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## **Chemical characteristics of surface systems in the Simpevarp area**

### **Visualisation and statistical evaluation of data from surface water, precipitation, shallow groundwater, and regolith**

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# Abstract

The Swedish Nuclear Fuel and Waste management Co (SKB) initiated site investigations for a deep repository for spent nuclear fuel at two different sites in Sweden, Forsmark and Oskarshamn, in 2002. This report evaluates the results from chemical investigations of the surface system in the Simpevarp area in Oskarshamn, i.e. both the Laxemar subarea and the Simpevarp subarea, during the period November 2002 – March 2005. The evaluation includes data from surface waters (lakes, streams and the sea), precipitation, shallow groundwater and regolith (till, soil, peat, sediments and biota) in the area.

The main focus of the study is to visualize the vast amount of data collected hitherto in the site investigations, and to give a chemical characterisation of the investigated media at the site. The results will be used to support the site descriptive models, which in turn are used for safety assessment studies and for the environmental impact assessment.

The data used consist of water chemical composition in lakes, streams and coastal sites, and in precipitation, predominantly sampled on a monthly basis, and in groundwater from soil tubes and wells. Moreover, regolith data includes information on the chemical composition of till, soil, sediment and vegetation samples from the area. The characterisations include all measured chemical parameters, i.e. major and minor constituents, trace elements, nutrients, isotopes and radio nuclides, as well as field measured parameters.

The evaluation of data from each medium has been divided into the following parts:

- Characterisation of individual sampling sites, and comparisons within and among sampling sites as well as comparisons with local, regional and national reference data.
- Analysis of time trends and seasonal variation (for surface waters).
- Exploration of relationships among the various chemical parameters.

For all investigated parameters, the report presents selected statistics for each sampling site, as well as for available reference data. A more comprehensive statistical description of the data is given per investigated parameter in appendices on the enclosed CD.

# Sammanfattning

Svensk Kärnbränslehantering AB (SKB) genomför sedan 2002 platsundersökningar på två platser i Sverige, Forsmark och Oskarshamn, med syftet att undersöka platsernas lämplighet för ett slutförvar för använt kärnbränsle. I denna rapport utvärderas resultaten från samtliga kemiska undersökningar av ekosystemet ovan bergrunden som har genomförts i Simpevarpsområdet i Oskarshamn under perioden november 2002 – mars 2005. Utvärderingen omfattar data från ytvatten (sjöar, vattendrag och hav), nederbörd, ytligt grundvatten och kvartära avlagringar (morän, jordmån, torv och sediment ) och biota i de två delområden som utgör Simpevarpsområdet, dvs delområde Simpevarp och delområde Laxemar.

Rapporten syftar dels till att sammanställa och visualisera den stora mängd kemiska data som hittills har insamlats från ekosystemet i samband med platsundersökningarna, dels till att ge en beskrivning och karaktärisering av de kemiska förhållandena i undersökta medier på platsen. Resultaten kommer att användas som underlag för de platsbeskrivande modeller som tas fram under platsmodelleringen, vilka i sin tur sedan kommer att användas vid säkerhetsanalysen och miljökonsekvensbeskrivningen av ett eventuellt framtida slutförvar.

De data som används i utvärderingen består av vattenkemiska data från sjöar, vattendrag, hav och nederbörd, med provtagning i huvudsak en gång per månad, och från prover av ytligt grundvatten i borrade jordrör och brunnar. Vidare ingår data som beskriver den kemiska sammansättningen i prover av morän, jordmån, sediment och vattenlevande växter från området. Beskrivningarna inkluderar samtliga analyserade parametrar, dvs huvudkomponenter, spårämnen, närsalter, isotoper och radionuklider, samt ett antal fältmätta parametrar.

Utvärderingen av data från respektive medium har delats upp i följande delar:

- Karaktärisering av enskilda provtagningsobjekt, jämförelser mellan olika provtagningsobjekt, och jämförelser mellan platsdata och tillgängliga lokala, regionala och nationella referensdata.
- Analys av tidsserier och säsongsvariation (för data från ytvatten).
- Analys av samband mellan olika kemiska parametrar och mellan olika provtagningsobjekt.

I rapporten presenteras, för samtliga undersökta parametrar, ett antal statistiska mått för varje provtagningsobjekt och för referensdata. En mer utförlig statistisk beskrivning av data ges i de appendix som finns på den CD som medföljer den tryckta rapporten.



## Extended summary

The Swedish Nuclear Fuel and Waste management Co (SKB) is currently conducting site investigations at two sites, Oskarshamn and Forsmark, with the objective of siting a geological repository for spent nuclear fuel. This report evaluates the results from chemical investigations of the surface system in the Simpevarp area in Oskarshamn (including both the Laxemar subarea and the Simpevarp subarea) during the period November 2002 – March 2005. The main focus of the report is to visualise the vast amount of data collected hitherto in the site investigations, and to give a chemical description of surface waters, precipitation, groundwater and regolith in the area. Underlying processes, and important premises for the evolution of the chemical composition of surface water and groundwater, are only to a minor extent discussed in this report.

The data used consist of water chemical composition in lakes, streams and coastal sites, and in precipitation, predominantly sampled on a monthly basis, and in groundwater from soil tubes and wells. Moreover, regolith data includes information on the chemical composition of till, soil and sediment samples from the area. The characterisations include all measured chemical parameters, i.e. major and minor constituents, trace elements, nutrients, isotopes and radio nuclides, as well as field measured parameters.

### Chemical characteristics of surface waters in the Simpevarp area

In general, the freshwater systems, i.e. lakes and streams, in the Simpevarp area are classified as mesotrophic brown water types. Most freshwaters are markedly coloured due to high contents of humic substances, leading to very high levels of dissolved organic carbon. Both streams and lakes are also relatively rich in nitrogen and phosphorus, leading to high levels of chlorophyll, low visual depths and strained oxygen conditions in the bottom waters of the lakes.

Most freshwater sampling sites show ‘moderately’ to ‘slightly acid’ pH values and an alkalinity corresponding to ‘good buffering capacity’ according to the Swedish Environmental Quality Criteria. There are, however, a few stream sampling sites which show ‘very acid’ pH-values and ‘no or negligible’ buffering capacity, indicating occurrence of acidified waters in the Simpevarp area.

A substantial proportion of the Simpevarp area is covered by a very thin Quaternary layer or by bare bedrock, which gives prerequisites for acidification in small water courses dewatering catchments dominated by these thin soils. The spatial variation of alkalinity and pH is however rather contradictory, as topographically higher catchments in many cases seem to show higher pH values and higher alkalinity compared to the lower levelled sampling sites. The observed pattern probably reflects several superposed processes, e.g. acid precipitation, oxidation of sulphide bearing minerals in the Quaternary deposits, and liming of arable land and possibly also of lakes and water courses.

The electrical conductivity and the contents of dissolved ions are slightly elevated compared to most lakes and water courses in Sweden. The concentrations of major ions as calcium, sodium and chloride seem to increase along the streams in the area, and the highest levels are observed at the sampling sites near the outlets. There is also a tendency for an increasing gradient from north-west to south-east that coincides with increasing depths of the Quaternary deposits.

The contents of sulphur and silicon in surface waters are markedly elevated in the Simpevarp area compared to the rest of Sweden. Silicon also show increased levels compared to the region of Kalmar County, indicating locally enhanced levels. Also the levels of fluoride and iron are markedly higher in the Simpevarp area. The elevated levels of iron are probably connected to the high levels of dissolved organic substances, whereas the elevated fluoride levels probably are part of a regional pattern as the levels are generally elevated in Kalmar County compared to the rest of Sweden.

Among the trace elements, vanadium and several other heavy metals are elevated approximately ten times compared to the levels normally seen in Sweden. Other examples are chromium, molybdenum, copper, nickel and uranium. A possible explanation for the elevated levels of these metals probably is the high contents of dissolved organic substances in the area that increase the mobility of the metals.

Zirconium shows markedly elevated concentrations in the surface waters of the Simpevarp area. The median concentrations are approximately 100 times elevated compared to normal concentrations in lakes in Sweden. Also the rare earth elements, e.g. lanthanum and ytterbium, are elevated about 10 times in the area compared to normal levels in Swedish lakes.

### **Temporal variations of the chemical composition of surface waters**

Many parameters show temporal variations connected to season, runoff or primary production. In the lakes, nutrients and carbon, in particular the particulate species, show typical seasonal variations connected to the primary production during the warm season. The contents of phosphorus as well as the nitrate-nitrogen species show considerably variation throughout the year, whereas the contents of dissolved ions are more or less constant. Silicon, which is included in the biochemical cycles of phytoplankton, shows a clear seasonal pattern with low values during summer.

The content of chlorophyll, which is coupled to the supply of nutrients, shows a clear seasonal pattern in the lakes, with high values during late summer. In the bottom water, dissolved oxygen as well as ammonium nitrogen shows a variation opposite to chlorophyll, with low levels during late summer and early autumn. The anoxic conditions are caused by decomposition of organic matter, produced by primary production in the lakes and of terrestrial origin supplied by discharging streams.

The Basins of Granholmsfjärden and Borholmsfjärden show vigorous variations of most parameters due to different mixing proportions between sea water and fresh water discharging from the streams. This dilution-derived variation is in most cases overshadowing other sources of variation in these closed basins. Chlorophyll and dissolved oxygen in the bottom water show however a typical seasonal pattern due to variations in primary production, similar to the lakes.

The 'open sea' coastal sites show only minor variations compared to the lakes and brackish basins. There are slow changes in the contents of the major dissolved ions coupled to the large scale variations of salinity in the Baltic, as well as seasonal variations of for example calcium and silicon coupled to primary production.

The concentrations of most elements in the streaming waters show more or less variation, both due to dilution effects caused by variations in runoff and to seasonal variations coupled to primary production and the mobility of for example carbon species. During winter when the water in the superficial soil layers is frozen, the contents of carbon and carbon related elements are usually low in the streaming water. The seasonal variations of dissolved ions are less accentuated and probably principally controlled by variations in water flow.

## **Spatial variations in the chemical composition of surface waters**

The contents of dissolved ions show spatial patterns probably coupled to the occurrence and characteristics of Quaternary deposits. The north-western part of the Simpevarp area is dominated by thin deposits and bare bedrock, whereas the south-eastern part contains richer deposits and more arable land and consequently higher levels of most dissolved ions.

Total and dissolved organic carbon is more evenly distributed throughout the Simpevarp area compared to especially nitrogen, which shows higher concentrations downstream areas with high proportions of arable land.

A few catchment areas which show deviating characteristics are briefly summarised below:

The catchment of Ekerumsån (PSM002085) show deviating high contents of calcium, high alkalinity and elevated pH-values. This catchment contains a relatively high proportion of arable land and the deviating chemistry may be caused by agricultural activities as liming or by a deviating chemistry of the Quaternary deposits.

The small catchment of Vadevikebäcken (PSM107735) at the Island of Ävrö, shows deviating concentrations of lithium, and probably also of calcium and bicarbonate supplied by calcite dissolution processes. This may indicate either discharging deeper groundwater or a deviating chemistry of the deposits in the area. Observations of shallow groundwater in this catchment also show deviating characteristics of for example tritium and carbon-14 which may indicate discharging groundwater of deeper origin.

## **Chemical characteristics of shallow groundwater in the Simpevarp area**

The shallow groundwater in the Simpevarp is characterised by neutral or slightly acid pH-values, normal content of major constituents, and alkalinity ranging from high to very low. Groundwater in the area is influenced by marine relics, resulting in elevated content of e.g. chloride and sulphate in samples from soil tubes and also in fresh surface waters.

Several parameters show large deviations when data from the Simpevarp area is compared with normal Swedish conditions. Iron and manganese show markedly elevated concentrations of about an order of magnitude. Fluoride, iodide and strontium show higher concentrations in the area compared to Swedish reference data of shallow groundwater and surface waters.

### **Summary per element**

#### **Major and minor constituents**

The shallow groundwaters in the Simpevarp area range from Ca-HCO<sub>3</sub> to Na-Cl types. All soil tubes situated at topographically 'higher' levels are classified as Ca-HCO<sub>3</sub> type, whereas the topographically 'lower' located soil tubes show either Ca-HCO<sub>3</sub> or Na-Cl characteristics.

The content of calcium, magnesium, sodium and potassium are normal in the Simpevarp area in comparison with typical shallow groundwater in Sweden. The content of chloride and sulphate are slightly elevated, probably due to the marine relics and the proximity to the Baltic Sea. In addition to the marine sources, sulphate is also added through long distance deposition and by weathering of sulphur-containing minerals. The longer time-series available from a private well in the area show indications of decreasing content of non-marine sulphate in the shallow groundwater, a finding consistent with the diminishing sulphate deposition during the last decades.

The silicon levels are doubled in the Simpevarp area, both when samples from shallow groundwater is compared with shallow groundwater in the Forsmark area and when streaming water in the Simpevarp area is compared with data from the national survey of Swedish streams.

Manganese and iron occurs in markedly elevated concentrations in shallow groundwater in the Simpevarp area compared to the rest of Sweden. A similar, but not that pronounced elevation is also seen in the surface waters in the area. The manganese concentrations are elevated about 40 times compared to the median value of undisturbed shallow groundwater in Sweden. As there is no obvious explanation for this discrepancy from the national reference data, methodological reasons could not be excluded. A similar discrepancy seen in data from the investigations in the Forsmark supports this explanation.

Fluoride shows about five times elevated concentrations in groundwater from soil tubes in the Simpevarp area, both compared to Kalmar County and the whole Sweden. A similar pattern is seen when surface water in the Simpevarp area is compared to Swedish lakes.

### **Alkalinity and pH**

The shallow groundwater in the Simpevarp area is characterised by slightly acid pH-values, and the major part of the observations range from pH 6 to pH 7. A typical pH-value in the area is 6.7.

According to the Swedish environmental quality criteria the alkalinity in the shallow groundwater range from 'very high' to 'very low' in the Simpevarp area /Naturvårdsverket 1999b/. Most measurements of alkalinity are classified as 'high' according to these criteria. There are however examples of soil tubes at higher topographical locations showing 'low' alkalinity in combination with low pH-values, indicating low buffering capacity and ongoing acidification. These conditions are promoted by the fact that a substantial proportion of the Simpevarp area is covered by bare bedrock or thin layers of overburden with very low contents of calcite.

The pH-levels and alkalinity in the private wells of the Simpevarp area are normal compared both with wells from Kalmar County and from Sweden.

### **Redox potential**

The coarse classification of redox potential, based on a scheme from the Swedish Environmental Quality criteria for groundwater /Naturvårdsverket 1999b/, shows that the redox potential is 'low' or 'very low' in all soil tubes.

The reducing conditions are also indicated by the presence of hydrogen sulphide and the fact that a substantial fraction of the iron occurs as the Fe<sup>2+</sup> ion in all soil tubes.

### **Trace elements**

About thirty trace elements have been measured in shallow groundwater and surface waters. Some conclusions concerning these elements are summarised below.

- The rare earth elements (e.g. lanthanum and ytterbium) occur in about ten times higher concentrations in the Simpevarp area compared with soil tubes in the Forsmark area. When concentrations in streams in the Simpevarp area are compared to the concentrations in 242 Swedish lakes, a similar pattern is found, indicating elevated concentrations in a national perspective.

- The vanadium concentrations are about ten times higher in the shallow groundwater in the Simpevarp area compared with Forsmark. A similar pattern is seen when fresh surface waters are compared to 781 lakes in Sweden, indicating generally elevated levels in the Simpevarp area. Other metals, e.g. chromium, copper, molybdenum and nickel, show similar elevations in the surface waters, possibly indicating a similar pattern in shallow groundwater. There are no reference data available for groundwater to validate this speculation.
- Rubidium show elevated concentrations both compared with Forsmark soil tubes and when Simpevarp surface waters are compared with Swedish lakes.
- The zirconium content in the shallow groundwater is usually about ten times higher in the Simpevarp area compared with the soil tubes in the Forsmark area. When the Simpevarp surface waters are compared with typical Swedish lakes, the levels are elevated approximately 100 times.
- Thorium show ten times higher concentrations in the shallow groundwater compared with most Swedish groundwaters. A corresponding difference is not seen when surface waters from the Simpevarp area are compared with typical Swedish lakes.

### **Isotopes of hydrogen, oxygen and carbon**

*Deuterium* and *oxygen-18* data from precipitation and most observations from shallow groundwater from the Simpevarp area plot close to the Global Meteoric Water Line (GMWL), indicating a meteoric origin of most shallow groundwaters. This conclusion is also supported by the fact that the variation along the GMWL-line of groundwater is centred on the variation interval observed in precipitation.

Data from streams and lakes forms an ‘evaporation line’ indicating enrichments of the heavier isotopes due to evaporation. This is also seen as a gradual decrease of the deuterium deviations along the flow path from recharge areas to streams, lakes and finally the Baltic Sea. Median values are  $-76$  (precipitation),  $-77$  (soil tube),  $-77$  (stream),  $-65$  (lake) and  $-57$  (sea) respectively.

The *tritium* levels in most soil tubes range from 8–15 TU, an interval which overlap the range of surface waters and precipitation of approximately 9–19 TU. In SSM000022 at the Island of Ävrö, low tritium values corresponding to sub modern levels have been observed. The low fraction modern carbon in this soil tube also supports the hypothesis of groundwater of older origin. Low carbon-14 values may also originate from dissolution of calcites depleted in carbon-14.

### **Isotopes of boron, chlorine, sulphur and strontium**

The *boron-10/boron-11* ratios found in the Simpevarp area are slightly lower than the natural abundance ratio. The median ratio of the soil tubes in Simpevarp area is 0.243 compared to 0.248 in natural abundance /Clark and Fritz 1997/. Boron-10 is most depleted in SSM000022 located at the Island of Ävrö. The highest enrichment is found in SSM000005, located near the nuclear power plant at the Simpevarp Peninsula. This latter soil tube shows a deviating water chemical composition with respect to several parameters, e.g. calcium.

The *chlorine-37/chlorine-35* ratios found in the Simpevarp area are approximately centred on the international standard, corresponding to an average ratio of about 0.324 (SMOC). The natural abundance ratio is 0.320 /Clark and Fritz 1997/. There are great uncertainties regarding the spatial variation of chlorine-37 in both shallow groundwater and surface water, as a substantial part of the variation in the Simpevarp area are within the analytical error of  $\pm 0.2\%$ . No clear patterns are identified for chlorine-37.

The recorded values of *sulphur-34* in shallow groundwater vary within a wide range between  $-15\text{‰}$  to  $23\text{‰}$  CDT. Fresh surface waters range between  $-1\text{‰}$  and  $15\text{‰}$  CDT with most of the samples between  $2\text{‰}$  and  $8\text{‰}$  CDT. All measurements of sea water are very close to  $20\text{‰}$  CDT. Three soil tubes (SSM000022, SSM000029 and SSM000037) show enriched content of sulphur-34 corresponding to the levels found in sea water.

*Strontium-87* is generally enriched relative the natural abundance ratio by 2‰ to 33‰. The recorded ratio in the Simpevarp soil tubes ranges from 0.712 to 0.734, compared to the natural abundance ratio of 0.712 (Sr-87/Sr-86). Strontium-87 is least enriched in SSM000002 and SSM000034 where the ratios are only slightly higher than the ratios of sea water in the area (0.710). The highest enrichments are found for SSM000005 and SSM000016.

### **Isotopes of radium, radon, thorium and uranium**

The *radium-226* activities are significantly higher in the Simpevarp soil tubes compared to the median values of the reference data of drilled wells in Sweden, whereas the *radon-222* activities are in the same order of magnitude compared to the excavated wells of Sweden.

### **Summary of groundwater chemistry per subarea**

In this section the conclusions are summarised per subarea or catchment in order to make the compilation compatible with the corresponding work on surface waters. The compilation per catchment area is appropriate for shallow groundwater as the catchment boundaries often coincide with the groundwater divides. The measurements of streaming waters and lakes may also be seen as the sum of groundwater discharge in the area, and this is especially the case when local recharge-discharge patterns dominate.

#### **The Laxemar subarea**

The Laxemar subarea extends over several catchments, and the watercourses Mederhultsån, Kåreviksån, Pistlanbäcken, Ekerumsån and Laxemarån fall into the brackish basins of Granholmsfjärden and Borholmsfjärden at the eastern border of the Laxemar subarea.

The groundwater from different soil tubes in the Laxemar subarea show very different chemical composition, and this seems to be due both to differences between sub-catchments and to the topographical locations of the tubes.

In the sub-catchment of Ekerumsån (9:1–3), the levels of calcium and bicarbonate are generally elevated in both surface waters and in shallow groundwater from topographically 'lower' soil tubes. The soil tubes in this catchment also show elevated content of potassium, silicon and barium, compared to the adjacent catchment of Mederhultsån (6:1). One possible explanation to the deviating water chemistry in the catchment of Ekerumsån could be agricultural activities in the area.

In the sub-catchment of Ekerumsån there are two 'higher' located soil tubes which show highly deviating water chemical characteristics by having very low alkalinity and low pH (SSM000009 and SSM000011). These soil tubes are presumably representative for soil tubes located at topographical heights dominated by bare bedrock or thin layers of quaternary deposits. Hitherto no other parameters have been analysed on samples from these soil tubes, but it may be expected that several other parameters will deviate from most of the other soil tubes in the area.

There are a number of soil tubes located close to coast of the brackish Basins of Granholmsfjärden and Borholmsfjärden (SSM000029, SSM000034 and SSM000040), which show elevated content of several major and minor constituents, e.g. magnesium, sodium, potassium, chloride and bromide, and depleted contents of strontium-87.

### **The Simpevarp subarea**

The Simpevarp subarea consists of the Simpevarp Peninsula and the Island of Ävrö, on which a few smaller catchments have been identified. The soil tubes in the Simpevarp subarea are characterised by rather normal levels of most major and minor constituents. Sulphate and fluoride levels are lower at the Simpevarp Peninsula compared to the rest of the Simpevarp area. The soil tubes at the Island of Ävrö show, contrary to those at the Simpevarp Peninsula, elevated sulphate and fluoride levels.

The soil tubes SSM000022 at the Island of Ävrö and SSM000005 at the Simpevarp Peninsula show deviating characteristics with respect to many parameters. SSM000022, situated in the small catchment of Vadevikebäcken (23:1) at Ävrö, shows high pH, elevated concentrations of uranium and fluoride, and low content of tritium and modern carbon, possibly indicating groundwater of older and probably deeper origin compared to most other soil tubes.

SSM000005 deviates by showing remarkably high iron and manganese concentrations in combination with high calcium and fluoride content. The isotopes boron-10, chlorine-37 and strontium-87 also show deviating characteristics in this soil tube. A possible explanation to the deviating chemical characteristics of this soil tube may be influences from the prevailing artificial landfills in the area close to the nuclear power plants.

### **Chemical characteristics of the regolith in the Simpevarp area**

Chemical investigations of the regolith in the Simpevarp area have hitherto included analyses of till, soil and sediment samples.

#### **Till**

When the contents of different elements in samples from the Simpevarpa area are compared with regional and national data only minor differences are revealed, indicating that the chemical composition of the till in the Simpevarp area is relatively normal in a Swedish context.

The levels of magnesium and iron are slightly elevated in the samples from the Simpevarp area according to the ICP-AES analyses. A corresponding pattern is however not seen for the total contents analysed by XRF-technique. According to ICP-AES data, the content of the trace metal cobalt is less than half the typical values of Sweden, whereas the content of lead is approximately doubled. However, according to XRF data, the cobalt content is only slightly lower in the Simpevarp samples.

Three observations in the south-eastern part of the area, at the peninsula east of Figeholm, show deviating chemical composition of till with respect to several elements. For example is the strontium content low and the lead content somewhat elevated in this area.

All till samples in the Simpevarp area show very low content of calcium carbonate and may be regarded as free of lime. The measurements range from 0.1% to 0.6% calcium carbonate per dry weight, with a median value of 0.3%.

## **Sediment**

The content of calcium carbonate in the sediments is usually negligible, except for one sample from Långenmossen (PSM006564), where the content of calcium carbonate is 12% at a depth of 220–227 cm in the sediment profile.

There is a large spread in the content of carbon, nitrogen, hydrogen and sulphur in sediment samples, depending on both sampling site and depth in sediment profile. Many of the sampling sites show a decreasing content of carbon, nitrogen, sulphur and hydrogen with increasing depth. The carbon content ranges from 0–60%, nitrogen from 0–2%, sulphur from 0–4% and hydrogen from 0–6%.

## **Soil**

The analyses of top soil samples from the Simpevarp area are in general close to the Swedish mean values, indicating rather normal pH-values and normal content of carbon and nitrogen.

## **Element content in amphibious plants**

Many metals as iron, cobalt, chromium, copper and especially molybdenum occur in elevated levels in amphibious plants in the Simpevarp area, when the distribution of values in samples from the Simpevarp area are compared to regional and national data. Lead occurs at normal levels, whereas manganese occurs at lower levels.



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### **Appendices on enclosed CD**

**Appendix 1** Detailed statistics on surface waters (lake, stream and sea)

**Appendix 2** Detailed statistics on shallow groundwater (soil tubes)

**Appendix 3** Detailed statistics on precipitation

**Appendix 4** Raw data – water

**Appendix 5** Raw data – regolith

# 1 Introduction

## 1.1 Background

The Swedish Nuclear Fuel and Waste management Co (SKB) is currently conducting site investigations at two sites, Oskarshamn and Forsmark, with the objective of siting a geological repository for spent nuclear fuel. The results from the investigations at the sites are used as a basic input to the site descriptive modelling. A Site Descriptive Model (SDM) is an integrated description of the site and its regional setting, covering the current state of the geosphere and the biosphere, as well as ongoing natural processes of importance for long-term safety. The SDM shall summarise the current state of knowledge of the site, and provide parameters and models to be used in further analyses within Safety Assessment, Repository Design and Environmental Impact Assessment.

The site investigation programme involves extensive studies of the surface ecosystem as well as of the bedrock, in order to provide a detailed characterisation of the site (see /SKB 2001/ for a description of the general execution programme). The strategy which is adopted by SKB for developing a descriptive ecosystem model based on site data, is described in /Löfgren and Lindborg 2003/. An important part of the description of the surface ecosystem is the characterisation of chemical properties of surface waters, groundwater and regolith in the area.

## 1.2 This report

This report evaluates the results from chemical investigations of the surface system in the Simpevarp area, i.e. both the Laxemar subarea and the Simpevarp subarea, during the period November 2002 – March 2005. Moreover, available data from chemical investigations performed before the start of the site investigations was also included in the evaluation. The data used is not associated to any special data freeze, as is usually the case in the site descriptive modelling work. Instead, all data from chemical investigations of the surface system, available in the Sicada database in May 2005, was used in the evaluation. In a parallel report /Tröjbom and Söderbäck 2006/, data from chemical investigations of the surface system in the Forsmark area during the same time period is evaluated.

The main focus of the report is to visualise the vast amount of data collected hitherto in the site investigations, and to give a chemical characterisation of surface waters (lakes, streams and the sea), precipitation, shallow groundwater and regolith (till, soil, peat, sediments and biota) in the area. Underlying processes, and important premises for the evolution of the chemical composition of surface water and groundwater, are only to a minor extent discussed in this report. The presentation of the data, as well as of the results, is separated according to the investigated media into four main parts; surface water, precipitation, shallow groundwater, and regolith.

The data used consist of water chemical composition in lakes, streams and coastal sites, and in precipitation, predominantly sampled on a monthly basis, and in groundwater from soil tubes and wells. Moreover, regolith data includes information on the chemical composition of till, soil and sediment samples from the area. The characterisations include all measured chemical parameters, i.e. major and minor constituents, trace elements, nutrients, isotopes and radio nuclides, as well as field measured parameters.

The evaluation of data from each medium has been divided into two or three parts:

- Characterisation of individual sampling sites, and comparisons within and among sampling sites as well as comparisons with local, regional and national reference data.
- Analysis of time trends and seasonal variation (for surface waters).
- Exploration of relationships among the various chemical parameters.

For all investigated parameters, the report presents selected statistics for each sampling site, as well as for available reference data. A more comprehensive statistical description of the data is given per investigated parameter in Appendices 1–3 on the enclosed CD, and the primary data used in the evaluation can also be found on the CD in Appendices 4–5.

## 2 Study area

The Simpevarp area is located in the County of Kalmar within the municipality of Oskarshamn, about 350 km south of Stockholm. The candidate area for the repository is located in the regional area termed the Simpevarp area. This regional area is divided in the local subareas termed the Simpevarp subarea and Laxemar subarea /SKB 2005/. The former consists of the Simpevarp Peninsula and the Island of Ävrö (Figure 2-1).

In the following sections, premises important for chemical and physical properties of the surface systems are summarised. For further information, see /Lindborg 2005/.



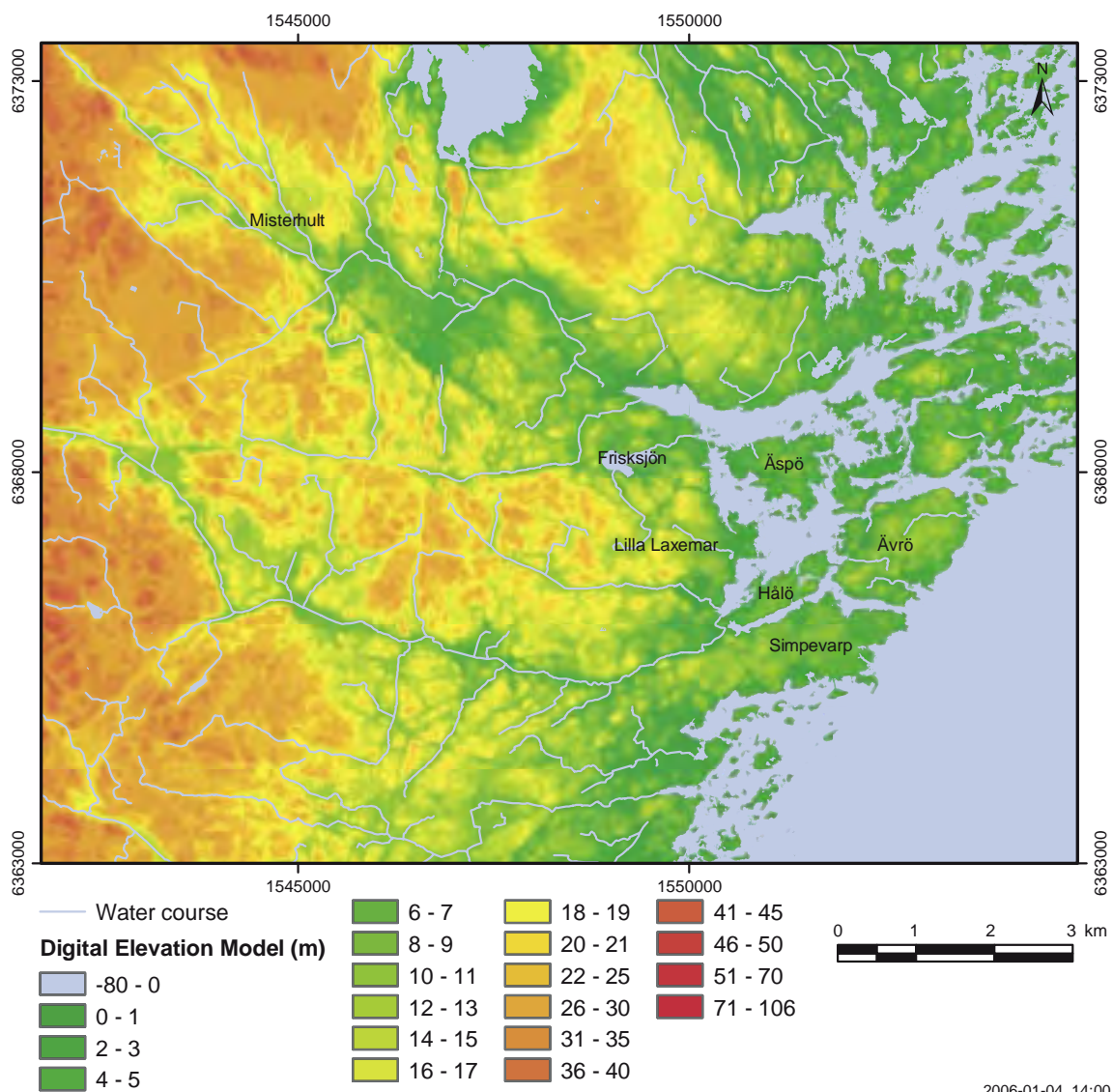
**Figure 2-1.** Map showing the Simpevarp area and the subareas of Simpevarp (Simpevarp Peninsula and Island of Ävrö) and Laxemar.

## 2.1 Topography and climate

The Simpevarp area belongs to the boreal forest region, characterized by temperate climate and a mean annual precipitation of approximately 500–600 mm. The annual runoff has been estimated to approximately 150–180 mm /Lindborg 2005/, and the effective recharge actually reaching the bedrock has been estimated to be in the order of 10 mm per year /SKB 2004/.

The Simpevarp area is relatively flat and is characterised by relatively shallow quaternary deposits. Almost the entire area is situated less than 50 m above sea level (Figure 2-2). The highest altitude reaches about 60 m above sea level, which is more than 40 or 50 m below the late-glacial highest shoreline.

There is ongoing isostatic uplift in the Simpevarp area, even though less pronounced than further north in Sweden. As a consequence of the local topography, the uplift has only resulted in limited areas recently emerging from the Baltic /SKB 2006/.



**Figure 2-2.** Map showing the digital elevation model of the Simpevarp area /Brydsten and Strömgren 2005/.



## 2.2 Surface hydrology

The Simpevarp area contains three main catchments, and the remaining coastal areas are divided into 23 minor catchments (Figure 2-3). The 26 catchments are further divided into 96 sub-catchments, which are thoroughly described by /Brunberg et al. 2004/.

There are three lakes investigated for chemical composition within the Simpevarp area (Jämsen, Frisksjön and Söråmagasinet) and one reference lake north of the study area (Lake Götemar). All lakes within the Simpevarp regional model area are characterised as mesotrophic brown-water lakes, whereas the reference Lake Götemar is characterised as an oligotrophic clear-water lake. The morphology and drainage characteristics of the lakes are thoroughly described by /Brunberg et al. 2004/.

The 22 investigated streams range from small tributaries with an average runoff of about 0.02 m<sup>3</sup>/s, to 0.44 m<sup>3</sup>/s in Laxemarån and 0.25 m<sup>3</sup>/s in Kärrviksån /Ericsson and Engdahl 2004b/. The water in most streams is strongly coloured by a high content of humus. The morphology, vegetation and physical properties of the streams are described by /Carlsson et al. 2005/.



**Figure 2-3.** The Simpevarp area with the 26 catchments delineated and described by /Brunberg et al. 2004/.

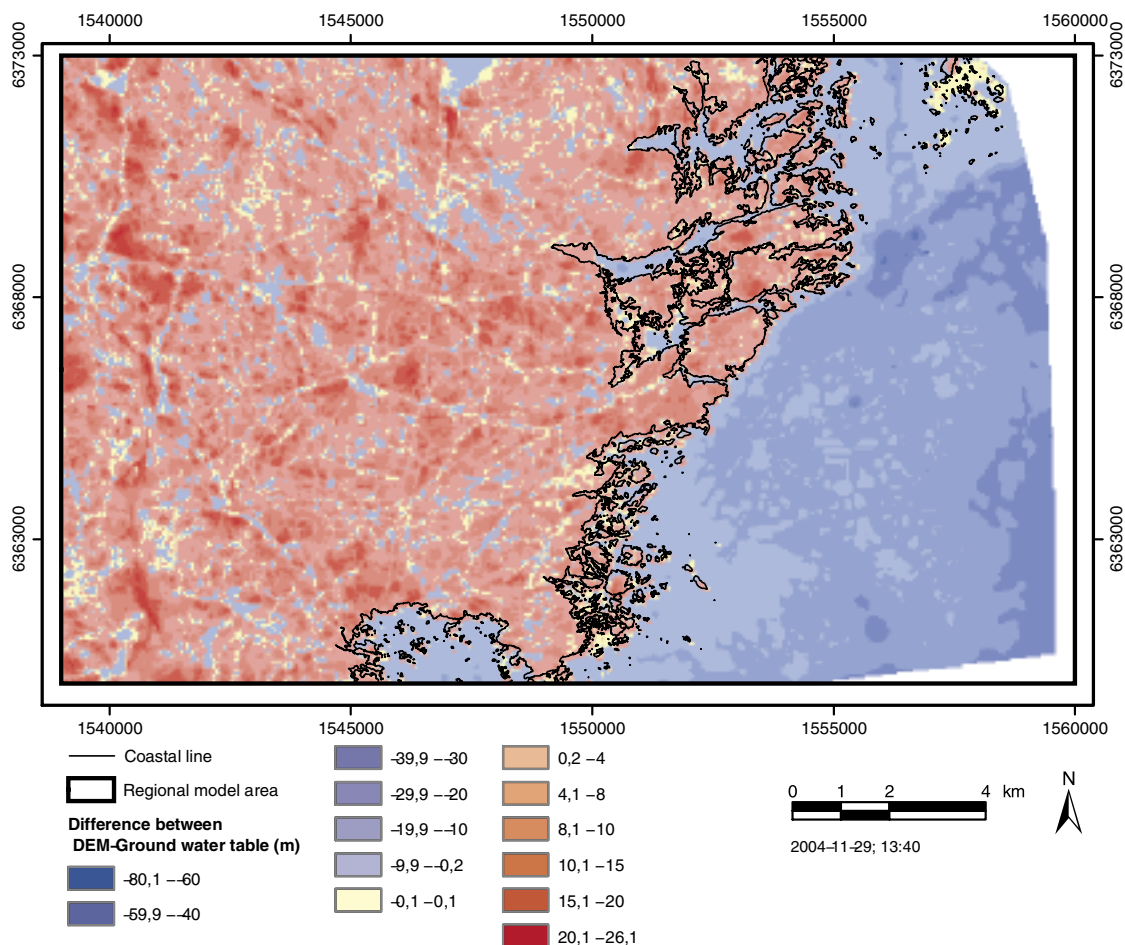


The groundwater level is close to the surface in most of the area. A coarse estimation of the depth to the groundwater surface, calculated by subtracting interpolated known groundwater levels from the topography /Werner et al. 2005a/, is presented in Figure 2-4.

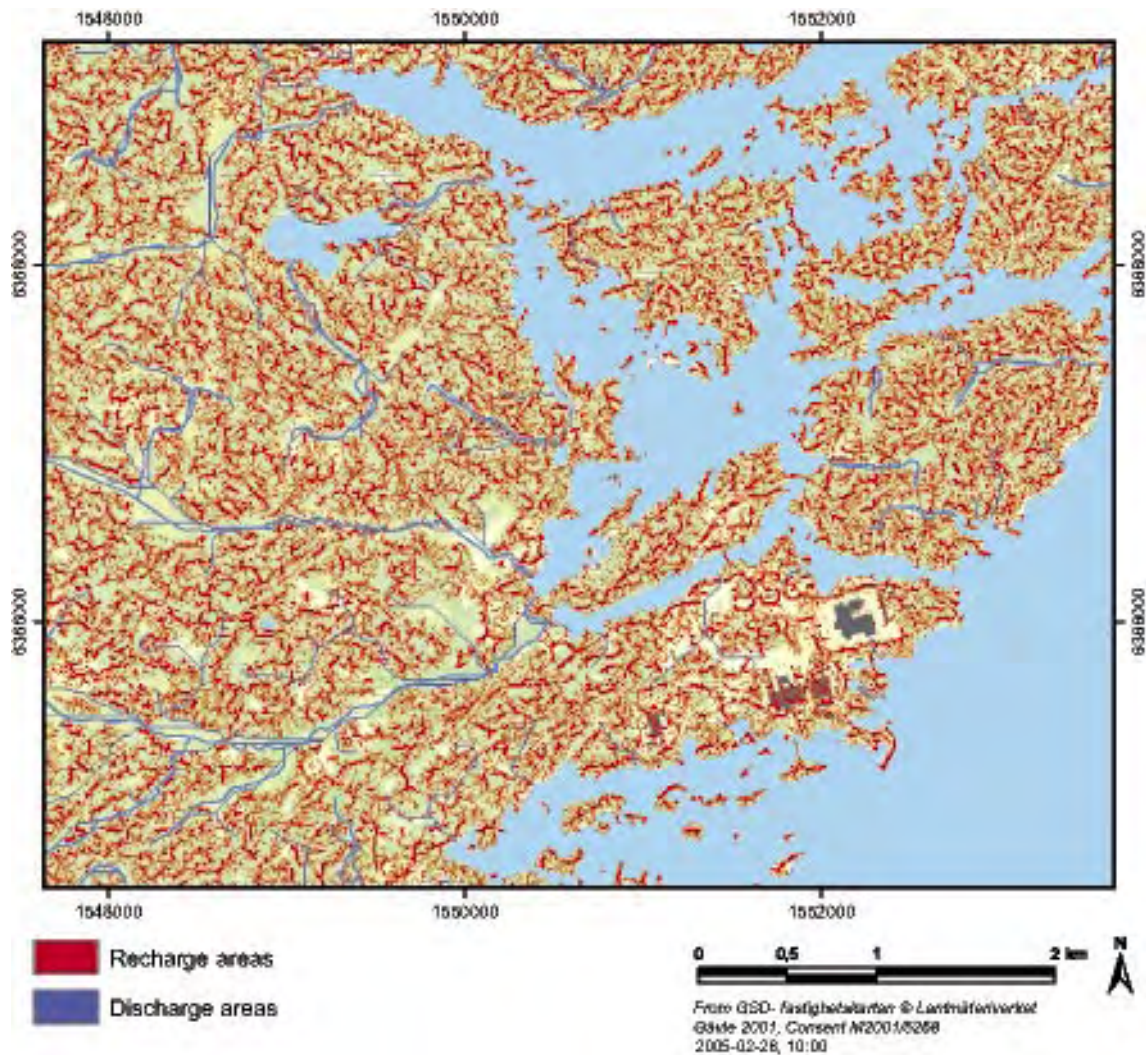
An important factor for the chemical composition of groundwater is the residence time, i.e. the time period during which different hydrogeochemical processes can alter the composition of recharging meteoric water. The small-scale topography in the area implies that many local, shallow groundwater flow systems with relatively short residence times are formed in the quaternary deposits, overlying more large-scale flow systems associated with groundwater flows at greater depths and longer residence times.

As the residence time usually differs significantly between groundwater in recharge and discharge areas, significant differences in the chemical composition between the two types of areas can be expected, depending on differences in the contact time with overburden and bedrock.

A modelled distribution of recharge, intermediate and discharge areas, is shown in Figure 2-5. As the distribution of these three categories is rather arbitrary depending on modelling assumptions as well as seasonal and spatial resolution, only the overall picture should be pointed out. From Figure 2-5 it can be concluded that recharge and discharge areas form a fine cut pattern in the area. This fact implies that any categorization of the soil tubes in terms of recharge and discharge must be based on the detailed topography, whereas the classification is rather arbitrary if only topographical constraints at a large scale are considered.



**Figure 2-4.** Map showing the depth to groundwater surface calculated by subtracting interpolated known groundwater levels from topography /Werner et al. 2005a/.



*Figure 2-5. Identification of recharge and discharge areas using a GIS model. Areas with colours other than blue and red are “intermediate areas”, i.e. neither recharge nor discharge areas /Werner et al. 2005a/.*

### 2.3 Quaternary deposits

The relatively shallow Quaternary deposits in Simpevarp area are mainly located in the valleys, whereas the higher-altitude areas are dominated by exposed bedrock or thin layers of till and peat. The thickness of the till usually varies between 0.5 and 4 m /Lindborg 2005/. The maximum depth of the Quaternary deposits in the area has been estimated in a GIS model to about 50 m (at sea), and the average depth on land is 2.1 m with outcrops included, and 3.0 m with outcrops excluded /Nyman 2005/.

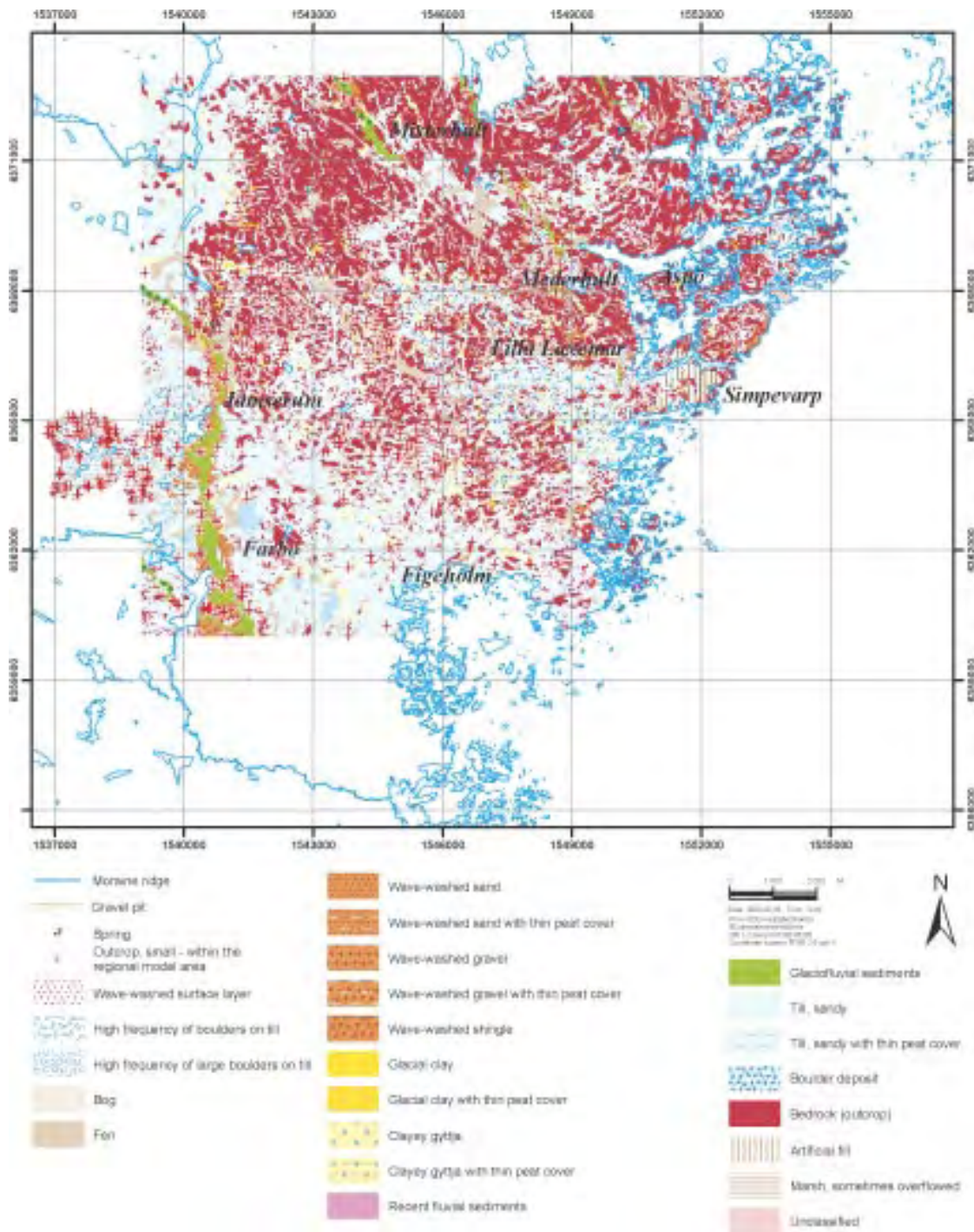
All known Quaternary deposits in the Simpevarp area were formed during or after the latest glaciation. The oldest deposits are of glacial origin, deposited directly from the inland ice or by water from the melting ice. Fine-grained sediment has been deposited in local depressions, such as the bottom of the lakes and on the present sea floor.

The predominating Quaternary unit in the area is sandy or gravely till, which covers about 43% of the investigated area. The till bed lies directly on the Precambrian bedrock and is generally thin, less than 3 m. Altogether, 35% of the area constitutes exposed bedrock or areas with a very thin cover (< 0.5 m) of Quaternary deposits /Rudmark et al. 2005/.



In the western part of the area there is a large esker (the Tunaåsen esker) with a north-south direction, which in the north changes to northwest/southeast. The whole area is relatively rich in peatland. Glacial clay, clay gyttja, sand, gravel and peat occur frequently as superficial Quaternary deposits on many small surfaces. These small deposits are frequent, but cover only a small part of the total investigation area. The till and glacial clay have no or very little CaCO<sub>3</sub>-content. The area around the nuclear power plant is dominated by artificial filling material consisting mainly of blast bedrock, but also containing reworked Quaternary deposits /Rudmark et al. 2005/.

The distribution of Quaternary deposits and exposed bedrock is shown in Figure 2-6.



**Figure 2-6.** Map showing the Quaternary deposits and exposed bedrock in the Simpevarp area (from /Rudmark et al. 2005/).

## **2.4 Bedrock and fracture zones**

The bedrock in the Simpevarp area is dominated by medium grained granitoids, ranging from red/grey granite to grey quartz monzodiorite. On a regional scale, NE-SW oriented deformation zones are dominant. The structural network is completed by mostly discontinuous E-W and NW-SE oriented deformation zones (Figure 2-7).

At a local scale, the Simpevarp site is bounded to the west and east by the large scale regional NE-SW deformation zones aligned sub-parallel to the coast, and to the north and south by the approximately NE-SE and NE-SW oriented deformation zones /Wahlgren et al. 2004/.

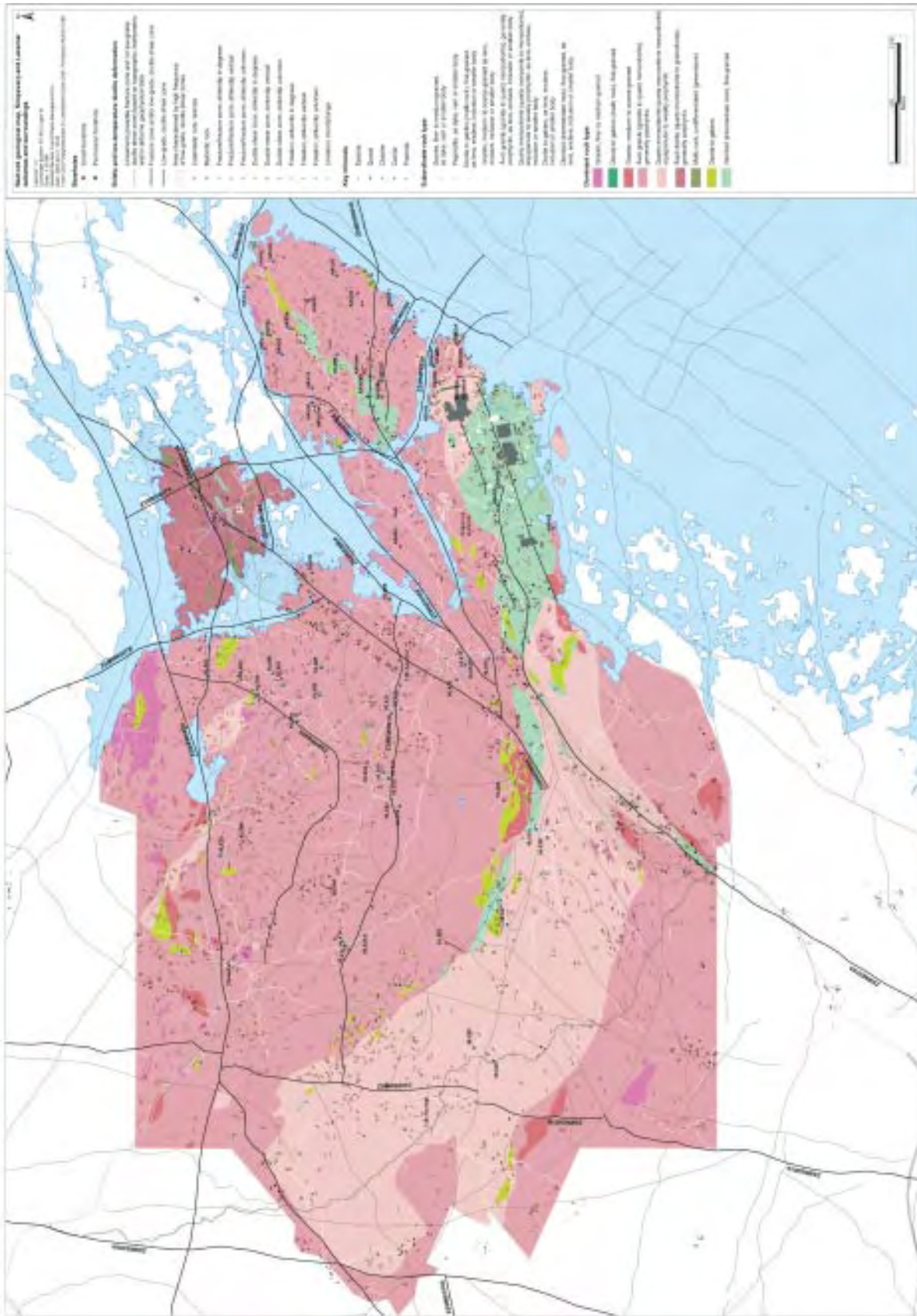


Figure 2-7. Bedrock map, including lineaments, of the Laxemar and Simpevarp subareas (from SKB 2006/).



### 3 Summary of available data

In this section, available data from surface waters, shallow groundwater, and Quaternary deposits in the Simpevarp area are summarised, beside various data used as reference on the local, regional and national scales.

#### 3.1 Surface water

##### 3.1.1 Investigations and previous evaluations

The investigation programme and sampling techniques for sampling of surface waters are described, and the water chemical composition is briefly evaluated, in /Ericsson and Engdahl 2004a/ and /Ericsson and Engdahl 2004b/. Moreover, the Preliminary Site Description of Simpevarp 1.2 includes a brief description of the chemistry of surface waters in the area /SKB 2005, Lindborg 2005/.

##### 3.1.2 Chemical data from surface water

Analyses of the chemical composition of surface water have been conducted on samples from 22 stream sites, four lakes and five coastal sites in the Simpevarp area (Figure 3-1).



*Figure 3-1. Map showing the locations of the sampling sites in surface waters in the Simpevarp area. Some of the sampling sites have been named in blue. See Table 3-2 for a complete list of the names of the individual objects.*

The evaluation of chemical properties of surface waters is based on the data in the SKB database SICADA on May 2005, covering the period October 2002 to Mars 2005. During a preliminary data evaluation prior to May 2005 all erroneous data found was reported to the SICADA database. These corrections were included in the final data acquisition on May 2005. There were no further corrections made in the material presented in this report except for lithium, where an erroneous reporting limit was changed later.

The number of sampling occasions where chemical analyses of water have been conducted are summarised per month in Table 3-1. Most parameters are sampled once a month or more often, while other parameters are sampled more or less sparse according to the sampling programme described in /Ericsson and Engdahl 2004a/ and /Ericsson and Engdahl 2004b/. The sampling programme has undergone some revisions according to the compilation in Table 3-1.

The chemical parameters can be grouped into a number of parameter categories, where the parameters within each category show similar characteristics. For each parameter category a 'typical' parameter was selected. The total number of analyses per parameter category is summarised in Table 3-2. Parameters included in the chosen parameter groups are listed in Table 3-3.

**Table 3-1. Number of sampling occasions per month in surface waters in the Simpevarp area during the site investigation period. Samples taken at 0.5 m below surface are denoted 'S', and bottom samples taken from c 1 m above bottom are denoted 'B'.**

Year Month	2002			2003												2004												2005							
	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3					
<b>Streaming water</b>																																			
PSM000347	S																														1	1	1		
PSM002068	S	1	2		1	1	2	2	2	2	2	1	2	1	1	1	1		1	1	2	2	2	2	1	2	1	1	1	1		1	1	1	
PSM002069	S	1	2		1	1	2	2	2	2	2	1	2	1	1	1			1	1	2	2	2	2	1	2	1	1	1	1					
PSM002070	S		2		1	1	2	2	2	2	2	1	2	1																					
PSM002071	S		2		1	1	2	2	2	2	2	1	2	1	1	1			1	1	2	2	2	2	1	2	1	1	1	1	1		1	1	1
PSM002072	S		2		1	1	2	2	2	2	2	1		1																					
PSM002075	S	1	2		1	1	2	2	2	2	2	1	2	1																					
PSM002076	S		2		1	1	2	2	2	2	1		1	1	1	1			1	1	2	2	2	2	1	1		1	1	1		1	1	1	
PSM002077	S	1	2		1	1	2	2	2	2	2	1	2	1																					
PSM002078	S	1	2		1	1	2	2	2	2	1		1		1	1			1	1	2	2	2		1			1	1	1					
PSM002079	S	1	2		1	1	2	2	2	2	2	1	1	2	1	1			1	1	2	2	2	2	1	1	1	1	1	1	1	1	1		
PSM002080	S		2		1	1	2	2	2	2	1	1	2	1																					
PSM002081	S	1	2		1	1	2	2	2	2	1	1		1	1	1			1	1	2	2	2	1	1	3		1	2						
PSM002082	S		1	2		1	1	2	2	2	1	1	1	2	1	1			1	1	2	2	2	2	1	2	1	1	2						
PSM002083	S	1	1	2		1	1	2	2	2	2	1	1	2	1	1			1	1	2	2	2	2	1	2	1	1	2			1	1	1	
PSM002084	S	1	1	2		1	1	2	2	2	2	1	1	2	1	1			1	1	2	2	2	2	1	2	1	1	2						
PSM002085	S	1	1	2		1	1	2	2	2	2	2	1	2	1	1	1			1	1	2	2	2	2	1	2		1	2			1	1	1
PSM002086	S	1	1	2		1	1	2	2	2	2		1			1			1	1	2	2	2		1			1	2						
PSM002087	S	1	1	2		1	1	2	2	2	2	1	1	2	1	1			1	1	2	2	2	2	1	2	1	1	2			1	1	1	
PSM003715	S																				1	2	2	2	2	1									
PSM003716	S																				1	2	2	2	2	1									
PSM107735	S														1			1	1	2	2		1	1			1	1	1						
<b>Lake water</b>																																			
PSM002065	S	1	2		1	1	2	2	2	2	1	1	2	1	1	1			1	1	2	2	2	2	1	2	1	1	1					1	
PSM002065	B	1	2		1	1	2	2	2	2	1	1	2	1	1	1			1	1	2	2	2	2	1	1	1	1	1					1	
PSM002066	S	1	1	1		1	1	2	2	2	2	1	1	2	1																				
PSM002066	B	1	1	1		1	1	2	2	2	2	1	1	2	1																				
PSM002067	S	1	1	2		1	1	1	2	2	2	1	1	2	1	1	1			1	1	2	2	2	2	1	2	1	1	1				1	
PSM002067	B	1	1	2		1	1	1	2	2	2	1	1	2	1	1	1			1	1	2	2	2	2	1	2	1	1	1				1	
PSM005964	S																				1	1	2	1	1			1	1	1					
PSM005964	B																				1	1	2	1	1			1	1	1					
<b>Sea water</b>																																			
PSM002060	S	1	1	1		1	1	1	2	2	2	1	1	1	2	1	1			1	1	2	2	2	1	2	1	1	2					1	
PSM002060	B	1	1	1		1	1	1	1	2	2	1	1	1	2	1	1			1	1	2	2	2	1	2	1	1	2	1				1	
PSM002061	S	1	1	2		1		1	2	2	2	1	1	1	2	1	1			1	1	2	2	2	2	1	2	1	1	1	1				
PSM002061	B	1	1	2		1		1	2	2	2	1	1	1	2	1	1			1	1	2	2	2	2	1	2	1	1	1					
PSM002062	S		1	2		1	1	1	2	2	2	1	1	1	2	1	1			1	1	2	2	2	2	1	2	1	1	2				1	1
PSM002062	B		1	2		1	1	1	2	2	2	1	1	1	2	1	1			1	1	2	2	2	2	1	2	1	1	2				1	1
PSM002063	S	1	1	2		1	1	2	2	2	1	1	2	1																					
PSM002063	B	1	1	2		1	1	2	2	2	1	1	2	1																					
PSM002064	S		1	2		1	1	1	2	2	2	1	1	1	2	1	1			1	1	2	2	2	2	1	2	1	2	2				1	1
PSM002064	B		1	2		1	1	1	2	2	2	1	1	1	2	1	1			1	1	2	2	2	2	1	2	1	2				1	1	



**Table 3-2. Number of observations per sampling site (IDCODE) and representative parameter group in the Simpevarp area. The selected elements represent different parameter categories explained in Table 3-3. 'First' and 'last' denotes the first and latest sampling date, respectively.**

Idcode	Name	Catchment	First	Last	pH	Na	Fe <sup>2+</sup>	Tot-N	D	C-13	Zn	U-238	Ra-226
PSM002065	Frisksjön	7:2	021120	050222	36	36	3	36	8	2	1	1	3
PSM002066	Götemar		021031	031028	18	18	–	18	1	1	–	–	–
PSM002067	Jämsen	10:30	021031	050222	36	36	–	36	1	1	–	–	–
PSM005964	Söråmagasinet	11:1	030814	041117	22	22		22	–	–	–	–	–
All lakes samples			021031	050222	112	112	3	112	10	4	1	1	3
PSM002060	Kråkelund	Baltic	021030	050126	34	34	2	35	5	4	1	1	2
PSM002061	Ekö	Baltic	021030	041201	36	36	2	35	7	7	1	1	2
PSM002062	Borholmsfjärden	Baltic	021118	050222	36	36	2	37	8	6	1	1	2
PSM002063	Fågelöfjärden	Baltic	021030	031028	17	17	–	17	–	1	–	–	–
PSM002064	Granholmsfjärden	Baltic	021119	050222	36	37	1	38	8	6	1	1	2
All samples of sea water			021030	050222	159	160	7	162	28	24	4	4	8
PSM000347	–	7:2	050125	050316	–	–	–	1	–	–	–	–	–
PSM002068	Köksmåla	10:30	021120	050316	37	37	–	38	–	–	–	–	–
PSM002069	Jämserum	10:1	021120	041201	37	37	–	37	–	–	–	–	–
PSM002070	Flohult	18:1	021202	031028	17	17	–	17	–	–	–	–	–
PSM002071	Plittorp	10:1	021202	050316	36	36	2	37	8	2	1	1	2
PSM002072	Lillekvarn	Coast	021202	031028	15	15	1	15	5	1	1	1	1
PSM002075	Figeholm	Coast	021118	031028	17	17	–	18	–	–	–	–	–
PSM002076	Övrahammar	17:1	021202	050316	32	32	1	33	8	2	1	1	1
PSM002077	Brolund	10:1	021118	031029	18	18	–	18	–	–	–	–	–
PSM002078	Sillebäcken	10:8	021118	041201	29	29	–	29	–	–	–	–	–
PSM002079	Kvarnstugan	10:1	021118	050316	36	36	2	37	8	2	1	1	2
PSM002080	Misterhult	5:1	021202	031028	17	17	–	17	–	–	–	–	–
PSM002081	Perstorpet	5:8	021119	041130	33	34	–	33	–	–	–	–	–
PSM002082	Misterhultsbäcken	5:1	021119	041130	37	37	2	37	8	3	1	1	2
PSM002083	Smedtorpet	5:1	021029	050316	39	39	2	40	9	3	1	1	2
PSM002084	Kärsvik	6:1	021029	041130	38	38	2	38	9	5	1	1	2
PSM002085	Ekerum	9:1	021029	050316	37	37	2	37	9	7	1	1	2
PSM002086	Basteböla	13:1	021029	041130	29	29	1	29	8	3	1	1	1
PSM002087	Ekhyddan	10:1	021029	050316	39	39	2	40	9	3	1	1	2
PSM003715	–	9:1	040218	040714	7	–	–	–	–	–	–	–	–
PSM003716	–	9:1	040218	040714	8	–	–	–	–	–	–	–	–
PSM107735	–	23:1	031210	041201	12	12	–	12	1	–	–	–	–
All samples of streaming water			021029	020316	570	556	17	563	82	31	10	10	17

**Table 3-3. Parameters included in the different categories listed in Table 3-2.**

Example	Other parameters in the category
pH	Conductivity
Na	K, Ca, Mg, HCO <sub>3</sub> , Cl, SO <sub>4</sub> , Br, F, Li, Sr, Si, Fe, Mn
Fe(II)	Fe(tot), S <sup>2-</sup>
Tot-N	NO <sub>23</sub> -N, NH <sub>4</sub> -N, PON, Tot-P, PO <sub>4</sub> -P, POP, TOC, DOC, DIC, POC
D	Tr, O-18
C-13	C-14, S-34, B-10. Cl-37, Sr-87
Zn	U, Th, Sc, Rb, Y, Zr, In, Cs, Ba, Hf, Tl, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu, As, Cd, Hg, I, La, Mo, V, Cu, Pb, Co, Cr, Ni,
U-238	U-235, U-234, Th-232, Th-230
Ra-226	Rn-222

### 3.1.3 Reference data from lakes and streams

The National Survey of lakes and streams is used as reference data for major constituents, nutrients and some metals. This nation wide survey is repeated every fifth year, and data from the year 2000 is used in this report /IMA 2005/.

In 1998 and 1999, a study was conducted in the Laxemar subarea before the present PLU-programme started. This study covered single observations at 53 sampling sites, shallow both in groundwater and surface water /Laaksoharju and Gurban 2006/. A broad selection of parameters was included, comprising major and minor constituents, some isotopes and trace elements. The data of the Laxemar pre-PLU investigation are in some cases included as reference in tables and figures (cf Table 3-10).

Reference data on the content of *trace elements* in lakes and streams was derived from the background documents of the Swedish Environmental Quality Criteria for lakes and streams /Naturvårdsverket 1999a/. As a complement, chemical composition of *precipitation* are also included in the compilations. These data from Gårdsjön in western Sweden was derived from /Eriksson 2001/.

### 3.1.4 Reference data from sea water

Data from the National SHARK database is used as reference data for sea water samples /SMHI 2005/. This database mainly contains data of nutrient salts, salinity and chlorophyll. Data from three stations have been selected; one located in Bottenhavet (MS4/C14), one in the Baltic Proper (BY29), and one station located near the coast north of the Simpevarp area (B1). As the water in the Baltic Proper shows a counter clockwise rotation, these stations should reflect the incoming sea water to the study area of Simpevarp (Figure 3-2).



*Figure 3-2. Map showing the marine monitoring stations included in 'Svenskt havsarkiv' (SHARK). From /SMHI 2005/.*

## 3.2 Precipitation

Precipitation is measured at two meteorological stations in the Simevarp area. One is located at the Island of Ävrö (PAS00028) and the other is located approximately 10 km west of Ävrö in Plittorp (PAS107738).

The meteorological sampling stations are described in /Lärke et al. 2005/ and placed in a regional context in /Larsson-McCann et al. 2002/. Some meteorological data have been evaluated in the preliminary site description of Laxemar 1.2 /Werner et al. 2005b/.

### 3.2.1 Chemical data from precipitation

The chemical composition of precipitation have been analysed for 21 parameters at the sampling station at the Island of Ävrö in the Simevarp area. The chemical sampling station, which has been given the idcode PSM002170, coincides with the meteorological station PAS00028. The number of chemical analyses per month is listed in Table 3-4.

**Table 3-4. Number of analyses per month in precipitation at the sampling station at the Island of Ävrö (PSM002170).**

Year Month	2002				2003												2004											
	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
Bromide	1	1			1	1	1						1	1			1	3	3	3	2	4		3	1	4	4	2
Calcium	1	1			1	1	1						1	1			1		1	1	1							
Bicarbonate	1					1	1	1					1				1	1	2	1	2	1		1			1	
Chloride	1	1			1	1	1						1	1			1	3	3	3	2	4		3	1	4	4	2
Chlorine-37		1																										
Deuterium	1	1			1	1	1						1	1			2		1	1	1		1	1	1	1		
Fluoride	1	1			1	1	1						1	1			1	3	3	3	2	4		3	1	4	4	2
Iron	1	1			1	1	1						1	1			1		1	1	1							
Lithium	1					1	1	1					1	1			1		1	1	1							
Magnesium	1	1			1	1	1						1	1			1		1	1	1							
Manganese	1	1			1	1	1						1	1			1		1	1	1							
Oxygen-18	1	1			1	1	1						1	1			2		1	1	1		1		1	1	1	
Potassium	1	1			1	1	1						1	1			1		1	1	1							
Silicon	1	1			1	1	1						1	1			1		1	1	1							
Sodium	1	1			1	1	1						1	1			1		1	1	1							
Strontium	1	1			1	1	1						1	1			1		1	1	1							
Sulphate	1	1			1	1	1						1	1			1	3	3	3	2	4		3	1	4	4	2
Sulphate-sulphur	1	1			1	1	1						1	1			1		1	1	1							
Tritium	1	1			1	1	1						1				2		1	1	1		1		1	1	1	
Conductivity	1	1			1	1	1						1	1			1	3	3	3	2	4		3	1	4	4	2
pH	1	1			1	1	1						1	1			1	3	3	3	2	4		3	1	4	4	2

### 3.2.2 Reference data from precipitation

Reference data of chemical composition was derived from two national sampling stations in Vimmerby (IVL:261) and Gotland (IVL:1554), respectively /IVL 2005/. These reference data represent the distribution of the yearly averages during the period 2000–2004.

### 3.3 Shallow groundwater

#### 3.3.1 Investigations and previous evaluations

The Preliminary Site Descriptions of Simpevarp and Laxemar 1.2 /Lindborg 2005, 2006/ include brief descriptions of the chemistry in shallow groundwater, based on available data from the site investigations. Detailed descriptions of drilling and sampling of groundwater from soil tubes are found in the reports compiled in Table 3-5.

**Table 3-5. Summary of reports containing detailed descriptions of drilling and sampling of soil tubes, as well as Site Descriptions including brief descriptions of chemical characteristics of shallow groundwater.**

Description	SKB report number	Reference
Preliminary Site Description. Simpevarp subarea – version 1.2.	R-05-08	/SKB 2005/
Preliminary Site Description. Laxemar subarea – version 1.2.	R-06-10	/SKB 2006/
Description of surface systems. Preliminary site description Simpevarp subarea – Version 1.2.	R-05-01	/Lindborg 2005/
Description of surface systems. Preliminary site description Laxemar subarea – Version 1.2.	R-06-11	/Lindborg 2006/
Description of climate, surface hydrology, and near-surface hydrogeology. Simpevarp 1.2.	R-05-04	/Werner et al. 2005a/
Laxemar 1.2 – Description of meteorology, surface hydrology, and near-surface hydrology.	R-05-61	/Werner et al. 2005b/
Installation of four monitoring wells, SSM000001, SSM000002, SSM000004 and SSM000005 in the Simpevarp subarea.	P-03-80	/Ask 2003/
Drilling and installation of two monitoring wells, SSM 000006 and SSM 000007 in the Simpevarp subarea.	P-04-46	/Ask 2004/
Drilling and sampling in soil. Installation of groundwater monitoring wells.	P-04-121	/Johansson and Adestam, 2004a/
Drilling and sampling in soil. Installation of groundwater monitoring wells in the Laxemar area.	P-04-317	/Johansson and Adestam, 2004b/

#### 3.3.2 Chemical data from shallow groundwater

The evaluation of chemical properties of shallow groundwaters is based on the data in the SKB database SICADA on May 2005, covering the period 2002-11-06 to 2005-03-30. During a preliminary data evaluation prior to May 2005 all erroneous data found was reported to the SICADA database. These corrections were included in the final data delivery in May 2005. There are no further corrections made in the material presented in this report.

In this report, the evaluation of chemical composition of shallow groundwater includes a total of 30 soil tubes. The ‘soil tube sampling programme’ that started in mars 2004 comprises 10 soil tubes in the Simpevarp subarea and 14 in the Laxemar subarea (of which three soil tubes are dry, making sampling for chemical composition impossible). Additionally, 8 soil tubes have been sampled once for chemical composition outside these programmes. Soil tubes in the ‘soil tube sampling programme’ will be sampled for chemical composition four times per year during a period of two years. After this period some of these soil tubes will be included in a monitoring programme. The current sampling programme of each soil tube is summarised in Table 3-6 and in the map in Figure 3-3 is the spatial distribution of the soil tubes shown.

In Table 3-6 are the number of samples per soil tube shown for a selection of parameters that are representative for the parameter categories that are explained in Table 3-7.

**Table 3-6. Number of observations per soil tube (IDCODE) and representative parameter group in the Simpevarp area. SICADA database in May 2005. The selected elements represent different parameter categories explained in Table 3-7. The colour of the IDCODE denotes the sampling programme of each soil tube: blue – miscellaneous purposes, green – ‘soil tube sampling programme’ in the Simpevarp subarea, red – ‘environmental’, black – ‘soil tube programme’ in the Laxemar subarea.**

<b>Idcode</b>	<b>First date</b>	<b>Last date</b>	<b>pH</b>	<b>Na</b>	<b>Fe</b>	<b>Fe(II)</b>	<b>S<sup>2</sup></b>	<b>D</b>	<b>C13</b>	<b>La</b>	<b>U238</b>	<b>Ra226</b>
SSM000001	021106	030422	1	1	1			1				
SSM000002	021106	030422	1	1	1							
SSM000005	030422	030422	1	1	1			1				
SSM000008	040323	041207	4	3	3	2	2	3	3	1	1	2
SSM000009	040405	040405	1									
SSM000010	040323	041207	4	3	3	2	2	3	3	1	1	2
SSM000011	040405	040405	1									
SSM000012	040323	041130	4	3	3	2	2	3	3	1	1	2
SSM000014	040323	041130	4	3	3	1	2	3	3	1	1	2
SSM000016	040323	041130	4	3	3	2	2	3	2	1	1	2
SSM000017	040506	040506	1									
SSM000018	040323	041130	4	3	3	2	2	3	2	1	1	2
SSM000019	040506	040506	1									
SSM000020	040323	041202	4	3	3	1	2	3	2	1	1	2
SSM000021	040506	040506	1									
SSM000022	040323	041202	4	3	3	2	2	3	3	1	1	2
SSM000024	040325	041202	4	3	3	2	2	3	3	1	1	2
SSM000026	040325	041202	4	3	3	2	2	3	1	1	1	2
SSM000027	040928	050330	1	1	1	1	1	1		1		1
SSM000029	040916	040916	1	1	1	1	1	1	1	1	1	1
SSM000030	040927	050330	1	1	1	1	1	1	1	1	1	1
SSM000031	040909	050322	2	1	1	1	1	1		1	1	1
SSM000034	040914	040914	1	1	1	1	1	1	1	1	1	1
SSM000035	040923	050330	1									
SSM000037	040916	050322	1	1	1	1		1	1	1	1	1
SSM000039	040909	050322	2	1	1	1	1	1	1	1	1	1
SSM000040	040909	050322	2	1	1			1		1		
SSM000041	040923	050322	1									
SSM000042	040923	050322	2									
Soil tubes at 'Higher' levels			16	11	11	5	6	10	6	3	3	6
Soil tubes at 'Lower' levels			47	30	30	20	20	30	24	15	13	21
All soil tubes			63	41	41	25	26	40	30	18	16	27

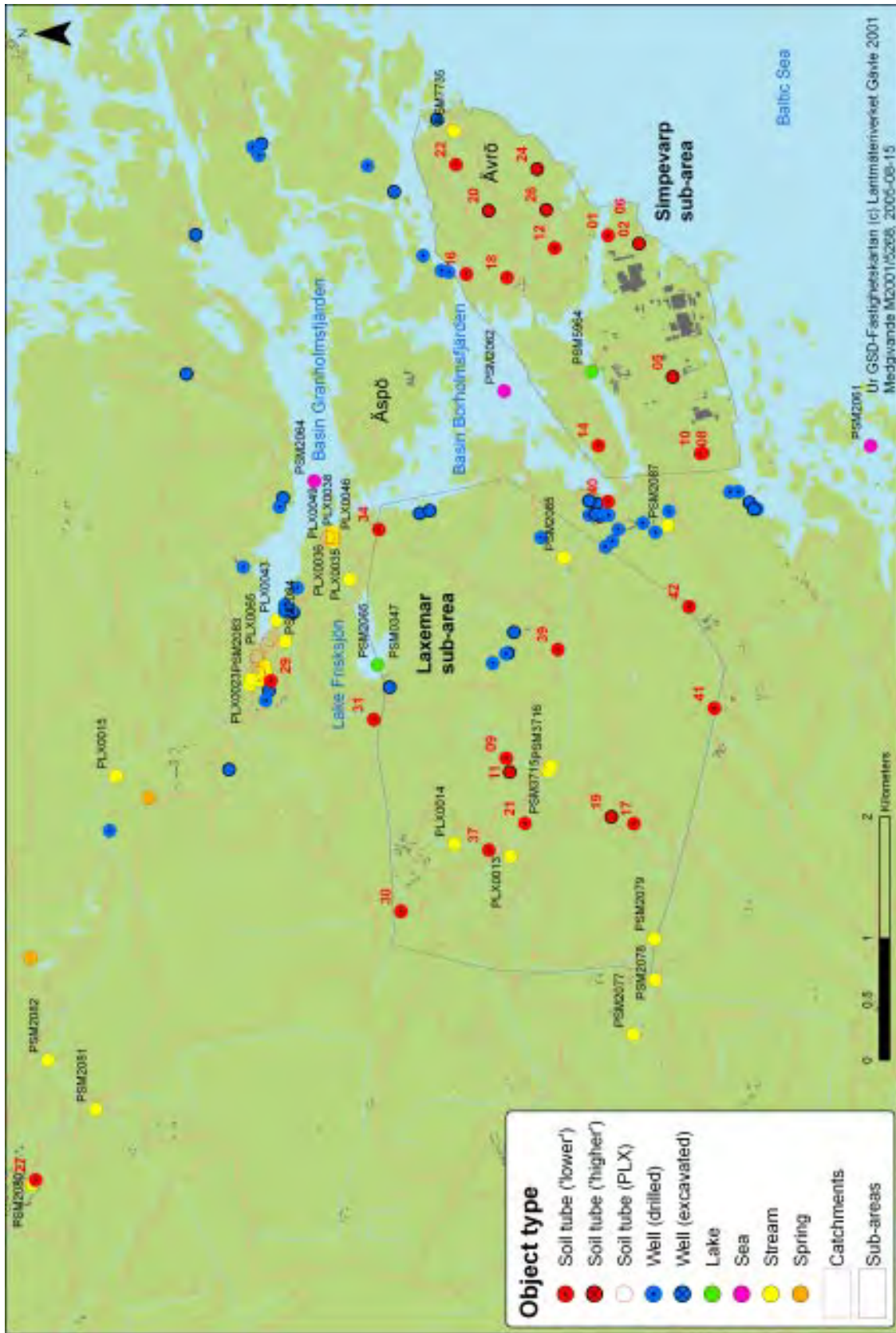


Figure 3-3. Map showing the spatial distribution of soil tubes and private wells in surface waters are marked in this map for orientation. Identities for soil tubes are marked in red (SSM0000XX). See Section 4.2 for an explanation of the soil tube categories 'higher' and 'lower'.



**Table 3-7. Parameters included in the different categories that are listed in Table 3-6.**

Example	Other parameters in the category
pH	Conductivity
Na	K, Ca, Mg, HCO <sub>3</sub> , Cl, SO <sub>4</sub> , Br, F, Li, Sr, Si
Fe	Mn
Fe(II)	Fe(tot)
S2	
D	Tr, O-18
C-13	C-14, S-34, B-10. Cl-37, Sr-87
La	U, Th, Sc, Rb, Y, Zr, In, Cs, Ba, Hf, Tl, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu, As, Cd, Hg, I
U-238	U-235, U-234, Th-232, Th-230
Ra-226	Rn-222

### 3.3.3 Reference data from private wells in the Simpevarp area

In addition to the sampling of soil tubes, 47 private wells have been sampled during the period 1989–2005. The sampling programme is a part of the control program for the Äspö Hardrock Laboratory. The wells were analysed 2 to 16 times during this period, giving a total of 432 analyses. These data are used both as a local reference to the soil tube data and in comparisons with regional and national data from Swedish wells. In /Morosini and Hultgren 2003/ there is a detailed description of the private wells in the Simpevarp area. The well data are also directly comparable to the national database of private wells, which makes them suitable in setting local data in a regional and national context. The private wells are also included in the maps in order to increase the spatial coverage.

In Table 3-8 the numbers of observations per well type and element are listed for the private wells and in Table 3-9 are the number of observations per well compiled. The locations of the private wells are displayed in Figure 3-3.

**Table 3-8. Private wells in the Simpevarp area. Total number of observations per element for drilled and excavated wells.**

Element		Drilled	Excavated
Aluminium	Al	248	101
Calcium	Ca	252	101
Chloride	Cl	291	134
Chemical Oxygen Demand	COD	275	129
Electrical conductivity	Cond	286	133
Fluoride	F	289	133
Iron	Fe	291	134
Bicarbonate	HCO <sub>3</sub>	285	133
Potassium	K	252	101
Magnesium	Mg	252	101
Manganese	Mn	291	134
Sodium	Na	252	101
Nitrogen as ammonium	NH <sub>4</sub> -N	291	134
Nitrogen as nitrate and nitrite	NO <sub>23</sub> -N	276	129
Nitrogen as nitrate	NO <sub>3</sub> -N	15	4
pH	pH	287	133
Phosphorus as phosphate	PO <sub>4</sub> -P	291	134
Sulphate	SO <sub>4</sub>	290	134



**Table 3-9. Private wells in the Simpevarp area. Number of observations per well for excavated (Exc) and drilled (Dri) wells.**

<b>Idcode</b>		<b>First date</b>	<b>Last date</b>	<b>Number of obs</b>	<b>Idcode</b>		<b>First date</b>	<b>Last date</b>	<b>Number of obs</b>
PSM000001	Exc	890810	040824	14	PSM000027	Dri	890606	960819	8
PSM000002	Dri	890607	040824	16	PSM000028	Dri	930921	030826	10
PSM000003	Exc	890706	950814	7	PSM000030	Exc	890606	910812	3
PSM000004	Dri	890725	960827	8	PSM000031	Exc	890606	950814	7
PSM000005	Dri	890606	040824	14	PSM000032	Exc	890606	040824	8
PSM000006	Exc	890706	950814	7	PSM000033	Dri	890606	040824	15
PSM000007	Exc	890810	950814	7	PSM000034	Dri	910813	020815	8
PSM000008	Dri	930921	040824	11	PSM000035	Dri	890726	040824	15
PSM000009	Exc	890706	040824	12	PSM000036	Dri	890607	040824	16
PSM000010	Exc	890608	040824	16	PSM000037	Exc	890607	000809	8
PSM000011	Dri	890607	990812	11	PSM000038	Dri	890607	040825	16
PSM000012	Dri	890607	040826	15	PSM000039	Exc	900912	950815	6
PSM000013	Exc	890607	950815	7	PSM000040	Dri	920818	960915	5
PSM000014	Dri	890608	040824	16	PSM000041	Exc	970813	980825	2
PSM000016	Dri	890606	040824	15	PSM000045	Exc	900911	980810	6
PSM000017	Dri	890821	040824	15	PSM000046	Dri	950814	040824	9
PSM000018	Dri	970813	040824	5	PSM000047	Dri	900912	990817	9
PSM000019	Dri	970813	980914	2	PSM000048	Dri	950822	040825	9
PSM000020	Dri	890608	910814	4	PSM000049		000809	040824	5
PSM000021	Dri	890808	911006	3	PSM000053	Dri	890822	010807	12
PSM000022	Exc	890608	030820	8	PSM000116	Dri	970813	980825	2
PSM000023	Dri	890912	040825	14	PSM000117	Exc	970813	980825	2
PSM000024	Exc	890609	950815	7	PSM000124	Dri	890606	960819	8
PSM000025	Exc	890706	950814	7					

### 3.3.4 Pre-PLU study in the Laxemar subarea

A hydrogeochemical study of shallow groundwater and surface waters in the Laxemar subarea was conducted in 1998 and 1999, i.e. before the start of the present PLU-programme. This study included one sampling occasion at totally 53 sampling sites in shallow groundwater and surface water /Laaksoharju and Gurban 2006/. A broad selection of parameters was included as major and minor constituents as well as some isotopes and trace elements (*major constituents*: Ca, Mg, Na, K, Cl, HCO<sub>3</sub>, SO<sub>4</sub> and Si, *minor constituents*: PO<sub>4</sub>-P Fe, Mn, Sr and Ba, *trace elements*: Ce, Cs, Er, Eu, Ho, In, La, Li, Lu, Nd, Pr, Rb, Sc, Sm, Th, Tl, Tm, U, Y and Yb, *isotopes*: Deuterium, O-18 and Tritium, *physical parameters*: electrical conductivity and pH.

The data of the Laxemar pre-PLU soil tubes are in this report used as a reference in figures and maps, making the spatial coverage more complete. Most of these soil tubes are located in presumable discharge areas in the vicinity of Granholmsfjärden and Borholmsfjärden. Data from this study is denoted with the prefix 'PLX' in the id-codes.

In Table 3-10 are the objects in the pre-PLU study summarised.

**Table 3-10. Summary of study conducted in the Laxemar subarea before the present PLU-programme started. This study covered both observations in shallow groundwater and surface waters.**

Idcode	Shallow groundwater			Idcode	Surface water		
	Object	Info	Date		Object	Info	Date
PLX000016	Groundwater	–	980603	PLX000034	Lake water	Surface	980605
PLX000017	Private well	Excavated	980603	PLX000030	Sea water	Surface	980604
PLX000018	Spring	–	980603	PLX000031	Sea water	Surface	980604
PLX000019	Groundwater	–	980603	PLX000039	Sea water	Surface	980605
PLX000020	Spring	–	980603	PLX000040	Sea water	Surface	980605
PLX000021	Private well	Excavated	980603	PLX000013	Streaming water	Surface	980602
PLX000022	Private well	Drilled	980603	PLX000014	Streaming water	Surface	980602
PLX000028	Groundwater	–	980604	PLX000015	Streaming water	Surface	980603
PLX000029	Groundwater	–	980604	PLX000023	Streaming water	Surface	980604
PLX000032	Private well	Drilled	980604	PLX000024	Streaming water	Surface	980604
PLX000033	Private well	Excavated	980604	PLX000025	Streaming water	Surface	980604
PLX000041	Gravel-pit	–	980605	PLX000026	Streaming water	Surface	980604
PLX000042	Private well	Drilled	980605	PLX000027	Streaming water	Surface	980604
PLX000044	Soil tube	–	990215	PLX000035	Streaming water	Surface	980605
PLX000045	Soil tube	–	990215	PLX000036	Streaming water	Surface	980605
PLX000046	Soil tube	–	990215	PLX000037	Streaming water	Surface	980605
PLX000047	Soil tube	–	990215	PLX000038	Streaming water	Surface	980605
PLX000048	Soil tube	–	990215	PLX000043	Streaming water	Surface	980605
PLX000049	Soil tube	–	990215				
PLX000050	Soil tube	–	990315				
PLX000051	Soil tube	–	990315				
PLX000052	Soil tube	–	990315				
PLX000053	Soil tube	–	990315				
PLX000054	Soil tube	–	990315				
PLX000055	Soil tube	–	990315				
PLX000056	Soil tube	–	990315				
PLX000057	Soil tube	–	990315				
PLX000058	Soil tube	–	990315				
PLX000059	Soil tube	–	990415				
PLX000060	Soil tube	–	990415				
PLX000061	Soil tube	–	990415				
PLX000062	Soil tube	–	990415				
PLX000063	Soil tube	–	990415				
PLX000064	Soil tube	–	990415				
PLX000065	Soil tube	–	990415				

### 3.3.5 Reference data from the Forsmark area

When available, reference data of soil tubes and private wells from the Forsmark area are shown in box plots and statistical compilations. These data are described in /Tröjbom and Söderbäck 2006/, a parallel report to the present report of the Simpevarp area.

### 3.3.6 Reference data from the National database of private wells

A database from The Swedish Geological Survey containing data from private wells was used as reference for the major constituents of shallow groundwater /SGU 2005a/. In Table 3-11 there is a listing of the number of observations per element that was used as reference statistics. Data from excavated and drilled wells are presented separately. Excavated wells are most comparable to the soil tubes.

**Table 3-11. Number of observations from the National database of private wells used as reference statistics.**

Element		Uppsala County		Sweden	
		Excavated	Drilled	Excavated	Drilled
Aluminium	Al	46	70	1,423	1,668
Calcium	Ca	47	73	900	2,056
Chloride	Cl	66	672	6,822	12,433
Chemical Oxygen Demand	COD	9	12	5,374	2,887
Fluoride	F	66	647	1,464	9,362
Iron	Fe	66	672	4,555	11,091
Bicarbonate	HCO <sub>3</sub>	66	672	8,897	13,579
Potassium	K	56	85	974	2,223
Magnesium	Mg	56	85	1,058	2,231
Manganese	Mn	66	672	4,252	10,934
Sodium	Na	56	85	1,054	2,237
Ammonium nitrogen	NH <sub>4</sub> -N	65	669	1,611	9,805
Nitrite nitrogen	NO <sub>2</sub> -N	66	672	1,635	10,119
Nitrate nitrogen	NO <sub>3</sub> -N	66	671	1,724	10,134
pH	pH	59	667	8,948	13,745
Phosphate phosphorus	PO <sub>4</sub> -P	18	571	713	7,532
Sulphate	SO <sub>4</sub>	65	299	7,762	8,726

### 3.3.7 Reference data – trace elements

From the report 'Grundvattnets kemi i Sverige' reference data was derived for some trace metals, e.g. arsenic. These values, which represent non-disturbed shallow groundwaters, are based on data from the national and regional monitoring programmes 'Grundvattennätet' and 'PMK-grundvatten' /Naturvårdsverket 1995/.

Thorium and uranium reference data were derived from /SSI 2005/. These data, which may be assumed to represent typical conditions in Sweden, originates from a partly published research programme at SGU. During 2006, data on several more trace elements included in the same programme will be published.

For most other trace elements, e.g. rare earth metals, there are no reference data from groundwater available. As a complement, data from surface waters (lakes) are used as a reference. These data were derived from the background documents of the Swedish Environmental Quality Criteria for lakes and streams /Naturvårdsverket 1999a/ and the National survey of Swedish lakes and streams conducted at the year 2000 /IMA 2005/.

Reference data for precipitation were derived from Gårdsjön in the western part of Sweden /Eriksson 2001/.

## 3.4 Regolith

### 3.4.1 Investigations and previous evaluations

The Preliminary Site Descriptions of Simpevarp and Laxemar 1.2 include brief descriptions of the chemistry of Quaternary deposits, based on available data from the site investigations. Detailed descriptions of sampling and analytical issues are found in the reports compiled in Table 3-12.

**Table 3-12. Summary of reports containing detailed descriptions of sampling and chemical analysis of Quaternary deposits in the Simpevarp area.**

Description	SKB report number	Reference
Preliminary Site Description. Simpevarp subarea – version 1.2.	R-05-08	/SKB 2005/
Preliminary Site Description. Laxemar subarea – version 1.2.	R-06-10	/SKB 2006/
Description of surface systems. Preliminary site description Simpevarp subarea – Version 1.2.	R-05-01	/Lindborg 2005/
Description of surface systems. Preliminary site description Laxemar subarea – Version 1.2.	R-06-11	/Lindborg et al. 2006/
Simpevarp 1.2 – Description of climate, surface hydrology, and near-surface hydrogeology.	R-05-04	/Werner et al. 2005a/
Laxemar 1.2 – Description of meteorology, surface hydrology, and near-surface hydrogeology.	R-05-61	/Werner et al. 2005b/
Investigation of Quaternary deposits 2003–2004.	P-05-49	/Rudmark et al. 2005/
Depth and stratigraphy of Quaternary deposits. Preliminary site description Laxemar subarea – version 1.2.	R-05-54	/Nyman 2005/
Installation of four monitoring wells, SSM000001, SSM000002, SSM000004 and SSM000005 in the Simpevarp subarea.	P-03-80	/Ask 2003/
Drilling and installation of two monitoring wells, SSM 000006 and SSM 000007 in the Simpevarp subarea.	P-04-46	/Ask 2004/
Drilling and sampling in soil. Installation of groundwater monitoring wells.	P-04-121	/Johansson and Adestam 2004a/
Drilling and sampling in soil. Installation of groundwater monitoring wells in the Laxemar area.	P-04-317	/Johansson and Adestam 2004b/
Investigation of sediments, peat lands and wetlands. Stratigraphical and analytical data.	P-04-273	/Nilsson 2004/
Surveillance of soils and site types in the Oskarshamn area.	P-04-243	/Lundin et al. 2004a/
Soils and site types in the Oskarshamn area.	R-05-in press	/Lundin et al. in press/

### 3.4.2 Chemical data from regolith samples

The chemical analyses performed hitherto mainly include total contents of organic carbon, calcium carbonate (CaCO<sub>3</sub>), nitrogen and sulphur.

The data from till samples is limited to analysis of calcium carbonate in superficial till samples of test pits and drillings. In a near future, chemical and mineralogical analyses of till will be available. Samplings and stratigraphical observations are described by /Rudmark et al. 2005/. Compilations of hydrological and geological properties of some of the till sampling sites are presented in /Werner et al. 2005ab/.

The contents of carbon, nitrogen, hydrogen and sulphur have been analysed in sediments from peat lands and in lacustrine and marine sediments from lakes and bays. These sediments range from gyttja to glacial clay. Descriptions of samplings, detailed stratigraphical information and raw data on chemical composition are found in /Nilsson 2004/.

The chemical composition of soil has been analysed in ten typical site types in the Simpevarp area. The analyses include the contents of carbon and nitrogen in different soil horizons. A thorough description of site types and the sampling techniques is found in /Lundin et al. 2004a/.

The available chemical data from Quaternary deposits and soil in the SICADA database on May 2005 are summarised in Table 3-13. The locations of sampling sites for the categories 'till', 'sediment' and 'soil' are shown in Figure 3-4.

**Table 3-13. Compilation of available samples from till, sediments, peat and soil in the Simpevarp area. The table gives the number of objects with analyses of the categories HCNS (pH, organic carbon, nitrogen, sulphur), calcium carbonate (CaCO<sub>3</sub>), major constituents (Major) and trace elements (Trace). The different sampling campaigns are described in the SKB reports under 'Reference'. In many cases there are several sub-samples per sampling site. See Table 3-12 for further references on the SKB report numbers.**

Sample	Objekt	ID-code interval		Number of objects per category				Reference
		From	To	HCNS	CaCO <sub>3</sub>	Major	Trace	
Till	Drillings, pits	PSM002642	PSM005634	–	27	–	–	P-05-49, R-05-61
Sediment	Peat lands	PSM006562	PSM006568	7	7	–	–	P-04-273
Sediment	Lake	PSM006570	PSM006590	20	20	–	–	P-04-273
Soil	Sampling site	ASM001424	ASM001443	20	–	–	–	P-04-243

### 3.4.3 Summary of regolith data not compiled in this report

There are a few chemical data from the Simpevarp area which were not available in the SICADA database at data delivery in May 2005. These are briefly summarised below.

Seven samples of till from the Simpevarp area, sampled during the summer 2004, have been analysed for contents of various elements. These data, which were not available in the SICADA database at the time for data delivery in May 2005, are included in a report by /Lindroos 2004/ where spatial distribution of copper, lead and zinc are shown in maps.

There are some data from sediments that were collected before the present site investigation started. In a wetland at the Island of Äspö sediment cores have been sampled and analysed for chemical composition /Aggeryd et al. 1995, 1999, Landström et al. 1994/. Clay mineralogy have been analysed on a sediment core from the Basin of Borholmsfjärden, located south of the Island of Äspö /Risberg 2002/. These data were not included in the compilation due to lack of time.

Chemical and mineralogical analyses of till from a larger number of sampling sites will be available at the end of 2005.

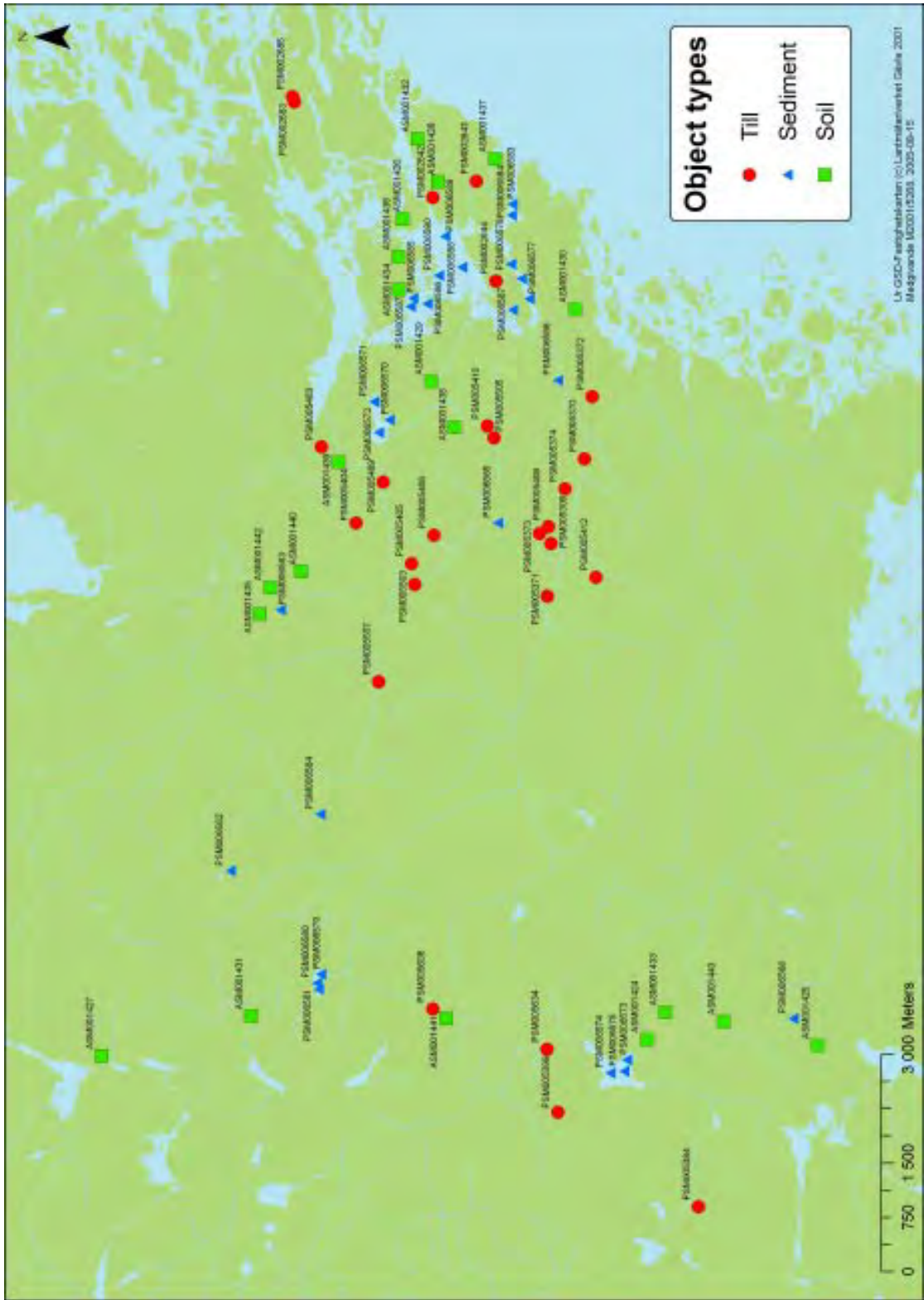


Figure 3-4. Map showing the sampling sites in till, sediments and soil in the Simpevarp area.

#### 3.4.4 Reference data from till

The geochemical database from the Geological Survey of Sweden, SGU was used to give a first general view of the chemical composition of till in the Simpevarp area. This database contains about 15,000 geochemical samples of mostly fine-grained soils, sampled at a depth of 0.6 to 1.0 m. The database, which covers more than half the area of Sweden, is judged to be representative for the country. About twenty samples are located within, or in the vicinity of the Simpevarp area /SGU 2005b/.

The geochemical database contains element analyses based on different techniques as well as on different solvents. Data presented in this report are either dissolved in *Aqua Regia* and analysed by ICP-AES technique, or analysed as total content by XRF technique.

Descriptive statistics from the geochemical database was compiled by SGU. Statistics based on all Swedish till data, as well as a subset from Kalmar County, are used as a reference to the sampling sites of the geochemical survey located in the Simpevarp area.

#### 3.4.5 Reference data from soil and peat

In the section dealing with chemical composition of soil, reference data originating from the nation wide Swedish survey of forest Soils and Vegetation (sw. *Ståndortskarteringen*) are used /SML 2005/.

#### 3.4.6 Element contents in amphibious plants

The content of trace metals in roots of amphibious plants from a national wide biogeochemical survey is compiled as an independent reference to the geochemical data presented in this report. This database contains approximately 36,000 element analyses of roots of amphibious plants collected in minor water courses. The sampled species are mainly different *Carex* species, *Fontinalis antipyretica* and *Filipendula ulmaria* /SGU 2005b/.

The content of elements measured in till gives an indication of which elements that may be available in elevated concentrations in for example groundwater and surface waters. The measurements of element content in plant roots give an integrated measure of the exposure of different elements and may indicate if some elements occur in elevated levels in the studied area. There is however no straightforward connection between the concentrations in plant roots and the concentrations in water or soil, making the evaluation of these data more or less complicated.

## **4 Statistical methods used in data evaluations**

In this section details on data handling, statistical methods, classification and presentation techniques are summarised.

### **4.1 Handling of values below reporting limits**

For many elements there is a variation in the reporting limit, sometimes depending on different analytical methods used, and sometimes because different labs use different reporting limits. Environmental factors, e.g. salinity, may also influence the reporting limits. In all statistical calculations, values below reporting limits were set to a value equivalent to half of the reporting limit. When different reporting limits occur for a single object, the highest limit is shown in statistics and figures.

### **4.2 Classification of soil tubes**

In order to condense and aggregate soil tube characteristics, statistics are shown for a few categories, besides values for individual soil tubes.

A factor that probably is important for the chemical composition of groundwater is whether the soil tube is located in a recharge or discharge area. When the present report was compiled, no definitive hydrological classification with respect to the direction of the groundwater flow was available. The classification used in this report is therefore based on coarse topographical considerations only, and should be regarded as a preliminary classification of the soil tubes as to whether they are situated in either recharge or discharge areas. Most of the soil tubes were classified by the hydrogeochemical modelling group, ChemNet, as reported in /SKB 2005/, based on GIS modelling results and the high resolution Digital Elevation Model displayed in Figures 2-2 and 2-5. This classification was used in the present work. For the soil tubes not considered by ChemNet, a similar topographically based classification was made as a part of this work.

To stress the preliminary nature of this classification, the soil tubes located in presumably recharge areas are termed 'higher' and tubes located in presumably discharge areas 'lower'. This designation reflects the fact that recharge areas usually are found at local topographical maxima and that discharge areas are found in lower points of the landscape, e.g. in the bottom of valleys or near lakes and streams (Figure 3-3). As shown in Figure 3-3, 22 soil tube locations were classified as 'lower' and 7 as 'higher'.



### 4.3 Presentation techniques for comparisons among sampling sites

For data on water chemistry, the parameter values from individual sampling sites are compared among sites and with reference data by their statistical distributions. The statistical properties used in figures and tables are minimum, maximum, the 10-, 25-, 50- (median), 75- and 90-percentiles and the mean. The exact values of these properties, together with observation count, standard deviation and coefficient of variation (CV) are found in Appendices 1–3, where statistics for all parameters are compiled.

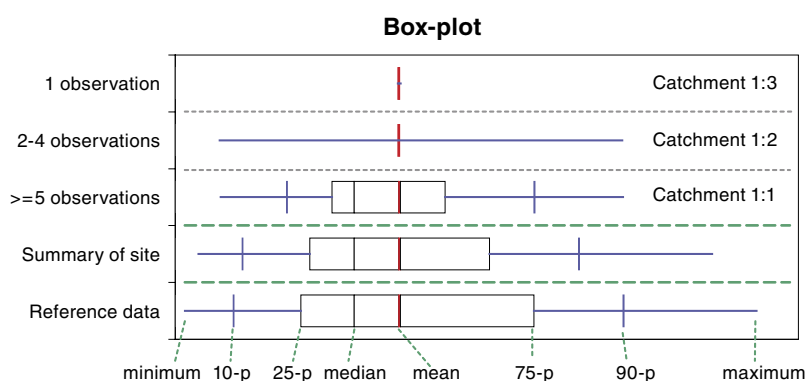
Box-plots are used to visualise the statistical distributions of the data. Depending on the amount of data available are the individual boxes more or less complete. When there are at least five observations, a full box including all statistical properties above is shown. When there is one observation available, only the mean is shown. When there are 2–4 observations, the minimum, mean and maximum values are shown (Figure 4-1).

Each sampling site for surface water is identified on the left side of the box-plot by the name, the last four digits of the ID-code in brackets, and, for surface water from lakes and the sea, a letter denoting if it is a surface ('S') or a bottom sample ('B'). For example, surface samples from Lake Götemar have the following identity: **Götemar (2066) S**.

For shallow groundwater, each soil tube is identified on the left side of the box-plot by the ID-code, the classification in 'higher' (H) or 'lower' (L) location (see Section 4.2 for the rationale behind the classification), and the sub-catchment number. For example has the 'lower' located soil tube at the Island of Ävrö in sub-catchment 23:1 the identity **SSM000022 (L23:1)**.

In the box-plots, sampling sites situated in different sub-catchments are separated by horizontal broken lines. The objects found in the top of the figures are part of the northernmost catchment. Additionally, all sub-catchments are assorted by the position in the water system when possible, i.e. the water flows from upstream to downstream in each catchment.

When possible, data were compared with local, regional and national reference data, marked as 'reference' in the box-plots. The different reference data sets used are described earlier in this report.



**Figure 4-1.** The construction of box-plots, showing statistical distributions of parameter values for individual sampling sites or soil tubes, and for different categories (summary of site). The corresponding distributions for local, regional and national reference data are included under 'Reference data'. 10-p denotes the 10<sup>th</sup> percentile etcetera.

When applicable, the colour scale of the Swedish Environmental Quality Criteria is included in the box-plots. The meaning of the different colours differs depending on the parameter and usually ranges from low (blue) to high (red). The scale often refers to statistical distributions and is not necessarily coupled to 'good' or 'bad' conditions.

#### **4.4 Spatial variation**

The spatial variation in the area is outlined in maps, where concentration differences are visualised by dots of different sizes, representing the arithmetic mean values for the individual objects. An automatic algorithm in ArcGis called 'natural breaks', is in most cases used in order to find five to eight suitable classes. This method enhances the differences by making a non-linear scale, which should be held in mind when the maps are evaluated.

In maps visualising the spatial variation in shallow groundwater from soil tubes, also private wells and surface waters of lakes, streams and sea are included. By this, it is possible to relate the concentrations in the shallow groundwater from soil tubes to corresponding levels in adjacent wells and surface waters.

#### **4.5 Temporal variation**

The time trends and temporal variation in surface water chemistry are visualised in scatter plots, where all observations from each sampling site are included. An evaluation of temporal variation and time-trends in shallow groundwater from soil tubes was not possible due to the limited number of observations available (1–3 per soil tube).

There are, however, time-series available from a few private wells in the Simpevarp area, sampled once a year during the period 1989 to 2004. It should be noted that altered usage of the wells may cause changes in chemical composition of groundwater. As there is no information available about water usage, these data should be evaluated cautiously.

#### **4.6 Relationships among elements and among sampling sites**

The relationships among both the sampling sites and the different chemical parameters were investigated by applying a Principal Component Analysis (PCA). A PCA was performed separately for surface water, groundwater and regolith, respectively. In the PCA, mean values from each sampling site were used in order to isolate the spatial variation. The PCA analysis reveals underlying factors that influence the parameters to different extent. By comparing the co-variation (the loadings) between the parameters and these factors, conclusions could be drawn about the relationships among parameters and parameter groups. The analysis also reveals the influence from individual objects (scores), making it possible to identify soil tubes with similar properties. The PCA was based on a Pearson correlation matrix, with scaled and centred data. No transformations were made prior to the analysis. Missing data was handled by an automatic algorithm, which replace the missing values with the overall mean of the parameter.

In order to facilitate an interpretation of the processes involved in the forming of the chemical composition of shallow groundwater, a selection of *ratios* between elements or chemical species is presented. Ratios are calculated both between major elements and between environmental isotopes. To reveal rock-water interactions affecting the chemical composition of the shallow groundwater, *saturation indexes* were calculated for several minerals. The thermodynamic database WATEQ4F was used in these calculations /USGS 2005/. For some of the parameters and parameter groups *correlation plots* and *correlation matrices* are shown in order to facilitate the evaluation.

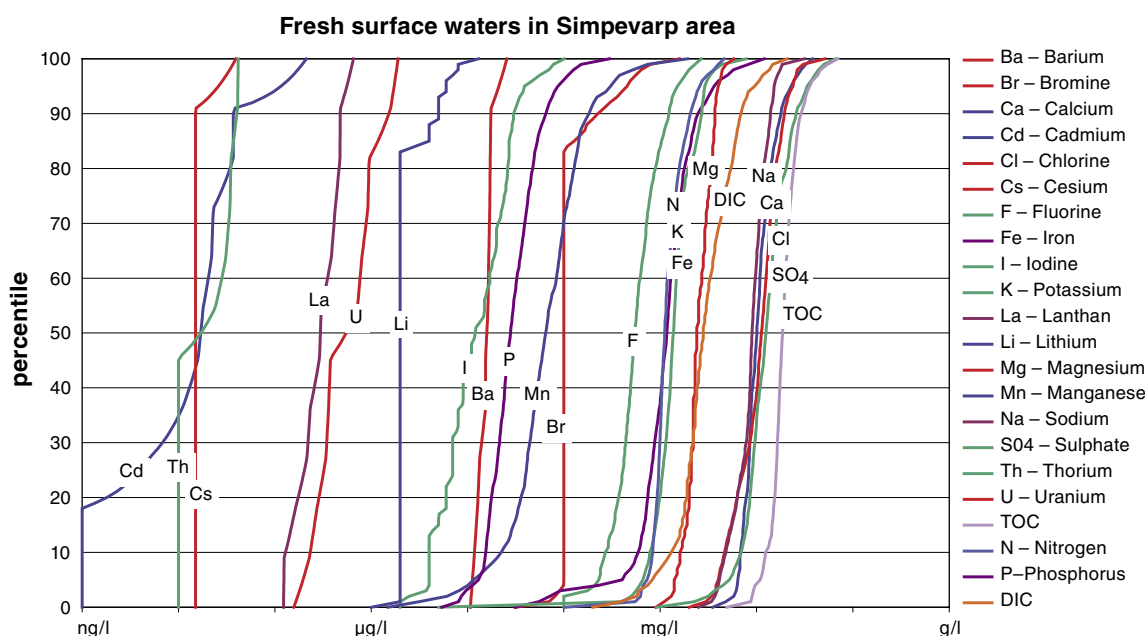
## 5 Surface water – presentation and evaluation of primary data

The evaluation of the chemical composition of surface water in the Simpevarp area consists of three major steps that are presented in parallel per element or element group. In the first step, comparisons among objects within the Simpevarp area, as well as with national and regional reference data, are made. In the second step, the spatial distributions are evaluated in maps, and finally are the temporal variations explored by plots of time series.

The compilation of primary data has been divided into six parts, dealing with different parameter groups. These are; nutrient salts, dissolved ions, acidity and alkalinity, trace elements, isotopes, and miscellaneous parameters including field measurements. In the seventh and last part, the relationships among the variables are briefly explored.

### 5.1 Parameter overview

In the SICADA database there are about seventy different chemical parameters, including isotopes and trace elements, measured in the surface waters. In Figure 5-1 the concentration distributions in samples from lakes and streams are shown for a selection of these parameters. Data from brackish water were excluded since they represent an area far beyond the Simpevarp area.



**Figure 5-1.** Concentration distributions for a selection of parameters measured in fresh surface waters in the Simpevarp area. The partly straight lines for thorium, lithium and bromide are caused by observations below the reporting limit which were given half this value.

The elements occur in concentrations differing about seven orders of magnitude. The highest concentrations, found among elements such as calcium, chloride and organic carbon, range from less than a milligram per litre to almost 100 milligrams per litre. The lowest concentrations, which are found for trace elements such as cadmium, thorium and cesium, are measured in nanograms per litre.

## 5.2 Carbon, nitrogen and phosphorus – overview

In Table 5-1 are the species of carbon, nitrogen, phosphorus, sulphur and silicon compiled in order to facilitate comparisons between elements. In the following sections each element is presented separately.

**Table 5-1. Summary of carbon, nitrogen, phosphorus, sulphur and silicon in surface water in the Simpevarp area. Numbers denote median values of carbon, nitrogen, phosphorus and silicon (mg per litre). Sulphur is expressed as mg sulphate per litre.**

Idcode	Depth	Carbon				Nitrogen				Phosphorus			SO <sub>4</sub>	Si
		TOC	DOC	POC	DIC	tot-N	NO <sub>23</sub> -N	NH <sub>4</sub> -N	PON	tot-P	PO <sub>4</sub> -P	POP		
<b>Streaming water</b>														
PSM002068	Surface	22	20	2.0	2.7	1.2	0.19	0.063	0.12	0.026	0.003	0.016	7.3	5.6
PSM002069	Surface	17	17	0.6	2.5	1.0	0.12	0.020	0.06	0.017	0.001	0.008	9.0	4.3
PSM002070	Surface	19	19	1.1	5.2	1.1	0.19	0.061	0.08	0.026	0.006	0.016	7.1	7.1
PSM002071	Surface	15	15	1.1	3.2	0.9	0.18	0.052	0.07	0.022	0.003	0.011	12	5.7
PSM002072	Surface	30	30	0.4	0.6	1.0	0.04	0.025	0.03	0.024	0.004	0.004	2.9	5.0
PSM002075	Surface	21	21	1.0	3.9	1.2	0.16	0.065	0.08	0.030	0.006	0.014	10	8.5
PSM002076	Surface	28	27	2.6	3.4	1.9	0.14	0.142	0.18	0.053	0.012	0.025	18	11
PSM002077	Surface	18	17	1.4	2.6	1.0	0.15	0.075	0.10	0.028	0.005	0.017	12	7.3
PSM002078	Surface	18	18	0.7	0.8	1.0	0.17	0.022	0.06	0.018	0.003	0.007	14	11
PSM002079	Surface	18	17	1.4	2.4	1.0	0.19	0.072	0.10	0.030	0.005	0.017	14	7.5
PSM002080	Surface	23	22	1.0	3.2	1.1	0.15	0.046	0.12	0.022	0.003	0.020	6.9	7.2
PSM002081	Surface	23	22	1.4	3.8	1.2	0.08	0.060	0.10	0.039	0.008	0.015	8.2	9.1
PSM002082	Surface	23	23	1.7	3.1	1.4	0.28	0.068	0.14	0.038	0.007	0.021	9.4	8.9
PSM002083	Surface	22	21	1.6	2.8	1.3	0.20	0.065	0.12	0.049	0.010	0.026	13	8.5
PSM002084	Surface	21	20	1.4	4.8	1.5	0.40	0.037	0.11	0.046	0.010	0.020	26	9.2
PSM002085	Surface	21	20	1.0	12	1.8	0.50	0.052	0.09	0.044	0.008	0.015	23	10
PSM002086	Surface	26	25	1.1	2.0	2.7	0.94	0.094	0.09	0.059	0.016	0.020	44	13
PSM002087	Surface	18	18	1.6	2.7	1.2	0.23	0.063	0.12	0.037	0.007	0.021	16	8.0
PSM107735	Surface	32	32	1.1	1.3	1.4	0.16	0.076	0.07	0.026	0.004	0.010	36	8.9
<b>All streams</b>	<b>Surface</b>	<b>20</b>	<b>20</b>	<b>1.3</b>	<b>3.0</b>	<b>1.2</b>	<b>0.19</b>	<b>0.060</b>	<b>0.10</b>	<b>0.035</b>	<b>0.006</b>	<b>0.016</b>	<b>13</b>	<b>8.2</b>
<b>Lake water</b>														
PSM002065	Surface	16	16	0.66	2.2	1.1	0.18	0.081	0.089	0.023	0.0012	0.011	12	4.4
PSM002065	Bottom	16	16	0.67	2.3	1.1	0.19	0.097	0.093	0.023	0.0013	0.011	12	4.5
PSM002066	Surface	9.0	8.9	0.22	1.9	0.61	0.11	0.007	0.031	0.008	0.0003	0.004	22	2.2

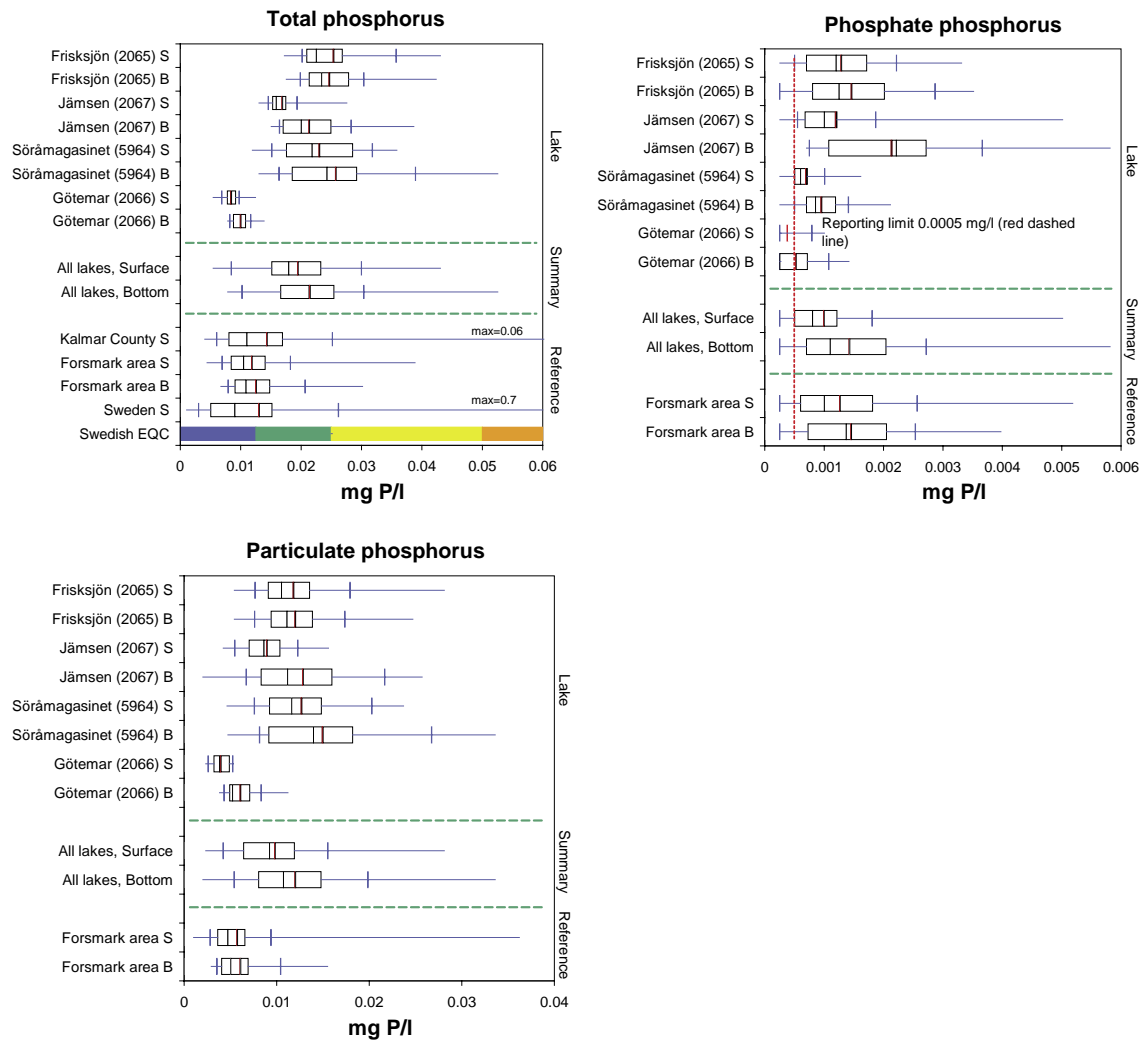
Idcode	Depth	Carbon				Nitrogen				Phosphorus				
		TOC	DOC	POC	DIC	tot-N	NO <sub>23</sub> -N	NH <sub>4</sub> -N	PON	tot-P	PO <sub>4</sub> -P	POP	SO <sub>4</sub>	Si
PSM002066	Bottom	9.2	9.2	0.27	2.1	0.65	0.18	0.037	0.038	0.010	0.0003	0.005	22	2.6
PSM002067	Surface	17	17	0.76	2.4	1.0	0.12	0.010	0.079	0.016	0.0010	0.009	9.2	4.4
PSM002067	Bottom	17.0	16	1.0	2.9	1.0	0.21	0.087	0.082	0.020	0.0022	0.011	9.6	5.1
PSM005964	Surface	12	12	0.86	6.2	0.85	0.02	0.023	0.110	0.022	0.0006	0.012	15	1.0
PSM005964	Bottom	12	12	1.0	6.4	0.86	0.03	0.037	0.119	0.024	0.0009	0.014	15	1.3
<b>All lakes</b>	<b>Surface</b>	<b>16</b>	<b>15</b>	<b>0.70</b>	<b>2.3</b>	<b>0.95</b>	<b>0.12</b>	<b>0.023</b>	<b>0.081</b>	<b>0.018</b>	<b>0.0008</b>	<b>0.009</b>	<b>12</b>	<b>3.9</b>
All lakes	Bottom	16	15	0.80	2.7	1.0	0.16	0.057	0.082	0.021	0.0011	0.011	12	4.2
<b>Sea water</b>														
PSM002060	Surface	3.9	3.8	0.11	16	0.27	0.001	0.001	0.016	0.021	0.012	0.003	530	0.27
PSM002060	Bottom	3.8	3.7	0.10	16	0.27	0.012	0.002	0.014	0.024	0.016	0.002	540	0.34
PSM002061	Surface	4.0	4.0	0.15	16	0.29	0.000	0.002	0.026	0.022	0.010	0.004	530	0.27
PSM002061	Bottom	4.0	3.9	0.19	16	0.30	0.001	0.002	0.032	0.026	0.013	0.005	540	0.30
PSM002062	Surface	8.8	8.7	0.60	12	0.63	0.040	0.013	0.097	0.023	0.002	0.012	350	2.3
PSM002062	Bottom	7.0	6.9	0.50	13	0.60	0.040	0.033	0.083	0.022	0.002	0.011	410	1.4
PSM002063	Surface	4.4	4.4	0.18	16	0.33	0.001	0.003	0.031	0.021	0.009	0.006	520	0.26
PSM002063	Bottom	4.2	4.2	0.21	16	0.32	0.000	0.002	0.031	0.022	0.009	0.006	530	0.26
PSM002064	Surface	7.4	7.2	0.48	13	0.52	0.018	0.010	0.073	0.020	0.002	0.010	430	0.96
PSM002064	Bottom	5.4	5.2	0.35	16	0.53	0.061	0.045	0.054	0.028	0.006	0.012	490	1.1
<b>All coastal sites</b>	<b>Surface</b>	<b>4.5</b>	<b>4.6</b>	<b>0.27</b>	<b>15</b>	<b>0.37</b>	<b>0.005</b>	<b>0.004</b>	<b>0.041</b>	<b>0.021</b>	<b>0.006</b>	<b>0.007</b>	<b>500</b>	<b>0.43</b>
All coastal sites	Bottom	4.4	4.4	0.24	16	0.36	0.018	0.009	0.035	0.024	0.010	0.007	510	0.47

## 5.2.1 Phosphorus

Phosphorus and nitrogen are the main limiting factors for primary production in natural fresh and brackish waters. Phosphorus is usually considered to be the main limiting factor in fresh waters, whereas nitrogen is the limiting factor in marine environments. Phosphorus is usually highly associated to particles. The measurements of the total phosphorus concentrations are therefore highly dependent on the amount of suspended particles at the sampling occasion. Water flow in water courses and wind mixing in lakes are factors which may have important influence on the phosphorus concentrations.

### **Comparisons with regional and national data**

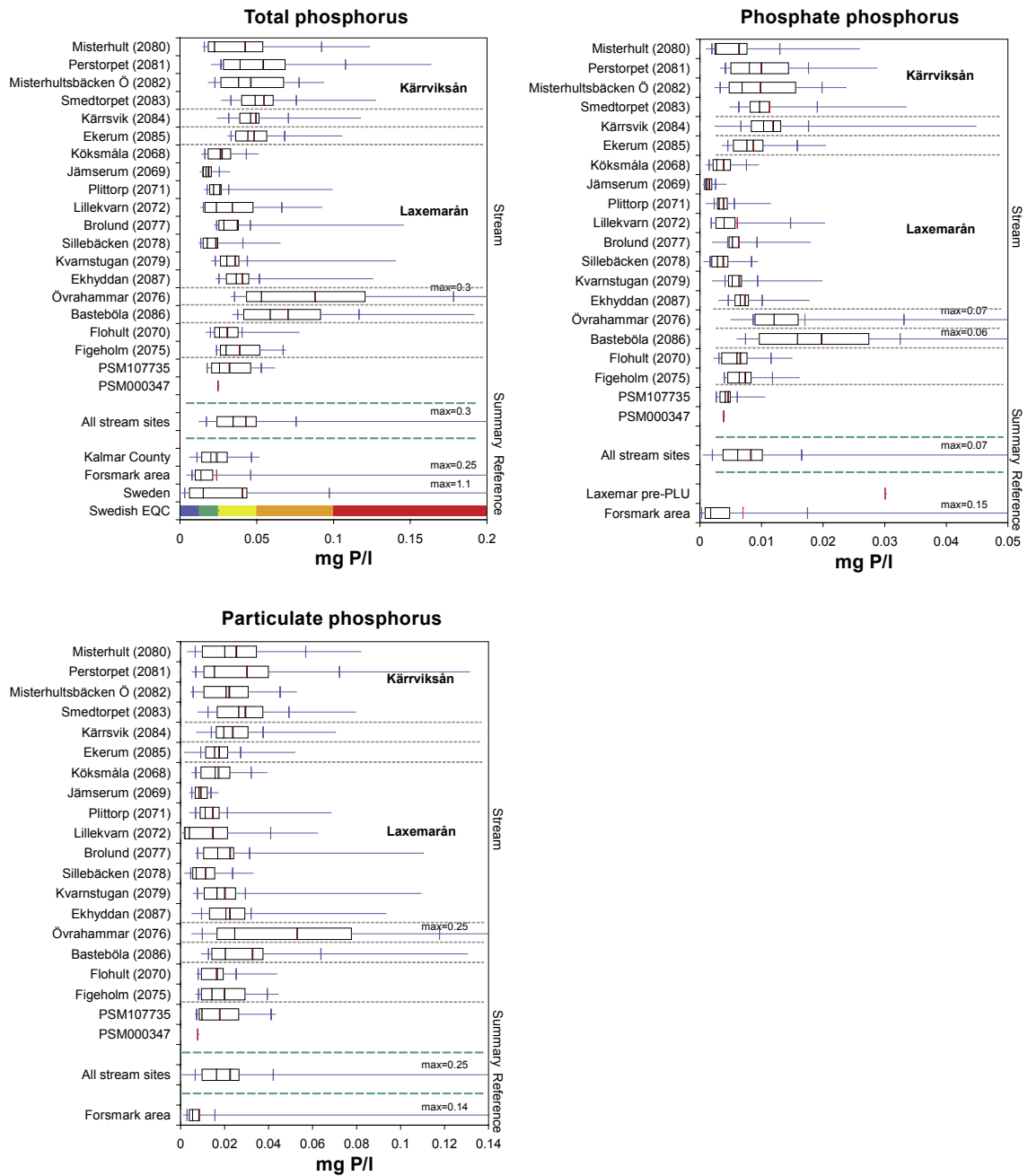
The concentrations of total phosphorus in the fresh waters of the Simpevarp area range from 'moderately high' to 'very high' according to the Swedish Environmental Quality Criteria /Naturvårdsverket 2000/. The investigated lakes in the Simpevarp area are mesotrophic according to the phosphorus levels. Lake Götemar, located north of the Simpevarp area, shows 'low' phosphorus concentrations and oligotrophic characteristics. Compared to Swedish lake and stream data from the National Survey /IMA 2005/, the phosphorus levels are elevated both in streams and lakes (Figures 5-2 and 5-3).



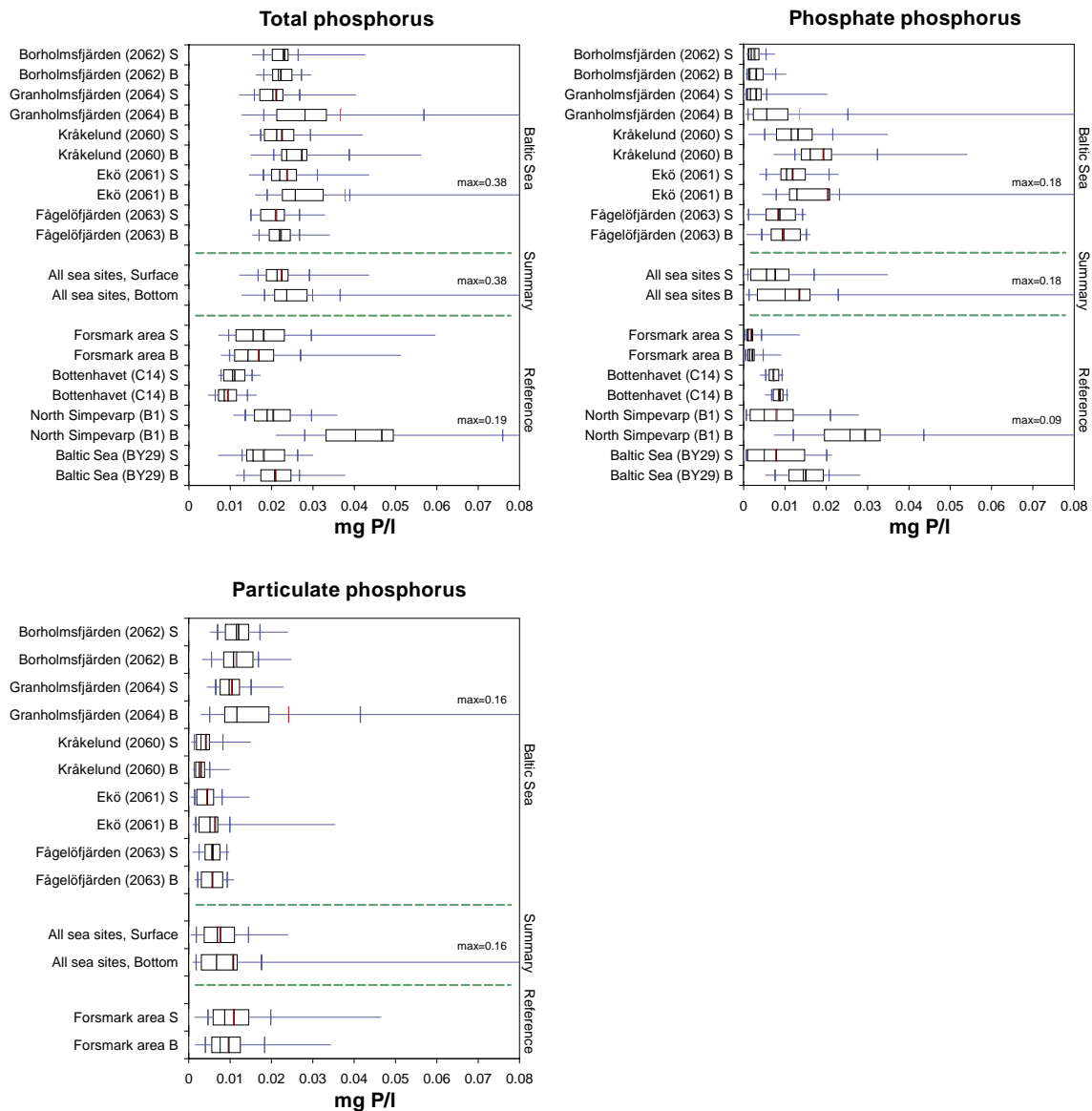
**Figure 5-2.** Concentrations of total, phosphate and particulate phosphorus species in surface (S) and bottom (B) water in lakes in the Simpevarp area.

The total phosphorus concentrations at all coastal sites in the Simpevarp area are on a level with the observations in the Baltic proper, as well as with the national reference station located north of the Simpevarp area. The Basins of Granholmsfjärden and Borholmsfjärden deviates with respect to the phosphate and particulate phosphorus species by showing lower levels of phosphate and higher levels of particulate phosphorus compared to the ‘open sea’ sites. This is probably an effect of the closed conditions in the basins and the supply of particulate organic matter from the water courses discharging into the basins (Figure 5-4).





**Figure 5-3.** Concentrations of total, phosphate and particulate phosphorus species in streams in the Simpevarp area.

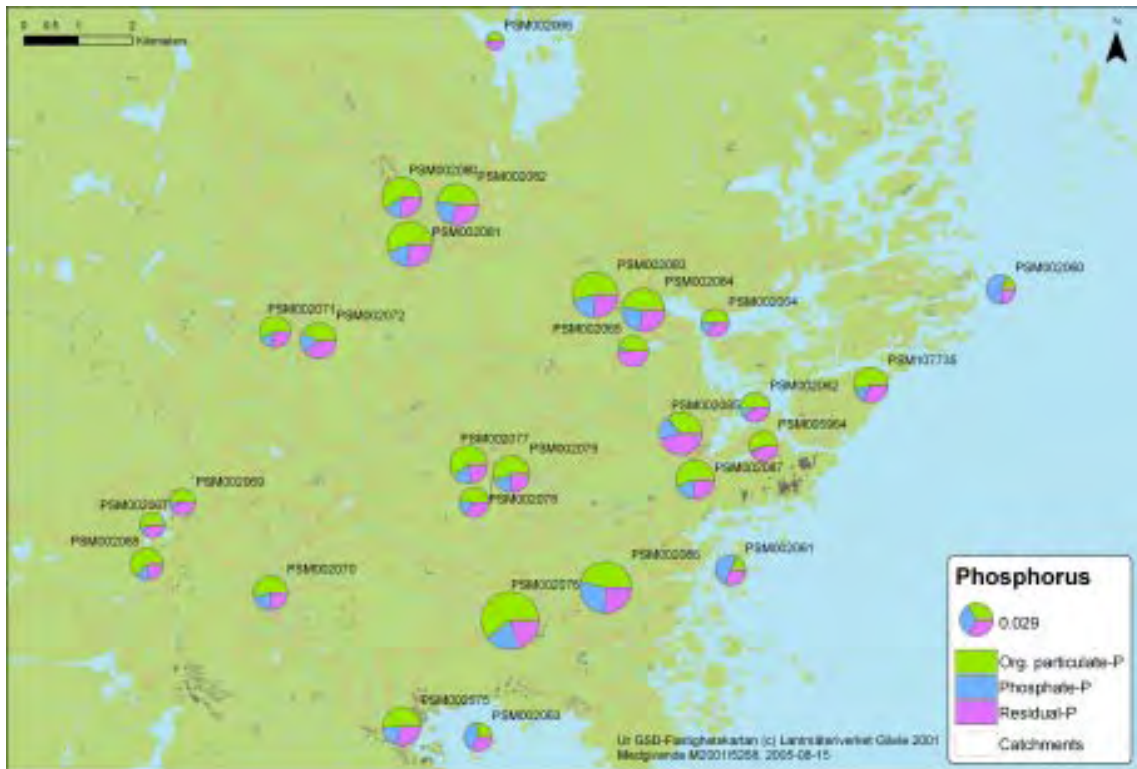


**Figure 5-4.** Concentrations of total, phosphate and particulate phosphorus species in surface (S) and bottom (B) water at the coastal sites in the Simpevarp area.

### Spatial variation within the Simpevarp area

For all three phosphorus species, there is a general tendency for increasing concentrations downstream the watercourses in the area. The highest phosphorus levels, which are found near the outlets of the streams, coincide with the areas with highest share of arable land. The catchment areas of PSM002084, PSM002085 and PSM002086 contain 12%, 13% and 18% arable land, respectively, compared to 3–5% which is typical for most stream sites in the area (Figure 5-5).

Two stream sites in the northern part of the area (PSM002081 and PSM002082) show elevated phosphorus levels, despite a low share of arable land in the catchment area.



**Figure 5-5.** Phosphorus in surface water in the Simpevarp area. The pie charts are sized proportionally to the mean concentration of total phosphorus, and the relative fraction of each phosphorus species is shown. The residual phosphorus is calculated as the difference between total phosphorus, phosphate phosphorus and particulate organic phosphorus. The lower map shows mean values of total phosphorus per sampling site.

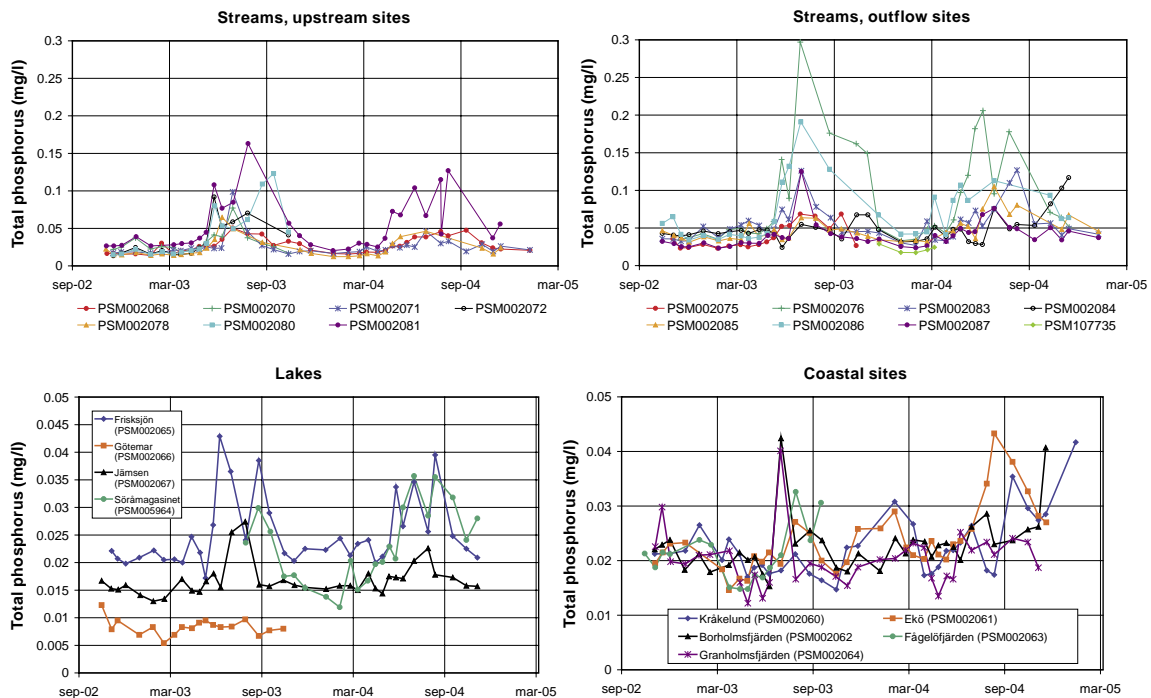
## Temporal variations

The concentrations of total phosphorus generally show a cyclic pattern, with the highest levels observed during spring/summer and the lowest during winter. This pattern, which is most evident for particulate organic phosphorus and to a minor extent for phosphate, is probably coupled to water movements, leading to elevated levels during the warm season and especially during high water flow episodes in spring (Figures 5-6 to 5-8).

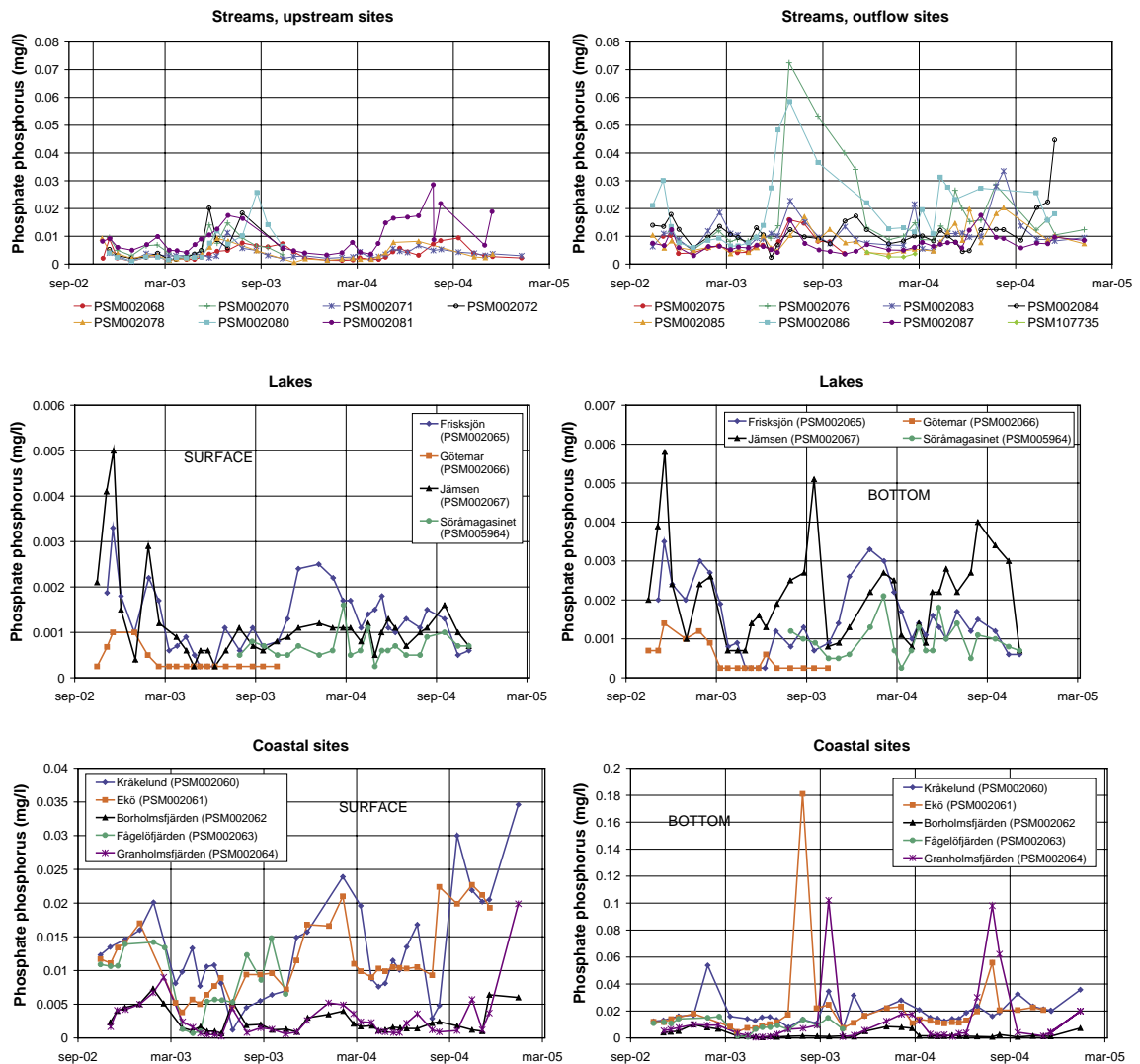
Two stream sampling sites in the south-eastern part (PSM002076 and PSM002086) show markedly elevated phosphorus levels during the summer period. These sites are located in an area with high proportion of arable land and the high levels are probably coupled to the farming activities. A similar pattern is also seen for the organic particulate species of carbon and nitrogen.

In the brown-water lakes and at the coastal sites, the particulate phosphorus shows a typical cyclic pattern coupled to the primary production and presence of phytoplankton. Phosphate phosphorus shows an opposite pattern with low levels during the growing season.

In the bottom water of both lakes and coastal sites, the level of phosphate is occasionally elevated due to release from the sediments during periods of to anoxic conditions. Lake Frisksjön and Lake Jämsen show partly different patterns with respect to release of phosphate: Lake Jämsen show elevated concentrations during both late summer and late winter, whereas the levels in Lake Frisksjön are elevated only during winter. The different conditions in the bottom water of the two lakes is probably an effect of the shallow depth of Lake Frisksjön (mean depth 1.7 m and max 2.8m) compared to Lake Jämsen (mean depth 3.7 m and max 11 m).



**Figure 5-6.** Temporal variations in the concentration of total phosphorus in streams, lakes and at coastal sites in the Simpevarp area.



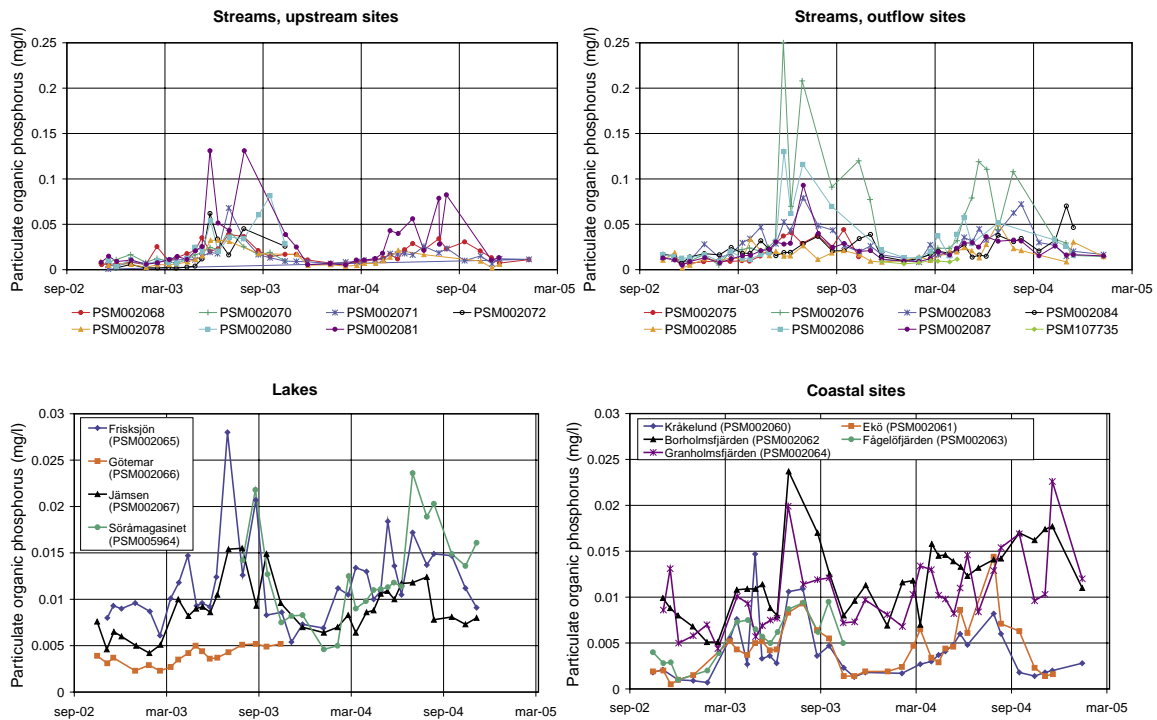
**Figure 5-7.** Temporal variations in the concentration of phosphate phosphorus in streams, lakes and at coastal sites in the Simpevarp area. For lake and coastal sites, concentrations in surface waters (left) and bottom waters (right) are shown separately.

### Typical phosphorus values in the Simpevarp area

The median total phosphorus concentrations range from 20 to 60  $\mu\text{g/l}$  in streams in the Simpevarp area. There is a substantial variation in the streams throughout the year and concentrations up to 150  $\mu\text{g/l}$  are commonly measured. In the streaming fresh waters the particulate organic phosphorus species constitutes about 50% of the total phosphorus, whereas phosphate phosphorus makes about 25%. The remaining part, approximately 25%, probably consists of phosphorus bound to inorganic particles.

In both lakes and at coastal sites, the median concentration of total phosphorus is usually about 20  $\mu\text{g/l}$ . In the ‘open sea’ sites, phosphate constitutes about half of the total phosphorus, whereas phosphate constitutes a minor fraction in the lakes and in the basins of Granholmsfjärden and Borholmsfjärden.





**Figure 5-8.** Temporal variations in the concentration of particular organic phosphorus in streams, lakes and at coastal sites in the Simpevarp area.

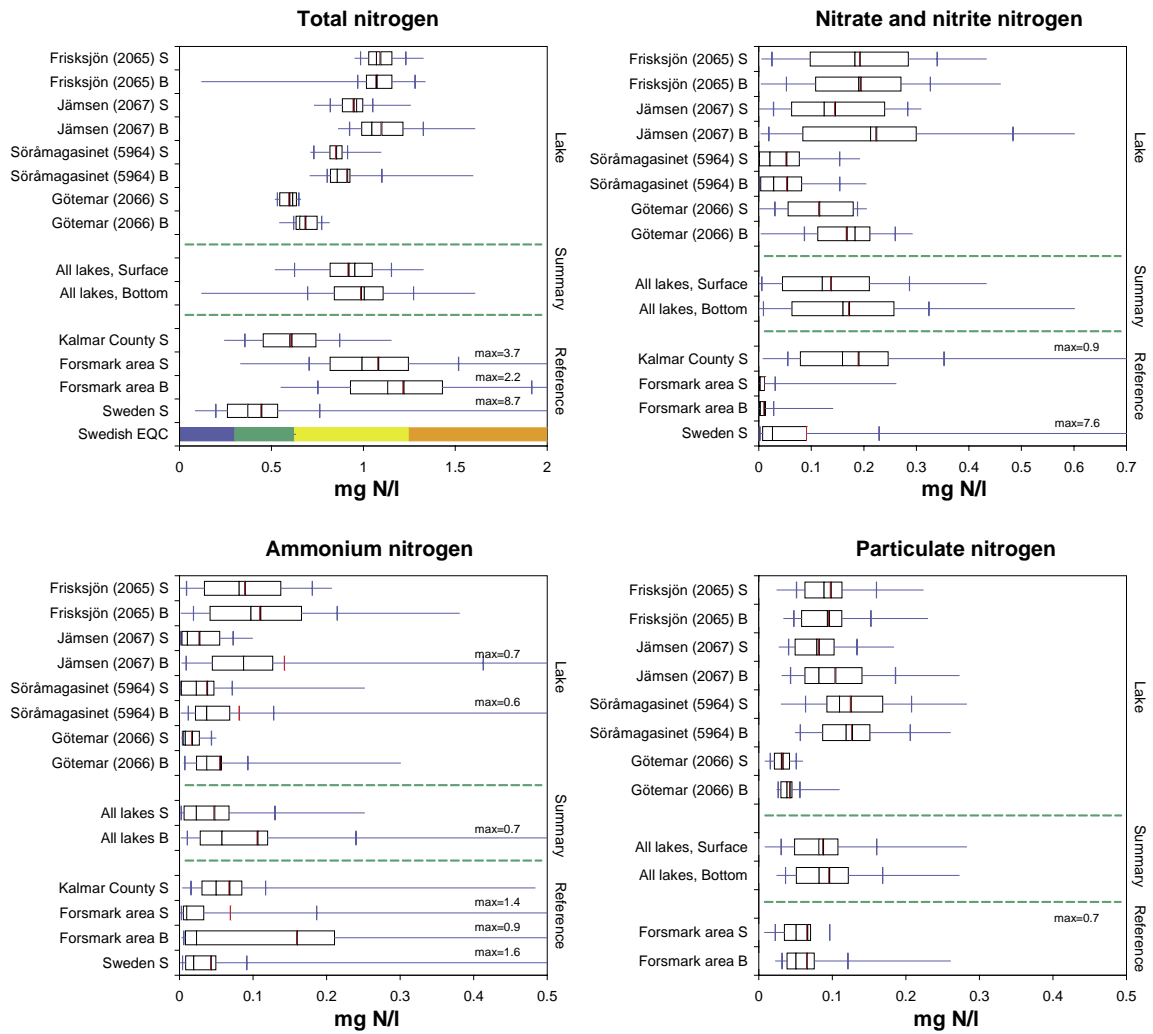
## 5.2.2 Nitrogen

Nitrogen is together with phosphorus the major limiting factors for primary production in natural fresh and brackish waters. Phosphorus is usually considered to be the main limiting factor in fresh waters, whereas nitrogen is the main limiting factor in marine environments.

### Comparisons with regional and national data

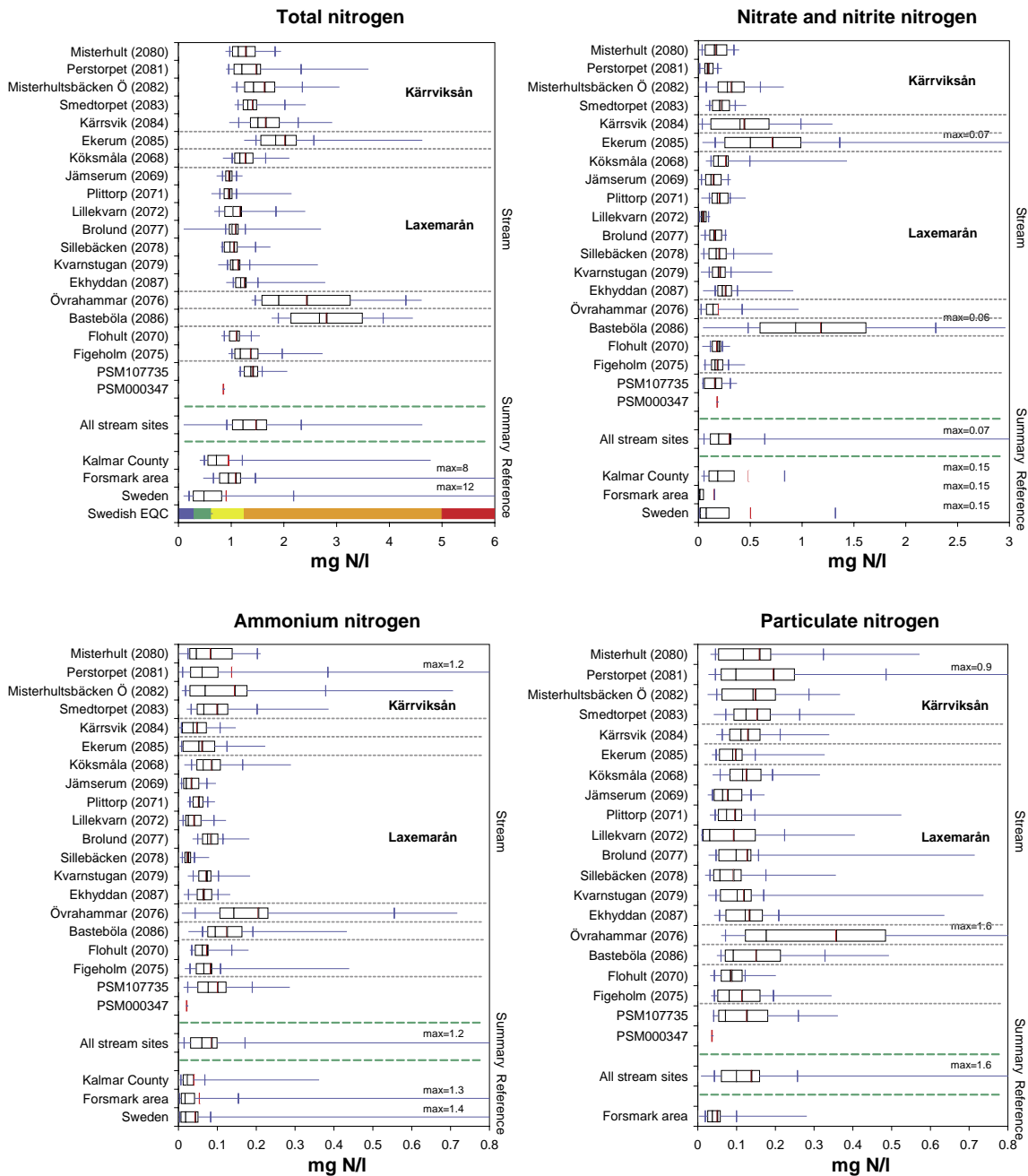
The concentrations of total nitrogen in the fresh waters of the Simpevarp area are ‘high’ according to the Swedish environmental quality criteria /Naturvårdsverket 2000/. Lake Götemar, which has oligotrophic characteristics according to the phosphorus levels, show slightly lower nitrogen concentrations compared to the mesotrophic lakes in the Simpevarp area. Compared to Swedish lake and stream data from the National Survey /IMA 2005/, the nitrogen levels are elevated both in streams and lakes (Figures 5-9 and 5-10).

The total nitrogen concentrations at the ‘open sea’ coastal sites in the Simpevarp area are normal compared with the observations in the Baltic proper, as well as with the national reference station located north of the Simpevarp area. The Basins of Granholmsfjärden and Borholmsfjärden deviates by showing highly elevated concentrations of all nitrogen species compared to the ‘open sea’ sites. This is probably an effect of the closed conditions in the basins and the supply of particulate organic matter from the water courses which discharge into the basins (Figure 5-11).

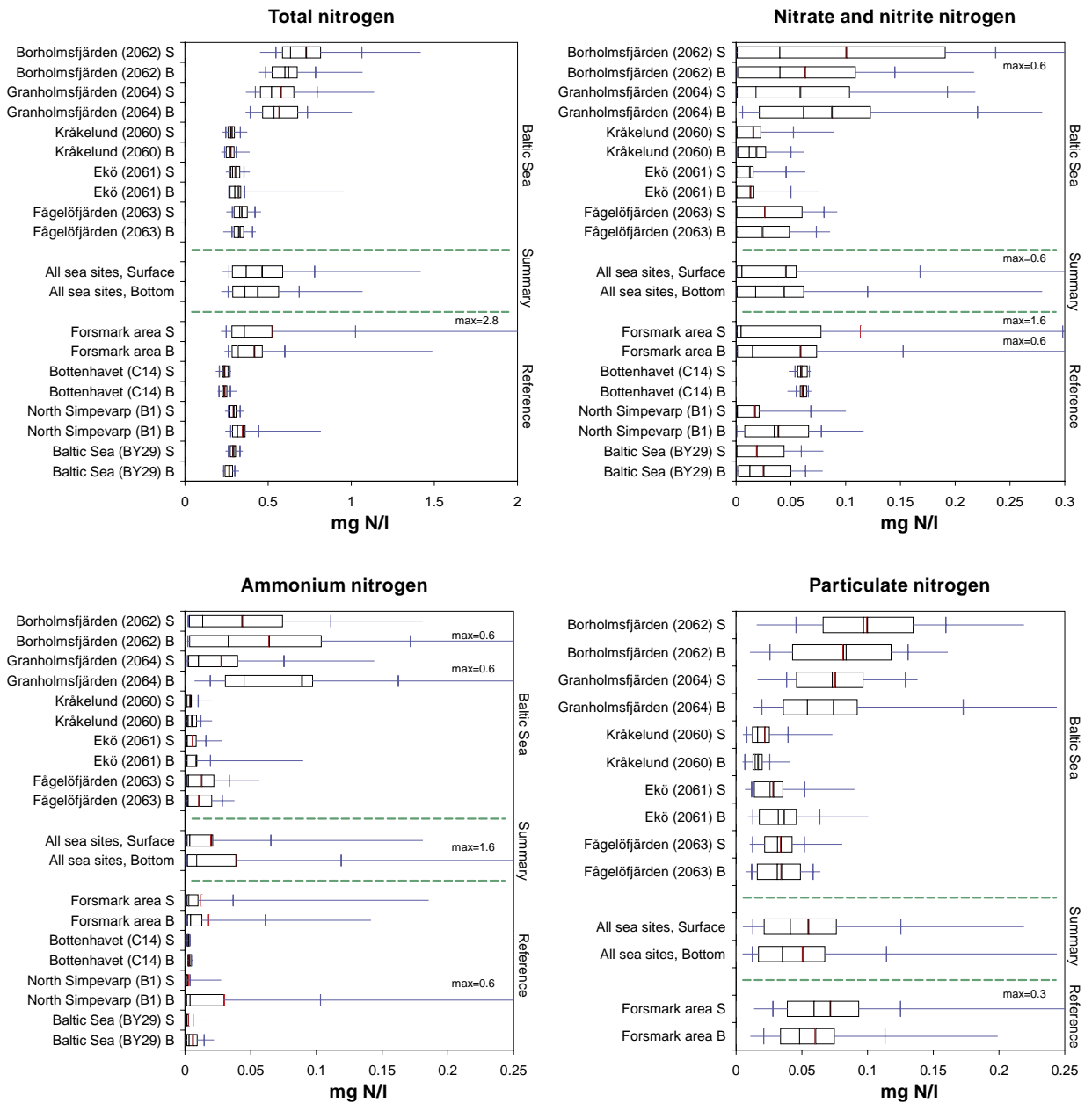


**Figure 5-9.** Concentrations of total, nitrate and nitrite, ammonium and particulate nitrogen species in surface (S) and bottom (B) water in lakes in the Simpevarp area. The low concentration measured in the bottom water in Lake Frisksjön was erroneously reported as 0.12 instead for 1.2.





**Figure 5-10.** Concentrations of total, nitrate and nitrite, ammonium and particulate nitrogen species in streams in the Simpevarp area.



**Figure 5-11.** Concentrations of total, nitrate and nitrite, ammonium and particulate nitrogen species in surface (S) and bottom (B) water at the coastal sites in the Simpevarp area.

### ***Spatial variation within the Simpevarp area***

The highest nitrogen concentrations are observed at the stream sites which drains the catchments containing large shares of arable land. The catchments of PSM002084, PSM002085 and PSM002086 contain 12%, 13% and 18% arable land respectively (Figure 5-12). Also PSM002076, close to PSM002086, shows high nitrogen concentrations, probably due to the agricultural activities in the area.

Similar to phosphorus, the nitrogen levels are elevated in the PSM002082 in the northern part of the area. Especially the ammonium fraction is occasionally elevated in both PSM002081 and PSM002082, maybe indicating a point source.

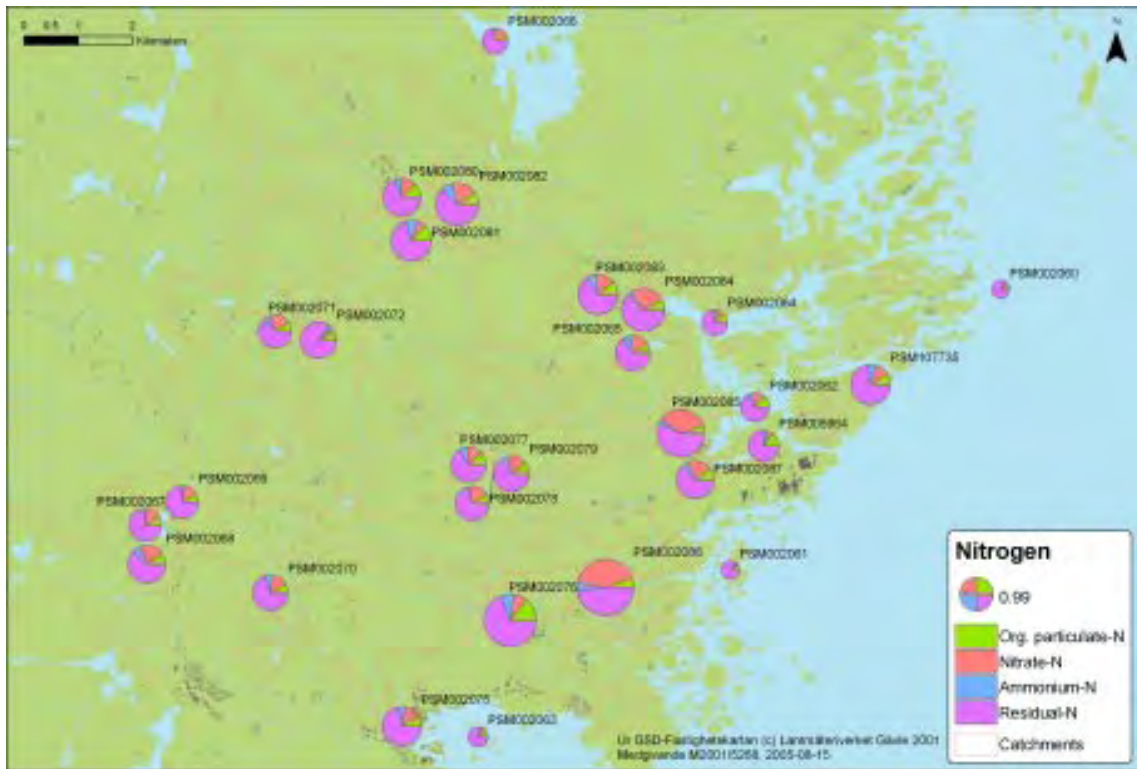
### ***Temporal variations***

The seasonal variation of total nitrogen is small and much less pronounced compared to the variation of total phosphorus in both streaming water, lake water and sea water. In the upstream sites, the levels tend to be slightly elevated during summer.

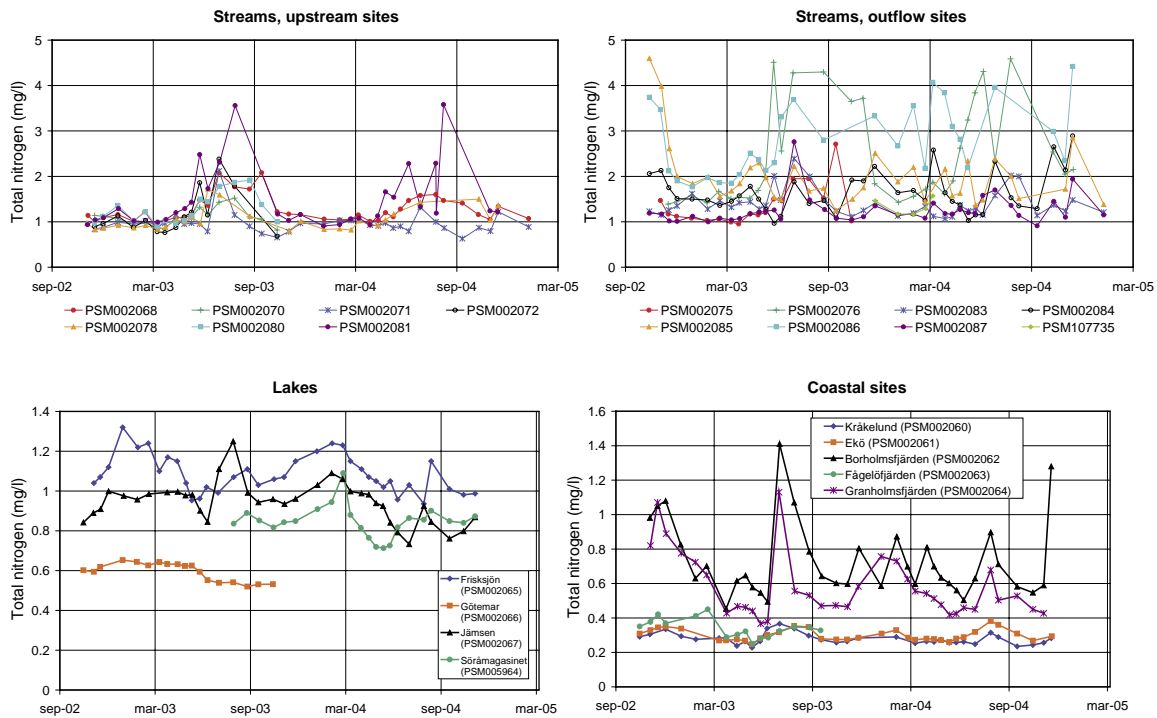
In the lakes and coastal sites, the nitrogen species of ammonium, nitrate, as well as particulate organic nitrogen, show seasonal patterns clearly coupled to the primary production of phytoplankton. During late winter, the concentration of particulate organic nitrogen is low whereas the nitrate fraction is high. In spring, when the primary production starts, the particulate organic fraction increases, accompanied by a concomitant decrease of nitrate nitrogen. In the autumn, the particulate organic fraction decreases due to reduced primary production leading to increased ammonium concentrations. During autumn and winter the ammonium nitrogen is oxidised to nitrate, leading to a time lag between the maximum concentrations of these two nitrogen species. These cycles are most evident in the lakes and in the Basins of Borholmsfjärden and Granholmsfjärden where the concentration levels are considerably higher compared to the 'open sea' coastal sites (Figures 5-13 to 5-16).

In Lake Jämsen, as well as the Basins of Borholmsfjärden and Granholmsfjärden, elevated ammonium levels during summer indicate anoxic conditions in the bottom water. In contrast, the shallow Lake Frisksjön shows elevated ammonium concentrations during winter, indicating lowered levels of dissolved oxygen.

Two sampling sites in the south-eastern part (PSM002076 and PSM002086) show markedly elevated nitrogen levels with respect to several nitrogen species, especially particulate organic nitrogen. These sites are located in an area with high share of arable land and the high levels are probably coupled to the farming activities. A concomitant pattern is also seen for the organic particulate species of carbon and phosphorus.



**Figure 5-12.** Nitrogen in the surface water in the Simpevarp area. The pie charts are sized proportionally to the mean concentration of total nitrogen, and the relative fraction of each nitrogen species is shown. The residual nitrogen is calculated as the difference between total nitrogen, nitrite, nitrate, ammonium and particulate organic nitrogen species. Mean values of total nitrogen (lower map).

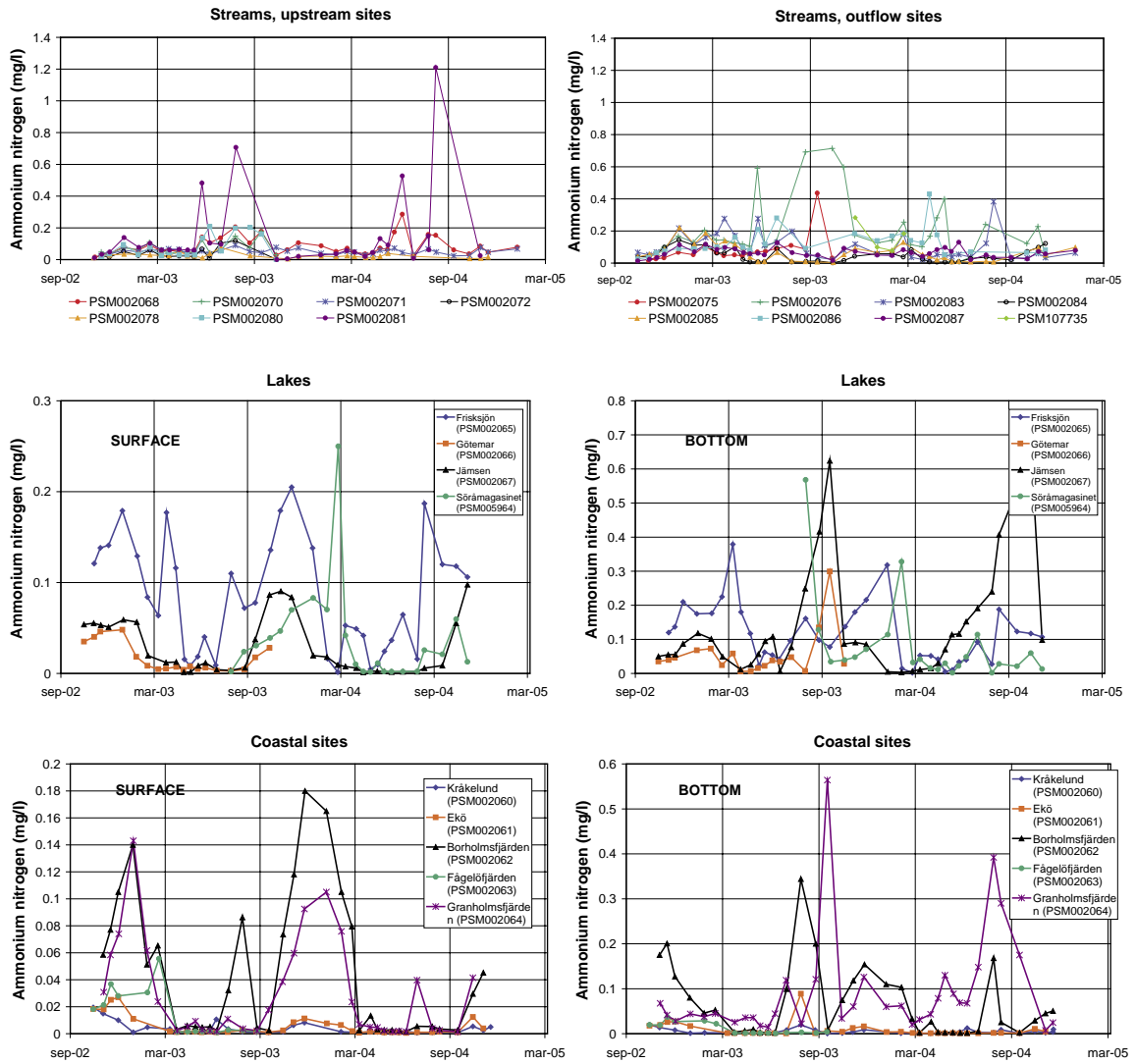


**Figure 5-13.** Temporal variations in the concentration of total nitrogen in streams, lakes and at coastal sites in the Simpevarp area.

### Typical nitrogen values in the Simpevarp area

The median total nitrogen concentration in both streams and lakes in the Simpevarp area is about 1 mg/l. The total content of nitrogen is rather constant throughout the year, whereas the nitrogen species show considerable seasonal variation. Nitrate, ammonium and particulate organic nitrogen comprises only a minor part of the observed total contents of nitrogen. The calculated residual-nitrogen constitutes about 85% on average.

In the ‘open sea’ coastal sites, median total nitrogen concentrations are about 0.3 mg/l, whereas the basins show intermediate values of about 0.6 mg/l.



**Figure 5-14.** Temporal variations in the concentration of ammonium nitrogen in streams, lakes and at coastal sites in the Simpevarp area. For lake and coastal sites concentrations in surface waters (left) and bottom waters (right) are shown separately.



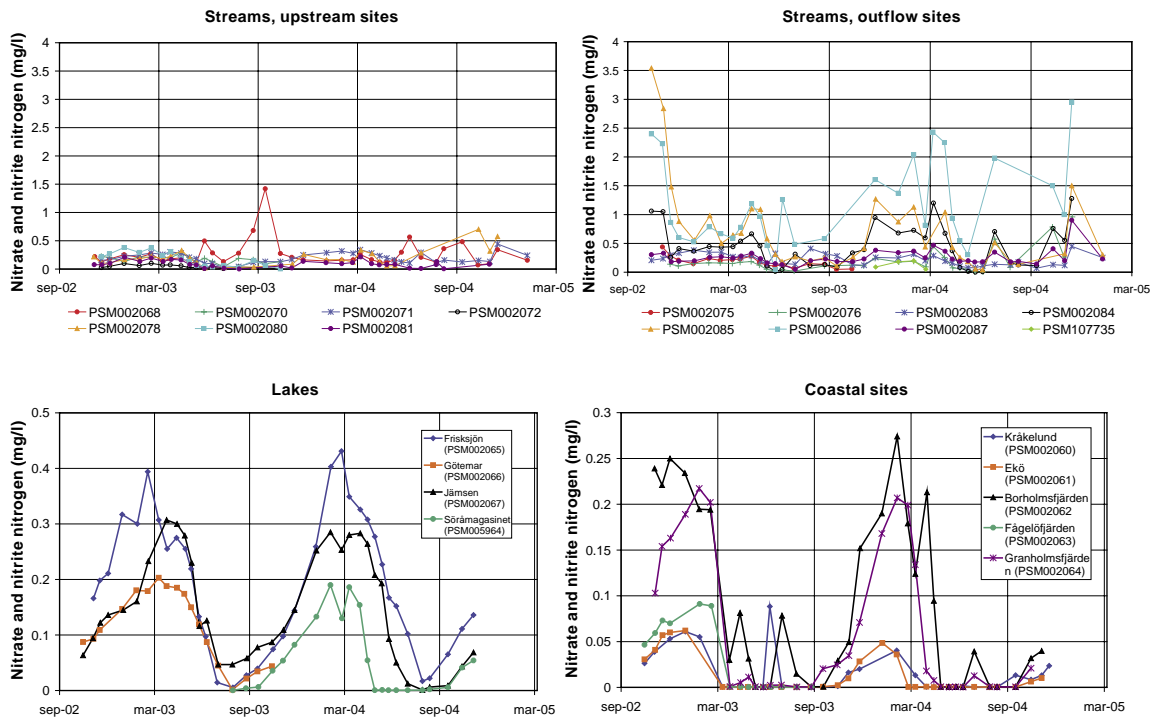


Figure 5-15. Temporal variations in the concentration of nitrate and nitrite nitrogen in streams, lakes and at coastal sites in the Simpevarp area.

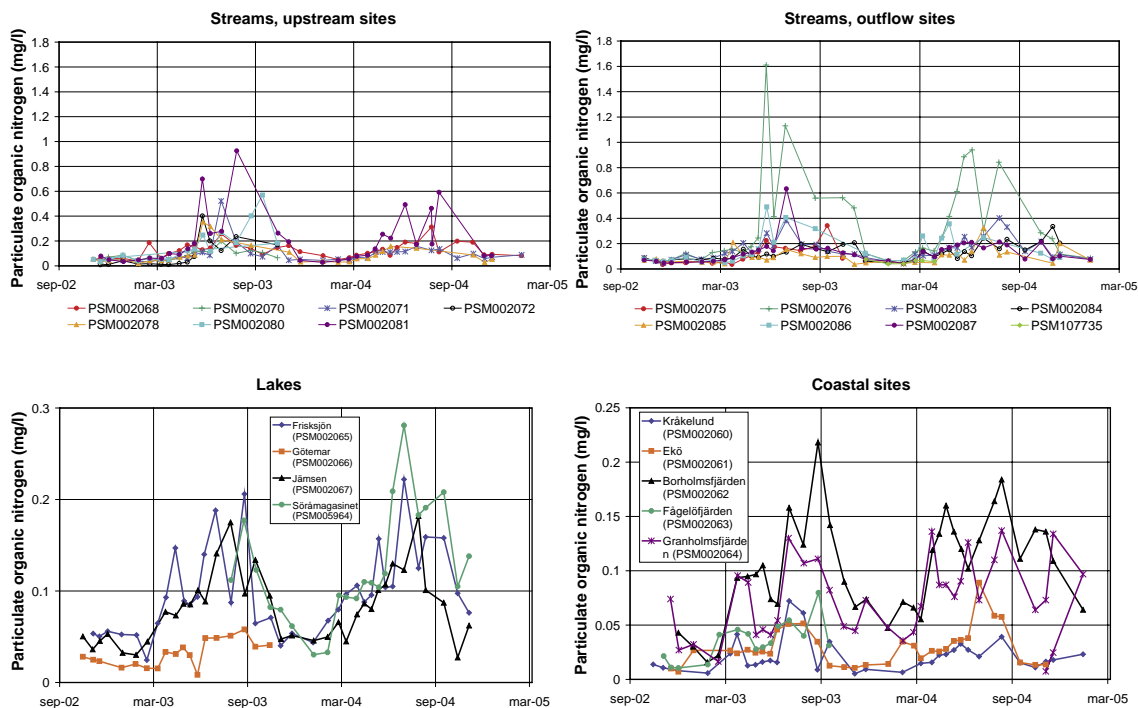


Figure 5-16. Temporal variations in the concentration of particulate organic nitrogen in streams, lakes and at coastal sites in the Simpevarp area.

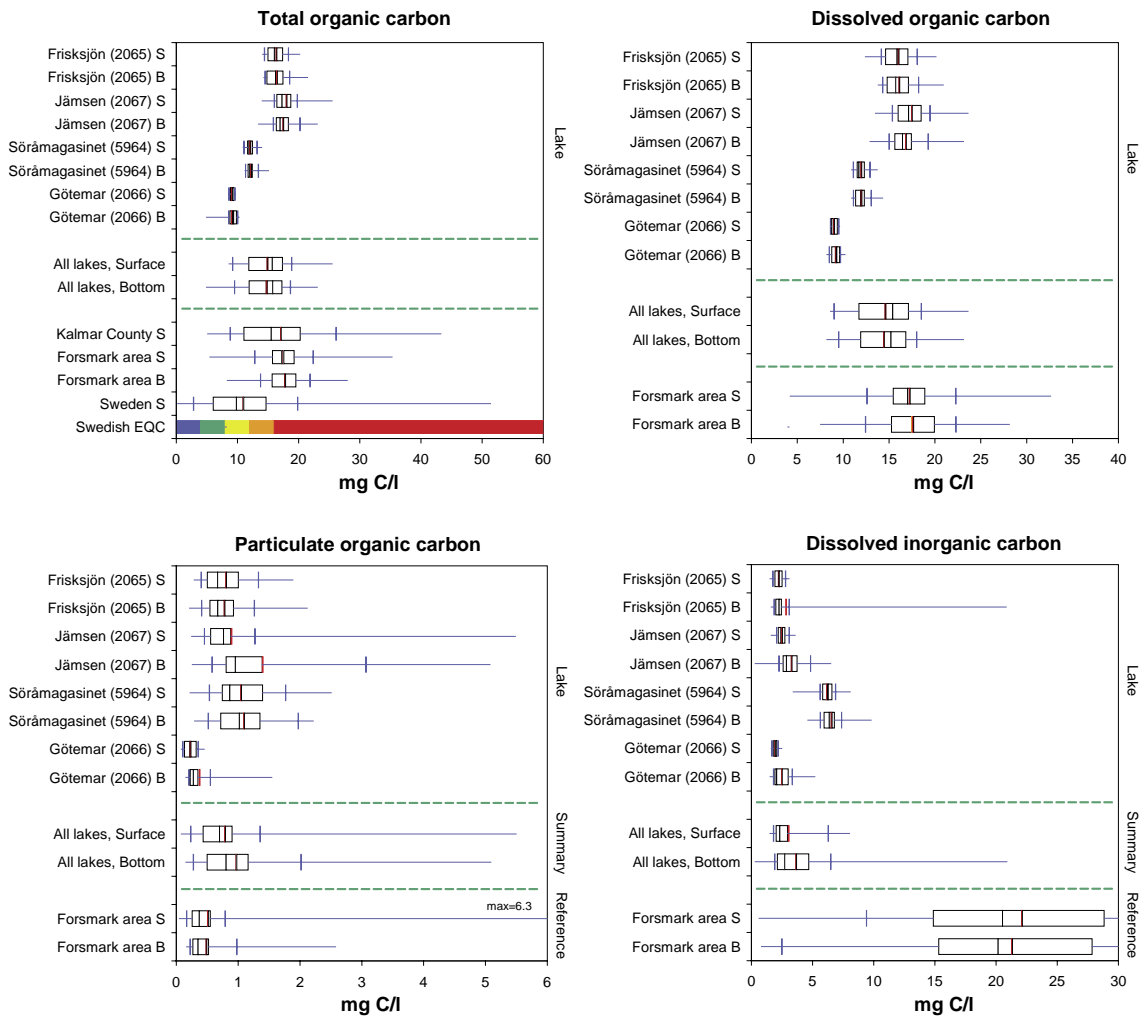


### 5.2.3 Organic and inorganic carbon

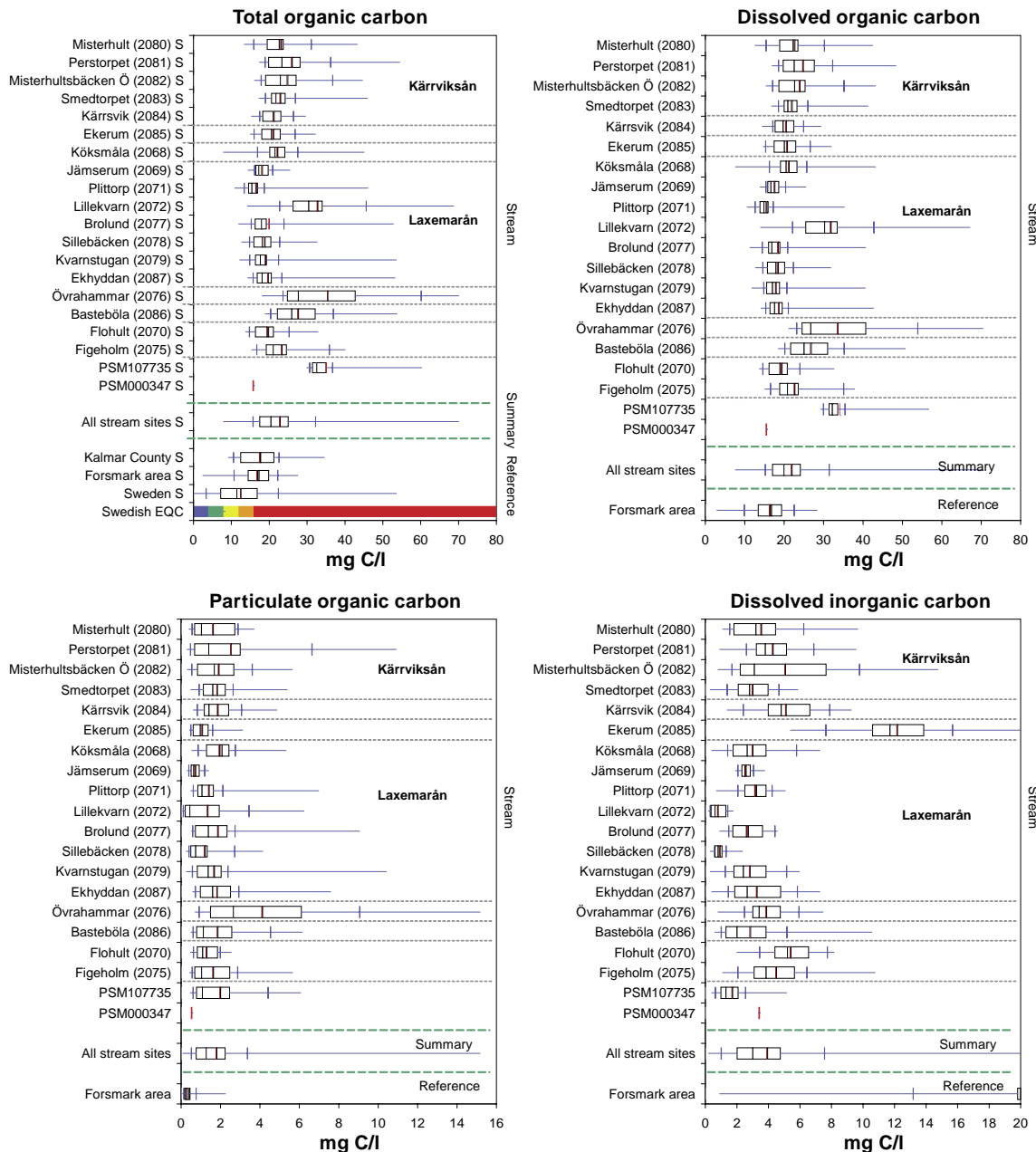
The content of organic carbon is measured both as total content and as dissolved and particulate species. In the surface waters in the Simpevarp area, the dissolved species dominate by comprising about 90% of the total organic carbon. Organic carbon originates from primary production in both terrestrial and aquatic ecosystems. The dissolved inorganic carbon, which consists mainly of bicarbonate at the prevailing pH levels, is evaluated in the section dealing with pH and alkalinity and is presented in this section only as a reference. The inorganic carbon species originates from dissolution processes of calcite and carbonic acid from organism respiration and the atmosphere.

#### Comparisons with regional and national data

The content of total organic carbon in the fresh waters of the Simpevarp area is ‘very high’ according to the Swedish environmental quality criteria /Naturvårdsverket 2000/. The oligotrophic Lake Götömar show ‘moderately high’ levels of organic carbon. Compared to Swedish lake and stream data from /IMA 2005/, the organic carbon levels are markedly elevated both in streams and lakes (Figures 5-17 and 5-18).

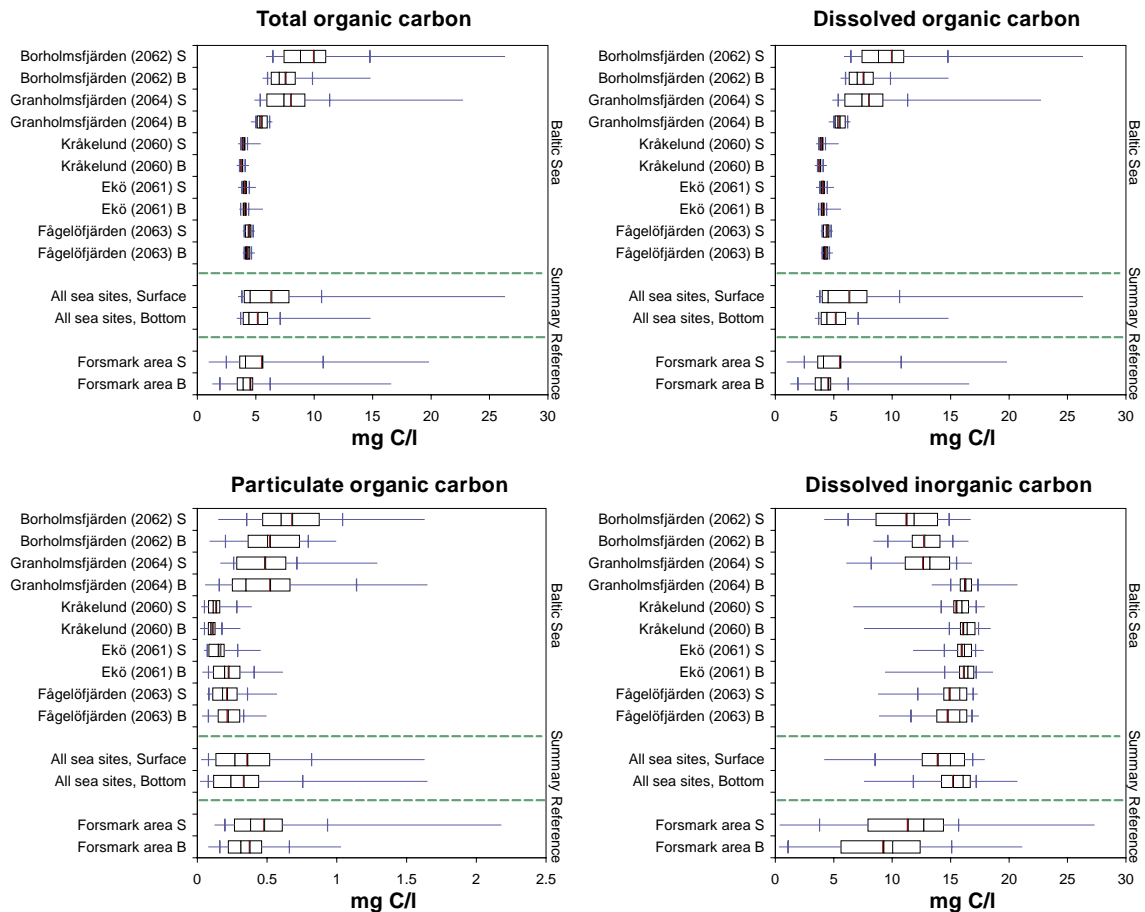


**Figure 5-17.** Concentrations of total, dissolved and particulate organic carbon species as well as contents of dissolved inorganic carbon in surface (S) and bottom (B) water in lakes in the Simpevarp area.



**Figure 5-18.** Concentrations of total, dissolved and particulate organic carbon species, as well as contents of dissolved inorganic carbon, in streams in the Simpevarp area.

The carbon content in the Basins of Granholmsfjärden and Borholmsfjärden show markedly higher content of both dissolved and particulate organic carbon species, compared to the ‘open sea’ coastal sites. Supply of particulate organic matter and dissolved organic carbon species, i.e. humic acids, probably contribute significantly to the carbon pool in these basins (Figure 5-19).



**Figure 5-19.** Concentrations of total, dissolved and particulate organic carbon species as well as contents of dissolved inorganic carbon in surface (S) and bottom (B) water at the coastal sites in the Simpevarp area.

### Spatial variation within the Simpevarp area

The high organic carbon content in the Simpevarp area is rather uniformly distributed. The few sampling sites that show deviating high contents of total organic carbon are scattered throughout the Simpevarp area, showing no large scale spatial patterns (Figure 5-20).

PSM002072 which is located high upstream in Laxemarån and dominated by forest land, show high contents of dissolved organic carbon, whereas the particulate species are rather normal in a Simpevarp context. The same applies to PSM107735 located in a small catchment at the Island of Ävrö. Humus acids is probably the major source of the dissolved organic carbon /Ericsson and Engdahl 2004a/.

PSM002076, located in the south-western part of the Simpevarp area where arable land constitutes a significant land use, shows high contents of both dissolved and particulate organic carbon species. The high carbon content, in combination with the deviating phosphorus and nitrogen levels at this site, may be an indication of an alternative source for carbon, probably coupled to the agricultural activities in the area.



**Figure 5-20.** Organic carbon in surface water in the Simpevarp area. The pie charts are sized proportionally to the mean concentration of total organic carbon, and the relative fractions of the dissolved and particulate carbon species are shown. The lower map shows mean values of total organic carbon.

## Temporal variation

The contents of organic carbon show a clear seasonal variation with generally higher values during the warm season. The variation is probably coupled to the mobility of water and transport of humus acids and other carbon compounds originating from the terrestrial ecosystems. Both particulate and dissolved organic carbon show similar seasonal patterns in the streams in the area (Figure 5-21 to 5-23).

Lake Frisksjön, Lake Jämsen and the Basins of Granholmsfjärden and Borholmsfjärden show similar seasonal patterns of total and dissolved organic carbon, which deviates from the nearly constant conditions at the other coastal sites. The general pattern is probably explained by a common climatic factor such as precipitation, which mainly affects smaller water bodies with relatively large catchments. This interpretation could explain why for example Lake Söråmagasinet, which has very small catchment, show only minor variation.

## Typical carbon values in the Simpevarp area

The typical total organic carbon concentration is about 20 mg/l in both streams and lakes in the Simpevarp area. Dissolved organic species comprises the major part of the total organic carbon. The organic carbon contents show a substantial seasonal variation, with highest values during the warm season.

In the 'open sea' coastal sites, median total organic carbon concentrations are about 4 mg/l whereas the basins show intermediate levels of about 8 mg/l.

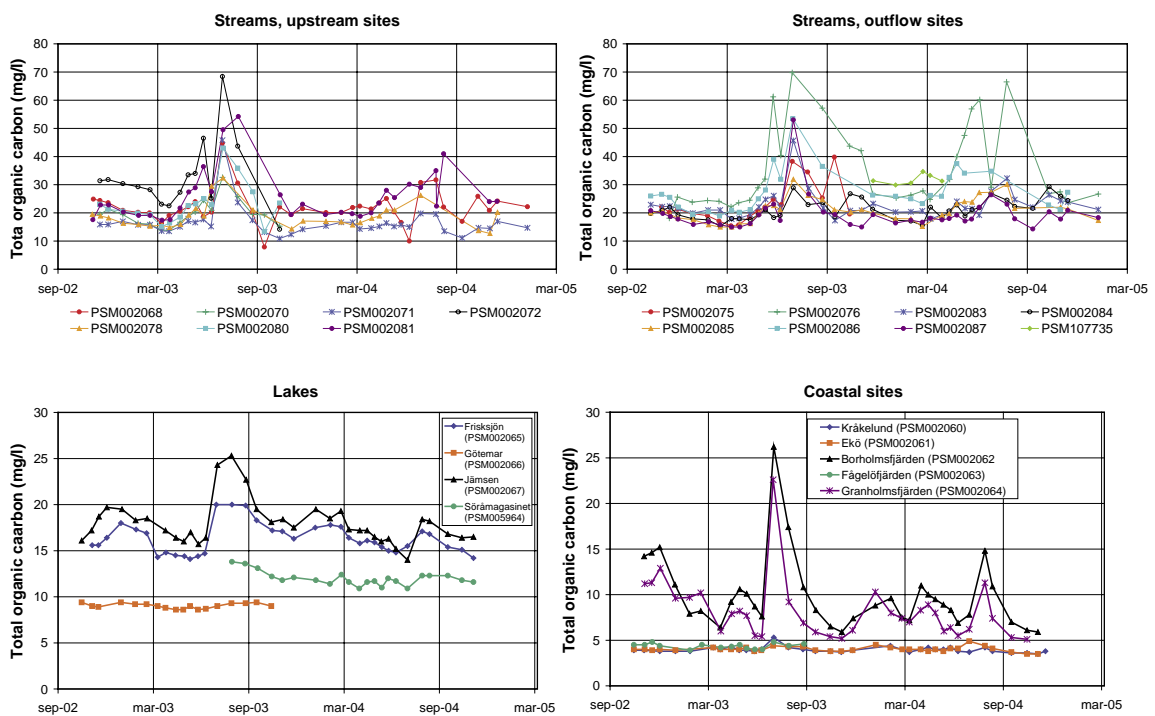


Figure 5-21. Temporal variations in the concentration of total organic carbon in streams, lakes and at coastal sites in the Simpevarp area.



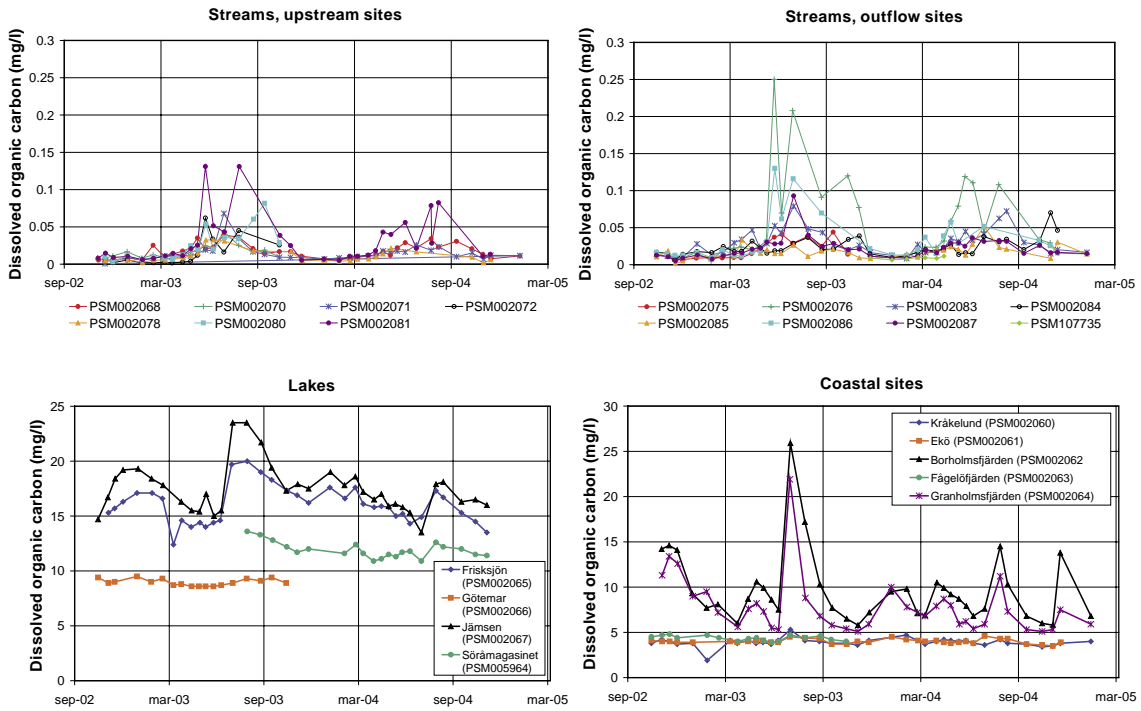


Figure 5-22. Temporal variations in the concentration of dissolved organic carbon in streams, lakes and at coastal sites in the Simpevarp area.

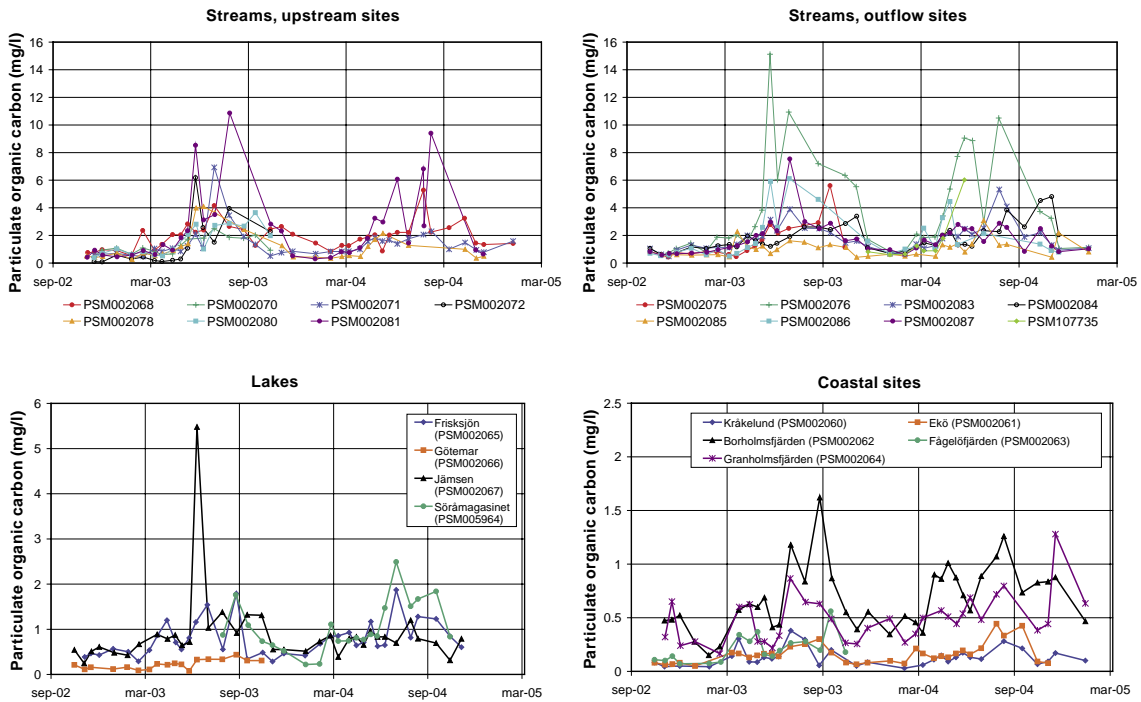


Figure 5-23. Temporal variations in the concentration of particulate organic carbon in streams, lakes and at coastal sites in the Simpevarp area.

## 5.2.4 Sulphur

Sulphur in fresh waters generally originates from atmospheric deposition and leakage from soils containing sulphur bearing minerals or marine relics. The high sulphur levels seen in the Simpevarp area indicate that leaching from soils is an important source of sulphur in the area as the sulphate deposition is not deviating significantly from other parts of the country.

### Comparisons with regional and national data

The content of sulphur as sulphate in the fresh waters of the Simpevarp area is markedly elevated compared to the levels of both Swedish lakes and streams from the National Survey /IMA 2005/. The same applies to Kalmar County, indicating generally elevated sulphur levels in the fresh waters of the whole region (Figure 5-24).

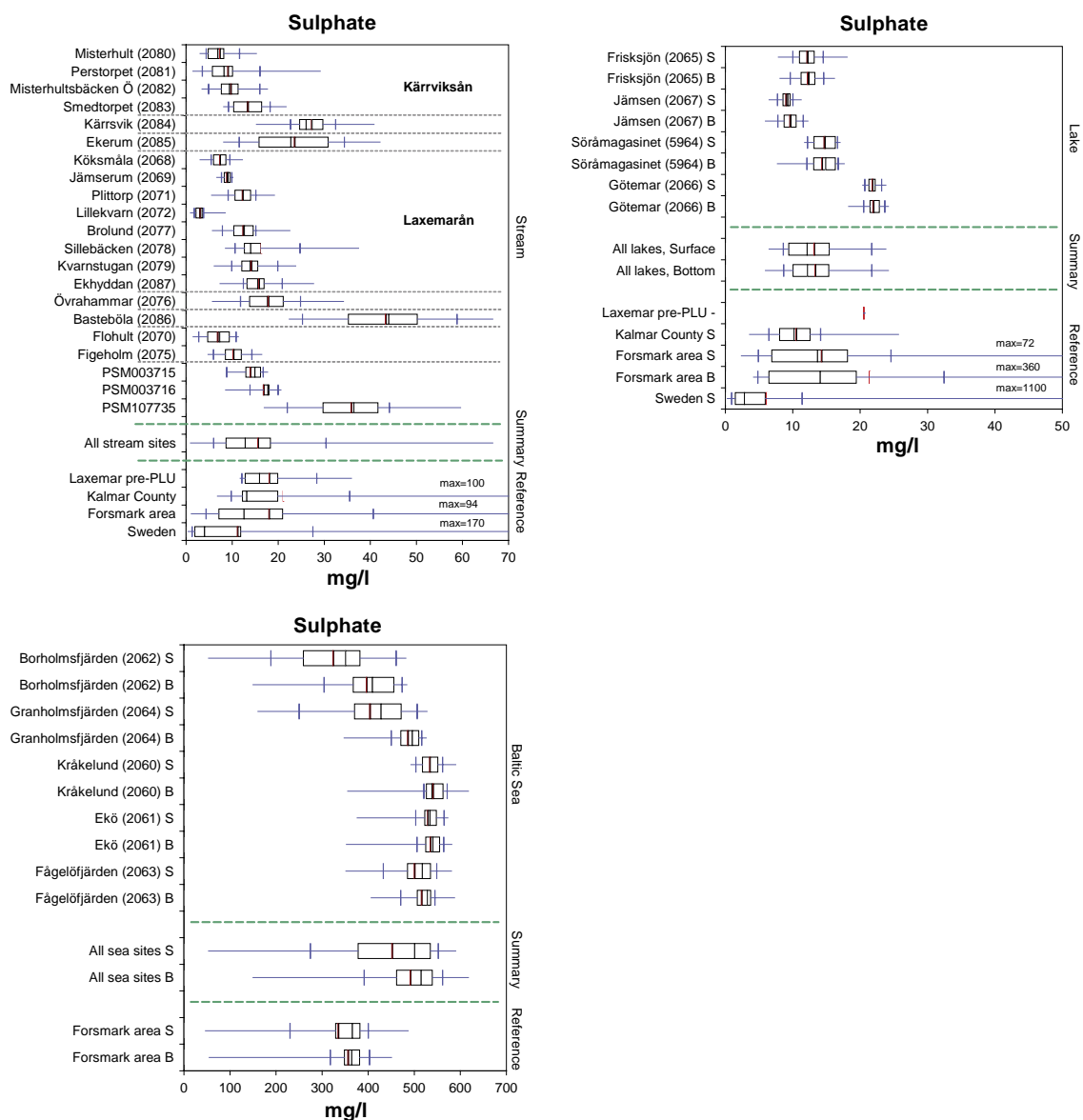


Figure 5-24. Concentrations of sulphate in the lakes, streams and at the coastal sites in the Simpevarp area. Surface samples is denoted 'S' and bottom samples 'B'.



The sulphur levels in the sea water at the ‘open sea’ sites of the Simpevarp area is probably normal compared to the Baltic proper. As expected is the level in the Simpevarp area slightly higher than the more diluted sea water of Bottenhavet outside the Forsmark area. Both the surface and bottom water in the closed Basins of Granholmsfjärden and Borholmsfjärden are more or less diluted with fresh water when sulphate levels are compared with those in the Baltic.

### **Spatial variation within the Simpevarp area**

There is a general tendency for increasing sulphur concentrations along the water courses in the area. The highest levels, which are found near the outlets of the streams, coincide with the highest concentrations of arable land and the occurrence of presumably sulphur-containing sediments, which probably is an important cause for elevated levels of sulphur (e.g. PSM002086). The lowest sulphur concentrations, which are almost normal compared to most Swedish lakes and streams, are found in the western part of the Simpevarp area (Figure 5-25).

The minor stream PSM107735 in a small catchment at the Island of Ävrö show deviating high sulphate concentrations. Possible explanations to this deviation could be leakage from sediments rich in sulphur, or discharge of sulphur-rich groundwater of deeper origin. The oligotrophic Lake Götemar (PSM002086) north of the Simpevarp area shows especially high sulphate concentrations in comparison with the mesotrophic lakes in the Simpevarp area.



**Figure 5-25.** Mean sulphate concentrations in the surface water in the Simpevarp area.

## Temporal variation

Sulphur shows a seasonal pattern in the fresh waters, with lower concentrations during summer. This pattern, which is most evident in the mesotrophic lakes in the area, is also seen in most of the streams (Figure 5-26).

The sulphate concentrations at the 'open sea' sites show little variation, whereas the closed basins show vigorous variation, probably due to mixing with fresh water from the streams.

## Typical sulphate concentrations in the Simpevarp area

The typical sulphate concentration in both streams and lakes in the Simpevarp area is about 12 mg/l. At some sites, probably containing sulphur-rich sediments and agricultural activities, concentrations up to 50 mg/l are observed.

In the 'open sea' coastal sites median sulphate concentrations are about 500 mg/l, whereas the basins show highly fluctuating concentrations ranging from 50 to 500 mg/l.

## 5.2.5 Silicon

In fresh waters, silicon originates from weathering of silicate minerals in the catchments. Silicon, which is utilised by some phytoplankton (diatoms), is markedly bio-regulated, leading to more or less clear seasonal concentration variations.

Silicon is analysed both as silicon and silica silicon ( $\text{SiO}_2\text{-Si}$ ). Both parameters show almost identical values in the box plots below, indicating that silica is the only species that occur to any significant extent. Both silicon species are analysed on filtrated ( $45\ \mu\text{m}$ ) samples.

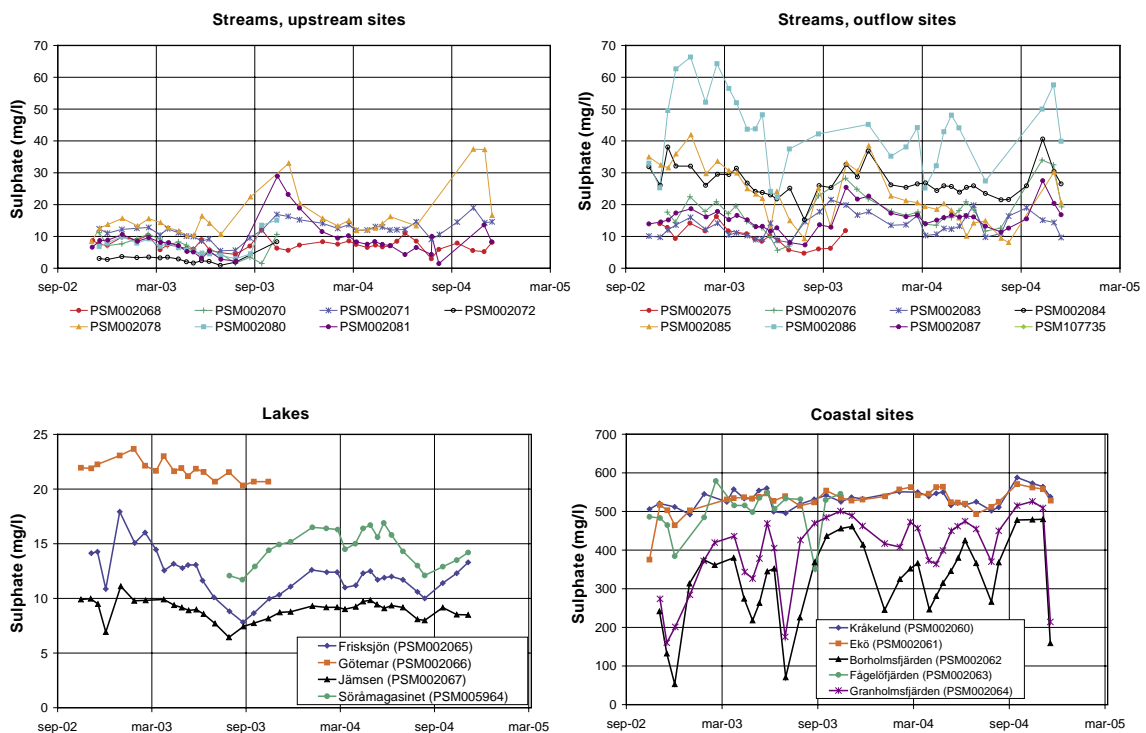


Figure 5-26. Temporal variations in the concentration of sulphate in streams, lakes and at coastal sites in the Simpevarp area.

### Comparisons with regional and national data

Some of the lakes and most stream sites show markedly elevated content of silicon in the Simpevarp area, compared to normal levels in Sweden /IMA 2005/. The Simpevarp area also deviates from the Kalmar County region, implying that the levels are locally enhanced, probably due to higher weathering rates (Figure 5-28).

The silicon levels in the sea water at the ‘open sea’ sites of the Simpevarp area are probably normal and comparable to the levels observed in Bottenhavet outside the Forsmark area. In the closed Basins of Granholmsfjärden and Borholmsfjärden markedly higher levels occur due to supply from the water courses entering the basins.

### Spatial variation within the Simpevarp area

The lowest silicon concentrations occur in the western part of the Simpevarp area, whereas the highest occur in the eastern part, especially in the catchments containing much arable land and fine-grained sediments (Figure 5-27).

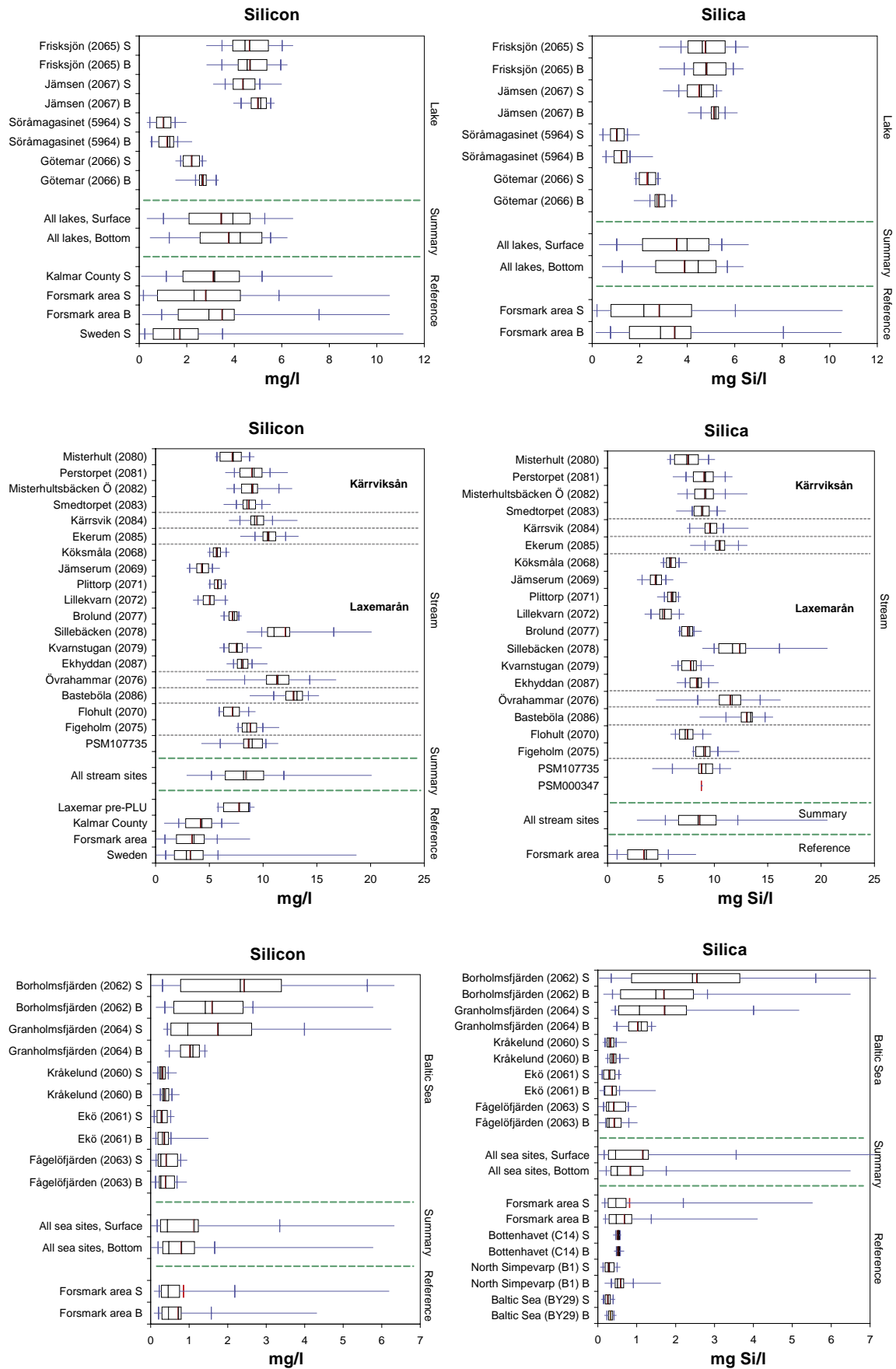
### Temporal variation

Silicon shows a clear seasonal variation in the lakes and the Basins of Granholmsfjärden and Borholmsfjärden due to utilisation by diatoms during the growing season. The highest concentrations, which occur during late winter, drop rapidly when the primary production starts in spring. The silicon concentrations in the streams show only minor co-variation with this seasonal pattern (Figure 5-29).

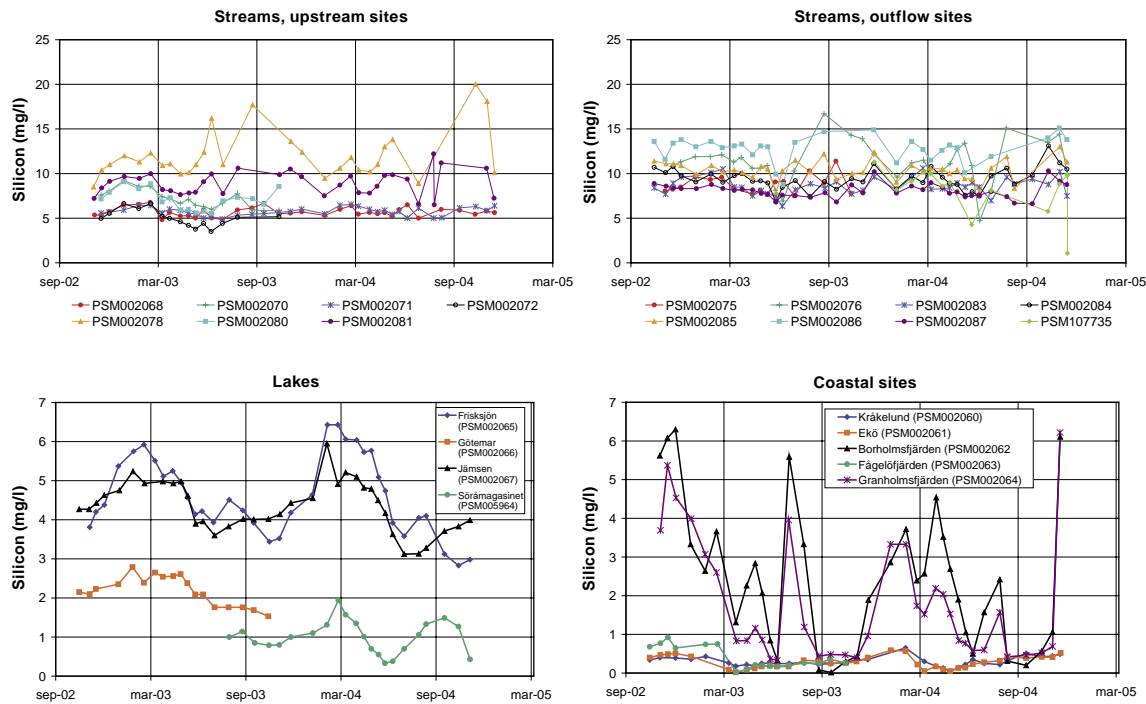
The seasonal variation observed in the basins indicates that the diatoms show two algal blooms per year, one in spring and one in early autumn.



Figure 5-27. Mean silicon concentrations in the surface water in the Simpevarp area.



**Figure 5-28.** Concentrations of silicon (left) and silica silicon (right) in lakes, streams and coastal sites in the Simpevarp area. Surface (S) and bottom (B) samples.



**Figure 5-29.** Temporal variations in the concentration of silicon in streams, lakes and at coastal sites in the Simpevarp area.

### Typical silicon concentrations in the Simpevarp area

The median silicon concentration is about 8 mg/l in streams and 5 mg/l in the mesotrophic lakes in the Simpevarp area. In the ‘open sea’ coastal sites median silicon concentrations are about 0.3 mg/l, whereas the basins show fluctuating concentrations ranging from 0.3 to 7 mg/l. In the lakes and basins, the silicon concentrations show a strong seasonal variation due to algal utilisation during the growing season.

## 5.3 Dissolved ions

In this section the electrical conductivity and the contents of dissolved ions are compiled. Electrical conductivity is an integrated measure of the total amounts of ions dissolved in the water. In Table 5-2 are the most abundant dissolved ions compiled in order to facilitate comparisons between the elements. In the following sections compilations and evaluations are presented for groupings of elements.

**Table 5-2. Median values of conductivity (mS/m) and dissolved ions (mg/l) in surface waters in the Simpevarp area. Included in the table are also bicarbonate and sulphate, which are dealt with in previous sections.**

Idcode	Depth	E. cond	Ca	Mg	Na	K	HCO <sub>3</sub>	SO <sub>4</sub>	Cl	Fe	Mn	Sr	Li	F	Br	I
<b>Streaming water</b>																
PSM002068	Surface	8.2	7.8	2.0	4.6	0.87	14	7.3	4.5	1.6	0.096	0.043	< 0.004	0.59	< 0.2	0.004
PSM002069	Surface	11	8.4	2.2	8.6	1.3	15	9.0	12	1.2	0.089	0.044	< 0.004	0.50	< 0.2	0.006
PSM002070	Surface	14	12	2.8	11	0.95	29	7.1	14	1.1	0.14	0.065	< 0.004	0.67	< 0.2	0.005
PSM002071	Surface	14	9.7	2.6	11	1.4	16	12	18	1.3	0.067	0.054	< 0.004	0.47	< 0.2	0.006
PSM002072	Surface	9.7	4.8	1.1	10	0.49	2.2	2.9	14	1.4	0.059	0.027	< 0.004	0.24	< 0.2	0.007
PSM002075	Surface	14	12	2.8	10	1.1	25	10	12	1.0	0.073	0.066	< 0.004	0.63	< 0.2	0.019
PSM002076	Surface	13	13	2.3	6.8	1.1	18	18	7.6	2.0	0.085	0.060	< 0.004	0.52	< 0.2	0.022
PSM002077	Surface	13	9.3	2.4	9.4	1.4	14	12	13	1.3	0.051	0.051	< 0.004	0.42	< 0.2	0.008
PSM002078	Surface	7.8	6.4	1.5	4.1	0.59	3.6	14	4.1	0.72	0.044	0.032	< 0.004	0.24	< 0.2	0.010
PSM002079	Surface	13	9.6	2.4	9.2	1.3	14	14	13	1.2	0.051	0.052	< 0.004	0.40	< 0.2	0.007
PSM002080	Surface	11	8.6	1.5	8.1	0.88	15	6.9	9.9	1.2	0.049	0.038	< 0.004	0.29	< 0.2	0.007
PSM002081	Surface	10	12	1.9	4.6	0.96	23	8.2	4.6	1.0	0.057	0.041	< 0.004	0.40	< 0.2	0.013
PSM002082	Surface	12	11	2.0	6.7	1.2	20	9.4	8.1	1.1	0.066	0.043	< 0.004	0.37	< 0.2	0.012
PSM002083	Surface	12	10	2.2	8.5	1.2	17	13	9.6	1.3	0.057	0.048	< 0.004	1.0	< 0.2	0.014
PSM002084	Surface	18	17	3.6	9.9	2.8	30	26	10	1.2	0.091	0.066	0.004	1.8	< 0.2	0.022
PSM002085	Surface	21	28	3.4	7.8	1.1	72	23	6.1	0.63	0.042	0.081	< 0.004	1.0	< 0.2	0.022
PSM002086	Surface	22	18	4.2	12	3.1	11	44	14	1.0	0.12	0.073	0.006	0.75	0.6	0.060
PSM002087	Surface	14	10	2.6	9.1	1.4	17	16	12	1.2	0.055	0.053	< 0.004	0.44	< 0.2	0.013
PSM107735	Surface	14	14	3.8	5.2	1.2	5.3	36	5.7	2.0	0.13	0.058	0.008	0.53	< 0.2	0.022
All streams	Surface	13	11	2.4	8.6	1.2	18	13	10	1.2	0.067	0.053	< 0.004	0.53	< 0.2	0.010
<b>Lake water</b>																
PSM002065	Surface	11	7.0	2.2	9.4	1.5	13	12	10	0.76	0.045	0.037	< 0.004	0.74	< 0.2	0.029
PSM002065	Bottom	11	7.0	2.2	9.2	1.5	13	12	11	0.82	0.053	0.037	< 0.004	0.76	< 0.2	0.027
PSM002066	Surface	15	9.9	2.9	11	1.5	11	22	14	0.057	0.026	0.055	< 0.004	1.22	< 0.2	0.018
PSM002066	Bottom	15	10	2.9	11	1.6	12	22	14	0.12	0.11	0.056	< 0.004	1.24	< 0.2	0.017
PSM002067	Surface	12	8.5	2.2	8.6	1.3	15	9.2	13	1.3	0.093	0.044	< 0.004	0.49	< 0.2	0.007
PSM002067	Bottom	12	8.8	2.3	8.9	1.4	16	9.6	13	1.6	0.18	0.046	< 0.004	0.48	< 0.2	0.007
PSM005964	Surface	18	11	3.5	14	2.7	35	15	19	0.74	0.008	0.054	< 0.004	0.44	< 0.2	0.021
PSM005964	Bottom	18	11	3.6	14	2.7	36	15	19	0.83	0.019	0.054	< 0.004	0.46	< 0.2	0.022
<b>All lakes</b>	<b>Surface</b>	<b>12</b>	<b>8.6</b>	<b>2.3</b>	<b>9.6</b>	<b>1.5</b>	<b>14</b>	<b>12</b>	<b>13</b>	<b>0.88</b>	<b>0.041</b>	<b>0.045</b>	<b>&lt; 0.004</b>	<b>0.62</b>	<b>&lt; 0.2</b>	<b>0.021</b>
<b>All lakes</b>	<b>Bottom</b>	<b>13</b>	<b>8.8</b>	<b>2.4</b>	<b>10</b>	<b>1.5</b>	<b>15</b>	<b>12</b>	<b>13</b>	<b>0.94</b>	<b>0.086</b>	<b>0.047</b>	<b>&lt; 0.004</b>	<b>0.58</b>	<b>&lt; 0.2</b>	<b>0.021</b>
<b>Sea water</b>																
PSM002060	Surface	1,130	95	240	2,000	74	93	530	3,700	< 0.02	< 0.02	1.4	0.032	< 0.2	15	0.012
PSM002060	Bottom	1,160	98	240	2,000	76	94	540	3,700	< 0.02	< 0.02	1.5	0.032	< 0.2	15	0.013
PSM002061	Surface	1,140	95	240	2,000	74	93	530	3,700	< 0.02	< 0.02	1.4	0.032	< 0.2	15	0.012
PSM002061	Bottom	1,150	97	240	2,000	76	94	540	3,700	< 0.02	< 0.02	1.5	0.032	< 0.2	15	0.012
PSM002062	Surface	770	68	160	1,300	51	66	350	2,400	0.13	< 0.02	1.0	0.022	< 0.2	9.1	0.012
PSM002062	Bottom	920	75	190	1,500	59	77	410	2,900	0.10	< 0.02	1.1	0.026	< 0.2	12	0.013
PSM002063	Surface	1,100	90	230	1,900	70	92	520	3,500	< 0.02	< 0.01	1.4	0.030	< 0.2	12	0.009
PSM002063	Bottom	1,110	91	230	1,900	70	92	530	3,600	< 0.02	< 0.01	1.4	0.031	< 0.2	13	0.009
PSM002064	Surface	960	78	200	1,700	59	80	430	3,000	0.05	< 0.02	1.2	0.026	< 0.2	12	0.013
PSM002064	Bottom	1,060	90	220	1,800	69	90	490	3,400	0.06	0.02	1.4	0.029	< 0.2	13	0.018
<b>All coastal sites</b>	<b>Surface</b>	<b>1,070</b>	<b>89</b>	<b>220</b>	<b>1,900</b>	<b>70</b>	<b>89</b>	<b>500</b>	<b>3,400</b>	<b>&lt; 0.02</b>	<b>&lt; 0.01</b>	<b>1.4</b>	<b>0.030</b>	<b>&lt; 0.2</b>	<b>13</b>	<b>0.012</b>
<b>All coastal sites</b>	<b>Bottom</b>	<b>1,100</b>	<b>92</b>	<b>230</b>	<b>1,900</b>	<b>71</b>	<b>92</b>	<b>510</b>	<b>3,500</b>	<b>&lt; 0.02</b>	<b>&lt; 0.01</b>	<b>1.4</b>	<b>0.031</b>	<b>&lt; 0.2</b>	<b>13</b>	<b>0.013</b>



### 5.3.1 Electrical conductivity

The electrical conductivity is an integrated measure of the total amounts of dissolved ions in a sample. Different ions contribute, on molar basis, to different extents to the total conductivity, depending on the ion charge. This section deals with conductivity measured in laboratory, whereas field measurements by sonde is briefly summarised in the section dealing with field measurements.

#### Comparisons with regional and national data

The electrical conductivity in both the Simpevarp area and Kalmar County is slightly elevated compared to the distributions of Swedish lakes and streams /IMA 2005/. Compared to the very high conductivities observed in the Forsmark area are the levels almost normal in a Swedish context (Figures 5-30 and 5-31).

The conductivity at the ‘open sea’ coastal sites are probably normal compared to the Baltic proper and, as expected, slightly higher compared to Bottenhavet outside Forsmark. The basins of Granholmsfjärden and Borholmsfjärden show generally lower conductivities due to mixing with fresh water.

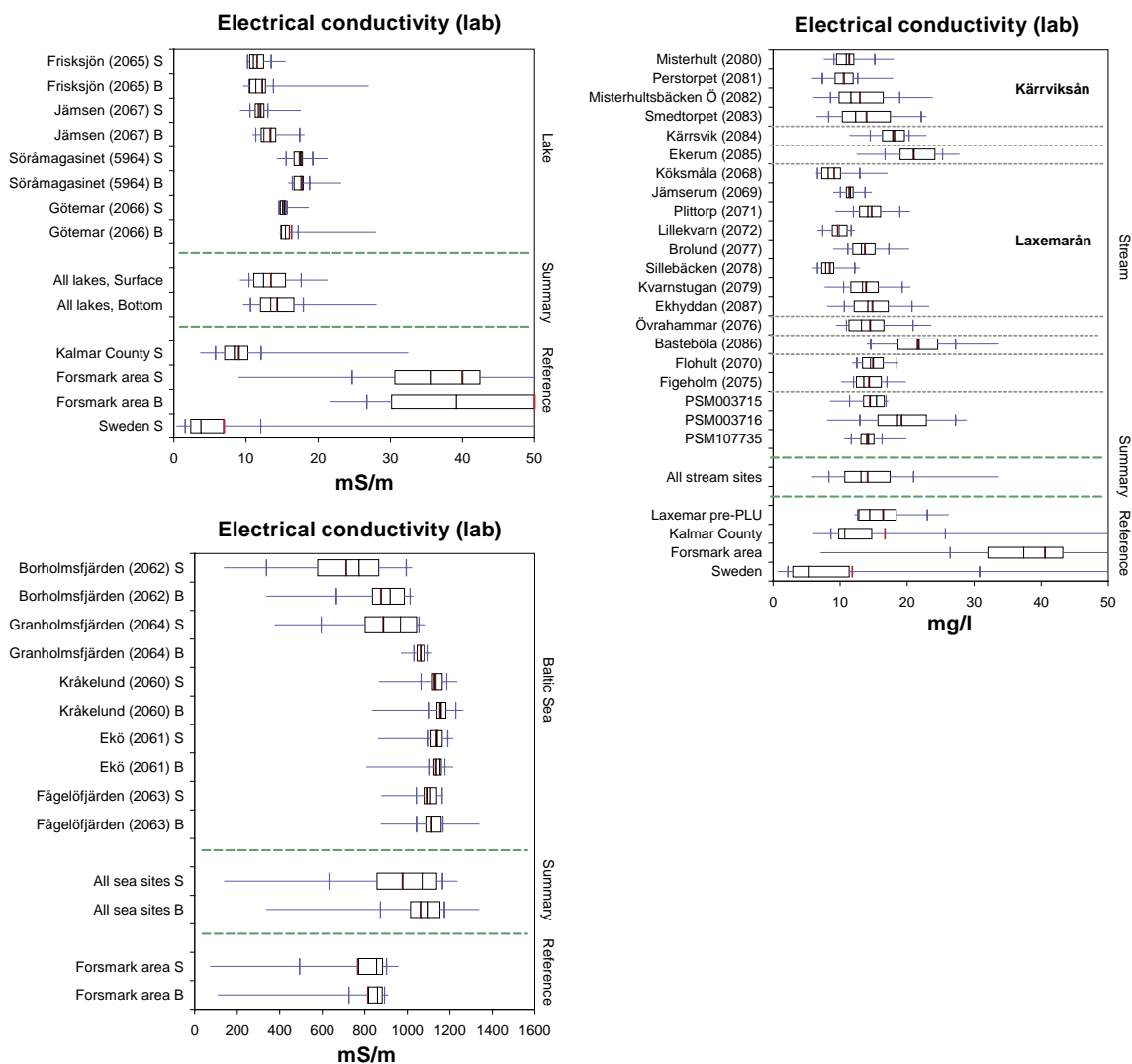
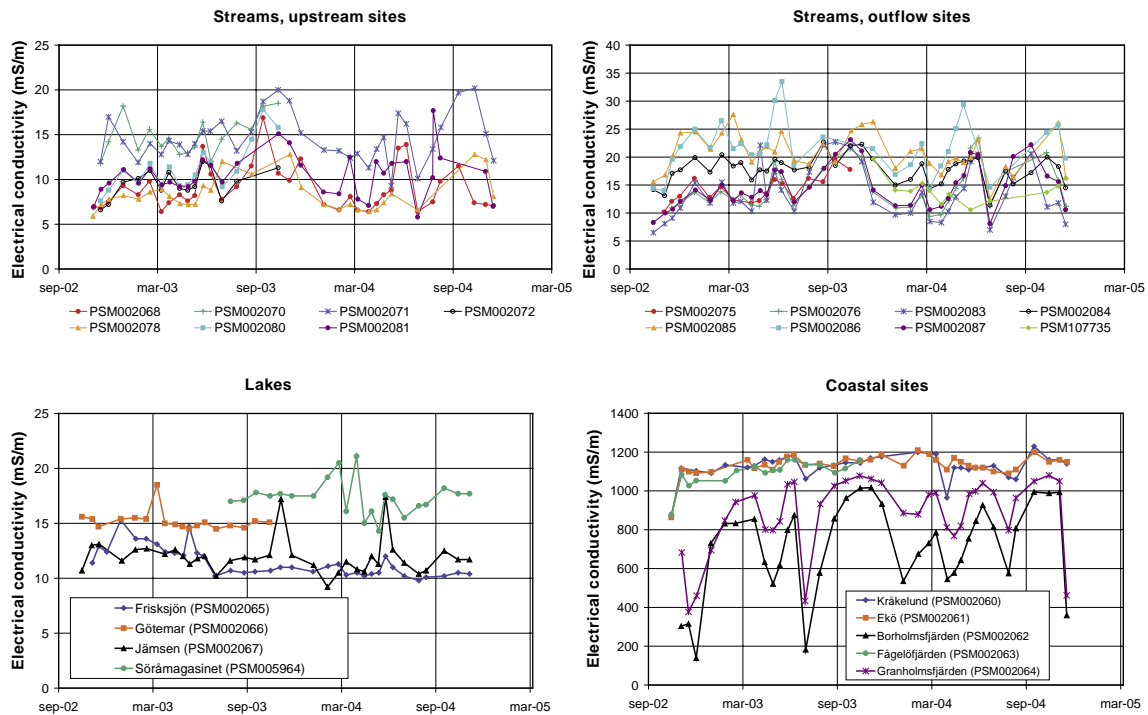


Figure 5-30. Laboratory measurements of electrical conductivity in lakes, streams and coastal sites in the Simpevarp area. Surface samples is denoted 'S' and bottom samples 'B'.



**Figure 5-31.** Temporal variations in electrical conductivity in streams, lakes and at coastal sites in the Simpevarp area.

### Spatial variation within the Simpevarp area

The electrical conductivity shows a slightly more scattered spatial distribution in the Simpevarp area, compared to the nutrients. Sampling sites that show high electrical conductivities coincide in some cases with the sites showing high contents of nutrients, e.g. phosphorus (Figure 5-32).

For example PSM002072, high upstream in Kärrviksån, shows high content of nutrients and carbon, whereas the electrical conductivity is low. PSM002086 that is located in a catchment with high proportion of arable land shows both high contents of nutrients and high conductivity.

### Temporal variation

The electrical conductivity is rather constant in both lakes and at the ‘open sea’ coastal sites, whereas the streams and the basins of Granholmsfjärden and Borholmsfjärden show high variability. This variation, which shows no clear seasonal pattern, is probably induced by climatic variations in precipitation and runoff.

### Typical conductivity in the Simpevarp area

The conductivity in the Simpevarp area usually ranges from 10 to 20 mS/m in both lakes and streams.

In the ‘open sea’ coastal sites, median conductivity is about 1,100 mS/m, whereas the basins show highly fluctuating concentrations ranging from 200 to 1,000 mS/m.





**Figure 5-32.** Electrical conductivity in surface water in the Simpevarp area (laboratory measurements). Mean value per sampling site.

### 5.3.2 Calcium, magnesium, sodium and potassium

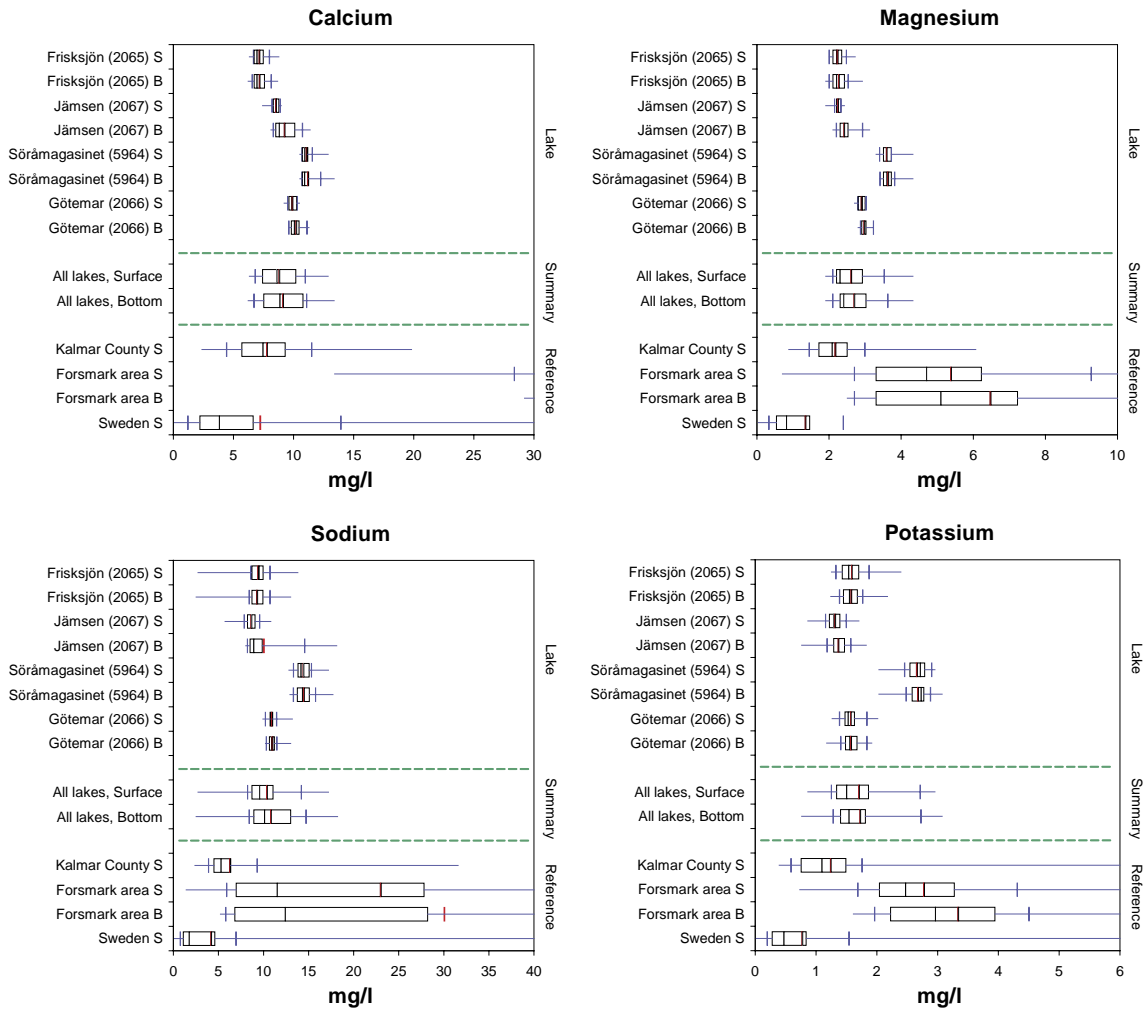
Calcium, magnesium, sodium and potassium constitute the main part of the cations in fresh surface waters of the Simpevarp area. The concentrations of these ions range from 2 to 15 mg/l, which can be compared to the content of total organic carbon which is about 20 mg/l and the total nitrogen which is about 1 mg/l. In the brackish water of the Baltic, calcium occurs in about 10 times higher concentrations, whereas the magnesium, sodium and potassium are elevated about 100 times.

#### **Comparisons with regional and national reference data**

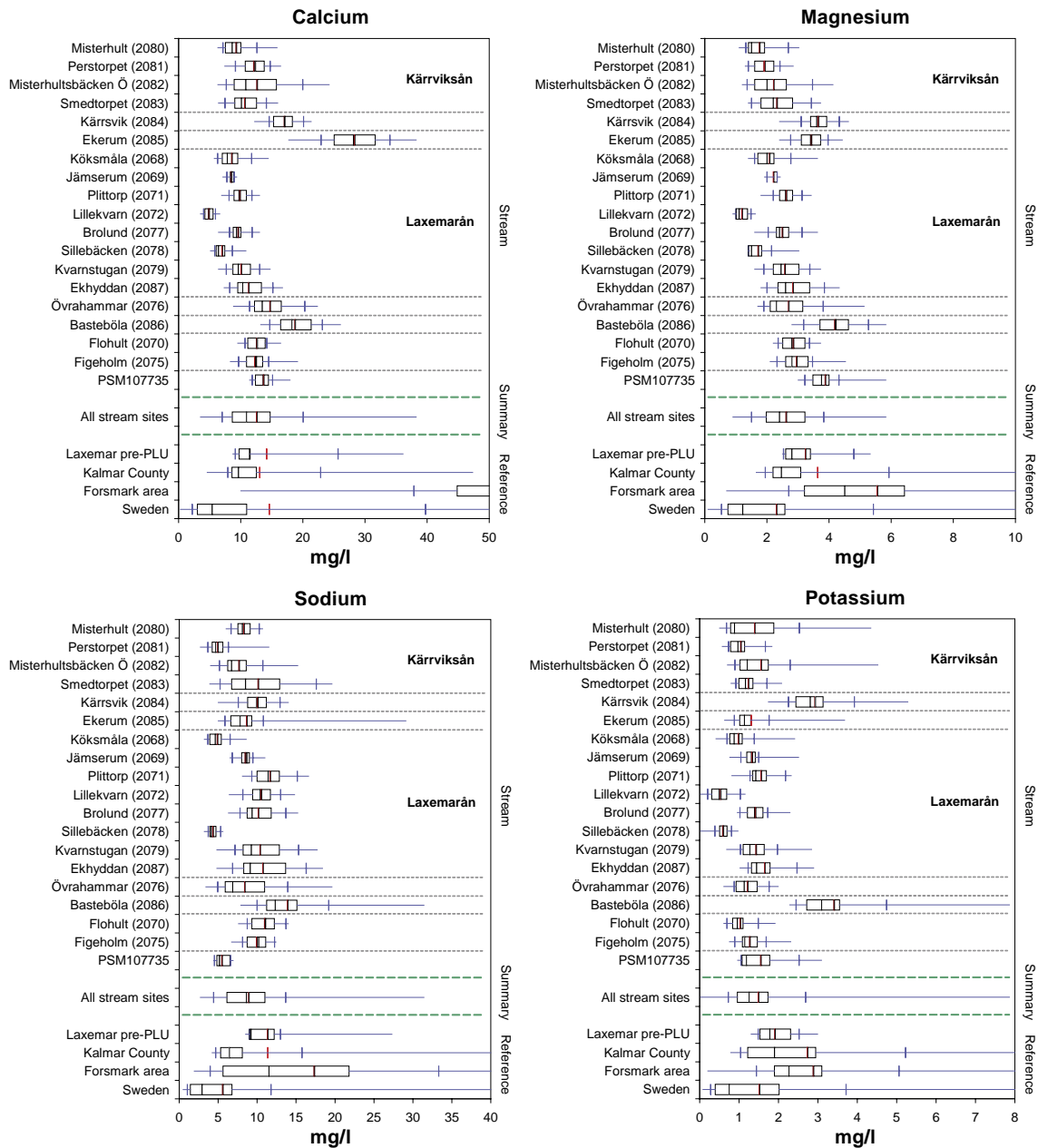
Compared to the national distributions of the Swedish survey of lakes and streams calcium, magnesium, sodium and potassium occur in slightly elevated concentrations in both the Simpevarp area and Kalmar County /IMA 2005/. The observed median concentrations of the fresh waters are generally two or three times elevated compared to the Swedish median (Figures 5-33 and 5-34).

The observed concentrations of calcium, magnesium, sodium and potassium in the brackish water of the Simpevarp area reflects the mixing between water from the Baltic proper and varying amounts of fresh water. The concentrations are as expected slightly elevated compared to the brackish water of Bottenhavet (Figure 5-35).

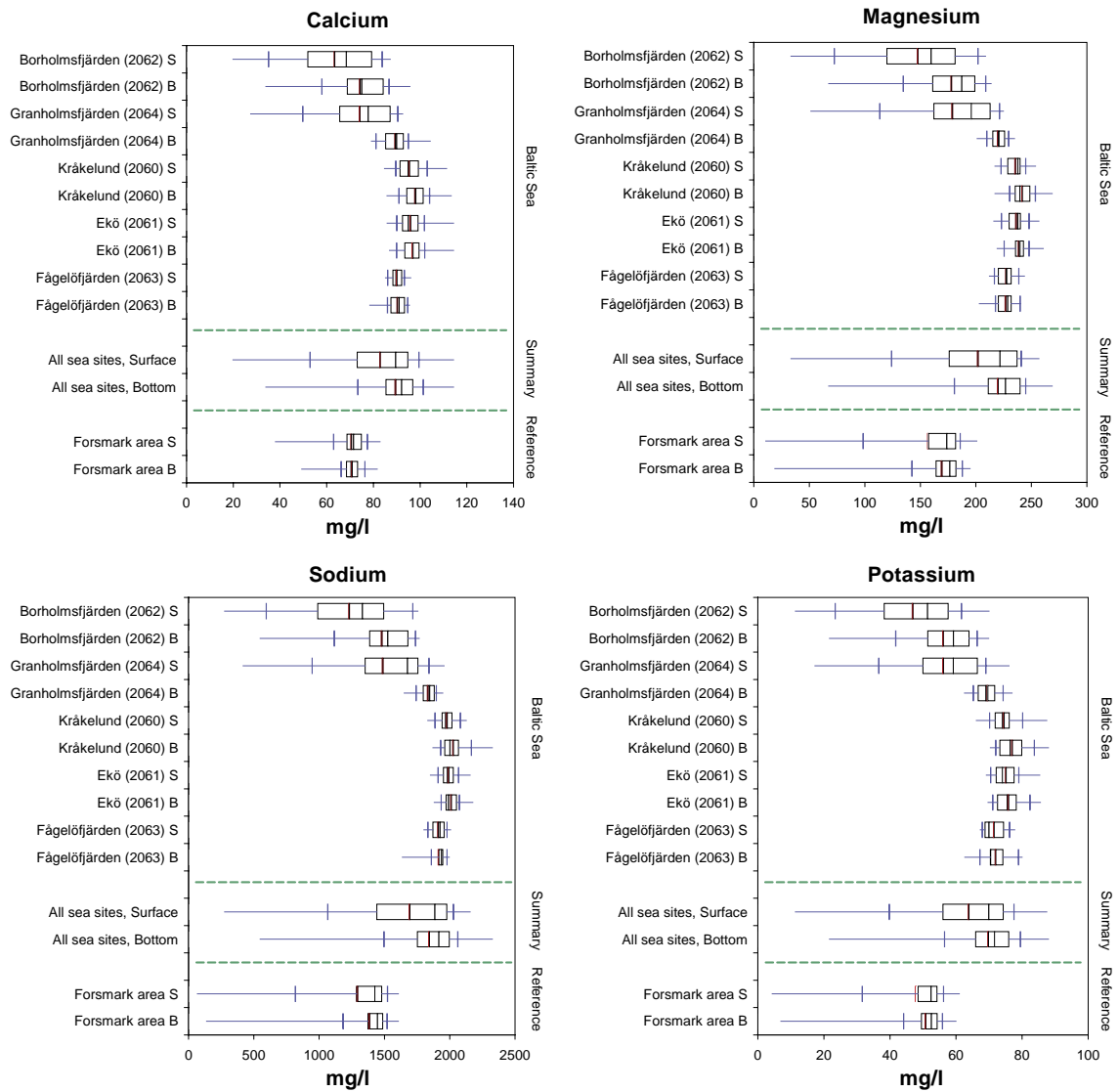
The variation is usually low, except for the closed Basins of Granholmsfjärden and Borholmsfjärden where the variation is substantial. The sampling site in Fågelöfjärden, PSM002063, shows stable but slightly lower concentrations compared to the ‘open sea’ sites at Kråkelund and Ekö (PSM002060 and PSM002061).



**Figure 5-33.** Concentrations of calcium, magnesium, sodium and potassium in surface (S) and bottom (B) water in lakes in the Simpevarp area.



**Figure 5-34.** Concentrations of calcium, magnesium, sodium and potassium in the streams in the Simpevarp area.



**Figure 5-35.** Concentrations of calcium, magnesium, sodium and potassium in surface (S) and bottom (B) water at the coastal sites in the Simpevarp area.

### ***Spatial variation within the Simpevarp area***

There is general tendency that the highest concentrations of calcium, magnesium, sodium and potassium are found in the streams near the coast, and the lowest concentrations in the western part of the Simpevarp area. A topographical gradient is ranging from higher levels in the northwest to sea level in the southeast. This gradient is accompanied by a soil gradient ranging from thin Quaternary deposits dominating the north-western part, to thicker deposits of till, clay and gyttja clay in the southeast. The richer soils in the southeast also give prerequisites for agriculture, and the largest proportions of arable land are consequently found in this part of the area (Figure 5-36).

The Principal Component Analysis summarised in Figure 5-37 reveals the spatial relationships among the major constituents, as well as among individual sampling sites. The analysis is based on mean values per stream sampling site in order to isolate the spatial variation.

There is a substantial co-variation among all parameters (Ca, Mg, Na, K, Cl, HCO<sub>3</sub>, SO<sub>4</sub>), described by the first component (horizontal), which implies that all included parameters generally occur at high or at low levels concomitantly. The highest levels are found for PSM002084, PSM002085 and PSM002086 located near the coast, all containing large shares of arable land. The lowest levels are found for PSM002068, PSM002072 and PSM002081 located in the western part of the Simpevarp area.

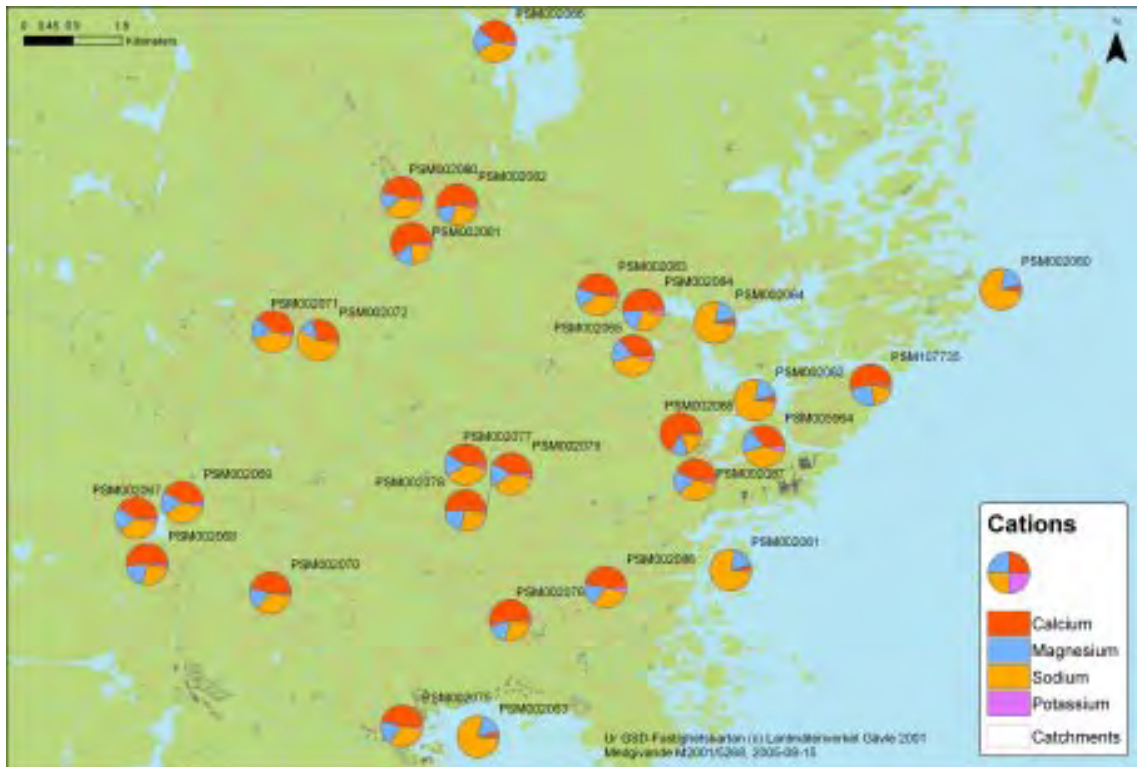
The second principal component (vertical) reveals an opposition between sodium and chloride on one hand, and calcium and bicarbonate on the other, probably reflecting different origins of the elements. PSM002071, PSM002072 and PSM002086 show elevated values of sodium and chloride, which may reflect a marine component altered by ion exchange. At the other end of the scale, PSM002081, PSM002085 and PSM107735 probably reflects calcium supplied by calcite dissolution processes. In the catchment of Ekerumsån (PSM002085), shallow groundwater at lower sampling locations shows a similar deviating chemical composition.

### ***Temporal variation of calcium, magnesium, sodium and potassium***

Observed magnesium concentrations in the lakes are remarkable constant throughout the year. Also calcium levels show small temporal variation compared to potassium and sodium.

Many streams show very similar temporal patterns regarding calcium, magnesium, sodium and potassium, even if they belong to different catchments. A possible explanation is that the observed pattern is mainly controlled by climatic factors as precipitation and runoff.

In the 'open sea' coastal sites, the concentrations of the four elements show only little variation. The main exception is calcium, which shows a slightly increased variation compared to the other ions, probably due to biogenic utilisation. The variation of the four elements in the Basins of Granholmsfjärden and Borholmsfjärden is mainly controlled by the inflow of fresh water from streams in the area (Figures 5-38 to 5-41).



**Figure 5-36.** The relative molar (charge) amounts of the cations calcium, magnesium, sodium and potassium in the Simpevarp area (upper). In the lower map the mean concentrations of calcium are shown for all fresh and brackish sampling sites in the Simpevarp area.



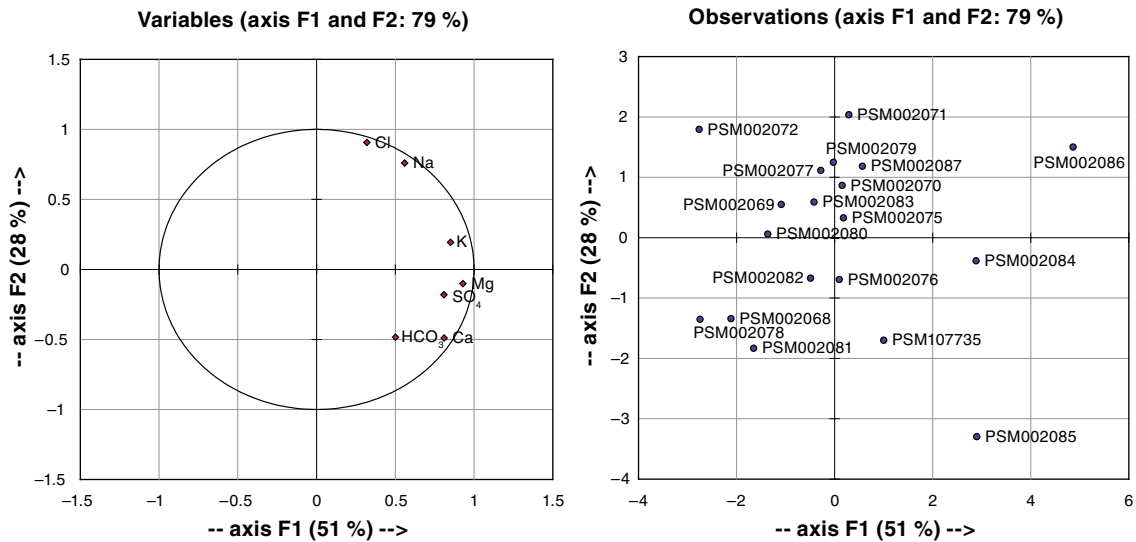


Figure 5-37. Principal component analysis summarising the major constituents of streaming water. Mean values per sampling site shown in the map in Figure 5-36.

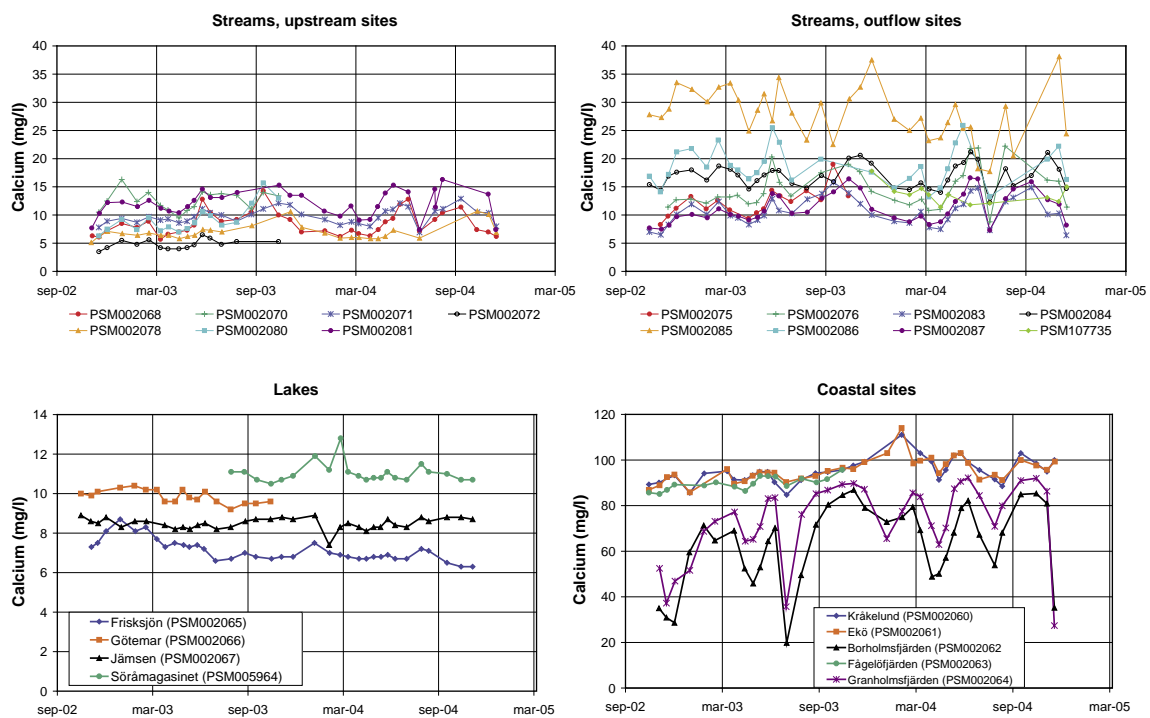
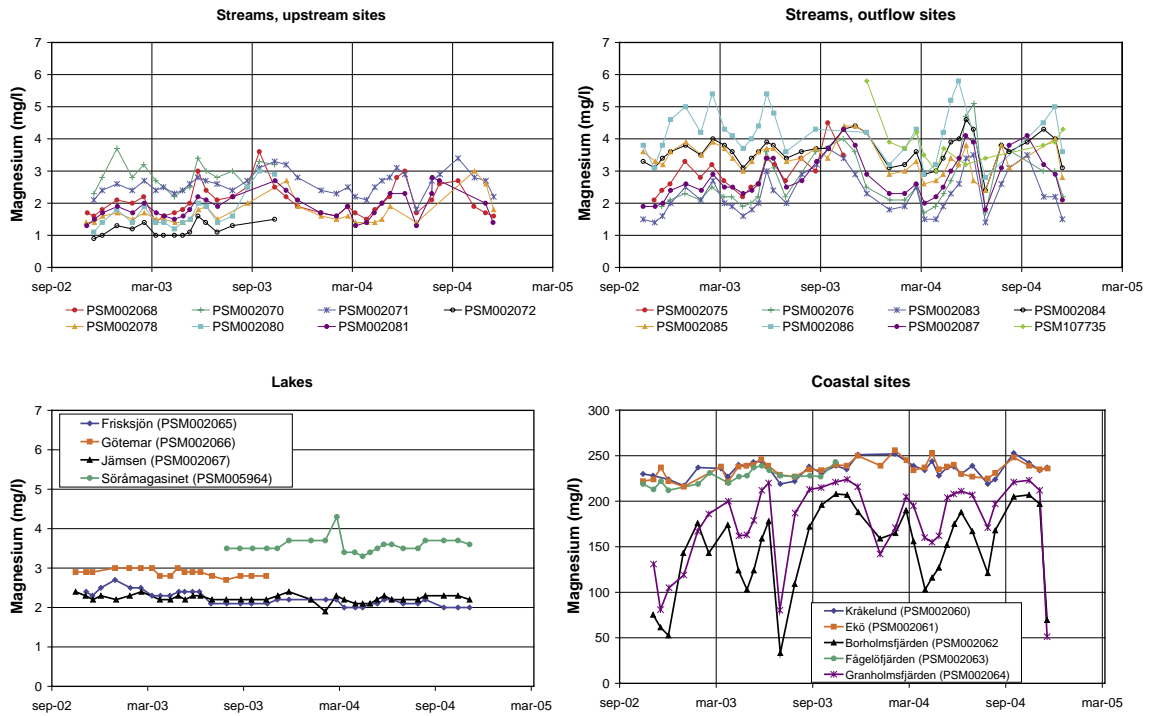
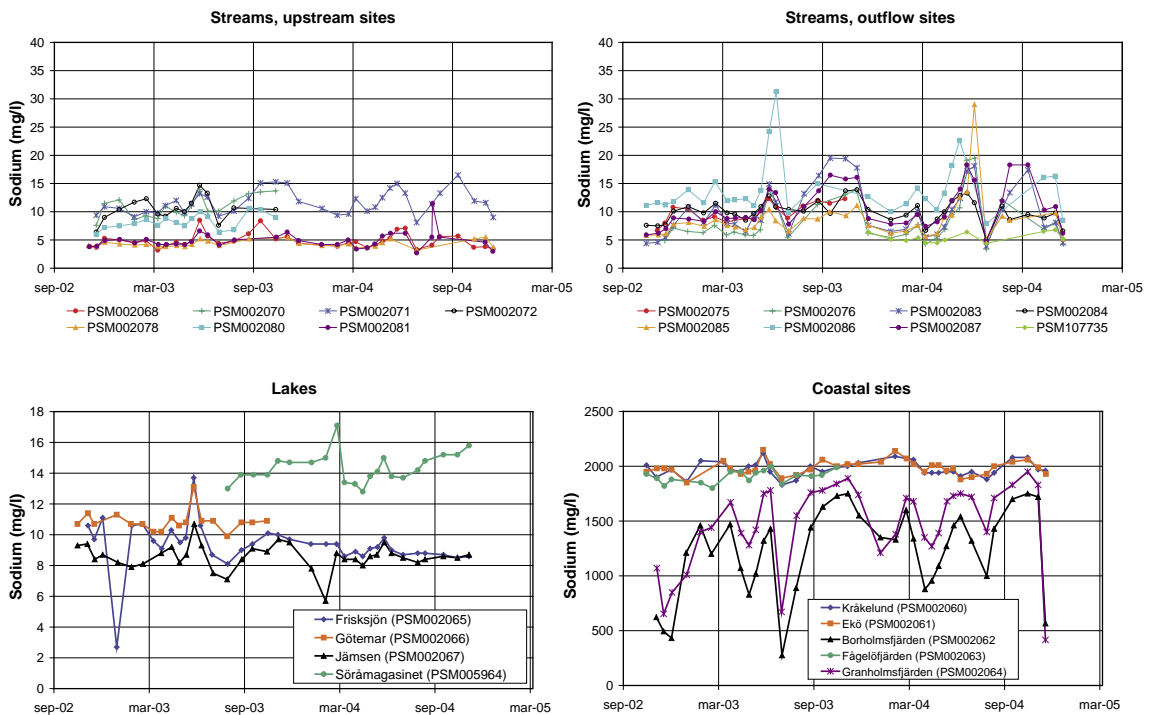


Figure 5-38. Temporal variations in the concentration of calcium in streams, lakes and at coastal sites in the Simpevarp area.

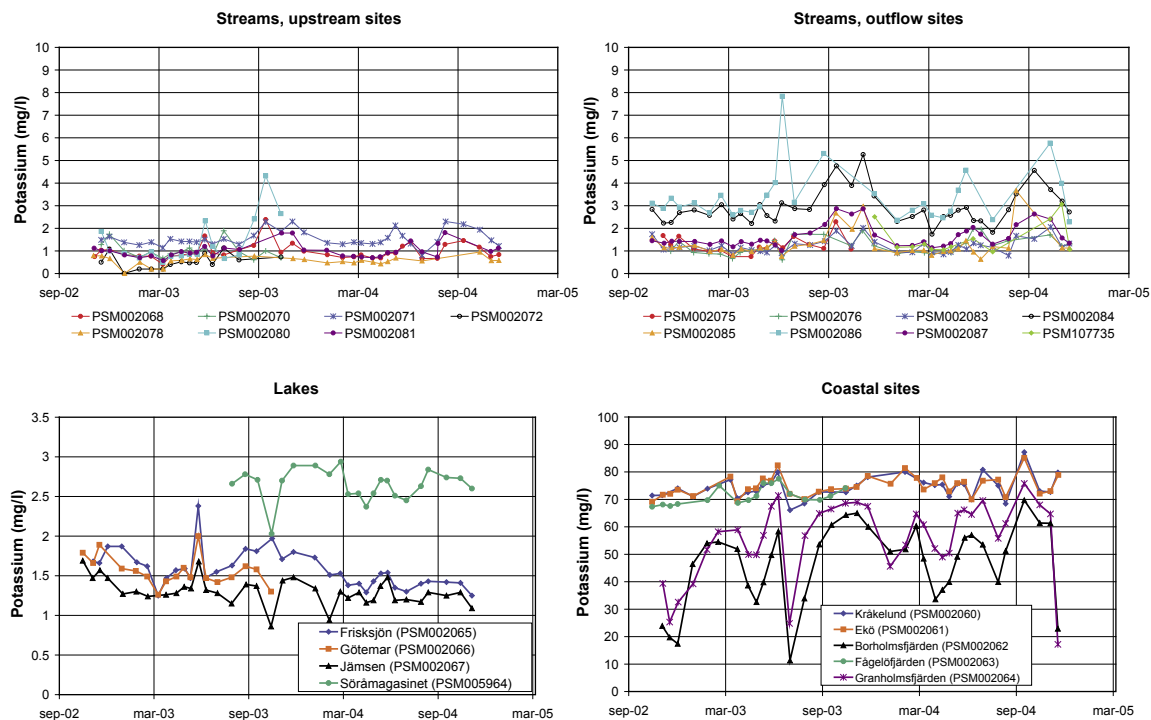




**Figure 5-39.** Temporal variations in the concentration of magnesium in streams, lakes and at coastal sites in the Simpevarp area.



**Figure 5-40.** Temporal variations in the concentration of sodium in streams, lakes and at coastal sites in the Simpevarp area.



**Figure 5-41.** Temporal variations in the concentration of potassium in streams, lakes and at coastal sites in the Simpevarp area.

### Typical concentrations of calcium, magnesium, sodium and potassium in the Simpevarp area

Typical concentrations of calcium, magnesium, sodium and potassium in the surface waters are summarised in Table 5-3. The concentrations in the Basins of Granholmsfjärden and Borholmsfjärden are given as an interval due to the large variation at these sites.

**Table 5-3.** Typical concentrations of calcium, magnesium, sodium and potassium. Rounded median values in mg/l. The 'open sea' sea sites refer to PSM002060, PSM002061 and PSM002063.

	Calcium	Magnesium	Sodium	Potassium
Lakes	8.6	2.3	10	1.5
Streams	11	2.4	8.6	1.2
Sea – 'open sea' sites	100	200	2,000	70
Sea – closed basins	20–90	50–200	300–2,000	10–70

### 5.3.3 Chloride, fluoride, bromide and iodide

Chloride constitutes together with bicarbonate and sulphate the major part of the anions in fresh surface waters of the Simpevarp area. Each of these ions make about one third of the total anions on molar (charge) basis. Fluoride and bromide occur at concentrations less than one tenth of chloride, whereas iodide only occurs at trace levels.

In the brackish water of the Baltic, chloride and bromide occur in markedly higher concentrations compared to the fresh waters. Iodide occurs in comparable concentrations, whereas the fluoride concentration is higher in the fresh waters than in the brackish water.

## Comparisons with regional and national reference data

Compared to the national distributions of the Swedish survey of lakes and streams /IMA 2005/, chloride occur in slightly elevated concentrations in the Simpevarp area, whereas the fluoride concentrations are markedly elevated compared both to Kalmar County and Sweden (Figures 5-42 and 5-43).

There are no national reference data available for bromide and iodide, but compared to the Forsmark area are the bromide levels probably normal, whereas the iodide level is markedly elevated in some Simpevarp lakes and streams. The evaluation of bromide is complicated by the fact that the majority of the observations fall below the reporting limit of 0.2 mg/l.

The observed concentrations of chloride and bromide in the brackish water of the Simpevarp area reflects the mixing between water from the Baltic proper and varying amounts of fresh water. The concentrations are, as expected, slightly elevated compared to the brackish water of Bottenhavet outside the Forsmark study area. Also the iodide concentrations seem to be elevated compared to Bottenhavet, whereas the fluoride concentrations are difficult to evaluate since many observations fall below the reporting limit (Figure 5-44).

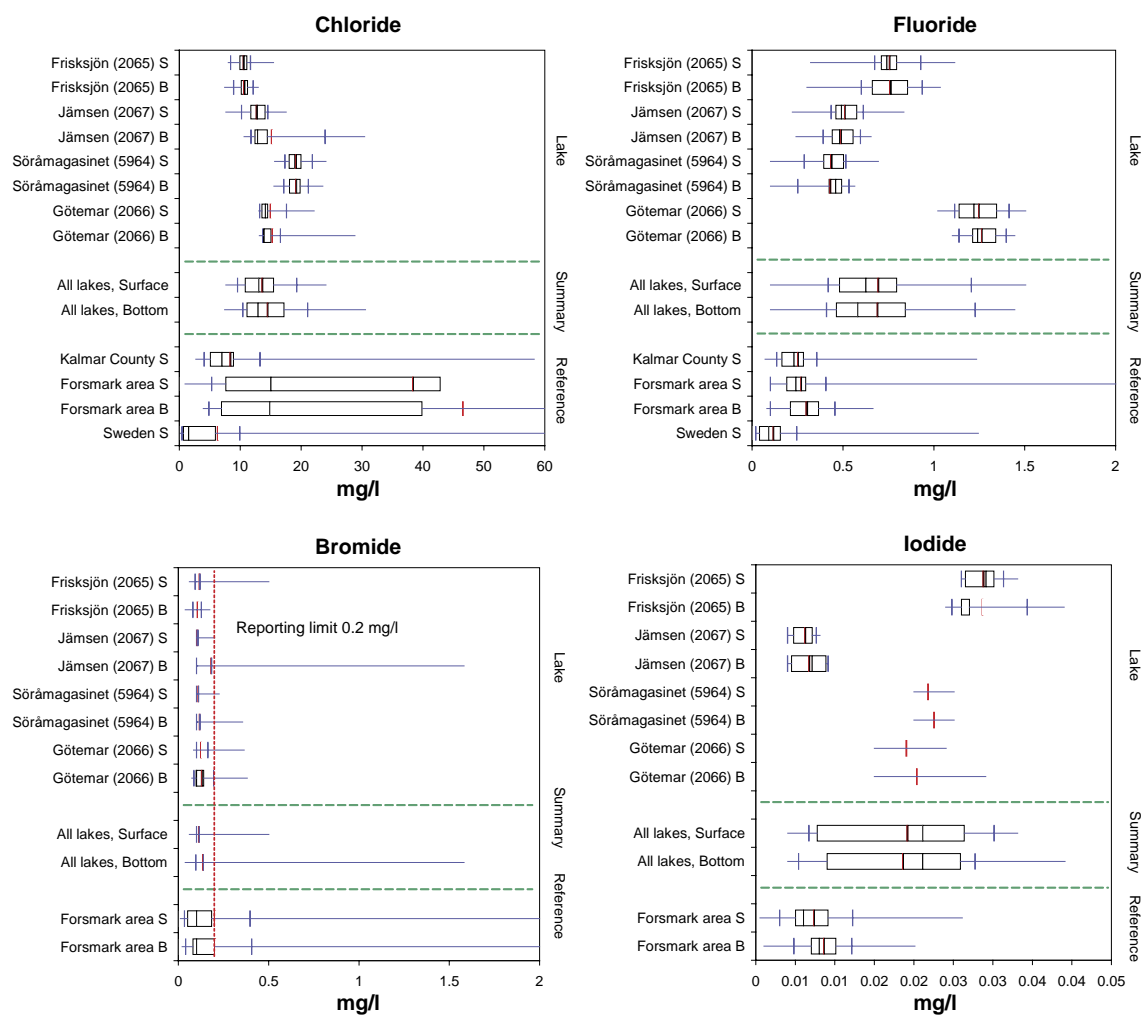


Figure 5-42. Concentrations of chloride, fluoride, bromide and iodide in surface (S) and bottom (B) water in lakes in the Simpevarp area.

The observations from the closed Basins of Granholmsfjärden and Borholmsfjärden show a substantial variation due to mixing with fresh waters from the streams. The chloride and bromide concentrations are shifted towards lower values due to mixing, whereas fluoride is elevated. Iodide that occurs at comparable concentrations in both fresh and brackish water show only increased variation. The sampling site in Fågelfjärden, PSM002063, shows stable but slightly lower concentrations of all ions, compared to the ‘open sea’ sites at Kråkelund and Ekö (PSM002060 and PSM002061).

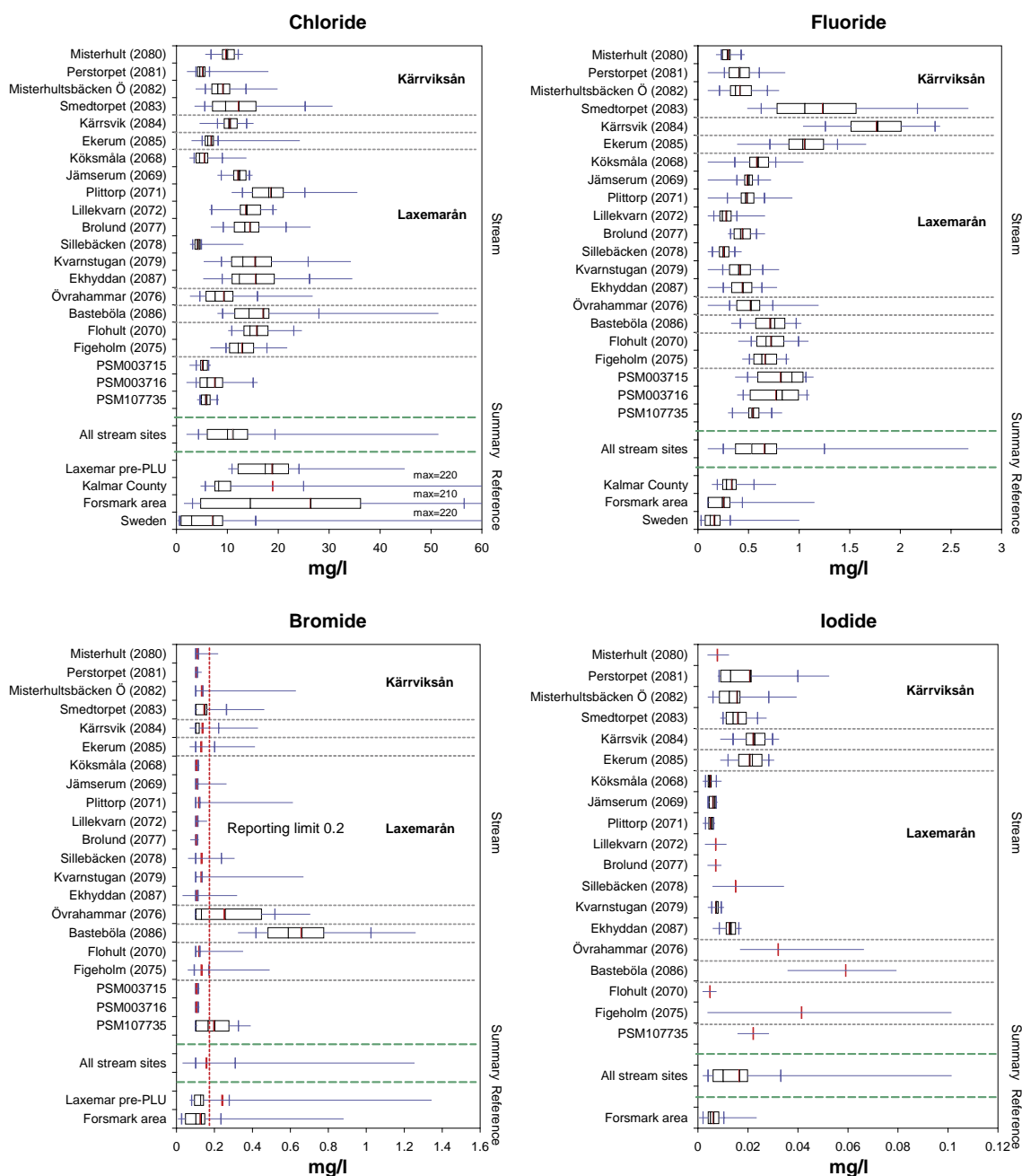
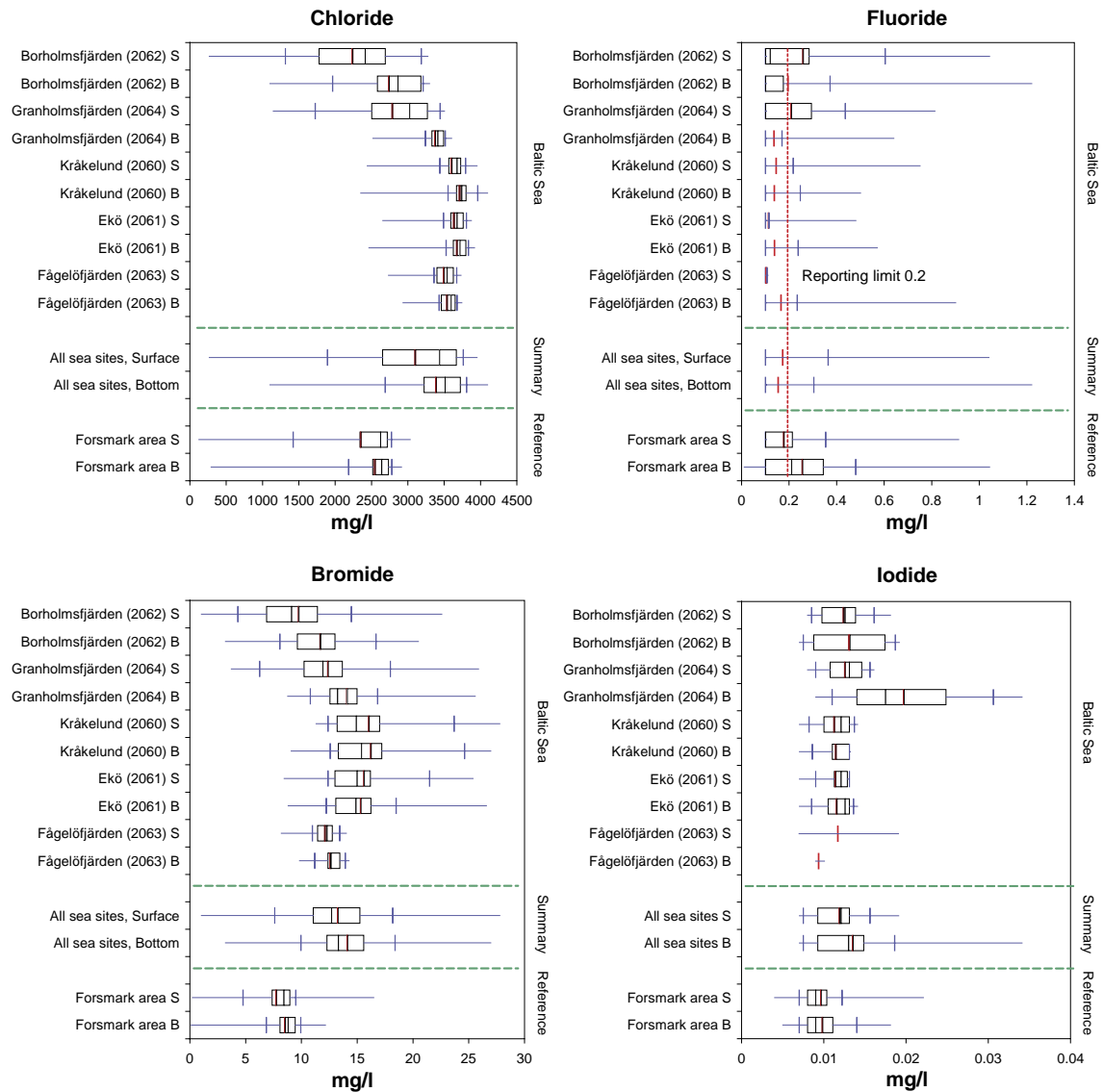


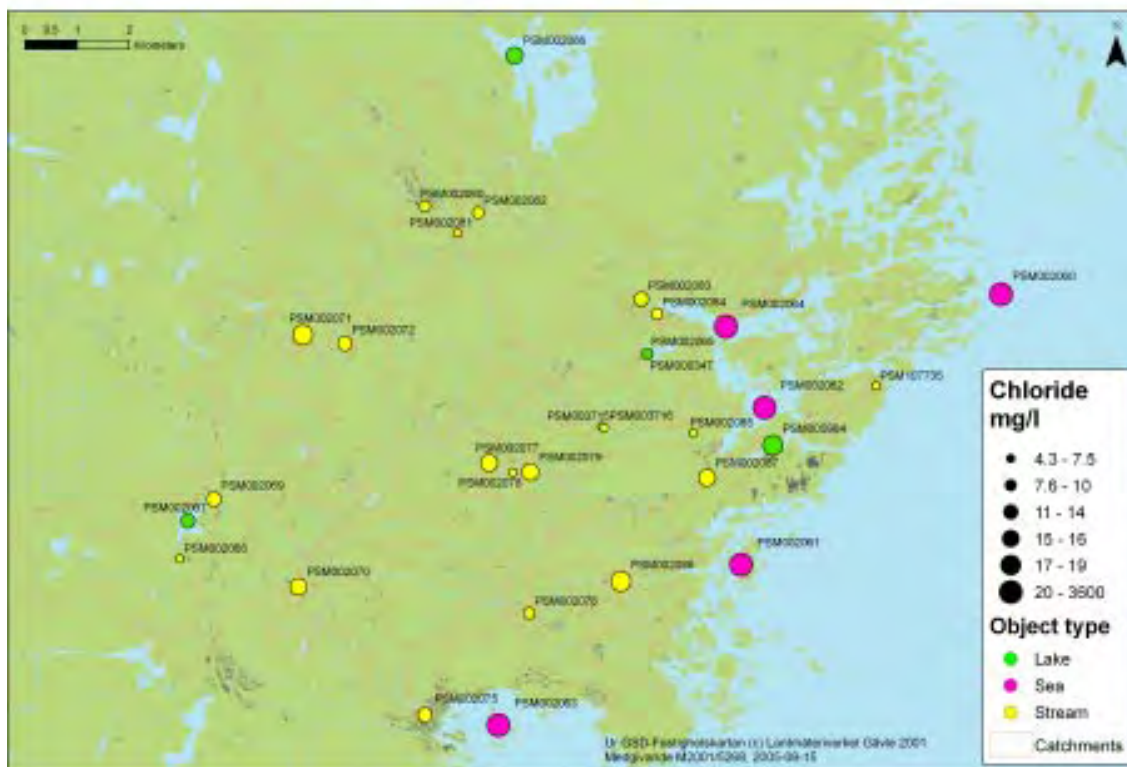
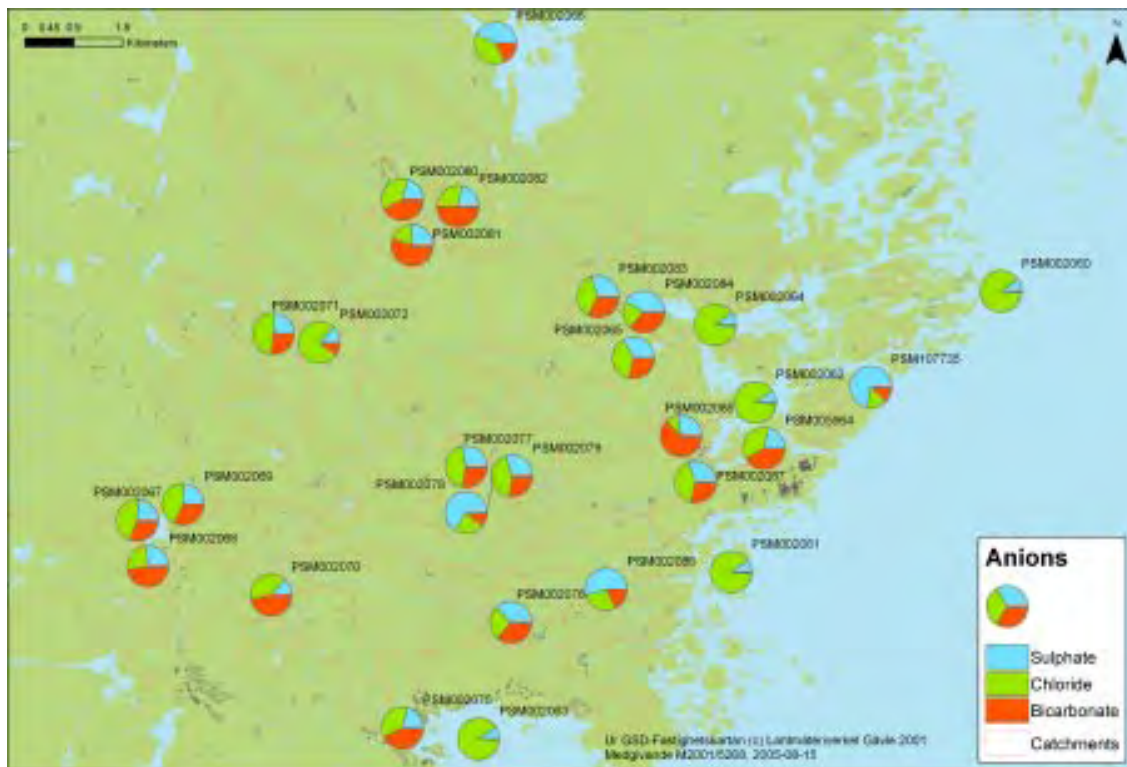
Figure 5-43. Concentrations of chloride, fluoride, bromide and iodide in the streams in the Simpevarp area.



**Figure 5-44.** Concentrations of chloride, fluoride, bromide and iodide in lakes, streams and at the coastal sites in the Simpevarp area. Surface (S) and bottom (B).

### Spatial variation within the Simpevarp area

The Principal Component Analysis in previous section revealed that the spatial distribution of chloride is most similar to sodium when compared with the major cations. Elevated chloride concentrations are found in a west to east directed band in the middle of the Simpevarp area. At the sampling sites which show elevated chloride levels, the contents of bicarbonate is relatively lower, whereas the sulphate levels are approximately normal compared to the rest of the Simpevarp sampling sites (Figure 5-45).



**Figure 5-45.** The relative molar (charge) amounts of the anions chloride, sulphate and bicarbonate in the Simpevarp area (upper). In the lower map the mean concentrations of chloride are shown for all fresh and brackish sampling sites in the Simpevarp area.

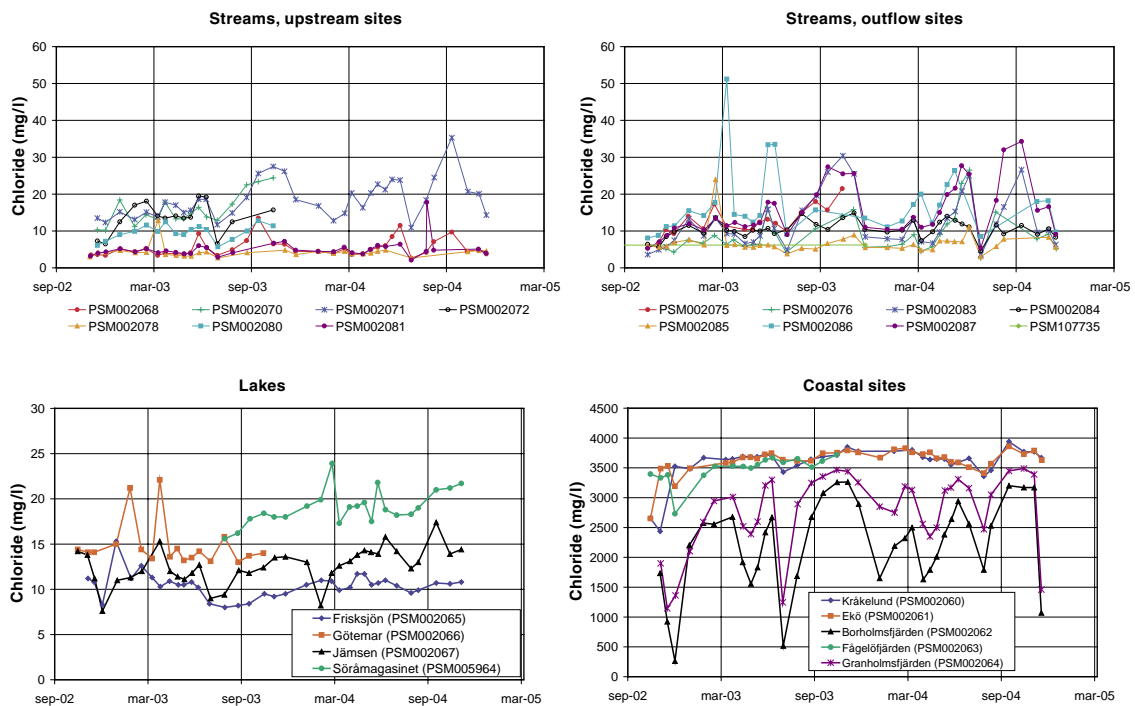


### Temporal variation of chloride and fluoride

Chloride shows a temporal pattern similar to sodium in the lakes and streams, probably mainly controlled by climatic factors as precipitation and runoff. In the coastal sites, the concentration of chloride shows rather small variation, except for the Basins of Granholmsfjärden and Borholmsfjärden where the vigorous variation seems to be controlled mainly by the inflow of fresh water from streams in the area (Figure 5-46).

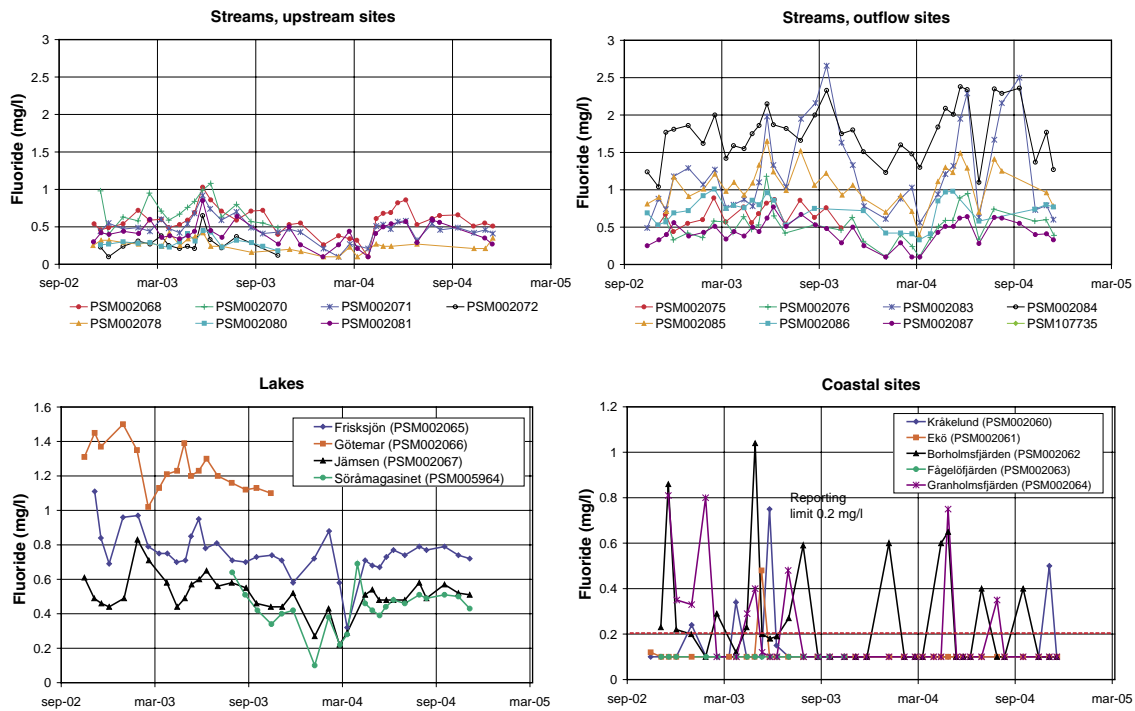
In many of the lakes and streams, fluoride shows a different pattern of variation compared to chloride, which may reflect that fluoride has a different origin. Many streams and lakes show for example a short decrease in fluoride concentrations during the winter 2004 that is not seen for chloride.

In the brackish water many observations fall under the reporting limit. During episodes of large influx of fresh water, the fluoride levels in the Basins of Granholmsfjärden and Borholmsfjärden show transient peaks, caused by mixing with the higher fluoride levels of fresh water (Figure 5-47).



**Figure 5-46.** Temporal variations in the concentration of chloride in streams, lakes and at coastal sites in the Simpevarp area.





**Figure 5-47.** Temporal variations in the concentration of fluoride in streams, lakes and at coastal sites in the Simpevarp area.

### Typical concentrations of chloride, bromide, fluoride and iodide in the Simpevarp area

Typical concentrations of chloride, bromide, fluoride and iodide in the surface waters are summarised in Table 5-4. The concentrations of chloride and bromide are given as intervals for the closed basins because of the large variation at these sites.

**Table 5-4.** Typical concentrations of chloride, bromide, fluoride and iodide in the Simpevarp area. Rounded median values in mg/l. The 'open sea' sea sites refer to PSM002060, PSM002061 and PSM002063.

	Chloride	Bromide	Fluoride	Iodide
Lakes	13	< 0.2	0.6	0.02
Streams	10	< 0.2	0.5	0.01
Sea – 'open sea' sites	3,500	15	< 0.2	0.01
Sea – closed basins	1,000–3,500	1–20	< 0.2	0.01

### 5.3.4 Lithium and strontium

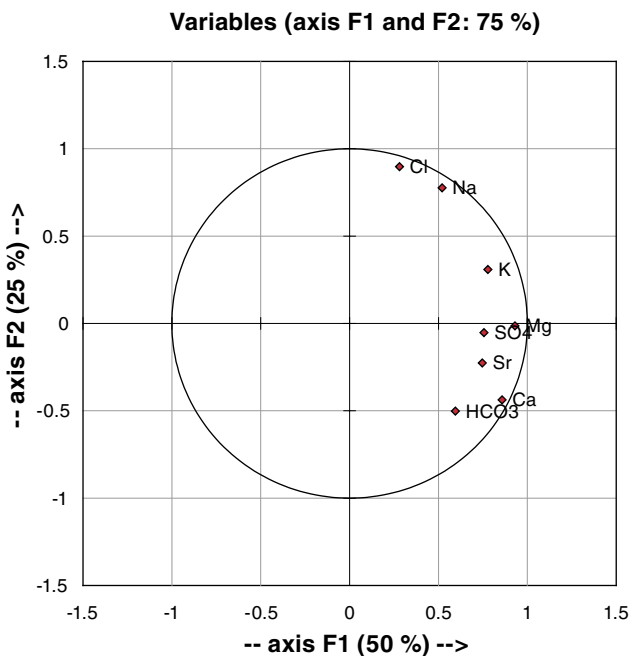
Lithium and strontium originates to a large extent from weathering processes in the catchments. Deep groundwater could also be a source for these elements. The chemical characteristics of lithium resemble to some degree magnesium, whereas strontium show characteristics very similar to calcium (Figure 5-48).

Most of the lithium samples from fresh waters fall below the reporting limit which makes the evaluation of this element difficult. Furthermore, there are no national reference data available for neither lithium nor strontium, and therefore data from the Forsmark site investigation area are used as reference.

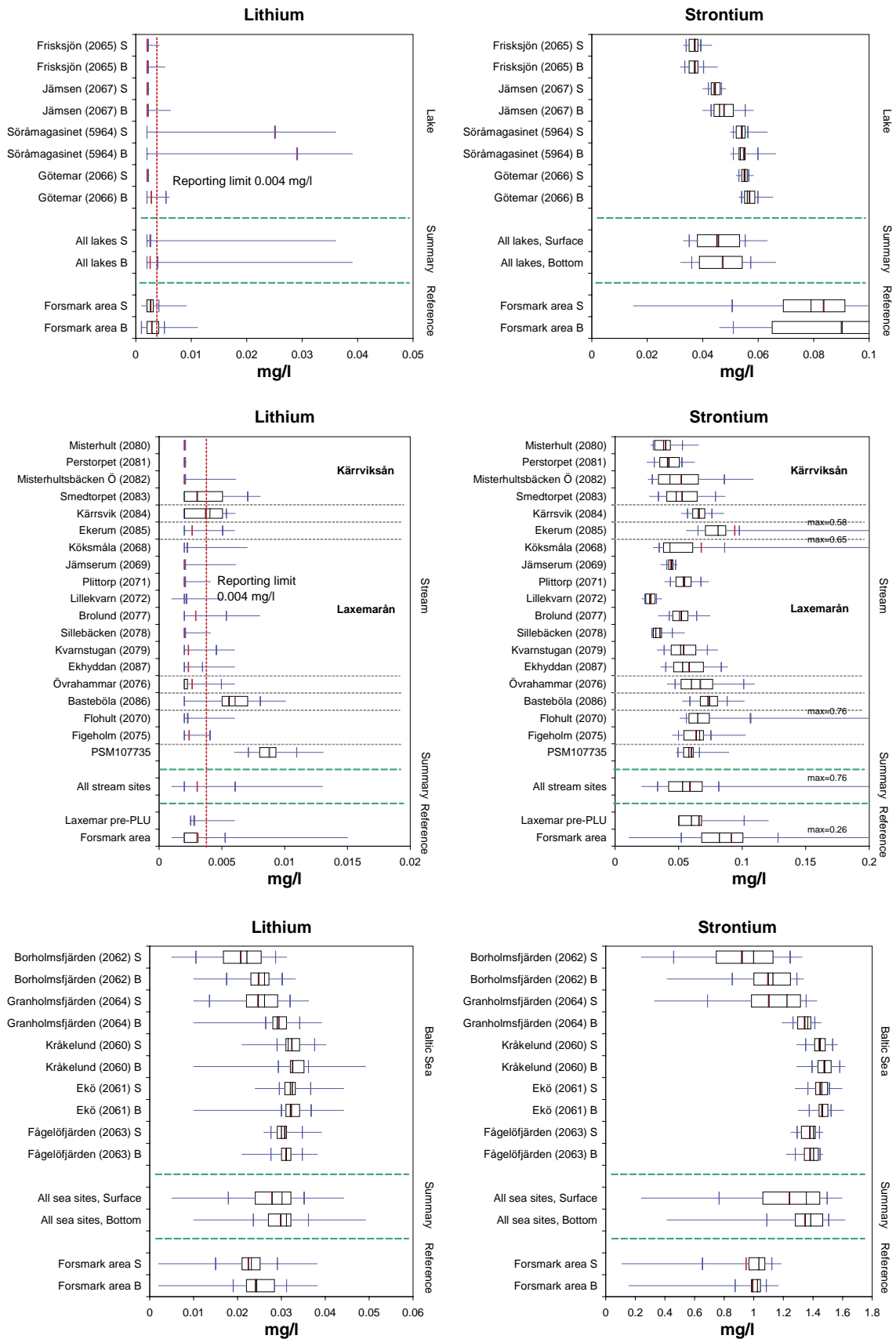
The lithium concentrations in the fresh waters are, as far as the limited data permit any conclusions, approximately in the same range as those observed in the Forsmark area. There are two sampling sites which show deviating lithium concentrations; PSM002086 located in a catchment with a high proportion of arable land, and PSM107735 located in a small catchment at the Island of Ävrö. In a soil tube in the latter catchment, deviating groundwater chemistry has been observed, possibly indicating discharge of deep groundwater (Figure 5-49). Typical lithium concentrations in fresh waters are below the reporting limit of 0.004 mg/l, whereas the concentrations in the sea water are at least ten times higher, about 0.03 mg/l.

There are, however, a few stream sites with occasionally markedly elevated levels of strontium compared to the normal levels of these sampling sites. These erroneous data will be corrected in the SICADA database.

Typical strontium concentrations in the Simpevarp area are 0.05 mg/l in fresh waters and 1.4 mg/l in brackish water.



**Figure 5-48.** The Principal Component Analysis on major ion data shown in Figure 5-37, but with strontium included. Strontium is located close to calcium in the loading plot implicating a similar spatial pattern in the Simpevarp area.



**Figure 5-49.** Concentrations of lithium (left) and strontium (right) in lakes, streams and at coastal sites in the Simpevarp area. Surface samples are denoted 'S' and bottom samples 'B'.

### **5.3.5 Iron and manganese**

The mobility of iron and manganese is enhanced by the presence of organic substances and by low redox potentials. In brown-water lakes and streams, iron is bound to the humic substances which lead to high concentrations of ferrous iron in the water column. Without the presence of humus acids a larger fraction of this iron would have precipitated as ferric iron.

Discharging groundwater, as well as anoxic bottom waters of lakes, show low redox potentials which implies high mobility of both ferrous iron and manganese. Bottom sediments usually contain ferric iron that has been precipitated in the water column. During anoxic episodes this process may be reversed, leading to elevated concentrations in the bottom water. Manganese shows an analogue pattern.

#### ***Comparisons with regional and national reference data***

The concentration of iron is generally very high in the superficial fresh waters of the Simpevarp area, both compared to national distributions of the Swedish survey of lakes /IMA 2005/ and to observations from the Forsmark study area. The very high content of organic substances in the area, mainly humus acids, is a probable explanation for the markedly elevated iron contents in both streams and lakes.

Manganese occurs in moderately elevated concentrations in the surface waters of the Simpevarp area compared to the Swedish survey of lakes (Figure 5-50).

#### ***Spatial variation within the Simpevarp area***

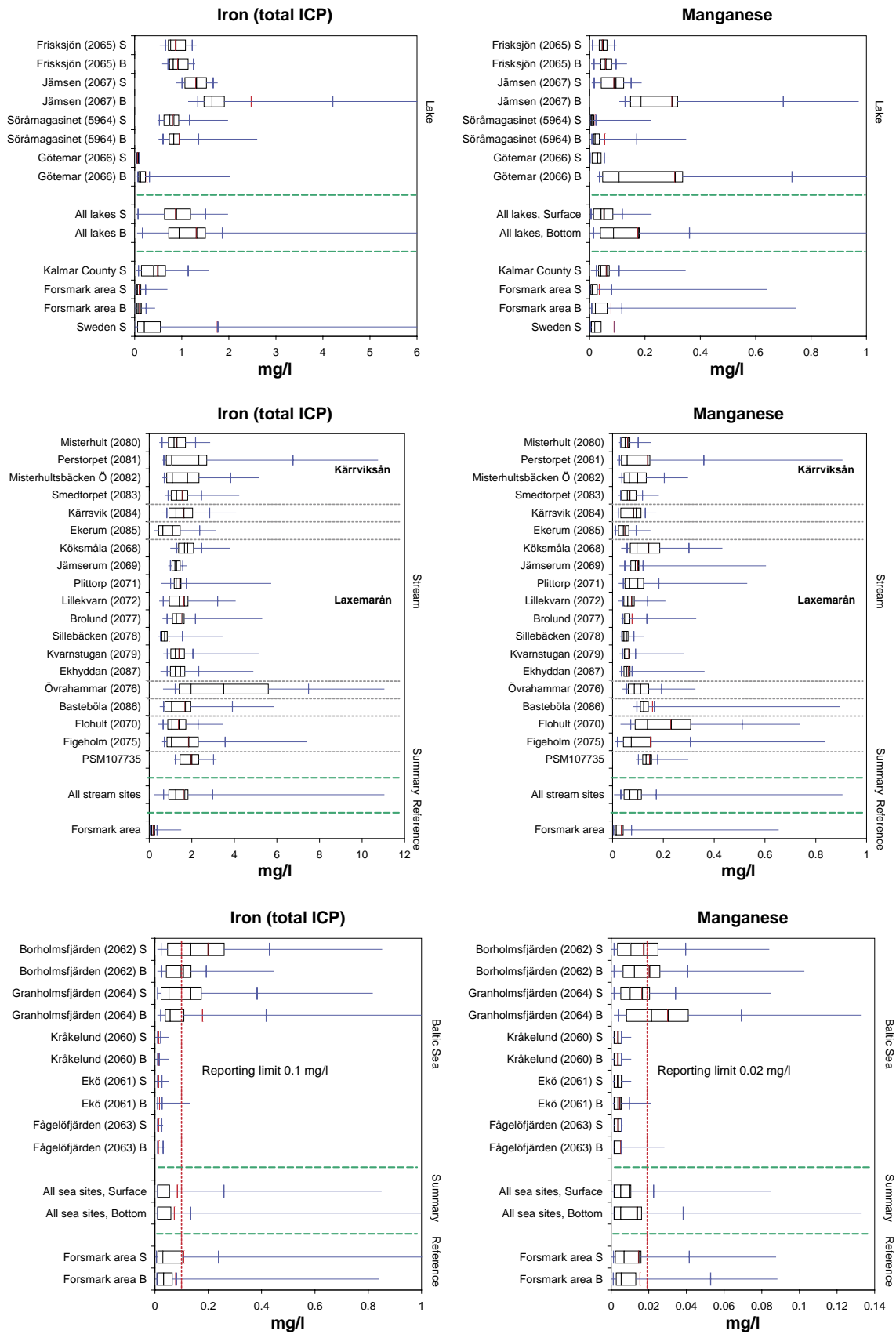
Both iron and manganese are rather evenly distributed throughout the Simpevarp area and show no clear spatial patterns. There are a few sampling sites that deviates by showing either lower or higher levels of these metals.

Among the lakes, Lake Götemar north of the Simpevarp area deviates by showing low contents of both iron, and to some extent also manganese, in the surface water. This lake is, in contrast to the other studied lakes in the area, an oligotrophic clear-water lake with low contents of organic substances, which is the probable explanation for the low contents of iron.

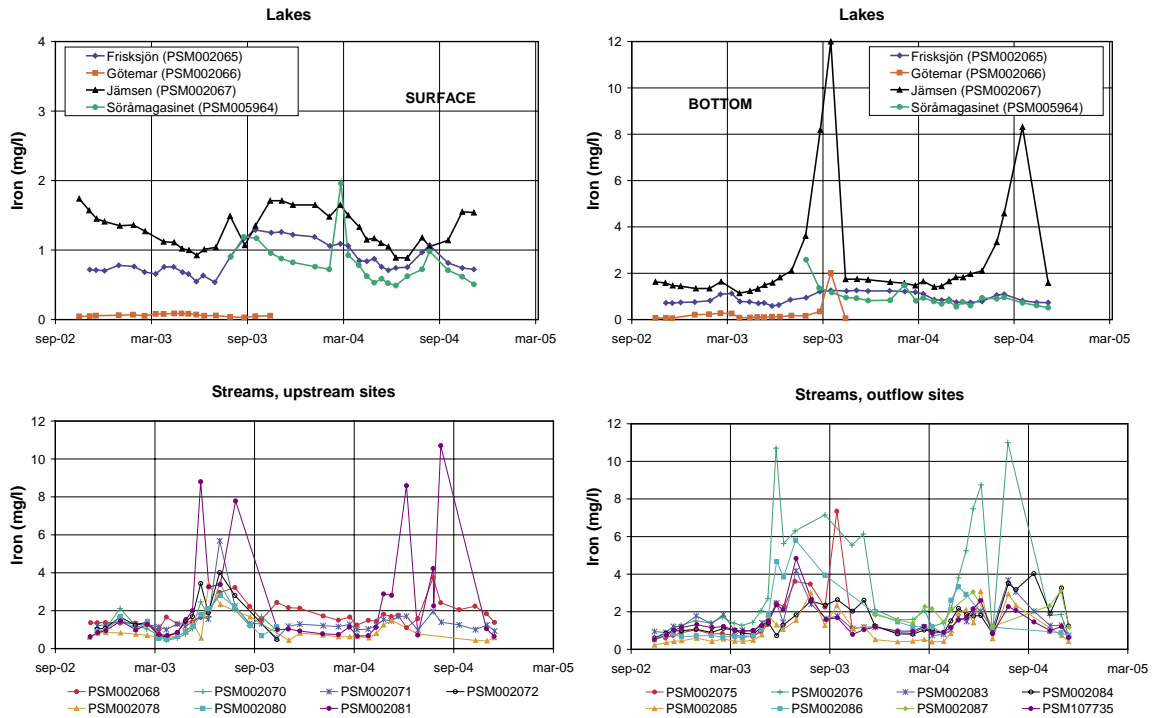
#### ***Temporal variation***

The concentrations of iron in the streams show a clear seasonal pattern, strongly correlated to the seasonal variation of the contents of dissolved organic substances. PSM002076 and PSM002081 located in different parts of the Simpevarp area show a similar pattern with highly elevated iron levels during two occasions each summer. The cause for this probably not randomly induced pattern is unclear.

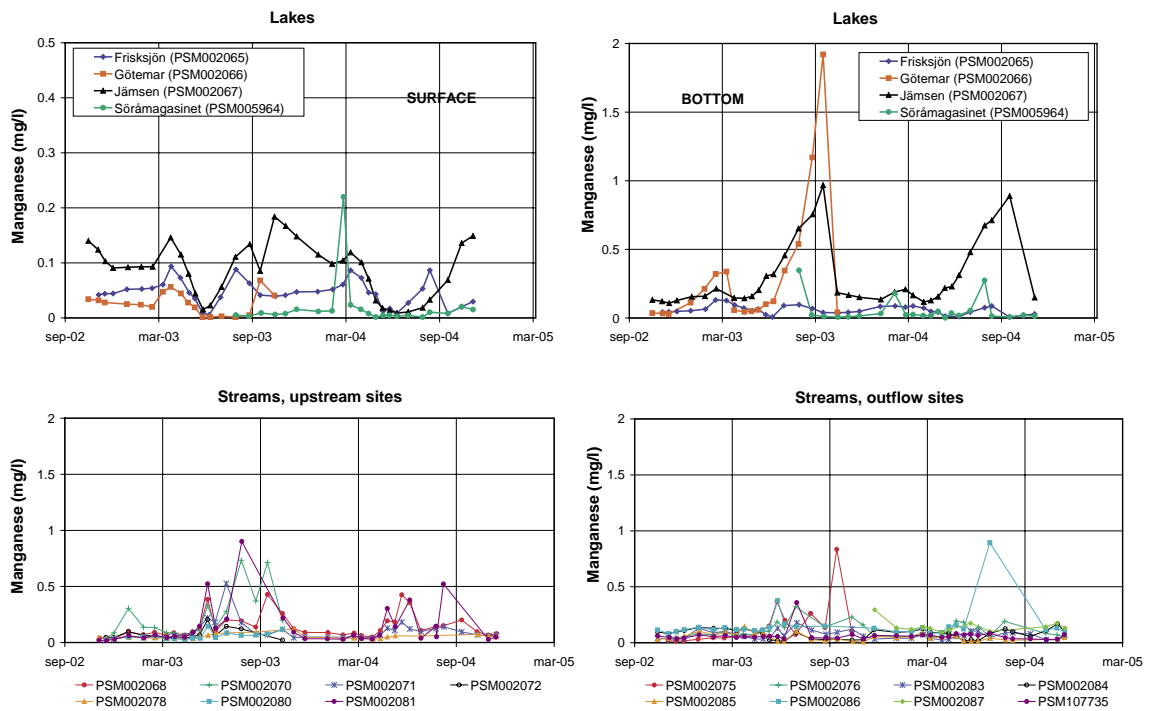
Lake Jämsen and Lake Götemar show elevated concentrations of both iron and manganese in the bottom water during late summer. These elevated concentrations coincide with anoxic conditions in the bottom water due to decomposition of organic matter. In Lake Götemar, manganese shows an additional but lower raise during late winter (Figures 5-51 and 5-52).



**Figure 5-50.** Concentrations of iron (left) and manganese (right) in lakes, streams and at coastal sites in the Simpevarp area. Surface samples are denoted 'S' and bottom samples 'B'.



**Figure 5-51.** Temporal variations in the concentration of iron (total ICP) in streams and lakes in the Simpevarp area (surface and bottom water).



**Figure 5-52.** Temporal variations in the concentration of manganese in streams and lakes in the Simpevarp area (surface and bottom water).

### ***Typical iron and manganese concentrations in the Simpevarp area***

Typical concentrations in the fresh waters in the Simpevarp area are 1 mg/l for iron and 0.1 mg/l for manganese. Both elements show a substantial seasonal variation. The content of sea water is unclear since almost all observations fall below reporting limits.

## **5.4 Acidity and alkalinity**

Alkalinity is a measure of the capacity of the water to withstand supply of acids. The higher alkalinity, the more acid can be neutralised by the water without substantial lowering of the pH. Bicarbonate constitutes the major part of the alkalinity of Swedish freshwaters, but other ions may also contribute to the alkalinity. As the bicarbonate ion constitutes the major part of the dissolved inorganic carbon, DIC, the conclusions of alkalinity are therefore valid for DIC (see figures in the carbon section). pH is an important factor controlling in which form many substances occur in the water phase, and for example mobility and toxicity of many metals are heavily dependent on the prevailing pH.

### ***Comparisons with regional and national reference data***

Most freshwaters in the Simpevarp area have moderately to slightly acid pH-values and the buffering capacity is very good in most of the sampling sites according to the Swedish EQC /Naturvårdsverket 2000/ (Table 5-5 and Figure 5-53).

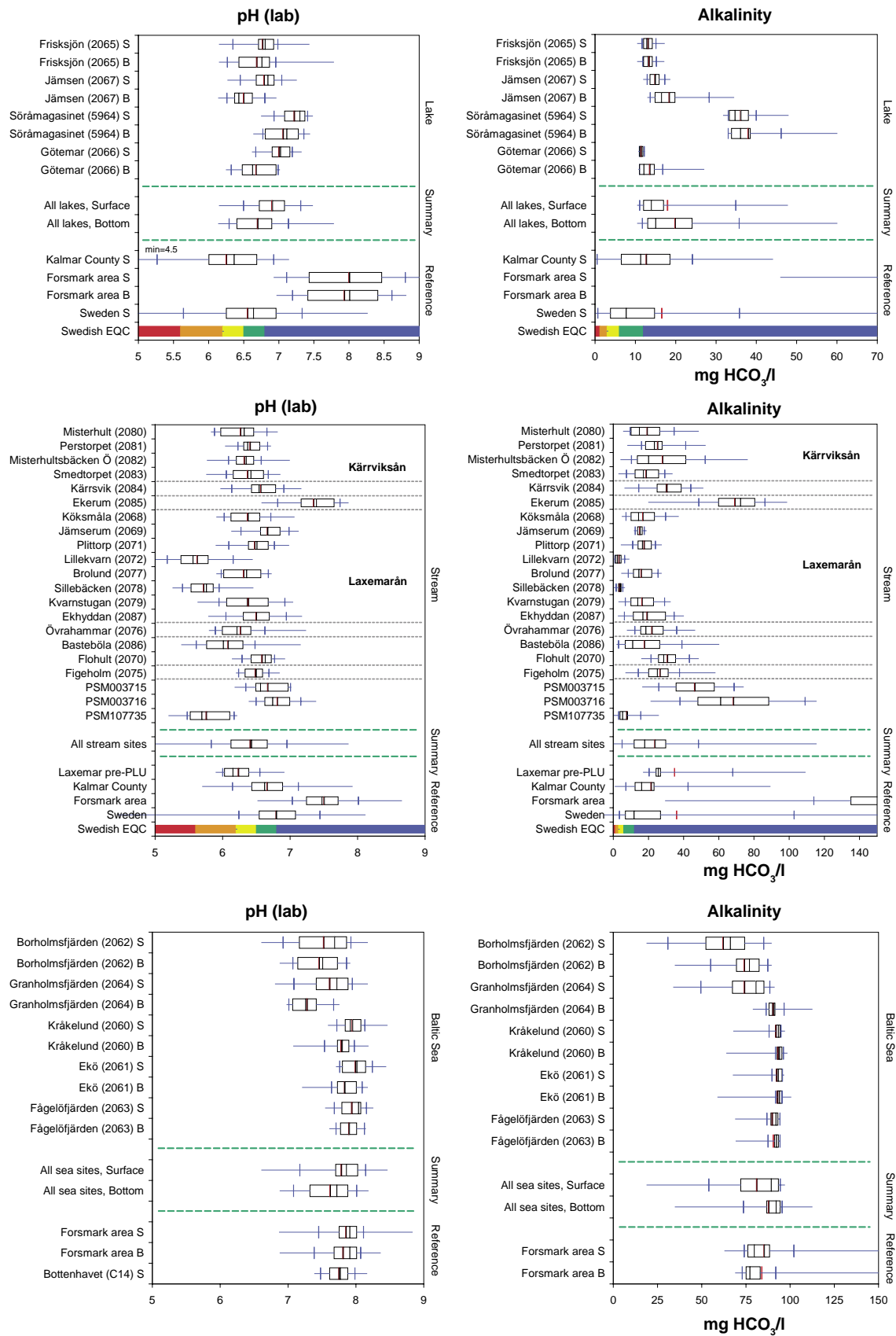
There are, however, a few stream sampling sites that show 'very acid' pH-values and 'no or negligible' buffering capacity, indicating occurrence of acidified waters in the area. A substantial proportion of the Simpevarp area is covered by a very thin Quaternary layer or bare bedrock, giving prerequisites for acidification in small water courses dewatering the catchments which are dominated by these thin soils. Most stream and lake sampling sites are, however, located in the valleys and is not necessary representative for these smaller streams that may show substantial acidification.

The pH and alkalinity at the coastal sites are stable and on consistently high levels. The lower levels and higher variation observed in the closed Basins of Granholmsfjärden and Borholmsfjärden is due to dilution of the sea water by freshwater entering with the streams, a phenomenon common for most dissolved ions in the basins.



**Table 5-5. Median values of pH and alkalinity in lakes, streams and at coastal sites.**

Idcode		Alkalinity		pH	
		mg HCO <sub>3</sub> /l	meq/l	lab	field
<b>Streaming water</b>					
PSM002068	Surface	14	0.23	6.37	
PSM002069	Surface	15	0.24	6.66	
PSM002070	Surface	29	0.47	6.62	
PSM002071	Surface	17	0.27	6.50	
PSM002072	Surface	2.2	0.04	5.56	
PSM002075	Surface	25	0.41	6.49	
PSM002076	Surface	19	0.30	6.21	
PSM002077	Surface	15	0.24	6.35	
PSM002078	Surface	3.6	0.06	5.75	
PSM002079	Surface	14	0.23	6.37	
PSM002080	Surface	15	0.24	6.31	
PSM002081	Surface	23	0.38	6.37	
PSM002082	Surface	20	0.33	6.34	
PSM002083	Surface	17	0.28	6.41	
PSM002084	Surface	30	0.49	6.54	
PSM002085	Surface	72	1.18	7.38	
PSM002086	Surface	11	0.18	6.01	
PSM002087	Surface	17	0.28	6.49	
PSM003715	Surface	46	0.75	6.56	
PSM003716	Surface	61	1.00	6.74	
PSM107735	Surface	5.3	0.09	5.69	
<b>All streams</b>	<b>Surface</b>	<b>18</b>	<b>0.29</b>	<b>6.42</b>	
<b>Lake water</b>					
PSM002065	Surface	13	0.21	6.80	6.94
PSM002065	Bottom	13	0.21	6.75	6.56
PSM002066	Surface	11	0.18	7.02	7.24
PSM002066	Bottom	12	0.20	6.63	6.43
PSM002067	Surface	15	0.24	6.84	6.95
PSM002067	Bottom	16	0.27	6.43	6.39
PSM005964	Surface	35	0.57	7.29	7.33
PSM005964	Bottom	36	0.59	7.11	6.93
<b>All lakes</b>	<b>Surface</b>	<b>14</b>	<b>0.23</b>	<b>6.90</b>	<b>7.04</b>
All lakes	Bottom	15	0.25	6.70	6.59
<b>Sea water</b>					
PSM002060	Surface	93	1.52	7.92	7.99
PSM002060	Bottom	94	1.53	7.79	7.85
PSM002061	Surface	93	1.52	8.01	8.17
PSM002061	Bottom	94	1.54	7.83	7.94
PSM002062	Surface	66	1.08	7.68	7.77
PSM002062	Bottom	77	1.26	7.50	7.45
PSM002063	Surface	92	1.50	8.03	8.08
PSM002063	Bottom	92	1.51	7.89	8.00
PSM002064	Surface	80	1.32	7.71	7.74
PSM002064	Bottom	90	1.48	7.26	7.11
<b>All coastal sites</b>	<b>Surface</b>	<b>89</b>	<b>1.46</b>	<b>7.85</b>	<b>7.93</b>
<b>All coastal sites</b>	<b>Bottom</b>	<b>92</b>	<b>1.50</b>	<b>7.71</b>	<b>7.71</b>



**Figure 5-53.** pH and alkalinity in lakes, streams and at coastal sites in the Simpevarp area. Surface samples are denoted 'S' and bottom samples 'B'.

### **Spatial variation within the Simpevarp area**

There are no obvious large-scale geographical gradients of either pH or alkalinity in the Simpevarp area, as can be seen in the Figures 5-54 and 5-55.

Two or three catchments show both higher pH and alkalinity compared to most other sites in the area. PSM002085 (Ekerum) show both markedly elevated pH and alkalinity, whereas PSM002075 (Figeholm) and PSM002084 (Kärrevik) show rather high alkalinity but only slightly elevated pH-values. These catchments have in common that they drain relatively high situated cathment areas.

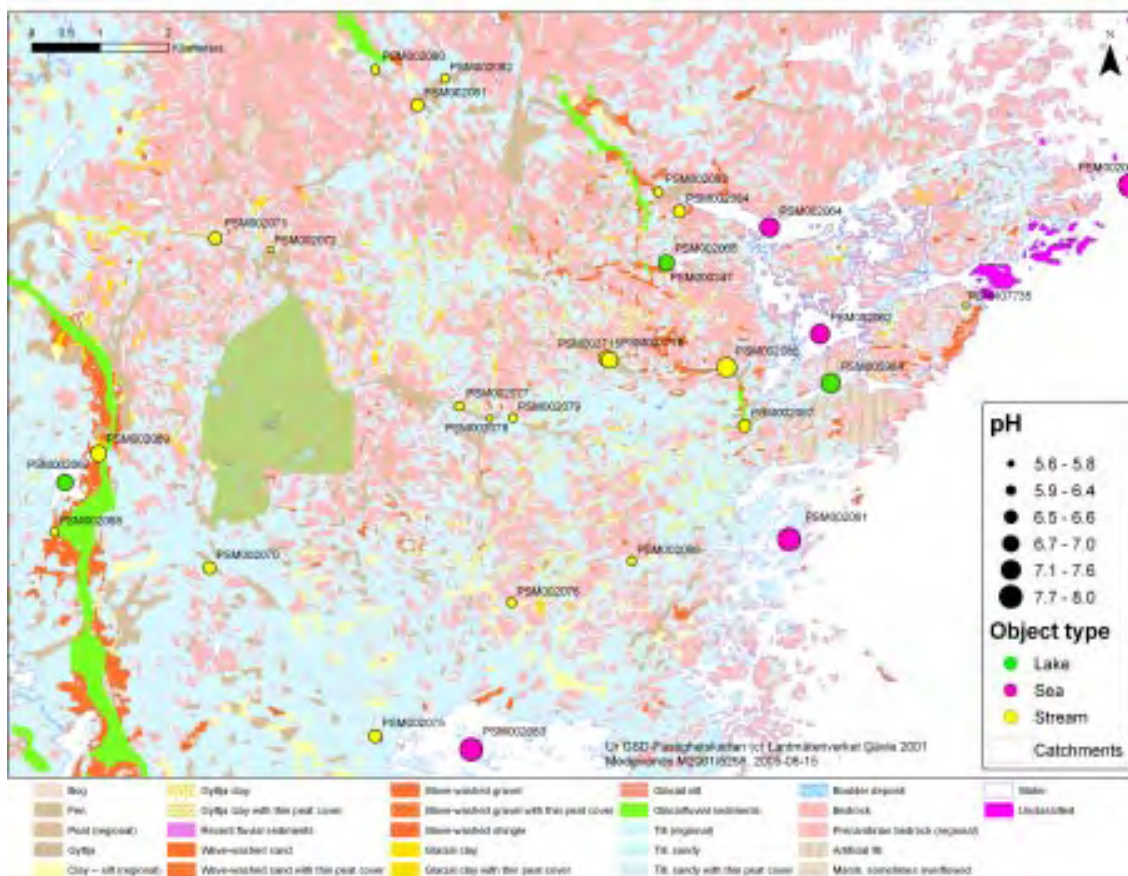
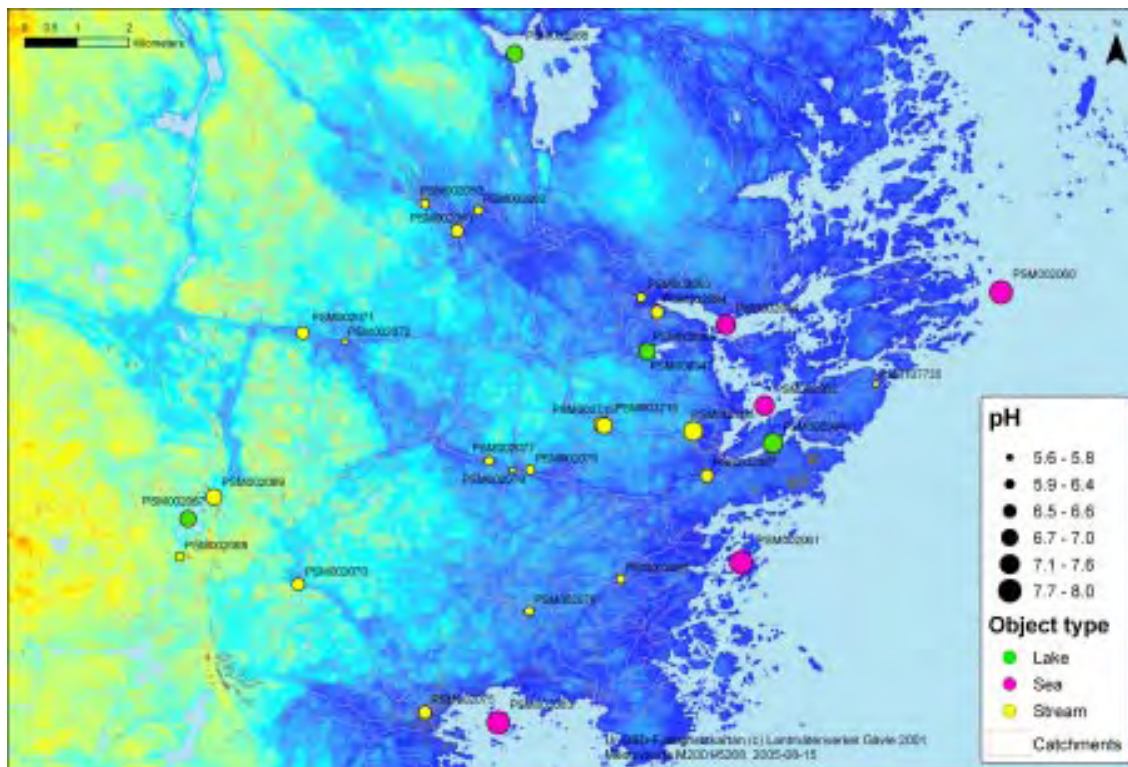
The shallow groundwater in the valleys of the catchment of PSM002085 also shows especially high alkalinity, whereas the groundwater at two topographically higher locations nearby shows very low alkalinity and low pH-values. A possible explanation for the high alkalinity and pH in PSM002085 is agricultural activities, such as liming.

A number of stream sampling sites located in a northwest-southeast oriented band in the middle of the Simpevarp area, show especially low pH and alkalinity. These sites also show higher chloride concentrations compared to most other freshwater sampling sites. Most of these sampling sites are located in areas with thicker Quaternary deposits and peat.

The spatial distribution of alkalinity and pH shows a rather contradictory pattern as topographically higher catchments seem to exhibit higher values compared to the lower levelled sampling sites, where thicker Quaternary deposits should imply prerequisites for increased buffering capacity and higher pH-values. Probable explanations for this somewhat confusing pattern could be oxidation of sulphide-bearing minerals in the Quaternary deposits, or liming activities at some of these sites.



**Figure 5-54.** Mean alkalinity in the surface water in the Simpevarp area (mg HCO<sub>3</sub>/l).



**Figure 5-55.** Mean pH in lakes, streams and at coastal sites. The regional digital elevation model (DEM) which is used as background in the upper map ranges from blue low topographical levels to high levels symbolised by yellow tones. The map over Quaternary deposits is used as background in the lower map.



### Temporal variation

In the lakes and coastal sampling sites, pH shows a seasonal variation with higher values during late summer and early autumn and the lowest values during late winter. This pattern is probably connected to primary production, where high consumption of carbon dioxide during the warm season raises the pH-level. The alkalinity in lakes and at coastal sites is rather stable and shows no clear seasonal pattern (Figures 5-56 and 5-57).

The variation seen in both the streams and in the Basins of Granholmsfjärden and Borholmsfjärden probably reflects the variations in precipitation, leading to varying mixing proportions of waters of different origin.

### Typical values of pH and alkalinity in the Simpevarp area

The freshwaters of the Simpevarp area are slightly acid with pH about 6.5. The alkalinity is usually about 20 mg HCO<sub>3</sub>/l in both lakes and streams. There are, however, examples of markedly lower pH and almost zero alkalinity at some of the sampling sites in the area.

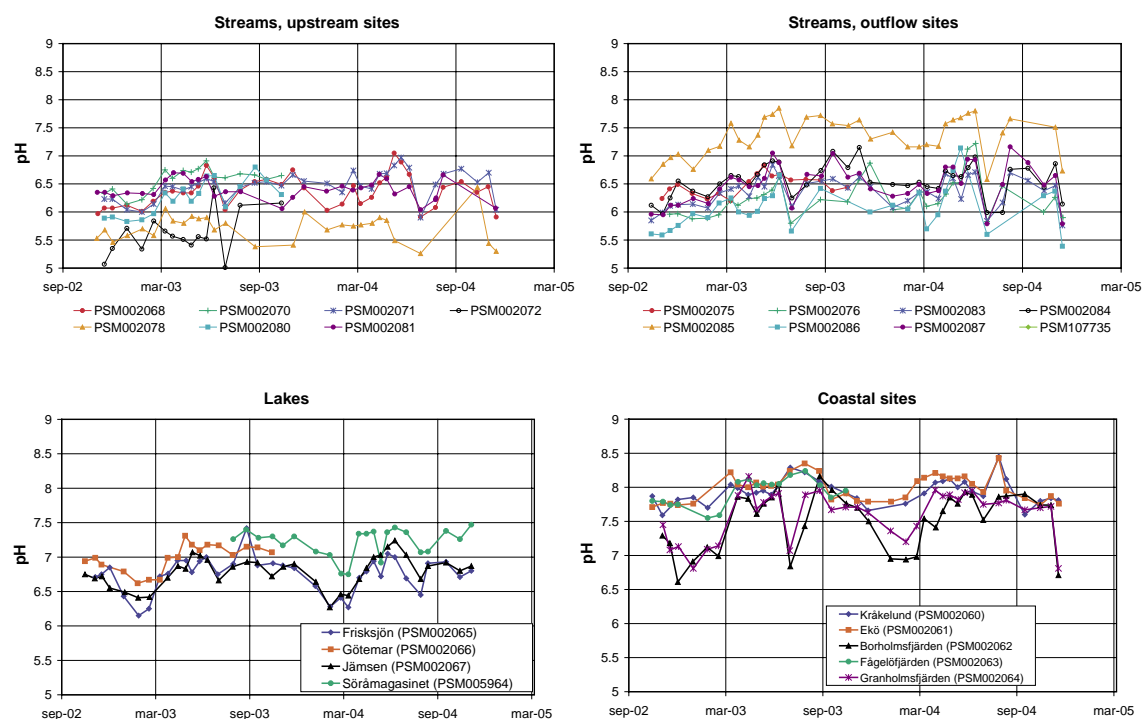


Figure 5-56. Temporal variations in the pH-value in streams and lakes in the Simpevarp area.

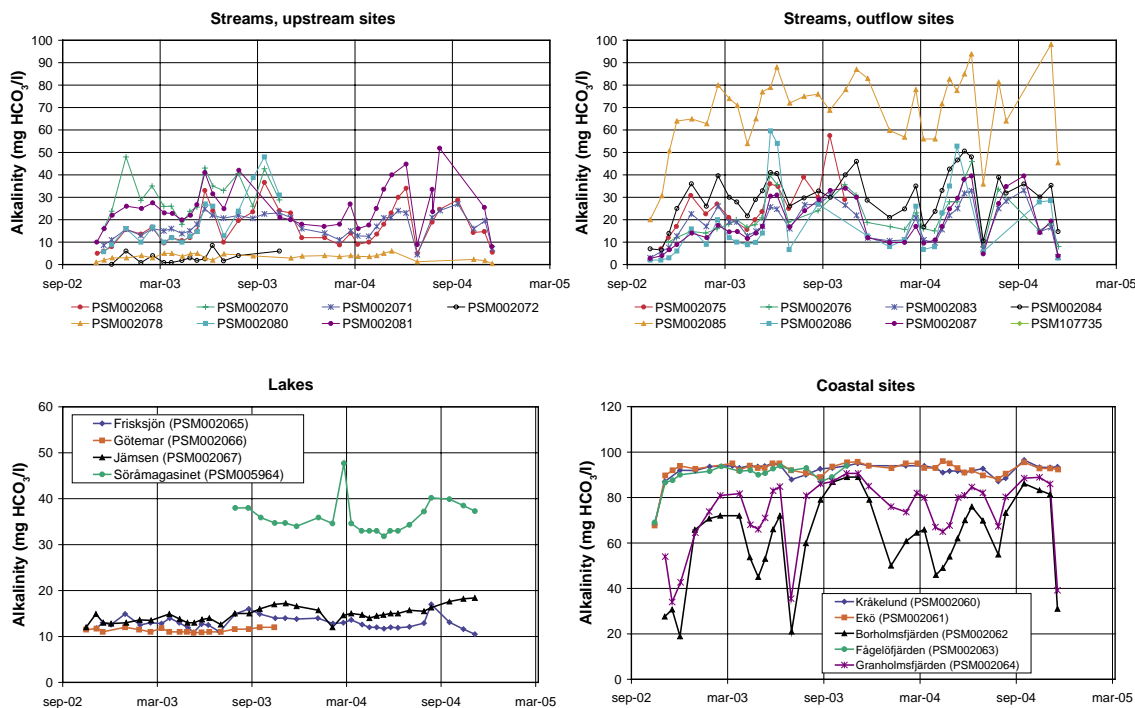


Figure 5-57. Temporal variations in the alkalinity expressed as mg HCO<sub>3</sub>/l in streams and lakes in the Simpevarp area.

## 5.5 Trace elements

In this section the abundance of 30 trace elements in surface waters are compiled. Comparisons are made with data from other regions as well as from precipitation. A few representative elements are described in more detail by maps showing spatial patterns. There was only one observation available per sampling site for most trace elements at the time for writing this report.

For some of the trace elements a significant portion of the observations falls below the reporting limit of the analysis method. This is particularly the case for mercury, indium and hafnium, making the conclusions more uncertain for these elements.

In the section dealing with shallow groundwater in the Simpevarp area, comprehensive comparisons are made among concentrations observed in shallow groundwater, precipitation and surface waters.

### 5.5.1 Overview of trace elements

Median values of trace elements in lakes, streams, sea water and precipitation are compiled in Table 5-6. Iodine, lithium and strontium are also described in previous sections. In Appendix 1 detailed statistics per element are presented for individual sampling sites.

The concentrations differ among the trace elements by several orders of magnitude. The highest concentrations are found for strontium, barium, zinc and zirconium in descending order. The lowest are found for mercury, lithium, lutetium and thulium.

**Table 5-6. Median values of trace elements (µg/l) in Simpevarp surface waters. Reference data from Swedish surveys of lakes, rivers and precipitation. Values below the reporting limit are marked by a '<'-sign and the highest reporting limit included in each calculation are shown in the statistics.**

Element		Precipitation <sup>d</sup>	Simpevarp streams	Swedish rivers <sup>c</sup>	Simpevarp lakes <sup>e</sup>		Swedish lakes <sup>a,b</sup>	Simpevarp coastal sites	
					Surface	Bottom	Surface	Surface	Bottom
Aluminium	Al	–	350		140	130	45	8.4	2.7
Antimony	Sb	0.06	0.075		0.13	0.13	0.04	< 0.1	< 0.1
Arsenic	As	0.13	0.63	0.63	0.63	0.57	0.29	< 1	< 1
Barium	Ba	0.8	16		12	11	7	18	18
Cadmium	Cd	0.024	0.020	0.01	< 0.002	< 0.002	0.018	< 0.02	< 0.02
Cerium	Ce	0.029	0.57		0.19	0.20	0.09	< 0.05	< 0.05
Cesium	Cs	0.007	< 0.03		< 0.03	< 0.03	0.01	< 0.3	< 0.3
Chromium	Cr	0.24	1.2	0.85	0.61	0.62	0.18	< 0.1	< 0.1
Cobalt	Co	0.017	0.61	0.54	0.046	0.048	0.05	< 0.05	< 0.05
Copper	Cu	0.80	2.8	0.9	2	2	0.5	< 1	< 1
Dysprosium	Dy	0.002	0.041		0.014	0.014	0.004	< 0.05	< 0.05
Erbium	Er	0.0007	0.027		0.009	0.010	0.002	< 0.05	< 0.05
Europium	Eu	0.0005	0.011		< 0.005	< 0.005	0.001	< 0.05	< 0.05
Gadolinium	Gd	0.002	0.053		0.018	0.018	0.006	< 0.05	< 0.05
Hafnium	Hf	0.001	0.13		0.69	0.35	< 0.001	0.35	0.65
Holmium	Ho	0.0003	0.0089		< 0.005	< 0.005	< 0.001	< 0.05	< 0.05
Indium	In	< 0.001	< 0.05		< 0.05	< 0.05		< 0.5	< 0.5
Lanthanum	La	0.017	0.34		0.12	0.13	0.08	< 0.05	< 0.05
Lead	Pb	1.4	0.24	0.24	0.48	0.44	0.28	< 0.1	< 0.1
Lithium	Li	0.05	< 0.004		< 0.004	< 0.004	0.4	30	31
Lutetium	Lu	0.0001	< 0.005		< 0.005	< 0.005	< 0.001	< 0.05	< 0.05
Mercury	Hg	< 0.002	0.0030		< 0.002	< 0.002	0.002	< 0.002	< 0.002
Molybdenum	Mo	0.03	0.79		1.1	1.0	0.05	1.6	1.6
Neodymium	Nd	0.012	0.36		0.13	0.13	0.05	< 0.05	< 0.05
Nickel	Ni	0.29	3.4	2.3	1.8	1.6	0.39	0.79	0.90
Praseodymium	Pr	0.004	0.092		0.034	0.035	0.02	< 0.05	< 0.05
Rubidium	Rb	0.12	2.3		3.4	3.4	1.1	21	22
Samarium	Sm	0.002	0.062		0.022	0.022	0.007	< 0.05	< 0.05
Scandium	Sc	0.003	< 0.05		< 0.05	< 0.05	< 0.05	< 0.5	< 0.5
Strontium	Sr	0.7	53		45	47	11	1,400	1,400
Terbium	Tb	0.0003	< 0.05		< 0.05	< 0.05	< 0.001	< 0.5	< 0.5
Thallium	Tl	0.006	< 0.03		< 0.03	< 0.03	0.005	< 0.3	< 0.3
Thorium	Th	0.002	0.027		< 0.02	< 0.02	0.014	< 0.2	< 0.2
Thullium	Tm	0.0001	< 0.005		< 0.005	< 0.005	< 0.001	< 0.05	< 0.05
Uranium	U	0.002	0.76		0.38	0.34	0.05	0.76	0.77
Vanadium	V	0.43	1.3	0.84	0.98	0.94	0.13	0.18	0.17
Ytterbium	Yb	0.008	0.30		0.01	0.01	0.003	< 0.05	< 0.05
Zinc	Zn	10	4.0		2	1.5	2.2	2.4	< 2
Zirconium	Zr	0.025	3.8		3.5	2.4	0.03	1.1	1.9

a. Uranium and thorium from /SSI 2005/, the remaining from /Naturvårdsverket 1995/.

b. Samples of 781 lakes in southern for commonly measured elements. 242 randomly sampled Swedish lakes for rarely measured elements /Naturvårdsverket 1999a/. Hg from /Logan 2002/.

c. 76 watercourses of various sizes in southern Sweden /Naturvårdsverket 1999a/.

d. At Gårdsjön in the south west of Sweden /Eriksson 2001/.

e. Based on only one observation of surface and bottom water of Lake Frisksjön.



When comparing the concentrations of trace elements observed in the Simpevarp area with other Swedish surface waters, the following conclusions can be drawn:

- The concentrations of Rare Earth Elements (REE) in the streaming surface waters of the Simpevarp area are generally elevated about ten times when compared to REE levels of Swedish lakes. The single observation from lakes in the Simpevarp area is also markedly elevated with respect to the REE.
- The vanadium concentrations in the surface waters are elevated ten times compared to concentrations observed in 781 Swedish lakes. Other metals, e.g. chromium, copper, molybdenum and nickel, also show elevated concentrations when fresh surface waters in the area are compared to most Swedish lakes.
- Rubidium show elevated concentrations in surface waters compared to most Swedish lakes.
- The levels of zirconium in the surface waters in the Simpevarp area are about 100 times higher than the median of the 242 Swedish lakes.
- The concentrations of uranium in the surface waters are elevated about ten times compared to Swedish lakes.

### **5.5.2 Examples – uranium, molybdenum, rubidium and lanthanum**

The spatial distributions of uranium, molybdenum, rubidium and lanthanum are shown in Figures 5-58 and 5-59. These four trace elements were selected because most observations exceed reporting limits and because they represent different element groups.

Uranium and molybdenum show similar spatial patterns according to Figure 5-58. The concentrations along Laxemarån are markedly lower compared to all other sampling sites.

Both rubidium and lanthanum occur in lower levels along Laxermaan, even if the deviation is less accentuated compared to uranium and molybdenum. The concentration of rubidium is low also in the catchment of Kärrviksån in the northern part of the investigated area (Figure 5-59).



*Figure 5-58. The spatial distribution of uranium (upper) and molybdenum (lower) in lakes, streams and at coastal sites in the Simpevarp area. The scaled symbols represent one sampling occasion.*



Figure 5-59. The spatial distribution of rubidium (upper) and lanthanum (lower) in lakes, streams and at coastal sites in the Simpevarp area. The scaled symbols represent one sampling occasion.

## 5.6 Isotopes

In the following section all isotopic information from surface waters are briefly summarised. In the part of this report dealing with isotopes in shallow groundwater is the isotopes more thoroughly discussed, including maps showing the spatial distributions in surface waters and groundwater, and several comparisons are made between water types.

In the first part, the environmental isotopes of hydrogen, oxygen and carbon are presented, as well as the stable isotopes of boron, chlorine, sulphur and strontium. The last part deals with the radioisotopes of uranium, thorium, radium and radon. In Appendix 1, data from all individual surface water sampling sites are compiled.

### 5.6.1 Stable isotopes and tritium

Ranges of parameter values for the different isotopes in the Simpevarp area are summarised per water type in Table 5-7, and in Table 5-8 are the median values for all sampling site compiled.

All observations of *tritium, deuterium and oxygen-18* are within the range of precipitation. The observations of deuterium and oxygen-18 from streams plot close to the Global Meteoric Water Line, indicating dominating meteoric origin, whereas lakes and sea water forms an evaporation line indicating enrichments of the heavier isotopes due to evaporation (cf Figure 7-46).

**Table 5-7. Summary of stable isotopes and tritium in surface waters in the Simpevarp area. Minimum (blue), maximum (red) and median (black) values of all observations per water type, including precipitation and shallow groundwater. A complete description of the distributions per sampling site is compiled in Appendix 1.**

	Tritium TU	Deuterium ‰ SMOW	Oxygen-18 ‰ SMOW	Carbon-13 ‰ PDB	Carbon-14 pmC	Boron-10/ boron-11 Ratio	Chlorine-37 ‰ SMOC	Sulphur-34 ‰ CDT	Strontium-87/ strontium-86 Ratio
<b>Streaming water</b>									
min	8.7	-85	-12	-24	66	0.230	-1.01	-1.1	0.718
median	12	-77	-11	-18	98	0.243	-0.02	6.3	0.721
max	15	-68	-8.7	-12	106	0.276	0.77	15	0.726
<b>Lake water</b>									
min	10	-73	-9.6	-19	66	0.228	-0.72	0.9	0.720
median	11	-65	-8.3	-19	91	0.242	-0.50	3.5	0.722
max	15	-54	-6.7	-13	106	0.267	-0.27	8.8	0.728
<b>Sea water</b>									
min	10	-71	-9.7	-7.0	106	0.227	-0.09	16	0.709
median	14	-57	-7.1	-1.5	108	0.238	0.10	20	0.709
max	17	-54	-6.8	-0.22	111	0.244	0.36	23	0.710
<b>Precipitation</b>									
min	9.0	-125	-17						
median	13	-76	-10				0.07		
max	19	-44	-6.6						
<b>Shallow groundwater</b>									
min	0.4	-85	-12	-22	45	0.236	-0.71	-15	0.711
median	12	-77	-11	-17	82	0.243	-0.24	1.8	0.719
max	15	-66	-9.6	-6.3	103	0.250	0.77	23	0.733

**Table 5-8. Median values per sampling site of the stable isotopes and tritium in surface waters in the Simpevrap area. A complete description of the distributions per sampling site is compiled in Appendix 1.**

Idcode		Tritium	Deuterium	Oxygen-	Carbon-	Carbon-	Boron-	Chlorine-	Sulphur-	Strontium-
		TU	‰ SMOW	18 ‰ SMOW	13 ‰ PDB	14 pmC	10 Ratio	37 ‰ SMOC	34 ‰ CDT	87 Ratio
<b>Streaming water</b>										
PSM002068	Surface	–	–	–	–	–	0.239	–	–	–
PSM002069	Surface	–	–	–	–	–	0.240	–	–	–
PSM002070	Surface	–	–	–	–	–	0.240	–	–	–
PSM002071	Surface	12.3	–72.0	–9.8	–20.6	101	0.242	–0.10	6.2	0.726
PSM002072	Surface	11.0	–82.5	–11.6	–	–	0.239	–0.25	11.8	0.721
PSM002075	Surface	–	–	–	–	–	0.241	–	–	–
PSM002076	Surface	12.7	–76.7	–10.9	–20.1	98	0.243	–0.04	8.5	0.720
PSM002077	Surface	–	–	–	–	–	0.243	–	–	–
PSM002078	Surface	–	–	–	–	–	0.245	–	–	–
PSM002079	Surface	11.7	–73.2	–10.4	–19.2	97	0.243	0.08	7.2	0.723
PSM002080	Surface	–	–	–	–	–	0.243	–	–	–
PSM002081	Surface	–	–	–	–	–	0.243	–	–	–
PSM002082	Surface	12.3	–78.5	–11.1	–18.9	100	0.243	0.15	8.2	0.722
PSM002083	Surface	11.2	–77.6	–11.3	–20.3	102	0.243	0.11	5.5	0.720
PSM002084	Surface	11.9	–77.6	–11.2	–17.3	98	0.245	–0.07	3.1	0.720
PSM002085	Surface	12.6	–77.8	–11.2	–13.6	96	0.245	0.02	6.1	0.721
PSM002086	Surface	12.0	–77.0	–11.2	–18.5	93	0.247	0.23	3.2	0.719
PSM002087	Surface	11.7	–74.4	–10.7	–18.4	98	0.244	–0.02	5.1	0.723
<b>All streams</b>	<b>Surface</b>	<b>12.0</b>	<b>–76.7</b>	<b>–10.8</b>	<b>–18.4</b>	<b>98</b>	<b>0.243</b>	<b>–0.02</b>		<b>0.721</b>
<b>Lake water</b>										
PSM002065	Surface	11.9	–66.2	–8.3	–18.9	106	0.242	–0.50	3.5	0.722
PSM002065	Bottom	12.4	–66.3	–8.3	–19.8	105	0.242	–0.07	3.0	0.722
PSM002066	Surface	10.7	–54.4	–6.7	–12.9	66	0.244	–	0.9	0.721
PSM002066	Bottom	14.2	–55.7	–7.1	–15.7	66	0.243	–	0.9	0.720
PSM002067	Surface	11.3	–64.9	–8.5	–18.5	76	0.240	–	8.8	0.728
PSM002067	Bottom	10.0	–65.4	–8.7	–21.1	78	0.240	–	8.3	0.728
<b>All lakes</b>	<b>Surface</b>	<b>11.4</b>	<b>–65.0</b>	<b>–8.3</b>	<b>–18.6</b>	<b>91</b>	<b>0.242</b>	<b>–0.50</b>	<b>3.5</b>	<b>0.722</b>
<b>All lakes</b>	<b>Bottom</b>	<b>12.4</b>	<b>–65.1</b>	<b>–8.3</b>	<b>–19.8</b>	<b>91</b>	<b>0.242</b>	<b>–0.07</b>	<b>3.0</b>	<b>0.722</b>
<b>Sea water</b>										
PSM002060	Surface	16.1	–56.2	–7.1	–0.5	108	0.238	0.01	20.0	0.709
PSM002060	Bottom	14.2	–56.2	–7.1	–1.2	109	0.238	0.03	20.1	0.709
PSM002061	Surface	13.3	–55.4	–7.0	–0.8	109	0.239	0.13	20.2	0.709
PSM002061	Bottom	14.6	–55.6	–6.9	–1.0	109	0.238	0.10	20.4	0.709
PSM002062	Surface	14.2	–62.1	–8.2	–4.7	109	0.238	0.22	20.3	0.710
PSM002062	Bottom	13.8	–60.8	–7.8	–3.1	108	0.237	–0.04	20.1	0.710
PSM002063	Surface	–	–	–	–1.3	110	0.237	–	21.4	0.709
PSM002063	Bottom	–	–	–	–1.0	110	0.237	–	21.9	0.709
PSM002064	Surface	13.7	–62.3	–8.3	–3.9	108	0.238	0.11	20.1	0.710
PSM002064	Bottom	14.0	–56.6	–7.0	–5.9	108	0.238	0.27	20.4	0.709
<b>All coastal sites</b>	<b>Surface</b>	<b>13.9</b>	<b>–57.1</b>	<b>–7.1</b>	<b>–1.5</b>	<b>108</b>	<b>0.238</b>	<b>0.11</b>	<b>20.2</b>	<b>0.709</b>
<b>All coastal sites</b>	<b>Bottom</b>	<b>14.0</b>	<b>–56.9</b>	<b>–7.1</b>	<b>–2.5</b>	<b>109</b>	<b>0.238</b>	<b>0.08</b>	<b>20.4</b>	<b>0.709</b>

Regarding the carbon isotopes most of the fresh surface waters show *carbon-14* values around 100% and *carbon-13* deviations of –15‰ to –20‰ PDB (cf Figure 7-53). Two observations from Lake Götömar and two observations from streams (PSM002084 and PSM002086) show lowered contents of modern carbon, which could be an indication that dissolution of calcite may be a source for inorganic carbon at these sites.

The *boron isotope* ratios found in lake and streaming water are in the same level as in shallow groundwater. The ratio found in sea water is markedly lower, with a median value of 0.238. Any conclusion concerning *chlorine-37* is uncertain, since much of the variation in the Simpevarp area is within the analytical error of  $\pm 0.2\%$ .

The contents of *sulphur-34* are usually close to 20‰ CDT in sea water, whereas most fresh surface waters and shallow groundwater usually range between 2 and 8‰ CDT. Among the fresh surface waters, Lake Götömar shows the lowest values of sulphur-34.

*Strontium-87* shows the largest variation in shallow groundwaters and little variation in sea water. Generally, the fresh surface waters in the area show higher values of strontium-87 than the sea water.

### 5.6.2 Isotopes of uranium, thorium, radium and radon

In this section the radioactive isotopes of uranium, thorium, radium and radon are compiled. Table 5-9 summarises data available from surface waters in the Simpevarp area. A corresponding table summarising data from soil tubes and Swedish reference data is found in the section dealing with shallow groundwater.

All observations of thorium and uranium isotopes fall below the reporting limit. The radium-226 activities in the surface waters are usually close to the reporting limit and in level with activities measured in shallow groundwater. The radon-222 activities in the surface waters are usually higher in streaming water compared to both lake water and sea water. The radon activities in shallow groundwater are usually 20 to 200 times higher than in the surface waters.

**Table 5-9. Compilation of the activities of the radioactive isotopes of radium-226, radon-222, thorium and uranium in surface waters in the Simpevarp area.**

Idcode		Radium-226 Bq/l	Radon-222 Bq/l	Thorium-230 mBq/kg	Thorium-232 mBq/kg	Uranium-234 mBq/kg	Uranium-235 mBq/kg	Uranium-238 mBq/kg
<b>Streaming water</b>								
PSM002071	Surface	0.10	1.4	< 50	< 50	< 50	< 50	< 50
PSM002072	Surface	0.10	0.70	< 50	< 50	< 50	< 50	< 50
PSM002076	Surface	0.10	1.2	< 50	< 50	< 50	< 50	< 50
PSM002079	Surface	< 0.1	0.70	< 50	< 50	< 50	< 50	< 50
PSM002082	Surface	0.25	7.5	< 50	< 50	< 50	< 50	< 50
PSM002083	Surface	< 0.1	9.0	< 50	< 50	< 50	< 50	< 50
PSM002084	Surface	0.18	2.0	< 50	< 50	< 50	< 50	< 50
PSM002085	Surface	0.20	0.30	< 50	< 50	< 50	< 50	< 50
PSM002086	Surface	0.30	1.9	< 50	< 50	< 50	< 50	< 50
PSM002087	Surface	0.15	0.80	< 50	< 50	< 50	< 50	< 50
<b>All streams</b>	<b>Surface</b>	<b>0.10</b>	<b>1.1</b>	<b>&lt; 50</b>	<b>&lt; 50</b>	<b>&lt; 50</b>	<b>&lt; 50</b>	<b>&lt; 50</b>
<b>Lake water</b>								
PSM002065	Surface	0.20	0.10	< 50	< 50	< 50	< 50	< 50
PSM002065	Bottom	0.10	0.20	< 50	< 50	< 50	< 50	< 50
<b>All lakes</b>	<b>Surface</b>	<b>0.20</b>	<b>0.10</b>	<b>&lt; 50</b>	<b>&lt; 50</b>	<b>&lt; 50</b>	<b>&lt; 50</b>	<b>&lt; 50</b>
<b>All lakes</b>	<b>Bottom</b>	<b>0.10</b>	<b>0.20</b>	<b>&lt; 50</b>	<b>&lt; 50</b>	<b>&lt; 50</b>	<b>&lt; 50</b>	<b>&lt; 50</b>
<b>Sea water</b>								
PSM002060	Surface	0.25	0.13	< 50	< 50	< 50	< 50	< 50
PSM002060	Bottom	0.13	0.25	< 50	< 50	< 50	< 50	< 50
PSM002061	Surface	0.050	< 0.1	< 50	< 50	< 50	< 50	< 50
PSM002061	Bottom	0.20	< 0.1	< 50	< 50	< 50	< 50	< 50
PSM002062	Surface	0.15	0.65	< 50	< 50	< 50	< 50	< 50
PSM002062	Bottom	0.050	0.13	< 50	< 50	< 50	< 50	< 50
PSM002064	Surface	0.13	0.050	< 50	< 50	< 50	< 50	< 50
PSM002064	Bottom	0.20	0.30	< 50	< 50	< 50	< 50	< 50
<b>All coastal sites</b>	<b>Surface</b>	<b>0.10</b>	<b>&lt; 0.1</b>	<b>&lt; 50</b>	<b>&lt; 50</b>	<b>&lt; 50</b>	<b>&lt; 50</b>	<b>&lt; 50</b>
<b>All coastal sites</b>	<b>Bottom</b>	<b>0.10</b>	<b>0.15</b>	<b>&lt; 50</b>	<b>&lt; 50</b>	<b>&lt; 50</b>	<b>&lt; 50</b>	<b>&lt; 50</b>

## 5.7 Field measurements and chlorophyll

In this section field measured parameters are summarised beside laboratory measurements of chlorophyll, absorbance and dissolved oxygen. Some of these parameters are independent measures which reflect the nutrient status of the water bodies, whereas other reflects the contents of coloured substances and total amount of dissolved ions.

There is no direct link in the SICADA database between the laboratory samples and the simultaneously conducted field measurements by sonde. Laboratory analyses are conducted on surface and bottom samples from lakes and sea sites, whereas the field registrations are made at several depths. In order to make the laboratory and field measured parameters



compatible it was assumed that the most superficial field registrations corresponds to the 'surface' laboratory analysis, whereas the deepest registrations corresponds to the 'bottom' laboratory analysis. It should be noted that this method implies a simplification, since the laboratory bottom samples are taken approximately one meter above the bottom, whereas the lowest sonde measurements are made at a level close to the bottom. During winter when the sampling is conducted through the ice, there may be minor discrepancies in the surface samples as well.

### 5.7.1 Overview of field measured parameters

In Tables 5-10 and 5-11 the field measured parameters are summarised as median values per site. In the following sections the different parameters are presented in more detail as time series.

**Table 5-10. Median values of field measured parameters.**

<b>Idcode</b>		<b>pH</b>	<b>Electrical conductivity mS/m</b>	<b>Salinity ‰</b>	<b>Light <math>\mu\text{molE/m}^2\text{s}</math></b>	<b>Light penetration m</b>	<b>Chlorophyll <math>\mu\text{g/l}</math></b>	<b>Turbidity FNU</b>
<b>Streaming water</b>								
PSM002083	Surface	–	–	–	–	–	–	7.3
PSM002087	Surface	–	–	–	–	–	–	6.2
All streams	Surface	–	–	–	–	–	–	6.8
<b>Lake water</b>								
PSM002065	Surface	6.94	10	0.05	72	1.8	7.6	1.5
PSM002065	Bottom	6.56	11	0.05	5.2	1.8	7.0	3.7
PSM002066	Surface	7.24	15	0.07	77	4.0	3.0	0.60
PSM002066	Bottom	6.43	16	0.07	4.2	4.0	3.2	5.1
PSM002067	Surface	6.95	11	0.05	36	1.3	10	1.5
PSM002067	Bottom	6.39	12	0.06	4.3	1.3	7.7	6.2
PSM005964	Surface	7.33	17	0.08	68	2.2	7.3	1.3
PSM005964	Bottom	6.93	17	0.08	4.9	2.2	8.1	7.5
<b>All lakes</b>	<b>Surface</b>	<b>7.04</b>	<b>12</b>	<b>0.06</b>	<b>54</b>	<b>1.8</b>	<b>8.2</b>	<b>1.2</b>
<b>All lakes</b>	<b>Bottom</b>	<b>6.59</b>	<b>14</b>	<b>0.07</b>	<b>4.5</b>	<b>1.8</b>	<b>7.2</b>	<b>4.9</b>
<b>Sea water</b>								
PSM002060	Surface	7.99	1,200	6.61	350	13	1.4	0.20
PSM002060	Bottom	7.85	1,200	6.81	4.9	13	1.2	0.20
PSM002061	Surface	8.17	1,200	6.68	440	8.0	1.2	0.15
PSM002061	Bottom	7.94	1,200	6.74	29	8.0	2.1	0.40
PSM002062	Surface	7.77	790	4.39	210	2.3	7.1	1.1
PSM002062	Bottom	7.45	1,000	5.60	14	2.3	6.4	1.2
PSM002063	Surface	8.08	1,100	6.45	250	5.0	< 2.2	0.23
PSM002063	Bottom	8.00	1,100	6.55	36	5.0	2.5	0.23
PSM002064	Surface	7.74	990	5.54	140	3.4	5.1	0.40
PSM002064	Bottom	7.11	1,100	6.29	4.4	3.3	3.3	1.4
<b>All coastal sites</b>	<b>Surface</b>	<b>7.93</b>	<b>1,100</b>	<b>6.21</b>	<b>240</b>	<b>5.0</b>	<b>3.0</b>	<b>0.30</b>
<b>All coastal sites</b>	<b>Bottom</b>	<b>7.71</b>	<b>1,100</b>	<b>6.50</b>	<b>7.4</b>	<b>5.0</b>	<b>2.8</b>	<b>0.50</b>

**Table 5-11. Median values of laboratory measured parameters (oxygen as a combination of field measurements and laboratory measurements).**

<b>Idcode</b>		<b>Absorbance 436nm</b>	<b>Chlorophyll A µg/l</b>	<b>Chlorophyll C µg/l</b>	<b>Pheopigment µg/l</b>	<b>Dissolved oxygen mg/l</b>
<b>Streaming water</b>						
SM000347	Surface	0.15				10
PSM002068	Surface	0.41				9.5
PSM002069	Surface					9.5
PSM002070	Surface					10
PSM002071	Surface	0.25				9.0
PSM002072	Surface					12
PSM002075	Surface					10
PSM002076	Surface	0.34				8.9
PSM002077	Surface					8.2
PSM002078	Surface					10
PSM002079	Surface	0.23				10
PSM002080	Surface					5.5
PSM002081	Surface					9.6
PSM002082	Surface					9.1
PSM002083	Surface	0.27	3.2	< 0.5	1.8	9.4
PSM002084	Surface					9.4
PSM002085	Surface	0.20				12
PSM002086	Surface					9.3
PSM002087	Surface	0.25	1.2	< 0.5	1.1	10
PSM107735	Surface					7.7
<b>All streams</b>	<b>Surface</b>	<b>0.27</b>	<b>1.8</b>	<b>&lt; 0.5</b>	<b>1.4</b>	<b>9.5</b>
<b>Lake water</b>						
PSM002065	Surface	0.18	4.1	< 0.5	1.6	9.9
PSM002065	Bottom	0.18	4.5	< 0.5	1.9	7.8
PSM002066	Surface		1.4	< 0.5	< 0.5	11
PSM002066	Bottom		1.3	< 0.5	0.75	6.4
PSM002067	Surface	0.34	2.6	< 0.5	1.2	9.8
PSM002067	Bottom	0.29	1.9	< 0.5	1.7	5.4
PSM005964	Surface		4.5	< 0.5	2.2	9.6
PSM005964	Bottom		5.4	< 0.5	1.8	5.8
<b>All lakes</b>	<b>Surface</b>	<b>0.26</b>	<b>3.5</b>	<b>&lt; 0.5</b>	<b>1.3</b>	<b>9.8</b>
<b>All lakes</b>	<b>Bottom</b>	<b>0.23</b>	<b>2.5</b>	<b>&lt; 0.5</b>	<b>1.6</b>	<b>6.8</b>
<b>Sea water</b>						
PSM002060	Surface	0.011	0.70	< 0.5	< 0.5	12
PSM002060	Bottom	0.012	0.60	< 0.5	< 0.5	11
PSM002061	Surface		0.85	< 0.5	< 0.5	12
PSM002061	Bottom		1.1	< 0.5	0.80	12
PSM002062	Surface	0.064	4.2	0.60	0.90	11
PSM002062	Bottom	0.036	3.5	0.50	1.0	8.9
PSM002063	Surface		1.4	< 0.5	0.50	12
PSM002063	Bottom		1.2	< 0.5	0.50	12
PSM002064	Surface	0.046	3.5	< 0.5	0.80	11
PSM002064	Bottom	0.027	2.1	< 0.5	1.2	5.0
<b>All coastal sites</b>	<b>Surface</b>	<b>0.042</b>	<b>1.6</b>	<b>&lt; 0.5</b>	<b>0.60</b>	<b>11</b>
<b>All coastal sites</b>	<b>Bottom</b>	<b>0.028</b>	<b>1.4</b>	<b>&lt; 0.5</b>	<b>0.70</b>	<b>11</b>

## 5.7.2 Salinity and conductivity

Salinity and conductivity are measured by sonde at several depths. According to comparisons made by /Ericsson and Engdahl 2004a/ the conductivity measurements are comparable to the laboratory measured parameters. The field measured salinity at coastal sites is shown for both surface and bottom water in Figure 5-60.

The ‘open sea’ sites show only minor variation in salinity, whereas the Basins of Granholmsfjärden and Borholmsfjärden show vigorous fluctuations, similar to the variations previously described for the laboratory analyses of dissolved ions and conductivity. The bottom water of Granholmsfjärden shows almost constant salinity, whereas the bottom water of Borholmsfjärden is clearly influenced by influx of fresh water.

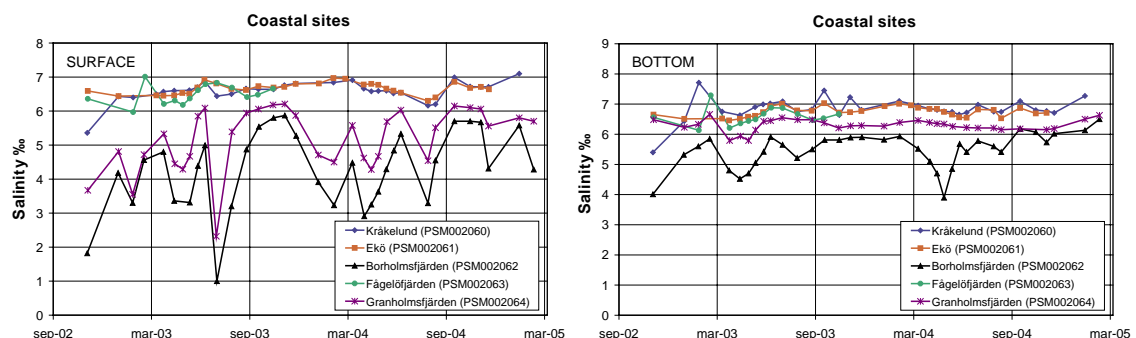
## 5.7.3 Absorbance, turbidity and light penetration

Absorbance is measured in the laboratory whereas turbidity and light penetration are field measurements. Turbidity is measured by a sonde, simultaneous to other field measurements, e.g. dissolved oxygen and salinity. Light penetration is measured visually by the use of a ‘Secchi disc’.

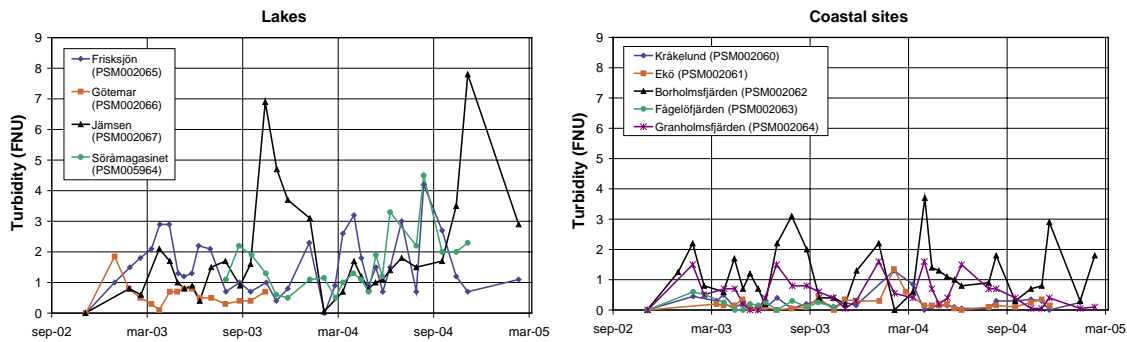
Absorbance, which is a measure of the colour of the water, is strongly correlated to the contents of humus. According to the Swedish Environmental Quality Criteria /Naturvårdsverket 2000/ most measurements in the Simpevarp area are classed as ‘strongly coloured water’, a finding consistent with the high contents of dissolved organic carbon that mainly consists of humus acids.

Turbidity is a measure of the opaqueness of the water due to particles of e.g. clay minerals, organic matter and plankton. In Figure 5-61, the temporal variation in turbidity in surface water of both lakes and coastal sites is shown. According to the Swedish EQC, the oligotrophic Lake Götemar is ‘slightly turbid’ whereas the mesotrophic lakes are ‘moderately turbid’. The ‘open sea’ coastal sites show lower turbidity than the lakes.

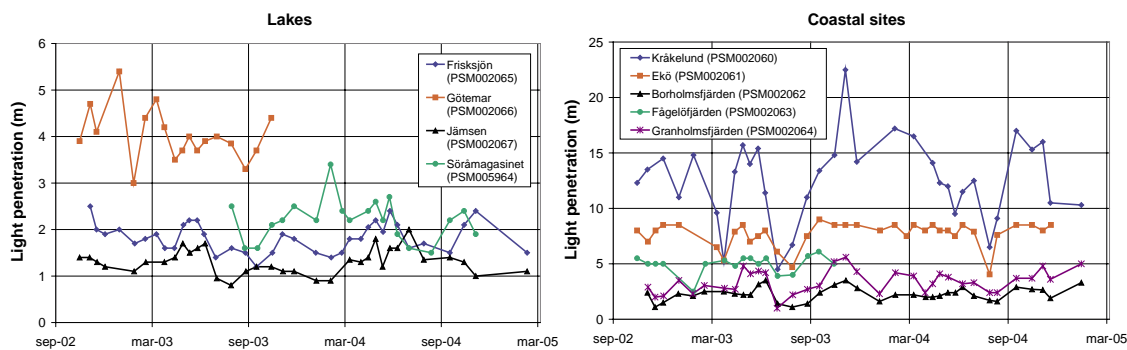
The light penetration depth is ‘moderate’ in Lake Götemar according to the Swedish EQC, whereas the mesotrophic lakes Jämsen, Frisksjön and Söråmagasinet show ‘small’ light penetration depths (Figure 5-62).



**Figure 5-60.** Temporal variations in the field measured salinity in surface and bottom water at the coastal sites in the Simpevarp area.



**Figure 5-61.** Temporal variations in the field measured turbidity in surface water of lakes and at coastal sites in the Simpevarp area.



**Figure 5-62.** Temporal variations in the light penetration depth in lakes and coastal sites in the Simpevarp area.

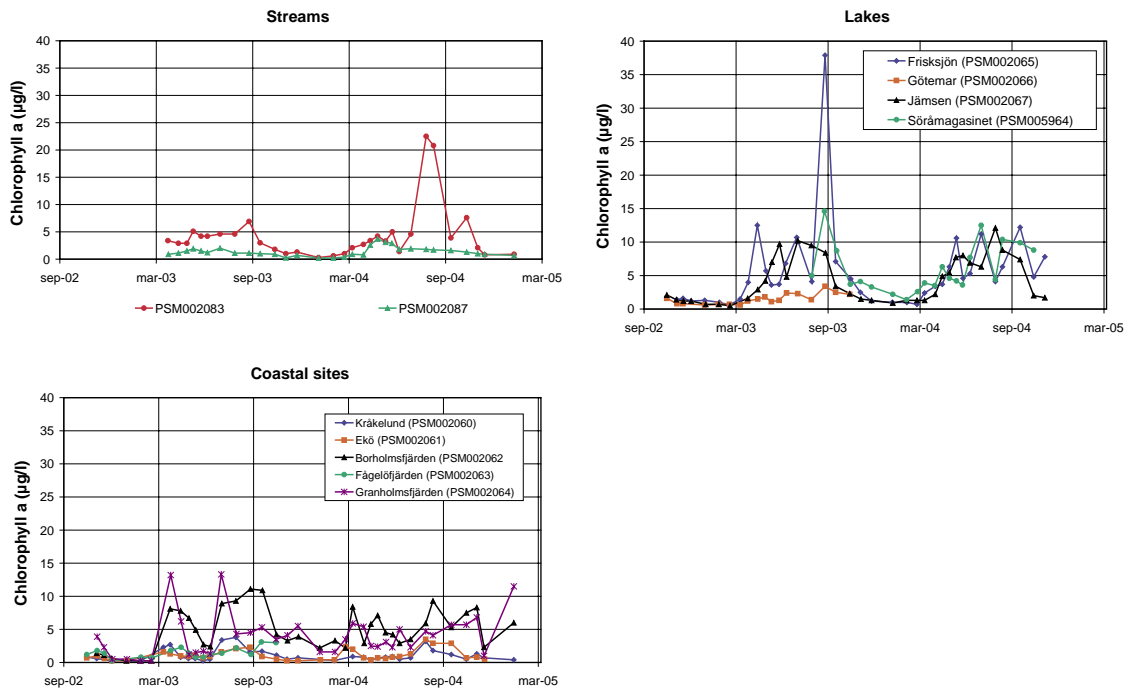
### 5.7.4 Chlorophyll

Chlorophyll is measured both in laboratory and in field. The field measurements have been marred by uncertainties due to the measurement technique /Ericsson and Engdahl 2004b/. Besides chlorophyll *a*, chlorophyll *c* and pheopigments are also analysed (these species are compiled in Appendix 1).

The content of chlorophyll *a* shows a clear seasonal pattern in the lakes and a weaker pattern in the two stream sites (Figure 5-63). The ‘open sea’ coastal sites show a seasonal pattern with a minor peak in spring and a larger peak in late summer or early spring. The chlorophyll levels observed in the mesotrophic lakes in August are classified as ‘moderately’ to ‘high’ concentrations according to the Swedish EQC.

### 5.7.5 Dissolved oxygen

Dissolved oxygen is measured both in field and in the laboratory. The laboratory measured time series of oxygen is not complete as these measurements are conducted only when oxygen levels are low. In order to get a complete time series, the field and laboratory measurements were combined to form a ‘continuous’ time series for dissolved oxygen.



**Figure 5-63.** Temporal variations in chlorophyll a in lakes, streams and at coastal sites in the Simpevarp area.

The concentrations of dissolved oxygen show a typical seasonal pattern due to the temperature dependent solubility of oxygen. The solubility is higher at low temperatures leading to generally higher values during winter. In lakes and streams the variation is centred on 10 mg/l whereas the median value of the ‘open sea’ coastal sites is slightly higher, probably due to lower water temperatures during summer and therefore greater solubility of oxygen (Figure 5-64).

There are several processes besides the physical temperature constraint that affect the amount of oxygen dissolved in the water. *Decomposition of organic matter*, which is most evident during the warm season, consumes oxygen and thereby decreases the amount of dissolved oxygen. This process may reduce the oxygen levels in bottom water to zero if the lakes are stratified during summer or winter. The reversed process occurs during *photosynthesis* when oxygen is released by aqueous plants and phytoplankton. This process takes place in the upper parts of the water column and may during certain circumstances lead to over-saturation of dissolved oxygen. *Discharging groundwater* is naturally depleted of oxygen and during dry periods the increased proportions of groundwater in the streams may lead to decreased levels of dissolved oxygen in streaming waters.

In the streams of the Simpevarp area there are several observations during summer which show lowered contents of dissolved oxygen, probably as a consequence of both decomposition of organic matter and discharging groundwater. The lakes, as well as the Basins of Granholmsfjärden and Borholmsfjärden, show recurrent episodes of low oxygen levels in the bottom water during both summer and winter when the water column is stratified. When the water is completely mixed again during spring and autumn, the oxygen level raises rapidly.

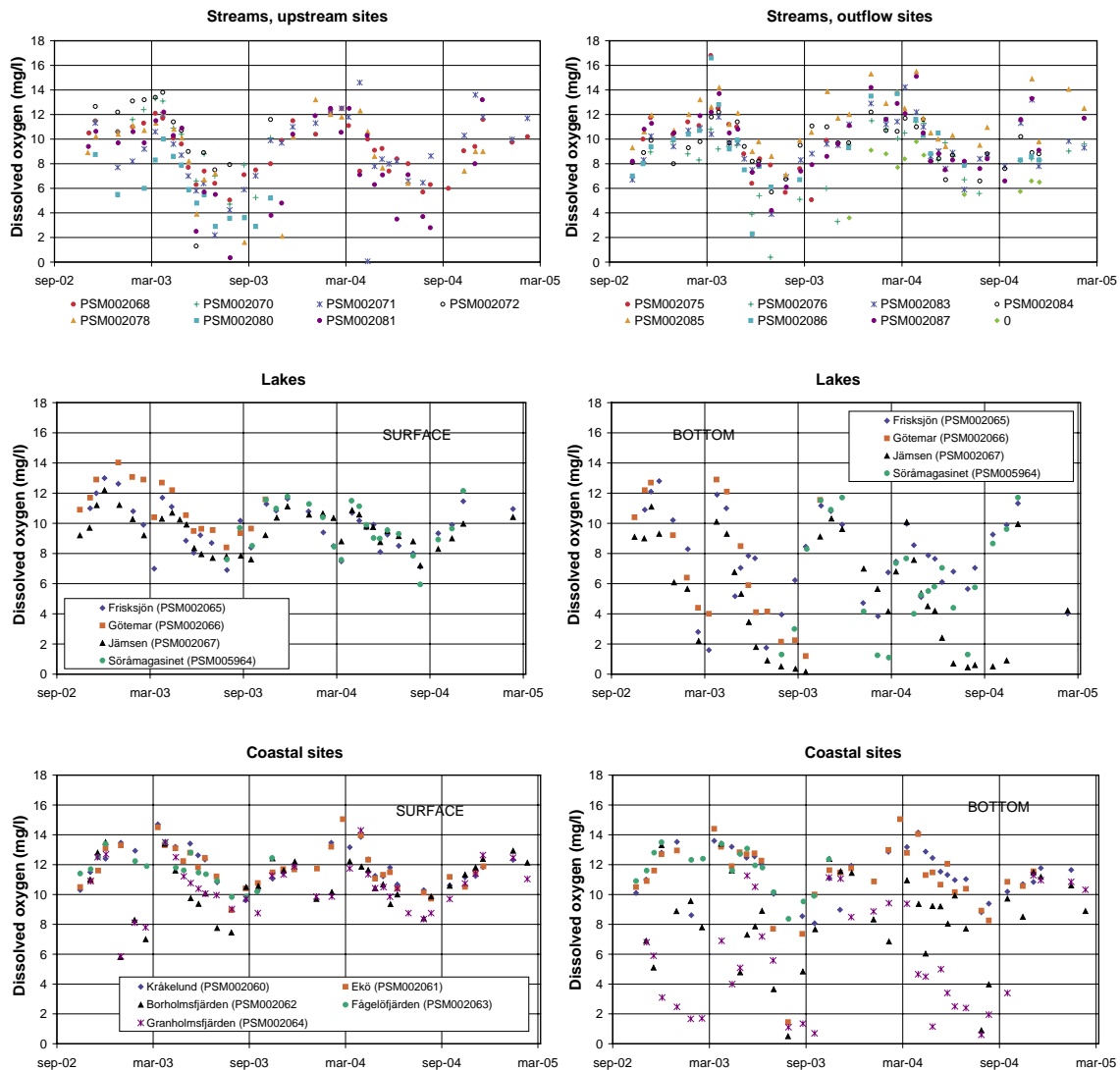
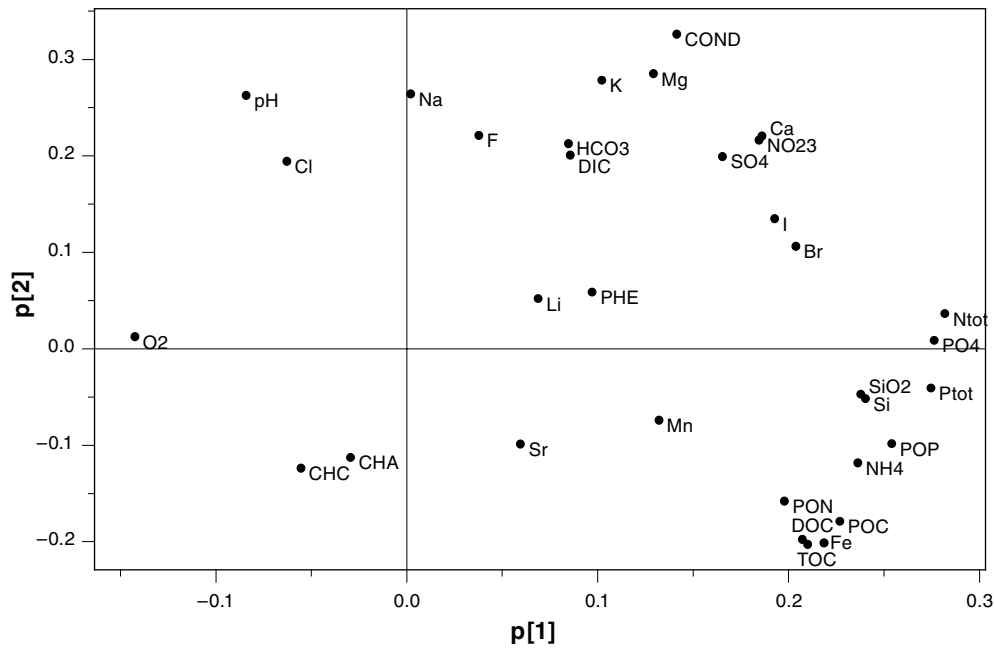


Figure 5-64. Temporal variations in dissolved oxygen in streams, lakes and at coastal sites in the Simpevarp area, as a combination of field and laboratory measurements.

## 5.8 Relationships among parameters in lakes and streams

A Principal Component Analysis was conducted on surface water data from lakes and streams in the Simpevarp area. In order to isolate the spatial variation in the model and to facilitate the interpretation, the analysis was based on mean values per sampling site. By this, the model mainly reflects the spatial relationships among variables and observations in the area.

In Figure 5-65 the correlations between variables and observations (sampling sites) are shown in a loading-plot and a score-plot of the two first components. The two first principal components comprises in all 59% of the total variation in the material. The *first component* mainly describes the total amounts of nutrients and carbon. Dissolved oxygen is inversely correlated to nutrients by showing low values when the contents of nutrients are high. The *second component* may be interpreted as the gradient from acid waters of low ion strength to waters with high contents of most dissolved ions, pH and electrical conductivity.



**Figure 5-65.** Loading plot showing the relationships among the variables. The two first principal components which are shown in the plot comprises in all 59% of the total variation in the material. The first component, which is horizontal in the figure, constitutes 38% and the vertical second component constitutes 21% of the variation, respectively. Variables located far from origin are strongly correlated to the principal components. Clustered variables are correlated, whereas variables at opposite sides of origin are inversely correlated.

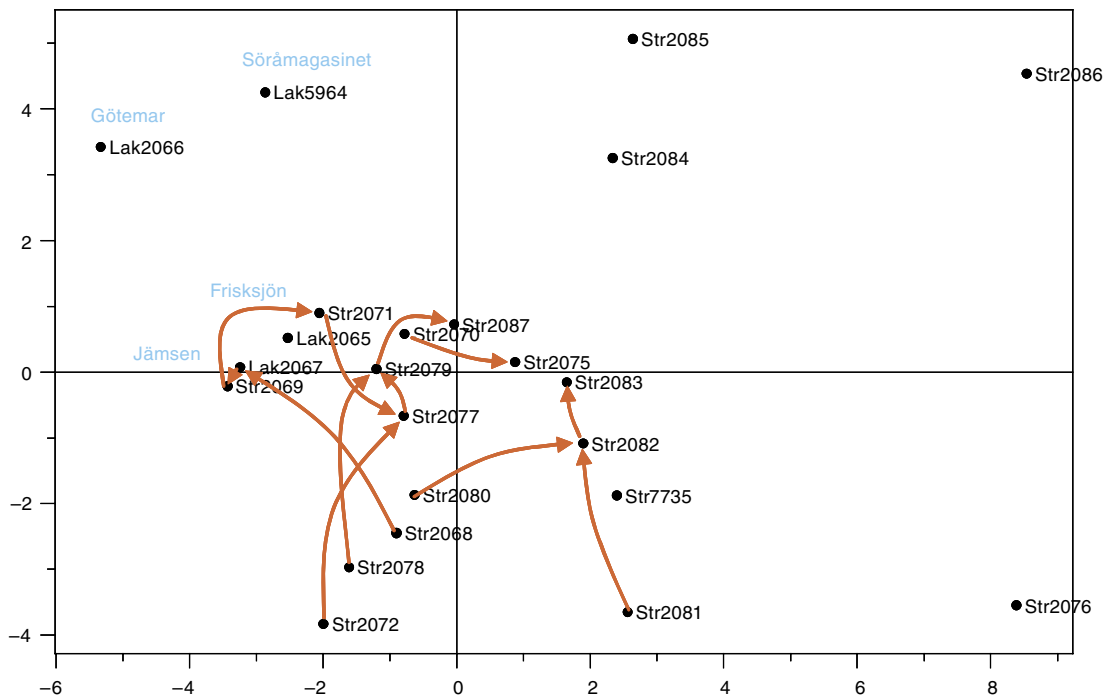
In the score plot in Figure 5-66, which shows the relationships among the observations (sampling sites), the sampling sites have been connected by arrows showing the direction of water flow. Most arrows point upwards and to the right, indicating that both the ion strength and the contents of nutrients and carbon usually increase along the water courses.

The most nutrient- and carbon-rich streams in the area are PSM002076 and PSM002086, located on the right side of the score-plot. These sampling sites differ however regarding the contents of dissolved ions, where PSM002086 show high levels.

The stream sites PSM002085 and PSM002084 show deviating high levels of dissolved ions, as well as pH and alkalinity, a fact that have been stressed during the element-wise presentations earlier.

The lakes Götemar and Söråmagasinet deviate from Lake Jämsen and Lake Frisksjön by showing higher levels of dissolved ions. The oligotrophic Lake Götemar also contains less nutrients and carbon compared to the other mesotrophic lakes.





**Figure 5-66.** Score-plot showing the relationships among the observations (sampling sites). The sampling sites have been connected by arrows showing the direction of water flow when more than one lake or stream are sampled in a catchment. Observations found at corresponding locations as variables in the loading plot show high values of these variables, and inversely low values if the observations and variables are located at opposite sides of the origin. The three leftmost characters in the observation names denotes the water type: ‘Lak’- lake, ‘Str’ – stream and the following digits denotes the SKB idcode number in marked in red, PSM00XXXX.

## 6 Precipitation – presentation and evaluation of primary data

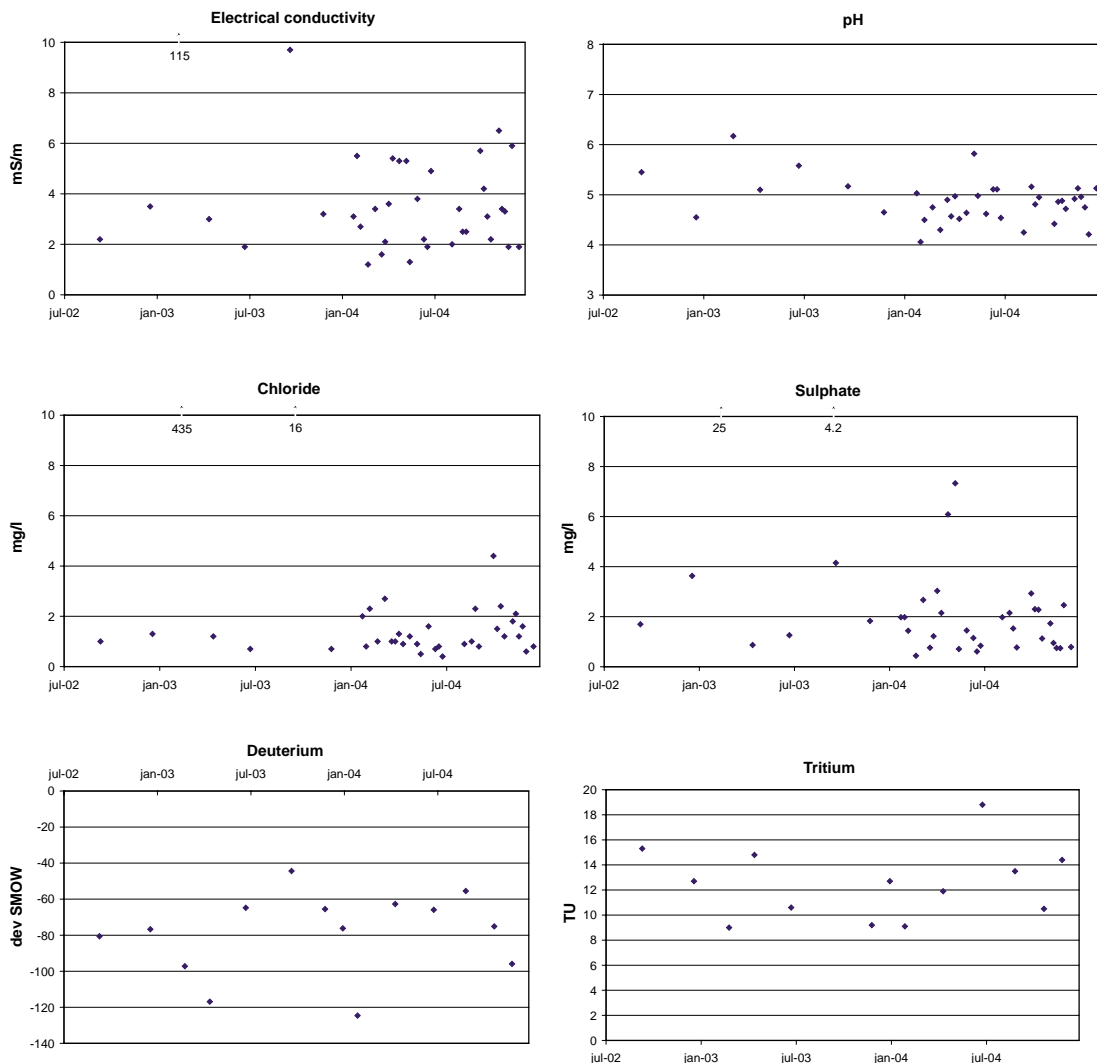
The chemical composition of precipitation has been measured for 21 parameters at the sampling station PSM002170 at the Island of Ävrö. The distributions of all available data are together with reference data from Vimmerby and Gotland, compiled in Table 6-1.

The temporal variations are shown for six elements in Figure 6-1, showing the time series from September 2002 to December 2004.

The electrical conductivity, chloride and sulphate show similar patterns with markedly elevated values at two occasions. Supply of sea water is a probable explanation for the elevated marine components in precipitation.

Deuterium show a typical seasonal variation with the lowest values measured during winter.

Tritium scatters around 12 TU, which is slightly higher than the natural production of tritium corresponding to levels of 5–10 TU. The slightly elevated levels could probably be due to emissions from the nuclear power plant nearby.



**Figure 6-1.** Time series showing the chemical composition in precipitation in the Simpevarp area (PSM002170).

**Table 6-1. Compilation of chemical composition of precipitation from PSM002170 in the Simpevarp area. Reference data from national reference stations in Vimmerby (IVL:261) and at the Island of Gotland (IVL:1554).**

Element	Unit	ID-code	Number	Min	25-p	Median	75-p	Max	Mean	Stddev	CV(%)
Bromide	mg/l	PSM002170	37	< 0.2	< 0.2	< 0.2	< 0.2	3.4	0.21	0.6	260
Calcium	mg/l	PSM002170	11	0.20	0.45	0.60	1.4	5.2	1.3	1	110
		IVL:261	*	0.11	0.12	0.13	0.13	0.18	0.13	0.03	20
		IVL:1554	*	0.24	0.31	0.38	0.38	0.38	0.33	0.08	24
Bicarbonate	mg/l	PSM002170	15	< 0.2	< 0.2	< 0.2	< 0.2	1.0	0.20	0.3	140
Chloride	mg/l	PSM002170	37	0.40	0.80	1.2	1.8	440	13	70	530
		IVL:261	*	0.26	0.29	0.36	0.42	0.49	0.36	0.09	26
		IVL:1554	*	1.2	1.3	1.4	1.5	1.8	1.4	0.2	16
Chlorine-37	dev. SMOC	PSM002170	1	0.0700				0.0700	0.0700		
Deuterium	dev. SMOW	PSM002170	14	-125	-92.1	-75.7	-65.0	-44.4	-78.7	23	-29
Fluoride	mg/l	PSM002170	37	< 0.2	< 0.2	< 0.2	< 0.2	0.68	< 0.2	0.1	93
Iron (total ICP)	mg/l	PSM002170	11	< 0.02	< 0.02	0.022	0.034	0.10	0.032	0.03	94
Lithium	mg/l	PSM002170	10	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004		
Magnesium	mg/l	PSM002170	11	< 0.1	0.10	0.10	0.20	0.30	0.15	0.09	59
		IVL:261	*	0.040	0.040	0.040	0.050	0.060	0.046	0.009	19
		IVL:1554	*	0.090	0.11	0.15	0.17	0.21	0.15	0.05	33
Manganese	mg/l	PSM002170	11	0.0049	0.0067	0.014	0.037	0.070	0.024	0.02	94
Oxygen-18	dev. SMOW	PSM002170	14	-16.9	-12.4	-10.4	-8.75	-6.60	-10.8	3.1	-28
Potassium	mg/l	PSM002170	11	< 0.4	< 0.4	0.42	0.73	1.7	0.58	0.5	89
		IVL:261	*	0.10	0.10	0.11	0.12	0.13	0.11	0.01	12
		IVL:1554	*	0.12	0.12	0.15	0.17	0.31	0.17	0.08	45
Silicon	mg/l	PSM002170	11	< 0.03	< 0.03	< 0.03	0.040	0.10	0.032	0.03	82
Sodium	mg/l	PSM002170	11	0.40	0.55	1.2	2.4	8.1	2.3	3	110
		IVL:261	*	0.16	0.16	0.25	0.28	0.30	0.23	0.07	29
		IVL:1554	*	0.70	0.79	0.87	0.91	1.0	0.86	0.1	14
Strontium	mg/l	PSM002170	11	0.0010	0.0030	0.0050	0.025	0.067	0.018	0.02	140
Sulphate	mg/l	PSM002170	37	0.44	0.87	1.7	2.3	25	2.6	4	160
Sulphate as sulphur	mg/l	PSM002170	11	0.35	0.49	0.67	1.0	1.3	0.74	0.4	50
		IVL:261	*	0.26	0.30	0.38	0.38	0.41	0.35	0.06	18
		IVL:1554	*	0.53	0.59	0.62	0.69	0.72	0.63	0.08	12
Tritium	TU	PSM002170	13	9.00	10.5	12.7	14.4	18.8	12.5	2.9	23
Electrical conductivity (lab)	mS/m	PSM002170	37	1.2	2.2	3.2	4.9	120	6.5	20	280
		IVL:261	*	1.1	1.2	1.6	1.6	1.6	1.4	0.2	17
		IVL:1554	*	2.1	2.1	2.7	2.8	4.0	2.7	0.8	28
pH (lab)	pH unit	PSM002170	37	4.06	4.57	4.88	5.11	6.17	4.87	0.43	8.9
		IVL:261	*	4.57	4.59	4.79	4.85	4.89	4.74	0.15	3.1
		IVL:1554	*	4.63	4.64	4.64	4.69	4.73	4.67	0.055	1.2

\* Distribution of 5 yearly averages during the period 2000–2004.

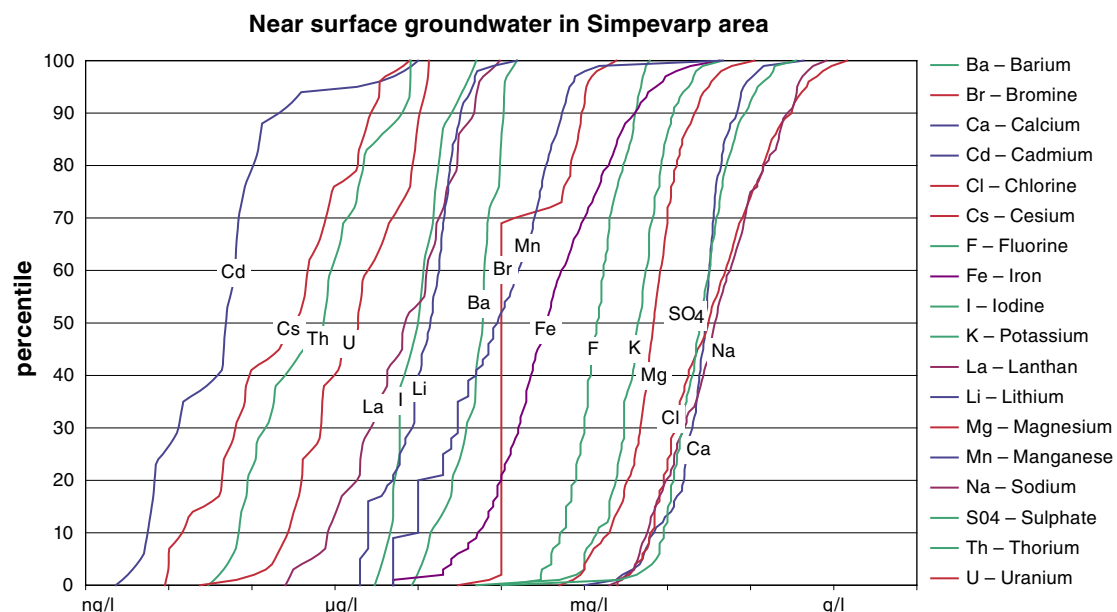
## 7 Shallow groundwater – presentation and evaluation of primary data

The evaluation of the chemical composition of shallow groundwater in the Simpevarp area has been divided into three sections. In the *first section*, observations from individual soil tubes and from different categories of soil tubes are compared with different reference data. The spatial variation is also shown in maps for most elements. This section is divided in six parts, dealing with major constituents, nutrients (CNP), redox state, pH, trace elements and isotopes. The *second section* deals with temporal and seasonal variations and time trends. In the *third section* relationships among variables are explored by methods such as principal component analysis, ratios and saturation indices.

### 7.1 Parameter overview

In the SICADA database, there are nearly seventy different chemical parameters measured in groundwater, including isotopes and trace elements. The concentration distributions for a selection of these parameters are shown in Figure 7-1.

The elements occur in concentrations differing about six orders of magnitude. The highest concentrations are found among the major elements, which range from a few milligrams per litre to almost a gram per litre. The lowest concentrations, which are found for trace elements as cadmium and cesium, are measured in nanograms per litre.



**Figure 7-1.** Concentration distributions for a selection of the parameters measured in groundwater from soil tubes in the Simpevarp area. The partly straight line for bromide is caused by observations below the reporting limit that were given half this value.

## 7.2 Evaluation of data quality

The data quality was evaluated by calculating the charge balance error for the major constituents. In groundwater from soil tubes, the average of the absolute deviations is 8%, thus exceeding 5%, the frequently used limit for individual analyses accepted as valid. Sixty percent of the analyses in soil tubes, and 46 percent of the analyses of private wells exceed this limit (Table 7-1).

The explanation for this seemingly bad result is probably the low ion strength of the groundwater in the Simpevarp area. Minor errors in concentrations, due to limited precision of analyses in this concentration range, may lead to large charge balance errors. Figure 7-2 shows a clear trend for greater CBE-errors at lower conductivities. The conductivity of the soil tubes in the Simpevarp area is, for example, usually only 10% of the conductivity measured in the Forsmark area.

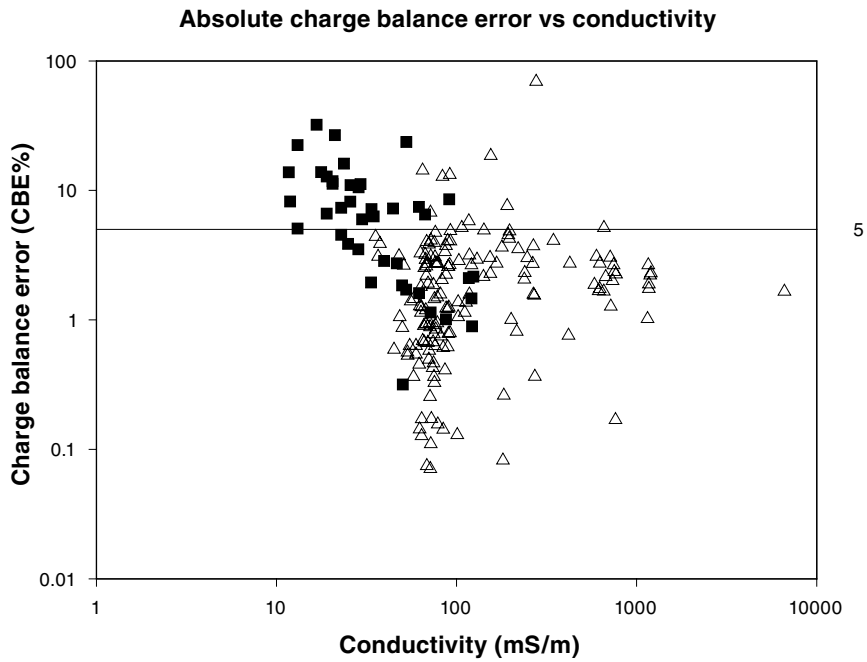
For some of the parameters, many of the observations fall below reporting limits. As these observations are included in the statistics by a value equivalent to half of the reporting limit, it is important to identify parameters and objects where a considerable fraction of the observations fulfil these criteria. In Figure 7-3, all parameters where more than 5% percent of the observations fall below the reporting limit are shown.

This is the case for a total of 18 parameters. For hafnium, uranium-234 and uranium-238 this fraction exceeds 40%. For mercury, indium and the isotopes of thorium-230, thorium-232 and uranium-235, this fraction is 100%. For bromide, which is a central parameter in some evaluations, this fraction exceeds 70% which makes this parameter less useful in the evaluations.

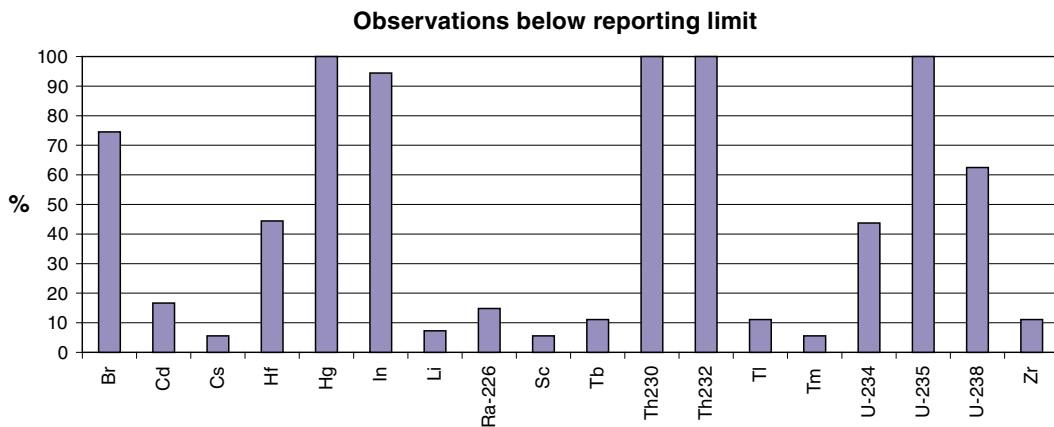
It should be pointed out that the fraction that falls below reporting limits may constitute a considerably greater fraction when individual soil tubes are concerned, making the comparisons including these objects uncertain. In Appendix 1, all values below reporting the limit is denoted by a '<' sign, followed by the reporting limit.

**Table 7-1. Charge balance error (CBE) including Ca, Mg, Na, K, Cl, SO<sub>4</sub> and HCO<sub>3</sub>. The error expressed in percent was calculated by the formula 100 x (cations-anions)/ (cations+anions, with all ions expressed in meq/l.**

Object	Total number of observations	Number of observations where CBE > 5% or CBE < 5%	Average of absolute CBE in all observations (%)
Soil tubes	41	25 (61%)	8.2
Private wells	350	162 (46%)	7.3
Pre-PLU Soil tubes	21	2 (14%)	2.5



**Figure 7-2.** The conductivity versus absolute charge balance error in soil tubes in both the Simpevarp and Forsmark areas. Filled squares – soil tubes in the Simpevarp area, triangles soil tubes in the Forsmark area.



**Figure 7-3.** The portion of the observations that fall below the reporting limit of the used analytical methods in the soil tube data from the Simpevarp area.

### 7.3 Major and minor constituents – overview

Shallow groundwaters contain dissolved and particulate minerals, organic substances and dissolved gases. Depending on factors in the catchment, the overburden and the underlying bedrock, the groundwater composition is influenced by a number of different processes. These processes involve the atmosphere, biosphere and lithosphere. Examples of processes affecting the local chemistry of shallow groundwater are decomposition of organic matter, dissolution of soluble phases (e.g. calcite), and mixing with relict saline waters. As the groundwater composition is highly dependent on the contact time between water and bedrock or minerals in the overburden, younger ground water can be assumed to differ significantly from water with longer residence time.

The major constituents of groundwater are in general bicarbonate, calcium, chloride, magnesium, silicon, sodium, sulphate and carbonic acid. The minor constituents are in general boron, carbonate, fluoride, iron, nitrate, potassium and strontium. The rest of the elements presented in this section, which may be considered as trace elements, are barium, bromide and iodide /Schwartz and Zhang 2003/.

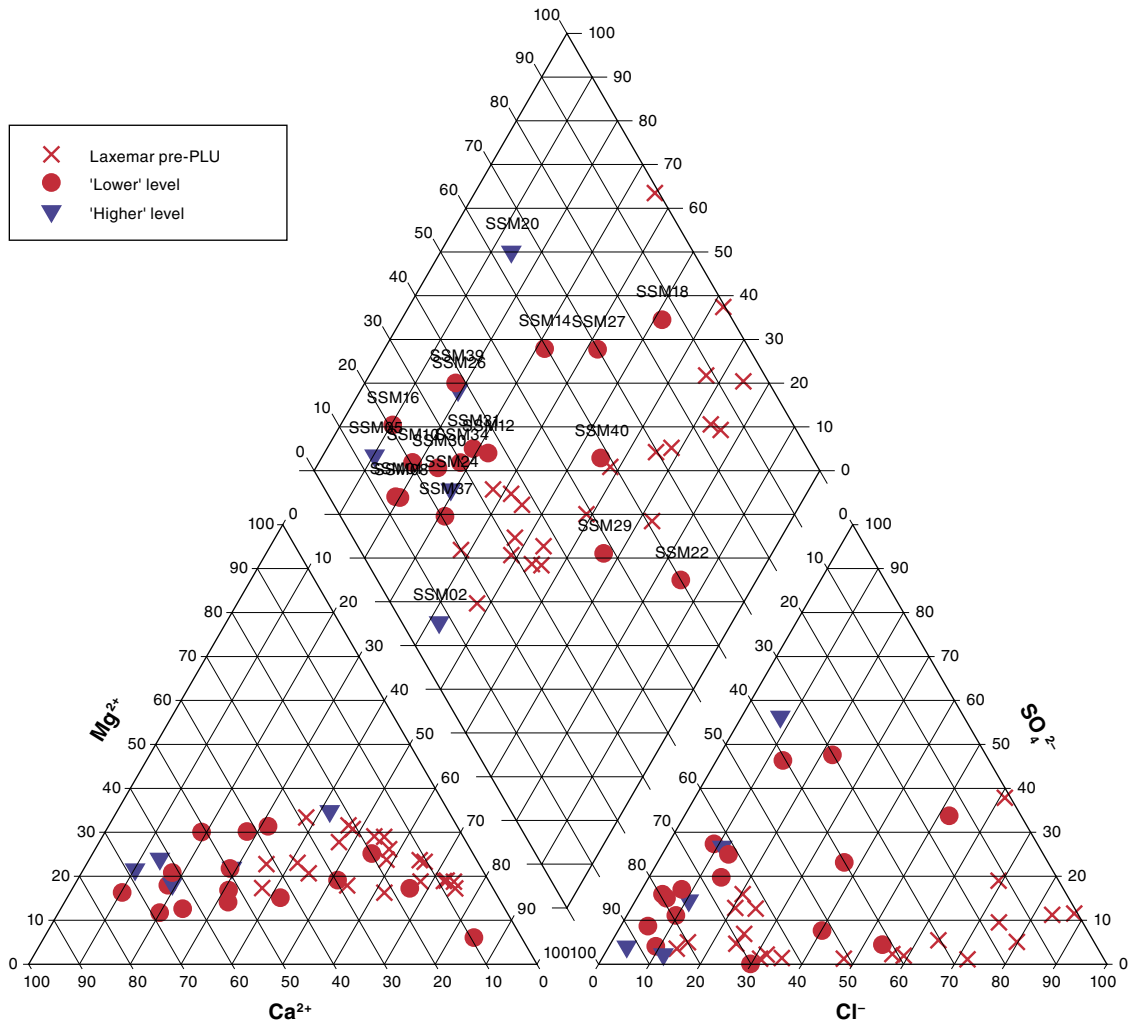
Figure 7-4 shows a Piper diagram where average concentrations of the major constituents are plotted. Blue dots represent soil tubes at ‘higher’ levels and red dots tubes at ‘lower’ levels according to the classification described in Section 4.2. Most of the soil tubes of the Laxemar pre-PLU study plot in the area dominated by ‘lower’ tubes.

All of the ‘higher’ located soil tubes are of Ca-HCO<sub>3</sub> type (left side of the prism) probably indicating recently infiltrated water and presumably recharge characteristics. ‘Lower’ located soil tubes range from the Ca-HCO<sub>3</sub> type to the Na-Cl type on the right side of the plot. Most of the Laxemar pre-PLU soil tubes plot in the area dominated by the ‘lower’ located soil tubes, implicating mostly discharge characteristics. There are a number of soil tubes plotting in the middle of Piper plot, i.e. they show intermediate characteristics with respect to the major constituents.

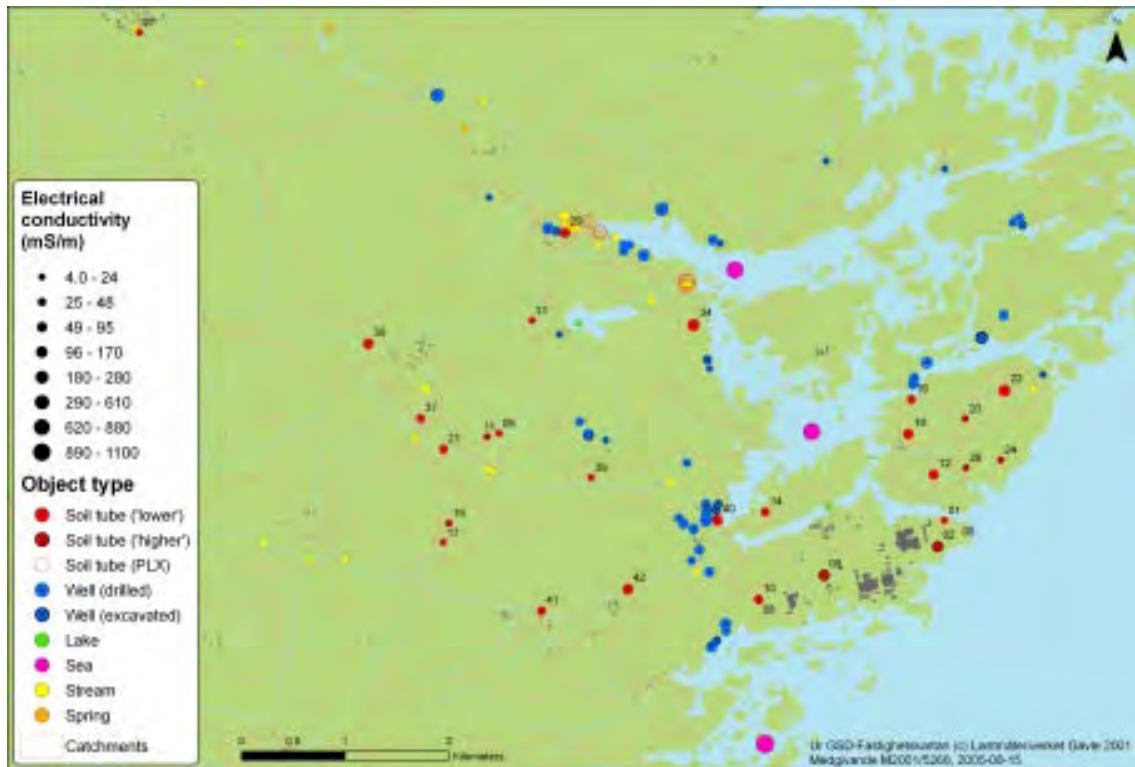
Some soil tubes classified as ‘lower’ fall into the ‘recharge area’ at the left side of the Piper diagram. This indicates that the coarse classification in ‘higher’ and ‘lower’ located soil tubes not necessarily corresponds to recharge and discharge characteristics. This fact may lead to smaller differences between the two groups in the statistics and box-plots.

The electrical conductivity is a measure of the total content of dissolved ions. All soil tubes in the area show conductivities significantly lower than sea water (Figure 7-5). The same applies to all private wells, as well as to surface waters of lakes and streams. The highest conductivities (120 mS/m) are found for SSM000022 at the Island of Ävrö and SSM000034 near the coast in the Laxemar subarea. The conductivity of sea water is ten times higher, about 1,000 mS/m.





**Figure 7-4.** Piper diagram where mean concentrations of the major constituents are plotted for the soil tubes in the Simpevarp area. The id-codes for the soil tubes are shown as green numbers. See Section 4.2 for an explanation of the classification in 'higher' and 'lower' soil tubes used in the plot.



*Figure 7-5. Electrical conductivity in soil tubes, private wells, lake, stream and sea water in the Simpevarp area. The numbers corresponds to the last two digits in the id-codes of the soil tubes. The Laxemar pre-PLU measurements are also included, forming two clusters of soil tubes in the middle-north of the map.*

In Table 7-2, median values of major and minor constituents are shown for individual soil tubes, as well as for the categories ‘higher’ and ‘lower’ located soil tubes. The median values represent very different numbers of observations. This table is compiled to facilitate comparisons between several elements. For example, SSM000018, SSM000022 and SSM000034 show elevated concentrations of several marine ions, whereas e.g. SSM000008, SSM000010, SSM000020 and SSM000026 display markedly lower values for most of these ions. In the following sections each element is accounted for separately. See Appendix 2 for further details on number of observations, percentiles, mean values and variances.

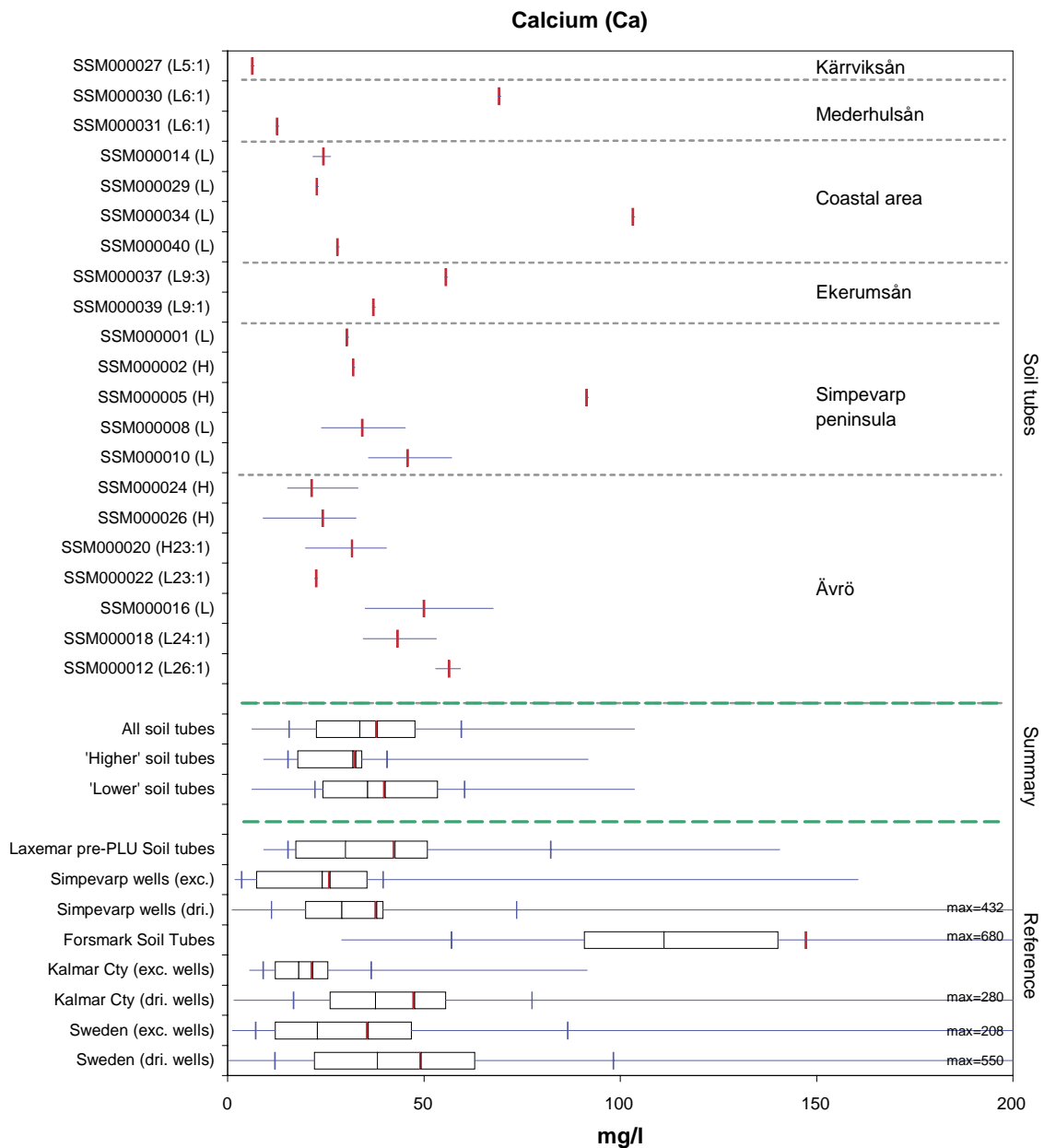
**Table 7-2. Summary of major and minor constituents of groundwater in the Simpevarp area (median values in mg/l). The columns corresponds in order from left to right to identification code for the soil tube, the catchment name, the sub-catchment number, the classification in 'higher' (H) and 'lower'(L) located soil tubes.**

Idcode	Catchment		Ca	Mg	Na	K	Sr	Li	Cl	HCO <sub>3</sub>	SO <sub>4</sub>	F	Br	I
SSM000001	Simpevarp Peninsula		L	30	11	11	4.2	0.081	0.013	7.1	110	4.1	0.48	< 0.2
SSM000002	Simpevarp Peninsula		H	32	29	59	12	0.27	0.012	8.5	370	13	1.1	< 0.2
SSM000005	Simpevarp Peninsula		H	91	18	10	9.3	0.26	< 0.004	17	220	4.5	5.4	0.91
SSM000008	Simpevarp Peninsula		L	34	3.6	10	2.1	0.10	0.0050	3.9	100	8.5	0.35	< 0.2 0.012
SSM000009	Ekerumsån	9:2	L							2.0				
SSM000010	Simpevarp Peninsula		L	44	7.8	13	4.3	0.14	0.011	4.7	130	22	0.82	< 0.2 0.011
SSM000011	Ekerumsån	9:2	H							3.0				
SSM000012	Skölkebacken	26:1	L	57	9.0	34	5.5	0.18	0.019	15	210	68	1.8	< 0.2 0.0060
SSM000014	Coastal area		L	25	13	23	6.8	0.099	0.041	12	69	61	3.0	< 0.2 0.016
SSM000016	Island of Ävrö		L	47	7.3	5.6	4.1	0.070	0.0090	6.2	110	18	2.1	< 0.2 0.0060
SSM000017	Laxemarån	10:5	L							42				
SSM000018	Lindströmmebacken	24:1	L	42	17	69	41	0.16	0.026	120	59	100	0.99	0.77 0.020
SSM000019	Laxemarån	10:5	H							27				
SSM000020	Vadevikebacken	23:1	H	35	6.5	5.8	3.7	0.10	0.015	5.3	45	51	1.4	< 0.2 0.0060
SSM000021	Ekerumsån	9:1	L							200				
SSM000022	Vadevikebacken	23:1	L	22	8.7	230	7.6	0.28	0.023	150	280	130	3.9	0.64 0.015
SSM000024	Island of Ävrö		H	16	5.1	6.5	3.3	0.068	0.010	6.0	83	11	0.97	< 0.2 0.018
SSM000026	Island of Ävrö		H	31	5.1	7.7	2.2	0.070	0.0060	5.6	55	18	0.77	< 0.2 0.0040
SSM000027	Kärrviksån	5:1	L	6.1	1.3	6.2	1.1	0.025	0.0020	7.4	17	21	0.51	< 0.2 0.0030
SSM000029	Coastal area		L	23	14	98	11	0.15	0.029	86	190	22	2.9	1.0 0.050
SSM000030	Mederhultsån	6:1	L	69	8.3	29	2.5	0.27	0.010	16	260	46	2.3	< 0.2 0.010
SSM000031	Mederhultsån	6:1	L	12	3.3	7.5	1.3	0.044	0.0040	6.1	48	11	2.4	< 0.2 0.0050
SSM000034	Coastal area		L	100	45	72	12	0.54	0.025	140	550	< 0.2	0.38	1.5 0.033
SSM000035	Laxemarån	10:30	L							87				
SSM000037	Ekerumsån	9:3	L	55	11	34	5.7	0.22	0.031	16	220	24	2.2	< 0.2 0.0080
SSM000039	Ekerumsån	9:1	L	37	7.6	9.7	4.5	0.10	0.014	6.2	50	16	1.3	< 0.2 0.0050
SSM000040	Coastal area		L	28	21	82	9.6	0.20	0.019	120	160	13	1.8	0.92
SSM000041	Laxemarån	10:1	L							120				
SSM000042	Laxemarån	10:1	L							65	180	91	1.1	0.78
Soil tubes at 'lower' levels			L	36	8.7	25	5.2	0.14	0.017	12	120	24	1.8	< 0.2 0.011
Soil tubes at 'higher' levels			H	32	5.9	6.5	3.3	0.076	0.0090	5.9	58	18	1.1	< 0.2 0.0060
All soil tubes				34	8.2	12	4.8	0.13	0.014	7.4	93	22	1.4	< 0.2 0.010

### 7.3.1 Calcium, magnesium, sodium and potassium

The *calcium* concentrations of the groundwater in the Simpevarp area are in level with, or slightly lower than concentrations usually measured in wells in Sweden (Figure 7-6). The highest calcium concentrations are observed in soil tubes from three different catchments (SSM000030, SSM000034 and SSM000005). There is no obvious relationship between these soil tubes.

The lowest calcium concentrations are found in the two soil tubes that are located in the vicinity of glaciofluvial sediments (SSM000027 and SSM000031). There is no clear difference between soil tubes at 'higher' and 'lower' levels, probably indicating only minor differences in calcium content between these two categories.



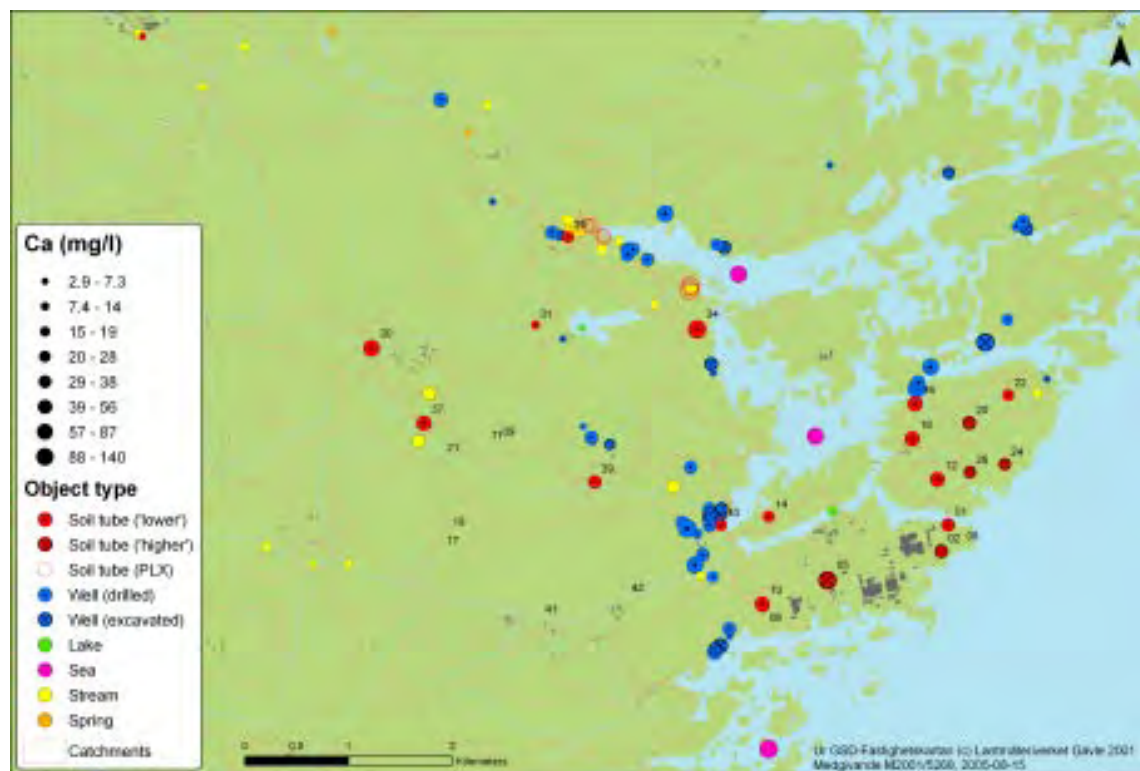
**Figure 7-6.** Calcium concentrations in shallow groundwater in the Simpevarp area. Explanations to the figure are given in Section 4.3.

According to Figure 7-7, the calcium concentrations in shallow groundwaters are generally higher than in stream and lake water. The calcium concentrations in precipitation usually range from 0.5 to 1.5 mg/l. In streams, concentrations of 10 mg/l are usually measured, compared to 5 mg/l in the rest of Sweden. The values found in sea water are about 90 mg/l.

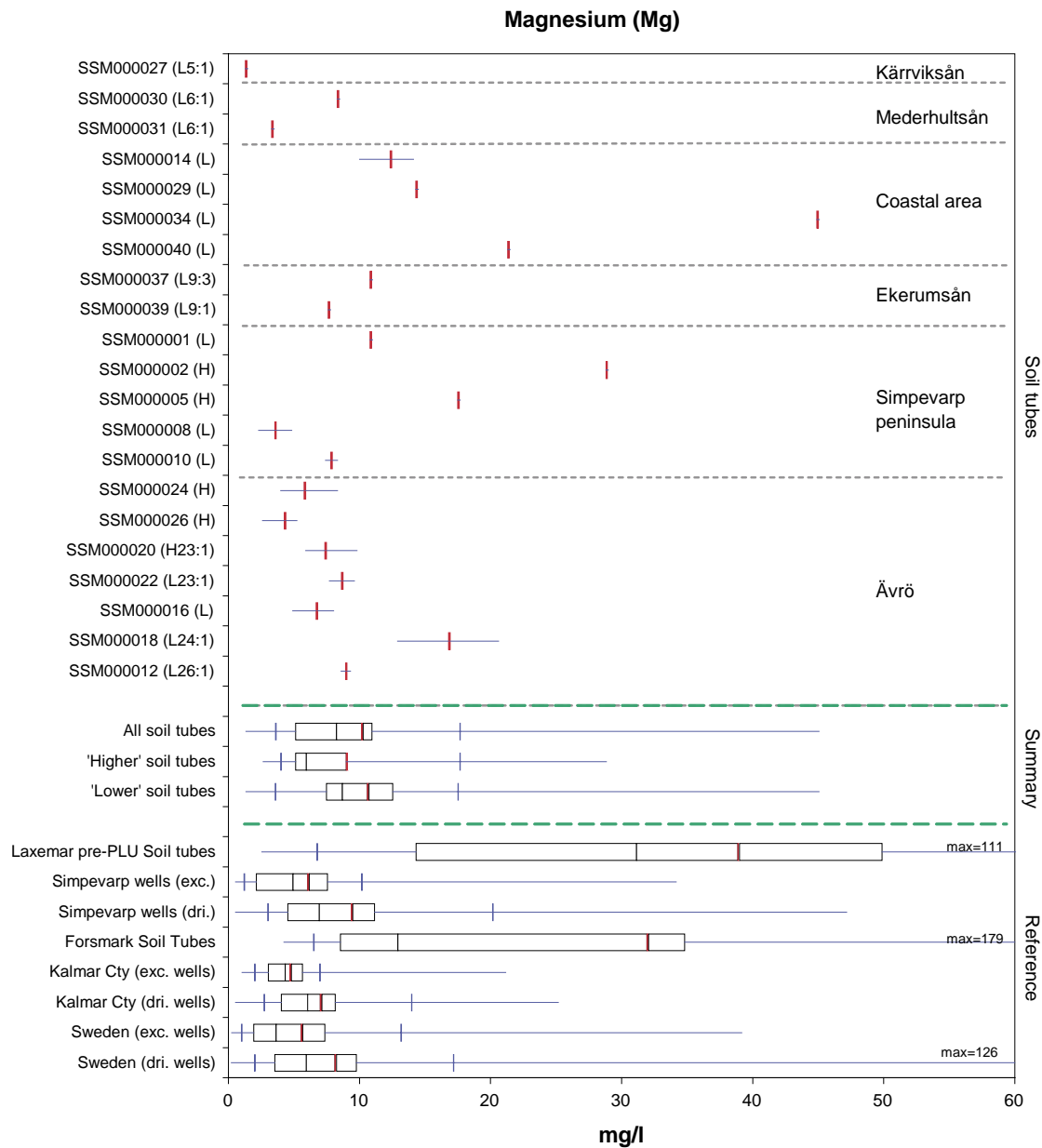
A typical calcium concentration in shallow groundwater in the Simpevarp area is 35 mg/l.

The *magnesium* concentrations in the groundwater in the Simpevarp area are normal in a Swedish perspective, when private wells of the Simpevarp area and Kalmar County are compared to concentrations measured in private wells of Sweden. The concentrations measured in some of the soil tubes near the coast of the Baltic Sea are in this context slightly elevated.

The highest magnesium concentrations are found near the Baltic coast in SSM000034, SSM000040, SSM000002, SSM000005 and the lowest concentrations are found in the highest topographical areas in the western part of the area (Figure 7-8). There is also a tendency for elevated concentrations in ‘lower’ soil tubes compared to ‘higher’ located soil tubes.

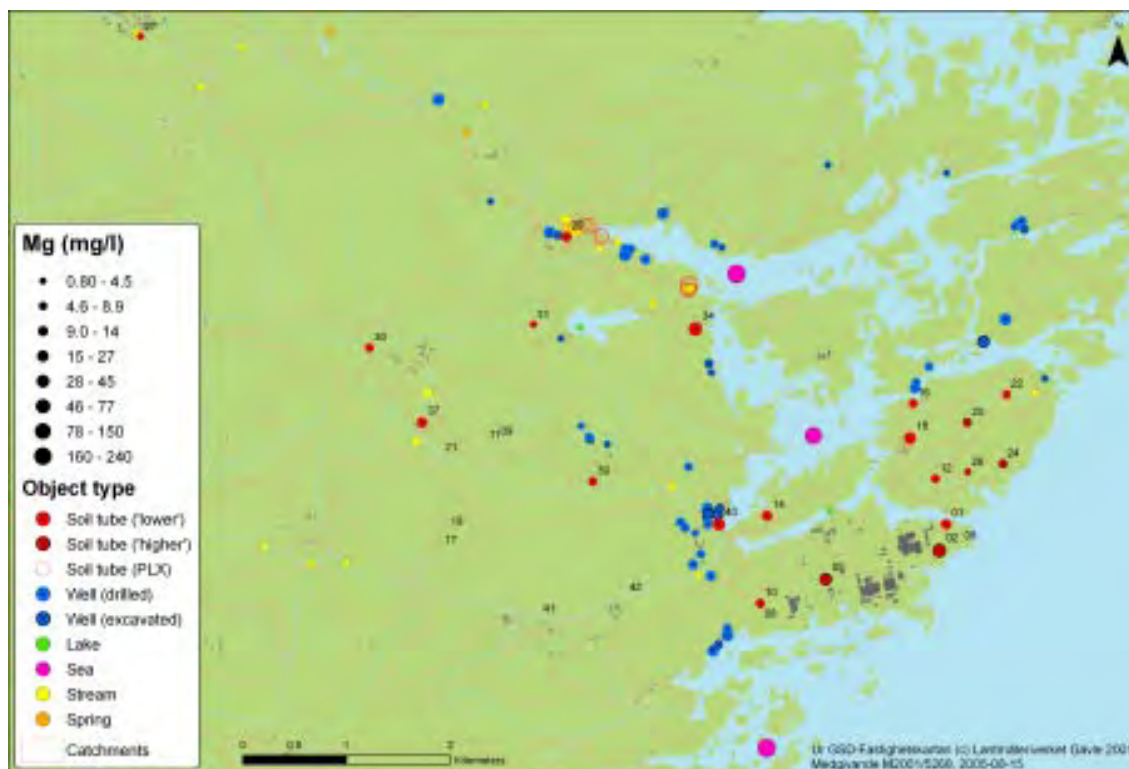


**Figure 7-7.** Calcium concentrations in shallow groundwater and surface water in the Simpevarp area. The dots represent mean values of available data from soil tubes, private wells and surface waters. The figures in black corresponds to the last two digits of the id-codes of the soil tubes.



**Figure 7-8.** Magnesium concentrations in shallow groundwater in the the Simpevarp area. Explanations to the figure are given in Section 4.3.

The magnesium concentrations are generally 3–4 times higher in shallow groundwaters compared to both stream and lake waters and markedly lower than sea water (Figure 7-9). The magnesium concentration in precipitation is usually around 0.1 mg/l. In streams concentrations of slightly more than 2 mg/l are usually measured, compared to about 1 mg/l in the rest of Sweden. The concentrations found in sea water are markedly higher, about 220 mg/l.



**Figure 7-9.** Magnesium concentrations in shallow groundwater and surface water in the Simpevarp area. The dots represent mean values of available data from soil tubes, private wells and surface waters. The figures in black corresponds to the last two digits of the id-codes of the soil tubes.

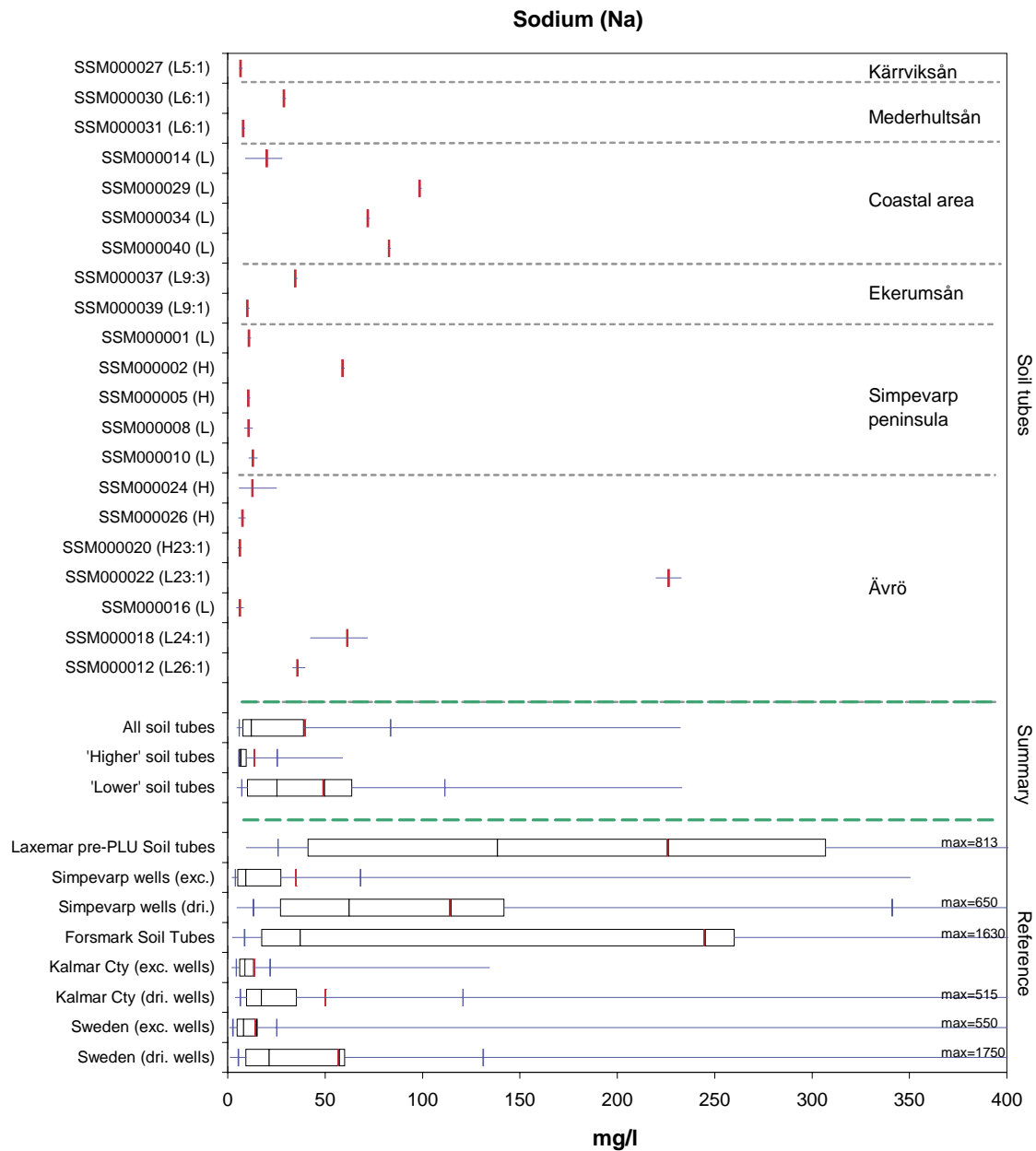
The fact that the lowest magnesium concentrations coincides with the highest topographical levels indicates that one an important factor behind the magnesium pattern may be marine relics.

A typical magnesium concentration in shallow groundwater in the Simpevarp area is 8 mg/l.

The *sodium* concentrations in the groundwater in the Simpevarp area are normal in a national context, when private wells of the Simpevarp area and Kalmar County are compared to concentrations measured in private wells of Sweden. The concentrations measured in some of the soil tubes near the coast of the Baltic Sea are slightly elevated.

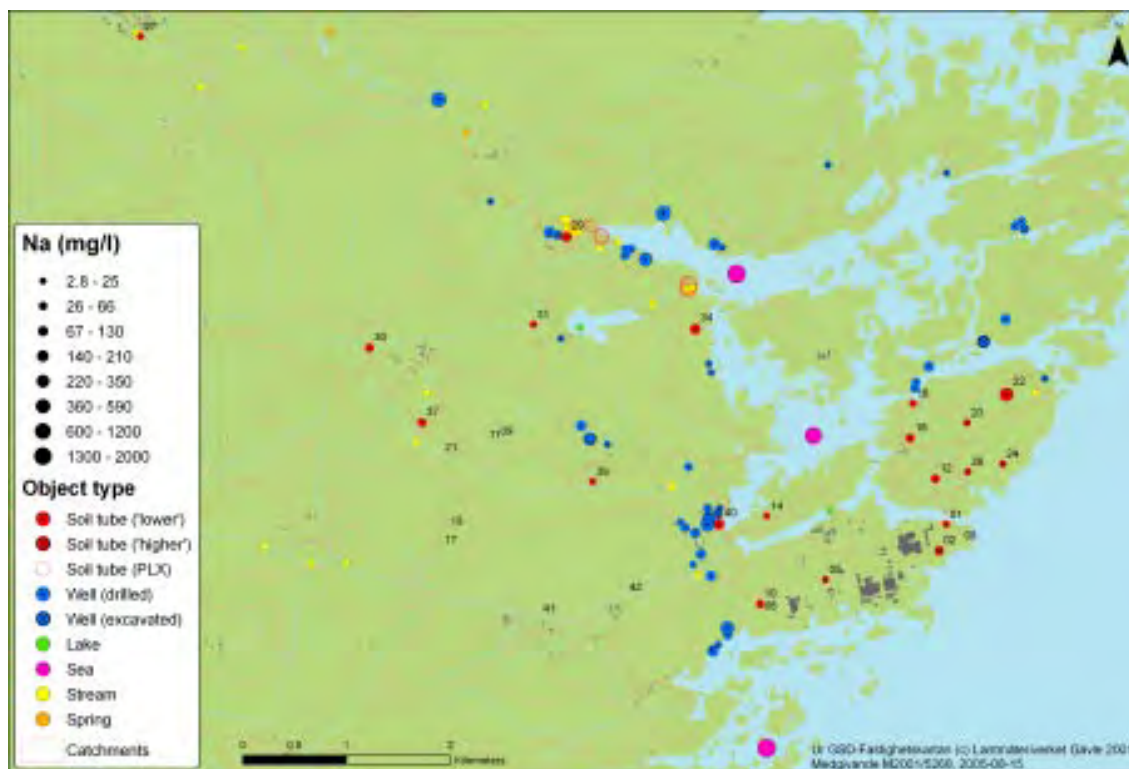
The spatial pattern for sodium is, apart from one clear exception (SSM000022), very similar to both the patterns of calcium and magnesium, where the lowest concentrations are found in the highest topographical areas in the western part of the Simpevarp area. The soil tube SSM000022 at the Island of Ävrö shows markedly elevated sodium levels compared to magnesium and calcium. Furthermore, the difference between 'higher' and 'lower' located soil tubes is slightly enhanced compared to both magnesium and calcium (Figure 7-10).





**Figure 7-10.** Sodium concentrations in shallow groundwater in the Simpevarp area. Explanations to the figure are given in Section 4.3.

The sodium concentrations in the shallow groundwater are usually comparable to that in both stream and lake water, and markedly lower than in sea water (Figure 7-11). The sodium concentration in precipitation is usually around 1 mg/l. In streams, concentrations of 9 mg/l are usually measured, compared to 3 mg/l in the rest of Sweden. The concentrations found in sea water are markedly higher, about 1,900 mg/l.



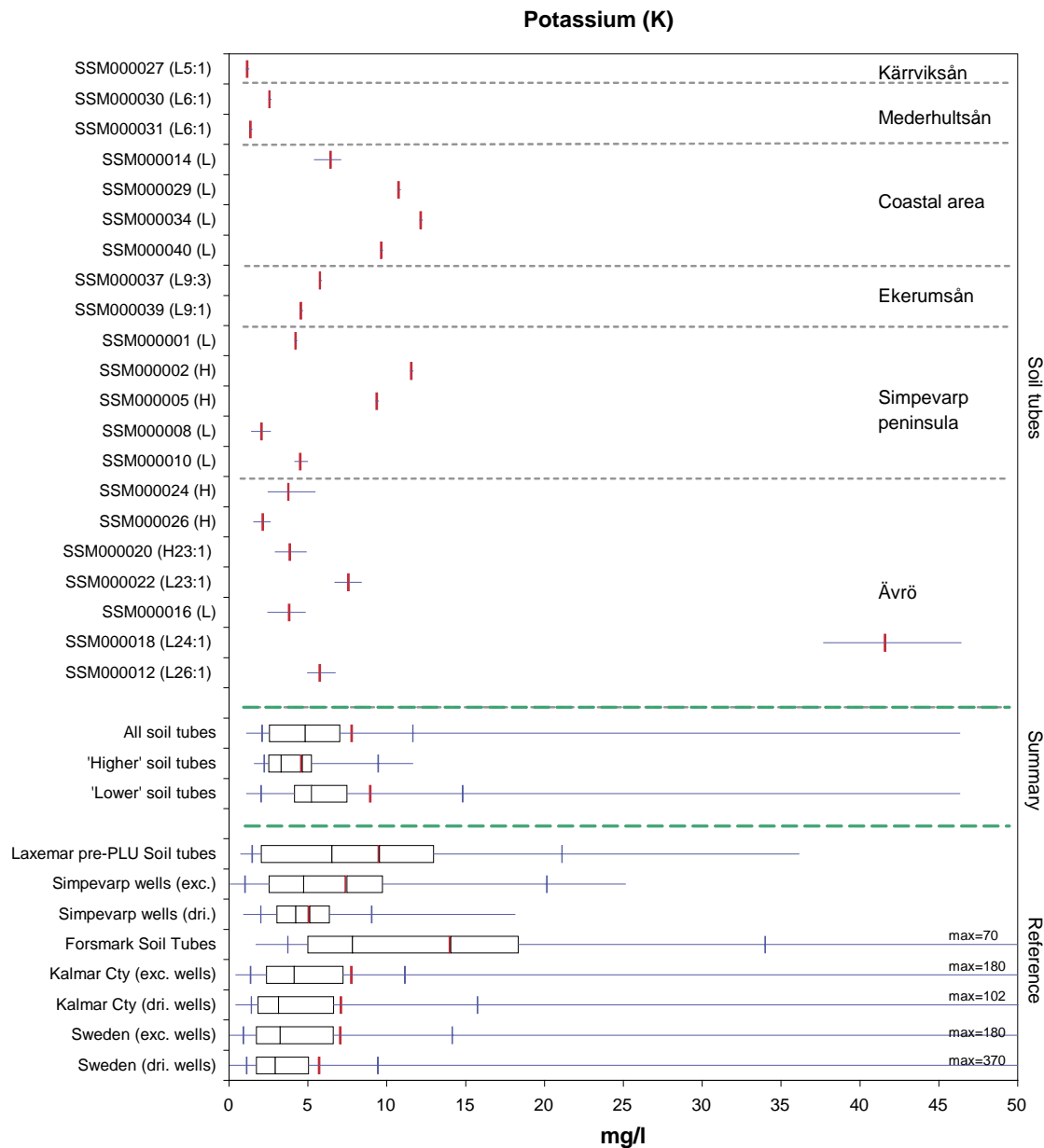
**Figure 7-11.** Sodium concentrations in shallow groundwater and surface water in the Simpevarp area. The dots represent mean values of available data from soil tubes, private wells and surface waters. The figures in black corresponds to the last two digits of the id-codes of the soil tubes.

The ratio between the concentrations in 'lower' and 'higher' soil tubes differs between sodium and magnesium. This ratio is 4 for sodium compared to 1.5 for magnesium, indicating that there are differences in the mechanisms controlling the concentrations of these elements.

Typical sodium concentrations in shallow groundwater in the Simpevarp area are 7 mg/l in 'higher' located soil tubes and 25 mg/l in 'lower' soil tubes.

The **potassium** concentrations in the shallow groundwater in the Simpevarp area are in level with Swedish groundwaters when private wells in the Simpevarp area and Kalmar County are compared to private wells of Sweden. The concentrations measured in some of the soil tubes near the coast of the Baltic Sea are slightly elevated.

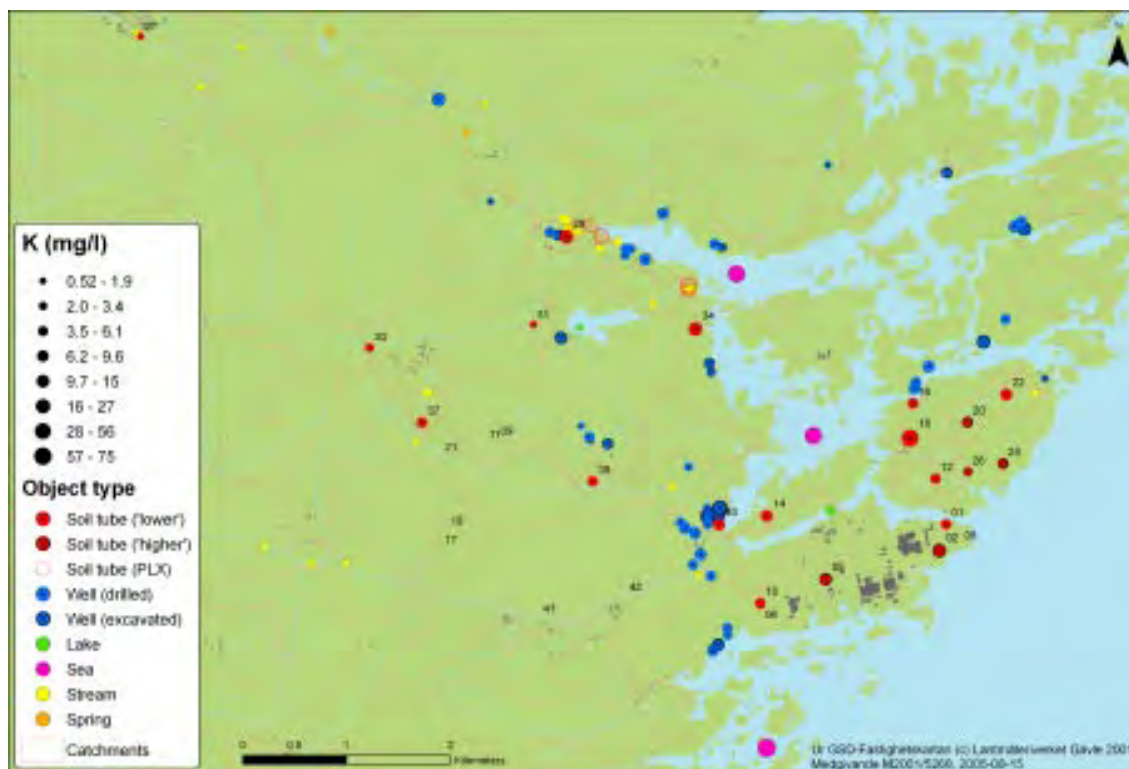
The spatial pattern for potassium is very similar to the pattern of magnesium, where the lowest concentrations are found in the highest topographical areas in the western part of the study area. The soil tube SSM000018 at the Island of Ävrö show markedly elevated potassium levels (Figure 7-12).



**Figure 7-12.** Potassium concentrations in shallow groundwater in the Simpevarp area. Explanations to the figure are given in Section 4.3.

The potassium concentrations are generally 3–4 times higher in shallow groundwaters compared to that in both stream and lake water, and markedly lower than in sea water (Figure 7-13). The potassium concentration in precipitation is usually around 0.4 mg/l. In streams, concentrations of slightly more than 1 mg/l are usually measured, compared to about 0.7 mg/l in the rest of Sweden. The concentrations found in sea water are markedly higher, about 70 mg/l.

A typical potassium concentration in shallow groundwater in the Simpevarp area is 5 mg/l.



**Figure 7-13.** Potassium concentrations in shallow groundwater and surface water in the Simpevarp area. The dots represent mean values of available data from soil tubes, private wells and surface waters. The figures in black corresponds to the last two digits of the id-codes of the soil tubes.

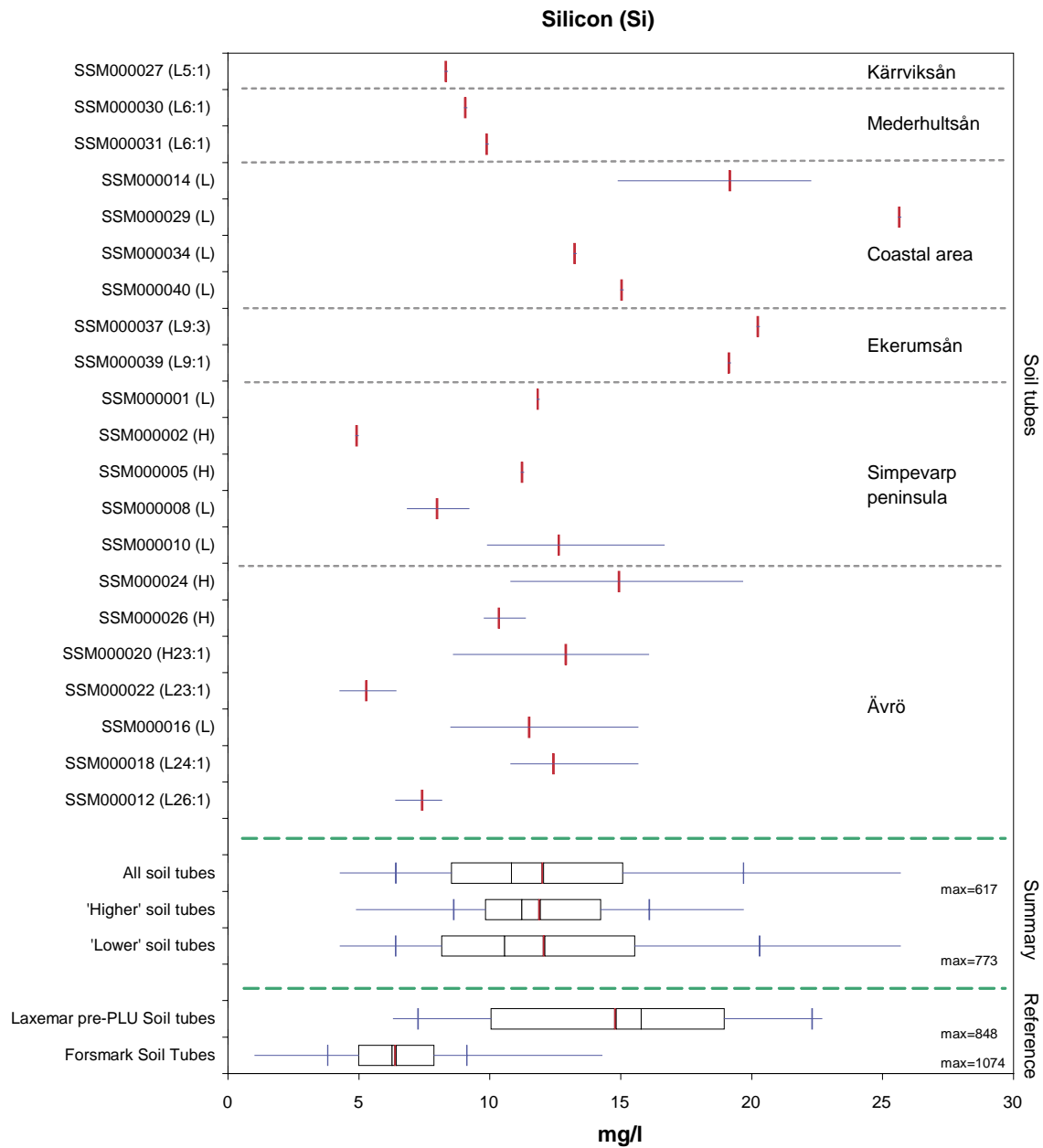
### 7.3.2 Silicon

The silicon content in the shallow groundwater in the Simpevarp area is only measured as total silicon. In surface waters both total-silicon and silica-silicon are measured.

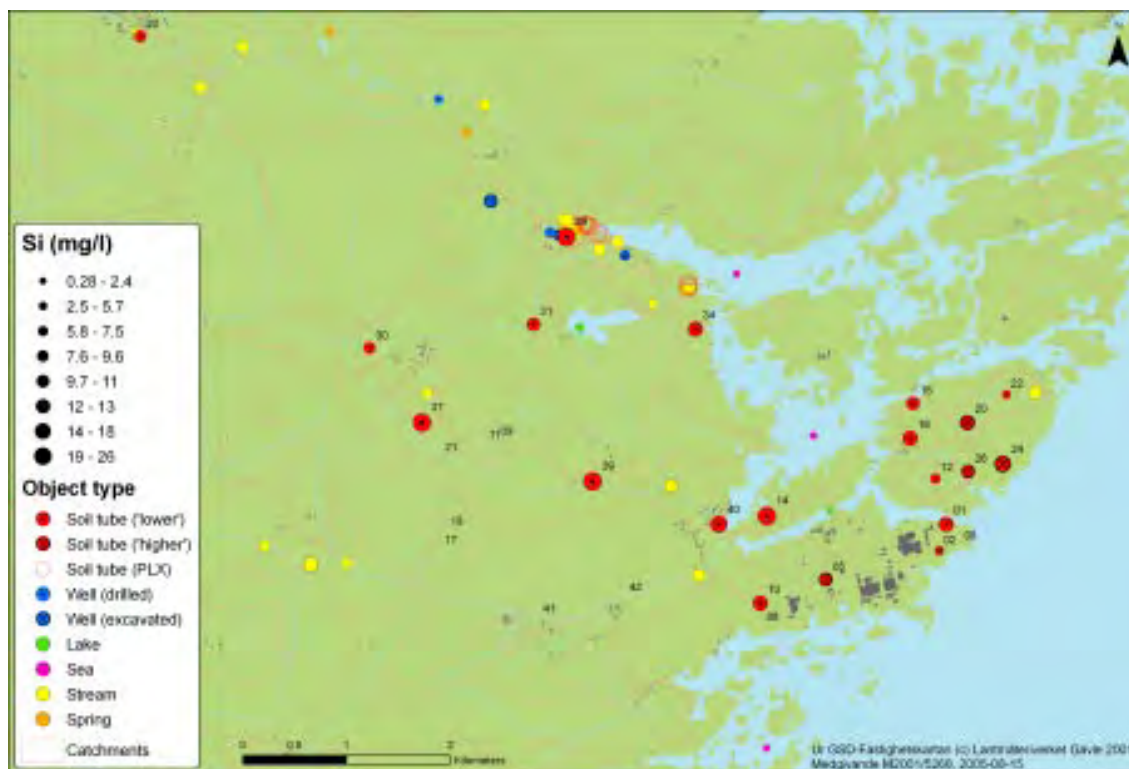
The silicon concentrations in the Simpevarp area range from about 5 to 25 mg/l in shallow groundwater. The silicon levels are probably slightly elevated in the Simpevarp area. The variation within the few soil tubes with more than one observation is usually large. The lowest concentrations are found in the soil tubes SSM000002 and SSM000022 and the highest in SSM000029. The spatial variation of silicon shows no clear pattern and there are no differences between 'lower' and 'higher located soil tubes. Compared to the soil tubes in the Forsmark area, the median silicon content is doubled in the Simpevarp area (Figure 7-14).

The silicon content in lakes and streams are 4 and 8 mg/l, respectively, about twice the level in most lakes and streams of Sweden. The silicon content in the sea is lower, about 0.5 mg/l (Figure 7-15). The fraction of silica-silicon constitutes the main part of total silicon measured in surface waters. There are no measurements of the silica fraction in groundwaters.

A typical concentration of silicon in shallow groundwater in the Simpevarp area is 11 mg/l .



**Figure 7-14.** Silicon concentrations in shallow groundwater in the Simpevarp area. Explanations to the figure are given in Section 4.3.

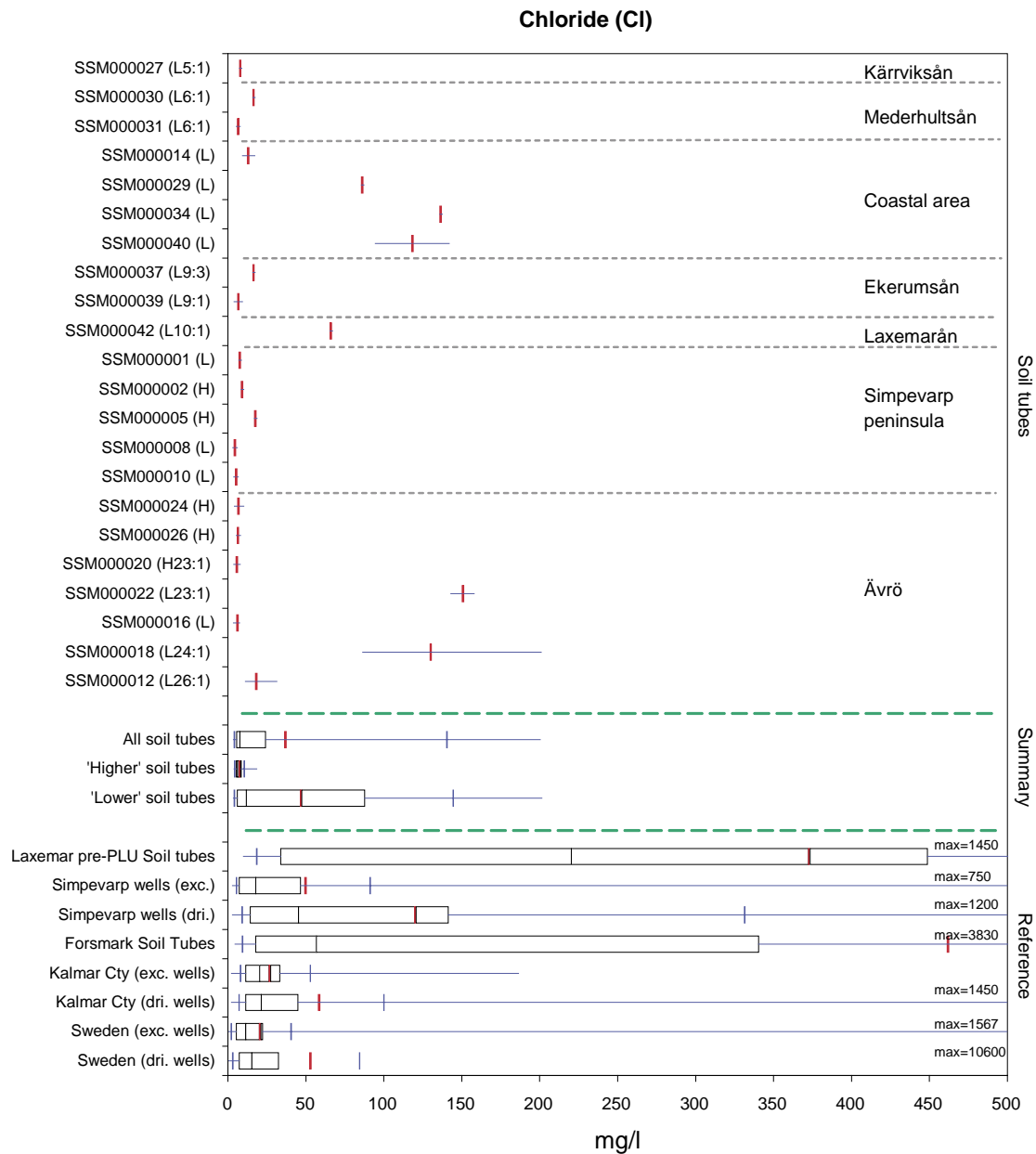


**Figure 7-15.** Silicon concentrations in shallow groundwater and surface water in the Simpevarp area. The dots represent mean values of available data from soil tubes, private wells and surface waters. The figures in black corresponds to the last two digits of the id-codes of the soil tubes.

### 7.3.3 Chloride, sulphate and bicarbonate

The **chloride** concentrations in the groundwater in the Simpevarp region are slightly elevated when private wells from the Simpevarp area and Kalmar County are compared to private wells of Sweden. A comparison of chloride concentrations in streams reveals a similar pattern.

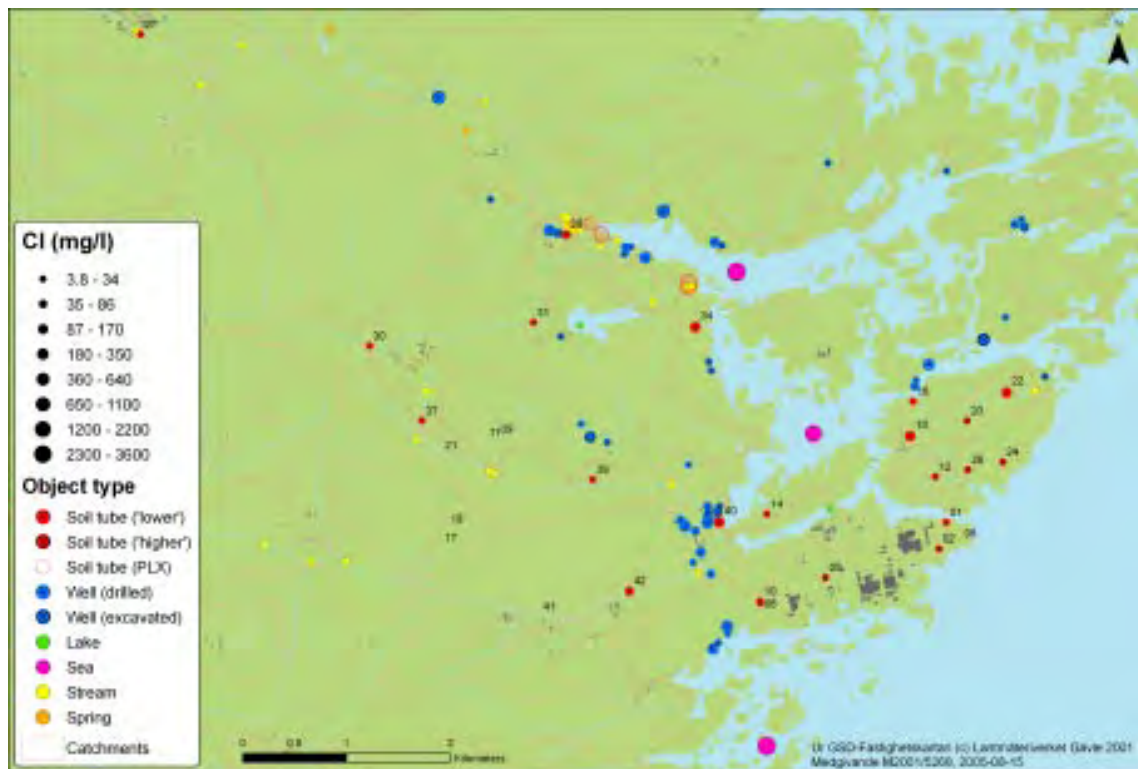
The spatial pattern for chloride is very similar to the pattern for sodium. The soil tubes SSM000022 and SSM000018 at the Island of Ävrö, as well as SSM000029, SSM000034 and SSM000040 located near the brackish basins of Granholmsjärden and Borholmsfjärden, show markedly elevated chloride levels. However, the chloride concentration in SSM000022 is less elevated than what is seen for sodium (Figure 7-16, cf Figure 7-10). There are no obvious large scale gradient from inland to sea for chloride.



**Figure 7-16.** Chloride concentrations in shallow groundwater in the Simpevarp area. Explanations to the figure are given in Section 4.3.

The chloride concentrations in the shallow groundwater are usually comparable to that in both stream and lake water, and markedly lower than sea water (Figure 7-17). The chloride concentration in precipitation is usually about 1 mg/l. In streams concentrations of 10 mg/l is usually measured, compared to 3 mg/l in the rest of Sweden. The concentrations found in sea water are markedly higher, about 3,400 mg/l.





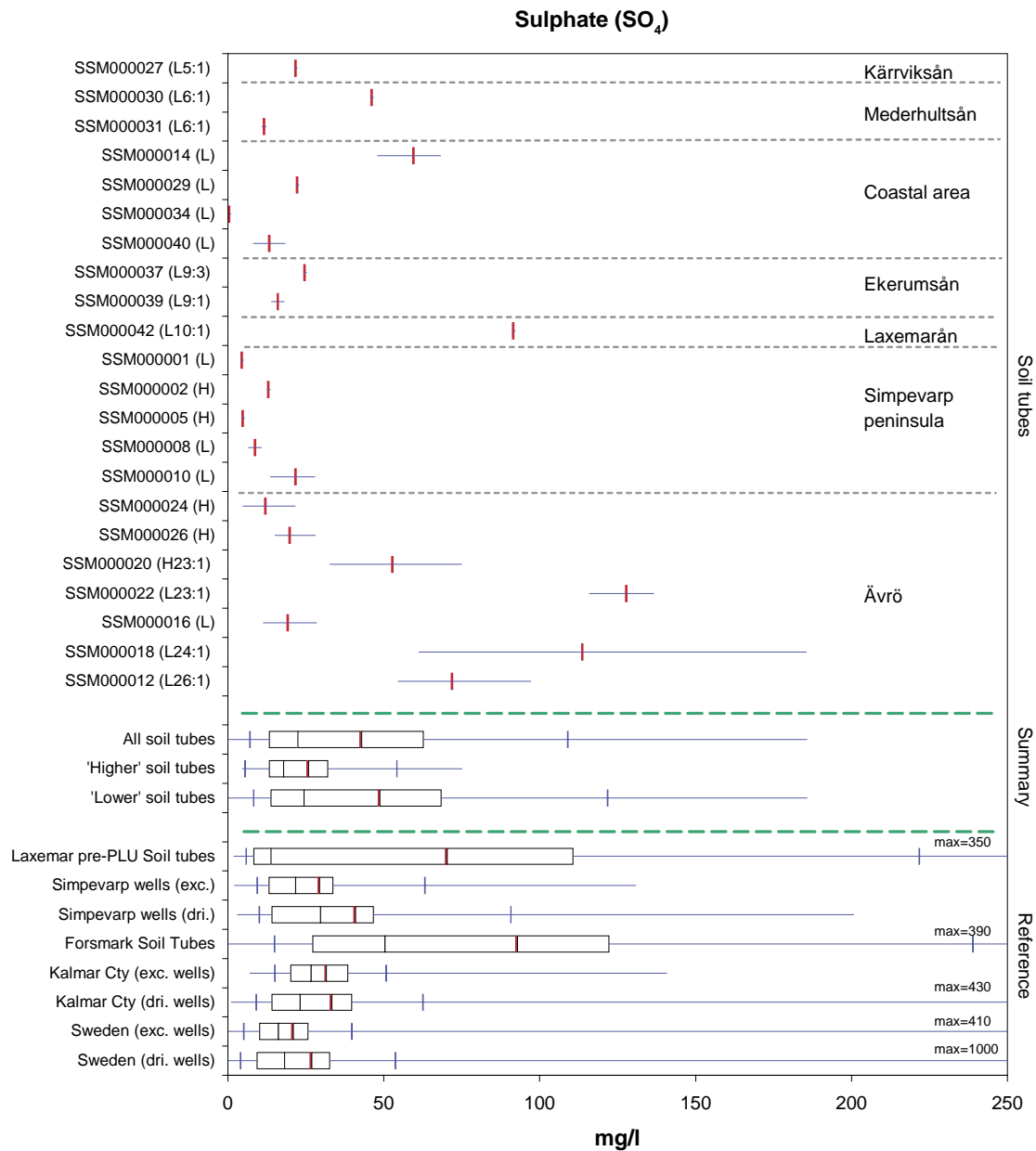
**Figure 7-17.** Chloride concentrations in shallow groundwater and surface water in the Simpevarp area. The dots represent mean values of available data from soil tubes, private wells and surface waters. The figures in black corresponds to the last two digits of the id-codes of the soil tubes.

The pattern for chloride differs from sodium with respect to the ratio between the concentrations in 'lower' and 'higher' soil tubes. This ratio is 2 for chloride, compared to 4 for sodium.

Typical chloride concentrations in shallow groundwater in the Simpevarp area are 6 mg/l in 'higher' located soil tubes and 12 mg/l in 'lower' located soil tubes.

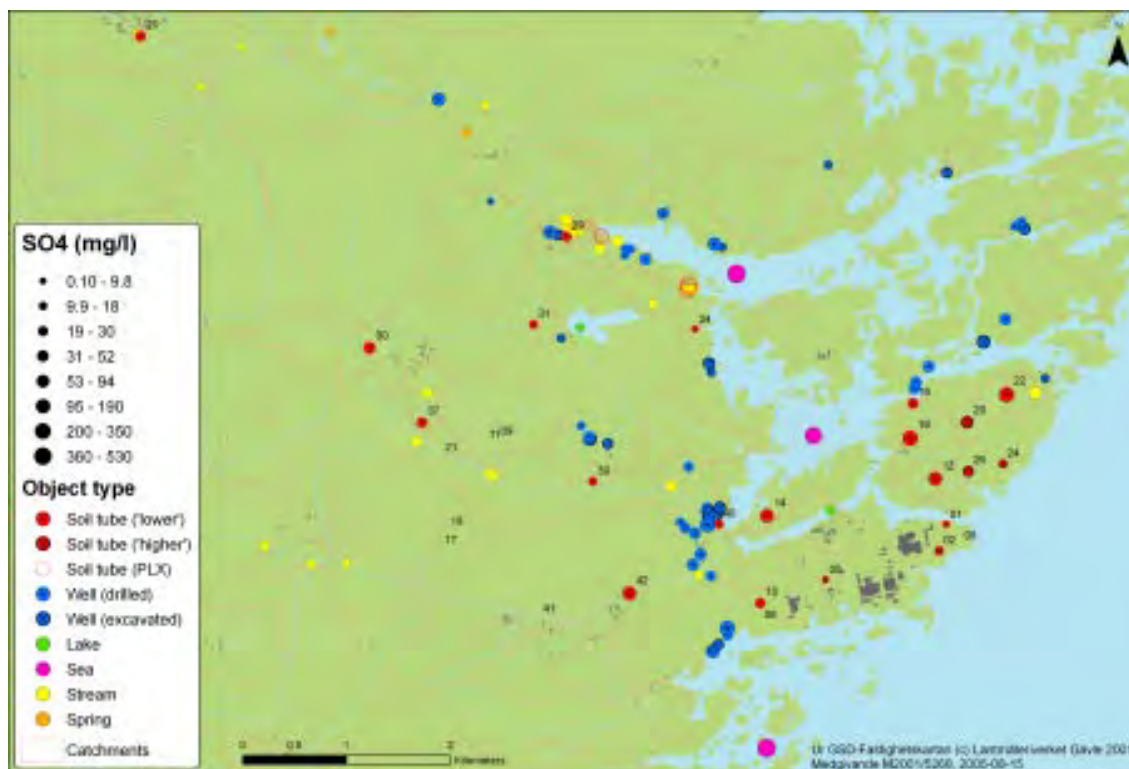
The *sulphate* concentrations in the private wells in the Simpevarp region are elevated almost twice compared to concentrations observed in most excavated wells in Sweden. An analogous comparison of streams reveals a similar pattern of about 3 times elevated sulphate concentrations.

The spatial pattern for sulphate is partly similar to the pattern of chloride. The soil tubes SSM000022 and SSM000018 at the Island of Ävrö, as well as SSM000042 in the catchment of Laxemarån, show elevated sulphate levels (Figure 7-18). There is no general difference between 'lower' and 'higher' located soil tubes. In the Laxemar pre-PLU study some soil tubes show markedly elevated sulphate levels, shifting the distribution to the right. Most of these soil tubes are located close to the brackish waters of the basins Borholmsfjärden and Granholmsfjärden.



**Figure 7-18.** Sulphate concentrations in shallow groundwater in the Simpevarp area. Explanations to the figure are given in Section 4.3.

The sulphate concentrations in the shallow groundwater are approximately twice the concentrations measured in both stream and lake water, and markedly lower than in sea water (Figure 7-19). The sulphate concentration in precipitation is usually about 2 mg/l. In streams concentrations of 13 mg/l is usually measured, compared to 4 mg/l in the rest of Sweden. The concentrations found in sea water are markedly higher, 500 mg/l.



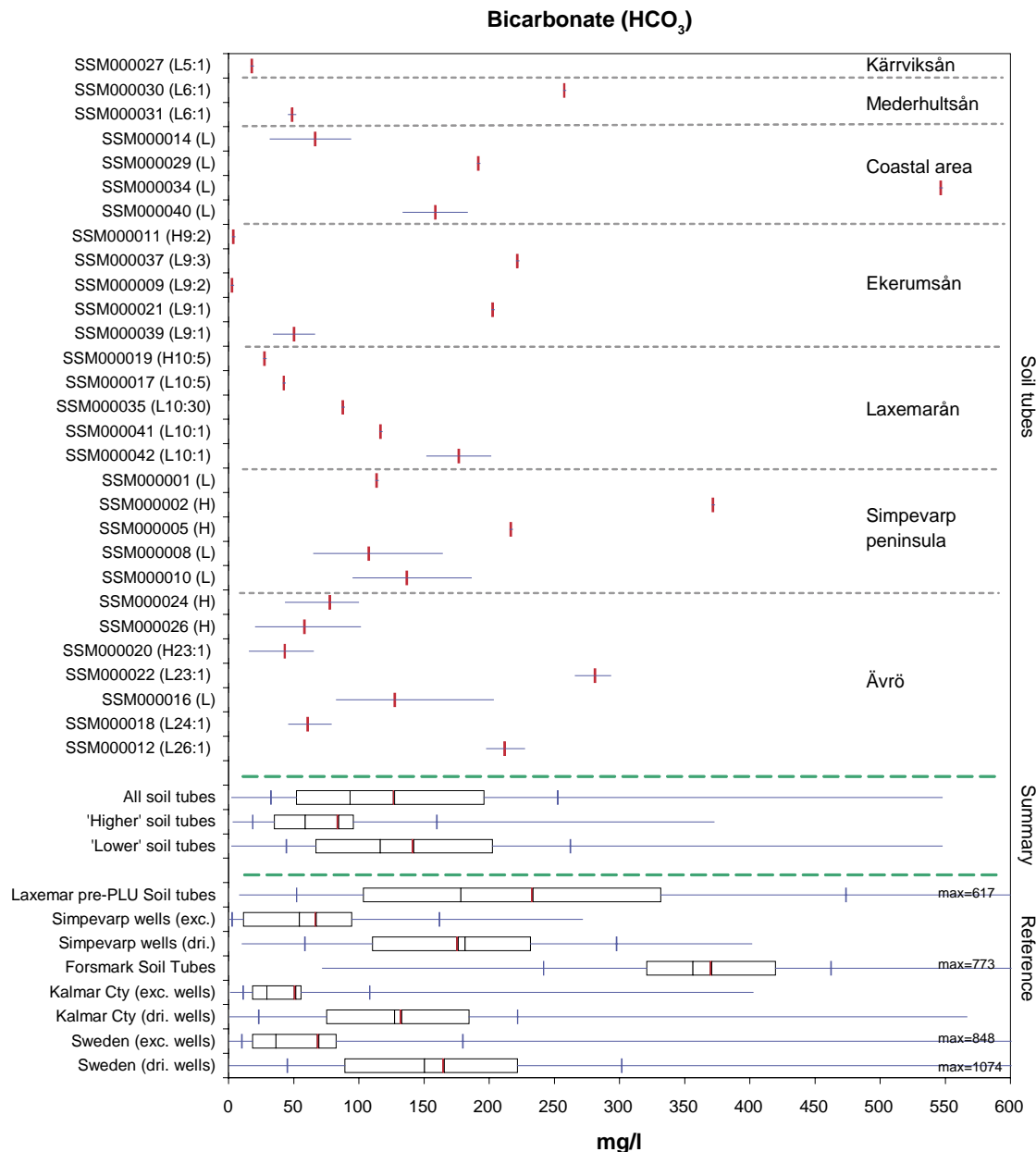
**Figure 7-19.** Sulphate concentrations in shallow groundwater and surface water in the Simpevarp area. The dots represent mean values of available data from soil tubes, private wells and surface waters. The figures in black corresponds to the last two digits of the id-codes of the soil tubes.

A possible explanation for the elevated sulphate concentrations could be oxidation of sulphide bearing post glacial sediments that presumably are present in the area.

A typical sulphate concentration in shallow groundwater in the Simpevarp area is about 20 mg/l. In some of the ‘lower’ located soil tubes, concentrations of about 100 mg/l are measured.

There is a large spread among the *bicarbonate* concentrations measured in the soil tubes in the Simpevarp area. The concentration ranges from about 500 mg/l to almost 0, indicating very low alkalinity and buffering capacity in some groundwaters. Most observations are normal or slightly elevated in a Swedish context (Figure 7-20). There is a significant difference between soil tubes at ‘higher’ and ‘lower’ levels, with markedly lower alkalinity in some ‘higher’ located soil tubes.

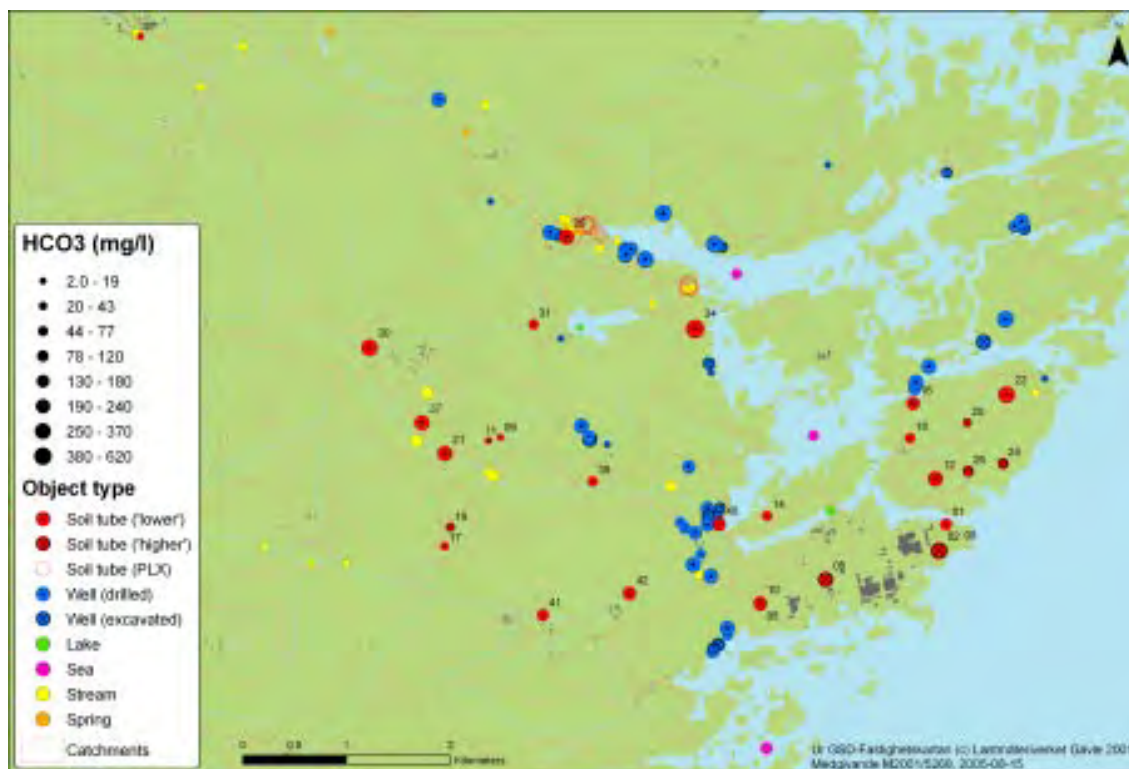
The highest bicarbonate levels are observed in SSM000030, SSM000034, SSM000002 and SSM000022, as well as in most of the soil tubes in the Laxemar pre-PLU study. Most of these soil tubes are located at ‘lower’ levels, except for SSM000002 and SSM000005 located close to the nuclear power plants at the Simpevarp Peninsula.



**Figure 7-20.** Bicarbonate concentrations in in shallow groundwater in the Simpevarp area. Explanations to the figure are given in Section 4.3.

The lowest bicarbonate levels are observed in SSM000009 and SSM000011, located at higher topographical levels dominated by bare bedrock. These low bicarbonate concentrations, in combination with the low pH-values measured, corresponds to ‘very low’ alkalinity according to the Swedish EQC /Naturvårdsverket 2000/. Also SSM000027, located downstream the glaciofluvial esker in the north-western part of the area, show ‘low’ alkalinity according to the Swedish EQC.

The bicarbonate concentrations are generally higher in shallow groundwater compared to stream, lake and sea water (Figure 7-21). The bicarbonate concentration in precipitation is usually less than 0.2 mg/l. In streams, concentrations of 18 mg/l are usually measured, compared to 12 mg/l in the rest of Sweden. The concentrations found in sea water are higher, about 89 mg/l.



**Figure 7-21.** Bicarbonate concentrations in shallow groundwater and surface water in the Simpevarp area. The dots represent mean values of available data from soil tubes, private wells and surface waters. The figures in black corresponds to the last two digits of the id-codes of the soil tubes.

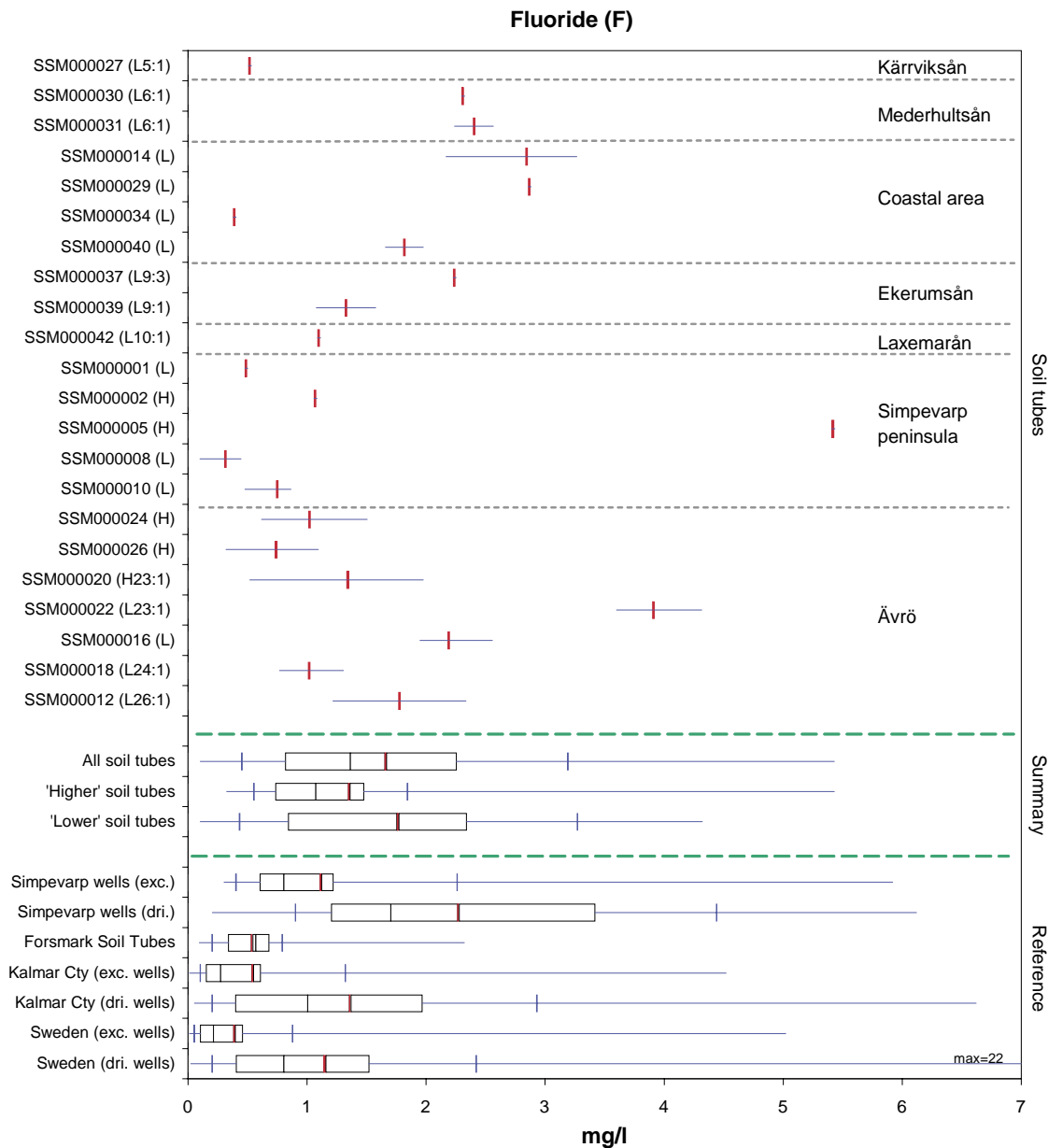
The area in the vicinity of Mederhult, e.g. SSM000021, SSM000030 and SSM000037, show elevated levels of bicarbonate in both shallow groundwater and streaming water. There are no indications that the elevated alkalinity in these catchments is explained by deviating geological conditions or different contents of the Quaternary deposits. A possible explanation could be liming coupled to the agricultural activities in the area.

A typical bicarbonate concentration is 100 mg/l in the Simpevarp area. At 'higher' levels there are examples of almost zero alkalinity, indicating very low buffering capacity in some groundwaters.

### 7.3.4 Fluoride, iodide and bromide,

The *fluoride* concentrations in both soil tubes and excavated wells in the Simpevarp area are approximately five times elevated compared to the concentrations observed in most excavated wells in Sweden. The fluoride concentrations are also elevated in a regional context when the private wells of the Simpevarp area are compared to the wells in Kalmar County. There is also a clear difference between excavated and drilled wells, where the latter show about 2–4 times higher fluoride concentrations.

The fluoride concentrations are rather uniformly distributed within the area and the spatial pattern deviate from the pattern observed for most of the major constituents. The highest fluoride concentrations are found in SSM000005 at the Simpevarp Peninsula and in SSM000022 at the Island of Ävrö (Figure 7-22).

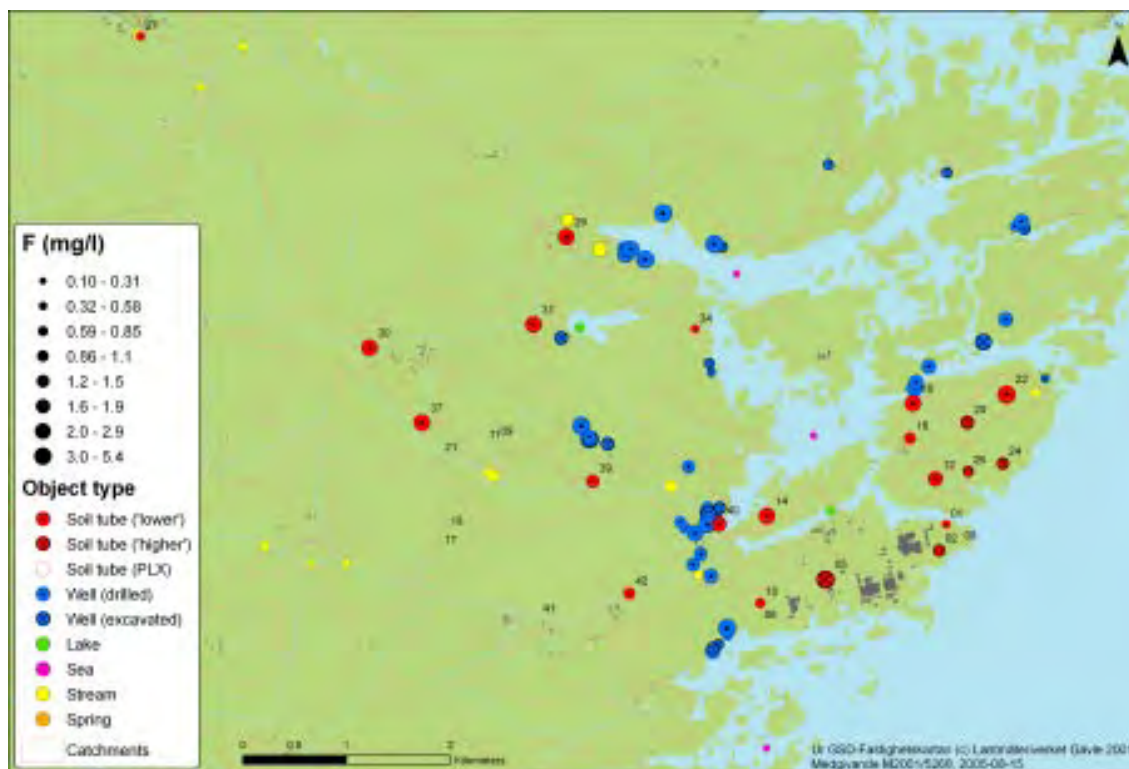


**Figure 7-22.** Fluoride concentrations in shallow groundwater in the Simpevarp area. Explanations to the figure are given in Section 4.3.

The lowest fluoride concentrations are found in SSM000027, SSM000034, SSM000001 and SSM000008. There are no obvious connections between these soil tubes.

The fluoride concentrations are generally higher in shallow groundwater compared to stream, lake and sea water (Figure 7-23). The fluoride concentration in precipitation is less than 0.2 mg/l. In streams concentrations of 0.5 mg/l are usually measured, compared to 0.1 mg/l in the rest of Sweden. The concentrations measured in sea water are usually lower than 0.2 mg/l.





**Figure 7-23.** Fluoride concentrations in shallow groundwater and surface water in the Simpevarp area. The dots represent mean values of available data from soil tubes, private wells and surface waters. The figures in black corresponds to the last two digits of the id-codes of the soil tubes.

In the middle of the Laxemar subarea, near the village of Mederhult, both shallow groundwater and streaming surface waters show slightly elevated levels of fluoride. In contrast, the fluoride concentrations are especially low in the streams draining the western part of the area, as well as in the westernmost soil tube SSM000027.

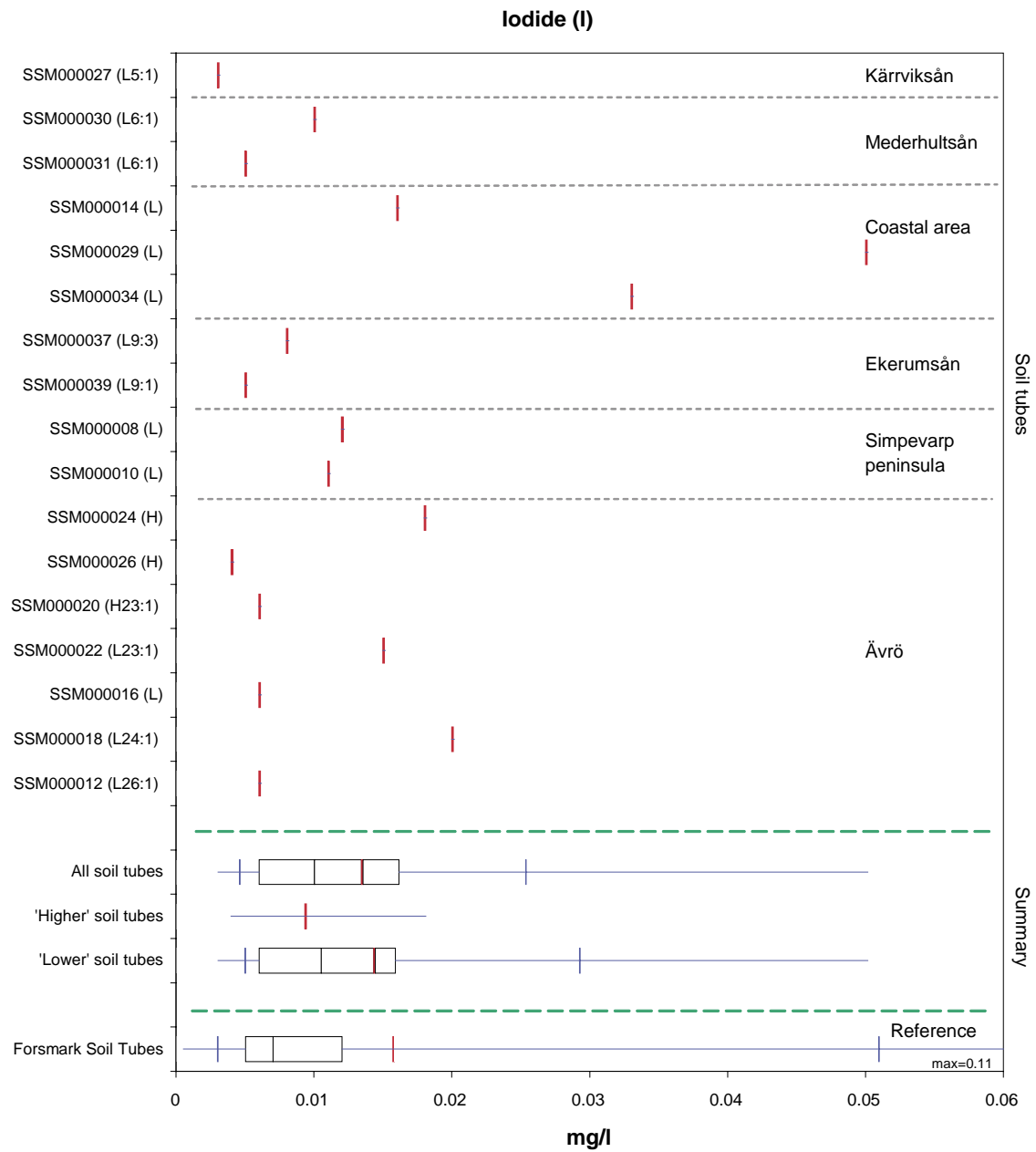
Typical fluoride concentrations in shallow groundwater in the Simpevarp area are about 1–2 mg/l.

The *iodide* concentrations in the soil tubes of the Simpevarp area range from 0.003 to 0.05 mg/l. The highest concentrations are found in SSM000029 and SSM000034 near the coast in the Laxemar subarea (Figure 7-24). The iodide concentrations are rather scattered throughout the Simpevarp area and no clear pattern spatial pattern can be identified in Figure 7-25.

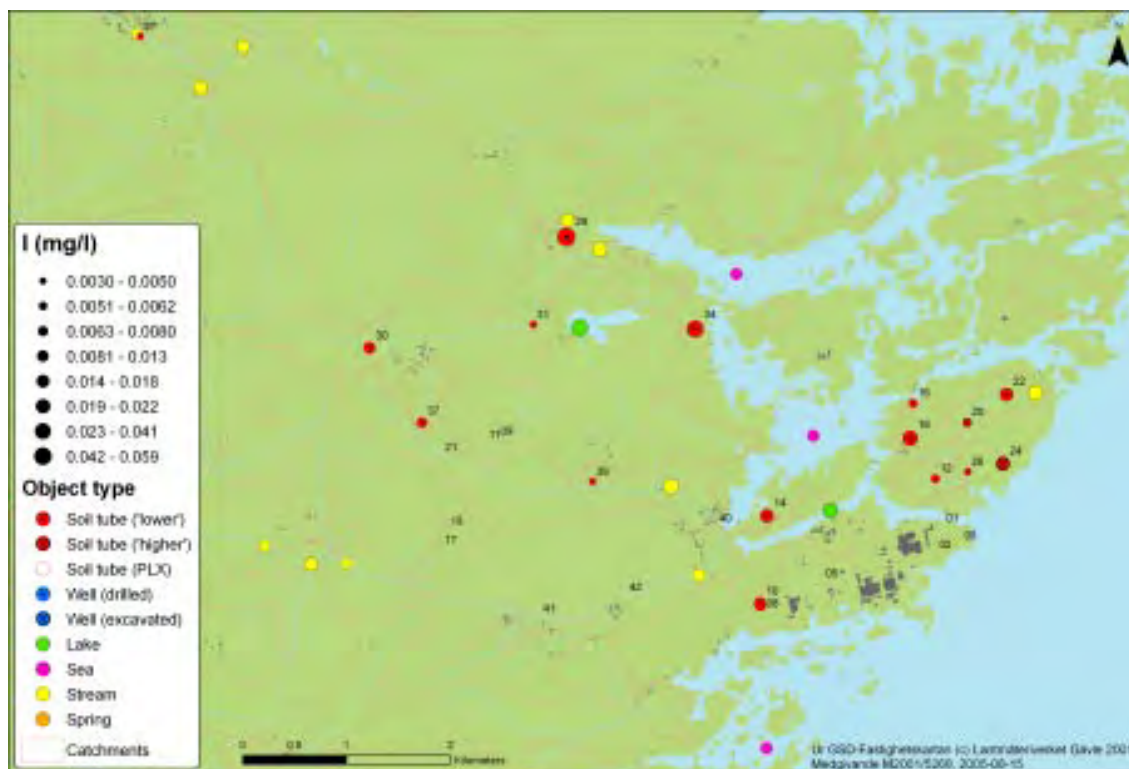
The median iodide concentration in shallow groundwater in the Simpevarp area is approximately in level with that in both streaming water and sea water (0.01–0.02 mg/l). In the few observations from lakes, the iodide concentrations seem to be slightly elevated compared to streaming water. In a single observation from the Forsmark area, the iodide concentration of precipitation is less than 0.001 mg/l.

In a sample of 242 Swedish lakes the iodide concentration was ranging from 0.0002 to 0.0017 mg/l (10- and 90-percentile) /Naturvårdsverket 1999/.





**Figure 7-24.** Iodide concentrations in shallow groundwater in the Simpevarp area. Explanations to the figure are given in Section 4.3.



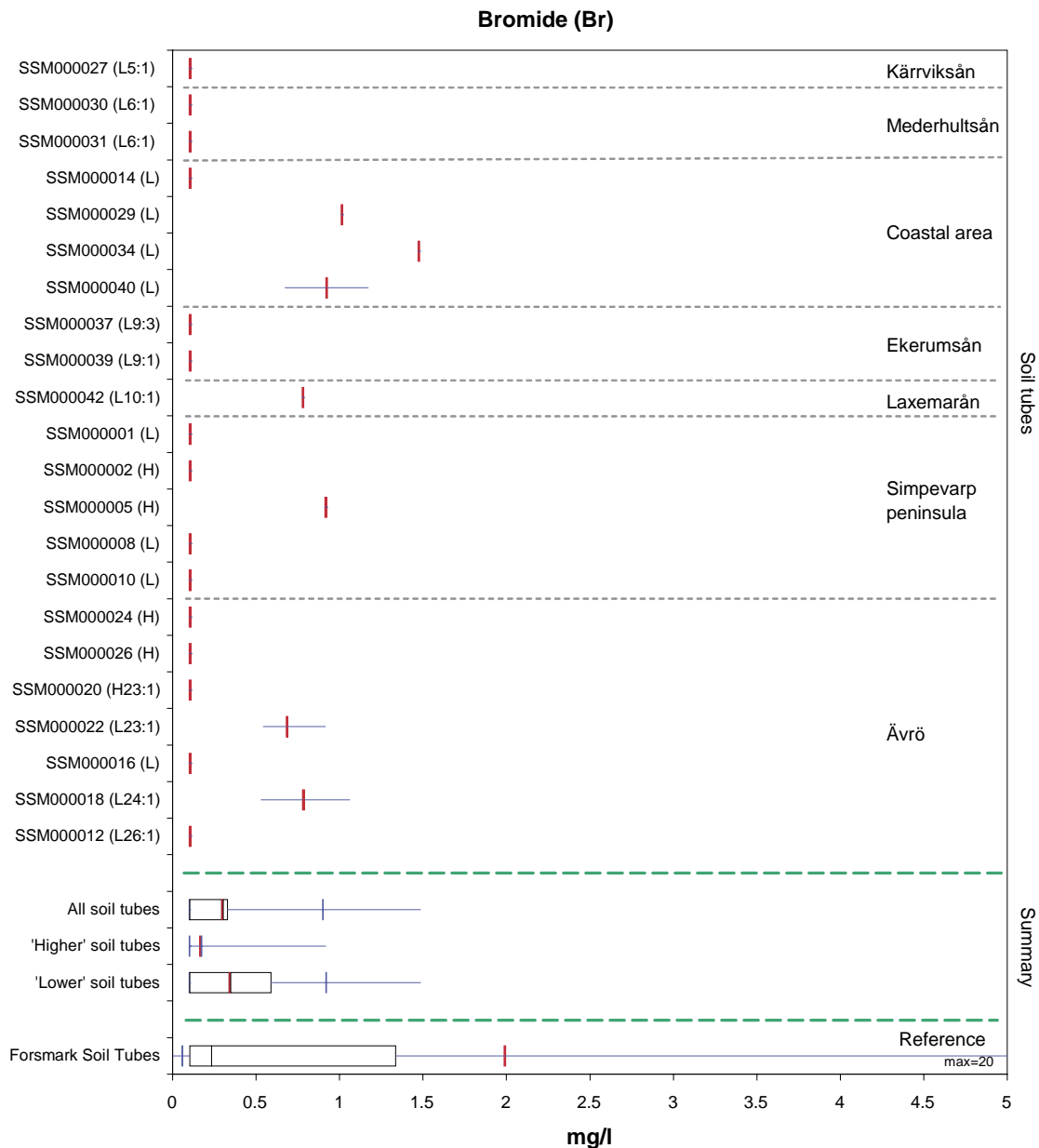
**Figure 7-25.** Iodide concentrations in shallow groundwater and surface water in the Simpevarp area. The dots represent mean values of available data from soil tubes, private wells and surface waters. The figures in black corresponds to the last two digits of the id-codes of the soil tubes.

A typical iodide concentration in shallow groundwater in the Simpevarp area is 0.01 mg/l.

A large portion of the observations on **bromide** in soil tube samples, as well as in surface waters, fall below the reporting limit of 0.2 mg/l. This fact makes the evaluation of bromide less reliable compared to most other ions.

The spatial pattern for bromide is much the same as the pattern seen for chloride, with the exception that SSM000005 shows elevated bromide concentration relative to chloride. (Figure 7-26).

The bromide concentration in precipitation is less than 0.005 mg/l, in most surface waters less than 0.2 mg/l and in sea water about 8 mg/l. In a sample of 242 Swedish lakes the median bromide concentration was 0.007 mg/l /Naturvårdsverket 1999/.

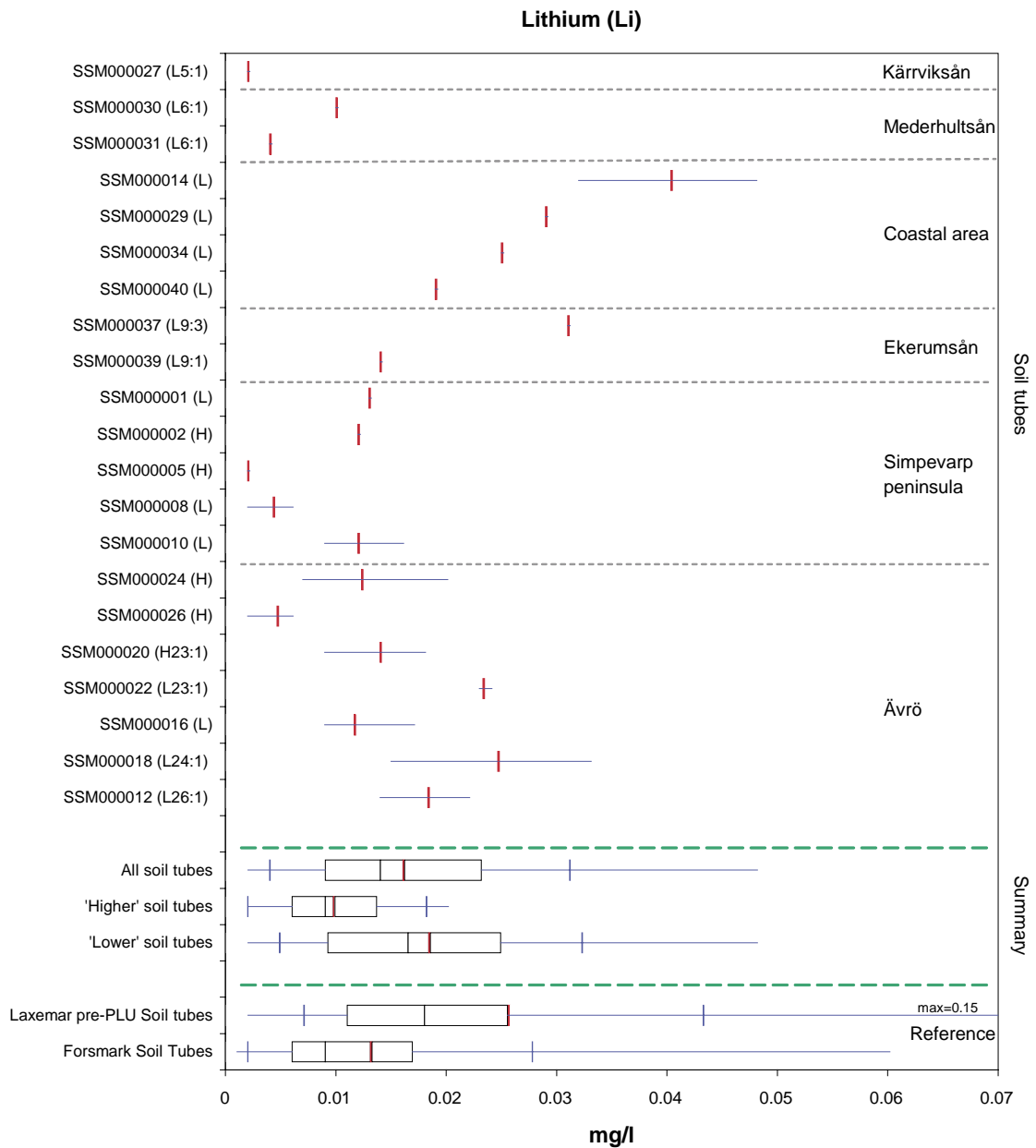


**Figure 7-26.** Bromide concentrations in shallow groundwater in the Simpevarp area. Explanations to the figure are given in Section 4.3.

### 7.3.5 Lithium, strontium and barium

**Lithium** shows a pattern most similar to potassium. A number of soil tubes show elevated concentrations, with the highest concentrations noted in SFM0023 (Figure 7-27).

The median lithium concentration in the soil tubes is at least three times higher than concentrations usually measured in streaming water (Figure 7-28). The lithium content in precipitation, measured at Gårdsjön in western Sweden, is 0.00005 mg/l /Eriksson 2001/. In streams in the Simpevarp area, the lithium concentration is usually less than 0.004 mg/l. The concentration found in sea water is markedly higher, about 0.03 mg/l.

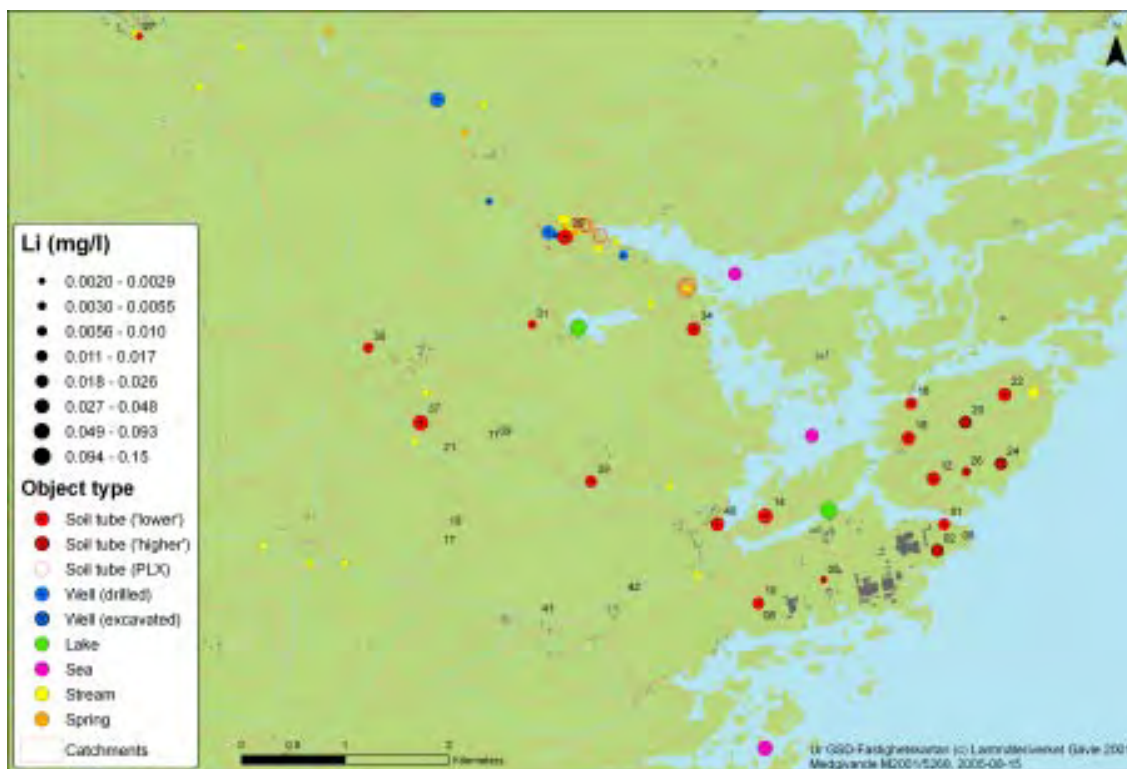


**Figure 7-27.** Lithium concentrations in shallow groundwater in the Simpevarp area. Explanations to the figure are given in Section 4.3.

In a sample of 242 Swedish lakes the lithium concentration was ranging from 0.0001 to 0.0014 mg/l (10- and 90-percentile) /Naturvårdsverket 1999/. Many of the observations of lake and stream water fall below the reporting limit for lithium of 0.004 mg/l.

Typical lithium concentrations in shallow groundwater in the Simpevarp area are 0.01 to 0.02 mg/l.

The **strontium** concentrations in the shallow groundwater in the Simpevarp area range from 0.03 to 0.5 mg/l, with most observations between 0.1 and 0.2 mg/l.



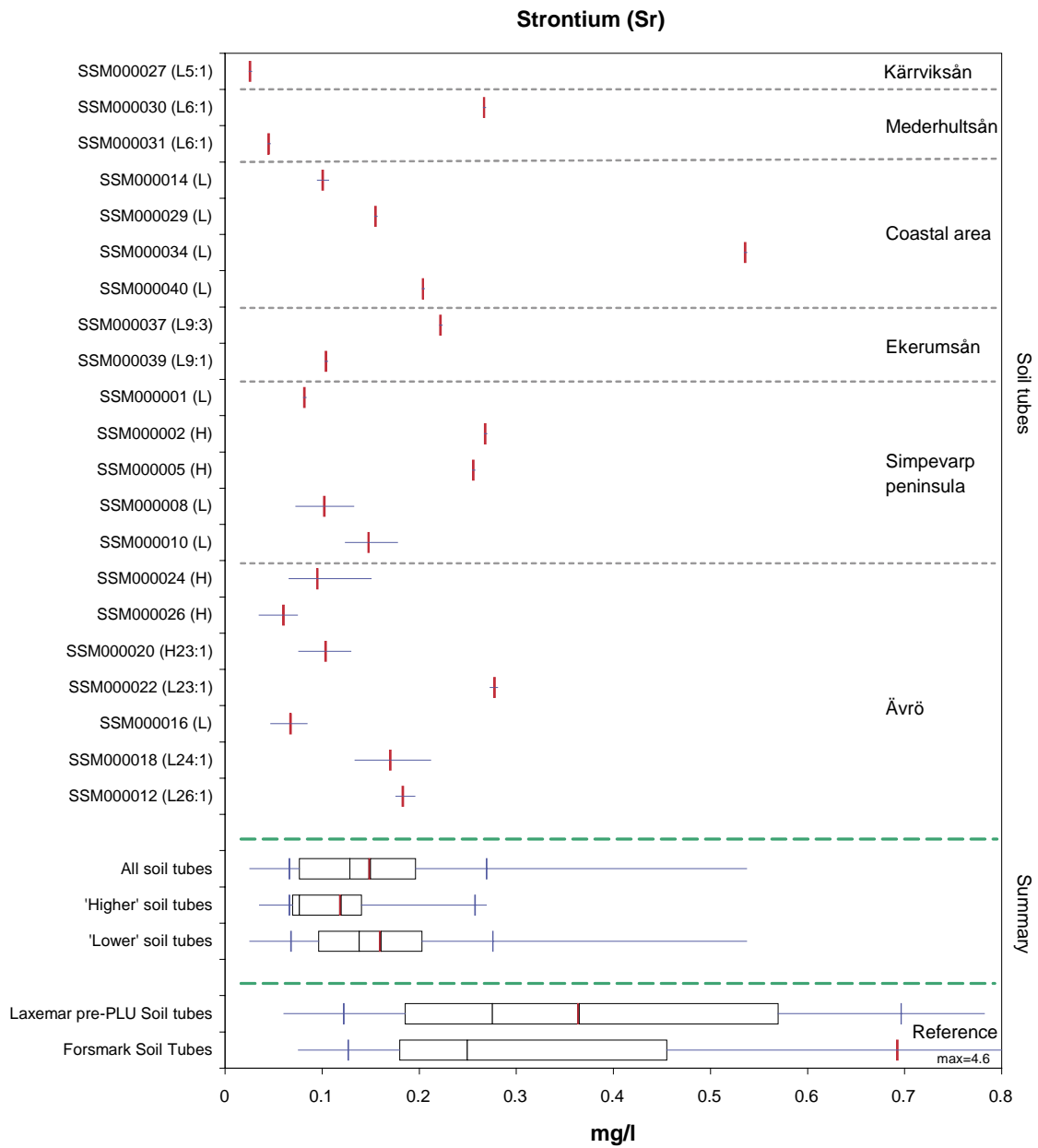
**Figure 7-28.** Lithium concentrations in shallow groundwater and surface water in the Simpevarp area. The dots represent mean values of available data from soil tubes, private wells and surface waters. The figures in black corresponds to the last two digits of the id-codes of the soil tubes.

The highest strontium concentration is found in SSM000034 in the Laxemar subarea, and the lowest value is measured in SFM000027 (Figure 7-29). Strontium shows a spatial pattern very similar to calcium.

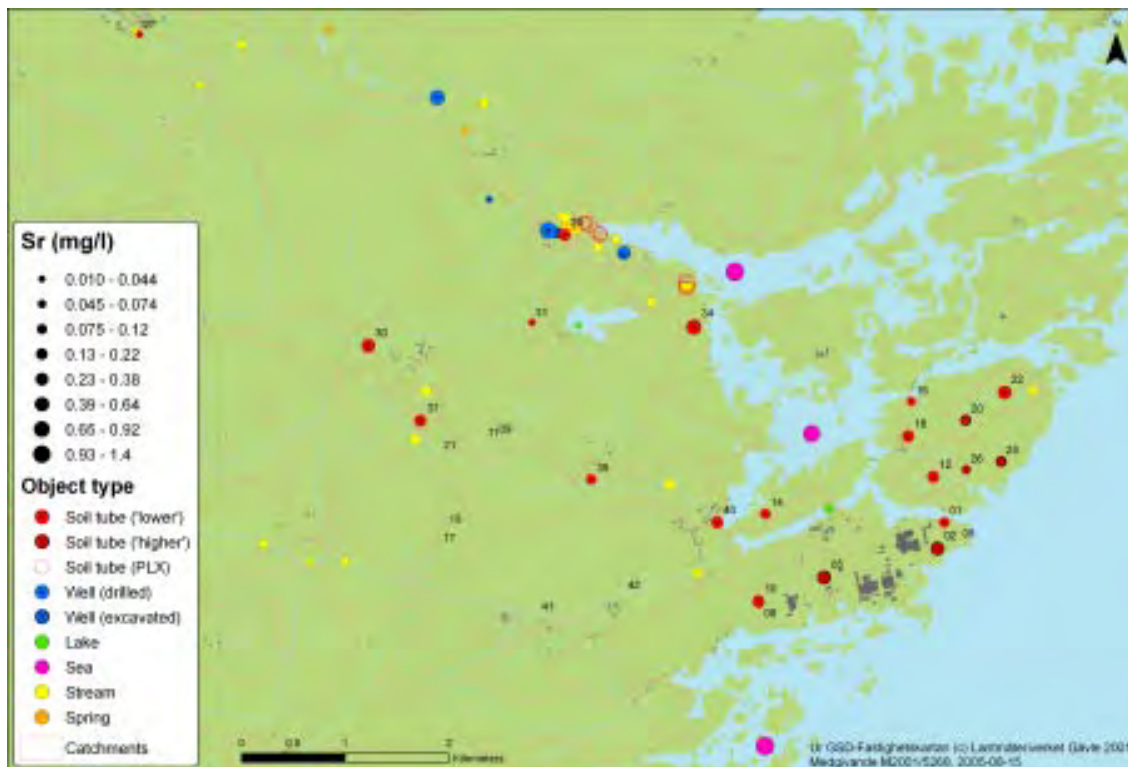
The strontium concentrations in the soil tubes are generally twice the concentrations usually measured in both stream and lake water (Figure 7-30). The strontium content in precipitation, measured at Gårdsjön in western Sweden, is 0.0007 mg/l /Eriksson 2001/. In streams and lakes in the Simpevarp area, strontium concentrations of about 0.05 mg/l are usually observed. The concentrations found in sea water are markedly higher, about 1.4 mg/l.

In a sample of 242 Swedish lakes the strontium concentrations were ranging from 0.004 to 0.041 mg/l (10- and 90-percentile) /Naturvårdsverket 1999/. The median value of the lakes in the Simpevarp area (0.05 mg/l) exceeds the 90-th percentile (0.04 mg/l, indicating that the strontium concentrations in the Simpevarp area are elevated compared to most lakes in Sweden.

A typical strontium concentration in shallow groundwater in the Simpevarp area is 0.1 mg/l.



**Figure 7-29.** Strontium concentrations in shallow groundwater in the Simpevarp area. Explanations to the figure are given in Section 4.3.



**Figure 7-30.** Strontium concentrations in shallow groundwater and surface water in the Simpevarp area. The dots represent mean values of available data from soil tubes, private wells and surface waters. The figures in black corresponds to the last two digits of the id-codes of the soil tubes.

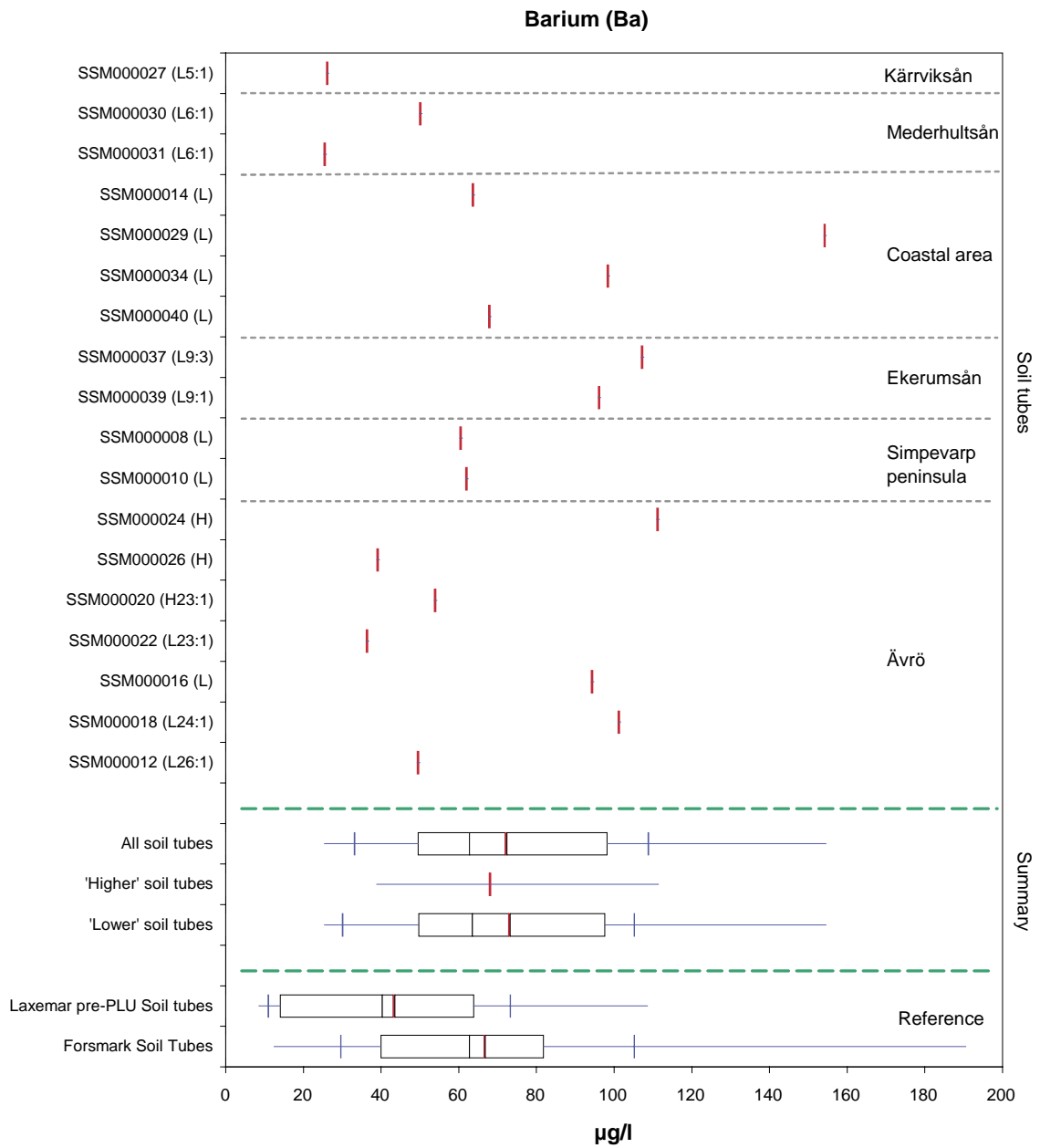
The **barium** concentrations in the shallow groundwater in the Simpevarp area range from 0.02 to 0.15 mg/l. There are no clear spatial patterns for barium, and there is no difference between ‘lower’ and ‘higher’ located soil tubes (Figure 7-31). The highest barium concentration is found in SSM000029 in the Laxemar subarea, whereas the lowest values are noted in SSM000027 and SSM000031 (Figure 7-32). The spatial pattern for barium is most similar to the patterns for iodide and rubidium.

The barium concentrations are generally higher in the shallow groundwater than in lake, stream and sea water (Figure 7-32). The barium content in precipitation, measured at Gårdsjön in western Sweden, is 0.0008 mg/l /Eriksson 2001/. Median barium concentrations in stream, lake and sea water in the Simpevarp area are about 0.01 mg/l.

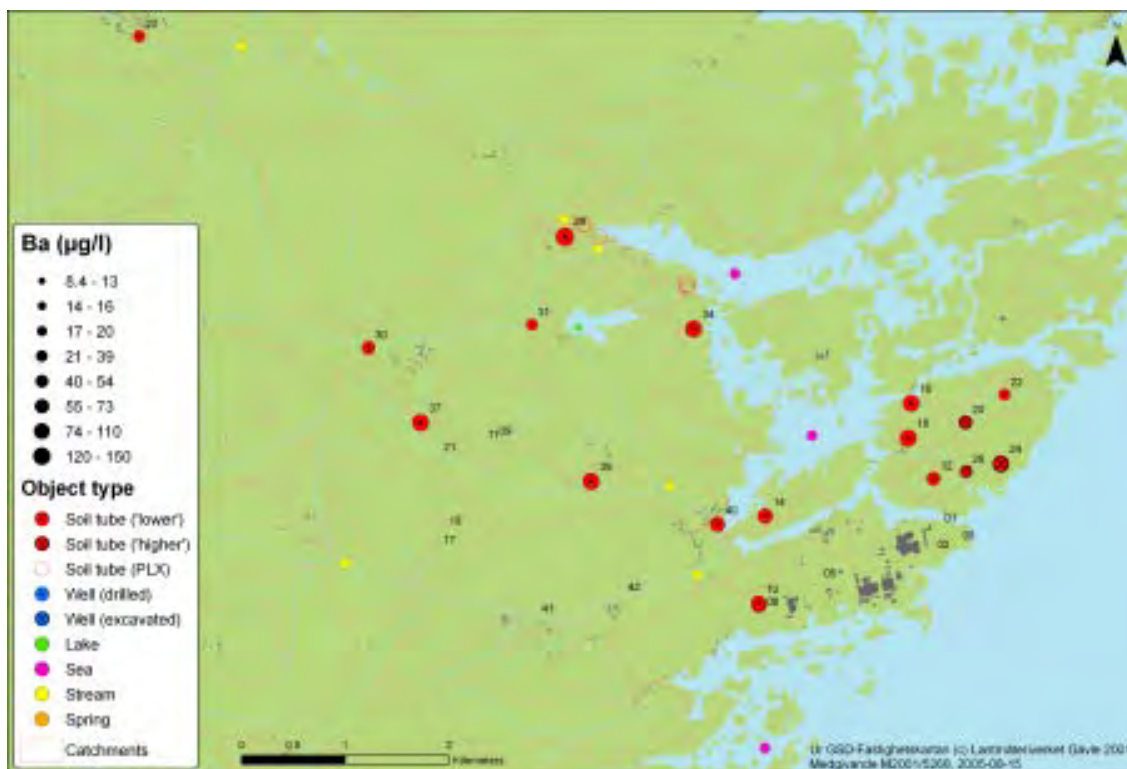
In a sample of 242 Swedish lakes, the barium concentration was ranging from 0.002 to 0.020 mg/l (10- and 90-percentile) /Naturvårdsverket 1999/, indicating that the barium concentrations are rather normal in the Simpevarp area compared to most lakes in Sweden.

A typical barium concentration in shallow groundwater in the Simpevarp area is 0.06 mg/l.





**Figure 7-31.** Barium concentrations in shallow groundwater in the Simpevarp area. Note that barium concentrations are expressed in  $\mu\text{g/l}$  in contrast to the preceding ions. Explanations to the figure are given in Section 4.3.



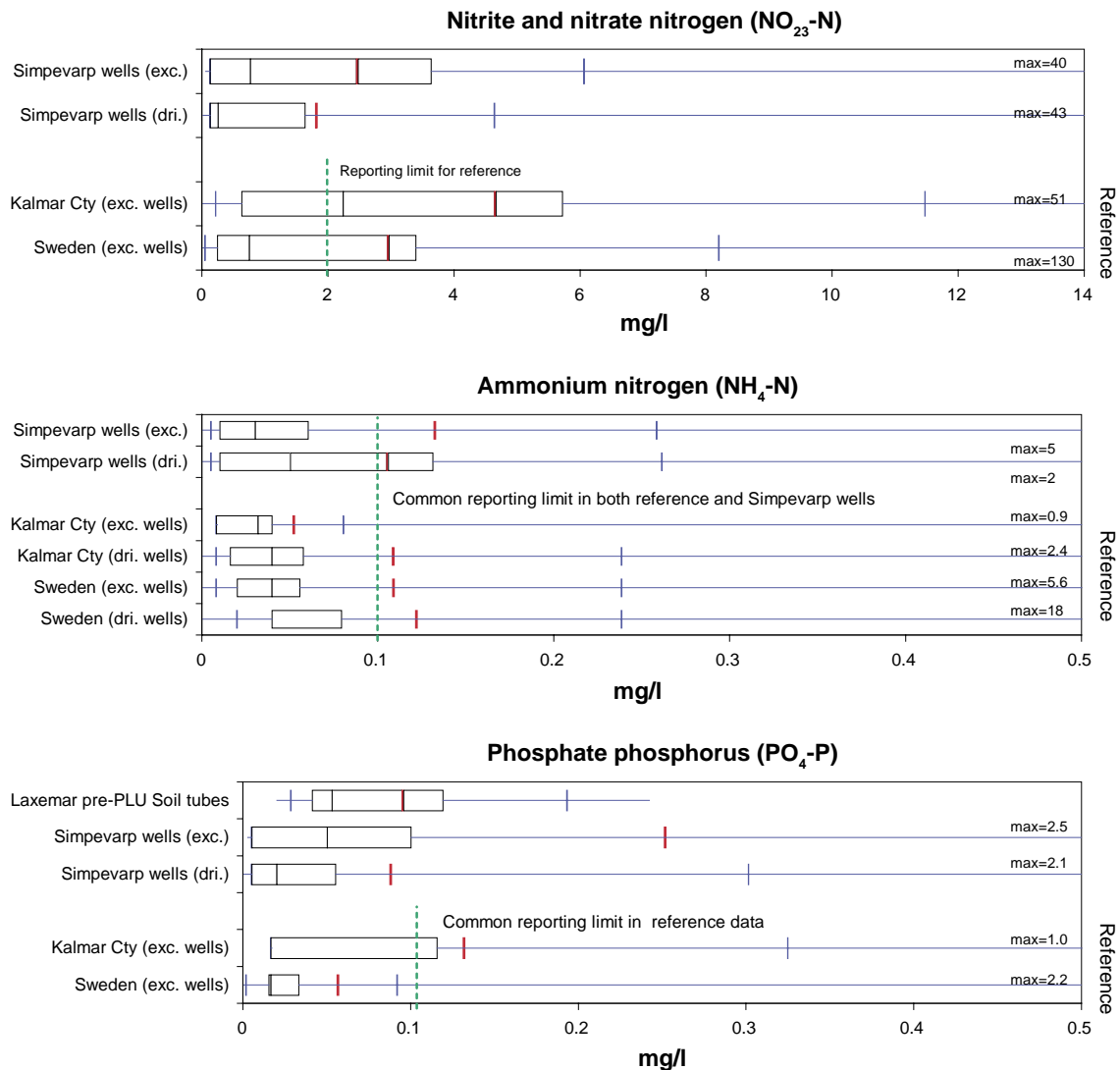
*Figure 7-32. Barium concentrations in shallow groundwater and surface water in the Simpevarp area. The dots represent mean values of available data from soil tubes, private wells and surface waters. The figures in black corresponds to the last two digits of the id-codes of the soil tubes.*

## 7.4 Nitrogen and phosphorus

At the time for data delivery in May 2005, there were no quality controlled data for carbon, nitrogen and phosphorus species from soil tubes in the Simpevarp area available in the SICADA database. These elements, which in fact were measured in September 2004, will be included in the sampling programme from the end of 2005. To give a conception of the levels of nitrogen and phosphorus in the area, nitrate, ammonium and phosphate data from private wells are compiled in this section.

In Figure 7-33 the distributions are shown for nitrate, ammonium and phosphate for excavated and drilled private wells in the Simpevarp area. Any comparisons with reference data from the survey of Swedish wells are difficult, since a significant fraction of both the Simpevarp and the reference data falls below reporting limits.

The nitrogen concentrations measured as *nitrate and nitrite* are in level with, or slightly lower than the nitrate concentrations measured in most private wells of Sweden. Due to the reporting limit of 2 mg/l in the reference data, comparisons are difficult and no definitive conclusions can be drawn. Most excavated wells show nitrate and nitrite concentrations of about 1 mg N/l. There are, however, observations up to 40 mg N/l in some of the Simpevarp wells. When comparing excavated and drilled wells, the nitrogen concentrations are slightly higher in excavated wells.



**Figure 7-33.** The distributions of nitrate and nitrite nitrogen (upper), ammonium nitrogen (middle) and phosphate phosphorus (lower) in private wells in the Simpevarp area. A substantial fraction of both reference and Simpevarp data falls below the reporting limit, making comparisons less reliable. The highest reporting limits are marked by a green dashed line. The reference for nitrate and nitrite includes only the nitrate fraction. Nitrite usually constitutes a minor fraction compared to nitrate.

The **ammonium** concentrations are even more difficult to evaluate as a substantial fraction of both Simpevarp data and reference data falls below the reporting limit. The ammonium concentrations are usually less than 0.1 mg N/l in the Simpevarp area. There are, however, observations up to 5 mg N/l in some wells.

The phosphorus concentrations in the Simpevarp area, measured as *phosphate phosphorus*, are in level with the phosphate concentrations measured in most private wells of Sweden. Due to the reporting limit of 0.1 mg/l in the reference data, comparisons are rather complicated and no precise comparisons should be made. The median values of private wells and the Laxermar pre-PLU soil tubes, show phosphate concentrations of about 0.05 mg P/l. There are however observations up to more than 2 mg P/l in some wells. When comparing excavated and drilled wells, the phosphate concentrations are slightly higher in excavated wells.

When the nitrogen and phosphorus levels in the surface waters are compared to Swedish lakes and streams, both elements seem to be slightly elevated in the Simpevarp area, contrary to the conclusions for shallow groundwater (Table 7-3).

**Table 7-3. Median concentrations of nitrate and nitrite, ammonium and phosphate in precipitation, shallow groundwater, streaming water, lake water and sea water in the Simpevarp area. Figures in brackets are median values of Swedish lakes and streams. Total concentrations of nitrogen and phosphorus are included for comparison.**

	Shallow groundwater	Precipitation	Streaming water	Lake water	Sea water
Total-N	–	–	1.2 (0.5)	1 (0.4)	0.4
NO <sub>23</sub> -N	1	0.3 (a)	0.2 (0.07)	0.1 (0.03)	0.005
NH <sub>4</sub> -N	0.1	0.3 (a)	0.06 (0.02)	0.02 (0.02)	0.004
Total-P	–	–	0.04 (0.02)	0.02 (0.01)	0.02
PO <sub>4</sub> -P	0.05	–	0.006	0.0008	0.006

a) Median value from the national monitoring station Norra Kvill in Vimmerby, IVL:261 /IVL 2005/.

## 7.5 Iron, manganese and redox potential

In this section some parameters important for the determination of the redox conditions are summarised. No calculations based on redox pairs are performed, but a simplified classification based on iron, manganese and sulphate content is presented.

### 7.5.1 Redox potential – overview

In Table 7-4 a selection of parameters important for evaluating the redox potential are summarised. The coarse classification of redox potential, shown in the rightmost column, is based on the total contents of iron, manganese and sulphate; the higher redox class (1–4), the lower redox potential. The classification scheme used is presented in the Swedish Environmental Quality criteria for groundwater /Naturvårdsverket 1999b/.

All soil tubes in Table 7-4 are classified as redox class 3 or 4, corresponding to ‘low’ redox potential (note – high EQC redox class). Furthermore, in almost all soil tubes the fraction of Fe<sup>2+</sup> of total iron is substantial, indicating low redox potentials.

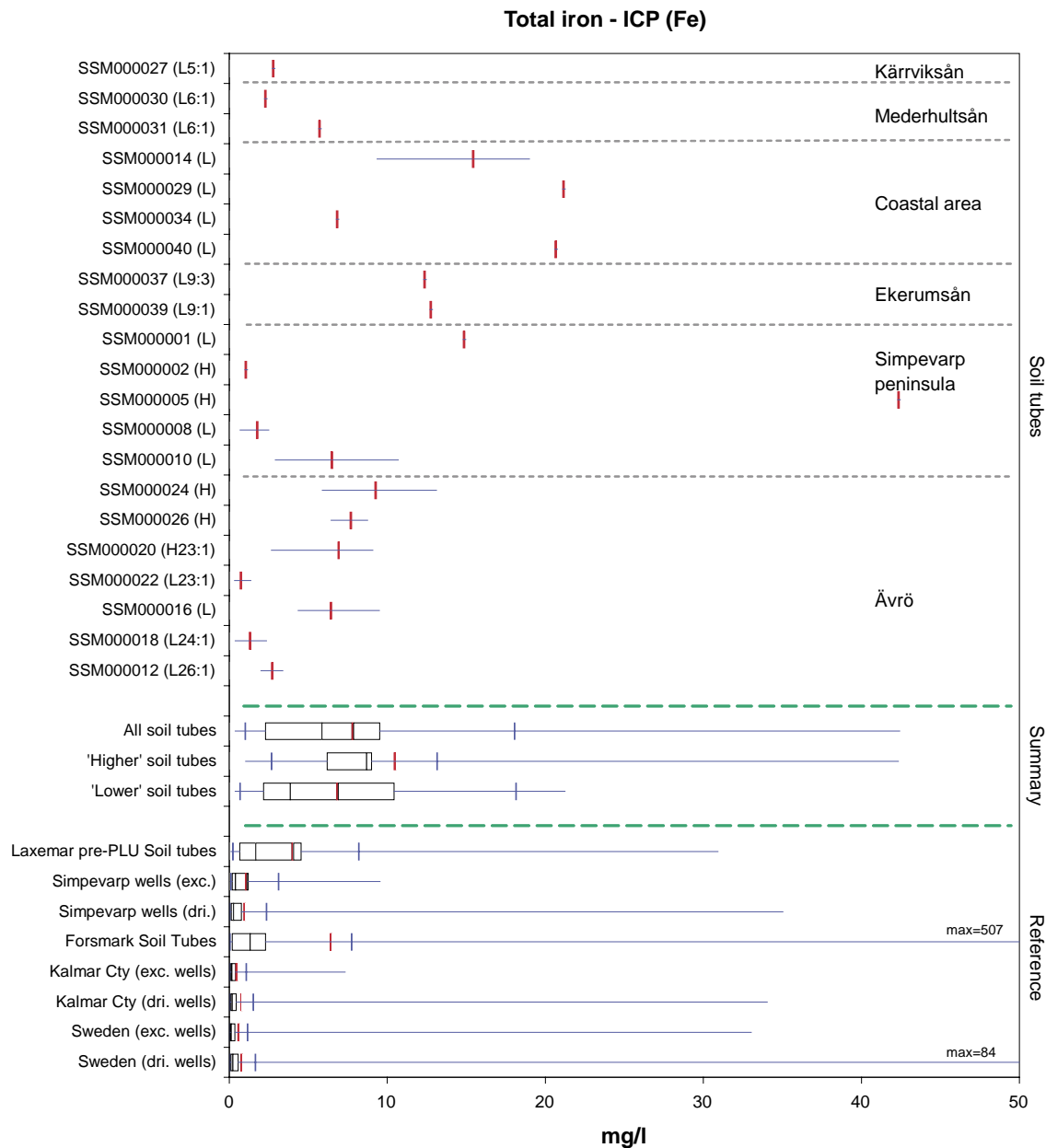
**Table 7-4. Median values (mg/l) for a number of parameters coupled to redox potential in shallow groundwater in the Simpevarp area. Redox potential class according to the Swedish EQC of groundwater /Naturvårdsverket 1999b/. Class 1 = high redox potential. Class 4 =very low redox potential.**

Idcode	Catchment		Iron tot-Fe	Iron Fe <sup>2+</sup>	Manganese tot-Mn	Sulphate SO <sub>4</sub>	Hydrogen sulphide as S <sup>2-</sup>	Sw EQC Redox class	
SSM000001	Simpevarp Peninsula		L	15	0.80	4.1		4	
SSM000002	Simpevarp Peninsula		H	0.99	0.34	13		3	
SSM000005	Simpevarp Peninsula		H	42	6.1	4.5		4	
SSM000008	Simpevarp Peninsula		L	2.1	0.70	0.22	8.5	0.0045	3
SSM000010	Simpevarp Peninsula		L	5.8	1.3	0.64	22	0.0050	3
SSM000012	Skölkebäcken	26:1	L	2.7	2.4	0.52	68	0.014	3
SSM000014	Coastal area		L	18	5.7	0.75	61	0.0055	3
SSM000016	Ävrö		L	5.4	2.4	0.094	18	0.0040	3
SSM000018	Lindströmmebäcken	24:1	L	1.2	0.27	0.49	100	0.0095	3
SSM000020	Vadevikebäcken	23:1	H	9.0	1.7	0.39	51	0.0065	3
SSM000022	Vadevikebäcken	23:1	L	0.46	0.19	0.097	130	0.039	3
SSM000024	Ävrö		H	8.7	2.2	0.33	11	0.016	3
SSM000026	Ävrö		H	7.8	5.2	0.56	18	0.012	3
SSM000027	Kärrviksån	5:1	L	2.7	2.5	0.16	21	0.0030	3
SSM000029	Coastal area		L	21	8.4	0.38	22	0.015	3
SSM000030	Mederhultsån	6:1	L	2.2	1.8	0.60	46	0.011	3
SSM000031	Mederhultsån	6:1	L	5.7	5.3	0.17	11	0.0070	3
SSM000034	Coastal area		L	6.8	6.9	1.3	< 0.2	0.036	4
SSM000037	Ekerumsån	9:3	L	12	4.9	0.94	24		3
SSM000039	Ekerumsån	9:1	L	13	1.5	0.53	16	0.0070	3
SSM000040	Coastal area		L	21		0.40	13		3
SSM000042	Laxemarån	10:1	L				91		
	'Soil tubes at Higher' levels		H	8.7	2.5	0.39	18	0.008	
	Soil tubes at 'Lower' levels		L	3.8	1.8	0.51	24	0.007	
	All soil tubes			5.8	1.9	0.49	22	0.007	

## 7.5.2 Iron and manganese

The *iron* concentrations in soil tubes in the Simpevarp area range from 0.3 to 40 mg/l. Compared to private wells, both in the Simpevarp area as well as in the Kalmar county and the whole Sweden, the concentrations measured in some soil tubes are substantially elevated. When the private wells in the Simpevarp area are compared to the Swedish wells, the iron concentrations in the area seem to be only slightly elevated.

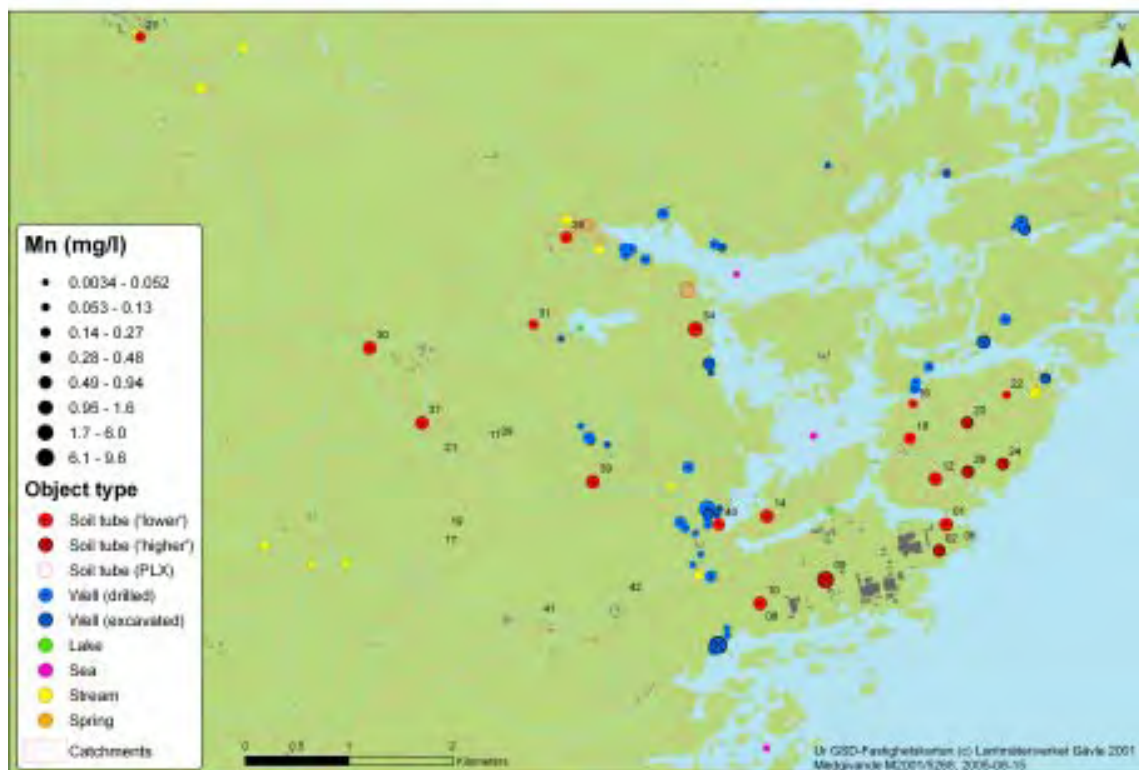
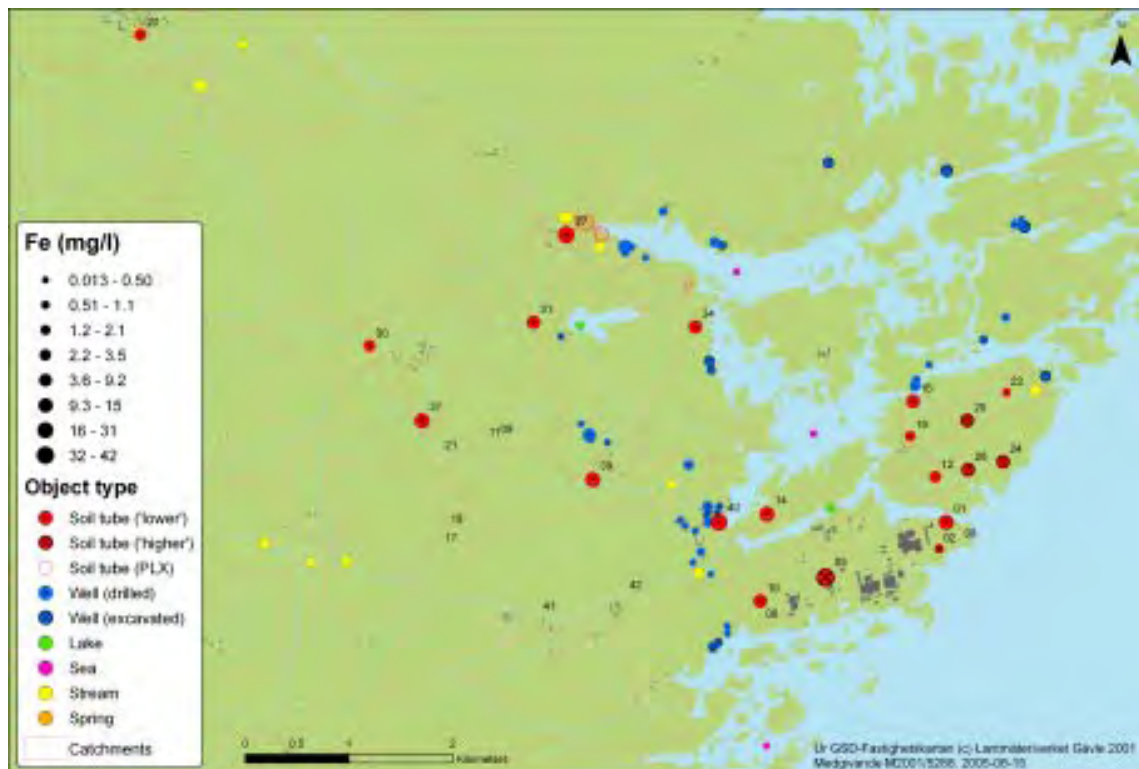
Seven soil tubes, predominantly at 'lower' locations, show low iron levels of about 1 mg/l (e.g. SSM000002, SSM000008, SSM000022 and SSM000018). SSM000005 shows markedly elevated iron concentration, and this soil tube, located close to the nuclear power plant with artificial fillings in the vicinity, deviates also by showing high fluoride, calcium and bicarbonate concentrations (Figure 7-34).



**Figure 7-34.** Concentration of total iron (ICP) in shallow groundwater in the Simpevarp area. Explanations to the figure are given in Section 4.3.

Generally, the iron concentration is often higher in shallow groundwater than in both stream and lake water. The iron concentration in precipitation in the Simpevarp area is about 0.02 mg/l. In streams and lakes, median concentrations are usually around 1 mg/l, compared to 0.2 mg/l in the rest of Sweden. The median concentration in sea water is less than 0.1 mg/l (Figure 7-35).

Typical iron concentrations in shallow groundwater in the Simpevarp area range from 1–10 mg/l.



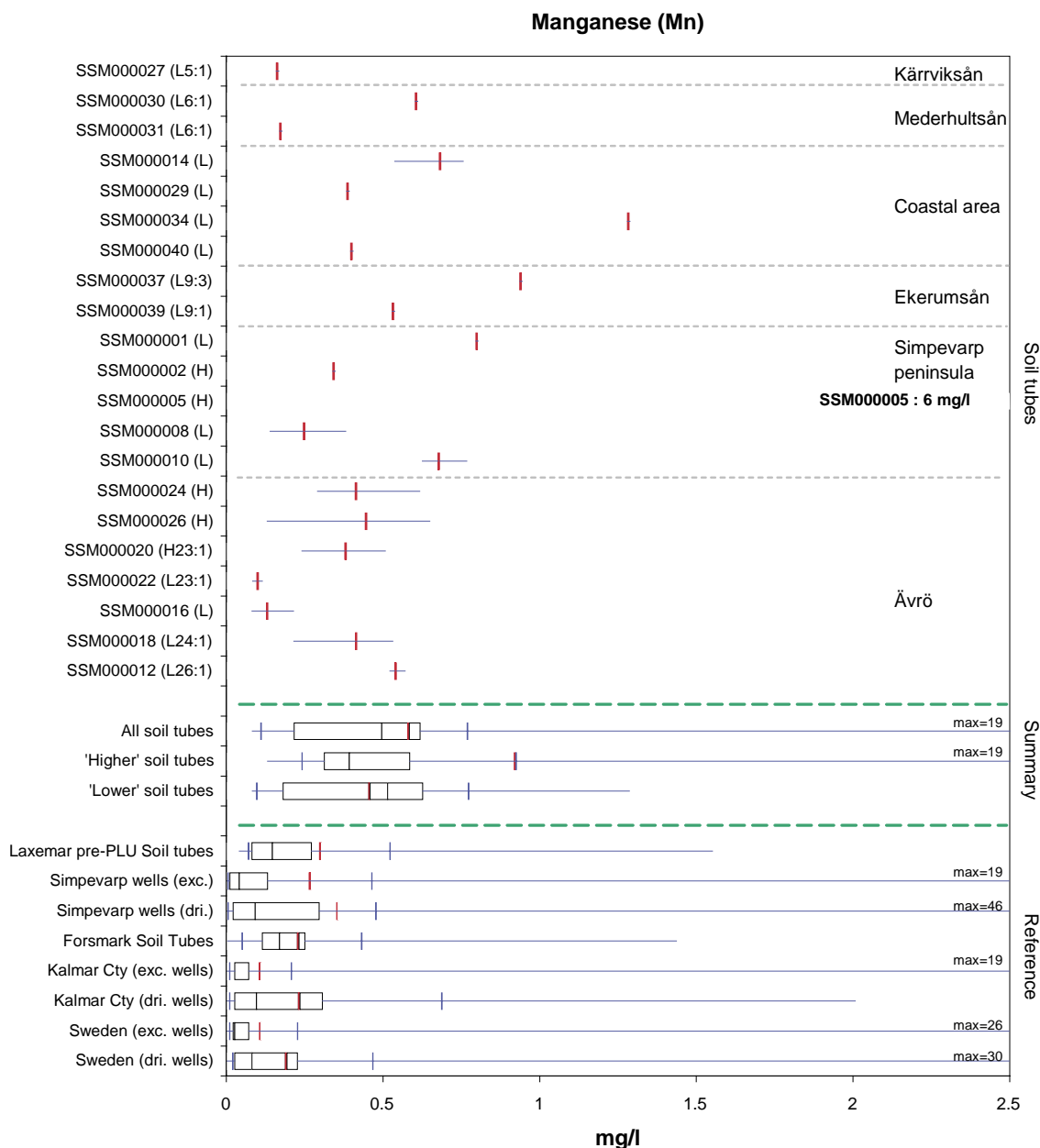
*Figure 7-35. Concentrations of total iron (upper) and manganese (lower) in shallow groundwater and surface water in the Simpevarp area. The dots represent mean values of available data from soil tubes, private wells and surface waters. The figures in black corresponds to the last two digits of the id-codes of the soil tubes.*



The spatial pattern of *manganese* is very similar to that of iron. As for iron, one of the lowest observations was made in SSM000022 at the Island of Ävrö (Figure 7-36). Especially high manganese content, 6 mg/l, was observed in SSM000005 near the power plant.

The manganese concentration in precipitation in the Simpevarp area is about 0.01 mg/l. In streams and lakes, median concentrations are usually around 0.05 mg/l, compared to 0.02 mg/l in the rest of Sweden. Both iron and manganese concentrations in the Simpevarp area are clearly elevated, compared to the median values of non-disturbed shallow groundwater in Sweden /Naturvårdsverket 1995/. These median values are 0.025 and 0.005 mg/l for iron and manganese, respectively, compared to 1–10 mg/l and 0.1–1 mg/l in the soil tubes of the Simpevarp area.

Typical manganese concentrations in shallow groundwater in the Simpevarp area range from 0.1 to 1 mg/l.

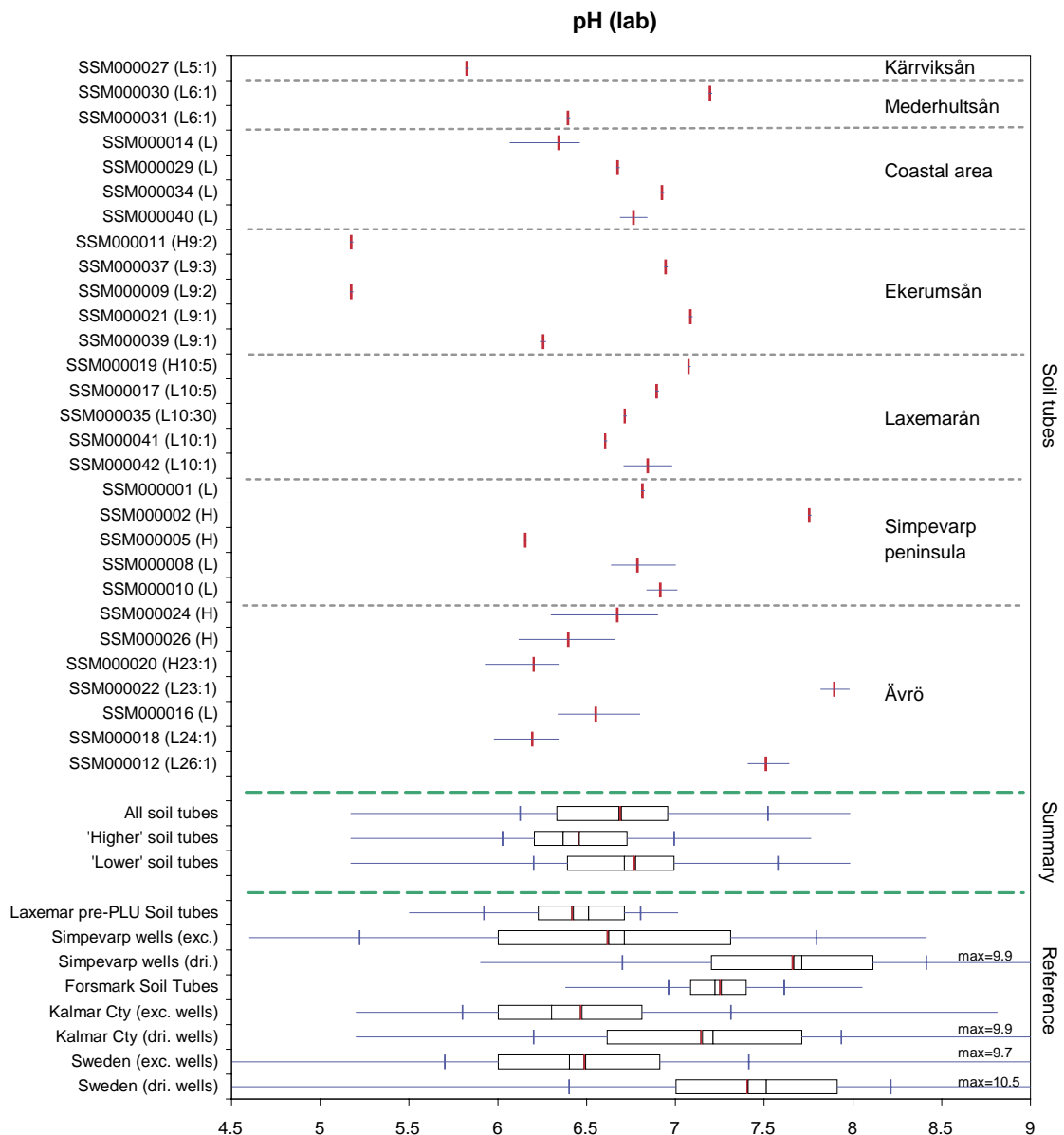


**Figure 7-36.** Concentration of manganese in shallow groundwater in the Simpevarp area. Explanations to the figure are given in Section 4.3.

## 7.6 Alkalinity and pH

The shallow groundwater in the Simpevarp area is characterised by slightly acid pH values, where the major part of the observations range from pH 6 to pH 7. Most measurements of alkalinity is classified as 'high' or 'very high' according to the Swedish Environmental Quality Criteria /Naturvårdsverket 1999b/. There are however a few soil tubes where the pH-values are lower than 6 and the alkalinity are 'low' or even 'very low' according to the EQC, indicating a low buffering capacity at some locations.

The pH-levels and alkalinity in private wells in the Simpevarp area are quite normal compared to wells of Kalmar County and Sweden. Drilled wells show considerably higher values of both pH and alkalinity than excavated wells (Figure 7-37).



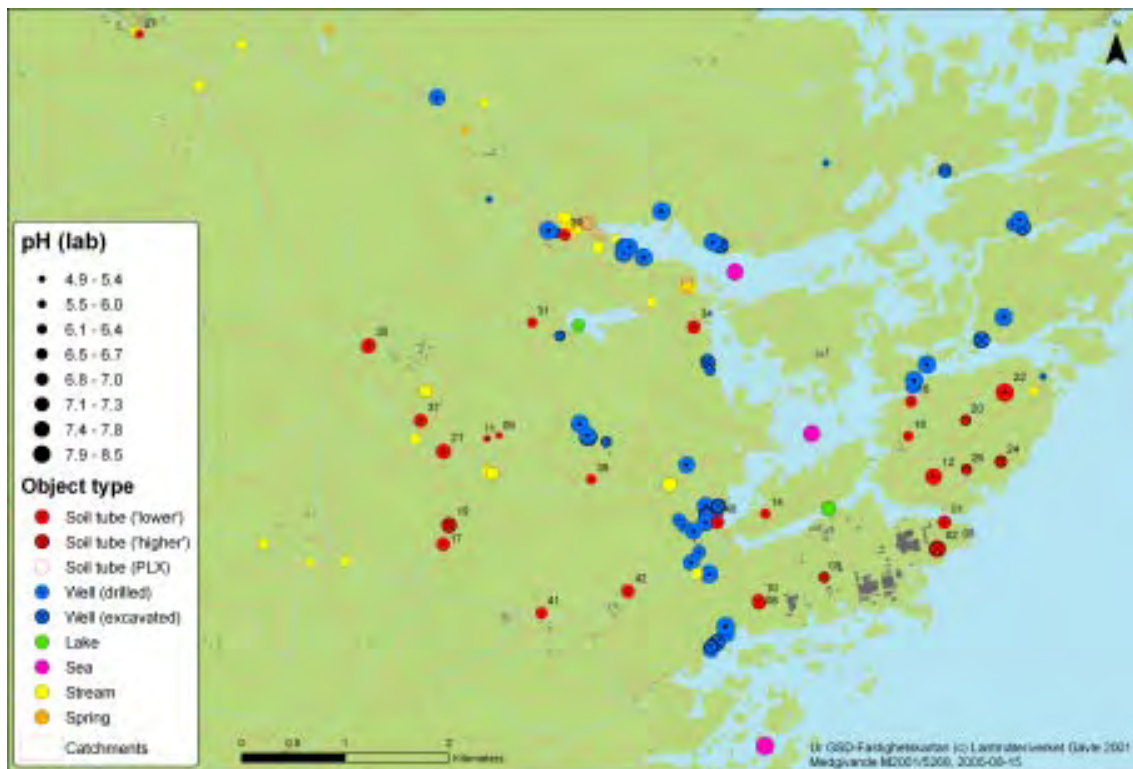
**Figure 7-37.** pH in shallow groundwater in the Simpevarp area. Explanations to the figure are given in Section 4.3.

The median pH of shallow groundwater in the Simpevarp area is in level with the median values observed in streaming waters. There is, however, a great pH variation among streaming waters, with values ranging from 5.5 to 7.4. The lowest pH-values are measured in the streams of the western, inland part of the Simpevarp area. The pH in precipitation in the Simpevarp area is about 4.9. In streams, pH values are usually about 6.4, compared to 6.8 in the rest of Sweden (Figure 7-38).

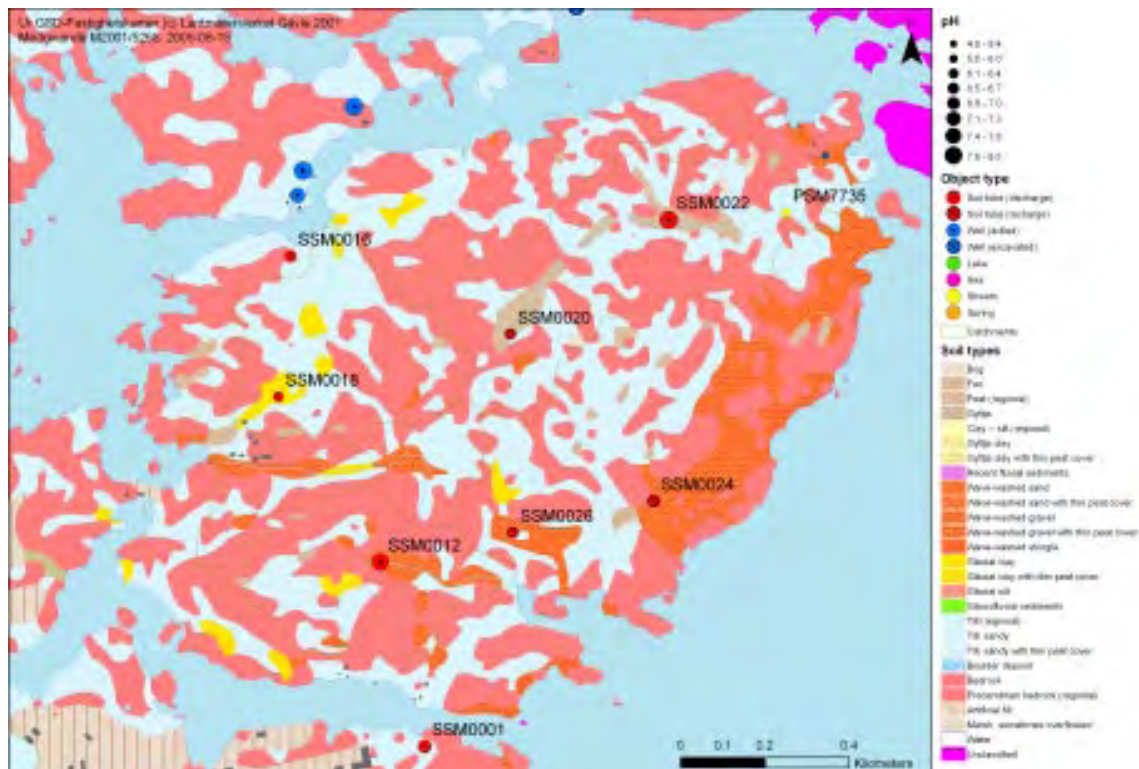
Especially low pH-values and low alkalinity are observed in SSM000009 and SSM000011. These soil tubes are located in a small, topographical high catchment, where exposed bedrock and gyttja clay covered with peat dominates the overburden. The pH-values in these soil tubes are close to 5 and the alkalinity close to zero, indicating far gone acidification or presence of fresh groundwater very close to precipitation.

The highest pH-values are found in SSM000002 near the nuclear power plant, and in SSM000012 and SSM000022 at the Island of Ävrö. The latter soil tube show deviating characteristics with respect to many parameters. SSM000022 is situated in a small catchment dominated by bare bedrock on the topographical heights and by till in the lower areas. The upstream located soil tube, SSM000020, as well as the streaming water sampling site (PSM107735) at the outlet of the catchment of Vadevikebäcken, show markedly lower pH than SSM000022 (Figure 7-39).

A typical pH value in shallow groundwater in the Simpevarp area is 6.7.



**Figure 7-38.** pH in shallow groundwater and surface water in the Simpevarp area. The dots represent mean values of available data from soil tubes, private wells and surface waters. The figures in black corresponds to the last two digits of the id-codes of the soil tubes.



**Figure 7-39.** Median pH in shallow groundwater and surface water at the Island of Ävrö, on a detailed map of the overburden. Groundwater from the soil tube SSM000022 shows deviating chemical composition with respect to several parameters.

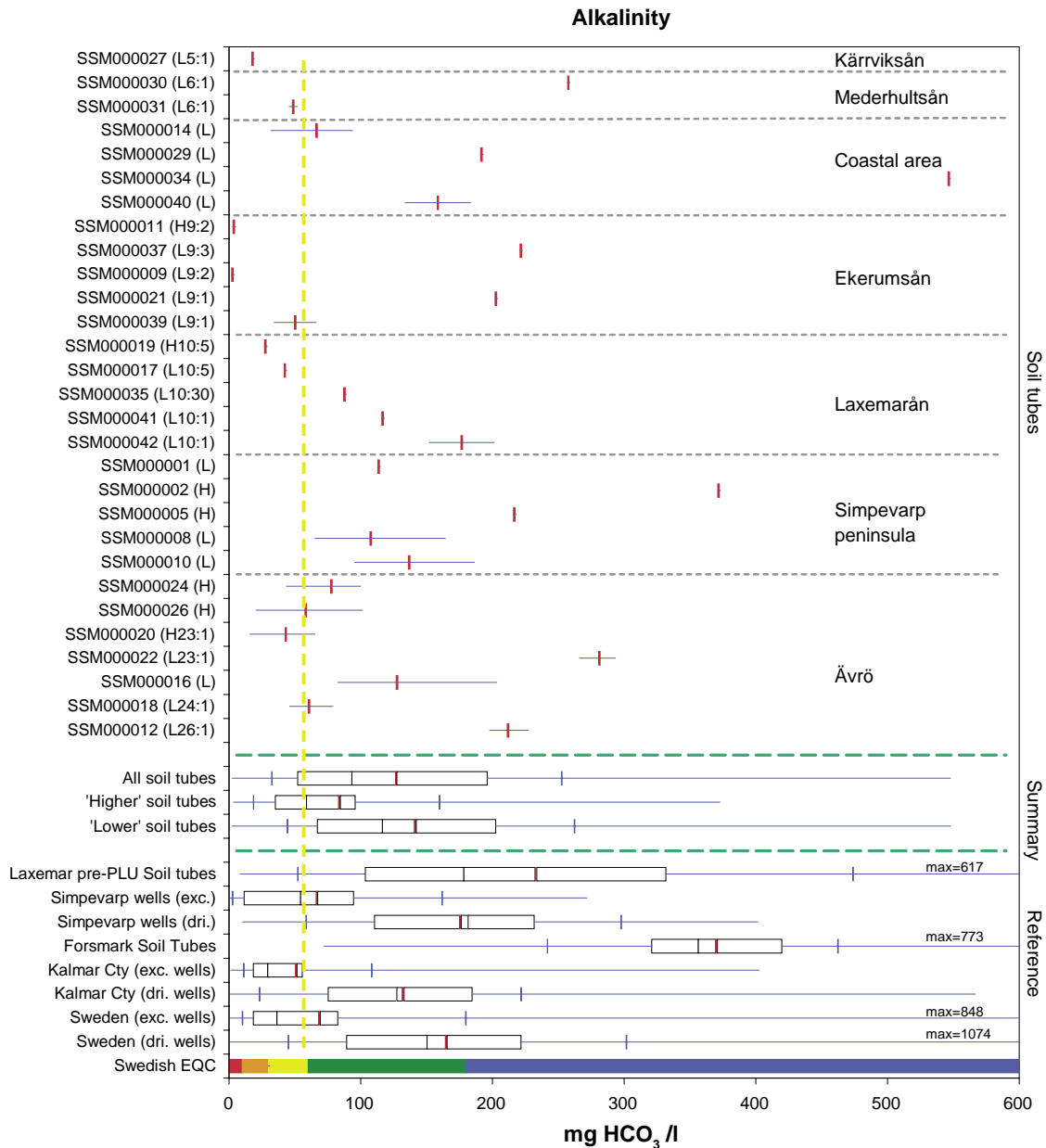
In Figure 7-40 the alkalinity in the Simpevarp area is shown for soil tubes, private wells and reference waters, and alkalinity is also classified according to the Swedish Environmental Quality criteria /Naturvårdsverket 2000/. The coloured scale displays the five classes of the Swedish environmental quality criteria, representing the range from ‘very low’ (class 5) alkalinity in the red end and ‘very high’ (class 1) alkalinity in the blue end. The dashed yellow line marks the boundary between class 2 and 3. Above this line (class 1 and 2) the buffering capacity is considered to withstand acidification.

According to the Swedish environmental quality criteria, most of the soil tubes in the Simpevarp area show ‘high’ or ‘very high’ alkalinity indicating enough buffering capacity to withstand acidification. There are, however, exceptions where the alkalinity is markedly lower. In the previously described SSM000009 and SSM000011 the alkalinity is almost depleted and the bicarbonate levels are comparable to precipitation (< 0.2 mg HCO<sub>3</sub>/l). Very shallow groundwater, in combination with thin or absent overburden in most of the Simpevarp area, may partly explain the low levels observed.

The highest alkalinity levels are observed predominantly in ‘lower’ located soil tubes. Exceptions are the ‘higher’ located soil tubes SSM000002 and SSM000005, situated near the power plant at the Simpevarp Peninsula. The highest alkalinity is observed in SSM000034 near the coast in the Laxemar subarea. This soil tube also show especially high content of magnesium and calcium, together with a low content of sulphate.

The alkalinity (bicarbonate) is generally higher in shallow groundwater than in both fresh surface water and sea water (Figure 7-21). In streams, concentrations of about 18 mg/l are usually measured, compared to 12 mg/l in the rest of Sweden. The concentrations found in sea water are considerably higher, about 89 mg/l.

A typical value of the alkalinity in shallow groundwater in the Simpevarp area is 100 mg HCO<sub>3</sub>/l (1.6 mekv/l).



**Figure 7-40.** Alkalinity in shallow groundwater in the Simpevarp area. The coloured scale displays the five classes of the Swedish environmental quality criteria, representing the range from 'very low' (class 5) alkalinity in the red end and 'very high' (class 1) alkalinity in the blue end. The dashed yellow line marks the boundary between class 2 and 3. Above this line (class 1 and 2) the buffering capacity is considered to withstand acidification. Explanations to the figure are given in Section 4.3.

## 7.7 Trace elements

In this section the abundance of 30 trace elements in shallow groundwater are compiled. Comparisons are made to other regions, as well as to surface water and precipitation. A few selected elements are described in more detail by box-plots showing statistical distributions, and in maps showing spatial patterns.

For some of the trace elements a significant portion of the observations falls below the reporting limit of the analysis method. This is particularly the case for mercury, indium and hafnium, making the conclusions more uncertain for these elements.

### 7.7.1 Overview of trace elements

In Table 7-5, median values in Simpevarp soil tubes are compared to concentrations observed in lakes, streams, sea water and precipitation. Iodine, lithium, strontium and barium are also described in previous sections, together with major constituents, iron and manganese. In Appendix 2, detailed statistics per element are presented for individual soil tubes, as well as for different categories.

The concentrations differ among the trace elements by several orders of magnitude. The highest concentrations are found for strontium, barium, cerium, lanthanum, neodymium, lithium, ytterbium and rubidium. The lowest are found for mercury, indium, hafnium and thallium.

When comparing the concentrations of trace elements observed in the soil tubes in Simpevarp with available reference data, the following conclusions can be drawn:

- The Rare Earth Elements (REE) are generally elevated ten times in the Simpevarp area, compared to the levels measured in the Forsmark area. When the concentrations in streaming water in the Simpevarp area are compared with REE levels in Swedish lakes, the concentrations are also ten times higher in the streams. In Lake Frisksjön, the only lake where REE:s have been analysed so far, the difference is not that accentuated compared to the Swedish lakes.
- There are tendencies for slightly elevated arsenic concentrations in shallow groundwater in the Simpevarp area.
- The vanadium concentrations in shallow groundwater in the Simpevarp area are elevated ten times compared to shallow groundwater in the Forsmark area. A similar pattern is seen when the surface waters in the Simpevarp area are compared to the vanadium concentrations in 781 Swedish lakes. Other metals, e.g. chromium, copper, molybdenum and nickel, also show elevated concentrations when fresh surface waters in the area are compared to most Swedish lakes.
- Rubidium show elevated concentrations in shallow groundwater in the Simpevarp area compared with the Forsmark area. Comparisons between surface waters in the Simpevarp area and most Swedish lakes show a similar difference.
- Zirconium show a pattern similar to rubidium, with slightly higher levels compared to the Forsmark area. The levels in the surface waters in the Simpevarp area are, however, about 100 times higher than the median of the 242 Swedish lakes. SSM000022 and SSM000034 show markedly lower zirconium concentrations compared to the other soil tubes.
- The thorium content in shallow groundwater in the Simpevarp area is more than ten times elevated compared to Swedish groundwaters. A similar elevation is not seen in the surface waters.
- When uranium show normal values in shallow groundwater in the Simpevarp area, the concentrations in surface waters are elevated about ten times compared to reference data of Swedish lakes.

**Table 7-5. Median values of trace-elements (µg/l) in the Simpevarp soil tubes. Reference data from surface waters in the Simpevarp area, soil tubes in the Forsmark area and various Swedish surveys of groundwater, lakes, rivers, sea and precipitation. Values below the reporting limit are marked by a '<'-sign and the highest reporting limit included in each calculation are shown in the statistics.**

Element	All soil tubes	'Higher'	'Lower'	Forsmark soil tubes	Swedish groundwaters <sup>a</sup>	Simpevarp lakes	Swedish lakes <sup>b</sup>	Simpevarp streams	Swedish rivers <sup>c</sup>	Precipitation <sup>d</sup>	Simpevarp sea	
Aluminium	Al	–	–	–	23	57	140	45	350	–	8.4	
Antimony	Sb	–	–	–	< 0.1		0.13	0.04	0.075	0.06	< 0.1	
Arsenic	As	0.62	1.0	0.61	1.1	< 0.3	0.63	0.29	0.63	0.63	< 1	
Barium	Ba	63	54	63	63		12	7	16	0.8	18	
Cadmium	Cd	< 20	< 20	< 20	< 0.02	0.025	< 0.002	0.018	0.020	0.01	0.024	< 0.02
Cerium	Ce	29	34	24	1.3		0.19	0.09	0.57		0.029	< 0.05
Cesium	Cs	0.57	0.43	0.64	< 0.3		< 0.03	0.01	< 0.03		0.007	< 0.3
Chromium	Cr	–	–	–	0.20		0.61	0.18	1.2	0.85	0.24	< 0.1
Cobalt	Co	–	–	–	0.22		0.046	0.05	0.61	0.54	0.017	< 0.05
Copper	Cu	–	–	–	< 1	0.84	2	0.5	2.8	0.9	0.80	< 1
Dysprosium	Dy	1.6	2.0	1.4	0.17		0.014	0.004	0.041		0.002	< 0.05
Erbium	Er	0.85	1.0	0.77	0.100		0.009	0.002	0.027		0.0007	< 0.05
Europium	Eu	0.43	0.51	0.39	< 0.05		< 0.005	0.001	0.011		0.0005	< 0.05
Gadolinium	Gd	2.7	3.3	2.0	0.27		0.018	0.006	0.053		0.002	< 0.05
Hafnium	Hf	0.053	0.072	0.051	< 0.05		0.69	< 0.001	0.13		0.001	0.35
Holmium	Ho	0.31	0.39	0.27	< 0.05		< 0.005	< 0.001	0.0089		0.0003	< 0.05
Indium	In	< 0.05	< 0.05	< 0.05	< 0.3		< 0.05		< 0.05		< 0.001	< 0.5
Lanthanum	La	19	22	16	1.7		0.12	0.08	0.34		0.017	< 0.05
Lead	Pb	–	–	–	< 0.1	< 0.5	0.48	0.28	0.24	0.24	1.4	< 0.1
Lithium	Li	14	9	17	9		< 4	0.4	< 4		0.05	30
Lutetium	Lu	0.12	0.15	0.12	< 0.05		< 0.005	< 0.001	< 0.005		0.0001	< 0.05
Mercury	Hg	< 0.002	< 0.002	< 0.002	< 0.002		< 0.002	0.002	0.0030		< 0.002	< 0.002
Molybdenum	Mo	–	–	–	1.4		1.1	0.05	0.79		0.03	1.6
Neodymium	Nd	17	20	13	1.4		0.13	0.05	0.36		0.012	< 0.05
Nickel	Ni	–	–	–	0.91		1.8	0.39	3.4	2.3	0.29	0.79
Praseodymium	Pr	4.5	5.3	3.5	0.36		0.034	0.02	0.092		0.004	< 0.05
Rubidium	Rb	8.7	9.1	8.2	2.3		3.4	1.1	2.3		0.12	21
Samarium	Sm	2.7	3.5	2.3	0.24		0.022	0.007	0.062		0.002	< 0.05
Scandium	Sc	0.82	0.70	0.83	< 0.5		< 0.05	< 0.05	< 0.05		0.003	< 0.5
Strontium	Sr	130	76	140	250		45	11	53		0.7	1,400
Terbium	Tb	0.34	0.41	0.27	< 0.5		< 0.05	< 0.001	< 0.05		0.0003	< 0.5
Thallium	Tl	0.060	0.057	0.064	< 0.3		< 0.03	0.005	< 0.03		0.006	< 0.3
Thorium	Th	1.5	1.2	1.8	< 0.2	0.04	< 0.02	0.014	0.027		0.002	< 0.2
Thulium	Tm	0.11	0.14	0.11	< 0.05		< 0.005	< 0.001	< 0.005		0.0001	< 0.05
Uranium	U	5.2	1.9	8.0	5.0	7.2	0.38	0.05	0.76		0.002	0.76
Vanadium	V	7.8	7.1	8.4	0.58		0.98	0.13	1.3	0.84	0.43	0.18
Ytterbium	Yb	11	13	9.0	1.7		0.01	0.003	0.30		0.008	< 0.05
Zinc	Zn	–	–	–	< 2	9.3	2	2.2	4.0		10	2.4
Zirconium	Zr	3.6	4.0	3.6	1.1		3.5	0.03	3.8		0.025	1.1

a. Uranium and thorium from /SSI 2005/, the remaining from /Naturvårdsverket 1995/.

b. Samples of 781 lakes in southern Sweden for commonly measured elements as heavy metals. 242 randomly sampled Swedish lakes for rarely measured elements /Naturvårdsverket 1999/. Mercury from /Logan 2002/.

c. 76 watercourses of various sizes in southern Sweden /Naturvårdsverket 1999a/.

d. At Gårdsjön in the south west of Sweden /Eriksson 2001/.



When trace element concentrations are compared along the flow path from precipitation to shallow groundwater, further into streams, lakes and finally to the sea, there are examples of both increasing and decreasing concentrations. In Figure 7-41, the relative mean concentrations are shown for a selection of elements where most observations exceed reporting limits.

Major constituents of groundwater, e.g. sodium and chloride, usually show increasing concentrations along the flow path with the highest concentrations found in sea water. Rubidium is an example of a trace element where the highest concentration in the Simpevarp area is found in sea water.

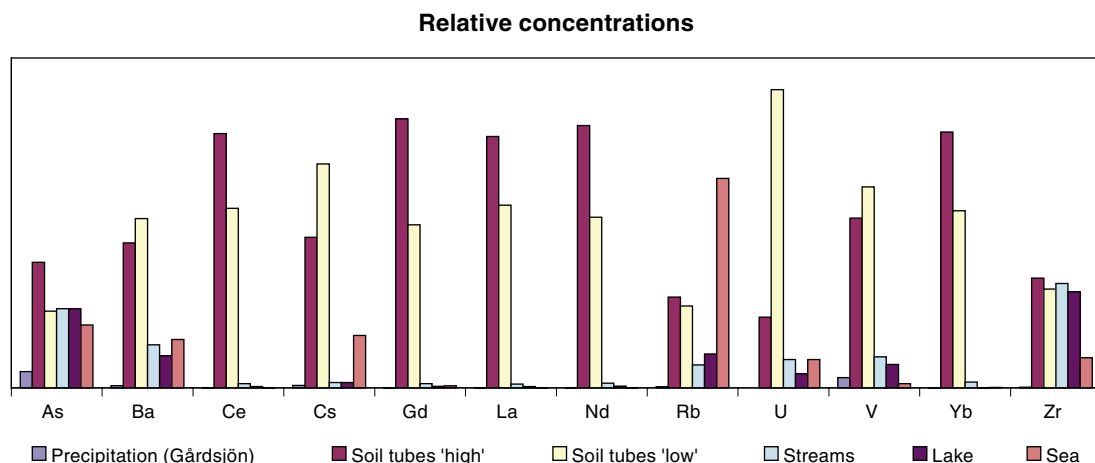
The rare earth elements (e.g. cerium, gadolinium, lanthanum, neodymium and ytterbium) usually occur at significantly higher concentrations in shallow groundwaters compared to surface waters.

The highest relative concentrations in precipitation are displayed by arsenic and vanadium, indicating that deposition may be an important source of these elements. The different patterns shown by these two elements in Figure 7-41 could possibly be explained by a higher retention of vanadium than of arsenic.

The pattern for zirconium is rather similar to that of arsenic, in that both these elements show the same relative concentrations in groundwater and in surface waters, and dissimilar in that deposition is a relatively large source for arsenic but not for zirconium.

### 7.7.2 Examples – lanthanum, uranium and rubidium.

The concentration of *lanthanum* ranges from 1–100 µg/l in the Simpevarp area. The highest concentration is observed in SSM000039 near Ekerumsån in the Laxemar subarea. Especially low concentrations are found in SSM000034 and SSM000022 (Figures 7-42). These two soil tubes, both with discharge characteristics, show a deviating chemistry with respect to several parameters.



**Figure 7-41.** Relative mean concentrations in precipitation (measured at Gårdsjön in western Sweden), soil tubes at 'higher' and 'lower' levels, streams, lakes and in sea water in the Simpevarp area. The figure is based on all available data from the Simpevarp area.

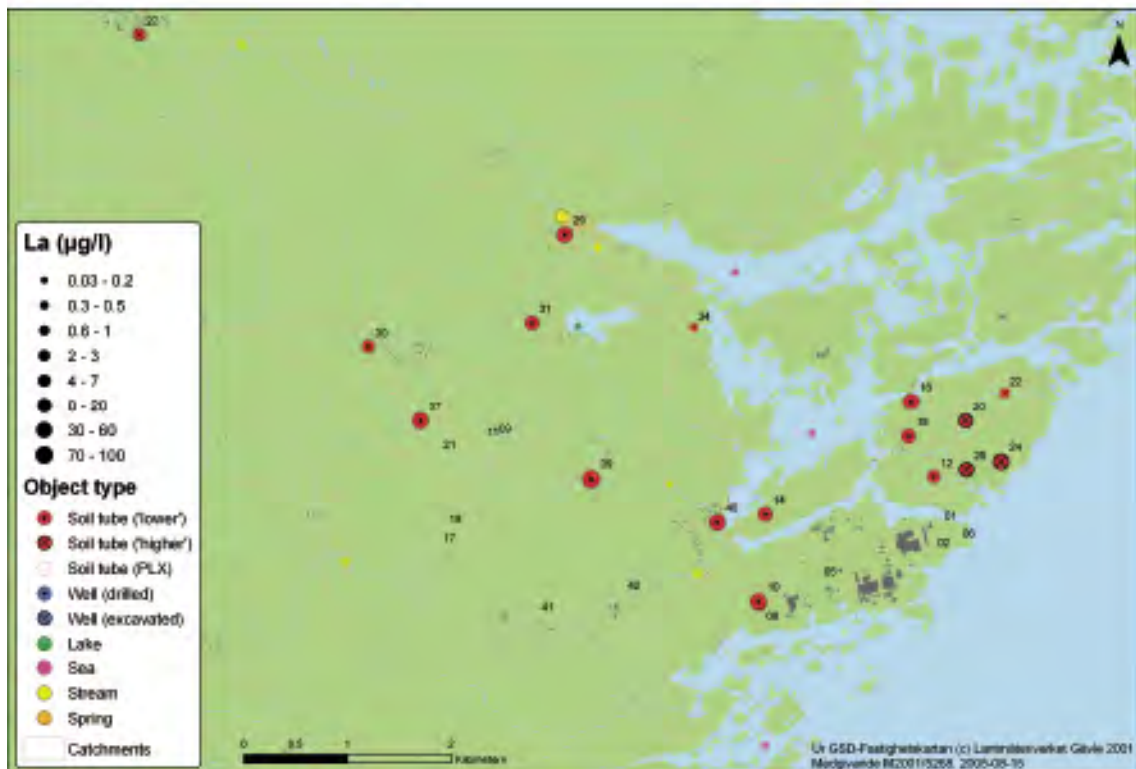
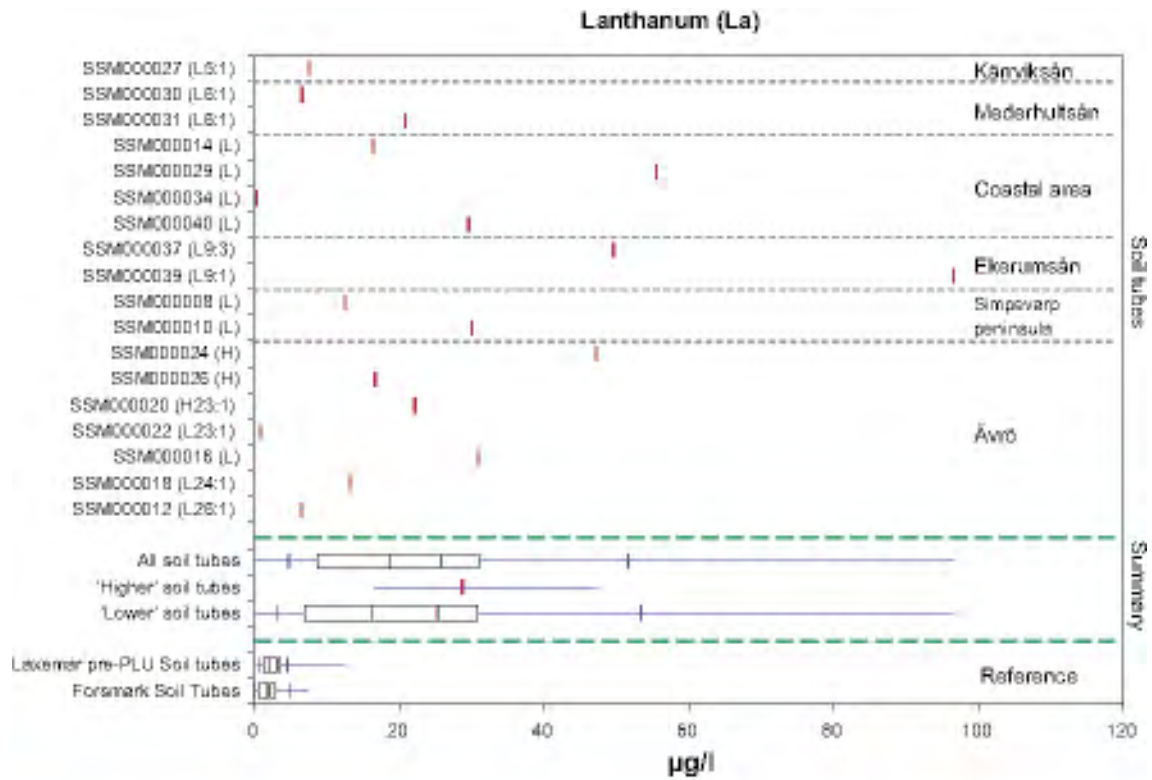
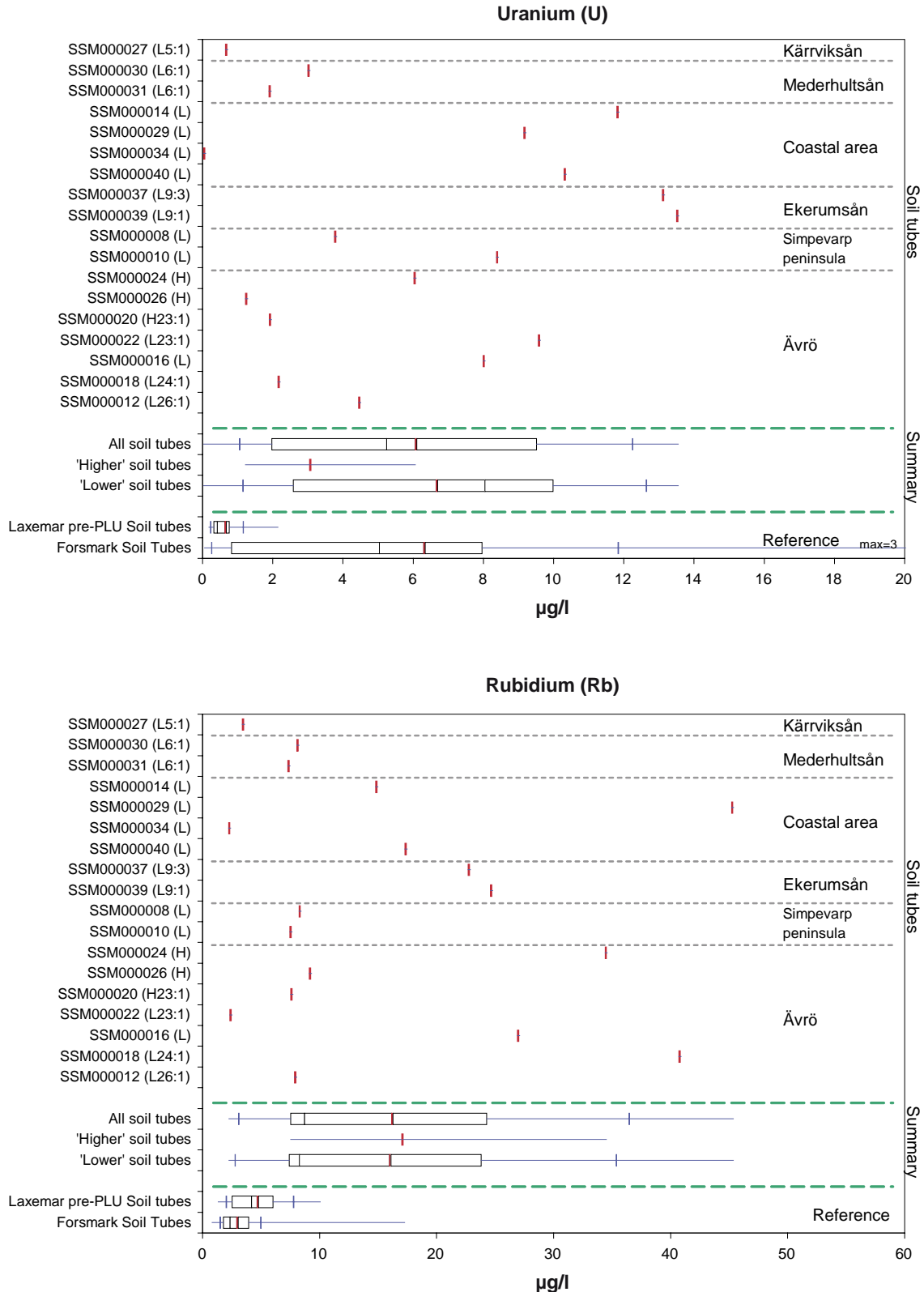
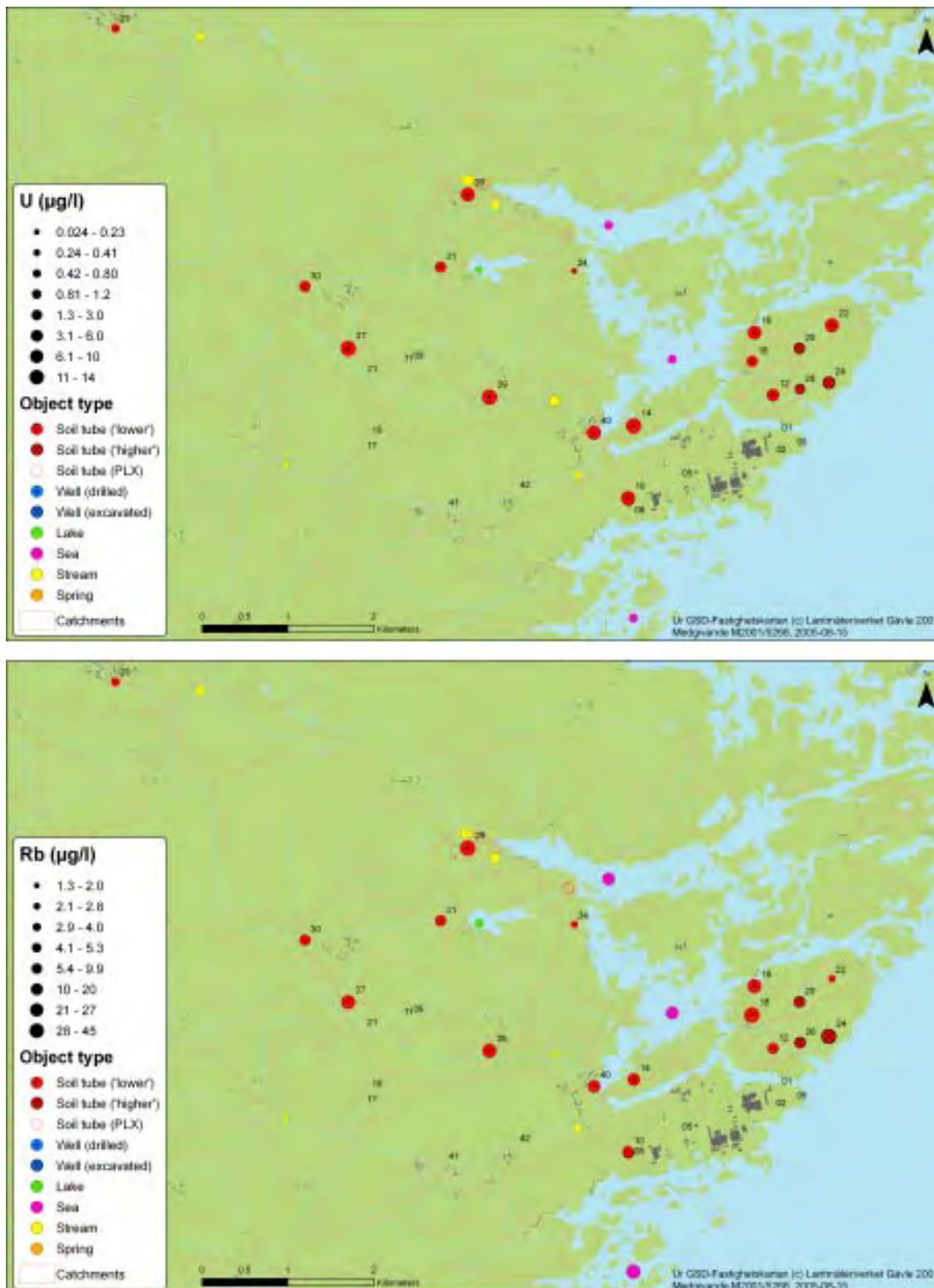


Figure 7-42. Concentrations of lanthanum in shallow groundwater and surface water in the Simpevarp area. Explanations to the figure are given in Section 4.3.

**Uranium** and **rubidium** show very similar spatial patterns with two exceptions; in SSM000018 the rubidium concentration is high when the uranium concentration is low, whereas SSM000022 displays an opposite pattern with high uranium content and low rubidium content. In SSM000034, both uranium and rubidium concentrations are especially low (Figures 4-43 and 4-44).



**Figure 7-43.** Uranium (upper) and rubidium (lower) concentrations in shallow groundwater in the Simpevarp area. Explanations to the figure are given in Section 4.3.



*Figure 7-44. Concentrations of uranium (upper) and rubidium (lower) in shallow groundwater and surface water in the Simpevarp area. The dots represent mean values of available data from soil tubes, private wells and surface waters. The figures in black corresponds to the last two digits of the id-codes of the soil tubes.*

## 7.8 Isotopes

In this section all isotopic information from shallow groundwater is compiled. In the first part, the isotopes of hydrogen, oxygen and carbon are presented, followed by the stable isotopes of boron, chlorine, sulphur and strontium. The last part deals with the radioisotopes of uranium, thorium, radium and radon.

### 7.8.1 Overview – isotopes of hydrogen, oxygen and carbon

Median values for isotopes of hydrogen, oxygen and carbon are shown in Table 7-6.

**Table 7-6. Median values for isotopes of hydrogen, oxygen and carbon in shallow groundwater in the Simpevarp area.**

Idcode	Catchment		Tr TU	D ‰ SMOC	O-18 ‰ SMOC	D/O-18 ratio	C-13 ‰ PDB	C-14 pmC
SSM000001	Simpevarp Peninsula		L	-80.4	-11.3	7.11		
SSM000005	Simpevarp Peninsula		H 13.3	-85.2	-11.8	7.22		
SSM000008	Simpevarp Peninsula		L 12.0	-78.9	-11.0	7.17	-17.1	82.2
SSM000010	Simpevarp Peninsula		L 11.9	-77.3	-10.8	7.16	-17.5	81.1
SSM000012	Skölkebäcken	26:1	L 11.2	-76.3	-10.7	7.13	-13.7	54.9
SSM000014	Coastal area		L 14.5	-73.0	-10.6	6.89	-18.5	97.6
SSM000016	Ävrö		L 13.2	-79.8	-11.1	7.19	-17.9	
SSM000018	Lindströmmebäcken	24:1	L 12.9	-77.0	-10.9	7.06	-19.6	99.6
SSM000020	Vadevikebäcken	23:1	H 12.1	-76.3	-10.8	7.06	-18.8	
SSM000022	Vadevikebäcken	23:1	L 1.00	-77.1	-10.6	7.27	-10.8	45.4
SSM000024	Ävrö		H 12.6	-77.4	-10.5	7.37	-16.5	103
SSM000026	Ävrö		H 13.4	-74.5	-10.7	6.96	-12.7	
SSM000027	Kärrviksån	5:1	L 9.60	-84.3	-11.3	7.46		
SSM000029	Coastal area		L 11.0	-80.4	-10.9	7.38	-12.4	
SSM000030	Mederhultsån	6:1	L 8.70	-77.4	-10.9	7.10	-15.2	
SSM000031	Mederhultsån	6:1	L 12.1	-76.2	-10.7	7.12		
SSM000034	Coastal area		L 14.8	-78.5	-10.9	7.20	-10.7	
SSM000037	Ekerumsån	9:3	L 10.7	-77.4	-11.0	7.04	-14.6	
SSM000039	Ekerumsån	9:1	L 11.0	-77.8	-10.9	7.14	-12.4	
SSM000040	Coastal area		L 12.7	-79.7	-10.7	7.45		
'Higher' soil tubes			S 13.0	-76.9	-10.7	7.19	-17.4	103
'Lower' soil tubes			S 11.8	-77.4	-10.8	7.17	-16.9	81.7
All soil tubes			S 12.0	-77.4	-10.8	7.17	-16.9	82.2

The relationships among the isotopes of hydrogen, oxygen and carbon are outlined in the correlation matrix shown in Table 7-7. Chloride, bicarbonate and carbon-13 are positively correlated, showing high values in e.g. SSM000022, SSM000012 and SSM000034. Tritium is negatively correlated to these variables and shows especially low values in SSM000022 (but not in SSM000034). Carbon-14 (percent modern carbon) is also low in SSM000012 and SSM000022.

Deuterium and oxygen-18, which as expected are closely positively correlated, show rather weak correlations to the other parameters in the correlation matrix. The strongest correlations are found for deuterium, sulphate and the D/O-18 ratio (the latter with negative sign).

**Table 7-7. Pearson correlation matrix on isotope data for hydrogen, oxygen and carbon from shallow groundwater in the Simpevarp area. Calcium, bicarbonate, chloride and sulphate are included as references. Figures in bold are significant ( $p < 0.05$ , two-tailed test). The correlation analysis is based on 30 individual observations with complete records.**

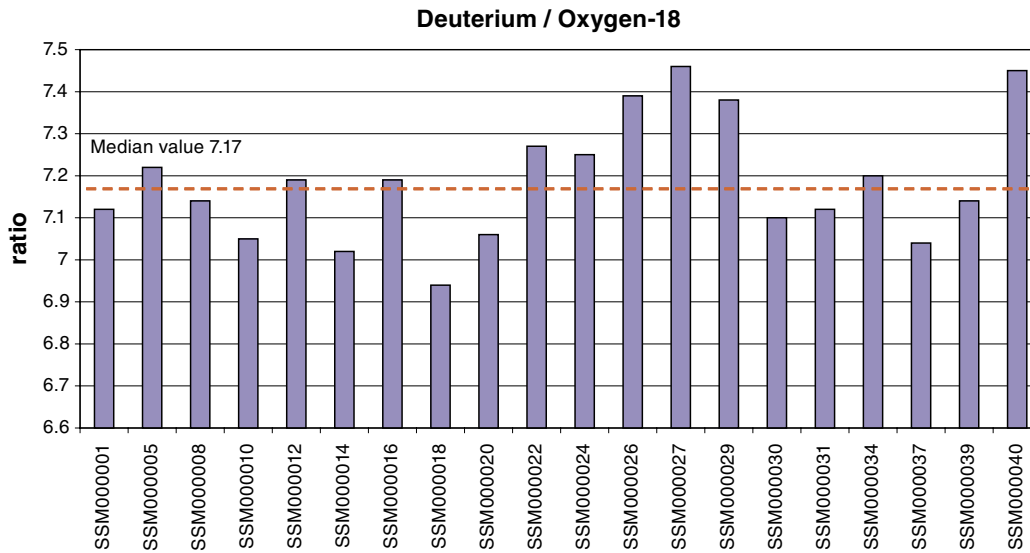
	Ca	HCO <sub>3</sub>	Cl	SO <sub>4</sub>	D	O-18	D/O-18	C-13	Tritium
Ca	1	<b>0.62</b>	-0.01	-0.19	-0.02	-0.05	-0.04	0.19	0.25
HCO <sub>3</sub>	<b>0.62</b>	1	<b>0.58</b>	0.05	-0.24	-0.15	0.18	<b>0.62</b>	<b>-0.40</b>
Cl	-0.01	<b>0.58</b>	1	<b>0.63</b>	0.00	-0.04	-0.08	<b>0.43</b>	<b>-0.65</b>
SO <sub>4</sub>	-0.19	0.05	<b>0.63</b>	1	<b>0.36</b>	0.17	<b>-0.40</b>	0.08	<b>-0.57</b>
D	-0.02	-0.24	0.00	<b>0.36</b>	1	<b>0.83</b>	<b>-0.45</b>	-0.36	0.20
O-18	-0.05	-0.15	-0.04	0.17	<b>0.83</b>	1	0.11	-0.17	0.15
D/O18	-0.04	0.18	-0.08	<b>-0.40</b>	<b>-0.45</b>	0.11	1	<b>0.38</b>	-0.11
C-13	0.19	<b>0.62</b>	<b>0.43</b>	0.08	-0.36	-0.17	<b>0.38</b>	1	<b>-0.49</b>
Tritium	0.25	<b>-0.40</b>	<b>-0.65</b>	<b>-0.57</b>	0.20	0.15	-0.11	<b>-0.49</b>	1

## 7.8.2 Deuterium and oxygen-18

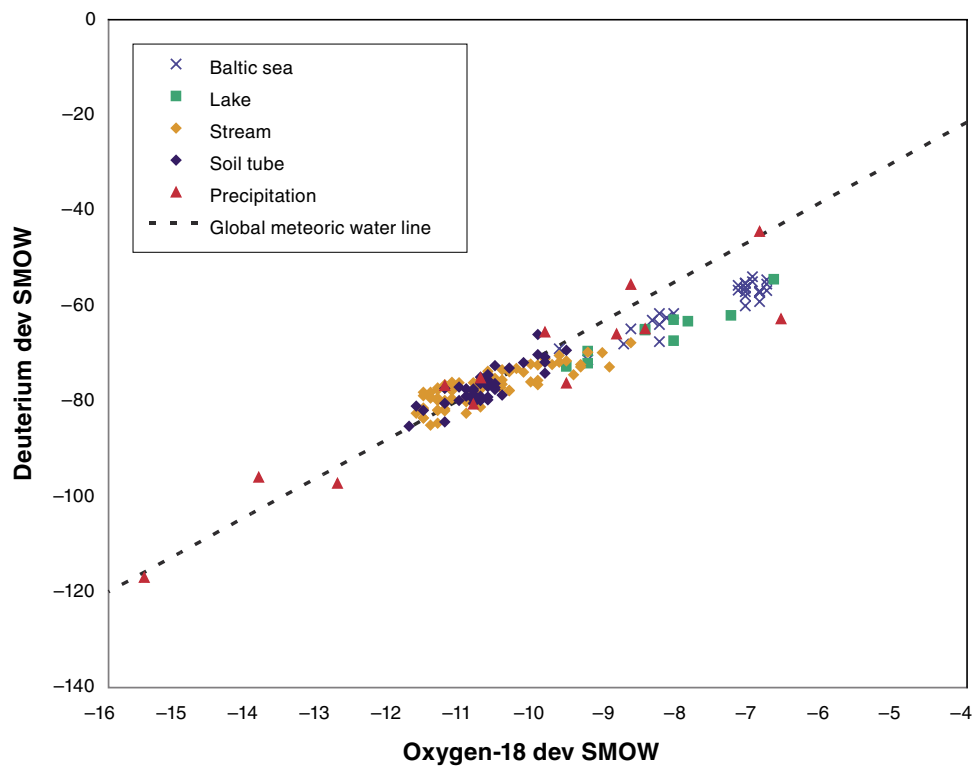
Deuterium and oxygen-18 are evaluated both separately and in combination as a ratio. In Figures 7-48 to 7-50, the distributions and spatial variation are shown for each isotope separately and in Figures 7-45 to 7-47 are relations between the two isotopes evaluated.

The ratio between deuterium and oxygen-18 are usually around 7.2 in shallow groundwater in the Simpevarp area (Figure 7-45). Due to the large seasonal variation of especially deuterium and to the short time series consisting of only one to three observations, the present sample is probably slightly biased.

Precipitation data, and most observations from soil tubes, plot on, or close to the Global Meteoric Water Line (GMWL), indicating a meteoric origin of most shallow groundwater. Data from streams and lakes forms an 'evaporation line' indicating enrichments of the heavier isotopes due to evaporation in these waters (Figure 7-46).

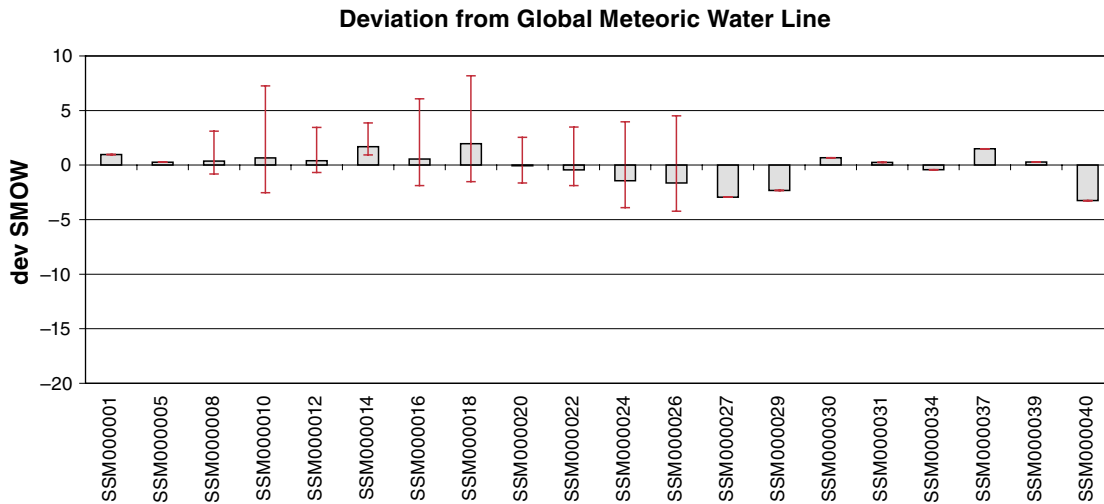


**Figure 7-45.** The ratio between deuterium and oxygen-18 in shallow groundwater in the Simpevarp area.



**Figure 7-46.** Deuterium vs. oxygen-18 for all data from shallow groundwater and surface water in the Simpevarp area. Dashed line shows the Global Meteoric Water Line.





**Figure 7-47.** Deuterium excess – deviations from Global Meteoric Water Line  $D - (8.2 * O - 18 + 11.3)$  in soil tubes in the Simpevarp area. Averages (bars), minimum and maximum values (whiskers).

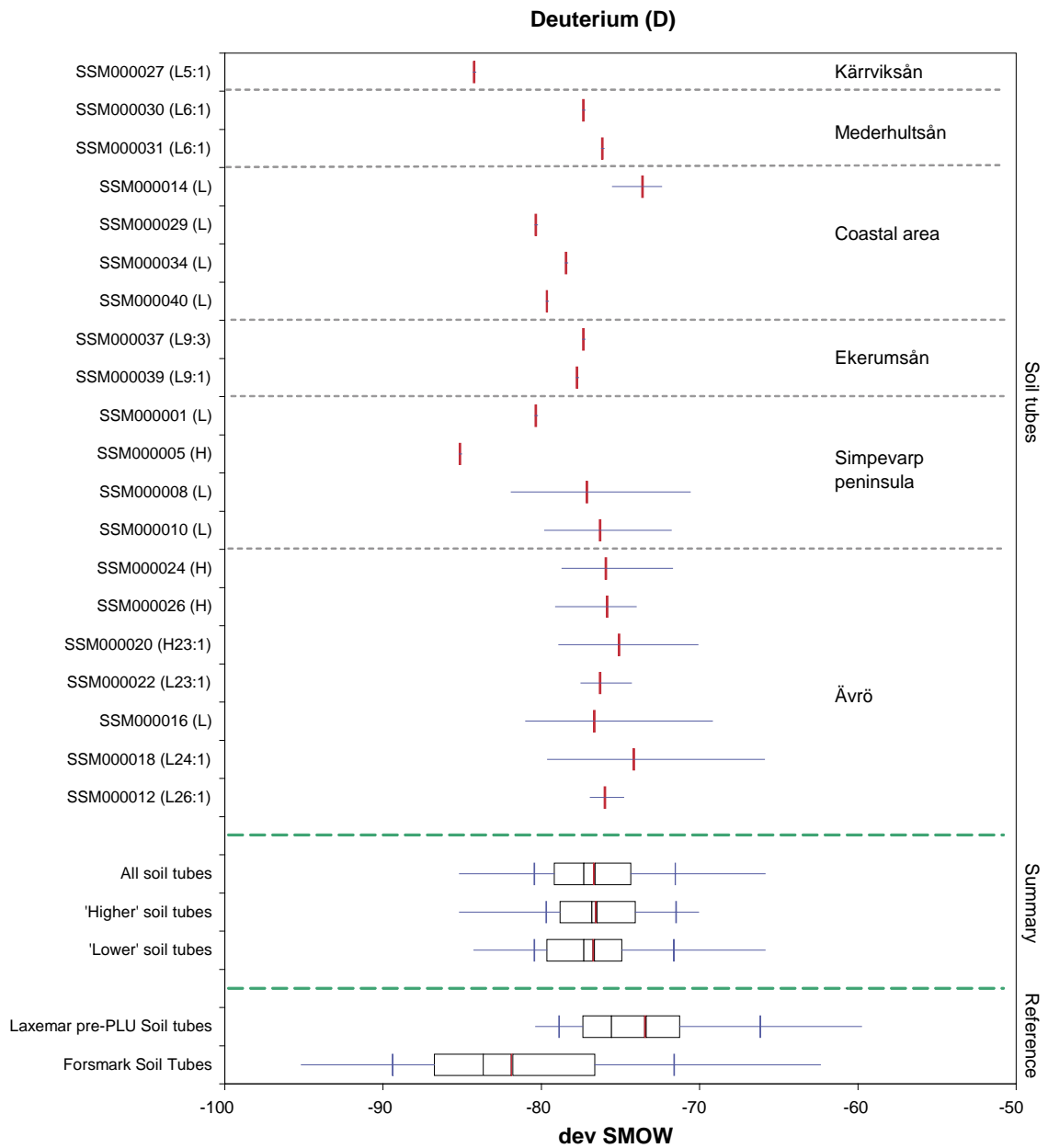
The deuterium and oxygen-18 deviations measured in soil tubes, are centred within the range observed in precipitation in the Simpevarp area. Neither the very low deuterium values measured at winter time (around -110‰ SMOW) nor the high values at summer time (about -50‰ SMOW) are observed in any of the shallow groundwater observations.

The deviations from the Global Meteoric Water Line have been estimated for individual soil tubes in Figure 7-47, by calculating the deuterium excess. Most soil tubes show a symmetric variation around the GMWL indicating that these tubes are predominantly influenced by recharging meteoric water.

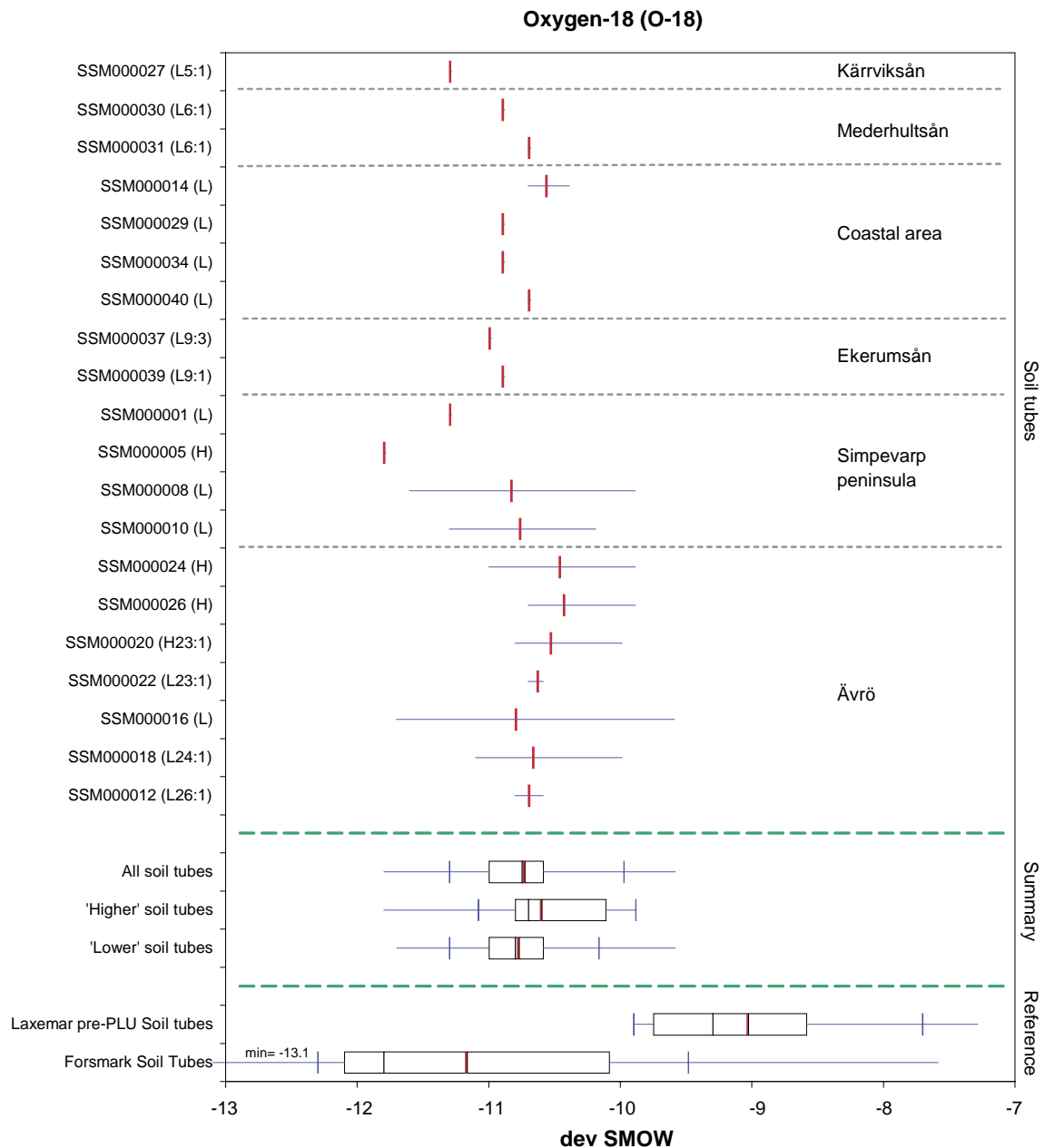
The **deuterium** deviations range from approximately -85‰ to -66‰ SMOW in shallow groundwater in the Simpevarp area. Corresponding range for **oxygen-18** is -11.8‰ to -9.6‰ SMOW. The median deuterium deviation of the soil tubes is -77‰ SMOW, compared to -76‰ in precipitation. Corresponding values for oxygen-18 are -10.8‰ and -10.4‰ SMOW, respectively (Figures 7-48 and 7-49).

There is no difference between ‘higher’ and ‘lower’ soil tubes concerning deuterium. When these categories are compared for oxygen-18 (exactly the same observations), the ‘lower’ soil tubes display larger deviations compared to the ‘higher’ located soil tubes.

When the Simpevarp soil tubes are compared with the soil tubes in the Forsmark area, the oxygen-18 distributions show a symmetrical overlap, while deuterium is shifted towards higher deuterium values in the Simpevarp area. This shift is probably an effect of the limited sample size in the Simpevarp area, leading to a bias due to the larger seasonal variation of deuterium compared to oxygen-18. The Laxemar pre-PLU study show highly deviating oxygen-18 values compared to the soil tubes of the Simpevarp area. A similar discrepancy is not seen for deuterium.

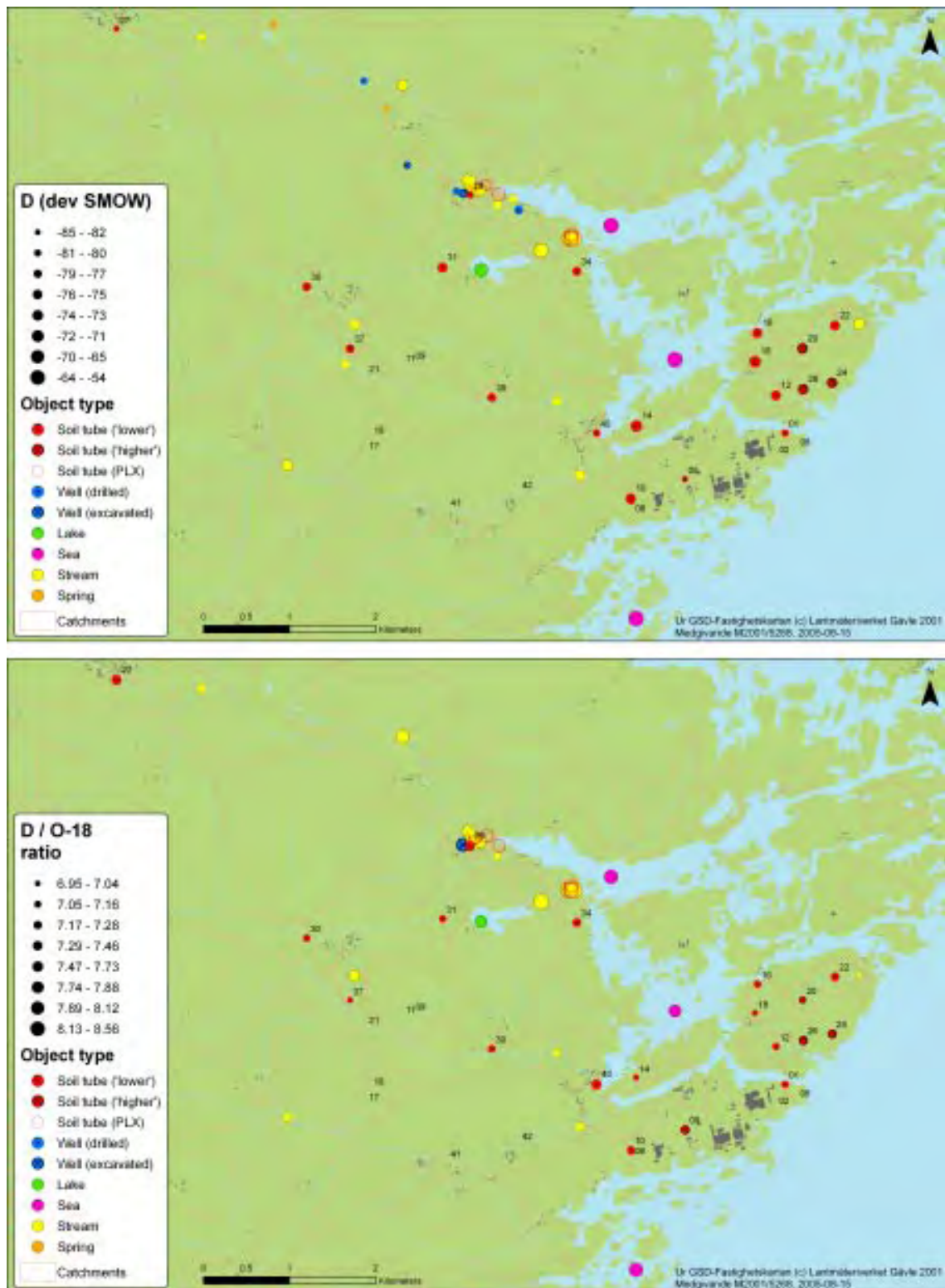


**Figure 7-48.** Deviation of deuterium in soil tubes in the Simpevarp area (‰ SMOW). Explanations to the figure are given in Section 4.3.



**Figure 7-49.** Deviation of oxygen-18 in soil tubes in the Simpevarp area (‰ SMOW). Explanations to the figure are given in Section 4.3.

The spatial patterns in the Simpevarp area for deuterium, and for the ratio of deuterium and oxygen-18, are shown in Figure 7-50. The dots represent non-weighted mean values of all observations per object. The deuterium and oxygen-18 deviations decrease along the flow path from discharge areas to streams, lakes and finally the Baltic Sea. Median values for deuterium are  $-76$  (precipitation),  $-77$  ('higher'),  $-77$  ('lower'),  $-77$  (stream),  $-65$  (lake) and  $-57$  (sea) ‰ SMOW respectively.

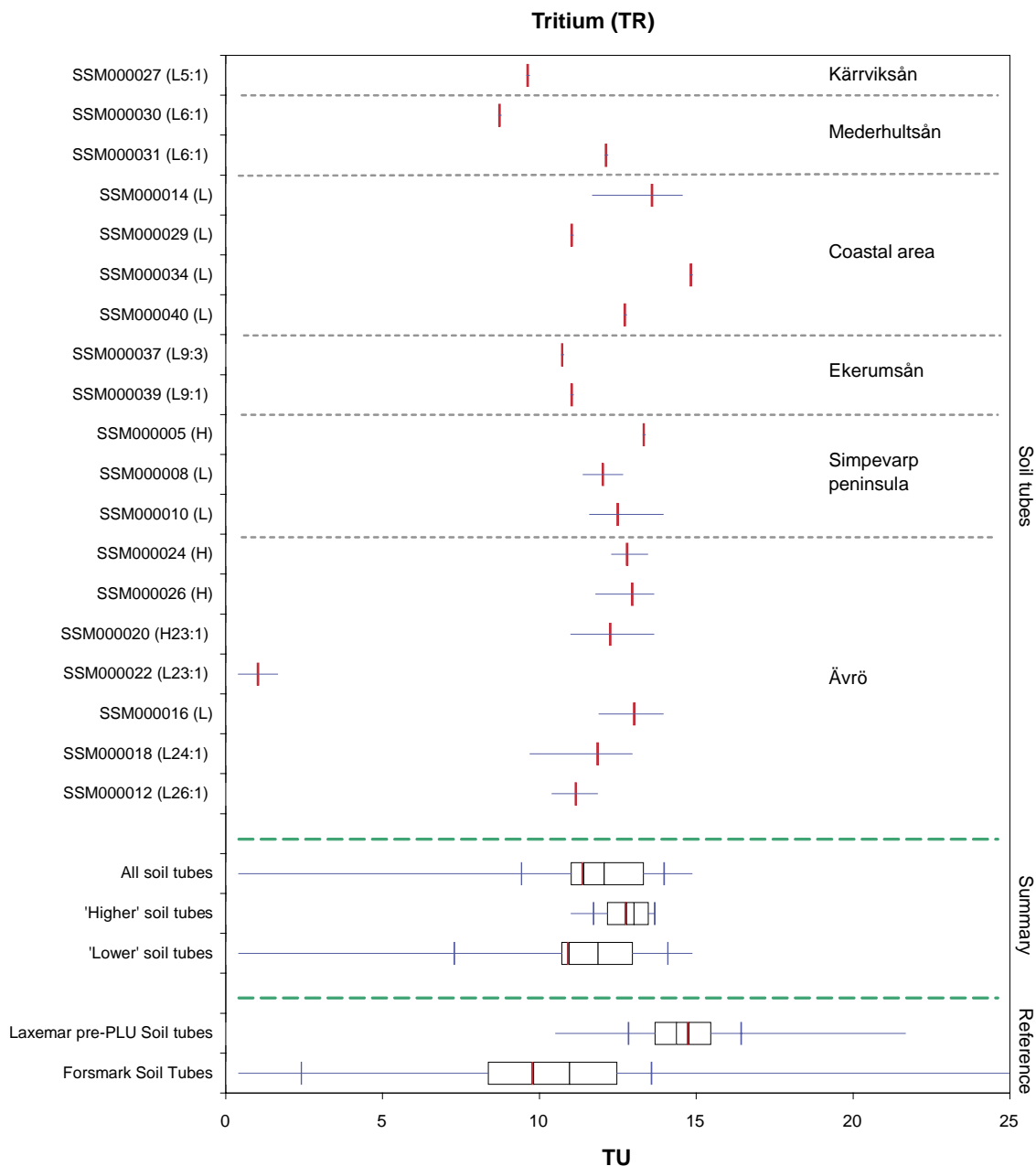


*Figure 7-50. Deuterium ‰ SMOW (upper) and deuterium oxygen-18 ratio (lower) in shallow groundwater and surface water in the Simpevarp area. The dots represent mean values of all data from soil tubes, private wells and surface waters. The figures in black corresponds to the last two digits of the id-codes of the soil tubes.*

### 7.8.3 Tritium

Tritium is a radioactive isotope of hydrogen, which is produced by cosmic radiation in the atmosphere in amounts corresponding to levels of 5–10 tritium units (TU). In the early sixties, hydrogen bomb tests raised the levels to several thousands TU. Due to these two sources of tritium, and the half life of 12 years, it is possible to use tritium as a tracer for waters recharged within the past decades. High tritium levels indicate considerable components of recharge from 1960s or 1970s. Low levels on the other hand, indicate sub-modern waters recharged prior to 1952 when the bomb tests started /Kehew 2001/.

The tritium levels in most soil tubes range from 8–15 TU, an interval that overlap the range of surface waters and precipitation which are approximately 9–19 TU (Figure 7-51).



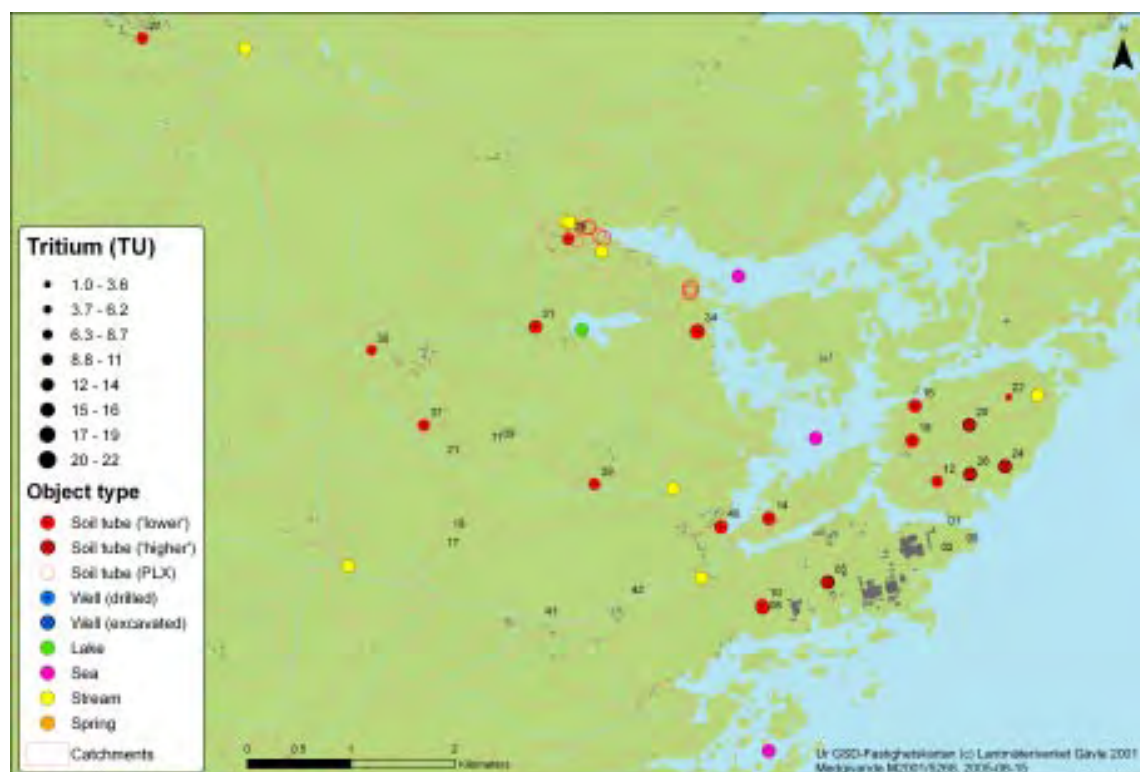
**Figure 7-51.** Tritium levels in shallow groundwater in the Simpevarp area. Explanations to the figure are given in Section 4.3.

The soil tube SSM000022 deviates by showing especially low tritium content in all three observations available. The tritium level of about 1 TU indicates substantial mixing with groundwater of sub-modern origin (Figure 7-52).

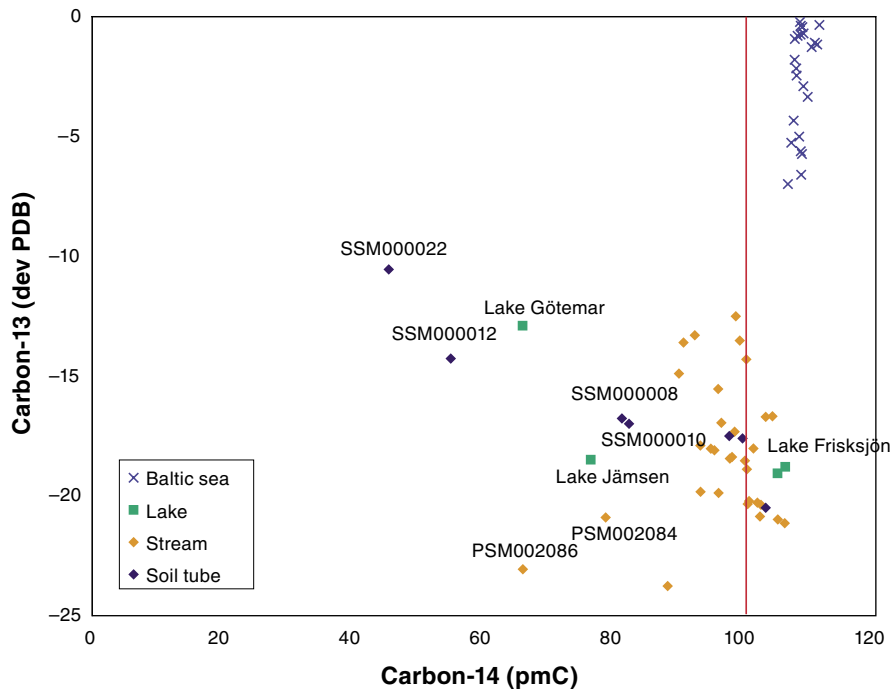
#### 7.8.4 Isotopes of carbon (C-13, C-14)

The isotope ratios of stable carbon-13 and carbon-12, and the content radioactive carbon-14, are here used to evaluate sources and evolution of carbon species in shallow groundwater and surface waters.

When the radioactive carbon-14 content (expressed as percent modern carbon) is plotted versus the stable carbon isotope ratio (expressed as  $\delta^{13}\text{C}$  ‰ PDB), a few groups may be distinguished. Four out of seven soil tubes show carbon-14 values below 100 percent modern carbon. Most lake and streaming waters scatter around 100 percent and sea water exceeds 100% in all observations (Figure 7-53).



**Figure 7-52.** Tritium levels (TU) in shallow groundwater and surface water in the Simpevarp area. The dots represent mean values of all data from soil tubes, private wells and surface waters. The figures in black corresponds to the last two digits of the id-codes of the soil tubes.



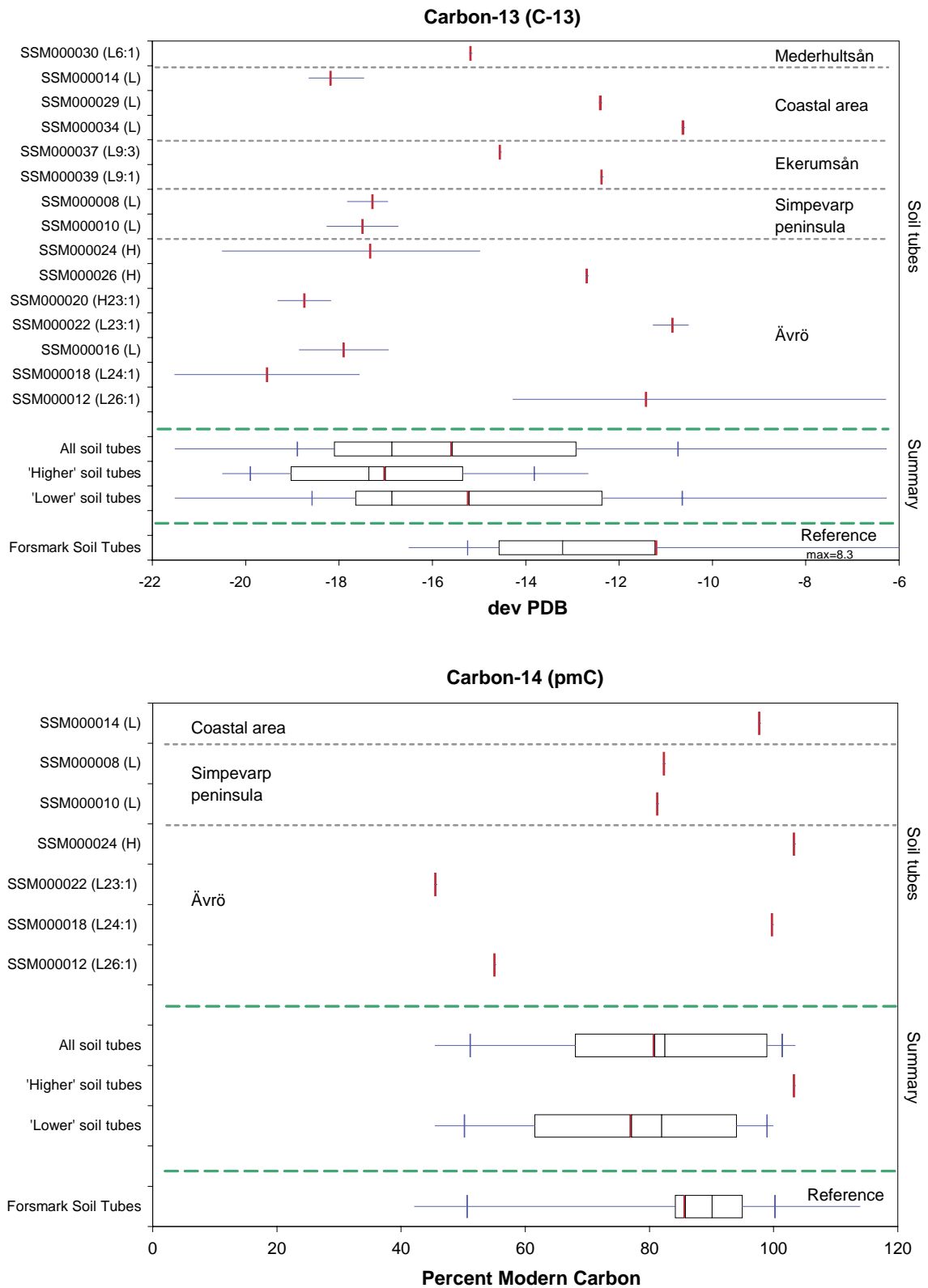
**Figure 7-53.** Content of carbon-14 (percent modern carbon) versus the carbon-13 ratio ( $\delta^{13}C$  ‰ PDB) in shallow groundwater and surface water in the Simpevarp area. All individual observations are plotted in the figure.

In complement to carbon-14, carbon-13 discriminates the observations in the following groups:

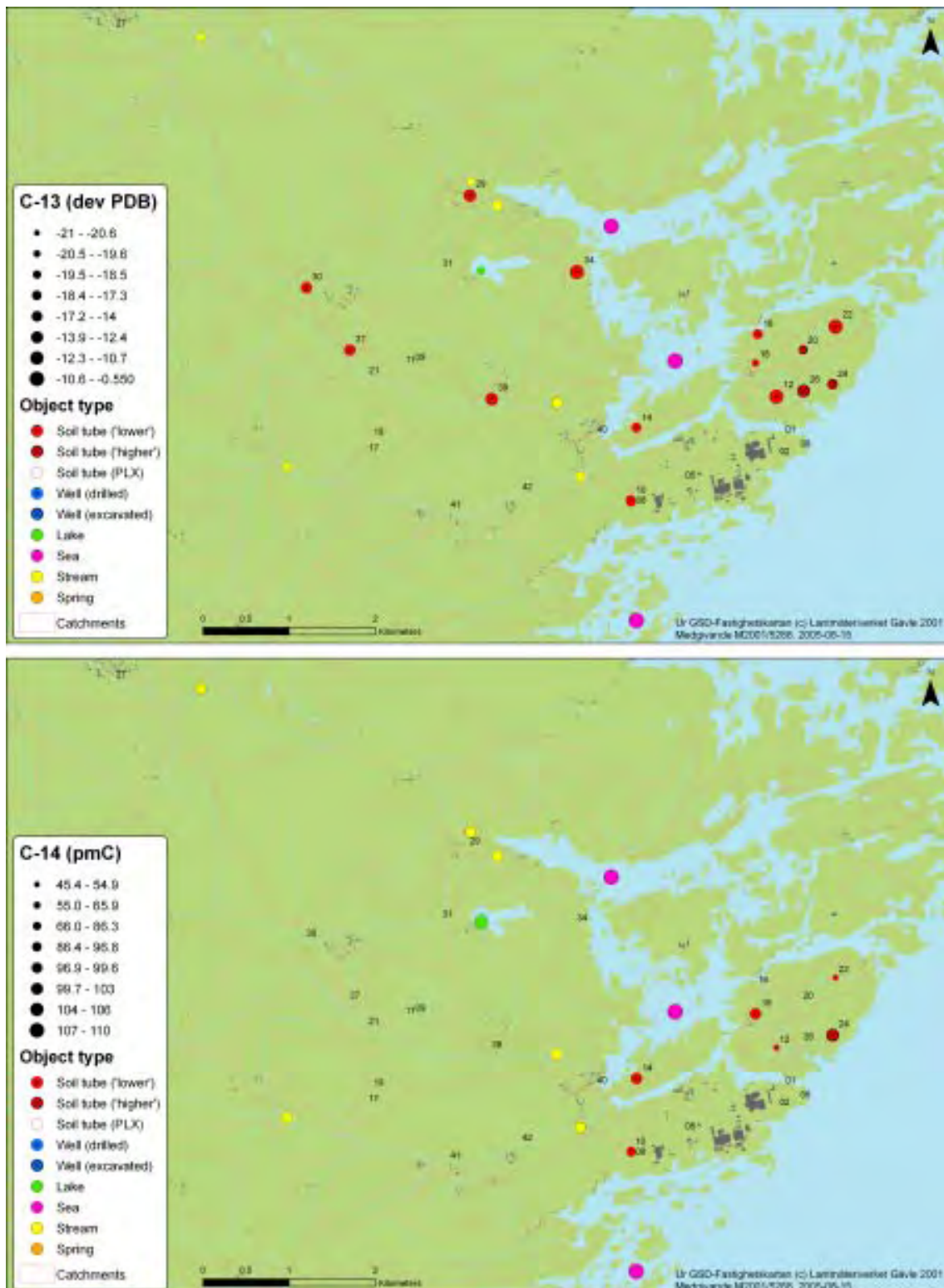
- The first, uppermost group contains all sea water samples, where carbon-13 ranges from 7‰ to 0‰ PDB and carbon-14 exceeds 100%. No shallow groundwater belongs to this group.
- The second group consists of fresh surface waters, where carbon-14 scatters around 100 percent modern carbon and carbon-13 ranges between –23‰ and –13‰ PDB. Three soil tubes belong to this group (SSM000014, SSM000018 and SSM000024), showing characteristics close to most fresh surface waters. SSM000008 and SSM000010 show a slightly lower content of modern carbon and normal carbon-13 values, compared to surface waters.
- In the third group, the fraction modern carbon is less than 70% and the carbon-13 content plots between fresh surface water and sea water. The soil tubes SSM000012 and SSM000022, together with Lake Göttemar which is located north of the Simpevarp area, form a group where carbon-13 values range between –15 and –10‰.

Figure 7-54 shows the distributions of carbon-13 and carbon-14 values for individual soil tubes, and Figure 7-55 the spatial patterns for the content of the two carbon isotopes in shallow groundwater and surface water in the Simpevarp area.





**Figure 7-54.** Stable carbon-13 (upper) expressed as C-13 deviations from the PDB-reference ( $\delta^{13}C$  ‰ PDB), and radioactive carbon-14 content expressed as percent modern carbon (lower). Explanations to the figure are given in Section 4.3.



*Figure 7-55. Deviations of carbon-13 (upper) and content of modern carbon (carbon-14) (lower) in shallow groundwater and surface water in the Simpevarp area. The dots represent mean values of available data from soil tubes, private wells and surface waters. The figures in black corresponds to the last two digits of the id-codes of the soil tubes.*

## 7.8.5 Isotopes of boron, chlorine, sulphur and strontium

In this section, stable isotopes of boron, chlorine, sulphur and strontium are compiled. These isotopes can be used to evaluate sources of mixing components, geochemical water-rock interactions and biochemical processes.

In Table 7-8 the median values are summarised per soil tube and category. In Figures 4-57 to 4-61 the statistical distributions and spatial variations of are displayed per isotope.

**Table 7-8. Median values for isotopes of boron, chlorine, sulphur and strontium in water samples from soil tubes in the Simpevarp area. Boron and strontium are expressed both as absolute ratios, and as ‰ deviations from natural abundance ratios. The isotopes of chlorine and sulphur are expressed as ‰ deviations from international standards (SMOC and CDT respectively).**

Idcode	Catchment		B-10/B-11		Cl-37 ‰SMOC	S-34 ‰CDT	Sr-87/Sr-86	
			ratio	‰ 0.248			ratio	‰ 0.71
SSM000001	Simpevarp Peninsula	L	0.2443	-14.9				
SSM000002	Simpevarp Peninsula	H	0.2400	-32.3			0.7124	3.35
SSM000005	Simpevarp Peninsula	H	0.2500	8.06	0.460		0.7286	26.2
SSM000008	Simpevarp Peninsula	L	0.2436	-17.7	-0.310	-1.30	0.7186	12.1
SSM000010	Simpevarp Peninsula	L	0.2445	-14.1	-0.360	-11.9	0.7187	12.3
SSM000012	Skölkebäcken	26:1 L	0.2406	-29.8	0.0700	9.60	0.7197	13.7
SSM000014	Coastal area	L	0.2432	-19.6	0.0600	-12.5	0.7198	13.9
SSM000016	Ävrö	L	0.2417	-25.6	-0.250	-2.80	0.7331	32.6
SSM000018	Lindströmmebäcken	24:1 L	0.2423	-23.0	-0.410	-5.60	0.7160	8.45
SSM000020	Vadevikebäcken	23:1 H	0.2468	-5.04	-0.210	-6.30	0.7220	17.0
SSM000022	Vadevikebäcken	23:1 L	0.2367	-45.8	-0.190	20.6	0.7159	8.29
SSM000024	Ävrö	H	0.2401	-32.1	-0.380	10.2	0.7216	16.3
SSM000026	Ävrö	H	0.2429	-20.6	-0.350	4.20	0.7223	17.3
SSM000027	Kärrviksån	5:1 L	0.2465	-6.05		0.700	0.7186	12.1
SSM000029	Coastal area	L	0.2417	-25.4		22.4	0.7161	8.54
SSM000030	Mederhultsån	6:1 L	0.2421	-23.8		11.0	0.7149	6.96
SSM000031	Mederhultsån	6:1 L	0.2450	-12.1	0.420	5.10	0.7202	14.3
SSM000034	Coastal area	L	0.2451	-11.7			0.7117	2.38
SSM000037	Ekerumsån	9:3 L	0.2427	-21.4		17.0	0.7188	12.3
SSM000039	Ekerumsån	9:1 L	0.2452	-11.3		-5.90	0.7220	16.9
SSM000040	Coastal area	L	0.2443	-14.9			0.7140	5.59
'Higher' soil tubes		H	0.2429	-20.6	-0.280	4.20	0.7220	16.9
'Lower' soil tubes		L	0.2426	-21.8	-0.235	-0.300	0.7187	12.3
All soil tubes			0.2426	-21.8	-0.235	1.75	0.7194	13.2

In Table 7-9 the correlations among the isotopes and calcium, bicarbonate, chloride, sulphate and strontium are shown as a Pearson correlation matrix. In Figure 7-56 the isotopes are plotted pair wise in order to discriminate individual observations of soil tubes with respect to these parameters. There is not necessarily a process-based connection between the pairs selected, as the only motive for the pairs selected was the correlations calculated in Table 7-9.

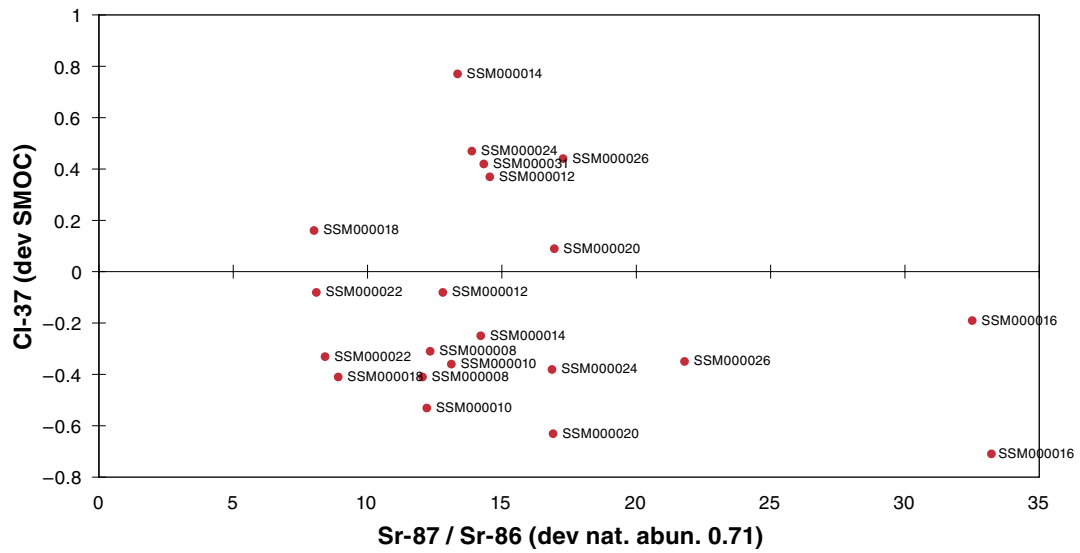
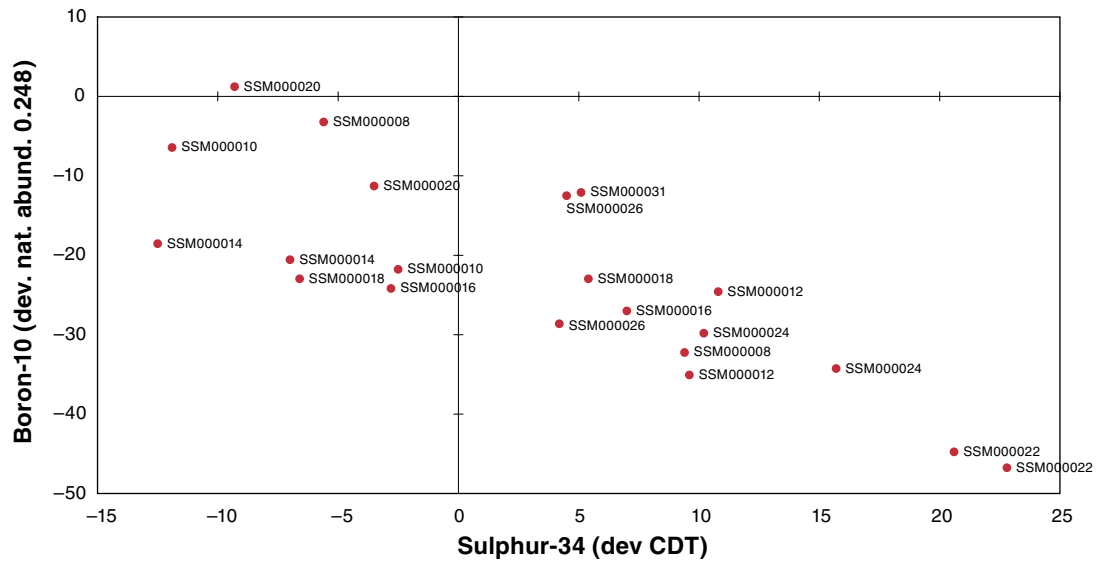
Sulphur-34 and boron-10 (–0.81) are negatively correlated in the subset of soil tubes that were included in the correlation analysis (SSM000008, 10, 12, 14, 16, 18, 20, 22, 24, 26, 31). Sulphur-34 is also positively correlated to chloride and bicarbonate. Strontium-87 is negatively correlated to chloride, sulphate and strontium. Chlorine-37 shows no correlation to the investigated parameters.

In the uppermost plot of Figure 7-56, which shows sulphur-34 versus boron-10, there is a negative correlation between these isotopes. Among the studied soil tubes, sulphur-34 is most enriched and boron-10 most depleted in SSM000022. In the opposite part of the figure, where sulphur-34 is most depleted and boron-10 most enriched, are SSM000008, SSM000010 and SSM000020 located. There is, however, no apparent connection between these soil tubes.

In the lower plot of Figure 7-56, which shows strontium-87 versus chlorine-37, most soil tubes cluster in the middle of the plot. An exception is SSM000016, which forms a cluster to the right where strontium-87 is most enriched and chlorine-37 is somewhat depleted. In the other end of the diagram, where strontium-87 is most depleted, SSM000022 is found.

**Table 7-9. Correlation (Pearson) matrix for isotopes of sulphur, chlorine, strontium, boron and a selection of major elements in shallow groundwater in the Simpevarp area. Values in bold are significant ( $p < 0.05$ ). The correlation analysis is based on all complete observations from soil tubes in Simpevarp (n=21).**

Element		Ca	HCO <sub>3</sub>	Cl	SO <sub>4</sub>	Sr	S-34	Cl-37	Sr-87	B-10
Calcium	Ca	1	<b>0.44</b>	–0.11	0.10	0.35	–0.21	–0.07	0.02	0.18
Bicarbonate	HCO <sub>3</sub>	<b>0.44</b>	1	<b>0.51</b>	0.38	<b>0.85</b>	<b>0.45</b>	–0.05	–0.28	<b>–0.45</b>
Chloride	Cl	–0.11	<b>0.51</b>	1	<b>0.84</b>	<b>0.75</b>	<b>0.47</b>	–0.03	<b>–0.51</b>	<b>–0.56</b>
Sulphate	SO <sub>4</sub>	0.10	0.38	<b>0.84</b>	1	<b>0.70</b>	0.15	0.15	<b>–0.51</b>	–0.35
Strontium	Sr	0.35	<b>0.85</b>	<b>0.75</b>	<b>0.70</b>	1	0.41	0.03	<b>–0.62</b>	<b>–0.47</b>
Sulphur-34	S-34	–0.21	<b>0.45</b>	<b>0.47</b>	0.15	0.41	1	0.06	–0.14	<b>–0.81</b>
Chlorine-37	Cl-37	–0.07	–0.05	–0.03	0.15	0.03	0.06	1	–0.22	–0.01
Strontium-87	Sr-87/Sr-86	0.02	–0.28	<b>–0.51</b>	<b>–0.51</b>	<b>–0.62</b>	–0.14	–0.22	1	0.11
Boron-10	B-10/B-11	0.18	<b>–0.45</b>	<b>–0.56</b>	–0.35	<b>–0.47</b>	<b>–0.81</b>	–0.01	0.11	1

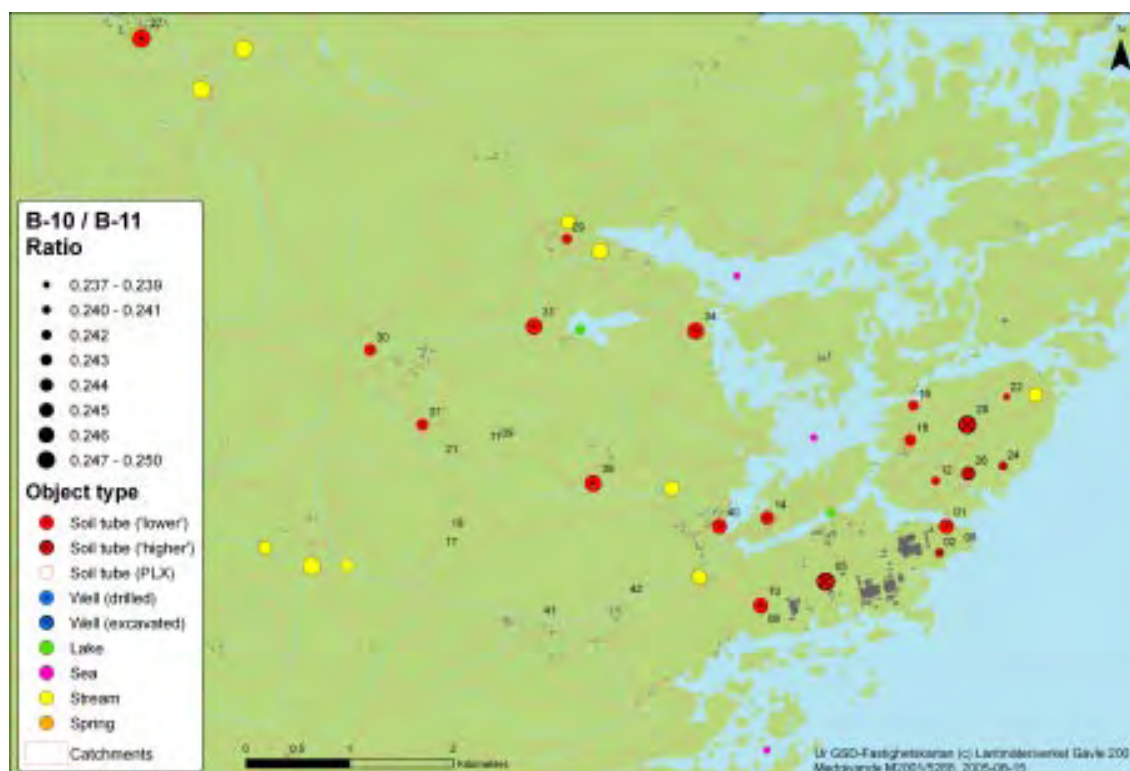


**Figure 7-56.** Sulphur-34 versus boron-10 (upper) and strontium-87 versus chlorine-37 (lower) in samples from soil tubes in the Simpevarp area. Individual observations plotted as ‰ deviations from international standards (S-34 and Cl-37) or natural abundance ratio (Sr-87 and B-10).

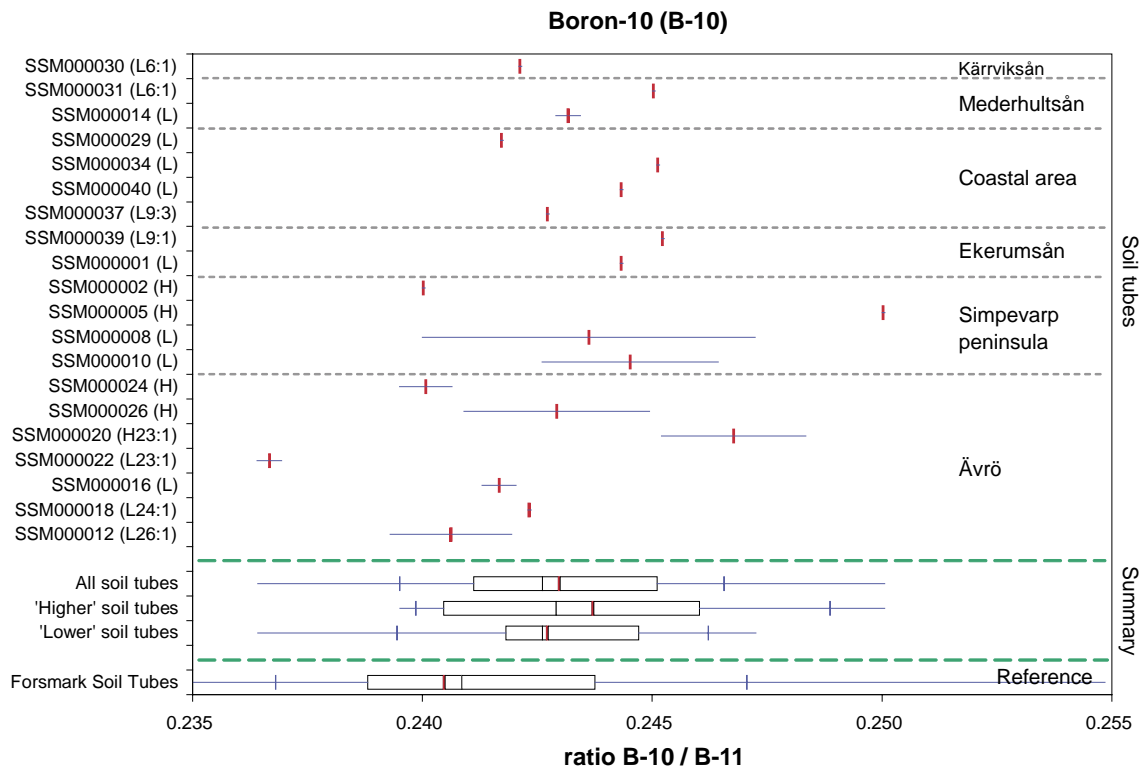
The *boron-10/boron-11* ratios found in the Simpevarp area are slightly lower than the natural abundance ratio. The median ratio of the soil tubes in the Simpevarp area is 0.243, compared to 0.248 in natural abundance /Clark and Fritz 1997/. The median ratio in shallow groundwater in the Forsmark area is 0.240 (Figure 7-58). The ratios found in lake and streaming water are in the same level as in shallow groundwater, whereas the ratio found in sea water is markedly lower, with a median value of 0.238 (Figure 7-57).

Boron-10 is most depleted in SSM000022, located at the Island of Ävrö. The highest enrichment is found in SSM000005, located near the nuclear power plant at the Simpevarp Peninsula, a soil tube which shows a deviating water chemical composition with respect to several parameters, e.g. calcium.

The *chlorine-37/chlorine-35* ratios found in the Simpevarp area are approximately centred on the international standard, corresponding to an average ratio of about 0.324 (SMOC). The natural abundance ratio is 0.320 /Clark and Fritz 1997/ (Figure 7-59). There are great uncertainties regarding the spatial variation of chlorine-37 in both shallow groundwater and surface water, as a substantial part of the variation in the Simpevarp area are within the analytical error of  $\pm 0.2\%$ . No clear spatial patterns can be identified for chlorine-37.



**Figure 7-57.** Ratio of boron-10/boron-11 in shallow groundwater and surface water in the Simpevarp area. The dots represent mean values of available data from soil tubes, private wells and surface waters. The figures in black corresponds to the last two digits of the id-codes of the soil tubes.

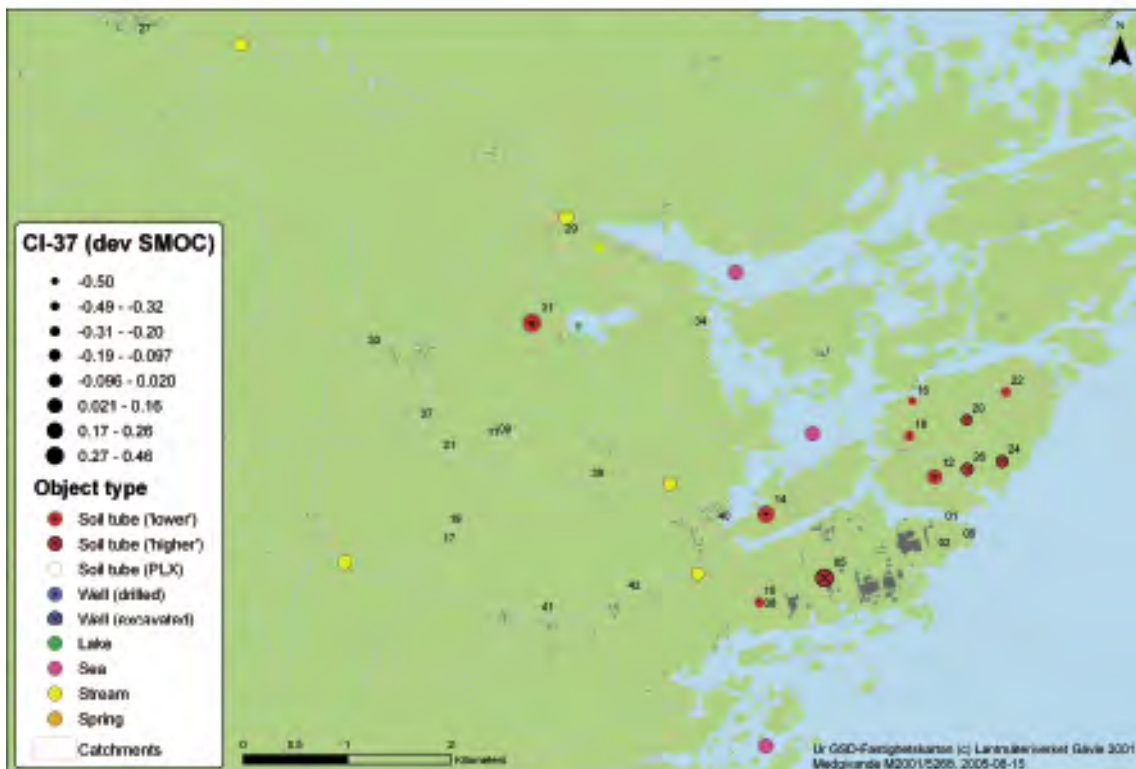
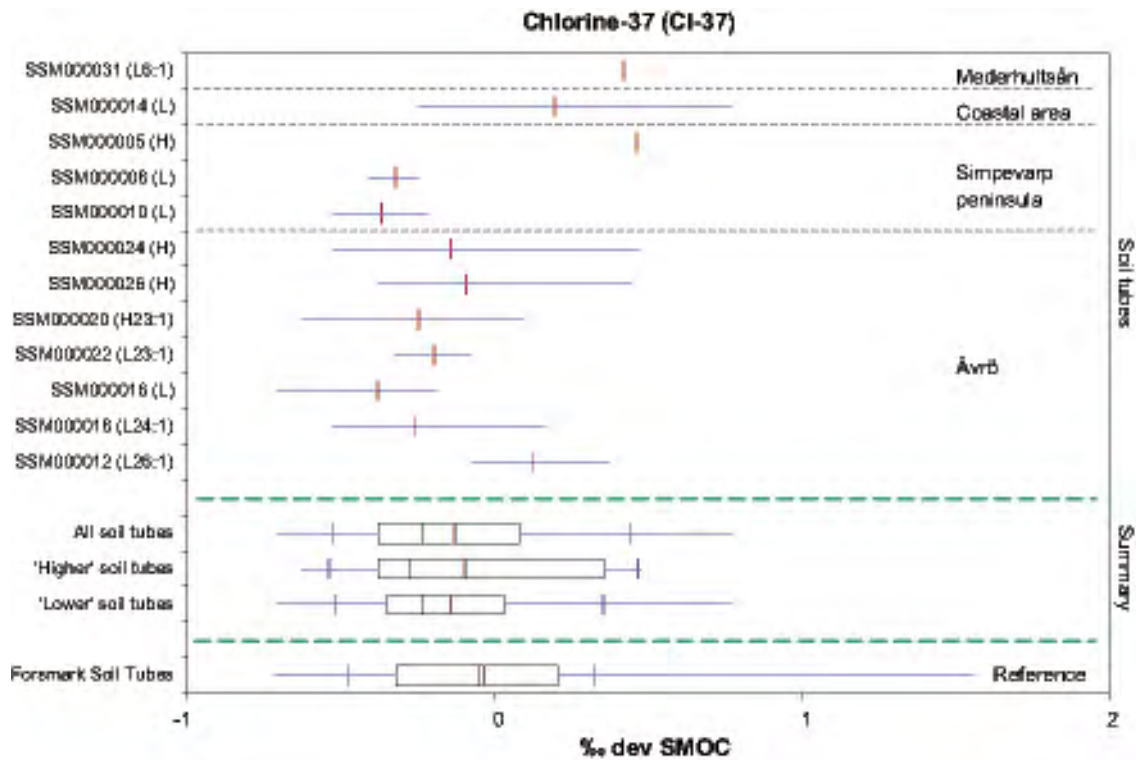


**Figure 7-58.** Boron-10/boron-11 ratio in shallow groundwater in the Simpevarp area. Explanations to the figure are given in Section 4.3.

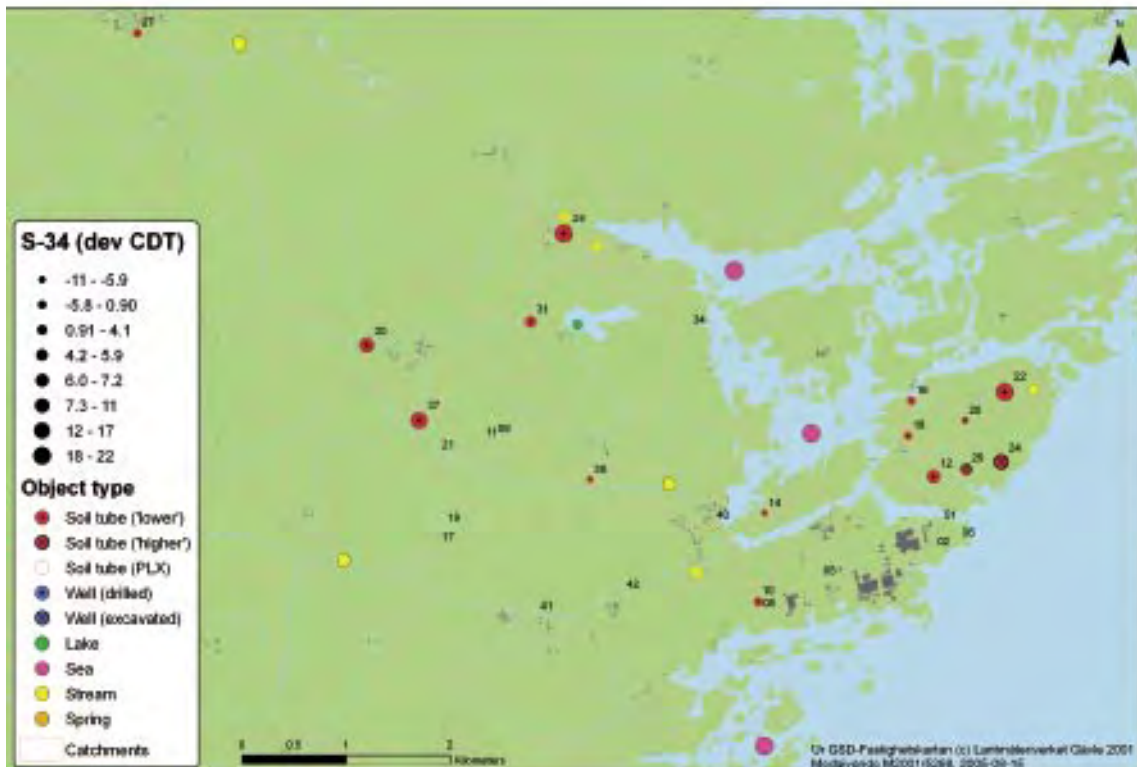
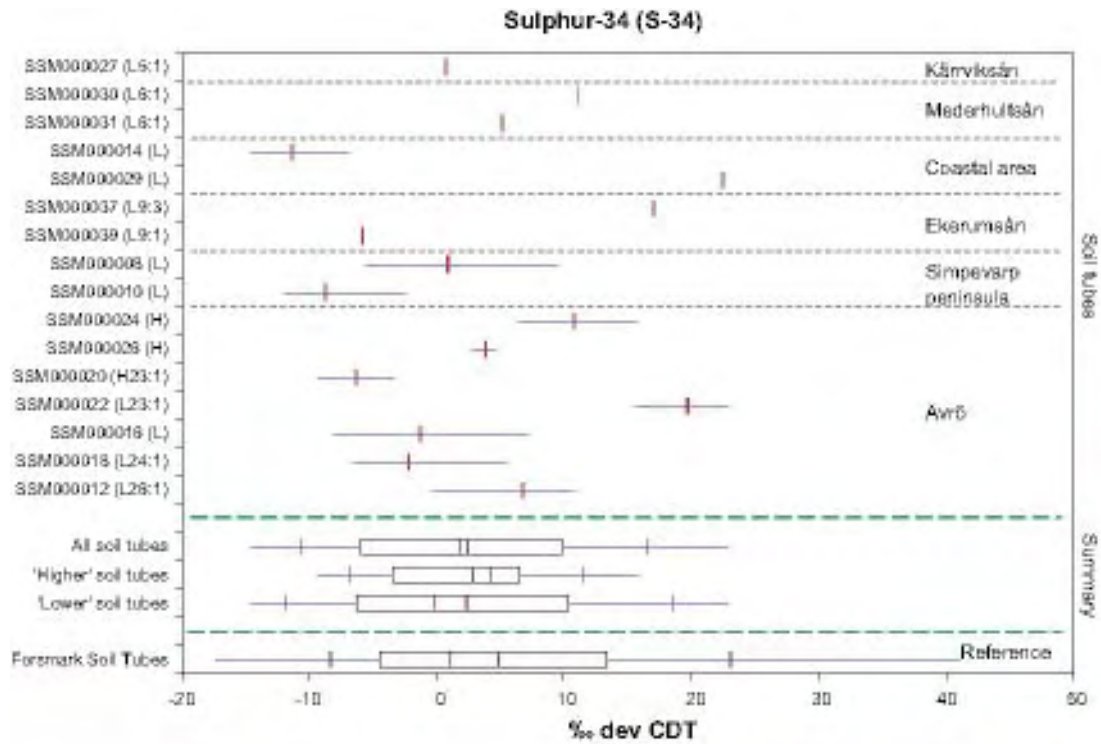
The recorded values of *sulphur-34* in shallow groundwater in the Simpevarp area vary within a wide range, between  $-15\text{‰}$  to  $23\text{‰}$  CDT. Fresh surface waters range between  $-1\text{‰}$  and  $15\text{‰}$  CDT, with most of the samples between  $2\text{‰}$  and  $8\text{‰}$  CDT. All measurements of sea water are very close to  $20\text{‰}$  CDT (Figure 7-60). Three soil tubes (SSM000022, SSM000029 and SSM000037) show enriched content of Sulphur-34, corresponding to the levels found in sea water ( $20\text{‰}$  CDT).

*Strontium-87* is generally enriched relative the natural abundance ratio (Sr-87/Sr-86). The recorded ratio in the Simpevarp soil tubes ranges from 0.712 to 0.734, compared to the natural abundance ratio of 0.712 /Clark and Fritz 1997/. The median ratio in the Simpevarp area is 0.719, which is slightly lower than the median ratio in the Forsmark area (0.724). Strontium-87 is least enriched in SSM000002 and SSM000034, where the ratios are only slightly higher than the ratios found in sea water in the area (0.710). The highest enrichments are found for SSM000005 and SSM000016 (Figure 7-61).

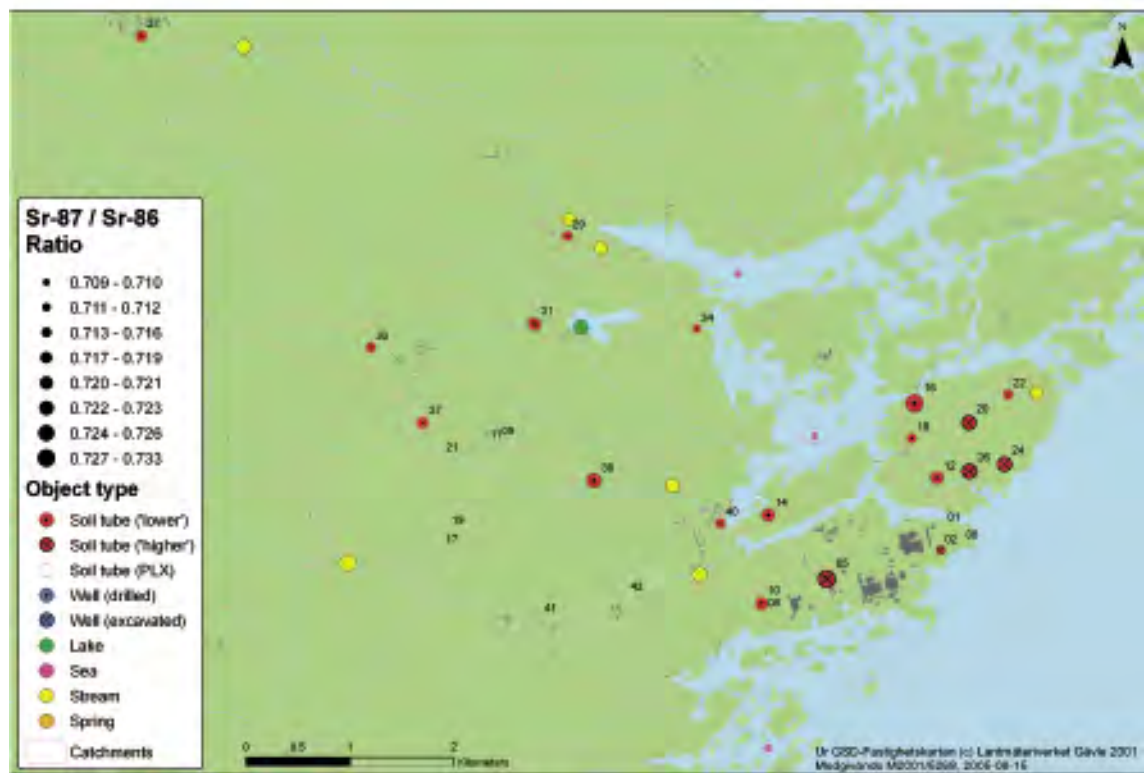
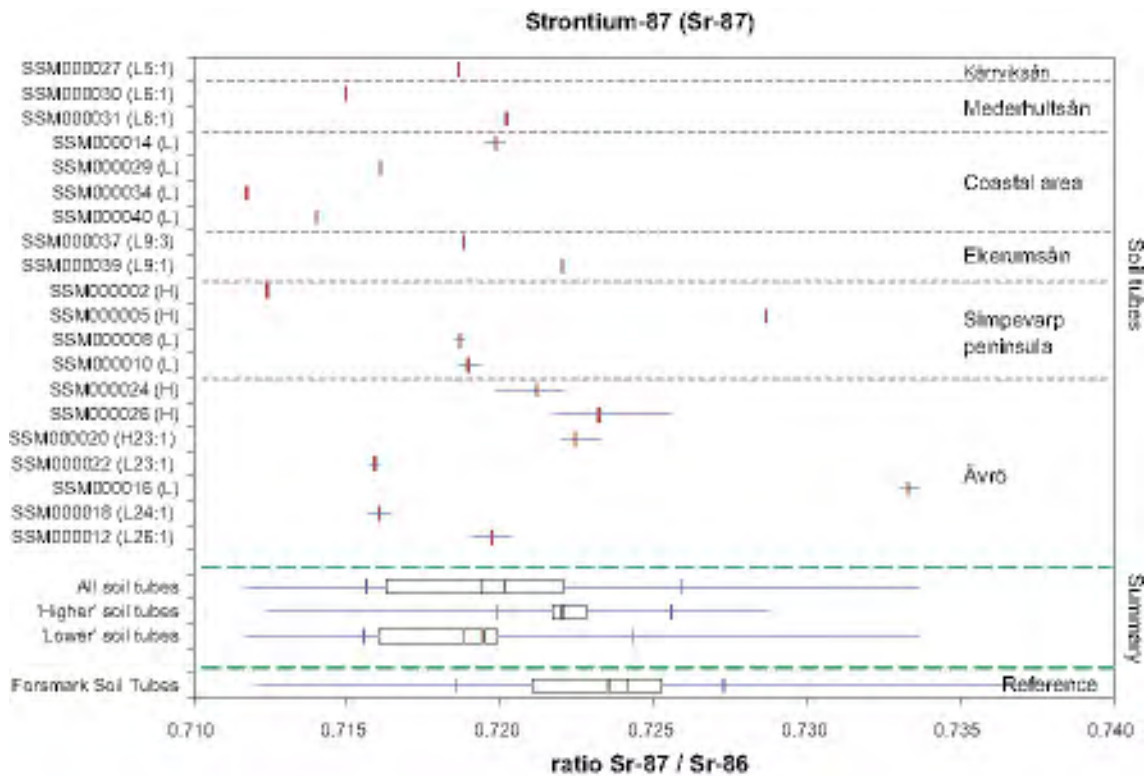




**Figure 7-59.** Chlorine-37 deviations in shallow groundwater in the Simpevarp area. Distributions shown as box-plots (upper) and spatial pattern (lower) for mean values of shallow groundwater and surface waters. The figures in black corresponds to the last two digits of the id-codes of the soil tubes. Explanations to the figure are given in Section 4.3.



*Figure 7-60. Sulphur-34 deviations in shallow groundwater in the Simpevarp area. Distributions shown as box-plots (upper) and spatial pattern (lower) for mean values of shallow groundwater and surface waters. The figures in black corresponds to the last two digits of the id-codes of the soil tubes. Explanations to the figure are given in Section 4.3.*



*Figure 7-61. Strontium-87/strontium-86 ratios in shallow groundwater in the Simpevarp area. Distributions shown as box-plots (upper) and spatial pattern (lower) for mean values of shallow groundwater and surface waters. The figures in black corresponds to the last two digits of the id-codes of the soil tubes. Explanations to the figure are given in Section 4.3.*

## 7.8.6 Isotopes of uranium, thorium, radium and radon

In this section the radioactive isotopes of uranium, thorium, radium and radon are compiled. Table 7-10 summarises data available from soil tubes in the Simpevarp area. Data from private wells in Sweden, as well as corresponding measurements from the Forsmark area, are used as reference. Detailed statistical information on all isotopes is compiled in Appendix 2.

The activity of *radium-226* ranges from less than 0.1 to 0.5 Bq/l. In the soil tubes where the highest radium activities are measured, SSM000012 and SSM000018, there are substantial differences between the two observations that are available per soil tube. Many of the radium observations border on, or fall below the reporting limit of 0.1 Bq/l. The *radon-222* activities, which range from 11 to 56 Bq/l, show only minor differences between the two available observations per soil tube. The highest radon-222 activities are found in SSM000014, SSM000016 and SSM000031. No correlation can be observed when radium-226 is plotted versus radon-222 (Figure 7-62).

**Table 7-10. Median activities of uranium, thorium, radium and radon isotopes in shallow groundwater in the Simpevarp area.**

Idcode	Catchment		Ra-226 Bq/l	Rn222 Bq/l	Th-230 mBq/kg	Th-232 mBq/kg	U-234 mBq/kg	U-235 mBq/kg	U-238 mBq/kg
SSM000008	Simpevarp Peninsula	L	0.10	23	< 50	< 50	50	< 50	< 50
SSM000010	Simpevarp Peninsula	L	0.10	21	< 50	< 50	90	< 50	110
SSM000012	Skölkebäcken	26:1 L	0.28	21	< 50	< 50	< 50	< 50	60
SSM000014	Coastal area	L	0.13	42	< 50	< 50	140	< 50	90
SSM000016	Ävrö	L	< 0.1	31	< 50	< 50	80	< 50	90
SSM000018	Lindströmmebäcken	24:1 L	0.30	25	< 50	< 50	< 50	< 50	< 50
SSM000020	Vadevikebäcken	23:1 H	0.15	23	< 50	< 50	50	< 50	< 50
SSM000022	Vadevikebäcken	23:1 L	< 0.1	17	< 50	< 50	240	< 50	130
SSM000024	Ävrö	H	0.10	13	< 50	< 50	< 50	< 50	< 50
SSM000026	Ävrö	H	0.10	22	< 50	< 50	< 50	< 50	< 50
SSM000027	Kärrviksån	5:1 L	0.20	11					
SSM000029	Coastal area	L	0.20	13	< 50	< 50	80	< 50	< 50
SSM000030	Mederhultsån	6:1 L	0.10	13	< 50	< 50	80	< 50	< 50
SSM000031	Mederhultsån	6:1 L	0.20	38	< 50	< 50	< 50	< 50	< 50
SSM000034	Coastal area	L	0.10	17	< 50	< 50	< 50	< 50	< 50
SSM000037	Ekerumsån	9:3 L	0.10	15	< 50	< 50	< 50	< 50	< 50
SSM000039	Ekerumsån	9:1 L	0.20	30	< 50	< 50	80	< 50	50
'Higher' soil tubes		H	0.10	21	< 50	< 50	< 50	< 50	< 50
'Lower' soil tubes		L	0.10	22	< 50	< 50	80	< 50	< 50
All soil tubes			0.10	22	< 50	< 50	50	< 50	< 50
Reference									
Forsmark	Soil tubes		0.20	30	1.6	< 50	85	< 50	72
Sweden	Excavated wells (a)			20					
Sweden	Drilled wells (a)		0.01	85					
Sweden	Drilled wells (b)		0.022	143			66		32

a. 492 samples of radium and 2,500 samples of radon /SSI 2005/.

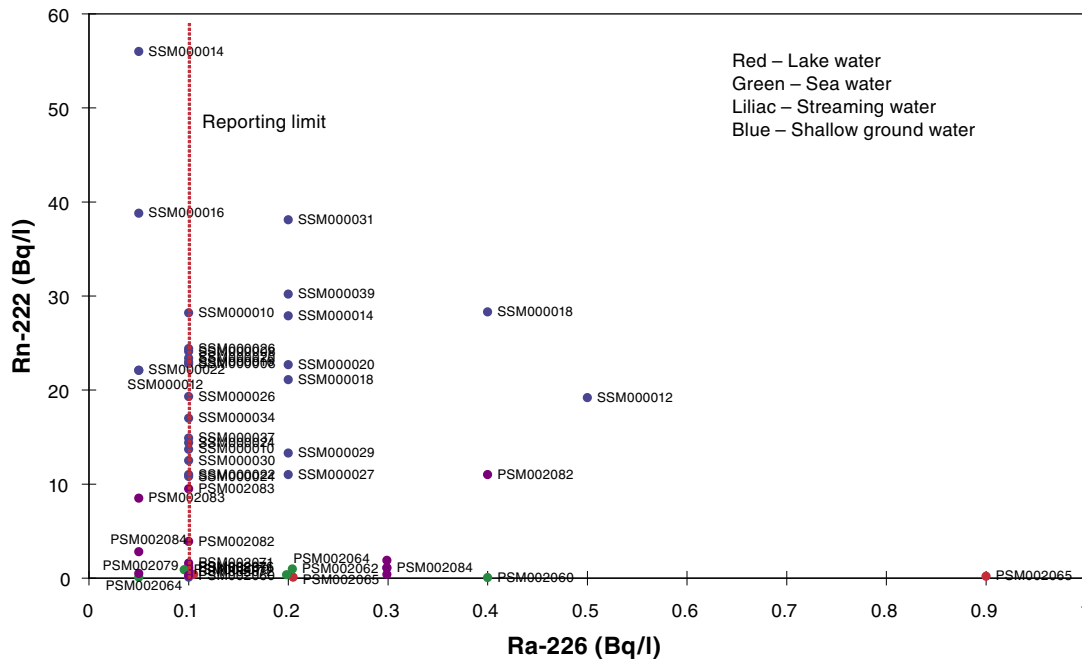
b. 54 drilled wells /Östergren et al. 2003/.

The radium activities in shallow groundwater in the Simpevarp area are comparable to the activities measured in the Forsmark area, and markedly higher than the median value for reference data from drilled wells in Sweden. The radon activities in the Simpevarp area are in the same order of magnitude as both the Forsmark soil tube data and data from excavated wells in Sweden. The radon activities in drilled wells in Sweden are substantially higher than the activities observed in the Simpevarp area.

The radium-226 range in surface waters overlaps or exceeds the range measured in shallow groundwater. The highest radium activity of 0.9 Bq/l is measured in one of the observations from Lake Frisksjön (PSM002065). All radon-222 measurements in shallow groundwater exceed the activities measured in surface waters. Three observations in streaming water (PSM002082 and PSM002083) show elevated radon-222 activities.

All measurements of *thorium-230* and *thorium-232* fall below the reporting limit.

The *uranium-234* activity ranges from less than 50 to 240 mBq/kg. All measurements of *uranium-235* fall below the reporting limit. The *uranium-238* activity ranges from less than 50 to 130 mBq/kg. The median activity of uranium-234 (50 mBq/kg) is in level with the activities measured in reference data from 54 wells in Sweden. The highest activities of both uranium-234 and uranium-238, as well as slightly elevated concentrations of uranium, are found in SSM000022 at the Island of Ävrö.



**Figure 7-62.** Radium versus radon in shallow groundwater in the Simpevarp area. Individual observations of all available data from both shallow groundwater and surface waters are included in the plot.



## 7.9 Time-trends and temporal variation in chemical composition

The soil tube data from the Simpevarp area, available in the SICADA database in May 2005, usually consist of one observation, and the maximum number of observations is four. These time-series are too short for a meaningful evaluation of temporal variation and time-trends in water chemical composition.

Private wells in the area have been sampled for major constituents once a year during August or September since 1989 (Figure 7-63). Two of the excavated wells which show the longest and most complete time series are here used exemplify time trends in a ten year perspective. PSM000001 is located in the northern part of the Simpevarp area on soils dominated by bare bedrock and acid groundwater. PSM000010 is located near the outlet of Ekerumsån on richer soils dominated by till and neutral groundwater. All sampling have been conducted once a year.

PSM000010 shows about five times higher concentrations of calcium, chloride and sulphate compared to PSM000001. Both wells show tendencies of decreasing concentrations of all three major constituents during the period. Sulphate shows the most pronounced concentration shift in PSM000001 and chloride in PSM000010 (Figure 7-64).

It should be noted that the observed decrease of several ions in the private wells could be due to either long-term changes in the recharging groundwater or changes in the usage of the wells. The decreasing chloride concentrations in PSM000001 at the beginning of the period as well as the gradual decrease observed in PSM000010 could be an indication of the latter explanation.

The fraction non-marine sulphate was estimated using chloride as a reference according to an empirical relationship ( $\text{non-marine SO}_4 = 0.103 \times \text{Cl}$  expressed in meq/l /Naturvårdsverket 1999a). From Figure 7-65 it can be concluded that the sulphate in PSM000001 consists of about 90% non-marine sulphate compared to about 70% in PSM000010, where sulphate of marine origin probably originates from marine relics in the Quaternary deposits.

There is a decreasing tendency of non-marine sulphate in PSM000001, consistent with the generally decreasing sulphate deposition in southern Sweden during the last decades. This tendency is probably most pronounced in wells situated in areas with a thin layer of overburden. In PSM000010 there is an opposite trend, with an increasing fraction of non-marine sulphate, probably due to altered usage of the well.

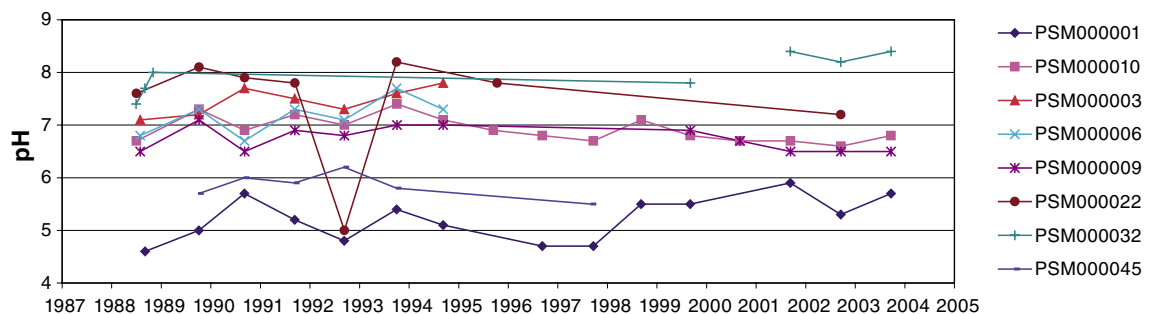
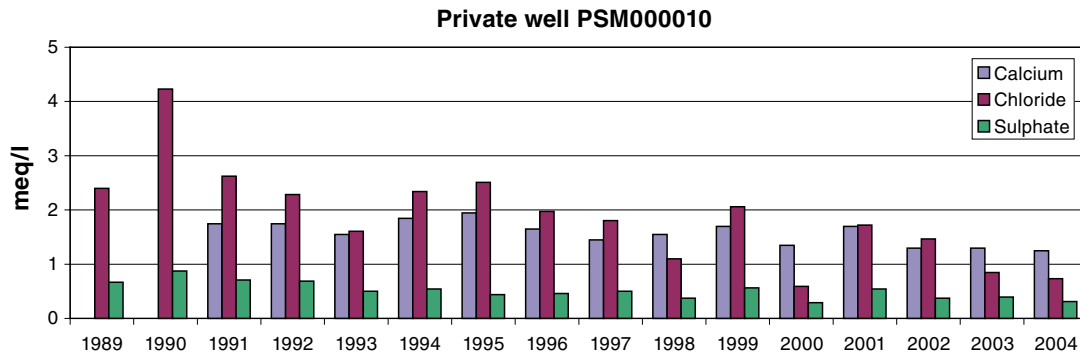
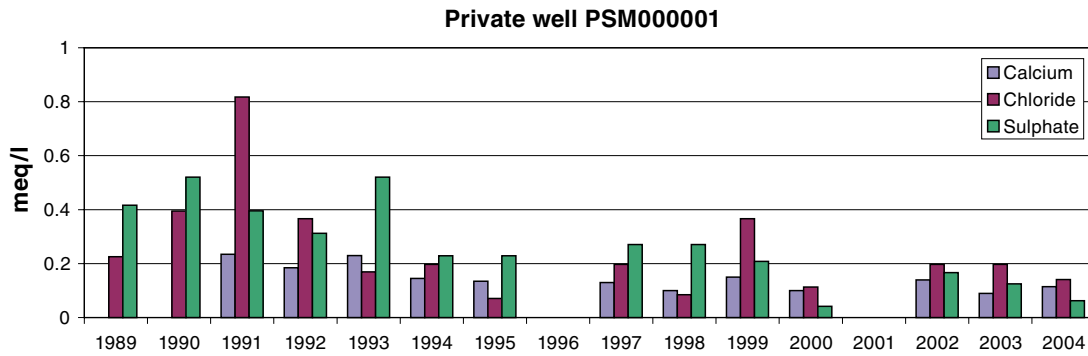
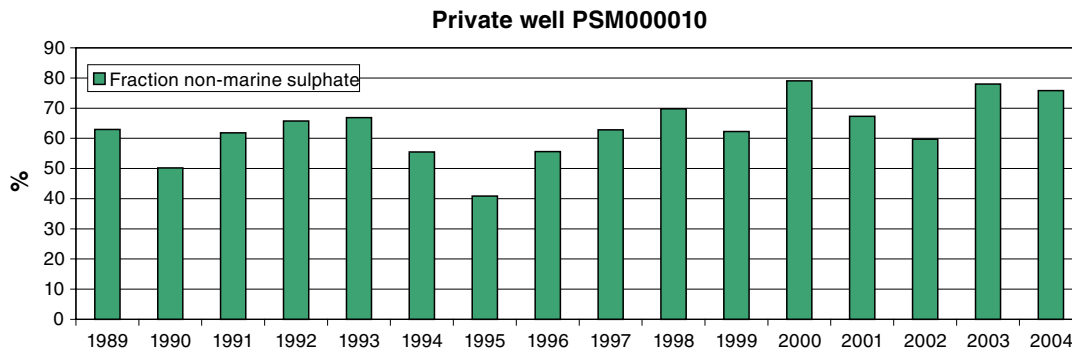
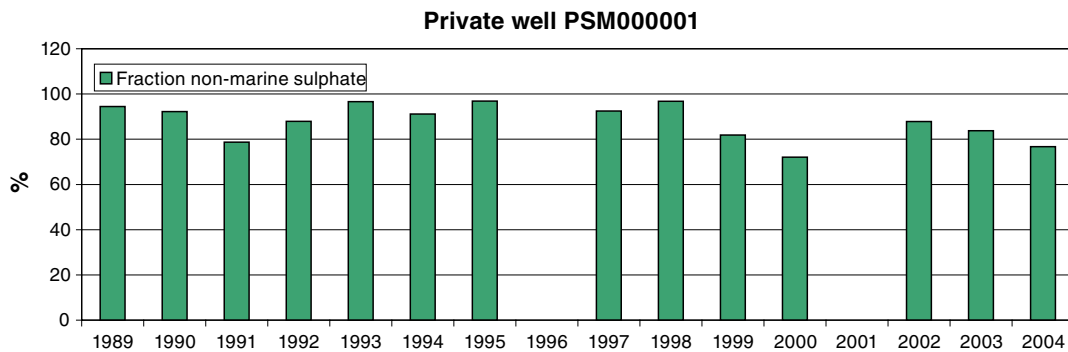


Figure 7-63. pH in excavated wells in the Simpevarp area.



**Figure 7-64.** Concentrations of calcium, chloride and sulphate in two private wells in the Simpevarp area.



**Figure 7-65.** Estimated sulphate fraction of non-marine origin in the private wells SSM000001 in the northern part of the Simpevarp area, and PSM000010 in the village of Ekerum, near the outlet of Ekerumsån.



## 7.10 Relationships among elements in groundwater

In this section, various evaluations which include several parameters are presented, in contrast to the element-wise compilations in previous sections. This division is not consistent throughout the report as some ratios and correlations are presented in connection to compilations of different parameter groups, for example stable and radioactive isotopes.

### 7.10.1 Principal Component Analysis

A Principal Component Analysis was accomplished in order to elucidate relationships among variables and to identify groups and outliers among the soil tubes. The analysis was carried out on mean values per object in order to isolate the spatial variation, using normalised data with no transformations. As the matrix contains several missing data, the results were interpreted cautiously and all relationships were checked in raw data.

The PCA was carried out on all available variables with enough spatial coverage. As all rare earth elements are very closely correlated, only lanthanum and thulium was included in the analysis as examples of this element group. Totally four components were significant with eigenvalues larger than 2. These components, which are shown in the figures below, accounted for 62% of the total variation (23%, 19%, 11% and 9%, respectively).

The soil tubes in Simpevarp area forms four groups according to the two first components:

1. SSM000022 at the Island of Ävrö
2. SSM000005 near the nuclear power plant at the Simpevarp Peninsula.
3. SSM000034, 18, 29, 40, 02, 12, 30
4. SSM000001, 08, 10, 14, 16, 24, 26, 27, 31, 39.

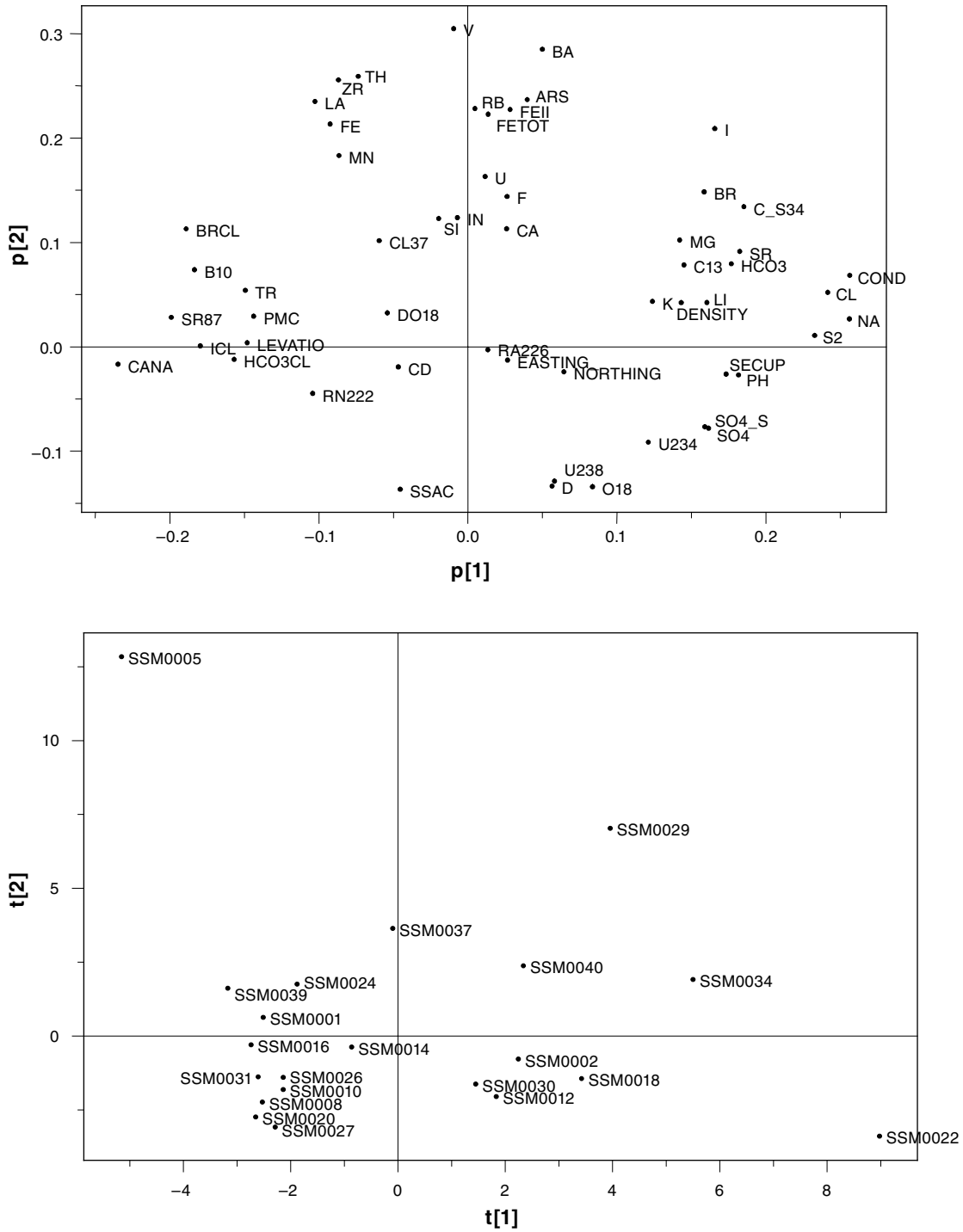
The variables with the strongest correlation to the *first component* are the major elements sodium, chloride, electrical conductivity, strontium, lithium, magnesium and potassium. Inversely correlated to these variables are carbon-14 (percent modern carbon - PMC), tritium and the ratios of  $\text{Ca}/(\text{Ca}+\text{Na})$ ,  $\text{I}/\text{Cl}$  and  $\text{Br}/\text{Cl}$ .

The *first component* discriminates objects with high ionic strength from the rest. The highest concentrations are found in SSM000022. The third group in the list above forms an intermediate cluster with high, but usually slightly lower concentrations than in SSM000022 (Figure 7-66).

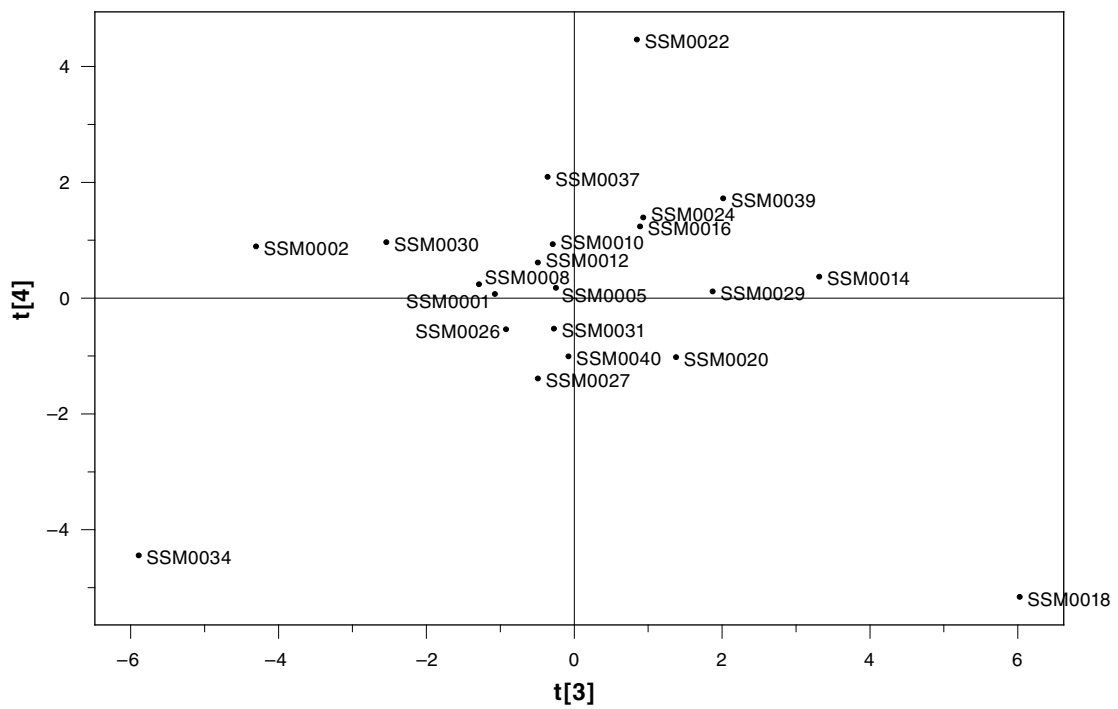
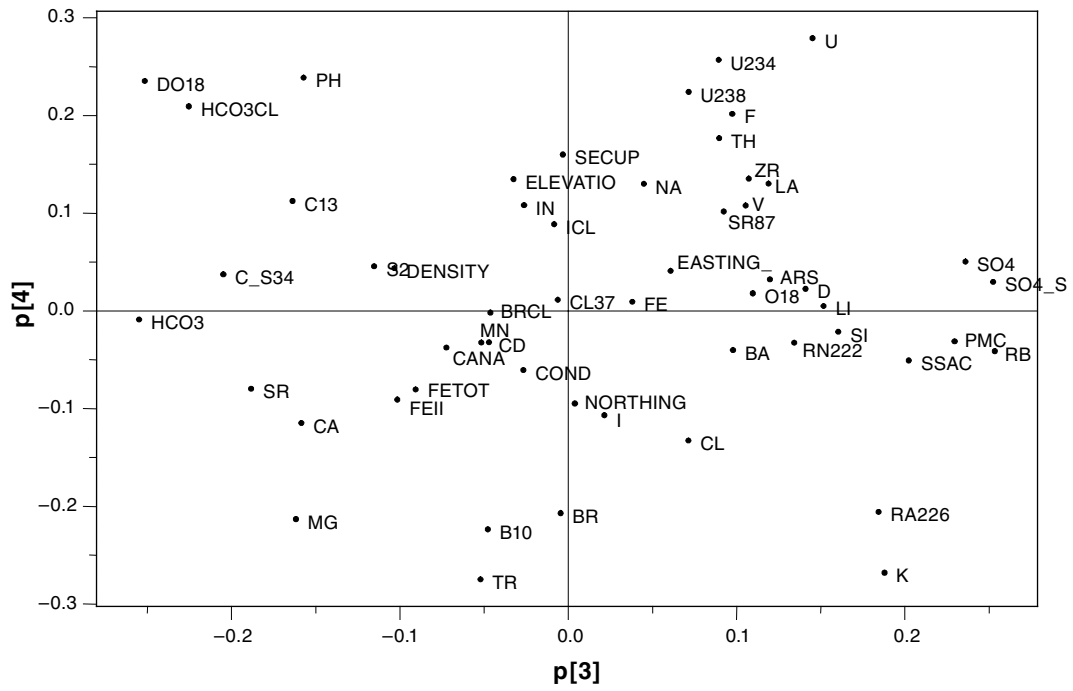
To the *second component* are several trace metals correlated, e.g. rubidium, vanadium, barium, thorium, lanthanum and zirconium. Negatively correlated to these parameters are the isotopes deuterium and oxygen-18. High trace metal concentrations are found in SSM000029 and low in SSM000022.

In SSM000005, which is strongly correlated to the second component, especially high values of iron and manganese are observed. This soil tube deviates in several parameters, and the differing chemical composition may be caused either by contamination or by a deviating composition of the overburden in the surroundings.

The *third component* discriminates between SSM000018 and SSM000034, both showing high chloride concentrations and high ionic strength. SSM000018 show high values of sulphate, rubidium and potassium, whereas the content of these elements are especially low in SSM000034. Instead, bicarbonate content is high in SSM000034 and low in SSM000018 (Figure 7-67).



**Figure 7-66.** The first (horizontal) and second (vertical) components of the PCA on soil tube data from the Simpevarp area. Upper – the loading plot which shows how the variables are related. Below – the score plot which shows how the objects (soil tubes) are related. See Table 7-11 for explanations of the abbreviations used.



**Figure 7-67.** The third (horizontal) and fourth (vertical) components of the PCA on soil tube data from the Simpevarp area. Upper – the loading plot which shows how the variables are related. Below – the score plot which shows how the objects (soil tubes) are related. See Table 7-11 for explanations of the abbreviations used.

The *fourth component* discriminates SSM000022 from SSM000018 and SSM000034 by showing high pH, elevated concentrations of uranium and fluoride, as well as low tritium content. SSM000022 deviates in several parameters, indicating a different origin of the groundwater. The especially low tritium value, in combination with the low content of modern carbon, indicates groundwater of older and probably deeper origin compared to most other soil tubes.

**Table 7-11. Abbreviations used in Figures 7-66 and 7-67.**

AL	Aluminium	MN	Manganese
ARS	Arsenic	NA	Sodium
B10	Boron-10	NI	Nickel
BA	Barium	NORTHING	North coordinate
BR	Bromide	O18	Oxygen-18
BRCL	Br/Cl ratio	O2	Oxygen
C13	Carbon-13	PH	pH
CA	Calcium	PMC	Carbon-14
CANA	Ca/(Ca+Na) ratio	RA222	Radon-222
CL37	Chlorine-37	RA226	Radium-226
COND	Conductivity	RB	Rubidium
D	Deuterium	S2	Hydrogen sulphide
DIC	Dissolved inorganic carbon	S34	Sulphur-34
DO18	D/O-18 ratio	SECUP	Depth of soil tube intake sieve
EASTING	East coordinate	SO4	Sulphate
ELEVATION	Altitude above sea level	SO4_S	Sulphur as sulphate
F	Fluoride	SR	Strontium
FE	Iron	SR87	Strontium-87
HCO3	Bicarbonate	SSAC	SO4/(SO4+Cl+HCO3)
HCO3CL	HCO3/(HCO3+Cl)	TH	Thorium
I	Iodine	TL	Thallium
ICL	I/Cl ratio	TM	Thulium
IN	Indium	TOC	Total organic carbon
K	Potassium	TR	Tritium
LA	Lanthanum	U	Uranium
LI	Lithium	V	Vanadium
MG	Magnesium		

### 7.10.2 Element ratios of major constituents

In this section, ratios of major and minor constituents are presented. These ratios, which are rather arbitrarily selected after proposals from hydrologists, are shown to facilitate the interpretations of the major and minor constituents. In Table 7-12 is the median value per soil tube shown for this selection of ratios, and in Figures 4-69 to 4-71 is the spatial variation shown in maps.

In contrast to the median values in the table below, the dots shown in the maps represent mean values. In addition to data from soil tubes, data from private wells and surface waters are included in the plots.

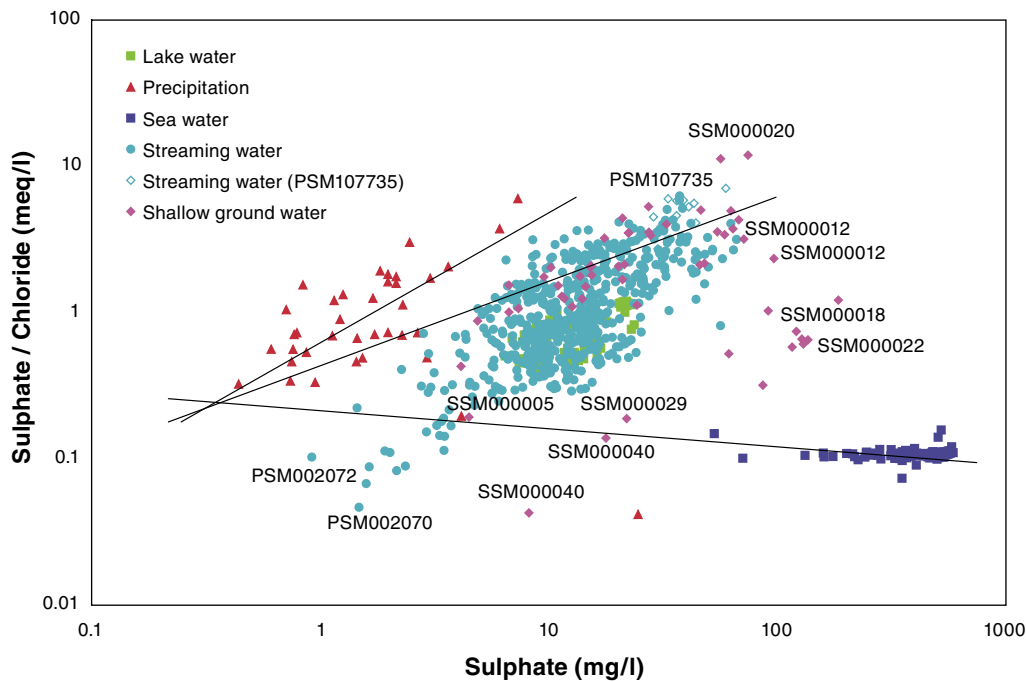
**Table 7-12. Element ratios of major constituents in water samples from soil tubes in the Simpevarp area. Shown in the table are median values of meq/l ratios, calculated per soil tube. Note that the ratios including bromide and iodide are multiplied by a factor 1,000.**

Idcode	Ca/ (Ca+Na)	HCO <sub>3</sub> / (HCO <sub>3</sub> +Cl)	1,000×Br/Cl	1,000×I/Cl	SO <sub>4</sub> / (SO <sub>4</sub> +Cl+HCO <sub>3</sub> )
SSM000001	0.77	0.90	6.2	–	0.040
SSM000002	0.38	0.96	5.2	–	0.040
SSM000005	0.91	0.88	24	–	0.023
SSM000008	0.79	0.94	12	0.84	0.092
SSM000010	0.82	0.95	9.4	0.65	0.15
SSM000012	0.64	0.89	3.1	0.10	0.27
SSM000014	0.56	0.79	3.7	0.35	0.48
SSM000016	0.90	0.92	7.2	0.48	0.15
SSM000018	0.47	0.23	2.7	0.050	0.31
SSM000020	0.88	0.83	8.5	0.45	0.56
SSM000022	0.10	0.52	1.9	0.027	0.23
SSM000024	0.73	0.86	7.7	0.71	0.14
SSM000026	0.82	0.82	7.9	0.20	0.32
SSM000027	0.53	0.57	6.0	0.11	0.48
SSM000029	0.21	0.56	5.2	0.16	0.076
SSM000030	0.74	0.90	2.8	0.18	0.17
SSM000031	0.65	0.82	7.4	0.26	0.20
SSM000034	0.62	0.70	4.8	0.068	0.00016
SSM000037	0.65	0.89	2.8	0.14	0.11
SSM000039	0.81	0.81	8.2	0.35	0.25
SSM000040	0.28	0.44	3.4	–	0.047
SSM000042	–	0.57	5.3	–	0.30
'Higher' soil tubes	0.80	0.87	7.9	0.45	0.27
'Lower' soil tubes	0.65	0.81	4.8	0.17	0.21
All soil tubes	0.73	0.84	6.2	0.20	0.22

The four leftmost ratios in Table 7-12 show very similar spatial patterns. The molar ratio between sulphate and the sum of sulphate, chloride and bicarbonate show a deviating pattern, for example at the Simpevarp Peninsula where markedly lower values are observed.

In Figure 7-68 are the sulphur concentration plotted versus the molar sulphur-chloride ratio. Extreme observations in different parts of the figure have been marked by id-codes to facilitate the evaluation.

The crossing of the lines in Figure 7-68 corresponds to the composition of maritime rainfall, where sulphate and chloride originates from sea water. The lower, nearly horizontal line shows the mixing trend with sea water, and the upper line shows the sulphate enrichments in precipitation probably originating from non-marine sources, for example burning of fossil fuels. The sulphate/chloride ratio in precipitation in the Simpevarp area probably differs depending on the wind direction during rainfall.



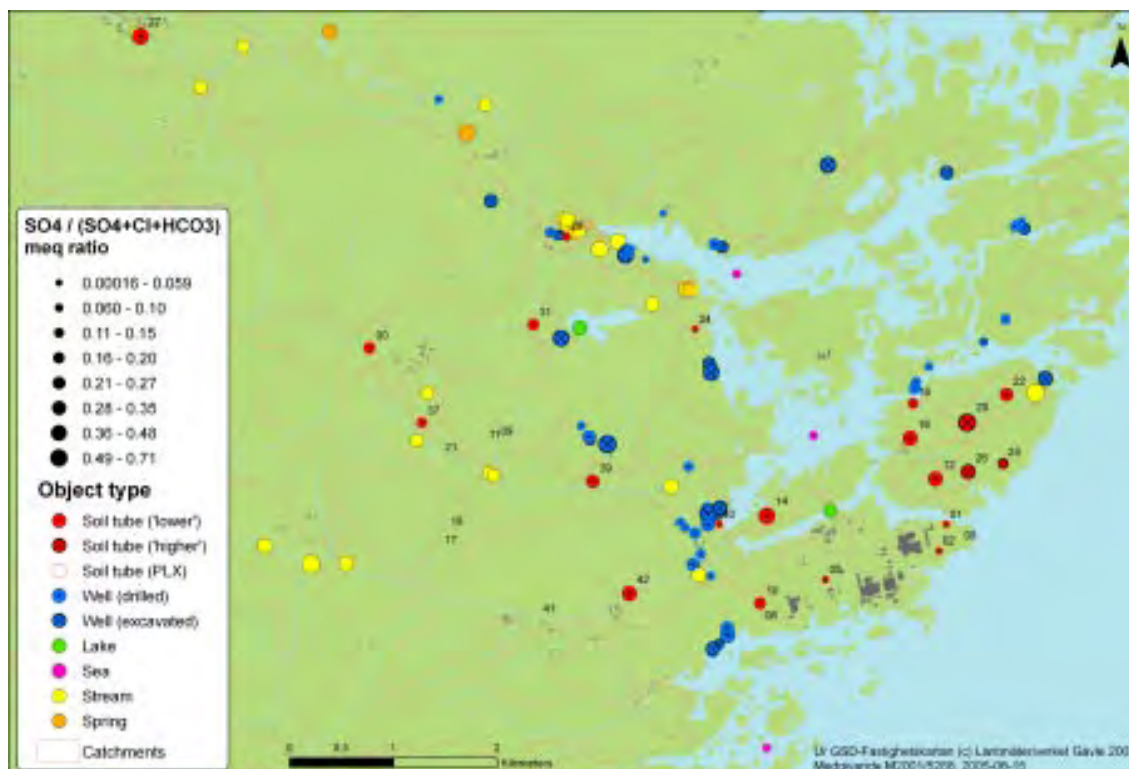
**Figure 7-68.** Plot showing the sulphate concentration versus the molar sulphate-chlorine ratio in shallow groundwater and surface water in the Simpevarp area.

Most soil tubes cluster around the middle line which shows the sulphate enrichments relative chloride, probably due to dissolution of sulphur-containing minerals. Fresh surface waters scatter between these three lines, representing different mixing proportions.

The soil tubes in the right part of Figure 7-68 is dominated by observations from the Island of Ävrö, e.g. the soil tubes SSM000012, SSM000018, SSM000020 and SSM000022, as well as the stream station PSM107735. In the small catchment of Vadevikebäcken at the Island of Ävrö, the soil tube SSM000020, probably with recharge characteristics, is located in the upper part of the catchment. SSM000022 which is located further downstream probably show discharge characteristics. The stream station PSM107735 is located at the outlet of the catchment (cf Figure 7-39).

The sulphate concentrations in both shallow groundwater and surface waters seem to be elevated at the Island of Ävrö, probably due to supply of non-marine sulphur sources from sulphur-containing minerals. The soil tube SSM000022 shows intermediate characteristics between the upstream soil tube SSM000020 and sea water, indicating a dual origin of this shallow groundwater. Also SSM000018 show similar characteristics with respect to sulphur and chloride. The composition of the water in the outlet at PSM107735 implies that water of SSM000022-type only constitutes a minor fraction of the total outflow from the catchment of Vadevikebäcken.

The 'sulphur-chloride-bicarbonate' ratio show especially low values at the Simpevarp Peninsula due to low sulphate concentrations. In SSM000001, SSM000002 and SSM000005, the ratio is even lower than in sea water. In the springs in the vicinity of the esker in the northern part of the Simpevarp area, the 'sulphur-chloride-bicarbonate' ratio is higher compared to most streaming water and shallow groundwater (Figure 7-69).



*Figure 7-69. Ratio between sulphur and the sum of sulphur, chloride and bicarbonate in shallow groundwater and surface water in the Simpevarp area.*

The calcium-sodium ratio is especially low in SSM000022 at the Island of Ävrö, whereas the observations in the catchment of Ekerumsån show elevated ratios (Figure 7-70). All sampling sites except for SSM000022 and SSM000040 exceed the ratio of sea water. Also the bicarbonate-chloride ratio is elevated in the catchment of Ekerumsån (Figure 7-70).

The patterns for the bromide-chloride and iodide-chloride ratios are very similar (Figure 7-71). The highest ratio is found in the spring in the northern part of the Simpevarp area. There are large uncertainties regarding bromide, since about 70% of the analyses fall below the reporting limit. The variation seen in the Br/Cl-ratio mainly reflects variations in chloride content.

### 7.10.3 Saturation indices

Saturation indices calculated for various minerals give indications whether the minerals are undersaturated, saturated or oversaturated under prevailing environmental conditions. When a mineral is undersaturated, dissolution processes transfer substances from rock or overburden to the water phase. At oversaturation, the reverse take place and substances may leave the water phase by precipitation. At saturation are the minerals in equilibrium with the dissolved ions in the water phase.

Based on concentrations of a number of constituents, laboratory measured pH and estimated groundwater temperature, the thermodynamic database WATEQ4F from USGS was used to calculate saturation indices for several minerals /USGS 2005/. All calculations were made on individual observations with complete records of the input data. In order to facilitate the evaluation in Table 7-13, mean values of the saturation indices were calculated per soil tube.



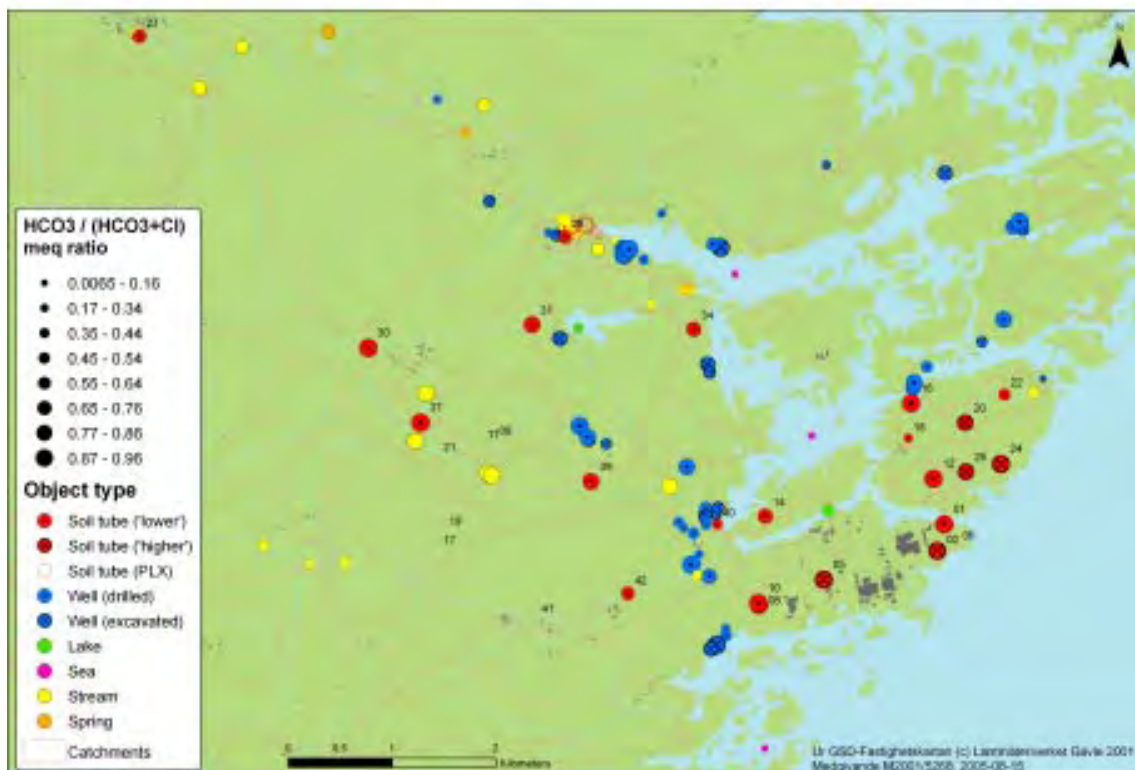
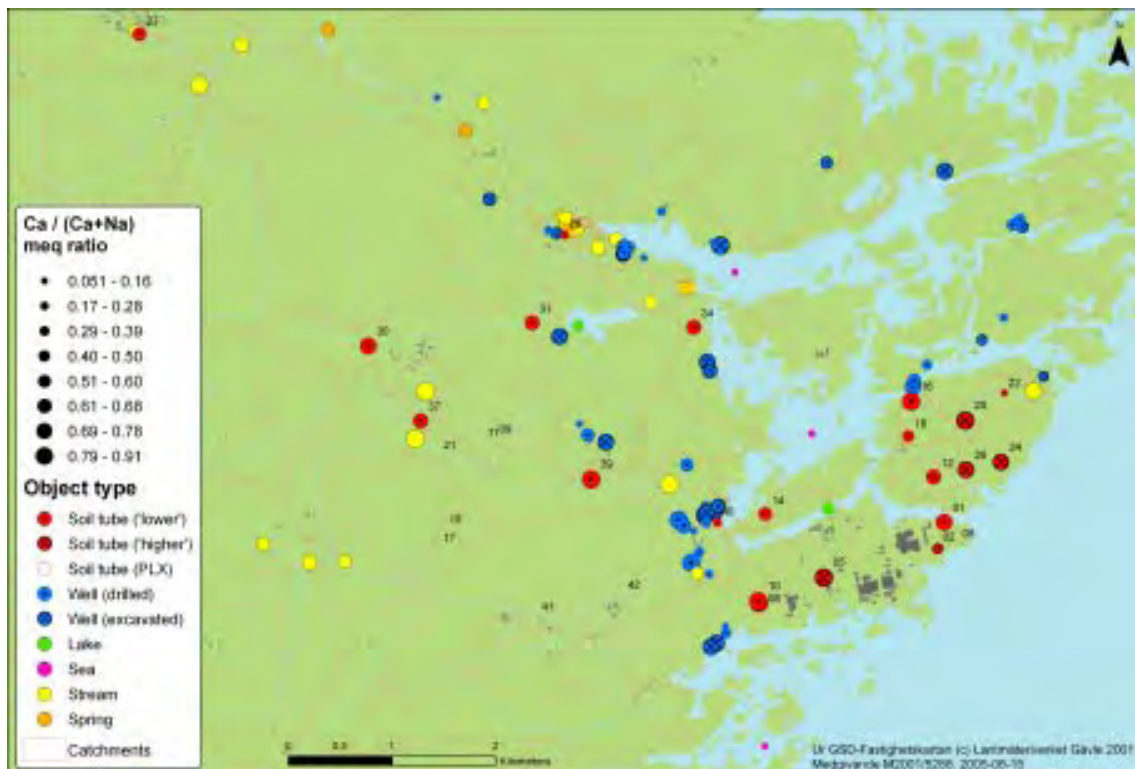
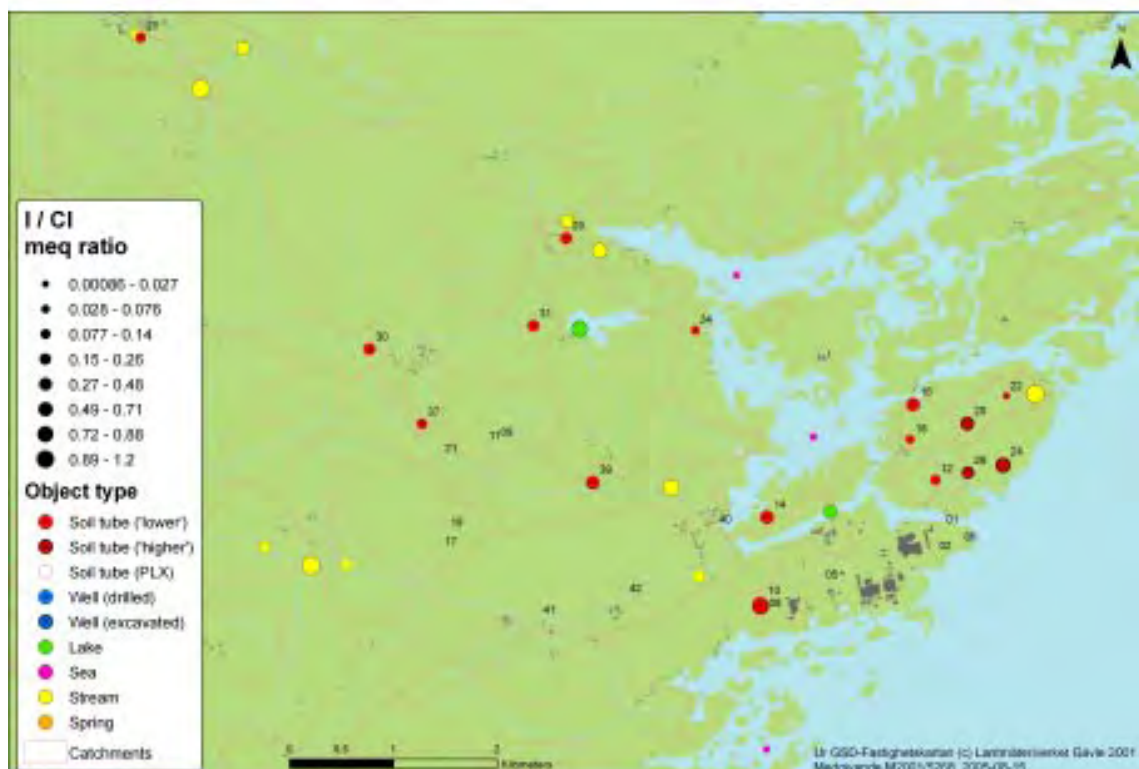
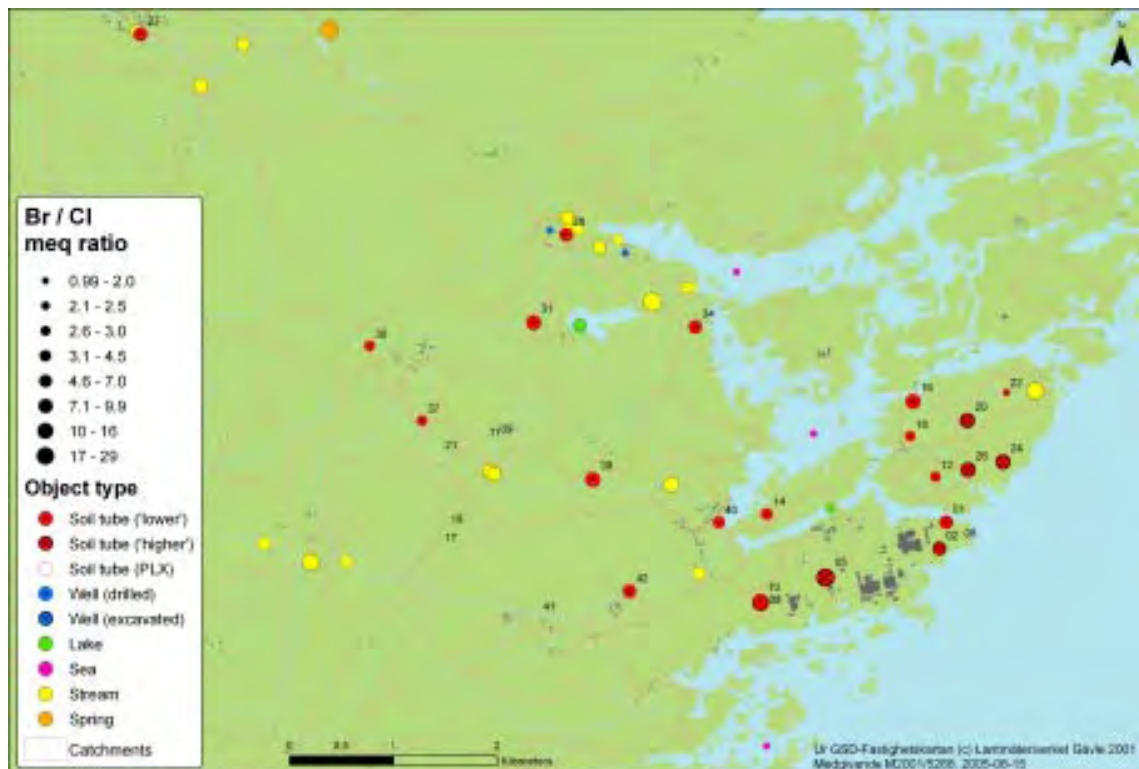


Figure 7-70. Calcium – sodium ratio (upper) and bicarbonate – chloride ratio (lower) in shallow groundwater and surface water in the Simpevarp area.



*Figure 7-71. Bromide – chloride ratio (upper) and iodide – chloride ratio (lower) in shallow groundwater and surface water in the Simpevarp area.*

Calcite is near saturation in SSM000002, SSM000012, SSM000022 and SSM000034. SSM000005 deviates by showing oversaturation for fluorite. In SSM000002, three minerals are near saturation; aragonite, calcite and dolomite. Most other observations from shallow groundwater in the Simpevarp area are more or less undersaturated.

**Table 7-13. Saturation indexes for a number of minerals in shallow groundwater in the Simpevarp area (mean values of 1–3 observations from each soil tube). To facilitate the interpretation of the table, all values exceeding 0.2 are marked yellow and values below -0.2 are marked blue. Values near saturation, between -0.2 and 0.2, are marked green.**

Idcode	Anhydrite	Aragonite	Calcite	Dolomite c	Dolomite d	Fluorite	Gypsum	Magnesite
SSM000001	-3.42	-1.51	-1.35	-3.75	-3.12	-1.64	-3.16	-2.26
SSM000002	-3.03	-0.11	0.05	-0.55	0.08	-1.03	-2.78	-0.46
SSM000005	-3.04	-1.47	-1.31	-3.96	-3.33	0.87	-2.78	-2.51
SSM000008	-3.05	-1.41	-1.25	-4.05	-3.42	-2.25	-2.79	-2.68
SSM000010	-2.53	-1.13	-0.97	-3.26	-2.64	-1.21	-2.28	-2.17
SSM000012	-2.08	-0.30	-0.14	-1.63	-1.01	-0.46	-1.82	-1.37
SSM000014	-2.37	-2.17	-2.01	-4.87	-4.24	-0.28	-2.12	-2.74
SSM000016	-2.56	-1.42	-1.26	-3.94	-3.32	-0.22	-2.30	-2.57
SSM000018	-1.99	-2.29	-2.13	-5.23	-4.60	-1.00	-1.74	-2.98
SSM000020	-2.29	-2.62	-2.47	-6.11	-5.49	-1.03	-2.03	-3.53
SSM000022	-2.26	-0.24	-0.09	-1.13	-0.51	-0.18	-2.01	-0.93
SSM000024	-3.28	-1.97	-1.81	-4.75	-4.12	-1.34	-3.03	-2.81
SSM000026	-2.89	-2.37	-2.21	-5.69	-5.07	-1.65	-2.63	-3.36
SSM000027	-3.29	-3.88	-3.73	-8.62	-8.01	-2.28	-3.03	-4.80
SSM000029	-2.92	-1.53	-1.37	-3.44	-2.82	-0.37	-2.67	-1.97
SSM000030	-2.15	-0.41	-0.25	-1.92	-1.31	-0.07	-1.89	-1.58
SSM000031	-3.30	-2.59	-2.43	-5.95	-5.33	-0.70	-3.05	-3.42
SSM000034	-4.78	-0.25	-0.10	-1.05	-0.44	-1.58	-4.53	-0.86
SSM000037	-2.49	-0.80	-0.65	-2.51	-1.89	-0.17	-2.24	-1.77
SSM000039	-2.72	-2.16	-2.00	-5.19	-4.57	-0.91	-2.46	-3.10
SSM000040	-3.28	-1.31	-1.15	-2.93	-2.31	-0.61	-3.02	-1.68

## 8 Regolith – presentation and evaluation of primary data

In this section, data from till, sediments, peat and soil are compiled. The content of trace elements in roots of amphibious plants is summarised as an independent reference to the geochemical compilations. These biogeochemical data may, at least to some extent, reflect the bioavailability of different elements that to a varying degree originates from the minerals in the Quaternary deposits.

### 8.1 Chemical composition of till

#### 8.1.1 Comparisons between local and national till data

The chemical content of till in the Simpevarp area is put in a national context by comparing the local distribution of the approximately 20 analyses of till samples from the Simpevarp area with regional and national distributions of the geochemical database /SGU 2005b/. Analyses made by ICP-AES technique are compiled in Table 8-1 and parallel analyses made by XRF technique are summarised in Table 8-2.

When the median values of the local, regional and national distributions are compared, only minor differences are revealed, indicating that the chemical composition of till in the Simpevarp area is relatively normal in a Swedish context. A few rather uncertain conclusions due to the limited local data are summarised below.

**Table 8-1. Element analyses on till samples from the Simpevarp area and from the national geochemical survey conducted by SGU. Extraction by *Aqua Regia* prior the ICP-AES analysis.** (Ur regionala markgeokemiska databasen. Copyright Sveriges geologiska undersökning (SGU). Medgivande:30-1125/2005.)

Element	Unit	Till – Simpevarp (ICP-AES)						Till – Swedish reference (ICP-AES)						
		N	Min	25-p	50-p	75-p	Max	N	Min	25-p	50-p	75-p	Max	
Al	Aluminium	%	19	0.40	0.67	1.1	1.2	2.0	15822	< 0.0003	0.74	1	1.3	6.7
Ca	Calcium	%	19	0.08	0.25	0.35	0.46	0.88	15844	< 0.001	0.22	0.29	0.36	38
Fe	Iron	%	19	0.60	1.6	2.1	2.4	2.9	15844	< 0.001	1.2	1.6	2.1	9.3
K	Potassium	%	19	0.03	0.07	0.10	0.16	0.27	15844	< 0.001	0.067	0.11	0.18	1.3
Mg	Magnesium	%	19	0.06	0.28	0.49	0.59	1.5	15844	0.001	0.21	0.31	0.44	4.1
Mn	Manganese	%	19	0.004	0.021	0.026	0.038	0.061	15844	< 0.001	0.016	0.023	0.034	0.81
Ba	Barium	ppm	19	12	29	34	45	67	15844	< 10	30	40	50	140
Be	Beryllium	ppm	19	0.10	0.45	0.60	0.75	2.5	15844	< 0.3	0.3	0.4	0.6	3.9
Co	Cobalt	ppm	19	0.25	4.4	5.6	7.2	16	7341	< 1	9	13	20	230
Cu	Copper	ppm	19	2.5	7.6	9.3	12	67	7341	< 1	8	12	18	229
La	Lanthanum	ppm	19	9	25	38	51	134	15844	< 2	21	26	33	338
Li	Lithium	ppm	19	2.5	10	15	18	30	15844	< 5	6	11	17	98
Ni	Nickel	ppm	19	0.5	4.6	7.5	9.7	29	15843	< 2	6	10	15	179
Pb	Lead	ppm	19	9	12	18	38	340	15843	< 7	5	9	13	423
Sr	Strontium	ppm	19	8	17	21	25	40	15844	< 2	8	11	16	462
Zn	Zinc	ppm	19	7	30	43	55	180	15843	< 1	25	35	47	2,197

The levels of the major constituents magnesium and iron are slightly elevated in the samples of the Simpevarp area according to the ICP-AES analyses. A corresponding pattern is not seen for the total contents analysed by XRF-technique.

The content of the trace metal cobalt is less than half the typical values of Sweden, whereas the content of lead is approximately doubled, when comparing ICP-AES data. When comparing XRF data the cobalt content is only slightly lower, whereas lead show elevated levels in accordance with the ICP-AES analyses.

**Table 8-2. Element analyses on till samples from the Simpevarp area and from the national geochemical survey conducted by SGU. Total content analysed by XRF technique.** (Ur regionala markgeokemiska databasen. Copyright Sveriges geologiska undersökning (SGU). Medgivande:30-1125/2005.)

Element	Unit	Till – Simpevarp (XRF)							Till – Swedish reference (XRF)					
		N	Min	25-p	50-p	75-p	Max	N	Min	25-p	50-p	75-p	Max	
Al Aluminium	%	19	6.1	6.8	7.3	7.6	8.4	26343	0.69	6.7	7.2	7.7	18	
Ba Barium	%	19	0.051	0.063	0.065	0.071	0.079	26343	0.02	0.04	0.05	0.06	0.76	
Ca Calcium	%	19	0.7	1.2	1.2	1.3	1.8	26343	0.06	1.3	1.5	1.8	39.	
Fe Iron	%	19	1.3	2.1	2.7	2.9	3.9	26343	0.34	2.1	2.6	3.2	11	
K Potassium	%	19	2.3	2.9	3.0	3.2	3.4	26343	0.31	2.2	2.4	2.6	5.6	
Mg Magnesium	%	19	0.28	0.55	0.77	0.99	1.9	26343	0.09	0.59	0.78	1.0	4.8	
Mn Manganese	%	19	0.025	0.033	0.036	0.043	0.072	26343	0.007	0.037	0.046	0.057	0.87	
Na Sodium	%	19	1.2	1.5	1.8	2.1	2.4	26343	0.067	1.6	2.0	2.4	3.9	
P Phosphorus	%	19	0.027	0.088	0.100	0.14	0.19	26343	0.004	0.083	0.100	0.12	0.86	
Si Silicon (calculated)	%	19	31	33	34	34	35	26343	19	33	34	35	42	
Ti Titanium	%	19	0.35	0.44	0.50	0.59	1.6	26343	0.07	0.62	0.74	0.86	2.6	
As Arsenic	ppm	19	< 10	< 10	< 10	< 10	13	26343	< 10	< 10	< 10	12	230	
Cl Chlorine	ppm	19	< 50	60	85	100	310	26343	< 50	< 50	66	100	5,200	
Co Cobalt	ppm	19	7	14	17	19	31	26343	< 5	16	20	25	95	
Cr Chromium	ppm	19	15	20	32	42	58	26343	6	33	48	65	600	
Cu Copper	ppm	19	2	8	10	14	80	26343	< 2	9	14	21	530	
Mo Molybdenum	ppm	19	< 2	< 2	< 2	2	8	26343	< 2	< 2	< 2	2	660	
Ni Nickel	ppm	19	–5	6	9	14	32	26343	< 5	11	16	23	200	
Pb Lead	ppm	19	23	32	35	47	360	26343	< 10	19	22	27	990	
Rb Rubidium	ppm	19	66	84	92	120	260	26343	< 10	71	85	102	410	
Sr Strontium	ppm	19	130	240	250	270	340	26343	21	140	170	200	710	
V Vanadium	ppm	19	35	52	65	73	89	26343	< 10	45	58	75	1,600	
Zn Zinc	ppm	19	18	40	53	66	200	26343	8	38	50	65	2,200	
ZR Zirconium	ppm	19	420	480	580	620	830	26343	56	380	450	560	2,200	

### 8.1.2 Comparisons within the Simpevarp area

The spatial variation within the Simpevarp area is shown for the subset of approximately twenty till samples from the geochemical database. The individual observations based on ICP-AES analyses are compiled in Table 8-3, and the spatial variation is shown for calcium, strontium, iron, manganese, lead, nickel, copper and zinc in Figures 8-1 to 8-4.

The three observations at the Peninsula of Figeholm in the south-eastern part of the area (no 3 to 5) show deviating chemical composition with respect to several elements. For example is the strontium content low and the lead content somewhat elevated in this area.

**Table 8-3. Element analyses on till samples from the Simpevarp area and from the national geochemical survey conducted by SGU. 19 observations within or close to the Simpevarp area have been selected. Extraction by aqua regia prior the ICP-AES analysis. The three highest values per element have been marked in bold.** (Ur regionala markgeokemiska databasen. Copyright Sveriges geologiska undersökning (SGU). Medgivande:30-1125/2005.)

No	Idnr	X	Y	Al %	Ba ppm	Be ppm	Ca %	Co ppm	Cu ppm	Fe %	K %
1	30316	6361631	1539590	0.92	0.0046	0.8	0.50	6.4	<b>14.2</b>	2.3	0.06
2	30346	6370400	1539802	1.10	0.0036	0.5	0.31	3.9	12.5	1.5	0.10
3	30352	6361529	1542495	1.18	0.0043	1.0	<b>0.67</b>	6.4	12.1	<b>2.6</b>	0.18
4	30353	6363470	1547121	0.41	0.0018	< 0.2	0.08	< 0.5	3.6	0.6	0.03
5	30354	6361376	1548701	0.50	0.0030	0.5	0.35	5.6	8.8	<b>2.6</b>	0.07
6	30355	6363636	1549683	0.40	0.0012	0.2	0.26	3.3	2.5	0.9	0.05
7	30356	6362782	1543499	0.52	0.0028	0.4	0.38	4	7.7	1.7	0.09
8	30357	6366223	1543719	<b>2.02</b>	<b>0.0056</b>	0.6	0.31	<b>15.7</b>	13.6	2.9	<b>0.27</b>
9	30358	6366396	1541690	1.14	0.0035	0.5	0.40	7.3	8.5	1.7	0.11
10	30360	6364151	1539845	1.19	0.0043	0.7	0.42	8.2	<b>14.3</b>	2.4	0.15
11	30365	6366694	1547807	1.10	0.0034	0.6	<b>0.53</b>	5.3	9.3	2.4	0.09
12	30366	6368863	1548059	0.76	0.0023	<b>2.5</b>	0.38	5.5	7.5	2.2	0.11
13	30367	6370262	1549072	<b>1.65</b>	<b>0.0067</b>	<b>1.2</b>	0.15	<b>8.6</b>	7.6	<b>2.9</b>	<b>0.19</b>
14	30370	6370657	1544848	1.19	0.0030	0.4	0.25	5.6	9.3	1.2	0.07
15	30371	6369598	1544499	1.19	0.0022	0.4	0.14	4.2	6.1	0.9	0.06
16	30372	6369015	1541684	<b>1.49</b>	0.0051	0.7	0.08	5.5	6.5	2.0	0.11
17	30401	6366826	1552042	1.14	0.0030	0.6	0.24	7.1	10.4	1.8	0.10
18	30402	6369011	1553895	0.78	<b>0.0063</b>	0.7	<b>0.53</b>	<b>9</b>	<b>66.7</b>	2.1	<b>0.25</b>
19	30403	6371213	1550809	0.58	0.0030	<b>1.5</b>	<b>0.88</b>	4.6	10.7	2.2	0.16

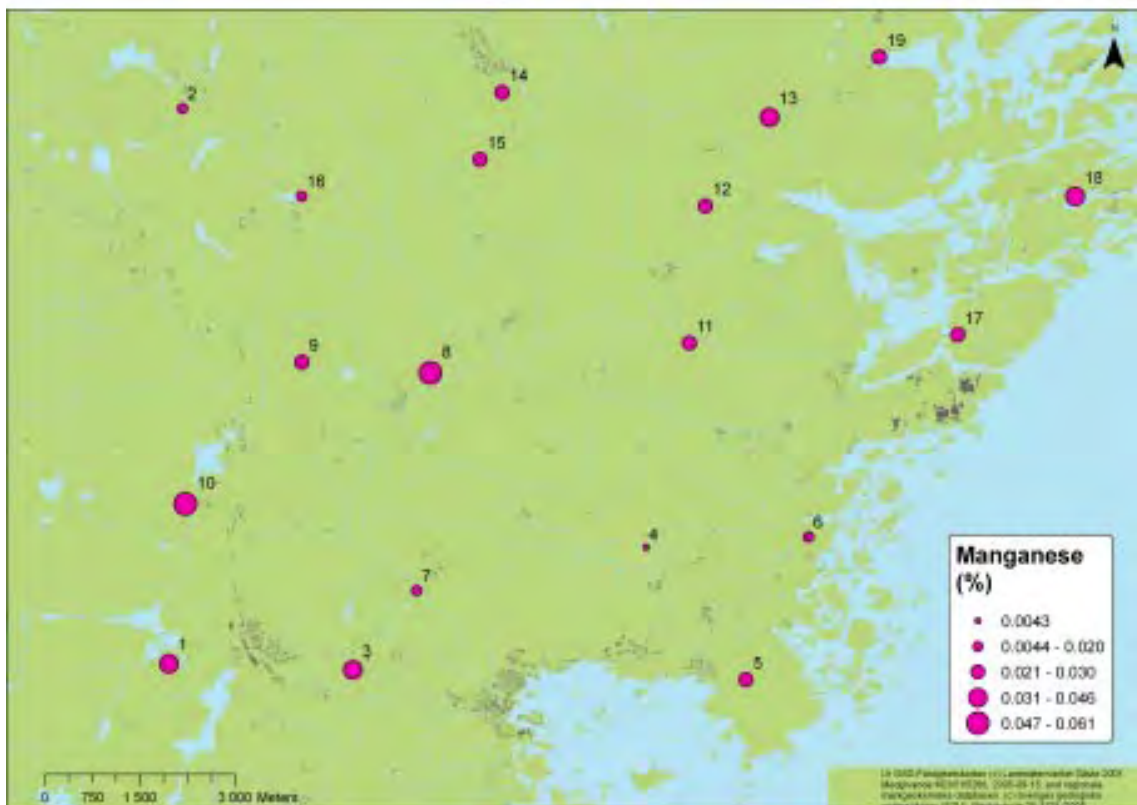
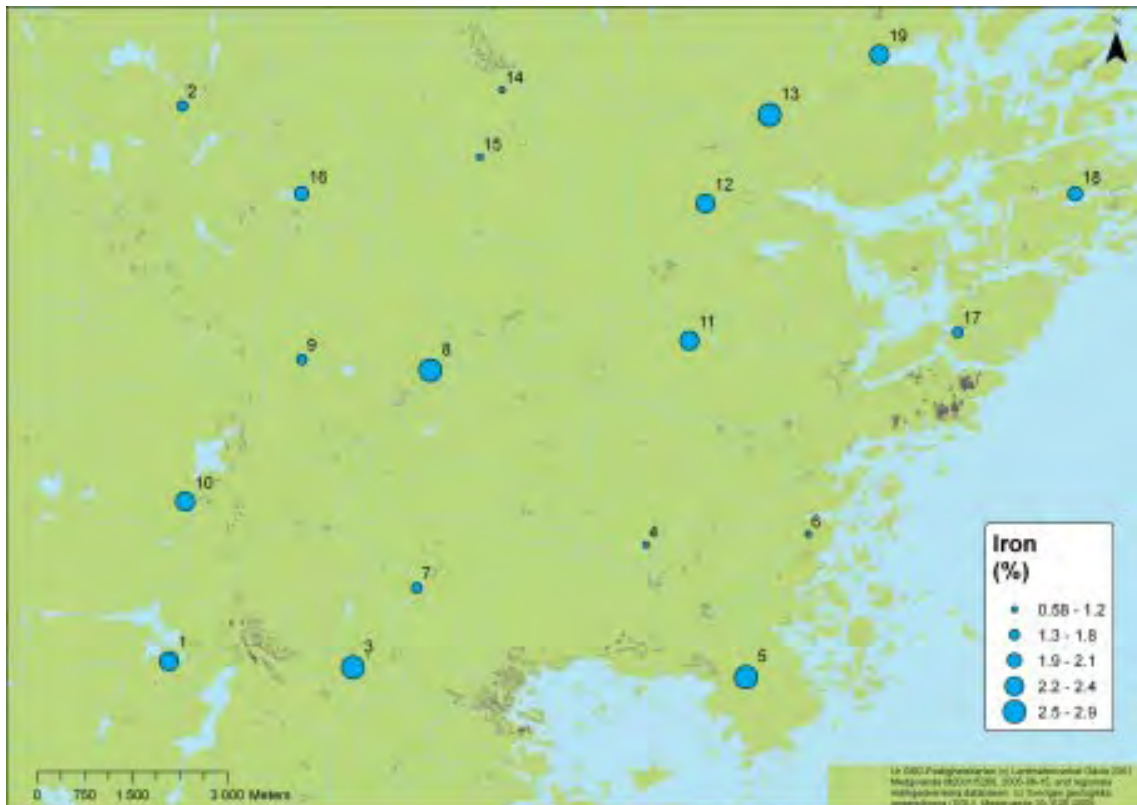
No	Idnr	X	Y	La ppm	Li ppm	Mg %	Mn %	Ni ppm	Pb ppm	Sr ppm	Zn ppm
1	30316	6361631	1539590	<b>82</b>	15	0.54	<b>0.046</b>	8.8	17	29	53
2	30346	6370400	1539802	38	9.3	0.32	0.020	5.4	13	21	27
3	30352	6361529	1542495	42	<b>230</b>	<b>0.72</b>	0.039	9.2	18	<b>32</b>	57
4	30353	6363470	1547121	9	< 5	0.06	0.004	< 1	44	8	7
5	30354	6361376	1548701	<b>112</b>	5.6	0.26	0.030	4.2	38	21	28
6	30355	6363636	1549683	20	7.2	0.23	0.014	2.9	9	13	22
7	30356	6362782	1543499	51	7.7	0.27	0.020	3.7	12	18	27
8	30357	6366223	1543719	51	19	<b>1.49</b>	<b>0.061</b>	<b>29</b>	19	23	<b>180</b>
9	30358	6366396	1541690	27	11	0.43	0.027	10	14	<b>30</b>	40
10	30360	6364151	1539845	48	17	0.60	<b>0.055</b>	6.7	19	26	<b>69</b>
11	30365	6366694	1547807	35	14	0.49	0.026	7.1	10	<b>40</b>	42
12	30366	6368863	1548059	27	19	0.30	0.024	4.9	<b>57</b>	24	39
13	30367	6370262	1549072	38	<b>26</b>	0.59	0.038	<b>12</b>	26	16	61
14	30370	6370657	1544848	24	17	0.52	0.024	7.5	38	22	44
15	30371	6369598	1544499	17	16	0.50	0.022	7.9	<b>79</b>	20	43
16	30372	6369015	1541684	19	15	0.38	0.017	10	11	11	31
17	30401	6366826	1552042	29	14	0.59	0.025	<b>13</b>	9	17	46
18	30402	6369011	1553895	60	13	<b>0.62</b>	0.040	9.4	18	22	44
19	30403	6371213	1550809	<b>134</b>	<b>21</b>	0.21	0.027	2.5	<b>340</b>	17	<b>63</b>



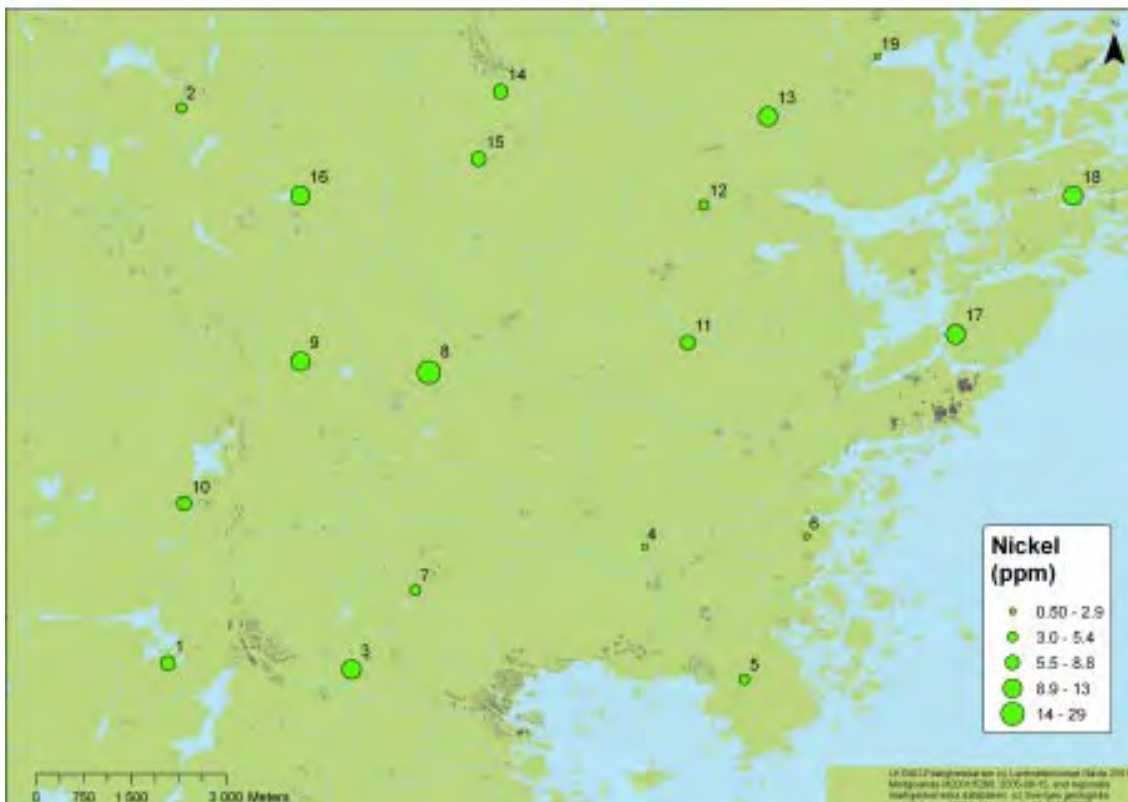


**Figure 8-1.** Content of calcium (upper) and strontium (lower) in till samples from the Simpevarp area. Extraction by Aqua Regia and ICP-AES analysis. (Ur regionala markgeokemiska databasen. Copyright Sveriges geologiska undersökning (SGU). Medgivande:30-1125/2005.)

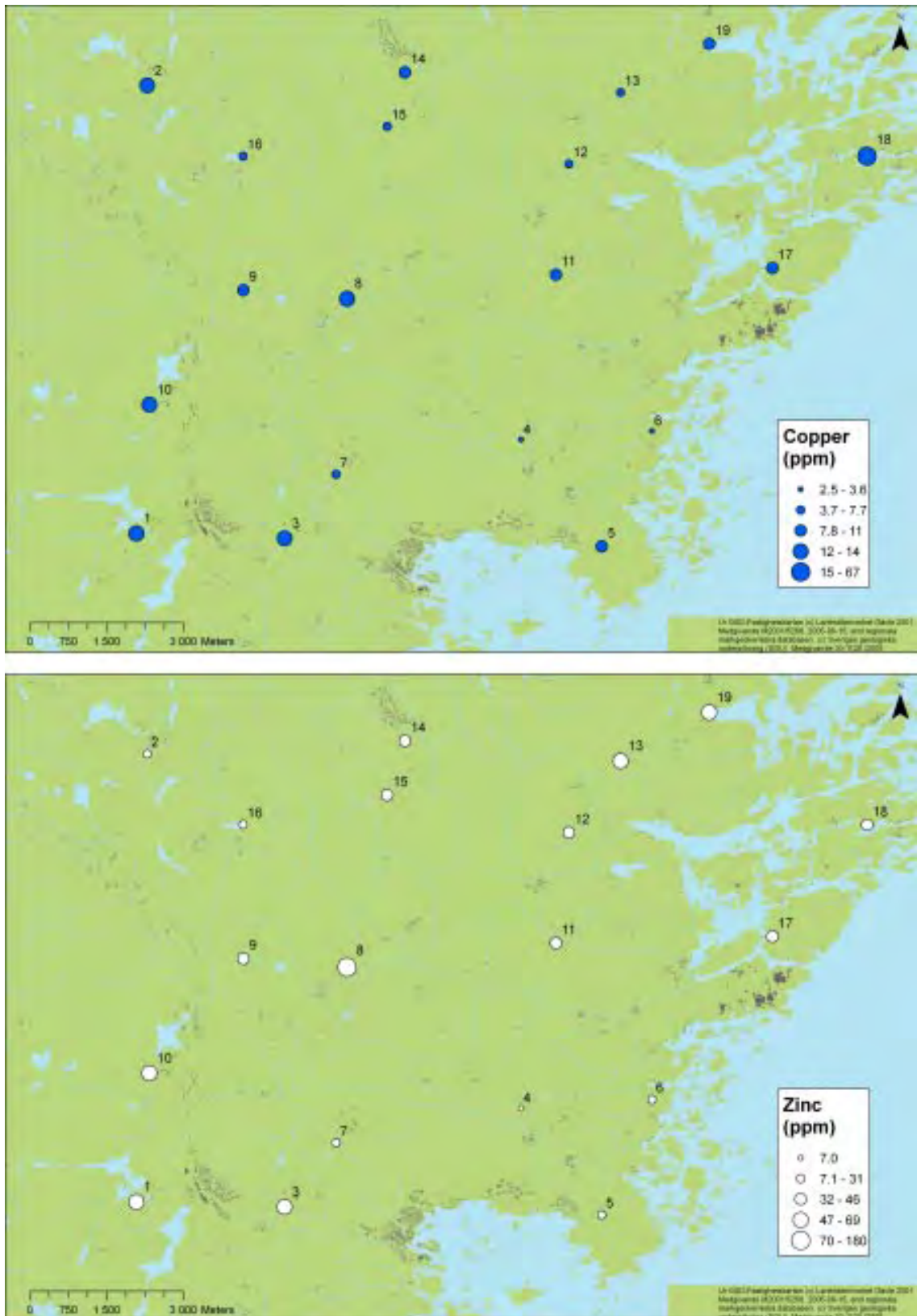




**Figure 8-2.** Content of iron (upper) and manganese (lower) in till samples from the Simpevarp area. Extraction by aqua regia and ICP-AES analysis. (Ur regionala markgeokemiska databasen. Copyright Sveriges geologiska undersökning (SGU). Medgivande:30-1125/2005.)



**Figure 8-3.** Content of lead (upper) and nickel (lower) in till samples from the Simpevarp area. Extraction by aqua regia and ICP-AES analysis. (Ur regionala markgeokemiska databasen. Copyright Sveriges geologiska undersökning (SGU). Medgivande:30-1125/2005.)



**Figure 8-4.** Content of copper (upper) and zinc (lower) in till samples from the Simpevarp area. Extraction by aqua regia and ICP-AES analysis. (Ur regionala markgeokemiska databasen. Copyright Sveriges geologiska undersökning (SGU). Medgivande:30-1125/2005.)

### 8.1.3 The distribution of calcium carbonate

All till samples from the Simpevarp area show very low content of calcium carbonate and may be regarded as principally free of lime. The measurements range from 0.1% to 0.6% calcium carbonate per dry weight, with a median value of 0.3%. All available observations from the Simpevarp area are compiled in Table 8-4.

**Table 8-4. The content of calcium carbonate in till samples from the Simpevarp area. The locations of the sample points are shown in Figure 3-4.**

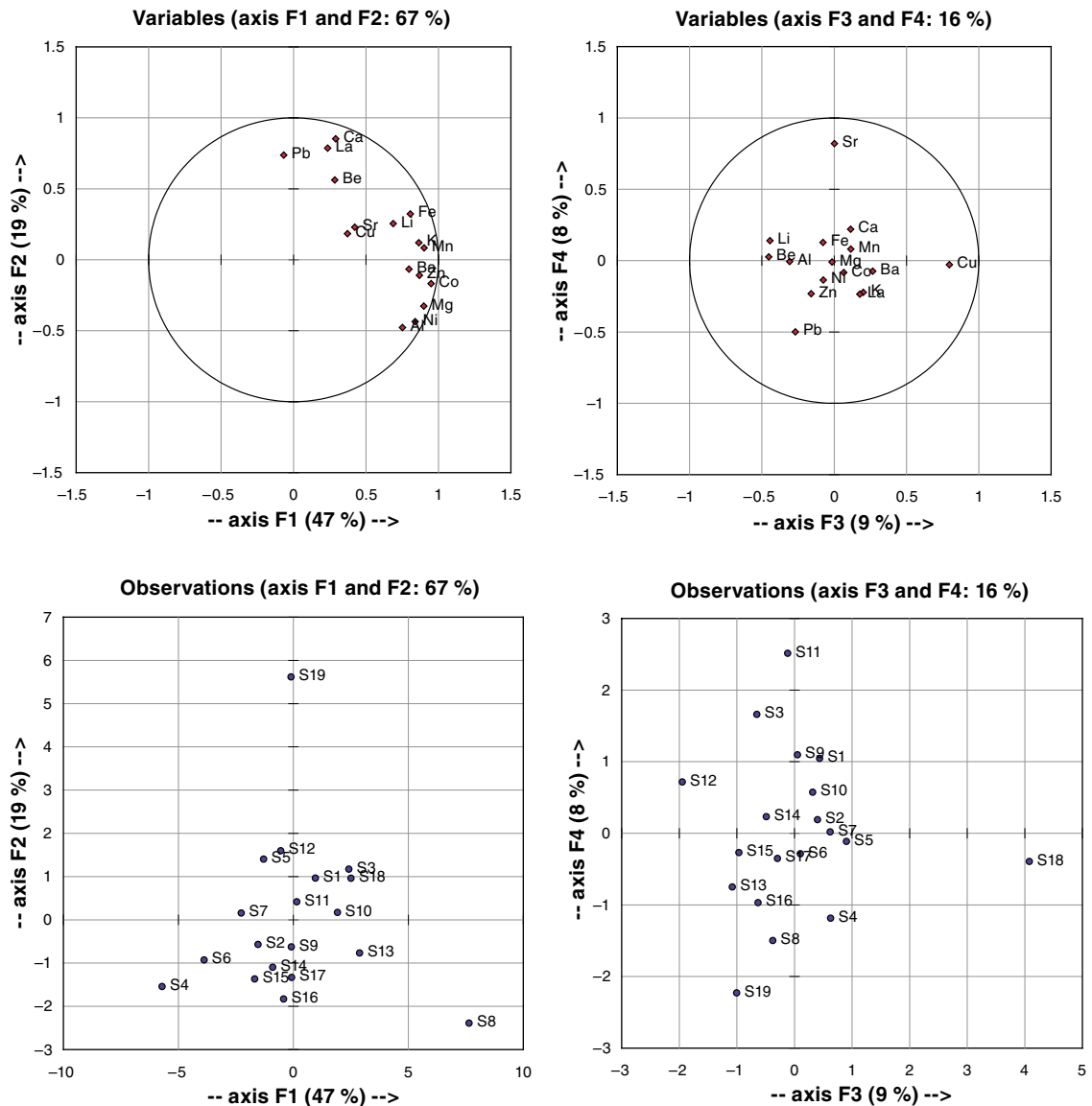
<b>Idcode</b>	<b>Secup</b>	<b>Seclow</b>	<b>Sample number</b>	<b>CaCO<sub>3</sub> %</b>
PSM002642	2	2	1	0.3
PSM002643	2	2	1	0.2
PSM002644	0.5	0.5	1	0.3
PSM002683	2	2	1	0.6
PSM002685	1	1	1	0.3
PSM005309	0.5	0.5	1	0.3
PSM005309	1	1	2	0.5
PSM005370	0.6	0.6	1	0.4
PSM005371	2.2	2.2	1	0.3
PSM005372	2	2	1	0.3
PSM005373	0.7	0.7	1	0.3
PSM005374	0.7	0.7	1	0.2
PSM005384	1.5	1.5	1	0.2
PSM005399	1	1	1	0.3
PSM005403	1.5	1.5	1	0.3
PSM005404	1.3	1.3	1	0.3
PSM005405	1	1	1	0.2
PSM005406	1	1	1	0.1
PSM005408	1.2	1.2	1	0.4
PSM005410	0.7	0.7	1	0.3
PSM005412	3	3	1	0.2
PSM005489	1	1	1	0.5
PSM005503	1	1	1	0.2
PSM005505	1.5	1.5	1	0.5
PSM005507	1	1	1	0.6
PSM005608	1	1	1	0.3
PSM005634	1	1	1	0.3



### 8.1.4 Relationships among elements in till

To reveal the relationships among elements and among sampling sites, a Principal Component Analysis (PCA) was conducted on the data listed in Table 8-3. In Figure 8-5 below, the variable and observation plots are shown for the four first principal components, which together describe 83% of the variation in the material.

According to the PCA, the spatial occurrence of aluminium, magnesium, potassium, iron, manganese, zinc and cobalt are correlated. Observation number 8 shows the largest deviation with respect to these parameters.



**Figure 8-5.** Principal component analysis of SGU till samples from the Simpevarp area (n=19). All elements in Table 8-3 have been included in the analysis. The figures in the plots of observations correspond to the observation numbers in Table 8-3 and in maps.

The spatial occurrence of calcium, lanthanum beryllium and lead are correlated. The highest concentrations of these elements are found for observation 19 in the north-eastern part of the area.

Strontium and copper show a deviating spatial occurrence compared to the other elements. The third and fourth principal components reveal that observation 18 deviates with respect to copper and observation 11 with respect to strontium.

## 8.2 Chemical composition of sediments

Analysis of total content of organic carbon, nitrogen, hydrogen, sulphur and calcium carbonate have been conducted on sediments samples from peatlands, lakes and coastal bays in the Simpevarp area.

### 8.2.1 Organic carbon, hydrogen, nitrogen, sulphur and calcium carbonate

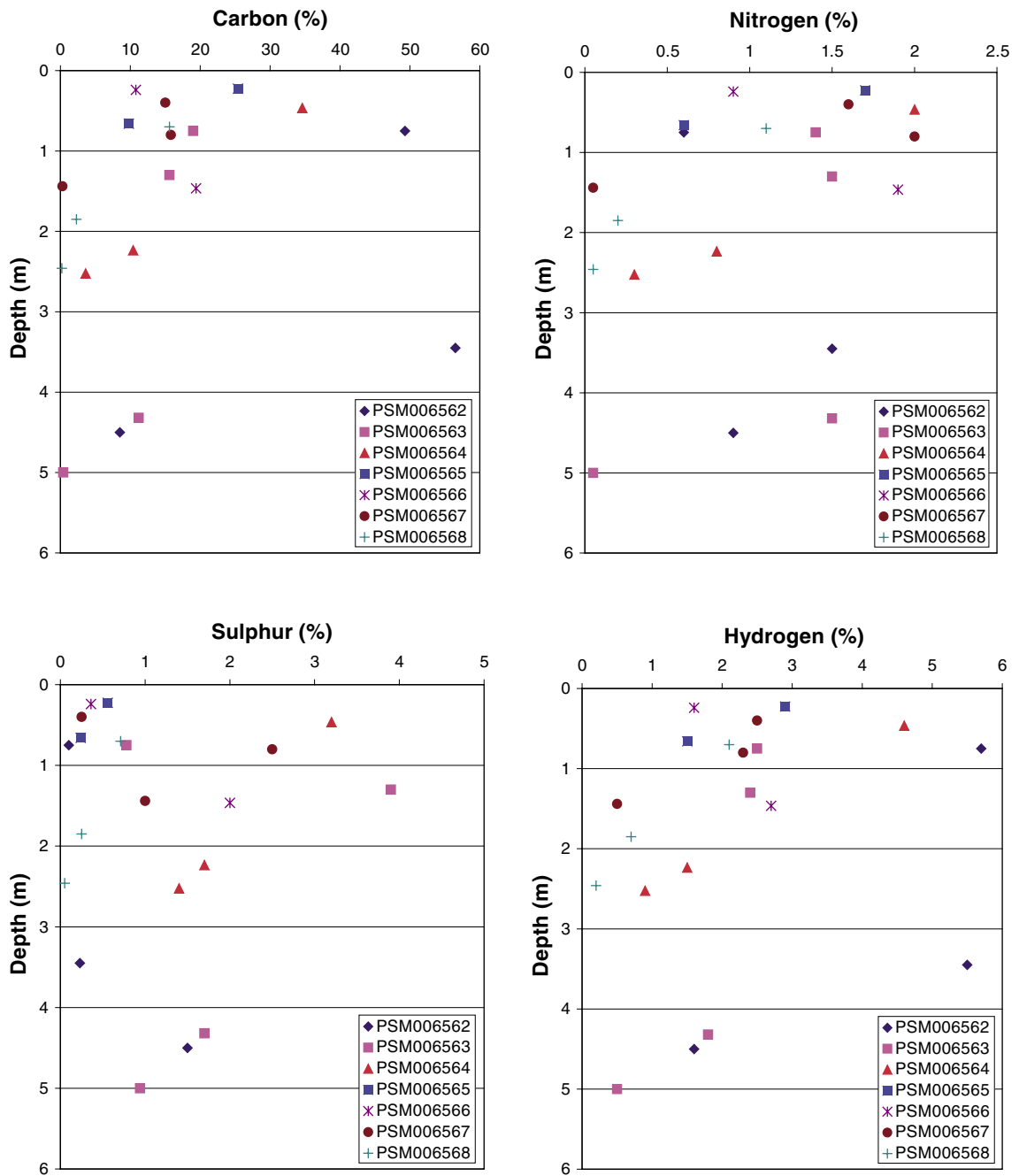
The sediment analyses are summarised in Table 8-5. In /Nilsson 2004/ raw data and details regarding the sampling locations and stratigraphy are compiled and evaluated.

The content of calcium carbonate in the sediments is usually negligible, except for one sample from Långenmossen (PSM006564), where the content of calcium carbonate is 12% at a depth of 220–227 cm in the sediment profile.

There is a large spread in the content of carbon, nitrogen, hydrogen and sulphur, depending on both sampling site and depth. All sediment data from peatlands are shown in Figure 8-6, and from marine and lacustrine sediments in Figure 8-7. Most sampling sites show a decreasing trend towards depth, but the initial levels show a large spread in the area. The carbon content ranges from 0–60%, nitrogen from 0–2%, sulphur from 0–4% and hydrogen from 0–6%.

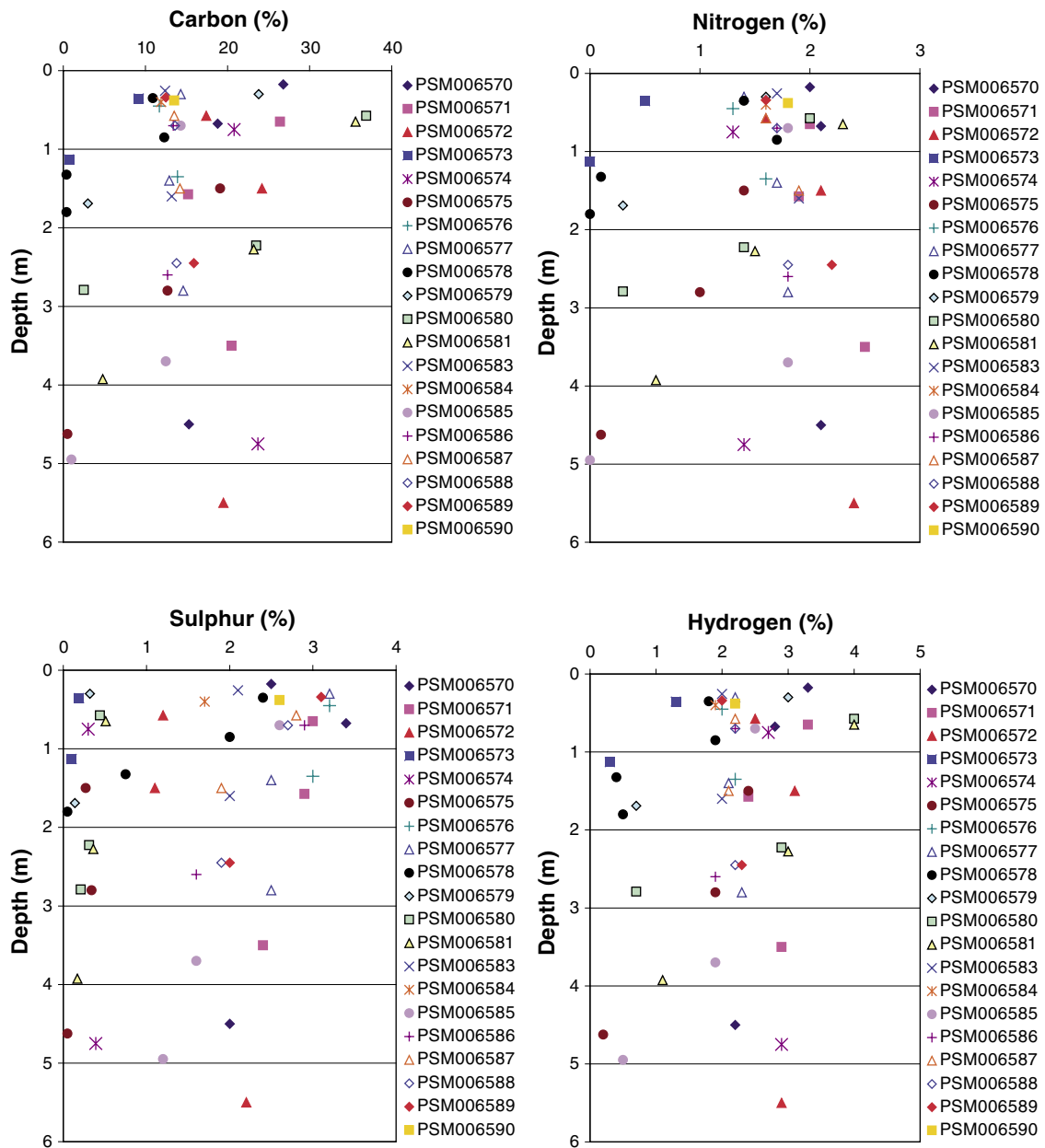
**Table 8-5. Statistics summarising the content of carbon, nitrogen, sulphur, hydrogen and calcium carbonate in sediment samples from peat- and wetlands, as well as from lake and bay sampling sites in the Simpevarp area.**

		Sediments at peat- and wetland sites				Sediments in lake and bay sites			
		count	minimum	median	maximum	count	minimum	median	maximum
Carbon	% DW	20	0.2	13	56	48	0.4	14	37
Sulphur	% DW	20	0.05	0.86	3.9	48	0.05	1.9	3.4
Nitrogen	% DW	20	0.05	1	2	48	0	1.6	2.5
Hydrogen	% DW	20	0.2	2.0	5.7	48	0.2	2.2	4
Calcium carbonate	% DW	20	0	0.2	12	46	0	0.4	1.4
pH	–	6	4.1	6.2	8.9	–	–	–	–
Water content	%	20	36	79	93	48	46	83	92
Ash content	%	–	–	–	–	9	36	68	82



**Figure 8-6.** Contents of carbon, nitrogen, sulphur and hydrogen per dry weight in sediment samples from peat lands in the Simpevarp area.





*Figure 8-7. Contents of carbon, nitrogen, sulphur and hydrogen per dry weight in sediments from marine and lacustrine sediments in the Simpevarp area.*

### 8.3 Chemical composition of soil and peat

The chemical composition of soil has been analysed on samples from ten typical 'site types' in the Simpevarp area. Each site type has been sampled in two replicates, and the chemical composition was determined in several subsamples and soil horizons. A thorough description of site types and the sampling techniques is found in /Lundin et al. in press/. In Table 8-6, a selection of the data available in the SICADA database are summarised to give an overview of pH and the contents of carbon in top soil, peat and mineral soil in the Simpevarp area.

**Table 8-6. Compilation of soil samples from the Simpevarp area. The table summarises all analyses in the SICADA database from the soil horizons denoted by 'A', 'B', 'C' and 'To' (peat). The sample plots represent typical site types in the area. The locations of the sampling sites are shown in Figure3-4. See /Lundin et al. in press/ for a thorough description of the different categories.**

Sample plot name	Soil type	Idcode	Horizon	Count	Carbon %	Nitrogen %	pH H <sub>2</sub> O	pH CaCl <sub>2</sub>
'GRAN'	Histosol	ASM001440	To	12	36	1.9	4.2	3.4
		ASM001441	To	12	34	1.9	4.2	3.6
'HÄLL'	Podzol/Regosol	ASM001428	A	4	3.9	0.18	4.5	3.8
		ASM001428	B	6	3.2	0.15	4.8	4.2
		ASM001428	C	3	0.5	0.03	5.1	4.4
		ASM001429	A	3	3.6	0.27	5.0	4.2
		ASM001429	B	8	1.5	0.10	5.0	4.2
		ASM001429	C	2	0.6	0.05	5.8	4.9
'LÖV'	Umbrisol/Regosol	ASM001426	A	8	11	0.71	5.3	4.4
		ASM001426	C	2	0.20	0.00	5.4	4.6
		ASM001427	A	10	6.9	0.46	5.2	4.3
		ASM001427	B	4	1.4	0.13	5.2	4.3
'STRAND'	Histosol/Regosol	ASM001436	To	12	22	1.7	5.3	4.9
		ASM001437	A	4	4.8	0.50	6.1	5.4
		ASM001437	C	16	0.1	0.00	5.7	5.1
'SUMP'	Histosol	ASM001434	To	12	20	1.9	5.1	4.5
		ASM001435	To	12	32	2.1	4.3	3.8
'VH'	Histosol	ASM001432	To	13	49	1.6	3.7	3.0
		ASM001433	To	12	51	1.2	3.5	2.7
'VÅT'	Histosol	ASM001442	To	12	38	1.5	4.8	4.3
		ASM001443	To	11	39	1.6	5.0	4.4
'ÅKER'	Umbrisol/Gleysol	ASM001438	A	20	10	0.75	5.7	5.1
		ASM001438	B	1	14	1.6	4.8	4.3
		ASM001438	C	3	0.23	0.00	5.8	4.8
		ASM001439	A	16	20	1.5	5.0	4.4
		ASM001439	B	1	0.10	0.00	4.6	3.9
'ÅS'	Podzol	ASM001424	A	2	1.9	0.10	5.1	4.7
		ASM001424	B	8	0.84	0.04	5.1	4.6
		ASM001424	C	2	0.15	0.00	5.0	4.3
		ASM001425	B	7	1.5	0.10	5.1	4.5
		ASM001425	C	1	0.20	0.00	5.2	4.8
'ÅNG'	Umbrisol/Gleysol	ASM001430	A	15	8.7	0.63	5.8	5.0
		ASM001430	C	1	0.60	0.10	5.2	4.6
		ASM001431	A	16	37	1.5	5.4	4.6
		ASM001431	B	3	2.5	0.23	5.0	4.3

In Table 8-7 Swedish reference data from the Survey of forest Soils and Vegetation /SML 2005/ are reproduced from /Lundin et al. 2004b/. The observations of the Simpevarp area are in general close to the Swedish mean values, indicating rather normal pH-values and normal content of carbon and nitrogen.

**Table 8-7. Reference data from the Survey of forest Soils and Vegetation /SML 2005/, reproduced from /Lundin et al. 2004b/.**

Parameter		Valid N	Average	Min	Max
pH (H <sub>2</sub> O)	O-horizon	6,429	4.2	3.0	7.8
	B-horizon	1,842	4.9	3.8	8.6
	C-horizon	1,484	5.3	3.5	9.2
Carbon (%)	O-horizon	5,449	33.7	0.0	56.4
	B-horizon	1,509	2.3	0.0	42.8
	C-horizon	1,213	0.7	0.0	46.5
Nitrogen (%)	O-horizon	5,449	1.1	0.0	13.3
	B-horizon	1,509	0.1	0.0	1.5
	C-horizon	1,213	0.04	0.0	2.0

## 8.4 Elements in roots of amphibious plants

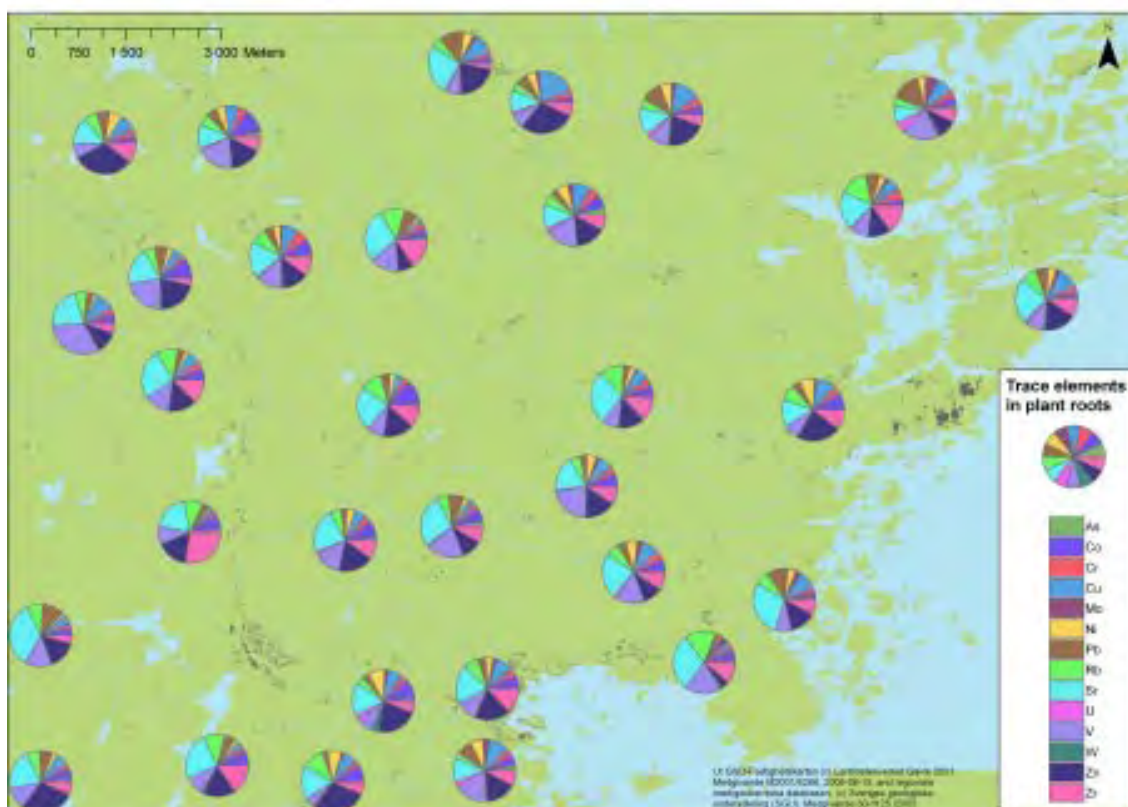
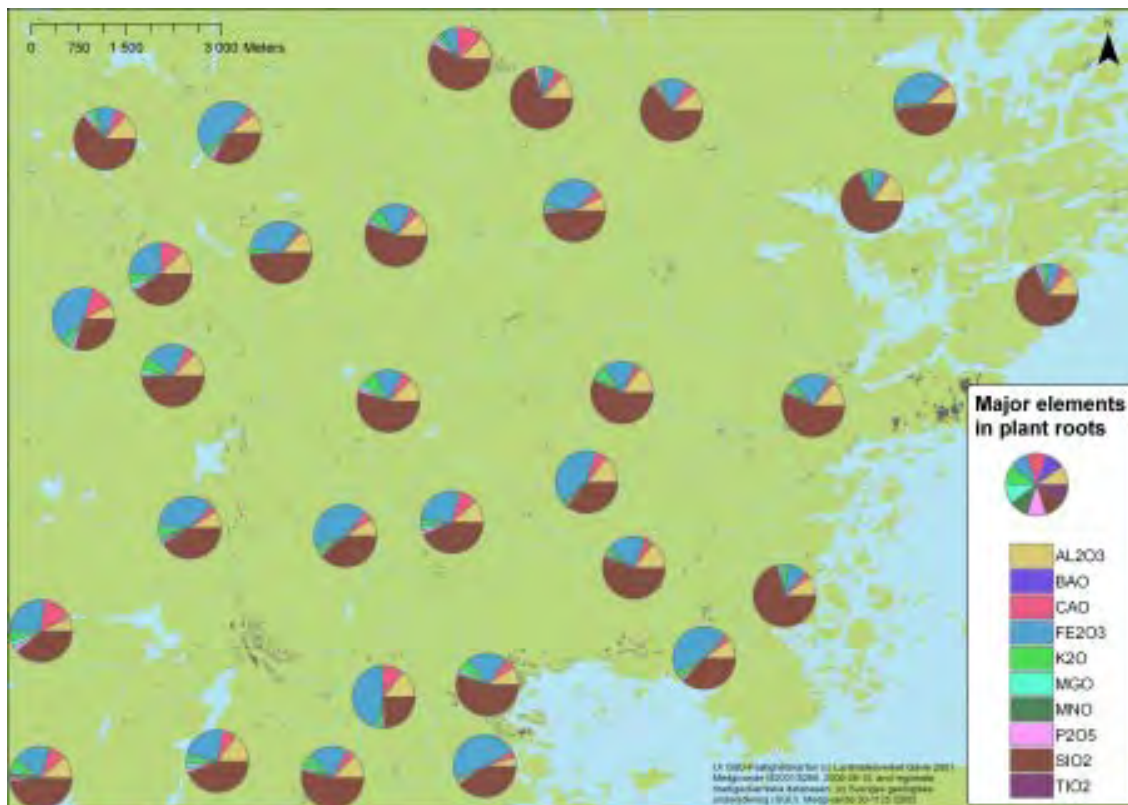
The chemical content in roots of amphibious plants are monitored by Swedish Geological survey, SGU, in a nation wide campaign /SGU 2005b/. Approximately 30 sample points are located in, or in the vicinity of the Simpevarp area. The element content in the roots gives an integrated measure of the availability of different elements in the environment. The *biogeochemical database* is suitable for relative comparisons in order to locate local anomalies and to place the Simpevarp area in a regional and national context. In Table 8-8, the statistical distributions of element content may be compared to regional data from Kalmar County and to national reference data.

Many metals, e.g. iron, cobalt, chromium, copper and especially molybdenum, occur in elevated levels in plant roots in the Simpevarp area, both compared to Kalmar County and Sweden. Lead occurs in normal levels compared to Sweden and Kalmar County, whereas manganese occurs at lower levels.

In Figure 8-8, the relative contents major constituents and trace elements are shown for the sampling sites within, and in the vicinity of the Simpevarp area.

**Table 8-8. The element content distribution in amphibious plants in the Forsmark area, compared to Kalmar County and Sweden. There are 26 observations in the Simpevarp area, 17,12 in Kalmar County and 36,481 in Sweden. Minimum, median and maximum values, compared to the 10<sup>th</sup>, median and 90<sup>th</sup> percentiles of the distributions.**

		Simpevarp area			Kalmar County			Sweden		
		min	median	max	10-perc	median	90-perc	10-perc	median	90-perc
No obs			26			1,712			36,481	
Ash	%	9.8	26	38	11	22	43	9.2	20	42
AL <sub>2</sub> O <sub>3</sub>	%	0.54	2.4	4.1	0.65	1.8	4.4	0.45	1.6	4.4
BAO	%	0.002	0.016	0.032	0.01	0.022	0.051	0.007	0.019	0.054
CAO	%	0.19	1.0	2.3	0.6	1.1	2.4	0.39	1	2.2
FE <sub>2</sub> O <sub>3</sub>	%	0.63	5.3	13	0.98	2.7	7.6	1.02	3.0	8.4
K <sub>2</sub> O	%	0.17	0.67	1.7	0.29	0.8	1.6	0.35	0.9	1.8
MGO	%	0.05	0.3	0.55	0.15	0.29	0.62	0.14	0.35	0.78
MNO	%	0.0045	0.058	0.21	0.014	0.13	1.5	0.019	0.15	1.7
P <sub>2</sub> O <sub>5</sub>	%	0.096	0.26	0.50	0.2	0.3	0.7	0.14	0.29	0.70
SiO <sub>2</sub>	%	2.1	11	16	2.8	8.1	21	1.7	6.8	21
TiO <sub>2</sub>	%	0.0083	0.084	0.14	0.022	0.07	0.19	0.015	0.064	0.20
As	ppm	0.61	4.0	17	0.6	2.5	9.8	1.5	6.4	30
Cl	ppm	66	730	2,100	140	710	2,000	160	820	2,900
Co	ppm	2.4	24	61	6.8	17	55	5.4	15	49
Cr	ppm	1.2	12	22	3.7	8.7	18	3	8.4	22
Cu	ppm	1.4	24	80	7.7	14	30	5.4	11	24
Mo	ppm	1.3	4.6	11	0.8	2	6.2	0.8	2	7.2
Ni	ppm	0.6	12	26	3.2	7.5	21	2.1	6.9	23
Pb	ppm	1	16	52	9.1	20	48	7.4	19	53
Rb	ppm	8.1	25	54	9.2	22	448	11	27	54
S	ppm	1,500	3,800	7,300	2,300	3,500	5,700	1,800	2,900	5,200
Sr	ppm	14	59	120	36	66	120	18	48	94
U	ppm	0.4	3.6	67	0.6	2.9	11	0.47	2.3	10
V	ppm	9.1	38	95	13	32	75	9.5	27	57
W	ppm	0.61	2.5	10	0.7	2	4.7	0.5	1.4	3.6
Y	ppm	12	46	210	9.4	29	71	5.2	15	39
Zn	ppm	2	49	120	27	56	150	32	72	240
Zr	ppm	5.3	32	95	12	34	89	7.8	33	110



**Figure 8-8.** Relative contents of major constituents (upper) and trace metals (lower) in roots of amphibious plants in the Simpevarp area. The pie charts show the relative amounts of the selected metals. The shares in the pie charts are based on the contents of the elements expressed per root dry weight. (Ur regionala biogeokemiska databasen. Copyright Sveriges geologiska undersökning (SGU). Medgivande:30-1125/2005.)

## 9 References

**Aggeryd I, Aquilonius K, Landström O, Sundblad B, Tullborg E-L, 1995.** Long-term transfer of elements across the interface of the biosphere and geosphere – The natural analogue at the Island of Äspö. SKB Project report U-96-24. Svensk Kärnbränslehantering AB.

**Aggeryd I, Aquilonius K, Sundblad B, 1999.** Biosphere – Geosphereinteractions Possible implications for the safety analysis, SKB Arbetsrapport TS-99-01. Svensk Kärnbränslehantering AB.

**Ask H, 2003.** Installation of four monitoring wells, SSM000001, SSM000002, SSM000004 and SSM000005 in the Simpevarp subarea. Oskarshamn site investigation. SKB P-03-80. Svensk Kärnbränslehantering AB.

**Ask H, 2004.** Drilling and installation of two monitoring wells, SSM 000006 and SSM 000007 in the Simpevarp subarea. Oskarshamn site investigation. SKB P-04-46. Svensk Kärnbränslehantering AB.

**Brunberg A-K, Carlsson T, Brydsten L, Strömgren M, 2004.** Oskarshamn site investigation – Identification of catchments, lake-related drainage parameters and lake habitats. SKB P-04-242. Svensk Kärnbränslehantering AB.

**Brydsten L, Strömgren M, 2005.** Digital elevation models for site investigation programme in Oskarshamn. Site description version 1.2. SKB R-05-38. Svensk Kärnbränslehantering AB.

**Carlsson T, Brunberg A-K, Brydsten L, Strömgren M, 2005.** Characterisation of running waters, including vegetation, substrate and technical encroachments. Oskarshamn site investigation. SKB P-05-40. Svensk Kärnbränslehantering AB.

**Clark I D, Fritz P, 1997.** Environmental Isotopes in Hydrogeology. Boca Raton, FL: CRC Press.

**Eriksson J, 2001.** Halter av 61 spårelement i avloppsslam, stallgödsel, handelsgödsel, nederbörd samt i jord och gröda. Naturvårdsverket Rapport 5148.

**Ericsson U, Engdahl A, 2004a.** Oskarshamn site investigation – Surface water sampling at Simpevarp 2002–2003. SKB P-04-13. Svensk Kärnbränslehantering AB.

**Ericsson U, Engdahl A, 2004b.** Oskarshamn site investigation – Surface water sampling in Oskarshamn – Subreport October 2003 to February 2004. SKB P-04-19. Svensk Kärnbränslehantering AB.

**Johansson T, Adestam L, 2004a.** Drilling and sampling in soil. Installation of groundwater monitoring wells. Oskarshamn site investigation. SKB P-04-121. Svensk Kärnbränslehantering AB.

**Johansson T, Adestam L, 2004b.** Drilling and sampling in soil. Installation of groundwater monitoring wells in the Laxemar area. Oskarshamn site investigation. SKB P-04-317. Svensk Kärnbränslehantering AB.

**Kehew A, 2001.** Applied chemical hydrogeology. Prentice Hall, New Jersey.

**Laaksoharju M, Gurban I, 2006.** Sampling of surface water and shallow groundwater at Laxemar: Possible indicators for interaction between deep groundwater in contact with the Biosphere. SKB report, in prep. Svensk Kärnbränslehantering AB.

**Landström O, Aggeryd I, Mathiasson L, Sundblad B, 1994.** Chemical composition of sediments from the Äspö area and interaction between biosphere and geosphere. SKB Arbetsrapport forskning och utveckling 94–13, Svensk Kärnbränslehantering AB.

**Larsson-McCann S, Karlsson A, Nord M, Sjögren J, Johansson L, Ivarsson M, Kindell S, 2002.** Meteorological, hydrological and oceanographical data for the site investigation program in the community of Oskarshamn. SKB TR-02-03. Svensk Kärnbränslehantering AB.

**Lindborg T (ed), 2005.** Description of the surface systems. Preliminary site description, Simpevarp subarea – version 1.2. SKB R-05-01. Svensk Kärnbränslehantering AB.

**Lindborg T (ed), 2006.** Description of the surface systems. Preliminary site description, Laxemar subarea – version 1.2. SKB R-06-11. Svensk Kärnbränslehantering AB.

**Lindroos H, 2004.** The potential for ore, industrial minerals and commercial stones in the Simpevarp area. R-04-72, Svensk Kärnbränslehantering AB.

**Logan T J, 2002.** Metals in Scandinavian Surface Waters: Effect of acidification, liming, and Potential Reacidification. Critical reviews in Environmental Science and Technology, 32:2-3 2002.

**Lundin L, Björkvald L, Hansson J, Stendahl J, 2004a.** Oskarshamn site investigation – Surveillance of soils and site types in the Oskarshamn area. SKB P-04-243. Svensk Kärnbränslehantering AB.

**Lundin L, Lode E, Stendahl J, Melkerud P-A, Björkvald L, Thorstensson, A, 2004b.** Soils and site types in the Forsmark area. SKB R-04-08. Svensk Kärnbränslehantering AB.

**Lundin L, Lode E, Stendahl J, Björkvald L, Hansson J, in press.** Soils and site types in the Oskarshamn area. SKB report in press. Svensk Kärnbränslehantering AB.

**Lärke A, Hillgren R, Wern L, Jones J, Aquilonius K, 2005.** Hydrological and meteorological monitoring at Oskarshamn during 2003–2004. Oskarshamn site investigation. SKB P-05-227. Svensk Kärnbränslehantering AB.

**Löfgren A, Lindborg T, 2003.** A descriptive ecosystem model – a strategy for model development during site investigations. SKB R-03-06. Svensk Kärnbränslehantering AB.

**Morosini M, Hultgren H, 2003.** Inventering av privata brunnar i Simpevarpsområdet, 2001–2002. SKB P-03-05. Svensk Kärnbränslehantering AB.

**Naturvårdsverket, 1995.** Grundvattnets kemi i Sverige. Swedish Environmental Protections Agency Report 4415.

**Naturvårdsverket, 1999a.** Environmental Quality Criteria – Lakes and water courses. Background report on chemical and physical parameters. Swedish Environmental Protections Agency Report 4920.

**Naturvårdsverket, 1999b.** Environmental Quality Criteria – Groundwater. Swedish Environmental Protection Agency Report 4915.



- Naturvårdsverket, 2000.** Environmental Quality Criteria – Lakes and water courses. Swedish Environmental Protection Agency Report 5050.
- Nilsson G, 2004.** Oskarshamn site investigation – Investigation of sediments, peat lands and wetlands. Stratigraphical and analytical data. SKB P-04-273. Svensk Kärnbränslehantering AB.
- Nyman H, 2005.** Depth and stratigraphy of Quaternary deposits. Preliminary site description Laxemar subarea – version 1.2. SKB R-05-54. Svensk Kärnbränslehantering AB.
- Risberg J, 2002.** Holocene sediment accumulation in the Äspö area. SKB R-02-47, 37 pp, Svensk Kärnbränslehantering AB.
- Rudmark L, Malmberg-Persson K, Mikko H, 2005.** Oskarshamn site investigation: Investigation of Quaternary deposits 2003–2004. SKB P-05-49. Svensk Kärnbränslehantering AB.
- Schwartz F, Zhang H, 2003.** Fundamentals of ground water. John Wiley & sons, New York, 583 pp.
- SKB, 2001.** Site investigations. Investigation methods and general execution programme. SKB TR-01-29. Svensk Kärnbränslehantering AB.
- SKB, 2004.** Hydrogeochemical evaluation for Simpevarp model version 1.2. Preliminary site description of the Simpevarp area. SKB R-04-74. Svensk Kärnbränslehantering AB.
- SKB, 2005.** Preliminary site description. Simpevarp subarea – version 1.2. SKB R-05-08. Svensk Kärnbränslehantering AB.
- SKB, 2006.** Preliminary site description. Laxemar subarea – version 1.2. SKB R-06-10. Svensk Kärnbränslehantering AB.
- SSI, 2005.** Concentrations of Uranium, Thorium and Potassium in Sweden. SSI Report 2005:05.
- Tröjbom M, Söderbäck B, 2006.** Chemical characteristics of surface systems in the Forsmark area. Visualisation and statistical evaluation of data from surface water, shallow groundwater, precipitation and regolith. SKB R-06-19. Svensk Kärnbränslehantering AB.
- Wahlgren C-H, Ahl M, Sandahl K-A, Berglund J, Petersson J, Ekström Mary, Persson P-O, 2004.** Bedrock mapping 2003 – Simpevarp subarea. Outcrop data, fracture data, modal and geochemical classification of rock types, bedrock map, radiometric dating. Oskarshamn site investigation. SKB P-04-102. Svensk Kärnbränslehantering AB.
- Werner K, Bosson E, Berglund S, 2005a.** Description of climate, surface hydrology, and near-surface hydrogeology. Simpevarp 1.2. SKB R-05-04. Svensk Kärnbränslehantering AB.
- Werner K, Bosson E, Berglund S, 2005b.** Laxemar 1.2 – Description of meteorology, surface hydrology, and near-surface hydrogeology. SKB R-05-61. Svensk Kärnbränslehantering AB.
- Östergren I, Falk R, Mjönes L and Ek B-M, 2003.** Mätning av naturlig radioaktivitet i dricksvatten. Test av mätmetoder och resultat av en pilotundersökning. SSI Report 2003:07.

## **Web based references**

**IMA, 2005.** The National survey of Lakes and Streams at <http://info1.ma.slu.se/db.html>. Accessed 2005-07-15.

**IVL, 2005.** [ww.ivl.se/miljo](http://ww.ivl.se/miljo). Accessed 2005-07-15.

**SGU, 2005a.** The geochemical and biogeochemical databases of Sveriges Geologiska Undersökning, SGU. [www.sgu.se](http://www.sgu.se). Accessed 2005-07-15.

**SGU, 2005b.** [www.sgu.se/sgu/sv/service/kart-tjanst\\_start.htm#brunn](http://www.sgu.se/sgu/sv/service/kart-tjanst_start.htm#brunn). Accessed 2005-06-15.

**SMHI, 2005.** [www.smhi.se/oceanografi/oce\\_data/oce\\_data.html](http://www.smhi.se/oceanografi/oce_data/oce_data.html). Accessed 2005-05-15.

**SML, 2005.** [www-sml.slu.se/sk/](http://www-sml.slu.se/sk/). The Swedish Survey of Forest Soil and Vegetation. Accessed 2005-07-15.

**USGS, 2005.** [water.usgs.gov/software/wateq4f.html](http://water.usgs.gov/software/wateq4f.html). Accessed 2005-07-15

## Appendix 1 – Simpevarp surface water

<b>Element</b>	<b>Description</b>	<b>Abbreviation</b>	<b>Page</b>
<b>Aluminium</b>	Aluminium	Al	1
<b>Antimony</b>	Antimony	Sb	2
<b>Arsenic</b>	Arsenic	As	3
<b>Barium</b>	Barium	Ba	4
<b>Boron</b>	Boron-10 (B10/B11)	B-10	5
<b>Bromide</b>	Bromide	Br	6
<b>Cadmium</b>	Cadmium	Cd	7
<b>Calcium</b>	Calcium	Ca	8
<b>Carbon</b>	Bicarbonate	HCO <sub>3</sub>	9
	Carbon-13	C-13	10
	Carbon-14	C-14	11
	Dissolved inorganic carbon	DIC	12
	Dissolved organic carbon	DOC	13
	Particulate organic carbon	POC	14
	Total organic carbon	TOC	15
<b>Cerium</b>	Cerium	Ce	16
<b>Cesium</b>	Cesium	Cs	17
<b>Chlorine</b>	Chloride	Cl	18
	Chlorine-37	Cl-37	19
<b>Chromium</b>	Chromium	Cr	20
<b>Cobalt</b>	Cobalt	Co	21
<b>Copper</b>	Copper	Cu	22
<b>Deuterium</b>	Deuterium	D	23
<b>Dysprosium</b>	Dysprosium	Dy	24
<b>Erbium</b>	Erbium	Er	24
<b>Europium</b>	Europium	Eu	25
<b>Fluoride</b>	Fluoride	F	26
<b>Gadolinium</b>	Gadolinium	Gd	27
<b>Hafnium</b>	Hafnium	Hf	27
<b>Holmium</b>	Holmium	Ho	28
<b>Hydrogen</b>	pH (field)	pH (field)	28
	pH (lab)	pH (lab)	29
	Tritium	Tr	30
<b>Indium</b>	Indium	In	31
<b>Iodide</b>	Iodide	I	32
<b>Iron</b>	Ferrous iron	Fe(II)	33
	Iron (total ICP)	Fe	34
	Iron (total spectrometric)	Fe	35
<b>Lanthanum</b>	Lanthanum	La	35
<b>Lead</b>	Lead	Pb	36
<b>Lithium</b>	Lithium	Li	37
<b>Lutetium</b>	Lutetium	Lu	38
<b>Magnesium</b>	Magnesium	Mg	39
<b>Manganese</b>	Manganese	Mn	40
<b>Mercury</b>	Mercury	Hg	41

<b>Element</b>	<b>Description</b>	<b>Abbreviation</b>	<b>Page</b>
<b>Molybdenum</b>	Molybdenum	Mo	41
<b>Neodymium</b>	Neodymium	Nd	42
<b>Nickel</b>	Nickel	Ni	43
<b>Nitrogen</b>	Total nitrogen	Tot-N	44
	Nitrogen as ammonium	NH4-N	45
	Nitrogen as nitrate	NO3-N	46
	Nitrogen as nitrate and nitrite	NO23-N	47
	Particulate organic nitrogen	PON	48
<b>Oxygen</b>	Dissolved oxygen (lab+field)	O2	49
	Oxygen-18	O-18	50
<b>Phosphorus</b>	Particulate organic phosphorus	POP	51
	Phosphorus as phosphate	PO4-P	52
	Total phosphorus	Tot-P	53
<b>Potassium</b>	Potassium	K	54
<b>Praseodymium</b>	Praseodymium	Pr	55
<b>Radium</b>	Radium-226	Ra-226	55
<b>Radon</b>	Radon-222	Rn-222	56
<b>Rubidium</b>	Rubidium	Rb	56
<b>Samarium</b>	Samarium	Sm	57
<b>Scandium</b>	Scandium	Sc	58
<b>Silicon</b>	Silicon	Si	59
	Silica	SiO2-si	60
<b>Sodium</b>	Sodium	Na	61
<b>Strontium</b>	Strontium	Sr	62
	Strontium-87 (Sr87/Sr86)	Sr-87	63
	Hydrogen sulphide as total sulphide	S2 (HS)	64
<b>Sulphur</b>	Sulphate	SO4	65
	Sulphate as sulphur	SO4-S	66
	Sulphur-34	S-34	67
	Terbium	Terbium	Tb
<b>Thallium</b>	Thallium	Tl	68
<b>Thorium</b>	Thorium	Th	69
	Thorium-230	Th-230	69
	Thorium-232	Th-232	70
	Thullium	Thullium	Tm
<b>Uranium</b>	Uranium	U	71
	Uranium-234	U-234	71
	Uranium-235	U-235	72
	Uranium-238	U-238	72
<b>Vanadium</b>	Vanadium	V	73
<b>Ytterbium</b>	Ytterbium	Yb	74
<b>Yttrium</b>	Yttrium	Y	75
<b>Zinc</b>	Zinc	Zn	76
<b>Zirconium</b>	Zirconium	Zr	77

<b>Element</b>	<b>Description</b>	<b>Abbreviation</b>	<b>Page</b>
<b>Absorbance</b>	Spectr.abs.coeff 436nm		77
	Absorbance 436nm	Abs	78
<b>Chlorophyll</b>	Chlorophyll a		78
	Chlorophyll b		79
	Pheopigment		79
	Chlorophyll (field)		80
<b>Conductivity</b>	Electrical conductivity (lab)		81
	Electrical conductivity (field)		82
<b>Light</b>	Light penetration		82
	Light $\mu\text{molE}/\text{m}^2,\text{s}$		83
<b>Salinity</b>	Salinity (field)		83
<b>Turbidity</b>	Turbidity		84

## Surface Water

<b>AI</b>			<b>Aluminium (µg/l)</b>								<b>AI</b>	
			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>	
<b>Lake Water</b>												
Frisksjön	PSM002065	Surface	1	140		<b>140</b>		140	140			
Frisksjön	PSM002065	Bottom	1	130		<b>130</b>		130	130			
Simpevarp area		Surface	1	140		<b>140</b>		140	140			
Simpevarp area		Bottom	1	130		<b>130</b>		130	130			
Kalmar County	N.S.2000	Surface	35	9.8	45	<b>98</b>	270	770	180	200	100	
Forsmark area		Surface	49	2.3	7.8	<b>15</b>	36	240	33	50	140	
Forsmark area		Bottom	15	2.0	6.2	<b>12</b>	20	56	17	20	100	
Sweden	N.S.2000	Surface	1206	1.6	23	<b>62</b>	140	37000	130	1000	800	
<b>Sea Water</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>	
Borholmsfjärden	PSM002062	Surface	1	19		<b>19</b>		19	19			
Borholmsfjärden	PSM002062	Bottom	1	16		<b>16</b>		16	16			
Granholmsfjärden	PSM002064	Surface	1	16		<b>16</b>		16	16			
Granholmsfjärden	PSM002064	Bottom	1	4.4		<b>4.4</b>		4.4	4.4			
Kråkelund	PSM002060	Surface	1	<2		<b>&lt;2</b>		<2	<2			
Kråkelund	PSM002060	Bottom	1	<2		<b>&lt;2</b>		<2	<2			
Ekö	PSM002061	Surface	1	<2		<b>&lt;2</b>		<2	<2			
Ekö	PSM002061	Bottom	1	<2		<b>&lt;2</b>		<2	<2			
Simpevarp area		Surface	4	<2	<2	<b>8.4</b>	17	19	9.3	10	100	
Simpevarp area		Bottom	4	<2	<2	<b>2.7</b>	7.3	16	5.6	7	130	
Forsmark area		Surface	38	1.5	6.9	<b>13</b>	32	720	67	200	230	
Forsmark area		Bottom	13	1.8	2.8	<b>5.6</b>	12	44	11	10	110	
<b>Streaming Water</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>	
Misterhultsbäcken Ö	PSM002082	Surface	1	420		<b>420</b>		420	420			
Smedtorpet	PSM002083	Surface	1	530		<b>530</b>		530	530			
Kärrevik	PSM002084	Surface	1	340		<b>340</b>		340	340			
Ekerum	PSM002085	Surface	1	130		<b>130</b>		130	130			
Plittorp	PSM002071	Surface	1	130		<b>130</b>		130	130			
Lillekvarn	PSM002072	Surface	1	410		<b>410</b>		410	410			
Kvarnstugan	PSM002079	Surface	1	160		<b>160</b>		160	160			
Ekhyddan	PSM002087	Surface	1	180		<b>180</b>		180	180			
Övrahammar	PSM002076	Surface	1	360		<b>360</b>		360	360			
Basteböla	PSM002086	Surface	1	600		<b>600</b>		600	600			
Simpevarp area		Surface	10	130	170	<b>350</b>	420	600	330	200	52	
Forsmark area		Surface	48	0.65	9.0	<b>13</b>	22	70	17	10	72	

## Surface Water

Sb			Antimony ( $\mu\text{g/l}$ )								Sb	
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
<b>Lake Water</b>												
Frisksjön	PSM002065	Surface	1	0.13		<b>0.13</b>		0.13	0.13			
Frisksjön	PSM002065	Bottom	1	0.13		<b>0.13</b>		0.13	0.13			
Simpevarp area		Surface	1	0.13		<b>0.13</b>		0.13	0.13			
Simpevarp area		Bottom	1	0.13		<b>0.13</b>		0.13	0.13			
Forsmark area		Surface	36	0.037	0.067	<b>0.077</b>	0.093	0.14	0.080	0.02	29	
Forsmark area		Bottom	7	0.072	0.078	<b>0.082</b>	0.093	0.13	0.089	0.02	22	
<b>Sea Water</b>												
Borholmsfjärden	PSM002062	Surface	1	<0.1		<b>&lt;0.1</b>		<0.1	<0.1			
Borholmsfjärden	PSM002062	Bottom	1	<0.1		<b>&lt;0.1</b>		<0.1	<0.1			
Granholmsfjärden	PSM002064	Surface	1	<0.1		<b>&lt;0.1</b>		<0.1	<0.1			
Granholmsfjärden	PSM002064	Bottom	1	<0.1		<b>&lt;0.1</b>		<0.1	<0.1			
Kråkelund	PSM002060	Surface	1	0.11		<b>0.11</b>		0.11	0.11			
Kråkelund	PSM002060	Bottom	1	<0.1		<b>&lt;0.1</b>		<0.1	<0.1			
Ekö	PSM002061	Surface	1	<0.1		<b>&lt;0.1</b>		<0.1	<0.1			
Ekö	PSM002061	Bottom	1	0.11		<b>0.11</b>		0.11	0.11			
Simpevarp area		Surface	4	<0.1	<0.1	<b>&lt;0.1</b>	<0.1	0.11	<0.1	0.03	48	
Simpevarp area		Bottom	4	<0.1	<0.1	<b>&lt;0.1</b>	<0.1	0.11	<0.1	0.03	47	
Forsmark area		Surface	32	<0.2	<0.2	<b>&lt;0.2</b>	<0.2	<0.2	<0.2	0.03	32	
Forsmark area		Bottom	10	<0.2	<0.2	<b>&lt;0.2</b>	<0.2	<0.2	<0.2	0.04	37	
<b>Streaming Water</b>												
Misterhultsbäcken Ö	PSM002082	Surface	1	0.074		<b>0.074</b>		0.074	0.074			
Smedtorpet	PSM002083	Surface	1	0.094		<b>0.094</b>		0.094	0.094			
Kärrevik	PSM002084	Surface	1	0.077		<b>0.077</b>		0.077	0.077			
Ekerum	PSM002085	Surface	1	0.091		<b>0.091</b>		0.091	0.091			
Plittorp	PSM002071	Surface	1	0.043		<b>0.043</b>		0.043	0.043			
Lillekvarn	PSM002072	Surface	1	0.068		<b>0.068</b>		0.068	0.068			
Kvarnstugan	PSM002079	Surface	1	0.043		<b>0.043</b>		0.043	0.043			
Ekhyddan	PSM002087	Surface	1	0.049		<b>0.049</b>		0.049	0.049			
Övrahammar	PSM002076	Surface	1	0.099		<b>0.099</b>		0.099	0.099			
Basteböla	PSM002086	Surface	1	0.14		<b>0.14</b>		0.14	0.14			
Simpevarp area		Surface	10	0.043	0.054	<b>0.075</b>	0.093	0.14	0.078	0.03	39	
Forsmark area		Surface	32	0.042	0.066	<b>0.075</b>	0.083	0.15	0.076	0.02	29	



## Surface Water

As			Arsenic ( $\mu\text{g/l}$ )								As	
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
<b>Lake Water</b>												
Frisksjön	PSM002065	Surface	1	0.63		<b>0.63</b>		0.63	0.63			
Frisksjön	PSM002065	Bottom	1	0.57		<b>0.57</b>		0.57	0.57			
Simpevarp area		Surface	1	0.63		<b>0.63</b>		0.63	0.63			
Simpevarp area		Bottom	1	0.57		<b>0.57</b>		0.57	0.57			
Kalmar County	N.S.2000	Surface	35	0.18	0.31	<b>0.35</b>	0.44	0.76	0.38	0.1	35	
Forsmark area		Surface	21	<0.1	0.31	<b>0.40</b>	0.55	1.5	0.48	0.3	66	
Forsmark area		Bottom	5	0.29	0.33	<b>0.37</b>	0.48	0.48	0.39	0.08	22	
Sweden	N.S.2000	Surface	1206	0.010	0.15	<b>0.31</b>	0.47	520	0.85	20	1800	
<b>Sea Water</b>			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
Borholmsfjärden	PSM002062	Surface	1	<1		<1		<1	<1			
Borholmsfjärden	PSM002062	Bottom	1	<1		<1		<1	<1			
Granholmsfjärden	PSM002064	Surface	1	<1		<1		<1	<1			
Granholmsfjärden	PSM002064	Bottom	1	1.0		<b>1.0</b>		1.0	1.0			
Kråkelund	PSM002060	Surface	1	<1		<1		<1	<1			
Kråkelund	PSM002060	Bottom	1	<1		<1		<1	<1			
Ekö	PSM002061	Surface	1	<1		<1		<1	<1			
Ekö	PSM002061	Bottom	1	<1		<1		<1	<1			
Simpevarp area		Surface	4	<1	<1	<1	<1	<1	<1			
Simpevarp area		Bottom	4	<1	<1	<1	<1	1.0	<1	0.3	40	
Forsmark area		Surface	18	<100	<100	<100	<100	<100	<100	20	180	
Forsmark area		Bottom	6	<100	<100	<100	<100	<100	<100	30	100	
<b>Streaming Water</b>			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
Misterhultsbäcken Ö	PSM002082	Surface	1	0.99		<b>0.99</b>		0.99	0.99			
Smedtorpet	PSM002083	Surface	1	0.49		<b>0.49</b>		0.49	0.49			
Kärsvik	PSM002084	Surface	1	0.46		<b>0.46</b>		0.46	0.46			
Ekerum	PSM002085	Surface	1	0.67		<b>0.67</b>		0.67	0.67			
Plittorp	PSM002071	Surface	1	0.37		<b>0.37</b>		0.37	0.37			
Lillekvarn	PSM002072	Surface	1	0.74		<b>0.74</b>		0.74	0.74			
Kvarnstugan	PSM002079	Surface	1	0.51		<b>0.51</b>		0.51	0.51			
Ekhyddan	PSM002087	Surface	1	0.59		<b>0.59</b>		0.59	0.59			
Övrahammar	PSM002076	Surface	1	1.7		<b>1.7</b>		1.7	1.7			
Basteböla	PSM002086	Surface	1	1.3		<b>1.3</b>		1.3	1.3			
Simpevarp area		Surface	10	0.37	0.50	<b>0.63</b>	0.93	1.7	0.79	0.4	54	
Forsmark area		Surface	14	<0.1	0.27	<b>0.36</b>	0.48	0.80	0.38	0.2	61	

## Surface Water

<b>Ba</b>			<b>Barium (µg/l)</b>							<b>Ba</b>	
			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
<b>Lake Water</b>											
Frisksjön	PSM002065	Surface	1	12		<b>12</b>		12	12		
Frisksjön	PSM002065	Bottom	1	11		<b>11</b>		11	11		
Simpevarp area		Surface	1	12		<b>12</b>		12	12		
Simpevarp area		Bottom	1	11		<b>11</b>		11	11		
Forsmark area		Surface	52	10	15	<b>20</b>	27	59	22	9	41
Forsmark area		Bottom	18	11	17	<b>22</b>	26	64	26	10	54
<b>Sea Water</b>											
Borholmsfjärden	PSM002062	Surface	1	18		<b>18</b>		18	18		
Borholmsfjärden	PSM002062	Bottom	1	19		<b>19</b>		19	19		
Granholmsfjärden	PSM002064	Surface	1	19		<b>19</b>		19	19		
Granholmsfjärden	PSM002064	Bottom	1	19		<b>19</b>		19	19		
Kråkelund	PSM002060	Surface	1	18		<b>18</b>		18	18		
Kråkelund	PSM002060	Bottom	1	18		<b>18</b>		18	18		
Ekö	PSM002061	Surface	1	18		<b>18</b>		18	18		
Ekö	PSM002061	Bottom	1	18		<b>18</b>		18	18		
Simpevarp area		Surface	4	18	18	<b>18</b>	18	19	18	0.2	1.2
Simpevarp area		Bottom	4	18	18	<b>18</b>	19	19	18	0.2	1.3
Forsmark area		Surface	41	13	17	<b>18</b>	20	22	18	2	12
Forsmark area		Bottom	16	14	16	<b>18</b>	21	24	18	3	16
<b>Streaming Water</b>											
Misterhultsbäcken Ö	PSM002082	Surface	1	17		<b>17</b>		17	17		
Smedtorpet	PSM002083	Surface	1	13		<b>13</b>		13	13		
Kärrevik	PSM002084	Surface	1	15		<b>15</b>		15	15		
Ekerum	PSM002085	Surface	1	15		<b>15</b>		15	15		
Plittorp	PSM002071	Surface	1	17		<b>17</b>		17	17		
Lillekvarn	PSM002072	Surface	1	13		<b>13</b>		13	13		
Kvarnstugan	PSM002079	Surface	1	18		<b>18</b>		18	18		
Ekhyddan	PSM002087	Surface	1	16		<b>16</b>		16	16		
Övrahammar	PSM002076	Surface	1	17		<b>17</b>		17	17		
Basteböla	PSM002086	Surface	1	26		<b>26</b>		26	26		
Simpevarp area		Surface	10	13	15	<b>16</b>	17	26	17	4	21
Laxemar	pre-PLU	Surface	1	12		<b>12</b>		12	12		
Forsmark area		Surface	49	14	19	<b>23</b>	27	51	25	8	34

## Surface Water

B-10			Boron-10 (B10/B11) (ratio)								B-10	
Lake Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
Frisksjön	PSM002065	Surface	12	0.2354	0.2410	<b>0.2419</b>	0.2425	0.2443	0.2412	0.00263	1.1	
Frisksjön	PSM002065	Bottom	13	0.2343	0.2412	<b>0.2422</b>	0.2428	0.2454	0.2416	0.00317	1.3	
Jämsen	PSM002067	Surface	11	0.2278	0.2389	<b>0.2398</b>	0.2413	0.2670	0.2416	0.01000	4.1	
Jämsen	PSM002067	Bottom	11	0.2327	0.2392	<b>0.2401</b>	0.2423	0.2651	0.2423	0.00870	3.6	
Söråmagasinet	PSM005964	Surface	1	0.2402		<b>0.2402</b>		0.2402	0.2402			
Söråmagasinet	PSM005964	Bottom	1	0.2413		<b>0.2413</b>		0.2413	0.2413			
Götemar	PSM002066	Surface	10	0.2350	0.2427	<b>0.2438</b>	0.2442	0.2474	0.2432	0.00334	1.4	
Götemar	PSM002066	Bottom	10	0.2392	0.2423	<b>0.2435</b>	0.2438	0.2447	0.2427	0.00188	0.77	
Simpevarp area		Surface	34	0.2278	0.2399	<b>0.2418</b>	0.2438	0.2670	0.2419	0.00603	2.5	
Simpevarp area		Bottom	35	0.2327	0.2400	<b>0.2422</b>	0.2437	0.2651	0.2421	0.00520	2.1	
Forsmark area		Surface	15	0.2345	0.2373	<b>0.2390</b>	0.2402	0.2426	0.2387	0.00216	0.90	
Forsmark area		Bottom	3	0.2363	0.2364	<b>0.2365</b>	0.2583	0.2800	0.2509	0.0252	10	
Sea Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
Borholmsfjärden	PSM002062	Surface	11	0.2343	0.2373	<b>0.2383</b>	0.2399	0.2438	0.2387	0.00266	1.1	
Borholmsfjärden	PSM002062	Bottom	11	0.2290	0.2358	<b>0.2367</b>	0.2383	0.2417	0.2366	0.00364	1.5	
Granholmsfjärden	PSM002064	Surface	11	0.2269	0.2368	<b>0.2383</b>	0.2398	0.2417	0.2374	0.00407	1.7	
Granholmsfjärden	PSM002064	Bottom	11	0.2317	0.2370	<b>0.2383</b>	0.2392	0.2411	0.2376	0.00272	1.1	
Kråkelund	PSM002060	Surface	10	0.2311	0.2371	<b>0.2379</b>	0.2389	0.2418	0.2374	0.00318	1.3	
Kråkelund	PSM002060	Bottom	9	0.2338	0.2366	<b>0.2376</b>	0.2380	0.2391	0.2372	0.00156	0.66	
Ekö	PSM002061	Surface	11	0.2347	0.2367	<b>0.2385</b>	0.2395	0.2438	0.2384	0.00257	1.1	
Ekö	PSM002061	Bottom	11	0.2302	0.2364	<b>0.2383</b>	0.2394	0.2415	0.2376	0.00310	1.3	
Fågelöfjärden	PSM002063	Surface	9	0.2303	0.2361	<b>0.2371</b>	0.2386	0.2414	0.2371	0.00314	1.3	
Fågelöfjärden	PSM002063	Bottom	9	0.2281	0.2362	<b>0.2374</b>	0.2392	0.2410	0.2370	0.00389	1.6	
Simpevarp area		Surface	52	0.2269	0.2365	<b>0.2381</b>	0.2395	0.2438	0.2378	0.00311	1.3	
Simpevarp area		Bottom	51	0.2281	0.2365	<b>0.2377</b>	0.2391	0.2417	0.2372	0.00300	1.3	
Forsmark area		Surface	15	0.1900	0.2144	<b>0.2373</b>	0.2383	0.2396	0.2255	0.0215	9.6	
Forsmark area		Bottom	5	0.1912	0.1916	<b>0.1918</b>	0.2394	0.2399	0.2108	0.0264	13	
Streaming Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
Misterhult	PSM002080	Surface	9	0.2384	0.2396	<b>0.2426</b>	0.2428	0.2676	0.2441	0.00896	3.7	
Perstorpet	PSM002081	Surface	11	0.2394	0.2418	<b>0.2434</b>	0.2464	0.2746	0.2467	0.00989	4.0	
Misterhultsbäcken Ö	PSM002082	Surface	12	0.2404	0.2423	<b>0.2430</b>	0.2462	0.2723	0.2467	0.00900	3.6	
Smedtorpet	PSM002083	Surface	14	0.2394	0.2423	<b>0.2433</b>	0.2449	0.2561	0.2443	0.00399	1.6	
Kärsvik	PSM002084	Surface	13	0.2428	0.2443	<b>0.2452</b>	0.2470	0.2537	0.2459	0.00290	1.2	
Ekerum	PSM002085	Surface	13	0.2405	0.2424	<b>0.2454</b>	0.2467	0.2479	0.2448	0.00237	0.97	
Köksmåla	PSM002068	Surface	11	0.2308	0.2359	<b>0.2388</b>	0.2418	0.2651	0.2413	0.00980	4.1	
Jämserum	PSM002069	Surface	11	0.2335	0.2360	<b>0.2403</b>	0.2412	0.2764	0.2425	0.0122	5.0	
Pliittorp	PSM002071	Surface	11	0.2350	0.2396	<b>0.2415</b>	0.2420	0.2725	0.2437	0.0102	4.2	
Lillekvarn	PSM002072	Surface	10	0.2304	0.2363	<b>0.2392</b>	0.2413	0.2628	0.2405	0.00858	3.6	
Brolund	PSM002077	Surface	10	0.2377	0.2418	<b>0.2434</b>	0.2440	0.2498	0.2432	0.00365	1.5	
Sillebäcken	PSM002078	Surface	11	0.2395	0.2425	<b>0.2448</b>	0.2452	0.2639	0.2469	0.00812	3.3	
Kvarnstugan	PSM002079	Surface	12	0.2389	0.2414	<b>0.2428</b>	0.2434	0.2449	0.2424	0.00175	0.72	
Ekhyddan	PSM002087	Surface	14	0.2354	0.2421	<b>0.2439</b>	0.2450	0.2636	0.2448	0.00620	2.5	
Övrahammar	PSM002076	Surface	11	0.2399	0.2428	<b>0.2434</b>	0.2437	0.2456	0.2431	0.00167	0.69	
Basteböla	PSM002086	Surface	13	0.2427	0.2453	<b>0.2473</b>	0.2483	0.2512	0.2472	0.00249	1.0	
Flohult	PSM002070	Surface	9	0.2354	0.2376	<b>0.2401</b>	0.2441	0.2708	0.2433	0.0108	4.4	
Figeholm	PSM002075	Surface	10	0.2367	0.2397	<b>0.2412</b>	0.2439	0.2499	0.2424	0.00421	1.7	
	PSM107735	Surface	1	0.2445		<b>0.2445</b>		0.2445	0.2445			
Simpevarp area		Surface	206	0.2304	0.2410	<b>0.2431</b>	0.2452	0.2764	0.2442	0.00709	2.9	
Forsmark area		Surface	14	0.1932	0.2361	<b>0.2380</b>	0.2414	0.2436	0.2299	0.0193	8.4	

## Surface Water

Br			Bromide (mg/l)								Br
Lake Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Frisksjön	PSM002065	Surface	36	<0.2	<0.2	<0.2	<0.2	0.50	<0.2	0.07	65
Frisksjön	PSM002065	Bottom	36	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.03	25
Jämsen	PSM002067	Surface	36	<0.2	<0.2	<0.2	<0.2	0.20	<0.2	0.02	16
Jämsen	PSM002067	Bottom	36	<0.2	<0.2	<0.2	<0.2	1.6	<0.2	0.3	180
Söråmagasinet	PSM005964	Surface	22	<0.2	<0.2	<0.2	<0.2	0.23	<0.2	0.03	25
Söråmagasinet	PSM005964	Bottom	22	<0.2	<0.2	<0.2	<0.2	0.36	<0.2	0.05	48
Götemar	PSM002066	Surface	18	<0.2	<0.2	<0.2	<0.2	0.36	<0.2	0.07	54
Götemar	PSM002066	Bottom	18	<0.2	<0.2	<0.2	<0.2	0.38	<0.2	0.07	56
Simpevarp area		Surface	112	<0.2	<0.2	<0.2	<0.2	0.50	<0.2	0.05	47
Simpevarp area		Bottom	112	<0.2	<0.2	<0.2	<0.2	1.6	<0.2	0.2	140
Laxemar	pre-PLU	-	1	0.070		0.070		0.070	0.070		
Forsmark area		Surface	245	<0.2	<0.2	<0.2	<0.2	12	<0.2	0.8	380
Forsmark area		Bottom	72	<0.2	<0.2	<0.2	0.20	3.2	0.20	0.4	190
Sea Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Borholmsfjärden	PSM002062	Surface	36	1.0	6.9	9.1	11	23	9.7	5	50
Borholmsfjärden	PSM002062	Bottom	36	3.2	9.6	12	13	20	12	4	32
Granholmsfjärden	PSM002064	Surface	37	3.7	10	12	14	26	12	5	41
Granholmsfjärden	PSM002064	Bottom	35	8.7	13	13	15	26	14	3	24
Kräkelund	PSM002060	Surface	34	11	13	15	17	28	16	4	28
Kräkelund	PSM002060	Bottom	34	9.1	13	15	17	27	16	4	27
Ekö	PSM002061	Surface	36	8.4	13	15	16	25	16	4	25
Ekö	PSM002061	Bottom	35	8.8	13	15	16	27	15	3	22
Fågelöfjärden	PSM002063	Surface	17	8.2	11	12	13	14	12	1	11
Fågelöfjärden	PSM002063	Bottom	17	9.8	12	13	13	14	13	1	9.1
Simpevarp area		Surface	160	1.0	11	13	15	28	13	5	37
Simpevarp area		Bottom	157	3.2	12	13	16	27	14	4	28
Forsmark area		Surface	175	0.21	7.3	8.4	8.9	16	7.7	2	31
Forsmark area		Bottom	72	<0.2	8.1	8.7	9.4	12	8.5	2	19
Streaming Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Misterhult	PSM002080	Surface	17	<0.2	<0.2	<0.2	<0.2	0.22	<0.2	0.03	26
Perstorpet	PSM002081	Surface	34	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.005	4.9
Misterhultsbäcken Ö	PSM002082	Surface	37	<0.2	<0.2	<0.2	<0.2	0.63	<0.2	0.10	78
Smedtorpet	PSM002083	Surface	39	<0.2	<0.2	<0.2	<0.2	0.45	<0.2	0.09	60
Kärrsvik	PSM002084	Surface	38	<0.2	<0.2	<0.2	<0.2	0.43	<0.2	0.08	60
Ekerum	PSM002085	Surface	37	<0.2	<0.2	<0.2	<0.2	0.41	<0.2	0.07	58
Köksmåla	PSM002068	Surface	37	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2		
Jämserum	PSM002069	Surface	37	<0.2	<0.2	<0.2	<0.2	0.26	<0.2	0.03	25
Plittorp	PSM002071	Surface	36	<0.2	<0.2	<0.2	<0.2	0.61	<0.2	0.08	74
Lillekvarn	PSM002072	Surface	15	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.01	14
Brolund	PSM002077	Surface	18	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.008	8.4
Sillebäcken	PSM002078	Surface	29	<0.2	<0.2	<0.2	<0.2	0.30	<0.2	0.06	50
Kvarnstugan	PSM002079	Surface	36	<0.2	<0.2	<0.2	<0.2	0.67	<0.2	0.1	88
Ekhyddan	PSM002087	Surface	39	<0.2	<0.2	<0.2	<0.2	0.32	<0.2	0.04	36
Övrahammar	PSM002076	Surface	32	<0.2	<0.2	<0.2	0.44	0.70	0.25	0.2	77
Basteböla	PSM002086	Surface	29	0.32	0.48	0.59	0.77	1.3	0.65	0.2	36
Flohult	PSM002070	Surface	17	<0.2	<0.2	<0.2	<0.2	0.35	<0.2	0.06	52
Figeholm	PSM002075	Surface	17	<0.2	<0.2	<0.2	<0.2	0.49	<0.2	0.10	76
	PSM003715	Surface	8	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2		
	PSM003716	Surface	9	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2		
	PSM107735	Surface	12	<0.2	<0.2	<0.2	0.27	0.38	<0.2	0.1	54
Simpevarp area		Surface	573	<0.2	<0.2	<0.2	<0.2	1.3	<0.2	0.2	100
Laxemar	pre-PLU	Surface	10	0.070	0.093	0.13	0.14	1.3	0.24	0.4	160
Forsmark area		Surface	316	<0.2	<0.2	<0.2	<0.2	0.87	<0.2	0.1	97

## Surface Water

Cd			Cadmium (µg/l)								Cd	
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
<b>Lake Water</b>												
Frisksjön	PSM002065	Surface	1	<0.002		<0.002		<0.002	<0.002			
Frisksjön	PSM002065	Bottom	1	<0.002		<0.002		<0.002	<0.002			
Simpevarp area		Surface	1	<0.002		<0.002		<0.002	<0.002			
Simpevarp area		Bottom	1	<0.002		<0.002		<0.002	<0.002			
Kalmar County	N.S.2000	Surface	35	0.0030	0.0060	<b>0.011</b>	0.017	0.038	0.012	0.009	70	
Forsmark area		Surface	45	<0.002	<0.002	<b>0.0030</b>	0.0050	0.010	0.0034	0.002	63	
Forsmark area		Bottom	12	<0.002	<0.002	<b>0.0041</b>	0.0065	0.016	0.0050	0.004	90	
Sweden	N.S.2000	Surface	1206		0.0050	<b>0.0090</b>	0.017	0.15	0.015	4	2500	
<b>Sea Water</b>												
			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>	
Borholmsfjärden	PSM002062	Surface	1	<0.02		<0.02		<0.02	<0.02			
Borholmsfjärden	PSM002062	Bottom	1	<0.02		<0.02		<0.02	<0.02			
Granholmsfjärden	PSM002064	Surface	1	<0.02		<0.02		<0.02	<0.02			
Granholmsfjärden	PSM002064	Bottom	1	<0.02		<0.02		<0.02	<0.02			
Kräkelund	PSM002060	Surface	1	<0.02		<0.02		<0.02	<0.02			
Kräkelund	PSM002060	Bottom	1	<0.02		<0.02		<0.02	<0.02			
Ekö	PSM002061	Surface	1	<0.02		<0.02		<0.02	<0.02			
Ekö	PSM002061	Bottom	1	<0.02		<0.02		<0.02	<0.02			
Simpevarp area		Surface	4	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02			
Simpevarp area		Bottom	4	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02			
Forsmark area		Surface	38	<0.05	<0.05	<0.05	<0.05	0.18	<0.05	0.03	150	
Forsmark area		Bottom	13	<0.05	<0.05	<0.05	<0.05	0.39	0.051	0.1	200	
<b>Streaming Water</b>												
			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>	
Misterhultsbäcken Ö	PSM002082	Surface	1	0.022		<b>0.022</b>		0.022	0.022			
Smedtorpet	PSM002083	Surface	1	0.018		<b>0.018</b>		0.018	0.018			
Kärsvik	PSM002084	Surface	1	0.037		<b>0.037</b>		0.037	0.037			
Ekerum	PSM002085	Surface	1	0.023		<b>0.023</b>		0.023	0.023			
Plittorp	PSM002071	Surface	1	<0.002		<0.002		<0.002	<0.002			
Lillekvarn	PSM002072	Surface	1	0.016		<b>0.016</b>		0.016	0.016			
Kvarnstugan	PSM002079	Surface	1	0.0050		<b>0.0050</b>		0.0050	0.0050			
Ekhyddan	PSM002087	Surface	1	0.011		<b>0.011</b>		0.011	0.011			
Övrahammar	PSM002076	Surface	1	0.037		<b>0.037</b>		0.037	0.037			
Basteböla	PSM002086	Surface	1	0.21		<b>0.21</b>		0.21	0.21			
Simpevarp area		Surface	10	<0.002	0.012	<b>0.020</b>	0.034	0.21	0.038	0.06	160	
Forsmark area		Surface	42	<0.002	0.0028	<b>0.0040</b>	0.0063	0.018	0.0049	0.004	79	

## Surface Water

Ca			Calcium (mg/l)								Ca
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
<b>Lake Water</b>											
Frisksjön	PSM002065	Surface	36	6.3	6.7	<b>7.0</b>	7.4	8.7	7.1	0.6	7.8
Frisksjön	PSM002065	Bottom	36	6.2	6.7	<b>7.0</b>	7.5	8.6	7.1	0.6	8.5
Jämsen	PSM002067	Surface	36	7.4	8.3	<b>8.5</b>	8.7	8.9	8.5	0.3	3.5
Jämsen	PSM002067	Bottom	36	8.1	8.5	<b>8.8</b>	10	11	9.2	0.9	10
Söråmagasinet	PSM005964	Surface	22	11	11	<b>11</b>	11	13	11	0.5	4.5
Söråmagasinet	PSM005964	Bottom	22	11	11	<b>11</b>	11	13	11	0.7	6.2
Götemar	PSM002066	Surface	18	9.2	9.6	<b>9.9</b>	10	10	9.9	0.3	3.4
Götemar	PSM002066	Bottom	18	9.6	9.8	<b>10</b>	10	11	10	0.5	5.4
Simpevarp area		Surface	112	6.3	7.4	<b>8.6</b>	10	13	8.8	2	17
Simpevarp area		Bottom	112	6.2	7.5	<b>8.9</b>	11	13	9.1	2	18
Laxemar	pre-PLU	-	1	8.7		<b>8.7</b>		8.7	8.7		
Kalmar County	N.S.2000	Surface	106	2.4	5.7	<b>7.4</b>	9.2	20	7.7	3	39
Forsmark area		Surface	247	13	37	<b>46</b>	61	130	49	20	37
Forsmark area		Bottom	74	29	43	<b>52</b>	62	120	54	20	34
Sweden	N.S.2000	Surface	3464	0.060	2.2	<b>3.8</b>	6.6	130	7.2	10	170
<b>Sea Water</b>											
			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Borholmsfjärden	PSM002062	Surface	36	20	52	<b>68</b>	79	87	63	20	28
Borholmsfjärden	PSM002062	Bottom	36	34	69	<b>75</b>	84	95	74	10	17
Granholmsfjärden	PSM002064	Surface	37	27	66	<b>78</b>	87	92	74	20	23
Granholmsfjärden	PSM002064	Bottom	35	79	85	<b>90</b>	93	100	89	5	6.0
Kräkelund	PSM002060	Surface	34	85	91	<b>95</b>	99	110	95	5	5.7
Kräkelund	PSM002060	Bottom	34	86	94	<b>98</b>	100	110	98	5	5.4
Ekö	PSM002061	Surface	36	86	92	<b>95</b>	99	110	96	5	5.6
Ekö	PSM002061	Bottom	35	87	93	<b>97</b>	99	110	97	5	5.3
Fågelöfjärden	PSM002063	Surface	17	85	88	<b>90</b>	92	96	90	3	3.2
Fågelöfjärden	PSM002063	Bottom	17	78	87	<b>91</b>	93	95	90	4	4.7
Simpevarp area		Surface	160	20	73	<b>89</b>	94	110	83	20	22
Simpevarp area		Bottom	157	34	85	<b>92</b>	97	110	89	10	13
Forsmark area		Surface	175	38	69	<b>71</b>	75	83	70	7	10
Forsmark area		Bottom	72	49	68	<b>70</b>	73	81	71	5	6.7
<b>Streaming Water</b>											
			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Misterhult	PSM002080	Surface	17	6.3	7.5	<b>8.6</b>	9.9	16	9.2	2	27
Perstorpet	PSM002081	Surface	34	7.4	11	<b>12</b>	14	16	12	2	19
Misterhultsbäcken Ö	PSM002082	Surface	37	6.3	8.9	<b>11</b>	16	24	13	5	39
Smedtorpet	PSM002083	Surface	39	6.4	9.0	<b>10</b>	12	16	11	2	23
Kärsvik	PSM002084	Surface	38	12	15	<b>17</b>	18	21	17	2	13
Ekerum	PSM002085	Surface	37	18	25	<b>28</b>	32	38	28	5	17
Köksmåla	PSM002068	Surface	37	5.7	7.0	<b>7.8</b>	9.4	14	8.5	2	25
Jämserum	PSM002069	Surface	37	7.1	8.3	<b>8.4</b>	8.7	9.2	8.4	0.4	5.3
Plittorp	PSM002071	Surface	36	6.9	8.9	<b>9.7</b>	11	13	9.8	1	14
Lillekvarn	PSM002072	Surface	15	3.5	4.2	<b>4.8</b>	5.4	6.5	4.8	0.8	17
Brolund	PSM002077	Surface	18	6.4	8.8	<b>9.3</b>	9.9	13	9.5	2	16
Sillebäcken	PSM002078	Surface	29	5.1	6.0	<b>6.4</b>	7.3	11	6.9	1	20
Kvarnstugan	PSM002079	Surface	36	6.4	8.7	<b>9.6</b>	11	15	10	2	21
Ekhyddan	PSM002087	Surface	39	7.3	9.5	<b>10</b>	13	17	11	3	24
Övrahammar	PSM002076	Surface	32	8.8	12	<b>13</b>	16	22	15	3	24
Basteböla	PSM002086	Surface	29	13	16	<b>18</b>	21	26	19	3	18
Flohult	PSM002070	Surface	17	9.5	11	<b>13</b>	14	16	13	2	14
Figeholm	PSM002075	Surface	17	8.3	11	<b>12</b>	13	19	12	2	20
	PSM107735	Surface	12	11	12	<b>14</b>	14	18	14	2	13
Simpevarp area		Surface	556	3.5	8.6	<b>11</b>	15	38	13	6	47
Laxemar	pre-PLU	Surface	14	8.7	9.7	<b>11</b>	11	36	14	8	58
Kalmar County	N.S.2000	Surface	26	4.6	8.6	<b>9.6</b>	12	47	13	9	70
Forsmark area		Surface	317	10	45	<b>55</b>	66	150	59	20	38
Sweden	N.S.2000	Surface	725	0.26	3.0	<b>5.4</b>	11	160	15	20	170

## Surface Water

HCO3			Bicarbonate (mg/l)								HCO3	
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
<b>Lake Water</b>												
Frisksjön	PSM002065	Surface	36	11	12	<b>13</b>	14	17	13	2	12	
Frisksjön	PSM002065	Bottom	36	11	12	<b>13</b>	14	17	13	1	11	
Jämsen	PSM002067	Surface	36	12	14	<b>15</b>	16	18	15	2	11	
Jämsen	PSM002067	Bottom	36	13	15	<b>16</b>	20	34	18	5	30	
Söråmagasinet	PSM005964	Surface	22	32	33	<b>35</b>	38	48	36	4	9.8	
Söråmagasinet	PSM005964	Bottom	22	33	34	<b>36</b>	38	60	38	7	17	
Götemar	PSM002066	Surface	18	11	11	<b>11</b>	12	12	11	0.4	3.8	
Götemar	PSM002066	Bottom	18	11	11	<b>12</b>	15	27	13	4	29	
Simpevarp area		Surface	112	11	12	<b>14</b>	17	48	18	9	52	
Simpevarp area		Bottom	112	11	13	<b>15</b>	24	60	20	10	52	
Laxemar	pre-PLU	-	1	16		<b>16</b>		16	16			
Kalmar County	N.S.2000	Surface	106	-6.0	6.5	<b>11</b>	18	44	13	9	74	
Forsmark area		Surface	244	46	120	<b>140</b>	190	370	160	50	34	
Forsmark area		Bottom	73	93	130	<b>160</b>	190	370	170	60	33	
Sweden	N.S.2000	Surface	3464	-580	3.8	<b>7.7</b>	15	340	16	30	200	
<b>Sea Water</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>	
Borholmsfjärden	PSM002062	Surface	36	19	52	<b>66</b>	74	89	62	20	31	
Borholmsfjärden	PSM002062	Bottom	36	35	70	<b>77</b>	82	89	74	10	17	
Granholmsfjärden	PSM002064	Surface	37	34	67	<b>80</b>	85	91	74	20	21	
Granholmsfjärden	PSM002064	Bottom	35	79	88	<b>90</b>	91	110	90	5	6.1	
Kräkelund	PSM002060	Surface	34	68	92	<b>93</b>	94	97	92	5	5.2	
Kräkelund	PSM002060	Bottom	34	64	93	<b>94</b>	95	98	93	5	5.8	
Ekö	PSM002061	Surface	36	68	92	<b>93</b>	95	96	92	5	5.0	
Ekö	PSM002061	Bottom	35	59	93	<b>94</b>	95	100	93	6	6.7	
Fågelöfjärden	PSM002063	Surface	17	69	89	<b>92</b>	93	94	90	6	6.5	
Fågelöfjärden	PSM002063	Bottom	17	69	91	<b>92</b>	93	94	90	6	6.5	
Simpevarp area		Surface	160	19	72	<b>89</b>	93	97	81	20	22	
Simpevarp area		Bottom	157	35	87	<b>92</b>	94	110	88	10	12	
Forsmark area		Surface	174	63	76	<b>80</b>	88	210	85	20	22	
Forsmark area		Bottom	69	69	75	<b>77</b>	83	220	84	20	29	
<b>Streaming Water</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>	
Misterhult	PSM002080	Surface	17	5.7	10	<b>15</b>	26	48	19	10	62	
Perstorpet	PSM002081	Surface	34	8.1	18	<b>23</b>	27	52	25	10	40	
Misterhultsbäcken Ö	PSM002082	Surface	37	4.2	14	<b>20</b>	41	76	28	20	68	
Smedtorpet	PSM002083	Surface	39	3.0	12	<b>17</b>	25	33	19	8	45	
Kärsvik	PSM002084	Surface	38	6.5	25	<b>30</b>	38	51	30	10	36	
Ekerum	PSM002085	Surface	37	20	60	<b>72</b>	80	98	69	20	25	
Köksmåla	PSM002068	Surface	37	4.9	10	<b>14</b>	23	37	17	9	51	
Jämserum	PSM002069	Surface	37	12	14	<b>15</b>	16	18	15	2	11	
Plittorp	PSM002071	Surface	36	4.4	14	<b>17</b>	21	27	17	5	31	
Lillekvarn	PSM002072	Surface	14	<0.2	1.1	<b>2.2</b>	4.0	8.5	3.0	2	81	
Brolund	PSM002077	Surface	18	4.6	11	<b>15</b>	22	27	16	7	42	
Sillebäcken	PSM002078	Surface	29	0.42	2.9	<b>3.6</b>	4.0	6.0	3.4	1	39	
Kvarnstugan	PSM002079	Surface	36	3.0	9.9	<b>14</b>	22	32	16	8	52	
Ekhyddan	PSM002087	Surface	39	2.7	11	<b>17</b>	29	40	19	10	57	
Övrahammar	PSM002076	Surface	32	7.8	15	<b>19</b>	28	46	22	10	44	
Basteböla	PSM002086	Surface	29	2.0	6.7	<b>11</b>	26	60	18	20	91	
Flohult	PSM002070	Surface	17	16	26	<b>29</b>	35	48	31	9	30	
Figeholm	PSM002075	Surface	17	7.0	20	<b>25</b>	31	58	26	10	45	
	PSM003715	Surface	8	17	36	<b>46</b>	57	74	46	20	41	
	PSM003716	Surface	9	21	48	<b>61</b>	88	120	68	30	46	
	PSM107735	Surface	12	0.36	3.8	<b>5.3</b>	7.7	25	7.5	7	91	
Simpevarp area		Surface	572	<0.2	12	<b>18</b>	29	120	23	20	81	
Laxemar	pre-PLU	Surface	14	17	24	<b>26</b>	27	110	35	30	78	
Kalmar County	N.S.2000	Surface	26	0.98	12	<b>16</b>	23	89	21	20	84	
Forsmark area		Surface	315	30	140	<b>170</b>	200	540	180	70	41	
Sweden	N.S.2000	Surface	725	-5.2	6.8	<b>12</b>	27	380	36	60	180	



## Surface Water

C-13			Carbon-13 (dev. PDB)								C-13	
Lake Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
Frisksjön	PSM002065	Surface	2	-19.1	-19.0	<b>-18.9</b>	-18.9	-18.8	-18.9	0.19	-1.0	
Frisksjön	PSM002065	Bottom	2	-20.2	-20.0	<b>-19.8</b>	-19.7	-19.5	-19.8	0.43	-2.2	
Jämsen	PSM002067	Surface	1	-18.5		<b>-18.5</b>		-18.5	-18.5			
Jämsen	PSM002067	Bottom	1	-21.1		<b>-21.1</b>		-21.1	-21.1			
Götemar	PSM002066	Surface	1	-12.9		<b>-12.9</b>		-12.9	-12.9			
Götemar	PSM002066	Bottom	1	-15.7		<b>-15.7</b>		-15.7	-15.7			
Simpevarp area		Surface	4	-19.1	-18.9	<b>-18.6</b>	-17.1	-12.9	-17.3	2.9	-17	
Simpevarp area		Bottom	4	-21.1	-20.4	<b>-19.8</b>	-18.6	-15.7	-19.1	2.4	-13	
Forsmark area		Surface	26	-14.0	-11.2	<b>-9.75</b>	-8.30	0.770	-8.98	3.5	-39	
Forsmark area		Bottom	15	-13.5	-10.7	<b>-8.30</b>	-8.05	-3.01	-8.92	2.7	-30	
Sea Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
Borholmsfjärden	PSM002062	Surface	6	-5.73	-5.47	<b>-4.68</b>	-3.60	-2.90	-4.49	1.2	-26	
Borholmsfjärden	PSM002062	Bottom	6	-5.75	-4.08	<b>-3.08</b>	-2.83	-2.47	-3.59	1.2	-35	
Granholmsfjärden	PSM002064	Surface	6	-6.99	-6.27	<b>-3.86</b>	-2.24	-1.80	-4.21	2.4	-56	
Granholmsfjärden	PSM002064	Bottom	6	-6.69	-6.35	<b>-5.90</b>	-3.73	-2.51	-5.08	1.8	-36	
Kräkelund	PSM002060	Surface	4	-0.930	-0.758	<b>-0.525</b>	-0.318	-0.220	-0.550	0.32	-59	
Kräkelund	PSM002060	Bottom	4	-7.22	-2.70	<b>-1.17</b>	-1.04	-0.700	-2.57	3.1	-120	
Ekö	PSM002061	Surface	7	-1.16	-0.945	<b>-0.750</b>	-0.555	-0.380	-0.756	0.30	-39	
Ekö	PSM002061	Bottom	7	-2.21	-1.10	<b>-1.02</b>	-0.685	-0.530	-1.05	0.56	-54	
Fågelöfjärden	PSM002063	Surface	1	-1.27		<b>-1.27</b>		-1.27	-1.27			
Fågelöfjärden	PSM002063	Bottom	1	-1.04		<b>-1.04</b>		-1.04	-1.04			
Simpevarp area		Surface	24	-6.99	-4.51	<b>-1.54</b>	-0.738	-0.220	-2.54	2.2	-88	
Simpevarp area		Bottom	24	-7.22	-4.68	<b>-2.49</b>	-1.09	-0.530	-2.94	2.2	-76	
Forsmark area		Surface	18	-15.0	-8.33	<b>-4.10</b>	-3.03	-0.960	-5.73	3.7	-65	
Forsmark area		Bottom	13	-14.0	-5.00	<b>-4.00</b>	-2.90	-1.33	-5.17	3.7	-72	
Streaming Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
Misterhultsbäcken Ö	PSM002082	Surface	3	-20.2	-19.6	<b>-18.9</b>	-18.5	-18.1	-19.1	1.1	-5.6	
Smedtorpet	PSM002083	Surface	3	-23.8	-22.0	<b>-20.3</b>	-18.5	-16.7	-20.2	3.5	-17	
Kärsvik	PSM002084	Surface	5	-20.9	-18.0	<b>-17.3</b>	-17.0	-16.7	-18.0	1.7	-9.5	
Ekerum	PSM002085	Surface	7	-15.5	-14.6	<b>-13.6</b>	-13.4	-12.5	-14.0	1.0	-7.4	
Plittorp	PSM002071	Surface	2	-20.9	-20.7	<b>-20.6</b>	-20.5	-20.3	-20.6	0.37	-1.8	
Lillekvarn	PSM002072	Surface	1	-21.0		<b>-21.0</b>		-21.0	-21.0			
Kvarnstugan	PSM002079	Surface	2	-19.9	-19.5	<b>-19.2</b>	-18.8	-18.4	-19.2	1.0	-5.3	
Ekhyddan	PSM002087	Surface	3	-21.1	-19.8	<b>-18.4</b>	-18.2	-18.0	-19.2	1.7	-8.9	
Örahammar	PSM002076	Surface	2	-20.4	-20.2	<b>-20.1</b>	-20.0	-19.8	-20.1	0.38	-1.9	
Basteböla	PSM002086	Surface	3	-23.1	-20.8	<b>-18.5</b>	-18.2	-17.9	-19.8	2.8	-14	
Simpevarp area		Surface	31	-23.8	-20.3	<b>-18.4</b>	-16.7	-12.5	-18.2	2.9	-16	
Forsmark area		Surface	26	-20.0	-14.8	<b>-13.0</b>	-11.0	-3.60	-12.9	3.5	-27	

## Surface Water

<b>C-14</b>			<b>Carbon-14 (PMC)</b>								<b>C-14</b>	
			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>	
<b>Lake Water</b>												
Frisksjön	PSM002065	Surface	2	105	105	<b>106</b>	106	106	106	0.83	0.79	
Frisksjön	PSM002065	Bottom	2	104	104	<b>105</b>	105	106	105	1.6	1.6	
Jämsen	PSM002067	Surface	1	76.4		<b>76.4</b>		76.4	76.4			
Jämsen	PSM002067	Bottom	1	78.4		<b>78.4</b>		78.4	78.4			
Götemar	PSM002066	Surface	1	65.9		<b>65.9</b>		65.9	65.9			
Götemar	PSM002066	Bottom	1	66.0		<b>66.0</b>		66.0	66.0			
Simpevarp area		Surface	4	65.9	73.7	<b>90.7</b>	105	106	88.3	20	23	
Simpevarp area		Bottom	4	66.0	75.3	<b>91.1</b>	104	106	88.5	20	22	
Forsmark area		Surface	26	109	111	<b>113</b>	114	118	113	2.5	2.2	
Forsmark area		Bottom	15	109	112	<b>113</b>	114	116	113	2.3	2.1	
<b>Sea Water</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>	
Borholmsfjärden	PSM002062	Surface	6	107	108	<b>109</b>	109	110	109	0.72	0.67	
Borholmsfjärden	PSM002062	Bottom	6	106	107	<b>108</b>	108	109	108	1.2	1.1	
Granholmsfjärden	PSM002064	Surface	6	107	107	<b>108</b>	108	109	108	0.70	0.65	
Granholmsfjärden	PSM002064	Bottom	6	106	106	<b>108</b>	108	109	107	1.2	1.2	
Kräkelund	PSM002060	Surface	5	108	108	<b>108</b>	109	111	109	1.4	1.3	
Kräkelund	PSM002060	Bottom	4	108	109	<b>109</b>	109	110	109	0.71	0.66	
Ekö	PSM002061	Surface	6	108	108	<b>109</b>	110	111	109	1.3	1.2	
Ekö	PSM002061	Bottom	7	108	109	<b>109</b>	110	111	109	1.3	1.2	
Fågelöfjärden	PSM002063	Surface	1	110		<b>110</b>		110	110			
Fågelöfjärden	PSM002063	Bottom	1	110		<b>110</b>		110	110			
Simpevarp area		Surface	24	107	108	<b>108</b>	109	111	109	1.2	1.1	
Simpevarp area		Bottom	24	106	108	<b>109</b>	109	111	108	1.4	1.3	
Forsmark area		Surface	18	100	107	<b>108</b>	109	111	108	2.5	2.3	
Forsmark area		Bottom	13	95.6	108	<b>109</b>	109	110	108	3.9	3.6	
<b>Streaming Water</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>	
Misterhultsbäcken Ö	PSM002082	Surface	3	95.3	97.8	<b>100</b>	100	101	98.7	3.0	3.0	
Smedtorpet	PSM002083	Surface	3	88.1	95.0	<b>102</b>	103	104	98.1	8.7	8.8	
Kärsvik	PSM002084	Surface	5	78.6	96.4	<b>98.4</b>	101	103	95.6	9.8	10	
Ekerum	PSM002085	Surface	7	89.9	91.4	<b>95.9</b>	98.8	100	95.2	4.3	4.5	
Plittorp	PSM002071	Surface	2	100	101	<b>101</b>	102	102	101	1.3	1.3	
Lillekvarn	PSM002072	Surface	1	105		<b>105</b>		105	105			
Kvarnstugan	PSM002079	Surface	2	95.9	96.3	<b>96.8</b>	97.2	97.6	96.8	1.2	1.3	
Ekhyddan	PSM002087	Surface	3	94.7	96.4	<b>98.0</b>	102	106	99.6	5.8	5.9	
Örahammar	PSM002076	Surface	2	93.2	95.5	<b>97.8</b>	100	102	97.8	6.5	6.7	
Basteböla	PSM002086	Surface	3	66.0	79.5	<b>93.1</b>	96.5	99.9	86.3	18	21	
Simpevarp area		Surface	31	66.0	93.9	<b>98.4</b>	101	106	96.4	8.0	8.3	
Forsmark area		Surface	26	93.3	110	<b>112</b>	114	117	110	6.2	5.6	

## Surface Water

DIC			Dissolved inorganic carbon (mg/l)								DIC
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
<b>Lake Water</b>											
Frisksjön	PSM002065	Surface	36	1.5	1.9	<b>2.2</b>	2.4	3.0	2.2	0.4	17
Frisksjön	PSM002065	Bottom	36	1.6	2.0	<b>2.3</b>	2.4	21	2.8	3	110
Jämsen	PSM002067	Surface	36	1.6	2.2	<b>2.4</b>	2.7	3.5	2.5	0.4	16
Jämsen	PSM002067	Bottom	36	0.30	2.6	<b>2.9</b>	3.7	6.4	3.2	1	38
Söråmagasinet	PSM005964	Surface	22	3.4	5.8	<b>6.2</b>	6.5	8.0	6.1	0.9	14
Söråmagasinet	PSM005964	Bottom	22	4.6	5.9	<b>6.4</b>	6.7	9.7	6.5	1	17
Götemar	PSM002066	Surface	18	1.6	1.8	<b>1.9</b>	2.0	2.4	1.9	0.2	10
Götemar	PSM002066	Bottom	18	1.5	1.9	<b>2.1</b>	2.9	5.1	2.4	0.9	36
Simpevarp area		Surface	112	1.5	2.0	<b>2.3</b>	2.9	8.0	3.0	2	55
Simpevarp area		Bottom	112	0.30	2.1	<b>2.7</b>	4.6	21	3.6	2	68
Forsmark area		Surface	255	0.60	15	<b>21</b>	29	65	22	10	49
Forsmark area		Bottom	74	0.80	15	<b>20</b>	28	55	21	10	61
<b>Sea Water</b>											
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Borholmsfjärden	PSM002062	Surface	37	4.2	8.6	<b>12</b>	14	17	11	3	30
Borholmsfjärden	PSM002062	Bottom	37	8.4	12	<b>13</b>	14	16	13	2	16
Granholmsfjärden	PSM002064	Surface	38	6.1	11	<b>13</b>	15	17	13	3	23
Granholmsfjärden	PSM002064	Bottom	36	13	16	<b>16</b>	17	21	16	1	6.8
Kråkelund	PSM002060	Surface	35	6.7	15	<b>16</b>	16	18	15	2	14
Kråkelund	PSM002060	Bottom	34	7.6	16	<b>16</b>	17	18	16	2	12
Ekö	PSM002061	Surface	36	12	16	<b>16</b>	17	18	16	1	7.8
Ekö	PSM002061	Bottom	35	9.4	16	<b>16</b>	17	19	16	2	9.6
Fågelöfjärden	PSM002063	Surface	17	8.8	14	<b>16</b>	16	17	15	2	16
Fågelöfjärden	PSM002063	Bottom	17	8.9	14	<b>16</b>	16	17	15	2	16
Simpevarp area		Surface	163	4.2	13	<b>15</b>	16	18	14	3	23
Simpevarp area		Bottom	159	7.6	14	<b>16</b>	17	21	15	2	15
Forsmark area		Surface	172	0.38	7.9	<b>13</b>	14	27	11	5	44
Forsmark area		Bottom	69	0.33	5.6	<b>10.0</b>	12	21	9.2	5	53
<b>Streaming Water</b>											
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Misterhult	PSM002080	Surface	17	1.1	1.8	<b>3.2</b>	4.4	9.6	3.5	2	63
Perstorpet	PSM002081	Surface	34	0.90	3.2	<b>3.8</b>	5.1	9.5	4.3	2	42
Misterhultsbäcken Ö	PSM002082	Surface	37	0.80	2.2	<b>3.1</b>	7.6	15	5.0	4	74
Smedtorpet	PSM002083	Surface	40	0.30	2.1	<b>2.8</b>	3.9	5.8	3.0	1	44
Kärsvik	PSM002084	Surface	38	1.4	4.0	<b>4.8</b>	6.6	9.2	5.1	2	39
Ekerum	PSM002085	Surface	37	5.4	11	<b>12</b>	14	20	12	3	26
Köksmåla	PSM002068	Surface	38	0.40	1.8	<b>2.7</b>	3.8	7.2	3.0	2	54
Jämserum	PSM002069	Surface	37	1.9	2.3	<b>2.5</b>	2.8	3.7	2.5	0.4	15
Plittorp	PSM002071	Surface	37	0.70	2.5	<b>3.2</b>	3.8	5.0	3.1	1.0	31
Lillekvarn	PSM002072	Surface	15	0.20	0.35	<b>0.60</b>	1.3	1.7	0.77	0.5	64
Brolund	PSM002077	Surface	18	0.90	1.7	<b>2.6</b>	3.6	4.5	2.7	1	42
Sillebäcken	PSM002078	Surface	29	0.30	0.60	<b>0.80</b>	1.0	2.3	0.88	0.4	46
Kvarnstugan	PSM002079	Surface	37	0.30	1.8	<b>2.4</b>	3.8	5.9	2.8	1	54
Ekhyddan	PSM002087	Surface	40	0.40	1.9	<b>2.7</b>	4.7	7.2	3.2	2	57
Övrahammar	PSM002076	Surface	33	0.80	3.0	<b>3.4</b>	4.7	7.4	3.8	1	37
Basteböla	PSM002086	Surface	29	0.60	1.3	<b>2.0</b>	3.8	11	2.8	2	80
Flohult	PSM002070	Surface	17	2.0	4.4	<b>5.2</b>	6.5	8.1	5.4	2	32
Figeholm	PSM002075	Surface	18	1.1	3.1	<b>3.9</b>	5.6	11	4.5	2	51
	PSM107735	Surface	12	0.40	0.98	<b>1.3</b>	2.0	5.1	1.7	1	75
	PSM000347	Surface	1	3.4		<b>3.4</b>		3.4	3.4		
Simpevarp area		Surface	564	0.20	2.0	<b>3.0</b>	4.7	20	3.9	3	80
Forsmark area		Surface	319	0.90	20	<b>26</b>	32	59	26	10	42

## Surface Water

DOC			Dissolved organic carbon (mg/l)							DOC	
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
<b>Lake Water</b>											
Frisksjön	PSM002065	Surface	36	12	15	<b>16</b>	17	20	16	2	11
Frisksjön	PSM002065	Bottom	36	14	15	<b>16</b>	17	21	16	2	10
Jämsen	PSM002067	Surface	36	14	16	<b>17</b>	18	24	17	2	13
Jämsen	PSM002067	Bottom	36	13	16	<b>16</b>	17	23	17	2	12
Söråmagasinet	PSM005964	Surface	21	11	12	<b>12</b>	12	14	12	0.7	6.1
Söråmagasinet	PSM005964	Bottom	22	11	11	<b>12</b>	12	14	12	0.8	6.6
Götemar	PSM002066	Surface	18	8.6	8.7	<b>8.9</b>	9.3	9.5	9.0	0.3	3.4
Götemar	PSM002066	Bottom	18	8.2	8.7	<b>9.2</b>	9.5	10	9.1	0.5	5.7
Simpevarp area		Surface	111	8.6	12	<b>15</b>	17	24	15	4	24
Simpevarp area		Bottom	112	8.2	12	<b>15</b>	17	23	14	3	23
Forsmark area		Surface	255	4.2	15	<b>17</b>	19	33	17	4	23
Forsmark area		Bottom	74	7.5	15	<b>18</b>	20	28	17	4	23
<b>Sea Water</b>											
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Borholmsfjärden	PSM002062	Surface	37	5.8	7.1	<b>8.7</b>	10	26	9.7	4	41
Borholmsfjärden	PSM002062	Bottom	37	5.5	6.1	<b>6.9</b>	8.1	12	7.4	2	21
Granholmsfjärden	PSM002064	Surface	38	4.6	5.7	<b>7.2</b>	8.6	22	7.7	3	41
Granholmsfjärden	PSM002064	Bottom	36	4.5	5.1	<b>5.2</b>	5.8	6.5	5.4	0.5	9.3
Kråkelund	PSM002060	Surface	35	1.9	3.8	<b>3.8</b>	4.1	5.3	3.9	0.5	12
Kråkelund	PSM002060	Bottom	35	3.4	3.7	<b>3.7</b>	3.9	4.2	3.8	0.2	4.8
Ekö	PSM002061	Surface	36	3.5	3.9	<b>4.0</b>	4.1	4.6	4.0	0.3	6.3
Ekö	PSM002061	Bottom	35	3.5	3.8	<b>3.9</b>	4.1	4.7	4.0	0.3	6.6
Fågelöfjärden	PSM002063	Surface	17	3.9	4.1	<b>4.4</b>	4.6	4.8	4.4	0.3	6.6
Fågelöfjärden	PSM002063	Bottom	17	3.9	4.1	<b>4.2</b>	4.4	4.8	4.2	0.3	5.9
Simpevarp area		Surface	163	1.9	4.0	<b>4.6</b>	7.5	26	6.2	3	56
Simpevarp area		Bottom	160	3.4	3.9	<b>4.4</b>	6.0	12	5.1	2	32
Forsmark area		Surface	173	1.1	3.4	<b>4.0</b>	5.6	21	5.3	4	73
Forsmark area		Bottom	69	1.1	2.3	<b>3.8</b>	4.4	16	4.1	3	68
<b>Streaming Water</b>											
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Misterhult	PSM002080	Surface	17	13	19	<b>22</b>	23	42	23	7	32
Perstorpet	PSM002081	Surface	34	17	20	<b>23</b>	27	48	25	7	29
Misterhultsbäcken Ö	PSM002082	Surface	37	15	19	<b>23</b>	25	43	24	7	31
Smedtorpet	PSM002083	Surface	40	17	20	<b>21</b>	23	41	22	4	19
Kärsvik	PSM002084	Surface	38	14	18	<b>20</b>	22	29	20	4	17
Ekerum	PSM002085	Surface	37	15	17	<b>20</b>	23	32	21	4	20
Köksmåla	PSM002068	Surface	38	7.6	19	<b>20</b>	23	43	21	6	27
Jämserum	PSM002069	Surface	37	14	16	<b>17</b>	18	25	17	2	14
Plittorp	PSM002071	Surface	37	11	14	<b>15</b>	16	35	15	4	25
Lillekvarn	PSM002072	Surface	15	14	25	<b>30</b>	33	67	32	10	38
Brolund	PSM002077	Surface	18	11	16	<b>17</b>	19	40	18	6	33
Sillebäcken	PSM002078	Surface	29	13	16	<b>18</b>	20	32	18	4	23
Kvarnstugan	PSM002079	Surface	37	12	16	<b>17</b>	19	40	18	5	26
Ekhyddan	PSM002087	Surface	40	14	16	<b>18</b>	19	42	18	5	25
Övrahammar	PSM002076	Surface	33	21	25	<b>27</b>	41	70	33	10	39
Basteböla	PSM002086	Surface	29	19	22	<b>25</b>	31	51	27	7	26
Flohult	PSM002070	Surface	17	14	16	<b>19</b>	21	32	19	5	24
Figeholm	PSM002075	Surface	18	15	19	<b>21</b>	23	38	23	7	30
	PSM107735	Surface	12	29	31	<b>32</b>	34	57	34	7	21
	PSM000347	Surface	1	15		<b>15</b>		15	15		
Simpevarp area		Surface	564	7.6	17	<b>20</b>	24	70	22	8	36
Forsmark area		Surface	319	2.9	13	<b>17</b>	19	28	16	5	29

## Surface Water

POC			Particulate organic carbon (mg/l)								POC	
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
<b>Lake Water</b>												
Frisksjön	PSM002065	Surface	36	0.29	0.50	<b>0.66</b>	0.99	1.9	0.80	0.4	51	
Frisksjön	PSM002065	Bottom	36	0.21	0.54	<b>0.67</b>	0.91	2.1	0.77	0.4	49	
Jämsen	PSM002067	Surface	36	0.25	0.55	<b>0.76</b>	0.88	5.5	0.88	0.8	94	
Jämsen	PSM002067	Bottom	35	0.25	0.80	<b>0.95</b>	1.4	5.1	1.4	1	77	
Söråmagasinet	PSM005964	Surface	22	0.22	0.74	<b>0.86</b>	1.4	2.5	1.0	0.5	53	
Söråmagasinet	PSM005964	Bottom	22	0.29	0.71	<b>1.0</b>	1.3	2.2	1.1	0.5	48	
Götemar	PSM002066	Surface	18	0.077	0.13	<b>0.22</b>	0.31	0.44	0.22	0.1	46	
Götemar	PSM002066	Bottom	18	0.15	0.22	<b>0.27</b>	0.34	1.5	0.37	0.3	87	
Simpevarp area		Surface	112	0.077	0.43	<b>0.70</b>	0.89	5.5	0.78	0.6	81	
Simpevarp area		Bottom	111	0.15	0.50	<b>0.80</b>	1.1	5.1	0.96	0.8	80	
Forsmark area		Surface	248	0.046	0.25	<b>0.37</b>	0.53	6.3	0.50	0.6	120	
Forsmark area		Bottom	69	0.16	0.27	<b>0.35</b>	0.50	2.6	0.48	0.4	80	
<b>Sea Water</b>												
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
Borholmsfjärden	PSM002062	Surface	37	0.15	0.47	<b>0.60</b>	0.87	1.6	0.68	0.3	46	
Borholmsfjärden	PSM002062	Bottom	36	0.090	0.36	<b>0.50</b>	0.73	0.99	0.52	0.2	46	
Granholmsfjärden	PSM002064	Surface	35	0.17	0.28	<b>0.48</b>	0.63	1.3	0.48	0.2	47	
Granholmsfjärden	PSM002064	Bottom	35	0.057	0.25	<b>0.35</b>	0.66	1.6	0.52	0.4	79	
Kråkelund	PSM002060	Surface	32	0.029	0.079	<b>0.11</b>	0.15	0.38	0.13	0.08	64	
Kråkelund	PSM002060	Bottom	35	0.021	0.078	<b>0.096</b>	0.12	0.30	0.11	0.05	50	
Ekö	PSM002061	Surface	35	0.050	0.081	<b>0.15</b>	0.19	0.44	0.16	0.10	59	
Ekö	PSM002061	Bottom	34	0.037	0.11	<b>0.19</b>	0.30	0.60	0.22	0.1	61	
Fågelöfjärden	PSM002063	Surface	17	0.070	0.11	<b>0.18</b>	0.28	0.56	0.21	0.1	62	
Fågelöfjärden	PSM002063	Bottom	17	0.035	0.15	<b>0.21</b>	0.30	0.49	0.22	0.1	54	
Simpevarp area		Surface	156	0.029	0.13	<b>0.27</b>	0.51	1.6	0.36	0.3	83	
Simpevarp area		Bottom	157	0.021	0.12	<b>0.24</b>	0.43	1.6	0.33	0.3	89	
Forsmark area		Surface	170	0.13	0.26	<b>0.38</b>	0.60	2.2	0.48	0.3	68	
Forsmark area		Bottom	66	0.080	0.22	<b>0.31</b>	0.45	1.0	0.37	0.2	57	
<b>Streaming Water</b>												
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
Misterhult	PSM002080	Surface	16	0.39	0.67	<b>1.0</b>	2.7	3.7	1.6	1	67	
Perstorpet	PSM002081	Surface	34	0.31	0.68	<b>1.4</b>	3.0	11	2.5	3	110	
Misterhultsbäcken Ö	PSM002082	Surface	37	0.32	0.82	<b>1.7</b>	2.6	5.6	1.9	1	69	
Smedtorpet	PSM002083	Surface	40	0.49	1.1	<b>1.6</b>	2.2	5.3	1.8	1.0	55	
Kärsvik	PSM002084	Surface	38	0.61	1.2	<b>1.4</b>	2.4	4.8	1.8	1	56	
Ekerum	PSM002085	Surface	37	0.42	0.60	<b>0.97</b>	1.3	3.1	1.0	0.6	56	
Köksmåla	PSM002068	Surface	38	0.54	1.3	<b>2.0</b>	2.4	5.3	1.9	1.0	50	
Jämserum	PSM002069	Surface	36	0.31	0.50	<b>0.64</b>	0.88	1.3	0.70	0.3	41	
Plittorp	PSM002071	Surface	37	0.49	0.84	<b>1.1</b>	1.6	6.9	1.4	1	81	
Lillekvarn	PSM002072	Surface	15	0.080	0.20	<b>0.43</b>	1.9	6.2	1.3	2	130	
Brolund	PSM002077	Surface	18	0.53	0.72	<b>1.4</b>	2.3	9.0	1.8	2	110	
Sillebäcken	PSM002078	Surface	29	0.25	0.48	<b>0.73</b>	1.3	4.1	1.2	1	93	
Kvarnstugan	PSM002079	Surface	36	0.26	0.81	<b>1.4</b>	2.0	10	1.6	2	100	
Ekhyddan	PSM002087	Surface	40	0.59	0.96	<b>1.6</b>	2.5	7.5	1.8	1	67	
Övrahammar	PSM002076	Surface	33	0.72	1.5	<b>2.6</b>	6.1	15	4.1	4	88	
Basteböla	PSM002086	Surface	29	0.50	0.78	<b>1.1</b>	2.5	6.1	1.8	2	87	
Flohult	PSM002070	Surface	16	0.47	0.81	<b>1.1</b>	1.8	2.5	1.3	0.6	48	
Figeholm	PSM002075	Surface	18	0.43	0.69	<b>1.0</b>	2.4	5.6	1.6	1	83	
	PSM107735	Surface	12	0.47	0.77	<b>1.1</b>	2.4	6.0	2.0	2	95	
	PSM000347	Surface	1	0.52		<b>0.52</b>		0.52	0.52			
Simpevarp area		Surface	560	0.080	0.75	<b>1.3</b>	2.2	15	1.8	2	97	
Forsmark area		Surface	311	0.058	0.18	<b>0.26</b>	0.41	2.2	0.36	0.3	84	

## Surface Water

TOC			Total organic carbon (mg/l)							TOC	
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
<b>Lake Water</b>											
Frisksjön	PSM002065	Surface	36	14	15	16	17	20	16	2	10
Frisksjön	PSM002065	Bottom	36	14	15	16	17	21	16	2	10
Jämsen	PSM002067	Surface	36	14	16	17	19	25	18	2	13
Jämsen	PSM002067	Bottom	36	13	16	17	18	23	17	2	12
Söråmagasinet	PSM005964	Surface	22	11	12	12	12	14	12	0.8	6.3
Söråmagasinet	PSM005964	Bottom	22	11	12	12	12	15	12	0.8	6.9
Götemar	PSM002066	Surface	18	8.6	8.8	9.0	9.3	9.4	9.0	0.3	3.1
Götemar	PSM002066	Bottom	18	4.9	8.7	9.2	9.7	10	9.0	1	13
Simpevarp area		Surface	112	8.6	12	16	17	25	15	4	25
Simpevarp area		Bottom	112	4.9	12	16	17	23	15	4	24
Kalmar County	N.S.2000	Surface	106	5.1	11	16	20	43	17	8	47
Forsmark area		Surface	254	5.5	16	17	19	35	17	4	22
Forsmark area		Bottom	74	8.3	16	18	19	28	18	3	20
Sweden	N.S.2000	Surface	3464	0.20	6.0	9.8	15	51	11	7	65
<b>Sea Water</b>											
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Borholmsfjärden	PSM002062	Surface	37	5.9	7.4	8.8	11	26	9.9	4	40
Borholmsfjärden	PSM002062	Bottom	37	5.6	6.3	7.0	8.3	15	7.5	2	25
Granholmsfjärden	PSM002064	Surface	38	4.9	5.9	7.4	9.1	23	7.9	3	40
Granholmsfjärden	PSM002064	Bottom	36	4.6	5.1	5.4	5.9	6.3	5.5	0.5	8.4
Kråkelund	PSM002060	Surface	35	3.5	3.8	3.9	4.0	5.3	4.0	0.3	7.9
Kråkelund	PSM002060	Bottom	35	3.4	3.7	3.8	3.8	4.3	3.8	0.2	4.7
Ekö	PSM002061	Surface	36	3.5	3.9	4.0	4.1	4.9	4.0	0.3	6.7
Ekö	PSM002061	Bottom	35	3.6	3.9	4.0	4.1	5.5	4.0	0.3	8.2
Fågelöfjärden	PSM002063	Surface	17	3.9	4.1	4.4	4.5	4.8	4.3	0.3	6.4
Fågelöfjärden	PSM002063	Bottom	17	3.9	4.1	4.2	4.4	4.8	4.3	0.2	5.7
Simpevarp area		Surface	163	3.5	4.0	4.5	7.8	26	6.3	4	56
Simpevarp area		Bottom	160	3.4	3.9	4.4	5.9	15	5.1	2	34
Forsmark area		Surface	172	1.0	3.6	4.1	5.5	20	5.5	4	73
Forsmark area		Bottom	70	1.3	3.4	3.9	4.7	16	4.5	3	65
<b>Streaming Water</b>											
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Misterhult	PSM002080	Surface	17	13	19	23	24	43	23	7	31
Perstorpet	PSM002081	Surface	34	17	20	23	28	54	26	9	33
Misterhultsbäcken Ö	PSM002082	Surface	37	16	19	23	27	44	25	8	31
Smedtorpet	PSM002083	Surface	39	17	21	22	24	46	23	5	21
Kärrsvik	PSM002084	Surface	38	15	18	21	23	29	21	4	17
Ekerum	PSM002085	Surface	37	15	18	21	23	32	21	4	19
Köksmåla	PSM002068	Surface	38	7.9	20	21	24	45	22	6	27
Jämserum	PSM002069	Surface	37	14	16	17	20	25	18	2	13
Plittorp	PSM002071	Surface	37	11	15	15	17	46	16	5	33
Lillekvarn	PSM002072	Surface	15	14	26	30	34	68	33	10	39
Brolund	PSM002077	Surface	18	12	16	18	19	53	20	9	44
Sillebäcken	PSM002078	Surface	29	13	16	18	20	32	19	4	24
Kvarnstugan	PSM002079	Surface	37	12	16	18	19	53	19	7	35
Ekhyddan	PSM002087	Surface	40	14	17	18	20	53	20	6	31
Övrahammar	PSM002076	Surface	32	18	25	28	43	70	35	10	42
Basteböla	PSM002086	Surface	29	19	22	26	32	54	28	8	27
Flohult	PSM002070	Surface	17	14	16	19	21	33	20	5	24
Figeholm	PSM002075	Surface	18	15	19	21	24	40	23	7	31
	PSM107735	Surface	12	30	31	33	35	60	35	8	23
	PSM000347	Surface	1	16		16		16	16		
Simpevarp area		Surface	562	7.9	17	20	25	70	23	9	38
Kalmar County	N.S.2000	Surface	26	9.2	12	18	21	34	17	6	33
Forsmark area		Surface	320	2.5	14	17	20	27	17	4	27
Sweden	N.S.2000	Surface	725	0.20	7.1	11	17	53	12	7	60

## Surface Water

Ce			Cerium (µg/l)							Ce	
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
<b>Lake Water</b>											
Frisksjön	PSM002065	Surface	1	0.19		<b>0.19</b>		0.19	0.19		
Frisksjön	PSM002065	Bottom	1	0.20		<b>0.20</b>		0.20	0.20		
Simpevarp area		Surface	1	0.19		<b>0.19</b>		0.19	0.19		
Simpevarp area		Bottom	1	0.20		<b>0.20</b>		0.20	0.20		
Forsmark area		Surface	39	0.0088	0.052	<b>0.076</b>	0.11	0.35	0.096	0.08	82
Forsmark area		Bottom	10	0.021	0.074	<b>0.13</b>	0.17	0.29	0.13	0.08	66
<b>Sea Water</b>											
Borholmsfjärden	PSM002062	Surface	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05		
Borholmsfjärden	PSM002062	Bottom	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05		
Granholmsfjärden	PSM002064	Surface	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05		
Granholmsfjärden	PSM002064	Bottom	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05		
Kråkelund	PSM002060	Surface	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05		
Kråkelund	PSM002060	Bottom	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05		
Ekö	PSM002061	Surface	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05		
Ekö	PSM002061	Bottom	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05		
Simpevarp area		Surface	4	<0.05	<0.05	<b>&lt;0.05</b>	<0.05	<0.05	<0.05		
Simpevarp area		Bottom	4	<0.05	<0.05	<b>&lt;0.05</b>	<0.05	<0.05	<0.05		
Forsmark area		Surface	34	<0.05	<0.05	<b>&lt;0.05</b>	0.16	3.5	0.28	0.7	230
Forsmark area		Bottom	13	<0.05	<0.05	<b>&lt;0.05</b>	0.069	1.4	0.15	0.4	250
<b>Streaming Water</b>											
Misterhultsbäcken Ö	PSM002082	Surface	1	0.91		<b>0.91</b>		0.91	0.91		
Smedtorpet	PSM002083	Surface	1	0.95		<b>0.95</b>		0.95	0.95		
Kärrevik	PSM002084	Surface	1	0.54		<b>0.54</b>		0.54	0.54		
Ekerum	PSM002085	Surface	1	0.22		<b>0.22</b>		0.22	0.22		
Plittorp	PSM002071	Surface	1	0.37		<b>0.37</b>		0.37	0.37		
Lillekvarn	PSM002072	Surface	1	0.59		<b>0.59</b>		0.59	0.59		
Kvarnstugan	PSM002079	Surface	1	0.38		<b>0.38</b>		0.38	0.38		
Ekhyddan	PSM002087	Surface	1	0.47		<b>0.47</b>		0.47	0.47		
Övrahammar	PSM002076	Surface	1	0.80		<b>0.80</b>		0.80	0.80		
Basteböla	PSM002086	Surface	1	1.2		<b>1.2</b>		1.2	1.2		
Simpevarp area		Surface	10	0.22	0.40	<b>0.57</b>	0.88	1.2	0.65	0.3	49
Laxemar	pre-PLU	Surface	1	7.4		<b>7.4</b>		7.4	7.4		
Forsmark area		Surface	33	0.015	0.054	<b>0.10</b>	0.15	0.37	0.13	0.10	78



## Surface Water

<b>Cs</b>			<b>Cesium (µg/l)</b>							<b>Cs</b>	
			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
<b>Lake Water</b>											
Frisksjön	PSM002065	Surface	1	<0.03		<b>&lt;0.03</b>		<0.03	<0.03		
Frisksjön	PSM002065	Bottom	1	<0.03		<b>&lt;0.03</b>		<0.03	<0.03		
Simpevarp area		Surface	1	<0.03		<b>&lt;0.03</b>		<0.03	<0.03		
Simpevarp area		Bottom	1	<0.03		<b>&lt;0.03</b>		<0.03	<0.03		
Forsmark area		Surface	39	<0.03	<0.03	<b>&lt;0.03</b>	<0.03	<0.03	<0.03	0.004	29
Forsmark area		Bottom	10	<0.03	<0.03	<b>&lt;0.03</b>	<0.03	<0.03	<0.03	0.004	33
<b>Sea Water</b>											
Borholmsfjärden	PSM002062	Surface	1	<0.3		<b>&lt;0.3</b>		<0.3	<0.3		
Borholmsfjärden	PSM002062	Bottom	1	<0.3		<b>&lt;0.3</b>		<0.3	<0.3		
Granholmsfjärden	PSM002064	Surface	1	<0.3		<b>&lt;0.3</b>		<0.3	<0.3		
Granholmsfjärden	PSM002064	Bottom	1	<0.3		<b>&lt;0.3</b>		<0.3	<0.3		
Kråkelund	PSM002060	Surface	1	<0.3		<b>&lt;0.3</b>		<0.3	<0.3		
Kråkelund	PSM002060	Bottom	1	<0.3		<b>&lt;0.3</b>		<0.3	<0.3		
Ekö	PSM002061	Surface	1	<0.3		<b>&lt;0.3</b>		<0.3	<0.3		
Ekö	PSM002061	Bottom	1	<0.3		<b>&lt;0.3</b>		<0.3	<0.3		
Simpevarp area		Surface	4	<0.3	<0.3	<b>&lt;0.3</b>	<0.3	<0.3	<0.3		
Simpevarp area		Bottom	4	<0.3	<0.3	<b>&lt;0.3</b>	<0.3	<0.3	<0.3		
Forsmark area		Surface	35	<0.3	<0.3	<b>&lt;0.3</b>	<0.3	<0.3	<0.3	0.05	88
Forsmark area		Bottom	13	<0.3	<0.3	<b>&lt;0.3</b>	<0.3	<0.3	<0.3	0.05	94
<b>Streaming Water</b>											
Misterhultsbäcken Ö	PSM002082	Surface	1	<0.03		<b>&lt;0.03</b>		<0.03	<0.03		
Smedtorpet	PSM002083	Surface	1	<0.03		<b>&lt;0.03</b>		<0.03	<0.03		
Kärsvik	PSM002084	Surface	1	<0.03		<b>&lt;0.03</b>		<0.03	<0.03		
Ekerum	PSM002085	Surface	1	<0.03		<b>&lt;0.03</b>		<0.03	<0.03		
Plittorp	PSM002071	Surface	1	<0.03		<b>&lt;0.03</b>		<0.03	<0.03		
Lillekvarn	PSM002072	Surface	1	<0.03		<b>&lt;0.03</b>		<0.03	<0.03		
Kvarnstugan	PSM002079	Surface	1	<0.03		<b>&lt;0.03</b>		<0.03	<0.03		
Ekhyddan	PSM002087	Surface	1	<0.03		<b>&lt;0.03</b>		<0.03	<0.03		
Övrahammar	PSM002076	Surface	1	<0.03		<b>&lt;0.03</b>		<0.03	<0.03		
Basteböla	PSM002086	Surface	1	0.039		<b>0.039</b>		0.039	0.039		
Simpevarp area		Surface	10	<0.03	<0.03	<b>&lt;0.03</b>	<0.03	0.039	<0.03	0.008	44
Laxemar	pre-PLU	Surface	1	0.024		<b>0.024</b>		0.024	0.024		
Forsmark area		Surface	33	<0.03	<0.03	<b>&lt;0.03</b>	<0.03	<0.03	<0.03	0.003	24

## Surface Water

CI			Chloride (mg/l)								CI
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
<b>Lake Water</b>											
Frisksjön	PSM002065	Surface	36	8.0	9.9	11	11	15	10	1	13
Frisksjön	PSM002065	Bottom	36	7.4	10	11	11	13	11	1	11
Jämsen	PSM002067	Surface	36	7.6	12	13	14	17	13	2	16
Jämsen	PSM002067	Bottom	36	11	12	13	14	30	15	5	33
Söråmagasinet	PSM005964	Surface	22	16	18	19	20	24	19	2	10
Söråmagasinet	PSM005964	Bottom	22	16	18	19	20	23	19	2	9.4
Götemar	PSM002066	Surface	18	13	14	14	14	22	15	3	17
Götemar	PSM002066	Bottom	18	13	14	14	15	29	15	4	23
Simpevarp area		Surface	112	7.6	11	13	15	24	14	4	27
Simpevarp area		Bottom	112	7.4	11	13	17	30	14	5	31
Laxemar	pre-PLU	-	1	24		24		24	24		
Kalmar County	N.S.2000	Surface	106	2.7	5.1	7.0	8.7	58	8.3	7	83
Forsmark area		Surface	246	0.90	7.6	15	43	430	38	60	140
Forsmark area		Bottom	74	3.9	6.9	15	40	490	46	80	170
Sweden	N.S.2000	Surface	3464	0.11	0.64	1.5	5.9	3400	6.2	70	1100
<b>Sea Water</b>											
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Borholmsfjärden	PSM002062	Surface	36	260	1800	2400	2700	3300	2200	800	34
Borholmsfjärden	PSM002062	Bottom	36	1100	2600	2900	3200	3300	2700	500	18
Granholmsfjärden	PSM002064	Surface	37	1100	2500	3000	3300	3500	2800	700	24
Granholmsfjärden	PSM002064	Bottom	35	2500	3300	3400	3500	3600	3400	200	5.5
Kräkelund	PSM002060	Surface	34	2400	3600	3700	3700	3900	3600	300	8.1
Kräkelund	PSM002060	Bottom	34	2300	3700	3700	3800	4100	3700	300	7.6
Ekö	PSM002061	Surface	36	2700	3600	3700	3700	3900	3600	200	5.9
Ekö	PSM002061	Bottom	35	2500	3600	3700	3800	3900	3700	200	6.4
Fågelöfjärden	PSM002063	Surface	17	2700	3400	3500	3600	3700	3500	200	6.4
Fågelöfjärden	PSM002063	Bottom	17	2900	3500	3600	3600	3700	3500	200	5.1
Simpevarp area		Surface	160	260	2600	3400	3700	3900	3100	800	25
Simpevarp area		Bottom	157	1100	3200	3500	3700	4100	3400	500	14
Forsmark area		Surface	175	120	2300	2600	2700	3000	2300	700	28
Forsmark area		Bottom	72	290	2500	2600	2700	2900	2500	400	15
<b>Streaming Water</b>											
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Misterhult	PSM002080	Surface	17	5.7	9.0	9.9	11	13	9.7	2	21
Perstorpet	PSM002081	Surface	34	2.1	4.1	4.6	5.4	18	5.1	2	49
Misterhultsbäcken Ö	PSM002082	Surface	37	3.8	6.9	8.1	10	20	9.1	4	40
Smedtorpet	PSM002083	Surface	39	3.6	7.1	9.6	15	30	12	7	58
Kärsvik	PSM002084	Surface	38	4.6	9.3	10	12	15	10	2	22
Ekerum	PSM002085	Surface	37	3.0	5.6	6.1	7.1	24	6.8	3	48
Köksmåla	PSM002068	Surface	37	2.6	3.8	4.5	6.0	14	5.4	2	44
Jämserum	PSM002069	Surface	37	8.1	11	12	14	15	12	2	16
Plittorp	PSM002071	Surface	36	11	15	18	21	35	19	5	28
Lillekvarn	PSM002072	Surface	15	6.5	13	14	16	20	14	4	31
Brolund	PSM002077	Surface	18	6.8	11	13	16	26	14	5	37
Sillebäcken	PSM002078	Surface	29	2.7	3.6	4.1	4.5	13	4.3	2	41
Kvarnstugan	PSM002079	Surface	36	5.4	11	13	19	34	15	7	43
Ekhyddan	PSM002087	Surface	39	5.3	11	12	19	34	16	7	46
Övrahammar	PSM002076	Surface	32	2.7	5.8	7.6	11	27	9.3	5	58
Basteböla	PSM002086	Surface	29	8.1	11	14	18	51	17	9	54
Flohult	PSM002070	Surface	17	10	13	14	18	24	16	4	28
Figeholm	PSM002075	Surface	17	6.7	10	12	15	22	13	4	29
	PSM003715	Surface	8	2.6	4.7	5.1	5.9	6.5	5.1	1	24
	PSM003716	Surface	9	2.0	4.6	6.0	8.9	16	7.5	5	64
	PSM107735	Surface	12	4.1	4.9	5.7	6.5	8.1	5.8	1	22
Simpevarp area		Surface	573	2.0	6.0	10	14	51	11	6	58
Laxemar	pre-PLU	Surface	14	10	12	17	22	45	19	9	47
Kalmar County	N.S.2000	Surface	26	4.8	7.5	8.3	11	220	19	40	220
Forsmark area		Surface	313	1.5	4.7	15	36	210	26	30	130
Sweden	N.S.2000	Surface	725	0.25	0.85	2.9	8.9	220	7.1	20	210

## Surface Water

CI-37			Chlorine-37 (dev. SMOC)								CI-37
Lake Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Frisksjön	PSM002065	Surface	2	-0.720	-0.608	<b>-0.495</b>	-0.383	-0.270	-0.495	0.32	-64
Frisksjön	PSM002065	Bottom	3	-0.120	-0.0950	<b>-0.0700</b>	0.0100	0.0900	-0.0333	0.11	-330
Simpevarp area		Surface	2	-0.720	-0.608	<b>-0.495</b>	-0.383	-0.270	-0.495	0.32	-64
Simpevarp area		Bottom	3	-0.120	-0.0950	<b>-0.0700</b>	0.0100	0.0900	-0.0333	0.11	-330
Forsmark area		Surface	25	-0.610	-0.0700	<b>0.110</b>	0.170	0.660	0.0556	0.27	480
Forsmark area		Bottom	11	-0.100		<b>0.0800</b>	0.190	0.460	0.107	0.16	150
Sea Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Borholmsfjärden	PSM002062	Surface	3	-0.0900	0.0650	<b>0.220</b>	0.290	0.360	0.163	0.23	140
Borholmsfjärden	PSM002062	Bottom	3	-0.0400	-0.0400	<b>-0.0400</b>	0.0100	0.0600	-0.00667	0.058	-870
Granholmsfjärden	PSM002064	Surface	3	-0.0800	0.0150	<b>0.110</b>	0.180	0.250	0.0933	0.17	180
Granholmsfjärden	PSM002064	Bottom	3	0.190	0.230	<b>0.270</b>	0.280	0.290	0.250	0.053	21
Kråkelund	PSM002060	Surface	2	-0.0200	-0.00750	<b>0.00500</b>	0.0175	0.0300	0.00500	0.035	710
Kråkelund	PSM002060	Bottom	2	-0.0400	-0.00500	<b>0.0300</b>	0.0650	0.100	0.0300	0.099	330
Ekö	PSM002061	Surface	2	0.100	0.115	<b>0.130</b>	0.145	0.160	0.130	0.042	33
Ekö	PSM002061	Bottom	2	0.0400	0.0700	<b>0.100</b>	0.130	0.160	0.100	0.085	85
Simpevarp area		Surface	10	-0.0900	-0.00750	<b>0.105</b>	0.205	0.360	0.104	0.15	140
Simpevarp area		Bottom	10	-0.0400	-0.0200	<b>0.0800</b>	0.183	0.290	0.0990	0.13	130
Forsmark area		Surface	22	-0.610	-0.148	<b>0.00500</b>	0.0675	0.220	-0.0677	0.22	-330
Forsmark area		Bottom	13	-0.390	0.0100	<b>0.0900</b>	0.110	0.230	0.0277	0.18	630
Streaming Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Misterhultsbäcken Ö	PSM002082	Surface	3	-0.0300	0.0600	<b>0.150</b>	0.225	0.300	0.140	0.17	120
Smedtorpet	PSM002083	Surface	3	-0.0600	0.0250	<b>0.110</b>	0.215	0.320	0.123	0.19	150
Kärrsvik	PSM002084	Surface	3	-0.880	-0.475	<b>-0.0700</b>	0.0100	0.0900	-0.287	0.52	-180
Ekerum	PSM002085	Surface	3	-0.0400	-0.0100	<b>0.0200</b>	0.0500	0.0800	0.0200	0.060	300
Plittorp	PSM002071	Surface	3	-0.740	-0.420	<b>-0.100</b>	0.00500	0.110	-0.243	0.44	-180
Lillekvarn	PSM002072	Surface	3	-0.810	-0.530	<b>-0.250</b>	-0.200	-0.150	-0.403	0.36	-88
Kvarnstugan	PSM002079	Surface	3	-0.0200	0.0300	<b>0.0800</b>	0.185	0.290	0.117	0.16	140
Ekhyddan	PSM002087	Surface	3	-0.170	-0.0950	<b>-0.0200</b>	0.0700	0.160	-0.0100	0.17	-1700
Övrahammar	PSM002076	Surface	3	-1.01	-0.525	<b>-0.0400</b>	0.150	0.340	-0.237	0.70	-290
Basteböla	PSM002086	Surface	3	-0.220	0.00500	<b>0.230</b>	0.500	0.770	0.260	0.50	190
Simpevarp area		Surface	30	-1.01	-0.138	<b>-0.0200</b>	0.140	0.770	-0.0520	0.38	-730
Forsmark area		Surface	26	-0.560	-0.0150	<b>0.120</b>	0.305	1.94	0.183	0.48	260

## Surface Water

Cr			Chromium (µg/l)								Cr	
Lake Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
Frisksjön	PSM002065	Surface	1	0.61		<b>0.61</b>		0.61	0.61			
Frisksjön	PSM002065	Bottom	1	0.62		<b>0.62</b>		0.62	0.62			
Simpevarp area		Surface	1	0.61		<b>0.61</b>		0.61	0.61			
Simpevarp area		Bottom	1	0.62		<b>0.62</b>		0.62	0.62			
Kalmar County	N.S.2000	Surface	35	0.19	0.35	<b>0.42</b>	0.74	1.5	0.58	0.3	59	
Forsmark area		Surface	49	0.060	0.10	<b>0.13</b>	0.16	34	0.83	5	590	
Forsmark area		Bottom	15	0.071	0.10	<b>0.13</b>	0.20	2.4	0.41	0.7	180	
Sweden	N.S.2000	Surface	1206	0.030	0.19	<b>0.29</b>	0.48	620	0.97	20	1900	
Sea Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
Borholmsfjärden	PSM002062	Surface	1	<0.1		<b>&lt;0.1</b>		<0.1	<0.1			
Borholmsfjärden	PSM002062	Bottom	1	0.11		<b>0.11</b>		0.11	0.11			
Granholmsfjärden	PSM002064	Surface	1	<0.1		<b>&lt;0.1</b>		<0.1	<0.1			
Granholmsfjärden	PSM002064	Bottom	1	<0.1		<b>&lt;0.1</b>		<0.1	<0.1			
Kråkelund	PSM002060	Surface	1	<0.1		<b>&lt;0.1</b>		<0.1	<0.1			
Kråkelund	PSM002060	Bottom	1	<0.1		<b>&lt;0.1</b>		<0.1	<0.1			
Ekö	PSM002061	Surface	1	<0.1		<b>&lt;0.1</b>		<0.1	<0.1			
Ekö	PSM002061	Bottom	1	1.7		<b>1.7</b>		1.7	1.7			
Simpevarp area		Surface	4	<0.1	<0.1	<b>&lt;0.1</b>	<0.1	<0.1	<0.1			
Simpevarp area		Bottom	4	<0.1	<0.1	<b>&lt;0.1</b>	0.50	1.7	0.47	0.8	170	
Forsmark area		Surface	38	<0.1	<0.1	<b>0.14</b>	0.29	1.8	0.24	0.3	130	
Forsmark area		Bottom	13	<0.1	0.11	<b>0.16</b>	0.17	0.58	0.20	0.2	76	
Streaming Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
Misterhultsbäcken Ö	PSM002082	Surface	1	1.5		<b>1.5</b>		1.5	1.5			
Smedtorpet	PSM002083	Surface	1	1.2		<b>1.2</b>		1.2	1.2			
Kärsvik	PSM002084	Surface	1	1.2		<b>1.2</b>		1.2	1.2			
Ekerum	PSM002085	Surface	1	1.2		<b>1.2</b>		1.2	1.2			
Plittorp	PSM002071	Surface	1	0.33		<b>0.33</b>		0.33	0.33			
Lillekvarn	PSM002072	Surface	1	1.0		<b>1.0</b>		1.0	1.0			
Kvarnstugan	PSM002079	Surface	1	0.55		<b>0.55</b>		0.55	0.55			
Ekhyddan	PSM002087	Surface	1	0.74		<b>0.74</b>		0.74	0.74			
Övrahammar	PSM002076	Surface	1	1.7		<b>1.7</b>		1.7	1.7			
Basteböla	PSM002086	Surface	1	3.6		<b>3.6</b>		3.6	3.6			
Simpevarp area		Surface	10	0.33	0.81	<b>1.2</b>	1.4	3.6	1.3	0.9	71	
Forsmark area		Surface	48	0.059	0.11	<b>0.14</b>	0.19	0.26	0.15	0.05	33	

## Surface Water

Co			Cobalt (µg/l)								Co	
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
<b>Lake Water</b>												
Frisksjön	PSM002065	Surface	1	0.046		<b>0.046</b>		0.046	0.046			
Frisksjön	PSM002065	Bottom	1	0.048		<b>0.048</b>		0.048	0.048			
Simpevarp area		Surface	1	0.046		<b>0.046</b>		0.046	0.046			
Simpevarp area		Bottom	1	0.048		<b>0.048</b>		0.048	0.048			
Kalmar County	N.S.2000	Surface	35	0.030	0.061	<b>0.12</b>	0.22	1.7	0.24	0.3	150	
Forsmark area		Surface	49	0.019	0.039	<b>0.051</b>	0.075	0.16	0.060	0.03	53	
Forsmark area		Bottom	15	0.040	0.051	<b>0.084</b>	0.11	0.17	0.089	0.04	49	
Sweden	N.S.2000	Surface	1206	0.0050	0.032	<b>0.068</b>	0.15	250	0.45	8	1800	
<b>Sea Water</b>												
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
Borholmsfjärden	PSM002062	Surface	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05			
Borholmsfjärden	PSM002062	Bottom	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05			
Granholmsfjärden	PSM002064	Surface	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05			
Granholmsfjärden	PSM002064	Bottom	1	0.074		<b>0.074</b>		0.074	0.074			
Kräkelund	PSM002060	Surface	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05			
Kräkelund	PSM002060	Bottom	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05			
Ekö	PSM002061	Surface	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05			
Ekö	PSM002061	Bottom	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05			
Simpevarp area		Surface	4	<0.05	<0.05	<b>&lt;0.05</b>	<0.05	<0.05	<0.05			
Simpevarp area		Bottom	4	<0.05	<0.05	<b>&lt;0.05</b>	<0.05	0.074	<0.05	0.02	66	
Forsmark area		Surface	38	<0.05	<0.05	<b>&lt;0.05</b>	0.11	0.76	0.100	0.1	150	
Forsmark area		Bottom	13	<0.05	<0.05	<b>&lt;0.05</b>	0.075	0.22	0.057	0.06	110	
<b>Streaming Water</b>												
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
Misterhultsbäcken Ö	PSM002082	Surface	1	1.0		<b>1.0</b>		1.0	1.0			
Smedtorpet	PSM002083	Surface	1	0.72		<b>0.72</b>		0.72	0.72			
Kärsvik	PSM002084	Surface	1	0.14		<b>0.14</b>		0.14	0.14			
Ekerum	PSM002085	Surface	1	0.18		<b>0.18</b>		0.18	0.18			
Plittorp	PSM002071	Surface	1	0.49		<b>0.49</b>		0.49	0.49			
Lillekvarn	PSM002072	Surface	1	1.0		<b>1.0</b>		1.0	1.0			
Kvarnstugan	PSM002079	Surface	1	0.35		<b>0.35</b>		0.35	0.35			
Ekhyddan	PSM002087	Surface	1	0.34		<b>0.34</b>		0.34	0.34			
Övrahammar	PSM002076	Surface	1	2.1		<b>2.1</b>		2.1	2.1			
Basteböla	PSM002086	Surface	1	2.0		<b>2.0</b>		2.0	2.0			
Simpevarp area		Surface	10	0.14	0.34	<b>0.61</b>	1.0	2.1	0.84	0.7	85	
Forsmark area		Surface	48	0.038	0.058	<b>0.076</b>	0.10	0.33	0.097	0.07	68	

## Surface Water

Cu			Copper (µg/l)								Cu	
Lake Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
Frisksjön	PSM002065	Surface	1	2.0		<b>2.0</b>		2.0	2.0			
Frisksjön	PSM002065	Bottom	1	2.0		<b>2.0</b>		2.0	2.0			
Simpevarp area		Surface	1	2.0		<b>2.0</b>		2.0	2.0			
Simpevarp area		Bottom	1	2.0		<b>2.0</b>		2.0	2.0			
Kalmar County	N.S.2000	Surface	35	0.30	0.70	<b>1.0</b>	1.4	3.4	1.1	0.6	57	
Forsmark area		Surface	45	0.13	0.45	<b>0.58</b>	0.86	1.5	0.66	0.3	50	
Forsmark area		Bottom	12	0.33	0.52	<b>0.58</b>	0.74	1.4	0.70	0.3	47	
Sweden	N.S.2000	Surface	1206	0.10	0.30	<b>0.50</b>	0.80	2900	3.6	90	2400	
Sea Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
Borholmsfjärden	PSM002062	Surface	1	<1		<1		<1	<1			
Borholmsfjärden	PSM002062	Bottom	1	1.2		<b>1.2</b>		1.2	1.2			
Granholmsfjärden	PSM002064	Surface	1	<1		<1		<1	<1			
Granholmsfjärden	PSM002064	Bottom	1	<1		<1		<1	<1			
Kråkelund	PSM002060	Surface	1	<1		<1		<1	<1			
Kråkelund	PSM002060	Bottom	1	<1		<1		<1	<1			
Ekö	PSM002061	Surface	1	<1		<1		<1	<1			
Ekö	PSM002061	Bottom	1	<1		<1		<1	<1			
Simpevarp area		Surface	4	<1	<1	<1	<1	<1	<1			
Simpevarp area		Bottom	4	<1	<1	<1	<1	1.2	<1	0.4	52	
Forsmark area		Surface	38	<1	<1	<1	1.3	25	1.6	4	240	
Forsmark area		Bottom	13	<1	<1	<1	1.4	2.9	1.1	0.6	60	
Streaming Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
Misterhultsbäcken Ö	PSM002082	Surface	1	3.3		<b>3.3</b>		3.3	3.3			
Smedtorpet	PSM002083	Surface	1	1.9		<b>1.9</b>		1.9	1.9			
Kärsvik	PSM002084	Surface	1	4.4		<b>4.4</b>		4.4	4.4			
Ekerum	PSM002085	Surface	1	4.7		<b>4.7</b>		4.7	4.7			
Plittorp	PSM002071	Surface	1	0.72		<b>0.72</b>		0.72	0.72			
Lillekvarn	PSM002072	Surface	1	1.4		<b>1.4</b>		1.4	1.4			
Kvarnstugan	PSM002079	Surface	1	1.2		<b>1.2</b>		1.2	1.2			
Ekhyddan	PSM002087	Surface	1	2.2		<b>2.2</b>		2.2	2.2			
Övrahammar	PSM002076	Surface	1	3.3		<b>3.3</b>		3.3	3.3			
Basteböla	PSM002086	Surface	1	6.4		<b>6.4</b>		6.4	6.4			
Simpevarp area		Surface	10	0.72	1.5	<b>2.8</b>	4.1	6.4	3.0	2	62	
Forsmark area		Surface	42	0.29	0.49	<b>0.71</b>	1.1	3.3	0.90	0.6	70	

## Surface Water

D			Deuterium (dev. SMOW)								D
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
<b>Lake Water</b>											
Frisksjön	PSM002065	Surface	8	-72.7	-70.1	<b>-66.2</b>	-63.1	-62.0	-66.8	4.2	-6.3
Frisksjön	PSM002065	Bottom	8	-72.3	-69.1	<b>-66.3</b>	-63.8	-61.5	-66.5	3.7	-5.5
Jämsen	PSM002067	Surface	1	-64.9		<b>-64.9</b>		-64.9	-64.9		
Jämsen	PSM002067	Bottom	1	-65.4		<b>-65.4</b>		-65.4	-65.4		
Götemar	PSM002066	Surface	1	-54.4		<b>-54.4</b>		-54.4	-54.4		
Götemar	PSM002066	Bottom	1	-55.7		<b>-55.7</b>		-55.7	-55.7		
Simpevarp area		Surface	10	-72.7	-69.0	<b>-65.0</b>	-63.0	-54.4	-65.4	5.4	-8.2
Simpevarp area		Bottom	10	-72.3	-68.7	<b>-65.1</b>	-63.5	-55.7	-65.3	4.7	-7.2
Laxemar	pre-PLU	-	1	-68.6		<b>-68.6</b>		-68.6	-68.6		
Forsmark area		Surface	50	-90.4	-77.4	<b>-70.1</b>	-61.6	-44.3	-69.5	12	-17
Forsmark area		Bottom	19	-90.0	-77.9	<b>-66.9</b>	-62.1	-46.2	-68.2	12	-18
<b>Sea Water</b>											
Borholmsfjärden	PSM002062	Surface	8	-69.0	-65.6	<b>-62.1</b>	-59.3	-56.9	-62.5	4.6	-7.3
Borholmsfjärden	PSM002062	Bottom	8	-68.2	-61.7	<b>-60.8</b>	-59.1	-56.9	-61.0	3.4	-5.7
Granholmsfjärden	PSM002064	Surface	8	-71.3	-64.8	<b>-62.3</b>	-58.5	-56.3	-62.4	5.2	-8.3
Granholmsfjärden	PSM002064	Bottom	8	-59.9	-57.5	<b>-56.6</b>	-54.8	-54.0	-56.5	2.1	-3.8
Kråkelund	PSM002060	Surface	5	-57.0	-56.7	<b>-56.2</b>	-55.3	-54.5	-55.9	1.0	-1.8
Kråkelund	PSM002060	Bottom	5	-57.2	-56.9	<b>-56.2</b>	-56.1	-54.6	-56.2	1.0	-1.8
Ekö	PSM002061	Surface	7	-57.9	-56.5	<b>-55.4</b>	-55.1	-53.9	-55.7	1.4	-2.5
Ekö	PSM002061	Bottom	7	-57.3	-56.3	<b>-55.6</b>	-55.0	-53.9	-55.6	1.2	-2.1
Simpevarp area		Surface	28	-71.3	-62.6	<b>-57.1</b>	-56.1	-53.9	-59.6	4.9	-8.2
Simpevarp area		Bottom	28	-68.2	-59.2	<b>-56.9</b>	-55.5	-53.9	-57.5	3.1	-5.4
Forsmark area		Surface	37	-85.0	-66.4	<b>-64.5</b>	-61.6	-43.0	-65.9	7.7	-12
Forsmark area		Bottom	17	-82.4	-65.7	<b>-64.4</b>	-62.4	-60.1	-65.0	5.0	-7.7
<b>Streaming Water</b>											
Misterhultsbäcken Ö	PSM002082	Surface	8	-84.6	-81.9	<b>-78.5</b>	-75.5	-72.2	-78.7	4.3	-5.5
Smedtorpet	PSM002083	Surface	9	-82.0	-79.3	<b>-77.6</b>	-75.9	-73.9	-77.8	2.8	-3.6
Kärrevik	PSM002084	Surface	9	-82.5	-80.3	<b>-77.6</b>	-77.2	-76.4	-78.7	2.2	-2.8
Ekerum	PSM002085	Surface	9	-81.2	-80.4	<b>-77.8</b>	-76.3	-75.5	-78.2	2.2	-2.9
Plittorp	PSM002071	Surface	8	-77.1	-73.7	<b>-72.0</b>	-70.9	-69.7	-72.7	2.7	-3.7
Lillekvarn	PSM002072	Surface	5	-85.0	-83.5	<b>-82.5</b>	-78.8	-67.7	-79.5	7.0	-8.8
Kvarnstugan	PSM002079	Surface	8	-79.0	-74.6	<b>-73.2</b>	-72.7	-72.3	-74.2	2.5	-3.3
Ekhyddan	PSM002087	Surface	9	-80.1	-78.0	<b>-74.4</b>	-73.8	-71.1	-75.3	3.2	-4.2
Övrahammar	PSM002076	Surface	8	-81.8	-78.1	<b>-76.7</b>	-75.4	-69.8	-76.6	3.5	-4.6
Basteböla	PSM002086	Surface	8	-81.9	-78.1	<b>-77.0</b>	-76.1	-75.9	-77.6	2.1	-2.8
Basteböla	PSM107735	Surface	1	-73.4		<b>-73.4</b>		-73.4	-73.4		
Simpevarp area		Surface	82	-85.0	-79.3	<b>-76.7</b>	-74.3	-67.7	-76.8	3.7	-4.8
Laxemar	pre-PLU	Surface	14	-77.2	-75.4	<b>-73.9</b>	-69.9	-66.9	-72.8	3.5	-4.8
Forsmark area		Surface	61	-93.4	-80.8	<b>-73.7</b>	-67.4	-50.1	-73.7	11	-15



## Surface Water

Dy			Dysprosium (µg/l)								Dy
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
<b>Lake Water</b>											
Frisksjön	PSM002065	Surface	1	0.014		<b>0.014</b>		0.014	0.014		
Frisksjön	PSM002065	Bottom	1	0.014		<b>0.014</b>		0.014	0.014		
Simpevarp area		Surface	1	0.014		<b>0.014</b>		0.014	0.014		
Simpevarp area		Bottom	1	0.014		<b>0.014</b>		0.014	0.014		
Forsmark area		Surface	34	<0.005	0.010	<b>0.015</b>	0.022	0.054	0.017	0.01	68
Forsmark area		Bottom	7	<0.005	0.016	<b>0.025</b>	0.039	0.047	0.026	0.02	64
<b>Sea Water</b>											
Borholmsfjärden	PSM002062	Surface	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05		
Borholmsfjärden	PSM002062	Bottom	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05		
Granholmsfjärden	PSM002064	Surface	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05		
Granholmsfjärden	PSM002064	Bottom	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05		
Kråkelund	PSM002060	Surface	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05		
Kråkelund	PSM002060	Bottom	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05		
Ekö	PSM002061	Surface	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05		
Ekö	PSM002061	Bottom	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05		
Simpevarp area		Surface	4	<0.05	<0.05	<b>&lt;0.05</b>	<0.05	<0.05	<0.05		
Simpevarp area		Bottom	4	<0.05	<0.05	<b>&lt;0.05</b>	<0.05	<0.05	<0.05		
Forsmark area		Surface	31	<0.05	<0.05	<b>&lt;0.05</b>	<0.05	0.26	<0.05	0.05	170
Forsmark area		Bottom	10	<0.05	<0.05	<b>&lt;0.05</b>	<0.05	<0.05	<0.05	0.009	100
<b>Streaming Water</b>											
Misterhultsbäcken Ö	PSM002082	Surface	1	0.059		<b>0.059</b>		0.059	0.059		
Smedtorpet	PSM002083	Surface	1	0.058		<b>0.058</b>		0.058	0.058		
Kärsvik	PSM002084	Surface	1	0.044		<b>0.044</b>		0.044	0.044		
Ekerum	PSM002085	Surface	1	0.027		<b>0.027</b>		0.027	0.027		
Plittorp	PSM002071	Surface	1	0.033		<b>0.033</b>		0.033	0.033		
Lillekvarn	PSM002072	Surface	1	0.039		<b>0.039</b>		0.039	0.039		
Kvarnstugan	PSM002079	Surface	1	0.032		<b>0.032</b>		0.032	0.032		
Ekhyddan	PSM002087	Surface	1	0.039		<b>0.039</b>		0.039	0.039		
Örahammar	PSM002076	Surface	1	0.060		<b>0.060</b>		0.060	0.060		
Basteböla	PSM002086	Surface	1	0.085		<b>0.085</b>		0.085	0.085		
Simpevarp area		Surface	10	0.027	0.034	<b>0.041</b>	0.059	0.085	0.048	0.02	38
Forsmark area		Surface	32	0.0056	0.012	<b>0.020</b>	0.027	0.051	0.022	0.01	61
Er			Erbium (µg/l)								Er
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
<b>Lake Water</b>											
Frisksjön	PSM002065	Surface	1	0.0091		<b>0.0091</b>		0.0091	0.0091		
Frisksjön	PSM002065	Bottom	1	0.0096		<b>0.0096</b>		0.0096	0.0096		
Simpevarp area		Surface	1	0.0091		<b>0.0091</b>		0.0091	0.0091		
Simpevarp area		Bottom	1	0.0096		<b>0.0096</b>		0.0096	0.0096		
Forsmark area		Surface	39	<0.005	0.0080	<b>0.013</b>	0.018	0.038	0.014	0.009	62
Forsmark area		Bottom	10	<0.005	0.018	<b>0.021</b>	0.025	0.037	0.021	0.01	51
<b>Sea Water</b>											
Borholmsfjärden	PSM002062	Surface	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05		
Borholmsfjärden	PSM002062	Bottom	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05		
Granholmsfjärden	PSM002064	Surface	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05		
Granholmsfjärden	PSM002064	Bottom	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05		
Kråkelund	PSM002060	Surface	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05		
Kråkelund	PSM002060	Bottom	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05		
Ekö	PSM002061	Surface	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05		
Ekö	PSM002061	Bottom	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05		
Simpevarp area		Surface	4	<0.05	<0.05	<b>&lt;0.05</b>	<0.05	<0.05	<0.05		
Simpevarp area		Bottom	4	<0.05	<0.05	<b>&lt;0.05</b>	<0.05	<0.05	<0.05		
Forsmark area		Surface	34	<0.05	<0.05	<b>&lt;0.05</b>	<0.05	0.14	<0.05	0.03	130
Forsmark area		Bottom	13	<0.05	<0.05	<b>&lt;0.05</b>	<0.05	0.074	<0.05	0.02	150
<b>Streaming Water</b>											
Misterhultsbäcken Ö	PSM002082	Surface	1	0.038		<b>0.038</b>		0.038	0.038		
Smedtorpet	PSM002083	Surface	1	0.040		<b>0.040</b>		0.040	0.040		
Kärsvik	PSM002084	Surface	1	0.029		<b>0.029</b>		0.029	0.029		
Ekerum	PSM002085	Surface	1	0.018		<b>0.018</b>		0.018	0.018		
Plittorp	PSM002071	Surface	1	0.021		<b>0.021</b>		0.021	0.021		
Lillekvarn	PSM002072	Surface	1	0.024		<b>0.024</b>		0.024	0.024		
Kvarnstugan	PSM002079	Surface	1	0.021		<b>0.021</b>		0.021	0.021		
Ekhyddan	PSM002087	Surface	1	0.025		<b>0.025</b>		0.025	0.025		
Örahammar	PSM002076	Surface	1	0.039		<b>0.039</b>		0.039	0.039		
Basteböla	PSM002086	Surface	1	0.056		<b>0.056</b>		0.056	0.056		
Simpevarp area		Surface	10	0.018	0.022	<b>0.027</b>	0.039	0.056	0.031	0.01	38
Laxemar	pre-PLU	Surface	1	0.37		<b>0.37</b>		0.37	0.37		
Forsmark area		Surface	33	<0.005	0.0090	<b>0.014</b>	0.020	0.034	0.015	0.009	58

## Surface Water

Eu			Europium (µg/l)							Eu	
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
<b>Lake Water</b>											
Frisksjön	PSM002065	Surface	1	<0.005		<0.005		<0.005	<0.005		
Frisksjön	PSM002065	Bottom	1	<0.005		<0.005		<0.005	<0.005		
Simpevarp area		Surface	1	<0.005		<0.005		<0.005	<0.005		
Simpevarp area		Bottom	1	<0.005		<0.005		<0.005	<0.005		
Forsmark area		Surface	39	<0.005	<0.005	<0.005	<0.005	0.010	<0.005	0.002	52
Forsmark area		Bottom	10	<0.005	<0.005	<0.005	<0.005	0.0063	<0.005	0.001	39
<b>Sea Water</b>											
Borholmsfjärden	PSM002062	Surface	1	<0.05		<0.05		<0.05	<0.05		
Borholmsfjärden	PSM002062	Bottom	1	<0.05		<0.05		<0.05	<0.05		
Granholmsfjärden	PSM002064	Surface	1	<0.05		<0.05		<0.05	<0.05		
Granholmsfjärden	PSM002064	Bottom	1	<0.05		<0.05		<0.05	<0.05		
Kråkelund	PSM002060	Surface	1	<0.05		<0.05		<0.05	<0.05		
Kråkelund	PSM002060	Bottom	1	<0.05		<0.05		<0.05	<0.05		
Ekö	PSM002061	Surface	1	<0.05		<0.05		<0.05	<0.05		
Ekö	PSM002061	Bottom	1	<0.05		<0.05		<0.05	<0.05		
Simpevarp area		Surface	4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
Simpevarp area		Bottom	4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
Forsmark area		Surface	34	<0.05	<0.05	<0.05	<0.05	0.059	<0.05	0.01	94
Forsmark area		Bottom	13	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.009	110
<b>Streaming Water</b>											
Misterhultsbäcken Ö	PSM002082	Surface	1	0.014		0.014		0.014	0.014		
Smedtorpet	PSM002083	Surface	1	0.014		0.014		0.014	0.014		
Kärsvik	PSM002084	Surface	1	0.012		0.012		0.012	0.012		
Ekerum	PSM002085	Surface	1	0.0061		0.0061		0.0061	0.0061		
Plittorp	PSM002071	Surface	1	0.0070		0.0070		0.0070	0.0070		
Lillekvarn	PSM002072	Surface	1	0.0091		0.0091		0.0091	0.0091		
Kvarnstugan	PSM002079	Surface	1	0.0071		0.0071		0.0071	0.0071		
Ekhyddan	PSM002087	Surface	1	0.0088		0.0088		0.0088	0.0088		
Övrahammar	PSM002076	Surface	1	0.014		0.014		0.014	0.014		
Basteböla	PSM002086	Surface	1	0.021		0.021		0.021	0.021		
Simpevarp area		Surface	10	0.0061	0.0075	0.011	0.014	0.021	0.011	0.005	41
Laxemar	pre-PLU	Surface	1	0.11		0.11		0.11	0.11		
Forsmark area		Surface	33	<0.005	<0.005	<0.005	0.0055	0.012	<0.005	0.003	62

## Surface Water

F			Fluoride (mg/l)								F
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
<b>Lake Water</b>											
Frisksjön	PSM002065	Surface	35	0.32	0.71	<b>0.74</b>	0.79	1.1	0.75	0.1	17
Frisksjön	PSM002065	Bottom	35	0.30	0.66	<b>0.76</b>	0.85	1.0	0.76	0.1	19
Jämsen	PSM002067	Surface	35	0.22	0.46	<b>0.49</b>	0.57	0.83	0.51	0.1	22
Jämsen	PSM002067	Bottom	35	0.24	0.44	<b>0.48</b>	0.55	0.65	0.49	0.09	19
Söråmagasinet	PSM005964	Surface	22	<0.2	0.39	<b>0.44</b>	0.50	0.69	0.43	0.1	29
Söråmagasinet	PSM005964	Bottom	22	<0.2	0.42	<b>0.46</b>	0.49	0.56	0.43	0.1	26
Götemar	PSM002066	Surface	18	1.0	1.1	<b>1.2</b>	1.3	1.5	1.2	0.1	10
Götemar	PSM002066	Bottom	18	1.1	1.2	<b>1.2</b>	1.3	1.4	1.3	0.10	7.9
Simpevarp area		Surface	110	<0.2	0.48	<b>0.63</b>	0.79	1.5	0.69	0.3	44
Simpevarp area		Bottom	110	<0.2	0.46	<b>0.58</b>	0.84	1.4	0.69	0.3	45
Kalmar County	N.S.2000	Surface	106	0.070	0.16	<b>0.23</b>	0.28	1.2	0.25	0.2	63
Forsmark area		Surface	223	<0.2	<0.2	<b>0.24</b>	0.29	3.1	0.27	0.3	94
Forsmark area		Bottom	61	<0.2	0.21	<b>0.30</b>	0.36	0.66	0.30	0.1	45
Sweden	N.S.2000	Surface	3464	0.020	0.040	<b>0.090</b>	0.15	1.2	0.11	0.1	93
<b>Sea Water</b>											
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Borholmsfjärden	PSM002062	Surface	35	<0.2	<0.2	<b>&lt;0.2</b>	0.28	1.0	0.26	0.2	94
Borholmsfjärden	PSM002062	Bottom	35	<0.2	<0.2	<b>&lt;0.2</b>	<0.2	1.2	<0.2	0.2	110
Granholmsfjärden	PSM002064	Surface	37	<0.2	<0.2	<b>&lt;0.2</b>	0.29	0.81	0.21	0.2	99
Granholmsfjärden	PSM002064	Bottom	35	<0.2	<0.2	<b>&lt;0.2</b>	<0.2	0.64	<0.2	0.1	83
Kråkelund	PSM002060	Surface	34	<0.2	<0.2	<b>&lt;0.2</b>	<0.2	0.75	<0.2	0.1	94
Kråkelund	PSM002060	Bottom	34	<0.2	<0.2	<b>&lt;0.2</b>	<0.2	0.50	<0.2	0.1	75
Ekö	PSM002061	Surface	36	<0.2	<0.2	<b>&lt;0.2</b>	<0.2	0.48	<0.2	0.06	57
Ekö	PSM002061	Bottom	35	<0.2	<0.2	<b>&lt;0.2</b>	<0.2	0.57	<0.2	0.1	76
Fågelöfjärden	PSM002063	Surface	17	<0.2	<0.2	<b>&lt;0.2</b>	<0.2	<0.2	<0.2		
Fågelöfjärden	PSM002063	Bottom	17	<0.2	<0.2	<b>&lt;0.2</b>	<0.2	0.90	<0.2	0.2	120
Simpevarp area		Surface	159	<0.2	<0.2	<b>&lt;0.2</b>	<0.2	1.0	<0.2	0.2	100
Simpevarp area		Bottom	156	<0.2	<0.2	<b>&lt;0.2</b>	<0.2	1.2	<0.2	0.1	99
Forsmark area		Surface	148	<0.2	<0.2	<b>&lt;0.2</b>	0.21	0.91	<0.2	0.1	84
Forsmark area		Bottom	55	<0.2	<0.2	<b>0.21</b>	0.34	1.0	0.25	0.2	76
<b>Streaming Water</b>											
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Misterhult	PSM002080	Surface	17	0.18	0.24	<b>0.29</b>	0.31	0.45	0.30	0.07	25
Perstorpet	PSM002081	Surface	34	<0.2	0.31	<b>0.41</b>	0.50	0.85	0.41	0.2	38
Misterhultsbäcken Ö	PSM002082	Surface	37	<0.2	0.32	<b>0.37</b>	0.52	0.79	0.41	0.2	43
Smedtorpet	PSM002083	Surface	38	0.49	0.78	<b>1.1</b>	1.6	2.7	1.2	0.6	48
Kärrsvik	PSM002084	Surface	37	1.0	1.5	<b>1.8</b>	2.0	2.4	1.8	0.4	21
Ekerum	PSM002085	Surface	36	0.39	0.90	<b>1.0</b>	1.2	1.7	1.1	0.3	25
Köksmåla	PSM002068	Surface	37	<0.2	0.51	<b>0.59</b>	0.69	1.0	0.58	0.2	30
Jämserum	PSM002069	Surface	37	<0.2	0.46	<b>0.50</b>	0.53	0.71	0.49	0.1	23
Plittorp	PSM002071	Surface	35	<0.2	0.43	<b>0.47</b>	0.55	0.92	0.48	0.2	32
Lillekvarn	PSM002072	Surface	15	<0.2	0.22	<b>0.24</b>	0.32	0.65	0.28	0.1	47
Brolund	PSM002077	Surface	18	0.30	0.36	<b>0.42</b>	0.51	0.65	0.44	0.1	24
Sillebäcken	PSM002078	Surface	28	<0.2	0.21	<b>0.25</b>	0.30	0.42	0.25	0.08	33
Kvarnstugan	PSM002079	Surface	35	<0.2	0.31	<b>0.40</b>	0.51	0.79	0.41	0.2	39
Ekhyddan	PSM002087	Surface	38	<0.2	0.33	<b>0.44</b>	0.53	0.77	0.44	0.2	36
Övrahammar	PSM002076	Surface	32	<0.2	0.38	<b>0.52</b>	0.60	1.2	0.52	0.2	43
Basteböla	PSM002086	Surface	29	0.33	0.57	<b>0.75</b>	0.85	1.0	0.71	0.2	27
Flohult	PSM002070	Surface	17	0.40	0.58	<b>0.67</b>	0.84	1.1	0.72	0.2	27
Figeholm	PSM002075	Surface	17	0.44	0.55	<b>0.63</b>	0.77	0.89	0.66	0.1	22
	PSM003715	Surface	9	0.37	0.59	<b>0.92</b>	1.0	1.1	0.81	0.3	34
	PSM003716	Surface	8	0.39	0.52	<b>0.83</b>	0.99	1.1	0.77	0.3	37
	PSM107735	Surface	11	0.30	0.50	<b>0.53</b>	0.60	0.82	0.54	0.1	27
Simpevarp area		Surface	565	<0.2	0.37	<b>0.53</b>	0.77	2.7	0.66	0.5	70
Kalmar County	N.S.2000	Surface	26	0.14	0.24	<b>0.28</b>	0.37	0.76	0.33	0.2	47
Forsmark area		Surface	270	<0.2	<0.2	<b>0.24</b>	0.31	1.1	0.25	0.1	55
Sweden	N.S.2000	Surface	725	0.020	0.070	<b>0.12</b>	0.21	0.99	0.16	0.1	83

## Surface Water

Gd			Gadolinium (µg/l)								Gd	
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
<b>Lake Water</b>												
Frisksjön	PSM002065	Surface	1	0.018		<b>0.018</b>		0.018	0.018			
Frisksjön	PSM002065	Bottom	1	0.018		<b>0.018</b>		0.018	0.018			
Simpevarp area		Surface	1	0.018		<b>0.018</b>		0.018	0.018			
Simpevarp area		Bottom	1	0.018		<b>0.018</b>		0.018	0.018			
Forsmark area		Surface	34	<0.005	0.0083	<b>0.014</b>	0.020	0.056	0.017	0.01	75	
Forsmark area		Bottom	7	<0.005	0.012	<b>0.022</b>	0.034	0.047	0.023	0.02	68	
<b>Sea Water</b>												
Borholmsfjärden	PSM002062	Surface	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05			
Borholmsfjärden	PSM002062	Bottom	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05			
Granholmsfjärden	PSM002064	Surface	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05			
Granholmsfjärden	PSM002064	Bottom	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05			
Kråkelund	PSM002060	Surface	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05			
Kråkelund	PSM002060	Bottom	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05			
Ekö	PSM002061	Surface	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05			
Ekö	PSM002061	Bottom	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05			
Simpevarp area		Surface	4	<0.05	<0.05	<b>&lt;0.05</b>	<0.05	<0.05	<0.05			
Simpevarp area		Bottom	4	<0.05	<0.05	<b>&lt;0.05</b>	<0.05	<0.05	<0.05			
Forsmark area		Surface	31	<0.05	<0.05	<b>&lt;0.05</b>	<0.05	0.33	<0.05	0.06	190	
Forsmark area		Bottom	10	<0.05	<0.05	<b>&lt;0.05</b>	<0.05	<0.05	<0.05	0.009	100	
<b>Streaming Water</b>												
Misterhultsbäcken Ö	PSM002082	Surface	1	0.072		<b>0.072</b>		0.072	0.072			
Smedtorpet	PSM002083	Surface	1	0.070		<b>0.070</b>		0.070	0.070			
Kärrevik	PSM002084	Surface	1	0.058		<b>0.058</b>		0.058	0.058			
Ekerum	PSM002085	Surface	1	0.031		<b>0.031</b>		0.031	0.031			
Plittorp	PSM002071	Surface	1	0.040		<b>0.040</b>		0.040	0.040			
Lillekvarn	PSM002072	Surface	1	0.047		<b>0.047</b>		0.047	0.047			
Kvarnstugan	PSM002079	Surface	1	0.039		<b>0.039</b>		0.039	0.039			
Ekhyddan	PSM002087	Surface	1	0.047		<b>0.047</b>		0.047	0.047			
Örahammar	PSM002076	Surface	1	0.071		<b>0.071</b>		0.071	0.071			
Basteböla	PSM002086	Surface	1	0.11		<b>0.11</b>		0.11	0.11			
Simpevarp area		Surface	10	0.031	0.042	<b>0.053</b>	0.070	0.11	0.058	0.02	38	
Forsmark area		Surface	32	<0.005	0.013	<b>0.019</b>	0.028	0.054	0.022	0.01	65	
Hf			Hafnium (µg/l)								Hf	
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
<b>Lake Water</b>												
Frisksjön	PSM002065	Surface	1	0.69		<b>0.69</b>		0.69	0.69			
Frisksjön	PSM002065	Bottom	1	0.35		<b>0.35</b>		0.35	0.35			
Simpevarp area		Surface	1	0.69		<b>0.69</b>		0.69	0.69			
Simpevarp area		Bottom	1	0.35		<b>0.35</b>		0.35	0.35			
Forsmark area		Surface	39	<0.005	0.0053	<b>0.010</b>	0.014	0.075	0.012	0.01	100	
Forsmark area		Bottom	10	<0.005	0.0059	<b>0.013</b>	0.016	0.022	0.011	0.007	59	
<b>Sea Water</b>												
Borholmsfjärden	PSM002062	Surface	1	0.95		<b>0.95</b>		0.95	0.95			
Borholmsfjärden	PSM002062	Bottom	1	0.77		<b>0.77</b>		0.77	0.77			
Granholmsfjärden	PSM002064	Surface	1	0.67		<b>0.67</b>		0.67	0.67			
Granholmsfjärden	PSM002064	Bottom	1	0.53		<b>0.53</b>		0.53	0.53			
Kråkelund	PSM002060	Surface	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05			
Kråkelund	PSM002060	Bottom	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05			
Ekö	PSM002061	Surface	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05			
Ekö	PSM002061	Bottom	1	1.0		<b>1.0</b>		1.0	1.0			
Simpevarp area		Surface	4	<0.05	<0.05	<b>0.35</b>	0.74	0.95	0.42	0.5	110	
Simpevarp area		Bottom	4	<0.05	0.40	<b>0.65</b>	0.83	1.0	0.58	0.4	72	
Forsmark area		Surface	35	<0.05	<0.05	<b>&lt;0.05</b>	<0.05	2.0	0.23	0.5	220	
Forsmark area		Bottom	13	<0.05	<0.05	<b>&lt;0.05</b>	<0.05	1.9	0.33	0.6	190	
<b>Streaming Water</b>												
Misterhultsbäcken Ö	PSM002082	Surface	1	0.13		<b>0.13</b>		0.13	0.13			
Smedtorpet	PSM002083	Surface	1	0.20		<b>0.20</b>		0.20	0.20			
Kärrevik	PSM002084	Surface	1	0.24		<b>0.24</b>		0.24	0.24			
Ekerum	PSM002085	Surface	1	0.13		<b>0.13</b>		0.13	0.13			
Plittorp	PSM002071	Surface	1	0.15		<b>0.15</b>		0.15	0.15			
Lillekvarn	PSM002072	Surface	1	0.093		<b>0.093</b>		0.093	0.093			
Kvarnstugan	PSM002079	Surface	1	0.093		<b>0.093</b>		0.093	0.093			
Ekhyddan	PSM002087	Surface	1	0.062		<b>0.062</b>		0.062	0.062			
Örahammar	PSM002076	Surface	1	0.20		<b>0.20</b>		0.20	0.20			
Basteböla	PSM002086	Surface	1	0.13		<b>0.13</b>		0.13	0.13			
Simpevarp area		Surface	10	0.062	0.10	<b>0.13</b>	0.19	0.24	0.14	0.06	40	
Forsmark area		Surface	33	<0.005	0.0070	<b>0.010</b>	0.019	0.065	0.014	0.01	98	

## Surface Water

Ho			Holmium (µg/l)								Ho
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
<b>Lake Water</b>											
Frisksjön	PSM002065	Surface	1	<0.005		<0.005		<0.005	<0.005		
Frisksjön	PSM002065	Bottom	1	<0.005		<0.005		<0.005	<0.005		
Simpevarp area		Surface	1	<0.005		<0.005		<0.005	<0.005		
Simpevarp area		Bottom	1	<0.005		<0.005		<0.005	<0.005		
Forsmark area		Surface	39	<0.005	<0.005	<0.005	0.0060	0.012	<0.005	0.003	61
Forsmark area		Bottom	10	<0.005	0.0052	<b>0.0067</b>	0.0082	0.011	0.0066	0.003	43
<b>Sea Water</b>											
Borholmsfjärden	PSM002062	Surface	1	<0.05		<0.05		<0.05	<0.05		
Borholmsfjärden	PSM002062	Bottom	1	<0.05		<0.05		<0.05	<0.05		
Granholmsfjärden	PSM002064	Surface	1	<0.05		<0.05		<0.05	<0.05		
Granholmsfjärden	PSM002064	Bottom	1	<0.05		<0.05		<0.05	<0.05		
Kråkelund	PSM002060	Surface	1	<0.05		<0.05		<0.05	<0.05		
Kråkelund	PSM002060	Bottom	1	<0.05		<0.05		<0.05	<0.05		
Ekö	PSM002061	Surface	1	<0.05		<0.05		<0.05	<0.05		
Ekö	PSM002061	Bottom	1	<0.05		<0.05		<0.05	<0.05		
Simpevarp area		Surface	4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
Simpevarp area		Bottom	4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
Forsmark area		Surface	34	<0.05	<0.05	<0.05	<0.05	0.061	<0.05	0.01	93
Forsmark area		Bottom	13	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.010	110
<b>Streaming Water</b>											
Misterhultsbäcken Ö	PSM002082	Surface	1	0.013		<b>0.013</b>		0.013	0.013		
Smedtorpet	PSM002083	Surface	1	0.013		<b>0.013</b>		0.013	0.013		
Kärsvik	PSM002084	Surface	1	0.0095		<b>0.0095</b>		0.0095	0.0095		
Ekerum	PSM002085	Surface	1	0.0058		<b>0.0058</b>		0.0058	0.0058		
Pliittorp	PSM002071	Surface	1	0.0071		<b>0.0071</b>		0.0071	0.0071		
Lillekvarn	PSM002072	Surface	1	0.0083		<b>0.0083</b>		0.0083	0.0083		
Kvarnstugan	PSM002079	Surface	1	0.0070		<b>0.0070</b>		0.0070	0.0070		
Ekhyddan	PSM002087	Surface	1	0.0082		<b>0.0082</b>		0.0082	0.0082		
Övrahammar	PSM002076	Surface	1	0.013		<b>0.013</b>		0.013	0.013		
Basteböla	PSM002086	Surface	1	0.018		<b>0.018</b>		0.018	0.018		
Simpevarp area		Surface	10	0.0058	0.0074	<b>0.0089</b>	0.013	0.018	0.010	0.004	37
Laxemar	pre-PLU	Surface	1	0.12		<b>0.12</b>		0.12	0.12		
Forsmark area		Surface	33	<0.005	<0.005	<0.005	0.0064	0.012	<0.005	0.003	61

pH			pH (field) (pH unit)								pH
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
<b>Lake Water</b>											
Frisksjön	PSM002065	Surface	31	6.22	6.66	<b>6.94</b>	7.07	7.43	6.86	0.34	4.9
Frisksjön	PSM002065	Bottom	33	6.13	6.35	<b>6.56</b>	6.79	7.13	6.57	0.30	4.5
Jämsen	PSM002067	Surface	31	6.48	6.66	<b>6.95</b>	7.09	7.34	6.90	0.25	3.6
Jämsen	PSM002067	Bottom	31	6.09	6.26	<b>6.39</b>	6.65	6.97	6.46	0.26	4.0
Söråmagasinet	PSM005964	Surface	20	6.91	7.18	<b>7.33</b>	7.46	8.01	7.33	0.25	3.4
Söråmagasinet	PSM005964	Bottom	20	6.63	6.77	<b>6.93</b>	7.22	7.76	7.01	0.29	4.2
Götemar	PSM002066	Surface	15	6.58	6.95	<b>7.24</b>	7.40	7.57	7.15	0.31	4.3
Götemar	PSM002066	Bottom	15	6.15	6.30	<b>6.43</b>	6.63	7.19	6.53	0.34	5.2
Simpevarp area		Surface	97	6.22	6.79	<b>7.04</b>	7.26	8.01	7.01	0.34	4.9
Simpevarp area		Bottom	99	6.09	6.32	<b>6.59</b>	6.85	7.76	6.62	0.35	5.3
Forsmark area		Surface	246	6.31	7.30	<b>7.92</b>	8.52	9.52	7.94	0.73	9.2
Forsmark area		Bottom	78	6.70	7.28	<b>7.83</b>	8.47	9.02	7.87	0.62	7.9
<b>Sea Water</b>											
Borholmsfjärden	PSM002062	Surface	32	6.63	7.39	<b>7.77</b>	7.97	8.21	7.62	0.45	5.9
Borholmsfjärden	PSM002062	Bottom	33	6.85	7.13	<b>7.45</b>	7.59	8.04	7.41	0.33	4.4
Granholmsfjärden	PSM002064	Surface	33	6.86	7.63	<b>7.74</b>	7.94	8.42	7.68	0.38	5.0
Granholmsfjärden	PSM002064	Bottom	31	6.82	7.00	<b>7.11</b>	7.53	7.75	7.24	0.30	4.1
Kråkelund	PSM002060	Surface	30	7.71	7.89	<b>7.99</b>	8.15	8.53	8.02	0.19	2.4
Kråkelund	PSM002060	Bottom	29	7.30	7.70	<b>7.85</b>	8.00	8.19	7.81	0.24	3.0
Ekö	PSM002061	Surface	30	7.70	7.93	<b>8.17</b>	8.29	8.51	8.12	0.22	2.7
Ekö	PSM002061	Bottom	30	7.02	7.83	<b>7.94</b>	8.19	8.36	7.92	0.33	4.1
Fågelöfjärden	PSM002063	Surface	14	7.45	7.89	<b>8.08</b>	8.16	8.35	8.02	0.25	3.1
Fågelöfjärden	PSM002063	Bottom	14	7.72	7.94	<b>8.00</b>	8.08	8.35	8.02	0.18	2.3
Simpevarp area		Surface	139	6.63	7.73	<b>7.93</b>	8.14	8.53	7.87	0.38	4.9
Simpevarp area		Bottom	137	6.82	7.30	<b>7.71</b>	7.96	8.36	7.63	0.41	5.4
Forsmark area		Surface	171	6.93	7.78	<b>7.98</b>	8.12	8.86	7.93	0.31	4.0
Forsmark area		Bottom	72	6.89	7.62	<b>7.95</b>	8.13	8.42	7.87	0.35	4.5
<b>Streaming Water</b>											
Forsmark area		Surface	309	6.40	7.06	<b>7.27</b>	7.47	8.66	7.31	0.37	5.1

## Surface Water

pH			pH (lab) (pH unit)								pH
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
<b>Lake Water</b>											
Frisksjön	PSM002065	Surface	36	6.15	6.71	<b>6.80</b>	6.92	7.42	6.76	0.26	3.8
Frisksjön	PSM002065	Bottom	36	6.15	6.43	<b>6.75</b>	6.86	7.77	6.68	0.32	4.7
Jämsen	PSM002067	Surface	36	6.27	6.68	<b>6.84</b>	6.92	7.24	6.78	0.23	3.3
Jämsen	PSM002067	Bottom	36	6.14	6.37	<b>6.43</b>	6.61	6.95	6.49	0.20	3.1
Söråmagasinet	PSM005964	Surface	22	6.75	7.08	<b>7.29</b>	7.36	7.47	7.21	0.21	2.9
Söråmagasinet	PSM005964	Bottom	22	6.64	6.81	<b>7.11</b>	7.27	7.43	7.06	0.24	3.5
Götemar	PSM002066	Surface	18	6.62	6.90	<b>7.02</b>	7.15	7.31	6.99	0.20	2.8
Götemar	PSM002066	Bottom	18	6.25	6.48	<b>6.63</b>	6.95	7.00	6.67	0.27	4.0
Simpevarp area		Surface	112	6.15	6.72	<b>6.90</b>	7.07	7.47	6.90	0.29	4.2
Simpevarp area		Bottom	112	6.14	6.40	<b>6.70</b>	6.89	7.77	6.69	0.33	4.9
Laxemar	pre-PLU	-	1	6.60		<b>6.60</b>		6.60	6.60		
Kalmar County	N.S.2000	Surface	106	4.54	6.00	<b>6.36</b>	6.68	7.13	6.25	0.59	9.4
Forsmark area		Surface	231	6.93	7.43	<b>8.00</b>	8.46	9.62	7.99	0.64	8.0
Forsmark area		Bottom	65	6.97	7.41	<b>8.00</b>	8.40	8.80	7.93	0.54	6.8
Sweden	N.S.2000	Surface	3464	3.12	6.25	<b>6.63</b>	6.95	8.25	6.55	0.68	10
<b>Sea Water</b>											
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Borholmsfjärden	PSM002062	Surface	36	6.61	7.17	<b>7.68</b>	7.85	8.16	7.52	0.42	5.6
Borholmsfjärden	PSM002062	Bottom	36	6.88	7.14	<b>7.50</b>	7.72	7.90	7.45	0.31	4.1
Granholmsfjärden	PSM002064	Surface	36	6.81	7.41	<b>7.71</b>	7.87	8.16	7.61	0.35	4.6
Granholmsfjärden	PSM002064	Bottom	35	6.98	7.07	<b>7.26</b>	7.41	7.74	7.27	0.24	3.2
Kräkelund	PSM002060	Surface	34	7.59	7.84	<b>7.92</b>	8.06	8.45	7.94	0.19	2.3
Kräkelund	PSM002060	Bottom	34	7.08	7.73	<b>7.79</b>	7.89	8.17	7.77	0.20	2.5
Ekö	PSM002061	Surface	36	7.71	7.80	<b>8.01</b>	8.13	8.43	7.99	0.19	2.4
Ekö	PSM002061	Bottom	35	7.21	7.73	<b>7.83</b>	8.00	8.16	7.83	0.22	2.8
Fågelöfjärden	PSM002063	Surface	17	7.55	7.79	<b>8.03</b>	8.06	8.24	7.93	0.20	2.5
Fågelöfjärden	PSM002063	Bottom	17	7.61	7.77	<b>7.89</b>	8.00	8.13	7.90	0.16	2.0
Simpevarp area		Surface	159	6.61	7.70	<b>7.85</b>	8.02	8.45	7.78	0.36	4.6
Simpevarp area		Bottom	157	6.88	7.32	<b>7.71</b>	7.87	8.17	7.61	0.33	4.4
Forsmark area		Surface	166	6.87	7.75	<b>7.90</b>	8.00	8.82	7.85	0.29	3.7
Forsmark area		Bottom	63	6.88	7.68	<b>7.90</b>	8.00	8.35	7.80	0.30	3.8
Bottenhavet	SMHI:MS4	Surface	9	7.39	7.61	<b>7.76</b>	7.87	8.15	7.74	0.23	3.0
<b>Streaming Water</b>											
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Misterhult	PSM002080	Surface	17	5.83	5.97	<b>6.31</b>	6.45	6.80	6.26	0.30	4.9
Perstorpet	PSM002081	Surface	33	6.04	6.31	<b>6.37</b>	6.54	6.70	6.40	0.18	2.7
Misterhultsbäcken Ö	PSM002082	Surface	37	5.77	6.20	<b>6.34</b>	6.45	6.98	6.31	0.24	3.8
Smedtorpet	PSM002083	Surface	39	5.76	6.16	<b>6.41</b>	6.60	6.84	6.36	0.27	4.2
Kärrsvik	PSM002084	Surface	38	5.97	6.43	<b>6.54</b>	6.78	7.15	6.56	0.30	4.5
Ekerum	PSM002085	Surface	37	6.58	7.16	<b>7.38</b>	7.64	7.85	7.34	0.35	4.8
Köksmåla	PSM002068	Surface	37	5.91	6.12	<b>6.37</b>	6.54	7.05	6.36	0.28	4.4
Jämserum	PSM002069	Surface	37	6.13	6.56	<b>6.66</b>	6.84	7.11	6.66	0.25	3.8
Plittorp	PSM002071	Surface	36	5.90	6.38	<b>6.50</b>	6.67	6.97	6.47	0.25	3.9
Lillekvarn	PSM002072	Surface	15	5.01	5.38	<b>5.56</b>	5.78	6.43	5.62	0.39	7.0
Brolund	PSM002077	Surface	18	5.91	6.01	<b>6.35</b>	6.56	6.71	6.30	0.29	4.6
Sillebäcken	PSM002078	Surface	29	5.26	5.53	<b>5.75</b>	5.85	6.44	5.71	0.25	4.4
Kvarnstugan	PSM002079	Surface	36	5.63	6.06	<b>6.37</b>	6.67	7.03	6.38	0.38	5.9
Ekhyddan	PSM002087	Surface	39	5.79	6.31	<b>6.49</b>	6.68	7.16	6.49	0.34	5.3
Övrahammar	PSM002076	Surface	32	5.80	5.99	<b>6.21</b>	6.41	7.22	6.26	0.35	5.6
Basteböla	PSM002086	Surface	29	5.39	5.76	<b>6.01</b>	6.29	7.14	6.08	0.39	6.4
Flohult	PSM002070	Surface	17	6.14	6.42	<b>6.62</b>	6.71	6.91	6.58	0.21	3.1
Figeholm	PSM002075	Surface	17	6.20	6.33	<b>6.49</b>	6.58	6.83	6.48	0.18	2.8
	PSM003715	Surface	7	6.18	6.49	<b>6.56</b>	6.96	7.00	6.66	0.32	4.7
	PSM003716	Surface	8	6.39	6.62	<b>6.74</b>	6.98	7.37	6.81	0.31	4.6
	PSM107735	Surface	12	5.20	5.52	<b>5.69</b>	6.10	6.20	5.75	0.33	5.7
Simpevarp area		Surface	570	5.01	6.12	<b>6.42</b>	6.65	7.85	6.40	0.46	7.2
Laxemar	pre-PLU	Surface	14	5.90	6.03	<b>6.15</b>	6.38	6.90	6.23	0.27	4.4
Kalmar County	N.S.2000	Surface	26	5.70	6.43	<b>6.62</b>	6.88	7.91	6.65	0.44	6.7
Forsmark area		Surface	312	6.52	7.24	<b>7.47</b>	7.70	8.64	7.50	0.37	5.0
Sweden	N.S.2000	Surface	725	4.45	6.54	<b>6.79</b>	7.07	8.10	6.79	0.52	7.7

## Surface Water

Tr			Tritium (TU)								Tr
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
<b>Lake Water</b>											
Frisksjön	PSM002065	Surface	8	10.4	11.2	<b>11.9</b>	13.6	14.6	12.3	1.5	12
Frisksjön	PSM002065	Bottom	8	10.0	11.1	<b>12.4</b>	12.8	13.3	12.0	1.2	9.7
Jämsen	PSM002067	Surface	1	11.3		<b>11.3</b>		11.3	11.3		
Jämsen	PSM002067	Bottom	1	10.0		<b>10.0</b>		10.0	10.0		
Götemar	PSM002066	Surface	1	10.7		<b>10.7</b>		10.7	10.7		
Götemar	PSM002066	Bottom	1	14.2		<b>14.2</b>		14.2	14.2		
Simpevarp area		Surface	10	10.4	11.1	<b>11.4</b>	13.3	14.6	12.0	1.4	12
Simpevarp area		Bottom	10	10.0	11.0	<b>12.4</b>	12.9	14.2	12.0	1.4	12
Forsmark area		Surface	48	6.90	11.4	<b>12.5</b>	13.4	15.6	12.1	2.1	17
Forsmark area		Bottom	19	6.10	11.1	<b>12.7</b>	13.2	16.0	12.1	2.3	19
<b>Sea Water</b>											
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Borholmsfjärden	PSM002062	Surface	8	11.5	12.2	<b>14.2</b>	15.6	15.7	13.9	1.7	13
Borholmsfjärden	PSM002062	Bottom	8	10.6	12.5	<b>13.8</b>	14.3	14.9	13.3	1.5	11
Granholmsfjärden	PSM002064	Surface	8	10.3	12.8	<b>13.7</b>	14.6	17.3	13.7	2.2	16
Granholmsfjärden	PSM002064	Bottom	8	12.6	13.6	<b>14.0</b>	15.4	15.7	14.3	1.1	8.0
Kräkelund	PSM002060	Surface	5	14.0	16.0	<b>16.1</b>	16.4	17.0	15.9	1.1	7.1
Kräkelund	PSM002060	Bottom	5	13.3	13.6	<b>14.2</b>	14.2	16.7	14.4	1.3	9.3
Ekö	PSM002061	Surface	7	10.9	13.3	<b>13.3</b>	13.7	15.5	13.4	1.3	10
Ekö	PSM002061	Bottom	7	10.1	11.8	<b>14.6</b>	16.1	16.1	13.8	2.6	19
Simpevarp area		Surface	28	10.3	13.2	<b>13.9</b>	15.6	17.3	14.0	1.8	13
Simpevarp area		Bottom	28	10.1	13.1	<b>14.0</b>	15.0	16.7	13.9	1.7	12
Forsmark area		Surface	37	10.1	12.2	<b>13.9</b>	15.9	18.6	14.1	2.2	16
Forsmark area		Bottom	17	10.3	12.7	<b>16.0</b>	17.4	19.3	15.2	2.7	18
<b>Streaming Water</b>											
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Misterhultsbäcken Ö	PSM002082	Surface	8	9.80	10.6	<b>12.3</b>	12.9	13.3	11.8	1.4	12
Smedtorpet	PSM002083	Surface	9	9.30	11.0	<b>11.2</b>	12.3	13.2	11.5	1.2	10
Kärsvik	PSM002084	Surface	9	9.50	10.6	<b>11.9</b>	12.3	13.5	11.6	1.4	12
Ekerum	PSM002085	Surface	9	11.5	11.7	<b>12.6</b>	13.3	14.9	12.7	1.1	8.7
Plittorp	PSM002071	Surface	8	8.70	11.1	<b>12.3</b>	12.7	15.0	11.9	1.9	16
Lillekvarn	PSM002072	Surface	5	10.1	10.6	<b>11.0</b>	12.6	12.8	11.4	1.2	11
Kvarnstugan	PSM002079	Surface	8	9.60	11.4	<b>11.7</b>	12.3	14.6	11.9	1.5	12
Ekhyddan	PSM002087	Surface	9	11.0	11.6	<b>11.7</b>	12.4	13.3	11.9	0.72	6.1
Övrahammar	PSM002076	Surface	8	9.50	12.1	<b>12.7</b>	13.3	14.5	12.6	1.6	12
Basteböla	PSM002086	Surface	8	10.7	11.2	<b>12.0</b>	13.0	14.5	12.3	1.5	12
	PSM107735	Surface	1	12.9		<b>12.9</b>		12.9	12.9		
Simpevarp area		Surface	82	8.70	11.0	<b>12.0</b>	12.8	15.0	12.0	1.3	11
Laxemar	pre-PLU	Surface	1	13.6		<b>13.6</b>		13.6	13.6		
Forsmark area		Surface	57	5.30	10.5	<b>11.8</b>	13.1	17.0	11.7	2.1	18

## Surface Water

In			Indium ( $\mu\text{g/l}$ )							In	
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
<b>Lake Water</b>											
Frisksjön	PSM002065	Surface	1	<0.05		<0.05		<0.05	<0.05		
Frisksjön	PSM002065	Bottom	1	<0.05		<0.05		<0.05	<0.05		
Simpevarp area		Surface	1	<0.05		<0.05		<0.05	<0.05		
Simpevarp area		Bottom	1	<0.05		<0.05		<0.05	<0.05		
Forsmark area		Surface	10	<0.05	<0.05	4.1	8.8	16	5.2	6	110
Forsmark area		Bottom	3	7.5	8.8	10	11	13	10	3	25
<b>Sea Water</b>											
Borholmsfjärden	PSM002062	Surface	1	<0.5		<0.5		<0.5	<0.5		
Borholmsfjärden	PSM002062	Bottom	1	<0.5		<0.5		<0.5	<0.5		
Granholmsfjärden	PSM002064	Surface	1	<0.5		<0.5		<0.5	<0.5		
Granholmsfjärden	PSM002064	Bottom	1	<0.5		<0.5		<0.5	<0.5		
Kråkelund	PSM002060	Surface	1	<0.5		<0.5		<0.5	<0.5		
Kråkelund	PSM002060	Bottom	1	<0.5		<0.5		<0.5	<0.5		
Ekö	PSM002061	Surface	1	<0.5		<0.5		<0.5	<0.5		
Ekö	PSM002061	Bottom	1	<0.5		<0.5		<0.5	<0.5		
Simpevarp area		Surface	4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		
Simpevarp area		Bottom	4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		
Forsmark area		Surface	15	<0.1	6.0	15	19	26	13	9	67
Forsmark area		Bottom	9	11	15	16	20	21	17	4	23
<b>Streaming Water</b>											
Misterhultsbäcken Ö	PSM002082	Surface	1	<0.05		<0.05		<0.05	<0.05		
Smedtorpet	PSM002083	Surface	1	<0.05		<0.05		<0.05	<0.05		
Kärrevik	PSM002084	Surface	1	<0.05		<0.05		<0.05	<0.05		
Ekerum	PSM002085	Surface	1	<0.05		<0.05		<0.05	<0.05		
Plittorp	PSM002071	Surface	1	<0.05		<0.05		<0.05	<0.05		
Lillekvarn	PSM002072	Surface	1	<0.05		<0.05		<0.05	<0.05		
Kvarnstugan	PSM002079	Surface	1	<0.05		<0.05		<0.05	<0.05		
Ekhyddan	PSM002087	Surface	1	<0.05		<0.05		<0.05	<0.05		
Övrahammar	PSM002076	Surface	1	<0.05		<0.05		<0.05	<0.05		
Basteböla	PSM002086	Surface	1	<0.05		<0.05		<0.05	<0.05		
Simpevarp area		Surface	10	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
Laxemar	pre-PLU	Surface	1	0.010		0.010		0.010	0.010		
Forsmark area		Surface	6	<0.05	<0.05	<0.05	<0.05	10	1.7	4	240



## Surface Water

			Iodide (mg/l)								
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
<b>Lake Water</b>											
Frisksjön	PSM002065	Surface	7	0.026	0.027	<b>0.029</b>	0.030	0.033	0.029	0.003	8.9
Frisksjön	PSM002065	Bottom	5	0.024	0.026	<b>0.027</b>	0.027	0.039	0.029	0.006	21
Jämsen	PSM002067	Surface	6	0.0040	0.0048	<b>0.0070</b>	0.0070	0.0080	0.0062	0.002	28
Jämsen	PSM002067	Bottom	6	0.0040	0.0045	<b>0.0070</b>	0.0088	0.0090	0.0067	0.002	35
Söråmagasinet	PSM005964	Surface	4	0.020	0.020	<b>0.021</b>	0.023	0.025	0.022	0.002	11
Söråmagasinet	PSM005964	Bottom	4	0.020	0.022	<b>0.023</b>	0.024	0.025	0.023	0.002	9.3
Götemar	PSM002066	Surface	3	0.015	0.017	<b>0.018</b>	0.021	0.024	0.019	0.005	24
Götemar	PSM002066	Bottom	3	0.015	0.016	<b>0.017</b>	0.023	0.029	0.020	0.008	37
Simpevarp area		Surface	20	0.0040	0.0078	<b>0.021</b>	0.026	0.033	0.019	0.010	51
Simpevarp area		Bottom	18	0.0040	0.0090	<b>0.021</b>	0.026	0.039	0.019	0.01	54
Forsmark area		Surface	200	<0.001	0.0050	<b>0.0060</b>	0.0090	0.026	0.0073	0.004	59
Forsmark area		Bottom	49	0.0010	0.0070	<b>0.0080</b>	0.010	0.020	0.0086	0.004	43
<b>Sea Water</b>											
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Borholmsfjärden	PSM002062	Surface	6	0.0080	0.0098	<b>0.013</b>	0.014	0.018	0.012	0.004	29
Borholmsfjärden	PSM002062	Bottom	6	0.0070	0.0088	<b>0.013</b>	0.017	0.019	0.013	0.005	39
Granholmsfjärden	PSM002064	Surface	6	0.0080	0.011	<b>0.013</b>	0.015	0.016	0.013	0.003	24
Granholmsfjärden	PSM002064	Bottom	6	0.0090	0.014	<b>0.018</b>	0.025	0.034	0.020	0.009	47
Kråkelund	PSM002060	Surface	5	0.0070	0.010	<b>0.012</b>	0.013	0.014	0.011	0.003	25
Kråkelund	PSM002060	Bottom	5	0.0070	0.011	<b>0.013</b>	0.013	0.013	0.011	0.003	23
Ekö	PSM002061	Surface	6	0.0070	0.011	<b>0.012</b>	0.013	0.013	0.011	0.002	20
Ekö	PSM002061	Bottom	6	0.0070	0.011	<b>0.013</b>	0.013	0.014	0.012	0.003	23
Fågelöfjärden	PSM002063	Surface	3	0.0070	0.0080	<b>0.0090</b>	0.014	0.019	0.012	0.006	55
Fågelöfjärden	PSM002063	Bottom	3	0.0090	0.0090	<b>0.0090</b>	0.0095	0.010	0.0093	0.0006	6.2
Simpevarp area		Surface	26	0.0070	0.0093	<b>0.012</b>	0.013	0.019	0.012	0.003	27
Simpevarp area		Bottom	26	0.0070	0.0093	<b>0.013</b>	0.015	0.034	0.013	0.006	46
Forsmark area		Surface	140	0.0040	0.0080	<b>0.0090</b>	0.010	0.022	0.0096	0.003	29
Forsmark area		Bottom	42	0.0050	0.0080	<b>0.0090</b>	0.011	0.018	0.0098	0.003	29
<b>Streaming Water</b>											
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Misterhult	PSM002080	Surface	3	0.0040	0.0055	<b>0.0070</b>	0.0095	0.012	0.0077	0.004	53
Perstorpet	PSM002081	Surface	5	0.0080	0.0090	<b>0.013</b>	0.021	0.052	0.021	0.02	89
Misterhultsbäcken Ö	PSM002082	Surface	6	0.0040	0.0085	<b>0.013</b>	0.017	0.039	0.016	0.01	80
Smedtorpet	PSM002083	Surface	6	0.0090	0.011	<b>0.014</b>	0.019	0.027	0.016	0.007	43
Kärsvik	PSM002084	Surface	6	0.0090	0.019	<b>0.023</b>	0.027	0.032	0.022	0.008	36
Ekerum	PSM002085	Surface	6	0.0090	0.016	<b>0.022</b>	0.025	0.030	0.021	0.008	37
Köksmåla	PSM002068	Surface	6	0.0020	0.0040	<b>0.0045</b>	0.0050	0.0090	0.0048	0.002	48
Jämserum	PSM002069	Surface	6	0.0040	0.0045	<b>0.0065</b>	0.0070	0.0070	0.0058	0.001	25
Plittorp	PSM002071	Surface	6	0.0020	0.0043	<b>0.0055</b>	0.0060	0.0060	0.0048	0.002	33
Lillekvarn	PSM002072	Surface	2	0.0030	0.0050	<b>0.0070</b>	0.0090	0.011	0.0070	0.006	81
Brolund	PSM002077	Surface	3	0.0040	0.0060	<b>0.0080</b>	0.0085	0.0090	0.0070	0.003	38
Sillebäcken	PSM002078	Surface	4	0.0060	0.0083	<b>0.010</b>	0.017	0.034	0.015	0.01	86
Kvarnstugan	PSM002079	Surface	6	0.0040	0.0070	<b>0.0070</b>	0.0078	0.010	0.0072	0.002	27
Ekhyddan	PSM002087	Surface	6	0.0060	0.011	<b>0.013</b>	0.015	0.017	0.013	0.004	31
Övrahammar	PSM002076	Surface	4	0.017	0.018	<b>0.023</b>	0.037	0.066	0.032	0.02	72
Basteböla	PSM002086	Surface	4	0.036	0.044	<b>0.061</b>	0.075	0.079	0.059	0.02	35
Flohult	PSM002070	Surface	3	0.0020	0.0035	<b>0.0050</b>	0.0060	0.0070	0.0047	0.003	54
Figeholm	PSM002075	Surface	3	0.0040	0.012	<b>0.019</b>	0.060	0.10	0.041	0.05	130
	PSM107735	Surface	2	0.016	0.019	<b>0.022</b>	0.025	0.028	0.022	0.008	39
Simpevarp area		Surface	87	0.0020	0.0060	<b>0.010</b>	0.020	0.10	0.016	0.02	110
Forsmark area		Surface	229	<0.001	0.0040	<b>0.0050</b>	0.0080	0.023	0.0061	0.004	60

## Surface Water

Fe(II)			Ferrous iron (mg/l)							Fe(II)	
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
<b>Lake Water</b>											
Frisksjön	PSM002065	Surface	3	0.23	0.25	<b>0.27</b>	0.27	0.27	0.26	0.03	10
Frisksjön	PSM002065	Bottom	1	0.17		<b>0.17</b>		0.17	0.17		
Simpevarp area		Surface	3	0.23	0.25	<b>0.27</b>	0.27	0.27	0.26	0.03	10
Simpevarp area		Bottom	1	0.17		<b>0.17</b>		0.17	0.17		
<b>Sea Water</b>											
Borholmsfjärden	PSM002062	Surface	2	0.011	0.033	<b>0.054</b>	0.076	0.097	0.054	0.06	110
Borholmsfjärden	PSM002062	Bottom	2	0.010	0.021	<b>0.031</b>	0.042	0.052	0.031	0.03	96
Granholmsfjärden	PSM002064	Surface	1	<0.005		<b>&lt;0.005</b>		<0.005	<0.005		
Granholmsfjärden	PSM002064	Bottom	2	<0.005	0.11	<b>0.21</b>	0.31	0.41	0.21	0.3	140
Kräkelund	PSM002060	Surface	2	<0.022	<0.022	<b>&lt;0.022</b>	<0.022	<0.022	<0.022	0.001	40
Kräkelund	PSM002060	Bottom	2	<0.022	<0.022	<b>&lt;0.022</b>	<0.022	<0.022	<0.022	0.006	89
Ekö	PSM002061	Surface	2	<0.013	<0.013	<b>&lt;0.013</b>	<0.013	<0.013	<0.013	0.002	58
Ekö	PSM002061	Bottom	2	<0.013	<0.013	<b>&lt;0.013</b>	<0.013	<0.013	<0.013	0.003	63
Simpevarp area		Surface	7	<0.022	<0.022	<b>&lt;0.022</b>	<0.022	0.097	<0.022	0.03	190
Simpevarp area		Bottom	8	<0.022	<0.022	<b>&lt;0.022</b>	<0.022	0.41	0.063	0.1	230
<b>Streaming Water</b>											
Misterhultsbäcken Ö	PSM002082	Surface	2	0.87	0.97	<b>1.1</b>	1.2	1.3	1.1	0.3	28
Smedtorpet	PSM002083	Surface	2	0.56	0.70	<b>0.85</b>	0.99	1.1	0.85	0.4	48
Kärsvik	PSM002084	Surface	2	0.39	0.41	<b>0.43</b>	0.45	0.47	0.43	0.05	12
Ekerum	PSM002085	Surface	2	0.40	0.44	<b>0.48</b>	0.51	0.55	0.48	0.1	22
Plittorp	PSM002071	Surface	2	0.30	0.30	<b>0.30</b>	0.31	0.31	0.30	0.01	3.9
Lillekvarn	PSM002072	Surface	1	0.81		<b>0.81</b>		0.81	0.81		
Kvarnstugan	PSM002079	Surface	2	0.28	0.31	<b>0.34</b>	0.36	0.39	0.34	0.07	22
Ekhyddan	PSM002087	Surface	2	0.44	0.44	<b>0.44</b>	0.44	0.44	0.44	0.0007	0.16
Övrahammar	PSM002076	Surface	1	1.2		<b>1.2</b>		1.2	1.2		
Basteböla	PSM002086	Surface	1	0.82		<b>0.82</b>		0.82	0.82		
Simpevarp area		Surface	17	0.28	0.39	<b>0.47</b>	0.82	1.3	0.62	0.3	52

## Surface Water

Fe			Iron (total ICP) (mg/l)								Fe	
Lake Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
Frisksjön	PSM002065	Surface	36	0.54	0.71	<b>0.76</b>	1.1	1.3	0.86	0.2	25	
Frisksjön	PSM002065	Bottom	35	0.59	0.74	<b>0.82</b>	1.1	1.3	0.91	0.2	24	
Jämsen	PSM002067	Surface	36	0.89	1.1	<b>1.3</b>	1.5	1.7	1.3	0.3	20	
Jämsen	PSM002067	Bottom	35	1.1	1.5	<b>1.6</b>	1.9	12	2.5	2	95	
Söråmagasinet	PSM005964	Surface	22	0.49	0.62	<b>0.74</b>	0.92	2.0	0.82	0.3	40	
Söråmagasinet	PSM005964	Bottom	22	0.51	0.73	<b>0.83</b>	0.95	2.6	0.94	0.4	47	
Götemar	PSM002066	Surface	18	0.031	0.051	<b>0.057</b>	0.078	0.088	0.062	0.02	28	
Götemar	PSM002066	Bottom	18	0.054	0.082	<b>0.12</b>	0.23	2.0	0.25	0.4	180	
Simpevarp area		Surface	112	0.031	0.63	<b>0.88</b>	1.2	2.0	0.86	0.5	55	
Simpevarp area		Bottom	110	0.054	0.72	<b>0.94</b>	1.5	12	1.3	2	120	
Kalmar County	N.S.2000	Surface	35	0.042	0.14	<b>0.40</b>	0.64	1.6	0.48	0.4	88	
Forsmark area		Surface	70	0.0069	0.036	<b>0.056</b>	0.11	0.67	0.094	0.1	110	
Forsmark area		Bottom	26	0.010	0.038	<b>0.070</b>	0.12	0.41	0.10	0.09	93	
Sweden	N.S.2000	Surface	1206	0.0040	0.059	<b>0.20</b>	0.54	1500	1.7	40	2500	
Sea Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
Borholmsfjärden	PSM002062	Surface	36	<0.1	<0.1	<b>0.13</b>	0.26	0.85	0.20	0.2	110	
Borholmsfjärden	PSM002062	Bottom	36	<0.1	<0.1	<b>&lt;0.1</b>	0.13	0.44	0.10	0.09	90	
Granholmsfjärden	PSM002064	Surface	37	<0.1	<0.1	<b>&lt;0.1</b>	0.17	0.81	0.13	0.2	140	
Granholmsfjärden	PSM002064	Bottom	35	<0.1	<0.1	<b>&lt;0.1</b>	0.11	1.7	0.18	0.4	200	
Kräkelund	PSM002060	Surface	34	<0.1	<0.1	<b>&lt;0.1</b>	<0.1	<0.1	<0.1	0.01	87	
Kräkelund	PSM002060	Bottom	34	<0.1	<0.1	<b>&lt;0.1</b>	<0.1	<0.1	<0.1	0.01	89	
Ekö	PSM002061	Surface	36	<0.1	<0.1	<b>&lt;0.1</b>	<0.1	<0.1	<0.1	0.01	83	
Ekö	PSM002061	Bottom	34	<0.1	<0.1	<b>&lt;0.1</b>	<0.1	0.13	<0.1	0.02	140	
Fågelöfjärden	PSM002063	Surface	17	<0.02	<0.02	<b>&lt;0.02</b>	<0.02	0.029	<0.02	0.006	48	
Fågelöfjärden	PSM002063	Bottom	17	<0.02	<0.02	<b>&lt;0.02</b>	<0.02	0.033	<0.02	0.008	58	
Simpevarp area		Surface	160	<0.1	<0.1	<b>&lt;0.1</b>	<0.1	0.85	<0.1	0.2	190	
Simpevarp area		Bottom	156	<0.1	<0.1	<b>&lt;0.1</b>	<0.1	1.7	<0.1	0.2	260	
Forsmark area		Surface	48	<0.02	<0.02	<b>0.029</b>	0.10	1.2	0.11	0.2	200	
Forsmark area		Bottom	20	<0.02	<0.02	<b>0.032</b>	0.064	0.84	0.077	0.2	240	
Streaming Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
Misterhult	PSM002080	Surface	17	0.48	0.89	<b>1.2</b>	1.7	2.8	1.3	0.7	51	
Perstorpet	PSM002081	Surface	34	0.63	0.80	<b>1.0</b>	2.7	11	2.3	3	120	
Misterhultsbäcken Ö	PSM002082	Surface	37	0.62	0.81	<b>1.1</b>	2.3	5.1	1.8	1	75	
Smedtorpet	PSM002083	Surface	39	0.73	1.0	<b>1.3</b>	1.8	4.2	1.5	0.8	50	
Kärrsvik	PSM002084	Surface	38	0.61	0.92	<b>1.2</b>	2.0	4.0	1.6	0.9	55	
Ekerum	PSM002085	Surface	37	0.23	0.43	<b>0.63</b>	1.4	3.1	1.1	0.8	78	
Köksmåla	PSM002068	Surface	37	1.0	1.4	<b>1.7</b>	2.1	3.7	1.8	0.6	33	
Jämserum	PSM002069	Surface	37	0.91	1.1	<b>1.2</b>	1.4	1.7	1.3	0.2	18	
Plittorp	PSM002071	Surface	35	0.55	1.2	<b>1.3</b>	1.5	5.7	1.4	0.8	56	
Lillekvarn	PSM002072	Surface	15	0.48	0.94	<b>1.4</b>	1.8	4.0	1.6	1	64	
Brolund	PSM002077	Surface	18	0.63	1.1	<b>1.3</b>	1.6	5.3	1.5	1	67	
Sillebäcken	PSM002078	Surface	29	0.41	0.58	<b>0.72</b>	0.84	3.4	0.92	0.6	69	
Kvarnstugan	PSM002079	Surface	36	0.67	1.0	<b>1.2</b>	1.6	5.1	1.4	0.8	55	
Ekhyddan	PSM002087	Surface	39	0.54	0.99	<b>1.2</b>	1.6	4.8	1.4	0.8	54	
Övrahammar	PSM002076	Surface	32	0.66	1.4	<b>2.0</b>	5.6	11	3.5	3	86	
Basteböla	PSM002086	Surface	29	0.50	0.73	<b>1.1</b>	1.9	5.8	1.7	1	84	
Flohult	PSM002070	Surface	17	0.43	0.86	<b>1.1</b>	1.7	3.4	1.4	0.8	57	
Figeholm	PSM002075	Surface	17	0.61	0.83	<b>1.0</b>	2.3	7.3	1.8	2	94	
	PSM107735	Surface	12	1.2	1.4	<b>2.0</b>	2.3	3.1	2.0	0.7	33	
Simpevarp area		Surface	555	0.23	0.91	<b>1.2</b>	1.8	11	1.6	1	84	
Laxemar	pre-PLU	Surface	1	2.0		<b>2.0</b>		2.0	2.0			
Forsmark area		Surface	89	0.024	0.068	<b>0.11</b>	0.22	1.5	0.18	0.2	110	

## Surface Water

Fe			Iron (total spectrometric) (mg/l)								Fe
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
<b>Lake Water</b>											
Frisksjön	PSM002065	Surface	3	0.55	0.71	<b>0.87</b>	0.88	0.89	0.77	0.2	25
Frisksjön	PSM002065	Bottom	1	0.57		<b>0.57</b>		0.57	0.57		
Simpevarp area		Surface	3	0.55	0.71	<b>0.87</b>	0.88	0.89	0.77	0.2	25
Simpevarp area		Bottom	1	0.57		<b>0.57</b>		0.57	0.57		
<b>Sea Water</b>											
Borholmsfjärden	PSM002062	Surface	2	0.020	0.029	<b>0.038</b>	0.047	0.056	0.038	0.03	67
Borholmsfjärden	PSM002062	Bottom	2	0.017	0.037	<b>0.058</b>	0.078	0.098	0.058	0.06	100
Granholmsfjärden	PSM002064	Surface	2	0.0090	0.013	<b>0.016</b>	0.020	0.023	0.016	0.010	62
Granholmsfjärden	PSM002064	Bottom	2	0.020	0.14	<b>0.26</b>	0.38	0.50	0.26	0.3	130
Kräkelund	PSM002060	Surface	2	<0.009	<0.009	<b>&lt;0.009</b>	<0.009	0.0090	<0.009	0.006	110
Kräkelund	PSM002060	Bottom	2	<0.009	0.010	<b>0.016</b>	0.022	0.028	0.016	0.02	100
Ekö	PSM002061	Surface	2	<0.006	0.0060	<b>0.0090</b>	0.012	0.015	0.0090	0.008	94
Ekö	PSM002061	Bottom	2	<0.006	<0.006	<b>&lt;0.006</b>	<0.006	0.0060	<0.006	0.003	71
Simpevarp area		Surface	8	<0.009	<0.009	<b>0.012</b>	0.021	0.056	0.017	0.02	100
Simpevarp area		Bottom	8	<0.009	<0.009	<b>0.019</b>	0.046	0.50	0.084	0.2	200
<b>Streaming Water</b>											
Misterhultsbäcken Ö	PSM002082	Surface	2	2.4	2.7	<b>2.9</b>	3.2	3.4	2.9	0.7	24
Smedtorpet	PSM002083	Surface	2	1.6	1.9	<b>2.3</b>	2.7	3.0	2.3	1	44
Kärsvik	PSM002084	Surface	2	1.4	1.8	<b>2.2</b>	2.6	3.0	2.2	1	51
Ekerum	PSM002085	Surface	2	1.1	1.3	<b>1.6</b>	1.9	2.1	1.6	0.7	45
Plittorp	PSM002071	Surface	2	1.2	1.3	<b>1.4</b>	1.4	1.5	1.4	0.2	15
Lillekvarn	PSM002072	Surface	1	2.2		<b>2.2</b>		2.2	2.2		
Kvarnstugan	PSM002079	Surface	2	1.7	1.7	<b>1.7</b>	1.8	1.8	1.7	0.06	3.7
Ekhyddan	PSM002087	Surface	2	1.8	1.9	<b>2.0</b>	2.1	2.2	2.0	0.3	15
Övrahammar	PSM002076	Surface	1	3.7		<b>3.7</b>		3.7	3.7		
Basteböla	PSM002086	Surface	1	3.6		<b>3.6</b>		3.6	3.6		
Simpevarp area		Surface	17	1.1	1.6	<b>2.1</b>	3.0	3.7	2.2	0.8	38
<b>La</b>											
			Lanthanum (µg/l)								La
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
<b>Lake Water</b>											
Frisksjön	PSM002065	Surface	1	0.12		<b>0.12</b>		0.12	0.12		
Frisksjön	PSM002065	Bottom	1	0.13		<b>0.13</b>		0.13	0.13		
Simpevarp area		Surface	1	0.12		<b>0.12</b>		0.12	0.12		
Simpevarp area		Bottom	1	0.13		<b>0.13</b>		0.13	0.13		
Forsmark area		Surface	28	0.010	0.040	<b>0.058</b>	0.10	0.27	0.080	0.06	80
Forsmark area		Bottom	7	0.018	0.079	<b>0.12</b>	0.14	0.23	0.12	0.07	60
<b>Sea Water</b>											
Borholmsfjärden	PSM002062	Surface	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05		
Borholmsfjärden	PSM002062	Bottom	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05		
Granholmsfjärden	PSM002064	Surface	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05		
Granholmsfjärden	PSM002064	Bottom	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05		
Kräkelund	PSM002060	Surface	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05		
Kräkelund	PSM002060	Bottom	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05		
Ekö	PSM002061	Surface	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05		
Ekö	PSM002061	Bottom	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05		
Simpevarp area		Surface	4	<0.05	<0.05	<b>&lt;0.05</b>	<0.05	<0.05	<0.05		
Simpevarp area		Bottom	4	<0.05	<0.05	<b>&lt;0.05</b>	<0.05	<0.05	<0.05		
Forsmark area		Surface	27	<0.05	<0.05	<b>&lt;0.05</b>	0.063	0.86	0.13	0.3	200
Forsmark area		Bottom	11	<0.05	<0.05	<b>&lt;0.05</b>	0.063	0.90	0.12	0.3	220
<b>Streaming Water</b>											
Misterhultsbäcken Ö	PSM002082	Surface	1	0.47		<b>0.47</b>		0.47	0.47		
Smedtorpet	PSM002083	Surface	1	0.48		<b>0.48</b>		0.48	0.48		
Kärsvik	PSM002084	Surface	1	0.39		<b>0.39</b>		0.39	0.39		
Ekerum	PSM002085	Surface	1	0.16		<b>0.16</b>		0.16	0.16		
Plittorp	PSM002071	Surface	1	0.22		<b>0.22</b>		0.22	0.22		
Lillekvarn	PSM002072	Surface	1	0.30		<b>0.30</b>		0.30	0.30		
Kvarnstugan	PSM002079	Surface	1	0.23		<b>0.23</b>		0.23	0.23		
Ekhyddan	PSM002087	Surface	1	0.29		<b>0.29</b>		0.29	0.29		
Övrahammar	PSM002076	Surface	1	0.42		<b>0.42</b>		0.42	0.42		
Basteböla	PSM002086	Surface	1	0.66		<b>0.66</b>		0.66	0.66		
Simpevarp area		Surface	10	0.16	0.25	<b>0.34</b>	0.46	0.66	0.36	0.1	41
Laxemar	pre-PLU	Surface	1	4.4		<b>4.4</b>		4.4	4.4		
Forsmark area		Surface	27	0.017	0.050	<b>0.086</b>	0.12	0.26	0.095	0.07	70

## Surface Water

<b>Pb</b>			<b>Lead (µg/l)</b>								<b>Pb</b>	
			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>	
<b>Lake Water</b>												
Frisksjön	PSM002065	Surface	1	0.48		<b>0.48</b>		0.48	0.48			
Frisksjön	PSM002065	Bottom	1	0.44		<b>0.44</b>		0.44	0.44			
Simpevarp area		Surface	1	0.48		<b>0.48</b>		0.48	0.48			
Simpevarp area		Bottom	1	0.44		<b>0.44</b>		0.44	0.44			
Kalmar County	N.S.2000	Surface	35	0.050	0.14	<b>0.28</b>	0.34	0.56	0.26	0.1	55	
Forsmark area		Surface	45	0.011	0.042	<b>0.092</b>	0.14	0.64	0.11	0.1	99	
Forsmark area		Bottom	12	0.015	0.027	<b>0.096</b>	0.12	0.26	0.096	0.08	83	
Sweden	N.S.2000	Surface	1206	0.010	0.070	<b>0.18</b>	0.39	500	0.77	10	1900	
<b>Sea Water</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>	
Borholmsfjärden	PSM002062	Surface	1	<0.1		<b>&lt;0.1</b>		<0.1	<0.1			
Borholmsfjärden	PSM002062	Bottom	1	<0.1		<b>&lt;0.1</b>		<0.1	<0.1			
Granholmsfjärden	PSM002064	Surface	1	<0.1		<b>&lt;0.1</b>		<0.1	<0.1			
Granholmsfjärden	PSM002064	Bottom	1	<0.1		<b>&lt;0.1</b>		<0.1	<0.1			
Kråkelund	PSM002060	Surface	1	<0.1		<b>&lt;0.1</b>		<0.1	<0.1			
Kråkelund	PSM002060	Bottom	1	<0.1		<b>&lt;0.1</b>		<0.1	<0.1			
Ekö	PSM002061	Surface	1	<0.1		<b>&lt;0.1</b>		<0.1	<0.1			
Ekö	PSM002061	Bottom	1	<0.1		<b>&lt;0.1</b>		<0.1	<0.1			
Simpevarp area		Surface	4	<0.1	<0.1	<b>&lt;0.1</b>	<0.1	<0.1	<0.1			
Simpevarp area		Bottom	4	<0.1	<0.1	<b>&lt;0.1</b>	<0.1	<0.1	<0.1			
Forsmark area		Surface	38	<0.3	<0.3	<b>&lt;0.3</b>	<0.3	2.8	<0.3	0.6	220	
Forsmark area		Bottom	13	<0.3	<0.3	<b>&lt;0.3</b>	0.30	0.86	<0.3	0.2	110	
<b>Streaming Water</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>	
Misterhultsbäcken Ö	PSM002082	Surface	1	0.39		<b>0.39</b>		0.39	0.39			
Smedtorpet	PSM002083	Surface	1	0.31		<b>0.31</b>		0.31	0.31			
Kärsvik	PSM002084	Surface	1	0.10		<b>0.10</b>		0.10	0.10			
Ekerum	PSM002085	Surface	1	0.086		<b>0.086</b>		0.086	0.086			
Plittorp	PSM002071	Surface	1	0.099		<b>0.099</b>		0.099	0.099			
Lillekvarn	PSM002072	Surface	1	0.42		<b>0.42</b>		0.42	0.42			
Kvarnstugan	PSM002079	Surface	1	0.10		<b>0.10</b>		0.10	0.10			
Ekhyddan	PSM002087	Surface	1	0.16		<b>0.16</b>		0.16	0.16			
Övrahammar	PSM002076	Surface	1	0.35		<b>0.35</b>		0.35	0.35			
Basteböla	PSM002086	Surface	1	0.55		<b>0.55</b>		0.55	0.55			
Simpevarp area		Surface	10	0.086	0.10	<b>0.24</b>	0.38	0.55	0.26	0.2	65	
Forsmark area		Surface	42	<0.01	0.049	<b>0.070</b>	0.11	0.40	0.097	0.08	82	

## Surface Water

Li			Lithium (mg/l)								Li
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
<b>Lake Water</b>											
Frisksjön	PSM002065	Surface	36	<0.004	<0.004	<0.004	<0.004	0.0040	<0.004	0.0004	18
Frisksjön	PSM002065	Bottom	36	<0.004	<0.004	<0.004	<0.004	0.0050	<0.004	0.0006	28
Jämsen	PSM002067	Surface	36	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004		
Jämsen	PSM002067	Bottom	36	<0.004	<0.004	<0.004	<0.004	0.0060	<0.004	0.0007	32
Söråmagasinet	PSM005964	Surface	22	<0.004	<0.004	<0.004	<0.004	0.0040	<0.004	0.0004	20
Söråmagasinet	PSM005964	Bottom	22	<0.004	<0.004	<0.004	<0.004	0.0050	<0.004	0.0008	34
Götemar	PSM002066	Surface	18	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004		
Götemar	PSM002066	Bottom	18	<0.004	<0.004	<0.004	<0.004	0.0060	<0.004	0.001	53
Simpevarp area		Surface	112	<0.004	<0.004	<0.004	<0.004	0.0040	<0.004	0.0003	14
Simpevarp area		Bottom	112	<0.004	<0.004	<0.004	<0.004	0.0060	<0.004	0.0009	38
Laxemar	pre-PLU	-	1	<0.005		<0.005		<0.005	<0.005		
Forsmark area		Surface	244	<0.004	<0.004	<0.004	<0.004	0.0090	<0.004	0.001	53
Forsmark area		Bottom	73	<0.004	<0.004	<0.004	0.0040	0.011	<0.004	0.002	62
<b>Sea Water</b>											
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Borholmsfjärden	PSM002062	Surface	36	<0.02	<0.02	<b>0.022</b>	0.025	0.031	0.021	0.007	34
Borholmsfjärden	PSM002062	Bottom	36	<0.02	0.023	<b>0.026</b>	0.027	0.033	0.025	0.005	22
Granholmsfjärden	PSM002064	Surface	37	<0.02	0.022	<b>0.026</b>	0.029	0.036	0.025	0.007	28
Granholmsfjärden	PSM002064	Bottom	35	<0.02	0.028	<b>0.029</b>	0.031	0.039	0.029	0.005	15
Kräkelund	PSM002060	Surface	34	0.021	0.031	<b>0.032</b>	0.034	0.040	0.032	0.004	12
Kräkelund	PSM002060	Bottom	34	<0.02	0.032	<b>0.032</b>	0.035	0.049	0.032	0.006	19
Ekö	PSM002061	Surface	36	0.024	0.031	<b>0.032</b>	0.033	0.044	0.032	0.004	11
Ekö	PSM002061	Bottom	35	<0.02	0.031	<b>0.032</b>	0.034	0.044	0.032	0.005	15
Fågelöfjärden	PSM002063	Surface	17	0.026	0.029	<b>0.030</b>	0.031	0.039	0.031	0.003	11
Fågelöfjärden	PSM002063	Bottom	17	0.021	0.030	<b>0.031</b>	0.032	0.038	0.031	0.004	12
Simpevarp area		Surface	160	<0.02	0.024	<b>0.030</b>	0.032	0.044	0.028	0.007	26
Simpevarp area		Bottom	157	<0.02	0.027	<b>0.031</b>	0.032	0.049	0.030	0.006	20
Forsmark area		Surface	172	<0.004	0.021	<b>0.023</b>	0.025	0.038	0.022	0.006	27
Forsmark area		Bottom	68	<0.004	0.022	<b>0.024</b>	0.028	0.038	0.024	0.007	28
<b>Streaming Water</b>											
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Misterhult	PSM002080	Surface	17	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004		
Perstorpet	PSM002081	Surface	34	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004		
Misterhultsbäcken Ö	PSM002082	Surface	37	<0.004	<0.004	<0.004	<0.004	0.0060	<0.004	0.0007	34
Smedtorpet	PSM002083	Surface	39	<0.004	<0.004	<0.004	0.0050	0.0080	<0.004	0.002	58
Kärrsvik	PSM002084	Surface	38	<0.004	<0.004	<b>0.0040</b>	0.0050	0.0060	<0.004	0.002	42
Ekerum	PSM002085	Surface	37	<0.004	<0.004	<0.004	<0.004	0.0060	<0.004	0.001	47
Köksmåla	PSM002068	Surface	37	<0.004	<0.004	<0.004	<0.004	0.0070	<0.004	0.0009	43
Jämserum	PSM002069	Surface	37	<0.004	<0.004	<0.004	<0.004	0.0060	<0.004	0.0007	31
Plittorp	PSM002071	Surface	36	<0.004	<0.004	<0.004	<0.004	0.0040	<0.004	0.0005	22
Lillekvarn	PSM002072	Surface	15	<0.004	<0.004	<0.004	<0.004	0.0050	<0.004	0.0008	39
Brolund	PSM002077	Surface	18	<0.004	<0.004	<0.004	<0.004	0.0080	<0.004	0.002	63
Sillebäcken	PSM002078	Surface	29	<0.004	<0.004	<0.004	<0.004	0.0040	<0.004	0.0004	18
Kvarnstugan	PSM002079	Surface	36	<0.004	<0.004	<0.004	<0.004	0.0070	<0.004	0.001	49
Ekhyddan	PSM002087	Surface	39	<0.004	<0.004	<0.004	<0.004	0.0060	<0.004	0.0009	40
Övrahammar	PSM002076	Surface	32	<0.004	<0.004	<0.004	<0.004	0.0060	<0.004	0.001	46
Basteböla	PSM002086	Surface	28	<0.004	0.0050	<b>0.0060</b>	0.0070	0.010	0.0055	0.002	39
Flohult	PSM002070	Surface	17	<0.004	<0.004	<0.004	<0.004	0.0060	<0.004	0.0010	43
Figeholm	PSM002075	Surface	17	<0.004	<0.004	<0.004	<0.004	0.0040	<0.004	0.0008	33
	PSM107735	Surface	12	0.0060	0.0080	<b>0.0080</b>	0.0093	0.013	0.0088	0.002	21
Simpevarp area		Surface	555	<0.004	<0.004	<0.004	<0.004	0.013	<0.004	0.002	61
Laxemar	pre-PLU	Surface	14	<0.005	<0.005	<0.005	<0.005	0.0060	<0.005	0.0009	34
Forsmark area		Surface	299	<0.004	<0.004	<0.004	<0.004	0.015	<0.004	0.003	83

## Surface Water

Lu			Lutetium (µg/l)							Lu	
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
<b>Lake Water</b>											
Frisksjön	PSM002065	Surface	1	<0.005		<0.005		<0.005	<0.005		
Frisksjön	PSM002065	Bottom	1	<0.005		<0.005		<0.005	<0.005		
Simpevarp area		Surface	1	<0.005		<0.005		<0.005	<0.005		
Simpevarp area		Bottom	1	<0.005		<0.005		<0.005	<0.005		
Forsmark area		Surface	39	<0.005	<0.005	<0.005	<0.005	0.010	<0.005	0.002	52
Forsmark area		Bottom	10	<0.005	<0.005	<0.005	<0.005	0.0072	<0.005	0.002	44
<b>Sea Water</b>											
Borholmsfjärden	PSM002062	Surface	1	<0.05		<0.05		<0.05	<0.05		
Borholmsfjärden	PSM002062	Bottom	1	<0.05		<0.05		<0.05	<0.05		
Granholmsfjärden	PSM002064	Surface	1	<0.05		<0.05		<0.05	<0.05		
Granholmsfjärden	PSM002064	Bottom	1	<0.05		<0.05		<0.05	<0.05		
Kråkelund	PSM002060	Surface	1	<0.05		<0.05		<0.05	<0.05		
Kråkelund	PSM002060	Bottom	1	<0.05		<0.05		<0.05	<0.05		
Ekö	PSM002061	Surface	1	<0.05		<0.05		<0.05	<0.05		
Ekö	PSM002061	Bottom	1	<0.05		<0.05		<0.05	<0.05		
Simpevarp area		Surface	4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
Simpevarp area		Bottom	4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
Forsmark area		Surface	34	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.010	85
Forsmark area		Bottom	13	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.008	110
<b>Streaming Water</b>											
Misterhultsbäcken Ö	PSM002082	Surface	1	0.0062		<b>0.0062</b>		0.0062	0.0062		
Smedtorpet	PSM002083	Surface	1	0.0079		<b>0.0079</b>		0.0079	0.0079		
Kärrevik	PSM002084	Surface	1	0.0053		<b>0.0053</b>		0.0053	0.0053		
Ekerum	PSM002085	Surface	1	<0.005		<0.005		<0.005	<0.005		
Plittorp	PSM002071	Surface	1	<0.005		<0.005		<0.005	<0.005		
Lillekvarn	PSM002072	Surface	1	<0.005		<0.005		<0.005	<0.005		
Kvarnstugan	PSM002079	Surface	1	<0.005		<0.005		<0.005	<0.005		
Ekhyddan	PSM002087	Surface	1	<0.005		<0.005		<0.005	<0.005		
Övrahammar	PSM002076	Surface	1	0.0067		<b>0.0067</b>		0.0067	0.0067		
Basteböla	PSM002086	Surface	1	0.0096		<b>0.0096</b>		0.0096	0.0096		
Simpevarp area		Surface	10	<0.005	<0.005	<0.005	0.0066	0.0096	<0.005	0.003	56
Laxemar	pre-PLU	Surface	1	0.093		<b>0.093</b>		0.093	0.093		
Forsmark area		Surface	33	<0.005	<0.005	<0.005	<0.005	0.0060	<0.005	0.001	41

## Surface Water

<b>Mg</b>			<b>Magnesium (mg/l)</b>								<b>Mg</b>
			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
<b>Lake Water</b>											
Frisksjön	PSM002065	Surface	36	2.0	2.1	<b>2.2</b>	2.3	2.7	2.2	0.2	7.8
Frisksjön	PSM002065	Bottom	36	1.9	2.1	<b>2.2</b>	2.4	2.9	2.3	0.2	10
Jämsen	PSM002067	Surface	36	1.9	2.2	<b>2.2</b>	2.3	2.4	2.2	0.10	4.3
Jämsen	PSM002067	Bottom	36	2.1	2.3	<b>2.3</b>	2.5	3.1	2.4	0.3	11
Söråmagasinet	PSM005964	Surface	22	3.3	3.5	<b>3.5</b>	3.7	4.3	3.6	0.2	5.6
Söråmagasinet	PSM005964	Bottom	22	3.4	3.5	<b>3.6</b>	3.7	4.3	3.6	0.2	5.4
Götemar	PSM002066	Surface	18	2.7	2.8	<b>2.9</b>	3.0	3.0	2.9	0.09	3.2
Götemar	PSM002066	Bottom	18	2.8	2.9	<b>2.9</b>	3.0	3.2	3.0	0.1	4.4
Simpevarp area		Surface	112	1.9	2.2	<b>2.3</b>	2.9	4.3	2.6	0.6	22
Simpevarp area		Bottom	112	1.9	2.3	<b>2.4</b>	3.0	4.3	2.7	0.6	21
Laxemar	pre-PLU	-	1	2.8		<b>2.8</b>		2.8	2.8		
Kalmar County	N.S.2000	Surface	106	0.87	1.7	<b>2.1</b>	2.5	6.0	2.2	0.7	33
Forsmark area		Surface	247	0.70	3.3	<b>4.7</b>	6.2	26	5.4	3	58
Forsmark area		Bottom	74	2.5	3.3	<b>5.1</b>	7.2	42	6.5	6	87
Sweden	N.S.2000	Surface	3464	0.036	0.53	<b>0.81</b>	1.4	180	1.3	4	310
<b>Sea Water</b>											
			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Borholmsfjärden	PSM002062	Surface	36	33	120	<b>160</b>	180	210	150	50	32
Borholmsfjärden	PSM002062	Bottom	36	67	160	<b>190</b>	200	210	180	30	18
Granholmsfjärden	PSM002064	Surface	37	51	160	<b>200</b>	210	220	180	40	25
Granholmsfjärden	PSM002064	Bottom	35	200	220	<b>220</b>	220	230	220	8	3.5
Kräkelund	PSM002060	Surface	34	220	230	<b>240</b>	240	250	230	9	3.9
Kräkelund	PSM002060	Bottom	34	220	240	<b>240</b>	250	270	240	10	4.3
Ekö	PSM002061	Surface	36	220	230	<b>240</b>	240	260	240	9	3.8
Ekö	PSM002061	Bottom	35	220	240	<b>240</b>	240	260	240	9	3.6
Fågelöfjärden	PSM002063	Surface	17	210	220	<b>230</b>	230	240	230	9	3.8
Fågelöfjärden	PSM002063	Bottom	17	200	220	<b>230</b>	230	240	230	10	4.2
Simpevarp area		Surface	160	33	180	<b>220</b>	240	260	200	50	24
Simpevarp area		Bottom	157	67	210	<b>230</b>	240	270	220	30	13
Forsmark area		Surface	175	10	160	<b>170</b>	180	200	160	40	27
Forsmark area		Bottom	72	19	160	<b>180</b>	180	190	170	30	15
<b>Streaming Water</b>											
			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Misterhult	PSM002080	Surface	17	1.1	1.4	<b>1.5</b>	1.9	3.0	1.8	0.6	32
Perstorpet	PSM002081	Surface	34	1.3	1.6	<b>1.9</b>	2.2	2.8	1.9	0.4	21
Misterhultsbäcken Ö	PSM002082	Surface	37	1.2	1.6	<b>2.0</b>	2.6	4.1	2.2	0.8	38
Smedtorpet	PSM002083	Surface	39	1.4	1.8	<b>2.2</b>	2.8	3.7	2.3	0.7	29
Kärsvik	PSM002084	Surface	38	2.4	3.4	<b>3.6</b>	3.9	4.6	3.6	0.5	13
Ekerum	PSM002085	Surface	37	2.4	3.1	<b>3.4</b>	3.7	4.4	3.4	0.5	14
Köksmåla	PSM002068	Surface	37	1.4	1.7	<b>2.0</b>	2.2	3.6	2.1	0.5	24
Jämserum	PSM002069	Surface	37	1.9	2.2	<b>2.2</b>	2.3	2.4	2.2	0.1	5.1
Plittorp	PSM002071	Surface	36	1.8	2.4	<b>2.6</b>	2.8	3.4	2.6	0.4	13
Lillekvarn	PSM002072	Surface	15	0.90	1.0	<b>1.1</b>	1.4	1.6	1.2	0.2	18
Brolund	PSM002077	Surface	18	1.6	2.3	<b>2.4</b>	2.7	3.6	2.5	0.5	19
Sillebäcken	PSM002078	Surface	29	1.4	1.4	<b>1.5</b>	1.8	3.0	1.7	0.4	24
Kvarnstugan	PSM002079	Surface	36	1.6	2.2	<b>2.5</b>	3.0	3.7	2.6	0.6	22
Ekhyddan	PSM002087	Surface	39	1.8	2.4	<b>2.6</b>	3.4	4.3	2.8	0.7	24
Övrahammar	PSM002076	Surface	32	1.7	2.1	<b>2.3</b>	3.1	5.1	2.7	0.9	32
Basteböla	PSM002086	Surface	29	2.8	3.7	<b>4.2</b>	4.6	5.8	4.2	0.8	19
Flohult	PSM002070	Surface	17	2.2	2.5	<b>2.8</b>	3.2	3.7	2.8	0.4	15
Figeholm	PSM002075	Surface	17	2.1	2.6	<b>2.8</b>	3.3	4.5	2.9	0.6	20
	PSM107735	Surface	12	3.0	3.5	<b>3.8</b>	4.0	5.8	3.9	0.7	19
Simpevarp area		Surface	556	0.90	2.0	<b>2.4</b>	3.2	5.8	2.6	0.9	34
Laxemar	pre-PLU	Surface	14	2.5	2.6	<b>2.8</b>	3.4	5.3	3.2	1.0	30
Kalmar County	N.S.2000	Surface	26	1.7	2.2	<b>2.5</b>	3.1	19	3.6	3	96
Forsmark area		Surface	317	0.70	3.2	<b>4.5</b>	6.4	17	5.5	3	61
Sweden	N.S.2000	Surface	725	0.097	0.74	<b>1.2</b>	2.6	22	2.3	3	120



## Surface Water

Mn			Manganese (mg/l)								Mn
Lake Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Frisksjön	PSM002065	Surface	36	0.0057	0.034	<b>0.045</b>	0.061	0.094	0.047	0.02	52
Frisksjön	PSM002065	Bottom	35	0.0060	0.040	<b>0.053</b>	0.077	0.13	0.057	0.03	55
Jämsen	PSM002067	Surface	36	0.0086	0.041	<b>0.093</b>	0.12	0.18	0.087	0.05	57
Jämsen	PSM002067	Bottom	35	0.11	0.15	<b>0.19</b>	0.32	0.97	0.30	0.2	81
Söråmagasinet	PSM005964	Surface	22	<0.003	0.0046	<b>0.0080</b>	0.015	0.22	0.019	0.05	240
Söråmagasinet	PSM005964	Bottom	22	<0.003	0.014	<b>0.019</b>	0.034	0.35	0.054	0.09	170
Götemar	PSM002066	Surface	18	<0.003	0.0085	<b>0.026</b>	0.039	0.068	0.027	0.02	74
Götemar	PSM002066	Bottom	18	0.029	0.046	<b>0.11</b>	0.33	1.9	0.31	0.5	160
Simpevarp area		Surface	112	<0.003	0.014	<b>0.041</b>	0.081	0.22	0.051	0.05	91
Simpevarp area		Bottom	110	<0.003	0.038	<b>0.086</b>	0.18	1.9	0.17	0.3	160
Kalmar County	N.S.2000	Surface	35	0.0050	0.032	<b>0.040</b>	0.069	0.34	0.060	0.06	100
Forsmark area		Surface	70	<0.003	0.0041	<b>0.0088</b>	0.027	0.64	0.034	0.08	250
Forsmark area		Bottom	25	<0.003	0.011	<b>0.021</b>	0.063	0.74	0.077	0.2	210
Sweden	N.S.2000	Surface	1206		0.0060	<b>0.018</b>	0.041	62	0.088	2	2000
Sea Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Borholmsfjärden	PSM002062	Surface	36	<0.02	<0.02	<b>&lt;0.02</b>	0.024	0.083	<0.02	0.02	110
Borholmsfjärden	PSM002062	Bottom	36	<0.02	<0.02	<b>&lt;0.02</b>	0.026	0.10	0.020	0.02	120
Granholmsfjärden	PSM002064	Surface	37	<0.02	<0.02	<b>&lt;0.02</b>	0.020	0.084	<0.02	0.02	120
Granholmsfjärden	PSM002064	Bottom	35	<0.02	<0.02	<b>0.021</b>	0.041	0.13	0.030	0.03	98
Kräkelund	PSM002060	Surface	34	<0.02	<0.02	<b>&lt;0.02</b>	<0.02	<0.02	<0.02	0.003	77
Kräkelund	PSM002060	Bottom	34	<0.02	<0.02	<b>&lt;0.02</b>	<0.02	<0.02	<0.02	0.003	78
Ekö	PSM002061	Surface	36	<0.02	<0.02	<b>&lt;0.02</b>	<0.02	<0.02	<0.02	0.003	71
Ekö	PSM002061	Bottom	34	<0.02	<0.02	<b>&lt;0.02</b>	<0.02	0.021	<0.02	0.004	91
Fågelöfjärden	PSM002063	Surface	17	<0.01	<0.01	<b>&lt;0.01</b>	<0.01	<0.01	<0.01	0.002	51
Fågelöfjärden	PSM002063	Bottom	17	<0.01	<0.01	<b>&lt;0.01</b>	<0.01	0.028	<0.01	0.006	120
Simpevarp area		Surface	160	<0.02	<0.02	<b>&lt;0.02</b>	<0.02	0.084	<0.02	0.01	150
Simpevarp area		Bottom	156	<0.02	<0.02	<b>&lt;0.02</b>	<0.02	0.13	<0.02	0.02	150
Forsmark area		Surface	48	<0.003	<0.003	<b>0.0068</b>	0.015	0.087	0.014	0.02	130
Forsmark area		Bottom	19	<0.003	<0.003	<b>0.0052</b>	0.013	0.088	0.015	0.02	150
Streaming Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Misterhult	PSM002080	Surface	17	0.027	0.035	<b>0.049</b>	0.065	0.15	0.058	0.03	56
Perstorpet	PSM002081	Surface	34	0.018	0.034	<b>0.057</b>	0.14	0.90	0.14	0.2	140
Misterhultsbäcken Ö	PSM002082	Surface	37	0.026	0.045	<b>0.066</b>	0.13	0.29	0.096	0.07	77
Smedtorpet	PSM002083	Surface	39	0.023	0.035	<b>0.057</b>	0.090	0.18	0.066	0.04	55
Kärrsvik	PSM002084	Surface	38	0.010	0.032	<b>0.091</b>	0.11	0.17	0.080	0.04	53
Ekerum	PSM002085	Surface	37	0.0068	0.023	<b>0.042</b>	0.061	0.15	0.048	0.03	68
Köksmåla	PSM002068	Surface	37	0.035	0.069	<b>0.096</b>	0.18	0.43	0.14	0.1	75
Jämserum	PSM002069	Surface	37	0.028	0.071	<b>0.089</b>	0.10	0.60	0.098	0.09	90
Plittorp	PSM002071	Surface	35	0.025	0.048	<b>0.067</b>	0.12	0.53	0.097	0.09	92
Lillekvarn	PSM002072	Surface	15	0.022	0.044	<b>0.059</b>	0.083	0.20	0.074	0.05	67
Brolund	PSM002077	Surface	18	0.035	0.045	<b>0.051</b>	0.068	0.33	0.076	0.07	91
Sillebäcken	PSM002078	Surface	29	0.030	0.038	<b>0.044</b>	0.058	0.12	0.052	0.02	40
Kvarnstugan	PSM002079	Surface	36	0.028	0.046	<b>0.051</b>	0.064	0.28	0.063	0.04	67
Ekhyddan	PSM002087	Surface	39	0.028	0.044	<b>0.055</b>	0.066	0.36	0.062	0.05	82
Övrahammar	PSM002076	Surface	32	0.040	0.061	<b>0.085</b>	0.14	0.32	0.11	0.06	59
Basteböla	PSM002086	Surface	29	0.082	0.11	<b>0.12</b>	0.14	0.89	0.16	0.2	96
Flohult	PSM002070	Surface	17	0.032	0.088	<b>0.14</b>	0.31	0.73	0.23	0.2	92
Figeholm	PSM002075	Surface	17	0.012	0.042	<b>0.073</b>	0.15	0.83	0.15	0.2	140
	PSM107735	Surface	12	0.093	0.12	<b>0.13</b>	0.15	0.29	0.15	0.05	37
Simpevarp area		Surface	555	0.0068	0.045	<b>0.067</b>	0.11	0.90	0.097	0.1	110
Laxemar	pre-PLU	Surface	1	0.030		<b>0.030</b>		0.030	0.030		
Forsmark area		Surface	89	<0.003	0.0080	<b>0.014</b>	0.039	0.65	0.034	0.07	210

## Surface Water

Hg			Mercury (µg/l)								Hg	
Lake Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
Frisksjön	PSM002065	Surface	3	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002			
Frisksjön	PSM002065	Bottom	1	<0.002		<0.002		<0.002	<0.002			
Simpevarp area		Surface	3	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002			
Simpevarp area		Bottom	1	<0.002		<0.002		<0.002	<0.002			
Forsmark area		Surface	45	<0.002	<0.002	<0.002	<0.002	0.014	<0.002	0.002	130	
Forsmark area		Bottom	12	<0.002	<0.002	<0.002	0.0026	0.0069	0.0020	0.002	86	
Sea Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
Borholmsfjärden	PSM002062	Surface	2	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002			
Borholmsfjärden	PSM002062	Bottom	2	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002			
Granholmsfjärden	PSM002064	Surface	2	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002			
Granholmsfjärden	PSM002064	Bottom	2	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002			
Kråkelund	PSM002060	Surface	2	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002			
Kråkelund	PSM002060	Bottom	2	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002			
Ekö	PSM002061	Surface	2	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002			
Ekö	PSM002061	Bottom	2	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002			
Simpevarp area		Surface	8	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002			
Simpevarp area		Bottom	8	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002			
Forsmark area		Surface	38	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.001	110	
Forsmark area		Bottom	13	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.002	150	
Streaming Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
Misterhultsbäcken Ö	PSM002082	Surface	2	0.0029	0.0035	<b>0.0041</b>	0.0047	0.0053	0.0041	0.002	41	
Smedtorpet	PSM002083	Surface	2	0.0025	0.0027	<b>0.0030</b>	0.0032	0.0034	0.0030	0.0006	22	
Kärrsvik	PSM002084	Surface	2	0.0037	0.0037	<b>0.0038</b>	0.0038	0.0038	0.0038	0.00007	1.9	
Ekerum	PSM002085	Surface	2	0.0029	0.0031	<b>0.0034</b>	0.0036	0.0038	0.0034	0.0006	19	
Pliittorp	PSM002071	Surface	2	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002			
Lillekvarn	PSM002072	Surface	1	0.0052		<b>0.0052</b>		0.0052	0.0052			
Kvarnstugan	PSM002079	Surface	2	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002			
Ekhyddan	PSM002087	Surface	2	<0.002	<0.002	<b>0.0020</b>	0.0025	0.0030	0.0020	0.001	71	
Örahammar	PSM002076	Surface	1	0.0037		<b>0.0037</b>		0.0037	0.0037			
Basteböla	PSM002086	Surface	1	0.0072		<b>0.0072</b>		0.0072	0.0072			
Simpevarp area		Surface	17	<0.002	<0.002	<b>0.0030</b>	0.0038	0.0072	0.0031	0.002	58	
Forsmark area		Surface	42	<0.002	<0.002	<0.002	0.0026	0.0062	<0.002	0.001	75	
Mo			Molybdenium (µg/l)								Mo	
Lake Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
Frisksjön	PSM002065	Surface	1	1.1		<b>1.1</b>		1.1	1.1			
Frisksjön	PSM002065	Bottom	1	1.0		<b>1.0</b>		1.0	1.0			
Simpevarp area		Surface	1	1.1		<b>1.1</b>		1.1	1.1			
Simpevarp area		Bottom	1	1.0		<b>1.0</b>		1.0	1.0			
Forsmark area		Surface	49	0.19	0.30	<b>0.47</b>	0.65	1.0	0.52	0.2	46	
Forsmark area		Bottom	15	0.20	0.27	<b>0.49</b>	0.62	1.1	0.50	0.3	53	
Sea Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
Borholmsfjärden	PSM002062	Surface	1	1.5		<b>1.5</b>		1.5	1.5			
Borholmsfjärden	PSM002062	Bottom	1	1.4		<b>1.4</b>		1.4	1.4			
Granholmsfjärden	PSM002064	Surface	1	1.5		<b>1.5</b>		1.5	1.5			
Granholmsfjärden	PSM002064	Bottom	1	1.6		<b>1.6</b>		1.6	1.6			
Kråkelund	PSM002060	Surface	1	2.0		<b>2.0</b>		2.0	2.0			
Kråkelund	PSM002060	Bottom	1	1.6		<b>1.6</b>		1.6	1.6			
Ekö	PSM002061	Surface	1	1.6		<b>1.6</b>		1.6	1.6			
Ekö	PSM002061	Bottom	1	1.8		<b>1.8</b>		1.8	1.8			
Simpevarp area		Surface	4	1.5	1.5	<b>1.6</b>	1.7	2.0	1.6	0.2	14	
Simpevarp area		Bottom	4	1.4	1.5	<b>1.6</b>	1.7	1.8	1.6	0.2	11	
Forsmark area		Surface	38	0.63	1.3	<b>1.5</b>	1.7	2.1	1.5	0.3	23	
Forsmark area		Bottom	13	1.1	1.3	<b>1.6</b>	1.9	2.1	1.6	0.3	21	
Streaming Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
Misterhultsbäcken Ö	PSM002082	Surface	1	0.80		<b>0.80</b>		0.80	0.80			
Smedtorpet	PSM002083	Surface	1	0.78		<b>0.78</b>		0.78	0.78			
Kärrsvik	PSM002084	Surface	1	1.7		<b>1.7</b>		1.7	1.7			
Ekerum	PSM002085	Surface	1	3.2		<b>3.2</b>		3.2	3.2			
Pliittorp	PSM002071	Surface	1	0.069		<b>0.069</b>		0.069	0.069			
Lillekvarn	PSM002072	Surface	1	0.18		<b>0.18</b>		0.18	0.18			
Kvarnstugan	PSM002079	Surface	1	0.24		<b>0.24</b>		0.24	0.24			
Ekhyddan	PSM002087	Surface	1	0.49		<b>0.49</b>		0.49	0.49			
Örahammar	PSM002076	Surface	1	3.0		<b>3.0</b>		3.0	3.0			
Basteböla	PSM002086	Surface	1	6.8		<b>6.8</b>		6.8	6.8			
Simpevarp area		Surface	10	0.069	0.30	<b>0.79</b>	2.7	6.8	1.7	2	120	
Forsmark area		Surface	48	<0.05	0.29	<b>0.42</b>	0.73	1.9	0.56	0.4	72	

## Surface Water

Nd			Neodymium (µg/l)								Nd	
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
<b>Lake Water</b>												
Frisksjön	PSM002065	Surface	1	0.13		<b>0.13</b>		0.13	0.13			
Frisksjön	PSM002065	Bottom	1	0.13		<b>0.13</b>		0.13	0.13			
Simpevarp area		Surface	1	0.13		<b>0.13</b>		0.13	0.13			
Simpevarp area		Bottom	1	0.13		<b>0.13</b>		0.13	0.13			
Forsmark area		Surface	39	0.012	0.042	<b>0.074</b>	0.096	0.27	0.082	0.06	71	
Forsmark area		Bottom	10	0.018	0.075	<b>0.13</b>	0.15	0.24	0.11	0.07	57	
<b>Sea Water</b>												
Borholmsfjärden	PSM002062	Surface	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05			
Borholmsfjärden	PSM002062	Bottom	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05			
Granholmsfjärden	PSM002064	Surface	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05			
Granholmsfjärden	PSM002064	Bottom	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05			
Kråkelund	PSM002060	Surface	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05			
Kråkelund	PSM002060	Bottom	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05			
Ekö	PSM002061	Surface	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05			
Ekö	PSM002061	Bottom	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05			
Simpevarp area		Surface	4	<0.05	<0.05	<b>&lt;0.05</b>	<0.05	<0.05	<0.05			
Simpevarp area		Bottom	4	<0.05	<0.05	<b>&lt;0.05</b>	<0.05	<0.05	<0.05			
Forsmark area		Surface	34	<0.05	<0.05	<b>&lt;0.05</b>	0.12	1.7	0.16	0.3	210	
Forsmark area		Bottom	13	<0.05	<0.05	<b>&lt;0.05</b>	0.050	0.78	0.091	0.2	230	
<b>Streaming Water</b>												
Misterhultsbäcken Ö	PSM002082	Surface	1	0.50		<b>0.50</b>		0.50	0.50			
Smedtorpet	PSM002083	Surface	1	0.48		<b>0.48</b>		0.48	0.48			
Kärrevik	PSM002084	Surface	1	0.40		<b>0.40</b>		0.40	0.40			
Ekerum	PSM002085	Surface	1	0.19		<b>0.19</b>		0.19	0.19			
Plittorp	PSM002071	Surface	1	0.24		<b>0.24</b>		0.24	0.24			
Lillekvarn	PSM002072	Surface	1	0.32		<b>0.32</b>		0.32	0.32			
Kvarnstugan	PSM002079	Surface	1	0.25		<b>0.25</b>		0.25	0.25			
Ekhyddan	PSM002087	Surface	1	0.31		<b>0.31</b>		0.31	0.31			
Övrahammar	PSM002076	Surface	1	0.47		<b>0.47</b>		0.47	0.47			
Basteböla	PSM002086	Surface	1	0.72		<b>0.72</b>		0.72	0.72			
Simpevarp area		Surface	10	0.19	0.26	<b>0.36</b>	0.48	0.72	0.39	0.2	41	
Laxemar	pre-PLU	Surface	1	4.2		<b>4.2</b>		4.2	4.2			
Forsmark area		Surface	33	0.019	0.054	<b>0.081</b>	0.13	0.27	0.10	0.07	68	

## Surface Water

Ni			Nickel (µg/l)								Ni	
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
<b>Lake Water</b>												
Frisksjön	PSM002065	Surface	1	1.8		<b>1.8</b>		1.8	1.8			
Frisksjön	PSM002065	Bottom	1	1.6		<b>1.6</b>		1.6	1.6			
Simpevarp area		Surface	1	1.8		<b>1.8</b>		1.8	1.8			
Simpevarp area		Bottom	1	1.6		<b>1.6</b>		1.6	1.6			
Kalmar County	N.S.2000	Surface	35	0.21	0.55	<b>0.74</b>	0.92	3.1	0.88	0.6	70	
Forsmark area		Surface	49	0.14	0.29	<b>0.41</b>	0.48	1.00	0.41	0.2	39	
Forsmark area		Bottom	15	0.20	0.30	<b>0.45</b>	0.58	2.8	0.65	0.7	100	
Sweden	N.S.2000	Surface	1206	0.010	0.25	<b>0.45</b>	0.80	600	1.3	20	1300	
<b>Sea Water</b>												
			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>	
Borholmsfjärden	PSM002062	Surface	1	1.3		<b>1.3</b>		1.3	1.3			
Borholmsfjärden	PSM002062	Bottom	1	0.90		<b>0.90</b>		0.90	0.90			
Granholmsfjärden	PSM002064	Surface	1	0.96		<b>0.96</b>		0.96	0.96			
Granholmsfjärden	PSM002064	Bottom	1	0.90		<b>0.90</b>		0.90	0.90			
Kråkelund	PSM002060	Surface	1	0.62		<b>0.62</b>		0.62	0.62			
Kråkelund	PSM002060	Bottom	1	0.53		<b>0.53</b>		0.53	0.53			
Ekö	PSM002061	Surface	1	0.50		<b>0.50</b>		0.50	0.50			
Ekö	PSM002061	Bottom	1	2.3		<b>2.3</b>		2.3	2.3			
Simpevarp area		Surface	4	0.50	0.59	<b>0.79</b>	1.1	1.3	0.85	0.4	43	
Simpevarp area		Bottom	4	0.53	0.81	<b>0.90</b>	1.2	2.3	1.2	0.8	67	
Forsmark area		Surface	37	<0.5	0.76	<b>0.94</b>	1.2	3.6	1.2	0.8	67	
Forsmark area		Bottom	13	<0.5	0.88	<b>1.1</b>	1.2	2.0	1.0	0.4	42	
<b>Streaming Water</b>												
			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>	
Misterhultsbäcken Ö	PSM002082	Surface	1	3.6		<b>3.6</b>		3.6	3.6			
Smedtorpet	PSM002083	Surface	1	3.1		<b>3.1</b>		3.1	3.1			
Kärsvik	PSM002084	Surface	1	4.4		<b>4.4</b>		4.4	4.4			
Ekerum	PSM002085	Surface	1	5.5		<b>5.5</b>		5.5	5.5			
Plittorp	PSM002071	Surface	1	0.80		<b>0.80</b>		0.80	0.80			
Lillekvarn	PSM002072	Surface	1	1.7		<b>1.7</b>		1.7	1.7			
Kvarnstugan	PSM002079	Surface	1	1.5		<b>1.5</b>		1.5	1.5			
Ekhyddan	PSM002087	Surface	1	2.1		<b>2.1</b>		2.1	2.1			
Övrahammar	PSM002076	Surface	1	6.2		<b>6.2</b>		6.2	6.2			
Basteböla	PSM002086	Surface	1	15		<b>15</b>		15	15			
Simpevarp area		Surface	10	0.80	1.8	<b>3.4</b>	5.3	15	4.4	4	96	
Forsmark area		Surface	48	0.18	0.39	<b>0.48</b>	0.68	1.5	0.56	0.3	49	

## Surface Water

tot-N			Nitrogen - total (mg/l)								tot-N	
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
<b>Lake Water</b>												
Frisksjön	PSM002065	Surface	36	0.95	1.0	<b>1.1</b>	1.2	1.3	1.1	0.09	8.3	
Frisksjön	PSM002065	Bottom	36	0.12	1.0	<b>1.1</b>	1.2	1.3	1.1	0.2	18	
Jämsen	PSM002067	Surface	36	0.73	0.88	<b>0.96</b>	0.99	1.3	0.94	0.1	11	
Jämsen	PSM002067	Bottom	36	0.86	0.99	<b>1.0</b>	1.2	1.6	1.1	0.2	16	
Söråmagasinet	PSM005964	Surface	22	0.71	0.82	<b>0.85</b>	0.88	1.1	0.85	0.08	9.6	
Söråmagasinet	PSM005964	Bottom	22	0.71	0.82	<b>0.86</b>	0.92	1.6	0.91	0.2	20	
Götemar	PSM002066	Surface	18	0.52	0.54	<b>0.61</b>	0.63	0.65	0.59	0.05	7.7	
Götemar	PSM002066	Bottom	18	0.54	0.63	<b>0.65</b>	0.74	0.81	0.68	0.07	10	
Simpevarp area		Surface	112	0.52	0.82	<b>0.95</b>	1.0	1.3	0.92	0.2	20	
Simpevarp area		Bottom	112	0.12	0.84	<b>1.0</b>	1.1	1.6	0.98	0.2	23	
Kalmar County	N.S.2000	Surface	106	0.24	0.45	<b>0.60</b>	0.74	1.1	0.61	0.2	32	
Forsmark area		Surface	250	0.33	0.82	<b>0.99</b>	1.2	3.7	1.1	0.4	38	
Forsmark area		Bottom	71	0.55	0.93	<b>1.1</b>	1.4	2.2	1.2	0.4	34	
Sweden	N.S.2000	Surface	3464	0.086	0.26	<b>0.37</b>	0.53	8.8	0.44	0.4	81	
<b>Sea Water</b>												
			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>	
Borholmsfjärden	PSM002062	Surface	37	0.45	0.59	<b>0.63</b>	0.81	1.4	0.73	0.2	30	
Borholmsfjärden	PSM002062	Bottom	37	0.45	0.52	<b>0.60</b>	0.67	1.1	0.62	0.1	22	
Granholmsfjärden	PSM002064	Surface	38	0.37	0.45	<b>0.52</b>	0.65	1.1	0.57	0.2	31	
Granholmsfjärden	PSM002064	Bottom	36	0.37	0.47	<b>0.53</b>	0.67	1.00	0.56	0.1	26	
Kräkelund	PSM002060	Surface	35	0.23	0.26	<b>0.27</b>	0.29	0.37	0.28	0.03	11	
Kräkelund	PSM002060	Bottom	34	0.22	0.25	<b>0.27</b>	0.29	0.38	0.27	0.03	12	
Ekö	PSM002061	Surface	35	0.25	0.28	<b>0.29</b>	0.32	0.38	0.30	0.03	11	
Ekö	PSM002061	Bottom	35	0.26	0.27	<b>0.30</b>	0.33	0.95	0.32	0.1	36	
Fågelöfjärden	PSM002063	Surface	17	0.25	0.29	<b>0.33</b>	0.37	0.45	0.34	0.05	16	
Fågelöfjärden	PSM002063	Bottom	17	0.23	0.29	<b>0.32</b>	0.35	0.42	0.33	0.05	15	
Simpevarp area		Surface	162	0.23	0.28	<b>0.37</b>	0.58	1.4	0.46	0.2	50	
Simpevarp area		Bottom	159	0.22	0.29	<b>0.36</b>	0.56	1.1	0.44	0.2	42	
Forsmark area		Surface	171	0.22	0.28	<b>0.36</b>	0.52	2.8	0.52	0.4	86	
Forsmark area		Bottom	68	0.24	0.28	<b>0.32</b>	0.46	1.5	0.41	0.2	58	
Bottenhavet	SMHI:MS4	Surface	35	0.19	0.22	<b>0.23</b>	0.25	0.27	0.24	0.02	9.2	
Bottenhavet	SMHI:MS4	Bottom	36	0.20	0.22	<b>0.23</b>	0.25	0.31	0.24	0.02	10	
N Simpevarp	SMHI:B1	Surface	91	0.24	0.27	<b>0.29</b>	0.30	0.35	0.29	0.02	8.1	
N Simpevarp	SMHI:B1	Bottom	85	0.24	0.29	<b>0.31</b>	0.36	0.81	0.34	0.10	29	
Östersjön	SMHI:BY29	Surface	44	0.25	0.27	<b>0.29</b>	0.30	0.34	0.29	0.02	8.2	
Östersjön	SMHI:BY29	Bottom	45	0.23	0.24	<b>0.26</b>	0.28	0.32	0.26	0.03	9.8	
<b>Streaming Water</b>												
			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>	
Misterhult	PSM002080	Surface	17	0.89	1.0	<b>1.1</b>	1.4	1.9	1.3	0.3	26	
Perstorpet	PSM002081	Surface	33	0.91	1.1	<b>1.2</b>	1.5	3.6	1.5	0.7	47	
Misterhultsbäcken Ö	PSM002082	Surface	37	1.0	1.3	<b>1.4</b>	1.8	3.0	1.6	0.5	30	
Smedtorpet	PSM002083	Surface	40	1.1	1.2	<b>1.3</b>	1.5	2.4	1.4	0.3	21	
Kårsvik	PSM002084	Surface	38	0.97	1.4	<b>1.5</b>	1.9	2.9	1.6	0.5	28	
Ekerum	PSM002085	Surface	37	1.3	1.6	<b>1.8</b>	2.2	4.6	2.0	0.7	34	
Köksmåla	PSM002068	Surface	38	0.85	1.1	<b>1.2</b>	1.4	2.1	1.3	0.3	23	
Jämserum	PSM002069	Surface	37	0.73	0.89	<b>0.96</b>	1.0	1.2	0.95	0.1	11	
Plittorp	PSM002071	Surface	37	0.63	0.86	<b>0.95</b>	1.0	2.1	0.96	0.2	25	
Lillekvarn	PSM002072	Surface	15	0.68	0.87	<b>1.0</b>	1.2	2.4	1.2	0.5	41	
Brolund	PSM002077	Surface	18	0.10	0.96	<b>1.0</b>	1.1	2.7	1.1	0.5	44	
Sillebäcken	PSM002078	Surface	29	0.81	0.87	<b>0.97</b>	1.1	1.7	1.0	0.2	23	
Kvarnstugan	PSM002079	Surface	37	0.76	0.98	<b>1.0</b>	1.2	2.6	1.1	0.3	28	
Ekhyddan	PSM002087	Surface	40	0.91	1.1	<b>1.2</b>	1.3	2.8	1.3	0.3	25	
Övrahammar	PSM002076	Surface	33	1.4	1.6	<b>1.9</b>	3.2	4.6	2.4	1	45	
Basteböla	PSM002086	Surface	29	1.8	2.1	<b>2.7</b>	3.5	4.4	2.8	0.8	28	
Flohult	PSM002070	Surface	17	0.82	0.97	<b>1.1</b>	1.1	1.5	1.1	0.2	17	
Figeholm	PSM002075	Surface	18	0.95	1.1	<b>1.2</b>	1.5	2.7	1.4	0.5	33	
	PSM107735	Surface	12	1.1	1.2	<b>1.4</b>	1.5	2.0	1.4	0.3	18	
	PSM000347	Surface	1	0.85		<b>0.85</b>		0.85	0.85			
Simpevarp area		Surface	563	0.10	1.0	<b>1.2</b>	1.7	4.6	1.5	0.7	47	
Kalmar County	N.S.2000	Surface	26	0.41	0.55	<b>0.72</b>	0.94	4.8	0.94	0.9	91	
Forsmark area		Surface	320	0.48	0.78	<b>0.95</b>	1.2	8.0	1.1	0.7	62	
Sweden	N.S.2000	Surface	725	0.10	0.28	<b>0.48</b>	0.81	12	0.90	1	150	

## Surface Water

NH4-N			Nitrogen as ammonium (mg/l)								NH4-N	
Lake Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
Frisksjön	PSM002065	Surface	36	0.0014	0.033	<b>0.081</b>	0.14	0.21	0.088	0.06	71	
Frisksjön	PSM002065	Bottom	36	0.0021	0.041	<b>0.097</b>	0.16	0.38	0.11	0.09	81	
Jämsen	PSM002067	Surface	36	0.0013	0.0031	<b>0.010</b>	0.053	0.098	0.026	0.03	110	
Jämsen	PSM002067	Bottom	36	0.0030	0.044	<b>0.087</b>	0.13	0.67	0.14	0.2	120	
Söråmagasinet	PSM005964	Surface	22	0.0016	0.0021	<b>0.023</b>	0.045	0.25	0.037	0.05	150	
Söråmagasinet	PSM005964	Bottom	22	0.0021	0.022	<b>0.037</b>	0.068	0.57	0.081	0.1	160	
Götemar	PSM002066	Surface	18	0.0028	0.0048	<b>0.0075</b>	0.026	0.048	0.016	0.02	98	
Götemar	PSM002066	Bottom	18	0.0058	0.023	<b>0.037</b>	0.056	0.30	0.055	0.07	120	
Simpevarp area		Surface	112	0.0013	0.0059	<b>0.023</b>	0.066	0.25	0.047	0.05	120	
Simpevarp area		Bottom	112	0.0021	0.028	<b>0.057</b>	0.12	0.67	0.11	0.1	120	
Kalmar County	N.S.2000	Surface	106	0.0040	0.030	<b>0.050</b>	0.084	0.48	0.067	0.07	100	
Forsmark area		Surface	255	<0.01	<0.01	<b>&lt;0.01</b>	0.033	1.4	0.069	0.2	250	
Forsmark area		Bottom	75	<0.01	<0.01	<b>0.023</b>	0.21	0.94	0.16	0.2	150	
Sweden	N.S.2000	Surface	3464	0.0010	0.0080	<b>0.019</b>	0.048	1.6	0.042	0.08	180	
Sea Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
Borholmsfjärden	PSM002062	Surface	37	0.0016	0.0032	<b>0.013</b>	0.074	0.18	0.043	0.05	120	
Borholmsfjärden	PSM002062	Bottom	37	0.0017	0.0034	<b>0.033</b>	0.10	0.34	0.064	0.08	120	
Granholmsfjärden	PSM002064	Surface	38	0.0014	0.0026	<b>0.010</b>	0.039	0.14	0.027	0.03	130	
Granholmsfjärden	PSM002064	Bottom	36	0.0074	0.031	<b>0.045</b>	0.096	0.56	0.089	0.1	130	
Kräkelund	PSM002060	Surface	35	0.00070	0.0011	<b>0.0014</b>	0.0042	0.020	0.0035	0.004	120	
Kräkelund	PSM002060	Bottom	35	0.00050	0.0014	<b>0.0023</b>	0.0081	0.020	0.0048	0.005	110	
Ekö	PSM002061	Surface	36	0.00060	0.0011	<b>0.0016</b>	0.0078	0.027	0.0054	0.007	130	
Ekö	PSM002061	Bottom	35	0.00070	0.0011	<b>0.0015</b>	0.0084	0.089	0.0081	0.02	200	
Fågelöfjärden	PSM002063	Surface	17	0.0010	0.0015	<b>0.0025</b>	0.021	0.056	0.012	0.02	130	
Fågelöfjärden	PSM002063	Bottom	17	0.00090	0.0015	<b>0.0023</b>	0.020	0.037	0.010	0.01	120	
Simpevarp area		Surface	163	0.00060	0.0015	<b>0.0035</b>	0.020	0.18	0.019	0.03	170	
Simpevarp area		Bottom	160	0.00050	0.0018	<b>0.0087</b>	0.039	0.56	0.039	0.07	190	
Forsmark area		Surface	175	0.000070	0.0015	<b>0.0028</b>	0.0097	0.18	0.012	0.02	200	
Forsmark area		Bottom	71	0.00026	0.0017	<b>0.0041</b>	0.013	0.14	0.018	0.03	170	
Bottenhavet	SMHI:MS4	Surface	8	0.0013	0.0017	<b>0.0018</b>	0.0026	0.0031	0.0021	0.0007	31	
Bottenhavet	SMHI:MS4	Bottom	9	0.0021	0.0022	<b>0.0027</b>	0.0041	0.0048	0.0031	0.0010	32	
N Simpevarp	SMHI:B1	Surface	91	0.00056	0.00070	<b>0.00098</b>	0.0019	0.027	0.0024	0.004	180	
N Simpevarp	SMHI:B1	Bottom	85	0.00056	0.0011	<b>0.0038</b>	0.029	0.33	0.030	0.05	190	
Östersjön	SMHI:BY29	Surface	46	0.00056	0.00098	<b>0.0014</b>	0.0025	0.015	0.0028	0.004	130	
Östersjön	SMHI:BY29	Bottom	46	0.00056	0.0012	<b>0.0030</b>	0.0086	0.021	0.0057	0.006	98	
Streaming Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
Misterhult	PSM002080	Surface	17	0.0020	0.029	<b>0.046</b>	0.14	0.21	0.081	0.07	88	
Perstorpet	PSM002081	Surface	34	<0.0005	0.031	<b>0.060</b>	0.10	1.2	0.14	0.2	180	
Misterhultsbäcken Ö	PSM002082	Surface	37	0.0092	0.029	<b>0.068</b>	0.17	0.70	0.14	0.2	120	
Smedtorpet	PSM002083	Surface	40	0.022	0.048	<b>0.065</b>	0.12	0.38	0.099	0.08	83	
Kårsvik	PSM002084	Surface	38	0.0020	0.0094	<b>0.037</b>	0.070	0.14	0.047	0.04	86	
Ekerum	PSM002085	Surface	37	0.0036	0.011	<b>0.052</b>	0.091	0.22	0.060	0.05	88	
Köksmåla	PSM002068	Surface	38	0.016	0.047	<b>0.063</b>	0.11	0.29	0.084	0.06	69	
Jämserum	PSM002069	Surface	37	0.0045	0.013	<b>0.020</b>	0.050	0.093	0.032	0.03	80	
Plittorp	PSM002071	Surface	37	0.023	0.037	<b>0.052</b>	0.061	0.091	0.051	0.02	33	
Lillekvarn	PSM002072	Surface	15	0.0023	0.018	<b>0.025</b>	0.056	0.12	0.039	0.03	88	
Brolund	PSM002077	Surface	18	0.037	0.062	<b>0.075</b>	0.099	0.18	0.083	0.03	40	
Sillebäcken	PSM002078	Surface	29	0.0043	0.016	<b>0.022</b>	0.029	0.076	0.024	0.01	60	
Kvarnstugan	PSM002079	Surface	37	0.025	0.052	<b>0.072</b>	0.081	0.18	0.071	0.03	41	
Ekhyddan	PSM002087	Surface	40	0.014	0.048	<b>0.063</b>	0.083	0.13	0.065	0.03	45	
Övrahammar	PSM002076	Surface	33	0.0090	0.11	<b>0.14</b>	0.23	0.71	0.20	0.2	91	
Basteböla	PSM002086	Surface	29	0.026	0.075	<b>0.094</b>	0.16	0.43	0.12	0.08	66	
Flohult	PSM002070	Surface	17	0.030	0.043	<b>0.061</b>	0.074	0.18	0.072	0.04	60	
Figeholm	PSM002075	Surface	18	0.017	0.045	<b>0.065</b>	0.084	0.44	0.082	0.09	110	
	PSM107735	Surface	12	0.014	0.049	<b>0.076</b>	0.12	0.28	0.100	0.08	80	
	PSM000347	Surface	1	0.020		<b>0.020</b>		0.020	0.020			
Simpevarp area		Surface	564	<0.0005	0.031	<b>0.060</b>	0.097	1.2	0.085	0.1	130	
Kalmar County	N.S.2000	Surface	26	0.0030	0.012	<b>0.022</b>	0.039	0.36	0.039	0.07	170	
Forsmark area		Surface	323	<0.0005	0.0069	<b>0.016</b>	0.041	1.3	0.053	0.1	230	
Sweden	N.S.2000	Surface	725	0.0010	0.0060	<b>0.018</b>	0.048	1.4	0.042	0.10	240	

**Surface Water**

<b>NO3-N</b>	<b>Nitrogen as nitrate (mg/l)</b>								<b>NO3-N</b>	
<b>Lake Water</b>		<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Forsmark area	Surface	16	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.002	58
Forsmark area	Bottom	1	<0.01		<0.01		<0.01	<0.01		
<b>Sea Water</b>		<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Forsmark area	Surface	9	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.002	78
Forsmark area	Bottom	4	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
<b>Streaming Water</b>		<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Forsmark area	Surface	10	<0.01	<0.01	<0.01	0.038	0.048	0.020	0.02	98

## Surface Water

NO23-N			Nitrogen as nitrate and nitrite (mg/l)								NO23-N	
Lake Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
Frisksjön	PSM002065	Surface	36	0.0055	0.097	<b>0.18</b>	0.28	0.43	0.19	0.1	64	
Frisksjön	PSM002065	Bottom	36	0.0044	0.11	<b>0.19</b>	0.27	0.46	0.19	0.1	59	
Jämsen	PSM002067	Surface	36	0.0011	0.062	<b>0.12</b>	0.24	0.31	0.14	0.10	68	
Jämsen	PSM002067	Bottom	36	0.0038	0.083	<b>0.21</b>	0.30	0.60	0.22	0.2	77	
Söråmagasinet	PSM005964	Surface	22	0.00040	0.00080	<b>0.021</b>	0.075	0.19	0.052	0.07	130	
Söråmagasinet	PSM005964	Bottom	22	0.00040	0.0032	<b>0.028</b>	0.080	0.20	0.053	0.06	120	
Götemar	PSM002066	Surface	18	0.0016	0.055	<b>0.11</b>	0.18	0.20	0.11	0.07	57	
Götemar	PSM002066	Bottom	18	0.0041	0.11	<b>0.18</b>	0.21	0.29	0.17	0.07	45	
Simpevarp area		Surface	112	0.00040	0.045	<b>0.12</b>	0.21	0.43	0.14	0.1	79	
Simpevarp area		Bottom	112	0.00040	0.063	<b>0.16</b>	0.26	0.60	0.17	0.1	80	
Kalmar County	N.S.2000	Surface	106	0.0080	0.079	<b>0.16</b>	0.24	0.89	0.19	0.1	79	
Forsmark area		Surface	255	<0.01	<0.01	<b>&lt;0.01</b>	0.010	0.26	0.011	0.03	220	
Forsmark area		Bottom	75	<0.01	<0.01	<b>&lt;0.01</b>	0.011	0.14	<0.01	0.02	200	
Sweden	N.S.2000	Surface	3464	0.0010	0.0070	<b>0.026</b>	0.090	7.6	0.091	0.3	300	
Sea Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
Borholmsfjärden	PSM002062	Surface	37	0.00040	0.00080	<b>0.040</b>	0.19	0.59	0.10	0.1	120	
Borholmsfjärden	PSM002062	Bottom	37	0.00020	0.0020	<b>0.040</b>	0.11	0.22	0.062	0.06	100	
Granholmsfjärden	PSM002064	Surface	38	0.00030	0.00080	<b>0.018</b>	0.10	0.22	0.058	0.08	130	
Granholmsfjärden	PSM002064	Bottom	36	0.0023	0.021	<b>0.061</b>	0.12	0.28	0.087	0.08	96	
Kräkelund	PSM002060	Surface	35	0.00020	0.00040	<b>0.00070</b>	0.022	0.088	0.015	0.02	150	
Kräkelund	PSM002060	Bottom	35	0.00030	0.0015	<b>0.012</b>	0.026	0.061	0.018	0.02	110	
Ekö	PSM002061	Surface	36	0.00020	0.00030	<b>0.00045</b>	0.015	0.062	0.012	0.02	170	
Ekö	PSM002061	Bottom	35	0.00020	0.00030	<b>0.00060</b>	0.015	0.074	0.013	0.02	170	
Fågelöfjärden	PSM002063	Surface	17	0.00030	0.00040	<b>0.00060</b>	0.059	0.091	0.026	0.04	140	
Fågelöfjärden	PSM002063	Bottom	17	0.00020	0.00030	<b>0.00040</b>	0.048	0.085	0.024	0.03	140	
Simpevarp area		Surface	163	0.00020	0.00040	<b>0.0052</b>	0.054	0.59	0.045	0.08	180	
Simpevarp area		Bottom	160	0.00020	0.00070	<b>0.018</b>	0.061	0.28	0.043	0.06	140	
Forsmark area		Surface	175	<0.0002	0.00074	<b>0.0044</b>	0.077	1.6	0.11	0.3	250	
Forsmark area		Bottom	71	0.00030	0.0010	<b>0.015</b>	0.073	0.65	0.058	0.1	180	
Bottenhavet	SMHI:MS4	Surface	8	0.048	0.056	<b>0.059</b>	0.064	0.067	0.059	0.006	10	
Bottenhavet	SMHI:MS4	Bottom	9	0.047	0.058	<b>0.061</b>	0.064	0.067	0.060	0.006	9.7	
N Simpevarp	SMHI:B1	Surface	91	0.00014	0.00028	<b>0.00098</b>	0.020	0.099	0.017	0.03	170	
N Simpevarp	SMHI:B1	Bottom	85	0.00028	0.0077	<b>0.035</b>	0.065	0.12	0.038	0.03	81	
Östersjön	SMHI:BY29	Surface	46	0.00014	0.00028	<b>0.00056</b>	0.043	0.079	0.018	0.03	140	
Östersjön	SMHI:BY29	Bottom	46	0.00028	0.0021	<b>0.012</b>	0.049	0.078	0.025	0.03	100	
Streaming Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
Misterhult	PSM002080	Surface	17	0.0029	0.064	<b>0.15</b>	0.27	0.38	0.17	0.1	74	
Perstorpet	PSM002081	Surface	34	0.0024	0.060	<b>0.084</b>	0.13	0.22	0.094	0.06	63	
Misterhultsbäcken Ö	PSM002082	Surface	37	0.0054	0.19	<b>0.28</b>	0.43	0.81	0.32	0.2	67	
Smedtorpet	PSM002083	Surface	40	0.069	0.13	<b>0.20</b>	0.29	0.45	0.22	0.10	45	
Kårsvik	PSM002084	Surface	38	0.0024	0.12	<b>0.40</b>	0.67	1.3	0.44	0.4	80	
Ekerum	PSM002085	Surface	37	0.040	0.25	<b>0.50</b>	0.98	3.5	0.71	0.7	100	
Köksmåla	PSM002068	Surface	38	0.073	0.14	<b>0.19</b>	0.28	1.4	0.26	0.2	90	
Jämserum	PSM002069	Surface	37	0.0021	0.068	<b>0.12</b>	0.21	0.30	0.14	0.09	66	
Plittorp	PSM002071	Surface	37	0.030	0.13	<b>0.18</b>	0.28	0.44	0.20	0.09	45	
Lillekvarn	PSM002072	Surface	15	0.0081	0.027	<b>0.037</b>	0.066	0.10	0.046	0.03	66	
Brolund	PSM002077	Surface	18	0.022	0.11	<b>0.15</b>	0.22	0.26	0.16	0.07	46	
Sillebäcken	PSM002078	Surface	29	0.023	0.10	<b>0.17</b>	0.26	0.70	0.20	0.2	78	
Kvarnstugan	PSM002079	Surface	37	0.026	0.13	<b>0.19</b>	0.25	0.70	0.21	0.1	56	
Ekhyddan	PSM002087	Surface	40	0.047	0.18	<b>0.23</b>	0.31	0.90	0.26	0.1	52	
Övrahammar	PSM002076	Surface	33	0.0033	0.076	<b>0.14</b>	0.19	0.96	0.19	0.2	110	
Basteböla	PSM002086	Surface	29	0.046	0.59	<b>0.94</b>	1.6	3.0	1.2	0.8	64	
Flohult	PSM002070	Surface	17	0.039	0.13	<b>0.19</b>	0.21	0.29	0.17	0.06	34	
Figeholm	PSM002075	Surface	18	0.050	0.12	<b>0.16</b>	0.23	0.44	0.18	0.10	53	
	PSM107735	Surface	12	0.037	0.056	<b>0.16</b>	0.22	0.36	0.16	0.1	69	
	PSM000347	Surface	1	0.18		<b>0.18</b>		0.18	0.18			
Simpevarp area		Surface	564	0.0021	0.11	<b>0.19</b>	0.30	3.5	0.30	0.4	130	
Kalmar County	N.S.2000	Surface	26	0.030	0.10	<b>0.19</b>	0.34	4.7	0.48	1.0	200	
Forsmark area		Surface	323	0.00030	0.0044	<b>0.014</b>	0.047	5.5	0.15	0.6	400	
Sweden	N.S.2000	Surface	725	0.0010	0.016	<b>0.074</b>	0.29	14	0.50	1	250	



## Surface Water

PON			Particulate organic nitrogen (mg/l)								PON
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
<b>Lake Water</b>											
Frisksjön	PSM002065	Surface	36	0.025	0.062	<b>0.089</b>	0.11	0.22	0.097	0.05	49
Frisksjön	PSM002065	Bottom	36	0.034	0.058	<b>0.093</b>	0.11	0.23	0.095	0.04	46
Jämsen	PSM002067	Surface	36	0.027	0.049	<b>0.079</b>	0.10	0.18	0.081	0.04	48
Jämsen	PSM002067	Bottom	35	0.031	0.063	<b>0.082</b>	0.14	0.27	0.10	0.06	57
Söråmagasinet	PSM005964	Surface	22	0.030	0.092	<b>0.11</b>	0.17	0.28	0.12	0.06	49
Söråmagasinet	PSM005964	Bottom	22	0.050	0.086	<b>0.12</b>	0.15	0.26	0.13	0.06	46
Götemar	PSM002066	Surface	18	0.0084	0.021	<b>0.031</b>	0.040	0.058	0.032	0.01	45
Götemar	PSM002066	Bottom	18	0.024	0.030	<b>0.038</b>	0.044	0.11	0.041	0.02	48
Simpevarp area		Surface	112	0.0084	0.048	<b>0.081</b>	0.11	0.28	0.087	0.05	60
Simpevarp area		Bottom	111	0.024	0.051	<b>0.082</b>	0.12	0.27	0.095	0.06	59
Forsmark area		Surface	249	0.0078	0.035	<b>0.050</b>	0.069	0.74	0.065	0.07	110
Forsmark area		Bottom	69	0.023	0.038	<b>0.050</b>	0.074	0.26	0.065	0.04	66
<b>Sea Water</b>											
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Borholmsfjärden	PSM002062	Surface	37	0.016	0.066	<b>0.097</b>	0.13	0.22	0.099	0.05	47
Borholmsfjärden	PSM002062	Bottom	36	0.011	0.043	<b>0.083</b>	0.12	0.16	0.081	0.04	51
Granholmsfjärden	PSM002064	Surface	36	0.017	0.046	<b>0.073</b>	0.096	0.14	0.075	0.03	45
Granholmsfjärden	PSM002064	Bottom	35	0.014	0.036	<b>0.054</b>	0.091	0.24	0.074	0.06	79
Kråkelund	PSM002060	Surface	32	0.0053	0.012	<b>0.016</b>	0.025	0.072	0.021	0.02	71
Kråkelund	PSM002060	Bottom	35	0.0051	0.013	<b>0.014</b>	0.019	0.040	0.016	0.008	47
Ekö	PSM002061	Surface	36	0.0070	0.014	<b>0.026</b>	0.035	0.089	0.028	0.02	62
Ekö	PSM002061	Bottom	34	0.0092	0.017	<b>0.032</b>	0.045	0.100	0.036	0.02	60
Fågelöfjärden	PSM002063	Surface	17	0.011	0.022	<b>0.031</b>	0.042	0.080	0.034	0.02	53
Fågelöfjärden	PSM002063	Bottom	17	0.0079	0.016	<b>0.031</b>	0.048	0.063	0.034	0.02	54
Simpevarp area		Surface	158	0.0053	0.021	<b>0.041</b>	0.076	0.22	0.055	0.04	80
Simpevarp area		Bottom	157	0.0051	0.017	<b>0.035</b>	0.067	0.24	0.050	0.04	88
Forsmark area		Surface	170	0.014	0.039	<b>0.059</b>	0.093	0.32	0.071	0.05	67
Forsmark area		Bottom	68	0.011	0.034	<b>0.048</b>	0.074	0.20	0.060	0.04	67
<b>Streaming Water</b>											
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Misterhult	PSM002080	Surface	17	0.033	0.053	<b>0.12</b>	0.19	0.57	0.16	0.1	92
Perstorpet	PSM002081	Surface	34	0.028	0.060	<b>0.098</b>	0.25	0.93	0.19	0.2	110
Misterhultsbäcken Ö	PSM002082	Surface	37	0.026	0.062	<b>0.14</b>	0.20	0.36	0.15	0.09	64
Smedtorpet	PSM002083	Surface	40	0.042	0.093	<b>0.12</b>	0.18	0.40	0.15	0.09	57
Kärsvik	PSM002084	Surface	38	0.048	0.082	<b>0.11</b>	0.16	0.34	0.13	0.06	50
Ekerum	PSM002085	Surface	37	0.037	0.055	<b>0.089</b>	0.11	0.32	0.097	0.06	59
Köksmåla	PSM002068	Surface	38	0.039	0.083	<b>0.12</b>	0.16	0.31	0.12	0.06	48
Jämserum	PSM002069	Surface	36	0.026	0.042	<b>0.063</b>	0.11	0.17	0.077	0.04	53
Plittorp	PSM002071	Surface	37	0.031	0.052	<b>0.074</b>	0.11	0.52	0.095	0.08	86
Lillekvarn	PSM002072	Surface	15	0.0087	0.013	<b>0.030</b>	0.15	0.40	0.091	0.1	130
Brolund	PSM002077	Surface	18	0.028	0.054	<b>0.098</b>	0.14	0.71	0.13	0.2	120
Sillebäcken	PSM002078	Surface	29	0.019	0.041	<b>0.057</b>	0.11	0.35	0.091	0.08	90
Kvarnstugan	PSM002079	Surface	36	0.027	0.058	<b>0.10</b>	0.14	0.73	0.12	0.1	98
Ekhyddan	PSM002087	Surface	40	0.043	0.072	<b>0.12</b>	0.16	0.63	0.13	0.10	73
Övrahammar	PSM002076	Surface	33	0.061	0.12	<b>0.18</b>	0.48	1.6	0.36	0.4	100
Basteböla	PSM002086	Surface	29	0.050	0.071	<b>0.091</b>	0.21	0.49	0.15	0.1	79
Flohult	PSM002070	Surface	17	0.032	0.060	<b>0.084</b>	0.11	0.20	0.086	0.04	48
Figeholm	PSM002075	Surface	18	0.035	0.051	<b>0.081</b>	0.16	0.34	0.11	0.08	72
	PSM107735	Surface	12	0.039	0.054	<b>0.071</b>	0.18	0.36	0.13	0.1	84
	PSM000347	Surface	1	0.036		<b>0.036</b>		0.036	0.036		
Simpevarp area		Surface	562	0.0087	0.060	<b>0.099</b>	0.16	1.6	0.14	0.1	110
Forsmark area		Surface	311	0.0030	0.025	<b>0.037</b>	0.056	0.28	0.049	0.04	84

## Surface Water

O2 (lab + field)			Oxygen (lab + field) (mg/l)					O2 (lab + field)			
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
<b>Lake Water</b>											
Frisksjön	PSM002065	Surface	36	6.9	8.5	<b>9.9</b>	11	13	9.8	2	17
Frisksjön	PSM002065	Bottom	36	1.6	5.5	<b>7.8</b>	10	13	7.7	3	39
Jämsen	PSM002067	Surface	37	7.2	8.8	<b>9.8</b>	10	12	9.6	1	13
Jämsen	PSM002067	Bottom	37	0.15	1.8	<b>5.4</b>	9.1	11	5.3	4	69
Söråmagasinet	PSM005964	Surface	22	6.0	8.6	<b>9.6</b>	11	12	9.6	2	17
Söråmagasinet	PSM005964	Bottom	22	1.1	4.0	<b>5.8</b>	8.6	12	6.2	4	56
Götemar	PSM002066	Surface	17	8.4	9.6	<b>11</b>	13	14	11	2	15
Götemar	PSM002066	Bottom	17	1.2	4.1	<b>6.4</b>	12	13	7.3	4	56
Simpevarp area		Surface	112	6.0	8.8	<b>9.8</b>	11	14	9.9	2	16
Simpevarp area		Bottom	112	0.15	4.0	<b>6.8</b>	9.6	13	6.5	4	55
Forsmark area		Surface	247	0.10	6.7	<b>11</b>	12	16	9.2	4	44
Forsmark area		Bottom	78	0.10	2.3	<b>10</b>	12	14	7.8	5	64
<b>Sea Water</b>											
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Borholmsfjärden	PSM002062	Surface	35	5.8	9.7	<b>11</b>	12	14	11	2	18
Borholmsfjärden	PSM002062	Bottom	37	0.50	6.9	<b>8.9</b>	11	13	8.3	3	37
Granholmsfjärden	PSM002064	Surface	38	5.9	9.7	<b>11</b>	11	14	11	2	16
Granholmsfjärden	PSM002064	Bottom	36	0.60	2.5	<b>5.0</b>	9.4	11	5.7	4	65
Kråkelund	PSM002060	Surface	32	9.6	11	<b>12</b>	13	15	12	1	11
Kråkelund	PSM002060	Bottom	32	8.1	10	<b>11</b>	13	14	11	2	15
Ekö	PSM002061	Surface	34	9.0	11	<b>12</b>	13	15	12	1	11
Ekö	PSM002061	Bottom	35	1.5	11	<b>12</b>	13	15	11	2	22
Fågelöfjärden	PSM002063	Surface	17	9.8	11	<b>12</b>	12	14	12	1	9.3
Fågelöfjärden	PSM002063	Bottom	17	8.4	11	<b>12</b>	13	14	12	1	12
Simpevarp area		Surface	156	5.8	10	<b>11</b>	12	15	11	2	15
Simpevarp area		Bottom	157	0.50	7.7	<b>11</b>	12	15	9.3	4	38
Forsmark area		Surface	171	6.6	11	<b>12</b>	13	16	12	2	13
Forsmark area		Bottom	72	3.3	10	<b>12</b>	13	15	12	2	19
<b>Streaming Water</b>											
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Misterhult	PSM002080	Surface	15	2.9	4.2	<b>5.5</b>	8.1	10	6.0	2	38
Perstorpet	PSM002081	Surface	30	0.35	5.6	<b>9.6</b>	11	13	8.2	4	43
Misterhultsbäcken Ö	PSM002082	Surface	34	1.1	5.3	<b>9.1</b>	11	13	7.7	3	44
Smedtorpet	PSM002083	Surface	39	3.9	8.3	<b>9.4</b>	11	14	9.5	2	22
Kärsvik	PSM002084	Surface	37	5.7	8.2	<b>9.4</b>	11	12	9.4	2	18
Ekerum	PSM002085	Surface	35	7.1	10.0	<b>12</b>	13	16	12	2	18
Köksmåla	PSM002068	Surface	38	5.1	7.4	<b>9.5</b>	11	13	9.2	2	22
Jämserum	PSM002069	Surface	34	0.070	7.8	<b>9.5</b>	11	13	9.1	2	27
Plittorp	PSM002071	Surface	36	0.060	7.0	<b>9.0</b>	11	15	8.9	3	34
Lillekvarn	PSM002072	Surface	14	1.3	8.9	<b>12</b>	13	14	10	3	32
Brolund	PSM002077	Surface	17	2.7	7.1	<b>8.2</b>	9.9	13	8.4	3	32
Sillebäcken	PSM002078	Surface	27	1.6	7.5	<b>10</b>	11	13	9.0	3	33
Kvarnstugan	PSM002079	Surface	37	3.7	8.2	<b>10</b>	11	14	9.8	2	25
Ekhyddan	PSM002087	Surface	36	4.2	8.1	<b>10</b>	12	15	9.9	2	25
Övrahammar	PSM002076	Surface	32	0.40	7.8	<b>8.9</b>	9.7	12	8.3	3	31
Basteböla	PSM002086	Surface	27	2.3	8.0	<b>9.3</b>	11	17	9.5	3	29
Flohult	PSM002070	Surface	15	4.7	7.5	<b>10</b>	12	13	9.6	3	29
Figeholm	PSM002075	Surface	17	5.1	7.9	<b>10</b>	11	17	9.8	3	29
	PSM107735	Surface	11	3.6	6.1	<b>7.7</b>	8.8	9.8	7.3	2	26
	PSM000347	Surface	2	10	10	<b>10</b>	11	11	10	0.5	4.7
Simpevarp area		Surface	533	0.060	7.7	<b>9.5</b>	11	17	9.2	3	30
Forsmark area		Surface	310	0.10	4.5	<b>6.8</b>	8.7	13	6.6	3	48

## Surface Water

O-18			Oxygen-18 (dev. SMOW)								O-18	
Lake Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
Frisksjön	PSM002065	Surface	8	-9.60	-9.30	<b>-8.30</b>	-8.05	-7.30	-8.51	0.81	-9.5	
Frisksjön	PSM002065	Bottom	8	-9.30	-8.93	<b>-8.25</b>	-7.98	-7.30	-8.36	0.67	-8.0	
Jämsen	PSM002067	Surface	1	-8.50		<b>-8.50</b>		-8.50	-8.50			
Jämsen	PSM002067	Bottom	1	-8.70		<b>-8.70</b>		-8.70	-8.70			
Götemar	PSM002066	Surface	1	-6.70		<b>-6.70</b>		-6.70	-6.70			
Götemar	PSM002066	Bottom	1	-7.10		<b>-7.10</b>		-7.10	-7.10			
Simpevarp area		Surface	10	-9.60	-9.10	<b>-8.30</b>	-7.95	-6.70	-8.33	0.92	-11	
Simpevarp area		Bottom	10	-9.30	-8.85	<b>-8.25</b>	-7.93	-7.10	-8.27	0.73	-8.8	
Laxemar	pre-PLU	-	1	-8.00		<b>-8.00</b>		-8.00	-8.00			
Forsmark area		Surface	50	-12.7	-10.1	<b>-8.85</b>	-6.73	-4.50	-8.59	2.2	-26	
Forsmark area		Bottom	19	-12.0	-9.95	<b>-8.20</b>	-6.90	-4.60	-8.43	2.1	-25	
Sea Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
Borholmsfjärden	PSM002062	Surface	8	-9.70	-8.73	<b>-8.15</b>	-7.10	-6.90	-8.08	0.99	-12	
Borholmsfjärden	PSM002062	Bottom	8	-8.80	-8.15	<b>-7.75</b>	-7.08	-6.90	-7.71	0.69	-9.0	
Granholmsfjärden	PSM002064	Surface	8	-9.30	-8.33	<b>-8.30</b>	-7.05	-6.80	-7.93	0.89	-11	
Granholmsfjärden	PSM002064	Bottom	8	-7.40	-7.20	<b>-7.00</b>	-6.80	-6.70	-7.01	0.25	-3.5	
Kråkelund	PSM002060	Surface	5	-7.20	-7.10	<b>-7.10</b>	-6.90	-6.80	-7.02	0.16	-2.3	
Kråkelund	PSM002060	Bottom	5	-7.20	-7.20	<b>-7.10</b>	-7.00	-6.70	-7.04	0.21	-2.9	
Ekö	PSM002061	Surface	7	-7.20	-7.10	<b>-7.00</b>	-6.95	-6.80	-7.01	0.13	-1.9	
Ekö	PSM002061	Bottom	7	-7.20	-7.10	<b>-6.90</b>	-6.90	-6.80	-6.99	0.15	-2.1	
Simpevarp area		Surface	28	-9.70	-8.30	<b>-7.10</b>	-6.98	-6.80	-7.58	0.85	-11	
Simpevarp area		Bottom	28	-8.80	-7.20	<b>-7.10</b>	-6.90	-6.70	-7.21	0.51	-7.0	
Forsmark area		Surface	37	-11.7	-8.50	<b>-8.20</b>	-8.10	-4.50	-8.46	1.2	-14	
Forsmark area		Bottom	17	-11.0	-8.50	<b>-8.20</b>	-8.00	-7.60	-8.34	0.75	-9.0	
Streaming Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
Misterhultsbäcken Ö	PSM002082	Surface	8	-11.6	-11.5	<b>-11.1</b>	-10.3	-10.0	-10.9	0.69	-6.3	
Smedtorpet	PSM002083	Surface	9	-11.6	-11.5	<b>-11.3</b>	-10.6	-10.0	-11.0	0.62	-5.7	
Kärrevik	PSM002084	Surface	9	-11.5	-11.3	<b>-11.2</b>	-10.9	-10.6	-11.1	0.30	-2.7	
Ekerum	PSM002085	Surface	9	-11.3	-11.3	<b>-11.2</b>	-10.8	-10.6	-11.0	0.29	-2.6	
Plittorp	PSM002071	Surface	8	-10.5	-10.1	<b>-9.80</b>	-9.53	-9.00	-9.82	0.53	-5.4	
Lillekvarn	PSM002072	Surface	5	-11.7	-11.6	<b>-11.6</b>	-11.5	-8.70	-11.0	1.3	-12	
Kvarnstugan	PSM002079	Surface	8	-11.0	-10.7	<b>-10.4</b>	-9.70	-9.40	-10.2	0.63	-6.1	
Ekhyddan	PSM002087	Surface	9	-11.2	-10.9	<b>-10.7</b>	-9.90	-9.50	-10.4	0.61	-5.8	
Övrahammar	PSM002076	Surface	8	-11.4	-11.3	<b>-10.9</b>	-10.5	-9.10	-10.7	0.77	-7.2	
Basteböla	PSM002086	Surface	8	-11.4	-11.3	<b>-11.2</b>	-10.9	-10.1	-11.0	0.44	-4.0	
Basteböla	PSM107735	Surface	1	-10.5		<b>-10.5</b>		-10.5	-10.5			
Simpevarp area		Surface	82	-11.7	-11.3	<b>-10.8</b>	-10.4	-8.70	-10.7	0.72	-6.7	
Laxemar	pre-PLU	Surface	12	-9.90	-9.48	<b>-9.25</b>	-8.18	-8.10	-9.04	0.72	-7.9	
Forsmark area		Surface	61	-12.7	-10.9	<b>-9.70</b>	-8.30	-5.50	-9.46	2.0	-21	

## Surface Water

POP			Particulate organic phosphorus (mg/l)								POP
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
<b>Lake Water</b>											
Frisksjön	PSM002065	Surface	36	0.0054	0.0091	<b>0.011</b>	0.013	0.028	0.012	0.005	39
Frisksjön	PSM002065	Bottom	36	0.0054	0.0094	<b>0.011</b>	0.014	0.025	0.012	0.004	35
Jämsen	PSM002067	Surface	35	0.0042	0.0070	<b>0.0086</b>	0.010	0.016	0.0089	0.003	32
Jämsen	PSM002067	Bottom	36	0.0020	0.0083	<b>0.011</b>	0.016	0.026	0.013	0.006	47
Söråmagasinet	PSM005964	Surface	22	0.0046	0.0092	<b>0.012</b>	0.015	0.024	0.013	0.005	40
Söråmagasinet	PSM005964	Bottom	22	0.0047	0.0091	<b>0.014</b>	0.018	0.034	0.015	0.008	50
Götemar	PSM002066	Surface	18	0.0023	0.0032	<b>0.0038</b>	0.0048	0.0052	0.0039	0.0010	25
Götemar	PSM002066	Bottom	16	0.0038	0.0049	<b>0.0052</b>	0.0070	0.011	0.0060	0.002	32
Simpevarp area		Surface	111	0.0023	0.0064	<b>0.0092</b>	0.012	0.028	0.0097	0.005	49
Simpevarp area		Bottom	110	0.0020	0.0080	<b>0.011</b>	0.015	0.034	0.012	0.006	50
Forsmark area		Surface	253	0.0010	0.0036	<b>0.0047</b>	0.0065	0.036	0.0057	0.004	70
Forsmark area		Bottom	74	0.0029	0.0040	<b>0.0050</b>	0.0068	0.015	0.0060	0.003	47
<b>Sea Water</b>											
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Borholmsfjärden	PSM002062	Surface	36	0.0051	0.0088	<b>0.012</b>	0.014	0.024	0.012	0.004	34
Borholmsfjärden	PSM002062	Bottom	37	0.0033	0.0084	<b>0.011</b>	0.015	0.025	0.011	0.005	41
Granholmsfjärden	PSM002064	Surface	38	0.0044	0.0076	<b>0.0098</b>	0.012	0.023	0.010	0.004	38
Granholmsfjärden	PSM002064	Bottom	35	0.0030	0.0087	<b>0.012</b>	0.019	0.16	0.024	0.03	140
Kråkelund	PSM002060	Surface	34	0.00070	0.0018	<b>0.0029</b>	0.0048	0.015	0.0040	0.003	79
Kråkelund	PSM002060	Bottom	34	0.0010	0.0016	<b>0.0025</b>	0.0036	0.0096	0.0028	0.002	63
Ekö	PSM002061	Surface	35	0.00050	0.0019	<b>0.0043</b>	0.0058	0.014	0.0043	0.003	67
Ekö	PSM002061	Bottom	34	0.0010	0.0024	<b>0.0051</b>	0.0068	0.035	0.0062	0.006	99
Fågelöfjärden	PSM002063	Surface	17	0.0010	0.0039	<b>0.0057</b>	0.0073	0.0095	0.0055	0.003	46
Fågelöfjärden	PSM002063	Bottom	17	0.0015	0.0030	<b>0.0056</b>	0.0080	0.011	0.0056	0.003	52
Simpevarp area		Surface	160	0.00050	0.0037	<b>0.0069</b>	0.011	0.024	0.0075	0.005	64
Simpevarp area		Bottom	157	0.0010	0.0030	<b>0.0067</b>	0.012	0.16	0.011	0.02	170
Forsmark area		Surface	171	0.0014	0.0059	<b>0.0086</b>	0.014	0.046	0.011	0.007	62
Forsmark area		Bottom	68	0.0016	0.0055	<b>0.0076</b>	0.012	0.034	0.0095	0.006	62
<b>Streaming Water</b>											
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Misterhult	PSM002080	Surface	17	0.0030	0.0098	<b>0.020</b>	0.034	0.082	0.025	0.02	88
Perstorpet	PSM002081	Surface	34	0.0051	0.011	<b>0.015</b>	0.040	0.13	0.030	0.03	110
Misterhultsbäcken Ö	PSM002082	Surface	36	0.0046	0.011	<b>0.021</b>	0.030	0.052	0.022	0.01	65
Smedtorpet	PSM002083	Surface	40	0.0078	0.017	<b>0.026</b>	0.037	0.079	0.029	0.02	58
Kärsvik	PSM002084	Surface	38	0.0072	0.016	<b>0.020</b>	0.030	0.070	0.024	0.01	51
Ekerum	PSM002085	Surface	37	0.0018	0.011	<b>0.015</b>	0.021	0.052	0.017	0.009	52
Köksmåla	PSM002068	Surface	38	0.0050	0.0092	<b>0.016</b>	0.022	0.039	0.017	0.009	56
Jämserum	PSM002069	Surface	36	0.0040	0.0066	<b>0.0083</b>	0.012	0.017	0.0089	0.003	38
Plittorp	PSM002071	Surface	37	0.0040	0.0088	<b>0.011</b>	0.017	0.068	0.014	0.01	76
Lillekvarn	PSM002072	Surface	15	0.00060	0.0020	<b>0.0039</b>	0.021	0.062	0.014	0.02	130
Brolund	PSM002077	Surface	18	0.0068	0.010	<b>0.017</b>	0.024	0.11	0.022	0.02	110
Sillebäcken	PSM002078	Surface	29	0.0018	0.0054	<b>0.0070</b>	0.015	0.033	0.011	0.009	78
Kvarnstugan	PSM002079	Surface	37	0.0057	0.011	<b>0.017</b>	0.025	0.11	0.020	0.02	86
Ekhyddan	PSM002087	Surface	40	0.0050	0.013	<b>0.021</b>	0.029	0.093	0.022	0.01	65
Övrahammar	PSM002076	Surface	33	0.0051	0.017	<b>0.025</b>	0.077	0.25	0.053	0.06	110
Basteböla	PSM002086	Surface	29	0.0094	0.014	<b>0.020</b>	0.037	0.13	0.032	0.03	92
Flohult	PSM002070	Surface	17	0.0072	0.0094	<b>0.016</b>	0.019	0.043	0.016	0.009	55
Figeholm	PSM002075	Surface	17	0.0068	0.0094	<b>0.014</b>	0.029	0.044	0.020	0.01	67
	PSM107735	Surface	12	0.0065	0.0084	<b>0.0097</b>	0.026	0.043	0.018	0.01	79
	PSM000347	Surface	1	0.0076		<b>0.0076</b>		0.0076	0.0076		
Simpevarp area		Surface	561	0.00060	0.0097	<b>0.016</b>	0.026	0.25	0.022	0.02	100
Forsmark area		Surface	312	0.0012	0.0039	<b>0.0053</b>	0.0082	0.14	0.0086	0.01	140

## Surface Water

PO4-P			Phosphorus as phosphate (mg/l)								PO4-P
Lake Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Frisksjön	PSM002065	Surface	36	<0.0005	0.00070	<b>0.0012</b>	0.0017	0.0033	0.0013	0.0007	55
Frisksjön	PSM002065	Bottom	36	<0.0005	0.00080	<b>0.0013</b>	0.0020	0.0035	0.0015	0.0009	63
Jämsen	PSM002067	Surface	36	<0.0005	0.00068	<b>0.0010</b>	0.0012	0.0050	0.0012	0.0010	82
Jämsen	PSM002067	Bottom	36	0.00070	0.0011	<b>0.0022</b>	0.0027	0.0058	0.0021	0.001	58
Söråmagasinet	PSM005964	Surface	22	<0.0005	0.00050	<b>0.00060</b>	0.00070	0.0016	0.00068	0.0003	41
Söråmagasinet	PSM005964	Bottom	22	<0.0005	0.00070	<b>0.00085</b>	0.0012	0.0021	0.00094	0.0004	47
Götemar	PSM002066	Surface	18	<0.0005	<0.0005	<b>&lt;0.0005</b>	<0.0005	0.0010	<0.0005	0.0003	69
Götemar	PSM002066	Bottom	18	<0.0005	<0.0005	<b>&lt;0.0005</b>	0.00070	0.0014	0.00051	0.0004	74
Simpevarp area		Surface	112	<0.0005	0.00050	<b>0.00080</b>	0.0012	0.0050	0.00099	0.0008	78
Simpevarp area		Bottom	112	<0.0005	0.00070	<b>0.0011</b>	0.0020	0.0058	0.0014	0.001	75
Forsmark area		Surface	255	<0.001	<0.001	<b>0.0010</b>	0.0018	0.0052	0.0013	0.0009	73
Forsmark area		Bottom	75	<0.001	<0.001	<b>0.0014</b>	0.0020	0.0040	0.0014	0.0009	61
Sea Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Borholmsfjärden	PSM002062	Surface	37	0.00070	0.0012	<b>0.0018</b>	0.0035	0.0073	0.0025	0.002	70
Borholmsfjärden	PSM002062	Bottom	37	0.00050	0.0012	<b>0.0015</b>	0.0045	0.010	0.0029	0.003	94
Granholmsfjärden	PSM002064	Surface	38	<0.0005	0.00090	<b>0.0016</b>	0.0040	0.020	0.0029	0.003	120
Granholmsfjärden	PSM002064	Bottom	36	0.00050	0.0023	<b>0.0056</b>	0.011	0.10	0.014	0.02	180
Kräkelund	PSM002060	Surface	35	0.0012	0.0079	<b>0.012</b>	0.016	0.035	0.013	0.007	57
Kräkelund	PSM002060	Bottom	35	0.0073	0.014	<b>0.016</b>	0.021	0.054	0.019	0.009	48
Ekö	PSM002061	Surface	36	0.0038	0.0090	<b>0.010</b>	0.015	0.023	0.012	0.005	45
Ekö	PSM002061	Bottom	35	0.0045	0.011	<b>0.013</b>	0.021	0.18	0.020	0.03	140
Fågelöfjärden	PSM002063	Surface	17	0.00070	0.0054	<b>0.0086</b>	0.012	0.015	0.0083	0.005	57
Fågelöfjärden	PSM002063	Bottom	17	0.00070	0.0066	<b>0.0094</b>	0.014	0.016	0.0096	0.004	47
Simpevarp area		Surface	163	<0.0005	0.0017	<b>0.0055</b>	0.011	0.035	0.0075	0.007	89
Simpevarp area		Bottom	160	0.00050	0.0033	<b>0.010</b>	0.016	0.18	0.013	0.02	150
Forsmark area		Surface	175	<0.001	<0.001	<b>0.0011</b>	0.0020	0.013	0.0018	0.002	110
Forsmark area		Bottom	71	<0.001	<0.001	<b>0.0014</b>	0.0024	0.0088	0.0020	0.002	85
Bottenhavet	SMHI:MS4	Surface	8	0.0040	0.0061	<b>0.0071</b>	0.0083	0.0093	0.0071	0.002	25
Bottenhavet	SMHI:MS4	Bottom	9	0.0053	0.0071	<b>0.0087</b>	0.0093	0.011	0.0084	0.002	20
N Simpevarp	SMHI:B1	Surface	91	0.00062	0.0015	<b>0.0050</b>	0.012	0.028	0.0078	0.008	97
N Simpevarp	SMHI:B1	Bottom	85	0.0074	0.020	<b>0.026</b>	0.033	0.089	0.029	0.02	60
Östersjön	SMHI:BY29	Surface	45	0.00062	0.00093	<b>0.0050</b>	0.015	0.021	0.0078	0.007	96
Östersjön	SMHI:BY29	Bottom	46	0.0053	0.011	<b>0.014</b>	0.019	0.028	0.015	0.005	35
Streaming Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Misterhult	PSM002080	Surface	17	0.0010	0.0024	<b>0.0026</b>	0.0075	0.026	0.0063	0.006	100
Perstorpet	PSM002081	Surface	34	0.0033	0.0050	<b>0.0080</b>	0.014	0.029	0.0099	0.006	62
Misterhultsbäcken Ö	PSM002082	Surface	37	0.0024	0.0047	<b>0.0068</b>	0.015	0.024	0.0097	0.007	67
Smedtorpet	PSM002083	Surface	40	0.0048	0.0081	<b>0.0097</b>	0.011	0.034	0.011	0.006	53
Kärsvik	PSM002084	Surface	38	0.0024	0.0083	<b>0.010</b>	0.013	0.045	0.012	0.007	58
Ekerum	PSM002085	Surface	37	0.0036	0.0054	<b>0.0076</b>	0.010	0.020	0.0085	0.004	52
Köksmåla	PSM002068	Surface	38	0.0010	0.0021	<b>0.0027</b>	0.0048	0.0094	0.0038	0.002	64
Jämserum	PSM002069	Surface	37	0.00050	0.00090	<b>0.0011</b>	0.0018	0.0041	0.0014	0.0008	52
Plittorp	PSM002071	Surface	37	0.0010	0.0028	<b>0.0031</b>	0.0043	0.011	0.0037	0.002	47
Lillekvarn	PSM002072	Surface	15	0.0017	0.0026	<b>0.0039</b>	0.0057	0.020	0.0060	0.006	96
Brolund	PSM002077	Surface	18	0.0020	0.0047	<b>0.0053</b>	0.0063	0.018	0.0064	0.004	58
Sillebäcken	PSM002078	Surface	29	0.00060	0.0019	<b>0.0028</b>	0.0044	0.0093	0.0037	0.003	68
Kvarnstugan	PSM002079	Surface	37	0.0020	0.0046	<b>0.0052</b>	0.0066	0.020	0.0063	0.003	55
Ekhyddan	PSM002087	Surface	40	0.0030	0.0057	<b>0.0065</b>	0.0077	0.018	0.0072	0.003	41
Örahammar	PSM002076	Surface	33	0.0050	0.0089	<b>0.012</b>	0.016	0.073	0.017	0.01	84
Basteböla	PSM002086	Surface	29	0.0060	0.0096	<b>0.016</b>	0.027	0.059	0.020	0.01	65
Flohult	PSM002070	Surface	17	0.0022	0.0035	<b>0.0060</b>	0.0075	0.015	0.0065	0.004	57
Figeholm	PSM002075	Surface	18	0.0038	0.0045	<b>0.0064</b>	0.0082	0.016	0.0073	0.004	49
	PSM107735	Surface	12	0.0026	0.0032	<b>0.0041</b>	0.0048	0.010	0.0045	0.002	47
	PSM000347	Surface	1	0.0038		<b>0.0038</b>		0.0038	0.0038		
Simpevarp area		Surface	564	0.00050	0.0037	<b>0.0061</b>	0.0100	0.073	0.0082	0.008	93
Laxemar	pre-PLU	Surface	1	0.030		<b>0.030</b>		0.030	0.030		
Forsmark area		Surface	323	<0.001	<0.001	<b>0.0017</b>	0.0048	0.15	0.0070	0.02	240

## Surface Water

tot-P			Phosphorus- total (mg/l)								tot-P
Lake Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Frisksjön	PSM002065	Surface	36	0.017	0.021	<b>0.023</b>	0.027	0.043	0.025	0.006	26
Frisksjön	PSM002065	Bottom	36	0.018	0.021	<b>0.023</b>	0.028	0.042	0.025	0.005	20
Jämsen	PSM002067	Surface	36	0.013	0.015	<b>0.016</b>	0.017	0.027	0.017	0.003	18
Jämsen	PSM002067	Bottom	36	0.015	0.017	<b>0.020</b>	0.025	0.039	0.021	0.005	26
Söråmagasinet	PSM005964	Surface	22	0.012	0.018	<b>0.022</b>	0.028	0.036	0.023	0.007	30
Söråmagasinet	PSM005964	Bottom	22	0.013	0.019	<b>0.024</b>	0.029	0.052	0.026	0.010	37
Götemar	PSM002066	Surface	18	0.0054	0.0078	<b>0.0083</b>	0.0090	0.012	0.0083	0.001	18
Götemar	PSM002066	Bottom	18	0.0078	0.0088	<b>0.0099</b>	0.011	0.014	0.0099	0.002	15
Simpevarp area		Surface	112	0.0054	0.015	<b>0.018</b>	0.023	0.043	0.019	0.008	40
Simpevarp area		Bottom	112	0.0078	0.017	<b>0.021</b>	0.025	0.052	0.021	0.008	37
Kalmar County	N.S.2000	Surface	106	0.0040	0.0080	<b>0.011</b>	0.017	0.060	0.014	0.010	70
Forsmark area		Surface	250	0.0044	0.0084	<b>0.010</b>	0.014	0.039	0.012	0.005	44
Forsmark area		Bottom	72	0.0067	0.0090	<b>0.011</b>	0.015	0.030	0.012	0.005	39
Sweden	N.S.2000	Surface	3464	0.0010	0.0050	<b>0.0090</b>	0.015	0.67	0.013	0.02	140
Sea Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Borholmsfjärden	PSM002062	Surface	37	0.015	0.020	<b>0.023</b>	0.024	0.042	0.023	0.005	23
Borholmsfjärden	PSM002062	Bottom	37	0.016	0.020	<b>0.022</b>	0.025	0.029	0.022	0.004	16
Granholmsfjärden	PSM002064	Surface	38	0.012	0.017	<b>0.020</b>	0.023	0.040	0.021	0.006	28
Granholmsfjärden	PSM002064	Bottom	36	0.013	0.021	<b>0.028</b>	0.033	0.16	0.037	0.03	86
Kräkelund	PSM002060	Surface	35	0.015	0.018	<b>0.021</b>	0.025	0.042	0.022	0.006	26
Kräkelund	PSM002060	Bottom	35	0.015	0.022	<b>0.024</b>	0.028	0.056	0.027	0.008	30
Ekö	PSM002061	Surface	36	0.015	0.020	<b>0.022</b>	0.026	0.043	0.024	0.006	25
Ekö	PSM002061	Bottom	35	0.016	0.023	<b>0.026</b>	0.032	0.38	0.038	0.06	160
Fågelöfjärden	PSM002063	Surface	17	0.015	0.017	<b>0.021</b>	0.023	0.033	0.021	0.005	24
Fågelöfjärden	PSM002063	Bottom	17	0.015	0.019	<b>0.022</b>	0.024	0.034	0.022	0.004	20
Simpevarp area		Surface	163	0.012	0.019	<b>0.021</b>	0.024	0.043	0.022	0.006	26
Simpevarp area		Bottom	160	0.013	0.021	<b>0.024</b>	0.029	0.38	0.030	0.03	110
Forsmark area		Surface	171	0.0072	0.011	<b>0.016</b>	0.023	0.059	0.018	0.009	48
Forsmark area		Bottom	68	0.0078	0.011	<b>0.014</b>	0.020	0.051	0.017	0.008	48
Bottenhavet	SMHI:MS4	Surface	35	0.0071	0.0084	<b>0.011</b>	0.013	0.017	0.011	0.003	26
Bottenhavet	SMHI:MS4	Bottom	36	0.0046	0.0071	<b>0.0085</b>	0.011	0.016	0.0093	0.003	32
N Simpevarp	SMHI:B1	Surface	91	0.011	0.016	<b>0.019</b>	0.024	0.036	0.020	0.006	29
N Simpevarp	SMHI:B1	Bottom	85	0.021	0.033	<b>0.040</b>	0.049	0.19	0.047	0.03	56
Östersjön	SMHI:BY29	Surface	45	0.0071	0.014	<b>0.015</b>	0.023	0.030	0.018	0.006	31
Östersjön	SMHI:BY29	Bottom	45	0.011	0.017	<b>0.021</b>	0.024	0.037	0.021	0.005	26
Streaming Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Misterhult	PSM002080	Surface	17	0.015	0.018	<b>0.022</b>	0.053	0.12	0.042	0.03	80
Perstorpet	PSM002081	Surface	33	0.020	0.028	<b>0.039</b>	0.068	0.16	0.054	0.04	65
Misterhultsbäcken Ö	PSM002082	Surface	37	0.018	0.027	<b>0.038</b>	0.067	0.093	0.046	0.02	49
Smedtorpet	PSM002083	Surface	40	0.027	0.040	<b>0.049</b>	0.060	0.13	0.054	0.02	43
Kårsvik	PSM002084	Surface	38	0.024	0.039	<b>0.046</b>	0.051	0.12	0.049	0.02	39
Ekerum	PSM002085	Surface	37	0.031	0.036	<b>0.044</b>	0.056	0.11	0.048	0.02	34
Köksmåla	PSM002068	Surface	38	0.014	0.018	<b>0.026</b>	0.033	0.051	0.027	0.01	38
Jämserum	PSM002069	Surface	37	0.013	0.015	<b>0.017</b>	0.020	0.032	0.018	0.005	25
Plittorp	PSM002071	Surface	37	0.016	0.019	<b>0.022</b>	0.026	0.099	0.026	0.01	55
Lillekvarn	PSM002072	Surface	15	0.014	0.016	<b>0.024</b>	0.047	0.092	0.034	0.02	71
Brolund	PSM002077	Surface	18	0.022	0.025	<b>0.028</b>	0.037	0.15	0.037	0.03	76
Sillebäcken	PSM002078	Surface	29	0.012	0.015	<b>0.018</b>	0.024	0.065	0.023	0.01	55
Kvarnstugan	PSM002079	Surface	37	0.020	0.026	<b>0.030</b>	0.038	0.14	0.036	0.02	58
Ekhyddan	PSM002087	Surface	40	0.023	0.030	<b>0.037</b>	0.044	0.13	0.040	0.02	44
Övrahammar	PSM002076	Surface	33	0.033	0.043	<b>0.053</b>	0.12	0.30	0.088	0.06	73
Basteböla	PSM002086	Surface	29	0.034	0.041	<b>0.059</b>	0.091	0.19	0.070	0.04	54
Flohult	PSM002070	Surface	17	0.017	0.022	<b>0.026</b>	0.037	0.077	0.031	0.01	46
Figeholm	PSM002075	Surface	18	0.023	0.026	<b>0.030</b>	0.051	0.069	0.039	0.02	43
	PSM107735	Surface	12	0.017	0.021	<b>0.026</b>	0.046	0.061	0.032	0.02	48
	PSM000347	Surface	1	0.025		<b>0.025</b>		0.025	0.025		
Simpevarp area		Surface	563	0.012	0.024	<b>0.035</b>	0.049	0.30	0.043	0.03	72
Kalmar County	N.S.2000	Surface	26	0.0060	0.014	<b>0.020</b>	0.030	0.051	0.024	0.01	57
Forsmark area		Surface	320	0.0043	0.0098	<b>0.014</b>	0.021	0.25	0.024	0.03	130
Sweden	N.S.2000	Surface	725	0.0010	0.0060	<b>0.015</b>	0.043	1.1	0.040	0.08	200

## Surface Water

K			Potassium (mg/l)								K
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
<b>Lake Water</b>											
Frisksjön	PSM002065	Surface	36	1.3	1.4	<b>1.5</b>	1.7	2.4	1.6	0.2	15
Frisksjön	PSM002065	Bottom	36	1.2	1.4	<b>1.5</b>	1.7	2.2	1.6	0.2	12
Jämsen	PSM002067	Surface	36	0.86	1.2	<b>1.3</b>	1.4	1.7	1.3	0.2	13
Jämsen	PSM002067	Bottom	36	0.76	1.3	<b>1.4</b>	1.5	1.8	1.4	0.2	14
Söråmagasinet	PSM005964	Surface	22	2.0	2.5	<b>2.7</b>	2.8	2.9	2.6	0.2	7.6
Söråmagasinet	PSM005964	Bottom	22	2.0	2.6	<b>2.7</b>	2.8	3.1	2.7	0.2	7.8
Götemar	PSM002066	Surface	18	1.3	1.5	<b>1.5</b>	1.6	2.0	1.6	0.2	12
Götemar	PSM002066	Bottom	18	1.2	1.5	<b>1.6</b>	1.7	1.9	1.6	0.2	12
Simpevarp area		Surface	112	0.86	1.3	<b>1.5</b>	1.8	2.9	1.7	0.5	31
Simpevarp area		Bottom	112	0.76	1.4	<b>1.5</b>	1.8	3.1	1.7	0.5	30
Laxemar	pre-PLU	-	1	1.7		<b>1.7</b>		1.7	1.7		
Kalmar County	N.S.2000	Surface	106	0.39	0.75	<b>1.1</b>	1.5	6.3	1.2	0.8	68
Forsmark area		Surface	247	0.73	2.0	<b>2.5</b>	3.3	9.6	2.8	1	42
Forsmark area		Bottom	74	1.6	2.2	<b>3.0</b>	3.9	16	3.3	2	58
Sweden	N.S.2000	Surface	3464		0.27	<b>0.47</b>	0.82	72	0.77	2	230
<b>Sea Water</b>											
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Borholmsfjärden	PSM002062	Surface	36	11	38	<b>51</b>	57	70	47	10	32
Borholmsfjärden	PSM002062	Bottom	36	22	51	<b>59</b>	64	70	56	10	18
Granholmsfjärden	PSM002064	Surface	37	17	50	<b>59</b>	66	76	56	10	25
Granholmsfjärden	PSM002064	Bottom	35	63	67	<b>69</b>	71	77	69	4	5.1
Kräkelund	PSM002060	Surface	34	66	72	<b>74</b>	76	87	74	4	5.6
Kräkelund	PSM002060	Bottom	34	70	73	<b>76</b>	80	88	77	4	5.7
Ekö	PSM002061	Surface	36	69	72	<b>74</b>	77	85	75	4	5.0
Ekö	PSM002061	Bottom	35	70	73	<b>76</b>	78	85	76	4	5.3
Fågelöfjärden	PSM002063	Surface	17	67	69	<b>70</b>	74	78	71	3	4.5
Fågelöfjärden	PSM002063	Bottom	17	63	70	<b>70</b>	74	80	72	5	6.5
Simpevarp area		Surface	160	11	56	<b>70</b>	74	87	64	20	24
Simpevarp area		Bottom	157	22	66	<b>71</b>	76	88	70	10	14
Forsmark area		Surface	175	4.1	48	<b>52</b>	54	61	48	10	26
Forsmark area		Bottom	72	6.9	49	<b>52</b>	54	60	51	7	14
<b>Streaming Water</b>											
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Misterhult	PSM002080	Surface	17	0.50	0.78	<b>0.88</b>	1.9	4.3	1.4	1	73
Perstorpet	PSM002081	Surface	34	0.57	0.78	<b>0.97</b>	1.1	1.8	1.0	0.3	32
Misterhultsbäcken Ö	PSM002082	Surface	37	0.70	1.0	<b>1.2</b>	1.7	4.5	1.5	0.9	56
Smedtorpet	PSM002083	Surface	39	0.79	0.99	<b>1.2</b>	1.3	2.1	1.2	0.3	26
Kärsvik	PSM002084	Surface	38	1.7	2.4	<b>2.8</b>	3.1	5.3	2.9	0.8	26
Ekerum	PSM002085	Surface	37	0.63	1.0	<b>1.1</b>	1.3	3.7	1.3	0.6	47
Köksmåla	PSM002068	Surface	37	0.41	0.76	<b>0.87</b>	1.1	2.4	0.97	0.4	36
Jämserum	PSM002069	Surface	37	0.76	1.2	<b>1.3</b>	1.4	2.5	1.3	0.3	23
Plittorp	PSM002071	Surface	36	0.81	1.3	<b>1.4</b>	1.7	2.3	1.5	0.3	22
Lillekvarn	PSM002072	Surface	15	<0.4	<0.4	<b>0.49</b>	0.67	1.1	0.52	0.3	62
Brolund	PSM002077	Surface	18	0.95	1.2	<b>1.4</b>	1.6	2.3	1.4	0.3	23
Sillebäcken	PSM002078	Surface	29	<0.4	0.50	<b>0.59</b>	0.67	0.95	0.58	0.2	34
Kvarnstugan	PSM002079	Surface	36	0.68	1.1	<b>1.3</b>	1.6	2.8	1.4	0.4	31
Ekhyddan	PSM002087	Surface	39	1.0	1.3	<b>1.4</b>	1.8	2.9	1.6	0.5	30
Övrahammar	PSM002076	Surface	32	0.61	0.92	<b>1.1</b>	1.4	2.0	1.2	0.4	31
Basteböla	PSM002086	Surface	29	2.3	2.7	<b>3.1</b>	3.5	7.8	3.4	1	35
Flohult	PSM002070	Surface	17	0.61	0.83	<b>0.95</b>	1.1	1.9	1.0	0.3	34
Figeholm	PSM002075	Surface	17	0.75	1.1	<b>1.1</b>	1.4	2.3	1.3	0.4	30
	PSM107735	Surface	12	0.96	1.1	<b>1.2</b>	1.8	3.1	1.5	0.7	46
Simpevarp area		Surface	556	<0.4	0.95	<b>1.3</b>	1.7	7.8	1.5	0.9	59
Laxemar	pre-PLU	Surface	14	1.3	1.5	<b>1.8</b>	2.3	3.0	1.9	0.5	26
Kalmar County	N.S.2000	Surface	26	0.78	1.2	<b>1.9</b>	2.9	12	2.7	2	91
Forsmark area		Surface	317	<0.4	1.9	<b>2.3</b>	3.1	12	2.9	2	65
Sweden	N.S.2000	Surface	725	0.078	0.39	<b>0.74</b>	2.0	39	1.5	2	140

## Surface Water

Pr			Praseodymium (µg/l)								Pr	
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
<b>Lake Water</b>												
Frisksjön	PSM002065	Surface	1	0.034		<b>0.034</b>		0.034	0.034			
Frisksjön	PSM002065	Bottom	1	0.035		<b>0.035</b>		0.035	0.035			
Simpevarp area		Surface	1	0.034		<b>0.034</b>		0.034	0.034			
Simpevarp area		Bottom	1	0.035		<b>0.035</b>		0.035	0.035			
Forsmark area		Surface	39	<0.005	0.010	<b>0.018</b>	0.026	0.069	0.020	0.01	74	
Forsmark area		Bottom	10	<0.005	0.017	<b>0.031</b>	0.034	0.058	0.028	0.02	60	
<b>Sea Water</b>												
Borholmsfjärden	PSM002062	Surface	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05			
Borholmsfjärden	PSM002062	Bottom	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05			
Granholmsfjärden	PSM002064	Surface	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05			
Granholmsfjärden	PSM002064	Bottom	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05			
Kråkelund	PSM002060	Surface	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05			
Kråkelund	PSM002060	Bottom	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05			
Ekö	PSM002061	Surface	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05			
Ekö	PSM002061	Bottom	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05			
Simpevarp area		Surface	4	<0.05	<0.05	<b>&lt;0.05</b>	<0.05	<0.05	<0.05			
Simpevarp area		Bottom	4	<0.05	<0.05	<b>&lt;0.05</b>	<0.05	<0.05	<0.05			
Forsmark area		Surface	34	<0.05	<0.05	<b>&lt;0.05</b>	<0.05	0.53	<0.05	0.10	200	
Forsmark area		Bottom	13	<0.05	<0.05	<b>&lt;0.05</b>	<0.05	0.21	<0.05	0.05	220	
<b>Streaming Water</b>												
Misterhultsbäcken Ö	PSM002082	Surface	1	0.13		<b>0.13</b>		0.13	0.13			
Smedtorpet	PSM002083	Surface	1	0.13		<b>0.13</b>		0.13	0.13			
Kärsvik	PSM002084	Surface	1	0.10		<b>0.10</b>		0.10	0.10			
Ekerum	PSM002085	Surface	1	0.046		<b>0.046</b>		0.046	0.046			
Plittorp	PSM002071	Surface	1	0.061		<b>0.061</b>		0.061	0.061			
Lillekvarn	PSM002072	Surface	1	0.083		<b>0.083</b>		0.083	0.083			
Kvarnstugan	PSM002079	Surface	1	0.063		<b>0.063</b>		0.063	0.063			
Ekhyddan	PSM002087	Surface	1	0.078		<b>0.078</b>		0.078	0.078			
Övrahammar	PSM002076	Surface	1	0.12		<b>0.12</b>		0.12	0.12			
Basteböla	PSM002086	Surface	1	0.18		<b>0.18</b>		0.18	0.18			
Simpevarp area		Surface	10	0.046	0.067	<b>0.092</b>	0.12	0.18	0.099	0.04	42	
Laxemar	pre-PLU	Surface	1	1.1		<b>1.1</b>		1.1	1.1			
Forsmark area		Surface	33	<0.005	0.013	<b>0.019</b>	0.033	0.073	0.026	0.02	72	
<b>Ra-226</b>			<b>Radium-226 (Bq/l)</b>								<b>Ra-226</b>	
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
<b>Lake Water</b>												
Frisksjön	PSM002065	Surface	3	0.10	0.15	<b>0.20</b>	0.55	0.90	0.40	0.4	110	
Frisksjön	PSM002065	Bottom	1	0.10		<b>0.10</b>		0.10	0.10			
Simpevarp area		Surface	3	0.10	0.15	<b>0.20</b>	0.55	0.90	0.40	0.4	110	
Simpevarp area		Bottom	1	0.10		<b>0.10</b>		0.10	0.10			
Forsmark area		Surface	6		0.050	<b>0.20</b>	0.20	0.50	0.18	0.2	100	
Forsmark area		Bottom	3				0.050	0.10	0.033	0.06	170	
<b>Sea Water</b>												
Borholmsfjärden	PSM002062	Surface	2	0.10	0.13	<b>0.15</b>	0.18	0.20	0.15	0.07	47	
Borholmsfjärden	PSM002062	Bottom	2		0.025	<b>0.050</b>	0.075	0.10	0.050	0.07	140	
Granholmsfjärden	PSM002064	Surface	2	<0.1	<0.1	<b>0.13</b>	0.16	0.20	0.13	0.1	85	
Granholmsfjärden	PSM002064	Bottom	2	0.10	0.15	<b>0.20</b>	0.25	0.30	0.20	0.1	71	
Kråkelund	PSM002060	Surface	2	0.10	0.18	<b>0.25</b>	0.33	0.40	0.25	0.2	85	
Kråkelund	PSM002060	Bottom	2	<0.1	<0.1	<b>0.13</b>	0.16	0.20	0.13	0.1	85	
Ekö	PSM002061	Surface	2		0.025	<b>0.050</b>	0.075	0.10	0.050	0.07	140	
Ekö	PSM002061	Bottom	2	0.10	0.15	<b>0.20</b>	0.25	0.30	0.20	0.1	71	
Simpevarp area		Surface	8	<0.1	<0.1	<b>0.10</b>	0.20	0.40	0.14	0.1	86	
Simpevarp area		Bottom	8	<0.1	<0.1	<b>0.10</b>	0.23	0.30	0.14	0.1	78	
Forsmark area		Surface	7	<0.1	<0.1	<b>0.10</b>	0.10	0.20	0.10	0.05	50	
Forsmark area		Bottom	4	<0.1	<0.1	<b>0.25</b>	0.40	0.40	0.24	0.2	79	
<b>Streaming Water</b>												
Misterhultsbäcken Ö	PSM002082	Surface	2	0.10	0.18	<b>0.25</b>	0.33	0.40	0.25	0.2	85	
Smedtorpet	PSM002083	Surface	2	<0.1	<0.1	<b>&lt;0.1</b>	<0.1	0.10	<0.1	0.04	47	
Kärsvik	PSM002084	Surface	2	<0.1	0.11	<b>0.18</b>	0.24	0.30	0.18	0.2	100	
Ekerum	PSM002085	Surface	2	0.10	0.15	<b>0.20</b>	0.25	0.30	0.20	0.1	71	
Plittorp	PSM002071	Surface	2	0.10	0.10	<b>0.10</b>	0.10	0.10	0.10			
Lillekvarn	PSM002072	Surface	1	0.10		<b>0.10</b>		0.10	0.10			
Kvarnstugan	PSM002079	Surface	2	<0.1	<0.1	<b>&lt;0.1</b>	<0.1	0.10	<0.1	0.04	47	
Ekhyddan	PSM002087	Surface	2		0.075	<b>0.15</b>	0.23	0.30	0.15	0.2	140	
Övrahammar	PSM002076	Surface	1	0.10		<b>0.10</b>		0.10	0.10			
Basteböla	PSM002086	Surface	1	0.30		<b>0.30</b>		0.30	0.30			
Simpevarp area		Surface	17	<0.1	0.10	<b>0.10</b>	0.30	0.40	0.15	0.1	79	



## Surface Water

Rn-222			Radon-222 (Bq/l)								Rn-222	
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
<b>Lake Water</b>												
Frisksjön	PSM002065	Surface	3	0.10	0.10	<b>0.10</b>	0.15	0.20	0.13	0.06	43	
Frisksjön	PSM002065	Bottom	1	0.20		<b>0.20</b>		0.20	0.20			
Simpevarp area		Surface	3	0.10	0.10	<b>0.10</b>	0.15	0.20	0.13	0.06	43	
Simpevarp area		Bottom	1	0.20		<b>0.20</b>		0.20	0.20			
Forsmark area		Surface	6		0.15	<b>0.30</b>	0.53	0.80	0.35	0.3	86	
Forsmark area		Bottom	3				0.20	0.40	0.13	0.2	170	
<b>Sea Water</b>												
Borholmsfjärden	PSM002062	Surface	2	0.30	0.48	<b>0.65</b>	0.83	1.0	0.65	0.5	76	
Borholmsfjärden	PSM002062	Bottom	2	<0.1	<0.1	<b>0.13</b>	0.16	0.20	0.13	0.1	85	
Granholmsfjärden	PSM002064	Surface	2		0.025	<b>0.050</b>	0.075	0.10	0.050	0.07	140	
Granholmsfjärden	PSM002064	Bottom	2	0.30	0.30	<b>0.30</b>	0.30	0.30	0.30			
Kråkelund	PSM002060	Surface	2	<0.1	<0.1	<b>0.13</b>	0.16	0.20	0.13	0.1	85	
Kråkelund	PSM002060	Bottom	2	0.10	0.18	<b>0.25</b>	0.33	0.40	0.25	0.2	85	
Ekö	PSM002061	Surface	2	<0.1	<0.1	<b>&lt;0.1</b>	<0.1	<0.1	<0.1	0.04	140	
Ekö	PSM002061	Bottom	2	<0.1	<0.1	<b>&lt;0.1</b>	<0.1	0.10	<0.1	0.07	140	
Simpevarp area		Surface	8	<0.1	<0.1	<b>&lt;0.1</b>	0.23	1.0	0.21	0.3	160	
Simpevarp area		Bottom	8	<0.1	<0.1	<b>0.15</b>	0.30	0.40	0.18	0.1	78	
Forsmark area		Surface	7	0.10	0.15	<b>0.30</b>	0.30	0.60	0.27	0.2	63	
Forsmark area		Bottom	4	0.10	0.10	<b>0.35</b>	0.60	0.60	0.35	0.3	82	
<b>Streaming Water</b>												
Misterhultsbäcken Ö	PSM002082	Surface	2	3.9	5.7	<b>7.5</b>	9.2	11	7.5	5	67	
Smedtorpet	PSM002083	Surface	2	8.5	8.8	<b>9.0</b>	9.3	9.5	9.0	0.7	7.9	
Kärrsvik	PSM002084	Surface	2	1.1	1.5	<b>2.0</b>	2.4	2.8	2.0	1	62	
Ekerum	PSM002085	Surface	2	0.20	0.25	<b>0.30</b>	0.35	0.40	0.30	0.1	47	
Plittorp	PSM002071	Surface	2	1.1	1.2	<b>1.4</b>	1.5	1.6	1.4	0.4	26	
Lillekvarn	PSM002072	Surface	1	0.70		<b>0.70</b>		0.70	0.70			
Kvarnstugan	PSM002079	Surface	2	0.50	0.60	<b>0.70</b>	0.80	0.90	0.70	0.3	40	
Ekhyddan	PSM002087	Surface	2	0.50	0.65	<b>0.80</b>	0.95	1.1	0.80	0.4	53	
Övrahammar	PSM002076	Surface	1	1.2		<b>1.2</b>		1.2	1.2			
Basteböla	PSM002086	Surface	1	1.9		<b>1.9</b>		1.9	1.9			
Simpevarp area		Surface	17	0.20	0.70	<b>1.1</b>	2.8	11	2.8	3	130	
Rb			Rubidium (µg/l)								Rb	
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
<b>Lake Water</b>												
Frisksjön	PSM002065	Surface	1	3.4		<b>3.4</b>		3.4	3.4			
Frisksjön	PSM002065	Bottom	1	3.4		<b>3.4</b>		3.4	3.4			
Simpevarp area		Surface	1	3.4		<b>3.4</b>		3.4	3.4			
Simpevarp area		Bottom	1	3.4		<b>3.4</b>		3.4	3.4			
Forsmark area		Surface	39	1.7	2.0	<b>2.4</b>	2.9	4.5	2.5	0.7	26	
Forsmark area		Bottom	10	1.8	2.4	<b>3.1</b>	3.5	5.4	3.1	1	33	
<b>Sea Water</b>												
Borholmsfjärden	PSM002062	Surface	1	17		<b>17</b>		17	17			
Borholmsfjärden	PSM002062	Bottom	1	18		<b>18</b>		18	18			
Granholmsfjärden	PSM002064	Surface	1	20		<b>20</b>		20	20			
Granholmsfjärden	PSM002064	Bottom	1	21		<b>21</b>		21	21			
Kråkelund	PSM002060	Surface	1	22		<b>22</b>		22	22			
Kråkelund	PSM002060	Bottom	1	22		<b>22</b>		22	22			
Ekö	PSM002061	Surface	1	22		<b>22</b>		22	22			
Ekö	PSM002061	Bottom	1	22		<b>22</b>		22	22			
Simpevarp area		Surface	4	17	19	<b>21</b>	22	22	20	2	11	
Simpevarp area		Bottom	4	18	20	<b>22</b>	22	22	21	2	9.6	
Forsmark area		Surface	35	3.5	15	<b>17</b>	17	20	15	4	28	
Forsmark area		Bottom	13	4.0	16	<b>17</b>	18	19	16	4	24	
<b>Streaming Water</b>												
Misterhultsbäcken Ö	PSM002082	Surface	1	3.1		<b>3.1</b>		3.1	3.1			
Smedtorpet	PSM002083	Surface	1	2.2		<b>2.2</b>		2.2	2.2			
Kärrsvik	PSM002084	Surface	1	4.9		<b>4.9</b>		4.9	4.9			
Ekerum	PSM002085	Surface	1	1.8		<b>1.8</b>		1.8	1.8			
Plittorp	PSM002071	Surface	1	2.8		<b>2.8</b>		2.8	2.8			
Lillekvarn	PSM002072	Surface	1	1.9		<b>1.9</b>		1.9	1.9			
Kvarnstugan	PSM002079	Surface	1	1.9		<b>1.9</b>		1.9	1.9			
Ekhyddan	PSM002087	Surface	1	2.2		<b>2.2</b>		2.2	2.2			
Övrahammar	PSM002076	Surface	1	2.4		<b>2.4</b>		2.4	2.4			
Basteböla	PSM002086	Surface	1	7.7		<b>7.7</b>		7.7	7.7			
Simpevarp area		Surface	10	1.8	2.0	<b>2.3</b>	3.0	7.7	3.1	2	60	
Laxemar	pre-PLU	Surface	1	4.7		<b>4.7</b>		4.7	4.7			
Forsmark area		Surface	33	0.49	1.9	<b>2.2</b>	2.7	4.9	2.4	0.8	35	

## Surface Water

Sm			Samarium (µg/l)								Sm
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
<b>Lake Water</b>											
Frisksjön	PSM002065	Surface	1	0.022		<b>0.022</b>		0.022	0.022		
Frisksjön	PSM002065	Bottom	1	0.022		<b>0.022</b>		0.022	0.022		
Simpevarp area		Surface	1	0.022		<b>0.022</b>		0.022	0.022		
Simpevarp area		Bottom	1	0.022		<b>0.022</b>		0.022	0.022		
Forsmark area		Surface	39	<0.005	0.0084	<b>0.016</b>	0.021	0.055	0.017	0.01	70
Forsmark area		Bottom	10	<0.005	0.017	<b>0.026</b>	0.033	0.047	0.024	0.01	55
<b>Sea Water</b>											
Borholmsfjärden	PSM002062	Surface	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05		
Borholmsfjärden	PSM002062	Bottom	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05		
Granholmsfjärden	PSM002064	Surface	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05		
Granholmsfjärden	PSM002064	Bottom	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05		
Kråkelund	PSM002060	Surface	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05		
Kråkelund	PSM002060	Bottom	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05		
Ekö	PSM002061	Surface	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05		
Ekö	PSM002061	Bottom	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05		
Simpevarp area		Surface	4	<0.05	<0.05	<b>&lt;0.05</b>	<0.05	<0.05	<0.05		
Simpevarp area		Bottom	4	<0.05	<0.05	<b>&lt;0.05</b>	<0.05	<0.05	<0.05		
Forsmark area		Surface	34	<0.05	<0.05	<b>&lt;0.05</b>	<0.05	0.33	<0.05	0.06	180
Forsmark area		Bottom	13	<0.05	<0.05	<b>&lt;0.05</b>	<0.05	0.15	<0.05	0.04	200
<b>Streaming Water</b>											
Misterhultsbäcken Ö	PSM002082	Surface	1	0.086		<b>0.086</b>		0.086	0.086		
Smedtorpet	PSM002083	Surface	1	0.084		<b>0.084</b>		0.084	0.084		
Kärsvik	PSM002084	Surface	1	0.068		<b>0.068</b>		0.068	0.068		
Ekerum	PSM002085	Surface	1	0.036		<b>0.036</b>		0.036	0.036		
Plittorp	PSM002071	Surface	1	0.044		<b>0.044</b>		0.044	0.044		
Lillekvarn	PSM002072	Surface	1	0.056		<b>0.056</b>		0.056	0.056		
Kvarnstugan	PSM002079	Surface	1	0.045		<b>0.045</b>		0.045	0.045		
Ekhyddan	PSM002087	Surface	1	0.055		<b>0.055</b>		0.055	0.055		
Övrahammar	PSM002076	Surface	1	0.085		<b>0.085</b>		0.085	0.085		
Basteböla	PSM002086	Surface	1	0.13		<b>0.13</b>		0.13	0.13		
Simpevarp area		Surface	10	0.036	0.048	<b>0.062</b>	0.084	0.13	0.068	0.03	40
Laxemar	pre-PLU	Surface	1	0.73		<b>0.73</b>		0.73	0.73		
Forsmark area		Surface	33	<0.005	0.011	<b>0.017</b>	0.027	0.054	0.021	0.01	68

## Surface Water

Sc			Scandium (µg/l)							Sc	
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
<b>Lake Water</b>											
Frisksjön	PSM002065	Surface	1	<0.05		<0.05		<0.05	<0.05		
Frisksjön	PSM002065	Bottom	1	<0.05		<0.05		<0.05	<0.05		
Simpevarp area		Surface	1	<0.05		<0.05		<0.05	<0.05		
Simpevarp area		Bottom	1	<0.05		<0.05		<0.05	<0.05		
Forsmark area		Surface	39	<0.05	<0.05	<0.05	<0.05	0.054	<0.05	0.007	29
Forsmark area		Bottom	10	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.004	19
<b>Sea Water</b>											
Borholmsfjärden	PSM002062	Surface	1	<0.5		<0.5		<0.5	<0.5		
Borholmsfjärden	PSM002062	Bottom	1	<0.5		<0.5		<0.5	<0.5		
Granholmsfjärden	PSM002064	Surface	1	<0.5		<0.5		<0.5	<0.5		
Granholmsfjärden	PSM002064	Bottom	1	<0.5		<0.5		<0.5	<0.5		
Kråkelund	PSM002060	Surface	1	<0.5		<0.5		<0.5	<0.5		
Kråkelund	PSM002060	Bottom	1	<0.5		<0.5		<0.5	<0.5		
Ekö	PSM002061	Surface	1	<0.5		<0.5		<0.5	<0.5		
Ekö	PSM002061	Bottom	1	<0.5		<0.5		<0.5	<0.5		
Simpevarp area		Surface	4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		
Simpevarp area		Bottom	4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		
Forsmark area		Surface	35	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	0.1	100
Forsmark area		Bottom	13	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	0.09	110
<b>Streaming Water</b>											
Misterhultsbäcken Ö	PSM002082	Surface	1	<0.05		<0.05		<0.05	<0.05		
Smedtorpet	PSM002083	Surface	1	<0.05		<0.05		<0.05	<0.05		
Kärrevik	PSM002084	Surface	1	<0.05		<0.05		<0.05	<0.05		
Ekerum	PSM002085	Surface	1	<0.05		<0.05		<0.05	<0.05		
Plittorp	PSM002071	Surface	1	<0.05		<0.05		<0.05	<0.05		
Lillekvarn	PSM002072	Surface	1	<0.05		<0.05		<0.05	<0.05		
Kvarnstugan	PSM002079	Surface	1	<0.05		<0.05		<0.05	<0.05		
Ekhyddan	PSM002087	Surface	1	<0.05		<0.05		<0.05	<0.05		
Övrahammar	PSM002076	Surface	1	<0.05		<0.05		<0.05	<0.05		
Basteböla	PSM002086	Surface	1	<0.05		<0.05		<0.05	<0.05		
Simpevarp area		Surface	10	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
Laxemar	pre-PLU	Surface	1	0.36		0.36		0.36	0.36		
Forsmark area		Surface	33	<0.05	<0.05	<0.05	<0.05	0.054	<0.05	0.008	32

## Surface Water

Si			Silicon (mg/l)								Si
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
<b>Lake Water</b>											
Frisksjön	PSM002065	Surface	36	2.8	3.9	<b>4.4</b>	5.4	6.4	4.6	1.0	21
Frisksjön	PSM002065	Bottom	36	2.8	4.2	<b>4.5</b>	5.3	6.2	4.6	0.9	20
Jämsen	PSM002067	Surface	36	3.1	3.9	<b>4.4</b>	4.8	6.0	4.4	0.6	15
Jämsen	PSM002067	Bottom	36	4.0	4.7	<b>5.1</b>	5.3	5.7	5.0	0.5	9.5
Söråmagasinet	PSM005964	Surface	22	0.33	0.72	<b>1.0</b>	1.3	1.9	1.0	0.4	41
Söråmagasinet	PSM005964	Bottom	22	0.46	0.82	<b>1.3</b>	1.4	2.2	1.2	0.5	39
Götemar	PSM002066	Surface	18	1.5	1.8	<b>2.2</b>	2.5	2.8	2.2	0.4	17
Götemar	PSM002066	Bottom	18	1.5	2.5	<b>2.6</b>	2.8	3.3	2.7	0.4	16
Simpevarp area		Surface	112	0.33	2.1	<b>3.9</b>	4.6	6.4	3.4	2	47
Simpevarp area		Bottom	112	0.46	2.6	<b>4.2</b>	5.1	6.2	3.8	2	44
Laxemar	pre-PLU	-	1	4.9		<b>4.9</b>		4.9	4.9		
Kalmar County	N.S.2000	Surface	106	0.090	1.8	<b>3.1</b>	4.2	8.1	3.1	2	50
Forsmark area		Surface	247	<0.03	0.76	<b>2.3</b>	4.2	11	2.8	2	84
Forsmark area		Bottom	74	0.13	1.6	<b>2.9</b>	4.0	11	3.5	3	75
Sweden	N.S.2000	Surface	3464		0.58	<b>1.5</b>	2.5	11	1.7	1	79
<b>Sea Water</b>											
			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Borholmsfjärden	PSM002062	Surface	36	<0.03	0.77	<b>2.3</b>	3.4	6.3	2.4	2	78
Borholmsfjärden	PSM002062	Bottom	36	0.14	0.60	<b>1.4</b>	2.4	5.8	1.6	1	72
Granholmsfjärden	PSM002064	Surface	37	0.33	0.52	<b>0.96</b>	2.6	6.2	1.7	2	90
Granholmsfjärden	PSM002064	Bottom	35	0.37	0.77	<b>1.1</b>	1.2	1.5	1.0	0.3	32
Kräkelund	PSM002060	Surface	34	<0.1	0.22	<b>0.27</b>	0.36	0.65	0.30	0.1	41
Kräkelund	PSM002060	Bottom	34	<0.1	0.30	<b>0.34</b>	0.45	0.72	0.37	0.1	35
Ekö	PSM002061	Surface	36	<0.1	0.16	<b>0.27</b>	0.41	0.59	0.28	0.2	57
Ekö	PSM002061	Bottom	35	<0.1	0.19	<b>0.30</b>	0.45	1.5	0.34	0.2	72
Fågelöfjärden	PSM002063	Surface	17	<0.04	0.19	<b>0.26</b>	0.68	0.92	0.39	0.3	73
Fågelöfjärden	PSM002063	Bottom	17	<0.04	0.22	<b>0.26</b>	0.60	0.91	0.38	0.2	65
Simpevarp area		Surface	160	<0.1	0.25	<b>0.43</b>	1.2	6.3	1.1	1	130
Simpevarp area		Bottom	157	<0.1	0.31	<b>0.47</b>	1.1	5.8	0.79	0.8	99
Forsmark area		Surface	175	0.090	0.28	<b>0.45</b>	0.75	6.2	0.84	1	130
Forsmark area		Bottom	72	0.090	0.29	<b>0.46</b>	0.77	4.3	0.71	0.8	110
<b>Streaming Water</b>											
			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Misterhult	PSM002080	Surface	17	5.6	6.0	<b>7.2</b>	7.9	9.1	7.1	1	16
Perstorpet	PSM002081	Surface	34	6.5	7.8	<b>9.1</b>	9.8	12	8.9	1	15
Misterhultsbäcken Ö	PSM002082	Surface	37	6.6	8.0	<b>8.9</b>	9.4	13	9.0	2	17
Smedtorpet	PSM002083	Surface	39	6.3	8.1	<b>8.5</b>	9.2	11	8.6	1.0	11
Kärsvik	PSM002084	Surface	38	6.8	8.8	<b>9.2</b>	10.0	13	9.4	1	13
Ekerum	PSM002085	Surface	37	7.9	10.0	<b>10</b>	11	13	10	1	11
Köksmåla	PSM002068	Surface	36	4.8	5.3	<b>5.6</b>	6.0	6.8	5.7	0.5	9.0
Jämserum	PSM002069	Surface	37	2.9	3.8	<b>4.3</b>	4.9	5.9	4.3	0.8	18
Plittorp	PSM002071	Surface	36	4.9	5.5	<b>5.7</b>	6.0	6.6	5.7	0.5	8.1
Lillekvarn	PSM002072	Surface	15	3.5	4.4	<b>5.0</b>	5.4	6.6	5.0	0.9	19
Brolund	PSM002077	Surface	18	6.0	6.8	<b>7.3</b>	7.5	7.9	7.1	0.5	7.7
Sillebäcken	PSM002078	Surface	29	8.5	10	<b>11</b>	12	20	12	3	23
Kvarnstugan	PSM002079	Surface	36	6.0	6.8	<b>7.5</b>	8.0	9.8	7.5	0.9	12
Ekhyddan	PSM002087	Surface	39	6.6	7.6	<b>8.0</b>	8.5	10	8.1	0.8	10.0
Övrahammar	PSM002076	Surface	32	4.7	10	<b>11</b>	12	17	11	2	21
Basteböla	PSM002086	Surface	29	8.8	12	<b>13</b>	14	15	13	1	11
Flohult	PSM002070	Surface	17	5.8	6.3	<b>7.1</b>	7.7	9.2	7.1	1	15
Figeholm	PSM002075	Surface	17	7.5	8.0	<b>8.5</b>	9.3	11	8.8	1	12
	PSM107735	Surface	12	4.3	8.2	<b>8.9</b>	9.9	11	8.6	2	22
Simpevarp area		Surface	555	2.9	6.5	<b>8.2</b>	10.0	20	8.4	3	31
Laxemar	pre-PLU	Surface	13	5.7	6.3	<b>8.6</b>	8.7	9.1	7.7	1	17
Kalmar County	N.S.2000	Surface	26	0.82	2.8	<b>4.3</b>	5.1	7.7	4.1	2	40
Forsmark area		Surface	317	0.080	1.9	<b>3.5</b>	4.5	8.7	3.3	2	54
Sweden	N.S.2000	Surface	725	0.070	1.7	<b>2.9</b>	4.4	19	3.2	2	65

## Surface Water

SiO2-Si			Silicon as silicate (mg/l)								SiO2-Si	
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
<b>Lake Water</b>												
Frisksjön	PSM002065	Surface	36	2.8	4.0	<b>4.6</b>	5.6	6.5	4.8	1.0	20	
Frisksjön	PSM002065	Bottom	36	2.8	4.3	<b>4.8</b>	5.6	6.3	4.8	0.9	19	
Jämsen	PSM002067	Surface	36	3.0	4.0	<b>4.6</b>	5.1	5.4	4.5	0.7	15	
Jämsen	PSM002067	Bottom	36	4.0	5.0	<b>5.2</b>	5.3	6.1	5.1	0.4	8.0	
Söråmagasinet	PSM005964	Surface	22	0.30	0.76	<b>1.0</b>	1.3	2.0	1.0	0.4	40	
Söråmagasinet	PSM005964	Bottom	22	0.43	0.91	<b>1.2</b>	1.4	2.5	1.2	0.5	39	
Götemar	PSM002066	Surface	18	1.8	2.0	<b>2.3</b>	2.6	2.8	2.3	0.4	16	
Götemar	PSM002066	Bottom	18	1.8	2.6	<b>2.7</b>	3.0	3.5	2.8	0.4	15	
Simpevarp area		Surface	112	0.30	2.1	<b>4.0</b>	4.9	6.5	3.5	2	47	
Simpevarp area		Bottom	112	0.43	2.7	<b>4.4</b>	5.2	6.3	3.9	2	43	
Forsmark area		Surface	255	0.037	0.78	<b>2.2</b>	4.2	10	2.8	2	85	
Forsmark area		Bottom	75	0.15	1.6	<b>2.9</b>	4.1	10	3.5	3	77	
<b>Sea Water</b>												
Borholmsfjärden	PSM002062	Surface	37	0.038	0.86	<b>2.4</b>	3.6	7.1	2.5	2	79	
Borholmsfjärden	PSM002062	Bottom	37	0.15	0.58	<b>1.5</b>	2.4	6.5	1.7	1	74	
Granholmsfjärden	PSM002064	Surface	38	0.34	0.53	<b>1.1</b>	2.3	5.2	1.7	1	84	
Granholmsfjärden	PSM002064	Bottom	36	0.40	0.79	<b>1.1</b>	1.3	1.5	1.0	0.3	31	
Kråkelund	PSM002060	Surface	35	0.13	0.23	<b>0.29</b>	0.39	0.72	0.31	0.1	40	
Kråkelund	PSM002060	Bottom	35	0.20	0.31	<b>0.36</b>	0.45	0.78	0.39	0.1	33	
Ekö	PSM002061	Surface	36	0.032	0.14	<b>0.28</b>	0.42	0.58	0.29	0.2	54	
Ekö	PSM002061	Bottom	35	0.042	0.17	<b>0.36</b>	0.45	1.5	0.36	0.2	68	
Fågelöfjärden	PSM002063	Surface	17	0.015	0.22	<b>0.28</b>	0.70	0.97	0.40	0.3	70	
Fågelöfjärden	PSM002063	Bottom	17	0.031	0.23	<b>0.29</b>	0.58	0.99	0.41	0.3	67	
Simpevarp area		Surface	163	0.015	0.27	<b>0.45</b>	1.3	7.1	1.1	2	130	
Simpevarp area		Bottom	160	0.031	0.34	<b>0.50</b>	1.1	6.5	0.83	0.8	100	
Forsmark area		Surface	174	0.098	0.26	<b>0.46</b>	0.72	5.5	0.81	1	130	
Forsmark area		Bottom	71	0.13	0.29	<b>0.47</b>	0.85	4.1	0.67	0.7	99	
Bottenhavet	SMHI:MS4	Surface	8	0.40	0.48	<b>0.52</b>	0.54	0.57	0.51	0.05	11	
Bottenhavet	SMHI:MS4	Bottom	9	0.42	0.50	<b>0.52</b>	0.54	0.65	0.52	0.06	12	
N Simpevarp	SMHI:B1	Surface	91	0.067	0.18	<b>0.26</b>	0.40	0.55	0.28	0.1	45	
N Simpevarp	SMHI:B1	Bottom	85	0.18	0.44	<b>0.50</b>	0.65	1.6	0.58	0.3	44	
Östersjön	SMHI:BY29	Surface	46	0.087	0.19	<b>0.25</b>	0.30	0.42	0.25	0.08	33	
Östersjön	SMHI:BY29	Bottom	46	0.17	0.27	<b>0.31</b>	0.36	0.45	0.31	0.06	20	
<b>Streaming Water</b>												
Misterhult	PSM002080	Surface	17	5.6	6.3	<b>7.4</b>	8.4	10.0	7.5	1	18	
Perstorpet	PSM002081	Surface	34	6.1	8.0	<b>9.1</b>	9.8	12	9.0	1	16	
Misterhultsbäcken Ö	PSM002082	Surface	37	6.6	8.1	<b>9.1</b>	9.8	13	9.2	2	16	
Smedtorpet	PSM002083	Surface	40	6.4	8.1	<b>8.8</b>	9.5	11	8.9	1	12	
Kärrevik	PSM002084	Surface	38	7.4	9.1	<b>9.6</b>	10	13	9.5	1	12	
Ekerum	PSM002085	Surface	37	7.8	10	<b>10</b>	11	13	10	1	11	
Köksmåla	PSM002068	Surface	38	5.0	5.5	<b>5.8</b>	6.3	7.4	5.9	0.6	10.0	
Jämserum	PSM002069	Surface	36	2.8	4.0	<b>4.5</b>	5.0	6.1	4.4	0.8	19	
Plittorp	PSM002071	Surface	37	4.7	5.6	<b>6.1</b>	6.3	6.8	5.9	0.5	8.7	
Lillekvarn	PSM002072	Surface	15	3.5	4.9	<b>5.1</b>	5.9	7.1	5.3	1	19	
Brolund	PSM002077	Surface	18	6.6	6.9	<b>7.6</b>	7.9	8.7	7.5	0.6	7.9	
Sillebäcken	PSM002078	Surface	29	8.9	10	<b>12</b>	13	21	12	3	22	
Kvarnstugan	PSM002079	Surface	37	6.0	6.9	<b>8.0</b>	8.2	9.9	7.7	0.9	12	
Ekhyddan	PSM002087	Surface	40	6.5	7.7	<b>8.4</b>	8.7	10	8.3	0.9	11	
Övrahammar	PSM002076	Surface	33	4.6	10	<b>12</b>	12	16	11	2	20	
Basteböla	PSM002086	Surface	29	8.6	13	<b>13</b>	14	15	13	1	11	
Flohult	PSM002070	Surface	17	5.9	6.7	<b>7.3</b>	7.9	9.6	7.4	1	14	
Figeholm	PSM002075	Surface	18	7.9	8.3	<b>9.0</b>	9.5	12	9.1	1	12	
	PSM107735	Surface	12	4.2	8.5	<b>9.1</b>	9.8	11	8.8	2	23	
	PSM000347	Surface	1	8.8		<b>8.8</b>		8.8	8.8			
Simpevarp area		Surface	563	2.8	6.6	<b>8.5</b>	10	21	8.6	3	30	
Forsmark area		Surface	322	0.088	1.9	<b>3.6</b>	4.6	8.2	3.4	2	53	

## Surface Water

Na			Sodium (mg/l)								Na
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
<b>Lake Water</b>											
Frisksjön	PSM002065	Surface	36	2.7	8.7	<b>9.4</b>	9.9	14	9.3	2	16
Frisksjön	PSM002065	Bottom	36	2.5	8.7	<b>9.2</b>	9.8	13	9.2	2	17
Jämsen	PSM002067	Surface	36	5.7	8.2	<b>8.6</b>	9.0	11	8.6	0.8	9.7
Jämsen	PSM002067	Bottom	36	8.0	8.5	<b>8.9</b>	9.8	18	10.0	3	26
Söråmagasinet	PSM005964	Surface	22	13	14	<b>14</b>	15	17	14	1.0	6.9
Söråmagasinet	PSM005964	Bottom	22	13	14	<b>14</b>	15	18	14	1	7.4
Götemar	PSM002066	Surface	18	9.9	11	<b>11</b>	11	13	11	0.7	6.1
Götemar	PSM002066	Bottom	18	10	11	<b>11</b>	11	13	11	0.6	5.6
Simpevarp area		Surface	112	2.7	8.7	<b>9.6</b>	11	17	10	2	23
Simpevarp area		Bottom	112	2.5	8.9	<b>10</b>	13	18	11	3	24
Laxemar	pre-PLU	-	1	13		<b>13</b>		13	13		
Kalmar County	N.S.2000	Surface	106	2.4	4.5	<b>5.3</b>	6.3	31	6.2	4	60
Forsmark area		Surface	247	1.4	7.0	<b>12</b>	28	210	23	30	120
Forsmark area		Bottom	74	5.2	6.8	<b>12</b>	28	350	30	50	170
Sweden	N.S.2000	Surface	3464	0.092	1.1	<b>1.7</b>	4.5	1300	4.1	30	660
<b>Sea Water</b>											
			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Borholmsfjärden	PSM002062	Surface	36	280	990	<b>1300</b>	1500	1800	1200	400	33
Borholmsfjärden	PSM002062	Bottom	36	550	1400	<b>1500</b>	1700	1800	1500	300	18
Granholmsfjärden	PSM002064	Surface	37	420	1400	<b>1700</b>	1800	2000	1500	400	26
Granholmsfjärden	PSM002064	Bottom	35	1600	1800	<b>1800</b>	1900	1900	1800	60	3.4
Kräkelund	PSM002060	Surface	34	1800	1900	<b>2000</b>	2000	2100	2000	70	3.5
Kräkelund	PSM002060	Bottom	34	1900	2000	<b>2000</b>	2100	2300	2000	100	4.8
Ekö	PSM002061	Surface	36	1800	2000	<b>2000</b>	2000	2200	2000	70	3.3
Ekö	PSM002061	Bottom	35	1900	2000	<b>2000</b>	2000	2200	2000	70	3.3
Fågelöfjärden	PSM002063	Surface	17	1800	1900	<b>1900</b>	2000	2000	1900	60	3.0
Fågelöfjärden	PSM002063	Bottom	17	1600	1900	<b>1900</b>	1900	2000	1900	80	4.3
Simpevarp area		Surface	160	280	1400	<b>1900</b>	2000	2200	1700	400	25
Simpevarp area		Bottom	157	550	1800	<b>1900</b>	2000	2300	1800	300	14
Forsmark area		Surface	175	66	1300	<b>1400</b>	1500	1600	1300	300	27
Forsmark area		Bottom	72	140	1400	<b>1400</b>	1500	1600	1400	200	15
<b>Streaming Water</b>											
			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Misterhult	PSM002080	Surface	17	6.0	7.5	<b>8.1</b>	9.0	11	8.3	1	16
Perstorpet	PSM002081	Surface	34	2.7	4.2	<b>4.7</b>	5.5	11	4.9	1	30
Misterhultsbäcken Ö	PSM002082	Surface	37	4.0	6.2	<b>6.7</b>	8.5	15	7.6	2	32
Smedtorpet	PSM002083	Surface	39	3.9	6.7	<b>8.5</b>	13	20	10	5	45
Kärsvik	PSM002084	Surface	38	5.0	8.8	<b>9.9</b>	11	14	10	2	20
Ekerum	PSM002085	Surface	37	5.0	6.6	<b>7.8</b>	9.2	29	8.6	4	46
Köksmåla	PSM002068	Surface	37	3.2	3.9	<b>4.6</b>	5.3	8.5	4.9	1	26
Jämserum	PSM002069	Surface	37	6.5	8.0	<b>8.6</b>	8.9	11	8.4	1.0	12
Plittorp	PSM002071	Surface	36	8.1	10.0	<b>11</b>	13	17	12	2	18
Lillekvarn	PSM002072	Surface	15	6.4	9.4	<b>10</b>	12	15	10	2	20
Brolund	PSM002077	Surface	18	6.3	8.7	<b>9.4</b>	12	15	10	2	24
Sillebäcken	PSM002078	Surface	29	3.2	3.9	<b>4.1</b>	4.6	5.5	4.3	0.6	14
Kvarnstugan	PSM002079	Surface	36	4.8	8.2	<b>9.3</b>	13	18	10	3	31
Ekhyddan	PSM002087	Surface	39	4.8	8.3	<b>9.1</b>	14	18	11	4	35
Övrahammar	PSM002076	Surface	32	3.4	5.9	<b>6.9</b>	11	20	8.4	4	48
Basteböla	PSM002086	Surface	29	7.9	11	<b>12</b>	15	31	14	5	36
Flohult	PSM002070	Surface	17	7.6	9.3	<b>11</b>	12	14	11	2	18
Figeholm	PSM002075	Surface	17	6.7	8.7	<b>10</b>	11	12	9.9	2	17
	PSM107735	Surface	12	4.4	4.8	<b>5.2</b>	6.4	6.8	5.4	0.9	16
Simpevarp area		Surface	556	2.7	6.1	<b>8.6</b>	11	31	8.9	4	42
Laxemar	pre-PLU	Surface	14	8.5	9.0	<b>9.2</b>	12	27	11	5	43
Kalmar County	N.S.2000	Surface	26	4.2	5.3	<b>6.4</b>	8.1	110	11	20	180
Forsmark area		Surface	317	1.9	5.6	<b>12</b>	22	100	17	20	100
Sweden	N.S.2000	Surface	725	0.48	1.4	<b>2.9</b>	6.7	120	5.5	9	160

## Surface Water

Sr			Strontium (mg/l)								Sr
Lake Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Frisksjön	PSM002065	Surface	36	0.033	0.035	<b>0.037</b>	0.038	0.043	0.037	0.002	6.7
Frisksjön	PSM002065	Bottom	36	0.032	0.035	<b>0.037</b>	0.038	0.045	0.037	0.003	7.4
Jämsen	PSM002067	Surface	36	0.040	0.043	<b>0.044</b>	0.046	0.048	0.044	0.002	4.0
Jämsen	PSM002067	Bottom	36	0.040	0.044	<b>0.046</b>	0.051	0.058	0.048	0.005	10
Söråmagasinet	PSM005964	Surface	22	0.050	0.052	<b>0.054</b>	0.055	0.063	0.054	0.003	5.3
Söråmagasinet	PSM005964	Bottom	22	0.050	0.053	<b>0.054</b>	0.055	0.066	0.055	0.004	7.3
Götemar	PSM002066	Surface	18	0.052	0.054	<b>0.055</b>	0.056	0.058	0.055	0.001	2.7
Götemar	PSM002066	Bottom	18	0.053	0.055	<b>0.056</b>	0.059	0.065	0.057	0.003	5.3
Simpevarp area		Surface	112	0.033	0.038	<b>0.045</b>	0.053	0.063	0.046	0.008	17
Simpevarp area		Bottom	112	0.032	0.039	<b>0.047</b>	0.054	0.066	0.047	0.009	18
Laxemar	pre-PLU	-	1	0.040		<b>0.040</b>		0.040	0.040		
Forsmark area		Surface	247	0.015	0.069	<b>0.079</b>	0.091	0.53	0.083	0.04	48
Forsmark area		Bottom	74	0.046	0.065	<b>0.090</b>	0.11	0.32	0.090	0.04	44
Sea Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Borholmsfjärden	PSM002062	Surface	36	0.24	0.75	<b>0.99</b>	1.1	1.3	0.92	0.3	31
Borholmsfjärden	PSM002062	Bottom	36	0.41	1.00	<b>1.1</b>	1.2	1.3	1.1	0.2	18
Granholmsfjärden	PSM002064	Surface	37	0.33	0.98	<b>1.2</b>	1.3	1.4	1.1	0.3	25
Granholmsfjärden	PSM002064	Bottom	35	1.2	1.3	<b>1.4</b>	1.4	1.5	1.3	0.06	4.5
Kräkelund	PSM002060	Surface	34	1.3	1.4	<b>1.4</b>	1.5	1.6	1.4	0.06	4.4
Kräkelund	PSM002060	Bottom	34	1.3	1.4	<b>1.5</b>	1.5	1.6	1.5	0.07	5.0
Ekö	PSM002061	Surface	36	1.3	1.4	<b>1.5</b>	1.5	1.6	1.4	0.06	4.5
Ekö	PSM002061	Bottom	35	1.3	1.4	<b>1.5</b>	1.5	1.6	1.5	0.06	4.1
Fågelöfjärden	PSM002063	Surface	17	1.3	1.3	<b>1.4</b>	1.4	1.5	1.4	0.06	4.5
Fågelöfjärden	PSM002063	Bottom	17	1.2	1.3	<b>1.4</b>	1.4	1.5	1.4	0.07	5.1
Simpevarp area		Surface	160	0.24	1.1	<b>1.4</b>	1.4	1.6	1.2	0.3	24
Simpevarp area		Bottom	157	0.41	1.3	<b>1.4</b>	1.5	1.6	1.3	0.2	13
Forsmark area		Surface	175	0.10	0.96	<b>1.0</b>	1.1	1.2	0.94	0.2	25
Forsmark area		Bottom	72	0.16	0.98	<b>1.0</b>	1.0	1.2	0.99	0.1	14
Streaming Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Misterhult	PSM002080	Surface	17	0.028	0.031	<b>0.038</b>	0.043	0.065	0.039	0.01	26
Perstorpet	PSM002081	Surface	33	0.025	0.035	<b>0.041</b>	0.050	0.062	0.042	0.009	22
Misterhultsbäcken Ö	PSM002082	Surface	37	0.026	0.034	<b>0.043</b>	0.065	0.11	0.052	0.02	45
Smedtorpet	PSM002083	Surface	39	0.027	0.041	<b>0.048</b>	0.064	0.086	0.052	0.02	31
Kärrsvik	PSM002084	Surface	38	0.052	0.061	<b>0.066</b>	0.070	0.085	0.066	0.008	11
Ekerum	PSM002085	Surface	37	0.056	0.071	<b>0.081</b>	0.087	0.58	0.094	0.08	89
Köksmåla	PSM002068	Surface	37	0.030	0.038	<b>0.043</b>	0.061	0.65	0.067	0.10	150
Jämserum	PSM002069	Surface	37	0.036	0.042	<b>0.044</b>	0.045	0.048	0.044	0.003	6.1
Plittorp	PSM002071	Surface	36	0.039	0.048	<b>0.054</b>	0.059	0.073	0.054	0.009	17
Lillekvarn	PSM002072	Surface	15	0.021	0.024	<b>0.027</b>	0.031	0.036	0.028	0.004	15
Brolund	PSM002077	Surface	18	0.034	0.045	<b>0.051</b>	0.057	0.074	0.052	0.010	19
Sillebäcken	PSM002078	Surface	29	0.029	0.030	<b>0.032</b>	0.036	0.054	0.035	0.007	20
Kvarnstugan	PSM002079	Surface	36	0.033	0.044	<b>0.052</b>	0.063	0.080	0.054	0.01	23
Ekhyddan	PSM002087	Surface	39	0.036	0.046	<b>0.053</b>	0.069	0.088	0.058	0.02	27
Övrahammar	PSM002076	Surface	32	0.041	0.052	<b>0.060</b>	0.076	0.11	0.067	0.02	30
Basteböla	PSM002086	Surface	29	0.053	0.067	<b>0.073</b>	0.080	0.10	0.074	0.01	15
Flohult	PSM002070	Surface	17	0.051	0.058	<b>0.065</b>	0.074	0.76	0.11	0.2	160
Figeholm	PSM002075	Surface	17	0.045	0.054	<b>0.066</b>	0.069	0.10	0.063	0.01	22
	PSM107735	Surface	12	0.048	0.054	<b>0.058</b>	0.061	0.089	0.060	0.01	18
Simpevarp area		Surface	555	0.021	0.042	<b>0.053</b>	0.068	0.76	0.059	0.05	83
Laxemar	pre-PLU	Surface	14	0.050	0.050	<b>0.060</b>	0.068	0.12	0.066	0.02	35
Forsmark area		Surface	315	0.011	0.068	<b>0.082</b>	0.10	0.26	0.091	0.04	46

## Surface Water

Sr-87			Strontium-87 (Sr87/Sr86) (ratio)								Sr-87	
Lake Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
Frisksjön	PSM002065	Surface	6	0.7216	0.7220	<b>0.7220</b>	0.7220	0.7223	0.7220	0.000213	0.029	
Frisksjön	PSM002065	Bottom	6	0.7218	0.7219	<b>0.7219</b>	0.7220	0.7222	0.7220	0.000122	0.017	
Jämsen	PSM002067	Surface	1	0.7280		<b>0.7280</b>		0.7280	0.7280			
Jämsen	PSM002067	Bottom	1	0.7280		<b>0.7280</b>		0.7280	0.7280			
Götemar	PSM002066	Surface	1	0.7208		<b>0.7208</b>		0.7208	0.7208			
Götemar	PSM002066	Bottom	1	0.7205		<b>0.7205</b>		0.7205	0.7205			
Simpevarp area		Surface	8	0.7208	0.7219	<b>0.7220</b>	0.7221	0.7280	0.7226	0.00223	0.31	
Simpevarp area		Bottom	8	0.7205	0.7219	<b>0.7219</b>	0.7220	0.7280	0.7225	0.00229	0.32	
Forsmark area		Surface	12	0.7191	0.7202	<b>0.7226</b>	0.7233	0.7243	0.7219	0.00179	0.25	
Forsmark area		Bottom	6	0.7198	0.7210	<b>0.7231</b>	0.7233	0.7234	0.7222	0.00163	0.23	
Sea Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
Borholmsfjärden	PSM002062	Surface	6	0.7095	0.7096	<b>0.7096</b>	0.7097	0.7104	0.7097	0.000324	0.046	
Borholmsfjärden	PSM002062	Bottom	6	0.7094	0.7095	<b>0.7095</b>	0.7096	0.7097	0.7096		0.013	
Granholmsfjärden	PSM002064	Surface	6	0.7094	0.7095	<b>0.7096</b>	0.7096	0.7101	0.7096	0.000255	0.036	
Granholmsfjärden	PSM002064	Bottom	6	0.7094	0.7094	<b>0.7094</b>	0.7094	0.7094	0.7094		0.0033	
Kräkelund	PSM002060	Surface	4	0.7094	0.7094	<b>0.7094</b>	0.7094	0.7094	0.7094		0.0042	
Kräkelund	PSM002060	Bottom	4	0.7094	0.7094	<b>0.7094</b>	0.7095	0.7099	0.7095	0.000234	0.033	
Ekö	PSM002061	Surface	6	0.7094	0.7094	<b>0.7094</b>	0.7094	0.7095	0.7094		0.0071	
Ekö	PSM002061	Bottom	6	0.7094	0.7094	<b>0.7094</b>	0.7094	0.7094	0.7094		0.0021	
Fågelöfjärden	PSM002063	Surface	1	0.7094		<b>0.7094</b>		0.7094	0.7094			
Fågelöfjärden	PSM002063	Bottom	1	0.7094		<b>0.7094</b>		0.7094	0.7094			
Simpevarp area		Surface	23	0.7094	0.7094	<b>0.7095</b>	0.7096	0.7104	0.7096	0.000250	0.035	
Simpevarp area		Bottom	23	0.7094	0.7094	<b>0.7094</b>	0.7095	0.7099	0.7095	0.000124	0.017	
Forsmark area		Surface	12	0.7094	0.7094	<b>0.7095</b>	0.7095	0.7097	0.7095		0.012	
Forsmark area		Bottom	6	0.7094	0.7095	<b>0.7095</b>	0.7095	0.7107	0.7097	0.000503	0.071	
Streaming Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
Misterhultsbäcken Ö	PSM002082	Surface	6	0.7208	0.7216	<b>0.7219</b>	0.7222	0.7224	0.7218	0.000601	0.083	
Smedtorpet	PSM002083	Surface	7	0.7196	0.7201	<b>0.7202</b>	0.7211	0.7213	0.7205	0.000676	0.094	
Kärsvik	PSM002084	Surface	7	0.7198	0.7199	<b>0.7200</b>	0.7203	0.7207	0.7201	0.000345	0.048	
Ekerum	PSM002085	Surface	7	0.7207	0.7209	<b>0.7211</b>	0.7215	0.7218	0.7212	0.000417	0.058	
Plittorp	PSM002071	Surface	6	0.7252	0.7255	<b>0.7259</b>	0.7260	0.7263	0.7258	0.000412	0.057	
Lillekvarn	PSM002072	Surface	5	0.7213	0.7214	<b>0.7214</b>	0.7214	0.7218	0.7215	0.000179	0.025	
Kvarnstugan	PSM002079	Surface	6	0.7226	0.7232	<b>0.7232</b>	0.7235	0.7238	0.7233	0.000411	0.057	
Ekhyddan	PSM002087	Surface	7	0.7220	0.7225	<b>0.7230</b>	0.7231	0.7233	0.7228	0.000463	0.064	
Örahammar	PSM002076	Surface	6	0.7192	0.7196	<b>0.7199</b>	0.7203	0.7204	0.7199	0.000476	0.066	
Basteböla	PSM002086	Surface	7	0.7186	0.7189	<b>0.7189</b>	0.7190	0.7193	0.7190	0.000216	0.030	
	PSM107735	Surface	1	0.7206		<b>0.7206</b>		0.7206	0.7206			
Simpevarp area		Surface	65	0.7186	0.7201	<b>0.7213</b>	0.7225	0.7263	0.7215	0.00191	0.26	
Forsmark area		Surface	9	0.7187	0.7199	<b>0.7204</b>	0.7223	0.7251	0.7211	0.00201	0.28	



## Surface Water

S2 (HS)			Hydrogen sulphide as total sulphide (mg/l)							S2 (HS)	
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
<b>Lake Water</b>											
Frisksjön	PSM002065	Surface	3	0.0040	0.0075	<b>0.011</b>	0.011	0.011	0.0087	0.004	47
Frisksjön	PSM002065	Bottom	1	0.0070		<b>0.0070</b>		0.0070	0.0070		
Simpevarp area		Surface	3	0.0040	0.0075	<b>0.011</b>	0.011	0.011	0.0087	0.004	47
Simpevarp area		Bottom	1	0.0070		<b>0.0070</b>		0.0070	0.0070		
Forsmark area		Surface	4	<0.03	<0.03	<b>&lt;0.03</b>	<0.03	<0.03	<0.03		
Forsmark area		Bottom	2	<0.03	<0.03	<b>&lt;0.03</b>	<0.03	<0.03	<0.03		
<b>Sea Water</b>											
Borholmsfjärden	PSM002062	Surface	2	0.0060	0.0083	<b>0.011</b>	0.013	0.015	0.011	0.006	61
Borholmsfjärden	PSM002062	Bottom	2	0.0060	0.0095	<b>0.013</b>	0.017	0.020	0.013	0.010	76
Granholmsfjärden	PSM002064	Surface	2	0.0030	0.0043	<b>0.0055</b>	0.0068	0.0080	0.0055	0.004	64
Granholmsfjärden	PSM002064	Bottom	2	0.0030	0.0045	<b>0.0060</b>	0.0075	0.0090	0.0060	0.004	71
Kråkelund	PSM002060	Surface	2	0.0010	0.0020	<b>0.0030</b>	0.0040	0.0050	0.0030	0.003	94
Kråkelund	PSM002060	Bottom	2	0.0010	0.0018	<b>0.0025</b>	0.0033	0.0040	0.0025	0.002	85
Ekö	PSM002061	Surface	2	0.0030	0.0040	<b>0.0050</b>	0.0060	0.0070	0.0050	0.003	57
Ekö	PSM002061	Bottom	2	0.0050	0.0055	<b>0.0060</b>	0.0065	0.0070	0.0060	0.001	24
Simpevarp area		Surface	8	0.0010	0.0030	<b>0.0055</b>	0.0073	0.015	0.0060	0.004	72
Simpevarp area		Bottom	8	0.0010	0.0038	<b>0.0055</b>	0.0075	0.020	0.0069	0.006	85
Forsmark area		Bottom	1	0.020		<b>0.020</b>		0.020	0.020		
<b>Streaming Water</b>											
Misterhultsbäcken Ö	PSM002082	Surface	2	0.019	0.023	<b>0.027</b>	0.031	0.035	0.027	0.01	42
Smedtorpet	PSM002083	Surface	2	0.019	0.023	<b>0.028</b>	0.032	0.036	0.028	0.01	44
Kärsvik	PSM002084	Surface	2	0.011	0.012	<b>0.013</b>	0.014	0.015	0.013	0.003	22
Ekerum	PSM002085	Surface	2	0.011	0.013	<b>0.015</b>	0.016	0.018	0.015	0.005	34
Plittorp	PSM002071	Surface	2	0.0090	0.010	<b>0.011</b>	0.012	0.013	0.011	0.003	26
Lillekvarn	PSM002072	Surface	1	0.019		<b>0.019</b>		0.019	0.019		
Kvarnstugan	PSM002079	Surface	2	0.010	0.012	<b>0.013</b>	0.015	0.016	0.013	0.004	33
Ekhyddan	PSM002087	Surface	2	0.010	0.011	<b>0.012</b>	0.012	0.013	0.012	0.002	18
Övrahammar	PSM002076	Surface	1	0.023		<b>0.023</b>		0.023	0.023		
Basteböla	PSM002086	Surface	1	0.015		<b>0.015</b>		0.015	0.015		
Simpevarp area		Surface	17	0.0090	0.011	<b>0.015</b>	0.019	0.036	0.017	0.008	46
Forsmark area		Surface	4	<0.03	<0.03	<b>&lt;0.03</b>	<0.03	<0.03	<0.03		

## Surface Water

SO4			Sulphate (mg/l)								SO4
Lake Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Frisksjön	PSM002065	Surface	36	7.8	11	12	13	18	12	2	17
Frisksjön	PSM002065	Bottom	36	8.1	11	12	13	16	12	2	15
Jämsen	PSM002067	Surface	36	6.4	8.5	9.2	9.5	11	8.9	0.9	10
Jämsen	PSM002067	Bottom	36	5.9	8.7	9.6	10	12	9.5	1	15
Söråmagasinet	PSM005964	Surface	22	12	13	15	16	17	15	2	11
Söråmagasinet	PSM005964	Bottom	22	7.7	13	15	16	18	14	2	17
Götemar	PSM002066	Surface	18	20	21	22	22	24	22	0.9	4.1
Götemar	PSM002066	Bottom	18	18	21	22	23	24	22	1	6.3
Simpevarp area		Surface	112	6.4	9.4	12	15	24	13	5	35
Simpevarp area		Bottom	112	5.9	10	12	15	24	13	5	34
Laxemar	pre-PLU	-	1	21		21		21	21		
Kalmar County	N.S.2000	Surface	106	3.6	8.0	10	12	26	10	4	35
Forsmark area		Surface	246	2.4	6.9	14	18	72	14	9	65
Forsmark area		Bottom	74	4.2	6.4	14	19	360	21	40	200
Sweden	N.S.2000	Surface	3464	0.24	1.4	2.8	5.9	1100	6.0	20	400
Sea Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Borholmsfjärden	PSM002062	Surface	36	53	260	350	380	480	320	100	34
Borholmsfjärden	PSM002062	Bottom	36	150	370	410	450	480	400	70	18
Granholmsfjärden	PSM002064	Surface	37	160	370	430	470	530	400	100	24
Granholmsfjärden	PSM002064	Bottom	35	350	470	490	510	520	490	30	6.9
Kräkelund	PSM002060	Surface	34	490	520	530	550	590	530	20	4.2
Kräkelund	PSM002060	Bottom	34	360	530	540	560	620	540	40	7.7
Ekö	PSM002061	Surface	36	380	520	530	550	570	530	30	6.5
Ekö	PSM002061	Bottom	35	350	520	540	550	580	530	40	7.1
Fågelöfjärden	PSM002063	Surface	17	350	480	520	530	580	500	60	12
Fågelöfjärden	PSM002063	Bottom	17	410	510	530	530	590	510	40	7.7
Simpevarp area		Surface	160	53	380	500	530	590	450	100	25
Simpevarp area		Bottom	157	150	460	510	540	620	490	70	15
Forsmark area		Surface	175	46	330	360	380	480	330	90	26
Forsmark area		Bottom	72	54	350	360	380	450	360	50	14
Streaming Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Misterhult	PSM002080	Surface	17	3.0	4.8	6.9	8.0	15	7.3	3	45
Perstorpet	PSM002081	Surface	34	1.5	5.7	8.2	9.9	29	9.0	6	63
Misterhultsbäcken Ö	PSM002082	Surface	37	3.4	7.6	9.4	11	17	9.7	4	39
Smedtorpet	PSM002083	Surface	39	8.1	10	13	16	22	13	4	27
Kärsvik	PSM002084	Surface	38	15	25	26	30	41	27	5	18
Ekerum	PSM002085	Surface	37	8.1	16	23	31	42	23	9	38
Köksmåla	PSM002068	Surface	37	3.0	5.9	7.3	8.5	12	7.3	2	25
Jämserum	PSM002069	Surface	37	6.6	8.3	9.0	9.4	10.0	8.8	0.8	9.6
Plittorp	PSM002071	Surface	36	5.5	11	12	14	19	12	3	23
Lillekvarn	PSM002072	Surface	15	0.92	2.1	2.9	3.4	8.3	3.0	2	55
Brolund	PSM002077	Surface	18	5.7	10	12	14	22	12	4	31
Sillebäcken	PSM002078	Surface	29	8.5	13	14	16	37	16	7	46
Kvarnstugan	PSM002079	Surface	36	6.1	12	14	15	24	14	4	27
Ekhyddan	PSM002087	Surface	39	7.3	13	16	17	28	16	4	25
Övrahammar	PSM002076	Surface	32	5.7	14	18	21	34	18	6	35
Basteböla	PSM002086	Surface	29	22	35	44	50	66	43	10	28
Flohult	PSM002070	Surface	17	1.5	4.6	7.1	9.2	11	6.8	3	45
Figeholm	PSM002075	Surface	17	4.7	8.5	10	12	16	10	3	32
	PSM003715	Surface	8	8.8	13	15	16	18	14	3	24
	PSM003716	Surface	9	8.5	17	18	18	20	17	3	21
	PSM107735	Surface	12	17	30	36	41	59	36	10	31
Simpevarp area		Surface	573	0.92	8.6	13	18	66	16	10	68
Laxemar	pre-PLU	Surface	13	12	13	16	20	36	18	7	42
Kalmar County	N.S.2000	Surface	26	6.8	12	13	20	100	21	20	98
Forsmark area		Surface	312	1.1	7.1	13	21	94	18	20	94
Sweden	N.S.2000	Surface	725	0.38	1.9	4.0	12	170	11	20	170

## Surface Water

SO4-S			Sulphate as sulphur (mg/l)								SO4-S	
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
<b>Lake Water</b>												
Frisksjön	PSM002065	Surface	36	3.2	4.0	<b>4.4</b>	4.9	6.0	4.5	0.7	16	
Frisksjön	PSM002065	Bottom	36	3.2	4.0	<b>4.5</b>	4.9	5.9	4.5	0.7	15	
Jämsen	PSM002067	Surface	36	2.7	3.2	<b>3.4</b>	3.6	3.9	3.4	0.3	8.4	
Jämsen	PSM002067	Bottom	36	2.5	3.3	<b>3.6</b>	4.0	4.5	3.6	0.5	14	
Söråmagasinet	PSM005964	Surface	22	4.2	4.7	<b>5.0</b>	5.5	5.8	5.0	0.5	9.2	
Söråmagasinet	PSM005964	Bottom	22	3.6	4.7	<b>5.0</b>	5.5	6.0	5.0	0.6	12	
Götemar	PSM002066	Surface	18	7.0	7.5	<b>7.6</b>	7.8	8.4	7.6	0.4	5.1	
Götemar	PSM002066	Bottom	18	6.3	7.5	<b>7.7</b>	7.7	8.6	7.6	0.5	6.4	
Simpevarp area		Surface	112	2.7	3.6	<b>4.3</b>	5.5	8.4	4.7	1	32	
Simpevarp area		Bottom	112	2.5	3.7	<b>4.4</b>	5.5	8.6	4.8	1	30	
Laxemar	pre-PLU	-	1	6.6		<b>6.6</b>		6.6	6.6			
Forsmark area		Surface	247	0.43	2.7	<b>4.9</b>	6.5	25	5.2	3	61	
Forsmark area		Bottom	74	1.8	2.7	<b>5.3</b>	7.1	35	6.0	5	83	
<b>Sea Water</b>												
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
Borholmsfjärden	PSM002062	Surface	36	27	89	<b>110</b>	130	150	110	30	31	
Borholmsfjärden	PSM002062	Bottom	36	50	110	<b>130</b>	140	160	130	20	18	
Granholmsfjärden	PSM002064	Surface	37	40	120	<b>140</b>	150	170	130	30	25	
Granholmsfjärden	PSM002064	Bottom	35	140	150	<b>150</b>	160	170	150	7	4.6	
Kräkelund	PSM002060	Surface	34	150	160	<b>170</b>	170	190	170	9	5.2	
Kräkelund	PSM002060	Bottom	34	150	160	<b>170</b>	180	190	170	9	5.4	
Ekö	PSM002061	Surface	36	150	160	<b>170</b>	170	180	170	8	4.9	
Ekö	PSM002061	Bottom	35	150	160	<b>170</b>	170	180	170	8	4.9	
Fågelöfjärden	PSM002063	Surface	17	150	150	<b>160</b>	160	170	160	7	4.6	
Fågelöfjärden	PSM002063	Bottom	17	140	150	<b>160</b>	160	170	160	8	5.2	
Simpevarp area		Surface	160	27	120	<b>160</b>	170	190	140	30	24	
Simpevarp area		Bottom	157	50	150	<b>160</b>	170	190	150	20	14	
Forsmark area		Surface	175	14	110	<b>120</b>	120	140	110	30	24	
Forsmark area		Bottom	72	18	110	<b>120</b>	120	140	120	20	14	
<b>Streaming Water</b>												
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
Misterhult	PSM002080	Surface	17	1.8	2.4	<b>2.7</b>	3.3	5.7	3.1	1	33	
Perstorpet	PSM002081	Surface	34	1.6	2.6	<b>3.2</b>	3.9	9.7	3.6	2	47	
Misterhultsbäcken Ö	PSM002082	Surface	37	2.4	3.0	<b>3.8</b>	4.5	6.2	3.9	1	29	
Smedtorpet	PSM002083	Surface	39	3.5	4.1	<b>4.9</b>	5.8	7.7	5.1	1	22	
Kärrsvik	PSM002084	Surface	38	7.6	8.7	<b>9.3</b>	10	14	9.8	2	16	
Ekerum	PSM002085	Surface	37	3.2	6.2	<b>8.5</b>	11	14	8.3	3	34	
Köksmåla	PSM002068	Surface	37	1.6	2.6	<b>2.8</b>	3.3	4.4	2.9	0.6	20	
Jämserum	PSM002069	Surface	37	2.8	3.1	<b>3.3</b>	3.6	3.9	3.3	0.3	8.7	
Plittorp	PSM002071	Surface	36	2.5	4.0	<b>4.4</b>	4.8	6.3	4.4	0.8	17	
Lillekvarn	PSM002072	Surface	15	1.1	1.3	<b>1.4</b>	1.6	3.1	1.5	0.5	32	
Brolund	PSM002077	Surface	18	2.6	4.1	<b>4.6</b>	5.3	7.4	4.7	1	23	
Sillebäcken	PSM002078	Surface	29	4.0	4.7	<b>5.3</b>	5.9	13	5.9	2	38	
Kvarnstugan	PSM002079	Surface	36	2.7	4.5	<b>5.0</b>	5.5	8.1	5.1	1	22	
Ekhyddan	PSM002087	Surface	39	3.3	5.1	<b>5.6</b>	6.1	9.3	5.7	1	20	
Övrahammar	PSM002076	Surface	32	4.0	5.8	<b>6.8</b>	8.1	12	7.1	2	28	
Basteböla	PSM002086	Surface	29	8.6	13	<b>15</b>	17	21	15	3	22	
Flohult	PSM002070	Surface	17	1.0	2.6	<b>3.1</b>	3.7	4.2	2.9	1.0	34	
Figeholm	PSM002075	Surface	17	2.7	3.6	<b>4.3</b>	4.9	5.6	4.2	0.9	20	
	PSM107735	Surface	12	6.8	9.9	<b>12</b>	14	21	12	4	31	
Simpevarp area		Surface	556	1.0	3.5	<b>4.8</b>	6.8	21	5.8	3	61	
Laxemar	pre-PLU	Surface	14	5.2	5.4	<b>5.9</b>	6.7	12	6.7	2	31	
Forsmark area		Surface	317	0.55	2.9	<b>4.7</b>	7.1	31	6.3	5	84	

## Surface Water

S-34			Sulphur-34 (dev. CDT)								S-34	
Lake Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
Frisksjön	PSM002065	Surface	8	1.50	2.53	<b>3.50</b>	4.08	8.10	3.73	2.0	55	
Frisksjön	PSM002065	Bottom	7	0.700	2.50	<b>3.00</b>	4.80	6.60	3.56	2.0	55	
Jämsen	PSM002067	Surface	1	8.80		<b>8.80</b>		8.80	8.80			
Jämsen	PSM002067	Bottom	1	8.30		<b>8.30</b>		8.30	8.30			
Götemar	PSM002066	Surface	1	0.900		<b>0.900</b>		0.900	0.900			
Götemar	PSM002066	Bottom	1	0.900		<b>0.900</b>		0.900	0.900			
Simpevarp area		Surface	10	0.900	2.18	<b>3.50</b>	4.43	8.80	3.95	2.6	67	
Simpevarp area		Bottom	9	0.700	2.40	<b>3.00</b>	5.10	8.30	3.79	2.6	68	
Forsmark area		Surface	16	-1.00	3.03	<b>5.35</b>	6.38	19.9	5.40	4.9	91	
Forsmark area		Bottom	5	-0.500	5.20	<b>6.00</b>	6.20	6.60	4.70	3.0	63	
Sea Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
Borholmsfjärden	PSM002062	Surface	8	16.8	19.1	<b>20.3</b>	20.6	21.0	19.6	1.6	7.9	
Borholmsfjärden	PSM002062	Bottom	8	17.8	19.1	<b>20.1</b>	20.7	21.1	19.8	1.1	5.7	
Granholmsfjärden	PSM002064	Surface	8	16.9	18.9	<b>20.1</b>	20.5	21.3	19.6	1.5	7.4	
Granholmsfjärden	PSM002064	Bottom	8	18.8	19.8	<b>20.4</b>	20.7	20.9	20.1	0.76	3.8	
Kräkelund	PSM002060	Surface	6	16.3	19.7	<b>20.0</b>	21.9	22.8	20.2	2.4	12	
Kräkelund	PSM002060	Bottom	5	19.8	20.1	<b>20.1</b>	20.7	20.9	20.3	0.46	2.3	
Ekö	PSM002061	Surface	8	18.7	19.3	<b>20.2</b>	21.2	23.1	20.4	1.5	7.2	
Ekö	PSM002061	Bottom	8	17.9	19.0	<b>20.4</b>	20.9	21.6	20.0	1.3	6.7	
Fågelöfjärden	PSM002063	Surface	1	21.4		<b>21.4</b>		21.4	21.4			
Fågelöfjärden	PSM002063	Bottom	1	21.9		<b>21.9</b>		21.9	21.9			
Simpevarp area		Surface	31	16.3	19.3	<b>20.2</b>	21.0	23.1	20.0	1.6	8.2	
Simpevarp area		Bottom	30	17.8	19.3	<b>20.4</b>	20.7	21.9	20.1	1.0	5.1	
Forsmark area		Surface	16	17.2	19.9	<b>20.6</b>	20.9	21.0	20.2	1.0	5.1	
Forsmark area		Bottom	6	19.9	20.2	<b>20.7</b>	21.1	21.4	20.6	0.61	3.0	
Streaming Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
Misterhultsbäcken Ö	PSM002082	Surface	8	5.20	6.85	<b>8.15</b>	10.9	15.1	9.00	3.3	36	
Smedtorpet	PSM002083	Surface	9	2.90	4.40	<b>5.50</b>	6.70	7.60	5.44	1.6	29	
Kärrsvik	PSM002084	Surface	9	-1.10	2.30	<b>3.10</b>	3.30	7.20	2.91	2.3	80	
Ekerum	PSM002085	Surface	9	2.60	5.30	<b>6.10</b>	9.20	10.5	6.57	2.7	41	
Plittorp	PSM002071	Surface	8	4.90	5.70	<b>6.20</b>	8.08	8.60	6.70	1.4	21	
Lillekvarn	PSM002072	Surface	3	10.5	11.2	<b>11.8</b>	11.9	12.0	11.4	0.81	7.1	
Kvarnstugan	PSM002079	Surface	8	4.90	5.70	<b>7.15</b>	8.40	10.2	7.23	1.8	26	
Ekhyddan	PSM002087	Surface	9	1.90	4.70	<b>5.10</b>	8.10	9.00	5.86	2.5	43	
Övrahammar	PSM002076	Surface	8	5.00	7.80	<b>8.45</b>	10.4	13.7	9.01	2.6	29	
Basteböla	PSM002086	Surface	8	2.20	2.30	<b>3.15</b>	5.43	7.90	4.14	2.3	57	
	PSM107735	Surface	1	3.60		<b>3.60</b>		3.60	3.60			
Simpevarp area		Surface	80	-1.10	4.63	<b>6.30</b>	8.30	15.1	6.42	3.0	47	
Forsmark area		Surface	15	-10.3	1.70	<b>4.70</b>	7.85	10.4	4.03	5.4	130	

## Surface Water

<b>Tb</b>			<b>Terbium (µg/l)</b>								<b>Tb</b>	
			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>	
<b>Lake Water</b>												
Frisksjön	PSM002065	Surface	1	<0.05		<0.05		<0.05	<0.05			
Frisksjön	PSM002065	Bottom	1	<0.05		<0.05		<0.05	<0.05			
Simpevarp area		Surface	1	<0.05		<0.05		<0.05	<0.05			
Simpevarp area		Bottom	1	<0.05		<0.05		<0.05	<0.05			
Forsmark area		Surface	34	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.010	110	
Forsmark area		Bottom	7	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.009	53	
<b>Sea Water</b>												
Borholmsfjärden	PSM002062	Surface	1	<0.5		<0.5		<0.5	<0.5			
Borholmsfjärden	PSM002062	Bottom	1	<0.5		<0.5		<0.5	<0.5			
Granholmsfjärden	PSM002064	Surface	1	<0.5		<0.5		<0.5	<0.5			
Granholmsfjärden	PSM002064	Bottom	1	<0.5		<0.5		<0.5	<0.5			
Kråkelund	PSM002060	Surface	1	<0.05		<0.05		<0.05	<0.05			
Kråkelund	PSM002060	Bottom	1	<0.05		<0.05		<0.05	<0.05			
Ekö	PSM002061	Surface	1	<0.5		<0.5		<0.5	<0.5			
Ekö	PSM002061	Bottom	1	<0.5		<0.5		<0.5	<0.5			
Simpevarp area		Surface	4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.1	58	
Simpevarp area		Bottom	4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.1	58	
Forsmark area		Surface	31	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.09	160	
Forsmark area		Bottom	10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.09	150	
<b>Streaming Water</b>												
Misterhultsbäcken Ö	PSM002082	Surface	1	<0.05		<0.05		<0.05	<0.05			
Smedtorpet	PSM002083	Surface	1	<0.05		<0.05		<0.05	<0.05			
Kärrsvik	PSM002084	Surface	1	<0.05		<0.05		<0.05	<0.05			
Ekerum	PSM002085	Surface	1	<0.05		<0.05		<0.05	<0.05			
Plittorp	PSM002071	Surface	1	<0.05		<0.05		<0.05	<0.05			
Lillekvarn	PSM002072	Surface	1	<0.05		<0.05		<0.05	<0.05			
Kvarnstugan	PSM002079	Surface	1	<0.05		<0.05		<0.05	<0.05			
Ekhyddan	PSM002087	Surface	1	<0.05		<0.05		<0.05	<0.05			
Örahammar	PSM002076	Surface	1	<0.05		<0.05		<0.05	<0.05			
Basteböla	PSM002086	Surface	1	<0.05		<0.05		<0.05	<0.05			
Simpevarp area		Surface	10	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05			
Forsmark area		Surface	32	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.009	110	
<b>TI</b>												
<b>TI</b>			<b>Thallium (µg/l)</b>								<b>TI</b>	
			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>	
<b>Lake Water</b>												
Frisksjön	PSM002065	Surface	1	<0.03		<0.03		<0.03	<0.03			
Frisksjön	PSM002065	Bottom	1	<0.03		<0.03		<0.03	<0.03			
Simpevarp area		Surface	1	<0.03		<0.03		<0.03	<0.03			
Simpevarp area		Bottom	1	<0.03		<0.03		<0.03	<0.03			
Forsmark area		Surface	39	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.004	31	
Forsmark area		Bottom	10	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.005	39	
<b>Sea Water</b>												
Borholmsfjärden	PSM002062	Surface	1	<0.3		<0.3		<0.3	<0.3			
Borholmsfjärden	PSM002062	Bottom	1	<0.3		<0.3		<0.3	<0.3			
Granholmsfjärden	PSM002064	Surface	1	<0.3		<0.3		<0.3	<0.3			
Granholmsfjärden	PSM002064	Bottom	1	<0.3		<0.3		<0.3	<0.3			
Kråkelund	PSM002060	Surface	1	<0.3		<0.3		<0.3	<0.3			
Kråkelund	PSM002060	Bottom	1	<0.3		<0.3		<0.3	<0.3			
Ekö	PSM002061	Surface	1	<0.3		<0.3		<0.3	<0.3			
Ekö	PSM002061	Bottom	1	<0.3		<0.3		<0.3	<0.3			
Simpevarp area		Surface	4	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3			
Simpevarp area		Bottom	4	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3			
Forsmark area		Surface	35	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.05	94	
Forsmark area		Bottom	13	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.05	82	
<b>Streaming Water</b>												
Misterhultsbäcken Ö	PSM002082	Surface	1	<0.03		<0.03		<0.03	<0.03			
Smedtorpet	PSM002083	Surface	1	<0.03		<0.03		<0.03	<0.03			
Kärrsvik	PSM002084	Surface	1	<0.03		<0.03		<0.03	<0.03			
Ekerum	PSM002085	Surface	1	<0.03		<0.03		<0.03	<0.03			
Plittorp	PSM002071	Surface	1	<0.03		<0.03		<0.03	<0.03			
Lillekvarn	PSM002072	Surface	1	<0.03		<0.03		<0.03	<0.03			
Kvarnstugan	PSM002079	Surface	1	<0.03		<0.03		<0.03	<0.03			
Ekhyddan	PSM002087	Surface	1	<0.03		<0.03		<0.03	<0.03			
Örahammar	PSM002076	Surface	1	<0.03		<0.03		<0.03	<0.03			
Basteböla	PSM002086	Surface	1	0.060		0.060		0.060	0.060			
Simpevarp area		Surface	10	<0.03	<0.03	<0.03	<0.03	0.060	<0.03	0.01	73	
Laxemar	pre-PLU	Surface	1	0.0030		0.0030		0.0030	0.0030			
Forsmark area		Surface	33	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.004	27	

## Surface Water

Th			Thorium (µg/l)								Th	
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
<b>Lake Water</b>												
Frisksjön	PSM002065	Surface	1	<0.02		<0.02		<0.02	<0.02			
Frisksjön	PSM002065	Bottom	1	<0.02		<0.02		<0.02	<0.02			
Simpevarp area		Surface	1	<0.02		<0.02		<0.02	<0.02			
Simpevarp area		Bottom	1	<0.02		<0.02		<0.02	<0.02			
Forsmark area		Surface	39	<0.02	<0.02	<0.02	0.026	0.053	<0.02	0.01	70	
Forsmark area		Bottom	10	<0.02	<0.02	0.026	0.035	0.043	0.024	0.01	55	
<b>Sea Water</b>												
Borholmsfjärden	PSM002062	Surface	1	<0.2		<0.2		<0.2	<0.2			
Borholmsfjärden	PSM002062	Bottom	1	<0.2		<0.2		<0.2	<0.2			
Granholmsfjärden	PSM002064	Surface	1	<0.2		<0.2		<0.2	<0.2			
Granholmsfjärden	PSM002064	Bottom	1	<0.2		<0.2		<0.2	<0.2			
Kråkelund	PSM002060	Surface	1	<0.2		<0.2		<0.2	<0.2			
Kråkelund	PSM002060	Bottom	1	<0.2		<0.2		<0.2	<0.2			
Ekö	PSM002061	Surface	1	<0.2		<0.2		<0.2	<0.2			
Ekö	PSM002061	Bottom	1	<0.2		<0.2		<0.2	<0.2			
Simpevarp area		Surface	4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2			
Simpevarp area		Bottom	4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2			
Forsmark area		Surface	35	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	0.06	77	
Forsmark area		Bottom	13	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	0.04	61	
<b>Streaming Water</b>												
Misterhultsbäcken Ö	PSM002082	Surface	1	0.035		0.035		0.035	0.035			
Smedtorpet	PSM002083	Surface	1	0.034		0.034		0.034	0.034			
Kärsvik	PSM002084	Surface	1	0.031		0.031		0.031	0.031			
Ekerum	PSM002085	Surface	1	<0.02		<0.02		<0.02	<0.02			
Plittorp	PSM002071	Surface	1	<0.02		<0.02		<0.02	<0.02			
Lillekvarn	PSM002072	Surface	1	0.024		0.024		0.024	0.024			
Kvarnstugan	PSM002079	Surface	1	<0.02		<0.02		<0.02	<0.02			
Ekhyddan	PSM002087	Surface	1	<0.02		<0.02		<0.02	<0.02			
Övrahammar	PSM002076	Surface	1	0.041		0.041		0.041	0.041			
Basteböla	PSM002086	Surface	1	0.042		0.042		0.042	0.042			
Simpevarp area		Surface	10	<0.02	<0.02	0.027	0.035	0.042	0.025	0.01	55	
Laxemar	pre-PLU	Surface	1	0.52		0.52		0.52	0.52			
Forsmark area		Surface	33	<0.02	<0.02	<0.02	0.028	0.056	0.020	0.01	73	

Th-230			Thorium-230 (mBq/kg)								Th-230	
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
<b>Lake Water</b>												
Frisksjön	PSM002065	Surface	1	<50		<50		<50	<50			
Frisksjön	PSM002065	Bottom	1	<50		<50		<50	<50			
Simpevarp area		Surface	1	<50		<50		<50	<50			
Simpevarp area		Bottom	1	<50		<50		<50	<50			
Forsmark area		Surface	6	<50	<50	<50	<50	<50	<50			
Forsmark area		Bottom	3	<50	<50	<50	<50	50	<50	10	43	
<b>Sea Water</b>												
Borholmsfjärden	PSM002062	Surface	1	<50		<50		<50	<50			
Borholmsfjärden	PSM002062	Bottom	1	<50		<50		<50	<50			
Granholmsfjärden	PSM002064	Surface	1	<50		<50		<50	<50			
Granholmsfjärden	PSM002064	Bottom	1	<50		<50		<50	<50			
Kråkelund	PSM002060	Surface	1	<50		<50		<50	<50			
Kråkelund	PSM002060	Bottom	1	<50		<50		<50	<50			
Ekö	PSM002061	Surface	1	<50		<50		<50	<50			
Ekö	PSM002061	Bottom	1	<50		<50		<50	<50			
Simpevarp area		Surface	4	<50	<50	<50	<50	<50	<50			
Simpevarp area		Bottom	4	<50	<50	<50	<50	<50	<50			
Forsmark area		Surface	7	<50	<50	<50	<50	<50	<50			
Forsmark area		Bottom	5	<50	<50	<50	<50	100	<50	30	84	
<b>Streaming Water</b>												
Misterhultsbäcken Ö	PSM002082	Surface	1	<50		<50		<50	<50			
Smedtorpet	PSM002083	Surface	1	<50		<50		<50	<50			
Kärsvik	PSM002084	Surface	1	<50		<50		<50	<50			
Ekerum	PSM002085	Surface	1	<50		<50		<50	<50			
Plittorp	PSM002071	Surface	1	<50		<50		<50	<50			
Lillekvarn	PSM002072	Surface	1	<50		<50		<50	<50			
Kvarnstugan	PSM002079	Surface	1	<50		<50		<50	<50			
Ekhyddan	PSM002087	Surface	1	<50		<50		<50	<50			
Övrahammar	PSM002076	Surface	1	<50		<50		<50	<50			
Basteböla	PSM002086	Surface	1	<50		<50		<50	<50			
Simpevarp area		Surface	10	<50	<50	<50	<50	<50	<50			

## Surface Water

Th-232			Thorium-232 (mBq/kg)							Th-232	
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
<b>Lake Water</b>											
Frisksjön	PSM002065	Surface	1	<50		<50		<50	<50		
Frisksjön	PSM002065	Bottom	1	<50		<50		<50	<50		
Simpevarp area		Surface	1	<50		<50		<50	<50		
Simpevarp area		Bottom	1	<50		<50		<50	<50		
Forsmark area		Surface	6	<50	<50	<50	<50	<50	<50		
Forsmark area		Bottom	3	<50	<50	<50	<50	<50	<50		
<b>Sea Water</b>											
Borholmsfjärden	PSM002062	Surface	1	<50		<50		<50	<50		
Borholmsfjärden	PSM002062	Bottom	1	<50		<50		<50	<50		
Granholmsfjärden	PSM002064	Surface	1	<50		<50		<50	<50		
Granholmsfjärden	PSM002064	Bottom	1	<50		<50		<50	<50		
Kråkelund	PSM002060	Surface	1	<50		<50		<50	<50		
Kråkelund	PSM002060	Bottom	1	<50		<50		<50	<50		
Ekö	PSM002061	Surface	1	<50		<50		<50	<50		
Ekö	PSM002061	Bottom	1	<50		<50		<50	<50		
Simpevarp area		Surface	4	<50	<50	<50	<50	<50	<50		
Simpevarp area		Bottom	4	<50	<50	<50	<50	<50	<50		
Forsmark area		Surface	7	<50	<50	<50	<50	<50	<50		
Forsmark area		Bottom	5	<50	<50	<50	<50	<50	<50		
<b>Streaming Water</b>											
Misterhultsbäcken Ö	PSM002082	Surface	1	<50		<50		<50	<50		
Smedtorpet	PSM002083	Surface	1	<50		<50		<50	<50		
Kärrsvik	PSM002084	Surface	1	<50		<50		<50	<50		
Ekerum	PSM002085	Surface	1	<50		<50		<50	<50		
Plittorp	PSM002071	Surface	1	<50		<50		<50	<50		
Lillekvarn	PSM002072	Surface	1	<50		<50		<50	<50		
Kvarnstugan	PSM002079	Surface	1	<50		<50		<50	<50		
Ekhyddan	PSM002087	Surface	1	<50		<50		<50	<50		
Övrahammar	PSM002076	Surface	1	<50		<50		<50	<50		
Basteböla	PSM002086	Surface	1	<50		<50		<50	<50		
Simpevarp area		Surface	10	<50	<50	<50	<50	<50	<50		

Tm			Thulium (µg/l)							Tm	
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
<b>Lake Water</b>											
Frisksjön	PSM002065	Surface	1	<0.005		<0.005		<0.005	<0.005		
Frisksjön	PSM002065	Bottom	1	<0.005		<0.005		<0.005	<0.005		
Simpevarp area		Surface	1	<0.005		<0.005		<0.005	<0.005		
Simpevarp area		Bottom	1	<0.005		<0.005		<0.005	<0.005		
Forsmark area		Surface	39	<0.005	<0.005	<0.005	<0.005	0.0060	<0.005	0.0008	32
Forsmark area		Bottom	10	<0.005	<0.005	<0.005	<0.005	0.0059	<0.005	0.001	36
<b>Sea Water</b>											
Borholmsfjärden	PSM002062	Surface	1	<0.05		<0.05		<0.05	<0.05		
Borholmsfjärden	PSM002062	Bottom	1	<0.05		<0.05		<0.05	<0.05		
Granholmsfjärden	PSM002064	Surface	1	<0.05		<0.05		<0.05	<0.05		
Granholmsfjärden	PSM002064	Bottom	1	<0.05		<0.05		<0.05	<0.05		
Kråkelund	PSM002060	Surface	1	<0.05		<0.05		<0.05	<0.05		
Kråkelund	PSM002060	Bottom	1	<0.05		<0.05		<0.05	<0.05		
Ekö	PSM002061	Surface	1	<0.05		<0.05		<0.05	<0.05		
Ekö	PSM002061	Bottom	1	<0.05		<0.05		<0.05	<0.05		
Simpevarp area		Surface	4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
Simpevarp area		Bottom	4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
Forsmark area		Surface	34	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.009	85
Forsmark area		Bottom	13	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.009	110
<b>Streaming Water</b>											
Misterhultsbäcken Ö	PSM002082	Surface	1	0.0056		0.0056		0.0056	0.0056		
Smedtorpet	PSM002083	Surface	1	0.0062		0.0062		0.0062	0.0062		
Kärrsvik	PSM002084	Surface	1	<0.005		<0.005		<0.005	<0.005		
Ekerum	PSM002085	Surface	1	<0.005		<0.005		<0.005	<0.005		
Plittorp	PSM002071	Surface	1	<0.005		<0.005		<0.005	<0.005		
Lillekvarn	PSM002072	Surface	1	<0.005		<0.005		<0.005	<0.005		
Kvarnstugan	PSM002079	Surface	1	<0.005		<0.005		<0.005	<0.005		
Ekhyddan	PSM002087	Surface	1	<0.005		<0.005		<0.005	<0.005		
Övrahammar	PSM002076	Surface	1	0.0060		0.0060		0.0060	0.0060		
Basteböla	PSM002086	Surface	1	0.0084		0.0084		0.0084	0.0084		
Simpevarp area		Surface	10	<0.005	<0.005	<0.005	0.0059	0.0084	<0.005	0.002	54
Laxemar	pre-PLU	Surface	1	0.063		0.063		0.063	0.063		
Forsmark area		Surface	33	<0.005	<0.005	<0.005	<0.005	0.0053	<0.005	0.0007	30

## Surface Water

U			Uranium (µg/l)								U	
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
<b>Lake Water</b>												
Frisksjön	PSM002065	Surface	1	0.38		<b>0.38</b>		0.38	0.38			
Frisksjön	PSM002065	Bottom	1	0.34		<b>0.34</b>		0.34	0.34			
Simpevarp area		Surface	1	0.38		<b>0.38</b>		0.38	0.38			
Simpevarp area		Bottom	1	0.34		<b>0.34</b>		0.34	0.34			
Forsmark area		Surface	39	0.97	1.3	<b>2.0</b>	2.5	4.3	2.1	0.9	42	
Forsmark area		Bottom	10	1.00	1.4	<b>2.0</b>	3.2	7.2	2.6	2	70	
<b>Sea Water</b>												
Borholmsfjärden	PSM002062	Surface	1	0.74		<b>0.74</b>		0.74	0.74			
Borholmsfjärden	PSM002062	Bottom	1	0.74		<b>0.74</b>		0.74	0.74			
Granholmsfjärden	PSM002064	Surface	1	0.75		<b>0.75</b>		0.75	0.75			
Granholmsfjärden	PSM002064	Bottom	1	0.77		<b>0.77</b>		0.77	0.77			
Kråkelund	PSM002060	Surface	1	0.78		<b>0.78</b>		0.78	0.78			
Kråkelund	PSM002060	Bottom	1	0.77		<b>0.77</b>		0.77	0.77			
Ekö	PSM002061	Surface	1	0.78		<b>0.78</b>		0.78	0.78			
Ekö	PSM002061	Bottom	1	0.77		<b>0.77</b>		0.77	0.77			
Simpevarp area		Surface	4	0.74	0.75	<b>0.76</b>	0.78	0.78	0.76	0.02	2.3	
Simpevarp area		Bottom	4	0.74	0.76	<b>0.77</b>	0.77	0.77	0.76	0.02	2.1	
Forsmark area		Surface	35	0.55	0.67	<b>0.83</b>	1.2	2.7	1.1	0.6	58	
Forsmark area		Bottom	13	0.60	0.69	<b>0.75</b>	0.91	2.4	0.92	0.5	53	
<b>Streaming Water</b>												
Misterhultsbäcken Ö	PSM002082	Surface	1	0.72		<b>0.72</b>		0.72	0.72			
Smedtorpet	PSM002083	Surface	1	0.92		<b>0.92</b>		0.92	0.92			
Kärsvik	PSM002084	Surface	1	0.80		<b>0.80</b>		0.80	0.80			
Ekerum	PSM002085	Surface	1	1.9		<b>1.9</b>		1.9	1.9			
Plittorp	PSM002071	Surface	1	0.16		<b>0.16</b>		0.16	0.16			
Lillekvarn	PSM002072	Surface	1	0.27		<b>0.27</b>		0.27	0.27			
Kvarnstugan	PSM002079	Surface	1	0.23		<b>0.23</b>		0.23	0.23			
Ekhyddan	PSM002087	Surface	1	0.36		<b>0.36</b>		0.36	0.36			
Övrahammar	PSM002076	Surface	1	0.95		<b>0.95</b>		0.95	0.95			
Basteböla	PSM002086	Surface	1	1.6		<b>1.6</b>		1.6	1.6			
Simpevarp area		Surface	10	0.16	0.30	<b>0.76</b>	0.95	1.9	0.79	0.6	74	
Laxemar	pre-PLU	Surface	1	0.74		<b>0.74</b>		0.74	0.74			
Forsmark area		Surface	33	0.27	1.0	<b>2.0</b>	3.0	28	4.0	7	170	

U-234			Uranium-234 (mBq/kg)								U-234	
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
<b>Lake Water</b>												
Frisksjön	PSM002065	Surface	1	<50		<b>&lt;50</b>		<50	<50			
Frisksjön	PSM002065	Bottom	1	<50		<b>&lt;50</b>		<50	<50			
Simpevarp area		Surface	1	<50		<b>&lt;50</b>		<50	<50			
Simpevarp area		Bottom	1	<50		<b>&lt;50</b>		<50	<50			
Forsmark area		Surface	6	<50	<50	<b>&lt;50</b>	60	70	<50	20	48	
Forsmark area		Bottom	3	<50	<50	<b>&lt;50</b>	<50	50	<50	10	43	
<b>Sea Water</b>												
Borholmsfjärden	PSM002062	Surface	1	<50		<b>&lt;50</b>		<50	<50			
Borholmsfjärden	PSM002062	Bottom	1	<50		<b>&lt;50</b>		<50	<50			
Granholmsfjärden	PSM002064	Surface	1	<50		<b>&lt;50</b>		<50	<50			
Granholmsfjärden	PSM002064	Bottom	1	<50		<b>&lt;50</b>		<50	<50			
Kråkelund	PSM002060	Surface	1	<50		<b>&lt;50</b>		<50	<50			
Kråkelund	PSM002060	Bottom	1	<50		<b>&lt;50</b>		<50	<50			
Ekö	PSM002061	Surface	1	<50		<b>&lt;50</b>		<50	<50			
Ekö	PSM002061	Bottom	1	<50		<b>&lt;50</b>		<50	<50			
Simpevarp area		Surface	4	<50	<50	<b>&lt;50</b>	<50	<50	<50			
Simpevarp area		Bottom	4	<50	<50	<b>&lt;50</b>	<50	<50	<50			
Forsmark area		Surface	7	<50	<50	<b>&lt;50</b>	<50	50	<50	10	38	
Forsmark area		Bottom	5	<50	<50	<b>&lt;50</b>	<50	100	<50	30	84	
<b>Streaming Water</b>												
Misterhultsbäcken Ö	PSM002082	Surface	1	<50		<b>&lt;50</b>		<50	<50			
Smedtorpet	PSM002083	Surface	1	<50		<b>&lt;50</b>		<50	<50			
Kärsvik	PSM002084	Surface	1	<50		<b>&lt;50</b>		<50	<50			
Ekerum	PSM002085	Surface	1	<50		<b>&lt;50</b>		<50	<50			
Plittorp	PSM002071	Surface	1	<50		<b>&lt;50</b>		<50	<50			
Lillekvarn	PSM002072	Surface	1	<50		<b>&lt;50</b>		<50	<50			
Kvarnstugan	PSM002079	Surface	1	<50		<b>&lt;50</b>		<50	<50			
Ekhyddan	PSM002087	Surface	1	<50		<b>&lt;50</b>		<50	<50			
Övrahammar	PSM002076	Surface	1	<50		<b>&lt;50</b>		<50	<50			
Basteböla	PSM002086	Surface	1	<50		<b>&lt;50</b>		<50	<50			
Simpevarp area		Surface	10	<50	<50	<b>&lt;50</b>	<50	<50	<50			



## Surface Water

U-235			Uranium-235 (mBq/kg)							U-235	
Lake Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Frisksjön	PSM002065	Surface	1	<50		<50		<50	<50		
Frisksjön	PSM002065	Bottom	1	<50		<50		<50	<50		
Simpevarp area		Surface	1	<50		<50		<50	<50		
Simpevarp area		Bottom	1	<50		<50		<50	<50		
Forsmark area		Surface	6	<50	<50	<50	<50	<50	<50		
Forsmark area		Bottom	3	<50	<50	<50	<50	<50	<50		
Sea Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Borholmsfjärden	PSM002062	Surface	1	<50		<50		<50	<50		
Borholmsfjärden	PSM002062	Bottom	1	<50		<50		<50	<50		
Granholmsfjärden	PSM002064	Surface	1	<50		<50		<50	<50		
Granholmsfjärden	PSM002064	Bottom	1	<50		<50		<50	<50		
Kråkelund	PSM002060	Surface	1	<50		<50		<50	<50		
Kråkelund	PSM002060	Bottom	1	<50		<50		<50	<50		
Ekö	PSM002061	Surface	1	<50		<50		<50	<50		
Ekö	PSM002061	Bottom	1	<50		<50		<50	<50		
Simpevarp area		Surface	4	<50	<50	<50	<50	<50	<50		
Simpevarp area		Bottom	4	<50	<50	<50	<50	<50	<50		
Forsmark area		Surface	7	<50	<50	<50	<50	<50	<50		
Forsmark area		Bottom	5	<50	<50	<50	<50	<50	<50		
Streaming Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Misterhultsbäcken Ö	PSM002082	Surface	1	<50		<50		<50	<50		
Smedtorpet	PSM002083	Surface	1	<50		<50		<50	<50		
Kärrsvik	PSM002084	Surface	1	<50		<50		<50	<50		
Ekerum	PSM002085	Surface	1	<50		<50		<50	<50		
Plittorp	PSM002071	Surface	1	<50		<50		<50	<50		
Lillekvarn	PSM002072	Surface	1	<50		<50		<50	<50		
Kvarnstugan	PSM002079	Surface	1	<50		<50		<50	<50		
Ekhyddan	PSM002087	Surface	1	<50		<50		<50	<50		
Övrahammar	PSM002076	Surface	1	<50		<50		<50	<50		
Basteböla	PSM002086	Surface	1	<50		<50		<50	<50		
Simpevarp area		Surface	10	<50	<50	<50	<50	<50	<50		

U-238			Uranium-238 (mBq/kg)							U-238	
Lake Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Frisksjön	PSM002065	Surface	1	<50		<50		<50	<50		
Frisksjön	PSM002065	Bottom	1	<50		<50		<50	<50		
Simpevarp area		Surface	1	<50		<50		<50	<50		
Simpevarp area		Bottom	1	<50		<50		<50	<50		
Forsmark area		Surface	6	<50	<50	<50	60	70	<50	20	48
Forsmark area		Bottom	3	<50	<50	<50	<50	50	<50	10	43
Sea Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Borholmsfjärden	PSM002062	Surface	1	<50		<50		<50	<50		
Borholmsfjärden	PSM002062	Bottom	1	<50		<50		<50	<50		
Granholmsfjärden	PSM002064	Surface	1	<50		<50		<50	<50		
Granholmsfjärden	PSM002064	Bottom	1	<50		<50		<50	<50		
Kråkelund	PSM002060	Surface	1	<50		<50		<50	<50		
Kråkelund	PSM002060	Bottom	1	<50		<50		<50	<50		
Ekö	PSM002061	Surface	1	<50		<50		<50	<50		
Ekö	PSM002061	Bottom	1	<50		<50		<50	<50		
Simpevarp area		Surface	4	<50	<50	<50	<50	<50	<50		
Simpevarp area		Bottom	4	<50	<50	<50	<50	<50	<50		
Forsmark area		Surface	7	<50	<50	<50	<50	50	<50	10	38
Forsmark area		Bottom	5	<50	<50	<50	<50	100	<50	30	84
Streaming Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Misterhultsbäcken Ö	PSM002082	Surface	1	<50		<50		<50	<50		
Smedtorpet	PSM002083	Surface	1	<50		<50		<50	<50		
Kärrsvik	PSM002084	Surface	1	<50		<50		<50	<50		
Ekerum	PSM002085	Surface	1	<50		<50		<50	<50		
Plittorp	PSM002071	Surface	1	<50		<50		<50	<50		
Lillekvarn	PSM002072	Surface	1	<50		<50		<50	<50		
Kvarnstugan	PSM002079	Surface	1	<50		<50		<50	<50		
Ekhyddan	PSM002087	Surface	1	<50		<50		<50	<50		
Övrahammar	PSM002076	Surface	1	<50		<50		<50	<50		
Basteböla	PSM002086	Surface	1	<50		<50		<50	<50		
Simpevarp area		Surface	10	<50	<50	<50	<50	<50	<50		

## Surface Water

V			Vanadium (µg/l)								V
Lake Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Frisksjön	PSM002065	Surface	1	0.98		<b>0.98</b>		0.98	0.98		
Frisksjön	PSM002065	Bottom	1	0.94		<b>0.94</b>		0.94	0.94		
Simpevarp area		Surface	1	0.98		<b>0.98</b>		0.98	0.98		
Simpevarp area		Bottom	1	0.94		<b>0.94</b>		0.94	0.94		
Kalmar County	N.S.2000	Surface	35	0.070	0.25	<b>0.57</b>	0.91	3.2	0.66	0.6	94
Forsmark area		Surface	45	0.16	0.22	<b>0.25</b>	0.37	0.61	0.30	0.1	39
Forsmark area		Bottom	12	0.17	0.20	<b>0.21</b>	0.24	0.52	0.25	0.1	43
Sweden	N.S.2000	Surface	1206	0.010	0.090	<b>0.22</b>	0.46	740	0.94	20	2300
Sea Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Borholmsfjärden	PSM002062	Surface	1	0.23		<b>0.23</b>		0.23	0.23		
Borholmsfjärden	PSM002062	Bottom	1	0.19		<b>0.19</b>		0.19	0.19		
Granholmsfjärden	PSM002064	Surface	1	0.19		<b>0.19</b>		0.19	0.19		
Granholmsfjärden	PSM002064	Bottom	1	0.20		<b>0.20</b>		0.20	0.20		
Kräkelund	PSM002060	Surface	1	0.18		<b>0.18</b>		0.18	0.18		
Kräkelund	PSM002060	Bottom	1	0.15		<b>0.15</b>		0.15	0.15		
Ekö	PSM002061	Surface	1	0.16		<b>0.16</b>		0.16	0.16		
Ekö	PSM002061	Bottom	1	0.11		<b>0.11</b>		0.11	0.11		
Simpevarp area		Surface	4	0.16	0.17	<b>0.18</b>	0.20	0.23	0.19	0.03	16
Simpevarp area		Bottom	4	0.11	0.14	<b>0.17</b>	0.19	0.20	0.16	0.04	26
Forsmark area		Surface	38	0.096	0.17	<b>0.23</b>	0.34	2.1	0.32	0.3	100
Forsmark area		Bottom	13	0.097	0.16	<b>0.19</b>	0.25	0.64	0.24	0.2	63
Streaming Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Misterhultsbäcken Ö	PSM002082	Surface	1	2.0		<b>2.0</b>		2.0	2.0		
Smedtorpet	PSM002083	Surface	1	1.3		<b>1.3</b>		1.3	1.3		
Kärsvik	PSM002084	Surface	1	1.2		<b>1.2</b>		1.2	1.2		
Ekerum	PSM002085	Surface	1	1.2		<b>1.2</b>		1.2	1.2		
Plittorp	PSM002071	Surface	1	0.69		<b>0.69</b>		0.69	0.69		
Lillekvarn	PSM002072	Surface	1	1.9		<b>1.9</b>		1.9	1.9		
Kvarnstugan	PSM002079	Surface	1	0.86		<b>0.86</b>		0.86	0.86		
Ekhyddan	PSM002087	Surface	1	1.1		<b>1.1</b>		1.1	1.1		
Övrahammar	PSM002076	Surface	1	3.0		<b>3.0</b>		3.0	3.0		
Basteböla	PSM002086	Surface	1	3.0		<b>3.0</b>		3.0	3.0		
Simpevarp area		Surface	10	0.69	1.1	<b>1.3</b>	2.0	3.0	1.6	0.8	52
Forsmark area		Surface	42	0.11	0.22	<b>0.28</b>	0.36	0.69	0.32	0.1	43

## Surface Water

Yb			Ytterbium (µg/l)								Yb	
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
<b>Lake Water</b>												
Frisksjön	PSM002065	Surface	1	0.010		<b>0.010</b>		0.010	0.010			
Frisksjön	PSM002065	Bottom	1	0.010		<b>0.010</b>		0.010	0.010			
Simpevarp area		Surface	1	0.010		<b>0.010</b>		0.010	0.010			
Simpevarp area		Bottom	1	0.010		<b>0.010</b>		0.010	0.010			
Forsmark area		Surface	39	<0.005	0.0090	<b>0.013</b>	0.018	0.040	0.015	0.009	60	
Forsmark area		Bottom	10	<0.005	0.018	<b>0.023</b>	0.026	0.043	0.022	0.01	51	
<b>Sea Water</b>												
Borholmsfjärden	PSM002062	Surface	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05			
Borholmsfjärden	PSM002062	Bottom	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05			
Granholmsfjärden	PSM002064	Surface	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05			
Granholmsfjärden	PSM002064	Bottom	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05			
Kråkelund	PSM002060	Surface	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05			
Kråkelund	PSM002060	Bottom	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05			
Ekö	PSM002061	Surface	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05			
Ekö	PSM002061	Bottom	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05			
Simpevarp area		Surface	4	<0.05	<0.05	<b>&lt;0.05</b>	<0.05	<0.05	<0.05			
Simpevarp area		Bottom	4	<0.05	<0.05	<b>&lt;0.05</b>	<0.05	<0.05	<0.05			
Forsmark area		Surface	34	<0.05	<0.05	<b>&lt;0.05</b>	<0.05	0.13	<0.05	0.03	130	
Forsmark area		Bottom	13	<0.05	<0.05	<b>&lt;0.05</b>	<0.05	0.067	<0.05	0.02	140	
<b>Streaming Water</b>												
Misterhultsbäcken Ö	PSM002082	Surface	1	0.038		<b>0.038</b>		0.038	0.038			
Smedtorpet	PSM002083	Surface	1	0.045		<b>0.045</b>		0.045	0.045			
Kärrevik	PSM002084	Surface	1	0.030		<b>0.030</b>		0.030	0.030			
Ekerum	PSM002085	Surface	1	0.020		<b>0.020</b>		0.020	0.020			
Plittorp	PSM002071	Surface	1	0.021		<b>0.021</b>		0.021	0.021			
Lillekvarn	PSM002072	Surface	1	0.024		<b>0.024</b>		0.024	0.024			
Kvarnstugan	PSM002079	Surface	1	0.021		<b>0.021</b>		0.021	0.021			
Ekhyddan	PSM002087	Surface	1	0.025		<b>0.025</b>		0.025	0.025			
Övrahammar	PSM002076	Surface	1	0.041		<b>0.041</b>		0.041	0.041			
Basteböla	PSM002086	Surface	1	0.057		<b>0.057</b>		0.057	0.057			
Simpevarp area		Surface	10	0.020	0.021	<b>0.028</b>	0.041	0.057	0.032	0.01	39	
Laxemar	pre-PLU	Surface	1	0.48		<b>0.48</b>		0.48	0.48			
Forsmark area		Surface	33	<0.005	0.0097	<b>0.015</b>	0.021	0.035	0.016	0.009	54	

## Surface Water

Y			Yttrium (µg/l)								Y
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
<b>Lake Water</b>											
Frisksjön	PSM002065	Surface	1	0.093		<b>0.093</b>		0.093	0.093		
Frisksjön	PSM002065	Bottom	1	0.095		<b>0.095</b>		0.095	0.095		
Simpevarp area		Surface	1	0.093		<b>0.093</b>		0.093	0.093		
Simpevarp area		Bottom	1	0.095		<b>0.095</b>		0.095	0.095		
Forsmark area		Surface	39	0.035	0.089	<b>0.15</b>	0.22	0.44	0.16	0.10	59
Forsmark area		Bottom	10	0.040	0.20	<b>0.22</b>	0.31	0.40	0.24	0.1	50
<b>Sea Water</b>											
Borholmsfjärden	PSM002062	Surface	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05		
Borholmsfjärden	PSM002062	Bottom	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05		
Granholmsfjärden	PSM002064	Surface	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05		
Granholmsfjärden	PSM002064	Bottom	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05		
Kråkelund	PSM002060	Surface	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05		
Kråkelund	PSM002060	Bottom	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05		
Ekö	PSM002061	Surface	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05		
Ekö	PSM002061	Bottom	1	<0.05		<b>&lt;0.05</b>		<0.05	<0.05		
Simpevarp area		Surface	4	<0.05	<0.05	<b>&lt;0.05</b>	<0.05	<0.05	<0.05		
Simpevarp area		Bottom	4	<0.05	<0.05	<b>&lt;0.05</b>	<0.05	<0.05	<0.05		
Forsmark area		Surface	35	<0.05	<0.05	<b>0.069</b>	0.14	1.5	0.21	0.3	170
Forsmark area		Bottom	13	<0.05	<0.05	<b>0.057</b>	0.080	0.86	0.13	0.2	170
<b>Streaming Water</b>											
Misterhultsbäcken Ö	PSM002082	Surface	1	0.41		<b>0.41</b>		0.41	0.41		
Smedtorpet	PSM002083	Surface	1	0.42		<b>0.42</b>		0.42	0.42		
Kärrevik	PSM002084	Surface	1	0.32		<b>0.32</b>		0.32	0.32		
Ekerum	PSM002085	Surface	1	0.20		<b>0.20</b>		0.20	0.20		
Plittorp	PSM002071	Surface	1	0.24		<b>0.24</b>		0.24	0.24		
Lillekvarn	PSM002072	Surface	1	0.24		<b>0.24</b>		0.24	0.24		
Kvarnstugan	PSM002079	Surface	1	0.24		<b>0.24</b>		0.24	0.24		
Ekhyddan	PSM002087	Surface	1	0.27		<b>0.27</b>		0.27	0.27		
Övrahammar	PSM002076	Surface	1	0.41		<b>0.41</b>		0.41	0.41		
Basteböla	PSM002086	Surface	1	0.61		<b>0.61</b>		0.61	0.61		
Simpevarp area		Surface	10	0.20	0.24	<b>0.30</b>	0.41	0.61	0.34	0.1	38
Laxemar	pre-PLU	Surface	1	5.3		<b>5.3</b>		5.3	5.3		
Forsmark area		Surface	33	0.043	0.082	<b>0.15</b>	0.20	0.41	0.16	0.09	58

## Surface Water

<b>Zn</b>			<b>Zinc (µg/l)</b>								<b>Zn</b>	
			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>	
<b>Lake Water</b>												
Frisksjön	PSM002065	Surface	1	2.0		<b>2.0</b>		2.0	2.0			
Frisksjön	PSM002065	Bottom	1	1.5		<b>1.5</b>		1.5	1.5			
Simpevarp area		Surface	1	2.0		<b>2.0</b>		2.0	2.0			
Simpevarp area		Bottom	1	1.5		<b>1.5</b>		1.5	1.5			
Kalmar County	N.S.2000	Surface	35	0.50	1.2	<b>1.8</b>	2.9	6.4	2.2	1	65	
Forsmark area		Surface	49	0.38	0.71	<b>1.1</b>	1.7	13	1.6	2	120	
Forsmark area		Bottom	15	0.45	0.66	<b>2.0</b>	2.6	7.6	2.0	2	91	
Sweden	N.S.2000	Surface	1206		0.80	<b>1.5</b>	3.0	43000	46	1000	2700	
<b>Sea Water</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>	
Borholmsfjärden	PSM002062	Surface	1	<2		<b>&lt;2</b>		<2	<2			
Borholmsfjärden	PSM002062	Bottom	1	<2		<b>&lt;2</b>		<2	<2			
Granholmsfjärden	PSM002064	Surface	1	2.3		<b>2.3</b>		2.3	2.3			
Granholmsfjärden	PSM002064	Bottom	1	<2		<b>&lt;2</b>		<2	<2			
Kråkelund	PSM002060	Surface	1	2.5		<b>2.5</b>		2.5	2.5			
Kråkelund	PSM002060	Bottom	1	<2		<b>&lt;2</b>		<2	<2			
Ekö	PSM002061	Surface	1	3.4		<b>3.4</b>		3.4	3.4			
Ekö	PSM002061	Bottom	1	<2		<b>&lt;2</b>		<2	<2			
Simpevarp area		Surface	4	<2	<2	<b>2.4</b>	2.7	3.4	2.3	1.0	43	
Simpevarp area		Bottom	4	<2	<2	<b>&lt;2</b>	<2	<2	<2			
Forsmark area		Surface	38	<2	<2	<b>&lt;2</b>	3.0	23	3.5	5	140	
Forsmark area		Bottom	13	<2	<2	<b>4.1</b>	4.9	110	11	30	250	
<b>Streaming Water</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>	
Misterhultsbäcken Ö	PSM002082	Surface	1	8.8		<b>8.8</b>		8.8	8.8			
Smedtorpet	PSM002083	Surface	1	6.2		<b>6.2</b>		6.2	6.2			
Kärrevik	PSM002084	Surface	1	4.0		<b>4.0</b>		4.0	4.0			
Ekerum	PSM002085	Surface	1	1.4		<b>1.4</b>		1.4	1.4			
Plittorp	PSM002071	Surface	1	1.9		<b>1.9</b>		1.9	1.9			
Lillekvarn	PSM002072	Surface	1	6.1		<b>6.1</b>		6.1	6.1			
Kvarnstugan	PSM002079	Surface	1	2.3		<b>2.3</b>		2.3	2.3			
Ekhyddan	PSM002087	Surface	1	2.4		<b>2.4</b>		2.4	2.4			
Övrahammar	PSM002076	Surface	1	4.0		<b>4.0</b>		4.0	4.0			
Basteböla	PSM002086	Surface	1	9.1		<b>9.1</b>		9.1	9.1			
Simpevarp area		Surface	10	1.4	2.3	<b>4.0</b>	6.2	9.1	4.6	3	61	
Forsmark area		Surface	48	0.41	1.1	<b>1.5</b>	2.3	20	2.4	3	120	

## Surface Water

Zr			Zirconium (µg/l)								Zr	
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
<b>Lake Water</b>												
Frisksjön	PSM002065	Surface	1	3.5		<b>3.5</b>		3.5	3.5			
Frisksjön	PSM002065	Bottom	1	2.4		<b>2.4</b>		2.4	2.4			
Simpevarp area		Surface	1	3.5		<b>3.5</b>		3.5	3.5			
Simpevarp area		Bottom	1	2.4		<b>2.4</b>		2.4	2.4			
Forsmark area		Surface	39	0.089	0.24	<b>0.31</b>	0.39	0.61	0.31	0.1	44	
Forsmark area		Bottom	10	0.081	0.30	<b>0.39</b>	0.50	0.61	0.39	0.2	42	
<b>Sea Water</b>												
Borholmsfjärden	PSM002062	Surface	1	2.7		<b>2.7</b>		2.7	2.7			
Borholmsfjärden	PSM002062	Bottom	1	2.2		<b>2.2</b>		2.2	2.2			
Granholmsfjärden	PSM002064	Surface	1	1.9		<b>1.9</b>		1.9	1.9			
Granholmsfjärden	PSM002064	Bottom	1	1.6		<b>1.6</b>		1.6	1.6			
Kråkelund	PSM002060	Surface	1	<0.3		<b>&lt;0.3</b>		<0.3	<0.3			
Kråkelund	PSM002060	Bottom	1	<0.3		<b>&lt;0.3</b>		<0.3	<0.3			
Ekö	PSM002061	Surface	1	<0.3		<b>&lt;0.3</b>		<0.3	<0.3			
Ekö	PSM002061	Bottom	1	2.7		<b>2.7</b>		2.7	2.7			
Simpevarp area		Surface	4	<0.3	<0.3	<b>1.1</b>	2.1	2.7	1.2	1	98	
Simpevarp area		Bottom	4	<0.3	1.3	<b>1.9</b>	2.3	2.7	1.7	1	66	
Forsmark area		Surface	35	<10	<10	<b>&lt;10</b>	<10	<10	<10	2	180	
Forsmark area		Bottom	13	<10	<10	<b>&lt;10</b>	<10	<10	<10	2	160	
<b>Streaming Water</b>												
Misterhultsbäcken Ö	PSM002082	Surface	1	4.3		<b>4.3</b>		4.3	4.3			
Smedtorpet	PSM002083	Surface	1	3.9		<b>3.9</b>		3.9	3.9			
Kärrsvik	PSM002084	Surface	1	4.0		<b>4.0</b>		4.0	4.0			
Ekerum	PSM002085	Surface	1	3.7		<b>3.7</b>		3.7	3.7			
Plittorp	PSM002071	Surface	1	1.3		<b>1.3</b>		1.3	1.3			
Lillekvarn	PSM002072	Surface	1	2.2		<b>2.2</b>		2.2	2.2			
Kvarnstugan	PSM002079	Surface	1	1.6		<b>1.6</b>		1.6	1.6			
Ekhyddan	PSM002087	Surface	1	2.0		<b>2.0</b>		2.0	2.0			
Övrahammar	PSM002076	Surface	1	6.0		<b>6.0</b>		6.0	6.0			
Basteböla	PSM002086	Surface	1	6.0		<b>6.0</b>		6.0	6.0			
Simpevarp area		Surface	10	1.3	2.1	<b>3.8</b>	4.2	6.0	3.5	2	48	
Forsmark area		Surface	33	0.095	0.16	<b>0.27</b>	0.34	0.85	0.30	0.2	61	

A_436			Spectr. Abscoeff 436 nm ((µmol/mol)-1xm-1)								A_436	
			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%	
<b>Lake Water</b>												
Frisksjön	PSM002065	Surface	1	3.7		<b>3.7</b>		3.7	3.7			
Frisksjön	PSM002065	Bottom	1	3.6		<b>3.6</b>		3.6	3.6			
Jämsen	PSM002067	Surface	1	6.8		<b>6.8</b>		6.8	6.8			
Jämsen	PSM002067	Bottom	1	5.9		<b>5.9</b>		5.9	5.9			
Simpevarp area		Surface	2	3.7	4.4	<b>5.2</b>	6.0	6.8	5.2	2	43	
Simpevarp area		Bottom	2	3.6	4.1	<b>4.7</b>	5.3	5.9	4.7	2	35	
Kalmar County	N.S.2000	Surface	106	0.014	0.15	<b>0.26</b>	0.37	1.1	0.29	0.2	69	
Forsmark area		Surface	21	0.022	0.076	<b>0.72</b>	2.2	31	4.1	9	220	
Forsmark area		Bottom	4	1.0	1.5	<b>6.8</b>	13	15	7.4	7	96	
Sweden	N.S.2000	Surface	3464	0.0010	0.065	<b>0.14</b>	0.27	1.4	0.19	0.2	90	
<b>Sea Water</b>												
Borholmsfjärden	PSM002062	Surface	2	0.84	1.1	<b>1.3</b>	1.5	1.7	1.3	0.6	48	
Borholmsfjärden	PSM002062	Bottom	2	0.55	0.63	<b>0.70</b>	0.78	0.85	0.70	0.2	30	
Granholmsfjärden	PSM002064	Surface	2	0.82	0.87	<b>0.92</b>	0.96	1.0	0.92	0.1	15	
Granholmsfjärden	PSM002064	Bottom	2	0.52	0.53	<b>0.54</b>	0.55	0.56	0.54	0.03	5.2	
Kråkelund	PSM002060	Surface	1	0.22		<b>0.22</b>		0.22	0.22			
Kråkelund	PSM002060	Bottom	1	0.23		<b>0.23</b>		0.23	0.23			
Simpevarp area		Surface	5	0.22	0.82	<b>0.84</b>	1.0	1.7	0.92	0.5	57	
Simpevarp area		Bottom	5	0.23	0.52	<b>0.55</b>	0.56	0.85	0.54	0.2	41	
Forsmark area		Surface	5	0.0050	0.0090	<b>0.26</b>	0.30	2.8	0.67	1	180	
<b>Streaming Water</b>												
Smedtorpet	PSM002083	Surface	3	4.5	4.9	<b>5.2</b>	5.3	5.5	5.1	0.5	9.4	
Ekerum	PSM002085	Surface	3	2.8	3.4	<b>3.9</b>	6.1	8.2	5.0	3	57	
Köksmåla	PSM002068	Surface	3	3.9	5.8	<b>7.7</b>	8.0	8.2	6.6	2	35	
Plittorp	PSM002071	Surface	3	3.9	4.4	<b>4.9</b>	4.9	4.9	4.6	0.6	13	
Kvarnstugan	PSM002079	Surface	3	4.5	4.6	<b>4.6</b>	5.3	6.0	5.1	0.8	17	
Ekhyddan	PSM002087	Surface	3	4.3	4.3	<b>4.3</b>	4.7	5.0	4.6	0.4	8.7	
Övrahammar	PSM002076	Surface	3	3.0	4.5	<b>6.0</b>	6.4	6.8	5.3	2	39	
	PSM000347	Surface	3	2.9	2.9	<b>3.0</b>	4.1	5.2	3.7	1	36	
Simpevarp area		Surface	24	2.8	3.9	<b>4.8</b>	5.6	8.2	5.0	2	31	
Kalmar County	N.S.2000	Surface	26	0.078	0.13	<b>0.25</b>	0.34	0.51	0.24	0.1	49	
Forsmark area		Surface	19	0.097	0.18	<b>2.4</b>	4.1	37	7.9	10	160	
Sweden	N.S.2000	Surface	725	0.0020	0.094	<b>0.19</b>	0.31	1.0	0.22	0.2	73	

## Surface Water

### Absorbance 436 nm (( $\mu\text{mol/mol}$ )-1xm-1)

Lake Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Frisksjön	PSM002065	Surface	1	0.18		<b>0.18</b>		0.18	0.18		
Frisksjön	PSM002065	Bottom	1	0.18		<b>0.18</b>		0.18	0.18		
Jämsen	PSM002067	Surface	1	0.34		<b>0.34</b>		0.34	0.34		
Jämsen	PSM002067	Bottom	1	0.29		<b>0.29</b>		0.29	0.29		
Simpevarp area		Surface	2	0.18	0.22	<b>0.26</b>	0.30	0.34	0.26	0.1	43
Simpevarp area		Bottom	2	0.18	0.21	<b>0.23</b>	0.26	0.29	0.23	0.08	35
Sea Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Borholmsfjärden	PSM002062	Surface	2	0.042	0.053	<b>0.064</b>	0.074	0.085	0.064	0.03	48
Borholmsfjärden	PSM002062	Bottom	2	0.028	0.032	<b>0.036</b>	0.039	0.043	0.036	0.01	30
Granholmsfjärden	PSM002064	Surface	2	0.041	0.044	<b>0.046</b>	0.049	0.051	0.046	0.007	15
Granholmsfjärden	PSM002064	Bottom	2	0.026	0.027	<b>0.027</b>	0.028	0.028	0.027	0.001	5.2
Kråkelund	PSM002060	Surface	1	0.011		<b>0.011</b>		0.011	0.011		
Kråkelund	PSM002060	Bottom	1	0.012		<b>0.012</b>		0.012	0.012		
Simpevarp area		Surface	5	0.011	0.041	<b>0.042</b>	0.051	0.085	0.046	0.03	58
Simpevarp area		Bottom	5	0.012	0.026	<b>0.028</b>	0.028	0.043	0.027	0.01	40
Streaming Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Smedtorpet	PSM002083	Surface	3	0.26	0.27	<b>0.27</b>	0.34	0.40	0.31	0.08	25
Ekerum	PSM002085	Surface	3	0.14	0.17	<b>0.20</b>	0.29	0.38	0.24	0.1	52
Köksmåla	PSM002068	Surface	3	0.39	0.40	<b>0.41</b>	0.49	0.57	0.46	0.1	22
Pliittorp	PSM002071	Surface	3	0.20	0.22	<b>0.25</b>	0.30	0.35	0.26	0.08	30
Kvarnstugan	PSM002079	Surface	3	0.23	0.23	<b>0.23</b>	0.29	0.35	0.27	0.07	27
Ekhyddan	PSM002087	Surface	3	0.22	0.23	<b>0.25</b>	0.30	0.35	0.27	0.07	24
Övrahammar	PSM002076	Surface	3	0.30	0.32	<b>0.34</b>	0.43	0.52	0.39	0.1	30
	PSM000347	Surface	3	0.14	0.15	<b>0.15</b>	0.19	0.24	0.18	0.05	30
Simpevarp area		Surface	24	0.14	0.22	<b>0.27</b>	0.36	0.57	0.30	0.1	38

### Chlorophyll A ( $\mu\text{g/l}$ )

Lake Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Frisksjön	PSM002065	Surface	36	0.60	1.5	<b>4.1</b>	6.4	38	5.6	7	120
Frisksjön	PSM002065	Bottom	36	0.70	1.6	<b>4.5</b>	6.6	11	4.5	3	71
Jämsen	PSM002067	Surface	36	0.50	1.3	<b>2.6</b>	7.1	12	4.2	3	80
Jämsen	PSM002067	Bottom	36	0.60	1.2	<b>1.9</b>	2.8	4.7	2.0	1	50
Söråmagasinet	PSM005964	Surface	22	1.4	3.6	<b>4.5</b>	8.8	15	6.3	4	61
Söråmagasinet	PSM005964	Bottom	22	1.7	3.6	<b>5.4</b>	9.6	22	7.4	5	67
Götömar	PSM002066	Surface	18	0.60	0.80	<b>1.4</b>	2.1	3.4	1.5	0.8	53
Götömar	PSM002066	Bottom	18	<0.5	0.80	<b>1.3</b>	1.6	2.8	1.3	0.6	50
Simpevarp area		Surface	112	0.50	1.4	<b>3.5</b>	6.4	38	4.6	5	100
Simpevarp area		Bottom	112	<0.5	1.3	<b>2.5</b>	4.9	22	3.8	4	96
Forsmark area		Surface	253	<0.5	0.83	<b>1.4</b>	2.4	18	2.0	2	120
Forsmark area		Bottom	75	<0.5	0.65	<b>1.5</b>	2.6	12	2.1	2	100
Sea Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Borholmsfjärden	PSM002062	Surface	37	<0.5	2.4	<b>4.2</b>	7.5	11	4.9	3	64
Borholmsfjärden	PSM002062	Bottom	37	<0.5	1.8	<b>3.5</b>	7.1	12	4.3	3	73
Granholmsfjärden	PSM002064	Surface	38	<0.5	1.6	<b>3.5</b>	5.4	13	4.0	3	81
Granholmsfjärden	PSM002064	Bottom	36	<0.5	1.1	<b>2.1</b>	3.8	16	3.6	4	110
Kråkelund	PSM002060	Surface	35	<0.5	0.50	<b>0.70</b>	1.3	3.8	1.1	0.9	87
Kråkelund	PSM002060	Bottom	35	<0.5	<0.5	<b>0.60</b>	0.90	2.6	0.68	0.4	66
Ekö	PSM002061	Surface	36	<0.5	0.58	<b>0.85</b>	1.4	3.5	1.1	0.8	75
Ekö	PSM002061	Bottom	35	<0.5	0.75	<b>1.1</b>	1.9	7.5	1.6	1	85
Fågelöfjärden	PSM002063	Surface	17	<0.5	0.80	<b>1.4</b>	1.8	3.1	1.5	0.8	53
Fågelöfjärden	PSM002063	Bottom	17	<0.5	0.80	<b>1.2</b>	1.8	3.2	1.5	0.8	58
Simpevarp area		Surface	163	<0.5	0.70	<b>1.6</b>	3.5	13	2.7	3	100
Simpevarp area		Bottom	160	<0.5	0.70	<b>1.4</b>	2.9	16	2.5	3	120
Forsmark area		Surface	174	<0.5	1.7	<b>2.6</b>	4.1	24	3.5	3	97
Forsmark area		Bottom	69	<0.5	1.5	<b>2.9</b>	4.3	10	3.2	2	64
Streaming Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Smedtorpet	PSM002083	Surface	32	0.30	1.7	<b>3.2</b>	4.6	23	4.3	5	120
Ekhyddan	PSM002087	Surface	32	<0.5	0.90	<b>1.2</b>	1.8	3.7	1.4	0.8	60
Simpevarp area		Surface	64	<0.5	1.0	<b>1.8</b>	3.3	23	2.8	4	130
Forsmark area		Surface	108	<0.5	<0.5	<b>0.67</b>	1.7	22	1.7	4	210

## Surface Water

### Chlorophyll B (µg/l)

Lake Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Frisksjön	PSM002065	Surface	36	<0.5	<0.5	<0.5	0.73	1.9	0.56	0.5	87
Frisksjön	PSM002065	Bottom	36	<0.5	<0.5	<0.5	0.53	1.4	<0.5	0.3	65
Jämsen	PSM002067	Surface	36	<0.5	<0.5	<0.5	0.70	2.0	<0.5	0.4	88
Jämsen	PSM002067	Bottom	36	<0.5	<0.5	<0.5	<0.5	0.90	<0.5	0.2	59
Söråmagasinet	PSM005964	Surface	22	<0.5	<0.5	<0.5	0.80	2.6	0.69	0.7	98
Söråmagasinet	PSM005964	Bottom	20	<0.5	<0.5	<0.5	0.63	3.0	0.62	0.7	110
Götemar	PSM002066	Surface	18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		
Götemar	PSM002066	Bottom	18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		
Simpevarp area		Surface	112	<0.5	<0.5	<0.5	0.70	2.6	0.51	0.5	95
Simpevarp area		Bottom	110	<0.5	<0.5	<0.5	0.50	3.0	<0.5	0.4	89
Forsmark area		Surface	252	<0.5	<0.5	<0.5	<0.5	1.9	<0.5	0.2	70
Forsmark area		Bottom	74	<0.5	<0.5	<0.5	<0.5	0.82	<0.5	0.1	45
Sea Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Borholmsfjärden	PSM002062	Surface	37	<0.5	<0.5	0.60	1.1	1.7	0.69	0.5	67
Borholmsfjärden	PSM002062	Bottom	37	<0.5	<0.5	0.50	0.90	1.4	0.61	0.4	69
Granholmsfjärden	PSM002064	Surface	38	<0.5	<0.5	<0.5	0.60	2.9	0.51	0.6	110
Granholmsfjärden	PSM002064	Bottom	36	<0.5	<0.5	<0.5	0.53	3.1	0.57	0.7	130
Kräkelund	PSM002060	Surface	35	<0.5	<0.5	<0.5	<0.5	0.60	<0.5	0.1	53
Kräkelund	PSM002060	Bottom	35	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.08	44
Ekö	PSM002061	Surface	36	<0.5	<0.5	<0.5	<0.5	0.60	<0.5	0.1	52
Ekö	PSM002061	Bottom	35	<0.5	<0.5	<0.5	<0.5	0.60	<0.5	0.1	51
Fågelöfjärden	PSM002063	Surface	17	<0.5	<0.5	<0.5	<0.5	0.60	<0.5	0.1	44
Fågelöfjärden	PSM002063	Bottom	17	<0.5	<0.5	<0.5	<0.5	0.60	<0.5	0.1	35
Simpevarp area		Surface	163	<0.5	<0.5	<0.5	<0.5	2.9	<0.5	0.4	100
Simpevarp area		Bottom	160	<0.5	<0.5	<0.5	<0.5	3.1	<0.5	0.4	110
Forsmark area		Surface	174	<0.5	<0.5	<0.5	0.50	6.5	0.51	0.8	160
Forsmark area		Bottom	70	<0.5	<0.5	<0.5	0.68	1.7	<0.5	0.3	73
Streaming Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Smedtorpet	PSM002083	Surface	32	<0.5	<0.5	<0.5	<0.5	1.8	<0.5	0.3	120
Ekyddan	PSM002087	Surface	32	<0.5	<0.5	<0.5	<0.5	0.60	<0.5	0.1	57
Simpevarp area		Surface	64	<0.5	<0.5	<0.5	<0.5	1.8	<0.5	0.2	100
Forsmark area		Surface	108	<0.5	<0.5	<0.5	<0.5	2.0	<0.5	0.2	85

### Pheopigment (µg/l)

Lake Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Frisksjön	PSM002065	Surface	36	0.60	1.1	1.6	2.1	12	2.1	2	96
Frisksjön	PSM002065	Bottom	36	0.50	1.4	1.9	2.7	6.5	2.3	1	62
Jämsen	PSM002067	Surface	36	<0.5	0.80	1.2	2.0	5.3	1.6	1	77
Jämsen	PSM002067	Bottom	36	<0.5	1.2	1.7	2.5	4.8	2.0	1	56
Söråmagasinet	PSM005964	Surface	22	0.60	1.5	2.2	2.6	5.3	2.3	1	57
Söråmagasinet	PSM005964	Bottom	22	0.80	1.5	1.8	2.9	23	3.9	5	130
Götemar	PSM002066	Surface	18	<0.5	<0.5	<0.5	0.80	1.3	0.53	0.3	63
Götemar	PSM002066	Bottom	18	<0.5	0.60	0.75	0.98	1.6	0.82	0.4	54
Simpevarp area		Surface	112	<0.5	0.80	1.3	2.1	12	1.7	2	90
Simpevarp area		Bottom	112	<0.5	1.1	1.6	2.5	23	2.3	3	120
Forsmark area		Surface	253	<0.5	<0.5	<0.5	0.80	10	0.66	1.0	150
Forsmark area		Bottom	75	<0.5	<0.5	0.50	0.90	4.4	0.73	0.8	110
Sea Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Borholmsfjärden	PSM002062	Surface	37	<0.5	0.60	0.90	1.9	5.2	1.4	1	79
Borholmsfjärden	PSM002062	Bottom	37	<0.5	0.60	1.0	1.7	4.0	1.2	0.9	69
Granholmsfjärden	PSM002064	Surface	37	<0.5	0.60	0.80	1.6	6.6	1.5	2	100
Granholmsfjärden	PSM002064	Bottom	36	<0.5	0.68	1.2	1.4	5.6	1.6	1	88
Kräkelund	PSM002060	Surface	35	<0.5	<0.5	<0.5	0.55	1.1	<0.5	0.3	78
Kräkelund	PSM002060	Bottom	35	<0.5	<0.5	<0.5	<0.5	0.90	<0.5	0.2	53
Ekö	PSM002061	Surface	36	<0.5	<0.5	<0.5	0.50	1.3	<0.5	0.3	78
Ekö	PSM002061	Bottom	35	<0.5	<0.5	0.80	1.1	2.6	0.86	0.7	77
Fågelöfjärden	PSM002063	Surface	17	<0.5	<0.5	0.50	0.60	1.1	0.53	0.3	56
Fågelöfjärden	PSM002063	Bottom	16	<0.5	<0.5	0.50	0.73	1.3	0.56	0.3	51
Simpevarp area		Surface	162	<0.5	<0.5	0.60	0.98	6.6	0.88	1	120
Simpevarp area		Bottom	159	<0.5	<0.5	0.70	1.2	5.6	0.96	1.0	100
Forsmark area		Surface	173	<0.5	<0.5	0.80	1.3	7.8	1.0	0.9	91
Forsmark area		Bottom	69	<0.5	<0.5	0.80	1.2	3.0	0.90	0.7	76
Streaming Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Smedtorpet	PSM002083	Surface	32	0.40	0.90	1.8	3.2	12	2.4	2	91
Ekyddan	PSM002087	Surface	32	<0.5	0.75	1.1	1.5	2.5	1.1	0.6	48
Simpevarp area		Surface	64	<0.5	0.88	1.4	2.1	12	1.8	2	96
Forsmark area		Surface	108	<0.5	<0.5	<0.5	0.70	23	0.85	2	280



## Surface Water

### Chlorophyll (field) (µg/l)

Lake Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Frisksjön	PSM002065	Surface	34	4.7	6.7	<b>7.6</b>	8.7	7100	220	1000	560
Frisksjön	PSM002065	Bottom	34	3.4	6.0	<b>7.0</b>	7.9	2800	90	500	530
Jämsen	PSM002067	Surface	32	7.4	9.2	<b>10</b>	11	8300	270	1000	540
Jämsen	PSM002067	Bottom	32	5.8	7.1	<b>7.7</b>	8.2	8200	260	1000	550
Söråmagasinet	PSM005964	Surface	21	4.1	5.4	<b>7.3</b>	10	17	8.7	4	44
Söråmagasinet	PSM005964	Bottom	22	4.6	6.6	<b>8.1</b>	12	68	13	10	110
Götemar	PSM002066	Surface	15	1.1	2.3	<b>3.0</b>	3.7	4200	280	1000	380
Götemar	PSM002066	Bottom	15	1.9	2.3	<b>3.2</b>	3.8	5300	360	1000	380
Simpevarp area		Surface	102	1.1	6.2	<b>8.2</b>	11	8300	200	1000	570
Simpevarp area		Bottom	103	1.9	5.8	<b>7.2</b>	8.3	8200	170	1000	600
Forsmark area		Surface	170	1.0	4.0	<b>5.9</b>	8.1	45	7.0	5	72
Forsmark area		Bottom	31	2.8	5.1	<b>7.2</b>	11	17	8.4	4	52
Sea Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Borholmsfjärden	PSM002062	Surface	33	2.5	5.3	<b>7.1</b>	8.7	7700	240	1000	560
Borholmsfjärden	PSM002062	Bottom	35	1.9	4.2	<b>6.4</b>	8.7	4100	120	700	560
Granholmsfjärden	PSM002064	Surface	34	2.5	3.9	<b>5.1</b>	6.5	11000	340	2000	570
Granholmsfjärden	PSM002064	Bottom	33	0.60	2.5	<b>3.3</b>	5.4	1700	56	300	530
Kråkelund	PSM002060	Surface	29	<1	<1	<b>1.4</b>	2.2	7.4	1.6	1	85
Kråkelund	PSM002060	Bottom	30	<1	<1	<b>1.2</b>	1.8	3100	100	600	540
Ekö	PSM002061	Surface	30	0.20	0.70	<b>1.2</b>	1.9	2800	95	500	540
Ekö	PSM002061	Bottom	31	0.40	1.5	<b>2.1</b>	3.4	1100	38	200	510
Fågelöfjärden	PSM002063	Surface	14	<2.2	<2.2	<b>&lt;2.2</b>	2.8	2100	150	600	370
Fågelöfjärden	PSM002063	Bottom	14	<2.2	<2.2	<b>2.5</b>	3.1	1600	120	400	370
Simpevarp area		Surface	140	<2.2	<2.2	<b>3.0</b>	6.0	11000	180	1000	680
Simpevarp area		Bottom	143	<2.2	<2.2	<b>2.8</b>	5.5	4100	85	500	560
Forsmark area		Surface	114	0.30	1.9	<b>2.9</b>	4.4	42	4.3	5	120
Forsmark area		Bottom	28	1.3	2.3	<b>2.7</b>	6.3	8.3	4.0	2	58
Streaming Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Forsmark area		Surface	1	4.6		<b>4.6</b>		4.6	4.6		

## Surface Water

### Electrical conductivity (lab) (mS/m)

			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
<b>Lake Water</b>											
Frisksjön	PSM002065	Surface	36	10	10	11	12	15	11	1	12
Frisksjön	PSM002065	Bottom	36	9.6	11	11	13	27	12	3	25
Jämsen	PSM002067	Surface	35	9.2	11	12	12	17	12	2	13
Jämsen	PSM002067	Bottom	36	11	12	12	14	18	13	2	16
Söråmagasinet	PSM005964	Surface	22	14	17	18	18	21	17	2	9.0
Söråmagasinet	PSM005964	Bottom	22	16	17	18	18	23	18	1	8.2
Götemar	PSM002066	Surface	18	15	15	15	15	19	15	0.9	5.9
Götemar	PSM002066	Bottom	18	15	15	15	16	28	16	3	19
Simpevarp area		Surface	111	9.2	11	12	15	21	13	3	20
Simpevarp area		Bottom	112	9.6	12	13	17	28	14	3	23
Laxemar	pre-PLU	-	1	15		15		15			
Kalmar County	N.S.2000	Surface	106	3.7	7.0	8.4	10	32	8.9	4	40
Forsmark area		Surface	206	9.0	31	36	42	190	40	20	50
Forsmark area		Bottom	50	22	30	39	56	240	50	40	83
Sweden	N.S.2000	Surface	3464	0.39	2.3	3.7	6.9	1100	6.9	20	340
<b>Sea Water</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Borholmsfjärden	PSM002062	Surface	36	140	580	770	860	1000	710	200	33
Borholmsfjärden	PSM002062	Bottom	36	340	830	920	980	1000	870	100	17
Granholmsfjärden	PSM002064	Surface	37	380	800	960	1000	1100	880	200	22
Granholmsfjärden	PSM002064	Bottom	35	970	1000	1100	1100	1100	1100	30	2.7
Kräkelund	PSM002060	Surface	34	870	1100	1100	1200	1200	1100	70	5.9
Kräkelund	PSM002060	Bottom	34	840	1100	1200	1200	1300	1200	70	6.0
Ekö	PSM002061	Surface	36	860	1100	1100	1200	1200	1100	60	5.0
Ekö	PSM002061	Bottom	35	810	1100	1200	1200	1200	1100	60	5.7
Fågelöfjärden	PSM002063	Surface	17	880	1100	1100	1100	1200	1100	70	6.2
Fågelöfjärden	PSM002063	Bottom	17	880	1100	1100	1200	1300	1100	90	8.1
Simpevarp area		Surface	160	140	860	1100	1100	1200	970	200	24
Simpevarp area		Bottom	157	340	1000	1100	1200	1300	1100	100	13
Forsmark area		Surface	139	73	760	850	880	950	770	200	27
Forsmark area		Bottom	45	110	810	860	880	900	810	100	17
<b>Streaming Water</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Misterhult	PSM002080	Surface	17	7.6	9.4	11	12	18	11	3	24
Perstorpet	PSM002081	Surface	34	5.8	9.2	10	12	18	10	2	23
Misterhultsbäcken Ö	PSM002082	Surface	37	6.0	9.8	12	16	24	13	5	35
Smedtorpet	PSM002083	Surface	39	6.5	10	12	17	23	14	5	35
Kärsvik	PSM002084	Surface	38	11	16	18	19	23	18	2	14
Ekerum	PSM002085	Surface	37	13	19	21	24	28	21	3	16
Köksmåla	PSM002068	Surface	37	6.4	7.2	8.2	9.9	17	9.0	3	28
Jämserum	PSM002069	Surface	37	9.0	11	11	12	15	11	1	11
Plittorp	PSM002071	Surface	36	9.3	13	14	16	20	15	3	18
Lillekvarn	PSM002072	Surface	15	6.6	8.8	9.7	11	12	9.6	2	17
Brolund	PSM002077	Surface	18	9.0	12	13	15	20	14	3	21
Sillebäcken	PSM002078	Surface	29	5.9	7.2	7.8	8.9	13	8.4	2	23
Kvarnstugan	PSM002079	Surface	36	7.7	12	13	16	20	14	3	24
Ekhyddan	PSM002087	Surface	39	8.1	12	14	17	23	15	4	26
Övrahammar	PSM002076	Surface	32	9.4	11	13	16	23	14	4	27
Basteböla	PSM002086	Surface	29	14	19	22	24	34	22	5	22
Flohult	PSM002070	Surface	17	12	13	15	16	19	15	2	14
Figeholm	PSM002075	Surface	17	10	12	14	16	20	14	2	17
	PSM003715	Surface	7	8.5	13	15	16	17	14	3	21
	PSM003716	Surface	8	8.1	16	19	23	29	19	7	35
	PSM107735	Surface	12	11	13	14	15	20	14	2	17
Simpevarp area		Surface	571	5.8	11	13	17	34	14	5	34
Laxemar	pre-PLU	Surface	14	12	13	14	18	26	16	5	28
Kalmar County	N.S.2000	Surface	26	6.0	9.8	11	15	110	17	20	120
Forsmark area		Surface	272	7.1	32	37	43	91	40	10	35
Sweden	N.S.2000	Surface	725	0.71	2.9	5.3	11	130	12	20	140

## Surface Water

### Electrical conductivity (field) (mS/m)

			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
<b>Lake Water</b>											
Frisksjön	PSM002065	Surface	34	9.8	10	<b>10</b>	12	15	11	1	12
Frisksjön	PSM002065	Bottom	34	9.1	10	<b>11</b>	12	19	12	2	18
Jämsen	PSM002067	Surface	32	9.4	11	<b>11</b>	12	12	11	0.7	6.0
Jämsen	PSM002067	Bottom	32	11	12	<b>12</b>	17	20	14	3	22
Söråmagasinet	PSM005964	Surface	21	16	17	<b>17</b>	17	18	17	0.5	2.8
Söråmagasinet	PSM005964	Bottom	22	17	17	<b>17</b>	19	31	19	4	19
Götemar	PSM002066	Surface	15	14	14	<b>15</b>	16	18	15	1	6.8
Götemar	PSM002066	Bottom	15	14	15	<b>16</b>	17	22	16	2	12
Simpevarp area		Surface	102	9.4	11	<b>12</b>	15	18	13	3	21
Simpevarp area		Bottom	103	9.1	11	<b>14</b>	17	31	15	4	26
Forsmark area		Surface	246	17	30	<b>35</b>	42	450	45	40	94
Forsmark area		Bottom	78	20	30	<b>36</b>	51	480	62	100	160
<b>Sea Water</b>											
Borholmsfjärden	PSM002062	Surface	33	200	610	<b>790</b>	940	1000	770	200	26
Borholmsfjärden	PSM002062	Bottom	35	710	920	<b>1000</b>	1000	1200	970	100	11
Granholmsfjärden	PSM002064	Surface	34	440	830	<b>990</b>	1100	1100	930	200	17
Granholmsfjärden	PSM002064	Bottom	33	1000	1100	<b>1100</b>	1100	1200	1100	40	3.2
Kråkelund	PSM002060	Surface	31	960	1100	<b>1200</b>	1200	1300	1200	50	4.6
Kråkelund	PSM002060	Bottom	31	960	1200	<b>1200</b>	1200	1300	1200	60	5.2
Ekö	PSM002061	Surface	31	1100	1200	<b>1200</b>	1200	1200	1200	30	2.7
Ekö	PSM002061	Bottom	32	1100	1200	<b>1200</b>	1200	1200	1200	30	2.5
Fågelöfjärden	PSM002063	Surface	14	1100	1100	<b>1100</b>	1200	1200	1100	50	4.1
Fågelöfjärden	PSM002063	Bottom	14	1100	1100	<b>1100</b>	1200	1300	1200	50	4.1
Simpevarp area		Surface	143	200	870	<b>1100</b>	1200	1300	1000	200	20
Simpevarp area		Bottom	145	710	1100	<b>1100</b>	1200	1300	1100	100	9.7
Forsmark area		Surface	171	46	680	<b>830</b>	870	940	750	200	27
Forsmark area		Bottom	72	130	710	<b>820</b>	870	920	770	100	18
<b>Streaming Water</b>											
Forsmark area		Surface	309	9.4	31	<b>37</b>	42	100	39	10	37

### Light penetration (field) (m)

			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
<b>Lake Water</b>											
Frisksjön	PSM002065	Surface	35	1.2	1.6	<b>1.8</b>	2.1	2.5	1.8	0.3	18
Frisksjön	PSM002065	Bottom	37	1.2	1.6	<b>1.8</b>	2.1	2.5	1.8	0.3	17
Jämsen	PSM002067	Surface	34	0.80	1.1	<b>1.3</b>	1.4	2.0	1.3	0.3	21
Jämsen	PSM002067	Bottom	34	0.80	1.1	<b>1.3</b>	1.4	2.0	1.3	0.3	21
Söråmagasinet	PSM005964	Surface	20	1.5	1.9	<b>2.2</b>	2.4	3.4	2.2	0.5	21
Söråmagasinet	PSM005964	Bottom	20	1.5	1.9	<b>2.2</b>	2.4	3.4	2.2	0.5	21
Götemar	PSM002066	Surface	18	3.0	3.7	<b>4.0</b>	4.4	5.4	4.0	0.6	14
Götemar	PSM002066	Bottom	18	3.0	3.7	<b>4.0</b>	4.4	5.4	4.0	0.6	14
Simpevarp area		Surface	107	0.80	1.4	<b>1.8</b>	2.4	5.4	2.1	1	48
Simpevarp area		Bottom	109	0.80	1.4	<b>1.8</b>	2.4	5.4	2.1	1.0	47
Forsmark area		Surface	230	0.30	1.0	<b>1.6</b>	1.9	2.3	1.5	0.5	34
Forsmark area		Bottom	72	1.4	1.6	<b>1.8</b>	2.0	2.2	1.8	0.2	13
<b>Sea Water</b>											
Borholmsfjärden	PSM002062	Surface	36	1.1	2.0	<b>2.3</b>	2.7	3.5	2.3	0.6	27
Borholmsfjärden	PSM002062	Bottom	36	1.1	2.0	<b>2.3</b>	2.7	3.5	2.3	0.6	27
Granholmsfjärden	PSM002064	Surface	36	1.0	2.6	<b>3.4</b>	4.1	5.6	3.4	1	30
Granholmsfjärden	PSM002064	Bottom	34	1.0	2.5	<b>3.3</b>	4.2	5.6	3.4	1	31
Kråkelund	PSM002060	Surface	34	4.5	11	<b>13</b>	15	23	13	4	29
Kråkelund	PSM002060	Bottom	33	4.5	11	<b>13</b>	15	23	13	4	27
Ekö	PSM002061	Surface	36	4.1	7.5	<b>8.0</b>	8.5	9.0	7.7	1	15
Ekö	PSM002061	Bottom	35	4.1	7.5	<b>8.0</b>	8.5	9.0	7.7	1	15
Fågelöfjärden	PSM002063	Surface	17	<5	5.0	<b>5.0</b>	5.5	6.1	<5	0.8	17
Fågelöfjärden	PSM002063	Bottom	17	<5	5.0	<b>5.0</b>	5.5	6.1	<5	0.8	17
Simpevarp area		Surface	159	<5	<5	<b>5.0</b>	8.5	23	6.3	4	68
Simpevarp area		Bottom	155	<5	<5	<b>5.0</b>	8.5	23	6.3	4	69
Forsmark area		Surface	169	0.30	1.3	<b>2.3</b>	3.6	6.4	2.5	1	52
Forsmark area		Bottom	70	0.90	1.5	<b>2.9</b>	3.7	6.4	2.9	1	46
<b>Streaming Water</b>											
Forsmark area		Surface	21		0.10	<b>0.20</b>	0.30	1.0	0.27	0.2	92

## Surface Water

### Light (field) ( $\mu\text{molE/m}^{**2}\text{xs}$ )

Lake Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Frisksjön	PSM002065	Surface	32	4.5	32	<b>72</b>	170	500	120	100	98
Frisksjön	PSM002065	Bottom	32	2.0	4.7	<b>5.2</b>	6.3	16	6.1	3	46
Jämsen	PSM002067	Surface	30	3.6	14	<b>36</b>	77	330	65	80	120
Jämsen	PSM002067	Bottom	30	1.6	4.2	<b>4.3</b>	4.4	5.3	4.2	0.6	15
Söråmagasinet	PSM005964	Surface	20	7.1	33	<b>68</b>	190	630	130	200	120
Söråmagasinet	PSM005964	Bottom	21	4.4	4.6	<b>4.9</b>	5.5	11	5.4	2	30
Götemar	PSM002066	Surface	15	19	28	<b>77</b>	370	1100	230	300	130
Götemar	PSM002066	Bottom	15	1.7	4.2	<b>4.2</b>	4.2	4.4	4.0	0.7	19
Simpevarp area		Surface	97	3.6	27	<b>54</b>	170	1100	120	200	130
Simpevarp area		Bottom	98	1.6	4.2	<b>4.5</b>	5.1	16	5.1	2	40
Forsmark area		Surface	147	<0.4	19	<b>68</b>	180	1000	140	200	140
Forsmark area		Bottom	24	<0.4	0.73	<b>4.7</b>	13	210	20	40	220
Sea Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Borholmsfjärden	PSM002062	Surface	30	7.2	59	<b>210</b>	410	700	240	200	85
Borholmsfjärden	PSM002062	Bottom	32	2.1	8.2	<b>14</b>	21	170	21	30	140
Granholmsfjärden	PSM002064	Surface	31	9.1	76	<b>140</b>	430	1200	280	300	110
Granholmsfjärden	PSM002064	Bottom	30	1.7	4.2	<b>4.4</b>	4.4	4.5	4.2	0.6	14
Kräkelund	PSM002060	Surface	30	17	79	<b>350</b>	610	1700	450	400	100
Kräkelund	PSM002060	Bottom	30	1.5	4.7	<b>4.9</b>	5.5	8.4	5.1	1	25
Ekö	PSM002061	Surface	30	25	110	<b>440</b>	640	2400	480	500	97
Ekö	PSM002061	Bottom	31	6.0	11	<b>29</b>	66	120	42	30	80
Fågelöfjärden	PSM002063	Surface	14	13	64	<b>250</b>	320	2300	420	600	150
Fågelöfjärden	PSM002063	Bottom	14	6.0	17	<b>36</b>	100	290	67	80	110
Simpevarp area		Surface	135	7.2	77	<b>240</b>	520	2400	370	400	110
Simpevarp area		Bottom	137	1.5	4.5	<b>7.4</b>	24	290	23	40	160
Forsmark area		Surface	106	<0.1	56	<b>190</b>	660	2100	380	400	110
Forsmark area		Bottom	23	<0.1	3.3	<b>7.5</b>	19	290	28	60	220

### Salinity (field) (per mill)

Lake Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Frisksjön	PSM002065	Surface	34	0.0500	0.0500	<b>0.0500</b>	0.0600	0.0700	0.0541	0.0070	13
Frisksjön	PSM002065	Bottom	34	0.0400	0.0500	<b>0.0500</b>	0.0600	0.0900	0.0568	0.011	19
Jämsen	PSM002067	Surface	32	0.0400	0.0500	<b>0.0500</b>	0.0500	0.0600	0.0516	0.0051	10.0
Jämsen	PSM002067	Bottom	32	0.0500	0.0500	<b>0.0600</b>	0.0800	0.100	0.0659	0.016	24
Söråmagasinet	PSM005964	Surface	21	0.0800	0.0800	<b>0.0800</b>	0.0800	0.0800	0.0800		
Söråmagasinet	PSM005964	Bottom	22	0.0800	0.0800	<b>0.0800</b>	0.0875	0.150	0.0882	0.017	19
Götemar	PSM002066	Surface	15	0.0700	0.0700	<b>0.0700</b>	0.0800	0.0900	0.0740	0.0063	8.5
Götemar	PSM002066	Bottom	15	0.0700	0.0700	<b>0.0700</b>	0.0800	0.100	0.0773	0.0096	12
Simpevarp area		Surface	102	0.0400	0.0500	<b>0.0600</b>	0.0775	0.0900	0.0616	0.013	21
Simpevarp area		Bottom	103	0.0400	0.0500	<b>0.0700</b>	0.0800	0.150	0.0693	0.018	26
Forsmark area		Surface	221		0.140	<b>0.170</b>	0.200	2.37	0.202	0.23	110
Forsmark area		Bottom	61		0.100	<b>0.160</b>	0.230	2.54	0.304	0.58	190
Sea Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Borholmsfjärden	PSM002062	Surface	33	1.00	3.31	<b>4.39</b>	5.27	5.87	4.28	1.2	27
Borholmsfjärden	PSM002062	Bottom	35	3.90	5.16	<b>5.60</b>	5.87	6.50	5.47	0.60	11
Granholmsfjärden	PSM002064	Surface	34	2.32	4.63	<b>5.54</b>	6.01	6.21	5.21	0.92	18
Granholmsfjärden	PSM002064	Bottom	33	5.79	6.21	<b>6.29</b>	6.45	6.66	6.30	0.20	3.2
Kräkelund	PSM002060	Surface	31	5.36	6.51	<b>6.61</b>	6.72	7.10	6.59	0.30	4.6
Kräkelund	PSM002060	Bottom	31	5.40	6.74	<b>6.81</b>	7.01	7.71	6.85	0.37	5.5
Ekö	PSM002061	Surface	31	6.30	6.54	<b>6.68</b>	6.79	6.97	6.66	0.17	2.5
Ekö	PSM002061	Bottom	32	6.46	6.60	<b>6.74</b>	6.85	7.03	6.74	0.16	2.4
Fågelöfjärden	PSM002063	Surface	14	5.97	6.32	<b>6.45</b>	6.68	7.01	6.49	0.29	4.4
Fågelöfjärden	PSM002063	Bottom	14	6.13	6.45	<b>6.55</b>	6.68	7.29	6.59	0.30	4.5
Simpevarp area		Surface	143	1.00	4.86	<b>6.21</b>	6.65	7.10	5.73	1.2	21
Simpevarp area		Bottom	145	3.90	6.13	<b>6.50</b>	6.76	7.71	6.34	0.65	10
Forsmark area		Surface	171	0.200	3.65	<b>4.60</b>	4.81	5.25	4.10	1.2	28
Forsmark area		Bottom	71	0.400	3.83	<b>4.52</b>	4.75	5.06	4.19	0.80	19
Bottenhavet	SMHI:MS4	Surface	35	4.56	4.89	<b>5.16</b>	5.27	5.46	5.10	0.25	4.8
Bottenhavet	SMHI:MS4	Bottom	34	5.10	5.33	<b>5.42</b>	5.46	5.58	5.40	0.10	1.9
N Simpevarp	SMHI:B1	Surface	91	5.66	5.93	<b>6.08</b>	6.32	6.89	6.14	0.28	4.5
N Simpevarp	SMHI:B1	Bottom	89	6.00	6.67	<b>6.80</b>	6.94	8.36	6.86	0.43	6.3
Östersjön	SMHI:BY29	Surface	46	5.78	6.24	<b>6.53</b>	6.79	7.17	6.51	0.35	5.4
Östersjön	SMHI:BY29	Bottom	46	6.60	6.79	<b>6.89</b>	7.05	7.22	6.91	0.16	2.3
Streaming Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Forsmark area		Surface	260		0.140	<b>0.170</b>	0.200	0.510	0.177	0.078	44

## Turbidity (field) (FNU)

Lake Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Frisksjön	PSM002065	Surface	35		0.95	<b>1.5</b>	2.5	10	1.9	2	90
Frisksjön	PSM002065	Bottom	35	0.50	1.9	<b>3.7</b>	5.8	13	4.3	3	71
Jämsen	PSM002067	Surface	31	0.050	0.90	<b>1.5</b>	2.5	19	2.5	3	140
Jämsen	PSM002067	Bottom	31	1.8	3.3	<b>6.2</b>	10	31	9.2	8	89
Söråmagasinet	PSM005964	Surface	21	0.50	1.1	<b>1.3</b>	2.0	4.5	1.6	1.0	60
Söråmagasinet	PSM005964	Bottom	22	0.60	2.8	<b>7.5</b>	11	20	7.6	6	75
Götemar	PSM002066	Surface	16	0.10	0.40	<b>0.60</b>	0.80	9.2	1.2	2	190
Götemar	PSM002066	Bottom	16	0.20	1.8	<b>5.1</b>	12	32	8.4	9	110
Simpevarp area		Surface	103		0.80	<b>1.2</b>	2.1	19	1.9	2	120
Simpevarp area		Bottom	104	0.20	2.7	<b>4.9</b>	8.8	32	7.1	7	96
Forsmark area		Surface	173		0.45	<b>0.70</b>	1.0	880	7.8	70	880
Forsmark area		Bottom	32		0.20	<b>0.55</b>	0.95	11	1.3	2	170
Sea Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Borholmsfjärden	PSM002062	Surface	34		0.63	<b>1.1</b>	1.8	16	1.7	3	160
Borholmsfjärden	PSM002062	Bottom	35		0.45	<b>1.2</b>	2.4	20	2.5	4	150
Granholmsfjärden	PSM002064	Surface	33		0.20	<b>0.40</b>	0.70	18	1.1	3	280
Granholmsfjärden	PSM002064	Bottom	32	0.10	0.40	<b>1.4</b>	3.4	18	2.9	4	130
Kråkelund	PSM002060	Surface	31		0.10	<b>0.20</b>	0.30	14	0.68	2	360
Kråkelund	PSM002060	Bottom	31	0.050	0.15	<b>0.20</b>	0.33	24	1.0	4	410
Ekö	PSM002061	Surface	30		0.10	<b>0.15</b>	0.30	17	0.76	3	390
Ekö	PSM002061	Bottom	31		0.30	<b>0.40</b>	1.3	17	1.5	3	220
Fågelöfjärden	PSM002063	Surface	14		0.10	<b>0.23</b>	0.29	17	1.4	4	320
Fågelöfjärden	PSM002063	Bottom	14		0.10	<b>0.23</b>	0.50	17	1.5	4	300
Simpevarp area		Surface	142		0.10	<b>0.30</b>	0.78	18	1.1	3	270
Simpevarp area		Bottom	143		0.20	<b>0.50</b>	1.6	24	1.9	4	200
Forsmark area		Surface	119		0.40	<b>0.80</b>	4.3	40	3.2	6	190
Forsmark area		Bottom	31		0.48	<b>1.2</b>	5.0	33	3.3	6	180
Streaming Water			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Smedtorpet	PSM002083	Surface	1	7.3		<b>7.3</b>		7.3	7.3		
Ekhyddan	PSM002087	Surface	1	6.2		<b>6.2</b>		6.2	6.2		
Simpevarp area		Surface	2	6.2	6.5	<b>6.8</b>	7.0	7.3	6.8	0.8	12
Forsmark area		Surface	1	0.10		<b>0.10</b>		0.10	0.10		

## Appendix 2 – Simpevarp soil tubes

<b>Element</b>	<b>Description</b>	<b>Abbreviation</b>	<b>Page</b>
<b>Aluminium</b>	Aluminium	Al	1
<b>Arsenic</b>	Arsenic	As	1
<b>Barium</b>	Barium	Ba	2
<b>Boron</b>	Boron-10 (B10/B11)	B-10	2
<b>Bromide</b>	Bromide	Br	3
<b>Cadmium</b>	Cadmium	Cd	3
<b>Calcium</b>	Calcium	Ca	4
<b>Carbon</b>	Bicarbonate	HCO <sub>3</sub>	5
	Carbon-13	C-13	6
	Carbon-14	C-14	6
<b>Cerium</b>	Cerium	Ce	7
<b>Cesium</b>	Cesium	Cs	7
<b>Chlorine</b>	Chloride	Cl	8
	Chlorine-37	Cl-37	8
<b>Conductivity</b>	Electrical conductivity		42
<b>Deuterium</b>	Deuterium	D	9
<b>Dysprosium</b>	Dysprosium	Dy	9
<b>Erbium</b>	Erbium	Er	10
<b>Europium</b>	Europium	Eu	10
<b>Fluoride</b>	Fluoride	F	11
<b>Gadolinium</b>	Gadolinium	Gd	12
<b>Hafnium</b>	Hafnium	Hf	12
<b>Holmium</b>	Holmium	Ho	13
<b>Hydrogen</b>	pH (lab)	pH	14
	Tritium	Tr	15
<b>Indium</b>	Indium	In	15
<b>Iodide</b>	Iodide	I	16
<b>Iron</b>	Ferrous iron	Fe(II)	16
	Iron (total ICP)	Fe	17
	Iron (total spectrometric)	Fe	18
<b>Lanthanum</b>	Lanthanum	La	18
<b>Lithium</b>	Lithium	Li	19
<b>Lutetium</b>	Lutetium	Lu	19
<b>Magnesium</b>	Magnesium	Mg	20
<b>Manganese</b>	Manganese	Mn	21
<b>Mercury</b>	Mercury	Hg	22
<b>Neodymium</b>	Neodymium	Nd	22
<b>Nitrogen</b>	Nitrogen as ammonium	NH <sub>4</sub> -N	23
	Nitrogen as nitrate	NO <sub>3</sub> -N	23
	Nitrogen as nitrate and nitrite	NO <sub>23</sub> -N	23
<b>Oxygen</b>	Chemical oxygen demand	COD	23
	Oxygen-18	O-18	24
<b>Phosphorus</b>	Phosphorus as phosphate	PO <sub>4</sub> -P	24
<b>Potassium</b>	Potassium	K	25
<b>Praseodymium</b>	Praseodymium	Pr	26

<b>Element</b>	<b>Description</b>	<b>Abbreviation</b>	<b>Page</b>
<b>Radium</b>	Radium-226	Ra-226	26
<b>Radon</b>	Radon-222	Rn-222	27
<b>Rubidium</b>	Rubidium	Rb	27
<b>Samarium</b>	Samarium	Sm	28
<b>Scandium</b>	Scandium	Sc	28
<b>Silicon</b>	Silicon	Si	29
<b>Sodium</b>	Sodium	Na	30
<b>Strontium</b>	Strontium	Sr	31
	Strontium-87 (Sr87/Sr86)	Sr-87	31
<b>Sulphur</b>	Hydrogen sulphide as total sulphide	S2 (HS)	32
	Sulphate	SO4	33
	Sulphate as sulphur	SO4-S	34
	Sulphur-34	S-34	34
<b>Terbium</b>	Terbium	Tb	35
<b>Thallium</b>	Thallium	Tl	35
<b>Thorium</b>	Thorium	Th	36
	Thorium-230	Th-230	36
	Thorium-232	Th-232	37
<b>Thulium</b>	Thulium	Tm	37
<b>Uranium</b>	Uranium	U	38
	Uranium-234	U-234	38
	Uranium-235	U-235	39
	Uranium-238	U-238	39
<b>Vanadium</b>	Vanadium	V	40
<b>Ytterbium</b>	Ytterbium	Yb	40
<b>Yttrium</b>	Yttrium	Y	41
<b>Zirconium</b>	Zirconium	Zr	41

## Ground Water

<b>Al</b>			<b>Aluminium (µg/l)</b>								<b>Al</b>
<b>Reference</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Simpevarp area	Private wells	excavated	101	5.0	140	<b>360</b>	940	3400	630	700	110
Simpevarp area	Private wells	drilled	248	5.0	20	<b>50</b>	140	1400	130	200	160
Forsmark area	Private wells	excavated	12	25	25	<b>28</b>	38	90	37	20	54
Forsmark area	Private wells	drilled	13	25	25	<b>30</b>	55	220	53	60	100
Forsmark area	Soil tubes	All	89	<2	5.7	<b>23</b>	42	560	56	100	190
Forsmark area	Soil tubes	'Higher'	67	<2	6.8	<b>21</b>	42	500	53	90	180
Forsmark area	Soil tubes	'Lower'	22	<2	5.6	<b>23</b>	41	560	65	100	210
Forsmark area	Soil tubes	In lake	3	<2	<2	<b>&lt;2</b>	3.4	5.7	2.3	3	130
Forsmark area	Soil tubes	At sea	1			<b>2.2</b>			2.2		
Kalmar County	SGU well	excavated	4	<20	70	<b>150</b>	370	830	290	400	130
Uppsala County	SGU well	excavated	46	<20	<20	<b>&lt;20</b>	20	230	32	50	150
Uppsala County	SGU well	drilled	70	<20	<20	<b>&lt;20</b>	<20	70	<20	10	80
Sweden	SGU well	excavated	1423	<20	<20	<b>30</b>	100	1900	96	200	190
Sweden	SGU well	drilled	1668	<20	<20	<b>&lt;20</b>	25	3800	39	100	380

<b>As</b>			<b>Arsenic (µg/l)</b>								<b>As</b>
<b>Soil tube</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
SSM000008	LOW (Coast)		1			<b>0.57</b>			0.57		
SSM000010	LOW (Coast)		1			<b>0.61</b>			0.61		
SSM000012	LOW (26:1)		1			<b>0.49</b>			0.49		
SSM000014	LOW (Coast)		1			<b>1.3</b>			1.3		
SSM000016	LOW (Coast)		1			<b>0.85</b>			0.85		
SSM000018	LOW (24:1)		1			<b>0.63</b>			0.63		
SSM000020	HIGH (23:1)		1			<b>0.58</b>			0.58		
SSM000022	LOW (23:1)		1			<b>0.44</b>			0.44		
SSM000024	HIGH (Coast)		1			<b>1.0</b>			1.0		
SSM000026	HIGH (Coast)		1			<b>1.3</b>			1.3		
SSM000027	LOW (5:1)		1			<b>0.65</b>			0.65		
SSM000029	LOW (Coast)		1			<b>3.6</b>			3.6		
SSM000030	LOW (6:1)		1			<b>0.47</b>			0.47		
SSM000031	LOW (6:1)		1			<b>0.26</b>			0.26		
SSM000034	LOW (Coast)		1			<b>0.056</b>			0.056		
SSM000037	LOW (9:3)		1			<b>0.95</b>			0.95		
SSM000039	LOW (9:1)		1			<b>0.50</b>			0.50		
SSM000040	LOW (Coast)		1			<b>1.9</b>			1.9		
<b>Summary Simpevarp</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Simpevarp area	Soil tubes	All	18	0.056	0.49	<b>0.62</b>	0.99	3.6	0.90	0.8	90
Simpevarp area	Soil tubes	'Higher'	3	0.58	0.79	<b>1.0</b>	1.2	1.3	0.97	0.4	39
Simpevarp area	Soil tubes	'Lower'	15	0.056	0.48	<b>0.61</b>	0.90	3.6	0.89	0.9	99
<b>Reference</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Forsmark area	Soil tubes	All	26	<0.01	0.52	<b>1.1</b>	1.4	9.0	1.8	2	140
Forsmark area	Soil tubes	'Higher'	21	<0.01	0.52	<b>1.1</b>	1.5	9.0	2.0	3	140
Forsmark area	Soil tubes	'Lower'	5	0.35	0.71	<b>0.80</b>	1.3	1.5	0.93	0.5	49



**Ground Water**

<b>Ba</b>			<b>Barium (µg/l)</b>							<b>Ba</b>	
<b>Soil tube</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
SSM000008	LOW (Coast)		1			60			60		
SSM000010	LOW (Coast)		1			62			62		
SSM000012	LOW (26:1)		1			49			49		
SSM000014	LOW (Coast)		1			63			63		
SSM000016	LOW (Coast)		1			94			94		
SSM000018	LOW (24:1)		1			100			100		
SSM000020	HIGH (23:1)		1			54			54		
SSM000022	LOW (23:1)		1			36			36		
SSM000024	HIGH (Coast)		1			110			110		
SSM000026	HIGH (Coast)		1			39			39		
SSM000027	LOW (5:1)		1			26			26		
SSM000029	LOW (Coast)		1			150			150		
SSM000030	LOW (6:1)		1			50			50		
SSM000031	LOW (6:1)		1			25			25		
SSM000034	LOW (Coast)		1			98			98		
SSM000037	LOW (9:3)		1			110			110		
SSM000039	LOW (9:1)		1			96			96		
SSM000040	LOW (Coast)		1			68			68		
<b>Summary Simpevarp</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Simpevarp area	Soil tubes	All	18	25	49	63	98	150	72	30	48
Simpevarp area	Soil tubes	'Higher'	3	39	46	54	82	110	68	40	56
Simpevarp area	Soil tubes	'Lower'	15	25	50	63	97	150	73	40	49
<b>Reference</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Laxemar pre-PLU	Soil tubes	All	12	8.4	14	40	63	110	43	30	74
Forsmark area	Soil tubes	All	92	12	40	63	81	190	66	40	54
Forsmark area	Soil tubes	'Higher'	70	22	44	63	80	190	66	30	49
Forsmark area	Soil tubes	'Lower'	22	12	35	50	96	180	66	50	70
Forsmark area	Soil tubes	In lake	3	27	31	35	110	180	80	90	110
Forsmark area	Soil tubes	At sea	1			37			37		

<b>B-10</b>			<b>Boron-10 (B10/B11) (ratio)</b>							<b>B-10</b>	
<b>Soil tube</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
SSM000001	LOW (Coast)		1			0.2443			0.2443		
SSM000002	HIGH (Coast)		1			0.2400			0.2400		
SSM000005	HIGH (Coast)		1			0.2500			0.2500		
SSM000008	LOW (Coast)		2	0.2400		0.2436		0.2472	0.2436	0.00509	2.1
SSM000010	LOW (Coast)		2	0.2426		0.2445		0.2464	0.2445	0.00269	1.1
SSM000012	LOW (26:1)		2	0.2393		0.2406		0.2419	0.2406	0.00184	0.76
SSM000014	LOW (Coast)		2	0.2429		0.2432		0.2434	0.2432	0.000354	0.15
SSM000016	LOW (Coast)		2	0.2413		0.2417		0.2420	0.2417	0.000495	0.20
SSM000018	LOW (24:1)		2	0.2423		0.2423		0.2423	0.2423		
SSM000020	HIGH (23:1)		2	0.2452		0.2468		0.2483	0.2468	0.00219	0.89
SSM000022	LOW (23:1)		2	0.2364		0.2367		0.2369	0.2367	0.000354	0.15
SSM000024	HIGH (Coast)		2	0.2395		0.2401		0.2406	0.2401	0.000778	0.32
SSM000026	HIGH (Coast)		2	0.2409		0.2429		0.2449	0.2429	0.00283	1.2
SSM000027	LOW (5:1)		1			0.2465			0.2465		
SSM000029	LOW (Coast)		1			0.2417			0.2417		
SSM000030	LOW (6:1)		1			0.2421			0.2421		
SSM000031	LOW (6:1)		1			0.2450			0.2450		
SSM000034	LOW (Coast)		1			0.2451			0.2451		
SSM000037	LOW (9:3)		1			0.2427			0.2427		
SSM000039	LOW (9:1)		1			0.2452			0.2452		
SSM000040	LOW (Coast)		1			0.2443			0.2443		
<b>Summary Simpevarp</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Simpevarp area	Soil tubes	All	31	0.2364	0.2411	0.2426	0.2451	0.2500	0.2429	0.00310	1.3
Simpevarp area	Soil tubes	'Higher'	8	0.2395	0.2405	0.2429	0.2460	0.2500	0.2437	0.00402	1.7
Simpevarp area	Soil tubes	'Lower'	23	0.2364	0.2418	0.2426	0.2447	0.2472	0.2427	0.00277	1.1
<b>Reference</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Forsmark area	Private wells	excavated	2	0.2379		0.2399		0.2418	0.2399	0.00276	1.1
Forsmark area	Private wells	drilled	5	0.2367	0.2376	0.2389	0.2394	0.2415	0.2388	0.00184	0.77
Forsmark area	Soil tubes	All	141	0.1900	0.2388	0.2408	0.2437	0.2548	0.2404	0.00852	3.5
Forsmark area	Soil tubes	'Higher'	93	0.1900	0.2396	0.2423	0.2447	0.2548	0.2408	0.0102	4.3
Forsmark area	Soil tubes	'Lower'	48	0.2345	0.2378	0.2392	0.2409	0.2503	0.2398	0.00320	1.3
Forsmark area	Soil tubes	In lake	21	0.2345	0.2369	0.2379	0.2406	0.2503	0.2393	0.00434	1.8
Forsmark area	Soil tubes	At sea	7	0.2376	0.2384	0.2388	0.2390	0.2401	0.2387	0.000763	0.32

## Ground Water

Br			Bromide (mg/l)								Br
Soil tube			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
SSM000001	LOW (Coast)		1			<0.2			<0.2		
SSM000002	HIGH (Coast)		1			<0.2			<0.2		
SSM000005	HIGH (Coast)		1			0.91			0.91		
SSM000008	LOW (Coast)		4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2		
SSM000010	LOW (Coast)		4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2		
SSM000012	LOW (26:1)		4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2		
SSM000014	LOW (Coast)		4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2		
SSM000016	LOW (Coast)		4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2		
SSM000018	LOW (24:1)		4	0.53	0.64	0.77	0.90	1.1	0.78	0.2	29
SSM000020	HIGH (23:1)		4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2		
SSM000022	LOW (23:1)		4	0.55	0.57	0.64	0.75	0.91	0.68	0.2	24
SSM000024	HIGH (Coast)		4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2		
SSM000026	HIGH (Coast)		4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2		
SSM000027	LOW (5:1)		1			<0.2			<0.2		
SSM000029	LOW (Coast)		1			1.0			1.0		
SSM000030	LOW (6:1)		1			<0.2			<0.2		
SSM000031	LOW (6:1)		2	<0.2		<0.2		<0.2	<0.2		
SSM000034	LOW (Coast)		1			1.5			1.5		
SSM000037	LOW (9:3)		1			<0.2			<0.2		
SSM000039	LOW (9:1)		2	<0.2		<0.2		<0.2	<0.2		
SSM000040	LOW (Coast)		2	0.68		0.92		1.2	0.92	0.3	37
SSM000042	LOW (10:1)		1			0.78			0.78		
Summary Simpevarp			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Simpevarp area	Soil tubes	All	55	<0.2	<0.2	<0.2	0.32	1.5	0.29	0.4	120
Simpevarp area	Soil tubes	'Higher'	14	<0.2	<0.2	<0.2	<0.2	0.91	<0.2	0.2	140
Simpevarp area	Soil tubes	'Lower'	41	<0.2	<0.2	<0.2	0.58	1.5	0.33	0.4	110
Reference			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Forsmark area	Private wells	excavated	6	<0.2	<0.2	0.28	3.4	12	2.9	5	170
Forsmark area	Private wells	drilled	14	<0.2	0.29	3.2	23	32	11	10	110
Forsmark area	Soil tubes	All	199	<0.2	<0.2	0.23	1.3	20	2.0	4	190
Forsmark area	Soil tubes	'Higher'	119	<0.2	<0.2	<0.2	0.23	1.8	0.24	0.3	140
Forsmark area	Soil tubes	'Lower'	80	<0.2	0.41	1.7	8.3	20	4.6	5	110
Forsmark area	Soil tubes	In lake	35	<0.2	1.3	6.4	12	20	6.9	6	85
Forsmark area	Soil tubes	At sea	11	4.1	6.6	7.7	8.7	12	7.8	2	30

Cd			Cadmium (µg/l)								Cd
Soil tube			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
SSM000008	LOW (Coast)		1			0.044			0.044		
SSM000010	LOW (Coast)		1			0.0070			0.0070		
SSM000012	LOW (26:1)		1			<0.01			<0.01		
SSM000014	LOW (Coast)		1			0.063			0.063		
SSM000016	LOW (Coast)		1			0.051			0.051		
SSM000018	LOW (24:1)		1			0.12			0.12		
SSM000020	HIGH (23:1)		1			0.047			0.047		
SSM000022	LOW (23:1)		1			<0.03			<0.03		
SSM000024	HIGH (Coast)		1			0.084			0.084		
SSM000026	HIGH (Coast)		1			<20			<20		
SSM000027	LOW (5:1)		1			0.0058			0.0058		
SSM000029	LOW (Coast)		1			0.40			0.40		
SSM000030	LOW (6:1)		1			0.013			0.013		
SSM000031	LOW (6:1)		1			0.0066			0.0066		
SSM000034	LOW (Coast)		1			0.0023			0.0023		
SSM000037	LOW (9:3)		1			0.065			0.065		
SSM000039	LOW (9:1)		1			0.070			0.070		
SSM000040	LOW (Coast)		1			0.13			0.13		
Summary Simpevarp			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Simpevarp area	Soil tubes	All	18	<20	<20	<20	<20	<20	<20	2	380
Simpevarp area	Soil tubes	'Higher'	3	<20	<20	<20	<20	<20	<20	6	170
Simpevarp area	Soil tubes	'Lower'	15	<20	<20	<20	<20	<20	<20	0.1	150
Reference			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Forsmark area	Soil tubes	All	90	<0.02	<0.02	<0.02	<0.02	0.067	<0.02	0.01	100
Forsmark area	Soil tubes	'Higher'	68	<0.02	<0.02	<0.02	<0.02	0.053	<0.02	0.01	97
Forsmark area	Soil tubes	'Lower'	22	<0.02	<0.02	<0.02	0.022	0.067	<0.02	0.02	110
Forsmark area	Soil tubes	In lake	3	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.005	74
Forsmark area	Soil tubes	At sea	1			<0.02			<0.02		

**Ground Water**

<b>Ca</b>			<b>Calcium (mg/l)</b>							<b>Ca</b>	
<b>Soil tube</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
SSM000001	LOW (Coast)		1			<b>30</b>			30		
SSM000002	HIGH (Coast)		1			<b>32</b>			32		
SSM000005	HIGH (Coast)		1			<b>91</b>			91		
SSM000008	LOW (Coast)		3	24	29	<b>34</b>	39	45	34	10	31
SSM000010	LOW (Coast)		3	36	40	<b>44</b>	51	57	46	10	23
SSM000012	LOW (26:1)		3	53	55	<b>57</b>	58	59	56	3	5.3
SSM000014	LOW (Coast)		3	22	23	<b>25</b>	25	26	24	2	8.7
SSM000016	LOW (Coast)		3	35	41	<b>47</b>	57	67	50	20	33
SSM000018	LOW (24:1)		3	35	38	<b>42</b>	47	53	43	9	21
SSM000020	HIGH (23:1)		3	20	27	<b>35</b>	37	40	31	10	33
SSM000022	LOW (23:1)		3	22	22	<b>22</b>	22	23	22	0.2	0.68
SSM000024	HIGH (Coast)		3	15	15	<b>16</b>	24	33	21	10	47
SSM000026	HIGH (Coast)		3	9.1	20	<b>31</b>	32	32	24	10	54
SSM000027	LOW (5:1)		1			<b>6.1</b>			6.1		
SSM000029	LOW (Coast)		1			<b>23</b>			23		
SSM000030	LOW (6:1)		1			<b>69</b>			69		
SSM000031	LOW (6:1)		1			<b>12</b>			12		
SSM000034	LOW (Coast)		1			<b>100</b>			100		
SSM000037	LOW (9:3)		1			<b>55</b>			55		
SSM000039	LOW (9:1)		1			<b>37</b>			37		
SSM000040	LOW (Coast)		1			<b>28</b>			28		
<b>Summary Simpevarp</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Simpevarp area	Soil tubes	All	41	6.1	23	<b>34</b>	47	100	38	20	55
Simpevarp area	Soil tubes	'Higher'	11	9.1	18	<b>32</b>	34	91	32	20	68
Simpevarp area	Soil tubes	'Lower'	30	6.1	24	<b>36</b>	53	100	40	20	51
<b>Reference</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Simpevarp area	Private wells	excavated	101	1.8	7.3	<b>24</b>	35	160	26	20	90
Simpevarp area	Private wells	drilled	252	1.0	20	<b>29</b>	39	430	37	40	110
Forsmark area	Private wells	excavated	20	46	99	<b>130</b>	180	220	140	50	36
Forsmark area	Private wells	drilled	30	11	110	<b>160</b>	680	1200	360	400	99
Laxemar pre-PLU	Soil tubes	All	22	9.1	17	<b>30</b>	50	140	42	30	81
Forsmark area	Soil tubes	All	197	29	91	<b>110</b>	140	680	150	100	81
Forsmark area	Soil tubes	'Higher'	117	58	94	<b>110</b>	130	210	110	30	24
Forsmark area	Soil tubes	'Lower'	80	29	57	<b>120</b>	280	680	200	200	87
Forsmark area	Soil tubes	In lake	35	33	75	<b>270</b>	430	680	260	200	79
Forsmark area	Soil tubes	At sea	11	140	170	<b>420</b>	440	450	330	100	43
Kalmar County	SGU well	excavated	81	5.5	12	<b>18</b>	25	91	21	10	67
Kalmar County	SGU well	drilled	108	1.5	26	<b>38</b>	55	280	47	40	86
Uppsala County	SGU well	excavated	47	16	49	<b>71</b>	91	140	70	30	42
Uppsala County	SGU well	drilled	73	9.6	40	<b>65</b>	93	200	69	40	56
Sweden	SGU well	excavated	900	1.1	12	<b>23</b>	46	210	35	30	95
Sweden	SGU well	drilled	2056	0.15	22	<b>38</b>	62	550	49	40	85

## Ground Water

HCO3			Bicarbonate (mg/l)							HCO3	
Soil tube			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
SSM000001	LOW (Coast)		1			110			110		
SSM000002	HIGH (Coast)		1			370			370		
SSM000005	HIGH (Coast)		1			220			220		
SSM000008	LOW (Coast)		4	65	78	100	130	160	110	40	40
SSM000009	LOW (9:2)		1			2.0			2.0		
SSM000010	LOW (Coast)		4	96	110	130	160	180	140	40	29
SSM000011	HIGH (9:2)		1			3.0			3.0		
SSM000012	LOW (26:1)		4	200	200	210	220	230	210	10	6.0
SSM000014	LOW (Coast)		4	32	50	69	85	93	66	30	42
SSM000016	LOW (Coast)		4	83	85	110	150	200	130	60	44
SSM000017	LOW (10:5)		1			42			42		
SSM000018	LOW (24:1)		4	46	48	59	70	78	60	20	25
SSM000019	HIGH (10:5)		1			27			27		
SSM000020	HIGH (23:1)		4	16	32	45	56	64	43	20	49
SSM000021	LOW (9:1)		1			200			200		
SSM000022	LOW (23:1)		4	270	270	280	290	290	280	10	4.2
SSM000024	HIGH (Coast)		4	44	66	83	94	99	77	20	32
SSM000026	HIGH (Coast)		4	21	35	55	77	100	58	30	60
SSM000027	LOW (5:1)		1			17			17		
SSM000029	LOW (Coast)		1			190			190		
SSM000030	LOW (6:1)		1			260			260		
SSM000031	LOW (6:1)		2	46		48		51	48	3	6.9
SSM000034	LOW (Coast)		1			550			550		
SSM000035	LOW (10:30)		1			87			87		
SSM000037	LOW (9:3)		1			220			220		
SSM000039	LOW (9:1)		2	34		50		65	50	20	43
SSM000040	LOW (Coast)		2	130		160		180	160	30	21
SSM000041	LOW (10:1)		1			120			120		
SSM000042	LOW (10:1)		2	150		180		200	180	30	19
<b>Summary Simpevarp</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Simpevarp area	Soil tubes	All	63	2.0	52	93	190	550	130	100	79
Simpevarp area	Soil tubes	'Higher'	16	3.0	35	58	94	370	83	90	110
Simpevarp area	Soil tubes	'Lower'	47	2.0	67	120	200	550	140	100	71
<b>Reference</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Simpevarp area	Private wells	excavated	133	0.50	11	54	93	270	66	70	100
Simpevarp area	Private wells	drilled	285	10	110	180	230	400	170	90	50
Forsmark area	Private wells	excavated	18	120	280	330	400	540	340	100	31
Forsmark area	Private wells	drilled	26	52	170	300	410	660	310	200	61
Laxemar pre-PLU	Soil tubes	All	21	8.0	100	180	330	620	230	200	74
Forsmark area	Soil tubes	All	199	72	320	360	420	770	370	100	31
Forsmark area	Soil tubes	'Higher'	119	180	340	360	410	580	370	60	18
Forsmark area	Soil tubes	'Lower'	80	72	250	350	430	770	370	200	44
Forsmark area	Soil tubes	In lake	35	72	200	340	380	770	370	200	59
Forsmark area	Soil tubes	At sea	11	200	240	240	300	350	270	50	21
Kalmar County	SGU well	excavated	367	1.0	18	29	54	400	50	60	120
Kalmar County	SGU well	drilled	375	0.50	75	130	180	560	130	80	62
Uppsala County	SGU well	excavated	66	32	160	240	290	500	230	100	43
Uppsala County	SGU well	drilled	672	24	210	260	320	620	270	80	31
Sweden	SGU well	excavated	8897		18	36	81	850	68	80	120
Sweden	SGU well	drilled	13579		89	150	220	1100	160	100	63

## Ground Water

C-13			Carbon-13 (dev. PDB)								C-13
Soil tube			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
SSM000008	LOW (Coast)		3	-17.8	-17.5	-17.1	-17.0	-17.0	-17.3	0.45	-2.6
SSM000010	LOW (Coast)		3	-18.3	-17.9	-17.5	-17.1	-16.8	-17.5	0.75	-4.3
SSM000012	LOW (26:1)		3	-14.3	-14.0	-13.7	-10.0	-6.32	-11.4	4.4	-39
SSM000014	LOW (Coast)		3	-18.6	-18.5	-18.5	-18.0	-17.5	-18.2	0.61	-3.4
SSM000016	LOW (Coast)		2	-18.9		-17.9		-17.0	-17.9	1.3	-7.4
SSM000018	LOW (24:1)		2	-21.5		-19.6		-17.6	-19.6	2.8	-14
SSM000020	HIGH (23:1)		2	-19.3		-18.8		-18.2	-18.8	0.78	-4.1
SSM000022	LOW (23:1)		3	-11.3	-11.0	-10.8	-10.7	-10.6	-10.9	0.37	-3.4
SSM000024	HIGH (Coast)		3	-20.5	-18.5	-16.5	-15.8	-15.0	-17.4	2.8	-16
SSM000026	HIGH (Coast)		1			-12.7			-12.7		
SSM000029	LOW (Coast)		1			-12.4			-12.4		
SSM000030	LOW (6:1)		1			-15.2			-15.2		
SSM000034	LOW (Coast)		1			-10.7			-10.7		
SSM000037	LOW (9:3)		1			-14.6			-14.6		
SSM000039	LOW (9:1)		1			-12.4			-12.4		
Summary Simpevarp			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Simpevarp area	Soil tubes	All	30	-21.5	-18.1	-16.9	-13.0	-6.32	-15.6	3.5	-22
Simpevarp area	Soil tubes	'Higher'	6	-20.5	-19.0	-17.4	-15.4	-12.7	-17.0	2.9	-17
Simpevarp area	Soil tubes	'Lower'	24	-21.5	-17.7	-16.9	-12.4	-6.32	-15.3	3.6	-24
Reference			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Forsmark area	Soil tubes	All	79	-16.5	-14.6	-13.2	-11.2	8.25	-11.2	5.9	-52
Forsmark area	Soil tubes	'Higher'	52	-16.5	-14.7	-13.9	-12.7	-0.540	-13.3	2.6	-19
Forsmark area	Soil tubes	'Lower'	27	-16.3	-13.2	-8.74	-5.64	8.25	-7.19	8.0	-110
Forsmark area	Soil tubes	In lake	13	-8.40	-6.53	-4.80	6.83	8.25	-0.793	7.1	-890
Forsmark area	Soil tubes	At sea	5	-12.4	-12.4	-11.3	-11.2	-8.74	-11.2	1.5	-13

C-14			Carbon-14 (PMC)								C-14
Soil tube			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
SSM000008	LOW (Coast)		1			82.2			82.2		
SSM000010	LOW (Coast)		1			81.1			81.1		
SSM000012	LOW (26:1)		1			54.9			54.9		
SSM000014	LOW (Coast)		1			97.6			97.6		
SSM000018	LOW (24:1)		1			99.6			99.6		
SSM000022	LOW (23:1)		1			45.4			45.4		
SSM000024	HIGH (Coast)		1			103			103		
Summary Simpevarp			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Simpevarp area	Soil tubes	All	7	45.4	68.0	82.2	98.6	103	80.6	23	28
Simpevarp area	Soil tubes	'Higher'	1			103			103		
Simpevarp area	Soil tubes	'Lower'	6	45.4	61.5	81.7	93.7	99.6	76.8	22	29
Reference			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Forsmark area	Soil tubes	All	59	42.1	84.1	89.8	94.6	114	85.5	16	19
Forsmark area	Soil tubes	'Higher'	38	69.1	88.2	91.0	95.4	114	92.4	7.3	7.9
Forsmark area	Soil tubes	'Lower'	21	42.1	48.6	81.3	87.9	105	72.9	21	28
Forsmark area	Soil tubes	In lake	11	42.1	48.2	66.8	82.4	84.4	64.0	17	27
Forsmark area	Soil tubes	At sea	4	47.6	47.7	67.8	88.4	89.8	68.3	24	35

**Ground Water**

<b>Ce</b>			<b>Cerium (µg/l)</b>							<b>Ce</b>	
<b>Soil tube</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
SSM000008	LOW (Coast)		1			23			23		
SSM000010	LOW (Coast)		1			24			24		
SSM000012	LOW (26:1)		1			13			13		
SSM000014	LOW (Coast)		1			30			30		
SSM000016	LOW (Coast)		1			41			41		
SSM000018	LOW (24:1)		1			22			22		
SSM000020	HIGH (23:1)		1			34			34		
SSM000022	LOW (23:1)		1			1.1			1.1		
SSM000024	HIGH (Coast)		1			100			100		
SSM000026	HIGH (Coast)		1			28			28		
SSM000027	LOW (5:1)		1			15			15		
SSM000029	LOW (Coast)		1			140			140		
SSM000030	LOW (6:1)		1			9.0			9.0		
SSM000031	LOW (6:1)		1			35			35		
SSM000034	LOW (Coast)		1			0.46			0.46		
SSM000037	LOW (9:3)		1			82			82		
SSM000039	LOW (9:1)		1			150			150		
SSM000040	LOW (Coast)		1			42			42		
<b>Summary Simpevarp</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Simpevarp area	Soil tubes	All	18	0.46	17	29	42	150	44	50	100
Simpevarp area	Soil tubes	'Higher'	3	28	31	34	69	100	56	40	77
Simpevarp area	Soil tubes	'Lower'	15	0.46	14	24	42	150	42	50	110
<b>Reference</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Laxemar pre-PLU	Soil tubes	All	12	0.61	2.2	3.9	6.2	22	5.5	6	100
Forsmark area	Soil tubes	All	85	<0.05	0.29	1.3	3.3	10	2.0	2	110
Forsmark area	Soil tubes	'Higher'	63	0.13	0.52	1.4	3.1	10	2.0	2	97
Forsmark area	Soil tubes	'Lower'	22	<0.05	<0.05	0.14	4.3	8.0	2.2	3	120
Forsmark area	Soil tubes	In lake	3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.01	60
Forsmark area	Soil tubes	At sea	1			<0.05			<0.05		

<b>Cs</b>			<b>Cesium (µg/l)</b>							<b>Cs</b>	
<b>Soil tube</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
SSM000008	LOW (Coast)		1			0.46			0.46		
SSM000010	LOW (Coast)		1			0.49			0.49		
SSM000012	LOW (26:1)		1			0.27			0.27		
SSM000014	LOW (Coast)		1			0.85			0.85		
SSM000016	LOW (Coast)		1			1.9			1.9		
SSM000018	LOW (24:1)		1			0.38			0.38		
SSM000020	HIGH (23:1)		1			0.21			0.21		
SSM000022	LOW (23:1)		1			0.065			0.065		
SSM000024	HIGH (Coast)		1			2.6			2.6		
SSM000026	HIGH (Coast)		1			0.43			0.43		
SSM000027	LOW (5:1)		1			0.084			0.084		
SSM000029	LOW (Coast)		1			2.3			2.3		
SSM000030	LOW (6:1)		1			0.75			0.75		
SSM000031	LOW (6:1)		1			0.64			0.64		
SSM000034	LOW (Coast)		1			<0.03			<0.03		
SSM000037	LOW (9:3)		1			3.4			3.4		
SSM000039	LOW (9:1)		1			3.5			3.5		
SSM000040	LOW (Coast)		1			0.94			0.94		
<b>Summary Simpevarp</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Simpevarp area	Soil tubes	All	18	<0.03	0.29	0.57	1.7	3.5	1.1	1	110
Simpevarp area	Soil tubes	'Higher'	3	0.21	0.32	0.43	1.5	2.6	1.1	1	120
Simpevarp area	Soil tubes	'Lower'	15	<0.03	0.32	0.64	1.4	3.5	1.1	1	110
<b>Reference</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Laxemar pre-PLU	Soil tubes	All	12	0.0090	0.016	0.045	0.087	7.9	0.85	2	270
Forsmark area	Soil tubes	All	85	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.03	110
Forsmark area	Soil tubes	'Higher'	63	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.02	98
Forsmark area	Soil tubes	'Lower'	22	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.05	94
Forsmark area	Soil tubes	In lake	3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.08	74
Forsmark area	Soil tubes	At sea	1			<0.3			<0.3		

**Ground Water**

<b>CI</b>			<b>Chloride (mg/l)</b>							<b>CI</b>	
<b>Soil tube</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
SSM000001	LOW (Coast)		1			7.1			7.1		
SSM000002	HIGH (Coast)		1			8.5			8.5		
SSM000005	HIGH (Coast)		1			17			17		
SSM000008	LOW (Coast)		4	3.2	3.6	3.9	4.3	5.1	4.0	0.8	20
SSM000010	LOW (Coast)		4	3.8	4.5	4.7	5.0	5.7	4.7	0.8	16
SSM000012	LOW (26:1)		4	11	12	15	20	30	18	9	49
SSM000014	LOW (Coast)		4	9.3	11	12	14	16	12	3	23
SSM000016	LOW (Coast)		4	3.5	5.5	6.2	6.4	6.5	5.6	1	25
SSM000018	LOW (24:1)		4	86	110	120	140	200	130	50	38
SSM000020	HIGH (23:1)		4	3.7	4.4	5.3	6.2	6.8	5.3	1	26
SSM000022	LOW (23:1)		4	140	150	150	150	160	150	6	4.3
SSM000024	HIGH (Coast)		4	4.1	4.7	6.0	7.6	9.2	6.3	2	36
SSM000026	HIGH (Coast)		4	5.4	5.5	5.6	6.1	7.2	6.0	0.8	14
SSM000027	LOW (5:1)		1			7.4			7.4		
SSM000029	LOW (Coast)		1			86			86		
SSM000030	LOW (6:1)		1			16			16		
SSM000031	LOW (6:1)		2	5.3		6.1		6.9	6.1	1	19
SSM000034	LOW (Coast)		1			140			140		
SSM000037	LOW (9:3)		1			16			16		
SSM000039	LOW (9:1)		2	4.0		6.2		8.3	6.2	3	49
SSM000040	LOW (Coast)		2	95		120		140	120	30	28
SSM000042	LOW (10:1)		1			65			65		
<b>Summary Simpevarp</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Simpevarp area	Soil tubes	All	55	3.2	5.4	7.4	24	200	36	50	150
Simpevarp area	Soil tubes	'Higher'	14	3.7	5.0	5.9	7.2	17	6.8	3	49
Simpevarp area	Soil tubes	'Lower'	41	3.2	5.7	12	86	200	46	60	130
<b>Reference</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Simpevarp area	Private wells	excavated	134	2.5	7.0	18	46	750	49	100	210
Simpevarp area	Private wells	drilled	291	2.5	14	45	140	1200	120	200	150
Forsmark area	Private wells	excavated	20	3.0	4.8	14	140	1900	260	500	210
Forsmark area	Private wells	drilled	29	8.0	44	91	3600	5600	1500	2000	130
Laxemar pre-PLU	Soil tubes	All	22	9.7	33	220	450	1400	370	500	120
Forsmark area	Soil tubes	All	196	4.2	18	56	340	3800	460	900	190
Forsmark area	Soil tubes	'Higher'	117	4.2	11	23	56	580	64	100	170
Forsmark area	Soil tubes	'Lower'	79	12	69	400	1900	3800	1000	1000	110
Forsmark area	Soil tubes	In lake	34	23	300	1300	2300	3800	1600	1000	87
Forsmark area	Soil tubes	At sea	11	690	1700	1800	1900	2000	1700	400	21
Kalmar County	SGU well	excavated	377	2.0	11	20	32	180	26	20	85
Kalmar County	SGU well	drilled	375	2.0	11	21	45	1400	58	100	260
Uppsala County	SGU well	excavated	66	0.32	7.1	13	24	730	33	100	290
Uppsala County	SGU well	drilled	672	0.50	9.7	19	42	2600	65	200	260
Sweden	SGU well	excavated	6822		5.0	11	21	1600	20	50	230
Sweden	SGU well	drilled	12433		7.0	15	32	11000	52	200	390

<b>CI-37</b>			<b>Chlorine-37 (dev. SMOC)</b>							<b>CI-37</b>	
<b>Soil tube</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
SSM000005	HIGH (Coast)		1			0.460			0.460		
SSM000008	LOW (Coast)		3	-0.410	-0.360	-0.310	-0.280	-0.250	-0.323	0.081	-25
SSM000010	LOW (Coast)		3	-0.530	-0.445	-0.360	-0.290	-0.220	-0.370	0.16	-42
SSM000012	LOW (26:1)		3	-0.0800	-0.00500	0.0700	0.220	0.370	0.120	0.23	190
SSM000014	LOW (Coast)		3	-0.250	-0.0950	0.0600	0.415	0.770	0.193	0.52	270
SSM000016	LOW (Coast)		3	-0.710	-0.480	-0.250	-0.220	-0.190	-0.383	0.28	-74
SSM000018	LOW (24:1)		3	-0.530	-0.470	-0.410	-0.125	0.160	-0.260	0.37	-140
SSM000020	HIGH (23:1)		3	-0.630	-0.420	-0.210	-0.0600	0.0900	-0.250	0.36	-140
SSM000022	LOW (23:1)		3	-0.330	-0.260	-0.190	-0.135	-0.0800	-0.200	0.13	-63
SSM000024	HIGH (Coast)		3	-0.530	-0.455	-0.380	0.0450	0.470	-0.147	0.54	-370
SSM000026	HIGH (Coast)		3	-0.380	-0.365	-0.350	0.0450	0.440	-0.0967	0.47	-480
SSM000031	LOW (6:1)		1			0.420			0.420		
<b>Summary Simpevarp</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Simpevarp area	Soil tubes	All	32	-0.710	-0.380	-0.235	0.0750	0.770	-0.133	0.37	-280
Simpevarp area	Soil tubes	'Higher'	10	-0.630	-0.380	-0.280	0.353	0.470	-0.102	0.43	-420
Simpevarp area	Soil tubes	'Lower'	22	-0.710	-0.353	-0.235	0.0250	0.770	-0.148	0.35	-230
<b>Reference</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Forsmark area	Soil tubes	All	105	-0.720	-0.320	-0.0500	0.200	1.56	-0.0371	0.39	-1000
Forsmark area	Soil tubes	'Higher'	72	-0.590	-0.305	-0.0700	0.190	0.580	-0.0694	0.29	-420
Forsmark area	Soil tubes	'Lower'	33	-0.720	-0.320		0.210	1.56	0.0333	0.54	1600
Forsmark area	Soil tubes	In lake	14	-0.670	0.0125	0.185	0.653	1.56	0.359	0.61	170
Forsmark area	Soil tubes	At sea	5	-0.410	-0.360	-0.270	-0.260	0.0400	-0.252	0.17	-69

## Ground Water

D			Deuterium (dev. SMOW)								D
Soil tube			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
SSM000001	LOW (Coast)		1			-80.4			-80.4		
SSM000005	HIGH (Coast)		1			-85.2			-85.2		
SSM000008	LOW (Coast)		3	-81.9	-80.4	-78.9	-74.8	-70.7	-77.2	5.8	-7.5
SSM000010	LOW (Coast)		3	-79.8	-78.6	-77.3	-74.6	-71.9	-76.3	4.0	-5.3
SSM000012	LOW (26:1)		3	-76.9	-76.6	-76.3	-75.6	-74.9	-76.0	1.0	-1.3
SSM000014	LOW (Coast)		3	-75.5	-74.3	-73.0	-72.8	-72.5	-73.7	1.6	-2.2
SSM000016	LOW (Coast)		3	-81.0	-80.4	-79.8	-74.6	-69.3	-76.7	6.4	-8.4
SSM000018	LOW (24:1)		3	-79.6	-78.3	-77.0	-71.5	-66.0	-74.2	7.2	-9.7
SSM000020	HIGH (23:1)		3	-78.9	-77.6	-76.3	-73.3	-70.2	-75.1	4.5	-5.9
SSM000022	LOW (23:1)		3	-77.5	-77.3	-77.1	-75.8	-74.4	-76.3	1.7	-2.2
SSM000024	HIGH (Coast)		3	-78.7	-78.1	-77.4	-74.6	-71.8	-76.0	3.7	-4.8
SSM000026	HIGH (Coast)		3	-79.1	-76.8	-74.5	-74.3	-74.1	-75.9	2.8	-3.7
SSM000027	LOW (5:1)		1			-84.3			-84.3		
SSM000029	LOW (Coast)		1			-80.4			-80.4		
SSM000030	LOW (6:1)		1			-77.4			-77.4		
SSM000031	LOW (6:1)		1			-76.2			-76.2		
SSM000034	LOW (Coast)		1			-78.5			-78.5		
SSM000037	LOW (9:3)		1			-77.4			-77.4		
SSM000039	LOW (9:1)		1			-77.8			-77.8		
SSM000040	LOW (Coast)		1			-79.7			-79.7		
Summary Simpevarp			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Simpevarp area	Soil tubes	All	40	-85.2	-79.2	-77.4	-74.5	-66.0	-76.7	4.0	-5.2
Simpevarp area	Soil tubes	'Higher'	10	-85.2	-78.9	-76.9	-74.2	-70.2	-76.6	4.3	-5.6
Simpevarp area	Soil tubes	'Lower'	30	-84.3	-79.7	-77.4	-75.1	-66.0	-76.8	3.9	-5.1
Reference			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Forsmark area	Private wells	excavated	2	-87.8		-82.7		-77.6	-82.7	7.2	-8.7
Forsmark area	Private wells	drilled	5	-85.1	-82.3	-82.2	-78.6	-75.9	-80.8	3.6	-4.4
Laxemar pre-PLU	Soil tubes	All	22	-80.4	-77.4	-75.6	-71.4	-59.9	-73.5	5.5	-7.5
Forsmark area	Soil tubes	All	180	-95.2	-86.8	-83.7	-76.8	-62.5	-81.9	6.9	-8.4
Forsmark area	Soil tubes	'Higher'	111	-95.2	-87.4	-85.1	-81.7	-68.8	-83.8	5.6	-6.7
Forsmark area	Soil tubes	'Lower'	69	-93.5	-85.6	-80.7	-73.2	-62.5	-79.0	7.8	-9.8
Forsmark area	Soil tubes	In lake	29	-84.5	-77.4	-72.5	-68.0	-62.5	-72.8	5.9	-8.0
Forsmark area	Soil tubes	At sea	10	-89.9	-87.8	-86.9	-79.8	-73.2	-83.9	6.0	-7.2

Dy			Dysprosium (µg/l)								Dy
Soil tube			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
SSM000008	LOW (Coast)		1			1.4			1.4		
SSM000010	LOW (Coast)		1			1.6			1.6		
SSM000012	LOW (26:1)		1			0.57			0.57		
SSM000014	LOW (Coast)		1			1.3			1.3		
SSM000016	LOW (Coast)		1			2.4			2.4		
SSM000018	LOW (24:1)		1			1.3			1.3		
SSM000020	HIGH (23:1)		1			2.0			2.0		
SSM000022	LOW (23:1)		1			0.082			0.082		
SSM000024	HIGH (Coast)		1			5.5			5.5		
SSM000026	HIGH (Coast)		1			1.5			1.5		
SSM000027	LOW (5:1)		1			0.58			0.58		
SSM000029	LOW (Coast)		1			6.7			6.7		
SSM000030	LOW (6:1)		1			0.48			0.48		
SSM000031	LOW (6:1)		1			1.6			1.6		
SSM000034	LOW (Coast)		1			0.033			0.033		
SSM000037	LOW (9:3)		1			2.5			2.5		
SSM000039	LOW (9:1)		1			6.7			6.7		
SSM000040	LOW (Coast)		1			2.0			2.0		
Summary Simpevarp			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Simpevarp area	Soil tubes	All	18	0.033	0.75	1.6	2.3	6.7	2.1	2	97
Simpevarp area	Soil tubes	'Higher'	3	1.5	1.7	2.0	3.7	5.5	3.0	2	74
Simpevarp area	Soil tubes	'Lower'	15	0.033	0.57	1.4	2.2	6.7	2.0	2	110
Reference			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Forsmark area	Soil tubes	All	85	<0.05	0.051	0.17	0.33	0.84	0.22	0.2	86
Forsmark area	Soil tubes	'Higher'	63	<0.05	0.10	0.19	0.32	0.71	0.22	0.2	70
Forsmark area	Soil tubes	'Lower'	22	<0.05	<0.05	<0.05	0.40	0.84	0.21	0.3	120
Forsmark area	Soil tubes	In lake	3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.01	74
Forsmark area	Soil tubes	At sea	1			<0.05			<0.05		



**Ground Water**

<b>Er</b>			<b>Erbium (µg/l)</b>								<b>Er</b>
<b>Soil tube</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
SSM000008	LOW (Coast)		1			<b>0.77</b>			0.77		
SSM000010	LOW (Coast)		1			<b>0.86</b>			0.86		
SSM000012	LOW (26:1)		1			<b>0.34</b>			0.34		
SSM000014	LOW (Coast)		1			<b>0.69</b>			0.69		
SSM000016	LOW (Coast)		1			<b>1.2</b>			1.2		
SSM000018	LOW (24:1)		1			<b>0.68</b>			0.68		
SSM000020	HIGH (23:1)		1			<b>1.0</b>			1.0		
SSM000022	LOW (23:1)		1			<b>0.050</b>			0.050		
SSM000024	HIGH (Coast)		1			<b>2.6</b>			2.6		
SSM000026	HIGH (Coast)		1			<b>0.84</b>			0.84		
SSM000027	LOW (5:1)		1			<b>0.34</b>			0.34		
SSM000029	LOW (Coast)		1			<b>3.6</b>			3.6		
SSM000030	LOW (6:1)		1			<b>0.26</b>			0.26		
SSM000031	LOW (6:1)		1			<b>0.86</b>			0.86		
SSM000034	LOW (Coast)		1			<b>0.026</b>			0.026		
SSM000037	LOW (9:3)		1			<b>1.3</b>			1.3		
SSM000039	LOW (9:1)		1			<b>3.1</b>			3.1		
SSM000040	LOW (Coast)		1			<b>1.2</b>			1.2		
<b>Summary Simpevarp</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Simpevarp area	Soil tubes	All	18	0.026	0.43	<b>0.85</b>	1.2	3.6	1.1	1	92
Simpevarp area	Soil tubes	'Higher'	3	0.84	0.92	<b>1.0</b>	1.8	2.6	1.5	1.0	66
Simpevarp area	Soil tubes	'Lower'	15	0.026	0.34	<b>0.77</b>	1.2	3.6	1.0	1	100
<b>Reference</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Laxemar pre-PLU	Soil tubes	All	12	0.080	0.11	<b>0.14</b>	0.21	0.93	0.22	0.2	110
Forsmark area	Soil tubes	All	85	<0.05	<0.05	<b>0.100</b>	0.21	0.46	0.14	0.1	85
Forsmark area	Soil tubes	'Higher'	63	<0.05	0.060	<b>0.11</b>	0.20	0.43	0.14	0.1	73
Forsmark area	Soil tubes	'Lower'	22	<0.05	<0.05	<b>&lt;0.05</b>	0.26	0.46	0.13	0.2	120
Forsmark area	Soil tubes	In lake	3	<0.05	<0.05	<b>&lt;0.05</b>	<0.05	<0.05	<0.05	0.01	74
Forsmark area	Soil tubes	At sea	1			<b>&lt;0.05</b>			<0.05		

<b>Eu</b>			<b>Europium (µg/l)</b>								<b>Eu</b>
<b>Soil tube</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
SSM000008	LOW (Coast)		1			<b>0.35</b>			0.35		
SSM000010	LOW (Coast)		1			<b>0.43</b>			0.43		
SSM000012	LOW (26:1)		1			<b>0.14</b>			0.14		
SSM000014	LOW (Coast)		1			<b>0.39</b>			0.39		
SSM000016	LOW (Coast)		1			<b>0.71</b>			0.71		
SSM000018	LOW (24:1)		1			<b>0.37</b>			0.37		
SSM000020	HIGH (23:1)		1			<b>0.51</b>			0.51		
SSM000022	LOW (23:1)		1			<b>0.020</b>			0.020		
SSM000024	HIGH (Coast)		1			<b>1.6</b>			1.6		
SSM000026	HIGH (Coast)		1			<b>0.43</b>			0.43		
SSM000027	LOW (5:1)		1			<b>0.18</b>			0.18		
SSM000029	LOW (Coast)		1			<b>1.6</b>			1.6		
SSM000030	LOW (6:1)		1			<b>0.14</b>			0.14		
SSM000031	LOW (6:1)		1			<b>0.55</b>			0.55		
SSM000034	LOW (Coast)		1			<b>0.014</b>			0.014		
SSM000037	LOW (9:3)		1			<b>0.82</b>			0.82		
SSM000039	LOW (9:1)		1			<b>2.3</b>			2.3		
SSM000040	LOW (Coast)		1			<b>0.58</b>			0.58		
<b>Summary Simpevarp</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Simpevarp area	Soil tubes	All	18	0.014	0.22	<b>0.43</b>	0.68	2.3	0.62	0.6	100
Simpevarp area	Soil tubes	'Higher'	3	0.43	0.47	<b>0.51</b>	1.0	1.6	0.83	0.6	76
Simpevarp area	Soil tubes	'Lower'	15	0.014	0.16	<b>0.39</b>	0.64	2.3	0.57	0.6	110
<b>Reference</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Laxemar pre-PLU	Soil tubes	All	12	0.017	0.032	<b>0.052</b>	0.070	0.30	0.075	0.08	100
Forsmark area	Soil tubes	All	85	<0.05	<0.05	<b>&lt;0.05</b>	0.051	0.15	<0.05	0.03	86
Forsmark area	Soil tubes	'Higher'	63	<0.05	<0.05	<b>&lt;0.05</b>	<0.05	0.14	<0.05	0.03	73
Forsmark area	Soil tubes	'Lower'	22	<0.05	<0.05	<b>&lt;0.05</b>	0.079	0.15	<0.05	0.05	110
Forsmark area	Soil tubes	In lake	3	<0.05	<0.05	<b>&lt;0.05</b>	<0.05	<0.05	<0.05	0.01	74
Forsmark area	Soil tubes	At sea	1			<b>&lt;0.05</b>			<0.05		

## Ground Water

F			Fluoride (mg/l)								F
Soil tube			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
SSM000001	LOW (Coast)		1			<b>0.48</b>			0.48		
SSM000002	HIGH (Coast)		1			<b>1.1</b>			1.1		
SSM000005	HIGH (Coast)		1			<b>5.4</b>			5.4		
SSM000008	LOW (Coast)		4	<0.2	0.28	<b>0.35</b>	0.38	0.43	0.31	0.1	47
SSM000010	LOW (Coast)		4	0.48	0.72	<b>0.82</b>	0.84	0.85	0.74	0.2	24
SSM000012	LOW (26:1)		4	1.2	1.6	<b>1.8</b>	1.9	2.3	1.8	0.4	25
SSM000014	LOW (Coast)		4	2.2	2.7	<b>3.0</b>	3.1	3.3	2.8	0.5	17
SSM000016	LOW (Coast)		4	2.0	2.1	<b>2.1</b>	2.2	2.5	2.2	0.3	12
SSM000018	LOW (24:1)		4	0.77	0.92	<b>0.99</b>	1.1	1.3	1.0	0.2	21
SSM000020	HIGH (23:1)		4	0.52	1.2	<b>1.4</b>	1.6	2.0	1.3	0.6	45
SSM000022	LOW (23:1)		4	3.6	3.7	<b>3.9</b>	4.0	4.3	3.9	0.3	7.8
SSM000024	HIGH (Coast)		4	0.62	0.78	<b>0.97</b>	1.2	1.5	1.0	0.4	37
SSM000026	HIGH (Coast)		4	0.32	0.61	<b>0.77</b>	0.89	1.1	0.73	0.3	43
SSM000027	LOW (5:1)		1			<b>0.51</b>			0.51		
SSM000029	LOW (Coast)		1			<b>2.9</b>			2.9		
SSM000030	LOW (6:1)		1			<b>2.3</b>			2.3		
SSM000031	LOW (6:1)		2	2.2		<b>2.4</b>		2.6	2.4	0.2	9.2
SSM000034	LOW (Coast)		1			<b>0.38</b>			0.38		
SSM000037	LOW (9:3)		1			<b>2.2</b>			2.2		
SSM000039	LOW (9:1)		2	1.1		<b>1.3</b>		1.6	1.3	0.3	26
SSM000040	LOW (Coast)		2	1.7		<b>1.8</b>		2.0	1.8	0.2	12
SSM000042	LOW (10:1)		1			<b>1.1</b>			1.1		
Summary Simpevarp			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Simpevarp area	Soil tubes	All	55	<0.2	0.82	<b>1.4</b>	2.2	5.4	1.6	1	70
Simpevarp area	Soil tubes	'Higher'	14	0.32	0.73	<b>1.1</b>	1.5	5.4	1.3	1	93
Simpevarp area	Soil tubes	'Lower'	41	<0.2	0.84	<b>1.8</b>	2.3	4.3	1.8	1	63
Reference			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Simpevarp area	Private wells	excavated	133	0.30	0.60	<b>0.80</b>	1.2	5.9	1.1	1.0	89
Simpevarp area	Private wells	drilled	289	0.20	1.2	<b>1.7</b>	3.4	6.1	2.3	1	62
Forsmark area	Private wells	excavated	20	<0.2	0.30	<b>0.50</b>	0.57	0.90	0.46	0.2	43
Forsmark area	Private wells	drilled	29	<0.2	0.34	<b>0.50</b>	0.81	1.3	0.58	0.3	60
Forsmark area	Soil tubes	All	195	<0.2	0.34	<b>0.55</b>	0.66	2.3	0.53	0.3	53
Forsmark area	Soil tubes	'Higher'	117	<0.2	0.35	<b>0.56</b>	0.64	1.0	0.51	0.2	36
Forsmark area	Soil tubes	'Lower'	78	<0.2	0.28	<b>0.52</b>	0.70	2.3	0.55	0.4	69
Forsmark area	Soil tubes	In lake	34	<0.2	0.28	<b>0.60</b>	0.75	1.5	0.55	0.3	61
Forsmark area	Soil tubes	At sea	10	<0.2	<0.2	<b>0.34</b>	0.54	1.3	0.43	0.4	91
Kalmar County	SGU well	excavated	171	0.010	0.15	<b>0.27</b>	0.59	4.5	0.53	0.7	130
Kalmar County	SGU well	drilled	280	0.050	0.40	<b>1.0</b>	1.9	6.6	1.4	1	89
Uppsala County	SGU well	excavated	66	0.020	0.10	<b>0.20</b>	0.37	1.7	0.31	0.3	110
Uppsala County	SGU well	drilled	647	0.020	0.50	<b>0.90</b>	1.7	7.2	1.2	1	86
Sweden	SGU well	excavated	1464	0.010	0.10	<b>0.21</b>	0.44	5.0	0.38	0.5	130
Sweden	SGU well	drilled	9362	0.020	0.40	<b>0.80</b>	1.5	22	1.1	1	99

## Ground Water

<b>Gd</b>			<b>Gadolinium (µg/l)</b>								<b>Gd</b>
<b>Soil tube</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
SSM000008	LOW (Coast)		1			1.9			1.9		
SSM000010	LOW (Coast)		1			2.9			2.9		
SSM000012	LOW (26:1)		1			0.80			0.80		
SSM000014	LOW (Coast)		1			2.0			2.0		
SSM000016	LOW (Coast)		1			3.9			3.9		
SSM000018	LOW (24:1)		1			2.0			2.0		
SSM000020	HIGH (23:1)		1			3.3			3.3		
SSM000022	LOW (23:1)		1			0.12			0.12		
SSM000024	HIGH (Coast)		1			9.7			9.7		
SSM000026	HIGH (Coast)		1			2.4			2.4		
SSM000027	LOW (5:1)		1			1.0			1.0		
SSM000029	LOW (Coast)		1			9.8			9.8		
SSM000030	LOW (6:1)		1			0.78			0.78		
SSM000031	LOW (6:1)		1			3.0			3.0		
SSM000034	LOW (Coast)		1			0.044			0.044		
SSM000037	LOW (9:3)		1			4.3			4.3		
SSM000039	LOW (9:1)		1			13			13		
SSM000040	LOW (Coast)		1			3.3			3.3		
<b>Summary Simpevarp</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Simpevarp area	Soil tubes	All	18	0.044	1.2	2.7	3.8	13	3.6	4	100
Simpevarp area	Soil tubes	'Higher'	3	2.4	2.9	3.3	6.5	9.7	5.1	4	77
Simpevarp area	Soil tubes	'Lower'	15	0.044	0.90	2.0	3.6	13	3.3	4	110
<b>Reference</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Forsmark area	Soil tubes	All	85	<0.05	0.058	0.27	0.40	1.0	0.28	0.2	87
Forsmark area	Soil tubes	'Higher'	63	<0.05	0.14	0.28	0.38	0.96	0.29	0.2	72
Forsmark area	Soil tubes	'Lower'	22	<0.05	<0.05	<0.05	0.59	1.0	0.28	0.3	120
Forsmark area	Soil tubes	In lake	3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.01	74
Forsmark area	Soil tubes	At sea	1			<0.05			<0.05		

<b>Hf</b>			<b>Hafnium (µg/l)</b>								<b>Hf</b>
<b>Soil tube</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
SSM000008	LOW (Coast)		1			<0.05			<0.05		
SSM000010	LOW (Coast)		1			<0.05			<0.05		
SSM000012	LOW (26:1)		1			0.051			0.051		
SSM000014	LOW (Coast)		1			0.082			0.082		
SSM000016	LOW (Coast)		1			0.056			0.056		
SSM000018	LOW (24:1)		1			<0.05			<0.05		
SSM000020	HIGH (23:1)		1			<0.05			<0.05		
SSM000022	LOW (23:1)		1			<0.05			<0.05		
SSM000024	HIGH (Coast)		1			0.28			0.28		
SSM000026	HIGH (Coast)		1			0.072			0.072		
SSM000027	LOW (5:1)		1			<0.05			<0.05		
SSM000029	LOW (Coast)		1			0.21			0.21		
SSM000030	LOW (6:1)		1			<0.05			<0.05		
SSM000031	LOW (6:1)		1			0.068			0.068		
SSM000034	LOW (Coast)		1			<0.05			<0.05		
SSM000037	LOW (9:3)		1			0.17			0.17		
SSM000039	LOW (9:1)		1			0.13			0.13		
SSM000040	LOW (Coast)		1			0.16			0.16		
<b>Summary Simpevarp</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Simpevarp area	Soil tubes	All	18	<0.05	<0.05	0.053	0.12	0.28	0.082	0.08	94
Simpevarp area	Soil tubes	'Higher'	3	<0.05	<0.05	0.072	0.18	0.28	0.13	0.1	110
Simpevarp area	Soil tubes	'Lower'	15	<0.05	<0.05	0.051	0.10	0.21	0.073	0.06	86
<b>Reference</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Forsmark area	Soil tubes	All	85	<0.05	<0.05	<0.05	0.10	0.29	0.062	0.07	110
Forsmark area	Soil tubes	'Higher'	63	<0.05	<0.05	<0.05	0.11	0.29	0.068	0.07	110
Forsmark area	Soil tubes	'Lower'	22	<0.05	<0.05	<0.05	0.056	0.17	<0.05	0.05	110
Forsmark area	Soil tubes	In lake	3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.01	53
Forsmark area	Soil tubes	At sea	1			<0.05			<0.05		

## Ground Water

Ho			Holmium (µg/l)								Ho
Soil tube			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
SSM000008	LOW (Coast)		1			0.27			0.27		
SSM000010	LOW (Coast)		1			0.32			0.32		
SSM000012	LOW (26:1)		1			0.11			0.11		
SSM000014	LOW (Coast)		1			0.24			0.24		
SSM000016	LOW (Coast)		1			0.44			0.44		
SSM000018	LOW (24:1)		1			0.25			0.25		
SSM000020	HIGH (23:1)		1			0.39			0.39		
SSM000022	LOW (23:1)		1			0.018			0.018		
SSM000024	HIGH (Coast)		1			1.0			1.0		
SSM000026	HIGH (Coast)		1			0.30			0.30		
SSM000027	LOW (5:1)		1			0.12			0.12		
SSM000029	LOW (Coast)		1			1.3			1.3		
SSM000030	LOW (6:1)		1			0.093			0.093		
SSM000031	LOW (6:1)		1			0.32			0.32		
SSM000034	LOW (Coast)		1			0.0080			0.0080		
SSM000037	LOW (9:3)		1			0.47			0.47		
SSM000039	LOW (9:1)		1			1.2			1.2		
SSM000040	LOW (Coast)		1			0.41			0.41		
Summary Simpevarp			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Simpevarp area	Soil tubes	All	18	0.0080	0.15	0.31	0.43	1.3	0.41	0.4	95
Simpevarp area	Soil tubes	'Higher'	3	0.30	0.34	0.39	0.70	1.0	0.57	0.4	69
Simpevarp area	Soil tubes	'Lower'	15	0.0080	0.12	0.27	0.43	1.3	0.37	0.4	100
Reference			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Laxemar pre-PLU	Soil tubes	All	12	0.024	0.034	0.049	0.070	0.32	0.076	0.08	110
Forsmark area	Soil tubes	All	85	<0.05	<0.05	<0.05	0.073	0.17	<0.05	0.04	82
Forsmark area	Soil tubes	'Higher'	63	<0.05	<0.05	<0.05	0.070	0.15	<0.05	0.03	71
Forsmark area	Soil tubes	'Lower'	22	<0.05	<0.05	<0.05	0.092	0.17	<0.05	0.05	110
Forsmark area	Soil tubes	In lake	3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.01	74
Forsmark area	Soil tubes	At sea	1			<0.05			<0.05		

## Ground Water

pH			pH (lab) (pH unit)							pH	
Soil tube			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
SSM000001	LOW (Coast)		1			<b>6.81</b>			6.81		
SSM000002	HIGH (Coast)		1			<b>7.75</b>			7.75		
SSM000005	HIGH (Coast)		1			<b>6.15</b>			6.15		
SSM000008	LOW (Coast)		4	6.64	6.67	<b>6.75</b>	6.86	6.99	6.78	0.16	2.3
SSM000009	LOW (9:2)		1			<b>5.17</b>			5.17		
SSM000010	LOW (Coast)		4	6.84	6.85	<b>6.90</b>	6.96	7.00	6.91	0.078	1.1
SSM000011	HIGH (9:2)		1			<b>5.17</b>			5.17		
SSM000012	LOW (26:1)		4	7.41	7.45	<b>7.49</b>	7.55	7.63	7.51	0.095	1.3
SSM000014	LOW (Coast)		4	6.07	6.30	<b>6.42</b>	6.45	6.45	6.34	0.18	2.9
SSM000016	LOW (Coast)		4	6.34	6.47	<b>6.53</b>	6.61	6.79	6.55	0.19	2.8
SSM000017	LOW (10:5)		1			<b>6.89</b>			6.89		
SSM000018	LOW (24:1)		4	5.98	6.10	<b>6.23</b>	6.32	6.33	6.19	0.16	2.6
SSM000019	HIGH (10:5)		1			<b>7.07</b>			7.07		
SSM000020	HIGH (23:1)		4	5.93	6.15	<b>6.27</b>	6.32	6.33	6.20	0.18	3.0
SSM000021	LOW (9:1)		1			<b>7.08</b>			7.08		
SSM000022	LOW (23:1)		4	7.82	7.83	<b>7.89</b>	7.95	7.97	7.89	0.076	0.97
SSM000024	HIGH (Coast)		4	6.30	6.59	<b>6.74</b>	6.82	6.89	6.67	0.26	3.9
SSM000026	HIGH (Coast)		4	6.12	6.33	<b>6.40</b>	6.46	6.65	6.39	0.22	3.4
SSM000027	LOW (5:1)		1			<b>5.82</b>			5.82		
SSM000029	LOW (Coast)		1			<b>6.67</b>			6.67		
SSM000030	LOW (6:1)		1			<b>7.19</b>			7.19		
SSM000031	LOW (6:1)		2	6.39		<b>6.39</b>		6.39	6.39		
SSM000034	LOW (Coast)		1			<b>6.92</b>			6.92		
SSM000035	LOW (10:30)		1			<b>6.71</b>			6.71		
SSM000037	LOW (9:3)		1			<b>6.94</b>			6.94		
SSM000039	LOW (9:1)		2	6.24		<b>6.25</b>		6.26	6.25	0.014	0.23
SSM000040	LOW (Coast)		2	6.69		<b>6.76</b>		6.83	6.76	0.099	1.5
SSM000041	LOW (10:1)		1			<b>6.60</b>			6.60		
SSM000042	LOW (10:1)		2	6.71		<b>6.84</b>		6.97	6.84	0.18	2.7
<b>Summary Simpevarp</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Simpevarp area	Soil tubes	All	63	5.17	6.33	<b>6.68</b>	6.95	7.97	6.68	0.58	8.6
Simpevarp area	Soil tubes	'Higher'	16	5.17	6.20	<b>6.37</b>	6.72	7.75	6.45	0.56	8.7
Simpevarp area	Soil tubes	'Lower'	47	5.17	6.39	<b>6.71</b>	6.98	7.97	6.76	0.57	8.4
<b>Reference</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Simpevarp area	Private wells	excavated	133	4.60	6.00	<b>6.70</b>	7.30	8.40	6.61	0.89	13
Simpevarp area	Private wells	drilled	287	5.90	7.20	<b>7.70</b>	8.10	9.90	7.66	0.71	9.3
Forsmark area	Private wells	excavated	18	6.70	6.95	<b>7.40</b>	7.68	8.20	7.34	0.44	5.9
Forsmark area	Private wells	drilled	26	6.60	6.99	<b>7.12</b>	7.30	8.20	7.20	0.36	5.0
Laxemar pre-PLU	Soil tubes	All	22	5.50	6.23	<b>6.50</b>	6.70	7.00	6.41	0.39	6.0
Forsmark area	Soil tubes	All	178	6.38	7.08	<b>7.22</b>	7.39	8.04	7.25	0.27	3.7
Forsmark area	Soil tubes	'Higher'	111	6.71	7.11	<b>7.25</b>	7.37	7.69	7.25	0.20	2.7
Forsmark area	Soil tubes	'Lower'	67	6.38	7.04	<b>7.17</b>	7.40	8.04	7.24	0.36	5.0
Forsmark area	Soil tubes	In lake	32	6.38	6.97	<b>7.21</b>	7.35	7.52	7.14	0.29	4.1
Forsmark area	Soil tubes	At sea	9	6.99	7.05	<b>7.07</b>	7.08	7.74	7.13	0.23	3.2
Kalmar County	SGU well	excavated	414	5.20	6.00	<b>6.30</b>	6.80	8.80	6.46	0.59	9.1
Kalmar County	SGU well	drilled	390	5.20	6.61	<b>7.20</b>	7.70	9.90	7.14	0.71	10.0
Uppsala County	SGU well	excavated	59	6.20	6.90	<b>7.20</b>	7.40	7.80	7.16	0.35	4.9
Uppsala County	SGU well	drilled	667	5.70	7.40	<b>7.70</b>	8.00	9.40	7.66	0.48	6.3
Sweden	SGU well	excavated	8948	3.90	6.00	<b>6.40</b>	6.90	9.70	6.48	0.65	10
Sweden	SGU well	drilled	13745	4.20	7.00	<b>7.50</b>	7.90	10.5	7.40	0.70	9.4

**Ground Water**

Tr			Tritium (TU)							Tr	
Soil tube			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
SSM000005	HIGH (Coast)		1			<b>13.3</b>			13.3		
SSM000008	LOW (Coast)		3	11.4	11.7	<b>12.0</b>	12.3	12.6	12.0	0.60	5.0
SSM000010	LOW (Coast)		3	11.6	11.8	<b>11.9</b>	12.9	13.9	12.5	1.3	10
SSM000012	LOW (26:1)		3	10.4	10.8	<b>11.2</b>	11.5	11.8	11.1	0.70	6.3
SSM000014	LOW (Coast)		3	11.7	13.1	<b>14.5</b>	14.5	14.5	13.6	1.6	12
SSM000016	LOW (Coast)		3	11.9	12.6	<b>13.2</b>	13.6	13.9	13.0	1.0	7.8
SSM000018	LOW (24:1)		3	9.70	11.3	<b>12.9</b>	12.9	12.9	11.8	1.8	16
SSM000020	HIGH (23:1)		3	11.0	11.6	<b>12.1</b>	12.9	13.6	12.2	1.3	11
SSM000022	LOW (23:1)		3	0.400	0.700	<b>1.00</b>	1.30	1.60	1.00	0.60	60
SSM000024	HIGH (Coast)		3	12.3	12.5	<b>12.6</b>	13.0	13.4	12.8	0.57	4.5
SSM000026	HIGH (Coast)		3	11.8	12.6	<b>13.4</b>	13.5	13.6	12.9	0.99	7.6
SSM000027	LOW (5:1)		1			<b>9.60</b>			9.60		
SSM000029	LOW (Coast)		1			<b>11.0</b>			11.0		
SSM000030	LOW (6:1)		1			<b>8.70</b>			8.70		
SSM000031	LOW (6:1)		1			<b>12.1</b>			12.1		
SSM000034	LOW (Coast)		1			<b>14.8</b>			14.8		
SSM000037	LOW (9:3)		1			<b>10.7</b>			10.7		
SSM000039	LOW (9:1)		1			<b>11.0</b>			11.0		
SSM000040	LOW (Coast)		1			<b>12.7</b>			12.7		
Summary Simpevarp			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Simpevarp area	Soil tubes	All	39	0.400	11.0	<b>12.0</b>	13.3	14.8	11.4	3.3	29
Simpevarp area	Soil tubes	'Higher'	10	11.0	12.2	<b>13.0</b>	13.4	13.6	12.7	0.89	7.0
Simpevarp area	Soil tubes	'Lower'	29	0.400	10.7	<b>11.8</b>	12.9	14.8	10.9	3.7	34
Reference			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Forsmark area	Private wells	excavated	2	11.8		<b>12.5</b>		13.2	12.5	0.99	7.9
Forsmark area	Private wells	drilled	5	3.90	6.00	<b>9.40</b>	12.1	12.7	8.82	3.8	43
Laxemar pre-PLU	Soil tubes	All	22	10.5	13.7	<b>14.4</b>	15.4	21.6	14.7	2.1	15
Forsmark area	Soil tubes	All	179	0.400	8.35	<b>10.9</b>	12.4	24.9	9.75	4.2	43
Forsmark area	Soil tubes	'Higher'	112	0.400	10.4	<b>11.6</b>	12.5	24.9	11.4	2.9	25
Forsmark area	Soil tubes	'Lower'	67	0.400	2.45	<b>7.80</b>	11.3	15.7	7.01	4.7	67
Forsmark area	Soil tubes	In lake	27	0.400	1.30	<b>3.00</b>	6.00	12.8	4.23	3.8	89
Forsmark area	Soil tubes	At sea	10	4.80	6.35	<b>7.95</b>	11.6	14.5	8.86	3.5	39

In			Indium (µg/l)							In	
Soil tube			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
SSM000008	LOW (Coast)		1			<b>&lt;0.05</b>			<0.05		
SSM000010	LOW (Coast)		1			<b>&lt;0.05</b>			<0.05		
SSM000012	LOW (26:1)		1			<b>&lt;0.05</b>			<0.05		
SSM000014	LOW (Coast)		1			<b>&lt;0.05</b>			<0.05		
SSM000016	LOW (Coast)		1			<b>&lt;0.05</b>			<0.05		
SSM000018	LOW (24:1)		1			<b>&lt;0.05</b>			<0.05		
SSM000020	HIGH (23:1)		1			<b>&lt;0.05</b>			<0.05		
SSM000022	LOW (23:1)		1			<b>&lt;0.05</b>			<0.05		
SSM000024	HIGH (Coast)		1			<b>&lt;0.05</b>			<0.05		
SSM000026	HIGH (Coast)		1			<b>&lt;0.05</b>			<0.05		
SSM000027	LOW (5:1)		1			<b>&lt;0.05</b>			<0.05		
SSM000029	LOW (Coast)		1			<b>&lt;0.05</b>			<0.05		
SSM000030	LOW (6:1)		1			<b>&lt;0.05</b>			<0.05		
SSM000031	LOW (6:1)		1			<b>&lt;0.05</b>			<0.05		
SSM000034	LOW (Coast)		1			<b>&lt;0.05</b>			<0.05		
SSM000037	LOW (9:3)		1			<b>0.070</b>			0.070		
SSM000039	LOW (9:1)		1			<b>&lt;0.05</b>			<0.05		
SSM000040	LOW (Coast)		1			<b>&lt;0.05</b>			<0.05		
Summary Simpevarp			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Simpevarp area	Soil tubes	All	18	<0.05	<0.05	<b>&lt;0.05</b>	<0.05	0.070	<0.05	0.01	38
Simpevarp area	Soil tubes	'Higher'	3	<0.05	<0.05	<b>&lt;0.05</b>	<0.05	<0.05	<0.05		
Simpevarp area	Soil tubes	'Lower'	15	<0.05	<0.05	<b>&lt;0.05</b>	<0.05	0.070	<0.05	0.01	41
Reference			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Laxemar pre-PLU	Soil tubes	All	12	0.0025	0.0063	<b>0.0084</b>	0.019	0.043	0.013	0.01	89
Forsmark area	Soil tubes	All	19	<0.3	<0.3	<b>&lt;0.3</b>	<0.3	<0.3	<0.3	0.04	100
Forsmark area	Soil tubes	'Higher'	14	<0.3	<0.3	<b>&lt;0.3</b>	<0.3	<0.3	<0.3	0.05	100
Forsmark area	Soil tubes	'Lower'	5	<0.3	<0.3	<b>&lt;0.3</b>	<0.3	<0.3	<0.3		

## Ground Water

			Iodide (mg/l)								
Soil tube			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
SSM000008	LOW (Coast)		1			0.012			0.012		
SSM000010	LOW (Coast)		1			0.011			0.011		
SSM000012	LOW (26:1)		1			0.0060			0.0060		
SSM000014	LOW (Coast)		1			0.016			0.016		
SSM000016	LOW (Coast)		1			0.0060			0.0060		
SSM000018	LOW (24:1)		1			0.020			0.020		
SSM000020	HIGH (23:1)		1			0.0060			0.0060		
SSM000022	LOW (23:1)		1			0.015			0.015		
SSM000024	HIGH (Coast)		1			0.018			0.018		
SSM000026	HIGH (Coast)		1			0.0040			0.0040		
SSM000027	LOW (5:1)		1			0.0030			0.0030		
SSM000029	LOW (Coast)		1			0.050			0.050		
SSM000030	LOW (6:1)		1			0.010			0.010		
SSM000031	LOW (6:1)		1			0.0050			0.0050		
SSM000034	LOW (Coast)		1			0.033			0.033		
SSM000037	LOW (9:3)		1			0.0080			0.0080		
SSM000039	LOW (9:1)		1			0.0050			0.0050		
Summary Simpevarp			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Simpevarp area	Soil tubes	All	17	0.0030	0.0060	0.010	0.016	0.050	0.013	0.01	90
Simpevarp area	Soil tubes	'Higher'	3	0.0040	0.0050	0.0060	0.012	0.018	0.0093	0.008	81
Simpevarp area	Soil tubes	'Lower'	14	0.0030	0.0060	0.011	0.016	0.050	0.014	0.01	90
Reference			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Forsmark area	Private wells	drilled	3	0.0070	0.0085	0.010	0.012	0.013	0.010	0.003	30
Forsmark area	Soil tubes	All	157	<0.001	0.0050	0.0070	0.012	0.11	0.016	0.02	130
Forsmark area	Soil tubes	'Higher'	98	<0.001	0.0040	0.0060	0.0080	0.063	0.0070	0.007	100
Forsmark area	Soil tubes	'Lower'	59	0.0040	0.0075	0.014	0.052	0.11	0.030	0.03	93
Forsmark area	Soil tubes	In lake	26	0.0060	0.044	0.056	0.072	0.11	0.052	0.03	56
Forsmark area	Soil tubes	At sea	7	0.011	0.017	0.028	0.030	0.033	0.023	0.009	38

Fe(II)			Ferrous iron (mg/l)								Fe(II)
Soil tube			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
SSM000008	LOW (Coast)		2	0.69		0.70		0.72	0.70	0.02	2.9
SSM000010	LOW (Coast)		2	0.96		1.3		1.7	1.3	0.5	39
SSM000012	LOW (26:1)		2	2.0		2.4		2.7	2.4	0.5	22
SSM000014	LOW (Coast)		1			5.7			5.7		
SSM000016	LOW (Coast)		2	1.9		2.4		2.9	2.4	0.8	32
SSM000018	LOW (24:1)		2	0.17		0.27		0.36	0.27	0.1	49
SSM000020	HIGH (23:1)		1			1.7			1.7		
SSM000022	LOW (23:1)		2	0.18		0.19		0.20	0.19	0.02	9.7
SSM000024	HIGH (Coast)		2	1.8		2.2		2.5	2.2	0.5	23
SSM000026	HIGH (Coast)		2	4.1		5.2		6.4	5.2	2	32
SSM000027	LOW (5:1)		1			2.5			2.5		
SSM000029	LOW (Coast)		1			8.4			8.4		
SSM000030	LOW (6:1)		1			1.8			1.8		
SSM000031	LOW (6:1)		1			5.3			5.3		
SSM000034	LOW (Coast)		1			6.9			6.9		
SSM000037	LOW (9:3)		1			4.9			4.9		
SSM000039	LOW (9:1)		1			1.5			1.5		
Summary Simpevarp			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Simpevarp area	Soil tubes	All	25	0.17	0.96	1.9	4.1	8.4	2.7	2	85
Simpevarp area	Soil tubes	'Higher'	5	1.7	1.8	2.5	4.1	6.4	3.3	2	60
Simpevarp area	Soil tubes	'Lower'	20	0.17	0.71	1.8	3.4	8.4	2.6	2	94
Reference			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Forsmark area	Soil tubes	All	71	<0.002	0.083	1.5	2.0	3.8	1.3	1	94
Forsmark area	Soil tubes	'Higher'	59	<0.002	0.085	1.5	2.0	3.8	1.4	1	88
Forsmark area	Soil tubes	'Lower'	12	0.022	0.083	0.14	2.1	2.6	0.81	1	130

**Ground Water**

<b>Fe</b>			<b>Iron (total ICP) (mg/l)</b>								<b>Fe</b>
<b>Soil tube</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
SSM000001	LOW (Coast)		1			<b>15</b>			15		
SSM000002	HIGH (Coast)		1			<b>0.99</b>			0.99		
SSM000005	HIGH (Coast)		1			<b>42</b>			42		
SSM000008	LOW (Coast)		3	0.68	1.4	<b>2.1</b>	2.2	2.4	1.7	0.9	53
SSM000010	LOW (Coast)		3	2.9	4.4	<b>5.8</b>	8.2	11	6.4	4	60
SSM000012	LOW (26:1)		3	2.0	2.4	<b>2.7</b>	3.0	3.3	2.7	0.6	24
SSM000014	LOW (Coast)		3	9.4	14	<b>18</b>	18	19	15	5	34
SSM000016	LOW (Coast)		3	4.4	4.9	<b>5.4</b>	7.4	9.4	6.4	3	42
SSM000018	LOW (24:1)		3	0.38	0.77	<b>1.2</b>	1.7	2.3	1.3	0.9	75
SSM000020	HIGH (23:1)		3	2.7	5.8	<b>9.0</b>	9.0	9.0	6.9	4	53
SSM000022	LOW (23:1)		3	0.33	0.40	<b>0.46</b>	0.86	1.3	0.68	0.5	73
SSM000024	HIGH (Coast)		3	5.9	7.3	<b>8.7</b>	11	13	9.2	4	39
SSM000026	HIGH (Coast)		3	6.5	7.1	<b>7.8</b>	8.2	8.7	7.6	1	15
SSM000027	LOW (5:1)		1			<b>2.7</b>			2.7		
SSM000029	LOW (Coast)		1			<b>21</b>			21		
SSM000030	LOW (6:1)		1			<b>2.2</b>			2.2		
SSM000031	LOW (6:1)		1			<b>5.7</b>			5.7		
SSM000034	LOW (Coast)		1			<b>6.8</b>			6.8		
SSM000037	LOW (9:3)		1			<b>12</b>			12		
SSM000039	LOW (9:1)		1			<b>13</b>			13		
SSM000040	LOW (Coast)		1			<b>21</b>			21		
<b>Summary Simpevarp</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Simpevarp area	Soil tubes	All	41	0.33	2.3	<b>5.8</b>	9.4	42	7.7	8	100
Simpevarp area	Soil tubes	'Higher'	11	0.99	6.2	<b>8.7</b>	9.0	42	10	10	110
Simpevarp area	Soil tubes	'Lower'	30	0.33	2.1	<b>3.8</b>	10	21	6.8	6	96
<b>Reference</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Simpevarp area	Private wells	excavated	134	0.020	0.16	<b>0.36</b>	1.1	9.4	0.99	1	150
Simpevarp area	Private wells	drilled	291		0.090	<b>0.24</b>	0.73	35	0.87	2	280
Forsmark area	Private wells	excavated	16	0.030	0.16	<b>0.38</b>	1.2	32	2.7	8	290
Forsmark area	Private wells	drilled	19	0.10	0.34	<b>0.94</b>	2.8	12	2.1	3	130
Laxemar pre-PLU	Soil tubes	All	22	0.064	0.63	<b>1.6</b>	4.4	31	3.9	7	170
Forsmark area	Soil tubes	All	135	<0.02	0.16	<b>1.3</b>	2.3	510	6.3	40	690
Forsmark area	Soil tubes	'Higher'	92	<0.02	0.25	<b>1.2</b>	1.8	18	1.6	2	150
Forsmark area	Soil tubes	'Lower'	43	<0.02	0.13	<b>2.1</b>	7.4	510	17	80	470
Forsmark area	Soil tubes	In lake	18	<0.02	1.1	<b>7.6</b>	11	33	9.2	10	100
Forsmark area	Soil tubes	At sea	3	6.2	6.4	<b>6.5</b>	7.4	8.3	7.0	1	16
Kalmar County	SGU well	excavated	342	<0.02	0.060	<b>0.14</b>	0.37	7.3	0.38	0.7	190
Kalmar County	SGU well	drilled	384	<0.02	0.060	<b>0.15</b>	0.40	34	0.68	2	320
Uppsala County	SGU well	excavated	66	<0.02	<0.02	<b>0.040</b>	0.090	3.5	0.14	0.4	310
Uppsala County	SGU well	drilled	672	<0.02	0.050	<b>0.12</b>	0.28	16	0.32	0.9	300
Sweden	SGU well	excavated	4555	<0.02	0.025	<b>0.10</b>	0.31	33	0.50	2	320
Sweden	SGU well	drilled	11091	<0.02	0.060	<b>0.19</b>	0.52	84	0.69	2	300



## Ground Water

<b>Fe</b>			<b>Iron (total spectrometric) (mg/l)</b>								<b>Fe</b>
<b>Soil tube</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
SSM000008	LOW (Coast)		2	0.75		<b>0.82</b>		0.90	0.82	0.1	13
SSM000010	LOW (Coast)		2	1.1		<b>1.6</b>		2.0	1.6	0.7	43
SSM000012	LOW (26:1)		2	2.4		<b>2.6</b>		2.8	2.6	0.3	11
SSM000014	LOW (Coast)		1			<b>6.8</b>			6.8		
SSM000016	LOW (Coast)		2	2.0		<b>3.1</b>		4.2	3.1	2	49
SSM000018	LOW (24:1)		2	0.30		<b>0.43</b>		0.55	0.43	0.2	42
SSM000020	HIGH (23:1)		1			<b>1.9</b>			1.9		
SSM000022	LOW (23:1)		2	0.19		<b>0.20</b>		0.22	0.20	0.02	11
SSM000024	HIGH (Coast)		2	2.0		<b>2.4</b>		2.8	2.4	0.6	24
SSM000026	HIGH (Coast)		2	4.8		<b>6.2</b>		7.7	6.2	2	33
SSM000027	LOW (5:1)		1			<b>2.6</b>			2.6		
SSM000029	LOW (Coast)		1			<b>8.3</b>			8.3		
SSM000030	LOW (6:1)		1			<b>1.8</b>			1.8		
SSM000031	LOW (6:1)		1			<b>5.4</b>			5.4		
SSM000034	LOW (Coast)		1			<b>7.1</b>			7.1		
SSM000037	LOW (9:3)		1			<b>5.8</b>			5.8		
SSM000039	LOW (9:1)		1			<b>1.8</b>			1.8		
<b>Summary Simpevarp</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Simpevarp area	Soil tubes	All	25	0.19	1.1	<b>2.0</b>	4.8	8.3	3.1	2	82
Simpevarp area	Soil tubes	'Higher'	5	1.9	2.0	<b>2.8</b>	4.8	7.7	3.8	2	64
Simpevarp area	Soil tubes	'Lower'	20	0.19	0.86	<b>2.0</b>	4.5	8.3	2.9	3	89
<b>Reference</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Forsmark area	Soil tubes	All	72	0.0060	0.092	<b>1.4</b>	2.1	3.9	1.3	1	94
Forsmark area	Soil tubes	'Higher'	60	0.0060	0.085	<b>1.5</b>	2.1	3.9	1.4	1	89
Forsmark area	Soil tubes	'Lower'	12	0.049	0.10	<b>0.16</b>	2.1	2.7	0.84	1	130

<b>La</b>			<b>Lanthanum (µg/l)</b>								<b>La</b>
<b>Soil tube</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
SSM000008	LOW (Coast)		1			<b>12</b>			12		
SSM000010	LOW (Coast)		1			<b>30</b>			30		
SSM000012	LOW (26:1)		1			<b>6.4</b>			6.4		
SSM000014	LOW (Coast)		1			<b>16</b>			16		
SSM000016	LOW (Coast)		1			<b>31</b>			31		
SSM000018	LOW (24:1)		1			<b>13</b>			13		
SSM000020	HIGH (23:1)		1			<b>22</b>			22		
SSM000022	LOW (23:1)		1			<b>0.82</b>			0.82		
SSM000024	HIGH (Coast)		1			<b>47</b>			47		
SSM000026	HIGH (Coast)		1			<b>17</b>			17		
SSM000027	LOW (5:1)		1			<b>7.5</b>			7.5		
SSM000029	LOW (Coast)		1			<b>55</b>			55		
SSM000030	LOW (6:1)		1			<b>6.5</b>			6.5		
SSM000031	LOW (6:1)		1			<b>21</b>			21		
SSM000034	LOW (Coast)		1			<b>0.25</b>			0.25		
SSM000037	LOW (9:3)		1			<b>50</b>			50		
SSM000039	LOW (9:1)		1			<b>96</b>			96		
SSM000040	LOW (Coast)		1			<b>30</b>			30		
<b>Summary Simpevarp</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Simpevarp area	Soil tubes	All	18	0.25	8.7	<b>19</b>	31	96	26	20	94
Simpevarp area	Soil tubes	'Higher'	3	17	19	<b>22</b>	35	47	29	20	57
Simpevarp area	Soil tubes	'Lower'	15	0.25	7.0	<b>16</b>	30	96	25	30	100
<b>Reference</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Laxemar pre-PLU	Soil tubes	All	12	0.32	1.2	<b>2.1</b>	3.3	12	3.0	3	100
Forsmark area	Soil tubes	All	84	<0.05	0.49	<b>1.7</b>	2.5	7.1	1.9	2	90
Forsmark area	Soil tubes	'Higher'	62	0.17	0.88	<b>1.8</b>	2.5	7.1	2.0	1	75
Forsmark area	Soil tubes	'Lower'	22	<0.05	<0.05	<b>0.087</b>	4.2	6.0	1.8	2	130
Forsmark area	Soil tubes	In lake	3	<0.05	<0.05	<b>&lt;0.05</b>	<0.05	<0.05	<0.05	0.009	44
Forsmark area	Soil tubes	At sea	1			<b>&lt;0.05</b>			<0.05		

Ground Water

Li			Lithium (mg/l)							Li	
Soil tube			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
SSM000001	LOW (Coast)		1			<b>0.013</b>			0.013		
SSM000002	HIGH (Coast)		1			<b>0.012</b>			0.012		
SSM000005	HIGH (Coast)		1			<b>&lt;0.004</b>			<0.004		
SSM000008	LOW (Coast)		3	<0.004	<0.004	<b>0.0050</b>	0.0055	0.0060	0.0043	0.002	48
SSM000010	LOW (Coast)		3	0.0090	0.010	<b>0.011</b>	0.014	0.016	0.012	0.004	30
SSM000012	LOW (26:1)		3	0.014	0.017	<b>0.019</b>	0.021	0.022	0.018	0.004	22
SSM000014	LOW (Coast)		3	0.032	0.037	<b>0.041</b>	0.045	0.048	0.040	0.008	20
SSM000016	LOW (Coast)		3	0.0090	0.0090	<b>0.0090</b>	0.013	0.017	0.012	0.005	40
SSM000018	LOW (24:1)		3	0.015	0.021	<b>0.026</b>	0.030	0.033	0.025	0.009	37
SSM000020	HIGH (23:1)		3	0.0090	0.012	<b>0.015</b>	0.017	0.018	0.014	0.005	33
SSM000022	LOW (23:1)		3	0.023	0.023	<b>0.023</b>	0.024	0.024	0.023	0.0006	2.5
SSM000024	HIGH (Coast)		3	0.0070	0.0085	<b>0.010</b>	0.015	0.020	0.012	0.007	55
SSM000026	HIGH (Coast)		3	<0.004	0.0040	<b>0.0060</b>	0.0060	0.0060	0.0047	0.002	49
SSM000027	LOW (5:1)		1			<b>0.0020</b>			0.0020		
SSM000029	LOW (Coast)		1			<b>0.029</b>			0.029		
SSM000030	LOW (6:1)		1			<b>0.010</b>			0.010		
SSM000031	LOW (6:1)		1			<b>0.0040</b>			0.0040		
SSM000034	LOW (Coast)		1			<b>0.025</b>			0.025		
SSM000037	LOW (9:3)		1			<b>0.031</b>			0.031		
SSM000039	LOW (9:1)		1			<b>0.014</b>			0.014		
SSM000040	LOW (Coast)		1			<b>0.019</b>			0.019		
Summary Simpevarp			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Simpevarp area	Soil tubes	All	41	<0.004	0.0090	<b>0.014</b>	0.023	0.048	0.016	0.01	68
Simpevarp area	Soil tubes	'Higher'	11	<0.004	0.0060	<b>0.0090</b>	0.014	0.020	0.0097	0.006	62
Simpevarp area	Soil tubes	'Lower'	30	<0.004	0.0093	<b>0.017</b>	0.025	0.048	0.018	0.01	62
Reference			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Forsmark area	Private wells	excavated	6	<0.004	<0.004	<b>0.0070</b>	0.016	0.019	0.0092	0.008	87
Forsmark area	Private wells	drilled	14	0.0070	0.016	<b>0.027</b>	0.041	0.048	0.028	0.01	52
Laxemar pre-PLU	Soil tubes	All	22	0.0020	0.011	<b>0.018</b>	0.026	0.15	0.026	0.03	120
Forsmark area	Soil tubes	All	198	<0.004	0.0060	<b>0.0090</b>	0.017	0.060	0.013	0.01	90
Forsmark area	Soil tubes	'Higher'	118	<0.004	0.0040	<b>0.0070</b>	0.011	0.023	0.0078	0.005	61
Forsmark area	Soil tubes	'Lower'	80	<0.004	0.011	<b>0.018</b>	0.028	0.060	0.021	0.01	69
Forsmark area	Soil tubes	In lake	35	0.0050	0.018	<b>0.030</b>	0.036	0.060	0.030	0.02	54
Forsmark area	Soil tubes	At sea	11	0.015	0.022	<b>0.023</b>	0.026	0.029	0.024	0.004	17

Lu			Lutetium (µg/l)							Lu	
Soil tube			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
SSM000008	LOW (Coast)		1			<b>0.12</b>			0.12		
SSM000010	LOW (Coast)		1			<b>0.12</b>			0.12		
SSM000012	LOW (26:1)		1			<b>0.054</b>			0.054		
SSM000014	LOW (Coast)		1			<b>0.10</b>			0.10		
SSM000016	LOW (Coast)		1			<b>0.18</b>			0.18		
SSM000018	LOW (24:1)		1			<b>0.11</b>			0.11		
SSM000020	HIGH (23:1)		1			<b>0.14</b>			0.14		
SSM000022	LOW (23:1)		1			<b>0.0075</b>			0.0075		
SSM000024	HIGH (Coast)		1			<b>0.32</b>			0.32		
SSM000026	HIGH (Coast)		1			<b>0.15</b>			0.15		
SSM000027	LOW (5:1)		1			<b>0.062</b>			0.062		
SSM000029	LOW (Coast)		1			<b>0.51</b>			0.51		
SSM000030	LOW (6:1)		1			<b>0.037</b>			0.037		
SSM000031	LOW (6:1)		1			<b>0.12</b>			0.12		
SSM000034	LOW (Coast)		1			<b>0.0058</b>			0.0058		
SSM000037	LOW (9:3)		1			<b>0.18</b>			0.18		
SSM000039	LOW (9:1)		1			<b>0.36</b>			0.36		
SSM000040	LOW (Coast)		1			<b>0.19</b>			0.19		
Summary Simpevarp			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Simpevarp area	Soil tubes	All	18	0.0058	0.073	<b>0.12</b>	0.18	0.51	0.15	0.1	85
Simpevarp area	Soil tubes	'Higher'	3	0.14	0.14	<b>0.15</b>	0.23	0.32	0.20	0.1	50
Simpevarp area	Soil tubes	'Lower'	15	0.0058	0.058	<b>0.12</b>	0.18	0.51	0.14	0.1	95
Reference			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Laxemar pre-PLU	Soil tubes	All	12	0.019	0.021	<b>0.024</b>	0.043	0.18	0.043	0.04	100
Forsmark area	Soil tubes	All	85	<0.05	<0.05	<b>&lt;0.05</b>	<0.05	0.066	<0.05	0.02	84
Forsmark area	Soil tubes	'Higher'	63	<0.05	<0.05	<b>&lt;0.05</b>	<0.05	0.066	<0.05	0.02	80
Forsmark area	Soil tubes	'Lower'	22	<0.05	<0.05	<b>&lt;0.05</b>	<0.05	0.064	<0.05	0.02	94
Forsmark area	Soil tubes	In lake	3	<0.05	<0.05	<b>&lt;0.05</b>	<0.05	<0.05	<0.05	0.01	74
Forsmark area	Soil tubes	At sea	1			<b>&lt;0.05</b>			<0.05		

## Ground Water

<b>Mg</b>			<b>Magnesium (mg/l)</b>							<b>Mg</b>	
<b>Soil tube</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
SSM000001	LOW (Coast)		1			11			11		
SSM000002	HIGH (Coast)		1			29			29		
SSM000005	HIGH (Coast)		1			18			18		
SSM000008	LOW (Coast)		3	2.3	3.0	3.6	4.2	4.7	3.5	1	34
SSM000010	LOW (Coast)		3	7.4	7.6	7.8	8.0	8.2	7.8	0.4	5.1
SSM000012	LOW (26:1)		3	8.6	8.8	9.0	9.1	9.2	8.9	0.3	3.4
SSM000014	LOW (Coast)		3	10	12	13	14	14	12	2	17
SSM000016	LOW (Coast)		3	4.9	6.1	7.3	7.6	7.9	6.7	2	24
SSM000018	LOW (24:1)		3	13	15	17	19	21	17	4	23
SSM000020	HIGH (23:1)		3	5.9	6.2	6.5	8.1	9.7	7.4	2	28
SSM000022	LOW (23:1)		3	7.7	8.2	8.7	9.1	9.5	8.6	0.9	10
SSM000024	HIGH (Coast)		3	4.0	4.6	5.1	6.7	8.2	5.8	2	38
SSM000026	HIGH (Coast)		3	2.6	3.9	5.1	5.1	5.1	4.3	1	34
SSM000027	LOW (5:1)		1			1.3			1.3		
SSM000029	LOW (Coast)		1			14			14		
SSM000030	LOW (6:1)		1			8.3			8.3		
SSM000031	LOW (6:1)		1			3.3			3.3		
SSM000034	LOW (Coast)		1			45			45		
SSM000037	LOW (9:3)		1			11			11		
SSM000039	LOW (9:1)		1			7.6			7.6		
SSM000040	LOW (Coast)		1			21			21		
<b>Summary Simpevarp</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Simpevarp area	Soil tubes	All	41	1.3	5.1	8.2	11	45	10	8	78
Simpevarp area	Soil tubes	'Higher'	11	2.6	5.1	5.9	9.0	29	9.0	8	86
Simpevarp area	Soil tubes	'Lower'	30	1.3	7.5	8.7	12	45	11	8	76
<b>Reference</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Simpevarp area	Private wells	excavated	101	0.50	2.1	4.9	7.4	34	6.0	6	98
Simpevarp area	Private wells	drilled	252	0.50	4.5	6.9	11	47	9.3	8	83
Forsmark area	Private wells	excavated	20	1.8	5.3	6.7	16	89	19	30	140
Forsmark area	Private wells	drilled	30	2.3	16	30	150	190	69	70	110
Laxemar pre-PLU	Soil tubes	All	22	2.5	14	31	50	110	39	30	86
Forsmark area	Soil tubes	All	199	4.2	8.5	13	35	180	32	40	120
Forsmark area	Soil tubes	'Higher'	119	4.2	7.8	9.8	18	52	14	10	72
Forsmark area	Soil tubes	'Lower'	80	4.4	14	53	89	180	59	50	86
Forsmark area	Soil tubes	In lake	35	6.5	59	88	96	180	88	50	63
Forsmark area	Soil tubes	At sea	11	41	76	79	96	120	86	20	27
Kalmar County	SGU well	excavated	95	1.0	3.0	4.3	5.5	21	4.6	3	61
Kalmar County	SGU well	drilled	133	0.50	4.0	6.0	8.0	25	7.0	5	66
Uppsala County	SGU well	excavated	56	1.4	4.2	6.5	10	17	7.2	4	54
Uppsala County	SGU well	drilled	85	0.97	4.5	7.0	8.3	19	6.7	3	47
Sweden	SGU well	excavated	1058	0.20	1.9	3.6	7.2	39	5.5	5	98
Sweden	SGU well	drilled	2231	0.19	3.5	5.9	9.6	130	8.1	8	99

## Ground Water

Mn			Manganese (mg/l)							Mn	
Soil tube			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
SSM000001	LOW (Coast)		1			<b>0.80</b>			0.80		
SSM000002	HIGH (Coast)		1			<b>0.34</b>			0.34		
SSM000005	HIGH (Coast)		1			<b>6.1</b>			6.1		
SSM000008	LOW (Coast)		3	0.14	0.18	<b>0.22</b>	0.30	0.38	0.25	0.1	49
SSM000010	LOW (Coast)		3	0.63	0.63	<b>0.64</b>	0.70	0.76	0.68	0.08	11
SSM000012	LOW (26:1)		3	0.52	0.52	<b>0.52</b>	0.55	0.57	0.54	0.02	4.6
SSM000014	LOW (Coast)		3	0.54	0.64	<b>0.75</b>	0.75	0.75	0.68	0.1	18
SSM000016	LOW (Coast)		3	0.082	0.088	<b>0.094</b>	0.15	0.21	0.13	0.07	55
SSM000018	LOW (24:1)		3	0.22	0.35	<b>0.49</b>	0.51	0.53	0.41	0.2	42
SSM000020	HIGH (23:1)		3	0.24	0.32	<b>0.39</b>	0.45	0.50	0.38	0.1	35
SSM000022	LOW (23:1)		3	0.084	0.091	<b>0.097</b>	0.10	0.11	0.097	0.01	13
SSM000024	HIGH (Coast)		3	0.29	0.31	<b>0.33</b>	0.47	0.61	0.41	0.2	43
SSM000026	HIGH (Coast)		3	0.13	0.34	<b>0.56</b>	0.60	0.64	0.44	0.3	62
SSM000027	LOW (5:1)		1			<b>0.16</b>			0.16		
SSM000029	LOW (Coast)		1			<b>0.38</b>			0.38		
SSM000030	LOW (6:1)		1			<b>0.60</b>			0.60		
SSM000031	LOW (6:1)		1			<b>0.17</b>			0.17		
SSM000034	LOW (Coast)		1			<b>1.3</b>			1.3		
SSM000037	LOW (9:3)		1			<b>0.94</b>			0.94		
SSM000039	LOW (9:1)		1			<b>0.53</b>			0.53		
SSM000040	LOW (Coast)		1			<b>0.40</b>			0.40		
Summary Simpevarp			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Simpevarp area	Soil tubes	All	41	0.082	0.22	<b>0.49</b>	0.61	6.1	0.58	0.9	160
Simpevarp area	Soil tubes	'Higher'	11	0.13	0.31	<b>0.39</b>	0.58	6.1	0.92	2	190
Simpevarp area	Soil tubes	'Lower'	30	0.082	0.18	<b>0.51</b>	0.62	1.3	0.45	0.3	65
Reference			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Simpevarp area	Private wells	excavated	134		0.010	<b>0.040</b>	0.13	19	0.26	2	630
Simpevarp area	Private wells	drilled	291		0.020	<b>0.090</b>	0.30	46	0.35	3	770
Forsmark area	Private wells	excavated	16	0.0050	0.024	<b>0.080</b>	0.17	0.61	0.13	0.2	120
Forsmark area	Private wells	drilled	19	0.050	0.11	<b>0.23</b>	0.94	1.2	0.47	0.4	92
Laxemar pre-PLU	Soil tubes	All	22	0.040	0.080	<b>0.15</b>	0.27	1.6	0.30	0.4	140
Forsmark area	Soil tubes	All	139	0.0027	0.11	<b>0.17</b>	0.24	1.4	0.23	0.2	100
Forsmark area	Soil tubes	'Higher'	95	0.0027	0.12	<b>0.17</b>	0.20	0.42	0.16	0.08	51
Forsmark area	Soil tubes	'Lower'	44	0.031	0.076	<b>0.24</b>	0.50	1.4	0.36	0.3	96
Forsmark area	Soil tubes	In lake	18	0.041	0.38	<b>0.48</b>	0.76	1.4	0.55	0.3	60
Forsmark area	Soil tubes	At sea	3	0.93	0.97	<b>1.0</b>	1.0	1.1	1.00	0.06	6.3
Kalmar County	SGU well	excavated	338	<0.05	<0.05	<b>&lt;0.05</b>	0.070	4.9	0.10	0.3	310
Kalmar County	SGU well	drilled	382	<0.05	<0.05	<b>0.095</b>	0.30	2.0	0.23	0.3	140
Uppsala County	SGU well	excavated	66	<0.05	<0.05	<b>&lt;0.05</b>	<0.05	0.58	0.050	0.1	200
Uppsala County	SGU well	drilled	672	<0.05	<0.05	<b>0.050</b>	0.10	0.90	0.082	0.10	120
Sweden	SGU well	excavated	4252	<0.05	<0.05	<b>&lt;0.05</b>	0.070	26	0.10	0.6	550
Sweden	SGU well	drilled	10934	<0.05	<0.05	<b>0.080</b>	0.22	30	0.19	0.4	240

**Ground Water**

<b>Hg</b>			<b>Mercury (µg/l)</b>							<b>Hg</b>	
<b>Soil tube</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
SSM000008	LOW (Coast)		1			<0.002			<0.002		
SSM000010	LOW (Coast)		1			<0.002			<0.002		
SSM000012	LOW (26:1)		1			<0.002			<0.002		
SSM000014	LOW (Coast)		1			<0.002			<0.002		
SSM000016	LOW (Coast)		1			<0.002			<0.002		
SSM000018	LOW (24:1)		1			<0.002			<0.002		
SSM000020	HIGH (23:1)		1			<0.002			<0.002		
SSM000022	LOW (23:1)		1			<0.002			<0.002		
SSM000024	HIGH (Coast)		1			<0.002			<0.002		
SSM000026	HIGH (Coast)		1			<0.002			<0.002		
SSM000027	LOW (5:1)		1			<0.002			<0.002		
SSM000029	LOW (Coast)		1			<0.002			<0.002		
SSM000030	LOW (6:1)		1			<0.002			<0.002		
SSM000031	LOW (6:1)		1			<0.002			<0.002		
SSM000034	LOW (Coast)		1			<0.002			<0.002		
SSM000037	LOW (9:3)		1			<0.002			<0.002		
SSM000039	LOW (9:1)		1			<0.002			<0.002		
SSM000040	LOW (Coast)		1			<0.002			<0.002		
<b>Summary Simpevarp</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Simpevarp area	Soil tubes	All	18	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002		
Simpevarp area	Soil tubes	'Higher'	3	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002		
Simpevarp area	Soil tubes	'Lower'	15	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002		
<b>Reference</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Forsmark area	Soil tubes	All	92	<0.002	<0.002	<0.002	<0.002	0.0057	<0.002	0.0007	60
Forsmark area	Soil tubes	'Higher'	70	<0.002	<0.002	<0.002	<0.002	0.0034	<0.002	0.0005	43
Forsmark area	Soil tubes	'Lower'	22	<0.002	<0.002	<0.002	<0.002	0.0057	<0.002	0.001	80
Forsmark area	Soil tubes	In lake	3	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002		
Forsmark area	Soil tubes	At sea	1			<0.002			<0.002		

<b>Nd</b>			<b>Neodymium (µg/l)</b>							<b>Nd</b>	
<b>Soil tube</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
SSM000008	LOW (Coast)		1			11			11		
SSM000010	LOW (Coast)		1			19			19		
SSM000012	LOW (26:1)		1			5.1			5.1		
SSM000014	LOW (Coast)		1			13			13		
SSM000016	LOW (Coast)		1			26			26		
SSM000018	LOW (24:1)		1			12			12		
SSM000020	HIGH (23:1)		1			20			20		
SSM000022	LOW (23:1)		1			0.69			0.69		
SSM000024	HIGH (Coast)		1			68			68		
SSM000026	HIGH (Coast)		1			15			15		
SSM000027	LOW (5:1)		1			6.6			6.6		
SSM000029	LOW (Coast)		1			63			63		
SSM000030	LOW (6:1)		1			4.9			4.9		
SSM000031	LOW (6:1)		1			20			20		
SSM000034	LOW (Coast)		1			0.23			0.23		
SSM000037	LOW (9:3)		1			33			33		
SSM000039	LOW (9:1)		1			99			99		
SSM000040	LOW (Coast)		1			21			21		
<b>Summary Simpevarp</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Simpevarp area	Soil tubes	All	18	0.23	7.6	17	25	99	24	30	110
Simpevarp area	Soil tubes	'Higher'	3	15	18	20	44	68	34	30	84
Simpevarp area	Soil tubes	'Lower'	15	0.23	5.8	13	24	99	22	30	120
<b>Reference</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Laxemar pre-PLU	Soil tubes	All	12	0.35	1.1	2.0	2.8	11	2.7	3	100
Forsmark area	Soil tubes	All	85	<0.05	0.35	1.4	2.1	6.2	1.6	1	90
Forsmark area	Soil tubes	'Higher'	63	0.12	0.68	1.5	2.0	6.1	1.6	1	75
Forsmark area	Soil tubes	'Lower'	22	<0.05	<0.05	0.093	3.0	6.2	1.4	2	130
Forsmark area	Soil tubes	In lake	3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.01	54
Forsmark area	Soil tubes	At sea	1			<0.05			<0.05		

## Ground Water

NH4-N			Nitrogen as ammonium (mg/l)								NH4-N
Reference			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Simpevarp area	Private wells	excavated	134		0.010	<b>0.030</b>	0.060	5.0	0.13	0.5	360
Simpevarp area	Private wells	drilled	291		0.010	<b>0.050</b>	0.13	2.1	0.10	0.2	170
Forsmark area	Private wells	excavated	18	0.0050	0.0068	<b>0.021</b>	0.44	3.4	0.53	1.0	190
Forsmark area	Private wells	drilled	25	0.020	0.050	<b>0.91</b>	1.6	3.9	1.1	1	110
Forsmark area	Soil tubes	All	128	<0.0005	0.032	<b>0.092</b>	0.47	8.6	0.86	2	200
Forsmark area	Soil tubes	'Higher'	81	<0.0005	0.025	<b>0.074</b>	0.16	0.32	0.097	0.09	89
Forsmark area	Soil tubes	'Lower'	47	0.0086	0.28	<b>1.3</b>	3.2	8.6	2.2	2	110
Forsmark area	Soil tubes	In lake	22	1.9	2.7	<b>3.3</b>	5.6	8.6	4.1	2	53
Forsmark area	Soil tubes	At sea	8	0.27	1.0	<b>1.2</b>	1.2	1.3	1.0	0.4	42
Kalmar County	SGU well	excavated	115	<0.1	<0.1	<b>&lt;0.1</b>	<0.1	0.86	<0.1	0.1	210
Kalmar County	SGU well	drilled	256	<0.1	<0.1	<b>&lt;0.1</b>	<0.1	2.4	0.11	0.3	240
Uppsala County	SGU well	excavated	65	<0.1	<0.1	<b>&lt;0.1</b>	0.16	0.71	0.11	0.1	130
Uppsala County	SGU well	drilled	669	<0.1	<0.1	<b>&lt;0.1</b>	<0.1	8.1	0.11	0.4	350
Sweden	SGU well	excavated	1611	<0.1	<0.1	<b>&lt;0.1</b>	<0.1	5.6	0.11	0.3	290
Sweden	SGU well	drilled	9805	<0.1	<0.1	<b>&lt;0.1</b>	<0.1	18	0.12	0.4	360

NO3-N			Nitrogen as nitrate (mg/l)								NO3-N
Reference			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Simpevarp area	Private wells	excavated	4	0.050	0.050	<b>0.33</b>	1.3	3.3	1.00	2	160
Simpevarp area	Private wells	drilled	15	0.050	0.050	<b>0.050</b>	0.23	4.2	0.55	1	210
Forsmark area	Soil tubes	All	15	<0.002	<0.002	<b>&lt;0.002</b>	<0.002	0.042	0.0040	0.01	270
Forsmark area	Soil tubes	'Higher'	8	<0.002	<0.002	<b>&lt;0.002</b>	0.0021	0.042	0.0063	0.01	230
Forsmark area	Soil tubes	'Lower'	7	<0.002	<0.002	<b>&lt;0.002</b>	<0.002	0.0091	<0.002	0.003	240
Forsmark area	Soil tubes	In lake	3	<0.002	<0.002	<b>&lt;0.002</b>	<0.002	<0.002	<0.002	0.00006	43
Forsmark area	Soil tubes	At sea	2	<0.002		<b>0.0046</b>		0.0091	0.0046	0.006	140
Kalmar County	SGU well	excavated	115	<2	<2	<b>&lt;2</b>	5.7	51	4.6	8	170
Kalmar County	SGU well	drilled	259	<2	<2	<b>&lt;2</b>	<2	40	2.0	5	240
Uppsala County	SGU well	excavated	66	<2	<2	<b>&lt;2</b>	4.7	8.4	2.9	3	86
Uppsala County	SGU well	drilled	671	<2	<2	<b>&lt;2</b>	<2	18	<2	2	180
Sweden	SGU well	excavated	1724	<2	<2	<b>&lt;2</b>	3.4	130	2.9	6	200
Sweden	SGU well	drilled	10134	<2	<2	<b>&lt;2</b>	<2	84	<2	3	290

NO23-N			Nitrogen as nitrate and nitrite (mg/l)								NO23-N
Reference			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Simpevarp area	Private wells	excavated	129	0.050	0.13	<b>0.76</b>	3.6	40	2.4	4	180
Simpevarp area	Private wells	drilled	276	0.0050	0.13	<b>0.25</b>	1.6	43	1.8	4	250
Forsmark area	Private wells	excavated	4	0.00020	0.00050	<b>0.0012</b>	0.24	0.97	0.24	0.5	200
Forsmark area	Private wells	drilled	9	0.00090	0.0017	<b>0.023</b>	0.40	0.64	0.19	0.3	140
Forsmark area	Soil tubes	All	126	<0.0002	0.00033	<b>0.0016</b>	0.011	0.85	0.048	0.1	300
Forsmark area	Soil tubes	'Higher'	79	<0.0002	0.00060	<b>0.0035</b>	0.031	0.85	0.068	0.2	250
Forsmark area	Soil tubes	'Lower'	47	<0.0002	0.00020	<b>0.00060</b>	0.0025	0.43	0.015	0.06	420
Forsmark area	Soil tubes	In lake	22	<0.0002	<0.0002	<b>0.00040</b>	0.0013	0.027	0.0020	0.006	290
Forsmark area	Soil tubes	At sea	8	<0.0002	<0.0002	<b>0.00035</b>	0.0010	0.0091	0.0017	0.003	190

COD			Chemical oxygen demand (mg/l)								COD
Reference			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Simpevarp area	Private wells	excavated	129	1.3	7.0	<b>11</b>	16	61	14	10	78
Simpevarp area	Private wells	drilled	275	0.50	5.0	<b>7.0</b>	10	51	8.5	6	67
Forsmark area	Private wells	excavated	14	4.6	8.9	<b>10</b>	13	31	13	8	59
Forsmark area	Private wells	drilled	16	4.0	5.2	<b>8.3</b>	13	20	9.1	5	51
Kalmar County	SGU well	excavated	251	0.10	1.8	<b>3.8</b>	8.0	98	7.4	10	150
Kalmar County	SGU well	drilled	120	0.20	2.0	<b>3.8</b>	7.0	63	7.0	10	140
Uppsala County	SGU well	excavated	9	0.50	1.0	<b>2.0</b>	5.0	9.0	3.3	3	100
Uppsala County	SGU well	drilled	12	0.50	0.88	<b>2.0</b>	4.0	9.0	3.0	3	93
Sweden	SGU well	excavated	5374		1.6	<b>3.5</b>	8.0	300	7.0	10	160
Sweden	SGU well	drilled	2887		0.50	<b>2.0</b>	5.0	140	4.4	7	160

**Ground Water**

<b>O-18</b>			<b>Oxygen-18 (dev. SMOW)</b>								<b>O-18</b>	
<b>Soil tube</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>	
SSM000001	LOW (Coast)		1			-11.3			-11.3			
SSM000005	HIGH (Coast)		1			-11.8			-11.8			
SSM000008	LOW (Coast)		3	-11.6	-11.3	-11.0	-10.5	-9.90	-10.8	0.86	-8.0	
SSM000010	LOW (Coast)		3	-11.3	-11.1	-10.8	-10.5	-10.2	-10.8	0.55	-5.1	
SSM000012	LOW (26:1)		3	-10.8	-10.8	-10.7	-10.7	-10.6	-10.7	0.100	-0.93	
SSM000014	LOW (Coast)		3	-10.7	-10.7	-10.6	-10.5	-10.4	-10.6	0.15	-1.4	
SSM000016	LOW (Coast)		3	-11.7	-11.4	-11.1	-10.4	-9.60	-10.8	1.1	-10	
SSM000018	LOW (24:1)		3	-11.1	-11.0	-10.9	-10.5	-10.0	-10.7	0.59	-5.5	
SSM000020	HIGH (23:1)		3	-10.8	-10.8	-10.8	-10.4	-10.0	-10.5	0.46	-4.4	
SSM000022	LOW (23:1)		3	-10.7	-10.7	-10.6	-10.6	-10.6	-10.6	0.058	-0.54	
SSM000024	HIGH (Coast)		3	-11.0	-10.8	-10.5	-10.2	-9.90	-10.5	0.55	-5.3	
SSM000026	HIGH (Coast)		3	-10.7	-10.7	-10.7	-10.3	-9.90	-10.4	0.46	-4.4	
SSM000027	LOW (5:1)		1			-11.3			-11.3			
SSM000029	LOW (Coast)		1			-10.9			-10.9			
SSM000030	LOW (6:1)		1			-10.9			-10.9			
SSM000031	LOW (6:1)		1			-10.7			-10.7			
SSM000034	LOW (Coast)		1			-10.9			-10.9			
SSM000037	LOW (9:3)		1			-11.0			-11.0			
SSM000039	LOW (9:1)		1			-10.9			-10.9			
SSM000040	LOW (Coast)		1			-10.7			-10.7			
<b>Summary Simpevarp</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>	
Simpevarp area	Soil tubes	All	40	-11.8	-11.0	-10.8	-10.6	-9.60	-10.7	0.49	-4.6	
Simpevarp area	Soil tubes	'Higher'	10	-11.8	-10.8	-10.7	-10.1	-9.90	-10.6	0.58	-5.5	
Simpevarp area	Soil tubes	'Lower'	30	-11.7	-11.0	-10.8	-10.6	-9.60	-10.8	0.46	-4.3	
<b>Reference</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>	
Forsmark area	Private wells	excavated	2	-12.8		-11.9		-10.9	-11.9	1.3	-11	
Forsmark area	Private wells	drilled	5	-12.0	-11.6	-10.9	-10.4	-10.3	-11.0	0.74	-6.7	
Laxemar pre-PLU	Soil tubes	All	15	-9.90	-9.75	-9.30	-8.60	-7.30	-9.04	0.86	-9.5	
Forsmark area	Soil tubes	All	180	-13.1	-12.1	-11.8	-10.1	-7.60	-11.2	1.3	-11	
Forsmark area	Soil tubes	'Higher'	111	-13.1	-12.2	-11.9	-11.1	-9.00	-11.5	0.94	-8.1	
Forsmark area	Soil tubes	'Lower'	69	-13.1	-11.9	-11.0	-9.60	-7.60	-10.6	1.5	-14	
Forsmark area	Soil tubes	In lake	29	-11.8	-10.0	-9.50	-8.80	-7.60	-9.35	1.3	-14	
Forsmark area	Soil tubes	At sea	10	-12.2	-11.8	-11.7	-10.4	-9.70	-11.2	0.95	-8.4	

<b>PO4-P</b>			<b>Phosphorus as phosphate (mg/l)</b>								<b>PO4-P</b>	
<b>Reference</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>	
Simpevarp area	Private wells	excavated	134	0.0025	0.0050	<b>0.050</b>	0.10	2.5	0.25	0.6	220	
Simpevarp area	Private wells	drilled	291		0.0050	<b>0.020</b>	0.055	2.1	0.087	0.2	230	
Forsmark area	Private wells	excavated	18	0.0022	0.0050	<b>0.0072</b>	0.021	1.4	0.089	0.3	370	
Forsmark area	Private wells	drilled	25	<0.0005	0.00060	<b>0.0050</b>	0.0050	0.19	0.011	0.04	340	
Laxemar pre-PLU	Soil tubes	All	5	0.020	0.041	<b>0.053</b>	0.12	0.24	0.095	0.09	95	
Forsmark area	Soil tubes	All	128	<0.0005	0.0019	<b>0.0050</b>	0.012	0.20	0.012	0.02	180	
Forsmark area	Soil tubes	'Higher'	81	0.00050	0.0024	<b>0.0055</b>	0.013	0.046	0.010	0.01	110	
Forsmark area	Soil tubes	'Lower'	47	<0.0005	0.0010	<b>0.0027</b>	0.011	0.20	0.016	0.03	210	
Forsmark area	Soil tubes	In lake	22	<0.0005	0.00065	<b>0.0012</b>	0.0077	0.20	0.018	0.05	250	
Forsmark area	Soil tubes	At sea	8	<0.0005	0.0013	<b>0.0020</b>	0.0041	0.027	0.0055	0.009	160	
Kalmar County	SGU well	excavated	32	<0.1	<0.1	<b>&lt;0.1</b>	0.12	0.99	0.13	0.2	190	
Kalmar County	SGU well	drilled	133	<0.1	<0.1	<b>&lt;0.1</b>	<0.1	2.1	<0.1	0.3	410	
Uppsala County	SGU well	excavated	18	<0.1	<0.1	<b>&lt;0.1</b>	<0.1	2.2	0.42	0.8	180	
Uppsala County	SGU well	drilled	571	<0.1	<0.1	<b>&lt;0.1</b>	<0.1	3.6	<0.1	0.2	440	
Sweden	SGU well	excavated	713	<0.1	<0.1	<b>&lt;0.1</b>	<0.1	2.2	<0.1	0.2	310	
Sweden	SGU well	drilled	7532	<0.1	<0.1	<b>&lt;0.1</b>	<0.1	7.9	<0.1	0.1	440	

## Ground Water

K			Potassium (mg/l)							K	
Soil tube			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
SSM000001	LOW (Coast)		1			4.2			4.2		
SSM000002	HIGH (Coast)		1			12			12		
SSM000005	HIGH (Coast)		1			9.3			9.3		
SSM000008	LOW (Coast)		3	1.4	1.8	2.1	2.3	2.5	2.0	0.5	27
SSM000010	LOW (Coast)		3	4.2	4.2	4.3	4.6	4.9	4.5	0.4	8.3
SSM000012	LOW (26:1)		3	5.0	5.2	5.5	6.1	6.6	5.7	0.9	15
SSM000014	LOW (Coast)		3	5.4	6.1	6.8	6.9	7.0	6.4	0.9	14
SSM000016	LOW (Coast)		3	2.5	3.3	4.1	4.4	4.7	3.8	1	31
SSM000018	LOW (24:1)		3	38	39	41	43	46	42	4	11
SSM000020	HIGH (23:1)		3	2.9	3.3	3.7	4.2	4.8	3.8	0.9	25
SSM000022	LOW (23:1)		3	6.7	7.1	7.6	7.9	8.3	7.5	0.8	11
SSM000024	HIGH (Coast)		3	2.5	2.9	3.3	4.3	5.4	3.7	1	40
SSM000026	HIGH (Coast)		3	1.6	1.9	2.2	2.4	2.5	2.1	0.5	23
SSM000027	LOW (5:1)		1			1.1			1.1		
SSM000029	LOW (Coast)		1			11			11		
SSM000030	LOW (6:1)		1			2.5			2.5		
SSM000031	LOW (6:1)		1			1.3			1.3		
SSM000034	LOW (Coast)		1			12			12		
SSM000037	LOW (9:3)		1			5.7			5.7		
SSM000039	LOW (9:1)		1			4.5			4.5		
SSM000040	LOW (Coast)		1			9.6			9.6		
<b>Summary Simpevarp</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Simpevarp area	Soil tubes	All	41	1.1	2.5	4.8	7.0	46	7.7	10	130
Simpevarp area	Soil tubes	'Higher'	11	1.6	2.5	3.3	5.1	12	4.5	3	70
Simpevarp area	Soil tubes	'Lower'	30	1.1	4.1	5.2	7.4	46	8.9	10	130
<b>Reference</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Simpevarp area	Private wells	excavated	101	0.050	2.5	4.7	9.6	25	7.3	7	91
Simpevarp area	Private wells	drilled	252	0.90	3.0	4.2	6.2	18	5.0	3	60
Forsmark area	Private wells	excavated	18	2.3	5.9	6.8	12	40	11	10	92
Forsmark area	Private wells	drilled	27	2.7	6.3	13	26	38	16	10	65
Laxemar pre-PLU	Soil tubes	All	22	0.70	2.0	6.5	13	36	9.4	9	100
Forsmark area	Soil tubes	All	197	1.7	5.0	7.8	18	70	14	10	110
Forsmark area	Soil tubes	'Higher'	119	1.7	4.5	5.4	10	27	7.7	6	75
Forsmark area	Soil tubes	'Lower'	78	3.0	8.4	18	34	70	23	20	79
Forsmark area	Soil tubes	In lake	35	4.9	28	34	44	70	36	20	54
Forsmark area	Soil tubes	At sea	11	13	18	19	29	43	24	10	46
Kalmar County	SGU well	excavated	95	0.40	2.4	4.1	7.2	180	7.7	20	250
Kalmar County	SGU well	drilled	133	0.40	1.8	3.1	6.6	100	7.0	10	180
Uppsala County	SGU well	excavated	56	0.90	3.2	5.8	13	93	14	20	150
Uppsala County	SGU well	drilled	85	0.45	3.0	4.4	7.7	51	8.2	10	130
Sweden	SGU well	excavated	974	0.030	1.7	3.2	6.6	180	7.0	10	180
Sweden	SGU well	drilled	2223	0.0050	1.7	2.9	5.0	370	5.6	10	260



## Ground Water

Pr			Praseodymium (µg/l)							Pr	
Soil tube			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
SSM000008	LOW (Coast)		1			2.7			2.7		
SSM000010	LOW (Coast)		1			5.1			5.1		
SSM000012	LOW (26:1)		1			1.4			1.4		
SSM000014	LOW (Coast)		1			3.5			3.5		
SSM000016	LOW (Coast)		1			7.2			7.2		
SSM000018	LOW (24:1)		1			2.9			2.9		
SSM000020	HIGH (23:1)		1			5.3			5.3		
SSM000022	LOW (23:1)		1			0.18			0.18		
SSM000024	HIGH (Coast)		1			19			19		
SSM000026	HIGH (Coast)		1			4.0			4.0		
SSM000027	LOW (5:1)		1			1.7			1.7		
SSM000029	LOW (Coast)		1			17			17		
SSM000030	LOW (6:1)		1			1.3			1.3		
SSM000031	LOW (6:1)		1			5.1			5.1		
SSM000034	LOW (Coast)		1			0.061			0.061		
SSM000037	LOW (9:3)		1			9.4			9.4		
SSM000039	LOW (9:1)		1			26			26		
SSM000040	LOW (Coast)		1			5.4			5.4		
Summary Simpevarp			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Simpevarp area	Soil tubes	All	18	0.061	2.0	4.5	6.7	26	6.6	7	110
Simpevarp area	Soil tubes	'Higher'	3	4.0	4.6	5.3	12	19	9.4	8	89
Simpevarp area	Soil tubes	'Lower'	15	0.061	1.5	3.5	6.3	26	6.0	7	120
Reference			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Laxemar pre-PLU	Soil tubes	All	12	0.085	0.28	0.52	0.79	2.9	0.72	0.8	100
Forsmark area	Soil tubes	All	85	<0.05	0.084	0.36	0.57	1.6	0.39	0.3	88
Forsmark area	Soil tubes	'Higher'	63	<0.05	0.17	0.39	0.55	1.5	0.40	0.3	73
Forsmark area	Soil tubes	'Lower'	22	<0.05	<0.05	<0.05	0.82	1.6	0.37	0.5	130
Forsmark area	Soil tubes	In lake	3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.01	74
Forsmark area	Soil tubes	At sea	1			<0.05			<0.05		

Ra-226			Radium-226 (Bq/l)							Ra-226	
Soil tube			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
SSM000008	LOW (Coast)		2	0.10		0.10		0.10	0.10		
SSM000010	LOW (Coast)		2	0.10		0.10		0.10	0.10		
SSM000012	LOW (26:1)		2	<0.1		0.28		0.50	0.28	0.3	120
SSM000014	LOW (Coast)		2	<0.1		0.13		0.20	0.13	0.1	85
SSM000016	LOW (Coast)		2	<0.1		<0.1		0.10	<0.1	0.04	47
SSM000018	LOW (24:1)		2	0.20		0.30		0.40	0.30	0.1	47
SSM000020	HIGH (23:1)		2	0.10		0.15		0.20	0.15	0.07	47
SSM000022	LOW (23:1)		2	<0.1		<0.1		0.10	<0.1	0.04	47
SSM000024	HIGH (Coast)		2	0.10		0.10		0.10	0.10		
SSM000026	HIGH (Coast)		2	0.10		0.10		0.10	0.10		
SSM000027	LOW (5:1)		1			0.20			0.20		
SSM000029	LOW (Coast)		1			0.20			0.20		
SSM000030	LOW (6:1)		1			0.10			0.10		
SSM000031	LOW (6:1)		1			0.20			0.20		
SSM000034	LOW (Coast)		1			0.10			0.10		
SSM000037	LOW (9:3)		1			0.10			0.10		
SSM000039	LOW (9:1)		1			0.20			0.20		
Summary Simpevarp			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Simpevarp area	Soil tubes	All	27	<0.1	0.10	0.10	0.20	0.50	0.14	0.1	71
Simpevarp area	Soil tubes	'Higher'	6	0.10	0.10	0.10	0.10	0.20	0.12	0.04	35
Simpevarp area	Soil tubes	'Lower'	21	<0.1	0.10	0.10	0.20	0.50	0.15	0.1	75
Reference			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Forsmark area	Soil tubes	All	35	<0.1	0.10	0.20	0.50	0.90	0.27	0.2	88
Forsmark area	Soil tubes	'Higher'	27	<0.1	0.10	0.10	0.40	0.80	0.25	0.2	91
Forsmark area	Soil tubes	'Lower'	8	<0.1	0.20	0.20	0.53	0.90	0.36	0.3	80
Forsmark area	Soil tubes	In lake	2	0.50		0.55		0.60	0.55	0.07	13
Sweden	SSI well	drilled	492	0.00020	0.0050	0.012	0.035	2.5			

## Ground Water

<b>Rn-222</b>			<b>Radon-222 (Bq/l)</b>							<b>Rn-222</b>	
<b>Soil tube</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
SSM000008	LOW (Coast)		2	23		23		24	23	0.9	3.9
SSM000010	LOW (Coast)		2	14		21		28	21	10	49
SSM000012	LOW (26:1)		2	19		21		22	21	2	9.9
SSM000014	LOW (Coast)		2	28		42		56	42	20	47
SSM000016	LOW (Coast)		2	23		31		39	31	10	36
SSM000018	LOW (24:1)		2	21		25		28	25	5	21
SSM000020	HIGH (23:1)		2	23		23		23	23	0.5	2.1
SSM000022	LOW (23:1)		2	11		17		22	17	8	47
SSM000024	HIGH (Coast)		2	11		13		14	13	3	20
SSM000026	HIGH (Coast)		2	19		22		24	22	4	17
SSM000027	LOW (5:1)		1			11			11		
SSM000029	LOW (Coast)		1			13			13		
SSM000030	LOW (6:1)		1			13			13		
SSM000031	LOW (6:1)		1			38			38		
SSM000034	LOW (Coast)		1			17			17		
SSM000037	LOW (9:3)		1			15			15		
SSM000039	LOW (9:1)		1			30			30		
<b>Summary Simpevarp</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Simpevarp area	Soil tubes	All	27	11	15	22	26	56	23	10	45
Simpevarp area	Soil tubes	'Higher'	6	11	16	21	23	24	19	5	29
Simpevarp area	Soil tubes	'Lower'	21	11	15	22	28	56	24	10	46
<b>Reference</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Forsmark area	Soil tubes	All	35	7.7	22	30	48	180	44	40	90
Forsmark area	Soil tubes	'Higher'	27	7.7	19	28	43	150	36	30	80
Forsmark area	Soil tubes	'Lower'	8	23	32	50	93	180	73	60	80
Forsmark area	Soil tubes	In lake	2	65		70		75	70	7	10
Sweden	SSI well	drilled	1000		30	85	220	9300			
Sweden	SSI well	excavated	1000	1.0	8.0	20	49	950			

<b>Rb</b>			<b>Rubidium (µg/l)</b>							<b>Rb</b>	
<b>Soil tube</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
SSM000008	LOW (Coast)		1			8.2			8.2		
SSM000010	LOW (Coast)		1			7.5			7.5		
SSM000012	LOW (26:1)		1			7.9			7.9		
SSM000014	LOW (Coast)		1			15			15		
SSM000016	LOW (Coast)		1			27			27		
SSM000018	LOW (24:1)		1			41			41		
SSM000020	HIGH (23:1)		1			7.5			7.5		
SSM000022	LOW (23:1)		1			2.3			2.3		
SSM000024	HIGH (Coast)		1			34			34		
SSM000026	HIGH (Coast)		1			9.1			9.1		
SSM000027	LOW (5:1)		1			3.4			3.4		
SSM000029	LOW (Coast)		1			45			45		
SSM000030	LOW (6:1)		1			8.1			8.1		
SSM000031	LOW (6:1)		1			7.3			7.3		
SSM000034	LOW (Coast)		1			2.2			2.2		
SSM000037	LOW (9:3)		1			23			23		
SSM000039	LOW (9:1)		1			25			25		
SSM000040	LOW (Coast)		1			17			17		
<b>Summary Simpevarp</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Simpevarp area	Soil tubes	All	18	2.2	7.5	8.7	24	45	16	10	83
Simpevarp area	Soil tubes	'Higher'	3	7.5	8.3	9.1	22	34	17	20	89
Simpevarp area	Soil tubes	'Lower'	15	2.2	7.4	8.2	24	45	16	10	85
<b>Reference</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Laxemar pre-PLU	Soil tubes	All	12	1.3	2.5	4.2	5.8	9.9	4.6	3	56
Forsmark area	Soil tubes	All	85	0.77	1.7	2.3	3.8	17	2.9	2	70
Forsmark area	Soil tubes	'Higher'	63	0.77	1.6	2.2	2.5	5.8	2.5	1	49
Forsmark area	Soil tubes	'Lower'	22	1.8	2.4	3.2	4.6	17	4.1	3	78
Forsmark area	Soil tubes	In lake	3	4.9	5.1	5.3	11	17	9.1	7	76
Forsmark area	Soil tubes	At sea	1			6.2			6.2		

## Ground Water

<b>Sm</b>			<b>Samarium (µg/l)</b>								<b>Sm</b>
<b>Soil tube</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
SSM000008	LOW (Coast)		1			1.9			1.9		
SSM000010	LOW (Coast)		1			2.9			2.9		
SSM000012	LOW (26:1)		1			0.83			0.83		
SSM000014	LOW (Coast)		1			2.3			2.3		
SSM000016	LOW (Coast)		1			4.4			4.4		
SSM000018	LOW (24:1)		1			2.1			2.1		
SSM000020	HIGH (23:1)		1			3.5			3.5		
SSM000022	LOW (23:1)		1			0.12			0.12		
SSM000024	HIGH (Coast)		1			10			10		
SSM000026	HIGH (Coast)		1			2.6			2.6		
SSM000027	LOW (5:1)		1			1.1			1.1		
SSM000029	LOW (Coast)		1			11			11		
SSM000030	LOW (6:1)		1			0.79			0.79		
SSM000031	LOW (6:1)		1			3.3			3.3		
SSM000034	LOW (Coast)		1			0.039			0.039		
SSM000037	LOW (9:3)		1			4.9			4.9		
SSM000039	LOW (9:1)		1			15			15		
SSM000040	LOW (Coast)		1			3.4			3.4		
<b>Summary Simpevarp</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Simpevarp area	Soil tubes	All	18	0.039	1.3	2.7	4.1	15	3.8	4	100
Simpevarp area	Soil tubes	'Higher'	3	2.6	3.0	3.5	6.8	10	5.4	4	77
Simpevarp area	Soil tubes	'Lower'	15	0.039	0.96	2.3	3.9	15	3.5	4	110
<b>Reference</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Laxemar pre-PLU	Soil tubes	All	12	0.075	0.19	0.35	0.46	1.9	0.47	0.5	100
Forsmark area	Soil tubes	All	85	<0.05	0.056	0.24	0.36	1.0	0.25	0.2	88
Forsmark area	Soil tubes	'Higher'	63	<0.05	0.12	0.24	0.35	0.95	0.26	0.2	72
Forsmark area	Soil tubes	'Lower'	22	<0.05	<0.05	<0.05	0.46	1.0	0.24	0.3	130
Forsmark area	Soil tubes	In lake	3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.01	74
Forsmark area	Soil tubes	At sea	1			<0.05			<0.05		

<b>Sc</b>			<b>Scandium (µg/l)</b>								<b>Sc</b>
<b>Soil tube</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
SSM000008	LOW (Coast)		1			1.1			1.1		
SSM000010	LOW (Coast)		1			0.82			0.82		
SSM000012	LOW (26:1)		1			0.38			0.38		
SSM000014	LOW (Coast)		1			0.97			0.97		
SSM000016	LOW (Coast)		1			1.9			1.9		
SSM000018	LOW (24:1)		1			0.43			0.43		
SSM000020	HIGH (23:1)		1			0.50			0.50		
SSM000022	LOW (23:1)		1			0.051			0.051		
SSM000024	HIGH (Coast)		1			3.1			3.1		
SSM000026	HIGH (Coast)		1			0.70			0.70		
SSM000027	LOW (5:1)		1			0.20			0.20		
SSM000029	LOW (Coast)		1			4.0			4.0		
SSM000030	LOW (6:1)		1			0.29			0.29		
SSM000031	LOW (6:1)		1			0.83			0.83		
SSM000034	LOW (Coast)		1			<0.05			<0.05		
SSM000037	LOW (9:3)		1			1.9			1.9		
SSM000039	LOW (9:1)		1			2.7			2.7		
SSM000040	LOW (Coast)		1			1.1			1.1		
<b>Summary Simpevarp</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Simpevarp area	Soil tubes	All	18	<0.05	0.39	0.82	1.7	4.0	1.2	1	96
Simpevarp area	Soil tubes	'Higher'	3	0.50	0.60	0.70	1.9	3.1	1.4	1	100
Simpevarp area	Soil tubes	'Lower'	15	<0.05	0.33	0.83	1.5	4.0	1.1	1	99
<b>Reference</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Laxemar pre-PLU	Soil tubes	All	12	0.034	0.046	0.076	0.12	0.67	0.14	0.2	130
Forsmark area	Soil tubes	All	85	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.07	81
Forsmark area	Soil tubes	'Higher'	63	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.06	77
Forsmark area	Soil tubes	'Lower'	22	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.09	80
Forsmark area	Soil tubes	In lake	3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.1	74
Forsmark area	Soil tubes	At sea	1			<0.5			<0.5		

**Ground Water**

<b>Si</b>			<b>Silicon (mg/l)</b>								<b>Si</b>
<b>Soil tube</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
SSM000001	LOW (Coast)		1			<b>12</b>			12		
SSM000002	HIGH (Coast)		1			<b>4.9</b>			4.9		
SSM000005	HIGH (Coast)		1			<b>11</b>			11		
SSM000008	LOW (Coast)		3	6.9	7.4	<b>7.9</b>	8.5	9.1	8.0	1	14
SSM000010	LOW (Coast)		3	9.9	11	<b>11</b>	14	17	13	4	28
SSM000012	LOW (26:1)		3	6.4	7.0	<b>7.7</b>	7.9	8.1	7.4	0.9	12
SSM000014	LOW (Coast)		3	15	18	<b>20</b>	21	22	19	4	20
SSM000016	LOW (Coast)		3	8.5	9.4	<b>10</b>	13	16	11	4	32
SSM000018	LOW (24:1)		3	11	11	<b>11</b>	13	16	12	3	22
SSM000020	HIGH (23:1)		3	8.6	11	<b>14</b>	15	16	13	4	30
SSM000022	LOW (23:1)		3	4.3	4.7	<b>5.1</b>	5.7	6.4	5.2	1	20
SSM000024	HIGH (Coast)		3	11	13	<b>14</b>	17	20	15	4	30
SSM000026	HIGH (Coast)		3	9.8	9.8	<b>9.9</b>	11	11	10	0.9	8.3
SSM000027	LOW (5:1)		1			<b>8.3</b>			8.3		
SSM000029	LOW (Coast)		1			<b>26</b>			26		
SSM000030	LOW (6:1)		1			<b>9.0</b>			9.0		
SSM000031	LOW (6:1)		1			<b>9.9</b>			9.9		
SSM000034	LOW (Coast)		1			<b>13</b>			13		
SSM000037	LOW (9:3)		1			<b>20</b>			20		
SSM000039	LOW (9:1)		1			<b>19</b>			19		
SSM000040	LOW (Coast)		1			<b>15</b>			15		
<b>Summary Simpevarp</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Simpevarp area	Soil tubes	All	41	4.3	8.5	<b>11</b>	15	26	12	5	42
Simpevarp area	Soil tubes	'Higher'	11	4.9	9.8	<b>11</b>	14	20	12	4	33
Simpevarp area	Soil tubes	'Lower'	30	4.3	8.1	<b>11</b>	15	26	12	5	45
<b>Reference</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Forsmark area	Private wells	excavated	6	3.8	4.2	<b>5.4</b>	6.2	7.2	5.3	1	26
Forsmark area	Private wells	drilled	14	4.9	6.0	<b>6.5</b>	7.0	8.4	6.5	0.9	14
Laxemar pre-PLU	Soil tubes	All	22	6.3	10	<b>16</b>	19	23	15	5	37
Forsmark area	Soil tubes	All	199	1.0	5.0	<b>6.3</b>	7.8	14	6.4	2	33
Forsmark area	Soil tubes	'Higher'	119	3.0	4.9	<b>6.0</b>	7.0	14	6.1	2	30
Forsmark area	Soil tubes	'Lower'	80	1.0	5.2	<b>6.9</b>	8.3	14	6.7	2	36
Forsmark area	Soil tubes	In lake	35	1.0	4.6	<b>6.8</b>	8.2	14	6.6	3	44
Forsmark area	Soil tubes	At sea	11	5.5	6.4	<b>8.6</b>	9.0	9.7	7.8	2	20

## Ground Water

Na			Sodium (mg/l)							Na	
Soil tube			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
SSM000001	LOW (Coast)		1			11			11		
SSM000002	HIGH (Coast)		1			59			59		
SSM000005	HIGH (Coast)		1			10			10		
SSM000008	LOW (Coast)		3	8.7	9.5	10	11	12	10	2	15
SSM000010	LOW (Coast)		3	11	12	13	13	14	13	2	14
SSM000012	LOW (26:1)		3	33	34	34	36	39	35	3	8.3
SSM000014	LOW (Coast)		3	9.1	16	23	25	27	20	9	48
SSM000016	LOW (Coast)		3	4.6	5.1	5.6	6.4	7.2	5.8	1	23
SSM000018	LOW (24:1)		3	43	56	69	70	71	61	20	26
SSM000020	HIGH (23:1)		3	5.4	5.6	5.8	6.0	6.2	5.8	0.4	6.9
SSM000022	LOW (23:1)		3	220	220	230	230	230	230	6	2.7
SSM000024	HIGH (Coast)		3	6.0	6.3	6.5	15	24	12	10	85
SSM000026	HIGH (Coast)		3	5.7	6.7	7.7	8.0	8.2	7.2	1	18
SSM000027	LOW (5:1)		1			6.2			6.2		
SSM000029	LOW (Coast)		1			98			98		
SSM000030	LOW (6:1)		1			29			29		
SSM000031	LOW (6:1)		1			7.5			7.5		
SSM000034	LOW (Coast)		1			72			72		
SSM000037	LOW (9:3)		1			34			34		
SSM000039	LOW (9:1)		1			9.7			9.7		
SSM000040	LOW (Coast)		1			82			82		
<b>Summary Simpevarp</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Simpevarp area	Soil tubes	All	41	4.6	7.5	12	39	230	39	60	150
Simpevarp area	Soil tubes	'Higher'	11	5.4	5.9	6.5	9.2	59	13	20	120
Simpevarp area	Soil tubes	'Lower'	30	4.6	9.8	25	63	230	49	70	130
<b>Reference</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Simpevarp area	Private wells	excavated	101	2.0	4.9	9.0	27	350	35	70	200
Simpevarp area	Private wells	drilled	252	4.6	27	62	140	650	110	100	110
Forsmark area	Private wells	excavated	18	2.8	5.9	14	43	650	91	200	200
Forsmark area	Private wells	drilled	27	8.0	43	120	920	1900	500	600	130
Laxemar pre-PLU	Soil tubes	All	22	9.3	41	140	310	810	230	200	110
Forsmark area	Soil tubes	All	197	2.2	17	37	260	1600	240	400	170
Forsmark area	Soil tubes	'Higher'	119	2.2	11	22	33	410	45	80	170
Forsmark area	Soil tubes	'Lower'	78	9.3	130	340	910	1600	550	500	92
Forsmark area	Soil tubes	In lake	35	17	260	690	1200	1600	800	600	73
Forsmark area	Soil tubes	At sea	11	350	720	740	820	970	750	200	21
Kalmar County	SGU well	excavated	95	1.9	6.0	8.5	13	130	13	20	140
Kalmar County	SGU well	drilled	133	3.8	9.3	17	35	600	50	90	190
Uppsala County	SGU well	excavated	56	1.8	6.8	11	15	260	16	30	210
Uppsala County	SGU well	drilled	85	3.4	18	41	86	210	57	50	89
Sweden	SGU well	excavated	1054	0.67	4.5	7.9	14	550	14	30	210
Sweden	SGU well	drilled	2237	1.0	9.0	21	59	1800	56	100	200

**Ground Water**

<b>Sr</b>			<b>Strontium (mg/l)</b>								<b>Sr</b>
<b>Soil tube</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
SSM000001	LOW (Coast)		1			<b>0.081</b>			0.081		
SSM000002	HIGH (Coast)		1			<b>0.27</b>			0.27		
SSM000005	HIGH (Coast)		1			<b>0.26</b>			0.26		
SSM000008	LOW (Coast)		3	0.073	0.087	<b>0.10</b>	0.12	0.13	0.10	0.03	29
SSM000010	LOW (Coast)		3	0.12	0.13	<b>0.14</b>	0.16	0.18	0.15	0.03	18
SSM000012	LOW (26:1)		3	0.18	0.18	<b>0.18</b>	0.19	0.19	0.18	0.01	5.5
SSM000014	LOW (Coast)		3	0.095	0.097	<b>0.099</b>	0.10	0.11	0.100	0.005	5.1
SSM000016	LOW (Coast)		3	0.047	0.059	<b>0.070</b>	0.077	0.083	0.067	0.02	27
SSM000018	LOW (24:1)		3	0.13	0.15	<b>0.16</b>	0.19	0.21	0.17	0.04	23
SSM000020	HIGH (23:1)		3	0.076	0.090	<b>0.10</b>	0.12	0.13	0.10	0.03	25
SSM000022	LOW (23:1)		3	0.27	0.28	<b>0.28</b>	0.28	0.28	0.28	0.003	1.2
SSM000024	HIGH (Coast)		3	0.066	0.067	<b>0.068</b>	0.11	0.15	0.094	0.05	50
SSM000026	HIGH (Coast)		3	0.035	0.053	<b>0.070</b>	0.072	0.073	0.059	0.02	36
SSM000027	LOW (5:1)		1			<b>0.025</b>			0.025		
SSM000029	LOW (Coast)		1			<b>0.15</b>			0.15		
SSM000030	LOW (6:1)		1			<b>0.27</b>			0.27		
SSM000031	LOW (6:1)		1			<b>0.044</b>			0.044		
SSM000034	LOW (Coast)		1			<b>0.54</b>			0.54		
SSM000037	LOW (9:3)		1			<b>0.22</b>			0.22		
SSM000039	LOW (9:1)		1			<b>0.10</b>			0.10		
SSM000040	LOW (Coast)		1			<b>0.20</b>			0.20		
<b>Summary Simpevarp</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Simpevarp area	Soil tubes	All	41	0.025	0.076	<b>0.13</b>	0.19	0.54	0.15	0.10	65
Simpevarp area	Soil tubes	'Higher'	11	0.035	0.069	<b>0.076</b>	0.14	0.27	0.12	0.08	66
Simpevarp area	Soil tubes	'Lower'	30	0.025	0.096	<b>0.14</b>	0.20	0.54	0.16	0.1	64
<b>Reference</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Forsmark area	Private wells	excavated	6	0.23	0.24	<b>0.30</b>	0.45	0.64	0.36	0.2	46
Forsmark area	Private wells	drilled	14	0.30	0.47	<b>1.5</b>	7.3	8.7	3.5	4	100
Laxemar pre-PLU	Soil tubes	All	22	0.060	0.19	<b>0.28</b>	0.57	0.78	0.36	0.2	64
Forsmark area	Soil tubes	All	198	0.075	0.18	<b>0.25</b>	0.45	4.6	0.69	1	150
Forsmark area	Soil tubes	'Higher'	118	0.075	0.16	<b>0.20</b>	0.26	0.50	0.23	0.1	49
Forsmark area	Soil tubes	'Lower'	80	0.080	0.30	<b>0.48</b>	2.1	4.6	1.4	1	100
Forsmark area	Soil tubes	In lake	35	0.16	0.49	<b>1.9</b>	2.5	3.8	1.8	1	73
Forsmark area	Soil tubes	At sea	11	0.99	1.5	<b>4.3</b>	4.4	4.6	3.2	2	49

<b>Sr-87</b>			<b>Strontium-87 (Sr87/Sr86) (ratio)</b>								<b>Sr-87</b>
<b>Soil tube</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
SSM000002	HIGH (Coast)		1			<b>0.7124</b>			0.7124		
SSM000005	HIGH (Coast)		1			<b>0.7286</b>			0.7286		
SSM000008	LOW (Coast)		3	0.7186	0.7186	<b>0.7186</b>	0.7187	0.7188	0.7186	0.000103	0.014
SSM000010	LOW (Coast)		3	0.7187	0.7187	<b>0.7187</b>	0.7190	0.7193	0.7189	0.000353	0.049
SSM000012	LOW (26:1)		3	0.7191	0.7194	<b>0.7197</b>	0.7200	0.7203	0.7197	0.000622	0.086
SSM000014	LOW (Coast)		3	0.7195	0.7197	<b>0.7198</b>	0.7200	0.7201	0.7198	0.000307	0.043
SSM000016	LOW (Coast)		3	0.7331	0.7331	<b>0.7331</b>	0.7334	0.7336	0.7333	0.000278	0.038
SSM000018	LOW (24:1)		3	0.7157	0.7158	<b>0.7160</b>	0.7162	0.7163	0.7160	0.000321	0.045
SSM000020	HIGH (23:1)		3	0.7220	0.7220	<b>0.7220</b>	0.7226	0.7232	0.7224	0.000673	0.093
SSM000022	LOW (23:1)		3	0.7157	0.7158	<b>0.7159</b>	0.7159	0.7160	0.7159	0.000117	0.016
SSM000024	HIGH (Coast)		3	0.7199	0.7207	<b>0.7216</b>	0.7218	0.7220	0.7211	0.00113	0.16
SSM000026	HIGH (Coast)		3	0.7218	0.7220	<b>0.7223</b>	0.7239	0.7255	0.7232	0.00202	0.28
SSM000027	LOW (5:1)		1			<b>0.7186</b>			0.7186		
SSM000029	LOW (Coast)		1			<b>0.7161</b>			0.7161		
SSM000030	LOW (6:1)		1			<b>0.7149</b>			0.7149		
SSM000031	LOW (6:1)		1			<b>0.7202</b>			0.7202		
SSM000034	LOW (Coast)		1			<b>0.7117</b>			0.7117		
SSM000037	LOW (9:3)		1			<b>0.7188</b>			0.7188		
SSM000039	LOW (9:1)		1			<b>0.7220</b>			0.7220		
SSM000040	LOW (Coast)		1			<b>0.7140</b>			0.7140		
<b>Summary Simpevarp</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Simpevarp area	Soil tubes	All	40	0.7117	0.7163	<b>0.7194</b>	0.7220	0.7336	0.7201	0.00503	0.70
Simpevarp area	Soil tubes	'Higher'	11	0.7124	0.7217	<b>0.7220</b>	0.7227	0.7286	0.7219	0.00394	0.55
Simpevarp area	Soil tubes	'Lower'	29	0.7117	0.7160	<b>0.7187</b>	0.7198	0.7336	0.7194	0.00529	0.73
<b>Reference</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Forsmark area	Soil tubes	All	115	0.7121	0.7210	<b>0.7241</b>	0.7252	0.7381	0.7235	0.00496	0.69
Forsmark area	Soil tubes	'Higher'	71	0.7209	0.7231	<b>0.7247</b>	0.7266	0.7286	0.7246	0.00203	0.28
Forsmark area	Soil tubes	'Lower'	44	0.7121	0.7185	<b>0.7192</b>	0.7250	0.7381	0.7217	0.00730	1.0
Forsmark area	Soil tubes	In lake	19	0.7121	0.7151	<b>0.7222</b>	0.7250	0.7250	0.7200	0.00513	0.71
Forsmark area	Soil tubes	At sea	8	0.7138	0.7174	<b>0.7186</b>	0.7186	0.7186	0.7174	0.00218	0.30

S2 (HS)			Hydrogen sulphide as total sulphide (mg/l)							S2 (HS)	
Soil tube			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
SSM000008	LOW (Coast)		2	0.0030		<b>0.0045</b>		0.0060	0.0045	0.002	47
SSM000010	LOW (Coast)		2	0.0020		<b>0.0050</b>		0.0080	0.0050	0.004	85
SSM000012	LOW (26:1)		2	0.0070		<b>0.014</b>		0.020	0.014	0.009	68
SSM000014	LOW (Coast)		2	0.0020		<b>0.0055</b>		0.0090	0.0055	0.005	90
SSM000016	LOW (Coast)		2	<0.002		<b>0.0040</b>		0.0070	0.0040	0.004	110
SSM000018	LOW (24:1)		2	0.0060		<b>0.0095</b>		0.013	0.0095	0.005	52
SSM000020	HIGH (23:1)		2	0.0060		<b>0.0065</b>		0.0070	0.0065	0.0007	11
SSM000022	LOW (23:1)		2	0.035		<b>0.039</b>		0.042	0.039	0.005	13
SSM000024	HIGH (Coast)		2	0.0080		<b>0.016</b>		0.023	0.016	0.01	68
SSM000026	HIGH (Coast)		2	0.0070		<b>0.012</b>		0.017	0.012	0.007	59
SSM000027	LOW (5:1)		1			<b>0.0030</b>			0.0030		
SSM000029	LOW (Coast)		1			<b>0.015</b>			0.015		
SSM000030	LOW (6:1)		1			<b>0.011</b>			0.011		
SSM000031	LOW (6:1)		1			<b>0.0070</b>			0.0070		
SSM000034	LOW (Coast)		1			<b>0.036</b>			0.036		
SSM000039	LOW (9:1)		1			<b>0.0070</b>			0.0070		
<b>Summary Simpevarp</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Simpevarp area	Soil tubes	All	26	<0.002	0.0060	<b>0.0070</b>	0.015	0.042	0.012	0.01	93
Simpevarp area	Soil tubes	'Higher'	6	0.0060	0.0070	<b>0.0075</b>	0.015	0.023	0.011	0.007	62
Simpevarp area	Soil tubes	'Lower'	20	<0.002	0.0053	<b>0.0070</b>	0.014	0.042	0.012	0.01	100
<b>Reference</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Forsmark area	Soil tubes	All	59	<0.03	<0.03	<b>&lt;0.03</b>	0.050	0.44	0.039	0.07	170
Forsmark area	Soil tubes	'Higher'	48	<0.03	<0.03	<b>&lt;0.03</b>	0.048	0.44	0.035	0.07	190
Forsmark area	Soil tubes	'Lower'	11	<0.03	<0.03	<b>&lt;0.03</b>	0.087	0.25	0.057	0.08	140
Forsmark area	Soil tubes	In lake	2	0.091		<b>0.11</b>		0.13	0.11	0.03	27

SO4			Sulphate (mg/l)							SO4	
Soil tube			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
SSM000001	LOW (Coast)		1			4.1			4.1		
SSM000002	HIGH (Coast)		1			13			13		
SSM000005	HIGH (Coast)		1			4.5			4.5		
SSM000008	LOW (Coast)		4	6.7	7.2	8.5	9.7	10	8.5	2	20
SSM000010	LOW (Coast)		4	14	20	22	24	27	21	6	26
SSM000012	LOW (26:1)		4	55	62	68	78	97	72	20	25
SSM000014	LOW (Coast)		4	48	56	61	64	68	59	8	14
SSM000016	LOW (Coast)		4	11	14	18	23	28	19	7	38
SSM000018	LOW (24:1)		4	61	80	100	140	180	110	50	47
SSM000020	HIGH (23:1)		4	33	43	51	61	74	52	20	33
SSM000022	LOW (23:1)		4	120	120	130	130	140	130	8	6.6
SSM000024	HIGH (Coast)		4	4.9	6.2	11	16	21	12	7	63
SSM000026	HIGH (Coast)		4	15	15	18	22	27	20	6	29
SSM000027	LOW (5:1)		1			21			21		
SSM000029	LOW (Coast)		1			22			22		
SSM000030	LOW (6:1)		1			46			46		
SSM000031	LOW (6:1)		2	11		11		12	11	0.5	4.4
SSM000034	LOW (Coast)		1			<0.2			<0.2		
SSM000037	LOW (9:3)		1			24			24		
SSM000039	LOW (9:1)		2	14		16		18	16	2	16
SSM000040	LOW (Coast)		2	8.2		13		18	13	7	52
SSM000042	LOW (10:1)		1			91			91		
<b>Summary Simpevarp</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Simpevarp area	Soil tubes	All	55	<0.2	13	22	62	180	42	40	99
Simpevarp area	Soil tubes	'Higher'	14	4.5	13	18	31	74	25	20	83
Simpevarp area	Soil tubes	'Lower'	41	<0.2	14	24	68	180	48	50	95
<b>Reference</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Simpevarp area	Private wells	excavated	134	2.0	13	22	33	130	29	30	89
Simpevarp area	Private wells	drilled	290	3.0	14	30	46	200	40	40	100
Forsmark area	Private wells	excavated	20	7.0	14	58	120	280	87	90	110
Forsmark area	Private wells	drilled	30	6.0	71	120	210	360	140	100	76
Laxemar pre-PLU	Soil tubes	All	22	1.8	8.2	14	110	350	70	100	140
Forsmark area	Soil tubes	All	194	<0.2	27	50	120	390	92	90	99
Forsmark area	Soil tubes	'Higher'	115	0.55	22	45	73	280	58	50	84
Forsmark area	Soil tubes	'Lower'	79	<0.2	43	120	230	390	140	100	81
Forsmark area	Soil tubes	In lake	34	<0.2	21	120	230	390	150	100	89
Forsmark area	Soil tubes	At sea	11	160	230	240	260	280	240	30	14
Kalmar County	SGU well	excavated	362	7.0	20	27	38	140	31	20	57
Kalmar County	SGU well	drilled	302	<2	14	23	39	430	33	40	120
Uppsala County	SGU well	excavated	65	7.2	16	24	34	84	27	10	54
Uppsala County	SGU well	drilled	299	<2	21	29	43	260	36	30	82
Sweden	SGU well	excavated	7762	<2	10	16	25	410	20	20	95
Sweden	SGU well	drilled	8726	<2	9.2	18	32	1000	26	30	130



## Ground Water

SO4-S			Sulphate as sulphur (mg/l)								SO4-S
Soil tube			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
SSM000001	LOW (Coast)		1			2.2			2.2		
SSM000002	HIGH (Coast)		1			5.0			5.0		
SSM000005	HIGH (Coast)		1			0.78			0.78		
SSM000008	LOW (Coast)		3	2.5	2.8	3.1	3.2	3.4	3.0	0.5	15
SSM000010	LOW (Coast)		3	7.2	8.0	8.9	8.9	8.9	8.3	1.0	12
SSM000012	LOW (26:1)		3	19	19	20	22	23	21	2	11
SSM000014	LOW (Coast)		3	17	19	20	21	22	20	2	12
SSM000016	LOW (Coast)		3	5.3	6.7	8.0	8.4	8.8	7.4	2	25
SSM000018	LOW (24:1)		3	21	36	51	55	59	43	20	46
SSM000020	HIGH (23:1)		3	15	16	18	22	26	20	6	30
SSM000022	LOW (23:1)		3	44	44	44	45	46	44	1	2.5
SSM000024	HIGH (Coast)		3	1.9	2.2	2.6	4.4	6.2	3.6	2	65
SSM000026	HIGH (Coast)		3	5.2	5.3	5.5	7.4	9.3	6.7	2	35
SSM000027	LOW (5:1)		1			6.3			6.3		
SSM000029	LOW (Coast)		1			7.6			7.6		
SSM000030	LOW (6:1)		1			14			14		
SSM000031	LOW (6:1)		1			3.7			3.7		
SSM000034	LOW (Coast)		1			0.26			0.26		
SSM000037	LOW (9:3)		1			8.7			8.7		
SSM000039	LOW (9:1)		1			7.5			7.5		
SSM000040	LOW (Coast)		1			5.2			5.2		
<b>Summary Simpevarp</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Simpevarp area	Soil tubes	All	41	0.26	5.2	8.7	20	59	14	10	100
Simpevarp area	Soil tubes	'Higher'	11	0.78	3.8	5.5	12	26	8.7	8	91
Simpevarp area	Soil tubes	'Lower'	30	0.26	5.6	8.9	21	59	17	20	97
<b>Reference</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Forsmark area	Private wells	excavated	6	20	23	34	59	81	43	30	60
Forsmark area	Private wells	drilled	14	14	33	53	92	110	60	30	55
Laxemar pre-PLU	Soil tubes	All	22	0.61	2.7	4.6	37	120	23	30	140
Forsmark area	Soil tubes	All	199	0.25	8.4	16	43	120	30	30	99
Forsmark area	Soil tubes	'Higher'	119	1.1	7.7	14	23	84	19	20	82
Forsmark area	Soil tubes	'Lower'	80	0.25	13	43	76	120	47	40	80
Forsmark area	Soil tubes	In lake	35	0.25	7.5	44	77	120	51	40	86
Forsmark area	Soil tubes	At sea	11	44	75	76	84	93	77	10	17

S-34			Sulphur-34 (dev. CDT)								S-34
Soil tube			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
SSM000008	LOW (Coast)		3	-5.60	-3.45	-1.30	4.05	9.40	0.833	7.7	930
SSM000010	LOW (Coast)		3	-12.0	-12.0	-11.9	-7.20	-2.50	-8.80	5.5	-62
SSM000012	LOW (26:1)		3	-0.300	4.65	9.60	10.2	10.8	6.70	6.1	91
SSM000014	LOW (Coast)		3	-14.6	-13.6	-12.5	-9.75	-7.00	-11.4	3.9	-35
SSM000016	LOW (Coast)		3	-8.10	-5.45	-2.80	2.10	7.00	-1.30	7.7	-590
SSM000018	LOW (24:1)		3	-6.60	-6.10	-5.60	-0.100	5.40	-2.27	6.7	-290
SSM000020	HIGH (23:1)		3	-9.30	-7.80	-6.30	-4.90	-3.50	-6.37	2.9	-46
SSM000022	LOW (23:1)		3	15.6	18.1	20.6	21.7	22.8	19.7	3.7	19
SSM000024	HIGH (Coast)		3	6.40	8.30	10.2	13.0	15.7	10.8	4.7	43
SSM000026	HIGH (Coast)		3	2.80	3.50	4.20	4.35	4.50	3.83	0.91	24
SSM000027	LOW (5:1)		1			0.700			0.700		
SSM000029	LOW (Coast)		1			22.4			22.4		
SSM000030	LOW (6:1)		1			11.0			11.0		
SSM000031	LOW (6:1)		1			5.10			5.10		
SSM000037	LOW (9:3)		1			17.0			17.0		
SSM000039	LOW (9:1)		1			-5.90			-5.90		
<b>Summary Simpevarp</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Simpevarp area	Soil tubes	All	36	-14.6	-6.00	1.75	9.75	22.8	2.37	10	440
Simpevarp area	Soil tubes	'Higher'	9	-9.30	-3.50	4.20	6.40	15.7	2.74	8.0	290
Simpevarp area	Soil tubes	'Lower'	27	-14.6	-6.25	-0.300	10.2	22.8	2.25	11	500
<b>Reference</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Forsmark area	Soil tubes	All	107	-17.4	-4.50	1.10	13.3	40.9	4.81	12	250
Forsmark area	Soil tubes	'Higher'	67	-17.4	-6.30	-0.500	1.85	22.3	-1.46	7.0	-480
Forsmark area	Soil tubes	'Lower'	40	-4.60	3.28	16.9	24.8	40.9	15.3	12	76
Forsmark area	Soil tubes	In lake	15	9.30	21.9	28.2	29.4	40.9	25.8	7.6	30
Forsmark area	Soil tubes	At sea	8	9.20	15.6	16.7	17.0	17.6	15.6	2.7	17

**Ground Water**

<b>Tb</b>			<b>Terbium (µg/l)</b>								<b>Tb</b>
<b>Soil tube</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
SSM000008	LOW (Coast)		1			<b>0.27</b>			0.27		
SSM000010	LOW (Coast)		1			<b>0.36</b>			0.36		
SSM000012	LOW (26:1)		1			<b>0.11</b>			0.11		
SSM000014	LOW (Coast)		1			<b>0.27</b>			0.27		
SSM000016	LOW (Coast)		1			<b>0.53</b>			0.53		
SSM000018	LOW (24:1)		1			<b>0.26</b>			0.26		
SSM000020	HIGH (23:1)		1			<b>0.41</b>			0.41		
SSM000022	LOW (23:1)		1			<b>&lt;0.05</b>			<0.05		
SSM000024	HIGH (Coast)		1			<b>1.2</b>			1.2		
SSM000026	HIGH (Coast)		1			<b>0.31</b>			0.31		
SSM000027	LOW (5:1)		1			<b>0.13</b>			0.13		
SSM000029	LOW (Coast)		1			<b>1.4</b>			1.4		
SSM000030	LOW (6:1)		1			<b>0.10</b>			0.10		
SSM000031	LOW (6:1)		1			<b>0.38</b>			0.38		
SSM000034	LOW (Coast)		1			<b>&lt;0.05</b>			<0.05		
SSM000037	LOW (9:3)		1			<b>0.56</b>			0.56		
SSM000039	LOW (9:1)		1			<b>1.6</b>			1.6		
SSM000040	LOW (Coast)		1			<b>0.43</b>			0.43		
<b>Summary Simpevarp</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Simpevarp area	Soil tubes	All	18	<0.05	0.16	<b>0.34</b>	0.50	1.6	0.47	0.5	100
Simpevarp area	Soil tubes	'Higher'	3	0.31	0.36	<b>0.41</b>	0.82	1.2	0.65	0.5	77
Simpevarp area	Soil tubes	'Lower'	15	<0.05	0.12	<b>0.27</b>	0.48	1.6	0.43	0.5	110
<b>Reference</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Forsmark area	Soil tubes	All	85	<0.5	<0.5	<b>&lt;0.5</b>	<0.5	<0.5	<0.5	0.04	94
Forsmark area	Soil tubes	'Higher'	63	<0.5	<0.5	<b>&lt;0.5</b>	<0.5	<0.5	<0.5	0.03	70
Forsmark area	Soil tubes	'Lower'	22	<0.5	<0.5	<b>&lt;0.5</b>	<0.5	<0.5	<0.5	0.06	120
Forsmark area	Soil tubes	In lake	3	<0.5	<0.5	<b>&lt;0.5</b>	<0.5	<0.5	<0.5	0.1	150
Forsmark area	Soil tubes	At sea	1			<b>&lt;0.5</b>			<0.5		

<b>TI</b>			<b>Thallium (µg/l)</b>								<b>TI</b>
<b>Soil tube</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
SSM000008	LOW (Coast)		1			<b>0.064</b>			0.064		
SSM000010	LOW (Coast)		1			<b>0.064</b>			0.064		
SSM000012	LOW (26:1)		1			<b>0.045</b>			0.045		
SSM000014	LOW (Coast)		1			<b>0.12</b>			0.12		
SSM000016	LOW (Coast)		1			<b>0.20</b>			0.20		
SSM000018	LOW (24:1)		1			<b>0.054</b>			0.054		
SSM000020	HIGH (23:1)		1			<b>0.053</b>			0.053		
SSM000022	LOW (23:1)		1			<b>&lt;0.03</b>			<0.03		
SSM000024	HIGH (Coast)		1			<b>0.25</b>			0.25		
SSM000026	HIGH (Coast)		1			<b>0.057</b>			0.057		
SSM000027	LOW (5:1)		1			<b>&lt;0.03</b>			<0.03		
SSM000029	LOW (Coast)		1			<b>0.31</b>			0.31		
SSM000030	LOW (6:1)		1			<b>0.045</b>			0.045		
SSM000031	LOW (6:1)		1			<b>0.038</b>			0.038		
SSM000034	LOW (Coast)		1			<b>0.043</b>			0.043		
SSM000037	LOW (9:3)		1			<b>0.16</b>			0.16		
SSM000039	LOW (9:1)		1			<b>0.20</b>			0.20		
SSM000040	LOW (Coast)		1			<b>0.097</b>			0.097		
<b>Summary Simpevarp</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Simpevarp area	Soil tubes	All	18	<0.03	0.045	<b>0.060</b>	0.15	0.31	0.10	0.09	85
Simpevarp area	Soil tubes	'Higher'	3	0.053	0.055	<b>0.057</b>	0.15	0.25	0.12	0.1	94
Simpevarp area	Soil tubes	'Lower'	15	<0.03	0.044	<b>0.064</b>	0.14	0.31	0.098	0.09	87
<b>Reference</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Laxemar pre-PLU	Soil tubes	All	12	0.00050	0.00050	<b>0.0025</b>	0.0040	0.010	0.0030	0.003	92
Forsmark area	Soil tubes	All	85	<0.3	<0.3	<b>&lt;0.3</b>	<0.3	0.82	<0.3	0.09	240
Forsmark area	Soil tubes	'Higher'	63	<0.3	<0.3	<b>&lt;0.3</b>	<0.3	0.82	<0.3	0.1	280
Forsmark area	Soil tubes	'Lower'	22	<0.3	<0.3	<b>&lt;0.3</b>	<0.3	<0.3	<0.3	0.05	120
Forsmark area	Soil tubes	In lake	3	<0.3	<0.3	<b>&lt;0.3</b>	<0.3	<0.3	<0.3	0.08	74
Forsmark area	Soil tubes	At sea	1			<b>&lt;0.3</b>			<0.3		

## Ground Water

Th			Thorium (µg/l)								Th
Soil tube			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
SSM000008	LOW (Coast)		1			0.82			0.82		
SSM000010	LOW (Coast)		1			1.3			1.3		
SSM000012	LOW (26:1)		1			1.9			1.9		
SSM000014	LOW (Coast)		1			2.2			2.2		
SSM000016	LOW (Coast)		1			3.8			3.8		
SSM000018	LOW (24:1)		1			0.75			0.75		
SSM000020	HIGH (23:1)		1			0.83			0.83		
SSM000022	LOW (23:1)		1			0.19			0.19		
SSM000024	HIGH (Coast)		1			7.9			7.9		
SSM000026	HIGH (Coast)		1			1.2			1.2		
SSM000027	LOW (5:1)		1			0.41			0.41		
SSM000029	LOW (Coast)		1			6.3			6.3		
SSM000030	LOW (6:1)		1			0.99			0.99		
SSM000031	LOW (6:1)		1			2.3			2.3		
SSM000034	LOW (Coast)		1			0.089			0.089		
SSM000037	LOW (9:3)		1			8.1			8.1		
SSM000039	LOW (9:1)		1			8.1			8.1		
SSM000040	LOW (Coast)		1			1.8			1.8		
Summary Simpevarp			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Simpevarp area	Soil tubes	All	18	0.089	0.82	1.5	3.4	8.1	2.7	3	110
Simpevarp area	Soil tubes	'Higher'	3	0.83	1.0	1.2	4.5	7.9	3.3	4	120
Simpevarp area	Soil tubes	'Lower'	15	0.089	0.78	1.8	3.0	8.1	2.6	3	110
Reference			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Laxemar pre-PLU	Soil tubes	All	12	0.030	0.069	0.100	0.17	0.71	0.16	0.2	120
Forsmark area	Soil tubes	All	85	<0.2	<0.2	<0.2	<0.2	0.80	<0.2	0.1	140
Forsmark area	Soil tubes	'Higher'	63	<0.2	<0.2	<0.2	<0.2	0.80	<0.2	0.2	150
Forsmark area	Soil tubes	'Lower'	22	<0.2	<0.2	<0.2	<0.2	0.26	<0.2	0.08	95
Forsmark area	Soil tubes	In lake	3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.05	74
Forsmark area	Soil tubes	At sea	1			<0.2			<0.2		
Sweden	SSI well	drilled	300	0.010	0.020	0.040	0.12	1.1			

Th-230			Thorium-230 (mBq/kg)								Th-230
Soil tube			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
SSM000008	LOW (Coast)		1			<50			<50		
SSM000010	LOW (Coast)		1			<50			<50		
SSM000012	LOW (26:1)		1			<50			<50		
SSM000014	LOW (Coast)		1			<50			<50		
SSM000016	LOW (Coast)		1			<50			<50		
SSM000018	LOW (24:1)		1			<50			<50		
SSM000020	HIGH (23:1)		1			<50			<50		
SSM000022	LOW (23:1)		1			<50			<50		
SSM000024	HIGH (Coast)		1			<50			<50		
SSM000026	HIGH (Coast)		1			<50			<50		
SSM000029	LOW (Coast)		1			<50			<50		
SSM000030	LOW (6:1)		1			<50			<50		
SSM000031	LOW (6:1)		1			<50			<50		
SSM000034	LOW (Coast)		1			<50			<50		
SSM000037	LOW (9:3)		1			<50			<50		
SSM000039	LOW (9:1)		1			<50			<50		
Summary Simpevarp			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Simpevarp area	Soil tubes	All	16	<50	<50	<50	<50	<50	<50		
Simpevarp area	Soil tubes	'Higher'	3	<50	<50	<50	<50	<50	<50		
Simpevarp area	Soil tubes	'Lower'	13	<50	<50	<50	<50	<50	<50		
Reference			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Forsmark area	Soil tubes	All	11	<50	<50	<50	<50	<50	<50		
Forsmark area	Soil tubes	'Higher'	9	<50	<50	<50	<50	<50	<50		
Forsmark area	Soil tubes	'Lower'	2	<50		<50	<50	<50	<50		
Forsmark area	Soil tubes	In lake	2	<50		<50	<50	<50	<50		

**Ground Water**

<b>Th-232</b>			<b>Thorium-232 (mBq/kg)</b>							<b>Th-232</b>	
<b>Soil tube</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
SSM000008	LOW (Coast)		1			<50			<50		
SSM000010	LOW (Coast)		1			<50			<50		
SSM000012	LOW (26:1)		1			<50			<50		
SSM000014	LOW (Coast)		1			<50			<50		
SSM000016	LOW (Coast)		1			<50			<50		
SSM000018	LOW (24:1)		1			<50			<50		
SSM000020	HIGH (23:1)		1			<50			<50		
SSM000022	LOW (23:1)		1			<50			<50		
SSM000024	HIGH (Coast)		1			<50			<50		
SSM000026	HIGH (Coast)		1			<50			<50		
SSM000029	LOW (Coast)		1			<50			<50		
SSM000030	LOW (6:1)		1			<50			<50		
SSM000031	LOW (6:1)		1			<50			<50		
SSM000034	LOW (Coast)		1			<50			<50		
SSM000037	LOW (9:3)		1			<50			<50		
SSM000039	LOW (9:1)		1			<50			<50		
<b>Summary Simpevarp</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Simpevarp area	Soil tubes	All	16	<50	<50	<50	<50	<50	<50		
Simpevarp area	Soil tubes	'Higher'	3	<50	<50	<50	<50	<50	<50		
Simpevarp area	Soil tubes	'Lower'	13	<50	<50	<50	<50	<50	<50		
<b>Reference</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Forsmark area	Soil tubes	All	11	<50	<50	<50	<50	<50	<50		
Forsmark area	Soil tubes	'Higher'	9	<50	<50	<50	<50	<50	<50		
Forsmark area	Soil tubes	'Lower'	2	<50		<50		<50	<50		
Forsmark area	Soil tubes	In lake	2	<50		<50		<50	<50		

<b>Tm</b>			<b>Thulium (µg/l)</b>							<b>Tm</b>	
<b>Soil tube</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
SSM000008	LOW (Coast)		1			0.11			0.11		
SSM000010	LOW (Coast)		1			0.11			0.11		
SSM000012	LOW (26:1)		1			0.047			0.047		
SSM000014	LOW (Coast)		1			0.094			0.094		
SSM000016	LOW (Coast)		1			0.16			0.16		
SSM000018	LOW (24:1)		1			0.093			0.093		
SSM000020	HIGH (23:1)		1			0.14			0.14		
SSM000022	LOW (23:1)		1			0.0073			0.0073		
SSM000024	HIGH (Coast)		1			0.35			0.35		
SSM000026	HIGH (Coast)		1			0.12			0.12		
SSM000027	LOW (5:1)		1			0.050			0.050		
SSM000029	LOW (Coast)		1			0.51			0.51		
SSM000030	LOW (6:1)		1			0.035			0.035		
SSM000031	LOW (6:1)		1			0.12			0.12		
SSM000034	LOW (Coast)		1			<0.005			<0.005		
SSM000037	LOW (9:3)		1			0.17			0.17		
SSM000039	LOW (9:1)		1			0.40			0.40		
SSM000040	LOW (Coast)		1			0.17			0.17		
<b>Summary Simpevarp</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Simpevarp area	Soil tubes	All	18	<0.005	0.061	0.11	0.17	0.51	0.15	0.1	92
Simpevarp area	Soil tubes	'Higher'	3	0.12	0.13	0.14	0.24	0.35	0.20	0.1	63
Simpevarp area	Soil tubes	'Lower'	15	<0.005	0.049	0.11	0.16	0.51	0.14	0.1	100
<b>Reference</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Laxemar pre-PLU	Soil tubes	All	12	0.014	0.017	0.022	0.033	0.15	0.035	0.04	110
Forsmark area	Soil tubes	All	85	<0.05	<0.05	<0.05	<0.05	0.060	<0.05	0.02	81
Forsmark area	Soil tubes	'Higher'	63	<0.05	<0.05	<0.05	<0.05	0.059	<0.05	0.01	76
Forsmark area	Soil tubes	'Lower'	22	<0.05	<0.05	<0.05	<0.05	0.060	<0.05	0.02	92
Forsmark area	Soil tubes	In lake	3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.01	74
Forsmark area	Soil tubes	At sea	1			<0.05			<0.05		

**Ground Water**

<b>U</b>			<b>Uranium (µg/l)</b>								<b>U</b>
<b>Soil tube</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
SSM000008	LOW (Coast)		1			3.8			3.8		
SSM000010	LOW (Coast)		1			8.4			8.4		
SSM000012	LOW (26:1)		1			4.4			4.4		
SSM000014	LOW (Coast)		1			12			12		
SSM000016	LOW (Coast)		1			8.0			8.0		
SSM000018	LOW (24:1)		1			2.2			2.2		
SSM000020	HIGH (23:1)		1			1.9			1.9		
SSM000022	LOW (23:1)		1			9.6			9.6		
SSM000024	HIGH (Coast)		1			6.0			6.0		
SSM000026	HIGH (Coast)		1			1.2			1.2		
SSM000027	LOW (5:1)		1			0.65			0.65		
SSM000029	LOW (Coast)		1			9.2			9.2		
SSM000030	LOW (6:1)		1			3.0			3.0		
SSM000031	LOW (6:1)		1			1.9			1.9		
SSM000034	LOW (Coast)		1			0.024			0.024		
SSM000037	LOW (9:3)		1			13			13		
SSM000039	LOW (9:1)		1			14			14		
SSM000040	LOW (Coast)		1			10			10		
<b>Summary Simpevarp</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Simpevarp area	Soil tubes	All	18	0.024	2.0	5.2	9.5	14	6.0	4	74
Simpevarp area	Soil tubes	'Higher'	3	1.2	1.6	1.9	4.0	6.0	3.0	3	85
Simpevarp area	Soil tubes	'Lower'	15	0.024	2.6	8.0	9.9	14	6.6	5	69
<b>Reference</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Laxemar pre-PLU	Soil tubes	All	12	0.17	0.31	0.41	0.71	2.1	0.63	0.5	86
Forsmark area	Soil tubes	All	85	0.041	0.81	5.0	7.9	36	6.3	7	110
Forsmark area	Soil tubes	'Higher'	63	0.17	1.7	5.3	7.9	36	6.9	8	110
Forsmark area	Soil tubes	'Lower'	22	0.041	0.36	2.2	7.3	20	4.5	5	120
Forsmark area	Soil tubes	In lake	3	0.041	0.076	0.11	10	20	6.7	10	170
Forsmark area	Soil tubes	At sea	1			3.9			3.9		
Sweden	SSI well	drilled	300	0.10	1.7	7.2	21	140			

<b>U-234</b>			<b>Uranium-234 (mBq/kg)</b>								<b>U-234</b>
<b>Soil tube</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
SSM000008	LOW (Coast)		1			50			50		
SSM000010	LOW (Coast)		1			90			90		
SSM000012	LOW (26:1)		1			<50			<50		
SSM000014	LOW (Coast)		1			140			140		
SSM000016	LOW (Coast)		1			80			80		
SSM000018	LOW (24:1)		1			<50			<50		
SSM000020	HIGH (23:1)		1			50			50		
SSM000022	LOW (23:1)		1			240			240		
SSM000024	HIGH (Coast)		1			<50			<50		
SSM000026	HIGH (Coast)		1			<50			<50		
SSM000029	LOW (Coast)		1			80			80		
SSM000030	LOW (6:1)		1			80			80		
SSM000031	LOW (6:1)		1			<50			<50		
SSM000034	LOW (Coast)		1			<50			<50		
SSM000037	LOW (9:3)		1			<50			<50		
SSM000039	LOW (9:1)		1			80			80		
<b>Summary Simpevarp</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Simpevarp area	Soil tubes	All	16	<50	<50	50	80	240	67	60	86
Simpevarp area	Soil tubes	'Higher'	3	<50	<50	<50	<50	50	<50	10	43
Simpevarp area	Soil tubes	'Lower'	13	<50	<50	80	80	240	74	60	82
<b>Reference</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Forsmark area	Soil tubes	All	11	<50	65	100	130	400	120	100	90
Forsmark area	Soil tubes	'Higher'	9	<50	70	100	110	400	120	100	92
Forsmark area	Soil tubes	'Lower'	2	<50		100		180	100	100	110
Forsmark area	Soil tubes	In lake	2	<50		100		180	100	100	110

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<b>U-235</b>			<b>Uranium-235 (mBq/kg)</b>							<b>U-235</b>	
<b>Soil tube</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
SSM000008	LOW (Coast)		1			<50			<50		
SSM000010	LOW (Coast)		1			<50			<50		
SSM000012	LOW (26:1)		1			<50			<50		
SSM000014	LOW (Coast)		1			<50			<50		
SSM000016	LOW (Coast)		1			<50			<50		
SSM000018	LOW (24:1)		1			<50			<50		
SSM000020	HIGH (23:1)		1			<50			<50		
SSM000022	LOW (23:1)		1			<50			<50		
SSM000024	HIGH (Coast)		1			<50			<50		
SSM000026	HIGH (Coast)		1			<50			<50		
SSM000029	LOW (Coast)		1			<50			<50		
SSM000030	LOW (6:1)		1			<50			<50		
SSM000031	LOW (6:1)		1			<50			<50		
SSM000034	LOW (Coast)		1			<50			<50		
SSM000037	LOW (9:3)		1			<50			<50		
SSM000039	LOW (9:1)		1			<50			<50		
<b>Summary Simpevarp</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Simpevarp area	Soil tubes	All	16	<50	<50	<50	<50	<50	<50		
Simpevarp area	Soil tubes	'Higher'	3	<50	<50	<50	<50	<50	<50		
Simpevarp area	Soil tubes	'Lower'	13	<50	<50	<50	<50	<50	<50		
<b>Reference</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Forsmark area	Soil tubes	All	11	<50	<50	<50	<50	<50	<50	5	21
Forsmark area	Soil tubes	'Higher'	9	<50	<50	<50	<50	<50	<50	5	23
Forsmark area	Soil tubes	'Lower'	2	<50		<50		<50	<50		
Forsmark area	Soil tubes	In lake	2	<50		<50		<50	<50		

<b>U-238</b>			<b>Uranium-238 (mBq/kg)</b>							<b>U-238</b>	
<b>Soil tube</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
SSM000008	LOW (Coast)		1			<50			<50		
SSM000010	LOW (Coast)		1			110			110		
SSM000012	LOW (26:1)		1			60			60		
SSM000014	LOW (Coast)		1			90			90		
SSM000016	LOW (Coast)		1			90			90		
SSM000018	LOW (24:1)		1			<50			<50		
SSM000020	HIGH (23:1)		1			<50			<50		
SSM000022	LOW (23:1)		1			130			130		
SSM000024	HIGH (Coast)		1			<50			<50		
SSM000026	HIGH (Coast)		1			<50			<50		
SSM000029	LOW (Coast)		1			<50			<50		
SSM000030	LOW (6:1)		1			<50			<50		
SSM000031	LOW (6:1)		1			<50			<50		
SSM000034	LOW (Coast)		1			<50			<50		
SSM000037	LOW (9:3)		1			<50			<50		
SSM000039	LOW (9:1)		1			50			50		
<b>Summary Simpevarp</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Simpevarp area	Soil tubes	All	16	<50	<50	<50	68	130	<50	40	74
Simpevarp area	Soil tubes	'Higher'	3	<50	<50	<50	<50	<50	<50		
Simpevarp area	Soil tubes	'Lower'	13	<50	<50	<50	90	130	54	40	70
<b>Reference</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Forsmark area	Soil tubes	All	11	<50	65	100	130	400	120	100	90
Forsmark area	Soil tubes	'Higher'	9	<50	70	100	110	400	120	100	92
Forsmark area	Soil tubes	'Lower'	2	<50		100		180	100	100	110
Forsmark area	Soil tubes	In lake	2	<50		100		180	100	100	110

**Ground Water**

<b>V</b>			<b>Vanadium (µg/l)</b>								<b>V</b>
<b>Soil tube</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
SSM000008	LOW (Coast)		1			<b>5.3</b>			5.3		
SSM000010	LOW (Coast)		1			<b>5.3</b>			5.3		
SSM000012	LOW (26:1)		1			<b>3.9</b>			3.9		
SSM000014	LOW (Coast)		1			<b>11</b>			11		
SSM000016	LOW (Coast)		1			<b>18</b>			18		
SSM000018	LOW (24:1)		1			<b>5.1</b>			5.1		
SSM000020	HIGH (23:1)		1			<b>4.3</b>			4.3		
SSM000022	LOW (23:1)		1			<b>1.2</b>			1.2		
SSM000024	HIGH (Coast)		1			<b>29</b>			29		
SSM000026	HIGH (Coast)		1			<b>7.1</b>			7.1		
SSM000027	LOW (5:1)		1			<b>2.7</b>			2.7		
SSM000029	LOW (Coast)		1			<b>55</b>			55		
SSM000030	LOW (6:1)		1			<b>8.4</b>			8.4		
SSM000031	LOW (6:1)		1			<b>13</b>			13		
SSM000034	LOW (Coast)		1			<b>0.63</b>			0.63		
SSM000037	LOW (9:3)		1			<b>24</b>			24		
SSM000039	LOW (9:1)		1			<b>24</b>			24		
SSM000040	LOW (Coast)		1			<b>20</b>			20		
<b>Summary Simpevarp</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Simpevarp area	Soil tubes	All	18	0.63	4.5	<b>7.8</b>	19	55	13	10	100
Simpevarp area	Soil tubes	'Higher'	3	4.3	5.7	<b>7.1</b>	18	29	13	10	99
Simpevarp area	Soil tubes	'Lower'	15	0.63	4.5	<b>8.4</b>	19	55	13	10	110
<b>Reference</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Forsmark area	Soil tubes	All	91	<0.05	0.30	<b>0.58</b>	1.6	5.4	1.0	1.0	95
Forsmark area	Soil tubes	'Higher'	69	0.089	0.30	<b>0.61</b>	1.7	5.4	1.1	1	94
Forsmark area	Soil tubes	'Lower'	22	<0.05	0.29	<b>0.53</b>	1.1	2.7	0.82	0.8	99
Forsmark area	Soil tubes	In lake	3	0.050	0.080	<b>0.11</b>	0.15	0.19	0.12	0.07	60
Forsmark area	Soil tubes	At sea	1			<b>&lt;0.05</b>			<0.05		

<b>Yb</b>			<b>Ytterbium (µg/l)</b>								<b>Yb</b>
<b>Soil tube</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
SSM000008	LOW (Coast)		1			<b>0.70</b>			0.70		
SSM000010	LOW (Coast)		1			<b>0.72</b>			0.72		
SSM000012	LOW (26:1)		1			<b>0.32</b>			0.32		
SSM000014	LOW (Coast)		1			<b>0.64</b>			0.64		
SSM000016	LOW (Coast)		1			<b>1.1</b>			1.1		
SSM000018	LOW (24:1)		1			<b>0.62</b>			0.62		
SSM000020	HIGH (23:1)		1			<b>0.91</b>			0.91		
SSM000022	LOW (23:1)		1			<b>0.043</b>			0.043		
SSM000024	HIGH (Coast)		1			<b>2.2</b>			2.2		
SSM000026	HIGH (Coast)		1			<b>0.79</b>			0.79		
SSM000027	LOW (5:1)		1			<b>0.36</b>			0.36		
SSM000029	LOW (Coast)		1			<b>3.4</b>			3.4		
SSM000030	LOW (6:1)		1			<b>0.24</b>			0.24		
SSM000031	LOW (6:1)		1			<b>0.75</b>			0.75		
SSM000034	LOW (Coast)		1			<b>0.030</b>			0.030		
SSM000037	LOW (9:3)		1			<b>1.2</b>			1.2		
SSM000039	LOW (9:1)		1			<b>2.5</b>			2.5		
SSM000040	LOW (Coast)		1			<b>1.1</b>			1.1		
<b>Summary Simpevarp</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Simpevarp area	Soil tubes	All	18	0.030	0.43	<b>0.74</b>	1.1	3.4	0.97	0.9	90
Simpevarp area	Soil tubes	'Higher'	3	0.79	0.85	<b>0.91</b>	1.5	2.2	1.3	0.8	60
Simpevarp area	Soil tubes	'Lower'	15	0.030	0.34	<b>0.70</b>	1.1	3.4	0.91	0.9	100
<b>Reference</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Laxemar pre-PLU	Soil tubes	All	12	0.097	0.12	<b>0.14</b>	0.23	1.0	0.24	0.3	110
Forsmark area	Soil tubes	All	85	<0.05	<0.05	<b>0.086</b>	0.18	0.40	0.12	0.1	87
Forsmark area	Soil tubes	'Higher'	63	<0.05	<0.05	<b>0.091</b>	0.17	0.40	0.12	0.09	77
Forsmark area	Soil tubes	'Lower'	22	<0.05	<0.05	<b>&lt;0.05</b>	0.21	0.38	0.12	0.1	110
Forsmark area	Soil tubes	In lake	3	<0.05	<0.05	<b>&lt;0.05</b>	<0.05	<0.05	<0.05	0.01	74
Forsmark area	Soil tubes	At sea	1			<b>&lt;0.05</b>			<0.05		

**Ground Water**

<b>Y</b>			<b>Yttrium (µg/l)</b>								<b>Y</b>
<b>Soil tube</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
SSM000008	LOW (Coast)		1			9.0			9.0		
SSM000010	LOW (Coast)		1			12			12		
SSM000012	LOW (26:1)		1			3.8			3.8		
SSM000014	LOW (Coast)		1			7.8			7.8		
SSM000016	LOW (Coast)		1			14			14		
SSM000018	LOW (24:1)		1			8.4			8.4		
SSM000020	HIGH (23:1)		1			13			13		
SSM000022	LOW (23:1)		1			0.65			0.65		
SSM000024	HIGH (Coast)		1			36			36		
SSM000026	HIGH (Coast)		1			9.9			9.9		
SSM000027	LOW (5:1)		1			4.1			4.1		
SSM000029	LOW (Coast)		1			43			43		
SSM000030	LOW (6:1)		1			3.1			3.1		
SSM000031	LOW (6:1)		1			11			11		
SSM000034	LOW (Coast)		1			0.31			0.31		
SSM000037	LOW (9:3)		1			16			16		
SSM000039	LOW (9:1)		1			44			44		
SSM000040	LOW (Coast)		1			15			15		
<b>Summary Simpevarp</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Simpevarp area	Soil tubes	All	18	0.31	5.0	11	14	44	14	10	95
Simpevarp area	Soil tubes	'Higher'	3	9.9	11	13	24	36	19	10	72
Simpevarp area	Soil tubes	'Lower'	15	0.31	4.0	9.0	14	44	13	10	100
<b>Reference</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Laxemar pre-PLU	Soil tubes	All	12	0.87	1.4	2.4	2.8	14	3.3	4	110
Forsmark area	Soil tubes	All	85	<0.05	0.49	1.7	2.9	7.6	2.0	2	86
Forsmark area	Soil tubes	'Higher'	63	0.16	0.93	1.7	2.8	7.6	2.1	2	76
Forsmark area	Soil tubes	'Lower'	22	<0.05	0.053	0.44	3.3	6.4	1.8	2	120
Forsmark area	Soil tubes	In lake	3	<0.05	<0.05	<0.05	<0.05	0.055	<0.05	0.02	48
Forsmark area	Soil tubes	At sea	1			<0.05			<0.05		

<b>Zr</b>			<b>Zirconium (µg/l)</b>								<b>Zr</b>
<b>Soil tube</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
SSM000008	LOW (Coast)		1			2.7			2.7		
SSM000010	LOW (Coast)		1			3.6			3.6		
SSM000012	LOW (26:1)		1			3.7			3.7		
SSM000014	LOW (Coast)		1			4.5			4.5		
SSM000016	LOW (Coast)		1			4.3			4.3		
SSM000018	LOW (24:1)		1			2.4			2.4		
SSM000020	HIGH (23:1)		1			2.0			2.0		
SSM000022	LOW (23:1)		1			<0.3			<0.3		
SSM000024	HIGH (Coast)		1			9.9			9.9		
SSM000026	HIGH (Coast)		1			4.0			4.0		
SSM000027	LOW (5:1)		1			0.40			0.40		
SSM000029	LOW (Coast)		1			6.7			6.7		
SSM000030	LOW (6:1)		1			2.0			2.0		
SSM000031	LOW (6:1)		1			3.0			3.0		
SSM000034	LOW (Coast)		1			<0.3			<0.3		
SSM000037	LOW (9:3)		1			7.8			7.8		
SSM000039	LOW (9:1)		1			7.1			7.1		
SSM000040	LOW (Coast)		1			6.8			6.8		
<b>Summary Simpevarp</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Simpevarp area	Soil tubes	All	18	<0.3	2.1	3.6	6.1	9.9	3.9	3	70
Simpevarp area	Soil tubes	'Higher'	3	2.0	3.0	4.0	6.9	9.9	5.3	4	78
Simpevarp area	Soil tubes	'Lower'	15	<0.3	2.2	3.6	5.6	7.8	3.7	3	69
<b>Reference</b>			<b>Count</b>	<b>Min</b>	<b>25-p</b>	<b>Median</b>	<b>75-p</b>	<b>Max</b>	<b>Mean</b>	<b>Sdev</b>	<b>CV%</b>
Forsmark area	Soil tubes	All	85	<0.3	0.54	1.1	3.6	11	2.2	2	110
Forsmark area	Soil tubes	'Higher'	63	<0.3	0.56	1.3	3.7	11	2.5	3	110
Forsmark area	Soil tubes	'Lower'	22	<0.3	0.35	0.98	1.8	4.6	1.4	1	97
Forsmark area	Soil tubes	In lake	3	<0.3	<0.3	<0.3	0.39	0.63	0.31	0.3	89
Forsmark area	Soil tubes	At sea	1			<0.3			<0.3		



## Electrical conductivity (lab) (mS/m)

Soil tube			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
SSM000001	LOW (Coast)		1			24			24		
SSM000002	HIGH (Coast)		1			62			62		
SSM000005	HIGH (Coast)		1			53			53		
SSM000008	LOW (Coast)		4	16	18	21	24	29	22	5	25
SSM000009	LOW (9:2)		1			6.5			6.5		
SSM000010	LOW (Coast)		4	22	25	28	31	35	28	5	20
SSM000011	HIGH (9:2)		1			4.0			4.0		
SSM000012	LOW (26:1)		4	47	49	50	54	64	53	8	15
SSM000014	LOW (Coast)		4	24	25	30	34	34	29	5	17
SSM000016	LOW (Coast)		4	20	20	25	31	40	27	9	34
SSM000017	LOW (10:5)		1			11			11		
SSM000018	LOW (24:1)		4	62	81	89	94	100	86	20	21
SSM000019	HIGH (10:5)		1			9.5			9.5		
SSM000020	HIGH (23:1)		4	18	18	21	26	29	22	6	26
SSM000021	LOW (9:1)		1			44			44		
SSM000022	LOW (23:1)		4	120	120	120	120	120	120	2	1.4
SSM000024	HIGH (Coast)		4	13	18	20	21	21	19	4	20
SSM000026	HIGH (Coast)		4	12	15	18	21	23	18	5	27
SSM000027	LOW (5:1)		1			12			12		
SSM000029	LOW (Coast)		1			67			67		
SSM000030	LOW (6:1)		1			53			53		
SSM000031	LOW (6:1)		2	13		15		16	15	2	14
SSM000034	LOW (Coast)		1			120			120		
SSM000035	LOW (10:30)		1			30			30		
SSM000037	LOW (9:3)		1			44			44		
SSM000039	LOW (9:1)		2	15		16		17	16	1	7.6
SSM000040	LOW (Coast)		2	63		67		72	67	6	9.6
SSM000041	LOW (10:1)		1			34			34		
SSM000042	LOW (10:1)		2	68		79		90	79	20	20
Summary Simpevarp			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Simpevarp area	Soil tubes	All	63	4.0	19	29	57	120	42	30	78
Simpevarp area	Soil tubes	'Higher'	16	4.0	16	20	23	62	23	10	66
Simpevarp area	Soil tubes	'Lower'	47	6.5	22	34	65	120	48	30	72
Reference			Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
Simpevarp area	Private wells	excavated	133	2.0	11	25	43	280	36	40	120
Simpevarp area	Private wells	drilled	286	9.0	37	55	89	430	77	70	85
Forsmark area	Private wells	excavated	18	23	47	72	120	490	120	100	110
Forsmark area	Private wells	drilled	26	14	68	120	880	1400	420	500	130
Laxemar pre-PLU	Soil tubes	All	22	18	55	120	200	610	170	200	97
Forsmark area	Soil tubes	All	171	36	68	86	200	1200	210	300	130
Forsmark area	Soil tubes	'Higher'	104	36	66	73	85	270	84	40	50
Forsmark area	Soil tubes	'Lower'	67	48	100	220	660	1200	400	400	88
Forsmark area	Soil tubes	In lake	32	48	200	450	760	1200	550	400	74
Forsmark area	Soil tubes	At sea	9	580	620	620	660	670	630	30	4.7

## Precipitation

		Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
<b>Aluminium (Al) µg/l</b>										
PFM002457	Forsmark	6	<0.015	<0.015	<b>0.019</b>	0.041	0.15	0.041	0.06	130
PFM002564	Forsmark	8	<0.015	<0.015	<b>0.021</b>	0.028	0.043	0.022	0.01	62
<b>Bromide (Br) mg/l</b>										
PFM002564	Forsmark	8	<0.005	<0.005	<b>&lt;0.005</b>	<0.005	<0.005	<0.005		
PFM002457	Forsmark	6	<0.005	<0.005	<b>&lt;0.005</b>	<0.005	<0.005	<0.005		
PSM002170	Simpevarp	37	<0.2	<0.2	<b>&lt;0.2</b>	<0.2	3.4	0.21	0.6	260
<b>Calcium (Ca) mg/l</b>										
PFM002564	Forsmark	8	0.070	0.088	<b>0.16</b>	0.32	0.46	0.21	0.1	70
PFM002457	Forsmark	6	0.090	0.19	<b>0.37</b>	0.50	0.83	0.39	0.3	70
PSM002170	Simpevarp	11	0.20	0.45	<b>0.60</b>	1.4	5.2	1.3	1	110
IVL:289	Enköping	5	0.12	0.13	<b>0.16</b>	0.19	0.20	0.16	0.04	22
IVL:261	Vimmerby	5	0.11	0.12	<b>0.13</b>	0.13	0.18	0.13	0.03	20
IVL:1554	Gotland	3	0.24	0.31	<b>0.38</b>	0.38	0.38	0.33	0.08	24
<b>Dissolved organic carbon (DOC) mg/l</b>										
PFM002457	Forsmark	6	1.3	2.0	<b>2.5</b>	2.7	3.3	2.4	0.7	29
PFM002564	Forsmark	8	0.60	0.90	<b>2.5</b>	3.0	3.4	2.1	1	55
<b>Bicarbonate (HCO<sub>3</sub>) mg/l</b>										
PFM002457	Forsmark	6	<1	<1	<b>&lt;1</b>	<1	<1	<1		
PFM002564	Forsmark	8	<1	<1	<b>&lt;1</b>	<1	<1	<1		
PSM002170	Simpevarp	15	<0.2	<0.2	<b>&lt;0.2</b>	<0.2	1.0	0.20	0.3	140
<b>Chloride (Cl) mg/l</b>										
PFM002457	Forsmark	6	0.42	0.55	<b>0.72</b>	1.0	2.9	1.1	0.9	87
PFM002564	Forsmark	8	0.30	0.41	<b>0.70</b>	0.93	1.5	0.74	0.4	55
PSM002170	Simpevarp	37	0.40	0.80	<b>1.2</b>	1.8	440	13	70	530
IVL:289	Enköping	5	0.40	0.41	<b>0.45</b>	0.47	0.49	0.44	0.04	8.7
IVL:261	Vimmerby	5	0.26	0.29	<b>0.36</b>	0.42	0.49	0.36	0.09	26
IVL:1554	Gotland	5	1.2	1.3	<b>1.4</b>	1.5	1.8	1.4	0.2	16
<b>Chlorine-37 (Cl-37) dev. SMOC</b>										
PSM002170	Simpevarp	1	0.0700				0.0700	0.0700		
<b>Deuterium (D) dev. SMOW</b>										
PFM002564	Forsmark	7	-109	-94.3	<b>-77.9</b>	-76.2	-57.1	-83.5	19	-22
PSM002170	Simpevarp	14	-125	-92.1	<b>-75.7</b>	-65.0	-44.4	-78.7	23	-29
<b>Fluoride (F) mg/l</b>										
PFM002564	Forsmark	1	<0.2				<0.2	<0.2		
PSM002170	Simpevarp	37	<0.2	<0.2	<b>&lt;0.2</b>	<0.2	0.68	<0.2	0.1	93
<b>Iodide (I) mg/l</b>										
PFM002564	Forsmark	1	<0.001				<0.001	<0.001		
<b>Iron (total) (Fe) mg/l</b>										
PFM002457	Forsmark	6	0.0030	0.0078	<b>0.012</b>	0.016	0.29	0.057	0.1	200
PFM002564	Forsmark	8	0.0010	0.0010	<b>0.0030</b>	0.0088	0.025	0.0076	0.01	130
PSM002170	Simpevarp	11	<0.02	<0.02	<b>0.022</b>	0.034	0.10	0.032	0.03	94
<b>Lithium (Li) mg/l</b>										
PSM002170	Simpevarp	10	<0.004	<0.004	<b>&lt;0.004</b>	<0.004	<0.004	<0.004		
<b>Magnesium (Mg) mg/l</b>										
PFM002457	Forsmark	6	0.046	0.065	<b>0.078</b>	0.082	0.17	0.086	0.04	50
PFM002564	Forsmark	8	0.020	0.065	<b>0.078</b>	0.090	0.14	0.078	0.03	43
PSM002170	Simpevarp	11	<0.1	0.10	<b>0.10</b>	0.20	0.30	0.15	0.09	59
IVL:289	Enköping	5	0.040	0.040	<b>0.040</b>	0.050	0.060	0.046	0.009	19
IVL:261	Vimmerby	5	0.040	0.040	<b>0.040</b>	0.050	0.060	0.046	0.009	19
IVL:1554	Gotland	5	0.090	0.11	<b>0.15</b>	0.17	0.21	0.15	0.05	33
<b>Manganese (Mn) mg/l</b>										
PSM002170	Simpevarp	11	0.0049	0.0067	<b>0.014</b>	0.037	0.070	0.024	0.02	94
<b>Nitrogen - total (tot-N) mg/l</b>										
PFM002564	Forsmark	1	0.25				0.25	0.25		

## Precipitation

		Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
<b>Nitrogen as nitrate (NO3-N) mg/l</b>										
PFM002457	Forsmark	6	0.044	0.36	<b>0.43</b>	0.57	0.72	0.43	0.2	54
PFM002564	Forsmark	8	0.14	0.31	<b>0.34</b>	0.43	0.80	0.40	0.2	52
IVL:289	Enköping	5	0.25	0.31	<b>0.31</b>	0.40	0.40	0.33	0.07	19
IVL:261	Vimmerby	5	0.22	0.25	<b>0.33</b>	0.34	0.35	0.30	0.06	20
IVL:1554	Gotland	5	0.51	0.54	<b>0.57</b>	0.60	0.63	0.57	0.05	8.3
<b>Nitrogen as ammonium (NH4-N) mg/l</b>										
IVL:289	Enköping	5	0.25	0.28	<b>0.31</b>	0.34	0.42	0.32	0.07	20
IVL:261	Vimmerby	5	0.22	0.23	<b>0.29</b>	0.31	0.31	0.27	0.04	16
IVL:1554	Gotland	4	0.39	0.44	<b>0.50</b>	0.58	0.70	0.52	0.1	26
<b>Nitrogen as Kjeldahl nitrogen (Kj-N) mg/l</b>										
PFM002457	Forsmark	6	<0.15	0.20	<b>0.31</b>	0.33	0.77	0.33	0.2	73
PFM002564	Forsmark	8	0.20	0.35	<b>0.41</b>	1.2	1.5	0.71	0.5	76
<b>Oxygen-18 (O-18) dev. SMOW</b>										
PFM002564	Forsmark	7	-15.4	-13.2	<b>-11.2</b>	-10.7	-8.30	-11.8	2.5	-21
PSM002170	Simpevarp	14	-16.9	-12.4	<b>-10.4</b>	-8.75	-6.60	-10.8	3.1	-28
<b>Phosphorus- total (tot-P) mg/l</b>										
PFM002457	Forsmark	6	<0.002	<0.002	<b>&lt;0.002</b>	0.0028	0.019	0.0045	0.007	160
PFM002564	Forsmark	8	0.0010	0.0018	<b>0.0065</b>	0.084	0.11	0.039	0.05	130
<b>Potassium (K) mg/l</b>										
PFM002457	Forsmark	6	<0.08	<0.08	<b>&lt;0.08</b>	0.14	0.35	0.13	0.1	92
PFM002564	Forsmark	8	0.070	0.098	<b>0.14</b>	0.22	0.67	0.22	0.2	94
PSM002170	Simpevarp	11	<0.4	<0.4	<b>0.42</b>	0.73	1.7	0.58	0.5	89
IVL:289	Enköping	5	0.10	0.11	<b>0.12</b>	0.12	0.14	0.12	0.01	13
IVL:261	Vimmerby	5	0.10	0.10	<b>0.11</b>	0.12	0.13	0.11	0.01	12
IVL:1554	Gotland	5	0.12	0.12	<b>0.15</b>	0.17	0.31	0.17	0.08	45
<b>Silicon (Si) mg/l</b>										
PFM002564	Forsmark	1	<0.03				<0.03	<0.03		
PSM002170	Simpevarp	11	<0.03	<0.03	<b>&lt;0.03</b>	0.040	0.10	0.032	0.03	82
<b>Sodium (Na) mg/l</b>										
PFM002457	Forsmark	6	0.26	0.44	<b>0.53</b>	0.66	1.1	0.59	0.3	49
PFM002564	Forsmark	8	0.22	0.31	<b>0.44</b>	0.58	1.0	0.49	0.3	51
PSM002170	Simpevarp	11	0.40	0.55	<b>1.2</b>	2.4	8.1	2.3	3	110
IVL:289	Enköping	5	0.25	0.27	<b>0.27</b>	0.29	0.31	0.28	0.02	8.2
IVL:261	Vimmerby	5	0.16	0.16	<b>0.25</b>	0.28	0.30	0.23	0.07	29
IVL:1554	Gotland	5	0.70	0.79	<b>0.87</b>	0.91	1.0	0.86	0.1	14
<b>Strontium (Sr) mg/l</b>										
PSM002170	Simpevarp	11	0.0010	0.0030	<b>0.0050</b>	0.025	0.067	0.018	0.02	140
<b>Sulphate (SO4) mg/l</b>										
PFM002564	Forsmark	1	0.52				0.52	0.52		
PSM002170	Simpevarp	37	0.44	0.87	<b>1.7</b>	2.3	25	2.6	4	160
<b>Sulphate as sulphur (SO4-S) mg/l</b>										
PFM002564	Forsmark	8	0.21	0.35	<b>0.40</b>	0.60	0.78	0.47	0.2	43
PFM002457	Forsmark	6	0.38	0.51	<b>0.55</b>	0.56	0.63	0.53	0.08	16
PSM002170	Simpevarp	11	0.35	0.49	<b>0.67</b>	1.0	1.3	0.74	0.4	50
IVL:289	Enköping	5	0.26	0.33	<b>0.39</b>	0.41	0.47	0.37	0.08	22
IVL:261	Vimmerby	5	0.26	0.30	<b>0.38</b>	0.38	0.41	0.35	0.06	18
IVL:1554	Gotland	5	0.53	0.59	<b>0.62</b>	0.69	0.72	0.63	0.08	12
<b>Tritium (Tr) TU</b>										
PFM002564	Forsmark	7	7.40	8.55	<b>9.70</b>	13.0	13.9	10.6	2.7	25
PSM002170	Simpevarp	13	9.00	10.5	<b>12.7</b>	14.4	18.8	12.5	2.9	23
<b>Electrical conductivity ( ) mS/m</b>										
PFM002457	Forsmark	3	1.5	1.7	<b>1.9</b>	2.6	3.4	2.2	1	46
PFM002564	Forsmark	8	1.0	1.8	<b>2.4</b>	2.9	3.1	2.2	0.8	36
PSM002170	Simpevarp	37	1.2	2.2	<b>3.2</b>	4.9	120	6.5	20	280
IVL:289	Enköping	5	1.1	1.5	<b>1.5</b>	1.5	2.3	1.6	0.4	27
IVL:261	Vimmerby	5	1.1	1.2	<b>1.6</b>	1.6	1.6	1.4	0.2	17
IVL:1554	Gotland	5	2.1	2.1	<b>2.7</b>	2.8	4.0	2.7	0.8	28

## Precipitation

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		Count	Min	25-p	Median	75-p	Max	Mean	Sdev	CV%
<b>pH (pH)</b>	<b>pH unit</b>									
PFM002564	Forsmark	8	4.32	4.82	<b>5.00</b>	5.25	6.81	5.16	0.74	14
PFM002457	Forsmark	6	4.42	4.54	<b>4.85</b>	5.41	6.89	5.17	0.94	18
PSM002170	Simpevarp	37	4.06	4.57	<b>4.88</b>	5.11	6.17	4.87	0.43	8.9
IVL:289	Enköping	5	4.64	4.74	<b>4.79</b>	4.83	4.92	4.78	0.10	2.2
IVL:261	Vimmerby	5	4.57	4.59	<b>4.79</b>	4.85	4.89	4.74	0.15	3.1
IVL:1554	Gotland	3	4.63	4.64	<b>4.64</b>	4.69	4.73	4.67	0.055	1.2