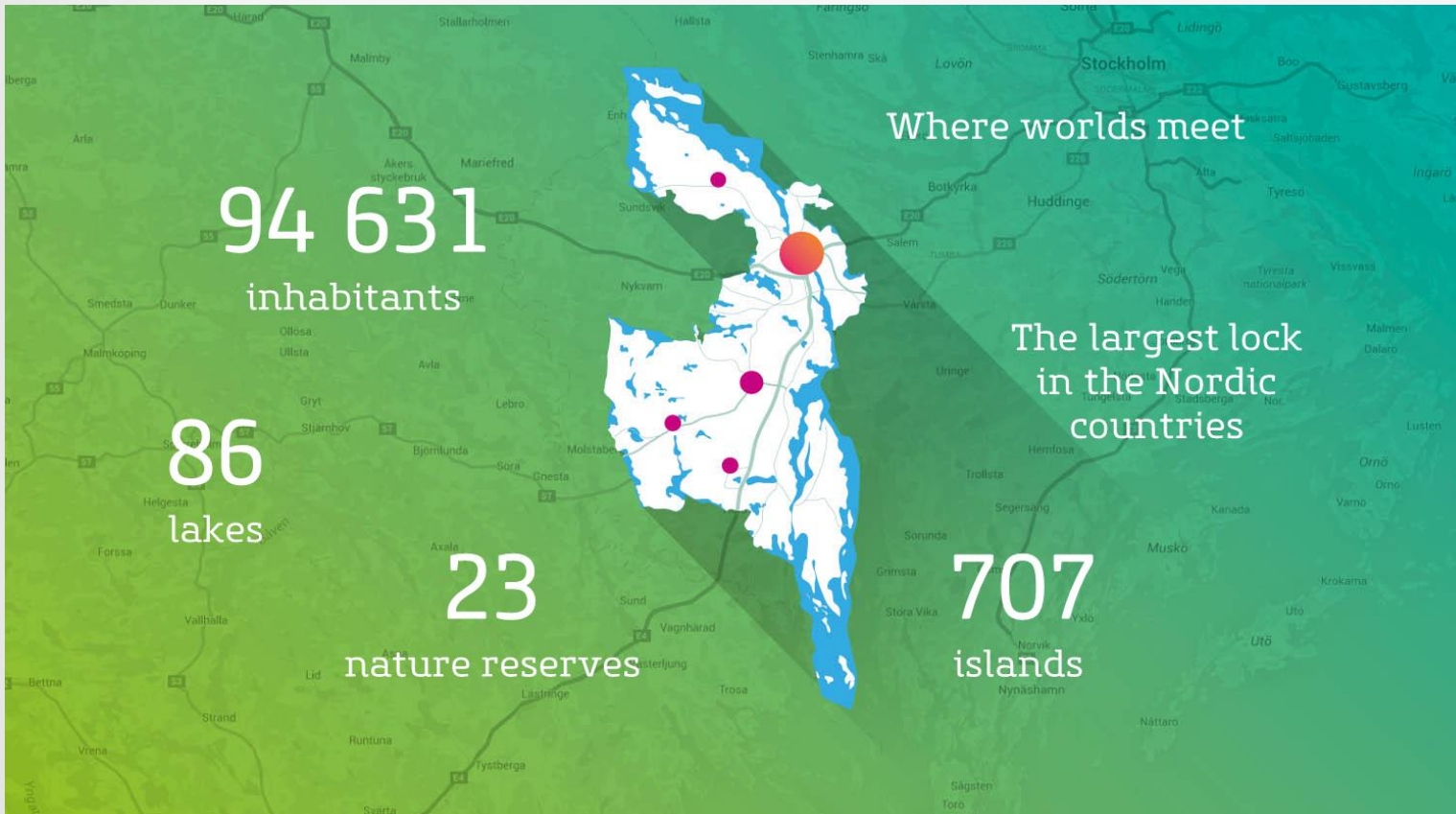


Welcome to Hölö and the Södertälje municipality



Water from toilets contains valuable nutrients.

Each year the average person produces:



This corresponds to the nutrient requirements of **250 tonnes of grain.**



Telge Nät och Telge Återvinning

*Two companies in the Telge group which is 100%
owned by the municipality of Södertälje*



Telge Nät

Infrastructure and services

*Operates in the municipalities of Södertälje
and Nykvarn*

Water and Waste water management

Electricity

District Heating and Cooling

Broadband - Communication

Telge Nät och Telge Återvinning



Telge Återvinning

Waste management

Recycling

*Operates in the municipalities of Södertälje
and Nykvarn and on the open market*

*98% of the materials managed are
recycled*

Telge



Vision

Telge challenges by combining business with social benefits.

Together we change the view of the world

Reuse-oriented water and sanitation development for sensitive areas



Cecilia Weistrand
Head of Planning

Peter Rohberg
Director Strategy and Planning



Introduction

In Mälardalen alone there are currently over 30,000 private sewage systems that are in such poor condition they contribute to major environmental problems, such as algal blooms and eutrophication.

Our treatment plant in Hölö is helping to reduce the pressure on the environment while also contributing to more sustainable farming.



Private sewage in Sweden and Södertälje

There are almost one million private sewage systems in Sweden and around 40 per cent of them are believed to be in need of attention.

This poses a significant environmental problem in the municipality of Södertälje. Private sewage is responsible for large emissions of nutrient salts that place environmental pressure on lakes and waterways, which eventually run into the Baltic Sea.



Our challenge

The lakes of Lillsjön and Kyrksjön in the Stavbofjärden catchment area are among the most over-fertilised or eutrophied lakes in Sweden. Phosphorus levels in particular are very high, since there are around 500 private sewage systems in the area.

The environmental committee in Södertälje has adopted a recycling policy with the aim of replacing unsatisfactory sewage systems with a closed, water-saving method of treating sewage water.

An innovative solution

The treatment plant in Hölö was built in spring 2012 and uses a unique process. Other municipalities, in Sweden and abroad, have shown great interest.

The plant takes sewage from 500–700 closed tanks. The lower the water content in these tanks, the more substrate can be treated. This in turn leads to a higher concentration of nutrients in the end product.

A special process is used to treat the wastewater and convert it into nutrient-rich fertilizer that can be returned to farmland.



Collaboration

Telge Nät has managed the project in collaboration with the municipality and the Federation of Swedish Farmers (LRF).

The objectives of the project was in line with the Swedish government's environmental target that at least 60 per cent of the phosphorus in sewage water should be used as fertilizer by 2015, and at least half of this should be returned to farmland.

The project is cofounded by Stockholm County Administrative Board using funding for local water conservation projects (LOVA) and from the Baltic Sea Action Plan fund.





A win - win situation

- *Reduced eutrophication of lakes and sea.*
- *Saving of resources such as plantnutrients and water*
- *Continued use of existing methods for subsurface application of fertilizers*
- *Economic benefit, compared to expansion of traditional waste water system in rural areas.*
- *Possibility to build new housing areas on the country side.*

Reuse-oriented water and sanitation development for sensitive areas

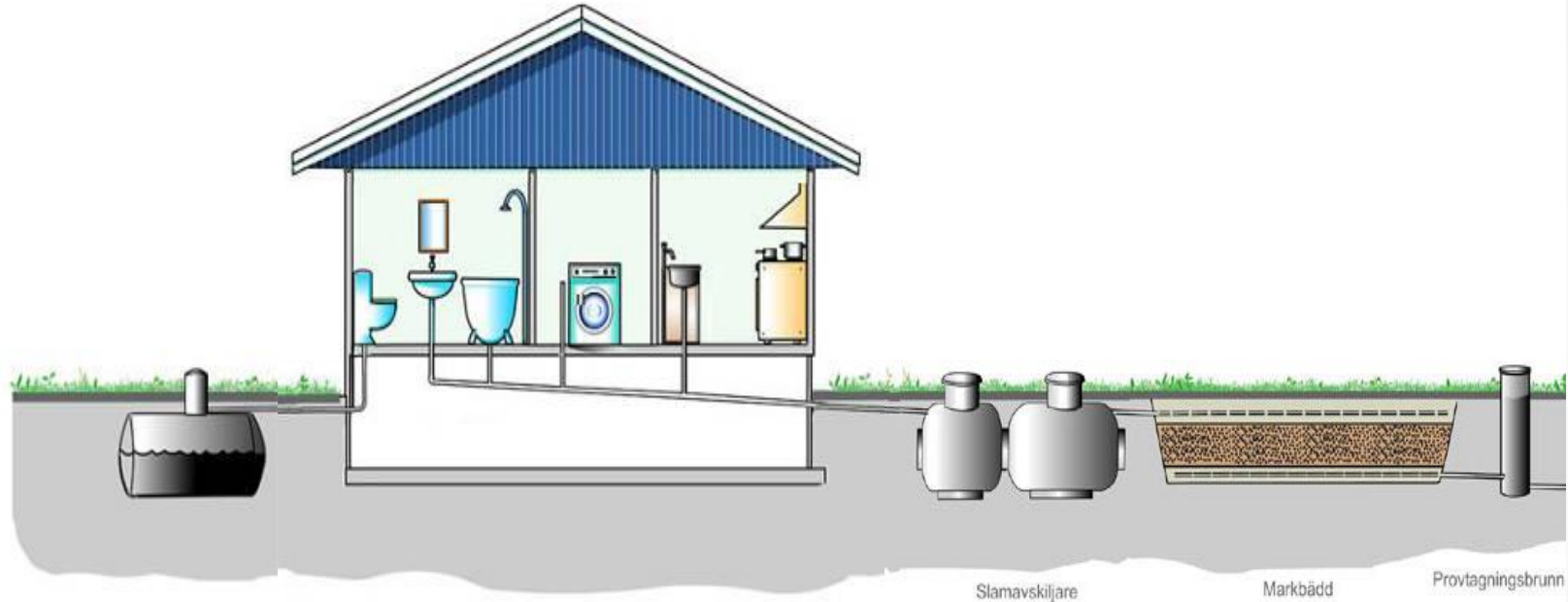
- *Capacity*
1500 m³ per year ≈ 700 households
- *Saves ca 6 000 m³ drinking water per year*
- *Recirculate nutrition for 375 tones of grains*
8,550 kg Nitrogen
900 kg Phosphorus
1800 kg Potassium
- *Scalable*



Economical aspects

- Investment 0,825 milj €
Partly financed by LOVA & BSA
- Annual operating costs 38 000 €
- All sewage treated is collected from closed tanks by Telge Återvinning

Source separated black water to sealed tanks

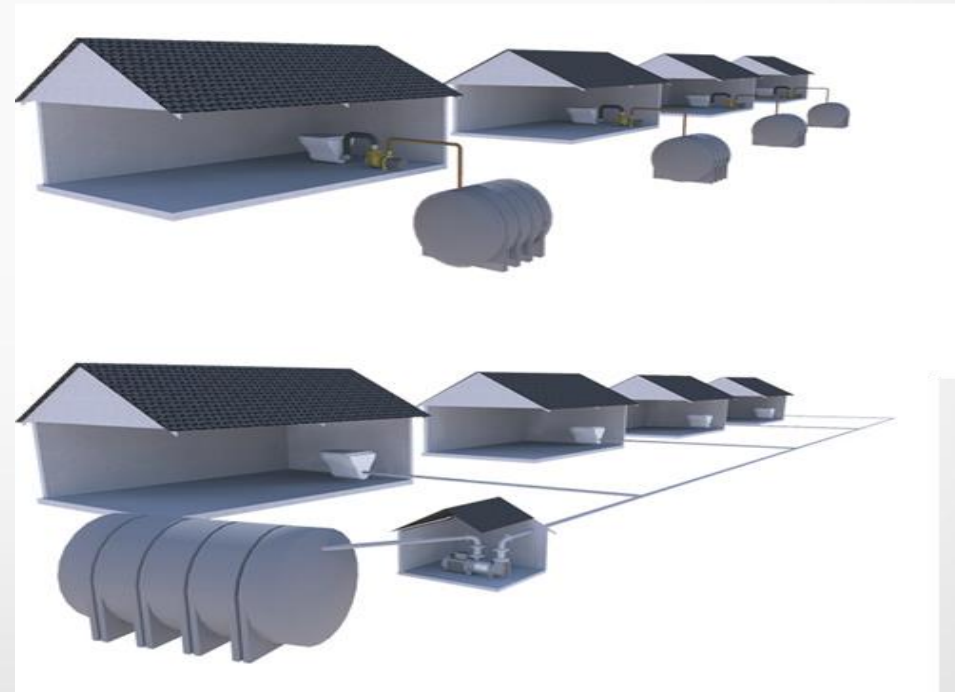


Solutions for residential areas

Vacuum toilets



Combined pump and sealed tank for several households



- [Södertälje Model – Recycling of housing sewages](#)