

Wetlands treat water in Söderhamn

The Municipality of Söderhamn created a wetland alongside a sewage treatment plant. This resulted in a reduction in nitrogen emissions of 5.5 tonnes/year and in phosphorus emissions of 365 kg/year. At the same time, the residents of Söderhamn gained a new recreational area that has also become a resting and breeding site for many birds.

The Municipality of Söderhamn created a wetland alongside the Granskär sewage treatment plant in 2002–2004. The discharges from the sewage treatment plant had previously gone straight into the Söderhamns-ån river, and the municipality wanted to change this practice. The wetland now acts as an extra treatment stage for nutrients and metals and reduces the nutrient load on the inlet of Söderhamnsfjärden.

The project received grants from the local investment programme (LIP).

POSITIVE ENVIRONMENTAL AND ECONOMIC IMPACTS

- Phosphorus inputs to water have decreased by 365 kg/year.
- Nitrogen inputs to water have decreased by 5,475 kg/year.
- BOD decreased by 5.66 tonnes/year.
- The wetland's 9.6 hectares are now a significantly more varied environment, benefiting biodiversity.
- As a result of the wetland treatment, the sewage treatment plant uses less chemicals, saving both money and the environment.

Photograph: Hans Svensk



IMPLEMENTATION

The wetland was created by the municipality excavating an overgrown sea bay. This work was partly done using special machinery. The removed material was deposited in the area, partly as embankments between the ponds that were created. No material was transported to or from the area. The municipality dug new channels from the sewage treatment plant to the wetland.

The treatment works very well. The treatment plant as a whole is being less vulnerable. On the down side, nitrogen treatment does not work throughout the year, due to the northern location of Söderhamn. The municipality is continuing to make efforts to make the process more efficient, among other things in order to improve nitrogen treatment.

POTENTIAL AND FUTURE BENEFIT

Creating sustainable and ecocycle-adapted water and wastewater systems is important both for the infrastructure of society and for environmental efforts. Using biological methods that supplement technical parts of water and wastewater systems can create cost-effective system solutions.

Created wetlands, like all wetlands, have important water-managing functions by acting as treatment plants, reducing flooding and contributing towards reduced eutrophication. Wetlands also account for a significant share of our biodiversity.

Access to nature is important for everyone and is a great leisure interest for many people. Nature experiences can provide a foundation for greater engagement in environmental issues.

WHY BEST PRACTICE

With the aid of the wetland, the objective of moving the discharge point was achieved and emissions were substantially reduced, at a lower cost than the alternatives. The wetland is the most northerly in the world for the treatment of sewage.

The residents of Söderhamn have gained a pleasant recreational area instead of an area of reeds. The municipality has created a new 4 km cycle path, and the area connects previous walking trails. The wetland has become a resting and breeding site for many birds. The wetland serves as a training area for the school.

The project has attracted attention within Sweden and abroad. Söderhamn has received study visits and other visits from county administrative boards, municipalities, schools and organisations.

The municipality has created more wetlands, and for this purpose has launched cooperation with the Wetland Centre at Halmstad University.

FOR FURTHER INFORMATION

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Contractors/Providers:
Special excavators: Lindings våtmarksrestaurering AB,
www.lvr.se
Other excavation work was done by Gävleborgs
Grävkonsult Ek. För., www.gkonsult.se
The municipality did considerable work under
its own auspices

The project on the Internet:
www.svrab.se

For further information on Best Practice
www.swedishepa.se/bestpractise
www.naturvardsverket.se/mir

FACTS

LIP Söderhamn 2002
Action 2
Environmental investment:
SEK 6.4m
Grant: SEK 2.35m

