

MEDFORD, OREGON TEMPERATURE TRADING

The Freshwater Trust is an environmental organization based in Oregon that focuses on conservation in the Pacific Northwest. In 2011, The Freshwater Trust helped Medford, Oregon mitigate warming of the Rogue River caused by discharge of warm water from the city's wastewater treatment center to comply with the Clean Water Act. The City considered a number of options to address the issue, but these options were cost-prohibitive. Traditionally, the city would look to invest in cooling tanks or placing the warm water into a nearby stream or pond until properly cooled. However, those alternatives were extremely expensive, and could have cost the city and taxpayers upwards of \$15 million. Through the guidance of The Freshwater Trust, Medford decided to take a more cost-effective route that offered a higher benefit pay back.

The solution was for the city to pay landowners who owned stretches of land along the river basin to plant trees which provide shade and reduce thermal loading. This partnership between public and private entities saved the city more than \$8 million, as it cost a total of \$6.5 million. The verification protocol uses a 2 to 1 ratio, doubling the impact that could have resulted from a traditional cooling system. The Freshwater Trust uses a third-party certification program that would determine how many kilocalories of temperature were avoided.

For more information:

<http://www.thefreshwatertrust.org/case-study/medford-water-quality-trading-program/>

HOW IT APPLIES TO STEWARDSHIP

In order to ensure this project benefitted the community as a whole, The Freshwater Trust worked with local tree nursery companies to grow, plant, and maintain the native tree species planted along the river. This type of innovative financing produced additional areas of conserved land while also providing a steady stream of money from the city to maintain these plantings.

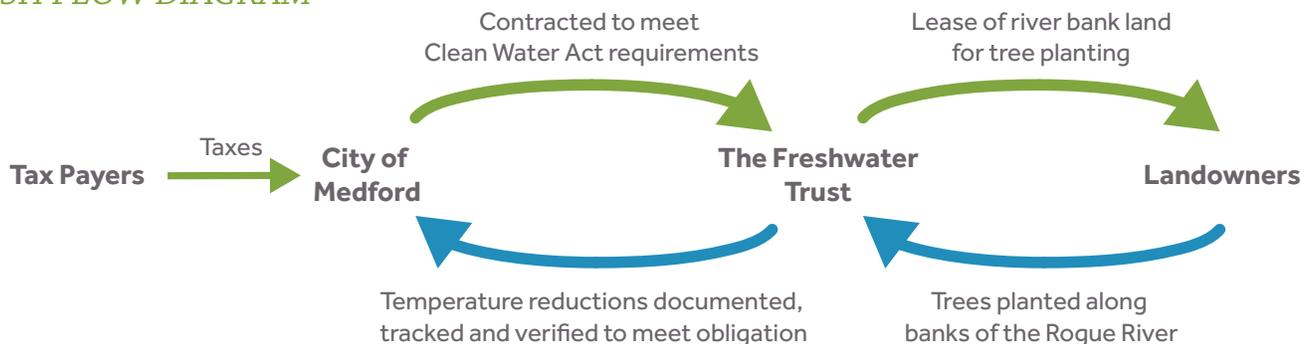
STRENGTHS

- Maintains biodiversity of the river while doubling the kilocalorie reductions needed to comply with legal requirements.
- Planting and maintenance of the trees provided economic opportunity
- Offers additional environmental benefits (i.e. reduction of carbon in atmosphere, filtration of agricultural runoff, wildlife habitat, nutrient regulation)

CHALLENGES

- Ensuring there is sufficient land area to lease and negotiating long term agreements
- Creating and establishing first-of-their-kind verification protocols

CASH FLOW DIAGRAM



Quick Facts

Program initiated in 2011 to help Medford comply with the Clean Water Act

Saved over \$8 million dollars for a total project cost of \$6.5 million

Currently 337,260,273 kilocalories of thermal loading offset/day

Resulted in 27 acres or 3.6 miles of stream planted with native plants

The Freshwater Trust leases the land for 20 years, which allows them to maintain the project sites

Trees grown locally at Althouse Nursery in Cave Junction, Oregon

