

Watershed-Scale Restoration in Mid-Snake River for Hydropower Compliance and Ecological Benefit

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Idaho Power is working toward meeting the obligations of its Hells Canyon hydroelectric power complex relicensing with the Federal Energy Regulatory Commission while also aiming to address the issue of returning a heavily used and hydrologically altered waterway to a healthier state. Idaho Power has partnered with The Freshwater Trust to develop the Snake River Stewardship Plan (SRSP), a multi-decade restoration program of multiple Mid-Snake River watersheds to support native fish habitat and meet regulations for water temperature.

The Mid-Snake River and its tributaries suffer from various issues that compromise water quality. These include: lack of streamside vegetation; slow-moving water due to wide, shallow channels; nutrient and sediment loading from agricultural runoff; excess aquatic vegetation growth; and low oxygen levels. We will discuss the Bayha Island Research Project, a major component of the SRSP, scheduled to begin implementation in mid-2016. We'll review the project design---which will narrow and deepen the channel in a key stretch of the Marsing Reach, improving streamflow and expanding the size of Bayha and Wright islands---and touch briefly on the pre-implementation monitoring that is already underway.

The benefits of increasing streamflow in wide, shallow sections around Bayha and Wright islands include:

- Improving temperature conditions on the reach
- Restoring the river's natural functions
- Creating more areas of clean gravel, necessary for native fish reproduction
- Inhibiting the growth of unwanted aquatic plants, providing better conditions for fish
- Creating wetlands and floodplains that will enhance wildlife habitat, provide better conditions for native plant species, and filter excess sediment and nutrients from the water.

Idaho Power and The Freshwater Trust will use information gained from the research project to develop a comprehensive strategy for addressing water quality issues throughout the Mid-Snake.