

Before & After Pictures



Looking from the bottom spillway to the east-BEFORE
Spring 2010



Looking from the bottom spillway to the east-AFTER
Spring 2011

Weiser River Soil Conservation District is continuing more water quality projects to address the Weiser River TMDL.

We were awarded another grant to construct a wetland near the confluence of the Weiser River and Cove Creek.

We have been concentrating our efforts, on the Weiser River watershed to have a greater impact. By decreasing the Weiser River TMDLs, the Snake River-Hell's Canyon TMDLs will decrease as well.

Weiser River Soil Conservation District

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Weiser River Soil Conservation District

Payette Ditch Wetland Discharge Treatment Project



Entire wetland-BEFORE
Spring 2010



Entire wetland-AFTER
Spring 2011

Department of Environmental Quality
319 grant project with
Lower Payette Ditch Company

Payette Ditch Wetland Discharge Treatment Project

Introduction

Weiser River Soil Conservation District partnered with the Lower Payette Ditch Company to treat the tail water discharging from the Lower Payette Ditch before it empties into the Weiser River. Sediment and phosphorous will be reduced when the water travels through a constructed wetland. The constructed wetland will be made of two ponds and two spillways. The first pond is a deeper pond where sediment settles to the bottom. The water then travels over the first river rock spillway into a shallower and larger pond that slows down the water so that plants can filter pollutants. Lastly, the water travels over the bottom river rock spillway into the outlet ditch where it then empties into the Weiser River.

Project Setting

The constructed wetland is located southeast of the town of Weiser, Idaho near the Cove Road Bridge. This is where the Lower Payette Ditch empties into the Weiser River. The area of the wetland is approximately 7 acres. The land is adjacent to the Weiser River and is separated by a dirt and stone levy.



polishing pond-July 2012



Project History

The Lower Payette Ditch is an irrigation conveyance that originates at the Payette River diversion and flows north approximately 20 miles prior to the ditch water discharging into the Weiser River. There are over 3,200 acres that drain back into the Lower Payette Ditch. Previous to this project, the wetland area consisted of an algaeicide treatment pond, a pasture area, and a ditch along the south side of the property. The Weiser River has a developed Total Maximum Daily Load (TMDL) on it. The Payette Ditch Wetland Discharge Treatment Project will address decreasing sediment and phosphorous for the Weiser River.

Monitoring

All of the monitoring for this project was completed by Kirk Campbell of the Idaho Department of Agriculture. Background data was collected in 2010 before anything was done on the wetland site. 2011 was the first year that the wetland was constructed and operational. The data collected in 2010 and 2011 was used for before and after comparison.

Suspended Sediment Concentration (SSC)

The amount of suspended sediment leaving the wetland in 2010 was 7,548 lbs/day and in 2011 there was 1,544 lbs/day leaving the wetland or an 80% reduction.

◆ **Annual load reduction= 570 tons/year.**

Total Phosphorous (TP)

In 2010, the average loading of TP was 18 lbs/day and in 2011 it was 7 lbs/day or a 62% reduction.

◆ **Annual load reduction= 1.045 tons/year.**

Monitoring Data Conclusion

Overall, this wetland project reduced the average TP concentration by 38%. The Payette Ditch Wetland Discharge Treatment Project reduced the average SSC by 62%. This data is from the first year that the wetland was constructed and operational. The total phosphorus reductions should increase with wetland maturity. There should be more plant growth each year the wetland is used. Therefore, the more plants in the wetland, the slower the water is moving and the more phosphorus is taken by the plants. Willows were planted using a water jet stinger. Many desirable wetland plants have established themselves on their own. Sediment reduction looks good even after only one year of data. The sediment reductions should remain as long as the settling pond is maintained by cleaning it out periodically after the irrigation season.

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