

Nutrient Trading: Why Incentives Are Needed to Grow a Fledgling Market

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Nutrient concentrations in excess of those attributable to natural sources have been documented in the Lower Boise River. Studies by the US Geological Survey and others have identified the principal source of one nutrient, phosphorus, as agricultural return water and found it to be responsible for seasonal algal blooms that are both a nuisance and a source of carbonaceous biological oxygen demand (BOD) responsible for depleted concentrations of dissolved oxygen in the river.

While sedimentation basins in combination with constructed wetlands have been shown in other regions of the United States to be capable of removing notable amounts of phosphorus, there are few systematic, “on-the-ground” studies documenting the same in the Intermountain West.

The North Alkali Drain water quality improvement project seeks to fill this gap in knowledge. In operation for two years, it has provided data that show notable removal of both particulate and dissolved phosphorus. The pilot project was designed so it may be scaled to accommodate volumes of agricultural return water typical of the drains in the Lower Boise River watershed, and a portion of natural waterways like Fifteen Mile Creek. Its design may also be modified to better resemble waterways and wetlands in a natural landscape.

Clean Water Partners, LLC has marketed credits available from projects such as North Alkali Drain to municipalities seeking a more cost effective solution to nutrient removal than that provided by conventional, advanced treatment. In doing so, we have identified obstacles to entering the market that limit business models based on “sustainable” technology such as that offered by both constructed wetlands and the application of best management practices to farming operations.

This presentation will describe those obstacles in detail, and offer solutions within the means of state governments to incentivize the fledgling market.