

WATER QUALITY MONITORING

**YELLOWTAIL AFTERBAY
BIGHORN RIVER**

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November 16, 2017

PROJECT GOAL

PSAT temporal variability and spatial distribution

Total Gas Supersaturation (PSAT)

**Pressure relative to barometric pressure exerted
on biological systems from gases
dissolved in water**

Ideal conditions are less than 110%

$$\text{PSAT (\%)} = [(\text{BP}) + (\text{TDG} - \text{BP})] / \text{BP} * 100$$

BP = Barometric pressure

TDG = Total dissolved gas

Three Water Quality Stations

Afterbay

Left Bank

Right Bank

Station Equipment

- **Data collection platforms**
- **Primary and auxiliary DCP**
- **Multi-parameter instruments**
- **GOES satellite telemetry**
- **Afterbay-floating instrument**
- **River-stationary instrument**
- **Hourly data**

Parameters

- **Depth**
- **Temperature**
- **Total dissolved gas**
- **Dissolved oxygen**
- **Specific conductance**
- **pH**
- **Barometric pressure**



Figure 1

AFTERBAY



LEFT BANK



RIGHT BANK





Currently conducting qualitative analysis of the data
Hourly data will be available at:
<https://www.usbr.gov/gp/hydromet/>

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RECLAMATION
Managing Water in the West