

Pend Oreille Total Dissolved Gas Total Maximum Daily Load

Presented to Pend Oreille River WAG
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Idaho Department of Environmental Quality

Outline

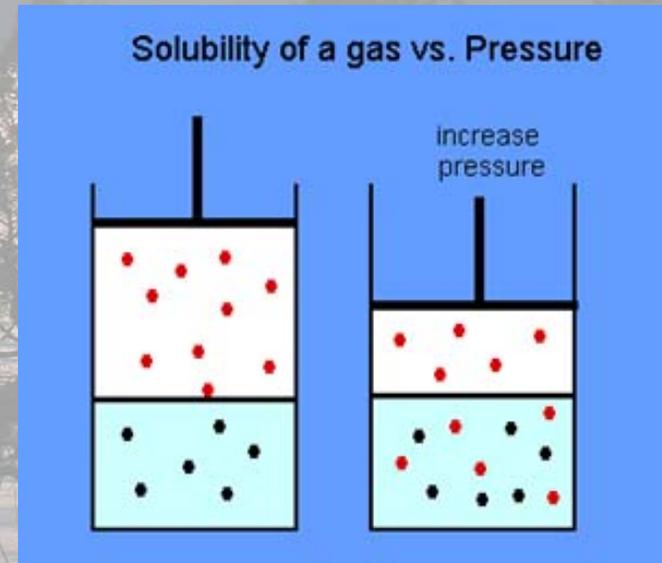
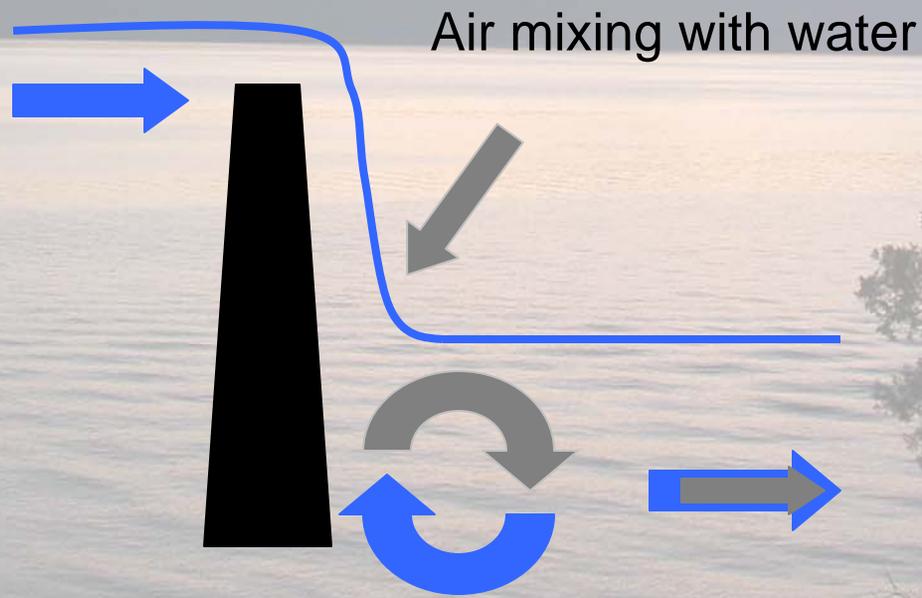
- What is TDG?
- How is TDG produced?
- Gas Bubble Trauma or Gas Bubble Disease
- Idaho water quality standard
- TDG sources
- TMDL outcomes

What is Total Dissolved Gas?

- When the amount of gas in solution is greater than the saturation amount.
- The excess amount of gas is later returned to the atmosphere but until then the water is referred to as supersaturated.

How is it produced?

- Total dissolved gas is produced when atmospheric gasses are forced into solution due to increased pressure.



Gas Bubble Trauma or Gas Bubble Disease

- Gas that was dissolved in water enters the blood stream and is released.



Idaho Water Quality Standard

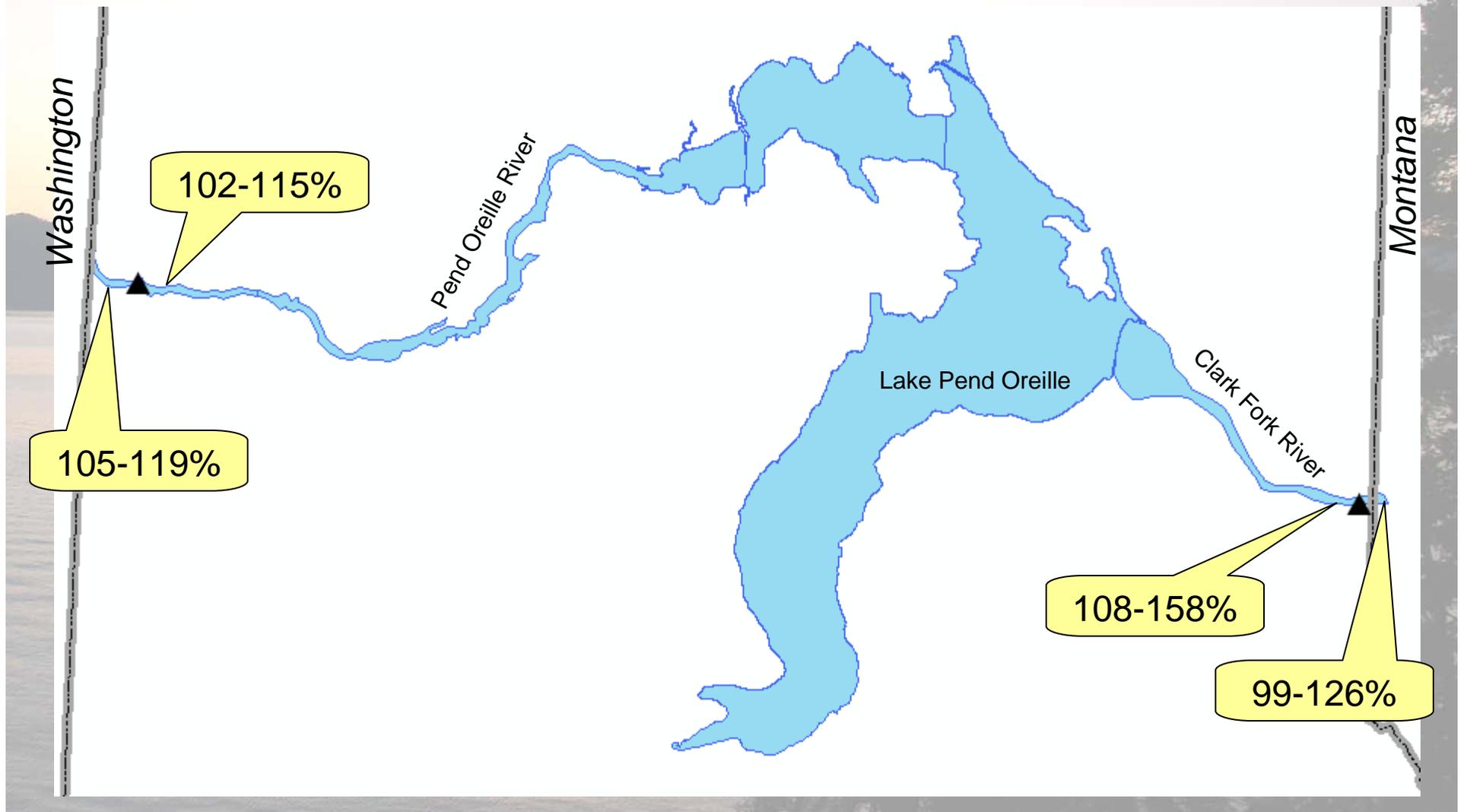
- The Idaho numeric water quality criteria for TDG (IDAPA 58.01.02.211.01.b.) states:

“The total concentration of dissolved gas not exceeding one hundred and ten percent (110%) of saturation at atmospheric pressure at the point of sample collection.”

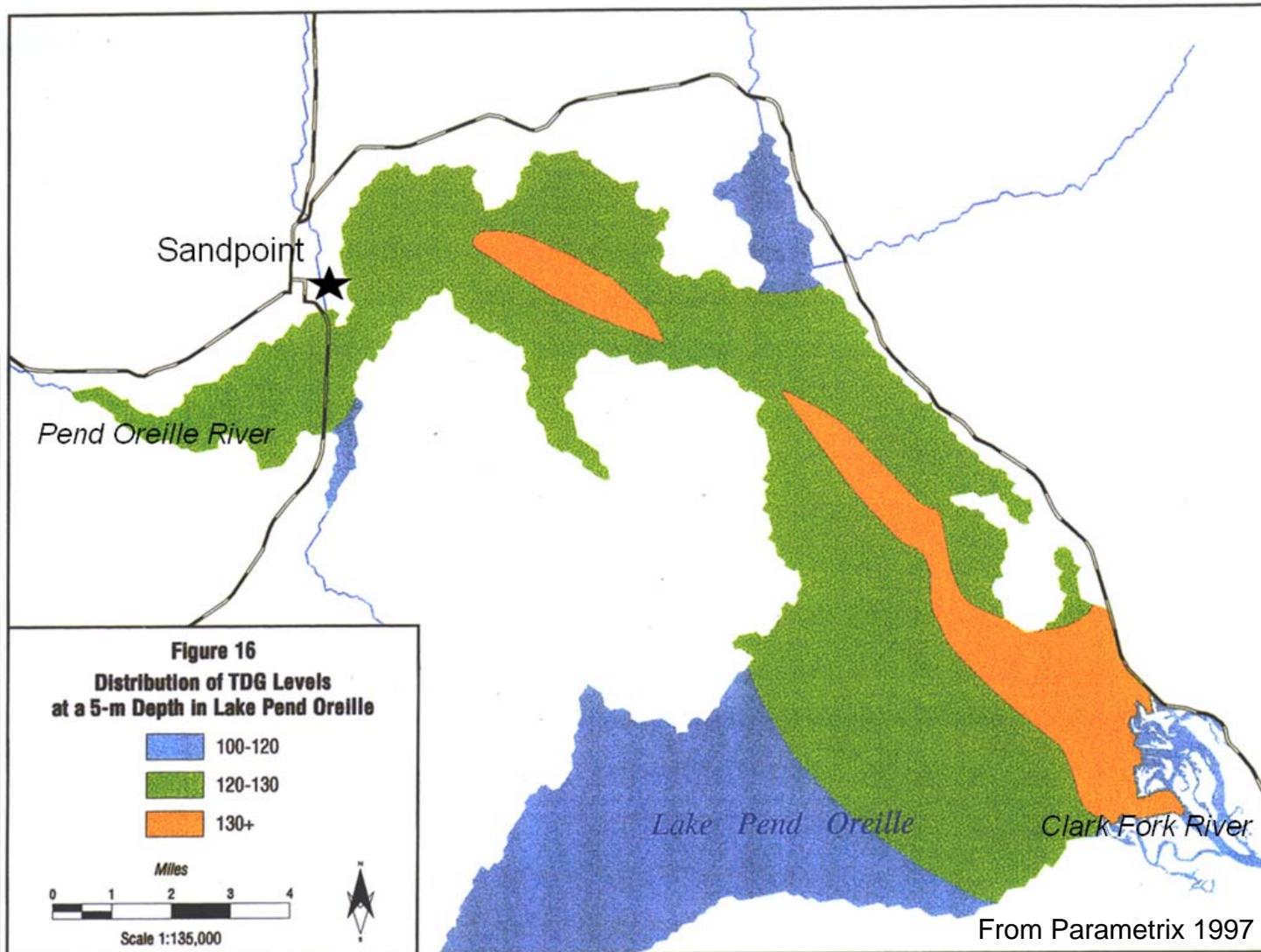


TDG in Idaho

Idaho



TDG in Idaho



Cabinet Gorge Dam

- TDG TMDL approved by EPA October 2007
- TMDL Target – 110% saturation
- No net increase in TDG from upstream waters to downstream waters



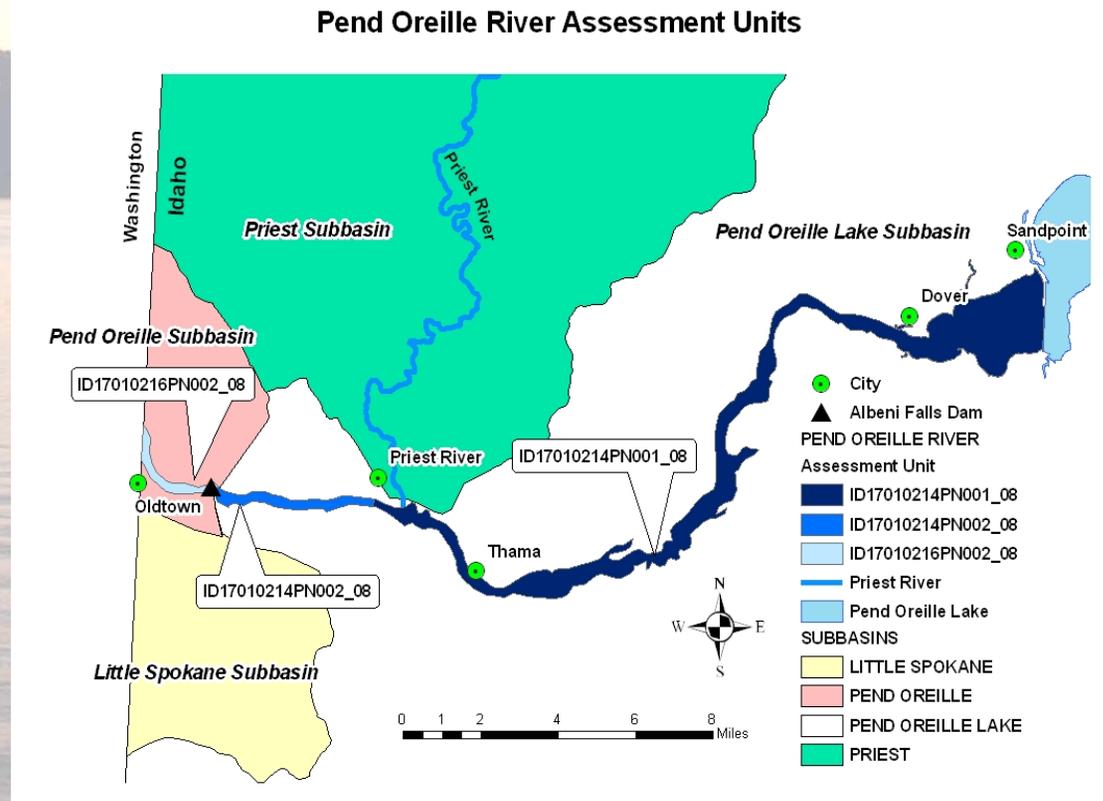
Albeni Falls Dam

- TMDL target – 110% saturation
- No net increase in TDG from upstream waters to downstream waters



TMDL Outcomes

- Three Assessment Unit – Pollutant combination addressed
- TMDL target set at 110% saturation
- Albeni Falls no net increase





Questions?