



Dissolved Oxygen TMDL Dispute Resolution

City of Post Falls, Idaho

April 5, 2010

This presentation will:

- Introduce Post Falls
- Describe Post Falls' concerns and requested changes
- Explain Post Falls' needs on phosphorus
- Explain four additional changes
- Discuss larger issues with TMDL

Introduction to Post Falls

- Post Falls:
 - Serves growing communities
 - Has already done a lot to reduce nutrient loading
 - Is willing to do significantly more

Post Falls Serves Growing Communities

- Current capacity: 3.1 mgd
- Under construction: 2.0 mgd
- Currently serves: City of Rathdrum (7,000) and City of Post Falls (26,000)
- Future service area population: 101,770
- 2030 service area population projection: 83,850



Post Falls population growth

- Post Falls expects to grow to 83,850 people by 2027:

Post Falls engaged J.P. Stravens in 2007 to look very carefully at where their boundaries and obligations will take them for the next 20 years. Stravens determined that Post Falls' Area of City Impact (ACI) will grow from 33,860 to 69,732 people by 2028 (Stravens, 2007).

The City of Rathdrum also discharges 100% of their wastewater to the Post Falls Water Reclamation Facility (WRF). Rathdrum believes that it is reasonable and prudent to include the March 2009 growth numbers projected by the Kootenai Metropolitan Planning Organization (KMPO, 2009) for planning their municipal boundaries and service obligations out to 2030. Rathdrum would grow from 7,173 to 14,118 people during that time. The results show that, even at less than 3.5% annual population growth (which is well below historical rates for the last 20 years) the combined city service areas will have 83,850 people by 2030.

JUB, March 11, 2010 at 1(Exh. 16).

Post Falls Has Already Done A Lot To Reduce Nutrient Discharges

- Permit requirement: 70% total phosphorus removal
- Actual performance: Better than 90% removal
- Phosphorus removed above and beyond permit requirement: 14,000 lbs/yr.
- Treatment Processes:
 - ✓ Activated sludge
 - ✓ Biological nutrient removal
 - ✓ Secondary clarification
 - ✓ Ultraviolet light disinfection
 - ✓ Biosolids composting and reuse (3rd party).

Post Falls Is Willing To Do More

- Post Falls is willing to install and operate technology sufficient to reduce phosphorus levels to 50 ug/L on a seasonal average

Post Falls' concerns with the TMDL

- Inadequate allocations
- Severe economic impact

TMDL Allocates Too Little to Post Falls

- The TMDL allocates only 1.5 lbs/day phosphorus and ~29 lbs/day ammonia
- Allocation is only sufficient to serve a population of about 40,000

Part of the problem is the 36 ug/L treatment assumption

- As stated in other presentations, the lowest achievable level on a reliable basis is 50 ug/L on a seasonal average



The other part of the problem is inaccurate future flow assumptions

- As stated by JUB:

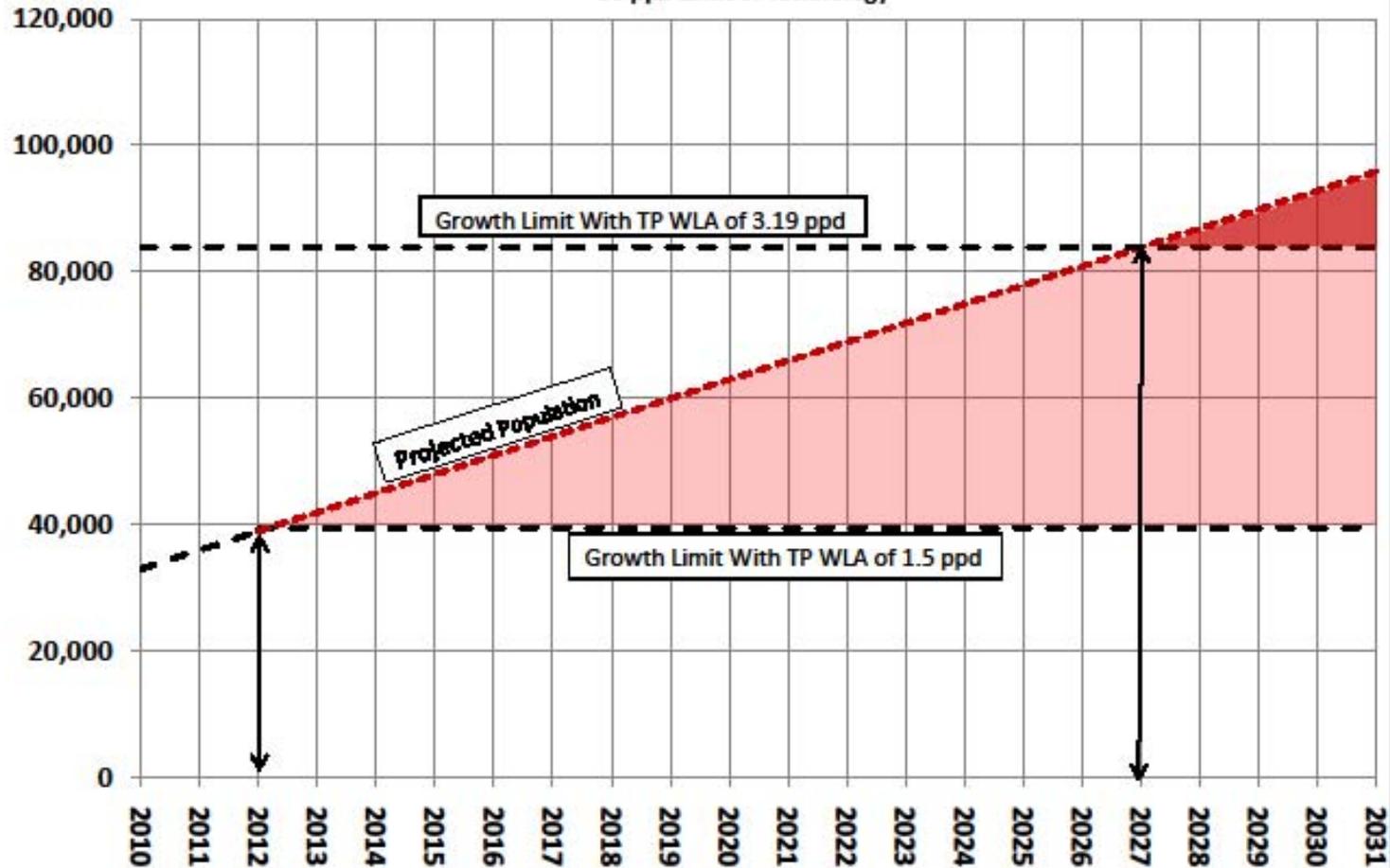
Cumulatively, the population and flow factors will create a 2030 flow rate for the Post Fall WRF of 7.55 mgd (83,850 people x 73 gpcd x 1.25). The 2010 TMDL accounted for only 5.0 mgd because that is the capacity of the current expansion that the City submitted - believing that all other entities were using a similar approach.

JUB, March 11, 2010 at 1 (Exh. 16).

The TMDL would create a severe economic hardship for Post Falls

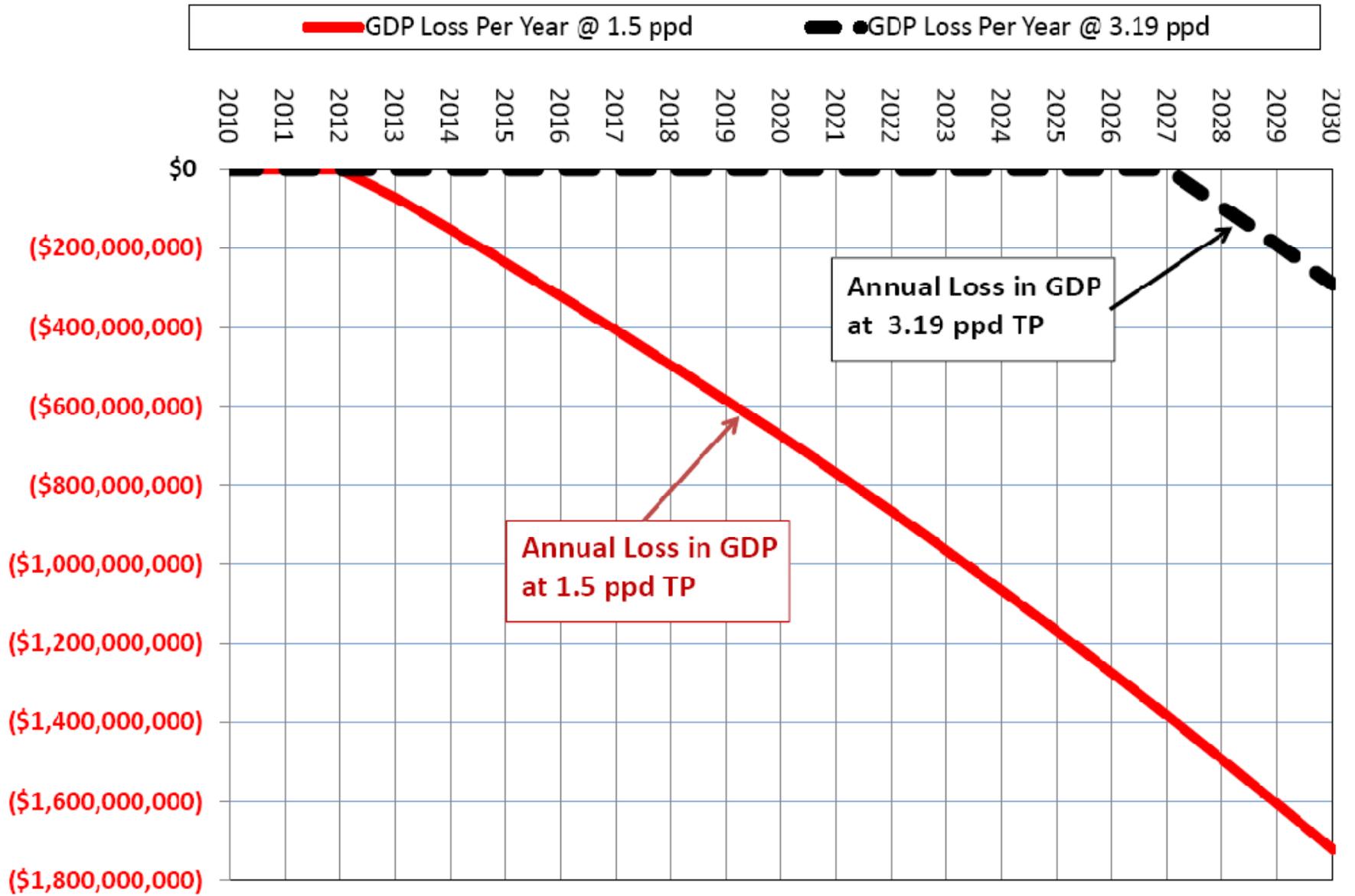
Impact of Phosphorus WLA on Growth

50 ppb Limit of Technology



Growth limits based on technology limit of 50 ppb and per capita flow of 91.25 gpd = 73 gpcd residential flow + 25% for commercial

Impact of WLA on Post Falls' Annual Gross Product



Post Falls' Requested Changes

- No concentration-based limits for Idaho permits;
- Increase in ammonia load to 255 lbs/day;
- Include load allocation for the Spokane River east of the Idaho border;
- Increase Post Falls' phosphorus loading assumption from 1.5 lbs/day to 3.19 lbs/day; and
- Clarify criteria and applicability of bio-availability studies to Idaho dischargers.

Post Falls' phosphorus request

- Post Falls needs 3.19 lbs/day:

As acknowledged by Appendix L as well as numerous comments to the TMDL, Post Falls and other municipal entities along the Spokane River have supported and/or performed significant research, pilot testing and application of the best phosphorus treatment technology available in the world. The conclusion is that a seasonal average or median value of 50 ug/L total phosphorus is an appropriate technologically achievable limit. Therefore, Post Falls is justified in requesting a seasonal average WLA of 3.19 pounds of total phosphorus per day in the revision to the February 2010 Total Maximum Daily Load Water Quality Improvement Report (7.65 mgd x 0.050 ppm x 8.34 pounds per gallon). This is a reasonable and prudent waste load allocation rather than the currently allocated 1.5 ppd.

JUB, March 11, 2010 at 2 (Exh. 16).

Four Additional Changes

- No concentration-based limits
- Increase ammonia limits
- Set load at Idaho border
- Clarify bio-availability studies

No Concentration-Based Limits

- 36 ug/L limits not achievable
- TMDL compliance does not appear to require concentration-based limits
- Mass limits only would offer some cushion
- Request clarification that concentration-based limits not required for compliance

Raise ammonia load assumptions

- EPA has assured Idaho dischargers TMDL would not require ammonia limits
- Idaho dischargers ~40 miles from Spokane Lake reservoir
- Ammonia limits not needed because ammonia dissipates quickly
- LimnoTech analysis confirms no material ammonia impact
- Post Falls/HARSB willing to accept reduction from 8 mg/L to 4 mg/L

Set Idaho load allocation

- Clean Water Act requires setting load allocation
- Ecology explanations for not setting load allocations are not persuasive
- Idaho dischargers need load allocation to ensure:
 - Transparency
 - Protect dischargers' rights in permitting

Clarify Bio-Availability Studies

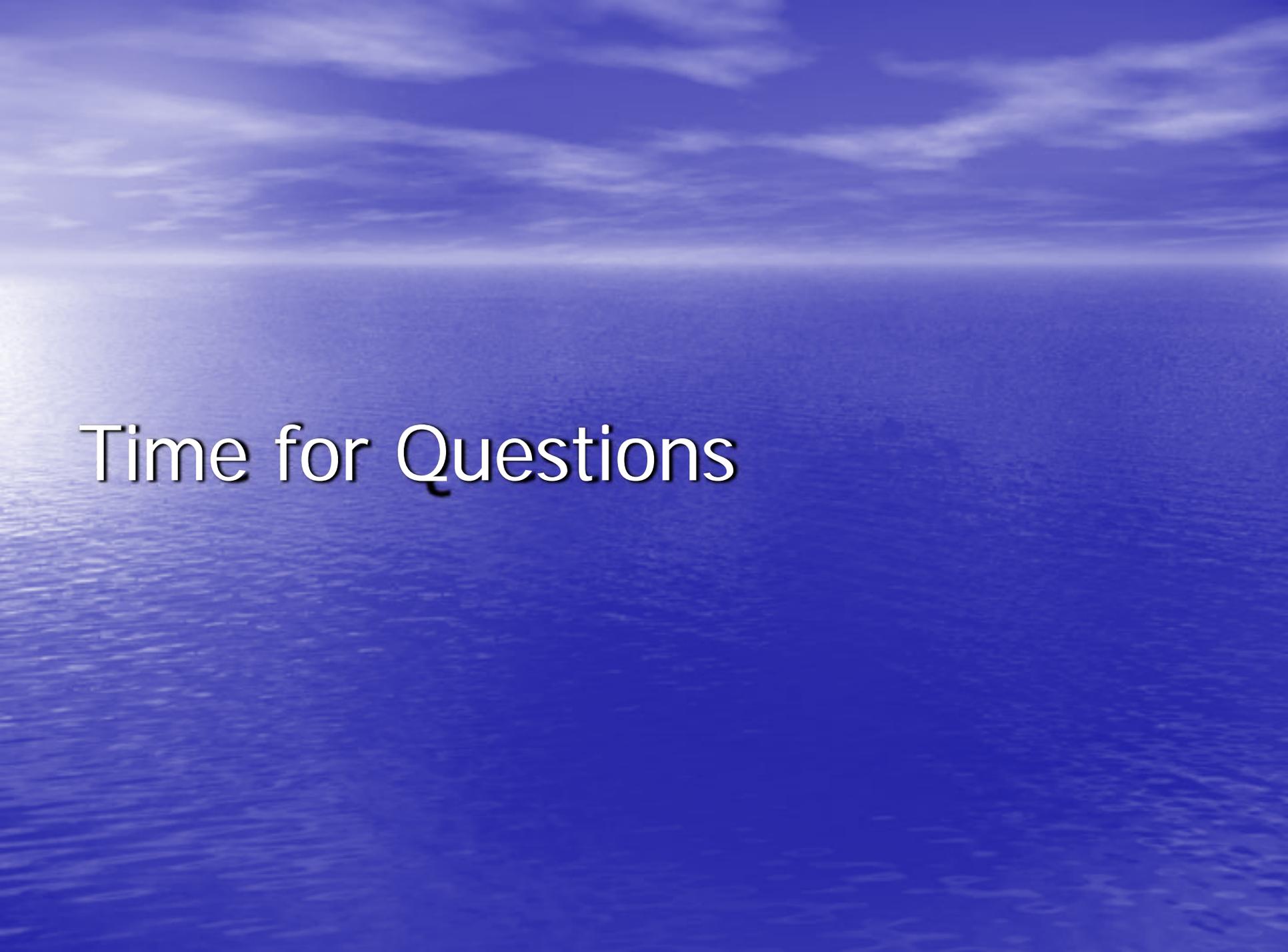
- Outline criteria
- Clarify application to Idaho discharges

The TMDL is on shaky ground

- Reservoir or natural lake?
 - No source modeling
 - What is the standard?
 - Application of "natural conditions"
 - Application of "dominant aquatic habit"
- Mesotrophic or oligotrophic?
- Replacement of 25 ug/L phosphorus standard without rulemaking
- Wrong eco-region criteria
- Algae blooms?

Conclusion

- Post Falls is willing to install tertiary treatment sufficient to meet 50 ug/L phosphorus on a seasonal average
- Post Falls needs five modest changes to the TMDL
 - No concentration-based limits for Idaho permits;
 - Increase in ammonia load to 255 lbs/day;
 - Include load allocation for the Spokane River east of the Idaho border;
 - Increase Post Falls' phosphorus loading assumption to 3.19 lbs/day; and
 - Clarify criteria and applicability of bio-availability studies to Idaho dischargers.



Time for Questions