RESPONSE TO COMMENTS
City of Payette Wastewater Treatment Plant
NPDES Permit No. ID0020672
September 8, 2014

On July 18, 2014, the U. S. Environmental Protection Agency (EPA) issued a public notice for the reissuance of the City of Payette Wastewater Treatment Plant (WWTP) National Pollutant Discharge Elimination System (NPDES) Permit No. ID0020672. This Response to Comments provides a summary of significant comments received during the public comment period and the corresponding EPA responses to the comments. There were no changes to the permit as the result of the comments received. Comments were received from Justin Hayes of the Idaho Conservation League (ICL).

Comment
We are concerned that the draft permit does not require sufficiently stringent total phosphorus limits to help the Payette River ultimately comply with the SR-HC TMDL phosphorus target. The draft permit's factsheet cites progress made in reducing phosphorus loading, noting that a mere 14% reduction in in-river TP concentration is needed to meet the SR-HC target. The draft permit's factsheet state's "[i]n order to maintain progress toward the necessary phosphorus reductions, the phosphorus loadings for this facility are capped at the current levels in the draft permit." This statement makes no sense to us.

Capping the WWTP's discharges at its 'current level' does nothing to 'maintain progress toward the necessary phosphorus reductions.' Indeed, capping the discharge at the current levels is the exact opposite of maintaining progress toward further, necessary reductions. To maintain progress towards reducing in-river TP concentrations, the EPA should require the WWTP to reduce its TP discharges. In addition, the EPA's proposed effluent limits do not actually cap the WWTP's loading at its current level. Rather, the EPA limit authorizes a substantial increase in TP discharged by the WWTP, which, if realized, will make TP situation in the Payette and Snake Rivers worse, not better. The current 'average' TP discharge from the WWTP is 52.4 lbs/day. Thus the facility's annual discharge is 19,126 lbs/yr. The draft permit's Average Monthly Limit is 78.2 lbs/day. Thus the facility is authorized to discharge at 28,543 lbs/yr. If the facility complies with the draft permit's Average monthly Limit, the facility can discharge 9,417 more pounds of phosphorus than it is currently discharging. Not only does this not 'maintain progress toward the necessary phosphorus reductions,' it actually reverses the progress that has occurred in the Payette River. If the EPA wants to actually cap the WWTP's discharge at its current load, the EPA should incorporate an annual limit of 19,126 lbs/yr TP into the permit. However, even with such a limit, the EPA is failing to use the WWTP's NPDES permit to move the river towards achieving the necessary 14% TP reduction called for in the SR-HC TMDL. To do so the EPA needs to develop a TP limit for the WWTP that results in reductions in actual TP discharges

Response
The EPA does not have a basis to require more stringent total phosphorus (TP) effluent limits in the final permit than those included in the draft permit. Further, the EPA has no basis for including an annual limit for TP.

The Payette River is a tributary to the Snake River which is impaired for nutrients. The Idaho Water Quality Standards (WQS) for nutrients are narrative and specify that nutrients not exceed concentrations that promote the growth of nuisance algal matter or slime on the water surface. The Idaho DEQ's *Snake River Hells Canyon TMDL* (July, 2003) (*SRHC TMDL*) identified TP as the limiting nutrient for nuisance aquatic flora in the Snake River. The *SRHC TMDL* assigned a load allocation of 0.07 mg/L TP to the mouth of the Payette River. TP limits for the Payette WWTP were included in the draft permit in an effort to maintain progress toward meeting the TP load allocation for the Payette River. The limits were based on capping the TP load at the existing load discharged from the Payette WWTP.

In developing these limits, EPA considered the following:

The Payette River is not impaired for nutrients. The EPA did not conclude that the facility has the reasonable potential to cause an excursion of the water quality criteria for nutrients in the Payette River.

The majority of the phosphorus loadings in the Payette River are from non-point sources and the discharge from the Payette WWTP is not a significant contributor to the downstream impairment. The IDEQ's *Lower Payette River TMDL Five-Year Review (HUC 170150122)* (February, 2010) (*LPR Five-Year Review*) describes current water quality status, pollutant sources, and recent pollution control efforts in the lower Payette River subbasin. The *LPR Five-Year Review* notes that: *Based on a review of the available data, the largest proportional contributions of TP to the lower Payette River are the irrigation drains and the Black Canyon Reservoir. (See Pg. 118).*

The *LPR Five-Year Review* further describes these sources: *The potential nonpoint sources of phosphorus in the lower Payette River subbasin are from upstream reservoirs and agriculture irrigation drain water; which has reported concentrations that exceed the TMDL target by more than two orders of magnitude. The highest reported concentrations of phosphorus are from samples collected from north-side tributaries and north- and south-side irrigation drains from April through September. (See* Pg. 14)

Significant progress has been made in reducing the TP loads in the Payette River through nonpoint source efforts. Continued reduction of TP loading is expected to occur from the nonpoint sources. Reducing the load from the Payette WWTP does not appear necessary to meet the load allocations for the Payette River.
The EPA acknowledges the progress made by nonpoint sources in the Payette watershed. The EPA envisions continued reductions of TP from the nonpoint sources and does not see a need to reduce TP from the Payette WWTP at this time. The *LPR Five-Year Review* discusses the progress made and further reductions expected:
Based on the data reported between 2000 and 2009, the TP load delivered to the Snake River at the control monitoring location (LPR-007) for the SR-HC TMDL has been reduced approximately 20% since the development of the TMDL. The load entering the Snake River from the lower Payette River subbasin is now 14% above the target load (469 kg/day) instead of 34% above target at the time the SR-HC TMDL was developed. (See Pg. 64)

Based on a review of the available data, the largest proportional contributions of TP to the lower Payette River are the irrigation drains and the Black Canyon Reservoir. Reductions of 14% are necessary to meet the SR-HC TMDL, and this seems achievable as the sources are controllable. (*See* pg. 118)

Capping the phosphorus at its current loads maintains the progress toward the necessary phosphorus reductions.
The permit includes an average monthly limit (AML) of 78.2 lbs/day and average weekly limit (AWL) of 149 lbs/day.

These limits prevent the facility from discharging TP at current concentrations at the facility's design flow rate. In contrast, in the *SRHC TMDL*, point sources are assigned WLAs based on the design capacity of the WWTP. This essentially caps those facilities at their design capacity (not their existing load). In capping the Payette WWTP at its current load, the facility will be unable to discharge TP at current concentrations at its design flow rate. The facility currently operates well below its design flow. Any growth in the system, will require the facility to upgrade to reduce phosphorus concentrations before the facility reaches its design flow capacity. With the new TP limits, the permittee will likely implement measures to reduce TP in the effluent to assure compliance with the new AML and AWL.

Including an annual load limit of 19,126 lbs/yr of TP does not cap the facility at its current load
The inclusion of limits expressed as AML and AWL is based on the federal regulations at 40 CFR 122.45(d) which require that limitations for publicly owned treatment works (POTWs) be stated as average weekly and average monthly unless impracticable. The EPA has no basis to also include an annual limit.

The limits in the permits were developed from the existing long term average (LTA) load from the facility using procedures in the EPA's *Technical Support Document for Water Quality-Based Toxics Control* (March 1991) (*TSD*). These procedures assume that the effluent data are lognormally distributed and account for effluent variability. TP concentrations from a secondary treatment plant can be highly variable. In developing the AML and AWL, the EPA is acknowledging the basic principles of effluent variability for a POTW as outlined in the *TSD*. Suggesting that a biological treatment plant could actually discharge at its average monthly limit every day and still maintain compliance with its NPDES permit goes against the basic principles upon which the permit limits are developed.

The annual limit suggested in the comment of 19,126 lbs/yr represents an average of 52.4 lbs/day discharged 365 days (i.e. 52.4 x 365 = 19,126). The limits in the permit were <u>not</u> derived assuming an average of 52.4 lbs/day discharged over a year, but instead were derived based on a <u>long</u> term average discharge of 52.4 lbs/day, based on several years of data. The existing average load discharged during a given year *can be and has been* higher. For example in 2003, the annual average TP load from the Payette WWTP was 78.8 lbs/day. The EPA has no basis for assuming that the 52.4 lbs/day should be averaged over a year and has no basis for including an annual limit in the permit.