Response to Comments
City of Genesee
NPDES Permit Number: ID0020125
April 13, 2017

On January 9th, 2017, the U.S. Environmental Protection Agency Region 10 (EPA) issued a public notice for the proposed reissuance of the City of Genesee Waste Water Treatment Plant (WWTP) draft National Pollutant Discharge Elimination System (NPDES) Permit No. ID0020125. The public comment period closed February 8th, 2017.

During the public comment period, the EPA received comments from the following:

- City of Genesee
- Idaho Conservation League

This document presents the comments received and provides the corresponding responses to those comments. No revisions were made to the final permit as a result of comments received during the public comment period. During the public comment period EPA was made aware of three errors which have been corrected in the Permit and Fact Sheet.

- The references to "influent" on page 12 of the Permit in Table 4, *Facility Design Criteria*, were erroneous and have been changed to "effluent".
- The sample type for temperature have been changed from "Grab" to "Auto Record" in the Permit and Fact Sheet to accurately reflect the permit requirements and syntax in NetDMR.
- EPA erroneously entered "24-hour composite" sampling for Biological Oxygen Demand and Total Suspended Solids. Grab sampling has been carried forward from the previous permit.

The comments below are abbreviated from the original comment letters, which are attached to this document.

Comments from the City of Genesee

Comment #1. *We have been making improvements to the lagoon since 2006 and are planning additional improvements to be implemented over the next five years. We respectfully request the EPA restructure the permit, using the interim ammonia limits as the final limits, so that if one of the rare scenarios should occur, requiring a few days of discharge to the creek, Genesee would not be in violation of the law.*

No lagoon system could ever achieve those limits. Although there are several "add-on" biological processes, which might achieve them in warm weather, when we have not been discharging, none of these technologies could produce the desired results during the winter months, when a brief period of discharge might conceivably be necessary.

Response #1. When a discharge has the reasonable potential to cause or contribute to an excursion above of a water quality standard, EPA must establish effluent limits in NPDES permits which ensure

compliance with approved water quality standards (WQS) (40 CFR 122.44(d)(1)). Regardless of the frequency of the discharge, the limit must comply with WQS. Since the facility cannot meet the final, total ammonia effluent limits upon the effective date of the permit, the permit includes an eight-year compliance schedule to allow time for the facility achieve compliance with the final effluent limits. The interim limit is based on existing performance and is designed to hold the facility to its current discharge levels as the facility is working toward coming into compliance with its final effluent limit. No changes to the final permit resulted from this comment.

The Idaho Conservation League

Comment #2. *The fact sheet should but failed to take into account the effects of climate change that have impacted the hydrology of Cow Creek and the impact climate change will have on the hydrology of Cow Creek over the term the proposed permit would be implemented. Further review may indicate that total phosphorus limits, for example, are necessary year round rather than just seasonally.*

Response #2. In order to insure relevant flow data will be available for the next permit term, quarterly flow monitoring in the receiving water is required for the duration of the permit. Changes in the receiving water low-flows for any reason, including climate change, will be captured through monitoring during the permit term, and used in the next permit re-issuance.

Total phosphorus (TP) effluent limits in the draft permit are consistent with the waste load allocations (WLAs) for this facility in the EPA-approved Total Maximum Daily Load (TMDL): Cow Creek Subbasin TMDL (ID 22724) (IDEQ 2015). Reasonable potential for all pollutants of concern will be reevaluated in the next permit cycle using the most recent, available data. No changes to the final permit resulted from this comment.

Comment #3. *We request additional monitoring be conducted to accurately determine receiving water quality before a permit is issued. Specifically, accurate and actionable data on temperature, pH, ammonia, and total phosphorus is needed to provide a reasonable basis for the limits and requirements in a draft permit.*

Response #3. The most recent water quality data collected by the permittee and the Idaho Department of Environmental Quality (IDEQ) were used to evaluate reasonable potential and calculate Water Quality-Based Effluent Limits (WQBELs). The calculations were based on a critical low flow of dry conditions or zero cubic feet per second (cfs). Therefore, any uncertainties regarding the assimilative capacity of the receiving water did not impact those calculations.

Receiving water monitoring for temperature, pH, total phosphorus, and total ammonia have been continued in this permit, in addition to flow. EPA requires that all sampling must be conducted using 40 CFR 136 test methods and the collected data during this permit term will be used in future reasonable potential calculations, assuring that current and relevant data provide the basis for limits and requirements in the permit. No changes to the final permit resulted from this comment.

Comment #4. *We request that EPA collect more recent flow data on Cow Creek before issuing this permit. If EPA declines to act on this request, we further request that EPA provide a response explaining the basis for its decision.*

Response #4. This permit utilized flow measurements collected by the facility in 2006, field sampling and reports by IDEQ in 2002 and 2014, USGS gauge data from 1979 to 1986 (gauge station no. 13350448), as well as personal communications with the facility to characterize year-round flow conditions in Cow Creek. All available sources indicate that historically, Cow Creek in the vicinity of the discharge is periodically dry with no flow. Therefore, the critical low flow for the receiving water, Cow Creek, used in the calculations was zero cfs. Additional flow data would not change a critical flow condition of zero. No changes to the final permit resulted from this comment.

Comment #5. *On page 23 of the fact sheet, it states that no compliance schedule is necessary for phosphorus because the Genesee WWTP can meet the phosphorus standards by applying treated effluent to the land. If this is the means by which the Genesee WWTP plans to meet standards for phosphorus, this should be acknowledged and reflected in the draft permit. We request that if a final permit is issued, that the permit explicitly require that if the WWTP is land applying treated effluent, the WWTP is prohibited from simultaneously discharging into Cow Creek. This requirement would ensure that the Genesee WWTP does not violate its NPDES permit limits as a result of effluent runoff from land application combining with simultaneous discharges into Cow Creek.*

Response #5. Any schedule of compliance must require compliance as soon as possible in accordance with 40 CFR 122.47(a)(1). The TMDL WLA of 0.60 kg/day or 1.3 lbs/day for TP applies during the period of June 1 through September 30, during which time the facility has historically utilized land application with no or minimal discharge to Cow Creek. For this reason, a compliance schedule was not authorized for TP as the facility can reasonably discharge below the pollutant loading limits set by the TMDL WLA. The WLA has been applied as an end-of-pipe limit at the outfall, and does not prohibit the facility from discharging from the outfall while also utilizing land application. Land application is permitted through the IDEQ. No changes to the final permit resulted from this comment.

Comment #6. *The EPA's Technical Support Document (TSD) provides guidance on how to calculate low-flow conditions for receiving water bodies. The TSD states water quality based effluent limits (WQBEL) intended to protect aquatic life should be based on the lowest seven-day average flow rate expected to occur once every ten years (7Q10) for chronic criteria and the lowest one day average flow rate expected to occur once every ten years (1Q10) for acute criteria. The data necessary to calculate the 7Q10 for chronic criteria and 1Q10 for acute criteria require a minimum flow sampling frequency of once per day. Without this data, low flow conditions and corresponding WQBELs cannot be accurately determined and set. In light of this, we are concerned by the EPA's proposal to require flow monitoring only once per quarter. This sampling frequency does not provide sufficient resolution to calculate appropriate low flows and, therefore, should be replaced with a requirement to monitor flow either daily or continuously. If EPA declines to require more frequent water flow monitoring in the final permit, we request EPA provide an explanation for its decision.*

Response #6. EPA has addressed this concern with Responses 2, 3, and 4. EPA recognizes the limitations of using quarterly flow monitoring data in order to establish low-flow conditions for a receiving water. The critical low flow used in this permit was zero cfs which is protective of Cow Creek for all possible flow conditions. No changes to the final permit resulted from this comment.

Comment #7. *The Genesee WWTP point of discharge is roughly 6 miles from the Washington/Idaho border. Accordingly, we request that EPA revise the draft permit to ensure that downstream water quality standards are attained and maintained for E. coli and other bacteria or nutrients. If EPA declines to act on this request, we further request EPA provide a response explaining the basis for its decision. In particular, we would request EPA explain how the E. coli bacteria concentrations permitted in the Genesee WWTP permit would ensure Genesee's WWTP discharges do not lead to downstream violations of Washington State water quality standards.*

Response #7. *Addressing E. coli:* In the 2012 *Recreational Water Quality Criteria* (RWQC) report, EPA recommends using the fecal indicator bacteria enterococci and *Escherichia coli* (E. *coli*) as indicators of fecal contamination for fresh water (pg. 2, RWQC 2012). The 2012 RWQC maintains that values for culturable levels of E. *coli* for fresh waters will be protective of the primary contact recreational use on a national basis (pg. 3, RWQC 2012). States may develop alternative criteria so long as they are scientifically defensible, protective of the use, and reviewed and approved by EPA under CWA §303(c). In this permit, effluent limits for E. *coli* were implemented at end-of-pipe using Idaho State WQS for primary contact recreation (IDAPA 58.01.02.251.01.a.). Since no mixing zone was authorized for the facility, the designated use of primary contact recreation will be supported in the immediate receiving water and 6 miles downstream in Washington State waters.

Addressing nutrients: The nutrient limits for TP will be sufficiently protective of Washington State WQS 6 miles downstream, where Cow Creek transitions into Union Flat Creek. Union Flat Creek is not listed as impaired for nutrients by the Washington State Department of Ecology (Ecology) Assessment 305(b) report and 303(d) list (Ecology, 2016a). The TP WLA allocates nutrient capacity among point and non-point pollutant sources, taking into account natural background levels and a margin of safety. Further concerns for downstream WQS such as DO, pH, and aesthetic uses are addressed by IDEQ in the Cow Creek Subbasin TMDL with the Cow Creek Watershed Advisory Group (IDEQ 2005) and by Ecology in the 4b Analysis for Cow Creek with the Eastern Regional Office livestock and water quality program (Ecology, 2016b). The conclusions by these two reports describe IDEQ's and Ecology's best professional judgement and emphasize the importance of watershed management plans to address water quality impairments from non-point sources, where implementing NPDES limits for the facility will not solely bring the watershed into compliance with designated uses. No changes to the final permit resulted from this comment.

Comment #8. *To our knowledge, no such review has been undertaken for Cow Creek, despite it being more than ten (10) years since the TMDL was approved. In light of this, complying with an outdated TMDL does not guarantee compliance with state water quality standards and protection of beneficial uses. Prior to approving a TP limit, either the EPA or DEQ must conduct the necessary review of the TMDL in order to assess and potentially reevaluate load allocations for pollutants causing impairment. Most notably, we encourage the EPA and DEQ to consider the efficacy of seasonal permits versus year-round effluent limits.*

Response #8. EPA acknowledges this comment, including the importance of evaluating the efficacy of seasonal versus year-round effluent limits. Section 303(d) of the CWA requires states to develop total maximum daily loads (TMDLs) for water bodies that are not meeting their beneficial uses. The

EPA must approve each TMDL, after which an implementation plan is written. Pursuant to 40 CFR 122.44(d)(1)(vii)(B), EPA must include a WQBEL consistent with the assumptions and requirements of the TMDL and/or WLA. The effluent limits for TP in this permit are consistent with the TMDL WLA.

At the time of this permit reissuance, the TP and temperature TMDLs are fully effective and approved by the EPA. By reissuing this permit EPA is bringing the facility into compliance with all applicable TMDLs for the receiving water. Since the facility discharges to an impaired waterbody with two TMDLs, and no additional, pending TMDL's are awaiting EPA approval, further delay of permit reissuance for updating TMDLs or additional studies of seasonal versus annual TMDLs is not justifiable. No changes to the final permit resulted from this comment.

References

Ecology, 2016a. Water Quality Assessment and 303(d) List Search Tool. Accessed March 1, 2016. <http://www.ecy.wa.gov/programs/wq/303d/index.html>

Ecology, 2016b. 4b Analysis for Cow Creek. Accessed March 1, 2016. <http://www.ecy.wa.gov/programs/wq/303d/4Bs/4bAnalysis-CowCrk2014.pdf>

EPA. 1991. Technical Support Document for Water Quality-based Toxics Control. US Environmental Protection Agency, Office of Water, EPA-505-2-90-001.

EPA. 2010. NPDES Permit Writers' Manual. Environmental Protection Agency, Office of Wastewater Management, EPA-833-K-10-001.

EPA. 2012. Recreational Water Quality Criteria. US Environmental Protection Agency, Office of Water, EPA-820-F-12-058.

IDAPA 58.01.02. Idaho water quality standards and wastewater treatment requirements.

IDEQ. 2005. Cow Creek Subbasin Assessment and Nutrient Total Maximum Daily Load. December, 2005.

IDEQ. 2014. Idaho's 2012 Integrated Report. Boise, ID: Idaho Department of Environmental Quality.

USGS. Monitoring Station for Cow Creek at Genesee ID (Station ID 13350448). Accessed July, 2016 at: http://waterdata.usgs.gov/nwis/dv?cb_00060=on&format=rdb&site_no=13350448&referred_module=sw&period=&begin_date=1969-12-01&end_date=2016-11-30

Appendix

Comment Letter from City of Genesee, received by EPA on January 27, 2017.

Comment Letter from Idaho Conservation League, received by EPA on February 8, 2017.

City of Genesee

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January 20, 2017

Director, Office of Water and Watersheds
USEPA Region 10
1200 Sixth Avenue, Suite 900
Seattle, Washington 98101-3140

RE: Draft NPDES PERMIT for Genesee, Idaho

Dear Director:

We have reviewed the draft permit and the accompanying fact sheet. As you probably have already guessed, our primary concern is the final effluent limits for ammonia. Our treatment system is a facultative lagoon. We have been making improvements to it since 2006 and are planning additional improvements to be implemented over the next five years. These would consist of adding an aerated cell and a facultative cell to precede the existing lagoon, plus an expansion of our overland flow land application system. Concomitantly, we are working to improve the collection system to remove as much I/I as possible. Our goal is to eliminate the need to ever discharge effluent to Cow Creek, hence hopefully making the ammonia limit moot.

However, it would seem prudent to retain the NPDES permit as a "safety valve," so discharge might be possible during the periods of emergency. Several scenarios, could be envisioned, wherein this might be necessary, although their probability of occurrence would be extremely low. Retention of the permit would be meaningless, however, with the final ammonia limits as currently constituted. No lagoon system could ever achieve those limits. Although there are several "add-on" biological processes, which might achieve them in warm weather, when we have not been discharging, none of these technologies could produce the desired results during the winter months, when a brief period of discharge might conceivably be necessary.

Given all this, we respectfully request that EPA restructure the permit, using the interim ammonia limits as the final limits, so that if one of the rare scenarios should occur, requiring a few days of discharge to the creek, Genesee would not be in violation of the law. We understand that such a request is unusual, but so are the circumstances that occasion us to make it. Please give it your serious consideration. There are no alternatives, which do not place the City into a precarious position.

Sincerely,

Steve Odenborg

Steve Odenborg, Mayor

Cc: Ashley Grompe, P.E.
Jack S. Hammond, P.E.
Mike Camin, P.E.

IDAHO
CONSERVATION
LEAGUE

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Ashley Grompe
Director, Office of Water and Watersheds
U.S. EPA Region 10
1200 Sixth Avenue (OWW-191)
Seattle, WA 98101

Submitted via email to: grompe.ashley@epa.gov

February 8, 2017

RE: Proposed Permit for City of Genesee Wastewater Treatment Plant

Dear Ms. Grompe:

Thank you for the opportunity to comment on the draft NPDES permit for the City of Genesee's wastewater treatment plant. Since 1973, the Idaho Conservation League has been Idaho's leading voice for clean water, clean air and wilderness—values that are the foundation for Idaho's extraordinary quality of life. The Idaho Conservation League works to protect these values through public education, outreach, advocacy and policy development. As Idaho's largest state-based conservation organization, we represent over 25,000 supporters, many of whom have a deep personal interest in protecting Idaho's human health and environment.

Attached, please find my comments on behalf of the Idaho Conservation League regarding the proposed permit for the City of Genesee's wastewater treatment plant.

Thank you for your time and consideration. Please do not hesitate to contact me at (208) 265-9565 or mnykiel@idahoconservation.org if you have any questions regarding our comments or if we can provide you with any additional information on this matter.

Sincerely,

Matthew Nykiel
Conservation Associate

ICL Comments

Insufficient Data and Analysis

The fact sheet and, derivatively, the draft permit do not provide sufficient data and records to form a reasonable basis for several of the findings made in the fact sheet and the corresponding requirements and restrictions proposed in the draft permit.

1. Climate Change

The fact sheet should but failed to take into account the effects of climate change that have impacted the hydrology of Cow Creek and the impact climate change will have on the hydrology of Cow Creek over the term the proposed permit would be implemented. Analyzing historic and contemporary trends can provide a reliable basis from which to predict future hydrologic conditions. Without data reflecting how conditions in Cow Creek have changed and may change due to climate change, EPA cannot reasonably set discharge limits, especially since much of the Cow Creek data EPA relied on is not current (see below). Because hydrologic conditions, like water temperature, flow rates, and flow timing, are changing as a result of climate change, we request that a final permit not be issued until Cow Creek is analyzed for future hydrologic changes due to climate change and the City of Genesee's WWTP permit application is considered in light of this data. Further review may indicate that total phosphorus limits, for example, are necessary year round rather than just seasonally. If EPA decides to forego this analysis, we request that EPA provide a response explaining the basis for its decision.

2. Receiving Water Quality

At page 11 of the fact sheet, receiving water quality is listed in terms of temperature, pH, ammonia, and total phosphorus. However, these values come from data 9-12 years old. Moreover, the values are the result of merely 11 sampling events, of which the fact sheet fails to indicate the time of the year the samples were taken – receiving water quality may vary depending on the time of the year. The quality of receiving water is essential to determining a water body's capacity to dilute pollutant discharges, and without more current data, there is no reasonable basis for the findings on receiving water quality provided in the fact sheet.

We request additional monitoring be conducted to accurately determine receiving water quality before a permit is issued. Specifically, accurate and actionable data on temperature, pH, ammonia, and total phosphorus is needed to provide a reasonable basis for the limits and requirements in a draft permit. If EPA declines to act on this request, we further request that EPA provide a response explaining the basis for its decision.

3. Instream Flow

Similarly, at page 12, the fact sheet admits that there are no flow stations along Cow Creek and that data for flow conditions is limited. Here too, more data must be collected and analyzed to reasonably determine the time periods and flow levels at which Cow Creek can accommodate particular levels of pollutant discharges. As it

currently stands, the draft permit is based off data collected 12-15 years ago, which may not account for the effects of climate change or new upstream water appropriation. We request that EPA collect more recent flow data on Cow Creek before issuing this permit. If EPA declines to act on this request, we further request that EPA provide a response explaining the basis for its decision.

4. Land Application

On page 23 of the fact sheet, it states that no compliance schedule is necessary for phosphorus because the Genesee WWTP can meet the phosphorus standards by applying treated effluent to the land. If this is the means by which the Genesee WWTP plans to meet standards for phosphorus, this should be acknowledged and reflected in the draft permit. We request that if a final permit is issued, that the permit explicitly require that if the WWTP is land applying treated effluent, the WWTP is prohibited from simultaneously discharging into Cow Creek. This requirement would ensure that the Genesee WWTP does not violate its NPDES permit limits as a result of effluent runoff from land application combining with simultaneous discharges into Cow Creek. If EPA declines to act on the request above, we further request EPA provide an explanation for its decision.

Monitoring

The EPA's Technical Support Document (TSD) provides guidance on how to calculate low-flow conditions for receiving water bodies. The TSD states water quality based effluent limits (WQBEL) intended to protect aquatic life should be based on the lowest seven-day average flow rate expected to occur once every ten years (7Q10) for chronic criteria and the lowest one day average flow rate expected to occur once every ten years (1Q10) for acute criteria. The data necessary to calculate the 7Q10 for chronic criteria and 1Q10 for acute criteria require a minimum flow sampling frequency of once per day. Without this data, low flow conditions and corresponding WQBELs cannot be accurately determined and set. In light of this, we are concerned by the EPA's proposal to require flow monitoring only once per quarter. This sampling frequency does not provide sufficient resolution to calculate appropriate low flows and, therefore, should be replaced with a requirement to monitor flow either daily or continuously. If EPA declines to require more frequent water flow monitoring in the final permit, we request EPA provide an explanation for its decision.

Downstream Beneficial Uses

As noted in the fact sheet, the Clean Water Act requires the attainment and maintenance of downstream water quality standards (See 40 CFR 131.10(b)). Cow Creek flows into Union Flat Creek and exits Idaho westward, into Washington State. The Washington Administrative Code requires Union Flat Creek be protected for primary contact recreation, among other beneficial uses. The draft permit sets acceptable E. coli bacteria concentrations well above the monthly geometric mean and single sample maximum acceptable in Washington State for water bodies protected for primary contact recreation. The Genesee WWTP point of discharge is roughly 6 miles from the Washington/Idaho border. Accordingly, we request that EPA revise the draft permit to ensure that downstream water quality standards are attained and maintained

for E. coli and other bacteria or nutrients. If EPA declines to act on this request, we further request EPA provide a response explaining the basis for its decision. In particular, we would request EPA explain how the E. coli bacteria concentrations permitted in the Genesee WWTP permit would ensure Genesee's WWTP discharges do not lead to downstream violations of Washington State water quality standards.

Total Phosphorus Seasonal Limits

The draft permit assigns a total phosphorus (TP) effluent limit of 0.6 kg/d averaged over June 1 – September 30. This effluent limit was selected in order to comply with the Cow Creek Subbasin TMDL for Nutrient/Eutrophication Biological Indicators (2006). Although consistent with the 2006 TMDL, we are concerned that this effluent limit may not provide sufficient protection to Cow Creek and downstream waters.

Pursuant to Idaho Code 39-3611(7), the Director of the Idaho Department of Environmental Quality is to review and reevaluate each TMDL, supporting subbasin assessment, implementation plan(s) and all available data periodically at intervals of no greater than five (5) years. To our knowledge, no such review has been undertaken for Cow Creek, despite it being more than ten (10) years since the TMDL was approved. In light of this, complying with an outdated TMDL does not guarantee compliance with state water quality standards and protection of beneficial uses. Prior to approving a TP limit, either the EPA or DEQ must conduct the necessary review of the TMDL in order to assess and potentially reevaluate load allocations for pollutants causing impairment. Most notably, we encourage the EPA and DEQ to consider the efficacy of seasonal permits versus year-round effluent limits.