Response to Comments
2005 NPDES Permit Issuance to the City of Grangeville, Idaho
NPDES Permit No. ID-002003-6

City of Grangeville
225 W. North Street
Grangeville, Idaho 83530

Public Comment Period: 10/27/04 – 11/26/04

During the public comment period specified above, a total of 12 comments were received on the proposed NPDES permit. This document summarizes those comments and provides EPA's response to them.

1. Regarding Appendix B, Section B.4.i. of the Fact Sheet – *Escherichia Coli* (*E. coli*)

Comment: The Association of Idaho Cities (AIC) requests that the *E. coli* instantaneous effluent limit be removed from the permit as it has no regulatory or technical basis when considered with other applicable portions of the Idaho State Water Quality Standards such as IDAPA 58.01.02.080.03, "Violation of Water quality Standards".

Response: IDAPA 58.01.02.251 of the Idaho Water Quality Standards (WQS) provides the sole basis for determining bacteria effluent limitations in NPDES permits. However, the State may use IDAPA 58.01.02.080.03 as a basis for their own enforcement discretion or implementation policy of their wastewater treatment requirements. While the States 401 certification of the permit contains suggestions as to how the permit can be made less stringent and still meet WQS, these suggestions were not implemented in accordance with federal regulations at 40 CFR 124.55(c) which says "a State may not condition or deny a certification on the grounds that State law allows a less stringent permit condition". The State would not have provided 401 certification of a permit that had no regulatory or technical basis in their own WQS. Furthermore, NPDES permitting regulations at 40 CFR 122.44(d) require EPA to include effluent limits in permits necessary to achieve water quality standards established under section 303(c) of the CWA. Establishing *E. coli* permit limits based upon single sample maximum and geometric mean concentrations is not only consistent with State WQS, but allows EPA and the State to monitor and control effluent variability by controlling spiked concentrations in the discharge in a way that is protective of public health.

2. Regarding Appendix B, Section B.4.i. of the Fact Sheet – *Escherichia Coli* (*E. coli*)

Comment: EPA's 1986 Bacteria Criteria Guidance, EPA's 2004 Final BEACH Rule (69 FR 67218), and the Idaho State Water Quality Standards appear to provide no technical or regulatory basis for the instantaneous bacteria limit included in the draft permit. While Idaho is not one of the 35 states included in the BEACH Rule, the rule contains EPA's most current thinking and guidance to states concerning appropriate implementation of *E. coli* standards for freshwaters. AIC requests that the basis for the limitation in the Fact

Sheet be corrected to be consistent with State WQS, and that the instantaneous *E. coli* limit be removed from the permit.

Response: As described in Section IV.B.3. of the Beaches Environmental Assessment and Coastal Health (BEACH) Rule, EPA and the states "retain the discretion to use single sample maximum values as they deem appropriate in the context of Clean Water Act implementation programs other than beach notification and closure". While maximum or instantaneous *E. coli* values are appropriate for determining beach closures, the final rule does not constrain the use of single sample maximum values in Clean Water Act programs such as NPDES permitting. As noted in the comment response above, Idaho WQS include an instantaneous maximum criterion for *E. coli*, and NPDES regulations at 40 CFR 122.44(d) require EPA to incorporate effluent limits necessary to protect state water quality standards. Since the State of Idaho has not authorized a mixing zone for bacteria, the effluent must meet the criterion prior to discharging to the receiving water. EPA has determined that meeting the bacteria criterion prior to discharging will not cause or contribute to a violation of the water quality standards.

3. Regarding Appendix B, Section B.4.i. of the Fact Sheet – *Escherichia Coli* (*E. coli*)

Comment: EPA has issued a number of NPDES permits throughout the state with instantaneous *E. coli* limits. Permit limits appear to be based on the incomplete/incorrect application of Idaho State Water Quality Standards (e.g. application of Section 251 but not 080.03). AIC is interested in EPA's proposed approach regarding how the Agency will correct these recently issued permits should it be determined that instantaneous limits are not required. AIC is also interested in knowing how EPA will address compliance reporting of instantaneous limits.

Response: EPA has included instantaneous maximum limits in NPDES permits because it determined that these limits were necessary to protect water quality standards as required under 40 CFR 122.44(d). As noted in the comment response above, EPA has interpreted Section 251 of the State WQS as providing the sole basis for determining permit effluent limitations, and that Section 080.03 can be utilized by the State for enforcement discretion or implementation policy. The State has provided a 401 certification of reasonable assurance that the activities allowed under the permit will comply with the applicable requirements of the CWA. For the purposes of compliance reporting, sampling data regarding an instantaneous *E. coli* limit is summarized on a Discharge Monitoring Report (DMR) no differently from any other pollutant. Specific enforcement actions taken relative to permit violations are done on a case by case basis considering many factors including any history of repeated effluent violations.

4. Regarding Table 1 and the apparent inconsistency between footnote #1 and the *E. coli* monitoring frequency specified in the body of Table 1.

Comment: The Nez Perce Tribe Water Resource Division (Tribe) commented that footnote #1 on Table 1, "Effluent Limitations and Monitoring Requirements", is inconsistent with the *E. coli* monitoring frequency of five samples per month as specified

in Table 1. Footnote #1 specifies that a minimum of five samples should be collected every 3-5 days.

Response: Small municipal wastewater treatment facilities such as Grangeville are typically staffed five days a week Monday through Friday. A sample frequency of 5/month with samples collected every 3-5 days is a recognition of this fact along with a desire to spread sampling events out evenly over the month.

5. Regarding the exclusion of pH effluent limitation from Table 1.

Comment: The Tribe requested that EPA include the pH effluent limitation (6.5 – 9.0 standard units as specified in Section I.A.2.) in Table 1 to ensure that it is not overlooked.

Response: Because pH effluent limits are specified over the range of 6.5 to 9.0 standard units at all times, it does not lend itself to the format of Table 1 which identifies average monthly, average weekly, maximum daily, and instantaneous maximum effluent limits. EPA has not yet encountered a circumstance where a pH limit has been overlooked due to exclusion from Table 1.

6. Regarding the requirement that samples for some parameters be composited over an 8-hour time period as opposed to a 24 hour composite.

Comment: The Tribe requested clarification as to why an 8-hour composite sample was required as opposed to a 24-hour composite.

Response: For small municipal wastewater treatment facilities (i.e., those with a design flow less that 1 MGD), EPA typically requires 8-hour composites in recognition of the fact that these facilities are not staffed around the clock, and often do not have fully automated sampling equipment.

7. Regarding the requirement that total inorganic nitrogen (TIN) ammonia and dissolved oxygen (DO) be monitored for a period of three years instead of the full 5 year permit term.

Comment: The Tribe requested the monitoring requirement for TIN, ammonia and DO be extended from three to five years.

Response: Monthly monitoring for a period of three years provides a total of 36 sample results for each parameter. This is sufficient data to evaluate whether future effluent limitations are necessary for TIN, ammonia and DO.

8. Regarding the temperature effluent limit of 9.5°C from April 1 through May 31, and 19.4°C from July 15 through September 15.

Comment: On behalf of the City of Grangeville, JUB Engineers (JUB) requested that the permit not have a temperature effluent limit for April and May until the background

temperature and designated issues are resolved for Threemile Creek. The permit could have a re-opener clause and a new compliance schedule for temperature. Several other parties, including: 1) the South Fork of the Clearwater Watershed Advisory Group (WAG); 2) the City of Grangeville; and, 3) the Idaho Department of Environmental Quality (IDEQ) made similar comments suggesting that the temperature limit be removed from the permit despite the fact that a wasteload allocation (WLA) for the Grangeville wastewater treatment plant (WWTP) has been established in the final and approved Total Maximum Daily Load (TMDL). This temperature limit/WLA was based upon salmonid spawning being a designated beneficial use in Threemile Creek. However, new information indicates that a natural physical barrier (i.e., waterfall) downstream of the WWTP may block salmonid passage, and that downstream reaches of Threemile Creek go dry during summer months in dry years. Questions concerning the natural condition of Threemile Creek upstream of the WWTP have also been expressed, along with the possibility that the temperature of the receiving water exceeds 9.5°C during the time when salmonid spawning criteria apply.

Response: EPA agrees that the temperature WLA in the TMDL maybe based upon an improper designated use, and that imposing such a restrictive temperature limit on the City will cause serious operational and financial difficulties that would not be needed if salmonid spawning is demonstrated not to be an existing use. Accordingly, EPA is removing proposed temperature effluent limitations from the permit pending further study being conducted by IDEQ and the City of Grangeville as discussed below. However, if the results of this study indicate that salmonid spawning is an existing use, then the permit may be re-opened to include the temperature limits that were specified in the TMDL.

Although adult salmonids have been captured above the migration barrier, limited studies performed by the City found no evidence of salmonid spawning above the barrier. Together with the City of Grangeville, IDEQ proposes to conduct more detailed investigations over the next two years to identify existing designated uses of Threemile Creek along with its natural temperature condition. This study will include detailed fish electro shocking work in the summer and fall of 2005, the purpose of which is to determine if there is or is not a viable population of salmonids in Threemile Creek above the migration barrier. In addition, information provided by the City of Grangeville suggests that trout present in Threemile Creek are escapees from local farm ponds and that these fish are non-reproducing. Salmonids collected during the electro shocking program will be analyzed in a population dynamic study for age class determinations. Additionally, fish collected will be preserved for genetic analysis to determine parentage and source of fish. These studies are planned through October 2005, and will be performed primarily by IDEQ, with assistance from the City of Grangeville, the WAG, and EPA.

The second phase of the proposed study is to conduct year long temperature measurements at key locations in the upper section of Threemile Creek above and below the migration barrier. Temperature data will be collected above the Grangeville WWTP, below the plant discharge, at the fish barrier and below the fish barrier. Stream flow data

will also be collected. This information is intended to be used for establishing site specific criteria should salmonid spawning be determined to be an existing designated use for Threemile Creek. This data collection has the potential to affect designated uses and possibly water quality standards, both of which would require IDEQ to adopt changes into their water quality standards and seek approval of the new criteria by EPA.

A possibility exists that resident trout spawning does occur in the upper reaches of Threemile Creek, and that natural background conditions exist in which salmonid (in this case trout) populations are viable. Therefore, a third phase of the proposed study is to collect additional temperature information on reference stream(s) in order to determine if it is appropriate to apply Idaho's natural conditions standard. Temperature data will be collected at springs, at prairie break, and at reference stream(s). It is anticipated that the entire study will be completed by March 2007. To guide this investigation, IDEQ has recently prepared a Threemile Creek Beneficial Use Assessment Project Plan.

9. Regarding the 0.067 mg/l phosphorous limit during the time period July 1 through September 15.

Comment: On behalf of the City of Grangeville, JUB Engineers (JUB) requested that the phosphorous limit be changed to require 85 percent removal by the end of the permit cycle.

Response: The phosphorous effluent limit of 0.067 mg/l (67 µg/l) applies from July 1 through September 15 which is the critical time period for algae growth. As discussed in the fact sheet, this permit limit was taken directly from the final TMDL which went through a public review process and was approved by EPA. If the City of Grangeville is in disagreement with the basis of these effluent limits, these concerns should have been raised during the development of the TMDL, not during their implementation in the NPDES permit. Unlike temperature where there is a question over improper use designation and ongoing study to assess the problem, the phosphorous WLA is not based upon the salmonid spawning use designation. The state water quality standard for nutrients (IDAPA 58.01.02.200.06) is a narrative standard that simply states "surface waters of the state shall be free from excess nutrients that can cause visible slime growths or other nuisance aquatic growths impairing designated beneficial uses." Numeric criteria used to establish WLAs in the TMDL include a regional guidance of 0.030 mg/l total phosphorous for Columbia Plateau streams, and 0.1 mg/l as water quality criteria from the EPA "Goldbook" (EPA 1986). The City has several options to achieve compliance with the phosphorous limit including: 1) treatment using technologies such as continuous backwashing upflow dual sand filtration (CBUDSF); 2) land application; 3) water storage during critical time periods; and/or, 4) other treatment options. The 4.5 year compliance schedule in the permit should allow the City of Grangeville ample time to study their options, and pursue the most cost effective path towards achieving compliance. It should also be noted that many small municipalities in Idaho are facing similar restrictions with the discharge of phosphorous containing wastewaters as a consequence of recently issued TMDLs. Some of these communities have total

phosphorous effluent limits at or below 0.01 mg/l, levels that have been demonstrated achievable through technologies such as CBUDSF.

10. Regarding the 85 percent removal requirement for BOD_5 and TSS.

Comment: On behalf of the City of Grangeville, JUB Engineers (JUB) requested that the 85 percent removal requirement for BOD_5 and TSS be imposed during the third year of the permit cycle as part of a compliance schedule.

Response: Percent removal requirements for BOD_5 and TSS are technology based effluent limits imposed as secondary treatment requirements. Compliance schedule are not available for technology based effluent limits, and all POTWs were required to meet secondary treatment standards by July 1, 1977.

11. Regarding the requirement for the City to prepare a Facilities Plan .

Comment: On behalf of the City of Grangeville, JUB Engineers (JUB) requested that the permit include a requirement for the City to prepare a Facilities Plan to: 1) address and resolve the phosphorous removal requirement; 2) evaluate options for I/I control; and, 3) evaluate options for compliance with the revised temperature standards that would result from revising the TMDL for Threemile Creek to consider natural temperature.

Response: The EPA encourages the City of Grangeville to pursue any and all planning options that are necessary to comply with the NPDES permit. However, the preparation of a Facilities Plan is not a permit requirement. As noted above in comment response #8, IDEQ and the City are already involved in studying many of the issues related to temperature in Threemile Creek, and its designated beneficial uses.

12. Regarding a waiver for 85 percent removal of BOD_5 and TSS during flows above 1.5 MGD.

Comment: On behalf of the City of Grangeville, JUB Engineers (JUB) requested that the permit include a waiver for the 85 percent removal requirement during flows exceeding 1.5 MGD as was done during the last permit issuance in 1987.

Response: According the discharge monitoring reports (DMRs) submitted by the City of Grangeville, the highest inflow that has occurred to the plant over the past five years was 1.18 MGD in May 2004. While this exceeds the design capacity of the plant (0.88 MGD), it is below the 1.5 MGD waiver limit that was granted as part of the 1987 permit issuance. The city has had 18 years to address their infiltration/inflow (I/I) problem since the last permit issuance, and EPA understands that these efforts are continuing. The percent removal rate will remain at 85 percent for all flows. However, EPA acknowledges that effluent violations may occur during periods of peak flow as part of large storm events.