



FACT SHEET

**The United States Environmental Protection Agency (EPA)
Proposes To Reissue
A National Pollutant Discharge Elimination System (NPDES) Permit to:**

**City of Fruitland, Payette River Facility
P.O. Box 324
Fruitland, Idaho 83619**

NPDES Permit Number: ID-002119-9

Public Notice Start Date: March 23, 2011

Public Notice Expiration Date: April 22, 2011

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1-800-424-4372 ext. 3-8257 (within Region 10)
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EPA Proposes To Reissue NPDES Permit

EPA proposes to reissue the NPDES permit to the facility referenced above. The draft permit places conditions on the discharge of pollutants from the wastewater treatment plant to waters of the United States. In order to ensure protection of water quality and human health, the permit place limits on the types and amounts of pollutants that can be discharged from each facility.

This Fact Sheet includes:

- information on public comment, public hearing, and appeal procedures
- a listing of proposed effluent limitations, and other conditions for each facility
- a map and description of the discharge locations
- technical material supporting the conditions in the permit

State Certification for Facilities that Discharge to State Waters

EPA will request that the Idaho Department of Environmental Quality (IDEQ) certify the NPDES permit for this facility, under Section 401 of the Clean Water Act. Comments regarding the certification should be directed to:

IDEQ Boise Regional Office
1445 N. Orchard
Boise, ID 83706
ph: (208) 373-0550
fx: (208) 373-0287

Public Comment

Persons wishing to comment on, or request a Public Hearing for the draft permit for this facility may do so in writing by the expiration date of the Public Comment period. A request for a Public Hearing must state the nature of the issues to be raised as well as the requester's name, address and telephone number. All comments and requests for Public Hearings must be in writing and should be submitted to EPA as described in the Public Comments Section of the attached Public Notice.

After the Public Notice expires and all comments have been considered, EPA Region 10's Director for the Office of Water and Watersheds will make a final decision regarding permit reissuance. If no substantive comments are received, the tentative conditions in the draft permit will become final, and the permit will become effective upon issuance. If comments are received, EPA will address the comments and issue the permit. In such a case, the permit will become effective at least 30 days after the issuance date unless an appeal is submitted to the Environmental Appeals Board within 30 days.

Documents are Available for Review.

The draft permit and fact sheet are posted on the Region 10 website at <http://yosemite.epa.gov/r10/WATER.NSF/NPDES+Permits/DraftPermitsID>. Copies may also be requested by writing to EPA at the Seattle address below, by e-mailing washington.audrey@epa.gov, or by calling Audrey Washington at 206-553-0523 or (800) 424-4372 ext 0523 (within Alaska, Idaho, Oregon, & Washington). Copies may also be inspected and copied at the offices below between 8:30 a.m. and 4:00 P.M., Monday through Friday, except federal holidays. In Seattle, visitors report to the 12th floor Public Information Center.

United States Environmental Protection Agency

Region 10

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For technical questions regarding the permit or fact sheet, contact John Drabek at the phone number or e-mail address at the top of this fact sheet. Those with impaired hearing or speech may contact a TDD operator at 1-800-833-6384 and ask to be connected to the appropriate phone number. Persons with disabilities may request additional services by contacting John Drabek.

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APPLICANT

This fact sheet provides information on the draft NPDES permit for the following entity:

Facility Name: City of Fruitland, Payette River Wastewater Treatment Plant

Mailing Address: P.O. Box 324, Fruitland, Idaho 83619

Facility Address: 8701 Northwest 6th Avenue, Idaho 83619

Contact: Rick Shultz, (208) 452-3997

I. FACILITY INFORMATION

A. Facility Description

The City of Fruitland, Payette River Facility owns, operates and has maintenance responsibility for a facility that treats domestic sewage and commercial wastewater discharge. The facility receives wastewater primarily from local residents and commercial establishments through a separate sanitary sewer system. Dickinson Frozen Foods, an onion processing facility with pretreatment, is the only industrial discharger to the system and discharges in the range of 140,000 gallons per day to the treatment system. This is greater than 25,000 gallons per day making it a significant industrial user.

Primary treatment consists of a step screen and ram press to remove solids. The Fruitland Payette River wastewater treatment plant provides treatment equivalent to secondary (TES) using waste stabilization ponds operated as a “solids recycling/aerated lagoon” (SR/AL). This is a three-cell aerated lagoon with diffused-air aeration system.

Final effluent polishing is accomplished by a submerged-rock filter. Disinfection is provided by chlorination in a third cell prior to discharge to the Payette River in a batch mode of operation; i.e., wastewater is discharged for a three-hour period out of a 12-hour cycle at a maximum rate of 1.0 million gallons per day.

Fruitland achieved overall BOD removal of 85 percent with four exceptions and 85 percent TSS removal with three exceptions.

Disinfection is by adding sodium hypochlorite from either an on-site hypochlorite generator or 12.5% hypochlorite.

Settled solids are removed from the treatment system and disposed of by burial at Payette County’s Clay Peak Sanitary Landfill.

The sanitary collection system which drains to the Payette River Wastewater Treatment facility contains approximately 9.7 miles of piping with 750 service connections. The current service population is estimated to be 2,375 people. The WWTP has a design flow rate of 0.35 mgd.

The average inflow and infiltration is 22,000 gallons per day. To address this, the City has prepared a facilities plan and is continuing to upgrade and maintain the collection system.

Permit History

The facility's previous permit became effective on December 31, 2001. A complete application for permit reissuance was submitted to EPA on September 13, 2006. Since the permit was not reissued before the expiration date of January 2, 2007, the permit was administratively extended under 40 CFR 122.6. An updated application was sent to EPA on November 6, 2009.

B. Compliance History

A review of the DMRs from January, 2003 to July 2009 found the following:

pH

One violation of the 6.5 standard in October, 2008 with a discharge of 5.7

Chlorine

The monthly average chlorine limit of 0.5 mg/L was violated only in 2003 with discharges of 0.52, 0.54, 0.54, 0.61 mg/l and 0.71 mg/L.

II. RECEIVING WATER

The treated effluent from the City of Fruitland's wastewater treatment facility is discharged continuously to the Payette River at river mile 3.9 which is identified in the Southwest Idaho Basin of Idaho's *Water Quality Standards and Wastewater Treatment Requirements at* (IDAPA 58.01.02.140.16.). The discharge is in the Payette River, Black Canyon Reservoir Dam to the mouth subbasin and the standards protect the following beneficial use classifications: cold water aquatic life, salmonid spawning; primary contact recreation; aesthetics; wildlife habitats; and domestic, agricultural, and industrial water supply. The outfall is located at latitude 44° 50.6' 00" N and longitude 116° 55.1' 51.5" W.

A. Water Quality Standards

Section 301(b)(1)(C) of the CWA requires the development of limitations in permits necessary to meet water quality standards by July 1, 1977. Federal regulations at 40 CFR 122.4(d) require that the conditions in NPDES permits ensure compliance with the water quality standards of all affected States. A State's water quality standards are composed of use classifications, numeric and/or narrative water quality criteria, and an anti-degradation policy. The use classification system designates the beneficial uses (such as drinking water supply, contact recreation, and aquatic life) that each water body is expected to achieve. The numeric and/or narrative water quality criteria are the criteria deemed necessary by the State to support the beneficial use classification of each water body.

B. Water Quality Limited Segment

A water quality limited segment (WQLS) is any waterbody, or definable portion of a waterbody, where it is known that water quality does not meet applicable water quality standards or is not expected to meet applicable water quality standards. In accordance with section 303(d) of the Clean Water Act, States must identify waters not achieving water quality standards in spite of application of technology-based controls in National Pollutant

Discharge Elimination System (NPDES) permits for point sources. Such waterbodies are known as water quality limited segments (WQLSs), and the list of such waterbodies is called the “303(d) list.” Once a water body is identified as a WQLS, the States are required under the Clean Water Act to develop a total maximum daily load (TMDL).

A TMDL is a determination of the mass or concentration of a pollutant from point, nonpoint, and natural background sources that may be discharged to a water body without causing the water body to exceed the water quality criterion for that pollutant (including a margin of safety). The TMDL documents the amount of a pollutant a water body can assimilate without violating a state’s water quality standards and allocates that load to known point sources and nonpoint sources.

The segment of the Payette River to which the City of Fruitland discharges was identified on the State of Idaho 303(d) list because it did not attain the state water quality standards for temperature and bacteria. The State of Idaho developed *The Lower Payette River Subbasin Assessment and Total Maximum Daily Load, December 1999* that was approved by EPA in May, 2000. That TMDL did not establish an allocation for temperature. The TMDL did establish a WLA for bacteria of 200 CFU/100 ml.

III. EFFLUENT LIMITATIONS

A. Basis for Permit Effluent Limits

In general, the CWA requires that the limits for a particular pollutant be the more stringent of either technology-based effluent limits or water quality-based limits. Technology-based limits are set according to the level of treatment that is achievable using available technology. A water quality-based effluent limit is designed to ensure that the water quality standards of a waterbody are being met and they may be more stringent than technology-based effluent limits. The basis for the proposed effluent limits in the draft permit are provided in Appendix B of this document.

B. Proposed Effluent Limitations

The following summarizes the proposed effluent limitations that are in the draft permit:

1. There must be no discharge of any floating solids, visible foam in other than trace amounts, or oily wastes that produce a sheen on the surface of the receiving water.
2. Table 1 below presents the proposed effluent limitations.

| Table 1 Effluent Limitations | | | | |
|---|-----------------------------------|-----------------------------|--|------------------------------------|
| Parameters | Average Monthly Limit | Average Weekly Limit | Minimum Percent Removal¹ | Instantaneous Maximum Limit |
| Flow | -- | -- | --- | -- |
| BOD ₅ | 30 mg/L | 45 mg/L | 85% | -- |
| | 95 lbs/day ² | 140 lbs/day ² | | -- |
| TSS | 30 mg/L | 45 mg/L | 85% | -- |
| | 95 lbs/day ² | 140 lbs/day ² | | -- |
| <i>E. coli</i> Bacteria | 126 colonies /100 mL ³ | -- | -- | 406 colonies /100mL |
| Fecal Coliform May 1 - September 30 | 50 colonies/100 mL ³ | -- | -- | |
| Total Residual Chlorine | 0.5 mg/L | 0.75 mg/L | -- | -- |
| | 1.5 lbs/day | 2.2 lbs/day | -- | -- |
| Phosphorus May 1 - September 30 | 15 lbs/day | 19 lbs/day | -- | -- |
| pH | 6.5 – 9.0 standard units | | | |

1. Percent removal is calculated using the following equation: ((influent - effluent) / influent) x 100, this limit applies to the average monthly values.
2. Loading limits are calculated by multiplying the concentration in mg/L by the flow and a conversion factor of 8.34 lbs/gallon.
3. The monthly averages for *E. coli* and fecal coliform are the geometric means of all samples taken during the month.

IV. MONITORING REQUIREMENTS

A. Basis for Effluent and Surface Water Monitoring Requirements

Section 308 of the CWA and federal regulation 40 CFR 122.44(i) require monitoring in permits to determine compliance with effluent limitations. Monitoring is also required to characterize the effluent to determine if additional effluent limitations are required and to monitor effluent impacts on receiving water quality.

B. Effluent Monitoring Requirements

Parameters

BOD₅, TSS, *E. coli*, Fecal Coliform, pH and Total Residual Chlorine

The permit requires monitoring for BOD₅, TSS, *E. coli*, fecal coliform, pH and total residual chlorine to determine compliance with the effluent limits. The permit also requires monitoring of the influent for BOD₅ and TSS to calculate monthly removal rates.

Total Phosphorus

The Payette River is not impaired for nutrients. However, there is a TMDL for the Snake River Hells Canyon which assigns waste load allocations to point sources that discharge directly to the Snake River. The Snake River - Hells Canyon Total Maximum Daily Load (SR-HC TMDL) (IDHW), June 2004 states future work will be done to determine if tributaries such as the Payette River require a TMDL. The SR-HC TMDL target for total phosphorus for each tributary is a concentration of less than or equal to 0.07 mg/L total phosphorus as measured at the mouth of the tributary. Data show that the Payette River is close to this target. To support this target concentration for the Payette River, the draft permit for this facility includes a phosphorus WLA equal to the current loading of the facility. The waste load allocation applies for the critical period for the Snake River of May through September. An effluent limitation equal to the existing load is consistent with the WLAs for phosphorus for point sources within the SR-HC TMDL reach, which employ facultative lagoons (i.e. City of Fruitland Snake River permit). An effluent limitation will insure no increase in total phosphorus from the facility. A weekly effluent limitation of 19 lbs pounds per day and a monthly limitation of 14 pounds per day are established using procedures in the TSD.

Total phosphorus surface water monitoring is required to determine any future reasonable potential to violate the water quality standards.

Ortho-Phosphorus, Kjeldahl Nitrogen, Nitrate - Nitrite (as N),

Since total phosphorus is the primary limiting nutrient and the downstream Snake River TMDL includes allocations for total phosphorus only, continued ortho-phosphorus, kjeldahl nitrogen and nitrate – nitrite monitoring will provide no additional useful information. Monitoring for these parameters has been discontinued.

Ammonia

Monitoring for ammonia is again required however; it is expanded from two years in the existing permit to the term of the new permit. Ammonia is a parameter commonly monitored for POTWs to determine performance and will determine impacts to the Payette River. Ammonia does not have a reasonable potential to violate the water quality standards of the Payette River therefore a limit is not required.

Temperature

The Payette River is listed for temperature but a TMDL is not yet developed for temperature. Fruitland has not been required to monitor its effluent for temperature. To characterize the discharges for temperature continuous monitoring is required. Continuous ambient temperature monitoring is also required. This data will be used to

determine if Fruitland has a reasonable potential to violate the water quality standard for temperature and to gather data to support a future TMDL effort.

Application Form 2A Monitoring

The City of Fruitland WWTP is a minor NPDES facility (i.e., <1 MGD design flow). Monitoring for reapplication is required over a three year period as required in NPDES permit Application Form 2A Effluent Testing Data.

Frequency

Monitoring frequencies are based on the nature and effect of the pollutant, as well as a determination of the minimum sampling necessary to adequately monitor the facility’s performance. Permittees have the option of taking more frequent samples than are required under the permit. These samples can be used for averaging if they are conducted using EPA approved test methods (generally found in 40 CFR 136) and if the Method Detection Limits (MDLs) are less than the effluent limits.

Table 2 presents the effluent monitoring requirements for the permittee in the draft permit. Each of the effluent monitoring requirements from the previous permit were evaluated to determine whether the requirements should be continued, updated or eliminated.

The sampling location must be after the last treatment unit and prior to discharge to the receiving water. If no discharge occurs during the reporting period, “no discharge” shall be reported on the DMR.

| Table 2 Effluent Monitoring Requirements | | | | |
|---|-----------------|------------------------------------|-------------------------|--------------------|
| Parameter | Unit | Sample Location | Sample Frequency | Sample Type |
| Flow | mgd | Effluent | Continuous | Recording |
| BOD ₅ | mg/L | Influent and Effluent ⁴ | 1/week | 24-hour composite |
| | lbs/day | Effluent | 1/week | Calculation |
| | % Removal | --- | --- | Calculation |
| TSS | mg/L | Influent and Effluent ⁴ | 1/week | 24-hour composite |
| | lbs/day | Effluent | 1/week | Calculation |
| | % Removal | --- | --- | Calculation |
| pH | standard units | Effluent | 5/week | Grab |
| <i>E.coli</i> Bacteria | colonies/100 mL | Effluent | 1/week | Grab |
| Fecal Coliform May 1 to September 30 | colonies/100 ml | Effluent | 1/month | Grab |
| Total Residual Chlorine | mg/L | Effluent | 5/week | Grab |
| | lbs/day | | | |

| Table 2 Effluent Monitoring Requirements | | | | |
|---|-------------|------------------------|---|--------------------|
| Parameter | Unit | Sample Location | Sample Frequency | Sample Type |
| Total Ammonia Nitrogen | mg/L | Effluent | 1/2 month | 24-hour composite |
| Total Phosphorus | mg/L | Effluent | 1/week | 24-hour composite |
| | Lbs/day | | | |
| Temperature | °F | Effluent | Continuous | Recording |
| NPDES Application Form 2A Effluent Testing Data | mg/L | Effluent | 1 each in 2 nd , 3 rd , & 4 th years of the permit | See footnote 5 |

4. Influent and effluent composite samples shall be collected during the same 24-hour period.
5. For Effluent Testing Data, in accordance with instructions in NPDES Application Form 2A, Part B.6.

| Table 3 Surface Water Monitoring Parameter and Location | | | | |
|--|-------------|------------------------|-------------------------|--------------------|
| Parameter | Unit | Sample Location | Sample Frequency | Sample Type |
| Temperature | °F | Upstream | Continuous | Recording |
| Phosphorus | mg/L | Upstream | 1/quarter | grab |

V. SLUDGE (BIOSOLIDS) REQUIREMENTS

EPA Region 10 separates wastewater and sludge permitting. Under the CWA, EPA has the authority to issue separate sludge-only permits for the purposes of regulating biosolids. EPA may issue a sludge-only permit to each facility at a later date, as appropriate.

In the absence of a sludge-only permit, sludge management and disposal activities at each facility continue to be subject to the national sewage sludge standards at 40 CFR Part 503 and any requirements of the State's biosolids program. Since the 40 CFR Part 503 regulations are self-implementing, the permittees must comply with them whether or not a permit has been issued.

The proposed permit requires the permittee to submit a biosolids permit application (NPDES Form 2S) before sewage sludge is removed from the lagoon. The application is required by 40 CFR 122.21(a)(i), 122.21(a)(ii)(H), and 122.21(c)(2). The regulations require 180 days so EPA has time to evaluate the information, ask for additional information and prepare the permit.

VI. OTHER PERMIT CONDITIONS

A. Quality Assurance Plan Implementation

The federal regulation at 40 CFR §122.41(e) requires the permittee to develop procedures to ensure that the monitoring data submitted to EPA are accurate and to explain data anomalies if they occur. The permittee is required to develop or update and implement a Quality Assurance Plan within 90 days of the effective date of the final permit. The Quality Assurance Plan shall consist of standard operating procedures that the permittee must follow for collecting, handling, storing and shipping samples, laboratory analysis and data reporting. The plan shall be retained on site and be made available to EPA and IDEQ upon request.

B. Operation and Maintenance Plan Implementation

The permit requires the Permittee to properly operate and maintain all facilities and systems of treatment and control. Proper operation and maintenance is essential to meeting discharge limits, monitoring requirements, and all other permit requirements at all times. The Permittee is required to develop and implement an operation and maintenance plan for its facility within 180 days of the effective date of the final permit. The plan shall be retained on site and made available to EPA and IDEQ upon request.

C. Sanitary Sewer Overflows and Proper Operation and Maintenance

Untreated or partially treated discharges from separate sanitary sewer systems are referred to as sanitary sewer overflows (SSOs). SSOs may present serious risks of human exposure when released to certain areas, such as streets, private property, basements, and receiving waters used for drinking water, fishing and shellfishing, or contact recreation. Untreated sewage contains pathogens and other pollutants, which are toxic. SSOs are not authorized under this permit. Pursuant to the NPDES regulations, discharges from separate sanitary sewer systems authorized by NPDES permits must meet effluent limitations that are based upon secondary treatment. Further, discharges must meet any more stringent effluent limitations that are established to meet EPA-approved state water quality standards.

The permit contains language to address SSO reporting and public notice and operation and maintenance of the collection system. The permit requires that the permittee identify SSO occurrences and their causes. In addition, the permit establishes reporting, record keeping and third party notification of SSOs. Finally, the permit requires proper operation and maintenance of the collection system. The following specific permit conditions apply:

Immediate Reporting – The permittee is required to notify the EPA of an SSO within 24 hours of the time the permittee becomes aware of the overflow. (See 40 CFR 122.41(l)(6))

Written Reports – The permittee is required to provide the EPA a written report within five days of the time it became aware of any overflow that is subject to the immediate reporting provision. (See 40 CFR 122.41(l)(6)(i)).

Third Party Notice – The permit requires that the permittee establish a process to notify specified third parties of SSOs that may endanger health due to likelihood of human exposure or of unanticipated bypasses and upsets that exceed any effluent limitation in the permit or that may endanger health due to a likelihood of human exposure. The permittee is required

to develop, in consultation with appropriate authorities at the local, county, and/or state level, a plan that describes how, under various overflow (and unanticipated bypass and upset) scenarios, the public, as well as other entities, would be notified of overflows that may endanger health. The plan should identify all overflows that would be reported, to whom, and the specific information that would be reported. The plan should include a description of lines of communication and the identities of responsible officials. (See 40 CFR 122.41(l)(6)).

Record Keeping – The permittee is required to keep records of SSOs. The permittee must retain the reports submitted to the EPA and other appropriate reports that could include work orders associated with investigation of system problems related to a SSO, that describes the steps taken or planned to reduce, eliminate, and prevent reoccurrence of the SSO. (See 40 CFR 122.41(j)).

Proper Operation and Maintenance – The permit requires proper operation and maintenance of the collection system. (See 40 CFR 122.41(d) and (e)). SSOs may be indicative of improper operation and maintenance of the collection system. The permittee may consider the development and implementation of a capacity, management, operation and maintenance (CMOM) program.

The permittee may refer to Guide for Evaluating Capacity, Management, Operation, and Maintenance (CMOM) Programs at Sanitary Sewer Collection Systems (EPA 305-B-05-002). This guide identifies some of the criteria used by EPA inspectors to evaluate a collection system's management, operation and maintenance program activities. Owners/operators can review their own systems against the checklist (Chapter 3) to reduce the occurrence of sewer overflows and improve or maintain compliance.

D. Additional Permit Provisions

Sections III, IV, and V of the draft permit contain standard regulatory language that must be included in all NPDES permits. Because they are based on federal regulations, they cannot be challenged in the context of an individual NPDES permit action. The standard regulatory language covers requirements such as monitoring, recording, and reporting requirements, compliance responsibilities, and other general requirements.

VII. OTHER LEGAL REQUIREMENTS

A. Endangered Species Act

The Endangered Species Act requires federal agencies to consult with National Oceanic and Atmospheric Administration Fisheries (NOAA Fisheries) and the U.S. Fish and Wildlife Service (FWS) if their actions could adversely affect any threatened or endangered species. EPA has determined that there are no listed species in the vicinity of the discharge; therefore, the issuance of this proposed permit will have no effect on listed species.

In an e-mail dated January 21, 2009, NOAA Fisheries stated that there are no threatened or endangered species under NOAA's jurisdiction in the Snake River drainage upstream of the Hells Canyon Dam, which is located at river mile 247.5. The City of Fruitland, Payette is located at river mile 3.9 of the Payette River tributary to the Snake River more than 100 miles upstream from Hell's Canyon Dam and the nearest ESA-listed threatened or

endangered species under NOAA's jurisdiction. Therefore, the reissuance of this permit will have no effect on any listed threatened or endangered species under NOAA's jurisdiction.

Bull trout although listed for Payette County is not present in the Payette River according to the U.S. Fish and Wildlife Service (e-mail October 22, 2010 Bob Kibler - Fish and Wildlife Biologist, U.S. Department of The Interior - Fish and Wildlife Service).

Based on the following considerations, EPA again concludes as it did for the existing permit that this permit has no effect on endangered or threatened species under the jurisdiction of the U.S. Fish and Wildlife Service. Bull trout are not found in the Payette River near Fruitland according to the U.S. Fish and Wildlife Service. Therefore, EPA concludes discharges from Fruitland will have no effect on any listed species under the jurisdiction of either NOAA or FWS.

B. Essential Fish Habitat

Essential fish habitat (EFH) includes the waters and substrate (sediments, etc.) necessary for fish to spawn, breed, feed, or grow to maturity. The Magnuson-Stevens Fishery Conservation and Management Act (January 21, 1999) requires EPA to consult with NOAA Fisheries when a proposed discharge has the potential to adversely affect (reduce quality and/or quantity of) EFH. The EFH regulations define an adverse effect as any impact which reduces quality or quantity of EFH and may include direct (e.g. contamination or physical disruption), indirect (e.g. loss of prey, reduction in species' fecundity), site specific, or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions.

The area of the discharge is not designated critical habitat pursuant to 50 CFR Part 17 Endangered and Threatened Wildlife and Plants; Revised Designation of Critical Habitat for Bull Trout in the Coterminous United States; Final Rule, October 18, 2010. EPA concludes that issuance of this permit has no affect on EFH.

C. State Certification

Section 401 of the CWA requires EPA to seek State certification before issuing a final permit. As a part of the certification, the State may require more stringent permit conditions or additional monitoring requirements to ensure that the permit complies with State water quality standards.

D. Permit Expiration

The permit will expire five years from the effective date of the permit.

VIII. DEFINITIONS AND ACRONYMS

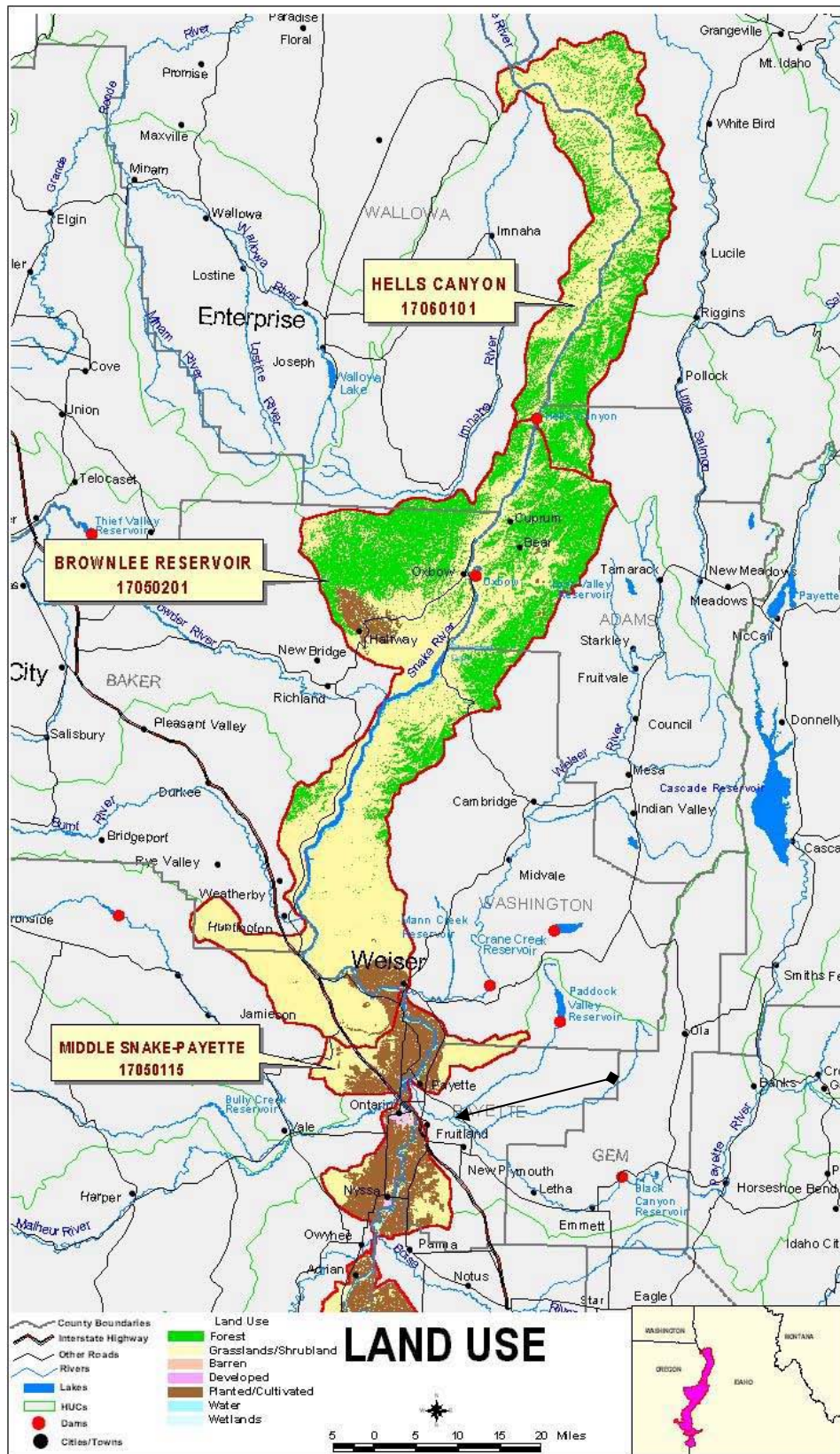
| | |
|------------------|-------------------------------------|
| 1Q10 | 1 day, 10 year low flow |
| 7Q10 | 7 day, 10 year low flow |
| AML | Average Monthly Limit |
| BOD ₅ | Biochemical oxygen demand, five-day |
| °C | Degrees Celsius |
| cfs | Cubic feet per second |

| | |
|---------|--|
| CFR | Code of Federal Regulations |
| CV | Coefficient of Variation |
| CWA | Clean Water Act |
| DMR | Discharge Monitoring Report |
| DO | Dissolved oxygen |
| EPA | U.S. Environmental Protection Agency |
| ESA | Endangered Species Act |
| lbs/day | Pounds per day |
| LTA | Long Term Average |
| mg/L | Milligrams per liter |
| mL | milliliters |
| µg/L | Micrograms per liter |
| mgd | Million gallons per day |
| MDL | Maximum Daily Limit or Method Detection Limit (depending on the context) |
| NOAA | National Oceanographic and Atmospheric Administration |
| NPDES | National Pollutant Discharge Elimination System |
| OWW | Office of Water and Watersheds |
| O&M | Operations and maintenance |
| POTW | Publicly owned treatment works |
| QAP | Quality assurance plan |
| RP | Reasonable Potential |
| RPM | Reasonable Potential Multiplier |
| s.u. | Standard Units |
| TMDL | Total Maximum Daily Load |
| TRE | Toxicity Reduction Evaluation |
| TSD | Technical Support Document (EPA, 1991) |
| TSS | Total suspended solids |
| USFWS | U.S. Fish and Wildlife Service |
| USGS | United States Geological Survey |
| UV | Ultraviolet radiation |
| WLA | Wasteload allocation |
| WQBEL | Water quality-based effluent limit |
| WWTP | Wastewater treatment plant |

IX. REFERENCES

1. City of Fruitland, ID, NPDES permit, effective December 31, 2001 to January 2, 2007.
2. Idaho Administrative Procedures Act (IDAPA), 2006. Section 58, Water Quality Standards and Wastewater Treatment Requirements. Idaho Department of Environmental Quality Rules, Title 01, Chapter 02.
3. U.S. EPA, 1973. *Water Quality Criteria 1972* (EPA R3-73-033).
4. EPA. 1991. Technical Support Document for Water Quality-based Toxics Control. US Environmental Protection Agency, Office of Water, EPA/505/2-90-001.
5. EPA, 1996. U.S. EPA NPDES Permit Writer's Manual, US Environmental Protection Agency, Office of Water, EPA-833-B-96-003.

Appendix A – Location Map and Discharge Point to Payette River







Appendix B – Basis for Effluent Limitations

The following discussion explains in more detail the statutory and regulatory basis for the technology and water quality-based effluent limits in the draft permit. Part A discusses technology-based effluent limits, Part B discusses water quality-based effluent limits in general, and Part C discusses facility specific water quality-based effluent limits.

A. Technology-Based Effluent Limits

The CWA requires POTWs to meet requirements based on available wastewater treatment technology. Section 301 of the CWA established a required performance level, referred to as “secondary treatment,” which all POTWs were required to meet by July 1, 1977. EPA has developed and promulgated “secondary treatment” effluent limitations, which are found in 40 CFR 133.102. These technology-based effluent limits apply to all municipal wastewater treatment plants and identify the minimum level of effluent quality attainable by application of secondary treatment in terms of BOD₅, TSS and pH.

The existing permit was based on adjusting these limits for TSS in accordance with 40 CFR 133.103(c) (IDAPA16.01.01.420.02.b.ii). However, these limitations were never submitted to or approved by EPA as alternative state requirements. Therefore, they should not have been included in the previous permit. These alternative state requirements (ASRs) for TSS were a monthly limit of 70 mg/L and a weekly limit of 105 mg/L. Additionally, the State of Idaho eliminated IDAPA16.01.01.420.02.b.ii and the ASRs.

On September 20, 1984, EPA revised the Secondary Treatment Regulations (40CFR 133.102) for facilities that use waste stabilization ponds as the principal process. These revisions established effluent limitations for Treatment Equivalent to Secondary Treatment (40 CFR 133.105). However, 40CFR133.105(f) states:

“Furthermore, permitting authorities shall require more stringent limitations when adjusting permits if: (1) For existing facilities the permitting authority determines that the 30-day average and the 7- day average BOD₅ and SS effluent values that could be achievable through proper operating and maintenance of the treatment work, based on an analysis of the past performance of the treatment works, would enable the treatment works to achieve more stringent limitations”

An analysis of the last three years demonstrates Fruitland Payette can achieve through proper operating and maintenance of the treatment work a more stringent limitation than Treatment Equivalent to Secondary. The regulation requires as the limit for a given parameter the 95th percentile value of the 30 day average effluent quality achieved for a period of at least two years.

The TSS 95th percentile for the 30 day average is under 30 mg/L over the last three years. Multiplying by 1.5 produces a 7-day average of 45 mg/l. These limits are the same as established in 40CFR133.102(a) Secondary Treatment and in the proposed reissued permit shown in Table B-1.

The BOD₅ 95th percentile for the 30 day average is under 30 mg/L over the last three years. Multiplying by 1.5 produces a 7-day average of 45 mg/l. These limits are the same as established in 40CFR133.102(b) Secondary Treatment and in the proposed reissued permit as shown in Table B-1.

Based on past performance over the last three years Fruitland can achieve through proper operation and maintenance of the treatment work a BOD₅ removal rate of 85 percent. Over the last three years Fruitland achieved this level of control with only four exceptions. Based on past performance over the last three years Fruitland can achieve through proper operation and maintenance of the treatment work a TSS removal rate of 85 percent. Over the last three years Fruitland achieved this level of control with only three exceptions.

| Parameter | Average Monthly Limit | Average Weekly Limit | Range |
|--|------------------------------|-----------------------------|-------------------|
| BOD ₅ | 30 mg/L | 45 mg/L | --- |
| TSS | 30 mg/L | 45 mg/L | --- |
| Removal Rates for BOD ₅ and TSS | 85% (minimum) | --- | --- |
| pH | --- | --- | 6.0 - 9.0 s.u. |

Mass-based Limits

The federal regulations at 40 CFR §122.45(b) and (f) require that POTW limitations to be expressed as mass-based limits using the design flow of the facility. The mass-based limits, expressed in lbs/day, are calculated as follows based on the design flow:

$$\text{Mass-based limit (lbs/day)} = \text{concentration limit (mg/L)} \times \text{design flow (mgd)} \times 8.34$$

For example for BOD₅:

$$\text{Mass-based limit (lbs/day)} = 30 \text{ mg/L} \times 0.35 \text{ mgd} \times 8.34 = 95 \text{ lbs per day.}$$

EPA will not allow any adjustment to the mass limits under §133.105(a)(1) or §133.105(b)(1). This provision is optional in cases when wastes are introduced from an industrial category that exceeds 10 percent of the design flow of a publicly owned treatment works. Effluent limits for BOD₅ and TSS may be adjusted upwards.

Chlorine

Chlorine is often used to disinfect municipal wastewater prior to discharge. The Water Pollution Control Federation’s *Chlorination of Wastewater* (1976) states that a properly designed and maintained wastewater treatment facility can achieve adequate disinfection if a 0.5 mg/L chlorine residual is maintained after 15 minutes of contact time. A treatment plant that provides adequate chlorination contact time can meet the 0.5 mg/L limit on a monthly average basis. The average weekly limit is expressed as 1.5 times the average monthly limit or in this case 0.75

mg/L. The technology based limits for total residual chlorine are 0.5 mg/L average monthly and 0.75 mg/l average weekly.

Finally, since the federal regulation at 40 CFR § 122.45(f) requires limitations to be expressed as mass based limits using the design flow of the facility, mass based limits are calculated as follows:

$$\text{Monthly average} = 0.5 \text{ mg/L} \times 0.35 \text{ mgd} \times 8.34 = 1.5 \text{ lbs/day}$$

$$\text{Weekly average} = 0.75 \text{ mg/L} \times 0.35 \text{ mgd} \times 8.34 = 2.2 \text{ lbs/day}$$

B. Water Quality-Based Effluent Limits

Statutory Basis for Water Quality-Based Limits

Section 301(b)(1)(C) of the CWA requires the development of limitations in permits necessary to meet water quality standards by July 1, 1977.

The NPDES regulation 40 CFR §122.44(d)(1), implementing Section 301 (b)(1)(C) of the CWA, requires that permits include limits for all pollutants or parameters which are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any state/tribal water quality standard, including state/tribal narrative criteria for water quality.

The regulations require that this evaluation be made using procedures which account for existing controls on point and nonpoint sources of pollution, the variability of the pollutant in the effluent, species sensitivity (for toxicity), and where appropriate, dilution in the receiving water. The limits must be stringent enough to ensure that water quality standards are met and must be consistent with any available wasteload allocation.

Reasonable Potential Analysis

When evaluating the effluent to determine if water quality-based effluent limits based on chemical specific numeric criteria are needed, a projection of the receiving water concentration downstream of where the effluent enters the receiving water for each pollutant of concern is made. The chemical-specific concentration of the effluent and receiving water and, if appropriate, the dilution available from the receiving water are factors used to project the receiving water concentration. If the projected concentration of the receiving water exceeds the numeric criterion for a limited parameter, then there is a reasonable potential that the discharge may cause or contribute to an excursion above the applicable water quality standard, and a water quality-based effluent limit is required.

Sometimes it is appropriate to allow a small volume of receiving water to provide dilution of the effluent; these volumes are called mixing zones. Mixing zone allowances will increase the allowable mass loadings of the pollutant to the water body and decrease treatment requirements. Mixing zones can be used only when there is adequate receiving water flow volume and the concentration of the pollutant of concern in the receiving water is below the numeric criterion necessary to protect the designated uses of the water body. Mixing zones must be authorized by the State. The State of Idaho authorized a mixing zone of 25 percent of the receiving water

resulting in an acute dilution ratio of 55 to 1 and a chronic dilution ratio of 75 to 1.

The chronic ammonia criterion is expressed as a 30-day average not to be exceeded more than once every three years. The 30B3 is a biologically-based design flow intended to ensure an excursion frequency of once every three years for a 30-day average flow rate. The averaging period (30 days) and the excursion frequency (3 years) are consistent with the chronic ammonia criterion. This results in a dilution ratio of 161.

$$D = \frac{Q_e + Q_u(MZ)}{Q_e}$$

D = Dilution Ratio

Q_e = Effluent flow rate (set equal to the design flow of the WWTP)

Q_u = Receiving water low flow rate upstream of the discharge (1Q10, 7Q10 or 30B3)

Based on USGS Station 13251000 in Payette River near Payette Idaho

MZ = is the fraction of the receiving water flow available for dilution.

Q_e = maximum effluent flow = 0.35 mgd

Q_u = 1Q10 = upstream acute critical low flow = 127 CFS = 82 mgd

$$\text{Acute dilution ratio} = \frac{0.35 + 82(0.25)}{0.35} = 55$$

Q_u = 7Q10 = upstream chronic critical low flow = 173 CFS = 112 mgd

$$\text{Chronic dilution ratio} = \frac{0.35 + 112(0.25)}{0.35} = 75$$

Q_u = 30B3 = ammonia upstream chronic critical low flow = 243 CFS = 157 mgd

$$\text{Ammonia Chronic dilution ratio} = \frac{0.35 + 157(0.25)}{0.35} = 113$$

Procedure for Deriving Water Quality-based Effluent Limits

The first step in developing a water quality-based effluent limit is to develop a wasteload allocation (WLA) for the pollutant. A wasteload allocation is the concentration or loading of a pollutant that the permittee may discharge without causing or contributing to an exceedance of water quality standards in the receiving water.

In cases where a mixing zone is not authorized, either because the receiving water already exceeds the criterion, the receiving water flow is too low to provide dilution, or the State does not authorize one, the criterion becomes the WLA. Establishing the criterion as the wasteload allocation ensures that the permittee will not cause or contribute to an exceedance of the

criterion. The following discussion details the specific water quality-based effluent limits in the draft permit.

C. Facility-Specific Water Quality-based Limits

Once the WLA has been developed, EPA applies the statistical permit limit derivation approach described in Chapter 5 of the TSD to obtain daily maximum and monthly average permit limits. This approach takes into account effluent variability (using the CV), sampling frequency and the difference in time frames between the monthly average and daily maximum limits.

The daily maximum limit is based on the CV of the data and the probability basis, while the monthly average limit is dependent on these two variables and the monitoring frequency. As recommended in the TSD, EPA used a probability basis of 95 percent for monthly average limit calculation and 99 percent for the daily maximum limit calculation.

Floating, Suspended or Submerged Matter/Oil and Grease

The Idaho Water Quality Standards (IDAPA 58.01.02.200.05) require surface waters of the State to be free from floating, suspended or submerged matter of any kind in concentrations causing nuisance or objectionable conditions that may impair designated beneficial uses. A narrative condition is proposed for the draft permit that states there must be no discharge of floating solids or visible foam or oil and grease other than trace amounts.

pH

The Idaho Water Quality Standards (IDAPA 58.01.02.250.01.a) require surface waters of the State to have a pH value within the range of 6.5 - 9.5 standard units. It is anticipated that mixing zones will not be authorized for the water quality-based criterion for pH. Therefore, this criterion must be met when the effluent is discharged to the receiving water. The technology-based effluent limits for pH are 6.0 - 9.0 standard units. To ensure that both water quality-based requirements and technology-based requirements are met, the draft permit incorporates the more stringent lower limit of the water quality standards (6.5 standard units) and the more stringent upper limit of the technology-based limits (9.0 standard units). The City achieved these levels of control over the last five years.

Total Phosphorus

Performance Based Limit

The proposed permit contains a final end of pipe phosphorus weekly limit of 19 lbs per day and a monthly limitation of 15 lbs/day based on existing demonstrated performance using procedures in EPA's Technical Support Document. The derivation of this limit is shown below.

| | | | |
|--|--|---|--------|
| PERFORMANCE-BASED EFFLUENT LIMITS | | | |
| USE EXCEL TO PERFORM THE LOGNORMAL TRANSFORMATION | | | |
| AND CALCULATE THE TRANSFORMED MEAN AND VARIANCE | | | |
| | | LOGNORMAL TRANSFORMED MEAN = | 1.43 |
| | | LOGNORMAL TRANSFORMED VARIANCE = | 0.04 |
| | | NUMBER OF SAMPLES/MONTH FOR COMPLIANCE MONITORING = | 4 |
| | | AUTOCORRELATION FACTOR(ne)(USE 0 IF UNKNOWN) = | 0 |
| | | E(X) = | 4.26 |
| | | V(X) = | 0.742 |
| | | VARn | 0.0102 |
| | | MEANn= | 4.0129 |
| | | VAR(Xn)= | 0.185 |
| | | MAXIMUM DAILY EFFLUENT LIMIT = | 6.65 |
| | | AVERAGE MONTHLY EFFLUENT LIMIT = | 5.01 |

| <i>Column 1</i> | |
|--------------------|--------|
| Mean | 4.01 |
| Standard Error | 0.01 |
| Median | 4.01 |
| Mode | 3.97 |
| Standard Deviation | 0.08 |
| Sample Variance | 0.0059 |
| Kurtosis | -0.92 |
| Skewness | 0.29 |
| Range | 0.30 |
| Minimum | 3.87 |
| Maximum | 4.17 |
| Sum | 537.49 |
| Count | 134.00 |

| Total Phosphorus | Ln |
|------------------|----------|
| 4.07 | 1.403643 |
| 5.32 | 1.671473 |
| 4.89 | 1.587192 |
| 3.48 | 1.247032 |
| 3.5 | 1.252763 |

$$\text{Mass weekly limit} = 6.65 \text{ mg/L} \times 0.35 \text{ mgd} \times 8.34 = 19.4 \text{ lbs/day}$$

$$\text{Mass Monthly limit} = 5.01 \text{ mg/L} \times 0.35 \text{ mgd} \times 8.34 = 14.6 \text{ lbs/day}$$

Chlorine

Idaho water quality standards at IDAPA 58.01.02.210.01 establish a chlorine chronic aquatic life criterion of 11 µg/L and an acute aquatic life criterion 19 µg/L in the Snake River. Fruitland, Payette River does not have a reasonable potential to violate the water quality standards for chlorine in the Payette River. Therefore, water quality based effluent limits for chlorine is not required. However, EPA will continue to include technology based limits of 0.5 mg/l average monthly and 0.75 mg/l weekly derived for the existing permit.

Ammonia, Total (as Nitrogen)

The Idaho water quality standards contain criteria for the protection of aquatic life from the toxic effects of ammonia (IDAPA 58.01.02.250.01.d.). The water quality standards apply the criteria for early life stages to water bodies (IDAPA 58.01.02.250.01.d.(3)). The criteria are dependent on pH and temperature, because the fraction of ammonia present as the toxic, un-ionized form increases with increasing pH and temperature. Therefore, the criteria become more stringent as pH and temperature increase. Fresh water ammonia criteria are calculated according to the equations in Table B-5.

| Table B-5 Water Quality Criteria for Ammonia | |
|--|---|
| Acute Criterion | Chronic Criterion |
| $\frac{0.275}{1+10^{7.204-\text{pH}}} + \frac{39}{1+10^{\text{pH}-7.204}}$ | $\left(\frac{0.0577}{1+10^{7.688-\text{pH}}} + \frac{2.487}{1+10^{\text{pH}-7.688}} \right) \times \text{MIN}(2.85, 1.45 \times 10^{0.028 \times (25-T)})$ |

Ambient ammonia, temperature and pH data are from the surface water monitoring from May, 2002 through November, 2004 required during the last permit cycle. The 95th percentile of pH and temperature data are used to derive the acute and chronic criteria.

| | |
|--|------|
| 95 th Percentile Ambient pH | 7.36 |
| 95 th Percentile Ambient Temperature °C | 23 |
| Highest Background Ammonia mg/L | 0.11 |
| Highest Discharge Ammonia mg/L | 16.3 |
| Coefficient of Variation | 1.1 |

The ammonia acute criterion is 16.2 mg/L and the chronic criterion is 2.82 mg/L.

The reasonable potential analysis shows that there is no reasonable potential for the facility’s discharge to cause or contribute to an exceedance of the acute or chronic criteria, therefore,

effluent limits are not required. The reasonable potential analysis for derived for the existing permit issuance also found Fruitland had no reasonable potential to violate the ammonia water quality standards in the Payette River. Ammonia is a parameter commonly monitored for POTWs to determine performance. Monitoring will again be required. This will also determine impacts to the Payette River. Receiving water monitoring will not be required.

Escherichia coli (E. coli) Bacteria

The Payette River at the point of discharge is designated for primary contact recreation. Waters of the State of Idaho that are designated for recreation are not to contain *E. coli* bacteria in concentrations exceeding 126 organisms per 100 mL as a geometric mean based on a minimum of five samples taken every three to seven days over a thirty day period (IDAPA 58.01.02.251.01.a). The permit contains a monthly geometric mean effluent limit for *E. coli* of 126 organisms per 100 mL.

The Idaho water quality rules also state that for primary contact recreation a single water sample that exceeds 406 organisms/100 mL indicates a likely exceedance of the geometric mean criterion, although it is not, in and of itself, a violation of water quality standards. (IDAPA 58.01.02.251.01.b.ii).

The goal of a water quality-based effluent limit is to ensure a low probability that water quality standards will be exceeded in the receiving water as a result of a discharge, while considering the variability of the pollutant in the effluent (EPA, 1991). Because a single sample value exceeding 406 organisms/100 mL may indicate an exceedance of the geometric mean criterion, EPA has included an instantaneous (single grab sample) maximum effluent limit for *E. coli* of 406 organisms/100 mL in addition to a monthly geometric mean limit of 126 organisms/100 mL, which directly implements the water quality criterion for *E. coli*. This will ensure that the discharge will have a low probability of exceeding the geometric mean criterion for *E. coli* and provide warning of and opportunity to avoid possible non-compliance with the geometric mean criterion.

The draft permit, like the previous permit, includes “criteria end-of-pipe” effluent limits for bacteria, in order to protect contact recreation beneficial uses in the receiving water. In 1986, EPA updated its criteria to protect recreational use of water recommending an *E. coli* criterion as a better indicator of bacteria levels that may cause gastro-intestinal distress in swimmers than fecal coliform. IDEQ subsequently changed its bacteria criterion from fecal coliform to *E. coli*. EPA is using *E-coli* as the indicator of bacteria that is the indicator organism currently specified in the Idaho water quality standards. These limits are identical to the *E-coli* limits in the existing permit.

Fecal Coliform

Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at 40 CFR 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit. The proposed fecal coliform monthly limit is 50 colonies/100 mL from May 1st to September 30th is identical to the existing fecal coliform limit. The proposed permit requires monthly compliance monitoring.

Antidegradation

Overview

EPA is required under Section 301(b)(1)(C) of the Clean Water Act (CWA) and implementing regulations (40 CFR 122.4(d) and 122.44(d)) to establish conditions in NPDES permits that ensure compliance with State water quality standards, including antidegradation requirements. The fact that the State of Idaho has not identified methods for implementing its antidegradation policy does not necessarily prevent EPA from establishing such permit conditions.

The City of Fruitland, Payette NPDES permit contains limits as stringent as necessary to ensure compliance with all applicable water quality standards, including Idaho's antidegradation policy (IDAPA 58.01.02.051). As explained in detail below, the reissued permit ensures that "the existing in stream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected" consistent with the requirements of 40 CFR 131.12(a)(1) and IDAPA 58.01.02.051.01. Relative to the existing permit issued in 2001, the reissued permit does not allow lower water quality for those parameters where the receiving water quality "exceeds levels necessary to support propagation of fish, shellfish and wildlife and recreation in and on the water." Therefore, the reissued permit maintains and protects the existing level of water quality, consistent with 40 CFR 131.12(a)(2) and IDAPA 58.01.02.051.02. Finally, the antidegradation policy for outstanding resource waters is inapplicable in this reissued permit because no waters of the State of Idaho are designated as "outstanding resource waters" (IDAPA 58.01.02.051.03).

The draft reissued permit ensures compliance with the State of Idaho's antidegradation policy and CWA regulations because the permit conditions ensure protection of existing uses and do not allow lower water quality relative to the existing permit. Under the circumstances of this draft reissued permit, EPA may issue an NPDES permit even though the State has not yet identified methods for implementing its antidegradation policy. In its antidegradation analysis below, EPA is applying a parameter-by-parameter approach in determining compliance with Idaho's antidegradation requirements.

EPA Antidegradation Analysis

Protection of Existing Uses (IDAPA 58.01.02.051.01 and 40 CFR 131.12(a)(1))

The segment of the Payette River that receives the Fruitland discharge has the following designated beneficial uses: cold water aquatic life; special resource water; salmonid spawning; primary contact recreation; aesthetics; wildlife habitats; and domestic, agricultural and industrial water supply. The effluent limits in the draft permit ensure compliance with applicable numeric and narrative water quality criteria. The numeric and narrative water quality criteria are set at levels that ensure protection of the designated uses. As there is no information indicating the presence of existing beneficial uses other than those that are designated the draft permit ensures a level of water quality necessary to protect the designated uses and, in compliance with IDAPA 58.01.02.051.01 and 40 CFR 131.12(a)(1), also ensures that the level of water quality necessary to protect existing uses is maintained and protected. If EPA receives information during the public comment period demonstrating that there are existing uses for which the Payette River is not designated, EPA will consider this information before issuing a final permit and will establish additional or more stringent effluent limitations if necessary to ensure protection of existing uses.

Specifically, the Payette River is listed for temperature and bacteria under CWA section 303(d). The State of Idaho developed *The Lower Payette River Subbasin Assessment and Total Maximum Daily Load, December 1999* which was approved by EPA in May, 2000.

The TMDL provided an allocation for bacteria. The effluent limits for fecal coliform proposed in this permit are consistent, and in fact more stringent, than the fecal coliform limits identified in the TMDL and therefore are consistent with the requirements of 40 CFR 122.44 (d)(vii)(B).

The effluent limits in the permit for *E. coli* and fecal coliform bacteria are at the level of the *E. coli* limits and fecal coliform of the existing permit and thus do not allow lower water quality relative to the existing permit. Further, the discharge achieves the water quality standards for bacteria at the end of pipe. The effluent monthly limits for *E-coli* is 126 colonies per 100 mL and the instantaneous limitation is 406 colonies per 100 mL and are both identical to the existing permit. The fecal coliform limit of 50 colonies per 100 mL is identical to the existing permit.

The TMDL did not provide an allocation for temperature. Effluent monitoring for temperature was not required in the existing permit. The draft permit contains a requirement for continuous temperature monitoring to determine if Fruitland has a reasonable potential to violate the temperature water quality standard for the Payette River and to ensure temperature does not increase in the Payette River. Because the facility is not increasing its design flow or altering its treatment practices and is only contributing a small fraction of flow to the Payette River, EPA determines that this permit will not further impact the uses of the Payette River.

High Quality Waters (IDAPA 58.01.02.051.02 and 40 CFR 131.12(a)(2))

For all parameters other than those identified above as listed on the CWA 303(d) list, EPA is assuming that the receiving water is a high quality water with water quality levels that exceed “levels necessary to support propagation of fish, shellfish and wildlife and recreation in and on the water.” Therefore, EPA considers the provisions of IDAPA 58.01.02.051.02, for high quality waters, to be applicable to the receiving waters for all parameters except those discussed above as 303d listed.

All of the effluent limits in the reissued permit are as stringent as or more stringent than the corresponding limits in the existing (2001) permit. These pollutants are BOD₅, TSS, total residual chlorine and pH. Therefore, for those pollutants for which the receiving water is high quality the reissued permit does not authorize an increased discharge of any pollutant that was limited in the existing permit because the limits are unchanged.

As to those pollutants present in the discharge for which there are no effluent limits in both the reissued permit and the existing permit, there is no factual basis to expect that those pollutants will be discharged in greater amounts under the reissued permit than were authorized in the existing permit. Similarly, there is no factual basis to expect that the effluent contains any new pollutants that have not been discharged previously. EPA reached these conclusions because the permit application and the discharge monitoring report data indicate no changes in the design flow, actual flow, influent quality or treatment processes that could result in a new or increased discharge of pollutants.

Summary

In summary, the effluent limits in the reissued permit are as stringent as or more stringent than the corresponding limits in the existing permit for all parameters for which the receiving water quality “exceeds levels necessary to support propagation of fish, shellfish and wildlife and

recreation in and on the water.” Furthermore, the reissued permit will not authorize an increased discharge of any pollutants that were not subject to effluent limits under the existing permit.

The reissuance of the City of Fruitland NPDES permit will therefore not allow lower water quality relative to the existing permit. Consequently, there is no need for the State of Idaho to make a finding that “allowing lower water quality is necessary to accommodate important economic or social development” under IDAPA 58.01.02.051.02. Under these circumstances, EPA may issue an NPDES permit even though the State of Idaho has not yet identified methods for implementing its antidegradation policy.

The State of Idaho issued a draft certification stating the effluent limitations in the draft permit for the City of Fruitland are set at levels that ensure the State’s numeric and narrative criteria will be met.

REASONABLE POTENTIAL FOR AQUATIC LIFE

| Parameter | Ambient Conc. | State Water Quality Standard | | Max concentration at edge of... | | LIMIT REQ'D? | Effluent percentile value | <i>Pn</i> | Max effluent conc. measure | Coeff Variation | # of samples | Multiplier | Acute Dil'n Factor | Chronic Dil'n Factor |
|-------------------------|----------------------|------------------------------|-------|---------------------------------|---------------------|--------------|---------------------------|-----------|----------------------------|-----------------|--------------|------------|--------------------|----------------------|
| | | Chronic | Acute | Acute Mixing Zone | Chronic Mixing Zone | | | | | | | | | |
| | | | mg/L | mg/L | mg/L | | | | mg/L | CV | <i>n</i> | | | |
| Total Ammonia Nitrogen | 0.11 | 2.82 | 16.2 | 0.112 | 0.111 | NO | 0.99 | 0.803 | 0.11 | 1.10 | 21 | 2.02 | 55 | 113 |
| Total Residual Chlorine | 0.00 ^{mg/L} | 0.011 | 0.019 | 0.00931 | 0.00683 | NO | 0.99 | 0.957 | 0.52 | 0.22 | 68 | 0.98 | 55 | 75 |