



# FACT SHEET

Permit Number: ID-002371-0  
Public Notice start date: April 27, 2001  
Public Notice expiration date: May 29, 2001  
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**The United States Environmental Protection Agency (EPA)  
Plans To Reissue A  
National Pollutant Discharge Elimination System (NPDES) Permit To:**

**The City of Ashton  
714 Main Street  
P.O. Box 689  
Ashton, Idaho 83420**

**the Idaho Department of Environmental Quality Proposes to  
Certify the Permit**

**EPA Proposes NPDES Permit Reissuance.**

EPA proposes to reissue an NPDES permit to the City of Ashton. The draft permit places conditions on the discharge of pollutants from the wastewater treatment plant to an unnamed perennial stream (which is a tributary to Spring Creek and Henry's South Fork River). In order to ensure protection of water quality and human health, the permit places limits on the types and amounts of pollutants that can be discharged.

This Fact Sheet includes:

- information on public comment, public hearing, and appeal procedures
- a description of the current discharge
- a listing of proposed effluent limitations and other conditions
- a map and description of the discharge location
- detailed technical material supporting the conditions in the permit

**The State of Idaho Proposes Certification.**

EPA is requesting that the Idaho Department of Environmental Quality certify the NPDES permit for the City of Ashton, under section 401 of the Clean Water Act.

**Public Comment.**

Persons wishing to comment on the draft permit may do so in writing by the expiration date of the public notice. All comments must be in writing and include the commenter's name, address, and telephone number and either be addressed to the Office of Water Director at U.S. EPA, Region 10, 1200 6th Avenue, OW-130, Seattle, WA 98101; submitted by facsimile to (206) 553-0165; or submitted via e-mail to huynh.kelly@epa.gov.

After the comment period closes, and all significant comments have been considered, EPA's regional Director for the Office of Water will make a final decision regarding permit reissuance. If no comments are received, the tentative conditions in the draft permit will become final, and the permit will become effective upon reissuance. If comments are received, EPA will address the significant comments and reissue the permit. The permit will become effective 30 days after the reissuance date, unless an appeal is filed with the Environmental Appeals Board within 30 days.

**Public comment on State certification**

Persons wishing to comment on State Certification should submit written comments by the Public Notice expiration date to the Idaho Department of Environmental Quality (IDEQ), c/o Greg Eager, 900 North Skyline, Suite B, Idaho Falls, Idaho 83402. A copy of the comments should also be submitted to EPA.

**Documents are Available for Review.**

The draft NPDES permit and related documents can be reviewed or obtained by visiting or contacting EPA's Regional Office in Seattle between 8:30 a.m. and 4:00 p.m., Monday through Friday (See address below).

United States Environmental Protection Agency  
Region 10  
1200 Sixth Avenue, OW-130  
Seattle, Washington 98101  
(206) 553-2108 or  
1-800-424-4372 (within Alaska, Idaho, Oregon and Washington)

The Fact Sheet and draft permit are also available at:

EPA Idaho Operations Office  
1435 North Orchard Street  
Boise, Idaho 83706  
(208) 378-5746

Draft permits, Fact Sheets, and other information can also be found by visiting the Region 10 website at [www.epa.gov/r10earth/water.htm](http://www.epa.gov/r10earth/water.htm).

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## I. APPLICANT

City of Ashton  
NPDES Permit No.: ID-002371-0

714 Main Street, P.O. Box 689  
Ashton, Idaho 83420

Contact: Bruce Spitz, Public Works Supervisor

## II. FACILITY INFORMATION

### A. Treatment Plant Description

The City of Ashton owns, operates, and has maintenance responsibility for a facility which treats domestic sewage from local residents and commercial establishments. The facility's application indicates that the design flow of the facility is 1.0 million gallons per day (mgd). From 1998 through 2000 the facility's average monthly discharge has been between 0.0007 mgd and 0.16 mgd.

Domestic wastewater is treated through a four-cell facultative aerated lagoon system. Sludge is treated biologically and land applied. Although the draft permit allows year round discharge to the unnamed perennial stream (a tributary of the Henry's South Fork), effluent is generally land applied during the summer months.

### B. Background Information

The previous NPDES permit for the wastewater treatment plant was issued on August 30, 1982 and expired on July 31, 1987. The City of Ashton submitted a new application (General Form 1 and NPDES Form 2A) that was received by EPA on August 4, 2000 in response to a request by EPA dated June 6, 2000.

A review of the facility's Discharge Monitoring Reports<sup>1</sup> for the past five years indicates that the facility has periodically failed to be in compliance with its 1982 permit effluent limits for five day biochemical oxygen demand (BOD<sub>5</sub>), total suspended solids (TSS), fecal coliform and pH.

A map has been included in Appendix A which shows the location of the treatment

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<sup>1</sup> Discharge monitoring reports are forms that the facility uses to report the results of monitoring the facility has done in compliance with their NPDES permit.

plant and the discharge location.

### III. RECEIVING WATER

#### A. Outfall Location/ Receiving Water

The treated effluent from the City of Ashton wastewater treatment facility is discharged from Outfall 001, located at latitude 44° 03' 18" and longitude 111° 26' 53", to an unnamed perennial stream, then to Spring Creek, and then 2 miles to Henry's South Fork at approximately river mile 47.

Flow information was not available to determine the low flow conditions (i.e. 1Q10<sup>2</sup> or 7Q10<sup>3</sup>) in the stream, Spring Creek or Henry's South Fork.

#### B. Water Quality Standards

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 cold water aquatic life communities, contact recreation, etc.) 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. The anti-degradation policy represents a three tiered approach to maintain and protect various levels of water quality and uses.

The Idaho *Water Quality Standards and Wastewater Treatment Requirements* (IDAPA 58.01.02.101.01) protect the unnamed perennial stream and Spring Creek for primary or secondary recreation and cold water biota because they are nondesignated waterbodies. Downstream, the Henry's South Fork River is protected for cold water aquatic life communities, salmonid spawning, primary and secondary contact recreation, domestic water supply, and special resource waters (IDAPA 58.01.02.140.16).

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<sup>2</sup> The 1Q10 represents the lowest daily flow that is expected to occur once in ten years.

<sup>3</sup> The 7Q10 represents the lowest 7 day average flow that is expected to occur once in ten years.

The criteria that the State of Idaho has deemed necessary to protect the beneficial uses for the receiving waters and the State's anti-degradation policy are summarized in Appendix B.

#### **IV. EFFLUENT LIMITATIONS**

In general, the Clean Water Act requires that the effluent limits for a particular pollutant be the more stringent of either technology-based effluent limits or water quality-based limits. A technology based effluent limit requires a minimum level of treatment for municipal point sources based on currently available treatment technologies. A water quality based effluent limit is designed to ensure that the water quality standards of a waterbody are being met. For more information on deriving technology-based effluent limits and water quality-based effluent limits see Appendix C. The following summarizes the proposed effluent limitations that are in the draft permit.

1. The pH range shall be between 6.5 - 9.0 standard units.
2. Removal Requirements for BOD<sub>5</sub> and TSS: For any month, the monthly average effluent load shall not exceed 15 percent of the monthly average influent load.
3. Surface waters shall be free of floating, suspended, or submerged matter of any kind in concentrations causing nuisance or objectionable conditions or that may impair designated beneficial uses.
4. 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.
5. Table 1, below, presents the proposed effluent limits for BOD<sub>5</sub>, TSS and pH which are continued from the existing permit. Proposed limits for total residual chlorine, E. coli bacteria, and fecal coliform bacteria have been added to the permit.

<b>Table 1: Monthly, Weekly and Daily Effluent Limitations</b>				
<b>Parameters</b>	<b>Average Monthly Limit</b>	<b>Average Weekly Limit</b>	<b>Maximum Daily Limit</b>	<b>Instantaneous Maximum Daily Limit</b>
BOD <sub>5</sub>	30 mg/L 250 lbs/day	45 mg/L 375 lbs/day	---	---
TSS	30 mg/L 250 lbs/day	45 mg/L 375 lbs/day	---	---
Fecal coliform, organisms/100 mL	---	200	---	---
E. coli bacteria, organisms/100 mL	126	---	---	406
Total Residual Chlorine	0.5 mg/L 4.2 lbs/day	0.75 mg/L 6.3 lbs/day	---	---

## V. SLUDGE REQUIREMENTS

The biosolids management regulations at 40 CFR §503 were designed so that the standards are directly enforceable against most users or disposers of biosolids, whether or not they obtain an NPDES permit. Therefore, the publication of Part 503 in the *Federal Register* on February 19, 1993 served as notice to the regulated community of its duty to comply with the requirements of the rule, except those requirements that indicate that the permitting authority shall specify what has to be done.

Requirements are included in Part 503 for pollutants in biosolids, the reduction of pathogens in biosolids, the reduction of the characteristics in biosolids that attract vectors, the quality of the exit gas from a biosolids incinerator stack, the quality of biosolids that are placed in a municipal solid waste landfill unit, the sites where biosolids are either land applied or placed for final disposal, and for a biosolids incinerator.

Even though Part 503 is self-implementing, Section 405(f) of the CWA requires the inclusion of biosolids use or disposal requirements in any NPDES permit issued to a Treatment Works Treating Domestic Sewage. In addition, the biosolids permitting regulations in 40 CFR §122 and §124 have been revised to expand its authority to issue NPDES permits with these requirements. This includes all biosolids generators, biosolids treaters and blenders, surface disposal sites and biosolids incinerators. In the future, EPA Region 10 will be issuing a separate NPDES general permit which deals only with the use and disposal of biosolids. Facilities that generate biosolids, including the City of Ashton,

will be required to be covered under the biosolids general permit. As mentioned earlier, even though the permittee does not presently have a permit for biosolids use or disposal, the Permittee is responsible for complying with the requirements of 40 CFR 503.

Presently, the permittee land applies biosolids during the irrigation season. The draft permit requires the permittee to comply with 40 CFR Part 503 for any biosolids that are removed from the sewage lagoons.

**VI. MONITORING REQUIREMENTS**

A. Effluent Monitoring

Section 308 of the Clean Water Act and federal regulation 40 CFR 122.44(i) require monitoring in permits to determine compliance with effluent limitations. Monitoring may also be required to gather data for future effluent limitations or to monitor effluent impacts on receiving water quality. The Permittee is responsible for conducting the monitoring and for reporting results on Discharge Monitoring Reports to EPA.

Table 2 presents the proposed effluent monitoring requirements.

<b>Parameter</b>	<b>Sample Location</b>	<b>Sample Frequency</b>	<b>Sample Type</b>
Flow, mgd	Influent or Effluent	Continuous	Recording
BOD <sub>5</sub> , mg/L	Influent and Effluent	1/month	grab
TSS, mg/L	Effluent	1/month	grab
pH, standard units	Effluent	1/week	grab
Fecal coliform Bacteria, organisms/100 mL	Effluent	5/week	grab
E. coli Bacteria, organisms/100 mL	Effluent	5/month	grab
Temperature, °C	Effluent	1/week	grab
Total Ammonia as N, µg/L	Effluent	1/quarter	grab
Total Residual Chlorine, mg/L	Effluent	1/week	grab

B. Ambient Monitoring

The permittee shall monitor flow upstream of outfall 001 and temperature, pH, and total ammonia downstream of outfall 001 in the unnamed perennial creek. The ambient monitoring shall be monthly for flow and quarterly for temperature, pH and total ammonia for the duration of the permit.

C. Representative Sampling

The draft permit has expanded the requirement in the federal regulations regarding monitoring (40 CFR 122.41[j]). This provision now specifically requires representative sampling whenever a bypass, spill, or non-routine discharge of pollutants occurs, if the discharge may reasonably be expected to cause or contribute to a violation of an effluent limit under the permit. This provision is included in the draft permit because routine monitoring could easily miss permit violations and/or water quality standards exceedences that could result from bypasses, spills, or non-routine discharges. This requirement directs the permittee to conduct additional, targeted monitoring to quantify the effects of these occurrences on the final effluent discharge.

## VII. OTHER PERMIT CONDITIONS

A. Quality Assurance Plan

The federal regulation at 40 CFR 122.41(e) requires the Permittee to develop and submit a Quality Assurance Plan to ensure that the monitoring data submitted is accurate and to explain data anomalies if they occur. The Permittee is required to complete a Quality Assurance Plan within **60 days** of the effective date of the final permit and implement the plan **120 days** from the effective date of the permit. The Quality Assurance Plan shall consist of standard operating procedures the Permittee must follow for collecting, handling, storing and shipping samples, laboratory analysis, and data reporting.

B. Additional Permit Provisions

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

C. Operation and Maintenance Plan

Section 402 of the Clean Water Act and federal regulations 40 CFR 122.44(k)(2) and (3) authorize EPA to require best management practices, or BMPs, in NPDES permits. BMPs are measures for controlling the generation of pollutants and their release to waterways. For municipal facilities, these measures are typically included in the facility's Operation & Maintenance (O&M) plan. These measures are important tools for waste minimization and pollution prevention.

The draft permit requires the City of Ashton to incorporate appropriate BMPs into their O&M plan within **180 days** of permit issuance. Specifically, the City must consider spill prevention and control, optimization of chemical use, public education aimed at controlling the introduction of household hazardous materials to the sewer system, and water conservation. To the extent that any of these issues have already been addressed, the City need only reference the appropriate document in its O&M plan. The O&M plan must be revised as new practices are developed.

## VIII. OTHER LEGAL REQUIREMENTS

A. Endangered Species Act

The Endangered Species Act requires federal agencies to consult with the National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service (USFWS) if their actions could adversely affect any threatened or endangered species. EPA has contacted both services regarding threatened and endangered species in the Teton River watershed. NMFS has indicated that there are no listed or threatened species at the location of the Ashton discharge. The USFWS has indicated that none of the endangered species in the area are expected to be impacted by reissuance of the NPDES permit. Therefore, EPA has determined that issuance of this permit will have **no effect** on any of the endangered species that may occur in the vicinity of the discharge. See Appendix D for further details.

B. Essential Fish Habitat

Section 305(b) of the Magnuson-Stevens Act (16 USC 1855(b)) requires federal agencies to consult with the NMFS when any activity proposed to be permitted, funded, or undertaken by a federal agency may have an adverse effect on designated Essential Fish Habitat (EFH) as defined by the Act. The EFH regulations define an *adverse effect* as any impact which reduces quality and/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.

To date, federal management plans have been approved by the Secretary of Commerce for groundfish and coastal pelagics. None of the 83 West Coast groundfish surveyed for the federal management plan included habitat near Spring Creek and Henry's South Fork (see Section III for a description of the discharge location). Similarly, the coastal pelagic species are not effected by the permitted discharges. Appendix A of Amendment 14 to the Pacific Coast Salmon Plan includes a geographic range freshwater EFH for coho, chinook, and pink salmon (Figure A-1) that does not include either Spring Creek or Henry's South Fork River. Because the permit does not include discharges to EFH, EPA has made a finding of **no potential for adverse effect**.

C. State Certification

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

D. Permit Expiration

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

**APPENDIX A**  
**Wastewater Treatment Plant Location**

The wastewater treatment plant location map has been provided as a separate file due to its size of the file (85 KB). The file is titled "ID0023701 FS App A.pdf."

## APPENDIX B Water Quality Standards

### A. Water Quality Criteria

For the City of Ashton's discharge, the following water quality criteria were considered for the protection of the beneficial uses of the unnamed perennial stream, Spring Creek and the Henry's South Fork River:

1. IDAPA 58.01.02.200.02 - Surface waters of the State shall be free from toxic substances in concentrations that impair designated beneficial uses. Furthermore, IDAPA 58.01.02.210.01 incorporates the National Toxics Rule by reference as found in 40 CFR 131.36(b)(1) that includes numeric criteria for toxic substances.
2. IDAPA 58.01.02.200.05 - Surface waters of the State shall be free from floating, suspended, or submerged matter of any kind in concentrations causing nuisance or objectionable conditions or that may impair designated beneficial uses.
3. IDAPA 58.01.02.200.06 - 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.
4. IDAPA 58.01.02.250.01.a. - Hydrogen ion concentration (pH) values within the range of 6.5 to 9.5 standard units.
5. IDAPA 58.01.02.250.01.c.i. - The one-hour average concentration of total residual chlorine shall not exceed 19 ug/L.
6. IDAPA 58.01.02.250.01.c.ii. - The four-day average concentration of total residual chlorine shall not exceed 11 ug/L.
7. IDAPA 58.01.02.250.02.a. - Dissolved oxygen concentrations shall exceed 6 mg/L at all times.
8. IDAPA 58.01.02.250.02.c.i - The one hour average concentration of un-ionized ammonia (as N) is not to exceed  $(0.43/A/B/2)$  mg/L, where:

A = 1 if the water temperature (T) is  $\geq 20^{\circ}\text{C}$ , or  
A =  $10^{(0.03(20-T))}$  if  $T < 20^{\circ}\text{C}$ , and

B = 1 if the pH is  $\geq$  8.0, or  
B =  $(1 + 10^{(7.4 - \text{pH})}) \div 1.25$  if pH is < 8.0

9. IDAPA 58.01.02.250.02.c.ii - The four day average concentration of un-ionized ammonia (as N) is not to exceed  $(0.66/A/B/C)$  mg/L, where:

A = 1.4 if T is  $\geq$  15°C, or  
A =  $10^{(0.03(20 - T))}$  if T < 15°C, and

B = 1 if the pH is  $\geq$  8.0, or  
B =  $(1 + 10^{(7.4 - \text{pH})}) \div 1.25$  if pH is < 8.0

C = 13.5 if pH is  $\geq$  7.7, or  
C =  $20(10^{(7.7 - \text{pH})}) \div (1 + 10^{(7.4 - \text{pH})})$  if the pH is < 7.7

10. IDAPA 58.01.02.250.02.e - Waters designated for salmonid spawning are to exhibit the following characteristics during the spawning period and incubation for the particular species inhabiting those waters:
- IDAPA 58.01.02.250.02.e.i - Intergravel dissolved oxygen shall have a one day minimum of not less than 5.0 mg/L and a seven day average mean of not less than 6.0 mg/L.
  - IDAPA 58.01.02.250.02.e.ii - Water column dissolved oxygen shall have a one day minimum of not less than 6.0 mg/L or 90% saturation, whichever is greater; and water temperatures of 13 degrees C or less with a maximum daily average no greater than 9 degrees C.
11. IDAPA 58.01.02.251.01 Waters designated for primary contact recreation are not to contain E. coli bacteria significant to the public health in concentrations exceeding:
- 406/100 mL at any time,
  - a geometric mean of 126/100 mL based on a minimum of five samples taken every 3 to 5 days over a thirty day period.

B. Anti-Degradation Policy

The State of Idaho has adopted an anti-degradation policy as part of their water quality standards. The anti-degradation policy represents a three-tiered approach to maintain and protect various levels of water quality and uses. The three tiers of protection are as follows:

**Tier 1 – Maintenance of Existing Uses for all Waters** - The existing in stream uses and the level of water quality necessary to protect the existing uses shall be maintained and protected.

**Tier 2 – High Quality Water** – Where the quality of the water exceeds levels necessary to support propagation of fish, shellfish and wildlife and recreation in and on the water, that quality shall be maintained and protected unless the Department finds, after full satisfaction on the intergovernmental coordination and public participation provisions of the Department’s continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. In allowing such degradation or lower water quality, the Department shall assure water quality adequate to protect existing uses fully.

**Tier 3 - Outstanding Resource Waters** – Where high quality waters constitute an outstanding natural resource, such as waters of national and state parks and wildlife refuges, and waters of exceptional recreational or ecological significance, that water shall be maintained and protected from the impacts of point and nonpoint source activities.

The unnamed perennial stream, Spring Creek and Henry’s South Fork are Tier 1 waterbodies, therefore their existing stream uses must be protected. An NPDES permit cannot be issued that would result in the water quality criteria being violated. The draft permit contains effluent limits which ensures that the existing beneficial uses will be maintained.

## APPENDIX C Basis for Effluent Limitations

The CWA requires Publicly Owned Treatment Works to meet performance-based requirements (also known as technology based effluent limits) based on available wastewater treatment technology. EPA may find, by analyzing the effect of an effluent discharge on the receiving water, that technology based effluent limits are not sufficiently stringent to meet water quality standards. In such cases, EPA is required to develop more stringent, water quality-based effluent limits designed to ensure that water quality standards are met. The draft effluent limits reflect whichever limits (technology-based or water quality-based) are more stringent. The following explains in more detail the derivation of technology based effluent limits and water quality based effluent limits.

### A. Technology-Based Effluent Limitations

The 1972 CWA required publicly owned treatment works (POTWs) to meet performance-based requirements based on available wastewater treatment technology. Section 301 of the CWA established a required performance level, referred to as “secondary treatment,” that all POTWs were required to meet by July 1, 1977.

More specifically, Section 301(b)(1)(B) of the CWA requires that EPA develop secondary treatment standards for POTWs as defined in Section 304(d)(1) of the CWA. Based on this statutory requirement, EPA developed secondary treatment regulations, found in 40 CFR Part 133.102. These technology-based regulations apply to all municipal wastewater treatment plants and identify the minimum level of effluent quality attainable by secondary treatment in terms of BOD<sub>5</sub>, TSS and pH and have been included in Table C-1.

<b>Table C-1: Secondary Treatment Requirements for POTWs</b>			
<b>Parameter</b>	<b>Average Weekly Limit</b>	<b>Average Monthly Limit</b>	<b>Percent Removal</b>
BOD <sub>5</sub>	45 mg/L	30 mg/L	85%
SS	45 mg/L	30 mg/L	85%
pH	between 6.0 and 9.0 standard units		

EPA methodology and Federal regulations at (40 CFR § 122.45 (b) and 122.45 (f)) require BOD<sub>5</sub> and TSS limitations to be expressed as mass based limits using the design flow (1.0 mgd) of the facility. The loading is calculated as follows: concentration X design flow X 8.34. Using this formula, the plant’s BOD<sub>5</sub> and TSS discharge permit limits

are:

BOD loading, monthly average = 30 mg/L X 1.0 mgd X 8.34 = 250 lbs/day  
BOD loading, weekly average = 45 mg/L X 1.0 mgd X 8.34 = 375 lbs/day  
TSS loading, monthly average = 30 mg/L X 1.0 mgd X 8.34 = 250 lbs/day  
TSS loading, weekly average = 45 mg/L X 1.0 mgd X 8.34 = 375 lbs/day

The technology-based chlorine effluent limitation of 0.5 mg/L is derived from standard operating practices. The Water Pollution Control Federation's Chlorination of Wastewater (1976) states that a properly designed and maintained wastewater treatment plant 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. Additionally, NPDES regulations require effluent limits for POTWs to be expressed as average weekly limits (AWLs) as well as average monthly limits (AMLs) unless impracticable. The AWL is expressed as 1.5 times the AML, or in this case 0.75 mg/L. Finally, federal regulations require limitations to be expressed as mass-based limits using the design flow of the facility. Therefore, the loading limits are:

Chlorine loading, monthly average = 0.5 mg/L X 1.0 mgd X 8.34= 4.2 lbs/day  
Chlorine loading, weekly average = 0.75 mg/L X 1.0 mgd X 8.34= 6.3 lbs/day

Idaho's water quality standards found at IDAPA 16.01.02.420.05 include the technology-based limit that fecal coliform concentrations in secondary treated effluent not exceed a geometric mean of two hundred per one hundred ml based on no more than one week's data and a minimum of five samples.

B. Water Quality-Based Evaluation

1. 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. Discharges to state waters must also comply with limitations imposed by the state as part of its certification of NPDES permits under section 401 of the CWA.

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 water quality standard, including state 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.

## 2. Reasonable Potential Determination

The effluent is evaluated to determine if water quality-based effluent limits are needed based on chemical specific numeric criteria. Sometimes it is appropriate to allow a small area of ambient water to provide dilution of the effluent. These areas are called mixing zones. Mixing zone allowances will increase the mass loading of the pollutant to the water body, and decrease treatment requirements. Mixing zones can be used only when there is adequate ambient flow volume and the ambient water is below the criteria necessary to protect designated uses. The projected concentrations are determined by either:

- a) multiplying the maximum actual effluent concentration by a reasonable potential factor (to account for effluent variability) if a mixing zone is not available or
- b) projecting the receiving water concentration (downstream of where the effluent enters the receiving water) if a mixing zone is available. The maximum actual effluent concentration (multiplied by a reasonable potential factor), ambient water concentration and, the dilution available from the ambient water are used to project the receiving water concentration.

If the projected concentration exceeds the numeric criterion for a specific chemical, 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.

## 3. Procedure for Deriving Water Quality-Based Effluent Limits

The first step in developing a water quality based permit limit is to develop a wasteload allocation (WLA) for the pollutant. A WLA 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. WLAs are determined in one of the following ways:

- a) Mixing zone-based WLA

When the State authorizes a mixing zone for the discharge, the WLA is calculated by using a simple mass balance equation. The equation takes into account the available dilution provided by the mixing zone, and the background concentrations of the pollutant. Flow information is not available in the unnamed creek or Spring Creek and therefore a mixing zone was not considered.

b) Criterion as the Wasteload Allocation:

In some cases a mixing zone cannot be authorized, either because the receiving water already exceeds the criteria or the receiving water flow is too low to provide dilution. In such cases, the criterion becomes the WLA. Establishing the criterion as the WLA ensures that the Permittee will not contribute to an exceedance of the criteria.

Once the WLA has been developed, the EPA usually applies the statistical permit limit derivation approach described in Chapter 5 of the *Technical Support Document for Water Quality-Based Toxics Control* (EPA/505/2-90-001, March 1991, hereafter referred to as the TSD) to obtain monthly average, and weekly average or daily maximum permit limits. This approach takes into account effluent variability, sampling frequency, and water quality standards.

4. Basis for Effluent Limits

a) Toxic Substances

The Idaho water quality standards require surface waters of the state to be free from toxic substances in concentration that impair designated uses. The City of Ashton's discharge is not expected to contain toxic substances because it does not receive industrial process wastewater for treatment. The Permittee was not required to submit expanded effluent testing data or toxicity testing data because the facilities design flow is less than or equal to 1.0 mgd.

b) Narrative Criteria

The Idaho water quality standards 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 or that may impair designated beneficial uses. In addition, the water quality standards

require that surface waters be free from excess nutrients that can cause visible slime growths or other nuisance aquatic growths impairing designated beneficial uses. The draft permit has incorporated these narrative criteria.

c) E. coli and Fecal Coliform Bacteria

The bacteria E. coli (Escherichia coli) is commonly found in POTW effluent. Therefore, consistent with state water quality standards for the protection of primary contact (i.e. swimming), an E. coli effluent limit has been added to the permit. The Idaho water quality standard for wastewater discharges (IDAPA 58.01.02.420.5) require that fecal coliform concentrations not exceed the technology-based limit of a geometric mean of 200/100 ml based on a minimum of five samples in one week.

d) Total Residual Chlorine (TRC)

The previous permit for this facility (September, 1987) did not include limits for chlorine. Therefore, no monitoring data is available for the reasonable potential determination of water quality-based limits. The technology-based average monthly limit of 0.5 mg/L and average weekly limit of 0.75 mg/L have been included in the permit because chlorine is used in the disinfection process. The effluent data obtained during the next permit cycle will be used to determine if water quality-based effluent limitations are necessary.

e) pH

The Idaho state water quality standards require surface waters of the state to have a pH value within the range of 6.5 - 9.5 standard units. The technology-based regulations require that pH be within the range of 6.0 - 9.0 s.u. Therefore, a minimum water quality-based value of 6.5 s.u. and a maximum technology-based limit of 9.0 s.u. has been included in the permit.

f) Biochemical Oxygen Demand, Total Suspended Solids and Dissolved Oxygen

The BOD<sub>5</sub> and TSS effluent limits and removal requirements were included in the draft permit consistent with the technology-based requirements for facilities treating equivalent to secondary wastewater. Water quality criteria are not available for these parameters. Discharges from the City of Ashton are not expected to have an appreciable effect on the dissolved oxygen concentration in the receiving water because of the BOD limitations in the draft permit

g) Ammonia

IDEQ has developed water quality criteria to protect aquatic life against short term and long term adverse impacts from ammonia using the equations found in IDAPA 58.01.02.250.02.c.i (1-hour average) and IDAPA 58.01.02.250.02.c.ii (4-day average).

Since ambient and effluent data are not available in the unnamed Creek and Spring Creek, a reasonable potential analysis for ammonia could not be completed. The draft permit includes requirements for monitoring effluent and ambient ammonia as well as pH and temperature.

## **APPENDIX D**

### **Endangered Species Act**

Section 7 of the Endangered Species Act (ESA) requires federal agencies to request a consultation with the National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service (USFWS) regarding potential effects an action may have on listed endangered species.

On August 18, 2000, NMFS sent an e-mail to EPA Region 10 indicating that there are no listed or threatened species at the location of the Ashton discharge.

In a letter dated September 1, 2000, the USFWS identified the Canada lynx, gray wolf, grizzly bear, bald eagle, whooping crane, and Ute ladies'- tresses (a plant found in wet meadows and river meanders) as being federally-listed endangered species occurring in Fremont County, Idaho (the location of the Ashton discharge). This list has not changed according to the updated species list (1-4-01-SP-362) dated March 1, 2001.

EPA has determined that the requirements contained in the draft permit will not have an impact on the Canada lynx, gray wolf, grizzly bear, bald eagle, whooping crane, or Ute ladies'- tresses. Hunting and habitat destruction are the primary causes of declines of the Canada lynx, the gray wolf and the grizzly bear. Issuance of the draft NPDES permit for Ashton will not result in habitat destruction, nor will it result in changes in population that could result in increased habitat destruction. Furthermore, issuance of this draft permit will not impact the food sources of the Canada lynx, the gray wolf, or the grizzly bear.

The primary reasons for the decline of the bald eagle are destruction of their habitat and food sources and widespread historic application of DDT. This permit will not impact any of these issues.

The whooping crane and gray wolf are included on the list as an experimental and non-essential population in the area. Habitat management plans are not developed for these populations.

Modification of riparian and wetland habitats associated with livestock grazing, vegetation removal, excavation, construction, stream channelization, and actions that alter hydrology are the primary causes for adverse impacts to Ute ladies' - tresses. Issuance of an NPDES permit for the City of Ashton wastewater treatment plant will not result in habitat destruction. Data is unavailable regarding whether or not the Ute ladies'- tresses are found in the vicinity of the discharge.

Informal consultation on September 21, 2000 and September 29, 2000 with the USFWS indicated that reissuance of the permits would not affect the Canada lynx, gray wolf, grizzly bear, whooping crane, bald eagle, or Ute ladies'- tresses. Therefore, EPA has

determined that issuance of this permit will **not affect** any of the endangered species that may occur in the vicinity of the discharge.

