

FACT SHEET

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

The City of Heyburn
P.O. Box 147
Heyburn, Idaho 83336

Permit Number: ID-002094-0
Public Notice start date: March 9, 2001
Public Notice expiration date: April 9, 2001

EPA Proposes NPDES Permit Reissuance.

EPA proposes to reissue an NPDES permit to the City of Heyburn. The draft permit places conditions on the discharge of pollutants from the City of Heyburn's wastewater treatment plant to the Snake 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 and current sewage sludge (biosolids) practices
- a listing of proposed effluent limitations, schedules of compliance, and other conditions
- a map and description of the discharge location
- 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 Heyburn, under section 401 of the Clean Water Act. The state provided preliminary comments on the draft permit, and these comments have been incorporated into the draft permit.

Public Comment.

Persons wishing to comment on, or request a Public Hearing for, the draft permit may do so in writing by the expiration date of the Public Notice. 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.

Persons wishing to comment on State Certification should submit written comments by the Public Notice expiration date to the Idaho Division of Environmental Quality (IDEQ) at 601 Pole Line Road, Suite 2, Twin Falls, Idaho 83301. A copy of the comments should also be submitted to EPA.

After the Public Notice expires, and all comments have been considered, EPA's regional Director for the Office of Water 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. The permit will become effective 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 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). Draft permits, Fact Sheets, and other information can also be found by visiting the Region 10 website at "www.epa.gov/r10earth/water.htm."

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

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I. APPLICANT

City of Heyburn
NPDES Permit No.: ID-002094-0

Facility Mailing Address:
P.O. Box 147
Heyburn, Idaho 83336

II. FACILITY INFORMATION

A. Treatment Plant Description

The City of Heyburn owns, operates, and has maintenance responsibility for a facility which treats domestic sewage from local residents and commercial establishments. There are no significant industrial dischargers to the system. The facility has a design flow of 0.66 million gallons per day (mgd), an annual average daily flow rate of 0.32 mgd and provides secondary treatment, as well as disinfection by ultraviolet radiation prior to discharging effluent to the Snake River.

Biosolids are treated 60 - 90 days in aerobic digesters before being put onto sand or asphalt drying beds to dry. The City disposes of the biosolids at the Southern Idaho Regional Solid Waste District.

B. Background Information

The NPDES permit for the wastewater treatment plant expired on January 4, 1994. Under federal law, specifically, the Administrative Procedures Act (APA), a federally issued NPDES permit is administratively extended (i.e., continues in force and effect) provided the permittee submits a timely and complete application for a new permit prior to the expiration of the current permit. Since the City did submit a timely application for a new permit, the current permit was administratively extended.

A review of the facility's Discharge Monitoring Reports¹ for the past five years indicates that the facility has generally been in compliance with its permit effluent limits.

¹Discharge monitoring reports are forms used by the permittee to report the results of monitoring that is conducted to verify that they are adhering to the effluent limitations and conditions in their NPDES permit.

A map has been included in Appendix A which shows the location of the treatment plant and the discharge location.

III. RECEIVING WATER

A. Outfall location/ Receiving Water

The treated effluent from the City of Heyburn's wastewater treatment facility is discharged from outfall 001 to Milner Pool at approximately river mile (RM) 653.2 on the Snake River.

Milner pool, is a slow moving section of the Snake River that extends from approximately RM 640 to 675. Physical and chemical water quality characteristics are influenced by water releases from Minidoka Dam and American Falls Reservoir, municipal and industrial point source discharges, irrigation return flows, and nonpoint source agricultural runoff. Critical low flow conditions can result during fall and winter, the non-irrigation season, as water releases are curtailed at upstream dams to store water for irrigation purposes. Such curtailment takes place when carryover storage is small and precipitation and/or snow pack are below normal.

The following low flow values were calculated from USGS gaging station 13081500 (USGS station is downstream from Minidoka dam):

	<u>1Q10</u>	<u>7Q10</u>
June-September:	2412 cfs (1559 mgd)	3311cfs (2140 mgd)
October-May	145 cfs (93.7 mgd)	330 cfs (213.3 mgd)

The 1Q10 flow is the one day low flow with a return period of 10 years, and the 7Q10 is the seven day low flow with a return period of 10 years.

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 biota, 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 16.01.02.101.01.) protects this segment of the Snake River for the warm water biota, primary contact recreation, and agricultural water.

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

C. Water Quality Limited Segment

A water quality limited segment is any waterbody, or definable portion of water body, where it is known that water quality does not meet applicable water quality standards, and/or is not expected to meet applicable water quality standards. The Snake River has been listed as a water quality limited segment. This section of the river has been listed as water quality limited for sediment, nutrients, oil and grease, and dissolved oxygen.

Section 303(d) of the Clean Water Act requires States to develop a plan, known as a Total Maximum Daily Load (TMDL) management plan, for water bodies determined to be water quality limited. The TMDL documents the amount of a pollutant a waterbody can assimilate without violating a state's water quality standards and allocates that load to known point sources and nonpoint sources. The Idaho Division of Environmental Quality (IDEQ) completed the *Lake Walcott Subbasin Assessment and Total Maximum Daily Load* and submitted to EPA on December 20, 1999, and EPA approved the TMDL on June 28, 2000. The approved TMDL provides wasteload allocations for phosphorus.

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 effluent 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 and they may be more stringent than technology-based effluent limits. 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. For any month, the monthly average effluent concentration for BOD₅ and TSS shall not exceed 15 percent of the monthly average influent concentration for BOD₅ and TSS.
3. There shall be no discharge of floating solids or visible foam, or oil and grease other than trace amounts.

4. Table 1, below, presents the proposed average monthly, average weekly, and instantaneous maximum effluent limits for BOD₅, TSS, escherichia coli (E. coli) bacteria, fecal coliform bacteria, and total phosphorus.

TABLE 1: Monthly, Weekly and Daily Effluent Limitations			
Parameters	Average Monthly Limit	Average Weekly Limit	Instantaneous Maximum Limit
BOD ₅	30 mg/L (165 lbs/day)	45 mg/L (248 lbs/day)	---
TSS	30 mg/L (165 lbs/day)	45 mg/L (248 lbs/day)	---
E. coli Bacteria	126 /100 ml	---	406 /100 ml
Fecal Coliform Bacteria	---	200 colonies/100 ml	---
Total Phosphorus	5.0 lbs/day	10.1 lbs/day	---

V. MONITORING REQUIREMENTS

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 effluent and ambient data to determine if additional effluent limitations are required and/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, and table 3 presents the proposed ambient monitoring requirements.

TABLE 2: City of Heyburn Waste Water Treatment Plant Monitoring Requirements			
Parameter	Sample Location	Sample Frequency	Sample Type
Flow, mgd	Effluent	Continuous	---
BOD ₅ , mg/L	Influent and effluent	1/week	8-hour composite
TSS, mg/L	Influent and effluent	1/week	8-hour composite
pH, standard units	Effluent	5/week (Monday - Friday)	grab
Fecal Coliform Bacteria, colonies/100 ml	Effluent	1/week	grab
E. Coli Bacteria	Effluent	5/month	grab
Oil and Grease	Effluent	1/month	grab
Total Ammonia as N, mg/L	Effluent	1/month	8-hour composite
Total Phosphorus	Effluent	1/week	8-hour composite
Temperature, °C	Effluent	1/month	grab

TABLE 3: City of Heyburn Ambient Monitoring Requirements			
Parameter	Sample Location	Sample Frequency	Sample Type
Temperature, °C	upstream of outfall	2/month	grab
pH, standard units	upstream of outfall	2/month	grab
Total Ammonia, mg/L	upstream of outfall	2/month	grab
Note: Ambient monitoring shall start 3 years after the effective date of the permit and continue for 12 months.			

VI. SLUDGE (BIOSOLIDS) REQUIREMENTS

The biosolids conditions in the administratively extended permit were based on best professional judgment (BPJ) since EPA had not promulgated regulations for the use and disposal of biosolids at the time of permit issuance. Since that time EPA has promulgated regulations and they are contained in 40 CFR 503. Therefore, the BPJ biosolids requirements contained in the administratively extended permit have not been incorporated into the draft permit.

The biosolids regulations at 40 CFR 503 are self-implementing so that they are directly enforceable against most users or disposers of biosolids, whether or not they obtain an NPDES permit. The publication of 40 CFR 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 regulations, except for those requirements that indicate that the permitting authority shall specify what has to be done.

Requirements are contained in 40 Part 503 for: acceptable pollutant levels 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 biosolid incinerators.

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, treaters and blenders, surface disposal sites and incinerators. EPA Region 10 plans to issue a separate NPDES general permit which deals only with the use and disposal of biosolids. When the general permit is issued facilities that generate biosolids, including the City of Heyburn, will be required to be covered under this general permit.

Presently, the permittee disposes biosolids at the Southern Idaho Regional Solid Waste District. The draft permit requires the permittee to submit its updated sludge application within one year of the effective date of the permit.

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. 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.

VIII. OTHER LEGAL REQUIREMENTS

A. Endangered Species Act

The Endangered Species Act requires federal agencies to consult with the National Marine Fisheries Service and the U.S. Fish and Wildlife Service if their actions could adversely affect any threatened or endangered species. EPA has determined that issuance of this permit will not affect any of the endangered species in the vicinity of the discharge. See Appendix E for further details.

B. 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.

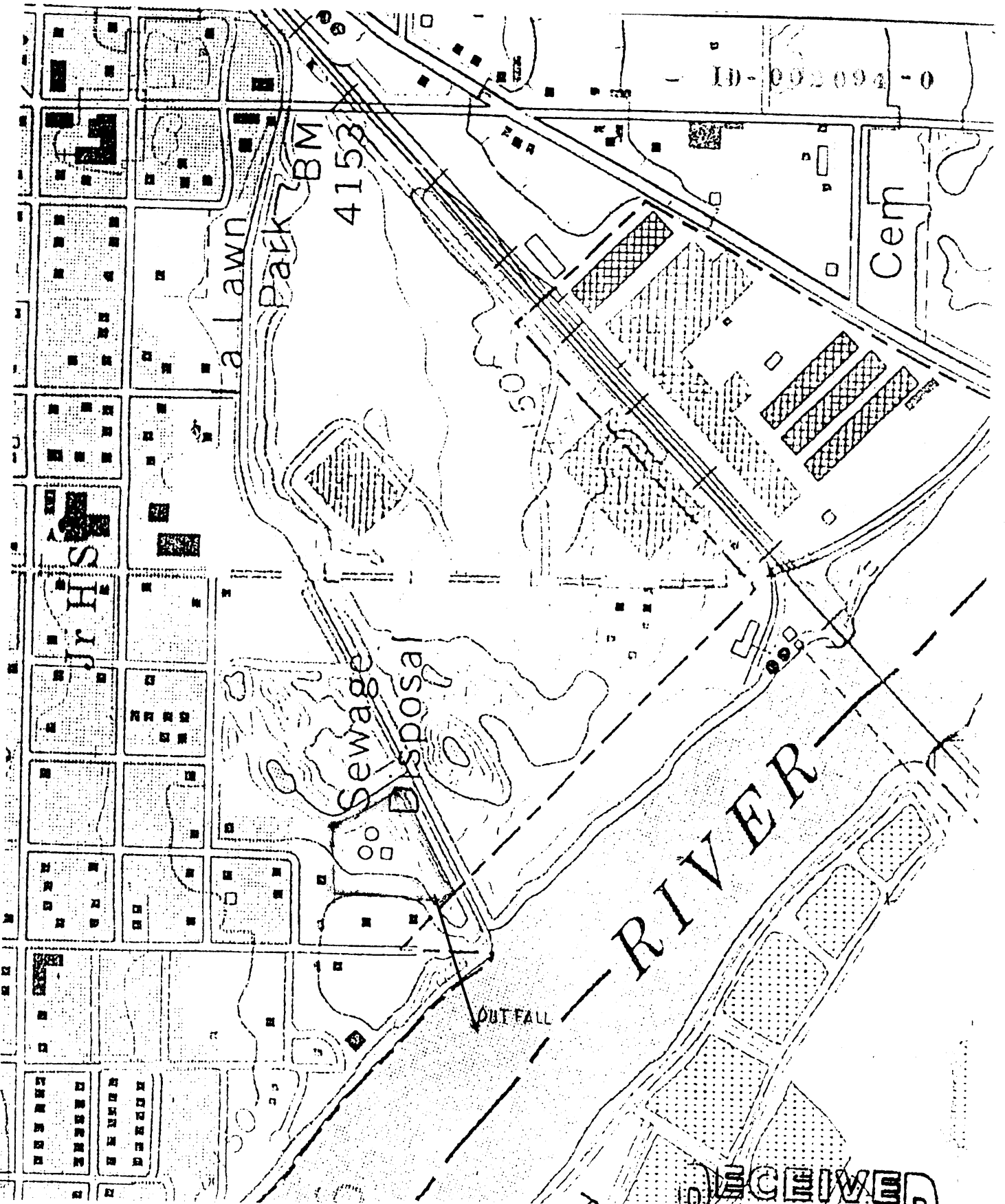
C. Permit Expiration

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

APPENDIX A

Wastewater Treatment Plant Location

APPENDIX A
Wastewater Treatment Plant Location



APPENDIX B
WATER QUALITY STANDARDS

(A) Water Quality Criteria

For the City of Heyburn discharge, the following water quality criteria are necessary for the protection of the beneficial uses of the Snake River:

1. IDAPA 16.01.02.200.02 - Surface waters of the State shall be free from toxic substances in concentrations that impair designated beneficial uses. These substances do not include suspended sediment produced as a result of nonpoint source activities.
2. IDAPA 16.01.02.200.05 - 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 16.01.02.200.06 - Excess Nutrient. 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 16.01.02.200.08 - Sediment. Sediment shall not exceed quantities specified in section 250, and 252 or in the absence of specific sediment criteria, quantities which impair designated beneficial uses. Determinations of impairment shall be based on water quality monitoring and surveillance and the information utilized as described in Subsection 350.02.b.
5. IDAPA 16.01.02.250.01.a. - Hydrogen ion concentration (pH) values within the range of 6.5 to 9.5 standard units.
6. IDAPA 16.01.02.250.04.a - Dissolved oxygen concentrations shall exceed 5 mg/L at all times. In lakes and reservoirs this standard does not apply to: (1) the bottom twenty percent of the water depth in natural lakes and reservoirs where depths are 35 meters or less. (2) the bottom 7 meters of water depth in natural lakes and reservoirs where depths are greater than 35 meters. (3) Those waters of the hypolimnion in stratified lakes and reservoirs.
7. IDAPA 16.01.02.250.04.b. - Water temperature of 33°C or less with a maximum daily average of no greater than 29°C .
8. IDAPA 16.01.02.250.04.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 = 0.7 if the water temperature (T) is $\geq 25^{\circ}\text{C}$, or
A = $10^{(0.03(20-T))}$ if T < 25°C, and

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

9. IDAPA 16.01.02.250.02.c.ii - The four day average concentration of un-ionized ammonia (as N) is not to exceed $(0.66A/B/C)$ mg/L, where:

A = 1.0 if 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 ≥ 8.0 , or
B = $(1 + 10^{(7.4 - \text{pH})}) \div 1.25$ if pH is < 8.0

C = 13.5 if pH is ≥ 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 16.01.02.251.01. - Waters designated for primary contact recreation are not to contain E. coli bacteria significant to the public health in concentrations exceeding:

- a. A single sample of four hundred and six E. coli organisms per one hundred ml; or
- b. A geometric mean of one hundred and twenty six E. coli organisms per one hundred ml based on a minimum of five samples taken, every three to five 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 - Protects existing uses and the level of water quality necessary to protect those uses.
- Tier 2 - Protects the level of water quality necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water in waters that are currently of higher quality than required to support these uses. Before water quality in Tier 2 waters can be lowered, there must be an anti-degradation review consisting of: (1) a finding that it is necessary to accommodate important economic or social development in the area where the waters are located (2) full satisfaction of all intergovernmental coordination and public participation provisions; and (3) assurance that the highest statutory and regulatory requirements for point sources and best management practices for nonpoint sources are achieved. Furthermore, water quality may not be lowered to less than the level necessary to fully protect the “fishable/swimmable” uses and other existing uses.
- Tier 3 - Protects the quality of outstanding national resources, such as waters of national and State parks and wildlife refuges and waters of exceptional recreational or ecological significance. There may be no new or increased discharges to these waters and no new or increased discharges to tributaries of these waters that would result in lower water quality.

The Snake River is a tier 1 waterbody, therefore, water quality should be such that it results in no mortality and no significant growth or reproductive impairment of resident species. 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 for the Snake River will be maintained.

APPENDIX C
Basis for Effluent Limitations

The Clean Water Act (CWA) requires Publicly Owned Treatment Works (POTW) 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 which are designed to ensure that water quality standards are met. Furthermore, technology based effluent limits don't always limit every parameter that is in an effluent. For example, technology based effluent limits for POTWs only limit five-day biochemical oxygen demand (BOD₅), total suspended solids (TSS), and pH. Yet effluent from a POTW may contain other pollutants such as chlorine, ammonia, or metals depending on the type of treatment system used and the service area of the POTW (i.e., industrial facilities as well as residential areas discharge into the POTW). In these cases, where technology based effluent limits do not exist for a particular pollutant, EPA must determine if the pollutants will cause or contribute to a violation of the water quality standards for the water body. If they do, EPA is required to develop water quality-based effluent limits designed to ensure that water quality standards are met.

The proposed 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. Part A discusses technology based effluent limits, Part B discusses water quality based effluent limits, and Part C compares the technology based effluent limits with the water quality based effluent limits, and shows the effluent limits that are proposed in the draft permit.

A. Technology-based Effluent Limitations

The CWA requires 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. EPA developed "secondary treatment" regulations which are specified in the 40 CFR 133. These technology-based effluent limits apply to all municipal wastewater treatment plants and identify the minimum level of effluent quality attainable by secondary treatment in terms of five-day biochemical oxygen demand (BOD₅), total suspended solids (TSS), and pH. The technology based effluent limits applicable to the City of Heyburn are as follows:

1. 5-day Biochemical Oxygen Demand (BOD₅) and Total Suspended Solids (TSS), concentration based limits:

Average Monthly Limit =	30 mg/L
Average Weekly Limit =	45 mg/L
Percent Removal Requirements =	85 %

2. 5-day Biochemical Oxygen Demand (BOD₅) and Total Suspended Solids (TSS), mass based limits: Federal regulations at (40 CFR § 122.45 (f)) require BOD₅ and TSS limitations to be expressed as mass based limits using the design flow of the facility. The loading is calculated as follows: concentration X design flow X 8.34.

BOD₅ and TSS loading, monthly average = 30 mg/L X 0.66 mgd X 8.34 = 165 lbs/day

BOD₅ and TSS loading, weekly average = 45 mg/L X 0.66 mgd X 8.34 = 248 lbs/day

3. pH: The pH range must be between 6.0 - 9.0 standard units.
4. Fecal Coliform Bacteria: In addition to the above, the Idaho *Water Quality Standards and Wastewater Treatment Requirements* (IDAPA16.01.02.420.02.b) require that fecal coliform concentrations in treated effluent not exceed a geometric mean of 200 colonies/100ml based on no more than one week's data and a minimum of five samples. IDEQ has determined that monitoring once per week will satisfy the Idaho water quality standards. IDEQ will include this monitoring frequency in their certification of the final permit.

B. Water Quality-Based Effluent Limits

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. 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 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. Wasteload allocations, for this permit have been determined in one of the following ways:

- (a) Where the receiving water quality does not meet water quality standards, the wasteload allocation is generally based on a TMDL developed by the State. A TMDL is a determination of the amount of a pollutant from point, non-point, and natural background sources, including a margin of safety, that may be discharged to a water body without causing the water body to exceed the criterion for that pollutant. Any loading above this capacity risks violating water quality standards.

Section 303(d) of the CWA requires states to develop TMDLs for water bodies that will not meet water quality standards after the imposition of technology-based effluent limitations to ensure that these waters will come into compliance with water quality standards. The first step in establishing a TMDL is to determine the assimilative capacity of the waterbody (the loading of pollutant that a water body can assimilate without exceeding water quality standards). The next step is to divide the assimilative capacity into allocations for non-point sources (load allocations), point sources (wasteload allocations), natural background loadings, and a margin of safety to account for any uncertainties. Permit limitations are then developed for point sources that are consistent with the wasteload allocation for the point source.

The State has completed a TMDL for the Snake River which provides the City of Heyburn with a wasteload allocation for phosphorus.

- (b) In some cases a mixing zone is not authorized, either because the receiving water already exceeds the criteria, the receiving water flow is too low to provide dilution, or the state does not authorize one. In such cases, the criterion becomes the wasteload allocation. Establishing the criterion as the wasteload allocation ensures that the Permittee will not contribute to an exceedance of the criteria.

Once the wasteload allocation has been developed, the EPA applies the statistical permit limit derivation approach (if appropriate) 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.

3. Specific Water Quality-Based Effluent Limits

(a) **Toxic Substances**

The Idaho state water quality standards require surface waters of the state to be free from toxic substances in concentration that impair designated uses. There are no significant industrial discharges to the facility, and concentrations of priority pollutants from cities without a significant industrial component are low. Therefore, it is not anticipated that toxicity will be a problem in the effluent, and a water quality based effluent limit has not been proposed.

(b) **Floating, Suspended or Submerged Matter/Oil and Grease**

The segment of the Snake River that the City of Heyburn discharges to has oil and grease listed as a pollutant of concern. According to the Lake Walcott TMDL, information was not available to determine if oil and grease was affecting beneficial uses in this segment of the river, therefore, IDEQ will assess oil and grease impacts over the next five years to better quantify the loads in this segment of the river. To support IDEQ's effort to assess oil and grease impacts over the next five years, the draft permit proposes that the facility monitor its effluent for oil and grease.

In addition, the Idaho state 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 that may impair designated beneficial uses. Therefore, 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 in other than trace amounts.

(c) **Excess Nutrients**

The Idaho state water quality standards require surface waters of the state be free from excess nutrients that can cause visible slime growths or other nuisance aquatic growths impairing designated beneficial uses. The Snake River has been listed as water quality limited for nutrients. The TMDL has provided a phosphorus wasteload allocation (WLA) for the City of Heyburn wastewater treatment plant. Federal regulations at 40 CFR 122.44(d)(vii)(B) require EPA to incorporate effluent limits based on WLAs from the State's TMDL into NPDES permits.

The following water quality based effluent limits have been proposed, based on the TMDL: an average monthly limit of 5.0 lbs/day, and an average weekly limit of 10.1 lbs/day for phosphorus have been incorporated into the draft permit. For details on deriving the effluent limits see pages D1 - D2.

(d) **Sediment/Total Suspended Solids (TSS)**

The Snake River is listed as water quality limited for sediment. The TMDL maintains that the river is meeting the water quality standards for sediment. Therefore, requirements more stringent than technology based requirements are not 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. It is anticipated that a mixing zone will not be authorized for the water quality based criterion for pH, therefore, this criterion must be met before the effluent is discharged to the receiving water. The technology based effluent limits for pH are 6.0 - 9.0 standard units, and also must be met before the effluent is discharged to the receiving water. To ensure that both water quality based requirements and technology based requirements are met the draft permit incorporates the lower range of the water quality standards (6.5 standard units) and the upper range of the technology based limits (9.0 standard units).

(f) **Dissolved Oxygen (D.O.)**

The Snake River is listed as water quality limited for dissolved oxygen (D.O.), and the state water quality standards require the level of D.O. to exceed 5 mg/L at all times for water bodies that are protected for aquatic life use. The Lake Walcott TMDL found that low D.O. was not a problem in this segment of the Snake River, therefore, a water quality based effluent limit has not been proposed for this parameter.

(g) **Temperature**

The state water quality standards require ambient water temperatures of thirty three degrees C or less with a maximum daily average of no greater than twenty nine degrees C. However, IDEQ has started a temperature study to re-evaluate current temperature standards. According to the TMDL, following the conclusion of the temperature study, temperature levels in the Snake River will be reassessed and if needed a temperature TMDL will be completed.

A water quality based temperature limit has not been proposed in the draft permit since the State will be re-evaluating temperature levels in the Snake River.

However, ambient and effluent monitoring for temperature have been incorporated into the draft permit, to determine if effluent limits for temperature are necessary in the future..

(h) **Ammonia**

The Idaho Water Quality Standards contain water quality criteria to protect aquatic life against short term and long term adverse impacts from ammonia. Currently, there are no ammonia data from the facility to determine if ammonia may cause or contribute to a water quality standard violation.

Since the data are not available to determine if water quality based effluent limits are required for ammonia the draft permit does not propose effluent limits for ammonia. However, the draft permit requires monthly sampling for ammonia, and these data will be used, in the future, to determine if an ammonia limit is needed for the facility.

(i) **Escherichia Coli (E. Coli) Bacteria**

According to the Idaho Water Quality Standards, waters designated for primary contact recreation, such as the Snake River, are not to contain E. coli bacteria significant to the public health in concentrations exceeding:

- a. A single sample of four hundred and six E. coli organisms per one hundred ml; or
- b. A geometric mean of one hundred and twenty six E. coli organisms per one hundred ml based on a minimum of five samples taken, every three to five days, over a thirty day period.

It is anticipated that a mixing zone will not be authorized for bacteria, therefore, the criteria must be met before the effluent is discharged to the receiving water. The proposed water quality based effluent limits in the permit include an instantaneous maximum limit of 406 organisms/100 ml, and an average monthly limit of 120 organisms/100 ml.