

RESPONSE TO COMMENTS

A draft National Pollutant Discharge Elimination System (NPDES) permit for the City of Jerome, Idaho wastewater treatment facility was issued for public notice on September 24, 1997. The Public Notice initiated a 45-day public comment period. EPA received comments from David Anderson, Regional Manager, State of Idaho Department of Health and Welfare, Division of Environmental Quality in a letter dated November 6, 1997 and from Jon Cecil, City Administrator, City of Jerome, in a letter dated November 10, 1997. The following summarizes the comments and EPA's responses. The following also summarizes changes to the draft permit as a result of Endangered Species Act consultation.

State of Idaho Division of Environmental Quality (IDEQ) Comments

(1) Comment: Fecal Coliform Comments. The following IDEQ comments are in regard to the fecal coliform requirements in the proposed permit:

- (a.) It is recommended that the average monthly fecal coliform limit be written as not exceeding the geometric mean of 200/100 ml based on a minimum of five samples taken over a thirty day period.
- (b.) Daily and weekly fecal coliform limits should be deleted.
- (c.) It is suggested that the fecal coliform sampling frequency be three times per week.
- (d.) As written the monthly and weekly permit limits appear redundant.

Response:

(a.) The average monthly fecal coliform limit is written as worded in the comment (see Table 1, footnote 1 in the permit).

(b.) According to the State of Idaho Water Quality Standards, the Snake River at the point of discharge from the Jerome Wastewater Treatment Plant (WWTP) is protected for secondary contact recreation. Per Section 16.01.02250.01b. of the Idaho Water Quality Standards, waters designated for secondary contact recreation are not to contain fecal coliform bacteria in concentrations exceeding 800/100 ml at any time. The daily maximum fecal coliform limit in the proposed permit is based directly on this maximum allowable concentration.

Section 16.01.02420.05a. of the Idaho Water Quality Standards, "Disinfection Requirements for Sewage Wastewater Treatment Plant Effluent" requires that fecal coliform concentrations in secondary treated effluent must not exceed a geometric mean of 200/100 ml based on no more than one weeks of data and a minimum of five samples. The weekly average limit in the proposed permit is based directly on this fecal coliform concentration.

The Clean Water Act requires that limitations in permits meet state water quality standards. Because the daily maximum and weekly average fecal coliform limits in the proposed permit are based on the Idaho water quality standards they will be retained in the final permit. This was

discussed with the State of Idaho¹ and the State concurred that the daily and weekly fecal coliform limits be retained in the final permit.

(c.) The proposed permit included a requirement for daily monitoring of fecal coliform. This sampling frequency is based on the “Disinfection Requirements” of Section 16.01.02420.05a. of the Idaho Water Quality Standards. As noted in the response to the previous comment, this section requires that fecal coliform measurements be based on a minimum of five samples collected within one week. Reducing the monitoring frequency to three times per week (3/week) is acceptable, however, the State must certify this frequency in its Section 401 certification of the permit. The monitoring requirements in Table 1 and the last sentence of footnote #1 will be revised to reflect a fecal coliform sampling frequency of 3/week.

(d.) The average weekly limit and average monthly limits are the same numerically, i.e., 200/100 ml. However, the basis for determining compliance with the limits is different. The average weekly limit is based on no more than one weeks data, while the monthly limit is based on samples collected over a thirty day period. The State has concurred that both the weekly and monthly limits, since based on the State Water Quality Standards, be retained in the final permit¹. See also response to (1b.), above.

(2.) Comment: Chlorine Residual Monitoring. IDEQ suggested that the monitoring frequency for chlorine residual be reduced to five times per week.

Response: Daily monitoring for total residual chlorine was specified in the proposed permit. Based on monitoring requirements for facilities of similar size to the Jerome WWTP, it is acceptable to reduce the monitoring frequency from daily to five times per week. The final permit (specifically the Table 1 monitoring requirements) is revised to reflect this change.

(3.) Comment: Temperature Monitoring. IDEQ suggested that the monitoring frequency for temperature be reduced to five times per week.

Response: Daily monitoring for temperature was specified in the proposed permit. It is acceptable to reduce the monitoring frequency to five times per week. The final permit (specifically the Table 1 monitoring requirements) is revised to reflect this change.

¹ Phone conversation, Patty McGrath (EPA) with Mike McMasters (IDEQ).
April 14, 1998.

(4.) Comment: Nutrients Monitoring. IDEQ recommended reducing the monitoring frequency for ammonia, nitrate/nitrite, and Kjeldahl nitrogen to monthly.

Response: The monitoring frequency in the proposed permit for these parameters is twice per month. This frequency is based on the *Middle Snake River Watershed Management Plan* which was prepared by representatives of the Mid-Snake River wastewater industry and approved by the State of Idaho. Appendix A-6 (“Proposed Watershed Reduction Plan for the Wastewater Treatment Industry”) of the *Middle Snake River Watershed Management Plan*, specifically Management Action item number 4, recommends monitoring effluent from wastewater treatment plants for ammonia, nitrite, nitrate, and Kjeldahl nitrogen (TKN). The recommended minimum monitoring frequency is twice monthly for plants with flows between 1 and 2 million gallons per day (mgd). The average effluent flow from the Jerome WWTP is within this range, therefore, EPA has decided to retain the twice monthly monitoring frequency as recommended for these parameters in the final permit. The State has concurred with this decision¹.

(5.) Comment: Phosphorus Limits. IDEQ submitted the following comments in regard to the phosphorus limits in the proposed permit:

- (a.) Deletion of the total phosphorus daily maximum should be considered, as the monthly limit will be precedent based on a twice per month sampling frequency. Also, phosphorus, biologically does not have a “toxic” effect and is not a toxic, but a pollutant of concern. It seems that a daily limit does not have significant if a monthly average limit is observed.
- (b.) Rather than having a specific date for the facility to come into compliance with the phosphorus limit, IDEQ suggested that the compliance date be changed to reflect a date five years from the date of issuance of the permit.

Response:

- (a.) The NPDES regulations at 40 CFR 122.45(d) require that all permit limits be expressed, unless impracticable, as both average monthly limits (AMLs) and maximum daily limits (MDLs) for all discharges other than publicly owned treatment works (POTWs), and as average weekly limits (AWLs) for POTWs.

The objective in setting effluent limits is to establish limits that will result in the effluent meeting the wasteload allocation (WLA) under normal operating conditions virtually all the time. While not possible to guarantee, through permit limits, that a WLA will never be exceeded, it is possible to use procedures which can account for extreme values. Permit limits can be established that will have low statistical probability of exceeding the WLA and will achieve the desired loading. The statistical procedures used by EPA to determine effluent limitations are described in the Technical Support Document for Water Quality-based Toxics Control (TSD), (EPA March 1991). As discussed in the fact sheet accompanying the draft permit, EPA followed the statistical procedures of the TSD in developing the AML and MDL for facilities in the Middle Snake River watershed, including the City of Jerome WWTP.

EPA has decided to drop the phosphorus MDL (330 lb/day) included in the proposed permit and replace it with an AWL, as required by the regulation cited in the first paragraph of this response. The AML (205 lb/day) will be retained. No evidence was presented during the comment period that these limitations, which are based on targets established in the approved *Middle Snake River Watershed Management Plan*, “are impracticable” as cited by the regulations. Including both an AML and AWL for POTWs meets the requirements of EPA regulations and also assures that the long-term average loading requirements of total phosphorous to the Mid-Snake River system, as specified in the *Middle Snake River Watershed Management Plan*, is being met. Having both an AML and AWL also ensures good performance of the treatment system. In addition, setting an AWL provides a measure of effluent compliance during operational periods between monthly sampling.

An AWL of 377 lb/day has been included in the final permit. The AWL was calculated using the MDL/AML ratio similar to how the MDL was originally calculated (see Appendix B of the fact sheet). Per Table 5-3 of the TSD, the MDL(or AWL)/AML ratio is dependent upon the following parameters:

- percentile probability basis for the MDL and AML (used 99th and 95th respectively)
- number of samples per month (used 4, see the next paragraph)
- coefficient of variation (used 0.5 based on last four years of effluent monitoring data)

Given these values, per Table 5-3 of the TSD, $MDL(or\ AWL)/AML = 1.84$. The AML for Jerome is 204.7 lb/day (from the TMDL), therefore the $AWL = 1.84 \times 204.7 = 377$ lb/day.

After reviewing the comments, EPA realizes that sampling twice during the month, as originally proposed for the Jerome WWTP, is not adequate in order to determine compliance with the average monthly limitation. For this reason, EPA is increasing the sampling to weekly. Weekly sampling will be required for all the municipal POTWs on the Middle-Snake River. This requirement increases assurance that the average monthly limitation is being met by averaging four or five weekly samples a month versus two samples. It is also consistent with the new weekly effluent limitation in the final permit. Table 1 of the final permit has been revised to reflect the revised phosphorus effluent limitations and monitoring requirements.

The final permit will continue to require a maximum daily limit (MDL) for chlorine rather than an average weekly limit (AWL). An AWL has the potential of allowing spikes of a pollutant to occur. While this is not a concern with pollutants that are not toxic, such as phosphorus, it is a significant concern when toxic pollutants, such as chlorine, are being discharged. Using an MDL in lieu of an AWL will ensure that spikes do not occur, and will be protective of aquatic life. For these reasons EPA Region 10 considers it impracticable to develop an AWL for chlorine.

(b.) The draft permit required the Permittee to achieve compliance with the phosphorus effluent limits by May 1, 2002, five years from the date of approval by EPA of IDEQ’s *Middle Snake*

River Watershed Management Plan. Including a date in the permit facilitates compliance tracking through EPA's compliance database, therefore, the final permit will include a specific date for achieving compliance with the phosphorus limitation. However, the compliance date in the final permit has been revised to allow the facility five years from the effective date of the permit to achieve compliance.

City of Jerome Comments

(1.) Comment: Total Chlorine Limits. The Jerome WWTP derives a major portion of its loading from industrial and commercial discharges which fluctuate dramatically throughout the day. Due to fluctuating loading, the facility may be unable to reliably meet the proposed effluent limits for total chlorine residual and still reliably meet the proposed limits for fecal coliform. The City of Jerome requested a compliance schedule to meet the proposed total chlorine limits.

Response: As discussed in the fact sheet accompanying the draft permit, the total residual chlorine limits in the proposed permit (0.5 mg/l average monthly and 1.0 mg/l daily maximum) are technology-based limits, i.e., a properly designed and maintained wastewater treatment plant can achieve these limits. The NPDES regulations (40 CFR 122.47) allow for compliance schedules to achieve compliance with the Clean Water Act and applicable regulations. However, compliance schedules are not appropriate for requirements where statutory deadlines have passed. The technology-based chlorine limits are based on best professional judgement (BPJ). The statutory deadline for compliance with technology-based effluent limits, including BPJ was March 31, 1989. Therefore, a compliance schedule cannot be placed in a permit to allow for extensions in meeting a BPJ pollutant limit, such as the chlorine limits in the Jerome permit. Likewise, the Idaho State Water Quality Standards do not allow for compliance schedules for technology-based limits (IDAPA 16.01.02400.03). Therefore, the final permit retains the chlorine limitations in the proposed permit without allowing for a schedule of compliance.

See response to comment (2b), below regarding the ability to meet the fecal coliform limits, given the chlorine limits.

(2.) Comment: Fecal Coliform Limits. The City of Jerome submitted the following comments in regard to the fecal coliform limits in the proposed permit:

- (a.) Given the proposed chlorine limits, the facility may not be able to reliably meet the proposed daily maximum limit for fecal coliform. The City requests removal of the proposed daily maximum limit of 800/100 ml and an increase in the weekly average limit to 400/100 ml.
- (b.) To meet the fecal coliform limits as proposed, a compliance schedule will be required. The phosphorus compliance schedule date of May 1, 2002 should be acceptable.
- (c.) A reduction in the frequency of fecal coliform monitoring is requested (reduce to 3 days/week).

Response:

(a.) This comment is similar to IDEQ comment (1b); see response to IDEQ comment (1b). The fecal coliform limits are based on Idaho State Water Quality Standards and cannot be changed.

(b.) The fecal coliform limits in the current and proposed permit are:

FECAL COLIFORM	proposed limit	current limit
daily maximum	800/100 ml	no limit
weekly average	200/100 ml	100/100 ml
monthly average	200/100 ml	50/100 ml

The proposed weekly average and monthly average limits are higher than those in the current permit. A review of the Discharge Monitoring Reports (DMRs) for the Jerome WWTP for the last three years indicated that the discharge would be in compliance with the proposed limits, and, that the concentration of fecal coliform in the effluent could increase and still meet the proposed limits. The DMR review also indicated that total residual chlorine in the effluent is generally greater than the proposed chlorine limits. However, the current target for total residual chlorine is the existing lower fecal coliform limits. Given the higher fecal coliform limits, the Permittee has not demonstrated that reducing the total residual chlorine will result in exceedences of the fecal coliform limits. Therefore, at this time a compliance schedule for fecal coliform is not warranted.

The EPA Region 10 NPDES Compliance Unit has been notified of this issue. If, following issuance of the permit, the Permittee demonstrates an inability to meet the fecal coliform and/or chlorine limits, then a compliance schedule may be developed (dependent upon enforcement discretion).

(c.) A monitoring frequency of 3 times per week is acceptable. See response to State of Idaho comment (1c), above.

(3.) Comment: Phosphorus Limits. The City commented that the proposed maximum daily limit for phosphorus is not needed to meet the TMDL goals which establish monthly loading limits for the Mid-Snake River. Therefore, monthly average discharge limits should be sufficient to meet this goal.

Response: This comment is similar to IDEQ comment (5a). The maximum daily limit has been replaced with an average weekly limit consistent with regulation. The phosphorus monitoring frequency has been increased to weekly. The response to IDEQ comment (5a) provides the rationale for these changes.

(4.) Comment: Sludge Management Requirements. The City of Jerome submitted the following comments in regards to the sludge management requirements in Table 2:

(a.) Correct the typographical error under Approved Method for Pathogens to read “Aerobic Digestion (warm): MCRT>40 days@ 20°C; or > 60 days @ 15°C.”

(b.) Under Alternative Methods, for Vector Control, add as an option “Specific Oxygen Uptake Rate (SOUR) 503.3(b)(4).” The optional SOUR allows a wider choice of operational strategies.

Response:

(a.) The correct wording for the approved pathogen treatment process of aerobic digestion is, [per 40 CFR 503.32(b)(3), Appendix B(A.1)]: “Values for the mean cell residence time (MCRT) and temperature shall be between 40 days at 20 degrees Celsius and 60 days at 15 degrees Celsius.” The entry in Table 2 is revised to reflect this exact regulatory wording. Section I.B.4 of the permit lists documents that provide guidance on how to interpret this regulation.

(b.) The Jerome WWTP has demonstrated that it should be able to comply with the vector control standards and conduct the SOUR analysis (April 9, 1998 letter from Jon Cecil, Jerome City Administrator, to Dick Hetherington, EPA). Therefore, it is acceptable to add SOUR as an alternative method for vector control. Table 2 of the permit is revised accordingly.

(5.) Comment: Requirements for Industrial User. The City of Jerome requested clarification of the wording under “Requirements for Industrial Users”; specifically, to clarify whether this changes the City of Jerome’s voluntary pretreatment program into a USEPA mandatory program.

Response: The wording referenced in the comment is standard “boilerplate” language based on statutory requirements for industrial users. The wording is required in all permits of this type (municipals with industrial users) and, therefore will not be changed in the final permit. However, EPA provides the following clarification of the language as it applies to the City of Jerome.

The wording referenced relates to general requirements for industrial users. The language requires industrial users to comply with the City of Jerome’s Sewer Use Ordinance as well as comply with other statutory requirements which may or may not be incorporated into the Sewer Use Ordinance. The language does not relate to whether or not the City of Jerome’s pretreatment program is mandatory or voluntary. Currently, the City of Jerome has not been required to develop a mandatory pretreatment program.

Endangered Species Consultation

The U.S. Fish and Wildlife Service has issued a Biological Opinion on the effects of EPA issuing this and eight other NPDES permits that authorize discharge into the Middle Snake River. The Service's opinion is that the proposed action is not likely to jeopardize the continued existence of listed snail species in the action area. The opinion also includes an "Incidental Take Statement". Under the terms of Section 7(b)(4) and Section 7(o)(2) of the Endangered Species Act, take of species that is incidental to an agency's action is not prohibited provided that such taking is in compliance with the terms and conditions of the Incidental Take Statement. The Service identified eight "reasonable and prudent measures" that must be addressed by EPA in order to minimize incidental take. As described in the Biological Opinion, measures listed in the Incidental Take Statement are "non-discretionary, and must be implemented by the EPA so that they become binding conditions of any grant or permit issued to the applicant..."

In order to meet the conditions specified in the Incidental Take Statement, EPA has revised the twenty-four hour notice of noncompliance reporting requirements in section II of the permit. The permittee shall report conditions that endanger listed snail species to both EPA and the U.S. Fish and Wildlife Service within 24 hours from the time a permittee becomes aware of the circumstances. Likewise, written reports on noncompliance occurrences that endanger listed Snake River snails must be sent to the Service. Changes to address these reporting requirements have been made to the final permit. No other revisions to the NPDES permit language are necessary to address the conditions of the Biological Opinion.