



FACT SHEET

Public Comment Period Start Date: September 30, 2015

Public Comment Expiration Date: October 30, 2015

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

**The City of Aberdeen
Wastewater Treatment Plant**

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Permit No. ID0020176

EPA is Reopening for Public Comment a Draft NPDES Permit

The initial public period for this permit opened on July 1, 2015 and closed on July 30, 2015. EPA has revised the draft permit to include significant changes from the version that was issued for public comment on July 1, 2015, Therefore, EPA is reopening the public comment period on the draft permit for those changes.

This Fact Sheet includes:

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

State Certification for Facilities that Discharge to State Water

Section 401 of the federal Clean Water Act requires EPA to seek State certification before issuing a final permit. On September 22, 2015 the Idaho Department of Environmental Quality issued a draft Section 401 Water Quality Certification for the reissuance of the City of Aberdeen NPDES permit.

Public Comment

Pursuant to 40 CFR 124.14(c), at this time, the EPA is only accepting comments on aspects of the draft permit that are different from those in the draft permit that was issued for public comment on July 1, 2015. These are as follows:

- Revised final water quality based effluent limits for total phosphorus

- Inclusion of a compliance schedule for the final total phosphorous limits
- A minor correction to a footnote regarding compliance with the chlorine effluent limit.

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

After the Public Notice expires, and all comments have been considered, the EPA's regional Director for the Office of Water and Watersheds will make a final decision regarding permit issuance. 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 substantive comments are received, the EPA will address the comments and issue the permit. The permit will become effective no less than 30 days after the issuance date, unless an appeal is submitted to the Environmental Appeals Board within 30 days pursuant to 40 CFR 124.19.

Documents are Available for Review.

The draft NPDES permit and related documents can be reviewed or obtained by visiting or contacting the EPA's Regional Office in Seattle between 8:30 a.m. and 4:00 p.m., Monday through Friday at the address below. The draft permits, fact sheet, and other information can also be found by visiting the Region 10 NPDES website at "<http://EPA.gov/r10earth/waterpermits.htm>."

United States Environmental Protection Agency
Region 10
1200 Sixth Avenue, OWW-190
Seattle, Washington 98101
(206) 553-0523 or
Toll Free 1-800-424-4372 (within Alaska, Idaho, Oregon and Washington)

The fact sheet and draft permits are available at:

EPA Idaho Operations Office
950 W Bannock, Suite 900
Boise, ID 83702
208-378-5746

IDEQ
Pocatello Regional Office
444 Hospital Way, #300
Pocatello, ID 83201
ph: (208) 236-6160
fx: (208) 236-6168
toll-free: (888) 655-6160

Effluent Limitation

The revised final total phosphorus limits in Table 1 of the permit are shown below.

Table 1. Effluent Limitations and Monitoring Requirements

Parameter	Units	Effluent Limitations			Monitoring Requirements		
		Average Monthly	Average Weekly	Maximum Daily	Sample Location	Sample Frequency	Sample Type
Parameters With Effluent Limits							
Biochemical Oxygen Demand (BOD ₅)	mg/L	30	45	--	Influent and Effluent	1/week	24-hour composite
	lbs/day	205	308	--			Calculation ¹
BOD ₅ Percent Removal	%	85 (minimum)	--	--	--	1/week	Calculation ²
Total Suspended Solids (TSS)	mg/L	30	45	--	Influent and Effluent	1/week	24-hour composite
	lbs/day	205	308	--			Calculation ¹
TSS Percent Removal	%	85 (minimum)	--	--	--	1/week	Calculation ²
<i>E. coli</i> ³	CFU/100 ml	126	--	406 ⁴	Effluent	5/month	Grab
Total Residual Chlorine	mg/L	0.021 ⁵	--	0.043 ^{4,5}	Effluent	1/week ⁵	Grab
	lbs/day	0.146 ⁵	--	0.292 ⁵	Effluent	1/week ⁵	Grab
pH	std units	Between 6.5 – 9.0			Effluent	5/week ⁶	Grab
Total Phosphorus (interim) ⁷	lbs/day	38	57	--	Effluent	1/week	Grab
Total Phosphorus (final) ⁸	lbs/day	10.9 1.36	20.6 2.68	--	Effluent	1/week	Grab
		Annual Average Limit 4.5 0.876 lbs/day ⁹		--			
Narrative	See Paragraph See I.B.2. of this permit				Effluent	1/month	Visual Observation
Report Parameters							
Total Ammonia (as N)	mg/L	Report	--	Report ⁴	Effluent	1/month	Grab
Flow	mgd	Report	--	Report	Effluent	Continuous	Meter
Effluent Testing for Permit Renewal							
Permit Application Effluent Testing Data ¹⁰	--				Effluent	3x/5 years	--

Parameter	Units	Effluent Limitations			Monitoring Requirements		
		Average Monthly	Average Weekly	Maximum Daily	Sample Location	Sample Frequency	Sample Type
<u>Notes</u>							
1. Loading (in lbs/day) is calculated by multiplying the concentration (in mg/L) by the corresponding flow (in mgd) for the day of sampling and a conversion factor of 8.34. For more information on calculating, averaging, and reporting loads and concentrations see the <i>NPDES Self-Monitoring System User Guide</i> (EPA 833-B-85-100, March 1985).							
2. Percent Removal. The monthly average percent removal must be calculated from the arithmetic mean of the influent values and the arithmetic mean of the effluent values for that month using the following equation: (average monthly influent concentration – average monthly effluent concentration) ÷ average monthly influent concentration x 100. Influent and effluent samples must be taken over approximately the same time period.							
3. The average monthly <i>E. coli</i> bacteria counts must not exceed a geometric mean of 126/100 ml based on a minimum of five samples taken every 3 - 7 days within a calendar month. See Part VI of this permit for a definition of geometric mean.							
4. Reporting is required within 24 hours of a maximum daily limit or instantaneous maximum limit violation. See Paragraph I.B.3 and Part III.G. of this permit.							
5. Only applicable when chlorine or chlorine compounds are used for disinfection. The limits for chlorine are not quantifiable using EPA-approved analytical methods. The minimum level (ML) for chlorine is 50 µg/L for this parameter. The EPA will use 50 µg/L as the compliance evaluation level for this parameter. The permittee will be in compliance with the total residual chlorine limitations if the average monthly and maximum daily concentrations are less than 50 µg/L and the average monthly and maximum daily mass discharge limit <u>loading</u> is less than 0.34 lbs/day..							
6. Samples must be taken on different days..							
7. Interim limits lasting until August 1, 2020 December 1, 2025							
8. Limit to be achieved by August 1, 2020 December 1, 2025 . (see Part I.C.).							
9. See Part I.B.8.							
10. Effluent Testing Data - See NPDES Permit Application Form 2A, Part B.6 for the list of pollutants to be included in this testing. The Permittee must use sufficiently sensitive analytical methods in accordance with Part I.B.5 of this permit.							

The revised calculations for the total phosphorus effluent limitations are shown below.

Total Phosphorus

The State of Idaho developed the American Falls Subbasin Assessment and TMDL (IDEQ), May 2012 (TMDL). The TMDL established a wasteload allocation for total phosphorus of 0.16 tons per year. Effluent limits in NPDES permits for POTWs that discharge continuously must be expressed as average monthly and average weekly limits (40 CFR 122.45(d)(2)).

Calculating the Average Monthly Limit

$$\frac{0.16 \text{ tons/yr} \times 2000 \text{ lb/ton}}{365 \text{ days/yr}} = 0.876 \text{ lb/day (annual average)}$$

Assume LTA = 0.876 lb/day

$$\text{AML} = \text{LTA} \times \exp[z\sigma_n - 0.5\sigma_n^2] \quad (\text{from Table 5-2 of the TSD})$$

Where:

CV = coefficient of variation = 0.6 (a default value for < 10 effluent samples, since no samples are available under the current permit after the upgrade)

n = 4 (number of samples in a month)

$$\sigma_4^2 = \ln((CV^2/n)+1) = \ln((0.6^2/4) + 1) = 0.0862$$

$$\sigma_4 = 0.294$$

$$z_a = \text{percentile exceedance probability for AML (95\%)} = 1.645$$

$$AML = 0.876 \times \exp[(1.645 \times 0.294) - (0.5 \times 0.0862)] = 1.36 \text{ lb/day}$$

Calculating the Average Weekly Limit

The AWL is calculated from the following relationship with the AML (from Table 5-3 of the TSD):

$$AWL = \frac{\exp[z_m\sigma - 0.5\sigma^2]}{\exp[z_a\sigma - 0.5\sigma^2]} \times AML$$

Where CV = 0.6, the default value, as above

$$\sigma^2 = \ln(CV^2 + 1) = \ln(0.6^2 + 1) = 0.307$$

$$\sigma = 0.554$$

$$z_m = \text{percentile exceedance probability for AWL (99\%)} = 2.326$$

$$z_a = \text{percentile exceedance probability for AML (95\%)} = 1.645$$

$$AWL = \frac{\exp[(2.326 \times 0.554) - (0.5 \times 0.307)]}{\exp[(1.645 \times 0.294) - (0.5 \times 0.0862)]} \times 1.36 \text{ lb/day}$$

$$AWL = 2.68 \text{ lb/day}$$

Compliance Schedule

The City of Aberdeen needs a compliance schedule to allow the facility time to comply with the new phosphorus limits. Schedules of compliance are authorized by federal NPDES regulations at 40 CFR 122.47 and by Section 400.03 of the Idaho Water Quality Standards. The Idaho water quality standards allow for compliance schedules “when new limitations are in the permit for the first time.” The federal regulation allows schedules of compliance “when appropriate,” and requires that such schedules require compliance as soon as possible.

The Aberdeen WWTP cannot comply with the new phosphorus limits immediately upon the effective date of the permit. Although the City of Aberdeen completed upgrades to its treatment facility in July 2015 (note the July 1 fact sheet incorrectly stated that the upgrades were completed in July 2012), the upgrades were not designed to remove phosphorus to the low levels required by the TMDL.

The permit requires the facility to meet final effluent limits in nine years and eleven months. The time is required to allow proper evaluation of alternatives in the facilities planning process and approval by the Idaho Department of Environmental Quality. One alternative is a reuse (land application) option that would eliminate not just phosphorus but also the other pollutants in the wastewater discharged to Hazard Creek. The City needs time to evaluate the reuse options for the effluent during the irrigation season. Pursuant to 40 CFR 122.47(a)(3), a permit with a compliance schedule must have interim requirements and dates for achievement. EPA has included interim requirements, dates for their achievement and reports of progress.