

May 28, 2009

**JUSTIFICATION  
for  
Granting of Variances  
from  
The Idaho Water Quality Standards  
to  
The Cities of Page, Mullan and Smelterville  
for  
The Discharge of Metals  
from  
Their Wastewater Treatment Plants**

**Prepared by:**

**The Idaho Department of Environmental Quality (DEQ)**

**Background**

In 1997, the U.S. Environmental Protection Agency (EPA) promulgated a federal rule which established water quality standards applicable to specific waters in the State of Idaho (40 CFR Part 131.33, Federal Register Vol. 62, No. 147, July 31, 1997). As part of that rulemaking EPA promulgated a cold water biota beneficial use designation for the South Fork Coeur d'Alene River. This made EPA the party with authority to grant variances to the water quality standards for the South Fork Coeur d'Alene River.

On June 24, 2004 EPA issued variances from water quality standards to the wastewater treatment plants (WWTPs) of the cities of Page, Mullan and Smelterville for their discharge of cadmium, lead and zinc to the South Fork Coeur d'Alene River. These variances expire at midnight on August 1, 2009, along with current National Pollution Discharge Elimination System (NPDES) permits that expire on the same date. The permits stipulate that water quality based effluent limits – effluent limits based on no variance in place – go into effect on July 31, 2009.

On August 19, 2008 EPA proposed removing its federal use designation for the South Fork Coeur d'Alene River, as a result of EPA's 2005 approval of the use designation that Idaho adopted in 2002 (Federal Register Vol. 73, No. 161, page 48351). The removal of federal use designations became final on November 5, 2008. This put the Idaho Department of Environmental Quality (DEQ) in charge of granting any future variances and DEQ began discussions with EPA on the upcoming expiration of NPDES permits for the three facilities and their need for renewed variances.

## **Determination**

Based on DEQ's review of variance requests supplied by the South Fork Coeur d'Alene River Sewer District (SFCDRSD) and City of Smelterville (Smelterville), data submitted by the permit holders and additional data obtained by EPA and DEQ, and DEQ's analysis of that data, DEQ has determined that the requirements for renewing a variance, as required by the state rule (IDAPA 58.01.02.260) have been met. The variances are being renewed based on a demonstration that wastewater treatment controls more stringent than those required by technology based requirements would result in substantial and widespread adverse economic and social impacts to these Silver Valley communities.

These variances apply only to the specific facilities identified in the variances, only to the pollutant(s) specified, and only for the time period specified. The underlying water quality standard remains in effect. In order to renew the variances, there must be a demonstration that reasonable further progress has been and will be made towards improving water quality and eventually attaining the water quality standard (IDAPA 58.01.02.260.01.d.ii). Since water quality standards are implemented within NPDES permits for point sources, reasonable progress toward meeting the standards will likely become a condition of the permit when renewed by EPA.

## **DEQ Variance Process**

DEQ revised its variance procedures at IDAPA 58.01.02.260 in 2002 and received EPA approval of these procedures on July 7, 2006. EPA must review and approve variances granted by DEQ in order for the variances to be reflected in NPDES permits issued by EPA. DEQ met internally and conferred with EPA during the month of December 2008 to prepare the document "Proposed Idaho Variance Procedure – For Page, Mullan and Smelterville Metals I & P". This document described the information needs and expected timelines in DEQ's consideration of granting renewed variances under its rules and was finalized and transmitted to the owners of the affected facilities by e-mail on January 2, 2009.

The SFCDRSD, which operates the Page and Mullan WWTPs, provided DEQ with an initial variance request on January 30, 2009. DEQ reviewed this request and provided the sewer district with comments, chief of which was a need to provide a more concrete schedule of proposed future work, with dates, estimated costs and a discussion of uncertainties in completing future work. They responded with a revised request addressing DEQ's concerns on February 16, 2009. Meanwhile on February 19, 2009 DEQ received a separate request from the City of Smelterville for their WWTP. DEQ regional and state office staff coordinated review of these two variance requests.

## **DEQ Review of Variance Requests**

DEQ's review of the variance requests focused on the items identified in the January 2, 2009 procedures document. Specifically:

1. Demonstration of reasonable progress under the current permit toward meeting

applicable water quality standards. This is based on language at IDAPA 58.01.02.260.01.d.ii regarding renewed variances.

2. Justification for a renewed variance. The rules (IDAPA 58.01.02.260.01.b) allow for a variance only if the discharger can demonstrate that, based on one or more of six reasons, meeting the standards is unattainable.
3. A plan for making reasonable progress toward meeting water quality standards in the future. This will provide the basis for DEQ to assess progress should the owners of the facilities in the future make another variance renewal request.

In consultation between DEQ staff in the Coeur d'Alene Regional Office and State Office Water Quality Division it was decided that:

1. Reasonable progress under the current variance had been made. The variance requests from both the SFCDRSD and Smelterville provided documentation of the progress made in all the communities towards removing infiltration and inflow (I/I) through administrative measures, flow monitoring/TV inspections, and actual construction to replace/repair portions of the wastewater collection systems. See pgs. 4-7 in the "SFCDRSD Variance Justification" and pgs. 1-2 in the "Request for Variance" from Smelterville for more details. In evaluating the compliance with the 2004 NPDES permit conditions related to the variance, the SFCDRSD complied with all the conditions with the exception of developing compliance schedules by July 2005. Instead, compliance schedules were adopted by the municipalities within the District. Osburn and Wallace adopted compliance schedules in September 2005. Kellogg and Mullan have not adopted compliance schedules. Mullan continues to annually upgrade the wastewater collection system without a compliance schedule. Smelterville has completed all of the variance conditions in their permit.
2. A renewed variance was justified due to the substantial and widespread economic and social impact that would result from treating wastewater to meet water quality based effluent limits. This is authorized in the Water Quality Standards at IDAPA 58.01.02.260.01.b.vi and is the same basis for the existing federal variances.
3. The owners of the facilities have a plan for making future progress as described in their variance requests. Both the SFCDRSD and Smelterville have listed the proposed work to be completed during the next 5 year NPDES permit cycle (see pgs. 17-18 of the "SFCDRSD Variance Justification" and pg. 3 of the "Request for Variance" from Smelterville). It is expected that EPA in drafting the NPDES Permits will include conditions with milestones using the variance requests proposed work plans.

The facility owners also proposed two other reasons as justification for a variance. The first proposal was that "naturally occurring pollutant concentrations prevent attainment of the standard" (IDAPA 58.01.02.260.01.b.i). Given the history of mining and smelting in the area and active/ongoing remediation efforts to address contamination of groundwater, DEQ does not

believe that natural conditions are the sole cause for preventing attainment of the standard and therefore Section 260.01.b.i does not apply. The second proposal was that “human caused conditions or sources of pollution prevent the attainment of the standard and cannot be remedied or would cause more environmental damage to correct than to leave in place” (IDAPA 58.01.02.260.01.b.iii). This may be true of the groundwater contamination that is the major cause of elevated metals in the facilities’ wastewater, but since active remediation is ongoing such a conclusion is premature at this juncture.

The Water Quality Standards also specify that:

- The discharger must submit to DEQ documentation that treatment more advanced than required by technology-based effluent limitations have been considered and that alternative effluent control strategies have been evaluated
- DEQ shall publish notice of a tentative determination to grant a variance and describe the impacts of the variance upon the receiving stream segment.

The variance requests received summarize the facility owner’s consideration of more advanced treatment, the cost and financial impact of the treatment, and their decision to focus at this time on the removal of I/I from the wastewater collection systems as a more cost effective approach to reducing the metals coming into the facilities from metals-laden ground water. Treatment of the wastewater for metals removal may be needed in the future once significant amounts of I/I have been removed.

Having reviewed the variance requests and finding them adequate, DEQ made the tentative determination to grant metals variances to the owners of the Page, Mullan, and Smeltonville WWTPs. This determination required DEQ to do two things:

1. Prepare alternate metals limits that would apply under the variances, in place of Water Quality Based Effluent Limits (WQBELs), based upon the water quality criteria in Idaho’s Water Quality Standards.
2. Describe the impacts the proposed variances would have on the receiving water, the South Fork Coeur d’ Alene River

### **Development of Alternate Metals Limits**

Alternate effluent limitations for metals were established to insure that the wastewater effluent discharged by the facilities is at or below current metals concentrations and loadings, while making reasonable progress towards the eventual goal of complying with WQBELs based upon the water quality criteria. The limits are performance based and derived using statistical procedures in EPA’s Technical Support Document (TSD) for Water Quality-Based Toxics Control (EPA 1991). This is the approach that EPA used to develop the limits in the 2004 EPA variances (see Memo from Ben Cope to Lisa Macchio, August 26, 2002),

The calculation is based on available sampling information and the desired level of

confidence in the estimates of maximum potential discharge. These statistical elements are combined to produce a dimensionless factor (referred to as a “reasonable potential multiplying factor”). This factor is multiplied by the maximum historic discharge to provide an estimate of the maximum potential discharge. The calculation is based on available sampling information, effluent variability and the desired level of confidence in the estimate. These estimates are more typically used in water quality based effluent limits to assure criteria are rarely exceeded. They are being used in the variance to set a limit no more lax than historical performance shows the facilities can meet most of the time. Because the monthly monitoring data are based on single daily measurements these were treated as daily data for purpose of the statistical analysis to derive maximum daily effluent limits.

Don Essig of DEQ applied the TSD statistical procedures to the available discharge monitoring data. Discharge monitoring data was obtained from EPA in early December, 2008 and covered the period from August 2004, up through October, 2008. This provided considerably more data on wastewater quality than EPA used in 2004. As part of DEQ’s analysis, John Tindal of DEQ’s Coeur d’ Alene Regional Office contacted the facilities to verify or correct suspect data. Maximum daily concentration limits at the 99<sup>th</sup> percentile (1% chance of being exceeded) were calculated for each metal and discharge. A divisor (from table 5-3 of the TSD) was then applied to generate average monthly limits at the 95<sup>th</sup> percentile (5% chance of being exceeded) given one sample per month. This process was initially applied directly to loads as well, but because facility flows are quite variable as well, it was decided to base load limits off of the concentration limits multiplied by facility design flow.

The 2009 DEQ calculations are shown in Table 1, along with the limits EPA calculated in 2004 for comparison. It can be seen that in several instances the 2009 calculations resulted in limits that would be greater than in the 2004 permits/variance. DEQ believes anti-backsliding as well as other considerations prevent the use of higher limits and so the 2009 variance limits are the lesser of the two. The alternate metals limits for the renewed variances appear in **bold** face text in the tabular summary.

While DEQ could have simply used the maximum on record as the daily maximum effluent limit going forward, DEQ believes the application of statistical procedures more suitably accounts for the variability in the data record. The use of TSD divisors to go from daily to monthly limits was necessitated by the limitation of once per month monitoring. More frequent monitoring would allow better prediction in the future. Spreadsheets which provide the data used, calculations, and notes are available from DEQ.

Table 1. Page, Mullan, and Smelterville Variance, Summary of Alternate Metals Limits

**Page, City of**

4.30  
MGD

		Concentration Limits, µg/L		Load Limits, lbs/day	
		EPA, 2004	DEQ, 2009	EPA, 2004	DEQ, 2009
Cadmium	DML 8.8		<b>8.3</b>	0.32	<b>0.30</b>
	AML 5.3		<b>5.3</b>	0.19	<b>0.19</b>
Lead	DML 182		<b>96</b>	6.5	<b>3.4</b>
	AML 84		<b>63</b>	3.0	<b>2.2</b>
Zinc	DML	<b>1340</b>	1637	<b>48</b>	59
	AML	<b>802</b>	1063	<b>29</b>	38

**Mullan, City of**

0.55  
MGD

		Concentration Limits, µg/L		Load Limits, lbs/day	
		EPA, 2004	DEQ, 2009	EPA, 2004	DEQ, 2009
Cadmium	DML 11		<b>10.8</b>	0.050	<b>0.049</b>
	AML 5.5		<b>5.5</b>	0.025	<b>0.025</b>
Lead	DML	NA	NA NA NA		
	AML	NA	NA NA NA		
Zinc	DML	<b>3682</b>	3950	<b>17</b>	18.1
	AML	<b>1610</b>	2079	<b>7.4</b>	9.5

**Smelterville, City of**

0.24  
MGD

		Concentration Limits, µg/L		Load Limits, lbs/day	
		EPA, 2004	DEQ, 2009	EPA, 2004	DEQ, 2009
Cadmium	DML 37		<b>29.8</b>	0.077	<b>0.30</b>
	AML 23		<b>17.5</b>	0.048	<b>0.19</b>
Lead	DML	<b>85</b>	109	<b>0.18</b>	0.22
	AML	<b>46</b>	66.6	<b>0.096</b>	0.13
Zinc	DML 8800		<b>3490</b>	18	<b>7.0</b>
	AML 3651		<b>1994</b>	7.6	<b>4.0</b>

Note: **Bold** face (shaded) text denotes lower values between current variance limits and newly calculated limits based on DMR data since August, 2004. These lower **bold** values (shaded cells) are the new variance limits.

MGD = Million Gallons per Day

DML= Daily Maximum Limit

AML = Average Monthly Limit

NA = Not Applicable

## **Determination of Substantial and Widespread Economic and Social Impacts**

Using the EPA document titled “Interim Economic Guidance for Water Quality Standards Workbook” (Workbook), March 1995, it is clear that the users of the SFCDRSD and Smelterville wastewater treatment systems and the surrounding community would face substantial and widespread (adverse) economic and social impacts (SWESI) by having to comply with the NPDES permit limits based on the current water quality criteria. The use of alternate metal permit limits provides relief from substantial and widespread (adverse) economic and social impacts.

The attached Worksheets A-F and Table 2-2 for the SFCDRSD and Smelterville wastewater treatment systems demonstrate the substantial adverse impacts. The approach of first focusing on I/I removal before attempting to install treatment is a common, cost effective practice in developing strategies for compliance with water quality criteria. The cost estimates presented for installing metals treatment appear to be appropriately calculated and are based on pilot studies.

The attached “Widespread Socioeconomic Impacts” summaries for both SFCDRSD and Smelterville discuss how the costs for installing metals treatment at this time also leads to widespread impacts within the communities. The three (3) wastewater treatment plants and their associated wastewater collection systems serve the entire Silver Valley. As a result practically all of the residents and businesses would be impacted by higher user rates that would result from the costs of constructing and operating metals removal systems.

## **Impact of Variances to Water Quality of South Fork Coeur d’Alene River**

As required by Idaho rules DEQ examined the impact of the variances upon the receiving stream segment (IDAPA 58.01.02.260.01.a.i). All three facilities discharge to the South Fork Coeur d’Alene River in Shoshone County, Idaho. Page and Smelterville WWTPs both discharge to the river near the City of Smelterville, Idaho Waterbody unit 17020302 P-1. While the Mullan discharge is about 22 miles upstream, at the City of Mullan, Idaho Waterbody unit 17020302 P-11. Both water body units are impaired due to metals and both are designated for support of cold water aquatic life.

DEQ’s evaluation of the impact of the variances on water quality is based on a comparison of both loads and concentrations of cadmium, lead and zinc using USGS data to characterize receiving stream water quality and the aforementioned discharge monitoring reports (DMR) to characterize the effluent quality data over the past 4 plus years. The USGS gaging station (12413470) is on the South Fork Coeur d’Alene River at Pinehurst, just downstream of Smelterville, but also downstream of the confluence of Pine Creek. While this location is influenced by contamination in Pine Creek and is quite distant from the Mullan discharge, in DEQ’s opinion the extensive monitoring of metals by the USGS at this location provides the most robust data set on in stream water quality in the affected stream segment. DEQ obtained the USGS data online from their NWIS database and performed a comparison of in stream water quality from January 2004 through February 2009 to effluent quality from August 2004 (initiation existing variance) to October 2008 (most recently data available at time of analysis).

South Fork Coeur d’Alene River water quality data reported by the USGS are for both dissolved and total metals. The DMR data from the facilities is for total recoverable metals. The

latter is most comparable to the USGS total metal data, but the two are not the same. Dissolved metal concentrations are most appropriate for comparison to Idaho's criteria which are for dissolved metals. EPA develops effluent limits based on total recoverable, making the conservation assumption that any metal in the discharge may/will eventually dissolve and become biologically available. This being the case DEQ used conversion factors incorporated in Idaho's WQS to convert DMR data to a dissolved metals basis for comparison to water quality criteria (see IDAPA 58.01.02.210.02). For load comparisons the WWTP metal loads are based on the total recoverable concentrations.

Effluent and receiving stream water quality data are not available for the same dates, thus precluding a pair wise comparison. For purposes of comparing loads DEQ calculated means and maximums for both data sets. This provides four possible comparisons of WWTP **total recoverable** loads to in stream loads for each of the metals - For **means**: 1) as a fraction of in stream load of **total** metals, or 2) as a fraction of in stream load of **dissolved** metals; and for **maximums**: 3) as a fraction of in stream load of **total** metals, or 4) as a fraction of in stream load of **dissolved** metals. In addition loads of metals from all three WWTPs can be summed to evaluate their combined impact. Table 2 gives a summary of the load comparison.

Table 2.

### SF CdA River / WWTP Load Comparison Summary

Daily Loads, in lbs/day

Number of observation/period of time:

USGS SF CdA R. @ Pinehurst: 39 samples from 1-21-04 thru 2-24-09

Page & Mullan WWTP: 51 samples Aug 2004 thru Oct 2008

Smelterville WWTP: 22 samples, Jan 2007 through Oct 2008

Mean Daily Loads						Maximum Daily Loads *						
	CdA R-tot	CdA R-dis	Page	Mullan	Smelterville		CdA R-tot	CdA R-dis	Page	Mullan	Smelterville	
<b>Cadmium</b>	24	14	0.03	0.001	0.021		249	37	0.13	0.019	0.09	
<b>Lead</b>	1349	14	0.32	NA	0.015		33947	192	3.8	NA	0.067	
<b>Zinc</b>	3204	2189	4.9	0.60	1.6		30019	6057	24.8	7.95	7.7	
WWTP loads as percentage of in stream loads <sup>a</sup>						<b>Σ</b>	WWTP loads as percentage of in stream loads <sup>a</sup>					
			Page	Mullan	Smelterville				Page	Mullan	Smelterville	<b>Σ</b>
<b>Cadmium</b>	Total		0.13%	0.004%	0.09%	0.22%	Total		0.05%	0.008%	0.04%	0.10%
	Dissolved		0.21%	0.007%	0.15%	0.37%	Dissolved		0.35%	0.05%	0.24%	0.65%
<b>Lead</b>	Total		0.02%		0.001%	0.02%	Total		0.01%		0.00%	0.01%
	Dissolved		2.29%		0.11%	2.39%	Dissolved		1.98%		0.03%	2.01%
<b>Zinc</b>	Total		0.15%	0.02%	0.050%	0.22%	Total		0.08%	0.03%	0.026%	0.13%
	Dissolved		0.22%	0.03%	0.073%	0.32%	Dissolved		0.41%	0.13%	0.127%	0.67%

<sup>a</sup> Note: WWTP loads are based on total recoverable metals.

\* Note: River and effluent maximums do not necessarily occur on the same dates.

Except for dissolved lead the summed metal loads of all three WWTPs is less than 1% of the in stream metals load, and are thus insignificant contributors to in stream loads. The combined contribution of lead from all three WWTP rises above 2% of in stream load when comparing both mean and maximum loads, but only when their summed total recoverable load is compared to in stream dissolved loads, average or maximum (2 & 4 above). Although this is a conservative approach it is not a very valid comparison. The USGS stream data show that most of the lead in the river is particulate (96%), and thus does not contribute to exceedance of aquatic life criteria. Lead is even less of a concern when concentrations are considered.

While loads are important when identifying relative source contributions, aquatic organisms respond to concentrations. Concentrations of dissolved cadmium and zinc in the effluent are lower in concentration than the river most of the time — the effluent actually dilutes and serves to reduce in stream concentrations of cadmium and zinc, on average. For lead, although the effluent concentration normally exceeds the in stream concentrations, and thus does contribute to increasing the in stream lead concentrations, this increase is small by virtue of the small load (2.0 to 2.39% of in stream dissolved lead). More importantly, using the conversion factor in the rules (0.85 for lead, a value far greater than the 0.04 indicated by stream data), dissolved lead concentrations in the effluent actually meet aquatic life criteria most of the time. Furthermore the South Fork Coeur d' Alene River, below the addition of these effluents, exceeded the lead chronic criterion value on just one occasion over 4+ years (39 measurements), and thus meets the chronic lead aquatic life criterion. The acute criterion is higher and more easily met.

From this analysis DEQ concludes that the impact of the discharges on receiving stream water quality is very small and the marginal impact of the variances even smaller. Even if the discharge of these three WWTPs were discontinued the river would not attain criteria, nor would it even substantially improve in quality. In fact, for cadmium and zinc receiving stream quality would decline without these discharges. Attainment of water quality standards in the South Fork Coeur d' Alene River will require control of non-point sources and remediation of contaminated groundwater.

The proposed Superfund program cleanup plan for the Coeur d'Alene Basin indicates that attainment of the water quality criteria for cadmium, lead and zinc will be a long term effort (on the order of decades). These variances do not preclude the achievement of water quality standards by these facilities over the long term.

The effluent limitations contained in the NPDES permits, during the term of the variances, are designed to insure that the facilities discharge at or below current metals concentrations and loadings. DEQ determined that it is reasonable to allow the facilities to discharge at current levels while they make progress on addressing infrastructure upgrades to address the most significant I/I problems with their wastewater collection systems and investigate treatment.

## Notice and Public Comment

The Water Quality Standards variance section (IDAPA 58.01.02.260.01.a.i) requires DEQ to post a notice of its tentative determination to grant a variance from the water quality standards and to provide an opportunity for the public to provide comments on the proposed variance action.

DEQ having received complete variance requests from both SFCDRSD and Smeltermville:

- 1) completed a review of the facilities' progress toward meeting water quality standards and found it reasonable;
- 2) completed a review of the economic and social justification for a variance and found it adequate;
- 3) reaffirmed our understanding of the source of metals contamination in the facilities wastewater and broader context of historic mining and smelting operation in causing metals contamination of ground water;
- 4) estimated the maximum effluent quality since August 2004 as performance based alternate metal limits that the facilities can reasonably achieve; and,
- 5) examined the impact of the discharges, with variances to water quality standards, on the South Fork Coeur River and found the discharge to be trivial in the context of broader non-point source contamination.

DEQ made the decision to proceed with proposed variances in early March 2009. Draft variances were prepared stating the alternate metals limits the facilities would be expected to meet. A public notice was prepared and then published in the Idaho Administrative Bulletin on April 1, 2009. The notice informed the public of DEQ's preliminary decision, the availability of the draft variances and supporting documentation on DEQ's web site for public review, and started a 30-day public comment period.

Comments were received from nine (9) individuals and EPA. All but one was in favor of DEQ granting a variance. An e-mail from Ashley Leach objected. Her concern seemed to be that DEQ was lowering water quality standards and thus being short-sighted. DEQ's granting of variance is a temporary action that is aimed at improving the long-term health of the South Fork Coeur d'Alene River and its communities in the most practical way taking into account the realities of broader contamination in the valley and the economic wherewithal of the communities to treat their wastewater.

Comments from EPA, while in favor of granting the variances, recommended several ways to improve the variances and their justification. DEQ has addressed EPA's concerns by 1)

preparing this justification document; 2) working with the SFCDASD and City of Smeltonville to strengthen their economic analysis and to better document the widespread economic impact in the Silver Valley of implementing advanced wastewater treatment to meet water quality based effluent limits absent the variances; and 3) developing language for the variances and ultimately renewed NPDES permits, that better describes the dischargers specific plans for making progress toward meeting water quality standards.

## **Variance Conditions**

Specific actions which would constitute reasonable progress towards attainment of the final discharge limits and therefore the water quality standards are conditions for the variance. Primary among these actions is continuing to reduce the amount of I/I entering the wastewater collection systems which will reduce the metals concentrations and load coming into the three (3) wastewater treatment plants. Both entities will continue with programs previously started, such as the following: SFCDRSD loan program for repairing leaking service laterals, charging special fees for annexation that are used on I/I removal projects and cooperating with the satellite cities in providing technical assistance (TV inspections of collection lines, flow monitoring, etc.); Smeltonville will continue with the collection system replacement project started in 2008 and work towards connecting into the SFCDRSD system which will allow Smeltonville to abandon the existing lagoon.

Data the owners of the facilities have provided to date suggest that continued improvements in the collection system to reduce I/I flows will reduce metals in the treatment plant effluent and may be sufficient to meet water quality standards. DEQ believes the control of I/I is the owner's most cost effective short term strategy to reduce metals in their wastewater and should be exhausted before costly advanced treatment is required. Implementation of I/I controls will also provide additional benefits:

- (1) Improved treatment performance and compliance with limitations for other non-metal pollutants in the wastewater, particularly during high inflow events;
- (2) Reduced design flows for sizing of additional or expanded treatment works; and
- (3) Reduced operating costs associated with high inflow rates.

It is DEQ's intent that the draft NPDES permits include actions to be taken by the SFCDRSD and Smeltonville over the next five (5) year permit cycle which will reduce the metals in the influent wastewater through the removal of I/I and continue exploring strategies that will lead to compliance with the water quality criteria. The variance requests discuss these proposed actions. The following new actions are proposed:

### **SFCDRSD (Page & Mullan WWTPs)**

1. Apply for STAG funds that will be used for sewer line replacement work in the Elizabeth Park collection system which is owned by the SFCDRSD.

2. Work with the city of Kellogg to complete a compliance schedule.
3. Monitor and report on the progress made by the cities of Mullan, Osburn and Wallace on I/I removal projects presented in the compliance schedules that were included in the Variance Request.
4. Work with DEQ on a demonstration wetlands treatment system to determine the effectiveness of wetlands treatment for metals removal.
5. Repair at least five (5) manholes per year to eliminate an estimated 2.5 million gallons of I/I per year per manhole.
6. Provide annual reports to DEQ and EPA on the progress made in completing these actions and other I/I removal related matters that may come up.

### **Smeltonville**

1. Complete the replacement of 88 service laterals on private property.
2. After compiling four (4) years of WWTP flow data, enter into negotiations with the SFCDRSD about connecting into the SFCDRSD Page WWTP.
3. Provide annual reports to DEQ and EPA on the progress made in completing these actions and other I/I removal related matters that may come up.

### **Variance Term and Renewal**

The term of these variances is five (5) years from their effective date. At that time the variances may be renewed if the applicants reapply and demonstrate that the use is still not attainable, the metals criteria still can not be achieved, they have met the conditions in the variance and have made reasonable progress towards achieving the water quality standards.

Renewal of the variance may be denied if the applicant did not comply with the conditions of the original variance.

## References

**City of Smelterville Wastewater Facility Variance Justification.** Original received by DEQ Coeur d'Alene Regional Office February 19, 2009, revision received May 27, 2009.

Cover letter requesting variances Page and Mullan wastewater treatment plants from Ross Stout, Manager SFCDA Sewer District to EPA & Idaho DEQ and attached '**South Fork Coeur d'Alene River Sewer District Variance Justification**'. Original dated February 26, 2009, revision received May 27, 2009.

DEQ. Proposed Idaho Variance Procedure – For Page, Mullan and Smelterville Metals I & I. Dated January 2, 2009

DEQ. Estimation of alternate metals limits for Page Mullan and Smelterville. Excel<sup>®</sup> spreadsheets prepared by Don A. Essig. March 20, 2009.

DEQ. Comparison of cadmium, lead and zinc loads and concentrations discharged by Page, Mullan, and Smelterville wastewater treatment plants to loads and concentrations of these metals in the SF Coeur d'Alene River near Pinehurst, ID (USGS station 12413470). Prepared by Don A. Essig. March 31, 2009.

Federal Register / Vol. 62, No. 147 / Thursday, July 31, 1997 / Rules and Regulations. Water Quality Standards for Idaho.

Federal Register /Vol. 73, No. 161 /Tuesday, August 19, 2008 / Proposed Rules. Withdrawal of the Federal Water Quality Standards Use Designations for Soda Creek and Portions of Canyon Creek, South Fork Coeur d'Alene River, and Blackfoot River in Idaho.

Federal Register / Vol. 73, No. 215 / Wednesday, November 5, 2008 / Rules and Regulations. Withdrawal of the Federal Water Quality Standards Use Designations for Soda Creek and Portions of Canyon Creek, South Fork Coeur d'Alene River, and Blackfoot River in Idaho.

Idaho Administrative Bulletin. Docket No. 58-0000-0903 Notice of Public Comment Period and Public Hearing on DEQ's Tentative Determination to Grant Variances from Meeting Water Quality Standards for the Discharge of Metals from the Page, Mullan, and Smelterville Wastewater Treatment Facilities. April 1, 2009 - Vol. 09-4, page 18- 19.

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