

## **Response to Comment Record**

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**Response to Comments Record**  
**Draft Lower Boise River**  
**Nutrient Subbasin Assessment**

DEQ Boise Regional Office  
January 28, 2002

**Introduction**

The Draft Lower Boise River Nutrients Subbasin Assessment was available for public comment from Monday, July 9<sup>th</sup>, 2001 through Friday, August 10<sup>th</sup>, 2001. Comments were accepted through August 17<sup>th</sup>, 2001. The public comment period was announced on the DEQ web site, in the Idaho Statesman and in the Idaho Press Tribune. DEQ also presented the subbasin assessment at a public meeting on July 9<sup>th</sup>, 2001. This document summarizes the comments that were received from all parties and provides DEQ's response to comments.

**Comments Received**

Total Number of Comment Received: 4

**Agencies**

Idaho Department of Water Resources  
Environmental Protection Agency – *received October 10<sup>th</sup>*

**Municipalities**

Boise City Public Works

**Private**

Moffatt Thomas Barrett Rock & Fields, Chartered – *received September 17<sup>th</sup>*

**Response Format:**

All comments are either quoted or summarized below. *DEQ responses are shown in italics.*

## Idaho Department of Water Resources

The Idaho Department of Water Resources planning staff reviewed the nutrient subbasin assessment and provided several editorial and content related comments. A cover letter itemizing the content related comments was received August 8<sup>th</sup>, 2001. The editorial comments were integrated into the final document, but are not addressed in this response to comment record.

1. [Page 15], In the Ground Water Hydrology section, you may want to review and reference the most recent report from the Treasure Valley Hydrologic Project.

*DEQ will review the most recent report(s) from the Treasure Valley Project and where appropriate, update or refine the 'Ground Water Hydrology section of the nutrient subbasin assessment.*

2. [Page 23], Specify why the Boise River from Lucky Peak to River Mile 50 is designated as a "Special Resource Water".

*The lower Boise River from Lucky Peak to River Mile 50 (Veterans Park) is listed as a 'Special Resource Water' in the Idaho Water Quality Standards and Wastewater Treatment Requirements. Special Resource Waters receive intensive protection to preserve outstanding or unique characteristics and beneficial uses. A water body may be designated as a special resource water if it meets at least one of the characteristics outlined in IDAPA 58.01.02.056.01. The lower Boise River is recognized as meeting at least one of these characteristics.*

3. [Page 25], The USGS is monitoring at the mouth of 4 tributaries to the Boise River; presumably this is without accompanying volume/flow data. Why, and how, does this monitoring fit in with the total monitoring program on the lower Boise River?

*Beginning in 2000 and continuing into 2001, the USGS is monitoring at the mouth of Mason Creek, Indian Creek, Fivemile Creek and Tenmile Creek. The USGS is sampling multiple water quality related parameters (nutrients, sediment, etc) including discharge/flow data. The four lower Boise tributaries that are being monitored are 303(d) listed streams and are being monitored for two primary reasons: 1) collect additional data for the development of the tributary subbasin assessments (due 2001), and 2) collect additional data for the development of the nutrient allocations that are expected to be developed upon approval of the Snake River-Hells Canyon TMDL.*

4. [Page 41], The conclusion about algae growth in conjunction with sediment TMDL implementation is based on very limited information.

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*DEQ agrees that information to validate or invalidate this conclusion would be helpful. However, the analysis performed by Chen and Wells (1975) (described on page 41) and the application of the Thomann and Mueller (1987) phytoplankton growth model (as described in appendix E) to the lower Boise River sediment data both show that phytoplankton chlorophyll-a levels do not exceed the literature based nuisance thresholds. Given that information available, DEQ feels the conclusion is valid.*

5. [Page 42], The assessment, while comprehensive, is based on limited data, limited sources of those data, and limited modeling results for the lower Boise River. Understanding the reason for the data insufficiencies, is it reasonable at this time to recommend de-listing nutrients from the 2002 303(d) list?

*The intent of the nutrient subbasin assessment is to identify and assess the available physical, chemical and biological data as they relate to pollutant(s) of concern and to determine the support status of aquatic life and recreational beneficial uses. DEQ used the available data from all of the available sources for the assessment. The data was assessed in a manner consistent with EPA and state guidance. Therefore, DEQ feels that it is reasonable to recommend de-listing nutrients from the 2002 303(d) list.*

6. [Page 47], Are the SCDs collecting data to quantify the reduction in sediment loadings associated with BMP implementation? If so, how?

*The Soil Conservation Districts are not collecting data to quantify watershed wide sediment reductions as a result of BMP implementation. Information exists that quantifies the effectiveness of specific BMPs, but pre and post BMP installation sediment loading data must be available in order for the reductions to be quantified on a field by field basis. In most cases this information is not available.*

*The Idaho Department of Agriculture and USGS are collecting data at the mouth of selected tributaries in the basin. As BMPs are installed and inventoried in each respective basin the water quality monitoring data reflect the realized sediment reduction.*

## U.S. Environmental Protection Agency, Region 10

Comment: In a letter dated October 10<sup>th</sup>, 2001 the Environmental Protection Agency, Region 10 made the following comments:

1. “Idaho’s water quality standards for nutrients are narrative. We recognize that interpretation of the narrative nutrient standard is difficult, and it is not as well defined for rivers as it is for lakes and reservoirs. Our staff recently visited the Middleton to Caldwell section of the river. During their visit they also observed growth of filamentous algae, macrophytes and periphyton, particularly along the shoreline and in slower moving sections of the river as described in the SBA. Whether these growths are a nuisance is a subjective matter. The SBA also states that a review of the complaint logs for the years of 1997 to present indicate that no complaints of nuisance growth or odors were received. If public complaints are a key factor in determining whether there is a nuisance we would suggest better documentation be provided in the record that conditions are not of concern to river users. Possible means of documenting this may include polling or surveying a cross section of river users to more directly record public opinion.”

*DEQ concurs that the Middleton to Caldwell segment of the lower Boise River is the most sensitive segment in terms of the potential for excess aquatic plant growth. The year 2001 is one of the lowest water years on record in the lower Boise River. Therefore, it is not surprising that some amount of aquatic growth is noticeable near Middleton. DEQ also concurs that determining whether or not the algae growth is a nuisance is a subjective matter that is difficult to gauge. DEQ attempted to address this subjectivity by using water quality complaint logs as an indicator of the public’s perception of the river. DEQ feels it used the best available data at the time of assessment.*

2. “As you are aware, the Lower Boise is part of a national demonstration project for nutrient effluent trading between and among point and non-point sources within the subbasin. The demonstration project has been in the planning stages for approximately five years. Participation in the effluent trading program is voluntary on the part of the point and nonpoint sources. EPA is concerned that, despite the legal nexus to issue load allocations and wasteload allocations, stakeholders may be less motivated to participate in the trading program if the river is delisted. Our understanding is that you have had discussions with several stakeholders and they have indicated that they are still expecting to participate in the program. We hope DEQ will continue to reiterate to the stakeholders, particularly the non-point sources, the importance of participating in the program.”

*The Lower Boise River effluent trading demonstration project is indeed an important program in terms of providing an additional method for achieving phosphorus load reductions in the river. The impetus for effluent trading is the*

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*necessity for point and non-point sources alike to reduce phosphorus loads. Delisting nutrients in the Lower Boise River will not remove the necessity for load reductions because reductions from point and non-point sources will still be necessary as a result of the Snake River-Hells Canyon TMDL. The extent of the reductions will be determined upon approval of the Snake River-Hells Canyon TMDL.*

3. “The suspended sediment TMDL for the Lower Boise was issued January 2000. The TMDL calls for a 37% reduction in suspended sediments for the watershed. As these reductions are implemented, there is concern that the resultant increase in light transmission through the water may result in increased algal blooms and other aquatic vegetation nuisances. EPA would suggest that these conditions be monitored, and re-listing the waters for nutrients be considered if necessary. This may become especially important if implementation of the SR/HC TMDL significantly delays for any reason.”

*Page 41 and Appendix E of the assessment provide data suggesting that nuisance algal blooms would not occur as a result of achieving a 37% total suspended sediment reduction in the river. However, DEQ concurs that the continued monitoring of algal biomass is important and intends to do so in cooperation with USGS. If a 37% reduction in total suspended sediment in the river results in chronic dissolved oxygen and pH criteria violations, a significant increase in benthic and suspended algal biomass concentrations and complaints about ‘nuisance’ algae growth, DEQ will consider re-listing the river for nutrients.*

4. “As discussed with IDEQ management, we are expecting that this listing action, and others currently in the process will be formally submitted as a package during the 2002 listing cycle. At that time, EPA will officially consider all proposed delisting requests, including the Lower Boise.”

*This proposed listing action will be submitted with a larger package during the 2002 listing cycle.*

### **City of Boise Public Works Department**

Comment: In a letter received August 17<sup>th</sup>, 2001 the City of Boise Public Works Department said: “The City of Boise has and will continue to actively participate in the Lower Boise River and the Snake River-Hells Canyon TMDL development and implementation processes. As a responsible and concerned stake holder in the water quality of the Boise River, the city concurs with, and supports, the Idaho Department of Environmental Quality analysis that indicates that nutrients are not impairing aquatic life or recreational beneficial uses in the lower Boise River. As such, the city supports the proposed de-listing of nutrients as a pollutant in the lower Boise River from Star to the Snake River from the 2002 303(d) list. ”

*DEQ acknowledges and supports the participation of the City of Boise as a stakeholder in the lower Boise River TMDL process. The City of Boise has provided valuable input throughout development of the nutrient subbasin assessment and DEQ anticipates continued involvement from the city. DEQ acknowledges the City of Boise as a supporter of the nutrient subbasin assessment.*

## Moffatt Thomas Barrett Rock & Fields, Chartered

Scott Campbell, representing Pioneer Irrigation District, hand delivered a letter, including comments to DEQ on September 17<sup>th</sup>, 2001. The letter included several legal, technical and editorial comments. The editorial comments were integrated into the document where appropriate. The technical and legal comments are addressed below.

1. "Pioneer agrees that nutrients should be de-listed as a pollutant on the Lower Boise River"

*DEQ acknowledges Pioneer Irrigation District's support for delisting nutrients as a pollutant of concern in the lower Boise River.*

2. "At the outset of the remainder of these comments, Pioneer wishes to address a fundamental issue: the idea that even though nutrients should be delisted as a pollutant on the Lower Boise River, a nutrient load allocation may be allocated to the Boise River through the Snake River-Hells Canyon process. The idea that such allocation is proper, and may result in a change to the Lower Boise TMDL, is fundamentally flawed and improper."
3. "DEQ simply does not have the authority to conduct a reallocation on a stream which has been delisted for a certain pollutant, in this case nutrients."

*Pioneer Irrigation District (PID) argues that DEQ can not allocate loads to sources of pollutants on a tributary to a listed water body when the tributary itself is not listed. DEQ disagrees with this argument.*

*The Clean Water Act (CWA) and state law requires TMDLs set loads necessary to implement the applicable water quality standards. If reductions from sources on tributaries are "necessary to implement the applicable water quality standard" (CWA, section 303(d)(1)(C)), then the TMDL must take such sources and reductions into account in order to meet the requirements of 303(d).*

*The federal TMDL regulations also clearly provide TMDLs should take into account all sources to listed water bodies, even if those sources may be located on tributaries. The definition of TMDL in the federal regulation indicates allocations should be made to tributaries or adjacent segment: "(i) Total maximum daily load (TMDL). The sum of the individual WLAs for point sources and Las for non-point sources and natural background. If a receiving water has only one point source discharger, the TMDL is the sum of that point source WLA plus the Las for any non-point sources of pollution and natural background sources, tributaries, or adjacent segments." 40 CFR 130.2(i), (emphasis added).*



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*Idaho state law also provides the TMDL should take into account sources of pollutants within the watershed in which the listed water body is located:*

*"Total maximum daily load processes developed pursuant to this section shall include, but not be limited to:*

- (1) identification of pollutants impacting the water body;*
- (2) an inventory of all point and non-point sources of the identified pollutant, if practical, or an analysis of the land types, land uses and geographical features within the watershed that may be contributing identified pollutants to the water body." Idaho Code 39-3611. (emphasis added).*

*Thus, under state law, regardless of whether the pollutants within the watershed are discharging directly to a listed water body, these sources should be inventoried and reduced if necessary to develop a TMDL that will implement water quality standards for the listed water body.*

4. "At this time, the SR-HC TMDL is months away from being completed. However, DEQ apparently has already decided what the TMDL will say, and how it will allocate loads. That assumption or premature decision calls into question the very integrity of the SR-HC TMDL process, and certainly could lead one to the conclusion that DEQ is in no way objective about the outcome of that process. It could also lead one to conclude that DEQ will ignore certain science, and will instead use only that "science" or "data" that supports its premature decision. That action does not comply with the laws of Idaho, or the Clean Water Act and is, in fact repugnant to the fundamental tenets of the constitution of this state and country."

*PID appears to assert DEQ, by referencing the possible results of the SR-Hells Canyon TMDL, is indicating it will not consider public comments or information provided during the still pending SR-Hells Canyon public participation process. This is not correct. DEQ will continue to fully consider all timely comments and information in its development of the SR-Hells Canyon TMDL.*

5. "There is absolutely no authority for looking first to nonpoint sources when loads are being allocated."

*PID asserts that a TMDL can not set load allocations relating to non-point sources until wasteload allocations and effluent limitations for point sources are implemented and determined to be not stringent enough to implement state WQS. DEQ disagrees with this assertion and it has been rejected by the court in *Dioxin/Organochlorine Center v. EPA*, 37 ERC 1845 (WD WA 1993) *aff'm on appeal*, 57 F3d 1517 (9th Cir 1995). The court in this case held that section 303(d) of the CWA did not require the application of technology based limitations on point sources, and the analysis of whether these limitations were sufficient, before a TMDL could be developed.*

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*Moreover, state law clearly requires TMDLs address both point and non-point sources and imposes no requirement that point source controls be applied before a TMDL is developed or controls are implemented for non-point sources. Idaho Code section 39-3611.*

6. PID asserts that the use of words such as those highlighted in the following DEQ statement “illustrate the speculation inherent in unsupported and unproven theory.” DEQ says, “the high nutrient concentrations and low flow conditions in the Middleton and Caldwell reach **suggest** that in severe drought years, if flows are low enough, conditions in the river **may** support sufficient algae growth to impair aquatic life or recreational uses.”

*DEQ agrees that the use of words such as “suggest” and “may” in this statement imply that DEQ is not certain that excess algae growth will occur in drought conditions. However, given the fact that phosphorus is in no way limiting algae growth (based on concentration data presented in the SBA), it is scientifically defensible to assume that high point velocities (among other things) are one of the factors limiting excess algae growth. Hence, if flow levels drop the point velocities will drop as well.*

7. The comments assert that the DEQ statement “flow alteration and in-stream and riparian habitat modification contribute to the impairment of aquatic life beneficial uses in the river” should be removed. The comments assert that “flow alteration and habitat modification are not state water quality standards and have absolutely no relevance in a subbasin assessment dealing with nutrients.”

*DEQ disagrees with the PID’s assertion that language describing flow alteration and habitat modifications have no relevance in a subbasin assessment dealing with nutrients. The purpose of this subbasin assessment and any subbasin assessment, no matter what the pollutant(s), is to evaluate the support status of designated and existing beneficial uses. If information exists that shows other factors are impairing beneficial uses, it is the intent of the subbasin assessment to document those factors.*

8. “DEQ has exhibited a significant bias toward Idaho Power Company’s data, and has refused to honor the repeated requests of counsel for Pioneer, as well as other interested parties, that the Idaho Power Company and DEQ release Idaho Power Company data for peer review. That bias and refusal to release data invalidates the conclusion regarding nutrients downstream from the mouth of the Boise River, and the cause thereof.”

*The issue of Idaho Power Company data validity has no bearing on DEQ’s proposal to remove nutrients from the 303(d) list. No Idaho Power Company data was used in the lower Boise River nutrient assessment. This document is not*

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*the appropriate place to address the contention that Idaho Power Company's data, as it pertains to the Snake River – Hells Canyon TMDL, is not being distributed to the interested stakeholders.*

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**Response to Comments Record**  
**Draft Lower Boise River**  
**Tributary Subbasin Assessments**  
**Blacks Creek, Fivemile/Tenmile Creek,**  
**Mason Creek, Indian Creek, Sand Hollow Creek**

DEQ Boise Regional Office  
January 28, 2002

**Introduction**

The Draft Lower Boise River tributary subbasin assessments were available for public comment from Monday, October 29<sup>th</sup>, 2001 through Friday, November 30<sup>th</sup>, 2001. The public comment period was announced on the DEQ web site, in the Idaho Statesman and in the Idaho Press Tribune. DEQ also presented the subbasin assessments at a public meeting on October 29<sup>th</sup>, 2001. This document summarizes the comments that were received from all parties and provides DEQ's response to comments.

**Comments Received**

Total Number of Comments Received: 10

**Agencies**

Canyon Soil Conservation District  
Ada Soil and Water Conservation District  
Idaho Soil Conservation Commission  
Idaho Department of Water Resources  
Idaho Department of Agriculture  
U.S. Environmental Protection Agency – *received December 6<sup>th</sup>*

**Municipalities**

City of Meridian Public Works

**Private**

Black Canyon Irrigation District  
Ringert-Clark Chartered Lawyers – *received December 4<sup>th</sup>*  
Southwest Ada Neighborhood Association

**Response Format:**

The comments are organized by tributary and are either quoted or summarized below. *DEQ responses are shown in italics.*

## **Blacks Creek**

### **Canyon Soil Conservation District**

1. “The Canyon Soil Conservation District supports the delisting of Blacks Creek for sediment”.

*DEQ acknowledges the Canyon Soil Conservation District’s support for delisting sediment as a pollutant of concern in Blacks Creek.*

### **Ada Soil & Water Conservation District**

2. “The Ada Soil & Water Conservation District supports the proposed delisting of Blacks Creek from the 303(d) list of impaired water bodies for sediment, nutrients and dissolved oxygen.”

*DEQ acknowledges the Ada Soil & Water Conservation District’s support for delisting sediment, nutrients and dissolved oxygen as pollutants of concern in Blacks Creek.*

### **Idaho Department of Water Resources**

3. “In several instances, conclusions are drawn or decisions are made based on very limited data. From a scientifically defensible standpoint, the data cannot statistically support or refute conclusions or decisions. Is this appropriate for a sub-basin assessment?”

*DEQ agrees that additional information to statistically validate or invalidate the conclusions in the subbasin assessment would be helpful. DEQ attempted to use the available data in the best manner possible to reach a conclusion on beneficial use support status for contact recreation and aquatic life. Given the court order to reach such conclusions by December 2001, DEQ feels the assessment is valid.*

## **Fivemile and Tenmile Creeks**

### **Canyon Soil Conservation District**

1. “The Canyon Soil Conservation District supports the delisting of Fivemile and Tenmile Creek for sediment”.

*DEQ acknowledges the Canyon Soil Conservation District’s support for delisting sediment as a pollutant of concern in Fivemile and Tenmile Creek.*

### **Ada Soil & Water Conservation District**

2. “The Ada Soil & Water Conservation District supports the proposed delisting of Fivemile and Tenmile Creek from the 303(d) list of impaired water bodies for sediment, nutrients and dissolved oxygen.”

*DEQ acknowledges the Ada Soil & Water Conservation District’s support for delisting sediment, nutrients and dissolved oxygen as pollutants of concern in Fivemile and Tenmile Creek.*

### **Idaho Soil Conservation Commission**

The ISCC provided several comments ranging from typographic errors to suggested wording changes. The substantive changes are described below.

3. “There is a misprint in the criteria for DO that reads, ‘Dissolved oxygen concentrations exceeding four (6) mg/L at all times.’ This should read, exceeding four (4) mg/L at all time”.

*DEQ agrees that the correct DO criterion for the modified aquatic life use is 4.0 mg/L. The mistake has been corrected in the final document.*

### **Idaho Department of Water Resources**

The IDWR planning staff provided editorial comments and requested clarification on two issues, which are addressed below.

4. “What is the status of the beneficial use changes? What is the approval process?”

*The proposed beneficial use changes for Fivemile and Tenmile Creeks, as described in the subbasin assessment, were adopted by the DEQ board in late 2001. In terms of approval, the proposed use changes will go before the Idaho*

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*State Legislature in 2002 for approval. Upon legislative approval they will go to EPA for approval. Once approved by EPA the changed become official.*

5. “In several instances, conclusions are drawn or decisions are made based on very limited data. From a scientifically defensible standpoint, the data cannot statistically support or refute conclusions or decisions. Is this appropriate for a sub-basin assessment.”

*DEQ agrees that additional information to statistically validate or invalidate the conclusions in the subbasin assessment would be helpful. Until 1998, no consistent data collection efforts were performed upstream of the mouth in each tributary, and only in 2000 did DEQ collect algal biomass data. DEQ attempted to use the available data in the best manner possible to reach a conclusion on beneficial use support status for contact recreation and aquatic life. Given the court order to reach such conclusions by December 2001, DEQ feels the assessment is valid.*

**Southwest Ada Neighborhood Association**

6. “It is our recommendation that both Fivemile and Tenmile Creeks specifically remain as impaired water bodies on the 303(d) list under the United States Clean Water Act. Even though these creeks presently meet state water quality standards for nutrients, sediment and dissolved oxygen, they will not continue to meet these standards in the future due to heavy residential, commercial and airport development that is planned and occurring in our community.” Our concerns are based on the following:

[Summarized by DEQ]

- “The Fivemile Creek flows under and through the area designated for the future Third Parallel Runway at the Boise Airport.”
- “Airports are sources of tons of pollutants. These pollutants, through natural stream flows, will end up in Fivemile Creek that runs through our community.”
- “Now is not the time to drop Fivemile Creek from the 303(d) list of impaired water bodies.”
- “In studying the history of Tenmile Creek it was found that Tenmile Creek is actually two separate creeks, and can be described as the most raped natural waterway in the nation. It was found that when the New York Canal was originally constructed, Tenmile Creek was terminated at the canal with a vermin laden polluted little pond, located on the Owyhee Sewer District property....”
- “The second Tenmile Creek flows from the west side of the New York Canal on out through Meridian and is undoubtedly that portion of Tenmile Creek that DEQ is interested in removing from the 303(d) list.”
- “Our recommendation: Tenmile Creek remain on the 303d list, until Tenmile Creek is routed under the New York Canal, thus reconnecting the two sections of the creek. It is further recommended that prior to removing Tenmile Creek from

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the 303d list that both portions of Tenmile Creek be cleaned up to meet DEQ standards and the good living standards on our community.”

*The Gowen Field plant uses a lagoon system to serve the wastewater treatment needs of Boise's airport and adjacent commercial and industrial areas. Hay is produced on nearby land irrigated with treated effluent from Gowen Field. In terms of stormwater from the airport, which appears to be the Southwest Ada Neighborhood Association's concern, the airport is subject to a National Pollution Discharge Elimination System (NPDES) stormwater permit from the United States Environmental Protection Agency (EPA). The NPDES permit includes minimum requirements to control and contain stormwater, including a monitoring program to gauge permit compliance. The permit also contains requirements to contain the use of airport related pollutants such as oil/grease and fuel.*

*The intent of a subbasin assessment is to determine water quality conditions in a water body as the conditions pertain to the 303(d) listed pollutants. If the pollutants are not exceeding state water quality standards, they are removed from the 303(d) list. Removal of a pollutant from the 303(d) list does not exempt the water body from the Idaho Water Quality Standards and Wastewater Treatment Requirements, it simply means no Total Maximum Daily Load (TMDL) is necessary. As with all waters of the state, Fivemile and Tenmile Creek are subject to antidegradation provisions, which means that water quality conditions will not be allowed to deteriorate such that beneficial uses are not met.*

*DEQ concurs that Tenmile Creek is hydrologically disconnected at the New York Canal. The decision to hydrologically re-connect Tenmile Creek at the New York Canal does not fall under DEQ jurisdiction. While DEQ agrees that a reconnection would be beneficial to the stream, it cannot be addressed in the TMDL arena.*

### **City of Meridian, Public Works/Building Department**

The City of Meridian provided DEQ with several editorial comments and technical suggestions. The editorial comments were integrated into the document. The notable technical suggestions are noted below.

7. “If Fivemile and Tenmile Creeks are consistent with seasonal cold water biota criteria and the only seasonal cold water specific criterion which pertains to this analysis is dissolved oxygen, which is temperature dependent, and oxygen criteria is applied on an annual basis, then does then mean that the required dissolved oxygen concentration is an annual mathematical average or does it mean that the instantaneous dissolved oxygen level must exceed the criterion at all times regardless of season?”



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*The only seasonal cold water specific criterion that applies to Fivemile and Tenmile Creek is temperature. A site specific, ambient, dissolved oxygen criterion of 4.0 mg/L was established to accompany the modified aquatic life use, which is different than the season cold criterion of 6.0 mg/L. Compliance with the 4.0 mg/L dissolved oxygen criterion is based on instantaneous data, not an annual mathematical average. If ambient dissolved oxygen concentrations sag below the criterion, an assessment must be performed to determine the cause of the sag.*

8. Page 27, paragraph 2 of the assessment indicates that the City of Meridian's NPDES reporting method may be the reason no dissolved oxygen values below 6.0 mg/L are reported. The City of Meridian comments: "The City of Meridian Wastewater Treatment Plant spent approximately \$1,400,000 in 1997-1998 to upgrade, among other units, the post-aeration facilities to meet the NPDES DO requirements. The post-aeration facilities were put on-line in January of 1998, which you will find coincides with the absence of sub-6.0 mg/L DO data.

*When the DO analysis was performed, DEQ did not consider the 1997-1998 upgrade to the post-aeration facility. DEQ agrees that the upgrade is probably the cause of the absence of sub-6.0 mg/L DO concentrations. Additional language has been added to the final assessment that acknowledges the upgrade.*

9. The 'Reasonable Assurance' section of the document says that if the appropriate load reduction are not achieved from nonpoint sources through existing regulatory and voluntary programs, then additional reductions must come from point sources. The City of Meridian comments: "One should note, and understand, even if **ALL** the nutrients were removed from the wastewater effluent (a prohibitively costly proposition to the ratepayers on the City of Meridian), the load allocation for Fifteenmile Creek would likely not be achieved."

*DEQ needs to clarify that a nutrient load allocation has not (as of December 2001) been given to Fifteenmile Creek or any of the other nutrient sources to the lower Boise River. The load allocation process will occur sometime after EPA approval of the Snake River-Hells Canyon TMDL. DEQ agrees that removing all of the phosphorus from the Meridian WWTP effluent would probably be cost prohibitive. It is unlikely that such a requirement would be necessary. Additional text has been added to the assessment indicating that a cost-benefit analysis would be appropriate before additional point source reductions were to be suggested.*

**Ringert Clark Chartered Lawyers**

In a letter dated December 4<sup>th</sup>, 2001 Ringert Clark made the following comment:

10. "In general, the subbasin assessment does not accurately state that the IDEQ Board directed IDEQ personnel to work on the appropriate method to remove the

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## Response to Comment

“recreational” use designation for these drains because such use of these drains is not appropriate and that it should not even be implied that it is appropriate. The references in the subbasin assessment need to accurately reflect the direction given by the IDEQ Board, or such references need to be completely eliminated.”

*DEQ concurs with the comment. A reference to the DEQ Board’s direction to work on an appropriate method for remove the “recreational” use designation from waters such as Fivemile and Tenmile Creek has been added to the subbasin assessment. DEQ also added language indicating that upon development of a more appropriate ‘contact’ use, DEQ will reconsider requests to change secondary contact recreation.*

## United State Environmental Protection Agency

In a letter dated December 6<sup>th</sup>, 2001 the Environmental Protection Agency, Region 10 made the following summarized comments.

11. “Appropriate detailed maps and figures showing each of the landmarks and locations referenced in the report should be provided. Please provide appropriate detailed graphics and use consistent reference points.”

*DEQ has revised most of the figures to provide adequate geo-referencing.*

12. “EPA would not support the recommendation made on page 2 and page 8 of the UAA for Fivemile, Tenmile and Fifteenmile Creek for the removal of the bacteria criteria for recreational use. A site-specific criteria less protective than the existing standard would also not likely be acceptable to EPA.”

*DEQ agrees with EPA, and has not proposed to remove the secondary contact recreation beneficial use or the associated bacteria criteria in the final draft of the subbasin assessment.*

13. It is stated in the SBA that: “If beneficial uses appear to be impaired by a non-303(d) listed pollutant, the IDEQ has the option of preparing a TMDL at the current time or postponing the TMDL until a later date when additional data can be collected. Since the data clearly demonstrate that the bacteria criteria are exceeded, a statement must be provided in each SBA as to IDEQ’s intent for addressing bacteria.”

“The beneficial use summary table indicate “None” under Other causes of Impairment. Bacteria should be added to this category.”

*DEQ agrees that the bacteria data show secondary contact recreational use impairment. A bacteria analysis has been added to the assessment showing that bacteria are impairing contact recreation. Additionally, DEQ will propose listing*

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Response to Comment

*Fivemile and Tenmile Creek for bacteria on the 2002 303(d) list and will establish a schedule for TMDL development. A TMDL will not be developed at this time.*

14. “A discussion and summary of the CH2M Hill DNA analysis of bacteria samples should be provided in the SBA and related to the discussion of future preparation of a TMDL. We believe this report will not obviate the need to prepare a TMDL.”

*DEQ did not provide a summary of the CH2M Hill DNA study or any of the associated data in the subbasin assessment. The DNA report and it's associated conclusions and recommendations have not been finalized (as of December 2001). Therefore, DEQ feels that it is premature to include the report in the SBA. The DNA report and any additional bacteria analyses that have been performed will be considered in the future, when DEQ addresses the need for a bacteria TMDL.*

15. “There is mention of additional efforts to gather information concerning sediment and nutrients. These statements should be explained as to what the data collection efforts are, if this is indeed the case.”

*DEQ has added additional language to the SBA further describing the monitoring efforts by the United States Geological Survey, DEQ and the Idaho Department of Agriculture.*

16. “The SBA refers to the use of a TSS target of 148 mg/L as averaged over a four month period based on Newcombe and Jensen’s work for adult salmonids. We are concerned that this target may not be adequately protective. Figure 6(B) in Newcombe and Jensen indicates that adult non-salmonids are more sensitive to TSS effects than either adult salmonids or larval/juveniles salmonids. In addition, the proposed TSS target is based on an SEV of 9, which falls under the range of “lethal and para-lethal” effects. Even a more conservative score of 8, which falls in the range of sublethal effects, is characterized as having indications of major physiological stress. Setting targets at levels which are known to have such effects does not seem consistent with efforts to restore conditions which fully support beneficial uses.”

*DEQ agrees that the technical rationale behind the 148 mg/L TSS target was not sufficiently documented in the Draft SBA and thus, understands EPA’s concerns regarding the protectiveness of the target. DEQ has prepared an additional technical appendix for the document that clarifies the Newcombe and Jensen report. The additional appendix evaluates three principles of the Newcombe and Jensen work: 1) An evaluation of the severity-of-ill effects (SEV) score of 9 on which the target is based, 2) and evaluation of the four-month duration on which the target is based and 3) An evaluation of the 148 mg/L TSS concentration on*

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Response to Comment

*which the target is based. DEQ feels that the additional appendix illustrates the appropriateness of the 148 mg/L target for modified waters.*

## Mason Creek

### Canyon Soil Conservation District

The Canyon SCD provided several comments ranging from typographic errors to suggested wording changes. Nearly all of the comments were integrated into the document. The substantive changes are described below.

1. “The Canyon Soil Conservation District supports the delisting of Mason Creek for sediment”.

*DEQ acknowledges the Canyon Soil Conservation District’s support for delisting sediment as a pollutant of concern in Mason Creek.*

2. “Figure 5 and Table 1 illustrate land ownership and land use from 1994, which does not represent the current land ownership and land use from the year 2001...Please make the corrected changes also on page 13, Figure 5 and page 14, Table 1.

*DEQ has updated the land ownership and land use information with the data provided by the Canyon SCD.*

3. The draft document reads, [DEQ], “In areas that lack sewerage and wastewater treatment, septic systems may contribute nutrients to groundwater that eventually reach the stream directly or via drains.” [Canyon SCD] “It should also be stated that DNA fingerprinting data show that other parts of the Lower Boise River watershed have a human E-coli problem, and could also be true in Mason Creek due to faulty septic systems.”

*DEQ agrees that faulty septic systems, or illicit discharges for that matter, may be a source of human E. coli in Mason Creek. However, the DNA fingerprinting data are preliminary and the final report has not been completed. Instead of speculating on specific bacteria sources at this time, DEQ has included an analysis of the Mason Creek bacteria concentrations in the document along with a recommendation to 303(d) list the stream for bacteria in 2002. A detailed bacteria source analysis will be performed prior to potential TMDL development.*

### Ada Soil & Water Conservation District

4. “The Ada Soil & Water Conservation District supports the proposed delisting of Mason Creek from the 303(d) list of impaired water bodies for sediment, nutrients and dissolved oxygen.”

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Response to Comment

*DEQ acknowledges the Ada Soil & Water Conservation District's support for delisting sediment, nutrients and dissolved oxygen as pollutants of concern in Mason Creek.*

**Idaho Department of Water Resources**

The IDWR planning staff provided editorial comments and requested clarification on two issues, which are addressed below.

5. "What is the status of the beneficial use changes? What is the approval process?"

*The proposed beneficial use changes for Mason Creek, as described in the subbasin assessment, were adopted by the DEQ board in late 2001. In terms of approval, the proposed use changes will go before the Idaho State Legislature in 2002 for approval. Upon legislative approval they will go to EPA for approval. Once approved by EPA the changes become official.*

6. "In several instances, conclusions are drawn or decisions are made based on very limited data. From a scientifically defensible standpoint, the data cannot statistically support or refute conclusions or decisions. Is this appropriate for a sub-basin assessment?"

*DEQ agrees that additional information to statistically validate or invalidate the conclusions in the subbasin assessment would be helpful. Until 1998, no consistent data collection efforts were performed upstream of the mouth, and only in 2000 did DEQ collect algal biomass data. DEQ attempted to use the available data in the best manner possible to reach a conclusion on beneficial use support status for contact recreation and aquatic life. Given the court order to reach such conclusions by December 2001, DEQ feels the assessment is valid.*

**United State Environmental Protection Agency**

In a letter dated December 6<sup>th</sup>, 2001 the Environmental Protection Agency, Region 10 made the following summarized comments.

7. "Appropriate detailed maps and figures showing each of the landmarks and locations referenced in the report should be provided. Please provide appropriate detailed graphics and use consistent reference points."

*DEQ has revised most of the figures to provide adequate geo-referencing.*

8. It is stated in the SBA that: "If beneficial uses appear to be impaired by a non-303(d) listed pollutant, the IDEQ has the option of preparing a TMDL at the current time or

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Response to Comment

postponing the TMDL until a later date when additional data can be collected. Since the data clearly demonstrate that the bacteria criteria are exceeded, a statement must be provided in each SBA as to IDEQ's intent for addressing bacteria."

"The beneficial use summary table indicate "None" under Other causes of Impairment. Bacteria should be added to this category."

*DEQ agrees that the bacteria data show secondary contact recreational use impairment. A bacteria analysis has been added to the assessment showing that bacteria are impairing contact recreation. Additionally, DEQ will propose listing Mason Creek for bacteria on the 2002 303(d) list and will establish a schedule for TMDL development. A TMDL will not be developed at this time.*

9. "A discussion and summary of the CH2M Hill DNA analysis of bacteria samples should be provided in the SBA and related to the discussion of future preparation of a TMDL. We believe this report will not obviate the need to prepare a TMDL."

*DEQ did not provide a summary of the CH2M Hill DNA study or any of the associated data in the subbasin assessment. The DNA report and it's associated conclusions and recommendations have not been finalized. Therefore, DEQ feels that it is premature to include the report in the SBA. The DNA report and any additional bacteria analyses that have been performed will be considered in the future, when DEQ addresses the need for a bacteria TMDL.*

10. "There is mention of additional efforts to gather information concerning sediment and nutrients. These statements should be explained as to what the data collection efforts are, if this is indeed the case."

*DEQ has added additional language to the SBA further describing the monitoring efforts by the United States Geological Survey, DEQ and the Idaho Department of Agriculture.*

11. "The SBA refers to the use of a TSS target of 148 mg/L as averaged over a four month period based on Newcombe and Jensen's work for adult salmonids. We are concerned that this target may not be adequately protective. Figure 6(B) in Newcombe and Jensen indicates that adult non-salmonids are more sensitive to TSS effects than either adult salmonids or larval/juveniles salmonids. In addition, the proposed TSS target is based on an SEV of 9, which falls under the range of "lethal and para-lethal" effects. Even a more conservative score of 8, which falls in the range of sublethal effects, is characterized as having indications of major physiological stress. Setting targets at levels which are known to have such effects does not seem consistent with efforts to restore conditions which fully support beneficial uses."

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Response to Comment

*DEQ agrees that the technical rationale behind the 148 mg/L TSS target was not sufficiently documented in the Draft SBA and thus, understands EPA's concerns regarding the protectiveness of the target. DEQ has prepared an additional technical appendix for the document that clarifies the Newcombe and Jensen report. The additional appendix evaluates three principles of the Newcombe and Jensen work: 1) An evaluation of the severity-of-ill effects (SEV) score of 9 on which the target is based, 2) and evaluation of the four-month duration on which the target is based and 3) An evaluation of the 148 mg/L TSS concentration on which the target is based. DEQ feels that the additional appendix illustrates the appropriateness of the 148 mg/L target for modified waters.*



## Indian Creek

### Canyon Soil Conservation District

1. “The Canyon Soil Conservation District supports the delisting of Upper Indian Creek for sediment”.

*DEQ acknowledges the Canyon Soil Conservation District’s support for delisting sediment as a pollutant of concern in Upper Indian Creek.*

### Ada Soil & Water Conservation District

2. “The Ada Soil & Water Conservation District supports the proposed delisting of Indian Creek from the 303(d) list of impaired water bodies for nutrients and dissolved oxygen.”

*DEQ acknowledges the Ada Soil & Water Conservation District’s support for delisting nutrients and dissolved oxygen as pollutants of concern in Indian Creek.*

### Idaho Soil Conservation Commission

The ISCC provided numerous comments ranging from typographic errors to suggested wording changes. Nearly all of the comments were integrated into the document. The substantive changes are described below.

3. “Pg. 40, 4<sup>th</sup> Paragraph: Suggest modifying the sentence to read, “Placing additional “targets” on sediment sources...”

*The sentence currently says “Placing additional ‘control requirements’ on sediment sources...”. DEQ did not make the suggested wording change because the term “target” is used in reference to water quality indicators, whereas the term “control requirements” is indicative of sediment reducing activities. The sentence in the SBA is referring to sediment reducing activities, not water quality indicators.*

### Idaho Department of Water Resources

The IDWR planning staff provided editorial comments and requested clarification on two issues, which are addressed below.

4. “What is the status of the beneficial use changes? What is the approval process?”

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## Response to Comment

*The proposed beneficial use changes for Indian Creek, as described in the subbasin assessment, were adopted by the DEQ board in late 2001. In terms of approval, the proposed use changes will go before the Idaho State Legislature in 2002 for approval. Upon legislative approval they will go to EPA for approval. Once approved by EPA the changes become official.*

5. “In several instances, conclusions are drawn or decisions are made based on very limited data. From a scientifically defensible standpoint, the data cannot statistically support or refute conclusions or decisions. Is this appropriate for a sub-basin assessment.”

*DEQ agrees that additional information to statistically validate or invalidate the conclusions in the subbasin assessment would be helpful. Until 1998, no consistent data collection efforts were performed upstream of the mouth, and only in 2000 did DEQ collect algal biomass data. DEQ attempted to use the available data in the best manner possible to reach a conclusion on beneficial use support status for contact recreation and aquatic life. Given the court order to reach such conclusions by December 2001, DEQ feels the assessment is valid.*

## **United State Environmental Protection Agency**

In a letter dated December 6<sup>th</sup>, 2001 the Environmental Protection Agency, Region 10 made the following summarized comments.

6. “Appropriate detailed maps and figures showing each of the landmarks and locations referenced in the report should be provided. Please provide appropriate detailed graphics and use consistent reference points.”

*DEQ has revised most of the figures to provide adequate geo-referencing.*

7. It is stated in the SBA that: “If beneficial uses appear to be impaired by a non-303(d) listed pollutant, the IDEQ has the option of preparing a TMDL at the current time or postponing the TMDL until a later date when additional data can be collected.” Since the data clearly demonstrate that the bacteria criteria are exceeded, a statement must be provided in each SBA as to IDEQ’s intent for addressing bacteria.”

“The beneficial use summary table indicate “None” under Other causes of Impairment. Bacteria should be added to this category.”

*DEQ agrees that the bacteria data show secondary contact recreational use impairment. A bacteria analysis has been added to the assessment showing that bacteria are impairing contact recreation. Additionally, DEQ will propose listing Indian Creek for bacteria on the 2002 303(d) list and will establish a schedule for TMDL development. A TMDL will not be developed at this time.*

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Response to Comment

8. “A discussion and summary of the CH2M Hill DNA analysis of bacteria samples should be provided in the SBA and related to the discussion of future preparation of a TMDL. We believe this report will not obviate the need to prepare a TMDL.”

*DEQ did not provide a summary of the CH2M Hill DNA study or any of the associated data in the subbasin assessment. The DNA report and its associated conclusions and recommendations have not been finalized. Therefore, DEQ feels that it is premature to include the report in the SBA. The DNA report and any additional bacteria analyses that have been performed will be considered in the future, when DEQ addresses the need for a bacteria TMDL.*

9. “There is mention of additional efforts to gather information concerning sediment and nutrients. These statements should be explained as to what the data collection efforts are, if this is indeed the case.”

*DEQ has added additional language to the SBA further describing the monitoring efforts by the United States Geological Survey, DEQ and the Idaho Department of Agriculture.*

10. “The Rosgen classification system is based on the natural hydrologic evolution of channel features. As such, we question whether it can be used to predict substrate characteristics where the shape of the channel appears to primarily related to dredging...” “You may want to consider presenting particle size distribution information for soils in these watersheds or particle size distribution information from relatively unimpacted reference sites in these tributaries as alternative means to explain the high percentage fines. However, since it is known that there are major anthropogenic sources of sediment in the mid-lower reaches of these watersheds, it would not seem reasonable to conclude that high percentage fines in bed sediments in the mid-lower reaches of the tributaries are necessarily natural conditions.

*DEQ agrees that the historical dredging makes the use of the Rosgen stream channel classification system somewhat discretionary in terms of the entrenchment and sinuosity components of the classification system. However, the Rosgen stream channel classification system is based on factors other than entrenchment and sinuosity, namely channel material. DEQ has added additional documentation from a 2001 USGS report that describes the geologic framework of the lower Boise River basin. The report says “sediment in the modern drainages with watersheds underlain by Tertiary basaltic volcanic rocks in the Lower Boise River Valley consist of medium to course sand interbedded with silty fine sand and silt”. The report goes on to say [paraphrased] “the bulk of the material transported by the tributaries in the Lower Boise River Valley are expected to be sand or silt size.” These statements are based on the fact that the Treasure Valley served as a slack-water for the Bonneville Flood, during which large amounts of sediment and silt were deposited in the valley. The report*

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Response to Comment

*essentially supports the Rosgen classification and the associated natural particle size distribution.*

*DEQ agrees that there are anthropogenic sources of sediment in the mid-lower reaches of Indian Creek that must be controlled. However, the data show that the sources primarily discharge during the irrigation season, when flow velocities are high enough to disallow settling. Therefore, while the sources certainly need to be controlled to meet the 37% TSS reductions stipulated by the lower Boise River sediment TMDL, the reductions are unlikely to have a large impact on reducing substrate fines in Indian Creek.*

11. “Provide a greater level of detail concerning the sediment loading analysis”

*DEQ feels that the SBA contains the information necessary to determine and substantiate the in-stream support status of contact recreation and aquatic life beneficial uses. A detailed sediment loading analysis is not included because the SBA shows that a TMDL is not necessary.*

12. “Page 30, DO Sag. It is not clear how or why a DO sag is considered to be non-anthropogenic. Please provide more detail.”

*Dissolved oxygen sags can occur for a number of reasons. In chronic situations, a TMDL may or may not solve the problem; it depends on the cause. In terms of Indian Creek, the DO sags occurred primarily during the summer months (as shown in the SBA). This indicates that the causes may be elevated water temperature, elevated BOD caused by excess plant biomass or elevated sediment oxygen demand (SOD) caused by an increase in sediment-borne microorganisms. DEQ acknowledges that the cause may be from acute discharges from streamside feedlots, but a TMDL is not the appropriate mechanism to solve such a problem.*

*DEQ performed an analysis in the SBA to show that elevated water temperatures are probably not the cause of DO sags in Indian Creek. This is not surprising given the constant infusion of cold groundwater throughout the system. The remaining reasons for the DO sags could be summer-time BOD caused by macrophytes or SOD. Unfortunately, DEQ does not have enough data to conclusively say that either is the cause.*

## Sand Hollow Creek

### Canyon Soil Conservation District

The Canyon SCD provided several comments ranging from typographic errors to suggested wording changes. Nearly all of the comments were integrated into the document. The substantive changes are described below.

1. “The Canyon Soil Conservation District supports the delisting of Sand Hollow Creek for sediment”.

*DEQ acknowledges the Canyon Soil Conservation District’s support for delisting sediment as a pollutant of concern in Sand Hollow Creek. However, after receiving comments from the Idaho Department of Agriculture and reviewing the data further, DEQ has opted not to de-list Sand Hollow Creek for sediment.*

2. “Pg. 4, fifth paragraph “Executive Summary”, executive summary: This sentence talks about not expecting load allocations to Sand Hollow Creek, but discussions at the Lower Snake/Hells Canyon TMDL meetings are talking about Sand Hollow Creek and possible allocations for sediment and phosphorous at the mouth.”

*At one time DEQ had considered allocating explicit loads to Sand Hollow Creek as part of the SR-HC TMDL. However, the DRAFT SR-HC TMDL does not contain loads for Sand Hollow Creek itself. Rather, the TMDL outlines the necessity for reductions from a conglomeration of “drains”, including Sand Hollow Creek.*

3. Canyon SCD provided a detailed description of the canal system that exists in the upper segment of Sand Hollow Creek.

*DEQ has updated the surface water hydrology description in the SBA based on Canyon SCDs comments.*

4. “Figure 5 and Table 1 illustrate land ownership and land use from 1994, which does not represent the current land ownership and land use from the year 2001.”

*DEQ has updated the land ownership and land use information based on the data provided by the Canyon SCD.*

5. The draft document reads, [DEQ], “In areas that lack sewerage and wastewater treatment, septic systems may contribute nutrients to groundwater that eventually reach the stream directly or via drains.” [Canyon SCD] “It should also be stated that DNA fingerprinting data shows that other parts of the Lower Boise River watershed

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## Response to Comment

have a human E-coli problem, and could also be true in Sand Hollow Creek due to faulty septic systems.”

*DEQ agrees that faulty septic systems, or illicit discharges for that matter, may be a source of human E. coli in Sand Hollow Creek. However, the DNA fingerprinting data are preliminary and the final report has not been completed. Instead of speculating on specific bacteria sources at this time, DEQ has included an analysis of the Sand Hollow Creek bacteria concentrations in the document along with a recommendation to 303(d) list the stream for bacteria in 2002. A detailed bacteria source analysis will be performed prior to potential TMDL development.*

### **Ada Soil & Water Conservation District**

6. “The Ada Soil & Water Conservation District supports the proposed delisting of Sand Hollow Creek from the 303(d) list of impaired water bodies for sediment, nutrients and dissolved oxygen.”

*DEQ acknowledges the Ada Soil & Water Conservation District’s support for delisting sediment, nutrients and dissolved oxygen as pollutants of concern in Sand Hollow Creek. However, after receiving comments from the Idaho Department of Agriculture and reviewing the data further, DEQ has opted not to de-list Sand Hollow Creek for sediment. Nutrients and dissolved oxygen will still be proposed for de-listing.*

### **Idaho Department of Agriculture**

7. “Is the 148 mg/L [target based on] an average or a one-time occurrence or multiple occurrences? The third paragraph in your write up needs to be clarified. Using Table 6, there appears to be numerous exceedences of the 148 mg/L [target] throughout the time period indicated in the table. Even if you used interval averaging between sampling dates the results still indicate that stations SH-1 and SH-2, over a 120 day period, consistently exceed the 148 mg/L average. I would suggest a more thorough explanation of how you reached your conclusions concerning TSS values.”

*When the TSS concentrations are reviewed on a point by point basis in comparison to the day of the month they were collected, they do not show exceedences of the 148 mg/L target for 120 consecutive days. However, DEQ agrees with IDA in that interval averaging is a more appropriate method of determining the likelihood of concentrations remaining above 148 mg/L for a four-month duration. After a further review of the data, using the interval averaging technique, DEQ agrees with IDA in saying that the 148 mg/L target is exceeded for greater than 120 days, particularly at the mid-stream monitoring*

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Response to Comment

*location. As a result, DEQ will not propose de-listing sediment as a pollutant of concern in Sand Hollow Creek.*

### **Black Canyon Irrigation District**

The Black Canyon Irrigation District raised the following concerns:

8. “On page 17, the turbidity criteria proposed for Sand Hollow Creek are proposed to default to cold water biota criteria because no site-specific criteria were developed. The lack of turbidity data as mentioned on page 24 leads us to believe that at least some measure of current conditions should be made before criteria are applied. We feel that until actual turbidity studies have been performed that turbidity criteria should not default to cold water biota criteria. The other constituents of concern in Sand Hollow are proposed to follow modified aquatic life and secondary contact recreation criteria. We oppose any criteria that are more restrictive than needed to protect modified aquatic life and secondary recreation beneficial uses proposed to be designated for Sand Hollow Creek.”

“Furthermore, Sand Hollow Creek was originally listed in the 303(d) list for sediment, nutrients and dissolved oxygen. Though we understand sediment load and turbidity are related, the test for sediment (i.e. TSS) is different than the test for turbidity (i.e. Secchi Disc or turbidity meters). The inclusion of a turbidity criteria is unnecessary to remove Sand Hollow Creek from the 303(d) list and we oppose establishing cold water biota criteria for turbidity in Sand Hollow Creek.”

*DEQ agrees that at least some measurements should be taken before the turbidity criteria are applied. For that reason, no discussion of turbidity conditions exists in the SBA. In terms of the applicable turbidity criteria, the Water Quality Standards and Wastewater Treatment Requirements say that sediment levels shall not exceed quantities specified in Section 250 (which is where the cold water biota turbidity criteria are located), or, in the absence of site-specific criteria sediment shall not exceed levels which impair beneficial uses. Since no site-specific turbidity criteria were developed for the modified aquatic life use (which would clarify turbidity thresholds for modified communities), the general sediment criteria apply.*

*The inclusion of the turbidity criteria is necessary because it is implicitly linked to the general sediment criteria. Since the turbidity criteria apply to all waters of the state, DEQ must consider it when evaluating sediment conditions.*

9. “The executive summary reports water quality criteria for temperature were developed to accompany the modified aquatic life beneficial use. We cannot find the temperature criteria discussed in the text. The CH2M Hill report indicates that temperature will be dealt with on a case by case basis. The lack of a discussion and

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## Response to Comment

temperature criteria for Sand Hollow Creek makes us believe the criteria to be applied will be the cold water biota criteria. We oppose establishing a temperature criterion for cold water biota in Sand Hollow Creek when the anticipated beneficial use is modified aquatic life and not cold water biota.”

*The temperature criteria that accompany the modified aquatic life use are consistent with the seasonal cold water biota criteria of 26.0 degrees C daily maximum and 23 degrees C daily average, except that they will be applied on an annual basis (whereas the seasonal cold water biota criteria are applied during the summer months). The modified aquatic life temperature criteria will apply to Sand Hollow Creek, not the cold water biota criteria. There is no further discussion of temperature conditions in the SBA because temperature is not a 303(d) listed pollutant of concern in Sand Hollow Creek.*

## Idaho Department of Water Resources

The IDWR planning staff provided editorial comments and requested clarification on two issues, which are addressed below.

10. “What is the status of the beneficial use changes? What is the approval process?”

*The proposed beneficial use changes for Sand Hollow Creek, as described in the subbasin assessment, were adopted by the DEQ board in late 2001. In terms of approval, the proposed use changes will go before the Idaho State Legislature in 2002 for approval. Upon legislative approval they will go to EPA for approval. Once approved by EPA the changes become official.*

11. “In several instances, conclusions are drawn or decisions are made based on very limited data. From a scientifically defensible standpoint, the data cannot statistically support or refute conclusions or decisions. Is this appropriate for a sub-basin assessment?”

*DEQ agrees that additional information to statistically validate or invalidate the conclusions in the subbasin assessment would be helpful. Until 1998, no consistent data collection efforts existed in Sand Hollow Creek and only in 2000 did DEQ collect algal biomass data. DEQ attempted to use the available data in the best manner possible to reach a conclusion on beneficial use support status for contact recreation and aquatic life. Given the court order to reach such conclusions by December 2001, DEQ feels the assessment is valid.*

## United State Environmental Protection Agency

In a letter dated December 6<sup>th</sup>, 2001 the Environmental Protection Agency, Region 10 made the following summarized comments.



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Response to Comment

12. “Appropriate detailed maps and figures showing each of the landmarks and locations referenced in the report should be provided. Please provide appropriate detailed graphics and use consistent reference points.”

*DEQ has revised most of the figures to provide adequate geo-referencing.*

13. It is stated in the SBA that: “If beneficial uses appear to be impaired by a non-303(d) listed pollutant, the IDEQ has the option of preparing a TMDL at the current time or postponing the TMDL until a later date when additional data can be collected.” Since the data clearly demonstrate that the bacteria criteria are exceeded, a statement must be provided in each SBA as to IDEQ’s intent for addressing bacteria.”

“The beneficial use summary table indicate “None” under Other causes of Impairment. Bacteria should be added to this category.”

*DEQ agrees that the bacteria data show secondary contact recreational use impairment. A bacteria analysis has been added to the assessment showing that bacteria are impairing contact recreation. Additionally, DEQ will propose listing Sand Hollow Creek for bacteria on the 2002 303(d) list and will establish a schedule for TMDL development. A TMDL will not be developed at this time.*

14. “A discussion and summary of the CH2M Hill DNA analysis of bacteria samples should be provided in the SBA and related to the discussion of future preparation of a TMDL. We believe this report will not obviate the need to prepare a TMDL.”

*DEQ did not provide a summary of the CH2M Hill DNA study or any of the associated data in the subbasin assessment. The DNA report and it’s associated conclusions and recommendations have not been finalized. Therefore, DEQ feels that it is premature to include the report in the SBA. The DNA report and any additional bacteria analyses that have been performed will be considered in the future, when DEQ addresses the need for a bacteria TMDL.*

15. “There is mention of additional efforts to gather information concerning sediment and nutrients. These statements should be explained as to what the data collection efforts are, if this is indeed the case.”

*DEQ has added additional language to the SBA further describing the monitoring efforts by the United States Geological Survey, DEQ and the Idaho Department of Agriculture.*

16. “The SBA refers to the use of a TSS target of 148 mg/L as averaged over a four month period based on Newcombe and Jensen’s work for adult salmonids. We are concerned that this target may not be adequately protective. Figure 6(B) in Newcombe and Jensen indicates that adult non-salmonids are more sensitive to TSS

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## Response to Comment

effects that either adult salmonids or larval/juveniles salmonids. In addition, the proposed TSS target is based on an SEV of 9, which falls under the range of “lethal and para-lethal” effects. Even a more conservative score of 8, which falls in the range of sublethal effects, is characterized as having indications of major physiological stress. Setting targets at levels which are known to have such effects does not seem consistent with efforts to restore conditions which fully support beneficial uses.”

*DEQ agrees that the technical rationale behind the 148 mg/L TSS target was not sufficiently documented in the Draft SBA and thus, understands EPA’s concerns regarding the protectiveness of the target. DEQ has prepared an additional technical appendix for the document that clarifies the Newcombe and Jensen report. The additional appendix evaluates three principles of the Newcombe and Jensen work: 1) An evaluation of the severity-of-ill effects (SEV) score of 9 on which the target is based, 2) and evaluation of the four-month duration on which the target is based and 3) An evaluation of the 148 mg/L TSS concentration on which the target is based. DEQ feels that the additional appendix illustrates the appropriateness of the 148 mg/L target for modified waters.*

17. “There does not appear to be a consistent level of discussion concerning the sediment and nutrient reductions required in the Lower Boise River TMDL that will be translated to both Sand Hollow and Blacks Creek. This forms the basis for not preparing a TMDL at this time. There is also no discussion of effluent trading as it applies to these streams. The discussion provided in Mason and Indian Creek are more appropriately detailed. If the Lower Boise River TMDL and effluent trading programs apply to Sand Hollow and Blacks Creeks, provide similar discussions in their SBAs.

*EPA is correct in saying “there does not appear to be a consistent level of discussion concerning the sediment and nutrient reductions required in the Lower Boise River TMDL that will be translated to both Sand Hollow and Blacks Creek.” This is because Sand Hollow and Blacks Creek do not discharge to the Lower Boise River and hence, did not and will not (in the case of nutrients) receive load allocations. While the pre-existing necessity for sediment and nutrient reductions as part of the lower Boise River TMDL processes certainly plays a part in DEQ’s justification for not preparing TMDLs for the tributaries, it is by no means the only reason. Much more emphasis is placed on in-stream beneficial use support status.*

*There is no discussion of effluent trading in the Sand Hollow and Blacks Creek SBAs because they do not discharge to the lower Boise River. The lower Boise River effluent trading framework is based on the assumption that a water quality benefit will be recognized in the river. Therefore, a trade within Sand Hollow or Blacks Creek would fit in the framework and is not likely to happen.*



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