

2012 Integrated Report: Assessment Unit-Cause Combinations Delisted

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Southwest

17050101

C. J. Strike Reservoir

ID17050101SW003_03 Browns Creek - 3rd order

4.21

MILES

Sedimentation/Siltation

Applicable QWS attained; according to new assessment method

3/7/12 (HS) - In 2010 and 2011, the Boise Regional Office devised a simple bank-stability method that could be used to determine whether this assessment unit was impaired by sediment. Field work was conducted in the spring of 2010 and fall of 2011. Approximately five miles (one-third) of the length of this channel was surveyed.

The episodic nature of sediment pollution in intermittent streams makes direct monitoring extremely difficult. To solve this problem, a bank stability approach was used. Banks were considered stable if they did not show indications of breakdown, slump, fracture, or vertical erosion.

DEQ typically considers 80% stability to be the threshold for sediment impairment. The banks of this assessment unit were found to be 97% stable. This indicates that erosion is minimal. and that the assessment unit is not impaired by sediment.

Final results are available in the documents 'Intermittent Streams Monitoring in the Boise Region: Spring 2010. Results and Field Summary', DEQ, December 2010, and 'Intermittent Streams Monitoring in the Boise Region: Fall 2011. Results and Field Summary', DEQ, December 2011. TRIM refs. 2010AKL104 and 2012AKL7 respectively.

ID17050101SW003_04 Browns Creek - 4th order

4.06

MILES

Sedimentation/Siltation

Applicable QWS attained; according to new assessment method

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ID17050101SW004_02 Browns Creek - 1st and 2nd order tributaries

63.59

MILES

Sedimentation/Siltation

Applicable QWS attained; according to new assessment method

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ID17050101SW004_03 Browns Creek - 3rd order	15.74	MILES
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Sedimentation/Siltation

Applicable QQS attained; according to new assessment method

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ID17050101SW006_02 Sailor Creek - 1st and 2nd order	265.96	MILES
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Sedimentation/Siltation

Applicable QQS attained; according to new assessment method

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ID17050101SW006_03 Sailor Creek - 3rd order	33.38	MILES
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Sedimentation/Siltation

Applicable QQS attained; according to new assessment method

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The episodic nature of sediment pollution in intermittent streams makes direct monitoring extremely difficult. To solve this problem, a bank stability approach was used. Banks were considered stable if they did not show indications of breakdown, slump, fracture, or vertical erosion.

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ID17050101SW006_04 Sailor Creek - 4th order	22.85	MILES
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Sedimentation/Siltation

Applicable QQS attained; according to new assessment method

3/7/2012 (HS) - In 2010 and 2011, the Boise Regional Office devised a simple bank-stability method that could be used to determine whether this assessment unit was impaired by sediment. Field work was conducted in the spring of 2010 and fall of 2011. Approximately five miles (one-third) of the length of this channel was surveyed.

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ID17050101SW008_02 Deadman Creek - 1st and 2nd order	92.7	MILES
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Sedimentation/Siltation

Applicable WQS attained; according to new assessment method

3/7/2012 (HS) - In 2010 and 2011, the Boise Regional Office devised a simple bank-stability method that could be used to determine whether this assessment unit was impaired by sediment. Field work was conducted in the spring of 2010 and fall of 2011. Approximately five miles (one-third) of the length of this channel was surveyed.

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ID17050101SW008_03 Deadman Creek - 3rd order	38.42	MILES
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Sedimentation/Siltation

Applicable WQS attained; according to new assessment method

3/7/2012 (HS) - In 2010 and 2011, the Boise Regional Office devised a simple bank-stability method that could be used to determine whether this assessment unit was impaired by sediment. Field work was conducted in the spring of 2010 and fall of 2011. Approximately five miles (one-third) of the length of this channel was surveyed.

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17050102

Bruneau

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ID17050102SW004_04 Big Jacks Creek - 4th order (Dry Canyon to Duncan Creek)

7.36

MILES

Other flow regime alterations

Applicable QWS attained; according to new assessment method

3/23/2012 (HS) - This segment was first listed for sediment and flow alteration on the 1994 §303(d) list, which was promulgated by EPA as part of the first total maximum daily load lawsuit. EPA listed this water solely because it was listed in Appendix D: Idaho Impaired Stream Segments Requiring Further Assessment of DEQ's 1992 Water Quality Status Report. Although Big Jacks Creek was mentioned in this appendix, the original assessment was not based on any actual water quality monitoring data (biological, physical, or chemical). Suspected sediment and flow alteration were a case of best professional judgment. Given the lack of listing history to explain what data were used, if any, DEQ proposes to delist sediment and flow alteration.

Sedimentation/Siltation

Applicable QWS attained; original basis for listing was incorrect

3/23/2012 (HS) - Data collected in 2006 from a Beneficial Use Reconnaissance Program site (2006STWFA044), located in this assessment unit, showed the stream bank stability to be excellent, with 96% of the stream rated as covered and stable.

Percent fines recorded in 2006 showed that only 9% of the substrate consisted of material less than or equal to 2.5 millimeters in size. According to DEQ's Guide to Selection of Sediment Targets for Use in Idaho TMDLs most impairment is noted when percent fines of this size make up greater than 30% of the substrate.

The stream macroinvertebrate index (SMI) "Condition Rating" from this site was 3 (out of 3).
The stream habitat index (SHI) "condition rating" from this site was 3 (out of 3)
The stream fish index (SFI) "Condition rating" from this site was 1 (out of 3)
Therefore, the overall score was 2.3, indicating that the site fully meets its beneficial uses.

These data should have been assessed in the 2010 integrated report, but was omitted because of an oversight. Therefore, DEQ proposes to delist the assessment unit for sediment since impacts from sediment are not readily apparent.

As part of the Bruneau River temperature TMDL (in progress), DEQ has conducted shade inventories of the entire Jacks Creek basin. We found that Big Jacks Creek was at its natural level of shade, lending further evidence that beneficial uses are fully supported.

This segment was first listed for sediment and flow alteration on the 1994 §303(d) list, which was promulgated by EPA as part of the first total maximum daily load lawsuit. EPA listed this water solely because it was listed in Appendix D: Idaho Impaired Stream Segments Requiring Further Assessment of DEQ's 1992 Water Quality Status Report. Although Big Jacks Creek was mentioned in this appendix, the original assessment was not based on any actual water quality monitoring data (biological, physical, or chemical). Suspected sediment and flow alteration were a case of best professional judgment. Given the lack of listing history to explain what data were used, if any, DEQ proposes to delist sediment and flow alteration.

ID17050102SW022_02 Cougar Creek - 1st and 2nd order

40.78

MILES

Sedimentation/Siltation

Applicable QWS attained; according to new assessment method

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ID17050102SW022_03 Cougar Creek - 3rd order	20.03	MILES
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Sedimentation/Siltation

Applicable QWS attained; according to new assessment method

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ID17050102SW025_02 Poison Creek - 1st and 2nd order section	60.67	MILES
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Sedimentation/Siltation

Applicable QWS attained; according to new assessment method

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ID17050102SW025_03 Poison Creek - 3rd order	16.65	MILES
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Sedimentation/Siltation

Applicable QWS attained; according to new assessment method

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17050103

Middle Snake-Succor

ID17050103SW004_02 McBride Creek - 1st and 2nd order	73.13	MILES
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Temperature, water

Applicable QWS attained; according to new assessment method

7/17/2012 (HS) - The original temperature listing was based solely on an evaluation conducted by BLM in the late 1970s to mid-1980s and not on any actual water quality monitoring data (biological, physical, or chemical). Therefore, DEQ placed a thermograph in the second order section of McBride Creek during the year of 2011 to verify if thermal loading was actually occurring. Before June 13, 2011, when the creek ran dry, the maximum daily average temperature was 15 degrees C and the maximum temperature recorded was 21.17 degrees C. These are both cooler than the water quality criteria of 13 and 19 degrees C for cold water aquatic life. Therefore, the creek is not impaired for temperature.

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ID17050103SW005_02 Jump Creek - 1st and 2nd order

84.67

MILES

Physical substrate habitat alterations

Data and/or information lacking to determine water quality status; original basis for listing was incorrect (Category 3)

3/7/2012 (HS) - The listing of this assessment unit for 'physical substrate alterations' was a mistake. The Mid-Snake/Succor TMDL (approved January 2004) said that Jump Creek was impaired by physical substrate alterations. However, it was referring to the lower section of the creek (assessment unit ID17050103SW005_03). The upper section is a dry, rangeland stream, and does not have significant physical substrate alterations (Fall 2011 field visits).

Sedimentation/Siltation

Applicable WQS attained; according to new assessment method

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ID17050103SW016_02 Pickett Creek - 1st & 2nd order

27.52

MILES

Sedimentation/Siltation

Applicable WQS attained; according to new assessment method

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ID17050103SW019_02 Brown Creek - 1st & 2nd order

79.78

MILES

Sedimentation/Siltation

Applicable WQS attained; according to new assessment method

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ID17050103SW019_03 Brown Creek - 3rd order	7.64	MILES
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Sedimentation/Siltation

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ID17050103SW019_04 Brown Creek - 4th order	6.43	MILES
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Sedimentation/Siltation

Applicable QWS attained; according to new assessment method

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ID17050103SW021_02 Birch Creek and tributaries - 1st and 2nd order	66	MILES
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Sedimentation/Siltation

Applicable QWS attained; according to new assessment method

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ID17050103SW024_03 Shoofly and Poison Creeks - 3rd order	28.47	MILES
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Sedimentation/Siltation

Applicable QWS attained; according to new assessment method

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ID17050103SW025_02 Corder Creek - 1st and 2nd order	63.34	MILES
<p>Sedimentation/Siltation Applicable QWS attained; according to new assessment method</p> <p>3/7/2012 (HS) - In 2010 and 2011, the Boise Regional Office devised a simple bank-stability method that could be used to determine whether this assessment unit was impaired by sediment. Field work was conducted in the spring of 2010 and fall of 2011. Approximately five miles (one-third) of the length of this channel was surveyed.</p> <p>The episodic nature of sediment pollution in intermittent streams makes direct monitoring extremely difficult. To solve this problem, a bank stability approach was used. Banks were considered stable if they did not show indications of breakdown, slump, fracture, or vertical erosion.</p> <p>DEQ typically considers 80% stability to be the threshold for sediment impairment. The banks of this assessment unit were found to be 100% stable. This indicates that erosion is minimal. and that the assessment unit is not impaired by sediment.</p> <p>Final results are available in the documents 'Intermittent Streams Monitoring in the Boise Region: Spring 2010. Results and Field Summary', DEQ, December 2010, and 'Intermittent Streams Monitoring in the Boise Region: Fall 2011. Results and Field Summary', DEQ, December 2011. TRIM refs. 2010AKL104 and 2012AKL7 respectively.</p>		

ID17050103SW026_02 Rabbit Creek (north side of Snake River) - 1st and 2nd order	12.99	MILES
<p>Sedimentation/Siltation Applicable QWS attained; according to new assessment method</p> <p>3/7/2012 (HS) - In 2010 and 2011, the Boise Regional Office devised a simple bank-stability method that could be used to determine whether this assessment unit was impaired by sediment. Field work was conducted in the spring of 2010 and fall of 2011. Approximately five miles (one-third) of the length of this channel was surveyed.</p> <p>The episodic nature of sediment pollution in intermittent streams makes direct monitoring extremely difficult. To solve this problem, a bank stability approach was used. Banks were considered stable if they did not show indications of breakdown, slump, fracture, or vertical erosion.</p> <p>DEQ typically considers 80% stability to be the threshold for sediment impairment. The banks of this assessment unit were found to be 100% stable. This indicates that erosion is minimal. and that the assessment unit is not impaired by sediment.</p> <p>Final results are available in the documents 'Intermittent Streams Monitoring in the Boise Region: Spring 2010. Results and Field Summary', DEQ, December 2010, and 'Intermittent Streams Monitoring in the Boise Region: Fall 2011. Results and Field Summary', DEQ, December 2011. TRIM refs. 2010AKL104 and 2012AKL7 respectively.</p>		

17050104 Upper Owyhee

ID17050104SW023_02 Battle Creek - 1st & 2nd order	252.97	MILES
<p>Temperature, water TMDL approved or established by EPA (4A)</p> <p>8/24/2012 (NED) - The Owyhee River Watershed TMDL Temperature Addendum was reviewed and approved by EPA on July 20, 2012. The second order segment of Battle Creek carries a current heat load of 320,014 kWh/day with a load capacity of 279,597 kWh/day, equaling an excess load of 40,417 kWh/day-which equals a 12.6% load reduction. For additional information refer to Section 5.4, Table 6 on page 24 and Table 9 on page 27 and Appendix D, Table D4 on page 71 of the TMDL.</p>		
ID17050104SW023_03 Battle Creek - 3rd order	36.58	MILES
<p>Temperature, water TMDL approved or established by EPA (4A)</p> <p>8/24/2012 (NED) - The Owyhee River Watershed TMDL Temperature Addendum was reviewed and approved by EPA on July 20, 2012. The third order segment of Battle Creek carries a current heat load of 2,614,026 kWh/day with a load capacity of 1,858,326 kWh/day, equaling an excess load of 755,701 kWh/day-which equals a 28.9% load reduction. For additional information refer to Section 5.4, Table 6 on page 24 and Table 9 on page 27 and Appendix D, Table D5 on page 72 of the TMDL.</p>		
ID17050104SW023_04 Battle Creek - 4th order	29.46	MILES
<p>Temperature, water TMDL approved or established by EPA (4A)</p> <p>8/30/2012 (HS) - The Owyhee River Watershed TMDL Temperature Addendum was reviewed and approved by EPA on July 20, 2012. Although the fourth order segment of Battle Creek does not have an excess load, it is still considered impaired by the thermal loads from its tributaries. It may be delisted when either a) all its tributaries meet their shade targets, or b) a thermograph demonstrates that it does not violate water quality standards. For additional information refer to Section 5.4, Table 6 on page 24 and Table 9 on page 27 and Appendix D, Table D6 on page 73 of the TMDL.</p>		

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ID17050104SW029_03 Camas Creek - 3rd order	7.3	MILES
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Temperature, water

TMDL approved or established by EPA (4A)

8/24/2012 (NED) - The Owyhee River Watershed TMDL Temperature Addendum was reviewed and approved by EPA on July 20, 2012. Camas Creek carries a current heat load of 251,640 kWh/day with a load capacity of 240,656 kWh/day, equaling an excess load of 10,984 kWh/day-which equals a 4.4% load reduction. For additional information refer to Section 5.4, Table 6 on page 24 and Table 9 on page 27 and Appendix D, Table D17 on page 80 of the TMDL.

ID17050104SW030_02 Camel Creek - 1st and 2nd order	28.57	MILES
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Temperature, water

TMDL approved or established by EPA (4A)

8/24/2012 (NED) - The Owyhee River Watershed TMDL Temperature Addendum was reviewed and approved by EPA on July 20, 2012. Camel Creek carries a current heat load of 48,175 kWh/day with a load capacity of 37,408 kWh/day, equaling an excess load of 10,767 kWh/day-which equals a 22.3% load reduction. For additional information refer to Section 5.4, Table 6 on page 24 and Table 9 on page 27 and Appendix D, Table D18 on page 80 of the TMDL.

ID17050104SW031_02 Nickel Creek & tributaries - 1st and 2nd order	76.91	MILES
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Temperature, water

TMDL approved or established by EPA (4A)

8/24/2012 (NED) - The Owyhee River Watershed TMDL Temperature Addendum was reviewed and approved by EPA on July 20, 2012. Nickel, Smith and Thomas Creek headwaters carry a current heat load of 75,986 kWh/day with a load capacity of 50,939 kWh/day, equaling an excess load of 25,047 kWh/day-which equals a 33% load reduction. For additional information refer to Section 5.4, Table 6 on page 24 and Table 9 on page 27 and Appendix D, Table D20 on page 81 of the TMDL.

ID17050104SW031_03 Nickel, Thomas & Smith Creeks - 3rd order sections	9.71	MILES
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Temperature, water

TMDL approved or established by EPA (4A)

8/30/2012 (HS and NED) - The Owyhee River Watershed TMDL Temperature Addendum was reviewed and approved by EPA on July 20, 2012. Although the third order segment of Nickel, Smith and Thomas Creek does not have an excess load, it is still considered impaired by the thermal loads from its tributaries. It may be delisted when either a) all its tributaries meet their shade targets, or b) a thermograph demonstrates that it does not violate water quality standards. For additional information refer to Section 5.4, Table 6 on page 24 and Table 9 on page 27 and Appendix D, Table D21 on page 82 of the TMDL.

ID17050104SW033_03 Beaver Creek - 3rd order	3.7	MILES
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Temperature, water

TMDL approved or established by EPA (4A)

8/24/2012 (NED) - The Owyhee River Watershed TMDL Temperature Addendum was reviewed and approved by EPA on July 20, 2012. The third order segment of Beaver Creek carries a current heat load of 41,215 kWh/day with a load capacity of 20,873 kWh/day, equaling an excess load of 20,342 kWh/day-which equals a 49.4% load reduction. For additional information refer to Section 5.4, Table 6 on page 24 and Table 9 on page 27 and Appendix D, Table D26 on page 85 of the TMDL.

ID17050104SW033_04 Beaver Creek - 4th order	2.58	MILES
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Temperature, water

TMDL approved or established by EPA (4A)

8/24/2012 (NED) - The Owyhee River Watershed TMDL Temperature Addendum was reviewed and approved by EPA on July 20, 2012. The fourth order segment of Beaver Creek carries a current heat load of 127,811 kWh/day with a load capacity of 92,283 kWh/day, equaling an excess load of 35,528 kWh/day-which equals a 27.8% load reduction. For additional information refer to Section 5.4, Table 6 on page 24 and Table 9 on page 27 and Appendix D, Table D27 on page 85 of the TMDL.

17050108

Jordan

ID17050108SW001_05 Jordan Creek - Williams Creek to State Line	13.35	MILES
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Temperature, water

TMDL approved or established by EPA (4A)

3/7/2012 (HS) - The Jordan Creek TMDL was reviewed and approved by EPA April 13, 2011. Refer to Table 36 on page 132 and 133 for existing and potential solar loads for Jordan Creek.

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ID17050108SW004_02 Upper Jordan Creek - 1st and 2nd order tributaries	102.32	MILES
<p>Temperature, water TMDL approved or established by EPA (4A)</p> <p>3/7/2012 (HS) - The Jordan Creek TMDL was reviewed and approved by EPA April 13, 2011. Refer to Table 36 on page 132 and 133 for existing and potential solar loads for Jordan Creek.</p>		
ID17050108SW004_03 Jordan Creek - 3rd order (Jacobs Gulch to Louse Creek)	13.41	MILES
<p>Temperature, water TMDL approved or established by EPA (4A)</p> <p>3/7/2012 (HS) - Jordan Creek TMDL, approved by EPA April 13, 2011. Refer to Table 36 on page 132 and 133 for existing and potential solar loads for Jordan Creek.</p>		
ID17050108SW004_04 Jordan Creek - 4th order (Louse Creek to Big Boulder Creek)	5.65	MILES
<p>Temperature, water TMDL approved or established by EPA (4A)</p> <p>3/7/2012 (HS) - The Jordan Creek TMDL was reviewed and approved by EPA April 13, 2011. Refer to Table 36 on page 132 and 133 for existing and potential solar loads for Jordan Creek.</p>		
ID17050108SW004_05 Jordan Creek - Big Boulder Creek to Williams Creek	3.38	MILES
<p>Temperature, water TMDL approved or established by EPA (4A)</p> <p>3/7/2012 (HS) - The Jordan Creek TMDL was reviewed and approved by EPA April 13, 2011. Refer to Table 36 on page 132 and 133 for existing and potential solar loads for Jordan Creek.</p>		
ID17050108SW013_02 Rock Creek above Triangle Reservoir - 1st and 2nd order	63.93	MILES
<p>Temperature, water TMDL approved or established by EPA (4A)</p> <p>3/7/2012 (HS) - The Jordan Creek TMDL was reviewed and approved by EPA April 13, 2011. Refer to Table 39 on page 135 for existing and potential solar loads for Rock Creek.</p>		
ID17050108SW013_03 Rock Creek above Triangle Reservoir - 3rd order	12.51	MILES
<p>Temperature, water TMDL approved or established by EPA (4A)</p> <p>3/7/2012 (HS) - The Jordan Creek TMDL was reviewed and approved by EPA April 13, 2011. Refer to Table 39 on page 135 for existing and potential solar loads for Rock Creek.</p>		
ID17050108SW014_02 Louisa Creek - entire drainage	13.82	MILES
<p>Temperature, water TMDL approved or established by EPA (4A)</p> <p>3/7/2012 (HS) - The Jordan Creek TMDL was reviewed and approved by EPA April 13, 2011. Refer to Table 40 on page 136 for existing and potential solar loads for Louisa Creek.</p>		
ID17050108SW015_02 Spring and Meadow Creeks - 1st and 2nd order	48.87	MILES
<p>Temperature, water TMDL approved or established by EPA (4A)</p> <p>3/7/2012 (HS) - The Jordan Creek TMDL was reviewed and approved by EPA April 13, 2011. Refer to Tables 41 and 42 on pages 136 and 137 for existing and potential solar loads for Spring and Meadow Creek.</p>		
ID17050108SW015_03 Spring and Meadow Creeks - 3rd order sections	8.09	MILES
<p>Temperature, water TMDL approved or established by EPA (4A)</p> <p>3/7/2012 (HS) - The Jordan Creek TMDL was reviewed and approved by EPA April 13, 2011. Refer to Tables 41 and 42 on pages 136 and 137 for existing and potential solar loads for Spring and Meadow Creek.</p>		
ID17050108SW021_02 Cow Creek - 1st and 2nd order	55.15	MILES
<p>Temperature, water TMDL approved or established by EPA (4A)</p> <p>3/7/2012 (HS) - The Jordan Creek TMDL was reviewed and approved by EPA April 13, 2011. Refer to Table 37 on page 134 for existing and potential solar loads for Cow Creek.</p>		

2012 Integrated Report: Assessment Unit-Cause Combinations Delisted

ID17050108SW021_03 Cow Creek - 3rd order (Wildcat Canyon to Soda Creek)	3.41	MILES
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Temperature, water

TMDL approved or established by EPA (4A)

3/7/2012 (HS) - The Jordan Creek TMDL was reviewed and approved by EPA April 13, 2011. Refer to Table 37 on page 134 for existing and potential solar loads for Cow Creek.

ID17050108SW022_02 Soda, Swisher and Chimney Creeks - 1st and 2nd order	36.92	MILES
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Sedimentation/Siltation

TMDL approved or established by EPA (4A)

3/7/2012 (HS) - The Jordan Creek TMDL was reviewed and approved by EPA April 13, 2011. Refer to Table 47 on page 151 for suspended sediment/total suspended solids targets and margin of safety for Soda Creek.

Temperature, water

TMDL approved or established by EPA (4A)

3/7/2012 (HS) - The Jordan Creek TMDL was reviewed and approved by EPA April 13, 2011. Refer to Table 38 on page 134 for existing and potential solar loads for Soda Creek.

ID17050108SW022_03 Soda Creek - 3rd order section	3.09	MILES
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Sedimentation/Siltation

TMDL approved or established by EPA (4A)

3/7/2012 (HS) - The Jordan Creek TMDL was reviewed and approved by EPA April 13, 2011. Refer to Table 47 on page 151 for suspended sediment/total suspended solids targets and margin of safety for Soda Creek.

Temperature, water

TMDL approved or established by EPA (4A)

3/7/2012 (HS) - The Jordan Creek TMDL was reviewed and approved by EPA April 13, 2011. Refer to Table 38 on page 134 for existing and potential solar loads for Soda Creek.

17050112

Boise-Mores

ID17050112SW009_06 Mores Creek - 6th order (Grimes Creek to mouth)	9.35	MILES
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Temperature, water

TMDL approved or established by EPA (4A)

3/7/2012 (HS) - The Boise-Mores TMDL was reviewed and approved by EPA February 18, 2010. Refer to Table 81 on page 159 for existing and potential solar loads for Mores Creek.

17050114

Lower Boise

2012 Integrated Report: Assessment Unit-Cause Combinations Delisted

ID17050114SW002_04 Indian Creek - 4th order below Sugar Ave. in Nampa

11.95

MILES

Fecal Coliform

Applicable WQS attained; due to change in WQS

3/23/2012 (HS) - E. coli criteria values were developed to be as protective as the fecal coliform criteria and were directly calculated by translating fecal coliform criteria using ratios of observed water quality data from EPA epidemiological studies. Recent E. coli data show a geometric mean of 490.2 col/100ml, which is greater than the 126 col/100ml criterion value, therefore the recreational use of this water body is considered impaired by bacteria. E. coli will be added as a cause of impairment for this AU.

Temperature, water

Applicable WQS attained; original basis for listing was incorrect

3/8/12 (HS) - The Indian Creek Natural Background Temperature Analysis found that this section of Indian Creek is cooler than it would be naturally. This is primarily because Indian Creek would naturally be a small desert stream with limited shade. The rationale for delisting Indian Creek for temperature is attached to this assessment unit, but can be summarized as follows:

Thermograph data show that in 2011, only 0.08% of the data exceeded the 22C criteria at Centennial Way (Idaho's water quality standards allow for up to 10%).

In 2011, the Maximum Daily Average Temperature occurred on August 2. To see what the natural MDA temperature at Centennial Way would have been, we ran the QUAL2K model using the following inputs:

Inflow temperature: 16C

Inflow discharge: 1 cfs at Robinson Springs

Diffuse discharge: 1 cfs between Robinson Springs and Centennial Way

Air temperature: East Valley Middle School weather station

Dew point: East Valley Middle School weather station

The natural MDAT at Centennial Way was calculated to be 23.4C.

The thermograph data show that in 2011, the actual MDAT at Centennial Way was 20.2C.

Therefore, Indian Creek downstream of Sugar Avenue is cooler than the natural background temperature for Cold Water Aquatic Life. It should be delisted, and no TMDL should be written.

ID17050114SW003a_0 Indian Creek - New York Canal to Sugar Avenue

5.61

MILES

4

Temperature, water

Applicable WQS attained; original basis for listing was incorrect

6/8/12 (HS) - The Indian Creek Natural Background Temperature Analysis found that this section of Indian Creek is cooler than it would be naturally. This is primarily because Indian Creek would naturally be a small desert stream with limited shade. The rationale for delisting Indian Creek for temperature is attached to this assessment unit, but can be summarized as follows:

The thermograph data show that in 2011, the water temperature at Sugar Avenue never exceeded 22C. Only 2% of the days exceeded the 19 degrees C MDAT criterion (Idaho's water quality standards allow for up to 10%).

Therefore Indian Creek upstream of Sugar Avenue is cooler than the temperature criteria for Cold Water Aquatic Life.

In 2011, the Maximum Weekly Maximum Temperature occurred during the week of June 24-June 30. To see what the natural MWMT at Sugar Avenue would have been, we ran the QUAL2K model for each day, using the following inputs:

Inflow temperature: 16C,

Inflow discharge: 1.35 cfs at Robinson Springs

Diffuse discharge: 0.3 cfs between Robinson Springs and Sugar Avenue

Air temperature: East Valley Middle School weather station

Dew point: East Valley Middle School weather station

The maximum natural temperatures for the last week in June was calculated to be 29.9C.

The thermograph data show that in 2011, the actual MWMT at Sugar Avenue was 19.2C.

Therefore, Indian Creek upstream of Sugar Avenue is cooler than the natural background temperature for Salmonid Spawning. It should be delisted for temperature and no TMDL should be written.

2012 Integrated Report: Assessment Unit-Cause Combinations Delisted

ID17050114SW003b_0 Tributaries to Indian Cr.between Res. and and New York Canal

186.58

MILES

2

Fecal Coliform

Data and/or information lacking to determine water quality status; original basis for listing was incorrect (Category 3)

5/3/2012 (HS) - This assessment unit was erroneously listed for bacterial pollution. The lower reaches of Indian Creek (ID17050114SW002_04) were found to be impaired by e. coli. As a result, this upper assessment unit was mistakenly listed. In fact, no bacteria samples have ever been collected from this assessment unit, primarily because it is dry. Numerous field visits in April and May (the 'wet' season) have revealed no water that can be sampled.

As such, it is being delisted for three reasons:

- 1) The original listing was in error
- 2) There is no evidence of impairment, based on several field visits
- 3) There is no water to sample.

Nutrient/Eutrophication Biological Indicators

Applicable WQS attained; according to new assessment method

5/3/2012 (HS) - This assessment unit was erroneously listed for eutrophication. The lower reaches of Indian Creek were once listed for eutrophication, and the impairment was mistakenly carried up through the entire watershed. No nutrient samples have ever been collected from this assessment unit, and no data has ever suggested that it was impaired by nutrients. This assessment unit was visited on seven occasions between May 2011 and May 2012. No evidence of eutrophication or elevated nutrients was observed. The streams were dry on every visit.

As such, it is being delisted for three reasons:

- 1) The original listing was in error
- 2) There is no evidence of impairment, based on several field visits
- 3) There is no water to be impaired.

Sedimentation/Siltation

Applicable WQS attained; according to new assessment method

3/7/2012 (HS) - In 2010 and 2011, the Boise Regional Office devised a simple bank-stability method that could be used to determine whether this assessment unit was impaired by sediment. Field work was conducted in the spring of 2010 and fall of 2011. Approximately five miles (one-third) of the length of this channel was surveyed.

The episodic nature of sediment pollution in intermittent streams makes direct monitoring extremely difficult. To solve this problem, a bank stability approach was used. Banks were considered stable if they did not show indications of breakdown, slump, fracture, or vertical erosion.

DEQ typically considers 80% stability to be the threshold for sediment impairment. The banks of this assessment unit were found to be 98% stable. This indicates that erosion is minimal, and that the assessment unit is not impaired by sediment.

Final results are available in the documents 'Intermittent Streams Monitoring in the Boise Region: Spring 2010. Results and Field Summary', DEQ, December 2010, and 'Intermittent Streams Monitoring in the Boise Region: Fall 2011. Results and Field Summary', DEQ, December 2011. TRIM refs. 2010AKL104 and 2012AKL7 respectively.

2012 Integrated Report: Assessment Unit-Cause Combinations Delisted

ID17050114SW003b_0 Indian Creek between Reservoir and Sand Creek	41.46	MILES
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3

Nutrient/Eutrophication Biological Indicators **Applicable QWS attained; original basis for listing was incorrect**

5/3/2012 (HS) - This assessment unit was erroneously listed for eutrophication. The lower reaches of Indian Creek were once listed for eutrophication, and the impairment was mistakenly carried up through the entire watershed. No nutrient samples have ever been collected from this assessment unit, and no data has ever suggested that it was impaired by nutrients. This assessment unit was visited on seven occasions between May 2011 and May 2012. No evidence of eutrophication or elevated nutrients was observed. The stream was dry on every visit.

As such, it is being delisted for three reasons:

- 1) The original listing was in error
- 2) There is no evidence of impairment, based on several field visits
- 3) There is no water to be impaired

Sedimentation/Siltation **Applicable QWS attained; according to new assessment method**

3/7/2012 (HS) - In 2010 and 2011, the Boise Regional Office devised a simple bank-stability method that could be used to determine whether this assessment unit was impaired by sediment. Field work was conducted in the spring of 2010 and fall of 2011. Approximately five miles (one-third) of the length of this channel was surveyed.

The episodic nature of sediment pollution in intermittent streams makes direct monitoring extremely difficult. To solve this problem, a bank stability approach was used. Banks were considered stable if they did not show indications of breakdown, slump, fracture, or vertical erosion.

DEQ typically considers 80% stability to be the threshold for sediment impairment. The banks of this assessment unit were found to be 99% stable. This indicates that erosion is minimal, and that the assessment unit is not impaired by sediment.

Final results are available in the documents 'Intermittent Streams Monitoring in the Boise Region: Spring 2010. Results and Field Summary', DEQ, December 2010, and 'Intermittent Streams Monitoring in the Boise Region: Fall 2011. Results and Field Summary', DEQ, December 2011. TRIM refs. 2010AKL104 and 2012AKL7 respectively.

Temperature, water **Applicable QWS attained; original basis for listing was incorrect**

6/15/2012 (HS) - In order to correct a digitizing error and establish consistency with Idaho Water Quality Standards, AU ID17050114SW003b_03 and ID17050114SW003d_03 were created to replace AU ID17050114SW003_03. By doing so, BURP site 1997SBOIA005 that provided the instantaneous temperature data that EPA used to list AU ID17050114SW003_03 for temperature is now captured in AU ID17050114SW003d_03 and not AU ID17050114SW003b_03. Furthermore, AU ID17050114SW003b_03 was dry during all six field visits conducted in 2011. Therefore, until there is sufficient data to suggest AU ID17050114SW003b_03 is impaired for temperature, DEQ is proposing to delist temperature for the 2012 cycle.

ID17050114SW003b_0 Indian Creek- 4th order between Reservoir and New York Canal	20.63	MILES
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4

Temperature, water **Applicable QWS attained; original basis for listing was incorrect**

6/15/2010 (HS) - In order to correct a digitizing error and establish consistency with Idaho Water Quality Standards, AU ID17050114SW003a_04 and ID17050114SW003b_04 were created to replace AU ID17050114SW003_04. By doing so, the beneficial uses once associated with AU ID17050114SW003_04 changed when the new AUs were created. Salmonid spawning is now only associated with AU ID17050114SW003a_04. The single temperature reading of 15 degrees C (BURP ID 1997SBOIC020) that was used by EPA to list AU ID17050114SW003_04 for exceeding the salmonid spawning (SS) temperature criteria, now only applies to AU ID17050114SW003a_04 and not ID17050114SW003b_04. That is because AU ID17050114SW003a_04 is the only segment that has been assessed for SS. Therefore, until there is sufficient data to suggest AU ID17050114SW003b_04 is impaired for temperature, DEQ is proposing to delist temperature for the 2012 cycle.

2012 Integrated Report: Assessment Unit-Cause Combinations Delisted

ID17050114SW003d_0 Indian Creek and tribs - 1st and 2nd order above Reservoir	74.35	MILES
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2

Fecal Coliform

Applicable QWS attained; due to change in QWS

7/5/2012 (HS) - E. coli criteria values were developed to be as protective as the fecal coliform criteria and were directly calculated by translating fecal coliform criteria using ratios of observed water quality data from EPA epidemiological studies. Recent E. coli data show a geometric mean of 1338 col/100ml, which is greater than the 126 col/100 mL criterion value, therefore the recreational use of this water body is considered impaired by bacteria. E. coli will be added as a cause of impairment for this AU.

Nutrient/Eutrophication Biological Indicators

Applicable QWS attained; original basis for listing was incorrect

5/3/2012 (HS) - This assessment unit was erroneously listed for eutrophication. The lower reaches of Indian Creek were once listed for eutrophication, and the impairment was mistakenly carried up through the entire watershed. No nutrient samples have ever been collected from this assessment unit, and no data has ever suggested that it was impaired by nutrients. This assessment unit was visited on seven occasions between May 2011 and May 2012. No evidence of eutrophication or elevated nutrients was observed. As such, it is being delisted for two reasons: 1) The original listing was in error; and 2) There is no evidence of impairment, based on several field visits.

Sedimentation/Siltation

Applicable QWS attained; according to new assessment method

3/7/2012 (HS) - In 2010 and 2011, the Boise Regional Office devised a simple bank-stability method that could be used to determine whether this assessment unit was impaired by sediment. Field work was conducted in the spring of 2010 and fall of 2011. Approximately five miles (one-third) of the length of this channel was surveyed.

The episodic nature of sediment pollution in intermittent streams makes direct monitoring extremely difficult. To solve this problem, a bank stability approach was used. Banks were considered stable if they did not show indications of breakdown, slump, fracture, or vertical erosion.

DEQ typically considers 80% stability to be the threshold for sediment impairment. The banks of this assessment unit were found to be 98% stable. This indicates that erosion is minimal, and that the assessment unit is not impaired by sediment.

Final results are available in the documents 'Intermittent Streams Monitoring in the Boise Region: Spring 2010. Results and Field Summary', DEQ, December 2010, and 'Intermittent Streams Monitoring in the Boise Region: Fall 2011. Results and Field Summary', DEQ, December 2011. TRIM refs. 2010AKL104 and 2012AKL7 respectively.

ID17050114SW003d_0 Indian Creek, 3rd order upstream of Indian Creek Reservoir	15.43	MILES
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3

Nutrient/Eutrophication Biological Indicators

Applicable QWS attained; original basis for listing was incorrect

5/3/2012 (HS) - This assessment unit was erroneously listed for eutrophication. The lower reaches of Indian Creek were once listed for eutrophication, and the impairment was mistakenly carried up through the entire watershed. No nutrient samples have ever been collected from this assessment unit, and no data has ever suggested that it was impaired by nutrients.

This assessment unit was visited on nine occasions between May 2011 and May 2012. No evidence of eutrophication or elevated nutrients was observed.

As such, it is being delisted for two reasons:

- 1) The original listing was in error
- 2) There is no evidence of impairment, based upon several field visits

Sedimentation/Siltation

Applicable QWS attained; according to new assessment method

3/7/2012 (HS) - In 2010 and 2011, the Boise Regional Office devised a simple bank-stability method that could be used to determine whether this assessment unit was impaired by sediment. Field work was conducted in the spring of 2010 and fall of 2011. Approximately five miles (one-third) of the length of this channel was surveyed.

The episodic nature of sediment pollution in intermittent streams makes direct monitoring extremely difficult. To solve this problem, a bank stability approach was used. Banks were considered stable if they did not show indications of breakdown, slump, fracture, or vertical erosion.

DEQ typically considers 80% stability to be the threshold for sediment impairment. The banks of this assessment unit were found to be 99% stable. This indicates that erosion is minimal, and that the assessment unit is not impaired by sediment.

Final results are available in the documents 'Intermittent Streams Monitoring in the Boise Region: Spring 2010. Results and Field Summary', DEQ, December 2010, and 'Intermittent Streams Monitoring in the Boise Region: Fall 2011. Results and Field Summary', DEQ, December 2011. TRIM refs. 2010AKL104 and 2012AKL7 respectively.

ID17050114SW004_06 Lake Lowell	6059.2	ACRES
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Phosphorus (Total)

TMDL approved or established by EPA (4A)

3/8/2012 (HS) - 3/7/2012 (HS) - The Lake Lowell TMDL was reviewed and approved by EPA December 6, 2010. Refer to Table 25 on page 94 for the load capacity for Lake Lowell.

2012 Integrated Report: Assessment Unit-Cause Combinations Delisted

ID17050114SW008_03 Tenmile Creek - 3rd order below Blacks Creek Reservoir	29.48	MILES
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Fecal Coliform

Applicable WQS attained; due to change in WQS

3/7/2012 (HS) - E. coli criteria values were developed to be as protective as the fecal coliform criteria and were directly calculated by translating fecal coliform criteria using ratios of observed water quality data from EPA epidemiological studies. Recent E. coli data show a geometric mean of 699.5 col/100ml, which is greater than the 126 col/100ml criterion value, therefore the recreational use of this water body is considered impaired by bacteria. E. coli will be added as a cause of impairment for this AU.

ID17050114SW009_02 Blacks Creek and Bryans Run - 1st and 2nd order	56.21	MILES
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Combined Biota/Habitat Bioassessments

Applicable WQS attained; according to new assessment method

5/1/2012 (HS) - The impairment listing was based upon a failing 1998 BURP survey. However, this section of Blacks Creek is intermittent. It is most likely that the BURP site failed because of this intermittency - the metrics are not designed for intermittent streams. With our current methods and field manual, this site would probably never have been monitored.

It was possible, though, that the impairment was genuine, and based on field visits and knowledge of the area, would have been caused by temperature or sedimentation. To discount this possibility, DEQ's Boise Region conducted a sediment survey and deployed a thermograph:

SEDIMENT SURVEY

In 2010 and 2011, the Boise Regional Office devised a simple bank-stability method that could be used to determine whether this assessment unit was impaired by sediment. Field work was conducted in the spring of 2010 and fall of 2011. Approximately five miles (one-third) of the length of this channel was surveyed.

The episodic nature of sediment pollution in intermittent streams makes direct monitoring extremely difficult. To solve this problem, a bank stability approach was used. Banks were considered stable if they did not show indications of breakdown, slump, fracture, or vertical erosion.

DEQ typically considers 80% stability to be the threshold for sediment impairment. The banks of this assessment unit were found to be 96% stable. This indicates that erosion is minimal and that the assessment unit is not impaired by sediment.

Final results are available in the documents 'Intermittent Streams Monitoring in the Boise Region: Spring 2010. Results and Field Summary', DEQ, December 2010, and 'Intermittent Streams Monitoring in the Boise Region: Fall 2011. Results and Field Summary', DEQ, December 2011. TRIM refs. 2010AKL104 and 2012AKL7 respectively.

Furthermore, the 1998 BURP site (1998SBOIB008) showed only 16% of the substrate consisted of material less than or equal to 2.5 millimeters in size.

THERMOGRAPH

A thermograph was deployed from 4/1/11 to 10/19/11 at the Blacks Creek Road culvert, near the Elmore/Ada County boundary, on the road to Prairie. It ran dry on July 16, 2011. The maximum daily average temperature exceeded 19C 1% of the time (one occasion). This means that the assessment unit meets the criteria for cold water aquatic life and is therefore not impaired by temperature.

It is therefore concluded that the reason for failure of the BURP metrics is that the creek is intermittent, and not because there is any real sediment or temperature problem. The creek should be delisted.

2012 Integrated Report: Assessment Unit-Cause Combinations Delisted

ID17050114SW009_03 Blacks Creek - 3rd order

7.12 MILES

Combined Biota/Habitat Bioassessments

Applicable WQS attained; according to new assessment method

5/1/2012 (HS) - The impairment listing was based upon a failing 1998 BURP survey. However, this section of Blacks Creek is intermittent. It is most likely that the BURP site failed because of this intermittency - the metrics are not designed for intermittent streams. With our current methods and field manual, this site would probably never have been monitored.

It was possible, though, that the impairment was genuine, and based on field visits and knowledge of the area, would have been caused by temperature or sedimentation. To discount this possibility, DEQ's Boise Region conducted a sediment survey and deployed a thermograph:

SEDIMENT SURVEY

In 2010 and 2011, the Boise Regional Office devised a simple bank-stability method that could be used to determine whether this assessment unit was impaired by sediment. Field work was conducted in the spring of 2010 and fall of 2011. Approximately five miles (one-third) of the length of this channel was surveyed.

The episodic nature of sediment pollution in intermittent streams makes direct monitoring extremely difficult. To solve this problem, a bank stability approach was used. Banks were considered stable if they did not show indications of breakdown, slump, fracture, or vertical erosion.

DEQ typically considers 80% stability to be the threshold for sediment impairment. The banks of this assessment unit were found to be 90% stable. This indicates that erosion is minimal, and that the assessment unit is not impaired by sediment.

Final results are available in the documents 'Intermittent Streams Monitoring in the Boise Region: Spring 2010. Results and Field Summary', DEQ, December 2010, and 'Intermittent Streams Monitoring in the Boise Region: Fall 2011. Results and Field Summary', DEQ, December 2011. TRIM refs. 2010AKL104 and 2012AKL7 respectively.

THERMOGRAPH

The results from the thermograph are not available yet, so the stream has been listed for temperature, pending results. This serves to show that biota and sediment are not impairing the stream, and that temperature is the only remaining possible cause. Data from the thermograph should be available by July 2012.

ID17050114SW010_02 Fivemile, Eightmile, and Ninemile Creeks - 1st and 2nd order

65 MILES

Fecal Coliform

Applicable WQS attained; due to change in WQS

3/7/2012 (HS) - E. coli criteria values were developed to be as protective as the fecal coliform criteria and were directly calculated by translating fecal coliform criteria using ratios of observed water quality data from EPA epidemiological studies. Recent E. coli data show a geometric mean of 708.8 col/100ml, which is greater than the 126 col/100ml criterion value, therefore the recreational use of this water body is considered impaired by bacteria. E. coli will be added as a cause of impairment for this AU.

2012 Integrated Report: Assessment Unit-Cause Combinations Delisted

ID17050114SW012_02 Stewart Gulch, Cottonwood and Crane Creeks - 1st & 2nd order 63.71 MILES

Combined Biota/Habitat Bioassessments

Applicable WQS attained; according to new assessment method

7/17/2012 (HS) - A 2003 thermograph indicated that the 3rd order section of Cottonwood Creek was not impaired for temperature. Specifically, the maximum daily average temperature was 17.94 C, and the maximum temperature was 22.09 C, which occurred on one occasion in five months. A thermograph was also placed in the 2nd order section, but this part of the stream ran dry. It is not possible to determine from the data exactly when the stream ran dry, and so the thermograph data are unusable. Typically, this stream is dry by mid-June.

The thermograph data from downstream indicate that temperature criteria are not exceeded in that section. Therefore, they are unlikely to be exceeded in the headwater section either.

In 2010 and 2011, the Boise Regional Office devised a simple bank-stability method that could be used to determine whether this assessment unit was impaired by sediment. Field work was conducted in the spring of 2010 and fall of 2011. Approximately five miles (one-third) of the length of this channel was surveyed.

The episodic nature of sediment pollution in intermittent streams makes direct monitoring extremely difficult. To solve this problem, a bank stability approach was used. Banks were considered stable if they did not show indications of breakdown, slump, fracture, or vertical erosion.

DEQ typically considers 80% stability to be the threshold for sediment impairment. The banks of this assessment unit were found to be 99% stable. This indicates that erosion is minimal. and that the assessment unit is not impaired by sediment.

Final results are available in the documents 'Intermittent Streams Monitoring in the Boise Region: Spring 2010. Results and Field Summary', DEQ, December 2010, and 'Intermittent Streams Monitoring in the Boise Region: Fall 2011. Results and Field Summary', DEQ, December 2011. TRIM refs. 2010AKL104 and 2012AKL7 respectively.

Finally, the BURP sites that caused the original listing should not have been used because they were visited outside of the index period (6/13/96 and 6/27/96) and on a stream that runs dry. We should not expect such a stream to correspond to the BURP metrics, which were developed for perennial streams, to be conducted between July and September. Additionally, total macroinvertebrate count was at each site was 122 and 32 respectively. Field notes mentioned that a poor seal was obtained, and that the water level was extremely low. The discharge at each site was 0.4 cfs.

ID17050114SW012_03 Cottonwood Creek - 3rd order (Fivemile Creek to Boise River) 5.93 MILES

Combined Biota/Habitat Bioassessments

Applicable WQS attained; according to new assessment method

7/17/2012 (HS) - A 2003 thermograph indicated that the 3rd order section of Cottonwood Creek was not impaired for temperature. Specifically, the maximum daily average temperature was 17.94 C, and the maximum temperature was 22.09 C, which occurred on one occasion in five months.

In 2010 and 2011, the Boise Regional Office devised a simple bank-stability method that could be used to determine whether this assessment unit was impaired by sediment. Field work was conducted in the spring of 2010 and fall of 2011. Approximately five miles (one-third) of the length of this channel was surveyed.

The episodic nature of sediment pollution in intermittent streams makes direct monitoring extremely difficult. To solve this problem, a bank stability approach was used. Banks were considered stable if they did not show indications of breakdown, slump, fracture, or vertical erosion.

DEQ typically considers 80% stability to be the threshold for sediment impairment. The banks of this assessment unit were found to be 99% stable. This indicates that erosion is minimal. and that the assessment unit is not impaired by sediment.

Final results are available in the documents 'Intermittent Streams Monitoring in the Boise Region: Spring 2010. Results and Field Summary', DEQ, December 2010, and 'Intermittent Streams Monitoring in the Boise Region: Fall 2011. Results and Field Summary', DEQ, December 2011. TRIM refs. 2010AKL104 and 2012AKL7 respectively.

Finally, the BURP site that caused the original listing should not have been used because it was outside of the index period and on a stream that runs dry. We should not expect such a stream to correspond to the BURP metrics, which were developed for perennial streams, to be conducted between July and September. Additionally, total macroinvertebrate count was only 137.

ID17050114SW017_03 Sand Hollow Creek - I-84 to Sharp Road 18.25 MILES

Fecal Coliform

Applicable WQS attained; due to change in WQS

5/8/2012 (HS) - E. coli criteria values were developed to be as protective as the fecal coliform criteria and were directly calculated by translating fecal coliform criteria using ratios of observed water quality data from EPA epidemiological studies. Recent E. coli data show a geometric mean of 573.4 col/100ml, which is greater than the 126 col/100ml criterion value, therefore the recreational use of this water body is considered impaired by bacteria. E. coli will be added as a cause of impairment for this AU.

17050115

Middle Snake-Payette

2012 Integrated Report: Assessment Unit-Cause Combinations Delisted

ID17050115SW001_08 Snake River - Boise River to Weiser River	71.93	MILES
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Cause Unknown

Data and/or information lacking to determine water quality status; original basis for listing was incorrect (Category 3)

3/7/2012 (HS) - Cause Unknown (nutrients suspected impairment) is a redundant cause, because 'Total Phosphorus' has been identified as the cause, and a TMDL has been written.

17050120

South Fork Payette

ID17050120SW001_02 SF Payette River - 1st and 2nd order:Lowman to Garden Valley	115.81	MILES
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Cause Unknown

Data and/or information lacking to determine water quality status; original basis for listing was incorrect (Category 3)

3/22/2012 (HS) - This assessment unit was identified as being impaired based upon BURP data. 'Cause Unknown', 'Fishes Bioassessments' and 'Habitat Bioassessment' were mistakenly used as placeholders for 'combined biota/habitat bioassessments'. Therefore, we are removing the erroneous causes and leaving only 'combined biota/habitat bioassessments' as the true cause.

Fishes Bioassessments

Data and/or information lacking to determine water quality status; original basis for listing was incorrect (Category 3)

3/22/2012 (HS) - This assessment unit was identified as being impaired based upon BURP data. 'Cause Unknown', 'Fishes Bioassessments' and 'Habitat Bioassessment' were mistakenly used as placeholders for 'combined biota/habitat bioassessments'. Therefore, we are removing the erroneous causes and leaving only 'combined biota/habitat bioassessments' as the true cause.

Habitat Assessment (Streams)

Data and/or information lacking to determine water quality status; original basis for listing was incorrect (Category 3)

3/22/2012 (HS) - This assessment unit was identified as being impaired based upon BURP data. 'Cause Unknown', 'Fishes Bioassessments' and 'Habitat Bioassessment' were mistakenly used as placeholders for 'combined biota/habitat bioassessments'. Therefore, we are removing the erroneous causes and leaving only 'combined biota/habitat bioassessments' as the true cause.

ID17050120SW001_05 South Fork Payette River - 5th order	23.98	MILES
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Sedimentation/Siltation

Applicable WQS attained; according to new assessment method

3/8/2012 (HS) - From the South Fork Payette River Subbasin Five-Year Review (January 2011):

The USFS (2004) stated in a sediment transport study based on 72 measurements of bedload transport and 37 measurements of suspended sediment from 1994-1997 that suspended sediment accounted for the majority of transported material with over an order magnitude greater suspended transport than bedload transport at the highest discharges and similar rates at the lowest discharges. Thus, suspended sediment concentration is an adequate target in this case for determining water quality impairment due to sediment.

The target for suspended sediment concentration is a geometric mean of 50 mg/L SSC for no longer than 60 days and a geometric mean of 80 mg/L SSC for no longer than 14 days (SF Payette River SBA, DEQ 2004). This target allows for spikes in total suspended sediment due to spring runoff or episodic storm events. Since the South Fork Payette total suspended sediment data collected during water year 2008 and 2009 only exceeds 50 mg/L during the highest stream flows, total suspended sediment is unlikely to impact fisheries. 2009 load duration curves show that suspended sediment targets are met except at high flows, which account for less than 5% of the flows.

Turbidity levels were all very low. The highest measurement of 25 NTRUs on May 22, 2008 occurred at high flows of 3940 cfs and was still far below the instantaneous standard of 50 NTUs above background and would also be below the 25 NTU above background level for consecutive measurements.

The SF Salmon River Subbasin Assessment uses a monitoring target of five year depth fines mean of 27% or less with no individual year > 29%. In 2009, 14.8% depth fines were measured from pool tailouts in this assessment unit.

In summary, this assessment is not impaired by any kind of sediment.

17050122

Payette

2012 Integrated Report: Assessment Unit-Cause Combinations Delisted

ID17050122SW002_02 Tributaries to Black Canyon Reservoir 18.13 MILES

Combined Biota/Habitat Bioassessments

Data and/or information lacking to determine water quality status; original basis for listing was incorrect (Category 3)

10/29/2012 (NED) - After a more thorough review of the BURP data collected in July 2004, DEQ determined that BURP site 2004SBOIA042 is not representative of the AU. The BURP site was placed immediately below a culvert and the flow at the time of the visit was only 0.1 cfs. According to the field notes, the single riffle in the reach was too narrow to sample and where the crew did manage to collect macroinvertebrate samples they were unable to get a good seal on the Hess net. With a flow as low as 0.1, any samples that were collected were not going to be representative of the water conditions of Anderson Creek and with such a low flow the Hess net was not the appropriate equipment to be using.

The stream macroinvertebrate index (SHI) which received a condition rating of 1 should not have been applied to a stream with a flow of 0.1 cfs. The SMI was developed based on community composition and function typical of an expected reference condition. Reference conditions describe persistent aquatic habitats that allow full development of aquatic communities and have few impacts from human activities. The culvert that is immediately upstream of the BURP site most likely has fundamentally altered this section of Anderson Creek from its original conditions and its biological and physical conditions causing the biological and habitat parameters not to fall within the range of natural variability of the reference conditions. Therefore, this data should not have been compared to reference conditions and not considered representative of the AU.

In conclusion, combined biota/habit bioassessments has been delisted due to a listing error and the support status for CWAL and SS have been changed to unassessed. Until DEQ is capable of collecting sufficient water quality monitoring data to determine the support status of CWAL and SS, the tributaries to Black Canyon Reservoir will only be not fully supporting secondary contact recreation due to elevated E. coli concentrations.

ID17050122SW011_04 Little Squaw Creek - 4th order (Soldier Creek to mouth) 1.71 MILES

Combined Biota/Habitat Bioassessments

Applicable QWS attained; original basis for listing was incorrect

3/8/2012 (HS) - Little Squaw Creek was listed as impaired, based upon BURP site 2004SBOIA044. However, it has transpired that a software mistake caused the creek to be rated too low.

Previously, the SHI habitat index scored '1', and this caused DEQ to classify the creek as impaired. When the site is placed into its proper ecoregion (Snake River Basin/High Desert), and when embeddedness is considered, the site scores a '3'. This, in turn, indicates that Little Squaw Creek is not impaired.

The high macroinvertebrate index (3 out of 3) gives credence to this assessment.

The specific habitat metrics used, and their scores out of ten, were: Instream Cover (7), Large Organic Debris (1), Percent Fines (7), Embeddedness (5), Size Classes (8), Channel Shape (6), Percent Coverage (10), Percent Canopy (4), Disruptive Pressure (5), and Zone of Influence (6). Total score 59. The threshold for a score of 3 out of 3 is 57. (Idaho Small Stream Ecological Assessment Framework).

ID17050122SW015_02 Bissel Creek - 1st and 2nd order 28.48 MILES

Sedimentation/Siltation

Applicable QWS attained; according to new assessment method

3/7/2012 (HS) - In 2010 and 2011, the Boise Regional Office devised a simple bank-stability method that could be used to determine whether this assessment unit was impaired by sediment. Field work was conducted in the spring of 2010 and fall of 2011. Approximately five miles (one-third) of the length of this channel was surveyed.

The episodic nature of sediment pollution in intermittent streams makes direct monitoring extremely difficult. To solve this problem, a bank stability approach was used. Banks were considered stable if they did not show indications of breakdown, slump, fracture, or vertical erosion.

DEQ typically considers 80% stability to be the threshold for sediment impairment. The banks of this assessment unit were found to be 99% stable. This indicates that erosion is minimal, and that the assessment unit is not impaired by sediment.

Final results are available in the documents 'Intermittent Streams Monitoring in the Boise Region: Spring 2010. Results and Field Summary', DEQ, December 2010, and 'Intermittent Streams Monitoring in the Boise Region: Fall 2011. Results and Field Summary', DEQ, December 2011. TRIM refs. 2010AKL104 and 2012AKL7 respectively.

17050123

North Fork Payette

ID17050123SW002_03 Round Valley Creek - 3rd order 2.4 MILES

Escherichia coli

Applicable QWS attained; reason for recovery unspecified

4/11/2012 (HS) - Another five-sample geometric mean was collected in May 2011, when overland runoff from grazed pastures was at a maximum. The recent E. coli data had a geometric mean less than the 126 col/100 mL criterion value, therefore the recreational use of this water body is no longer considered to be impaired by bacteria.

2012 Integrated Report: Assessment Unit-Cause Combinations Delisted

ID17050123SW007_02 West Mountain tributaries to Cascade Reservoir	60.5	MILES
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pH

Applicable WQS attained; according to new assessment method

3/7/2012 (HS) - From Cascade Reservoir Phase III Water Quality Management Plan & Five Year TMDL Review February 2009, page 15: "DEQ sampled the creek in 2008. There have been no pH violations in the past five years. DEQ recommends delisting AU ID17050123SW007_02 for pH in the next 303(d) listing cycle."

ID17050123SW011_02 Boulder/Willow Creek - 1st and 2nd order irrigated sections	18.42	MILES
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Combined Biota/Habitat Bioassessments

Data and/or information lacking to determine water quality status; original basis for listing was incorrect (Category 3)

3/7/2012 (HS) - From Cascade Reservoir Phase III Water Quality Management Plan & Five Year TMDL Review February 2009, page 17, "The recent 303(d) listing of the AU based on habitat/bioassessment scores for AU17050123SW011_02 (the 1st and 2nd order irrigated sections of Boulder and Willow Creek) is not warranted since there is already a TMDL in place (AU17050123SW011_02). This is a listing error, and this AU is recommended for delisting in the next integrated report cycle."

ID17050123SW011_03 Boulder Creek - 3rd order (Louie Creek to mouth)	11.55	MILES
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Sedimentation/Siltation

TMDL approved or established by EPA (4A)

3/7/2012 (HS) - The Cascade Reservoir Tributary TMDL Addendum was reviewed and approved by EPA February 22, 2012. Refer to Table 7 on page 17 for load allocations for Boulder Creek.

ID17050123SW012_03 Lake Fork - Little Payette Lake to Cascade Reservoir	19.55	MILES
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Phosphorus (Total)

Applicable WQS attained; according to new assessment method

3/7/2012 (HS) - From Cascade Reservoir Phase III Water Quality Management Plan & Five Year TMDL Review February 2009, pages 18 and 19.

DEQ stream surveys above Little Payette Lake showed full support of beneficial uses. Lake Fork Creek below Little Payette Lake is listed for an unknown pollutant. Nutrient data showed low levels of total phosphorus in Lake Fork Creek (Figure 7). Dissolved orthophosphorus, the biologically available form of phosphorus, showed a decreasing trend from the mid 1990s. Prior to 2007, the average dissolved orthophosphorus concentration was 0.013 mg/L, and in 2007, the concentration was 0.006 mg/L.

In 2007, data was collected that showed DO in Lake Fork Creek below 6 mg/L (the Idaho minimum standard for DO) (ISDA 2007). Temperature data during that time did not show exceedance of the state standard. The field notes from the Idaho State Department of Agriculture for that data collection event state that macrophytic vegetation was present in the sampling transect. DEQ has noted the same characteristics but noted that the vegetation is not present throughout the channel, just in a short section below a deep pool and above a riffle. In 2008, depressed DO conditions were not seen. Lake Fork Creek has a substantial amount of water diverted from it in the summer. Lack of flow appears to be the primary factor leading to aquatic life impairment and low DO. DEQ recommends that Lake Fork Creek be listed for flow alteration.

ID17050123SW015_02 Mud Creek - 1st and 2nd order	25.62	MILES
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Sedimentation/Siltation

TMDL approved or established by EPA (4A)

3/7/2012 (HS) - The Cascade Reservoir Tributary TMDL Addendum was reviewed and approved by EPA February 22, 2012. Refer to Table 7 on page 17 for load allocations for Mud Creek.

2012 Integrated Report: Assessment Unit-Cause Combinations Delisted

ID17050123SW015_03 Mud Creek - 3rd order (Norwood to Reservoir)

7.15

MILES

Ammonia (Un-ionized)

Applicable QQS attained; according to new assessment method

3/7/2012 (HS) - From Cascade Reservoir Phase III Water Quality Management Plan & Five Year TMDL Review February 2009, page 19: "The ammonia concentrations in Mud Creek ranged from 0.01 to 0.04 mg/L, far below the ammonia criteria, which are set at a level such that exceeding them would adversely affect young fish. DEQ recommends that Mud Creek be delisted for ammonia. Total nitrogen/total phosphorus (TN/TP) ratios are used to determine whether a stream system's aquatic plant growth is limited by phosphorus or nitrogen. TN/TP ratios less than 7 indicate a nitrogenlimited system whereas TN/TP ratios greater than 7 indicate a phosphorus-limited system. Mean TN/TP ratios in Mud Creek are greater than 7, indicating a phosphorus-limited system. Excess nutrients can lead to excess aquatic plant growth and low dissolved oxygen (DO). In 2007, DO levels ranged from 6.95 to 10.29, which exceeds the 6 mg/L minimum level required by the state DO criteria."

Combined Biota/Habitat Bioassessments

Applicable QQS attained; original basis for listing was incorrect

3/7/2012 (HS) - The sources of the impairment in Mud Creek have been identified as bacteria, sediment, and total phosphorus (Cascade Reservoir Phase III Water Quality Management Plan & Five Year TMDL Review February 2009 page 19). Therefore, 'combined biota/habitat bioassessments' is no longer needed as a placeholder.

Sedimentation/Siltation

TMDL approved or established by EPA (4A)

3/7/2012 (HS) - The Cascade Reservoir Tributary TMDL Addendum was reviewed and approved by EPA February 22, 2012. Refer to Table 7 on page 17 for load allocations for Mud Creek.

17050124

Weiser

ID17050124SW002_02 Cove Creek - entire watershed

44.72

MILES

Sedimentation/Siltation

Applicable QQS attained; according to new assessment method

3/7/2012 (HS) - In 2010 and 2011, the Boise Regional Office devised a simple bank-stability method that could be used to determine whether this assessment unit was impaired by sediment. Field work was conducted in the spring of 2010 and fall of 2011. Approximately five miles (one-third) of the length of this channel was surveyed.

The episodic nature of sediment pollution in intermittent streams makes direct monitoring extremely difficult. To solve this problem, a bank stability approach was used. Banks were considered stable if they did not show indications of breakdown, slump, fracture, or vertical erosion.

DEQ typically considers 80% stability to be the threshold for sediment impairment. The banks of this assessment unit were found to be 95% stable. This indicates that erosion is minimal, and that the assessment unit is not impaired by sediment.

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