Southwest

**17050101 C. J. Strike Reservoir**

<table>
<thead>
<tr>
<th>ID</th>
<th>Description</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>ID17050101SW003_03</td>
<td>Browns Creek - 3rd order</td>
<td>4.21 MILES</td>
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<tr>
<td>ID17050101SW003_04</td>
<td>Browns Creek - 4th order</td>
<td>4.06 MILES</td>
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<tr>
<td>ID17050101SW004_02</td>
<td>Browns Creek - 1st and 2nd order tributaries</td>
<td>63.59 MILES</td>
</tr>
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</table>

**Sedimentation/Siltation**

**Applicable WQS 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.


**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.

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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.

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 100% stable. This indicates that erosion is minimal, and that the assessment unit is not impaired by sediment.

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.


<table>
<thead>
<tr>
<th>ID17050101SW004_03</th>
<th>Browns Creek - 3rd order</th>
<th>15.74</th>
<th>MILES</th>
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<tbody>
<tr>
<td>Sedimentation/Siltation</td>
<td>Applicable WQS attained; according to new assessment method</td>
<td>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.</td>
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</tr>
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</table>

<table>
<thead>
<tr>
<th>ID17050101SW006_02</th>
<th>Sailor Creek - 1st and 2nd order</th>
<th>265.96</th>
<th>MILES</th>
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<tbody>
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<td>Sedimentation/Siltation</td>
<td>Applicable WQS attained; according to new assessment method</td>
<td>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 100% 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.</td>
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<tbody>
<tr>
<td>Sedimentation/Siltation</td>
<td>Applicable WQS attained; according to new assessment method</td>
<td>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 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.</td>
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<th>22.85</th>
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<tr>
<td>Sedimentation/Siltation</td>
<td>Applicable WQS attained; according to new assessment method</td>
<td>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. 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.</td>
<td></td>
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</tbody>
</table>
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.

2012 Integrated Report: Assessment Unit-Cause Combinations Delisted

ID17050102SW004_04 Big Jacks Creek - 4th order (Dry Canyon to Duncan Creek) 7.36 MILES

Other flow regime alterations
Applicable WQS 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 WQS attained; according to new assessment method

3/23/2012 (HS) - According to new assessment method, this segment was delisted for sediment and flow alteration on the 1994 §303(d) list. EPA listed this water solely because it was listed on 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.

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.

ID17050102SW022_02 Cougar Creek - 1st and 2nd order 40.78 MILES

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 100% stable. This indicates that erosion is minimal, and that the assessment unit is not impaired by sediment.

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 100% stable. This indicates that erosion is minimal and that the assessment unit is not impaired by sediment.

**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

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.


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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 91% stable. This indicates that erosion is minimal and that the assessment unit is not impaired by sediment.


**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 94% stable. This indicates that erosion is minimal and that the assessment unit is not impaired by sediment.

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.

Sedimentation/Siltation

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 100% stable. This indicates that erosion is minimal, and that the assessment unit is not impaired by sediment.


Temperature, water

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.

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.

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.
ID17050104SW029_03 Camas Creek - 3rd order  
7.3 MILES  

**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  

**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  

**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  

**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  

**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  

**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  

**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.
<table>
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<tr>
<th>ID</th>
<th>Description</th>
<th>Miles</th>
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<tbody>
<tr>
<td>ID17050108SW004_02</td>
<td>Upper Jordan Creek - 1st and 2nd order tributaries</td>
<td>102.32</td>
<td>MILES</td>
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<td>ID17050108SW004_03</td>
<td>Jordan Creek - 3rd order (Jacobs Gulch to Louse Creek)</td>
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<td>ID17050108SW004_04</td>
<td>Jordan Creek - 4th order (Louse Creek to Big Boulder Creek)</td>
<td>5.65</td>
<td>MILES</td>
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<tr>
<td>ID17050108SW013_02</td>
<td>Rock Creek above Triangle Reservoir - 1st and 2nd order</td>
<td>63.93</td>
<td>MILES</td>
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<tr>
<td>ID17050108SW013_03</td>
<td>Rock Creek above Triangle Reservoir - 3rd order</td>
<td>12.51</td>
<td>MILES</td>
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<td>ID17050108SW014_02</td>
<td>Louisa Creek - entire drainage</td>
<td>13.82</td>
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<tr>
<td>ID17050108SW015_02</td>
<td>Spring and Meadow Creeks - 1st and 2nd order</td>
<td>48.87</td>
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<td>ID17050108SW015_03</td>
<td>Spring and Meadow Creeks - 3rd order sections</td>
<td>8.09</td>
<td>MILES</td>
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<td>ID17050108SW021_02</td>
<td>Cow Creek - 1st and 2nd order</td>
<td>55.15</td>
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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.
## 2012 Integrated Report: Assessment Unit-Cause Combinations Delisted

<table>
<thead>
<tr>
<th>ID</th>
<th>Description</th>
<th>Miles</th>
<th>Status</th>
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<td>Cow Creek - 3rd order (Wildcat Canyon to Soda Creek)</td>
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<td>ID17050108SW022_02</td>
<td>Soda, Swisher and Chimney Creeks - 1st and 2nd order</td>
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<td>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.</td>
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<tr>
<td>ID17050108SW022_03</td>
<td>Soda Creek - 3rd order section</td>
<td>3.09</td>
<td>Temperature, water TMDL approved or established by EPA (4A)</td>
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<td>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.</td>
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</tr>
</tbody>
</table>

### 17050112 Boise-Mores

| ID17050112SW009_06 | Mores Creek - 6th order (Grimes Creek to mouth)                              | 9.35  | 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

### Fecal Coliform

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

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 MDA at Centennial Way was calculated to be 23.4C.

The thermograph data show that in 2011, the actual MDA 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.
2012 Integrated Report: Assessment Unit-Cause Combinations Delisted

ID17050114SW003b_0  Tributaries to Indian Cr.between Res. and and New York Canal  186.58  MILES

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.

Indian Creek between Reservoir and Sand Creek

**Nutrient/Eutrophication Biological Indicators**  
Applicable WQS 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 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 99% stable. This indicates that erosion is minimal, and that the assessment unit is not impaired by sediment.


**Temperature, water**  
Applicable WQS 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.

Temperature, water

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

<table>
<thead>
<tr>
<th>Fecal Coliform</th>
<th>Applicable WQS attained; due to change in WQS</th>
</tr>
</thead>
<tbody>
<tr>
<td>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 geomean 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.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Nutrient/Eutrophication Biological Indicators</th>
<th>Applicable WQS attained; original basis for listing was incorrect</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sedimentation/Siltation</th>
<th>Applicable WQS attained; according to new assessment method</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
<td></td>
</tr>
</tbody>
</table>

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.


#### ID17050114SW003d_0  Indian Creek, 3rd order upstream of Indian Creek Reservoir

<table>
<thead>
<tr>
<th>Nutrient/Eutrophication Biological Indicators</th>
<th>Applicable WQS attained; original basis for listing was incorrect</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Sedimentation/Siltation</th>
<th>Applicable WQS attained; according to new assessment method</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
<td></td>
</tr>
</tbody>
</table>

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.


#### ID17050114SW004_06  Lake Lowell

<table>
<thead>
<tr>
<th>Phosphorus (Total)</th>
<th>TMDL approved or established by EPA (4A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
<td></td>
</tr>
</tbody>
</table>
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.

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.


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.
ID17050114SW009_03 Blacks Creek - 3rd order

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.


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

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.
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.

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.

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.

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.

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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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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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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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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.

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.
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

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.

**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.
### ID17050122SW002_02 Tributaries to Black Canyon Reservoir

<table>
<thead>
<tr>
<th>Combined Biota/Habitat Bioassessments</th>
<th>Data and/or information lacking to determine water quality status; original basis for listing was incorrect (Category 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
<td></td>
</tr>
</tbody>
</table>

In conclusion, combined biota/habitat 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)

<table>
<thead>
<tr>
<th>Combined Biota/Habitat Bioassessments</th>
<th>Applicable WQS attained; original basis for listing was incorrect</th>
</tr>
</thead>
<tbody>
<tr>
<td>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).</td>
<td></td>
</tr>
</tbody>
</table>

### ID17050122SW015_02 Bissel Creek - 1st and 2nd order

<table>
<thead>
<tr>
<th>Sedimentation/Siltation</th>
<th>Applicable WQS attained; according to new assessment method</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
<td></td>
</tr>
</tbody>
</table>

### ID17050123SW002_03 Round Valley Creek - 3rd order

<table>
<thead>
<tr>
<th>Escherichia coli</th>
<th>Applicable WQS attained; reason for recovery unspecified</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
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</tr>
</tbody>
</table>
ID17050123SW007_02 West Mountain tributaries to Cascade Reservoir 60.5 MILES

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

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

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

Phosphorus (Total)
Applicable WQS attained; according to new assessment method

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

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)  

<table>
<thead>
<tr>
<th>Ammonia (Un-ionized)</th>
<th>Applicable WQS attained; according to new assessment method</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/7/2012 (HS) - From Cascade Reservoir Phase III Water Quality Management Plan &amp; Five Year TMDL Review February 2009, page 19: &quot;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 nitrogen-limited 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.&quot;</td>
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</table>

Combined Biota/Habitat Bioassessments  

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  

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  

<table>
<thead>
<tr>
<th>Sedimentation/Siltation</th>
<th>Applicable WQS attained; according to new assessment method</th>
</tr>
</thead>
<tbody>
<tr>
<td>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. 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.</td>
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