Lookingglass Creek Salmonid Evaluation Studies

Lower Snake River Compensation Plan

Statement of Work Task Completion Summary for
October 1, 2011 through September 30, 2012

Prepared by
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**Statement of Work Status October 1, 2011 to September 30, 2012**

**Task 1.1** Check the rotary screw trap every 2-3 days or as needed and enumerate, examine for marks, and interrogate for PIT tags all juveniles collected.

**Status:** Completed. Trap was checked 2-3 times per week, although checks increased during high flows, heavy debris loads, and during extreme temperatures. A total of 133 trap checks occurred during October 1, 2011 and September 30, 2012. See table 1.1

**Task 1.2** Mark using PIT tags or fin clips at least 50 fish per week for estimating trap efficiency.

**Status:** Completed. CTUIR is marking at least 50 fish per week and often more, due to much higher outmigration numbers. In the winter months, and mid-summer, fish numbers dwindle and CTUIR tags all available outmigrants. Between October 1, 2011 and September 30, 2012, a total of 1385 juvenile Chinook were marked and 1070 juvenile steelhead, respectively. See table 1.1

**Task 1.3** Collect and preserve genetics samples from at least 500 fish collected in the screw trap for each season of the migration year.

**Status:** Completed. CRITFC informed CTUIR that we should sample genetics from at least 2-3 times the number of spawners per brood year. CTUIR took a total of 483 genetic samples during the spring and fall migration. We will increase the number of samples taken to meet our goal in the future. See table 1.1

**Task 1.4** PIT- Tag and release at least 500 fish collected in the screw trap each season of the migration year.

**Status:** Completed. Permitting allows for only 500 tags to be implanted. The spring and fall groups fell short of the 500 fish needed, due to extremely high flows in the spring and having the screw trap pulled during that time, and a repair to the front of the cone shaft in the fall which required replacing the affected parts. Between October 1, 2011 to December 31, 2011 (winter group) 767 juvenile Chinook were tagged and released. Between January 1, 2012 to June 30, 2012 (spring group) 277 juvenile Chinook were tagged. Our trap was pulled during much of the spring due to extremely high flows which did not allow us to reach our goal of 500 tagged Chinook. Between July 1, 2012 and September 30, 2012 (fall group, migration year 2013) 341 juvenile Chinook were tagged and released. See table 1.1
Table 1.1. Number of trap checks, files uploaded to PTAGIS, Number of Chinook and Steelhead tagged or clipped and number of genetics samples taken from Chinook from October 1, 2010 to September 30, 2011.

<table>
<thead>
<tr>
<th>Month/Year</th>
<th># Trap Checks</th>
<th>Files loaded P3</th>
<th>Tag/clip CHS</th>
<th>Tag/clip STS</th>
<th>Gen. Taken</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oct 2011</td>
<td>18</td>
<td>18</td>
<td>592</td>
<td>253</td>
<td>168</td>
</tr>
<tr>
<td>Nov 2011</td>
<td>12</td>
<td>12</td>
<td>125</td>
<td>94</td>
<td>0</td>
</tr>
<tr>
<td>Dec 2011</td>
<td>8</td>
<td>7</td>
<td>50</td>
<td>26</td>
<td>0</td>
</tr>
<tr>
<td>Jan 2012</td>
<td>11</td>
<td>9</td>
<td>81</td>
<td>36</td>
<td>30</td>
</tr>
<tr>
<td>Feb 2012</td>
<td>10</td>
<td>9</td>
<td>29</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>Mar 2012</td>
<td>10</td>
<td>10</td>
<td>75</td>
<td>69</td>
<td>85</td>
</tr>
<tr>
<td>Apr 2012</td>
<td>9</td>
<td>9</td>
<td>10</td>
<td>47</td>
<td>3</td>
</tr>
<tr>
<td>May 2012</td>
<td>8</td>
<td>7</td>
<td>1</td>
<td>66</td>
<td>0</td>
</tr>
<tr>
<td>Jun 2012</td>
<td>13</td>
<td>13</td>
<td>81</td>
<td>269</td>
<td>16</td>
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<td>July 2012</td>
<td>13</td>
<td>13</td>
<td>173</td>
<td>139</td>
<td>79</td>
</tr>
<tr>
<td>Aug 2012</td>
<td>13</td>
<td>12</td>
<td>89</td>
<td>53</td>
<td>52</td>
</tr>
<tr>
<td>Sep 2012</td>
<td>8</td>
<td>7</td>
<td>79</td>
<td>8</td>
<td>50</td>
</tr>
</tbody>
</table>

Task 1.5 PIT tag and release up to 1,000 spring Chinook salmon parr collected by snorkel/seine in the main nursery area above the hatchery weir.

Status: Completed. CTUIR collected and tagged 982 spring Chinook parr. Collection was in the upper reaches near the section break for 3U and 3L. The tagging station was set up there on August 6-10, 2012. All parr were easily captured in two days due to large numbers, and tagged and released back to the reaches they were caught in during the following two days.

Task 1.6 Collect and sample (fork Length and weight) on 50 parr per month from July – September at standard sites above and below the hatchery. See table 1.2.

Table 1.2. Monthly collection sites for Lookingglass Creek separated by site. Collection always took place on or near the 25th date of the month at each of the three sites, whenever possible.

<table>
<thead>
<tr>
<th>Month</th>
<th>RM.25</th>
<th>RM 2.25</th>
<th>RM 5.5</th>
<th>RM 6.75</th>
</tr>
</thead>
<tbody>
<tr>
<td>July</td>
<td>51</td>
<td>50</td>
<td>52</td>
<td>58</td>
</tr>
<tr>
<td>August</td>
<td>47</td>
<td>47</td>
<td>51</td>
<td>50</td>
</tr>
<tr>
<td>Sept</td>
<td>55</td>
<td>50</td>
<td>52</td>
<td>51</td>
</tr>
</tbody>
</table>

Status: Completed. Although collection was completed, in September there were many adult Chinook redds in sample areas that would have made parr collection potentially result in damage to redds and buried eggs. CTUIR has not encountered this problem thus far, as adult fish numbers remained low. Our numbers have grown substantially and this will have to be a consideration as we work with ESA listed species in the future. We sampled Little Lookingglass this year as well, since we have had a substantial amount of redds in Little Lookingglass. We
only captured 18 parr in August, and 40 in September. We will continue to sample Little Lookingglass in the future.

**Task 1.7** Estimate migration timing out of Lookingglass Creek and migration timing to Lower Granite for fish PIT-tagged after capture at the screw trap and PIT tagged in the nursery area.

**Status:** Complete for MY 2011. Not completed for MY 2012.

**Task 1.8** Validate and upload all PIT tag data to the PTAGIS database.

**Status:** Completed. Each week all files are uploaded to PTAGIS to keep the database current. Between October 1, 2011 and September 30, 2012 a total of 126 files have been uploaded to the PTAGIS database. See table 1.1.

**Task 1.9.** Collect water temperature data using recording thermometers in Little Lookingglass Creek and at the screw trap.

**Status:** Completed for 2011 and 2012.

**Task 1.10.** Compare (juvenile) life history metrics…

**Status:** Completed through migration year 2010. Partially complete for migration year 2011.

**Task 1.11.** Compare (juvenile) productivity metrics…

**Status:** Completed through migration year 2010. Partially complete for migration year 2011.

**Task 2.1** Obtain data and tissues (FL, sex, marks/tags, scales, genetic samples) from ODFW Lookingglass Hatchery staff for all spring Chinook salmon collected at the adult trap.

Status: Completed. Data has been collected and is being analyzed. The first Chinook was collected at the adult weir on May 22, 2012. A total of 1150 adult Chinook salmon were collected at the weir on Lookingglass Creek that were first time captures. Of these, 1005 were of hatchery origin, and 45 of natural origin. This number includes fish destined for brood stock, food bank jacks, and adults passed above the weir. Excluded from these numbers are fish that were Catherine Creek or Upper Grande Ronde swim-ins, and recaptures or fish recycled and passed downstream for the fishery, (n=63). CTUIR outplanted a total of 926 Chinook above the weir. Fish were passed upstream in “real time” as they swam into the adult ladder trap. Fish passed above the weir included 831 hatchery origin and 95 natural origin adults. No jacks were passed above the weir to spawn this year.

**Task 2.2** Conduct spawning ground surveys throughout the stream once a week during the spawning season, enumerating redds and logging locations with GPS and collecting carcass data and tissues.
Status: Completed. Large numbers of adult returns to Lookingglass Creek made for long days on spawning ground surveys. CTUIR collected data from 442 carcasses from July 19, 2012 to September 20, 2012 and enumerated and took GPS points for 447 redds during that time.

**Task 2.3** Age fish using scales and coded wire tags.

Status: Partial Completion. There is a back log of scales to be aged, due to large numbers of scales taken, new staff to be trained to read them, and the increase of field work. This task has been made a priority. Coded wire tag data for the previous year is not yet available to us through RMIS. Snouts were sent out October 14, 2012 with all accompanying data for 156 snouts. All 2012 snouts were checked for a CWT prior to being shipped, and were not sent if no CWT was present.

**Task 2.4** Estimate total redds, redd distribution, fish/redd, sex ratio, age composition, run timing, spawn timing, total escapement, and length frequency of adults and progeny per parent ratios.

Status:

**Task 2.5** Reconstruct run size and characteristics from adult and juvenile data.

Status: Completed for migration year 2011 (juveniles) and run year 2011 (adults) with preliminary summary completed for run year 2012.

**Task 2.6.** Estimate progeny per parent for brood year 2007 natural and hatchery origin adults.


**Task 2.7. Compare (adult) life history metrics...**


**Task 2.8. Compare adult productivity...**


**Task 3.1. Compare life history, survival...**

Status: Incomplete. This task needs to be clarified with supervisor.

**Task 3.2. Compare life history ...spawners in the wild.**

Status: Incomplete. This task needs to be clarified with supervisor.

**Task 4.1** Assist ODFW in completing spring Chinook salmon spawning surveys in the Grande Ronde Basin.
Status: Completed. CTUIR assisted with three Catherine Creek and three upper Grande Ronde spawning surveys during August 2012 and September 2012, as well as two pre spawn mortality surveys on the upper Grande Ronde and Catherine Creek. CTUIR assisted on the Upper Grande Ronde surveys on August 20, 27, and September 4. CTUIR assisted on the Catherine Creek surveys on August 21, 28 and September 5. One pre spawn mortality survey was conducted on Catherine Creek on August 1, and on the upper Grande Ronde on August 7, 2012.

**Task 4.2** Assist ODFW in collecting data and tissues during spawning of spring Chinook salmon broodstock at Lookingglass Hatchery.

Status: Completed. CTUIR had a presence at all spawning of Catherine, upper Grande Ronde, and Lookingglass stocks. CTUIR assisted in all phases of data collection to include taking bio-data, tissue and scale samples, and spawning of adults.

**Task 4.3** Assist ODFW in pre-transfer sampling of juvenile spring Chinook salmon reared at Lookingglass Hatchery.

Status: Completed. CTUIR assisted ODFW in February 2011 and February 2012 with sampling of Catherine, Grande Ronde, and Lookingglass stocks. CWT retention was checked and lengths and weights were taken from a percentage of juveniles.

**Task 4.4** Assist ODFW in other LSRCP-related activities when CTUIR staff and equipment is available.

Status: Completed. CTUIR is eager to assist our co-manager’s whenever possible, as long as CTUIR has available staff, time, and equipment. CTUIR assisted ODFW with production PIT tagging at Lookingglass fish hatchery for Catherine Creek stock (21,000 juveniles), Grande Ronde (2,000 juveniles) and Lookingglass Creek stock (1,500 juveniles) from October 3-October 7, 2012 and also in 2011..

**Task 5.1.** Analyze data and synthesize in annual report using standard scientific format.

**Status:** Annual report combining 2009 and 2010 has been submitted to CTUIR reviewer(s).

**Task 5.2.** Submit draft annual report for 2011 to reviewers by 15 July 2012.

**Status:** Incomplete. Annual report for 2011 is being assembled.

**Task 5.3.** Submit final copy of the 2011 annual project report to LSRCP and managers by 30 September 2012.

**Status:** Incomplete.

**Task 5.4.** Submit a draft 2012 annual report to reviewers by April 2012.

**Status:** Incomplete.
**Task 5.5.** Continue process of making project information and progress available over the internet.

**Status:** Ongoing. Two new data management staff have been hired to lead this effort within CTUIR DNR.

**Task 5.6.** Consult with other professionals to improve project efficiency and work products.

**Status:** Ongoing.

**Task 5.7.** Submit preliminary project funding proposal, statement of work, and budget for the 2012 contract year by September 1, 2012.

**Status:** Complete.

**Task 5.8.** Complete final project funding proposal, statement of work, and budget for the 2012-2013 contract year by September 1, 2012.

**Status:** Complete.