

**FY2014 Performance Report for
the Cooperative Agreement
between the US Fish and Wildlife Service
and the Idaho Department of Fish and Game**

**Recipient: Idaho Department of Fish and Game
FWS Agreement Number: F14AC00008
Reporting Period: October 1, 2013 - September 30, 2014**

Part 1- Spring/Summer Chinook Salmon

Work Element 1- Evaluation of Hatchery Production Programs

Tasks:

1. Summarize and report the Chinook salmon adult return data by age class for all LSRCP hatchery facilities operated by IDFG. This information will be submitted to the LSRCP office by December 31 (90 days after the end of the current contract), via the LSRCP generated Excel spreadsheet templates. Data will include:

- a. Yearly summary of Chinook salmon trapping and disposition data for each hatchery facility.

This task was completed for return year 2013 and the data is reported in the Excel template that was submitted to the LSRCP office on December 31, 2014. Total returns for 2014 have been summarized but the PBT results are not currently available. This data is needed to assign the 2014 returns to their respective brood year. This information will be summarized in the 2014 annual report that is submitted to LSRCP in 2015.

- b. Harvest estimates from recreational fisheries conducted by IDFG in the Clearwater River, Salmon River and South Fork Salmon River for the current contract year.

This task was completed and a summary of the number of fish harvested in each fishery (summarized by jack and adult) will be included in the 2014 Calendar Year Report that is submitted to LSRCP in 2015. Age and stock composition of the harvest for 2013 utilizing results from the PBT analysis is included in the Excel spreadsheet that was submitted to LSRCP on December 31, 2014.

- c. Harvest estimates from non-tribal commercial and recreational, and tribal fisheries conducted downstream of Idaho for the fisheries that occurred two years prior to the current contract year. Data will include escapement estimates from fish recovered at hatchery traps and spawning ground surveys in areas downstream of Idaho

This task was completed and the data through return year 2012 is reported in the Excel template that was submitted to the LSRCP office on December 31, 2014.

- d. Yearly summary of estimated escapement by release group and age at Lower Granite Dam based on PIT tag detections.

This task was completed and the escapement estimates are provided in the in-season PIT tag estimation spreadsheets that are posted on the following website (<https://collaboration.idfg.idaho.gov/InSeason%20Run%20Documents/Forms/AllItems.aspx>). Results will also be reported in the 2014 Calendar Year Report.

- 2. Work with hatchery staffs to facilitate the summarization and reporting of Chinook salmon spawning and rearing data for all LSRCP hatchery facilities operated by IDFG for the current contract year. This information will be submitted to LSRCP office by December 31 (90 days after the end of the current contract), via the LSRCP generated Excel spreadsheet templates. Data will include:
 - a. Release location, lifestage and number of juveniles released in the current contract year including the number of marks and tags, and size of the fish.

This task was completed and the data is reported in the Excel template that was submitted to the LSRCP office on December 31, 2014 and will be included in the 2014 Calendar Year Report

- b. The estimated survival rate of juvenile Chinook salmon from each release site to Lower Granite Dam.

This task was completed and the data is reported in the Excel template that was submitted to the LSRCP office on December 31, 2014 and will be included in the 2014 Calendar Year Report

- c. Spawning and early rearing data including: prespawn mortality, number of males and females spawned by origin, fecundity, number culled, estimated green egg take, and green-egg to eyed-egg survival rates.

This task was completed and the data is reported in the Excel template that was submitted to the LSRCP office on December 31, 2014

3. Submit Brood Year 2007 Completion Report to LSRCP office by October 1. This report will include lifestage specific survival components of the specified brood year from adult spawning through the return of all recruits. Specific information provided in this report will include:
 - a) Spawning and broodstock management protocols of parent group including prespawn mortality and fecundity.
 - b) On station survival (green-egg to juvenile release).
 - c) Summary of marking and tagging.
 - d) Number of juveniles released by life stage and location including size of fish released
 - e) Estimated survival from release sites to Lower Granite Dam.
 - f) Cohort reconstruction (returning progeny across three return years).
 1. Harvest in Ocean, Columbia River, Snake River, and terminal fisheries
 2. Returns to hatcheries (including dispositions)
 3. Estimated number of strays
 4. Estimated number of dropouts and unintended escapement.
 - g) Estimated smolt-to-adult survival rates and progeny: parent ratios

A DRAFT of the BY2007 report is not currently available but the data that will be presented in the report is available in the Excel template spreadsheet submitted to LSRCP in December of 2014. The BY2007 report will be completed in 2015.

Work Element 2- Pre-season and In-season Chinook salmon fisheries management

Tasks:

1. Hatchery Evaluation staff will assist in the development of preseason run forecasts of hatchery-origin Snake River Chinook salmon back to the Columbia River mouth.

Preliminary run reconstruction data for all hatchery returns through 2014 was summarized and submitted to the IDFG Fisheries Bureau to help facilitate development of run forecasts for 2015. As mentioned previously, the age specific return information will be updated utilizing the information resulting from the PBT analysis later this winter.

2. Hatchery Evaluation staff will maintain and update daily in-season estimates of adult Chinook salmon at Bonneville, McNary, Ice Harbor and Lower Granite dam. This will help to facilitate weekly inter-agency and tribal teleconferences that are used to manage harvest share, and broodstock management for all hatchery programs in Idaho. In-season escapement estimates will be updated daily (Monday-Friday) during the Chinook migration and posted to a website that is accessible to all interested parties.

In-season spreadsheets were updated daily (Mon-Fri) during the spring/summer Chinook adult migration in 2014. Daily updates were posted to the website and summarized by evaluation staff at each of the weekly teleconference calls.

Work Element 3- Juvenile Mark, tag and release planning and associated data management

Tasks:

1. Organize and convene an annual inter-agency and tribal mark/tag committee meeting in October to facilitate coordination of marking and tagging activities that will occur the following year (May-August).

A coordination meeting was held at the IDFG Nampa Research office on October 2, 2014 to discuss marking/tagging coordination for 2014 as well as the upcoming activities for 2015.

2. Coordinate and submit mark and tag plans for LSRCP Chinook salmon hatcheries operated by IDFG. Mark plans will be distributed to hatchery staffs and the PSMFC marking crew by the end of May of the current contract year for marking that will occur in the following contract year.

Mark and tag plans were developed and distributed to hatchery and marking staffs. A summary of all marking and tagging that was completed in 2014 is summarized in the 2014 Idaho Anadromous Fish Marking Program Report produced by PSMFC and is available from IDFG.

3. Work with LSRCP hatchery staff to develop loading plans that ensure representation of tags (PIT and CW) across family groups and rearing containers and to track family units as part of Parental Based Tagging.

M&E staff worked cooperatively with hatchery staffs to develop representative CWT and PIT loading and tagging plans. All plans were distributed to the marking crew and hatchery staffs.

4. Enter, validate, and maintain all marking, tagging and release data in the IDFG database.

All 2014 marking and tagging data were entered into the IDFG database and are available on request.

5. Manage, validate, and upload, all PIT tag files to the PTAGIS regional database for Chinook salmon released in the current contract year.

All PIT tag files for migration year 2014 were validated and uploaded to the PTAGIS database.

6. Submit juvenile release information to the Fish Passage Center in-season as fish are released from all LSRCP hatchery facilities operated by IDFG.

Hatchery release data was updated and sent to the FPC throughout 2014 as anadromous fish were released.

Work Element 4- Operation of Coded Wire Tag Laboratory

Tasks:

1. Assemble and distribute snout sample bags to all LSRCP hatcheries, to harvest monitoring staff, and to IDFG research staff that will be conducting spawning ground surveys.

This task was completed.

2. Coordinate the delivery of all snouts collected in the current contract year to the CWT laboratory in Nampa.

This task was completed.

3. Excise CW tags, read, enter and validate all CWT information into the IDFG database.

This task was completed.

4. Upload all CWT recovery information, including sample rate, into the RMIS database. This data upload will occur on or before December 31 and will include CWTs recovered in Idaho fisheries, spawning ground surveys and hatchery traps during the spring, summer, fall of the current year.

All recoveries collected in 2013 will be submitted to the Regional Mark Processing Center (RMPC) prior to January 31, 2014.

5. Return all non-Idaho Coded Wire tags recovered to the tagging agency as per the PSMFC tag coordinators agreement.

This task was completed

Work Element 5- Harvest monitoring for Chinook salmon recreational fisheries conducted in Idaho

IDFG staff is responsible for all recreational harvest monitoring and for the development spring/summer Chinook salmon catch estimates in the Clearwater River drainage, and sections of mainstem Salmon River and South Fork Salmon River.

Tasks

1. Work with Idaho state fish managers to implement spring/summer Chinook salmon harvest monitoring programs in Idaho where applicable.
2. Conduct harvest surveys for all recreational Chinook salmon fisheries in Idaho.
3. Maintain electronic records of all harvest data.

Recreational fisheries were conducted in sections of the Clearwater, Salmon, and South Fork Salmon rivers in 2014. Harvest monitoring staffs conducted angler creel surveys for all Chinook fisheries and provided harvest estimates. A summary of the estimated number of fish harvested (by jack and adult) is summarized below. Results of the PBT analysis will be used to partition out the stock and cohort for the mixed stock fisheries and will be included in the 2014 Chinook Calendar Year report that is submitted in 2015.

Estimated Harvest of spring/summer Chinook salmon in Idaho, 2014

Drainage	River	Estimated Harvest
Clearwater	Clearwater River	2302
	Lochsa River	105
	MF Clearwater River	322
	NF Clearwater River	488
	SF Clearwater River	525
Salmon	Little Salmon River	3435
	Salmon River	3562
	SF Salmon River	726
	Snake River	443

Work Element 6 – Electronic Database Systems

M&E staff will continue to collaborate with the PSMFC database development team, IDFG Information Systems Bureau staff, Fisheries Bureau staff, and Hatchery O&M staff in a guidance role for the development of a comprehensive relational database to house IDFG LSRCP hatchery information. Data elements will include the accounting of LSRCP hatchery production facilities over the complete life cycle of program fish.

Major tasks of M&E staff relative to development of the database will be to assemble, organize, validate and enter the historic data from all LSRCP hatchery facilities operated by IDFG

Tasks:

1. Participate in hatchery database committee meetings and help steer the database development process.

A representative from the M&E staff is on the Hatchery Database Technical Advisory Committee and attended all committee meetings.

2. Complete validation process for all historical spawning and final disposition data.

The validation process for the historic spawning and disposition data has been completed and is ready to be uploaded to the current database. As per the Steering committee prioritization, PSMFC staff time will not be devoted to develop an uploading tool in the near term. Once the upload tool is available we will be ready to import the data

3. Begin the data entry and validation for all historic hatchery incubation and rearing data.

Until the development team at PSMFC is ready to work on this module we are going to postpone this task.

Part 2- Summer Steelhead

Work Element 1- Evaluation of Hatchery Production Programs

Tasks:

1. Summarize and report the steelhead adult return data by age class for all LSRCP hatchery facilities operated by IDFG. This information will be submitted to the LSRCP office by December 31 (90 days after the end of the current contract), via the LSRCP generated Excel spreadsheet templates. Data will include:

- a. Yearly summary of steelhead trapping and disposition data for each hatchery facility.

This task was completed for return year 2013 and the data is reported in the Excel template that was submitted to the LSRCP office on December 31, 2014. Total returns for 2014 have been summarized but the PBT results are not currently available. This data is needed to assign the 2014 returns to their respective brood year. This information will be summarized in the 2014 annual report that is submitted to LSRCP in 2015.

- b. Harvest estimates from recreational fisheries conducted by IDFG in the Snake River, Clearwater River, Little Salmon River, and Salmon River for the current contract year.

This task was completed and a summary of the number of fish harvested during the Fall of 2012 and Spring 2013 in each fishery is included in the Excel template spreadsheet submitted to LSRCP on Dec 31, 2014. Age and stock composition of the harvest from the 2013-2014 fishery has not been completed because the PBT results are not available but are scheduled to be processed during the winter of 2014/2015. Results of the age composition analysis will be included in the 2014 Calendar Year Report that is submitted in 2015.

- c. Harvest estimates from non-tribal commercial and recreational, and tribal fisheries conducted downstream of Idaho for the fisheries that occurred two years prior to the current contract year. Data will include escapement estimates from fish recovered at hatchery traps and spawning ground surveys in areas downstream of Idaho

This task was completed and the harvest data through spawn year 2012 is reported in the Excel template spreadsheet.

- d. Yearly summary of estimated escapement by release group and age at Lower Granite Dam based on PIT tag detections.

This task was completed and the escapement estimates are provided in the in-season PIT tag estimation spreadsheets that are posted on the following website (<https://collaboration.idfg.idaho.gov/InSeason%20Run%20Documents/Forms/AllItems.aspx>). These results will also be reported in the 2013 Calendar Year Report.

2. Work with hatchery staffs to facilitate the summarization and reporting of steelhead spawning and rearing data for all LSRCP hatchery facilities operated by IDFG for the current contract year. This information will be submitted to LSRCP office by December 31 (30 days after the end of the current contract), via the LSRCP generated Excel spreadsheet templates. Data will include:
 - a. Release location, lifestage and number of juveniles released in the current contract year including the number of marks and tags, and size of the fish.
 - b. The estimated survival rate of juvenile steelhead from each release site to Lower Granite Dam.
 - c. Spawning and early rearing data including: prespawn mortality, number of males and females spawned by origin, fecundity, number culled, estimated green egg take, and green-egg to eyed-egg survival rates.

This task was completed and the data is reported in the Excel template that was submitted to the LSRCP office on December 31, 2014.

3. Submit Brood Year 2007 Completion Report to LSRCP office by October 1. This report will include lifestage specific survival components of the specified brood year from adult spawning through the return of all recruits. Specific information provided in this report will include:
 - a) Spawning and broodstock management protocols of parent group including prespawn mortality and fecundity.
 - b) On station survival (green-egg to juvenile release).
 - c) Summary of marking and tagging.
 - d) Number of juveniles released by life stage and location including size of fish released
 - e) Estimated survival from release sites to Lower Granite Dam.
 - f) Cohort reconstruction (returning progeny across three return years).
 5. Harvest in Ocean, Columbia River, Snake River, and terminal fisheries
 6. Returns to hatcheries (including dispositions)
 7. Estimated number of strays
 8. Estimated number of dropouts and unharvested escapement.
 - g) Estimated smolt-to-adult survival rates and progeny: parent ratios

A DRAFT of the BY2007 report is not currently available but all of the data that will be presented in the brood report is in the Excel template spreadsheet.

Work Element 2- Pre-season and In-season fisheries management

Task:

1. Hatchery Evaluation staff will maintain and update in-season estimates of adult steelhead at Bonneville, McNary, Ice Harbor and Lower Granite dam that are based on the detections of PIT tagged fish. This will help to facilitate inter-agency and tribal teleconferences that are used to manage harvest share, and broodstock management for all hatchery programs in Idaho.

In-season PIT tag spreadsheets were updated weekly during the summer/fall steelhead adult migration in 2014. Updates were posted to the website and summarized by evaluation staff at each of the weekly teleconference calls.

Work Element 3- Juvenile Mark, tag and release planning and associated data management

Tasks:

1. Organize and convene an annual inter-agency and tribal mark/tag committee meeting in October to facilitate coordination of marking and tagging activities that will occur the following year (May-August).

A coordination meeting was held at the IDFG Nampa Research office on October 2, 2014 to discuss marking/tagging coordination for 2014 as well as the upcoming activities for 2015.

2. Coordinate and submit mark and tag plans for LSRCF steelhead hatcheries operated by IDFG and Hagerman National Fish Hatchery. Mark plans will be distributed to hatchery staffs and the PSMFC marking crew around the end of May of the current contract year for marking that will occur in the following contract year.

Mark and tag plans were developed and distributed to hatchery and marking staffs. A summary of all marking and tagging that was completed in 2014 is summarized in the DRAFT 2014 Idaho Anadromous Fish Marking Program Report written by PSMFC and is available from IDFG.

3. Work with LSRCF hatchery staff to develop loading plans that ensure representation of tags (PIT and CW) across family groups and rearing containers and to track family units as part of Parental Based Tagging.

M&E staff worked cooperatively with hatchery staffs to develop representative CWT and PIT loading and tagging plans. All plans were distributed to the marking crew and hatchery staffs.

4. Enter, validate, and maintain all marking, tagging and release data in the IDFG database.

All 2014 marking and tagging data were entered into the IDFG database and are available on request.

5. Manage, validate, and upload, all PIT tag files to the PTAGIS regional database for steelhead released in the current contract year.

All PIT tag files for migration year 2014 were validated and uploaded to the PTAGIS database.

6. Submit juvenile release information to the Fish Passage Center in-season as fish are released from all LSRCP hatchery facilities operated by IDFG.

Hatchery release data was updated and sent to the FPC throughout 2014 as anadromous fish were released.

Work Element 4- Operation of Coded Wire Tag Laboratory

Tasks:

1. Assemble and distribute snout sample bags to all LSRCP hatcheries, to harvest monitoring staff, and to IDFG research staff that will be conducting spawning ground surveys.

This task was completed.

2. Coordinate the delivery of all snouts collected in the current contract year to the CWT laboratory in Nampa.

This task was completed.

3. Excise CW tags, read, enter and validate all CWT information into the IDFG database.

This task was completed.

4. Upload all CWT recovery information, including sample rate, into the RMIS database. This data upload will occur on or before December 31 and will include CWTs recovered in Idaho fisheries, spawning ground surveys and hatchery traps during the spring, summer and fall of the current contract year.

All recoveries collected in 2014 will be submitted to the Regional Mark Processing Center (RMPC) prior to January 31, 2015. We have initiated the process with RMIS staff to upload the Catch Sample data. Since this data has not previously been updated by IDFG, we will be using the application program developed by RMPC staff. We are currently working with RMPC staff to migrate the historic data to the RMPC Access

application. None of the catch sample data has been uploaded yet but we have initiated the process to accomplish this task.

5. Return all non-Idaho Coded Wire tags recovered to the tagging agency as per the PSMFC tag coordinators agreement.

This task was completed

Work Element 5- Harvest monitoring for steelhead recreational fisheries conducted in Idaho

IDFG staff funded by LSRCP is responsible for all recreational harvest monitoring in the Clearwater River drainage, Snake River, and Salmon River,

Tasks

1. Conduct harvest surveys for all recreational steelhead fisheries in Idaho.
2. Maintain electronic records of all harvest data.

The Idaho Statewide steelhead harvest survey for the fall of 2013 and the spring of 2014 has been completed. A summary of harvest by major river section in the Salmon, Clearwater, and Snake rivers for each of the fall and spring fisheries is provided below. Once the PBT analysis from the fishery sample is complete, the Excel spreadsheet template will be updated to reflect the estimated catch from each rearing facility, stock and cohort. Results will also be provided in the 2014 Calendar Year Report that is submitted in 2015.

Drainage	Fall harvest	Spring Harvest	Total Harvest
Clearwater River	3,085	1,623	4,708
Salmon River	16,408	9,471	25,879
Snake River	5,049	565	5,614
Total	24,542	11,659	36,201

Work Element 6 – Electronic Database Systems

M&E staff will continue to collaborate with the PSMFC database development team, IDFG Information Systems Bureau staff, Fisheries Bureau staff, and Hatchery O&M staff in a guidance role for the development of a comprehensive relational database to house IDFG LSRCP hatchery information. Data elements will include the accounting of LSRCP hatchery production facilities over the complete life cycle of program fish.

Major tasks of M&E staff relative to development of the database will be to assemble, organize, validate and enter the historic data from all LSRCP hatchery facilities operated by IDFG

Tasks:

1. Participate in hatchery database committee meetings and help steer the database development process.

A representative from the M&E staff is on the Hatchery Database Technical Advisory Committee and attended all committee meetings.

2. Complete validation process for all historical spawning and final disposition data.

The validation process for the historic spawning and disposition data has been completed and is ready to be uploaded to the current database. As per the Steering committee prioritization, PSMFC staff time will not be devoted to develop an uploading tool in the near term. Once the upload tool is available we will be ready to import the data

3. Begin the data entry and validation for all historic hatchery incubation and rearing data.

Until the development team at PSMFC is ready to work on this module we are going to postpone this task.