

NOAA 2011 Protected Species  
Studies of Green Sturgeon along the West Coast of the  
U.S. to Guide the Design and to Implement a Monitoring  
Program to Track Coast-Wide Status and Trends for  
Future Population Viability Assessments

**PROGRESS REPORT**

Funded by: National Oceanic and Atmospheric Administration (NOAA)

Grant Number: NA10NMF470037

Reporting Period: January 1, 2011 through June 30, 2011

Prepared by: **Christine Mallette**, Program Leader  
Oregon Department of Fish and Wildlife (ODFW)  
Columbia River Investigations Program  
17330 SE Evelyn Street  
Clackamas, OR 97015

Project accomplishments by objective are:

*A) Database Development*

Due to the late start of the contract in 2010, and NOAA's May 2011 notice to substantially reduce project funds for FY2012, progress on database development has been delayed. After attending a meeting of HYDRA database users in February 2011, we were made aware of the potential to integrate our essential database needs for acoustic data with this existing data exchange system, as opposed to creating an entirely new green sturgeon database encompassing biological, acoustic telemetry and other species monitoring data. To help us make an informed decision on how to proceed on the objective of developing a data exchange system, we will form and convene a steering committee (task E1) of database development and green sturgeon experts to guide further data exchange activities.

1. Solicit and select a contractor to oversee the development of the database by August 31, 2010.

(See previous progress report for time period of July through December 2010)

2. Convene a conference to define needs and standards by November 30, 2010.

The conference dates and schedule of activities have not been firmly established. A conceptual agenda outline has been developed and was later revised under the auspices of substantially reduced available funds for this project during FY 2012.

3. Build a beta-version of the database system by March 31, 2011.

This task is pending the review and recommendations of the green sturgeon steering committee. Potential form and timing of a beta-version exchange system will be discussed by this committee as soon as practical.

4. Incorporate feedback from researchers by April 30, 2011.

Feedback will be solicited from members of the steering committee, regional green sturgeon experts and other conference attendees as soon as practical.

5. Complete the database with sample/historical data by August 31, 2011.

(Task not scheduled to be completed during this reporting time period.)

6. Input tagging information until web application is completed.

Acoustic tagging and biological data collection is ongoing. Data is archived in pre-existing temporary databases at ODFW and WDFW. Hydro-acoustic data is being stored on an online hydro-acoustic database as well as at WDFW.

7. Roll out green sturgeon tagging data website for accessing coast-wide data by February 29, 2012.

(Task not scheduled to be completed during this reporting time period.)

8. Roll out enhanced green sturgeon tagging data website for input and access to coast-wide data (including interface to other databases) by October 31, 2012.

(Task not scheduled to be completed during this reporting time period.)

9. Develop a maintenance plan for the website by October 31, 2012.

(Task not scheduled to be completed during this reporting time period.)

10. Maintain the website, and make improvements November 1, 2012 – June 30, 2013.

(Task not scheduled to be completed during this reporting time period.)

## B) *Critical Habitat*

1. Deploy acoustic receivers at the entrance to the main estuaries (in concert with Abundance/Survival objective) by July 15, 2010.

We intend to monitor the entrances to the main estuaries from July through November each year of the study. The acoustic receiver gateway array for Grays Harbor consists of borrowed receivers that were left in place over the past winter. Receivers were retrieved in April of 2011. Due to winter storms, two of the three receivers were lost. However, detections from the remaining receiver indicated that green sturgeon were present in the estuary during winter (green sturgeon recorded in February 2011). We are in the process of assessing and testing new receiver deployment locations and methods that may be more conducive to local winter conditions. The array at the entrance of Grays Harbor was reestablished with project owned receivers in June 2011.

An additional array of 3 receivers was deployed in the Umpqua River in May of 2011 and improved by the installation of a fourth receiver in June. Dialog with other, non-project operators of other acoustic arrays has confirmed that arrays in Willapa Bay and in Columbia River estuaries are being maintained through the summer of 2011.

2. Complete download of all gateway receivers yearly in November-December.

(Task not scheduled to be completed during the reporting time period.)

3. Complete year one acoustic tagging of fish (in concert with Abundance/Survival objective) by mid-September 2010.

(See previous progress report for time period of July through December 2010)

4. Deploy and monitor non-gateway receivers in the Columbia River July 16-November 30.

The Columbia River estuary had numerous receivers deployed by other entities (Columbia River Inter-Tribal Fish Commission, Oregon State Health and Science University, NMFS, USGS, Kintama Research, etc.). There is full cooperation amongst these groups to share detection data.

5. Complete year two acoustic tagging of fish by mid-September 2011.

Tagging operations are ongoing.

A total of 160 acoustic tags have been purchased and are slated for deployment during the 2011 field season. An additional 31 acoustic tags have also been provided by NMFS, NWFSC and the USGS Western Research Center to be

deployed in green sturgeon under 120cm long. During the 2011 field season, prior to July, four green sturgeon were implanted with acoustic tags in the Columbia River Estuary, 21 in Willapa Bay, and 20 in Grays Harbor.

6. Deploy and monitor non-gateway receivers in Willapa Bay May 1-November 30.

The acoustic array in Willapa Bay was operated by NMFS-NWFSC. No supplementation of the array was done.

7. Complete year three acoustic tagging of fish (in concert with Abundance/Survival objective) by mid-September 2012.

(Task not scheduled to be completed during this reporting time period.)

8. Deploy and monitor non-gateway receivers in Grays Harbor May 2-November 30.

This task has been curtailed due to substantial reduction in available funds for FY 2012.

9. Complete assessment of fine scale critical habitat use in the three estuaries by January 2013.

(Task not scheduled to be completed during this reporting time period.)

### C) *Abundance/Survival*

1. Complete year one tagging of fish (in concert with Critical Habitat objective) by mid-September 2010.

(See previous progress report for time period from July through December 2010)

2. Present a stratified sampling approach for the mark-recapture study to the green sturgeon steering committee for their critical review by January 2011. (*This will be informed by year one acoustic tagging and other distribution information*).

There have been discussions about the study design with our biostatisticians, but the steering committee has not been established as of yet, and distribution data from 2010 is sparse, due to the late start of sampling.

3. Complete year two tagging and recovery of fish by mid-September 2011.

Tagging and recovery operations are ongoing.

During the 2011 field season, prior to July, 17 green sturgeon were captured and PIT tagged in the Columbia River estuary, 21 were PIT tagged in Willapa Bay

and one was recaptured, and 35 were PIT tagged in Grays Harbor, and one was recaptured.

4. Complete initial (year two) abundance estimates by January 2012.  
(Task not scheduled to be completed during this reporting time period.)
5. Complete year three tagging and recovery of fish by mid-September 2012.  
(Task not scheduled to be completed during the reporting time period.)
6. Complete assessment of alternative survival and abundance estimates by January 2013.  
(Task not scheduled to be completed during the reporting time period.)

#### D) *FMEP*

1. Complete a review of what Washington fisheries would benefit from having an FMEP.  
(See previous progress report for time period from July through December 2010)  
  
The ODFW intends to develop a complimentary FMEP during FY2012 that will address those Oregon coastal and estuary fisheries that are not authorized by either, (1) federal permit or regulation and managed according to Pacific Fishery Management Council fishery management plans and are subject to future Section 7 consultations between PFMC and NMFS or (2) fisheries in the Columbia River or its estuary, that are subject to an existing Biological Opinion,
2. Determine how WDFW can meet the essential elements of the FMEP.  
(See previous progress report for time period from July through December 2010)
3. Gather or generate supporting documentation.  
(See previous progress report for time period from July through December 2010)
4. Complete and circulate a draft of the FMEP.  
(See previous progress report for time period from July through December 2010)
5. Complete revisions and submit a final FMEP to NMFS by the 120-day deadline.

The final Twin Harbors Region FMEP was submitted by WDFW on January 7, 2011, thereby meeting the 120-day deadline.

E) *Reporting and coordination*

1. Form, and convene at least semiannually, the green sturgeon steering committee, July 2010, January & June 2011, January & June 2012, and January & June 2013.

The steering committee has not been formed yet. A list of potential committee members has been developed internally during the reporting period. With the auspices of substantially reduced available funding for FY2012 and contingent project objective(s) prioritization, the initial committee meeting is tentatively scheduled for September 2011.

2. Complete annual progress report for each objective by June 2011-2013.

This is the second semi-annual progress report.

3. Complete a comprehensive report of the three-year study by December 2013.

(Task not scheduled to be completed during this reporting period.)

4. Document and distribute datasets from the study by December 2013

(Task not scheduled to be completed during this reporting period.)

Project biologists share raw biological sample and tag information with staff from NMFS-NWFSC and USGS-WRL. The acoustic receiver and tag information is currently being entered into a temporary regional acoustic database.

5. Complete submission of articles to peer-reviewed journals by December 2013.

No journal article has been submitted.

F) *Expenditures:*

ODFW, January 1 to June 30, 2011	\$ 42,031
Subcontract to WDFW, January 1 to June 30, 2011	\$ 178,900
Total expenditures for reporting period:	\$220,931