Statement of Work Report

Project Title:	StreamNet - Coordinated Information System (CIS)/ Northwest Environmental Database (NED)
Project #:	1988-108-04
Contract Title:	1988-108-04 EXP STREAMNET
Contract #:	63021 [ISSUED]

Province:	Non-Provincial	**Subbasin:**	Basinwide
Workorder ID:	35794	**Task ID:**	1
Perf. Period Budget:	$2,084,576	**Perf. Period:**	10/1/2013 - 9/30/2014
Contract Type:	Contract (IGC)	**Pricing Type:**	Cost Reimbursement (CNF)

Contractor(s):	Pacific States Marine Fisheries Commission (Prime - PACISTAT00)
BPA Internal Ref:	63021
SOW Validation:	Last validated 09/13/2013 with 0 problems, and 0 reviewable items

Contract Documents:	Property Inventory (09/11/2013)	StreamNet Property Inventory FY-2014
	Budget - Contract (09/13/2013)	StreamNet Project Budget FY-14

Contacts:

Name	Role	Organization	Phone/Fax	Email	Address
Russell Scranton	COTR	Bonneville Power Administration	(503) 230-4412 / NA	rwscranton@bpa.gov	
Kristi Van Leuven	Contracting Officer	Bonneville Power Administration	(503) 230-3605 / NA	kjvleuven@bpa.gov	P.O Box 3621 Mailstop - NSSP-4 Portland, OR 97208-3621
Jason Sweet	F&W Approver	Bonneville Power Administration	(503) 230-3349 / NA	jcsweet@bpa.gov	
Cedric Cooney	Technical Contact	Oregon Department of Fish and Wildlife	(541) 757-4186 247 / NA	cedric.x.cooney@state.or.us	7118 NE Vandenberg Ave Corvallis OR 97330
Bart Butterfield	Technical Contact	Idaho Department of Fish and Game (IDFG)	(208) 287-2722 / NA	bart.butterfield@idfg.idaho.gov	600 S Walnut St., Box 25 Boise ID 83707
Mike Banach	Technical Contact	Pacific States Marine Fisheries Commission	(503) 595-3152 / NA	mike_banach@psmfc.org	205 SE Spokane St Suite 100 Portland OR 97202-6413
Brodie Cox	Technical Contact	Washington Department of Fish and Wildlife (WDFW)	(360) 902-2776 / NA	coxpbc@dfw.wa.gov	
Lenora Oftedahl	Technical Contact	Columbia River Inter-Tribal Fish Commission (CRITFC)	(503) 736-3581 / (503) 731-1260	oftl@critfc.org	729 NE Oregon St Ste 190 Portland OR 97232
Michael Arredondo	Administrative Contact	Pacific States Marine Fisheries Commission	(503) 595-3100 / NA	marredondo@psmfc.org	205 SE Spokane St, Suite 100 Portland OR 97202

Stephen Pastor	Technical Contact	US Fish and Wildlife Service (USFWS)	(360) 604-2538 / NA	stephen_pastor@fws.gov	1211 SE Cardinal Court, Suite 100 Vancouver WA 98683-
Pam Kahut	Administrative Contact	Pacific States Marine Fisheries Commission	(503) 595-3100 / NA	pam_kahut@psmfc.org	205 SE Spokane St, Suite 100 Portland OR 97202-6413
Phillip Roger	Technical Contact	Columbia River Inter-Tribal Fish Commission (CRITFC)	(503) 731-1301 / NA	rogp@critfc.org	700 NE Multnomah, Suite 1200 Portland OR 97232
Greg Wilke	Technical Contact	Pacific States Marine Fisheries Commission	(503) 595-3157 / (503) 595-3232	greg_wilke@psmfc.org	205 SE Spokane Street, Suite 100 Portland OR 97202
Dawn Anderson	Technical Contact	Montana Fish, Wildlife and Parks (MFWP)	(406) 444-3373 / NA	dawanderson@mt.gov	
Randy Fisher	Supervisor	Pacific States Marine Fisheries Commission	(503) 595-3100 / NA	randy.fisher@psmfc.org	205 SE Spokane St Suite 100 Portland OR 97202-6413
Bryan Mercier	Interested Party	Bonneville Power Administration	(503) 230-3991 / NA	bkmercier@bpa.gov	
Donald Rose	Env. Compliance Lead	Bonneville Power Administration	(503) 230-3796 / NA	dlrose@bpa.gov	PO Box 3621 Mailstop - KEC Portland OR 97208-3621
Stan Allen	Supervisor	Pacific States Marine Fisheries Commission	(503) 595-3100 / NA	stan.allen@psmfc.org	205 SE Spokane St Suite 100 Portland OR 97202-6413
Chris Wheaton	Contract Manager	Pacific States Marine Fisheries Commission	(503) 595-3100 / NA	cwheaton@psmfc.org	
Donna Trott		Colville Confederated Tribes	(509) 422-4780 / NA	donna.trott@colvilletribes.com	

Work Element Table of Contents:

Work Element - Work Element Title	EC Needed*	Estimate	(%)
F : 160. Create/Manage/Maintain Database - CA data - automated data exchange		$67,540	(3 %)
G : 160. Create/Manage/Maintain Database - CA data - assist agencies enhance data flow		$21,660	(1 %)
H : 161. Disseminate Raw/Summary Data and Results - CA data - dissemination		$24,200	(1 %)
I : 159. Transfer/Consolidate Regionally Standardized Data - Habitat data - compile		$5,075	(0 %)
J : 160. Create/Manage/Maintain Database - Tier 2 data - DES and database		$22,650	(1 %)
K : 159. Transfer/Consolidate Regionally Standardized Data - Tier 2 data - compilation		$62,220	(3 %)
L : 161. Disseminate Raw/Summary Data and Results - Tier 2 data - dissemination		$6,720	(0 %)
M : 160. Create/Manage/Maintain Database - Tier 3 Juvenile abundance - DES and database		$39,170	(2 %)
N : 159. Transfer/Consolidate Regionally Standardized Data - Tier 3 Juvenile abundance - determine availability		$11,520	(1 %)
O : 159. Transfer/Consolidate Regionally Standardized Data - Tier 3 Juvenile abundance - compilation		$54,780	(3 %)
P : 161. Disseminate Raw/Summary Data and Results - Tier 3 Juvenile abundance - dissemination		$6,720	(0 %)
Q : 160. Create/Manage/Maintain Database - Tier 3 Juvenile abundance - Improve rotary screw trap data system		$3,465	(0 %)
R : 189. Coordination-Columbia Basinwide - Tier 4 Resident fish abundance data - coordination		$6,570	(0 %)
S : 160. Create/Manage/Maintain Database - Tier 4 Resident fish abundance data - DES and database		$15,285	(1 %)
T : 159. Transfer/Consolidate Regionally Standardized Data - Tier 4 Resident fish abundance - determine availability		$11,960	(1 %)
U : 159. Transfer/Consolidate Regionally Standardized Data - Tier 4 Resident fish abundance - compilation		$16,200	(1 %)
V : 161. Disseminate Raw/Summary Data and Results - Tier 4 Resident fish abundance - dissemination		$6,720	(0 %)
W : 159. Transfer/Consolidate Regionally Standardized Data - Base data compilation - hydrography		$49,750	(2 %)
X : 159. Transfer/Consolidate Regionally Standardized Data - Lower Tier and 'other' data - compilation		$22,455	(1 %)
Y : 160. Create/Manage/Maintain Database - Lower Tier data - maintain database		$2,690	(0 %)
Z : 160. Create/Manage/Maintain Database - Enhance data efficiency - system development		$133,915	(6 %)
AA : 160. Create/Manage/Maintain Database - Enhance data efficiency - automated data feeds		$37,940	(2 %)
AB : 189. Coordination-Columbia Basinwide - Data capture devices - coordinate field trials		$58,825	(3 %)

Work Element - Work Element Title	EC Needed*	Estimate	(%)
AC : 160. Create/Manage/Maintain Database - Data capture devices - develop data systems for trial		$6,720	(0 %)
AD : 189. Coordination-Columbia Basinwide - Coordination of PSMFC databases		$38,905	(2 %)
AE : 161. Disseminate Raw/Summary Data and Results - Metadata exchange through Monitoring Explorer pilot project		$15,385	(1 %)
AF : 161. Disseminate Raw/Summary Data and Results - Data sharing agreement - finalize and implement		$18,200	(1 %)
AG : 161. Disseminate Raw/Summary Data and Results - Data dissemination - custom requests		$49,520	(2 %)
AH : 160. Create/Manage/Maintain Database - Infrastructure and base operations		$269,490	(13 %)
AI : 189. Coordination-Columbia Basinwide - Coordination at the regional scale		$157,780	(8 %)
AJ : 119. Manage and Administer Projects - Manage project activities		$303,030	(15 %)
AK : 185. Produce Pisces Status Report - Periodic Status Reports for BPA		$39,550	(2 %)
AL : 132. Produce (Annual) Progress Report - Annual Report 1/1/2013 - 12/31/2013		$50,000	(2 %)
AM : 141. Produce Other Report - 2013 FCRPS BiOp Report for BPA		$7,671	(0 %)
	Total:	$2,084,576	

* Environmental Compliance (EC) needed before work begins.

Contract Description:

1988-108-04 EXP STREAMNET (CIS-NED) FY14

StreamNet is a cooperative, regional scale data compilation and dissemination project that acquires fish related data from the management agencies, standardizes and georeferences them to the hydrography (stream network), and makes them widely available through online data query systems. The project also provides data management related services to a variety of regional entities, including the agencies that create the biological data, and regional groups that have interest in regional scale fish monitoring data.

The StreamNet project is undergoing significant changes in response to new regional data priorities. For FY-2014, data development work on the traditional data types has been relegated to secondary priority, with primary emphasis on generating a flow of data to satisfy the Coordinated Assessments project and to support the archiving of data to secure data repositories that are available to appropriate regional scale entities. secure data from BPA funded projects. More specific work priorities for this year are:

1. Based on the FY-13 inventory of fish monitoring data, work to support efforts that ensure that data created by BPA funded projects are archived in suitably secure and accessible data repositories, as listed in monitoringresources.org.
2. Assure annual updates of available indicators and metrics as defined by the Coordinated Assessments (CA) project, and work to support improved data flow efficiency. Work toward establishing automated data feeds from the CA database to NOAA Fisheries for the Salmon Populaiton Status database, and as agency capabilities improve, automate data feeds from the agencies to the CA database. As the CA project expands focus to additional types of indicators, such as for hatchery performance, lead the development of Data Exchange Standards (DES) for the project and incorporate them into the CA database.
3. Finalize a DES for juvenile abundance estimates and include this data type as part of the traditional data types in StreamNet. Assure that juvenile data are included in the CA data flow, and work to acquire juvenile data that are broader than just CA metrics for inclusion in the StreamNet database, as a lower priority.
4. Explore the potential to add fish population productivity estimates to the traditional StreamNet data types.
5. Implement a Data Sharing Agreement template to facilitate data sharing through StreamNet and other regional scale databases.
6. Expand use of web services to utilize information from various regional databases such as Taurus, mm.org, monitoringresources.org, etc. to facilitate development of metadata and query capabilities for data in StreamNet, with a goal of increasing efficiency by eliminating the need for data sources to enter the same information more than once.
8. Prepare to receive and maintain data from the Northwest Habitat Institute as directed by the Northwest Power and Conservation Council.

Any work to update the traditional StreamNet data types will be attempted only when work to address the new priorities has been completed. Some resumption of updating the more traditional data may begin in FY-14, but complete updating of standard data trends will not be possible due to other priorities.

Ongoing work to support the project will include maintenance of the databases and computer infrastructure needed to manage and disseminate the data, regional coordination to integrate StreamNet efforts with other regional efforts to maximize efficiency of data flow and support regional approaches to data management and sharing, and administration of the project.

Details of the specific tasks to be performed in FY-2014 are presented in this Statement of Work.

Statement of Work Report

Work Element Details

A: 159. Transfer/Consolidate Regionally Standardized Data

Title: Support transfer of data into secure and accessible repositories

Description: Work with BPA project sponsors and others, as needed, to assist in assuring that data are archived and backed up in repositories, as listed at monitoringresources.org, that are secure from catastrophic loss and are web accessible to specified data users.

Deliverable Specification: StreamNet participants assist sponsors in securing data in appropriate repositories, as requested. Data are stored in appropriate repositories.

Primary Focal Species: Chinook - All Populations | Chum - Columbia River ESU | Coho - Lower Columbia River ESU | Coho - Unspecified Population | Sockeye - All Populations | Steelhead - All Populations | Lamprey, Pacific | Cutthroat Trout, Coastal - All Anadromous Populations | Trout, Bull | Trout, Interior Redband

Data Repositories: StreamNet Data Store (http://www.streamnet.org/datastore_search.cfm)
StreamNet Database (http://q.streamnet.org/Request.cfm?cmd=BuildCriteria&NewQuery=BuildCriteria)

Milestone Title	Start Date	End Date	Status	Milestone Description
A. PSMFC assist project sponsors transfer data to secure and accessible repositories	10/1/2013	9/30/2014	Completed	PSMFC StreamNet will assist BPA project sponsors in locating appropriate data repositories, as listed in monitoringresources.org, for secure storage and accessibility to BPA and other appropriate entities. For data that will be archived in the StreamNet Data Store, staff will assist project sponsors with metadata creation and data upload if requested and within staff resources.
B. CTCR assist tribal project sponsors transfer data to secure and accessible repositories	10/1/2013	9/30/2014	Active	CTCR StreamNet, on request and within limited resources, will assist tribal project sponsors in locating appropriate data repositories, as listed in monitoringresources.org, for secure storage and accessibility to BPA and other appropriate entities. For data that will be archived in the StreamNet Data Store, staff will assist tribal sponsors with metadata creation and data upload if requested and within staff resources, or refer sponsors to PSMFC for assistance.
C. FWS assist FWP project sponsors transfer data to secure and accessible repositories	10/1/2013	9/30/2014	Active	FWS StreamNet, on request and within limited resources, will assist FWS project sponsors in locating appropriate data repositories, as listed in monitoringresources.org, for secure storage and accessibility to BPA and other appropriate entities. For data that will be archived in the StreamNet Data Store, staff will assist FWS sponsors with metadata creation and data upload if requested and within staff resources, or refer sponsors to PSMFC for assistance.
D. IDFG assist IDFG project sponsors transfer data to secure and accessible repositories	10/1/2013	9/30/2014	Active	IDFG StreamNet, on request and within limited resources, will assist IDFG project sponsors in locating appropriate data repositories, as listed in monitoringresources.org, for secure storage and accessibility to BPA and other appropriate entities. For data that will be archived in the StreamNet Data Store, staff will assist IDFG sponsors with metadata creation and data upload if requested and within staff resources, or refer sponsors to PSMFC for assistance.
E. MFWP assist MFWP project sponsors transfer data to secure and accessible repositories	10/1/2013	9/30/2014	Active	MFWP StreamNet, on request and within limited resources, will assist MFWP project sponsors in locating appropriate data repositories, as listed in monitoringresources.org, for secure storage and accessibility to BPA and other appropriate entities. For data that will be archived in the StreamNet Data Store, staff will assist MFWP sponsors with metadata creation and data upload if requested and within staff resources, or refer sponsors to PSMFC for assistance.
F. ODFW assist ODFW project sponsors transfer data to secure and accessible repositories	10/1/2013	9/30/2014	Active	ODFW StreamNet, on request and within limited resources, will assist ODFW project sponsors in locating appropriate data repositories, as listed in monitoringresources.org, for secure storage and accessibility to BPA and other appropriate entities. For data that will be archived in the StreamNet Data Store, staff will assist ODFW sponsors with metadata creation and data upload if requested and within staff resources, or refer sponsors to PSMFC for assistance.
G. WDFW assist WDFW project sponsors transfer data to secure and accessible repositories	10/1/2013	9/30/2014	Active	WDFW StreamNet, on request and within limited resources, will assist WDFW project sponsors in locating appropriate data repositories, as listed in monitoringresources.org, for secure storage and accessibility to BPA and other appropriate entities. For data that will be archived in the StreamNet Data Store, staff will assist WDFW sponsors with metadata creation and data upload if requested and within staff resources, or refer sponsors to PSMFC for assistance.
Deliverable: H. Data are transferred to appropriate repositories.		9/30/2014	Active	*See the Deliverable Specification above*

B: 160. Create/Manage/Maintain Database

Title: Provide archive - Data Store

Description: Continue to manage and improve the StreamNet Data Store as a repository for unstructured data. Expand linkage with metadata in mm.org, Taurus, etc. to simplify metadata creation for project sponsors submitting data for archiving. Implement universal login if feasible.

Deliverable Specification: The Data Store data submission procedure in improved and more efficient and is increasingly used as an archive for unstructured data, particularly from BPA project sponsors. The Data Store tools integrate with mm.org and cbfish.org.

Data Repositories:	StreamNet Data Store	(http://www.streamnet.org/datastore_search.cfm)
	StreamNet Database	(http://q.streamnet.org/Request.cfm?cmd=BuildCriteria&NewQuery=BuildCriteria)

Milestone Title	Start Date	End Date	Status	Milestone Description
A. PSMFC enhance function of Data Store for dissemination of BPA project and other unstructured data	10/1/2013	9/30/2014	Active	PSMFC will improve functionality of the Data Store for disseminating data created by BPA-funded and other projects through integration with data in monitoringmethods.org, cbfish.org, etc. Standard procedures will include review and processing of each data set and related metadata within one business day of submission, with confirmation when the sponsor's data set is made live on the Data Store. Procedures for handling data sets with non-universal access, if established, will be implemented in appropriate cases.
Deliverable: B. Data Store improved for archiving unstructured data		9/30/2014	Active	*See the Deliverable Specification above*

C: 189. Coordination-Columbia Basinwide

Title:	CA data - coordination
Description:	The Coordinated Assessments project seeks to improve basin-wide assessments of salmon and steelhead population abundance and productivity indicators by improving how data are shared among agencies and tribes. StreamNet will coordinate with all entities involved in the Coordinated Assessments project and maintain its role in leading the technical aspects of the project, as well as continue serving on the CA Core Team and the Planning Group. StreamNet will lead the DES Development Team as needed to manage existing contents and to expand to new data types, and will participate in project meetings and workshops.
Deliverable Specification:	StreamNet, at all levels of the project, coordinates with all participants in the Coordinated Assessments project, including participation in the CA core team and planning group, leadership of the DES Development Team, leadership of the technical aspects of the project, and overall project participation and coordination.

Milestone Title	Start Date	End Date	Status	Milestone Description
A. PSMFC coordinates with participants in the Coordinated Assessments project	10/1/2013	9/30/2014	Active	PSMFC StreamNet staff will continue in a leadership role in the Coordinated Assessments project, including serving as technical lead, serving on the CA Core Team, participating in the CA Planning Group, leading the DES Development Team, and coordinating with the agencies that provide and use the CA data.
B. CTCR attend and participate in all Coordinated Assessments activities	10/1/2013	9/30/2014	Active	The Colville Tribe StreamNet project will participate in the several workshops and web meetings which are held throughout the year in which updates are given and coordination is made among various participants.
C. IDFG coordinate with entities involved with the Coordinated Assessments project	10/1/2013	9/30/2014	Active	IDFG StreamNet will coordinate with the CAPG, IDFG, and other data source agencies in Idaho to support efficient flow of data to the Coordinated Assessments project, and will coordinate with project participants including participation in workshops, meetings or web meetings.
D. ODFW coordination to support data flow to Coordinated Assessments	10/1/2013	9/30/2014	Active	ODFW StreamNet will coordinate with the CAPG, ODFW, and other data source agencies in Oregon to support efficient flow of data to the Coordinated Assessments project, and will coordinate with project participants including participation in workshops, meetings or web meetings.
E. WDFW coordination to support data flow to Coordinated Assessments	10/1/2013	9/30/2014	Active	WDFW StreamNet will coordinate with the CAPG, WDFW, and other data source agencies in Washington to support efficient flow of data to the Coordinated Assessments project, and will coordinate with project participants including participation in workshops, meetings or web meetings.
Deliverable: F. StreamNet partners coordinate with the Coordinated Assessments project participants.		9/30/2014	Active	*See the Deliverable Specification above*

D: 160. Create/Manage/Maintain Database

Title:	CA data - DES and database
Description:	Manage the existing Coordinated Assessments Data Exchange Standard for the initial four indicators and supporting metrics and adjust as necessary and as directed by Development Team and CAPG. Expand the DES to include additional metrics as they are adopted by the CAPG and participating state and tribal agencies, with the next additions likely to relate to hatchery performance. Manage and QA the CA data in a database conforming with the CA DES.

Deliverable Specification: The CA DES is maintained and updated to include new indicators and their supporting metrics and metadata, and CA data are loaded and QAd in a conforming database.

Data Repositories: StreamNet Database (http://q.streamnet.org/Request.cfm?cmd=BuildCriteria&NewQuery=BuildCriteria)

Milestone Title	Start Date	End Date	Status	Milestone Description
A. PSMFC lead development and management of the CA DES	10/1/2013	9/30/2014	Active	PSMFC StreamNet staff will lead the DES Development Team to manage and update as necessary the existing CA Data Exchange Standard and work to add additional indicators to the DES as directed by the CAPG. PSMFC staff will coordinate with data providers to ensure the DES is interpreted and implemented consistently among data sources.
B. PSMFC manage the CA database and its contents	10/1/2013	9/30/2014	Active	PSMFC StreamNet staff will maintain the interim CA database in conformity with the Coordinated Assessments DES. Staff will load the Indicators and Metrics provided by the participating agencies into the interim database, develop stored procedures to perform QA/QC to assure data quality, and assure that the data are available for dissemination to users through the various StreamNet query systems and web services. PSMFC will maintain and improve as necessary the interim CA database until such time as an Exchange Network approach can be implemented among all project members, and at that time lead the central management function for the network.
C. CTCR participation in managing the CA DES and related databases	10/1/2013	9/30/2014	Active	The Colville Tribe StreamNet project will participate in maintenance of the existing CA Data Exchange Standard and in development of new DES contents, as needed throughout the year. In order to conform to the Coordinated Assessment processes and goals, changes or additions to the OBMEP database will be made to incorporate the Coordinated Assessments Data Exchange Standard.
D. IDFG participation with managing the CA DES and database	10/1/2013	9/30/2014	Active	IDFG StreamNet staff will participate in the management and modifications to the CA Data Exchange Format, as needed to assure consistent organization and flow of data. IDFG will develop a database and user interface for data entry and data management of Coordinated Assessments high level indicators developed and managed by IDFG biologists.
E. ODFW development and maintenance of CA data exchange standards	10/1/2013	9/30/2014	Active	ODFW, as needed, will participate in the development and maintenance of the CA DES, and CA related data will be organized and managed in project databases for exchange to the CA database at PSMFC.
F. WDFW participate in DES management and develop database for CA data following DES	10/1/2013	9/30/2014	Active	WDFW StreamNet will manage their databases to incorporate the CA data (indicators, metrics and metadata) in DES format, and participate in management of the CA DES.
Deliverable: G. The CA DES and database are managed and updated		9/30/2014	Active	*See the Deliverable Specification above*

E: 159. Transfer/Consolidate Regionally Standardized Data

Title: CA data - compile data
Description: Obtain the available CA indicator and supporting metrics, convert them into the DES format, and exchange them with the interim CA database at PSMFC StreamNet.
Deliverable Specification: All available CA indicators and metrics are obtained, updated, converted to the DES format, and exchanged with the CA database.

Primary Focal Species: Chinook - Deschutes River Summer/Fall ESU | Chinook - Lower Columbia River ESU | Chinook - Mid-Columbia River Spring ESU | Chinook - Snake River Fall ESU | Chinook - Snake River Spring/Summer ESU | Chinook - Upper Columbia River Spring ESU | Chinook - Upper Columbia River Summer/Fall ESU | Chinook - Upper Willamette River ESU | Steelhead - Lower Columbia River DPS | Steelhead - Middle Columbia River DPS | Steelhead - Snake River DPS | Steelhead - Upper Columbia River DPS | Steelhead - Upper Willamette River DPS
Data Repositories: StreamNet Database (http://q.streamnet.org/Request.cfm?cmd=BuildCriteria&NewQuery=BuildCriteria)

Milestone Title	Start Date	End Date	Status	Milestone Description
A. CTCR compile data relevant to Coordinated Assessments indicators and metrics	10/1/2013	9/30/2014	Active	Data related to the Coordinated Assessments will be managed in the OBMEP database system, and available indicators and metrics will be exchanged to the CA database at PSMFC.
B. IDFG compile and deliver NOSA high level indicators for Coordinated Assessments	10/1/2013	12/31/2013	Completed	IDFG StreamNet will compile and deliver Natural Origin Spawner Abundance high level indicators and supporting metrics for all Idaho Chinook salmon populations, a few steelhead populations and 1 sockeye salmon population for years 1957-2012.
C. IDFG compile and deliver SAR high level indicators for Coordinated Assessments	4/1/2014	6/30/2014	Active	IDFG StreamNet will compile and deliver Smolt to Adult Ratio high level indicators and supporting metrics for about 25% of Idaho Chinook salmon populations, all steelhead populations by major population group and 1 sockeye salmon population for years 1957-2007.
D. IDFG compile and deliver AR/S high level indicators for Coordinated Assessments	7/1/2014	9/30/2014	Active	IDFG StreamNet will compile and deliver Adult Recruits per Spawner Ratio high level indicators and supporting metrics for about 25% of Idaho Chinook salmon populations, a few steelhead populations by major population group and 1 sockeye salmon population for years 1957-2007.
E. IDFG compile and deliver JR/S high level indicators for Coordinated Assessments	4/1/2014	6/30/2014	Active	IDFG StreamNet will compile Juvenile Recruits per Spawner high level indicators and supporting metrics for about 25% of Idaho Chinook salmon populations, all steelhead populations by major population group and 1 sockeye salmon population for years 1957-2010.
F. ODFW develop indicators and metrics for Coordinated Assessments	10/1/2013	9/30/2014	Active	ODFW StreamNet will work with ODFW to identify/locate agency datasets that contribute to calculating VSP/Recovery Plan indicators and acquire the available Coordinated Assessments (CA) indicators for Natural Origin Spawner Abundance, Adult Recruits per Spawner, Smolt to Adult Ratio, and Juvenile Recruits per Spawner, along with supporting metrics, metadata and if possible, flow diagrams on a full population scale basis, incorporate them into the Salmon & Steelhead Recovery Tracker, compiling them into the Data Exchange Standard (DES) format and submitting them to the CA Database at PSMFC StreamNet.
G. WDFW develop indicators and metrics for Natural Origin Spawner Abundance	10/1/2013	9/30/2014	Active	WDFW StreamNet staff will work with WDFW to implement a database that contains the supporting metrics and metadata necessary to populate the CA Database with the CA Indicators 'Natural Origin Spawner Abundance', 'Smolt to Adult Ratio', 'Adult Recruits per Spawner', and 'Juvenile Recruits per Spawner' on a full population scale basis. The goal for FY-14 is to implement processes to produce HLI's on a population scale and populate the CA Database where possible.
Deliverable: H. CA indicators and metrics are compiled		9/30/2014	Active	*See the Deliverable Specification above*

F: 160. Create/Manage/Maintain Database

Title:	CA data - automated data exchange
Description:	As possible given agency IT capabilities, work to establish automated feeds of the CA data to the CA database at PSMFC StreamNet via web services or other automated means.
Deliverable Specification:	Initial automated feeds of CA data to the CA database are implemented and evaluated for effectiveness, and automated data feeds to NOAAF are initiated.
Data Repositories:	StreamNet Database (http://q.streamnet.org/Request.cfm?cmd=BuildCriteria&NewQuery=BuildCriteria)

Milestone Title	Start Date	End Date	Status	Milestone Description
A. PSMFC work with CA agencies toward developing the capability for automated exchange of data	10/1/2013	9/30/2014	Active	PSMFC StreamNet staff will work with participants in the CA project to work toward developing the means to automate the flow of indicators and metrics in CA DES format to the interim CA database at PSMFC. This work will be performed at a pace commensurate with the technical capabilities at each of the participating agencies and their workloads.
B. PSMFC will manage and maintain an automated feed of CA data to the NOAA Fisheries SPS database	10/1/2013	9/30/2014	Active	PSMFC StreamNet staff will maintain, and enhance as needed, the automated feed of CA indicators and supporting metrics to the NOAA Fisheries Salmon Population Status database that was initiated in FY-13.
C. IDFG assist with systems to manage data that feed CA indicators to regional repositories.	10/1/2013	9/30/2014	Active	A web service will be developed to exchange CA data from the IDFG database system with the regional Coordinated Assessments data clearinghouse at PSMFC StreamNet.
Deliverable: D. Example automated data feeds to the CA database and to SPS have been tested		9/30/2014	Active	*See the Deliverable Specification above*

G: 160. Create/Manage/Maintain Database

Title: CA data - assist agencies enhance data flow
Description: StreamNet data stewards work within the data source agencies to improve the efficiency of data flow to the biologists who calculate the Coordinated Assessments indicators.
Deliverable Specification: Data flow to CA calculations is improved so that indicators can be calculated for more populations and speed is enhanced.

Data Repositories: StreamNet Database (http://q.streamnet.org/Request.cfm?cmd=BuildCriteria&NewQuery=BuildCriteria)

Milestone Title	Start Date	End Date	Status	Milestone Description
A. IDFG improve flow of data to high level indicators for Coordinated Assessments	10/1/2013	9/30/2014	Active	IDFG StreamNet will assist IDFG and partner agencies with developing the ability to compile raw data and metrics into internal databases or other systems to expand the coverage of currently available high level indicators and to address additional high level indicators developed by the region during the fiscal year.
Deliverable: B. Initial improvements to internal data flow are made		9/30/2014	Active	*See the Deliverable Specification above*

H: 161. Disseminate Raw/Summary Data and Results

Title: CA data - dissemination
Description: On an interim basis while the state and tribal agencies develop the capacity to host these data as exchange network nodes, StreamNet will disseminate the CA indicators and supporting metrics through the StreamNet online query systems and as web services adhering to the DES format.
Deliverable Specification: The CA indicators, metrics and metadata are available for public viewing and download through the StreamNet data query systems and as web services.

Primary Focal Species: Chinook - All Populations | Chum - Columbia River ESU | Coho - Lower Columbia River ESU | Coho - Unspecified Population | Cutthroat Trout, Coastal - All Anadromous Populations | Sockeye - All Populations | Steelhead - All Populations | Lamprey, Pacific | Trout, Bull | Trout, Interior Redband

Milestone Title	Start Date	End Date	Status	Milestone Description
A. PSMFC disseminate the CA indicators and metrics	10/1/2013	9/30/2014	Active	PSMFC StreamNet will establish means to disseminate the CA indicators and metrics to appropriate users through the StreamNet online query systems and as web services. If directed by the CAPG, PSMFC will develop a stand alone Coordinated Assessments online data interface as possible within current staffing. PSMFC staff will provide definitions with the disseminated data to ensure end users have the information needed to correctly interpret data they receive.
Deliverable: B. Currently available CA indicators and metrics are made publicly available		9/30/2014	Active	*See the Deliverable Specification above*

I: 159. Transfer/Consolidate Regionally Standardized Data

Title:	Habitat data - compile
Description:	CTCR will compile, format, and incorporate Okanogan Basin Monitoring and Evaluation Program habitat data into Sitka Technology Group's habitat data system. Sitka has built a data system for habitat data collected in under the Columbia River Habitat Monitoring Program (CHaMP). Data between OBMEP and CHaMP habitat monitoring programs are similar and will be used to show status and trends in multiple watersheds across the Columbia River Basin. OBMEP habitat data are stored in a relational database system, and automated reports and queries will be built to compile these data.
Deliverable Specification:	Compiled habitat data from the Colville Tribe will be packaged and delivered to the Sitka Technology Group's habitat data system.
Primary Focal Species:	Chinook - All Populations | Steelhead - All Populations | Coho - Lower Columbia River ESU | Coho - Unspecified Population
Data Repositories:	StreamNet Database (http://q.streamnet.org/Request.cfm?cmd=BuildCriteria&NewQuery=BuildCriteria)

Milestone Title	Start Date	End Date	Status	Milestone Description
A. CTCR compile habiatat data and exchange with CHaMP	10/1/2013	9/30/2014	Active	Colville StreamNet will compile, format, and incorporate Okanogan Basin Monitoring and Evaluation Program habitat data into Sitka Technology Group's habitat data system so data can be incorporated with CHaMP. OBMEP habitat data are stored in a relational database system, and automated reports and queries will be built to compile these data.
Deliverable: B. Colville Tribe compiles and delivers habitat data		9/30/2014	Active	*See the Deliverable Specification above*

J: 160. Create/Manage/Maintain Database

Title:	Tier 2 data - DES and database
Description:	Manage and maintain the existing StreamNet Data Exchange Standard for the data sets currently designated as 'Tier 2' (redd counts, spawner counts, estimates of spawning population, dam and weir counts, hatchery return counts, age composition, barriers, and distribution - these are secondary to the data contained in Coordinated Assessments, which are Tier 1). Enter, QA and manage data as received from project partners.
Deliverable Specification:	The StreamNet DES for Tier 2 fish abundance data is maintained and data are loaded into the StreamNet database and quality assured as they are received.
Data Repositories:	StreamNet Database (http://q.streamnet.org/Request.cfm?cmd=BuildCriteria&NewQuery=BuildCriteria)

Milestone Title	Start Date	End Date	Status	Milestone Description
A. PSMFC manage and maintain the StreamNet DES for Tier 2 data types	10/1/2013	9/30/2014	Active	PSMFC StreamNet staff will maintain and manage as necessary the existing Data Exchange Standard for the Tier 2 data types.
B. PSMFC load and manage Tier 2 fish abundance data in the StreamNet database	10/1/2013	9/30/2014	Active	PSMFC StreamNet staff will log, QA, return to compiler or load, and then manage the Tier 2 data as they are submitted by the StreamNet partner agencies. This is a lower priority after securing BPA funded data and the Coordinated Assessments indicators and metrics, so it is unclear how much data will actually be provided by the partner agencies.
C. CTCR development and maintenance of Tier 2 data exchange standards	10/1/2013	9/30/2014	Active	The Colville StreamNet project, if needed this year, and as scheduled by the Steering Committee, will work cooperatively and following the DES Process document to revise existing and/or develop new DESs for Tier 2 abundance data as necessary to assure regional data consistency and allow for inclusion of new data types.
D. FWS development and maintenance of Tier 2 data exchange standards	10/1/2013	9/30/2014	Active	FWS, if needed this year, and as scheduled by the Steering Committee, will work cooperatively and following the DES Process document to revise existing and/or develop new DESs for Tier 2 abundance data as necessary to assure regional data consistency and allow for inclusion of new data types.
E. IDFG development and maintenance of Tier 2 data exchange standards	10/1/2013	9/30/2014	Active	IDFG, if needed this year, and as scheduled by the Steering Committee, will work cooperatively and following the DES Process document to revise existing and/or develop new DESs for Tier 2 abundance data as necessary to assure regional data consistency and allow for inclusion of new data types.
F. ODFW development and maintenance of Tier 2 data exchange standards	10/1/2013	9/30/2014	Active	ODFW, if needed this year, and as scheduled by the Steering Committee, will work cooperatively and following the DES Process document to revise existing and/or develop new DESs for Tier 2 abundance data as necessary to assure regional data consistency and allow for inclusion of new data types.
G. WDFW development and maintenance of Tier 2 data exchange standards	10/1/2013	9/30/2014	Active	WDFW, if needed this year, and as scheduled by the Steering Committee, will work cooperatively and following the DES Process document to revise existing and/or develop new DESs for Tier 2 abundance data as necessary to assure regional data consistency and allow for inclusion of new data types.
Deliverable: H. DES and database for Tier 2 fish abundance data are maintained, updated as needed.		9/30/2014	Active	*See the Deliverable Specification above*

K: 159. Transfer/Consolidate Regionally Standardized Data

Title:	Tier 2 data - compilation
Description:	After the CA data are compiled and exchanged, resume updating the Tier 2 data in the standard StreamNet database (redd counts, spawner counts, estimates of spawning population, dam and weir counts, hatchery return counts, age composition, barriers, and distribution - these are secondary to the data contained in Coordinated Assessments, which are Tier 1). Update the existing trends as staffing levels allow, and exchange with the StreamNet database at PSMFC. Progress on this work element is contingent on completion of higher priority data compilation.
Deliverable Specification:	The Tier 2 data sets are updated as time and staffing allow, following completion of the CA data exchange.
Primary Focal Species:	Chinook - All Populations | Steelhead - All Populations | Coho - Lower Columbia River ESU | Coho - Unspecified Population
Data Repositories:	StreamNet Database (http://q.streamnet.org/Request.cfm?cmd=BuildCriteria&NewQuery=BuildCriteria)

Milestone Title	Start Date	End Date	Status	Milestone Description
A. CTCR compile and exchange adult abundance data from OBMEP database.	10/1/2013	9/30/2014	Active	The Colville StreamNet project will compile data on adult steelhead enumeration in the Okanogan River collected by the Okanogan Basin Monitoring and Evaluation Program. These data exist in online reports published on the OBMEP website and in the OBMEP database. Data include observations by field biologists that are stored in the database, calculated metrics that are performed by biologists, and the final products and estimates that are published in online reports. Compiling these data my require building new tables and routines in the OBMEP database to store calculated metrics and other information that are currently only published in online reports.
B. FWS compile hatchery return and related age data	10/1/2013	9/30/2014	Active	FWS will compile data for 2013 hatchery returns and related age composition and exchange the data in DES format to the StreamNet database at PSMFC
C. IDFG compile and deliver redd count data	10/1/2013	12/31/2013	Completed	IDFG will extract redd count data from its internal databases, convert to StreamNet DES Format and submit to the central StreamNet database.
D. IDFG compile and deliver spawner count data	1/1/2014	3/31/2014	Active	IDFG will extract spawner count data from its internal databases, convert to StreamNet DES Format and submit to the central StreamNet database.
E. IDFG compile and deliver weir count data.	1/1/2014	9/30/2014	Active	IDFG will compile weir count data into the StreamNet DES Format and submit to the central StreamNet database.
F. IDFG compile and deliver hatchery return data.	10/1/2013	9/30/2014	Completed	IDFG will extract hatchery return data from the Lower Snake River Compensation Plan database, convert to StreamNet DES Format and submit to the central StreamNet database.
G. IDFG compile and deliver age composition data.	7/1/2014	9/30/2014	Active	IDFG will compile age composition data into the StreamNet DES Format and submit to the central StreamNet database.
H. IDFG compile and deliver estimates of spawning population data.	10/1/2013	12/31/2013	Active	IDFG will compile estimates of spawning population data into the StreamNet DES Format and submit to the central StreamNet database.
I. ODFW update Tier 2 StreamNet data sets	12/1/2013	9/30/2014	Active	ODFW, as time and resources allow, will attempt to update key (Tier 2) summarized data, including Estimates of spawning population, Redd counts, Spawner counts, Dam and weir counts, age composition, barriers, and anadromous fish distribution for listed populations. It is not anticipated that much more than updating some existing data on an opportunistic basis can be accomplished this year, unless other priorities are completed faster than anticipated.
J. WDFW update Tier 2 StreamNet data sets	10/1/2013	9/30/2014	Active	WDFW, after completion of the inventory of BPA projects, Coordinated Assessments data, and the other BPA priority Work Elements, will attempt to update a few of the Tier 2 StreamNet data sets if sufficient staff time permits. It is not anticipated that much more than maintaining the existing data can be accomplished this year, but if the other priorities are completed faster than anticipated, attempts to update some data sets will be made on an opportunistic basis.
Deliverable: K. Some Tier 2 data are updated if other priorities are met		9/30/2014	Active	*See the Deliverable Specification above*

L: 161. Disseminate Raw/Summary Data and Results

Title:	Tier 2 data - dissemination
Description:	Updated and historic Tier 2 fish data (redd counts, spawner counts, estimates of spawning population, dam and weir counts, hatchery return counts, age composition, barriers, and distribution - these are secondary to the data contained in Coordinated Assessments, which are Tier 1) will be disseminated through the StreamNet online query systems and as web services as they are received from the project participants and pass QA review.
Deliverable Specification:	The Tier 2 data that are submitted by the source agencies are available for review and download through the StreamNet online query systems and as web services.
Primary Focal Species:	Chinook - Deschutes River Summer/Fall ESU	Chinook - Lower Columbia River ESU	Chinook - Mid-Columbia River Spring ESU	Chinook - Snake River Fall ESU	Chinook - Snake River Spring/Summer ESU	Chinook - Upper Columbia River Spring ESU	Chinook - Upper Columbia River Summer/Fall ESU	Chinook - Upper Willamette River ESU	Steelhead - Lower Columbia River DPS	Steelhead - Middle Columbia River DPS	Steelhead - Snake River DPS	Steelhead - Upper Columbia River DPS	Steelhead - Upper Willamette River DPS

Milestone Title	Start Date	End Date	Status	Milestone Description
A. PSMFC disseminate updated Tier 2 data	10/1/2013	9/30/2014	Active	PSMFC StreamNet staff will make any Tier 2 data provided by the source agencies available for viewing and download through the StreamNet online data query systems, periodic Access database dumps, and as web services. Existing data will be maintained. An externally accessible SQL Server database is mirrored with StreamNet data for data compilers to query against.
Deliverable: B. Available Tier 2 abundance data are available for download and as web services		9/30/2014	Active	*See the Deliverable Specification above*

M: 160. Create/Manage/Maintain Database

Title:	Tier 3 Juvenile abundance - DES and database
Description:	Integrate juvenile abundance into the StreamNet Data Exchange Standard, including derived estimates and field level measures summarized on an annual basis. Enter, QA and manage data as received from project partners.
Deliverable Specification:	The StreamNet DES functions to include juvenile fish abundance data, and data are quality checked and managed in DES format in the StreamNet database.
Data Repositories:	StreamNet Database (http://q.streamnet.org/Request.cfm?cmd=BuildCriteria&NewQuery=BuildCriteria)

Milestone Title	Start Date	End Date	Status	Milestone Description
A. PSMFC participate in development and implementation of a DES for juvenile abundance data	10/1/2013	9/30/2014	Active	PSMFC StreamNet staff will guide the DES development process for data types related to juvenile fish abundance. Once finalized and adopted through the DES modification process, the juvenile DES(s) will be incorporated into the StreamNet DES. If the current DES is capable of capturing the various juvenile abundance data types as well as adult abundance, then the current DES will be used, with any necessary adjustments made.
B. CTCR participate in development of DES for juvenile abundance	10/1/2013	9/30/2014	Active	CTCR will participate in development of a DES for juvenile abundance through involvement in the Steering Committee following the DES procedure.
C. IDFG participate in development of DES for juvenile abundance	10/1/2013	9/30/2014	Active	IDFG will participate in development of a DES for juvenile abundance through involvement in the Steering Committee following the DES procedure.
D. MFWP participate in development of DES for juvenile abundance	10/1/2013	9/30/2014	Active	MFWP StreamNet will participate in development of a DES for juvenile fish abundance data through the Steering Committee DES development process.
E. ODFW participate in development od DES for juvenile abundance	10/1/2013	9/30/2014	Active	ODFW will participate in development of a DES for juvenile fish abundance data through the Steering Committee DES development process.
F. WDFW lead development of DES and database for juvenile abundance	10/1/2013	9/30/2014	Active	WDFW, using the DES development procedure, will lead development of a DES for juvenile abundance following the Steering Committee's DES development guidelines with input from project participants. The draft DES will be submitted for approval through the Steering Committee. Staff will work with WDFW to implement a database that contains the supporting metrics and metadata necessary for 'Juvenile abundance (Summarized Data)' and will adjust the Washington StreamNet database to incorporate the new DES for juvenile abundance following approval by the Steering Committee. The goal for FY-14 is to implement processes to produce HLI's on a population scale and populate the database where possible.
Deliverable: G. DES and database for juvenile abundance data are development and maintained		9/30/2014	Active	*See the Deliverable Specification above*

N: 159. Transfer/Consolidate Regionally Standardized Data

Title:	Tier 3 Juvenile abundance - determine availability
Description:	Update and finalize the initial FY-13 survey of availability of juvenile count data to detail the availability and location of juvenile data types as defined in the Juvenile Abundance DES.
Deliverable Specification:	Report on availability of juvenile fish abundance data as detailed in the DES for each participating agency is published.
Primary Focal Species:	Chinook - All Populations	Steelhead - All Populations	Coho - Lower Columbia River ESU	Coho - Unspecified Population

Data Repositories: StreamNet Database (http://q.streamnet.org/Request.cfm?cmd=BuildCriteria&NewQuery=BuildCriteria)

Milestone Title	Start Date	End Date	Status	Milestone Description
A. PSMFC lead a survey of the availability of juvenile abundance data in the partner agencies	10/1/2013	9/30/2014	Active	PSMFC StreamNet staff will work with the state, tribal and federal partner agencies to determine the amount and availability of juvenile abundance data, as defined in the DES, in each agency and update and finalize the initial report on data availability from FY-13, and plans for obtaining the highest priority data types will be developed. Actual data flow may depend on available resources.
B. CTCR determine the availability of juvenile abundance data	10/1/2013	9/14/2014	Active	Colville Tribe StreamNet, after development of a juvenile abundance DES, will survey the availability of juvenile count data from the tribe and report the information to PSMFC.
C. IDFG determine the availability of juvenile abundance data	10/1/2013	9/30/2014	Active	IDFG StreamNet, after development of a juvenile abundance DES, will survey the availability of juvenile count data from IDFG and report the information to PSMFC.
D. MFWP determine the availability of juvenile abundance data	10/1/2013	9/30/2014	Active	MFWP StreamNet, after development of a juvenile abundance DES, will survey the availability of juvenile count data from MFWP and report the information to PSMFC.
E. ODFW determine the availability of juvenile abundance data	10/1/2013	9/30/2014	Active	ODFW StreamNet, after development of a juvenile abundance DES, will survey the availability of juvenile count data from ODFW and report the information to PSMFC.
F. WDFW determine the availability of juvenile abundance data	10/1/2013	9/30/2014	Active	WDFW StreamNet, after development of a juvenile abundance DES, will survey the availability of juvenile count data from WDFW and report the information to PSMFC.
Deliverable: G. Availability of juvenile fish data is reported in final report		9/30/2014	Active	*See the Deliverable Specification above*

O: 159. Transfer/Consolidate Regionally Standardized Data

Title:	Tier 3 Juvenile abundance - compilation
Description:	Within available resources and as available within agency, obtain, georeference and standardize to the StreamNet DES juvenile abundance data at the derived estimate and/or summarized measures level. This Work Element is focused on juvenile abundance data that are in addition to the juvenile abundance data included in the Coordinated Assessments indicators and metrics.
Deliverable Specification:	Initial juvenile abundance data sets are compiled and initial exchange is made to the StreamNet database at PSMFC in DES format as possible with existing staffing and if other data priorities are met first.
Primary Focal Species:	Chinook - All Populations	Steelhead - All Populations	Coho - Lower Columbia River ESU	Coho - Unspecified Population
Data Repositories:	StreamNet Database (http://q.streamnet.org/Request.cfm?cmd=BuildCriteria&NewQuery=BuildCriteria)

Milestone Title	Start Date	End Date	Status	Milestone Description
A. CTCR compile juvenile fish abundance data.	10/1/2013	9/30/2014	Active	Colville StreamNet will compile data on juvenile abundance of steelhead in the Okanogan River Collected by the Okanogan Basin Monitoring and Evaluation Program. These data exist primarily in the OBMEP database and some online reports. Data are primarily snorkel observations, but also include OBMEP habitat data that capture the area of the stream that was snorkeled, and are necessary for calculating fish densities. Compiling these data may involve building new tables, routines, or scripts to expand snorkel observations into fish densities.
B. IDFG compile juvenile fish abundance data.	10/1/2013	9/30/2014	Active	After a juvenile abundance DES is formalized and after surveying available juvenile count data, IDFG will initiate the compilation of juvenile abundance data into StreamNet DES format and submit available data to the central StreamNet database. These data may be for populations or species besides those where the CA indicators and metrics are calculated, and may be calculated at less than a population scale.
C. MFWP compile juvenile fish abundance data.	10/1/2013	9/30/2014	Active	After a juvenile abundance DES is formalized and after surveying available juvenile count data, MFWP will initiate the compilation of juvenile abundance data into StreamNet DES format and submit available data to the central StreamNet database. These data may be for populations or species besides those where the CA indicators and metrics are calculated, and may be calculated at less than a population scale.
D. ODFW compile juvenile fish abundance data.	10/1/2013	9/30/2014	Active	After a juvenile abundance DES is formalized and after surveying available juvenile count data, ODFW will initiate the compilation of juvenile abundance data into StreamNet DES format and submit available data to the central StreamNet database. These data may be for populations or species besides those where the CA indicators and metrics are calculated, and may be calculated at less than a population scale.
E. WDFW compile juvenile fish abundance data.	10/1/2013	9/30/2014	Active	After a juvenile abundance DES is formalized and after surveying available juvenile count data, WDFW will initiate the compilation of juvenile abundance data into StreamNet DES format and submit available data to the central StreamNet database. These data may be for populations or species besides those where the CA indicators and metrics are calculated, and may be calculated at less than a population scale.
Deliverable: F. Available juvenile abundance data are compiled if other priorities are met first.		9/30/2014	Active	*See the Deliverable Specification above*

P: 161. Disseminate Raw/Summary Data and Results

Title:	Tier 3 Juvenile abundance - dissemination
Description:	As juvenile abundance data are exchanged from the participating agencies, they will be made available through the StreamNet online query systems and as web services.
Deliverable Specification:	Juvenile abundance data exchanged by the project partners are made available through the StreamNet online query systems and as web services.
Primary Focal Species:	Chinook - All Populations	Chum - Columbia River ESU	Coho - Lower Columbia River ESU	Coho - Unspecified Population	Cutthroat Trout, Coastal - All Anadromous Populations	Sockeye - All Populations	Steelhead - All Populations	Trout, Bull	Trout, Interior Redband	Trout, Rainbow

Milestone Title	Start Date	End Date	Status	Milestone Description
A. PSMFC disseminate juvenile abundance data	10/1/2013	9/30/2014	Active	PSMFC StreamNet staff will build dissemination of juvenile abundance data into the standard StreamNet online data query systems and web services as they are received from the partner agencies. It is expected that delivery of this new data type will be slow due to other priorities and the fact that this will be a new data flow which will require new pathways within the agencies.
Deliverable: B. Available juvenile abundance data are disseminated.		9/30/2014	Active	*See the Deliverable Specification above*

Q: 160. Create/Manage/Maintain Database

Title:	Tier 3 Juvenile abundance - Improve rotary screw trap data system
Description:	Improve creation and management of juvenile abundance estimates through integration of database systems. Work with project partners to develop consistent approaches to capturing rotary screw trap data and calculating smolt production. Compare systems and share components that will improve consistency among them and produce equivalent results.

Deliverable Specification: Agency juvenile trap database systems are compared and improved features are shared among systems.

Data Repositories: StreamNet Database   (http://q.streamnet.org/Request.cfm?cmd=BuildCriteria&NewQuery=BuildCriteria)

Milestone Title	Start Date	End Date	Status	Milestone Description
A. PSMFC share capabilities of FWS Rotary Screw Trap database platform	10/1/2013	9/30/2014	Active	PSMFC StreamNet staff will improve and promote the smolt trap data collection, management, and analysis system that was created under USFWS funding for implementation in the Columbia Basin and as a standard against which to compare other systems. Where features, such as analysis routines, from this robust system could enhance other existing systems, the code will be provided for use in those systems. If agencies wish to adopt this system, PSMFC staff will assist new users with installation and implementation of the system. Workshops or webinars will be held to demonstrate system capabilities and for training.
Deliverable: B. Juvenile trap data systems are improved		9/30/2014	Active	*See the Deliverable Specification above*

R: 189. Coordination-Columbia Basinwide

Title: Tier 4 Resident fish abundance data - coordination

Description: Coordinate with the tribes managing the Upper Columbia resident fish database project and other state and tribal agencies with resident fish data to ensure compatibility of data formats and contents among all entities for development of the StreamNet Data Exchange Standard for these data.

Deliverable Specification: Coordination with the Upper Columbia resident fish database provides adequate information to assure compatibility of resident fish data in the StreamNet DES.

Milestone Title	Start Date	End Date	Status	Milestone Description
A. PSMFC coordinate with states and tribes to facilitate organization and delivery of resident data	10/1/2013	9/30/2014	Active	PSMFC StreamNet staff will coordinate with state, federal, and tribal fish management agencies to initiate compilation of resident fish abundance data. Coordination with interested parties will determine which specific types of resident fish data are priority for regional scale standardization and dissemination. These may be new data type(s) for StreamNet and may take some time to organize.
Deliverable: B. Coordination leads to a common approach to resident fish data		9/30/2014	Active	*See the Deliverable Specification above*

S: 160. Create/Manage/Maintain Database

Title: Tier 4 Resident fish abundance data - DES and database

Description: Integrate resident fish abundance into the StreamNet Data Exchange Standard, assuring the ability to integrate data with the Upper Columbia tribal resident fish database and resident fish data from the state and other tribal agencies. Enter, QA and manage data as received from project partners following completion of other data priorities for the year.

Deliverable Specification: Resident fish data types are functional within the StreamNet DES, a database is developed for the data, and the data are quality checked and managed in DES format as they are received.

Data Repositories: StreamNet Database   (http://q.streamnet.org/Request.cfm?cmd=BuildCriteria&NewQuery=BuildCriteria)

Milestone Title	Start Date	End Date	Status	Milestone Description
A. PSMFC lead development of a DES for juvenile fish abundance data	10/1/2013	9/30/2014	Active	PSMFC StreamNet staff will work with project partners to lead the DES development process for juvenile fish abundance data. The effort to develop a DES will take place once regional consensus is reached on which specific types of resident fish abundance data are highest priority, and the DES will focus on those.
B. PSMFC load and QA any juvenile abundance data submitted by partner agencies	4/1/2014	9/30/2014	Active	PSMFC staff will log, QA, return to compiler or load, and then manage any resident fish abundance data submitted by the partner agencies in the StreamNet database. The volume of this data in FY-14 is likely to be quite small, but any data that are received will be loaded.
C. CTCR participate in development of resident fish DES	10/1/2013	9/30/2014	Active	CTCR StreamNet will participate in development of a DES for resident fish abundance through the Steering Committee DES development process.
D. IDFG participate in development of resident fish DES	10/1/2013	9/30/2014	Active	IDFG StreamNet will participate in development of a DES for resident fish abundance through the Steering Committee DES development process.
E. MFWP participate in development of resident fish DES	10/1/2013	9/30/2014	Active	MFWP StreamNet staff will assist in reviewing the resident fish DES through the Steering Committee DES development process, ensuring that it will accommodate MFWP collected data.
F. ODFW participate in development of resident fish DES	10/1/2013	9/30/2014	Active	ODFW StreamNet will participate in development of a DES for resident fish abundance through the Steering Committee DES development process.
G. WDFW participate in development of resident fish DES	10/1/2013	9/30/2014	Active	WDFW StreamNet will participate in development of a DES for resident fish abundance through the Steering Committee DES development process.
Deliverable: H. Resident fish DES and database are created		9/30/2014	Active	*See the Deliverable Specification above*

T: 159. Transfer/Consolidate Regionally Standardized Data

Title:	Tier 4 Resident fish abundance - determine availability
Description:	Survey availability of resident fish count data and derived abundance estimates, as defined within the resident fish DES, within each partner agency.
Deliverable Specification:	Availability of the various types of resident fish data as described in the DES is reported in a final report

Primary Focal Species:	Lamprey, Pacific	Trout, Bull	Trout, Rainbow	Trout, Interior Redband	Cutthroat Trout, Coastal - Resident Populations	Cutthroat Trout, Westslope	Cutthroat Trout, Yellowstone	Kokanee	Sturgeon, White - All Populations except Kootenai R. DPS	Sturgeon, White - Kootenai River DPS	Whitefish, Mountain
Data Repositories:	StreamNet Database (http://q.streamnet.org/Request.cfm?cmd=BuildCriteria&NewQuery=BuildCriteria)

Milestone Title	Start Date	End Date	Status	Milestone Description
A. PSMFC with partners conduct a review of what specific resident fish data are available	10/1/2013	9/30/2014	Active	PSMFC StreamNet staff will continue to work with the partner agencies to determine the kinds and amounts of resident fish data, as contained in the DES, that are available in each agency, where they are located, and how easily they could be compiled for inclusion in the StreamNet database. A report on data availability will be prepared. This work began and an initial report was created in fiscal year 2013. Further review and refinement of the information collected will continue in fiscal year 2014, and a final report will be prepared.
B. CTCR survey availability of resident fish abundance data.	10/1/2013	9/30/2014	Active	CTCR StreamNet, after development of a resident fish abundance DES, will survey the availability of resident fish abundance data from CTCR.
C. IDFG survey availability of resident fish abundance data.	10/1/2013	9/30/2014	Active	IDFG StreamNet, after development of a resident fish abundance DES, will survey the availability of resident fish abundance data from IDFG.
D. MFWP survey availability of resident fish abundance data.	10/1/2013	9/30/2014	Active	MFWP StreamNet, after development of a resident fish abundance DES, will survey the availability of resident fish abundance data from MFWP.
E. ODFW survey availability of resident fish abundance data.	10/1/2013	9/30/2014	Active	ODFW StreamNet, after development of a resident fish abundance DES, will survey the availability of resident fish abundance data from ODFW.
F. WDFW survey availability of resident fish abundance data.	10/1/2013	9/30/2014	Active	WDFW StreamNet, after development of a resident fish abundance DES, will survey the availability of resident fish abundance data from WDFW.
Deliverable: G. Availability of resident fish data is determined		9/30/2014	Active	*See the Deliverable Specification above*

U: 159. Transfer/Consolidate Regionally Standardized Data

Title:	Tier 4 Resident fish abundance - compilation
Description:	On an exploratory basis, begin compiling resident fish data, convert to StreamNet DES, add georeferencing and exchange to the StreamNet database at PSMFC. Work on this new data type for StreamNet will begin under current staffing only after other data priorities have been met.
Deliverable Specification:	Initial resident fish data are exchanged with the StreamNet database in DES format as possible with existing staffing if other priorities are met.
Primary Focal Species:	Lamprey, Pacific	Trout, Bull	Trout, Rainbow	Trout, Interior Redband	Cutthroat Trout, Coastal - Resident Populations	Cutthroat Trout, Westslope	Cutthroat Trout, Yellowstone	Kokanee	Sturgeon, White - All Populations except Kootenai R. DPS	Sturgeon, White - Kootenai River DPS	Whitefish, Mountain
Data Repositories:	StreamNet Database (http://q.streamnet.org/Request.cfm?cmd=BuildCriteria&NewQuery=BuildCriteria)

Milestone Title	Start Date	End Date	Status	Milestone Description
A. CTCR compile resident fish data	10/1/2013	9/30/2014	Active	CTCR, on an exploratory basis and only following completion of other data development priorities and completion of a DES, will begin compiling resident fish data, convert to StreamNet DES, add georeferencing and exchange to the StreamNet database at PSMFC. Focus will be on tribal priority species (sturgeon, bull trout, lamprey).
B. MFWP resident fish data compilation and exchange	10/1/2013	9/30/2014	Active	MFWP StreamNet staff will update, maintain, correct and exchange resident fish abundance data including trends (redd counts), summarized population counts and references. Data will be exchanged via the approved DES or submitted to the Data Store as an independent data set.
Deliverable: C. Compilation of resident fish data begins on initial exploratory basis.		9/30/2014	Active	*See the Deliverable Specification above*

V: 161. Disseminate Raw/Summary Data and Results

Title:	Tier 4 Resident fish abundance - dissemination
Description:	As resident fish abundance data are exchanged from the participating agencies and pass QA review, make them available through the StreamNet online query systems.
Deliverable Specification:	Resident fish abundance data exchanged to the StreamNet database by the project partners on an exploratory basis are made available through the StreamNet online query systems.

Primary Focal Species:	Chinook - All Populations | Chum - Columbia River ESU | Coho - Lower Columbia River ESU | Coho - Unspecified Population | Cutthroat Trout, Coastal - All Anadromous Populations | Sockeye - All Populations | Steelhead - All Populations | Trout, Bull | Trout, Interior Redband | Trout, Rainbow			

Milestone Title	Start Date	End Date	Status	Milestone Description
A. PSMFC disseminate resident fish abundance data as received	10/1/2013	9/30/2014	Active	PSMFC StreamNet staff will make all resident fish abundance data exchanged from the partner agencies in DES format available through the StreamNet online data query systems, periodic Access database dumps, and web services. We expect that little data will actually become available in FY-14, but any that does will be added to the query systems.
Deliverable: B. Available resident fish abundance data are disseminated.		9/30/2014	Active	*See the Deliverable Specification above*

W: 159. Transfer/Consolidate Regionally Standardized Data

Title:	Base data compilation - hydrography
Description:	Maintain and update hydrography data, including stream and lakes layers, as necessary to serve as the common regional base for relating data based on the stream network.
Deliverable Specification:	State hydrography layers, including streams and lakes, are maintained and updated as necessary.
Primary Focal Species:	Chum - Columbia River ESU | Coho - Lower Columbia River ESU | Coho - Unspecified Population | Cutthroat Trout, Coastal - All Anadromous Populations | Sockeye - All Populations | Steelhead - All Populations | Lamprey, Pacific | Lamprey, River | Sturgeon, Green | Sturgeon, White - Lower Columbia River | Chinook - All Populations | Cutthroat Trout, Coastal - Resident Populations | Cutthroat Trout, Lahontan | Cutthroat Trout, Westslope | Cutthroat Trout, Yellowstone | Kokanee | Lamprey, Western Brook | Sturgeon, White - All Populations except Kootenai R. DPS | Sturgeon, White - Kootenai River DPS | Trout, Bull | Trout, Rainbow | Trout, Interior Redband | Whitefish, Mountain
Data Repositories:	StreamNet Database (http://q.streamnet.org/Request.cfm?cmd=BuildCriteria&NewQuery=BuildCriteria)

Milestone Title	Start Date	End Date	Status	Milestone Description
A. MFWP maintenance of hydrography for Montana	10/1/2013	9/30/2014	Active	MFWP will continue to update the routes using the updated NHD layer, including lakes; will participate in Steering and Technical Committee assignments for either the 1:24 K hydrography or the mixed scaled hydrography. MFWP will continue to collaboratively work with the Montana State Library's Natural Resource Information System (NRIS), stewards of the NHD, and other state partners towards the development of the NHD 1:24 K layer. MFWP will participate in the development of a whole-stream identifier in the 24k hydrography with StreamNet, USGS and NRIS.
B. ODFW maintenance of hydrography for Oregon	10/1/2013	9/30/2014	Active	ODFW, on an ongoing basis, will maintain and update as necessary the mixed scale hydrography (Framework subset) dataset for Oregon. Primary focus will be on building stream routes onto the NHD geometry. Only necessary changes will be exchanged. As needed and within available resources, ODFW may also contribute to the development of the next version mixed scale hydrography dataset, depending on the approach chosen.
C. WDFW development of the Washington portion of the StreamNet mixed-scale hydrography layer	10/1/2013	9/30/2014	Active	WDFW will maintain a mixed-scale (1:24,000) stream hydrography layer for Washington state, and respond to the outcomes of technical review by GIS staff from PSMFC and other project participants. WDFW will continue to update base stream and lake hydrography and high-priority attributes as needed to support spatial data exchange with StreamNet. Updates will be submitted to StreamNet when complete.
Deliverable: D. State hydrography layers are maintained and updated		9/30/2014	Active	*See the Deliverable Specification above*

X: 159. Transfer/Consolidate Regionally Standardized Data

Title:	Lower Tier and 'other' data - compilation
Description:	No updates to data types in the StreamNet DES that are below Tier 4 are planned. Data of these types that are obtained incidentally may be exchanged as a low priority and only if other data priorities have been met. Data that do not conform to the StreamNet DES (what is referred to as 'other data') will be directed to the Data Store.
Deliverable Specification:	Data not conforming to the StreamNet DES are uploaded to the Data Store.
Primary Focal Species:	Chinook - All Populations | Coho - Lower Columbia River ESU | Chum - Columbia River ESU | Cutthroat Trout, Coastal - All Anadromous Populations | Sockeye - All Populations | Steelhead - All Populations | Cutthroat Trout, Westslope | Cutthroat Trout, Yellowstone | Kokanee | Trout, Bull | Trout, Rainbow | Trout, Interior Redband
Data Repositories:	StreamNet Data Store (http://www.streamnet.org/datastore_search.cfm)

Milestone Title	Start Date	End Date	Status	Milestone Description
A. MFWP Lower Tier data updates	10/1/2013	9/30/2014	Active	MFWP, after completion of BPA priority work will attempt to update as many standard StreamNet data types as the remaining staff time permits. Standard data sets that may be updated in FY-14 if staffing and time allow include: resident fish distribution, population surveys, genetics, barriers and dams which are primarily updated via MFWP's centralized database or are managed by non-StreamNet staff.
B. ODFW development of other data sets	10/1/2013	9/30/2014	Active	No exchange of lower tier data is planned. Any other data provided to ODFW StreamNet will be directed to the Data Store and/or the ODFW Data Clearinghouse. Support for submission of BPA project data to the Data Store is included in another Work Element.
C. WDFW development of other data sets	10/1/2013	9/30/2014	Active	No exchange of lower tier data is planned. Any other data provided to WDFW StreamNet will be directed to the Data Store. Support for submission of BPA project data to the Data Store is included in another Work Element.
Deliverable: D. Nonconforming data added to Data Store.		9/30/2014	Active	*See the Deliverable Specification above*

Y: 160. Create/Manage/Maintain Database

Title: Lower Tier data - maintain database

Description: Any lower tier data that are exchanged will be QA reviewed and added to the StreamNet database through routine base operations. Few of these data are expected in FY-14.

Deliverable Specification: Lower tier data are maintained in the StreamNet database.

Data Repositories: StreamNet Data Store (http://www.streamnet.org/datastore_search.cfm)
StreamNet Database (http://q.streamnet.org/Request.cfm?cmd=BuildCriteria&NewQuery=BuildCriteria)

Milestone Title	Start Date	End Date	Status	Milestone Description
A. PSMFC maintain existing lower Tier data in the StreamNet database	10/1/2013	9/30/2014	Active	PSMFC StreamNet staff will maintain the existing lower tier data in the database. No significant amounts of updates to these data are expected, but any data submitted by the partner agencies will be loaded and QA procedures will be run.
B. PSMFC obtain and archive data from the IBIS database	10/1/2013	9/30/2014	Active	PSMFC StreamNet will remain ready to obtain the IBIS data set from BPA. If the data are provided by BPA, StreamNet will archive them so that they remain available to the public with all associated metadata.
Deliverable: C. Lower tier data are maintained in the StreamNet database.		9/30/2014	Active	*See the Deliverable Specification above*

Z: 160. Create/Manage/Maintain Database

Title: Enhance data efficiency - system development

Description: Assist agencies in development of database systems and data management procedures that increase the efficiency of data flow to internal use (such as calculation of Coordinated Assessments indicators) and externally (such as to StreamNet and/or as web services). This is a long term goal.

Deliverable Specification: Agency database systems and procedures are enhanced over time to improve data flow efficiency.

Data Repositories: StreamNet Data Store (http://www.streamnet.org/datastore_search.cfm)
StreamNet Database (http://q.streamnet.org/Request.cfm?cmd=BuildCriteria&NewQuery=BuildCriteria)

Milestone Title	Start Date	End Date	Status	Milestone Description
A. PSMFC assist partner agencies with data system development	10/1/2013	9/30/2014	Active	PSMFC StreamNet staff will assist partner agencies with development of internal database systems that will provide improved efficiency for organizing, standardizing and submitting data to StreamNet. This will be done as requested by the agencies and within the existing staff capacity. Tradeoffs in priority work to take on this role will be resolved through the Steering Committee.
B. CTCR build automated reports, routines and systems for OBMEP database to feed StreamNet, other db's	10/1/2013	9/30/2014	Active	In addition to building automated reports, routines, and queries for the specific work elements already mentioned, there are other data types and data requests that are made throughout the year from StreamNet, CRITFC, PTAGIS, and DART. For regular data requests, the OBMEP database will be updated to enable automatic data dissemination to appropriate data systems. Additionally, the OBMEP database will be modified to automate data acquisition from sources that are currently being input manually (i.e. water quality data being collected at PIT tag arrays in the Okanogan Basin), so they may in turn be disseminated more rapidly and in a more automated fashion.
C. IDFG assist with systems to compile agency data and feed to StreamNet database.	10/1/2013	9/30/2014	Active	IDFG StreamNet will assist IDFG with the maintenance of systems to compile agency data that feed the StreamNet and Coordinated Assessments databases.
D. MFWP assist agency develop data systems to automate data flow.	10/1/2013	9/30/2014	Active	As time and funds allow, MFWP StreamNet staff will continue to assist in the scoping and development of the Fisheries Information System (FIS) which will enhance the flow of data from the field to a centralized database and subsequently to StreamNet and other data dissemination systems. Work may consist of: incorporation of BPA data categories into the centralized database where they currently do not exist, developing enhanced data uploads for internal staff and external data providers, completion of the fish distribution module to allow for entry via a mapping interface, enhanced QA/QC functionality and the ability to save standardized population estimates. This work will ensure that internal data systems adhere to StreamNet data standards and will facilitate data flow to StreamNet.
E. ODFW assist agency develop data systems to automate data flow	10/1/2013	9/30/2014	Active	ODFW, as resources allow, will continue efforts to improve overall data flow from the field and then more efficiently to StreamNet by continuing the development of a data management and delivery system that also provides benefits to field projects, focusing on the system described in Oregon's CA Data Management Strategy and CA DES data elements. Staff will, on an opportunistic basis, update source contact information and attempt to acquire updated datasets and reports for upload to ODFW web applications, with priority given to mid-level metrics associated with CA data.
Deliverable: F. Agency databases and procedures are enhanced.		9/30/2014	Active	*See the Deliverable Specification above*

AA: 160. Create/Manage/Maintain Database

Title:	Enhance data efficiency - automated data feeds
Description:	Develop the capability to automate the flow of data externally via web services or other means, including automated feed of data to the StreamNet database at PSMFC. (Automated data feed to NOAA Fisheries is covered in a different Work Element.)
Deliverable Specification:	Web services or other automated means are established, and automated flow of data to StreamNet is tested.
Data Repositories:	StreamNet Data Store (http://www.streamnet.org/datastore_search.cfm)
	StreamNet Database (http://q.streamnet.org/Request.cfm?cmd=BuildCriteria&NewQuery=BuildCriteria)

Milestone Title	Start Date	End Date	Status	Milestone Description
A. PSMFC enhance data flow efficiency through automated data feeds	10/1/2013	9/30/2014	Active	PSMFC StreamNet staff will work with partner agencies to investigate and, if possible implement means of automating the flow of data from the agencies to the StreamNet database. PSMFC staff will also work with regional entities, on request, to assist them with using the StreamNet web services to obtain data.
B. IDFG develop automated data flow to central StreamNet database.	10/1/2013	9/30/2014	Active	After completion of automated flow of Coordinated Assessments high level indicators to a central repository, IDFG will investigate the potential for delivering Tier 2 data to the central StreamNet database using Web services.
C. MFWP development of web services.	10/1/2013	9/30/2014	Active	As part of the overall MFWP FIS centralized data system, the development of web services to exchange data with StreamNet will be explored as time and resources allow.
D. WDFW explore automation of data flow to the StreamNet dtabase.	10/1/2013	9/30/2014	Active	WDFW StreamNet will explore posting of data on data.wa.gov as a means for making data available for download to StreamNet.
Deliverable: E. Agency databases and procedures are enhanced.		9/30/2014	Active	*See the Deliverable Specification above*

AB: 189. Coordination-Columbia Basinwide

Title: Data capture devices - coordinate field trials

Description: PSMFC and agency StreamNet partners coordinate on development and conduct of field trials for evaluating selected handheld electronic data capture devices. Trials will be designed based on agency interest and capabilities. BPA requirements for documentation of protocols, focal species, environmental compliance, location specification, and specifications of metrics will be addressed. If required by BPA, a new Work Element for conduct of the study will be added to the Statement of Work.

Deliverable Specification: A collaborative study plan is produced, and implemented by project cooperators. A work element for conducting the study is added to the statement of work, if required by BPA.

Milestone Title	Start Date	End Date	Status	Milestone Description
A. PSMFC design sampling protocols	10/1/2013	9/30/2014	Active	PSMFC, in collaboration with participating agencies/projects and regional entities, will develop a study plan for the evaluation of electronic data capture devices in field trials and work to describe the sampling protocols and methods in monitoringmethods.org and complete all requirements for conducting a field study in Pisces.
B. PSMFC coordinate field trials of handheld data capture devices	10/1/2013	9/30/2014	Active	PSMFC StreamNet staff will coordinate the trial of handheld electronic data capture devices in conjunction with the partner agencies and BPA project sponsors that are able to participate. Trials will include deployment of test devices in real-world sampling efforts in the participating agencies, and upload, storage and management of data in a cloud database environment. Initial results will be reported, along with recommendations for appropriate uses for the technology.
C. CTCR participate in the field trial of data capture devices as possible within resources	10/1/2013	9/30/2014	Active	CTCR StreamNet staff will participate in the field testing of electronic data capture devices as possible under current resources, and work with PSMFC to establish effective management of the data.
D. MFWP assist in coordination of field trials for handheld devices.	10/1/2013	9/30/2014	Active	MFWP StreamNet staff will participate in the development of field trials of selected handheld electronic data capture devices, as possible within existing resources and if determined to be an MFWP interest.
E. WDFW will participate in the field trial of data capture devices as possible within resources	10/1/2013	9/30/2014	Active	WDFW StreamNet staff will participate in the field testing of electronic data capture devices as possible under current resources, and will work with PSMFC to establish effective management of the data.
Deliverable: F. A collaborative study plan is produced and implemented		9/30/2014	Active	*See the Deliverable Specification above*

AC: 160. Create/Manage/Maintain Database

Title: Data capture devices - develop data systems for trial

Description: Following initial trials in FY-13, obtain and program electronic handheld data capture devices for field trials in participating agencies and design 'cloud' database system for managing the resulting data. For the selected test data type(s), develop data input screens and establish cloud database so that data can be captured in the field and rapidly uploaded to the cloud, where the data creating biologists will be able to edit and manage the data, and the data become available for access by funding agencies and other authorized entities.

Deliverable Specification: A real-world test of the selected data capture devices and related cloud database service is conducted and the results are reported. Recommendations for future use are included in the report.

Data Repositories: StreamNet Data Store   (http://www.streamnet.org/datastore_search.cfm)
StreamNet Database   (http://q.streamnet.org/Request.cfm?cmd=BuildCriteria&NewQuery=BuildCriteria)

Milestone Title	Start Date	End Date	Status	Milestone Description
A. PSMFC develop data system and deploy devices for field trials of handheld data capture devices	10/1/2013	9/30/2014	Active	PSMFC StreamNet staff will purchase, manage and deploy the handheld electronic data capture devices for use in a real-world field trial, including programming of the devices and design of forms to meet agency specifications. A data system able to store data from the handheld device field trials will be designed and established to automate capture of the data and to provide access for data originators to manage and QA their data. This system will be implemented as desired by the participating partner agencies.
Deliverable: B. Data systems are set up to conduct field trial.		9/30/2014	Active	*See the Deliverable Specification above*

AD: 189. Coordination-Columbia Basinwide

Title: Coordination of PSMFC databases
Description: StreamNet will work with PSMFC to establish and implement a forum to include the regional scale database projects within PSMFC to develop an approach to integrate sharing of the respective data. An approach to providing access to consolidated data will be developed. Initial efforts to develop an integrated approach to data delivery will begin, but actual data delivery will depend on the programming complexities encountered and how quickly they can be addressed.
Deliverable Specification: A forum to integrate data sharing across PSMFC database projects is developed and implemented.

Milestone Title	Start Date	End Date	Status	Milestone Description
A. PSMFC esstablish a forum to address integration of data and functions among PSMFC databases	10/1/2013	9/30/2014	Active	PSMFC StreamNet will work through PSMFC to establish a forum to coordinate and integrate functions and sharing of data among the PSMFC database projects, including PTAGIS, RMIS, StreamNet, and the new SNPs genetics database project. The forum will serve to identify regional data coordination needs, foster integration of functions among projects, and development of integrated data sharing platforms and processes.
Deliverable: B. A plan to integrate data sharing across PSMFC database projects is developed.		9/30/2014	Active	*See the Deliverable Specification above*

AE: 161. Disseminate Raw/Summary Data and Results

Title: Metadata exchange through Monitoring Explorer pilot project
Description: StreamNet will work with PNAMP and Sitka Technologies to initiate flow of metadata to facilitate development of a pilot online project and data locator tool through MonitoringExplorer.org.
Deliverable Specification: Metadata for the pilot explorer are provided to Sitka via web services in conformity with the project metadata exchange standards.

Primary Focal Species: Chinook - All Populations | Chum - Columbia River ESU | Coho - Lower Columbia River ESU | Coho - Unspecified Population | Cutthroat Trout, Coastal - All Anadromous Populations | Sockeye - All Populations | Steelhead - All Populations | Trout, Bull | Trout, Interior Redband | Trout, Rainbow

Milestone Title	Start Date	End Date	Status	Milestone Description
A. PSMFC participate in regional effort to share metadata to locate monitoring activities	10/1/2013	9/30/2014	Active	PSMFC StreamNet staff will participate with PNAMP and Sitka Technologies to develop the Monitoring Explorer pilot with the intent of using metadata of existing data to locate where monitoring of many different types is taking place. The goal is to develop a common platform to display sampling/data locations from multiple types of sampling.
Deliverable: B. Metadata provided to ME.org pilot		9/30/2014	Active	*See the Deliverable Specification above*

AF: 161. Disseminate Raw/Summary Data and Results

Title:	Data sharing agreement - finalize and implement
Description:	The draft Data Sharing Agreement template developed in FY-13 will be released at a regional scale through PNAMP, the StreamNet Steering Committee and other forums for review, comment, refinement and general adoption. A final version will be adopted for use by the StreamNet Steering Committee and implemented in the Data Store to guide release and use of data sets from the archive. We will explore the utility of the agreement template for use with standard StreamNet data.
Deliverable Specification:	The draft Data Sharing Agreement template is released for regional review. A version of that template is adopted by StreamNet and implemented for data obtained through the Data Store.
Primary Focal Species:	Chinook - All Populations	Chum - Columbia River ESU	Coho - Lower Columbia River ESU	Coho - Unspecified Population	Cutthroat Trout, Coastal - All Anadromous Populations	Sockeye - All Populations	Steelhead - All Populations	Trout, Bull	Trout, Interior Redband	Trout, Rainbow

Milestone Title	Start Date	End Date	Status	Milestone Description
A. PSMFC implement a Data Sharing Agreement template	10/1/2013	9/30/2014	Active	PSMFC StreamNet staff, in conjunction with PNAMP and other regional entities, will develop and adopt a flexible template for a Data Sharing Agreement that will inform data users of appropriate use of data and any restrictions on use or limitations of availability. Following adoption by the Steering Committee, the template will be implemented for data sets in the StreamNet Data Store. If that is successful, PSMFC will explore whether the agreement might be of use with other StreamNet data sets.
Deliverable: B. Data Sharing Agreement finalized and implemented		9/30/2014	Active	*See the Deliverable Specification above*

AG: 161. Disseminate Raw/Summary Data and Results

Title:	Data dissemination - custom requests
Description:	Receive and respond to requests for data, maps and other information; source materials; and custom data products at the regional and cooperating agency levels, as appropriate. Response to requests will be honored within the limits of available resources, with priority given to information requests having direct relevance to BPA, the Fish and Wildlife Program and data source agencies/departments. Other priorities will include implementation of the Endangered Species Act and federal, state, and tribal natural resource management activities. Custom data development will be dependent on available resources. This year top priority will go to requests for fish population data for assessment purposes, and all other requests will be low priority.
Deliverable Specification:	Requests for information or assistance are responded to in a timely manner (within one business day at PSMFC). If within StreamNet capabilities, requested help or information is provided as rapidly as reasonably possible within existing resources.
Primary Focal Species:	Chinook - All Populations	Chum - Columbia River ESU	Coho - Lower Columbia River ESU	Coho - Unspecified Population	Cutthroat Trout, Coastal - All Anadromous Populations	Sockeye - All Populations	Steelhead - All Populations	Lamprey, Pacific	Sturgeon, White - Lower Columbia River	Sturgeon, Green	Cutthroat Trout, Coastal - Resident Populations	Cutthroat Trout, Westslope	Cutthroat Trout, Yellowstone	Kokanee	OBSOLETE-Pikeminnow, Northern	Sturgeon, White - All Populations except Kootenai R. DPS	Sturgeon, White - Kootenai River DPS	Trout, Bull	Trout, Rainbow	Trout, Interior Redband	Whitefish, Mountain

Milestone Title	Start Date	End Date	Status	Milestone Description
A. PSMFC respond to and track data/information requests	10/1/2013	9/30/2014	Active	PSMFC StreamNet, on an ongoing basis, will respond within one business day to requests for data, information or help, and will log and report responses to all requests received. Data requests will be satisfied on an "as possible" basis (based on data availability and time required) and, for large requests, within the limitations of available staffing and funding.
B. FWS respond to and track data/information requests	10/1/2013	9/30/2014	Active	FWS, as needed and within available resources, will respond to requests for data, maps, technical assistance, source materials, or custom data products at the agency level, within the capabilities provided by base funding. Requests will be logged and reported.
C. IDFG respond to and track data/information requests	10/1/2013	9/30/2014	Active	IDFG, on an ongoing basis, will respond to requests for data, maps, technical assistance, source materials, or custom data products at the agency level, within the capabilities provided by base funding. Requests will be logged and reported.
D. MFWP respond to and track data/information requests	10/1/2013	9/30/2014	Active	MFWP, on an ongoing basis, will respond to requests for data, maps, technical assistance, source materials, or custom data products at the agency level, within the capabilities provided by base funding. Requests will be logged and reported.
E. ODFW respond to and track data/information requests	10/1/2013	9/30/2014	Active	ODFW, on an ongoing basis, will respond to requests for data, maps, technical assistance, source materials, or custom data products at the agency level, within the capabilities provided by base funding. Requests will be logged and reported.
F. WDFW respond to and track data/information requests	10/1/2013	9/30/2014	Active	WDFW, on an ongoing basis, will respond to requests for data, maps, technical assistance, source materials, or custom data products at the agency level, within the capabilities provided by base funding. Requests will be logged and reported.
Deliverable: G. Priority requests for data or assistance are addressed.		9/30/2014	Active	*See the Deliverable Specification above*

AH: 160. Create/Manage/Maintain Database

Title: Infrastructure and base operations

Description: Maintain the infrastructure necessary for acquiring, managing and disseminating regionally standardized and georeferenced data, including system administration, databases, website pages, query systems, web services, and various data related applications. Maintain access to existing and historic data sets. Perform necessary operations to georeference, QA, maintain and manage data in the StreamNet-related databases, and provide reference documents for all data to the StreamNet Library.

Deliverable Specification: Project infrastructure and databases are maintained and updated as needed to acquire, manage and disseminate data.

Data Repositories: StreamNet Data Store (http://www.streamnet.org/datastore_search.cfm)
StreamNet Database (http://q.streamnet.org/Request.cfm?cmd=BuildCriteria&NewQuery=BuildCriteria)

Milestone Title	Start Date	End Date	Status	Milestone Description
A. PSMFC computer system administration	10/1/2013	9/30/2014	Active	PSMFC, on an ongoing basis, will maintain and update, as necessary, the hardware and software necessary to accomplish StreamNet's mission, including system administration, system backup and recovery, and security. Specific functions include: 1) Management and maintenance of the GIS system, including GIS software (ArcGIS Desktop and ArcGIS Server), spatial databases, extensions, and projects, and all associated hardware, that constitute the regional Geographic Information System; 2) Maintenance and upgrade of the StreamNet web server and software, including programming, system security, etc., with a target of the web server being on line and operational over 99.5% of the time; 3) Maintenance and management of database servers, SQL Server software & databases, including installation of updates, patches & service packs as they become available, management of logins, user permissions & client access tools, routine backup on & off-site of all databases, assistance with purchasing, attendance at Commission IT meetings, preparation of disaster recovery plans; and, 4) Continue assessment of means to improve data flow using web services or other developing technologies.

Milestone Title	Start Date	End Date	Status	Milestone Description
B. PSMFC GIS data content management	10/1/2013	9/30/2014	Active	PSMFC will: 1) Update & post spatial data for download from the StreamNet website to reflect periodic changes. Regional GIS layers & map services will be created where appropriate (e.g., fish distribution, hatchery facilities, etc.); 2) Verify correct format, accuracy & logical consistency of spatial data sets & attributes with state GIS contacts, compilers, & the Database Manager; 3) Maintain a library of GIS layers for internal use & as downloadable data with complete documentation (metadata) & establish web services to share key data, e.g., hydrography, subbasin plan limiting factors including remote sensing data sets in the Data Store, etc.; 4) Obtain and refine layers such as ESUs, ecoregions, administrative boundaries, & populations and create cross tables for the online data query system; 5) Obtain base GIS layers to place StreamNet data in an context. Provide links to key base layers on website; 6) Assist database manager with the spatial component of data and its implementation online; 7) Coordinate efforts by StreamNet partners to maintain and update, as necessary, the regional mixed scale hydrography (MSH) dataset. Hydrography updates may occur throughout the FY - however, bulk submissions should be received by January 2014. The region will process hydrography submissions in the winter/spring with the goal of having a March draft released for review and a final version released in May 2014. The Hydrography layer should then remain stable until the following January to avoid the confusion concurrent work; 8) Continue to publish the archived PNW 1:100k River Reach files to allow mapping legacy event data; 9) Continue to monitor progress on the development of a regionally consistent 24k routed hydrography by the USGS (NHD) and its adoption by partner agencies; 10) Integrate the functioning of the GIS system with the StreamNet fisheries database in support of the query system, and maintain up-to-date cross tables used via the StreamNet web interface to select information by geographic area; 11) Ensure that all published SN spatial data are documented to meet FGDC metadata requirements and emerging ISO standards; manage and maintain a method for publishing metadata (web service or web accessible folder) to make StreamNet and Data Store metadata available for inclusion in regional and national data portals; and, 12) Manage and update the Data Exchange Standards as necessary through the Steering Committee procedure.
C. PSMFC hydrography maintenance	10/1/2013	9/30/2014	Active	PSMFC StreamNet staff will maintain StreamNet's regional scale 'Mixed Scale Hydrography' layer in conformity with any hydrography updates submitted by the state partners so that data submitted by the states that are tied to their hydrography remain in synch with the StreamNet database. This is an essential function to enable the location of StreamNet data on the stream network.

Milestone Title	Start Date	End Date	Status	Milestone Description
G. FWS infrastructure maintenance and base operations	10/1/2013	9/30/2014	Active	FWS StreamNet will maintain its computer infrastructure and operations to assure efficient and effective management and flow of data internally and from the FWS to the StreamNet database. Specific actions may include: 1. Computer system administration, including maintenance and upgrades to hardware and software, backup and recovery, and system security, as necessary 2. Application of appropriate data management and QA/QC procedures in loading and managing data and creation of metadata 3. Creation and maintenance of interfaces and applications to enhance data flow efficiency 4. Participation in routine management and improvement of the StreamNet Data Exchange Standard working through the Steering Committee.
H. IDFG infrastructure maintenance and base operations	10/1/2013	9/30/2014	Active	IDFG StreamNet will maintain its computer infrastructure and operations to assure efficient and effective management and flow of data internally and from the tribe to the StreamNet database. Specific actions may include: 1. Computer system administration, including maintenance and upgrades to hardware and software, backup and recovery, and system security, as necessary 2. Application of appropriate data management and QA/QC procedures in loading and managing data and creation of metadata 3. Creation and maintenance of interfaces and applications to enhance data flow efficiency 4. Participation in routine management and improvement of the StreamNet Data Exchange Standard working through the Steering Committee.
I. MFWP infrastructure maintenance and base operations	10/1/2013	9/30/2014	Active	MFWP StreamNet will maintain its computer infrastructure and operations to assure efficient and effective management and flow of data internally and from the tribe to the StreamNet database. Specific actions may include: 1. Computer system administration, including maintenance and upgrades to hardware and software, backup and recovery, and system security, as necessary 2. Application of appropriate data management and QA/QC procedures in loading and managing data and creation of metadata 3. Creation and maintenance of interfaces and applications to enhance data flow efficiency 4. Participation in routine management and improvement of the StreamNet Data Exchange Standard working through the Steering Committee.
J. ODFW infrastructure maintenance and base operations	10/1/2013	9/30/2014	Active	ODFW StreamNet will maintain its computer infrastructure and operations to assure efficient and effective management and flow of data internally and from the tribe to the StreamNet database. Specific actions may include: 1. Computer system administration, including maintenance and upgrades to hardware and software, backup and recovery, and system security, as necessary 2. Application of appropriate data management and QA/QC procedures in loading and managing data and creation of metadata 3. Creation and maintenance of interfaces and applications to enhance data flow efficiency 4. Participation in routine management and improvement of the StreamNet Data Exchange Standard working through the Steering Committee 5. Manage and maintain Oregon's web-based data integration, communication, data sharing, and data transfer systems and their links to StreamNet. Priority will be on internal systems that provide access to priority data sets.
K. WDFW infrastructure maintenance and base operations	10/1/2013	9/30/2014	Active	WDFW StreamNet will maintain its computer infrastructure and operations to assure efficient and effective management and flow of data internally and from the tribe to the StreamNet database. Specific actions may include: 1. Computer system administration, including maintenance and upgrades to hardware and software, backup and recovery, and system security, as necessary 2. Application of appropriate data management and QA/QC procedures in loading and managing data and creation of metadata 3. Creation and maintenance of interfaces and applications to enhance data flow efficiency 4. Participation in routine management and improvement of the StreamNet Data Exchange Standard working through the Steering Committee.
L. StreamNet participants provide data reference documents and support library collection development	10/1/2013	9/30/2014	Active	All project participants, on an ongoing basis, to document StreamNet data and build the StreamNet Library collection will 1. Obtain reference documents for all data developed under WE 159 and submit them for inclusion in the collection and catalog, and, 2. Encourage and support the flow of agency reports and publications related to Columbia Basin fish and wildlife resources to the library.

Milestone Title	Start Date	End Date	Status	Milestone Description
Deliverable: M. Project infrastructure and databases are maintained		9/30/2014	Active	*See the Deliverable Specification above*

AI: 189. Coordination-Columbia Basinwide

Title: Coordination at the regional scale

Description: All participants in the StreamNet project will coordinate with a wide range of entities to assure coordination of data flow, improve data sharing, promote data standards, and encourage widespread participation in adoption of modern information technology to improve fish and wildlife management and recovery programs. Highest priority for coordination activities will be for entities participating in the Fish and Wildlife Program (BPA, NPCC, PNAMP, Federal Caucus, FWP project sponsors, etc.) and the agencies that create the data that are managed through the StreamNet program. Additional coordination with entities not participating directly in the FWP may take place on an as-possible basis to promote the acquisition of priority data and inform about StreamNet functions and available data. The project may be promoted through participation in technical and professional groups on an opportunistic basis.

Deliverable Specification: StreamNet participants coordinate with regional entities to manage and improve data sharing at the Columbia Basin scale.

Milestone Title	Start Date	End Date	Status	Milestone Description
A. PSMFC coordinate to support the Fish and Wildlife Program	10/1/2013	9/30/2014	Active	PSMFC, on an opportunistic basis and within budgeted resources, will work with regional entities to contribute data management expertise toward development of projects and activities within the scope of the Fish and Wildlife Program and serve as a data management resource to the FWP. Specific activities may include: 1) Top priority will be to coordinate with all entities involved with the Coordinated Assessments and sponsors of BPA funded projects; 2) Participate with the Pacific Northwest Aquatic Monitoring Partnership by serving on the PNAMP Steering Committee, the Data Management Leadership Team, Coordinated Assessment Core Team, and various PNAMP work groups, including Metadata, Monitoring Explorer, Effectiveness Monitoring, etc. 3) Work with PNAMP, BPA, NPCC and others to assist with development of a consistent approach to fish and aquatic data management and sharing to support data flow in the Columbia Basin; 4) Continue to participate with the NPCC and others in support of data flow to High Level Indicators; 5) Work with OFWIM and monitoringresources.org to complete a survey and assessments/reviews of hand held technologies and submit recommendations on suitability; and, 6) Provide data related support (expertise and guidance) to other FWP related programs and projects as requested and as possible under existing resources.
B. PSMFC coordination with data source agencies	10/1/2013	9/30/2014	Active	The Region, on an opportunistic basis and within budgeted resources, will work with the StreamNet partners and other data sources to determine their data availability, data management capabilities and needs, and interest in providing data. We will work toward supporting the data source agencies in developing the capabilities and tools (including database systems) to facilitate increased data flow, with particular emphasis placed on supporting systems to flow data efficiently to StreamNet, the Columbia Basin Coordinated Assessments, and High Level Indicators. A key focus this year will be working with the Colville Tribe as a new StreamNet participant to support tribal data flow.
C. PSMFC coordination outside the Fish and Wildlife Program	10/1/2013	9/30/2014	Active	PSMFC, on an opportunistic basis and within budgeted resources, will coordinate with other state, federal, or tribal agencies and various regional interagency planning and management work groups not funded through the FWP to enhance the collection and management of data related to management of fish and wildlife resources and the StreamNet mission. This may include efforts to support data for additional species, such as sturgeon, lamprey, etc., with top priority on ESA listed and candidate species. Little activity is planned in FY-14.
D. PSMFC promote the project through technical and professional organizations	10/1/2013	9/30/2014	Active	PSMFC will participate in technical and professional groups on an opportunistic basis and if resources allow to promote the flow of data to StreamNet and to publicize the data and services available from the project. The costs for this are listed under "Training" in the line item budget.

Milestone Title	Start Date	End Date	Status	Milestone Description
E. PSMFC support database workshop with PNAMP	10/1/2013	9/30/2014	Active	PSMFC will continue to work with PNAMP to conduct a series of workshops or webinars for BPA funded data systems to identify opportunities to collaborate in supporting the finalization of BPA's data management strategy actions and coordinate data management over the basin. Discussion topics will include integration of ISEMP, LCRE (Corps Estuary Data System; STEM; PTAGIS; RMIS and a new Genetics Database; coordination among regional scale database projects; data documentation; etc.
F. PSMFC collaborate to display locations and types of monitoring data available	10/1/2013	9/30/2014	Active	PSMFC StreamNet will continue to collaborate with the Monitoringresource.org Monitoring Explorer pilot in development of applications to use web services to display locations and types of monitoring data available in StreamNet along with data from other participating agencies and projects. StreamNet will encourage PTAGIS to support the tool. Initially this pilot effort will primarily focus on the Grande Ronde and John Day, and it is not limited to fish abundance and distribution data; with incorporation of mm.org protocol's metric categories, it should be easy to share and display data from projects with published protocols.
G. PSMFC support documentation of monitoring protocols	10/1/2013	9/30/2014	Active	PSMFC will work with BPA and BPA project sponsors upon request to support sponsors in describing the data management components of their fish monitoring protocols. Initial efforts will include supporting project data stewards in assisting project sponsors to upload data and data analysis forms to their protocols and methods, and participating in discussions of standardizing monitoring protocols and field data capture. Future work may include support by StreamNet data stewards working with their agency biologists to create standard data entry and data analysis forms (See CHaMP and SRFB effectiveness protocol as examples), but this work by data stewards is on an 'as possible under current funding' basis.
H. PSMFC collaborate in discussions of non-structured tributary and estuary data	10/1/2013	9/30/2014	Active	PSMFC will collaborate, as requested, in discussions with Sitka, the Corps of Engineers, and STEM on exchange and storage of non-structured tributary and estuary data, with a primary goal to propose recommended solutions to prevent duplication of effort.
I. CTCR regional coordination	10/1/2013	9/30/2014	Active	CTCR StreamNet will coordinate with a variety of entities in the Columbia Basin to support efficient and effective implementation of information technology to support improved data flow. Coordination efforts will be prioritized first towards support of the Fish and Wildlife Program, including the Coordinated Assessments project and other High Level Indicator efforts as for NPCC. Coordination will be maintained with programs within the Colville Tribe to facilitate data flow and IT technology improvements, and with other data source agencies if they produce information of use to the tribe and its other regional scale coordination efforts. Coordination with other entities outside the Fish and Wildlife Program will be conducted on an as needed and as time permits basis to promote coordination of data flow to and from the Colville Tribe.
J. FWS coordinate with national fish hatcheries to assist with data acquisition	10/1/2013	9/30/2014	Active	FWS will coordinate with national fish hatcheries and other data sources as needed to promote efficient acquisition of data for exchange with the StreamNet database.
K. IDFG coordination with the Fish and Wildlife Program	10/1/2013	9/30/2014	Active	IDFG will continue to participate with various components of the Fish and Wildlife Program, including Coordinated Assessments and high level indicators, the PNAMP Data Management Leadership Team and other PNAMP efforts regarding regional data management.
L. IDFG coordination with data source agencies	10/1/2013	9/30/2014	Active	IDFG StreamNet will coordinate with IDFG, other agencies, tribes, regional groups, non-profits, etc. for the purpose of enhancing the collection and management of data related to the StreamNet project mission and efficient flow of data to the StreamNet database and Coordinated Assessments.
M. IDFG coordinate with with agencies/organization outside the Fish and Wildlife Program	10/1/2013	9/30/2014	Active	IDFG will coordinate with agencies, tribes and organizations not part of the Fish and Wildlife Program that collect data relevant to StreamNet and Coordinated Assessments.
N. MFWP provide support to F&W Program development activities	10/1/2013	9/30/2014	Active	MFWP, on an as needed or requested basis and as base level resources will allow, will work with Columbia Basin regional entities to contribute data management expertise on activities within the Fish and Wildlife Program and serve as a data management resource to the FWP.
O. MFWP coordinate with data source agencies	10/1/2013	9/30/2014	Active	MFWP StreamNet staff will coordinate with data source agencies where necessary and appropriate. StreamNet staff will closely coordinate with the MFWP Fisheries Division in an effort to ensure that data is managed and maintained in an efficient and effective manner.

Milestone Title	Start Date	End Date	Status	Milestone Description
P. MFWP coordination with related activities outside of the FWP	10/1/2013	9/30/2014	Active	MFWP, on an opportunistic basis and within budgeted resources, will coordinate with other agencies, tribes, regional groups, non-profits, etc. that are not part of the Fish and Wildlife Program for the purpose of enhancing the collection, management and dissemination of data related to the StreamNet project mission. However, this is a low priority milestone.
Q. ODFW provide support to F&W Program development activities	10/1/2013	9/30/2014	Active	ODFW, on an as needed or requested basis and as resources allow, will work with regional entities to contribute data management expertise toward development of activities within the scope of the Fish and Wildlife Program and serve as a data management resource to the FWP. Particular emphasis this year will be placed on coordinating with the entities involved with the Coordinated Assessments (CAPG, PNAMP work groups, etc.) and assisting BPA project sponsors document and upload standard data entry forms and analysis forms for their protocols and methods. Lower priority will be placed on coordinating with regional entities on other data efforts outside the CA process.
R. ODFW coordination with data source agencies	10/1/2013	9/30/2014	Active	ODFW StreamNet, on an opportunistic basis and within budgeted resources, will coordinate with ODFW, other agencies, tribes, regional groups, non-profits, etc. for the purpose of enhancing the collection and management of data related to the StreamNet project mission and efficient flow of data to the StreamNet database.
S. ODFW coordination with ODFW GIS Coordination Group	10/1/2013	9/30/2014	Active	ODFW will continue to spearhead the ODFW GIS Coordination Group's efforts to assist in the protection and enhancement of Oregon's fish, wildlife, and habitats through the development, acquisition, analysis, and dissemination of geographic information. Priority will be on facilitating metadata & flow diagram development with field staff and improving collection site locational accuracy of field projects collecting recovery plan data.
T. ODFW coordination with related activities outside of the FWP.	10/1/2013	9/30/2014	Active	ODFW, on an opportunistic basis and within budgeted resources, will coordinate with other agencies, tribes, regional groups, non-profits, etc. that are not part of the Fish and Wildlife Program for the purpose of enhancing the collection and management of data related to the StreamNet project mission.
U. WDFW provide support to Fish and Wildlife Program development activities	10/1/2013	9/30/2014	Active	WDFW, on an as needed or requested basis and as base level resources allow, will work with regional entities to contribute data management expertise toward development of activities within the scope of the Fish and Wildlife Program and serve as a data management resource to the FWP. Particular emphasis this year will be placed on coordinating with the entities involved with the Coordinated Assessments and assisting BPA project sponsors document and upload standard data entry forms and analysis forms for their protocols and methods. Lower priority will be placed on coordinating with regional entities on other data efforts such as High Level Indicators or development of other types of data.
V. WDFW coordination with data source agencies	10/1/2013	9/30/2014	Active	WDFW StreamNet, on an opportunistic basis and within budgeted resources, will coordinate with WDFW, other agencies, tribes, regional groups, non-profits, etc. for the purpose of enhancing the collection and management of data related to the StreamNet project mission and efficient flow of data to the StreamNet database.
W. WDFW coordination with related activities outside of the FWP	10/1/2013	9/30/2014	Active	WDFW, on an opportunistic basis and within budgeted resources, will coordinate with other agencies, tribes, regional groups, non-profits, etc. that are not part of the Fish and Wildlife Program for the purpose of enhancing the collection and management of data related to the StreamNet project mission.
Deliverable: X. StreamNet actively coordinates at the regional scale to support data sharing		9/30/2014	Active	*See the Deliverable Specification above*

AJ: 119. Manage and Administer Projects

Title:	Manage project activities
Description:	Administer all aspects of the StreamNet project at the regional and partner agency levels, including oversight of budget, personnel (including training and staff development, and hiring and supervision of data technicians in support of the Coordinated Assessments), work statement / budget preparation and implementation, coordination among participating agencies, and project guidance through active participation in the StreamNet Steering Committee.
Deliverable Specification:	Project staff and budgets are effectively managed, work detailed in this SOW is accomplished, and required SOW/budget documents are prepared and submitted on schedule.

Milestone Title	Start Date	End Date	Status	Milestone Description
A. Begin drafting contract renewal documents and conduct internal review as needed	5/1/2014	5/1/2014	Active	PSMFC and subcontracting partners will begin drafting contract renewal documents (work statement, budget, equipment inventory) 5 months prior to the contract start date.
B. PSMFC submit contract renewal package (SOW, Excel budget, property inventory) to BPA COTR	5/1/2014	7/1/2014	Active	Once your statement of work (SOW) in Pisces is complete, and you have attached your line-item budget (LIB) and property inventory (PI) (if required), click the "Submit" button on the SOW tab to notify your COTR the package is ready for review.
C. Address comments and revise SOW, LIB, and PI as needed to get BPA manager approval	7/1/2014	8/1/2014	Active	Once your COTR and his or her BPA manager have reviewed your contract renewal package and returned any comments to you, you will need to provide responses and changes as needed to achieve approval from the BPA manager, who will then forward the package to the Contracting Officer. This should be completed at least two months prior to the next contract start date, but may need to be 3 or 4 months depending on your internal processing time for contract signatures. If you have subcontracts that need to be signed prior to the contract start, it should be a minimum of 4 months.
D. Return signed contract to BPA's Contracting Officer within 30 days	8/1/2014	9/1/2014	Active	Respond to the CO and COTR indicating any problems with the contract within 20 days, or return the signed contract to the BPA Contracting Officer (CO) within 30 days.
E. Submit final invoice for prior contract within 90 days to facilitate contract closeout	10/1/2013	12/30/2013	Completed	Within 90 days of the last day of the PRIOR contract, the contractor shall issue a final invoice. In instances where more than 90 days is needed (e.g., because subcontractors have not invoiced), the contractor shall: 1. review records, 2. estimate all outstanding costs, and 3. provide BPA with a single, cumulative estimate of all completed, but uninvoiced work. This amount shall be emailed to FWinvoices@bpa.gov and the COTR.
F. Accrual - Submit September estimate to BPA	8/10/2014	9/10/2014	Active	Provide BPA with an estimate of contract work that will occur prior to September 30 but will not be billed until October 1 or later. Data must be input in to Pisces by September 10 (begins Aug 10, ends Sep 10).
G. Facilitate inputting Cost Share information into Pisces at the Project level	10/1/2013	11/15/2013	Completed	As lead project Proponent, PSMFC will solicit cost share information for the previous federal FY from project partners and enter previous FY's Cost Share information on the Project Cost Share tab by Nov 15 for all project partners. The subcontractors under this project will provide federal FY Cost Share information to PSFMC by Nov 1. (Milestone starts Sep. 30 and ends Nov. 15 for PSMFC, and ends Nov 1 for subcontractors)
H. Project oversight and guidance: Project management and Steering Committee	10/1/2013	9/30/2014	Active	All StreamNet cooperators will perform project oversight and guidance (at both sub-project and Regional levels) and will participate cooperatively in the StreamNet Steering Committee to guide the direction of the project, coordinate among agencies and resolve policy and technical issues for the project.
I. Project oversight and guidance: Supervision	10/1/2013	9/30/2014	Active	All StreamNet cooperators, except for FWS, will supervise project staff and provide guidance and staff development.
J. Project oversight and guidance: Budget control	10/1/2013	9/30/2014	Active	All StreamNet cooperators will manage expenditures to accomplish the jobs in the Statement of Work within the approved budget.
Deliverable: K. Project is successfully administered		9/30/2014	Active	*See the Deliverable Specification above*

AK: 185. Produce Pisces Status Report

Title:	Periodic Status Reports for BPA
Description:	The Contractor shall report on the status of milestones and deliverables in Pisces. Reports shall be completed either monthly or quarterly as determined by the BPA COTR. Additionally, when indicating a deliverable milestone as COMPLETE, the contractor shall provide metrics and the final location (latitude and longitude) prior to submitting the report to the BPA COTR.
Deliverable Specification:	

Milestone Title	Start Date	End Date	Status	Milestone Description
A. Oct-Dec 2013 (10/1/2013 - 12/31/2013)	1/1/2014	1/15/2014	Completed	
B. Jan-Mar 2014 (1/1/2014 - 3/31/2014)	4/1/2014	4/15/2014	Active	
C. Apr-Jun 2014 (4/1/2014 - 6/30/2014)	7/1/2014	7/15/2014	Active	
D. Final Jul-Sep 2014 (7/1/2014 - 9/30/2014)	9/16/2014	9/30/2014	Active	

AL: 132. Produce (Annual) Progress Report

Title: Annual Report 1/1/2013 - 12/31/2013

Description: Produce a detailed annual report for Calendar year 2013, which may include information from Oct- Dec 2012 by March 2014 using BPA reporting tools in Taurus.

Deliverable Specification: Finalize and submit 2012 Annual Report to BPA for upload into Pisces of work conducted for the calendar year to be submitted to BPA COTR and RMESupport@bpa.gov.

Planned Metrics:
* Start date of reporting period : 1/1/2013
* End date of reporting period : 12/31/2013

Milestone Title	Start Date	End Date	Status	Milestone Description
A. Prepare for calendar year RM&E reporting	1/1/2014	3/1/2014	Completed	Updated reporting requirements apply to BPA fish and wildlife project sponsors who have the following work elements in their contract(s): 70 Install Equipment, 156 Develop RM&E Methods and Designs, 157 Collect/Generate/Validate Field and Lab Data, 158 Mark and Tag Animals, 159 Transfer/Consolidate Regionally Standardized Data, 160 Create/Manage/Maintain Database, and/or 162 Analyze/Interpret Data. Attend training. Due to regulatory reporting requirements, BPA needs all sponsors to have draft reports submitted in January and final reports completed in March to align with BPA's BiOp reporting timelines. Review all documentation and training materials in Taurus (www.cbfish.org) and create the report template for your technical report so you will know whether, or how much, your report will need to change to meet the new requirements. http://www.cbfish.org/Content/tutorials/ Sponsor_Reporting_Procedural_Guidance_Final%202-14.docx. (Milestone start/end: Mar 1-31)
B. Draft calendar year 2013 RM&E Technical Report and email MS Word version for BPA review	1/1/2014	1/31/2014	Completed	Use to create a template for your technical Annual Progress Report. Building off last year's report, develop a draft report on RM&E and data management actions and discuss relevancy of results to the Fish and Wildlife Program. Your report should include the data, analyses, and data management completed by your project by December 31st. Any activity after the last day of the Calendar Year should be included in a subsequent report. For example, if you have completed redd surveys, but have not completed the analyses, you will report the preliminary data (# of redds). You do not need to rush your analyses; they may be reported in the subsequent report. Upon completion, email a draft to your COTR and RMEsupport@bpa.gov for BPA review of the draft. (Milestone start/end: September 15 - January 15)
C. Upload MS Word calendar year 2013 RM&E Technical Report	2/24/2014	3/1/2014	Completed	Address BPA comments and upload Calendar Year Report into Pisces Attachments tab as an MS Word document as a "Technical, Draft." Upon completion, email draft to COTR and RMEsupport@bpa.gov (Note: This MS Word format is a change in policy. BPA staff will now convert it to a PDF). (Milestone start/end: Jan 16 - Mar 15)
D. Review progress report format requirements	1/1/2014	1/31/2014	Completed	Contractor must review formatting requirements before starting the first draft of their report. Please follow the BPA-required format. http://www.efw.bpa.gov/IntegratedFWP/technicalreports.aspx
E. Submit progress report for internal contractor review	1/31/2014	2/28/2014	Completed	Use this milestone if the annual report requires an internal review before being reviewed externally. Make sure to allow for both technical and policy reviews if necessary.
F. Submit progress report for external review	3/3/2014	3/14/2014	Completed	Use this milestone if the progress report requires external review.
G. Confirm BPA has posted the progress report	3/3/2014	3/31/2014	Completed	It usually takes BPA 30-45 days to post the final version of a report. This milestone's end date should therefore be 45 days after the Deliverable milestone. You will receive an email from BPA confirming that your report has been finalized and posted to the web.
H. Project participants provide input to annual report	1/1/2014	1/15/2014	Completed	Project participants submit their input to the 2013 annual progress report to PSMFC 15 days prior to the date the report is due to BPA. Draft is due to BPA by the end of January.
I. PSMFC uploads draftCalendar-2013 annual report to BPA (Pisces)	2/26/2014	3/1/2014	Completed	Produce a detailed annual report for Calendar year 2013, which may include information from Oct - Dec 2012 by March 2014 using BPA reporting tools and report template in Taurus. PSMFC will consolidate input from all project participants to prepare and submit the annual report in draft form for internal review and to BPA by the end of January, with the final due March 1.
Deliverable: J. Annual report submitted to BPA		3/3/2014	Completed	*See the Deliverable Specification above*

AM: 141. Produce Other Report

    Title: 2013 FCRPS BiOp Report for BPA

Description: Submit BiOp RM&E Report in Taurus for Calendar Year 2013. Projects that have claimed that they support one or more RM&E RPAs (i.e., RPAs 50-73) under the FCRPS BiOp are required to report their results. To facilitate the summary of these results across the entire Columbia River Basin, and to provide more clarity as to the format required under the BiOp, separate BiOp reports are now required to be completed online. If desired, the required information can be prepared in MS Word, and be pasted into Taurus.

The online BiOp RPA report in Taurus (www.cbfish.org) should include the data, analyses, and data management completed by your project by December 31st. Any activity after the last day of the Calendar Year should be included in a subsequent BiOp report. For example, if you have completed redd surveys, but have not completed the analyses, you will report the preliminary data (# of redds). You do not need to rush your analyses; they may be reported in the subsequent RPA report.

For each RPA, follow the directions in Taurus for each of the three sections and, as appropriate, input graphical or tabular data, accompanied by explanatory text. These are cumulative summary reports and should show relevant results for the life of your project. Each year, note trends and whether they are changing from one year (or groups of years) to the next.

Deliverable Specification: 2013 FCRPS BiOp Report for BPA for Calendar year January -December 2013

Milestone Title	Start Date	End Date	Status	Milestone Description
A. BiOp RM&E Projects: RPA reporting – download your associated RPA questions from Taurus	10/1/2013	1/31/2014	Completed	To prepare for your RPA report, go to Taurus (www.cbfish.org) and find your RPA reporting requirements (those with "Input Needed") so you will know how much time to set aside for this task.
B. BiOp RM&E Projects: RPA reporting - complete draft calendar year report in Taurus	1/1/2014	3/3/2014	Completed	When you are done, email RMEsupport@bpa.gov and the COTR to send them your working draft in Word or to notify them to review in Taurus.
C. BiOp RM&E Projects: RPA reporting – finalize the calendar year 2013 RPA report in Taurus	2/3/2014	3/15/2014	Completed	The final version is due 75 days after the end of the calendar year.
Deliverable: D. 2013 FCRPS BiOp Report for BPA		3/15/2014	Completed	*See the Deliverable Specification above*

Inadvertent Discovery Instructions

BPA is required by section 106 of the National Historic Preservation Act (NHPA) to consider the effects of its undertakings on historic properties (16 USC 470). Prior to approving the expenditure of funds or conducting a federal undertaking, BPA must follow the section 106 process as described at 36 CFR 800. Even though BPA has completed this process by the time an undertaking is implemented, if cultural materials are discovered during the implementation of a project, work within the immediate area must stop and the significance of the materials must be evaluated and adverse effects resolved before the project can continue (36 CFR 800.13(b)(3)). The Inadvertent Discovery of Cultural Resources Procedure form outlines the steps to be taken and notifications to be made. If the undertaking takes place on tribal lands (16 USC 470w), BPA must also "comply with applicable tribal regulations and procedures and obtain the concurrence of the Indian tribe on the proposed action" (36 CFR 800.13(d)).

Inadvertent Discovery of Cultural Resources Procedure form:
http://www.efw.bpa.gov/IntegratedFWP/InadvertentDiscoveryProcedure.pdf