



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 (CIS-NED) FY11
Contract #: 49053 [ISSUED] **Amendment #:** 1 [ISSUED]
Province: Non-Provincial **Subbasin:** Basinwide
Workorder ID: 35794 **Task ID:** 1
Contract Type: Contract (IGC) **Pricing Type:** Cost Reimbursement (CNF)
Contractor(s): Pacific States Marine Fisheries Commission (PSMFC) (Prime - PACISTAT00)
BPA Internal Ref: Amd1
SOW Validation: Last validated 11/08/2010 with 0 problems, and 0 reviewable items
Contract Documents: [Budget - Contract \(11/08/2010\)](#) CCR-21861 Updated Budget

Contacts:

Name	Role	Organization	Phone/Fax	Email	Address
Kristi Van Leuven	Contracting Officer	Bonneville Power Administration	(503) 230-3605 / NA	kjleuven@bpa.gov	P.O Box 3621 Mailstop - NSSP-4 Portland, OR 97208-3621
Bruce Schmidt	Contract Manager	Pacific States Marine Fisheries Commission (PSMFC)	(503) 595-3113 / (503) 595-3232	bruce_schmidt@psmfc.org	205 SE Spokane St Suite 100 Portland OR 97202-6413
Cedric Cooney	Technical Contact	Oregon Department Of Fish and Wildlife (ODFW)	(541) 757-4186 247 / NA	cedric.x.cooney@state.or.us	7118 NE Vandenberg Ave Corvallis OR 97330
Janet Hess-Herbert	Technical Contact	Montana Fish, Wildlife and Parks (MFWP)	(406) 444-7722 / NA	jhessherbert@mt.gov	
Bart Butterfield	Technical Contact	Idaho Department of Fish and Game (IDFG)	(208) 287-2722 / NA	bbutterf@idfg.idaho.gov	600 S Walnut St., Box 25 Boise ID 83707
Mike Banach	Technical Contact	Pacific States Marine Fisheries Commission (PSMFC)	(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	coxabc@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 (PSMFC)	(503) 595-3100 / NA	michael_arredondo@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 (PSMFC)	(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	729 NE Oregon St., Suite 200 Portland OR 97232
Stan Allen	Supervisor	Pacific States Marine Fisheries Commission (PSMFC)	(503) 595-3100 / NA	stan.allen@psmfc.org	205 SE Spokane St Suite 100 Portland OR 97202-6413
Amy Roberts	Technical Contact	Pacific States Marine Fisheries Commission (PSMFC)	(503) 595-3100 / NA	amy_roberts@psmfc.org	
Greg Wilke	Technical Contact	Pacific States Marine Fisheries Commission (PSMFC)	(503) 595-3157 / (503) 595-3232	greg_wilke@psmfc.org	205 SE Spokane Street, Suite 100 Portland OR 97202
Rosemary Mazaika	Contract Approver	Bonneville Power Administration	(503) 230-5869 / (503) 230-5699	rxmazaika@bpa.gov	P.O. Box 3621 KEWL-4 Portland, OR 97208-3621
Anne Creason	COTR	Bonneville Power Administration	(503) 230-3859 / NA	amcreason@bpa.gov	

Work Element Table of Contents:

Work Element - Work Element Title	EC Needed*	Estimate	(%)
A : 159. Transfer/Consolidate Regionally Standardized Data - Conduct site visits to obtain updated data from biologist		\$10,500	(0 %)
B : 159. Transfer/Consolidate Regionally Standardized Data - Develop anadromous fish distribution data		\$63,000	(3 %)
C : 159. Transfer/Consolidate Regionally Standardized Data - Develop resident fish distribution data (top priority for MFWP, lower priority for others)		\$63,000	(3 %)
D : 159. Transfer/Consolidate Regionally Standardized Data - Develop data for adult abundance in the wild		\$78,800	(4 %)
E : 159. Transfer/Consolidate Regionally Standardized Data - Develop hatchery return data		\$63,000	(3 %)
F : 159. Transfer/Consolidate Regionally Standardized Data - Develop dam and fish passage facility data (mid-priority), update on 3 year cycle		\$63,000	(3 %)
G : 159. Transfer/Consolidate Regionally Standardized Data - Develop hatchery facility data (key dataset), update on 3 year cycle		\$63,000	(3 %)



<u>Work Element - Work Element Title</u>	<u>EC Needed*</u>	<u>Estimate</u>	<u>(%)</u>
H : 159. Transfer/Consolidate Regionally Standardized Data - Develop hydrography data, including stream, lake and reservoir layers		\$68,400	(3 %)
I : 159. Transfer/Consolidate Regionally Standardized Data - Develop fish barrier data, update on 3 year cycle		\$63,000	(3 %)
J : 159. Transfer/Consolidate Regionally Standardized Data - Develop fish age data		\$65,000	(3 %)
K : 159. Transfer/Consolidate Regionally Standardized Data - Develop other data sets		\$56,800	(3 %)
L : 159. Transfer/Consolidate Regionally Standardized Data - Document data sources and help build the library collection		\$5,300	(0 %)
M : 159. Transfer/Consolidate Regionally Standardized Data - Obtain key salmon and steelhead VSP Indicators to support the Basin-wide Coordinated Assessments		\$296,717	(13 %)
N : 160. Create/Manage/Maintain Database - System Administration		\$174,500	(8 %)
O : 160. Create/Manage/Maintain Database - Application and interface development		\$149,000	(7 %)
P : 160. Create/Manage/Maintain Database - Data (content) management		\$166,000	(7 %)
Q : 160. Create/Manage/Maintain Database - Data exchange standard development		\$155,500	(7 %)
R : 161. Disseminate Raw/Summary Data and Results - Develop and maintain Internet sites for data dissemination		\$63,000	(3 %)
S : 161. Disseminate Raw/Summary Data and Results - Respond to data/information requests		\$140,000	(6 %)
T : 161. Disseminate Raw/Summary Data and Results - Promote availability of StreamNet data and encourage participation in the project		\$25,000	(1 %)
U : 189. Regional Coordination - Support regional efforts under the Fish and Wildlife Program		\$43,078	(2 %)
V : 189. Regional Coordination - Coordinate with and support data source agencies		\$43,000	(2 %)
W : 189. Regional Coordination - Coordinate with related activities outside of the FWP		\$9,000	(0 %)
X : 189. Regional Coordination - Support regional scale reporting on status and trends for HLI, BiOp, etc.		\$53,100	(2 %)
Y : 119. Manage and Administer Projects - Manage project activities		\$199,000	(9 %)
Z : 132. Produce (Annual) Progress Report - Annual report		\$57,000	(3 %)
AA : 185. Produce Pisces Status Report - Periodic Status Reports for BPA		\$4,700	(0 %)
Total:		\$2,241,395	

* Environmental Compliance (EC) needed before work begins.

Contract Description:

StreamNet Project



BPA Project No.: 1988-108-04
FY 2011 Work Statement
October 1, 2010 through September 30, 2011

The StreamNet Project, a cooperative data compilation and data management project under the FWP focused on fish and fish related data, provides regionally standardized, georeferenced fish related data and data related services. Emphasis of the project in FY-11 in addition to routine data acquisition, standardization, georeferencing and update is to support regional scale reporting (e.g., SOTR, HLI, etc.), promote and support development of data management systems in the data source agencies to improve data flow and efficiency, and to assist the basin-wide Coordinated Assessments. Primary data emphasis is on focal species as identified through subbasin planning.

StreamNet is continuing its participation in regional scale collaborative efforts, including PNAMP and CBFWA's Status of the Resource report (SOTR). A primary focus will be supporting the Cooperative Assessment of defined salmon and steelhead populations which is currently being planned. Initial scoping work is being initiated in FY-10, and the FY-11 work statement includes significant support work to locate, describe and acquire derived Indicators for Viable Salmonid Populations (VSP). This work will be dependent on more detailed instructions that are currently in development and on additional funding or major revision of existing tasks.

Key components of planned emphasis in fiscal year 2011 include the following:

- Emphasis on data to feed regional scale reporting at a high level. High priority will be on the raw or field level data that are needed to provide high level assessments of population trends (abundance and productivity) to regional scale reporting mechanisms, focusing initially on CBFWA's SOTR. We anticipate that these same data will also be needed to calculate abundance and productivity metrics under other High Level Indicator efforts. Emphasis in FY-11 will be on data for the abundance and distribution of focal species (as identified in the Subbasin Plans) in the SOTR.
- Establishing automated data flow from the StreamNet database to regional scale reporting through the SOTR. We will maintain the XML data feeds for SOTR and will work to assist CBFWA with additional data types, as possible.
- Emphasis on automating data flow to improve speed of data delivery from the source agencies to the regionally standardized database at StreamNet. Speed of updating time series of data was identified as a significant issue at the 2006 Data Workshop and the CBFWA Data Management Framework Subcommittee. Following a successful test, we will download data from the new Idaho Fish and Wildlife Information System databases in Idaho Fish and Game directly to StreamNet and will continue to provide programming support for further development of the system. This improves data delivery speed and also automates translation into the regional data format. Similar efforts will be pursued with other data source agencies, based on their priorities and capabilities, to assist them as they move toward implementing additional information technology, including the JMX juvenile abundance database effort in WDFW and the abundance reporting database in ODFW. The systems development envisioned would also be required in any regional move toward development of distributed database systems approaches for regional data sharing.
- Emphasis on data systems and data delivery that support the Basin-wide Cooperative Assessments under recovery planning and the BiOp. StreamNet partners will work within their agencies, CBFWA, PNAMP and recovery planners to determine BiOp data needs and develop approaches for providing needed data.
- Refine our strategy to compensate for lost staffing. The recent COLA is insufficient to offset the many years of level funding that unfortunately led to reduction of data technician staff, particularly in WDFW and ODFW. As a result, WDFW StreamNet had to limit data acquisition to only the lower Columbia Basin subbasins, and ODFW StreamNet has taken a subbasin by subbasin approach to acquiring data for focal species, but may be unable to address all subbasins each year. Several components of the project have moved some of their staff time to other funding sources, but for other work. Without funding to restore staffing levels, strategy options may include 1) encouraging data source agencies to emphasize development of agency-wide database approaches, 2) increased automation of data exchange where made possible by the first option, 3) continue or increase reliance on other funding sources to support specialized staff to free up funding to support additional data technicians until automated data exchanges become more feasible, and 4) attempt to identify funding to leverage efforts that meet goals for the project and other funding sources. Without changes, it will be necessary to update some data types only on an



every other year basis or skipping parts of a state, a significant departure from our goal of increasing speed of data compilation. As currently budgeted in FY-11, data compilation in Washington will be limited to the lower Columbia subbasins, and in Oregon all subbasins may not be included in data capture.

- Attempt to acquire data from tribal programs. Much of the focus on tribal data has shifted to CRITFC under the Accords, but StreamNet partners are increasing contacts with non-CRITFC tribes to assist with data system development and data flow.

The StreamNet statement of work is organized around seven Work Elements, with multiple individual WE Titles:

1. WE 159 Transfer/Consolidate Regionally Standardized Data. This work element encompasses the acquisition, standardization, georeferencing and consolidation of fish related data by the agencies that participate in the StreamNet project. This also includes acquisition of source documents for all acquired data and submission of the references to the StreamNet Library at CRITFC. Specific data types involved are detailed in the milestones in the work statement.
2. WE 160 Create/Manage/Maintain Database. All components of the StreamNet project maintain databases and computer systems to support their work at both the source agency and regional (PSMFC) levels. This work includes maintenance and needed upgrade of the hardware and software systems, development of applications to assist in data management and manipulation, development of standard data formats to assure data consistency across the region, and maintenance of regional base data layers essential for management and depiction of data including the PNW 1:100,000 routed hydrography (stream layer), a new interim mixed scale hydrography, and various general GIS layers.
3. WE 161 Disseminate Raw/Summary Data and Results. Data from StreamNet and independent data sets from the Data Store, maps, data references, and various other materials are disseminated primarily through the StreamNet website www.streamnet.org. Other data services include responding to requests for information from individuals, subbasin planners, other FWP supported projects, watershed councils, recovery teams, agencies and regional entities.
4. WE 189 Regional Coordination. StreamNet coordinates with a variety of other database projects and regional initiatives, including CBFWA (SOTR, Data Management Framework Subcommittee), PNAMP (Steering Committee, Data Management Leadership Team, other work groups), HSRG, NPCC, ISEMP, subbasin planners, recovery planners, data source agencies, etc. The purpose of coordination is to facilitate flow of data, provide data management expertise, and avoid duplication of efforts. A primary emphasis in FY-11 will be to support the Region-wide Cooperative Assessments of populations of salmon and steelhead.
5. WE 119 Manage and Administer Projects. All project participants contribute to management of the StreamNet project, including managing their own respective components and through participation in the StreamNet Steering Committee.
6. WE 132 Produce (Annual) Progress Report. All project participants contribute to a detailed annual report of activities and accomplishments throughout the fiscal year.
7. WE 185 Produce Pisces Status Report. This work element entails completing and submitting abbreviated quarterly and final status reports in the Pisces system.

The bulk of the project consists of sub-projects within four state fish and wildlife agencies (WA, OR, ID and MT) and US Fish and Wildlife Service to develop data and databases within the respective agencies and facilitate data transfer in regionally consistent format. In addition to administratively housing the StreamNet sub-projects, these cooperating agencies also contribute in kind support. The kind and amount of support varies between agencies. Most agencies provide at least some salary support for their respective StreamNet Project Leader (from one or two months to full time). Several agencies contribute use of servers or other computer equipment and services that are not covered by charges for indirect costs. All contribute time by biologists and in some cases data entry staff to provide data to the project.

The Pacific States Marine Fisheries Commission (PSMFC) administers StreamNet and is responsible for the regional components of the project, including maintaining the regional database, assuring regional data



standardization, making data available in tabular and Geographic Information System (GIS) formats, building and operating Internet based data delivery systems, and posting the data for public access.

Details of the actual tasks performed by the project are detailed in the Milestones under each Work Element.

Statement of Work Report

Work Element Details

A: 159. Transfer/Consolidate Regionally Standardized Data

- Title:** Conduct site visits to obtain updated data from biologist
- Description:** Conduct scheduled site visits to offices of biologists in state, tribal and federal agencies to obtain the most recently available field data. This approach is used by only one of the agencies cooperating in the StreamNet project.
- Deliverable Specification:** New data are obtained by the MFWP StreamNet project to update the data categories listed in the other Data Development work element titles.
- Primary Focal Species:** Trout, Bull | Trout, Interior Redband | Trout, Rainbow | Sturgeon, White - All Populations except Kootenai R. DPS | Sturgeon, White - Kootenai River DPS | Whitefish, Mountain | Kokanee | Cutthroat Trout, Westslope | Cutthroat Trout, Yellowstone

Milestone Title	Start Date	End Date	Status	Milestone Description
A. MFWP visit agencies to capture fish data through scheduled visits to biologist offices	10/1/2010	9/30/2011	Active	MFWP will either visit or correspond with MFWP, other state agency and federal fisheries biologists early in 2011 to obtain fisheries field survey data collected during the 2010 field season. Data will include fish distribution; use type; survey, inventory and monitoring of target species; reptiles and amphibians and nongame species. Data tables in MFISH will be updated with the new data collected from biologists and documents, reports and electronic files assigning data LLID for stream routes and lakes. Additional fields may be collected for species undergoing a species assessment. This is still the primary method of obtaining data for StreamNet in Montana, in contrast to the other state StreamNet partners.
Deliverable: B. Conduct site visits to obtain updated data from biologists		9/30/2011	Active	<i>See the Deliverable Specification above</i>



B: 159. Transfer/Consolidate Regionally Standardized Data

Title: Develop anadromous fish distribution data

Description: Document the occurrence, distribution and life history characteristics of anadromous fish species. These data will be georeferenced to the StreamNet mixed scale hydrography, with intent to migrate to 24K when a regionally consistent 24K routed hydrography becomes available. Maintenance of this high priority data set will continue. The state StreamNet sub-projects will maintain the existing data on anadromous fish distribution and habitat use in their respective states. New distribution information will be incorporated as they become available. Updated distribution data will be converted to the regional Generalized Fish Distribution format and conveyed ("exchanged") to the regional StreamNet database at PSMFC, where they will be incorporated into the database.

Deliverable Specification: Data on the distribution and habitat use of anadromous fish are maintained, and updated as possible, by each of the state StreamNet sub-projects. Updated data are exchanged with the main StreamNet database at PSMFC and made available through the online data query system and interactive maps.

Primary Focal Species: Chinook - All Populations | Chum - Columbia River ESU | Coho - Lower Columbia River ESU | Coho - Unspecified Population | Sockeye - All Populations | Steelhead - All Populations

Milestone Title	Start Date	End Date	Status	Milestone Description
A. IDFG development of anadromous fish distribution data	7/1/2011	9/30/2011	Active	IDFG, on an ongoing and opportunistic basis, will update, maintain, correct and submit distribution information for anadromous focal species to the regional StreamNet database .
B. ODFW development of anadromous fish distribution data	10/1/2010	9/30/2011	Active	ODFW, on an ongoing and opportunistic basis, will update, maintain, correct and exchange anadromous fish distribution and documentation information with the regional StreamNet database in the DEF tied to the mixed scale hydrography.
C. WDFW development of anadromous fish distribution data	10/1/2010	9/30/2011	Active	WDFW will update Washington anadromous fish distribution data as they become available. Data will be converted to StreamNet format and exchanged when complete.
Deliverable: D. Anadromous fish distribution data maintained and updated as needed		9/30/2011	Active	<i>See the Deliverable Specification above</i>

C: 159. Transfer/Consolidate Regionally Standardized Data

Title: Develop resident fish distribution data (top priority for MFWP, lower priority for others)

Description: Document the occurrence, distribution and life history characteristics of resident fish species, at the most current available hydrography scale. Existing resident fish distribution will be maintained, and project participants will begin expanding data for additional species. This is high priority for Montana, and new data will be developed by the other states as time allows. Updated distribution data will be exchanged to the regional StreamNet database at PSMFC, where they will be incorporated into the database.

Deliverable Specification: Data on the distribution and habitat use of resident fish (species of primary interest) are maintained, and updated as possible, by each of the state StreamNet sub-projects. Updated data are exchanged with the main StreamNet database at PSMFC and made available through the online data query system and interactive maps.

Primary Focal Species: Cutthroat Trout, Coastal - Resident Populations | Cutthroat Trout, Lahontan | Cutthroat Trout, Westslope | Cutthroat Trout, Yellowstone | Kokanee | 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. IDFG development and exchange of resident fish distribution data	7/1/2011	9/30/2011	Active	IDFG, on an ongoing and opportunistic basis, will update, maintain, correct and submit distribution information for resident focal species to the regional StreamNet database.
B. MFWP development and exchange of resident fish distribution data	10/1/2010	9/30/2011	Active	MFWP will update, maintain, correct and exchange resident fish distribution and documentation information with the regional StreamNet database in the DEF tied to the current and/or appropriate hydrography scale, based on the information obtained through the biologists. In addition, information from the University of Montana Genetics Lab for cutthroat trout and redband trout and information from habitat restoration projects data/barriers will be used to determine distribution.
C. MFWP participate in regional species assessments to develop distribution data	10/1/2010	9/30/2011	Active	MFWP will organize, prepare and distribute materials and conduct assessments of resident fish species of concern if they occur during the fiscal year. Updates to the Yellowstone Cutthroat Trout assessment will be submitted to the StreamNet Data Store. MFWP will continue to explore the feasibility of completing a Bull Trout assessment for Montana. MFWP will participate in the larger regional effort of cutthroat assessments and work toward standardization of these data and incorporation into StreamNet.
D. ODFW development and exchange of resident fish distribution data	10/1/2010	9/30/2011	Active	ODFW, on an ongoing and opportunistic basis, will update, maintain, correct and exchange resident fish distribution and documentation information with the regional StreamNet database in the DEF tied to the mixed scale hydrography.
E. WDFW development of priority resident fish distribution data	10/1/2010	9/30/2011	Active	WDFW will continue compiling Washington priority resident fish species (bull trout, cutthroat trout, rainbow trout) distribution data. Available data will be converted to StreamNet format and submitted when complete.
Deliverable: F. Resident fish distribution data maintained, updated as possible		9/30/2011	Active	<i>See the Deliverable Specification above</i>

D: 159. Transfer/Consolidate Regionally Standardized Data

Title: Develop data for adult abundance in the wild

Description: Develop and maintain (update all annual trends) information on adult abundance for native fish species, resident and anadromous, including escapement, redd counts, peak spawner counts, trap counts, dam and weir counts, and resident fish populations (where calculated by other agencies) for 2010 data. This is a high priority data type. Also included in this data category are data gathered during spawning ground surveys regarding straying of hatchery fish onto spawning areas, i.e., marked/unmarked ratio and age and sex composition. These are lower priority under level funding. Updated data will be exchanged with the regional StreamNet database at PSMFC at least once per year in the Data Exchange Format (DEF).

Deliverable Specification: Data on the abundance of fish (primary emphasis on focal species) in the wild are maintained and updated by each of the state StreamNet sub-projects. Updated data are exchanged with the main StreamNet database at PSMFC.

Primary Focal Species: Chinook - All Populations | Coho - Lower Columbia River ESU | Coho - Unspecified Population | Sockeye - All Populations | Steelhead - All Populations



Milestone Title	Start Date	End Date	Status	Milestone Description
A. IDFG direct exchange of adult abundance data from IFWIS	4/1/2011	6/30/2011	Active	IDFG will extract natural spawner data for focal species from the Idaho Fish and Wildlife Information System's (IFWIS) Spawning Ground Survey database and submit it to the StreamNet database.
B. IDFG development of adult abundance data from sources outside the IFWIS	7/1/2011	9/30/2011	Active	IDFG will pursue and compile natural spawner data for focal species not entered into IFWIS. Acquisition of these data will depend on agency responses outside of IDFG StreamNet's control.
C. MFWP development of adult abundance data	10/1/2010	9/30/2011	Active	MFWP will input all 2010 stream and lake fish survey data into MFISH, including trend, count and references. The data will include all fish surveys, including one time, index streams, lake netting and all other types. Data will be provided as an independent data set to the Data Store due to no DEF for resident fish surveys. If a DEF for resident fish abundance is adopted and becomes available, the data will be exchanged in that format.
D. ODFW development of adult abundance data, first exchange	10/1/2010	4/15/2011	Active	ODFW will update and maintain all time series that are used in the Status of the Resource Report (as it currently exists, not including proposed future changes). Updating SOTR focal species trends that are not directly referenced in the SOTR, but where data are currently being collected, as well as other existing anadromous, resident, and non-game abundance and index trends, and any new trend information will be updated/added opportunistically as time and resources allow. Submitted data will be spatially referenced to an LLID. This is the first of two planned exchanges of data.
E. ODFW development of adult abundance data, second exchange	4/18/2011	9/30/2011	Active	ODFW will update and maintain all time series that are used in the Status of the Resource Report (as it currently exists, not including proposed future changes). Updating SOTR focal species trends that are not directly referenced in the SOTR, but where data are currently being collected, as well as other existing anadromous, resident, and non-game abundance and index trends, and any new trend information will be updated/added opportunistically as time and resources allow. Submitted data will be spatially referenced to an LLID. This is the second of two planned exchanges of data.
F. WDFW development of adult abundance data, lower Columbia. Upper contingent on funding.	1/3/2011	8/31/2011	Active	WDFW will provide 2010 natural spawner counts or estimates for 27 focal populations in 10 Washington lower Columbia subbasins. Data will be converted to StreamNet format and submitted when complete. IF additional funding becomes available, these data would also be developed for focal species populations in the 8 Washington mid and upper Columbia subbasins. In addition, WDFW will participate in discussions on how best to represent hatchery fraction data.
Deliverable: G. Fish abundance data are maintained and updated		9/30/2011	Active	<i>See the Deliverable Specification above</i>

E: 159. Transfer/Consolidate Regionally Standardized Data

Title: Develop hatchery return data

Description: Develop (update) and maintain hatchery trend information on the return, disposition and straying (e.g., from other hatcheries) of adult fish returning to hatcheries, including information on coded wire tags. This is an anadromous related task only. Priority will be placed on updating total return and egg take data through 2010. Development of disposition data is lower priority and would require additional resources. Updated data will be exchanged with the regional StreamNet database at PSMFC at least annually. This is a CBFWA Priority 2 data type.

Deliverable Specification: Data on the return of anadromous fish to the hatcheries are maintained and updated by the states and FWS StreamNet sub-projects. Updated data are exchanged with the main StreamNet database at PSMFC.

Primary Focal Species: Chinook - All Populations | Coho - Lower Columbia River ESU | Coho - Unspecified Population | Sockeye - All Populations | Steelhead - All Populations



Milestone Title	Start Date	End Date	Status	Milestone Description
A. FWS development of hatchery return data	10/1/2010	5/30/2011	Active	FWS will receive Fish Removal and Egg files from individual national fish hatcheries for anadromous salmonids, and add summarized data to the Hatchery Returns file up through return year 2010. Data will be exchanged with the regional StreamNet database.
B. IDFG direct exchange of hatchery return data from IFWIS	1/1/2011	3/31/2011	Completed	IDFG will extract hatchery return and disposition data for focal species from the IFWIS Hatchery Data Management System (HDMS) and submit it to the StreamNet database.
C. ODFW development of hatchery return data, contingent on priority	4/8/2011	9/30/2011	Active	If hatchery return data are identified as a common data element and a priority under through work under WE 189; Title "Coordinate with regional entities to support regional scale reporting of population status & trends"; Milestone D, ODFW will seek to compile, update and exchange this data type, as time and resources allow.
D. WDFW development of hatchery return data, lower Columbia subbasins, upper contingent on funding	4/1/2011	8/1/2011	Active	WDFW will provide 2010 hatchery returns data for anadromous focal populations returning to WDFW facilities in 10 Washington lower Columbia subbasins. Data will be converted to StreamNet format and submitted when complete. IF additional funding becomes available, these data would also be developed for focal species populations in the 8 Washington mid and upper Columbia subbasins.
Deliverable: E. Data on return of anadromous fish to the hatcheries are maintained and updated		9/30/2011	Active	<i>See the Deliverable Specification above</i>

F: 159. Transfer/Consolidate Regionally Standardized Data

Title: Develop dam and fish passage facility data (mid-priority), update on 3 year cycle
Description: Data on dam and fish passage facilities will be maintained and updated only on a periodic basis. Previously compiled data of this type will be maintained. Information will be updated on a rotating schedule every three years, beginning in FY-08.
Deliverable Specification: Existing data on dam and fish passage facilities are maintained. This lower priority data set will be updated and exchanged with the main StreamNet database at PSMFC this fiscal year (FY-11) on the three year rotating schedule.
Primary Focal Species: Chinook - All Populations | Coho - Unspecified Population | Cutthroat Trout, Coastal - All Anadromous Populations | Sockeye - All Populations | Steelhead - All Populations

Milestone Title	Start Date	End Date	Status	Milestone Description
A. IDFG development of dam and fish passage facility data	10/1/2010	9/30/2011	Active	IDFG will maintain existing dam and fish passage data. New data will not be actively pursued, but data that otherwise become available will be exchanged.
B. MFWP development of dam and fish passage facility data	10/1/2010	9/30/2011	Active	MFWP will update existing data on dams due to the three-year update schedule for these data.
C. ODFW development of dam and fish passage facility data	10/1/2010	9/30/2011	Active	ODFW will update and maintain existing data on dams and fish passage facilities as per the three year rotating schedule.
D. WDFW development of dam and fish passage facility data	10/1/2010	9/30/2011	Active	WDFW will maintain existing data on dams and update the data this year as per the three-year update schedule.
Deliverable: E. Data on dam and fish passage facilities are maintained and updated.		9/30/2011	Active	<i>See the Deliverable Specification above</i>

G: 159. Transfer/Consolidate Regionally Standardized Data

Title: Develop hatchery facility data (key dataset), update on 3 year cycle
Description: Develop and maintain information on anadromous and resident hatchery facilities, including information on location, design, management and authorization. Information will be updated on a rotating schedule every three years, beginning in FY-07.
Deliverable Specification: Data on hatchery facilities are maintained by the state StreamNet sub-projects. Updated data are exchanged with the main StreamNet database at PSMFC on three year rotating basis, with a full updated scheduled in FY-2013..
Primary Focal Species: Chinook - All Populations | Chum - Columbia River ESU | Coho - Lower Columbia River ESU | Coho - Unspecified Population | Sockeye - All Populations | Steelhead - All Populations | Kokanee



Milestone Title	Start Date	End Date	Status	Milestone Description
A. FWS maintain and update hatchery facility data	10/1/2010	9/30/2011	Active	FWS will collect, update and maintain data on hatchery facilities, and exchange with regional StreamNet.
B. IDFG maintain and update hatchery facility data	10/1/2010	9/30/2011	Active	IDFG will maintain existing hatchery facilities data.
C. MFWP maintain and update hatchery facility data	10/1/2010	9/30/2011	Active	MFWP will maintain and update data on hatchery facilities. Updates of public and private hatchery facilities database will be exchanged as necessary.
D. ODFW maintain and update hatchery facility data	10/1/2010	9/30/2011	Active	ODFW will maintain existing hatchery facility data, as scheduled.
E. WDFW maintain and update hatchery facility data	10/1/2010	9/30/2011	Active	WDFW will maintain data on hatchery facilities as scheduled.
Deliverable: F. Hatchery facilities data maintained		9/30/2011	Active	<i>See the Deliverable Specification above</i>

H: 159. Transfer/Consolidate Regionally Standardized Data

Title: Develop hydrography data, including stream, lake and reservoir layers

Description: Archive the regionally consistent routed hydrography layer at the 1:100,000 (100K) scale for which StreamNet is the official keeper, and adopt use of the Mixed Scale Hydrography for depicting StreamNet data. In FY-10 the 100K hydrography will be archived but not updated, although it will still be available for use. Emphasis this year has shifted to the StreamNet Mixed Scale (100K plus 24K streams that have attached fish data) Hydrography as a step toward the eventual conversion to 24K when a regionally consistent routed 24K hydrography becomes available from other entities. Effort will also be expended toward developing 24K LLID based hydrography from NHD linework. The lakes and reservoirs layer will also be maintained. These are essential data for georeferencing all other data.

Deliverable Specification: The 1:100,000 PNW hydrography layer and lakes layer are maintained and archived for use a by others. The new StreamNet "mixed scale" (100K X 24K) hydrography is used for georeferencing StreamNet data until a fully routed PNW 1:24,000 scale NHD is completed by USGS.

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 | Cutthroat Trout, Coastal - Resident Populations | Cutthroat Trout, Lahontan | Cutthroat Trout, Westslope | Cutthroat Trout, Yellowstone | Kokanee | 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. IDFG maintenance of hydrography for Idaho	10/1/2010	9/30/2011	Active	IDFG, on an ongoing basis, will maintain and update, as necessary, the 1:100,000 scale hydrography (streams and lakes) for Idaho, and remain involved in discussions about the mixed scale hydrography and development of the NHD.
B. MFWP maintenance of hydrography for Montana	10/1/2010	9/30/2011	Active	MFWP, using the NHD, will continue to update the routes using the updated NHD layer, including lakes; will participate in Steering Committee assignments for either the 1:24 K hydrography or the mixed scaled hydrography. NRIS became the steward of the NHD layers in FY-06 and will perform maintenance of the layer excluding the stream routes, which remain MFWP responsibility. MFWP will rely on NRIS for the development of the NHD 1:24 K layer through contracted services. MFWP will coordinate with other StreamNet states and discuss with the USGS and NRIS StreamNet's business needs for development a whole-stream identifier in the 24k hydrography. MFWP will coordinate with other StreamNet states and discuss with the USGS and NRIS, StreamNet's business needs and the development a whole-stream identifier in the 24k hydrography.
C. ODFW maintenance of hydrography for Oregon, first exchange	10/1/2010	4/15/2011	Active	ODFW, on an ongoing basis, will maintain and update as necessary the mixed scale hydrography (Framework subset) dataset for Oregon. Necessary changes will be exchanged. As needed and within available resources, ODFW may also contribute to the development of a second and/or third version mixed scale hydrography dataset, depending on the approach chosen. This is the first of two planned exchanges of data.
D. ODFW maintenance of hydrography for Oregon, second exchange	4/18/2011	9/30/2011	Active	ODFW, on an ongoing basis, will maintain and update as necessary the mixed scale hydrography (Framework subset) dataset for Oregon. Necessary changes will be exchanged. As needed and within available resources, ODFW may also contribute to the development of a second and/or third version mixed scale hydrography dataset, depending on the approach chosen. This is the second of two planned exchanges of data.
E. WDFW development of the Washington portion of the StreamNet mixed-scale hydrography layer	10/1/2010	9/30/2011	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: F. The 100K hydrography is archived, emphasis is shifted to the mixed scale hydrography.		9/30/2011	Active	<i>See the Deliverable Specification above</i>

I: 159. Transfer/Consolidate Regionally Standardized Data

- Title:** Develop fish barrier data, update on 3 year cycle
- Description:** Develop and maintain data sets for barriers to fish migration. Delivery of this new data type will be on a rotating basis every three years beginning in FY-09. Efforts in FY-11 will focus on maintaining existing data.
- Deliverable Specification:** Data on fish barriers are maintained by the state StreamNet sub-projects. Updated data will be exchanged with the main StreamNet database at PSMFC in FY-12 on the 3 yr rotation schedule.
- Primary Focal Species:** Chinook - All Populations | Coho - Lower Columbia River ESU | Coho - Unspecified Population | Cutthroat Trout, Coastal - All Anadromous Populations | Sockeye - All Populations | Steelhead - All Populations



Milestone Title	Start Date	End Date	Status	Milestone Description
A. IDFG development of fish barrier data	10/1/2010	9/30/2011	Active	IDFG will maintain existing barrier data. New data will not be actively pursued due to the update schedule, but data that otherwise become available will be exchanged.
B. MFWP development of fish barrier data	10/1/2010	9/30/2011	Active	MFWP will maintain barrier location, species affected and other fields on stream barriers in Montana. Information will be collected on all species regardless of life history. Barriers data will be exchanged in the StreamNet DEF. MFWP will collect diversion screen data from the MFWP Fisheries Bureau - Habitat Section resulting from FRIMA and other screening activities in Montana. Screen information will be included in Barriers table and exchanged with StreamNet.
C. ODFW development of fish barrier data	10/1/2010	9/30/2011	Active	ODFW, on an ongoing basis, will maintain Oregon's Barrier data based on new and/or previously un-incorporated barrier information, including information from non-ODFW sources.
D. WDFW development of barrier data, contingent on funding	10/1/2010	9/30/2011	Active	WDFW will maintain barrier data records, and IF funding becomes available will update barrier data. This data type has been deemphasized due to reduced staff levels, and no exchange is scheduled this year.
Deliverable: E. Fish barrier data are maintained		9/30/2011	Active	<i>See the Deliverable Specification above</i>

J: 159. Transfer/Consolidate Regionally Standardized Data

Title: Develop fish age data
Description: Develop and maintain information on age/sex composition of returning adults in 2010, primarily for anadromous species. This is a CBFWA Priority 2 data type.
Deliverable Specification: Data on age composition of returning adult fish are available through the StreamNet website.
Primary Focal Species: Chinook - All Populations | Coho - Lower Columbia River ESU | Coho - Unspecified Population | Steelhead - All Populations

Milestone Title	Start Date	End Date	Status	Milestone Description
A. FWS development of fish age data	10/1/2010	5/30/2011	Active	FWS will process Fish Return and Age data through return year 2010 into the new StreamNet Age table format, and exchange the data with the regional StreamNet database.
B. IDFG extraction of fish age data from IFWIS	1/1/2011	3/31/2011	Completed	IDFG will obtain existing post-run age composition data for spring/summer Chinook and attempt to fit it into the StreamNet Data Exchange Format. If successful, the data will be submitted to StreamNet for posting on the StreamNet Web site.
C. ODFW development of fish age data, contingent on priority	10/1/2010	9/30/2011	Active	ODFW will seek to compile, update and exchange age data, as time and resources allow.
D. WDFW development of fish age data, lower Columbia subbasins. Upper contingent on funding.	4/1/2011	9/1/2011	Active	WDFW will develop age data for natural spawner and hatchery returns data from focal populations in the 10 Washington lower Columbia subbasins. Data will be converted to StreamNet format and submitted in company with the related datasets. IF additional funding becomes available, these data will be compiled for focal species populations in the 8 Washington mid and upper Columbia subbasins.
Deliverable: E. Age data are available on the StreamNet query system		9/30/2011	Active	<i>See the Deliverable Specification above</i>

K: 159. Transfer/Consolidate Regionally Standardized Data

Title: Develop other data sets
Description: On an opportunistic basis, develop other types of data as available or as requested by FWP participants. This relates to data relevant to StreamNet objectives which would be developed by StreamNet cooperators and also includes data developed by other agencies or projects. Actual acquisition, standardization, georeferencing and distribution of these data will be dependent on available time and funding. These data may be included in the main StreamNet database in the future, or may be obtained and distributed as independent data sets in native format in the Data Store. Priority for development of other data by StreamNet varies depending on the data type for each participating agency. Receiving and posting independent data sets from other entities in the Data Store is a high priority.
Deliverable Specification: Other fish related data (in addition to the standard StreamNet data categories) are obtained, preserved and made available through the StreamNet website as they become available on an opportunistic basis. Data sets that do not fit into the StreamNet data exchange formats are posted as independent data sets in their native format in the StreamNet 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 | Lamprey, Pacific | Cutthroat Trout, Westslope | Cutthroat Trout, Yellowstone | Trout, Bull

Milestone Title	Start Date	End Date	Status	Milestone Description
A. IDFG development of other data sets	10/1/2010	9/30/2011	Active	IDFG, on an opportunistic basis and within existing resources, will work with other projects in Idaho to assist them with submission of their data sets to StreamNet for archiving and dissemination as part of the formal DEF or as independent data sets in the Data Store.
B. MFWP development of other data sets	10/1/2010	8/31/2011	Active	MFWP will compile updated genetic results information on Montana's species of concern and provide to StreamNet as an independent data set to the Data Store. Aquatic Nuisance Species data will be evaluated for inclusion into the MFWP database and exchanged with StreamNet as an independent data set if appropriate. Staff will also explore providing other data sets if time allows.
C. MFWP develop habitat restoration projects data	10/1/2010	9/30/2011	Active	MFWP restoration project data base will be maintained and updated as needed, and the user interface will be enhanced if necessary. FWP will pursue updating the database with all restoration projects in Montana, not just those involved in the Future Fisheries Program. FWP will coordinate with the DNRC data coordinator to ensure that FWP data are incorporated in the multi-agency system that is being developed. Development of a statewide restoration database to support the State Wildlife Grant Program (SWG) program will be developed in FY-11.
D. MFWP development of internal assessment data sets	10/1/2010	9/30/2011	Active	As part of the Crucial Areas Assessment, MFWP will maintain and update data on game fish spawning and rearing areas, thermal refugia and unique recreational opportunities. Data will be exchanged with StreamNet as an independent data set. If other data sets are developed for the Crucial Areas Assessment, these will be exchanged as well.
E. ODFW development of other data sets	10/1/2010	9/30/2011	Active	ODFW, as requested and within budget/time constraints, will work with other projects in Oregon to assist them with submission of their data sets to StreamNet for archiving and dissemination as part of the formal DEF or as independent data sets in the Data Store.
F. PSMFC development of other data sets and data for the Data Store	10/1/2010	9/30/2011	Active	The Region, on an ongoing and opportunistic basis, will work with StreamNet cooperators, FWP funded projects and other projects and agencies in the region to identify data sets appropriate for inclusion in the Data Store archive, encourage submission of those data sets to the Data Store, and if requested, assist them with data development and the submission process. Special emphasis in FY-11 will be placed on the value of the Data Store for meeting BPA requirements for making project data electronically accessible. We will continue improving the online data upload capabilities and the metadata linkage with BPA's Taurus system to facilitate use of the Data Store for this purpose.
G. PSMFC exploration into data capture of additional NPCC F&W Program priority data sets	10/1/2010	9/30/2011	Active	The Region will cooperate with NPCC, PNAMP, CBFWA and other entities to identify priority regional data sets generated by Fish and Wildlife Program and other projects that are not currently captured in a regional data system, and, will locate and acquire useful base layers that are relevant to StreamNet data and include them along with StreamNet data. The amount of effort expended may depend on availability of resources.
H. WDFW development of other data sets	10/1/2010	9/30/2011	Active	WDFW, as resources and other priorities permit, will work with FWP supported projects in the state to assist them with submission of their data sets to StreamNet for archiving and dissemination as part of the formal DEF or as independent data sets in the Data Store.
Deliverable: I. Other data are developed on an ad hoc basis, as possible		9/30/2011	Active	<i>See the Deliverable Specification above</i>

L: 159. Transfer/Consolidate Regionally Standardized Data

Title: Document data sources and help build the library collection

Description: StreamNet project participants will acquire documents, reports, publications and agency reports (gray literature) that document data sources for the data included in the StreamNet database or that relate to Fish and Wildlife Program activities and fish and wildlife resources in the Columbia Basin and the Pacific Northwest and submit them to the StreamNet Library at CRITFC for access by regional scientists, agencies, interested parties and other libraries.

Deliverable Specification: The collection in the StreamNet Library is increased by addition of pertinent publications and reports and by reference documents supporting the data added to the StreamNet database.



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, Green | Sturgeon, White - Lower Columbia River | Cutthroat Trout, Coastal - Resident Populations | Cutthroat Trout, Lahontan | Cutthroat Trout, Westslope | Cutthroat Trout, Yellowstone | Kokanee | Sturgeon, White - All Populations except Kootenai R. DPS | Sturgeon, White - Kootenai River DPS | Trout, Bull | Trout, Rainbow | Trout, Interior Redband

Milestone Title	Start Date	End Date	Status	Milestone Description
A. StreamNet participants provide data reference documents and support collection development	10/1/2010	9/30/2011	Active	FWS, IDFG, MFWP, ODFW, WDFW, and PSMFC, on an ongoing basis, to document StreamNet data and to build the 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 fish and wildlife resources in the Columbia Basin to the library.
Deliverable: B. Library collection maintained and increased		9/30/2011	Active	<i>See the Deliverable Specification above</i>

M: 159. Transfer/Consolidate Regionally Standardized Data

Title: Obtain key salmon and steelhead VSP Indicators to support the Basin-wide Coordinated Assessments

Description: Utilizing added funding from BPA for the Coordinated Assessments, work with the fisheries co-managers and any PNAMP contractors to scope the availability of three key Viable Salmonid Population (VSP) derived Indicators (Abundance of Natural Spawners, Progeny per Parent Ratio, and Smolt to Adult Return Rate) to support the Coordinated Assessments in the Columbia Basin. The existence, storage location, format and availability of these data will be investigated and described for TRT and defined non-listed salmon and steelhead populations where they have been calculated by the agencies/tribes. Generalized data flow pathways and analyses will be diagrammed or described in a data analysis diagram, and the readily available estimates and their key supporting information will be obtained and compiled in a standardized Data Exchange Template (DET), for as many populations as possible with the available staffing. This additional one-time work is dependent on the funding made available for the Coordinated Assessments work to cover temporary data technician time to work with the fish managers. This work is a scoping effort to describe the current state and availability of this information, and data acquisition will focus only on the readily available data and supporting information.

Deliverable Specification: A description of the existence, location, format, completeness and availability of the three key VSP Indicators, including a 'level 2' generalized data analysis diagram or map describing data pathways, organized by Technical Recovery Team (TRT) or other formally defined salmon and steelhead population. Where the estimates and related information are readily available, the data are obtained and compiled in a DET as defined through CBFWA and PNAMP.

Primary Focal Species: Chinook - All Populations | Chum - Columbia River ESU | Coho - Lower Columbia River ESU | Coho - Unspecified Population | Sockeye - All Populations | Steelhead - All Populations



Milestone Title	Start Date	End Date	Status	Milestone Description
A. IDFG scope VSP Indicator availability, describe analysis pathways and obtain available Indicators	10/1/2010	9/30/2011	Active	IDFG StreamNet staff will work within their agency and with cooperating tribes to provide data and supporting information to the regional scale Coordinated Assessments being conducted by CBFWA. Specific work will include: 1) participation in development of the Data Exchange Template (DET) and the format for the Data Analysis Diagram, 2) scoping of availability, format and methodology of the three initial VSP Indicators (spawner abundance in the wild, smolt to adult ratio and parent to progeny ratio) for the defined populations of salmon and steelhead in their jurisdiction, 3) description of the analysis approach and data flow used to calculate the Indicators, by population, using 'level 2' Data Analysis Diagrams, and, 4) where readily available, obtain and record the three Indicator values along with supporting information in the draft DET. Intent is to capture Indicator data for as many populations as possible prior to the regional workshop tentatively planned for early Spring, 2010, with as much of the data for the remaining populations captured as possible before field staff time runs out, likely in June.
B. ODFW scope VSP Indicator availability, describe analysis pathways and obtain available Indicators	10/1/2010	9/30/2011	Active	ODFW StreamNet staff will work within their agency and with cooperating tribes to provide data and supporting information to the regional scale Coordinated Assessments being conducted by CBFWA. Specific work will include: 1) participation in development of the Data Exchange Template (DET) and the format for the Data Analysis Diagram, 2) scoping of availability, format and methodology of the three initial VSP Indicators (spawner abundance in the wild, smolt to adult ratio and parent to progeny ratio) for the defined populations of salmon and steelhead in their jurisdiction, 3) description of the analysis approach and data flow used to calculate the Indicators, by population, using 'level 2' Data Analysis Diagrams, and, 4) where readily available, obtain and record the three Indicator values along with supporting information in the draft DET. Intent is to capture Indicator data for as many populations as possible prior to the regional workshop tentatively planned for early Spring, 2010, with as much of the data for the remaining populations captured as possible before field staff time runs out, likely in June.
C. WDFW scope VSP Indicator availability, describe analysis pathways and obtain available Indicators	10/1/2010	9/30/2011	Active	WDFW StreamNet staff will work within their agency and with cooperating tribes to provide data and supporting information to the regional scale Coordinated Assessments being conducted by CBFWA. Specific work will include: 1) participation in development of the Data Exchange Template (DET) and the format for the Data Analysis Diagram, 2) scoping of availability, format and methodology of the three initial VSP Indicators (spawner abundance in the wild, smolt to adult ratio and parent to progeny ratio) for the defined populations of salmon and steelhead in their jurisdiction, 3) description of the analysis approach and data flow used to calculate the Indicators, by population, using 'level 2' Data Analysis Diagrams, and, 4) where readily available, obtain and record the three Indicator values along with supporting information in the draft DET. Intent is to capture Indicator data for as many populations as possible prior to the regional workshop tentatively planned for early Spring, 2010, with as much of the data for the remaining populations captured as possible before field staff time runs out, likely in June.
Deliverable: D. Availability of three key VSP Indicators is described; easily available indicators are provided		9/30/2011	Active	<i>See the Deliverable Specification above</i>

N: 160. Create/Manage/Maintain Database

Title: System Administration

Description: All StreamNet cooperators will manage and maintain the computer systems (hardware and software) necessary for acquiring, quality checking, formatting in regionally consistent format, georeferencing, backing up, and transmitting tabular and GIS data to the StreamNet database at PSMFC, and for storing, managing, documenting, backing up, quality checking and disseminating the data at PSMFC. This is a high priority work element that is essential to proper functioning of the project, even though it operates largely in the background.

Deliverable Specification: The computer systems used to obtain, store, manage, back up, and distribute data (hardware and software) are maintained in functioning condition and updated as needed at PSMFC and the cooperating agencies.



Milestone Title	Start Date	End Date	Status	Milestone Description
A. FWS computer system administration	10/1/2010	9/30/2011	Active	FWS, on an ongoing basis, will manage and maintain the computer systems (hardware and operating software) necessary for supporting the FWS StreamNet tabular data, including system administration, backup and recovery, hardware and software upgrades, and security.
B. IDFG computer system administration	10/1/2010	9/30/2011	Active	IDFG, on an ongoing basis, will manage, maintain and enhance the computer systems (hardware and operating software) necessary for supporting Idaho StreamNet tabular and GIS data, including system administration, backup and recovery, hardware and software upgrades, and security.
C. MFWP information system administration	10/1/2010	9/30/2011	Active	MFWP, is not responsible for maintaining the computer systems (hardware and operating software) necessary for supporting Montana StreamNet tabular and GIS data. MFWP StreamNet will support MFWP Technical Service Bureau by troubleshooting ArcGIS Server and SDE after installation, configuration, and implementation of any patches or service packs.
D. ODFW computer system administration	10/1/2010	9/30/2011	Active	ODFW, on an ongoing basis, will manage, maintain and enhance the computer systems (hardware and operating software) necessary for supporting Oregon StreamNet tabular and GIS data systems, including system administration, backup and recovery, hardware and software upgrades, and security.
E. PSMFC computer system administration	10/1/2010	9/30/2011	Active	The Region, 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 Server, ArcSDE & ArcIMS), 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 of all databases, assistance with purchasing, attendance at Commission IT meetings, preparation of disaster recovery plans; and, 4. Assistance with development of XML schema based options for both incoming and outgoing data and continuing exploration of how XML can enhance data exchange.
F. WDFW computer system administration	10/1/2010	9/30/2011	Active	WDFW, on an ongoing basis, will manage, maintain and enhance the computer systems (hardware and operating software) necessary for supporting Washington StreamNet tabular and GIS data, including system administration, backup and recovery, hardware and software upgrades, and security.
Deliverable: G. Computer systems are maintained		9/30/2011	Active	<i>See the Deliverable Specification above</i>

O: 160. Create/Manage/Maintain Database

Title: Application and interface development

Description: All StreamNet cooperators will develop and maintain computer applications and interfaces that facilitate the entry, management and dissemination of tabular and GIS data at the regional and subcontracting agency levels. This will include development of new applications and tools as well as maintenance or modification of existing applications. To the degree possible, cooperators will share code and applications between agencies and with other data source agencies to maximize project efficiency.

Deliverable Specification: The databases, computer applications and interfaces necessary for obtaining, storing, managing and disseminating data are developed and maintained in such a way that they support accomplishment of project goals.



Milestone Title	Start Date	End Date	Status	Milestone Description
A. FWS development and/or maintenance of applications and interfaces	10/1/2010	9/30/2011	Active	FWS, on an ongoing basis, will develop and/or maintain computerized databases, applications and interfaces that facilitate the entry, compilation, management and dissemination of FWS StreamNet tabular data.
B. IDFG development and/or maintenance of applications and interfaces	10/1/2010	9/30/2011	Active	IDFG, on an ongoing basis, will develop and/or maintain computerized databases, applications and interfaces that facilitate the entry, compilation, management and dissemination of Idaho StreamNet tabular and GIS data, including direct data acquisition from the Idaho Fish and Wildlife Information System (IFWIS).
C. MFWP development and/or maintenance of applications and interfaces	10/1/2010	9/30/2011	Active	MFWP, on an ongoing basis, will develop and/or maintain computerized databases, applications and interfaces that facilitate the entry, compilation, management and dissemination of Montana StreamNet tabular and GIS data. Duties include updating ArcIMS-based applications to ArcGIS Server technology and development of public map services for consuming Montana StreamNet GIS data.
D. MFWP development of a centralized data system.	10/1/2010	9/30/2011	Active	MFWP StreamNet staff will assist in the scoping and development of a complete Fisheries Information System to enhance the flow of data from the field to a centralized database. Included in this work will be assistance to the Fisheries Bureau and their field staff in the area of standardizing field survey protocol. StreamNet staff will provide some project management oversight to aspects of the project with emphasis on field and data standards.
E. MFWP planning system maintenance	10/1/2010	9/30/2011	Active	Will maintain and enhance the Crucial Areas Planning System (CAPS) and other mapping services that utilize StreamNet data. Activities will include data updates, addition of new data types, and user interface enhancements.
F. ODFW development and/or maintenance of applications and interfaces	10/1/2010	9/30/2011	Active	ODFW, on an ongoing basis, will develop and/or maintain computerized databases, applications and interfaces that facilitate the entry, compilation, management and dissemination of Oregon StreamNet tabular and GIS data, including work on the Recovery Planning application.
G. ODFW assist agency develop data systems to automate data flow	10/1/2010	9/30/2011	Active	Oregon StreamNet will continue efforts to improve overall data flow from the field by continuing the development of a data management and delivery system that also provides benefits to field projects, focusing on one of the common data elements identified in WE 189; Title "Coordinate with regional entities to support regional scale reporting of population status & trends"; Milestone D.
H. PSMFC development and/or maintenance of applications and interfaces	10/1/2010	9/30/2011	Active	The Region, on an ongoing basis, will: 1. Track the efforts of regional partners, including the USGS, to build crosswalks between the LLID and NHD route systems and seek opportunities to collaborate; 2. Research the creation of an Online Event Mapper that allows users to create event tables based on StreamNet's mixed-scale hydrography; 3. Modify the web data query system to add the capability of displaying data conforming to changes in the DEF, such as use of SuperTrends, SuperReferences and SuperCodes for identifying groups of trends and locations respectively; 4. Develop and/or maintain computerized databases, applications and interfaces that facilitate the entry, compilation, management and dissemination of tabular and GIS data; and, 5. Assist cooperating agencies with tool development, as requested. Tools may include data input interfaces, error checking routines, geographic locators, etc.
I. PSMFC implement new online Data Store submission tool	10/1/2010	9/30/2011	Active	Implement an Internet-based program for submitting data sets to the StreamNet Data Store through use of a web browser. This program will replace the currently available executable program that requires installation on host computers and is not fully compliant with FGDC metadata standards. FY-10 included initial development of the online tool. FY-11 will include any necessary corrections or improvements to the online tool. FY-11 will also include monitoring to determine if the ISO metadata standard and a biological profile has been officially adopted by the USGS-National Biological Information Infrastructure, and modifying the StreamNet Data Store and data submission tool if necessary. In addition, we will communicate with entities that have a direct interest in the Data Store, to meet their metadata requirements to the extent possible.
J. WDFW development and/or maintenance of applications and interfaces	10/1/2010	9/30/2011	Active	WDFW, on an ongoing basis, will develop and/or maintain computerized applications and interfaces that facilitate the entry, compilation, management and dissemination of Washington StreamNet tabular and spatial data.
Deliverable: K. Applications are developed and maintained.		9/30/2011	Active	<i>See the Deliverable Specification above</i>

**P: 160. Create/Manage/Maintain Database****Title:** Data (content) management**Description:** The StreamNet project will manage data at the regional and subcontracting agency levels to assure timely and accurate data flow from source to final distribution. Activities include exchange of data to PSMFC, data loading, updating data, quality assurance procedures, metadata development, etc. Emphasis will increase on improving timeliness of data development and dissemination, and we will initiate work to develop metadata templates, by data type and over time, in pilot subbasins.**Deliverable Specification:** Data are maintained and managed at PSMFC and the cooperating projects so that they are available through the StreamNet website and cooperating agency websites. A data delivery timeline application will be maintained on the StreamNet website. Work will have started on developing metadata templates. Metadata are published as Web Services.

Milestone Title	Start Date	End Date	Status	Milestone Description
A. WS data content management, QA/QC	10/1/2010	9/30/2011	Active	FWS will manage FWS StreamNet data, conduct quality checks, and exchange data to PSMFC as specified in this Statement of Work.
B. IDFG data content management, QA/QC	10/1/2010	9/30/2011	Active	IDFG will manage IDFG StreamNet data, conduct quality checks, develop and maintain FGDC compliant metadata for spatial data, and exchange data to PSMFC as specified in this Statement of Work.
C. MFWP data content management, QA/QC	10/1/2010	9/30/2011	Active	MFWP will manage IDFG StreamNet data, conduct quality checks, develop and maintain FGDC compliant metadata for spatial data, and exchange data to PSMFC as specified in this Statement of Work.
D. ODFW data content management, QA/QC	10/1/2010	9/30/2011	Active	ODFW will manage ODFW StreamNet data (including data in the ODFW NRIMP database that feed StreamNet), conduct quality checks, develop and maintain FGDC compliant metadata for spatial data, and exchange data to PSMFC as specified in this Statement of Work.
E. PSMFC support for data content management	10/1/2010	9/30/2011	Active	The Region, on an ongoing and as needed basis, will assist data contributing agencies (state, tribal or federal) in development of data to support regional population assessments, monitoring, evaluation and status reports of fishery resources, including formatting, coding, data entry, error checking, and submitting to the regional database.



Milestone Title	Start Date	End Date	Status	Milestone Description
F. PSMFC GIS data content management	10/1/2010	9/30/2011	Active	<p>The GIS Manager, will:</p> <ol style="list-style-type: none"> 1. Update and post spatial data for download from the StreamNet website to reflect periodic changes in the StreamNet database. Regional GIS layers and map services will be created from this information where appropriate (e.g., fish distribution, hatchery facilities, etc.) 2. Verify correct format, accuracy and logical consistency of spatial data sets and attributes through coordination with state GIS contacts, data compilers, and the Database Manager. 3. Maintain a library of StreamNet GIS layers for internal use and as downloadable data on the web site with complete documentation (metadata); 3. Obtain and refine layers such as ESUs, ecoregions, and administrative boundaries, and create cross tables for use by the online data query system; 4. Obtain base GIS layers to place StreamNet data in an appropriate context. Provide links to key base layers on SN website; 5. Assist the database manager with the spatial component of data and its implementation online; 6. Coordinate efforts by the 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 2011. 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 2011. The Hydrography layer should then remain stable until the following January. This schedule aims to avoid the confusion of event table data being compiled at the same time that the georeferencing framework is in flux. 7. Continue to publish the archived PNW 1:100k River Reach files to allow mapping legacy event data; 8. Continue to monitor progress on the development of a regionally consistent 24k routed hydrography by the USGS (NHD) and its adoption by partner agencies; 9. 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; and, 10. Ensure that all published SN spatial data are documented to meet FGDC metadata requirements; 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 (e.g., Geospatial One-Stop, NBII and others).
G. PSMFC tabular data content management, QA/QC	10/1/2010	9/30/2011	Active	<p>The Region, on an ongoing basis through the Regional Database Manager will:</p> <ol style="list-style-type: none"> 1. Update and append data to the regional StreamNet database as they are submitted by StreamNet participants, maintain logs of data submissions, and provide feedback to agency compilers to promote data exchanges that are consistent with others throughout the Columbia region, particularly data to support regional monitoring, evaluation, Cooperative Assessments, and status reports of fishery resources (e.g., SOTR); 2. Update StreamNet database schemas to accommodate changes in the official data exchange format. Indexes and triggers will be created and maintained for efficient processing, storage and retrieval of data. He will maintain database logins, user permissions, and client access tools. He will create views and stored procedures for use by the web based query system and in data loading and validation processes, develop and run QA/QC processes on new and existing data tables to isolate missing, erroneous or duplicative data, and work with source agencies to correct problems and continue to improve error-checking capabilities; 3. Periodically post an externally accessible version of the StreamNet SQL Server database for data compiler use, produce a downloadable version of StreamNet's primary fish enumeration data in Access database format, and post downloadable ASCII formatted files of primary StreamNet data tables; 4. Routinely assist the StreamNet Librarian in exporting the library reference database of StreamNet documents and import StreamNet citations into the regional StreamNet database for use by the web query system to cite references for all StreamNet data records; 5. Provide the regional staff and steering committee with guidance and supporting analysis of data issues, shortcomings and recommended improvements; and, 6. Maintain long term data sets, such as the Protected Areas data, Subbasin Planning data, Hatchery Review data from the HSRG, etc.



Milestone Title	Start Date	End Date	Status	Milestone Description
H. WDFW data content management, QA/QC	10/1/2010	9/30/2011	Active	WDFW will manage WDFW StreamNet data, conduct quality checks, develop and maintain FGDC compliant metadata for spatial data, and exchange data to PSMFC as specified in the Statement of Work.
Deliverable: I. Data are maintained and updated, metadata are developed, and data timeline is posted.		9/30/2011	Active	<i>See the Deliverable Specification above</i>

Q: 160. Create/Manage/Maintain Database

Title: Data exchange standard development

Description: The project will establish and maintain data exchange standards to ensure regionally consistent content and format of data that originate from multiple data sources. We will maintain adopted and develop proposed data exchange formats for data categories described under Work Element 159. This task will provide coordination and technical assistance regarding interpretation of database structures and codes. The formal process for creating new and revising old DEFs may require significant amounts of time, potentially more than a year, for complex data categories.

Deliverable Specification: The formal Data Exchange Formats that are used to standardize data regionally are maintained and updated as needed. Additions and changes to the DEF are made in accordance with the DEF guidance document. At least one new updated DEF version is adopted during the year.



Milestone Title	Start Date	End Date	Status	Milestone Description
A. FWS development and maintenance of data exchange standards	10/1/2010	9/30/2011	Active	FWS, on an ongoing basis and as scheduled by the Steering Committee, will work cooperatively through the Steering Committee, following the DEF Process document, to revise existing and/or develop new DEFs to assure regional data consistency and allow for inclusion of new data types.
B. IDFG development and maintenance of data exchange standards	10/1/2010	9/30/2011	Active	IDFG, on an ongoing basis and as scheduled by the Steering Committee, will work cooperatively through the Steering Committee, following the DEF Process document, to revise existing and/or develop new DEFs to assure regional data consistency and allow for inclusion of new data types.
C. MFWP development and maintenance of data exchange standards	10/1/2010	9/30/2011	Active	MFWP, on an ongoing basis and as scheduled by the Steering Committee, will work cooperatively through the Steering Committee, following the DEF Process document, to revise existing and/or develop new DEFs to assure regional data consistency and allow for inclusion of new data types.
D. ODFW development and maintenance of data exchange standards	10/1/2010	9/30/2011	Active	ODFW, on an ongoing basis and as scheduled by the Steering Committee, will work cooperatively through the Steering Committee, following the DEF Process document, to revise existing and/or develop new DEFs to assure regional data consistency and allow for inclusion of new data types.
E. PSMFC development and maintenance of data exchange standards	10/1/2010	9/30/2011	Active	The Region, on an ongoing, as needed basis, will work cooperatively through the Steering Committee, following the DEF change process document, to revise existing and develop new DEFs to assure regional data consistency and allow for inclusion of new data types. Two focal areas for FY-11 will be 1) returning to the effort to correctly and adequately capture data collected under an EPA EMAP-based GRTS sampling design, and 2) staying apprised of regional data needs and working with entities outside of StreamNet to define new data types that StreamNet can pursue in the future to support regional processes and needs. The Regional Biologist will serve as the primary coordinator of the DEF process and is responsible for updating and publishing the official DEF document. At least one DEF update is planned annually.
F. PSMFC development and maintenance of data exchange standards, EMAP-based data sets.	10/1/2010	9/15/2011	Active	The Region will evaluate the special needs for the capture, storage, and dissemination of data collected following an EMAP GRTS (Generalized Random Tessellation Stratified) sampling approach. They will work toward a strategy for obtaining, managing and appropriately disseminating such data.
G. PSMFC reevaluate DEF based on trends to consider an approach based on observations	10/1/2010	9/30/2011	Active	The Region will continue an effort to evaluate possibly changing our paradigm for data collection, storage, and delivery from the "trend" concept currently used to one based on individual observations. DEF changes as well as programming and presentation changes will be evaluated. Building on efforts from previous years, during FY-11 an in-depth test of converting existing StreamNet trend data will be conducted and a more detailed schematic for data querying and delivery will be developed. This effort will likely require more than one year to fully evaluate, design, and implement.
H. WDFW development and maintenance of data exchange standards	10/1/2010	9/30/2011	Active	WDFW, on an ongoing basis and as scheduled by the Steering Committee, will work cooperatively through the Steering Committee, following the DEF Process document, to revise existing and/or develop new DEFs to assure regional data consistency and allow for inclusion of new data types.
Deliverable: I. The Data Exchange Format is maintained and used for data transfer		9/30/2011	Active	<i>See the Deliverable Specification above</i>

R: 161. Disseminate Raw/Summary Data and Results

Title: Develop and maintain Internet sites for data dissemination

Description: StreamNet will continue to maintain and enhance the StreamNet Internet sites to provide access to tabular and GIS data from the StreamNet database. PSMFC will maintain and enhance the primary project website (www.streamnet.org) and associated applications, including the data query system, the interactive map applications and the Data Store. Partner agencies will assist with routine periodic review and comment on the primary website and may disseminate data through websites associated with their agency's StreamNet project and references housed in the StreamNet Library. Priority will be given to incorporating data and references developed through Work Element 159. The website will also be used to archive data sets developed by FWP participants for data that do not fit within the StreamNet DEF (Data Store archive function), including the means to index and search the archive. Metadata will be published as a web service, making all data findable through external portals.

Deliverable Specification: Internet sites for the dissemination of data at PSMFC and the cooperating agencies are maintained and functional. New web pages and features are developed as necessary to maximize the availability and utility of data. Metadata are published as web services.

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 | Cutthroat Trout, Westslope | Cutthroat Trout, Yellowstone | Kokanee | Trout, Bull | Trout, Rainbow | Trout, Interior Redband



Milestone Title	Start Date	End Date	Status	Milestone Description
A. PSMFC Internet site maintenance and development	10/1/2010	9/30/2011	Active	The Region, on an ongoing basis, will maintain and improve the StreamNet Internet site (the primary means of disseminating StreamNet data), through the following actions: 1. Correcting errors, adding or fixing links, improving performance, improving looks and usability, etc.; 2. Guide development and enhancement of the StreamNet web query system from the perspective of data users, and review changes to the web query system to ensure they are implemented appropriately and do not create unforeseen problems; 3. Maintain the GIS Maps & Data pages and archive legacy GIS pages; 4. Maintain, update as necessary, and improve the Internet mapping component to the StreamNet web site to allow users to access StreamNet data through interactive map interfaces. Improvements might include modifications to the mapping interface, improving data content (background imagery and vector data), and mapping trend locations selected via the web query system; 5. Support spatial filtering by a hierarchy of Hydrologic Unit Code (HUC) levels in the web-query system and Internet map application using an enhanced version of the recently released Watershed Boundary Dataset (WBD); Provide filtering by regionally identified salmonid populations based on their relationship to 6th field HUCs; 6. Deploy, as needed, new query system components and data categories that are approved by the Steering Committee; 7. Maintain logs of web query history and error events, track and report Internet site usage by month, and investigate web query system errors encountered; 8. Maintain and enhance the functionality, look and usability of the StreamNet web-based query system; 9. Evaluate and complete the redesign of the online data query system, as initiated in FY-08; 10. Maintain the PNAMP monitoring inventory web page and the CSMEP data inventory web page; and, 11. Maintain the interfaces to provide tabular and map based access to the Protected Areas data set
B. StreamNet partners assist Internet site maintenance and development	10/1/2010	9/30/2011	Active	The StreamNet partners on an ongoing basis will assist in maintenance and improvement of the StreamNet website, the project's primary data dissemination tool, through routine use and review of the site and providing feedback to StreamNet staff at PSMFC on any problems, errors or suggestions for needed improvements. They will continue to provide feedback on the functionality of the new website design implemented in FY-09 and the current query system redesign.
C. ODFW internal Internet site maintenance and development	10/1/2010	9/30/2011	Active	ODFW, on an ongoing basis, will manage and maintain Oregon's web-based data integration, communication, data sharing, and data transfer systems and their links to StreamNet.
Deliverable: D. StreamNet Internet sites are maintained and functional		9/30/2011	Active	<i>See the Deliverable Specification above</i>

S: 161. Disseminate Raw/Summary Data and Results

Title: Respond to data/information 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 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.

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 | Cutthroat Trout, Westslope | Cutthroat Trout, Yellowstone | Kokanee | Trout, Bull | Sturgeon, White - All Populations except Kootenai R. DPS | Sturgeon, White - Kootenai River DPS | Trout, Rainbow | Trout, Interior Redband



Milestone Title	Start Date	End Date	Status	Milestone Description
A. FWS respond to and track data/information requests	10/1/2010	9/30/2011	Active	FWS, 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.
B. IDFG respond to and track data/information requests	10/1/2010	9/30/2011	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.
C. MFWP respond to and track data/information requests	10/1/2010	9/30/2011	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.
D. ODFW respond to and track data/information requests	10/1/2010	9/30/2011	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.
E. PSMFC respond to and track data/information requests	10/1/2010	9/30/2011	Active	The Region, 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.
F. PSMFC maintain and post Protected Areas, other long term data sets	10/1/2010	9/30/2011	Active	The Region, on an ongoing basis, will maintain and provide access to various long term data sets that are valuable to the FWP, including the Protected Areas data set, the Subbasin Planning data, and hatchery review data from the HSRG.
G. WDFW respond to and track data/information requests	10/1/2010	9/30/2011	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: H. Responses to requests are provided rapidly and tracked		9/30/2011	Active	<i>See the Deliverable Specification above</i>

T: 161. Disseminate Raw/Summary Data and Results

- Title:** Promote availability of StreamNet data and encourage participation in the project
- Description:** Participate in scientific, professional, and other relevant groups to increase awareness of the StreamNet project, inform others of the data and data related services available from the project, and to encourage participation by others in providing relevant data to the project.
- Deliverable Specification:** The project and its data and services are made better known among potential data sources and data users, leading ultimately to increased participation in providing and using data.
- 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, Green | Sturgeon, White - Lower Columbia River | Cutthroat Trout, Westslope | Cutthroat Trout, Yellowstone | Freshwater Mussels | Kokanee | Trout, Bull | Trout, Interior Redband

Milestone Title	Start Date	End Date	Status	Milestone Description
A. Participants promote the project through professional and public involvement	10/1/2010	9/30/2011	Active	The project participants, on an opportunistic basis and within budgeted resources, will participate in and prepare and deliver presentations to scientific and professional meetings to demonstrate project capabilities and accomplishments, advertise StreamNet services, and to solicit additional data and coordination. Such professional groups may include various units of the American Fisheries Society, the Organization of Fish and Wildlife Information Managers, non-profits, and other local, regional or national groups or organizations.
B. PSMFC publication of the StreamNet Newsletter	10/1/2010	9/30/2011	Active	The Region will publish at least two editions of the StreamNet Newsletter during the fiscal year, providing readers with information about StreamNet activities, available data, data updates, new data services, etc. Target publication dates are 3/31/2011 and 9/30/2011.
C. PSMFC develop materials to support and promote participation in the project	10/1/2010	9/30/2011	Active	The Region, as needed, will develop and distribute materials to support the project and improve public materials such as the StreamNet brochure, data inventories, etc. as needed. They will maintain and update explanatory materials such as the Query System User Guide and other documents explaining data categories and data structures and/or prepare new materials, as necessary.
Deliverable: D. StreamNet data and services are made more widely known		9/30/2011	Active	<i>See the Deliverable Specification above</i>



U: 189. Regional Coordination

Title: Support regional efforts under the Fish and Wildlife Program

Description: Participate in planning, development and/or coordination meetings with regional projects and programs under the Fish and Wildlife Program to help develop a regional data management framework, to establish data type and data service priorities, and to provide advice in the area of data management, as requested. Provide input on ways StreamNet can effectively contribute to the programs and general advice about data management. Participate in coordination groups (e.g., CBFWA, PNAMP, etc.), advisory groups, task forces, etc. whose purpose is to enhance the effectiveness of the Fish and Wildlife Program relative to its data development activities. This also includes planning for the next round of subbasin planning and related activities.

Deliverable Specification: StreamNet staff have participated actively in and supported projects funded through the FWP, including CBFWA and PNAMP. StreamNet functions as a recognized component of the regional data management framework.

Milestone Title	Start Date	End Date	Status	Milestone Description
A. IDFG provide support to Fish and Wildlife Program development activities	10/1/2010	9/30/2011	Active	IDFG, on an as needed or requested basis as base level resources will 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.
B. MFWP provide support to Fish and Wildlife Program development activities	10/1/2010	9/30/2011	Active	MFWP, on an as needed or requested basis as base level resources will 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.
C. ODFW provide support to Fish and Wildlife Program development activities	10/1/2010	9/30/2011	Active	ODFW, on an as needed or requested basis and as base level resources will 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.
D. PSMFC provide support to Fish and Wildlife Program development activities	10/1/2010	9/30/2011	Active	The Region, 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. Work with CBFWA, PNAMP, BPA and others to assist with development of a standardized approach to data management to support data flow to the planned Columbia Basin Cooperative Assessments and BiOp and NOAA Fisheries reporting; 2. Continued participation in the Steering Committee of the Pacific Northwest Aquatic Monitoring Partnership (PNAMP) for watershed and fishery data coordination, and other R, M & E groups, including the Action Agencies, Federal Caucus and CBFWA, to provide support and data management expertise; 3. Continued participation with the PNAMP Data Management Leadership Team to convey recommendations based on experience in the development of a regional approach to data dissemination; 4. Continued participate with CBFWA in support of data management efforts, including support of and data flow to the Status of the Resource Report; 5. Support regional scale reporting and provide data as needed for status and trends for SOTR, HLI, BiOp, etc.; and, 6. Provide data related support (expertise and guidance) to other FWP related programs and projects as requested and as possible under existing resources.
E. WDFW provide support to Fish and Wildlife Program development activities	10/1/2010	9/30/2011	Active	WDFW on an as needed or requested basis and as base level resources will 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.
Deliverable: F. Data related support is provided to FWP related activities		9/30/2011	Active	<i>See the Deliverable Specification above</i>

V: 189. Regional Coordination

Title: Coordinate with and support data source agencies

Description: Coordinate with state, tribal and federal fish and wildlife agencies/departments that develop data of interest to StreamNet's mission to streamline data capture, determine agency data management needs and work to improve their internal data management and data transfer to StreamNet. Demonstrate data management tools and applications developed by StreamNet staff and others to increase interest in and adoption of similar tools to improve data flow and automation. Support development of internal data management capabilities and data automation to the degree possible under existing funding, and attempt to link data tools to reporting and decision making. Encourage data sharing in exchange for help with data management.



Deliverable Specification: Data capture and management tools demonstrated to agencies and regional groups. Increased involvement with tribes and development of plans to increase capture of tribal data. Increased commitment of agencies to increased data flow automation.

Milestone Title	Start Date	End Date	Status	Milestone Description
A. IDFG coordination with data source agencies	10/1/2010	9/30/2011	Active	IDFG, on an opportunistic basis and within budgeted resources, will coordinate with IDFG, other agencies, tribes, regional groups, non-profits, etc. that are part of the Fish and Wildlife Program for the purpose of enhancing the collection and management of data related to the StreamNet project mission.
B. MFWP coordination with data source agencies	10/1/2010	9/30/2011	Active	MFWP StreamNet will coordinate with MFWP to support enhanced data flow to StreamNet. This will include assistance in the scoping/development of a MFWP Fisheries Information System edit/entry user interface and working with national parks, federal land management agencies, tribal reservations and consultants in obtaining data to enter into StreamNet.
C. MFWP assist Fisheries Division in preparation of a Statewide Fisheries Management Plan	10/1/2010	9/30/2011	Active	MFWP will provide support, technical expertise and guidance, and products for the integration and development of the Fisheries portion of the Crucial Areas Assessment and Planning System (CAPS). This will include an analysis of existing Fisheries Bureau processes and how CAPS could be utilized in their development. All fisheries related data types, including aquatic connectivity, native species richness, species of concern, game fish quality and game fish life history, will be made available to StreamNet as independent data sets.
D. MFWP assist the Fisheries Bureau in standardized field survey techniques and forms	10/1/2010	9/30/2011	Active	MFWP will provide guidance, support and review to the activities of the Fisheries Bureau in their effort to standardize data processes and procedures from the field to data delivery. StreamNet staff will participate in the Fisheries Bureau Monitoring and Evaluation Committee and other committees, as appropriate, and provide guidance when data collection, storage and analysis issues are being discussed and implemented.
E. ODFW coordination with data source agencies	10/1/2010	9/30/2011	Active	ODFW, on an opportunistic basis and within budgeted resources, will coordinate with data sources to provide guidance and assistance with data processes to support efficient data flow and to determine future data management needs.
F. ODFW coordination with ODFW GIS Coordination Group	10/1/2010	9/30/2011	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.
G. PSMFC coordination with data source agencies	10/1/2010	9/30/2011	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 to the Columbia Basin Salmon Assessments being conducted through CBFWA.
H. WDFW coordination with data source agencies	10/1/2010	9/30/2011	Active	WDFW, on an opportunistic basis and within budgeted resources, will coordinate with WDFW, other agencies, tribes, regional groups, non-profits, etc. that are 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: I. Support provided to data source agencies		9/30/2011	Active	<i>See the Deliverable Specification above</i>

W: 189. Regional Coordination

Title: Coordinate with related activities outside of the FWP

Description: Maintain communications between StreamNet and other applicable regional, federal, tribal, private and state-level agencies and activities beyond the Council's Fish and Wildlife Program to identify means for collaboration on data capture and management. On request or as possible, work toward capture of data not currently being entered in StreamNet.

Deliverable Specification: Coordination with fish and wildlife programs outside of the FWP on data issues and availability is conducted as possible or needed



Milestone Title	Start Date	End Date	Status	Milestone Description
A. IDFG coordination with related activities outside of the FWP	10/1/2010	9/30/2011	Active	IDFG, 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.
B. MFWP coordination with related activities outside of the FWP	10/1/2010	9/30/2011	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. This includes a collaboration with the USFWS and federal land management agencies to continue discussions and recommendations on improving bull trout data to ensure MFISH can be the sole source of bull trout data in Montana. Utilize StreamNet data in the development of Crucial Areas systems and project tracking with Idaho, Washington and Oregon.
C. ODFW coordination with related activities outside of the FWP	10/1/2010	9/30/2011	Active	ODFW, on an opportunistic basis and within budgeted resources, will coordinate with other agencies, tribes, regional groups, tribes, 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.
D. PSMFC coordinate with related activities outside of the FWP	10/1/2010	9/30/2011	Active	The Region, 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 outside 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.
E. WDFW coordination with related activities outside of the FWP	10/1/2010	9/30/2011	Active	WDFW, on an opportunistic basis and within budgeted resources, will coordinate with other agencies, tribes, regional groups, tribes, 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: F. Coordination outside the FWP is accomplished as needed		9/30/2011	Active	<i>See the Deliverable Specification above</i>

X: 189. Regional Coordination

- Title:** Support regional scale reporting on status and trends for HLI, BiOp, etc.
- Description:** Support the capture and organization of data needed to produce assessments of population status and trends, such as for the Status of the Resource report (SOTR), other High Level Indicators (HLI) or BiOp related assessments. Participate with developers of these reports to understand needed raw data to create the indicators, and work with data source agencies to facilitate improved data flow to the data analysis and reporting mechanisms. The actual data development to support these efforts will be conducted under WE 159.
- Deliverable Specification:** StreamNet functions as an integral component of data flow to regional reporting of population status and trends.



Milestone Title	Start Date	End Date	Status	Milestone Description
A. FWS works with CBFWA, NPCC, PNAMP, etc. to systematically support regional indicators	10/1/2010	9/30/2011	Active	FWS StreamNet will coordinate with USFWS and reporting entities (e.g., CBFWA for the SOTR, NPCC and PNAMP for HLI, NOAA-Fisheries/Recovery Planning Teams for measurable criteria) to facilitate flow of raw or field level data into the development of higher scale reporting metrics. Specifically, Idaho will seek to identify and prioritize common raw or field level data between the various HLI lists, measurable criteria contained in Recovery Plans, and other analyses collected in Idaho for the purpose of focusing data compilation and data management/delivery system development efforts on the common priority data types.
B. IDFG works with CBFWA, NPCC, PNAMP, etc. to systematically support regional indicators	10/1/2010	9/30/2011	Active	Idaho StreamNet will coordinate with IDFG and reporting entities (e.g., CBFWA for the SOTR, NPCC and PNAMP for HLI, NOAA-Fisheries/Recovery Planning Teams for measurable criteria) to facilitate flow of raw or field level data into the development of higher scale reporting metrics. Specifically, Idaho will seek to identify and prioritize common raw or field level data between the various HLI lists, measurable criteria contained in Recovery Plans, and other analyses collected in Idaho for the purpose of focusing data compilation and data management/delivery system development efforts on the common priority data types.
C. MFWP works with CBFWA, NPCC, PNAMP, etc. to systematically support regional indicators	10/1/2010	9/30/2011	Active	Montana StreamNet will coordinate with MFWP field biologists and reporting entities (e.g., CBFWA for the SOTR, NPCC and PNAMP for HLI, NOAA-Fisheries/Recovery Planning Teams for measurable criteria) to facilitate flow of raw or field level data into the development of higher scale reporting metrics. Specifically, Montana will seek to identify and prioritize common raw or field level data between the various HLI lists, measurable criteria contained in Recovery Plans, and other analyses collected in Montana for the purpose of focusing data compilation and data management/delivery system development efforts on the common priority data types.
D. ODFW works with CBFWA, NPCC, PNAMP, etc. to systematically support regional indicators	10/1/2010	9/30/2011	Active	Oregon StreamNet will coordinate with ODFW and reporting entities (e.g., CBFWA for the SOTR, NPCC and PNAMP for HLI, NOAA-Fisheries/Recovery Planning Teams for measurable criteria) to facilitate flow of raw or field level data into the development of higher scale reporting metrics. Specifically, Oregon will seek to identify and prioritize common raw or field level data between the various HLI lists, measurable criteria contained in Recovery Plans, and other analyses collected in Oregon for the purpose of focusing data compilation and data management/delivery system development efforts on the common priority data types.
E. PSMFC works with CBFWA, NPCC, PNAMP, etc. to systematically support regional indicators	10/1/2010	9/30/2011	Active	The Region will coordinate with reporting entities (e.g., CBFWA for the SOTR, NPCC and PNAMP for HLI and NOAA Fisheries for BiOp metrics) to facilitate flow of raw or field level data into the development of higher scale reporting metrics. Specifically, the Region will seek to identify and prioritize common raw or field level data between the various HLI lists, measurable criteria contained in Recovery Plans, and other analyses for the purpose of focusing data compilation and data management/delivery system development efforts on the common priority data types. Coordination with CBFWA will continue, with emphasis on implementation of an automated data delivery approach for updating the SOTR.
F. WDFW works with CBFWA, NPCC, PNAMP, etc. to systematically support regional indicators	10/1/2010	9/30/2011	Active	Washington StreamNet will coordinate with WDFW and reporting entities (e.g., CBFWA for the SOTR, NPCC and PNAMP for HLI, NOAA-Fisheries/Recovery Planning Teams for measurable criteria) to facilitate flow of raw or field level data into the development of higher scale reporting metrics. Specifically, Washington will seek to identify and prioritize common raw or field level data between the various HLI lists, measurable criteria contained in Recovery Plans, and other analyses collected in Washington for the purpose of focusing data compilation and data management/delivery system development efforts on the common priority data types.
Deliverable: G. Regional scale status and trend data are supported		9/30/2011	Active	<i>See the Deliverable Specification above</i>

Y: 119. Manage and Administer Projects

Title: Manage project activities

Description: Administer all aspects of the StreamNet project at the regional and cooperating agency levels, including oversight of budget, personnel (including training and staff development, and hiring and supervision of temporary 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. Project oversight and guidance: Project management and Steering Committee	10/1/2010	9/30/2011	Active	All StreamNet cooperators will perform project oversight and guidance (at both cooperator 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.
B. Project oversight and guidance: Supervision	10/1/2010	9/30/2011	Active	All StreamNet cooperators, except for FWS, will supervise project staff and provide guidance and staff development.
C. Project oversight and guidance: Budget control	10/1/2010	9/30/2011	Active	All StreamNet cooperators will manage expenditures to accomplish the jobs in the Statement of Work within the approved budget.
D. StreamNet cooperators provide input for the FY-12 draft SOW/budget package	10/1/2010	6/18/2011	Active	Project cooperators will provide their respective input to the FY-2012 Project Proposal, Statement of Work and budget to PSMFC within 15 days of the deadline established by the NPCC Categorical Review process. Deadlines for this review have been pushed back to winter, 2011, at the time this SOW was drafted. Submission of requested documents and budgets will be provided in accordance with the final deadline, when firmly established. Normal deadline for this milestone is 105 days prior to the end of the FY-11 contract period.
E. PSMFC develop FY-12 draft SOW/budget package	10/1/2010	7/1/2011	Active	PSMFC will oversee development and submission of the FY-2012 Project Proposal, SOW and budget as part of the Categorical Review process. Guidance will be provided to project cooperators more than 120 days before the end of the Fiscal year or the NPCC Programmatic Review deadline, whichever comes first. PSMFC will utilize input from the cooperators to develop the final proposed FY-2012 proposal, Statement of Work and budget and submit them to NPCC/BPA by the final deadline, when established, for the NPCC Categorical Review of data project, or 90 days prior to the end of the FY-11 contract period, whichever comes first. At the time this SOW was drafted, the schedule for the Categorical Review of database projects had been postponed until winter of 2011.
F. PSMFC hire and supervise temporary data technicians to support Coordinated Assessments	11/3/2010	6/1/2011	Active	The Region (PSMFC) will hire and manage temporary technicians in support of the Coordinated Assessments to locate Indicators and related information, describe availability of this information, document data creation pathways in Data Analysis Diagrams, and obtain available Indicators and supporting information in the DET, by population. The data technicians will be stationed in the participating state and tribal fisheries management entities, which will provide local supervision. Hiring and performance evaluation will be performed in cooperation with the participating state and tribal managers.
G. Accrual - Submit September estimate to BPA	7/1/2011	9/10/2011	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. Generally, this should be done by September 10.
Deliverable: H. Project management accomplished		9/30/2011	Active	<i>See the Deliverable Specification above</i>

Z: 132. Produce (Annual) Progress Report

Title: Annual report
Description: Produce a detailed annual report for FY-10 project activities within 60 days of the beginning of the fiscal year.
Deliverable Specification: The FY-10 annual report is submitted to BPA and uploaded to Pisces.



Milestone Title	Start Date	End Date	Status	Milestone Description
A. Review progress report format requirements	10/1/2010	10/7/2010	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
B. Submit progress report for internal contractor review	10/19/2010	10/30/2010	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. [Draft has been prepared. This applies to StreamNet project internal review. No external review required. -JP]
C. Revisions in response to review of draft	10/26/2010	11/23/2010	Completed	Changes in response to comments from the StreamNet project partners and BPA COTR. This included final editing before upload.
D. PSMFC uploads FY-2009 annual report to BPA	11/27/2010	11/30/2010	Completed	PSMFC, with input from all cooperators, will submit the FY-10 annual progress report to BPA 60 days after the end of the previous fiscal year. The report will provide detailed information about project accomplishments throughout the fiscal year by Work Element Title.
E. Confirm BPA has posted the progress report	1/10/2011	1/15/2011	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.
Deliverable: F. Annual report submitted to BPA		11/30/2010	Completed	<i>See the Deliverable Specification above</i>

AA: 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 2010 (10/1/2010 - 12/31/2010)	1/1/2011	1/15/2011	Completed	
B. Jan-Mar 2011 (1/1/2011 - 3/31/2011)	4/1/2011	4/15/2011	Completed	
C. Apr-Jun 2011 (4/1/2011 - 6/30/2011)	7/1/2011	7/15/2011	Active	
D. Final Jul-Sep 2011 (7/1/2011 - 9/30/2011)	9/16/2011	9/30/2011	Active	

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>