



Statement of Work Report

Project Title: Streamnet (Cis/Ned)
Project #: 1988-108-04
Contract Title: 198810804 EXP STREAMNET
Contract #: 34428 [ISSUED]
Province: Systemwide **Subbasin:** Systemwide Projects
Workorder ID: 35794 **Task ID:** 1
Perf. Period Budget: \$2,261,033 **Perf. Period:** 10/1/2007 - 9/30/2008
Contract Type: Contract (IGC) **Pricing Type:** Cost Reimbursement (CNF)
Contractor(s): Pacific States Marine Fisheries Commission (PSMFC) (Prime - PACISTAT00)
BPA Internal Ref: 34428
SOW Validation: Last validated 08/16/2007 with 0 problems, and 0 reviewable items
Contract Documents: [Property Inventory \(08/11/2007\)](#) StreamNet Project Property Inventory
[Budget - Contract \(08/11/2007\)](#) StreamNet Budget FY 2008

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Work Element Table of Contents:

<u>Work Element - Work Element Title</u>	<u>EC Needed*</u>	<u>Estimate</u>	<u>(%)</u>
A : 159. Submit/Acquire Data - Conduct site visits to obtain updated data from biologist		\$10,000	(0 %)
B : 159. Submit/Acquire Data - Develop anadromous fish distribution data		\$65,000	(3 %)
C : 159. Submit/Acquire Data - Develop resident fish distribution data (top priority for MFWP, lower priority for others)		\$65,000	(3 %)
D : 159. Submit/Acquire Data - Develop data for adult abundance in the wild		\$65,000	(3 %)
E : 159. Submit/Acquire Data - Develop hatchery return data		\$65,000	(3 %)
F : 159. Submit/Acquire Data - Develop dam and fish passage facility data (mid-priority, update every three years)		\$65,000	(3 %)
G : 159. Submit/Acquire Data - Develop hatchery facility data (update every three years)		\$65,000	(3 %)
H : 159. Submit/Acquire Data - Develop hydrography data		\$65,000	(3 %)
I : 159. Submit/Acquire Data - Develop fish barrier data		\$65,000	(3 %)
J : 159. Submit/Acquire Data - Develop fish age data		\$65,000	(3 %)
K : 159. Submit/Acquire Data - Develop other data sets		\$65,000	(3 %)
L : 159. Submit/Acquire Data - Library collection development		\$118,000	(5 %)
M : 160. Create/Manage/Maintain Database - System Administration		\$177,000	(8 %)
N : 160. Create/Manage/Maintain Database - Application and interface development		\$147,000	(7 %)



<u>Work Element - Work Element Title</u>	<u>EC Needed*</u>	<u>Estimate</u>	<u>(%)</u>
O : 160. Create/Manage/Maintain Database - Data (content) management		\$163,000	(7 %)
P : 160. Create/Manage/Maintain Database - Data exchange standard development		\$153,000	(7 %)
Q : 161. Disseminate Raw/Summary Data and Results - Develop and maintain Internet sites for data dissemination		\$61,000	(3 %)
R : 161. Disseminate Raw/Summary Data and Results - Respond to data/information requests		\$133,000	(6 %)
S : 161. Disseminate Raw/Summary Data and Results - Library: Provide access to the library collection		\$265,000	(12 %)
T : 189. Regional Coordination - Support regional efforts under the Fish and Wildlife Program		\$41,000	(2 %)
U : 189. Regional Coordination - Coordinate with and support data source agencies		\$40,033	(2 %)
V : 189. Regional Coordination - Coordinate with related activities outside of the FWP		\$20,000	(1 %)
W : 99. Outreach and Education - Professional and public involvement		\$24,500	(1 %)
X : 119. Manage and Administer Projects - Manage project activities		\$193,500	(9 %)
Y : 132. Produce (Annual) Progress Report - Annual report		\$60,000	(3 %)
Z : 185. Produce Pisces Status Report - Periodic Status Reports for BPA		\$5,000	(0 %)
Total:		\$2,261,033	

* Environmental Compliance (EC) needed before work begins.

Contract Description:

StreamNet Project
 BPA Project No.: 198810804
 FY 2008 Work Statement
 October 1, 2007 through September 30, 2008

Note 1: This contract is being submitted while regional entities (CBFWA and NED) are continuing efforts to help establish regional data type priorities for the project. Therefore this should be considered as a first draft, and it may be necessary to amend the contract to adjust to final data and data service priorities once they are established.

Note 2: Project costs have, in most cases, been allocated equally across all individual titles within each Work Element, since it is not possible to accurately separate them for the large number of individual titles and the fact that in some cases given work effort (cost) can address several titles at the same time.

Participants:

Bruce Schmidt, Project Manager, Pacific States Marine Fisheries Commission
 Phil Roger, Columbia River Intertribal Fish Commission
 Bart Butterfield, Idaho Department of Fish and Game
 Janet Hess-Herbert, Montana Fish Wildlife and Parks



Cedric Cooney, Oregon Department of Fish and Wildlife
Steve Pastor, U.S. Fish and Wildlife Service
Brodie Cox, Washington Department of Fish and Wildlife

Project Description

StreamNet is a cooperative, multi-agency data compilation and data management project authorized by the Northwest Power Planning Council's Fish and Wildlife Program (FWP). It is funded primarily by the Bonneville Power Administration (BPA) through the FWP as part of its program to protect, mitigate, and enhance fish and wildlife resources affected by the development and operation of hydroelectric facilities on the Columbia River and tributaries. Other funding has also been obtained in the past from agencies including the Environmental Protection Agency and the National Marine Fisheries Service.

The Pacific States Marine Fisheries Commission (PSMFC) administers the project. PSMFC staff are also responsible for the regional components of the project, including maintaining the regional database, assuring regional data standardization, making data available in Geographic Information System (GIS) formats, building and operating Internet based data delivery systems, and posting the data for public access.

Three fourths of the project consists of sub-projects within the state fish and wildlife agencies, Columbia River Intertribal Fish Commission 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. All 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 project has received input on additional regional data type needs and priorities at the same time that the project is decreasing staff levels to meet the realities of inflation impacts due to this being the fifth year at level funding. Work in Oregon and Washington is being limited by geographic coverage due to reduced staffing in the subcontracting agencies. At the same time, we are exploring new data types through pilot efforts by subbasin in Oregon in response to requests by CBFWA for new data types. We are also reacting to requests for improved timeliness of data delivery through pilot testing in Idaho of new agency data systems and direct automated data pathways. We intend to increase support to agencies to build databases capable of speeding data flow as the only means to improve timeliness and increase efficiency in order to develop new data type priorities given level funding. Another key intent in response to regional priority input is to increase coordination with tribal programs to determine availability of tribal data and tribal agency data management capabilities to support data transfer to StreamNet. Pilot efforts are planned in this work statement, but complete delivery of tribal data will likely require additional capabilities within the tribal agencies.

StreamNet functions to obtain, standardize, georeference and disseminate fish related data. It focuses on the kinds of data primarily collected by the state, tribal and federal fisheries management agencies for use in management and research programs. Work is organized around eight BPA defined Work Elements:

1. WE 159 Submit / Acquire Data. The agency components of the project obtain various specific data sets from within their agencies and other agencies within their respective states or among member agencies. These data are then converted into regionally consistent formats so that all data are comparable despite agency of origin. The formats are agreed to by all participating agencies so that all are comfortable that data from different sources are being combined correctly. These data are then submitted to the regional database at PSMFC. In addition, source documents for all data are submitted to the StreamNet Library so that all data in the database are tied to source documents that are available through the library. Data acquisition this year is being restricted by location in Washington and Oregon due to staff reductions. Automated data exchange and agency database extraction techniques are being tested in Idaho.



2. WE 160 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 levels. This work includes maintenance of the hardware systems themselves and maintenance, updating, management and quality control of the data. Also included is development of various software tools to assist in data management and manipulation, and development of the various standard data formats referred to as Data Exchange Formats (DEF) used to assure data consistency across the region. StreamNet also maintains a number of regional base data layers that are 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 and Summary Data. Dissemination of data through the StreamNet website (www.streamnet.org) entails development, maintenance and operation of various applications, including a tabular data query system, interactive map applications, a searchable Independent Data Sets archive, and various pre-selected data sets. Data services include responding to requests for information from individuals, subbasin planners, other FWP supported projects, watershed councils, agencies and regional entities. The StreamNet Library provides access to data source documents for all data in the StreamNet database, the entire NW Power and Conservation Council document collection, and a major collection of fish and wildlife related agency reports and documents (gray literature). They also provide various services such as document scanning and Interlibrary Loans to aid patrons in obtaining information.

4. WE 189 Coordination. StreamNet coordinates with a variety of other database projects and regional initiatives. Coordination with other databases is for the purpose of avoiding unnecessary duplication of effort and to facilitate data sharing. Coordination with regional initiatives (such as Subbasin Planning, CSMEP, PNAMP, NED) is to provide data services and share experience and expertise with regional data consolidation and dissemination and assist these initiatives in reaching their goals. Coordination to encourage and support agency development of internal database systems is being given added emphasis this year as a means of moving toward more efficient data flow from data collecting agencies out to the regional scale data users.

5. WE 99 Outreach and Education. StreamNet produces occasional documents and brochures that explain the project and how to use it to obtain data. Project members also participate in professional organization meetings to explain project data services, advertise data availability, and encourage greater flow of data to the project.

6. WE 119 Manage and Administer Projects. All project participants contribute to management of the project. Each agency manages its own portion of the project, and PSMFC manages the overall project. Management tasks include budget development and expenditure tracking, personnel supervision, and management of project activities to accomplish tasks contained in the statement of work. Participants contribute to project guidance through active participation in the StreamNet Steering Committee and serve as liaisons with their respective agencies

7. WE 132 Produce Annual Report. A detailed annual report will be prepared that describes the specific work accomplished by the project during the preceding fiscal year. In the past, detailed activities were reported in four quarterly reports. With the advent of Pisces, however, quarterly reports were converted to the abbreviated Pisces format, eliminating the former detail. As a result, we are redesigning the annual report to contain summaries of the detailed work done by Work Element and Milestone.

8. WE 185 Periodic Status Reports for BPA. This work element entails completing and submitting abbreviated quarterly and final status reports in the Pisces system.

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. Submit/Acquire 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.

Planned <None>

Metrics:

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.

Milestone Title	Start Date	End Date	Status	Milestone Description
A. MFWP capture fish data through scheduled visits to biologist offices	10/1/2007	8/15/2008	Active	MFWP will visit MFWP, other state agency and federal fisheries biologists in early 2008 to obtain fisheries field survey data collected during the 2007 field season. Data will include fish distribution; use type; survey, inventory and monitoring of target species; reptiles and amphibians and nongame species. They will update the data tables in MFISH with the new data collected from biologists and documents, reports and electronic files assigning data LLID for stream routes and lakes. The update will be done for the entire state. Additional fields may be collected for species undergoing a species assessment. This is the primary method of obtaining data for StreamNet in Montana, in contrast to the other state StreamNet components. Additional fields may be collected for species undergoing a species assessment. This is the primary method of obtaining data for StreamNet in Montana, in contrast to the other state StreamNet components.
Deliverable: B. Conduct site visits to obtain updated data from biologists		8/15/2008	Active	<i>See the Deliverable Specification above</i>



B: 159. Submit/Acquire Data

Title: Develop anadromous fish distribution data

Description: Document the occurrence, distribution and life history characteristics of anadromous fish species. Efforts will be made to utilize the current mixed scale hydrography for these data, 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.

Planned Metrics: <None>

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.

Milestone Title	Start Date	End Date	Status	Milestone Description
A. IDFG development of anadromous fish distribution data	10/1/2007	9/30/2008	Active	IDFG, on an ongoing and opportunistic basis, will update, maintain, correct and exchange distribution information for Chinook salmon, sockeye salmon and steelhead with the regional StreamNet database in the DEF tied to the 100K hydrography scale.
B. ODFW development of anadromous fish distribution data	10/1/2007	9/30/2008	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 current and/or appropriate hydrography scale. For existing Oregon distribution data, convert all Columbia Basin events to events that map on the 24K Framework hydrography.
C. WDFW development of anadromous fish distribution data	10/1/2007	9/30/2008	Active	WDFW will perform any needed updates to Washington anadromous fish distribution data. Data will be converted to StreamNet format and exchanged when complete.
Deliverable: D. Anadromous fish distribution data updated and maintained		9/30/2008	Active	<i>See the Deliverable Specification above</i>

C: 159. Submit/Acquire 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.

Planned Metrics: <None>

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..



Milestone Title	Start Date	End Date	Status	Milestone Description
A. IDFG development and exchange of resident fish distribution data	10/1/2007	9/30/2008	Active	IDFG, on an ongoing and opportunistic basis, will update, maintain, correct and exchange distribution information for bull trout, white sturgeon, cutthroat trout and redband trout with the regional StreamNet database in the DEF tied to the 100K hydrography scale.
B. MFWP development and exchange of resident fish distribution data	10/1/2007	8/30/2008	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 scheduled visits to biologists offices. In addition, information from the UM genetics results for cutthroat trout and redband trout and information from the habitat restoration projects data will be used in determination of distributions.
C. MFWP participate in regional species assessments to develop distribution data	10/1/2007	9/1/2008	Active	MFWP will participate, organize and prepare materials for assessments of fish species of concern if they occur during the fiscal year. An update to the Yellowstone cutthroat trout assessment is likely in 2008.
D. ODFW development and exchange of resident fish distribution data	10/1/2007	9/30/2008	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 current and/or appropriate hydrography scale. For existing Oregon distribution data, convert all Columbia Basin events to events that map on the 24K Framework hydrography.
E. WDFW development of priority resident fish distribution data	10/1/2007	9/30/2008	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		9/30/2008	Active	<i>See the Deliverable Specification above</i>

D: 159. Submit/Acquire 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). 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).

Planned Metrics: <None>

Deliverable Specification: Data on the abundance of fish (species of primary interest) 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.



Milestone Title	Start Date	End Date	Status	Milestone Description
A. IDFG development of adult abundance data	10/1/2007	6/1/2008	Active	IDFG will compile the 2007 field season redd count and weir count data for Chinook salmon and sockeye salmon from IDFG and submit them in the DEF to regional StreamNet.
B. IDFG direct exchange of adult abundance data	10/1/2007	4/1/2008	Active	IDFG will pilot direct extraction of redd counts, spawner counts in the wild, and carcass counts from its agency-wide Spawning Ground Survey database for Chinook salmon and sockeye salmon.
C. IDFG extraction of hatchery fraction data	10/1/2007	4/1/2008	Active	IDFG will pilot direct extraction of hatchery fraction data from its agency-wide Spawning Ground Survey database for Chinook salmon and sockeye salmon.
D. IDFG extraction of size and sex composition data	10/1/2007	4/1/2008	Active	IDFG will pilot direct extraction of size and sex composition on spawning grounds from its agency-wide Spawning Ground Survey database for Chinook salmon and sockeye salmon.
E. MFWP development of adult abundance data	1/1/2008	9/1/2008	Active	MFWP will input all 2007 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 since the current DEF isn't established for resident fish surveys. If a DEF for resident fish abundance is adopted and becomes available, the data will be exchanged in that format.
F. ODFW development of adult abundance data, first exchange	10/1/2007	3/14/2008	Active	ODFW will update and maintain Steelhead, listed salmonids and Subbasin Plan focal species such as sturgeon, bull trout, redband trout, and westslope cutthroat where applicable, by subbasin, beginning with John Day Steelhead. Existing anadromous, resident, and non-game abundance and index trends, and add new trends will be updated 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.
G. ODFW development of adult abundance data, second exchange	3/17/2008	9/12/2008	Active	ODFW will update and maintain Steelhead, listed salmonids and Subbasin Plan focal species such as sturgeon, bull trout, redband trout, and westslope cutthroat where applicable, by subbasin, beginning with John Day Steelhead. Existing anadromous, resident, and non-game abundance and index trends, and add new trends will be updated 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.
H. ODFW pilot hatchery fraction - proportion of hatchery fish on spawning grounds	10/1/2007	9/12/2008	Active	ODFW will pilot data development in FY-08 with the goal of developing a plan to efficiently compile hatchery fraction data of spawners on spawning grounds that contribute to productivity estimates by subbasin and focal species, beginning with John Day Steelhead. Priority focus will be for steelhead, listed anadromous salmon and other focal species in each subbasin.



Milestone Title	Start Date	End Date	Status	Milestone Description
I. ODFW pilot size and sex composition	10/1/2007	9/12/2008	Active	ODFW will pilot data development in FY-08 with the goal of developing a plan to efficiently compile size and sex composition on spawning grounds that contribute to productivity estimates by subbasin and focal species, beginning with John Day Steelhead. Priority focus will be for steelhead, listed anadromous salmon and other focal species in each subbasin.
J. WDFW development of adult abundance data	10/1/2007	6/30/2008	Active	WDFW will provide 2007 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.
Deliverable: K. Fish abundance data are maintained and updated		9/30/2008	Active	<i>See the Deliverable Specification above</i>

E: 159. Submit/Acquire 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 2007. 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 DMFS Priority 2 data type for FY-08.

Planned Metrics: <None>

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



Milestone Title	Start Date	End Date	Status	Milestone Description
A. FWS development of hatchery return data	10/1/2007	5/30/2008	Active	FWS will receive Fish Removal and Egg files from individual hatcheries for anadromous salmonids, and add summarized data to the Hatchery Returns file up through return year 2007. Data will be exchanged with the regional StreamNet database.
B. IDFG development of hatchery return data	10/1/2007	8/1/2008	Active	IDFG will compile the 2007 field season hatchery return data for Chinook salmon, sockeye salmon and steelhead from IDFG and submit in DEF to regional StreamNet.
C. IDFG pilot extraction of hatchery return data	10/1/2007	4/1/2008	Active	IDFG will pilot direct extraction of hatchery return data from its in development Hatchery Database for Chinook salmon, sockeye salmon and steelhead.
D. ODFW development of hatchery return data	7/1/2008	9/30/2008	Active	ODFW will compile data on adult returns to ODFW hatchery facilities (updated through 2006 returns where possible) for Steelhead, listed salmonids & focal species, by subbasin, beginning in the mid-Columbia recovery area, and exchange in the DEF to regional StreamNet. Submitted data will be spatially referenced to an LLID.
E. WDFW development of hatchery return data	3/1/2008	7/15/2008	Active	WDFW will provide 2006 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.
Deliverable: F. Data on return of anadromous fish to the hatchery are maintained and updated		9/30/2008	Active	<i>See the Deliverable Specification above</i>

F: 159. Submit/Acquire Data

Title: Develop dam and fish passage facility data (mid-priority, update every three years)

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. This is a DMFS Priority 3 data type.

Planned Metrics: <None>

Deliverable Specification: Data on dam and fish passage facilities are maintained and updated by the state StreamNet sub-projects on a periodic, low priority basis.

Milestone Title	Start Date	End Date	Status	Milestone Description
A. MFWP development of dam and fish passage facility data	1/1/2008	8/15/2008	Active	MFWP will update the dams facilities database one time during the year and exchange the data if there are any changes.
Deliverable: B. Data on dam and fish passage facilities maintained and updated periodically		8/15/2008	Active	<i>See the Deliverable Specification above</i>



G: 159. Submit/Acquire Data

Title: Develop hatchery facility data (update every three years)

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. Data will be updated as necessary and exchanged to the regional database at PSMFC.

Planned Metrics: <None>

Deliverable Specification: Data on hatchery facilities are maintained and updated by the state StreamNet sub-projects. Updated data are exchanged with the main StreamNet database at PSMFC on three year rotating basis, beginning in 2007.

Milestone Title	Start Date	End Date	Status	Milestone Description
A. FWS maintain and update the Hatchery Facility table	10/1/2007	9/30/2008	Active	FWS will maintain existing data and collect any revised information on National Fish Hatcheries and submit updates to the regional StreamNet database.
B. MFWP development of hatchery facility data	10/1/2007	8/15/2008	Active	MFWP will update the public and private hatchery facilities database once during the year and exchange updated data with the regional StreamNet database.
C. WDFW development of hatchery facility data	10/1/2007	9/30/2008	Active	WDFW will maintain the hatchery facilities database, improving field entries for existing records and related tables as warranted. If significant updates are made, data will be converted to StreamNet format and submitted when complete.
Deliverable: D. Hatchery facilities data maintained and updated		9/30/2008	Active	<i>See the Deliverable Specification above</i>

H: 159. Submit/Acquire Data

Title: Develop hydrography data

Description: Maintain the regionally consistent routed hydrography layer at the 1:100,000 (100K) scale for which StreamNet is the official keeper. This LLID based hydrography has been the basis for georeferencing and displaying locations for all other data in the StreamNet database, and as such is an essential data set. In FY-08 we will continue to maintain these data, but emphasis will shift to development and use of a mixed scale hydrography (100K plus 24K streams that have attached fish data) as a step toward the eventual conversion to 24K when a regionally consistent routed 24K hydrography becomes available from other entities (potentially several years away). 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.

Planned Metrics: <None>

Deliverable Specification: The 1:100,000 PNW hydrography layer and lakes layer are maintained and updated as needed for internal use and posted on the StreamNet website for use by others. An interim "mixed scale" (100K X 24K) hydrography for use in posting StreamNet data is developed for StreamNet use until the PNW 1:24,000 scale NHD is completed by USGS.



Milestone Title	Start Date	End Date	Status	Milestone Description
A. IDFG maintenance of hydrography for Idaho	10/1/2007	9/30/2008	Active	IDFG, on an ongoing basis, will maintain and update, as necessary, the 1:100,000 scale hydrography (streams and lakes) for Idaho.
B. MFWP maintenance of hydrography for Montana	10/1/2007	8/15/2008	Active	MFWP, using the NHD, will continue to update the routes using the updated NHD layer, including lakes; quality check the cross-references between the LLID system and MFWP's water code system; and 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.
C. ODFW maintenance of hydrography for Oregon	10/1/2007	9/30/2008	Active	ODFW, on an ongoing basis, will maintain and update as necessary the 1:100,000 scale hydrography files for Oregon. Necessary changes will be exchanged. ODFW will also contribute to the development of a mixed scale (100k -24K) hydrography layer by submitting existing 100K streams, named 24K streams and 24K streams with associated distribution and barrier data in the Columbia basin in a linear format.
D. ODFW - Lakes/Reservoir layer	10/1/2007	9/30/2008	Active	ODFW will submit a statewide reservoir layer to make lake data compatible with 24k Streams data.
E. WDFW development of the Washington portion of the StreamNet mixed-scale hydrography layer	10/1/2007	9/30/2008	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 maintained and mixed scale hydrography is functional.		9/30/2008	Active	<i>See the Deliverable Specification above</i>



I: 159. Submit/Acquire Data

Title: Develop fish barrier data

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 with exchange targeted for FY-09. Some preliminary work may be done sooner, and some already compiled data may be exchanged.

Planned Metrics: <None>

Deliverable Specification: Data on fish barriers are developed and maintained by the state StreamNet sub-projects. Updated data are exchanged with the main StreamNet database at PSMFC as they become available, on 3 yr rotation beginning FY-09, or as available. New sources of barrier data are located.

Milestone Title	Start Date	End Date	Status	Milestone Description
A. MFWP development of fish barrier data	10/1/2007	8/29/2008	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.
B. ODFW development of fish barrier data	10/1/2007	9/30/2008	Active	ODFW will synthesize existing fish passage barrier inventory data from ODFW and other agencies for the Mid-Columbia recovery area into a more comprehensive and functional Framework dataset. For existing ODFW Columbia basin barrier data, convert events to the 24K Framework hydrography. ODFW will also update and maintain Oregon's Barrier data based on new and/or previously unincorporated barrier information, including information from non-ODFW sources. Species-specific upstream and downstream passage information for adults and juveniles will be included in the ODFW Barrier Database, and will be submitted to Regional StreamNet when a DEF is adopted.
C. ODFW conversion of fish barrier data to 24K hydrography	10/1/2007	3/30/2008	Active	For existing ODFW Columbia basin barrier data, convert events to the 24K Framework hydrography and submit.
Deliverable: D. Fish barrier data developed and maintained		9/30/2008	Active	<i>See the Deliverable Specification above</i>



J: 159. Submit/Acquire Data

Title: Develop fish age data

Description: Develop and maintain information on age/sex composition of returning adults, primarily for anadromous species. This is a DMFS Priority 2 data type.

Planned Metrics: <None>

Deliverable Specification: Data on age composition of returning adult fish are available through the StreamNet website.

Milestone Title	Start Date	End Date	Status	Milestone Description
A. CRITFC development of fish age data	10/1/2007	1/31/2008	Active	CRITFC will exchange 2007 CRITFC age data on fish populations sampled at Bonneville Dam.
B. FWS development of fish age data	10/1/2007	9/30/2008	Active	FWS will process Fish Return and Age data through return year 2007 into the new StreamNet Age table format, once a final format has been settled on, and exchange the data with the regional StreamNet database.
C. IDFG development of fish age data	10/1/2007	9/1/2008	Active	IDFG will compile and submit the 2007 field season age composition data for returning Chinook salmon, sockeye salmon and steelhead from IDFG and submit to regional StreamNet in DEF format.
D. IDFG pilot extraction of fish age data	10/1/2007	4/1/2008	Active	IDFG will pilot direct extraction of age composition data from its Spawning Ground Survey database and its in development Hatchery Database for Chinook salmon, sockeye salmon and steelhead.
E. ODFW development of fish age data	10/1/2007	9/15/2008	Active	ODFW will pilot data development in FY-08 with the goal of developing a plan to efficiently compile age data that contribute to productivity estimates by subbasin and focal species, beginning with John Day Steelhead. Priority focus will be for steelhead, listed anadromous salmon and other focal species in each subbasin.
F. WDFW development of fish age data	3/1/2008	9/30/2008	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.
Deliverable: G. Age data are available on the StreamNet query system		9/30/2008	Active	<i>See the Deliverable Specification above</i>

K: 159. Submit/Acquire 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 DEF 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 agency. Receiving and posting independent data sets from other entities in the Data Store is a high priority.

Planned Metrics: <None>



Deliverable Specification:

Other fish related data (in addition to the standard StreamNet data categories) are obtained 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.

Milestone Title	Start Date	End Date	Status	Milestone Description
A. CRITFC development of other data sets	10/1/2007	9/30/2008	Active	CRITFC will provide appropriate non-standard data sets developed through other activities as opportunities arise.
B. IDFG development of other data sets	10/1/2007	9/30/2008	Active	IDFG, on an opportunistic basis, 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.
C. MFWP development of other data sets	10/1/2007	8/29/2008	Active	MFWP will compile updated genetic results information on Montana's species of concern and update other datasets which will be provided as independent data sets to the Data Store. They will also explore providing other data sets if time allows and as desired by regional staff.
D. MFWP development of diversion screening data	10/1/2007	9/30/2008	Active	MFWP will collect diversion screening data from the MFWP Habitat Bureau resulting from FRIMA and other screening activities in Montana. Exchange data if DEF becomes available.
E. MFWP develop habitat restoration projects data	10/1/2007	9/30/2008	Active	Restoration project data will be maintained and updated as needed, and the user interface will be enhanced.
F. ODFW development of other data sets	10/1/2007	9/30/2008	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.
G. PSMFC development of other data sets and data for the Data Store	10/1/2007	9/30/2008	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. After the new North American metadata standard is adopted, and after designing the new on-line system for Data Store submissions, convert the current Data Store items' metadata to meet the new international standard.
H. PSMFC exploration into data capture of additional NPCC F&W Program priority data sets	10/1/2007	9/30/2008	Active	The Region will cooperate with NPCC staff to identify priority regional data sets generated by Fish and Wildlife Program projects that are not currently captured in a regional data system.
I. WDFW development of other data sets	10/1/2007	9/30/2008	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 Datasets (Data Store).
Deliverable: J. Other data are developed on an ad hoc basis as possible		9/30/2008	Active	<i>See the Deliverable Specification above</i>



L: 159. Submit/Acquire Data

Title: Library collection development

Description: The StreamNet Library, with input from the other project participants, will develop a collection of materials applicable to the mission of StreamNet. We will collect, catalog and organize materials to document data sources, Fish and Wildlife Program activities and reports, and other gray literature for access by regional scientists, agencies, interested parties, and other libraries. The project participants will submit reference documents for all data contained in the StreamNet database to the StreamNet Library.

Planned Metrics: <None>

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

Milestone Title	Start Date	End Date	Status	Milestone Description
A. CRITFC StreamNet Library collection development	10/1/2007	9/30/2008	Active	CRITFC, on an ongoing basis, will: 1. Develop a collection of materials related to the Columbia Basin, including reports from other Fish & Wildlife Program projects, other agency documents as they relate to the Basin, and other published and unpublished materials as requested by clients. 2. Receive, coordinate, and incorporate source document submissions for data compiled by project participants and entered into the StreamNet database. This includes references for data included in the data query system and also data in the independent data sets in the Data Store. 3. Develop and maintain a collection of journals related to fisheries and aquatic sciences and related scientific topics. 4. Digitize collections of historic documents, especially as they relate to the Columbia Basin.
B. StreamNet participants provide data reference documents	10/1/2007	9/30/2008	Active	CRITFC, FWS, IDFG, MFWP, ODFW, WDFW, and PSMFC, on an ongoing basis, will obtain reference documents for all data developed under WE 159 by their part of the project and submit them to the StreamNet Library for inclusion in the collection and catalog.
Deliverable: C. Library collection maintained and increased		9/30/2008	Active	<i>See the Deliverable Specification above</i>

M: 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.

Planned Metrics: <None>

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. CRITFC computer system administration	10/1/2007	9/30/2008	Active	CRITFC, on an ongoing basis, will manage, maintain and enhance the computer systems (hardware and operating software) necessary for supporting the StreamNet Library and CRITFC StreamNet data, including system administration, backup and recovery, hardware and software upgrades, and security.
B. FWS computer system administration	10/1/2007	9/30/2008	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.
C. IDFG computer system administration	10/1/2007	9/30/2008	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.
D. MFWP information system administration	10/1/2007	9/30/2008	Active	MFWP, on an ongoing basis, will manage and maintain and enhance the computer systems (hardware and operating software) necessary for supporting the MFWP StreamNet tabular and GIS data and serving needs of MFWP system administrators.
E. ODFW computer system administration	10/1/2007	9/30/2008	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.
F. PSMFC computer system administration	10/1/2007	9/30/2008	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, 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, and preparation of disaster recovery plans; and, 4. Assistance with development of XML schemas based options for both incoming and outgoing data and continuing exploration of how XML can enhance data exchange.



Milestone Title	Start Date	End Date	Status	Milestone Description
G. WDFW computer system administration	10/1/2007	9/30/2008	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: H. Computer systems maintained		9/30/2008	Active	<i>See the Deliverable Specification above</i>

N: 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.

Planned Metrics: <None>

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. CRITFC development and/or maintenance of applications and interfaces	10/1/2007	9/30/2008	Active	CRITFC, on an ongoing basis, will develop and/or maintain computerized databases, applications and interfaces that facilitate the entry, compilation, management and dissemination of tabular data to support Library operations and to provide reference data to PSMFC.
B. FWS development and/or maintenance of applications and interfaces	10/1/2007	9/30/2008	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.
C. IDFG development and/or maintenance of applications and interfaces	10/1/2007	9/30/2008	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 tabular and GIS data.
D. IDFG development of routines to extract data from IFWIS	10/1/2007	9/30/2008	Active	IDFG will develop routines that will extract data for the StreamNet database directly from the IDFG Fish and Wildlife Information System as part of a test of automated data delivery to the StreamNet database. Pilot efforts this year will relate to spawning ground survey data, including abundance, hatchery fraction, and size and sex composition.
E. MFWP development and/or maintenance of applications and interfaces	10/1/2007	9/30/2008	Active	MFWP will develop and/or maintain computerized databases, applications and interfaces that facilitate the entry, compilation, management and dissemination of tabular and GIS data.



Milestone Title	Start Date	End Date	Status	Milestone Description
F. ODFW development and/or maintenance of applications and interfaces	10/1/2007	9/30/2008	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. PSMFC development and/or maintenance of applications and interfaces	10/1/2007	9/30/2008	Active	The Region, on an ongoing basis, will: 1. Archive the LLID/NHD hydrography conversion tool. We will track the efforts of others, 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 1:100,000 scale hydrography over the Internet; 3. Modify the web data query system to add the capability of displaying data conforming to changes in the DEF, particularly age data, since the new Age DEF is approved and ready for implementation in FY-07; and, 4. Develop and/or maintain computerized databases, applications and interfaces that facilitate the entry, compilation, management and dissemination of tabular and GIS data. They will assist cooperating agencies with tool development, as requested. Tools may include input interfaces, error checking routines, geographic locators, etc.
H. PSMFC design interface for online Data Store submissions	4/30/2008	9/30/2008	Active	Design 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. Work in FY-07 included conceptual development and design; FY-08 will include modifications in order to meet the new North American metadata standard, as well as actual development of the program.
I. WDFW development and/or maintenance of applications and interfaces	10/1/2007	9/30/2008	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: J. Applications are developed and maintained.		9/30/2008	Active	<i>See the Deliverable Specification above</i>

O: 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.

Planned Metrics: <None>

**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 posted 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. CRITFC data content management, QA/QC	10/1/2007	9/30/2008	Active	CRITFC, on an ongoing basis, will perform comprehensive QA/QC on all datasets maintained by CRITFC.
B. FWS data content management, QA/QC	10/1/2007	9/30/2008	Active	FWS on an ongoing basis, will manage data at the agency level, conduct quality checks, and exchange data to PSMFC as specified in this Statement of Work.
C. IDFG data content management, QA/QC	10/1/2007	9/30/2008	Active	IDFG, on an ongoing basis, will manage data at the agency level, conduct quality checks, develop and maintain FGDC compliant metadata, and exchange data to PSMFC as specified in this Statement of Work.
D. MFWP data content management, QA/QC	10/1/2007	9/30/2008	Active	MFWP will manage all data related to deliverables in the SOW at the agency level, develop and maintain FGDC compliant metadata for GIS data, and exchange data to PSMFC according to deadlines specified in this work statement.
E. ODFW data content management, QA/QC	10/1/2007	9/30/2008	Active	ODFW, on an ongoing basis, will manage ODFW-NRIMP and StreamNet data, including metadata development/maintenance, QA/QC activities, and exchange data to PSMFC as specified in this Statement of Work.
F. PSMFC support for data content management	10/1/2007	9/30/2008	Active	The Region, on an ongoing, as needed basis, will assist data contributing agencies in development of data, including formatting, coding, data entry, error checking, and submitting to the regional database.



Milestone Title	Start Date	End Date	Status	Milestone Description
G. PSMFC GIS data content management	10/1/2007	9/30/2008	Active	<p>The Region, on an ongoing basis, will manage GIS data content for the StreamNet project through the following actions by the GIS Specialist:</p> <ol style="list-style-type: none"> 1. Whenever new tabular data with a spatial component are submitted to the Region (e.g., fish distribution, hatchery facilities, etc.), create regional GIS layers from this information where possible. He will verify correct format, accuracy and logical consistency of spatial data sets and attributes through coordination with state GIS contacts and then load data to the regional database in coordination with the database manager. He will post mappable layers to the online query system, the ArcIMS interactive mapping system, and as downloadable layers for StreamNet GIS users; 2. 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, or elevations, and create cross tables for use by the query system; 4. Assist the database manager with the spatial component of data and its implementation online; 5. Coordinate efforts by the StreamNet partners to maintain and update, as necessary, the 1:100,000 scale hydrography files for the states and the PNW region; 6. Maintain the 100K hydrography and integrate the interim "mixed scale" hydrography as it becomes available. In particular, this transition will enable StreamNet to display the best available fish distribution data region wide. Progress on the development of a regionally consistent 24k routed hydrography by the USGS and partners will be closely monitored; 7. Integrate the functioning of the GIS system with the StreamNet fisheries and habitat 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, 8. Ensure that all published spatial data is documented to meet FGDC metadata requirements and will manage and maintain a metadata web service that makes StreamNet and Data Store metadata available for inclusion in regional and national data portals (eg, NED, Geospatial One-Stop, NBII and others).



Milestone Title	Start Date	End Date	Status	Milestone Description
H. PSMFC tabular data content management, QA/QC	10/1/2007	9/30/2008	Active	The Region, on an ongoing basis through the Regional Database Manager will: 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; 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 produce a downloadable version of StreamNet's primary fish enumeration data in Access database format, downloadable ASCII formatted files of primary StreamNet data tables and maintain an online data dictionary; 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; and, 5. Provide the regional staff and steering committee with guidance and supporting analysis of data issues, shortcomings and recommended improvements.
I. WDFW data content management, QA/QC	10/1/2007	9/30/2008	Active	WDFW will develop and manage all Washington StreamNet data, including development of FGDC compliant metadata for spatial data, and submit data with the StreamNet Regional Office at PSMFC using StreamNet standard Data Exchange Format codes and conventions.
Deliverable: J. Data are maintained and updated, metadata are developed, and data timeline is posted.		9/30/2008	Active	<i>See the Deliverable Specification above</i>

P: 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.

Planned Metrics: <None>



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. CRITFC development and maintenance of data exchange standards	10/1/2007	9/30/2008	Active	CRITFC, 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. FWS development and maintenance of data exchange standards	10/1/2007	9/30/2008	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.
C. IDFG development and maintenance of data exchange standards	10/1/2007	9/30/2008	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.
D. MFWP development and maintenance of data exchange standards	10/1/2007	9/30/2008	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.
E. ODFW development and maintenance of data exchange standards	10/1/2007	9/30/2008	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.
F. PSMFC development and maintenance of data exchange standards	10/1/2007	9/30/2008	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. The Regional Biologist will serve as the primary coordinator of the DEF process and is responsible for updating and publishing the official DEF document.
G. PSMFC development and maintenance of data exchange standards, EMAP-based data sets.	10/1/2007	3/31/2008	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 data collected under an EMAP GRTS sampling approach.



Milestone Title	Start Date	End Date	Status	Milestone Description
H. PSMFC creation of DEF (s) for additional data types from FWP projects	10/1/2007	9/30/2008	Active	The Region will create a DEF(s) for the data type(s) not already included in the StreamNet DEF, as identified by work done under WE 159, Title "Develop Other Data Sets" , Milestone H to assist capture of data from FWP supported projects. The DEF(s) will be used to guide creation of one or more web-based applications for direct data entry into a standard database. If more than one type of data is identified, the goal of this milestone will be to complete at least one of the needed DEFs during the year.
I. WDFW development and maintenance of data exchange standards	10/1/2007	9/30/2008	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: J. Data are maintained and updated.		9/30/2008	Active	<i>See the Deliverable Specification above</i>

Q: 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.

Planned Metrics: <None>

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.



Milestone Title	Start Date	End Date	Status	Milestone Description
A. PSMFC Internet site maintenance and development	10/1/2007	9/30/2008	Active	<p>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:</p> <ol style="list-style-type: none"> 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 Data, Map, and PNW Reach File Internet 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. Research integration of 4th, 5th and 6th field HUC boundary layers into a single region-wide dataset and plan improvements to the web-query system and Internet map application as this improved base data becomes available; 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; and, 9. Continue planning for a complete redesign of the query system and website, and begin development. 10. Maintain the PNAMP monitoring inventory web page.
B. StreamNet partners assist Internet site maintenance and development	10/1/2007	9/30/2008	Active	<p>The StreamNet partners will assist in maintenance and improvement of the StreamNet website, the project's primary data dissemination tool, through ongoing use and review of the site and providing feedback to StreamNet staff at PSMFC on any problems, errors or suggestions for needed improvements.</p>
C. ODFW internal Internet site maintenance and development	10/1/2007	9/30/2008	Active	<p>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.</p>
Deliverable: D. StreamNet Internet sites maintained and functional		9/30/2008	Active	<p><i>See the Deliverable Specification above</i></p>

R: 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.

Planned Metrics: <None>

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.



Milestone Title	Start Date	End Date	Status	Milestone Description
A. CRITFC respond to and track document/information requests	10/1/2007	9/30/2008	Active	CRITFC on an ongoing basis, will respond to requests for documents, publications, technical assistance, source materials, or other library products. Requests will be logged and reported.
B. FWS respond to and track data/information requests	10/1/2007	9/30/2008	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.
C. IDFG respond to and track data/information requests	10/1/2007	9/30/2008	Active	IDFG, on an ongoing basis, will respond to requests for data, maps, technical assistance, source materials, or custom data products at the agency level, within the capabilities provided by base funding. Requests will be logged and reported.
D. MFWP respond to and track data/information requests	10/1/2007	9/30/2008	Active	MFWP, on an ongoing basis, will respond to requests for data, maps, technical assistance, source materials, or custom data products at the agency level, within the capabilities provided by base funding. Requests will be logged and reported.
E. ODFW respond to and track data/information requests	10/1/2007	9/30/2008	Active	ODFW, on an ongoing basis, will respond to requests for data, maps, technical assistance, source materials, or custom data products at the agency level, within the capabilities provided by base funding. Requests will be logged and reported.
F. PSMFC respond to and track data/information requests	10/1/2007	9/30/2008	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.
G. PSMFC maintain and post Protected Areas data	10/1/2007	9/30/2008	Active	The Region, on an ongoing basis, will maintain and provide access to the Protected Areas data through the online query system and the interactive map application. If not completed during FY07, the Region will add a web page that explains the Protected Areas and points users to all related resources. We will attempt to resolve Protected Areas locations to the mixed scale hydrography as the hydrography is developed in each state.
H. WDFW respond to and track data/information requests	10/1/2007	9/30/2008	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: I. Responses to requests are provided rapidly and tracked		9/30/2008	Active	<i>See the Deliverable Specification above</i>



S: 161. Disseminate Raw/Summary Data and Results

Title: Library: Provide access to the library collection

Description: The StreamNet Library will provide user access to the materials described in the collection development work element by providing facilities for storage of paper and electronic copies of documents, an online catalog of all documents in the collection, and staff to answer location questions and respond to requests. They will provide library services to the StreamNet user community, the Council's Fish and Wildlife Program, and the general public. They will network with other agency and regional library service providers to provide better access to other collections that will enhance the StreamNet Library and to avoid unnecessary duplication of effort and materials.

Planned Metrics: <None>

Deliverable Specification: The StreamNet Library is opened to patrons on all business days, and patrons have full access to the collection in person and through phone or Internet requests and to services such as Interlibrary Loan, document searches, etc.

Milestone Title	Start Date	End Date	Status	Milestone Description
A. CRITFC provide access to the StreamNet Library collection	10/1/2007	9/30/2008	Active	CRITFC, on an ongoing basis, will: 1. Provide and maintain appropriate facilities for the storage and public use of the StreamNet Library collections. 2. Catalog and organize materials for ease of use by patrons. 3. Update web catalog and archive data by providing copies of the database to the Regional Data Manager on at least a monthly basis. 5. Provide access to reference documents supporting data in the StreamNet data query system and independent data sets in the Data Store.
B. CRITFC provide library services to patrons to support dissemination of information	10/1/2007	9/30/2008	Active	CRITFC, on an ongoing basis, will: 1. Provide information and reference services to patrons. 2. Evaluate changes in technology and new feature requests for improved services to library patrons. 3. Provide interlibrary lending and borrowing services for access to unique materials in the library collections and materials not owned by the library. 4. Provide consultations for groups and other agencies on library organization and services. 5. Coordinate with other StreamNet libraries, library clients, and other libraries (through professional memberships) to improve service to clients and limit duplication of effort.
C. CRITFC prototype methods for improving access and services to Library patrons	10/1/2007	8/29/2008	Active	CRITFC will test and evaluate the following ways to enhance access and services 1. Georeference a subset of StreamNet references 2. Work with CBFWA to provide a map interface to georeferenced documents 3. Explore creation of digital collections to assist future subbasin planning 4. Maintain a plan to place electronic documents in the catalog and on the library website.
Deliverable: D. Library access is available all business days		9/30/2008	Active	<i>See the Deliverable Specification above</i>

T: 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), advisory groups, task forces, and other groups (e.g., PNAMP, NED, CSMEP) 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.

Planned Metrics: <None>

Deliverable Specification: StreamNet staff have participated actively in and supported a number of projects funded through the FWP, including CBFWA, PNAMP, NED and CSMEP. StreamNet is a recognized component of the regional data management framework. Regional agreement is reached on priorities for StreamNet data development for the remainder of the three year funding cycle.

Milestone Title	Start Date	End Date	Status	Milestone Description
A. CRITFC provide support to Fish and Wildlife Program development activities	10/1/2007	9/30/2008	Active	CRITFC, 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. This will include assisting with development of strategies for ESA recovery planning
B. IDFG provide support to Fish and Wildlife Program development activities	10/1/2007	9/30/2008	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.
C. MFWP provide support to Fish and Wildlife Program development activities	10/1/2007	9/30/2008	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.
D. ODFW provide support to Fish and Wildlife Program development activities	10/1/2007	9/30/2008	Active	ODFW, 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.



Milestone Title	Start Date	End Date	Status	Milestone Description
E. PSMFC provide support to Fish and Wildlife Program development activities	10/1/2007	9/30/2008	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. Continued participation on the Steering Committee for the Council's project to develop a Northwest Environmental Data-network (NED) to convey recommendations based on experience in the development of a regional approach to data dissemination; 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 participate with CBFWA in support of data management efforts, including work with the Collaborative Systemwide Monitoring and Evaluation Project (CSMEP), the Status of the Resource Report and the Data Management Framework Subcommittee. 4. Provide support (expertise and guidance) to other FWP related programs and projects as requested and as possible under existing resources.
F. WDFW provide support to Fish and Wildlife Program development activities	10/1/2007	9/30/2008	Active	WDFW will work with regional entities to contribute data management expertise toward development of activities within the scope of the Fish and Wildlife Program such as the Data Management Framework or subbasin planning, serving as a professional data management resource to the FWP.
Deliverable: G. Data related support is provided to FWP related activities		9/30/2008	Active	<i>See the Deliverable Specification above</i>

U: 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.

Planned Metrics: <None>

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. CRITFC coordination with data source agencies	10/1/2007	9/30/2008	Active	CRITFC, on an opportunistic basis and within budgeted resources, will coordinate with member tribal organizations to determine data availability and resources needed to develop future delivery of relevant data to StreamNet
B. IDFG coordination with data source agencies	10/1/2007	9/30/2008	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.
C. MFWP coordination with data source agencies	10/1/2007	9/30/2008	Active	MFWP StreamNet will coordinate with MFWP to support enhanced data flow to StreamNet.
D. MFWP assist Fisheries Division in preparation of a Statewide Fisheries Management Plan	10/1/2007	9/30/2008	Active	MFWP will provide support, technical expertise and guidance, and products for the development of the Fisheries Division Statewide Fisheries Management Plan.
E. MFWP assist the Fisheries Division in standardized field survey techniques and forms	10/1/2007	9/30/2008	Active	MFWP will provide guidance, support and review to the activities of the Fisheries Division in their effort to standardize data processes and procedures from the field to data delivery.
F. ODFW coordination with data source agencies	10/1/2007	9/30/2008	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. Focus this year will be to work with Rec Plan, run-reconstruction staff and others to identify the core datasets used in recovery planning and run-reconstruction. Once core Recovery Plan and/or run-reconstruction datasets have been identified, create and/or fully populate existing metadata for these datasets.
G. ODFW StreamNet coordination with ODFW on Data Summit	10/1/2007	9/30/2008	Active	ODFW StreamNet will take the lead in planning and conducting an ODFW Data Summit in FY-08, if approved by agency leadership.
H. ODFW coordination with ODFW GIS Coordination Group	10/1/2007	9/30/2008	Active	Continue to spearhead the ODFW GIS Coordination Group's efforts to develop an agency Strategic and Implementation Plan.
I. Region coordination with data source agencies	10/1/2007	9/30/2008	Active	The Region, on an opportunistic basis and within budgeted resources, will work with the StreamNet partners to coordinate with agencies and organizations that collect data to determine their data availability, data management capabilities and needs, and interest in providing data to StreamNet. We will work toward supporting the data source agencies in developing the capabilities and tools to facilitate increased data flow, with particular emphasis placed on supporting tribal efforts.
J. WDFW coordination with data source agencies	10/1/2007	9/30/2008	Active	WDFW, 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.
Deliverable: K. Support provided to data source agencies		9/30/2008	Active	<i>See the Deliverable Specification above</i>



V: 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.

Planned Metrics: <None>

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. CRITFC coordination with related activities outside of the FWP	10/1/2007	9/30/2008	Active	CRITFC, on an opportunistic basis and within budgeted resources, will coordinate with other agencies, 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. IDFG coordination with related activities outside of the FWP	10/1/2007	9/30/2008	Active	IDFG, on an opportunistic basis and within budgeted resources, will coordinate with other agencies, 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.
C. MFWP coordination with related activities outside of the FWP	10/1/2007	9/30/2008	Active	MFWP, on an opportunistic basis and within budgeted resources, will coordinate with other agencies, 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.
D. ODFW coordination with related activities outside of the FWP	10/1/2007	9/30/2008	Active	ODFW, on an opportunistic basis and within budgeted resources, will coordinate with other agencies, 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.
E. PSMFC coordinate with related activities outside of the FWP	10/1/2007	9/30/2008	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.
F. WDFW coordination with related activities outside of the FWP	10/1/2007	9/30/2008	Active	WDFW, on an opportunistic basis and within budgeted resources, will coordinate with other agencies, regional groups, non-profits, etc. that are not part of the Fish and Wildlife Program for the purpose of enhancing the collection and management of data related to the StreamNet project mission.
Deliverable: G. Coordination outside the FWP is accomplished as needed		9/30/2008	Active	<i>See the Deliverable Specification above</i>

**W: 99. Outreach and Education**

Title: Professional and public involvement

Description: As needed, produce public information materials and as possible participate in various meetings and forums (public or professional) to explain the project's capabilities and purpose and to generate support and additional data sources. Activities may include brochures, issue papers, demonstrations, guidance documents, posters and talks to public, policy or professional groups and organizations.

Planned * # of students reached: 100

Metrics: * # of general public reached: 100

Deliverable Specification: Materials describing the project are made available, and professional groups are informed about the project and its services.



Milestone Title	Start Date	End Date	Status	Milestone Description
A. CRITFC support for professional and public involvement	10/1/2007	9/30/2008	Active	CRITFC, on an opportunistic basis and within budgeted resources, will prepare and deliver presentations to public, scientific and professional meetings to demonstrate project capabilities, services and accomplishments and to solicit additional data and involvement or coordination with the StreamNet Library and the project.
B. IDFG support for professional and public involvement	10/1/2007	9/30/2008	Active	IDFG, on an opportunistic basis and within budgeted resources, will prepare and deliver presentations to public, scientific and professional meetings to demonstrate project capabilities, services and accomplishments and to solicit additional data and involvement or coordination with the StreamNet project.
C. MFWP support for professional and public involvement	10/1/2007	9/30/2008	Active	MFWP, on an opportunistic basis and within budgeted resources, will prepare and deliver presentations to public, scientific and professional meetings to demonstrate project capabilities, services and accomplishments and to solicit additional data and involvement or coordination with the StreamNet project.
D. ODFW support for professional and public involvement	10/1/2007	9/30/2008	Active	ODFW, as needed or requested within budget and time constraints, will prepare and deliver presentations to public, scientific and professional meetings to demonstrate project capabilities, services and accomplishments and to solicit additional data and involvement or coordination with the project.
E. PSMFC support for professional and public involvement	10/1/2007	9/30/2008	Active	The Region, 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, and other local, regional or national groups.
F. PSMFC support for professional and public involvement and publication of newsletter	10/1/2007	9/30/2008	Active	The Region will publish at least two (preferably four, depending on availability of 'news') 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 3/31/2008 and 9/30/2008.
G. PSMFC support professional and public involvement, produce public materials	10/1/2007	9/30/2008	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: H. Materials prepared and presentations given as needed		9/30/2008	Active	<i>See the Deliverable Specification above</i>

**X: 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), work statement / budget preparation and implementation, coordination among participating agencies, and project guidance through active participation in steering committee work.**Planned Metrics:** <None>**Deliverable Specification:** Project staff and budgets are effectively managed, work detailed in the 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	10/1/2007	9/30/2008	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	10/1/2007	9/30/2008	Active	All StreamNet cooperators, except for FWS, will supervise project staff and provide guidance and staff development.
C. Project oversight and guidance: Budget control	10/1/2007	9/30/2008	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-09 draft SOW/budget package	5/1/2008	6/16/2008	Active	Project cooperators will provide their respective input to the FY-09 Statement of Work and budget to PSMFC 105 days prior to the end of the FY-08 contract period.
E. PSMFC develop FY-09 draft SOW/budget package	4/3/2008	6/30/2008	Active	PSMFC will oversee development and submission of the FY-09 SOW and budget. Guidance will be provided to project cooperators 120 days before the end of the Fiscal year. PSMFC will utilize input from the cooperators to develop the final proposed FY-09 Statement of Work and budget and submit it to BPA 90 days prior to the end of the FY-08 contract period.
F. Accrual - Submit June estimate to BPA	6/1/2008	6/10/2008	Active	PSMFC, with input from the cooperating projects, will produce the June interim accrual estimate and submit it to BPA.
G. Accrual - Submit September estimate to BPA	7/1/2008	9/10/2008	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		9/30/2008	Active	<i>See the Deliverable Specification above</i>



Y: 132. Produce (Annual) Progress Report

Title: Annual report

Description: Produce a detailed annual report for FY-07 project activities within 60 days of the end of the fiscal year.

Planned Metrics: <None>

Deliverable Specification: The FY-07 annual report is submitted to BPA and uploaded to the BPA reports page.

Milestone Title	Start Date	End Date	Status	Milestone Description
A. PSMFC submit FY-2007 annual report to BPA	10/1/2007	11/30/2007	Active	The Region, with input from all cooperators, will submit the FY-06 annual progress report to BPA. The report will provide detailed information about project accomplishments throughout the fiscal year by Work Element Title.
Deliverable: B. Annual report submitted to BPA		11/30/2007	Active	<i>See the Deliverable Specification above</i>
C. Review progress report format requirements	10/1/2007	11/30/2007	Active	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
D. Submit progress report for internal contractor review	11/30/2007	11/30/2007	Active	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.
E. Submit progress report for external review	12/14/2007	12/14/2007	Active	Use this milestone if the progress report requires external review.
F. Confirm BPA has posted the progress report	12/28/2007	12/28/2007	Active	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.



Z: 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.

Planned Metrics: <None>

Deliverable Specification:

Milestone Title	Start Date	End Date	Status	Milestone Description
A. Oct-Dec 2007 (10/1/2007 - 12/31/2007)	1/1/2008	1/15/2008	Active	
B. Jan-Mar 2008 (1/1/2008 - 3/31/2008)	4/1/2008	4/15/2008	Active	
C. Apr-Jun 2008 (4/1/2008 - 6/30/2008)	7/1/2008	7/15/2008	Active	
D. Final Jul-Sep 2008 (7/1/2008 - 9/30/2008)	9/16/2008	9/30/2008	Active	