



StreamNet

BPA Project Number 198810804

Fourth Quarter Progress Report

Fiscal Year 2000

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Introduction

This report presents accomplishments of the StreamNet project for the Fourth Quarter of Fiscal Year 2000. The report is organized to clearly link accomplishments by the project participants to the tasks and responsibilities detailed in the annual Statement of Work. It is organized by task for all project participants rather than by individual project participant as in previous years. This report is the second use of the database approach to recording and reporting accomplishments. While it has taken some time to get the database organized, we anticipate increased flexibility and more rapid assembly of quarterly reports in the future. Since not all tasks are addressed each quarter and the project participants often work on different tasks, some tasks do not show activity in the Fourth Quarter.

Project participants contributing to the StreamNet project were Columbia River Intertribal Fisheries Commission (CRITFC), US Fish and Wildlife Service (FWS), Idaho Department of Fish and Game (IDFG), Montana Fish, Wildlife and Parks (MFWP), Oregon Department of Fish and Wildlife (ODFW), Pacific States Marine Fisheries Commission (Region), Shoshone-Bannock Tribes (SBT), and Washington Department of Fish and Wildlife (WDFW).

Objective 1 Data Development

Increase the knowledge base concerning the region's fish and wildlife resources through the acquisition of new information that responds to emerging needs as well as the updating and enhancement of production and survival trends and other existing information.

Objective 1 Data Development

Task 1 Anadromous Fish

Acquire data sets related to salmon, steelhead and, where data are readily available, other anadromous fish populations from the multiple agencies, tribes and organizations within the Columbia Basin and compile and maintain them in standardized, consistent formats for the following categories:

Objective 1 Data Development

Task 1 Anadromous Fish

Task 1.a Distribution, Life History (use type), and Barriers

Document the occurrence and distribution of anadromous species, related barriers to migration, and life history characteristics

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Fourth Quarter, FY2000</u>
IDFG	1 Develop an associated barriers database. Available, existing information on natural barriers is particularly lacking, so the barriers dataset should be expected to be incomplete.	Continued to identify and code constraints as barrier types into preliminary anadromous barriers table.
ODFW	1 Populate the FishBarrier table by rectifying all anadromous distribution with the barriers database: In the Lower Columbia HUCs (below the Willamette). In the Mid-Columbia HUCs (between the Willamette & John Day basins). In the Upper Columbia HUCs (upstream of the John Day)	Submitted 3,184 new/updated FishBarrier records to StreamNet this quarter. Continued efforts to populate the FishBarrier table as new distribution and barrier information were identified.
ODFW	2 Update, maintain, and correct the 100k distribution event tables for Oregon as needed and applicable.	1. Processed supplementary anadromous fish distribution datasets in order to facilitate comparison with the current StreamNet anadromous distribution data. Many updates to the current distribution are likely to stem from these supplementary databases. 2. Developed methodologies for transferring 1:24,000 scale distribution data into event format based on 1:100,000 scale routed hydrography. Processed documentation information to further develop information in the DistPres table for the Hood and Fifteenmile subbasins.

ODFW	3 Update the 100k distribution event tables: For the Willamette basin using documentation records derived from the W-DESH 2 Project; for the John Day basin; and for the NE Oregon basins	Routine updates were made to the 1:100k fish distribution event records as errors or omissions were identified.
ODFW	4 Test an automated approach to populate the FishBarrier table by rectifying all anadromous distribution with the barriers database using the Tillamook basin	Continued to refine the process of distribution and barrier data rectification.
ODFW	5 Populate the FishBarrier table for the Willamette basin by rectifying all anadromous distribution with the barriers database.	Completed during the second quarter.
ODFW	7 Develop a database to capture fish presence survey data to help populate the DistPresence table.	Continued to enter data into the Fish Presence Survey Database which is designed to capture Oregon's upper fish distribution and culvert information collected by ODF/ODFW surveyors. To date, 1,337 records have been entered.
ODFW	8 Develop a database for capturing incidental species observations not routinely reported in agency documents.	Continued to make enhancements to the database structure. Currently, 28 of the 91 records in the database are for Columbia Basin streams.
ODFW	9 Locate documentation information in the Willamette (W-DESH 2 Project) in order to populate the DistPresence table.	Completed during the first quarter.
ODFW	10 Assist in identifying appropriate references for anadromous fish distribution data in order to populate the DistPresence table.	Ongoing.
ODFW	11 Assist project staff with identifying appropriate references for anadromous fish distribution.	Ongoing.
ODFW	12 Assist in adding new barrier records to the Barriers database including providing references for any information in the database.	Efforts with the Barrier Database involved identifying information sources to populate missing information for existing barrier records. Continued to refine the data entry interface. Participated in discussions to coordinate the development of a comprehensive statewide barriers database that includes all existing culvert information.
ODFW	13 Plot new Columbia basin barriers on maps for review by ODFW field staff and incorporate changes as needed.	Efforts with the Barrier Database involved identifying information sources to populate missing information for existing barrier records. Continued to refine the data entry interface. Participated in discussions to coordinate the development of a comprehensive statewide barriers database that includes all existing culvert information.

ODFW	16	Transfer all 250K Lamprey distribution data into the 100K data structure using data from ORIS.	Acquired and processed Pacific Lamprey and Brook Lamprey data for the Midcoast region. Processed ORIS 250k lamprey data.
ODFW	17	Assist as needed with tabular data collection and compilation tasks in order to help produce anadromous salmon distribution coverages.	Ongoing.
ODFW	18	Compile Columbia basin distribution coverages from other State & Federal agencies and incorporate new information into ODFW distribution update processes. Four updates planned.	Ongoing.
ODFW	19	Update the Barrier database with information obtained during conduct of other project activities and submit updated information to PSMFC. Four updates anticipated.	Added to and updated Oregon's Barrier Database and submitted records to StreamNet. The barrier data submission included: 66 Barrier records added, 501 Barrier records updated. Conducted q/a on dam data.
Region	1	Compile distribution updates (tabular events) as they arrive. Create distribution GIS coverages from these event tables, and post the shape files to the StreamNet website as downloadable GIS coverages	QA'd and compiled an update of all Oregon anadromous distribution events. Created update distribution coverages from these events and posted these files to the StreamNet website as downloadable GIS coverages.
Region	3	Assist StreamNet partners with acquisition, development, formatting and submission of data.	The Regional Fisheries Biologist worked with representatives from ODFW and MFWP to determine if an acceptable and widely-used definition of "partial barrier" can be created. One part of this task was to survey biologists regarding how they used the term. It was determined that the term is very widely used, but seldom explicitly defined. Where defined, the definition does not necessarily match the definitions used by others. It was decided that StreamNet would not attempt to define "partial barrier." Instead, we will provide space for this item, and another field for defining exactly what is meant. At some point in the future it may be possible to categorize these barriers more finely.
WDFW	2	Review barriers in layer, based on SSHIAP information and indicators in the Stream Catalog. Update and exchange.	Barriers data review has become part of the data work to support subbasin assessments, and so was postponed to avoid duplication.

Task 1.b Adult Abundance

Escapement, redd counts, trap counts, dam counts

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Fourth Quarter, FY2000</u>
FWS	2 Complete programs to transform data into StreamNet exchange format	conversion programs completed
FWS	3 Submit data through 1999 to StreamNet	submitted 1995-1999 data
IDFG	2 The data will then be migrated to the current version of the PNW 1:100,000-scale hydrography.	Started migration and necessary clean up of all existing redd count data to our new 100K LLID based IDFG StreamNet database management system. This included the 1999 field season data and all other existing redd count data.
IDFG	3 Write new routines to convert the redd count data to the StreamNet data exchange format (2000.1) and submit to PSFMC.	Not started due to delay in migrating data.
ODFW	1 Update StreamNet abundance and indices data (escapement, redd counts, trap counts, peak/other spawning counts, etc.) for OR populations within the Columbia Basin (updated through 1998). Three updates planned.	Due to the departure of our abundance database staff person, and the anticipated delays in filling the position, no future work was accomplished.
ODFW	2 Compile some* of the Columbia basin abundance field data gathered by the CREP crews into the SN abundance dataset.	The new abundance database staff person was hired on Sept. 11th. Efforts this quarter focused on becoming familiar with the StreamNet DEF and contacting data providers to get updated information.
ODFW	3 Update existing abundance trends to the new 2000.1 exchange format standards as trends are updated through 1998. Three updates planned.	Submitted comments on the new interface including a list of errors and their fixes to Regional StreamNet staff and comments to WDFW staff.
ODFW	4 Revise and enhance the Abundance data entry interface to suit project needs.	Due to the departure of our abundance database staff person, no efforts were made during this quarter.
ODFW	5 Opportunistically review all 60K series trends for Oregon and transfer to 50K series trends or delete them if they cannot be validated.	Due to the departure of our abundance database staff person, no efforts were made during this quarter.
ODFW	6 Review all Oregon trends with personal communication references in the Abundance database and update to hardcopy reports if possible.	Due to the departure of our abundance database staff person, no efforts were made during this quarter.

Region	1 Assist StreamNet partners with acquisition, development, formatting and submission of data.	Met with ODFW and WDFW staff and discussed the availability of and obstacles to developing and posting run reconstruction data. These data are used in regulation setting processes, but are not routinely disseminated. Obstacles include incomplete base data (necessitating multiple assumptions) and concern over use of the estimates beyond their level of reliability. More work will be needed with the biologists who generate these estimates before we can agree on wider dissemination.
WDFW	1 Update and exchange hatchery returns through 1998 in the StreamNet data exchange format (2000.1).	1. Bob updated historical hatchery returns from old hatchery report books found (years prior to 1965). Worked on moving data into the internal databases, locating proper coding, and starting to convert into exchange format. Modifications to the exchange format for hatchery facilities have slowed this work. 2. Leslie used the TrendUI tool to proof hatchery returns data from Bob and found the tool doesn't catch several things worth identifying (individual count fields not adding up to total, etc.). She generated her own maneuvers to catch these additional items; Bob prepared a follow-up version of the returns table and Leslie began verifying it once more.
WDFW	2 Update and exchange natural spawner data through 1998 (CR, PS)	Fall chum, late fall chum, and fall chinook natural spawner returns data were updated through 1999. Data were prepared for exchange but set aside to complete work on hatchery returns data and LLID coding.

Objective 1 Data Development

Task 1 Anadromous Fish

Task 1.c Juvenile Data

Sample records, abundance indices (as available)

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Fourth Quarter, FY2000</u>
ODFW	1 Prepare and submit recommended modifications of the draft Juvenile abundance portion of the DEF.	Due to the departure of our abundance database staff person, no efforts were made during this quarter.
ODFW	2 Update Oregon's 10 existing juvenile abundance records to approved DEF standards.	New DEF has yet to be proposed or adopted. No efforts were made this quarter.

Objective 1 Data Development

Task 1 Anadromous Fish

Task 1.d Harvest

In-river, terminal, and other harvest, as available

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Fourth Quarter, FY2000</u>
ODFW	1 Provide statewide 1997 tributary sport harvest from angler harvest cards.	Acquired, compiled, and maintained in-season updates of catch estimates by species in Columbia River sport and commercial fisheries.
WDFW	1 Update and exchange salmon harvest data through 1998, beginning with Columbia River commercial, sport and treaty harvest.	Columbia River mainstem terminal harvest was updated by stock through 1998 (commercial) and 1997 (sport), and data were prepared for exchange.
WDFW	2 Update and exchange steelhead harvest through 1997 if feasible.	Steelhead harvest data development was delayed due to competing priorities.

Objective 1 Data Development

Task 1 Anadromous Fish

Task 1.e Hatchery Production

Releases, disposition, straying

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Fourth Quarter, FY2000</u>
FWS	1 Compile hatchery release data as it becomes available, add CWT information	managed new hatchery release information
IDFG	2 Migrate the data to the PNW 1:100,000-scale hydrography, write new routines to convert the data to the StreamNet data exchange format (2000.1), and submit to PSMFC.	Work started on migrating the data to our new 100K LLID based IDFG StreamNet database management system.
ODFW	1 Develop the ability to remotely access the Portland mainframe hatchery data and download hatchery return data consistent with the StreamNet contract.	Due to the departure of our database manager, no efforts were made this quarter.
ODFW	2 Compile 1997 egg-take data and submit to PSMFC	Due to the departure of our database manager, no efforts were made this quarter. No DEF was adopted by StreamNet this year, therefore no data could be submitted.
ODFW	3 Develop an automated procedure for updating egg-take data and to capture and incorporate historic data into the StreamNet database.	Due to the departure of our database manager, no efforts were made this quarter.

ODFW	4 Compile data on returns to ODFW hatchery facilities (updated for 1997 and part of 98 returns).	Due to the departure of our database manager, no efforts were made this quarter. The new DEF was not agreed upon and adopted by StreamNet this year, therefore no data was submitted this quarter.
Region	1 Assist StreamNet partners with acquisition, development, formatting and submission of data.	In past years, PSMFC entered and updated time-series data. With staff changes, it is now necessary for the other StreamNet partners to take over these "trends" and assume the responsibility for updating them. During this quarter, regional staff assisted USFWS staff with which of these trends to take over, and how the process should proceed.
Region	2 Acquire data from the RMIS database.	Acquired RMIS Releases and Locations. Partially processed data into StreamNet format, but prior methodology was dependent upon a river reach code to Pacific Salmon Commission location code translation table. The translation table was incomplete for many new location codes, and during this project quarter, StreamNet transitioned into using LLID codes for locations, so a new PSC code to LLID code translation table must be compiled in order to load these regional release records correctly.
WDFW	1 Update and exchange juvenile release data to PSMFC through 1999.	New person in the position (July 1) was unable to "come up in speed" in time to exchange a new year's worth of data. We expect the exchange to occur by the end of December.
WDFW	2 Explore providing "unrolled" release data directly to StreamNet.	No work done (new staff in the Hatchery Data division).

Objective 1 Data Development

Task 1 Anadromous Fish

Task 1.f Natural Production

Survival, production factors, spawner / recruit

Project Work Element

Accomplishments, Fourth Quarter, FY2000

Objective 1 Data Development

Task 1 Anadromous Fish

Task 1.g Age

Age/sex composition for returning adults

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Fourth Quarter, FY2000</u>
IDFG	2 Migrate the data to the PNW 1:100,000-scale hydrography, write new routines to convert the data to the data exchange format (2000.1), and submit to PSFMC.	Started migration of age/sex composition data to our new 100K LLID based IDFG StreamNet database management system.
ODFW	1 Compile age frequency data (updated for natural spring chinook in 1997, available time series for natural steelhead in OR portion of Columbia basin).	Completed during second quarter.
WDFW	1 Provide age/sex data associated with exchanged CRB natural returns data.	Data delayed due to competing priorities.

Objective 1 Data Development

Task 1 Anadromous Fish

Task 1.h Genetics

Areas where genetics data exists and the sources of these data

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Fourth Quarter, FY2000</u>
Region	1 Determine the desire/need for and availability of genetics data.	Genetics data were discussed briefly by the Steering Committee. This data type appears to currently be a lower priority.

Objective 1 Data Development

Task 1 Anadromous Fish

Task 1.i Populations

Population delineation, as determined by others

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Fourth Quarter, FY2000</u>
WDFW	1 Compile and exchange Washington SaSI stock status data for anadromous fish using newly developed 2000.1 Data Exchange Format (DEF)(see Task 2.3).	Started but did not complete conversion of Washington SaSI stock status data to draft StreamNet format; discovered a need to re-synchronize StreamNet presence data with SaSI spawning areas in parts of the state

Objective 1 Data Development

Task 1 Anadromous Fish

Task 1.j Historic Range

As available at the watershed-level. Compilation at the reach level is an option if these data are available

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Fourth Quarter, FY2000</u>
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Objective 1 Data Development

Task 2 Resident Fish and Other Aquatic Species

Acquire data sets related to resident fish species, and where specifically identified other aquatic species, from the multiple agencies, tribes and organizations within the Columbia Basin and compile and maintain them in standardized, consistent formats for the following categories:

Objective 1 Data Development

Task 2 Resident Fish and Other Aquatic Species

Task 2.a Distribution and Life History

Document species occurrence and distribution and life history characteristics

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Fourth Quarter, FY2000</u>
IDFG	1 As new information becomes available, update and maintain the existing IDFG StreamNet distribution dataset for resident salmonids and other species of concern that is attached to the PNW 1:100,000-scale hydrography. Include collecting permit records and annual reports.	Migrated existing reference based fish distribution data to the 100K LLIDs. Migrated Collection Permit Data to 100K LLIDs. Incorporated both into the new IDFG StreamNet database management system.
MFWP	1 Convert MRIS from the River Reach Numbering system to an "LLID system" (temporary use of MFWP water code).	Completed converting western Montana hydrography from a temporary "LLID" to a permanent system with LLIDs provided by StreamNet regional staff and USFS conversion. Converted existing data in MRIS existing in "routes" based on the old RRN system; converted data to routes and measures.
MFWP	2 Restructure MRIS datasets and create a new edit/entry program with tabular and spatial components for distribution data entry by measures.	Continued updating edit/entry screen to accommodate copying measures from Arcview over to Access. Also made other structural changes to the forms to facilitate data entry.
MFWP	3 Update and edit distribution data for game and native fish during visits with state and federal fisheries biologists by StreamNet staff during February through June 2000. Collect supporting references and survey data to document distribution.	Continued editing distribution from biologist interviews and data collected during 2nd quarter. Entered tabular edits from distribution list handed out to biologists in the 2nd and 3rd quarter.
MFWP	4 Complete conversion of data to a routed hydrography following access to the NHD.	Worked with NRIS on converting FWP LLID system over to the NHD; NRIS received a grant to complete a NHD product for the state; name checking is first step in the process that they are doing.

MFWP	5 Work with regional StreamNet staff to develop a resident fish data exchange format.	Developed initial proposal for DEF for DistUse, DistPresence, DistGenetics, Genetics and Resident Population Estimate tables; provided to StreamNet Steering Committee for review.
ODFW	1 Produce GIS coverages illustrating rainbow and redband trout distribution where available for Columbia basin streams.	Completed during the first quarter for the areas where we have data.
ODFW	2 Transfer Lahontan cutthroat and white sturgeon 250K resident distribution data from ORIS into the 100K data structure and compare with the current 100K distribution and update accordingly.	Submitted Lahontan Cutthroat Trout data to StreamNet. Confirmed accuracy of data based on the regional stream routes.
Region	2 Assist StreamNet partners with acquisition, development, formatting and submission of data.	QA'd and compiled an update of white sturgeon distribution events. Created updated distribution coverage from these events and posted this file to the StreamNet website as a downloadable GIS coverage.
WDFW	1 Update and exchange bull char distribution data at 100K resolution if multi-agency agreement on distribution criteria can be reached (see Task 2.3).	Completed basic data and map collection for bull char distribution/use update. Compilation involved WDFW biologists from Regions 1, 2, 3, and 5 plus other knowledgeable (tribal, federal) biologists. Data entry nearly completed; review and verification by field biologists will follow. Conversion to StreamNet exchange formats is scheduled for next fiscal year

Objective 1 Data Development

Task 2 Resident Fish and Other Aquatic Species

Task 2.b Adult Abundance

Escapement, redd counts, trap counts, dam counts

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Fourth Quarter, FY2000</u>
MFWP	1 Collect stream fisheries survey data collected for population trends; genetics and escapement, redd counts, trap count and other counts during visits to biologists.	Continued collection of survey data from state, federal and private sector biologists.
MFWP	2 Collect references for each survey.	Began refining the references link from the library to stream data; on larger reports where numerous species and numerous streams are mentioned, difficult to insure that reference is for a particular stream/species. Will look into modifying edit/entry program to accommodate for this.

ODFW	1 Update existing abundance trends to the new exchange format standards as trends are updated through 1998. Three updates planned.	The new abundance database staff person was hired on Sept. 11th. Efforts this quarter focused on becoming familiar with the StreamNet DEF and contacting data providers to get updated information.
ODFW	2 Review all Oregon trends with personal communication references in the Abundance database and update to hardcopy reports if possible.	The new abundance database staff person was hired on Sept. 11th. No effort was made on this task during this quarter.
ODFW	3 Update StreamNet abundance and indices data holdings (redd counts, trap counts, peak/other spawning counts, etc.) for OR populations within the Columbia Basin (updated through 1998). Three updates planned.	The new abundance database staff person was hired on Sept. 11th. Efforts this quarter focused on becoming familiar with the StreamNet DEF and contacting data providers to get updated information.
ODFW	4 Opportunistically review all 60K series trends for Oregon and transfer to 50K series trends or delete them if they cannot be validated.	The new abundance database staff person was hired on Sept. 11th. No effort was made on this task during this quarter.
WDFW	1 Compile, convert, and exchange portions of the Yakima Basin juvenile and adult abundance data from Ken Ham.	Work delayed until onset of subbasin assessments (Columbia Plateau).

Objective 1 Data Development

Task 2 Resident Fish and Other Aquatic Species

Task 2.c Angler Use

Fishing pressure, creel census

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Fourth Quarter, FY2000</u>
MFWP	1 Add FWP 1999 angler survey data to MRIS collected by MFWP mail survey.	Completed the addition of these data to the MRIS database and updated on the Internet query program.
MFWP	2 Review available creel census data on Montana's waters and determine value and availability.	Checked with biologists and all creel data is for lakes and reservoirs only.
WDFW	1 Explore conversion of Angler Fish Database harvest information from the Columbia Basin into either "harvest" or a new "census" format for exchange.	No work done (vacancy unable to be filled).

Task 2.d Hatchery Production

Hatchery production (releases and outplants) for salmonids

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Fourth Quarter, FY2000</u>
IDFG	1 IDFG resident fish stocking data currently uses an IDFG specific stream and lake locator (Catalog Number). IDFG SN will develop an ArcInfo compatible event table to cross-reference the catalog numbers to LLIDs.	Worked on attaching stream-based catalog numbers to 100K hydro LLIDs, with from to measures. Included unmarked or misnamed bridges which went into a new landmarks event table.
ODFW	1 Acquire 1997 trout release data (by species, location, and facility) and compile into SN exchange format.	Due to the departure of our database manager, no efforts were made this quarter.
WDFW	1 Complete conversion and exchange resident fish stocking data from 1930-1981, once location coding has been standardized and verified.	Work not yet completed.
WDFW	2 Add stocking data from 1981-1999 if time permits.	Work not yet completed.

Task 2.e Genetics

Areas where genetics data exists and the sources of these data

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Fourth Quarter, FY2000</u>
MFWP	1 Update genetic spatial and tabular databases that contain the results of genetic analysis of populations of Montana's species of special concern	Genetics tables updated through the 4th quarter.
MFWP	2 Update genetic codes in fish distribution table.	Completed.
MFWP	3 Explore the development of data exchange format with regional SN staff	Sent the genetics DEF with the rest of the draft resident fish distribution DEF.

Objective 1 Data Development

Task 2 Resident Fish and Other Aquatic Species

Task 2.f Population

Population delineation, as determined by others

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Fourth Quarter, FY2000</u>
MFWP	1 Maintain spatial delineation of bull trout populations, core and nodal habitat. Enhance layer with population risk field.	Updated this layer in July with new information from MFWP Native Species Coordinator. Have not enhanced layer with population risk field.
MFWP	2 Determine westslope cutthroat trout priority areas as part Westslope Cutthroat Conservation Agreement.	Completed and provided hard copy maps of conservation areas to all biologists involved in their management.
WDFW	1 Synchronize WDFW tabular SaSI data fields and codes with those linked to the spatial presence data for bull char.	Work in progress, awaiting finalization of bull char update and information from new SaSI data manager.
WDFW	2 Compile and exchange Washington SaSI stock status data for resident fish using newly developed exchange format (see Task 2.3).	Work in progress, awaiting information from new SaSI data manager.

Objective 1 Data Development

Task 2 Resident Fish and Other Aquatic Species

Task 2.g Historic Range

As available at the watershed-level

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Fourth Quarter, FY2000</u>
MFWP	1 Explore the development of historic range coverages for all of Montana's native species.	Started the initial creation of historic layer by editing of existing TNC database.

Objective 1 Data Development

Task 2 Resident Fish and Other Aquatic Species

Task 2.h Status

Population stability index

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Fourth Quarter, FY2000</u>
MFWP	1 Assist regional and state data managers in developing data exchange format.	Provided input to regional data managers as requested.
MFWP	2 If DEF adopted, submit bull trout, arctic grayling and westslope and Yellowstone cutthroat trout data.	DEF not adopted; data not provided.

Objective 1 Data Development

Task 3 Habitat

Acquire data sets related to fish habitat from the multiple agencies, tribes and organizations within the Columbia Basin and compile and maintain them in standardized, consistent formats for the following categories:

Objective 1 Data Development

Task 3 Habitat

Task 3.a Stream / Watershed Habitat

Incorporate applicable stream and watershed level habitat and stream survey data, as these become available

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Fourth Quarter, FY2000</u>
MFWP	1 Determine what type of habitat data and at what scale Montana state and federal fisheries biologists are collecting during regional visits.	Completed in 3rd quarter. Habitat data are generally collected by the USFS biologists; these data will be available eventually on a nationwide USFS site.
MFWP	2 Determine if there is a core set of variables that we could gather on each stream.	In progress.
MFWP	3 Work with regional staff on data exchange format, if sufficient interest and/or data.	No DEF created.
MFWP	4 Explore the idea of a statewide stream survey form that would include these core variables (if established).	Ongoing.
WDFW	1 Transfer and exchange spatial layers of SSHIAP habitat characteristics and segmentation (based on gradient, confinement, and substrate).	Change in order of SSHIAP product work; spatial layers will not be ready until January 2001.

Objective 1 Data Development

Task 3 Habitat

Task 3.b Water Quality

Incorporate existing Clean Water Act 303(d) data and other water quality data as applicable

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Fourth Quarter, FY2000</u>
MFWP	1 Provide a link to The MT Dept. of Environmental Quality (DEQ) from MRIS. The Natural Resource Information System (NRIS) has been contracted by DEQ to develop a web-based application of these data.	This link has been created by NRIS to the DEQ data; on-line, you can get TMDL data and MRIS fisheries data.

MFWP	2 Provide MRIS data and expertise in the process of updating the 303(d) (TMDL) affected water bodies for the state. Integrate these data into the sub-basin planning effort if opportunity arises during the fiscal year.	DEQ staff utilized on-line MRIS to update their process.
Region	2 Develop data structure for stream nutrient data compiled by PSMFC	Developed a relational data structure for stream and lake nutrient data compiled by PSMFC.
Region	3 Georeference (assign LLIDs) to the stream nutrient data	Completed georeferencing of all stream and lake nutrient data. Moves this data into a relational data format and posted to the StreamNet web site for download as both GIS and tabular data sets.

Objective 1 Data Development Task 3 Habitat

Task 3.c Miscellaneous Habitat Data

Incorporate habitat data from various sources, as appropriate

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Fourth Quarter, FY2000</u>
MFWP	1 Provide links through NRIS with GAP and other statewide natural resource data.	Accomplished by NRIS but not through this contract.
MFWP	2 Update and incorporate MFWP water leasing and dewatered stream list data into MRIS.	Completed. Updated both these tables in MRIS and on the web.
MFWP	3 Provide to StreamNet if data exchange format is developed.	No DEF.
ODFW	1 Update key stream management area designations for OR including FEMAT key watersheds, AFS aquatic diversity areas, ODFW coho source river reaches, ODSL essential salmon habitat and Priority Areas.	No changes have been made to these data layers therefore no efforts were made this quarter.
WDFW	1 Explore Cosentino's model to assess habitat suitability for anadromous and resident fish by comparing predictions to actual. Write paper on techniques and findings.	Change in order of SSHIAP product work; spatial layers will not be ready until January 2001.

Objective 1 Data Development

Task 4 Facilities

Acquire data sets related to fishery-related facilities and structures from the multiple agencies, tribes and organizations within the Columbia Basin and compile and maintain them in standardized, consistent formats for the following categories:

Objective 1 Data Development

Task 4 Facilities

Task 4.a Dams and Fish Passage Facilities

Enhance the existing StreamNet dams data set by updating relevant data from the Pacific Northwest Hydropower Database and Analysis System (NWHS) and the National Inventory of Dams

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Fourth Quarter, FY2000</u>
IDFG	1 Add enhanced data from the National Inventory of Dams to the IDFG StreamNet information system.	Worked on migration and necessary clean up of our enhanced dams data (NID plus Idaho Department of Water Resources database) to the new IDFG StreamNet database management system.
MFWP	1 Quality check the existing StreamNet dams dataset and update relevant data from the GNIS and the National Inventory of Dams, if needed.	Ongoing; duties have been transferred to Jeff Hutten and will be completed in FY2001.
MFWP	2 Exchange Montana's data.	Ongoing
ODFW	1 Update the dam database with information obtained during the conduct of other project activities. Four updates planned	Added to and updated Oregon's Barrier Database, which contains information on Oregon dams. Submitted new and updated dam records to StreamNet. The data submission included: 59 Dam records added, 198 Dam records updated, 144 DamXDamPurpose records added, 88 DamXDamType records added.
Region	1 Convert remaining 250K Dams information in StreamNet database to the 100K system. Create a 100K Dams and Fish Passages facilities GIS coverage and distribute it via the StreamNet website.	Georeferenced all Oregon and Washington dams, where possible, to 1:100,000 scale stream-based locations (w/ LLIDs). Returned this information to ODFW and WDFW for verification.
Region	2 Assist StreamNet partners with acquisition, development, formatting and submission of data.	Assisted ODFW in determining correct locations of dams. Assisted WDFW in comparing NID dam locations to Washington Dept of Ecology dam locations.
WDFW	1 Review, update, and exchange any new Washington state dams information.	Provided most recent dataset from WDOE to David Graves. Assisted in solving some data "mysteries".

Objective 1 Data Development

Task 4 Facilities

Task 4.b Hatcheries

Update and maintain a dataset on anadromous and resident hatchery facilities containing information on location, design, management and uthorization

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Fourth Quarter, FY2000</u>
FWS	1 Continue checking for submitted FWS update records, update records when appropriate, submit to StreamNet	periodically checked StreamNet web site for updated information
IDFG	1 IDFG StreamNet has attached the IDFG hatchery database to the current 1:100,000-scale PNW hydrography. The data will be incorporated into the IDFG database and submitted to PSMFC.	Worked on migration and necessary clean up of hatchery facilities to the new IDFG StreamNet database management system.
IDFG	2 Supporting hatchery structures, such as weirs and traps, will be added to the hatcheries database.	Started to build a database of traps and weirs tied to the 100K LLID hydrography. Includes data from 1956-2000.
MFWP	1 Provide update of these data if changes have occurred in Montana's facilities.	No changes.
ODFW	2 Update OR hatchery facilities data to the 99 version of the exchange format and submit to PSMFC.	1. Updated the Oregon Hatchery Facilities data to the 2000.2 version of the exchange format. Contacted hatchery staff members and updated the records for which information was provided. Submitted 36 hatchery facility records to StreamNet this quarter. 2. Reviewed WDFW's proposed changes to the Hatchery Facilities table and provided comments.
WDFW	1 Provide standard geo-spatial coordinates (Longitude-Latitude) for each facility.	Work in progress.
WDFW	2 Compile similar coordinates for fish releases that occur away from these facilities, in order to develop a spatial layer of fish release sites (including streams, lakes, and marine areas.	Work not started due to competing priorities.
WDFW	3 Complete, convert, and exchange tabular and spatial data tables of Washington state hatchery facilities, including federal and tribal stations.	1. Worked to develop a standardized system of water body and site identifiers for fixed entities (hatchery facilities) that is compatible with the 100K LLID system of stream identifiers. 2. Gil updated the spatial layer of hatchery facilities to bring it in line with the tabular data exchanged with StreamNet in May 2000. 3. Leslie pursued finding specific site locations for about 70 entries in the hatchery facilities table. 4. Leslie accepted the role of chair of the SN data team charged with resolving location coding questions for the hatchery facilities exchange format. She sent an updated draft format to all tech team members that were appointed in July at the Helena meeting. She contacted all members to get their responses and attend the September GIS Team meeting to work out some spatial data issues related to the hydrology layer.

Objective 1 Data Development Task 4 Facilities

Task 4.c Diversion/screening

Develop a dates for water diversions and screening

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Fourth Quarter, FY2000</u>
MFWP	1 Review regional data exchange format.	No DEF to review.
ODFW	1 Identify fish screening data that is appropriate for the StreamNet site and submit test records once an exchange format has been adopted.	No exchange format has been developed, therefore no efforts were made this quarter.
ODFW	2 Develop a database structure Oregon's fish screening data and submit a draft data exchange format to SC for adoption.	Provided technical assistance as requested, and modified the basic database that was developed last quarter to meet project needs.

Objective 1 Data Development

Task 5 Habitat Restoration/Improvement Projects

Acquire data sets related to habitat restoration / improvement projects from the multiple agencies, tribes and organizations within the Columbia Basin and compile and maintain them in standardized, consistent formats for the following categories:

Objective 1 Data Development Task 5 Habitat Restoration/Improvement Projects

Task 5.a Fish and Wildlife Program Projects

Prepare and maintain standardized data relating to tracking aquatic management and restoration projects related to the Fish and Wildlife Program

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Fourth Quarter, FY2000</u>
MFWP	1 Incorporate Fish and Wildlife Program Projects for Montana into Restoration and Mitigation database and submit in data exchange format.	Exchange with StreamNet DEF begin in fourth quarter; will complete the conversion and DEF in FY2001.
ODFW	2 Provide technical assistance to GWEB and StreamNet staff as needed to make compilation of ODFW habitat restoration / improvement projects in the Columbia basin more efficient.	Provided technical assistance to OWEB staff, answering MS Access questions to make compilation of ODFW mitigation and restoration data more efficient.

Region	3 Assist StreamNet partners with acquisition, development, formatting and submission of data.	Regional staff worked with WDFW staff to evaluate the utility of Washington Department of Outdoor Recreation's PRISM database for StreamNet use. The PRISM database is used in Washington to track implementation of projects on the ground, and had potential use as a standard database for the region. It was discovered by WDFW staff, however, that PRISM has a fatal flaw in terms of StreamNet's needs, because it did not allow for the degree of complexity which is necessary for capturing fish habitat restoration projects.
WDFW	1 Compile and convert a test set of restoration project data from the Interagency Commission (which oversees state salmon recovery project funds) PRISM database (which monitors project contracts) into exchange formats for conversion (projects since 1995).	1. Gil began converting key MS Access tables from the PRISM system to Paradox and scoping the table contents, documenting his findings along the way. He also began the work of trying to fit critical fields into StreamNet's exchange format. Leslie will review his work and perform the actual exchange. 2. Gil received additional information from the USFS (the IRDA database) and the Nooksack Salmon Enhancement Association (a local database) as a result of inquiries he sent out to several sources seeking additional sources of habitat restoration information.

Objective 1 Data Development

Task 5 Habitat Restoration/Improvement Projects

Task 5.b Other Projects

Prepare and maintain standardized data relating to tracking aquatic management and restoration projects other than related to the Fish and Wildlife Program

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Fourth Quarter, FY2000</u>
IDFG	1 IDFG StreamNet will continue to compile information from non-FWP restoration projects into the PSMFC projects database and interface and submit to PSMFC.	Completed entry of data from Idaho Conservation Data Center and submitted to PSMFC. Updated structural and coding changes to the MitProjects GUI. Compiled data from BLM NEPA logs for 2000 for all resource areas in Idaho. Also, compiled miscellaneous BLM data. Established a working relationship with Boise National Forest by helping them develop data standards for a similar process they are starting. This will allow us to easily incorporate their data later on.
MFWP	1 Data will be updated for FWP Projects during FY-00; a spatial data layer of project location will be checked by regional staff and the possibility of adding other agency/FWP divisions will be explored during regional visits.	Locations for western Montana checked and verified by MFWP biologists. Received all other projects during visits and inputted into Montana's system. Will exchange 2nd quarter FY2001.
MFWP	2 Exchange Montana data in data exchange format.	Ongoing.
ODFW	2 Provide technical assistance to GWEB and StreamNet staff as needed to make compilation of ODFW habitat restoration / improvement projects in the Columbia basin more efficient.	Provided technical assistance to OWEB staff, answering MS Access questions to make compilation of ODFW mitigation and restoration data more efficient.

Objective 1 Data Development

Task 6 Sub-basin Planning

Develop consistent data sets and information that are particularly suitable and useful for regional sub-basin planning and make them readily available for planners

Objective 1 Data Development

Task 6 Sub-basin Planning

Task 6.a Provide data for Sub-basin Planning

Organize and distribute the available fish, wildlife and habitat data in a standardized format for use in Sub-basin Planning or other regional planning efforts

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Fourth Quarter, FY2000</u>
MFWP	1 Coordinate with MT CBFWA rep and provide available fish, wildlife and habitat data in a standardized format for Sub-basin Planning or other regional planning.	Coordinated with Montana CBFWA rep and completed a set of maps for the Flathead and Kootenai drainages for their document. A set of maps was created for cutthroat genetic purity, bull trout distribution, stream classification information (which is based on a variety of habitat and species distribution on native species), barrier locations and wildlife habitat (included bald eagle habitat, big game seasonal distribution, lynx distribution, wolf pack distribution, grizzly bear management areas, waterfowl production areas, and state and national wildlife refuges).
ODFW	2 Participate in discussions concerning data needs to support sub-basin planning or other processes adopted by the amended Fish & Wildlife Program. Modify data plan and priorities as needed to be responsive.	Continued to consult with ODFW staff who are preparing the Hood and Fifteen Mile subbasin summaries to identify ways StreamNet might be able to help.
Region and	2 Develop, with help from the state SN projects, an 'example' package for a test sub-basin of StreamNet data suitable for use in sub-basin planning.	Enhanced an 'example' package of GIS information for subbasin planning and created a PowerPoint presentation to demonstrate this information StreamNet GIS capabilities.
WDFW	1 Participate in discussions concerning data needs to support sub-basin planning or other processes adopted by the amended Fish & Wildlife Program. Modify data plan and priorities as needed to be responsive.	1. Met with NMFS staff and Drew Parkin in Seattle to discuss NMFS data needs for Viable Salmon Population analysis and relationship to Basin data needs for subbasin assessments. 2. Met with Council Staff (Drew Parkin, Peter Paquet) to discuss a strategy and possible StreamNet role in developing data to support subbasin assessments.
WDFW	2 Coordinate data compilation from other WDFW Units as needed to respond to the above needs, using StreamNet data exchange experience.	Data compilation has not begun.

WDFW 3 Provide consultation services for WDFW wildlife and habitat data managers to assist them in meeting the above needs. Data compilation has not begun.

Objective 1 Data Development Task 6 Sub-basin Planning
Task 6.b Capture information from Sub-basin Planning

Acquire information developed during subbasin planning to update anadromous fish, resident fish, and wildlife data sets

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Fourth Quarter, FY2000</u>
CRITFC	1 In collaboration with regional staff, develop computer applications to enter and edit information developed during subbasin planning as described in Tasks 1.1 through 1.5, above.	Subbasin planning was delayed by the Power Council until spring of 2001. In collaboration with tribal staffs, we did some scoping of the new data sources and the work load which may be involved in capturing new subbasin planning data. We developed a draft set of standard tables for fish population data, based on the Stock Summary Reports. These tables are being prototype tested by the Yakima Nation during the present Provincial "rolling review" process.
CRITFC	2 Train subbasin planners in use of the applications.	Discussed use of the prototype tables developed under task 1.6.b.1 with tribal staff and tribal contractors working on subbasin summaries under the rolling review process.
CRITFC	3 Modify tools as needed on experience in the Columbia Gorge province	Tools will be developed and tested under the FY01 contract.
MFWP	1 Collaborate with regional staff and Montana CBFWA representative when data become available	No data available at this time.
ODFW	1 Determine the Subbasin Planning generated data types that are not contained in StreamNet and adjust staff work plans to capture new data if appropriate	Continued reviewing draft subbasin summaries to identify new data types that StreamNet might consider compiling. Efforts this quarter focused on examining reference lists in the summaries for potential new data.

Objective 2 Data Management and Delivery

Provide high quality data management services, with specific emphasis on the creation of regionally consistent data sets and the timely delivery of data to users in formats that meets their policy, planning, and management needs

Objective 2 Data Management and Delivery

Task 1. Database Management

Maintain functional database programs at the state and regional levels to make consistent data sets for anadromous fish, resident fish and to a lesser extent wildlife available through the StreamNet online database system. At both the regional and state levels, provide database management and administration necessary for accomplishing StreamNet objectives, to include: 1) maintaining regional and state-level StreamNet data sets, 2) processing exchange data into the regional database, 3) transporting data to the SQL environment, 4) enhancing StreamNet database structures and capabilities, and 5) providing programming services to project participants to allow for efficient data entry and transfer.

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Fourth Quarter, FY2000</u>
ODFW	1 Provide state-level StreamNet database management / administration / development. Enhance StreamNet and ODFW database structure and capabilities as possible.	1. Continued testing, modifying, and commenting on the StreamNet Access user interface. 2. Continued to scope the development of a composite database which will be used to capture a variety of different survey information. 3. Due to the departure of our database manager, efforts were limited this quarter.
ODFW	2 Modify/update the EventMapper tools with updated event data and/or background GIS layers.	Incorporated new barrier and lake coverages for OWEB and ODFW staff members.
ODFW	3 Maintain and update state-level StreamNet data sets, database structures, and interfaces.	Submitted records and photos from Oregon's Image Database to StreamNet. Submitted: 38 MapCat records, 2 MapCatXBarrier records, 32 MapCatXDam records, 38 MapCatXFormat records, 4 MapCatXHatchery records, 38 MapCatXState records, and 38 Photos.
ODFW	4 Develop custom GIS projects and database structures that help improve data management transfer with ODFW field staff.	Technical assistance was provided to several ODFW data collection projects which will aid in greater data availability and more efficient data transfer to StreamNet.
ODFW	5 Develop custom database products in support of project data compilation efforts as described in 3.1 below.	The Riparian Lands Tax Incentive Program database was completed. Version 2.1 of the database structure can be made available to StreamNet staff upon request.

centralized information systems

ODFW	7 Update existing data sets as described in Task 1 and provide data to the regional StreamNet office in DEF. Provide data as sub-sets are updated rather than waiting for entire data to be complete.	Due to the departure of our database manager and our abundance database staff person, efforts were limited this quarter.
Region	2 Add data submitted to the StreamNet regional office into the SN database within ~30 days of receipt from the project partners.	Loaded 356 Oregon Restoration/Improvement projects and associated ownership records for ODFW.
Region	3 Assist data-providing agencies with error checking of data sets.	1. Regional staff discovered errors with the habitat restoration data submitted by ODFW. ODFW staff were informed, and they worked with OWEB staff to correct the problems. 2. Regional staff discovered and documented errors in hatchery release data that had been entered by regional staff in previous years. ODFW, which is taking over ownership of these records, was notified of the errors found.
Region	5 Update the database structure as new data categories are added or categories are changed.	The regional database tables were modified to accommodate LLID georeferencing, and additional lookup tables were created to optimize data queries from the web based system. This was a major revision.
Region	8 Develop metadata for spatial data sets posted to the StreamNet GIS web page.	Developed metadata for new spatial data sets posted to the StreamNet GIS Web page and updated existing metadata when updates to the related spatial data sets occurred.

Objective 2 Data Management and Delivery

Task 2. Data Plan

Update and maintain a project data plan that identifies 1) current data holdings at the regional level, 2) data items to be incorporated in the current contract period and in future years, and 3) expectations for data development and delivery from participating organizations within the current contract period

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Fourth Quarter, FY2000</u>
ODFW	1 Work jointly with other participants to modify elements of data plan or priorities based on needs arising out of sub-basin planning or other processes that drive Basin data needs through the amended Fish & Wildlife Program.	Reviewed the draft StreamNet Charter document.

Objective 2 Data Management and Delivery

Task 3. Data Exchange Standards

Establish and maintain data exchange standards that ensure consistent format and content of data that originated from the multiple agencies and data sources in the basin. Included will be proposed and adopted data exchange formats, metadata and location look-up tables for specific data items as described under Objective 1. At the regional level, this task will provide technical assistance regarding standard codes and exchange formats for Fish and Wildlife Program and ESA- related projects, and for applicable tribal data compilation activities. At the state level, this task will provide similar technical assistance for state agency data activities applicable to StreamNet.

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Fourth Quarter, FY2000</u>
ODFW	1 Participate in the design, development and maintenance of standard codes and data exchange formats. This will occur through involvement on the Steering Committee and technical work groups. There is no set schedule for this task, because it is highly dependent on issues facing the Steering Committee. Potential new data exchange standards may include juvenile abundance, genetics, stream habitat, stream temperature and resident fish releases.	Reviewed and commented on FishBarrier and barrier issues. Reviewed and commented on the new quarterly report format (the quarterly database). Reviewed and responded to comments by PSMFC staff regarding mapping the mitigation/restoration data. Reviewed and commented on the FY-2001 StreamNet Statement of Work. Coordinated with regional StreamNet staff to develop a draft definition for the term "partial" blockage in relation to the FishBarrier table.
Region	1 Work with the project database managers to identify needed modifications to the Data Exchange Format (DEF) to accommodate changing data needs	1. Coordinated creation of new StreamNet codes for species. 2. The exchange format was updated for several items which have been agreed to since the adoption of version 2000.1. These changes will take effect with the next version, which will be 2001.1.

Objective 2 Data Management and Delivery

Task 4. GIS Data System

Establish and implement procedures for coordination of StreamNet-related spatial data activities among participating organizations, to include regular meetings and or other communication links among participating GIS specialists. Designate and maintain metadata format for spatial data to be used by StreamNet participants. Prepare map products in hardcopy and/or electronic format for use in Program-related aquatic resource policy, planning, and management. Provide for distribution of spatial data in GIS and tabular format and as GIS products.

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Fourth Quarter, FY2000</u>
ODFW	1 Participate in planning and coordination meetings for state-level 24k hydrography layer to ensure compatibility with the PNW 100k hydrography.	Attended Oregon / Washington Hydrography Framework group meeting in Olympia. Learned of specifics regarding direction of USFS hydro standards in relation to the NHD and the upcoming FGDC standard and the associated impacts on the Framework model development. Attended OGIC Hydro subcommittee meeting covering 100k / 24k issues.

ODFW	2 General maintenance activities associated with the GIS data system	Tested out both Arc Info / Access and Arcview / Access functionality in relation to meeting future data development needs and also improving data development efficiency.
ODFW	3 Develop a lakes coverage for Oregon.	Completed during the third quarter.
ODFW	4 Participate in spatial metadata format development processes with PSMFC, WA, ID, & MT.	Participated in discussion to formulate a metadata strategy at the StreamNet GIS coordination meeting in Olympia.
Region	1 Maintain and enhance a geographic information system (GIS) related to regional StreamNet goals and objectives.	<ol style="list-style-type: none"> 1. Maintained a geographic information system related to regional StreamNet goals and objectives. 2. Coordinated a StreamNet meeting of GIS staff in Olympia. 3. Researched and wrote a report on internet mapping for the StreamNet steering committee. 4. Updated the regional lakes/reservoirs GIS layer to clean up lakes situated on state boundaries. 5. Developed a GIS coverage of adult returns (trend) information and associated metadata and posted to the StreamNet site for download in a GIS format. 6. Errors were found and corrected in the GIS subbasin boundary layer.
Region	2 Prepare GIS data and map products from StreamNet data.	Prepared GIS data and map products from StreamNet data, as needed. Responded to all requests from the public and prepared GIS data, maps, and other products for 21 public requests relating to mapping or GIS. Requests were from a variety of sources including private citizens, environmental consulting firms, government agencies, educators, and students.
Region	3 Integrate the functioning of the GIS system with the StreamNet fisheries and habitat database, in support of the query system. Create cross tables and queriable maps used via the StreamNet web interface.	Integrated the functioning of the GIS system with the StreamNet fisheries and habitat database. Maintained and updated cross tables of our LLID stream locations by county, subbasin, hydrologic cataloging unit, state, and region in support of the query system. Created queriable GIS coverages of updated fish distribution and hydrography for the StreamNet web interface. Updated downstream stream tributary information for 1:100k streams to approximately 90% of all streams for better stream identification in the online system. Added previously designed subbasin base maps to the online map catalog.
Region	4 Direct users to other GIS resources when requests exceed StreamNet capability	Directed users to other GIS resources when requests exceeded StreamNet capability.

Objective 2 Data Management and Delivery

Task 5 StreamNet Internet Site

Continue to maintain and enhance the existing client-server system to provide access to StreamNet data products through the Internet. The StreamNet home page will continue to be recognized as the project's primary data delivery vehicle. Priority will be given to incorporating data developed through Objective 1 and providing access to reference materials secured through Objective 3. Appropriate training on the use of the system will be provided through a combination of on-line help and in-person training sessions.

Objective 2 Data Management and Delivery Task 5 StreamNet Internet Site

Task 5.a Maintain the StreamNet Client Server system

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Fourth Quarter, FY2000</u>
Region	1 Maintain, upgrade as needed, and administer the StreamNet web servers.	We experienced a failure of one hard drive on our database server. Since this was one of a three-drive RAID system, this compromises the internal backup features of the server. We developed a plan to request replacement of this server through BPA's spending authority.
Region	2 Convert the query system from the RRN to the LLID system where possible.	1. Conversion of the query system from the RRN system to the LLID system was completed during this quarter, with the new system going live on the StreamNet web site on August 28, 2000. Extensive and varied work went into this effort, including discussions of necessary and potential changes or updates to the database, devising a new system for tying data to geographic areas, programming, extensive testing / debugging, and other related activities. 2. The user survey was implemented the same day as the new query system.

Objective 2 Data Management and Delivery Task 5 StreamNet Internet Site

Task 5.b Enhance and improve the StreamNet website

Maintain and enhance components of the StreamNet home page and incorporate new features that complement existing components

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Fourth Quarter, FY2000</u>
CRITFC	1 Work with subbasin planners to identify modifications and new uses which will make the website more useful to them	Subbasin planning was deferred into 2001 by the Power Council. Hence, work on this task will occur in the next fiscal year.

CRITFC	2 Identify changes and new features which will improve delivery of Library services	Held periodic discussions with Power Council contractors to identify literature services which will be useful to stakeholders during the NPPC rolling review and subbasin planning activities. It was determined that enhancements of Internet-based services could be provided more efficiently if CRITFC managed a library web site separate from but linked with the main StreamNet web site.
CRITFC	3 Work with regional staff to implement changes identified above.	Identified changes will be implemented in FY01.
MFWP	1 Montana will review and comment when necessary.	No requests were received
ODFW	1 Recommend and/or take part in review of new products and features. Provide feedback on content, suitability, navigability and data currency issues.	Reviewed and commented on the StreamNet test and production query systems.
Region	1 Develop and conduct an online survey of users to determine the need for modifications to the site, the data or the project.	An on-line survey was developed and deployed during the quarter. The purpose of the survey was to ask StreamNet users the types of data they come to StreamNet to find, what they wish StreamNet had that we do not, and to obtain other various feedback. All users of the StreamNet query system were exposed to the survey questionnaire before proceeding to the query system. Unfortunately, very few people filled out the questionnaire. Because very few people took the survey, it was not worth the effort to do a thorough analysis of the results. No clear trends were evident from the few results obtained (less than two dozen responses, some of which were obviously only casual users).
Region	2 Review the website for clarity, organization and ease of use. Recommend and implement changes to maximize utility for people accessing the site to obtain information	During the quarter, a user pointed out an error in the "species database" contained in the Fish Facts portion of the StreamNet web site. Further investigation revealed more errors. The creator of the species database was contacted, and he provided the sources of the information. As time permits, the species database will be reviewed, any necessary corrections will be made, and citations will be added for all information.
Region	7 Modify the query system to function with revisions to the DEF	The query system was modified to function with the revised DEF and brought on line.
WDFW	1 Take part in review of new products and features. Provide feedback on content, suitability, navigability and data currency issues, especially issues related to providing static or dynamic map capabilities.	Gil reviewed and reported comments on the new StreamNet Online Test Query system. Leslie reviewed and commented on the GIS maps available, and Gil also looked at the MRIS site to compare what was available there to similar StreamNet services.

Objective 2 Data Management and Delivery

Task 6. 1:100,000-scale Hydrography

Maintain the 1:100,000-scale PNW hydrography for purposes of attaching StreamNet data. Coordinate with efforts to prepare a National Hydrographic Dataset (NHD). Develop a standardized method for incorporating lake hydrography and attribute information.

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Fourth Quarter, FY2000</u>
ODFW	1 Submit issues and corrections to 100K stream coverage as identified during other data compilation activities.	Submitted information on two streams in the "allstr" table that have anomalous BegFt data. Modified stream routes in the Sandy River, Goose Lake and Donner Und Blitzen river subbasins.
ODFW	2 Review Duane's RRN-LLID cross-reference table for errors and incorporate LLIDs into Oregon's abundance records	Worked to get correct LLIDs assigned to barrier, dam and hatchery records.
ODFW	3 Review and provide an evaluation of the NHD test CU's.	Completed during second quarter.
ODFW	4 Participate in technical and policy discussions concerning adoption of the NHD 100K framework for the Northwest.	Reviewed the NHD model and participated in a discussion amongst StreamNet GIS staff to determine the suitability / challenges of this model in relation to existing / future StreamNet hydrography needs. It was determined that further testing was necessary which will occur in FY2001 Q1.
Region	1 Continue to maintain the regional 1:100,000-scale PNW hydrography.	Designed a hydrography web page for use by regional entities.
Region	2 Implement updates to the 1:100,000-scale PNW hydrography from state cooperators.	Corrected hydrography errors in Oregon in coordination with ODFW and integrated the Smith R watershed (HUC 18010101- Southern Oregon) into the PNW Reach files.
Region	3 Update and serve a regional web version of the 1:100,000-scale PNW hydrographic set from the StreamNet website.	Created an updated set of PNW hydrography in multiple formats and posted to the StreamNet web site for download.

Objective 2 Data Management and Delivery

Task 7. Data Requests

Receive and respond to requests for data, source materials, and custom products. 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. Other priorities will include implementation of the Endangered Species Act and federal, state, and tribal natural resource management activities.

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Fourth Quarter, FY2000</u>
ODFW	1 As requested, consistent with other deliverables in this contract, receive and respond to requests for data, source materials, and custom products.	A total of 12 data, 60 document, and 4 other requests were answered during this quarter. A detailed list by requester and request type can be made available upon request. Also, 2,820 data downloads were made from the ODFW FTP site during this quarter.
ODFW	2 As requested, provide training and instruction on the use of the StreamNet website data delivery system.	Instruction on the use of the StreamNet web site was provided to at least 4 individuals via phone conversation.
Region	1 Respond within one day whenever possible to all user requests received via email, phone, or other medium. Typical requests received include help using the query system, complex data requests not easily done with the query system, and requests for GIS coverages and maps.	1. The Regional GIS Specialist responded to 21 GIS/map related requests this quarter. 2. The Regional Fisheries Biologist responded to 20 data/help requests this quarter.

Objective 3 Library / Reference Services

Provide a full service regional library for fish (and to some degree wildlife) literature (published and gray), including documentation of all data in the StreamNet database.

Objective 3 Library / Reference Services

Task 1. Collection Development

Develop a collection of materials applicable to the mission of StreamNet. Collect, catalog and organize materials to document data source materials, Fish and Wildlife Program activities and reports, and other gray literature for access by regional scientists, agencies, interested parties, and other libraries.

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Fourth Quarter, FY2000</u>
ODFW	1 Provide originals/copies of all documents and reports referenced in the compilation of new StreamNet data holdings, but not already housed in the StreamNet Library.	Submitted 189 documents associated with StreamNet data to the StreamNet Library during this quarter.

ODFW	2 Update the set of historic Oregon Fish Commission and Game Commission reports and provide to the StreamNet library as available.	This effort is on hold till our Library tracking software is updated (see Task 3.2).
ODFW	3 Update library bibliography of ODFW, Fish Commission, and Game Commission reports with 99 ODFW publications and make bibliography available to the StreamNet Library for reference.	This effort is on hold until our Library tracking software is updated (see Task 3.2).

Objective 3 Library / Reference Services

Task 2. Provide Access to Collection

Provide user access to the materials described in Task 3.1 by providing facilities for storage of paper and electronic copies of documents, an online catalog of all documents in collections, and staff to answer location questions and respond to requests.

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Fourth Quarter, FY2000</u>
ODFW	1 Investigate existing approaches and recommend adoption or develop a custom library interface and bibliography that allows tracking of information requests, key word searches, and easy comparison to the StreamNet Library holdings.	Reviewed documentation for InMagic to determine installation needs. Installed InMagic software on Library computer and imported data from the existing bibliography database. Worked on some customizations and worked on importing the progress and information report lists.

Objective 3 Library / Reference Services

Task 4. Library Services

Manage the StreamNet Library and provide library services to the StreamNet user community and the general public.

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Fourth Quarter, FY2000</u>
ODFW	1 Respond to requests for ODFW documents and other source materials.	Provided 324 hardcopy documents and 5 electronic documents to 87 individual users during the quarter.

Objective 3 Library / Reference Services

Task 5. Inter-library Coordination

Engage in networking activities 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

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Fourth Quarter, FY2000</u>
CRITFC	1-5 Routine coordination with customers and other libraries	Ongoing

Objective 4 Services to Fish and Wildlife Program Activities

Provide technical data services to Fish and Wildlife Program decision-makers and appropriate Fish and Wildlife Program projects

Objective 4 Services to Fish and Wildlife

Task 1. Project Tracking

Assist CBFWA, BPA, and the Council in providing Internet access to the Annual Implementation Work Plan (AIWP) database and other essential information from AIWP-related reports

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Fourth Quarter, FY2000</u>
Region	1 Update AIWP information in a timely manner as it is received, and make it available and queriable via the StreamNet web site.	Responsibility for the AIWP information was transferred to CBFWA last quarter.

Objective 4 Services to Fish and Wildlife

Task 2 Monitoring and Evaluation

Assist in the development of products that contribute to the monitoring and evaluating (M&E) of Fish and Wildlife Program effectiveness. Specific area of involvement will include:

Objective 4 Services to Fish and Wildlife Task 2 Monitoring and Evaluation

Task 2.a M&E Participation

Participate in Program-related monitoring and evaluation work groups

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Fourth Quarter, FY2000</u>
CRITFC	1 Assist CBFWA to develop an R/M/E plan consistent with the regional Framework (cost sharing)	Work was completed in the third quarter.
IDFG	1 Participate in discussions concerning data needs to support processes adopted by the amended Fish & Wildlife Program for Monitoring and Evaluation.	Discussed data management needs at StreamNet Steering Committee meetings.
ODFW	1 Participate in discussions concerning data needs to support processes adopted by the amended Fish & Wildlife Program for Monitoring and Evaluation.	Reviewed the Fish & Wildlife Program Amendment document, focusing on data management needs and issues and submitted comments to ODFW-Portland and Regional StreamNet staff.
WDFW	1 Participate in discussions concerning data needs to support processes adopted by the amended Fish & Wildlife Program for Monitoring and Evaluation.	No specific discussions were held.

Objective 4 Services to Fish and Wildlife Task 2 Monitoring and Evaluation

Task 2.b Evaluation

Periodically re-evaluate the StreamNet data plan to ensure consistency with M&E needs

Project Work Element

Accomplishments, Fourth Quarter, FY2000

CRITFC 1 Keep Steering Committee apprised of regional R/M/E plans and needs

Discussed R/M/E issues with NMFS and NWPPC staffs and contractors. Kept SC apprised of these discussions via reports at SC meetings and via e-mail.

Objective 4 Services to Fish and Wildlife Task 2 Monitoring and Evaluation

Task 2.c M & E Reporting

Prepare reports and data products that illustrate key M&E topics

Project Work Element

Accomplishments, Fourth Quarter, FY2000

CRITFC 1 Assist Steering Committee to identify useful M&E products which StreamNet can produce at regular intervals

Identification of specific M&E products depends on discussions with other entities which are expected to occur next fiscal year. See also comments on previous sub-components of this task.

Objective 4 Services to Fish and Wildlife

Task 3. Watershed Projects

Provide data and data services to Fish and Wildlife Program-sponsored watershed planning and assessment projects

Project Work Element

Accomplishments, Fourth Quarter, FY2000

Region 1 Receive information on watershed restoration and improvement projects and make available via the StreamNet website

Explored the existence of restoration project data tracking by BPA by meeting with BPA staff. Found out that project tracking in BPA has not been supported, but that some staff have interest. There is potential for some collaborative effort to develop project tracking, but more discussions are needed to determine roles, capabilities, etc. Would like to find means of linking current StreamNet efforts on restoration project data (projects not BPA funded) with data from BPA funded projects. Continued coordination with other state and federal restoration efforts through meetings with interested parties and the Forest Service Regional Ecosystem Office (see Objective 5, Task 3, Work Component 1).

Objective 4 Services to Fish and Wildlife

Task 4. Stock Assessment Projects

Provide technical assistance to the Upper Columbia Basin and Upper Snake River Basin resident fish stock assessment projects, including a) identification of regionally consistent data exchange standards and b) Internet access to project data and other information. Specific actions will be defined in consultation with stock assessment project managers

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Fourth Quarter, FY2000</u>
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Objective 4 Services to Fish and Wildlife

Task 5. Service to Other Fish and Wildlife Program Projects and Activities

In consultation with CBFWA, the Council, and BPA StreamNet will provide technical assistance and data services to select Program projects

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Fourth Quarter, FY2000</u>
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ODFW	1 No work planned this year.	Contributed hatchery release information to ODFW staff preparing the Hood and Fifteenmile Creek subbasin summaries. Participated in a meeting with NWPPC staff to discuss subbasin planning data management needs and how StreamNet could help.
Region	1 Work with Fish and Wildlife Program projects throughout the basin to assist with providing information needed by the projects and acquiring and distributing information generated by the projects.	1. Developed a matrix of data available in the StreamNet database by subbasin as a means of informing subbasin planners and projects throughout the basin of the kinds of information available to them just by accessing the StreamNet web site. Provided this to planners and to Power Planning Council staff. Met with NWPPC staff to discuss data needs for subbasin summaries/assessments and plan approach for developing the needed information. Met with NMFS NW Science Center staff and NWPPC data contractor to discuss TRT recovery plan data needs and VSP data needs. 2. Created a preliminary list of subbasins and their geographic extents in order to create a coverage in the GIS. A coverage is necessary for determining which water bodies are in which subbasin, which is a necessary step in providing data to subbasin planners.

Objective 4 Services to Fish and Wildlife

Task 6. Protected Areas

StreamNet will a) maintain and provide access to the Council's Protected Areas dataset, b) archive the official version as a historic record, and c) in consultation with the Council, respond to requests for information concerning Protected Areas

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Fourth Quarter, FY2000</u>
Region	1 Maintain the existing Protected Areas database.	This is ongoing.

Objective 4 Services to Fish and Wildlife

Task 7 Basin Data Needs

StreamNet will provide information and assistance to regional reviews of data management projects and data management needs conducted by the NWPPC, ISRP, ISAB and other regional entities

Objective 4 Services to Fish and Wildlife Task 7 Basin Data Needs

Task 7.a Data Management Needs

Provide an analysis of regional data management needs, challenges and capabilities to the Power Planning Council, CBFWA, and other regional data review processes

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Fourth Quarter, FY2000</u>
CRITFC	1 Review and contribute to the data management 'white paper'.	Staff helped to frame the issues, contributed suggestions for content, and reviewed the final data management white paper.
WDFW	1 Prepare an outline for a 'white paper' report describing the current state of regional data management and future options.	Work completed during second quarter.
WDFW	2 Review and contribute to the data management 'white paper'.	Work completed during second quarter.

Objective 4 Services to Fish and Wildlife

Task 7 Basin Data Needs

Task 7.b Data Needs Workshop

Promote organization of a regional 'data needs workshop' to establish regional data / information needs and priorities and to develop recommendations for roles and responsibilities for acquiring and providing the needed data / information

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Fourth Quarter, FY2000</u>
CRITFC	1 Assist in planning and conducting the workshop.	Workshop was delayed into the next fiscal year.
Region	1 Organize and hold a meeting of the regional data management projects to discuss current activities and capabilities, investigate potential duplication of effort, and develop a plan for coordinated activities to meet regional data and information needs.	Met with the PSMFC data projects to discuss coordination.
Region	2 Call for, and if successful, participate in, a regional workshop designed to bring together regional, state and tribal agencies to establish data and information needs, determine data and information priorities, and determine a coordinated regional approach to developing and providing the priority data and information.	Workloads precluded initiating a regional data needs workshop. We decided to initiate a strategy of inviting broad participation to StreamNet Steering Committee meetings so that agency data needs can be discussed and included in future work statements.
WDFW	1 Assist Regional staff as needed.	No assistance was requested.

Objective 5 Project Management / Coordination

Provide effective leadership that ensures the production of high quality products targeted at critical applications and the development of these products in a timely, cost-effective manner.

Objective 5 Project Management / Coordination

Task 1. Manage Project Activities

Administer all aspects of the project at the regional and sub-contractor levels, including oversight of budget, personnel, work statement preparation and implementation, coordination among participating agencies, active participation in steering committee work, and project reporting

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Fourth Quarter, FY2000</u>
ODFW	1 Attend StreamNet steering committee or specific technical data meetings as needed to address data issues.	Staff attended the July Steering Committee meeting in Helena, MT.

ODFW	2 Summarize/compile individual staff quarterly reports into one document, including fiscal year highlights, and plans for the next quarter.	Compiled and submitted the 2000-3 quarterly report. Reviewed and commented on the new quarterly report format (the quarterly database). Reviewed and responded to comments by PSMFC staff regarding mapping the mitigation/restoration data. Reviewed and commented on the FY-2001 StreamNet Statement of Work.
ODFW	3 Coordination activities: Oversee and monitor personnel, budget, and other project activities.	<ol style="list-style-type: none"> 1. Ongoing. Continued efforts to recruit a new database manager / developer. 2. Successfully recruited for and hired a new data analyst whose primary responsibility will be to update and maintain our abundance trends. 3. Met with Regional and WDFW staff to discuss the role of ODFW - Columbia River Management staff in StreamNet. 4. Conducted mid-year work plan reviews with two staff members. 5. Drafted a data status summary report and submitted it to Regional StreamNet staff.
ODFW	4 Prepare for and attend StreamNet steering committee meetings and specific technical data meetings as needed to address data issues.	Staff attended the July Steering Committee meeting in Helena, MT.
ODFW	5 Participate / attend appropriate conferences and submit conference agendas, proceedings, and presentations to PSMFC upon request	Duplicate task - see activity 5.4b.1
ODFW	6 Produce and provide a Statement of Work and budget proposal for ODFW	Drafted the FY-2001 Oregon StreamNet Statement of Work, staff allocation table, and an objective specific budget and submitted it to PSMFC.
ODFW	7 Contribute to the Oregon portion of Quarterly and Annual reports by providing period highlights, plans for the next quarter, and a data request/response log.	All staff submitted required reports for this period.
ODFW	8 Develop a mid-year status report for work items contained in individual work plans.	Completed in the 3rd quarter.
ODFW	9 Summarize/compile individual CRM staff quarterly reports into one document, including fiscal year highlights, and plans for the next quarter, and deliver to Cedric	Completed

Region	1 Provide oversight for the StreamNet Program	Routine project administration and oversight continued. Worked with the sub-project leaders on the work plans for FY2001.
Region	2 Supervise and train StreamNet regional staff	<ol style="list-style-type: none"> 1. The Program Manager attended training in the ACCESS database. 2. The Regional Fisheries Biologist explored programming languages, in order to determine which would be best to learn in order to assist the project. It was decided Visual Basic would be most useful, and he began a semester-long class. He also explored ArcView in order to better use that program.
Region	3 Develop program budgets and manage / monitor expenditures	The budget requested for FY2001 was reduced to the point that serious reductions were required from regional and cooperator projects. This was due to the cumulative effects of no cost of living increase for FY2001 and four years of cost of living increases that fell below actual salary increases. All budgets were adjusted to reflect the reductions, and work was begun on requesting reinstatement of funding to continue the project at full strength.
Region	5 Coordinate with data collecting agencies and organizations to determine data availability and encourage data and information being made public.	Met with ODFW and WDFW staff regarding availability of run reconstruction data.
Region	6 Coordinate with regional management agencies / entities and data using entities to determine information and data service needs to assure rapid response to reasonable requests for data and information.	<ol style="list-style-type: none"> 1) Requests to various staff in many agencies to determine data needs were not fully successful at identifying ongoing and future needs. Meetings were held specifically with NMFS staff at the NW Science Center on data needed to support various modeling efforts. 2) We developed a plan to invite agency representatives to participate in StreamNet Steering Committee meetings as a means of increasing input
Region	7 Produce quarterly reports within 1 month after the end of each quarter	A new database was developed to capture quarterly accomplishments from all project participants. The intent is to have the process automated so that report production is quick and efficient. The system was not functional enough to complete the third quarter report on time, however. on agency data needs. This will be carried out beginning in FY2001.

Region	9 Manage and serve the StreamNet Steering Committee through: Organizing and conducting committee meetings at least quarterly; Calling additional meetings as needed to address timely issues; and, Actively consulting with Steering Committee on program activities	1. Developed the agenda and chaired the Summer Steering Committee meeting on July 11-12 in Helena, MT. All PSMFC staff attended this meeting. 2. At the request of the Steering Committee, regional staff began creating a document that describes the roles and responsibilities of each of the regional staff. This request was made by the Steering Committee in order to minimize confusion regarding who to contact for various types of regional coordination.
Region	11 Prepare a project proposal and Statement of Work for FY 2001	The FY2001 Work Statement was developed in an ACCESS database format. The accompanying budget was developed at the Council approved level, and included references to the full amount needed to support the entire project. Uncertainty over the actual budget amount for the fiscal year and the best way to depict the budget needs delayed final submission and approval of the work statement and budget until the first quarter of FY2001.

Objective 5 Project Management / Coordination

Task 2. Participate in Fish and Wildlife Program Development Activities

Organize, facilitate, and/or participate in appropriate coordination meetings with BPA, CBFWA, the Council, ESA officials, ISAB/ISRP, and/or staff and management of participating organizations aimed at identifying ways that StreamNet might more effectively contribute to the Fish and Wildlife Program (FWP). Participate in advisory groups, task forces, and other groups whose purpose is enhancing the effectiveness of the Fish and Wildlife Program and its data development activities.

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Fourth Quarter, FY2000</u>
ODFW	1 Participate in Fish and Wildlife Program advisory groups and applicable regional policy, planning, and management forums and provide a written summary of activities in quarterly progress reports.	Participated in a conference call with NMFS-Seattle staff regarding data needs for their upcoming Viable Salmon Population analytical procedure.
Region	1 Participate in appropriate coordination meetings with BPA, CBFWA, the Council, ESA officials, ISAB / ISRP, and/or staff and management of participating organizations aimed at identifying ways that StreamNet might most effectively contribute data / information and support to the FWP.	Participated in meetings with NMFS NW Science Center staff regarding data needed for modeling and recovery planning efforts.

Objective 5 Project Management / Coordination

Task 3. Coordinate with Other Related Activities

As needed, produce public information materials including updated versions of the project brochure, computer demonstration materials, and/or other appropriate materials

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Fourth Quarter, FY2000</u>
ODFW	1 Establish / maintain working relationships with major data collection projects within and outside ODFW to promote efficient and beneficial data sharing.	1. Participated in restoration data integration meetings with the Regional Ecosystem Office, BLM, USFS, and OWEB. 2. Reviewed and commented on a draft white paper outlining restoration data integration efforts between REO, StreamNet, OWEB, and federal agencies.
Region	1 Coordinate the efforts of the StreamNet project with other data compilation projects occurring in the region. Address issues of data gaps, duplication of effort, data set integration, georeferencing standardization, scientific rigor, management needs, etc.	1. The Regional Fisheries Biologist participated in an interagency group which is attempting to coordinate and consolidate habitat restoration projects data for the region. Three meetings were attended, and a white paper was initiated which will lay out a strategy for integrating the several independent databases now in existence. 2. The Regional Fisheries Biologist participated in a workshop on volunteers using macroinvertebrates for monitoring, presented by the Xerces Society. At this meeting, he gained an understanding of what data are collected, and how they may be integrated into StreamNet in the future. At the request of the Xerces staff, he also provided feedback to the Xerces Society staff on ways they could improve their techniques, and how they could more easily move their data into StreamNet format.

Objective 5 Project Management / Coordination

Task 4 Prepare Public Information Materials.

Maintain communications between StreamNet and other applicable regional and state-level fish and wildlife activities to identify means for collaborative data collection, storage, and dissemination. Collaborative data activities will target tribal fishery programs within the Columbia Basin, federal land managers' fishery programs, state fish and wildlife agencies, and, with respect to water use and stream development, state water resource Collaboration with coast-wide and private data collection/compilation efforts will be pursued when this supports overall project goals. Areas of particular management agencies. emphasis are 1) participation in Fish and Wildlife Program monitoring and evaluation activities, and 2) exploring opportunities for integration of StreamNet data exchange formats into Fish and Wildlife Program contract terms and conditions.

Objective 5 Project Management / Coordination Task 4 Prepare Public Information Materials.

Task 4.a Prepare Public Information Materials

As needed, produce public information materials including updated versions of the project brochure, computer demonstration materials, and/or other appropriate materials

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Fourth Quarter, FY2000</u>
CRITFC	1 Produce and update a Library brochure and Access guide listing services, hours and cost recovery fees.	Brochure was updated previously.
MFWP	1 Montana will participate in review and recommendations.	Reviewed brochure.
ODFW	1 Write informational article for the ODFW Monitor or Inside Tracks on the Fish Presence Survey database development and its utility.	Due to the departure of project staff, and the anticipated delays in filling these positions, it is anticipated that no further efforts will be made on this task.
ODFW	2 Write informational article for the ODFW Monitor or Inside Tracks on the Barriers database development and utility	No efforts were made this quarter. The barrier data is still being compiled and validated. It would be premature to publish an information article until the bulk of our data has been completely reviewed.
ODFW	4 Write informational article for the ODFW Monitor or Inside Tracks on distribution data development efforts.	Wrote draft Inside Tracks article describing the Oregon salmonid distribution data. Refrained from submitting article due to recent significant developments in supplementary ODFW databases containing fish presence information and the need to reconcile the current distribution data with these data.
Region	1 Update the existing StreamNet brochure	Began review of the existing StreamNet brochure.
Region	3 Prepare reports, documents or presentations as needed to describe project actions and accomplishments	Wrote a report on StreamNet project accomplishments for the Pacific States Marine Fisheries Commission annual report.

Objective 5 Project Management / Coordination Task 4 Prepare Public Information Materials.

Task 4.b Participate in informational meetings/conferences

Participate in appropriate state, regional, and national educational and professional conferences, including, where applicable, giving presentations, preparing poster session materials, and contributing to conference proceedings.

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Fourth Quarter, FY2000</u>
CRITFC	1 See task 3.5	See report for task 3.5.
IDFG	1 Participate in state, regional, or national educational or professional conferences.	Attended NW ESRI Users Group Conference in Skamania, WA.
IDFG	2 Serve as chairman and organizer for the 2001 ArcInfo User's Group Conference scheduled for October 2001.	Gathered information for the 2001 NW GIS Users Conference.
ODFW	1 Participate in appropriate meetings & conferences as opportunities arise to highlight StreamNet programs & data	<ol style="list-style-type: none"> 1. Staff attended the Organization of Fish and Wildlife Information Managers (OFWIM) Conference in Silver Creek, Colorado in August. 2. Attended the Or. Plan monitoring team meeting and briefed the team on upcoming efforts. 3. Attended the annual Fish Biologist meeting and presented a summary of upcoming efforts. 4. One staff person attended a Library Procedures class at PCC. This class will continue through the fall. 5. One staff person attended MS Access Level I & II training.
Region	1 Participate in appropriate meetings to explain the StreamNet project, solicit new data and information, or to present relevant data from the SN database	The Program Manager and Database Manager participated in the annual meeting of the Organization of Fish and Wildlife Information Managers. The agenda theme was web distributed information systems and approaches. The StreamNet site was cited as an example of a well designed web page. Among the technical information presented was the value of using web based scripting in serving interactive GIS data.