



StreamNet

BPA Project Number 198810804

Fiscal Year 2000

Third Quarter Progress Report

April 1, 2000 through June 30, 2000

Submitted to:

Bonneville Power Administration

Submitted by:

Pacific States Marine Fisheries Commission

Table of Contents

Introduction.....	Page 2
Objective 1. Data Development.....	Page 3
Task 1.1. Anadromous Fish.....	Page 3
Task 1.2. Resident Fish and Other Aquatic Species.....	Page 10
Task 1.3. Habitat.....	Page 14
Task 1.4. Facilities.....	Page 15
Task 1.5. Habitat Restoration / Improvement Projects.....	Page 17
Task 1.6. Sub-Basin Planning.....	Page 18
Objective 2. Data Management.....	Page 19
Objective 3. Library.....	Page 31
Objective 4. Service to Fish and Wildlife Program Activities.....	Page 34
Objective 5. Project Management / Coordination.....	Page 38
Work Planned for Next Quarter.....	Page 45

Introduction

This report presents accomplishments of the StreamNet project for the third 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 also represents a new approach that provides greater flexibility and the ability to produce reports in several formats. It is based on a relational database containing the details of the Work Statement and the accomplishments by each project participant. This allows rapid compilation of a report for the entire project as well as the ability for each participant to develop a report specific to their activities. 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 third 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).

Objective1 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

Task1 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

Task1.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, Third Quarter</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.	Identified and attached constraints (barrier types) to preliminary barriers for anadromous fish. The database is still not ready for exchange, but the constraints is one more piece that is required.
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)	Continued internal efforts to populate the FishBarrier table as new distribution and barrier information was identified and performed QA/QC on the database.
ODFW	2 Update, maintain, and correct the 100k distribution event tables for Oregon as needed and applicable.	Ongoing.
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 For the NE Oregon basins	Performed extensive q/a on all anadromous salmonid distribution event data. Identified and fixed all distribution event records that either overlap, fall just shy of being adjacent or that are adjacent, but have the same usetype. Also reviewed were cases where the end measure of the event exceeds the length of the stream and inconsistent measures across HUC boundaries.

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 second quarter.
ODFW	7 Develop a database to capture fish presence survey data to help populate the DistPresence table.	Continued to develop the Fish Presence Survey Database in MS Access to capture Oregon's upper fish distribution and culvert information collected by ODF/ODFW surveyors. To date, 792 Records have been entered in the Columbia basin.
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 80 records in the database are for Col. 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 this quarter involved identifying information sources to populate missing information for existing barrier records.
ODFW	14 Using project camera, photograph Columbia basin barriers that are maintained in the database and provide to PSMFC.	Reviewed the list of 195 photographs that StreamNet has for Oregon in order to compile a list of photos that are still needed. Due to staff vacancies, no further effort is anticipated on this task.
ODFW	16 Transfer all 250K Lamprey distribution data into the 100K data structure using data from ORIS.	Completed during second quarter.
ODFW	17 Assist as needed with tabular data collection and compilation tasks in order to help produce anadromous salmon distribution coverages.	Ongoing. Worked with regional SN staff to reconcile LLID differences between ODFW and StreamNet data.
ODFW	19 Update the Barrier database with information obtained during conduct of other project activities and submit updated information to PSMFC. Four updates anticipated.	Updated the master barrier database to 2000.2 format and made efforts to identify information sources to populate missing data fields for existing barrier records.

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| 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 | 1) Compiled and QA'd anadromous distribution updates from ODFW. Generated new GIS coverages from these events and posted these to the StreamNet website as shape files for the query system and downloadable GIS coverages for public access.
2) Developed a procedure to summarize total anadromous distribution (salmon/steelhead) by cataloging unit (HUC). Created a GIS coverage and metadata of the results and posted these files to the StreamNet web site. |
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Objective 1 Data Development Task 1 Anadromous Fish

Task 1.b Adult Abundance

Escapement, redd counts, trap counts, dam counts

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Third Quarter</u>
IDFG	1 Compile 1999-field season redd count data into Idaho's existing database.	Added new information from 1999 field season into the IDFG StreamNet anadromous redd count database.
IDFG	2 The data will then be migrated to the current version of the PNW 1:100,000-scale hydrography.	Migration of adult abundance data into the IDFG StreamNet database management system awaits completion of the system and the associated 100K LLID hydrography.
IDFG	3 Write new routines to convert the redd count data to the StreamNet data exchange format (2000.1) and submit to PSFMC.	Work to prepare data exchange routines is awaiting completion of the IDFG StreamNet database management system.
ODFW	1 Update StreamNet abundance and indices data (escapement, redd counts, trap counts, peak/other spawning counts, etc.) OR populations within the Columbia Basin (updated through 1998). Three updates planned.	CREP documents were organized and reviewed for relevant data to for StreamNet. Due to the departure of our abundance database staff person, and the anticipated delays in filling the position, it is likely that no future updates will be submitted to regional StreamNet this fiscal year.
ODFW	2 Compile some* of the Columbia basin abundance field data gathered by the CREP crews into the SN abundance dataset.	Continued to update existing trends to the 2000.2 data exchange format. Due to the departure of our abundance database staff person, and the anticipated delays in filling the position, it is likely that no future updates will be submitted to regional StreamNet this fiscal year.
ODFW	3 Update existing abundance trends to the new 2000.1 exchange format standards as trends are updated through 1998. Three updates planned.	Updated the abundance database and interface to conform to the latest accepted exchange format - DEF 2000.2.
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.	Continued to update existing trends to the 2000.2 data exchange format and some trends were updated through 1998. Due to the departure of our abundance database staff person, and the anticipated delays in filling the position, it is likely that no future updates will be submitted to regional StreamNet this fiscal year.
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.
WDFW	1 Update and exchange hatchery returns through 1998 in the StreamNet data exchange format (2000.1).	LLID assignment was finished for hatchery facilities as a precursor for conversion and exchange of the return data, which are ready.
WDFW	2 Update and exchange natural spawner data through 1998 (CR, PS)	1) 1998-99 Hanford Reach spring, fall chinook natural spawning data completed, ready for conversion and exchange. 2) 1998-99 PS chum updated in the internal database; ready for conversion and exchange.

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, Third Quarter</u>
IDFG	1 Incorporate the IDFG General Parr Monitoring (GPM) data into the IDFG database.	The IDFG General Parr Monitoring database has been preliminarily migrated into the IDFG StreamNet database management system. Final migration is awaiting completion of bringing the 100K hydrography into the system. Cross-reference of species codes have been completed. Point locations of approximately 80% of the GPM transects have been linked to the 100K LLID hydrography and measures determined. Additional work is needed to identify additional locations and to link to the hydrography.
IDFG	2 If possible, convert the IDFG GPM (juvenile fish) data into exchange format and submit to PSMFC.	Conversion of the IDFG General Parr Monitoring data to StreamNet is awaiting final migration into the IDFG StreamNet database management system and adoption of a data exchange format by StreamNet.
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.

Task 1.d Harvest

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

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Third Quarter</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 commercial terminal and zonal harvest figures updated, ready for conversion and exchange.
WDFW	2 Update and exchange steelhead harvest through 1997 if feasible.	Assisted in review of new steelhead Catch Record Card area coding scheme for 2000-2001 and preparation of cross-reference table while awaiting final release of 1997 catch statistics.

Task 1.e Hatchery Production

Releases, disposition, straying

<u>Project</u>	<u>Work Element</u>	<u>Accomplishment, Third Quarter</u>
FWS	2 Transform into format 32	Answered Western Washington FRO inquiries regarding submitted data
IDFG	1 Compile IDFG 1999-field season hatchery returns data into Idaho's existing database.	Added new information from 1999 field season into the IDFG StreamNet anadromous hatchery returns database.
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 PSFMC.	Work to prepare data exchange routines is awaiting completion of the 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.	Worked with Portland information systems staff to get access to the Portland mainframe hatchery data.
ODFW	2 Compile 1997 egg-take data and submit to PSMFC	Worked with HIMS data manager to get the hatchery return data from the mainframe
ODFW	3 Develop an automated procedure to update egg-take data and to capture and incorporate historic data into the StreamNet database.	Worked with HIMS data manager to get the hatchery return data from the Mainframe

ODFW 4 Compile data on returns to ODFW hatchery facilities (updated for 1997 and part of 1998 returns).

Worked with HIMS data manager to get the hatchery return data from the mainframe

Region 1 Assist StreamNet partners with acquisition, development, formatting and submission of data.

Assisted ODFW in cleaning up the hatchery releases database by identifying hatchery release trends (time-series) that failed to be assigned the appropriate coding ('300,000 trends')

Objective 1 Data Development

Task 1 Anadromous Fish

Task1.f Natural Production

Survival, production factors, spawner recruit

Project Work Element

Accomplishments, Third Quarter

Objective 1 Data Development

Task 1 Anadromous Fish

Task1.g Age

Age/sex composition for returning adults

Project Work Element

Accomplishments, Third Quarter

IDFG 1 Compile IDFG 1999-field season age and sex composition data into our existing database.

Added new information from 1999 field season into the IDFG StreamNet anadromous age/sex composition database.

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.

Migration of age/sex composition data into the IDFG StreamNet database management system awaits completion of the system and the associated 100K LLID hydrography.

ODFW 1 Compile age frequency data (updated for natural spring chinook in 1997, available time series for natural steelhead in OR portion of the Columbia basin).

Completed during second quarter.

Objective 1 Data Development

Task 1 Anadromous Fish

Task1.h Genetics

Areas where genetics data exists and the sources of these data

Project Work Element

Accomplishments, Third Quarter

Task 1.i Populations

Population delineation, as determined by others

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Third Quarter</u>
IDFG	1 Incorporate the standard population/run type designations into the IDFG database.	Anadromous populations, known as cells or runtypes, in IDFG have been preliminarily linked to the 100K LLID hydrography and incorporated into the IDFG StreamNet database management system. Finalization of these data await the final work on the 100K LLID hydrography for the information system.
IDFG	2 If possible, convert IDFG population/run type data and submit to PSMFC.	There is no StreamNet data exchange format for submitting population or runtype geospatial data to StreamNet.
ODFW	1 Produce a cross-reference table of ODFW designated Gene Conservation Groups (GCG) by subbasin.	StreamNet subbasin delineations have not been modified to sync with ODFW GCGs and it appears unlikely that this will happen this fiscal year. Therefore, it is not anticipated that any further efforts will be made this year.
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).	Compared the upper extent of the SaSI stock status GIS coverage with updates made last quarter to the anadromous fish presence and use layers. Identified and eliminated inconsistencies.

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, Third Quarter</u>
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Task2 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:

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, Third Quarter</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.	Collecting permit data continue to be entered into the IDFG StreamNet database management system for references. We have not summarized these data, yet, into updated fish distribution geospatial layers.
MFWP	1 Convert MRIS from the River Reach Numbering system to an "LLID system" (temporary use of MFWP water code).	Completed conversion to a temporary " LLID" system to reference streams in MRIS. Added StreamNet measure fields to provide for use of route measures. Completed initial data gathering and meeting with field biologists for the 2000 MRIS updates. Unable to enter data by routes until PNW hydrography and NHD are completed.
ODFW	1 Produce GIS coverages illustrating rainbow and redband trout distribution where available for Columbia basin streams.	Processed upper fish distribution point data for the Lower Columbia in an effort to enhance existing distribution information.
ODFW	2 Transfer Lahonton 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.	Converted Lahontan Cutthroat distribution data to StreamNet format.
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).	1) Redesigned the bull char database to reflect new USFWS bull char status, presence, and use category needs. Designed new field maps reflecting both 24K and 100K streams layers. Created new instruction sheets for field biologists who will participate in the bull char presence and use update. 2) Generated new maps showing existing bull char presence data, added maps from WCC mapping parties, and delivered update kits and training materials to field biologists.

Task2.b Adult Abundance

Escapement, redd counts, trap counts, dam counts

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Third Quarter</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.	Collected population trend and other survey data up through the 1999 field season and all new genetic records from University of Montana Genetics Lab. Entered all genetics data and began entering survey data.
MFWP	2 Collect references for each survey.	References were gathered for each survey when available. Some of the surveys are not and will not be written in any formal report(i.e., DJ report) and therefore will be given their own reference ID number and other required StreamNet documentation by MRIS staff.
ODFW	1 Update existing abundance trends to the new exchange format standards as trends are updated through 1998. Three updates planned.	Continued to update existing trends to the 2000.2 data exchange format. Due to the departure of our abundance database staff person, and the anticipated delays in filling the position, it is likely that no future updates will be submitted to regional StreamNet this fiscal year.
ODFW	2 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.
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.	Continued to update existing trends to the 2000.2 data exchange format and some trends were updated through 1998. Due to the departure of our abundance database staff person, and the anticipated delays in filling the position, it is likely that no future updates will be submitted to regional StreamNet this fiscal year.
ODFW	4 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.

Task2.c Angler Use

Fishing pressure, creel census

Project Work ElementAccomplishments, Third Quarter**Task2.d Hatchery Production**

Hatchery production (releases and outplants) for salmonids

Project Work ElementAccomplishments, Third Quarter

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.	Continue to build cross-references of IDFG stocking catalog numbers with 100K LLID hydrography. The catalog numbers do not have a direct correspondence with reach numbers, therefore the work is slow and tedious. It involves a lot of on-screen visual examination to ensure accuracy.
IDFG	2 Migrate the IDFG stocking data into the IDFG StreamNet database, write new routines to convert the data to the data exchange format (2000.1), and submit to PSMFC.	This component is now waiting completion of a cross-reference between IDFG stocking catalog numbers and the 100K LLID hydrography.
ODFW	1 Acquire 1997 trout release data (by species, location, and facility) and compile into SN exchange format.	Coordinated with ODFW hatchery data staff to develop a process to export the required information into StreamNet format. The current bottleneck seems to be that the ODFW system has a limited number of programming routines that it can store, and there is no room for any new ones at this time.
WDFW	1 Complete conversion and exchange resident fish stocking data from 1930-1981, once location coding has been standardized and verified.	1) Continued cleansing duplicate entries found in the pre-1982 resident fish stocking records. Sent WRIA 62 records to Region 1 fish biologist for intensive comparison to field ledgers maintained in the Regional Office. 2) Began assigning standard location codes (LLIDs) to stocking sites (streams and lakes).

Task2.e Genetics

Areas where genetics data exists and the sources of these data

Project Work ElementAccomplishments, Third Quarter

MFWP	1 Update genetic spatial and tabular databases that contain the results of genetic analysis of populations of Montana's species of special concern	Genetic spatial and tabular components were updated through June 2000. Westslope Cutthroat Trout Genetic Maps by drainage were sent out to state and federal biologists in April 2000.
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Task 2.f Population

Population delineation, as determined by others

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Third Quarter</u>
MFWP	1 Maintain spatial delineation of bull trout populations, core and nodal habitat. Enhance layer with population risk field.	Updated bull trout core areas with most recent data from MFWP. Produced map depicting changes and sent to past requestors. Will send new coverage to StreamNet next quarter.
MFWP	2 Determine westslope cutthroat trout priority areas as part Westslope Cutthroat Conservation Agreement.	Created Westslope Cutthroat Trout Priority Area coverage in April 2000; it has been reviewed and should be finalized next quarter.

Task 2.g Historic Range

As available at the watershed-level

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Third Quarter</u>
MFWP	1 Explore the development of historic range coverages for all of Montana's native species.	Started creation of Historic Distribution by HUC. Used existing MRIS data and The Nature Conservancy data as a starting block.
MFWP	2 Submit arctic grayling, westslope and Yellowstone cutthroat trout historic distribution to StreamNet by June 1.	Submitted Arctic Grayling, Westslope and Yellowstone Cutthroat Trout historic coverages to StreamNet in May 2000. Received historic coverage of Montana's native fish species from project conducted by TNC. Will review and make recommendations to StreamNet as to an exchange format next quarter.
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	Formatted metadata for MFWP submission of historic grayling and cutthroat distribution data, and posted this (GIS) data and metadata as downloadable files to the StreamNet website.

Task 2.h Status

Population stability index

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

Task3 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

Task3.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, Third Quarter</u>
IDFG	1 IDFG StreamNet will incorporate the IDFG General Parr Monitoring (GPM) habitat data into its database.	No new work has been accomplished on stream habitat in the IDFG General Parr Monitoring database. We are awaiting completion of the 100K LLID hydrography and the IDFG StreamNet database management system (see item 1.1c).
IDFG	2 If possible, convert the IDFG GPM habitat data into regional format and submit to PSMFC.	Awaiting migration of IDFG General Parr Monitoring data into the IDFG StreamNet database management system and a StreamNet data exchange format.
MFWP	1 Determine what type of habitat data and at what scale Montana state and federal fisheries biologists are collecting during regional visits.	Met with MFWP and Federal biologists on what habitat data is gathered. Most of the habitat data is gathered by federal biologists by several different methods. Currently, we are working on a standardized stream form that could potentially facilitate gathering this habitat data in the future.

Objective 1 Data Development

Task 3 Habitat

Task3.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, Third Quarter</u>
Region	1 Create GIS water quality data coverages from the 303(d) data and post to the StreamNet web site.	Compiled metadata for 303(d) water quality data and developed a web page (http://www.streamnet.org/303d.html) to distribute this data & metadata on the StreamNet web site
Region	3 Georeference (assign LLIDs) to the stream nutrient data	Georeferenced approximately 50% of the stream nutrient data (work ongoing).

Task3.c Miscellaneous Habitat Data

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Third Quarter</u>
MFWP	2 Update and incorporate MFWP water leasing and dewatered stream list data into MRIS.	Updated Instream Flow and Water Leasing databases and incorporated into MRIS. Also updated this information on the MRIS web site.
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.

Task4 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:

Task4.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, Third Quarter</u>
IDFG	1 Add enhanced data from the National Inventory of Dams to the IDFG StreamNet information system.	Worked to obtain code definitions to enhanced dams database from Idaho Department of Water Resources and National Inventory of dams. Made additional table structure and programming modifications to the dam component of the IDFG StreamNet database management system.
IDFG	2 Write export routines and submit the dams data to PSMFC in StreamNet Data Exchange Format.	Still awaiting final completion of IDFG StreamNet database management system before developing routines to exchange dam information with central StreamNet.
ODFW	1 Update the dam database with information obtained during the conduction of other project activities. Four updates planned	Added updated RRNs and LLIDs, imported NIDDamID, RRN, and Prop field data from the NID into the Dam table and added an OwnerType lookup table.
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 dams, where possible, with non-stream coordinates based on longitude/latitude for use by the StreamNet query system. Tied WA & OR dams to 1:100k stream locations, where possible, and submitted these results to ODFW and WDFW for their review.

Task4.b Hatcheries

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

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Third Quarter</u>
FWS	1 Continue checking for submitted FWS update records, update records when appropriate, submit to StreamNet	Submitted updated hatchery facilities file
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.	Hatchery facilities is complete and linked to 100K LLID hydrography. Awaiting final adoption of hydrography into IDFG StreamNet database
IDFG	2 Supporting hatchery structures, such as weirs and traps, will be added to the hatcheries database.	No new work on supporting hatchery structures, such as weirs and traps.
ODFW	1 Locate at least one public domain photo of each hatchery in Oregon and provide to PSMFC.	Reviewed the list of 195 photographs that StreamNet has for Oregon in order to compile a list of photos that are still needed. Due to staff vacancies, no further effort is anticipated on this task.
ODFW	2 Update OR hatchery facilities data to the 99 version of the exchange format and submit to PSMFC.	Imported the latest version of the Hatchery table and began the process of updating it.
Region	1 Convert hatcheries data to the 100K system. Create a regional hatcheries GIS coverage and distribute it via the StreamNet website.	Georeferenced all hatcheries, where possible (OR & WA only), with non-stream coordinates based on longitude/latitude for use by the StreamNet query system. Tied Oregon hatcheries to 1:100k stream locations, where possible, and submitted these results to ODFW for their review.
WDFW	1 Provide standard geo-spatial coordinates (Longitude-Latitude) for each facility.	Reviewed and corrected LLID assignments to hatchery facilities based on hatchery returns and hatchery facilities data work. Added LLIDs for facilities not in the returns dataset.

Task4.c Diversion/screening

Develop a dates for water diversions and screening

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Third Quarter</u>
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.	Worked with Screening Program staff to build a crude, basic database structure for fish screening data maintained on paper.

Objective 1 Data Development

Task5 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

Task5.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, Third Quarter</u>
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Objective 1 Data Development

Task 5 Habitat Restoration/Improvement Projects

Task5.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, Third Quarter</u>
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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.	Compiled an extensive database of non-FWP projects obtained from the Idaho Conservation Data Center. Many of these projects consisted only of land purchases or changes in management, rather than fencing and restoration, but we captured this information while we had the data in front of us.
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.	MFWP staff updated the restoration project database for Montana after StreamNet staff made several modifications to edit/entry. Working on DEF to exchange Montana's data this fiscal year.
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. mitigation and restoration data more efficient.	Coordinated a data update for StreamNet on 40 projects in OWEB's Mitigation/Restoration database. Provided technical assistance to OWEB staff, answering MS Access questions to make compilation of ODFW

Objective 1 Data Development

Task6 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

Task6.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, Third Quarter</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.	Discussed Montana's role with Montana CBFWA representative, MFWP Fisheries Division staff and attended NWPPC meeting in Helena in May concerning amendment process and sub-basin planning process. Will provide input as process continues.
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.	Consulted with ODFW staff who are preparing the Hood and Fifteen Mile subbasin summaries about data gaps and ways StreamNet might be able to help. Provided Oregon's input to the "Availability of Fisheries Data from StreamNet For Use with the Subbasin Assessment Template" document.
Region	1 Meet with sub-basin planners to discuss data types that may be needed, data sources, and to plan integration methods of the various data sets.	Participated in the planning meetings for rolling provincial reviews in the Intermountain and Columbia Gorge provinces. Discussed data needs and StreamNet data availability for Subbasin Summaries.
SBT	1 Assist StreamNet cooperators with data needs as they are developed by Fish and Wildlife Program managers from sub-basin planning sessions.	Sub-basin planning was put on hold until sub-basin assessments are complete. Sub-basin assessment parameters
WDFW	2 Coordinate data compilation from other WDFW Units as needed to respond to the above needs, using StreamNet data exchange experience.	1) Participated in the subbasin assessment data compilation for the Gorge Province by providing escapement, harvest, hatchery returns data, graphs, basin descriptions and maps for the Wind River, Little White Salmon River, and White Salmon River basins. 2) Provided a list of StreamNet data categories and coverages pertinent to the InterMountain Province subbasin assessment team in preparation for their data meetings.

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, Third Quarter</u>
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	Began reviewing draft subbasin summaries to identify new data types that StreamNet might consider compiling.

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

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, Third Quarter</u>
IDFG	1 Implement a new information management system that will facilitate input of IDFG data and output the data in SN Data Exchange Format for inclusion in the regional database.	Continued to develop an IDFG StreamNet database management system for use by IDFG personnel to enter and manage fisheries data. Emphases have been on cleaning remaining glitches in 100K LLID hydrography, user interface forms, and table structures. The hydrography, taxonomy, and supporting tables are in beta-testing mode. The reference system is in production and being actively used by Fishery Bureau and StreamNet staff. The lakes component was independently extracted and supplied to IDFG fishery staff for testing. Stream survey, hatcheries, and dams components are still in development, but nearing completion. Fishery Bureau staff have coordinated with StreamNet to develop a regulations component for the system. With our help, they have linked fishing regulations to the 100K LLID hydrography.

IDFG	2 Update existing data sets with 1998 field data	We have not migrated our old StreamNet anadromous fish databases into the new database management system. We anticipate the hydrography being completed, cleaned and approved shortly and then this will be our first task.
IDFG	3 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.	Immediately upon final clearance of the 100K LLID hydrography into the new IDFG StreamNet database management system, we will transfer our existing anadromous StreamNet data for the 1998 and 1999 field seasons and submit to PSMFC in data exchange format.
ODFW	1 Provide state-level StreamNet database management / administration / development. Enhance StreamNet and ODFW database structure and capabilities as possible.	Wrote procedures for validating distribution event data. Tested and commented on the StreamNet Access user interface. Scoped the development of a composite database which will be used to capture a variety of different survey information
ODFW	2 Modify/update the EventMapper tools with updated event data and/or background GIS layers.	Worked with StreamNet regional staff to resolve problems with the new EventMapper coverages and provided the new coverages to OWEB and ODFW staff members.
ODFW	3 Maintain and update state-level StreamNet data sets, database structures, and interfaces.	Converted master image database to 2000.2 DEF standard.
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.	Reviewed additional information on the Riparian Lands Tax Incentive Program sent from the Portland ODFW office. Completed development of the first draft of the database structure and the interface and submitted version 1.0 to Habitat Division for review and comments.
ODFW	6 Investigate and summarize the pros and cons of distributed vs. centralized information systems	Completed the initial investigation and summarization of the pros and cons of a centralized vs. a distributed information system for Oregon's natural resource data and a preliminary report was prepared.
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.	Ongoing.

Region	1	Maintain and manage the StreamNet database so information / data are available internally to project participants and externally via Internet.	<p>1) Maintained the StreamNet database.</p> <p>2) Posted the 1990 smolt density model data files on the StreamNet web site at http://www.streamnet.org/f&w_subbasin.html. These files are in the form of spreadsheets summarizing subbasin habitats, percent of stream lengths used, and smolt carrying capacities.</p>
Region	2	Add data submitted to the StreamNet regional office into the SN database within ~30 days of receipt from the project partners.	<p>1) Loaded new data from ODFW related to trends, dams, barriers and fish barriers tables.</p> <p>2) Updated hatchery facility records from WDFW.</p>
Region	3	Assist data-providing agencies with error checking of data sets.	Reported errors to data compilers as encountered.
Region	7	Document all additions/changes to data structure, exchange formats, interface tools, etc.	Ongoing
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. Performed minor database cleanup and updates. For example, added new lookup codes, reworded some codes, created a Publishers table, cleaned up the Reference table's Authors field.
Region	10	Provide programming services to project participants to assist with efficient data entry and data transfer	<p>1) Updated the Trends (time-series) data input interface. This effort was designed to assist the StreamNet partners in their efforts on Tasks 1.1.b, 1.1.d, 1.1.e, 1.2.b, 1.2.c, and 1.2.d.</p> <p>2) Examined the existing StreamNet database, which uses RRN-based georeferencing, to determine which data types had not been updated to the LLID system. We found that the Smolt Density Model and Protected Areas tables could not be converted to the LLID system, due to imprecise descriptions of geographic locations used in those tables. We also determined that georeferencing in the Trend, Dam, and Hatchery tables must be accuracy-checked (this is being addressed by the StreamNet partner agencies). Smolt Density Model data and Protected Areas data will remain queryable on the StreamNet web page, but their geographic referencing will not be converted to the 1:100,000-scale LLID hydrography due to the sometimes vague textual descriptions of location.</p>

WDFW	1 Washington state data maintenance and exchange support services, including updated exchange format system, support for MS Access 97, and support for new data categories and fields.	Worked on developing a means to export data from our Paradox-based system into the MS Access-based TrendUI data entry tool. Installed TrendUI, ran into several compatibility problems with Access version 2000m and worked to repair problems.
WDFW	2 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.	1) Converted and exchanged hatchery facilities tabular dataset with StreamNet. Spatial dataset should be ready next quarter. 2) Sent a list of LLID corrections PSMFC-StreamNet staff need to make to the copy of the regional release database they maintain. 3) Spent time reviewing the 60000 series trends in the existing StreamNet database (Washington state escapement and hatchery returns data added by Duane Anderson years back) looking to separate duplicates from good data.

Objective 2 Data Management and Delivery

Task2. 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, Third Quarter</u>
CRITFC	1 Provide input to the data plan to keep it responsive to subbasin planning and Framework needs and schedules.	NPPC executed a contract with several consultants to develop data for watershed assessments. We are tracking these activities and will work at the regional level to insure effective, efficient management of these data sets. Specific discussions and actions will begin in the fourth quarter and extend into the next contract period.

Task3. 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, Third Quarter</u>
IDFG	1 IDFG StreamNet will 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.	Participated via the StreamNet Steering Committee on adoption of data exchange formats.
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 the 2000.2 DEF, including the restoration projects data category, distribution standards and definitions
Region	1 Work with the project database managers to identify needed modifications to the Data Exchange Format (DEF) to accommodate changing data needs	Developed a listing of needed changes and additions to the DEF.
Region	2 Formally adopt changes to the DEF through the SN Steering Committee	Updated the StreamNet Data Exchange Format. Created a major new version of the exchange format, number 2000.1, which was approved by the Steering committee. Subsequently developed version 2000.2, which is an error-fix of version 2000.1.

Region	3 Document all adopted changes to the DEF	Distributed a printed version of the new DEF to all Steering Committee members
Region	4 Develop a description of the DEF process and guidelines for modification	A protocol for proposing and adopting changes to the StreamNet data exchange format was developed and documented within version 2000.2 of the DEF. This protocol will be tested as it is implemented, and modified as necessary. It is anticipated that more well-defined procedures will result in greater efficiency, easier tracking of proposed changes, and ensure complete review before adoption of changes.
WDFW	4 Move toward complete adoption of LLIDs as the standard stream referencing code by reviewing and completing the RRN-to-LLID conversion, addressing supercode issues, and assuring that LLIDs are assigned to all locations where StreamNet data exist.	1) Continued to correct LLID assignments, in some cases assigning "closest LLID'd stream" and using a code to help us identify these cases. 2) Started work on a proposal for site coding to the StreamNet Steering Committee that takes a more generalized approach. This is based on having to deal with lake and marine areas, facilities on small streams that are not on the 100K streams layer, and sites that aren't on water at all.

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, Third Quarter</u>
IDFG	1 Maintain and enhance a geographic information system (GIS) related to regional and state-level StreamNet goals and Objectives.	We have continued to maintain, enhance and utilize our StreamNet GIS system. Our new IDFG StreamNet database management system, while itself in SQL Server, is directly linkable to our GIS data.
IDFG	2 Prepare data and map products from StreamNet data on request	We used our GIS for answering many information requests and for providing GIS services to our fisheries staff (See item 2.7 below for a summary of the data and map requests).
MFWP	1 Maintain a state level GIS program (state and StreamNet funded)	MFWP administrators reviewed and prioritized GIS layers that MFWP StreamNet staff maintains; 71 coverages are currently being maintained by staff.
MFWP	2 Prepare map products in hardcopy and/or electronic format for use in Program-related aquatic resource policy, planning, and management.	Provided map products and GIS analysis to support the Fisheries Division native species management program, genetic sampling program, westslope cutthroat priority areas, updated bull trout distribution and core areas, and updated USFS with fish present, hydrography and genetics data.

ODFW	1 Participate in planning and coordination meetings for state-level 24k hydrography layer to ensure compatibility with the PNW 100k hydrography.	Attended OGIC Hydro subcommittee meeting covering 100k / 24k issues. Met with David Graves, regional GIS specialist, to discuss alternative solutions to problems that have arisen in the 100k to 24k LLID transfer process that USFS and BLM employees are implementing.
ODFW	2 General maintenance activities associated with the GIS data system	Ongoing.
ODFW	3 Develop a lakes coverage for Oregon.	Provided Oregon lakes coverage with LLID's and names to SN regional staff.
ODFW	5 Develop, maintain, and update metadata for Oregon StreamNet GIS products	Updated distribution metadata.
Region	1 Maintain and enhance a geographic information system (GIS) related to regional StreamNet goals and Objectives.	<p>1) Maintained a geographic information system related to regional StreamNet goals and Objectives.</p> <p>2) Created a regional (Pacific Northwest) GIS coverage of lakes and reservoirs by combining GIS coverages from Washington, Oregon, and Idaho. Developed associated metadata and distributed these files on the StreamNet website. Developed related information in the StreamNet database to allow georeferencing of StreamNet data to lakes and reservoirs and utility of this new capacity by the online query system.</p> <p>3) Investigated the cause of problems with incorrect subbasin X stream cross references. Referred to the 1990 subbasin plans to determine correct subbasin definitions, and found that we had some errors in our GIS coverage. These errors are being addressed as the updated subbasin definitions are created.</p>
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 10 public requests. Requests were from a variety of sources including private citizens, environmental consulting firms, government agencies, educators, and students. Prepared more detailed map products for requests from the NWPPC and associates for use in reports, etc. Examples included maps of fish species distribution and BPA-funded hatchery projects.
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 queryable 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 queryable GIS coverages of updated fish distribution and hydrography for the StreamNet web interface. Determined downstream stream tributary information for most 1:100k streams (approx. 60,000 total) for use by the query system.

Region	6	Develop a tool to rapidly assign LLID location identifiers to data	Developed a method to update the event mapper base 1:100,000 scale hydrography and created an updated version for use with the event mapper application
WDFW	1	Create approved reference documents for all exchanged spatial data sets.	Began generating standardized "memos to file" to document dates, places, and participants in the mapping parties for all of the anadromous fish presence/use field maps we've compiled.

Objective 2 Data Management and Delivery

Task5 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

Task5.a Maintain the StreamNet Client Server system

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Third Quarter</u>
ODFW	1 Provide review and comment on system function to the Regional program	Provided comments to regional StreamNet staff on the format and content of data displayed in the new query system.
Region	1 Maintain, upgrade as needed, and administer the StreamNet web servers.	Performed ongoing maintenance and administration of the StreamNet web servers, including: Maintenance of the server computers; Maintenance of the StreamNet web site. Created the ability to query for habitat restoration project data on-line.
Region	2 Convert the query system from the RRN to the LLID system where possible.	The on-line query system was modified to function with LLIDs rather than with the River Reach Numbers (RRN) and made available for internal testing within the project. The new query system was not implemented publicly during the quarter. This effort was part of a major undertaking to convert the database to the use of LLIDs for georeferencing. Given the magnitude of this change, additional work on this effort will be required in subsequent quarters as this new query system is brought on line.

Task5.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, Third Quarter</u>
CRITFC	2 Identify changes and new features which will improve delivery of Library services	Management of the library portion of the website will be more effectively managed if it is separated from (but linked to) the main servers. The logistics of doing this are being identified.
ODFW	1 Recommend and/or take part in review of new products and features. Provide feedback on content, suitability, navigability and data currency issues.	1) Reviewed and commented on the StreamNet Test Query site. 2) Began work on a preseason report on salmon, steelhead, and sturgeon stock status and Columbia River fall fisheries which will be posted on the SN website when completed.
Region	1 Develop and conduct an online survey of users to determine the need for modifications to the site, the data or the project.	Researched methods of conducting an on-line user survey. Decided on a survey approach and developed a prototype for testing by StreamNet staff prior to deployment. Developed a 'frequently asked questions' page for use with the survey when it is conducted.
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	Began review of the website as an ongoing exercise rather than approaching it as an 'all at once' review.
Region	3 Implement an improved and remodeled website based on the review.	Made a variety of adjustments, corrections and improvements to the website as problems were identified.
Region	4 Plan to enhance the website content by adding additional kinds of information that would support the Fish and Wildlife Program. Develop concept for increased information by coordinating with regional data users	Enhanced the GIS Data portion of the web site by adding an additional download format (.shp files) and compressing all downloadable files for quicker access.
Region	7 Modify the query system to function with revisions to the DEF	Began revision of the query system to fit the revised DEF, version 2000.1, which was adopted by the StreamNet Steering Committee. The new protocol for implementing DEF changes specifies that the changes should be built into the query system then reviewed by project staff at the regional and cooperator level, and then brought online 90 days after the Steering Committee approval.
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. -ALL	Staff spent time reviewing new Online Query tool and approach, evaluating success of the database conversion to 2000.1 on the Web site, and visiting / reacting to the new GIS products section of the StreamNet Web site.

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, Third Quarter</u>
IDFG	1 Continue to maintain the Idaho portion of the 1:100,000-scale PNW hydrography for purposes of attaching StreamNet data.	Continue to correct errors found in the 100K hydrography as we find them in our efforts to build an IDFG StreamNet database management system.
IDFG	2 Participate in coordination of the National Hydrographic Dataset (NHD) through review and evaluation of the NHD.	Reviewed the National Hydrography Dataset (NHD), particularly in its applicability to link StreamNet data. Provided input to StreamNet Steering Committee and GIS staff on the NHD.
IDFG	3 Continue to enhance the 1:100,000-scale PNW hydrography for use in IDFG's information management system. This will include integrating the PNW hydrography with lakes, dams, and other hydrographic related features. All modifications will be made according to regional standards established for the 1:100,000-scale PNW hydrography.	Continued to work out bugs in our application of the 100K LLID hydrography to the IDFG StreamNet database management system. Bugs include routing errors, errors in coding 16 digit reach numbers, and errors in establishing relationships among the streams, lakes, dams, and other hydrographic related features.
IDFG	4 Submit all modified PNW hydrography to PSMFC for inclusion in the regional PNW hydrography data.	Submission of final Idaho hydrography to PSMFC is still awaiting final clearance into the IDFG StreamNet database management system. I anticipate that being completed in the final quarter of the current fiscal year.
MFWP	1 Support the efforts of the NHD and convert Montana hydrography to NHD upon receipt.	For Montana east of divide, NHD is moving at glacial speed but Western Montana HUC's are in the flow direction QA/QC process and we anticipate a product to begin checking and routing next quarter. NRIS has received a grant to maintain the NHD coverage, which will aid in the work needing to be performed.
MFWP	3 Use the PNW prior to release of NHD for western Montana following the assignment of LLIDs by StreamNet regional staff in winter 2000.	Continued to work with David Graves on creating a routed coverage for western Montana including LLID's. Completed inclusion of USFS work into 1:100 K product, sent to David, who has assigned all remaining LLID's. Performed QA/AC and sent back for final work from David. Will complete and route next quarter.

ODFW	1	Submit issues and corrections to 100K stream coverage as identified during other data compilation activities.	Modified stream routes in the Hood 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, Supercodes and WaterbodyIDs assigned. Prepared and sent the records for incorporation into the StreamNet regional database.
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.	Ongoing.
Region	1	Continue to maintain the regional 1:100,000-scale PNW hydrography.	Maintained the regional 1:100,000 scale PNW hydrography. Corrected errors on an ongoing basis as they were reported or found through regular use. Developed a method to update the event mapper base 1:100,000 scale hydrography and created an updated version for use with the event mapper application.
Region	2	Implement updates to the 1:100,000-scale PNW hydrography from state cooperators.	Synchronized the PNW reach files with updates made by ODFW to their Oregon regional set.
Region	3	Update and serve a regional web version of the 1:100,000-scale PNW hydrographic set from the StreamNet website.	Developed a semi-automated procedure for updating all PNW hydrography to the StreamNet website for distribution in multiple formats. Updated and delivered a regional web version of the 1:100,000 -scale PNW hydrography on the StreamNet website (see http://www.streamnet.org/pnwr/pnwrhome.html). Responded via e-mail or phone to all public requests for information about the PNW hydrography and assisted users of the hydrography with ancillary products (tables, GIS coverages, etc.)
Region	4	Assess future uses of the National Hydrography Dataset (NHD) and if adopted, coordinate the replacement of the PNW Reach files with the NHD as the StreamNet hydrography layer.	Submitted a proposal to maintain the NHD to the USGS & EPA. NHD will likely become the national standard approach to hydrography, and coordination and parallel updates with the PNW hydrography is imperative.
Region	5	Update Montana hydrography with LLID routing as updates are received from MFWP.	Developed complete LLID-based routes for Montana hydrography in the following cataloging units (i.e. HUCs): 17010101, 17010102, 17010103, 17010104, 17010201, 17010202, 17010203, 17010204, 17010205, 17010212, and 17010213.

Task7. 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, Third Quarter</u>
IDFG	1 Continue to respond to requests for information in the IDFG StreamNet database, including requests for fishery information that comes into the Idaho Conservation Data Center (Natural Heritage Program), other IDFG programs and personnel, and outside agencies and consultants.	1) 55 requests for site specific species list of fish presence/absence via the Idaho Conservation Data Center. 2) 6 map products for IDFG personnel showing fish distributions. 3) 1 list of sensitive fish in Idaho 4) 13 requests for geospatial data involving fish distributions.
MFWP	1 Receive and respond to requests for data, source materials, and custom products. Respond to requests within the limits of available resources, with priority given to information requests having direct relevance to the FWP.	Filled 73 GIS/ArcView technical support request for the MFWP Information Services Unit; 26 for fisheries requests.
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 7 data, 81 document, 2 map/GIS related, and 12 other requests were answered during this quarter. A detailed list by requester and request type can be made available upon request. Also, 3,025 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 a few 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) Responded to all StreamNet GIS/map user requests within one day of request. Answered all questions, where possible, about data, maps, GIS products, and miscellaneous requests. Requests were from a variety of sources including private citizens, environmental consulting firms, government agencies, educators, and students. Prepared GIS data or maps for public requests when feasible (see task 2.4- region (2)- Prepare GIS data & maps from StreamNet data). 2) Fulfilled data requests for the NWPPC Annual Report. 3) Created a summary of contents of the StreamNet database for use in Sub-basin Summaries / Assessments and provided to Sub-basin teams at the Intermountain and Columbia Gorge Provincial Review meetings and to NWPPC. 4) We were not able to determine the exact number of visitors to the StreamNet web site. We logged 55,986 visits during the quarter, but many were search robots. We estimated 2,696 query sessions during the quarter. Over 20 special requests for assistance were received and answered in addition to NWPPC.
WDFW	1 Generate maps, data reports, electronic copies of datasets as requested.	56 maps, 4 digital datasets and three reports were generated from spatial and tabular StreamNet databases and provided to agency staff, other state, tribal and local jurisdictions, and University staff.

Objective3 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

Task1. 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, Third Quarter</u>
CRITFC	1 Coordinate source material submissions for data compiled under Objective 1. Develop standards for document submissions	Received and cataloged approximately 75 StreamNet reference documents. Submitted list of publishers for Reference table picklist.
CRITFC	2 Collect and catalog documents prepared by contractors (including final products published by BPA and draft documents suitable for public release) under the Fish and Wildlife Program. Work with Publications distribution for better publication notification and deposit system.	Continued to work with the BPA publications office to ensure a complete collection of annual reports from the Fish and Wildlife Program. Also continued to discuss the publications that are only produced electronically.
CRITFC	3 Collect and catalog documents from the Council's Fish and Wildlife Program-related collection.	Received 12 boxes of materials from NPPC. Have processed approximately 50% of the collection.
CRITFC	4 Collect and catalog additional books, journals, agency reports, gray literature, research reports, and documents that are applicable to management of the region's aquatic resources.	Added 1000 new records for documents to the library catalog. Received and sent documents through Duplicate exchange. Requested placement on more mailing lists for Natural Resources publications.
IDFG	1 IDFG StreamNet will continue to collect documents used as source materials for data in Objectives 1 and 2. Documents will be assigned reference numbers and forwarded to the StreamNet library as per established StreamNet guidelines	No new source materials were sent to the StreamNet library.
MFWP	1 Provide an update to the electronic version of documents used as source materials for data compiled in Objective 1. Make a determination about acquiring the hard copy documents from Montana to the StreamNet Library.	MFWP Fisheries Division support staff continue to enter all new documents into the INMAJIC library cataloging system. Will provide updated version to StreamNet regional librarian in September.

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 6 documents associated with updated abundance trends to the StreamNet Library during the third quarter. An error was made in Oregon's second quarter submission in that 34 documents were submitted during the second 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 till our Library tracking software is updated (see Task 3.2).

Objective 3 Library / Reference Services

Task2. 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, Third Quarter</u>
CRITFC	2 Catalog, organize and maintain the collection for appropriate on-site use.	Continued to streamline collections by integrating the StreamNet reference documents, NPPC and classified collection. Over 300 records were processed.
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.	Ordered InMagic software for use by the library to allow better tracking of information requests and documents.

Objective 3 Library / Reference Services

Task4. 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, Third Quarter</u>
CRITFC	1 Provide access guide to outline services for patrons.	Updated Access Guide to show new journal runs.
CRITFC	2 Assist users to locate information by providing reference, referral, and computer based search services.	Assisted clients with over 40 requests for information.
CRITFC	3 Provide document delivery services, including inter-library lending and borrowing.	Approximately 253 interlibrary loan requests were generated by clients. We lent 30 items to other libraries.
ODFW	1 Respond to requests for ODFW documents and other source materials.	Provided 388 hardcopy documents and 22 electronic documents to 88 individual users during the quarter.

Objective 3 Library / Reference Services

Task5. 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, Third Quarter</u>
CRITFC	1 Collect information about other regional fish and wildlife library collections and access policies.	Created mailing list for the Needs Assessment. Began revisions of previous needs assessment.
CRITFC	5 Maintain presence in related Library groups (i.e. IAMSLIC, NRIC)to provide access to knowledge on Best Management Practices for libraries and current awareness of subject-related materials.	Renewed membership in Special Libraries Association, Environmental Resources Management Division.

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

Task1. 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, Third Quarter</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.	This work component was dropped from the work plan because CBFWA has taken on the job of posting AIWP information.

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

Task2.a M&E Participation

Participate in Program-related monitoring and evaluation work groups

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Third</u>
CRITFC	1 Assist CBFWA to develop an R/M/E plan consistent with the regional Framework (cost sharing)	Discussed R/M/E issues with Council and EDT staffs to explore differences between their perceptions of the various issues with those of the resource managers. Developed detailed recommendations on these issues for CBFWA as part of the NPPC program amendment process.
ODFW	1 Participate in discussions concerning data needs to support processes adopted by the amended Fish & Wildlife Program for Monitoring and Evaluation.	Participated in various discussions as part of other meetings. Reviewed the draft of the CBFWA Research, Monitoring and Evaluation guidelines in an effort to identify potential data needs in the basin.

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

Task2.b Evaluation

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

<u>Project</u>	<u>Work Element</u>	<u>Accomplishments, Third Quarter</u>
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Task2.c M & E Reporting

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

Project Work Element

Accomplishments, Third Quarter

Task3. Watershed Projects

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

Project Work Element

Accomplishments, Third Quarter

MFWP	1 Participate in watershed and, sub-basin planning to the extent requested by the Council and other regional participants. Coordinate with Montana CBFWA representatives in the process and assure a valuable product. Volunteer to complete a pilot sub-basin in the process within Montana.	Discussed watershed products needed for the Mountain Columbia Province rolling review process with MFWP and Council staff. Will provide products as needed.
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Task4. 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

Project Work Element

Accomplishments, Third Quarter

IDFG	1 IDFG StreamNet will coordinate with the Upper Snake River Basin Resident Fish Stock Assessment project in order to incorporate that data into StreamNet and to provide technical assistance.	No coordination conducted this quarter with the Upper Snake River Basin Resident Fish Stock Assessment Project. It is our intention, and we have discussed this previously with the USRBRFSAP, to implement our new IDFG StreamNet database management system for their use.
WDFW	1 Provide spatial, tabular data standardization and exchange consultation and assistance to participants in the BPA-funded Joint Stock Assessment Project (JSAP).	1) Participated in May 17 Steering Committee meeting for the JSAP Project. Delivered updated resident fish distribution data for the Blocked Area in both JSAP format and StreamNet exchange format (event tables) to familiarize project participants with StreamNet standards. 2) Wrote WDFW 1999 Final Report for the JSAP Project, Part I: "Coordination, Data Standards Development, and Data Sharing Activities".

Task5. 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, Third Quarter</u>
CRITFC	1 Collaborate with CBFWA, NPPC, and other fish and wildlife programs in the Columbia Basin to identify and provide technical and other services to the Fish and Wildlife Program (cost sharing)	Participated in CBFWA meetings and interagency staff discussions regarding shortcomings in the present programs. Kept SC apprised of issues.
IDFG	1 Provide technical and other services to other FWP projects occurring in IDFG.	1) Continued coordination with Fisheries Bureau and CBFWA representatives in regard to data needs and development of IDFG StreamNet database management system. 2) Coordinated with FWP anadromous field projects to enhance their data management capabilities and to capture data for StreamNet.
MFWP	1 Provide technical assistance and data services to Program projects upon request.	Provided David Graves with Montana's fish distribution, bull trout core and nodal areas, Wild and Scenic Rivers coverage, wildlife data, and hunting district data to fill a NWPPC request for data. Provided data list for subbasin planning efforts.
ODFW	1 No work planned this year.	1) Provided input to the StreamNet data holdings document prepared for NWPPC. 2) Prepared information on the distribution of wildlife species as part of a data request from the NWPPC. 3) Participated in a conference call with other StreamNet participants concerning the upcoming Columbia River Gorge Provincial Review and how StreamNet might be involved. Attended the Columbia Gorge Rolling Provincial Review meeting in The Dalles. 4) Produced, formatted, and posted in-season fishery management information (dam counts, hydrological data, and harvest estimates) on CRM/ODFW web page for three Columbia River Compact hearings (April 1, 2000 - June 30, 2000)
WDFW	1 No work planned; available as needed and as prioritized.	Provided EDT support by assisting a regional fish biologist and regional habitat biologist (Vancouver area) in entering historical run size, hatchery releases, stock information, and historical and current presence/use for anadromous species into the EDT Model database.

Objective 4 Services to Fish and Wildlife

Task6. 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, Third Quarter</u>
Region	1 Maintain the existing Protected Areas database.	This effort is ongoing.

Objective 4 Services to Fish and Wildlife

Task7 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

Task7.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, Third Quarter</u>
ODFW	1 Review and contribute to the data management 'white paper'.	Continued to provide comments on the SN data management white paper.
Region	1 Organize and coordinate development of a 'white paper' report describing the current state of regional data management and future options	Coordinated input from the sub projects and developed a beginning draft. The information ultimately proved more useful in the form of a letter to the ISRP than as a white paper.
Region	2 Publish and distribute the data management 'white paper'.	Revised the draft white paper on data management into a letter to the ISRP panel that reviewed the regional data management projects. This letter served as a follow up to the project review and was intended to provide background and context to the review. The draft white paper was also modified and used in our recommendations for amendment of the NWPPC Fish and Wildlife Program.
SBT	1 Review and contribute to the data management 'white paper'.	Reviewed and commented to Bart on draft.

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, Third Quarter</u>
ODFW	1 Participate if requested.	Participated in preliminary planning and strategy discussions with the Steering Committee.

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.

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, Third Quarter</u>
CRITFC	1 Provide normal supervision of StreamNet Library staff and the CRITFC database Programmer.	Same as in last quarter's report.
FWS	1 Participate in Steering Committee activities	Participate in StreamNet Steering Committee meeting
FWS	2 Produce quarterly reports within 1 month after the end of each quarter	Submitted quarterly report
IDFG	1 Participate in Steering Committee activities. Manage all aspects of StreamNet in IDFG, including budget, personnel, and work management. Products will include: Annual IDFG StreamNet work statement; Quarterly and annual reports of progress; and, Participation in Steering Committee activities.	1) Managed work flow, personnel, and budget issues for IDFG StreamNet. Participated in Steering Committee meeting and activities. 2) As the Steering Committee representative to PSMFC on personnel issues, I gathered input from Steering Committee members on the project manager's performance and summarized in a report to PSMFC for performance evaluation. 3) Completed and submitted second quarter progress report.
MFWP	1 Administer all aspects of the project for Montana, including oversight of budget, personnel, work statement preparation and implementation, coordination, and project reporting. Participate in Steering Committee.	Provided administration to all aspects of the StreamNet program in Montana including performance reviews for all staff, budget planning for FY2001, attend steering committee meetings and provide input to SC decision processes.

ODFW	1 Attend StreamNet steering committee or specific technical data meetings as needed to address data issues.	Attended the April Steering Committee meeting in Vancouver, WA.
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 2000-2 quarterly report.
ODFW	3 Coordination activities: Oversee and monitor personnel, budget, and other project activities.	Ongoing. Once again, we spent an excruciatingly inordinate amount of time this quarter on personnel related issues and paperwork - primarily related to recruitment for vacant positions. Reviewed and commented on our ODFW Program budget and add packages for the 2001-03 budget process.
ODFW	4 Prepare for and attend StreamNet steering committee meetings and specific technical data meetings as needed to address data issues.	Attended April Steering Committee meeting in Vancouver.
ODFW	5 Participate / attend appropriate conferences and submit conference agendas, proceedings, and presentations to PSMFC upon request	Attended the ESRI Conference in June. Summary report is available to regional StreamNet staff.
ODFW	6 Produce and provide a Statement of Work and budget proposal for ODFW	Provided a budget estimate to PSMFC for FY-2001 for Oregon StreamNet.
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.	All staff submitted mid-year status reports related to their individual Work plans.
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	Conducted ongoing management of the StreamNet Project, including regional office staff meetings and email and phone coordination with project participants. Hosted the quarterly StreamNet Steering Committee meeting on April 27-28, 2000.
Region	2 Supervise and train StreamNet regional staff	1) Continued routine supervision of regional technical staff. 2) The Regional Data Manager completed MSCE course 833 'Implementing a database design in MS SQL Server 7.0 the week of May 22-26, 2000.

Region	3	Develop program budgets and manage / monitor expenditures	Developed and submitted FY 2001 project renewal and budget. The StreamNet Program Manager Worked with PSMFC budget officer to clarify project spending and budget.
Region	4	Coordinate with other regional data management projects to coordinate and cooperate to maximize data and information flow, maximize complementary aspects, and to avoid duplication.	Participated in meeting of PSMFC data management project leaders to coordinate and discuss current activities.
Region	5	Coordinate with data collecting agencies and organizations to determine data availability and encourage data and information being made public.	1) Regional staff participated with representatives of multiple agencies during several meetings at the FS Regional Ecosystem Office to discuss availability and formats of fish habitat project data, to coordinate efforts, and to discuss potential for a regional database of such information. 2) Staff participated in an IRICC meeting regarding data collection standards for aquatic habitat measurement and characterization. The water temperature and stream classification standards were updated.
Region	7	Produce quarterly reports within 1 month after the end of each quarter	Developed a new format for the quarterly report that organized tasks and accomplishments by Objective and task, allowing activities by all project cooperators to be grouped. This format was used to prepare the report for the second quarter.
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	Organized and chaired the quarterly StreamNet Steering Committee meeting on April 27-28, 2000.
Region	11	Prepare a project proposal and Statement of Work for FY 2001	Developed and submitted a project proposal to renew the project for FY 2001.
SBT	1	Produce quarterly reports within 1 month of end of quarter.	Submitted second quarter report.
SBT	3	Participate in Steering Committee meetings	Attended April Steering Committee meeting.
WDFW	1	The WDFW StreamNet state coordinator will participate in Steering Committee activities. He will also manage all aspects of StreamNet in WDFW, including budget, personnel, and work management.	1) Participated in the April Steering Committee meeting at USFWS Vancouver office, generating and delivering informal WDFW project progress report. 2) Generated and delivered Q2 project report in new "work plan" style. 3) Provided FY2000 budget and workplan for supplemental funds as well as FY2001 first draft budget for BPA funded portion of StreamNet. 4) Hired a new data compiler to work with Bob Woodard in the Region 5 office (Vancouver).

Task2. 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, Third Quarter</u>
CRITFC	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 more effectively contribute to the Fish and Wildlife Program.	Submitted detailed recommendations to NWPPC regarding changes to the present Fish and Wildlife Program to improve data management and StreamNet effectiveness. Follow-up discussions are extensive and ongoing.
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.	Attended the Hood River Subbasin Planning information meetings in April and provided comments on data availability and data services which StreamNet could provide.
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.	1) Participated in several CBFWA and NWPPC meetings. 2) Developed and submitted recommendations for the draft NWPPC Fish and Wildlife Program amendment relating to regional data management.
Region	2 Where appropriate, 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. Areas of particular emphasis are a) participation in FWP monitoring and evaluation activities, and b) exploring opportunities for integration of StreamNet data exchange formats into Fish and Wildlife Program contract terms and conditions.	Participated in IRICC meeting at USFS regional office in Portland. Discussed the IRICC document being developed for setting interagency data collection standards for aquatic habitat measurement and characterization.
SBT	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 more effectively contribute to the Fish and Wildlife Program.	Represented StreamNet issues as a member of CBFWA's Anadromous Fish Committee.

WDFW 1 No specific work planned; available as needed for coordination. 1) Responded to NWPPC request for data scoping and availability of resident fish and wildlife spatial data coverages.
2) Compiled and delivered Yakima Basin and Lake Roosevelt resident fish stocking and harvest information for the past five years in response to a second scoping request from the NWPPC.

Objective 5 Project Management / Coordination

Task3. 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, Third Quarter</u>
IDFG	1 Continue to coordinate with regional and state-level fish and wildlife activities that have relevance to the goals and Objectives of StreamNet.	Developed plan and IDFG budget enhancement for an Idaho Fish and Wildlife Information System that would build upon and enhance IDFG StreamNet's capabilities to manage and distribute fish and wildlife data. The enhancement is in IDFG's 2002 budget request and has also been proposed directly to the Governor's office for funding.
MFWP	1 Maintain communication, help coordinate activities with Montana Department of Natural Resources, Department of Environmental Quality and the Natural Resource Information System as they relate to StreamNet activities. Participate in appropriate conferences by preparing papers and giving presentations.	Provided guidance to NRIS staff on MRIS query system enhancements, served on selection committee for NRIS director and system administration, represented FWP and StreamNet on NRIS Advisory Council and served as staff for the FWP rep on the Montana Geographic Information Council. Attended Montana/Idaho User's Group Conference in Kalispell; staff conducted workshops on ArcView tips and tricks and Access and ArcInfo.
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) Drafted and submitted seven pages of comments on ODFW's draft Vision 2006 Strategic Plan. Many comments related to data management issues.

- 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) Met twice in Salem, Oregon with the Regional Ecosystem Office, USFWS, ODFW, and the Oregon Watershed Enhancement Board to discuss a unified habitat restoration projects database for the Pacific Northwest. Agreed to develop a white paper on how the various databases of this region might be integrated.
 - 2) Created brief visual presentation materials to demonstrate the habitat restoration projects on-line query system output which is a component of the new, LLID-based query system. Wrote a general description of the information which can be captured in the StreamNet habitat restoration database.
 - 3) The StreamNet regional fisheries biologist met in Yakima with Dave Lind and Bill Bosch (Yakama Nation fisheries biologists) and Dave Askren of BPA. The group discussed needs and strategies to help guide the Yakama biologists in their desire to make the Yakima-Klickitat Fisheries Project data available on a queryable web site.

Objective 5 Project Management / Coordination

Task4 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 management agencies. Collaboration with coast-wide and private data collection/compilation efforts will be pursued when this supports overall project goals. Areas of particular 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.

Task4.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, Third Quarter</u>
IDFG	1 No work planned this year.	Produced a new map showing the distribution of the subspecies of cutthroat trout in Idaho. It is currently on public display in IDFG headquarters office.
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	3 Write informational article for the ODFW Monitor or Inside Tracks on the development of a component information system and 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	4 Write informational article for the ODFW Monitor or Inside Tracks on distribution data development efforts.	No efforts were made this quarter. It was decided that the information article would be put on hold until we could develop a simplified approach to accessing the fish distribution data. This approach was completed this quarter.
ODFW	5 Develop an informational PowerPoint presentation about the SN Project.	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	6 Write informational article for the ODFW Monitor or Inside Tracks on custom database and GIS projects/products services provided by the project.	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.
Region	1 Update the existing StreamNet brochure	Developed an inventory of all data in the StreamNet online database, by species and by Province / Subbasin for use in developing Subbasin Summaries as part of the Rolling Provincial Review process.

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, Third Quarter</u>
ODFW	1 Participate in appropriate meetings & conferences as opportunities arise to highlight StreamNet programs & data	1) Attended the Oregon Plan Monitoring Review and Workshop. 2) Attended the ESRI User's Conference in San Diego and presented an Oregon Salmon Distribution Poster at the conference. 3) One project staffer attended a Graphics Primer class 4) One project staffer attended a 6 hour Advanced HTML course. 5) One staffer attended a two-day fish passage course. 6) One staffer attended DEQ's Willamette River Basin Water Quality Data Summit.
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	Participated in the initial meetings of the Rolling Provincial Reviews at the Intermountain and Columbia Gorge provinces. Described StreamNet Project capabilities and data holdings. Distributed the inventory of data to the subbasin summary team leaders.

Work Planned for Next Quarter

In the fourth quarter we anticipate routine completion of the tasks detailed in the Work Statement, with the exception of work on abundance trends in Oregon. The Oregon Department of Fish and Wildlife experienced an unanticipated Data Analyst position vacancy that delayed work on a number of tasks in the third quarter. Because of anticipated administrative delays in filling the position, it is expected that the position will likely not be filled before the end of the fiscal year. This position was responsible for updating the abundance trend data (Objective 1, Task 1.b) for Oregon, and this work will be delayed until Fiscal Year 2001. Barring unforeseen circumstances, all of the other project participants anticipate no delays in the fourth quarter.