StreamNet Project

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Fiscal Year 2004
Third Quarter Progress Report

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Introduction

StreamNet is a cooperative, multi-agency data compilation and data management project authorized by the Northwest Power Planning Council's Fish and Wildlife Program (FWP), funded primarily by the Bonneville Power Administration. The project is administered by the Pacific States Marine Fisheries Commission. Three fourths of the project consists of sub-projects within the state fish and wildlife agencies, Columbia River Intertribal Fish Commission and the US Fish and Wildlife Service to develop databases within the respective agencies and to facilitate data transfer regionally. The remaining fourth consists of the regional staff and the database at PSMFC.

The StreamNet Project compiles, manages, standardizes and distributes information related to fish resources in the Columbia River basin, with additional information available for the rest of the Pacific Northwest. The state, tribal and federal fish and wildlife agencies collect and utilize data related to the region's fish and wildlife resources to meet their own mandates. A subset of these data, primarily the annually collected types of information that are routinely used to monitor trends within fisheries and populations and provide management information, are compiled by StreamNet into regionally standardized formats and publicly distributed. In this manner, data common to fisheries management but collected and stored in multiple formats by the individual agencies are standardized and made uniformly available basin wide, primarily through the StreamNet website (www.streamnet.org). StreamNet also ties all data to the regional 1:100,000 scale routed hydrography (GIS stream network) so that different kinds of data can be compared on a geographic basis and mapped. The project utilizes the Internet as its primary means of data distribution, but also provides custom data services to FWP participants. The StreamNet web site provides access to information in a queriable database and also provides maps, individual data sets not contained in the queriable database, and library references. All data in the StreamNet database are referenced to source documents that are housed in the StreamNet Library. Work reported herein is tied to the specific jobs contained in the FY-04 Statement of Work, available at http://www.streamnet.org/about-sn/project_management.html.

This report documents accomplishments made by the project and its cooperators during the third quarter of Fiscal Year 2004 (FY-04). Since the cooperating agencies work on different jobs throughout the year, and not all agencies address the same jobs in their respective portions of the Work Statement, the work accomplished in this quarter varies by cooperator. Tasks and jobs that did not have any work addressed during the quarter are not included in this report.

Work priorities for FY-04 include updating existing long term data sets, managing the data and infrastructure necessary to maintain and deliver data, maintaining the StreamNet Library, providing data services to regional entities associated with the Fish and Wildlife Program, and project administration. Activities in the Third Quarter of FY-04 included routine development, maintenance and posting of various data sets, as well as routine administrative activities to continue project function. Key highlights of activities in addition to routine project functions this quarter are presented by cooperator, as follows:

Regional StreamNet at PSMFC (Region)

The unexpected resignation of the StreamNet GIS Specialist early in the quarter had a significant impact on GIS work this quarter, and required a significant amount of effort to recruit for and hire a replacement. A large number of applications were received, and we needed to conduct two rounds of interviews. A new GIS Specialist was hired at the end of the quarter, but the process consumed a large amount of staff time

The links pages on www.streamnet.org were reviewed, and we removed dead links, added a few new ones, and moved some to better pages. More importantly, we removed all links to advocacy organizations, based on StreamNet's purpose as a neutral purveyor of scientifically derived data. The StreamNet Steering Committee created a policy regarding links to advocacy organizations, deciding that such links are appropriate only if the site has data or other information valuable for fisheries management purposes. Also, any such links should be directly to the resource of interest and not to the home page of the organization if possible.

The full 1:100,000 scale GIS hydrography layer was made available for download for the first time as a single entity.

First steps were made towards capturing, archiving, and disseminating via web site the input and output data used in subbasin planning.

Significant effort was expended by PSMFC, CRITFC, and WDFW staff, along with OWEB and California Fish and Game, on the creation of a new database structure for habitat restoration projects. This effort should result in a new DEF for this data type in the fourth quarter.

We investigated options (including MySQL) available for a central database should our current database software (SQL Server) become too expensive for us to maintain.

Columbia River Intertribal Fish Commission (CRITFC)

Maintaining the StreamNet Library is the largest portion of the CRITFC StreamNet budget. The vacant Assistant Librarian position was filled by in-house promotion of the Library Technician and advertising was begun to recruit a new Library Tech. Despite operating at reduced staffing levels during the quarter, all essential services were maintained without interruption. Efforts by the Library to support subbasin planning efforts were reduced, however. The acquisition and digitizing of core documents was slowed.

Strong support was provided to subbasin planning teams in Oregon through a combination of StreamNet and other CRITFC staff. This work included standardizing databases and GIS coverages, including metadata, providing support to teams developing EDT input datasets, and developing an archiving strategy using the StreamNet system. Some other planned work was delayed by the effort required for subbasin planning support.

The Project leader also participated in several regional inter-agency efforts to bring greater standardization to data collection and management efforts. Throughout these discussions a strong role for StreamNet was advocated.

Idaho Department of Fish and Game (IDFG)

Replacement of a failed backup server was completed, and installation and configuration of the necessary servers and network to make the Idaho Fish and Wildlife Information System go live was nearly completed.

IDFG/StreamNet played a key role in development of the bull trout status assessment protocol and development of data workshop tools. Project personnel participated in the data workshops, providing supporting data and technical operation and services.

Capture of the 2003 Idaho redd count data was completed, plus missing redd count data back to 1985 for fall chinook and sockeye were added.

Montana Fish, Wildlife and Parks (MFWP)

The proposed hatchery releases DEF is still under construction. The hatchery facility data were not exchanged due to questions about how to classify private facilities; the MFWP Enforcement Division now makes a distinction as to whether private facilities are licensed for aquaculture or fishing. A system was developed to create a new annotation layer that can be used at any scale which will be completed in the 4th quarter. Minor work was accomplished on the Hatchery Release data exchange format.

Regional data meetings with FWP and federal fisheries biologists were completed. Data collected during the meetings on all data types will continue to be entered next quarter and exchanged in the fourth quarter.

Montana StreamNet staff filled 15 GIS map/data requests during the quarter. The format for the field maps to each FWP fisheries biologist displaying distribution and genetic sampling location and data were completed for westslope cutthroat trout. Internal and public websites have been created to access the Fisheries reference materials from the FWP website with all references for fish and wildlife being entered into one system.

Montana has not provided any data or information to the CSMEP at this time; MFWP Fisheries Division sent a Fisheries Biologist working on fisheries monitoring protocols to the CSMEP workshop that was held in early June. Progress by NED has been tracked through participation in conference calls and conversations with NED and StreamNet project managers and provided comment/content when appropriate. The Public Review drafts of the Montana Subbasin Plans for the Kootenai and the Flathead have been completed and StreamNet staff have received a CD containing the planning documents and appendices; they will be reviewed next quarter.

A conference call to discuss preliminary tasks in the FY05 Statement of Work occurred in early June with all Steering Committee members. Dawn Anderson was hired as the Fisheries Information Specialist position that was advertised this quarter. She started work May 1 and is a great addition to the team. Monthly budget reports were reviewed and a surplus was identified. A revised 04 budget will be provided to the StreamNet regional project manager in the 4th quarter outlined changes in the budget. The FY05 Statement of Work was developed and reviewed with regional guidance and submitted along with the budget on June 18th.

The Fisheries Manager's meeting in June was attended by the Montana StreamNet Project Manager where discussion of the StreamNet FY05 work plan occurred and formal feedback on the Fishing Guide, which is a recreational version of the data collected by StreamNet staff, was received. A draft aquatic habitat matrix has been completed for the Montana Comprehensive Fish and Wildlife Plan using MFISH data.

Oregon Department of Fish and Wildlife (ODFW)

Progress was made on most project deliverables that were slated for attention during this quarter. CBFWA's request for us to conduct data inventory work for the CSMEP project, coupled with the integration and orientation of a number of new staff continued to contribute to delays in some planned activities. Support of the CBFWA effort continued throughout this report period.

A great deal of work was accomplished this quarter related to data and database management infrastructure improvements, including tool and metadata development, which are described in this report.

Specific deliverables completed this quarter include submission of an updated Trend dataset, internal and external project coordination, reference submissions to the StreamNet Library, and the development of resident fish habitat distribution information. The other significant data related effort centered on Oregon's Barriers dataset. Migration to a new barrier database format was completed, as was the integration of existing culvert data into our Barrier Database.

Three vacant positions were filled during this quarter, meaning the project is fully staffed for the first time this fiscal year.

Staff continued participation in Oregon Subbasin Planning support, including participation in related meetings, providing technical support, producing maps and other GIS products, and providing feedback on data related topics as needed. This effort has primarily been funded through a special contract with the Council through the Oregon Coordination Group.

Work on the various data update protocols continued this quarter. The draft Distribution Data Update Protocol was distributed for review and comment, and feedback was incorporated where appropriate. The draft protocol was also provided to several agencies and entities that intend to request changes to our distribution dataset. The draft protocol will be reviewed and hopefully adopted during the next quarter by ODFW's Fish Leadership Team.

US Fish and Wildlife Service

Activities during the third quarter were routine in nature, including participation in the Steering Committee and ongoing compilation of data related to the national fish hatcheries.

Washington Department of Fish and Wildlife (WDFW)

Location data are the most common denominator for all datasets and often a primary obstacle to efficiently collecting and compiling data. WDFW reorganized its StreamNet-funded positions to create a Location Data Manager position to put more attention on this issue.

We spent significant time gathering GPS points in the field to spatially-enable stream survey reach-based data that we have collected in the lower Columbia River tributaries for years.

Both direct and indirect support of CSMEP initiatives absorbed significant time this quarter, but the resources directed toward support of Monitoring and Evaluation are a worthwhile investment in the core support that StreamNet was conceived to provide to Basin managers.

Objective 1 Data acquisition and development

Support the need for region wide fisheries data for research, monitoring, modeling, and management through acquisition and regional standardization of new information and updates to previous information for priority fishery data types. Data types may be addressed by all data providing agencies, or for specific data types by a single cooperating agency on behalf of the entire project. This Objective addresses both anadromous and resident fish species, although priorities may differ. The tasks under this objective are identified as high or low priority under the constraints imposed under base level funding. Work on the low priority types will largely be limited in scope or effort unless new funding is approved.

Objective 1 Data acquisition and development

Task 1 Anadromous distribution and life history (habitat use) at the 1:100,000 scale

Document the occurrence, distribution and life history characteristics of anadromous fish species. Project participants made major updates last fiscal year utilizing the new Data Exchange Format (DEF). Maintenance of this data set will continue. This is a high priority data set.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2004
ODFW	1	Update, maintain, correct and exchange anadromous fish distribution and documentation information.	Our data technician continued to enter new records into the Incidental Fish Observation database, which contributes to Oregon's fish distribution and distribution documentation datasets. We currently have a total of 197 entries into the IFO Database.

Objective 1 Data acquisition and development

Task 2 Resident fish distribution and life history (habitat use)

Document the occurrence, distribution and life history characteristics of resident fish species. Existing resident fish distribution will be maintained, and project participants will begin expanding data for additional species. This is high priority for Montana and Idaho, and new data will be developed by the other states as time allows.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2004
IDFG	1	Update 100K resident fish distributions using new IDFG data surveys and sources, including westslope cutthroat, Yellowstone cutthroat, interior Columbia-basin redband, and bull trout.	The Salmon Region's alpine lake survey data were linked to the StreamNet hydrography Working with IDFG fishery biologists we mapped the distribution of Pacific lamprey in Idaho.
MFWP	2	Visit MFWP, other state and federal fisheries biologists in 2004 to collect 2002-2003 fish distribution and supporting survey data and references. Input all this information into the MFISH tables. To aid in visits, provide maps and other support documents to biologists.	Regional data meetings with biologists were completed during the quarter. Data entry is ongoing.

ODFW	1	As time and funding permits update, maintain, correct and exchange resident fish distribution and documentation information.	Additional draft distribution information was developed for lamprey, whitefish, and redband/rainbow through analyzing observation records located above existing distribution. Staff also worked to develop more comprehensive Redband distribution data based on information found within the 1995 Biennial Report on the Status of Wild Fish in Oregon. The spatial data will need to be reviewed by district staff before incorporation as "official" distribution data.

Objective 1 Data acquisition and development

Task 3 Adult abundance in the wild

Develop and maintain (update) information on adult abundance for native fish species, resident and anadromous, including escapement, redd counts, peak spawner counts, trap counts, dam and weir counts, and resident fish populations (where calculated by other agencies). This is a high priority data type. Also included in this data category are data gathered during spawning ground surveys regarding straying of hatchery fish onto spawning areas, i.e., marked/unmarked ratio. These are lower priority under base funding.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2004
CRITFC	1	Update mainstem Columbia and Snake River dam counts through 2003 and provide updated data to the StreamNet database.	This update was postponed until the fourth quarter due to the demands of supporting subbasin planning efforts.
CRITFC	2	Update available tribal spawning ground survey data.	This update was postponed until the fourth quarter due to the demands of supporting subbasin planning efforts.
IDFG	1	Complete the compilation of the 2003 field season redd count data from IDFG. Prepare the data for inclusion into StreamNet and submit.	Additional 2003 redd count data were captured and entered into our database for eventual submission to PSMFC. These data included 2003 summer and spring chinook, 1986-2003 fall chinook and 1985-2003 sockeye salmon.
MFWP	1	Collect all 2003 stream and lake fish survey data during field office visits; data may be one time visits, index streams and/or results from gill nets in lakes and reservoirs.	Regional data meetings with biologists were completed during the quarter. Data entry is ongoing.
MFWP	2	Input 2003 data into MFISH, including trend, count and references. Through the DEF Process, we will explore the creation of a DEF for Montana's stream survey data. If DEF is not developed, Montana will look into submitting these data as a supplemental dataset to the StreamNet website.	Data entry continued in the third quarter.

ODFW	1	Update existing anadromous, resident, and non-game abundance and index trends through 2002. Opportunistically collect new trend information, including marked-to-unmarked ratio data (relative to dam, weir, spawning ground, etc. counts) and hatchery-fraction data.	Our Data Analyst performed trend updates from data collected from ODFW District Biologists, as well as other data contributors in the Columbia Basin. Particular focus was paid to trends within the John Day basin. A trend data submission was made to Regional StreamNet on June 24th. The submission consisted of 2 newly created trends and 43 updated trends (207 total trend records). The 45 trends were broken out into the following data types: Adult Return Dam/Weir counts (9), Adult Return-Estimates of Spawning Population (1), Adult Return-Redd counts (13), and Harvest-Freshwater/Estuary (22). This, and future submissions, was made more efficient by making a query that compiles trends that are ready to be submitted. Trend data collection and submission of new trend data has been delayed this year due to staff changeover, coupled with the data inventory and cataloging work being done for the Collaborative Systemwide Monitoring and Evaluation Project (CSMEP).
WDFW	1	Update and enhance the existing natural spawner database (escapement estimates and/or detailed counts) for available species (including a focus on steelhead data AND any dam or weir counts that might not already be captured in our on-going Adult Abundance collection).	Natural spawner escapement data for 2003 were collected from statewide sources and used to update the master escapement database. The escapement data collected were for available species and contain either escapement estimates and/or detailed counts. Not all 2003 escapement data compilations for all species and areas were completed during this quarter.

Objective 1 Data acquisition and development

Task 4 Hatchery releases

Develop and maintain (update) information on the release of hatchery reared fish. Emphasis this year will be on developing release data before release information is rolled up into PSC location codes. Release data for resident species under base funding will be developed only where the data are readily available (primarily Montana). Efforts will be made to complete cross references between PSC release codes and LLID stream location identifiers. This is a high priority data set.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2004
FWS	1	Data received from National Fish Hatcheries will be processed and added sent to the Regional Mark Information System via the USFWS Lacey Office.	Most hatchery release information for calendar year 2004 has been received. Information in various fields has been standardized, and coded-wire tag retention has been used to fill in the TAGGED and UNTAGGED fields.
MFWP	1	Exchange Montana's hatchery release data after development of a resident DEF and/or modifications to the existing anadromous hatchery release DEF. Number of years and number of waters will need to be determined.	The proposed hatchery releases DEF is still under construction.

ODFW	1	Compile and submit anadromous hatchery releases through 2002, and 2003 where available.	Test hatchery release data were downloaded from the ODFW Hatchery Management Information System (HMIS) to find out what fields were needed to complete the StreamNet Hatchery Release table. Because the tag loss information is maintained in a separate data view in HMIS, release data will have to be downloaded in two different batches then joined together locally. This has slowed our efforts to provide unrolled release data to StreamNet. We anticipate providing a test dataset during the next quarter.
ODFW	2	Create a cross table to link Pacific Salmon Commission codes to LLID stream based locations to provide more precise locations for releases.	Staff continued to work on cross linking PSC codes to LLID during the quarter, creating LLIDs for 62 new release locations on 24K streams and adding them to the PSC Code - LLID cross-reference table.

Objective 1 Data acquisition and development

Task 5 Hatchery returns

Develop and maintain (update) information on the return, disposition and straying (e.g., from other hatcheries) of adult fish returning to hatcheries, including information on coded wire tags. This is an anadromous related task only. Priority will be placed on updating total return and egg take data through 2002. Development of disposition data is lower priority and would require additional resources. This is a high priority data set.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2004
ODFW	1	Compile data on returns to ODFW hatchery facilities (updated through 2002 returns where possible).	Our Database Managers worked to regain access to the HMIS Mainframe system. A switch to a new software package, 'InWin', within HMIS increased the learning curve and prevented us from using the automated approach created last year. However, this switch will allow us to get data more efficiently from HMIS in the future. While QAing our new automated download process, several questions arose during the test download that needed to be answered by StreamNet staff. Though questions remained, bulk hatchery return data were downloaded from HMIS and converted to Access for submission to StreamNet. To prevent overload of HMIS, the data had to be downloaded in brood-year increments. The total amounted to over 172,000 release records. This data will be rolled up into the StreamNet format for Hatchery Returns submission once lingering questions are resolved.
WDFW	1	Update and enhance the existing hatchery return database for available species per the newest DEF.	Biological hatchery return data from the Columbia River Hatcheries (fork length, sex, scale, and CWT data) were queried out of the Region 5 Paradox scales database in order to apply the proportions to the overall run size.

Objective 1 Data acquisition and development

Task 6 Dams and Fish Passage Facilities

Develop and maintain information on dam facilities. Update information as necessary. This is a high priority data set.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2004
MFWP	1	Continue to update Montana's spatial coverage and associated tabular file of dams. Exchange with StreamNet.	The regional data meetings with FWP biologists have been completed. Data collected during the meetings will be entered next quarter and exchanged in the fourth quarter.

Objective 1 Data acquisition and development

Task 7 Hatchery facilities

Develop and maintain information on anadromous and resident hatchery facilities, including information on location, design, management and authorization. Update information as necessary. This is a high priority data set.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2004
FWS	1	The hatchery facility database file will be updated as needed.	No changes were noted in hatchery facilities.
MFWP	1	Update the StreamNet hatchery database with Montana's public and private facilities. Exchange with StreamNet upon completion.	The data were not exchanged due to questions about how to classify the private facilities. The MFWP Enforcement Division now makes a distinction as to whether private facilities are licensed for aquaculture or fishing. The data will be exchanged in the fourth quarter.
WDFW	1	Update the hatchery database, adding records and improving field entries as warranted, including record updates for related tables (i.e. HatcheryXProduction data).	The Location Data Manager met with key WDFW hatchery data personnel and discussed changes to hatchery facility names, complexes and future data needs.

Objective 1 Data acquisition and development

Task 8 Harvest

Develop and maintain (update) information on sport and commercial harvest. Higher priority is assigned to anadromous species.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2004
CRITFC	1	Complete and update ocean and Columbia River catch data through 2003	This update was postponed until the fourth quarter due to the demands of supporting subbasin planning efforts.
ODFW	1	Compile and exchange Oregon sport harvest data through 2001.	Our Data Analyst searched for documents to update trends in the Harvest Data category, tracing previously entered data to find the previously used sources.

WDFW	1	Although we should only be in maintenance mode for this data set, WDFW re-organized their data collection process several times since our last StreamNet update (and it's still in flux) so it poses a large workload. As such, we need a large allotment of time before renewing this effort and this year we're devoting any discretionary time to barriers. As funding and time permits, compile freshwater harvest for key Columbia Basin salmonid stocks for both anadromous and resident data, using existing WDFW data sets (i.e. Angler Fish Database) and other sources. Standardize the data (to stock if possible), convert and submit it to the StreamNet database.	WDFW staff provided a brief review of the draft harvest data tables provided by Phil Roger at the Spring Steering Committee meeting.

Objective 1 Data acquisition and development

Task 9 Hydrography

Maintain a regionally consistent routed hydrography layer at the 1:100,000 scale. This LLID based hydrography is the basis for georeferencing and displaying locations for all other data in the StreamNet database, and as such is an essential data set. Data will be updated as necessary. Exploratory work will be initiated in preparation for the eventual, inevitable move to the 1:24,000 scale hydrography being developed by other entities.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2004
MFWP	3	Using ArcGIS, create new stream annotation layers at 3 scales; generalized, HUC level and Stream Level.	A system was developed to create a new annotation layer that can be used at any scale. The layer will be completed in the 4th quarter.
ODFW	1	Maintain and update, as necessary, the 1:100,000 scale hydrography files for Oregon. Submit all changes to the StreamNet database at the Regional office.	In relation to some trend mapping issues, our GIS Analyst reviewed stream route data for 4 separate routes and confirmed that the changes proposed by StreamNet were agreeable in 3 of the 4 cases; one stream had been incorrectly divided into two separate routes. Our GIS Analyst assessed issues related to the development of an enhanced 100K regional hydrography dataset and drafted a document that gives a preliminary outline of the issues and also a description of a proposed methodology for how to complete this work. A copy of this assessment was provided to Martin Hudson (WDFW) soliciting feedback before distributing the document more widely (to Carson - MT, Butterfield - ID, and Hare - PSMFC). 24K hydro and fish distribution data were acquired from WDFW and evaluated to scope out issues related to the development of a regional "hybrid-hydro" dataset. The dataset had no 24K routes, so a list of questions was compiled and provided back to Martin Hudson from Washington StreamNet. Also, a high resolution NHD dataset for the Lower Grande Ronde was requested and reviewed to evaluate what the Framework 24K hydro data may be able to add to this process. Known issues were sketched out in more detail based on the results of these efforts.

WDFW	1	Update, as necessary, the Washington 1:100,000 scale Stream, Lake, and Marine Area hydrography files. Submit all spatial and tabular changes to the StreamNet database at the Regional office for inclusion in the PNW regional hydro	The Location Data Manager coordinated both Compiler's efforts to cross- reference 24K LLIDS with WDFW's widespread internal StreamIDs. One compiler's effort targeted locations for Spawner Survey data and is complete for every location with a direct match in the hydro. This also highlights which 24K LLIDs could need editing to make an exact data match. The other compiler's effort started to address every StreamID in the primary, published catalog to fill in the gaps AND proof against the other effort. This strategy was postponed to address some unpublished StreamIDs before biologists retire and we lose their institutional knowledge. We joined forces with our most enthusiastic biologists on a pilot effort. The pilot effort attempts to identify streams that need to be added to the 24K hydro and capture the appropriate cross-references to published or un-published StreamIDs. We've captured the biologist's information but still need to proof our final product and assess if the pilot effort can be applied to each watershed. We started working with other agency staff to collect GPS readings for hatchery releases GIS Manager Martin Hudson created a hydro coverage merging the Oregon 100K line work and the WDFW 24K line work for HUC 17060106 (along with parts of 17060107 and 17060103 inside Washington borders). This was in collaboration with Jon Bowers of ODFW-StreamNet, in order to provide guidance for a proposed "100K-enhanced" initiative that will be discussed at the next Steering Committee meeting. A MS Access table has been started to list in detail all historical index sites for stream surveys and the associated beginning and ending river mile. GPS coordinates were collected on the Lower Columbia River to help facilitate the conversion in historical index site names to a river mile format.

Objective 1 Data acquisition and development

Task 10 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. Preliminary work has been completed on this data type, but regional priority has not been assigned to developing these data. Work continues on improving the data structure and DEF, primarily through work being done by a related project in California. This currently remains a low priority data type under current base funding, but is ready should a higher priority be assigned by regional entities.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2004
MFWP	1	Continue to collect, centralize and maintain all stream restoration projects data for Montana using the "Future Fisheries Interface" which StreamNet staff maintains and the Fisheries Division inputs data. Exchange data to the Region twice during the year.	Data entry is ongoing.

ODFW	2	Input a small set of historic restoration project records as a test to scope the level of effort needed to input available historic information.	Oregon StreamNet's Data Technician contacted Regional StreamNet to obtain the new version of the habitat restoration project data entry tool, but was informed that the new restoration database will be completed soon, but as it stands there are no plans for a data entry interface. Without a data entry tool, it is unlikely that any data will be submitted during this year, as we have no time to create one.
WDFW	1	If funding and time permits, convert habitat restoration project data stored in Washington's IRC's (Interactive Committee for Outdoor Recreation) PRISM database and submit to StreamNet. NOTE - We anticipate a pilot effort (under other funding) to compile other source habitat restoration data in StreamNet's newest format.	We continued to review and learn more about IAC's PRISM dataset as we participated in the DEF discussions. We also started drafting queries to QC existing and future PCSRF data. Since this is a complex dataset, we will share our efforts with the other PCSRF.

Objective 1 Data acquisition and development

Task 11 Barriers

Develop and maintain data sets for barriers to fish migration. This category is still being organized. Existing data on adult barriers will be maintained and updated as practical. Other sources of data will be explored. Work on juvenile barriers and culverts may require revisions to the DEF. The primary emphasis is on anadromous species except in non-anadromous areas. This is a low priority data set under current base funding, and will be addressed as time and other priorities allow.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2004
MFWP	1	Complete update to barrier location, species affected and other fields on stream barriers in Montana once the data collected during the Westslope Cutthroat Assessment Process conducted in 2002 is reviewed by MFWP biologists. Information will be collected on all species regardless of life history. Exchange Barriers data with the StreamNet Regional office at PSMFC.	Regional data meetings with biologists were completed during the quarter. Data entry is ongoing.
ODFW	1	Update and maintain Oregon's Barrier data and minimal Fish Barrier data development based on new barrier information.	The GIS Analyst worked to reconstruct the barrier database back to a functional state. He assessed the extent of data already migrated from the old format to the new database structure, and began the process of migrating the remaining data from the old structure. He identified and addressed problems with some of the data tables that were populated under a previous effort, especially in relation to ownership data, and completed migration of all barrier data, ensuring that nothing was missed in the process. Oregon StreamNet's GIS Analyst coordinated with Benton County and the Oregon Department Of Transportation staff on barrier data development, acquiring the "fixed" culverts list from ODOT, which has data on both replaced and retrofitted culverts that have been modified since 1997. He began and completed the process of reconciling / incorporating ODOT culvert fixes with our current barrier database.

Objective 1 Data acquisition and development

Task 12 Juvenile data (abundance and outmigration)

Develop and maintain information on smolt production (as determined from smolt traps), juvenile abundance (as determined through snorkel, electrofishing, and other surveys), and smolt density model estimates. Primary emphasis will be on maintaining the existing smolt density model data and development of a DEF for these data. The rest of the work for this data category is still under development and will require additional resources to accomplish. This is a low priority data set under current base funding, and will be addressed as time and other priorities allow.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2004
WDFW	1	As funding and time permits, keep informed about other WDFW agency staff efforts to organize the juvenile data and scope existing juvenile data to plan future conversion and submission efforts.	Raw 2004 smolt trap data were proofed for errors by StreamNet staff in the Vancouver office, and then converted to the standardized database format.

Objective 1 Data acquisition and development

Task 13 Age

Develop and maintain information on age/sex composition of returning adults, primarily for anadromous species. Emphasis on this data type will increase once the draft DEF is tested and finalized. This is a low priority under current base funding.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2004
CRITFC	1	Update CRITFC age data on sockeye and Bonneville Dam sampling	This update was postponed until the fourth quarter due to the demands of supporting subbasin planning efforts.
FWS	1	The Age table will be updated using the Snage program after processing is completed within the CRiS database.	Brood years 1980 through 1987 were processed using the still new and improving programs to convert data to the new DEF.
ODFW	1	Compile age composition data as it is identified and becomes available.	Staff began work on collecting age data within the Columbia Basin, looking through previously identified reports marked as "Age" data opportunities, and performing web searches. Web searches produced reports from eastern Oregon that we were previously unaware of. Age data contacts were also obtained from ODFW Scale Project staff. Contacts with potential age data contributors will continue through the next quarter.
WDFW	1	As warranted, update Age data links with other "count" data records (i.e. hatchery returns and adult abundance).	Age data for the 2002 and 2003 hatchery returns were gathered from the regional biologists where available and complete.

Objective 1 Data acquisition and development

Task 14 Production factors and run reconstruction

Develop and maintain information on survival, production factors, spawner / recruit estimates, and run reconstruction. This is a low priority data type under current base funding, but the existing spawner / recruit estimate data will be maintained. Current effort will focus on what aspects of this kind of data are most needed.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2004
CRITFC	1	Coordinate with ESA recovery planning and NWPPC subbasin planning efforts to capture available anadromous fish and bull trout productivity data for eventual DEF testing and inclusion in StreamNet.	CRITFC subbasin planning staff met with regional StreamNet staff to discuss archiving Oregon subbasin data on the StreamNet site. Data sets were discussed and described. Initially, data will be treated as non-standard. Options for incorporating some subbasin data into the searchable databases was also discussed as well as extending database services to local groups to support M&E activities in the future. The Project leader met with Power Council and Mobrand Biometrics staff to discuss long term management of subbasin datasets for the entire Columbia Basin. While The EDT analysis program may not be generally available to conduct new analyses on these data, it was agreed the databases have a high value in themselves as a foundation for M&E programs and to accumulate new information prior to future updating of subbasin plans. It was agreed that we could separate the issue of data management from the issue of maintaining and managing the analysis tools. Much of the habitat ratings used as EDT input for Oregon subbasins were downloaded from Mobrand's EDT web site. Not all of the fish population data are available interactively, however. Mobrand wants to be paid for providing these data, but BPA and NPCC feel it has already been paid for and have not approved expenditures for this work.

Objective 1 Data acquisition and development

Task 15 Diversion Screening

Explore the availability of data on diversion screening. Capture data on screens as time and other priorities allow. The DEF will need to be finalized before much can be done with this data type. This is a low priority data set under current base level funding.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2004
ODFW	2	Capture GPS coordinates for water diversions and fish screens in the Willamette subbasin.	The Data Technician contacted the Water Master in the mid-Willamette Valley to discuss obtaining fish screen coordinates in his area. At his suggestion, she attended the Calapooia Watershed Meeting on May 12th to meet Watershed Council members and get a feel for the folks she'd be contacting for permission to access private property.

			On June 21st, our Data Technician joined the local Water Master to obtain fish screen and diversion coordinates in the Calapooia watershed, making 11 stops. Out of those 11 stops, they obtained coordinates on 7 unscreened diversions and one screened diversion. On the other three stops, one person denied access to his land, another site was blocked by a locked gate, and they were unable to get a GPS reading at a third site. Several people indicated that there are very few screens in the Calapooia. Time was also spent tracking down landowner names, and other information related to the site visits that occurred and additional potential sites to visit. As was the case in the John Day, most of the water certificates, and associated paperwork contain the name of the first person the water right was issued to, but no information on who currently owns the land. Another site visit has been scheduled during the next quarter and will be reported on at that time.
ODFW	3	Capture GPS coordinates for water diversions and fish screens in the Primary Oregon Columbia River tributary subbasins.	The GIS Analyst completed q/a on the Fish Screen database that resulted from the 2003 Fish Screen and Diversion Location Project. After splitting out the Willamette Valley and Hood Basin records, he created a shapefile of the diversion locations and also created some basic metadata and provided the shapefile and the database for the Mill / Fivemile Creek diversion locations to Fish Screen staff from The Dalles screen shop.

Objective 1 Data acquisition and development

Task 16 Other data sets

On an opportunistic basis, develop other types of data as available or as requested by FWP participants. This relates to data relevant to StreamNet objectives which would be developed by StreamNet cooperators. Actual acquisition, standardization, georeferencing and distribution of these data will be dependent on available time and funding. These data may be included in the DEF in the future, or may be obtained and distributed as independent data sets in 'as is' condition. This is a low priority under current base funding.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2004
All			No work was done with “other” data sets this quarter

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 meet their policy, planning, monitoring, and management needs.

Objective 2 Data management and delivery

Task 1 System Administration

Manage and maintain the computer systems (hardware and software) necessary for supporting the tabular and GIS data systems at the regional and cooperating agency levels, including system backup.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2004
IDFG	1	Manage, maintain and enhance the computer systems (hardware and software) necessary for supporting the tabular and GIS data systems, including system administration, backup and recovery, hardware and software upgrades, and security.	We installed and configured a new backup server after our old one failed. We provided system administration services to the Idaho Conservation Data Center to determine a problem with their server. The database/system administrator configured our web server and system security in preparation for connecting access to the Internet. Other routine system administration functions were performed.
MFWP	1	Manage, maintain and enhance the computer systems (hardware and software) necessary for supporting the tabular and GIS data systems, including system administration, backup and recovery, hardware and software upgrades, and security.	This ongoing work continued during the quarter.
ODFW	1	Manage, maintain and enhance the computer systems (hardware and software) necessary for supporting the tabular and GIS data systems, including system administration, backup and recovery, hardware and software upgrades, and security.	Oregon StreamNet's GIS Analyst loaded ArcGIS 9 software and began testing. Bugs were discovered immediately, especially related to printing. ESRI is working on some patches. He also attended an ArcGIS 9 seminar in Portland and previewed new functionality that is available. Highlights include the Model Builder, associated capabilities, enhanced geoprocessing, interoperability, map labeling, scripting visualization, and advanced development tools for embedding ArcGIS components within custom applications, among other enhancements.
Region	1	Manage, maintain and enhance the existing tabular database systems, including hardware, software, tools, database structure, QA/QC activities, and system administration, backup and security.	Routine backups were frequently made of all important databases.

Region	2	Maintain and update, as necessary, the hardware and software, including ArcView and other tools, extensions and projects, that constitute the regional Geographic Information System. Provide system administration, backup and recovery, and security.	The online GIS system was maintained during the quarter, but GIS work was delayed by the resignation of the GIS Specialist.
Region	3	Maintain and upgrade the StreamNet web server and software, including programming, tool development, system	We upgraded the FTP server software to give us better security and enhanced logging capabilities.
Region	4	Assist with development of XML schema based options for both incoming and outgoing data. Continue exploration of how XML can enhance data exchange and develop data use agreement to control subsequent use of StreamNet data by other websites.	This quarter we were able to begin testing the use of web services (XML) as a new and fundamental foundation for all communications between applications within StreamNet and with application that want to work with or utilize data stored in the StreamNet database.
WDFW	1	Manage, maintain and enhance the computer systems (hardware and software) necessary for supporting the tabular and GIS data systems, including system administration, backup and recovery, hardware and software upgrades, and security.	The Location Data Manager attended a ArcGIS 9 seminar to anticipate future changes to location management. She also moved seven gigabytes of old ArcGIS files to a safer and more accessible location. For most of the quarter, several staff struggled to enable full function on new (and old) PCs. GPS units that are used to collect index points and redd data in Washington lower Columbia River tributaries were updated with the most recent software and patches. Updates and patches for the GPS Utility software that is used to download and store collected GPS coordinates was updated and reloaded on a new desktop PC.

Objective 2 Data management and delivery

Task 2 Application and Interface Development

Develop computer applications and interfaces that facilitate the entry, management and dissemination of tabular and GIS data at the regional and cooperating agency levels. This will include development of new applications and tools as well as maintenance or modification of existing applications.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2004
CRITFC	1	Develop data handling applications to ease transfer of tribal data to StreamNet	Much of the tribal data have been used in the development of subbasin plans. We are in the process of archiving these data.

IDFG	1	Develop and/or maintain computerized databases, applications and interfaces that facilitate the entry, compilation, management and dissemination of tabular and GIS data.	Work on the Trend Editor consisted of breaking some of our redd count trends that currently consist of multiple survey transects into individual trends for each transect in order to evaluate the potential impact on our redd count database. The new hatchery returns data structure was implemented and populated with existing data. The new age composition data structure is still being worked on. The GPS Coordinate Manager was made to read data directly from GPS units (without manual coordinate entry), capturing waypoints and descriptive data. Work continued on datum transformations and import/export routines. An application to manage the automated updates of remote files with standard Idaho Fish and Wildlife Information System and StreamNet framework data was started. This will allow IDFG staff to automatically and error-free capture changes to tables such as species codes and hydrography. Work continued on the database administration programs providing automated database administration functions, such as building stored procedures and new data classes. We also made progress with our business rules engine. This is a set of rules controlling data structure, integrity, domains and values that are stored in the databases. Generic application objects (programs) will be utilized in actual applications to call and apply these rules.
ODFW	1	Develop and/or maintain computerized databases, applications and interfaces that facilitate the entry, compilation, management and dissemination of tabular and *	The Database Manager modified some of the code for the web application framework we have been using for the last few web application sites that we've implemented. The modifications will reduce the time it takes developers to deploy applications, enhance the usability of the applications, and increase site security. A new menu component was also implemented into the framework. The new menu allowed for the nesting of sub-menus and the ability to place menus in vertical or horizontal layouts. This provides the user with a more intuitive way of accessing nested pages along with adding the familiarity of existing Windows applications. The new menu is also more cross-browser compatible, in that it now appears and functions the same in various different browsers. Role-based security was enhanced by centralizing the code that implemented the role-based authentication, thereby avoiding the mistake of modules being built without being monitored by the security engine. Staff conceptualized and began development of a project proposal web application that could be used to propose new and track existing projects/efforts within our program, including StreamNet tasks. Several key parts of the application were implemented during the quarter. The application was also useful for a demonstration of what can be done with other web applications.

			Final revisions to the schema of the newly designed barrier database, and issues related to the conversion of the new barrier database format (e.g. data migration, next steps in terms of migrating the data to MySQL, our new approach for managing culvert detail information in order to track changing conditions over time such as retrofits, etc.) were discussed and finalized during the quarter. Migration of the data to the new format was completed. We are now storing multiple culvert detail table records when culverts are retrofitted so we can capture the passage conditions over time. Issues regarding erroneous values, general conversion problems, and data synchronization were also discussed and resolved. Data migration led to some hatchery facility data not being applicable to the database and now must be maintained elsewhere if it is still needed. This effort also brought to light a need to standardize certain tables that are used in a number of ODFW and StreamNet databases, namely the Species and Reference tables. The final components of our Library Bibliography web application were completed, merged with the core source code, and copied along with the database to the NRIMP server, making the bibliography database available online. However, the URL will not be shared publicly until the ODFW Library is ready to resume standard Library services. Until then, the Bibliography will be used to aid Library organization activities.
Region	1	Develop and/or maintain computerized databases, applications and interfaces that facilitate the entry, compilation, management and dissemination of tabular and GIS data.. Assist cooperating agencies with tool development, as requested. Tools may include input interfaces, error checking, geographic locators, etc.	We successfully tested a different database application called MySQL to store the central StreamNet data and from which to operate the web query system. The database was converted from MS SQL server to MySQL and additional programming was done to enable the web query system to be "switched" to this other open-source, "free" database option if ever needed.
Region	3	Create an Online Event Mapper to allow users to create event tables based on 1:100K Hydrography over the Internet.	Work on this job was delayed by the resignation of the GIS Specialist in April.

Objective 2 Data management and delivery

Task 3 Data (content) Management

Manage data at the regional and cooperating agency levels to assure timely and accurate data flow from source to final distribution. Activities include exchange of data to PSMFC, data loading, updating data, quality assurance procedures, metadata development, etc.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2004
CRITFC	1	Manage data at the agency level (including data loading, data updating and quality assurance), develop and maintain FGDC compliant metadata for GIS data, work toward developing metadata for tabular data, and exchange data to PSMFC according to deadlines specified in this work	Routine data management continued. Metadata are being developed for all data being archived from the subbasin planning efforts in Oregon.

MFWP	1	Manage data at the agency level (including data loading, data updating and quality assurance), develop and maintain FGDC compliant metadata for GIS data, work toward developing metadata for tabular data, and exchange data to PSMFC according to deadlines specified in this work	Routine data management continued; no new metadata was developed this quarter.
ODFW	1	Manage data at the agency level (including data loading, data updating and quality assurance), develop and maintain FGDC compliant metadata for GIS data, work toward developing metadata for tabular data, and exchange data to PSMFC according to deadlines specified in this work	In response to questions raised by a StreamNet data user, Oregon StreamNet's Trend Database was corrected to relate Whiskey Cr (Wallowa River) and Bear Cr (Imnaha River) trends to the proper streams. These corrections were submitted to Regional StreamNet with our June data submission. The GIS Analyst completed Q/A and associated cleanup on the integrated barrier database - the state and county culvert data that were integrated with the NRIMP Barrier database. He cut a version 2 barriers dataset including related tables for fish passage, culvert and natural barrier detail, and started in on the development of metadata for the integrated barrier dataset. However, after running a cursory check against the OWEB list of coastal fish passage improvement projects, he identified over 50 "impassable" culverts that are located within the extent of anadromous salmonid distribution as it is currently mapped. A letter was drafted requesting assistance from eight ODFW district biologists who have these culvert passage / fish distribution data discrepancies within their districts. The spectrum of issues range from likely changes required to the distribution data to likely changes required to the barrier data. One additional twist is the "time" component of when the culverts were surveyed vs. when the distribution data were developed and whether any of these culverts have been recently repaired, but not updated in the database. The Project Leader drafted a recommended citation reference for the Oregon Timing Database. ODFW, Oregon StreamNet, and StreamNet Library staff reviewed the citation for approval. Once finalized, it was provided to ODEQ for their use and added to the metadata document for the database. Work on several documents describing QA/QC processes was initiated during the quarter, with the goal of adding them to the StreamNet QA/QC white paper. Focused attention was given to improving the data quality of the Reference table this quarter. Table edits to make the data in the fields consistent with the StreamNet DEF, and reference number assignments were reviewed and available numbers were identified and cataloged. Reference tables maintained in different databases were synchronized in order to establish one table that all databases will refer to.
ODFW	2	Continue development of a corporate information system.	Much of the work described under Objective 2, Task 2 contributes to the development of a corporate information system.

ODFW	3	Coordinate and work with internal ODFW staff to improve the agency data collection efforts to allow more efficient compiling into internal intermediate ODFW-NRIMP/ StreamNet databases and/or StreamNet databases.	Efforts this quarter centered on reconciling the differences between the ODFW / ODOT state and county culvert inventory passage information and Oregon's fish distribution data. Biologists were provided the information and tools they needed to assist them in locating the barrier without the assistance of an NRIMP generated map. Lists of barriers in need of review were compiled by district and provided to the appropriate biologists. Many of the discrepancies have been cleared up and the remainder are in the process of being resolved. One lingering issue related to the designation of habitat upstream of a blocking culvert as historic vs. current. Discussions will continue until we arrive at a clear answer to this question.
Region	1	Assist data contributing agencies in development of data, including formatting, coding, data entry, error checking, and submitting to the regional database.	A large number of time series of various data types were entered by PSMFC personnel a number of years ago. Within the past 2-3 years it was agreed that the state StreamNet partner agencies would take over control of these data sets from PSMFC. During this quarter, progress on this task was determined, and we found that this task is progressing and nearly complete. Work continued identifying problems with the distance measures from the stream mouth of new stream hydrography supplied by CDFG relative to existing ODFW stream hydrography in cases where the stream crosses the state border. Problems identified will need to be resolved by representatives of the state agencies that are responsible for geographic information.
Region	2	Examine the StreamNet database for errors and report any found to the appropriate entity for correction. Continue to improve error-checking capabilities.	A user reported errors in our barrier and bull trout distribution data for the Imnaha Basin. Documentation was provided to help identify the errors. This information was passed along to ODFW for investigation and appropriate corrections.
Region	3	Update and append data as submitted by StreamNet participants. Isolate erroneous or duplicative data and work with source agencies to correct problems. Maintain logs of data submissions and major database changes. Produce downloadable versions of the StreamNet databases to keep in synch with the updated regional databases.	Escapement data was updated for ODFW and IDFG. Reconciliation was completed between the StreamNet Library database and the Reference table used to describe the source of all fishery data in the StreamNet database.
Region	5	Help the StreamNet Librarian to optimally format an export of the library reference database of StreamNet documents for routine inclusion in the StreamNet database for use by the web query system.	The time-limited trial version of InMagic Corporation's DBTextWorks literature database software was utilized by the Regional Data Manager to better understand how references are input and managed in the StreamNet Library database at CRITFC, and to determine the most appropriate fields and subset of records to reconcile with the Reference table that is associated with all StreamNet data records. Reconciliation was completed between the StreamNet Library database and the Reference table used to describe the source of all fishery data in the StreamNet database.

Region	7	Maintain a library of StreamNet GIS layers for internal use and as downloadable data on the web site with complete documentation (metadata).	The library of GIS layers and metadata was maintained.
Region	10	Maintain and update, as necessary, the 1:100,000 scale hydrography files for the states and the PNW region.	The regional hydrography was maintained. A few updates were received from Oregon.
Region	11	Integrate the functioning of the GIS system with the StreamNet fisheries and habitat database in support of the query system. Maintain up-to-date cross tables used via the StreamNet web interface to select information by geographic area.	Resignation of the GIS Specialist prevented work on this task this quarter.
WDFW	1	Manage data at the agency level (including data loading, data updating and quality assurance), develop and maintain FGDC compliant metadata for GIS data, work toward developing metadata for tabular data, and exchange data to PSMFC according to deadlines specified in this work	All WDFW StreamNet staff are quantifying the quirks encountered writing/using MS Access queries and summarizing instructions on how to avoid them. Vancouver-based WDFW StreamNet staff also maintained and updated supporting tables within the smolt and adult trap database. An assessment of data that are currently being collected was reviewed by regional biologists to determine if the data that are currently being collected is sufficient.

Objective 2 Data management and delivery

Task 4 Data exchange standards

Establish and maintain data exchange standards to ensure consistent content and format of data that originate from multiple data sources. Monitor adopted and proposed Data Exchange Formats (DEF) for data categories described under Objective 1. This task will provide coordination and technical assistance regarding interpretation of database structures and codes. The formal process for creating new and revising old DEFs may require significant amounts of time, potentially more than a year, for complex data categories

Project	Job	Planned work elements	Accomplishments, Third Quarter 2004
CRITFC	1	Work cooperatively through the Steering Committee, following the DEF Process document, to revise existing and develop new DEFs to assure regional data consistency and allow for inclusion of new data types.	This update was postponed until the fourth quarter due to the demands of supporting subbasin planning efforts.
FWS	1	Work cooperatively through the Steering Committee, following the DEF Process document, to revise existing and develop new DEFs to assure regional data consistency and allow for inclusion of new data types.	The Project Leader responded to questions about the newly adopted DEF for Hatchery Returns and Age data.

MFWP	1	Work cooperatively through the Steering Committee, following the DEF Process document, to revise existing and develop new DEFs to assure regional data consistency and allow for inclusion of new data types.	Minor work was accomplished on the Hatchery Release data exchange format.
ODFW	1	Work cooperatively through the Steering Committee, following the DEF Process document, to revise existing and develop new DEFs to assure regional data consistency and allow for inclusion of new data types.	Staff communicated with Regional StreamNet and other StreamNet partners on issues related to the Hatchery Return data and the Disposition DEF tables. No resolution was reached this quarter, but communications will continue until a workable conclusion can be reached.
ODFW	2	Review the Barrier DEF for juvenile fish passage and recommend an approach to the Steering Committee.	Our GIS Analyst initiated efforts to refine the DEF related to the StreamNet Fish Barrier table. After fleshing out issues related to the direction of passage, additional blockage extent codes, and guidance related to passage data for barriers that fall upstream of current distribution, he completed a proposal to refine the DEF and submitted it to Regional StreamNet staff. He worked with regional StreamNet staff to clarify the proposal to modify the DEF for the Barrier, Dam and FishBarrier tables, agreeing to several modifications from the original proposal, which included dropping the proposed addition of the MigrationDirection field, but also included the addition of a GeneralPassageStatus field to the Barrier and Dam tables. This proposal was briefly discussed at the summer Steering Committee Meeting but more work was needed before changes could be adopted.
Region 1		Work cooperatively through the Steering Committee, following the DEF Process document, to revise existing and develop new DEFs to assure regional data consistency and allow for inclusion of new data types. The regional Biologist will serve as the primary coordinator of the DEF process and is responsible for updating and publishing the official DEF document.	During the first quarter StreamNet staff from PSMFC and WDFW worked, under NMFS funding, with staff from NMFS, CRITFC, Northwest Indian Fish Commission, Oregon Watershed Enhancement Board (OWEB), and California Department of Fish and Game (CDFG) to assist NMFS in compiling data for their report to Congress on how Pacific Coastal Salmon Recovery Fund monies have been spent. A large part of this data compilation effort involved information about habitat restoration projects that were performed. This work delayed an already-planned update to the StreamNet habitat restoration projects database structure. On the last day of the second quarter and the first day of this quarter PSMFC hosted a meeting with the agencies cited to determine if there was anything we learned from our PCSRF work that should be integrated into our database structure before the conversion was completed. The meeting was very productive in terms of producing valuable insight into appropriate changes to our habitat restoration projects database structure. WDFW, PSMFC, CDFG, and OWEB continued the work after the meeting until in agreement on the best new structure. The Regional Fisheries Biologist also met with USFWS staff to discuss the proposed SN database in relation to the structure of the USFWS' national HaBITs database. During this quarter numerous conversations were held between these agencies, as well as MFWP, to complete a new database structure for habitat restoration projects data.

			This task is complete except for 1) a final review of proposed codes for habitat treatments, 2) inclusion of the proposed changes into a draft DEF, and 3) putting the proposed DEF through the DEF change process. It is anticipated that the database changes will be taken though our DEF change process for adoption during the fourth quarter. Also during the quarter, proposals for possible changes to the hatchery returns DEF were made. These items are still under discussion between PSMFC, ODFW, USFWS, and WDFW as of the end of the quarter. ODFW also made a proposal for changes to the barriers DEF. These changes were still under discussion as of the end of the quarter. Regional staff discussed the metadata fields that are useful for managing data, tracking expected updates and data ownership, and for directing question about data to the correct individual. A preliminary proposal was arrived at of 3 fields to track who entered a data record, who compiled the data set and converted it to StreamNet format, and which agency is responsible for updates. This suite of fields will be implemented in the new restoration projects DEF, and if proven to be useful will be proposed for other parts of the DEF in the future.
WDFW	1	Work cooperatively through the Steering Committee, following the DEF Process document, to revise existing and develop new DEFs to assure regional data consistency and allow for inclusion of new data types.	The WDFW StreamNet Location Data Manager participated in the conference calls to draft and adopt a new Habitat Restoration Project DEF.

Objective 2 Data management and delivery

Task 5 StreamNet Internet sites

Continue to maintain and enhance the StreamNet Internet sites. Provide access to StreamNet data products through the Internet at both the regional and cooperating project levels. The StreamNet home page (www.streamnet.org) will continue to be utilized 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. The site will also be used to archive data sets developed by FWP participants for data that do not fit within the StreamNet DEF, including the means to index and search the archive.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2004
CRITFC	1	Provide ongoing review of the StreamNet website through routine use of the site, providing feedback to StreamNet staff at PSMFC on any problems, errors or needed	The subbasin planning FTP site was used to post databases, GIS products, and EDT input and output files. This was sometimes a more efficient way to distribute these products than other methods.
CRITFC	2	Maintain, and enhance as needed, the web pages used to provide public access to the StreamNet Library collections and services, including hardware and software maintenance, web page development, and system security.	Over 100 StreamNet documents were digitized and added to the library website. The website was used as an effective recruiting tool for the Library Technician opening.

ODFW	1	Provide ongoing review of the StreamNet website through routine use of the site, providing feedback to StreamNet staff at PSMFC on any problems, errors or needed	Review of the StreamNet website continued during this quarter. Our Project Leader discovered that part of the StreamNet online query system was down on June 3rd and notified regional StreamNet staff.
ODFW	2	Manage and maintain Oregon's web-based data integration, communication, and data transfer systems and their links to StreamNet.	The website hit statistics for January through March were recorded incorrectly in the second quarter report. The correct numbers for the period of January through March of 2004 are 607,391 total hits (FTP and HTTP combined) on our web server, 34,881 page views via HTTP, and 8,479 files downloaded via FTP For the period of April through June 2004, our web server had 614,957 total hits (FTP and HTTP combined), and 43,164 page views via HTTP and 3,815 files downloaded via FTP. The monthly hit statistics for the NRIMP website alone were 7,079 in April, 6,457in May, and 6,872 in June for a total of 20,408.
Region	1	Guide development and enhancement of the StreamNet web query system from the perspective of data users. Review changes to the web query system to ensure they are implemented appropriately and do not create unforeseen problems.	After due research, the 1990 Subbasin criterion was removed from the web query system, with two exceptions. Two older data sets, the Protected Areas and BPA Fish and Wildlife Projects, are not tied to the 1:100,000 scale hydrography and can not make use of the 2001 subbasin tables. The 1990 subbasins were thus kept in the web query system, and appear after one of these two categories has been chosen.
Region	2	Maintain and enhance the functionality, look and usability of the StreamNet web-based query system.	Only minor modifications and bug fixes were addressed this quarter.
Region	3	Conduct a thorough review of the web query system. Identify and address errors, and omissions in data delivery. Improve help files.	This quarter we noticed that the query system does not correctly produce maps of fish distribution for multiple streams. A solution to this problem will need to wait until the new GIS specialist hired this quarter is trained and can contribute to the improvement of the StreamNet web query system
Region	4	Review and rearrange the links pages on the StreamNet web site.	During this quarter a complete review of our "Links" pages was conducted. Several links were removed from the links pages. The links removed were dead, or were to web sites of advocacy organizations. Because StreamNet strives to be a neutral supplier of data, these links were anomalies that had mainly been added in the early years of developing the StreamNet web site. General guidelines for which sites are appropriate to add were discussed by the Steering Committee. The decision was made that in the future links to advocacy organizations should generally be avoided. Links to add should be to other on-line data sources, to government and scientific and fisheries management sites useful to fish managers and researchers, and to valuable educational sites. Links to an advocacy organization's site can be made if valuable data resources are available on the site, but we will link directly to the data pages rather than to the home page of advocacy organizations whenever possible. Several links were added to the Links pages, including to the federal Geographic Names Information System (GNIS) and to USGS National Water Quality Assessment program. Other links were moved around to more logically arrange the links pages.

Region	5	Maintain the GIS Data, Map, and PNW Reach File Internet pages.	The full Pacific Northwest 1:100,000 scale hydrography GIS layer had never been made available on the GIS pages. This quarter we made a link to the full hydrography layer.
Region	6	Maintain, update as necessary, and improve the Internet mapping component to the StreamNet web site to allow users to access StreamNet data through interactive map interfaces. Improvements might include such items as adding DRGs or aerial photos to the IMS applications, and showing trend locations in the web query system.	The interactive mapper was maintained during the quarter, but no new development or improvement occurred due to the resignation of the GIS
Region	8	Deploy new query system components and data categories that are approved by the Steering Committee	Some more work was done on age data, but we mainly revisited and redefined how this data category needs to be displayed in the web query system. We expect to have a test age data category ready in the 4th quarter.
Region	9	Maintain logs of web query history and error events. Track and report Internet site usage by month and investigate web query system errors encountered.	A summary of use statistics for the StreamNet website is presented in Table 1.
Region	10	Work with the StreamNet Librarian to improve user access to data references through the web data query system.	All links to view actual documents that are used in the StreamNet Library database were tested and those found to be broken due to improper syntax, invalid extraneous words or moved web sites were reported to the Librarian

Table 1. Use of the StreamNet website during the third quarter, 2004.

	April-04	**May-04**	**June-04**
Overall Page Requests	69,947	69,374	65,648
Number of Visits	12,314	9,250	7,968
Unique Visitors	6,664	5,571	4,741
Data Query Page Requests	17,339	21,433	20,382
Unique Query Sessions	8,632	12,808	9,298
Data Reports Viewed	1,759	1,879	2,835
FTP Files Downloaded	1,396	1,787	614

Objective 2 Data management and delivery

Task 6 Respond to data / information requests

Receive and respond to requests for data and information, source materials, and custom products at the regional and cooperating agency levels. 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.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2004
IDFG	1	Respond to requests for data, maps, technical assistance, source materials, or custom data products at the agency level, within the capabilities provided by base funding. Requests will be logged and reported.	We responded to 33 requests for information, maps or technical assistance. The requests were distributed as 14 state government, 5 federal government, 11 private industry, 2 non-governmental organization, and 1 university. The requests included 21 for species lists or distribution queries, 1 for barrier data, 3 for escapement data (redd counts or carcass counts(, 4 for GIS layers, 4 general GIS data, 1 hatchery facilities, 1 hatchery returns and 2 request for technical
MFWP	1	Respond to requests for data, maps, technical assistance, source materials, or custom data products at the agency level, within the capabilities provided by base funding. Requests will be logged and reported	Filled 15 GIS map/data requests during the quarter; the format for the field maps to each FWP fisheries biologist displaying distribution and genetic sampling location and data were completed for westslope cutthroat trout.
ODFW	1	Respond to requests for data, maps, technical assistance, source materials, or custom data products at the agency level, within the capabilities provided by base funding. Requests will be logged and reported.	The monthly breakdown of unique users (reflected as distinct IPAs) who viewed / downloaded data from the ODFW FTP site during this quarter is 2,294 (April), 1,925 (May), and 1,738 (June). Also, 3,815 data downloads were made from this site. A total of 16 data, 1 document, 3 map, and 5 'other' requests were answered during this quarter. A detailed list by requester and request type can be made available upon request. The list of requests below is provided as an example of the range of requests we respond to. These requests include: a. Numerous miscellaneous requests that related to plotting, metadata, hydro data and ODFW Wildlife Management Areas GIS data. b. Timing data requests from DEQ. c. Converting a number of one degree block, 10 meter DEM's into hillshades to meet Travel Management Area mapping needs. d. Acquiring degree block images of 24K DRG's, cutting them to a CD and providing the CD to staff in the Pendleton ODFW office for their mapping.

Region 1 Respond within one business day to requests for data, information or help. Log and report responses to all requests received.

A total of 28 help and information requests were received and responded to in the third quarter (Table 2).

Table 2. Number and types of information and help requests serviced by Regional staff during the third quarter, 2004

Requester Type	#		Type of Request	#
Environmental group	2		Can't find data	7
Federal agency	7		Data interpretation	1
General public	6		Error report	2
Graduate student	1		General fish biology	2
Industry	1		GIS	5
Local government	2		Library	3
Private consultant	1		Map	1
State agency	2		Query help	1
Tribe / tribal organization	1		Other	6
Watershed council	2		Total	28
Undergraduate student	2			
Unknown	1			
Total	28			

WDFW 1 Respond to requests for data, maps, technical assistance, source materials, or custom data products at the agency level, within the capabilities provided by base funding. Requests will be logged and reported.

There were at least 28 data requests responded to by WDFW-StreamNet staff this quarter. Fish distribution and use were the most popular data requested, followed closely by data from natural spawner surveys. But a growing category of interest involves creating informational maps using "infrastructure" layers we created and support, layers like streams, lakes, and hatchery facilities. Finally, staff were involved in supporting two management analyses that required determining overlap between stocking plans and presence of sensitive fish species, to highlight potential areas of conflict before on-the-ground decisions were made. Our staff are known for fast turnaround on data requests, which results in the occasional request (like this) to support time-sensitive and critical management decision-making.

Objective 3 Library and reference services

Provide professional library services to the Columbia Basin's fish and wildlife decision-makers, planners, managers, and researchers by acquiring and cataloging StreamNet source documents and other related material; and by providing open and efficient access to these materials. Provide a repository for the source documents for the data contained in the StreamNet database.

Objective 3 Library and reference services

Task 1 Collection development

Develop a collection of materials applicable to the mission of StreamNet. Collect, catalog and organize materials to document data sources, Fish and Wildlife Program activities and reports, and other gray literature for access by regional scientists, agencies, interested parties, and other libraries. Project participants will submit reference documents for all data contained in the StreamNet database.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2004
CRITFC	1	Obtain reference documents for all data developed under Objective 1 and submit them to the StreamNet Library for inclusion in the collection and catalog.	Several shipments of documents were received and added to the StreamNet collection. Many were digitized immediately in order to ease the cataloging process
CRITFC	2	Coordinate source material submissions for data compiled by StreamNet participants under Objective 1	Records for documents received were added to the catalog. We continue to identify duplicate documents and have developed a system for combining records and notifying the data manager.
CRITFC	3	Develop a collection of materials related to the Columbia Basin, including reports from other Fish & Wildlife Program projects, other agency documents as they relate to the Basin, and other published and unpublished materials as requested by clients.	We have been contacted by NOAA Fisheries, NWPCC, and Johnson Creek Watershed Council to help with maintaining their libraries. The NOAA Fisheries office and NWPCC both donated large runs of journals to the library. The Johnson Creek Watershed Council donated materials from the collection that were duplicates or superfluous.
MFWP	1	Obtain reference documents for all data developed under Objective 1 and submit them to the StreamNet Library for inclusion in the collection and catalog.	This effort is ongoing. Internal and public websites have been created to access the reference materials from the FWP website. All references for fish and wildlife are now being entered into one system.

ODFW	1	Obtain reference documents for all data developed under Objective 1 and submit them to the StreamNet Library for inclusion in the collection and catalog.	The Data Analyst continued to add references related to data captured under Objective 1 tasks, and performing quality assurance on the Reference Database records. She made a StreamNet Library submission in late June, which consisted of updates to six existing reference records and six new references. Also, 130 reference table records were submitted that had been updated to match the current DEF format for author name. The hardcopies of this submission were delivered by our Data Technician to the StreamNet Library on July 1st, along with 15 documents that were labeled "StreamNet" that had most likely been borrowed from the Library in the past.
ODFW	2	Initiate organization of ODFW Library documents and update the library bibliography with new titles as they are	Six Library Tech candidates were interviewed on April 1st. The most suitable candidate was identified, and she accepted the position and started organizing the ODFW Library on April 7th, creating space for sorting documents, beginning with journal materials.

Objective 3 Library and reference services

Task 2 Provide access to collection

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

Project	Job	Planned work elements	Accomplishments, Third Quarter 2004
CRITFC	1	Provide and maintain an appropriate facility for the storage and public use of the StreamNet Library collections.	All of the unused shelving was installed in the existing library space to accommodate donated material from the Canadian Department of Fisheries and Oceanography laboratory in Nanaimo, B.C.
CRITFC	2	Catalog and organize the materials for ease of use by clients and staff	Over 350 records were added to the online catalog. A volunteer has been cataloging and organizing the map collection so that these materials can be searched through the online catalog.
CRITFC	3	Provide access to the catalog of materials via the Internet and update the online catalog on at least a monthly basis.	We continue to provide access to the catalog via our website, http://www.fishlib.org. The catalog has been updated more frequently than monthly as we are working on updating the catalog at least weekly. We worked on a draft of the plan to prioritize documents.
CRITFC	4	Develop and execute a plan to place electronic documents in the catalog and on the library website.	We worked on a draft of the plan to prioritize documents.
CRITFC	5	Develop and keep a schedule of open times and reference desk staff hours	David Liberty was promoted to Assistant Librarian. We conducted a search to replace him as Library Technician. The new technician will begin on July 1.

Objective 3 Library and reference services

Task 3 Library services

Manage the StreamNet Library and provide library services to the StreamNet user community, the Council's Fish and Wildlife Program, and the general public.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2004
CRITFC	1	Provide information and reference services to library clients	Interlibrary loan activity picked up again as the new assistant librarian took over the essential functions. Reference questions also remained steady with more variety in the types of questions being asked.
CRITFC	2	Publish information about services and hours to library clients via print and Internet	We are currently working on upgrading the website, and information about any changes will be published next quarter.
CRITFC	3	Provide interlibrary borrowing services for library patrons to access materials not yet owned by the StreamNet Library.	Patrons continue to expand their research and thus their need for documents not currently in the library collections. We are working steadily on filling these needs and adding documents to the collection as they are identified.
CRITFC	4	Provide access to hardcopy and electronic files of draft and final documents related to subbasin planning and the NWPCC amendment process.	Very little work was accomplished in this area due to the lack of an assistant librarian during the quarter to head the project. We will continue to work on this project as time allows.

Task 4 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

Project	Job	Planned work elements	Accomplishments, Third Quarter 2004
CRITFC	1	Provide interlibrary lending services for other libraries to access the StreamNet Library's unique collection.	We provided materials to fill over 35 requests from other libraries. Many of these materials are unique to the StreamNet collections.
CRITFC	3	Provide consultations for groups and other agencies on library organization and services	Johnson Creek Watershed Council requested assistance with organizing their collection as they move into expanded space. They wanted to set up a research room for volunteers and researchers to use. They also wanted to make sure that duplication of effort was limited and to develop a working relationship with the StreamNet Library so that they could have access or send people over here to do further research. The librarian spent two days organizing their collection and is working on enhancing their catalog and organization of materials.
CRITFC	4	Coordinate with other StreamNet libraries, library clients and other libraries to improve service to clients and limit duplication of effort	We offered to help the new ODFW librarian with organizing the collections at the Clackamas facility.

Objective 4 Services to the Fish and Wildlife Program

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

Objective 4 Services to the Fish and Wildlife Program

Task 1 Data and Data Services to Support the Fish and Wildlife Program

Provide data management assistance to the Fish and Wildlife Program, as requested. Services may include custom development of data, provision of data from the StreamNet database to support FWP activities (such as planning, monitoring and evaluation, etc.), and general advice and technical assistance with database management, data delivery, and GIS. Work under this task will have to be based on time available, particularly for larger requests.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2004
CRITFC	1	Participate in various NWPCC planning and management work groups to improve and coordinate regional information management programs, such as serving as leader of the technical work group for Oregon's Subbasin Planning effort.	The Project Leader continued to serve as chair of the Oregon subbasin planning technical support group. He also serves on the steering committee of the Pacific Northwest Aquatic Monitoring Partnership and on the project team of the Columbia Basin Coordinated Information System group. All these groups are promoting standardization and coordination of monitoring and data management efforts Each. group met multiple times during the quarter to discuss and develop strategies for improving inter-agency coordination of data collection and management. The Project Leader also met with NPCC, Mobrand, and StreamNet Regional staffs to discuss options for archiving data and other material developed during subbasin planning.
IDFG	1	At the agency level, support Fish and Wildlife Program activities, such as R, M & E, subbasin assessment, etc., by providing data and maps of existing StreamNet data and technical information management advice or assistance as requested, within available time and budget under base level funding.	We completed entry of the first draft of the CSMEP data inventory for the Idaho pilot subbasins of South Fork of the Salmon and Selway Rivers. IDFG/StreamNet participated in planning and coordination meetings with CSMEP, including attendance at a regional CSMEP planning meeting in Oregon. IDFG/StreamNet provided data review and editing services for entering carcass data into a database supporting TRT and other FWP projects at IDFG.
MFWP	1	At the agency level, support Fish and Wildlife Program activities, such as R, M & E, subbasin assessment, etc., by providing data and maps of existing StreamNet data and technical information management advice or assistance as requested, within available time and budget under base level funding.	An update was provided by the CSMEP coordinator at the Steering Committee meeting. Montana has not provided any data or information at this time; MFWP sent a Fisheries Biologist working on monitoring schemes for the division to the CSMEP workshop that was held in early June. Notes from the meeting our available on request.

ODFW	1	At the agency level, support Fish and Wildlife Program activities, such as R, M & E, subbasin assessment, etc., by providing data and maps of existing StreamNet data and technical information management advice or assistance as requested, within available time and budget under base level funding.	The Data Technician continued to populate CSMEP data inventory spreadsheets for the Lower Columbia, and perform quality assurance on previously populated spreadsheets. She also began reviewing draft subbasin plans looking for any information that would contribute to the CSMEP inventory goals, or provide any other data opportunities. The Deschutes inventory was provided to ODFW's CSMEP Biologists for their review and evaluation. Staff attended the CSMEP meeting in Portland on June 17th. The main topic of discussion was the creation of a database and an application to input Table C1 data. Oregon StreamNet (NRIMP) staff showed meeting attendees how this could be implemented as a web-based application, which was approved by all. The tentative deadline for completing the initial development of the application was set for July 15th. Work on the web application progressed, and by the end of the quarter, the application had begun to take form, and can now be used to enter some of the data from existing Table C1 spreadsheets. The application is compartmentalized as much as possible so as to be scalable enough for anticipated future modifications.
Region	2	Participate in and assist regional Monitoring and Evaluation efforts to provide relevant StreamNet data, and to initiate work to obtain new data types necessary for R,M&E. Since no specific requests or funding have been received for this, work may be limited to scoping and advising. Development of new data types to serve R,M&E will be initiated only as current time and funding permit, or as current work priorities are reprioritized by regional processes.	The Program Manager has continued participation with the Pacific Northwest Aquatic Monitoring Partnership in order to determine regional scale data needs that relate to the kinds of data developed by the fish management agencies which could be provided through the StreamNet project. Interest and need is being expressed more frequently for data related to habitat restoration project

Objective 4 Services to the Fish and Wildlife Program

Task 2 Participate in Fish and Wildlife Program Development Activities

Participate in planning, development and/or coordination meetings with regional entities to provide assistance in the area of data management, as requested, to support development of Fish and Wildlife Program projects and programs. Provide input on ways StreamNet can effectively contribute to the programs and general advice about data management. Participate in advisory groups, task forces, and other groups whose purpose is to enhance the effectiveness of the Fish and Wildlife Program relative to its data development activities.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2004
CRITFC	1	Participate in groups to develop strategies for ESA recovery planning efforts to ensure data and technical literature are captured and made regionally accessible. This will be done "as possible"' under base level funding.	No substantial work was accomplished on this task this quarter due to the demands of completing subbasin plans by May 28. The Project Leader facilitated data development issues in the John Day and Grande Ronde subbasins. These data will eventually be used by NOAA's TRT.

MFWP	1	At the agency level, work with regional entities to contribute data management expertise toward development of activities within the scope of the Fish and Wildlife Program. Serve as a data management resource to the FWP.	Montana has participated in several conference calls of the NED project and provided comment/content when appropriate.
ODFW	1	At the agency level, work with regional entities to contribute data management expertise toward development of activities within the scope of the Fish and Wildlife Program. Serve as a data management resource to the FWP.	Staff participated in CSMEP meetings/conference calls on April 8th, April 28th, and also attended and participated in the CSMEP Workshop on June 9 - 11 in Welches, OR. The Oregon StreamNet Project Leader participated in the North-west Environmental Data-network (formerly CBCIS) regular Project Team Meetings via conference calls on April 20th and May 25th. Oregon and Regional StreamNet staff met with Frank Young and Amy Langston of CBFWA on April 28 to discuss the CSMEP Database being developed to replace the spreadsheet data entry process, and to talk about the data management related concerns expressed during the StreamNet Steering Committee meeting.
Region	1	At the regional level, work with regional entities to contribute data management expertise toward development of activities within the scope of the Fish and Wildlife Program. Serve as a data management resource to the FWP.	The Program Manager continued participation in the CSMEP project, and the state cooperating projects continued work on the data inventory. We anticipate continuing support for CSMEP as long as this project of the regions fish management agencies needs our data management expertise. StreamNet work for CSMEP has been hampered, however, by the limited amount of funding available for this new work and the necessity of meeting other existing StreamNet.
Region	2	Continue participation on the Program Team for the Council's project to develop a Columbia Basin Cooperative Information System to convey recommendations based on experience in the development of a regional approach to *	The Program Manager continued participation in NED, the renamed successor to CBCIS. NED needs to clearly define its goals and objectives and clarify how it is different from the PNAMP Data Management Module.
Region	3	Continue participation in the Federal/State/Tribal Partnership for watershed data coordination (the group being led by Steve Lanigan). Participate in other R, M & E groups, including the Action Agencies and CBFWA, to provide support and data management expertise.	The Program Manager, with some assistance from the Regional Fisheries Biologist, continued participation in the Pacific Northwest Aquatic Monitoring Partnership (PNAMP) to provide data management expertise to the group as it finalizes its organization. We have recommended that the data management function should be integrated in each of the PNAMP field modules right from the beginning rather than trying to rely on a separate Data Management Module.
Region	4	Participate with CBFWA, the Council and others to assist development of a regional scope data management oversight group or function.	With the growth of NED and the data management component of PNAMP, it is not clear whether there needs to be another data management group formed. StreamNet will work cooperatively with any data management group, but is not currently pushing for any new ones.

Objective 4 Services to the Fish and Wildlife Program

Task 3 Support to Subbasin Planning

At the regional and cooperating agency levels, work with subbasin planners to provide needed information from the StreamNet database and to capture data developed as part of the subbasin planning process.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2004
CRITFC	1	Participate in subbasin planning efforts, such as serving as leader of the technical work group for Oregon's Subbasin Planning effort.	The Project Leader continued to coordinate and provide technical assistance to Oregon subbasin planning groups.
IDFG	1	At the state or local level, and within existing resources, work with subbasin planners to provide needed information from the StreamNet database and to capture data developed as part of the subbasin planning process. In particular, IDFG / StreamNet is providing lead technical, logistical, and administrative support to subbasin assessments for the Salmon, Weiser/Boise/Payette, Middle Snake, and Upper Snake subbasins.	IDFG/StreamNet helped the subbasin assessment team complete the subbasin assessments for the Salmon, Boise/Payette/Weiser, Middle Snake and Upper Snake subbasins. The subbasin assessment staff have now been dismissed and are no longer working with StreamNet staff.
MFWP	1	At the state or local level, and within existing resources, work with subbasin planners to provide needed information from the StreamNet database and to capture data developed as part of the subbasin planning process.	The Public Review Drafts of the Montana Subbasin Plans for the Kootenai and the Flathead have been completed. A copy of the CDs containing the planning documents have been received by Montana StreamNet staff and will be reviewed next quarter.
ODFW	1	At the state or local level, and within existing resources, work with subbasin planners to provide needed information from the StreamNet database and to capture data developed as part of the subbasin planning process.	The Oregon StreamNet Project Leader posted five email communications to the Subbasin Planning Forum: a management plan example from the Walla Walla, guidance information on Research, Monitoring and Evaluation and public input, Key Ecological Functions and Key Environmental Correlates information, a posting that the "Out of Subbasin Effects" document is available, and a link for wildlife focal species accounts. He also communicated with Regional StreamNet and TOAST representatives about future data compilation needs related to Subbasin Planning. The GIS Analyst completed an updated Willamette Basin Conservation Focus map showing Tier I and Tier II categories of the Ecosystem Research Consortium Conservation / Restoration Opportunity Areas, as well as (old) 6th field watersheds.
Region	1	At the regional level, and within existing resources, work with subbasin planning groups to provide needed information from the StreamNet database and to capture data developed as part of the subbasin planning process and make it publicly available.	We met with Council staff to demonstrate StreamNet data delivery capabilities and indicate that the data delivery system can easily distribute data coming out of the subbasin planning process. The Independent Data Sets page (http://www.streamnet.org/online-data/ids.cfm) can immediately house data as provided by the subbasin planners. In the future it will be feasible to develop a specific data query system for subbasin planning data.

			The Regional Fisheries Biologist met with CRITFC staff, including the CRITFC StreamNet project leader, to discuss the data input and output of subbasin planning, and how the data could be stored and made available on the StreamNet web site. In the fourth quarter the regional Fisheries Biologist will hold similar conversations with the StreamNet staff from MFWP, IDFG, WDFW, and ODFW.
WDFW	1	At the state or local level, and within existing resources, work with subbasin planners to provide needed information from the StreamNet database and to capture data developed	Vancouver-based staff participated in a local regional meeting to locate and gather existing anadromous data in the Lower and Mid-Columbia basins for ongoing subbasin planning. as part of the subbasin planning process.

Objective 4 Services to the Fish and Wildlife Program

Task 4 Archive and deliver independent data sets, as requested

Work with participants to aid in the capture and distribution of data generated through Fish and Wildlife Program activities and to help determine the most appropriate means of storing and disseminating them. Where data do not fit in existing StreamNet data sets, post data in the archive as independent data sets in their native formats.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2004
MFWP	1	Work with FWP supported projects in the state to assist them with submission of their data sets to StreamNet for archiving and dissemination as part of the formal DEF or as Independent Data Sets.	The Subbasin Plans will be gone through thoroughly to see if there are any data types that should be captures as part of StreamNet or as an independent data

Objective 4 Services to the Fish and Wildlife Program

Task 5 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, c) in consultation with the Council, respond to requests for information concerning Protected Areas, and d) modernize georeferencing and make these data available through online mapping. If the Council so directs, work with subbasin planners to record any desired changes to the protected status of individual streams.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2004
Region	1	Maintain the Protected Areas database, and as time allows, work to resolve the remaining unresolved location issues that resulted from conversion of the data from the 1:250,000 scale to the 1:100,000 regional hydrography.	The Protected Areas data and interactive map pages were maintained during the quarter. No effort to resolve the remaining unresolved location issues from the transfer of data from 1:250,000 to 1:100,000 were made due to the resignation of the GIS Specialist this quarter.

Objective 5 Project management and coordination

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

Objective 5 Project management and coordination

Task 1 Manage Project Activities

Administer all aspects of the StreamNet project at the regional and cooperating agency levels, including oversight of budget, personnel (including training and staff development), work statement preparation and implementation, coordination among participating agencies, active participation in steering committee work, and project reporting.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2004
CRITFC	1	Project oversight and guidance. Participate cooperatively in the StreamNet Steering Committee to guide the direction of the project, coordinate within respective agencies, and resolve policy and technical issues for the project	The Project Leader attended the steering committee meeting this quarter and participated in the discussions. Input on agenda items was provided via e-mail.
CRITFC	2	Supervision. Supervise project staff at the cooperator level to provide guidance and staff development.	Normal staff supervision was provided. Personnel performance evaluations were also completed for all CRITFC StreamNet staff.
CRITFC	3	Budget. Manage expenditures to accomplish the jobs in the Statement of Work within the approved budget.	All activities were conducted within budget limits.
CRITFC	4	Develop the annual project proposal and budget within submission deadlines.	A draft work statement and budget were prepared and discussed with the Steering Committee.
CRITFC	5	Report accomplishment of the work outlined in the annual Statement of Work through quarterly progress reports submitted to PSMFC within 20 days of the end of each quarter.	The third quarter report was submitted a few days late.
FWS	1	Project oversight and guidance. Participate cooperatively in the StreamNet Steering Committee to guide the direction of the project, coordinate within respective agencies, and resolve policy and technical issues for the project	The Project Leader attended and participated in the quarterly Steering Committee meeting.
FWS	4	Develop the annual project proposal and budget within submission deadlines.	The FWS portion of the FY 2005 SOW and proposed budget were completed and submitted to regional staff at PSMFC.
FWS	5	Report accomplishment of the work outlined in the annual Statement of Work through quarterly progress reports submitted to PSMFC within 20 days of the end of each quarter.	FWS StreamNet input for work done in the second quarter was provided to PSMFC

IDFG	1	Project oversight and guidance. Participate cooperatively in the StreamNet Steering Committee to guide the direction of the project, coordinate within respective agencies, and resolve policy and technical issues for the project	The IDFG/StreamNet project coordinator attended and participated in the April Steering Committee meeting in Portland, OR.
IDFG	2	Supervision. Supervise project staff at the cooperator level to provide guidance and staff development.	The IDFG/StreamNet project coordinator provided supervision for both StreamNet and non-StreamNet staff that are part of the Idaho Fish and Wildlife Information System in IDFG. He also participated in the interview and hiring decision for the PSMFC StreamNet GIS Specialist.
IDFG	3	Budget. Manage expenditures to accomplish the jobs in the Statement of Work within the approved budget.	The IDFG/StreamNet project coordinator conducted regular reviews of the 2004 StreamNet budget.
IDFG	4	Develop the annual project proposal and budget within submission deadlines.	The IDFG/StreamNet project coordinator developed his FY05 StreamNet budget and statement of work and submitted it to the StreamNet project manager.
IDFG	5	Report accomplishment of the work outlined in the annual Statement of Work through quarterly progress reports submitted to PSMFC within 20 days of the end of each quarter.	We completed the 2004 StreamNet second quarter report and submitted it to the StreamNet project manager at PSMFC.
MFWP	1	Project oversight and guidance. Participate cooperatively in the StreamNet Steering Committee to guide the direction of the project, coordinate within respective agencies, and resolve policy and technical issues for the project	The April Steering Committee meeting was attended by the Montana Project Manager. Progress by NED has been tracked through participation in conference calls and conversations with NED and StreamNet project managers. A conference call to discuss preliminary tasks in the FY05 Statement of Work occurred in early June.
MFWP	2	Supervision. Supervise project staff at the cooperator level to provide guidance and staff development.	The 4th session of the MFWP Management and Leadership Development Program was attended by the Montana StreamNet Manager. The Program was very valuable in many aspects of the role played by the Project Manager. Mid- year performance reviews will be accomplished in the 4th quarter. Dawn Anderson was hired as the Fisheries Information Specialist position that was advertised this quarter. She started work May 1 and is a great addition to the team. Work plans for the new state fiscal years were reviewed with staff in Kalispell. Discussions continue on moving two of those positions to Helena.
MFWP	3	Budget. Manage expenditures to accomplish the jobs in the Statement of Work within the approved budget.	Monthly budget reports were reviewed and a surplus was identified. A revised 04 budget will be provided to StreamNet regional project manager in the 4th quarter outlined changes in the budget. A draft of the 05 budget was created and provided to the StreamNet Project Manager
MFWP	4	Develop the annual project proposal and budget within submission deadlines.	The FY05 Statement of Work was developed and reviewed with regional guidance and submitted along with a budget on June 18th.

MFWP	5	Report accomplishment of the work outlined in the annual Statement of Work through quarterly progress reports submitted to PSMFC within 20 days of the end of each quarter.	The FY04 2nd quarterly report was completed.
ODFW	1	Project oversight and guidance. Participate cooperatively in the StreamNet Steering Committee to guide the direction of the project, coordinate within respective agencies, and resolve policy and technical issues for the project	Oregon StreamNet's Project Leader attended and participated in the StreamNet Steering Committee meeting on April 26-27. Our GIS Analyst also participated during a portion of the meeting to brief the Steering Committee on a conceptual approach to developing a temporary regional hydrography coverage that will enable mapping 1:24,000 scale data in a linear format in conjunction with the 1:100,000 scale data. It was decided that the next steps in this process would be to conduct a pilot effort with Washington StreamNet staff focused on the Grande Ronde, which should be completed by June 30, 2004. At the request of Regional StreamNet staff, the Project Leader investigated the proportion of ODFW's field sampling effort that is supported by BPA funding. ODFW's Fiscal office provided a list of all BPA contracts in the agency, but they apparently have no way of knowing the proportion of each project that is funded by BPA, or even the total funds for each project. Funds are tracked by contract and/or funding source, and are not tied to a project by a common identifier. The Data Technician attended the MS Excel class at OSU. Some basics were covered in creating Excel files more effectively. The name/topic for the class was Excel Tips and Tools for Data Analysis. Staff communicated with Regional StreamNet staff regarding the priority skills needed when filling the open GIS position at StreamNet. Our GIS Analyst contributed potential interview questions, and participated on the StreamNet GIS Specialist interview panel on June 14th and 15th. The Project Leader coordinated with Regional StreamNet staff on the purchase of a new computer for our GIS Analyst. The specifications were agreed upon, and the computer was ordered. The new system should arrive during the next quarter.
ODFW	2	Supervision. Supervise project staff at the cooperator level to provide guidance and staff development.	Oregon StreamNet's Project Leader exercised routine supervision of StreamNet staff, and in some cases, non StreamNet staff. A new GIS Technician was hired and oriented to his new position. The ODFW Library Technician and Data Analyst were also hired and oriented during this quarter. Updated Statements-of-Work were provided to staff funded by StreamNet, and the Project Leader met with staff members in Corvallis to discuss work plan responsibilities and status.

			One staff member attended the Oregon State Library's Desktop Learning Conference. This training provided a solid introduction to the growing array of library information products and services available (including those that are web based) to support our information needs. She also cross-trained with the ODFW fish trap and passage project to gain a better understanding of how this data is collected in the field. Our GIS Analyst was able to enlist the services of a GIS volunteer to accurately identify hatchery release locations in Oregon, and to begin work on developing resident fish distribution data. Our Data Analyst attended Basic and Advanced Microsoft Access classes during the quarter.
ODFW	3	Budget. Manage expenditures to accomplish the jobs in the Statement of Work within the approved budget.	Routine budget tracking continued during the quarter.
ODFW	4	Develop the annual project proposal and budget within submission deadlines.	The FY-2005 StreamNet work priorities for Oregon were drafted this quarter, incorporating feedback from staff, and submitted to Regional StreamNet on May 20th. The FY-05 Oregon StreamNet budget was finalized and submitted on June 14th. It is the same amount we received the last three years, but the way the money is proportioned between salary and services/supplies continues to changed to account for rising personnel costs. Oregon StreamNet's Project Leader participated in a StreamNet conference call to discuss FY-05 Statement of Work priorities. QA/QC is going to be a top priority for Oregon in FY-05, undoubtedly at the expense of submitting new data.
ODFW	5	Report accomplishment of the work outlined in the annual Statement of Work through quarterly progress reports submitted to PSMFC within 20 days of the end of each quarter.	Oregon's StreamNet 2nd-Quarter Report was completed and delivered to Regional StreamNet on May 13th. Oregon StreamNet staff also reviewed and commented on the corporate second-quarter report, and submitted our comments.
Region	1	Project oversight and guidance. Participate cooperatively in the StreamNet Steering Committee to guide the direction of the project, coordinate within respective agencies, and resolve policy and technical issues for the project. Serve as chair of the Steering Committee.	The Steering Committee meeting was held at the new PSMFC office on April 26-27. Topics covered included: budget status; CSMEP, PNAMP, RM&E, and NED; potential changes to the FY04 SOW; the results of subbasin planning, and how StreamNet can help to collect, archive and make available the information gathered; StreamNet data QA/QC procedures; the potential new habitat restoration projects DEF; 1:24,000 scale hydrography; and a discussion of links to other Internet sites that are appropriate from the StreamNet web site.

Region	2	Supervision. Supervise project staff at the regional level to provide guidance and staff development.	Early in the third quarter the Regional GIS Specialist left to take a position with a different agency. PSMFC staff met with the departing GIS Specialist to be debriefed on information the incoming person would need to know. The recruitment process was conducted, but it became more lengthy than anticipated. Applications were reviewed, interviews were conducted, and because of the large number of applicants and several close rankings, a second round of interviews was held. Mr. Van Hare was hired and began working late in the quarter as the new Regional GIS Specialist. Staff from PSMFC, IDFG, and ODFW participated in the interviews and selection of the candidate. Orientation and training began and will continue into the fourth quarter.
Region	3	Budget. Manage expenditures to accomplish the jobs in the Statement of Work within the approved budget.	Routine budget expenditure tracking continued. More emphasis was placed on this because of potential budget implications of filling the vacant GIS position.
Region	4	Develop the annual project proposal and budget within submission deadlines.	Development of the FY-05 SOW began. Input was received from the participating cooperators, and a draft SOW was developed.
Region	5	Report accomplishment of the work outlined in the annual Statement of Work through quarterly progress reports submitted to BPA within 30 days of the end of each quarter.	The Second Quarter Report was prepared and submitted to BPA.
WDFW	1	Project oversight and guidance. Participate cooperatively in the StreamNet Steering Committee to guide the direction of the project, coordinate within respective agencies, and resolve policy and technical issues for the project	Managers met as needed to discuss work plans, progress tracking, our vacant position and individual roles. Two WDFW StreamNet staff attended the Spring Steering Committee meeting in Portland April 26-27, 2004. Staff present participated in the meeting through round-table contributions and presentation of on-going work. O'Connor provided the most recent draft of the QA/QC Paper and collected comments for the next revision. WDFW participated in the June 3 Steering Committee conference call to review and set priorities for FY 2005. A discussion about the relative merits of performing extensive QA/QC on existing data holdings versus compiling new data ensued. There will be more emphasis on "clean up" and "catch up" than on new data for some states. Washington will contribute to both emphases in FY2005.
WDFW	2	Supervision. Supervise project staff at the cooperator level to provide guidance and staff development.	WDFW submitted the annual inventory of BPA-purchased equipment in use by All standard supervisory duties were completed.
WDFW	3	Budget. Manage expenditures to accomplish the jobs in the Statement of Work within the approved budget.	WDFW provided a mid-year spending update to Bruce Schmidt, including an estimate of potential project surplus by the end of the contract period. WDFW's estimate (at this time) is for a surplus of around $1,000.

WDFW	4	Develop the annual project proposal and budget within submission deadlines.	The Project Leader provided WDFW-StreamNet task priorities and job statements for the first draft FY2005 statement of Work. In addition, he provided two budget proposals, one which kept the work (effort) level constant, the other which kept the dollars constant but reduced staff time to account for increased WDFW overhead and benefits costs.
WDFW	5	Report accomplishment of the work outlined in the annual Statement of Work through quarterly progress reports submitted to PSMFC within 20 days of the end of each quarter.	We submitted the WDFW FY2004 Second Quarter Progress Report to PSMFC on April 30, 2004.

Objective 5 Project management and coordination

Task 2 Coordinate with Related Activities Beyond the FWP

Maintain communications between StreamNet and other applicable regional and state-level fish and wildlife activities and agencies beyond the Council's Fish and Wildlife Program to identify means for collaborative data collection, storage, and dissemination. Collaborative data activities will include 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 and environmental quality agencies. Collaboration with coast-wide and private data collection/compilation efforts will be pursued when this supports overall project goals.

Project	Job	Planned work elements	Accomplishments, Third Quarter 2004
IDFG	1	On an opportunistic basis, coordinate with other state, federal, or tribal agencies and various local inter-agency planning and management work groups beyond the FWP to enhance the collection and management of data related to management of fish and wildlife resources.	IDFG/StreamNet participated with other agencies to plan and develop data workshops for the bull trout status assessment. Using non-StreamNet dollars, we built an ArcView application to capture all the information previously obtained on paper forms and maps. This captured the data electronically during the meetings instead of returning to home offices and having technicians enter the data IDFG/StreamNet staff attended. workshops in Couer d'Alene, McCall, Nampa and Salmon where they provided on-site technical operation and services with the program.
MFWP	1	On an opportunistic basis, coordinate with other state, federal, or tribal agencies and various local inter-agency planning and management work groups beyond the FWP to enhance the collection and management of data related to management of fish and wildlife resources.	Due to new office space being available to MFWP at the Montana State Library, discussions have expanded to the Montana Natural Heritage Program (MNHP) employees becoming part of state government as MFWP employees (they are also housed in the State Library). Discussions are at a very preliminary level focusing on what the MNHP does, what the MFWP Information Management Unit does and how the two programs are alike and different. The Fisheries Manager's meeting in June was attended by the Project Manager where discussion of the StreamNet FY05 work plan occurred and formal feedback on the Fishing Guide, which is a recreational version of the data collected by StreamNet staff. StreamNet employees attended the Montana / Idaho GIS Users Group conference in Billings in April. Information Management Unit staff have presented at 3 of the 7 regional meetings over the quarter; will complete the meetings next quarter. A draft aquatic habitat matrix has been completed for the Montana Comprehensive Fish and Wildlife Plan using MFISH data.

ODFW	1	On an opportunistic basis, coordinate with other state, federal, or tribal agencies and various local inter-agency planning and management work groups beyond the FWP to enhance the collection and management of data related to management of fish and wildlife resources.	Several coordination activities occurred during this quarter, including: -- Attending a coordination meeting related to the development of the Statewide Wildlife Conservation Strategy for Oregon. Attendees included representatives from OWEB, OGIC, and the Wildlife Conservation Strategy team. -- Meeting with ODFW Wildlife Division staff to discuss our development of a web-enabled sage grouse lek survey database. The meeting was generally positive, and it sounds like they want to move forward with the effort. -- Attending an OWEB sponsored workshop to review and contribute data management expertise on the "North Coast Basin Prototype Web Portal" project. This portal will be designed to serve local restoration groups, Oregon Plan partners, and OWEB's Board and program staff. -- Working with Willamette Creel Survey Project staff to evaluate data management related aspects of their creel survey manual using the Data Management Guide for Field Data Collection Projects that was developed by the Data Management Review Team at the Pacific Rim Salmonid Monitoring and Protocol Review Workshop in March. -- Participated in a coordination meeting with staff from The Nature Conservancy, the Oregon Natural Heritage Information Center, ODFW Wildlife Division, and ODFW Marine program staff. TNC's Ecoregional Planning process was discussed including their data products. ORNHIC also discussed some of their data products.
WDFW	1	On an opportunistic basis, coordinate with other state, federal, or tribal agencies and various local inter-agency planning and management work groups beyond the FWP to enhance the collection and management of data related to management of fish and wildlife resources.	O'Connor participated in a WDFW Eastside Salmon Recovery Workshop to provide input on data management aspects and how WDFW-StreamNet staff can assist in data and analytical support as WDFW prepares recovery plans for Eastern Washington (due June, 2005).

Objective 5 Project management and coordination

Task 3 Professional and Public Involvement

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

Project	Job	Planned work elements	Accomplishments, Third Quarter 2004
CRITFC	1	As requested, prepare and deliver presentations to public, scientific and professional meetings to demonstrate project capabilities, services and accomplishments and to solicit additional data and involvement or coordination with the project.	Received copies of the article written for Science & Technology Libraries. (v.23 (4) 2002)

MFWP	1	As requested, prepare and deliver presentations to public, scientific and professional meetings to demonstrate project capabilities, services and accomplishments and to solicit additional data and involvement or coordination with the project.	Regional meeting presentations by Information Management Unit staff have occurred in 3 of the 7 regions over the last quarter. Demonstrations of various web-based applications including MFISH have occurred. Information Management Unit staff are working closely with the MNHP aquatic staff on various aspects of the Comprehensive Fish and Wildlife Plan.

Supplemental Information. Work accomplished outside the specific work elements in the Statement of Work

Specific accomplishments during the third quarter, often on other funding sources, that did not relate specifically to any of the Tasks / Jobs in the annual Statement of Work, but that did relate to StreamNet and served the project mission.

Project	Accomplishments, second Quarter 2004
CRITFC	See above objectives and tasks relating to subbasin planning and regional monitoring and data management groups. These efforts involved a combination of StreamNet staff and CRITFC staff and additional funding from other sources
MFWP	The Montana Fishing Guide was released on the MFWP website; http://fwp.state.mt.us/fishing/guide/default.aspx and has been well received by the public and the agency. Due to new office space being available to MFWP at the Montana State Library, discussions have expanded to the Montana Natural Heritage Program (MNHP) employees becoming part of state government as MFWP employees (they are also housed in the State Library). Discussions are at a very preliminary level focusing on what the MNHP does, what the MFWP Information Management Unit does and how the two programs are alike and different. StreamNet employees attended the Montana/Idaho GIS Users Group conference in Billings in April. A draft aquatic habitat matrix has been completed for the Montana Comprehensive Fish and Wildlife Plan using MFISH data. Regional meeting presentations by Information Management Unit staff have occurred in 3 of the7 regions over the last quarter. Demonstrations of various web-based applications including MFISH have occurred. Work continues on Montana's Comprehensive Fish and Wildlife Plan with significant input and coordination with the Information Management Unit. Information Management Unit staff are working closely with the MNHP aquatic staff on various aspects of the Comprehensive Fish and Wildlife Plan. The FWP Strategic Information Technology Plan has been completed including a needs assessment; items identified in the needs assessment are being reviewed, discussed and decided on a new course of action by the FWP Information Services Steering Committee.
ODFW	Our Database Manager initiated phase II of the Oregon Plan Review website. This phase focuses on the ability to search and download the documents that were posted to the OPSW Data Upload Site. The first iteration of phase II was completed and presented to Oregon Plan staff. It has the ability to search for documents by agency, topic, or keywords, and to categorize posted information by 'Factors Of Decline'. Changes were made as warranted and requested during the quarter to better incorporate the site into the upload site. Our GIS Analyst worked with Statewide Wildlife Conservation Strategy GIS staff to resolve projection issues with TNC's ecoregion layer. He also identified some topological anomalies with the TNC priority conservation area dataset and initiated a process to work with TNC to resolve these issues.

We delivered a reference to the StreamNet Library on May 13th in response to a request by the Librarian.

Staff support of Oregon Subbasin Planning continued throughout the quarter.

Our GIS Technician completed development of Travel Management Area maps for the Burnt Cabin, Noragaard, Patrick Creek, Dark Canyon. and Grouse areas during the quarter.

Web statistics for the Oregon StreamNet related/maintained websites are presented in Table 3.

Table 3. Page views recorded in the third quarter on websites related to and maintained by the Oregon StreamNet Project.

	April	May	June	Total
Oregon Plan Metadata Warehouse	1,074	1,266	667	3,007
Oregon Fish Finder	3,201	5,501	5,504	14,206

Region The programmer worked with the Puget Sound Nearshore Ecosystem Recovery Project to provide recommendations on building a web-based query and mapping system to access the project's data.

WDFW WDFW-StreamNet staff participated in the CSMEP Workshop in June to begin establishing collaborative designs for Monitoring and Evaluation projects in the Basin. We also joined the regular CSMEP conference calls and provided detailed guidance for enhancing both the content and format of the spreadsheet tool used to capture CSMEP dataset inventories.

The Washington StreamNet Project Leader led efforts to complete the Data Management Considerations chapter upcoming formal report on Fish Sampling Protocols, stemming from the March workshop involving many Basin interests. He is working directly with Washington Upper Columbia participants as they work to design and populate databases specifically targeted toward support of Monitoring and Evaluation projects above McNary Dam.

WDFW staff participate on Washington's SWIM-TAC group, which spent time this quarter determining the best ways to support continued 24K hydro layer development through the Oregon-Washington Framework initiative.