StreamNet Project

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First 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 and Conservation Council's (NPCC) Fish and Wildlife Program (FWP) and is funded primarily by the Bonneville Power Administration. The project is administered by the Pacific States Marine Fisheries Commission (PSMFC). Three fourths of the project consists of sub-projects within the state fish and wildlife agencies, Columbia River Intertribal Fish Commission (CRITFC) and the US Fish and Wildlife Service (USFWS) to develop databases within the respective agencies and to facilitate data transfer regionally. The remaining fourth consists of the regional staff at PSMFC, which includes project management, database management and data dissemination functions.

The StreamNet Project compiles, manages 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. StreamNet also ties all data to the regional 1:100,000 scale (100K) 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 (www.streamnet.org) 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 (www.fishlib.org). Work reported herein is tied to the specific jobs contained in the Fiscal Year 2005 (FY-05) Statement of Work, available at www.streamnet.org/about-sn/project_management.html.

Work priorities for FY-05 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 FWP, and project administration. This report documents accomplishments made by the project and its cooperators during the first quarter of FY-05. 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.

Activities in the First Quarter of FY-05 included routine development and maintenance of data sets, routine administrative activities to continue project function, and data management support for components of the FWP. The project continued supporting the Columbia Basin Fish and Wildlife Authority's (CBFWA) Collaborative Systemwide Monitoring and Evaluation Project (CSMEP). StreamNet has volunteered to contribute two person months per state to conduct data inventories and enter the information in the online data entry tool developed by Oregon StreamNet. This effort is seen as a top priority by the region's fish managers despite the fact that it alters priorities established in the StreamNet Statement of Work and will result in the delay of some planned work on existing data sets.

Key highlights of activities by all project components this quarter are presented by cooperator, as follows:

Regional StreamNet at PSMFC (Region)

Coordination with a number of regional scope efforts continued, including CSMEP, the Pacific Northwest Aquatic Monitoring Program (PNAMP) and the Northwest Environmental Data-network (NED). StreamNet's participation was focused on advice and services related to managing data within these programs.

Improved monitoring of the ArcIMS sites helped to optimize performance and reliability and guide future development. New organization and layout of the IMS sites to provide additional information, clearer operations and more efficient use of space was developed and will be implemented in the near future

Regional and CRITFC personnel archived the data and other information generated during subbasin planning in Oregon subbasins. These resources were made available on the StreamNet Internet site, and a web page (http://www.streamnet.org/subbasin/2001-subbasin-data.html) was modified to assist in finding these resources.

The web query system was modified to allow for improved data downloads. A long-standing problem with carriage returns embedded in delimited files was corrected, and the ability to download data in xml format and as Microsoft Excel spreadsheets was added.

Significant database improvements occurred during the quarter. Dozens of outdated tables were archived and removed from the database. Major data submissions from ODFW, CRITFC, IDFG, WDFW, and MFWP were incorporated into the StreamNet database. A data submission from USFWS was received and will be processed in January.

Columbia River Intertribal Fish Commission (CRITFC)

Work during the first quarter was fairly routine. Demands for Library services occurred at a fairly steady rate and all service requests were filled. The scheduled upgrade of the Library server was completed and improved backup procedures were implemented. Prior to the upgrade, the old server crashed, but all files were successfully restored.

The Project Leader continued to serve on several regional data management and monitoring groups whose activities involve data management issues. The Project Leader also led efforts to update and improve the watershed assessment for the John Day basin.

U. S. Fish and Wildlife Service (FWS)

Activities for the FWS in the first quarter centered on routine development of data originating with the National Fish Hatchery System.

Idaho Department of Fish and Game (IDFG)

Updates of Idaho's anadromous and bull trout generalized fish distribution database utilized the 2004 subbasin assessments and IDFG data now available in the Idaho Fish and Wildlife Information System. This was the first major update of fish distribution since initial submission.

StreamNet staff worked with non-StreamNet staff to oversee the data compilation and preparation for the 2004 bull trout status review. Staff worked with workshop participants and provided data proofing and updating, formatted data into final forms, produced queries for data analysis and helped write sections of the report.

Staff migrated all GIS software to the ArcGIS 9.0 level, including ArcSDE 9.0 and ArcIMS 9.0. The improved and additional functionality has already proven useful, especially the linear referencing tools, which were used in fish distribution updates.

Montana Fish, Wildlife and Parks (MFWP)

Resident Fish distribution data were entered as received, completing the majority of the backlog. 2005 visits to FWP, USFS, BLM and USFWS offices to collect their 2004 data will occur in the second quarter.

A meeting was set up in January with Montana StreamNet and MFWP Fisheries Division administrators to discuss what assistance SN staff can provide to the division in developing statewide field collection standards.

Hatchery facility data was exchanged during the first quarter. Staff worked with the genetic labs at the University of Montana and Montana State University on standardized genetic reporting. A database front end using these standards was finalized this quarter. Montana's habitat restoration project database is being reviewed internally. Additional fish passage barriers were added during the bull trout status review conducted by Montana and Idaho, further delaying data delivery to the Regional database. This effort is near completion and data are anticipated to be exchanged in the second quarter.

Discussions were held with Montana's USGS representative concerning completion of the 1:24,000 scale (24K) hydrography for the state. Although the USGS is interested in completing Montana, they are also interested in some financial partnerships. The MFWP fisheries biologist responsibility area GIS layer was updated during the quarter and distributed to Fisheries Division staff. Fifteen data and/or GIS requests were filled during this quarter.

The rating system conducted in 1998 from MFISH data was recently used to develop rules for dredge mining in Montana; meetings were held with DEQ staff on several occasions to address the draft policy.

Several staff changes were made during the quarter: Lydia Bailey moved to Helena and was promoted to the GIS and Natural Resource Data Manager for the unit; Kim Lindstrom, GIS/Programmer Analyst, resigned and her position was rewritten to emphasize wildlife and data analysis. The position was advertised and Adam Messer, information specialist working on the Comprehensive Fish and Wildlife Plan for the agency, was selected for the position. Jeff Hutten will remain in Kalispell as the StreamNet western Montana representative and has reduced his hours on the StreamNet contract to a half-time basis.

Montana's Project Manager attended the Fisheries Division Manager's meeting in September to discuss various data management projects and the Montana Angler Forum to demonstrate the "Montana Fishing Guide", the recreational version of StreamNet data.

Oregon Department of Fish and Wildlife (ODFW)

Progress was made on most project deliverables that were slated for attention during the quarter.

CBFWA's request for us to conduct data inventory work and develop/maintain an online database application for the CSMEP project continued during the quarter, exhausting the 2 person-month commitment made by each StreamNet partner. Further CSMEP participation and support will take up time that would normally go towards other planned activities and could lead to delays in or postponement of some planned activities.

Specific deliverables addressed this quarter included the submission of updated spawner / recruit data, the release of updated barrier information, and internal and external project coordination. The other significant data related effort centered on modernizing Oregon StreamNet's data management and dissemination capabilities through the use of SQL Server, and ArcIMS software packages.

Significant progress was made toward establishing an agreed upon approach to address 24K hydrography development and the generation of linear event data for the Basin's 24K fish distribution.

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

Work on Oregon's various data update protocols continued this quarter. The draft Distribution Data Update Protocol was nearly completed, needing only minor edits to get it finalized.

Washington Department of Fish and Wildlife (WDFW)

The new WDFW StreamNet data compiler was hired and outfitted with an initial work plan that leverages his background in MS Access well in meeting initial WDFW-StreamNet needs. He will initially be tasked with work related to barriers and habitat restoration project information, but his background in GIS provides us a source of additional skill to tap when unforeseen events occur.

The master escapement database has been updated with all 2003 and most 2004 fish survey records; focus now moves to incorporating data from 2002 and earlier into the new (internal) format. This will facilitate data conversion and exchange with PSMFC in the quarters ahead.

Agreement reached on the final format of the hatchery returns database opens the doors for conversion and exchange of over 30,000 records of new-format data next quarter, including 2,500 new records.

The WDFW StreamNet GIS Manager started incorporating NHD line work along the WA-ID border and in Northeast Oregon (where available) into the 24K statewide hydro layer. This is the first step toward integrating cross-border streams and creating the four-state mixed-scale hydro layer that we need in order to share recent Washington updates to fish distribution (and other spatial datasets).

Migration from ArcInfo to ArcGIS 9 continued, as the Location Data Manager created our first geodatabase files to store the Columbia River and "other Washington" 24K hydrography data. The planning time she is putting into organizing spatial data files that will be migrated to ArcGIS will pay off in the months ahead as we attempt to continue migration without disrupting ongoing activities.

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 level base funding. Work on the low priority types will largely be limited in scope or effort unless new funding is approved. Primary focus this fiscal year will be to Quality Check the data in the StreamNet databases and to correct as necessary. Data updates will be delayed during the QC.

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, First Quarter 2005
IDFG	1	On an opportunistic basis, capture and update 100K anadromous fish distributions.	We completed updates of generalized fish distribution for fall Chinook, spring Chinook, summer Chinook, steelhead and sockeye salmon. New information from the 2004 Salmon Subbasin Assessment and IDFG redd count database were incorporated. The information will be exchanged with PSMFC early next quarter.
ODFW	1	Update, maintain, correct and exchange anadromous fish distribution and documentation information.	Routine maintenance was performed on Oregon's anadromous fish distribution and documentation information during the quarter.

WDFW	1	Convert newest Washington anadromous fish distribution data to StreamNet format (once streams layer can accommodate 24K streams). Exchange data when completed.	WDFW GIS staff piloted data development of an "aboriginal presence" fish distribution layer for winter and summer run steelhead statewide. This layer, based on impassable natural barriers (including modeled gradient breaks) and documented generalized presence in at least some part of the stream, was constructed in support of WDFW's statewide Steelhead Management Plan (still under development at this time). If users reach consensus on the utility and proper rules for creating such a modeled layer, the results will appear in the Plan. Results will also be provided to the StreamNet Steering Committee during Q3 of FY-05 for consideration as a potential regional data layer for OR, WA and ID.

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, First Quarter 2005
IDFG	1	On an opportunistic basis, capture and update 100K resident fish distributions.	We completed an update of generalized fish distribution for bull trout. Information from the 2004 5-year status review being conducted by Idaho, Montana, Nevada and Washington were incorporated. The information will be exchanged with PSMFC early next quarter.
MFWP	1	Complete Distribution and Use Types data sets from data collected from biologists, documents and reports during 2002-2003 using LLID stream routes and Montana's lakes coverage and water code system. Exchange with StreamNet. Complete distribution and use type data sets for 2003-2004. Update entire state. Focus on target species during the year if opportunity arises. Exchange the data to the regional database in the approved DEF format.	Data was entered as it was received and most of the 2004 backlog also was completed.
MFWP	2	Visit MFWP, other state and federal fisheries biologists in 2005 to collect 2003-2004 fish distribution and supporting survey data and references.	Visits to FWP, USFS, BLM and USFWS offices will occur in the second quarter.
MFWP	3	Work with FWP Fisheries Division to assist in the development of fisheries field collection survey standards.	A meeting was scheduled for January with Montana StreamNet staff and Fisheries Division Administrators to discuss what assistance SN staff can provide to the effort of field standards as we visit the regions during the second quarter.

MFWP	4	Explore commonly used habitat fields collected on streams to see if there is a core set related to fish distribution data.	Exploration of commonly used habitat fields will be conducted during the regional visits.
ODFW	1	As time and funding permits update, maintain, correct and exchange resident fish distribution and documentation information.	Routine maintenance was performed on Oregon's resident fish distribution and documentation information during the quarter.
WDFW	1	Using formal fish distribution mapping parties, organize the effort to update Washington west slope cutthroat distribution data and compile that data in concert with the existing federal data that was compiled in 2002.	A copy of the federal west slope cutthroat data was obtained and assessed in order to plan incorporation of these data into our existing dataset. The shapefile received was in a newer version than the one we are working in, so this work was postponed until we make further progress in our conversion from ArcInfo to ArcGIS 9.
WDFW	3	Incorporate any Washington bull trout distribution data updates resulting from the regional 5-year bull trout status review.	WDFW staff coordinating the data capture for the five-year bull trout status review have compiled and entered dozens of updates to bull trout distribution and barriers. The distribution data that have been confirmed by area biologists have been entered into WDFW's database. There are still a few cases outstanding where final confirmation was not received by the end of this quarter.
WDFW	5	Scope data availability and work to compile, convert and exchange distribution data for other priority resident species (including coastal cutthroat and rainbow trout).	WDFW staff transferred fish distribution data for priority resident fish species statewide (including rainbow trout, coastal cutthroat trout, and westslope cutthroat trout) from the 1985 1:100K scale dataset to the WDFW 24K hydrology layer. These data will be available to convert and exchange once the regional mixed-scale hydro layer is ready for data (probably in the third quarter, FY2005).

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, First Quarter 2005
CRITFC	1	Update mainstem Columbia and Snake River dam counts through 2003 and provide updated data to the StreamNet database.	No work was performed this quarter. Dam counts are typically available in corrected form in the second or third quarter.
CRITFC	2	Update available tribal spawning ground survey data.	No work was performed this quarter. These data are typically available in corrected form in the second or third quarter.

IDFG	1	Compile and submit the 2004 field season redd count data from IDFG.	Data entry for all but 2 of the 2004 redd counts were completed. We have been unable to obtain the 2 missing counts. Carcass data from the 2003 and 2004 spawning ground surveys was compiled. This completes all of our carcass data from 1960 through 2004. We completed a wholesale update of miles surveyed in the regional database, moving the information from the comments field into the miles surveyed field.
MFWP	2	Input 2003 data into MFISH, including trend, count and references.	This task is ongoing; data will be exchanged on a scheduled basis.
ODFW	1	Maintain existing anadromous, resident, and non-game abundance and index trends. Any updates will be the result of QA/QC efforts, and easily incorporated trend data.	Routine maintenance was performed on abundance and index trend information this quarter. Effort this year is focused on improving the quality of existing information rather than updating or adding to the existing Oregon trends. However, during QA/QC efforts (see Objective 2; Task 3; Job 2), some new information was obtained and added to the database, particularly in the Grande Ronde and Imnaha basins. New incidental coho and Chinook survey information in the Lower Columbia was also added. Updated information/corrections were submitted to Regional StreamNet in late October, but work continued throughout the quarter.
WDFW	1	Update and enhance the existing natural spawner database (escapement estimates and/or detailed counts) for available species. Convert and exchange data.	Stream survey cards for the 2004 return year were entered into the survey card database branch of the master escapement database. A total of 1,485 records have been entered for the Columbia River and tributary specific sites with only a few chum and coho surveys left to be made for the 2004 return year. In the process of completing this database, past years are being entered when time permits. The 2003 return year has been completed and attention now is focusing on the 2002 survey cards. A total of 1,073 cards were entered this quarter, which completed the 2002 return year. Past years have been completed for complete tributaries from1944-present. This data has not been ported yet to the database as it needs to be proofed first. There are approximately 10,000+ records in this dataset with another 30,000+ to be entered. To help facilitate data collection and data needs, the Vancouver data compiler designed a new survey card that will be implemented in the 2005 return year. These cards will hold more data, meet the needs of state managers and will better contain data that can be entered into the StreamNet database. Continued efforts have been made to acquire historical steelhead spawning data that can be entered into the escapement database. The collected data will be reflected in the July exchange that will complete the 2004 return year and age data.
WDFW	2	Continue maintaining and updating adult trap databases on all traps in Region 5 (lower Columbia River).	The Cedar Creek adult trap database was updated with 1,085 records entered. Data will continue to be entered into the adult trap database until the end of February.

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, First Quarter 2005
FWS	1	Acquire and process hatchery release information from national fish hatcheries in the region.	Preliminary processing of calendar year 2004 release information has occurred.
ODFW	1	Compile and submit anadromous hatchery releases through 2003, and 2004 where available, in an unrolled format if possible.	Staff continued to work on cross-links to PSC codes, developing and using an iterative approach for following up with the liberation coordinators to finish off this work. During this quarter, we contacted Liberation Coordinators for the NE and SE ODFW regions and resolved all "active" (defined as releases since 2000) NE Region locations and assigned LLIDs as appropriate. Work will continue until all the unmatched codes that have actually been used are linked with LLIDs.

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, First Quarter 2005
FWS	1	Complete work on the new program to convert information from the FWS CRiS format to the new StreamNet hatchery returns format.	Hatchery return information from National Fish Hatcheries for the 2004 return year has been received and added to the CRiS Returns file.
WDFW	1	Complete the conversion of old DEF hatchery returns data to the new DEF for all species and sites. Exchange data when complete.	Continued efforts have been made to convert all WDFW hatchery returns data to the new DEF. With the final format "finally" agreed upon by all entities, the final conversion and exchange can take place in the second quarter. Approximately 30,000 records will be exchanged. Of these, approximately 2,500 records will be new data. The other records will be updated due to format changes, ASNID additions or changes and fixes found in the null flag field.

WDFW	2	Work jointly with other WDFW hatchery data unit staff to create a more efficient means to improve the internal WDFW hatchery returns data system and simplify data flow from this database into the conversion and exchange process.	Great effort has been made to work closely with other WDFW staff to help redesign and convert Paradox hatchery returns data to the MS Access format. Database structure in the WDFW internal hatchery returns database will be similar to the StreamNet DEF for hatchery returns thus facilitating a faster and easier exchange of data when finalized by the agency. We expect to see gains in efficiency at the next hatchery returns data exchange, expected in the second quarter, FY-05.
WDFW	3	Help WDFW regional biologists with run reconstruction efforts in order to better feed the WDFW-StreamNet master databases and meet other urgent needs of the agency.	Data manipulation and analysis was performed for Fish Biologist Shane Hawkins to help determine population estimates of Lewis River wild fall Chinook. Historical survey counts and population estimates were queried out of the WDFW maintained StreamNet database. This data was used as part of the Pacific Power and Light (PPL) re-licensing agreement and future funding. Both Vancouver StreamNet staff assisted Regional Fish Biologist Dan Rawding with data analysis and final reporting of Cedar Creek adult and smolt data. This effort will help to further fund this data collection effort and to continue to populate these data and information-rich databases.

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, First Quarter 2005
IDFG	1	On an opportunistic basis, capture and update dam and fish passage facility data.	Some ambiguous dam Ids were updated in the regional database.
MFWP	1	Update dam facilities data, as necessary	There are no new dam or fish passage data available, so no data exchange is necessary.
WDFW	1	Update the dam database, adding records and improving field entries as warranted.	We questioned the keepers of the NID database why about 400 dams with unique NID codes are now missing. It appears we'll need to prod them for the information a third time.

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, First Quarter 2005
MFWP	1	Update the StreamNet hatchery database with Montana's public and private facilities.	The hatchery facilities data were exchanged during the first quarter of FY-05.

WDFW	1	Update the hatchery database, adding records and improving field entries as warranted, including record updates for related tables (i.e. HatcheryXProduction data). Convert and exchange data when complete.	We updated the internal codes grouping hatcheries under the hatchery complex and cleaned up the storage directories.

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, First Quarter 2005
CRITFC	1	Update available ocean and mainstem Columbia River harvest numbers through 2004, as available.	No work this quarter. This is an unfunded activity. We will see if other StreamNet partners can pick up this task.

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, First Quarter 2005
MFWP	1	Using the NHD, continue to update the routes using the updated NHD layer, including lakes; quality check the cross-reference between the LLID system and MFWP's water code system. Pursue any needs developed by the Steering Committee for a 1:24 K product.	Discussions have occurred with Montana's USGS representative concerning the completion of the 1:24 K hydro for the state. Although the USGS is interested in completing Montana, they are also interested in some financial partnerships. We will explore funding sources, including StreamNet, next quarter.
ODFW	1	Maintain and update, as necessary, the 1:100,000 scale hydrography files for Oregon.	Our GIS Analyst met with Regional and Washington StreamNet staff in Olympia to discuss strategies for moving forward with enhancing the regional 100k hydrography dataset with 24k stream routes. More discussion will be necessary before proceeding with the approaches that were discussed. As part of this effort, our GIS Analyst assessed issues related to Framework 24k routes, and mapping our distribution event data on top of those routes.
ODFW	2	Assist regional staff with the development of a hybrid 100k and 24k hydro layer that will enable display of all distribution data in a linear format	Our GIS Analyst compared hydrography from two different datasets along the Oregon / California border, assessing approximately 3 dozen routes where the differences in route length were significant. He provided comments to the regional GIS staff person regarding the specific issues with each and recommendations about which route to retain.

WDFW	1	Build and submit a "hybrid" layer containing 24K representation of all 100K Washington streams PLUS 24K-only streams containing StreamNet data.	On October 5 we met in Olympia with the GIS technical team to discuss details in preparing/adopting a 24K hybrid layer for StreamNet. Following the meeting, our Location Data Manager prepared (and shared) a work list addressing the issues and strategies for internally QCing the conversion of existing tabular data links. The WDFW StreamNet GIS Manager began work to replace WDFW 24K scale line work with NHD line work along the WA-ID border and in Northeast Oregon (where available). Initially, he converted the existing WDFW 24K hydro from a WRIA (state basin) basis to a HUC (USGS basin) basis. This facilitates swapping of our line work with HUC-based line work from the NHD dataset, and represents the necessary first step toward preparing a synchronized mixed-scale hydro layer for the four-state StreamNet region. A lot of program writing, debugging, and testing lies ahead. We now hope to have the Washington portion completed in the second quarter, FY-05.
WDFW	2	Finalize creation and QC of a 24K spatial/tabular lakes dataset to support data compilation and exchange for resident fish releases and other data under Objective 1.	Olympia StreamNet staff met twice with DNR to discuss our current lake layer and partially complete links to Wolcott's Lakes of Washington publication. DNR will use our database version of Wolcott to tie to THEIR lake layer. These meetings and data sharing jump-started the effort to re-format our tabular lake file, create a data dictionary, and correct some of the links. With the cleanup, WDFW is more prepared to finish our Wolcott links and react to the product DNR creates.

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

Project	Job	Planned work elements	Accomplishments, First Quarter 2005
MFWP	1	Continue to collect, centralize and maintain all stream restoration projects data for Montana using the "Future Fisheries Interface".	Initial review of the database structure started in the first quarter; this task has been reassigned to Dawn Anderson.
WDFW	1	Complete conversion and exchange of Washington habitat restoration project information extracted from IAC's PRISM system and 2000-2002 NWIFC PCSRF data, given that a final DEF exists for this data category. Scope out additional content from WDFW's LIP initiative and other sources as time permits.	We started converting a publication of habitat restoration and barrier terms into an electronic glossary database.

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, First Quarter 2005
IDFG	1	On an opportunistic basis, capture and update barrier data.	New barrier information was captured through our participation in the bull trout status review. The data have not been incorporated into our StreamNet barrier database, yet. As soon as the status review is completed we will capture the barrier data in StreamNet format.
MFWP	1	Maintain barrier location, species affected and other fields on stream barriers in Montana. Information will be collected on all species regardless of life history. Exchange Barriers data with the StreamNet database.	Data exchange was delayed because additional fish passage barriers were added during the bull trout status review conducted by Montana and Idaho. This effort is near completion and data are anticipated to be exchanged in the second quarter.
ODFW	1	Update and maintain Oregon's Barrier data and minimal Fish Barrier data development based on new barrier information, including information from non-ODFW sources.	New maps reflecting Oregon's most up-to-date barrier information were posted to the ODFW server in late November, making them available to everyone.
WDFW	1	Scope existing Washington state barriers datasets for a pilot data submission this FY. Data sources will at least include the Salmon and Steelhead Habitat Inventory and Assessment Project (SHIAP) and TAPPS (now renamed as the Fish Passage and Diversion Screening Inventory - FPDSI) databases	Our new Olympia Data Compiler started scoping the FPDSI fish barriers/fishways database managed by WDFW's Habitat Program and building cross-references to the newest StreamNet DEF and proposal. Natural barriers from SSHIAP are soon to be integrated into the FPDSI database as well. Through meetings with FPDSI staff and reviewing a copy of the voluminous Fish Passage Database manual, he was able to record the source field for each StreamNet Barriers DEF attribute where possible, and construct a short list of issues/questions related to this step. That list was posted to the Forum for comment in late December.

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, First Quarter 2005
CRITFC	1	Provide tribal juvenile abundance and/or outmigration data as time and availability allow.	No work this quarter. These data are typically available in corrected form in the second or third quarter.

WDFW	1	Continue maintaining and updating smolt trap databases on all traps in Region 5 (lower Columbia River). Scope out a pilot data conversion and exchange effort for Cedar Creek data.	Proofing the Cedar Creek smolt trap data has been completed and 8,230 records have been ported to the MS Access database. Documentation for this database has been ongoing and is almost complete. This database dates back to 1998 and was not maintained by the WDFW StreamNet data managers until 2002. Great effort has been expended to document data changes before 2002 so data is not misrepresented when compared to other years. Vancouver Data Compiler Michelle Groesbeck has done an outstanding job in bringing this data together and into a manageable form. The Vancouver Data Compiler also worked with the Regional Fish Biologist to complete population estimates for the tributary using collected smolt trap data. Since this data is in MS Access and few biologists in the region understand or can manipulate data in this database, she has put together canned queries to help them with their final reports and management decisions.

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, First Quarter 2005
FWS	1	Finish work on the new program to transform age information from the CRiS format to the new StreamNet format.	Hatchery return Age information for National Fish Hatcheries in the 2004 return year has been processed and added to the CRiS Age file.
IDFG	1	Compile and submit the 2004 field season age data from IDFG.	A wholesale correction and update was made to our age data in the regional database.
WDFW	1	Update and exchange age data records gleaned from hatchery returns and adult abundance exchanged data.	No age data work was done this quarter. Age data from previous years return will be exchanged next quarter. The 2004 age data cannot be entered until finalized and released by the agency.

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, First Quarter 2005
CRITFC	1	Provide productivity data from subbasin planning and other technical analyses as available.	Completed. Subbasin planning data for Oregon have been archived and delivered to the Regional staff. Access is provided through the StreamNet Web page.

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. A primary data management effort this year will be to Quality Check the data already contained in the StreamNet databases and correct as necessary, which may delay the delivery of data updates.

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, First Quarter 2005
CRITFC	1	Manage, maintain and enhance the computer systems (hardware and software) necessary for supporting the StreamNet Library, including system administration, backup and recovery, hardware and software upgrades, and security.	The Library server was scheduled for upgrade and replacement equipment was leased. Prior to the upgrade, however, the old server crashed just before Christmas. All data and files have been recovered and placed on the new server. We have a few remaining software configuration issues left to resolve. These will be completed in January. Library services were not significantly compromised during the change to a new server.
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.	Upgrades to ArcIMS 9.0 and ArcSDE 9.0 were completed. In addition, all of our client workstations were upgraded to ArcGIS 9.0 In 2004, the State of Idaho adopted a new map projection standard using the NAD83 datum, referred to as IDTM83. This map projection has been added as a standard projection to ArcGIS 9.0 with service pack 1. We began projecting our GIS layers to IDTM83 and rebuilding our SDE layers. Idaho Department of Water Resources donated 250GB of imagery in IDTM83. Progress continued in configuring our web site and Internet access. This will integrate our Internet, Intranet and Extranet with ArcIMS, Microsoft Reporting Services and our fisheries data applications, such as the Spawning Ground Survey and Juvenile Trap Application. We have installed a proxy on the IDFG public web server and configured both the State of Idaho and IDFG firewalls to deliver content outside IDFG.
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.	Ongoing system administration 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.	Routine system administration and management continued throughout the quarter. Significant effort was spent taking steps towards utilizing SQL Server, ArcIMS and ArcSDE, including acquiring and testing evaluation copies of the software and reconfiguring existing hardware addressing various connectivity and configuration issues to facilitate the efficient use of these software packages. Coordinating with other ODFW projects that utilize GIS software, our GIS Analyst initiated the purchase of updated licenses for our GIS software.
Region	1	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 GIS was maintained and updated this quarter, including the installation of service packs for ArcGIS and ArcIMS.
Region	2	Maintain and upgrade the StreamNet web server and software, including programming, system security, etc.	We maintained excellent web server up-time (99.5%+) during this quarter along with a significant reduction in overall errors reported in the logs. The reduction in errors is probably related to an update applied to the Apache web server that increased stability.
Region	3	Assist with development of XML schema based options for both incoming and outgoing data. Continue exploration of how XML can enhance data exchange.	An XML option was added to the download file types available for all report types.
Region	4	Maintain database servers and SQL Server software and databases; installing updates, patches and service packs as they become available. Manage logins and permissions. Routinely backup all databases. Assist with system administration and purchasing.	Routine maintenance of two SQL Servers was highlighted by the creation of agent jobs to automate daily, weekly & monthly backups of several additional databases, and porting of backups of the spatial data engine from disk storage to portable media to free storage space for the Commission's new asset tracking software that uses a SQL Server 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.	New software to download, store and manipulate collected GPS coordinates was installed on the Vancouver Data Manager's machine. Supporting software and updates for the ArcGIS Software was installed this quarter. All necessary software upgrades and security patches were installed on all computers managed by Vancouver StreamNet staff. With the Regional Programmer's effort and suggestions from our internal Information Services, we eventually resolved our StreamNet Forum access issues that came during a flurry of forum postings.

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, First Quarter 2005
CRITFC	1	Develop and/or maintain computerized databases, applications and interfaces that facilitate the entry, compilation, management and dissemination of tabular and GIS data.	Normal database management practices and functions were maintained. They will be reviewed and improved as appropriate during the data updating process in future quarters.
IDFG	1	Develop and/or maintain computerized databases, applications and interfaces that facilitate the entry, compilation, management and dissemination of tabular and GIS data.	We developed XML rules and tied them to our Idaho Fish and Wildlife Information System (IFWIS) framework. Migration of the Reference Program to .Net has been completed. This program is our basic StreamNet data management application. It contains information that is obtained from reports, publications, etc, including redd counts, hatchery returns, disposition, age composition and fish observations. Work to redesign our hatchery returns database design and migrate our existing data to comply with the new StreamNet hatchery returns DEF was begun.
MFWP	1	Develop and/or maintain computerized databases, applications and interfaces that facilitate the entry, compilation, management and dissemination of tabular and GIS data.	Minor changes were made to the MFISH database; the restoration projects table will be added to the MFISH website next quarter.
ODFW	1	Develop and/or maintain computerized databases, applications and interfaces that facilitate the entry, compilation, management and dissemination of tabular and GIS data.	Our GIS Analyst researched and installed SQL Server and ArcSDE and tested various components of each, including the design of an integrated Distribution, Barrier and Hydro geodatabase. Work was done to enhance charting controls for the web application framework we use. A generic charting control was created and other types of controls from it were specialized, such as a line plotting graph and a vertical bar graph. Using this base control will allow us to easily propagate any fixes or enhancements that we make to the suite of charting controls, while allowing specific controls to specialize in their respective areas.
ODFW	2	Continue development of a corporate information system.	The Database Manager/Developer compiled release builds of the application framework Dynamic Link Libraries for use in past and future projects, allowing the same block of library code to be shared between several applications instead of each application having to contain copies of the routines. He also made some changes to the framework to increase database concurrency and reduce possible errors between application and framework data. Work performed under Objective 2; Task 2; Job 1 also aids in the development of ODFW's corporate information system.

Region	3	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.	No new tools were required this quarter. Previous work was maintained.
WDFW	1	Develop and/or maintain computerized databases, applications and interfaces that facilitate the entry, compilation, management and dissemination of tabular and GIS data.	WDFW's 24K hydro coverages are maintained in separate WRIAs (Washington-centric watershed boundaries) and awkward to generally navigate in ArcGIS. Since one statewide coverage is too large for PC software, the Location Data Manager created a merged geodatabase file for the Columbia River and another for the rest of Washington. She also started researching the best directory structure for storing files to be used with ArcGIS or the free ArcExplorer. An initial good directory structure is vital because the paths must be re-set on any ArcGIS map or project file whenever files are moved.

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,

Project	Job	Planned work elements	Accomplishments, First Quarter 2005
CRITFC	1	Perform comprehensive QA/QC on all datasets maintained by CRITFC.	No work this quarter because data were not changed during the first quarter. This task will be completed as data sets are updated in future quarters.
MFWP	1	Manage data at the agency level, develop and maintain FGDC compliant metadata for GIS data, and exchange data to PSMFC according to deadlines specified in this work statement.	A review was conducted of the current GIS levels maintained by the Information Management Unit. Several data layers were reassigned due to staff changes. The FWP fisheries biologist responsibility layer was updated during the quarter and distributed to Fisheries Division staff.
ODFW	1	Manage ODFW-NRIMP and StreamNet data, including metadata development/maintenance, QA/QC activities, and work with regional staff as necessary to assure seamless loading of data into the regional database.	Our GIS Analyst reviewed a handful of distribution records from StreamNet for bull trout and redband trout where overlaps or other issues needed to be addressed, and worked with Regional StreamNet staff to clear these up.

ODFW	2	Perform comprehensive QA/QC on all Oregon Trends, Age, Harvest, Dams, and Barrier datasets.	Staff documented data compilation approaches/decisions related to maintenance of the trend and reference databases. This will assist in the QA/QC process and development of protocol documents by documenting existing guidelines that are followed, as well as identify and spell out new guidelines that are needed. Significant effort was spent this quarter ensuring the data quality of Oregon's existing Trend information. Our Data Analyst also performed QA/QC on Oregon Hatchery Return Data, working with ODFW Propagation and Regional StreamNet staff to fix any issues with data already posted on the StreamNet site. Updated spawner/recruit data were provided to Regional StreamNet this quarter to correct errors in existing trends.
ODFW	3	Coordinate and work with internal ODFW staff to improve the agency data collection efforts to allow more efficient compiling into internal intermediate NRIMP-Oregon StreamNet databases and/or StreamNet databases at the regional scale.	The Distribution Update Protocol Document is VERY near completion as we were able to resolve all the remaining issues in the draft version. Simple reformatting remains and also a redesign of the Procedures flow chart before we release it to the biologists and the public.
Region	2	Examine the StreamNet database for errors and report any found to the appropriate entity for correction. Continue to improve error-checking capabilities.	Summaries of data in major StreamNet tables were presented to Steering Committee members at their Fall meeting that identified issues about consistency of data compiled in several of the tables, such as Age (due to differences in the way fish aging is interpreted) and Hatchery Returns (due to incomplete migration by all agencies from the data exchange format specifications replaced in 2003).
Region	3	Whenever new tabular data with a spatial component are submitted to the Region (e.g., fish distribution, hatchery facilities, etc.), create regional GIS layers from this information where possible. Verify correct format, accuracy and logical consistency of spatial data sets and attributes through coordination with state GIS contacts and then load data to the regional database in coordination with the database manager. Post mappable layers to the online query system, the ArcIMS interactive mapping system, and as downloadable layers for StreamNet GIS users.	The GIS Specialist worked with the regional database administrator to address spatial referencing issues as they arose. He worked to improve location coding for non-stream point events, including hatchery and dam facilities. A focused effort is underway to QC the referencing of hatchery facilities and document the workflow involved in updating this dataset for download and use in ArcIMS.
Region	4	Maintain a library of StreamNet GIS layers for internal use and as downloadable data on the web site with complete documentation (metadata).	The regional GIS library was maintained and contact information was updated for all posted metadata. We plan to standardize the format of all metadata using ArcCatalog and provide metadata to the BPA in .xml format for use in their GIS Portal
Region	5	Obtain and refine layers such as ESUs, ecoregions, or elevations, and create cross tables for use by the query	Spatial data related to Critical Habitat designation were obtained from NOAA Fisheries.

Region	7	Coordinate efforts by the StreamNet partners to maintain and update, as necessary, the 1:100,000 scale hydrography files for the states and the PNW region.	We continued cooperation with the state GIS specialists to maintain the 1:100,00 scale hydrography. This included discussions with ODFW and CDFG to reconcile differences between the PNW hydrography and the "CalHydro" (1:100,000 scale routed hydrography) dataset developed by CDFG. This cooperation is important to ensure the proper functioning of the on-line query system and the compatible evolution of the two datasets.
Region	8	Coordinate efforts by the StreamNet partners to create a hybrid 1:100,000 / 1:24,000 scale hydrography for the states and the PNW region. Implement these changes at the Regional office.	Progress continues to accommodate 1:24,000 scale data from WDFW through the development of a hybrid dataset. WDFW is currently preparing their hydrography for submission to the region and is working to address border issues with ODFW and IDFG. CDFG is currently testing the use of high-resolution (1:24,000 scale) NHD in California and will share their experiences.
Region	9	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.	The existing cross reference tables were maintained.
Region	10	Update and append data as submitted by StreamNet participants. Maintain logs of data submissions and major database changes. Manage logins and permissions. Produce downloadable versions of the StreamNet databases to keep in synch with the updated regional databases. Create views and stored procedures for use by the web query system and in the data loading process. Routinely backup all databases. Create and revise database structures and indexes. Develop and run QA/QC processes on new and existing data tables to Isolate missing, erroneous or duplicative data and work with source agencies to correct problems.	Major data submissions were processed from ODFW (including new data trends, almost 2,000 new escapement data records, and over 8,100 Hatchery Disposition data records), CRITFC (including a library data exchange, escapement and Age data), IDFG (Hatchery, Hatchery Returns and Age data), MFWP (including Hatchery and Reference table updates). Location information was updated by WDFW and Hatchery information was updated by USFWS. Hatchery Returns and Age data were also submitted by USFWS, but processing was not completed during this project period. Summaries of records in major StreamNet data tables by table, compiler and the last project year each record was updated were developed. Feedback from data compilers showed an interest in having such summary information available on the StreamNet website, as long as it is organized by data category instead of data table (e.g. the EscData table includes data for seven data categories). We removed dozens of outdated StreamNet tables and then removed or modified views & stored procedures related to the deleted tables. New stored procedures were written that search all database tables for particular field values, or check for various inconsistencies or omissions in spatial cross-reference tables used by the StreamNet web query system.

Region	11	Assist the StreamNet Librarian to export the library reference database of StreamNet documents for routine inclusion in the StreamNet database for use by the web query	A complete StreamNet Library dump was transmitted from CRITFC to the regional StreamNet database. This information was reconciled with the StreamNet Reference table that associates each data record with the source of the information, and updates and additions were processed. In addition, the lengthy list of new Internet URLs that became available with this edition of the Library database were verified and URLs having broken or invalid links were reported to the StreamNet Librarian for investigation and correction. A few other minor problems, such as undesirable embedded carriage returns in text fields were also reported to the Librarian.
WDFW	1	Manage data at the agency level, develop and maintain FGDC compliant metadata for GIS data, and exchange data to PSMFC according to deadlines specified in this work statement.	No exchanges occurred this quarter due to the hatchery DEF no being finalized yet and WDFW escapement data not matching StreamNet escapement data (ASNID and NullFlag). These two will be exchanged next quarter. The Location Data Manager finalized the metadata drafted by the StreamNet GIS Manager for the Lakes and Facility layer. WDFW StreamNet staff reviewed the summary of data record counts by category provided by the StreamNet Regional Data Manager at the October Steering Committee meeting and provided him with a comment and a question to help clarify what was presented.
WDFW	2	Provide and update geo-reference field data as needed for all StreamNet data submissions. Improved geo-references generally contribute to multiple Objective 1 data categories.	We submitted a file to the StreamNet Regional Data Manager that corrected about20 streams that were miscoded as lakes. The Location Data Manager started researching the GPS readings collected by field staff. Currently many of the readings don't match the field note descriptions so there is a lot of strange data to weed through. This pilot effort would be aborted because of the issues, except we have learned the location for data that has been troublesome for a long time. She will make a last attempt to school the field compilers to research and resolve the readings themselves before we draw any conclusions about this pilot effort.
WDFW	3	Create standardized storage formats and protocols for area biologists to use with data collected at various fish collection facilities.	Work was performed on a Bull Trout trap database for WDFW biologists Steve Gray and Jim Byrne.
WDFW	5	Generate a MS Access table that contains links to GPS Index area maps, survey card database and master escapement database.	Steve Vanderploeg was hired to create a link between the GPS index area maps and the MS Access escapement database. This has not been finalized yet due to other priorities.

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 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

Project	Job	Planned work elements	Accomplishments, First Quarter 2005
IDFG	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 IDFG/StreamNet coordinator worked with a StreamNet technical group to finalize the StreamNet hatchery returns data exchange format.
ODFW	1	Monitor adopted and proposed data exchange formats and provide comments, feedback, and/or recommended changes as necessary. 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. New or modifications to existing DEFs will be submitted as warranted.	Staff communicated with Regional StreamNet and other StreamNet partners on issues related to the Hatchery Release, Hatchery Return, Fish Passage and Barrier data DEFs during the quarter. Our GIS Analyst continued efforts to refine the DEF related to the Fish Barrier table. Agreement was reached on nearly all outstanding issues related to the proposed fishway type categories. The one remaining issue regarding culverts and fishways and how to best categorize them in the database will be posted to a fish passage listserve for further discussion. Staff attended a Hatchery Return DEF technical meeting in Vancouver in mid-November. Representatives from Washington, Idaho, USFWS, and Regional StreamNet were also present. The discussion centered on the current Hatchery Return DEF and proposed new ways to organize it to better facilitate each state's varying degrees of hatchery return information.
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.	Substantial progress was made this quarter toward updating data exchange formats. A new DEF is due for completion early in the second quarter of the fiscal year. DEF updates completed or nearly completed this quarter include data structures and codes for location coding, fish migration barriers and fishway types, and hatchery returns and age. Significant research was required for the barriers update. The new DEF will also contain changes to the data structure for habitat restoration projects, and also changes resulting from a thorough comparison of the DEF to the existing SQL tables performed by the Regional Database Manager.

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.	Our new Olympia Data Compiler quickly reviewed StreamNet's newest barrier DEF proposal and joined in the DEF Forum discussion by posting a list of his comments. WDFW feels the Barriers DEF is essentially ready for testing with live data in the second quarter. Late November, the Location Data Manager and Regional Data Manager started researching and discussing the Hatchery DEF issues. A meeting was held to work out bugs and finalize the hatchery returns DEF for all parties involved. This resolved the data hold-up and work continues.

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

Project	Job	Planned work elements	Accomplishments, First Quarter 2005
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 improvements.	Final design modifications were implemented to make Oregon subbasin planning data available through StreamNet.
ODFW	1	Monitor and provide feedback on existing and new StreamNet Internet features.	Ongoing review of the StreamNet website took place throughout the quarter.
ODFW	2	Manage and maintain Oregon's web-based data integration, communication, and data transfer systems and their links to StreamNet.	Staff reviewed the entire NRIMP website and fixed/updated broken links. Incorporation of the Oregon.gov website design model into our web application framework continued throughout the quarter. A few websites we maintain were converted to this new format, including the Reference site. Many of our sites, or components of them, will not be converted due to the incompatibility of the Oregon.gov design to online interactivity. For the period of October through December 2004, our web server provided an average of 21,325 page views per month to an average of 2,624 unique IP addresses. A summary of StreamNet related Oregon website usage is summarized in Table 1. See Supplemental Information for a usage summary of other sites maintained by NRIMP.

Table 1. Use (page views) of the Oregon StreamNet related websites during the first quarter, FY-2005.

	Oct. 04	Nov. 04	Dec. 04
NRIMP (OR StreamNet)	6,488	6,866	6,438
CSMEP Web App.	5,967	12,268	2,189

Region	1	Maintain and improve the StreamNet Internet site, including correcting errors, adding or fixing links, improving performance, improving looks and usability, etc.	The StreamNet website was maintained and minor updates made.
Region	2	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.	Regional personnel learned some of the details regarding experimental design and data analysis of data collected following an EMAP sampling scheme. We realized that PSMFC personnel did not appreciate, and thus we do not make clear to our users, how different time series data sets in the StreamNet database relate to each other and are intended to be used as a unit. Research into how to analyze and interpret EMAP-format data sets began this quarter and continues into the second quarter. We intend to make available to StreamNet users the information they will need to fully understand how to construct full data sets and interpret the results.
Region	5	Maintain the GIS Data, Map, and PNW Reach File Internet pages.	All GIS related Web sites were maintained.
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.	A new Critical Habitat Interactive Mapper developed in cooperation with NOAA Fisheries went on-line December 13 and the new layout has received positive feedback. StreamNet's existing interactive mappers are being redesigned to employ this new layout. Tests are also underway to develop a more efficient and robust ArcIMS viewer based on the Active X connector and active server pages. The StreamNet Interactive Mappers are being monitored for site usage and performance to enable improved reporting and site optimization.
Region	8	Deploy new query system components and data categories that are approved by the Steering Committee	We deployed new report download file formats for all reports including XML, Microsoft Excel spreadsheets and an improved text file format.
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.	Use of the primary StreamNet website remained strong, with an average of 7,672 unique non-PSMFC visits per month from an average of 4,425 unique IP addresses, an increase of 4.2% and ¼%, respectively, from the previous quarter (Table 2). Use of the tabular online data query system averaged 12.7 visits per hour on a 24 hr day basis. New software to track use of the ArcIMS interactive map sites was instituted this quarter, and total map page requests approached the number of page requests for the main website; more page views were required to build maps than run the tabular query system. Top users of the web query system are listed in Table 3.

Table 2. Summary of use statistics for the StreamNet website during the first quarter of FY-05.

	Oct.-04	Nov. -04	Dec.-04
Main Web server			
Total Page Requests, tabular	68,330	69,562	62,884
Number of Visits	7,970	7,763	7,284
Unique Visitors	4,579	4,526	4,169
Data Query Page Requests	15,076	19,568	17,404
Unique Query Sessions	6,574	11,738	9,373
Unique Query Sessions / hr.	8.8	16.3	13.0
Data Reports Viewed	1,766	1,644	1,577
FTP Files Downloaded	1,359	1,637	911
ArcIMS Map server			
Total IMS Page Requests	41,552	42,570	61,828
Number of IMS Visits	778	999	1193
Unique IMS Visitors	429	530	635
Mean pages/visit	53	43	52

Table 3. Top users of the StreamNet website, first quarter FY-05.

User	Pages	User	Pages
Unresolved IP Address	4,848	ODoT	568
Private ISPs	3,624	USDA	362
Oregon State University	3,554	USFWS	318
Private Consultants	3,238	Nez Perce Tribe	306
ODFW	3,040	Idaho Power	292
BLM	1,094	U. Cal Santa Cruz	294
Cal Dept. Fish &Game	9,12	U.S. Army	208
NOAA	666	University of Idaho	206

Region	10	Maintain and enhance the functionality, look and usability of the StreamNet web-based query system.	No substantive changes were made to the look or functionality of the web query system this quarter besides those mentioned already.
WDFW	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 improvements.	The Olympia Data Compiler loaded and tested the latest StreamNet Independent Dataset software system (version 1.1.1). Initial install issues arose involving user-level permissions, which were set below "administrator" on his machine. Support staff with administrator privileges were able to successfully install this new version. Note that WDFW Windows 2000 users only rarely are granted administrator level rights, so tools that are built for StreamNet compiler use must be compatible with a reduced level of rights.

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, First Quarter 2005
CRITFC	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.	Library data requests are reported under Objective 3.
FWS	1	Respond to requests for information.	2004 Age and Return information has been sent to cooperating agencies.
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 in quarterly reports.	We continued filling data requests on a pace typical of past years, but because of an especially heavy work load this quarter, we did not log those requests.
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.	Staff handled 15 Fisheries GIS requests this quarter. The rating system conducted in 1998 from MFISH data was recently used to develop rules for dredge mining in Montana. We met with DEQ staff on several occasions to address draft policy.
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.	Staff responded to 37 information requests during the quarter (Table 4).

Table 4. Type and requesting organization information for help requests serviced by Oregon StreamNet staff during the first quarter, FY-05.

Request Type	No.	Requester	No.
Analysis	3	Federal Agency	4
Data	16	University	3
Document	2	State (non-ODFW)	3
Map	9	ODFW	20
Other	6	Watershed Council	1
Tech. Support	1	Local County	1
		Consultant	4
		Private Citizen	1
Total	37	Total	37

Region	1	Respond within one business day to requests for data, information or help. Log and report responses to all requests received.	Staff responded to 21 information requests during the quarter (Table 5).

Table 5. Number and types of information and help requests serviced by Regional staff during the first quarter, FY-05.

Requester Type	No.	Type of Request	No.
Environmental group	3	Can't find data	2
Federal agency	6	Complex request	1
General public	3	Data currency	2
Local government	1	Data interpretation	1
Nonprofit organization	1	Error report	4
Private consultant	1	GIS	7
State agency	3	Other	1
Undergraduate student	1	Query help	1
Total	19	Total	19

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.	Twenty-nine data requests involving StreamNet-related data were filled this quarter and were logged into the WDFW-StreamNet requests database. GIS digital data (fish distribution, hydrology) were involved in nearly half of the requests, while maps and fish survey data comprise the rest. Half of the users were WDFW staff, with the rest evenly distributed between government entities (including tribes) and private consultants.

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, First Quarter 2005
CRITFC	1	Coordinate source material submissions for data compiled by participants.	Reference documents for data submissions were received from participants and scheduled for cataloging.

CRITFC	2	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.	Using print outs from the Bonneville Power Administration's report query, we began working on verifying that we have a complete collection of documents produced by the BPA Environment, Fish and Wildlife Division.
CRITFC	3	Maintain and develop a collection of journals related to fisheries and aquatic sciences as well as other related scientific topics.	We created a prioritized list of journals for renewal for 2005.
IDFG	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.	We updated some hatchery return and age references in the regional database.
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.	Work continued on this ongoing task.
ODFW	1	Provide originals/copies of all documents and reports referenced in the compilation of new StreamNet data holdings, but not already housed in the StreamNet Library.	Staff spent time researching and correcting reference issues involving the Observation and Barrier databases, along with a number of other reference issues that need to be worked out, including identifying and addressing duplicate references.
ODFW	2	Continue organization of ODFW Library documents and update the library bibliography with new titles as they are identified.	Organization of the ODFW Library was put on hold this quarter due to the Library Technician position being vacant.
WDFW	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.	Documents describing Hanford reach aerial fall Chinook counts and upper Columbia River spawning ground counts were received from Grant County PUD. The data from these documents will be added to adult abundance datasets and exchanged next quarter, accompanied by copies of these source documents.

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

Project	Job	Planned work elements	Accomplishments, First Quarter 2005
CRITFC	1	Provide and maintain appropriate facilities for the storage and public use of the StreamNet Library collections.	We began working on creating an appropriate atmosphere to preserve materials in the library. Currently, temperature and humidity are not monitored. We are working to monitor both. Temperature should be 68-70 degrees and humidity should be kept at 50-55 percent to preserve paper based materials.

CRITFC	2	Catalog and organize the materials for ease of use by clients and staff	A large number of documents were added to the collection during the quarter (we will update with numbers when the catalog is accessible).
CRITFC	3	Provide access to the catalog of materials via the Internet and update the online catalog on at least a monthly basis.	The catalog was updated regularly. A new server was received to publish the catalog to the Internet.
CRITFC	4	Maintain and Implement a plan to place electronic documents in the catalog and on the library website.	We prioritized documents for electronic collections. The librarian attended training for copyright management and project development for digital collections.
CRITFC	5	Develop and keep a schedule of open times and reference desk staff hours	Staff were scheduled and the reference desk was handled during posted hours.

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, First Quarter 2005
CRITFC	1	Provide information and reference services to library clients	Library usage remains stable.
CRITFC	2	Provide information about services and hours to library clients via print and Internet	The Library webpage was updated regularly for holidays and open hours. When necessary, signs were posted at the entrance to announce openings and closings.
CRITFC	3	Provide interlibrary borrowing services for library patrons to access materials not yet owned by the StreamNet Library.	Information was not compiled due to holiday and vacation schedules. This information will be included in the next quarter's report.
CRITFC	4	Provide access to hardcopy and electronic files of draft and final documents related to subbasin planning and the NPPC amendment process.	We are looking at how to best serve these materials via the Internet and catalog.
CRITFC	5	Identify changes and new features that will improve delivery library services	We are considering expanding hours to the weekend. While there has not been an overwhelming demand for these hours, there has been some interest in being able to visit the library during non-business hours. Opening for a few hours on Saturday or Sunday seems like a good response to this demand

Objective 3 Library and reference services

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, First Quarter 2005
CRITFC	1	Provide interlibrary lending services for other libraries to access the library's unique collection.	The library provided nearly 100 items to other libraries.
CRITFC	2	Maintain memberships in appropriate library and subject-related associations, e.g., International Association of Aquatic and Marine Science Libraries and Information Centers, Natural Resources Information Council, Organization of Fish and Wildlife Information Managers, and Pacific Northwest Library Association	We renewed memberships in professional organizations. The librarian continues to be a moderator for professional email lists as well as an officer in NRIC.
CRITFC	3	Provide consultations for groups and other agencies on library organization and services	We continued to work with the Johnson Creek Watershed Council on their library. A letter of agreement was requested by the Audubon Society to house their collections. The Audubon collection will be transferred to the library in the next two to five years.
CRITFC	4	Coordinate with other StreamNet libraries, library clients and other libraries to improve service to clients and limit duplication of efforts	We continued to work with other libraries that have similar collections, primarily through providing inter-library loan services to the region.
CRITFC	5	Work with subbasin planning groups and TRTs to identify modifications and new uses to make information related to these processes easier to retrieve.	No further work was accomplished in this area. Subbasin planning activities were substantially completed in FY04 and we do not anticipate significant activity under this task in FY-05.

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, First Quarter 2005
IDFG	2	Provide data inventory services to the Coordinated Systemwide Monitoring and Evaluation Project (CSMEP).	The IDFG/StreamNet coordinator trained two new data technicians to enter CSMEP data inventory data into the newly developed CSMEP web application. The data technicians entered the Selway and South Fork Salmon pilot data into the web application, and entered data inventory information from two new basins, the Upper Salmon and Middle Fork Salmon.
ODFW	1	At the agency level, provide tabular and/or spatial data, technical advice/assistance and data services to Fish and Wildlife Program participants, as requested. Support F&W Program activities, such as R, M & E, subbasin assessment, etc., within available time and budget under base level funding.	We released the CSMEP database web application for official use on October15th, and continued to manage and maintain the application, incorporating requested changes as needed. Also, we created a summary of the updates that have been made to the application as requested by one of the CSMEP biologists. Our Data Technician entered all data records from the Imnaha and Lower Columbia pilot subbasins into the CSMEP web application, at the request of Oregon's CSMEP Biologist. She also spent time on the harvest data, making it more complete and accurate. Our Data Technician reviewed the Fifteenmile Subbasin plan looking at the status of focal species and for data sources, in response to Tom Iverson's (CBFWA) request for an at-a-glance approach to comparing species status across subbasins within the Columbia Basin.

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, First Quarter 2005
CRITFC	1	Participate in various NPCC planning and management work groups to improve and coordinate regional information management programs.	The Project Leader serves on the steering committees of the Pacific Northwest Aquatic Monitoring Partnership and the Northwest Environmental Data-network and participates in the John Day Analytical Framework Group. Data management and sharing issues are regularly discussed in these groups. We will be providing revised John Day watershed assessment data and limiting factors data to the latter group in the second quarter.
CRITFC	2	Develop strategies for ESA recovery planning and NWPPC subbasin planning efforts to ensure data and technical literature are captured and made regionally accessible. This will be done "as possible"' under base level funding.	Base level funds are not available for this task.
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.	We met with CBFWA staff during the Steering Committee meeting in Vancouver to discuss the use of subbasin plans and their content in upcoming regional efforts.
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.	Oregon StreamNet staff participated in regularly scheduled CSMEP meetings and conference calls throughout the quarter. The Oregon StreamNet Project Leader participated in the joint PNAMP / NED meeting on December 7th, and the Joint PNAMP/CSMEP meeting on Dec. 15th.
Region	2	Continue participation on the Program Team for the Council's project to develop a Northwest Environmental Data-network to convey recommendations based on experience in the development of a regional approach to data	The Program Manager continued participation in the NED program group. Ultimately, regional scope data management approaches are being explored, but it is clear that under nearly any scenario, regional scale data management will be based on existing data management efforts until significantly greater resources are brought to the effort.
Region	3	Continue participation in the Pacific Northwest Aquatic Monitoring Partnership for watershed and fishery data coordination. Participate in other R, M & E groups, including the Action Agencies, Federal Caucus and CBFWA, to provide support and data management expertise.	The Program Manager continued serving on the PNAMP Steering Committee, and also provided time of the Regional Fisheries Biologist to assist with database development for project tracking to the PNAMP Effectiveness Monitoring group.

Region	4	Participate with CBFWA in support of data management efforts, including work with the Collaborative Systemwide Monitoring and Evaluation Project.	The Program Manager continued participating with the CSMEP project. StreamNet has volunteered to provide two person-months of data technician help per state per year to assist the fish and wildlife agencies conduct data inventories.

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, First Quarter 2005
CRITFC	1	Continue to provide data and analytic support to Oregon subbasin planners as needed, and as base funding resources allow.	The Project Leader is leading a group to update and revise the watershed assessment for the John Day subbasin. These data will be added to the StreamNet website when completed.
MFWP	1	Work with subbasin planners to determine type of data within the Montana subbasin plans and opportunities for incorporating those data into StreamNet. Assist in providing data on the FWP website.	No assistance was necessary or requested during this quarter.
Region	1	At the regional level, and within existing resources, work with subbasin planning groups to provide needed information from the StreamNet database. Work with regional entities and subbasin planning groups to provide data management expertise and services related to capturing data developed during the subbasin planning process and making them readily available. Assist with archiving subbasin planning data, and means of publicly distributing them, as requested. This effort will have to be scaled to fit within existing resources and available time.	The Regional Fisheries Biologist worked with CRITFC personnel to archive and make available the subbasin planning data and information for Oregon subbasins that CRITFC helped capture during the TOAST (Technical Outreach and Assistance Team) effort. CRITFC personnel modified the web page that StreamNet had previously created to help subbasin planners find data on the StreamNet website (http://www.streamnet.org/subbasin/2001-subbasin-data.html). Originally this page contained links to materials provided by StreamNet for use by subbasin planners. CRITFC added information and links about data and materials produced by the subbasin planners. The existing and new files were rearranged on the StreamNet Internet site for clearer navigation. Data from most Oregon subbasins is included in the archive, and we hope to eventually get data and other materials from all subbasins. The Regional Fisheries Biologist met with Phil Roger (CRITFC), Peter Paquet (NPCC), and Chip McConnaha of Mobrand Biometrics to discuss strategies for capturing these data from all subbasins.

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, First Quarter 2005
CRITFC	1	Continue efforts to capture and archive subbasin planning data and literature, as base funding allows.	Oregon subbasin planning data were added to the StreamNet website in the first quarter.
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.	No assistance was necessary or requested during this quarter.
Region	1	Coordinate with BPA and BPA contractors, StreamNet cooperators, and others to capture data sets, reports, and other electronic materials for inclusion on the StreamNet Independent Data Sets Internet page. Post these items on the Independent Data Sets page.	As of the end of the first quarter the ability to archive data sets on the StreamNet Independent Data Sets page has not been advertised. Early this quarter the Nez Perce Soil & Water Conservation District (Nez Perce County, Idaho) found the independent data sets page and tool and submitted a stream temperature data set. This was the first actual use of the data submission tool by an entity outside of StreamNet, and data capture went fairly smoothly. The submission, in addition to the temperature data, included a spreadsheet program that allows users to analyze and graph temperature data relative to water quality standards. Unfortunately, the data file sent got corrupted in transfer. The data that did come through were posted, and late in the quarter the NPSWCD submitted additional stream temperature data, which were added to the existing data set. A review of the on-line Independent Data Sets page resulted in the discovery that the search function was not querying the correct set of fields. Adjustments were made and the correct fields are being searched as of late November.
Region	2	Review StreamNet Links web pages. For Internet sites that provide on-line data, add the sites to the Independent Data Sets page.	This task has not begun in earnest. However, the data set for the pesticide ruling was added to the Independent Data Sets page to make another area where users can find this information.
Region	3	Solicit feedback on the use of the Independent Data Sets submission tool. Make changes to the tool and IDS web page as appropriate. Assist users with the IDS page and the IDS submission tool.	The Nez Perce Soil & Water Conservation District needed minor assistance for the installation of the independent data sets tool. A shortcoming of the computer program is that it must be installed to a user's hard disk. This can cause difficulties for agencies that restrict privileges on users' computers. After telling NPSWCD of the need for administrative rights to install the software no other problems were encountered in the installation.

			A minor change to the program was needed this quarter due to a change in network security at PSMFC. Passive FTP transfers became required, but the FTP object from Microsoft that was used in the Independent Data Sets tool cannot perform passive transfers. An Internet search resulted in a free FTP ActiveX component from Chilkat Software that let this problem be overcome. For long term planning we intend to follow different paths based on how extensively the Independent Data Sets archival function is used. If extensive use is anticipated then the Programmer will create a better, web-based tool that does not require installation. However, we wish to ensure that this effort will be worth it before committing his time to this task. In the near term, we have begun creation of a spreadsheet to capture the information. This will not be as fool-proof as a program designed for the task, but if use proves to be small this may be a better alternative than expending the limited time of the programmer.

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, First Quarter 2005
Region	1	Maintain the Protected Areas database. Provide access to the Protected Areas data through the online database and through the interactive map application. 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 database was maintained.

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, First Quarter 2005
All Cooperators	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 fall meeting of the Steering Committee was held Oct. 28-29, hosted by FWS at their new USFWS office in Vancouver, WA. Topics included the CSMEP project, the bull trout status review, consideration of a request for a means to provide overview tracking of salmon status, handling EMAP format randomized data, and potential data types for future work. Internal issues discussed included unrolled hatchery release data, archiving changes in fish distribution and progress toward a 24K hydrography. All cooperators prepared for and participated in the meeting.
All Cooperators	2	Supervise project staff at the cooperator level to provide guidance and staff development	All cooperators except FWS performed routine supervisory functions during the Quarter. MT moved two positions to Helena to consolidate the personnel and activities associated with the Information Management Unit. Lydia Bailey was promoted to the manager level in charge of GIS and Natural Resource data for the agency. Adam Messer was hired to a redefined position emphasizing wildlife and data analysis. Jeff Hutten will remain in Kalispell as the StreamNet western Montana representative, half time on StreamNet. OR StreamNet staff in Corvallis attended Medic First aid/CPR training as required for all ODFW employees. The hiring process for a new Library Technician and a Cartographer was initiated this quarter. WA hired Greg Lippert as the new Olympia Data Compiler. The Vancouver Data Manager and Data Compiler met to facilitate data flow and direct work. The Location Data Manager directed the new compiler and established his initial work plan. She also assisted interviewing for an internal Biological Data Systems compiler/programmer.
All Cooperators	3	Manage expenditures to accomplish the jobs in the Statement of Work within the approved budget.	All cooperators exercised routine budget controls during the quarter. Subcontractors were encouraged to ensure their agencies submitted final FY-04 invoices to PSMFC within the shortened timeframe required by BPA this year. PSMFC submitted the final invoice billing to BPA.

Region	4	Develop the annual project proposal and budget within submission deadlines.	The draft FY05 project proposal was finalized and submitted to BPA this quarter. This task included a full assessment of the inventory. Regional personnel worked with PSMFC administrative staff to straighten out the inventory listing so that future inventories go more quickly.
All Cooperators	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	All cooperators developed and submitted input to the FY-04 fourth quarter performance report. In addition, the subcontractors began work on the FY-05 first quarter performance report at the end of the quarter as a result of the impossibly shortened report deadline in the new FY-05 contract with BPA. WA submitted its input to the first quarter report on the last day of the quarter.
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 Fourth Quarter report for FY-04 was completed and submitted to BPA. Staff members began work on input to the FY-05 First Quarter report in order to meet the impossibly shortened deadline for submission to BPA.
All Cooperators	6	Submit the draft FY-04 annual progress report for the sub project to PSMFC within 50 days of the end of the fiscal year,	All cooperators provided input for the FY-04 Annual Report. They also reviewed and provided feedback on the draft report.
Region	6	Submit the FY-04 annual progress report to BPA within 60 days of the end of the fiscal year.	Input for the FY-04 Annual Report was received from the cooperators and a draft report was prepared and sent out for review and editing. The Program Manager was hampered in completing the report on time by a family medical emergency. The report will be submitted early in the second quarter.

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, First Quarter 2005
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.	The IDFG/StreamNet coordinator participated on the IDFG Standard Stream Survey (SSS) committee. This committee is responsible for developing a standard stream survey database and application to be used by all IDFG fish biologists that conduct stream surveys. Due to much of the work of IDFG/StreamNet to build a comprehensive fish information system, the SSS incorporated many StreamNet standards and will be highly compatible with StreamNet. The SSS should prove to be an effective, electronic source of information for StreamNet.

			StreamNet staff worked with non-StreamNet staff to oversee the data compilation and preparation for the 2004 bull trout status review. We worked with workshop participants to provide data proofing and updating, formatted data into final forms, produced queries for data analysis and helped write sections of the report.
MFWP	1	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.	We worked with staff from the genetic labs at the University of Montana and Montana State University on standardized genetic reporting. A database front end using these standards was finalized this quarter.
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.	We attended the User Workshops for the OWEB North Coast Prototype Web Portal on Oct. 6th and Nov. 12th. Our data management staff continued to work with North Coast Web Portal staff regarding the interoperability of their upcoming portal system to the OPSW metadata site. Staff coordinated with ODFW's Fish Screen and Passage Program to craft a funding proposal for the development of a statewide barrier restoration prioritization system. Staff met with ODFW Propagation and Information Systems Division staff to discuss issues and potential redevelopment of ODFW's Hatchery Management Information System. Our GIS Analyst attended the GIS Project Leaders meeting in Portland in early November and reported on ODFW GIS activities. He also coordinated with staff from the Geospatial Enterprise Office in regards to fish passage barrier GIS data standards. Our Data Analyst attended a Pacific Northwest Water Quality Data Exchange presentation in Salem to determine if any data was applicable to StreamNet.
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.	WDFW StreamNet GIS staff worked with Habitat Program staff and The Nature Conservancy to construct a standard geospatial database for EDT reach data and analytical results for Washington state provinces of current interest to TNC. WDFW StreamNet staff were responsible for creation of EDT reach points in the Upper Columbia (WRIAs 45, 46, 48 and 49) and the Klickitat basin (WRIA 30).

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, First Quarter 2005
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.	We reported to the North Pacific/International chapter of AFS on the tribal perspectives on the Subbasin Planning and ESA Recovery Planning efforts. The presentation described the success and problems of data management during these processes.
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.	The Manager attended the Fisheries Division Manager's meeting in September to discuss various data management projects and the Montana Angler Forum to demonstrate the "Montana Fishing Guide", the recreational version of StreamNet data.
ODFW	1	Produce public informational documents on StreamNet data activities for natural resource oriented publications, give oral presentations to relevant user groups, and participate in various meetings and forums in support of project goals.	Our Data Technician presented information on various fish runs, salmon life history, Celilo Falls, what Lewis and Clark would have seen at the falls, and what that area of the Columbia is like now, at Outdoor School for the Corvallis School District.
Region	1	Publish at least two editions of the StreamNet Newsletter during the fiscal year, providing readers with information about StreamNet activities, available data, data updates, new data services, etc.	Some additional preparations for a StreamNet newsletter were conducted this quarter, but a newsletter was not sent. We anticipate issuing the first newsletter for FY-05 in January.

Supplemental Information

Work accomplished outside the specific work elements in the SOW

This section describes specific accomplishments during the first quarter that did not relate specifically to any of the Tasks / Work Elements in the annual Statement of Work. These activities either were performed on StreamNet contract funding but related to topics that were not specifically covered by a task or job in the Statement of Work (SOW) or they were performed by staff of the various StreamNet projects but on other funding. Work is often done by StreamNet staff on other funding because the StreamNet contract is not always sufficient to support all staff time. Such work is reported here when it relates specifically to StreamNet objectives or is ultimately of benefit to the project.

Project	Accomplishments, First Quarter 2005
CRITFC	Many of the activities reported above by the Project Leader were supported in part or in full by CRITFC or other funding sources.

MFWP Discussions continued between FWP and the Montana Natural Heritage Program with respect to integrating that program into FWP. Integrating data activities between the two agencies continues and determination of how NHP will fit into the Comprehensive Fish and Wildlife Plan (CFWP) is still under discussion. IMU staff continued to provide information management services to the CFWP including refinement of the species, habitat and survey/inventory portions of the plan. Considerable time has been devoted to developing a new agency level approach to information services requests. The electronic request tracker continued to refined and its use required by FWP staff; the first round of large requests were reviewed by a joint IMU/IT Bureau group, recommendations were made to the Information Services Steering Committee and work will now begin on these 40 larger requests.

ODFW We continued to provide data management, access, dissemination, and web development support to ODFW's Marine Resources Program (MRP). Specifically, we are designing and developing a website to provide fishery quota status information to the public. We are also web enabling MRP's nearshore projection application.

Staff continued to support the Oregon Plan Review (Metadata Warehouse) site and provide technical support to numerous users of the site. We also ramped up our support of the Oregon Plan Assessment via data compilation of Oregon Watershed Council datasets, data management, database and web site development.

Oregon StreamNet staff support of the Statewide Wildlife Conservation Strategy continued throughout the quarter, mainly focused on providing GIS and analytical support.

Web use statistics for the various web sites maintained by or related to Oregon StreamNet are provided in Table 6.

Table 6. Page views recorded in the first quarter, FY-05 for the web pages maintained by or related to Oregon StreamNet.

	Oct. -04	**Nov. -04**	**Dec. -04**	**Distinct IP's (monthly mean)**
Oregon Plan Metadata Warehouse	278	191	1644	19
Or. Plan Review	417	281	840	18
Oregon Fish Finder	2534	2398	1959	327
Marine Resources Program	54	25	4018	11
Fish Screening and Passage	84	12	206	4

Region The GIS Specialist completed and published the Critical Habitat Interactive Mapper in cooperation with NOAA Fisheries. This new application went on-line December 13, 2004 and includes links to spatial data and metadata for download from StreamNet and NOAA Fisheries. Improved base data layers were acquired and the improved layout and functionality are being used to update the other existing StreamNet IMS applications.

WDFW Vancouver StreamNet staff finished reviewing all the data and making appropriate corrections to dataset inventory work being performed for CSMEP. A total of 303 inventory records were entered into the CSMEP web application, with each one being reviewed for accuracy. A CSMEP planning session for Upper Columbia basins (Methow, Okanogan) was held on December 8 in Wenatchee. The WDFW StreamNet Lead built a list of data contacts from multiple agencies in the area and sent out information packets and invitations to share their expertise on any relevant M&E datasets. These activities were performed on funding outside the StreamNet contract.

WDFW filled a vacant programmer/database manager position in the Biological Data Systems (BDS) Unit (which houses WDFW StreamNet) to regain full-time support for statewide spawning ground survey data, age data, and escapement data. While this person will work out of Headquarters in Olympia, we foresee over time that this extra support will help reduce some of the workload on our Vancouver StreamNet staff, allowing them to expand their data compiling into other needed data categories.