



StreamNet Project

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FY 2002 Work Statement

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

Three fourths of the project consists of sub-projects within the state fish and wildlife agencies, Columbia River Intertribal Fish Commission and US Fish and Wildlife Service to develop databases within the respective agencies and facilitate data transfer regionally. In addition to administratively housing the StreamNet sub-projects, these cooperating agencies also contribute in kind support. The kind and amount of support varies between agencies. All agencies provide at least some salary support for their StreamNet Project Leader (1 month from CRITFC and ODFW, 3 months from IDFG, 8 months from MFWP, 10 months from FWS, and 12 months from WDFW). Several provide use of servers or other computer equipment and services that are not covered by charges for indirect costs. All contribute time by biologists and in some cases data entry staff to provide data to the project. MFWP provides \$65,000 worth of in-state travel, office space, computers and office supplies.

This document is the FY 2002 Work Statement for the StreamNet Project. Not all tasks identified in the Work Statement apply to all participating agencies. Each participating agency contributes work to a subset of the project tasks, with their responsibilities detailed individually for each task. The intent of this format is to provide clarity concerning the total activities addressing each project task and the role of each project participant. This combined Statement of Work covers Federal Fiscal Year 2002, from October 1, 2001 through September 30, 2002.

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 routed hydrography (GIS stream network) so that different kinds of data can be compared on a geographic basis and mapped. The project utilizes the Internet as its primary means of data distribution, but also provides custom data services to FWP participants. The StreamNet web site provides access to information in a queryable database and also provides maps, individual data sets not contained in the queryable database, and library references. All data in the StreamNet database are referenced to source documents that are housed in the StreamNet Library.

Work priorities for FY 2002 include updating existing long term data sets, managing the data and infrastructure necessary to maintain and deliver data, maintaining the StreamNet Library, providing data services to regional entities associated with the Fish and Wildlife Program, and project administration. This year the distinction between anadromous and resident fish data in the data development objectives was dropped. In stead, the agencies indicate in each individual job whether the work is directed toward anadromous or resident species for each particular data type. This change is more a change in organization than in project direction. The majority of work remains focused on anadromous species due to the sport and economic value of these species and because of associated Endangered Species Act aspects. However, efforts are also underway to develop increased information on resident species distribution, and increased effort is directed toward identifying resident species information that may be developed by other projects funded through the FWP and obtaining those data for archiving so that they are more widely available.

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Objective 1 Data Development and Updates, Priority Data sets

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. These priority data types will 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.

Objective 1 Data Development and Updates, Priority Data sets

Task 1 Distribution and life history (use type)

Document the occurrence, distribution and life history characteristics of native fish species, both resident and anadromous. Project participants have placed a high priority on updating these data during the fiscal year, utilizing newly re-defined use types.

<u>Project</u>	<u>Job</u>	<u>Planned work elements</u>	<u>Date Due</u>	<u>Deliverable</u>	<u>Lead</u>
IDFG	1	Compile available IDFG data on fish distribution into the IDFG/StreamNet Fish Information System. These data will come primarily from Collecting Permit reports and IDFG files being digitized via a BLM Challenge Cost Share grant. Both of these data entry efforts are independent of StreamNet. Other data will be collected from incidental observations in other tasks. Convert these data into StreamNet data exchange format and send to PSMFC as they become available.	Periodic	Updates to fish distribution data.	Murdock
MFWP	1	Complete Distribution and Use Types dataset from data collected from biologists, documents and reports during 1999-2000 using LLID stream routes. Exchange the data to the StreamNet database in the approved DEF format.	1/02	Updated data set exchanged to regional database	S. Carson
MFWP	2	Visit MFWP biologists in 2002 to collect 2000-2001 fish distribution and supporting survey data and references. Obtain data from federal biologists using our developed interface. Input all this information into the MRIS tables.	8/02	Information collected; updated data tables	S. Carson, J. Hutten
ODFW	1	Update, maintain, correct and exchange anadromous and resident fish distribution information (DistUse and DistPresence tables). Efforts will focus particularly in the Upper portion of the basin (NE Region, upstream of the Hood River basin).	8/02	Updated event data exchanged to region	Bowers
ODFW	2	Update (and modify if needed) the Fish Presence Survey database which helps populate the DistPresence table. These data will update the distribution data developed under Task 1.1.	As data are submitted from field staff.	Updated database	Herber
ODFW	3	Update (and modify if needed) the Incidental Fish Observation database, which captures incidental species observations not routinely reported in agency documents, which helps populate the DistPresence table. These data will update the distribution data developed under Task 1.1.	As data are submitted from field staff.	Updated database	Cooney
Region	1	Assist data contributing agencies in development of data, including formatting, coding, data entry, error checking, and submitting to the regional database.	Ongoing, on Request	Assistance to data contributing agencies	Graves, Banach, Kinney
WDFW	1	Incorporate field updates for Washington fish distribution and use data (when provided) into WDFW's GIS database, with emphasis on bull trout and other sensitive salmonids this year. Update tabular files via export from the GIS database. Convert spatial and tabular data to new StreamNet exchange formats and submit to PSMFC	1/02	Updated local and regional databases	O'Connor

Objective 1 Data Development and Updates, Priority Data sets

Task 2 Adult abundance in the wild

Develop and maintain information on adult abundance for native fish species, resident and anadromous, including escapement, redd counts, peak spawner counts, trap counts and dam and weir counts. 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. Priority is given to updating these data through 2000.

<u>Project</u>	<u>Job</u>	<u>Planned work elements</u>	<u>Date Due</u>	<u>Deliverable</u>	<u>Lead</u>
CRITFC	1	Update existing tribal escapement data through 2001	1/31/02	Updated escapement trend data sets exchanged	Forrest
CRITFC	2	Update mainstem Columbia and Snake River dam counts through 2001 and provide updated data to the StreamNet database.	3/02	Updated dam count data sets exchanged	Forrest
IDFG	1	Submit 1998, 1999, and 2000 field season redd count data.	12/01	Redd count data exchanged to region.	Murdock
IDFG	2	Compile year 2001 field season redd count data and submit to PSMFC.	4/02	Redd count data exchanged to region	Brown
MFWP	1	Complete input of 1999-2000 data, including trend, count and references; exchange to StreamNet.	12/01	Data submitted to StreamNet database	S. Carson, J. Hutten
MFWP	2	Collect all 2000-2001 survey data during field office visits.	4/02	Acquired data from field offices	S. Carson, J. Hutten
MFWP	3	Input 2000-2001 data into MRIS, including trend, count and references. Provide data in data exchange format to regional StreamNet staff if completed.	9/02	Updated MRIS data set; data exchanged to StreamNet	S. Carson
ODFW	1	Update existing abundance and indices trends (escapement, redd counts, trap counts, peak/other spawning counts, etc.) where data collection continues for anadromous and resident species through 2000 and modify as needed to adhere to any new data exchange standards. Three data submissions are planned.	1/02, 5/02, & 9/02	Updated Oregon trends exchanged to region, three submissions planned	Hurn
Region	1	Assist data contributing agencies in development of data, including formatting, coding, data entry, error checking, and submitting to the regional database.	Ongoing, on Request	Assistance to data contributing agencies	Banach, Kinney
WDFW	1	Research, compile, convert and submit natural spawner data updates (returns and/or redd counts) through 2000 (and 2001 as available) for available species (Columbia River and Puget Sound).	8/02	Updated database and exchange to region	Woodard
WDFW	2	After the WDFW dam layer is in place, consult the biologists to scope and collect any existing dam and weir counts that might not already be captured in our on-going Adult Abundance collection.	9/02	Work plan, more adult abundance data if it exists.	Woodard

Objective 1 Data Development and Updates, Priority Data sets

Task 3 Hatchery releases

Develop and maintain information on the release of hatchery reared fish. Priority is given to updating anadromous release records using RMIS data for anadromous species through 2000. Release data for resident species are currently low priority and will require specific resources in the future. Efforts this year will focus on creating cross references between PSC release codes and LLID stream location identifiers. We will explore means of providing data on specific release locations rather than more general PSC codes.

<u>Project</u>	<u>Job</u>	<u>Planned work elements</u>	<u>Date Due</u>	<u>Deliverable</u>	<u>Lead</u>
FWS	1	For anadromous hatchery releases, compile FWS hatchery release data, w/ added CWT information. Transform data to format 032. Submit 2001 hatchery release data to PSMFC via USFWS WWFRO.	9/02	dbf file in PSC format 3.2 submitted to database	Pastor
FWS	2	For resident fish, explore availability of data relative to FWS facilities. Provide resident fish production and release data to PSMFC.	9/02	Exchange of resident fish data	Pastor
ODFW	1	Acquire specific release location information for select releases in the Willamette, Lower Columbia, or Sandy basins as available.	5/02	Release location data tied to RMIS release codes	Cooney, Gorman
ODFW	2	Investigate if Hatchery Release data can be acquired in an un-rolled format prior to it being submitted to RMIS.	5/02	Report on what information is available unrolled	Cooney
Region	1	Assist contributing projects with cross referencing PSC codes with LLID codes.	As needed	Provide assistance as requested	Graves
Region	2	Assist data contributing agencies in development of data, including formatting, coding, data entry, error checking, and submitting to the regional database.	Ongoing, on Request	Assistance to data contributing agencies	Banach, Kinney
Region	3	Assist agencies to replace certain Hatchery Release records with records having specific locations and times rather than general "supercodes" originating from the PSC data exchange requirement that all releases of coded-wire tagged fish must be rolled into a single release record per tag code. This task requires that CWT data be resubmitted from agencies in either StreamNet data exchange format or a modified PSC data exchange format. The new formats will avoid pooling releases by tag code; thus allowing more detailed release location and timing information.	Ongoing	Generalized release locations (Supercodes) converted to specific LLID locations	Kinney
WDFW	1	For anadromous species, research, compile, convert and submit existing WDFW anadromous release data as detailed, "unrolled" records directly to StreamNet (instead of via RMIS). As warranted, organize procedures to ease future updates.	13/01 & ongoing	Direct submittal updated anadromous database	Sikora
WDFW	2	Collect, convert and submit Joint Stock Assessment Project (JSAP) blocked area release data (1994-Present, Columbia River drainage above Chief Joseph Dam) per the expected format. See Job 3 for efforts in other areas.	2/02	Resident database developed (JSAP = Col R above Chief Joseph, 1995-present)	O'Connor, Burns
WDFW	3	WDFW resident data is fractured in several collections by year. Research, compile, convert and submit data for any years we have finalized at a given time, until all collections are submitted. (Progress with this dataset relies upon improvements to our Lakes spatial layer first).	As possible	Resident database	Sikora
WDFW	4	Investigate the possibilities for digitizing points for fish release sites that occur away from a facility and tying the sites to the hatcheries habitually using the sites. This effort will involve tabular and spatial work and require a lot of coordination since the sites will include stream, lake, and marine areas.	TBD	Database & spatial layer developed	O'Connor, Hudson, Sikora

Objective 1 Data Development and Updates, Priority Data sets

Task 4 Hatchery returns

Develop and maintain information on the return, disposition and straying 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 2000. Development of disposition data is lower priority and would require additional resources.

<u>Project</u>	<u>Job</u>	<u>Planned work elements</u>	<u>Date Due</u>	<u>Deliverable</u>	<u>Lead</u>
FWS	1	Compile FWS hatchery return data for FWS hatcheries and submit to the regional database	9/02	StreamNet HatchRet file	Pastor
IDFG	1	Submit 1998, 1999, and 2000 return season hatchery return data.	12/01	Hatchery return data exchanged to Region	Murdock
IDFG	2	Compile year 2001 return season hatchery return data and submit to PSMFC.	4/02	Hatchery return data exchanged to Region	Brown
ODFW	1	Compile data on returns to ODFW hatchery facilities (updated through 2000 returns where possible).	6/02	Updated return data exchanged to Region	Herber
Region	1	Assist data contributing agencies in development of data, including formatting, coding, data entry, error checking, and submitting to the regional database.	Ongoing, on Request	Assistance to data contributing agencies	Banach, Kinney
WDFW	1	Research, compile, convert and submit hatchery returns updates through 2000 in StreamNet data exchange format. This submission includes new data and corrects errors that were previously submitted for post-1995 data. Work further with WDFW's Hatchery Division to improve their original database source and collection procedures as an investment in future timely and accurate StreamNet updates.	11/01	Updated database exchanged to Region	Woodard

Objective 1 Data Development and Updates, Priority Data sets

Task 5 Dams and Fish Passage Facilities

Develop and maintain information on dam facilities. Enhance the existing StreamNet dams data set by updating relevant data from the Pacific Northwest Hydropower Database and Analysis System (NWHS) and the National Inventory of Dams.

<u>Project</u>	<u>Job</u>	<u>Planned work elements</u>	<u>Date Due</u>	<u>Deliverable</u>	<u>Lead</u>
IDFG	1	Submit dam facilities table in data exchange format to PSMFC.	1/02	Dams data exchanged to Region	Murdock
MFWP	1	Complete the creation of a Montana dams spatial coverage and associated data in the StreamNet exchange format. Layer and data are being created using the NWHS and the National Inventory of Dams. Tasks to date include combining the data from the two sources; manual checking needs to be done before the final product is completed. Exchange the Dams data set to the StreamNet database..	1/02	Created data set and GIS coverage exchanged to Region	J. Hutten, K. Lindstrom
ODFW	1	Update, maintain, correct & exchange dam information (as part of Barrier database)	8/02	Database exchanged	Brodeur
Region	1	Assist data contributing agencies in development of data, including formatting, coding, data entry, error checking, and submitting to the regional database.	Ongoing, on Request	Assistance to data contributing agencies	Banach, Kinney
WDFW	1	StreamNet currently carries Washington dam information that wasn't officially exchanged by WDFW. We will compare StreamNet's existing Washington dams data with WDFW's internal dam layer and any other dam data resource (i.e. DOE's dams), adjust the WDFW layer accordingly and submit to StreamNet.	3/02 & ongoing	WDFW tabular database and spatial layer developed and coordinated with StreamNet.	Sikora

Objective 1 Data Development and Updates, Priority Data sets

Task 6 Hatchery Facilities

Develop and maintain information on anadromous and resident hatchery facilities, including information on location, design, management and authorization. Information will be updated through 2001 for required fields. We will review the optional (non-required) fields in the DEF.

<u>Project</u>	<u>Job</u>	<u>Planned work elements</u>	<u>Date Due</u>	<u>Deliverable</u>	<u>Lead</u>
FWS	1	Update hatchery facility records as needed, Update hatchery water records as needed. Update FWS data sets with 2001 data and submit to PSMFC	9/02	Updated Hatchery file	Pastor
IDFG	1	Submit hatchery facilities table in data exchange format to PSMFC.	1/02	Dams data exchanged to region	Murdock
MFWP	1	Update the StreamNet hatchery database with Montana's public and private facilities. Exchange with StreamNet upon completion.	12/01	Hatchery Facilities data exchanged to StreamNet	J. Hutten
ODFW	1	Incorporate temporary facilities that correspond to hatchery return data but are not yet in the data set.	7/02	New temporary facilities added to database	Herber
ODFW	2	Maintain hatchery facility records and update location information as available.	7/02	Updated location information	Brodeur
Region	1	Assist data contributing agencies in development of data, including formatting, coding, data entry, error checking, and submitting to the regional database.	Ongoing, on Request	Assistance to data contributing agencies	Banach, Kinney
WDFW	1	In an on-going effort, digitize hatchery facility sites and correct existing site locations as more site information is learned. Complete, convert, and submit Washington state hatchery facility data (including federal and tribal facilities as available), focusing on the location related fields per the 2001.1 format and facilities needed to support hatchery release and returns data. As time permits, update other hatchery facility related fields (including the water source table).	10/01 & ongoing	Updated database (& possible spatial layer)	Sikora

Objective 1 Data Development and Updates, Priority Data sets

Task 7 Harvest

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

<u>Project</u>	<u>Job</u>	<u>Planned work elements</u>	<u>Date Due</u>	<u>Deliverable</u>	<u>Lead</u>
CRITFC	1	Review ocean and mainstem Columbia River harvest data presently in the StreamNet databases and report findings to Steering committee	3/02	Report and recommendations provided to Steering Committee	Roger
CRITFC	2	Correct and update ocean and mainstem Columbia River harvest data as agreed to by Steering Committee	9/02	Updated harvest data sets exchanged	Forrest
ODFW	1	Compile and exchange updated and/or new tributary sport harvest data.	8/02	New and/or updated sport harvest data exchanged	Frazier
Region	1	Assist data contributing agencies in development of data, including formatting, coding, data entry, error checking, and submitting to the regional database.	Ongoing, on Request	Assistance to data contributing agencies	Banach, Kinney
WDFW	1	As funding and time permits, compile freshwater harvest for key Columbia Basin salmonid stocks for both anadromous and resident data, using existing WDFW data sets (i.e. Angler Fish Database) and other sources. Standardize the data (to stock if possible), convert and submit it to PSMFC.	As possible	Possible updates to local and regional databases	O'Connor, Burns

Objective 2 Data Development and Updates, Other Data sets

Support the need for region wide fisheries data for research, monitoring, modeling and management through acquisition of new information and updates to previous information for data sets of medium or lower priority as time and funding allow. This objective includes anadromous and resident species.

Objective 2 Data Development and Updates, Other Data sets

Task 1 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. This data category is still being organized, but interest in this information is growing. Existing data sets will be maintained and enhanced as practical. Additional sources of this information will be explored.

<u>Project</u>	<u>Job</u>	<u>Planned work elements</u>	<u>Date Due</u>	<u>Deliverable</u>	<u>Lead</u>
MFWP	1	Continue to collect, centralize and maintain all stream restoration projects for Montana using the "Future Fisheries Interface" which StreamNet staff maintains and the Fisheries Division inputs data. Exchange data to the Region twice during the year.	3/02, 9/02	Updated data set exchanged to Region	J. Hutten
ODFW	1	Maintain, correct and exchange existing restoration project information.	As needed	Corrected database exchanged to Region	Brodeur
Region	1	Assist data contributing agencies in development of data, including formatting, coding, data entry, error checking, and submitting to the regional database.	Ongoing, on request	Assistance to data	Banach, Kinney
Region	2	Coordinate with agencies and organizations involved with habitat restoration work in the Columbia Basin regarding data needs, standards and formats, storage and delivery. Work toward achieving regional consistency in restoration project data.	Ongoing	Coordinated regional data	Banach
WDFW	1	If new funding permits, finalize conversion of Washington's IAC's (Interactive Committee for Outdoor Recreation) PRISM database for WRIA 5 records and submit to StreamNet. Build an ArcView project file that incorporates Washington Salmon Recovery Funding Board data, basin-specific salmon habitat limiting factors (LFA) and potentially SaSI stock status. Assess if this tool allows managers to effectively compare relative expenditures (and the factors they intend to address) to identify priority issues in the basin and the utility of creating similar products for other basins.	As possible	TBD. Possible database and/or ArcView project	O'Connor, Sikora

Objective 2 Data Development and Updates, Other Data sets

Task 2 Barriers and diversion/screening

Develop and maintain data sets for barriers to fish migration and diversion structures with information on screening status. 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, culverts and diversion screening may require additional resources. The primary emphasis is on anadromous species except in non-anadromous areas.

<u>Project</u>	<u>Job</u>	<u>Planned work elements</u>	<u>Date Due</u>	<u>Deliverable</u>	<u>Lead</u>
MFWP	1	Continue to collect 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.	3/02	Initial data collection completed, data exchanged to Region	J. Hutten, K. Lindstrom
ODFW	1	Update, maintain, correct and exchange adult migration barrier information.	9/02	Updated barrier data exchanged to region	Brodeur
ODFW	2	Update, maintain, correct and exchange anadromous and resident fish barrier data.	Ongoing	Updated Oregon barrier data	Bowers
Region	1	Assist data contributing agencies in development of data, including formatting, coding, data entry, error checking, and submitting to the regional database.	Ongoing, on request	Assistance to data	Banach, Kinney, Graves
WDFW	1	If funding and time permits, review existing Washington state barriers (in GIS format) and identify additions and corrections needed and plan for future exchanges. Any barrier work plan will depend first on establishing a WDFW Dams spatial layer (see Obj 1, Task 5, Job 1).	As possible	Review of barriers data, plan for future work	Unknown

Objective 2 Data Development and Updates, Other Data sets

Task 3 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. The rest of this data category is still under development and may require additional resources to accomplish.

<u>Project</u>	<u>Job</u>	<u>Planned work elements</u>	<u>Date Due</u>	<u>Deliverable</u>	<u>Lead</u>
CRITFC	1	Seek to obtain tribal data on smolt abundance. Inform Steering Committee on data availability	9/02	Report to Steering	Forrest
IDFG	1	Begin design and collection of juvenile trapping component in IDFG/StreamNet Fish Information System. At current funding levels this task will be of lower priority than Objective 1 data components and progress will depend on completion of Objective 1 tasks. This task is also dependent on collaboration with non-StreamNet projects in IDFG.	When	Report on progress toward development of juvenile trapping component.	Murdock
IDFG	2	Incorporate the General Parr Monitoring database into the IDFG/StreamNet Fish Information System and submit to PSMFC.	9/02	General Parr Monitoring data in exchange format or as stand alone database	Murdock
Region	1	Assist data contributing agencies in development of data, including formatting, coding, data entry, error checking, and submitting to the regional database.	Ongoing, on request	Assistance to data	Banach, Kinney
WDFW	1	As funding and time permits, collect and scope existing juvenile data to plan future conversion and submission efforts.	As possible	Plan for future efforts	Unknown

Objective 2 Data Development and Updates, Other Data sets

Task 4 Age

Develop and maintain information on age/sex composition of returning adults, primarily for anadromous species. This is a medium priority, with the primary focus on developing data for a test location for each cooperating agency this year as a means of testing data organization/format and utility.

<u>Project</u>	<u>Job</u>	<u>Planned work elements</u>	<u>Date Due</u>	<u>Deliverable</u>	<u>Lead</u>
CRITFC	1	Survey member tribal fishery programs to determine availability and format of salmon age data. Inform Steering Committee on data availability	6/02	Report to Steering	Forrest
FWS	1	Update age and sex data through 2001.	9/02	Updated Age table	Pastor
IDFG	1	Compile year 2001 Age/Sex Composition data.	4/02	Age/Sex composition data exchanged to region	Brown
MFWP	1	During the field office visits in 2002, the availability of age data will be determined. Information will be gathered on what is being collected, in what format and for what geographic areas. Data will be acquired, if available, and reviewed with the Steering Committee.	4/02	Report on data availability to Steering Committee	S. Carson, J. Hutten
ODFW	1	Compile age frequency data for an as-yet undetermined basin or hatchery in the Oregon portion of the Columbia Basin as a prototype for organizing age data.	4/02	Tested age dataset	Hurn
Region	1	Assist data contributing agencies in development of data, including formatting, coding, data entry, error checking, and submitting to the regional database.	Ongoing, on request	Assistance to data	Banach, Kinney
WDFW	1	Research, compile, convert and submit age data for natural spawner data (salmon and steelhead) in one prototype subbasin (probably Lower Columbia R). This effort is to assess any problems with the existing 2001.1 format, standardization with any other agencies' data already submitted to StreamNet, and plan for further data submittals.	4/02	Database for one test subbasin and future work plan.	Sikora, Woodard

Objective 2 Data Development and Updates, Other Data sets

Task 5 Production factors and run reconstruction

Develop and maintain information on survival, production factors, spawner / recruit estimates, and run reconstruction. This is currently a low priority, but the existing spawner / recruit estimate data will be maintained.

<u>Project</u>	<u>Job</u>	<u>Planned work elements</u>	<u>Date Due</u>	<u>Deliverable</u>	<u>Lead</u>
Region	1	On an opportunistic basis, acquire production and run reconstruction data from developing entities if any become available.	Whenever available	New data in database or on web site	Banach

Objective 2 Data Development and Updates, Other Data sets

Task 6 Habitat

Acquire data sets related to fish habitat (including water quality, stream/watershed habitat quality, temperature, invertebrates, and miscellaneous habitat data) from the multiple agencies, tribes and organizations within the Columbia Basin and compile and maintain them in standardized, consistent formats or archive them in original format, as appropriate. This is currently a low priority under the existing contract, and data development will be pursued only on other funding. Data developed on other funding will be organized and included in the StreamNet database.

<u>Project</u>	<u>Job</u>	<u>Planned work elements</u>	<u>Date Due</u>	<u>Deliverable</u>	<u>Lead</u>
ODFW	1	Incorporate applicable stream and watershed level habitat data, as these become available	As available	Updated data	Bowers
Region	1	Coordinate with regional entities on habitat data needs and availability. Begin developing an approach toward capturing high priority data types. New development of habitat data may require additional resources.	Ongoing	Agreement with regional entities on what data will be captured, by whom and when. Available data sets posted on web site.	Schmidt
WDFW	1	As time and funding permits, scope available data source and develop a future work plan.	As possible	Plan for future efforts	Unknown

Objective 2 Data Development and Updates, Other Data sets

Task 7 Genetics

Develop and maintain information on genetic information and data sources for areas where genetics data exist. Efforts this year will concentrate on organizing existing information, and then working on a Data Exchange Format.

<u>Project</u>	<u>Job</u>	<u>Planned work elements</u>	<u>Date Due</u>	<u>Deliverable</u>	<u>Lead</u>
CRITFC	1	Develop prototype genetics data application using CRITFC genetic data.	12/01	Prototype reporting application submitted to SC	Forrest
MFWP	1	Obtain results from genetic analysis from the University of Montana Genetics Lab for sampled populations of Montana's species of special concern.	Quarterly	Updated data in MRIS only; no exchange format yet	S. Carson
MFWP	2	Update fish distribution table when new genetic samples affect fields/records.	Quarterly	Updated data	S. Carson
MFWP	3	Exchange data to the StreamNet regional database when a DEF is approved by the Steering Committee.	When DEF is developed	Genetics data exchanged to StreamNet	J. Hess-Herbert
Region	1	Assist data contributing agencies in development of data, including formatting, coding, data entry, error checking, and submitting to the regional database.	Ongoing, on	Assistance to data request	Banach, Kinney

Objective 2 Data Development and Updates, Other Data sets

Task 8 Information generated during Subbasin Planning

Work with Subbasin Planners to acquire information that is developed for Subbasin Plans and make it available basin wide in a standardized format. Data that fits existing DEF will be incorporated in the queryable database. Otherwise, data will be posted 'as is' and made available on the StreamNet website. Actual data development beyond the existing DEF would require additional resources.

<u>Project</u>	<u>Job</u>	<u>Planned work elements</u>	<u>Date Due</u>	<u>Deliverable</u>	<u>Lead</u>
CRITFC	1	Work with Oregon Technical Support Team (when funded and formed by NWPPC) to obtain existing data in electronic format	9/02	Data, currently is in electronic form, to region	Forrest
CRITFC	2	Work with Oregon Technical Support Team (when funded and formed by NWPPC) to develop applications to capture additional data generated during subbasin planning	9/02	Data entry and editing applications	Forrest
MFWP	1	Will communicate with Montana's CBFWA representative to better understand where they are in the planning process. Currently we receive all survey data generated from BPA contracts in Montana. Will discuss other products that may become available.	Ongoing	Coordination with subbasin planners	J. Hess-Herbert
Region	1	Participate in regional discussions on Subbasin Planning to identify data that may become available through the planning process. As data are identified, begin development of data standards and formats, and processes to effectively acquire the data without duplication of effort.	Ongoing, opportunistic	Plans for acquiring data sets produced by Subbasin Planning, and draft data standards	Schmidt, Banach
WDFW	1	Assist regional staff with Washington Subbasin data as time allows.	On request	Assistance	O'Connor

Objective 2 Data Development and Updates, Other Data sets

Task 9 Supplemental data sets

Obtain data sets that are important to regional monitoring and management but that do not fit the existing DEF for posting 'as is' on the StreamNet web site. Primary emphasis will be toward resident fish data developed by BPA funded fish and wildlife projects, data developed by cooperating agencies on other funding, and data developed by the FWP.

<u>Project</u>	<u>Job</u>	<u>Planned work elements</u>	<u>Date Due</u>	<u>Deliverable</u>	<u>Lead</u>
ODFW	1	Pursue supplemental datasets on an opportunistic basis consistent with StreamNet direction.	Opportunistic	Supplemental data sets available on line	Herber
Region	1	Assist in acquiring data sets from other entities where the data would be useful in relation to the fisheries data available in the StreamNet database and for regional planning and management needs. Initial efforts may be only exploratory in nature, and will only be pursued within existing resources and as data become available	Ongoing, opportunistic	Knowledge of available data sets, and acquired data sets posted on the StreamNet web site in original format.	Banach
WDFW	1	Work with participants in the Blocked Area Resident Fish Stock Status Project to obtain copies of their fish sampling data. Assess the "fit" to existing StreamNet data exchange formats. Convert and submit data as appropriate.	6/02	Data acquired, 'fit' to DEF assessed	O'Connor, Burns

Objective 2 Data Development and Updates, Other Data sets

Task 10 Carcass placement

Work with management agencies to capture information on placement of salmon carcasses and results from carcass placement projects. This is currently a low priority and will require additional resources to take on as a primary data type. Existing data may be acquired for posting 'as is'.

<u>Project</u>	<u>Job</u>	<u>Planned work elements</u>	<u>Date Due</u>	<u>Deliverable</u>	<u>Lead</u>
ODFW	1	Exchange carcass placement report 'as is' for 1999 placement efforts.	7/02	Carcass Placement report exchanged to region	Hurn
Region	1	Assist data contributing agencies in development of data, including formatting, coding, data entry, error checking, and submitting to the regional database. This data category is currently a low priority. Priority may increase if management agencies increase their efforts in developing these data.	Ongoing, opportunistic	Acquisition of data sets	Banach
WDFW	1	As time and funding permits, scope available data source and develop a future work plan.	As possible	Plan for future efforts	Unknown

Objective 2 Data Development and Updates, Other Data sets

Task 11 Populations - status and delineation

Develop a data set to describe population status as determined by other agencies. This is currently a low priority, and efforts will be exploratory in nature during FY2002. Links to existing data may be posted on the StreamNet web site.

<u>Project</u>	<u>Job</u>	<u>Planned work elements</u>	<u>Date Due</u>	<u>Deliverable</u>	<u>Lead</u>
IDFG	1	Begin design and development of incorporation of population status and legal designation into the IDFG/StreamNet Fish Information System.	9/02	Report to Steering Committee on design and progress	Murdock
MFWP	1	Species of Special Concern are currently identified on the MRIS website; when the Montana Natural Heritage Program website includes status information on these species, we will create a link between our site and theirs. Will also look into linking to USFWS website if information is available on Threatened and Endangered Species. Will link to MFWP new native species web page when that becomes available.	ongoing	Links to other websites	J. Hess-Herbert
Region	1	Assist data developers on an as needed basis. Currently a low priority	On request	Assistance to data	Banach
WDFW	1	If time permits and a spatial update of existing SaSI information occurs during the year, propose and test a means to share both tabular and spatial information with the regional StreamNet database.	As possible	Plan for future efforts	O'Connor, Burns

Task 12 Develop other data sets

On an opportunistic basis, develop data that relate to other existing data sets in the StreamNet database or would be useful for regional planning, monitoring or management efforts. This is a low priority, but some efforts may be expended if the data appear useful and they can be obtained within current resources.

<u>Project</u>	<u>Job</u>	<u>Planned work elements</u>	<u>Date Due</u>	<u>Deliverable</u>	<u>Lead</u>
IDFG	1	Work with IDFG biologists to incorporate other data sets into the IDFG/StreamNet Fish Information System. This task will be dependent on the time available after completion of higher priority tasks and on the opportunistic collaboration of non-StreamNet IDFG projects.	9/02	Report to Steering Committee on progress.	Murdock, Butterfield
ODFW	1	Update, maintain, correct and exchange photographic information (MapCat and related tables).	6/02	Updated photographic database exchanged to region	Brodeur
ODFW	2	Compile and exchange marked-to-unmarked ratio data (relative to dam, weir, spawning ground, etc. counts) for an undetermined location in the Oregon portion of the Columbia basin as a prototype for these data.	3/02	New data compiled and exchanged	Frazier, Hurn
ODFW	3	Compile and exchange hatchery-wild fraction data for an undetermined location in the Oregon portion of the Columbia basin as a prototype for these data. It is not clear if these data are still available since the dissolution of PATH, and the data developed by PATH, which are not in StreamNet, need to be captured so that they are not lost. We intend to attempt to locate and obtain the data in some fashion.	8/02	New data compiled and exchanged	Frazier, Hurn
Region	1	Advise and assist data developers with other data sets not currently in the StreamNet system. Low priority and within current resources only.	On request	Assistance or advice to data developers	Banach, Graves, Kinney

Objective 3 Data Management and Delivery

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

Objective 3 Data Management and Delivery

Task 1 Maintain and enhance tabular database systems at the project and regional levels

Maintain functional tabular database programs at the agency and regional levels to make consistent tabular data sets for anadromous fish, resident fish and to a lesser extent wildlife available through the StreamNet online database system. At both the regional and agency levels, provide database management and administration necessary for accomplishing StreamNet objectives, to include: 1) maintaining and updating the hardware and software systems necessary to support the StreamNet project, and 2) enhancing or optimizing StreamNet database structures and capabilities.

<u>Project</u>	<u>Job</u>	<u>Planned work elements</u>	<u>Date Due</u>	<u>Deliverable</u>	<u>Lead</u>
IDFG	1	Maintain and enhance hardware and software for the IDFG/StreamNet Fish Information System. This tasks includes general system maintenance, addition of new servers and workstations, where possible, providing necessary system administration and disaster recovery, and maintaining software licenses.	Ongoing	Continued function of data system	Butterfield
IDFG	2	Begin design and collection of barrier component in IDFG/StreamNet Fish Information System. At current funding levels this task will be of lower priority than fish data components and progress will depend on completion of objective 1 tasks.	As possible	Report on progress toward development of barrier component.	Murdock
MFWP	1	Provide a high-quality, state-level data management system, emphasizing coordination with StreamNet regional staff, MFWP and other state and federal natural resource agencies to encourage the use of consistent data attributes and data sets among all agencies.	Ongoing	well-coordinated data management systems	J. Hess-Herbert, all staff
ODFW	1	Provide state-level StreamNet database management, administration, and development. Enhance StreamNet and ODFW database structures, interfaces, tools, and capabilities as needed. Maintain hardware and software.	Ongoing	Functional tabular	Herber
Region	1	Locate and evaluate data obtained by the precursor projects to StreamNet (CIS and NED), including floppy disks and hard copy reports. Determine the types of data that are available in each format and how much are already included in StreamNet. Determine the feasibility and value of reclaiming lost data and the workload required. Prepare a report making recommendations to the Steering Committee for the possible inclusion of those data not already included in StreamNet.	4/02	Report on work required to recapture CID/NED data.	Banach
Region	2	Maintain and upgrade StreamNet database servers and software. Administer SQL Servers. Advise on office software acquisition. Maintain and optimize database structure and function .	Ongoing	Functional and improved database servers and software	Kinney
WDFW	1	Coordinate activities to maintain all new and existing WDFW internal tabular databases, code and cross-code assignment files related to StreamNet tabular and spatial submissions for data sets defined in Objectives 1 and 2. Submit any tabular databases as warranted to coordinate with spatial layer exchanges. Maintain the hardware and software necessary to the database system.	Ongoing	Tabular databases, spatial coordination, descriptions of data exchanged, functional database system	Sikora, Woodard

Task 2 Maintain and enhance the GIS and hydrography database systems at the project and regional

Maintain functional Geographic Information System programs at the agency and regional levels to make consistent GIS layers for anadromous fish, resident fish and to a lesser extent wildlife available through the StreamNet online database system. At both the regional and state levels, provide GIS management and administration necessary for accomplishing StreamNet objectives, to include: 1) maintaining regional and agency-level GIS systems, including hardware and software, and 2) maintaining a regionally consistent hydrography layer at the 1:100,000 scale.

<u>Project</u>	<u>Job</u>	<u>Planned work elements</u>	<u>Date Due</u>	<u>Deliverable</u>	<u>Lead</u>
IDFG	1	Maintain and enhance hardware and software for the IDFG/StreamNet GIS and Fish Information System. This task includes general system maintenance, addition of new servers and workstations where possible, providing necessary system administration and disaster recovery, and maintaining software licenses. We will also be evaluating the impact and cost of moving from ArcInfo 7.2.1 and ArcView 3.2 to ArcGIS 8.1. Depending on that outcome, we may make this major software migration this year, including necessary hardware reconfigurations.	Ongoing	Continued function of the GIS	Butterfield
IDFG	2	Provide GIS support and data infrastructure to the IDFG/StreamNet Fish Information System. The IDFG/StreamNet Fish Information System is built upon a foundation of GIS data and we will continue to provide that base. Products from this task will play a key role in integrating GIS with traditional tabular data models, specifically SQL Server and Microsoft Access.	Ongoing	Report on progress.	Graham, Hatton, Butterfield
MFWP	1	Maintain, update and enhance MFWP GIS data layers, provide these data as distributed files, on the web or as part of map requests. Integrate the use of GIS into management decision making processes.(Most of this work is conducted outside the StreamNet contract with MFWP dollars). Maintain the MFWP StreamNet GIS system.	Ongoing	functioning GIS system	J. Hess-Herbert, all staff
MFWP	2	Work with Natural Resource Information System staff and StreamNet GIS staff to maintain the 1:100 K NHD hydrography for Montana. Data layer will be enhanced with lakes and reservoirs and include stream level LLID routes.	Ongoing	Functioning hydrography	S. Carson, J. Hutten
ODFW	1	Develop and maintain a fully functioning GIS system and the database structures that help improve spatial data management and transfer with ODFW staff and the regional StreamNet system.. Maintain the hardware and software systems necessary for the GIS.	Ongoing	Functional GIS program within ODFW	Bowers
Region	1	Assist the database manager, as needed, with the spatial component of data and its implementation online.	Ongoing	Sound spatial component of the StreamNet database	Graves
Region	2	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.	Ongoing	Online delivery of data by geographic criteria	Graves
Region	3	Maintain functioning GIS software at regional office (two seats) + server products, including installing new software and making upgrades to old software, fulfilling contract obligations to ESRI (software vendor), and keeping abreast of GIS software developments that could be beneficial to the project.	Ongoing	Functional regional GIS system	Graves
Region	4	Maintain a library of StreamNet GIS layers for internal use and as downloadable data on the web site with complete documentation (metadata).	Ongoing	GIS data library and documentation (metadata) available on StreamNet website	Graves
Objective 3 Region	Task: 2 5	Maintain a regionally consistent 1:100,000 hydrography layer (the PNW Reach File) for internal use and public access through consultation with the state stewards of the hydrography.	11/7/01 Ongoing	1:100,000 hydrography layer and documentation available for project use and	Graves

on line

Region	6	Rebuild LLID-based stream route system on the National Hydrography Dataset hydrography for Western Montana (this work is complete for ID, OR, WA).	3/01	Completed crosswalk between the LLID & NHD systems which will allow data conversion by the StreamNet project and other data users.	Graves
WDFW	1	Coordinate activities to maintain all new and existing WDFW internal spatial layers related to StreamNet tabular and spatial submissions including but not limited to 100K hydro (streams and lakes), marine areas, distribution, production (hatchery and dam), and release site layers. Manage regionally standard location codes (LLIDs). Submit any spatial layer as warranted to coordinate with tabular exchanges. Maintain the hardware and software necessary for system function.	Ongoing	Spatial Layers, tabular coordination, descriptions of data exchanged, functional GIS system	Hudson

Objective 3 Data Management and Delivery

Task 3 Data management and coordination

This task includes data management after they have been developed. Once data are submitted to the regional database, assure they fit established formats, perform appropriate error checks, and load the data into the StreamNet database and perform routine management of the data. The regions and contributing agencies will collaborate to fix problems and assure seamless loading of data into the database.

<u>Project</u>	<u>Job</u>	<u>Planned work elements</u>	<u>Date Due</u>	<u>Deliverable</u>	<u>Lead</u>
IDFG	1	Review and update entire hatchery return dataset, in order to ensure the proper past assignment of trend definitions, location identifiers, accurate counts, and disposition codes.	9/02	New and improved hatchery return data set.	Brown
IDFG	2	Review and update entire redd count dataset, in order to ensure the proper past assignment of trend definitions, location identifiers, and accurate counts.	9/02	New and improved redd count data set.	Brown
IDFG	3	Add additional stream routes and assign LLIDs to 1:100,000 scale hydrography. New routes will be added as required to support locational data in the IDFG/StreamNet Fish Information System. All new routes will be submitted to PSMFC.	Ongoing	New routes submitted to PSMFC.	Graham, Hatton
ODFW	1	Work with regional staff as necessary to assure seamless loading of data into the regional database. into regional database	Ongoing	Data submitted and loaded	Bowers, Herber
Region	1	Whenever new tabular data with a spatial component are submitted to the project (e.g., fish distribution, hatchery facilities, etc.), create regional GIS layer(s) 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 layer(s) for the online query system and as downloadable layer(s) for StreamNet GIS users.	Ongoing	Data with sound spatial referencing available on the StreamNet web site	Graves

Objective 3	Task: 3	11/7/01			
Region	2	Update hatchery releases database with data from the Regional Mark Information Center and directly from state agencies where information is available in either StreamNet data exchange format or a modified PSC data exchange format without	Ongoing	StreamNet hatchery release data as current as possible.	Kinney

rolling CWT release records into single records by tag code. Reconcile known redundancies in the hatchery release table resulting from acquisition of data from multiple sources.

Region	3	Update and append data as submitted by StreamNet participants. Isolate erroneous or duplicative data and work with source agencies to correct problems. Produce downloadable versions of StreamNet databases. Maintain logs of data submissions and major database changes.	Ongoing	Maintain StreamNet databases	Kinney
Region	4	Examine the StreamNet database for errors and report any found to the appropriate entity for correction.	Ongoing	List of database errors encountered. Eventual database corrections.	Banach, Kinney
Region	5	In order to modernize existing data sets, begin converting the georeferencing for the Protected Areas and Smolt Density Model data from river reach numbers to LLIDs.	3/02	Updated, more accurate, standardized, and mappable locations for Protected Areas and Smolt Density Model data.	Graves
WDFW	1	Work with regional staff as necessary to assure seamless loading of data into the regional database. Explore new ways to simplify the instructions to the Regional Manager on how to post our data submission and purge any old records that are now irrelevant to avoid follow-up issues.	Ongoing	Exchange follow-up as needed.	Sikora, Hudson

Objective 3 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. Track adopted and proposed data exchange formats and location coding (including metadata) for data categories described under Objectives 1 and 2. At the regional level, this task will provide coordination and technical assistance regarding interpretation of database structures and codes. At the agency level, this task will provide similar coordination and technical assistance to activities applicable to StreamNet.

<u>Project</u>	<u>Job</u>	<u>Planned work elements</u>	<u>Date Due</u>	<u>Deliverable</u>	<u>Lead</u>
CRITFC	1	Review and comment on DEF issues brought to the Steering Committee	Ongoing	Comments on DEF issues via Steering Committee	Forrest, Roger
CRITFC	2	Propose a draft DEF for genetics data to the Steering Committee, based on the application and comments received under Obj. 2, Task 7, job 1. Work with MFWP on development of the draft.	5/02	Draft DEF	Forrest
FWS	1	Review and comment on DEF issues brought to the Steering Committee	Ongoing	Contribution to SC review of DEF	Pastor
IDFG	1	Working with the StreamNet Steering Committee, maintain and enhance the data exchange standards as needed.	Ongoing	Input to DEF	Butterfield

Objective 3	Task: 4	11/7/01			
MFWP	1	MFWP StreamNet will participate in the design, development and maintenance of standard codes and data exchange formats. This will occur through involvement on the Steering Committee and technical work groups.	ongoing	Reviewed DEFs	S. Carson, J. Hess-Herbert

MFWP	2	Work with CRITFC to develop a draft DEF for genetics data for adoption by the Steering committee	5/02	Draft DEF for genetics data to Steering Committee	J. Hess-Herbert
MFWP	3	Work with Regional StreamNet staff and Steering Committee to create a Data Exchange Format for Distribution and Use Type.	12/01	DEF proposed to Steering Committee and adopted	J. Hess-Herbert
ODFW	1	Participate in the design, development and maintenance of standard codes and data exchange formats. This will occur through involvement on the Steering Committee and technical work groups. There is no set schedule for this task, because it is highly dependent on issues facing the Steering Committee.	Ongoing	Updated and agreed upon DEFs	Cooney
ODFW	2	Develop and propose a DEF for screening data.	2/02	Draft DEF submitted to Steering Committee	Brodeur
Region	1	Assist with the design and implementation of data exchange standards as they relate to the spatial aspect of data in the StreamNet database.	Ongoing	Sound formats for spatial referencing of data	Graves
Region	2	Create a Data Exchange Protocol document that explains the process of developing and exchanging data to the StreamNet database.	4/02	Data Exchange Protocol document	Kinney
Region	3	Enhance the StreamNet data reference system by repairing or establishing procedures for updating and reconciling data-related references between the StreamNet database at PSMFC and the StreamNet Library database housed at CRITFC.	Ongoing	Reduce confusion and enhance accessibility to data references	Kinney
Region	4	Maintain and update the StreamNet Data Exchange Format as necessary to incorporate additions and modifications agreed to by the Steering Committee. Record accepted revisions in the DEF document. At least one update of the DEF document will be made during the year.	5/02	Updated Data Exchange Format	Banach
Region	6	Create a white paper examining the implications for a major simplification of the StreamNet Data Exchange Format. A simplified DEF, using much flatter tables, could greatly ease data submittal for StreamNet participants and potentially speed data flow to the regional database. It may also permit much easier data capture from people outside of the StreamNet project. However, potential complications of such an approach could include data integrity problems, unacceptable workload shifting, and a variety of other issues. Explore these issues and create a report on the potential benefits and detriments of a simplified DEF.	5/02	White paper on DEF simplification	Banach
Region	7	Assist with development of XML schema based data exchange option for both incoming and outgoing data.	Ongoing	Enhanced function of data exchange process	Kinney
WDFW	1	Engage in data exchange format (DEF) discussions. Lead new efforts to amend the format as warranted when WDFW's data cannot be accurately converted. Provide metadata for tabular and spatial data sets according to guidelines adopted by the Steering Committee.	Ongoing	DEF proposals & feedback. Metadata.	Varies
WDFW	2	Develop a revised DEF for Hatchery Return data and propose to Steering Committee	1/02	Proposed DEF submitted to Steering Committee for adoption	O'Connor

Task 5 StreamNet Internet Site

Continue to maintain and enhance the existing client-server system to provide access to StreamNet data products through the Internet.

The StreamNet home page will continue to be recognized as the project's primary data delivery vehicle. Priority will be given to incorporating data developed through Objectives 1 and 2 and providing access to reference materials secured through Objective 4. Appropriate training on the use of the system will be provided through a combination of on-line help and in-person training sessions.

Project	Job	Planned work elements	Date Due	Deliverable	Lead
ODFW	1	Recommend and/or take part in review of new products and features. Provide feedback on content, suitability, navigability and data currency issues.	Ongoing	Recommendations to regional staff	All staff
ODFW	2	Work with Regional StreamNet staff to link the StreamNet website to available Columbia River fisheries information (including Columbia River Compact Action Notices, In-Season Updates, Joint Columbia River Management Staff Reports and possibly in-season catch estimates), along with informational text to describe each link.	4/02	URL's & text to PSMFC	Frazier
ODFW	3	Finalize a summary of real-time data services that can be provided, as well as a description of how these services differ from current data services provided in the Basin.	2/02	Summary submitted to PSMFC	Frazier
ODFW	4	Manage and maintain the ODFW Natural Resources Information Management Program website and it's links to StreamNet..	Ongoing	Website maintenance and links to www.streamnet.org	Brodeur
Region	1	Maintain the GIS Data, Map, and PNW Reach File internet pages.	Ongoing	Up-to-date GIS and hydrography information available on line	Graves
Region	2	Add an internet mapping component to the StreamNet site to allow users to access StreamNet data through an interactive map interface. Internet mapping component will utilize spatial database engine (SDE) technology to improve speed and performance, and will utilize ArcIMS software for application design and delivery. Internet mapping component will serve at least 2 purposes: (1) to provide users with a vehicle to display and query StreamNet data in a spatial format; and, (2) to provide an alternate means of entry to access information in the current StreamNet query system.	3/01	Internet mapping	Graves, Wilke
Region	3	Maintain and enhance the look and usability of the current web-based query	Ongoing	Functional and enhanced query capability	Wilke
Region	4	Develop and test a new and enhanced web-based query system based on a more open and flexible programming environment (Cold Fusion).	Beta version by 3/31/02	New query system.	Wilke
Region	5	Deploy features of the new flexible query system as components are approved by the Steering Committee	As approved	New query system features operational	Wilke
Region	6	Maintain logs of web query history and error events. Track and report internet site usage by month and investigate web query system errors encountered. Assist programmer in debugging web query system problems that may be data related. Maintain and upgrade StreamNet web server and software.	Ongoing	Administration of web	Kinney
Objective 3	Task: 5	11/7/01			
Region	7	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 bugs.	Ongoing	Improved web query system	Banach
Region	8	Complete review of the existing StreamNet HTML pages. Decide which pages to	6/02	Completed major revision of	McGill

		archive and delete, which to include in the StreamNet web site, and which to modify for inclusion in the StreamNet web site.		the StreamNet web site	
WDFW	1	As time permits, review new products and features of the StreamNet Internet site. Provide feedback on content, suitability, navigability and data currency issues, especially issues related to providing static or dynamic map capabilities.	Ongoing	Feedback	Varies

Objective 3 Data Management and Delivery

Task 6 Tool development and maintenance

Provide programming services to project participants to support efficient data entry and transfer. Tools may be developed at the regional or agency levels. Even when developed for within agency use, tools should be shared among all project participants.

<u>Project</u>	<u>Job</u>	<u>Planned work elements</u>	<u>Date Due</u>	<u>Deliverable</u>	<u>Lead</u>
CRITFC	1	Provide support services to CRITFC staff working on interagency information issues, as needed	Ongoing	Report on services provided	Forrest
IDFG	1	Continue to develop the IDFG/StreamNet Fish Information System (FIS). The FIS provides data entry and management tools to IDFG biologists. It also provides for an electronic flow of data from the field to StreamNet. It ensures data integrity, data and coding standards, and an efficient transfer of data from the field to StreamNet.	Ongoing	User interfaces, local and central databases, and transfer of information.	Butterfield, Murdock
MFWP	1	Maintain and enhance the edit/entry interface for fisheries survey data distributed to individuals with a MFWP Collector's permit, including federal land management agencies.	Ongoing	Functioning interfaces, and data received	S. Carson
MFWP	2	Explore creating a complete user interface for MFWP biologists, preferably a web based system; standardize look-up tables across the state.	04/02	Decision on whether to develop interface	J. Hess-Herbert, S. Carson
MFWP	3	Maintain U of M system for genetics analysis input, Future Fisheries for restoration project data entry, and other interfaces upon request if they relate to StreamNet workplan.	Ongoing	Functioning interfaces	S. Carson, J. Corbin, J. Hutten
Region	1	On an as-needed basis, update or develop tools to assist with data entry and data management. Assist StreamNet data compilation agencies with trouble-shooting, modification, or development of data input interfaces. Tools might include input interfaces, error checking routines, geographic locators, etc.	As needed	New and updated data input tools.	Wilke
WDFW	1	Review and give feedback on StreamNet's tools. Also build internal tabular and GIS tools and procedures to efficiently manipulate data, including the conversion of WDFW's Paradox data to MS Access.	Ongoing	Internal tools and procedure instructions, external feedback	Brown, Hudson, Sikora

Objective 3 Data Management and Delivery

Task 7 Data / Information Requests

Receive and respond to requests for data and information, source materials, and custom products. Response to requests will be honored

within the limits of available resources, with priority given to information requests having direct relevance to the Fish and Wildlife Program. Other priorities will include implementation of the Endangered Species Act and federal, state, and tribal natural resource management activities.

<u>Project</u>	<u>Job</u>	<u>Planned work elements</u>	<u>Date Due</u>	<u>Deliverable</u>	<u>Lead</u>
IDFG	1	Respond to requests for data and queries of the IDFG/StreamNet Fish Information System. These requests come from a variety of sources, federal agencies, state agencies, and private consultants. All data requests will be logged for reporting.	Ongoing	Filled requests, responses summarized in quarterly reports.	Graham, Brown, Butterfield
MFWP	1	Receive and respond to requests for data, source materials, and custom products. Respond to requests within the limits of available resources, with priority given to information requests having direct relevance to the F&WP.	Ongoing	satisfied customers	all staff
ODFW	1	As requested, consistent with other deliverables in this contract, receive and respond to requests for data, source materials, technical training, and custom products.	Ongoing	Summaries in quarterly reports	All staff except Gloria
Region	1	Respond within one day whenever possible to users who request information or assistance. Requests may be for help in navigating the StreamNet web site to find desired information, help in learning to use the on-line data query system, help in finding information not contained in StreamNet, assistance finding GIS layers, providing unique or customized data, or a variety of other types of requests.	Ongoing	Satisfied requests	Banach
WDFW	1	Generate maps, data reports, and electronic copies of data sets as requested. Provide PRIORITY data support for subbasin assessments and other new elements of the NWPPC Fish & Wildlife Program, within existing resources.	Ongoing	Filled requests for maps, data reports, data files	Varies

Objective 4 Library / 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

Objective 4 Library / Reference Services

Task 1 Collection Development

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

<u>Project</u>	<u>Job</u>	<u>Planned work elements</u>	<u>Date Due</u>	<u>Deliverable</u>	<u>Lead</u>
CRITFC	1	Coordinate source material submissions for data compiled by participants.	9/02	Updated catalog of materials	Oftedahl
CRITFC	2	Develop collection of materials related to the Columbia Basin, including reports from other Fish and Wildlife Program projects, other agency documents as they relate to the Basin, and other published & unpublished materials as requested by clients.	9/02	Updated, expanded collection of materials.	Oftedahl
CRITFC	3	Maintain and develop a collection of journals related to fisheries and aquatic sciences as well as other related scientific topics.	Ongoing	Current collection of journals available to library users	Liberty
CRITFC	4	Format the library reference table of StreamNet documents for inclusion in the StreamNet database. New updates will be sent to the regional database monthly after that.	12/01, then monthly	Updated reference table	Oftedahl, Kinney
MFWP	1	Update the StreamNet library with references and publications from the Fisheries Division Library on an annual basis.	date to be determined	CD of new data to the SN Library	J. Hess-Herbert
MFWP	2	Collect and catalog supporting references to document the sources of the distribution information and other data types developed under Objectives 1 and 2, and to connect the data to references. Submit updated references to the SN Library	12/01	Updated references submitted to StreamNet Library	S. Carson
ODFW	1	Update library bibliography of ODFW, Fish Commission, and Game Commission reports with historic and current publications.	Ongoing	Updated bibliography	Bourne
ODFW	2	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.	Ongoing	Documents	Hurn
ODFW	3	Organize and submit to the StreamNet library all references related to the data developed under Objectives 1 and 2.	Ongoing	Reference material to StreamNet Library	Cooney
Region	1	Work with the StreamNet Library to search the library holdings for non-durable electronic reference materials (mainly floppy disks). Archive any files found on CD. Print hard copies if appropriate.	12/01	CDs with information saved from eventual deterioration.	Banach, Oftedahl
WDFW	1	Engage in discussions to finalize procedures to submit spatial data references. Continue to collect documents used as source materials for any data in Objectives 1 and 2. Documents will be assigned reference numbers and forwarded to the StreamNet library as per established SN guidelines.	On-going	Documents and files sent to library per guidelines	Varies

Objective 4 Library / Reference Services

Task 2 Provide Access to Collection

Provide user access to the materials described in Task 4.1 by providing facilities for storage of paper and electronic copies of documents, an online catalog of all documents in collections, and staff to answer location questions and respond to requests.

<u>Project</u>	<u>Job</u>	<u>Planned work elements</u>	<u>Date Due</u>	<u>Deliverable</u>	<u>Lead</u>
CRITFC	1	Provide and maintain an appropriate facility for the storage and public use of the StreamNet Library collections.	9/02	Library open to public	Oftedahl
CRITFC	2	Catalog and organize the materials for ease of use by clients and staff.	9/02	Current catalog of materials	Oftedahl
CRITFC	3	Provide access to the catalog of materials via the Internet and update the online catalog on at least a monthly basis.	9/02	Updated website and	Oftedahl
CRITFC	4	Develop and execute a plan to place electronic documents in the catalog and on the library website.	9/02	Access to electronic documents	Nock
CRITFC	5	Develop and keep schedule of open times and reference desk staff hours.	9/02	Availability of staff	Nock

Objective 4 Library / Reference Services

Task 3 Library Services

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

<u>Project</u>	<u>Job</u>	<u>Planned work elements</u>	<u>Date Due</u>	<u>Deliverable</u>	<u>Lead</u>
CRITFC	1	Provide information and reference services to library clients	9/02	Information provided as requested	Nock
CRITFC	2	Provide information about services and hours to library clients via print and	9/02	Updated website and brochure	Oftedahl
CRITFC	3	Provide interlibrary borrowing services for library patrons to access materials not yet owned by the StreamNet Library.	9/02	Information	Nock
CRITFC	4	Provide access to hardcopy and electronic files of draft and final documents related to subbasin planning and the NPPC amendment process.	9/02	Current collection	Oftedahl, Nock
CRITFC	5	Identify changes and new features that will improve delivery library services	9/02	Recommendations to improve delivery of services	Oftedahl, Nock, Liberty
ODFW	1	Enhance, maintain, and update ODFW Library software and procedures to ensure adequate tracking of information requests, key word searches, and easy comparison to the StreamNet Library holdings.	8/02	Updated Library information system	Herber, Bourne
ODFW	2	Respond to requests for ODFW documents and other source materials through the ODFW Library.	@ request	Filled requests	Bourne

Objective 4 Library / 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

<u>Project</u>	<u>Job</u>	<u>Planned work elements</u>	<u>Date Due</u>	<u>Deliverable</u>	<u>Lead</u>
CRITFC	1	Provide interlibrary lending services for other libraries to access the library's unique collection	9/02	Material circulation	Nock
CRITFC	2	Maintenance of memberships in appropriate library and subject-related associations. Ex. IAMSLIC, NRIC, OFWIM, etc.	9/02	Presentations, reports, professional development	Oftedahl
CRITFC	3	Provide consultations for groups and other agencies on library organization and services.	9/02	Services as requested, detailed in reports	Oftedahl
CRITFC	4	Coordinate with other StreamNet libraries, library clients and other libraries to improve service to clients and limit duplication of effort.	9/02	Improved services	Oftedahl
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	9/02	Recommendations to Steering committee	Oftedahl, Nock
ODFW	1	Provide an index of Oregon Fish Commission, Oregon Game Commission, and Oregon Wildlife Commission processed reports to the StreamNet Library for the purpose of identifying documents that are not currently within library holdings.	5/02	Index of documents.	Bourne
ODFW	2	Coordinate with the Oregon State Library system to enhance access to published periodicals, journals, and other documents for StreamNet users.	Ongoing	Regular communication & Coordination	Bourne

Objective 5 Services to Fish and Wildlife Program Activities

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

Objective 5 Services to Fish and Wildlife Program Activities

Task 1 Data and services to support the Subbasin Planning effort

Within existing data categories and staffing levels and as workloads permit, assist Subbasin Planning efforts by 1) providing data in formats that fit planner needs, 2) working with planners to locate data within the StreamNet database and contributing projects' databases, and 3) advising and assisting planners on data management issues.

<u>Project</u>	<u>Job</u>	<u>Planned work elements</u>	<u>Date Due</u>	<u>Deliverable</u>	<u>Lead</u>
CRITFC	1	Provide described services to CRITFC staff working on subbasin planning and NMFS' TRT groups	Ongoing	Report on services provided	Forrest
IDFG	1	Provide data and related assistance to subbasin planning efforts in Idaho. IDFG has the lead role in a number of subbasins and we will provide support services, including tabular reports and GIS services to these subbasins.	Ongoing	Services provided, activities reported in progress reports.	Butterfield, Brown, Graham
MFWP	1	Work with Montana's CBFWA representative involved with subbasin planning and provide data, map products and assistance as needed.	Ongoing, on request	Requested products	J. Hess-Herbert, J. Hutten
ODFW	1	Participate in Subbasin Planning meetings and provide data, advice, and related assistance to subbasin planning efforts in Oregon (within existing resources and as workloads permit)	As requested	Assistance	Cooney, Bowers, Herber
Region	1	Generate customized maps and information for subbasin planners from StreamNet data or other data provided by the planners, as long as this work can be accomplished within existing resources.	On request	Maps and data provided to planners	Graves
Region	2	Assist subbasin planners with the use of the StreamNet database system, including GIS data and the spatial component of the StreamNet database.	On request	Data flow to subbasin planners	Banach, Graves
WDFW	1	Participate in Subbasin planning meetings and provide data and advice as needed.	As requested	Assistance	O'Connor

Objective 5 Services to Fish and Wildlife Program Activities

Task 2 Support monitoring and evaluation efforts

Assist in the development of products that contribute to the monitoring and evaluating (M&E) of Fish and Wildlife Program effectiveness. Specific areas of involvement will include: participation in Program-related monitoring and evaluation work groups; periodic re-evaluation of the StreamNet data plan to ensure consistency with M&E needs; and design of databases and formats to house and disseminate M&E information to the degree possible under the existing contract.

<u>Project</u>	<u>Job</u>	<u>Planned work elements</u>	<u>Date Due</u>	<u>Deliverable</u>	<u>Lead</u>
CRITFC	1	Work with NMFS, NWPPC and subbasin planning groups to identify M&E needs and plans	ongoing	Report of activities	Roger
Region	1	Participate in regional discussions of Monitoring and Evaluation to coordinate the use of StreamNet data in support of M&E efforts.	On request	Contribution of SN data and services to M&E activities	Schmidt
WDFW	1	Provide input as needed on database and format issues.	As requested	Recommendations	O'Connor

Objective 5 Services to Fish and Wildlife Program Activities

Task 3 Support for and participation in regional data management initiatives

Work with regional entities to promote and implement sound data management programs that ensure efficient organization, management and delivery of pertinent fish and wildlife related information within the Columbia Basin. Efforts may include determination of regional data needs, identification of obstacles and challenges to effective regional data management, and development of recommendations and will take place in a collaborative atmosphere.

<u>Project</u>	<u>Job</u>	<u>Planned work elements</u>	<u>Date Due</u>	<u>Deliverable</u>	<u>Lead</u>
CRITFC	1	Participate on Regional Data Management Committee and other groups to improve data management in the region	Ongoing	Report of activities and progress to the SC	Roger
ODFW	1	Participate in discussions and offer solutions related to Columbia River Basin database management and information distribution issues, as needed.	As requested	Assistance	Cooney
Region	1	Participate with regional entities in the development of effective regional data management programs and approaches. Provide input based on years of StreamNet experience with management of data sets on a regional basis, along with insights into challenges, obstacles and costs. Support effective regional data management and delivery at reasonable cost with avoidance of duplication of effort. Support and encourage regional data needs assessments.	Opportunistic	Contribution to regional data management efforts	Schmidt
Region	2	Utilize the Systemwide Project Review process to recommend effective and cost-efficient approaches for meeting regional data needs. This will be done through project presentations and through development of issue papers that evaluate various aspects of data management in the basin.	3/02	Recommendations incorporated in the final project review	Schmidt
WDFW	1	Participate in discussions and offer solutions related to Columbia River Basin database management and information distribution issues as needed.	As requested	Support	O'Connor

Objective 5 Services to Fish and Wildlife Program Activities

Task 4 Archive function for regional data sets, as requested

Work with regional entities 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, develop archive functions to at a minimum make data available 'as is', regardless of their current form.

<u>Project</u>	<u>Job</u>	<u>Planned work elements</u>	<u>Date Due</u>	<u>Deliverable</u>	<u>Lead</u>
MFWP	1	Be available to Montana entities as a source of information and assistance for capturing F&WP-related data, as needed.	Opportunistic	Data sets identified and obtained	J. Hess-Herbert, J. Hutten
Region	1	Research and obtain resident fish data sets developed by BPA-funded projects. Where data are of a type similar to StreamNet data types, work with project sponsors to capture data in StreamNet format and enter into the StreamNet database. Where data are of a different type, work with project sponsors to identify the best means to post useful data in an archive format 'as is.'	12/01, then ongoing	Resident fish data in StreamNet database or posted as an archived data set in original format.	Banach
Region	2	On opportunistic basis, work with other F&WP projects to assist with archiving useful regional data sets.	Opportunistic	Archived data sets available on line	Schmidt
WDFW	1	Be available to Washington entities as a source of information and assistance for capturing F&WP-related data, as needed.	Opportunistic	Assistance in archiving data	O'Connor

Objective 5 Services to Fish and Wildlife Program Activities

Task 5 Data and services as requested by other FWP participants

In consultation with CBFWA, the Council, and BPA, StreamNet will provide technical assistance and data services to Program projects as requested, to the degree possible under the current contract.

<u>Project</u>	<u>Job</u>	<u>Planned work elements</u>	<u>Date Due</u>	<u>Deliverable</u>	<u>Lead</u>
CRITFC	1	Assist in providing services as requested and as time and budgets allow	Ongoing	Reports to SC on services provided	Forrest
IDFG	1	Provide technical assistance to fisheries projects in IDFG. Under current funding from both the F&WP program and IDFG, we are very limited in our ability to provide this assistance. Assistance will generally be focused where there is some mutual benefit to both StreamNet and the other project.	Ongoing	Assistance provided, summarized in progress reports.	Butterfield
MFWP	1	Data services will be provided by Montana StreamNet staff, on request.	Ongoing	Data services provided	all staff
ODFW	1	In consultation with CBFWA, the Council, and BPA, Oregon StreamNet staff will provide technical assistance and data services to Program projects as requested, to the degree possible under the current contract.	As requested	Technical assistance	Cooney
Region	1	Respond to requests to the StreamNet project from F&WP participants for data, maps, or GIS products or general assistance. Provide assistance, including custom map work where feasible. Direct users to other resources if requests exceed project capabilities.	Ongoing	Assistance provided	Banach, Graves
WDFW	1	Generate maps, data reports, and electronic copies of data sets as requested by F&WP project staff, within existing project capabilities.	Ongoing	Filled requests for maps, data reports, data files.	Varies

Objective 5 Services to Fish and Wildlife Program Activities

Task 6 Protected Areas

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

<u>Project</u>	<u>Job</u>	<u>Planned work elements</u>	<u>Date Due</u>	<u>Deliverable</u>	<u>Lead</u>
MFWP	1	Exchange Montana’s Protected Area database, which has been converted to LLID stream routing.	11/01	Routed database exchanged to Regional StreamNet	J. Hess-Herbert
Region	1	Maintain the Protected Areas database within the StreamNet database	Ongoing	Protected Areas data available in query system	Kinney

Objective 6 Project Management / Coordination

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

Objective 6 Project Management / Coordination

Task 1 Manage project activities

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

<u>Project</u>	<u>Job</u>	<u>Planned work elements</u>	<u>Date Due</u>	<u>Deliverable</u>	<u>Lead</u>
CRITFC	1	Attend and participate in Steering Committee meetings	Ongoing	Attendance and participation in discussions	Roger, Oftedahl
CRITFC	2	Effectively administer the CRITFC StreamNet project	Ongoing	Contract administration	Roger
FWS	1	Represent FWS in Steering Committee meetings. Produce quarterly reports w/in 30 days of quarter end. Produce FWS component of FY2001 final report. Create FWS StreamNet budget & statement of work for FY2003. Contribute FWS portion of Project Renewal documents.	Ongoing	Project administration performed	Pastor
IDFG	1	Prepare budgets, work statements, and progress reports	Quarterly and Annually	Required reports submitted to PSMFC	Butterfield
IDFG	2	Provide project management and staff supervision for IDFG StreamNet.	Ongoing	Project supervised	Butterfield
IDFG	3	Participate in Steering Committee activities, including Steering Committee meetings, project direction, and data exchange format development.	Ongoing	Participation in Steering Committee activities	Butterfield
IDFG	4	Participate in and provide for IDFG StreamNet staff appropriate professional and technical development. This includes technical training and participation in professional organizations and conferences.	Ongoing	Staff development	Butterfield
MFWP	1	Provide normal supervision of Montana StreamNet staff and project. Produce quarterly reports within 1 month after the end of each quarter. Produce final report within 2 months of the end of the contract period. Participate in Steering Committee meetings. Collaborate on developing a final detailed Statement of Work for FY02.	As defined in job	Quarterly and annual reports; meeting attendance.	J. Hess-Herbert
ODFW	1	Administer all aspects of the project for Oregon, including budget oversight, personnel, work statement preparation, staff work plan preparation, project implementation and coordination, reporting, and participation with the Steering Committee and technical issue working groups.	Ongoing	Participation in SC meetings, prompt project oversight	Cooney
Region	1	Project Administration: Perform ongoing administration of the StreamNet project, to include budget development and tracking, contract monitoring, personnel functions, inventory control, etc.	Ongoing	Functional project	Schmidt
Region	2	Reporting: Submit quarterly reports to BPA within one month of the end of each quarter and submit an annual report within two months of the end of the fiscal year.	Quarterly, and 12/31/02	Reports	Schmidt

Region	3	Maintain effective relationship with the StreamNet Steering Committee. Organize and conduct quarterly Steering Committee meetings to facilitate project oversight and setting direction/goals. Coordinate regional project activities with Steering Committee involvement and direction.	Ongoing	Effective guidance and coordination with Steering Committee	Schmidt
WDFW	1	The WDFW StreamNet state coordinator will participate in all Steering Committee and StreamNet Project management activities, including meetings and follow-up work assignments (progress reports, Statements of Work, budgets).	Ongoing	Steering Committee participation, quarterly and annual reports, budgets, SOW	O'Connor, Sikora
WDFW	2	The state coordinator and state data manager will jointly manage all aspects of StreamNet in WDFW, including budget, personnel, work scheduling, and product delivery.	Ongoing	Effective project	O'Connor, Sikora

Objective 6 Project Management / Coordination

Task 2 Participate in Fish and Wildlife Program development activities

Work with regional entities to assist in the area of data management as requested to support development of Fish and Wildlife Program projects and programs. Organize, facilitate, and/or participate in appropriate coordination meetings with BPA, CBFWA, the Council, ESA officials, ISAB/ISRP, and/or staff and management of participating organizations to identify ways StreamNet can effectively contribute to the Fish and Wildlife Program (FWP) and facilitate capture and dissemination of data. Participate in advisory groups, task forces, and other groups whose purpose is enhancing the effectiveness of the Fish and Wildlife Program and its data development activities.

<u>Project</u>	<u>Job</u>	<u>Planned work elements</u>	<u>Date Due</u>	<u>Deliverable</u>	<u>Lead</u>
CRITFC	1	Work with NWPPC and related agency staffs to improve data management services to the region	Ongoing	Reports to Steering Committee	Roger
MFWP	1	Provide services as requested	Ongoing	Requested services	J. Hess-Herbert, staff
Region	1	Work with regional entities to contribute data management expertise with development of activities within the scope of the Fish and Wildlife Program.	On request	Input and assistance to F&WP	Schmidt
WDFW	1	Assist in any pertinent coordination efforts.	Opportunistic	Assistance	O'Connor

Objective 6 Project Management / Coordination

Task 3 Coordinate with other related activities

Maintain communications between StreamNet and other applicable regional and state-level fish and wildlife activities 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.

<u>Project</u>	<u>Job</u>	<u>Planned work elements</u>	<u>Date Due</u>	<u>Deliverable</u>	<u>Lead</u>
CRITFC	1	Work with NMFS and non F&WP agency staffs to improve and provide data management services to the region	Ongoing	Reports and recommendations to SC	Roger
IDFG	1	Coordinate and collaborate with other organizations, including federal, tribal, state, and local governments and private organizations. Such coordination and collaboration will be selected and conducted in such a manner as to provide benefit to IDFG and StreamNet database systems or to distribute StreamNet data.	Ongoing	Coordination with related projects/activities	Butterfield
MFWP	1	Maintain communication between state and regional entities	Ongoing	Communication	J. Hess-Herbert
ODFW	1	Establish / maintain working relationships with data collection projects within and outside ODFW to promote efficient and beneficial data sharing.	As needed	Enhanced data flow into StreamNet	Cooney
Region	1	In order to broaden the scope and utility of the StreamNet database, develop appropriate proposals for data development activities that would compliment the main StreamNet data holdings. Ensure proposed work is not currently conducted by other entities. (Examples may include traditional StreamNet data types outside of the Columbia River basin, macroinvertebrates, water temperature, and habitat restoration.) Conduct of such work will be dependent on availability of additional resources. Once awarded, efforts will conform to the approved contract. Such work will be coordinated with this work plan so that activities under this task do not impede accomplishment of the remainder of the work plan. This task is necessitated by the fact that project staff have time available that is not covered by the BPA contract.	Ongoing	Project proposals	Schmidt
WDFW	1	Assist in any pertinent coordination efforts.	Opportunistic	Assistance	O'Connor

Objective 6 Project Management / Coordination

Task 4 Prepare and present public information related to the StreamNet Project.

As needed, produce public information materials and participate in various meetings and forums to explain the project's capabilities and purpose and to generate support and additional data sources. Activities may include brochures, demonstrations, posters and talks.

<u>Project</u>	<u>Job</u>	<u>Planned work elements</u>	<u>Date Due</u>	<u>Deliverable</u>	<u>Lead</u>
CRITFC	1	Prepare and present demonstrations and descriptions of the library services available through StreamNet	Ongoing	Reports on activities to Steering Committee	Oftedahl
IDFG	1	Where appropriate, participate in public or private meetings and forums to represent StreamNet and IDFG. Produce reports, maps, or other materials in support of or for dissemination of StreamNet information.	Opportunistic	Public awareness of the StreamNet project and capabilities	Butterfield
MFWP	1	Determine if Montana needs any publications, documents and produce them if needed. Review regional products when necessary.	Ongoing	Review	J. Hess-Herbert
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.	As needed	Published articles, and presentations	All staff
Region	1	Prepare and deliver presentations to scientific and professional meetings to demonstrate project capabilities and accomplishments and to solicit additional data and involvement or coordination with the project.. Expected results would be enhanced visibility for the project, increased participation and data flow from agencies, improved coordination, and avoided duplication of effort.	Opportunistic	Presentations	Staff
Region	2	Develop materials to support the project. Improve public materials such as the StreamNet brochure, data inventories, etc. as needed. Maintain and update explanatory materials such as the Query System User Guide and documents that explain data categories and structures.	As needed	Materials for distribution	Schmidt
WDFW	1	Participate as opportunities arise to highlight StreamNet programs & data. Report key contacts and results to Regional Project Manager to keep Manager apprised on opportunities pursued in Washington state.	As needed	Participation, information materials, reports	O'Connor