Recommendation on Integration of the Northwest Hydrosite Database into StreamNet

- Project White Paper -

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U.S. Department of Energy
Bonneville Power Administration
Fish and Wildlife Group
Columbia River Inter-Tribal Fish Commission
Idaho Department of Fish and Game
Montana Department of Fish, Wildlife & Parks
Oregon Department of Fish and Wildlife
Pacific States Marine Fisheries Commission
Shoshone-Bannock Tribes
U.S. Fish and Wildlife Service
Washington Department of Fish and Wildlife

Title: Recommendation on Integration of the Northwest Hydrosite Database into StreamNet

Work Statement task #: 1.4 (e)

Date: May 1997 (updated to incorporate steering committee comments)

Task description

FACILITIES

Task 1.4 Prepare and maintain standardized data relating to facilities affecting fish and aquatic habitat.

e) Prepare a recommendation regarding integrating the NWHS into StreamNet by FY 98.

Products: 3) Draft (March 31) and final (April 30) NWHS recommendation.

Background

In 1984 the Northwest Power Planning Council (Council) initiated the Hydro Assessment Study (HAS). The HAS consisted of three distinct efforts:

1. BPA, the Council, and the U.S. Army Corps of Engineers cooperated to develop the **Pacific Northwest Hydropower Data Base and Analysis System (NWHS)**.

2. The Council led the effort to design the region's first anadromous fish data system. This project, initially called the Anadromous Fish Study, started by identifying anadromous fish distribution. It later evolved into sub-basin planning and the **Coordinated Information System**.

3. BPA coordinated the inventory and analysis work on the remaining environmental categories, called the Pacific Northwest Rivers Study. Data from that study later evolved into the **Northwest Environmental Database**.

In 1996 the Coordinated Information System and the Northwest Environmental Database projects were merged to form **StreamNet**.

The NWHS continues to be updated and maintained by a contractor, located at Bonneville Power Administration. The NWHS contains detailed physical, hydrologic, institutional status, and cost information on over 4,000 identified regional hydro sites. The system also

includes hydrology and cost estimating algorithms and direct links to BPA's hydropower supply estimation models.

In 1996 the StreamNet COTR proposed that the NWHS be merged into the StreamNet project. This paper serves as the culmination of discussions within the StreamNet Steering Committee regarding that proposal.

Issues

The overriding issue that must be addressed is: should StreamNet include the management and maintenance of data/information whose primary purpose is to support energy forecasting? Within this issue are several other and more specific issues:

1. Does the NWHS support Fish and Wildlife Program objectives?

Discussion: NWHS falls partially within the StreamNet mission. Information on hydropower project configuration and status does serve the needs of the Fish and Wildlife Program. Data fields related to energy analysis and analytic calculations, however, are less applicable. The NWHS's analytic capabilities have no bearing on the Fish and Wildlife Program. The need to keep NWHS data current has been offered as a rationale for continued management of these data. While portions of the NWHS data system are relevant to fish and wildlife management these data elements are typically static in nature. The only variable that may be subject to change that is directly relevant to fish and wildlife management is project status and this involves only infrequent changes to a small subset of the dam sites in the data base.

2. Should hydropower specific data efforts be funded by the Fish and Wildlife Program?

Discussion: Given the current funding environment, there is a strong sentiment within the fish and wildlife management agencies, Council fish and wildlife staff, and CBFWA that non-fish and wildlife activities should not be funded using Program funds.

3. Is the current method for updating and maintaining the NWHS not working?

Discussion: No problems with the existing system have been identified. Updates are being made within the time-frame required by Fish and Wildlife Program users.

4. Is StreamNet getting the data from the NWHS?

Discussion: It would be desirable to have easier access to the data. However, given its tangential applicability, this is not considered as an important issue.

Options

Several options for future maintenance of the NWHS have been identified. These include:

1. Maintain status quo. Funding for the NWHS would come from outside the Fish and Wildlife Program. The current BPA contractor (or another selected by BPA) would continue the update/maintenance of the NWHS. As is the case with other users, StreamNet would continue to receive appropriate sub-sets of data from NWHS.

2. Maintain the status quo but with StreamNet controlling the sub-contract. Funding would come from outside the Fish and Wildlife Program.

3. Maintain the status quo but with StreamNet controlling the sub-contract. Funding would come from the Fish and Wildlife Program.

4. StreamNet would assume responsibility for the update/maintenance of the NWHS, with activities similar to those being performed by the BPA contractor. Funding would come through BPA using non-Fish and Wildlife Program funds.

5. StreamNet would assume responsibility for the update/maintenance of the NWHS, with activities similar to those being performed by the BPA contractor. Funding would come through the Fish and Wildlife Program.

6. StreamNet would assume responsibility for the update/maintenance of the NWHS, with funding from sources other than the Fish and Wildlife Program. The data fields currently available through the NWHS would be reviewed and those not directly related to fish and wildlife program activities and responsibilities would be discarded. StreamNet would not maintain updates to project status currently supplied by FERC or would confine updates to those directly relevant to the Fish and Wildlife Program. BPA could, at their option, pursue an agreement whereby FERC would maintain project status data as it is arguably that agency's responsibility. Historic paper files associated with the NWHS would be the responsibility of BPA. BPA and the Council would have the option of archiving or destroying these files. (A sub-option would be for PSMFC to archive these documents along with other historic PSMFC files. Files would <u>not</u> be readily accessible.)

7. StreamNet would assume responsibility for the update/maintenance of the NWHS, with funding coming through the Fish and Wildlife Program. Other aspects of the strategy would be the same as under option 6.

Analysis

Options 3 and 5 are not viable as they transfer to StreamNet responsibilities not directly related to the goals and objectives of the Fish and Wildlife Program. Both the CBFWA prioritization sub-committee that oversees the StreamNet budget and Council staff have indicated their opposition to this. Option 7 would require additional funding or a corresponding decrease in effort in other areas. It is doubtful that the entities controlling funding allocation for Program activities would agree to either new money or reallocation

of effort. The StreamNet steering committee is concerned about reallocating resources from current activities to address the NWHS issue. It is therefore recommended that options 3, 5, and 7 be rejected. In other words, work on the NWHS should receive funding from sources outside of the Fish and Wildlife Program.

Option 4 would require added space and logistical support at the regional StreamNet management site (PSMFC). Added management responsibilities may detract from the primary Fish and Wildlife program mission. This is also arguably outside of the mission of PSMFC. If this were the only option it may be worthy of consideration. However, there are other viable options. We therefore recommend that this option be rejected.

If StreamNet were to take an active role in NWHS administration, option 6 would be the preferred option as this provides the data needed by the Fish and Wildlife Program and in a format that is completely consistent with the StreamNet data system. However, this option would not provide for maintenance of data necessary for BPA's energy planning needs.

Options 1 and 2 are roughly equivalent in terms of effect on the NWHS. Option 2 would probably lead to a product that is marginally more useful for the Fish and Wildlife Program given increased control by StreamNet. On the other hand, option 1 guarantees to BPA and hydropower entities that the product will meet their non-Fish and Wildlife Program needs. It also avoids the added overhead that would be required if PSMFC were to manage the contract and would not detract StreamNet managers from other activities that are arguably more relevant to the Fish and Wildlife Program. On balance, option 1 would appear to be the more plausible option.

In sum, from a fish and wildlife management perspective, options 1, 2, and 6 are the only alternatives worthy of consideration. Given that the NWHS is only tangentially related to the Fish and Wildlife Program, and that StreamNet has other more pressing and relevant priorities, option 1 would appear to be the most logical choice.

Recommendation

The issue of whether or not to continue to maintain the NWHS should be made by BPA based on energy planning and management needs, not the needs of the Fish and Wildlife Program. If the system is to be maintained, this should not be the responsibility of the StreamNet project. StreamNet should continue to cooperate with BPA on the NWHS, specifically by sharing river reach updates and other Fish and Wildlife Program data and by assisting in exchange of NWHS data to StreamNet as necessary. StreamNet should create a dams and diversions dataset that would be fully integrated into the StreamNet system. This dataset would be derived, in part, from data currently contained in the NWHS, with StreamNet receiving periodic (annual) updates from the NWHS.