



Summary of Staff Team Proposal for Early Data Needs Tasks

Background

Since the Phase II technical assessment reports have been completed, and the Phase III Scope of Work has not yet been initiated, an interim process termed the “Early Data Needs” (EDN) has been identified so that field data can be collected during the summer and fall of 2001. Data collection during these seasons is important so that a stronger technical foundation is in place for the development of the initial version of the watershed plan during 2002-2003. Data collection this year is also especially important because currently there are drought conditions. Measurements taken during these low flow conditions provide essential information on water quality and quantity, fish habitat associated with low instream flows, and hydraulic continuity between ground and surface water.

This proposal provides a summary of the EDNs as recommended by the Staff Team and Technical Team Leads. More detailed information on each of the specific EDNs has been developed and will form the basis for contract amendments with Utah State University (USU). USU will revise a final detailed EDN Proposal that will be resubmitted for use as an amendment to the existing personal services contract between the Joint Board and USU for the latter to conduct technical studies in the WRIA 1 Watershed Management Project.

The anticipated schedule for the work proposed here would be initiated immediately following Joint Board approval. Contract implementation and approval is expected as soon as practicable. USU will provide matching funds for approximately 28% of the budgeted costs.

EDN 1 Alternative F \$75,000

Data Analysis for 6 of the FY 2000 Intensive Instream Flow Sites

The sites for which these analyses will be completed are intended to represent the range of conditions and stream types where data were collected during the 2000 field season. The sites selected for this purpose are Fishtrap, Tenmile, Middle Fork, South Fork, and the mainstem sites at Everson and the estuary. If the Middle Fork site is not ready for data analysis, the site along the mainstem at Ferndale will be selected. USU anticipates completing analyses of data from 3 – 4 sites by the end of the EDN time period (November), and the budget will support continued analyses on the remainder of the six sites. Analysis of the remaining 2000 field season sites and 2001 sites would need to occur under the Phase III Technical Assessment.

EDN 3 Alternative F \$200,000

Data Collection for FY 2001 Field Sites – 9 Intensive and 5 Rapid Assessment Sites

This work includes: intensive instream site identification, reach selection, and collection of the complete suite of intensive site data parameters (as identified in Hardy, 2000) during relatively high, medium, and low flow conditions for the nine sites suggested by the Instream Flow and Fish Habitat technical teams (may need to substitute one for new North Fork site). The five additional rapid assessment sites will be collected so as to represent the range of stream sizes, channel types, and basin strata. The five additional rapid assessment sites will be recommended by USU and the In-Stream Flow Tech Team and approved by the Staff Team.

Note: Fish utilization data necessary to validate the models will be collected at the FY 2000 and FY 2001 intensive instream flow sites. Fish utilization work will be conducted by the Lummi Nation in coordination with the salmon co-managers, USU, and respective Technical Teams.

EDN 13 (Previously EDN 4 & 5) \$40,000

Surface Water Quality Temperature versus Discharge Relationship and Calibration / Validation Data and Temperature Data Collection Associated with 303(d) and Key non 303(d) Stream Segments

A detailed Scope of Work will be developed for water quality data collection and modeling for the Phase III scope of work. Water quality data with particular importance to drought year conditions will be collected at 4 sites, to be recommended by USU. These sites will be reviewed by the Water Quality Tech Team and approved by the Staff Team. The Nooksack Tribe, in coordination with USU's EDN 13 efforts, will collect the information on a fifth site along the South Fork.

EDN 8 \$10,000

Lake Whatcom Loadings Data Needs

A detailed Scope of Work will be developed for modeling and calibration of Lake Whatcom water quality. Funds are also allocated for data management support (including data entry into DSS database), coordination with related Phase III work, and coordination with WRIA Project Team and others as necessary.

EDN 9 \$30,000

Seepage Run Data Collection

This task includes two sets of measurements to be collected along the entire mainstem Nooksack River and at tributaries where possible (see EDN 12), monitoring of major tributaries at confluence with the mainstem, and coordinated water level measurements in (approximately) 30 nearby wells. To the extent practicable, these field measurements and analyses will be coordinated with the data collection and analyses for Early Data Need 12, EDN1, and EDN 3. This will be undertaken to the extent such research relates to common drainage area or areas and enables the integration of related analytical results.

EDN 11 **\$40,000**
Support for Expanded Independent Peer Review Process
 (USU matching funds will not be provided for this task).

EDN 12 **\$100,000**
Hydraulic Continuity/Water Quality

This task includes data collection at three pilot “hydraulic continuity” sites: particular consideration will be given to sites located on Fishtrap Creek, Tenmile Creek, and Dakota Creek. The purpose of this hydraulic continuity investigation is to help evaluate the feasibility of adjusting the timing and location of water withdrawals as possible management solutions. This EDN proposal will result in the collection and analysis of data from approximately July – September 2001 for the purposes of illustrating hydraulic conditions during a drought year. EDN 12 will build on data collected during a 1995 low flow study in two of the three pilot areas previously identified as possible. Additional work will need to occur in the Phase III Technical Assessment in order to fully evaluate the management feasibility. USU will provide a work plan describing the type and frequency of measurements that will be needed for this EDN prior to initiating work. Measurements will include well level, water quality, and other data as necessary. USU will ensure coordination of this effort with EDN 9, and EDN 3 activities. USU will use the results of the EDN study to develop the detailed scope of work for Phase III related to answering hydraulic continuity questions associated with potential management solutions. A portion of the budget estimated for this effort has been allocated for initiating analysis of the data (approximately \$60,000)

EDN 14 **\$40,000**
Preliminary Water Quantity Model Development for Phase III

Preliminary model development for Phase III is important for the success and timely delivery of the WRIA 1 decision support system. The design, implementation, and deployment of a suite of models that would be integrated into the DSS is complex. This task would result in work on two primary tasks that are essential for successful implementation of the DSS: (1) Design of model-to-model and model-to-data interactions and (2) implementation of DSS design using placeholder models.

Added Work Element for Project Management \$50,000

Proposed Budget for EDNs

EDN 1	\$75,000
EDN 3	\$200,000
EDN 8	\$10,000
EDN 9	\$30,000
EDN 11	\$40,000
EDN 12	\$100,000
EDN 13 (4/5)	\$40,000

EDN 14	\$40,000
Project Management	\$50,000
Total (not to exceed)	\$585,000
Note: USU will contribute a match, the exact amount is to be determined.	