

# ASSISTANCE AGREEMENT

NOTE By signing this document, the recipient accepts this agreement and agrees to perform in accordance with all the enclosed terms, conditions, and documents attached hereto.

1. AGREEMENT NO. <b>HAA033D00</b>
2. TASK ORDER NO.
3. TYPE OF AGREEMENT (Check one) <input type="checkbox"/> GRANT <input checked="" type="checkbox"/> COOPERATIVE AGREEMENT

4. NAME, ADDRESS AND PHONE NO. OF ASSISTANCE OFFICER <b>Steven D. Shapiro, USDI, Bureau of Land Mgmt Oregon State Office, OR952 PO Box 2965 Portland, OR 97208 (503) 808-6227</b>	5. NAME, ADDRESS AND PHONE NO OF RECIPIENT <b>Maggie Peyton Upper Nehalem Watershed Council <del>16747 Timber Rd</del> 919 BRIDGE ST. <i>823/101</i> Veronia, OR 97064 503-429-2401</b>
--	--

6. NAME, ADDRESS AND PHONE NO. OF ASSISTANCE REPRESENTATIVE <b>Carolina Hooper (See Paragraph X)</b>	7. NAME, ADDRESS AND PHONE NO OF RECIPIENT'S PROJECT MANAGER <b>Bill Langmaid (See Paragraph X)</b>
---	--

6. PROGRAM STATUTORY AUTHORITY <b>PL 106-393</b>	3. STARTING DATE <b>3/18/2003</b>
---	--------------------------------------

10. EFFECTIVE DATE <b>See Block 17c</b>	11. COMPLETION DATE <b>9/30/2008</b>
--	---

12. TYPE OF RECIPIENT (Check one) <input type="checkbox"/> STATE <input type="checkbox"/> LOCAL GOVERNMENT <input type="checkbox"/> INDIAN TRIBAL GOVERNMENT <input type="checkbox"/> EDUCATIONAL INSTITUTION <input type="checkbox"/> INDIVIDUAL <input type="checkbox"/> FOR-PROFIT ORGANIZATION <input checked="" type="checkbox"/> NON-PROFIT ORGANIZATION <input type="checkbox"/> OTHER (Specify) _____	13. FUNDING INFORMATION <table> <tr> <td>This obligation</td> <td>\$ <u>10,850.00</u> Recipient</td> <td>\$ <u>36,497.00</u> BLM</td> <td><i>823/101</i></td> </tr> <tr> <td>Previous obligation</td> <td>\$ _____</td> <td>\$ _____</td> <td></td> </tr> <tr> <td>Total obligation</td> <td>\$ <u>10,850.00</u></td> <td>\$ <u>36,497.00</u></td> <td><i>823/101</i></td> </tr> <tr> <td>Share Ratio</td> <td><u>23</u> %</td> <td><u>100</u> %</td> <td><i>823/101</i></td> </tr> </table>	This obligation	\$ <u>10,850.00</u> Recipient	\$ <u>36,497.00</u> BLM	<i>823/101</i>	Previous obligation	\$ _____	\$ _____		Total obligation	\$ <u>10,850.00</u>	\$ <u>36,497.00</u>	<i>823/101</i>	Share Ratio	<u>23</u> %	<u>100</u> %	<i>823/101</i>
This obligation	\$ <u>10,850.00</u> Recipient	\$ <u>36,497.00</u> BLM	<i>823/101</i>														
Previous obligation	\$ _____	\$ _____															
Total obligation	\$ <u>10,850.00</u>	\$ <u>36,497.00</u>	<i>823/101</i>														
Share Ratio	<u>23</u> %	<u>100</u> %	<i>823/101</i>														

14. ACCOUNTING AND APPROPRIATION DATA  
 2003 .. OR086 .. 5882BP .. SA04 .. 252Z = \$36,497.00

15. PROJECT TITLE AND BRIEF SUMMARY OF THE PURPOSE AND OBJECTIVES  
**East Fork Nehalem River Watershed Assessment and other watershed restoration projects.**

See Continuation Pages

16a. NAME AND TITLE OF SIGNER (Type or print) <b>James J. Buxton, Secretary/Treas</b>	17a. NAME AND TITLE OF ASSISTANCE ORDERING OFFICER (Type or print) <b>Steven D. Shapiro</b>
16b. RECIPIENT <i>[Signature]</i> (Authorized Signature)	17b. UNITED STATES OF AMERICA BY <i>[Signature]</i> (Signature of Assistance Officer)
16c. DATE SIGNED <b>5/16/2003</b>	17c. DATE SIGNED <b>5/21/03</b>

I. Statement of Joint Objectives

A. Purpose. This agreement is made and entered into by the Department of the Interior, Bureau of Land Management, Oregon State Office (BLM) and the Upper Nehalem Watershed Council (UNWC) for the purpose of facilitating cooperation between UNWC and the BLM in implementing a watershed assessment of the East Fork Nehalem River (sixth field watershed) authorized by the Salem District Resource Advisory Committee and subsequent watershed restoration projects.

B. Objective. This agreement provides for the completion the East Fork Nehalem Watershed Assessment which will include the following topics: (Further detail is found in the project plan)

1. Assemble assessment team, compile existing data
2. Historical conditions assessment
3. Begin physical survey of sub-basin, comparative to existing data
4. Channel habitat type classification
5. Hydrological type classification
6. Riparian and Wetlands Classification and Assessment
7. Sediment sources identification and assessment
8. Channel modification assessment
9. Water Quality assessment
10. Fish presence and habitat assessment
11. Watershed Condition Consensus development
12. Monitoring Plan development
13. Publication and Dissemination of Findings

C. Authority.

1. Federal Land Policy and Management Act of 1976 (Public Law 94-579, Section 307 (b)).

2. Secure Rural Schools and Community Self-Determination Act of 2000 (Public Law, 106-393) hereinafter referred to as “County Payments” legislation.

D. Benefits.

1. Provide in-depth information on the current state of riparian and riparian related resources in the East Fork of the Nehalem watershed.
2. Greatly facilitate the BLM’s landscape level, and project level planning efforts.
3. Provide a substantial cost savings to the BLM, in that much of the information that will be collected is the type of information that the BLM would need to collect for project-specific environmental analysis work in the future.
4. Provide a substantial amount of information that will be used to create a ‘Linear Park’ along the East Fork of the Nehalem River. Part of this future proposed park would be on BLM managed land.

II. Definitions.

- A. Agreement: means this cooperative agreement.
- B. Assistance Officer (AO): means the BLM's Assistance Officer. The AO is the only individual authorized to obligate funds, award, modify or terminate the agreement. The AO is responsible for monitoring the agreement for compliance, enforcing the agreement provisions, issuing timely performance and payment approvals, terminating the agreement and closing out the agreement.
- C. Assistance Representative (AR): means the BLM's Assistance Representative. The AR will be designated for the purpose of administering the technical aspect of the agreement. The AR is authorized to clarify technical requirements, and to review and approve work, which is clearly within the scope of the work specified in this agreement. The AR is not authorized to issue changes or in any other way modify this agreement.
- D. BLM: means the Bureau of Land Management. May also be referred to as Bureau.
- E. CFR: means Code of Federal Regulations.
- F. Fiscal Year (FY): means the Federal fiscal year that extends from October 1 of one year through September 30 of the following year.

- G. UNWC may also be referred to as recipient.
- H. Not-to-Exceed (NTE) Amount: means the maximum Federal funding amount.
- I. OMB: means Office of Management and Budget.
- J. Project Inspector (PI): means the BLM's project inspector. At the time of award, a BLM employee(s) **may** be appointed as the PI. **If** appointed, the PI will be responsible for providing on-site inspection of the work and for giving the Project Manager any special instructions, guidance, or training necessary to complete or perform the work. The PI will not be authorized to issue changes or in any way modify the agreement.
- K. Project Manager: means the recipient's Project Manager.
- L. Responsible Official: means the recipient's Responsible Official. The responsible official is the individual who is authorized to act for the recipient's organization and commit the recipient to compliance with the terms and conditions of this agreement.
- M. Task Order (TO): means the order that is issued against the agreement to obligate funds for specific services or work to be accomplished.
- N. Assistance Ordering Officer (AOO): means the BLM's Assistance Ordering Officer. The AOO is responsible for obligating the funds, monitoring for compliance, enforcing the provisions, issuing timely performance and payment approvals, modifying, terminating, and closing out the agreement. The AOO is not authorized to issue changes or in any other way modify this agreement. A Project Inspector may be appointed by the AOO.

### III. Project Management Plan.

- A. UNWC agrees to:
  - 1. Allow the BLM, its employees, agents, contractors, and cooperators access to all project areas and all records and documents relating to the watershed assessment.
  - 2. Notify BLM a minimum of 7 days prior to the commencement of work.
  - 3. Attend the following meetings between the BLM and the UNWC, at a mutually agreed to location:

Meeting #1 – Immediately following step #2 in the Project Plan. Approximate date: February 2, 2003.

Meeting #2 – Approximately four months into the collection of the physical survey data. Approximate date: June 2, 2003.

Meeting #3 – Immediately following step #3 in the Project Plan. Approximate date: November, 2003.

Meeting #4 – Immediately following the delivery of the final watershed assessment documents as described in step 12 and 13 of the project plan. Approximate date: January 2004.

4. Provide a Project Plan with associated costs, to provide a basis on which payment will be made prior to the start of work based on the attached project plan as modified.
5. Perform work in accordance with established engineering practices.
6. Comply with fire regulations as administered by Oregon Department of Forestry.
7. UNWC will provide overall project management responsibilities.

B. The BLM agrees to:

1. Perform periodic check on the progress of the work to ensure timely completion.
2. Provide the watershed council with GIS layers, and with either copies of or access to any other pertinent information that will help develop the watershed assessment.
3. Assist UNWC in complying with any monitoring and/or auditing requirements that arising from implementation of this project utilizing County Payments legislation authorization.
4. Provide payments to UNWC in accordance with Section V, Financial Support, and Section VI, Payments, of this agreement and applicable OMB and Treasury Regulations.

IV. Term of Agreement. This agreement shall become effective on the date of signature of the BLM Assistance Officer and shall remain in effect until September 30, 2008 or unless terminated in accordance with the provisions of 43 CFR Subpart C, Section 12.84

V. Financial Support.

- A. Funds initially obligated or obligated for specific TO's but not expended in one FY can be carried forward and expended in the subsequent FY.
- B. This agreement shall be funded by issuance of TOs based on the availability of BLM funding. UNWC hereby releases the BLM from all liability due to failure of Congress to appropriate funds for this agreement.
- C. TOs will specify the NTE amounts. The BLM shall not be obligated to pay for nor shall UNWC be obligated to perform any effort that will require the expenditure of Federal funds above the NTE amount specified in that TO.
- D. Cost sharing for this agreement shall be in accordance with 43 CFR, Subpart C, Section 12.64. Anticipated support by partners, including BLM, to this agreement for this project:

BLM	\$36,497	
UNWC	<del>\$25,600</del>	\$10,850
	<del>(Coordinator \$4,000)</del>	
	<del>(Board \$4,000)</del>	
	(Volunteers \$9,600)	\$8,000
	<del>(Tech Team \$8,000)</del>	
	(ASSESSMENT PUBLISHING \$2,000)	
	(FORESTRY SUPPLIES \$850)	

JRS/1M  
JRS/1M  
JRS/1M  
JRS/1M

VI. Task Orders (TO).

- A. Issuance. If any TOs are issued they will be issued in writing by the Assistance Officer and must be signed by both the authorized responsible official and the AO to be effective.
- B. Contents. A TO will contain:
  - 1. The specifications or statement of work which specifies what will be performed under this TO.
  - 2. A list of any deliverable items that are required.

3. Any necessary drawings and/or location maps.
4. The delivery schedule or completion time which has been negotiated based on the level of difficulty, site location, etc.
5. A detailed budget submitted on form SF-424A, Budget Information - with a NTE amount for the task.
6. Any other detail or information necessary.

VII. Payments.

A. Financial Management Service's (FMS), Automated Standard Application for Payment (ASAP) System.

1. Payments under this agreement will be made by the United States Department of Treasury, FMS, ASAP system. ASAP is a recipient-initiated, on-line payment and information system for Financial Assistance Agreements. The recipient will request federal funds that are due directly from the Federal Reserve Bank.
2. Recipient enrollment in ASAP is accomplished in one of the two following ways:
  - a. Recipients *already participating with another Federal agency* need only complete the attached ASAP Participation Request form (see Attachment No. 1) and fax or mail it to the number or address listed on the form.
  - b. Recipients *not currently enrolled in the ASAP system* should complete the attached ASAP Participation Request form (see Attachment No. 1) and fax or mail it to the number or address listed on the form. The recipient will then receive a Department of Treasury enrollment handbook and enrollment form. The recipient will complete and return those forms to the Department of the Treasury and they will send the recipient the ASAP Passport software along with a CD-ROM tutorial. The Department of Treasury will establish an ASAP Requestor ID for the recipient as well as an Organization Access Code (OAC), User ID, and Password that will serve to segregate the recipient users and their access to certain functions of the on-line system. In addition, the data is encrypted in order to ensure the privacy of the data as it is sent from the user to ASAP.

3. Once the recipient has been assigned an ASAP Requestor ID by the Department of Treasury, the BLM Assistance Officer will create an ASAP Account ID unique to this agreement. The first nine characters will be the agreement number (reference block 1 of agreement cover page, BLM Form 1511-1). The remaining three characters will identify BLM funding line items. Drawdown of funds should be made in fund line item order, beginning with 001.
- B. The recipient will be required to complete a Standard Form (SF) 270, Request for Advance or Reimbursement, and backup documentation and mail or fax it to the Assistance Officer at the same time they make an ASAP fund drawdown. *Failure to submit an original SF-270 at time of drawdown may result in the BLM requiring agency review prior to release of funds using the ASAP system.*
  - C. Drawdowns for advance payments will be made only in amounts necessary to meet current disbursement needs and will be scheduled so that the funds are available only immediately prior to their disbursement. *If advance payments are drawn the recipient must submit an original Federal Cash Transaction Report, SF 272 to the Assistance Officer 15 working days following the end of each quarter.*

This recipient is subject to Agency Review for payment requests.

#### VIII. Property Management and Disposition.

Any BLM property used or other property acquired under this agreement, including intangible property such as copyrights and patents shall be governed by the provisions of 43 CFR, Subpart C, Section 12.71 through 12.74.

#### IX. Deliverables and Reports.

Submit one copy of an annual performance report to the Assistance Representative within 90 days after the end of the FY. The performance report must be prepared in accordance with 43 CFR, Subpart C, Section 12.80 and address items such as a comparison of actual accomplishments with established goals, reasons why goals may not have been met, cost overruns and any other pertinent information.

- A. A detailed project plan, submitted to AR, no later than one week after the commencement of work. The previously submitted project plan will be utilized (attached) as modified.
- B. Two complete copies on CDs of the monitoring report, the watershed assessment, including all maps. Three hard copies of the same information.

X. Key Officials.

A. Assistance Officer (AO)

Steven Shapiro  
Bureau of Land Management  
Oregon State Office  
333 SW First Ave.  
Portland, OR 97204  
Telephone Number (503) 808-6227

B. Assistance Representative (AR)

Carolina Hooper  
Bureau of Land Management  
Salem District  
4610 3<sup>rd</sup> St.  
Tillamook, OR 97141  
Telephone Number (503) 815-1119

C. Project Inspector (PI)

Kurt Heckerroth  
Bureau of Land Management  
Salem District  
4610 3<sup>rd</sup> St.  
Tillamook, OR 97141  
Telephone Number (503) 815-1119

D. Responsible Official

Maggie Peyton  
Watershed Coordinator  
Upper Nehalem Watershed Council  
919 Bridge St  
Vernonia, OR 97064

E. Project Manager

Bill Langmaid  
Upper Nehalem Watershed Council  
919 Bridge St.  
Vernonia, OR 97064

## XI. Special Terms and Conditions.

### A. Order of Precedence

Any inconsistency in this agreement shall be resolved by giving precedence in the following order: (a) Any national policy requirements and administrative management standards; (b) requirements of the applicable OMB Circulars and Treasury regulations; (c) 43 CFR Part 12; (d) special terms and conditions; and (e) all Agreement sections, documents, exhibits, and attachments.

### B. Modifications

This agreement may be modified by written agreement signed by both a UNWC official and the Assistance Officer. Administrative changes (i.e. AO name change) which do not change the project management plan, NTE amount, etc. or otherwise affect the recipient may be signed unilaterally by the AO.

### C. Procurement Procedures

It is a national policy to place a fair share of purchases with minority business firms. The Department of the Interior is strongly committed to the objectives of this policy and encourages all recipients of its grants and cooperative agreements to take affirmative steps to ensure such fairness. Positive efforts shall be made by recipients to utilize small businesses, minority-owned firms, and women's business enterprises, whenever possible. Recipients of Federal awards shall take all of the following steps to further this goal:

1. Ensure that small businesses, minority-owned firms, and women's business enterprises are used to the fullest extent practicable.
2. Make information on forthcoming opportunities available and arrange time frames for purchases and contracts to encourage and facilitate participation by small businesses, minority-owned firms, and women's business enterprises.
3. Consider in the contract process whether firms competing for larger contracts intend to subcontract with small businesses, minority-owned firms, and women's business enterprises.
4. Encourage contracting with consortiums of small businesses, minority-owned firms and women's business enterprises when a contract is too large for one of these firms to handle individually.

5. Use the services and assistance, as appropriate, of such organizations as the Small Business Development Agency in the solicitation and utilization of small business, minority-owned firms and women's business enterprises.

D. Deposit of Publications

Two (2) copies of each applicable publication produced under this agreement shall be sent to the Natural Resources Library with a transmittal that identifies the sender and the publication, and states that the publication is intended for deposit in the Natural Resources Library. Publications shall be sent to the following address:

U.S. Department of the Interior  
Natural Resources Library  
Interior Service Center  
Gifts and Exchanges Section  
1849 C Street, N.W.  
Washington, D.C. 20240

XII. General Provisions.

- A. National Policy Requirements and Administrative Management Standards. All applicable national policy requirements and administrative management standards as set forth in the Office of Management and Budget, Financial Management Division, Directory of Policy Requirements and Administrative Standards for Federal Aid Programs are incorporated by reference.
- B. 43 CFR Part 12, Administrative and Audit Requirements and Cost Principles for Assistance Programs is incorporated by reference.
- C. OMB Circular A-122, Cost Principles for Nonprofit Organizations is incorporated by reference.
- D. 43 Code of Federal Regulations (CFR) Part 12, Appendix A to Subpart D, Certification Regarding Debarment, Suspension, and Other Responsibility Matters - Primary Covered Transaction and completed Form DI-2010 are incorporated by reference.
- E. 43 CFR Part 12, Appendix C to Subpart D, Certification Regarding Drug-Free Workplace Requirements, Alternate I (Grantees other than individuals) and completed Form DI-2010 are incorporated by reference.

- F. 43 CFR Part 12, Appendix C to Subpart D, Certification Regarding Drug-Free Workplace Requirements, Alternate II (Grantees Who are Individuals) and completed Form DI-2010 are incorporated by reference.
- G. 31 U.S.C. 1352, Certification Regarding Lobbying and completed Form DI-2010 are incorporated by reference.
- H. Single Audit Act Amendments of 1996, Public Law 104-156, 110 Stat. 1396, 31 U.S.C. 750 1-7 and 43 CFR, Part 12, is incorporated by reference.
- I. Compliance With Buy American Act. Pursuant to Sec. 307 of the Department of the Interior and Related Agencies Appropriations Act of 2000, Public Law 106-113, be advised of the following:
1. None of the funds made available in this agreement may be expended by a recipient unless the recipient agrees that in expending the funds the recipient will comply with sections 2 through 4 of the Act of March 3, 1933 (41 U.S.C. 10a-10c; popularly known as the "Buy American Act").
  2. Purchase of American-made equipment and products. In the case of any equipment or product that may be authorized to be purchased with financial assistance provided using funds made available in this Act, it is the sense of the Congress that entities receiving the assistance should, in expending the assistance, purchase only American-made equipment and products.
  3. Recipient also agrees to follow the procedures in 43 CFR Part 12, Subpart E, Section 12.700 - Buy American Requirements for Assistance Programs.
- J. Opposition to Any Legislation. Recipient shall not use any part of the Government's funds for any activity or the publication or distribution of literature that in any way tends to promote public support or opposition to any legislative proposal on which Congressional action is not complete.
- K. Endorsements. Recipient shall not publicize or otherwise circulate, promotional material (such as advertisements, sales brochures, press releases, speeches, still and motion pictures, articles, manuscripts or other publications) which states or implies governmental, Departmental, bureau, or government employee endorsement of a product, service, or position which the recipient represents. No release of information relating to this award may state or imply that the Government approves of the recipient's work products, or considers the recipient's work product to be superior to other products or services.

All information submitted for publication or other public releases of information regarding this project shall carry the following disclaimer:

The views and conclusions contained in this document are those of the authors and should not be interpreted as representing the opinions or policies of the U.S. Government. Mention of trade names or commercial products does not constitute their endorsement by the U.S. Government.

Recipient must obtain prior Government approval for any public information releases concerning this award which refer to the Department of the Interior or any bureau or employee (by name or title). The specific text, layout photographs, etc. of the proposed release must be submitted with the request for approval.

A recipient further agrees to include this provision in a subaward to and subrecipient, except for a subaward to a State government, a local government, or to a federally recognized Indian tribal Government.

- L. Increasing Seat Belt Use in the United States. Recipients of grants/cooperative agreements and/or sub-awards are encouraged to adopt and enforce on-the-job seat belt use policies and programs for their employees when operating company-owned, rented, or personally owned vehicles. These measures include, but are not limited to, conducting education, awareness, and other appropriate programs for their employees about the importance of wearing seat belts and the consequences of not wearing them.

Upper Nehalem Watershed Council  
East Fork Nehalem  
Watershed Assessment Project

Timeline and Job details

This assessment will be conducted according to the Oregon Watershed Enhancement Board's (OWEB) *Oregon Watershed Assessment Manual*. It will be a coordinated effort between the Upper Nehalem Watershed Council (UNWC), the BLM, Columbia County, and landowners within the East Fork Nehalem sub-basin. Other technical resources and those provided by natural resource agencies concerned will be utilized as needed, including verbal testimony from old-timers in the Upper Nehalem watershed. All steps are listed below, and will be conducted in accordance with OWEB standards and practices, but time frames are approximate. The UNWC personnel involved have other occasional duties that could temporarily remove them from this project.

**Step 1 – Assemble assessment team, compile existing data.**

Process – Contact UNWC technical support team, advise them of project and identify specific areas where their assistance is needed. Request agency data and corporate records from landowners.

Product – meetings, agreements, data

Timeframe – 4 weeks.

**Step 2 – Historical conditions assessment**

Process – Examine historical records and studies, visit multiple areas within project site to search for ground proof (e.g. Stumps, old trestles, old railroad grades, logging camps), make GIS data layer and database.

Product – Narrative of historical conditions, (hopefully) historical harvest records.

Timeframe – 4-6 weeks.

**Step 3 – Begin physical survey of sub-basin, comparative to existing data**

Process – Full year project to sample the sub-basin through all seasons. Collect observational data as well as qualitative data.

Product – Base map, data for Steps 4-10

Timeframe – 40-45 weeks.

**Step 4 – Channel habitat type classification**

Process – Evaluate physical survey data, work with ODFW and ODF personnel to accurately document and classify stream channels. Utilize the *Coastal Landscape Analysis Modeling Study (CLAMS)* protocols to analyze existing physical data layers to provide initial typing of channel segments and create relationships to salmon habitat types.

Product – GIS data layers and database, field verification data

Timeline – 3-4 weeks.

**Step 5 – Hydrology and Water Use Assessment**

Process – Identify hydrologic potential, and how land use has altered it. Monitor flow rates over course of year to get a picture of hydrologic reaction to natural and manmade impacts to water availability. Use CLAMS data to generate cover-type map for entire sub-basin.

Product - GIS data layers and database, field verification data, summaries of land use, peak flow, roads, water use and diversion, and channel impacts.

Timeline – 6-8 weeks.

**Step 6 – Riparian and Wetlands Classification and Assessment**

Process – Verify existing riparian analysis (PSU, 2001) at a statistically significant level. Expand riparian conditions analysis to include all streams recognized by ODF. Create riparian overlay based on Oregon Forest Practices Act stream classifications. Conduct wetlands survey and assessment, meshing information with data gathered on channel modifications.

Product – GIS data layers (refined) showing shade, LWD recruitment. Associated database of riparian condition unit information

Timeline – 7-9 weeks

### **Step 7 – Sediment sources identification and assessment**

Process – Assemble all existing state, federal, and private data. Assemble priority list for survey based on proximity to streams and slope. Conduct field survey of roads (used and abandoned) for stability and culvert crossings. Locate forestry and rural land-use impacts on soil movement into the riparian area.

Product – Sediment severity map by vector of introduction, risk assessment map, summary of sediment vector data. Point layer of stream crossings, with associated data. Point layer of road failures, with documentation, and of potential failures (judgment) based on ODF/OWEB guidelines.

Timeline – 5-7 weeks.

### **Step 8 – Channel modification assessment**

Process – Use historical records and aerial photos to locate where human activities have altered channel morphology and aquatic habitat. This is overlaid onto channel habitat type maps to assess overall impact of historical and current activities on watershed health and function.

Product – Channel modification map, with associated data and summaries.

Timeline – 4-6 weeks.

### **Step 9 – Water Quality assessment**

Process – Measure current chemical and physical properties within the sub-basin and compare against ODEQ standards and historical data, including UNWC baseline data where available. Apply water quality standards to the GIS layer to generate percent above water quality standard/s and summarize.

Product – List of beneficial uses and quality issues, summary of percent water quality impairment per parameter. GIS layer showing water quality standards across each measurement and stream reach.

Timeline – 2-3 weeks.

### **Step 10 – Fish presence and habitat assessment**

Process – Gather and assimilate a wide source of data on ODFW fish presence and habitat characteristics. Gather and assimilate data on culvert locations and other fish passage modifications. Field check all data at a statistically significant level to ensure reliability.

Products – Maps of fish (anadromous and resident) presence, stream reach habitat suitability by species, and migration barriers (passable and blocking). Include electronic data and summaries of the field work in ArcView and spreadsheet formats.

Timeline – 8-10 weeks.

### **Step 11 – Watershed Condition Consensus development**

Process – Gather technical team to assess information gathered in Steps 2 through 10. Identify missing information, summarize collected information, list issues for future development, evaluate overall condition of the watershed and point out areas of immediate concern for future restoration or protection opportunities.

Product – Maps showing resource conditions and use types that are negatively affecting fish, and locations of recommended restoration actions.

Timeline – Several meetings throughout the process, plus 4 weeks at the end of the process to finalize the summaries and maps.

### **Step 12 – Monitoring Plan development**

Process – Using the Water Quality assessment, the *Water Quality Monitoring Guidebook*, and our ODEQ advisors, develop a monitoring plan to fill in the data gaps and answer questions generated by the assessment. Develop a strategy for monitoring restoration projects with OWEB and the OSU extension service.

Product – An adopted monitoring protocol and focus for the sub-basin.

Timeline – 1-2 weeks.

### **Step 13 – Publication and Dissemination of Findings**

Process – Wordsmith and compilation of data, maps, and findings into a complete document. Publication of this document in paper form and conversion of the same document to html format for publication on the Internet.

Product – A final document, approved by the technical team and the UNWC. Electronic (CD-ROM) copies of publication and all appendices with full data disclosure. Deliverable to the BLM and all cooperating landowners in the sub-basin will be three (3) hard copies and two (2) CD-ROMS.

Timeline – Ongoing throughout assessment, plus 6-10 weeks.

Note on these timelines. Some of these activities will be conducted simultaneously, as data is gathered in the field or from discovery of existing sources. The process described in Step 3 will take a long time, but as data is gathered it would be utilized in the other steps. This method of work is the best approach for a thorough assessment of the watershed. The final product described in Step 13 should be ready about 60 weeks after beginning the project, but any number of unforeseen factors could delay this.

Products are available as they are developed. For example, base maps would be available before a fish presence map, but a version of all the maps has been found to exist in some form already. Assimilation and standardization, along with field verification, are the factors that determine the final timing of the availability of approved, final version of maps and data.