
PART I - ADMINISTRATIVE

Section 1. General administrative information

Title of project

Increase Instream Water Rights For Crabtree Creek

BPA project number: 20089
Contract renewal date (mm/yyyy): **Multiple actions?**

Business name of agency, institution or organization requesting funding
South Santiam Watershed Council

Business acronym (if appropriate) SSWC

Proposal contact person or principal investigator:

Name	<u>Susan Gries</u>
Mailing Address	<u>33630 McFarland Road</u>
City, ST Zip	<u>Tangent, OR 97389</u>
Phone	<u>541-967-5927x120</u>
Fax	<u>541-928-9345</u>
Email address	<u>gries@peak.org</u>

NPPC Program Measure Number(s) which this project addresses
7.8 G.1, 2.2A, 7.6A.2, 7D

FWS/NMFS Biological Opinion Number(s) which this project addresses

Other planning document references

Oregon Department of Fish and Wildlife Santiam Calapooia Subbasin Fish Management Plan 1992, Oregon Plan Supplement on Steelhead, 1997. Oregon Water Resources Department Detailed Report on Water Availability, 1998. Oregon Plan Supplement of Steelhead, 1997. South Santiam Watershed Council Action Plan, 1997. South Santiam Watershed Council Watershed Assessment, in progress.

Short description

Pipe 3 miles of the Lcomb Irrigation Ditch in order to conserve 76% of the water and allocate 75% of conserved water to instream Crabtree Creek uses

Target species

Upper Willamette ESU winter steelhead

Section 2. Sorting and evaluation

Subbasin

Willamette

Evaluation Process Sort

CBFWA caucus	Special evaluation process	ISRP project type
Mark one or more caucus	If your project fits either of these processes, mark one or both	Mark one or more categories
<input checked="" type="checkbox"/> Anadromous fish <input type="checkbox"/> Resident fish <input type="checkbox"/> Wildlife	<input type="checkbox"/> Multi-year (milestone-based evaluation) <input type="checkbox"/> Watershed project evaluation	<input type="checkbox"/> Watershed councils/model watersheds <input type="checkbox"/> Information dissemination <input type="checkbox"/> Operation & maintenance <input type="checkbox"/> New construction <input type="checkbox"/> Research & monitoring <input checked="" type="checkbox"/> Implementation & management <input type="checkbox"/> Wildlife habitat acquisitions

Section 3. Relationships to other Bonneville projects

Umbrella / sub-proposal relationships. List umbrella project first.

Project #	Project title/description

Other dependent or critically-related projects

Project #	Project title/description	Nature of relationship

Section 4. Objectives, tasks and schedules

Past accomplishments

Year	Accomplishment	Met biological objectives?

Objectives and tasks

Obj 1,2,3	Objective	Task a,b,c	Task
1	Allocate approximately 13.5-18 CFS from irrigation to instream water rights in Crabtree Creek during July-October	a	Allocate 75% of conserved water to state for instream water rights under the program described in OAR Chapter 690 Division 18: Allocation of Conserved Water
2	Conserve water by piping three miles of Lacombe Irrigation Ditch from diversion	a	Surveying

	intake to the hydroelectric plant		
		b	Design
		c	NEPA assessment & documentation
		d	Purchase Materials
		e	Construction Inspection
		f	Pipe Installation
		g	Cleanup and Seeding
3	Monitor results of project	a	Continue temperature and other water quality monitoring in Crabtree Creek
		b	Continue annual index spawning surveys in Crabtree Creek
4	Manage and Coordinate piping project	a	Manage project, administer subcontracts

Objective schedules and costs

Obj #	Start date mm/yyyy	End date mm/yyyy	Measureable biological objective(s)	Milestone	FY2000 Cost %
1	10/2000	9/2001			0.00%
2	10/2000	9/2001			93.00%
3	10/2000	9/2001			0.00%
4	10/2000	9/2001			7.00%
				Total	100.00%

Schedule constraints

Completion date
9/2001

Section 5. Budget

FY99 project budget (BPA obligated):

FY2000 budget by line item

Item	Note	% of total	FY2000
Personnel			
Fringe benefits			
Supplies, materials, non-expendable property		%46	656,800
Operations & maintenance			
Capital acquisitions or improvements (e.g. land, buildings, major equip.)			
NEPA costs			
Construction-related support			
PIT tags	# of tags:		
Travel			
Indirect costs	Project Management and Coordination 8% of BPA request	%7	107,616

Subcontractor	Surveying, Design, Construction, Inspection, Pipe Installation, Cleanup and Seeding	%38	538,400
Other	Permits, Landrights, etc.	%7	100,000
TOTAL BPA FY2000 BUDGET REQUEST			\$1,402,816

Cost sharing

Organization	Item or service provided	% total project cost (incl. BPA)	Amount (\$)
Lacomb Irrigation District	Appurtenances	%2	30,000
Lacomb Irrigation District	Excavation	%0	10,000
Lacomb Irrigation District	Cost of piping (cash)	%3	50,000
South Santiam Watershed Council	Temperature Monitoring	%0	3,430
USFS	NEPA	%0	1,800
Total project cost (including BPA portion)			\$1,498,046

Outyear costs

	FY2001	FY02	FY03	FY04
Total budget				

Section 6. References

Watershed?	Reference
<input type="checkbox"/>	Busby, P.J., T.C. Wainwright, G.J. Bryant, L. Lierheimer, R.S. Waples, F.W. Waknitz, and I.V. Lagomarsino. 1996. Satus review of west coast steelhead from WA, ID, OR, and CA. NOAA tech. Memo. NMFS-NWFSC-27. U.S. Dep. Commer., Seattle, WA.
<input type="checkbox"/>	Wevers, M.J., J. Wetherbee, and W. Hunt. 1992. Santiam and Calapooia Subbasin Fish Managment Plan. Oregon Department of Fish and Wildlife.
<input type="checkbox"/>	Oregon Water Resources Department. 1998. Detailed report on water availability.
<input type="checkbox"/>	Oregon Department of Fish and Wildlife. 1993. Restoration of the Native Winter Steelhead Run on the South Santiam River above Foster Dam Coompletion Report. Army Corps of Engineers. Portland, Oregon.
<input type="checkbox"/>	Oregon Plan Supplement of Steelhead, 1997. Salem, OR
<input checked="" type="checkbox"/>	South Santiam Watershed Council. 1997. South Santiam Watershed Council Action Plan. Tangent, Oregon.
<input checked="" type="checkbox"/>	South Santiam Watershed Council. South Santiam Watershed Council Watershed Assessment, in progress.

PART II - NARRATIVE

Section 7. Abstract

This project proposes to allocate an estimated 13.5-18 CFS of water to instream water rights in Crabtree Creek, a stream that supports spawning, rearing, and holding for native winter steelhead. Crabtree Creek is located in the South Santiam, a subbasin of the Upper Willamette. The NMFS has proposed the Upper

Willamette ESU of steelhead for listing in February 1999 as threatened under the endangered species act. The proposed project, in Linn County, is located approximately 7 miles northeast of Lebanon and 15 miles east of Albany.

Water would be conserved by piping the first three miles of the unlined Lacombe Irrigation District ditch from the intake to the hydroelectric plant. The ditch loses 76% of its water during the first 3.5 miles. Seventy-five percent of the conserved water would be allocated to the state for instream water rights to Crabtree Creek, helping to solve the problems of over allocation and elevated temperatures. Expected outcomes include extending the effective salmonid habitat further downstream, decreasing erosion from the ditch into Crabtree Creek, and improving conditions in Crabtree Creek to stabilize and strengthen the population of native winter steelhead.

We are requesting \$1,402,816 from the Bonneville Power Administration for piping materials, surveying, design, installation, and project coordination and management. The project will be completed in FY2000. The South Santiam Watershed Council will monitor temperature, turbidity, and other water quality parameters. The Oregon Department of Fish and Wildlife conducts an annual index spawning survey for steelhead redds in Crabtree Creek.

Section 8. Project description

a. Technical and/or scientific background

This project proposes to pipe the first three miles of the unlined Lacombe Irrigation District ditch, from the intake to the hydroelectric plant. The ditch loses 76% of its water during the first 3.5 miles. Seventy-five percent of the conserved water would be returned for instream uses to Crabtree Creek, which is located in the South Santiam, a subbasin of the Upper Willamette. The proposed project, in Linn County, is located approximately 7 miles northeast of Lebanon and 15 miles east of Albany.

Crabtree Creek is over-allocated during July–October and has temperatures above 70 degrees in the summer. However, Crabtree Creek provides spawning, rearing, and holding for native winter steelhead. The NMFS has proposed the Upper Willamette ESU of steelhead for listing in February 1999 as threatened under the endangered species act. We estimate that 13.5–18 Cubic Feet per Second (CFS) of water would be allocated to the state for instream water rights during the summer and early fall months, when the proposed piping is completed, helping to solve the problems of over-allocation and high temperatures. The District is installing a meter at the intake to the ditch. With the meter in place, a much more accurate estimate of water conserved will be developed in summer of 1999. In addition to contributing to warmer temperatures downstream, the irrigation ditch has had several failures, contributing sediment to Crabtree Creek. Piping the first three miles would decrease erosion significantly

Water is diverted from Crabtree Creek to the 35-mile long irrigation ditch, which was built in 1941, at an intake at about river mile 30. The District is installing a meter in December, 1998. The intake has a fish screen, although it is outdated and may have to be replaced. The South Santiam Watershed Council is working with the Lacombe Irrigation District to determine screening needs. The District has two water rights, one for 65 CFS to operate their hydroelectric plant and one for 32 CFS for irrigation. During July–October, when Crabtree Creek is low, the District discontinues the operation of the hydroelectric plant, and the diverted water is used for irrigation only. The irrigation district is comprised of 4,300 acres, 2400 of which are irrigated. Crops produced include berries, row crops, cut flowers and Douglas-fir seedlings. Pasture and haylands are also irrigated.

In 1987, the Linn Soil & Water Conservation District proposed piping the 35-mile system into 17 miles of pipe, at an estimated cost of \$3 million, because of a 76% loss of water during its first 3.5 miles and a 95% loss overall. The District considered this project to be of highest priority. However, the Soil Conservation Service (SCS) turned down the request at that time, citing an unfavorable cost/benefit ratio and lack of erosion, which was an SCS emphasis. Benefits to fish were not considered a priority.

We are requesting 1,402,816 from the Bonneville Power Administration for piping materials, surveying, design, installation, and project coordination and management. The project will be completed in FY2000. Piping only the first three miles addresses the major water wastage from the irrigation ditch in a cost-

effective manner and also addresses a major concern of today, the improvement of habitat for anadromous fish.

Upper Willamette River Salmonid

The native steelhead in the Upper Willamette River ESU, a late migrating winter steelhead, enter fresh water primarily in March and April. Native winter steelhead have been declining on average since 1971 and have been proposed for listing as threatened under the Endangered Species Act by the NMFS. Resident cutthroat trout are also likely to benefit from this project. Spring chinook historically spawned in Crabtree Creek, and current natural production occurs, most likely from hatchery spring chinook. It is unlikely that there are native spring chinook currently in Crabtree Creek.

Historically, spawning by Upper Willamette River steelhead was concentrated in the North and Middle Santiam River Basins. (Busby et al. 1996) The Middle Santiam River is a tributary to the South Santiam River.

The Foster and Green Peter Dams

In the early 1970's, the Foster and Green Peter Dams were constructed on the South Santiam River. Before the construction of the dams, an estimated 2,600 native winter steelhead migrated above the Foster Dam site. (ODFW 1992) The construction of the dams seriously reduced and essentially eliminated steelhead and spring chinook production in the Middle Santiam basin. For example, presently, no natural production of steelhead occurs in the Middle Santiam above Green Peter Dam. (ODFW 1992) The US Army Corps of Engineers and the Oregon department of Fish and Wildlife concluded that attempts to restore winter steelhead above Green Peter Dam were unsuccessful. (ODFW 1993)

Due to loss of historic habitat above Foster and Green Peter reservoirs, recovery of Upper Willamette steelhead ESU is dependent on the restoration of habitat, temperature regimes, and water flow below the dams.

Production of steelhead below the dams has been declining, but native runs do still exist in the South Santiam River subbasin. The Santiam and Calapooia subbasin contributes 59% of the total steelhead production above Willamette Falls. Of this, 85% is natural (ODFW 1992). Angler Catch data were available to derive approximate average winter steelhead escapement for three tributaries: Mollala River, 2,300 (predominantly non-native); North Fork Santiam River, 2,000; South Fork Santiam River, 550. (Busby, et al. 1996)

Crabtree Creek Fish Habitat

Crabtree Creek, a tributary of the South Santiam River below the two dams, provides habitat for native winter steelhead spawning, rearing, and holding. Crabtree Creek has been managed for native production of winter steelhead. Spawning surveys indicate that winter steelhead continue to spawn in Crabtree Creek (ODFW 1992).

In Crabtree Creek, as in other lower valley streams, habitat for cold-water fisheries has been on the decline. According to the NMFS Technical memo, one study "specific factors affecting salmon habitat in various areas of Oregon, include streamflow and temperature problems, riparian habitat losses, and instream habitat problems. Within the Willamette Valley, they noted that temperatures and instream flows reach critical levels for salmonids in places where there are significant water withdrawals or removal of streamside vegetation, that loss of riparian vegetation results from agricultural practices and rural and urban development" (Busby et al. 1996)

Crabtree Creek has specific problems. USGS data near Scio in 1985 indicates that the 7 day average maximum temperature was 80.6 F, and data collected during the summers of 1997 and 1998 by the South Santiam Watershed Council, following DEQ Temperature monitoring protocol, indicates that the 7 day average max temperature was 77.9 F in 1997. Elevated summer temperatures prevent stocks of anadromous fish from holding and rearing. (ODFW 1992).

The irrigation ditch has experienced several failures, resulting in high ditch maintenance costs and contributing a substantial amount of sediment to Crabtree Creek. Piping the ditch would reduce the sediment loading.

Lower areas of the Santiam subbasin experience low flows in the summer and early fall, and “water diversions for agricultural, industrial, and municipal needs further aggravate low flow problems.” (ODFW 1992).

The Water Availability Report from the Oregon Water Resources Department indicates that Crabtree Creek is over-allocated during July–October. Table 1 details the natural streamflow, water rights, instream water rights, and water availability. Note that in July–October, the allocated water rights draw against the instream water rights. Current flow information is not available due to the loss of the USGS gauge because of lack of funding.

Table 1. Water Availability Report for Crabtree Creek at the Mouth

Month	Natural Stream Flow	Consumptive Water Rights	Instream Water Rights	Net Water Available
January	492.00	.49	100.00	392.00
February	470.00	.50	100.00	370.00
March	458.00	.29	100.00	358.00
April	389.00	1.18	100.00	288.00
May	217.00	8.04	100.00	109.00
June	119.00	16.30	50.00	53.00
July	53.50	27.80	35.00	-9.36
August	37.40	22.70	25.00	-10.30
September	40.10	11.0	100.00	-70.90
October	59.10	1.15	100.00	-42.00
November	207.00	.37	100.00	107.00
December	427.00	.46	100.00	327.00

Increasing Flow in Crabtree Creek

The increase of water in Crabtree Creek during the summer months due to this project will result in three main benefits for native winter steelhead stocks. (1) Water rights will no longer be overdrawn in July–August and will be improved greatly in September–October. (2) Summer water temperatures are expected to decrease, due to increased flow, thus returning Crabtree Creek closer to its natural temperature regimes and extending the effective salmonid rearing habitat further downstream. (3) Sediment contribution due to ditch failure will be greatly decreased.

According to ODFW, “winter steelhead in the South Santiam should be given a high priority with respect to future population and habitat inventory and monitoring activities in the subbasin.” (ODFW 1992)

Water Rights to the Lacombe Irrigation Ditch

This project proposes to pipe the first three miles of the irrigation ditch, from the intake to the forebay of the hydroelectric plant. Anticipated benefits to fish will be that 75% of the conserved water will be returned to the state according to Oregon Administrative Rules Chapter 690 Division 18 Allocation of

Conserved Water. We estimate that 13.5-18 CFS will be allocated to instream uses as a result of this piping project. The Lacombe Irrigation District water right dates from 1932 for 24 CFS and 1964 for 8 CFS. The irrigation district is metering their diversion intake in December 1998, and with information from the meter, we will be able to generate much more accurate numbers for amount of conserved water and water needed for beneficial uses in the summer of 1999.

Project Monitoring

The South Santiam Watershed Council will continue to monitor temperature and turbidity in Crabtree Creek. This monitoring is anticipated to continue through 2002. The irrigation diversion is metered. The Watermaster from Oregon Water Resources Department, has a monitoring site for flow at the Lacombe diversion, and at the mouth of Crabtree Creek. The Oregon Department of Fish and Wildlife surveys steelhead annually at a site on Crabtree Creek as part of their annual spawning index surveys.

b. Rationale and significance to Regional Programs

This project meets several goals and objectives of the 1994 Fish and Wildlife Program:

- (1) This project meets **Goal 7.8G.1, Instream flows for salmon and steelhead**, by acquiring water rights on a voluntary basis through state or federal funding of water conservation improvements that produce water savings and instream flows for fish. We estimate that by piping the first three miles of the ditch, approximately 18-24 CFS will be conserved, and 13.5-18 CFS allocated to instream uses.
- (2) This project meets the Fish and Wildlife Program **Systemwide Goal 2.2A**, "Support Native Species in Native Habitat". The project restores habitat of a remaining population of native winter steelhead in its native habitat, and mitigates losses due to dams.
- (3) **Goal 7.6A.2 Habitat**, "Improve production of salmon and steelhead habitat critical to recovery of weak stocks."
- (4) **Program Measure 7.6D, Habitat Objectives**. Habitat Objectives addressed by this project include:
 - Sediment
 - Water Quality: Temperature and Water quantity and timing
- (5) **7.6C Coordinated Habitat Planning: Watershed Assessment, Watershed Management, Collaboration, and Locally adopted Watershed Plans:**
 - The Lacombe Irrigation District project is part of the South Santiam Watershed Council's Action Plan. In developing the action plan, we reviewed and incorporated management plans and existing data from Oregon Department of Fish and Wildlife, Department of Environmental Quality, Bureau of Land Management, US Forest Service, US Army Corps of Engineers, and Environmental Protection Agency STORET database.
 - The South Santiam Watershed Council is currently conducting a comprehensive, ridgetop to ridgetop watershed assessment following guidelines in the Oregon Watershed Assessment Manual. The watershed assessment will be completed in March 1999. In addition, we have been monitoring temperature and other water quality parameters at sampling stations throughout the watershed for 18 months. Flow modification and warm summer temperatures have been identified by the Council as priority issues.
 - The Council has scheduled outreach and education activities to address other habitat and watershed issues in Crabtree Creek for the winter of 1999. These outreach and education issues will address other issues affecting fish habitat and water quality in Crabtree Creek such as loss of riparian vegetation, instream habitat, upland affects on aquatic environment, and human impacts. Projects will be developed through a local planning process to address these issues.

c. Relationships to other projects

1. The proposal is from the South Santiam Watershed Council. The Council will assist with project coordination and continue to monitor temperature, turbidity, and other water quality parameters in Crabtree Creek .
2. The US Forest Service Willamette National Forest will do the National Environmental Policy Act evaluation.
3. Linn Soil and Water Conservation District will provide project management of the project.
4. The Natural Resources Conservation Service developed the cost estimates for this grant, and will continue to provide guidance as needed.
5. The Lacombe Irrigation District will provide \$10,000 in excavation costs to install the pipe, labor on constructing appurtenances for the pipe, and an estimated \$50,000.
6. The Oregon Department of Fish and Wildlife will continue spawning surveys in Crabtree Creek through their annual index surveys on two reaches of Crabtree Creek.

In addition to the flow modification issues, the Council has sheduled an outreach and education effort in Crabtree Creek in the winter of 1999 to address riparian vegetation losses, instream habitat, upland issues affecting the aquatic environment, water quality parameters of concern, and other issues identified in the South Santiam Waterhshed Assessment. The Council will hold neighborhood meetings, work on education of local landowners with regard to the affect of human activities on watershed functions, and implement voluntary projects to protect, restore and enhance the watershed functions of Crabtree Creek. We have had successes with a similar effort in Hamilton Creek, another subbasin in the South Santiam Watershed.

d. Project history (for ongoing projects)

Not Applicable

e. Proposal objectives

The objectives of the proposal are as follows:

1. Allocate approximately 13.5-18 CFS from irrigation to instream water rights in Crabtree Creek during July-October
 - Allocate 75% of conserved water to state for instream water rights under the program described in Oregon Administrative Rules Chapter 690 Division 18: Allocation of Conserved Water
2. Conserve water by piping three miles of Lacombe Irrigation Ditch from diversion intake to the hydroelectric plant. Tasks to meet this objective include surveying, design, NEPA, purchase materials, construction inspection, pipe installation, cleanup and seeding.
3. Monitor results of increased instream water rights.
 - Monitor temperature and turbidity
 - Continue annual index steelhead spawning surveys in Crabtree Creek

f. Methods

During the summer of 1999, the Lacombe Irrigation District and the South santiam Watershed Council will re-estimate water losses during the summer fromt he intake to the end of the proposed piping. The Linn Soil and Water Conservation District will hire contractors following government contracting procedures to survey, design, and implement the piping of the Lacombe Irrigation District ditch. The Linn Soil and Water Conservation District has experience with managing projects such as this.

The South Santiam Watershed Council will monitor temperature and turbidity at two locations on Crabtree Creek as part of their ongoing ambient water quality monitoring program. The Lacombe Irrigation District will maintain the pipe after installation, and will apply for instream water rights under OAR chapter 690 Division 18.

g. Facilities and equipment

The Linn Soil and Water Conservation District maintains office space and currently has sufficient equipment to complete all of the tasks outlined in this proposal. The Linn SWCD will subcontract for the surveying, design, and implementation of the piping. The South Santiam Watershed Council has an ongoing water quality monitoring program and has equipment and lab facilities to conduct the water quality tests.

The Lacombe Irrigation District has the staff, resources and knowledge to maintain and operate the pipe.

h. Budget

The major items in the budget were estimated by Bruce D. Wilson, NRCS Conservation Planning Engineer. They include Surveying, Design, Construction Inspection, Materials, Pipe Installation, Cleanup & Seeding, and Permits and Landrights.

Cost Estimates Lacombe Piping Project

WORK OR MATERIAL	QUANTITY	UNITS	UNIT PRICE	AMOUNT
Surveying	240	Hours	\$75.00	\$40,000.00
Design	112	Hours	\$100.00	\$11,200.00
Construction Inspection	240	Hours	\$50.00	\$12,000.00
Materials				
60 inch Diameter ADS N12 Pipe	11,780	Feet	\$60.00	\$706,800.00
Appurtenances	Job	Lump Sum	\$30,000.00	\$30,000.00
Pipe Installation	11,780	Feet	\$40.00	\$471,200.00
Cleanup & Seeding	14	Acres	\$1,000.00	\$14,000.00
Permits, Landrights, Etc.	Job	Lump Sum	\$100,000.00	\$100,000.00
				\$1,385,200.00

Indirect costs (assigned to the Linn Soil and Water Conservation District for managing the project) are calculated at 8% of the BPA request.

The Lacombe Irrigation District will produce some of the piping appurtenances and contribute toward excavation and piping costs.

The South Santiam Watershed Council will monitor temperature, turbidity, and other water quality parameters before and after project implementation.

Section 9. Key personnel

Included are the resumes for the Project Managers: Catherine McBride, Administrative Assistant, Linn SWCD and Susan Gries, Coordinator, South Santiam Watershed Council

2143 NW Maser Place
Catherine Stahr McBride
Corvallis, OR 97330-2223 (541) 758-4097

Education

BS Wildlife Science, public education option. March 1995, Oregon State University, Corvallis, OR

Work Experience

Administrative Assistant - Linn Soil and Water Conservation District, Tangent, OR

Responsible for the operation of the District office, including the supervision of two staff members and coordination of Board of Directors and volunteers. Duties include office manager duties, project management, secretarial duties, fundraising, payroll, media contact, outreach, coordination of work with various agencies, and maintaining an awareness of conservation laws, trends and issues. 7/98 - current

District Manager - Benton Soil and Water Conservation District, Tangent, OR

Same duties as above. 4/98 - 7/98

Secretary - Linn and Benton Soil and Water Conservation Districts, Tangent, OR

Assisted phone and walk-in customers, picked up and distributed mail, set up data entry form and entered orders. Typed correspondence, made copies, filled out forms. Created Annual Report. Reorganized and corrected Annual Work Plan, created displays. I was solely responsible for scheduling advertising, taking tree orders by fax, phone and mail, and making all confirmations for each order. I sold over 6,900 tree seedlings. 12/97 - 2/98

Secretarial Worker - Kelly Temporary Services, Inc., Albany, OR

Secretarial and administrative support for the following businesses: AFI Associates, Inc., Cellular One, Corvallis Chamber of Commerce, Computer Stores Northwest, Wood Science and Wood Technology, and Willamette Industries (Albany) Training Center. 9/95 - 6/97

Cartographer 1 - Oregon State Water Resources Department, Salem, OR

Created GIS maps using ARC/INFO, ARC/EDIT and ARC/PLOT on a UNIX-based work station. 1/95 - 6/95

Volunteer/Research Contractor - USFWS (Wm. L. Finley NWR), Corvallis, OR

Teaching, photography, clerical, and outdoor work as a volunteer. As an independent contractor surveyed, captured and marked Western Pond turtles and compiled a report for Western Oregon Refuges Complex. 2/92 - 1/94

Chiropractic Assistant/Part owner - McBride Chiropractic Clinic, Corvallis, OR

Office management and secretarial duties. Also treated patients using ultrasound, collected fees, billed insurance companies, maintained waiting room, maintained cash-flow bookkeeping system, sold clinic. 9/82 - 5/87

Skills/Activities

Computer

- Windows, MSOffice, Word Perfect, Quicken, internet, and e-mail proficiency
- IBM-compatible PC, Power Mac, DOS, UNIX, and some Pagemaker experience

Typing Speed: 40-50 wpm

Photography Operate 35mm-format cameras, develop and print black and white film.

Training Trained to teach Project Wild and trained as an interpreter for the Oregon Coast Aquarium.

SUSAN GRIES • 916 NW 33rd Street. • Corvallis, Oregon 97330 • (541) 752-8024

EDUCATION

Masters of Community and Regional Planning, University of Oregon, 1998

Bachelor of Arts, Cornell University, Major: Psychology, May 1990

EMPLOYMENT HISTORY

Coordinator, South Santiam Watershed Council. *9/97 through present*

- Coordinate watershed activities, assist with Council meetings
- Conduct outreach and public education; public tours, public workshops. Publish Council newsletter
- Organize on-the-ground conservation projects
- Conduct Watershed Assessment
- Supervise South Santiam Water Quality Monitoring Program

Assistant Watershed Coordinator, South Santiam Watershed Council. *9/96 through 9/97*

- Develop and implement water quality monitoring program with high schools and citizens
- Develop draft action plan
- Write grants and obtain funds for South Santiam Water Quality Monitoring Program

Community Planning Workshop Project Manager. *9/95 through 9/96*

- Managed McKenzie Watershed Council Citizen Involvement Project
- Evaluation of Drinking Water Providers in Oregon

Technical Assistant II, Lane Council of Govts, Eugene, OR. *6/94 through 9/95*

- Research as needed for various planning projects
- Maintain the 911 and addressing databases
- Geographic information Systems work using Arc Info

Employment Specialist, Pearl Buck Center, Eugene, OR. *12/92 through 8/93*

- provide job development, training and continuing support to adults with developmental disabilities. Adults are employed at a variety of jobs throughout the community.
- Maintain a working relationship with clients

Case Coordinator Assistant, Pearl Buck Center, Eugene, OR. *9/91 through 12/92*

- Compiled information for reports and goal planning sessions, developed and taught lesson plans on basic skills, implemented and collected data on behavior programs and goals, assisted in developing behavior programs
- Acting Case Coordinator 6/15/92 through 7/22/92 and 10/27/92 through 12/1/92
- Trained new staff, supervised volunteers, developed goal plans for individuals

PUBLICATIONS AND PROJECTS:

- *South Santiam Watershed Council brochures, Water Quality Monitoring Report.* 1997
- *An Evaluation of Drinking Water Providers in Oregon.* Oregon Economic Development Department. 1996
- *City of Eugene Stormwater Quality Mapping.* 1996. City of Eugene
- *Winema National Forest Habitat Mapping.* 1996. Winema National Forest
- *Prospect Community Master Plan.* 1996. Prospect Community Improvement Association

VOLUNTEER EXPERIENCE

US Forest Service Trail Crew, Payette National Forest, McCall, Idaho. 6/89 through 9/89

Section 10. Information/technology transfer

The South Santiam Watershed Council will work with other irrigation districts and water users in the South Santiam Watershed to increase irrigation efficiency and increase instream water rights voluntarily.

We will report the benefits of this piping project to the network of watershed councils in Oregon, as well as water users within the South Santiam Watershed.

Congratulations!