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**INTERAGENCY RIPARIAN/WETLAND PLANT DEVELOPMENT PROJECT**

**Third Quarter 1993 Progress Report**

**Project Staff**

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**Introduction**

Work this quarter (FY 93) concentrated on the collection of willows from our Service Area, meetings, riparian plantings, planning for several Constructed Wetland Systems, and 3 training sessions (2 as instructor and 1 as a student).

**Trena J. Chernivec, Wetland Biological Technician**

As of July 10, Trena resigned her position as wetland biological technician to accompany her husband to Arkansas. He has a job with a nuclear power plant there. We will miss her hard work and reliability. The Biological Technician position is open at this time and is scheduled to be filled by July 25, 1993.

**Willow Collections**

Willow collections of the following species were completed in April:

<u>SPECIES</u>	<u>NO. OF ACC.</u>
Coyote Willow, <i>Salix exigua</i>	19
Geyers Willow, <i>Salix geyeriana</i>	10
Booth Willow, <i>Salix boothii</i>	11
Yellow Willow, <i>Salix lutea</i>	14
Pacific Willow, <i>Salix lasiandra</i>	10
Narrowleaf Poplar, <i>Populus angustifolia</i>	12
Total collections	76

The collection plan included 2-3 collections of each species from each state, except California. Collections were completed in April because of the deep snow conditions late in the season. Collections were processed and organized in May. On June 17-21, 1520 individual willows were planted in Field 28, Fish and Game Farm, on the PMC. The willows were planted in randomly replicated plots for testing and analysis. On July 3, a majority of the willows had sprouted and were growing rapidly.

**Poulson Constructed Wetland System Demonstration Site (CWS)**

Construction designs were drafted for the Poulson CWS in May. At that time, a major problem with the funding of the CWS surfaced and all work was stopped for 2 months. At the present time, the funding problem has been partially resolved and if the plans can be redesigned to be less expensive, we hope to start construction in November with completion by April. If this is not

possible, the entire construction phase will begin June, 1994. One change will be, lower the deep water pond down to only 4 feet of water instead of 8 feet. This will save about \$3000 and should not affect the function of the system because of the cyclic nature of the irrigation water season in the West. The deep water pond was primarily designed in the east, for the secondary production of fish or crustaceans that feed on the algae in the water. Water quality in each component will be sampled and monitored. The information that we can obtain from the research will benefit states throughout the western region.

### **Presentation to Three River R C & D Council**

In an effort to obtain money for the Poulson CWS construction, I made a presentation to the Three River Resource Conservation and Development (R C & D) Council. The Council did not have a quorum, but the members present were very enthusiastic about the project. In a subsequent meeting of the executive committee, they declined to contribute because they had difficulty envisioning applicability to the Three River Area. The Coordinator, Paula Jones, and I will provide additional information on applications that are possible throughout the Three River Area at future meetings.

### **Potential Fort Hall CWS**

On June 30, I met with key members of the Shoshone Bannock Tribal Business Council, BIA, and others to discuss Constructed Wetland Systems and possible application on the reservation. A presentation was given on the entire wetlands project and produced interest in both CWS and riparian work. Mr. Charlie Bidondo, Water Quality Specialist for the Shoshone Bannock Tribe, has scheduled another meeting with the council and others for July 21.

### **H-Drain project**

The H-Drain Constructed Wetland System is in cooperation with the Minidoka Project, USBR, Burley, Idaho. This project deals with the planting of both wetland plants and willows in a CWS designed and constructed by the USBR. The drain collects irrigation waste water from surrounding farms in the A & B Irrigation District. We have had several meetings with BOR to discuss planting plans and schedules. On June 22, we went to the site to make a planting plan and stake the pond. We are negotiating with the USBR to plant the site with the Wetland/Riparian Project plants which will provide us with additional off-center test site data.

About 2000 plants from our greenhouse will be transplanted to the CWS. This includes the six species that we are currently working with. The remainder of the plants will be taken from local sources near the site and planted directly into the pond. We have a total of 558 willow cuttings in the cooler that could be utilized. We will have to find some native stands to complete the needs for this project.

### **Nature Conservancy Constructed Wetland System, Hagerman, ID**

I have been asked to provide vegetation technical assistance for a constructed wetland system that is being planned for the Thousand Springs area near Hagerman, ID. Nature Conservancy purchased land on the rim above Thousand Springs. In cooperation with SCS, Wood River R C & D, North Side Canal Company, and the Gooding County Conservation District, a CWS is being built to help clean up irrigation waste water before it goes over the rim and down into the Snake River. This will be another potential off-center test site for many of our wetland plants.

### **Created Wetland Ponds on the PMC**

An ample supply of water for irrigating the ponds was available this year. Lined ponds 1 and 3 have been kept saturated by filling the ponds from 4 to 10 cm and allowing them to dry down to the point where only low areas have standing water. With the aid of tensiometers, placing one in each corner, diagonally, about 3 meters towards the center, we are able to keep the saturation level as uniform as possible throughout the pond. Ponds 2 and 4 are kept under permanent standing water at levels from 10 to 30 cm.

Pond evaluations have yet to be completed. Pond 6 had a very low percentage of the greenhouse propagated plants of Alkali Bulrush, *Scirpus maritimus* survive the winter. It is unknown what caused the mortality. Some factors may include the late transplant date, tops not being clipped, or the planting method. The plugs were difficult to plant with good soil contact in the super saturated soil in this pond.

The August, 1992 dike failure has been repaired and tested. We reconstructed the dikes by digging out the edge of the lining around the damaged area and overlapping the new repair liner approximately 2 feet over the original liner. A slit was made to fit over the riser head and a "boot" was constructed to eliminate erosion under the liner. The riser heads were also raised 12 inches. A drip gutter was also added to catch excess drip and to carry flow into pond. The drip gutter and the addition of larger rock around the riser should eliminate erosion in this area. Pond 1 was filled to near capacity and allowed to remain in that status for several days to test new construction and to mimic a natural flooding condition. The new construction held. Measuring devices are being constructed for a more accurate reading of water depths. Five will be placed in each pond, with one placed in the center and the other four in the corners.

### **Natural Wetlands near Fish & Game Farm, Sterling WMA**

In the natural wetland area located on Sterling WMA (Idaho Fish and Game), PVC depth gages were installed last year and are monitored weekly. The measuring system has been changed to metric measurement. This eliminates conversion time when writing reports. New forms have been designed to record the data gathered, along with a mathematical equation to ease the process. Mapping of plant communities near the tubes is still scheduled for August. This will give us an idea of plant species in relation to ground water depths. These community maps will also be used to determine where greenhouse propagated species should be planted in natural wetland conditions.

### **Alkali Bulrush Cutting Trial**

Seedlings were grown in a propagation tank in the greenhouse. The seedlings were clipped to 15 cm after 30 cm of growth. Seedlings were clipped three times before they exhibited detrimental affects from the clipping. Stems turned brown and growth ceased. About 90% mortality after the last clipping with the remaining 10% showing no new visible growth.

### **American Falls Reservoir**

On May 21 and 24, 1993, 60 large willow and cottonwood cuttings were planted into rock riprap on American Falls Reservoir with "The Stinger". The entire planting process was documented on VHS for future reference and training. By the end of June, there has been some growth on accessions. A formal evaluation has been scheduled for later in the summer when the reservoir level is lower. Previous years' plantings were under water because of the wet year. American Falls Reservoir was held at 1-2 feet over maximum fill for about a month. Most of the plants had sprouted and grown up enough so that at least 6 inches of the stems were out of the water. This will be a real test of the inundation tolerance for all the species we are testing.

### **Trout Creek, NV; Riparian Off-Center Test Site Planting**

On May 18-19, we planted additional cuttings at the Trout Creek Riparian Off-Center Test Site in northeastern Nevada near Jackpot. This is a continuing research effort to perfect riparian planting methods and to test different willow and cottonwood species in the program. The previous two years plantings appeared to be establishing quite well. We have learned quite a bit about appropriate planting methods to utilize when rehabilitating degraded perennial streams of the west.

### **Riparian and Shoreline Erosion Control Workshops**

In April, I gave a presentation on the shoreline and riparian pole planting work we have been doing on American Falls Reservoir. This was given to a combined class of Corps of Engineers and USBR employees at a Reservoir Shoreline Erosion Control and Revegetation training session in Riverton, WY. Two papers were presented: 1) Selection and Acquisition of Plant Species and Materials (Woody), and 2) Use of Willow and Poplar Cuttings for Vegetating Shorelines and Riparian Areas. The participants were very interested in the techniques and our projects. Copies of both papers will be handed out at the September Meeting.

In May, I gave a presentation to multiagency personnel on riparian pole planting techniques. We visited an overgrazed stream corridor on a private ranch. I gave field demonstrations on how to develop a planting plan and methods for harvesting and planting willow and cottonwood cuttings. This training session was held in Yerrington, NV for the Nevada Forest Service Stewardship Program.

Both sessions involved classroom instruction and actual field planting exercises. I was able to demonstrate both "The Stinger" and the "Mini-Stinger". I learned as much as the students about the many aspects of erosion control.

### **Wetland Restoration and Enhancement Training Course, Olympia, WA**

In June, I attended a course held in Olympia, WA conducted by the Soil Conservation Service. This course covered Wetland Restoration and Enhancement. In attendance were SCS employees from Washington, Oregon, and Idaho, and US Fish and Wildlife personnel. The course provided background material on wetlands, their function and values, and soil hydrology requirements. Little information was given on plants and proper planting methods for wetlands. I presented a slide show on the Interagency Riparian/Wetland Plant Development Project to inform the participants about the Project and our accomplishments. I made several new contacts during the session.

### **Tours of the Interagency Riparian/Wetland Plant Development Project**

We have held tours of the Interagency Riparian/Wetland Plant Development Project for the following agencies and groups:

- US Fish and Wildlife Refuge Managers, Pocatello Area
- Cassia County Conservation District, FHmA and Cooperative Extension
- Three River R C & D coordinator
- Monsanto Chemical Co. Reclamation Specialist, Soda Springs
- USBR Environmental Sciences Section, Denver, CO
- University of Idaho Forest Research Lab personnel
- US Army Corps of Engineers
- Soil Conservation Service Area III personnel

### **Next Meeting of the Wetland/Riparian Project Advisory Committee**

The next meeting for the Wetland/Riparian Project Advisory Committee will be September 8-9, 1993. This date was suggested by those members who attended last year's meeting. All cooperators are requested to attend this meeting. We will discuss this year's progress, next year's direction, and funding for FY 94 and FY 95. FY 94 just might be the turning point in the Project's short life. **Please call me at (208) 397-4133 and tell me if you are planning to attend or not by September 1.**

I propose we start in Boise on the 8th and travel to H Drain, Burley, ID to review the USBR Constructed Wetland System that we will plant with accessions from the Project. We will continue on to the Poulson CWS site for a review of the plans and then on to Pocatello for the night. On the 9th, we would meet at the PMC and have a business meeting, in the new conference room, and then tour the Created Wetland Ponds at the PMC. After lunch, members would return to Boise.

If anyone has any suggestions on other stops or options, please let me know. If you would rather stay in Boise, we could probably set up a tour of some created wetlands at the Ft. Boise WMA. I would need some feedback in the near future to set this up.

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