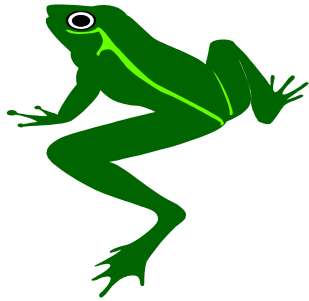


# View From a Wetland

## News and Technology for Riparian and Wetland Management



**Interagency Riparian/Wetland Plant Development Project  
Natural Resources Conservation Service  
Plant Materials Center  
Aberdeen, ID**

**Number 8 (2002)**

### **Project Leader**

J. Chris Hoag, Wetland Plant Ecologist

*"Good judgment comes from experience, and a lot of that comes from bad judgment."  
– Will Rogers*

### **Introduction**

This newsletter is part of the Aberdeen Plant Materials Center's continuing effort to provide useable information to the public on wetland and riparian plants, plant establishment, and management. This newsletter is the eighth issue published since the Interagency Riparian/Wetland Plant Development Project was established in 1991.

### **Riparian/wetland Project**

The Project mission is to introduce performance-tested ecotypes to the commercial seed and plant industry and to document technical information to improve the establishment of wetland and riparian herbaceous and woody plants. The Project has collected numerous riparian and wetland plant species in four ecoregions within our Service Area in the arid and semi-arid West. The Project has released 24 performance tested wetland plant ecotypes of six different herbaceous species.

### **Interagency Riparian/Wetland Plant Development Project website has moved**

Many of you have probably noticed that the Interagency Riparian/Wetland Plant Development Project website has moved. The USDA has finally move away from Unix and into a Windows environment. With this move, most of the servers are now windows servers. This means that you will have to put www before the address. In addition, the plant materials program has gone to a frames format on the website. This means that I cannot give you the exact address to the riparian/wetland project papers. You will need to go to the Idaho Plant Materials Center website and in the lower right hand corner, you will see the Riparian/Wetland

Project link. Click on it and you will go directly to the riparian/wetland papers. So the new website address is <http://www.plant-materials.nrcs.usda.gov/idpmc>. Please make a note of this change.

### **Riparian Ecology and Restoration Workshops**

As part of our technology transfer program a two-day Practical Streambank Bioengineering Workshop (renamed from the Riparian Ecology, Restoration, and Management Workshop) was developed. The first day of the workshop is devoted to the classroom where basic riparian dynamics, riparian zone vegetation, plant acquisition, and bioengineering techniques are discussed. The second day is spent at a field location where participants classify the riparian site and install a series of bioengineering structures on an eroding section of streambank.



Each year the Project conducts several workshops in different parts of our service area. If you are interested in attending this course, contact Pat Blaker at the PMC for the next scheduled workshop.

If you are interested in a workshop in your area and you have about 30 people, who would attend the training, contact Chris and we will try to schedule a course in your area.

This year we put on a workshop in Bend, OR for the Deschutes Basin Land Trust. We covered a few different topics at this workshop in addition to streambank bioengineering treatments, like wetland functions, planting willows into grass, and using weed barrier for woody plant establishment. WE demonstrated the waterjet stinger using willows plugs that were small enough to fit into the hole that was hydrodrilled by the waterjet.

### **Willow Clump Planting: a fantastic streambank bioengineering treatment (Part 2)**



Last year, I talked about willow clump plantings and the advantages of using this treatment for streambank stabilization. After publishing the newsletter, I was contacted by Kelly Ellis (Stephan B. Ellis Co., Provo, UT) about some of his experiences. I have worked with Kelly for a number of years and appreciated his willingness to share some of his experiences. "...We had some "lessons learned" with the storing and moving - loading and unloading the clumps. Initially, scooping up the clump off the flatbed trailer was difficult for the hoe operator and was breaking up the clump. Our solution was to use an ASV Posi-track MD-70 to push the clump into the bucket of the hoe. We had some pretty big clumps. The ASV was small enough to fit under the hoe and work as a second hand. We had one track-hoe digging and placing clumps on a low flatbed trailer, a pickup pulling the 12-ton trailer and another track-hoe with the ASV unloading and replanting. On our good day I think we dug and planted over 50 clumps. The restrictions were the tight spaces (canyon project), multiple small wetlands, distance between digging sites, planting sites, and the nursery location (only available site

was some distance from all dig/plant sites). Walking time for the track-hoes (back and forth) was a cost killer. All in all, the general contractor and I lost money on this bid item but the results were pretty good, if I do say so myself...."

### **Deer Repellant Effectiveness**

According to a recent publication by the Missoula Technology and Development Center, they evaluated 20 commercially available deer repellents. They planted some highly palatable trees, sprayed them with the repellents and then put some deer in with them. The results indicate that the most effective repellents are those that emit sulfurous odors such as egg or slaughterhouse waste. Repellents that use bittering agents to repel were ineffective while those that had active ingredients that caused pain or irritation when eaten were probably not in concentrations high enough to be effective. The most effective products generally eliminate browsing for a month and can provide good protection for 2-3 months. Their effectiveness will decline significantly after 3-4 months. An important point of the study is that none of the repellents provided complete protection after the first month.

The effectiveness of the game repellents depends upon other factors and the season. Other factors including deer population density, palatability of species, weather conditions and availability of alternative food sources affected browsing. Under extreme deep perdition, other strategies including exclusion fencing and netting might be a more effective option.

(2001 Tech Tip 0124-2331-MTDC. USDA Forest Service, Technology and Development program, Missoula Technology and Development Center)

### **Grazing Riparian Areas**

Grazing riparian areas has long been an important consideration to livestock operators. Research on when and how to graze these areas has indicated that careful management is extremely important. In addition, certain precautions should be incorporated into the planned grazing system.

Timing is probably the important consideration. Late spring after the spring runoff is the best time to graze a riparian area. Vegetation is growing and there is a lot of feed for the animals. As summer comes on, the woody vegetation will be "sweeter" and the livestock will start to select it over the herbaceous feed. This is the time to move the livestock out of the riparian area.



Some producers like to graze in the fall. This season is the hardest to manage because there is little regrowth of the riparian zone vegetation. Remember that the vegetation that is left after the livestock are removed is all that will be there when the floods hit the next spring. Heavy grazing will remove the main protection for the streambank and floodplain, i.e. the vegetation. A general recommendation is to remove no more than 25-30% of the herbaceous vegetation and less than 10% of the woody plants.

Careful management and constant attention seem to be the best advice for grazing a riparian zone. The key species should be the willows. Remember that the buffer zone along the stream is what will control the streambank erosion and how far the river will move.

### **New publication- *Streambank Soil Bioengineering Field Guide for Low Precipitation Areas***

Jon Fripp and I have just finished a new publication that we titled - *Streambank Soil Bioengineering Field Guide for Low Precipitation Areas*. It is intended as a pocket field guide for soil bioengineering treatments that are used to reduce streambank erosion. It incorporates a general discussion on riparian planting zones, plant materials selection criteria, and different treatments including installation guidelines and materials requirements. It is based on the *Practical Streambank Bioengineering Guide*.

The *Streambank Soil Bioengineering Field Guide* is small enough to fit in a field pack. It is printed on water resistant paper so it can be used in most any weather. The information in the field book is meant to provide a quick reference while in the field working on a project. This guide is not intended to be an exhaustive design tool. While the appendix contains overview information, this field guide is not intended for the final design of rock structures such

as deflectors, weirs, or riprap revetments nor is it intended to provide sufficient information for a geotechnical slope stability analysis. Rather this field guide should be viewed as a general field reference and review document.

I hope to have the field guide up on the Riparian/Wetland Project website by this summer.

### **Fertilizing Wetland plants in the Field**

Recently I was asked what kind of fertilizer that I recommend for a new planting of wetland plants. Generally, the first question I ask is what deficiencies did the soil test show. Next, I ask what the water quality samples show for the source water. Usually the nutrients in the source water are enough to feed the established wetland plants. Occasionally, a planting will be made in an area where the nutrients are low and the plants need some extra help. In these cases, a foliar fertilizer is recommended rather than a time-release fertilizer. We usually get a faster response and the plants seem to do better with the foliar fertilizer. Also, with a time release fertilizer, it takes at least 65°F temperatures to activate and release the fertilizer.

### **Use different colored flagging for various wetland plant species when harvesting**

If you are harvesting different wetland plant species from sites that are away from the planting site and you are using an inexperienced crew, try using different colored engineering flagging to identify the various species. I have also used different colored paint sprayed onto the large harvested clumps. This way when the trailer arrives at the project site, the planting crew knows that the flagging or paint on the clump corresponds to the same colored flags that are laid out in project wetland based on the planting plan.



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## **Additional Information**

All publications are now available on the Internet in Adobe Acrobat format. **NOTICE: We have moved our website address.** You can download each of the papers by going to <http://Plant-Materials.nrcs.usda.gov/idpmc>. Once at this site, click on Riparian/Wetland Project in the lower left to get to the correct page. If you do not have access to the Internet or would like to receive a hard copy, please contact us.

## **Bioengineering Information**

*The Practical Streambank Bioengineering Guide: A user's guide for natural streambank stabilization techniques in the arid and semi-arid Great Basin and Intermountain West.* – Available on the Internet at <http://Plant-Materials.nrcs.usda.gov/idpmc>. The Internet version of the Bioengineering Guide is in 4 files written in Adobe Acrobat format.

## **Individual Wetland Plant Fact Sheets – description, ecology, collection, propagation, management, and uses of:**

Nebraska Sedge (*Carex nebrascensis*)  
Creeping Spikerush (*Eleocharis palustris*)  
Baltic Rush (*Juncus balticus*)  
Threesquare Bulrush (*Scirpus pungens*)  
Alkali Bulrush (*Scirpus maritimus*)  
Hardstem Bulrush (*Scirpus acutus*)

## **Riparian/Wetland Project Information Series**

**No. 2** - Selection and Acquisition of Woody Plant Species and Materials for Riparian Corridors and Shorelines.

**No. 3** - Use of Willow and Cottonwood Cuttings for Vegetating Shorelines and Riparian Areas.

**No. 6** - Seed and Live Transplant Collection Procedures for 7 Wetland Plant Species.

**No. 7** - Use of Greenhouse Propagated Wetland Plants Versus Live Transplants to Vegetate Constructed or Created Wetlands.

**No. 8** - Constructed Wetland System for Water Quality Improvement of Irrigation Wastewater.

**No. 9** - Design Criteria for Revegetation in Riparian Zones of the Intermountain Area.

**No. 10** - Perigynium removal and cold-moist stratification improve germination of *Carex nebrascensis* (Nebraska sedge)

**No. 11** - Getting "Bang for your Buck" on your next Wetland Project.

**No. 12** - Guidelines for Planting, Establishment, Maintenance of Constructed Wetland Systems.

**No. 13** – A Reference Guide for the Collection and Use of Ten Common Wetland Plants of the Great Basin and Intermountain West.

**No. 14** - Harvesting, Propagating and Planting Wetland Plants.

**No. 15** - Costs and considerations of streambank bioengineering treatments.

**No. 16** – Riparian Planting Zones

**No. 17** – Waterjet Stinger: A tool to plant dormant unrooted cuttings of willows, cottonwoods, dogwoods, and other species

## **Idaho NRCS PM Technical Notes**

**No. 6** - The Stinger, a tool to plant unrooted hardwood cuttings of willow and cottonwood species for riparian or shoreline erosion control or rehabilitation.

**No. 23** - How to Plant Willows and Cottonwoods for Riparian Rehabilitation.

**No. 32** – User's Guide to Description, Propagation and Establishment of Native Shrubs and Trees for Riparian Areas of the Intermountain West.

**No. 38** - User's Guide to Description, Propagation and Establishment of Wetland Plant Species and Grasses for Riparian Areas in the Intermountain West.

For a copy, write or call:  
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Plant Materials Center  
USDA, NRCS  
P.O. Box 296  
Aberdeen, ID 83210  
Phone (208) 397-4133  
Fax (208) 397-3104  
Email – [chris.hoag@id.usda.gov](mailto:chris.hoag@id.usda.gov)

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