Marys River Watershed Council News

August 2008

Council Board Meeting - August 12th

6:30-8:30 pm - Philomath City Hall - 980 Applegate St.

Agenda

- Coordinator reports
- Continued discussion of accounting needs
- Developing a budget
- Review current projects, grants status, new project proposals
- Suggestions or comments from Community members

Council Board meetings are open to the public - everyone welcome to attend.

Riparian Restoration: Bioengineering

from Oregon Division of State Lands Website

http://oregonstatelands.us/DSL/PERMITS/bioengineering.shtml

As applied to riparian restoration, bioengineering is a branch of engineering in which green woody plants are an integral part. Living plants and cuttings of plant stems are propagated and used as building materials for controlling erosion as well as for riparian restoration. Conventionally, engineers have used only static inorganic materials that provide neither habitat for fish and wildlife, nor shade for the stream. Bioengineering techniques include effective, low cost methods for protecting and restoring riparian areas. Different species of willows and cottonwoods are used widely for bioengineering projects because they easily form roots on stem cuttings.

Various sizes of willow species grow in the Northwest. Some willows form a large, dense basal area, and small to medium sized species may have a rhizomatous or creeping habit. The latter type are the best ones for middle to lower streambank stabilization where high velocity, debris loads, and ice flows may occur. Tall shrubs and trees with a broad canopy should be concentrated on the south side of streams to provide the most shade over the channel. Cuttings for propagation should be taken from local native plants.

Several different techniques are used for bioengineering with live plants. **Living stakes** consist of stem cuttings that are large enough (0.5 inch or more) and long enough (2.0 to 2.5 feet) to drive into the streambank as a stake. Stakes should be cut with a sharp angle for penetrating the ground and have a flat square cut at the upper end for tamping. Tamp stakes into the ground, or use a digging bar to make a hole at right angles to the ground with about 20% of the stake above ground. The best season for planting is generally September to March. Split cuttings should be removed and replaced.

Living fascines consist of a bundle of stem cuttings that are wired or tied together. Fascines can be from 5 to 15 feet long by 6 inches thick with individual stems in the bundle smaller than about 1 inch in diameter. Fascines can be secured in a trench that follows a contour. Additionally, fascines can be used to stabilize gully erosion. The best season for planting is generally September to March. Split cuttings should be removed and replaced.

Joint planting requires the planting of cuttings of live stakes between previously placed riprap. This adds reinforcement with roots forming beneath the rocks in the riprap. Joint planting provides protection for banks of streams with high torrents by helping dissipate some the stream energy. The best season for planting is generally September to March. Split cuttings should be removed and replaced. **Brush layering** consists of placing thick clumps of living branches in a trench along contours of the stream bank. Branches should be placed in the trench at a slight angle toward downstream, with about 4 branches every 6 square inches. **Brush mattressing** consist of placing thick clumps of living branches on the stream bank to form a thick ground cover. Use wooden and live stakes with wire woven across branches to secure them in place.

General Project Considerations and Caveats: All plantings require monitoring for ample rainfall or watering to assure survival. Do not assume bank failure is caused by high stream velocity; look for other causes. Provide effective protection at the toe of the streambank. Usually this means armoring the streambank to a height somewhere between the ordinary high water mark and low flow level with riprap. A common design error is that bank protection does not continue far enough downstream below eroded sites. Generally, revetment of an embankment should extend downstream about 1.0 to 1.5 times the stream width at the eroded site. Create a smooth transition at the upstream and downstream ends of the site. Preserve the existing streambank vegetation as much as possible.

Visit the DSL at http://oregonstatelands.us/DSL/PERMITS/bioengineering.shtml for illustrations and permitting information.

Science Music & Marshmallows

- family natural resource campfire program -

Every Wednesday evening in August

Activities begin at 7pm - Music 7:45 - Presentation 8:30

Newton Creek Wetlands

Located at the Old Clemens Mill behind Philomath Chamber of Commerce Caboose on Hwy 20/34 just east of Philomath.

Upcoming Events!

August 13

Activity: Wildlife hike in the wetlands

Music: Pete Ballerstedt!

Presentation: Michael Bendixen, Oregon Field Guide Videographer "Behind the Scenes at Oregon Field Guide: Chiseling the Message"

August 20

Activity: Fishing! Fish for warm-water bass, crappie, catfish and bluegill to help Oregon Dept of Fish & Wildlife determine what species live in the beaver ponds. Bring your pole, license and favorite bait or lure. Do science: catch fish! (No license required for kids under 14)

Music: Rusty Strings Band!

Presentation: Bill Pearcy, OSU Emeritus Professor of Oceanography "Ecology of Ocean Fishes: What Goes on in the Big Pond?"

August 27

Activity: Extract DNA ~from your own saliva or from an onion. Build a DNA model.

Music: Alan Ede!

Presentation: Dr. Jon Moulton, Gene Tools, LLC "Knocking Down Genes in Philomath"

Sponsored by Marys Peak Natural Resources Interpretive Center, in cooperation with OSU Science Education Partnerships (SEPs), Philomath School District, Marys River Watershed Council, Oregon Trout, Starker Forests, Chintimini Wildlife Rehabilitation Center, Benton Soil and Water Conservation District, Integrated Resource Management & Philomath Area Chamber of Commerce.

For more about the community effort to purchase and conserve Newton Creek Wetlands, visit www.mpnric.org.

Projects Update!

Greasy Creek Subbasin

Rock Creek Join us to watch the action as the helicopter delivers logs to Rock Creek to improve aquatic habitat, scheduled *tentatively* for September 16th. Stay tuned for an update next month. Construction on culverts and fish ladders begins this month.

Blair Creek Upstream Gellatly culvert is now fish friendly! Construction has begun on the fish friendly stream crossing on Hwy 34 just west of Hwy 20 - please be cautious passing through the work zone.