

Project Monitoring Report
OWEB Grant 204-372C – Coos Watershed Association Projects 2004 Riparian
Coos Watershed Association
October 23, 2008

Projects completed under this grant addressed limiting factors for salmon production by restoring riparian areas with native vegetation (see Table 1). Located at nine project sites (see Map 1), spanning 6 landowners, the Coos Watershed Association has incorporated all but one of the projects completed under this grant into our restoration program effectiveness monitoring effort. Riparian monitoring data is collected using protocols outlined in the *Coastal Oregon Riparian Silviculture Guide* (Massingill 2003). Monitoring data has been collected yearly, for 4-6 years at each of the four project sites, and managed through our Riparian Silviculture Database. Results have shown consistent tree growth, notwithstanding some variation for species and site, and overall generally good plant survival.

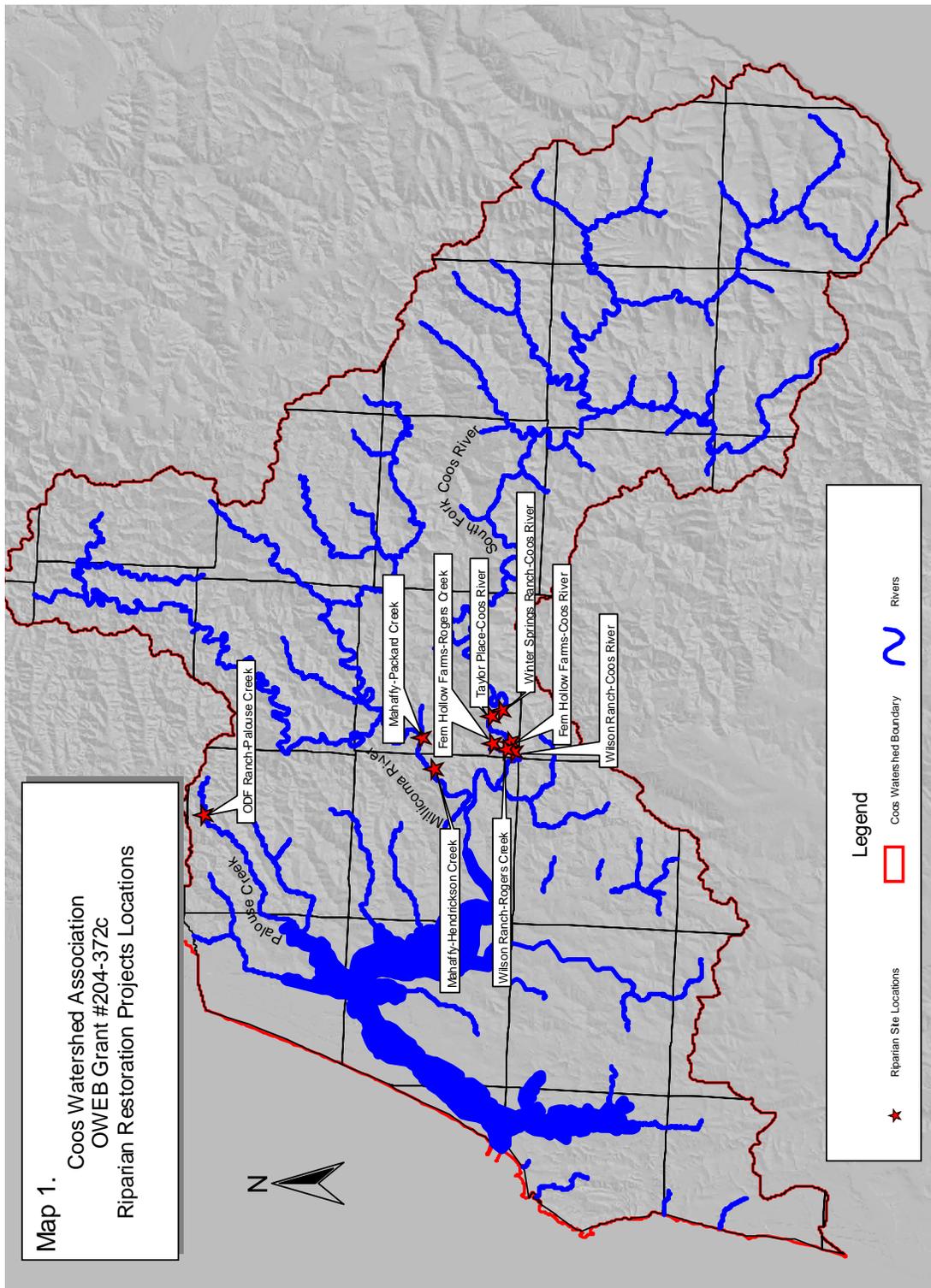
Annual maintenance at all project sites was performed from summer, 2006 through summer, 2008 by displaced salmon fishers, hired through two separate funding awards from OWEB's Salmon Season State of Emergency Program. The fishers have been instrumental in maintaining our riparian plantings over the last two years, and without the added maintenance, monitoring these projects would have proven extremely difficult. In addition, without maintenance it is expected that we would likely see diminished survival and growth from competing noxious weeds.

Riparian effectiveness monitoring over the last year occurred from October of 2007 to May of 2008 at six project sites, although due to access problems, only a portion of the Wilson Ranch sites were able to be evaluated at the time of this report.

Table 1. Project site planting dates and areas.

| Site | Planting Dates | Project Length (feet) | Average Buffer Width (feet) | Acres Planted |
|---|----------------|-----------------------|-----------------------------|---------------|
| Winter Springs Ranch | 2002&2003 | 5,000 | 65 | 7.5 |
| Mahaffy – Packard Creek | 2003 | 2,185 | 40 | 2.0 |
| Mahaffy – Hendrickson Creek | 2003 | 2,075 | 30 | 1.4 |
| Wilson Ranch – S. Fork Coos | 2003&2004 | 2,530 | 100 | 5.8 |
| Wilson Ranch – Rogers Creek & Unnamed Tributary | 2003&2004 | 3,960 | 35 | 3.2 |
| Lee Taylor – S.F. Coos R. | 2004 | 950 | 120 | 2.6 |
| Palouse Cr. – ODF Ranch | 2004&2005 | 3,810 | 50 | 4.4 |
| Fern Hollow Farms – S.F. Coos R. | 2005 | 3,800 | 60 | 5.2 |
| Fern Hollow Farms – Rogers Creek | 2005 | 8,400 | 35 | 6.75 |
| Total | | 32,710 | | 38.85 |

Map 1. Riparian Restoration Project Locations.



Winter Springs Ranch Riparian Restoration

The Winter Springs Ranch is the Coos Watershed Association's oldest CREP project and is one of our best examples of incorporating diverse species in riparian restoration projects (Photo 1). The landowner remains committed to the success of this project through maintaining the live-stock exclusion fencing. Japanese knotweed patches at the site were treated during the summer, 2008 and the control appears effective.

The Winter Springs Ranch riparian planting was one of the first projects to be monitored under the *Coastal Oregon Riparian Silviculture Guide* intensive monitoring protocol to gauge growth and survival of the plantings. Survival data and height growth from monitoring plots is summarized in the figures on the next page. The average survival rate alive was 22%, but this data is suspicious given the large number of "indeterminate" ratings. Species-specific survival ranges from potentially 0% (red elderberry and vine maple, which were not found in the late 2007 monitoring) to 68% (grand fir). Trees that are recorded as indeterminate are either unable to be found (i.e., the identification tag and stake were lost) or surveyors could not tell whether the tree was living during survey.



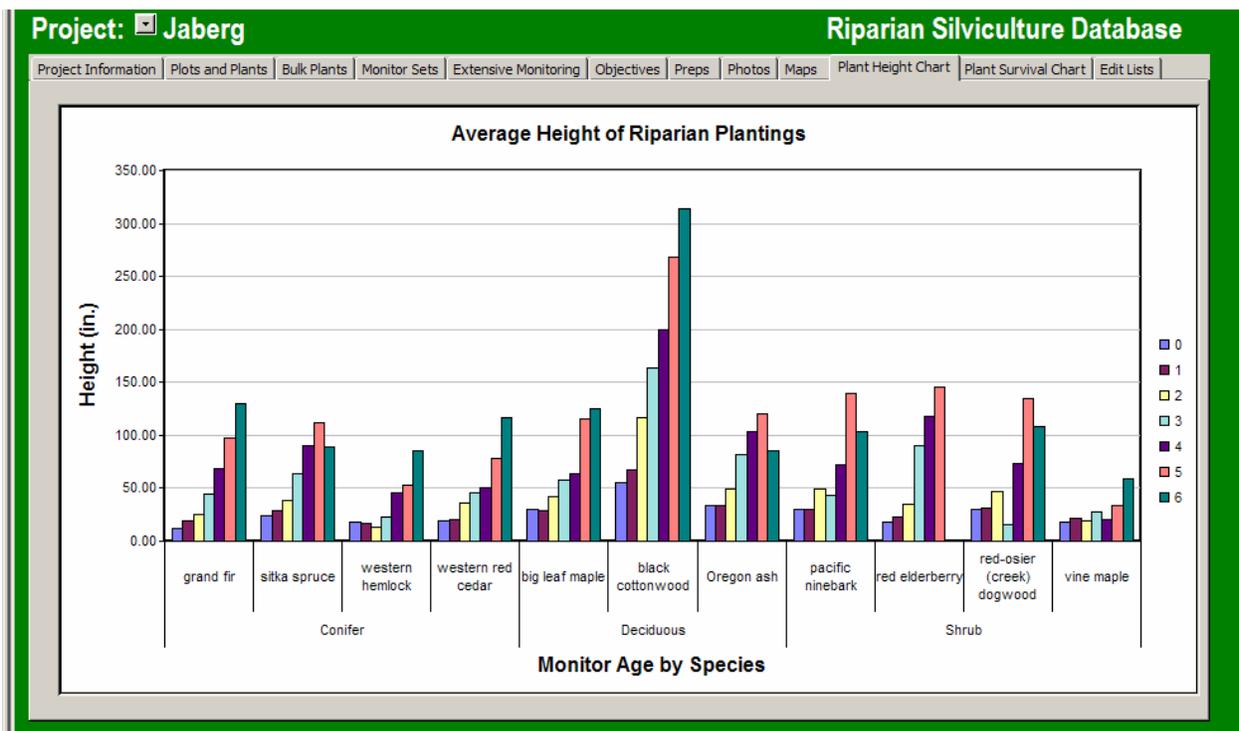
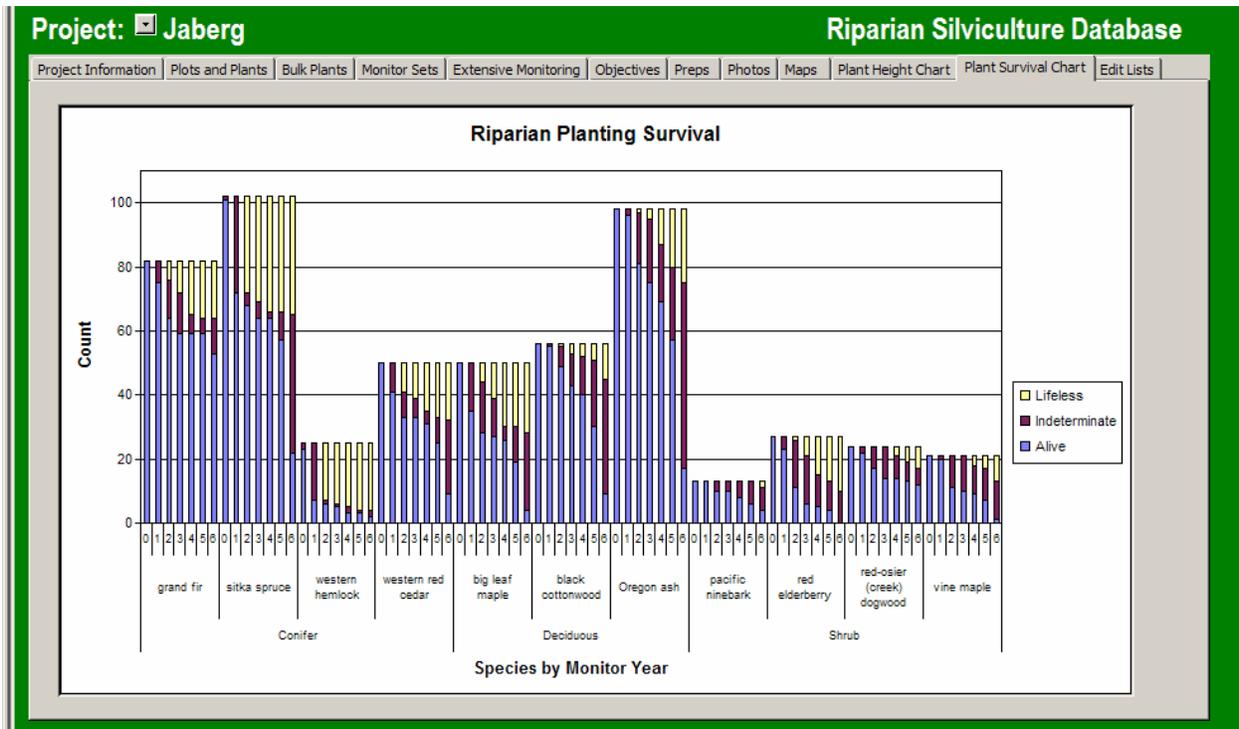
Photo 1. Winter Springs Ranch Riparian Planting, June, 2008.

Monitoring and maintenance costs from September, 2007 through September, 2008 have been \$14,556, mostly for Fisher crew labor for maintenance activities.

During 2008, Jim Jaberg sold the upper 5 acres of his ranch to an adjacent neighbor. Our contacts with this neighbor indicate that they are interested in continuing the riparian restoration project. This area includes Monitoring Plots 15 and 16, and we expect our monitoring activities to continue at these sites.

Phase 1 of the Winter Springs Riparian Restoration was used as a demonstration site for a field tour in May, 2008 as part of the Heads-of-Tide Watershed Assessment coffee klatch program.

**Jaberg Winter Springs Ranch, Planted 2002 & 2003
Last Monitored November 2007**



Packard Creek Riparian Restoration

The riparian plantings and willow walls at Packard Creek were implemented in 2003 due to a high level of streambank erosion, solar loading, and livestock accessing the creek. The site was fenced from livestock, although fence maintenance continues to be a concern. Willow walls were used to treat vertical streambanks at several places along the stream and have been highly successful at stabilizing banks, shading the stream and providing beaver forage. The willow walls and dense plantings have served to stabilize eroding banks (see Photo 2). Riparian plantings continue to be monitored for survival and growth. Figure on the next page show survival and height growth data for all species (excluding willow) at the site. Survival rates for individual species ranged from 0% (grand fir and black cottonwood) to 79% (Sitka spruce), with an average overall survival of 38%.

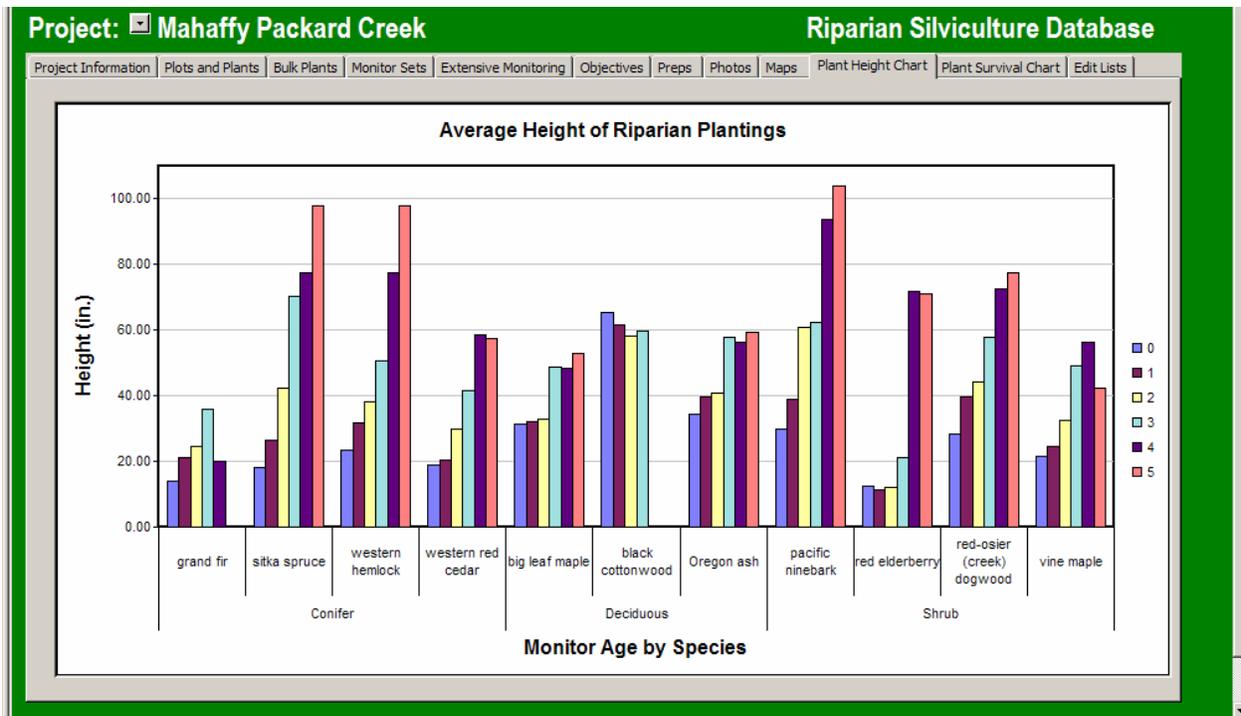
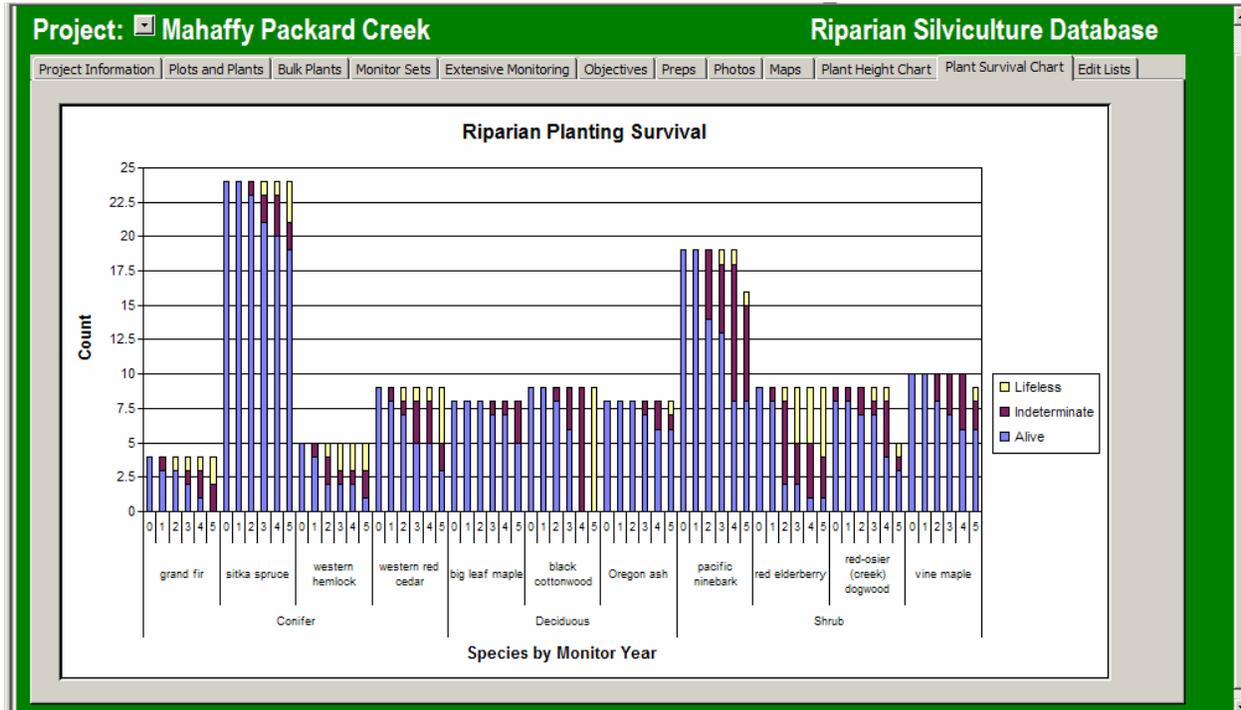


Photo 2. Packard Riparian Restoration, November, 2007 showing stabilized banks.

Maintenance and monitoring costs at Packard Creek from September, 2007 through September, 2008 have been \$4,869.88.

Due to difficulties in accessing the site, the Packard Riparian Restoration project is not generally used for outreach and education events.

**Mahaffy Packard Creek, Planted 2003
Last Monitored November 2007**



Hendrickson Creek Riparian Restoration

Hendrickson Creek was fenced and planted in 2003 primarily with shrubs and low-growing trees to reduce shade cast on the adjacent pasture (see Photo 3). Figures on the next page depict survival and plant heights five years after establishment. The average survival rate at this site is 67%, with a range of 33% (red-osier dogwood) to 100% (grand fir). Maintenance and monitoring costs for Hendrickson Creek since the final report (September, 2007 to September, 2008) have been \$4,926.87.

This project is meeting its objectives (see Photo 4). There have been no formal educational or outreach activities associated with this project in the last year, although there have been a couple of site visits by potential landowners interested in riparian restoration projects.

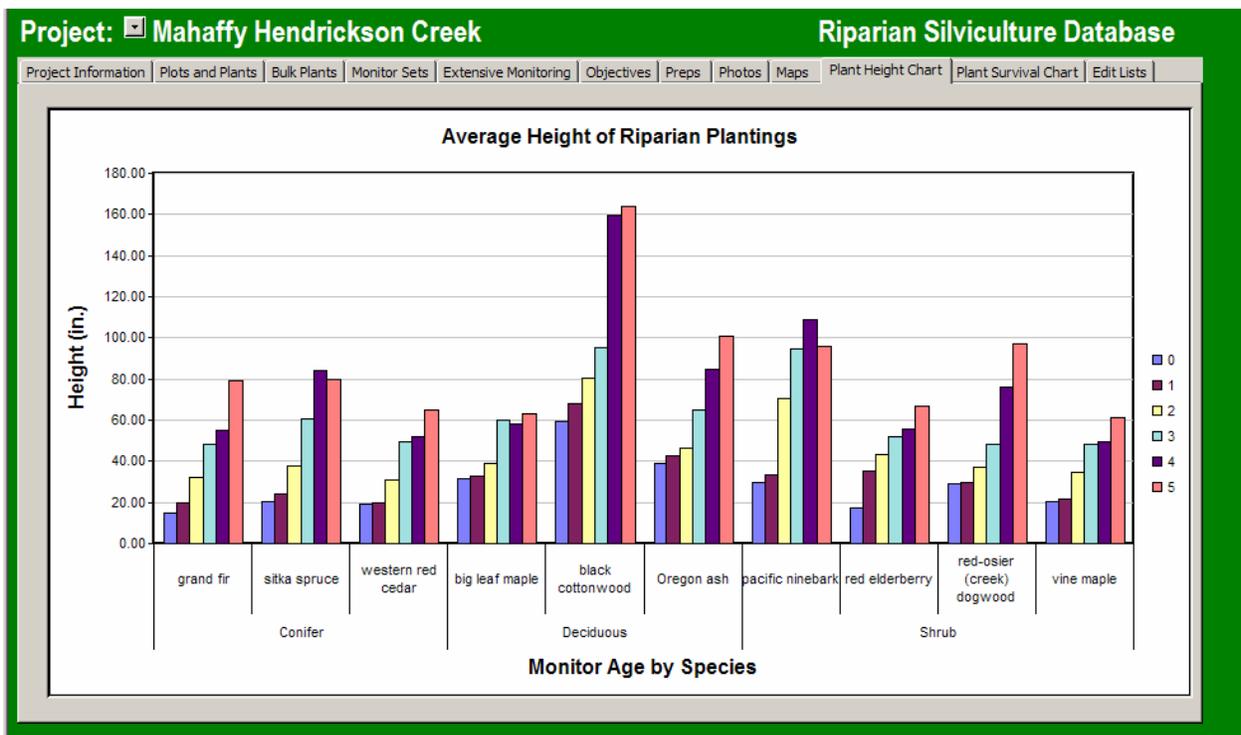
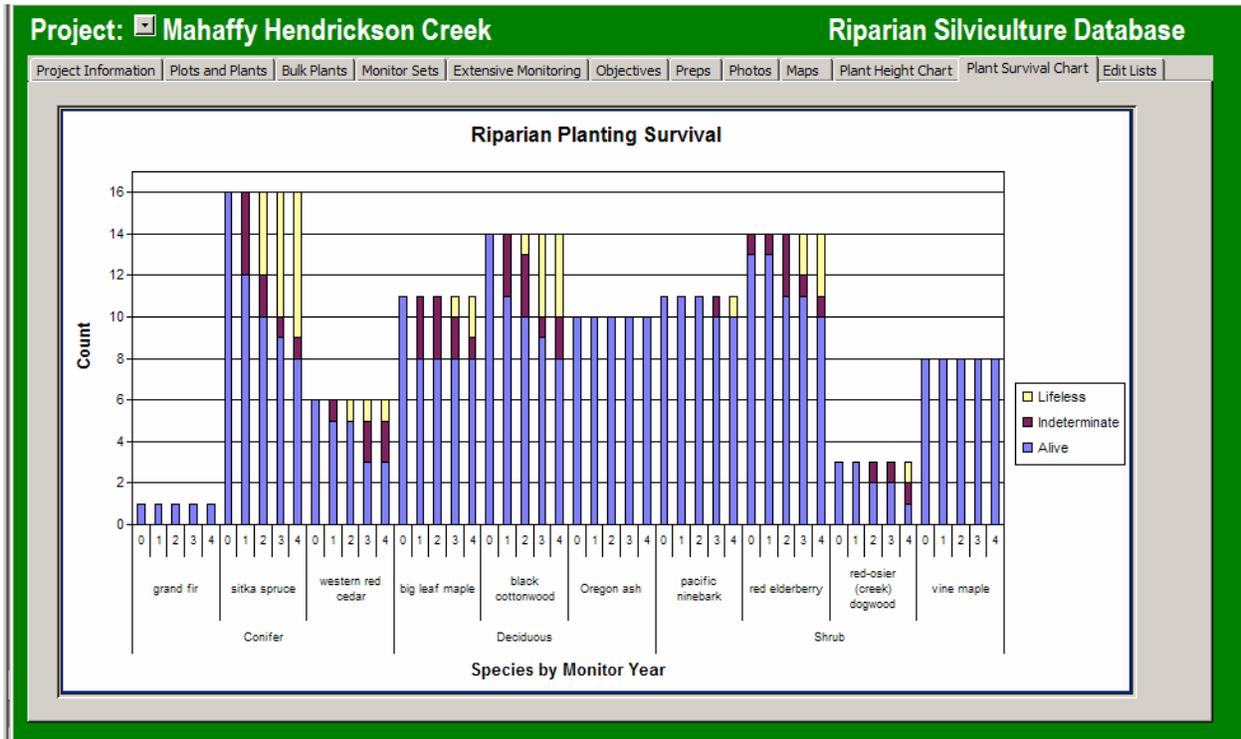


Photo 3. Hendrickson Creek, lower pasture, November, 2007.



Photo 4. Hendrickson Creek, height of plantings November, 2007.

**Mahaffy Hendrickson Creek, Planted November 2003
Last Monitored November 2007**



Wilson Ranch Riparian Restoration

The Wilson Ranch planting project on Rogers Creek and South Fork Coos River has been successful in regards to the establishment of trees and shrubs in the riparian area. We have observed steady growth in willows, conifers and deciduous species. The Wilson Ranch was sold in late 2006 and the new landowner has not been interested in enrolling in the CREP program. We have developed a relationship with the new landowners to the point where we have recently been allowed access for maintenance and monitoring. The landowners have stated they are committed to keeping most of the trees, although they have been removing cottonwoods from the riparian to increase the size of the pasture for agricultural use. More recent communications in October, 2008 indicate a willingness to work with CoosWA on continued maintenance of the plantings and possibly re-enrolling the project in the CREP.



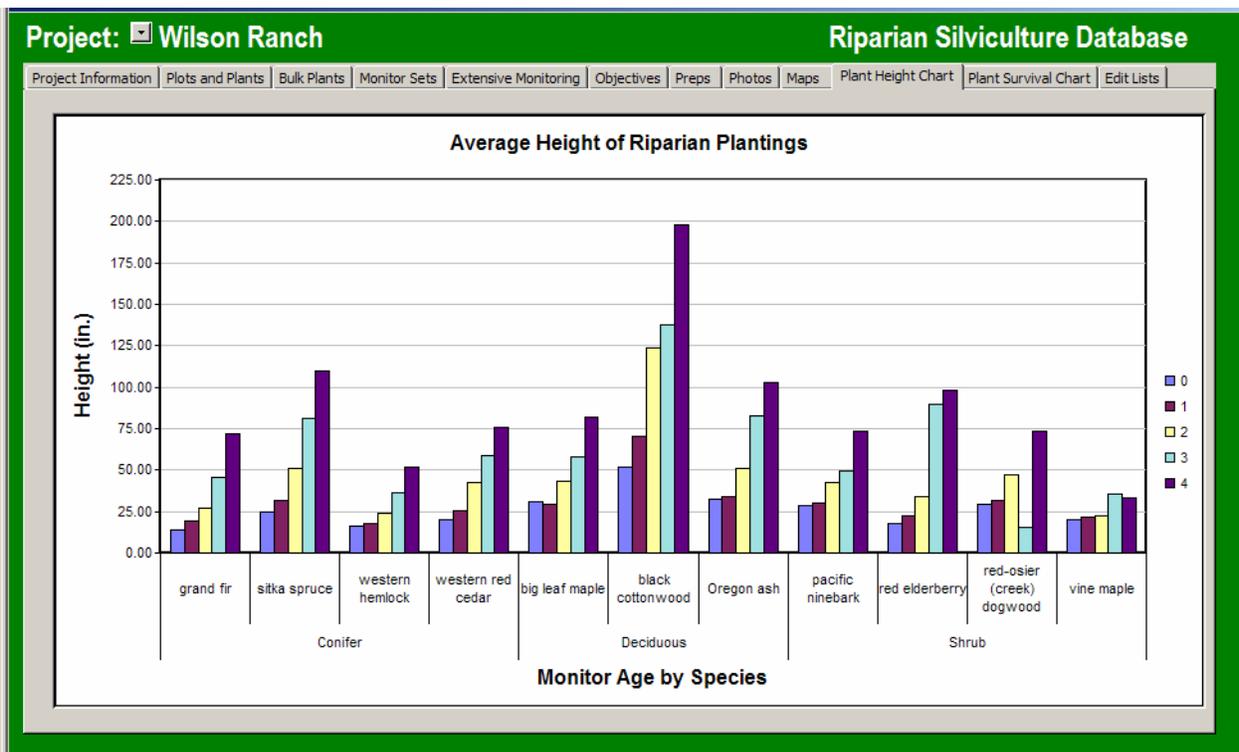
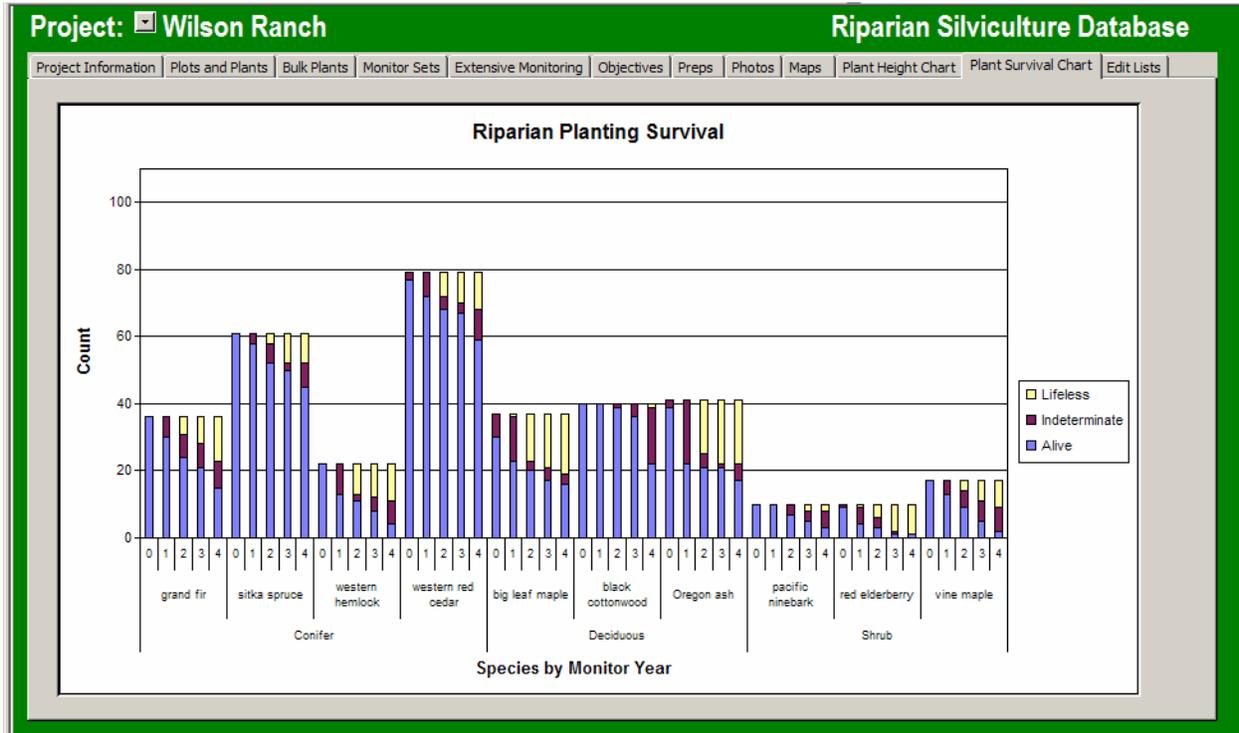
Photo 5. Phase 1 planting (2003) in the Wilson Ranch Riparian Restoration project, June, 2008.

Maintenance and monitoring costs since the submission of the final report have totaled approximately \$6,958.29.

Patches of Japanese knotweed were treated at this site during July, 2008.

At this time we have not completed the 2007/2008 monitoring for this site. We expect to have this completed by November, 2008.

**Wilson Ranch Coos River and Rogers Creek, Planted 2003 & 2004
Last Monitored November 2006 (partial monitoring June 2008 not included)**



Taylor Place Riparian Restoration



Photo 6. Taylor CREP showing willows along tributary stream and conifers in background, December, 2006.

Located immediately downstream of the Winter Springs Ranch, the 2.6 acre Taylor Place project area was also enrolled in the CREP program. The landowner, Lee Taylor, passed away in late 2006. A relationship is being formed with the new landowner. At this time, she does not wish to participate in the CREP program, although she is still interested in maintaining the plantings.

The establishment of plantings at this site has been very successful (see Photo 6). The former landowner completed the majority of the maintenance at this site, and while the Association has not undertaken rigorous silvicultural monitoring on

these plantings, we continue to observe a good survival rate. The Association will continue to work with the new landowner to ensure the plantings receive adequate maintenance. No funds have been expended on this site during the reporting period.

Two Japanese knotweed patches were found in this planting project during surveys in June, 2008. The landowner did not want herbicides applied to control these outbreaks. We will continue to monitor the sites and will attempt to control knotweed using methods acceptable to the landowner.

We use the Taylor site to access the lower portion of the Jaberg planting for tours. We took a group for the Heads-of-Tide coffee klatch through this site in May, 2008.

ODF Ranch Riparian Restoration.

This project occurred on Oregon Department of Forestry owned lands (formerly 3 homesteads) in the upper reaches of Palouse Creek. This project included planting 2,486 trees and shrubs and 4,000 willow on 4.4 acres of riparian in February, 2004 and January, 2005 (see Photo 7). Eight species were planted during two project phases, and include Sitka spruce, western red cedar, western hemlock (Phase 2), bigleaf maple, grand fir (Phase 1), red-osier dogwood, vine maple (Phase 2), and willow cuttings. The total project was 3,810 feet long by 50 feet wide and included several fenced in areas to exclude elk herds (see Photo 8) that were considered to be a significant risk to plantings.

We expended \$6,630 since the OWEB Final Report on maintaining and monitoring at this project site.

The last monitoring at this site was conducted in November, 2007.



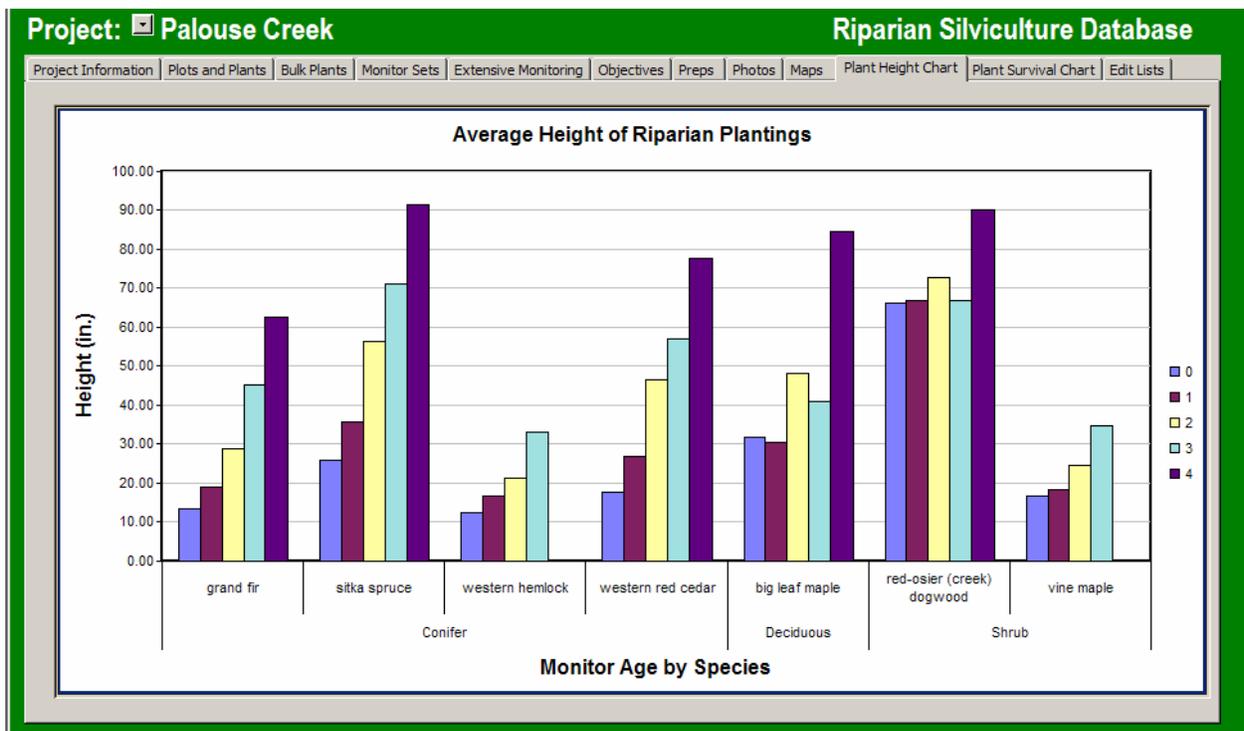
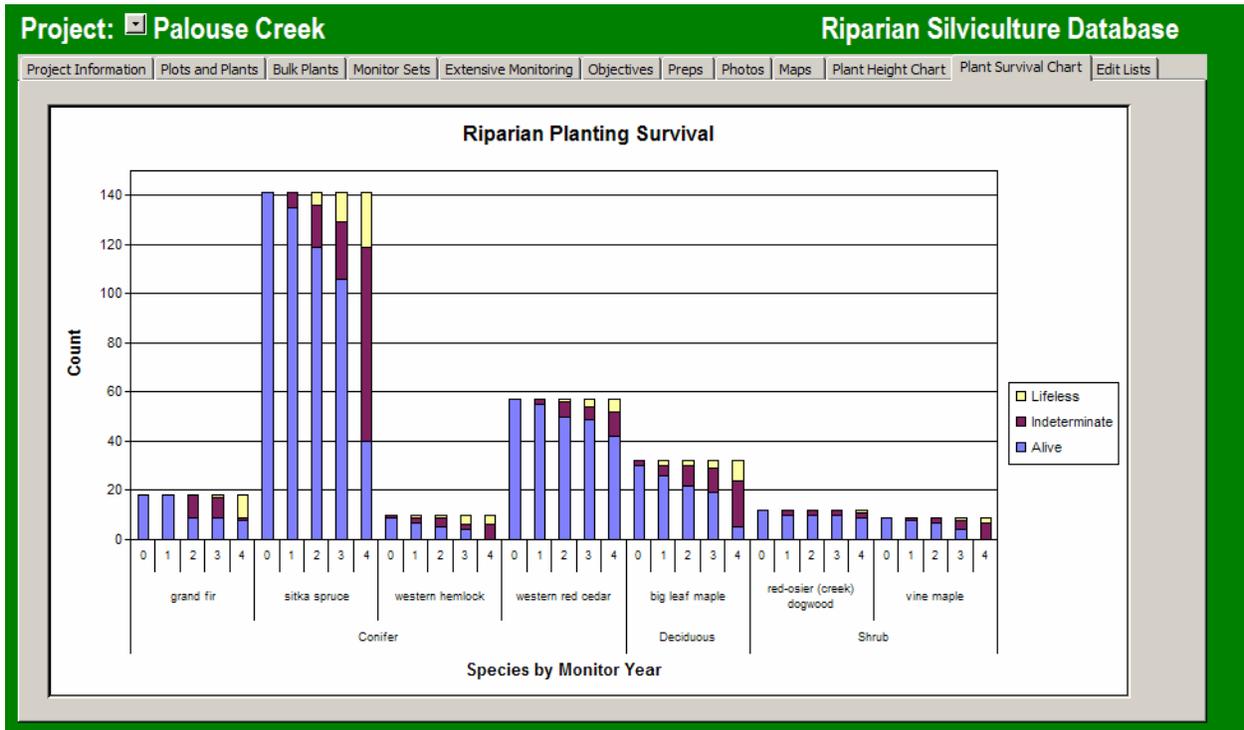
Photo 7. ODF Ranch riparian planting downstream from the washed out log stringer bridge, August, 2008.



Photo 8. ODF Ranch showing a bigleaf maple and other browse-sensitive species in an exclosure, August, 2008.

The project area is a popular hiking spot for local residents. There have been no formal outreach or education activities at this site since the completion of the Final Project Report in September, 2007.

**ODF Ranch Palouse Creek, Planted 2004 & 2005
Last Monitored November 2007**



Smith Ranch - Fern Hollow Farm Riparian Restoration

This project restored a total of 12 acres of riparian vegetation, including 3,800 feet of the north bank of the S.F. Coos River (60 foot setback) and 8,400 feet of Rogers Creek (35 foot setback on both banks). Site preparation included chemical treatment and mechanical removal of blackberries and stem injection of Japanese knotweed. In the spring, 2005, the site was planted with 5,560 bare-root and live-stake trees and shrubs. An additional 5,450 willow stakes were placed at the water's edge along the planting zones. During winter, 2006 a total of 14,560 feet of fence was constructed, and off-channel watering facilities were developed.

Plant survival in the South Fork Coos River project area varies from virtually zero for red elderberry to almost 100% for Sitka spruce. In general, the conifers survived better than the deciduous plants, although many hardwoods and shrubs were classified as “indeterminate” because their leaves had fallen prior to the monitoring in December, 2007. Our expectation is that most of these plants have survived. Height growth in the South Fork project area is consistent with the plants nearing or achieving “free-to-grow” above competing vegetation. The black cottonwoods averaged 132 inches in height, or 11 feet after three years. Sitka spruce and Oregon ash were the two other species that grew rapidly, both averaging about 80 inches (almost 7 feet) after three years. These three species are clearly “free to grow”. With the exception of red elderberry, which has almost completely failed, the other plants are averaging between 20 inches and 50 inches in height, indicating that they will require continued maintenance if they are to thrive. Japanese knotweed is a problem in this planting. Treatment in the summer, 2008 appears successful but will require periodic followup to insure that the infestation is controlled.



Photo 9. Willow, ash, and spruce along Rogers Creek.



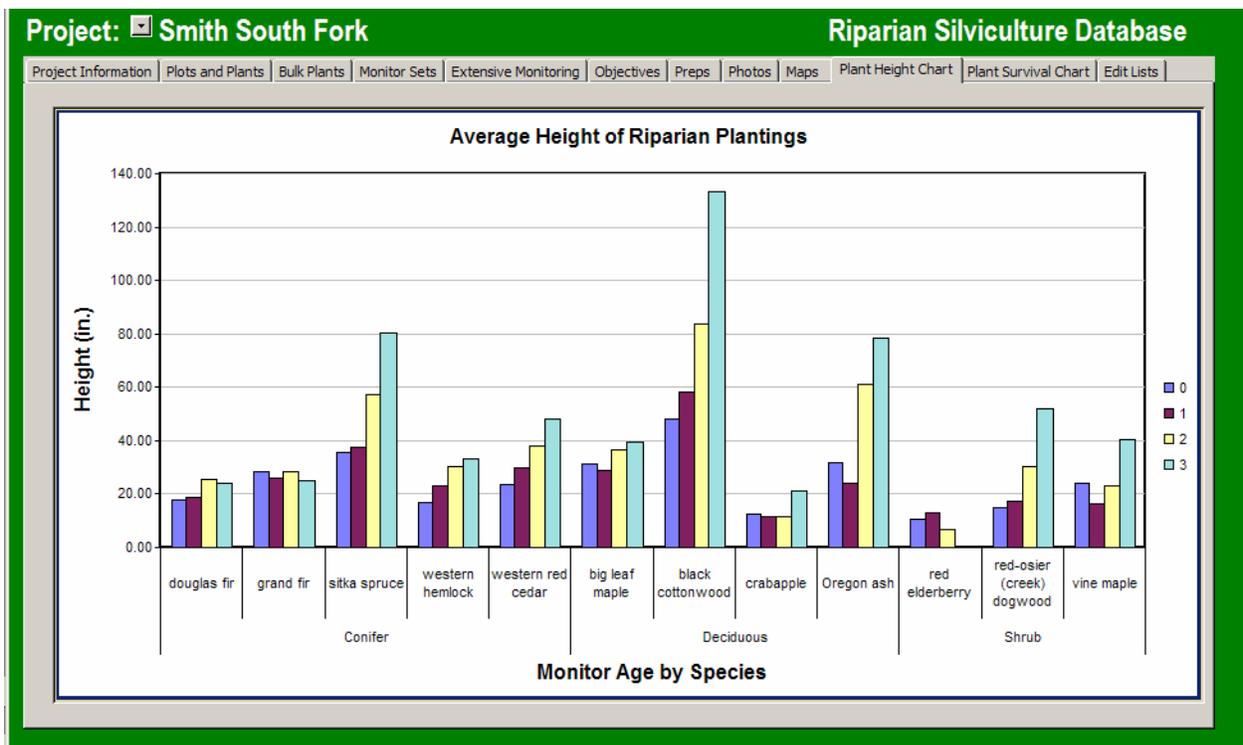
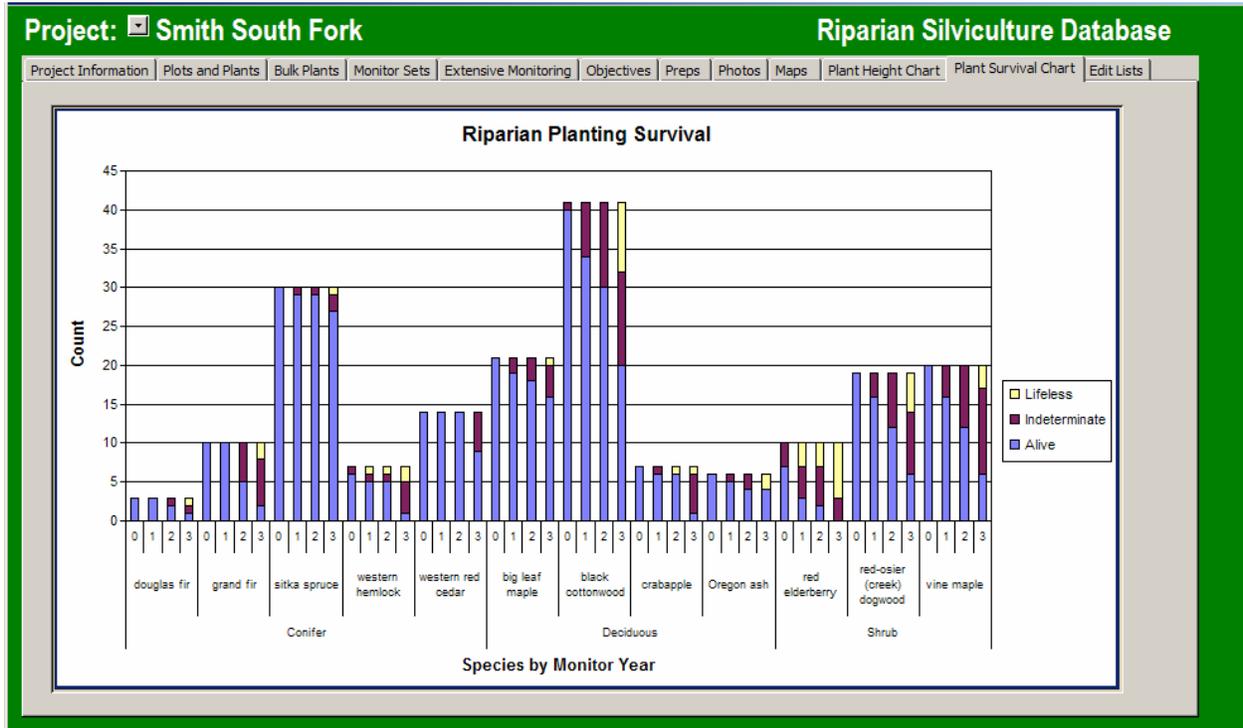
Photo 10. Cattle damage to tubed trees along Rogers Creek.

Riparian plantings in the Roger Creek area of the project have a similar outlook. Plant survival is high (almost 100%) for Sitka spruce and western red cedar. Again, red elderberry has largely failed, and the dogwood may also have been unsuccessful, although the large number of “indeterminate” status for this species may be due to late-in-the-year monitoring. Black cottonwood are noticeably shorter at Rogers Creek compared to similarly aged planting on the South Fork. This is largely due to beaver falling many of the trees, which then resprout from their stumps but are shorter as a result. Sitka spruce, bigleaf maple, Oregon ash and crabapple have all done nicely. There is a continued problem at this site with cattle breaking through the fence and dam-

aging the plants. Because it is a CREP project, NRCS has contacted the landowner about correcting this situation.

Maintenance and monitoring expenditures on the South Fork Coos River portion of the project were \$10, 570 since the preparation of the OWEB Final Report. An additional \$493 was spent on maintenance and monitoring at the Rogers Creek project area. Maintenance will need to continue for at least another year to insure that the plants are “free-to-grow”.

**Smith Ranch Fern Hollow South Fork Coos River, Planted 2005
Last Monitored December 2007**



Smith Ranch Fern Hollow Rogers Creek, Planted 2005
Last Monitored December 2007

