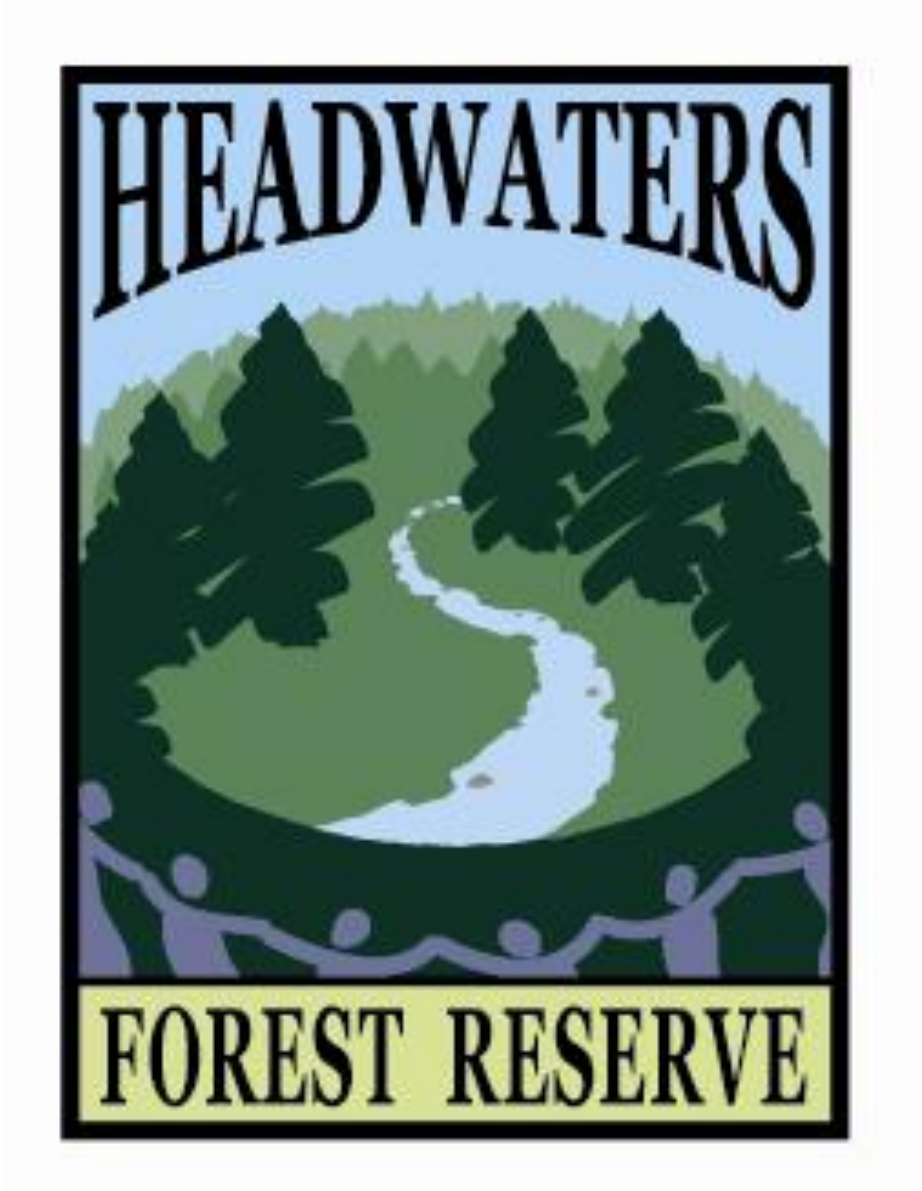
NATIONAL LANDSCAPE CONSERVATION SYSTEM

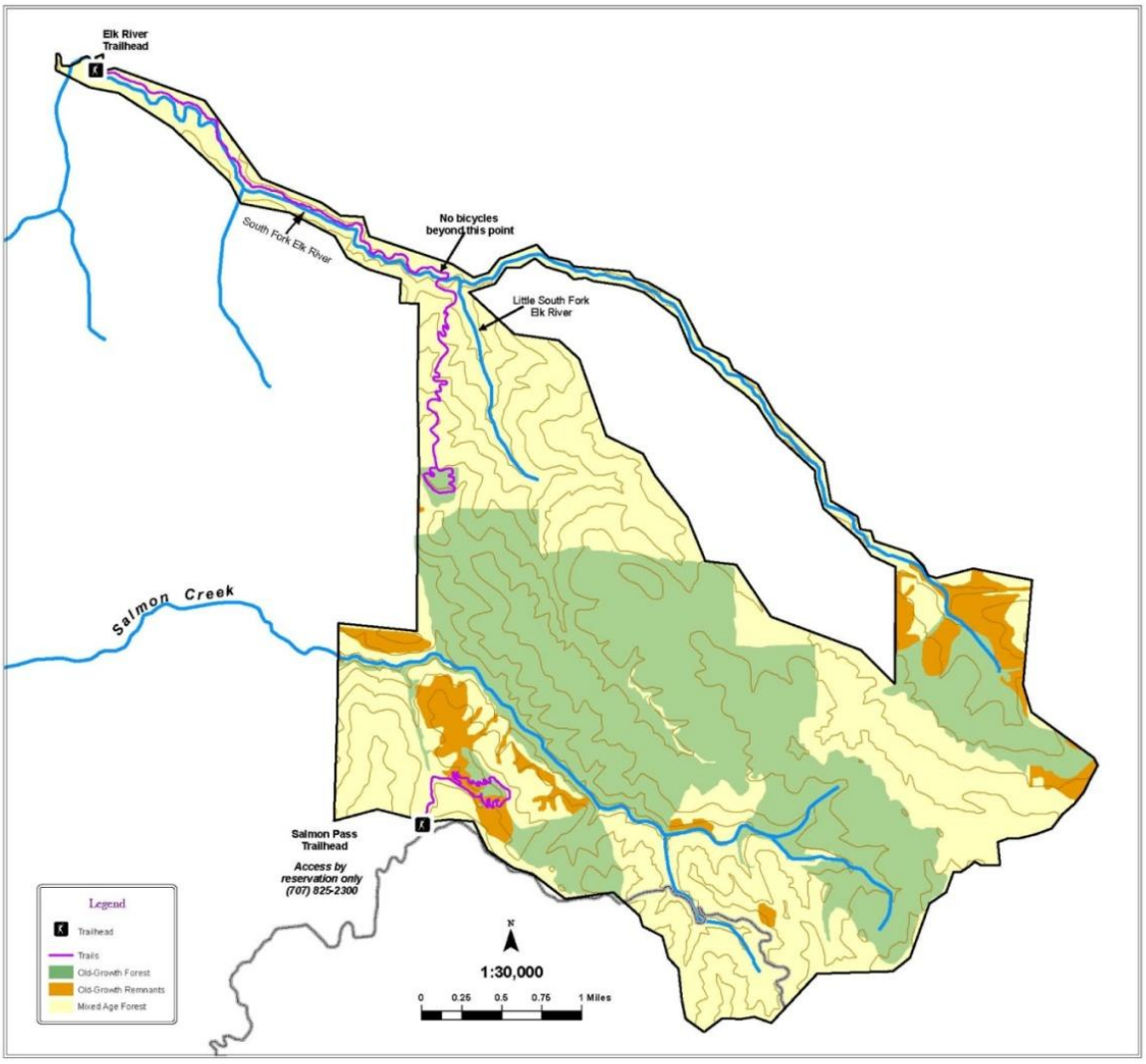
FY 2008 ANNUAL MANAGER'S REPORT



This manager's report is dedicated to Greg Jennings, Headwaters Forest Ecologist who was killed in a tragic accident in August. Greg's heart and soul resides in the Headwaters Forest Reserve, a place he knew so very well. Greg had many great qualities, he had a wonderful sense of humor, he was a teacher yet eager to learn and he was a positive person who was always willing to step in and help when needed. Like the old growth redwoods and the Douglas fir stands that he worked in we will miss him but are so very thankful for the time that we had to get to know and appreciate him.

Introduction

The Headwaters Forest Reserve (Reserve) was acquired by the United States Department of the Interior (USDI) and the State of California on March 1, 1999, to preserve the last unprotected large stand of old-growth redwood forest. The Reserve is 7,472 acres and is located in the mountainous north coast region of California. Approximately 10,300 visitors were documented in FY2008 with the majority of them accessing the Reserve through the north end, at the Elk River Trailhead.



The federal legislation authorizing the Reserve (1998 Interior Appropriations Bill) directed the Secretary of Interior to prepare a long-term management plan for its management. It established the following management goal for the plan:

> *"Conserve and study the land, fish, wildlife, and forests occurring on such land while providing public recreation opportunities and other management needs."*

The Resource Management Plan (RMP) was completed in 2004 and assures that human activities are compatible with the ecological integrity and preservation of the Reserve's lands, fish, wildlife, and forest. As required by the authorizing legislation, the plan addresses requirements for species management, research and monitoring activities, public access, minimal facilities and a management budget. In particular it addresses watershed and forest restoration actions that are needed to protect and promote long-term ecological integrity and provide conservation management.

The Reserve office is collocated with the BLM Arcata Field Office and is located at:

Bureau of Land Management
1695 Heindon Rd
Arcata, CA 95519
(707) 825-2300
(707) 825-2301 (fax)
www.blm.gov/ca/arcata

Section I - Natural and Heritage Resource Conditions

Natural Resource Trends

Overall forest conditions within the Reserve vary due to the mixed management history. Stand types and forest health of the entire area were characterized during the development of the Headwaters RMP with an extensive and detailed vegetation mapping effort. Approximately 3,088 acres of the Reserve exists in an undisturbed, old-growth condition. The remaining 4,384 acres are in younger seral stages as a result of timber harvesting that occurred prior to the public acquisition. Management goals for this young forest involve the accelerated restoration of old-growth characteristics through thinning dense, young stands and reforestation of watershed restoration sites.

An extensive body of research has shown that stand structural characteristics become established at an early age and that restoration of old-forest characteristics in previously harvested stands can be accelerated by manipulating tree density. Thinning prescriptions are designed to both accelerate tree growth and adjust species composition to more closely reflect that of adjacent old growth forests.

The BLM continued to implement a monitoring protocol developed with an interagency forest restoration working group. This same protocol is also in use in the California State Parks and Redwood National Park. Applying a uniform monitoring design across multiple jurisdictions will be helpful to future restoration projects by allowing meaningful, long-term comparisons between a variety of thinning regimes.

To date, all decommissioned roads and spoils sites have been planted with redwood seedlings. Reforestation of these areas improves slope stability and ensures that redwood will continue to be a forest component on those sites.

Proper management of invasive weeds, English ivy (*Hedera helix*), periwinkle (*Vinca major*), cotoneaster (*Cotoneaster franchetti*), pampas grass (*Cortaderia jubata*), and French broom (*Genista monspessulana*) will offer greater opportunity for native vegetation to thrive in previously disturbed areas of the Reserve. Successful eradication depends upon revisiting treated sites on a regular basis to remove any new sprouts.

The conditions of the wildlife resources within the Reserve are generally stable with the exception of the northern spotted owls (*Strix occidentalis caurina*). Detections of barred owls (*Strix varia*) were documented with reproduction occurring this year. The wildlife monitoring program includes surveys for two threatened species, the northern spotted owl and marbled murrelet (*Brachyramphus marmoratus*) and members of the Corvid family.

This was the fourth year stream channel monitoring was conducted. The stream channel monitoring followed protocols developed and tested by the US Forest Service Stream Condition Index program to track stream conditions within sensitive stream reaches. Results showed little change from past years data in either the number of pools or pool depth.

The ongoing watershed restoration program completed road decommissioning activities in the Salmon Creek watershed. This work was partially funded by California Department of Fish and Game and conducted in partnership with Pacific Coast Fish Wildlife and Wetlands Association.

Inventory/Monitoring

Forest Thinning

- Collected seed cones from redwood trees for future propagation.
- Continued with our tree density management program by thinning an additional 277 acres.
- Planted 5,000 redwood seedlings to reforest newly decommissioned roads and spoil sites.

Nonnative Vegetation Removal

- Invasive weed removal of English ivy, periwinkle, cotoneaster, pampas grass, and French broom occurred on the north end of the Reserve within the South Fork Elk River corridor.

Wildlife

- Located a new pair of spotted owls - this pair was found in marginally suitable habitat.
- The female of this new spotted owl pair was banded this year.
- Including the banding that took place this year there are a total of five owls now banded within the Reserve.
- It was confirmed that a new pair of barred owls displaced a pair of spotted owls.
- A different pair of barred owls successfully reproduced in the Reserve this year.
- A total of four pairs of spotted owls reside within the Reserve along with three pairs of barred owls.
- Marbled murrelets were detected at an observation station where there have not been any previous detections. This may be an anomaly but it may also mean that murrelets are searching for or finding new nesting opportunities in that area.
- Corvid surveys in 2008 were focused along the Elk River corridor and the findings are consistent with past data collected.
- Completed a biological assessment for incidental take due to fires that occurred on the south end in June. Two old growth trees were felled to extinguish fire burning inside and around them.
- Noise disturbance monitoring was conducted and an incidental take report was submitted to the Fish and Wildlife Service (FWS).

Watershed Restoration

- Removed 0.5 mile of road and five stream crossings in the Salmon Creek watershed.

- Monitored treatments conducted in ’07 within the first two miles of the Elk River corridor to determine sediment/erosion output on drainage improvement projects.
- Assessed erosion hazards and treatment options within the Elk River corridor in conjunction with trail improvement projects.
- Monitored Pacific salmon habitat and water quality in Salmon Creek and South Fork Elk River.

Heritage Resource Trends

The overall condition of the cultural and heritage resources remains stable; but with the increased visitation a greater number of visitors casually collect, or knowingly disturb, loot, or cause damage to the artifacts and structural remains. To deter looting and vandalism, and to protect the heritage values of sites, an annual monitoring program is being developed and ARPA signs have been installed. Three federally recognized Tribal entities: 1) Wiyot Tribe; 2) Bear River Band of Rohnerville Rancheria; and 3) Blue Lake Rancheria, linked to the area by lineage, continue to be contacted and invited to participate in ongoing inventory and site testing projects.

Inventory/Monitoring

- Worked with Humboldt State University (HSU) and tested three archaeological sites for interpretive purposes.
- Secured NLCS research funding for determination of eligibility for one prehistoric site.
- Initiated historic orchard restoration project as part of the “Take It Outside” initiative.

Section II - Recreation Facilities, Roads, and Trails Conditions

There are relatively few physical facilities within Headwaters. In total there are approximately three miles of BLM maintained roads, nine miles of maintained recreational trails, two trailheads with parking areas, information, signs, and three vault toilets. Due to adverse geological conditions and heavy winter rains, the roads and trails have very high maintenance requirements.

In 2007, a contract with the Forest Service Mountain Heritage Associates was established using 1653 (deferred maintenance) funds and the historic train barn was physically moved this summer. It was an intensive project as the barn was located on the other side of the South Fork Elk River. The standing structure was disassembled; all the materials were hauled across the river using a cable pulley system and then transported (using trucks with trailers) to the new site location. Once all the materials were at the new site the reconstruction began. The reconstruction was more complicated than the original structure as modern building code requirements were met (i.e. earthquake standards). As much original material as possible (approximately 50%) was salvaged from the old barn and incorporated into the new structure.

One-time directed funds received in 2008 included $649,000 in subactivity 2110 (construction). Specific watershed restoration work included the removal of a large, problematic culvert and the installation of a new 50' bridge; the removal of a failing bridge; and the replacement/installation of six culverts in conjunction with drainage improvements on 0.5 miles of streamside access road. The landslide area on the Elk River Trail was evaluated by LACO Associates to determine practical solutions to alleviate water drainage problems. Parking area improvements included a new parking lot surface using environmentally friendly pavers and the redesign of the parking lot and trailhead, including a new sign.

This new sign and other portal signs have been installed. A signing strategy was incorporated into the RMP and is currently being implemented. Installed signs of various types include portal, recreation site, kiosk panels, wayside exhibits, regulatory, and informational.

In cooperation with the California Conservation Corps (CCC), approximately ¾ mile of new trail was constructed on the north end of the Reserve. This trail was rerouted to a better location to better fit the topography of the area.

Section III – Outreach, Environmental Education, Interpretation, and Volunteers

With so many changes occurring within the Reserve in 2007 and new projects projected for 2008 we felt it was necessary to keep our interested parties up to date so we created and sent out a spring newsletter to all 389 interested parties on our mailing list.

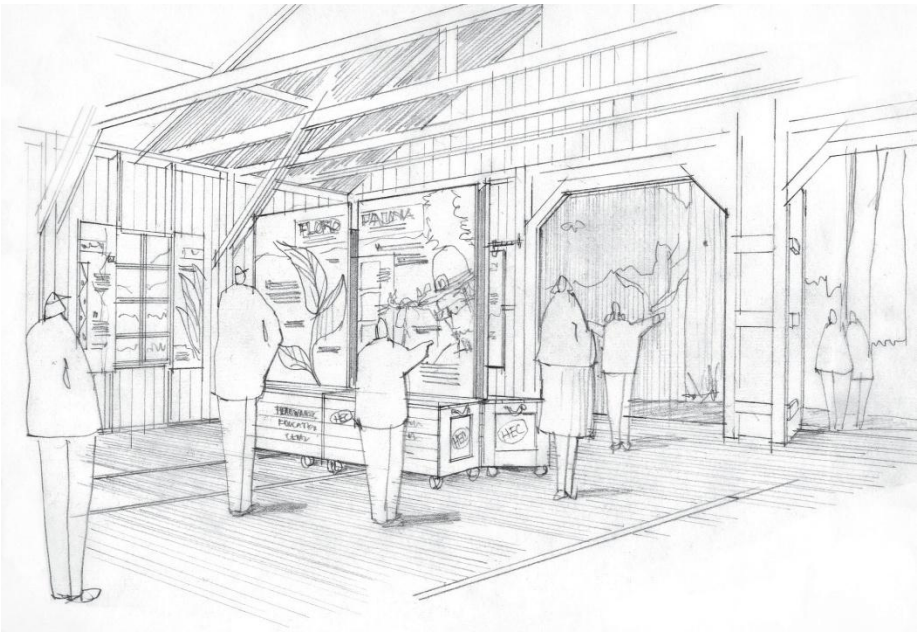
The Headwaters Forest Reserve environmental education and resource interpretation programs were created to instill in visitors a sense of stewardship and need for protection of the unique and valuable natural and cultural resources found in the area. Programs were also developed for local K-12 schools to provide students of Humboldt County an opportunity to actively learn about the Reserve's unique resource values. The curriculum was designed to meet the educational needs of students and teachers and the resource conservation goals of the BLM.

The Headwaters park ranger is actively involved in presenting pre-field trip classroom sessions and performs on-the-ground guided field trips to the Reserve. This year we reached 400 people through our guided tours on the south end (Salmon Pass) plus delivered 13 slide shows in our local schools reaching 413 students.

A power point presentation on Falk as well as a DVD set to music was presented to the Humboldt County Historical Society. The DVD was a compilation of all the photographs of Falk that the BLM has collected over the past 10 years. There were 140 participants at the local library. Another event that took place at the Reserve with the Historical Society

was a special guest presentation by Jon Humboldt Gates, author of Falk's Claim. This book is about the historic town of Falk, located within the Reserve. Following the presentation, approximately 40 people enjoyed viewing the newly constructed train barn and participating in a guided hike on the north end.

With the new train barn site our next step was to determine what we wanted to present to the public as far as interpretative displays. An interpretative prospectus was created based on our RMP objectives and a general direction of what the BLM wanted to see with this new facility. Our next task was to get input from the public and other partners (HSU, College of the Redwoods, Historical Society, etc.) to see what they thought our interpretative messages should be. A "charette" was organized and both morning and afternoon sessions were set up. The charette, also referred to as a "brainstorming session" was conducted onsite. Ideas were exchanged and comments compiled. Using this information, a small group of BLM employees worked with Alan Ransenberg of Alchemy of Design to create an exhibit planning document. It was during this process that this new facility would be known as the Headwaters Education Center. The exhibit planning document will be a very helpful tool in moving toward our next steps of concept development and design for the education center. Below is an example of a sketch looking toward the entrance of the center at exhibits.



Working cooperatively with HSU on our three cultural excavation sites we had approximately 268 volunteer hours for those specific projects. This included numerous students, one alumnus, and the archaeology professor's time. Work was focused on site excavation and artifact analysis.

Volunteer hours calculated in conjunction with the train barn site were a total of 1,373 volunteer hours. These hours were primarily from students at Colorado Mountain

College in Gunnison, CO and students and a professor from College of the Redwoods assisting in all aspects of the train barn conversion project.

Section IV - Science

Watershed Sediment Delivery
Results from ongoing watershed sediment delivery monitoring of decommissioned road crossings are supportive of current crossing removal techniques within the Reserve. The successful results have reinforced BLM's decision to continue such practices for future rehabilitation and protection of the Reserve's watersheds.

Monitoring results were presented at the 9th Biennial River Management Society Symposium in Portland, ME in May.

Geologic and Paleontologic Mapping
Detailed bedrock geologic field mapping of the reserve's 7000 acres is 80% complete and a final map is expected to be completed in FY09. This final geologic map will be used to analyze erosion rates, model landslide activity, and serve as a baseline data source for future scientific studies. The draft map is currently in a GIS format with a database. The reserve contains numerous important paleontologic sites, which were recorded during the geologic mapping phase.

Fire History
Field work and analysis were completed in 2008 for a multi-year fire history study of the Reserve. This work has revealed surprising patterns of human influence on the forest landscape. Unlike nearby low-elevation redwood forests, the Headwaters experienced relatively infrequent fire prior to European contact, suggesting that Native American burning was uncommon in the area. The mid 1800's, however, brought logging to the region and with it, the extensive use of fire. Early logging practices were responsible for doubling the fire frequency from 42 to 21 years and shifting the species composition of the forest away from redwood and towards Douglas-fir. This research was conducted by BLM personnel in cooperation with the US Forest Service Pacific Southwest Research Station. We expect to see a scientific paper published on the results of this study sometime in 2009.

Cultural Resources
In collaboration with HSU's Cultural Resources Facility, the Bear River Band of Rohnerville Rancheria, and the Wiyot Tribe, design and propose the successfully-funded ($25,000 NLCS research grant) Saddle Ridge Site Determination of Eligibility Project that will ultimately shed light on prehistoric use of the upland environment within the Reserve.

Section V - Partnerships and Collaborative Relationships

The Salmon Creek watershed has been the focus of watershed restoration efforts in the Reserve for the past nine years. This in combination with concurrent restoration activities in the Humboldt Bay National Wildlife Refuge and Green Diamond Resource Company lands which are both located downstream of the Reserve. Watershed-wide restoration provides for a "headwaters-to-tidelands" approach to restoration of functional watershed processes and improvement of stream conditions. Along with co-managing the Reserve with the California Department of Fish and Game, the watershed restoration program has been implemented through a partnership with the Pacific Coast Fish Wildlife and Wetlands Restoration Association, a non-profit watershed restoration group which has been working throughout the Salmon Creek watershed for the past decade.

Within the heritage program, collaborative efforts continue with government-to-government consultation between local tribes concerned with native cultural sites and landscapes.

The CCC is a state agency that provides employment and education opportunities for youth development through natural resources conservation. The BLM utilizes the CCC for a variety of Headwaters tasks including invasive weed eradication and trail development and maintenance. The CCC is a beneficial partner for the BLM as the BLM is often able to leverage additional funds from grantors using contributed labor from the CCC as a match.

The BLM has been an active member of the North Coast Forest Restoration Cooperative, a multi-agency working group focused on redwood forest restoration issues. Cooperators include federal, state, and local agencies, as well as the Save the Redwoods League and Humboldt State University.

Marbled murrelet at-sea census information is conducted by the U.S. Forest Service Redwood Science Laboratory and the U.S. Fish and Wildlife Service, Arcata Field Office. This research collects and analyzes yearly data on abundance, distribution and productivity of the marbled murrelet population. These at-sea surveys provide the necessary data to determine the population trends in the recovery of the marbled murrelet.

In May, a small group of BLM employees accompanied Michael Fay from National Geographic (NG) along with a film crew into the Reserve. Michael Fay was hiking from the southern most redwood tree to the northern most redwood tree to collect information on redwood ecology for two separate articles that will be featured in the NG magazine in October 2009.

Section VI - 2007 Business Practices

As part of our RMP implementation strategy we created and published a business plan for the Reserve. This project helped us determine goals and opportunities to pursue now and into the future (2008-2012). The business plan is available on the Reserve website: http://www.blm.gov/ca/st/en/fo/arcata/headwaters.html

Collaborative efforts between BLM and Pacific Lumber Company via assistance agreements and rights-of-way allows for cooperation in the improvement, maintenance and repair of roads accessing the Reserve. In 2008, the Pacific Lumber Company was purchased by Humboldt Redwood Company and we look forward to working closely with them to continue these collaborative efforts.

To date, total grant contributions received from state and federal sources to the Pacific Coast Fish Wildlife and Wetlands Restoration Association for assistance in the completion of road decommissioning work within the Reserve equate to $1.5 million.

Section VII – Manager's Corner

Implementation of projects within the Reserve is simplified by the highly detailed RMP. All plan implementation projects (activity level) were covered by the NEPA analysis for the RMP. This NEPA analysis included consultation with FWS and National Marine Fisheries Service (NMFS) for all ground-disturbing activities including road restoration, forest thinning, and trail and recreation facilities construction. Prior consultation greatly facilitates the completion of on-the-ground projects.

As the outgoing Reserve manager, I would like to thank the Lynda Roush, Arcata Field Office manager and all of the employees who spent many hours working within the Reserve. This work entailed working with our partners and the public, plus monitoring, analyzing and implementing on-the-ground projects. Thanks also to our many partners and interested publics who have helped make the Headwaters Forest Reserve a great place to work and visit. I would like to welcome Chris Heppe as the new Headwaters Forest Reserve Manager. There are a lot of new and exciting projects going on within the Reserve, like the celebration of our 10th anniversary which will occur on March 1, 2009. It has been a pleasure working with you all……. thank you! - Kathy Stangl -