

**Walama Restoration Project**  
*Community Supported Rehabilitation  
And Native Re-vegetation of our Watersheds*  
PO Box 894  
Eugene, OR 97440  
541.484.3939  
[info@walamarestoration.org](mailto:info@walamarestoration.org)  
[www.walamarestoration.org](http://www.walamarestoration.org)

## Riparian Restoration Plan for the Quiet Waters Homeowners Association Reach of the Yachats River

### Site Overview



The area detailed in this plan spans the north bank of the Yachats River for the entire property owned and stewarded by the Quiet Waters Homeowners Association (QWHA). The current state of this riparian area varies from fairly healthy to insufficient in terms of vegetative cover. Tidal influences combined with regular river flow are contributing towards erosive effects notable mostly in areas without

sufficient vegetation. The continued erosion of this reach presents considerable risk to the aesthetics, riparian habitat value and property interests of QWHA. There are multiple species of invasive vegetation on site. Current populations are manageable though if left unchecked could eventually threaten the health and function of the riparian area.

## **General Strategy**

The establishment of riparian vegetative cover is essential as an erosion control and prevention method for the QWHA stewarded reach of the Yachats River. Bank stabilization should occur using a variety of physical and biological methods. Invasive vegetation should be removed to help insure healthy ecological function of the site and prevent future costly large-scale removal projects. This plan will detail a riparian rehabilitation strategy for each of the four sections of QWHA reach of the Yachats River. This plan intends to reduce site erosion, help stabilize the riverbank, provide management strategies for problematic vegetation, improve riparian function and increase site biodiversity by improving the long-term aesthetic qualities of QWHA stewarded property.

### **Restoration Strategy Section 1**

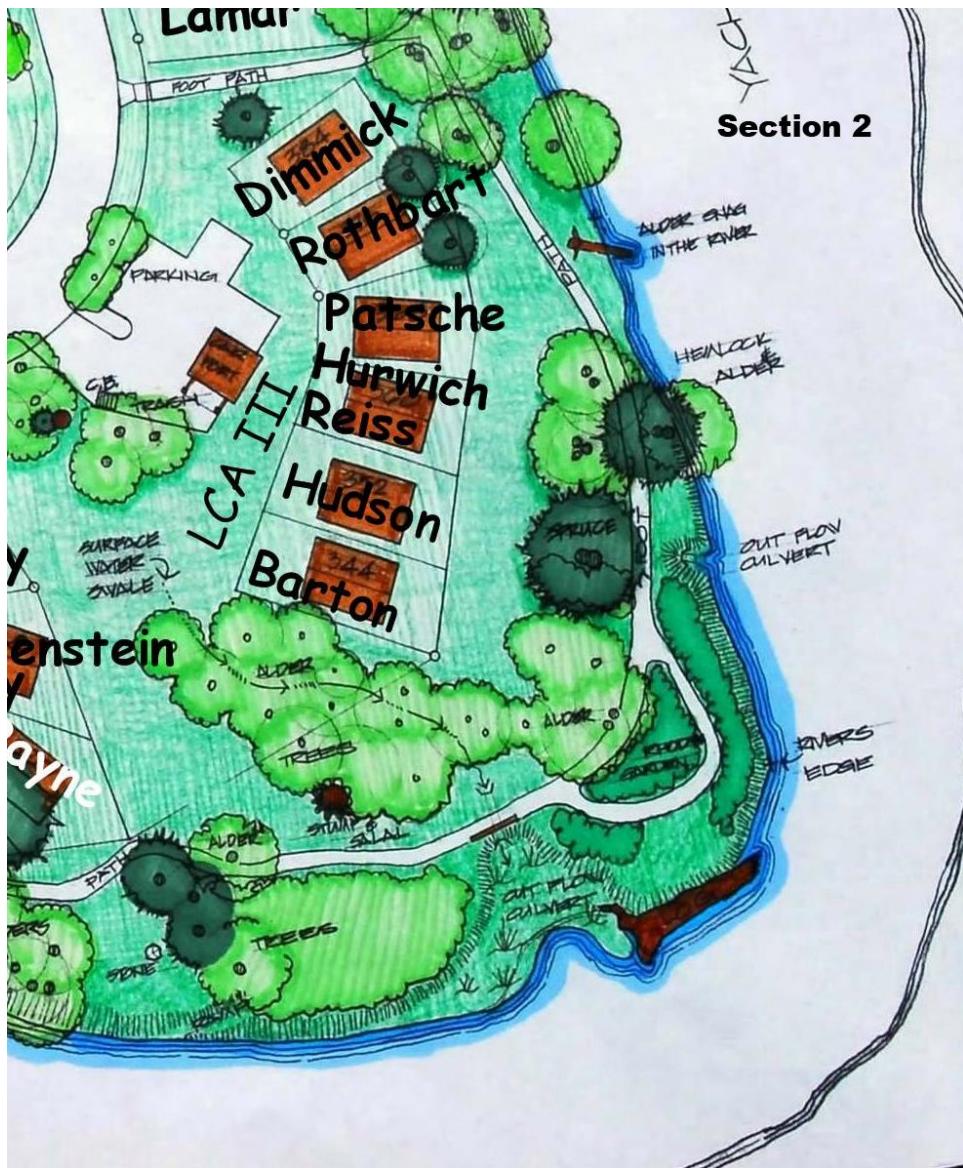
Scattered vegetative cover in this area merits more riparian plantings. Scattered populations of Reed Canary Grass (*Phalaris arundinacea*) occupy the upstream portion of this section. Small patches of English Ivy (*Hedera helix*) should be removed by hand to prevent further infestation. Geo-textile fabric should be placed to shade out populations of Reed Canary Grass. The fabric is held in place by wooden stakes and removed after two growing seasons. Native shrubs should be planted and native grass seed sown following removal of shading material. The majority of planting should occur in the downstream portions of section one. This section of the reach currently has little to no woody vegetation. The river is currently undermining the banks of the downstream portion of section one. Willow fascines should be placed along the stream bank to help stabilize the bank, provide vegetative cover and improve habitat value. Willow fascines are bundles of live cuttings tied together resembling a sausage or burrito and placed into shallow trenches dug into the stream-bank. Fascines may range between 4- 12' in length and 8-24" in diameter. Bundles should be secured with twine or other

cordage every 12-18". Fascines will sprout forming a dense matrix of roots to help stabilize the banks of the river. Sprouted fascines help contribute to water quality by taking up salts and nutrients and reducing sedimentation. In addition to fascines, willow cuttings should be liberally staked along this reach of riverbank including placed strategically as staking material for installed fascines. Willow stakes should be 3- 6' in length and at least 3/8" diameter at the butt end. Biodegradable jute netting should be placed to further secure biological bank stabilization efforts and to help reduce sedimentation. See the QWHA re-vegetation plan for a complete breakdown of species and quantities to plant for section one.



## **Restoration Strategy Section 2**

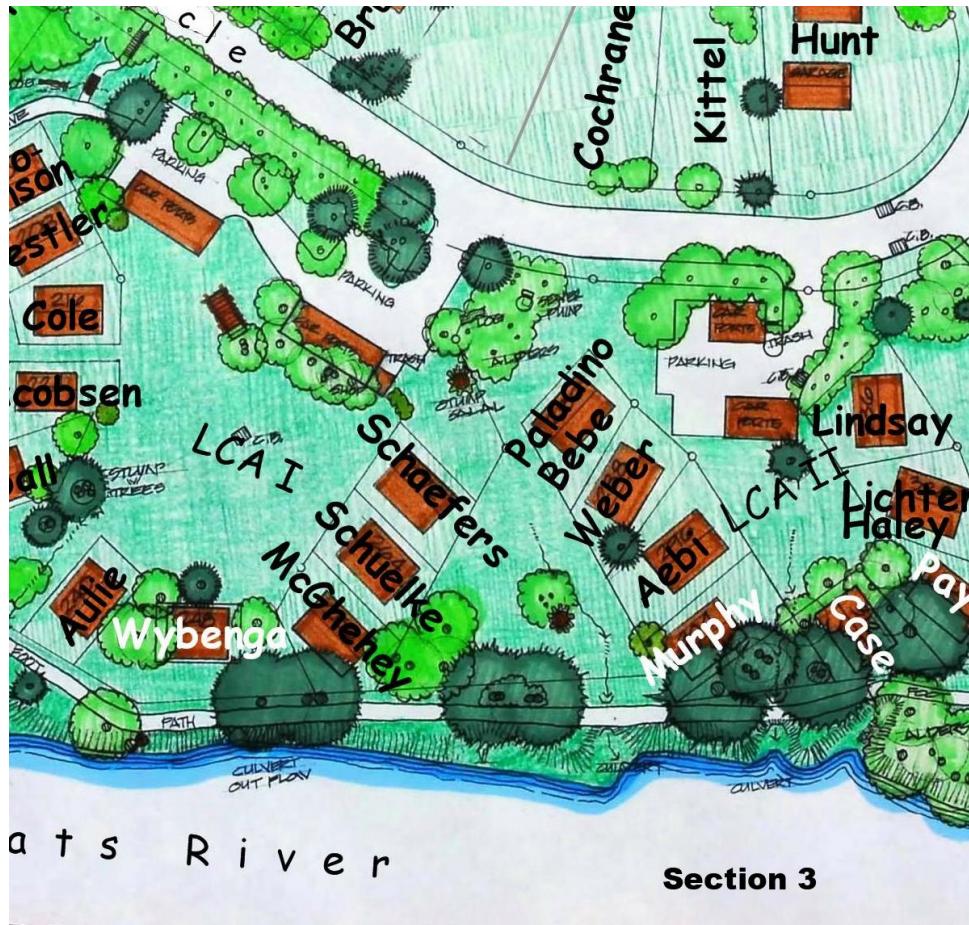
Bank stabilization and erosion control constitute the majority of rehabilitation efforts in section two. Portions of this section with a healthy amount of vegetative cover will help to serve as a model for on site re-vegetation efforts. Small patches of English ivy (*Hedera helix*) should be removed by hand to prevent further site infestation. The area currently being severely undermined with a large sand bar adjacent to the river contains the highest priority for section two. This area is currently being undermined along the stream and just under the handrail adjacent to the footpath. The top edges of the slope in this area should be profiled to create a more gradual slope. Profiling entails contouring the slope so that there is a more gradual decline as opposed to a steep drop off of the bank. Profiling should occur where little to no vegetation would be impacted on the top of the slope. Willow fascines should be utilized following bank profiling to establish a root matrix to further stabilize the slope. Fascines would be placed towards the bottom of the slope. Biodegradable jute netting should be placed over willow fascines and covering profiled areas to assist bank stabilization and to help prevent erosion. Willow stakes should be liberally applied throughout the area to help secure fascines, prevent erosion and contribute to habitat function. A similar strategy should be employed adjacent to the river in the previous canoe launch area. Planting should occur in and along the swale leading down to the river that has had chunks of asphalt added. This area is immediately downstream from the canoe launch area. Planting of native woody vegetation should also occur on the flat above the canoe launch area, in the swale across the footpath from the handrail and just upstream from the previously mentioned undermined area that was recently scoured of vegetation from high water. Planting should also occur in the open space to the left of the footpath immediately downstream from the severely undermined area. The unmanaged trail leading to the canoe launch area should be left open to provide river views and access to QWHA residents. See the QWHA re-vegetation plan for a complete breakdown of species and quantities to plant for section two.



### Restoration Strategy Section 3

Limited vegetative cover and homes located in close proximity to the Yachats River create challenges in section three. Small patches of English ivy (*Hedera helix*) should be removed by hand to prevent further infestation. A small patch of Periwinkle (*Vinca minor*) should be removed to prevent further infestation. Placement of geo-textile fabric will help to facilitate this process. Following removal of the fabric, lingering roots should be hand removed. Bare soil from Vinca removal efforts should be immediately sown with native grass seed and planted with appropriate woody vegetation. Willow fascines should be employed adjacent to the riverbank to promote stabilization

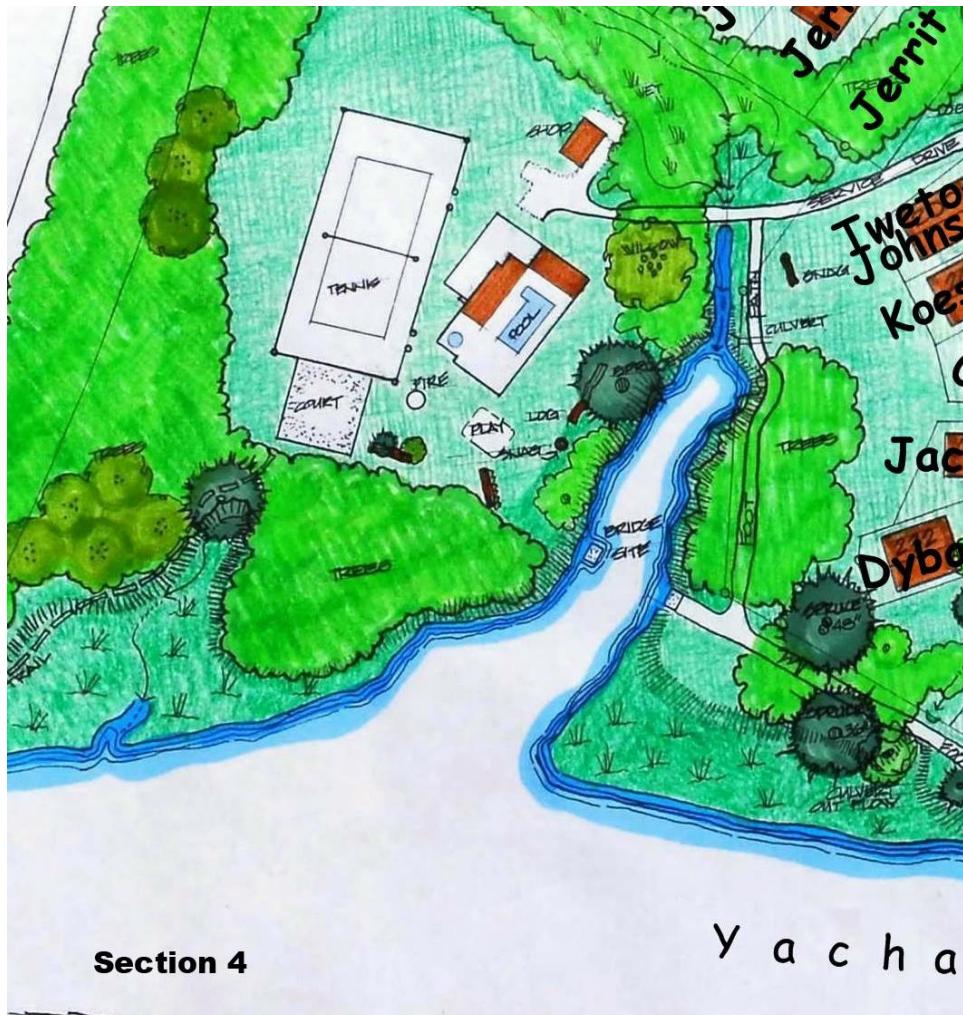
efforts and improve habitat function. Jute netting and further willow staking should immediately follow the installation of fascines. Woody vegetation should be planted throughout the entirety of section three. Plantings in section three should contain sporadic breaks to allow for river viewing by QWHA residents. See the QWHA re-vegetation plan for a complete breakdown of species and quantities to plant for section three.



#### Restoration Strategy Section 4

Exotic vegetation, limited canopy and eroding slopes are issues to be addressed in section four. Placement of geo-textile fabric over populations of Reed Canary grass should be employed along the Yachats River on the upstream portion of where the tidal stream enters the river. The sowing of native grass and installation of appropriate woody vegetation should occur immediately following removal of the fabric. The slope adjacent to the tidal stream on the QWHA poolside is being undermined and would be enhanced from

stabilization efforts. This area requires profiling of the slope followed by a jute fabric application. Willow fascines should be employed on the lower portion of the slope. Native grass and woody vegetation should be installed to further enhance stabilization and habitat improvement efforts. Removal of exotic vegetation should occur in the wetland at the upper reaches of the tidal stream. Armenian blackberry (*Rubus armeniacus*), English ivy and Scotch broom (*Cytis scoparius*) currently occupy and threaten the long-term health of this small wetland area. Blackberries should be cut followed by the grubbing of their root crowns. Ivy should be hand removed and Scotch broom should be pulled with a weed wrench. See the QWHA re-vegetation plan for a complete breakdown of species and quantities to plant for section four.



## **Final Notes**

This plan intends to improve habitat conditions along the QWHA stewarded reach of the Yachats River. Protocols presented will help to stabilize erosion for this section of riverbank. However, natural forces may be beyond the threshold of resiliency for proposed protocols. This or perhaps any restoration plan may require periodic maintenance. Fortunately on-site exotic vegetation currently exists in very manageable levels. Following initial treatment efforts, site maintenance to control exotic vegetation should be achievable with periodic QWHA resident in-put. Following plan implementation mowing in restored areas should be confined to reducing direct competition to native vegetation while it is getting established. Mulching of installed woody vegetation where applicable is recommended to reduce competing vegetation and conserve moisture during the summer months. Periodic watering of native plantings during establishment will help insure their survival and increase the rapidity of bank stabilization efforts. Species chosen for restoration purposes will contribute towards healthy habitat function, reduced river sedimentation and the overall beauty of a truly unique site.