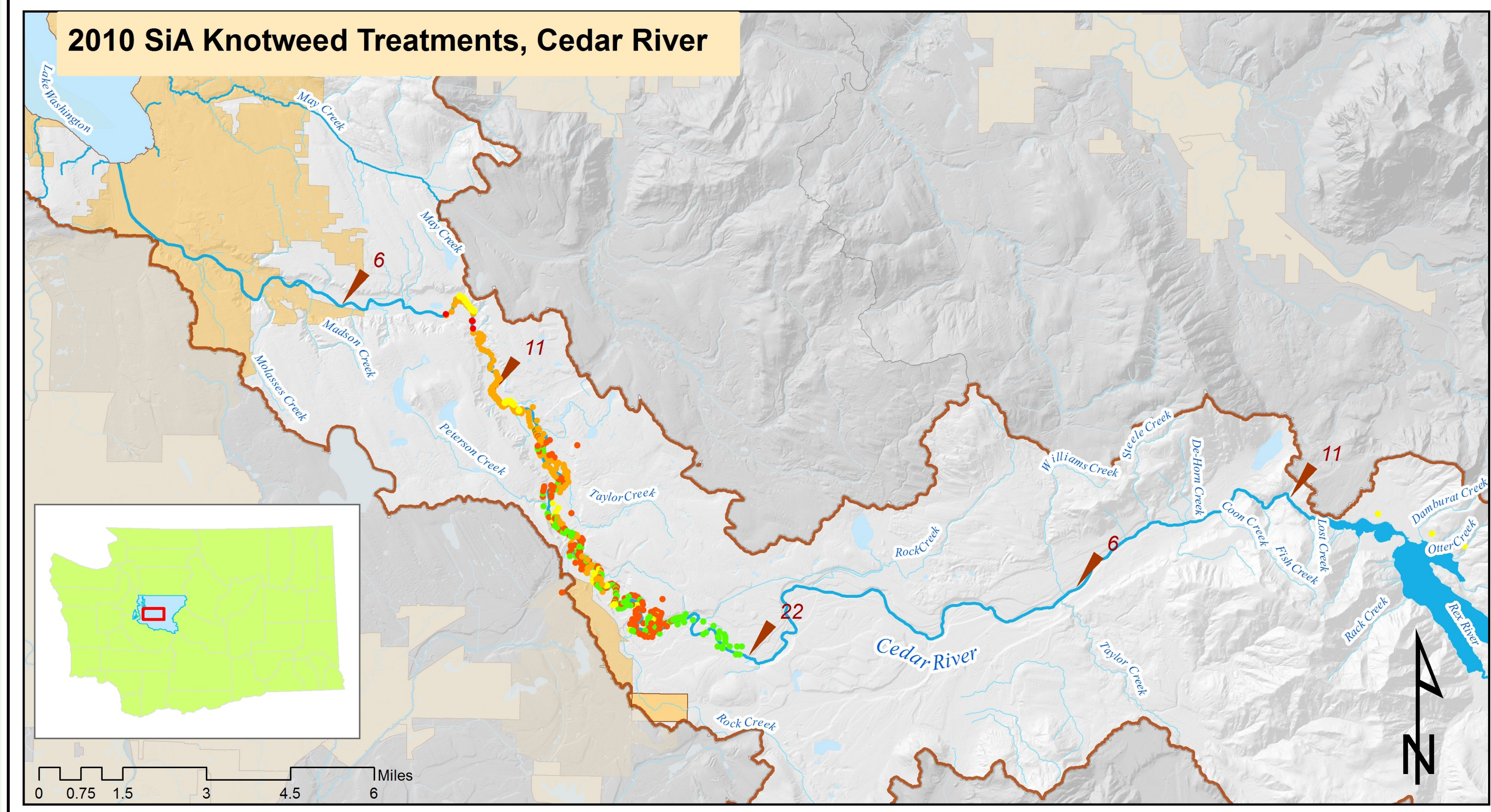
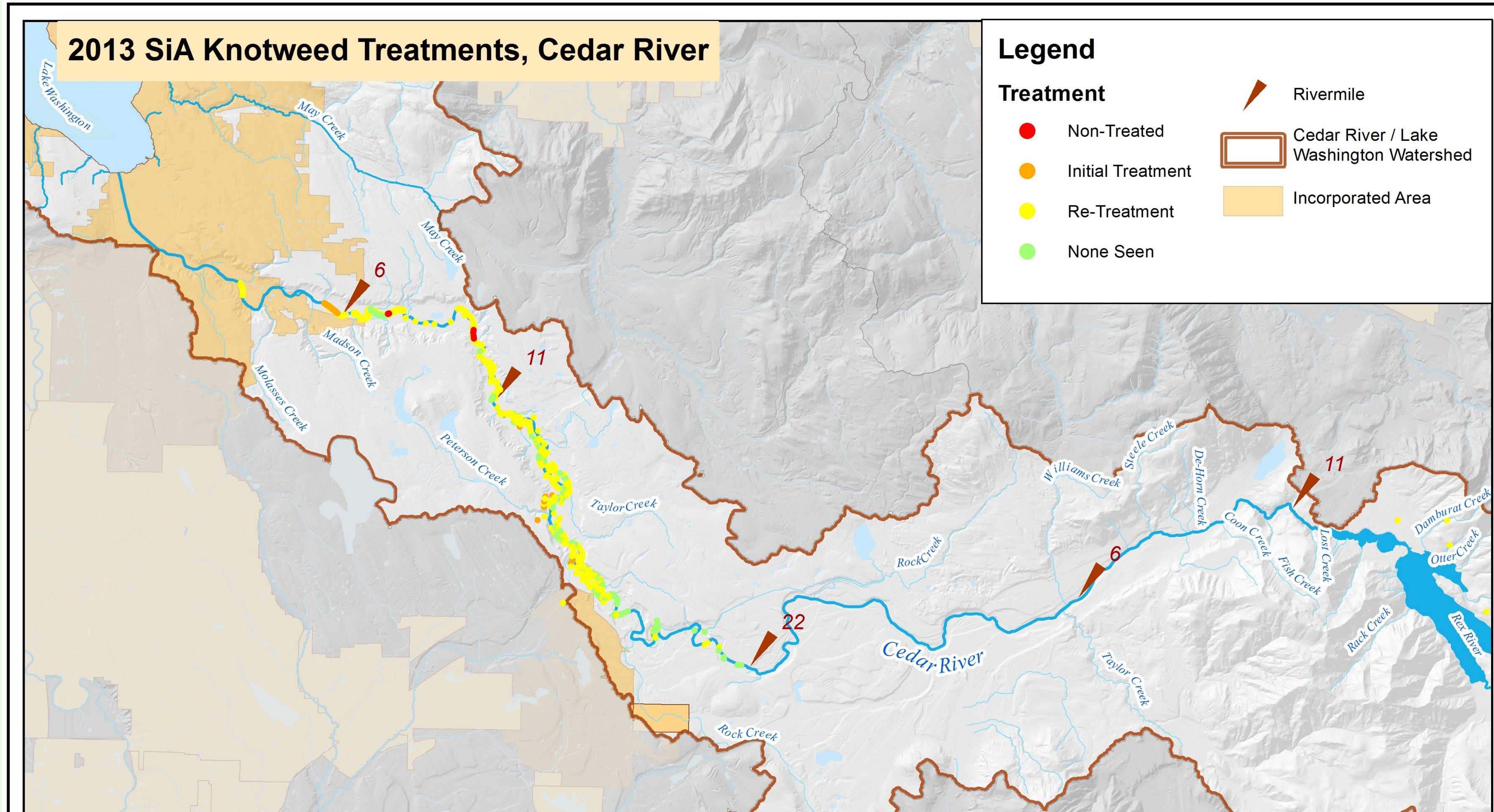


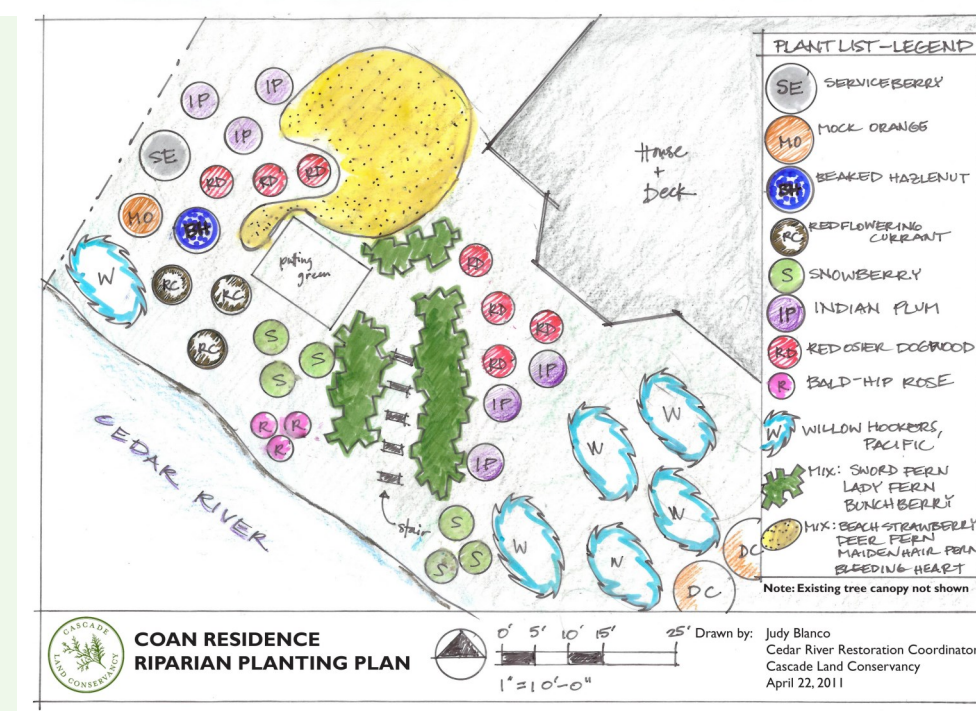
Cedar River Stewardship in Action (SiA)

Restoration through Collaboration



The History of Cedar River SiA

Invasive knotweed (*Polygonum spp.*) is an aggressive invader of riparian habitats throughout Western Washington. This plant displaces native vegetation, destabilizes river banks, and interrupts normal hydrogeomorphic processes. The impacts of these changes are wide reaching. Fish in the river have fewer insects to feed on, small mammals have no winter cover, and increased sediment loads in the river lead to higher temperatures. Landowners also struggle with knotweed's ability to grow through foundations and into septic systems. In addition to its high environmental impact, knotweed is technically very difficult to control. While small patches can be successfully addressed without chemicals, on a landscape scale, work almost always involves herbicide as part of the process.



In 2007, the King County Noxious Weed Control Program (KCNWCP) started work on knotweed control along the Cedar River. Initial control took place in 2008 with just a handful of landowners in the upper few rivermiles. Despite experience with knotweed control in other basins, the Cedar's semi-urban setting, extensive floodplain, and multitude of private landowners made the project highly complicated. To increase project success, KCNWCP combined efforts in 2009 with Forterra (formerly Cascade Land Conservancy, CLC), Seattle Public Utilities (SPU), and Friends of the Cedar River Watershed (FCRW) to form the Cedar River SiA. Each partner brings different strengths, resources, and relationships to the table that one program alone could never provide. Landowners benefit from being able to work with a single point of contact, and by focusing on different geographic areas to implement control efforts, partners cover more ground in a season while still coordinating a top-down approach.

Why Stewardship in Action?

SiA's Cedar River Riparian Restoration Project used successful knotweed control to organize an entire community around riparian restoration. Key factors of this framework are:

- **Multi-organization collaboration:** each partner brings different strengths to the project without needing to be experts in all aspects. Having many partners involved also means the ability to leverage grant funding opportunities and makes the project more competitive; ensures longevity by reducing reliance on institutional knowledge; increases adaptability; and increases credibility with other agencies and landowners.
- **Long term strategy:** the project acknowledges the multi-year need of this kind of work and communicates this timeframe to landowners and grantors instead of promising instant results. The project schedule factored in extra time for relationship building and the need to establish a reputation among the community.
- **Setting-appropriate solutions:** the project does not have prescribed buffers or number of trees per property. Owners are actively involved in the treatment and replanting designs whenever possible leading to unique solutions for each property. This approach goes hand in hand with a very up front acknowledgement that this project takes place in an urban setting where landowner preferences and livability are large components to success.

Key outcomes of this framework are:

- **Improved knotweed control:** the project has progressed quickly with a larger than usual area able to be treated each season as the work could be better split out to different leads. Collaboration and information sharing, particularly about treatment methods, among the multiple partners resulted in more efficient and effective techniques.
- **Improved riparian habitat condition:** after knotweed is controlled, space is available for replanting. The connections built with landowners during the treatment process move smoothly into connections for the replanting process as people see the overall program as approachable and successful. Replanting helps reduce reinfestation risk and provides improved habitat for the river's recovering Chinook population.
- **Community building and a gateway to outreach:** residents who are often encapsulated into separate reaches and neighborhoods are better able to connect through the common goal of knotweed control and restoration. This provides a receptive audience for other ecological topics and instills ownership.
- **Increased connection to the natural world:** many landowners find themselves surprised that as the knotweed is removed, their land becomes more accessible and in turn they use it more. This creates a greater appreciation of these resources.



From Left: Participants at a workshop learn how to use treatment equipment and practice calibrating; Crew members attend a field training session for hands on practice to ensure work is done effectively; Volunteers at a replanting event install plants at a previously treated site

SiA 2013 in Numbers:

• Worked on 19 Rivermiles, including tributaries



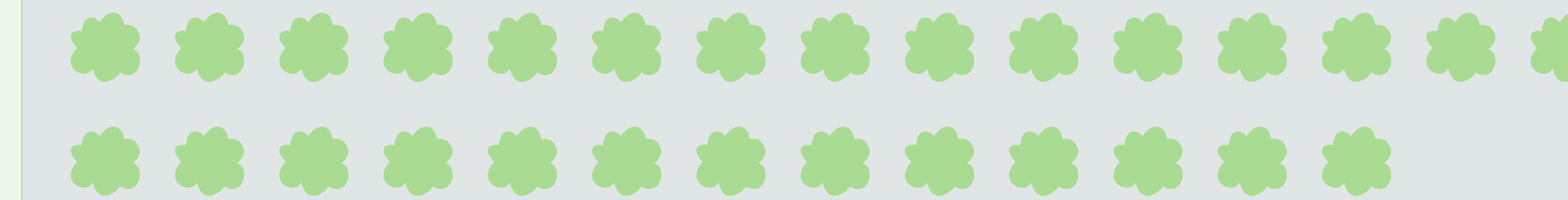
• Treated ~48 Net Acres



• Within ~105 Gross Acres



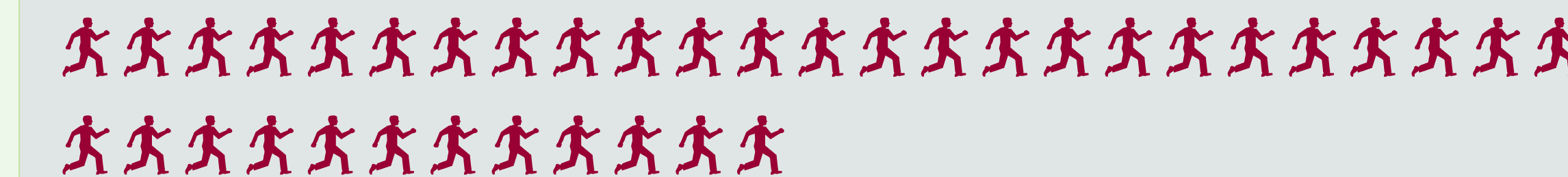
• Surveyed over 272 Acres



• Planted ~20,000 Plants



• Worked with 368 Landowners



• Engaged ~900 volunteers



Treatment Methodology

SiA successfully uses the following methodology to control knotweed, usually seeing a 90-95% reduction in net area in the first season:

- Work progresses from the highest infestation in the watershed, and includes any tributaries.
- Coarse initial surveys provide scoping information before starting a new area, but otherwise survey and treatment work happen simultaneously.
- Crews and staff conduct treatment activities between mid-July and the first hard frost (usually mid-October).
- All work uses aquatically approved herbicides and surfactants.
- All treatment activities are conducted under the supervision of aquatically licensed herbicide applicators and covered by NPDES permits.
- A 1% foliar application of aquatic imazapyr with a 1% MSO surfactant is the default treatment method.
- In areas with highly mixed, desirable vegetation, or by landowner request, initial treatment may be by injection with 3 mL of glyphosate per cane.
- In areas with only 1 or 2 plants per mile, staff may dig as a control method.
- Staff and crews avoid bending, cutting, or otherwise damaging canes as much as possible before treatment.
- Sites are treated once per season, and all sites are revisited annually until no plants are observed for a consecutive three years. After that, the site is checked once more four years later to confirm that no knotweed has regrown.
- Replanting may begin as early as the second winter after initial treatment.
- One on one meetings with landowners guide plant selection, placement, and design choices for replanting work.
- Crews prepare restoration areas, removing other invasives as needed, and install selected plants.
- Landowners agree to help water and maintain installed plants.



Treatment site at Darre Don Natural Area. From top: 2008 before treatment; 2009 spring, after treatment; 2012 fall, 5 years treatment



Crew installing plants at private site after treatment work has been conducted.



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