

RRWF Integrated Terrestrial Invasive Plant Control Plan 2018 Project Proposal

Purpose

The Integrated Terrestrial Invasive Plant Control Plan (ITIPCP) was developed by the Rocky Reach Wildlife Forum (RRWF) (Chelan County PUD 2012) as the integrated noxious weed control program required in the Rocky Reach Settlement Agreement (Chelan PUD 2006). The ITIPCP outlines the process for using the annual funding available to the RRWF under Section 4.4 of the Rocky Reach Wildlife Habitat Management Plan (RRWHMP) to implement project proposals. This 2018 Project Proposal is a component of the ITIPCP necessary for project implementation and requires RRWF approval before implementation.

Consistent with the Rocky Reach Settlement Agreement (Chapter 7; Section 4.2.5, Chelan PUD 2006) and the RRWHMP (Section 4.4, Chelan PUD 2009) Chelan PUD shall, in consultation with the RRWF, make available \$10,000 per year for the term of the new license and any subsequent annual licenses for implementation of an integrated noxious weed control program in the Rocky Reach Wildlife Area (RRWA). The RRWA is defined as a 3-mile buffer from the center of Rocky Reach Reservoir (Chelan PUD 2009). Implementation of the integrated noxious weed control program will be conducted by Chelan PUD personnel or other qualified personnel selected by the RRWF (Chelan PUD 2006). Projects proposed shall not require maintenance or monitoring to ensure success, rather, all projects are one-time treatments (Chelan PUD 2009).

Until the ITIPCP was developed in 2012, the RRWF had no means to implement the weed control plan. From 2009 to 2012 funds accrued under this program. From 2012 to 2016 the RRWF spent \$97,807.64 implementing the ITIPCP within the RRWA. For 2018, the annual funding available is approximately \$13,000.

Recent wildfire (2014 Mills Canyon and 2015 Chelan Complex fires) within the RRWA has increased the density and diversity of invasive plant species following the fires, including Dalmatian toadflax (*Linaria genistifolia ssp. dalmatica*), diffuse and spotted knapweeds (*Centaurea diffusa*, *C. maculosa*), and pockets of Russian knapweed (*Acroptilon repens*), which are all class B noxious weeds in Chelan County, Washington (Chelan County Weed Control Board website, 2017). Recently, rush skeleton weed (*Chondrilla juncea*) has been located in northern parts of the RRWA affected by the 2015 Chelan Complex Fire. The heaviest infestations of all the afore-mentioned weeds occur in post-fire areas north of Swakane Canyon to the Entiat River and from Chelan Butte north to Wells Dam along Rocky Reach Reservoir. This area is important mule deer and bighorn sheep winter and spring range. The area also hosts known populations of sensitive plants.

Much of the area impacted by Dalmatian toadflax occurs within roadless areas with steep canyons and rocky areas, making chemical control difficult to impossible. Areas infested with

knapweeds and rush skeleton weed also have limited access options for treatment regimes. Biological control agents remain the most effective tool for treating weeds in these areas.

The Washington State University Douglas County Extension released 107,826 biological control agents within or adjacent to the RRWA between 2012 and 2017 as directed by the RRWF and the ITIPCP as approved in 2012 (Chelan PUD 2015). The majority of the releases focused on weed infestations within recent burn scars. The remainder of untreated areas within burn scars and areas with high densities of invasive weeds at or near previously treated sites has been recommended by RRWF members as a priority during 2018.

Therefore, for 2018, the RRWF proposes to use funding available under Section 4.4 of the RRWHMP (up to \$13,000) to reduce the cover of Dalmatian toadflax, knapweeds, and rush skeleton weed within the RRWA with an emphasis on the Mills Canyon and Chelan Complex burn scars via the release of biological control insects during the spring and summer of 2018 consistent with the ITIPCP.

Project Detail

The RRWF proposes one action for funding under Section 4.4 of the RRWHMP through the ITIPCP in 2018. Approval of the project proposal will initiate action on the approved project and, per RRWF approval of project completion, approve the release of funds under Section 4.4 of the RRWHMP.

Proposal 2018: Release of biological control agents for Dalmatian toadflax, a variety of knapweeds (spotted, diffuse, and Russian), and rush skeleton weed on public lands within recent burn scars.

The RRWF proposes that Chelan PUD contract through Washington State University (WSU) to collect and release the biological control agents *Mecinus janthinus*, *Larinus minutus*, *Cyphocleonus achates*, and *Jaapiella ivannokovi* for Dalmatian toadflax, spotted knapweed, diffuse knapweed, and Russian knapweed, respectively, at multiple locations within the RRWA with an emphasis on the Mills Canyon and Chelan Complex burn scars on public lands. Priority is to be given to areas where infestations were noted to be heavy during 2017 and/or have not been treated during previous seasons (Figs 1 and 2). General areas suggested by the RRWF for treatment include the Chelan River Gorge, the head of Tenas George Canyon and areas off of the Rattlesnake Road connecting the Swakane area to the Entiat drainage (Mills Canyon burn scar), and the Douglas County side of the RRWA between Wells Dam and McNeil Canyon (Chelan Complex burn scar). In the vicinity of the Chelan River Gorge, *M. janthinus* should be released to control toadflax infestations at the WDFW Beebe Springs Unit in 2 locations: East of the Highway 150 trailhead parking lot and north of the springs (Figure 3).

The BLM would like to release agents for rush skeleton weed on BLM lands pending NEPA approval in 2018. There are three biological control agents that may be available: the rust fungus (*Puccinia chondrilla*), the gall mite (*Aceria chondrillae* or *Eriophyes chondrillae*), and the fly or gall midge (*Cystiphora schmidtii*). All known rush skeleton weed infestations within the

RRWA are located north of Beebe Bridge in both Chelan and Douglas counties. Should BLM get NEPA approval for weed control, release of biological control agents will commence, subject to availability.

Chelan PUD will enter into a contract with WSU (Contractor) and will pay for the contracted services (up to the agreed amount) with the Contractor. Once the contract is complete, Chelan PUD will invoice the RRWF for work completed under the approved 2018 proposal in accordance with Section 18 of the Rocky Reach Settlement Agreement (2006). Releases of biological control agents will take place during spring and summer of 2018. Timing of releases will take into consideration the phenology of Dalmatian toadflax, knapweeds, and rush skeleton weed at the proposed release sites. Releases may have to occur at different times and intervals to give the biological control agents the best opportunity to become established at the proposed release sites. The Contractor will determine if the release of biological controls is warranted based on the following: biocontrol availability, land ownership, density of weeds to be controlled, phenology of the host plant, and current environmental conditions.

Many of the release sites will likely be located far from main roads and will involve hiking into the sites to conduct the releases. Releases will occur on public land, where allowed, or on private land with landowner permission. Release areas will be within the burn scars shown in Figures 1 and 2, and are to focus on areas heavily infested with weeds or where releases have not yet occurred. Priority of these sites was selected in consultation with the land managers (USFS, BLM, and WDFW) and RRWF members.

The Contractor will mark release sites with GPS coordinates and photograph each release site. The release coordinates and photo documentation of release sites shall be included with the final report to Chelan PUD. A final summary report will be provided to the RRWF stating the number and location of release sites, dates of release, and approximate number of biological control agents released at each site.

For 2018, the contract will not exceed \$13,000 including up to 5% budgeted for contingency. Work will be conducted between March 2018 and October 2018. Upon completion of the project, Chelan PUD will pay contractor and invoice the RRWF for reimbursement by December 1, of 2018. Any unspent dollars for the 2018 proposal will roll-over and be available for future projects.

Considerations for Species of Conservation Concern

Populations of four sensitive species of plants are known to occur within the RRWA. The plant species of concern for each project proposal are listed below. Both WDFW and the USFS were contacted to assess presence of sensitive species. Biological control agents proposed for this project have been approved for widespread use on Dalmatian toadflax and knapweeds within Washington State. The biological control agents proposed for this project have demonstrated narrow host specificity, attacking only closely related Eurasian species with no effect to non-target native plants (Wilson et al 2005). The biological controls are already widely used within Chelan County and may already exist at some of the proposed sites, but the RRWF proposes to increase

numbers of these agents in the field to reduce cover of Dalmatian toadflax and knapweeds within recent burn scars. At this time, we are not aware of any property owner limitations or restrictions that would prevent this activity.

Species	WA State Status	Federal Status
Chelan rockmat <i>Petrophyton cinerascens</i>	Endangered	Species of Concern
Longsepal globemallow <i>Ilamna longisepala</i>	Sensitive	USFS Sensitive
Little bluestem <i>Schizachyrium scoparium var. scoparium</i>	Threatened	-
Thompson's clover <i>Trifolium thompsonii</i>	Threatened	Species of Concern

Literature Cited

- Chelan County Noxious Weed Control Board website. Accessed January 12, 2017
http://www.co.chelan.wa.us/nw/nw_weed_list.htm
- Chelan PUD. 2015. Rocky Reach Wildlife Habitat Management Plan. 5 – Year Summary Report 2010 – 2015. Rocky Reach Hydroelectric Project, Commission Project No. 2145. September 17, 2015. Wenatchee, WA.
- Chelan PUD. 2012. Rocky Reach Wildlife Area Integrated Terrestrial Invasive Plant Control Plan. Rocky Reach Hydroelectric Project, FERC Project No. 2145. Wenatchee, WA.
- Chelan PUD. 2009. Rocky Reach Wildlife Habitat Management Plan. Rocky Reach Hydroelectric Project, FERC Project No. 2145. Wenatchee, WA.
- Chelan PUD. 2006. Rocky Reach Settlement Agreement. Rocky Reach Hydroelectric Project, FERC Project No. 2145. Wenatchee, WA.
- Wilson, L. M., S. E. Sing, G. L. Piper, R. W. Hansen, R. De Clerck-Floate, D. K. MacKinnon, and C. Randall. 2005. Biology and Biological Control of Dalmatian and Yellow Toadflax. USDA Forest Service, FHTET-05-13.

Figure 1. Biological control agent release sites from 2012 – 2017 in both the Swakane and Mills Canyon burn scars. Agents were released to control Dalmatian toadflax and knapweeds. 2018 releases should target the portions of burn scars that lie within the RRWA.

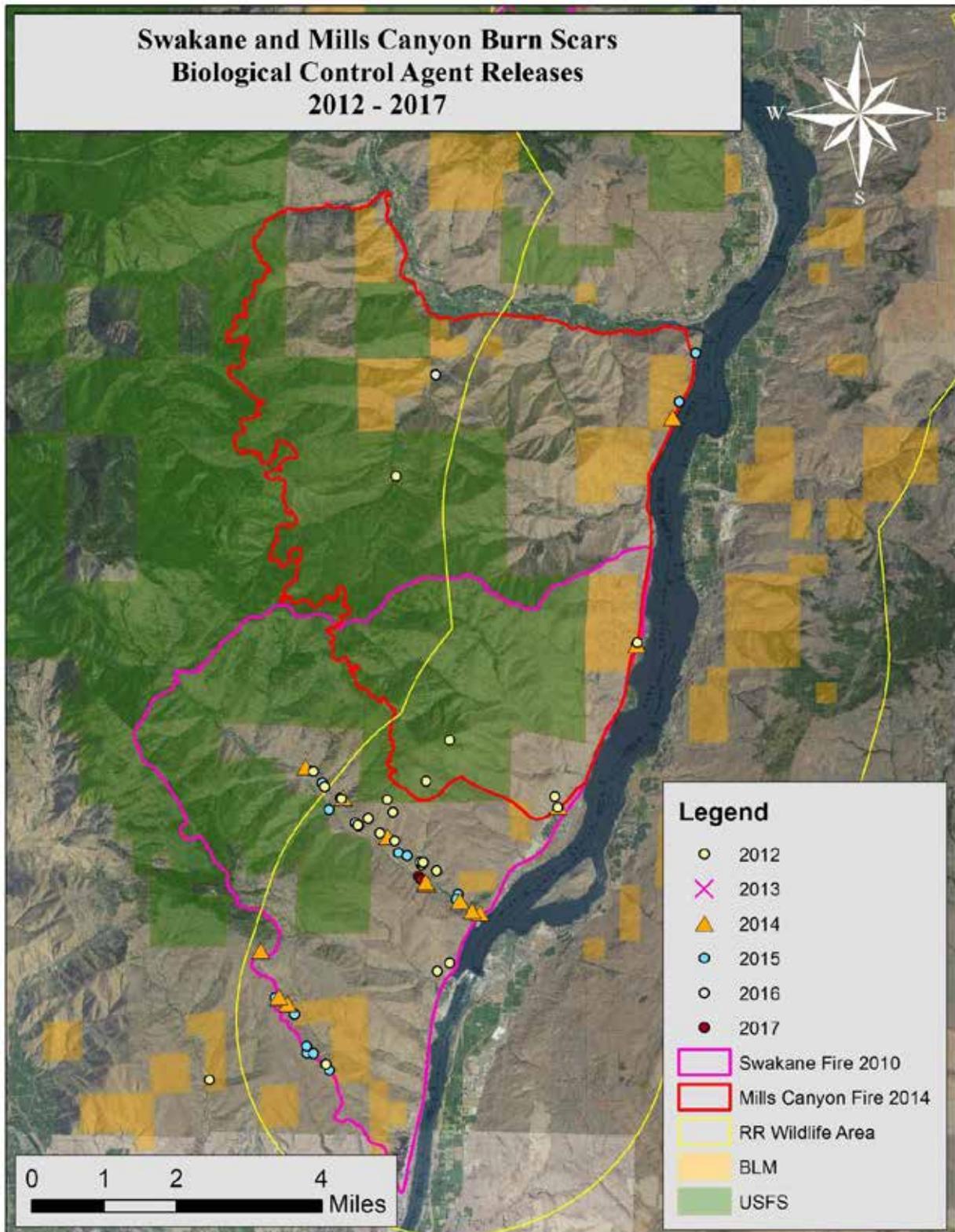


Figure 2. Biological control agent release sites from 2016 – 2017 within the Chelan Complex burn scar. Agents were released to control Dalmatian toadflax and knapweeds. 2018 releases should target the portions of the Chelan Complex burn scar that lie within the RRWA.

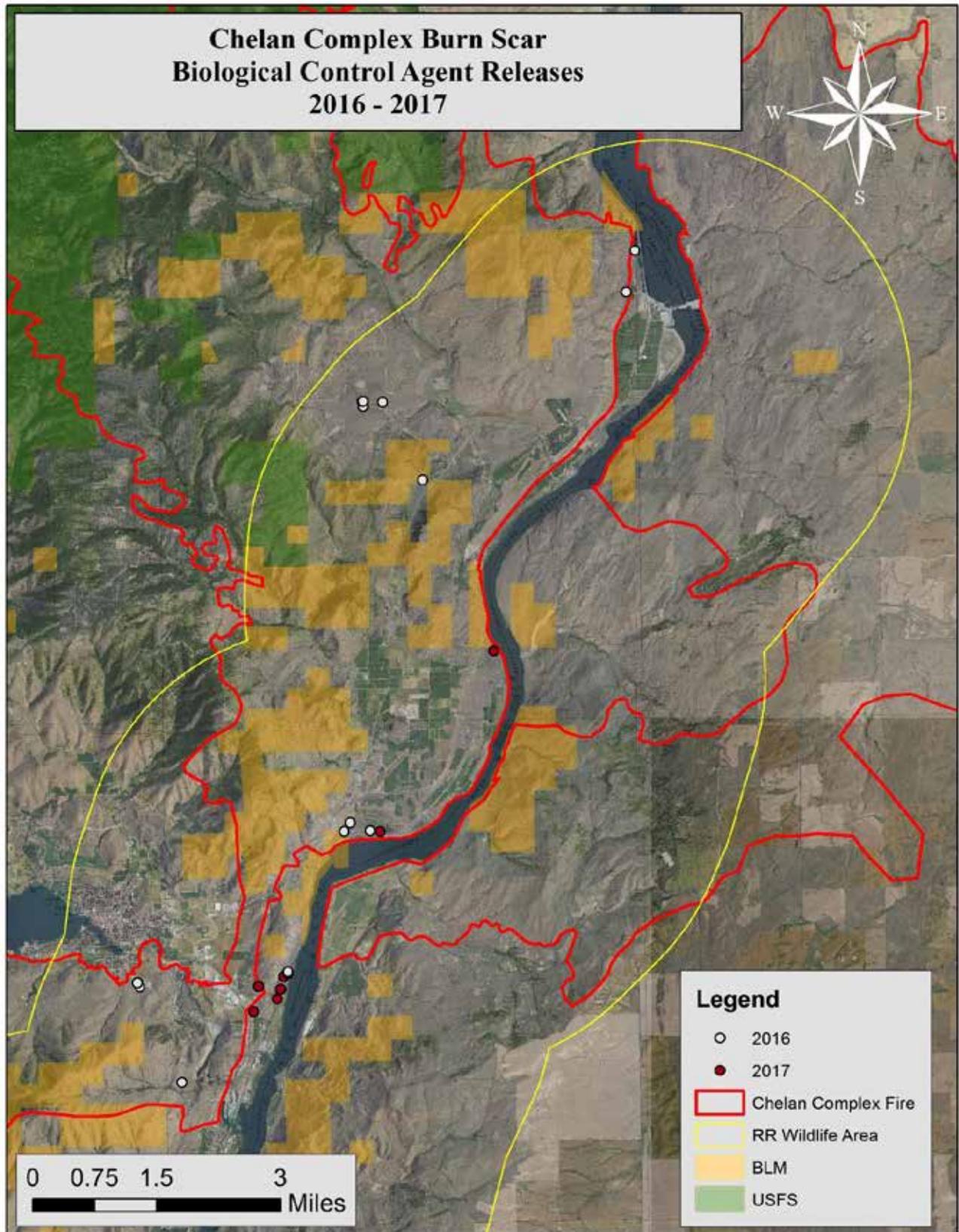


Figure 3. Proposed *M. janthinus* release sites on the WDFW Beebe Springs Unit in 2 locations: East of the Highway 150 trailhead parking lot and north of the springs within the Chelan Complex burn scar.

