

M E M O

TO: Board of Directors

FROM: District Manager
PREPARED BY: Environmental Programs Manager

SUBJECT: 2015 DATA COLLECTION/ RESTORATION GRANT PROGRAM FINAL PROJECT REPORT: "INVASIVE BROOMS AND ACACIA MANAGEMENT PLAN FOR THE OLYMPIA WELLFIELD."

DATE: May 3, 2017

BACKGROUND:

SAND PARKLAND COMMUNITY

Located on the western half of the Olympia Wellfield (also known as the Olympia Watershed) are extremely rare biotic communities known as sand chaparral and sand parkland. These communities harbor six identified rare/endangered species that exist nowhere in the world outside of Santa Cruz County. These include the Zayante band-winged grasshopper, Mount Hermon June beetle, Ben Lomond Spineflower, and Ben Lomond Buckwheat, and the Silver Leaf Manzanita and the Santa Cruz Kangaroo Rat (not confirmed). Of the 83 specialty Sandhills plants known to exist, 56 have been identified at the Olympia Watershed property (Schettler, 2011). Sand parkland is an extraordinarily rare community, occurring on fewer than 200 acres in the world (McGraw, 2004). Of that, only 37 acres of this unique habitat are protected. The San Lorenzo Valley Water District owns 14.1 acres of this rare habitat feature. The District's Watershed Management Plan has identified the eradication of invasive species to enhance the Sandhills communities as a priority for management and effective stewardship of the property. Current efforts are underway by the District to expand the total amount of protected Open Sand Parkland habitat by 6 acres to 43 acres.

In some areas of the Olympia Wellfield property, this rare biotic community has been impacted by an aggressive exotic infestation of invasive plant species including French Broom (*Genista monspessulana*) and Portuguese broom (*Cytisus striatus*), eucalyptus sp or spp, yellow-star thistle (*Centaurea solstitialis*), and silver wattle acacia (*Acacia dealbata*). In 2000, the District successfully removed Silver Wattle (*Acacia dealbata*) trees in an effort to restore habitat for the Sand Specialty plants. Currently, in an area of 40 acres, there is dense infestation of invasive broom that is shading-out the sandy soil, inhibiting growth of Sand Specialty plant species which are relatively small herbaceous plants that require full sun, thus changing the habitat for this unique biotic community. Also, French Broom is a legume which "fixes" nitrogen and changes the soil

composition into a soil type in which the sand specialty plants are not adapted to grow. This broom is fast spreading and is also beginning to encroach into the high quality Sand Parkland habitat the District is working to protect.

CURRENT PROPOSED ERADICATION EFFORT

French Broom seed is known to remain viable in the soil and then germinate after more than 40 years (K. Moore, pers. comm. 2016). The eradication of invasive broom species will require a long-term management plan with ongoing effort in order to address the long term seed bank established in the soil.

In the first year an anticipated 2,434 hours of labor would be required to reduce the number of large established broom plants (approximately 19,000 plants). A one-time application of herbicide to the mature broom plants through a cut stump method, where herbicide would be painted onto freshly cut stumps has been proposed as the best available eradication alternative (protecting the shallow digging larvae while eliminating individual plants). An estimated 2 - 4 gallons (.2ml per plant) of 50% diluted herbicide would be used to treat 40 acres of mature broom. There is no spraying proposed in this effort.

Following the initial-year effort, all first-year seedlings that subsequently appear would be timely managed by shallow hoeing or thermal weeding. No further chemical treatment is called for within the proposed plan.

HISTORY OF THE BROOM MANAGEMENT PLAN

On August 15, 2013, the Board awarded Education Grant Program funds in the sum of \$6,450 to Ecological Concerns, Inc. for a Data Collection/Restoration Grant project entitled, "French Broom Management & Monitoring Plan for the Olympia Watershed Site." Following months of discussions with the SLVWD Environmental Committee and the public, in January 2104 and again in March 2015 the SLVWD Board voted not to accept the Plan based on concerns regarding inadequate information and data gaps.

The 2015 Education Program Grant for Data Collection/ Restoration provided \$6,450 to fund the re-write of the management plan, specifically addressing the Olympia site, with special consideration of the rare and endangered Sandhills and Sand Parkland communities at the property.

To ensure that the District would be able to conduct restoration work on the Sand Parkland habitat without impacting the endangered Mount Hermon June Beetle, which spends most of its lifecycle underground in the soil, Greening Associates requested the USFWS review the draft plan to ensure they would approve the proposed plan. May 11, 2016 USFWS responded:

“We wouldn’t require a permit to chemically treat stumps (no treatment prior to rain events). Also, it is speculated that you would not encounter MHJB larvae at depths less than 6 inches, so uprooting any vegetation with roots systems around that depth would be fine.” - May 11, 2016 USFWS

The Broom Management Plan was then prepared so as to not require a recovery permit in order effectively restore the habitat, while reducing cost and staff resources for the District.

The Environmental Committee reviewed the plan during public meetings over a period of months, discussing the various methods.

On March 31, 2017, staff received an email from USFWS indicating that newly discovered disturbance to the soil below 2 inches would impact the Mount Hermon June Beetle. USFWS suggested that the District would be required to secure a recovery permit in order to complete restoration work on the site.

Use of a recovery permit would also introduce the potential for pulling the broom plants out (rather than cutting and treating) a strategy that was not available previously (when a recovery permit was not part of the proposed plan). Initial cost estimates for pulling the plants are said to range from three to five times more expensive than the proposed cutting and treating plan. A proposed plan for a pulling-only strategy has not yet been initiated but could be, pending direction to staff.

Securing a recovery permit lies outside the scope of Greening Associates contract. Greening Associates has completed their required task of preparation of a recovery plan with the knowledge that was available at the time. It is appropriate at this time to acknowledge Greening Associates for their efforts and close their contract.

RECOMMENDATION

It is recommended that the Board of Directors review this memo, officially close the contract with Greening Associates and provide direction as to whether staff should pursue recovery permit, and the Board’s preferred method for broom management.