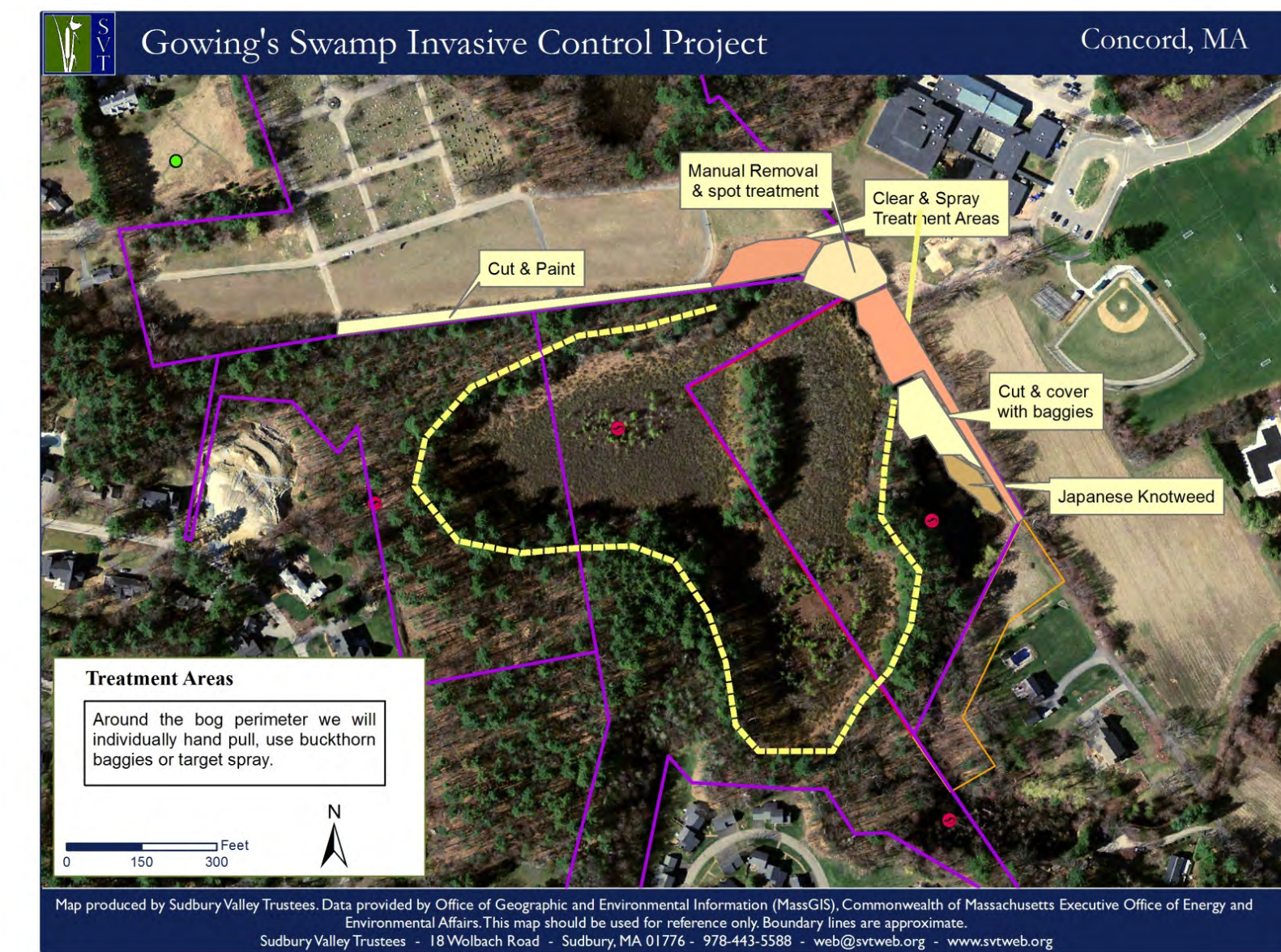




From Japanese Knotweed to Black-eyed Susans Gowing's Swamp, Concord MA

By Laura Mattei, Director of Stewardship, Sudbury Valley Trustees

The Gowing's Swamp natural area in Concord supports a complex of wetlands surrounded by oak-pine woodland and open fields. The centerpiece is a true bog, known as "Thoreau's Bog," bordered by two vernal pools and marsh. The 26 acre conservation area is protected by three separate owners: Concord Land Conservation Trust (CLCT), Meriam Close Foundation (CR held by the Town of Concord) and Sudbury Valley Trustees (SVT). These three landowners, along with the neighboring cemetery and Nature Playscape have worked together to develop and implement an invasive plant control program. The project began in 2014 and has been funded by the Concord Community Preservation Committee, SVT, CLCT, Playscape at Ripley and neighbors. SVT secured a wetlands permit from the local conservation commission for all invasive plant control activities.



BEFORE

A solid block of Japanese knotweed covered approximately 1/8 of an acre bordering a vernal pool.



1

SVT worked with Land Stewardship Inc. to develop a treatment plan. LSI conducted the initial brush clearing work and all herbicide treatments.

In early September, 2017, flowering knotweed was sprayed with an 8% solution of Rodeo with Thinvect (oil based). This was followed up by 100% Rodeo injection of large green knotweed stems at the end of the month. This treatment effectively killed all knotweed stems.

SVT raised concerns of spraying when bees were active on the knotweed flowers. Application was unable to entirely avoid the bees, but tried to minimize impacts by spraying earlier in the day, outside of peak bee activity.



2

In April, 2018, SVT staff and volunteers cut and cleared all of the dead Japanese knot weed stems. The stems were cut with a weed whacker, then raked, bagged and piled into a larger dumpster.



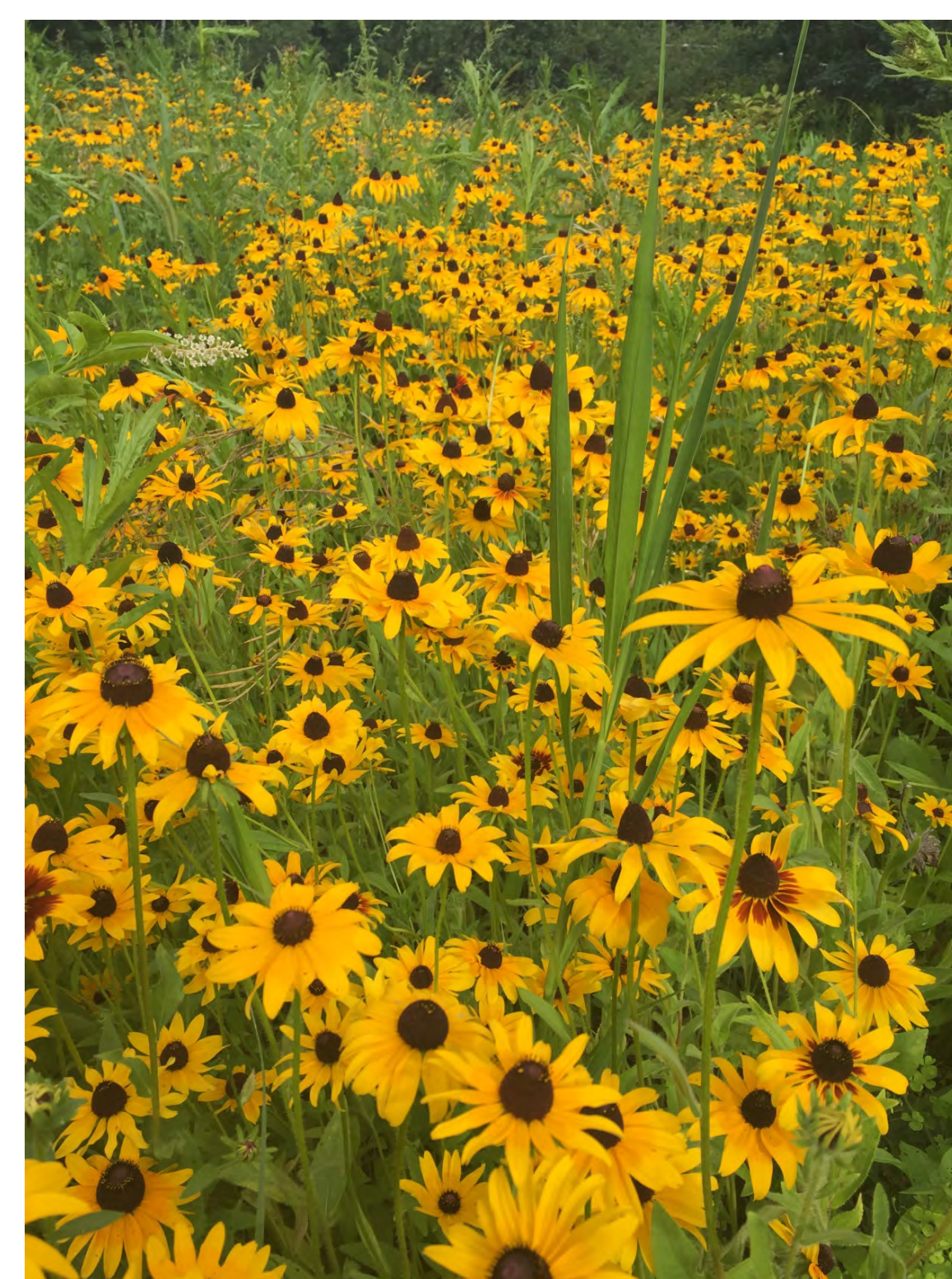
3

Staff and volunteers hand spread a native seed mix (Ernst Seeds Riparian Buffer Mix). The seeded area was covered with weed free hay and watered. We used a truck mounted tank with a pump and hose for watering.



4

In June, six weeks after seeding, we were discouraged to see quite a bit of knotweed sprouts amidst some natural, non-invasive plant regrowth. There appeared to be very little germination of our seed mix. We noticed that the Japanese regrowth was thicker where we had a sparser application of seed in the back corner or the area. This may have also been due to a lower application of herbicide in that spot.



AFTER

However, in early August we encountered a wonderfully beautiful field of black-eyed susans, dotted with white vervain, yellow partridge pea and other native and non-invasive plants. The nectar of black-eyed susans attracts checkerspot butterflies, and its seeds attract many birds. White vervain provides nectar and pollen for native bees.

We are thrilled with this success, but our work is not yet done. Japanese knotweed plants are still lurking. LSI conducted another round of spot-treatment of the Japanese knotweed in mid-August. Because invasive species control never really ends, we will continue to do spot treatments and removal each year. Now that we've seen how beautiful and healthy this area can be, we do not want the invasives to take over again.

Effectiveness of Buckthorn Baggies

In an attempt to minimize the use of chemical herbicides at this site, SVT and volunteers cut glossy buckthorn shrubs and covered them with "Buckthorn Baggies." Unfortunately, the success rate of using the bags was only about 50%. In spite of the bags, many of the shrubs were able to send up new shoots from the plant roots.

