

Monster Weed! Battling Japanese Knotweed in Manistee

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About 3 years ago, Mary Hurley and her neighbors at Harbor Village in the City of Manistee noticed an unpleasant change nearby. What once was a relatively contained population of phragmites, the invasive wetland plant, was giving way to a rapidly expanding population of Japanese knotweed. This fast growing, invasive woody shrub was taking over the roadsides near their neighborhood and marching across the hillsides

Imported from Asia, this nonnative plant grows at an incredible rate, forming a dense almost impenetrable wall of wide green leaves and stalks that resemble bamboo, rising 8 to 10 feet high and spreading across the landscape. Knotweed is also a reproducing nightmare, sprouting from even small pieces of the plant stems or roots (called rhizomes). Its spreading rhizomes can penetrate asphalt and crack concrete to send up more plants. It simply out competes native plants, blocking sunlight, but also releases chemicals into the soil that interfere with the growth of other plants.

This video helps describe the coordinated effort now underway in the City of Manistee to control and eradicate Japanese knotweed. The work is being supported by citizen groups, the City of Manistee and the Invasive Species Network with funding assistance from the *Michigan Invasive Species Grant Program* under the *Departments of Natural Resources, Environmental Quality, and Agriculture and Rural Development*.

Topics Covered

Biology; Botany; Invasive Plants; Habitat

Next Generation Science Standards

- 2-LS2-1. Plan and conduct an investigation to determine if plants need sunlight and water to grow.
- 2-LS4-1. Make observations of plants and animals to compare the diversity of life in different habitats.
- 3-LS4-3. Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.
- 3-LS4-4. Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.
- HS-LS4-4. Construct an explanation based on evidence for how natural selection leads to adaptation of populations.
- HS-LS2-7. Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.*

- HS-LS2-6. Evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions, but changing conditions may result in a new ecosystem.
- HS-LS4-6. Create or revise a simulation to test a solution to mitigate adverse impacts of human activity on biodiversity.*