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Betsy Scott Finding hope in the muck at Mentor Marsh at www.news-herald.com
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Mentor Marsh restoration marches on

■ Phragmites fuel, community engagement among growing efforts

On a recent November day, a couple of volunteers were painstakingly picking through swamp muck at Mentor Marsh State Nature Preserve, in search of certain maple seedlings.

Ben Anderson, a volunteer with the Cleveland Museum of Natural History, Natural Areas, displays some Freeman Maple seedlings he recently gathered from the Mentor Marsh.

They then combed a corner of the leaf-layered landscape at the 700acre preserve for pumpkin ash seeds.

The 150 Freeman maple seedlings gathered by their roots were transported to Klyn Nursery in Perry Township to grow for future use at the marsh.

The pumpkin ash seeds will be held in frozen storage until the destructive Emerald Ash Borer moves through the area and dies off.

"Eventually, our native Freeman maples and pumpkin ash trees will be replanted in these managed

areas," said Linda Sekura, a volunteer with the Cleveland Museum of Natural History, which is custodian of 691 acres of the marsh and leading the management efforts.

These arduous efforts are all in the name of restoration and are among the latest initiatives underway to return the marsh to its natural state.

Clean energy and compost

Phragmites — the fire-prone invasive grasses crowding out the marsh's native plant species — are part of an experiment to repurpose the plants, as well as eradicate them.

The experiment is to determine whether these invasives can be used as waste biomass for power. Along with the museum, collaborators comprise NASA Glenn Research Center, the Mentor Marsh Board, the city of Mentor, quasar energy group, Case Western Reserve University, FDC Enterprises, Forest City Enterprises and Midwest Sustainable Solutions.

Sekura, a former NASA sustainability/renewable resources contractor and Green-Lab biofuels team member, helped gather the group effort, which targets not only phragmites, but also other invasive plants.

"The idea is not to keep growing the phragmites for power, but to eliminate them as we restore the marsh," she said.

Quasar energy group, based in Collinwood, is taking the organic waste and using anaerobic digestion — a series of biological processes in which microorganisms break down biodegradable material in the absence of oxygen — in hope of producing an energy source.

Such power is sold by quasar to utilities, including Cleveland Public Power.

The phragmites may be used in another of quasar's five Ohio facilities, Sekura said.

The effluent (leftover "mush") also could be used, as a natural fertilizer on farm fields, once researchers ensure that the seeds and other remaining plant parts are no longer viable, Sekura said.

Case is providing its greenhouse — at Squire Valleevue Farm in Hunting Valley — for the experiment.

Stewardship startup

The museum, city of Mentor and other project collaborators also plan open houses and other events aimed at enabling community members to join restoration and fire safety efforts, and to expand a Mentor Marsh stewardship committee.

A local committee is key to preserving this important Lake Erie watershed well into the future, Sekura said.

"We have seen yard waste dumped into the marsh, and at least one fire set intentionally," she said, adding that, "More hands-on field activities with young folks and adults gives a feeling of ownership, and awareness that we live within this freshwater ecosystem that we depend on for survival. So do the birds, dragonflies and many other species we enjoy."

Similar stewardship committees exist elsewhere, such as at Kelleys Island and other properties protected by the museum.

Construction and cleanup

The Lake County Utilities Department is consulting with marsh stakeholders on major construction planned in a portion of the preserve.

A $3.5 million sanitary sewer interceptor project will replace about 6,400 feet of aging pipes — from Woodridge Lane, in the Mentor Headlands area, across the marsh to a county wastewater treatment plant — and provide improved access for sewer maintenance.

The department has been in contact with restoration representatives during the preliminary design phase, said Denis T. Yurkovich, assistant sanitary engineer.

"These discussions not only centered on the environmental concerns and mitigation of such a construction project in the marsh, but also opportunities as to how the sewer project could serve as a potential springboard for their initiatives," he said.

Meanwhile, the push continues for remediation of pollutants from an old salt mine landfill, northwest of Lake Shore Boulevard and Route 44.

Marsh remediation costs could top $10 million, according to a 5-year-old estimate from the Lake County Soil & Water Conservation District.

That figure was derived from part of a cost analysis focused on the removal of more than 250,000 tons of salt mine tailings disposed of on the old outflow of Blackbrook Creek in 1966.

"The dumping of the salt mine tailings are widely believed to be a primary source for the environmental issues and situation we now face at the marsh," said marsh stewardship committee member Abe Bruckman, also the city of Mentor grants coordinator.

"Where what once was a swamp forest and healthy wetland environment — a registered National Natural Landmark due to its rich biological diversity, and Ohio's first formally established nature preserve — was substantially compromised and radically transformed into our current situation. ...

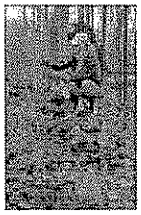
"Many people have grown up not knowing that the Mentor Marsh was once a very different place than what we now see."

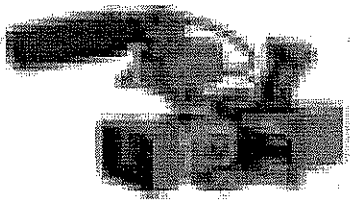
Mentor and the Lake County General Health District were party to a complaint filed with the Ohio Environmental Protection Agency and the Ohio Attorney General's Office in 2009 over the salt contamination.

A lawsuit related to the pollution was filed in August by the Attorney General versus property owner Jerome T. Osborne, Osborne Concrete and Stone, a family trust, and another of Osborne's companies. Containment attempts in the 1980s failed to prevent landfill liquids from leaving the property and affecting water quality in the creek and the marsh, the EPA contends.

The new complaint claims that the defendants caused or allowed pollutant-laden water containing salt tailings and lime-fly ash to be discharged into waters of the state without permits, and seeks more than $25,000 in civil penalties.

The case remains pending in Lake County Common Pleas Court.





A Determination of Federal Interest has been made in a U.S. Army Corps of Engineers feasibility study on environmental restoration. However, the corps has yet to receive funding approval at the federal level, Bruckman said.

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