

## LAKES ALIVE! PROGRAM OVERVIEW

### 2016 Summer and School Programs

**Lakes Alive!** is geared toward introducing elementary and middle school children to the lake environment, the fish and wildlife that rely on freshwater habitat, water quality monitoring and other scientific research to monitor and protect our natural resources, and ethical behaviors toward fish and wildlife. As we develop new partnerships, participants will also gain new and enhanced skills to enjoy outdoor recreation activities on our lakes and ponds, knowledge of native species and the impacts of non-native species, and understanding of how their individual behavior can impact the natural environment and other species that co-exist with us. Our overarching objective is to build a community of knowledgeable lake stewards statewide, a constituency that is comfortable and capable of speaking and acting on behalf of lake health and the communities that rely on these critical water resources, while encouraging healthy and respectful outdoor recreation behavior.

**Our program promotes lake stewardship and ethics of place; gets children outdoors, directly experiencing the wonders of our lake and pond environments through scientific inquiry; introduces new outdoor recreation opportunities through partnering organizations; and encourages networking and a learning exchange between schools, lake associations, state agencies, and lake communities.**

In 2016, the Lakes Alive! Boat Program and Bugs in the Classroom curriculum is being expanded to schools and youth camps that have very limited budgets for place-based, experiential learning outside of the classroom. We are developing this program at a time when our society is seeing alarming declines in children engaged in outdoor activities and experiences that teach them how to care for their environment and how to simply “be” in the natural world. Being attentive to the world in which we live leads to engagement in its protection. Through in-classroom, lakeshore, and on the water activities, we introduce children to the lake community, both human and wild, and provide them an introduction to the skills necessary to care for our freshwater resources, and to engage in water-based and wildlife-focused recreation activity safely and respectfully. Sharing their creative work and engaging in service projects will strengthen participants' connection to the larger community and provide skills that may enhance future employment opportunities.



#### 2016 Partners

Partnering with the Department of Inland Fisheries & Wildlife Hooked on Fishing program and Maine Warden Service adds a new and exciting element to the Lakes Alive! experience and provides participants with hands on experience with our freshwater fisheries while promoting youth and family togetherness outdoors. The Hooked on Fishing program will commit 40 to 80 hours of staff time, educational materials, and fishing equipment in support of this effort. Other partners include Belgrade Regional Conservation Alliance (BRCA), Belgrade Recreation Department's Camp Loon, Old Town

Recreation Center's Afterschool Enrichment Program and summer camp, Mt. Vernon Elementary School, the Maine Discovery Museum's summer camp program, Hirundo Wildlife Refuge, and the Maine Youth Fish and Game Association. BRCA will assist with formalizing our Lakes Alive! curriculum for alignment with state learning standards and distribution. We are also planning a Pushaw Lake Community Day with the Greater Pushaw Lake Association in collaboration with Maine Canoe and Kayak Racing Organization and the ACE New England Paddlers Club, which will have a lake education emphasis throughout the day that draws from the youth programming described in this summary. This event will serve as a model for other community events elsewhere. The Portland Water District is interested in the possibility of our bringing our developing model of community engagement around lake and watershed education to the Sebago Lake region in 2017.

## Connecting Children with Community

A developing component of our program is to allow the students themselves to become outreach communicators in their community through creation of art and literature based on Lakes Alive! program elements and our conservation partners' program activities, to be shared both locally and through online applications. The emphasis of all of our activities in the classroom, on the lakeshore, and out on the water is intended to encourage conservation and stewardship of the natural environment. We incorporate creative activities such as writing and drawing to demonstrate what the participants learn and to share with the broader community, and will be adding an audio-visual component for older children. STEM education is at the core of our boat program curriculum, and we are developing this project so that it can serve as a statewide model for community-based lake and watershed education. We are also exploring community service learning opportunities for youth around freshwater habitat restoration and/or demonstration projects highlighting best practices in lakeshore management.

Currently, we are focusing on two predominantly rural areas of the state, building upon past, successful programming. The Old Town area has been in an economic downturn with permanent closure of the pulp mill, with a poverty rate hovering at 30%, but with strong interest in and potential for economic revitalization with successful completion of the Penobscot River Restoration Project. The Belgrade area has a much higher median income, but communities vary widely, with Smithfield's poverty rate higher than the state average. Participants will include K-12 students, approximately 600 students in RSU 18 and 800 students through Old Town RSU 34 and local youth and conservation programs. Through youth outreach projects, the impact will spread throughout the community. Development of an interactive watershed exhibit has a potential reach of 50,000 at the Maine Discovery Museum, including 10,000 children.

## Our 30-foot Floating Classroom

Our 30-foot pontoon boat, the *Melinda Ann*, is the centerpiece of Lakes Alive! program activities.

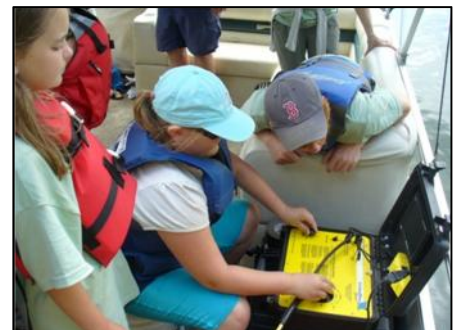
Designed to be a floating classroom, the *Melinda Ann* is equipped with proprietary field tested, place-based learning materials and activities, delivering a powerful learning experience. Immersed in the lake surroundings, participants directly observe and analyze the vitality and interdependence of lake

systems and quickly see how environmental stewardship supports biodiversity and good water quality. Through hands-on activities that explore such topics as lake ecology, food webs, and the water cycle, the *Melinda Ann's* passengers use a secchi disk to measure water clarity, a benthic dredge to look for mayfly nymphs, and a camera-mounted ROV to transmit images of freshwater clams growing on the lake bottom. Engaged in the life of the lake, students develop a personal motivation to become good environmental stewards.



## SCIENTIFIC INSTRUMENTS USED

- **Secchi Disk & Aqua Scope:** Measures water clarity
- **Plankton Tow:** Collects zooplankton
- **Ken-a-Vision:** Flat-screen monitor shows magnified images of microscopic organisms in the lake
- **Benthic Dredge:** Collects samples from the lake bottom
- **Water Column Sampler:** Takes water samples from various depths
- **Dissolved Oxygen Probe:** Compares oxygen levels at different depths
- **ROV:** Remote Operated Vehicle with an underwater camera



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