



Approved Projects: Evaluating the Effectiveness of AIS Prevention Activities

A pilot project hosted by the Initiative Foundation with funds from the Outdoor Heritage Fund, a Clean Water Land & Legacy Fund



Crow River Organization for Water (CROW)

- **Unique outreach and marketing tools for regional consistency in AIS prevention; targeted youth education to create a cultural shift in prevention attitudes and actions.**

The Crow River Watershed is a major tributary of the Mississippi River northwest of the Twin Cities. Agriculture is the primary land use although rapidly growing urban expansion is creating new pressures on water recreation and water quality, including the emerging risks associated with the spread of AIS. With over 120 public water access sites in the project's three targeted counties—Wright, Meeker and McLeod Counties—the challenge to protect the water bodies in these counties is burgeoning. The project is designed to create consistency in AIS prevention measures among the surrounding counties by using and evaluating unique messaging and outreach tools to increase AIS prevention awareness in the watershed as a whole.

The project is also targeting youth (ages 10-25) with education and outreach that includes heavy use of experiential learning, social media, and audio and visual mediums in an effort to internalize the importance of AIS prevention. This effort is geared towards creating a cultural shift in the way young adults think about their role in stopping the spread of AIS. “We believe that making an impression on this age group will be an effective way to normalize ‘Clean, Drain, Dry’ activities because youth are beginning to utilize water-related equipment independently,” said project coordinator, Charlene Brooks, CROW Water Resource Specialist. “We’re pursuing marketing and communication strategies that are specific to this age group in an effort to solidify expectations for water-craft use on public waters and establish positive behaviors.” **The project was approved in January 2015 for \$57,468.**

Activities:

- Focus groups were held to determine the types of information and programming needed to boost AIS knowledge and to evaluate effectiveness of project activities.
- Creating Attack Packs, backpacks that contained a toolkit of information for youth, including educational materials, games, and acrylic samples of common AIS. Over 1,000 students throughout the three counties have utilized the Attack Packs.
- “Wipe Out Aquatic Invaders” toilet paper was created and over 2,200 rolls were distributed in coffee shops, gas stations, bait shops, and used in Port-A-Potties in county parks. The toilet paper provided unique messaging and motivating outreach for AIS prevention. Many businesses and citizens commented on its unique attention grabbing value and use as a conversation starter in unusual places. Using social media hashtags (#wipeawayinvasives), the toilet paper drove people to social media outlets for further messaging; a story posted on one Facebook page reached over 2,000 people.
- Movie theater trailers were tried, but the messaging medium was determined to be ineffective in reaching a broad audience.
- Waterproof cell phone bags printed with an AIS message were very popular with sportsmen. The bags were distributed at license centers, sporting banquets, sporting and community events, and at sporting opener events.



Carnelian-Marine-St. Croix Watershed District/Big Marine Lake Association

- **New treatment protocols to enhance management of Eurasian Watermilfoil.**

Big Marine Lake in Washington County has about 45 total acres of Eurasian watermilfoil (EWM) found in a number of relatively small areas (2 to 10 acres) in open water. Previous herbicide treatments have typically knocked down the plants, but did not totally kill the plant or its root crown. Hence, repeated treatments were needed year after year to control the aquatic invasive plant. Research recognizes the difficulty in spot treating Eurasian watermilfoil because typically the herbicide applied disperses in the water column within a few hours of treatment diluting it below the level required to kill EWM.



The project is employing a new herbicide treatment protocol developed by the Big Marine Lake Association working in conjunction with Professional Lake Management and Blue Water Science to maintain concentrations of the herbicide at the level required to kill the EWM without exceeding the herbicide's approved application rate. The protocol treats the infested areas three times in one day at six-hour intervals to keep concentrations of the herbicide at higher levels for sustained periods of time. The goal is reducing the total acreage of EWM in the lake to less than 5 acres by 2019. While some new areas of EWM have been discovered, excellent progress towards the reduction goal has been achieved in the first two years of treatment using the new protocol. Other lake associations managing EWM have also inquired about and are trying the treatment method. Other project supporters include the Carnelian Marine St. Croix Watershed District, the Minnesota DNR, and Washington County. **The project was approved for up to \$48,000 in 2015.**

Carver County Water Management Organization (Carver County)

- **Outbound boat tagging for “proof of inspection” to expedite future lake access.**

Carver County has established a tagging system that provides outbound boaters at the Lake Minnewashta public access with a “proof of inspection tag” allowing them expedited future access to the lake if the tag is still intact. Carver County used local AIS funds to purchase a decontamination unit. Boaters at Lake Waconia access are also offered the option of being decontaminated and tagged, allowing them to bypass the inspection process at other county lakes if the tag is still intact. The tagging system is being evaluated to determine the feasibility of a centralized inspection program with tagging that would allow expedited launching at additional lakes in the county participating in the program. Tagging approval is a major project obstacle to be resolved with the MN DNR. **The project was approved for up to \$50,000 in 2015.**

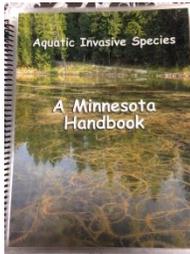


Cass County Environmental Services

- **Advanced training for watercraft inspectors.**

Although the DNR provides basic training and certification for watercraft inspectors, the Cass County project provides advanced training for inspectors in conflict resolution, techniques to de-escalate confrontations, and basic precepts in limnology and ecology of common AIS. E-learning opportunities are being explored to share the advanced training materials with other counties.



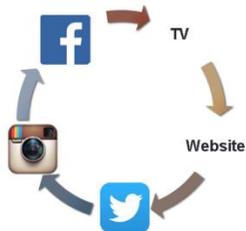


With only one year of training conducted thus far, the additional knowledge has resulted in inspectors being more comfortable encouraging people to change behaviors because they have a knowledge base to explain the impacts of AIS prevention as well as skills to deflect conflict. Numerous other counties and lake associations have inquired about replicating the advanced training. In 2017, the training will be open to lake associations and resorts in addition to DNR-trained watercraft inspectors. **The project was approved for \$57,212 in October 2015.**

Mississippi Headwaters Board/Crow Wing County

- **Social media and TV marketing directed at targeted user groups, especially young adult wakeboarders/adventurists and outdoor sporting groups.**

Using the marketing brand of “Mississippi Traditions”, the Mississippi Headwaters Board (MHB) is using social media and TV infomercials airing on the Fox Sports North TV channel and metro TV stations to target AIS prevention messages to special user groups. “Edgy” videos have been developed that appeal to younger wakeboard recreationalists who largely have ignored conventional education campaigns. Because the majority of the users in this target group recreating in the Headwaters area come from the Twin Cities and other urban areas, the TV infomercials aimed at young wakeboarders are airing in major urban areas of the state. Other TV infomercials are targeted at anglers, waterfowl



hunters, kayakers, and the family recreational boater. The infomercials are also promoted via social media (Facebook, Twitter, and Instagram) with customized home pages for each target group, with each media supporting other media for AIS message distribution. These targeted ad campaigns are being used to grow the number of followers on each type of social media

which will then provide additional opportunities for further messaging. The total potential market reach of this media is 6.5 million households. **The project is fiscally sponsored by Crow Wing County and approved for up to \$84,484 in October 2015.**

 Minnesota Traditions
Beltrami Co is educating anglers to prevent the spread of invasive species! [ow.ly/2n1j3005jSe](https://www.facebook.com/ow.ly/2n1j3005jSe)
#cleandrindry



Lake County Soil and Water Conservation District

- **Intensive trapping of rusty crayfish at the invasion front in the Kawishiwi watershed to halt or at least deter the spread of rusty crayfish into the Boundary Waters Canoe Area Wilderness.**

The Kawishiwi Watershed comprises a large portion of the southeast portion of the Boundary Waters Canoe Area Wilderness (BWCAW), the most visited wilderness in the United States. Today, approximately 20 years after rusty crayfish were introduced into Northern Minnesota lakes as fishing bait, they are found in 68 lakes in Lake and St. Louis counties. Their breeding population has exploded causing declines in native crayfish populations and reductions in aquatic vegetation, including wild rice. If left unchecked, the reduction in aquatic vegetation will reduce game fish and water fowl habitat and soon the native populations of crayfish in



the entire Kawishiwi Watershed could be extirpated. The project involves intensive trapping of rusty crayfish to prevent re-infestations in areas adjacent to the BWCAW and invasive to the BWCAW. In addition to trapping, anglers are encouraged to practice catch and release of small mouth bass, a predator of crayfish. In the first two years of the project, the intensive trapping has resulted in some reductions in the amount of crayfish in various areas in the invasive front of the Kawishiwi watershed and there has not been any further spread to the BWACW.

Student interns from Vermilion Community College are employed throughout the summer to trap rusty crayfish. Ely youth, ages 5 to 15 years old, are engaged in trapping through a community project to build self-esteem, community pride, and positive adult mentoring. Local lake associations have assisted with trapping along with other project partners including, Minnesota Sea Grant, MN DNR, the 1854



Treat Authority, and county staff. Community awareness of the project has been promoted through activities like local festivals, parades, and community crayfish boils. The Lake County SWCD and the U.S. Forest Service are evaluating the extent of crayfish infestation on Burntside River and attempting to identify factors which may explain why one lake may be unsuitable for rusty crayfish infestation while adjacent and hydrologically connected lakes do become infested. **The project was funded for \$52,730 in January 2015.**

Wildlife Forever

- Interactive educational outreach in the Vermillion Lake Watershed**

Wildlife Forever is a key partner in the national “Clean, Drain and Dry” education campaign to promote AIS prevention. Smartphone technology called “geo-fencing” (electronic



‘pushing’ of emails or web-messages) is being testing to share best practices for AIS prevention, locations of decontamination or inspection services, and other resources. Forty boat ramp signs in three St. Louis county locations (Duluth, Virginia and Ely) have been embedded with smartphone trigger information (augmented reality) that will play videos when accessed via a Clean, Drain, Dry mobile app created for this project. Video viewers will be rewarded with coupons to local



businesses, which also foster local business support and sponsorship. Distribution and promotion of the mobile app and business incentive solicitation will begin in May 2017. **The project was approved for up to \$47,200 in October, 2015.**

Lake Koronis Association (Stearns County)

- Experimental management of Minnesota’s first confirmed infestation of the invasive microalgae, Starry Stonewort.**

In August 2015, over 200 acres of Lake Koronis in Wright County were found to be infested with Starry Stonewort, the first confirmed infestation in Minnesota. Like Eurasian watermilfoil, Starry Stonewort grows in dense mats and can impair fishery reproduction, chokes out native vegetation, and impedes recreational activities. Currently, there are no proven methods of effective eradication or sustainable management. To assess the management potential, Phase One in 2016 targeted two infested areas for experimental treatment using an integrated management approach. In a 3.8 acre area the Starry Stonewort was: 1) harvested with an experimental machine; 2) scuba divers assessed the effectiveness of the harvester and hand collected remaining algal specimens; and 3) chemical treatment was used to “spot treat” any remaining infestation.





An estimated 250,000 pounds of biomass were removed in the first treatment plot. In an adjacent 2.8 acre comparison plot only chemical treatment was employed, no harvesting or hand pulling. The Minnesota DNR and Aquatic Invasive Species Research Center at the University of Minnesota approved the sampling protocol and a third-party was used to verify the work performed according to the approved protocol. Both treatment areas showed a 99% decline in biomass compared to pre-treatment. Re-growth in 2017 and further monitoring of treated areas will provide additional data on the effectiveness of treatment. Since confirmation in Lake Koronis, three additional lakes in Minnesota have been confirmed infested with Starry Stonewort. **The project was funded for up to \$425,000 in 2016.**

Voyageurs National Park/National Park Service

- **Restoration of non-native cattail-dominated wetlands in Voyageurs National Park.**

Non-native cattails have invaded wetlands in Voyageurs National Park, displacing native vegetation, reducing biodiversity, degrading fish/wildlife habitat, impairing recreational opportunities, and degrading cultural resources, especially wild rice. These lakes are designated "Outstanding Resource Value Waters" where herbicide use is prohibited. The appropriate and most cost effective cattail removal and wetland restoration techniques in these areas are not well known. The project's goal is mechanical removal of the non-native cattails, and any other invasive plants, using Native American techniques for wild rice restoration along with burning and other removal methods. Mechanical removal of cattails will be followed by reestablishment of native vegetation to restore wetland communities and enhancement of muskrat populations to maintain wetland diversity. These techniques will restore critical wetland habitats and prevent the future introduction and spread of invasive cattails and other aquatic invasive species. **The project was approved for funding up to \$800,000 in 2016.**



Wildlife Forever and CD3, LLC

- **Assess the impact of deploying a prototype user-operated AIS cleaning station.**

Decontamination of boats at boat landings and centralized locations is an effective tool to prevent the spread of AIS. Current decontamination stations employ pressurized hot water technology but have constraints including the high cost of equipment, the need for water, and the requirement of trained/certified staff to operate the equipment. Self-employed tools are lacking at boat accesses for recreational users (boaters, anglers, other recreational users) to apply best management practices for cleaning, draining, and drying their equipment and disposing of unwanted bait. Without the proper tools, removal of AIS becomes limited to physical ability and exposure to best management practices prior to arriving at the access. A project team, working with CD3, a for-profit developer of cleaning



stations, and utilizing grant funding from the Minnesota Pollution Control Agency, has aggregated AIS prevention techniques in to a prototype user-operated Clean, Drain, Dry and Dispose cleaning system. The prototype cleaning stations will be placed at selected outstate and metro locations and user behaviors will be monitored and evaluated to assess the effective of the stations. Other collaborators include MN Sea Grant and the University of Minnesota AIS Research Center. **The project was funded for \$264,800 in 2016.**