**PROJECT TITLE: Does AIS Outreach Lead to Behavior Change?**

**I. PROJECT STATEMENT**

Our goal is to pilot an aquatic invasive species (AIS) prevention program which increases boater compliance with regulations based on strategic outreach and community engagement, social media, chatbots (herein called outreach), and use of waterless boat cleaning stations (WBCS). Due to the vast number of water accesses across Minnesota, staffing all accesses with inspectors or with portable hot, high pressure water decontamination units is cost prohibitive and not justifiable based on risk for a vast majority of watercraft. *An alternative control approach is needed.* This project will compare use of 3 existing WBCSs near Duluth to 3 water accesses without WBCSs to determine if the outreach program and availability of WBCS improve compliance with DNR regulations. Outreach will include strategic social media and a new WBCS chatbot for people with questions about AIS and clean boating. A chatbot is a computer program, using artificial intelligence, which conducts a conversation via audio or text. Compliance will be assessed based on current regulations: removed aquatic vegetation, lack of transport of prohibited AIS, and water drained and decontamination when identified. We will pilot to assess value for use elsewhere to help prevent AIS spread and recommend improvements influencing boater behaviors. Disclosure: The PI worked with CD3, the sole manufacturer of WBCSs, by providing technical assistance as they designed their system.

**II. PROJECT ACTIVITIES AND OUTCOMES**

Overview: We will assess differences in boater regulatory compliance at accesses with and without WBCSs: 1) no community outreach, 2) with community outreach, compared 3) to community outreach, and 4) with outreach and without WBCSs. We will test over two seasons since motivational research shows that response to actions-based outreach programs is dependent upon messages *and* time (not mutually exclusive). We expect greatest differences in regulatory compliance, thereby risk reduction by boaters, between Yrs 1 & 3.

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|  | **3 Accesses With Existing WBCS** | **3 Accesses Without WBCS** |
| Yr 1 | 3 Accesses w/WBCSs – No Community Outreach | 3 Accesses w/o WBCSs – No Community Outreach |
| Yr 2 | 3 Accesses w/WBCSs + Community Outreach | 3 Accesses w/o WBCSs + Community Outreach |
| Yr 3 | 3 Accesses w/WBCSs + Community Outreach | 3 Accesses w/o WBCSs + Community Outreach |

Data on compliance rates will be collected four ways: 1) through observations by “secret shoppers”, staff, student interns, partner organizations and volunteers in the area, who will be trained to collect consistent observational data of boater’s actions at all accesses over three seasons, 2) exit surveys of boaters by staff/partners at accesses who use and do not use WBCSs. Additionally, we will collect data on the percent of boaters who use WBCSs where they exist, through drive-over vehicle counters 24/7, and on tool use by boaters (which tools are used and how long) through the WBCSs, that automatically transmit to the internet. This information will help us understand how boaters use (or do not use) these stations to comply with regulations and to take actions in support of *Stop Aquatic Hitchhikers!* clean-drain-dry-dispose (of unwanted bait) messages by linking direct actions to the tools:

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| * Clean: marine brush, vacuum, reach tool
 | * Dry: air blower
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| * Drain plug wrench (to remote boat plug)
 | * Dispose vacuum system
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As a key outcome of this proposal, we will determine if boaters, based on exposure to messages and with WBCS access, are in compliance with regulations. We will also gain understanding of how tool presence affects effort and/or time boaters spend to be in compliance with regulations. We will work with a company to develop the WBCS chatbot into viable product. As a key benefit, we will assess value of this approach for use elsewhere by counties/communities to help prevent AIS spread, resulting in less AIS impacts on environment, recreation and economies of communities that depend upon healthy waters statewide. This proposal builds upon previous AIS outreach efforts by DNR, Sea Grant, Wildlife Forever, MAISRC, U.S. Fish & Wildlife, 1854 Treaty Authority, parks and counties. This proposal compliments another submitted by Valerie Brady, UMD Natural Resources Research Institute, *How Effective Are Our AIS Removal Methods?*, which assesses biological efficacy of WBCSs. If funded, we will leverage efforts.

**Activity 1: Contact Partners, Develop Program, Select/Install Vehicle Counters, Gather Baseline Compliance**

An advisory board of regional AIS experts will ensure development of a strategic community outreach and engagement program. Accesses with WBCSs will be outfitted with vehicle counters and partners/volunteers will be trained/deployed at accesses with/without WBCSs to observe and conduct surveys on compliance behavior.

**ENRTF BUDGET: $118,364**

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| **Outcome** | **Completion Date** |
| 1. Contact and invite existing and new partners – convene advisory board; contracts set | *July ’20 – Aug ‘20* |
| 2. Develop outreach program/social media strategy; hold 2 focus groups in TCs and Duluth | *Aug ’20 – Dec ‘20* |
| 3. Select access locations and install vehicle counters (to access use and non-use of WBCSs) | *Sept ‘20 – Oct ‘20* |
| 4. Collect compliance observations/data at accesses (without outreach); develop chatbot  | *May ‘21 – Oct ‘21* |

**Activity 2: Implement a Strategic Community Outreach and Engagement Program with Social Media**

Develop program empowering positive behaviors of boaters to take actions to clean-drain-dry-dispose. Program employed at accesses with and without WBCSs over two boating seasons. Effective media used include: TV, radio (Sea Grant Files episode) and newspaper PSAs, billboards, water access awareness and social media campaign. Based on input from focus groups to help develop content, graphics and video, implement WCBS chatbot. Roll out social media strategy in based on input from UMD students to boost WBCS use. Compliance data collection continues.

**ENRTF BUDGET: $236,730**

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| **Outcome** | **Completion Date** |
| 1. Implement strategic community outreach and engagement program  | *May ’21 – Oct ‘22* |
| 2. Create, produce and distribute communication and outreach products; refine chatbot | *Nov ’20 – Oct ‘22* |
| 3. Collect compliance observations, surveys, and vehicle counter data at all 6 accesses  | *May ‘21 – Oct ‘22* |

**Activity 3:** **Increase Use of County, State and Tribal Decontamination Stations**

To increase use of decontamination units, watercraft users deemed high risk for AIS spread will be encouraged to visit the DNR interactive website ([www.mndnr.gov/decon](http://www.mndnr.gov/decon)), which has locations and hours for most decontamination stations. A new online mapping tool will be available via cell phones that will show proximity to local car washes. Messages will encourage use and rates will be tracked over time to assess if message helped lead to behavior change.

**ENRTF BUDGET: $118,364**

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| **Outcome** | **Completion Date** |
| 1. Create online mapping/education platform | *July ’20 – Aug ‘20* |
| 2. Collect tool use data (2 seasons); continue implement outreach program & WCBS chatbox | *May ’21 – Oct ‘22* |
| 3. Submit Final Report | *Feb ‘23* |

**III. PROJECT PARTNERS:**

1. **Partner receiving ENRTF funding (**PI served as CD3 technical advisor - no financial gained via this relationship)

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| --- | --- | --- | --- |
| Douglas A. Jensen\* | AIS Program Coordinator | Minnesota Sea Grant | Program Manager |

**B. Partners NOT receiving ENRTF funding (see attached letters of support\*)**

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| Tyler Kasper\*Sonja Smerude\*Edward Rudberg\*Kevin Comnick\*Bill GrantgesAnita Provinzino\*Jeff LovgrenJoan Farnam\* | Environmental SpecialistAIS Program CoordinatorCEOSupervisorAIS Program CoordinatorDistrict AdministratorAIS Program CoordinatorBoard Chair | 1854 Treaty AuthorityLake Co. SWCDCD3 CorporationCanosia TownshipItasca Co. SWCDNo. St. Louis Co. SWCDLake Vermilion AssociationCook Co. SWCD | Advisory Board/PartnerAdvisory Board/PartnerAdvisory Board/Ex-officioAdvisory Board/PartnerSupporterAdvisory Board/PartnerSupporterAdvisory Board/Partner |

**IV. LONG-TERM- IMPLEMENTATION AND FUNDING:**

This project is an investment in long-term prevention of AIS through a community outreach and engagement program and WBCSs aimed at improving compliance rate by boaters, which can be scaled up elsewhere.

**V. TIMELINE REQUIREMENTS:** July 2020 - March 2023 (2.75-years)