

# Access Enhancement Guidebook

Preventing AIS Through Modernized AIS Infrastructure



**A Comprehensive Guide to Invasive Species  
Prevention at Public Water Access Sites**





## PART 1 Introduction

### What is the Access Enhancement Protocol?

Access Enhancement Protocol (AEP) is the systematic redesign or retrofit process to improve a public water access site. While the focus is on aquatic invasive species (AIS) prevention, this goal cannot be achieved without considering all aspects of the site to create a cohesive and well designed public user experience. AEP is a comprehensive approach to AIS management which includes unified messaging, signage, AIS prevention tools, and strategic access design to empower boaters and anglers as a key component of AIS prevention. AEP encompasses a variety of techniques to increase public awareness of invasive species and provide tools necessary for boaters and anglers to clean boats and remove vegetation and debris from watercraft at the access.

Many agencies and organizations can expand prevention measures by including access enhancement in their AIS management strategy - prioritizing local containment and sustained management that is direly needed to combat infestations. With increased recreational opportunities available throughout the country, it is critical the public is aware of AIS best management practices and have access to prevention tools.



## Purpose of the guide

Prevention is the strongest and most effective method available to natural resource managers in preventing the spread of AIS. The Clean. Drain. Dry. Best Management Practices (BMPs) supports the behavior of recreational water users to: Clean all boats and equipment, drain all standing water from watercraft and gear, dry all equipment, and properly dispose of any unused bait. While these BMPs are well-known and supported by natural resource managers, there is a substantial gap between public knowledge of prevention and the ability to perform prevention behaviors at the access site.

Many accesses are not equipped with the necessary tools that allow users to comply with AIS regulations and perform the instructed BMPs. Public surveys indicate that the absence of available tools at water access sites is the primary reason recreationists fail to comply with these BMPs.

On-the-ground AIS prevention infrastructure, developed with comprehensive education and outreach, are highly effective forms of public engagement. By enhancing accesses through strategic design, accessible tools, and targeted signage, the public is empowered to act.

The purpose of this guide is to provide natural resource managers with a framework to enhance their water access sites. The following pages dive into the six-step **A.C.C.E.S.S.** process instructing how to implement effective and sustainable water access enhancements.



*Message overload and sign fatigue observed at an access in Minnesota.*



**PART 2 Access Enhancement Protocol****Six Step Process****1 ASSESS****Determine Your Goals & Site Selection Methods.**

Determine a subset of potential access sites for assessment. The sites can be chosen based on a variety of criteria (ie. current AIS infestations, proximity to uninfested waters, volume of access usage, etc.), or can be specifically-focused on uninfested waters threatened by surrounding waterbodies. Overall, it is crucial to determine what selection criteria conforms to the priorities of the resource manager. Ensure a structured, strategic approach to AIS prevention is conducted. If possible, consider referencing a state or federal invasive species

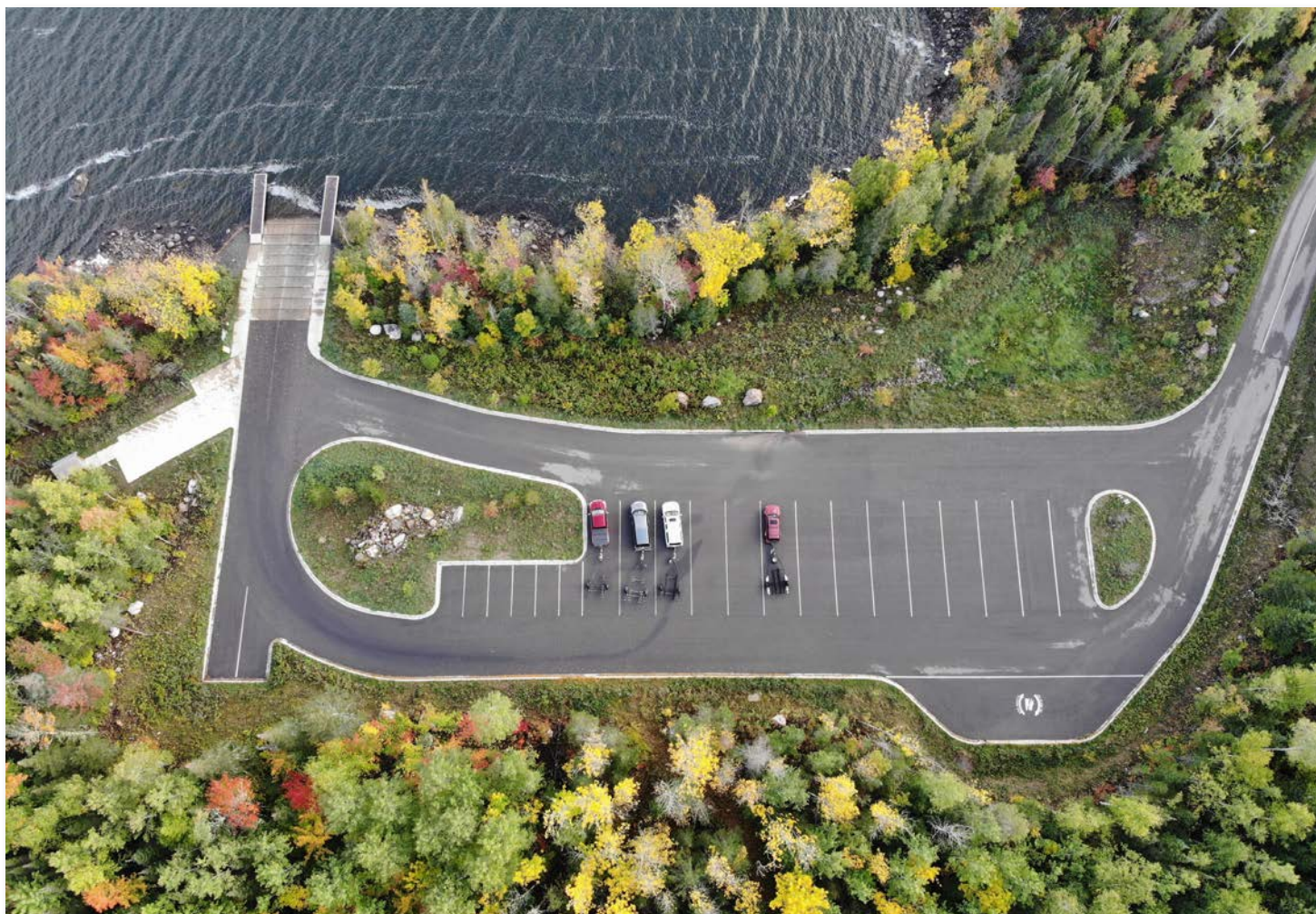
## ASSESS (CONTINUED)

plan to help inform decisions and action items that are feasible for the access. Prior to deploying access enhancement infrastructure, it is vital to determine which accesses meet high-priority criteria. While each access has AIS prevention needs, strategic implementation will allow resources to be efficiently utilized and maximally optimized.

Clearly defined prerequisite criteria allows success to be measured and promotes a site-specific approach to the Access Enhancement Protocol.

### Considerations Prior To Visit:

**1. Size of the access** — Access size plays a critical role in determining how tools and infrastructure will be outfitted for public use. While larger sites can hold more equipment and mediums of messaging, it is critical that ease of navigation and appropriate application of infrastructure is conducted. Smaller sites can be outfitted with appropriately sized equipment that maximizes space and limits impediments to the entrance/exits of the site.





**2. Demographics** —Knowing the userbase of the access is essential. As with any public outreach initiative, messaging and tools should resonate with visitors to facilitate ease of adoption and cooperation with BMPs. Variables include non-English speaking users, recreationist user types (hunting, fishing, nonmotorized use, pleasure boaters, etc.). These factors will all be taken into consideration upon site-specific creation of tools, signage and messaging mediums for deployment.

**3. Access Traffic** — Traffic volume should be considered prior to surveying and deploying infrastructure at the site. There is a lot going on at a busy boat launch. Ensuring enhancements will not impede traffic or risk public safety is top priority. For high-use sites, it may be beneficial to have inspectors engage and educate the public by demonstrating the tools provided at the site. It is also crucial to consider the form of recreation primarily taking place at the site (hunting, angling, water sports, kayaking, canoeing, etc.). to determine the seasons of increased traffic.

**4. Current AIS infestations/proximity to other infested waters** — Across states and regions, certain invasive species are of particular concern. It is necessary to take this into consideration for the purpose of appropriate deployment of tools and signage that correlates with the species prevalent. It is also beneficial to examine the spread severity and existing AIS infestations within proximity to the site chosen for enhancement.

## 2 COORDINATE

### Identify Partners and Administrators of the site.

Water accesses often have differing ownership or shared management. Coordination with multiple agencies may be a necessity. It is essential to network with local managers and communicate with involved partners prior to the site evaluation and implementation. Having proper points of contact allows for timely turnaround while increasing efficiency during the evaluation and implementation process.



# 3 COMMUNICATE

## Empower Public Use.

**Access design:** Ensuring recreationists comply with signage, use available tools, and adhere to Clean. Drain. Dry. best practices depends on a multitude of metrics and analyses of the site itself. Variables to consider in determining site-specific education includes the following:

**Signage:** Modern, colorful, aesthetically pleasing, while displaying useful information (e.g., fish species present, local ordinances, lake maps, park information, etc.).

**Cohesion:** Current signage at the site may be disjointed, creating “sign fatigue”. Fragmented messaging will detract attention and have little meaningful effect on public adoption and adherence to local ordinances. Modern, colorful, and aesthetically pleasing signage with consistent and direct information, will help facilitate user adoption of best practices.

### HELP STOP INVASIVE SPECIES!

**WHAT'S THE PROBLEM**  
Aquatic invasive species cause tremendous harm to our environment, our economy, and our health. They can outcompete and devour our native plants and wildlife, spread diseases, decrease recreational opportunities, and damage infrastructure.

**HOW YOU CAN HELP**  
Before transporting your boat, trailer and gear to another waterbody, remember to **Clean, Drain, and Dry** everytime. The cleaning station provided here makes it easy!

Take the pledge and learn more at [www.CleanDrainDry.org](http://www.CleanDrainDry.org)

**European Frogbit**  
(*Hydrocharis morsus-ranae*)

- IMPACTS**  
Forms dense mats that impede boat traffic and degrade habitat for ducks and fish.
- IDENTIFICATION**  
Heart-shaped leaves with a single white flower. Found free floating or rooted in shallow water.
- HOW IT'S SPREAD**  
Attaches to boats, trailers, and recreational gear.

**Eurasian Watermilfoil**  
(*Myriophyllum spicatum*)

- IMPACTS**  
Shades-out native plants and impedes recreational activities.
- IDENTIFICATION**  
Finely divided leaflets give the plant a feathery appearance. Usually found in 3-10' water depths.
- HOW IT'S SPREAD**  
Attaches to boats, trailers, and recreational gear.

**Phragmites**  
(*Phragmites australis*)

- IMPACTS**  
Forms impenetrable stands, obstructs views, and increases wildfire risk.
- IDENTIFICATION**  
Grows 6-13' tall with a rigid hollow stem. Found in wetlands, ditches, streams and pond banks.
- HOW IT'S SPREAD**  
Seed spread by wind and recreational equipment.



## 4 EVALUATE

### Visit the site and survey the needs.

Wildlife Forever's Access Evaluation Protocol involves a comprehensive data analysis and collection process that utilizes aerial and on-the-ground photographs to reference and aid in tool deployment prescriptions.

To ensure a thorough review perspective, consulting with local land managers is important. Images of all signage, boat ramps, trailered and non-trailered parking spaces, and all AIS prevention tools, and trash receptacles are captured and cataloged. Prioritizing key messages for recreational users is important to avoid sign fatigue and confusion with other boating and conservation messages.

Through the evaluation process, priority user groups are identified, and cohesive messages are designed that resonate with the audience. Because of the great variability in access types, **unique site traits** such as flooding, seasonal access, and vandalism occurrence, are evaluated and considered when providing enhancement recommendations.

Consolidating signage and referencing onsite photos and interviews with land managers aids in prioritizing key messages. Through modern marketing and graphic design, use of images, and simple text to guide best practices allows for signs to be easily and quickly understood. Current QR code and App technology also allows simple signs to act as AIS reporting mechanisms, links to fishing permits, lake maps, etc.





## 5 SUPPLY

### Equip the access with AIS prevention tools.

- Educational/informational kiosks
- Signage and messaging catered to user groups – because of sign fatigue, consider only erecting targeted signage during the times of year that it is needed – waterfowl hunting signage, for example.
- Boat wash/cleaning stations (placement and sizing in accordance with States Organization For Boating Access, SOBA 2015 Publication)
- Tools for weed removal – diagrams to demonstrate purpose and use for specific tool types
  - Scrapers, sponges, pick tools, plug wrenches
  - Trash and bait disposal
  - Fishing line and soft plastics receptacle
  - Lead recycling



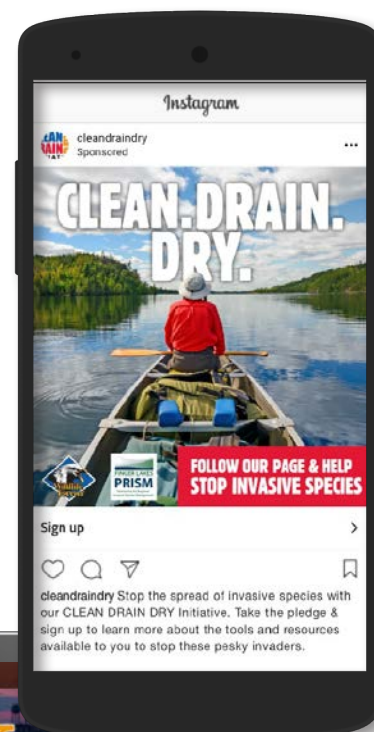
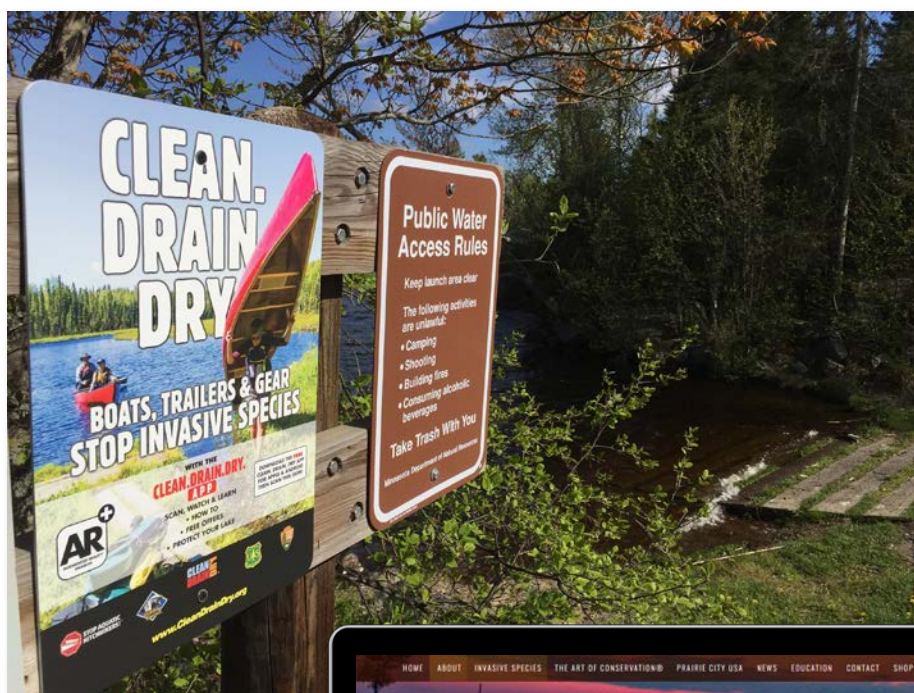
Studies have shown a cause for non-compliance with Clean Drain Dry prevention is the lack of tools.



## 6 STANDARDIZE

### Adopt consistent AIS prevention strategies.

- Consistent messaging across accesses and media types in the area.
- Make sure the public is aware of the enhancements, that the tools are free, and that they can use them to prevent AIS spread.
- Empower the public, view them as a solution to protect the resource. Positive reinforcement builds public trust.
- Maintain simple, easily adoptable messaging strategies across multiple platforms of outreach (Billboards, social media ads, signs, boat ramp stencils, buoys, kiosks, print ads, brochures, etc.)





## PART 3 Case Study

### Black Bayou National Wildlife Refuge: Monroe, LA — Access Enhancement



#### Existing Site Features

- A** Reserved Parking Spaces
- B** Trailered boat launch (50 hp max)
- C** Canoe/kayak launch
- D** Walking pier parking lot

#### Recommendations

- 1** Install watercraft cleaning station near exit to promote outbound use without impeding inbound traffic.
- 2** Install stencil and buoy
- 3** Install enhanced signage with cohesive messaging

## Black Bayou National Wildlife Refuge

The Black Bayou NWR provides a wide array of recreational opportunities for the public to enjoy including hiking, biking, boating, fishing, hunting, birdwatching, wildlife photography and more. These exceptional opportunities also present challenges in terms of managing the impacts people have on the resource. Invasive species are one of those many challenges. While a handful of invasives have already found their way in, more will continue to present risks to the ecosystems, aesthetics, and recreational opportunities at the refuge and surrounding natural areas. Fortunately, we can lower the magnitude of this risk by properly educating and engaging the unique recreational visitors the refuge attracts on their role in combatting the spread.



### Access Enhancements

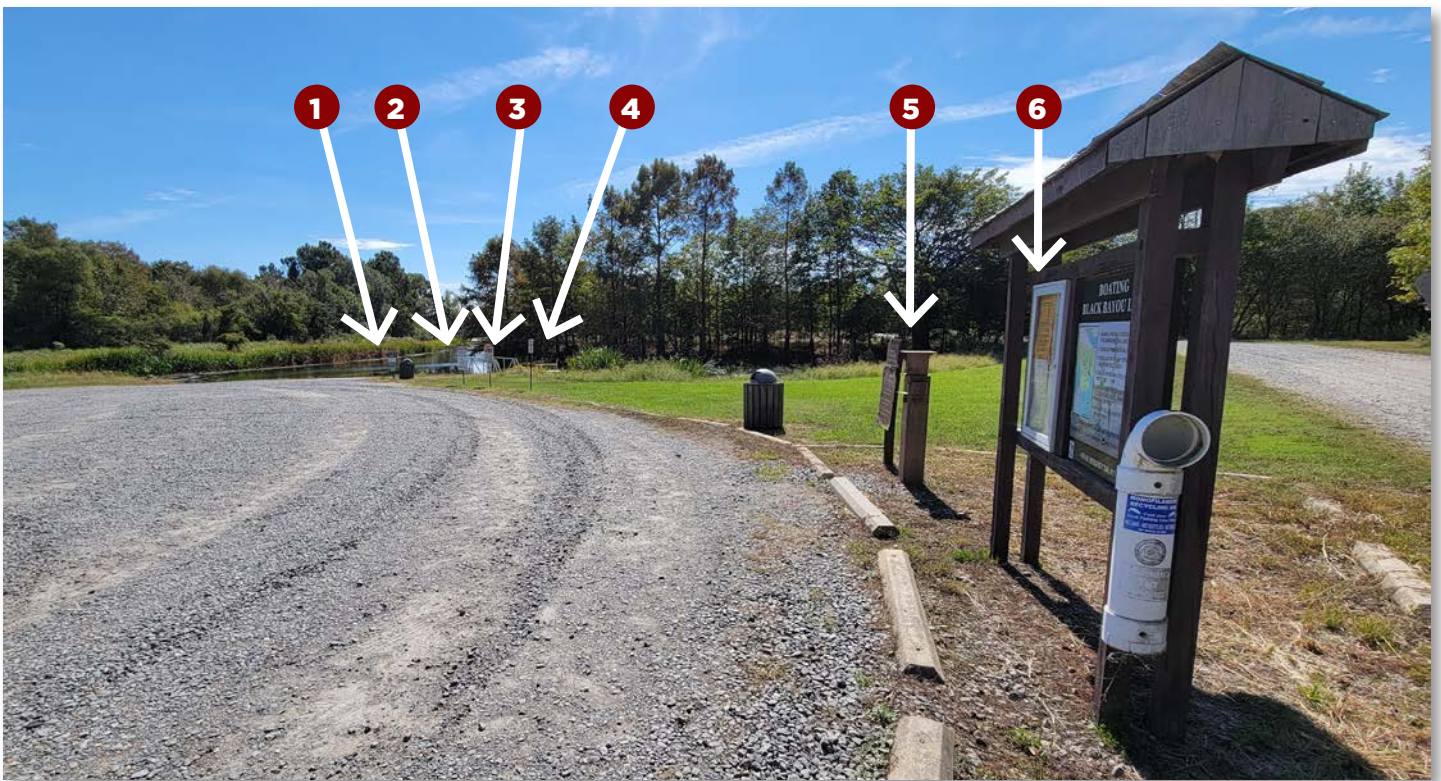
The greatest opportunities for improved AIS prevention are through enhanced infrastructure and resources at the Black Bayou Lake watercraft access site. Black Bayou Lake is in an area of high risk due to existing invasive species infestations of alligator weed, giant salvinia, water hyacinth, and Cuban bullrush. Additionally, because of its proximity to the city of Monroe, it receives the largest annual influx of visitors relative to the other access sites selected. Due to the popularity of the access site, the large volume of traffic departing from Black Bayou Lake poses a significant risk to neighboring water bodies. The amount of outbound traffic from this area increases the probability of spreading invasive species to neighboring water bodies, therefore AIS prevention infrastructure is essential to ensure containment of AIS and reduce the risk of spread in this region.

### Signage

Signage is the first step to ensure users receive AIS prevention messaging at the access sites. Create new, enhanced signage at the access site that is clear and cohesive. Currently, the amount of signage, as well as current signage design and placement, may leave recreationists overwhelmed. The recommendation is to select a sub-set of the current signage and improve messaging, placement, and design of each to ensure users are not overwhelmed by excessive sources of information. Wildlife Forever will design and recommend new signage options and include placement suggestions to increase message efficacy among members of the public.

Enhancing signage at the access site will (1) clearly inform recreationists about the current threat of AIS at Black Bayou and (2) ensure recreationists are aware of the AIS prevention resources provided by refuge staff so they may successfully perform BMP's. Communicate this information by ensuring current signage is clear, cohesive, and strategically placed.





Current signage at the Refuge's public water access



Recommended signage enhancement to provide cohesive and centralized messaging



## Demographics & Corresponding AIS Tool Deployment

Following the site survey, data showed that most recreationists that visit Black Bayou Lake are over the age of 50. Due to the older user demographic, providing tools is critical to ensure that primary user types are equipped to adequately remove vegetation and debris from their watercraft and trailer. It is essential to consider the average user's ability to perform clean, drain, dry behaviors. Older demographics are often physically hindered, if not completely unable to reach certain areas of their boat or boat trailer unassisted. Furthermore, if users are not provided with tools to address these issues, they are less likely to successfully perform AIS prevention behaviors.



*Watercraft cleaning Station Installed to empower boaters to Clean. Drain. and Dry.*

CD3 watercraft cleaning systems are solar-powered cleaning infrastructure installed at boat ramps that combine on-site tools, education, and technology to monitor use and functionality while showing a return on investment. CD3 Systems combine self-service cleaning resources to empower boaters to execute BMPs:

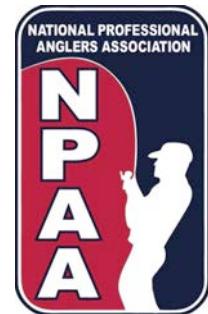
- Clean: marine brush, vacuum, reach tool
- Drain: plug wrench (to remove boat plug)
- Dry: blower
- Low light conditions: marine LED lights



## Acknowledgements and Support

The development of the Access Enhancement Guidebook would not have been possible without the funding and support from our partners and stakeholders.

**Thank you to our partners!**



## Summary

Aquatic Invasive Species Prevention Infrastructure Enhancements are essential to shielding uninfested waterbodies from infestations and containing invasive species where already present. By providing on-the-ground AIS prevention infrastructure, access sites holistically educate and empower the public to adopt and standardize best management practices.

While every access has a multitude of unique variables, site-specific considerations allow each access to be individually retrofitted with appropriate infrastructure to enhance public user experience and AIS preventive action capabilities.

## About Wildlife Forever

Wildlife Forever is a 501(c)(3) non-profit organization dedicated to serving America's wildlife heritage through conservation education, preservation of habitat, and management of fish and wildlife. For over 15 years, Wildlife Forever has served as the national leader of the Clean Drain Dry Initiative, a national campaign to educate outdoor recreational users on how to prevent the spread of invasive species. To learn more, visit [www.CleanDrainDry.org](http://www.CleanDrainDry.org).

**Wildlife Forever stands ready to assist in the Access Enhancement process and conduct site-specific prescriptions. Contact us at email [info@wildlife forever.org](mailto:info@wildlife forever.org) or call 763-253-0222.**

