



Empowering AIS Prevention Behaviors

Online Boater Led Check-In/Check-Out Alternative to In-Person Inspections:

A COVID-19 Response Pilot



- Problem: Aquatic Invasive Species (AIS)
- Problem: COVID
- Behavioral Science
- Site Design + Standards
- Check-In, Check-Out Web Hub Pilot



**INVASIVE SPECIES
COST THE US ECONOMY
\$146+
BILLION/YEAR**

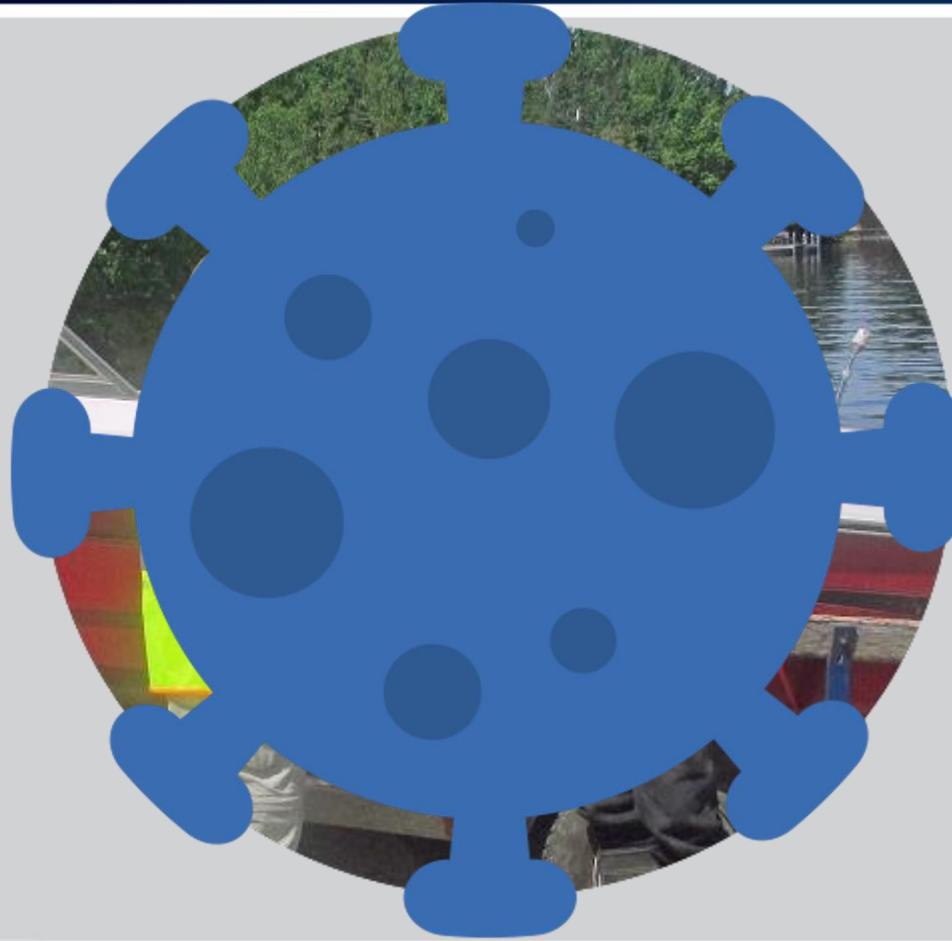


BOATERS NEED TOOLS



**EXISTING SOLUTIONS
ARE COSTLY AND
CANNOT SCALE**

Problem: 2020/2021

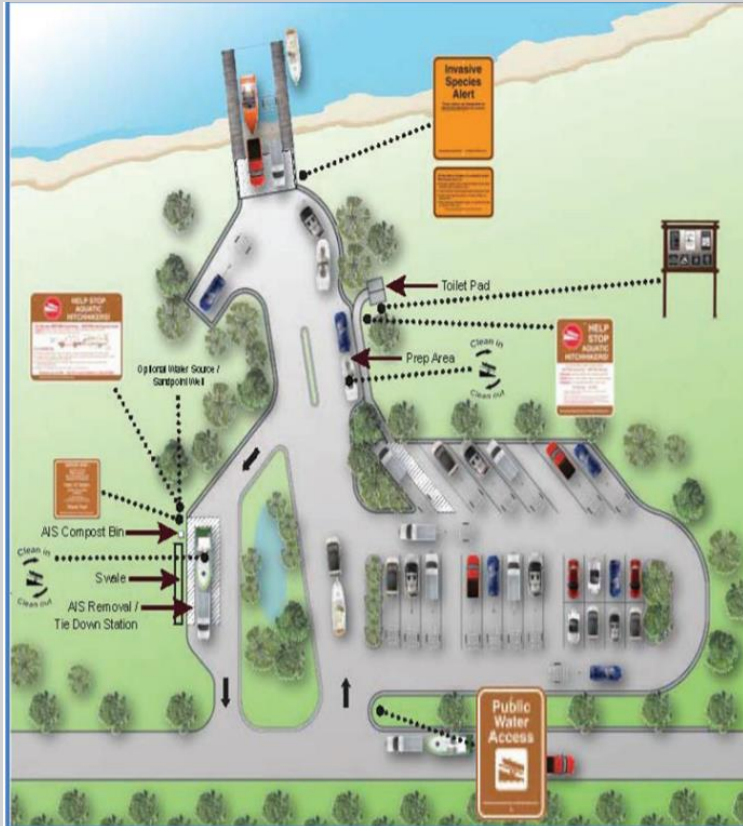


Behavioral Science



Dayboaters FAIL to take action

Installations



- Designate: “clean-in/out” area
- Small or large access



Design Guidelines

Waterless Cleaning Systems





CD³ Systems Overview



**INTERNET
CONNECTED**

**TETHERED
TOOLS**

**AIR
BLOWER**

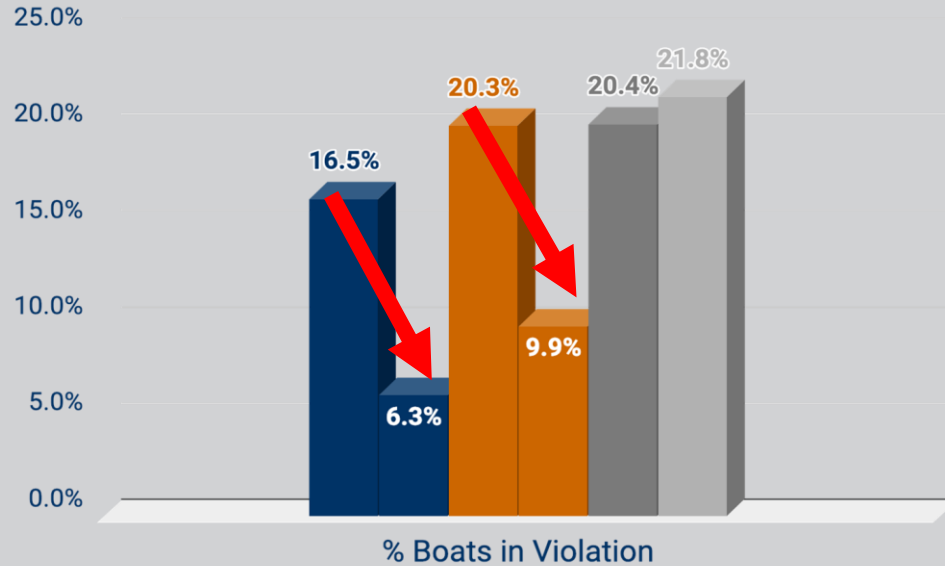
**TOP/BOTTOM
LED LIGHTS**

**OFF-GRID
SOLAR POWER**

**EDUCATIONAL
KIOSK AND
DECALS**

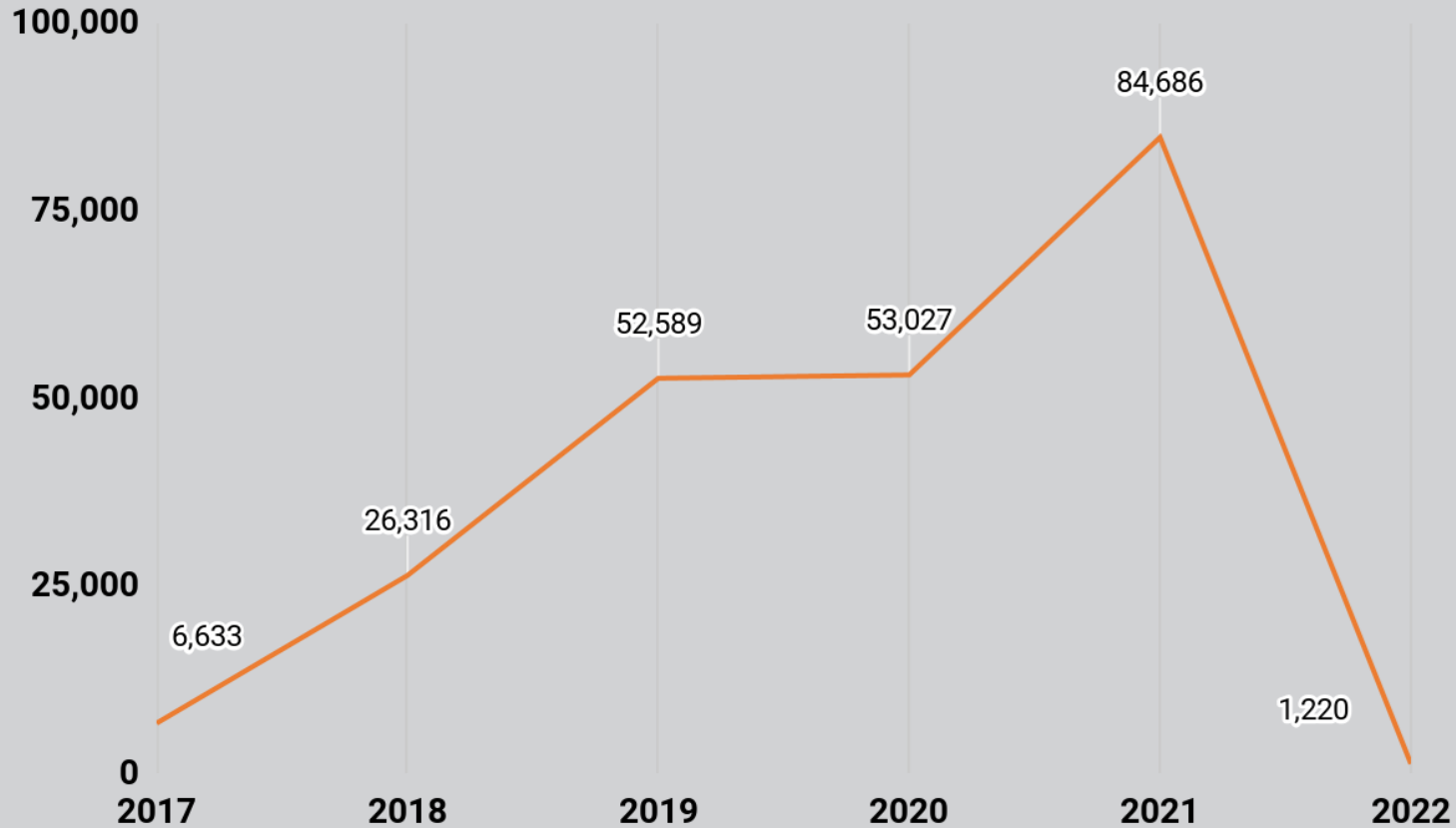
**WET/DRY
VACUUM**

Violations Decrease...BUT



**CD³ SYSTEMS FACILITATE A
70% DECREASE
IN AIS VIOLATIONS**

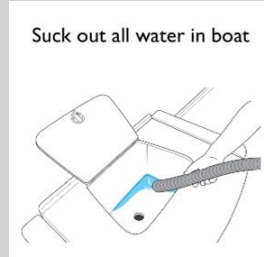
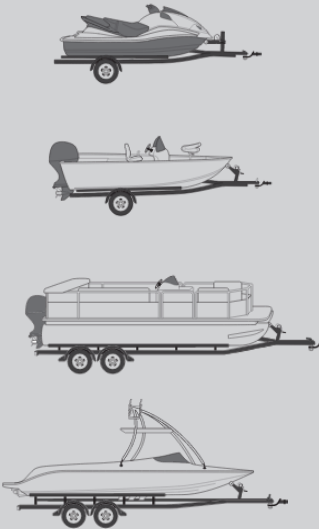
Number of Actions Taken by Year



- **Overcome behavioral barriers**
- **Use a social contract**
- **Ultimately:**
 - Decrease the spread of AIS
 - Increase compliance with AIS regulations
 - Increase use of available tools



Check-In, Check-Out Web Hub (CBMS)



- Custom designed
- Scaleable
- Social contract
- Incentive programs



Site Specific Instructions

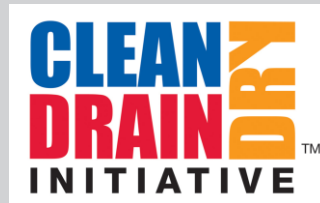


Instructions based upon site-specific tools

Signage & Pavement Markers

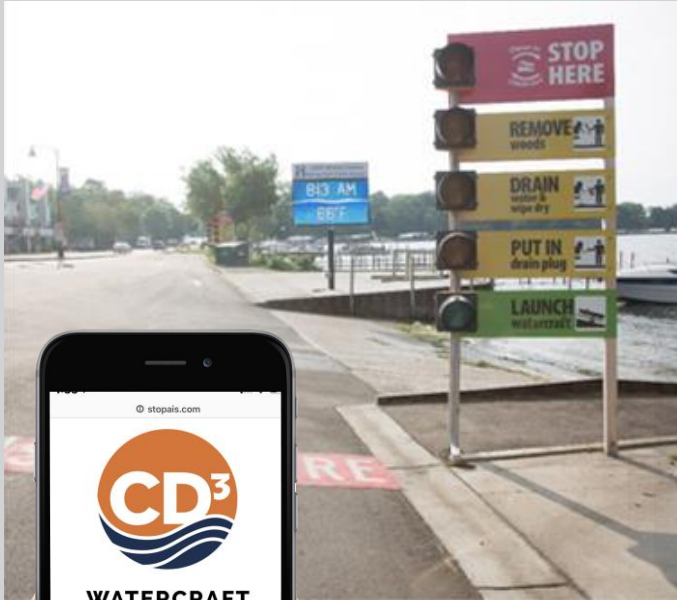


- Pictures over words
- Action over education
- Delineate action area
- People follow lines



*Use regional
standard messages*

Inbound Watercraft



- Focus on “get ready” areas
- Simple call to action
- Delineate cleaning space



Equipment & Software

- Check-In, Check-Out Web Hub
- CD3 Roadside

Roadside

Outbound Watercraft



- “Containment” strategy
- Within 150' of launch
- Direct with arrows
- Educational kiosk exterior



Equipment & Software

- Check-In, Check-Out Web Hub
- All models

CICO: Ramsey County Case Study



- 177 web app uses
- 88 commitments to future action
- Provide an incentive
- Have more obvious signage
- Change message to “Check In Check Out”
- Mandate?



Future: Unique Identifiers



Boat Number

Zip Code

Vehicle Licence



Web based hosting

Is it enforceable?

What do you fine?

Who does the checking?

End Results:



Empowering the public to take ACTION

Questions?



Ed Rudberg
CEO

Ed@cd3systems.com

612-414-0961

www.cd3systems.com