



National Early Detection and Rapid Response Framework Implementation

Informational Briefing

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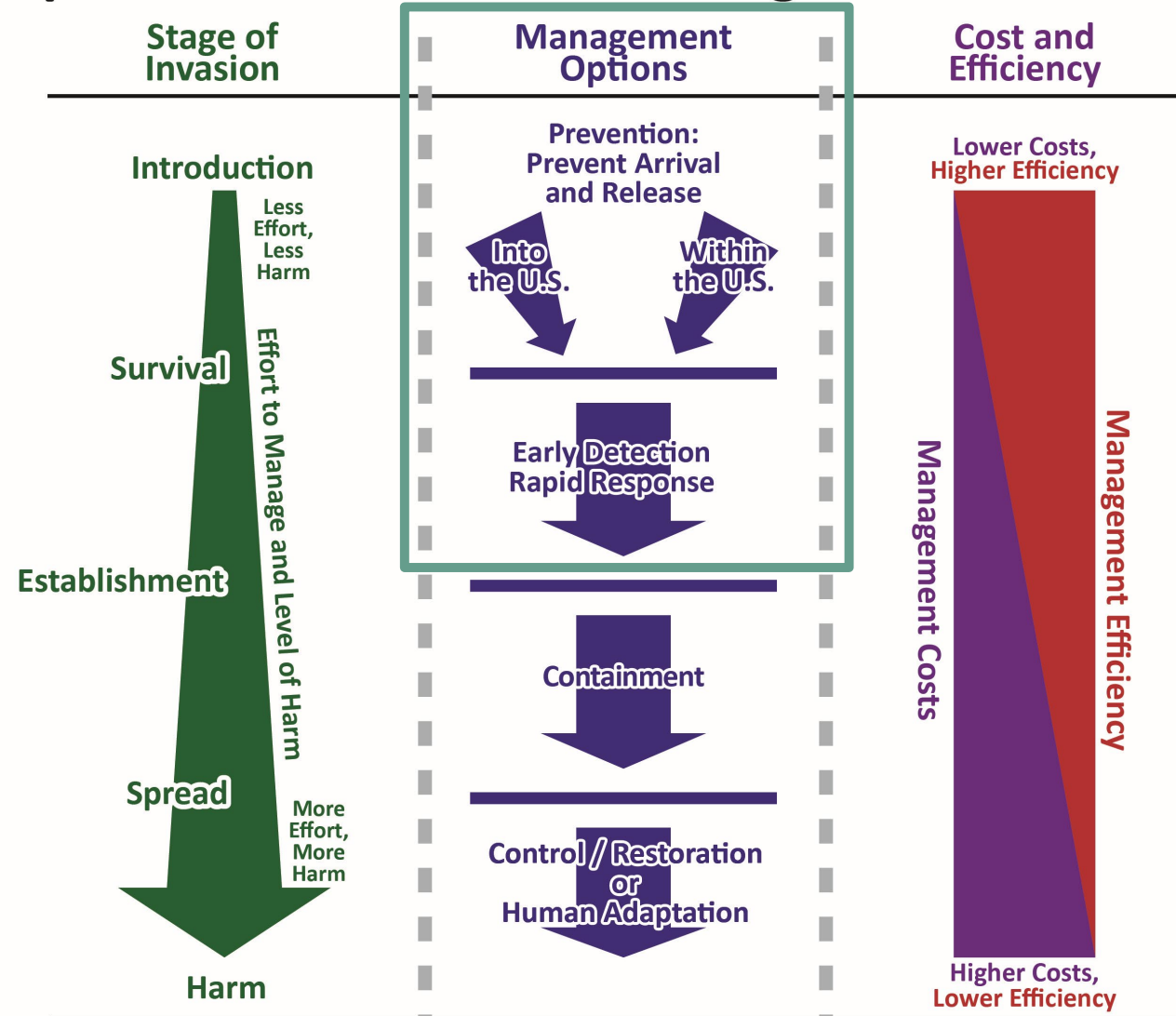
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DOI INVASIVE SPECIES TASK FORCE

Aspects of the Invasion Management Process



Adapted from Lodge et. al. 2006

Graphic by Don MacLean, USFWS
June 2012

Considering the Invasion and Management model on a national basis

“Action must be taken to quickly detect and intercept nonnative species at points of entry. This response largely falls to the Federal Government”
(Simberloff et al. 2020)

Administration & Congressional interest for a coordinated EDRR Framework in the United States

President's Budget Request: FY23

\$2.6M Pilot Rapid Response Fund

- Recognizes that early detection and rapid response frameworks are a priority and provide a cost-effective approach to invasive species management.
- Establish a pilot Aquatic Invasive Species Rapid Response Fund.
 - ✓ Coordinated through the Aquatic Nuisance Species Task Force.
 - ✓ Interjurisdictional response team(s).

Bipartisan Infrastructure Law funding: FY22-FY26

\$100M for invasive species prevention, detection, and eradication.

- Opportunities for development and implementation of a National EDRR Framework.

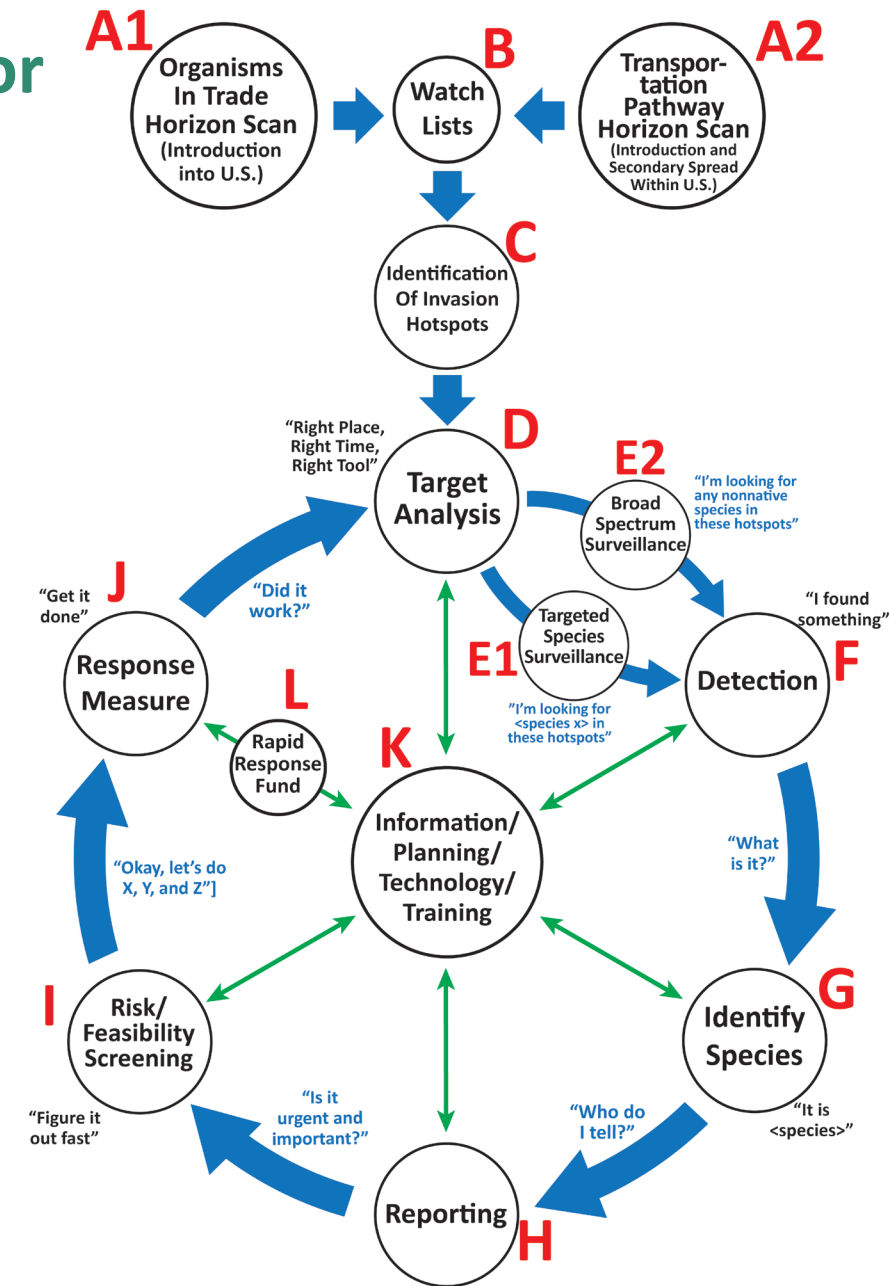
DOI invasive species priorities

“3 in 3 for the WIN: Wildfire, Islands, and a National EDRR Framework”

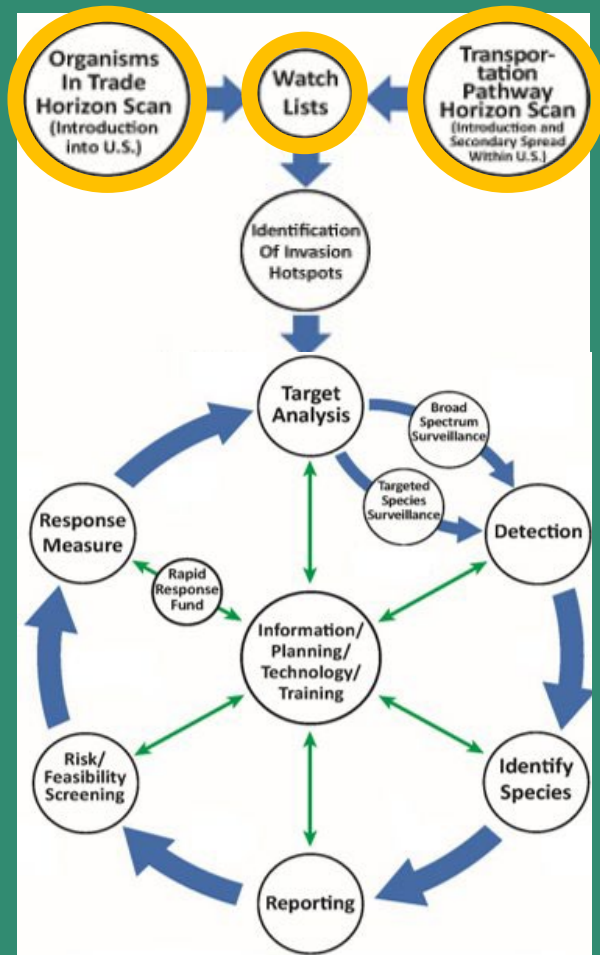
- DOI's Executive Leadership affirmed their support for “3 in 3 for the WIN,” an effort to advance 3 signature invasive species initiatives in 3 years.

Projects to Develop the Institutional Architecture for a National EDRR Framework in FY22

- Horizon scans (A1, A2) to develop Watch Lists (B)
- Hot spot analyses (C)
- Molecular detection tools at points of entry (E, F, G)
- Genetic material repository and network (E, F, G)
- Natural resource manager's eDNA toolbox (D-K)
- READI-Net – eDNA surveillance network (D-K)
- Invasive species habitat tool – terrestrial plant forecasting (D, E, F, K)
- National EDRR information system (K)



Conduct Horizon Scans

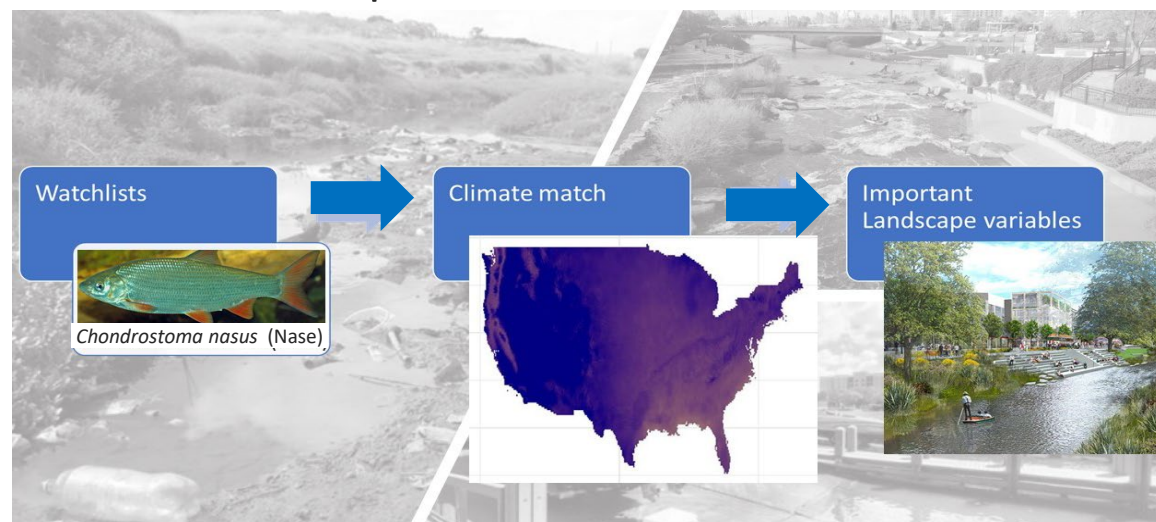


Consider potentially invasive species not yet found in the US:



Watch Lists!

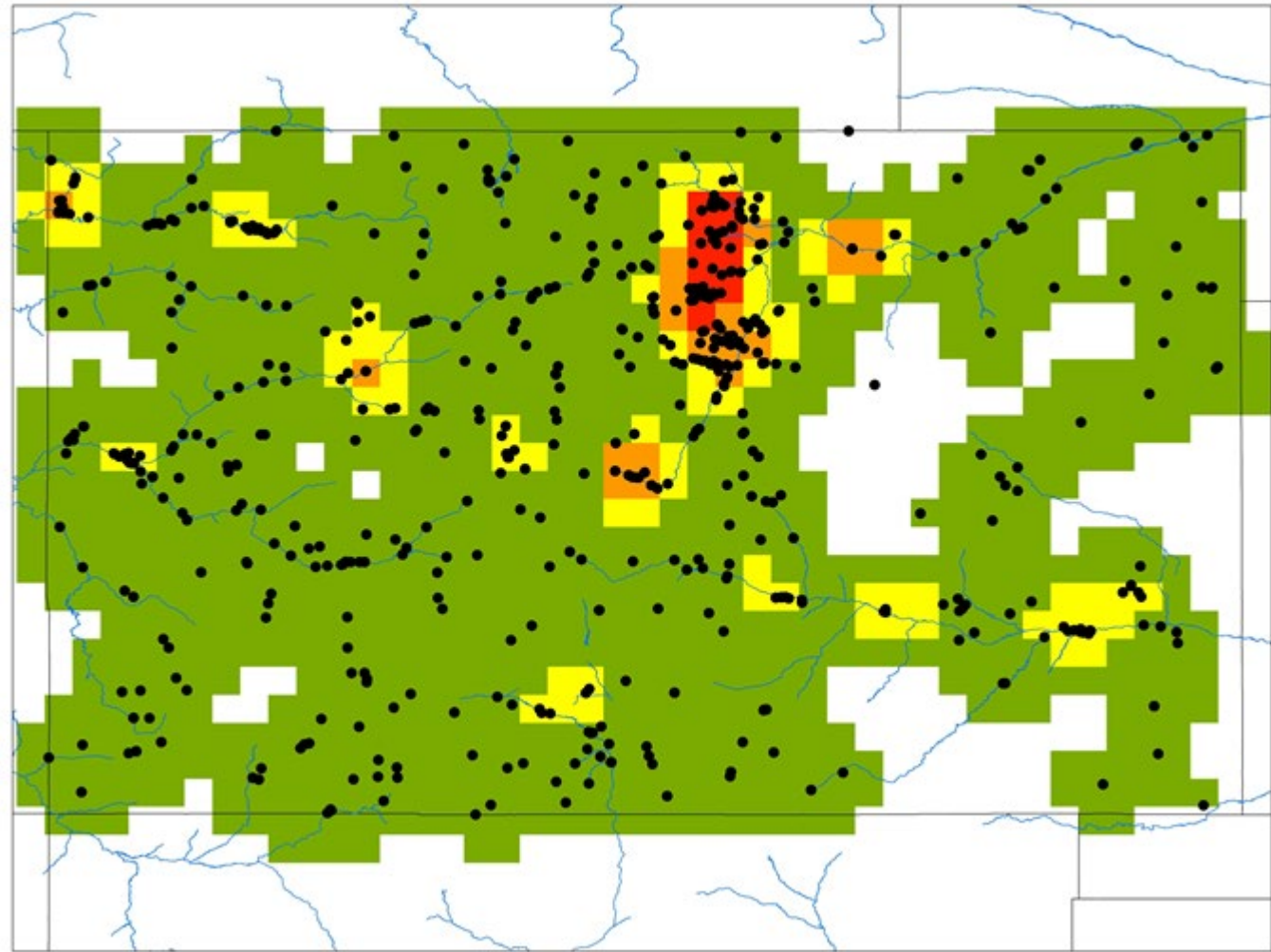
Determine extent of potential habitat in the US:



Conduct Hot Spot Analyses



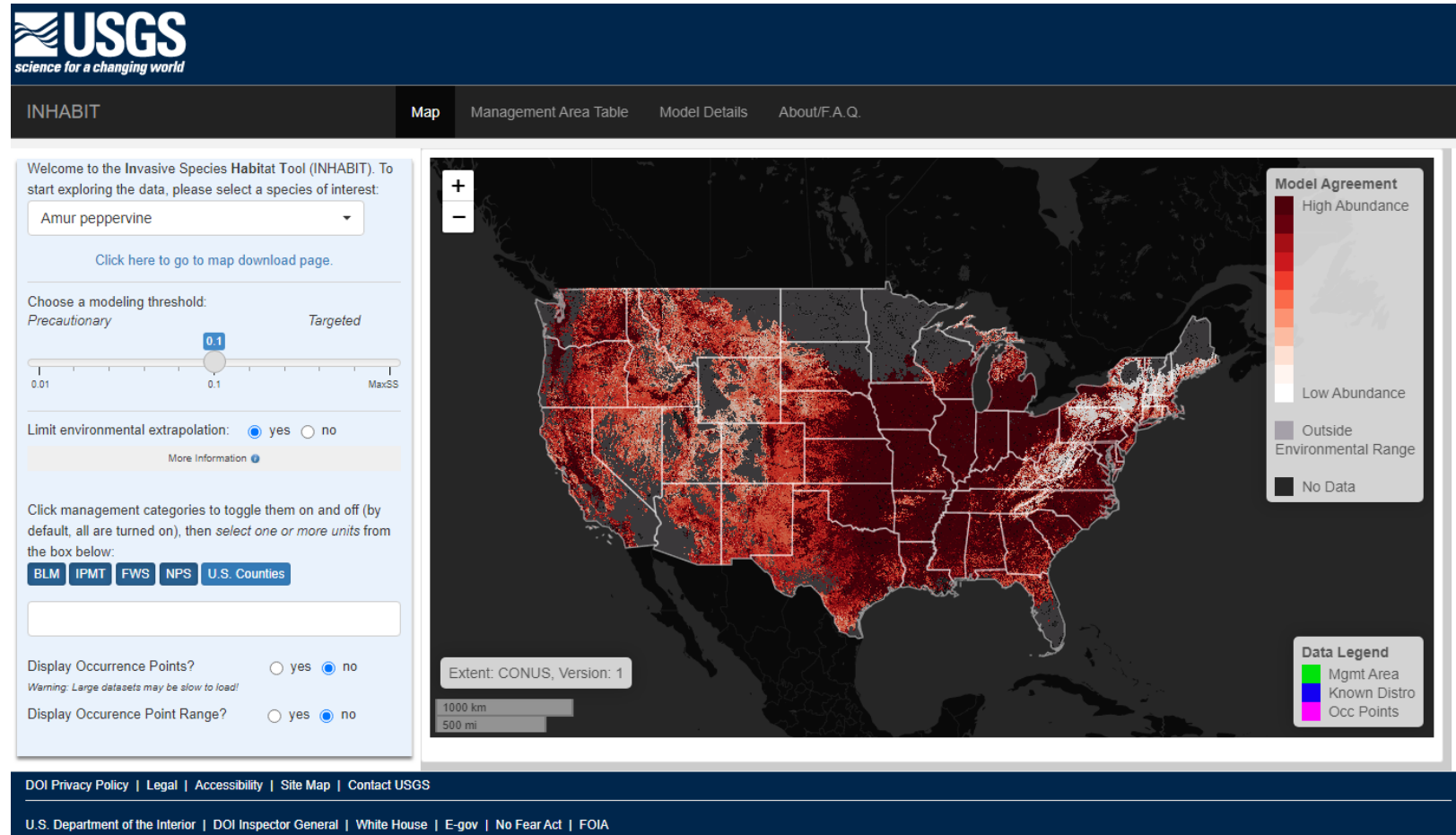
Established AIS Hot Spots in Colorado



Increase EDRR Capacity for Terrestrial Plants

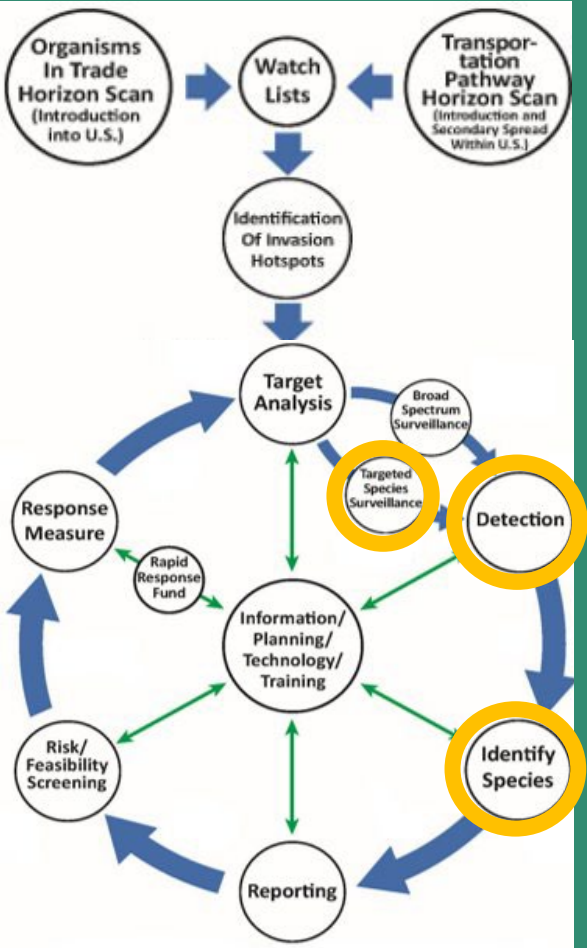


Invasive Species Habitat Tool (INHABIT)

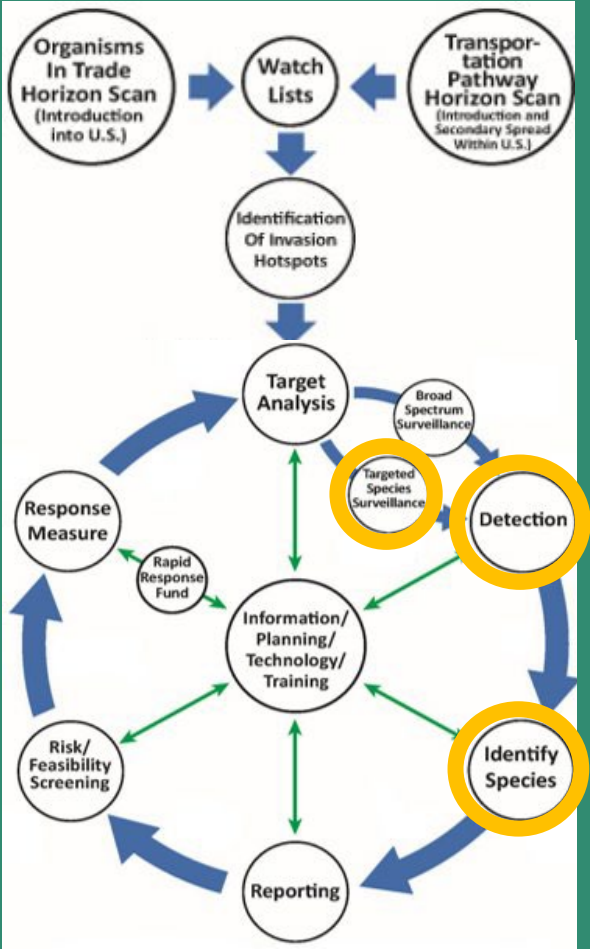


- Predicting species **abundance** not just suitability of invasive species.
- Including watchlist species that are **not yet known to occur** in the U.S.

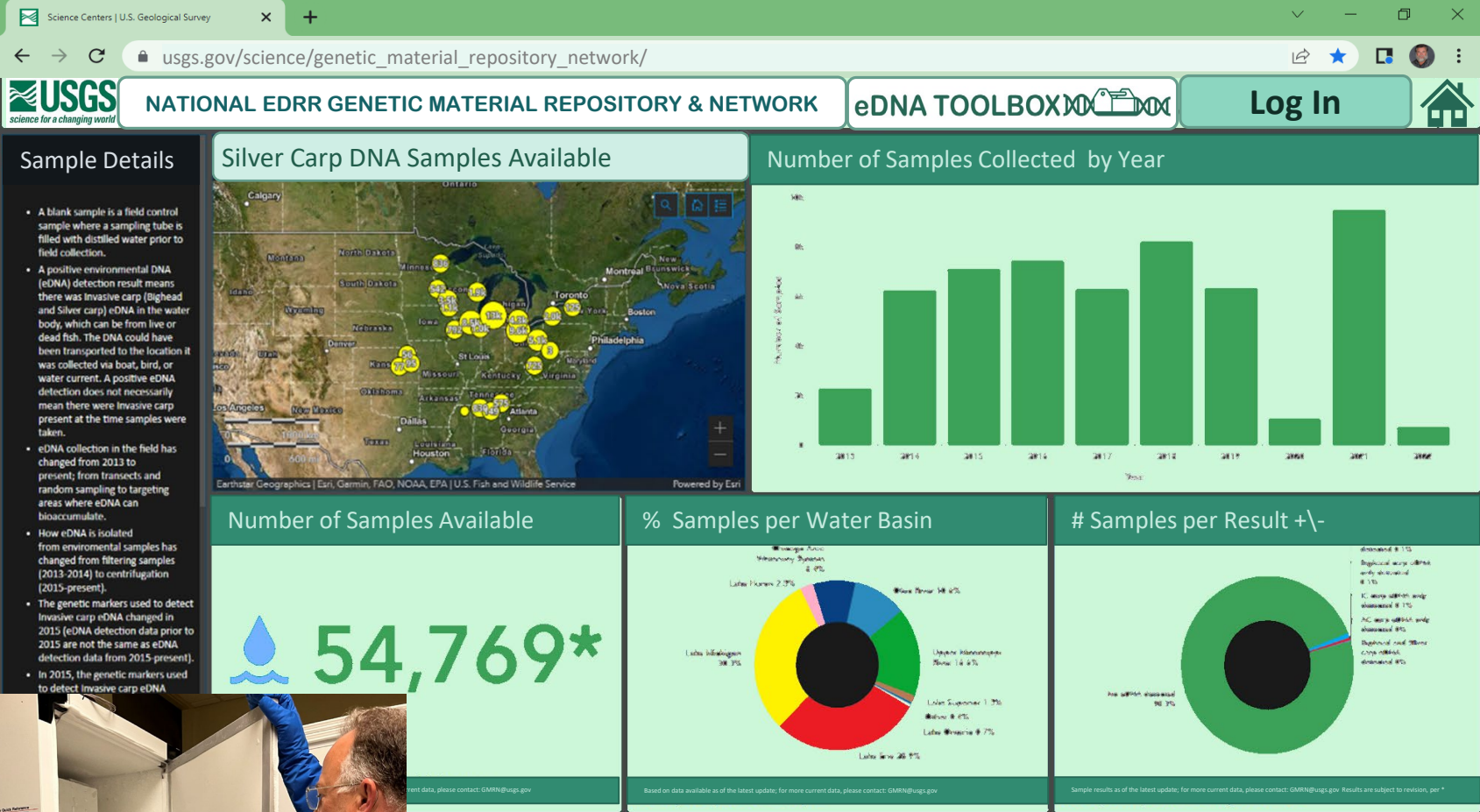
Develop Molecular Detection Tools at Points of Entry



Develop Genetic Material Repository & Sharing Network



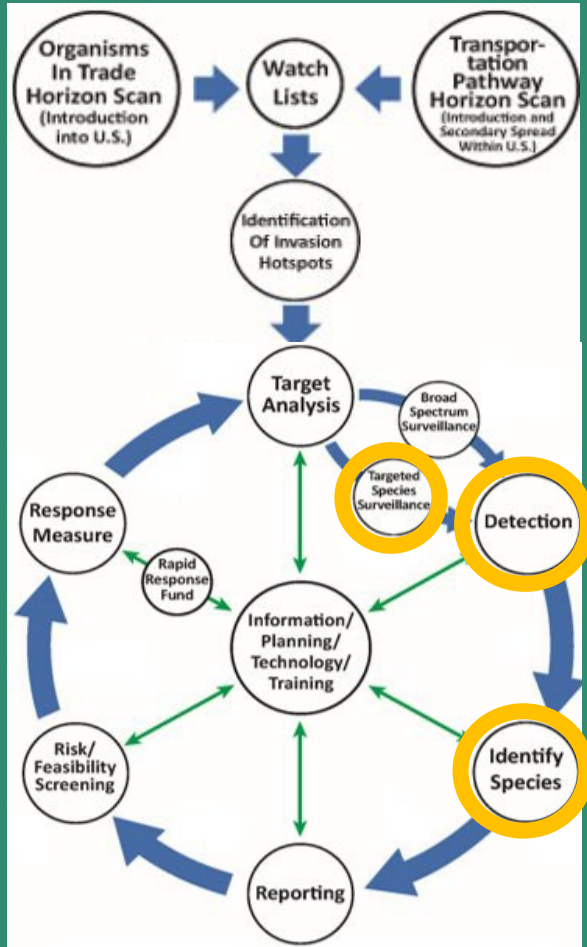
EDRR Framework Institutional Architecture



Mock-up

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Develop Manager's eDNA Toolbox



usgs.gov/science/edna-toolbox/

USGS
science for a changing world

eDNA TOOLBOX

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Tool Type: Native/Invasive: Taxa: Region: Keyword: Search

Filter by:

Collections

Add Collection Delete

Collection Name Search Clear

ID	Name	Status	Last Updated	Queries	Documents	Language	Actions
3	csv	●	26 Jul 2019 07:31:42 UTC	5	24	English	Index Clear Search
2	mongo	●	26 Jul 2019 07:42:42 UTC	6	24	English	Index Clear Search
1	mysql	●	26 Jul 2019				

Map showing collection locations across North America.

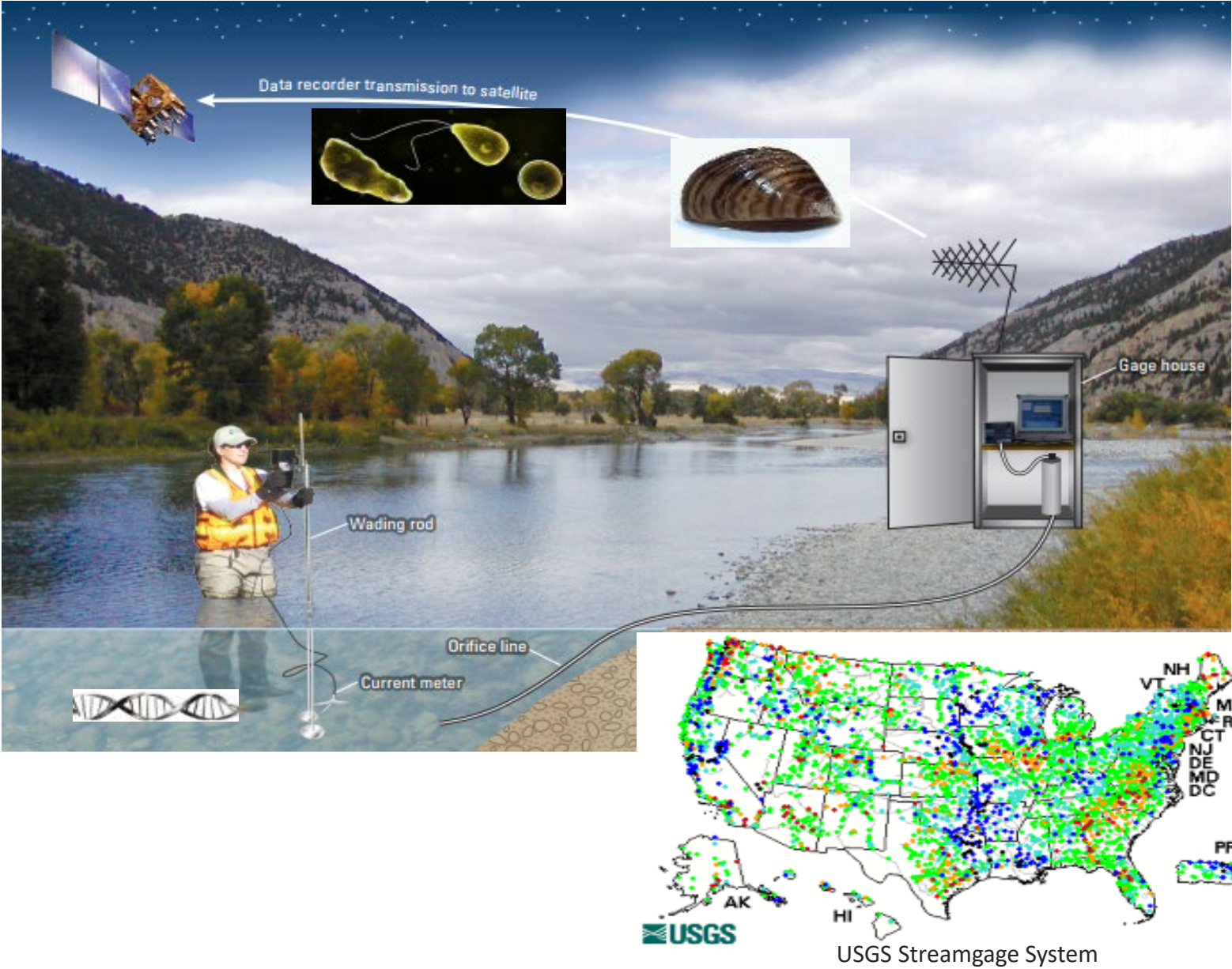
Mock-up

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Develop Rapid eDNA Assessment & Deployment Initiative Network

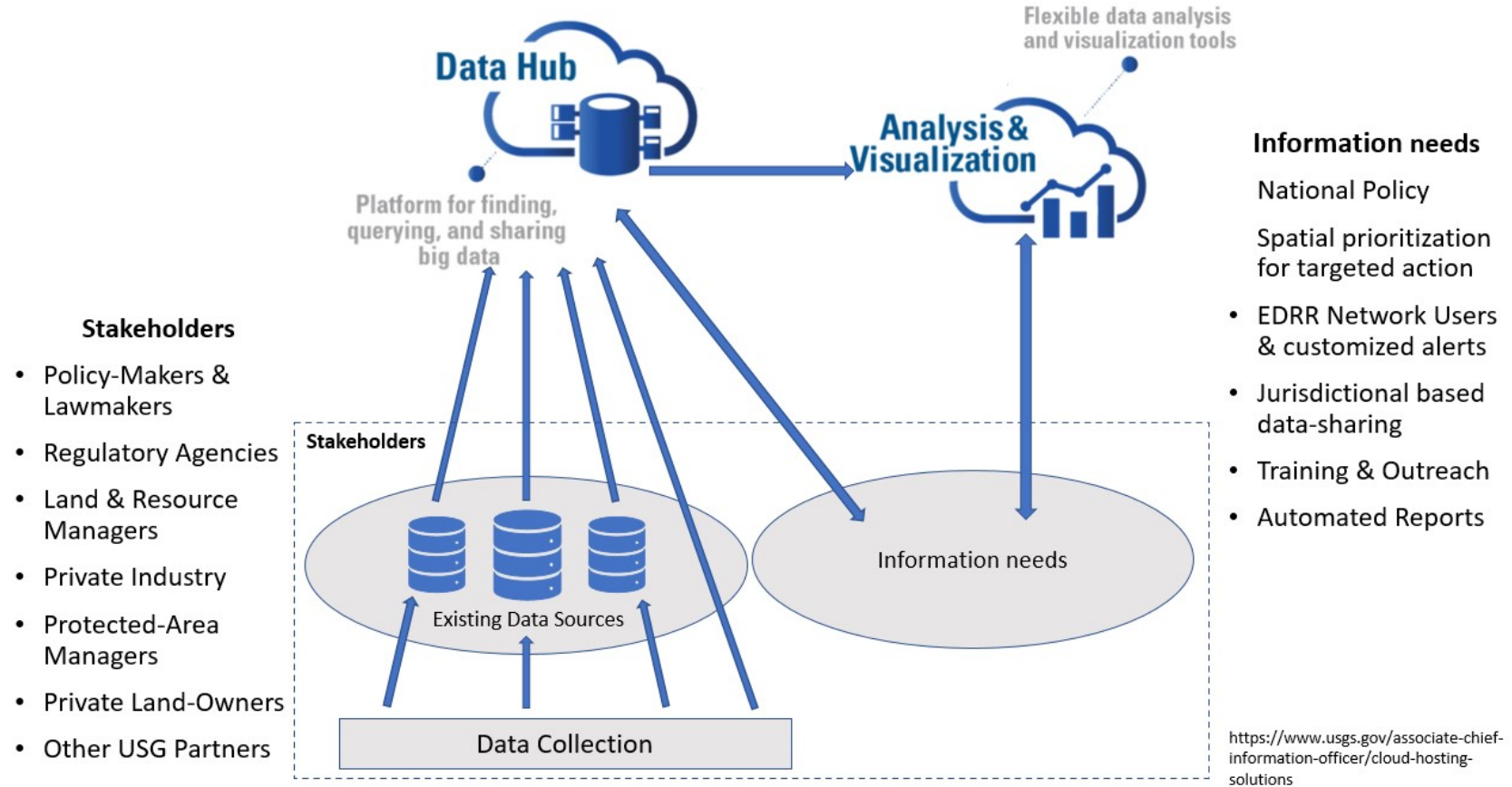


USGS Streamgage System

Develop National EDRR Information System



National EDRR Information System



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Next Steps and Discussion

- Socialize National EDRR Framework internally and externally
- Support FY23 President's Budget Request for Rapid Response Fund
- Prioritize strategic investments in the National EDRR Framework for Bipartisan Infrastructure Law FY23
- Build support for using and/or increasing base appropriations to sustain National EDRR Framework implementation in FY23 and beyond