Zebra/Quagga Mussel Management Decision Guidance

ISLT
INVASIVE SPECIES LEADERSHIP TEAM

Prevention
Diligent surveys & awareness. Most cost-effective

Routine surveys

Dreissena spp.* Detected

Report, Coordinate, Quarantine

Verify ID & Survey extent

Determine Response

Early Detection Rapid Response (EDRR)

Developing a **full rapid response plan prior to detection is strongly recommended.*

Outreach & Education

Notify field personnel, local agencies, USACE ISLT

Document infestation (EDDMapS, iNaturalist, USGS NAS)

Local coordination of quarantine/response effort.

Considerations

- Treatment contact time/water exchange ***Key factor*** → Waterbody: Size, depth, flow
- Scope/Extent of invasion: Source, Risk
- Post-treatment shell removal
- Major = **Contain** & **Manage** → Infestation extent
- Minor = **Eradication** feasible
- Accessibility, de-watering, points of entry → Piping/infrastructure; Open water, natural substrates → Infestation location
- Treatment timing, efficacy, & non-target effects → Life stage, spawning, persistence; Temperature, turbidity, water chemistry (Calcium, pH, etc.) → Region: climate, water quality
- Treatment restrictions ← Permitting, NEPA, etc. ← Potable water, irrigation, recreation, T&E species, etc. → Water uses
- ERDC: WOTS, USGS Siren, State Partners, ANSTF Rapid Response funds ← *possible resources* ← Funding? Personnel? Partners? → Costs and Capacity

Set management goal
How much infestation is tolerable?

Eradication
Treat early, survey often, repeat.

Containment
Limit spread. Survey often.Treat new areas.

Long-term Mgmt
Protect key resources. Reduce population.

Develop management plan
Includes: Pre/Post treatment monitoring, adaptive management, IPM, & continual surveys

Denotes link to recommended tools & additional resources.

Note: This graphic serves as a guide and starting point for initiating a management plan. While every effort was made to include all relevant factors, it may not cover all considerations for every ecosystem.