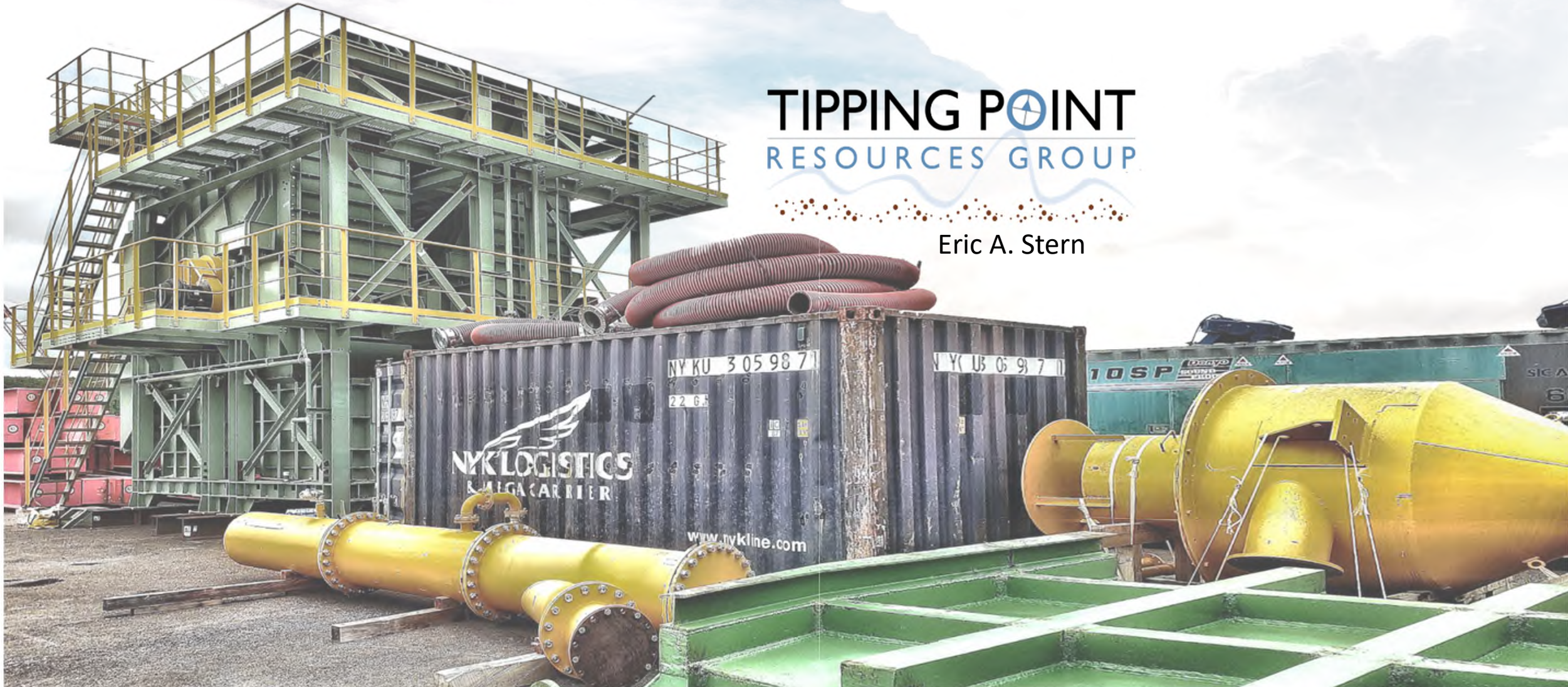


SMWG Contaminated Sediments Beneficial Use Workshop

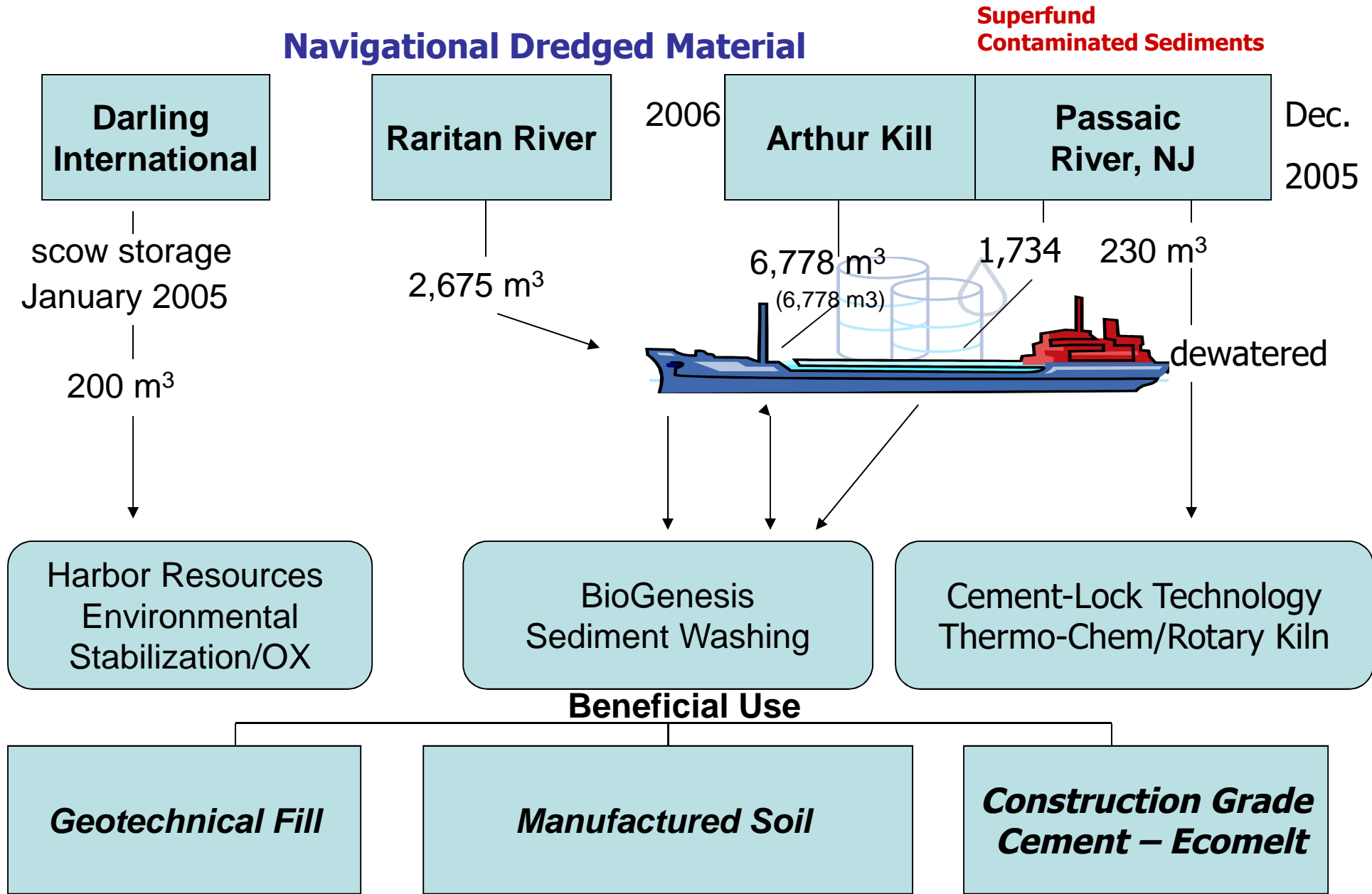
Panel Discussion: Technology Development Case Studies

TIPPING POINT
RESOURCES GROUP

Eric A. Stern



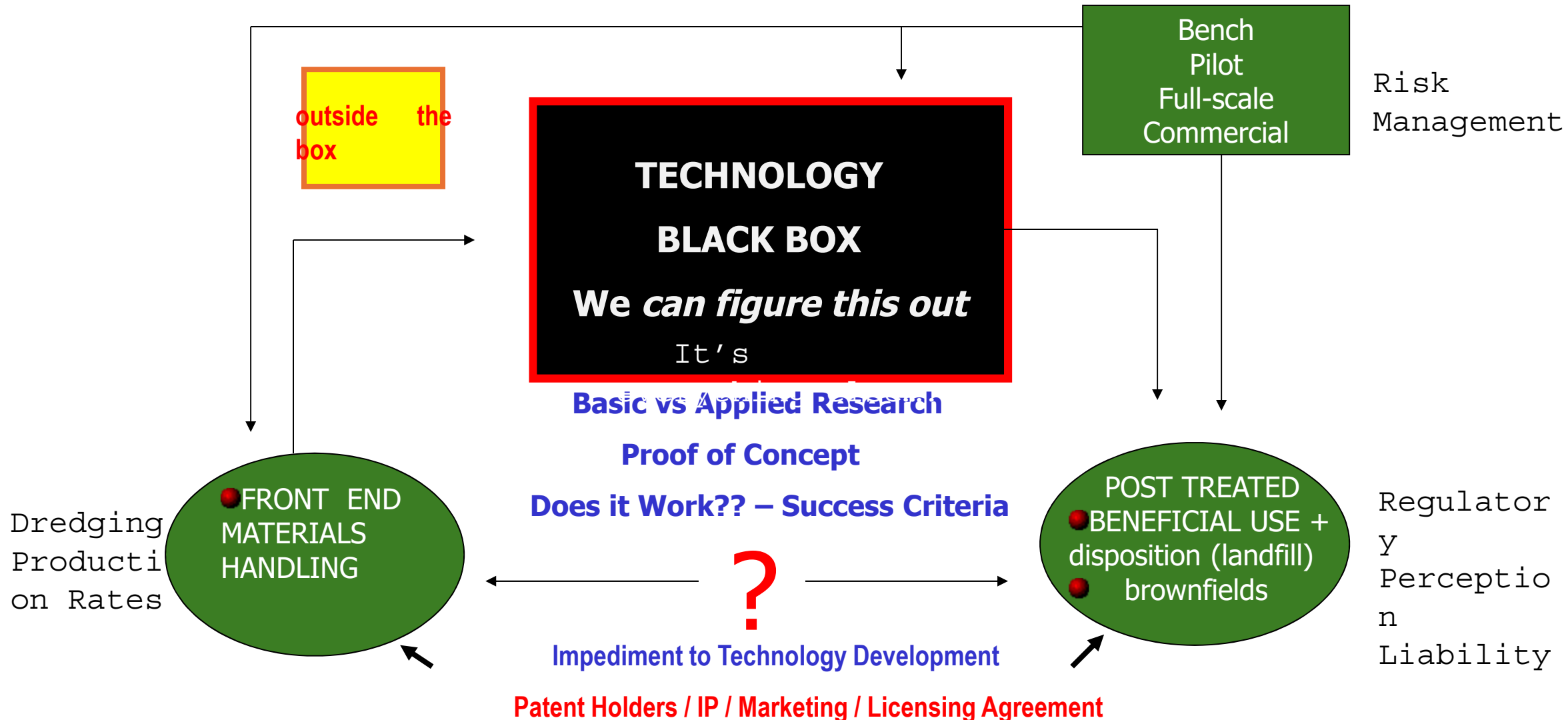
NY/NJ Harbor Sediment Decontamination Program Demonstrations : 2005-2007 Processing Facility – (Raritan River, New Jersey)





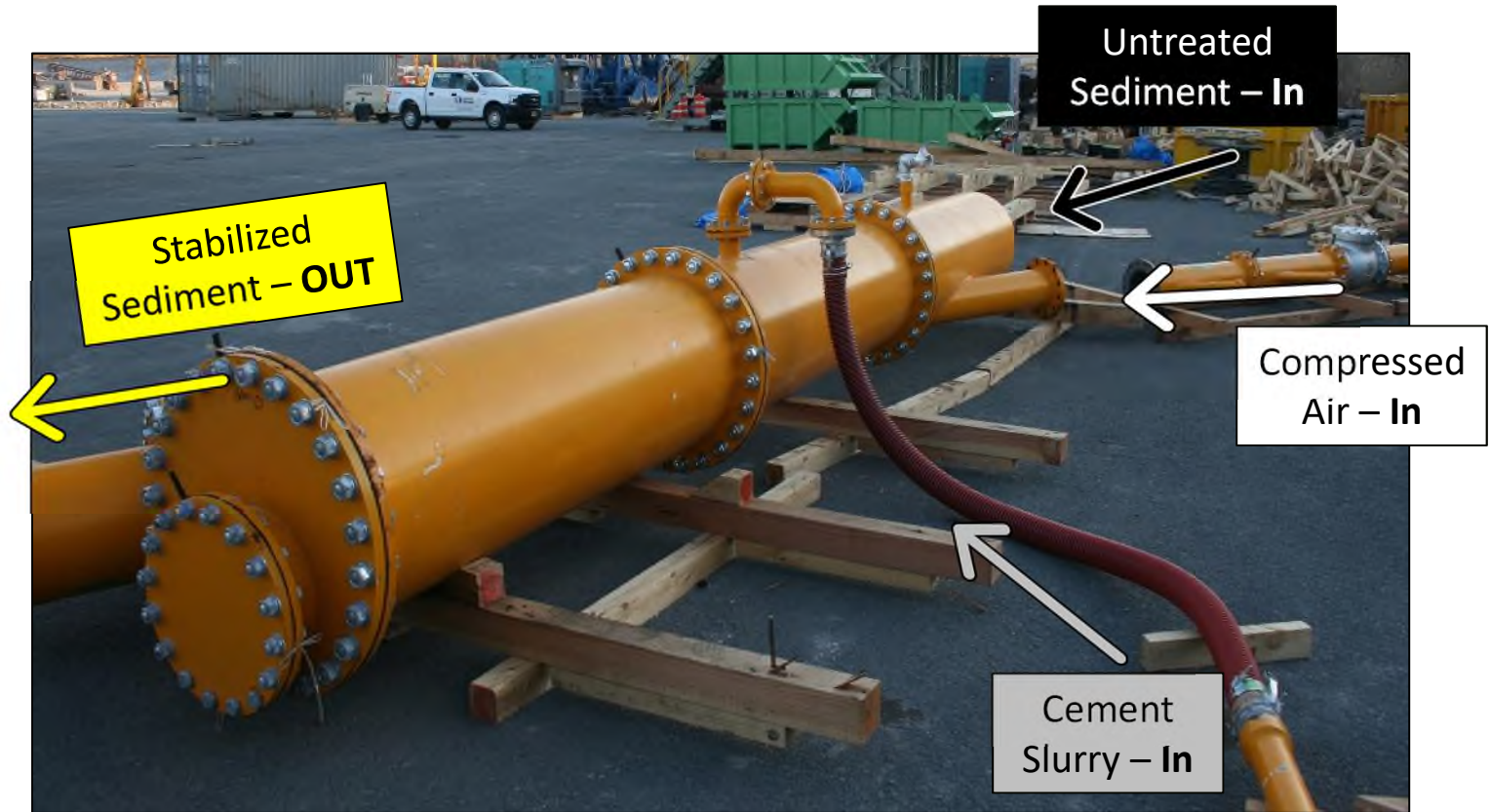


Sediment Innovation Treatment Train Impediment / Driving towards Commercial Implementation

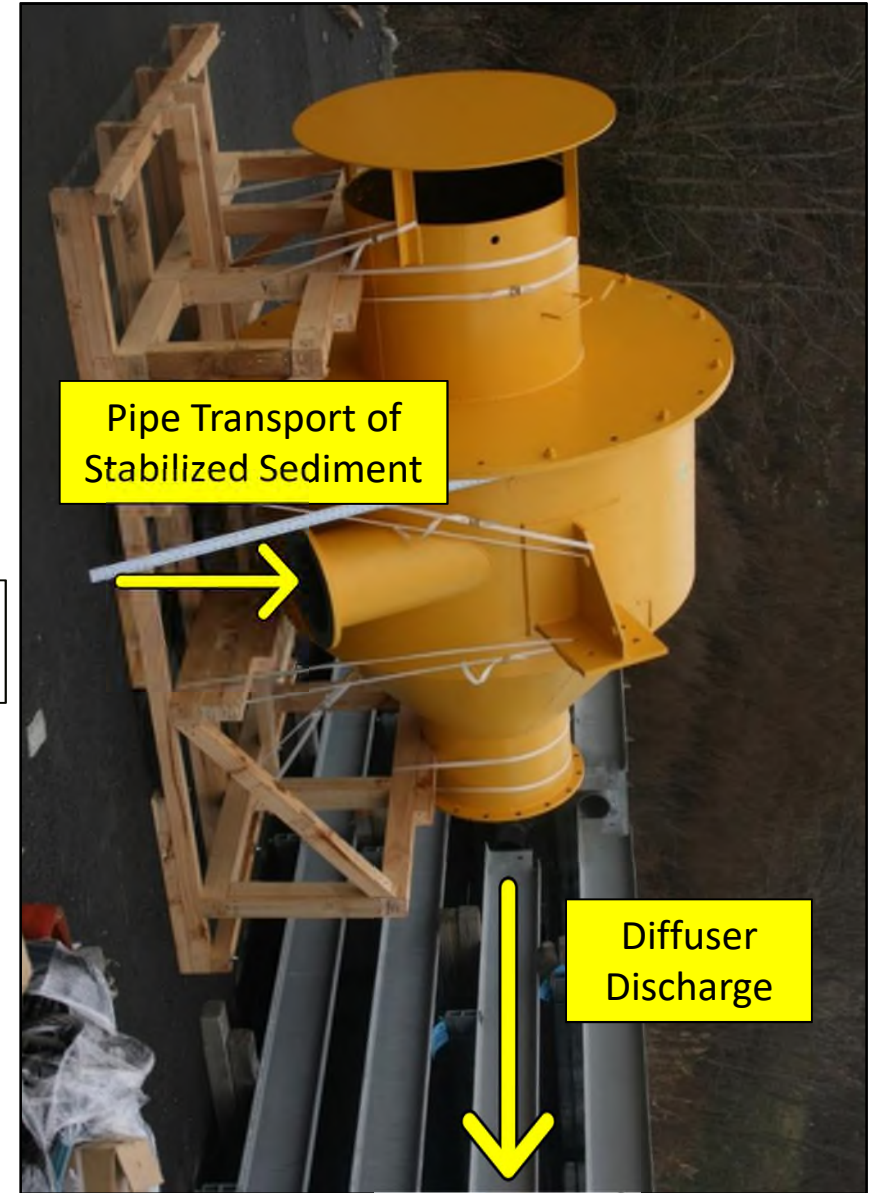




Pneumatic Flow Tube Mixing



PFTM2000 Mixing Tool - 2,000 CY/day (8-hr shift)



PFTM Cyclone Discharge Diffuser



Example: Innovation / Start-up / Platform Development

PFTM Pilot Land Based Option – NJDOT/OMR - Rutgers University (2016)



a) Grizzly/vibrator, screen, and mixing plant



b) Grout Plant



c) Control system / feedback loop



d) PFTM Mixing Tool



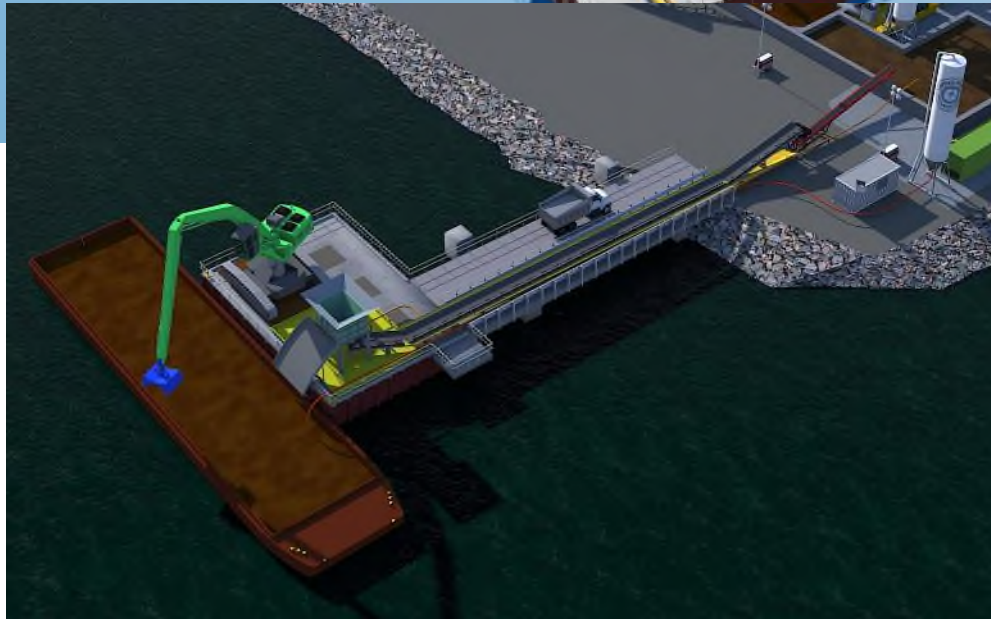
e) Transporting pipeline (up to 3000 feet)



f) Discharge

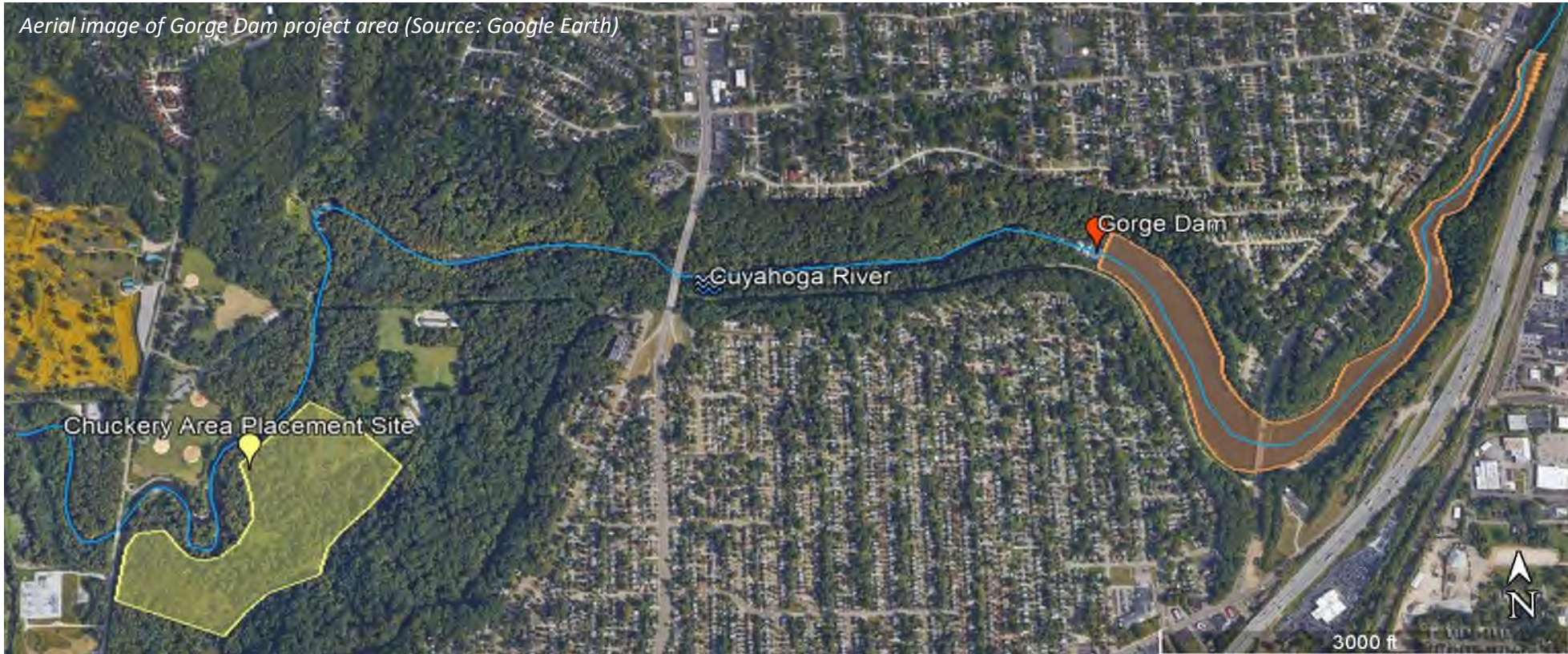


Mobile Operation Sediment Engineering System





Case Study: Gorge Dam – Cuyahoga River, Ohio (2024)



- Mass stabilization of sediments to produce an **engineered structural fill: Pneumatic Flow Tube Mixing (PFTM)**
- **Upland placement of stabilized sediment** at 35-acre former landfill (Chuckery Area Placement Site) adjacent to river, located 2.1 km from Gorge Dam pool
- Capping and revegetation with native grasses and trees



Cultural Inertia –What we learned

- Siloed/localized vs.Holistic/integrated:adaptive
 - Economic recovery/revitalization of blighted urban environments are dependent on functional healthy systems
 - Siloed approaches bring only partial solutions
 - ✓ **Investing costly in the short-term will get to the long-term remediation and restoration goal/visions with multiple net benefits**
 - Use existing (cross) programs with more efficient integration that cuts across multiple visions/goals and objectives (dredging/Superfund)**
 - Understand better the relationship between academia, NGO's, consulting and marine construction community and what is important to policy and political decision makers – do they really care about sediments if it's only sediments (*sediment only solutions...*)**
- Requires a National Public – Public Private Partnership (PPP) / Policy with a broader and more inclusive approach to **environmental management – beneficial use** / innovations
- ✓ Technologies do not fall out of sky and hit the ground running
 - Need to build a *Platform* including technical marketing (several years) No one wants to be first or even second
- ✓ **Needs a CHAMPION (2024) / Program Driven (similar to EU / SedNet)**