

Hudson River SAV 2016 Update



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Quick History

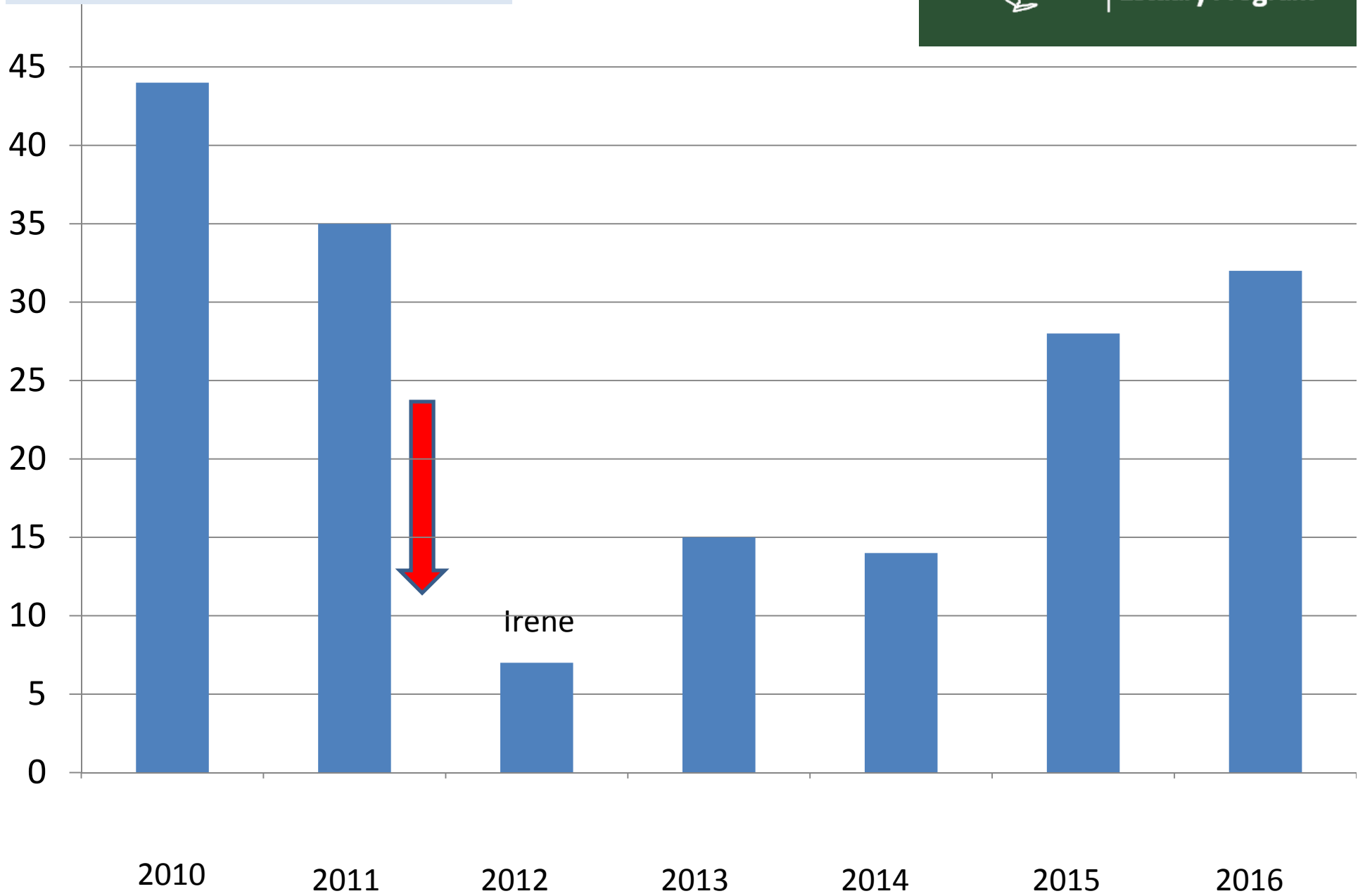
- SAV (Vallisneria) ~ 6% River bottom area in 2007
- Almost completely extirpated by TS Irene Aug 2011
- Loss documented by volunteers and others
- Loss due to burial of overwintering “buds”
[Hamberg et al in press, Restoration Ecology]

Status 2016

- Volunteer observations [good for trends]
- Other reports [targeted observations]
- Aerial inventories (Sarah Fernald)

SAV Volunteer Data

SAV Present (%)



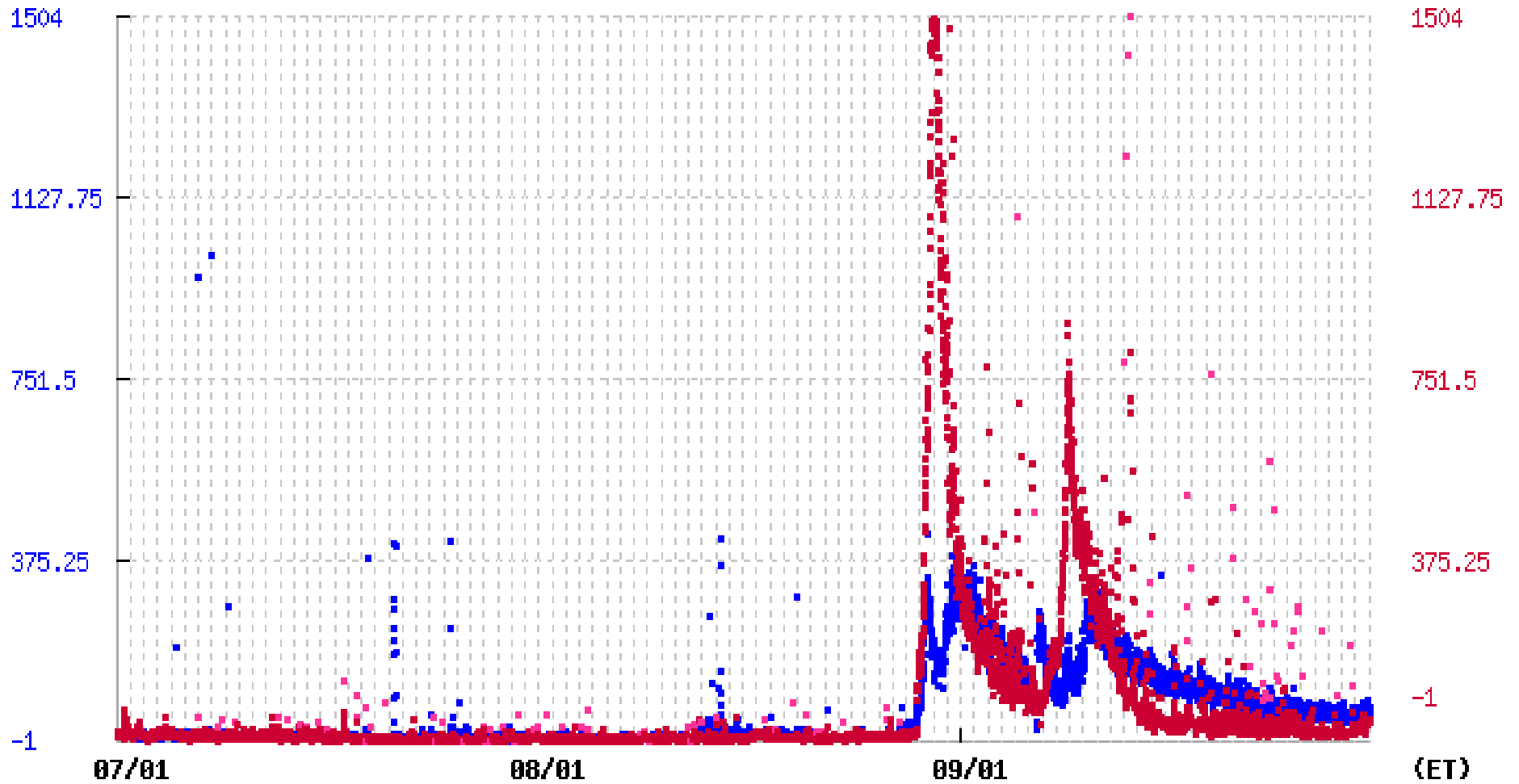
SAV Habitat wasn't "impaired"

- Light is key
 - Water column turbidity
 - HRECOS (Schodack, Norrie)
 - Point measures at SAV sites
 - Main channel clarity (LTREB stations)
 - Depth of prior SAV documented habitat
 - Site bathymetry

Turbidity 2011

Norrie Point, NY (hydro) Turbidity (NTU) ()
(verified to 2016-06-29)

Schodack Island, NY (hydro) Turbidity (NTU) ()
(verified to 2016-04-01)

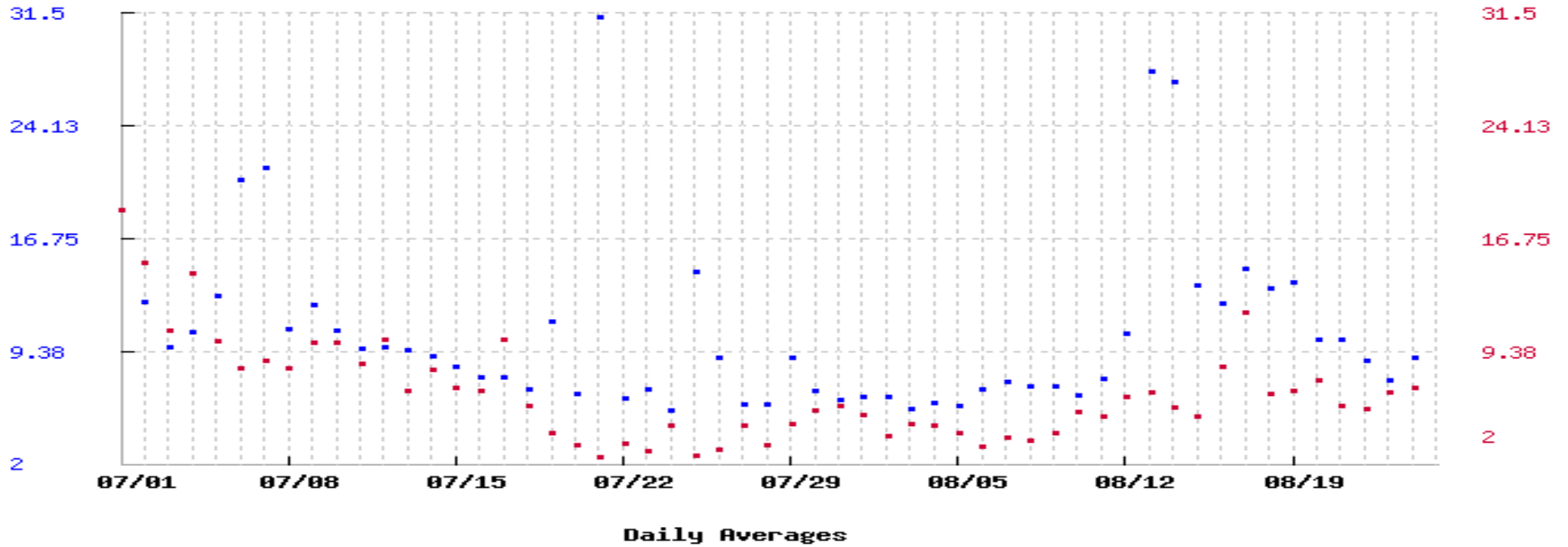


12/02/2016 ■ Schodack Island, NY (hydro) suspicious data

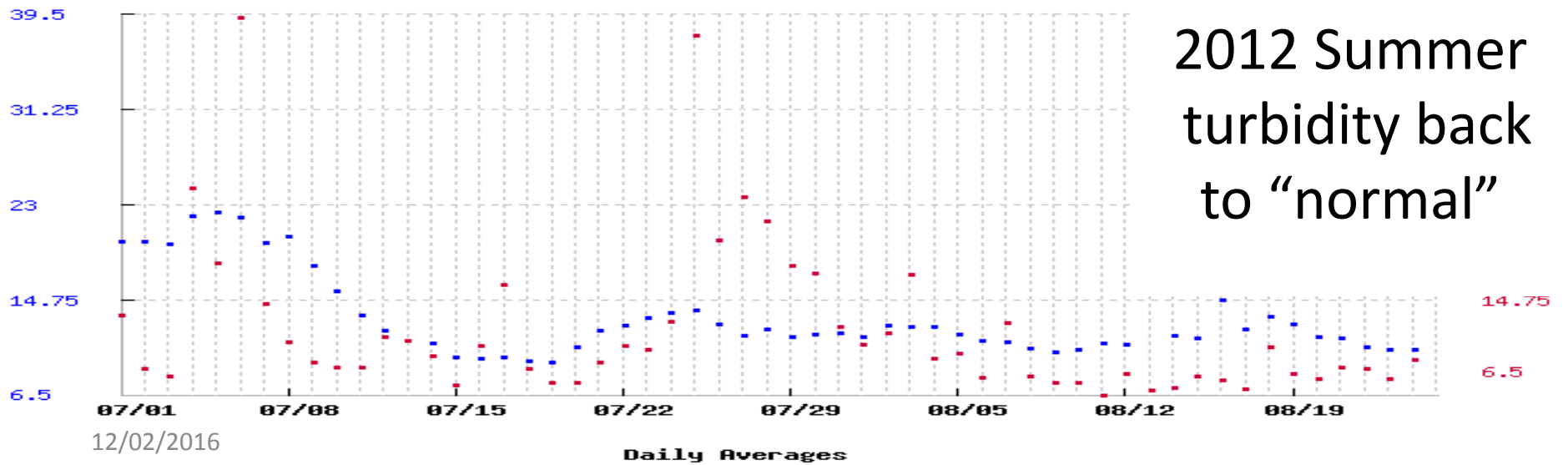
Norrie Point, NY (hydro) Turbidity (NTU) ()
(verified through: 2016-06-29)

Schodack Island, NY (hydro) Turbidity (NTU) ()
(verified through: 2016-04-01)

2011 pre-storm



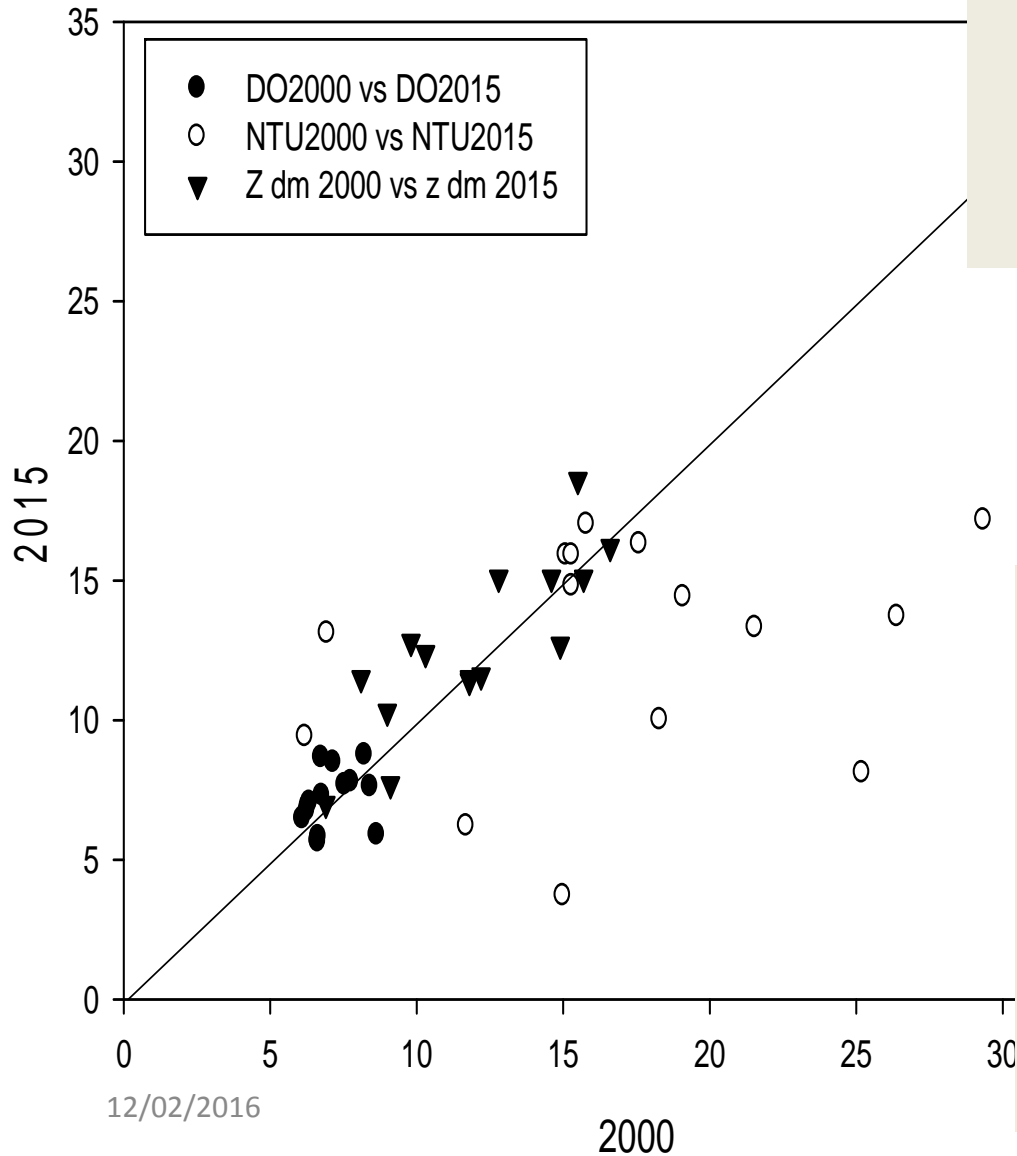
2012 Summer
turbidity back
to "normal"



12/02/2016

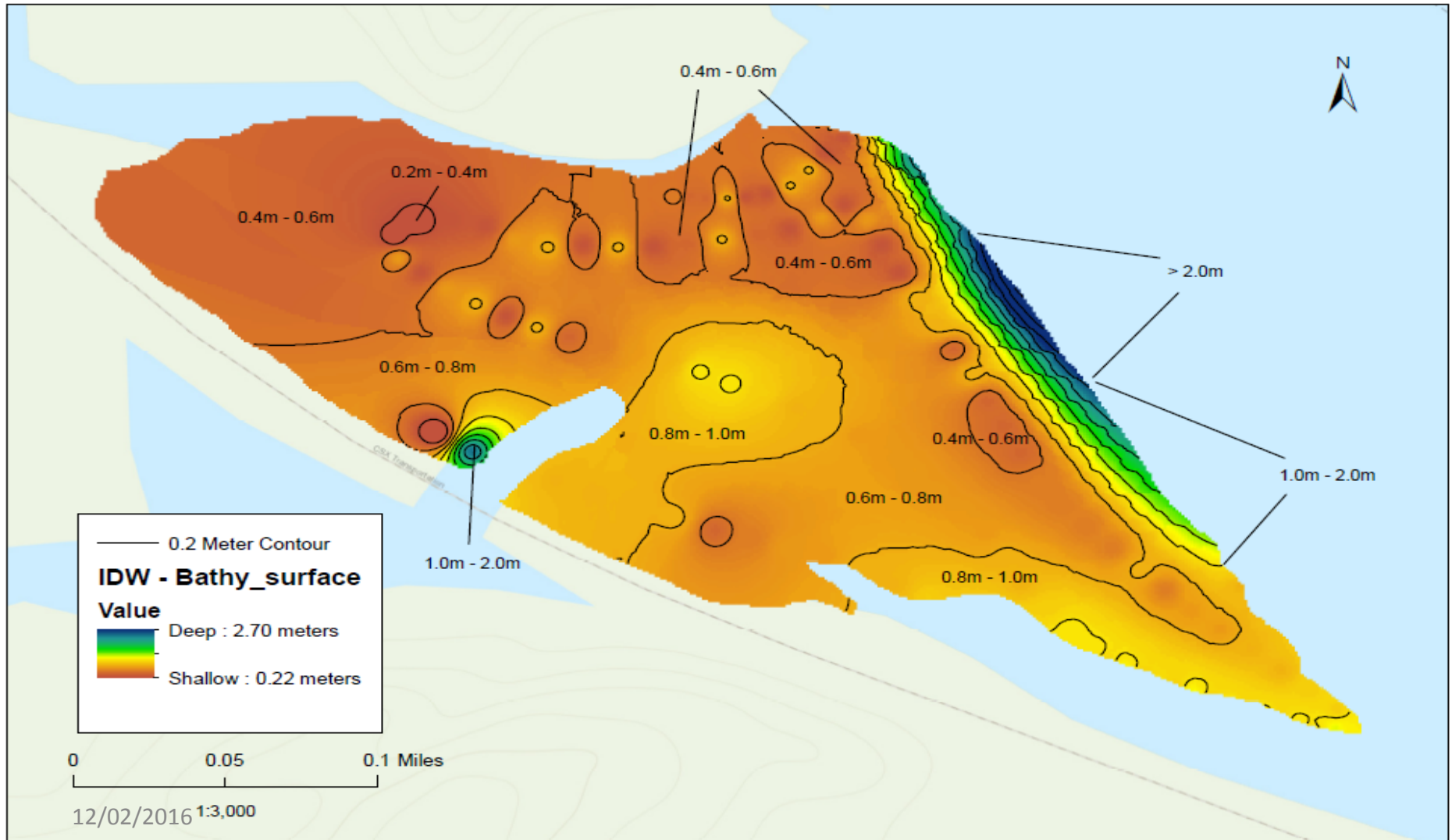
SAV Site Attributes

Point measures of water quality in SAV sites before/after Irene



DO, turbidity and dept at bed sites similar for 2000 vs 2015

Bathymetry South of Iona Island (no SAV in 2016, planting was successful)



Trial Plantings Largely Successful

- Locations (positive results)
 - Behind Cruger I. [Hamberg – 2014]
 - Norrie (R. Houser/C. Bowser)
 - Iona, Esopus Meadows, Kingston Point
- Locations (unsure)
 - Mill Creek
 - Kingston-Rhinecliff Bridge
 - N Germantown (?)

Overall

- The Hudson dodged a bullet, active (expensive, difficult) restoration not needed
- Write Management Plan based on what we learned
- We need to be better poised to capture storm events (similar to Irene/Lee/Sandy or otherwise)