Catalog of SWMP Water Quality to Decision Making Case Studies

**Project Summary and Contacts**

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| **Reserve** | ***Audience*****Summary** | **Contact** |
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| ApalachicolaNERR | *Regulatory staff*Numeric nutrient endpoint research informs EPA.Oyster population crash due to water diversions/nutrient reductions – declaration of commercial fishery disaster by NOAA. | Lauren LeviLauren.Levi@dep.state.fl.us |
| Elkhorn NERR | *Regulatory staff*SWMP data informs regulatory policy for setting Total Maximum Daily Loads for nitrogen. | Grey Hayesgrey@elkhornslough.org |
| Grand Bay NERR | *Regulatory staff*SWMP data used in enforcement action against phosphate processing facility where a spill occurred into the estuary | Kimberly CressmanKimberly.Cressman@dmr.ms.gov |
| Great Bay NERR | *Regulatory staff*SWMP data used to inform policy | Steve MillerSteve.Miller@wildlife.nh.gov |
| Great Bay NERR | *Community*State of the Estuary report  | Steve MillerSteve.Miller@wildlife.nh.gov |
| Lake SuperiorNERR | *Regulatory staff*Creating a phosphorous model for the State of Wisconsin in consideration of adding phosphorous to wastewater discharge permits. | Tracy Leddertracey.ledder@ces.uwex.edu |
| Mission Aransas NERR | *Local communities* New SWMP-like system installed to serve community needs, spurring increased community communications including a highlighted water quality report card. | Sally Palmersally.palmer@utexas.edu |
| Mission Aransas NERR | *Regulatory staff*EPA funded project to help establish numeric nutrient criteria (NNE) nutrient data in the Bay. | Rae Mooneyraemooney@utexas.edu |
| South Slough NERR | *Regulatory staff*State of the watershed assessment as part of a NERRS Science Collaborative; applying SWMP abiotic data for EPA and State policy standard consideration. | Ali Helmsalicia.r.helms@dsl.state.or.us |
| South Slough NERR | *Scientists*SWMP data improving understanding of circulation within estuary | John Braggjohn.bragg@state.or.us |
| Wells NERR | *Watershed managers*Buffers efficacy to reduce pollutants | Jeremy Miller jmiller@wellsnerr.org |

**Trends**

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| **Trend** | **Notes** | **Places** |
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| Setting water quality policy, now | Numeric Nutrient Endpoints (NNE)Total Maximum Daily Loads (TMDL)Narrative Nutrient Endpoints | North Inlet/Winyah BayMission-AransasElkhornWells |
| NERR is reference site for water quality | More pristine estuaries serve as reference sites for water quality | North Inlet/Winyah Bay |

**Concerns**

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| **Concern** | **Notes** | **Places** |
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| Concern about other agencies accepting the quality of NERR data | EPA ‘certification’ of QA/QC of water quality data via “Quality assurance project plans”* Annual renewal fee can be pricey: $1K/year
* pH checks need to take place every 3 hours
* SWMP turbidity probe instruments are not the approved equipment list

Data may not otherwise be defensible in court, otherwise (per lawyers) | Jacques CousteauElkhornGrand BayWells |
| Tidal movement complicates pollutant load calculations | USGS loudest model might help calculate load | Mission-AransasElkhorn |
| Data have to go both into CDMO and State database | Often doubles the labor | Great BayElkhorn |
| How do you make SWMP data compatible with other monitoring networks, to leverage rigorous emergent strength in analysis? | Municipalities and others are required to monitor ‘end of pipe’ – how can we assure that these and other efforts are coordinated? | Great BayElkhorn |
| Water quality concerns are not part of the SWMP monitoring system | Fecal coliform bacteria | North Inlet/Winyah BayElkhorn |
| Political concerns about water quality regulation | Scale and specificity of data are politically sensitive issuesAnti-regulatory sentiments | various (unnamed due to political sensitivity) |
| Need community education/ support | Communities may not recognize how water quality concerns affect their quality of life and economic health | Great BayElkhornKachemak Bay |