

Andy Lipsky, Natural Resource Conservation Service

- 2002 Farm Bill had a lot of funding for wetlands restoration. Will also talk about our available resources.
- We (NRCS) provide technical and financial assistance.
- See Tiner et al. (2003) looking at coastal wetlands in Narragansett Bay, including Massachusetts. They found that >4000 acres need restoration. Signs of stressors on over 4000 acres. 2/3 of those restoration sites occur on private land. So we have to create incentives for private landowners. Over half (56%) of coastal wetlands do not have adequate buffer zones.
- Tiner et al. evaluated a total area of 25,700+ acres, based upon establishing a 500 ft zone around the Narragansett bay shoreline/wetland perimeter.
- NRCS standards: we have national guidelines for applying a 3-zone buffer.
- We have funding to implement buffers for habitat functions through our Wildlife Habitat Incentives Program. The wildlife habitat benefits of narrow urban buffers may not be very significant.
- As part of our new urban riparian buffer standard, if we pay for a buffer on someone's property, it must be at least 15' of "no-touch" zone – though some uses are still allowed in the buffer.
- There is also an understanding that the owner must maintain the buffer. We also need to get together to talk about disturbances to maintain the buffer (as Scott McWilliams already mentioned).
- We currently do not have any projects that are doing this. We need to develop some projects that integrate NPS abatement and habitat.
- Note spreadsheet on plant attributes (NRCS_plant_attributes_ri.xls). Also that Parrish paper that Scott mentioned. But there is not a lot on coastal buffer habitat, etc. We're supposed to manage for songbird species in the northeast (Northeast Regional Bird Report??), so this is something to keep in mind. Although fire prescription is the preferred early successional habitat management practice, it is very difficult to implement burns in Rhode Island, so we use cutting instead. But there are a lot of habitats that we have that do require periodic maintenance.
- We are monitoring effects of different treatments. In depth vegetation sampling and bird habitat on site in Little Narragansett Bay (Avondale Farm).
- Dealing with invasives is an issue that we really need to discuss and make decisions on a statewide level, since some of our evidence shows that birds are using plots with the most invasive species.
- Coastal and Riparian Buffer Issues.
 1. Many landowners are hesitant to install buffers only because they feel that it will bring them under regulations, and they don't want to be regulated. So we need to discuss incentives seriously.
 2. Shoreline erosion and sea level rise. We shouldn't be afraid to use this as a scare tactic, if it makes people listen.
 3. Ops and maintenance. Maybe we need to do zoning based upon buffers for different goals (i.e. habitat in some areas, WQ in other areas).
 4. Alien Ecology/New England Wild plant Society. As a state we need to revive invasive species task force. We have resources at NRCS to control invasives. We

need an overall plan for the state, though. We don't have a plan to handle invasive outbreaks.

5. We need to recognize and acknowledge the goals on different shorelines. Water zoning to accomplish this?

- NRCS has technical teams that are looking for guidance on where to direct our funds, especially in terms of early successional habitat. Should we be targeting certain areas?
- Shoreline Protection: about 25% of NB shoreline is armored (Tiner et al., 2003). Bulkheads = 43% of these are artificial shorelines, Revetments are 24%, Seawalls = 11%
- RI Restoration Portal (website) has Tiner et al. paper.
- Part II: Methods of Shoreline Engineering
- Looking at subtidal, intertidal zone structures to mitigate coastal hazards.
- Soil bioengineering has been going on since the 1800s. But applying this to the coastal environment is new.
- Why use this? Soil buttressing, improving habitat, aesthetics, etc.
- Many techniques have been used for freshwater systems, and many of these are applicable to coastal areas, too. A lot of the species used in freshwater can be adapted for shoreline.
- Not many examples of coastal shoreline stabilization projects. Projects constructed in NC, NY/NJ, and now RI.
- (Hardaway and Bryne, 1999.) (Sills and breakwaters)
- NRCS and Ag. Engineering Handbooks show much of the information.
- Pocket planting rip-rap in Duwamish River, Puget Sound (Joint Planting).
- RI NRCS has an engineering document with 100s of species of plants.
- Lots of information about bioengineering but very little info regarding applying these techniques (esp. to coastal areas).