

Natural Resources Work Group
Meeting Notes - 2/15/11

Facilitators

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Participants

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Part I- Brainstorming responses to the following question:

What resources/assets/infrastructure is my organization concerned could be at risk from SLR?

Wetlands

- Tidal
- Freshwater
- Marsh islands (existing would be submerged/new ones would form)
- Impediments to wetland migration
 - Impoundments, dams, berms, levies, shoreline control structures
- High intensity storms/impacts from storm surge, wetlands drowning

Upland resources

- Wetland migration into forests
- Increased development pressure
- Ancient dune sand ridge forests

Agriculture

- Acreage lost-either b/c of wetland conversion or potential future regulations (buffers)
- Loss of environmental benefits of farming: groundwater recharge, open space that the state does not have to maintain, habitat

Recreation/Public Access

- Ecotourism \$257 million
- Beach nourishment projects
- Loss of open space, parks, federal refuges
- Loss of public access to water, boardwalks, paths, trails, infrastructure, etc.

Fisheries

- wetland/nursery habitat loss- impacts to fisheries
- species migrating may change as salinity changes
- Sabellaria impacts

Shellfish

- Salinity changes
- Erosion and resultant sedimentation impacts

Freshwater mussels- possible benefits from slr (more shallow water habitat?)

Rare/sensitive plant animal communities

Beach habitat loss/species impacts

Horseshoe crabs- loss of spawning habitat/impacts to migratory shorebirds

Beach nesters loss of habitat

Wrack line communities

Cultural/Historical

Cementaries, Old New Castle, Pea Patch, Indian burial/archeology sites

Water quality / salinity/turbidity/ nutrients/ sediments

Water quality impacts from WWTPs, leaching Hazardous sites, toxics.

Water budget/slr/climate change interactions

Air quality secondary impacts- maintenance disruptions at industrial facilities due to salinity in the intake

Engineering structures if inundated/overtopped becomes a navigation concern

Invasive species in transition areas

Phrag Erosion control benefit, habitat loss

Part II- Top 3 priorities from above list and data needs/data sources

Priorities:

1.Habitat Impacts

Wetlands

Rare/endangered species

Data needs/sources

Map head of tides

Important to determine increased extent of storm surges and habitat changes

Specific head of tide locations

Is this measureable?

GIS doesn't cover

May have some locations- could infer others from this

Heritage inventory of species and communities

PDE also has mapped communities w/in the estuary based on the national vegetation classification system

Fisheries info, EFH, nursery habitat- mapped? Available from DFW?

Shellfish maps- available from DFW

Freshwater mussels- see heritage for info

Site specific species migration studies- do lit search

Map physical barriers to wetland migration

Map characteristics of wetlands, assess vulnerability index of various marshes- mvi

Model responses of marshes to slr

Tnc has habitat maps, regional assessments- wetland to forest migration

Economic value of hunting and fishing

Study relationship btwn climate change related weather and slr/salinity

How will the water budget change

Adaptive capacity of natural resources- how well can wetlands adapt?

2. Agriculture

Ag data, acreage and crop/animal types and economic impact- dept of Ag, DEDO, Ed Ratledge- UD, Conservation Districts

Ag preservation parcels, location, acreage

Ag facilities/infrastructure

Manure sheds- DNREC non point prgm

Land use- buffer regs, tax ditches

Inundation maps to determine acreage lost from slr/salt water intrusion

Irrigation systems, shallow wells- salt water intrusion-need to drill more wells? Info from div. water, well monitoring section

3. Water Quality data

Turbidity, nutrient changes, salinity- NOAA, STORET, DNREC, UD

WWTP/infrastructure overlap from other group.