The Use of Remote Sensing in Local Planning

The Hilton Head Island Experience

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Coastal Issue Workshop: Remote Sensing of Intertidal Shellfish Habitats
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Introduction

• Hilton Head Island
  – barrier island
  – about 80% developed
  – shellfish closures

• Broad Creek Management Plan
  – comprehensive look at water quality, wildlife, recreational use, and land use
  – shellfish resources didn’t match DNR’s 1981 maps
  – pilot study to determine changes
Oyster Mapping - Pilot Study

• **Methodology**
  – Get Plenty Sloppy! (GPS)

• **Results**
  – estimated significant losses in live oysters
  – both extent of beds and strata types

• **Conclusions**
  – significant impact in one area from boat wakes
  – need more accurate maps for whole creek
  – Goes Pretty Slow (GPS)
Mapping Method Choices

- **GPS** - yuck (I mean, muck) not to mention big bucks
- **Remote sensing**
  - Not subjective
  - Efficient
  - Accurate results
  - Technologically proven

Okay, let’s use it
How can a town remotely sense?

- Collaborating with NOAA’s CSC & DNR
  - You already heard about project from Mark & Bill
    - we got involved because we already had baseline data
    - we’re anxious to get additional data for the creek
  - Hilton Head Island plans to further this effort
- Question of the Day: Can a town remotely make sense?
  - add strata data “by hand” to the polygons
  - compare to 1981 data
  - analyze results with land uses, outfalls, etc.
Shoreline Erosion

Total loss:
- 1986 - 1995 = 3.23 acres
- 1995 - 2002 = 1.03 acres
- Total = 4.26 acres
erosion from natural causes
erosion from boat wakes
new “solution”
What do we need this info for?

• Identify:
  – oyster restoration sites
  – erosion problem areas
  – land use impacts
  – marina/boating impacts
  – wildlife & habitat impacts
Why should we care?

- Local government has the power to affect change in land use – zoning, development standards, stormwater management.
- Stewardship of local waterways – everyone needs to help take better care of our environment...
- Healthy estuaries are vital to the continued wellbeing of the local economy.
What are we going to do about it?

- Public education
- Revise our development regulations
  - zoning
  - development standards (lot coverage, etc)
  - stormwater management
- Work with other agencies to address issues
- Monitor changes
  - shoreline
  - shellfish
  - water quality
  - wildlife habitat

Pretty dang important
I'm outta here
Charlie, this place
is a dump. Let's
go git us some
Islanders!