

TOWN OF BARNSTABLE SANDY NECK BOARD

1189 Phinney's Lane
Centerville, MA 02632

Tel: 508-790-6272
Fax: 508-790-6275

Sandy Neck Board Meeting October 19, 2015

Chairman:
Richards French

Vice Chairman:
Thomas O'Neill

Board Members:
William Carey
Lynn Heslinga
Nate King
George Muhlebach
Peter Sampou

Council Liaisons:
Ann Canedy
Phil Wallace

A regularly scheduled meeting of the Sandy Neck Board was held on October 19, 2015 in the Town Hall Hearing Room, 367 Main Street, Hyannis, MA. The meeting was called to order at 7:00 pm by Vice Chairman Thomas O'Neill.

Roll Call:

- Board Members present: George Muhlebach, Lynne Heslinga, Nate King, and Tom O'Neill.
- Board Members absent: Pete Sampou, Bill Carey, and Rich French.
- Staff: Nina Coleman, Sandy Neck Park Manager, and Debbie Lavoie, Secretary.
- Council Liaisons present: Phil Wallace and Ann Canedy.
- Invited Guests: Christine Player, CLE Engineering and Mark Borrelli, Provincetown Center for Coastal Studies.
- Public: Public and Town Staff were present.

Act on Minutes:

- On a **motion** by Nate King and seconded by George Muhlebach, the Sandy Neck Board unanimously voted to approve the September minutes as printed.

Correspondence:

- On hold until fee discussion.

Staff Report:

Nina Coleman addressed the Board:

- Sean Kortis was hired as the new full time Natural Resource Officer assigned to Sandy Neck. He will come to the next meeting to meet the Board.
- Currently, the gatehouse is open daily from 9 am to 9 pm. Winter curfew in effect -- must be past the gatehouse by 6 pm and off the beach by 8 pm. No fee for overnight camping.
- A number of fall activities have taken place – very successful. Halfway House being used regularly.
- CoastSweep was positive event. Thanks to everyone and kudos to Boy Scout Troop 54.
- Hunting is taking place now. The pheasants are stocked on Monday night and Saturday morning. It is recommended you wear orange on the back trails. Hunting is not allowed on front beach. No hunting allowed on Sundays.
- Invasive species program is on-going.
- First Ridley turtle was rescued today.

Important:

Stranded turtles are usually found in the rack line along the seaweed. If you see a turtle on any beach call MEA/Natural Resources (508-790-6272) or Animal Control (508-790-6274) or Gatehouse (508-362-8300). You could also call MA Audubon Wellfleet (508-349-2615 ext.104). Leave a message. Staff is on duty during the weekends. Mark the area so they can find the animal. Be as specific (as possible) as to location so they can recover the turtle quickly. *Do not put it back in the water. Do not move the animal. Do not remove it from the beach.* Turtles must be handled carefully and rehabilitated by professionals. Volunteers are needed at Sandy Neck to do patrols – day and night – to look for stranded turtles. Call the Gatehouse if you are interested.

Old Business:

2016 Fee Discussion and Sandy Neck Revenue Options & Regulation Discussion
Nina Coleman presented the following proposed fees for 2016

Proposed Sandy Neck Fees for 2016	
<u>Special Permit</u>	
2015*	No fee for non-profit and school groups
2015*	\$30 for groups of 20-50 people
2015*	\$60 for groups over 50 people
2015*	\$60 for tent camper rescue fee
	*At the discretion of the Park Manager
2016	\$5.00 campfire permit
<u>Annual Off Road Vehicle Permit (includes campfire permit)</u>	
Resident:	2015.....\$85.00
Non Resident:	2015.....\$170.00
Cottage Owner:	2015.....\$30.00
Trailer:	2015.....\$25.00
<u>Overnight Camp</u>	
Resident:	2015.....\$10.00 per night
Non Resident:	2015.....\$20.00 per night
All Chase Vehicles:	2015.....\$5.00 per night
Tent Camping:	2015.....\$20 per night
<u>Seasonal Off Road Vehicle Permit (Includes campfire permit)</u>	
Resident:	2015.....\$25.00
Non Resident:	2015.....\$50.00
Cottage Owner:	2015.....\$10.00
<u>Horses</u>	
2015	\$30.00
2016	\$20.00 per horse/per ride
<u>Halfway House Use (no changes proposed)</u>	
2015	\$100.00 day use only
2015	\$150.00 per night
Proposed Changes in red	

Discussion:

- The new proposed campfire fee is for the public beach (only). This is a small area on the Bodfish Beach. ORV stickers for 2016 would include the new campfire permit fee. The purpose of the fee is to (1) offset the cost of our facilities and cost for extra patrol staff and (2) regulate the number of campfires per night.
- The other proposed fee change involves the horse permits. As it stands now, the charge is one time (\$30) for the season no matter how many times you come to Sandy Neck. This new fee would charge the horse permit per visit. Statistically, twelve patrons came out recreationally one or two times in the season but many horse “businesses” are coming out multiple times. One company had used the beach (still only charged \$30/season) for 169 horse trips which the Sandy Neck Staff had to provide services for these groups. They are businesses that are charging their customers but the beach is not receiving additional revenue for these additional services.
- *From the public:* Terry Therrien, Ridge Valley Riding Stable, Grafton, MA addressed the board. He does come down with groups and the customers want to come to Sandy Neck. He makes his money by renting the horses and this would be very costly. He charges per trip but that includes the horses, his staff, his transportation of the horses, etc. He did not realize the beach was not economically supplemented or funded by the State or the Town.

- Also, the Vice Chairman read a letter from Elizabeth Buyrn, Esperanza Riding Company, Sandwich, MA. She states “While I do agree with a per horse rate as that allows for a more direct correlation between beach use and Sandy Neck Beach profit my concern is that this will not be affordable for my perspective clients causing a decrease in my business.” Email is attached at the end of these minutes.
- Councilor Canedy asked if this increase could be done more gradually. Nina Coleman stated they were originally thinking of a higher fee (\$25) but changed to the proposed \$20. This is a public beach and these big groups require more staff – including medical emergencies. Staff must be on site. There are other services: parking lot, gatehouse, bathrooms, etc. The \$20 is still affordable for private horse owners.
- Councilor Wallace felt the increase was too high because he is a horse owner. He asked the Board to reconsider.
- Nate King also wondered if this could be done in increments over the next few years. Tom O’Neill felt it is better to just do an increase once and not increase a little every year.
- When asked by the Board, Terry Therrien stated he charges \$300 for a beach ride with 2 riders for 3 hour ride. (That equals \$600 per trip).
- Nina Coleman also stated there will be a new regulation that will require all horseback riders to wear a helmet.

A **motion** was made by George Muhlebach and seconded by Lynne Heslinga to approve the proposed fee increases for 2016 as presented by Nina Coleman, Sandy Neck Park Manager. This proposal is reasonable and can always be reviewed next year after it has been in place for the year to see if any changes need to take place. Vote: All yes.

New Business

2015 Sandy Neck Deer Hunt

Nina Coleman presented this information:

The 2015 Sandy Neck Deer Hunt will be as follows:

- Archery hunt will be November 23, 2015 – November 28, 2015 or until six (6) deer are taken, whichever comes first.
- Primitive firearms hunt will be November 30, 2015 – December 05, 2015 or until six (6) deer are taken, whichever comes first.
- If six (6) deer are not taken during the week of the archery hunt, the remaining number will be added to the primitive firearms hunt. Thus, a total of twelve (12) deer will be harvested from Sandy Neck in 2015.
- You **MUST** attend a night meeting. The archery meeting is Wednesday, November 18, 2015 at 6:00 pm at the Centerville Recreation Building, 524 Main Street, Centerville, MA.
- The primitive firearms meeting is Wednesday, November 18, 2015 at 7:00 pm at the Centerville Recreation Building, 524 Main Street, Centerville, MA.
- The Deer Hunt Rules and Regulations are attached at the end of these minutes.

On a **motion** was made by Nate King and seconded by Lynne Heslinga, the Sandy Neck Board unanimously voted to support the Sandy Neck Park Manager’s recommendation that there will be a 2015 Deer Hunt and also voted to support the rules for this hunt as presented to the Board.

NOTE: This still needs approval from the Town Manager

New Business:

Kickoff Workshop

Mark Borrelli, Provincetown Center for Coastal Studies, addressed the Board. His PowerPoint presentation is attached at the end of these minutes entitled *Assessment of a Coastal Sediment Budget for the Towns of Sandwich & Barnstable*.

Highlights:

- Looking at old nautical charts (from the 1930s) and current information. They compare the changes from then to now. This data helps them show how sand moves – coming in and going out.
- Erosion and accretion is compared along the entire coast of the beach. They can integrate the information because the beach is involving and changing in elevation. This is what you want a natural beach to do. You shouldn’t look at just the shoreline.

- This information will show the direction of sediment transport. And when the Sediment Budget Summary Data is complete they will have an annual rate of transport for the entire Cape – from the Cape Cod Canal to Provincetown.
- He will be working with the Barnstable Harbormaster to get dredging information.
- The entire Sediment Budget Summary Data Study will be completed by June 30, 2016.

Christine Player, CLE Engineering, Inc. addressed the Board. Her PowerPoint presentation is attached at the end of these minutes entitled *MA CZM Coastal Resiliency Grant, Sandy Neck Public Beach Facility, Barnstable, MA.*

Highlights:

- Through this grant, they are looking for more focused solutions for the parking lot, facility and the infrastructure at Sandy Neck. This grant expires on June 30, 2016.
- CLE will be the lead on this project including the out reach portion at two public workshops.
- Their goal is to review conceptual designs addressing the erosion and select alternatives to bring forward.
- Sandy Neck is designated as an Area of Critical Environment Concern (ACEC) which affords it additional scrutiny.
- Tasks have started such as the beach survey and baseline situations.
- They will document movement of sand and present long-term resiliency alternatives. (1) do nothing (2) beach and dune nourishment (3) hard structures and soft structures (4) site reconfiguration.
- CLE would like a board member to join their project team as a liaison.
- Once plans are selected, CLE will help with the pre-application meetings with regulatory agencies and they will prepare and submit the permit applications.
- Councilor Canedy asked if CLE has looked into oyster reefs as a type of solution. And she asked about moving the accreted sand back onto the shore.
- Ms. Player stated that is called “sand mining” and is a sand source and “could” be considered but there are complications. It is not usually done in Massachusetts because of state restriction and challenging. Plus, by moving that sand, you are moving a known habitat, and run into fishery issues.
- Tom O’Neill stressed we should look at best practice from everywhere (globally). But we have permit challenges and strict time restraints.
- Nina Coleman will report back at the monthly board meetings regarding the progress.
- Tentatively the public workshops will be held in December 2015 and January 2016 but not during a Sandy Neck Meeting.
- Pete Sampou was nominated as the Sandy Neck Board Liaison to this project team.

Public Comment:

- none

Adjournment:

- There being no further business, the meeting adjourned at 8:31 pm.

Respectfully submitted,

Debbie Lavoie, Secretary

Attachments:

1. Email from Elizabeth Buyrn, Esperanza Riding Co.
2. 2015 Sandy Neck Deer Hunt Regulations
3. PowerPoint Handouts: Assessment of a Coastal Sediment Budget for the Towns of Sandwich & Barnstable
4. PowerPoint Handouts: MA CZM Coastal Resiliency Grant, Sandy Neck Beach Facility, Barnstable, MA.

Bouvier, Dennis*read @ meeting*

From: capecod@esperanzaridingcompany.com
Sent: Monday, October 19, 2015 4:33 PM
To: Coleman, Nina
Subject: [Probable SPAM] Re: ERC Beach Access 2016

Dear Sandy Neck Board,

Thank you for notifying me of this meeting however I am out of town at the moment. Having heard of your proposed fee schedule for horse use in 2016, I would like to add my thoughts and concerns.

4 clients+1guide horse x20\$=100\$+30\$ parking=130\$ for any ride before 3:30 pm. Which is half of my business since my schedule is dictated by the tides and avoiding the busiest beach going hours.

This significant increase in expenses will unavoidably have to be passed along to the clients.

As you may know any equine requires significant care and overhead.. More so on Cape Cod. Covering a 100\$ increase per trip will undoubtedly decrease my business. While I do agree with a per horse rate as that allows for a more direct correlation between beach use and Sandy Neck Beach Park profit my concern is that this will not be affordable for my perspective clients causing a decrease in my business. With this proposed plan this would also ultimately result in what would be a decrease in profit for Sandy Neck Beach Park.

My clients who are generally only at Sandy Neck for the duration of their ride are already incurring the parking fee. Which is often between 2-4 vehicles in addition to my truck and trailer and are only onsite for 2-1/2hours.

In closing I'm asking that you please reconsider such a significant increase as I work hard to keep my prices affordable enough for the tourists and locals of Cape Cod.

Thank you very much for hearing my concerns.

Kind Regards,

Elizabeth Buyn
Esperanza Riding Company
www.esperanzaridingcompany.com
508.939.1001

On Sep 30, 2015, at 3:39 PM, ERC CapeCod <capecod@esperanzaridingcompany.com> wrote:

Good Afternoon Nina,

I just wanted to pass along my email so that you may contact me when the date is set for the Sandy Neck Beach Park meeting that you mentioned I or a representative of my company should attend.

As we spoke earlier this summer, I have been trying to gain access to Crowe's Pasture and

10/19/2015

Chapin Beach in the Town of Dennis, but all administrators that I have contacted numerous times over the summer refuse to reply. I feel at a loss, but I will continue to try! As this is important so that my company perhaps does not over use its welcome at Sandy Neck. Do you have any other ideas of beaches and or tidal flats I might be able to access?

None the less, I am open to ideas as to how your park can be more comfortable with my business operating on the park. Please express any thoughts that you may have on this and I will be happy to consider and get back to you with details.

Have a nice day and try to stay dry! (:

Sincerely,

Elizabeth Buyrn



Visit us on [TripAdvisor](#) and [Facebook](#)



Town of Barnstable
Community Services Department
Marine and Environmental Affairs Division
1189 Phinneys Lane, Centerville Ma. 02632
www.town.barnstable.ma.us



Natural Resources 508-790-6272
Harbormaster 508-790-6273
Animal Control 508-790-6274
Sandy Neck 508-790-6272
Gatehouse 508-362-8300 (April – Nov)

Daniel J. Horn, Director
Office: 508-790-6273
FAX: 508-790-6275

2015 Sandy Neck Deer Hunt

The **2015 Sandy Neck Deer Hunt** will be as follows:

- Archery hunt will be November 23, 2015 – November 28, 2015 or until six (6) deer are taken, whichever comes first.
- Primitive firearms hunt will be November 30, 2015 – December 05, 2015 or until six (6) deer are taken, whichever comes first.

If six (6) deer are not taken during the week of the archery hunt, the remaining number will be added to the primitive firearms hunt. Thus, a total of twelve (12) deer will be harvested from Sandy Neck in 2015.

You **MUST** attend a night meeting. The archery meeting is Wednesday, November 18, 2015 at 6:00 pm at the Centerville Recreation Building, 524 Main Street, Centerville, MA. The primitive firearms meeting is Wednesday, November 18, 2015 at 7:00 pm at the Centerville Recreation Building, 524 Main Street, Centerville, MA. Please bring your valid hunting license to the meeting at which time you will be registered for the hunt. Participants for each hunt will be selected by lottery during their respective meetings.

Sandy Neck Deer Harvest Supplemental Regulations:

1. These regulations are issued in lieu of the Sandy Neck Beach Park Regulations §601-5 Hunting Regulations A & C. Other regulations remain in full force and effect.
2. In accordance with the provisions of Town of Barnstable Ordinances §177-2, all vehicles operating on Sandy Neck must have a valid Sandy Neck Off-Road Vehicle (ORV) sticker.

3. All participants must attend a Sandy Neck Deer Harvest Meeting that will be held prior to each deer hunt. (Meetings - Archery, Wednesday, November 18, 2015 at 6 pm and Primitive Firearms, Wednesday, November 18, 2015 at 7 pm).
4. Hunt limited to successful participants in the special lottery held prior to the event. All hunters participating in the White Tailed Deer harvest must register at the station prior to each hunting trip on Sandy Neck.
5. All deer taken must be reported at the station. All deer "struck and lost" shall be reported to the Natural Resource Officer on duty.
6. Specific zones will be identified on Sandy Neck for the hunting of White Tailed Deer. During the open season as proscribed by the controlled hunt regulations, areas designated for deer hunting will be closed to other forms of hunting, and general public use will be limited.
7. No blinds shall be established or maintained prior to the opening of the limited deer harvest season for Sandy Neck, or after either season established by the Town.
8. Any hunter receiving any citations will be suspended from further participation in the harvest.
9. Those regions of the front beach adjacent to deer hunting zones may be closed to the parking of off road vehicles, except those displaying a Sandy Neck Deer Harvest Parking Pass.
10. Access to the cross trails and Marsh Trail for the purposes of recovering harvested deer may be allowed BY SPECIAL PERMIT FROM THE OFFICER ON DUTY ONLY.
11. All persons possessing primitive firearms and archery equipment within the bounds of Sandy Neck must have a special permit issued from the Town of Barnstable in addition to all permits required by the Division of Fisheries and Wildlife.
12. No person shall carry a shotgun in the area of Sandy Neck designated for deer hunting, during the open deer season on Sandy Neck.
13. Deer may be hunted within the bounds of designated deer harvest areas on Sandy Neck by means of archery from November 23, 2015 – November 28, 2015 or until six (6) deer have been harvested, whichever comes first. And by means of blackpower (muzzleloader) from

November 30, 2015 – December 5, 2015 or until six (6) deer have been harvested, which ever comes first. A total of twelve (12) deer will be harvested.

14. Hunting shall occur between ½ hour before sunrise and sunset only.
15. Access to the beach will be granted to deer hunters one hour before sunrise, as determined by the Sandy Neck tide chart, on each day that deer may be hunted on Sandy Neck. No hunter may access the beach prior to one hour before sunrise. All hunters must be off the beach no later than one half hour after sunset.
16. All vehicles entering or leaving the controlled hunting area will be subject to search at the discretion of any Natural Resource Officer and/or staff at the Check Station.
17. Harassment of hunters or the obstruction, interference, or prevention of the lawful taking of fish or wildlife within the bounds of Sandy Neck is prohibited.
18. During the 2015 hunting season, the provisions of the Sandy Neck Regulations and the Sandy Neck Deer Harvest Supplemental Regulations may be enforced within the bounds of Sandy Neck by Natural Resource Officers, and any employee of the Town of Barnstable appointed to serve as a police officer.
19. Bag limit: One deer may be harvested per hunter participating in the controlled harvest. Possession: No more than one deer in possession for each licensed and permitted participant.
20. Hunting is prohibited on or from pre-existing blind structures, posted private or leased property, areas marked with symbolic fencing and red surveyors tape, within 150 feet of Access Trail and the front beach or within 500 feet of any dwelling in use or public building.
21. Patrol vehicle sirens shall signal a mandatory evacuation. All hunters must return to the front beach and/or their vehicles immediately after the evacuation siren is sounded, where they will await further instructions.
22. As stipulated in the Sandy Neck Beach Park Regulations, the Marine and Environmental Affairs Division reserves the right to close the beach to hunting if weather conditions or other factors constitute a hazardous or unsafe environment.

*distributed &
SW meeting
10/19/15*



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CLE PROJECT TEAM

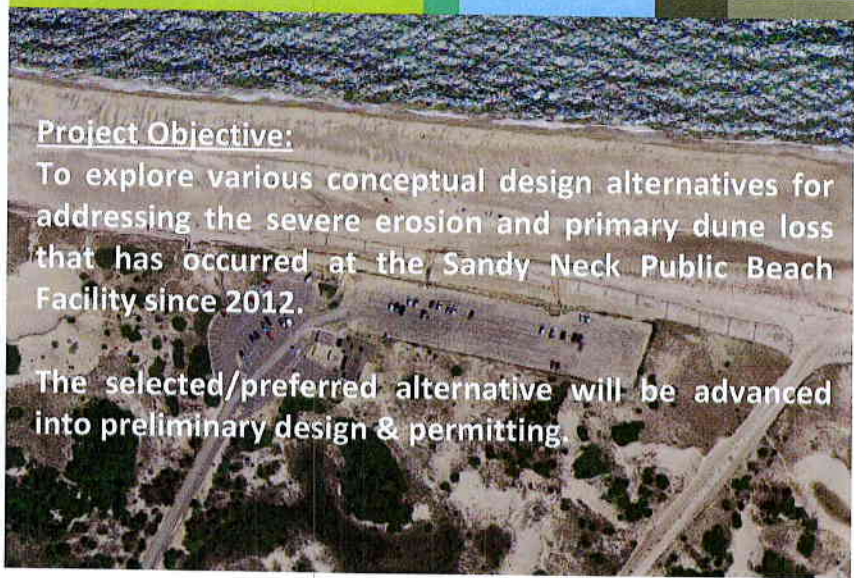
➤ **Lead Firm:** CLE Engineering, Inc. (CLE)

➤ **Role/Responsibilities:** Overall PM, Field Investigations, Evaluation of Resiliency Alternatives, Public Outreach, Preliminary Design & Environmental Permitting

Sub-Consultant Firm	Project Team Role
Applied Coastal Research & Engineering, Inc. (ACRE) 766 Falmouth Road Mashpee, MA 02649	<i>Coastal Sediment Transport and Shoreline Change Evaluation & Alternatives; Public Outreach</i>
Horsley Witten Group (HWG) 90 Route 6A, Unit 1 Sandwich, MA 02563	<i>Landscape Architecture; Site Design & Low Impact Development Solutions</i>
Brown, Lindquist, Fennucio & Raber Architects, Inc. (BLFR) 203 Willow Street, Suite A Yarmouthport, MA 02675	<i>Architectural Renderings</i>

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MA CZM Coastal Resiliency Grant



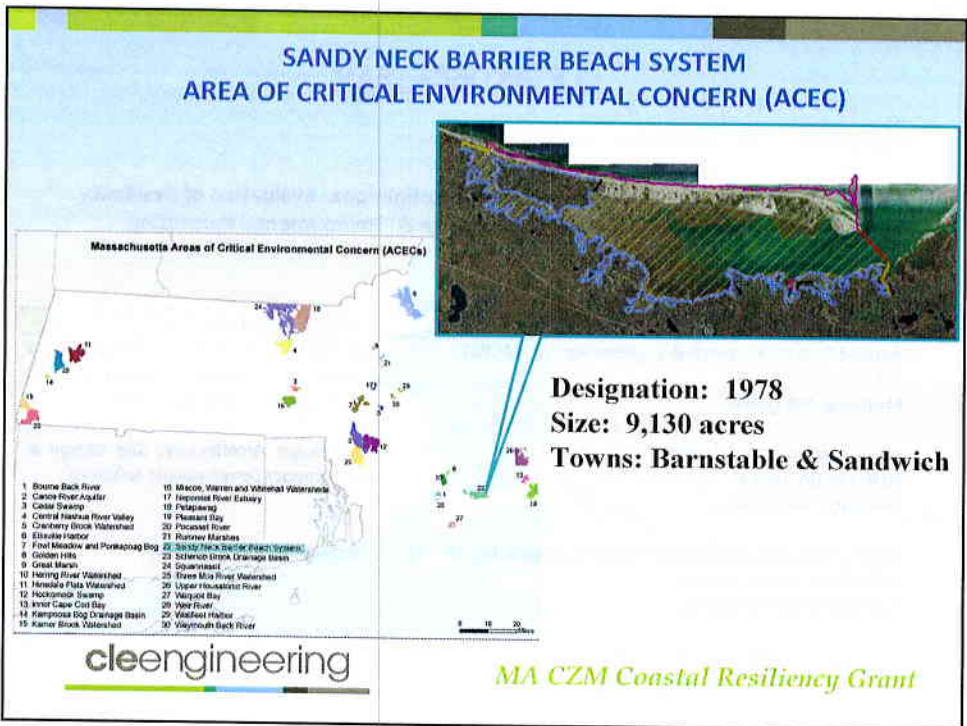
Project Objective:

To explore various conceptual design alternatives for addressing the severe erosion and primary dune loss that has occurred at the Sandy Neck Public Beach Facility since 2012.

The selected/preferred alternative will be advanced into preliminary design & permitting.

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MA CZM Coastal Resiliency Grant



SANDY NECK BARRIER BEACH SYSTEM AREA OF CRITICAL ENVIRONMENTAL CONCERN (ACEC)

Areas of Critical Environmental Concern (ACECs) are places in Massachusetts that receive special recognition because of the quality, uniqueness and significance of their natural and cultural resources.

These areas are identified and nominated at the community level and are reviewed and designated by the state's Secretary of Energy and Environmental Affairs (EEA). ACEC designation creates a framework for local and regional stewardship

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MA CZM Coastal Resiliency Grant

Designation of an area as an ACEC shall have the following effects:

- ✓ All EEA agencies shall take action, administer programs, and revise regulations in order to:
 - *Acquire useful scientific data on the ACEC;*
 - *Preserve, restore, or enhance the resources of the ACEC; and*
 - *Ensure activities in or impacting on the area are carried out so as to minimize adverse effects on:*
 - marine and aquatic productivity,
 - surface and groundwater quality,
 - habitat values,
 - storm damage prevention or flood control,
 - historic and archaeological resources,
 - scenic and recreational resources, and
 - other natural resource values of the area.
- ✓ All EEA agencies shall subject the projects of federal, state, and local agencies and private parties to the closest scrutiny to assure that the above standards are met for any action subject to their jurisdiction

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MA CZM Coastal Resiliency Grant

SCOPE OF SERVICES TO BE CONDUCTED

Beach Survey, Wetland Resource Delineation & Endangered Species Habitat

- **Develop an existing site condition plan which will identify beach and backland topography, wetland resource areas and endangered species habitats, etc.**
- **Survey will establish baseline conditions for coastal modeling and for alternatives analysis**

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MA CZM Coastal Resiliency Grant

Coastal Sediment Transport/Shoreline Change Evaluation

- **Perform an analysis of coastal processes (primarily waves) governing beach sediment transport to properly evaluate natural forces influencing nearshore sediment movement.**
- **Information from the wave modeling will be incorporated into a long-shore sediment transport model. Nearshore wave climate, grain size, and historic shoreline change data will be used to accurately simulate sediment transport in the shoreline change model developed for the project.**
- **The shoreline change model will be used to assess sediment transport trends, determine future migration of the shoreline, and evaluate beach nourishment.**

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□ Assessment of Long-term Resiliency Alternatives

✓ The following alternatives will be considered:

- Do-Nothing
- Beach/Dune Nourishment
(up to a total of three (3) beach fill templates)
- Shoreline Protection Structures
“hard structures” - bulkhead/seawall and stone revetment
“soft structures” - sand-filled coir bags
- Managed Site Reconfiguration

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□ Assessment of Long-term Resiliency Alternatives (cont'd)

✓ Conceptual plans will be developed for each alternative and each alternative will be evaluated, at a minimum, for:

- Long-term sustainability and longevity using shoreline change model
- Cost-Benefit Analysis
- Permittability – Evaluate the ability of each alternative to meet regulatory performance standards and comply with the requirements of the ACEC designation
- Potential mitigatory efforts required to offset impacts
- Potential impacts to abutting properties.

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MA CZM Coastal Resiliency Grant

Public Workshops

- Long-term alternatives developed will be presented at two (2) public workshop sessions.
- Topics presented/discussed will include site history, ACEC designation, natural resources, endangered habitats and the current and future vulnerability of the Sandy Neck Public Beach Facility with respect to climate change and sea-level rise in an effort to provide public awareness and understanding of the importance of identifying and implementing a sustainable long-term management plan.
- December 2015 – January 2016

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MA CZM Coastal Resiliency Grant

Preliminary Design

- The selected/preferred alternative will be advanced into preliminary design.
- Selection of Sandy Neck Advisory Board Liaison
- Preliminary design plans will be suitable for environmental permitting efforts.

Environmental Permitting

- Pre-application meeting with regulatory agencies
- Prepare permit/submit permit applications.

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MA CZM Coastal Resiliency Grant

QUESTIONS?

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MA/CZM Coastal Resiliency Grant

Distributed @
SN Meeting
10/19/15

ASSESSMENT OF A COASTAL SEDIMENT BUDGET FOR THE TOWNS OF SANDWICH & BARNSTABLE

19 October 2015

M. Borrelli, G. Giese, T. L. Smith, S.T. Mague, P. Barger

Center for Coastal Studies
Provincetown

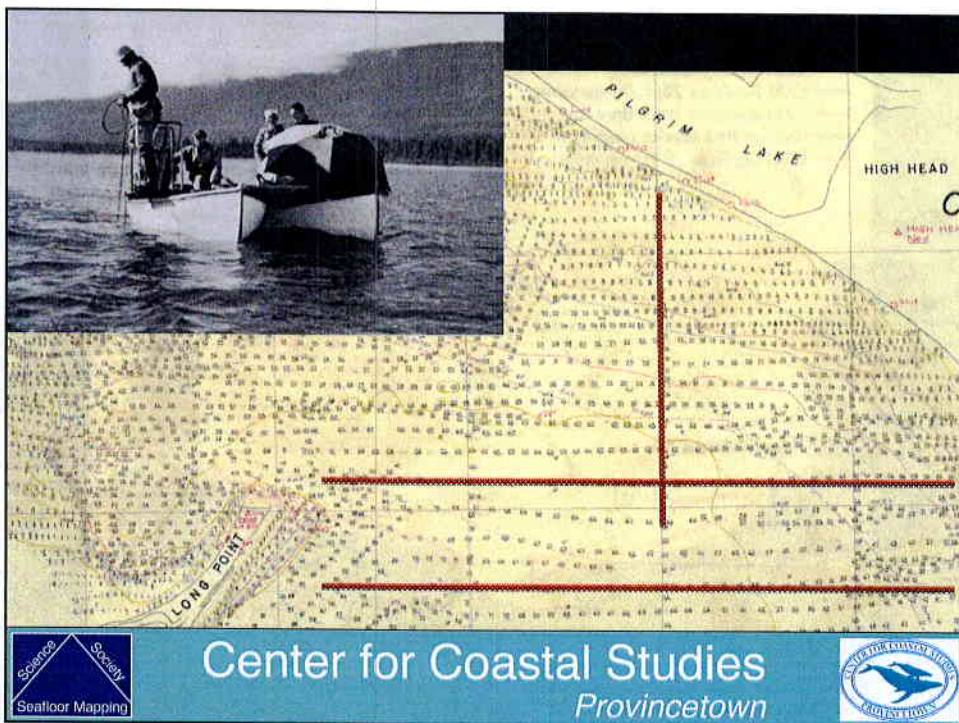
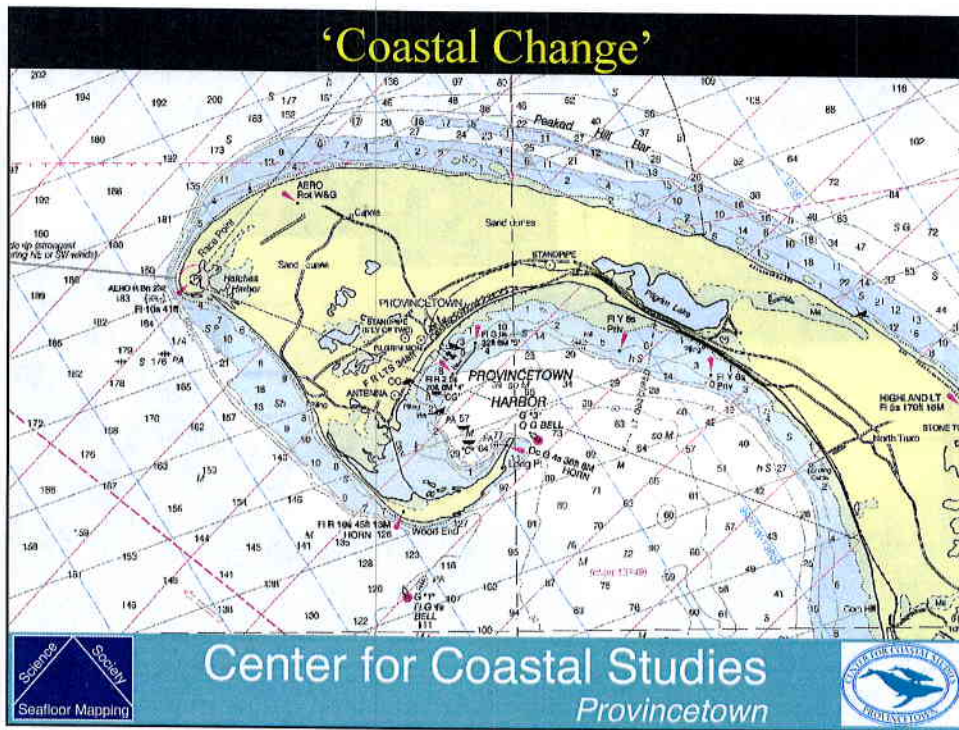
Science Society
Seafloor Mapping

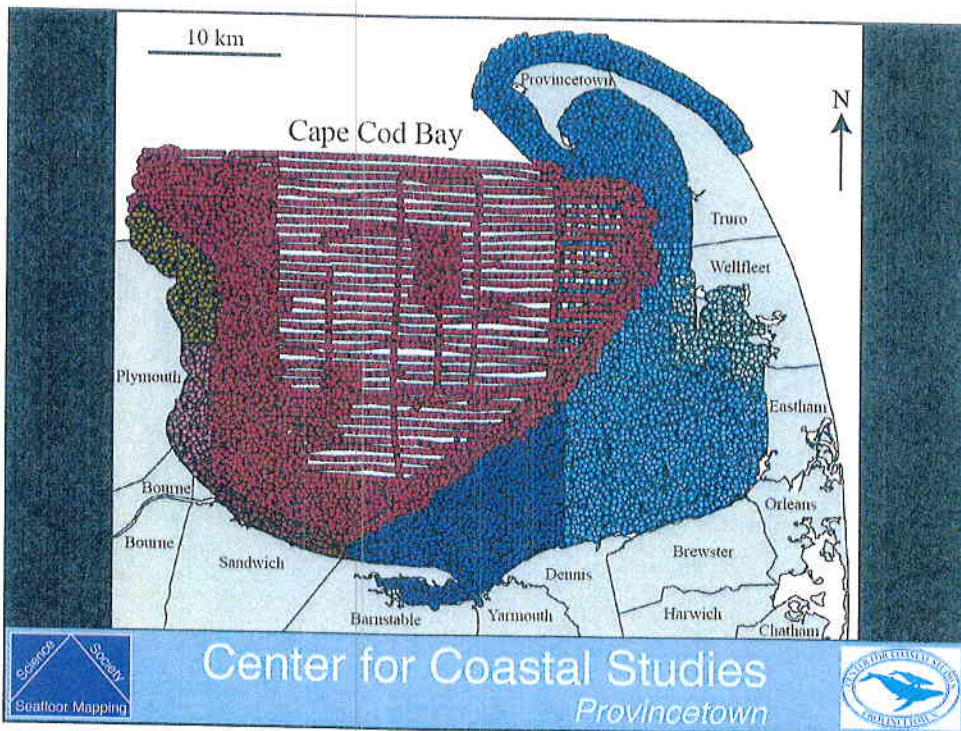
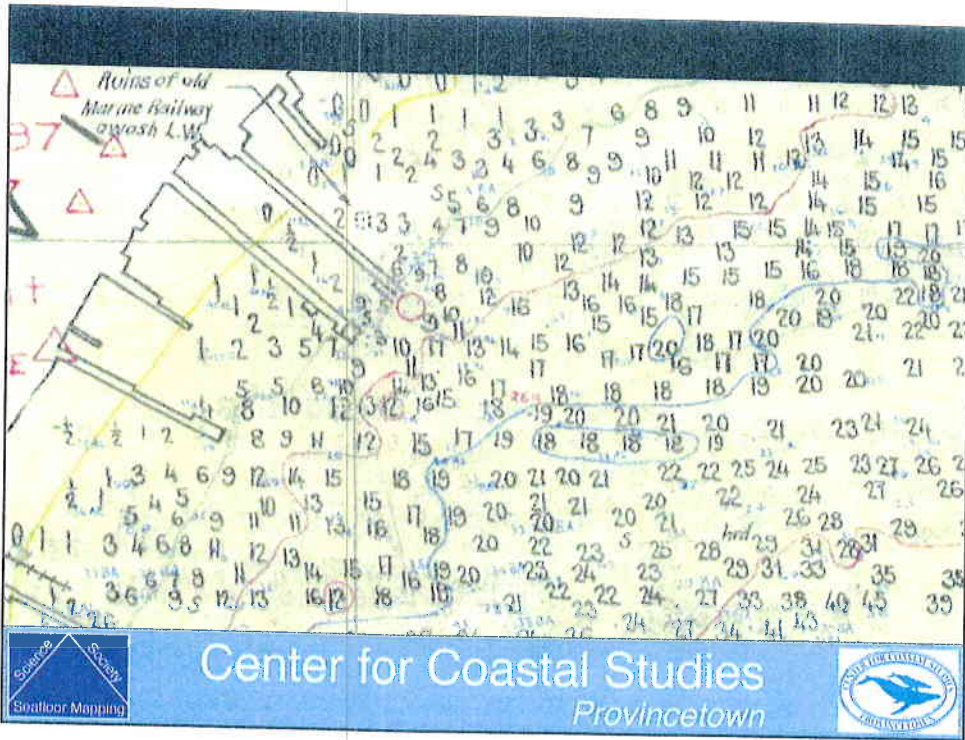
- Island Foundation 2012
- Island Foundation 2013
- Mass Bays Program 2014
- CZM Resiliency 2015: Provincetown
- CZM Resiliency 2015: Brewster
- National Park Service (ongoing)
- CZM Resiliency 2016: (ongoing)

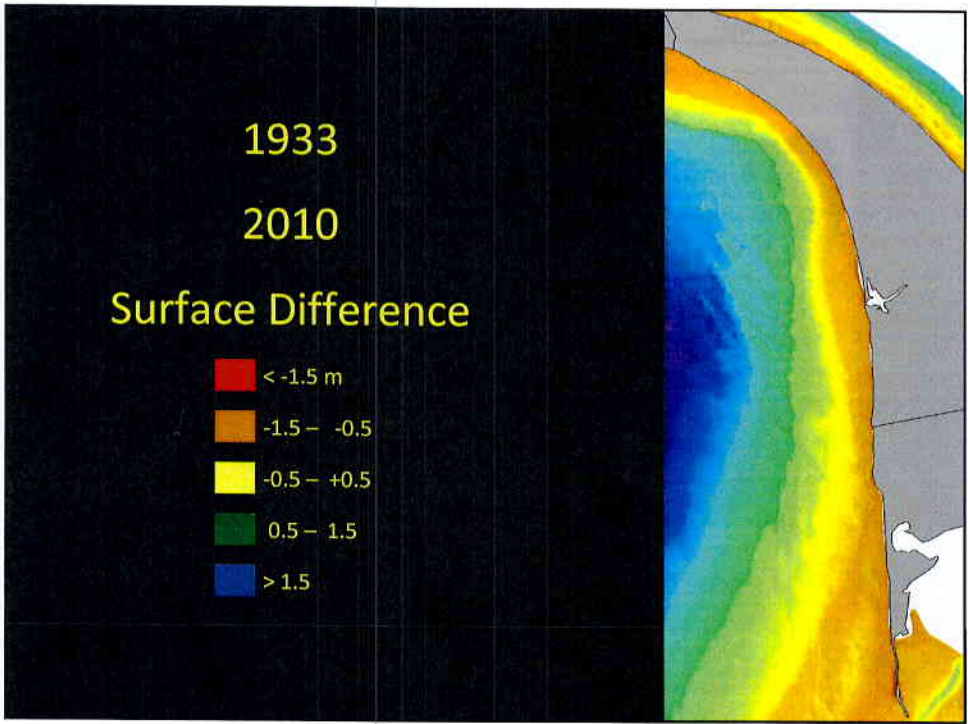
CAPE COD BAY

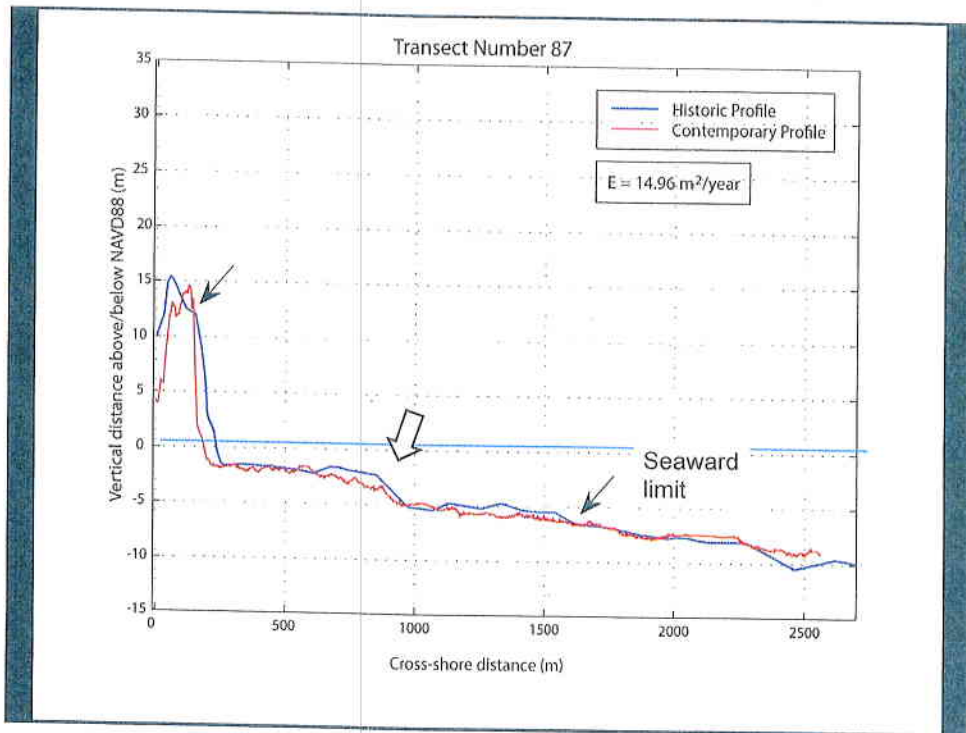
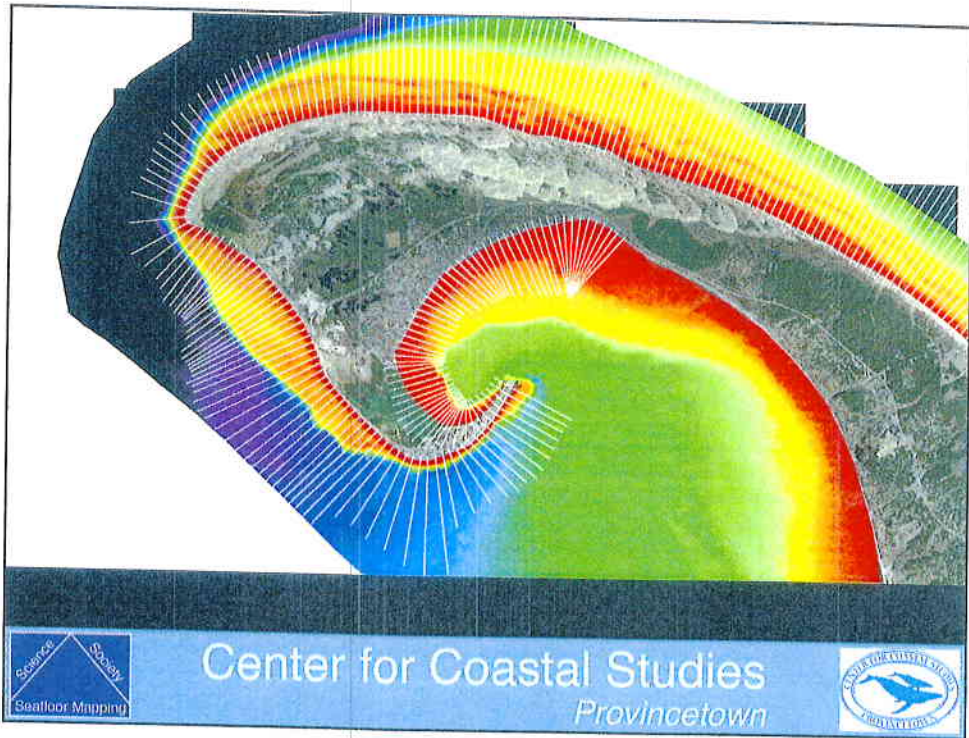
Center for Coastal Studies
Provincetown

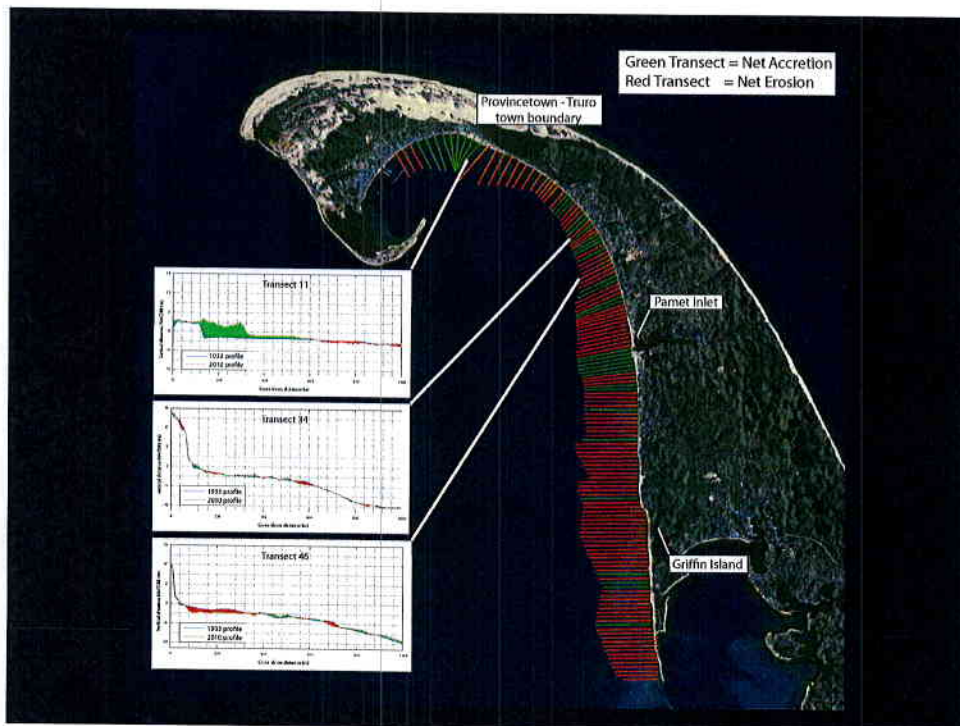
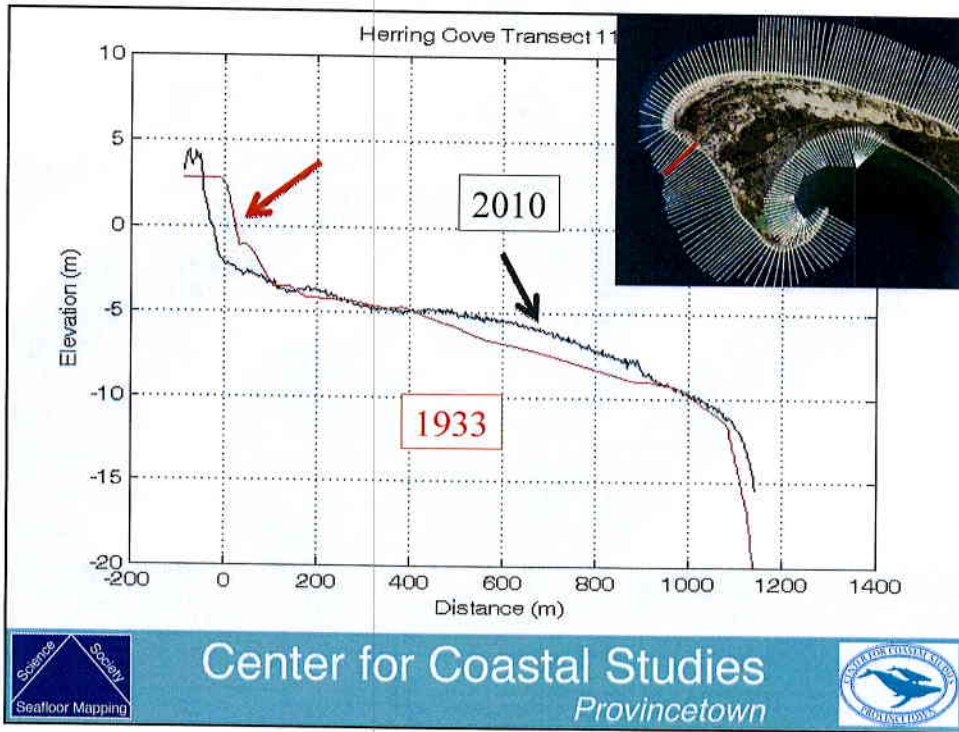
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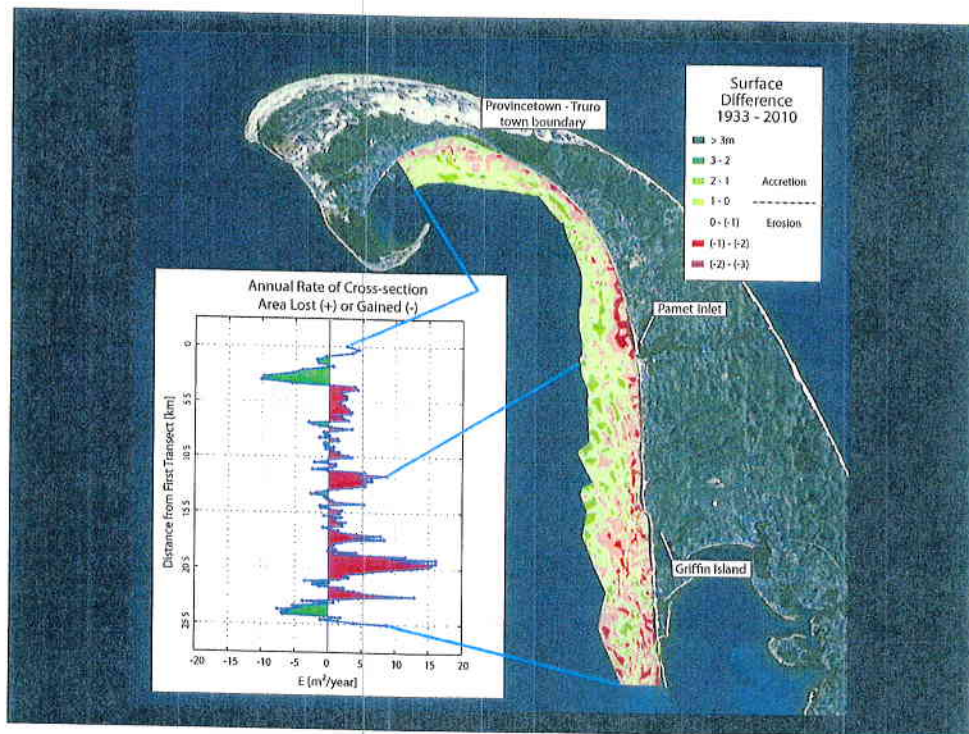
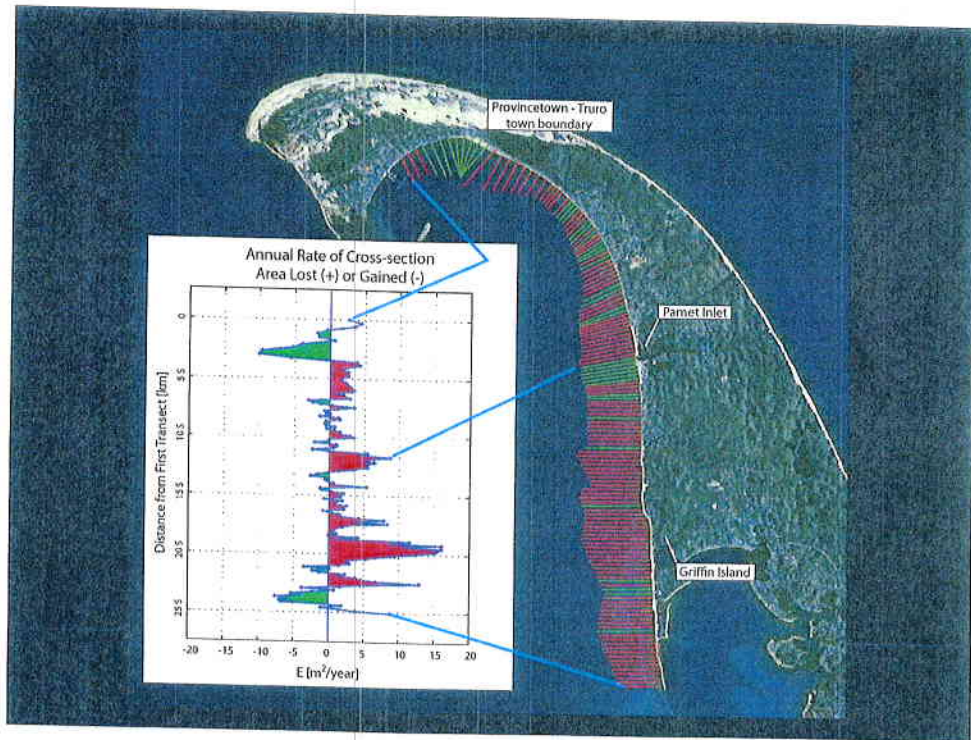


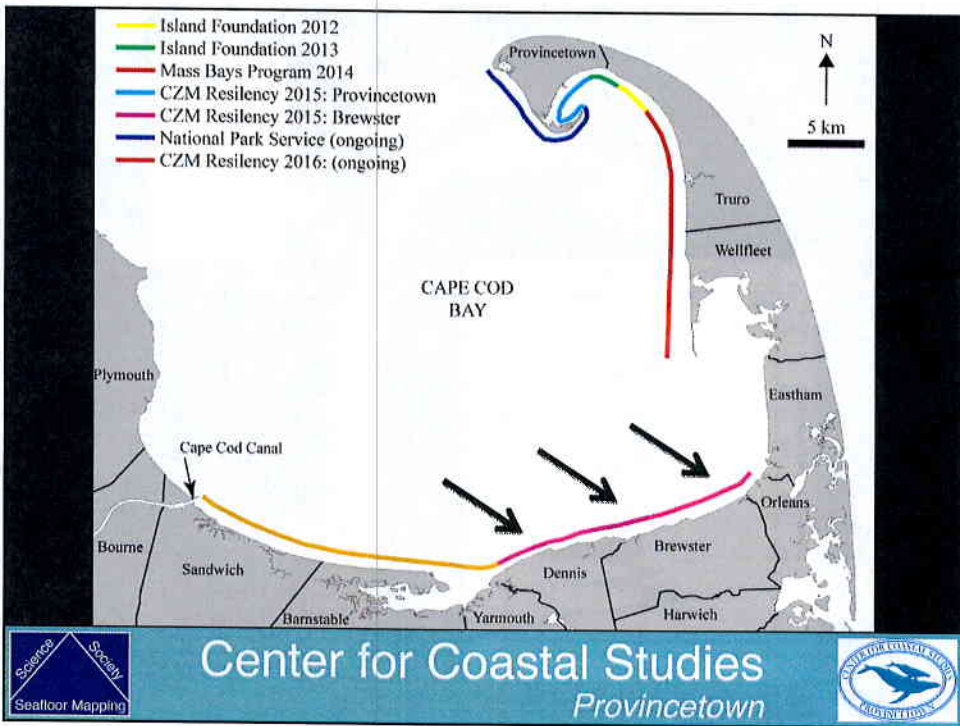
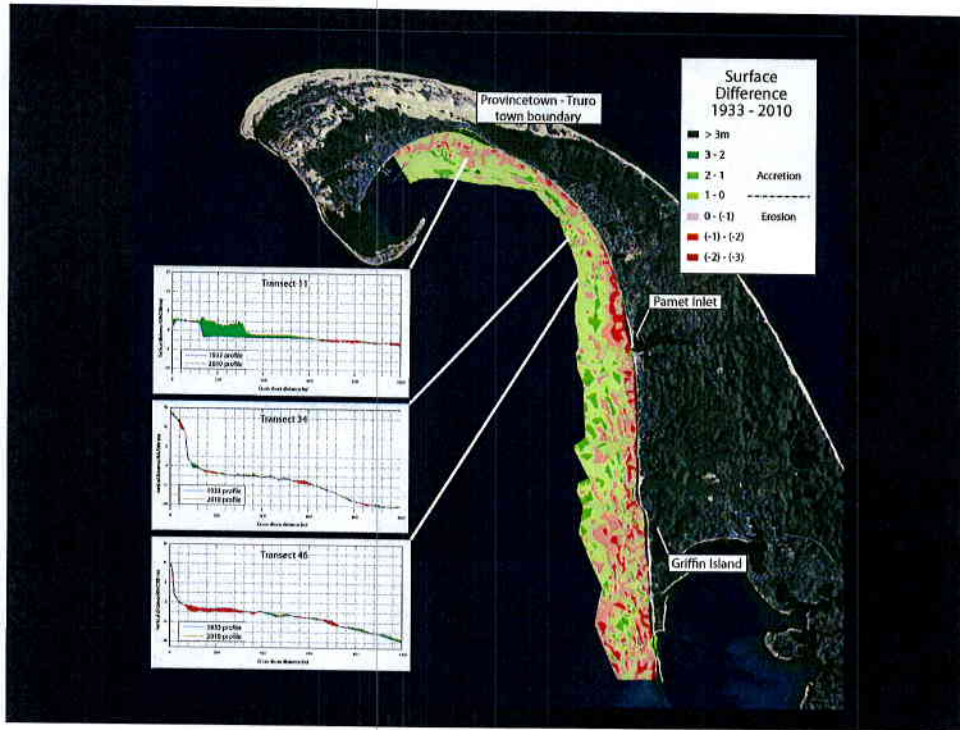




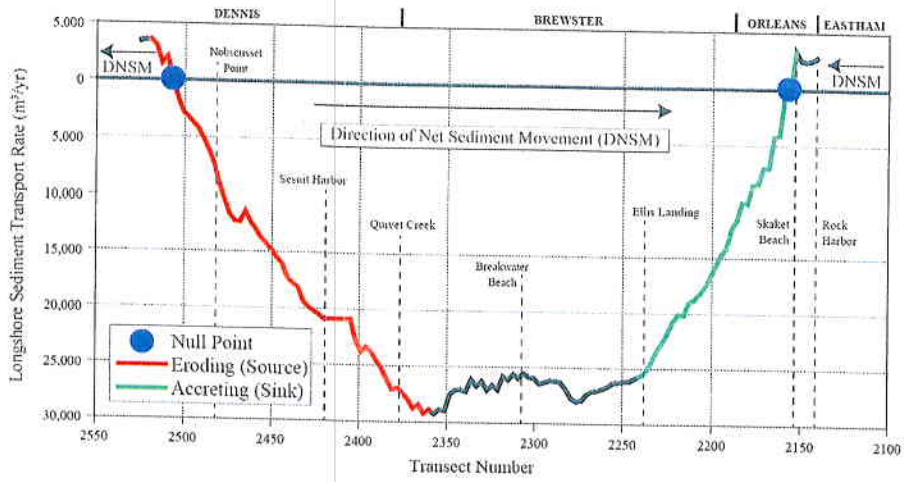








'BREWSTER' SEDIMENT BUDGET SUMMARY



Center for Coastal Studies
Provincetown

