

**TOWN COUNCIL WORKSHOP
WEDNESDAY, FEBRUARY 4, 2015 – 6:00 P.M.
COUNCIL CHAMBERS**

Item 1. Call to Order.

Item 2. Those Present.

Item 3. Discussion with Peter Slovinsky of the Maine Geological Survey, regarding Beach Erosion on Pine Point.

Item 4. Adjournment.

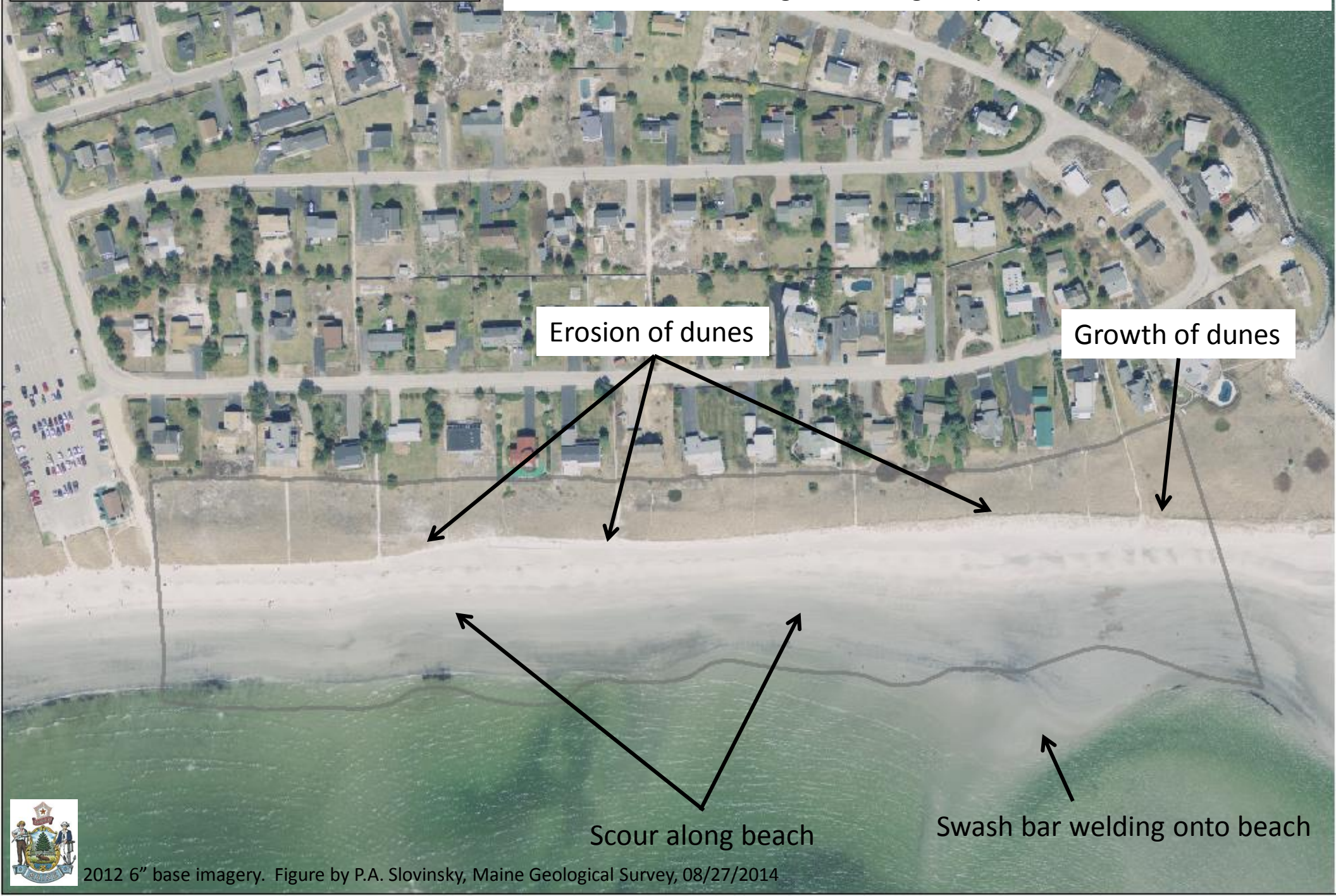
**Shoreline Change at Pillsbury Drive
Scarborough, ME**

120 60 0 120 Feet

Conservation_Easement



Figure 1. 2012 aerial orthoimagery showing the area of the conservation easement and some noted shoreline features. Beach and dune erosion and accretion is likely due to periodic scour due to ebbing tides and wave attack and swash bar migration along this portion of the beach.



Erosion of dunes

Growth of dunes

Scour along beach

Swash bar welding onto beach



Shoreline Change at Pillsbury Drive Scarborough, ME

Vegetation Line Changes (2006-2014)

Shoreline Change (ft/yr)

- 3.3 - -3.0
- 2.9 - -2.0
- 1.9 - -1.0
- 0.9 - 0.0
- 0.1 - 1.0
- 1.1 - 2.0
- 2.1 - 3.0
- 3.1 - 4.0
- 4.1 - 5.0

120 60 0 120 Feet



Conservation_Easement

Figure 2. Vegetation line position along the beach has, on average, eroded at a rate of about -0.5 ft/yr with a SD= 1.6 ft/yr from 2006 to 2014. Erosion is more concentrated along the western side of the conservation easement, where the average rate is -1.6 ft/yr (SD=0.8 ft/yr). Along the eastern side, the average rate is +0.8 ft/yr (SD=1.5 ft/yr) although there is a pocket of higher net erosion in the center of this area. SD = standard deviation.

Note erosion of dunes

Growth of dunes

Erosion (-1.6 ft/yr)

Accretion (+0.8 ft/yr)



Shoreline Change at Pillsbury Drive Scarborough, ME

High Water Line Changes (2006-2014)

Shoreline Change (ft/yr)

-5.6 - -5.0

-4.9 - -4.0

-3.9 - -3.0

-2.9 - -2.0

-1.9 - -1.0

-0.9 - 0.0

0.1 - 1.0

1.1 - 2.0

2.1 - 3.0

3.1 - 4.0

120 60 0 120 Feet



N



Conservation_Easement



Figure 3. High water line position along the beach has, on average, eroded at a rate of about -1.5 ft/yr with a SD= 3.1 ft/yr from 2006 to 2014. Beach erosion is more concentrated along the central portion of the conservation easement, where the average rate is -3.7 ft/yr (SD=1.7 ft/yr). Along the western side, the average rate is +1.6 ft/yr (SD=0.8 ft/yr), and along the extreme easternmost end, the rate is +2.2 ft/yr (SD=1.3 ft/yr). Beach erosion is likely due to scour channels west of the swash bar attachment point. SD = standard deviation.

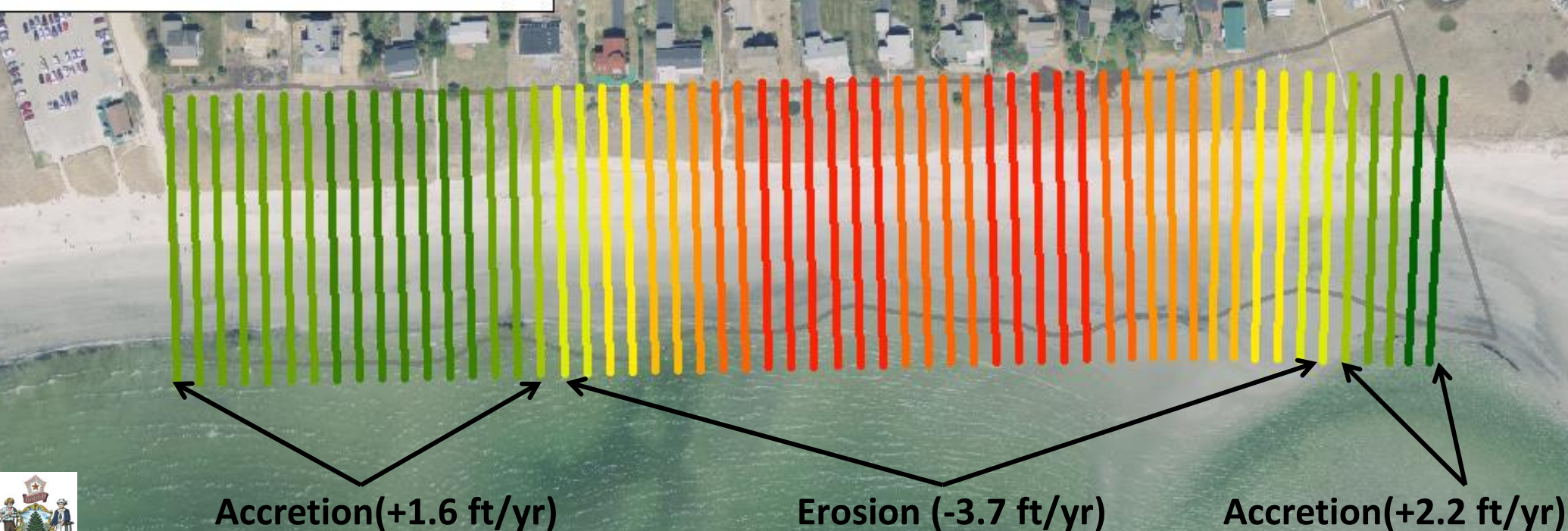


Figure 4. 2013 aerial orthoimagery showing the area of the conservation easement in the larger context of some regional shoreline features. Beach and dune erosion and accretion is likely due to periodic scour (likely driven by tides and wave attack) and swash bar migration along this portion of the beach. The deep channel allows waves to attack the beach.

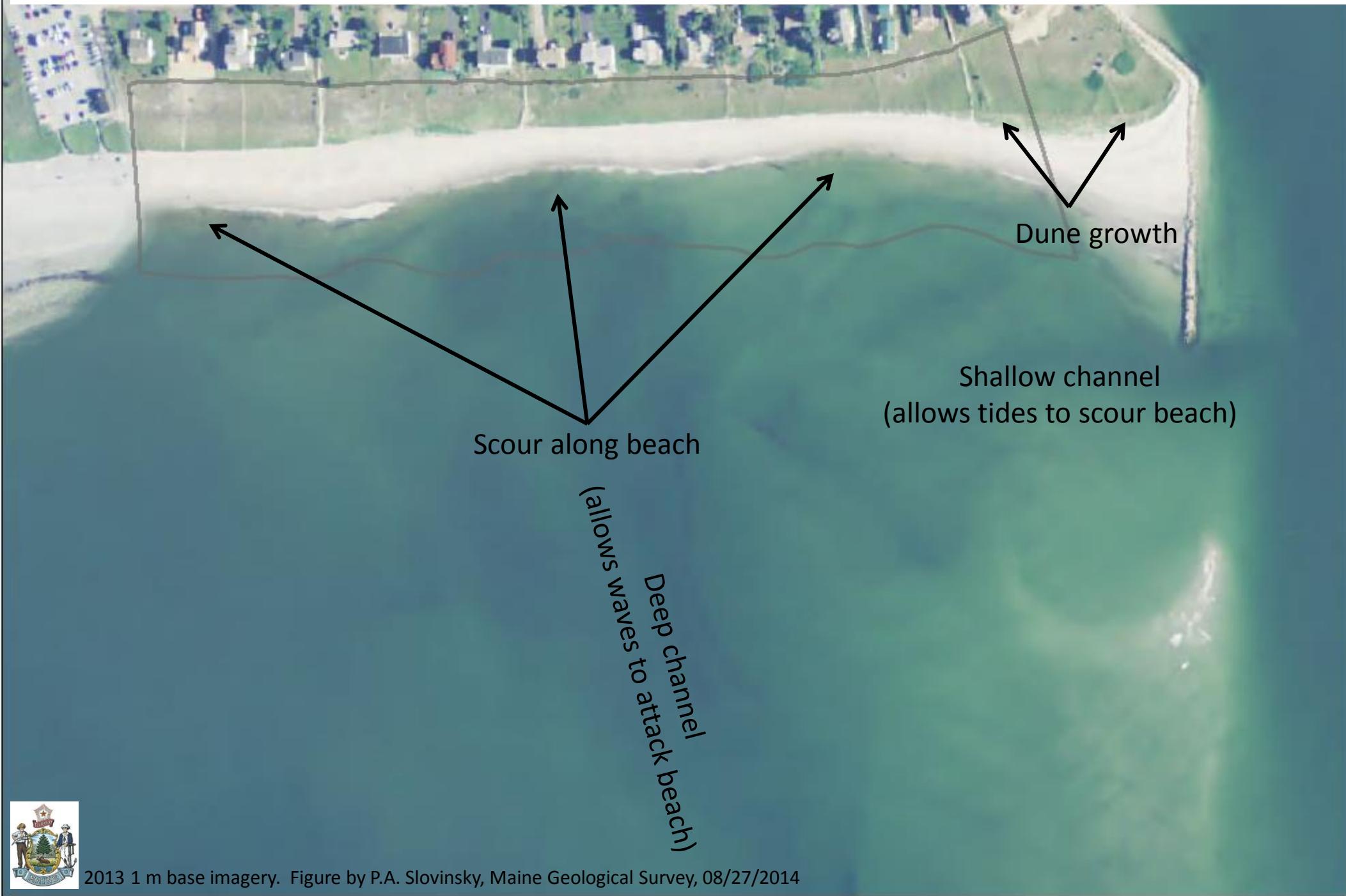


Figure 5. 2013 aerial orthoimagery showing vegetation line shoreline changes in the context of regional geomorphic features.

