



MASSWILDLIFE

Resource Protection at Gurnet/Saquish, Plymouth

21 August 2019

Agenda

- Introductions
- Ground rules
- Presentation – overview of birds, wetlands, problems caused by vehicles, regulations and guidelines; examples
- Information and concerns from residents
- Discussion
- Next steps



- Listen
- Keep an open mind
- One speaker at a time
- Be concise; let everyone participate
- Keep the discussion on-topic
- Issues that can't be resolved must be “parked”

Piping Plover

- Migratory shorebird
- Feeds on marine invertebrates on beach and in intertidal
- Lays eggs on sand
- Chicks are highly mobile within hours of hatch; feed themselves
- Parents attend and brood chicks
- Takes chicks ~1 mo. to fledge (fly)
- Listed as *Threatened* under U.S. & Mass. Endangered Species Acts
- Their wetland habitat is protected by Mass. Wetlands Protection Act (WPA)

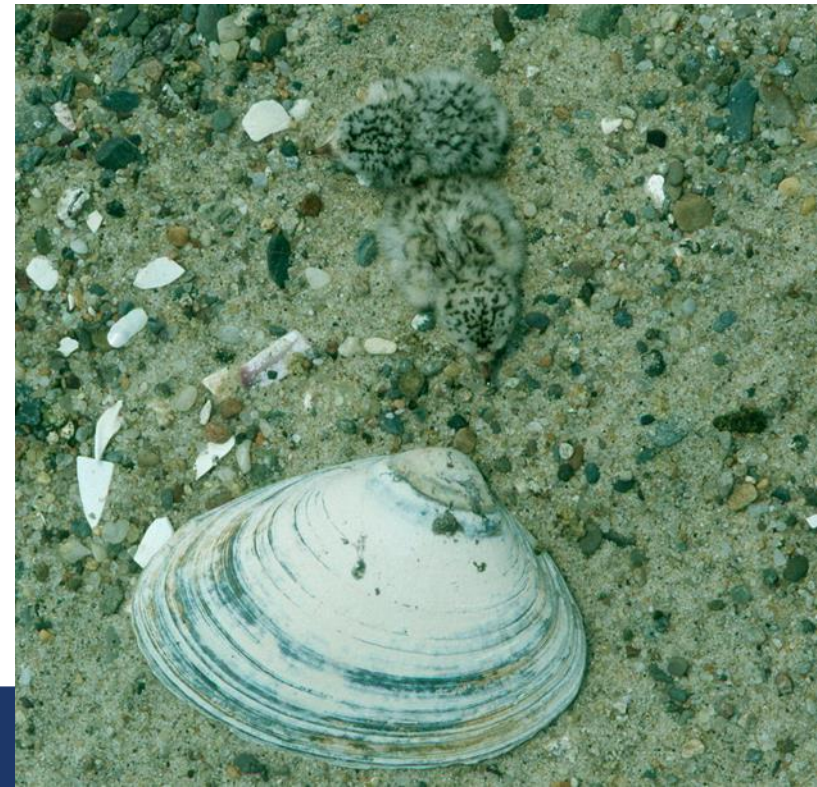


2018 Plover Nest Locations



Least Tern

- Migratory seabird
- Feeds nearshore, mostly on fish
- Lays eggs on sand
- Chicks are moderately mobile within hours of hatch
- Fed by adults in the vicinity of nest or near waterline
- Takes chicks about 3 – 4 weeks to fledge (fly)
- Listed as *Special Concern* under Mass. Endangered Species Act
- Their wetland habitat is protected by Mass. WPA



2018 Least Tern Colony Locations



U.S. and Massachusetts Endangered Species Acts

- Prohibit “take” of listed species
- Take includes harming, harassing, killing, and disrupting important behaviors (breeding, feeding, resting...)
- Take can be caused by actions or failures to act (negligence)



Impacts to birds caused by over-sand vehicle (OSV) use

- Disturbance to nesting and migratory shorebirds
- Creation of ruts that can trap shorebird chicks
- Crushing of shorebird chicks
- Degrade feeding habitat and reduce prey

Coastal Beaches

- “Unconsolidated sediment subject to wave, tidal and coastal storm action which forms the gently sloping shore of a body of salt water and includes tidal flats”
- Dissipate wave energy by their gentle slope, permeability and granular nature
- Serve as a sediment source for dunes and subtidal areas

Tidal flats

- “Any nearly level part of a coastal beach ... usually extends from the mean low water line landward to the more steeply sloping face of the coastal beach ... may be separated from the beach by land under the ocean”
- Critical link in marine food web
 - Recycle nutrients into the water column for use by primary producers, such as algae
 - Support large numbers of invertebrates, including shellfish, which provide a food source for shorebirds and commercially-important fish and crustaceans
- Protected under the Mass. WPA



Mass. Wetlands Protection Act (WPA)

- Regulated by Mass. Department of Environmental Protection (DEP)
- Protects wetlands and the public interests they serve
 - flood control
 - prevention of pollution and storm damage
 - protection of water supplies, groundwater, fisheries, shellfish and wildlife habitat
- Activities on beaches/flats cannot:
 - increase erosion
 - decrease volume
 - change the form
 - have adverse effects on the habitat of rare species

Impacts to beach and tidal flats caused by OSV use



- Changes form and decreases volume of the beach
- Increases erosion of the beach and adjacent/downdrift beaches
- Increases potential for storm damage and flooding
- Churning and compaction of substrate and wrack (seaweed accumulation at high tide mark)
- Accumulation of toxic chemicals
- Destruction of marine life
 - impacts to species that depend on them
- Harm to nesting and migratory shorebirds (disturbance, reduction in prey, mortality)

Vehicle use on beaches is regulated under the Mass. WPA

Mass. & federal “Guidelines” for protecting nesting plovers & terns (1993, 1994)

- Recommendations that, if followed, help land owners and managers avoid take, reducing their liability under the U.S. ESA and Mass. ESA
- Include:
 - Protecting nesting habitat and chick habitat (fencing and signage)
 - Managing disturbances (vehicles, dogs, kites, fireworks)
- Implemented widely across the breeding range



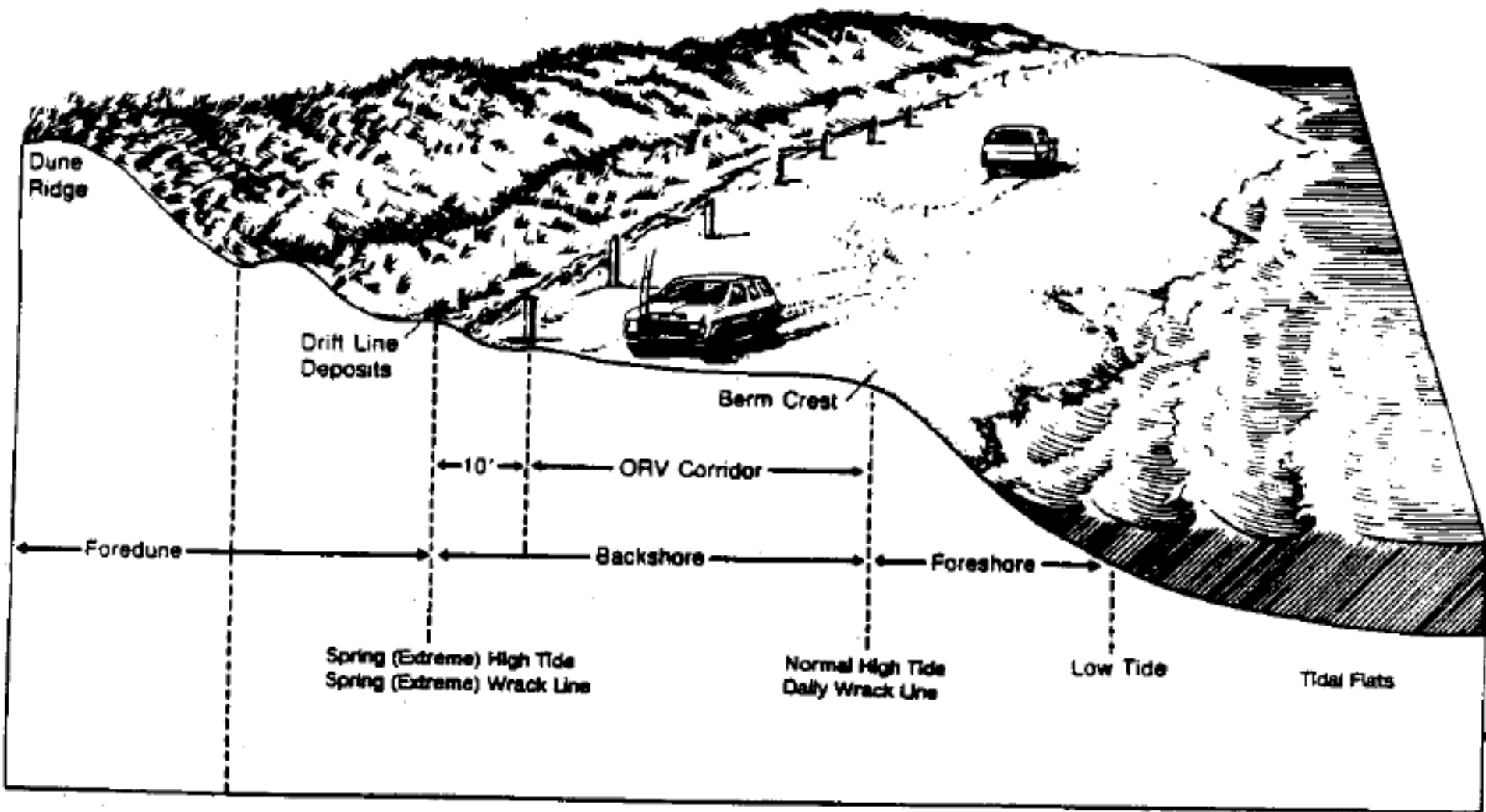
Photo: Kim Smith

Beach-nesting bird guidelines and Barrier Beach Guidelines address “essential vehicles”

- Public safety
- Law enforcement
- Minimal maintenance of public property
- Access to private dwellings not otherwise accessible
- Rare species monitoring and management
- Research (wildlife, plants, geology)

Beach-nesting bird guidelines regarding essential vehicles

- When unfledged chicks are present, essential vehicles should only travel if absolutely necessary and no other reasonable travel routes are available
 - Daylight hours only, except in emergencies
 - Guided by a qualified monitor who has first located chicks
- Number of trips should be minimized
- Use of open vehicles recommended for visibility
- Homeowners should consider other means of access (foot, water, shuttle)
- Travel should avoid wrack line and avoid creation of deep ruts
- If necessary, restrict only to emergency vehicles



Example 1: Sandy Neck, Barnstable

- ~50 cottages
- Essential vehicles -- those operated by cottage owners, spouses and immediate family of cottage owners, cottage lessees, and contractors providing necessary repairs
- Small number of essential vehicle trips vs. recreational trips
- Vehicle travel rules are designed to avoid take
 - Night travel prohibited
 - Regularly scheduled escorts provided, 8:15 am – 6:30 pm
 - 4 – 5 round-trips/day
 - During 6:30 am – 8:15 am and 6:30 pm – 8 pm, reservation must be made 24 h in advance



Piping Plover Habitat Conservation Plan (HCP)

- HCP – a management plan that is part of an application for an Incidental Take Permit (ITP) issued by the US Fish & Wildlife Service
- ITP – a permit that allows take of a listed species
- Because the plover population is doing well in Mass., MassWildlife obtained an ITP and issues subpermits to beach operators
 - Provides management flexibility so they can increase recreational opportunities
 - Allows deviations from Guidelines that may result in take
- HCP spells out how MassWildlife will manage plovers responsibly and mitigate for take so that there is a net benefit to plovers and the population remains healthy
- Permit requires:
 - Plover monitoring
 - Avoidance and minimization procedures to reduce take
 - Mitigation to compensate for take

HCP “covered activities” include vehicle use in the vicinity of unfledged chicks

Avoidance and minimization:

- Traffic management
 - Travel restricted to < 6 h/day in 2 – 3 travel periods
- Daylight hours only
- Vehicle escorts
- Mandatory training for OSV users
- Continuous monitoring of chicks during vehicle travel
- Barriers to prevent chick access to roads, if feasible
- Signage – *e.g.*, watch for birds, obey speed limits



Example 2: Duxbury Beach



Photo: Google

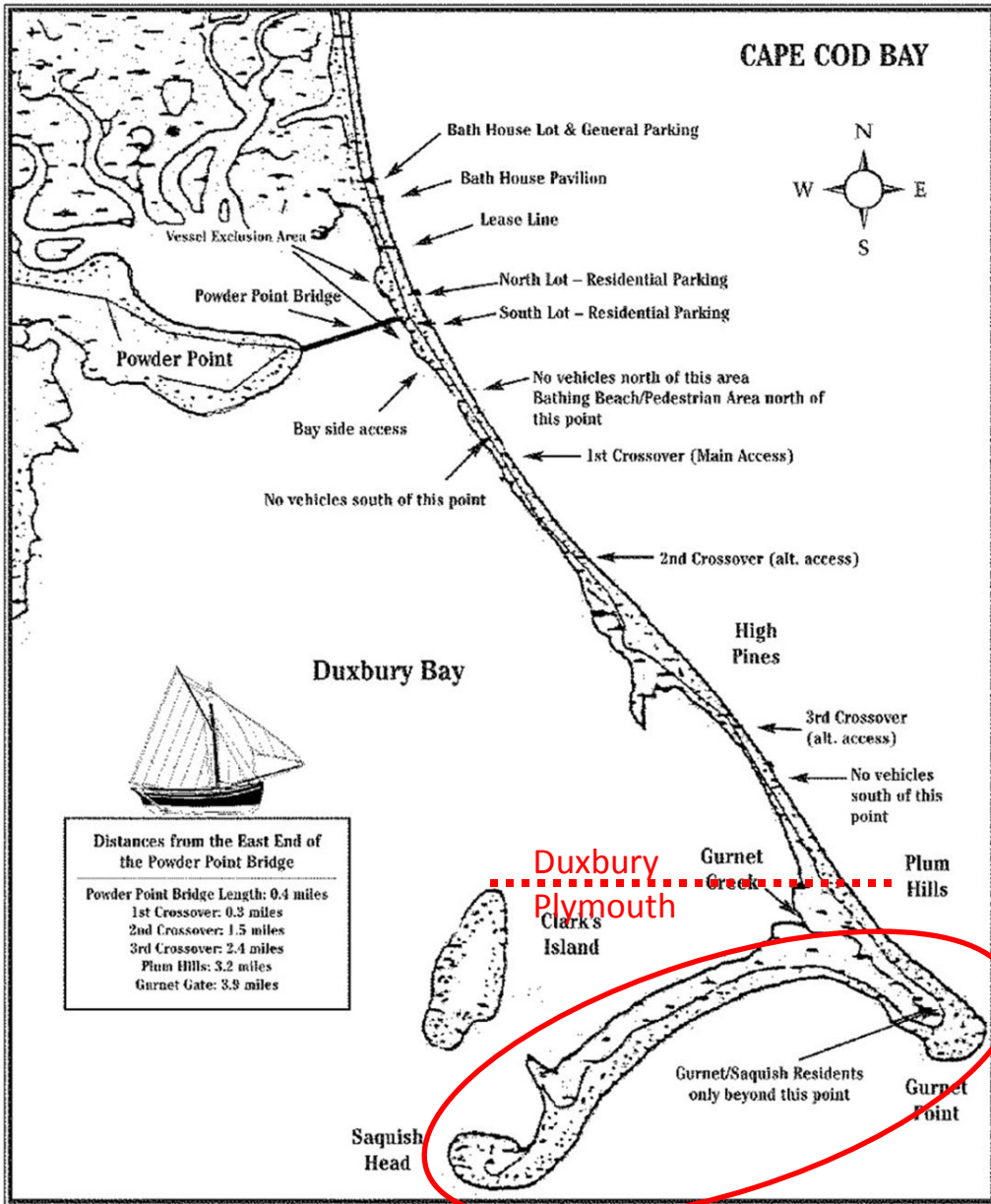
- Most of barrier beach owned by Duxbury Beach Reservation (DBR)
- DBR hires 50 – 60 bird monitors/year to protect unfledged chicks from vehicles and other disturbance
 - Monitor road crossings by chicks, stop traffic
 - 6 am – 8 pm, 7 days/week
- DBR has a “Certificate of Inclusion” (permit) under the HCP

Duxbury Beach, 2019

- 28 nesting plover pairs
- 11 broods crossed road
- 3 pairs brooded chicks in road, causing gridlock
- MassWildlife & USFWS allowed DBR to establish schedule for herding chicks & escorting essential vehicles during daylight hours
- 3 chick mortalities and 1 adult injury associated with plovers brooding in road
 - 2 separate incidents that occurred outside of monitoring hours



Gurnet-Saquish, Plymouth



- 248 residences
 - 6 occupied year-round
- Many are seasonal rentals
- Right-of-way along Duxbury Beach
- Essential vehicles: owners, their guests?, service/repair personnel, law enforcement, emergency vehicles

Issues for discussion

- By law, must protect listed species and wetland resources
- Regular use of “Boulevard” and other driving in intertidal zone/flats
- Daytime driving
 - DBR – level of monitoring and escorting
- Nighttime driving
 - High probability of causing take
 - Not an activity currently covered under HCP
- How to protect Plymouth residents from liability?