

Recommendations for 2009 Pre-nesting Closures

NPS Natural Resource staff conducted an annual assessment of piping plover (PIPL) breeding habitat on February 12-13, 2009. The pre-nesting closures have been identified and are based on current habitat conditions and consideration of PIPL breeding activity in recent years. As stated in the Interim Protected Species Management Strategy Finding of No Significant Impact (FONSI), the pre-nesting closures provide for continued recreational use and access consistent with required management of protected species. These closures will meet the requirements to provide protection from adverse impacts related to recreational uses as required by laws and policies, such as the Endangered Species Act, the Migratory Bird Treaty Act, the NPS Organic Act, and NPS *Management Policies 2006*. These recommendations are also intended to meet the requirements of the consent decree, which states that “In the years following the 2008 breeding season, NPS shall establish pre-nesting closure areas at Bodie Island Spit, Cape Point, South Beach, Hatteras Spit, North Ocracoke, and Ocracoke South Point that incorporate to the maximum extent possible the areas delineated in the 2008 pre-nesting closure maps.”

Pre-nesting areas will be established by March 15, 2009. Due to the Park’s dynamic shoreline and the likely occurrence of shorebird breeding behavior in suitable habitat as the breeding season progresses, subsequent modifications and additional resource closures may result in temporarily reduced access to certain areas. Following are the recommendations for the 2009 pre-nesting closures:

Bodie Island

Recent PIPL Breeding History: The 2007 and 2008 PIPL nests were located in the southern end of the small dunes after the large over wash area on Bodie Spit. The 2008 nest was located approximately 65 m (or 220 ft) SE of the 2007 nest. The 2008 nest suffered from multiple clutch reductions and in the end did not hatch. Average incubation for the Atlantic Coast population is 27-30 days. This pair incubated the nest for 53 days at which point it was abandoned.

Observations: The beach has eroded significantly on the ocean shoreline east of the small dunes near the southeast side of the spit, in part, as a result of dredging by the Army Corps of Engineers. The west side of the spit is accreting under the Bonner Bridge. At high tide, the only area that remains dry outside of the 2008 pre-nesting area is the extreme southern tip of the spit which now extends under the bridge. The site visit occurred during the spring tides so the high and low tides were higher and lower than average.

The 2008 PIPL nest site is located approximately 50 meters from the high tide line and the beach at this location has eroded approximately 20 meters inside the 2008 pre-nesting closure. Under current conditions, the high tide washes into the toe of the small dunes in the vicinity (east) of the 2008 PIPL nest site. This leaves inadequate beach width on which to provide a reliable ORV corridor above the high tide line without significantly compromising the integrity of the buffer around the 2008 nest site. Furthermore, during the 2008 breeding season, closure signs were constantly being lost in this area due to erosion. If this location were to be open to ORVs under

the current conditions, the inability to maintain adequate signing could result in closure violations and disturbance of breeding activity. Because of the steep slope of the beach at this site, which generally puts pedestrians below the sight line of the nest site, it is feasible to initially provide a pedestrian corridor below the high tide line past the pinch point. If breeding activity is observed in the vicinity of the nest site, it will likely require expansion of the buffers and preclude access.



Note: *In the above picture the driver's side tire is approximately on the edge of the 2008 pre-nesting closure at low tide. The toe of the dunes on the left side of the picture is approximately 50 meters from the 2008 PIPL nest.*



Note: *Bodie Island Spit "pinch point" at high tide, as seen from Bonner Bridge.*

The southern end of the spit (photo below) currently consists of a large mud flat with a large tidal pool draining out under the southern end of the Bonner Bridge. This entire area appears to be good PIPL foraging habitat and is also adjacent to recent PIPL nesting areas.



Note: *Exposed mud/sand flats and a tidal pool at low tide at Oregon Inlet.*

Recommendation: See Map 1 for Bodie Island Spit. The pre-nesting closure will begin 0.6 mi south of Ramp 4 (at the northern tip of the large over wash area). A 100-foot corridor will allow ocean-side ORV and pedestrian access for an additional 0.8 miles. Because of the pinch point created by shoreline erosion adjacent to (east of) the 2008 nest site, it is not currently feasible to maintain an ORV corridor past this location. In order to ensure adequate signing and compliance with the pre-nesting closure, only pedestrian access will be allowed beyond this point inside of a designated pedestrian corridor which will allow access parallel to the Bonner Bridge and to the southwest edge of the Bait Pond.

Cape Point/South Beach

Recent PIPL Breeding History: In 2008 the Park documented five pairs and six nests at Cape Point and one pair and one nest at South Beach. Three nests at Cape Point successfully fledged four young. The nest on South Beach hatched but no chicks survived.

Observations: The Point continues to be a dynamic landform. During the habitat assessment it was observed that the Salt Pond drainage just west of “The Hook” was dammed up and overwash from the high tide was back-filling into the drainage area of the Salt Pond (photo below) creating wet foraging habitat for PIPLs.



Note: *Spring tide over wash fills ephemeral pools in Salt Pond drainage at Cape Point.*

Recommendation: See Map 2 for Cape Point and Map 3 for South Beach. Install pre-nesting closures similar to the pre-nesting closures installed in 2008. The western end of the full beach closure would end near the halfway point (~0.2 miles east of Ramp 45) between Salt Pond Ramp and Ramp 45. Salt Pond Ramp would be closed to pedestrian and ORV access because of the location of a PIPL nest in this area in 2007 and 2008. Approximately 1 mile of shoreline would be closed to pedestrians and ORVs.

The configuration at the Point has changed and the very southern tip of the pre-nesting area near the point will be reconfigured to allow for similar access just west of the Point as occurred in 2008. The only other change will be to “bump out” (i.e., expand) the pre-nesting closure just south of Ramp 44 to create a 50-meter buffer around PIPL scrapes found in 2008.

On South Beach, approximately 1.5 miles of the upper beach (100 feet above high tide) west of Ramp 45 will be included in the pre-nesting closure to encompass PIPL scrapes documented in 2007 and at least one in 2008.

Hatteras Spit Overwash Fans

Recent PIPL Breeding History: No nests have ever been documented in this area. In 2007 PIPL were observed foraging on the sound-side and ocean-side. In 2006 PIPL were documented scraping and foraging within the proposed pre-nesting closure area.

Recommendation: See Map 4 for Overwash Fans. As per the consent decree, install a pre-nesting closure similar to the closure in 2008, which requires the closing of Pole Road and re-routing of traffic to the spurs off of the Pole Road onto the ocean-side shoreline.

Hatteras Inlet Spit

Recent PIPL Breeding History: In 2008 a lone PIPL was observed foraging on the sound-side tidal creeks of Hatteras Spit. No breeding behavior was observed in 2008. In 2007 a single PIPL was observed making a “roosting” scrape but no breeding behavior was observed since it was a lone individual. In 2006 scrapes were documented but no nest was ever found.

Observations: The spit continues to erode and the vegetation line has been knocked back approximately 0.2 miles since the 2008 season. The entire southern end of the Spit, including the inlet shoreline, now falls well inside of the 2008 pre-nesting closure.



Note: Mudflats and ephemeral pools at low tide at Hatteras Inlet.

There are pinch-points on both the oceanside and soundside during high tides. Two of the three tidal creeks on the soundside, where PIPL have foraged in recent years, have been lost to erosion. The remaining soundside tidal creek, where PIPL foraged in 2008, is located a little over 110 m west (south) of the Spur Road and remains suitable PIPL foraging habitat. At low tide (above photo) there are exposed mud/sand flats and ephemeral tidal pools along the inlet shoreline, which appear to be good potential foraging habitat for PIPL. During the 2008 breeding season, resource closure signs were constantly being lost due to erosion in this area and it is not feasible to consistently maintain closure signs at the inlet under the current conditions. Under current conditions, there is no way to provide a pedestrian access corridor from the soundside to the inlet without seriously compromising the integrity of the foraging habitat at the tidal creek and the inlet flats. The soundside shoreline east (north) of the Spur Road has accreted and has the potential to be re-opened to ORV access.

Recommendation: See Map 5 for Hatteras Inlet Spit. The full beach closure would begin at approximately 0.1 miles (170 meters) from Pole Road exit, the same distance from the Pole Road as in the 2008 pre-nesting closure. Approximately 0.6 mile of shoreline (including the inlet) would be closed to pedestrians and ORVs. Because of continuing erosion along the inlet

shoreline, it is not currently feasible to effectively maintain a pedestrian access corridor to “the Rip” from the soundside as occurred in 2008. In order to ensure adequate signing and compliance with the pre-nesting closure, the soundside access corridor will end approximately 0.1 miles (110 meters) west (south) of the Spur Road. As the season progresses, it may be possible to allow ORV access from Spur Road to Cable Crossing along the soundside beach due to accretion in this area.

North Ocracoke

Recent PIPL Breeding History: Although plovers historically used this area, no recent breeding activity has been observed. A pair was observed in 2007 but no breeding activity or scrapes were documented. No scrapes or breeding behavior was observed in 2008.

Observations: The north end of Ocracoke is accreting. High potential for nesting exists based on the elevation of the shell beds at the toe of the dunes and the expansion of the mud/sand flats.



Note: Mudflats on the north end of Ocracoke Island at low tide.

Recommendation: See Map 6 for North Ocracoke. The pre-nesting closure on north Ocracoke will start 0.2 miles northeast of Ramp 59. A 100-foot wide pedestrian and ORV corridor will extend for 0.6 miles. No pedestrian or ORV access will be allowed beyond this point. The pre-nesting closure will include the mud flats near the ferry channel.

South Ocracoke

Recent PIPL Breeding History: Four pairs and five nests were located in 2008 on South Point. Three young successfully fledged from this area. In 2006 and 2007, a single pair nested on the edge of the dunes (east side) just north of the large flats. Although the nests successfully hatched, the young were lost soon after hatching.

Observations: Little to no change in the habitat was observed from this time last year. There still appears to be nesting and foraging habitat available for more pairs.

Recommendation: See Map 7 for South Ocracoke. Install closure of the same specifications as in 2008 with the installation of a full beach closure approximately 0.3 miles east from where Ocracoke Inlet meets the sound (2.6 miles from Ramp 72). The only change from 2008's configuration is the closure will begin 0.3 miles southeast of Ramp 72 (0.2 miles larger than 2008) to encompass PIPL scrapes from 2008. There will be a 100-foot pedestrian and ORV corridor beginning 0.3 miles southeast of Ramp 72 and extending for 2.3 miles where the corridor ends in a full-beach closure 0.3 miles east of the sound. Consideration was given to proposing an upper beach "pass-through" corridor along the ocean shoreline adjacent to recent years PIPL nest sites in order to provide undisturbed intertidal foraging habitat. However, due to the location of the southeastern-most 2008 PIPL nest near the ocean shoreline (see map), the pass-through corridor is not feasible without encroaching upon an adequate buffer for the nest site and is therefore not recommended under the current conditions.