

## Atlantic Coast Piping Plover Strategic Communications Plan: Reducing Human Disturbance

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## Appendix A:

### Atlantic Coast Piping Plover Social Media Strategy: Reducing Human Disturbance 2017

#### Need for this plan:

Increase awareness of the piping plover and behaviors needed to protect them from disturbance. Intensive protection under the Endangered Species Act has helped the population more than double in the last 20 years, but the most recent surveys still place the Atlantic population at less than 2,000 pairs.

#### Purpose:

We are using social media platforms to reach targeted audiences with the goal of educating and engaging beachgoers and reducing human disturbance of nesting piping plovers, a shorebird protected under the Endangered Species Act since 1986.

#### Target Audience:

- Dog walkers/owners
- Residents near/adjacent to plover beaches
- General beachgoers (families, people walking/sunbathing, etc. on plover beaches)
- Beach and land managers
- Municipal on-beach staff

#### Timeline for Themes- Friday Facebook Posts

Each month has a theme, where partners can share each other's posts, or develop similar content based on the theme. To unify posts, the U.S. Fish and Wildlife Service will share a post every Friday that can be copied or shared.

Fridays in April- Posts about nesting and courtship.

Fridays in May- Posts about beach guidelines.

Fridays in June- Posts about plover chicks.

Fridays in July- Posting about how you can help plovers .

Fridays in August- Posts about migration.

- Consider posts about 4th of July fireworks, local events, campaigns, storms, news etc. when necessary.

#### Key Aspects:

Platforms: Primarily Facebook. Possibly Instagram, Snapchat, Blog

Hashtags: #pipingplover

Images: See callout box

Working with partners to promote each other's content and messaging

Interactive components- Ask, Have you seen this bird?

[Google Folder Link](#) - Please use this if the link above isn't working.

#### Key Messages:

*With ever-growing demands on our beaches, there are fewer places for piping plovers that are dependant on Atlantic coast beaches year-round to raise families, feed and rest.*

- The beach is the only home for the threatened

#### Help us collect great images!

Please share images in [this google folder](#) and save image with this file naming convention if possible: Subject\_Location\_Photographer\_Date (E.g., pipingplover\_parkerrivernwr\_JohnDoe\_041017). We understand some information may be missing, and the most important element is permission/credit for the photo.

piping plover.

- With fewer than 4,000 piping plovers on the Atlantic coast, each one makes a difference.

*What may seem like everyday use of beaches to us can unintentionally harm piping plovers.*

- Nests, and even piping plovers, are really hard to see.
- When you get too close to birds, they *flush* (fly off of their nest or move away from feeding areas). While it might seem minor to a person, this drives them away from what they need to survive - food and a resting place. Imagine if you were hungry and tired, and forces beyond your control kept you away from food all day, and no place felt safe to rest.

*By following some specific steps, we can share the beach with piping plover adults and chicks and help them survive.*

- Follow the guidance on signs and respect all areas fenced or posted for protection of wildlife.
- Watch these entertaining birds from a distance.
- If pets are permitted on beaches used by piping plovers, keep them leashed and away from birds. Remove trash and food scraps from the beach, because they attract animals that might eat piping plovers and their eggs.
- Do not feed wildlife or feral cats on or near the beach. Keep your own cats indoors.
- Volunteer as a piping plover monitor, ambassador, or educator on your local beach.

*It's working! The piping plover is making a comeback in the U.S. Help these shorebirds recover (alternative wording: Help us meet recovery goals), so they are around for future generations.*

*Additional messaging:*

1. People and wildlife can share the beach! As long as you keep your distance, you can walk, fish, kayak, read, relax, beachcomb, take photos, splash in the waves, search for sea glass, sunbathe, bike, and watch birds, without disturbing piping plovers. Check each beach for allowed activities.
2. We love our dogs! Be a responsible dog walker and take the BARK pledge: **B**ag waste, **A**lways put a leash on your dog, **R**espect wildlife, **K**now which beaches permit dogs. Your dog might not chase piping plovers, but it might step on an egg or a tiny chick by accident. (via National Park Service) (Additional wording, "Plovers on the beach? Put me on a leash!" or "Bird-friendly beaches have dogs on leashes")
3. It's a great weekend to get out on the water! When you're looking to land your boat, watch for and abide by signs reserved for feeding piping plovers and other shorebirds, and stay away from other spots where you see small birds along the shoreline. Know the rules for dog leashing and designated land/launch areas.
4. ORVs can make beach hopping easier, but make sure you know ahead of time the regulations in your area. Many beaches are temporarily closed to ORVs when piping plover and least tern chicks are present because these tiny, flightless, and camouflaged chicks are nearly impossible to see. You could run one over without knowing it.
5. Hope you hook a big fish today! Remember that discarded fishing line can seriously harm or kill birds and other wildlife. Wildlife usually cannot survive the injuries they sustain from entanglements. Put unusable fishing line in a fishing line recycling receptacle or dispose of it in a trash container. Carry out unused bait and fish parts to avoid attracting more gulls, crows or raccoons.

6. Plover parents have it tough! Their babies are able to run around immediately after hatching, creating chaos behind every corner. Let's give mom and dad some space while wrangling their wild ones.

### **Tips for posting to Social**

#### 1. Use captivating imagery

- The image is the most engaging portion of your post. People will stop to read or share if they enjoy the image.
- Limit the use of long text on Facebook.

#### 2. Post interesting factoids

- “Piping plover chicks are able to feed with their parents at the water’s edge just hours after hatching.”

#### 3. Keep a positive tone for regulatory posts

- Turn No’s and Don’ts guidelines into positive messages when possible.

#### 4. Find a plover family, providing weekly/monthly updates

- Providing updates keeps loyal followers engaged, and engages new members to follow
- Audience is more likely to relate to family, chicks, lifestyle

### **Ideas for weekly Facebook Posts:**

*Partners can use the examples below to copy on Facebook or to use as a model to craft an original post about any given theme.*

#### (Fun Factoids)

- “Plovers are clever and will feign injury to draw attention to itself and away from its nest”
- “#PipingPlover chicks are feeding at the water’s edge only hours after hatching”
- “Plover chicks grow incredibly fast! They are able to feed themselves at the water's edge only hours after hatching and will double in size in less than a week!”
- “Tagging chicks allows us to learn more about these beautiful birds. When their tags are spotted again, it gives us valuable data to best protect the species.”
- “These small adults weigh 50 grams which is equivalent to half a stick of butter!”

#### (Regulatory)

- “Only plovers past here, please!” Link to info/why (Silly sign/ Memes)
- “If you pack it in, please pack it out. Trash and scraps are bad for all wildlife, including the “PipingPlover”
- “Be sure to follow beach guidelines! You're helping to protect plovers chicks like Barbosa! (tag #?)”

#### (Call to Action)

- “Love the beach and plovers too? Become a plover ambassador today!” Link to more info
- “Dogs on leashes make bird-friendly beaches! #PipingPlover”
- “Volunteer as a plover ambassador and spend your days at the beach #PipingPlover”

#### (Creating Awareness): highlighting local efforts, maybe on partner/field stations facebook

- “Did you know there are fewer piping plovers left in the world than polar bears? With less than 4,000 of these small shorebirds left on the Atlantic Coast alone, each one deserves a chance.”
- “Nesting pairs are hard to spot along the beach! With camouflage feathers, nests, and eggs, plovers become almost invisible in the sand”

## Appendices, Atlantic Coast Piping Plover Strategic Communications Plan

- "Tire tracks may seem harmless to you and me, but they are a hazard to plover chicks whose natural instinct is to crouch down and freeze in them. That's one reason why USFWS Guidelines recommend that people stick with walking on the beach in the vicinity of flightless chicks."

- "I got my toes in the water, see nests in the sand, not a worry in the word, a dog leash in my head, life is good today. #pipingplover"

- "Feeding wildlife is bad, but drawing predators to the beach is a plover's worst nightmare!"

- "Headed to the beach? Plovers are too! Track a plover here! - link to migration, guidelines, plover family

(News)

- "Over the last 30 years, numbers continue to increase (insert new stats here) ! Thanks to our partners for bringing back the #pipingplover"

- "Fireworks and nesting birds don't mix well! Here's some great 4th of July alternatives" <http://bit.ly/1IUZ4jO>

### Mother's Day or Father's Days Post suggestions

Mother's Day: Piping plover mothers don't give up. If foxes or crows, or high tides, come after their eggs, piping plovers are likely to try again. In fact, one female on Cape Cod tried to nest five times laying a total of 19 eggs!

Father's Day: Male piping plovers are excellent fathers. When mothers shift their focus this time of year to rebuilding strength for returning south, the fathers take over chick care.

## Appendix B:

### INTRODUCTION TO THE PLANNING PROCESS

*Strategic communication integrates communication efforts occurring across the piping plover conservation community. In strategic communications, the research (sometimes known as discovery) phase allows for identification of the overall objective that should be addressed through communications efforts. Identification of the key audience(s) necessary to address the overall objective then allows for development of the more specific expected outcomes of communications. Developing appropriate communications objectives by audience often involves extensive audience assessment in order to fully understand the audience and the most effective means to communicate with them. These expected outcomes lay the foundation for the messages of the communications effort, as well as the strategies and tools, which together compose the action planning phase. The communications implementation phase involves the delivery of messaging and information using the strategies and tools. Evaluation is the monitoring phase for the communications effort, providing information on results and how the effort might be improved, which adaptively feeds back into communications planning and informs how to steward the networks and relationships built by the effort.*

This strategic communications plan was prepared with the input of more than 100 experts in all facets of the science and communication pertinent to this shorebird. It is the result of study and teamwork that started in spring 2016 and included conversations with biologists and outreach experts from state, federal and non-governmental organizations, a survey of volunteers and staff working directly with piping plover and people, a media content analysis, and a review.

Our work was influenced by several tools in order to align the process with strategic communication planning standards and with current national and regional efforts for shorebird restoration:

- We closely followed Marston's (1979) *Research, Action, Communication, Evaluation* (RACE) formula for developing a communication plan, with an additional *Stewardship* step as described by Kelly (2001).
- We also incorporated components from the planning process used by the Atlantic Coast Joint Venture for their 2014-2018 Strategic Communication Plan, available at <http://acjv.org/resources/>.
- The Atlantic Flyway Shorebird Initiative identifies human disturbance as a key concern and recommended efforts that build broad shorebird constituencies that help reduce that disturbance. Our work aims to support that need and is meant to be a foundational resource for flyway-level communications efforts. The Initiative's business strategy is available at [http://www.nfwf.org/amoy/Documents/afsi\\_biz\\_plan.pdf](http://www.nfwf.org/amoy/Documents/afsi_biz_plan.pdf) (Downloaded March 2017).

This process involved working through the below recommended steps systematically with a designated team. Careful thought was given to ensuring the key people were at the table, so that upon implementation, we have a network in place to support success.

**Research:** One team member conducted a survey to obtain input from professionals involved in piping

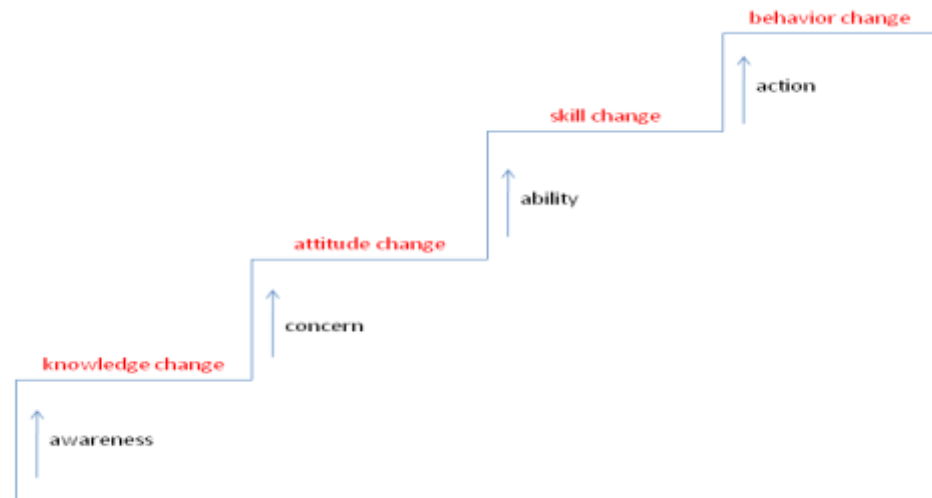
plover conservation regarding their communication needs and their perceptions of the communication needs of beach visitors (see Appendix D). Members of the team conducted a literature review of peer-reviewed articles about effective communication on beach-nesting birds and endangered species (see Appendix E). The research enabled the articulation of the following three items:

1. A background of the issue, as summarized in *Need for This Plan* (Appendix C).
2. *Problem Statement* - a short statement reflecting the heart of the problem to be addressed. This statement serves as the project goal that orients and guides strategy development.
3. *Expected Outcomes* for the project. This generally focuses on behavior changes, the result of moving targeted audiences along the awareness to action continuum.

**Action Planning:** Building on the previous step in the process and with the help of the research and the team's knowledge and involvement in piping plover protection and restoration endeavors, the Action Planning portion of the strategy resulted in:

- Priority target *Audiences*: Not the "general public," but a defined group or groups (internal and/or external) who are affected by and able to influence the desired outcomes identified in the research phase.
- Appropriate *Messages* for each audience: A sentence summarizing the single most important concept to be communicated to each of the target audiences with supporting messages is included. A message bank and talking points have also been prepared.
- Finally, *Strategies* and *Tactics* for delivering the messages have been determined. A strategy describes how you intend to reach a target audience, such as digitally or in person. The tactics describe the specific tools necessary for that strategy, such as a new website or webinar.

Ultimately, the overarching goal for communications is behaviorally related (reduce behaviors that disturb birds), given that an audience behaving in a certain way will allow for the accomplishment of the goal. However, it may not be possible to change an audience's behavior before first addressing their knowledge, attitudes, and skills. Each of these could serve as barriers if not sufficiently developed for the specific behavioral objective. Education and communications are often thought of as following a staircase of phases as shown in the figure below. First, awareness must be raised (knowledge change), then concern increased (attitude change), then appropriate abilities developed (skill change), for ultimately action (behavior change). This is a simplified model of behavior change that is effective for thinking through communications planning. The team's use of this model is illustrated in the following behavioral chart.



**Communication and Implementation:** The expertise of communication and outreach staff from a variety of organizations and partners in the restoration are needed in the final development of tools and implementation of the strategic plan as noted in the third step of the process. Key deliverables in this step include:

- The *Implementation table* details the responsibilities, timetable and costs to deliver the strategic plan.
- Priority actions are identified in order to ensure smart choices can be made with the resources and time available. As not all of the strategy can be implemented immediately, the essential elements to achieve expected outcomes are identified.

**Evaluation:** Evaluation is a process of critical examination. Each tactic and tool should also be evaluated to assess its effectiveness, leading to improvement of the tactic and tool or to guide the development of new products. The evaluation should include proximate (e.g., how many audiences reached, how many news articles published, how many website hits, etc.) as well as ultimate (e.g., change in attitudes/behavior, increase in knowledge, decrease in dogs in nesting area) measures. Evaluation may include formal and informal surveys, focus groups, interviews, and observations before, during and after the communications effort.

**Stewardship:** The final element of this 5-step process is *Stewardship*. Natural resource professionals understand this word and its many associations in the context of conserving lands, populations of wildlife, clean air and clean water. In the context of communication, stewardship has a different meaning.

Its derivation is from the fundraising profession where the principle, your “best prospects are previous donors,” is considered a best practice. In business circles, you will often hear that it is “easier to keep an old customer than find a new one.” In public relations, we learn that changing behavior is more difficult than reinforcing existing behavior (Kelly, 2001).

For example, once we have provided information and persuaded a beachgoer or dog owner to deal



differently with wildlife, we want them to continue this behavior. Actions have been identified that will ensure the durability of the behavior change in these categories.

1. Reciprocity (showing appreciation)
2. Responsibility (the organizations keeping their promises)
3. Reporting (regular communication/updates)
4. Relationship nurturing (create local ambassadors to help spread the word)

## Appendix C:

### NEED FOR THE PLAN

*A complete discussion of the biology of the piping plover is provided in the recovery plan (USFWS, 1996) and the current status review (USFWS, 2009). The following background information is intended to provide the reader with a brief overview of the species biology and the current situation and can be used when working with selected audiences.*

The life cycle of the threatened Atlantic Coast piping plover links recreation, coastal development, beach restoration, shorebirds and other wildlife, and communities from Canada to the Caribbean—making conservation of this shorebird an extraordinary opportunity. While Atlantic Coast piping plover populations have benefitted from intensive protection over the last 30 years, some areas are still below population goals and many lack long-term conservation plans to support recovery. The shorebird relies on limited beach habitat, and its needs sometimes conflict with human uses and values.

#### *Status and Reason for Decline*

Piping plovers were common along the Atlantic Coast during much of the 19th century, but commercial hunting for feathers to decorate hats nearly wiped them out by the early 20<sup>th</sup> century. Following passage of the Migratory Bird Treaty Act in 1918, piping plovers peaked in the 1940s. Increased development and beach recreation after World War II caused another drop in the population, a decline that led to protection as a threatened species under the Endangered Species Act in 1986. Intensive protection has helped the population more than double in the last 20 years, but the most recent surveys still place the Atlantic population at fewer than 2,000 pairs.

#### *Natural History*

Atlantic Coast piping plovers breed on coastal beaches from Newfoundland and southeastern Quebec to North Carolina. After they establish nesting territories and conduct courtship rituals beginning in late March or early April, pairs form nests that are shallow depressions in the sand on the high beach close to the dunes. They sometimes line nests with small stones or fragments of shell. Piping plovers typically lay four eggs that hatch in about 25 days. The downy chicks are soon able to follow their parents in foraging for the marine worms, crustaceans and insects that they pluck from the sand or wrack and eat.

Both the eggs and piping plover chicks blend into the beach so thoroughly that they are almost impossible to see. When predators or intruders come close, the chicks squat motionless on the sand while the parents attempt to attract the attention of the intruders, often by feigning a broken wing. Surviving chicks are able to fly in about 30 days.

Storm tides, predators or intruding humans sometimes disrupt nests before the eggs hatch. When this happens, piping plovers often lay another clutch of eggs. Chicks hatched from these late-nesting efforts may not fly until late August.

Piping plovers often gather in groups on undisturbed beaches before their southward migration. By mid-September, both adult and young plovers have departed for their wintering areas. These birds winter on the Atlantic Coast from North Carolina south to Florida, along the Gulf coast, and in the Bahamas and West Indies.

### *Challenges*

The 1996 recovery plan identified the following continuing threats to Atlantic Coast piping plovers in the breeding portion of their range:

- Commercial, residential and recreational development has decreased suitable coastal habitat for piping plovers. Additionally, rates of habitat loss are increasing simultaneously with coastal stabilization activities.
- Disturbance often curtails piping plover breeding success. Foot and vehicle traffic may crush nests or chicks. Excessive disturbance may cause piping plover parents to desert the nest, exposing eggs or chicks to the summer sun and predators. Interrupted feedings may stress juvenile birds during critical periods in their development.
- Pets, especially dogs and cats, may harass or kill the birds (see <http://www.fws.gov/northeast/pdf/catseat.pdf>). Animals such as raccoons, skunks and foxes, often attracted by food left on the beach, also may eat eggs and chicks and even kill adult birds.
- Piping plovers oiled in spills have been reported in several states within its range.

### *Protecting the piping plover*

The piping plover is designated as threatened along the Atlantic coast, which means that the population would become endangered and face possible extinction without Endangered Species Act protection. Recovery efforts include conserving breeding and wintering habitat, and protecting breeding birds, eggs, and chicks from predators and from disturbance and death caused by human activities.

In 2015, the following recovery needs for piping plover were identified (USFWS, 2015):

- Wide, flat, sparsely vegetated barrier beach habitats.
- Even distribution of population growth.
- Conservation of remaining habitats, and of natural processes that form habitat (Artificial beach management practices such as dune building can inhibit natural renewal of bay tidal flats and ephemeral pools).
- Hands-on management efforts that reduce predation and disturbance by humans and pets.

### *Why a strategic communications plan?*

While Atlantic Coast piping plover populations have benefitted from intensive protection over the last 30 years, some areas are still below recovery goals, and there are diverse and emerging threats to the piping plover's survival across its range. The shorebird relies on limited beach habitat, and its needs sometimes conflict with human uses and values.

The piping plover conservation community is striving to: Better understand barriers to change and how values and interests drive behavior; Increase understanding, trust and appreciation among decision

makers and communities; Build more support for actions and decisions that conserve the piping plover; and move us forward in engaging partners and citizens to incorporate nature-based coastal management options that conserve beaches and the wildlife that depend on them.

As with most wildlife restoration projects, there are efforts that focus on the species and efforts that focus on the people that influence its recovery. Natural history, population stressors and years of research have informed the development, implementation and monitoring of recovery actions for the piping plover. In concert with that, partners have enlisted the cooperation of groups and individuals who have the greatest potential to impact the piping plover and its habitat needs.

There is no question among long-time piping plover conservationists that communications have been key to getting to where we are today, and communications will be integral to reaching recovery. Through this communication process, we hope to provide approaches to further developing and fostering shorebird conservation constituencies that support long-term recovery of the species.

This initial communication strategy concentrates on reducing human disturbance to piping plovers. The communications team recommends that additional strategies be developed to address coastal engineering-related problems, habitat loss, and predator management topics.

## Appendix D: Survey of Piping Plover Conservation Network

A short online survey to better understand communications needs as perceived by staff, partners and volunteers who work on piping plover management was designed by the U.S. Fish and Wildlife Service Northeast Region External Affairs Office, in partnership with state agency wildlife communication professionals. An optional online survey link was distributed through email in December 2015 to attendees of the 2016 Atlantic Coast Piping Plover and Least Tern Workshop, the Atlantic Coast Joint Venture Communications Technical Committee, and Northeast state wildlife agency public affairs officers. Participants were encouraged to forward it to others who might have feedback. A copy of the survey is available below the results.

### Survey Results

Respondents (161) were primarily from three groups, U.S. Fish and Wildlife Service, NGO staff, or volunteers (collectively totaling 60% of respondents). Eleven percent worked with state wildlife agencies and 9 percent were researchers. Eighteen percent of respondents worked in New York; 16% in Connecticut; 11% each in Virginia and in Maryland; 9% each in New Jersey, North Carolina and Florida; and smaller percentages in other Atlantic Coast states. Most respondents reported that they monitor and manage birds and their habitat, consult with federal/state agencies, interact with beachgoers or research the species.

### Summary of Results

Communication tools used most currently include messaging, government websites, brochure, and signs/post material. *Other* tools used are social media, activities for beachgoers, meetings/conversations, and presentations. The tools reported to be least used (out of those presented in the survey) include other NGO websites, videos, web-based maps and the Cornell Lab of Ornithology's All About Birds web page (<https://www.allaboutbirds.org/>).

If developed, the following tools (in order) would be useful to the respondents

- o brochure templates,
- o .org site,
- o population-wide brochure,
- o a library of video footage of birds,
- o suggested messaging, and,
- o signage templates.

*Other* needs included standard public messages, training support, better signage, and, a piping plover database.

The following barriers to protecting piping plovers were ranked, with the greatest first:

- People don't understand how their actions affect piping plovers.
- People do not support us protecting important shorebird sites.
- People don't leash their dogs.
- A bird is encroaching on people's ability to enjoy the beach.

- There's more focus on securing shoreline properties than securing shorebird habitat.
- People disturb plovers.
- People leave trash that attracts predators to the beach.
- People don't know how the Endangered Species Act works.
- People don't understand how coastal engineering will affect resiliency of beaches to withstand sea-level rise and storms.
- Coastal engineering and development do not effectively incorporate piping plover conservation.

In open response, respondents noted that these are the most extreme because: People prioritize the economy and feel entitled to the beach; people dislike restrictions; issues are widespread, frequent, have direct mortality effects or require a lot of local support.

The tools and techniques used to overcome barriers to protecting piping plovers include education, announcements, social media, brochures, one-on-one communications, trained communicators, and positive messages.

According to respondents, the most effective currently used messages focus on encouragement to follow rules, emphasis on how protections have been vital, a call for help, a larger context of shorebird conservation, and the ability of people to make a difference. The open response question, *What's most important thing we can say?* generated answers that fell into these thematic categories: Nature is connected and beach health; people can help and explain how to share the beach; explain value of piping plover to people; and note that this is for future generations.

Additional open feedback: People want to help/most willing; they need more education of science; we need to target audiences; engage public on beach: be consistent and collaborative with larger issues; and we are doing great work!

## Piping Plover Shorebird Communications Needs Survey

### Welcome to the Piping Plover Shorebird Communication Needs Survey

The U.S. Fish and Wildlife Service is asking for your help to improve how we communicate about the conservation of the Atlantic Coast piping plover breeding population. Our goal is for outreach and communications to not only support but further recovery of the plover.

Your feedback in this 15-minute voluntary survey will help us improve our outreach and communications strategies and materials.

Please feel free to direct questions to Meagan Racey, 413-253-8558.

**Paperwork Reduction Act Statement.** We are collecting this information in accordance with the Endangered Species Act. Your response is voluntary. We will use the information you provide to improve our customer service in communications and public affairs. We may not conduct or sponsor and you are not required to respond to a collection of information unless it displays a currently valid OMB control number. OMB has approved this information collection and assigned OMB Control No. 1090-0011, which expires 08/31/2018. We estimate that it will take you about 15 minutes to complete this survey, including time to maintain records, gather information, and complete and submit the survey. You may send comments on the burden estimate or any other aspect of this form to the Information Collection Clearance Officer, U.S. Fish and Wildlife Service, MS BPHC, 5275 Leesburg Pike, Falls Church, VA 22041-3803.

## Piping Plover Shorebird Communications Needs Survey

\* 1. Which of these audiences do you communicate with regarding piping plover conservation? This includes audiences that you help prepare communications for, even if you do not directly communicate with that audience. (Mark each option that applies.)

- ☐ U.S. Congressional staff
- ☐ Beachgoers
- ☐ Agencies without conservation missions
- ☐ Reporters
- ☐ Residents (e.g., residents of a town with a plover beach)
- ☐ Landowners, beach or town managers
- ☐ Agencies with conservation missions
- ☐ Other (please specify)

## Piping Plover Shorebird Communications Needs Survey

\* 2. How frequently do you use, share, or reference these plover communication tools? For each option, select one point on the scale.

|  | Never                 | Rarely (2x/year)      | Sometimes<br>(monthly during<br>active plover<br>season) | Frequently            |
|--|-----------------------|-----------------------|--|-----------------------|
| Messaging, talking points developed by you (even in the form of notes)   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                                    | <input type="radio"/> |
| Messaging, talking points developed by your organization   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                                    | <input type="radio"/> |
| Government (federal, state, local, etc) plover website   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                                    | <input type="radio"/> |
| All About Birds Cornell plover page<br>[ <a href="http://www.allaboutbirds.org/guide/Piping_Plover/id">http://www.allaboutbirds.org/guide/Piping_Plover/id</a> ] | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                                    | <input type="radio"/> |
| Other NGO web pages on plover life history and status  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                                    | <input type="radio"/> |
| Brochure   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                                    | <input type="radio"/> |
| Signs/Post material  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                                    | <input type="radio"/> |
| Videos   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                                    | <input type="radio"/> |
| Web-based maps highlighting stories across a range<br>(Audubon, Atlantic Flyway, etc.)   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                                    | <input type="radio"/> |

3. If you use other tools, please tell us about those. (This question is optional.)

4. What makes the tools you use helpful?

## Piping Plover Shorebird Communications Needs Survey



- \* 5. If the Fish and Wildlife Service, in collaboration with conservation partners, were to streamline or create new communication tools, which would be helpful? For each option, select one point on the scale.

|   | Not at all helpful    | Slightly helpful      | Very helpful          |
|---|-----------------------|-----------------------|-----------------------|
| Messaging, talking points sheet                 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Partnership-based, .org website                 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Population-wide brochure                        | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Brochure/factsheet templates that you can adapt | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Signage templates that you can adapt            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Video footage of birds                          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Audio/Video interviews with experts             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Postcards                                       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Magnets   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

6. Why would those tools you indicated be helpful?

7. Is there another tool you would like to see developed? (This question is optional.)

## Piping Plover Shorebird Communications Needs Survey

- \* 8. What barriers do you face in **your** day-to-day plover conservation efforts? For each row, select one choice on the scale to identify barriers specifically in your work as an individual or small team.

|   | Never (This is not a barrier) | Rarely (2x/year)      | Sometimes (monthly during active plover season) | Frequently            |
|---|-------------------------------|-----------------------|---|-----------------------|
| People think plovers don't need protection. | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/>                           | <input type="radio"/> |

|  | Never (This is not a barrier) | Rarely (2x/year)      | Sometimes (monthly during active plover season) | Frequently            |
|--|-------------------------------|-----------------------|---|-----------------------|
| People don't know how the Endangered Species Act works.  | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/>                           | <input type="radio"/> |
| A bird is encroaching on people's ability to enjoy the beach.  | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/>                           | <input type="radio"/> |
| People don't leash their dogs.   | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/>                           | <input type="radio"/> |
| People don't keep cats contained or on a leash.  | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/>                           | <input type="radio"/> |
| People leave trash that attracts predators to the beach.   | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/>                           | <input type="radio"/> |
| People disturb plovers.  | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/>                           | <input type="radio"/> |
| People don't understand how their actions affect plovers.  | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/>                           | <input type="radio"/> |
| Coastal engineering and development do not effectively incorporate plover conservation.  | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/>                           | <input type="radio"/> |
| There's more focus on securing shoreline properties than securing shorebird habitat.   | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/>                           | <input type="radio"/> |
| People do not support us protecting important shorebird sites, especially if it includes closing off some areas during breeding. | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/>                           | <input type="radio"/> |
| People object to predator management.  | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/>                           | <input type="radio"/> |
| Negative media coverage.   | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/>                           | <input type="radio"/> |
| Lack of support from local officials.  | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/>                           | <input type="radio"/> |
| Lack of willingness by landowners, land managers or permitting agencies to incorporate or enforce conservation.                  | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/>                           | <input type="radio"/> |

|   | Never (This is not a barrier) | Rarely (2x/year)      | Sometimes (monthly during active plover season) | Frequently            |
|---|-------------------------------|-----------------------|---|-----------------------|
| People don't understand how coastal engineering will affect resiliency of beaches to withstand sea-level rise and storms. | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/>                           | <input type="radio"/> |

I encounter other barriers in my plover work: (please specify)

9. How do you try to overcome these plover conservation barriers in your communications?

## Piping Plover Shorebird Communications Needs Survey

\* 10. From your perspective, what are the most extreme barriers inhibiting plover conservation at large? For each row, select one point on the scale that characterizes barriers inhibiting plover conservation as a whole, beyond your work as an individual. You can use the same scale choices (e.g., Extreme barrier) for multiple rows.

|   | Not a barrier         | Somewhat of a barrier | Moderate barrier      | Extreme barrier       |
|---|-----------------------|-----------------------|-----------------------|-----------------------|
| People think plovers don't need protection.                   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| People don't know how the Endangered Species Act works.       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| A bird is encroaching on people's ability to enjoy the beach. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| People don't leash their dogs.                                | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| People don't keep cats contained or on a leash.               | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| People leave trash that attracts predators to the beach.      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

|  | Not a barrier         | Somewhat of a barrier | Moderate barrier      | Extreme barrier       |
|--|-----------------------|-----------------------|-----------------------|-----------------------|
| People disturb plovers.  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| People don't understand how their actions affect plovers.  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Coastal engineering and development do not effectively incorporate plover conservation   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| There's more focus on securing shoreline properties than securing shorebird habitat.   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| People do not support us protecting important shorebird sites, especially if it includes closing off some areas during breeding. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| People object to predator management.  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Negative media coverage.   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Lack of support from local officials.  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Lack of willingness by landowners, land managers or permitting agencies to incorporate or enforce conservation.                  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| People don't understand how coastal engineering will affect resiliency of beaches to withstand sea-level rise and storms.        | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

If there are other barriers inhibiting plover conservation at large, please specify:

11. Why might those you selected be the most extreme barriers to plover conservation?

12. Are there any barriers that have been eliminated, thanks to conservation and communication work? What activities or efforts led to that? (This question is optional)

## Piping Plover Shorebird Communications Needs Survey

\* 13. How effective are current efforts to communicate these messages with your non-conservation mission audiences (e.g., other Federal or State agencies, towns, beach managers, individuals, officials, etc.)? “Effective” means that the message evokes willingness or at least understanding from the audience. If you do not use these messages, please select “I do not need to use this message.”

|   | Not effective         | Rarely works          | Sometimes works       | Effective             | (N/A) I do not need to use this message. |
|---|-----------------------|-----------------------|-----------------------|-----------------------|--|
| We need your help to protect threatened piping plovers.   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                    |
| We encourage people to respect all areas posted for wildlife.   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                    |
| We ask people to leave pets at home or keep them leashed, as they are predators of these vulnerable shorebirds. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                    |
| Please remove trash, which attracts an unnatural volume of predators.   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                    |
| We have to improve how we conserve plovers in coastal development and engineering projects.                     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                    |
| The government seeks ways to better balance recreation and conservation.  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                    |
| Protective agreements and ordinances have been vital in protecting this species.                                | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                    |

|  | Not effective         | Rarely works          | Sometimes works       | Effective             | (N/A) I do not need to use this message. |
|--|-----------------------|-----------------------|-----------------------|-----------------------|--|
| It's critical for the plover's long-term survival that we have healthy plover populations across the breeding range.                             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                    |
| People have the ability to help us address nearly all the threats facing plovers.  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                    |
| We're not just conserving plovers. Several shorebirds have experienced alarming declines and benefit from many of the same conservation efforts. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                    |
| Lethal predator control is strictly used as a last resort, when other techniques have not been effective.  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                    |
| Please do not feed animals on or near the beach.   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>                    |

14. What kinds of messaging are we missing?

15. What do you think is the most effective message we can say to people about conserving plovers?

16. Is there any other feedback or personal insight you would like to share regarding plover conservation communications and outreach, such as an experience or observation not covered by any previous questions?

## Piping Plover Shorebird Communications Needs Survey

\* 17. What is your affiliation? Select just one option.

- ☐ U.S. Fish and Wildlife Service
- ☐ National Park Service
- ☐ State Wildlife Agency
- ☐ Public land manager
- ☐ NGO (with conservation mission)
- ☐ Local government
- ☐ Volunteer
- ☐ Other landowner
- ☐ Other government agency
- ☐ Researcher
- ☐ Other (please specify)

\* 18. In what state(s) do you work on plover conservation? Select all that apply.

- ☐ Maine
- ☐ New York
- ☐ New Hampshire
- ☐ Massachusetts
- ☐ Rhode Island
- ☐ Connecticut
- ☐ New Jersey
- ☐ Delaware
- ☐ Maryland
- ☐ Virginia
- ☐ North Carolina
- ☐ South Carolina
- ☐ Georgia
- ☐ Florida
- ☐ Other (please specify)



\* 19. Of the time you devote to plover conservation issues, how much of that time is spent on the following activities. For each option, select one out of 0%, 1-25%, 26-50%, 51-75%, 76-100%. 100% means that you spend all of your plover time working on that specific kind of task. It does not mean that you spend all your time working on that task.

|   | 0% (none of my<br>time) | 1-25%                 | 25-50%                | 51-75%                | 76-100%               |
|---|-------------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Consulting with federal<br>and state agencies                                   | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Receiving technical<br>assistance for plover<br>conservation                    | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Monitoring and<br>managing birds and their<br>habitat                           | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Interacting with<br>beachgoers  | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Researching plover life<br>history, ecology, habitat,<br>and conservation needs | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Coordinating<br>conservation efforts at a<br>state, regional or flyway<br>scale | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Overseeing public land<br>management  | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Enforcing laws  | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Communicating with<br>elected officials or<br>media                             | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

(Optional) If you spend your plover time on other activities, you can note them here:

## Appendix E:

### Literature Review

Six peer-reviewed articles addressing six different topics were examined to inform our planning. Summaries of the six articles are included in this appendix with the most relevant recommendations or results **in bold face type**.

#### *1. Media portrayal of the piping plover*

Dayer et al. (2017) conducted a media analysis of how the piping plover and associated conservation activities and conflict have been presented in the media along the Atlantic Flyway.

Recommendations by the authors to increase positive media coverage of piping plover included:

- **Foster relationships with media sources**
- Explain to reporters how endangered species protection works
- **Counter the negativity in articles (largely aimed at piping plovers) with positive plover messaging**
- **Develop positive messaging** around win-win situations of efforts to foster resilient areas for piping plovers and people.
- **Work with state agencies to share messaging about piping plovers**
- **Cultivate local spokespeople who are voices in support of piping plovers**

#### *2. Signage*

Rimmer, Maguire and Weston (2013) surveyed beach visitors in Victoria, Australia, about preferences for design and position of hooded plover management signs. Useful results include:

- **Signs as effective communication: Most respondents were likely to read beach signs**
- **Location of signs: Most respondents thought informative signs about the endangered birds should be placed at the beginning of the access path**
- **Design of signs: People generally preferred colorful, friendly, simple signs with attractive imagery**
- Language used in signs: Authoritative language and consequences for breaking rules and laws were not favored
- **Differences of dog walkers: Dog walkers preferred signs that address feelings of beach-goers more than non-dog walkers did**
- Recommendations: include color images of the target species along with simple information about how to help/not disturb the bird and a short statement about fines, to incorporate a friendly approach with a serious undertone

#### *3. Effects of education about beach-nesting birds*

Ormsby and Fors (2010) evaluated the effects of an education campaign in Florida on beach users' perceptions of beach-nesting birds. They noted a slight increase in public knowledge regarding beach

birds over the course of the conducted study. Results used to inform this plan include:

- **Signs were the most effective and cost-effective means to convey messages about beach-nesting birds to the public**
- **Beach-users spent, on average, less than 25 seconds to read signs**
- **Most people couldn't identify the target birds in the field and didn't know what they were**
- Most people appeared to be supportive of beach-nesting bird protection, including the use of beach fencing
- **Most beach users wanted what was best for the birds, but had no idea about the challenges facing the birds**
- Most people were okay with altering their behavior on the beach, including allowing fencing to be present and following rules such as not feeding wildlife, and keeping away from nesting sites

#### *4. Perceptions of threatened species*

Maguire, Rimmer and Weston (2013) studied stakeholder perceptions of threatened species (hooded plovers) and their management on urban beaches (Victoria, Australia). Findings included:

- **Awareness of threats was positively related to prior awareness, suggesting education is effective at conveying ownership of the problem**
  - **Higher inconvenience was reported by those with lower awareness, those using beaches more frequently, and dog walkers**
  - **Awareness and cultural norms were key factors explaining the occurrence of pro-environmental behavior**
  - Respondents with high awareness rated the severity of human-related threats higher (and rated exclusions as less effective)
  - **Low awareness was associated with lower scoring of human-related impacts, more inconvenience associated with on-ground protection, and exclusion and regulations**
  - The more inconvenienced respondents perceived themselves to be, the less effective they rated education, awareness, regulations and exclusions, and the less supportive they were of piping plover conservation
  - **Some people felt that because adult piping plovers persisted on the beach, the threats must be overstated**
  - **On-ground management must optimize coexistence of piping plovers and beach users.**
  - **Dog walkers reported more inconvenience associated with exclusions and regulations than non-dog walkers**
  - Dog walkers who used the beach infrequently rated threats significantly higher than frequent beach users.
  - Dog walkers who frequently used the beach had high levels of support for piping plover conservation, but inconvenience acted as a barrier to compliance.
  - **Some dog walkers viewed their dog as having little or no impact on their birds, but other people's dogs as highly threatening**
  - Respondents were most supportive of control of introduced pests such as foxes and feral cats
- Recommendations included the suggestion of optimizing coexistence, collaboration and

cooperation between agencies and involvement of communities to improve efficacy of policy change.

#### *5. Recreationists' awareness of and attitudes toward piping plovers*

Jorgensen and Bomberger Brown (2015) evaluated recreationists' awareness of and attitudes toward piping plovers in Nebraska.<sup>2</sup> They recommended that **piping plover recovery plans should incorporate general and site-specific human dimensions guidance for conservation practitioners**. Also:

- Similar to Maguire et al. (2013) they found that the attitudes of respondents to alternative piping plover management options (limited recreation, vehicle-free beaches, or beach closures) varied only by the number of annual visits made to the lake. Respondent age, sex, and location of primary residence had no effect.
- Similar to Maguire et al. (2013) they found that the more frequently a respondent visited Lake McConaughy during the piping plover breeding season, the less likely they were to be supportive of alternative piping plover management techniques. However, they also found that the more aware of the birds' presence respondents were the less supportive of management they were.

The results also indicated that respondents with previous knowledge of piping plovers felt the current educational efforts were adequate, while those without previous knowledge of piping plovers felt efforts were not adequate 6. *Topic: Perceptions of beach-nesting shorebirds and habitat management*

In research on Cape Cod about public perceptions related to beach-nesting shorebirds and habitat management, Hamilton (2014) found the following:

- Participants acknowledged birds were important to protect in the scope of the overall health of the ecosystem and that humans should change their habits because birds were inhabitants of the beach first.
- **Participants indicated a need to balance protection of beach nesting shorebirds and human needs**, and that it was the U.S. Fish and Wildlife Service's role to balance protection and public use of ecosystems.
- **Some participants felt they or others did not know enough about shorebirds or their habitats and desired or needed more information, education, and signage concerning the birds.**
- Some respondents thought that only certain species needed protection or that protecting habitats actually creates harms for bird populations because of the increased number of predators in those areas.
- Some participants indicated nesting areas/habitats, not entire beaches, should be closed for beach-nesting birds breeding so as to minimize inconveniences to human recreational needs.
- **Some participants had false beliefs such as that some species did not need help and that the**

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<sup>2</sup> Nebraska's piping plovers are part of the federally endangered Great Lakes population, which is distinct from the federally threatened Atlantic Coast population that is the focus of this Plan.

**U.S. Fish and Wildlife Service was protecting nonnative species.**

- Some respondents thought that there were too many closures or they were not in the correct place.

## APPENDIX F:

### Audiences that Influence Human Disturbance of Piping Plovers

Table 7: Audiences that influence human disturbance. Note that the team identified even more audiences, such as birdwatchers, photographers, and summer camp coordinators, that were not included after prioritization.

| <b>Audience Name</b>   | <b>Description</b>  |
|--|---|
| <i>Residents</i>   | Those who live in a community with a beach that is used by piping plovers, such as coastal homeowners, beach association members, summer beach residents or repeat renters.   |
| <i>Dog owners/walkers</i>  | Anyone who visits a piping plover beach with a dog(s), particularly while plovers are present (nesting, migrating, wintering). Research indicates that different types of messaging than used for other audiences may be more effective.  |
| <i>General beachgoers</i>  | Individuals, families and groups that use the beach for recreational purposes. Some of these users will fit into other categories, as well. Beachgoers impact the piping plover life cycle and may be unaware of guidance or reluctant to follow it, and in some areas, there is inadequate protection and/or management.   |
| <i>Municipal on-beach staff</i>  | Municipal employees and contractors whose responsibilities bring them to the beach. Group includes lifeguards, trash collectors, road maintenance, municipal planners, public works departments, permitting staff, concessionaires, divisions of marine and/or environmental affairs, recreation departments, conservation commissions, natural resources/beach/environmental committees.   |
| <i>Beach and land managers</i>   | People who work as managers of piping plover beaches, overseeing staff on the beach, setting policy, and/or implementing management plans. This includes managers of town, county, and state property, national wildlife refuges, national parks, conservation nonprofits and town recreation offices.  |
| <i>Law enforcement officers</i>  | Local and state police; Coast Guard; wildlife, fish, and natural resource wardens; harbor patrol; and/or federal officers in towns that have piping plover beaches and others who have the authority to enforce local ordinances, leash laws, and endangered species regulations.   |
| <i>Boaters (motorized and non-motorized)</i>                                   | Motor-boaters, kayakers, canoeists, personal watercraft users, and paddleboarders who are able to access areas occupied by piping plovers (and other shorebirds) that may otherwise be more difficult to get to. They may bring dogs with them and land their boats in sensitive bird areas.  |
| <i>Off road vehicle (ORV) users</i>  | Operators of motorized vehicles that are designed to be used off of paved roads, such as trucks, all-terrain vehicles and dirt bikes, who ride drive on piping plover beaches. (ORVs can crush chicks, nests, and adult birds, as well as disturb resting or foraging birds. They can create ruts in sand, which are difficult for chicks to traverse. They also degrade wrack by crushing and scattering, which destroys it or dries it out, reducing foraging quality.) |
| <i>Elected officials</i>   | Anyone holding an elected office in municipal, county, state or federal government, such as a councilperson, mayor, or congressional representative whose decisions can affect the management of human disturbance on piping plover beaches.  |
| <i>Federal, state, county and local agencies without conservation missions</i> | Federal, state, county and local agencies/entities that do not have conservation-specific missions but have decision-making authority that influences human disturbance. Some examples are state departments of transportation, FEMA and US Army Corps of Engineers.  |

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|   |  |
|---|--|
| <i>Owners of equipment rental and tourism dependent companies</i> | Owners of businesses that take tourists to the beach or rent equipment that can be used on the beach. Examples include bike, kayak, jet ski, paddleboard, and windsurf rental businesses, and beach ferries. |
| <i>School teachers and administrators</i>                         | Teachers and administrators working at schools near piping plover beaches.   |
| <i>Students</i>   | Many current programs focus on 3-6 grades in schools near piping plover beaches. Materials can be tailored for middle and high school ages.  |
| <i>Conservation partners</i>                                      | Staff, interns and volunteers of municipal, county, state and federal agencies, nonprofit organizations and other groups with conservation missions.   |
| <i>Anglers</i>  | People who fish from the beach, and travel to fishing areas by foot or ORV.  |

## Appendix G: Message Bank (Audience Specific Messages)

### *Overarching Messages for Communication about Human Disturbance of Piping Plover*

*With ever-growing demands on our beaches, there are fewer places for piping plovers that depend on Atlantic coast beaches year-round to raise families, feed, and rest.*

- Beaches are irreplaceable homes for shorebirds and other animals. Piping plovers and other shorebirds have thrived for centuries on coastal beaches that are constantly shifting in response to storms and wave action.
- With fewer than 4,000 piping plovers on the Atlantic coast, each one makes a difference.

*Everyday activities on the beach can unintentionally harm piping plovers.*

- Nests, and even piping plovers, are really hard to see.
- When you get too close to birds, they *flush* (fly off of their nest or move away from feeding areas). While it might seem minor, this drives them away from what they need to survive - food and a resting place. Imagine if you were hungry and tired, and forces beyond your control kept you away from food all day, and no place felt safe to rest.

*By following some specific steps, we can share the beach with piping plover adults and chicks to help them survive.*

- Follow the guidance on signs and respect all areas fenced or posted for protection of wildlife. Your actions can benefit sea turtles, terns, American oystercatchers, and black skimmers, among other animals.
- Watch these entertaining birds from a distance.
- If pets are permitted on beaches, keep them leashed and away from birds.
- Remove trash and food scraps, which attract animals that might eat piping plovers and their eggs.
- Do not feed animals on or near the beach. Keep your cats indoors.
- Volunteer as a piping plover monitor, ambassador, or educator on your local beach. Tell your friends and family how to help.

*The piping plover is making a comeback in the U.S.! Help make sure this shorebird is around for future generations.*

- Decades of efforts by landowners, organizations, and government agencies are paying off. The piping plover has more than doubled its population along the Atlantic Coast since it was listed as threatened under the Endangered Species Act in 1986.
- Progress has been made, but our work is not done. Help the piping plover population reach full recovery!
- Beaches managed for wildlife need your support. They provide critical, dependable space for shorebirds raising families or migrating from one beach to another.

### **Residents**

1. People and wildlife can share the beach! As long as you keep your distance, you can walk, fish, kayak, read, relax, beachcomb, take photos, splash in the waves, search for sea glass, sunbathe, bike, and watch birds without disturbing them. Check each beach for allowed activities.
2. Pets (cats/dogs) may chase piping plovers, injuring or killing them, or causing them to abandon their nests. It is important to keep cats indoors and, if allowed, dogs leashed on the beach.
3. You can help beach-nesting birds by reducing the food and shelter around your home that attract



predators of piping plovers (crows, skunks, racoon, fox, rats, etc.). Secure your trash and use fencing around your foundation or decks to prevent animals from denning there.

4. You are a partner in piping plover recovery and play a critical role in supporting wildlife conservation. You can encourage your neighbors/members to become wildlife-friendly/bird-friendly beachgoers.
5. You can support piping plover conservation by donating to conservation organizations, providing balanced or supportive perspective to the media and local officials, and by volunteering.
6. Beaches are dynamic and move with the storms, which naturally maintains great habitat for wildlife and, over time, can be our best protection against more frequent and stronger storms.
7. (This message is geared towards beach-front landowners) By allowing protective fencing to be placed around any piping plover nests on your property, you are contributing to the conservation of a threatened species.

### **Dog owners/walkers**

1. It's not just about the birds. Beach owners and managers prohibit dogs or request leashing in some areas for a variety of reasons, often for the safety and health of beachgoers, and sometimes to provide safe havens for wildlife.
2. You can be a responsible dog owner/walker by taking the BARK pledge: **B**ag waste, **A**lways put a leash on your dog, **R**espect wildlife, **K**now which beaches permit dogs. (via National Park Service)
3. We're fortunate to have access to areas that allow dogs on a leash. If dogs are allowed, remember to leash them and walk them far from nests and chicks.
4. Piping plovers see ALL dogs as predators and panic when a dog approaches their nest or chicks. Every dog is perceived as a threat, no matter its size or age. Dogs can cause piping plovers to leave their eggs, stop feeding, and waste precious time and energy on distraction displays.
5. Your dog might not chase birds, but it might step on an egg or a tiny chick by accident.
6. You can avoid fines or tickets by following leash laws.
7. Don't like seeing other dogs off leash when you follow the rules? Let the beach manager know.

Some alternative word choices to consider for creative design: "Plovers on the beach? Put me on a leash!" or "Bird-friendly beaches have dogs on leashes!"

### **General beachgoers**

1. People and wildlife can share the beach! As long as you keep your distance, you can walk, fish, kayak, read, relax, beachcomb, take photos, splash in the waves, search for sea glass, sunbathe, bike, and watch birds without disturbing them. Check each beach for allowed activities.

### **Municipal or other on-beach staff**

1. Many of the people who visit the beach care about wildlife.
2. Set a good example for beach visitors by following all beach guidelines.
3. Aspects of your job are critical to protecting piping plovers. These include picking up trash, maintaining beaches, ensuring dog laws are followed, informing visitors of the regulations, not disturbing birds, and much more.
4. Removing trash daily before nightfall reduces food available for scavenging animals such as raccoons, foxes, and coyotes. When lured to the beach, they will eat piping plover eggs and chicks. Evening trash removal also eliminates the need to clean up garbage scattered by the animals.
5. Being informed about piping plovers and their conservation can help beachgoers understand why you do what you do.

### **Land and beach managers**

1. Your partnership has fueled progress in piping plover recovery, and you can help conservation partners

reach and maintain recovery goals.

2. Your staff's activities on the beach can help or hinder piping plovers' efforts to survive and raise families. You play a critical role in piping plover conservation by carefully managing beaches that plovers need and that are in high demand by people
3. Your policies make a difference to piping plovers and often have other benefits. For example, requiring "carry in, carry out" behaviors or removing trash daily before nightfall reduces food available for scavenging animals such as raccoons, foxes, and coyotes. When lured to the beach, they will eat piping plover eggs and chicks. These behaviors also eliminate the need to clean up garbage scattered by the animals.
4. Closing beaches to dogs during the nesting season prevents disturbance to piping plovers, but some managers restrict dogs to prevent pet waste from soiling recreational areas and to eliminate dog-on-dog and dog-on-human aggression.
5. You can help create a culture of wildlife stewardship with staff and make it an standard component of activities and policies.
6. Following guidance about recreation on piping plover beaches helps you avoid legal consequences if actions should disturb or harm protected birds. If there are challenges in implementing conservation or management practices, work with your agency or conservation partner contacts.
7. Meeting or exceeding recovery goals can lead to more flexibility in beach management. For example, in Massachusetts the increase of piping plover nesting pairs allowed the U.S. Fish and Wildlife Service and MassWildlife to work with beach owners and managers to provide flexible beach management under both federal and state endangered species laws.

#### **Boaters: Motorized and Non-motorized**

1. It is critical that you do not land in areas that are fenced, signed, or where birds are nesting or feeding. If you see small birds along the shoreline as you approach, especially if they are peeping or diving at you, they are probably nesting or raising chicks. Stay out of these areas - even at high tide.
2. Know where you can and cannot land your boat. Use designated landing and launching when they are available.
3. Always keep your dog in the boat during the beach bird nesting season.
4. Inlet areas are especially critical for feeding and nesting birds. Be mindful that disturbance robs them of feeding opportunities and can leave eggs/chicks exposed to the elements.
5. Paddlers can still affect beach-nesting birds and should avoid areas that are fenced, signed or where birds are nesting or feeding.
6. Following local and municipal ordinances will help you avoid fines.

#### **Off road vehicle (ORV) users**

1. It is critical that you learn and follow all regulations regarding ORV use near piping plover and least tern nesting areas to prevent harming or harassing these birds. Breaking the rules may result in loss of your permit or fines and may cause stricter regulations.
2. Piping plover and least tern chicks are tiny, flightless, and camouflaged to blend into the sand. They sometimes hide in tire tracks, which are similar to nest scrapes where chicks hatched. You could run one over without knowing it.
3. Many regulations to protect piping plovers also protect the beach itself. For instance, keeping out of the dunes reduces erosion, thus allowing the beach to survive longer despite sea level rise.  
*Additionally, point out where ORVs are allowed, as well as what activities are allowed at the current location.*

#### **Elected officials**

## Appendices, Atlantic Coast Piping Plover Strategic Communications Plan

1. Polling shows that wildlife conservation is popular with many constituents and tourists. Most passive beach recreation is compatible with piping plover protection as long as people follow local guidelines and rules. Examples are walking, bird watching, wildlife photography, kayaking, and beachcombing.
2. Contact the U.S. Fish and Wildlife Service, your state wildlife agency or local piping plover conservation organization if any concerns arise or if you have questions.
3. Conservation organizations can be great resources in helping local communities address climate vulnerability holistically. Nature-based solutions are being developed to make smart investments to protect infrastructure and resources (like recreation beaches) over the long-term.

### **Federal, state and local agencies without conservation missions**

1. Guidance on piping plover beaches is meant to help you avoid legal consequences regarding protected wildlife. Call agency or conservation partner contacts first when any concerns arise.
2. Your projects can affect piping plovers. You have the most influence over how your projects are carried out.
3. Your collaboration is why progress has been made in piping plover conservation, and now is the time to reach recovery! As a partner in piping plover recovery, you play a critical role in support for conservation.
4. Enforcement of guidance and regulations for protected wildlife is a civic responsibility.
5. Outreach materials are available for you to help communicate with elected officials, media, and others.

### **Rental/tourism companies**

1. Your service area is home to unique wildlife that attract ecotourists.
2. Many tourists are wildlife advocates. Be a source of accurate and positive conservation messages.
3. Your customers can have effects on shorebirds like the piping plover. You can help them recreate in a way that supports wildlife conservation.
4. You can create a culture of stewardship by reinforcing support for conservation in training, staff meetings, and everyday conversations and activities.
5. Having posters about wildlife and how tourists can help shows customers that you are a wildlife-friendly business.

### **Anglers**

1. Leave your dog at home during the nesting season.
2. Discarded fishing line can seriously harm or kill birds and other wildlife. Birds can become entangled in, or ingest, the fishing line, whereby starvation, strangulation, or deep wounding are possible. Wildlife usually cannot survive the injuries they sustain from entanglements.
3. Put unusable fishing line in a fishing line recycling receptacle if one is available. If not, remove discarded fishing line and dispose of it in a trash container.
4. Carry out unused bait and fish parts. Leaving behind these items on beaches can attract predators that might not otherwise be there. These predators may take eggs or chicks or kill adults.
5. Know and follow all local regulations concerning the disposal of bait or fish parts.
6. Avoid piping plovers and protected nesting areas when walking to and from a fishing spot.

### **Conservation partners**

1. Consistent messaging used across locations provides reinforcement to people who visit more than one piping plover beach.
2. Active participation from all partners in piping plover conservation is needed to meet piping plover

recovery goals.

3. We have started to compile and create easily accessible information, tools and messages to engage key audiences about piping plover conservation and welcome your feedback on it.
4. We would like to share the tools and messages we have developed about piping plovers and natural processes so that your agency can use them in your communication efforts.
5. We want to work with you to ensure that laws to protect piping plovers are being enforced.
6. We want to help you communicate with the media and congressional representatives.

#### **School Teachers and Administrators**

1. We want to work with you to meet the standards of learning by incorporating topics focused on shorebirds and shorebird conservation, specifically piping plovers, a federally listed species. Several shorebird education programs are available.
2. Shorebird education programs provide opportunities to teach STEM topics, such as biology, environmental science, and math, along with other topics like civic engagement, ethics, values, how to handle conflict, conflict resolution, and citizenship skills.
3. A shorebird education program allows you and your students to be partners in piping plover recovery and play a critical role in garnering support for conservation.
4. Teachers play a critical role in influencing students' perspectives (viewpoints) and can instill an appreciation and desire to protect the environment at a young age.
5. Birds spend time in different countries at different times of the year and travel great distances every spring and fall. Education programs on shorebirds can connect kids to other countries and be especially relevant to international students, first and second generation immigrants, and those holding dual citizenship.

#### **Students**

1. Today is a great day for saving lives. Save a life by doing the right thing at the beach. "Look up, look down, look all around" before you begin your beach activities.
2. Your activities on the beach affect the feeding and nesting of piping plovers and their ability to raise families.
3. You can influence your family and friends by acting as a good example or sharing your knowledge about how to share the beach with nesting piping plovers.
4. Beaches are for families – people and piping plovers.

## Appendix H:

### Strategies Bank

These are grouped into four categories:

1. Signage – templates and placement guidance for education and enforcement messages.
2. Communications – increasing and improving communications, targeting communication efforts and messages to specific groups. Using a variety of media, such as social media, websites, mobile apps, newspapers, radio, and television.
3. Outreach/Education – teaching piping plover natural history, biology, and threats, and how to help.
4. Engagement – involving people in piping plover stewardship and monitoring in the field.

### Strategies for General Beachgoers, Dog Owners/Walkers, Residential Audiences, Anglers, Boaters, Kayakers, Kiteboarders, Off Road Vehicle (ORV) Users, and Cyclists

#### 1) Signage

A. Develop a signage strategy, available for download, to standardize messages.

- i) Signage with consistent messaging on key threats and needed actions, emphasizing positive messages, will increase compliance.
- ii) Signage with images/graphics showing where the birds lay eggs, where chicks feed, and that wracklines are habitat, will increase understanding and compliance for visual learners.
- iii) Signs made by local students and placed near enforcement signs will involve students in conservation, capture visitor attention, and encourage compliance with regulations.
- iv) Including a URL or a QR code (for tracking) on signs that directs people to more information on dog walking/leash rules and other beach rules will increase public knowledge of rules and regulations.
- v) Focus on sign placement in heavily frequented areas to reach target audiences
  - Beach paths, beach entrances, bathrooms, concessions, and even on trash cans
  - Neighborhood mailbox clusters, gates, community buildings and picnic pavilions
  - For boats, kayaks, kite boarders – at landings, rental locations, marinas (in bathrooms, showers, and fueling areas), “no landing” signs at tips of inlets
  - For cyclists – at parking lots near beaches and rental locations
  - High school bathrooms and bulletin boards during prom and graduation seasons to reduce impacts from beach parties
  - Veterinarian offices to reach dog owners in lobby or waiting room

B. Develop downloadable signs and templates with outreach and enforcement messages related to disturbance. This will help to standardize signage and to reduce time and effort needed to complete signage projects.

- i) Sign templates will leave room for users to add their logos as partners.
- ii) Examples of signs created by school children will help users engage teachers
- iii) Examples of interpretive/educational signs with graphics that can be modified for different regions or species, and contact information for artists/authors, will be available for use (i.e., [wrack community poster by the Inwater Research Group](#)).

iv) Dog specific - interpretive panel/sign showing the unintended consequences of letting a dog run loose verses keeping dog on leash or not bringing dog to beach.

- v) Kiteboarding – interpretive panel/sign showing the unintended consequences of this activity on beach-

nesting birds and migratory shorebirds for launch areas, parking lots, and/or websites.

vi) Rental companies – signs for their counters and waiting areas with simple messages on *bird-friendly* beach behavior, using audience-specific messages.

C. Investigate grants or other funding to support standardized signage.

i) Regional or county organizations/partners could collaborate on proposals.

ii) Members of the Atlantic Flyway Shorebird Initiative could collaborate on larger signage projects.

## **2) Communications**

A. Improve access to beach and dog regulations by adding information about dog leash laws and beach regulations to popular online platforms and websites, for example, Google Maps, Wikipedia, The Weather Channel, TripAdvisor, tourism sites, and/or beach organization sites. Consider developing a searchable database for rules and regulations.

B. Invite reporters to the field to observe conservation/management activities, including local school or college newspapers, to educate local media and get messages out. Maintain a list of *wildlife-friendly* reporters to contact with news and updates.

C. Develop communications campaigns using press releases, public service announcements, advertisements, commercials, and news stories to distribute information to radio, television, and newspapers.

D. Post or share updates during the piping plover nesting season, including maps and links to beach regulations to social media accounts for:

i) Beaches (town, state, etc.)

ii) Dog walking groups

iii) Kiteboarding groups

iv) Kayaking groups

v) Rental agencies

vi) Tour groups

E. Tag rental companies (e.g., kayak, kiteboarding, real estate agents) in social media posts, and recognize any contributions to your efforts.

F. Public appreciation, ads, or posters thanking supporters and summarizing the nesting season, will improve relations.

i) Awards/recognition for volunteers

ii) Awards/recognition for private landowners, beach associations

iii) Awards/recognition for groups (e.g., anglers, kayakers, dog walkers)

## **3) Education/Outreach (teaching about piping plover/beach wildlife, threats, and how to help)**

A. Create a piping plover web page providing information for the public, collaborating with the [Atlantic Flyway Shorebird Initiative](#) as the host for the page.

i) The page or pages will host information for different audiences, with links to other websites/pages.

ii) Contact the Cornell Lab of Ornithology to request that they link to the piping plover information page. Edit relevant Wikipedia articles to add the URL.

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B. Develop outreach materials to distribute with season/daily passes, OSV (over sand vehicle) permits, fishing licenses, rental agreements (i.e., for real estate, vehicles, kayaks, surfboards, bicycles, and kiteboards) with messages specific to each audience.

- i) Examples include bookmarks, small info cards, and abbreviated brochures with URLs for more information.
- ii) Include URLs to websites listing town ordinances that relate to beach use and dog regulations.
- iii) When possible, include a QR code to track use of materials.
- iv) Consider printing stickers for rental equipment that relate to wildlife-friendly behavior such as *Watch out for Wildlife*, and *Responsible Wildlife Recreation*.

C. The [Be a Good Egg Program](#) (via Audubon New York) is a model for public outreach, as is a National Park Service strategy of setting up a pop-up tent or shade canopy with outreach materials/games near beach access points.

- i) Engage families and kids with displays and games that teach about PIPL.
- ii) Include a pledge, as with the Be a Good Egg program, and give stickers or buttons to reinforce the pledge message.
- iii) Give out bookmarks, postcards and brochures with important messages for beachgoers.
- iv) If you have limited time, focus on busy weekends, or weekends when seasonal residents first arrive.
- v) Encourage beach associations or communities to self-certify as *Good Eggs* and reward them with recognition.
- vi) To reach dog owners/walkers.
- vii) Have water for dogs and treats to encourage them to visit and learn.
- viii) Offer free leashes with a slogan such as, “I’m on a leash when plovers are on the beach,” or “Bird-friendly beaches have dogs on leashes.”
- ix) Give stickers to dog owners/walkers who sign a pledge.

D. For businesses such as tourism agencies, rental/tour companies, and resorts/beach clubs, share beach bird images and information for their websites emphasizing that visitors value wildlife and need information to have a good experience.

- i) Include links to beach and dog regulations and messages for general beachgoers from the message bank.
- ii) Send updated information as the nesting season progresses to keep them engaged.
- iii) Offer guidelines for responsible wildlife watching.
- iv) Share links to pledge programs.

E. For beachgoer groups (i.e., kiteboarding, saltwater fishing, beach buggy associations, fat tire biking, kayaking) - share beach bird images and information for their websites.

- i) Include links to beach and dog regulations.
- ii) Include messages specific to each group from the message bank.
- iii) Update as the nesting season progresses to keep them engaged.

F. For residential landowners – create materials with important messages from the message bank.

- i) Fliers or tent cards that can be distributed to residential targets at the beginning of each nesting season will remind them of beach regulations and wildlife friendly behavior. Give copies to rental agencies.
- ii) Give pet-friendly rentals leashes with slogans and tent cards with information about dogs and beach nesting birds.
- iii) Print bookmarks with images of nesting birds, their eggs and chicks.
- iv) Give out magnets with images of plovers and bird-friendly slogans.

G. Create an annual award program (e.g., a Piping Plover or Wildlife Champion award) for businesses or beachgoer groups that support your efforts.

- i) Recognize them with a plaque.
- ii) Create a press release about the award.

#### **4) Engagement**

A. Initiate a Beach Bird (or Piping Plover) Volunteer Monitoring/Outreach Program. Volunteers can carry a spotting scope or binoculars to demonstrate to beachgoers how to observe and enjoy plovers from a distance, and teach responsible beach behavior at nesting beaches.

- i) Network with community groups to recruit volunteers.
- ii) Offer training and continuing education.
- iii) Encourage volunteers to recruit friends.
- iv) Provide opportunities for volunteers to work alongside biologists and help with fencing or monitoring.
- v) Give volunteers t-shirts or hats and nametags so they are easily identified by beach visitors.

B. Initiate a Bark Ranger, Green Dog, or Beach Ambassador training program for dog lovers who want to help with beach bird conservation by engaging fellow dog owners/walkers.

- i) Create a downloadable training guide that includes messages for dog owners/walkers and strategies for engagement. Give Ambassadors hats, t-shirts and/or name tags.
- ii) If dogs are not allowed, make sure Ambassadors have a list of places where dog owners/walkers can take dogs to walk.
- iii) If dogs are allowed, use Ambassadors with leashed dogs to set an example for all dog owners/walkers to leash dogs.
- iv) Have Ambassadors carry extra leashes with slogans “I’m on a leash when plovers are on the beach,” or “Bird-friendly beaches have dogs on leashes,” or have shared leashes at beach entrances.
- v) Have Ambassadors take the Be a Good Egg pledge and encourage others to do so.

C. Offer training for local summer camp counselors who visit with groups of campers. Train them in bird-friendly beach behavior and invite them to pledge to “Be a good egg.”

D. Install fishing line recycling receptacles at fishing areas with signs explaining impacts to birds and wildlife.

E. Attend annual meetings of beach associations or clubs for different beaches or give an annual talk at a local library, before or during the nesting season.

- i) Update the community on the prior and current year, let them know why things may or may not be going well, ask for their help with plover conservation such as assisting with repairing symbolic fencing when it washes out or installing predator exclosures.
- ii) Use messages from the message bank.
- iii) Thank volunteers for their support.
- iv) Create a template for an annual talk and guidance on how to create an annual meeting/gathering.

### **Additional Strategies for Specific Audiences**

#### **K – 12 Teachers and Students**

##### **1) Signage - No specific recommendations**



## 2) Communication

### 3) Outreach and Education

Narrow the audience.

- A. Target schools in coastal communities.
- B. Teach the teachers.
- C. Concentrate on grades 3 – 5 or middle school or high school.
- D. Speak at assemblies for entire schools or grades.

Use multi-session education (learning occurs through multiple levels of engagement).

- A. Visit with students at least twice.
- B. Leave games for them to play to reinforce lessons (e.g., card game to match different birds with their eggs or chicks, [Wrack Attack](#) to teach the effects of disturbance while feeding).
- C. Leave videos for students to watch.
- D. Take them to the beach to explore beaches as habitat for wildlife and ask questions about how people can survive there versus birds (adaptations).

Use existing vehicles/models for education

- A. SEAGRANT consortium program, funded by NSF and NOAA grants. They conduct marine science and teacher workshops, and are interested in including shorebirds in their curricula.
- B. [Shorebird Sisters School Program](#). They have a [curriculum](#) in English and Spanish.
- C. Upload and store materials to the piping plover webpage on the Atlantic Flyway Shorebird Initiative website. It might be a password-protected area where people could upload their own materials to share. For an example see the Bridgeport Wildlife Guards [activities webpage](#).

Use existing resources, modifying when necessary

- A. Wrack poster/sign to teach about wrack as habitat.
- B. Make your own [Beach Discovery Backpack](#), based on ones created by Goldenrod Foundation. They were developed to encourage learning, exploration and science in coastal habitats. Kids and their families borrow a backpack from a library or school and use the materials, which include equipment for investigation, such as binoculars, field guides, books, activities, a journal and a guide for exploring the beach in a way that is respectful of the wildlife and habitat. Make sure to include messaging on local shorebirds and how to be a good steward of piping plover habitat.
- C. Create an *education trunk* filled with teaching materials about piping plovers to send to teachers who request it. The Maryland Department of Natural Resources provides a [variety of trunks](#) that can serve as models. Teachers only pay shipping costs.

Engage in values discussions with teachers and students

- A. Listening is as important as talking.
- B. Ask how they feel about sharing the beach with birds.
- C. Prepare scenarios of potential human/piping plover conflicts and have students think about how they would feel and what they might do to bring values into the discussion.

## 4) Engagement

Establish Student Ambassadors for Plover Conservation.

- A. Invite older students to volunteer.
- B. Invite Girl and Boy Scout troops to volunteer.
- C. Consider using [Bridgeport Wildlife Guards](#) as a model.

## Strategies to Achieve Objectives for Municipal or other On-beach Staff

### 1) Signage - no specific strategies

### 2) Outreach/education

- A. Offer training and/or provide information on why it is important to protect the birds and nesting areas.
- B. Provide binoculars and basic birdwatching training
- C. Educate staff about beaches as habitat for wildlife, and give them a quick guide/fact sheet/pocket guide with this information and messages for this audience.
- D. Work with supervisor or administrators to ensure that trash bins are emptied at the end of the day, rather than leaving them full overnight. And/or encourage and enforce *carry in/carry out* policy for trash and food waste.

### 3) Communication

- A. Establish a consistent communication with the supervisor and encourage frequent all-staff meetings to update everyone on nesting locations.
- B. Develop a good working relationship with municipal officials. Make an effort to reach out to newly elected officials. (Crossover with elected officials audience)

### 4) Engagement

- A. Encourage a culture of stewardship.
- B. Encourage the town to develop beach management plans for protection of threatened and endangered species.

## Strategies to Achieve Objectives for Land and Beach Manager Audience

### 1) Signage-no specific recommendations

### 2) Communication

- A. Share priority messages for beach/land managers in presentations, on handouts, and in meetings.
- B. Produce an end-of-season report or in-season updates that highlight successful partnerships and efforts and show context of individual sites in a bigger picture. Distribute through a variety of channels, such as:
  - Email or electronic newsletter
  - Facebook group
  - Celebratory or stewardship event
  - Paper reports that can be shared with elected officials

### 3) Outreach/Education

- A. Hold trainings that are informative, fun, and short.
  - a. Design a presentation template that can be customized by others for their local beaches.
  - b. Consider whether partners can help provide trainings.
  - c. Whenever possible, hold trainings on beaches so the managers can observe the birds.
  - d. Recognize that manager attitudes will vary. Some may do all they can to help, while others may be uncooperative.
  - e. Develop a quick guide/fact sheet/pocket guide with information on the bird species and messages for the level of managers in your audience.
  - f. Give beach and public works staff messages that they can use to communicate with the public about plover protection.
- B. Produce a training video to share with multiple land and beach managers. (Individual relationships are key,

but also recommend group training.)

1. A good learning tool to use is video or stills of camouflaged piping plover nests and have the audience try to identify where they are. This may be done for other local beach nesting birds, such as least terns and American oystercatchers, and for chicks of various species.
2. Consider including a cartoon or video showing the effects of humans/predators/dogs on birds.

#### **4) Engagement**

Establish an award/recognition program.

- A. Focus on positive press or feedback.
- B. Use existing awards programs to recognize land and beach managers.
- C. Recognition can range from simply tagging people in social media posts to having a local celebration at the end of the season with food, entertainment, and awards.

Encourage culture of stewardship with staff

- A. Encourage land and beach managers to hold beach cleanups and examination of types of marine debris, similar to the [International Coastal Cleanup](#) when volunteers gather data on the types of trash they collect and dispose of properly. This raises awareness about trash in the ocean and on beaches and subtly suggests changes in behavior.
- B. Plant beach grass, where needed, and control invasive plants.
- C. Recruit volunteers to help with symbolic fencing.
- D. Inform Department of Public Works staff about actions that protect plovers, such as cleaning up trash to discourage predators, and how they can help.

### **Strategies to Achieve Objectives for Law Enforcement Officers (Federal, State, and Municipal)**

#### **1) Signage-no specific recommendations**

#### **2) Communications**

- A. Build good relationships with law enforcement personnel and establish a system for communicating with them.
- B. Identify a police chief or an officer who likes wildlife and keep them as point of contact/liaison. Must be certain they are dedicated to acting in this capacity.
- C. Hold a meeting with local law enforcement at the beginning of the year to share last year's summary and also discuss the plan for year ahead.
- D. Provide officers with a list of staff/volunteer names and introduce staff and volunteers to local officers, possibly during a site visit.
- E. Send out weekly updates to officers (particularly to ones who use vehicles on the beach) so they are aware when hatching occurs. Updates should also identify priority beaches and threats.
- F. Share detailed information about possible violations with law enforcement. For instance, perhaps people are walking through closed areas to go fishing. Did law enforcement know that people are fishing there? Do they patrol there?
- G. Be mindful that relationships can be strained when the presence of piping plovers limits law enforcement officers' ability to patrol with vehicles. Let them know you are available to *escort* them if they need to travel through a closed area for training or another important exercise.

#### **3) Outreach**

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### A. Educate law enforcement by holding annual training sessions or webinars

- i) Teach about the natural history and biology of beach nesting birds and why it is important to protect the birds and nesting areas.
- ii) Take them out to see the birds and make sure they understand normal incubation behavior.
- iii) Explain the management approaches used.
- iv) Provide a packet of information with regulations and contacts for EPO and FWS officers.
- v) Share information on previous violations and incidents, such as those in Maine, New Jersey, Connecticut, and Massachusetts.
- vi) An annual training can be very effective, but resource intensive and may be dependent on supervisors allowing or requiring personnel to attend.

### B. Consider creating materials that the U.S. Fish and Wildlife Service and/or state biologists could distribute at annual meetings with law enforcement.

### C. Have law enforcement train beach bird monitors/staff in incident data collection.

- i) Get a flowchart of data collection from law enforcement. Use a data/incident card that can be kept in a notebook by staff and volunteers.
- ii) Particularly with dogs – complete a form in field with each encounter. This may make it easier to keep track of prior incidents with a particular dog owner.
- iii) Staff and volunteers might be informed by law enforcement about open investigations so that they know how much information can be shared with the public and media during an investigation into a possible piping plover *take*.
- iv) There are differences between violations of local ordinances, such as dogs off leash, piping plover harassment issues, and take issues. Staff and volunteers should know when to contact local, state, and federal law enforcement.

## 4) Engagement

A. Enlist federal or state law enforcement officials to teach local police that the laws related to piping plovers and dog leashes/walking are important and worth enforcing. Possibly bring state, federal, and local law enforcement together or give a presentation when they gather for a different reason.

B. Emphasis should be placed on the importance of federal laws. Consider a training video with a USFWS law enforcement officer discussing the importance of the federal laws protecting piping plovers and how local police can help with violations.

C. Consider training local police and paying for overtime beach patrols, as USFWS offices have done.

D. Let local police know you need their help during 4<sup>th</sup> of July to prevent fireworks from causing plover ‘take.’

E. Give an award/recognition to law enforcement officers who help.

## Strategies to Achieve Objectives for Elected Officials

### 1) Signage-no specific recommendations

### 2) Communications

A. Schedule regular visits with elected officials in towns, municipalities, or counties with piping plover nesting beaches.

- i) Do not wait for problems to emerge. Be proactive and encourage communication.
- ii) Make sure they know how to reach you easily.
- iii) If high profile projects are on the horizon, reach out proactively.

B. Focus on messages specific to elected officials who oversee:

- i) Public works (trash and beach raking)
- ii) Lifeguards
- iii) Conservation Commission/Wetlands staff

C. Develop direct relationships with District Congressional offices to find/establish appropriate contact (more often than not, it is a District Director). Check with the U.S. Fish and Wildlife Service Field office.

D. Emphasize that volunteers, students, and wildlife lovers are their constituents.

E. Reference polls that show how much people care about wildlife.

**3) Outreach**

A. Develop an informational handout or rack card for elected officials with messages specific to this group.

B. Invite Congressional staff on field trips (surveys, banding, censusing, etc.) to get them interested.

C. Use some of the same strategies outlined for local elected officials.

**4) Engagement - no specific strategies**

## **Strategies to Achieve Objectives for Federal, State, and Local Agencies without Conservation Missions**

**1) Signage-no specific recommendations**

**2) Communication**

Build awareness and relationships with agencies outside of their upcoming projects.

**3) Outreach/Education**

Develop presentation and training templates for consultation and technical assistance with audiences ranging from town councils to Army Corps of Engineers.

Attend local chapter meetings of organizations that communicate with agencies, such as American Shore and Beach Preservation Association (local meeting can include mayors and municipality staff).

A. Use a brief handout that explains piping plover biology and what the birds need, and recommendations from a municipality or agency perspective.

B. Point them to a website where they can get general information, as well as specific information on consultation, technical assistance, and recommendations.

**4) Engagement - no specific strategies**

## **Strategies to Achieve Objectives for Conservation Partners**

**1) Signage**

Inform them about the piping plover webpage (to be created) for signage strategies, sign templates, and other resources and materials.

**2) Communication**

Identify the correct staff person within the agency or organization who can assist with communications and/or implement this plan.

**3) Education/outreach**

At campgrounds or nature/visitor centers, ask if outreach materials can be distributed to campers/user groups ahead of their visit or when they arrive so that beach rules are clear (e.g., dogs not allowed or not allowed in

certain areas).

Offer a webinar or other opportunity for conservation partners to learn about this PIPL Communications plan as well as the strategies, message bank, and goals.

**4) Engagement**

Connect with the ACJV technical committees and communication committee and share the outcomes of this work.

Appendix I:

**Table 8: Expected Outcomes of Individual Tools and Tactics**

| <b>EXPECTED OUTCOMES</b>                                   | 1. Voluntary compliance with regulations, rules and signage will increase. | 2. Beach and piping plover stewardship activities by volunteers and employees will increase. | 3. A suite of communication tools for piping plover conservation partners to use will be developed and made available. | 4. Members of the Atlantic Coast piping plover conservation community will use material developed through the communications effort. | 5. Supportive or balanced perspectives will be provided to the media, elected officials, and beach-going constituencies. |
|--|--|--|--|--|--|
| <b>TOOLS/TACTICS</b>                                       |  |  |  |  |  |
| Piping plover communication Strategy                       |  |  | X  | X  |  |
| Periodic meetings of the piping plover communications team |  |  | X  | X  |  |
| Support and/or develop citizen involvement programs        | X  | X  | X  | X  | X  |
| Template info for local web                                | X  |  |  |  | X  |
| Signage recommendations and downloadable templates         | X  | X  | X  | X  | X  |
| Compile downloadable educational materials                 | X  | X  | X  | X  | X  |
| Provide partners with communication opportunities          |  |  | X  | X  | X  |
| Use school communication networks                          | X  | X  |  |  | X  |
| Beach Discovery backpacks                                  | X  | X  |  | X (if shared for repurpose/reuse)  |  |
| PPT template talks   | X  | X  |  | X (if shared for repurpose/reuse)  | X  |
| Champion/vol. coordinator                                  | X  | X  |  |  | X  |
| Pocket Guide to beach and birds                            | X  | X  |  | X (if shared for repurpose/reuse)  |  |

## Appendices, Atlantic Coast Piping Plover Strategic Communications Plan

|  |   |   |   |                                   |   |
|--|---|---|---|-----------------------------------|---|
| Pledge Program   | X |   |   | X (if shared for repurpose/reuse) | X |
| Take-aways   | X | X |   | X (if shared for repurpose/reuse) | X |
| PSA/slide deck for community TV                              | X |   |   | X (if shared for repurpose/reuse) | X |
| Handouts given w/license, permit, rentals                    | X |   |   | X (if shared for repurpose/reuse) | X |
| Build relationship w/local news                              | X | X |   |                                   | X |
| Improve online piping plover information for beachgoers      | X | X | X | X                                 | X |
| Dog Stewards/ambassadors                                     | X | X |   | X (if shared for repurpose/reuse) | X |
| Loaner leashes   | X |   |   |                                   |   |
| Directions to alternate spots for dogs on beach              | X |   |   |                                   |   |
| App for dog owners/walkers                                   | X |   |   |                                   |   |
| Social media campaign  | X | X | X | X                                 | X |
| Share dog-friendly businesses and events                     | X |   |   |                                   |   |
| BARK Pledge (via National Park Service)                      | X |   |   |                                   |   |
| Peer to peer network – dog champion                          | X |   |   |                                   |   |
| Dev. reward system for leashing, Sticker – CWS. Dog biscuits | X |   |   | X (if shared for repurpose/reuse) |   |
| Press releases   | X | X |   | X (if shared for repurpose/reuse) | X |
| Link to beach ordinances                                     | X |   |   |                                   |   |
| Network with community groups                                | X | X |   |                                   | X |
| Train camp counselors  | X | X |   |                                   |   |
| Engage schools near beaches                                  | X | X |   |                                   | X |
| Wildlife Scorecard   | X | X |   |                                   |   |
| Train beach staff  | X |   |   |                                   | X |



## Appendices, Atlantic Coast Piping Plover Strategic Communications Plan

|   |   |   |  |                                   |   |
|---|---|---|--|-----------------------------------|---|
| Build and maintain relationships with beach and land management structure   | X | X |  |                                   | X |
| Provide contact info and find help for B & L managers during incidents  | X |   |  |                                   |   |
| Offer B & L managers educational opportunities and community engagement   | X | X |  |                                   |   |
| Press events  | X | X |  |                                   | X |
| Work with beach staff on trash can placement and signage. Consider wraps for trash cans and animal proof trash cans | X |   |  |                                   |   |
| Keep lines of communication open with enforcement   | X |   |  |                                   |   |
| Host Leadership site visit  |   |   |  |                                   | X |
| Volunteer-led trips to view piping plover adults and chicks   | X | X |  |                                   | X |
| Address remaining communication needs for of the Piping Plover recovery   |   |   |  | X (if shared for repurpose/reuse) |   |
|   |   |   |  |                                   |   |

This color denotes top 7 next steps and future efforts for the communication team (page 3)

## Appendix J:

### Objectives and Strategies by Audience Segment (Know/Feel/Do)

In this table objectives for each audience type are listed for each of the goals for Piping Plover Human Disturbance communications efforts. The Communication Team used this table as a guide for what various audiences need to know, feel and do along with strategies that would best deliver messages and encourage the desired behaviors. The information here represents an early stepping stone to the material that was later refined and presented in the plan and other appendices.

Knowledge and attitude objectives are generally abbreviated versions of messages. Communications may also be supplemented with secondary messages that provide examples or simple facts or statistics. Additionally, persuasive elements can be employed to make messages play on humor, excitement, empathy, or, when appropriate, fear. For skills and behaviors objectives, the message may also need to include tertiary information on how to build the skill or how to do the behavior.

All of these objectives can be made measurable by providing specific percentages to target for each of the knowledge, attitudes, skills, or behaviors. These objectives serve as the foundation for an evaluation following the implementation of the communications campaign to determine whether the objectives have been reached.

Table 9. Behavioral chart that helped team understand what audiences need to know, feel and do in order to contribute to this effort. *Note: The knowledge, attitudes, skills and behavioral objectives from the general beach user group are applicable to the specific groups but for space purposes are NOT repeated in the table. The strategies are repeated to help with prioritization.*

| Audience             | Knowledge Objectives (Know)<br>Audience will understand that:<br><i>See refined messages in Appendix G</i>  | Attitudes Objectives (Feel)<br>Audience will believe that:  | Skills Objectives (Be able to do)<br>Audience will be able to:  | Behavioral Objectives (Do)<br>Audience will:  | Strategies to Achieve Objectives<br><i>Strategies are described in further detail in Appendix H.</i> |
|----------------------|---|---|---|---|--|
| <b>All Audiences</b> | <ol style="list-style-type: none"> <li>1. The birds live on beaches and have nowhere else to go. Beaches are habitat for wildlife and plants, just like forests, deserts, and rainforests.</li> <li>2. Nests, and even piping plovers, are really hard to see!</li> <li>3. It is possible for both people and piping plovers to use the beach. On many beaches, people near piping plovers can read, nap, relax, and birdwatch without disturbing the birds.</li> <li>4. Out of a population of less</li> </ol> | <ol style="list-style-type: none"> <li>1. Each person can be a partner in piping plover recovery and play a role in garnering support for conservation.</li> <li>2. Individual decisions and actions can make a difference.</li> <li>3. It's important to have a positive attitude about piping plover conservation.</li> </ol> | <ol style="list-style-type: none"> <li>1. Easily access information, tools, and messages to engage key audiences about piping plover conservation.</li> <li>2. Easily contact a piping plover partner who can assist.</li> <li>3. Find guidance and information on regulations</li> </ol> | <p>Provide balanced or supportive perspectives to the media and legislators</p> <p>Follow these guidelines to help piping plovers, as well as other birds and beach wildlife:</p> <ol style="list-style-type: none"> <li>a) Respect all areas fenced or posted for protection of piping plovers and other wildlife.</li> <li>b) Watch birds from a distance to avoid disturbing them.</li> <li>c) Carry out all trash and uneaten food and food scraps</li> <li>d) Not feed wildlife.</li> <li>d) Fly kites away from areas used</li> </ol> | See page 13  |

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|  | <p>than 4,000 piping plovers, each bird and egg makes a difference.</p> <p>5. Guidance on piping plover beaches is meant to help you avoid legal consequences regarding protected wildlife. If there are challenges in implementation, working with agency or conservation partners can be very helpful.</p> <p>6. Unleashed dogs may chase piping plovers killing or injuring them or causing nest abandonment.</p> <p>7. Wrack is good for the beach and wildlife.</p> |  |  | by piping plovers. |  |
|--|--|--|--|--------------------|--|

Goal 1. Develop shorebird conservation constituencies that reduce disturbance to Atlantic Coast piping plovers.

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| <b>Dog owners/walkers</b> | <p>1. Even a single dog can affect piping plovers by killing or disturbing adults and chicks crushing eggs and chicks. Dogs also may harass sensitive shorebirds by chasing them.</p> <p>2. Beach owners prohibit dogs in some areas for a variety of reasons. If dogs are allowed, they must be kept on a leash. Even a leashed dog can step on a nest or chick.</p> <p>3. There are other places to walk dogs where there will be less disturbance to wildlife</p> <p>4. Not following leash laws will lead to fines or tickets.</p> | <p>Believe that:</p> <p>1. Every dog owner/walker can prevent their dog from being part of the problem, and instead be part of the solution.</p> <p>2. Leashing every dog is necessary, and a good thing to do!</p> <p>3. Dogs and their owners/walkers can go to other places. If dogs are not allowed, they go elsewhere.</p> | <p>Can:</p> <p>1. Find information on leash laws and alternative locations for dog walking.</p> <p>2. Access to long leashes.</p> | <p>Do:</p> <p>Walk dog on leash if allowed on piping plover beaches, or walk dog elsewhere. Overall, follow leash laws.</p> <p>Do not walk dog in prohibited areas.</p> | <p>Achieve by:</p> <ol style="list-style-type: none"> <li>1. Use signage and interpretive panels.</li> <li>2. Survey dog owners.</li> <li>3. Shorebird champions/ambassadors.</li> <li>4. Program/tent for busy periods.</li> <li>5. Add information to popular websites, and centralized website.</li> <li>6. Volunteer trainings.</li> <li>7. Train the counselors for summer camps that visit the beach.</li> <li>8. Use social media accounts for individual beaches.</li> <li>9. Partner with local dog walkers.</li> <li>10. Bark Rangers.</li> <li>11. Foster dogs as piping plover advocates.</li> <li>12. Advertise where dog walkers can go instead.</li> </ol> |
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| <b>General beach users</b>               | <p>1. Activities on the beach affect the feeding and nesting of piping plovers and their ability to raise their young.</p>   | <p>Believe that:</p> <p>1. My actions will make a difference.</p> <p>2. Beaches are homes for wildlife, not just recreational areas.</p> <p>3. Plovers need the beach to survive.</p> <p>4. It is not difficult to help.</p>      | <p>Can:</p> <p>1. People can find information on piping plover areas, and know what impacts they are having and what they need to do:<br/>a) Access to clear signage and be able to identify least impactful areas.<br/>b) Identify groups of feeding birds to avoid disturbing them.<br/>c) Dispose of trash without leaving it on the beach.<br/>d) Fly kites in an appropriate area<br/>e) Fill in sandcastle moats and holes dug in the sand.</p> <p>2. Find information on how they can help further.</p> <p>3. Find out who to contact when something is wrong.</p> <p>4. Notice that birds are present along the beach (in order to avoid them).</p> | <p>Do:</p> <p>Follow laws and guidance about fenced/posted areas, do not disturb piping plovers and their nests, and avoid feeding wildlife and attracting predators on beaches:<br/>a) Obey signage.<br/>b) Do not flush or approach birds.<br/>c) Take food scraps and trash off beach.<br/>d) Fly kites away from piping plover areas.</p> <p>Support piping plover conservation</p> <p>Provide balanced or supportive perspective to the media, neighbors and legislators</p> <p>Consider volunteering at your local beach to pick up trash or be a steward in other ways.</p> | <p>Achieve by:</p> <p>Strategies repeated from above: 1, 2, 3, 5, 6, 7, 8</p> <p>Campaigns to distribute information via radio, TV and news, such as public service announcements, advertisements, commercials, news stories, social media, websites, etc.</p>  |
| <b>Municipal or other on-beach staff</b> | <p>1. Staff must take the same precautions as ORV users if using a vehicle on the beach.</p> <p>2. People will observe and copy staff behavior.</p> <p>3. Taking precautions and making small changes in work will help in the conservation of piping plovers (e.g., removing trash daily and beach raking</p> | <p>Believe that:</p> <p>1. Each staff person must set a good example and follow all beach guidelines.</p> <p>2. The staff's work is critical in protecting piping plovers. Everyone shares responsibility for protecting this</p> | <p>Can:</p> <p>1. Can avoid nests and chicks by determining their locations.</p>  | <p>Do:</p> <p>Educate beach visitors about piping plovers and their conservation.</p> <p>Enforce guidance and laws that protect piping plovers.</p> <p>Work with state wildlife agency to erect protective fencing and</p>   | <p>Achieve by:</p> <p>Offer training and/or provide information on why it is important to protect the birds and nesting areas. Encourage a culture that supports the work on the beach, perhaps a birdwatching training. Maybe develop an informational handout. Suggest staff refer to the area as a "wild natural</p> |

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|  | <p>with extreme caution).</p> <p>4. Wrack and natural beach processes are valuable.</p> <p>5. There are solutions for keeping beaches safe and clean while conserving piping plovers.</p> <p>6. Preventing or stopping activities that cause disturbance will help the birds.</p> <p>7. Municipalities have an important role in conserving piping plovers.</p>  | <p>endangered species. This is part of doing the job right.</p> <p>3. Support and understanding of protection efforts are critical.</p> |  | <p>monitor nesting areas.</p> <p>Empty trash at least once a day, including trash that didn't make it in the bin. Do this in the afternoon or multiple times a day. Do not leave trash on beach overnight.</p> <p>Avoid raking where the birds are.</p> <p>Follow all rules for ORV use.</p> | <p>beach.”</p> <p>Establish a channel of communication, such as weekly/daily meetings, so that staff are aware of nesting locations. Start with a supervisor to establish a relationship.</p> <p>Develop a good working relationship with municipal officials. Make an effort to reach out to newly-elected officials. (Crossover with elected officials audience)</p> <p>Encourage the town to develop beach management plans for protection of threatened and endangered species. (Is there an incentive or a way to require this?)</p> <p>Staff should be instructed to empty trash bins and remove all trash bags at the end of the day, rather than leaving them full overnight.</p> |
| <p><i>Off-road vehicle (ATV, OHV, 4WD, etc.) users</i></p> | <p>1. ORVs can crush chicks, nests, and birds. Chicks can get trapped in tire tracks, which prevents them from feeding and keeping up with the rest of their family</p> <p>2. Local rules and regulations:</p> <p>a) There are specific regulations and rules for ORV use on state and local beaches. Even if ORVs are allowed, it is better to not ride during nesting season.</p> <p>b) ORV restrictions are seasonal or temporary in many piping plover areas. When ORV restriction are in place, many locations still permit other types of access. The faster the birds develop and fledge (fly),</p> | <p>Believe that:</p> <p>1. Following local rules and regulations is necessary, and good for the birds.</p>                              | <p>Can:</p> <p>1. Find and understand information on guidelines, local rules, and regulations.</p> <p>2. Find information on other places to go instead.</p> | <p>Do:</p> <p>Follow all rules for OHV use.</p>  | <p>Achieve by:</p> <p>Repeated strategies: 1, 2, 4, 5, 6, 7, 8</p> <p>If permits or passes are needed, provide information card and website address with permit.</p> <p>Offer alternative, wildlife-friendly options to access the beach. Ask OHV users to substitute one ride for a different transportation option.</p> <p>Encourage people to use areas they do not have to ride to.</p>   |

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|                             | the sooner restrictions can be lifted.  |  |   |   |  |
| <b>Kayakers and Boaters</b> | <p>1. Symbolic fencing and posting mean people and their pets must stay out of the area, even at high tide.</p> <p>2. Boaters must follow all of the rules that other beachgoers follow, such as not bringing a dog by boat to an area closed to dogs</p> <p>3. There are rules on where boats/kayaks can or cannot be landed. It is important to use only designated landing and launching areas only.</p> <p>4. Inlet areas are especially critical for shorebird feeding and nesting.</p> <p>5. Kayaks can impact piping plovers in a manner similar to a motorboat.</p> <p>6. Violation of local or municipal ordinances may result in fines.</p> | <p>Believe that:</p> <p>1. Kayakers and boaters follow the same rules as other beachgoers.</p> <p>2. Kayakers and boaters should avoid landing or launching in inlets or overwashes.</p> | <p>Can:</p> <p>1. Find where I can launch and land my boat.</p> <p>2. Find information on the rules I need to follow.</p>   | <p>Do:</p> <p>Avoid disturbing birds when pulling kayaks in and out of water.</p> <p>Return to boats rather than go beyond symbolic fencing when the tide is high.</p> <p>Launch and land boats in designated areas.</p> <p>Avoid sensitive areas, particularly ones that are signed.</p> <p>Follow beach regulations, such as dog rules. For example, keep your dog on the boat if you visit a beach closed to dogs.</p> | <p>Achieve by:</p> <p>Repeated strategies: 1, 2, 5, 7, 8,</p> <p>Post “No Landing” signage and other necessary signs.</p> <p>Reach boaters/kayakers with signs or informational materials at marinas, fuel stations, local boating stores or kayak rental companies.</p> <p>Include information in boat registration materials.</p> <p>Post large signs at tip of inlets to target landing.</p> <p>Include information in boating and kayaker magazines, related websites, and other publications.</p> <p>Post signs/information at public boat launches</p> <p>Identifying opinion leaders in these groups and building relationships with them</p> <p>Put laminated posters/signs in the bathrooms at boat launches, marinas, or rental companies.</p> |
| <b>Anglers</b>              | <p>1. Discarded fishing line can injure or kill piping plovers and other wildlife.</p> <p>2. Leaving behind bait, fish parts, or trash attracts predators that might not otherwise be there, and that eat piping plover eggs, chicks, or adults.</p> <p>3. There may be regulations concerning the disposal of fish parts and/or bait.</p>  | <p>Believe that:</p> <p>1. It’s necessary to carry out waste fishing line, fish parts, leftover bait, and trash.</p>   | <p>Can:</p> <p>1. Locate a fishing line recycling receptacle.</p> <p>2. Bring extra bags to carry out bait/fish parts.</p> <p>3. Access areas further out in the water to leave fish parts.</p> | <p>Do:</p> <p>Avoid birds and posted areas when walking to and from fishing spots.</p> <p>Put waste fishing line in recycling receptacles if available or carry it out.</p> <p>Do not leave behind bait or fish parts.</p>  | <p>Achieve by:</p> <p>Use strategies outlined for general beach users.</p> <p>Install fishing line recycling receptacles at fishing areas with signs that explain impacts to birds and wildlife (not necessarily piping plovers).</p> <p>Include messages about piping plovers in state fishing/angler’s guides, brochures, and on fishing related websites. Include</p>   |

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|  |   |   |  |   | <p>messaging in any angler education programs.</p> <p>Potentially volunteers can help.</p>   |
| <b>Kiteboarders</b>  | <p>1. Piping plovers react to kites as if they are predators (e.g., falcons) This can them to abandon their nests.</p> <p>2. Staging/launching can affect piping plovers and other shorebirds..</p> <p>3. It is important to be aware of rules and penalties for kiteboarding. Kiteboarding is not allowed in some areas. Landing/launching sites are designated in some areas.</p> | <p>Believe that:</p> <p>All kiteboarders should kite in areas where it is allowed and where they will have less impact on wildlife</p> <p>Following the rules protects current opportunities to kiteboard in the area.</p>      | <p>Can:</p> <p>1. Find where I can launch and land without having an impact on nesting shorebirds.</p> <p>2. Find information on the rules I need to follow.</p> | <p>Do:</p> <p>Follow rules.</p>   | <p>Achieve by:</p> <p>Use strategies outlined for general beach users.</p> <p>Put information on Kiteboarding listservs/forums/websites where kiteboarders go for information.</p> <p>Provide informational materials and signs at businesses that sell or rent kiteboards.</p> <p>Identify "kiteboard champions" to help distribute messages.</p> |
| <b>Cyclists</b>  | <p>1. Being observant of the beach when walking a bike to the wet sand will help cyclists to recognize and avoid sensitive nesting areas in the dry sand.</p>   | <p>Believe that:</p> <p>1. Everyone's actions make a difference.</p> <p>2. Beaches are homes for wildlife, not just recreational areas.</p> <p>3. Plovers need the beach to survive.</p> <p>4. It is not difficult to help.</p> | <p>Can:</p> <p>1. Find information on where to ride and walk carefully.</p> <p>2. Discern between wet and dry sand.</p>  | <p>Do:</p> <p>Ride bikes on the wet sand.</p>   | <p>Achieve by:</p> <p>Use strategies outlined for general beach users.</p> <p>Provide informational materials and signs at businesses that sell or rent bikes.</p>   |
| <p>Goal 2. Garner support within the piping plover conservation network and coastal community leaders to help build shorebird conservation constituencies, with the ultimate goal of reducing disturbance to piping plovers.</p> |   |   |  |   |  |
| <b>Residential Audiences</b>   | <p>See all audiences and general beach users.</p>   | <p>Believe that:</p> <p>1. Everyone can have critical influence over their neighbors/association members and can encourage them to be</p>   | <p>Can:</p> <p>1. Work with neighbors, visitors, and beach association members to increase their awareness of</p>  | <p>Do:</p> <p>Support piping plover conservation by donating to conservation organizations or by volunteering.</p> <p>Post "leash all dogs" signs and</p> | <p>Achieve by:</p> <p>Signage</p> <p>Website</p> <p>Database on regulations</p> <p>Dog ambassadors/Bark Rangers</p>  |

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|                                |   | wildlife-friendly beachgoers.   | nesting shorebirds and what actions they need to take to reduce disturbance.                         | have a policy of leashing dogs during the nesting season  | <p>Fliers with reminders</p> <p>Updates for residents on progress of nesting birds.</p> <p>Public, family or kid programming with activities that benefit the birds</p> <p>Establish a volunteer docent/outreach/stewardship program.</p> <p>Webcam video streaming of nests</p> <p>Leave-behinds for rental properties</p>   |
| <b>Land and Beach Managers</b> | <p>1. The activities of your staff on the beach affect the feeding and nesting of piping plovers and their ability to raise families.</p> <p>2. There are specific ways that policies can make a difference. For example, removing trash at least once during the day reduces attracting predators at night.</p> <p>Closing beaches to dogs during the piping plover nesting season is an option.</p> <p>3. Recreational guidance on piping plover beaches is meant to help you. If there are challenges in implementing it, please work with your agency or conservation partner contacts.</p> | <p>Believe that:</p> <p>1. I have the most influence over how staff and volunteers carry out their piping plover work.</p> <p>2. People can help protect and maintain natural beaches for people and piping plovers.</p> <p>3. Enforcement of guidance and regulations to protect piping plovers is a civic responsibility.</p> | <p>Can:</p> <p>1. Obtain support for enforcement of piping plover protective guidance and rules.</p> | <p>Do:</p> <p>Enforce guidance and laws that protect piping plovers in a way that makes it clear that managers understand why the rules are necessary.</p> <p>Require staff and visitors to follow guidance noted above for all audiences.</p> <p>Implement policies that benefit piping plovers, such as:</p> <p>a) removing trash at least once during the day;</p> <p>b) closing beaches to dogs as early as April through the nesting season;</p> <p>c) leaving all or sections of the beach with wrack;</p> <p>d) erect symbolic fencing early, by April 1, in conjunction with closing beaches to dogs, if possible. High beach use early in the season can cause piping plovers to abandon the beach.</p> <p>Create a culture of stewardship by reinforcing support for conservation in training, staff meetings, and other opportunities.</p> | <p>Achieve by:</p> <p>Obtain evening support to implement policies (staff, volunteers, etc).</p> <ul style="list-style-type: none"> <li>• Acknowledge success and set up an awards/recognition program. Highlight land managers that are successful.</li> <li>• Share talking points/messages.</li> <li>• Make sure every manager knows who can come do a presentation for staff on piping plover conservation.</li> <li>• Offer trainings or be a part any existing training program.</li> </ul> |



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| <b>Law Enforcement</b><br><br>(Police, USFWS, state agencies, parks, etc.) | <p>1. There are unique leash laws for all municipalities and agencies whose land is being patrolled.</p> <p>2. Dogs on boats will likely become dogs running loose on beaches. An enforcement stop to check for life vests and registration on boats can also include a conversation about unleashed dogs.</p>  | <p>Believe that:</p> <p>1. I must set a good example and follow all beach guidelines myself.</p> <p>2. My work is critical in protecting piping plovers. These birds need my protection.</p> <p>3. It is important to enforce laws for actions that may not seem to have significant effects, such as illegal/unauthorized boat landings or fireworks.</p> | <p>Can:</p> <p>1. Easily access a piping plover partner that can assist, and know who to report incidents to.</p>                                       | <p>Do:</p> <p>Enforce laws at beaches related to dogs, ORVs, and other activities that may be restricted.</p> <p>Increase partnerships, and monitoring of the birds and beach-going behaviors that can affect the birds.</p> <p>Check in with boaters who have dogs on board to let them know that dogs should not be running loose on beaches when they land the boat.</p>          | <p>Achieve by:</p> <p>Develop a good working relationship.</p> <p>Set up a system for incident reporting.</p> <p>Provide information through trainings or videos, webinars, and information packets with contacts.</p> <p>Encourage volunteer monitors to report incidents to law enforcement.</p> <p>Federal agents can emphasize the federal regulations to local and state law enforcement.</p> |
| <b>Elected Officials</b>   | <p>1. There are simple things your constituents can do to help piping plovers (see behavior column).</p> <p>2. These are guidelines to protect the birds and your constituents. There can be federal legal consequences if actions disturb or harm these protected birds.</p> <p>3. Many of your constituents support wildlife conservation, including piping plovers on the beach.</p> | <p>Believe that:</p> <p>1. Following guidance and regulations to protect piping plovers is a civic responsibility.</p> <p>2. I have critical influence over my constituencies and can encourage them to be wildlife-friendly beachgoers.</p>   | <p>Can:</p> <p>1. Access contact information for agencies and organizations</p> <p>2. (Is aware of) Share the need for conservation for the species</p> | <p>Do:</p> <p>Call agency or conservation partner contacts first when any concerns arise.</p> <p>Suggest constituents help by following the guidance noted above for all audiences.</p> <p>Support managers' implementation of policies that benefit piping plovers.</p> <p>Foster a culture of stewardship by reinforcing support for conservation in announcements and visits.</p> | <p>Achieve by:</p> <p>Develop relationships with District/State U.S. Congressional offices, state legislators, and local officials.</p> <p>Schedule routine information visits.</p> <p>Invite officials on field trips (surveys, banding, censusing, etc.).</p>  |
| <b>Federal, State, and Local Agencies without Conservation Missions</b>    | <p>1. Your projects can have effects on nesting shorebirds, and you have the most influence over how your projects are carried out.</p> <p>2. You are a critical partner in piping plover restoration. Their comeback is thanks to partners like you.</p>   | <p>Believe that:</p> <p>Saving endangered species is a responsibility for all government employees</p>   | <p>Can:</p> <p>1. Access contact information for agencies and organizations</p> <p>2. (Is aware of) Share the need for conservation for the species</p> | <p>Do:</p> <p>Call agency or conservation partner contacts first when any concerns arise.</p> <p>Incorporate conservation measures and policies that benefit piping plovers.</p> <p>Create a culture of stewardship</p>  | <p>Achieve by:</p> <p>Build awareness and relationships with agencies outside of their upcoming projects.</p> <p>Develop presentations and Powerpoint trainings for consultation and technical assistance. Could be a template</p>   |

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|   |   |  | 3. Access relevant information for their projects and species conservation  | by reinforcing support for conservation in training, staff meetings and other opportunities.   | that can be adapted. Audiences range from town councils to Corps of Engineers.<br><br>Attend local chapter meetings of organizations that communicate with agencies, such as American Shore and Beach Preservation Association (local meeting can include mayors and municipality staff).<br><br>Use a brief handout that explains piping plover biology and what the birds need, and recommendations from a municipality or agency perspective.<br><br>Point them to a website where they can get general information, as well as specific information on consultation, technical assistance, and recommendations. |
| <i>Rental/Tourism Companies and Entities</i><br><br>(Bike rentals, kayak tours, boat operators) | <p>Your customers can have effects on shorebirds like the piping plover.</p> <p>Your service area is home to some unique wildlife -- take advantage of this for your business. Many of your customers may value wildlife and would be willing to take steps to reduce their impact. It may make business sense to demonstrate concern for wildlife.</p> | <p>Believe that:</p> <p>Business owners should share information with customers regarding where to go to and how to avoid disturbing piping plovers.</p> | <p>Can:</p> <p>1. Access contact information for agencies and organizations</p> <p>2. (Is aware of) Share the need for conservation for the species</p> <p>3. Access relevant information for their service area and species conservation</p> | <p>Do:</p> <p>Explicitly share information regarding piping plover guidelines with customers or post flyers/posters with guidance at their business.</p> <p>Require staff and request customers to follow guidance noted for all audiences.</p> <p>Create a culture of stewardship by reinforcing support for conservation in training, staff meetings, and other opportunities.</p> | <p>Achieve by:</p> <p>Share talking points/messages, maps.</p> <p>Acknowledge success and set up an awards/recognition program.</p> <p>Plover-friendly designation.</p> <p>Incorporate waiver/pledge in their rental material</p> <p>Help companies offer opportunities specific to inspiring stewardship.</p> <p>Design a poster/sign template that can be given to businesses that describes simple behaviors "to do/not do."</p>   |
| <i>Teachers, Administrators, and Students</i>   | <b>TEACHERS</b><br>1. You can teach to the standards of science by  | <p>Believe that:</p> <p><b>STUDENTS</b></p>  | <p>Can:</p> <p>Find a piping plover</p>   | <p>Do:</p> <p>Incorporate piping plover</p>  | <p>Achieve by:</p>  |

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| <p>(K-12)</p> <p>(Possibly focus on 3-5 grade and high school students in coastal areas)</p>                                    | <p>incorporating these topics. Plover conservation also provides the opportunity to talk about handling conflict, ethics, and values.</p> <p>2. Conservation is a good way to talk about civic engagement and how to be a good citizen.</p> <p>3. Birds are from a different place and traveling (international students).</p> <p>4. Save a life by doing the right thing at the beach.</p> <p>(See additional messages in message bank.)</p> | <p>You can influence your family and friends by acting as a good example or providing your knowledge about how to share the beach with nesting piping plovers.</p>        | <p>curriculum online</p> <p>Teach about piping plover conservation</p> <p>(Is aware of) Share the need for conservation for the species</p> | <p>conservation into the curriculum.</p>   | <p>Narrowing the audience</p> <p>Establish young ambassadors for piping plover conservation</p> <p>Values discussions</p> <p>Multi-session education</p> <p>Use existing vehicles for education</p> <p>Use existing resources, modifying when necessary</p>  |
| <p><b>Conservation Partners</b></p> <p>(State fish and wildlife agencies, federal agencies with conservation mission, NGOs)</p> | <p>1. Active participation of all partners in piping plover conservation planning, science, and delivery activities will ensure we have shared goals moving forward, which is essential for conservation on the Atlantic Coast.</p>   | <p>Believe that:</p> <p>1. Collaboration and the use of consistent messages and tools developed together are more effective than uncoordinated, inconsistent efforts.</p> | <p>Can:</p> <p>Find online resources to help with piping plover management, such as sign templates, messages, federal point of contact.</p> | <p>Do:</p> <p>1. Use consistent tools and information about piping plovers and natural processes in communication efforts.</p> <p>2. Enforce guidance and laws that protect piping plovers.</p> <p>3. Reach out to agencies without a conservation mission and conservation partners to facilitate collaboration. Proactively engage agencies to address practices that may adversely impact piping plovers.</p> | <p>Achieve by:</p> <p>If a state, county, or other agency has a campground or other activity that requires paying a fee, ask if outreach materials can be distributed to campers/user groups ahead of their visit or when they arrive so that beach rules are clear (e.g., dogs not allowed or not allowed in certain areas).</p> <p>Contribute to web page (to be created by communications team) so people can access information and facilitate sharing and disseminating messages and materials.</p> <p>Share the strategies and messages that come out of this process with conservation partners.</p> <p>Offer a webinar or other opportunity for conservation partners to learn about this process, as well as the strategies and outcomes.</p> |

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|  |  |  |  |  | <p>Create a storinghouse for the materials that are created or a toolkit that could be public. Put on the AFSI website or create password protected webpages (which would allow tracking of who is accessing the data).</p> <p>Identify the correct staff person within the agency or organization who can assist with communication work.</p> <p>Tap into the ACJV technical committees and communication committee and share the outcomes of this work.</p> <p>Join existing opportunities and market materials.</p> |
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