Aleutian Tern Conservation Planning Meeting
January 26-27, 2018

Hotel Captain Cook, Resolution Room – Anchorage, Alaska
8:30am-5:00pm each day

Meeting Objective

Facilitate a common understanding among Aleutian tern (ALTE) researchers and managers of alternative sampling and population estimation methods for ALTE, including assumptions, advantages, and limitations, which will lead to recommended methodologies for future population monitoring.

Day 1 - January 26, 2018

8:30 Welcome, Introductions, Meeting Objectives & Agenda

- *Jan Caulfield, Facilitator*
- *Kelly Nesvacil, Alaska Department of Fish & Game (ADFG)*
- *Susan Oehlers, US Forest Service (USFS)*
- *Scott Hall, National Fish and Wildlife Foundation, Pacific Seabird Program*

9:00 Defining the Problem for Aleutian Tern Population Monitoring

Share the current state of our knowledge regarding Aleutian tern colony counting methods, with focus on the range of habitats in which surveys have been conducted, movements of the birds within a season, timing of behaviors, and the pros and cons of the methods employed.

- Previous Statewide Efforts and Synthesis of Current Colony Data – *Heather Renner, US Fish and Wildlife Service (USFWS) (15 min)*
- Kodiak Area Current and Previous Colony Work – *Robin Corcoran, USFWS (15 min)*
- Yakutat Area Previous Colony and Geolocator work – *Mike Goldstein, USFS (15 min)*

9:45 Break

10:00 Continue Defining the Problem

- Yakutat Area Current Colony Work– *Susan Oehlers, USFS (10 min)*
- Southwest Alaska Colony Work– *Kelly Nesvacil, ADFG (10 min)*
- Southwest Alaska and Yakutat PTT data insights– *Susan Oehlers and Kelly Nesvacil (10 min)*
- Summary Presentation – *Grey Pendleton, ADFG (10 min)*

11:30 "Straw Man" Methodology[1]

Introduce "straw man" methodology to use as an initial draft framework for discussion during the work session, with the understanding that it will be modified as a result of participants' expert input, questions, collaborative discussion, and recommendations – *Trent McDonald and Jason Carlisle, Western Ecosystems Technology, Inc. (WEST)*

[1] From Urban Dictionary – "*Straw man*" refers to an initial document that is expected to be modified by others.

12:00 Lunch

1:30 Relevant Work with Other Species of Terns

Outside researchers present their work relevant to the meeting question, challenges they have encountered, solutions they have employed, or processes they are undertaking to better understand the issues.

- Arctic and Common Tern – *Linda Welch, USFWS (20 min)*
- Black Tern – *David Shealer, Loras College (20 min)*
- Caspian and Other Terns – *Don Lyons, Oregon State University (20 min)*
- Facilitated discussion – *How this information connects to questions related to ALTE methodology and the "straw man" document (30 min)*

3:00 Break

3:20 New Technologies

Discuss opportunities for use of new technological methods.

- Kenai Drone Surveys – *Dawn Magness, USFWS (15 min)*
- Russian Colony Drone Presentation – *Don Lyons, OSU (10 min)*
- Close Kin Mark-Recapture – *Grey Pendleton, ADFG (15 min)*

4:20 Set the Stage for Day 2 Work Session

On Day 2, WEST will lead a collaborative work session to develop a methodology for ALTE population monitoring, using the "straw man" document as a framework for the discussion. Participants will discuss the pros, cons, feasibility, efficiency, and effectiveness of different methods – and will work with WEST to craft and refine the recommended methodology.

To set the stage for the Day 2 work session, WEST will reprise the "straw man" methodology, discuss how it addresses (or may need to be adjusted to address) points made in Day 1 presentations, and review key questions for discussion on Day 2.

Key Questions to address regarding the Site-Specific Scale:

1. The best population variable to measure (e.g., number of: nests, breeding pairs, breeding adults, all adults, juveniles).
2. Whether population estimates (need estimates of detection and availability probabilities) or relative abundance (make assumptions about detection and availability) is the optimal measure.
3. What is the best time scale to assess within a season (e.g., single time points, seasonal totals).

Considerations related to Site-Specific questions:

- *What is a colony? (including 'colonies' without nesting?)*
- *Habitat as it affects detection probability.*
- *Colony configuration and density.*
- *Short-term movement (e.g., foraging) as it affects availability to be detected.*
- *Intra-annual movement among colonies (for season total estimates).*

- *Spatial and temporal variation in nesting phenology.*
- *Researcher-caused disturbance.*

Key Questions to address regarding the Larger Spatial and Temporal Scales:

1. Potentially variable estimation quantities and methods (due to habitat, etc.).
2. The effects of unknown colonies on regional estimates.
3. Non-random selection of monitored colonies.
4. Inter-annual variation in colony occupancy and abundance.
5. Appropriate spatial and time scales (for regional abundance and trends, respectively).
6. Spatial and temporal variation in nesting phenology.

5:00 **Adjourn Day 1**

Day 2 - January 27, 2018

8:30 **Work Session**

Collaborative work session using the "straw man" document as a draft framework for developing a recommended methodology for ALTE population monitoring.

12:00 **Lunch**

1:30 **Reconvene Work Session**

4:00 **Wrap-up – Next Steps, Products, Schedule**

Opportunities for outside researchers to share their observations on what we have gained through this process (15 min).

Review results of collaborative work session and next steps / schedule for WEST to produce the draft and final recommended methodology for ALTE population monitoring, with review by workshop participants.

4:50 **Closing Comments and Thanks** – *ADFG and ALTE Technical Committee*

5:00 **Adjourn**