

**ADVANCING OUR  
KNOWLEDGE ABOUT  
SHOREBIRDS**

**PRISM  
Surveys on  
the Yukon  
Delta National  
Wildlife  
Refuge**

# PROGRAM FOR REGIONAL AND INTERNATIONAL SHOREBIRD MONITORING (PRISM)



- Developed to implement National Shorebird Conservation Plan
- Estimate size of breeding populations of North American shorebirds
- Monitor trends in shorebird population size
- Describe shorebird distribution, abundance, and habitat relationships



# PRISM SURVEYS IN THE ARCTIC

- 1996 – 1997 Prince Charles and Air Force Islands
- 1998 – 2000 Colville River Delta
- 2000 – 2001 National Petroleum Reserve
- 2001 – 2002 Western Alaska (Yukon Delta, Selawik, Alaska Peninsula, Alaska Maritime)
- 2002 and 2004 Arctic NWR and Central Arctic (Prudhoe)
- 2003 – 2004 Baffin Island
- 2004 and 2006 Southampton and Coats Island
- 2005 – 2008 Mackenzie River Delta and Northern Yukon
- 2006 National Petroleum Reserve – Alaska
- 2007-2008 Teshekpuk Lake Special Area – Alaska
- 2010 Peer review of protocols

# YUKON-KUSKOKWIM DELTA



- High priority region for PRISM surveys
- Hosts some of the highest shorebird breeding densities in the world
- Encompasses 75% of Alaska's coastal wetlands
- Provides breeding habitat for 60% of Alaska's shorebirds
- Has populations unique to Beringia

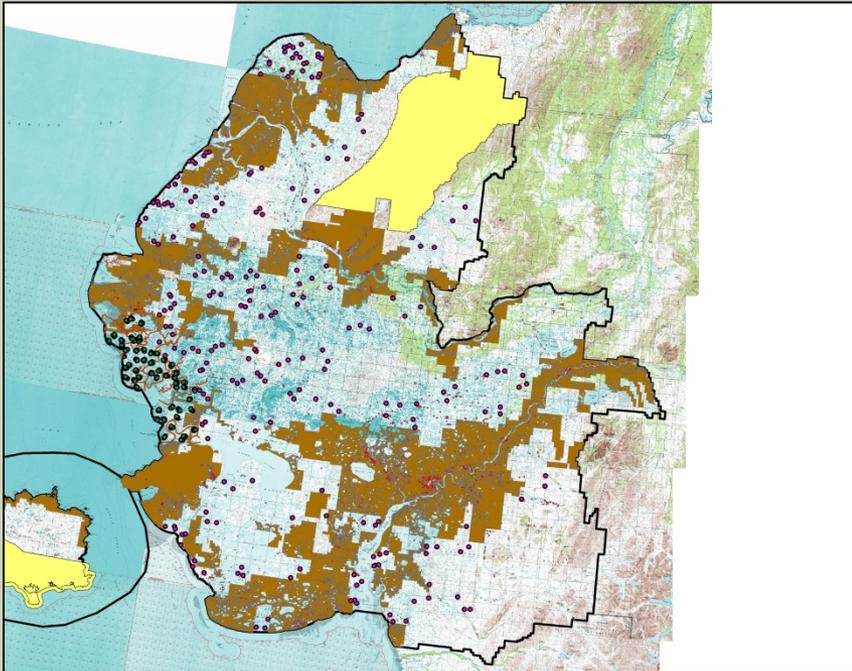
# CO – PRINCIPAL INVESTIGATORS

- Stephen Brown, Brad Winn, Manomet Center for Conservation Sciences
- Rick Lanctot, Jim Johnson, & Sarah Saalfeld, Migratory Bird Management R7, USFWS
- Kristine Sowl and Brian McCaffery, YDNWR, USFWS
- Diane Granfors, Inventory & Monitoring R7, USFWS
- Jim Lyons, Migratory Bird Management R9, USFWS
- Brad Andres, Habitat Conservation, R9, USFWS

# FUNDING

- National Fish and Wildlife Foundation Grant
- Matching non-federal funds raised by Manomet Center of Conservation Science
- USFWS Inventory and Monitoring Program (both regional and national funds)
- Yukon Delta NWR
- Migratory Bird Management R7

# SURVEY PLOT LOCATIONS



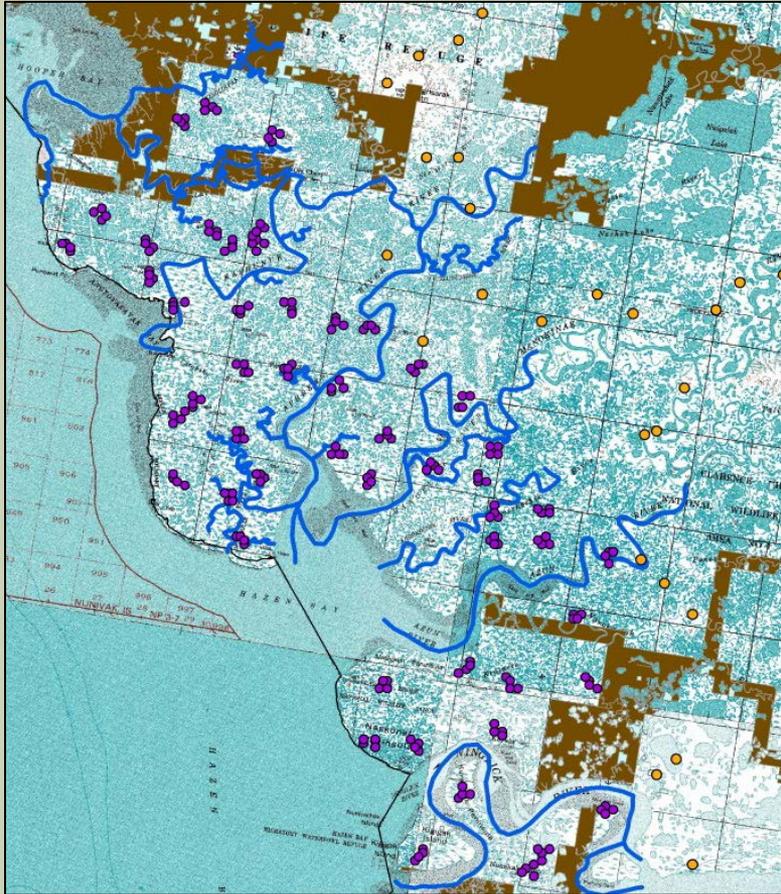
- Stratified random design
- Strata include low and high density shorebird habitats
- More plots located in central coast because very high density habitat
- Plots clustered in groups of three
- Alternate plots available

# HELICOPTER SURVEYS



- Survey Period: May 15-26
- Two R-44 helicopters and two 3-person teams
- Each person visited four plots/day
- Each plot was surveyed for 1 hour and 36 minutes

# CENTRAL COAST PLOTS



- Survey Period: May 29-June 9
- One 2-person crew dropped off by plane at several locations
- One 3-person crew traveled by boat
- 1-3 plots/person/day

# CHALLENGES

- Government red tape
- Poor weather, especially during helicopter surveys
- Late start for boat surveys
- Fuel cache logistics
- Boat motor trouble
- Tidal sloughs
- Poor imagery for plot maps



# RESULTS



- 301 plots completed
- 22 shorebird species observed
- 7,667 individuals observed

# RESULTS



## Most commonly detected species:

- Red-necked Phalarope (29%)
- Dunlin (20%)
- Western Sandpiper (16%)
- Pectoral Sandpiper (8%)
- Black Turnstone (6%)
- Bar-tailed Godwit (5%)

# PLANNING FOR 2016 - LOGISTICS

- Improve protocol to ensure consistency of data collection and address gaps
- Incorporate recording of weather (precip, wind speed) into protocol as it can impact shorebird detectability
- Search for better imagery to use for selecting plots
- Greater emphasis on pre-survey training to improve consistency and accuracy of observers
- Complete logistical planning much earlier than last year
- Have staffing determined by January

# PLANNING FOR 2016 – PLOT SELECTION

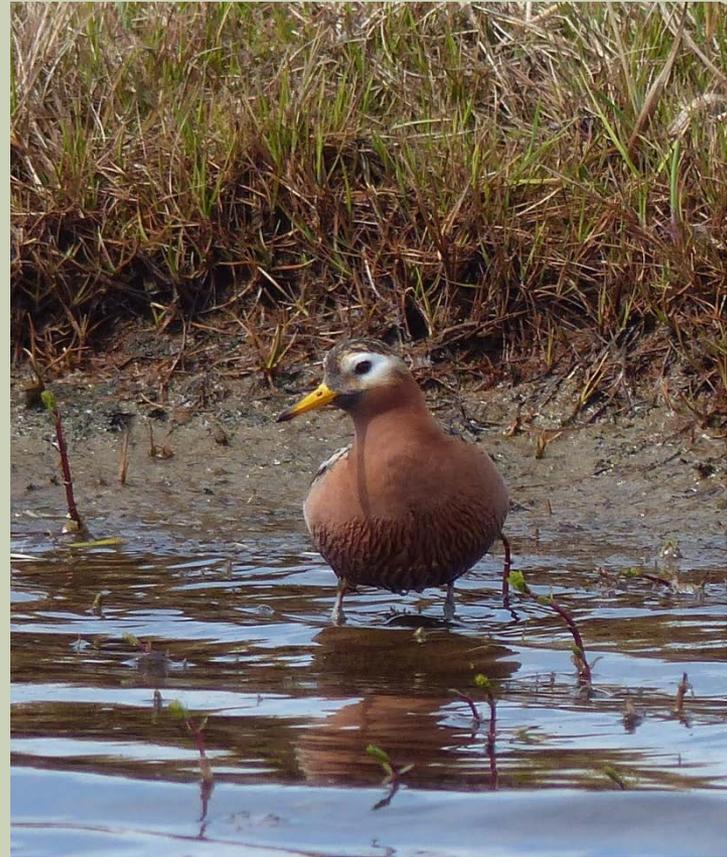
- Should we resurvey 2015 plots or select new plots?
- Should we do more coastal plots vs. inland plots?
- Use 2015 density data to modify strata
- Include more alternate plots on the central coast
- Institute habitat delineation on plots

# PLANNING FOR 2016 – DOUBLE SAMPLING

- **Should we conduct intensive plots?**
  - Pros and cons
  - Where to put them
  - How to do them
- **Alternative methods for assessing detectability**
  - Repeated surveys
  - Double observer methods
  - Other?

# PRISM 2016

- Full 2016 proposal has been submitted to NFWF. Decisions about proposals will be made in Nov.
- Manomet raising funds for match.
- YKNWR and MBM also budgeting for work.



# LOOKING FOR OBSERVERS!

