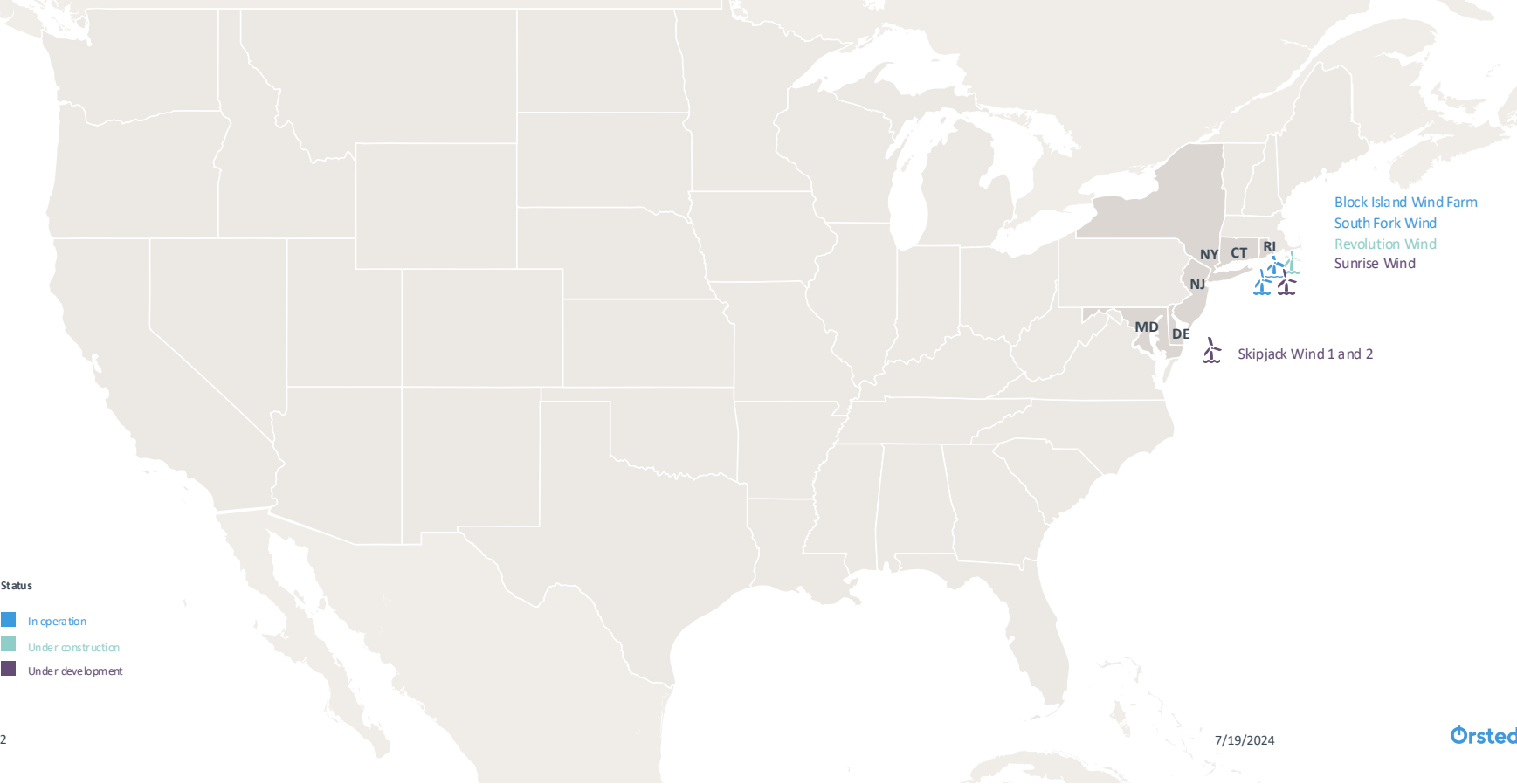


Avian mitigation planning

Kim Peters, Principal Avian & Bat Biologist and Senior Manager, Biological Sciences Group

Our offshore U.S. footprint



Status

- In operation
- Under construction
- Under development

Multiple projects with Avian Compensatory Mitigation Plan requirements

- Predicted take (based on SCRAM and Band results)
 - REKN
 - PIPL
- Initiated outreach with USFWS and BOEM in 2023
- Currently no mitigation bank or in-lieu program options
- Individual Project Compensatory Mitigation Plans:
 - Must be submitted prior to operations
 - Must demonstrate a 1:1 (or greater) offset
 - Must include detailed project description, location, timeline, costs, monitoring methods



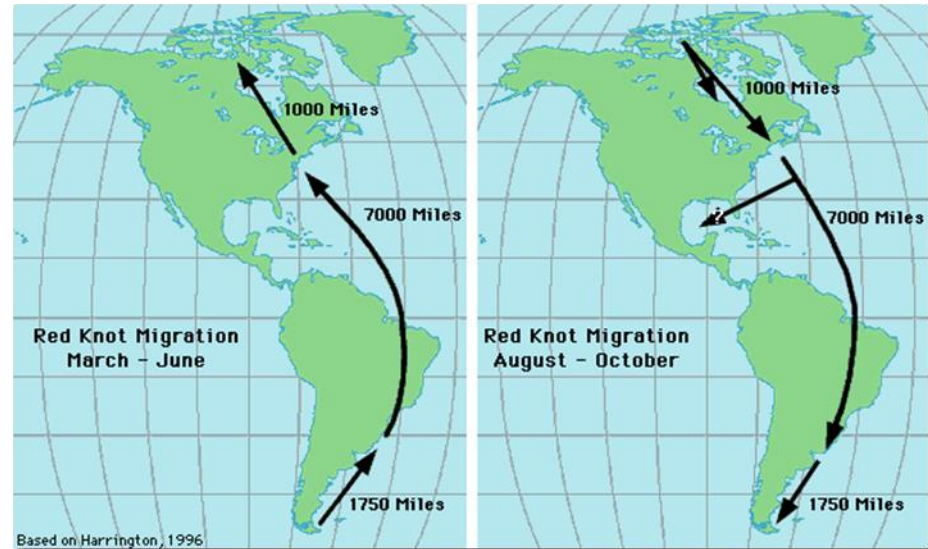
Photo: Greg Breese/USFWS



Photo: Don Freiday/USFWS

Process for identifying potential projects

- Early outreach to USFWS field/regional offices and BOEM
- Species Status Assessments (SSA) review and analysis
 - Focused on **Threats**
 - Filtered to *Moderate* and *High Severity*
 - Filtered out **Intractable** threats
- Identified conservation efforts and practitioners working on each of the priority threats
- Not limited to U.S.
- Initiation of communications with conservation organizations
 - Baseline?
 - Additionality?



Examples – *rufa* Red Knot (Atlantic Flyway population)

Threat (SSA)	Severity (SSA)	Potential Projects	Potential Metrics
Reduced nonbreeding food availability from human activity	High	Coastal restoration for horseshoe crab spawning HS crab stranding rescue/rehab Mussel habitat restoration Mussel hatchery support	HS crab/egg density, REKN weight gain, REKN abundance, area of beach restored, abiotic impacts (e.g., wave action), # strandings, # rescues, Mussel density, hatchery success
Aquaculture	Moderate	Work with industry partners in Northern Brazil to implement BMPs	Contaminant levels (REKN, surrogate species, extant), # Industry Commitments, # REKN
Human disturbance	Moderate	Beach Monitors Signage Fencing Exclusion zones	Shorebird abundance, # disturbance events, # signs installed, # monitors supported, # of “safe spaces”
Toxic algal blooms	Moderate	Support shorebird rehabilitation programs	Number of individuals rehabilitated
Coastal engineering/development	High	Habitat protection	Acreage, habitat condition, #REKN

Next Steps, Challenges, Opportunities

- Continue conversations with NGOs and other practitioners
- Discussions with other developers
- Continued coordination with USFWS, BOEM and BSEE
- Submit draft CMPs

Key Challenges:

- Accounting (# birds)
 - Conservation value vs. “easy metrics”
 - Long-term uncertainty
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