Managing the Cormorant-Fisheries Conflict in Michigan

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Timeline for Cormorant Management

- Public Resource Depredation Order (PRDO) 2003-2016
- ► The PRDO vacated in 2016
- Testified in Committee on Natural Resources, U.S. House of Representatives, 2018
- Additional Hearing Subcommittee on Oversight and Investigations, U.S. House of Representatives, Alpena, 2018
- New Environmental Impact Statement 2020
- Special Double-crested Cormorant permit system established in March 2021 for State or Tribal fish and wildlife agencies
- State permit approved on April 16 allowing take of 9,650 birds and 1,400 nests across 6 colonies, 6 stocking sites, and 2 lakes





Example of the Conflict - Saginaw Bay





Cormorant - Depredation Orders vs Permits

- Depredation Order:
 - Goal is to reduce economic loss
 - ▶ Implemented via the 2003 EA
 - Broad application (all lands and freshwaters in 24 states)



- Depredation Permits:
 - Authorized take to reduce damage caused by birds or to protect human health and safety or personal property
 - Specific number of individuals from a specific site by specified individuals
 - Intended to provide short-term relief until long-term solutions can be implemented





New State Permit System: Interior Region

Maximum allowable take for each subpopulation of cormorants in the lower 48 states

Cormorant Subpopulation	States included in Subpopulation	Maximum Allowable Take Per Year Across Subpopulation
Atlantic	GA, NC, SC, CT, MA, MD, ME, NH, NJ, NY, PA, RI, VT, VA	37,019
Florida	FL	1,314
Interior	NM, OK, TX, IL, IN, IA, <mark>MI,</mark> MN, MO, OH, WI, AL, AR, LA, KY, MS, TN, CO, MT, WY, KS, NE, ND, SD	78,632
Western	ID, OR, WA, AZ, UT, CA, NV	4,539
Total		121,504

Permit information can be found at the USFWS website: https://www.fws.gov/regulations/cormorant/



Requirements of the New Permit System

- Provide the <u>history</u> of doublecrested cormorant conflicts in our state
- Provide the <u>size/description</u> of the area affected, timeline, seasons of conflict, and time of year control activities will occur.
- For each location(s), describe <u>non-lethal methods</u> used previously and/or plan on implementing
 - ► Hazing
 - Passive deterrents
 - Habitat management
 - Other changes



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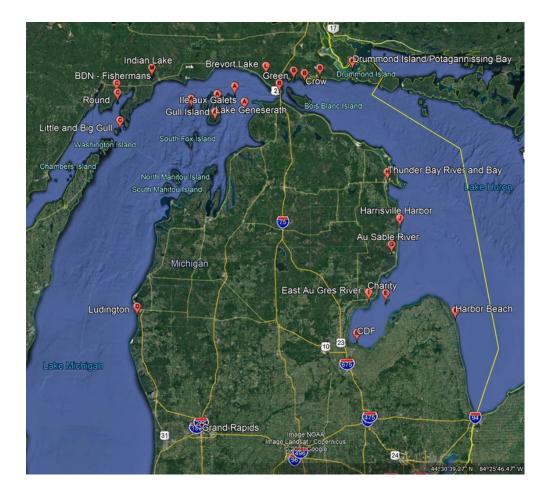
Requirements of the New Permit System

- Methods of take (i.e. shooting, nest-destroy, egg-oiling,etc.)
- Long-term plans to eliminate or significantly reduce the continued killing of doublecrested cormorants or destruction of eggs/nests
- Proposed take of cormorants by life-stage (i.e. adults, active nests, etc.)





Cormorant Management Results - 2021



- Large spatial distribution of sites
- Three methods:
 - ► Fish stocking sites
 - Inland waterbodies
 - ► GLs Colonies
- Justification(s) provided in permit
- Approved permit issued on April 16, 2021
- Total of 11,050 approved including DCCO take of 9,650 and active nest take of 1,400



Cormorant Management Results - 2021



- Outreach and input from local biologists and stakeholders throughout the year
- Our reported adult take was 2,529 and 1,097 nests at colonies only
- Utilized only one subpermittee, USDA-Wildlife Services
- Structured-Decision Making (SDM) study



Cormorant Management Results - 2021



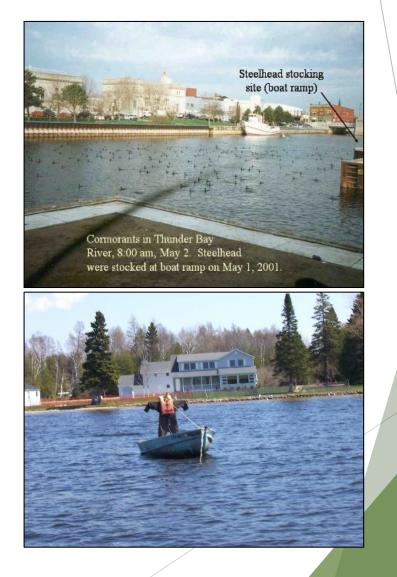
- Successfully completed report requirements and permit request for 2022 at similar take levels
- Fisheries and Wildlife Division administration and requirements are high
- Long-term funding and support needed
- Minimal use of non-lethal harassment techniques because of program limitations

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Cormorant Management Techniques

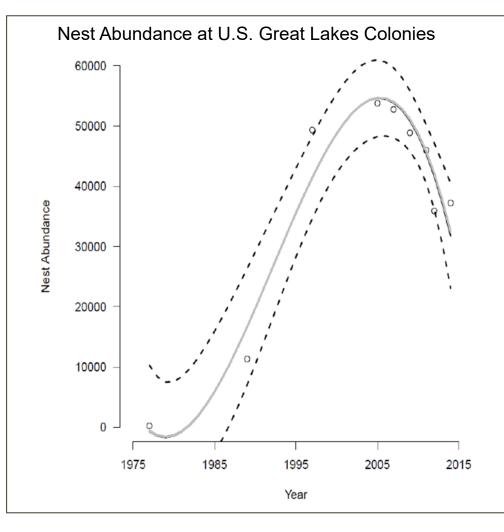
Non-lethal Approaches

- Harassment or animal behavior modification
- Avian Predator Notification (APN)
- Move locations of visual and auditory deterrents
- Begin when birds first arrive on location
- Consistent harassment and development of new techniques for our application





Cormorant Abundance





RCE

Wyman et al. Report, 2016

Questions?

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