Gull Management Program Update

CARE Workgroup Meeting 6-23-2022

Lee Humberg – State Director, USDA WS

Background

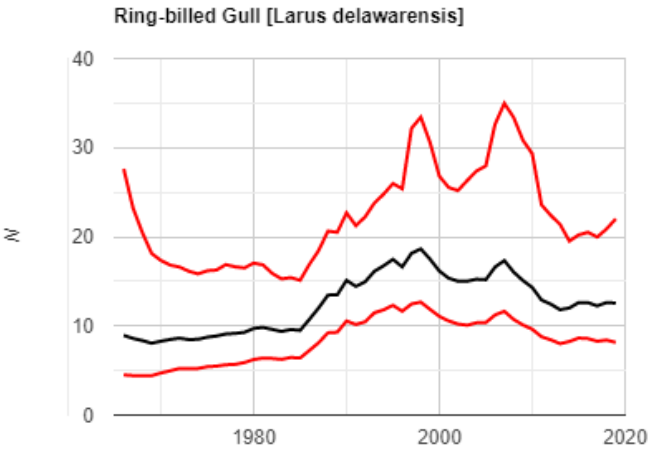
- Great Lakes Colonial Waterbird Survey (GLCWS) identified colony presence at East Chicago mills in late 1990s (Cuthbert and Wires 2013)
- Presence and growth of colony raised safety concerns at steel mills
- During the 2000's *E. coli* exceedances at East Chicago beaches led to frequent closures and advisories
- AOC Beach Studies (e.g., Nevers et al., 2018; Byappanahalli et al., 2015)
  - Water movement studies concluded that natural water movements was restricted by the land base to the west – inability to flush the embayed beach area of contaminants
  - Water sampling identified gull droppings as the primary source of *E. coli*, with dog waste and human sewage secondary sources, based on genetic markers
    - No specific markers were available for double-crested cormorants or Canada geese; however, both species were observed locally in large abundance and likely serve as unidentified sources.

Background

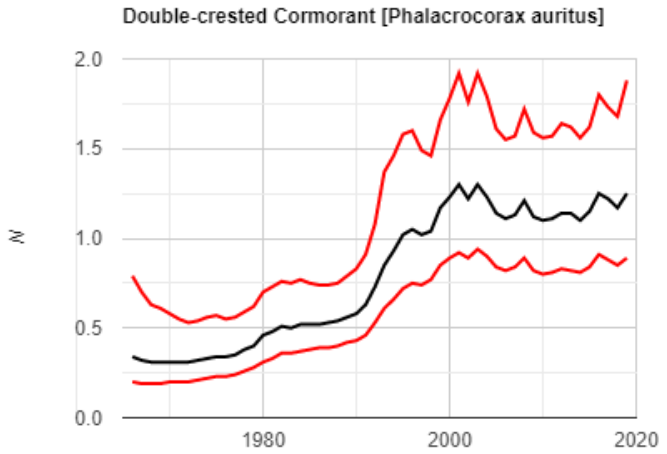
- Michigan State Modeling Study (Safaie et al., 2017)
  - Results reinforced that birds were the primary source of *E.coli* at Jeorse Park (either in the water or through sand and substrate)
  - Breakwater modifications to improve water quality would not result in significant improvements.
- Gull Harassment Activities
  - IDEM instituted a four-week Gull Harassment Pilot Project in 2015, using trained border collies; showed a notable decline in gull presence and *E. coli* levels.
  - IDEM funded full seasons of the dog program at the East Chicago beaches from 2016-2018, expanding it to include Whihala West Beach in 2018; a modified program in 2019.
  - Accompanied by implementation of BMPs (e.g., installation of wildlife-resistant trash receptacles, Eagle Eyes) at Hammond, Whiting, and East Chicago beaches.
  - Early season avian control, frequent and routine beach grooming, and elimination of hand-feeding and pet waste found to be critical elements of *E. coli* reduction.

Indiana Harbor Pop. Surveys

- Ring-billed Gull
  - GLCWS (2007) 42,000+ nests
  - IDNR (2019) 25,000+ nests



- Double-crested Cormorants
  - GLCWS (2007) 968 nests
  - IDNR (2019) 6,000+ nests



Which lead us to,,,,,,

- GLRI funding opportunity
  - Partnered with IDEM
  - Focus Area 3, Nonpoint Source Pollution
- Management efforts focused on local gulls and other local colonial nesting birds
- Modeled it after a neighboring Chicago Parks program

Chicago Parks Gull Program

- Since 2007:
  - Over 300,000 eggs have been treated, and an estimated reduction in 200,000+ hatch-year (HY, young of the year) birds prevented from causing conflicts on beaches
  - Hatch-year gull use of beaches declined by 84%
  - Continual treatment has also reduced observation of after hatch-year (AHY, 1+ years old) gull use = Cumulative Effect!

Overall Methods and Results

- Find colonies
  - *Turns out there were very few*
- Work with property owners to access site(s)
  - *Great cooperation from the mills, but safety is paramount and there are limitations*
- Conduct egg/nest treatment with corn oil
  - *Anecdotal data suggests treatments have worked well*

Yearly Implementation

- 2019
  - Initiated developing landowner relationships
  - Conducted ground surveys to find add'l colonies
  - No gull treatment that year
- 2020
  - Began treatment at Cleveland Cliffs (formerly AM)
  - Great teeth-cutting year
  - COVID created some challenges – beaches closed

Yearly Implementation

- 2021
  - Conducted helicopter survey
  - Added DCCO to the treatments
  - Reduced access due to demolition
- 2022
  - Movement of birds within the mill complex
  - Increased access to additional sites w/in complex

Results To Date

	Number of Nests Treated at East Chicago		
Species	2020	2021	2022
Ring-billed Gull	9,185	6,669	13,321
Double-crested Cormorant	0	376	416

Bird's Eye View

Additional Benefits

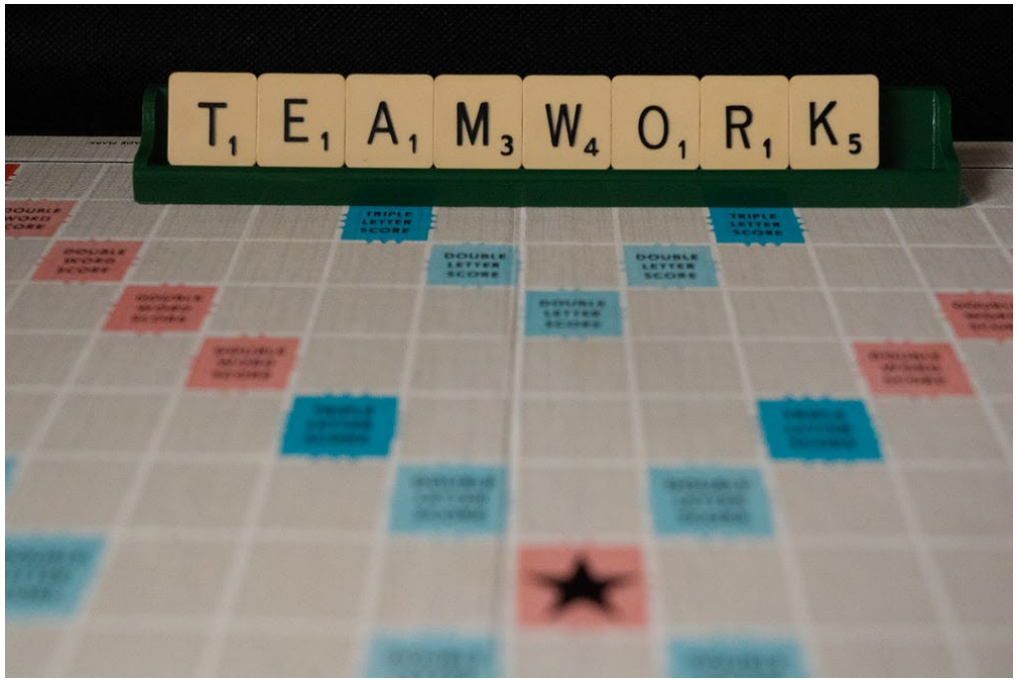
- Reduced pressure/competition with other colonial nesting species on site
  - Monitor long term changes with:
    - Great Egrets
    - Black-crowned Night Herons
    - Caspian terns
- Reduced safety concerns with birds flying around vehicles onsite, getting into buildings
- Reduced time birds spend tied to the site??

Future Monitoring/Analysis

- 3 years of treatment, begin looking at water quality data
- Now that I have local staff, begin looking at HY:AHY use of local beaches
- Explore options for more exact counts of total population
- Monitor impacts to other neighbors (e.g., marinas, airports, etc.)

Many Thanks!

- IDEM Partners
- The Mills
- Safe Air
- Neighboring Properties
- USDA Staff



Questions