NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Great Lakes RESTORATION

Rochester Embayment Area of Concern Degradation of Fish and Wildlife Populations Beneficial Use Impairment Removal

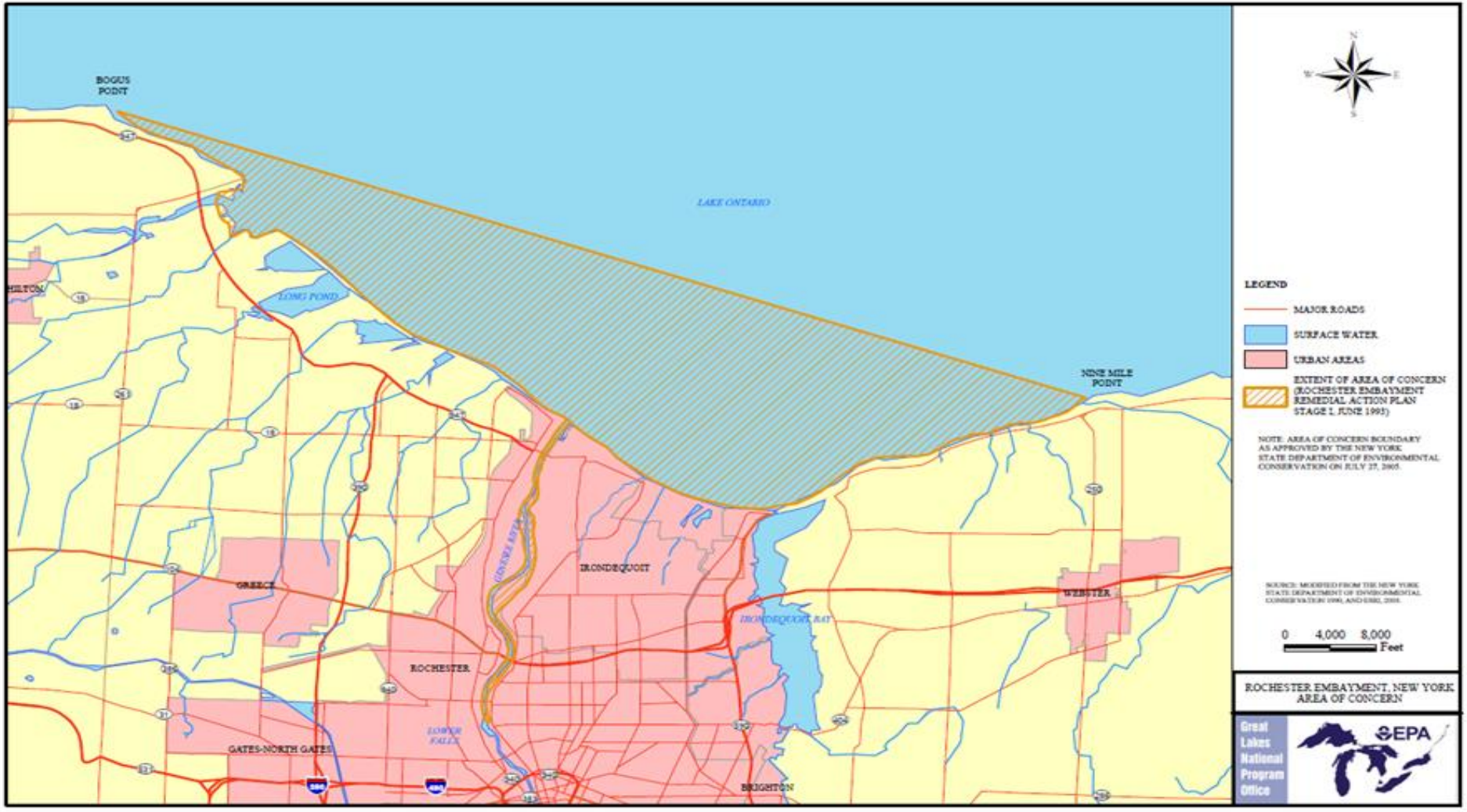
January 28, 2021

Presentation Outline

I. AOC Program Overview
II. The Rochester Embayment AOC
III. The RAP Process: Rationale for BUI Listing
IV. Setting Goals for BUI Removal
V. Addressing Root Problems
VI. Monitoring BUI Status
VII. BUI Conclusions

Area of Concern Program: Overview

- 1987 Amendment to the Great Lakes Water Quality Agreement (Annex One)
- Areas of “unique ecological degradation”
- Fourteen “Beneficial Use Impairments” (BUIs)
- Staged “Remedial Action Plans” (RAPs)


BOGUS POINT
LAKE ONTARIO
LONG POND
NINE MILE POINT
GENESEE RIVER
IRONDEQUOIT
GREECE
IRONDEQUOIT BAY
WEBSTER
ROCHESTER
LOWER FALLS
GATES-NORTH GATES
BRIGHTON
N
W
E
S
LEGEND
MAJOR ROADS
SURFACE WATER
URBAN AREAS
EXTENT OF AREA OF CONCERN (ROCHESTER EMBAYMENT REMEDIAL ACTION PLAN STAGE 2, JUNE 1995)
NOTE: AREA OF CONCERN BOUNDARY AS APPROVED BY THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION ON JULY 27, 2005.
SOURCE: MODIFIED FROM THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION 1990, AND USGS, 2005.
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ROCHESTER EMBAYMENT, NEW YORK AREA OF CONCERN
Great Lakes National Program Office
EPA

Rochester Embayment Area of Concern

Stage I Remedial Action Plan (RAP) published in August 1993

Root Problems/Causes of BUIs identified:

- Former Industrial/Manufacturing sites
- Contaminated bottom sediments
- Lost/degraded native fish and wildlife habitat
- Municipal and Industrial discharges

Rochester Embayment Area of Concern

Stage II Remedial Action Plan (RAP) published in September 1997

Plan for addressing root problems first outlined:

- Cleanup of hazardous waste sites
- Targeted habitat restoration and enhancement
- Ongoing CSO Abatement
- Wastewater infrastructure improvement

The RAP Process: Rationale for BUI Listing Degradation of Fish and Wildlife Populations

Root problems identified in Stage I RAP:

- Contaminants detected in fish tissue at concentrations known to cause reproductive failure in captive mink
- Observed absence of mink in the vicinity of Lake Ontario
- Anecdotal evidence of a “fishless” segment in the lower Genesee River

The RAP Process: Setting Goals for BUI Removal

Removal Criteria finalized in 2009 Stage II RAP Addendum

- ***Water column macroinvertebrate communities are "non-impacted" or "slightly impacted" according to NYSDEC indices; AND***
- ***Mink are present and are reproducing or levels of PCBs, dioxins/furans, mirex, and mercury measured in the tissue of resident prey are below those known to be associated with mink reproductive failure.***

The RAP Process: Addressing Root Problems

Restoring native fish and wildlife habitat

Buck Pond – Photos courtesy USFWS

The RAP Process: Addressing Root Problems

Restoring native fish and wildlife habitat

Braddock Bay – Photos courtesy USFWS

The RAP Process: Monitoring of BUI Status

- Targeted mink studies led by SUNY Brockport from 2004-2007 and from 2013-2015

- NYSDEC/USGS benthic macroinvertebrate community study in 2014

- NYSDEC RIBS program macroinvertebrate community analysis

The RAP Process: Criteria Conclusions

- No “fishless” segment in the lower Genesee River.
- Macroinvertebrate communities are “non” or “slightly” impacted according to NYSDEC indices.

The RAP Process:
Criteria Conclusions

- Mink are present and reproducing within the AOC.

- Contaminants are not present at levels that would cause adverse impacts in mink (ex. reproductive failure) affecting overall populations.

- Therefore, this BUI can be removed.

More Information

A draft of the *Degradation of Fish and Wildlife Populations* BUI Removal Report will be available for 30 days at the following website:

https://www.monroecounty.gov/eh-watershed

More Information

More information on Areas of Concern in New York State is available on the NYSDEC website:

https://www.dec.ny.gov/lands/91213.html

Questions?