



Great Pond Advance Restoration Plan (ARP)

Tracy Krueger
TMDL Coordinator

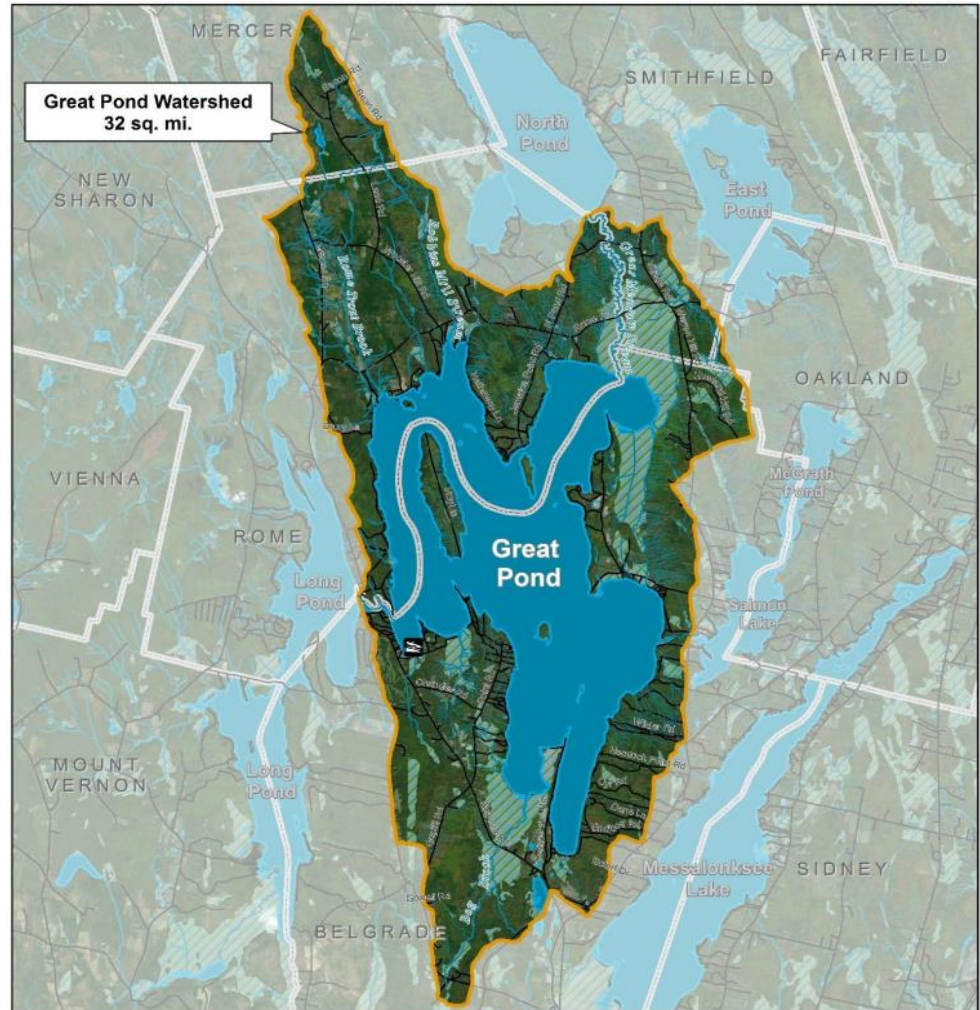
Maine Department of Environmental Protection

MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION

Protecting Maine's Air, Land and Water

Great Pond

- Largest of 7 lakes in the Belgrade Chain of Lakes in Central Maine
- 4 upstream lakes flow into Great Pond
- Great Pond flows into Long Pond and Messalonskee Lake



Water Quality

- Excellent in the past and not severely impaired
- Long, slow trend of declining water quality
 - 10-year decline in water clarity
 - Increased phosphorus
 - DO loss in deep areas
 - Increased algae, cyanobacteria, invasive species



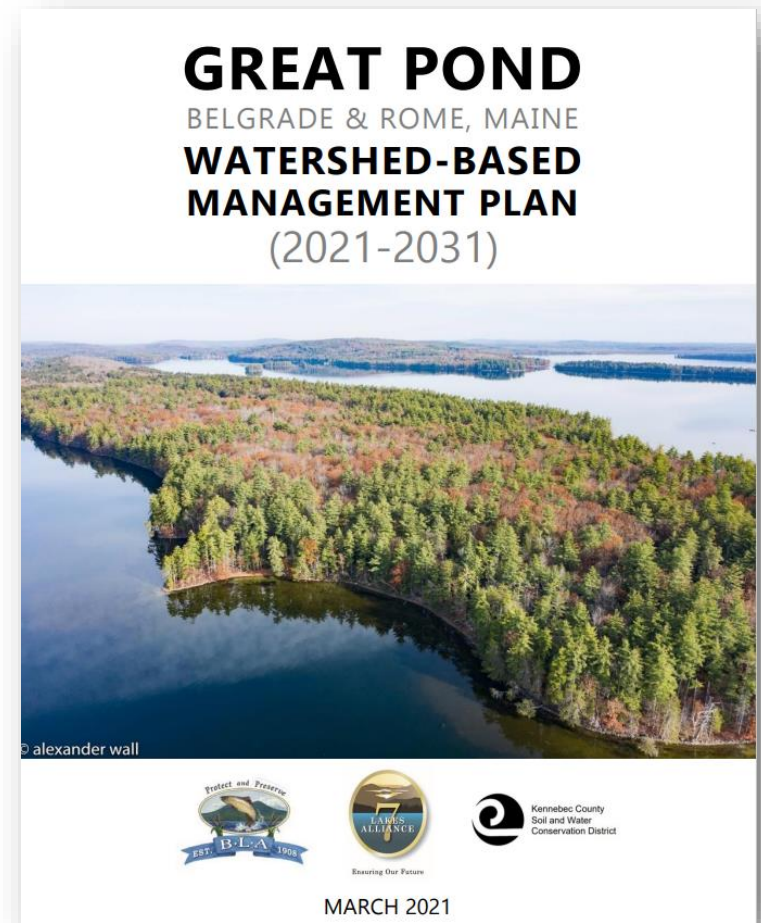
Prior Actions

- 2006 downstream Long Pond on 303(d) list
- 2008 Long Pond TMDL
 - Phosphorus from Great Pond major source
- 2008 604b grant application
- 2009 Watershed-Based Management Plan (WBP) for Long Pond
 - Items for Long Pond and Great Pond watersheds
- 2011-2019 319 funded improvement projects



Great Pond Actions

- 2010 Great Pond 303(d) list
 - Declining water clarity and increasing phosphorus
- 2018 watershed survey led by lake association
- 2018 604b grant application
- 2021 Watershed-Based Management Plan (WBP) completed



Why Did We Want an ARP?

- Usual process: Listing → TMDL → WBP
- Great Pond: Listing → WBP → (TMDL)
- 9-Element Watershed-Based Management Plan
 - No TMDL in place
- Benefits:
 - Same effect
 - More efficient
 - Quicker restoration timeline



Helpful Circumstances

- Only Nonpoint Sources
- Many invested partners
 - Confidence that plan would be implemented
- A lot of prior monitoring and assessment work
- Water quality not severely impaired
 - Confidence that restoration would be achieved
- Robust modeling included in WBP
 - LLRM model



Ensuring Our Future

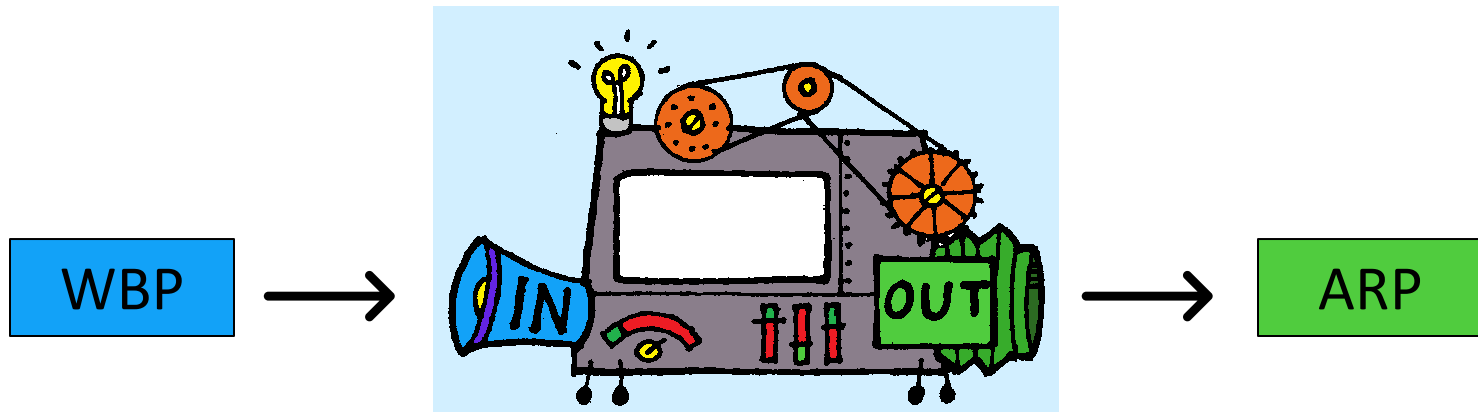


Kennebec County
Soil and Water
Conservation District



How Did We Get an ARP?

- Watershed group developed WBP
 - With ME DEP involvement
- ME DEP proposed turning WBP into ARP
 - Without watershed group involvement
- Worked with EPA Region 1



Submittal to EPA

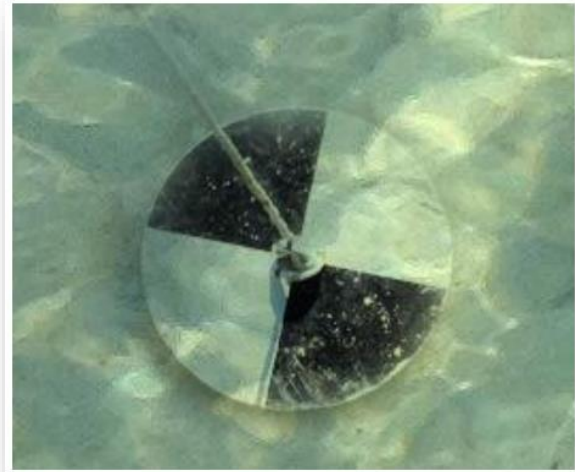
- Crosswalk between 2016 IR Memo suggested elements and 9-Element Watershed Plan

ARP Suggested Element	Section(s) and Page Number(s) in WBP
Identification of specific impaired water segments or waters addressed by the alternative restoration approach	<ul style="list-style-type: none">• Executive Summary. The Problem. – Identifies Great Pond as an impaired water and provides the listing reason. (p. xii)
Identification of available funding opportunities to implement the plan.	<ul style="list-style-type: none">• Section 9. Action Plan Implementation and Funding – describes public-private fundraising plan and funding options. (p. 103-104)



Submittal to EPA

- Submittal cover letter included elements not part of WBP or needed more explanation
 - Estimate of when WQS will be met
 - Show actions will be sufficient to achieve reductions
 - Explanation of LLRM model loads + TAC BPJ in WBP
 - Evaluate ARP approach
 - Include in Integrated Report



Future ARP Applicability

- Lakes versus Streams
 - Worked well for a pond with watershed groups
 - Would it work for streams, enough interest?
- Stakeholder led versus State led
 - Benefit to being led by stakeholders
 - Could State staff lead process, would it still work?
- Resources
 - Many resources invested. Feasible on larger scale?



Considerations

- Environmental Justice
 - Communities with less support and resources
 - State staff time on ARPs in these locations?
- Place of ARPs in Vision 2.0
 - Prioritize ahead of TMDLs?





Contact:

Tracy Krueger

Maine Department of Environmental Protection

tracy.krueger@maine.gov

207-215-6851

www.maine.gov/dep

