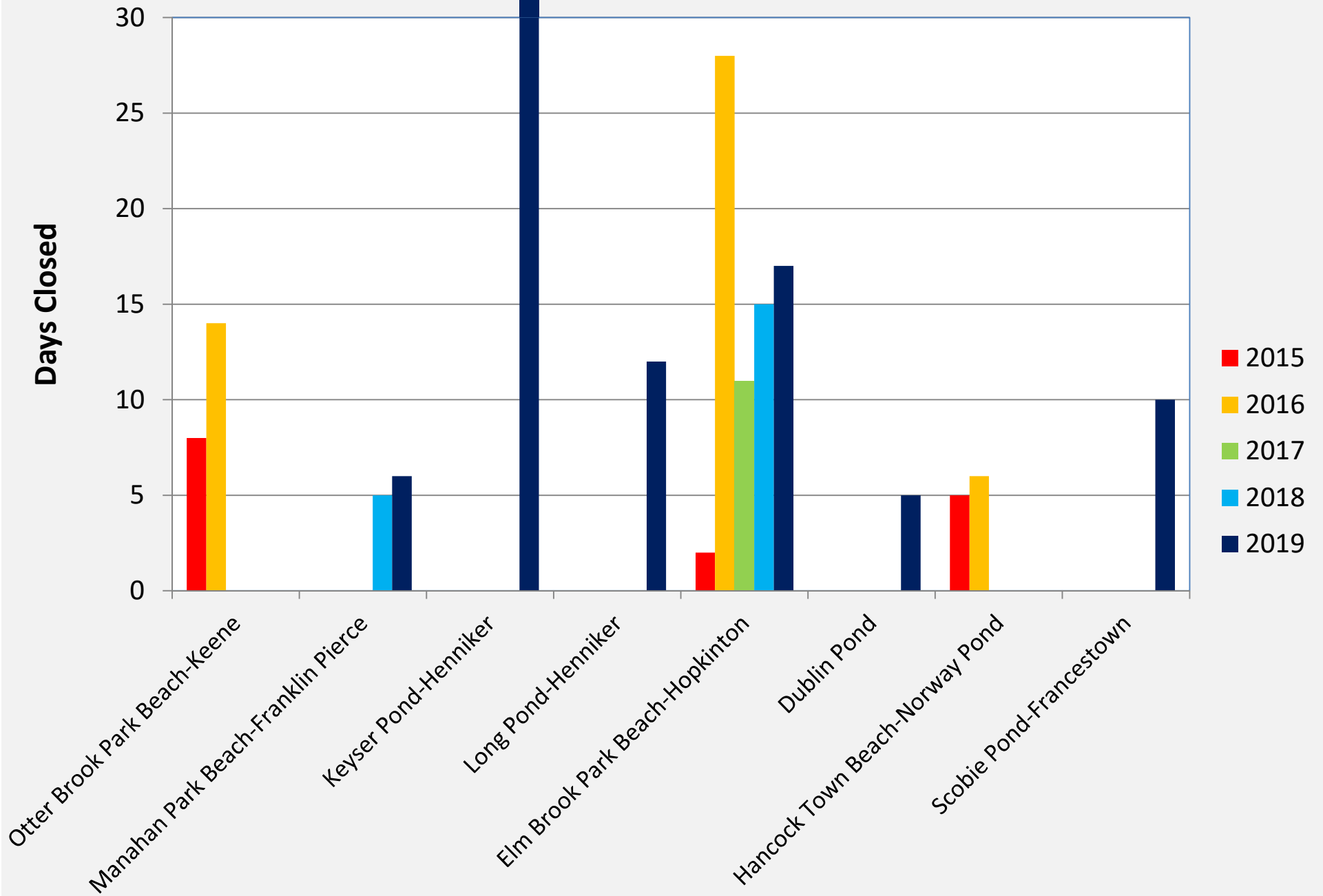


A photograph of a pond with lily pads and a large log in the background. The water is dark, and the lily pads are green and white. The log is dark and weathered. The text is overlaid on the image in yellow.

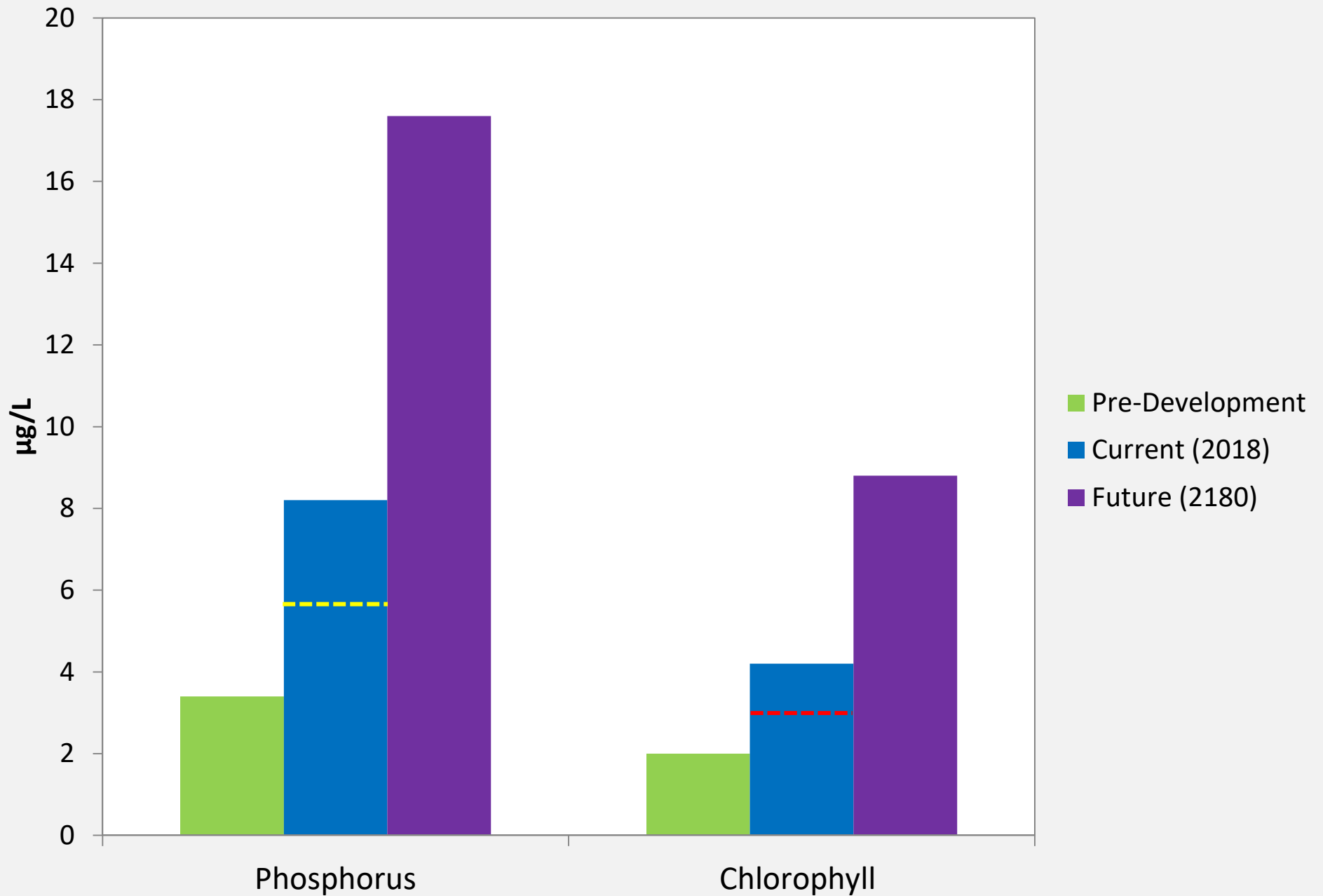
Gregg Lake Action Plan

Public Meeting
December 3, 2019

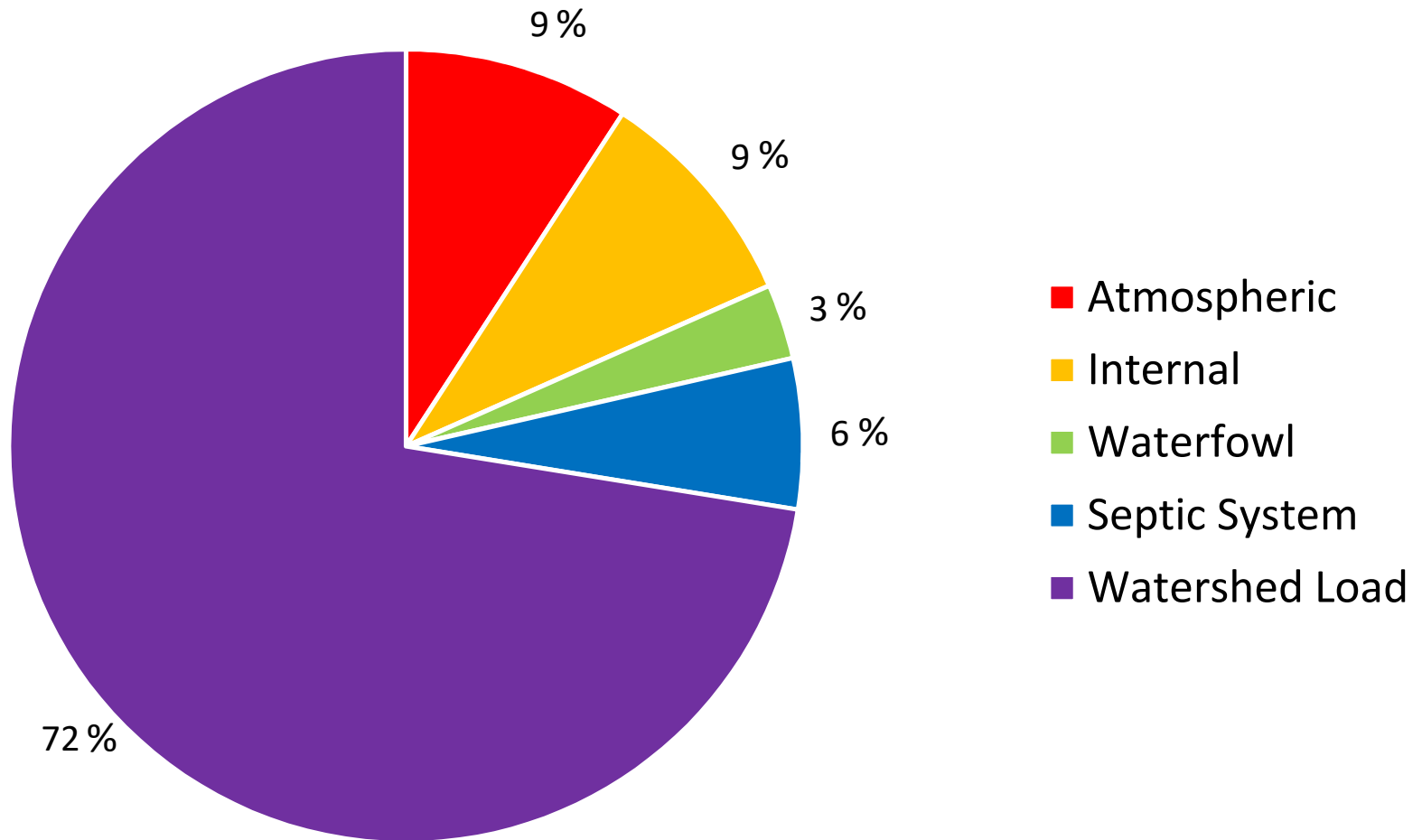
Beach Closures Due to Cyanobacteria



Gregg Lake Water Quality

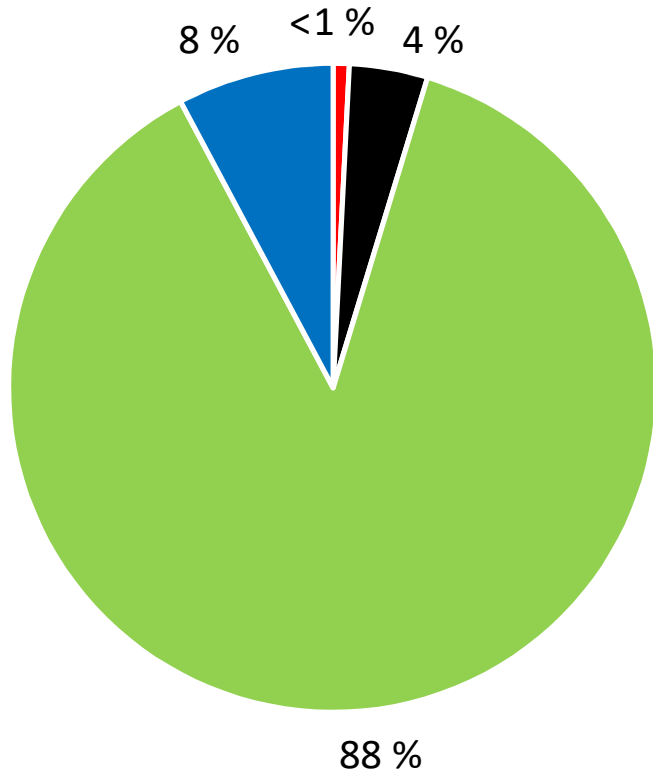


Current Gregg Lake Phosphorus Sources

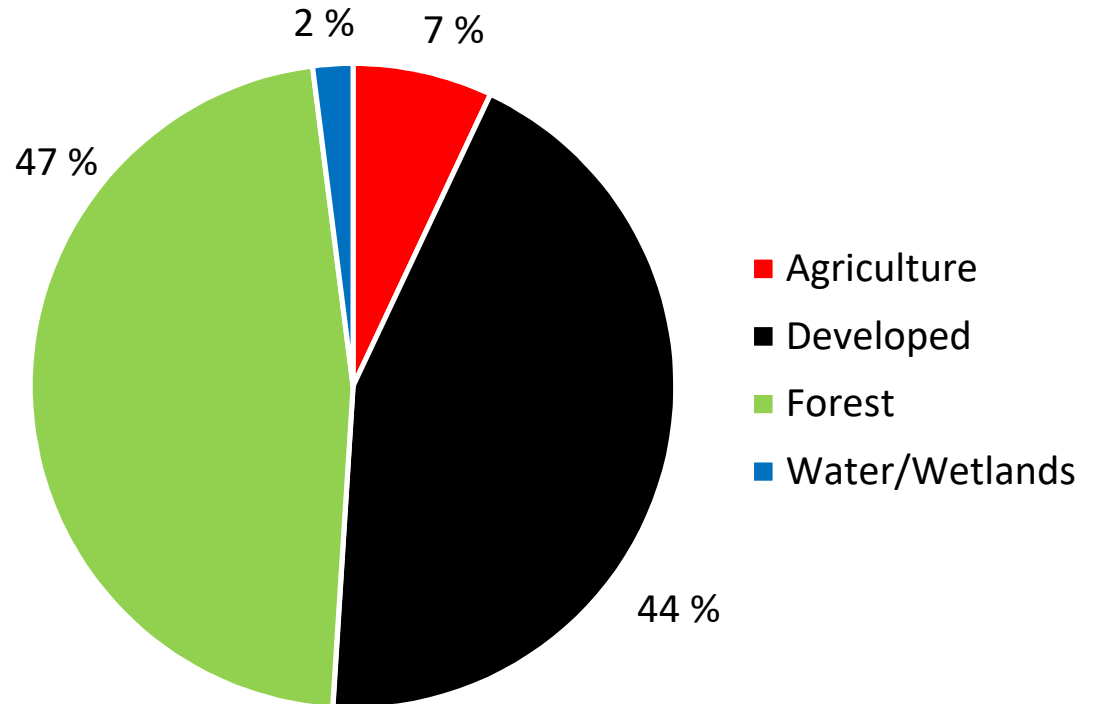


Gregg Lake Watershed

Land Cover Area

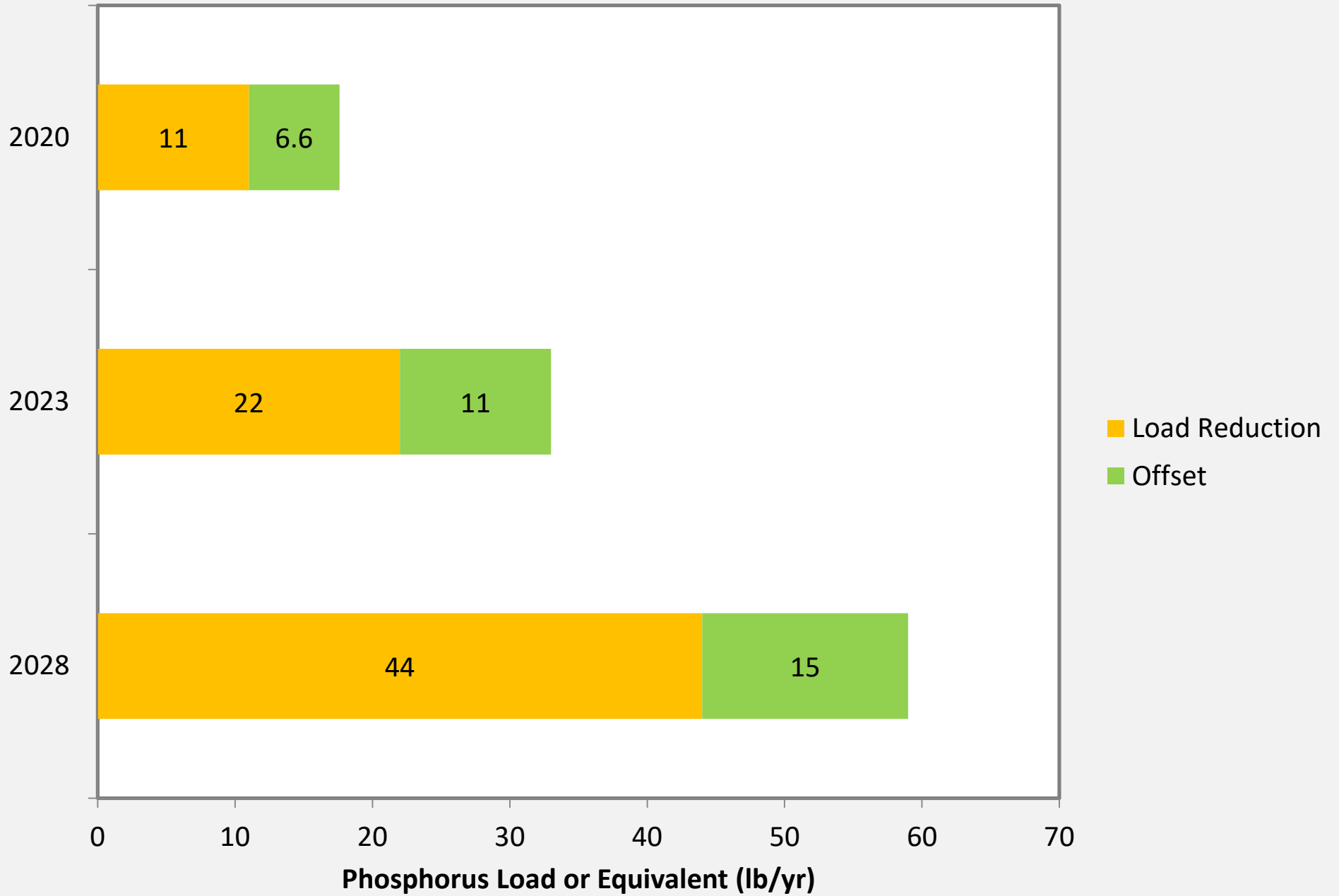


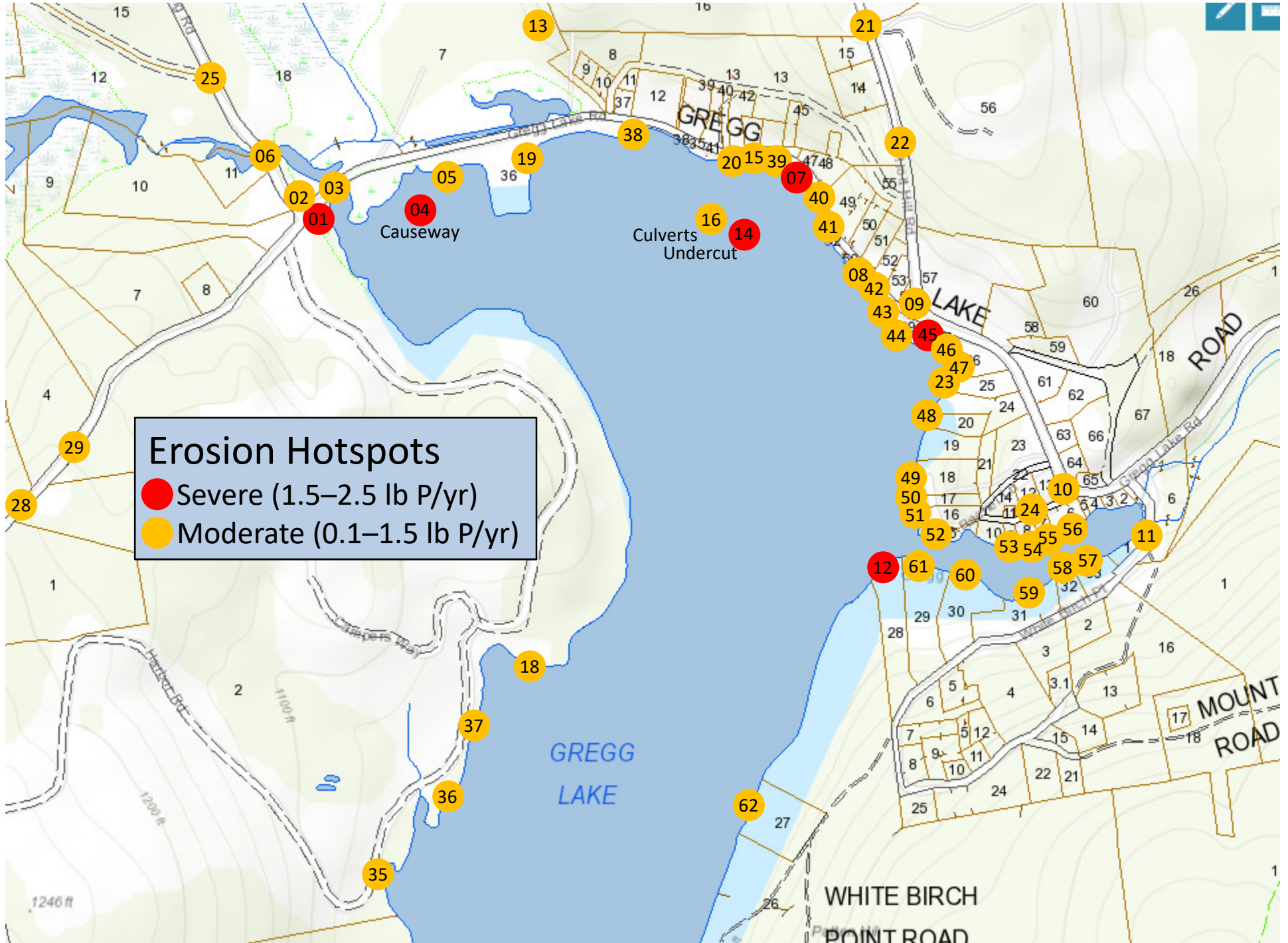
Phosphorus Load

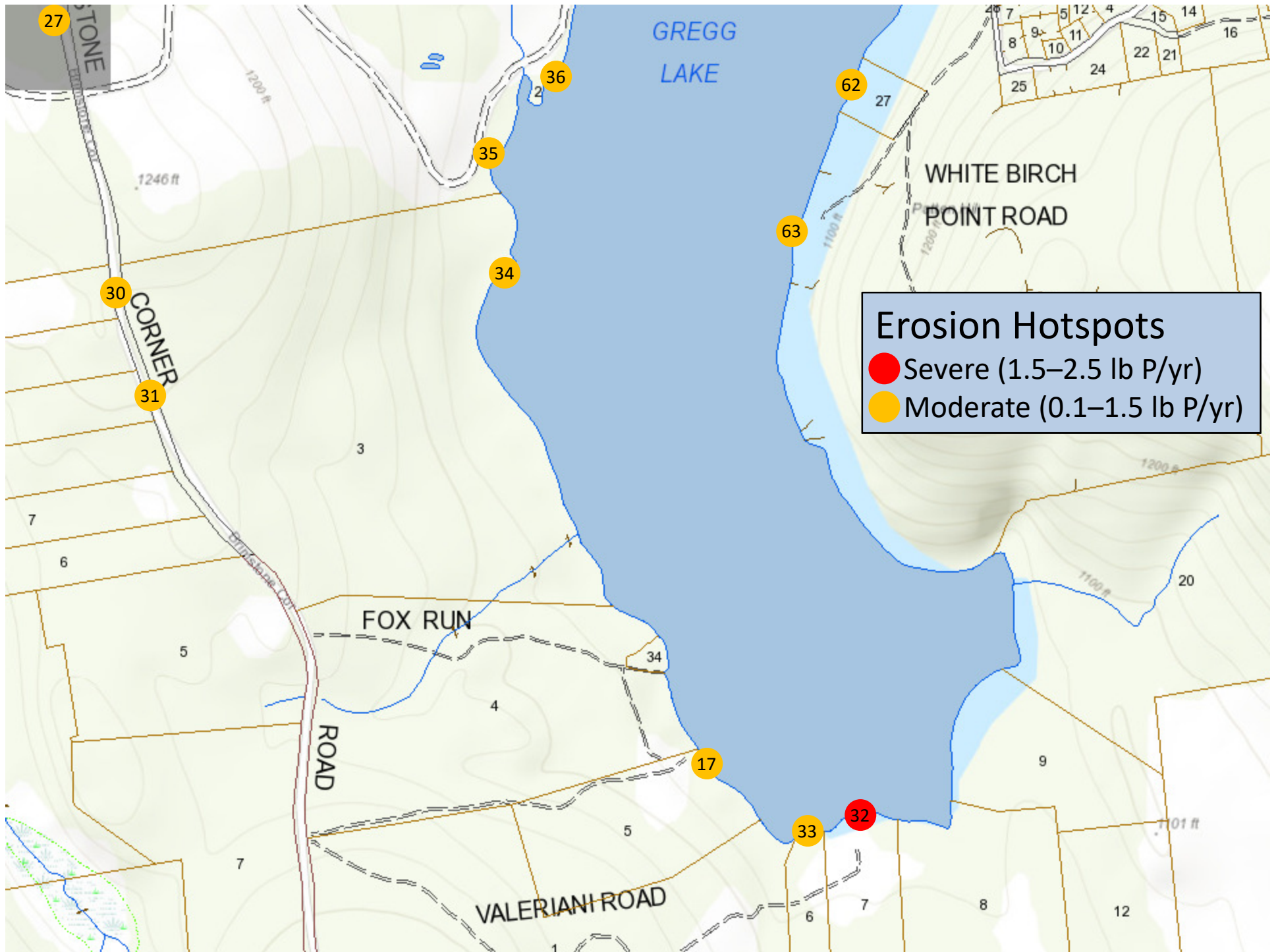


- Agriculture
- Developed
- Forest
- Water/Wetlands

Phosphorus Reduction Goals



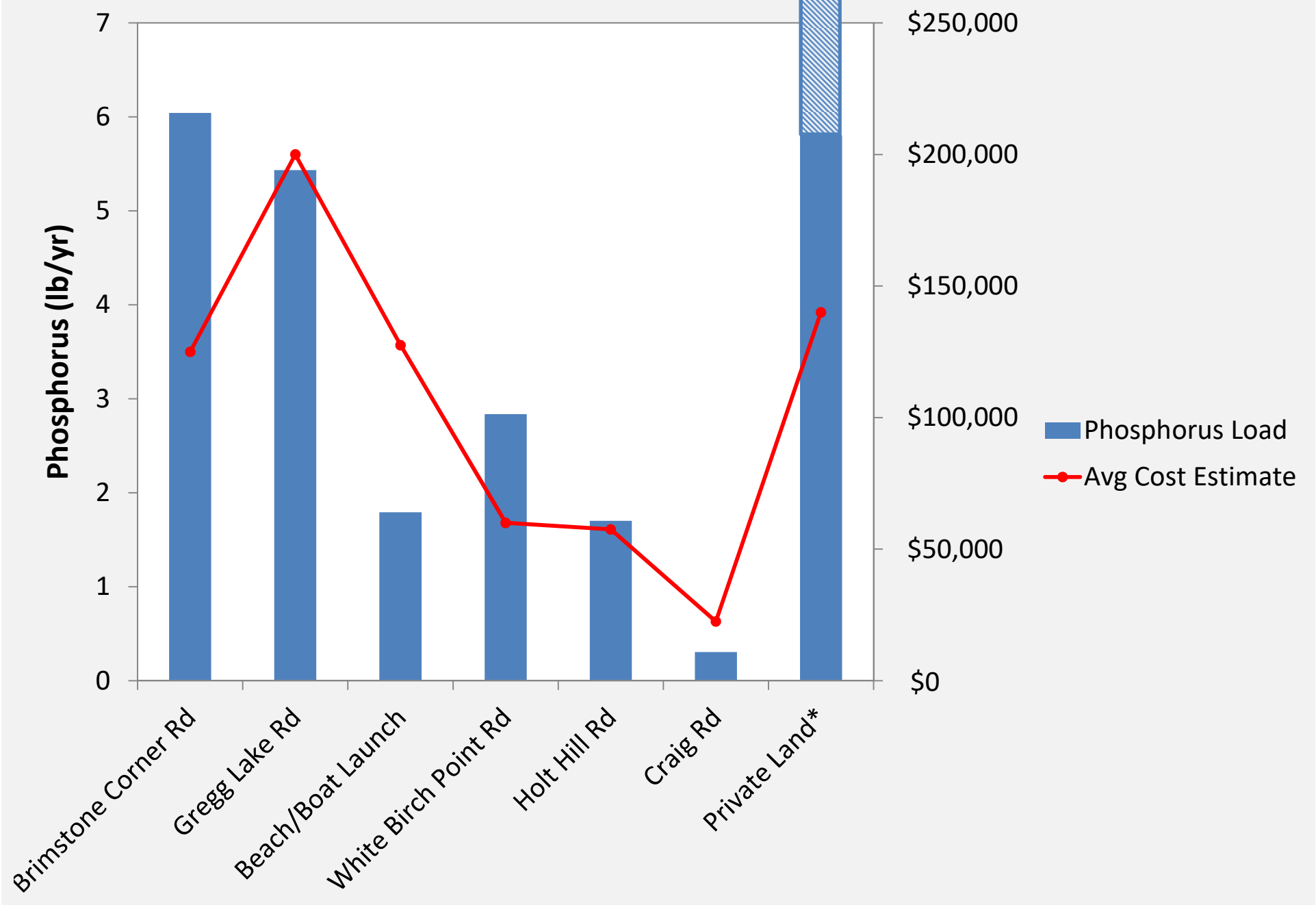




Erosion Hotspots

- Severe (1.5–2.5 lb P/yr)
- Moderate (0.1–1.5 lb P/yr)

Projects to Reduce Phosphorus Load



Action Plan Approach

- ⌚ Watershed infrastructure
- ⌚ Private landowner engagement
- ⌚ Regulatory changes
- ⌚ Lake management



Brimstone Corner Road (6 lb P/yr)

- ⌚ Culverts, catch basins
- ⌚ Turnouts, check dams
- ⌚ Stabilize shoulder, ditches
- ⌚ Reshape and crown road



GL-01: Brimstone Corner Rd at Craig Rd

White Birch Point Road (2.8 lb P/yr)



GL-12: White Birch Point Rd at turnaround



Holt Hill Road (1.7 lb P/yr)



Craig Road Bridge (0.3 lb P/yr)



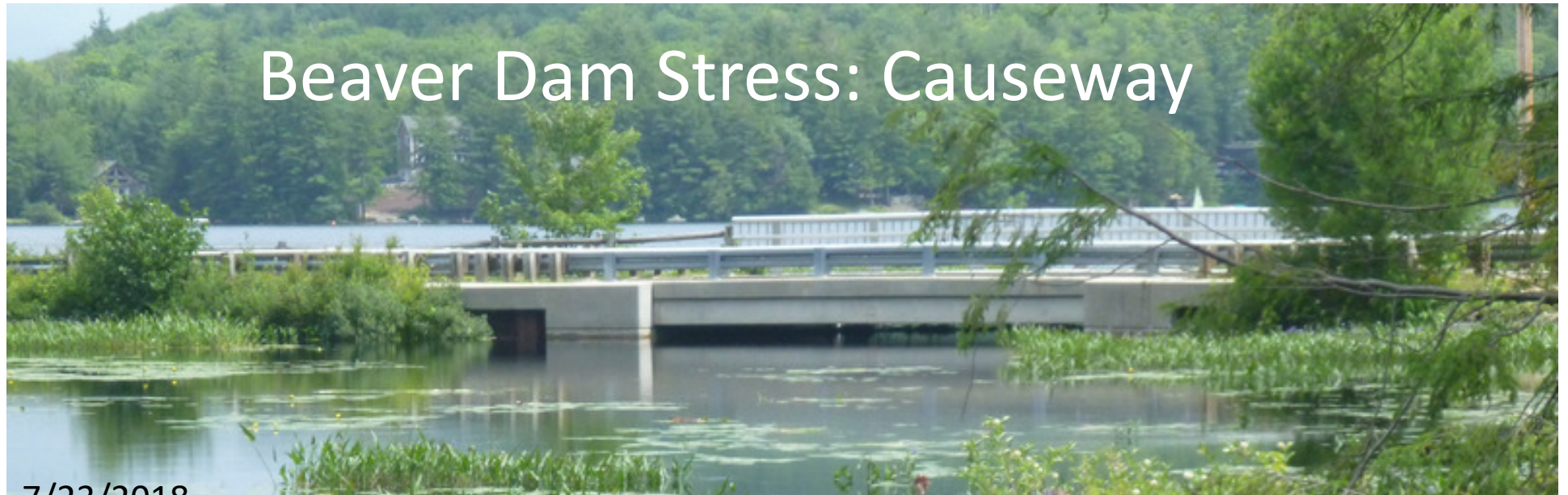
GL-06: Craig Road Bridge

Beaver Dam Stress: Craig Road

GL-06: Craig Road Bridge



Beaver Dam Stress: Causeway



7/23/2018



11/12/2018

Gregg Lake Road/Causeway (5.4 lb P/yr)



Gregg Lake Road/Causeway (5.4 lb P/yr)

- Reinforce shoulders
- Revegetate



Gregg Lake Road Undercut (2.1 lb P/yr)

Gregg Lake Road pavement

Summer water level

Winter water level

GL-14: Gregg Lake Rd Undercut



Erosion Control: Gabion Baskets

- Engineering option for undercut/shoulders



https://www.gabion1.com/gabion_erosion_control.htm

<https://www.warnerconstruction.co.nz/services/civil-engineering/oakura-gabion-basket-wall/>

Town Beach & Boat Launch (1.8 lb P/yr)



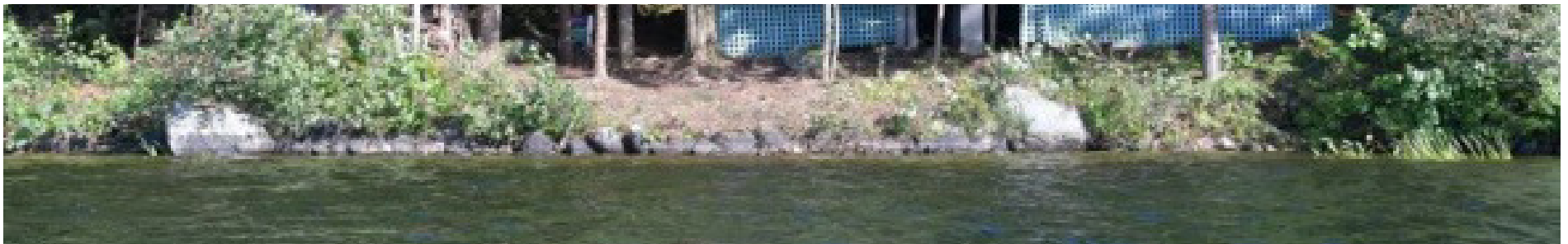
Private Landowner Engagement

- Stormwater and sediment management
- Septic upgrades & management
- Soak Up the Rain/LakeSmart

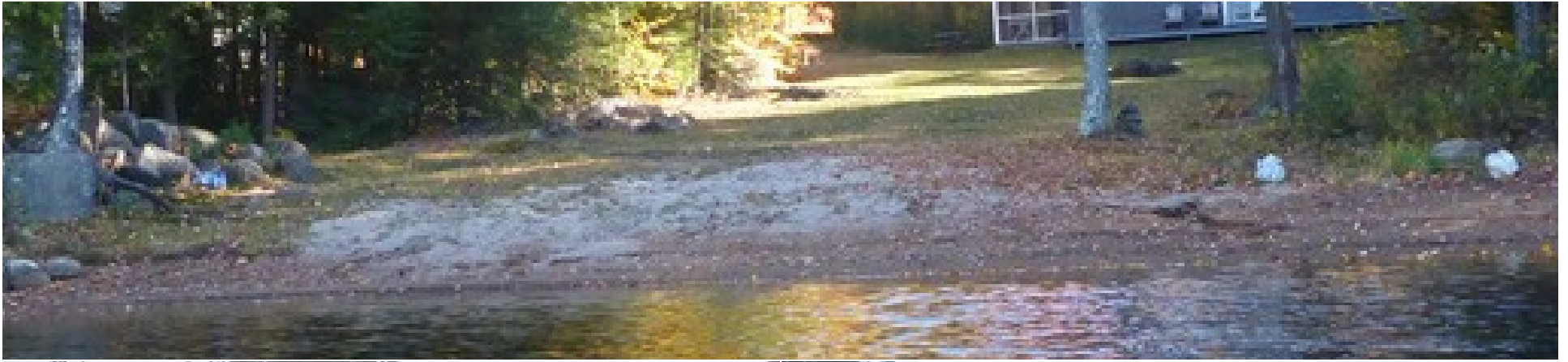
Dumping Sand



Clearing Shoreline Vegetation



Lawn



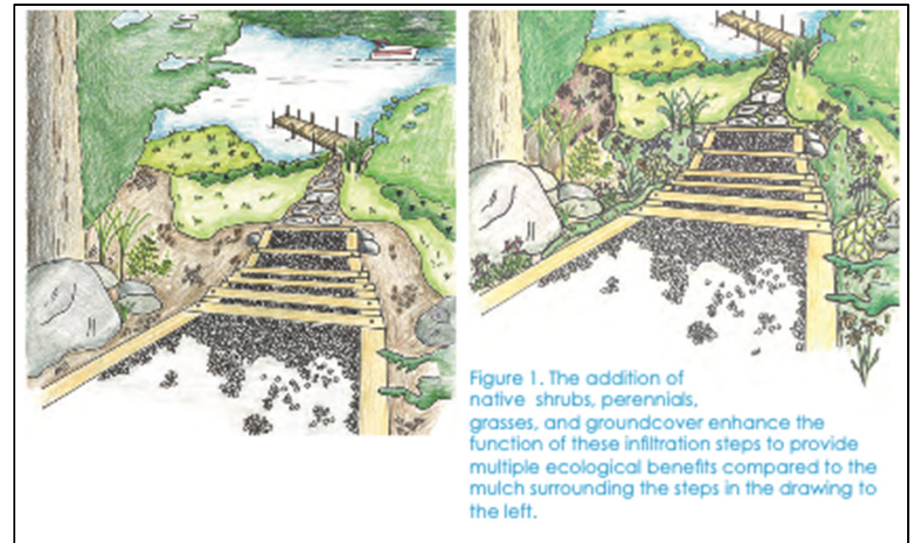
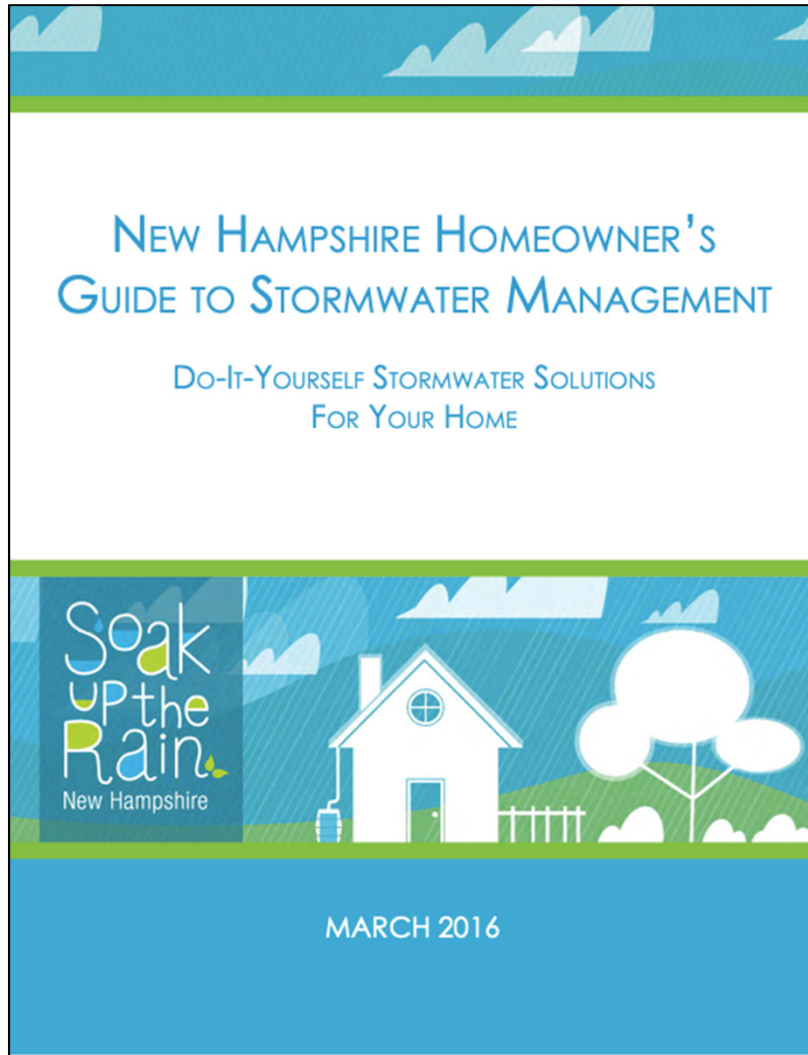
Stormwater Runoff



Septic System Upgrades



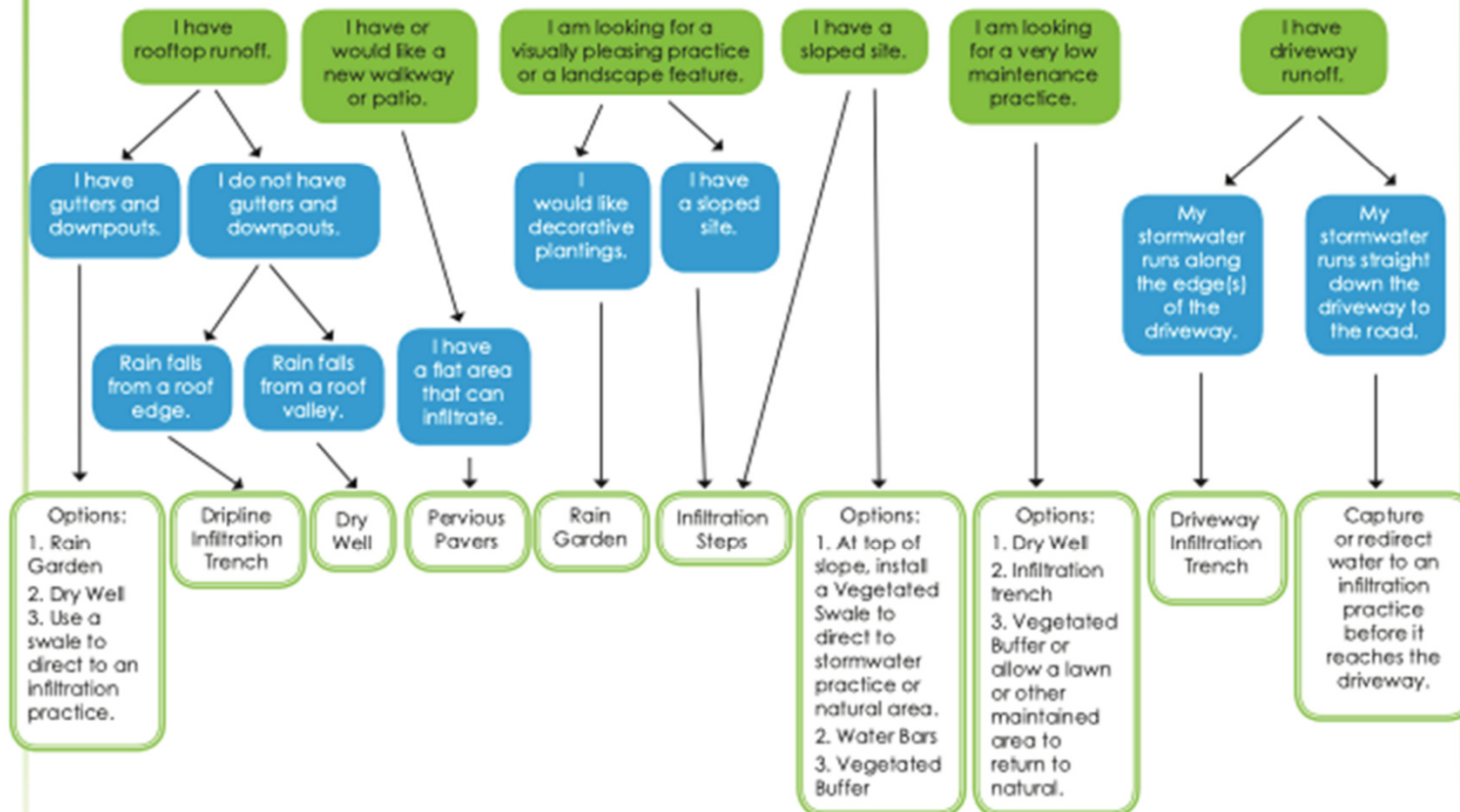
Private Landowner Engagement



<https://www4.des.state.nh.us/SoakNH/wp-content/uploads/2016/04/NH-Homeowner-Guide-2016.pdf>

Private Landowner Engagement

Stormwater Practice Selection Flow Chart for INFILTRATION PRACTICES



Regulatory Changes

⌚ Zoning

- ⌚ 100 ft setback for new construction

- ⌚ Lot sizes

 - ⌚ Lakefront Residential—2 acres

 - ⌚ Rural Conservation—3 acres

 - ⌚ 275 additional houses could be built

⌚ Ordinances

- ⌚ Harmful shoreline practices

- ⌚ Enforcement

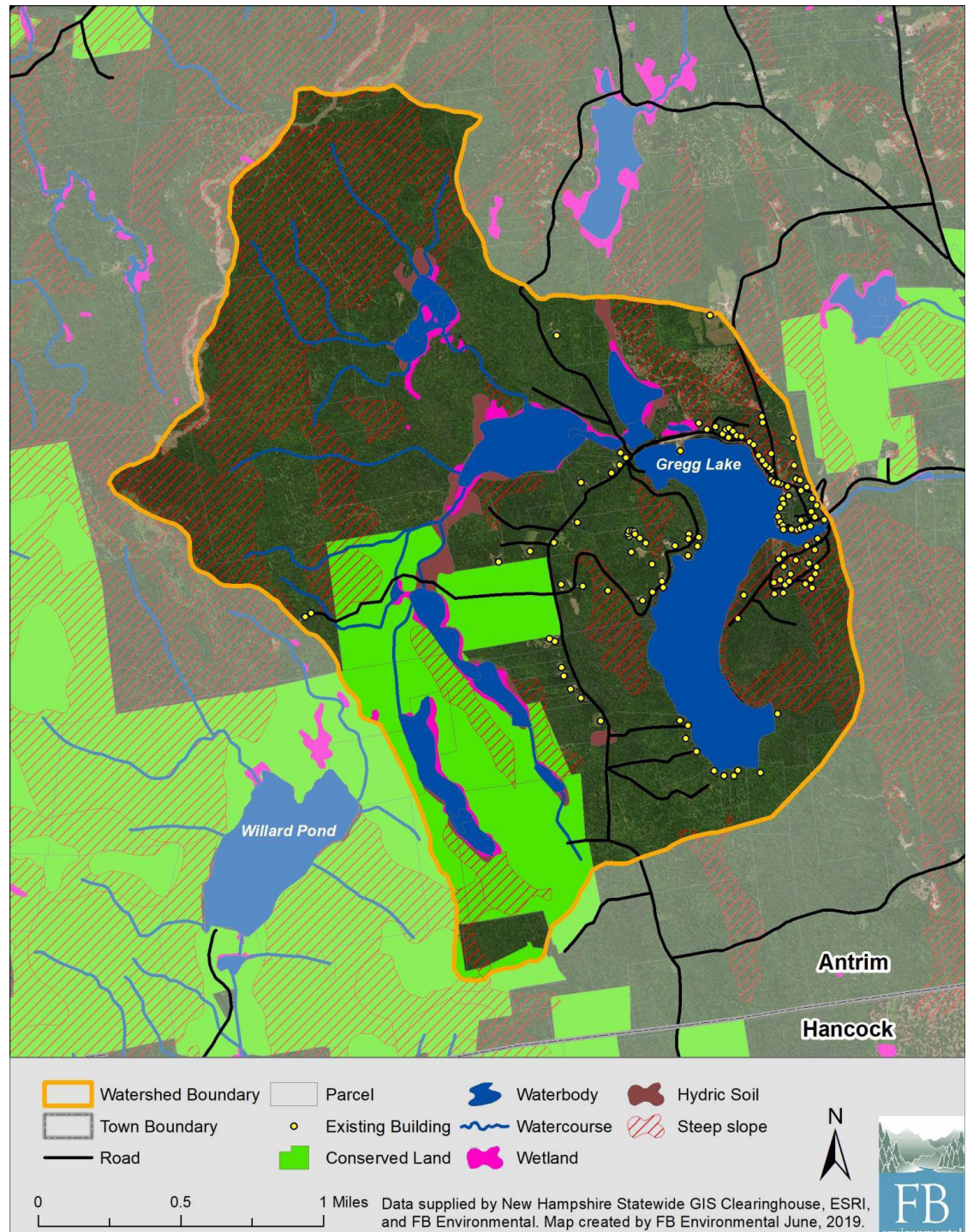
- ⌚ Informed contractors

⌚ Conservation easements

Existing Land Use

126 buildings

Many areas with steep slopes

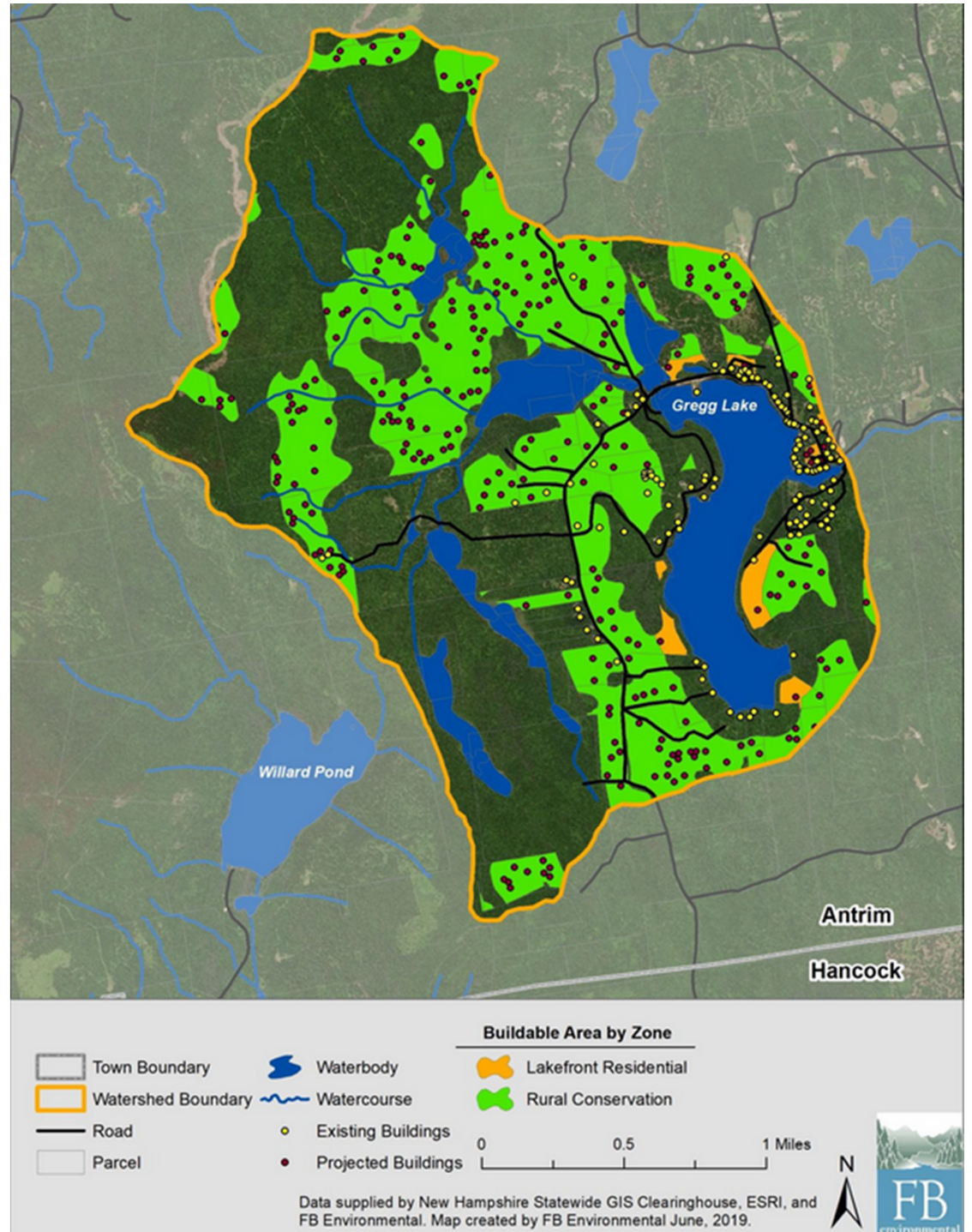


Watershed Build-out Scenario

Rural conservation district
Minimum lot size ~3 acres

Lakefront residential district
Single family minimum lot size ~2
acres
Duplex minimum lot size ~3 acres

Potential for 275 additional
buildings



Conservation Easements



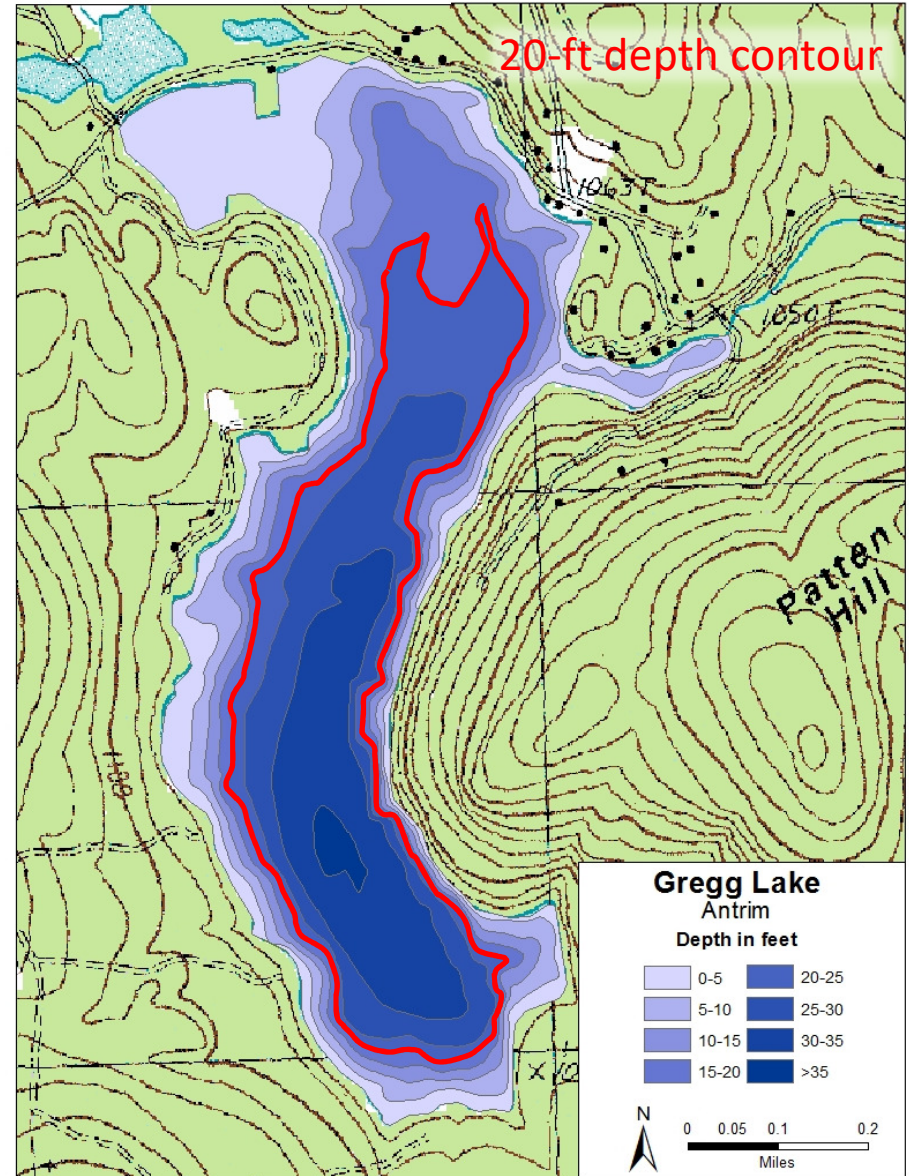
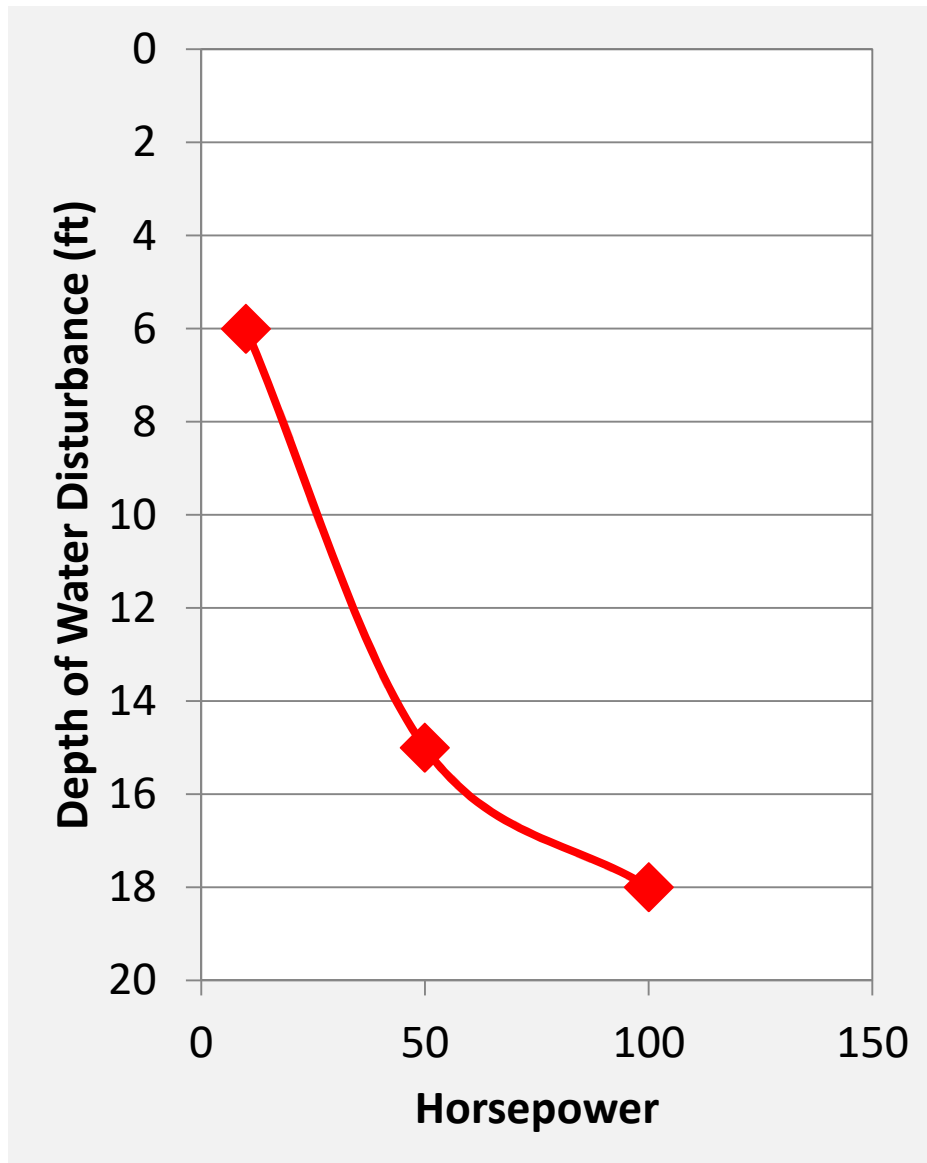
Lake Management Options

- ⌘ Lower lake level
- ⌘ Post & enforce current boating laws
- ⌘ Lower horsepower limit
- ⌘ Increase no-wake zone

Gregg Lake Dam



Motorboat Impacts — Depth & Wake





Shoreline Erosion



Beach & Boat Launch 1.8 lb P/yr

Action Plan—2020 Goal

| Action | Responsible | P Load Reduction (lb/yr) |
|--|-----------------------|--------------------------|
| Brimstone Corner Rd | TOA/HWY | 6.0 |
| Craig Rd/Bridge | TOA/HWY | 0.3 |
| Conservation easement (prevent 8 houses) | Private | 5.1 |
| Lower Lake Level | TOA/HWY | 2.0 |
| Enforce current boating laws | WMPC | 1.5 |
| Stormwater BMPs/Landscaping (4) | Private | 1.7 |
| Septic upgrades (2) | Private | 1.0 |
| Beaver box (Craig Rd bridge) | TOA | 0.2 |
| Apply for grant funding | WMPC | |
| | Total for 2020 | 12.5 + 5.3 |
| | Target | 11 + 6.6 |

Action Plan—2023 Goal

| Action | Responsible | P Load Reduction (lb/yr) |
|---------------------------------|-------------------------|--------------------------|
| Gregg Lake Rd/Causeway | TOA/WMPC/Grant | 3.7 |
| Beach/Boat Launch | TOA/WMPC/Grant | 1.8 |
| White Birch Point Rd | TOA/HWY | 2.8 |
| Stormwater BMPs/Landscaping (5) | Private | 2.2 |
| Septic upgrades (2) | Private | 1.0 |
| Reduce HP limit | TOA/WMPC | 2.0 |
| Increase no-wake zone | TOA/WMPC | 1.0 |
| Culvert/Catch basin maintenance | TOA/HWY | 1.5 |
| Zoning/Ordinances | TOA/WMPC | 2.5 |
| Conservation easement | Private | 2.5 |
| | Total for 2023 | 16 + 5.0 |
| | Cumulative Total | 28.5 + 10.3 |
| | Target | 22 + 11 |

Action Plan—2028 Goal

| Action | Responsible | P Load Reduction (lb/yr) |
|--|-------------------------|--------------------------|
| Holt Hill Rd | TOA/HWY | 1.7 |
| Gregg Lake Rd/Causeway/Bridge | TOA/WMPC/Grant | 2.0 |
| Stormwater BMPs/Landscaping (15) | Private | 5.8 |
| Septic upgrades/maintenance (9) | Private | 4.5 |
| Culvert/Catch basin upgrades/maintenance | TOA/HWY | 1.5 |
| Conservation easement | Private | 2.2 |
| Zoning/Ordinances | TOA/WMPC | 2.5 |
| | Total for 2028 | 15.5 + 4.7 |
| | Cumulative Total | 44 + 15 |
| | Target | 44 + 15 |



Gregg Lake Road pavement

Summer water level

Winter water level