• Numerous studies and reports
• Three plus detailed management plans
• Many BMP’s implemented
1987 Management Plan

- Bassett Creek WMC and Metropolitan Council

- Proposed Projects
  - Hypolimnetic Aeration
  - Wetland restoration
  - Bio-manipulation (fish removal)

EPA funding but not implemented
1995 – 1997 Watershed study

- BCWMC, MPCA, TRPD, Plymouth
- Developed a P8 Model for lake watershed
- Evaluated pond effectiveness in ws
- Evaluated BMPs
  - Street sweeping
  - Detention ponds
  - Runoff diversion
  - Sediment traps
2000 – Medicine Lake Watershed and Lake Management Plan

• BCWMC
• Construct alum treatment plants on major inflows
• Implement non-structural BMPs
  – P fertilizer ban
  – Street sweeping
  – Construct vegetated buffers along shoreline
  – Control litter and animal waste in ws
2004 – Medicine Lake Management Plan

- City of Plymouth EQC
- Multiple agencies (TRPD, AMLAC, BCWMC, Med Lake, BW Science)
- Address internal and external sources
- Non-structural BMPs
2004-Medicine Lake Plan

• External Sources
  - Erosion control & streambank stabilization
  - Detention pond management
  - Plymouth Creek outfall pond
  - Street sweeping
  - P fertilizer restriction
  - Goose management
  - Shoreline and pond buffers
  - Rain gardens
Internal Loading

• Plymouth established AVMC
  - DNR, TRPD, AMLAC, BW Science, Medicine
    Lake, EQC, Plymouth, citizens at large
  - Curly-leaf pondweed control program
  - Implemented in 2004
<table>
<thead>
<tr>
<th>Category</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
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<tbody>
<tr>
<td>Herbicide Application</td>
<td>May 8-11</td>
<td>April 19-21</td>
<td>April 18-20</td>
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<tr>
<td>Amount of Herbicide Used</td>
<td>1,668 Gallons</td>
<td>1,400 Gallons</td>
<td>1,357 Gallons</td>
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<tr>
<td>Area Treated</td>
<td>317 Acres</td>
<td>325 Acres</td>
<td>320 Acres</td>
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<td>Pre-Treatment Quadrant Survey</td>
<td>May 06</td>
<td>April 22</td>
<td>April 24</td>
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<tr>
<td>Post-Treatment Quadrant Survey</td>
<td>June 14</td>
<td>June 02</td>
<td>May 25</td>
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</tbody>
</table>
Medicine Lake

Total Phosphorus (µg/L)

Year: 1995 - 2006

Water Quality Goal