Recreational values of shallow lakes
Fish & Game New Zealand

- Statutory Crown Entity representing anglers and game bird hunters
- Funded by F&G Licence fees only
- Quantifiable group of recreational users of water
- Monitor resource and users
Active recreational lake users

- Angling & game bird hunting
- Rowing clubs
- Water ski – jet ski based clubs & users
- Sailing clubs
- …
Other recreational lake users

- Nimmo-Bell (2004) - 1000 Household study
- 40% Rotorua & 33% BoP - trout fishing
- Other Active Recreation also popular
  - Swimming 65%, boating 40%, kayak 30%
- Passive Recreation more popular than Active
  - Picnicking 80%, walking 65%, driving 60%
The effect of declining water quality on use

- Rotorua - locally monitored effects on angling

2002-03-04 Algal blooms on Lake Rotoiti
The effect of declining water quality on use

• Locally monitored effects on angling
  2002-03 Algal blooms on Lake Rotoiti
The effect of declining water quality on use

- Locally monitored effects on angling
  - Short term licence sales declined - $100K
  - Angler use dropped 65% on Rotoiti over summer peak
  - Significant detraction to 45% of anglers
The effect of declining water quality on use

- Locally surveyed effects on other lake users

Nimmo Bell report results

- Does the presence of blooms affect your use of the lakes?

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>Unsure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rotorua % of total</td>
<td>69%</td>
<td>20%</td>
<td>11%</td>
</tr>
<tr>
<td>Rest of BoP % of total</td>
<td>62%</td>
<td>20%</td>
<td>18%</td>
</tr>
</tbody>
</table>
The effect of declining water quality on use

- Locally surveyed effects on other lake users

Nimmo Bell report results

- Change in usage for households affected by blooms?

<table>
<thead>
<tr>
<th>Activity</th>
<th>Average days use with blooms</th>
<th>Average days use without blooms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Picnicking</td>
<td>13</td>
<td>23</td>
</tr>
<tr>
<td>Walking/Photography</td>
<td>12</td>
<td>22</td>
</tr>
<tr>
<td>Swimming</td>
<td>19</td>
<td>33</td>
</tr>
<tr>
<td>General boating</td>
<td>23</td>
<td>35</td>
</tr>
<tr>
<td><strong>All Activities as %</strong></td>
<td><strong>63%</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>
The effect of declining water quality on use

- Shallow Waikato lakes
  - Whangape: game bird hunting
- Species
BLACK SWAN TREND COUNT
Lake Whangape 1984 -2007

MINIMUM LEVEL AT OUTLET LOWERED
PARTIALLY RESTORED
MINIMUM LEVEL AT OUTLET RESTORED
AQUATIC PLANT COLLAPSE

Numbers

The effect of declining water quality on use

• Shallow Waikato lakes
  – Whangape: game bird hunting
    • Species
    • Hunter use
    • Experience – health warnings
The effect of declining water quality on use

• Shallow Waikato lakes
  – Whangape: game bird hunting
  – Ngaroto; sailing & boating
The effect of declining water quality on use

- Shallow Waikato lakes
  - Whangape: game bird hunting
  - Ngaroto; sailing & boating
- Cancelled yacht regattas
- Declining club membership
- Te Awamutu rowing club – training only
Declining water quality – not just a local problem

• National Issue
  – 2007 SOE report – Freshwater trends
Declining water quality – not just a local problem

• National Issue
  – 2007 SOE report – Freshwater trends
    • Improvements in point source related problems
    • Decline in quality from diffuse sources (as identified in 1997 SOE report)
    • Poor quality waters are getting worse
NZ Angler use
1,455,000 visits (01-02)

- National Angler Survey
  - 10%
  - Backcountry/headwater

Type of water

Rivers
- Mainstem
- Lowland
- Backcountry
- Headwater
- Canal

Lakes
- Natural >5km²
- Natural <5km²
- Hydro/Irrigation
NZ Angler use
1,455,000 visits (01-02)

- National Angler Survey
  - 40%
  - Lakes/Reservoirs

Estimated annual usage (days)

Type of water

Rivers
- Mainstem
- Lowland
- Backcountry
- Headwater
- Backwater

Lakes
- Natural >5km²
- Natural <5km²
- Hydro/Irrigation
NZ Angler use
1,455,000 visits (01-02)

- National Angler Survey
  - 50%

Lowland / mainstem river
Lowland Rivers – what do the anglers think?

- NIWA Lowland River Study – 2003
- Long term angler perceptions obtained from 270 anglers with an average of 35 years experience on 321 lowland rivers.
Lowland Rivers

- NIWA Lowland River Study – 2003

<table>
<thead>
<tr>
<th>Angling Quality</th>
<th>% of Rivers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Markedly worse</td>
<td>34%</td>
</tr>
<tr>
<td>Generally worse</td>
<td>34%</td>
</tr>
<tr>
<td>No Change</td>
<td>25%</td>
</tr>
<tr>
<td>Generally better</td>
<td>6%</td>
</tr>
<tr>
<td>Markedly better</td>
<td>1%</td>
</tr>
</tbody>
</table>
Lowland Rivers

- NIWA Lowland River Study – 2003
- Key reasons cited for fishery quality decline
  - Declining water quality (NI & upper SI)
  - Declining water quantity (Central SI)
  - Increased silt and sediment loads (NI & SI)
  - Increasing angler use (NI & SI)
What tools we have, or how we use what we’ve got?

- **Statutory**
  - RMA, WCO’s, NPS
- **Non-Statutory**
  - Landcare / Catchment type groups
  - Clean Streams / Project Watershed
  - Codes of practice, BMP’s
Some are working, some are not

- Lake Tarawera & Lake Okaro
  - Action plans, catchment works, in-lake options
    - Community buy-in
  - Development of actions
  - Regulations to protect investment gains
Some are working, some are not

- Mohaka River
  - WCO
    - “outstanding amenity or intrinsic value”
National Policy Statements

- = Outstanding Freshwater Resources?
  (or Rule 11, or Variation 5, …)
- Local & National perspective
- Pragmatic application and prioritising?
- Regulation and/or enforcement?
Summary – Something has to change

- Recreational users are strongly affected
- There are many more users out there than we might initially consider
- Improved management performance is necessary
  - change tools,
  - or change the way we use existing tools