From Zero to Hero – QLDC Faces up to the Challenge of Water Demand Management

Presented to: NZSSES Conference
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Water demand management is relevant to all water supplies, including the QLDC, because:

1. Leakage can be a major issue and represents wastage
2. The cost to produce water is going to increase
3. Benefits of conservation outweigh costs
4. Promotes wise use of water (flow on effect into other resource streams)
Raw Water Storage
How much water do QLDC use?

QLDC Design Criteria 700 l/person/day

Average Per Capita Consumption (L/capita/day)

- NZS 4404 (250)
- Hawea 1,270 (490)
- Luggate 2,820 (500)
- Arrowtown 410 (680)
- Arthurs Point 19,470 (700)
- Queenstown 520 (780)
- Wanaka 585 (960)
- Glenorchy 520 (1,260)
- Lake Hayes 585 (1,390)
Inefficient Water Use
Lifting the Game

Supporting Efficient Water Management

- LOS in LTCCP
- Demand Management Plans
- New Water Bylaw
Leakage expected to be a major issue
Verified by Night Flow Monitoring

Queenstown Inflow and Leakage May 20th 2008

- 24 Hour Intake Flowrate
- Estimated Leakage

Flowrate (L/s)

- Variable Customer Use
- Customer Night Use
- Estimated Leakage 87 L/s
- Minimum Night Flow
How much leakage?

- Estimated 1,070 L/connection/day
- Represents 50% of 2007 ADD
- Unknowns: exceptional night demand and property leakage
- Infrastructure Leakage Index = 15

✓ 3 Year Target 50% Water Loss Reduction
Potential for Significant Cost Savings

- $5
- $10
- $15
- $20
- $25
- $30
- $35
- $40

<table>
<thead>
<tr>
<th>Year</th>
<th>2009/19 LTCCP - Current Consumption</th>
<th>2009/19 LTCCP - After a 25% Decrease in Consumption</th>
<th>Cumulative Total Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>$10</td>
<td>$7.5</td>
<td>$2.5</td>
</tr>
<tr>
<td>2010</td>
<td>$15</td>
<td>$11.25</td>
<td>$13.75</td>
</tr>
<tr>
<td>2012</td>
<td>$20</td>
<td>$15</td>
<td>$38.75</td>
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<tr>
<td>2014</td>
<td>$25</td>
<td>$20</td>
<td>$58.75</td>
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<tr>
<td>2016</td>
<td>$30</td>
<td>$25</td>
<td>$85.75</td>
</tr>
<tr>
<td>2018</td>
<td>$35</td>
<td>$30</td>
<td>$110.75</td>
</tr>
</tbody>
</table>

Graph showing the total cost per year in millions from 2008 to 2018, with three lines representing different scenarios and cumulative total savings.
# The Plan

## Demand Management Plan

- 2008: Jan, Jun
- 2009: Jan
- 2010: Jan, Jun
- 2011: Jan, Jun

## Queenstown Leakage Reduction

- 2008: Jan, Jun
- 2009: Jan, Jun
- 2010: Jan, Jun
- 2011: Jan

## Night Flow Monitoring

- 2008: Jan
- 2009: Jan
- 2010: Jan
- 2011: Jan

## Annual Update of DMP

- 2008: Jun
- 2009: Jun
- 2010: Jun
- 2011: Jun

## Details of Levels of Service in LTCCP

- 2008: Jun
- 2009: Jun
- 2010: Jun
- 2011: Jun

## Fees and Charges to be Developed (with CCP)

- 2008: Jun
- 2009: Jun
- 2010: Jun
- 2011: Jun

## New Water Bylaw Operative

- 2008: Jun
- 2009: Jun
- 2010: Jun
- 2011: Jun
Education Programme Options
Water demand management is relevant to all water supplies, even the QLDC, because:

• Leakage can be a major issue and represents wastage
• The cost to produce water is going to increase
• Benefits of conservation outweigh costs
• Promotes wise use of water (flow on effect into other resource streams)
Thanks!

Questions?