Addressing Asset Management Challenges in Small Communities
A Collaborative Approach

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Jackie Patridge  Village of Warfield
Hillary Elliott  Village of Silverton
Laurie Taylor  Village of Nakusp
Background on the Pilot Project
## Municipalities

<table>
<thead>
<tr>
<th>Town</th>
<th>Approximate Population</th>
<th>Water Supply</th>
<th>Wastewater Collection</th>
<th>Stormwater Collection</th>
<th>Transportation</th>
<th>Facilities</th>
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<tbody>
<tr>
<td>Nakusp, BC</td>
<td>1,600</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
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<tr>
<td>Silverton, BC</td>
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<tr>
<td>Slocan, BC</td>
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<td>Warfield, BC</td>
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Challenges for Small Communities

1. Funding
   - Small tax base / small to no industrial sector

2. Expertise
   - No in-house GIS technician / engineer / planner / asset management specialist

3. Data
   - Minimal digitized infrastructure / large sections of unknown infrastructure
Addressing these Challenges

1. **Asset Management Grant**
   - FCM MAMP funding

2. **Collaboration**
   - Single data capture team and GIS technician shared between all municipalities
   - Standardized data structure

3. **Free Open-Source Asset Management Tools**
   - **QGIS** - GIS program
   - **QField or ROAM** - Tablet GIS interface application for data capture
   - **AIMSOIR** – Spreadsheet-based asset management reporting tool
Asset Management Data Process

- Asset Inventory
- Asset Prioritization
- Operational and Capital Strategies
Asset Management Data Process

- Asset Inventory
- Asset Prioritization
- Operational and Capital Strategies
Inventory Data
- Water Supply
- Wastewater Collection
- Stormwater Collection
- Transportation
  - Roads, sidewalks, trails, etc.
- Facilities
  - Parks, buildings, outdoor facilities, etc.

Tools to View, Query, Edit Data
- Web Mapping
- Tablet GIS
- Desktop GIS

State of Infrastructure Report
- Replacement Cost
- Condition
- Annual Reserve Required
- 30-Year Projected Expenditures

Hardcopy Infrastructure Maps

WWW.LANDINFO TECH.COM
The Pilot Project Journey!

- Asset Inventory
- Asset Prioritization
- Operational and Capital Strategies
# AIMSOIR Data Structure

<table>
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<tr>
<th>ID</th>
<th>Attribute Field Name</th>
<th>Data Type</th>
<th>Field Length</th>
<th>Precision</th>
<th>Minimum Data Required for AIMSOIR</th>
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<td>5</td>
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<td>5</td>
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TIE IN DETAIL

19mm FORD CORP STOP
19mm COPPER
19mm FORD CURB STOP
19mm GALVANIZED COUPLING
19mm EXIST STEEL LINE
## General Summary of All Asset Groups

<table>
<thead>
<tr>
<th>No.</th>
<th>Asset Group</th>
<th>Replacement Cost</th>
<th>Annual Reserves Required</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Buildings/Structures</td>
<td>$6,200,000</td>
<td>$230,000</td>
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<tr>
<td>2</td>
<td>Roads</td>
<td>$475,000</td>
<td>$40,000</td>
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<td>3</td>
<td>Sanitary</td>
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<td>4</td>
<td>Water</td>
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<td></td>
<td><strong>Total</strong></td>
<td><strong>$12,175,000</strong></td>
<td><strong>$380,000</strong></td>
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</table>
3. Annual Projected Expenditure of Water Network

Annual Project Expenditure Costs of Water Network

Figure 3: Annual Projected Expenditure of Water Network
Moving Forward: Asset Prioritization
Asset Inventory

Asset Prioritization

Operational and Capital Strategies
Phase 2

1. Workshop sessions with council and staff from all communities
2. Technical support for individual municipalities

Prioritized Infrastructure
- Probability of Failure
- Consequence of Failure
  - Social, Economic, Legal, Environmental, Technical, Community needs, etc.
- Risk Value
Thank you!