Asset Management for Small, Local Agencies

George Huntington, PE
APWA, Denver
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What we’ll be discussing…

- Goals of asset management
- Assessing asset management practices and needs
- Developing data collection plans
- Setting performance targets
- Developing asset management plans
- Condition prediction modeling
- Investment decision-making for multiple assets
Goals of Asset Management

• Operational Efficiency
  – Strategy
  – Tactics
  – Logistics
  – Practices

• Communications
  – Public
  – Elected officials
Assessing Practices and Needs
Ten-Step Implementation Process

1. Develop Asset Inventory
2. Assess Condition & Failure Modes
3. Determine Residual Life
4. Determine Life Cycle & Replacement Costs
5. Optimize Capital Investment
6. Optimize O&M Investment
7. Determine Business Risk
8. Determine Funding Strategy
9. Build Asset Management Plan
10. Set Level of Service Targets

Think about how these are used strategically... practically.
Think about how these are used to communicate
Developing Data Collection Plans
| **What do I own?** | • It is important to know what assets you are responsible for managing |
| **Where is it?** | • You must develop a process for linking field locations to data |
| **What condition is it in?** | • It is important to establish a repeatable method of assessing condition |
| **What is the remaining useful life?** | • To forecast future trends, you must have a way of predicting changes in asset condition with time. |
| **What is its remaining economic value?** | • The data should help you determine whether asset value is increasing or decreasing |
Determining What To Collect

<table>
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<tr>
<th>Question</th>
<th>Answer</th>
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<tbody>
<tr>
<td>What information is needed to support decisions?</td>
<td>• Only collect data that supports decisions</td>
</tr>
<tr>
<td>What information is already available? How reliable is it?</td>
<td>• Use information that’s readily available</td>
</tr>
<tr>
<td>What information is easy to obtain?</td>
<td>• Collect data as efficiently as possible</td>
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<tr>
<td>How much detail is needed? How will it be used?</td>
<td>• Determine appropriate level of detail for decisions</td>
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Basic Data Requirements

• Location
  – How will you identify the location of this sign?

• Physical attributes
  – What characteristics of this sign are important?
    • For replacement?
    • For management?

• Condition assessment
  – What measures of performance should be noted?
Setting Performance Targets
Considerations in Setting Performance Targets

- Stakeholder, customer expectations
- Regulator, legislative requirements
- Current actual performance

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<th>Sample Targets</th>
<th>Agency</th>
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<td>Average condition &gt; 70</td>
<td>Grand Rapids, MI</td>
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<td>90% of network with PASER rating &gt; 5; 70% of all primary and local roads &gt; 6; Network average rating &gt; 6</td>
<td>Roscommon County, MI</td>
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<tr>
<td>Every gravel road is brined, full length, twice each year</td>
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Examples taken from *Asset Management Guide for Local Agencies in Michigan*
Developing Asset Management Plans

City of Manistee

2008 Street Asset Management Plan

Tillamook County Public Works

Road Asset Management Plan

Submitted to:
Tillamook County Public Works
503 Maroff Loop Road
Tillamook, OR 97141

Submitted by:
PBS Consulting
5024 NE Dryce Street
Portland, OR 97212

Information Current through July 2007
Published January 2009
What Is an Asset Management Plan?

• A document for one or more assets that:
  – Identifies current and projected asset conditions
  – Summarizes factors impacting asset performance
  – Describes long-term options for preserving assets
  – Builds the business case for asset management strategies that are policy driven
  – Describes department policies and procedures
Asset Management Plans Online

- Flathead County, MT
- Pitkin County, CO
- Santa Barbara County, CA
- Casper Metropolitan Planning Area, WY
- King County, WA
- Derbyshire, UK
- Knox City, Australia
- and many more…
AMP Benefits

- Defines objectives
- Reduces life cycle costs & risks
- Improves accountability
- Increases transparency
- Improves data management
- Synergizes decision-making
## Condition Prediction Modeling

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<th>Thick Overlay</th>
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<th>Poor-1</th>
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### Graphs

1. **Chart 1**: Bar chart showing trend in costs for different conditions over the years.
2. **Chart 2**: Line graph illustrating the network average trend over the years.
Investment Decision-Making for Multiple Assets

Whole Life Approach to Managing Assets

- Good
- Poor

Asset Preservation Approach

Traditional ‘Worst First’ Strategy

Graph showing the relationship between pavement condition and yearly funding for different asset types:
- Paved Streets
- Gravel Roads
- Signs
- Culverts
- Guardrail

Condition: Good, Fair, Poor

Yearly funding ($million/year)
Summary

• Evaluate your current management practices
  – Try and see them through politicians’ eyes…
  – Do they improve operational efficiency?
• Evaluate your communications with elected officials and the public.
  – Do they understand your problems and issues?
  – Are you able to make good recommendations?
  – Do you have clear, transparent policies?
• Performance measurement
• Maintenance and cost tracking
From the Dust Scan Tour

“I think that the genius of his clear success was that he did what only 1% of managers do – manage the decision-making process by communicating the cost of not doing what he was recommending.”
Transportation Asset Management for Local Agencies

Questions?
Comments?