Environmental Management Systems
2006 Implementation Survey

ROBERT PIEPLOW
Construction Division Chief
California Department of Transportation
EMS Definition

“The organizational structure, associate responsibilities, and procedures to integrate environmental considerations and objectives into the ongoing management decision making processes and operations of an organization”

AASHTO Center For Environmental Excellence
EMS Framework

The scope of an EMS is designated by a “fence line” that identifies one or more areas of managerial emphasis for improved environmental compliance or enhancement.

EMS uses a basic four step management approach,

• Plan – What are we going to do?
• Do – Let’s do what we said.
• Check – Have we met our expectations?
• Act – Do we need to change anything?
2006 EMS Implementation Report

- Updates 2003 national AASHTO benchmark survey.
- Evaluates EMS awareness and utility.
- Includes focus interview case studies of select DOTs that have implemented EMS.
- Catalogues comments from DOTs for areas for EMS enhancement.
- Records best practices and lessons learned from EMS implementation and operations.
2006 Evaluation of EMS Awareness

- Aware of EMS: 46
- Not Aware of EMS: 3
- No Response: 1

Legend:
- Aware of EMS
- Not Aware of EMS
- No Response
2006 Evaluation of EMS Utility

- Considered EMS: 45
- Not Considered EMS: 2
- No Response: 3

Legend:
- Blue: Considered EMS
- Red: Not Considered EMS
- Yellow: No Response
2006 EMS Implementation Status

- **Implemented**: 11
- **Under Development**: 3
- **Under Consideration**: 12
- **Not Currently Considered**: 9
- **No Response**: 15

Legend:
- Implemented
- Under Development
- Under Consideration
- Not Currently Considered
- No Response
### EMS Implementation Comparison

<table>
<thead>
<tr>
<th>Category (Best Fit)</th>
<th>2003 Count</th>
<th>2006 Count</th>
<th>2003-2006 Changes Count</th>
<th>Percent</th>
<th>Percent</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implemented</td>
<td>7</td>
<td>12</td>
<td>5</td>
<td>14%</td>
<td>0.24%</td>
<td>10%</td>
</tr>
<tr>
<td>Under Development</td>
<td>3</td>
<td>15</td>
<td>12</td>
<td>6%</td>
<td>0.3%</td>
<td>24%</td>
</tr>
<tr>
<td>Under Consideration</td>
<td>14</td>
<td>9</td>
<td>-5</td>
<td>28%</td>
<td>0.18%</td>
<td>-10%</td>
</tr>
<tr>
<td>Not Currently Considered</td>
<td>23</td>
<td>11</td>
<td>-12</td>
<td>46%</td>
<td>0.22%</td>
<td>-24%</td>
</tr>
<tr>
<td>No Response</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>6%</td>
<td>0.06%</td>
<td>0%</td>
</tr>
</tbody>
</table>

**2003-2006 Changes Comparison**

0% 0 0.06 3 0.22 11 46% 23 Not Currently Considered

-24% -12 0.22 11 46% 23 Not Currently Considered

-10% -5 0.18 9 28% 14 Under Consideration

24% 12 0.3 15 6% 3 Under Development

10% 5 0.24 12 14% 7 Implemented

---

**Bar Chart:**

- **2003 Count**
- **2006 Count**
Findings and Recommendations

- EMS is inconsistently defined and applied.
- FHWA leadership on EMS is an issue.
- DOTs integrate EMS into going operations.
- DOTs are familiar with the AASHTO EMS implementation Guide.
- ISO 14001 Check Standard is a burden.
Findings and Recommendations

- The views of the current DOT administration are integral to success.
- Small DOTs have “value” issues with EMS as currently defined.
- The consulting industry is treating EMS as a growth market.
- There is a partnering opportunity for the environment and human resources work group.
2006 Lessons Learned

• Communication
• Integrity
• Mitigation Measure
• Compliance Focus
• Consultants
• Costs / Benefits
• Scale
• Adaptability