District Climate Change Vulnerability Assessments

Marlon Flournoy
Caltrans Division Chief, Transportation Planning

December 4, 2019
Caltrans District Climate Change Vulnerability Assessments

Climate Change Stressors Studied:

- Sea Level Rise
- Storm Surge
- Precipitation
- Increased Temperatures
- Wildfire

Project future climate scenarios (2050, 2070, 2100)

Identify and map segments of the State Highway System at risk of impact from climate change

Provide Summary and Technical Reports and online viewer tool to all twelve Districts
Vulnerability Assessment Delivery Schedule

- District 4 (released)
- Districts 2 and 6 (released)
- Districts 7, 8 and 11 (Released)
- Districts 10 and 12 (Released)
- District 3 and 9 (Released)
- District 1 and 5 (December 2019)

**Group 1:** Initial district.

**Group 2:** First inland districts (no coastal issues). Wildfire and heat likely to be the main issues.

**Group 3:** Coastal issues and flash flooding in urbanized environments.

**Group 4:** Coastal issues in D11. Extreme heat and flash flooding.

**Group 5:** Sacramento Delta issues, plus wildfire and flash flooding in the Sierra Nevada Mountains.
Products for Each of the Twelve Caltrans Districts

**Summary Report**
- Overview of District Characteristics
- Description of the interaction of the transportation system and identified stressors

**Technical Report**
- Background on data Sources
- Technical methodology to derive results

**On-line viewer Tool**
- Interactive mapping tool that allows users to toggle stressors on and off to visualize locations of climate change stressors by postmile
Next Step:
Caltrans Climate Action Reports

Using data from vulnerability assessments, develop adaptation strategies for assets at highest risk of climate change impact(s)

<table>
<thead>
<tr>
<th>Step 1</th>
<th>Caltrans Climate Change Adaptation Strategy Report</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>› Identify adaptation strategies and best practices</td>
</tr>
<tr>
<td></td>
<td>› Integrate into Caltrans business operations</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step 2</th>
<th>District-Adaptation Report</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>› Identify and prioritize at risk assets</td>
</tr>
<tr>
<td></td>
<td>› Design project alternatives</td>
</tr>
</tbody>
</table>
Questions?

Marlon.Flournoy@dot.ca.gov

Link to Vulnerability Assessment Reports:
https://transplanning.onramp.dot.ca.gov/climate-change-vulnerability-assessments-0