Climate Safe Infrastructure Working Group

Meeting 6
University of California-Davis
Institute of Transportation Studies, 1605 Tilia Street, Suite 100
Davis, California 95616

Wednesday, June 20, 2018
10am – 4pm
Welcome & Introductions

The Climate-Safe Infrastructure Working Group

Co-Facilitators
- Juliette Finzi Hart
  USGS
- Susi Moser
  Susanne Moser
  Research & Consulting

Project Team
- Keali’i Bright
  Natural Resources Agency
- Elea Becker Lowe
  Natural Resources Agency
- Joey Wall
  Natural Resources Agency
- Guido Franco
  California Energy Commission

... and YOU
AB 2800 (Quirk): Purpose

Examine how to integrate scientific data concerning projected climate change impacts into state infrastructure engineering, including oversight, investment, design, and construction.
At minimum...

• The current informational and institutional barriers to integrating projected climate change impacts into state infrastructure design.

• The critical information that engineers responsible for infrastructure design and construction need to address climate change impacts.

• How to select an appropriate engineering design for a range of future climate scenarios as related to infrastructure planning and investment.

Additional...

• Integrating scientific knowledge of projected climate change impacts into state infrastructure design.

• Addressing critical information gaps identified by the working group.

• A platform or process to facilitate communication between climate scientists and infrastructure engineers.
Project Timeline

January
- Mtg #1
- Focus & Bound

February
- Mtg #2
- Deliberate

March
- Mtg #3
- Deliberate

April
- Mtg #4
- Deliberate

May
- Mtg #5
- Draft Report

June
- Mtg #6
- Review & Revise
- Report due to Legislature

July
- Finalize Report
- Report Release

August
- Deliver Report

September
- Global Climate Action Summit
  San Francisco 9/12-14
- Outreach

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<table>
<thead>
<tr>
<th>Mtg</th>
<th>Dates</th>
<th>Locations</th>
<th>Topics and Tasks</th>
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<tbody>
<tr>
<td>1</td>
<td>1/18</td>
<td>Sacramento</td>
<td>Determine project goals; WG structure and process</td>
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<tr>
<td>2</td>
<td>2/12</td>
<td>Los Angeles</td>
<td>Identify relevant infrastructure, sector-specific infrastructure standards, climate-sensitivity, information needs</td>
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<td>3</td>
<td>3/13</td>
<td>San Francisco</td>
<td>Linking forward-looking climate science and impacts information with standards, codes, certifications throughout infrastructure life-cycle, identify barriers to information use and potential ways to overcome them</td>
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<tr>
<td>4</td>
<td>4/11</td>
<td>Davis</td>
<td>Considering more than climate changes (land use, demographics, economy, mitigation, disasters) and cross-sector interdependencies in infrastructure design</td>
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<td>5</td>
<td>5/9</td>
<td>San Diego</td>
<td>Governance of infrastructure and related standards and codes; non-standard strategies to ensure climate-safe infrastructure; tools &amp; platform needs; deliberation of draft report; agree on refinement needs</td>
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<tr>
<td>6</td>
<td>6/20</td>
<td>Davis</td>
<td>Refine recommendations/implementation ideas; agree on final report revisions; project debrief and closure</td>
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Measuring Progress

- Define WG goals
- Identify relevant infrastructure, sector-specific standards, and climate info needs
- Link climate science to infrastructure design/implementation/O&M & Barriers
- Identify cross-sector interdependencies
- Consider governance & implementation
- Report to Legislature & SGC
- Continue post-release outreach

Engagement during WG’s work
The Arc of Our Work to Date

Meeting 1
- Scoping
- Process
  - Identify, prioritize climate-sensitive infrastructure;
  - Agree on definitions
  - Prioritize relevant standards, codes, guidelines
  - Identify information needs

Meeting 2
- Identify, prioritize climate-sensitive infrastructure;
- Agree on definitions
- Prioritize relevant standards, codes, guidelines
- Identify information needs

Meeting 3
- Connect engineers’ information needs with climate science;
- Identify barriers to information use, solutions
- Work through concrete examples

Meeting 4
- Consider comprehensive approaches to climate-safe infrastructure that integrate...
  - Land use change
  - Ecol., econ., demogr. data
  - Disaster recovery
  - Interdependencies

Meeting 5
- Understand governance challenges
- Assess tools, platforms and processes to support science-engineering interaction
- Deliberate report & recommendations

Meeting 6
- Report review & refinement, approval
Tasks for Meeting #6:

• **Task 1**: Review “big comments” on working draft

• **Task 2**: Deepen into several issues related to Implementation

• **Task 3**: Tie together Vision, Challenges, Barriers, and Recommendations into clear storylines

• **Task 4**: Review and evaluate the CSIWG process
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Realizing the Vision of Climate-Safe Infrastructure for all

Credit: Angela Rowlings

Dr. Beverly Scott
Beverly Scott Associates, CEO & Parker Infrastructure Partners, Senior Partner

Credit: Angela Rowlings
Opportunity for Public Comment
Working Lunch

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Realizing the Vision of Climate-Safe Infrastructure

Dr. Bilal Ayyub
Director, Center for Technology & Systems Management
University of Maryland
Fellow, ASCE
Opportunity for Public Comment
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Report Timeline & Process (proposed)

- **Mtg #5** May 9
- **WG members’ inputs due** May 18
  - Report integration & Full drafting period
- **Send full draft to WG, selected reviewers** June 8
- **Mtg #6** June 20
  - “Big comments” due To Susi & Juliette June 15
- **Detailed comments** June 22
- **Report refinement & revisions based on Mtg #6**
  - **Revised report** July 1
  - **Final review comments due** July 9
- **Final revisions & layout**
- **Report Release August**
Review of the Day

Discussion with Dr. Beverly Scott
Discussion with Dr. Bilal Ayyub
Work Through Outstanding Report Issues
NEXT STEPS

Big Comments
Project review & evaluation
Reminder: The Webinar Series Lives on & Goes on

Presentations, Recordings and Q&A Available at: http://resources.ca.gov/climate/climate-safe-infrastructure-working-group/
Upcoming Webinars: June/July

**Infrastructure Financing III: Innovative Instruments, Approaches and Partnerships**

Speakers: Port of San Francisco, Milken Institute, Climate Resilience Consulting

**Talking Climate Change with Engineers: Overcoming Communication Challenges**

Speakers: George Mason University, Mississippi River Cities and Towns Initiative, Climate Access

Closing the series: Release of Report and Sharing of Report Findings
Next Steps

**We Will**
- Prepare meeting summary notes
- Revised/complete report for WG review by 7/1
- Conclude webinar series
- Prepare outreach plan for release and beyond

**You Will**
- Send in ALL travel receipts
- Attend and contribute to Webinar series
- Send detailed review comments by 6/22
- Respond to input requests in coming weeks
- Review full, near-final draft between 7/1 and 7/9
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Remember when....
## Synthesis of Goals Identified in Meeting #1

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<td>Orient toward longer-term outcomes (Vision, indications of success)</td>
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<td>Produce a set of outputs by July 1</td>
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<td>Provide clear policy guidance for near-term and longer-term decisions</td>
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<td>Address key issues for science &amp; the science-practice interface</td>
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<td>Focus on engagement during and after the life of the Working Group</td>
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<td>Embody a set of principles and values throughout the Working Group’s work</td>
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A Dense Schedule of Work

A Set of Project Findings
- The infrastructure considered in the work of the WG
- Opportunities for state to affect how and where infrastructure is built
- Opportunities for integrating science into infrastructure design
- Critical information needs of infrastructure engineers to address CC impacts.
- Critical information gaps
- Informational and institutional barriers to integrating projected climate change impacts into state infrastructure design
- Ways to select an appropriate engineering design for a range of future climate scenarios as related to infrastructure planning and investment.

A Set of Recommendations
- Policy recommendations of how to encourage forward-looking infrastructure planning and design
- Procedural recommendations to affect climate-safe infrastructure development process (from planning, design, approval, construction to monitoring)
- Principles to guide infrastructure development, maintenance, repair to build equitable, climate-resilient infrastructure
- Available tools and information sources to use
- Recommendations on how to lower/overcome barriers to information use
- Research recommendations to fill information gaps
- Recommendations on capacity building/professional development
External Input

Regional Example

- Sabrina Bornstein, Deputy Chief Resilience Officer | City of Los Angeles
- Matt Barnard, Principal | Degenkolb Engineers

IN THE FUTURE, I WANT BUILDINGS TO

BUILDING FORWARD LA

Integrating Land Use Change and Ecological Data in Planning and Implementation

Louise Bedsworth, Ph.D.
Governor's Office
Office of Planning and Research

Panel Discussion

Steve Reel, M.Eng.
Project Manager
Port of San Francisco
(TFR)

Kit Batten, Ph.D.
Bob Battalio, P.E.
Nate Kaufman

Our Governance Panel

- Phil Gibbons
  Port of San Diego
- Cody Haven
  City of San Diego
- Ralph Redman
  San Diego Airport
- Andrew Martin
  San Diego Association of Governments

Integrating Disaster Management & Long-Term Infrastructure Planning

Speaker: Nicole-Meyer-Morse, Ph.D.
California Office of Emergency Services
Intense Group Work
Open, Transparent & Engaged

>400 external stakeholders on webinars
Outreach Ongoing...

- AAAS 2019 session proposal
- CAF 3 session planning
- Water Resources Adaptation to Climate Change Workgroup of the Advisory Committee on Water Information
- City of Boston
- Sustained National Climate Assessment
- Webinar speakers

The best is yet to come...
Your Reflections on the AB2800 Project & Process
Opportunity for Public Comment
Closing Remarks

Keali’i Bright
Deputy Secretary for Climate and Energy
California Natural Resources Agency