Resilience & Climate Change

Session Summary
Resilience & Climate Change

- Climate does change and how it changes can affect the way transportation agencies maintain the roads especially in winter.
- What are some of issues your agency is dealing with in regards to climate change, extreme weather events and resiliency to future events?
- This session will focus on how agencies are facing changes and building in resilience to winter weather.
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W E A T H E R

1) Roadway friction
2) Visibility distance
3) Force on vehicles
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- Changes in the intensity and frequency of hazardous weather and environmental events noted by attendees from US States, Europe, New Zealand, and Japan.
- Noted more extreme/frequent events:
  - heavy rain, flash flooding, thunderstorms
  - wildfires
  - wet snow storms, strong snow storms (wind and precip.), shoulder season snow
  - surface melt/refreeze, subsurface freeze/thaw
  - coastal flooding
  - pavement buckling and deformation
- Infrastructure taking the brunt of the impact; maintenance budgets, too.
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- Still many unknowns; a lot of variability in weather and how to prepare
- Solutions may (or may not) include:
  - Earmarked funds for response to high-impact events; disaster planning
  - Earmarked funds for rebuilding failed infrastructure
  - Overbuilding
  - Include more weather in life cycle analyses
  - GIS-based maps of vulnerable locations
  - Partnering with other agencies to monitor vulnerable locations (e.g., Hydrology, Fire)
  - Learning from other states, countries who have experience
  - Monitoring vulnerable locations with instrumentation, plus alerts
  - Models to understand potential impacts