



San Joaquin Council of Governments Regional Resiliency Implementation Plan and Adaptation Guidance Project

Regional Needs Assessment



April 2021

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1 BACKGROUND AND SYNTHESIS OF FINDINGS

A thorough inventory of stakeholder and community needs is a critical input into establishing a Regional Resiliency Implementation Plan and Adaptation Guidance for San Joaquin County’s transportation system. This Needs Assessment documents this inventory, summarizing input and findings from a stakeholder workshop, a series of stakeholder interviews, and a public survey conducted for the San Joaquin Council of Governments (SJCOG) Regional Resiliency Implementation Plan and Adaptation Guidance project

This Needs Assessment drew on engagement with stakeholders through roughly a dozen interviews and a workshop, and with community members via a public survey. The survey targeted zip codes in disadvantaged communities, as identified by CalEnviroScreen. Over two thirds of respondents resided in these areas.

In general, regional stakeholders face future climate risks with limited funding, staffing, and information about how best to manage these risks. Clearer coordination across stakeholder groups and governments is needed to respond to climate change. There are varying levels of engagement – federal, state, regional, and local – and it can be unclear how all are working together. Cross-agency coordination is needed and should be proactive before there are impacts and emergencies.

Flooding is a persistent threat, particularly in the western portions of the county in the Delta; and in Stockton, by far the most populous city in the county, and nearby communities, such as Lathrop and Manteca. While there is a complex network of flood protection systems, bolstering these levees and other infrastructure to withstand expected future flooding would be very costly. While some jurisdictions and agencies know which parts of their systems are most vulnerable, others lack that knowledge. From a transportation perspective, protecting evacuation routes and infrastructure serving disadvantaged communities are two key priorities. Several key roads, railways and bridges mentioned by stakeholders should be prioritized for adaptations.

Over 90% of community members surveyed said they were very or somewhat concerned about the impacts of climate change, citing poor air quality as the most concerning hazard, followed closely by wildfire and flooding. Poor air quality has impacted travel of far more survey respondents than any of the other hazards. Many respondents said they experienced poor air quality in the Stockton area.

According to survey respondents, the most popular transportation strategies for resilience are more trees along roads, expanded bus routes and hours, and more comfortable, shaded transit stops. Each of these strategies tends to be implementable at a local level. When asked about other types of strategies, respondents most frequently cited educational opportunities for community members to learn about climate change and sustainability, followed by community solar or gardens and job training in green business. Public education and accessibility to information were mentioned as key strategies by some stakeholders as well.

Stakeholders and community members also noted poor reliability of electricity in the hottest months of the year. Transitioning to all-electric buses could be challenging given more frequent power shutoffs.

Integrating climate change considerations into the early stages of the transportation planning process should be a priority.

Organizations like Delta Stewardship Council, Caltrans, and California Department of Water Resources are heavily connected to many decisions affecting the resiliency of the region’s transportation system, again pointing to the need for collaboration. Many decisions and solutions rest with local agencies as well, where capacity building is particularly important. Local agencies pointed to a need for better guidance on resiliency-related best practices, land use and general planning, and data to support adaption planning and decision making.

2 COMPILED FINDINGS

This section provides a compiled list of the key needs and concerns that came out of the SJCOG Regional Resiliency Implementation Plan and Adaptation Guidance project stakeholder and community engagement. This second phase to the SJCOG Climate Adaptation and Resiliency Study involved a community and stakeholder engagement process. The key needs and concerns are organized into the following categories:

Regional Needs:

- Needs and barriers – Identified needs and barriers that need to be addressed to prepare for climate change impacts.

- Impacts and problem areas – Identified regional impacts and consequences from extreme weather and climate change, and specific problem areas on the transportation network where there have been past impacts or recurring damages.

Regional Implementation and Adaptation Strategies:

- Implementation and adaptation strategies – Strategies to prepare the San Joaquin region’s transportation network and its communities for climate change, including broader ideas related to public education, stakeholder coordination, policy, land use ordinances, and more.

The Appendix includes the full set of community and stakeholder feedback and comments collected through this process.

2.1 REGIONAL NEEDS

2.1.1 NEEDS AND BARRIERS

- Community needs
 - Reliable access to diverse transportation options.
 - Understand the subject matter and terminology around climate change.
 - Address high cost and poor reliability of energy in the summer when it is hot and smoky.
 - Community priorities identified in the Stockton Sustainable Neighborhood Plan: energy use, positive health outcomes, food access, urban greening, improving parks, and meeting transportation needs.
- Prioritization of responses
 - Local jurisdictions have a good sense of issues presented by climate change, but not the specific locations that will be affected and how to address those impacts.
 - Evacuation routes could be affected by climate hazards. County Office of Emergency Service has identified the routes that need to be evaluated.
 - Need to ensure projects within disadvantaged communities are prioritized.
- Staffing
 - Local jurisdictions and partner organizations have limited staffing and/or staff with the expertise needed to address climate change.
- Funding
 - Local jurisdictions do not have the funding necessary to assess the impacts from climate change and respond, install transportation improvements, or conduct maintenance needed.
- Design changes
 - When trying to design a project today, it is challenging to determine what should be assumed for design peak flow. If historical flow is used as the basis for design, a project could be under-designed. But if some of the projected future flows are assumed, then there would be issues in trying to build levees high enough and securing the funding for these types of projects.
- Data gaps
 - More data collection and analysis of climate across key public policy issues, such as public safety, homelessness, civic engagement, etc.
- Knowledge barriers

- Accessibility to information and public education.
- There is disagreement among communities and leaders about climate change, which may delay progress in the region.
- Communication/coordination barriers
 - Clearer coordination across stakeholder groups and governments is needed to respond to climate change. There are varying levels of engagement – state, regional, and local – and it can be unclear how all are working together. Cross-agency coordination is needed and should be proactive before there are impacts and emergencies.
- Energy reliability
 - Transitioning to all-electric buses will be a challenge in the future given that blackouts have become more common.
 - There are concerns related to how bus fleets will assist in evacuations if buses will need to stop to charge.

2.1.2 IMPACTS AND PROBLEM AREAS¹

- Maintenance efforts and schedules are/will be impacted by weather (e.g. maintenance schedules can be affected by climate stressors like more severe and frequent extreme heat events).
- Bus ridership can decline when the weather is too hot or cold, especially for senior citizens.
- 91% of survey responses indicated that they were either very concerned or somewhat concerned about the day-to-day impacts from climate change. The highest average ranking was for poor air quality (1.77), followed closely by wildfires (1.83), and heavy rains and flooding (1.95).
- High heat days
 - Are a concern for active transportation users and those waiting at unprotected bus stops.
 - This past summer (2020) was very difficult for those who used bikes for transportation and are in high risk professions (such as farm workers). Outreach was orchestrated for these folks, so they had water to drink. Many of these workers would walk or bike to a designated location, and then get picked up and taken to work. There were serious health concerns for these types of workers due to COVID, the fires, and poor air quality.
- Bad air quality/air pollution:
 - Bad air quality and heat waves affect the travel of the general public across the region but were especially reported as impacts in more populous areas.
 - Air pollution is a major concern, especially for Stockton given its placement as a transportation hub and its proximity to highways and the Port of Stockton. Trucking routes may contribute to these air quality impacts, especially in disadvantaged neighborhoods.
- Flood impacts:
 - Near the Calaveras River in Stockton
 - Near the San Joaquin River, particularly southwest of Manteca but also north in or near Stockton.
 - Significant flooding several years ago caused train derailments in the Stockton area.
 - Flooding is a major concern for residents, especially if they are near a levee or rely on a levee road to reach their property.

¹ A mapping exercise completed by the respondents through the survey identified many impacts to the traveling public and specific problem areas. This information is summarized here, but not all locations are listed. These data points are available and are summarized in graphics in Section 3.3.

- Concerns about Delta flooding from a combination of sea level rise and flooding from the San Joaquin and Sacramento Rivers. Specific concerns are related to flood impacts of disadvantaged communities and evacuation of critical routes.
- There are areas in the west part of the County near Corral Hollow that experience mudslides and have a lot of sediment coming down the flow.
- There are bridge structures that lack capacity, so as there are more intense storms in the area there are also increased concerns for safety and potential loss of property
- One of the hardest hit areas in terms of increased flows is the Mossdale Tract (Reclamation District 17) area. This location includes the portions of Lathrop, Manteca, Stockton, and San Joaquin County. The San Joaquin Area Flood Control District is doing a Feasibility Study with the Department of Water Resources to explore alternatives so that this area can be better protected.
- Interstates 5 and 205 could flood under projected 2065 flows. State Route 120 would also be impacted if the dryland levee remains as it is today. In 1997, the area behind the dryland levee became a lake because of upstream breaches and overtopping. The levees upstream are all small, agricultural levees that are not certified and provide limited protections during a big flood event. There have been several instances in the past where these levees will either breach or overtop.
- Wildfire impacts:
 - This past summer, the SCU Complex Fire reached into the southwestern part of San Joaquin County.
 - There are some areas identified on County maps that are fire hazard areas or are unprotected because there is not a specific fire district for that area.
 - Some areas, such as Corral Hollow Road (southwest part of the County), contain properties that are way off the main road and are in dense wooded areas. If these residents are ever unable to get to the main road, they will run into transportation issues.
- Department of Water Resources is interested in understanding long term impacts of subsidence coupled with climate change.
- As temperatures rise, toxic algae blooms become more prevalent in the Delta and have a negative impact on water quality.

2.2 REGIONAL IMPLEMENTATION AND ADAPTATION STRATEGIES

2.2.1 IMPLEMENTATION AND ADAPTATION STRATEGIES

- Priority site identification and classification for first adaptation responses.
 - The Delta Stewardship Council (DSC) has an initiative called the Delta Levee Investment Strategy, which has been going on for 4-5 years. The Delta Levee Investment Strategy prioritizes State levee investments in the Delta for existing conditions, and the DSC has not yet been able to get it approved because of pushback from stakeholders. The investment strategy is for existing conditions.
- Template or sample language for documents
 - Template language about climate change impacts and responses would be useful for the Safety element of member jurisdictions' General Plans (for compliance with SB 379).
 - Template or sample language for climate policies.
- Transportation improvements

- When asked about priority transportation improvements they would like to see implemented, 17% of public survey respondents thought more trees should be planted along roads and sidewalks. (This was the highest percentage of the strategies listed in the question.)
- Active transportation infrastructure investments are needed to ensure safe and comfortable routes for pedestrians and bikers. Build bike paths on the existing levee network so people can access these areas safely (many bike/walk/jog on the levees anyway).
- Transit improvements are needed, especially for bus infrastructure (e.g. bus stops) and schedules (e.g. shorter headways). When asked about priority transportation improvements they would like to see implemented, 13% of public survey respondents thought more comfortable, shaded transit stops are needed and 14% of public survey respondents were interested in expanded bus routes and hours.
- Assess designated and “informal” trucking routes that may have disproportionate impacts to neighboring communities.
- Other transportation improvements that public survey respondents would like to see implemented included:
 - 9% answered flood control improvements for roadways.
 - 8% answered low emissions car share program.
 - 8% answered transit to cooling centers should be provided on hot days.
 - 8% answered better communication in emergencies.
 - 7% answered expanded on-demand transit.
- Multiple survey respondents noted that more efficient and accessible rail service is needed, and others were interested in rail improvements to existing infrastructure (e.g. electrification, grade separation). Improve connections to rail options like Amtrak and ACE.
- Multiple survey respondents said that traffic congestion needs to be addressed.
- Multiple survey respondents were interested in expanded bus service, including more dense coverage of bus routes and more frequent headways.
- Additional vehicle charging stations are needed in the San Joaquin region to support transition to electric vehicles.
- Integrate climate change considerations into the early stages of the transportation planning process. For example, Caltrans is integrating information developed in their vulnerability assessments and Adaptation Priorities Report into their corridor plans.
- Design guidance
 - Update design criteria and guidance for infrastructure projects. 7% of public survey respondents thought engineering standards should be improved.
- Urban heat island mitigation and tree canopy
 - Stockton needs more investment in urban tree canopy.
 - As described above, 17% of public survey respondents cited tree planting along roads and sidewalks as a priority adaptation strategy.
 - When asked about strategies they would like to see implemented to improve community resilience, 7% of public survey respondents answered reduction of urban heat island effect.
- Levee improvements

- Multiple public survey respondents expressed concern/interest in maintaining and improving the levee system to mitigate flooding.
- Resident taxes for levee improvements and flood mitigation strategies.
- San Joaquin County can continue to secure funding for flood protections and levee improvements in specific communities.
- Regionally coordinated levee raising projects to ensure the entire system is high enough for future flows.
- Continue critical projects in progress by the San Joaquin Area Flood Control Agency (SJAFCA) including the locally led Smith Canal Project (currently under construction), the Lower San Joaquin River Phase I Project (currently under design and a portion will be going into construction in 2022), and the Mossdale Tract area (currently in the planning phase).
- Summary of best practices
 - An analysis is needed to identify the best practices or projects that other cities/counties are conducting in terms of responses to wildfires, evacuations, flood events.
 - A summary of best practices would be helpful if it includes specific tools to address climate change impacts via zoning code updates and policies.
 - Create one platform or clearinghouse for climate change information and best practices for adaptation.
 - When asked about strategies they would like to see implemented to improve community resilience, 7% of public survey respondents said a collection of best practices.
 - The Delta Stewardship Council (DSC) has discussed creating a toolkit of information that can assist agencies that do not have any type of vulnerability assessment or climate work. The toolkit could include data on extreme heat, wildfires, flood maps, etc. Potential opportunity for collaboration.
- Changing zoning and land use ordinances
 - There are many options for solutions such as performance zoning, improvements to engineering standards, infrastructure improvements, etc. Some larger policy and project decisions are impacted by climate – e.g. countering urban heat island effect using narrower travel lanes, increasing tree plantings, and amended development code to encourage transition of surface parking to other areas.
 - Update development requirements to encourage the installation of bicycle parking or other bike facilities.
- Policy leadership
 - Identify what local leadership can do on the policy side to build resilience.
 - The San Joaquin Area Flood Control Agency developed a climate change adaptation policy that recognizes the upward trend of hydrology. The policy calls for additional factors of safety for flood infrastructure design, as well as purchasing the additional right of way needed to increase the resiliency of levee structures. Could be a potential case study for other climate policies.
 - Regional CBOs/CFOs can support/co-sponsor legislation and policies, and elevate regional best practices to a state level.
- Funding
 - Dedicated funding sources are needed to support regional climate change work including implementation of adaptation strategies.
 - When asked about strategies they would like to see implemented to improve community resilience, 13% of public survey respondents said additional grant funding.

- Improved coordination across stakeholders and local governments
 - When asked about strategies they would like to see implemented to improve community resilience, 7% of public survey respondents said a regional committee to coordinate and implement responses to climate change.
 - Public survey respondents highlighted the need for cross-sector collaboration on climate change issues and responses, including public health and community-based organizations (CBOs).
 - Several different agencies came together to try to respond to SB 5. County's Development Services Division has been deeply involved in this process. Could be a potential case study for inter-agency coordination on climate issues.
 - Organize a Regional Climate Collaborative made up of public and private partners, that coordinates with other regional collaboratives across the state.
- Public education and outreach
 - Public education campaign to ensure that the broader public understands climate change projections, impacts, and adaptation strategies, and the terminology surrounding these topics. There have been good efforts through the Office of Emergency Services to list information on their website about potential risks. This could be taken a step further with public campaigns or explicit partnerships with organizations
 - Outreach funding, such as stipends for non-paid professionals or stakeholders to participate in meetings. Providing incentives to contribute will ensure a diverse range of perspectives (not just from subject matter experts and professionals working in the field).
 - When asked about strategies they would like to see implemented to improve community resilience, 20% of survey respondents said community education opportunities.
 - When asked about strategies they would like to see implemented to improve community resilience, 11% of survey respondents said informational materials on climate issues.
- Climate job training and opportunities
 - When asked about strategies they would like to see implemented to improve community resilience, 15% of survey respondents said green business job training.
 - When asked about strategies they would like to see implemented to improve community resilience, 11% of survey respondents said more part-time jobs created to support responses to climate change.
- Energy reliability
 - Investment in smart grids, microgrids, and/or community power.
- Build community resilience
 - When asked about strategies they would like to see implemented to improve community resilience, 15% of survey respondents said community solar and community gardens used to help residents prepare for extreme weather and climate change.
 - Multiple survey respondents noted that air quality impacts are a prevalent public health concern in the San Joaquin region, especially given recent wildfires. One respondent suggested that keeping N95 masks in stock and available is needed for wildfire season.
 - Vision Action Team on health in Lodi: this effort offered businesses access to experts and stipends to improve employee health. CBOs could offer similar services to businesses to build capacity for addressing climate-related issues.
- Partner with organizations like the Climate Action Corps to organize and implement climate change projects.

- Develop a framework for capacity building within public agencies and nonprofits so that they can support adaptation planning efforts.

3 REGIONAL STAKEHOLDER ENGAGEMENT

3.1 STAKEHOLDER ENGAGEMENT GOALS

Stakeholder interviews were held to collect the following types of information:

1. Needs and barriers to regional adaptation planning and implementation.
2. Past impacts and problem areas on the multi-modal transportation network that should be prioritized, especially for Phase I study priority facilities.
3. Adaptation and implementation strategy ideas, especially for Phase I study priority facilities.

Identification of needs and barriers, as well as past impacts and problem areas, will help the project team understand the challenges SJCOG's stakeholders are facing due to climate change and the ways in which they need support. Collecting adaptation and implementation strategy ideas can directly feed into the Regional Resiliency Implementation Plan and Adaptation Guidance final report.

3.2 STAKEHOLDER ENGAGEMENT PROCESS

To collect feedback on regional needs, impacts, and adaptation and implementation strategy ideas from SJCOG stakeholders, the project team organized a Vulnerability Assessment Working Group (VAWG) made up of SJCOG's member jurisdictions, regional nonprofits, transportation agencies, and relevant state agencies. A workshop was held with the VAWG to discuss project goals and outcomes and begin to collect feedback for this Regional Needs Assessment. The project team also held a series of follow up group interviews with VAWG members and other regional contacts. The stakeholder interviews provided another opportunity to ask questions posed to the VAWG and gather input from regional decision-makers about some of the most important and vulnerable facilities on the transportation network, and their ideas for how to improve these facilities and make them more resilient.

3.2.1 WORKSHOP #1 FINDINGS

At the Phase II study's first workshop, the project team asked questions aimed towards identifying technical, institutional, and community needs and held a discussion with VAWG members. The project team also developed questions and talking points for a second stage of discussion focused on the Phase I study priority facilities identified in the assessment.

The sections below summarize the key barriers and needs discussed with the VAWG and their implementation strategy ideas. The Workshop #1 meeting notes in the Appendix provide more detail on this discussion and the needs and strategy ideas discussed with VAWG members.

NEEDS IDENTIFIED

Through discussion with the VAWG, the project team identified the following needs and barriers to regional adaptation planning and implementation. These needs include specific impacts stakeholders are facing and/or problem areas on the multi-modal transportation network that should be prioritized for the Regional Implementation Strategy.

Needs and Barriers

- Community needs:
 - Understand the subject matter and terminology around climate change.
 - Mitigate poor air quality impacts.
 - Address high cost and poor reliability of energy in the summer when it is hot and smoky.
 - Community priorities identified in the Stockton Sustainable Neighborhood Plan: energy use, positive health outcomes, food access, urban greening, improving parks, and meeting transportation needs.

- Barriers to adapting to climate change:
 - Local jurisdictions have a good sense of issues presented by climate change but not the specific locations that will be affected and how to address those impacts.
 - Funding limitations for assessments and responses.
 - Limited staff availability to focus on climate issues.
 - Accessibility to information and public education.
 - Clearer coordination across stakeholder groups and governments is needed to respond to climate change (there are varying levels of engagement – state, regional, and local – and it’s unclear how all are working together). Cross-agency coordination is needed and should be proactive before there are impacts and emergencies.

Impacts and Problem Areas

- Maintenance efforts and schedules are/will be impacted by weather (e.g. maintenance schedules can be affected by climate stressors like more severe and frequent extreme heat events).

IMPLEMENTATION AND ADAPTATION STRATEGIES IDENTIFIED

The VAWG provided valuable insights into what implementation and adaptation strategies are needed to prepare local communities and the transportation network for a changing climate.

Implementation Strategies

- Summary of best practices
 - An analysis is needed to identify the best practices or projects that other cities/counties are conducting in terms of responses to wildfires, evacuations, flood events.
 - A summary of best practices would be helpful if it includes specific tools to address climate change impacts via zoning code updates and policies.
 - Create one platform or clearinghouse for climate change information and best practices for adaptation.
- Changing zoning and land use ordinances
 - There are many options for solutions such as performance zoning, improvements to engineering standards, infrastructure improvements, etc. Some larger policy and project decisions are impacted by climate – e.g. countering urban heat island effect using narrower travel lanes, increasing tree plantings, and amended development code to encourage transition of surface parking to other areas.
- Policy leadership
 - Identify what local leadership can do on the policy side to build resilience.
- Priority site identification and classification for first adaptation responses.
- Public education and outreach
 - Public education campaign to ensure that the broader public understands climate change projections, impacts, and adaptation strategies, and the terminology surrounding these topics.
 - Outreach funding – such as stipends for non-paid professionals or stakeholders to participate in meetings. Providing incentives to contribute will ensure a diverse range of perspectives (not just from subject matter experts and professionals working in the field).
- South Stockton

- Identify potential flood impacts to roadways which may be a recurring issue due to a lack of investment in infrastructure in South Stockton.
- Provide shelters for bus stops.

3.2.2 INTERVIEW FINDINGS

Interviews were held with regional decision makers and asset manager representatives from SJCOG’s member jurisdictions, CBOs/FBOs, VAWG members, and other partner agencies. To maximize the number of interviewees and encourage cross-jurisdictional/agency discussion, the project team organized group interviews with stakeholders that had similar perspectives and interests. Interviews were grouped as follows:

1. **Cities:** *Attendees:* Stockton, Ripon, *Regrets:* Lodi, Tracy, Manteca, Lathrop, Escalon
2. **San Joaquin County Departments:** *Attendees:* Community Development, *Regrets:* County Administrator, San Joaquin County Office of Emergency Services
3. **Levee Systems:** *Attendees:* San Joaquin Public Works, California Department of Water Resources, and San Joaquin Area Flood Control Agency, *Regrets:* Central Valley Flood Protection Board,
4. **CBOs/CFOs:** *Attendees:* Reinvent South Stockton Coalition, Third City Coalition, Edge Collaborative, *Regrets:* California Farmland Trust, Catholic Charities, Stockton Strong, Sierra Club
5. **Bike CBOs:** *Attendees:* San Joaquin Bike Coalition, Bike Lodi
6. **Public Transportation Agencies and Interagency Transit Committee:** *Attendees:* Tracy, Lodi, Escalon, Manteca, Lathrop, Ripon, Lodi, *Regrets:* San Joaquin Regional Rail Commission/Altamont Corridor Express Rail, San Joaquin Regional Transit District, Valley Link, San Joaquin Regional Transit District
7. *Attendee:* Stockton Metropolitan Airport
8. *Attendee:* Delta Stewardship Council
9. *Attendee:* Caltrans District 10
10. *Attendee:* Port of Stockton

Interview questions were developed specific to each set of stakeholders but were focused on achieving the overall stakeholder engagement goals of identifying needs and barriers to regional adaptation planning and implementation, past impacts and problem areas, and adaptation and implementation strategy ideas. The key takeaways of all interviews are listed below by needs and implementation strategies identified. See the Appendix for the complete set of interview notes.

NEEDS IDENTIFIED

Needs and Barriers

- Community needs:
 - Reliable access to diverse transportation options for commuting and access to healthcare and other services.
 - Need for more active transportation infrastructure: bicycle lanes, sidewalks, and amenities like bicycle parking. Oftentimes bicyclists and pedestrians do not feel safe traveling and it is imperative to create more places where people can get around safely.
- Staffing
 - Local jurisdictions, and partner organizations, have limited staffing and/or staff with the expertise needed to address climate change.
- Funding

- Local jurisdictions do not have the funding necessary to assess impacts from climate change and respond, install transportation improvements, or conduct maintenance needed.
- Regional leadership needs the willingness and capacity to apply for grant funding.
- Data gaps
 - More data collection and analysis of climate across key public policy issues, such as public safety, homelessness, civic engagement, etc.
- Knowledge barriers
 - Climate denial is an unfortunate reality even for elected officials, which may delay progress in the region.
- Prioritization of responses
 - Evacuation routes could be affected by climate hazards. County Office of Emergency Service has identified these routes that need to be evaluated.
 - Need to make sure projects in disadvantaged communities are prioritized.
- Design changes
 - When trying to design a project today, there is an issue with what needs to be assumed for design flow. If it assumed that there will be three times the amount of flow coming down the river, then there would be issues in trying to build levees high enough and securing the funding for these types of projects.
- Energy reliability
 - Transitioning to all-electric buses will be a challenge in the future given that blackouts have become more common.
 - There are concerns related to how bus fleets will assist in evacuations if buses will need to stop to charge.

Impacts and Problem Areas

- Bus stops are often unprotected and not highly visible, especially in South Stockton.
- Bus ridership can decline when the weather is too hot or cold, especially for senior citizens.
- Poor air quality/air pollution:
 - Is a major concern, especially for Stockton given its placement as a transportation hub and its proximity to highways and the Port of Stockton. Trucking routes may contribute to these air quality impacts, especially in disadvantaged neighborhoods.
- High heat days
 - Are a concern for active transportation users and those waiting at unprotected bus stops.
 - This past summer (2020) was very difficult for those who used bikes for transportation and are in high risk professions (such as farm workers). Outreach was orchestrated for these folks, so they had water to drink. Many of these workers would walk or bike to a designated location, and then get picked up and taken to work. There were serious health concerns for these types of workers due to COVID, the fires, and poor air quality.
 - Extreme heat affects outdoor workers of all types, including at the Stockton Airport, where heat radiating off the pavement makes conditions much hotter. Summer maintenance staff have to change their schedules.
- Flood impacts:
 - Flooding is a major concern for residents, especially if they neighbor a levee or rely on a levee road to reach their property.

- Significant flooding several years ago caused train derailments in the Stockton area.
- Concerns about Delta flooding from combination of sea level rise and flooding from the San Joaquin and Sacramento Rivers. The Department of Water Resources vulnerability assessment projects triple the flow coming down the San Joaquin River by 2065 (for a 200-year event). Specific concerns are related to flood impacts of disadvantaged communities and evacuation or critical routes.
- There are areas in the west part of the County near Corral Hollow that experience mudslides and have a lot of sediment coming down the flow.
- There are bridge structures that lack capacity, so as there are more intense storms in the area there are also increased concerns for safety and potential loss of property
- One of the hardest hit areas in terms of increased flows is the Mossdale Tract (Reclamation District 17) area. This location includes the portions of Lathrop, Manteca, Stockton, and San Joaquin County. SJAFCA is doing a Feasibility Study with DWR to explore alternatives so that this area can be better protected.
- Interstates 5 and 205 could flood under projected 2065 flows. State Route 120 would also be impacted if the dryland levee remains as it is today.
- In 1997, the area behind the dryland levee became a lake because of upstream breaches and overtopping. The levees upstream are all small, agricultural levees that are not certified and provide limited protections during a big flood event. There have been several instances in the past where these levees will either breach or overtop.
- City of Stockton flood maps show that public housing is in an existing floodplain and there are no comprehensive flood mitigation measures in place.
- Flooding of underpasses is especially challenging for bikers.
- The Stockton Airport is in a floodplain, but they have not experienced recent flood impacts.
- Wildfire impacts:
 - There are some areas identified on County maps that are fire hazard areas or are unprotected because there is not a specific fire district for that area.
 - Some areas, such as Corral Hollow Road (southwest part of the County), contain properties that are way off the main road and are in dense wooded areas. If these residents are ever unable to get to the main road, they will run into transportation issues.
- Department of Water Resources is interested in understanding long term impacts of subsidence from climate change.
- As temperatures rise, toxic algae blooms become more prevalent in the Delta and have a negative impact on water quality.

IMPLEMENTATION AND ADAPTATION STRATEGIES IDENTIFIED

Implementation Strategies

- Priority site identification and classification for first adaptation responses.
 - The DSC has an initiative called the Delta Levee Investment Strategy, which has been going on for 4-5 years. The Delta Levee Investment Strategy prioritizes State levee investments in the Delta for existing conditions, and the DSC has not been able to get it approved because of pushback from stakeholders. The investment strategy is for existing conditions.
- Template or sample language for documents
 - Template language about climate change impacts and responses would be useful for the Safety element of member jurisdictions' General Plans (for compliance with SB 379).

- Template or sample language for climate policies.
- Transportation improvements
 - Active transportation infrastructure investments are needed to ensure safe and comfortable routes for pedestrians and bikers.
 - Build bike paths on the existing levee network so people can access these areas safely (many bike/walk/jog on the levees anyway).
 - Transit improvements are needed, especially for bus infrastructure (e.g. bus stops) and schedules (e.g. shorter headways). Improve connections to rail options like Amtrak and ACE.
 - Assess designated and “informal” trucking routes that may have disproportionate impacts to neighboring communities.
 - Additional vehicle charging stations are needed in the San Joaquin region to support transition to electric vehicles.
 - Integrate climate change considerations into the transportation planning process holistically and early-on. For example, Caltrans is integrating information developed in their vulnerability assessments and Adaptation Priorities Report into their corridor plans.
 - Multimodal transportation options are needed in South Stockton where these investments are lacking.
- Design guidance
 - Update design criteria and guidance for infrastructure projects.
 - Potential case study: Stockton Airport has made a couple design changes to be more resilient to extreme weather impacts by having a standby generator at the terminal and by using a Category 2 Instrument Landing System (ILS).
- Levee improvements
 - Resident taxes for levee improvements and flood mitigation strategies.
 - San Joaquin County can continue to secure funding for flood protections and levee improvements in specific communities.
 - Regionally coordinated levee raising projects to ensure the entire system is high enough for future flows.
 - Continue critical projects in progress by SJAFCA including the locally led Smith Canal Project (currently under construction), the Lower San Joaquin River Phase I Project (currently under design and a portion will be going into construction in 2022), and the Mossdale Tract area (currently in the planning phase).
- Changing zoning and land use ordinances
 - Update development requirements to encourage the installation of bicycle parking or other bike facilities.
- Policy leadership
 - The San Joaquin Area Flood Control Agency developed a climate change adaptation policy that recognizes the upward trend of hydrology. The policy calls for additional factors of safety for flood infrastructure design, as well as purchasing the additional right of way needed to increase the resiliency of levee structures. Could be a potential case study for other climate policies.
 - Regional CBOs/CFOs can support/co-sponsor legislation and policies and elevate regional best practices to a state level.
- Urban heat island mitigation and tree canopy

- Stockton needs more investment in urban tree canopy, particularly in South Stockton where the tree canopy is currently sparse. The city's Stockton Rising Project, through the Transformative Climate Communities (TCC) Program, encompasses downtown and most of South Stockton. A big component of the project is focused on urban greening.
- Improved coordination across stakeholders and local governments
 - Several different agencies came together to try to respond to SB 5. County's Development Services Division has been deeply involved in this process. Could be a potential case study for inter-agency coordination on climate issues.
 - Organize a Regional Climate Collaborative made up of public and private partners, that coordinates with other regional collaboratives across the state.
- Public education and outreach
 - Build general awareness about climate change projections and expected impacts for San Joaquin region residents. There have been good efforts through the Office of Emergency Services to list information on their website about potential risks. This could be taken a step further with public campaigns or explicit partnerships with organizations.
- Energy reliability
 - Investment in smart grids, microgrids, and/or community power.
- Build community resilience
 - Vision Action Team on health in Lodi: this effort offered businesses access to experts and stipends to improve employee health. CBOs could offer similar services to businesses to build capacity for addressing climate-related issues.
 - Caltrans has developed a District Equity Task Force to promote policies and programs that reflect principles of diversity, inclusion, and fairness.
- Partner with organizations like the Climate Action Corps to organize and implement climate change projects.
- Develop a framework for capacity building within public agencies and nonprofits so that they can support adaptation planning efforts.
 - A Responsible, Accountable, Consulted and Informed (RACI) matrix of climate responsibilities across public sector agencies.
- Summary of best practices
 - The Delta Stewardship Council (DSC) has discussed creating a toolkit of information, that can assist agencies that do not have any type of vulnerability assessment or climate work. The toolkit could include data on extreme heat, wildfires, flood maps, etc. Potential opportunity for collaboration.

4 COMMUNITY ENGAGEMENT

4.1 COMMUNITY ENGAGEMENT GOALS

Community engagement was an important element during the outreach phase of the SJCOG Regional Resiliency Implementation Plan and Adaptation Guidance project. The engagement process gave community members the opportunity to provide their needs and priorities related to climate change, and detail what climate hazards already impact their daily lives. The input received from the community provided the project team with additional information about local concerns surrounding climate change, how residents use the transportation system, how previous weather events have impacted them, and the types of responses that the community would like to see implemented in the San Joaquin County region.

To assist in guiding the project's outreach phase, the following engagement goals were established:

1. Engage with a broad and diverse spectrum of residents in the San Joaquin region.
2. Ensure full engagement with underserved and underrepresented communities including those who are low income, transit dependent, speak English as a second language, and/or live in historically disadvantaged and polluted neighborhoods.
3. Identify how the community regularly uses the transportation network.
4. Identify perspectives and priorities around climate change issues in the San Joaquin region.
5. Collect community feedback on recent/past impacts of extreme weather and climate hazards, and problem areas on multi-modal transportation network.
6. Collect feedback on the climate change responses the community would like to see implemented.

4.2 OUTREACH STRATEGIES APPLIED

With the ongoing COVID-19 health crisis, it was important to develop effective engagement strategies that focused on outreach that could be completed in environments that would keep participants safe, while still providing the valuable input needed to meet the project's established community engagement goals. Therefore, the project team researched and identified multiple engagement strategies as alternatives to in-person events or gatherings. It was decided that the engagement strategies that would be most effective during the project's public outreach phase would include the use of an online survey, a dedicated phone line to receive comments from the public, and a social media campaign. Once implemented, all these outreach strategies were made available to the public in both English and Spanish.

The project's online survey was hosted on MetroQuest, a survey platform accessible on both computers and mobile devices (e.g. cellphones and tablets). The survey consisted of a series of multiple choice and priority ranking questions, as well as a mapping element, and was available to survey participants in both English and Spanish. Through the online survey, participants were able to:

- Learn about the project's purpose
- Rank and prioritize impacts from climate change that most concern them
- Detail their travel characteristics
- Provide input on their climate change concerns
- Identify transportation improvements and community preparedness strategies they would like to see implemented in the San Joaquin region to prepare for extreme weather and climate change, and help make the transportation system more resilient
- Participate in a countywide mapping exercise that allowed participants to identify if weather events or conditions have affected their travel or required them to evacuate

The project team also established a dedicated phone line to receive input from the public in order to help bridge the digital divide that exists among those in the community who have limited or no access to computers and the internet. The phone line consisted of a local number that callers could dial in to and leave a comment on the project or participate in a telephone survey. The telephone survey

contained pre-recorded questions that were similar to the online survey, and that allowed participants to verbally record their answers. When dialing in to the phone line, callers were met with an initial greeting that provided information on the project and instructions on how to participate in the telephone survey. Callers would then be prompted to press 1 to complete the telephone survey in English or press 2 to complete the survey in Spanish. Once callers had recorded their answers to the phone survey, the project team was alerted via email that a new message was left on the dedicated phone line.

A social media campaign was used to bring awareness to the project and help boost online and phone line survey participation. Targeted social media advertisement via Facebook advertisements was utilized to ensure input was received from all segments of the community. The project team ran two bilingual Facebook advertisements during the social media campaign. The first advertisement specifically targeted zip codes that are identified by CalEnviroScreen as “Disadvantaged Communities,” per California Senate Bill 535.² These zip codes were targeted to encourage input from communities that are historically disadvantaged and disproportionately burdened by pollution and environmental impacts. The second advertisement targeted the San Joaquin County region as a whole, including those disadvantaged communities already being targeted in the first advertisement. To further incentivize online survey participation, Facebook advertisements included a message that survey takers would be entered into a drawing to win a \$50 Amazon gift card.

Additional public outreach strategies that were used during the project’s engagement process included sharing project and survey information to project stakeholders for dissemination to the colleagues and constituents, as well as posting project information and the online survey link to the Stockton Reddit platform.

4.3 COMMUNITY SURVEY FINDINGS

4.3.1 GENERAL INFORMATION AND DEMOGRAPHICS

The SJCOG Regional Resiliency Implementation Plan and Adaptation Guidance online survey was made available to the public on December 24, 2020 and was live through March 15, 2021. During this time, a total of 74 completed surveys were submitted by participants throughout San Joaquin County.

Most survey respondents (81%) indicated that “driving alone or with family” was one of their main modes of transportation.³ The next most frequently cited modes were walking (22%), biking (19%), or the use of public transit (18%). Figure 1 shows the breakdown of responses by mode and whether respondents’ zip codes are designated as disadvantaged by CalEnviroScreen.

For demographics, a majority of respondents (53%) were between the ages of 25 to 44, followed by those who were between the ages of 18 to 24 (17%).

43% of respondents described themselves as Caucasian, while another 33% of survey takers identified themselves as Hispanic or Latino.

Approximately 29% of survey takers lived in a household with 2 people, while another 25% lived with 4 people, followed by 21% who have 3 people living in their household.

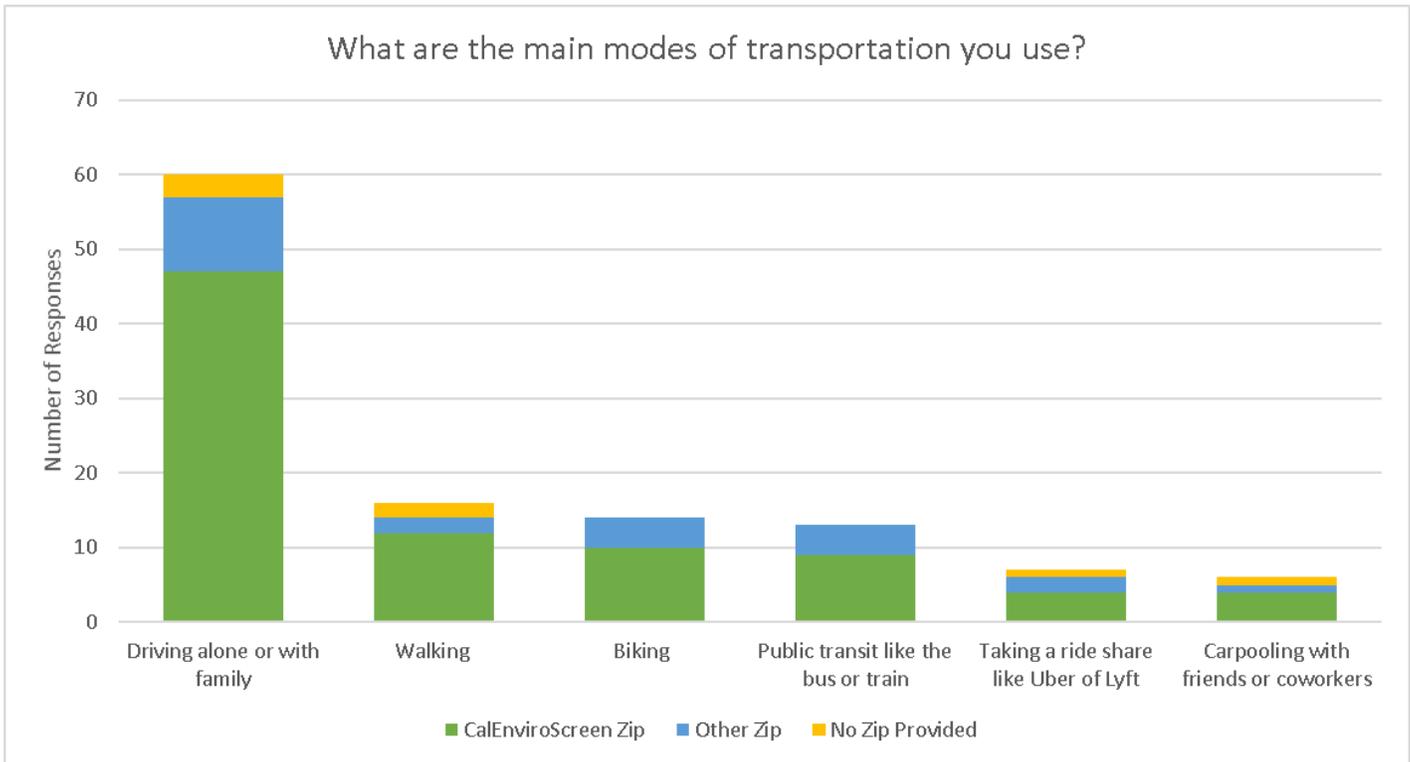
Of respondents, 68% had a household income of \$50,000 or more; 13% were between \$25,000 and \$35,999, 11% were between \$36,000 and \$49,999 (11%), and 8% were less than \$15,000.

About 69% of survey respondents resided in zip codes designated as disadvantaged by CalEnviroScreen. 19% lived in other zip codes, and 12% did not provide a zip code.

² See the following California Office of Environmental Health Hazard Assessment (OEHHA) pages for more details on CalEnviroScreen and SB 535: < <https://oehha.ca.gov/calenviroscreen/how-use#:~:text=CalEnviroScreen%20was%20designed%20to%20help,health%20and%20environmental%20hazard%20criteria>> and < <https://oehha.ca.gov/calenviroscreen/sb535>>.

³ Participants were allowed to indicate more than one main mode.

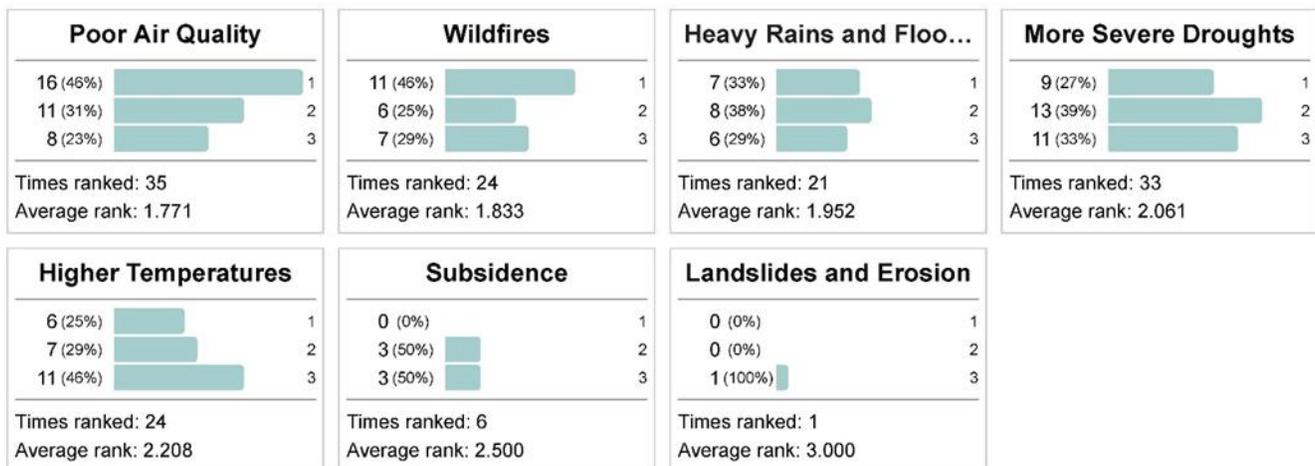
Figure 1 - Transportation Modes



4.3.2 REGIONAL IMPACTS AND CONCERNS

Of the surveys that were completed, 91% of survey responses indicated that they were either very concerned or somewhat concerned about the day-to-day impacts from climate change. Figure 2 shows climate change impacts considered most concerning to respondents, who could rank up to 3 impacts, 1 being the most concerning. The highest average ranking was for poor air quality (1.77), followed closely by wildfires (1.83), and heavy rains and flooding (1.95).

Figure 2 - Climate Change Impacts

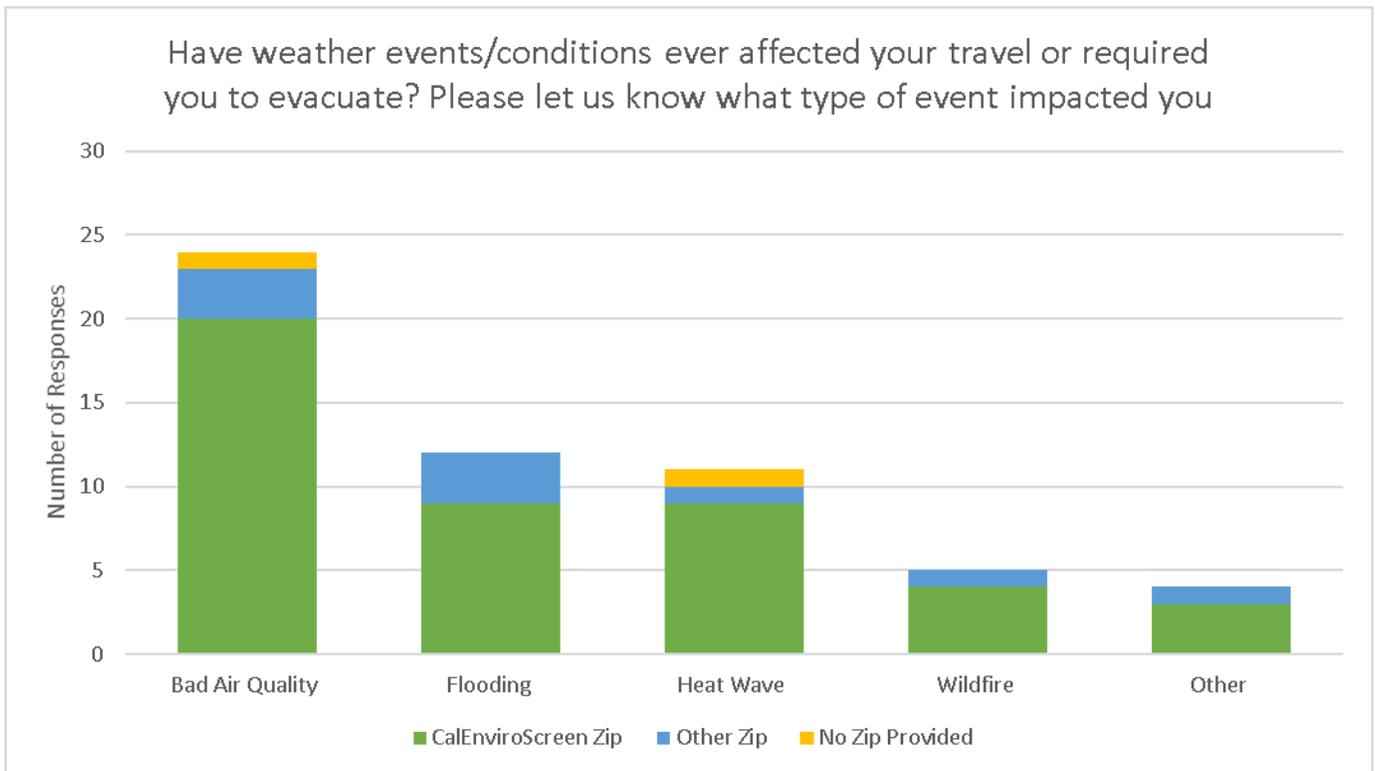


Participants were asked if the weather events or conditions have ever affected their travel or required them to evacuate. They were asked to identify what type of event or condition impacted them, and where in San Joaquin County this occurred, by dragging and dropping a marker icon onto a map. Mapping markers icons included: heat wave, flooding, wildfire, bad air quality, and other. Once

participants placed their icon marker on the map a textbox would appear and allows respondents to provide additional comments on the event or condition that impacted them.

A total of 59 icon markers were placed on the map. As shown in Figure 3, 24 of respondents' travel was affected by bad air quality, 12 by flooding, 11 by heat waves, 5 by wildfire, and 4 by other weather events. Of the 59 markers that were placed on the map, survey participants left 24 comments that provided further detail on the event or condition that impacted them. A complete listing of mapping comments can be seen in Appendix 4.2.

Figure 3 - Past Impacts



The next several maps show problem areas identified by respondents and/or areas where respondents experienced a weather-related impact to their travel. Figure 4 shows all locations. Figure 5 shows locations in the Stockton area, and Figure 6 shows locations in the Lathrop and Manteca area. Responses for bad air quality and heat waves were scattered in different parts of the county, generally concentrated in more populous areas. Flooding tends to be more of a discrete rather than area-wide hazard like bad air quality or heat waves and was cited as an issue in a few areas. Areas where past flooding impacts were noted included near the Calaveras River in Stockton and near the San Joaquin River, particularly southwest of Manteca but also north in or near Stockton.

Figure 4 - Impact Locations (Full Extent)

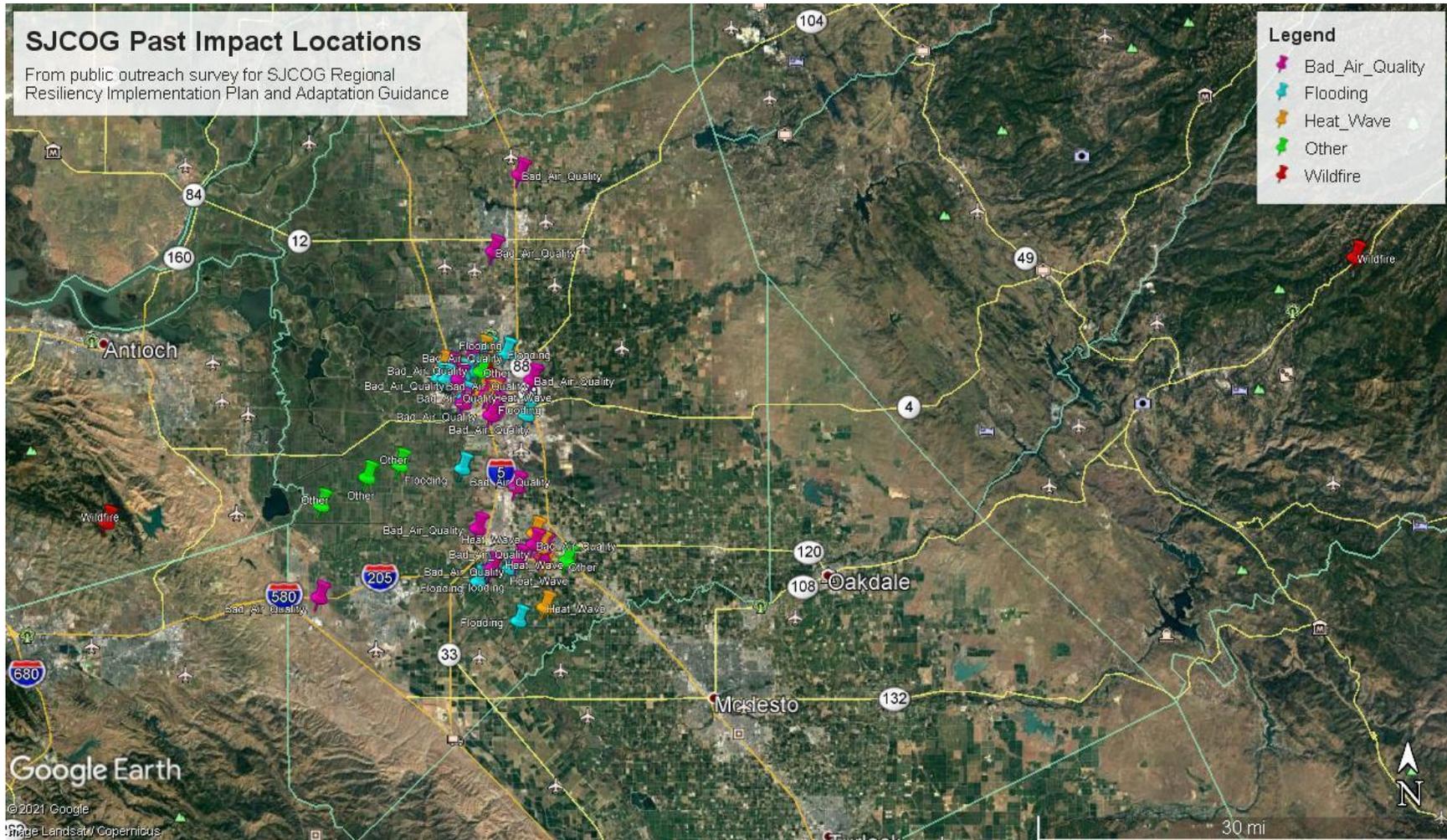


Figure 5 - Impact Locations (Stockton Zoom)

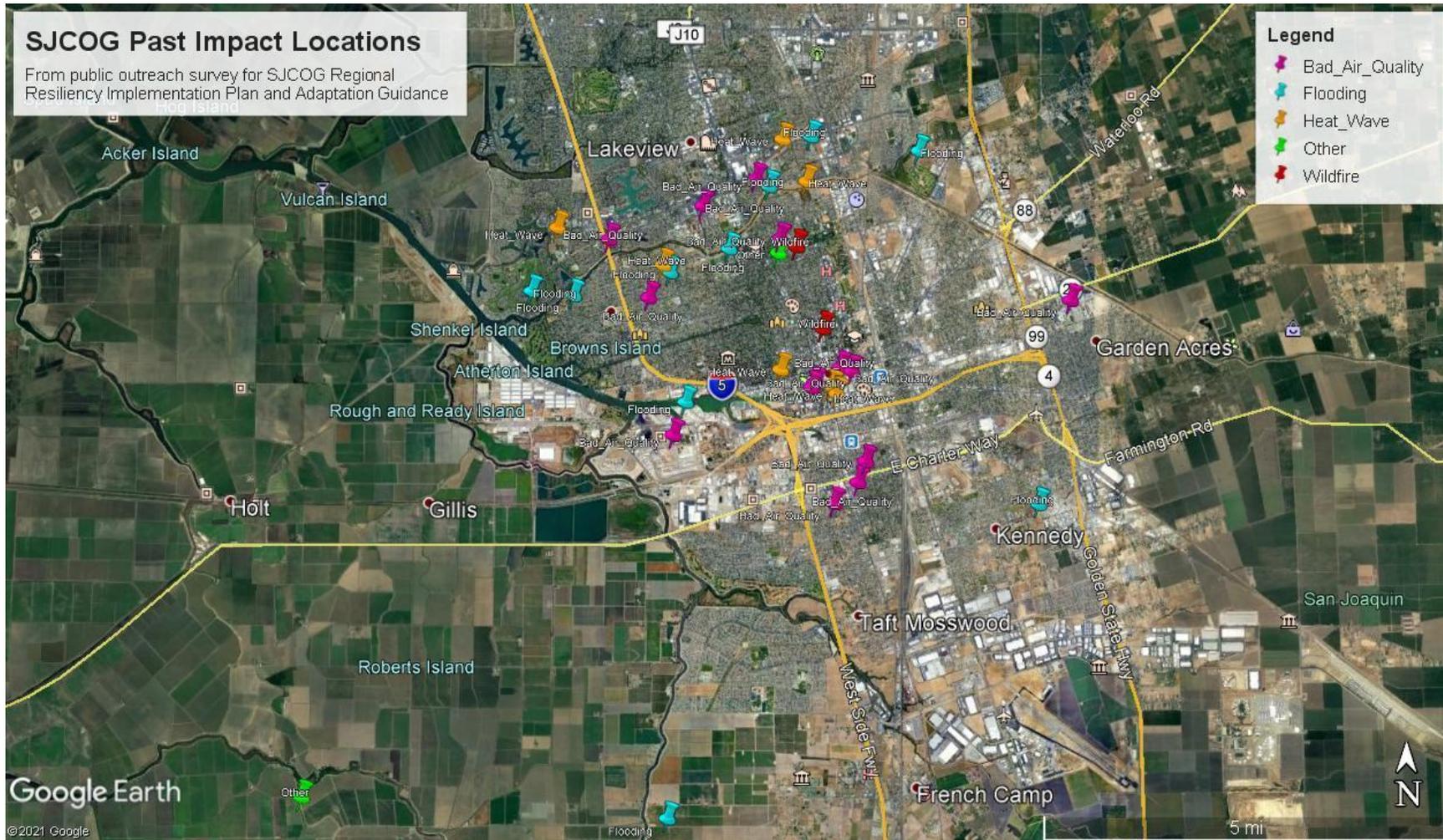
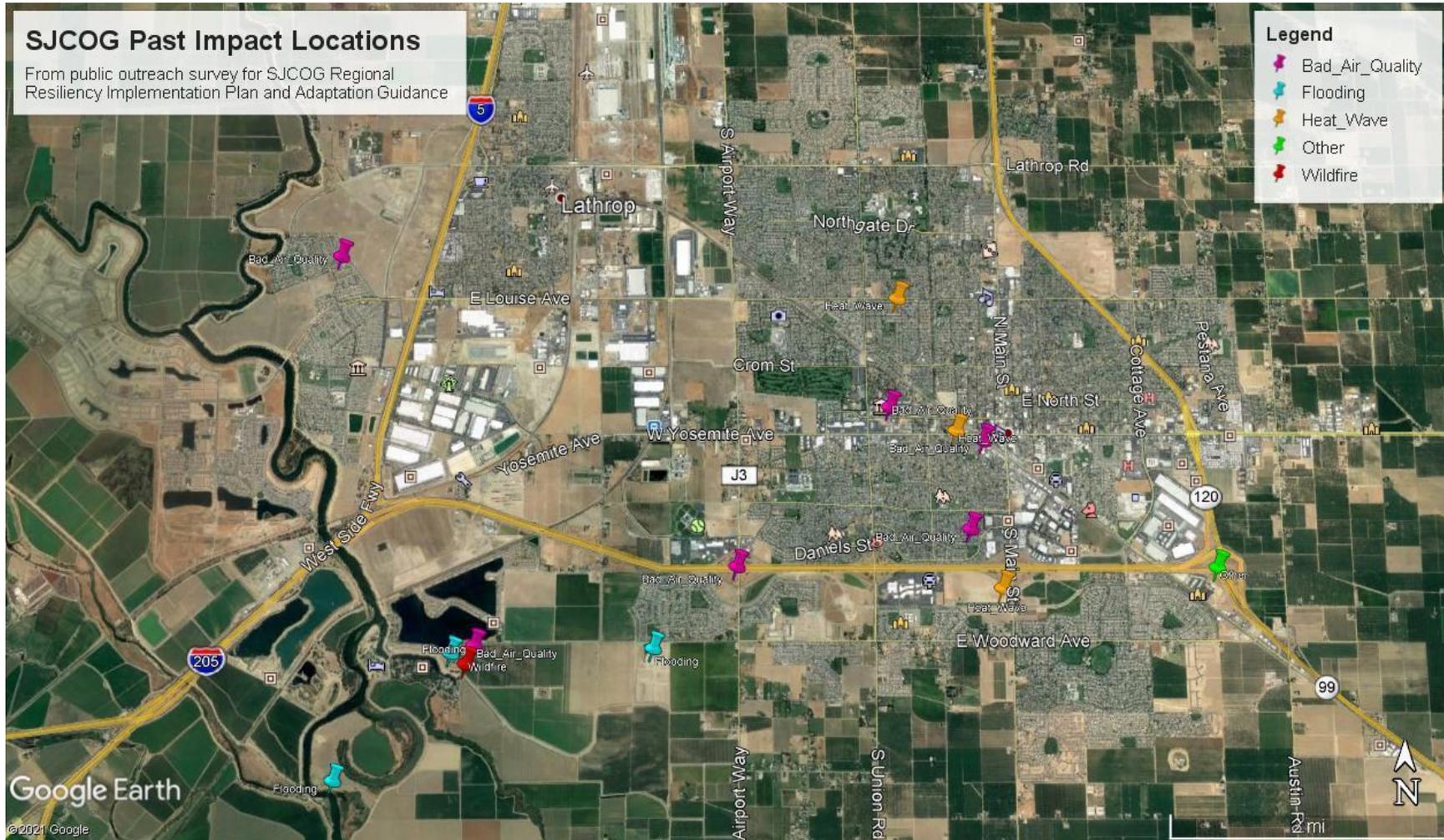


Figure 6 - Impact Locations (Lathrop/Manteca Zoom)



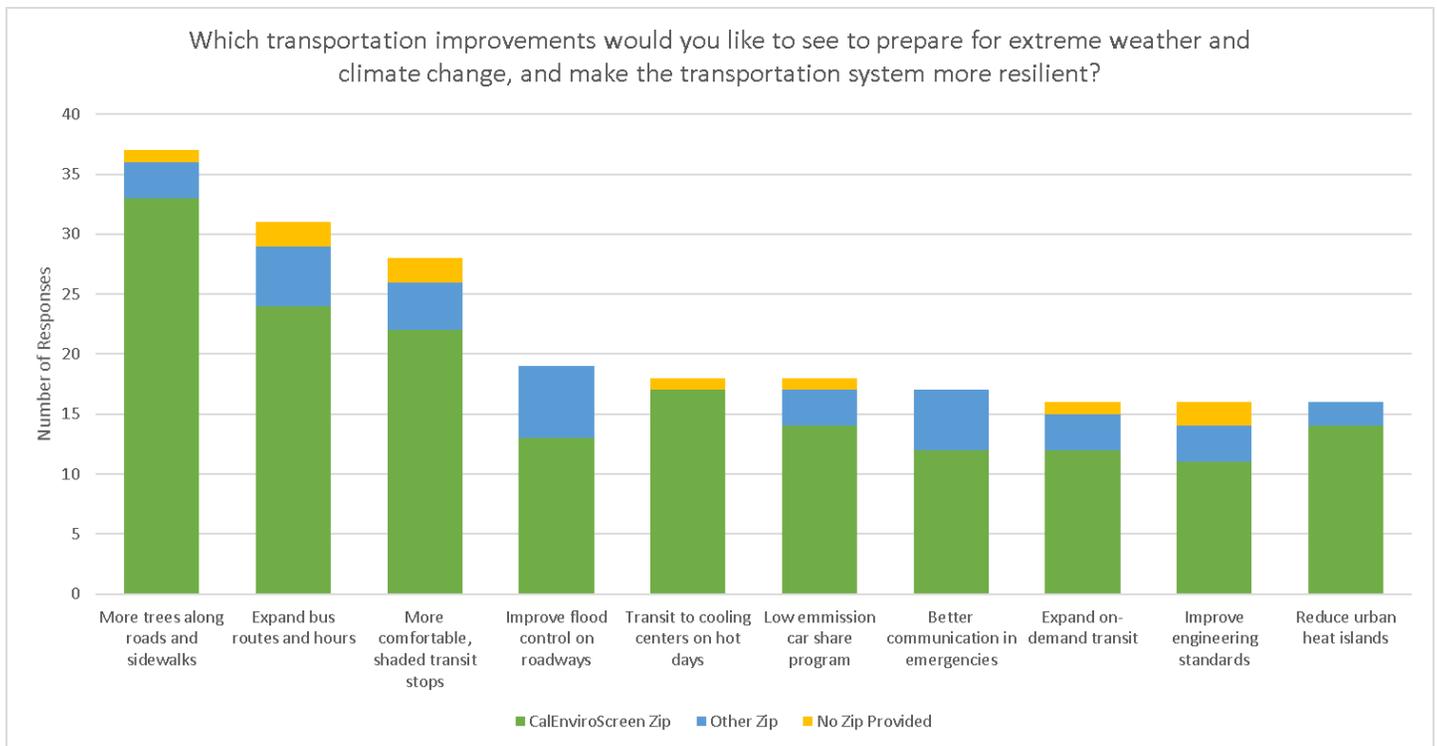
4.3.3 IMPLEMENTATION AND ADAPTATION STRATEGIES IDENTIFIED

To gain insight on what community members felt were the most important implementation or adaptation strategies when preparing for extreme weather and climate change, particularly with regards to the transportation system, the project team asked the following two key questions from survey participants. Survey takers could select more than one option when responding to each of the questions.

Which of the following transportation improvements would you like to see in the San Joaquin region to prepare for extreme weather and climate change, and make the transportation system more resilient?

17% of all responses listed the planting of more trees along roadways and sidewalks as a transportation improvement they would like to see in the San Joaquin region. The next most popular response was to expand bus routes and hours (14%), followed by the creation of more comfortable and shaded transit stops (13%). Figure 7 shows the number of responses per improvement broken down by whether they were from disadvantaged zip codes, as designated by CalEnviroScreen. In general, responses were consistent between all responses and the CalEnviroScreen zip code responses. In the comments section of the survey, a number of individuals provided specific recommendations for improvement to the transportation system, particularly denser, more frequent transit service and addressing issues with roadway congestion and safety.

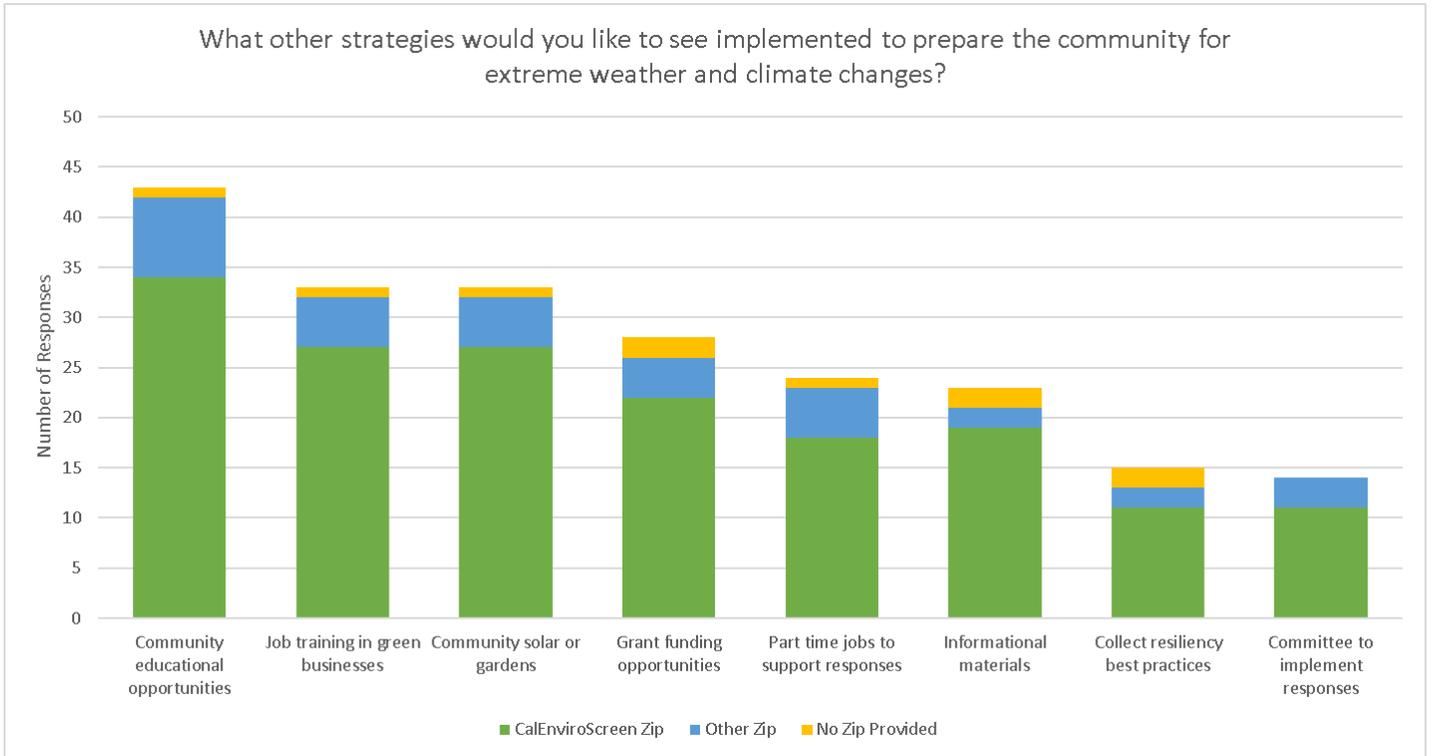
Figure 7 – Transportation Improvements



What other strategies would you like to see implemented in the San Joaquin region to prepare the community for extreme weather and climate changes?

20% of respondents indicated that they would like to see educational opportunities for community members to learn about climate change and sustainability. The next most popular responses were supportive of projects that improve community member quality of life like community solar or community gardens (16%), as well as providing job training in green business (16%). Figure 8 shows results broken down by whether respondents reside in CalEnviroScreen zip codes.

Figure 8 - Community Preparedness



5 APPENDIX

5.1 ANALYSIS WORKSHOP #1 NOTES

Thursday, October 1, 2020

10:00 – 11:30 am

Location: Virtual Meeting via Zoom

Attendees: *Vulnerability Assessment Working Group Members:* Jonathan Pruitt (Catholic Charities Diocese of Stockton), Michael King (City of Lathrop), Mark Meissner (City of Lathrop), Matthew Diaz (City of Stockton), Cynthia Marsh (City of Stockton), Tristan Osborn (City of Stockton), Ann Rogan (City of Stockton), Taylor Williams (City of Stockton), William Dean (City of Tracy), Megan Aguirre (County of San Joaquin), David Kwong (County of San Joaquin), Najee Zarif (County of San Joaquin), Harriet Ross (Delta Stewardship Council), Kim Anderson (Regional Government Services), Darryl Rutherford (Reinvent South Stockton Coalition), Renee DeVere-Okie (Sacramento Area Council Of Governments), Lynnea Ormiston (Sacramento Area Council Of Governments), Dylan Casper (San Joaquin Regional Rail Commission), David Ripperda (San Joaquin Regional Rail Commission), Isael Ojeda (Stanislaus Council of Governments), *Project Team:* Christine Corrales (San Joaquin Council of Governments), Isaiah Anderson (San Joaquin Council of Governments), Ashley Goldlist (San Joaquin Council of Governments), Hector Guerra (VRPA), Timothy Grose (WSP), Annika Ragsdale (WSP)

1. Welcome and Introductions

Christine Corrales, San Joaquin Council of Governments (SJCOG), welcomed attendees and thanked them for attending the Analysis Workshop #1. Christine led a round of introductions from the Vulnerability Assessment Working Group Members and project team (see above).

2. Adaptation and Resilience Study Project Overview and Outcomes

Ashley Goldlist, SJCOG, provided an overview of the SJCOG Climate Adaptation and Resiliency Study (Phase I Study). The Climate Adaptation and Resiliency Study assessed the vulnerability of the San Joaquin County’s transportation system to climate stressors, including:

- Sea level rise
- Riverine flooding
- Extreme precipitation
- Wildfire
- Extreme heat and drought

The overall goal of the Study was to consider how to improve the resiliency of the transportation system in response to climate change. The project began by identifying crucial assets for a resilient transportation system. The project team investigated how these assets would be exposed to each climate stressor under different greenhouse gas emissions projections and model scenarios.

The project team developed project resiliency goals which helped to define the Study’s scope, focus on realistic outcomes, and prioritize top vulnerabilities. The goals focused the vulnerability assessment on issues and assets related to transit, goods movement, and emergency evacuation. The Study’s resilience goals included the following:

- Maintain a multimodal transportation network.
- Create and maintain redundancy in the transportation system.
- Ensure operation of routes supporting evacuation and emergency response.

The Climate Adaptation and Resiliency Study identified the most critical and vulnerable assets around the County. The following assets were identified as being highly vulnerable and in need of priority action:

- SR-99 through Lodi
- South Stockton Neighborhood
- Stockton Airport
- Stockton Wye
- SR-4 from Stockton west to Contra Costa
- BNSF Intermodal Railroad

The following recommendations were identified for integrating resiliency into the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS):

- Use climate projects when defining future scenarios for the RTP/SCS.
- Use indicators of criticality and vulnerability across assets/projects.
- Review priority assets from vulnerability assessment and add to the RTP/SCS project list.

3. What is Needed to Respond to Climate Change in San Joaquin County?

Tim Grose, WSP, led a discussion on what is needed in San Joaquin County in order to respond to climate change. Needs may include the following:

- **Technical Needs:** Information, data, technical methodologies or guidance.
- **Institutional Needs:** Increased staff capacity or training.
- **Community Needs:** Additional community resources or support, especially for disadvantaged communities.
- **Needs for priority facilities:** Identified in Phase I analysis (see item number two above).
- **Other types of needs**

During this roundtable session Tim asked a series of questions designed to solicit feedback from attendees. These questions and responses are listed below.

What decisions do you make that depend on weather or climate change?

- Najee Zarif, County of San Joaquin:
 - **Storm drain infrastructure (culverts, ditches, bridges)**
 - Maintenance efforts are impacted by weather (e.g. **maintenance schedules** can be affected by climate stressors like more severe and frequent extreme heat events)
 - **Levees**
 - **Evacuation routes**
- Matthew Diaz, City of Stockton:
 - When talking about a resiliency plan this can also include heat islands, complete streets, infrastructure, flooding, land uses, etc.
 - Interested in **how climate change affects the Emergency Preparedness Plan.**
 - Would like to see problem areas identified, and what mechanisms would best respond to those certain areas.
 - He noted that currently the City has a good sense of issues presented by climate change but not the **specific locations that will be affected and how to address those impacts**
 - Knowing specifically how climate change impacts affect the City will allow for the creation of solutions.
 - Believes that there are many options for solutions such as **performance zoning, improvements to engineering standards, infrastructure improvements, etc.** Determining the specific problems and responses in certain locations will be helpful. As an example, Matt mentioned **changes to Right-of-Way size and landscaping could be an adaptive response.**
- Cynthia Marsh, City of Stockton (comment provided via Zoom chat):
 - Best practices would be helpful, but also specific tools to address these issues via our **zoning code updates and policies.**

- Tristan Osborn, City of Stockton (comments provided via Zoom chat):
 - **Zoning**
 - **Land Use**
 - **Priority site identification** and classification impacted by Sea Level Rise and flood risk.
 - Some larger policy and project decisions are impacted by climate – e.g. **countering urban heat island effect through the use of narrower travel lanes, increasing tree plantings, and amended development code to encourage transition of surface parking to other areas.**

What additional information do you need to make future-oriented decisions?

- Cynthia Marsh, City of Stockton (comments provided via Zoom chat):
 - **Funding** to address this issue is always helpful.
 - **Accessibility and public education.**
- Darryl Rutherford, Reinvent South Stockton Coalition:
 - **Outreach funding, such as stipends for non-paid professionals** to participate in meetings such as the one being held today.
 - **Methods for evaluating adaptation strategies, and guidance for implementing** those strategies.
 - There are a number of individuals who are not currently engaged in this issue, but perhaps they should be so that they can provide their day-to-day experiences and challenges on this issue. This will allow for an **infusion of different perspectives, not just the perspective from professional individuals.**
 - **Giving the public the tools so they can more easily understand what the adaptation strategies mean, and how the strategies will be implemented.**
 - **South Stockton** is a neglected community as far as infrastructure goes. **The roads are in bad shape and how will flooding impact this? The bus stops themselves, are they shaded or protected from other weather?** It is important to raise these issues so they are better understood by the public.
 - An additional barrier is the language/terminology that is being used. **Will want to ensure that things are easily understood by the general public.**

What are the institutional needs?

- Darryl Rutherford, Reinvent South Stockton Coalition:
 - When dealing with climate change, the community is just starting to come together over the last several years around this issue.
 - It is safe to say that a number of organizations/institutions who are engaged of this issue can be further engaged. These groups really do need some capacity as far as **staffing and funding** to be more involved in these efforts.
 - There are a lot of ongoing efforts around resilient communities on the national, State, and local government levels, and **people are being pulled in many directions to participate in these various conversations. It would be nice to see more coordination** at these levels, so that folks are not having to spend a lot of their own professional time engaging at different levels.
- Cynthia Marsh, City of Stockton:
 - The recent wildfires have really highlighted **the challenge of cross-agency coordination**, and the need to be more proactive (comment provided via Zoom chat).
 - From the recent APA conference there were a lot of discussions concerning wildfires. In other jurisdictions, it **seems that there was not a plan setup in advance to address issues such as housing and evacuation needs. All the agencies appeared to do their own thing, and it seemed that from the federal, to the State, to the local levels that there was not proactive coordination on these topics.**
 - In seems we can learn from the challenges from other jurisdictions.
- Jonathan Pruitt, Catholic Charities Diocese of Stockton:
 - **An analysis is needed to identify the best practices or projects that other cities/counties are conducting in terms of responses to wildfires, evacuations, flood events.** What measures are they taking? How much does it cost?

- Ann Rogan, City of Stockton:
 - The Mayor’s Office has previously partnered with Stanford University on some best practices relative to green economy from other cities across the county: <http://bit.ly/GreenEconomyBenchmark>
 - It would be helpful to **learn what local leadership can do on the policy side to build resilience.**

What are the community needs?

- Jonathan Pruitt, Catholic Charities Diocese of Stockton
 - One of the concerns people have are the fires and other things that are outside of our control.
 - Some **residents don’t want to be outside due to poor air quality, but then are also worried about the energy costs** from remaining indoors.
 - Is there infrastructure in place right now in terms of energy and is it sustainable? **Energy is a concern for people when it comes to climate change.**
 - What would be helpful is to **share all the studies and assessments that have been done in one platform/document.** This way people can refer back to that one platform/document. And the links would be broken down by transportation, energy, land use, etc. (comment provided via Zoom chat).
- Cynthia Marsh, City of Stockton:
 - In terms of **cooling centers**, the Stockton Shelter for the Homeless has a drop-in center where people can go during the day. St Mary’s may also have this capability.
- Taylor Williams, City of Stockton:
 - Several years ago, as a part of the Transform Climate Communities planning grant, the City of Stockton released a Sustainable Neighborhood Plan (<https://drive.google.com/file/d/1E-HjKq5m9KHurEMch3tamySu2Xcnjt7L/view>). The Plan contained input from the community and **energy was identified as a main priority, with one of the Plan goals being to lower utility bills. Additional identified priorities included health outcomes, food access, urban greening, improving parks, and transportation needs.**

4. Resiliency Implementation Plan and Adaptation Guide Goals and Products

Annika Ragsdale, WSP, provided an overview of the Resiliency Implementation Plan and Adaptation Guide project goals and products. The Resiliency Implementation Plan and Adaptation Guide goals include:

- Carry forward work completed in Phase I to create a shared understanding of adaptation planning in San Joaquin County between local, regional, and State agencies.
- Ensure disadvantaged communities needs are met and prioritized.
- Provide tools for local and regional adaptation efforts.
- Strengthen existing collaboration and partnerships in the County around responding to climate impacts and build new relationships.
- Expand SJCOG’s ability to provide countywide leadership, technical assistance, and guidance.
- Ensure local leaders have what they need to respond to climate impacts on the transportation network.

Expected project outcomes for the Resiliency Implementation Plan and Adaptation Guide include:

- Developing a plan that will address asset vulnerabilities and respond to San Joaquin County needs.
- Providing a prioritized list of implementation strategies for different transportation assets and climate hazards.

The Study Team will be initiating a community engagement process, which will include reaching out directly to the public and key stakeholders. In addition to the Vulnerability Assessment Working Group workshops, the project team will be conducting stakeholder interviews, which will provide an opportunity to discuss in detail the needs of local agencies and the public. The project team will be developing a community survey to gather input from the community and will continue to think creatively while COVID-19 restrictions are in place in order to receive feedback from the public.

Once the community engagement process has concluded, the project team will develop a regional needs assessment that summarizes the needs and information gaps collected during the engagement process. This assessment will be critical in guiding the next steps of the Study, which is to ultimately develop a list of implementation strategies to enhance the resiliency of the multimodal transportation network in San Joaquin County.

The Final Regional Resiliency Implementation Plan and Adaptation Guidance will:

- Summarize the strategies that SJCOG and its partners can take to create a resilient transportation network.
- Provide adaptation planning guidance like how to select strategies, track and monitor adaptation performance, and implement strategies.

5. Next Steps

Annika Ragsdale, WSP, explained that next steps for the Regional Resiliency Implementation Plan and Adaptation Guidance planning process will include developing a public outreach strategy and community survey. Stakeholder interviews will also be conducted to collect specific needs for the region. Anyone who is interested in participating in a stakeholder interview is asked to inform the project team so that an interview can be scheduled.

5.2 INTERVIEW NOTES

5.2.1 CITIES

Attendees:

Tristan Osborn, Senior Planner (City of Stockton)

Cynthia Marsh, Senior Planner (City of Stockton)

Ken Zuidervaart, Planning Director (City of Ripon)

INTERVIEW NOTES

1. Can you provide an overview of your position with your city?
 - Tristan Osborn, Senior Planner (City of Stockton) - Work focuses on General Plan and Zoning consistency. Background includes downtown revitalization, urban design, commercial corridors, TOD.
 - Cynthia Marsh, Senior Planner (City of Stockton) – Background more towards housing. Has worked in economic development, housing, and planning in the past.
 - Ken Zuidervaart, Planning Director (City of Ripon) – Involvement includes housing development, commercial development, forward planning, etc.
2. Have your cities conducted any climate change assessments before? (Stockton identified this as a need in 2018. Lodi has a Climate Action Plan)
 - The City of Stockton has a Climate Action Plan (CAP), but it is a bit old. The City is getting ready to update the Plan.
 - Tristan added that he is in the process of follow up on two requests from outside agencies to provide status on if the City is meeting CAP goals/objectives.
 - The City of Stockton is also reviewing the Delta Adapts plan to see how this may impact the City.
 - a. What climate change and weather-related hazards are of the greatest concern to your cities?
 - Tristan noted concerns around flooding displacement, urban heat islands, and droughts.
 - Cynthia reiterated flooding concerns and heat islands.
 - Cynthia added that air pollution is a concern given Stockton’s placement as a transportation hub and the City’s proximity to SR 99, I-5, and the Port of Stockton. Air pollution moves into the City and stays trapped up against the foothills.
 - Cynthia said that she lives on Smith Canal, and residents voted to tax themselves in order to build an inflatable damn at the end of the canal. Cynthia is interested in solutions such as this which are creative, but also wants to know how these solutions can be built/implemented.
 - Tristan mentioned that Stockton is not a well canopied City, particularly South Stockton.
 - Tristan noted that the City’s Stockton Rising Project, through the Transformative Climate Communities (TCC) Program, encompasses downtown and most of South Stockton. A big component of the Project is urban greening.
 - Tristan added that the Boggs Tract neighborhood (located in a County pocket near the Port and downtown) received funding for a Sustainable Mobility Plan, through a Caltrans Sustainable Transportation Planning Grant
3. What climate and weather-related impacts currently affect the transportation network or have affected it in the past?
 - Several years back there was significant flooding which caused rail derailments in the Stockton region.

- a. Do you have data on past impacts (e.g. locations, outage lengths, costs)?
4. What planning decisions do you make, if any, that depend on weather or climate (e.g. related to public health)?
 - a. What additional information do you need to make future-oriented planning decisions for your cities (e.g. climate data, guidance for implementing adaptation strategies)?
5. Do you feel the cities of Stockton, Ripon, and Lodi have the staff capacity and resources to address challenges posed by climate change?
 - Ken said that the City of Ripon does not have the staffing/resources/expertise to address climate change issues. The City would be interested in receiving funding to hire consultants who can assist on these issues.
6. What other resources do you need to implement responses to climate change (e.g. staff training or educational opportunities)?
 - a. Do you feel you need guidance or template language to update the safety element of your General Plan for meeting state requirements (SB 379)? The safety element is to include climate adaptation and resiliency strategies applicable to the city.
 - i. City of Stockton flagged the need to develop a climate change vulnerability assessment, a set of adaptation responses, and update their safety element by 2022 in their 2040 General Plan (2018).
 - Tristan mentioned that he would need to check the City's safety element to see what is included. He added that additional input, such as template language, is always welcomed.
 - ii. Did not see any safety element updates for the City of Ripon as of 2017.
 - iii. City of Lodi General Plan is from 2010, safety element does not include climate change.
7. What are the greatest concerns the public has around climate change?
 - a. What transportation improvements would the community like to see to make the network more resilient?
 - b. What are your ideas for ensuring that climate adaptation promotes social equity in the region?
8. There were multiple priority vulnerability locations identified in Stockton as part of SJCOG's Phase I study. One of the most critical being South Stockton, due to historic inequities which have caused a range of negative outcomes for its residents. It is also a highly transit dependent community compared to the rest of the county.
 - a. Are there any recent next steps taken following the Sustainable Neighborhood Plan that we should be aware of?
 - b. Are there high priority projects or strategies from the Sustainable Neighborhood Plan, or other plans for South Stockton, which we should consider for our project?
 - Tristan noted that active transportation infrastructure is severely lacking. There are also a lack of shade trees.
 - Tristan added that for transit there are some neighborhoods that have one (1) hour headways, and that there are a number of pockets in Stockton that are underserved.
 - Cynthia thought that more multimodal options need to be looked into, especially in South Stockton which has traditionally been left behind.
 - Cynthia mentioned that there may be opportunities with the Amtrak station and ACE connections
 - Cynthia agreed that bicycle and pedestrian options are sorely lacking in South Stockton.
 - Tristan mentioned designated truck routes due to all of the logistics associated with the Amazon facility and the airport. Is curious about any informal routes that trucks and other vehicles are taking.
9. What would you like to learn from SJCOG's Regional Resiliency Implementation Plan and Adaptation Guidance document?

- a. Are there specific types of tools or guidance you would use?
 - Tristan said that guidance/regulations with “teeth” and implementable actions would be crucial for local jurisdictions.
 - Cynthia added that sample language would be useful. Often times policies will come down from the State level, but it can be challenging to determine how to implement the policies locally.
 - b. What types of regional responses to climate change would you like to see included in the plan?
10. Are there helpful resources from your cities that we should be aware of?

5.2.2 SAN JOAQUIN COUNTY

Attendees:

Megan Aguirre, Senior Planner, San Joaquin County Community Development Department

John Funderburg, Principal Planner, San Joaquin County Community Development Department

INTERVIEW NOTES

1. Can you provide an overview of your position with the county?
 - Megan Aguirre, Senior Planner and John Funderburg, Principal Planner – Both work on long-range planning and study type related projects.
2. Has the county conducted any climate change assessments before?
 - a. What climate change and weather-related hazards are of the greatest concern to the county?
3. What climate and weather-related impacts currently affect the transportation network or have affected it in the past?
 - Flooding is an issue for County constituents, especially if they rely on a levee road to get to their property. There have also been issues in the past about the stability of levees due to flooding impacts.
 - There are some areas identified on County maps that are fire hazard areas or are unprotected because there is not a specific fire district for that area. Some areas, such as Corral Hollow Road (southwest part of the County), contain properties that are way off the main road and are in dense wooded areas. If these residents are ever unable to get to the main road, they will run into transportation issues.
 - a. Do you have data on past impacts (e.g. locations, outage lengths, costs)?
4. What planning decisions do you make, if any, that depend on weather or climate (e.g. related to public health)?
 - a. What additional information do you need to make future-oriented planning decisions for the county(e.g. climate data, guidance for implementing adaptation strategies)?
 - Public Works has detailed flooding related data and mapping and does a good job at analyzing and projects to see if there is a flood hazard.
5. Do you feel that San Joaquin County has the staff capacity and resources to address challenges posed by climate change?
6. What other resources do you need to implement responses to climate change (e.g. staff training or educational opportunities)?
 - The County has programs to help senior citizens during hot weather. If it is determined that the County is going to have an increase in hot days, it would be good for programs such as this when they are developing their budgets.
 - The County does have some fire hazard data but is not sure if the State has made updated versions.

- a. Do you feel you need guidance or template language to update the safety element of your General Plan for meeting state requirements (SB 379)? The safety element is to include climate adaptation and resiliency strategies applicable to the city.
 - The County did a Climate Action Plan (CAP) during the last update to the General Plan. This can be found in Appendix A: General Plan Sustainability Policies and Programs.
 - The County attempts to listens to people’s concerns, and if there is a project, tries to follow what is contained in the Safety Element.
 - With the Governor’s emphasize on trying to ensure that counties are being resilient, the County wants to make sure that it is following its General Plan policies and implementing items correctly.
 - The County is in the middle of updating its development title and has been going back and doing updating things in the General Plan to ensure consistency with State goals in regard to climate action plans, resiliency, sustainability, and community strategies.
7. What are the greatest concerns the public has around climate change?
 - a. What transportation improvements would the community like to see to make the network more resilient?
 - Gaps in the sidewalk infrastructure makes it challenging for residents who are walking.
 - John added that he would like to see more vehicle charging stations throughout the County.
 - Megan mentioned that adding more vehicle charging stations is something the County is looking into requiring for certain projects.
 - Megan mentioned that it is important to add more bicycle connections. Since the County is so big it can be difficult to add realistic bikeway facilities because sometimes the focus in on just one segment and the bike facilities may not go anywhere. But if there are projects that connects bikeways, people are more willing to use the facilities.
 - As part of the update to the development title, the County is trying to encourage the instillation of more bicycle parking.
 - b. What are your ideas for ensuring that climate adaptation promotes social equity in the region?
 8. Are there high priority locations in the county where detailed assessment or adaptation is needed?
 9. What would you like to learn from SJCOG’s Regional Resiliency Implementation Plan and Adaptation Guidance document?
 - a. Are there specific types of tools or guidance you would use?
 - b. What types of regional responses to climate change would you like to see included in the plan?
 10. What do you think are the greatest barriers to implementing adaptation in the San Joaquin region?
 - Funding
 - Reduction of trips to the Bay Area
 - Some of the County’s air quality issues are a result of air being blown in from other areas outside of the County. If these areas improve their air quality issues, it would help the County as well.
 - The more that the State focuses on doing things to improve the environment, the more it will help the County.
 - The County has LEED buildings, shade for subdivisions, and follow all of the other implementation guidelines from the State in regards to trying to reduce greenhouse gases.

5.2.3 LEVEE SYSTEMS

Attendees:

Romain Maendly, Senior Water Resources Engineer (Climate Change Program, California Department of Water Resources)

Lindsay Correa, Regional Climate Change Specialist (Climate Change Program, California Department of Water Resources)

Najee Zarif, Interim Deputy Director (San Joaquin County Public Works)

INTERVIEW QUESTIONS

1. Can you provide some background on your position with your agency?
 - Romain Maendly, Senior Water Resources Engineer (Climate Change Program, California Department of Water Resources) – The Climate Change Program is tied to a lot of different activities within DWR. The Program’s role is to recommend technical approaches on how to incorporate climate change technical analysis.
 - Lindsay Correa, Regional Climate Change Specialist (Climate Change Program, California Department of Water Resources) - Supports the San Joaquin County region from the North Central Region Office.
 - Najee Zarif, Interim Deputy Director (San Joaquin County Public Works) – Oversees roadway design, bridge design, construction, transportation planning and engineering.
 - a. And can you provide some background on your agency’s role in managing and implementing flood improvements in the San Joaquin region?
2. We know that managing levee maintenance and upgrades is complicated in the Delta, with multiple stakeholders involved including the county and private landowners.
 - a. Can you provide some background on how this coordination process works?
 - b. How is your agency involved in the process?
 - Najee said that levee maintenance in the County is a joint effort in cooperation with the Reclamation Districts as well as project levees that the County does not have responsibility for.
 - Najee mentioned that the Reclamation Districts have done a good job in securing funding to upgrade their levees.
 - Najee added that there has been some funding that the County has been able to secure for specific communities to try and improve flood protections and the levee system. He estimated between 6-10 million dollars has been set aside for these improvement.
 - c. What could be done to improve this coordination to ensure that levee conditions are maintained and monitored?
3. What are your key concerns regarding climate change impacts to the San Joaquin region?
 - Romain mentioned that there are a lot of foundational challenges due to climate change, as noted in the Central Valley Flood Protection Plan (CVFPP).
 - Romain felt that one of the biggest challenges for San Joaquin County is being at the downstream end of the system.
 - Romain also noted concerns about sea level rise and how this will impact Stockton and the surrounding areas.
 - Romain said that another concern is that of general capacity and how much the system can carry the flow down to the outlet of the Delta.
 - Najee mentioned concerns around higher intensity storms and the associated flooding.
 - Najee said that there is a concern of access for vulnerable/disadvantaged communities, and making sure that identified evacuation routes and critical roadways will remain open. He added that represents a priority network that the County wants to make sure is resistant to climate change.

- Najee added that there are areas in the west part of the County near Corral Hollow that experience mudslides and have a lot of sediment coming down the flow. There are also bridge structures that lack capacity, so as there are more intense storms in the area there are also increased concerns for safety and potential loss of property.
 - Najee further added that Corral Hollow frequently gets blocked when there is a high storm, as storms bring sediment down as well as other debris.
 - Najee said that long-term concerns include extreme weather impacts from flooding as well as extreme weather impacts on pavement, and how these impacts affect the overall lifecycle of pavement. Concerns about: Will the County have to go out and treat roadways more frequently? Will there need to be more money spent to make the roadways more resilient to extreme temperatures?
 - Najee said that OES has identified evacuation routes for the County, and that these transportation routes are prioritized by the County. Data is available upon request.
 - Lindsay mentioned that the DWR has some restoration activities and would be interested in understanding some of the subsidence related impacts from climate change.
 - Romain mentioned he often hears that one challenges is the design level of future projects in the region. The CVFPP does not provide design guidance for flooding, but Romain feels that this item is something that a lot of agencies are struggling with.
- a. Have your agencies undertaken any future flood risk assessments that we should be aware of for our project?
 - DWR has its Central Valley Flood Protection Plan (CVFPP). Romain said that in 2017, DWR engaged the RFMPs early in the CVFPP development process to receive their input on what types of analysis, studies, and projects they would like to see in the Plan, and how these projects would provide flood risk benefits. An updated CVFPP will be released in 2022.
 - b. Does DWR have any plans to update the [Levee Flood Protection Zones](#) or Best Available Maps to use future climate (precipitation, snowpack, temperature) data?
4. We know that there are efforts underway to upgrade the levee system in general and in response to regulation like SB 5.
 - a. Can you explain efforts underway to respond to new, more stringent federal and state levee standards?
 - Najee mentioned that there has been a lot of effort to bring together a number of different agencies to try to respond to SB 5, and that the County’s Development Services Division has been deeply involved in this process.
 - Romain mentioned that DWR has constant engagement with the RFMPs about strategies and projects.
 - b. Since FEMA has started its Map Modernization Program, have there been any updates to the floodplain mapping in the San Joaquin Region?
 - i. How has this affected flood improvement priorities?
 - c. Are there priority locations where maintenance, repair, or replacement is needed?
 5. What would you like to learn from SJCOG’s Regional Resiliency Implementation Plan and Adaptation Guidance document?
 - a. Are there specific types of tools or guidance you would use?
 - Najee mentioned that he would like to better understand what the Regional Resiliency Implementation Plan “rolls into.” If the Plan identifies priorities, will it then roll into other policy decisions with respect to how funding is invested? Will it provide advocacy for revenues/programs that support infrastructure improvements? What is the ultimate goal?
 - Romain was wondering how the Regional Resiliency Implementation Plan will roll into RFMPs efforts.

- Lindsay was interested in data gaps/needs that are identified through the Regional Resiliency Implementation Plan, and how DWR could provide support.

b. What types of regional responses to climate change would you like to see included in the plan?

5.2.4 COMMUNITY BASED/COMMUNITY FAITH-BASED ORGANIZATIONS

Attendees:

Taylor Williams – Edge Collaborative

Ann Rogan – Edge Collaborative

Darryl Rutherford - Reinvent South Stockton Coalition

Jasmine Leek - Third City Coalition

INTERVIEW NOTES

1. Can you provide an overview of your position with your organization and the communities you represent?
 - Taylor Williams, Program Manager (Edge Collaborative) – Duties include workforce development and green economy. Most of Taylor’s recent focus has been on air quality, including the Assembly Bill (AB) 617 implementation process, as well as community engagement.
 - Ann Rogan, Principal (Edge Collaborative)
 - Darryl Rutherford, Executive Director (Reinvent South Stockton Coalition) – Work focuses on resident engagement, and providing these residents with the tools and opportunities they need to be engaged in public policy decisions.
 - Jasmine Leek, Managing Director (Third City Coalition) – A community connector organization working on a variety of issues including civic engagement/innovation, and urban sustainability. Third City Coalition has led several projects around climate adaptation/climate equity project such as the City of Stockton’s Transformative Climate Communities (TCC) Program, as well as public engagement partnerships for various initiatives.
2. What climate and weather-related impacts affect the traveling public?
 - Taylor mentioned that transportation is a barrier for many residents that he works with, particularly access to transportation options.
 - Taylor said that wildfires have been increasing, and this leads to higher exposure for residents. Taylor added that perhaps a mitigation measure to poor air quality as a result of wildfires can be filtration systems on public transit.
 - Jasmine agreed that there are transportation access issues. Reliability is a key issue for public transportation, especially in neighborhoods that do not have bus rapid transit or more frequent service. Jasmine has spoken to many people who say that if they miss their bus then there is no way for them to get to their destination, and they are stranded.
 - Jasmine cited safety concerns for those who use other forms of transportation. There has been discussion about building out safe, multimodal transportation infrastructure but the region is far behind on implementing bicycle and pedestrian facilities and improving connectivity.
 - Darryl said that his organization has seen lots of situations where people are unable to access healthcare due to lack of transportation options. If there was a more robust public transportation system it would make access easier.
 - Darryl also noted the lack of bicycle lanes, sidewalks and other amenities that can get people to use other modes of transportation beside a vehicle. Road and other infrastructure are antiquated in the South Stockton community.
 - Darryl mentioned that bus stops in South Stockton are unprotected, not highly visible, and have long headways.

- Darryl added that for those who do own vehicles, often times the vehicles are older and not environmentally friendly.
 - a. Heat related impacts? (e.g. to transit and active transportation)
 - b. Flood impacts? (e.g. flooding of transit stops limiting access)
 - c. Poor air quality? (e.g. can't walk outside)
3. What are the greatest concerns you and the communities you represent have around climate change?
- Ann mentioned that parts of the City flood even when there is a moderate amount of rainfall, makes it difficult for travel.
 - Ann added that flood maps of Stockton show that there is public housing located within the flooding zone. Has not seen anything that comprehensively addresses flood mitigation.
 - Darryl felt that the Delta Stewardship Council's Delta Adapts Vulnerability Assessment is highlighting many issues in the community as far as the levee systems and water quality.
 - Ann mentioned that air quality/climate pollutants are worsening urban heat islands. This was one of the reasons why climate was on the former Mayor's radar, because of the recognition that certain parts of the City were hotter than others.
 - Ann also cited toxic algae blooms in the delta. As a temperatures rise the toxic algae blooms have a negative impact on water quality. Ann is interested in what the mitigation opportunities are for toxic algae blooms.
 - Taylor cited infrastructure around power and mentioned the situation in Texas as an example. Believes that investing in smart grids or micro grids is needed.
 - Jasmine through that just general awareness of the issues, and the civic impacts based on where people live. Jasmine felt that there has been good efforts through the Office of Emergency Services to list information on their website about what potential risks are. Feels that this can be taken a step further with public campaigns or explicit partnerships with organizations who are working/serving those in the community.
- a. What information, resources, or support does the community need to evaluate and respond to climate impacts on their own?
- Jasmine said that a promising policy idea that they have been pursuing is something that came out of the work with Greenlining Institute, who co-sponsored legislation for SB 1072 for Regional Climate Collaboratives. They are currently in the middle of piloting this idea through a program call Partners Advancing Climate Equity (PACE), and the long term goal is to take the learnings from the PACE program and scale across the State the idea of Regional Climate Collaboratives.
 - Jasmine thinks that a public/private partnership to implement Regional Climate Collaboratives would be great.
 - Darryl thinks that a type of information distribution campaign is needed. Thinks that there are a lot of populations that just don't understand the greater impacts of climate change because they don't have access to appropriate information. Also thinks that climate change information is not always articulated in a way that is easily understandable to the general public.
- b. What transportation improvements would the community like to see to make the network more resilient?
- c. What are your ideas for ensuring that climate adaptation is implemented equitably in the region?
4. There were multiple priority vulnerability locations identified in Stockton as part of SJCOG's Phase I study. One of the most critical being South Stockton, due to historic inequities which have caused a range of negative outcomes for its residents. It is also a highly transit dependent community compared to the rest of the county.

- a. Are there high priority projects or strategies, like those from the Sustainable Neighborhood Plan, which we should consider for our project?
 - Jasmine mentioned that the Climate Action Corps for Stockton has begun to build out, and feels that this can assist with some of the staff capacity issues that exist. The first year of the Climate Action Corps was focused on building up the structure and introducing the concept to partners in the form of a pilot. Long-term the hope is that more partners will join the Climate Action Corps, including those who are engaged in climate equity, environmental justice work, or public agencies who are tackling climate issues.
 - Ann said that the Climate Action Corps program will play an important part in getting more people to work in climate change-oriented careers.
 - Ann mentioned coordination through the Rise Stockton Coalition, which has become a coordinating body for a lot of environmental justice partners.
 - Taylor feels that public awareness campaigns are going to be important for people being able to advocate for themselves.
 - b. What type of stakeholder engagement is needed in South Stockton to implement adaptation and transportation improvements? How do you think coordination could be improved?
 - c. Do you have other ideas to share about how to respond to climate change impacts in South Stockton?
5. Do you feel you have the staff capacity and resources to address challenges posed by climate change?
 - a. What other resources do you need to implement responses to climate change (e.g. staff capacity, funding opportunities, educational materials for the public)?
 6. What would you like to learn from SJCOG's Regional Resiliency Implementation Plan and Adaptation Guidance document?
 - Jasmine wants to see if SJCOG can outline how something like the Regional Climate Collaborative could work, who key partners could be, and possibly committing to some sort of exploration or Feasibility Study.
 - Jasmine was also interested in seeing a framework for capacity, not just within public agencies, but how the issue of capacity could work in the non-profit sector and in coalitions that are already organizing around climate issues.
 - Taylor agreed with Jasmine on implementing partners, and added that identifying those who can accomplish the work is also important.
 - Taylor was also interested in a discussion on the grant/decision making bodies, and funding sources.
 - Ann added (via Zoom chat) that a Responsible, Accountable, Consulted and Informed (RACI) matrix of climate responsibilities across public sector agencies would be helpful.
 - Jasmine mentioned that ensuring that some of the project funded through Measure K are aligned with regional adaptation and resiliency goals.
 - Darryl added that making sure funding is going to projects that are addressing the highest needs. Perhaps creating some type of a bonus system for a project that is located in a disadvantaged community.
 - Jasmine mentioned data gaps and noted that the last GHG inventory for the City of Stockton was from 2016. Feels that doing inventory for GHG, or doing something similar to the American Council for an Energy-Efficient Economy(ACEEE) state energy efficiency scorecard, would provide a good understanding on where we are and what our starting point is on climate indicators.
 - Jasmine also wanted to see if there is a way to do more data collection and analysis of climate across key public policy issues, such as public safety, homelessness, civic engagement, etc. Feels that this information would assist in public information campaigns or engaging elected official and other public agencies.
 - a. Are there specific types of tools or guidance you would use?

- b. What types of regional responses to climate change would you like to see included in the plan?
7. Are there resources or projects your organizations are working on for the San Joaquin County region that we should be aware of for this project?
- Ann mentioned that there is a Green Analysis that should be looked at.
- a. *Question for Ann from Edge Collaborative* – What is the Embers Project?

5.2.5 ACTIVE TRANSPORTATION CBOS

Attendees:

Kari McNickle with San Joaquin Bike Coalition

Kathryn Siddle with Bike Lodi

INTERVIEW NOTES

1. Can you provide an overview of your position with your organization?
 - Kari McNickle - San Joaquin Bike Coalition (Board President). Also the Board Chair for the Downtown Stockton Alliance.
 - Kathryn Siddle – Bike Lodi (Board Chair). Bike Lodi is an advocacy group that works on improving infrastructure, and wants to see bicycles as an acceptable mode of transportation everywhere.
2. What climate change and weather-related hazards are of the greatest concern to you and your organization as bicyclists?
 - Kathryn said that in Lodi there are many instances where there are significant flooding for bridge underpasses, and this causes issues for riders who are trying to get beyond these points.
 - Kari added that the same things occurs in Stockton, and that in higher water years crossing that go under roadways will be flooded and/or full of mud and debris.
 - Kari also mentioned that high heat days are a concern for those who are dependent on biking/walking in order to access services.
 - Kathryn said that this past summer was very difficult for those who used bikes for transportation and are in high risk professions (such as farm workers). Outreach was orchestrated for these folks so they had water to drink. Many of these workers would walk or bike to a designated location, and then get picked up and taken to work. There were serious health concerns for these types of workers due to COVID, the fires, and poor air quality.
3. Do you and others at your organization typically bike to commute/run errands or is it primarily focused on recreational opportunities, or both?
4. Are there any locations on the San Joaquin region transportation network where you notice recurring weather or climate-related impacts (e.g., not enough shade, flooding)?
 - a. What transportation improvements would you like to see to make the network more resilient, safe, and accessible for bicyclists?
 - Kari mentioned that one challenge is a severe lack of safe and low stress places for people to bike. She has not been seeing the creation of infrastructure for those who bike for recreation or transportation purposes. With health disparities that exist within the community, and disproportionate environmental burdens, particularly in Stockton, it is imperative to create more places and ways for people to bike and walk safely.

- Kari added that there has been a huge uptick in people biking in the last year. However, this increase has come with tension because there are now large groups of bicyclists sharing roadways, and many are not used to doing so.
 - Kathryn agreed that there was a huge uptick in bike riding this past summer.
 - Kathryn mentioned that Bike Lodi, in cooperation with Visit Lodi, helps to develop routes for bicyclists.
 - Kari feels that in Stockton, one of the best opportunities to gain additional bike paths is in conjunction with the levees. A current levee network that is in use is on the Calaveras River. People are already walking/jogging on canals, particularly in the Lodi area. There are some rail/trails options in the Manteca area. There is an appetite for more bicycle facilities, especially to provide connections to the surrounding cities.
 - Kathryn added that in Lodi the levees are used, but they are considered to be illegally used. There are many walkers, runners, and bike riders out in these areas.
 - Kari mentioned that many of the bridges are in a poor state of repair and are often very space constrained, resulting in pinch points for bicyclist and pedestrians. As bridges are rehabbed, better accommodations for bicyclist would be desired.
- b. What are your ideas for ensuring that climate adaptation promotes equitable access to active transportation opportunities in the region?
- Kari cited the importance of “following through” on things that are already in existence. For example, Stockton and Lodi have a Climate Action Plan. How will they be moving forward with these Plans?
 - Kari added that the San Joaquin Valley has a trip reduction mandate, but that it has “no teeth” behind it. This mandate has not updated in some time and there is not an incentives to this mandate.
 - Kathryn mentioned that a few years back there was a Vision Action Team on health in Lodi. This effort offered businesses access to experts and stipends to improve employee health. Bike Lodi was asked to get involved and encourage business owners to make it easier for their employees to ride their bicycles to work. This effort was initiated by the Chamber of Commerce as an incentive based program that aimed at lowering insurance costs.
5. What would you like to learn from SJCOG’s Regional Resiliency Implementation Plan and Adaptation Guidance document?
- a. Are there specific types of tools or guidance you would use?
- b. What types of regional responses to climate change would you like to see included in the plan?
- Implementation of bicycle infrastructure.
 - Greater willingness by local leadership to apply for ATP grant funding.
6. What do you think are the greatest barriers to implementing adaptation in the San Joaquin region?
- Staff capacity for the Cities/County
 - Leadership at the City Council/Board of Supervisor level has not always embraced the addition of bicycle infrastructure.
 - Leadership also includes some “climate deniers,” which adds to challenges to address bike infrastructure and climate adaptation needs.

5.2.6 INTERAGENCY TRANSIT COMMITTEE

Attendees:

Michael King (Lathrop),

Ed Lovell (Tracy),

Jayanthi Pramod (Tracy),

Juan Portillo (Manteca),

Elizabeth Quiici (Ripon)

INTERVIEW NOTES

1. Can you provide an overview of your position and your role with the Interagency Transit Committee?
 - Michael King, Director of Public Works (Lathrop) - Background in transit is limited. Lathrop does not have public transit.
 - Ed Lovell, Transit Manager (Tracy)
 - Jayanthi Pramod, Transit Coordination (Tracy)
 - Juan Portillo, Transit Supervisor (Manteca)
 - Elizabeth Quilici (Ripon)
2. What climate change and weather-related hazards are of the greatest concern to transit in the San Joaquin Region?
 - Juan discussed the mandate that transit be all-electric in the future, and that the charging aspect of an all-electric fleet has the potential to be problematic given PG&E's rolling blackouts.
 - Juan added that he believed RTD experienced some of these types of issues last year. He believe that RTD was unable to charge their electric fleet, and as a result were forced to use other vehicles. This would be a significant concern to smaller cities who have smaller transit fleets.
 - Ed agreed that the charging aspect is a big concern, and it is unknown what can help to mitigate this type of situation.
 - Ed added that Tracy does not typically see serious flooding. The few times that serious flooding has occurred, it has taken place in the outskirts of the City, and in areas where the City does not provide transit services.
3. What climate and weather-related impacts currently affect the public transit network or have affected it in the past?
 - a. *(Maybe a question for RTD):* Do you have data on past impacts (e.g. locations, outage lengths, costs)?
4. Are there transit-related decisions that you make that depend on weather or climate (e.g. planning routes or bus stop locations)?
5. Is the public transit system used to respond to extreme weather or climate impacts, such as in wildfire evacuations or transport to cooling centers?
 - Juan mentioned that Manteca does have a transit center that is used as a warming center during cold weather days, and a cooling center during high heat days (over 100 degrees F).
 - Juan said that all transit routes ultimately go back to the Manteca Transit Center. Juan added that during "Go Green Week" or Earth Day, the City will provide free transit service.
 - Ed said that in the summer the transit station in Tracy is a designated as a cooling zone.
 - Ed added that on days forecasted to be 100 degrees or warmer, the City will provide free transit on their fixed-routes.
 - Ed stated that the City's Emergency Management Plan does list transit as a way to evacuate people in the event of an emergency.

- Ed said that with the future switch to an all-electric fleet there is a limited range that buses can travel, especially in an evacuation situation. This raises questions such as how quickly buses can be recharged, and if there will be charging stations readily available.
- a. How is this coordinated? What stakeholders are involved?
 - Ed said that if an evacuation type event were to occur, coordination would come through their EOC. In this scenario, the individual in command would coordinate and filter down instructions to Ed.
 - b. How could this coordination be improved?
 - i. To date it seems like the cities have not had to be involved with or manage this type of coordination.
 - c. How could the transit system better serve the community during extreme events (e.g. wildfires, poor air quality, heat waves)?
 - i. Juan noted more active transportation options are needed.
 - ii. Juan and Ed noted that transit is already used to reach cooling and warming centers.
6. Are there changes in ridership trends when experiencing extreme weather (e.g. heavy rain, extreme heat)?
- Ed said there is always an increase in ridership whenever the City offers free rides. This also includes other times such as the City's "Back to School" promotion where students can ride free during the first month they are back to school, or a December free ride month so people can go shopping.
 - Juan said that senior citizens tend to stay home when it is raining/cold or too hot. When this occurs the City usually see a drop in those using paratransit services.
- a. Are you concerned about declining ridership as weather becomes more extreme and variable?
 - i. Juan said that senior citizens tend to stay home when it is raining/cold or too hot. When this occurs the City usually see a drop in those using paratransit services.
7. What transit improvements are needed and should be prioritized in the San Joaquin Region to ensure that the system is resilient as climate continues to change?
- Juan felt that infrastructure improvements are needed, especially for a future electric fleet.
 - Ed agreed that proper infrastructure will be needed. Buses can currently be driven as far and as long as needed, as long as there is a gas station along the way. This will not be the case once the switch to electric vehicles occurs.
 - Ed mentioned that the charging times for electric vehicles are also a consideration, and are much different than refueling times. Ed was wondering how RTD, who runs service between counties, will work thought charging time issues in order to provide their services.
 - Ed said that for the City, the issue becomes:
 - Whether to invest in vehicle that have longer range and that are charged overnight (lasting half the day and then swapped out for another vehicle mid-day).
 - Or is it best to go with vehicles that get charged mid-trip. In this scenario there would be an extended layover at certain stops so the buses can charge.
 - Juan added that improvement also need to be made in order to make it easier for people to get to transit stops. This includes bicycle and pedestrians infrastructure improvement.
8. Do you feel you have the staff capacity and resources to address challenges posed by climate change?
- Juan felt that additional staff would be helpful in addressing long-term planning project.

- Juan said that in his opinion many grants such as the Low Carbon Transit Operations Program (LCTOP) tend to award funds for the same types of project.
- a. What other resources do you need to implement responses to climate change (e.g. guidance for meeting state requirements, staff training and educational opportunities)?
 - Juan mentioned importance of partnerships, especially for a countywide effort.
- 9. What would you like to learn from SJCOG’s Regional Resiliency Implementation Plan and Adaptation Guidance document?
 - a. Are there specific types of tools or guidance you would use?
 - b. What types of regional responses to climate change would you like to see included in the plan?
- 10. What do you think are the greatest barriers to creating a safe and efficient transit system in the face of climate change?
 - Ed felt that funding is a significant barrier, and noted that often times the larger cities tend to receive the lion share of funding. Ed would like to see a system where the non-larger cities can also benefit from funding.
 - Juan agreed that a lot of the times larger grant funding go to the biggest cities. Juan felt that this also occurs because the larger cities have the necessary resources and staff who can put in the time to submit grant applications. Many times grants are a long process, with a long application, and there is no way Juan can dedicate himself to this type of grant application process given his availability.
 - Ed said that often times the City does not even apply for certain grants because the City does not have the resources to be able to compete. If they try and focus their time on completing certain grant application, it will be to the detriment to other items that the City is responsible for.

5.2.7 STOCKTON METROPOLITAN AIRPORT

With Russell Stark, Director at the Stockton Metropolitan Airport

INTERVIEW NOTES

1. In the Phase I study SJCOG completed, airport staff reported that there were runway impacts due to flooding and there was an engineering assessment underway.
 - a. Have there been any further impacts to the runways from flooding?
 - The airport is in a designated floodplain. One of Russell’s goals is to get this designation changed based on what has happened in the past such as rerouting rivers and streams that surround the airport. However, getting the floodplain designation removed is costly.
 - Russell has a weekly call with the airport’s consultant in regards to floodplain designation, but unfortunately the airport has other priorities that push this issue down the list of priorities. The airport has a finite amount of funds, so the money goes to where it is most needed.
 - Haven’t had flooding issues at the airport in recent history, but aware of the potential in the future. Believe that the flood hazard is minimal.
 - Taxiway had drainage issues; the design was not prepared for that level of rainfall within the last couple years. Russ thinks this was under designed. Traffic began to rut
 - \$4.5 million-dollar emergency project
 - Runway is tapered so water doesn’t stay on the surface. Engineers do field studies. There is standing water in the apron of one of their facilities, need to add drainage. FAA standards are followed (e.g. airport design guidelines)

- Everything that the airport now builds has to be built above the floodplain.
 - b. Is the assessment complete and did the engineering assessment consider future flooding changes from climate change at all? Are there any relevant findings you can share?
 - c. Do you have data on past impacts (e.g. locations, outage lengths, costs)?
- 2. What other climate and weather-related impacts currently affect the Stockton Metropolitan Airport operations and infrastructure, or have affected it in the past?
 - The biggest hazard at the airport most recently has been the wind. A windstorm recently came through and “knocked everything out.” Not much the airport can do about the wind other than constructing buildings utilizing the best materials available.
 - The “Tule Fog” comes in the winter, but it does affect the air traffic in the area. However, the airport has a design feature, the Category 2 Instrument Landing System (ILS), that allows aviators to get down to a lower altitude.
 - Extreme heat is also a factor due to all the pavement at the airport. The heat will radiate off the pavement, making it hotter for airport workers. The airport provides air conditioning vehicles, and makes sure that workers hydrate and take their breaks
 - Air quality/CEQA guidelines plays a role in recent installation of a generator because the airport needed to get permits due to how much emissions the generator would be putting out.
 - There are design features that the airport must adhere to in order to be complaint with air quality standards. Every airport project has to go through a full NEPA evaluation for the FAA.
 - When the airport designs a project, the pavement is designed specifically for heat.
 - The taxiway that leads to the cargo area previously failed, not due to heat, but because of drainage issues. It was a rainy winter 2.5 years ago, and the design features when the taxiway was implemented did not take into account that level of rain. Per Russell, poor drainage, an under designed taxiway system, and increased traffic led to the taxiway beginning to rut. The airport was forced to do an emergency project (\$4.5 million), so that they could continue cargo operations.
 - The heat doesn’t really pose a problem because the airport is conscious of aircraft weight. If they see an aircraft start to taxi towards a pavement area that can’t support its weight, they will divert the aircraft, otherwise the pavement will rut.
 - With regards to worker safety, in the summer maintenance staff are allowed to come into work early so work can get done before the heat of the day.
 - a. Do you have data on past impacts (e.g. locations, outage lengths, costs)?
- 3. What decisions do you make that depend on weather or climate (e.g. designs, operations or maintenance decisions, emergency and public health responses)?
 - The two biggest design features that assist the airport in responding to extreme weather include having a stand by generator at the terminal, and the Category 2 ILS.
 - a. What current guidance and information do you use to make design decisions? Operations decisions?
 - Design engineers come out and do studies.
 - Everything is done to FAA standards. Russell has airport design standards manual and can share upon request.
 - b. What additional information do you need to make future-oriented decisions (e.g. climate projections, methodologies, economic or financial analysis, guidance for implementing adaptation strategies)?

- In the event of significant weather, advance warning is the biggest informational need. When the airport gets notice of high winds from the National Weather Service, they will send an email out to airport tenants.
 - The County OES does a great job informing the airport of significant weather that is going to occur such as high winds, fires, and power outages.
4. Do you feel you have the staff capacity and resources to address challenges posed by climate change?
- Yes
5. What other stakeholders or partner agencies do you coordinate with on weather and climate change-related impacts like wildfires, high heat, and flood events?
- County OES
 - The airport receives alerts from the National Weather Service
 - The airport is signed up for Cal Alerts
- a. What does this coordination look like now and how could it be improved?
6. What else is needed to respond to climate change impacts at Stockton Metropolitan Airport (e.g. better understanding of physical risks, identifying/evaluating adaptation options, funding, public outreach)?
7. What would you like to learn from SJCOG's Regional Resiliency Implementation Plan and Adaptation Guidance document?
- Would like to stay involved in receiving project emails and summaries
 - We added Russel's email to our VAWG contact list
- a. Are there specific types of tools or guidance you would use?
- b. What types of regional responses to climate change would you like to see included in the plan?
8. Are there helpful resources for the San Joaquin County region, or produced by the Stockton Metropolitan Airport, that we should be aware of?
- a. Not that Russel is aware of

5.2.8 DELTA STEWARDSHIP COUNCIL

Attendees:

Harriet Ross, Assistant Planning Director at the Delta Stewardship Council (DSC)

INTERVIEW NOTES

1. Can you provide some background on your position with the DSC?
2. We have familiarized ourselves with the first public draft of the Delta Adapts vulnerability assessment.
 - a. Based on the findings of the Delta Adapts assessment, what are your greatest concerns surrounding climate change in the Delta?
 - b. Could you give a brief overview of the flood hazard analysis developed for this effort? Will the outputs of the flood hazard analysis be available publicly?
 - i. DSC will share the newly updated shapefiles created in the flood assessment, for SJCOG use. DSC asks that SJCOG add a notation to the Phase I study flagging that the draft flood polygons applied from DSC have been updated.

3. The next steps for Delta Adapts is to create an Adaptation Strategy in 2021.
 - The Delta Stewardship Council (DSC) has discussed creating a toolkit of information, that can assist agencies that do not have any type of vulnerability assessment or climate work. The toolkit could include data on extreme heat, wildfires, flood maps, etc.
 - The DSC is also exploring creating some more specific items, which may include creating a set of General Plan policies and climate smart agricultural best practices.
 - a. What are the DSC's priorities for adaptation investments? For transportation?
 - The DSC will determine if they will be identifying specific projects, but Harriet does believe that they will get there.
 - It is likely that the Delta will be divided up into subregions, and then based on the flood maps there will be a determination on where the levee investments need to occur.
 - The DSC will be prioritizing where investments should occur, however they receive the most pushback from others once they go about prioritizing specific areas in the Delta. Nobody wants to be at the end of the list.
 - b. Relatedly, the Plan mentions that future investments should focus on benefiting the most socially vulnerable communities. Does the Plan/DSC have a recommended approach for engaging with and identifying adaptation strategies for these communities?
 - c. What do you/DSC think are the greatest barriers to adaptation in the Delta?
4. We know that managing levee maintenance and restoration is complicated in the Delta, with multiple stakeholders involved including the county, flood control boards/agencies, and private landowners. How is the DSC involved in this process, if at all?
 - The DSC does not fund levee improvements or maintenance.
 - The DSC's authority is to protect the State's investments, and the DSC's co-equal goals are to protect the water supply reliability of the Delta. However, the DSC does not own these assets, the California Department of Water Resources (DWR) and private owners manage them.
 - The DSC does not maintain, fund, or permit development but all covered actions or types of discretionary action that has an effect within the Delta goes through DSC's Consistency Process.
 - Local governments, including SJCOG, go through the DSC's Covered Actions Process and self-certify that they are consistent with the Delta Plan.
 - The DSC Covered Action Process was used to initially stop the Delta Conveyance Process. DSC is not directly involved but their process is leveraged by interest groups.
 - There is a lot of pushback from local governments regarding ecosystem restoration in the Delta because large amounts of land are being taken and converted from agricultural use to ecosystem restoration. The City/County is not getting the tax revenue from that property, so they are losing money and stuck with hundreds of acres of ecosystem restoration land. So many local governments are using the DSC Covered Actions Process to stop projects.
 - a. What could be done to improve this coordination to ensure that levee conditions are maintained and monitored?
 - The DSC has an initiative called the Delta Levee Investment Strategy, which has been very controversial and has been going on for (4) or five (5) years. The Delta Levee Investment Strategy prioritizes State levee investments in the Delta for existing conditions, and the DSC has not been able to get it approved because of pushback from stakeholders. The investment strategy is for existing conditions.

- Next steps include taking what has been done for the Vulnerability Assessment and update that initiative, which will then prioritize development. The DSC will try to be cautious because there are winners and losers whenever something is prioritized.
 - The DSC knows that the Stockton area and parts of San Joaquin County have significant flooding impacts and huge disadvantages communities, so these areas will likely get prioritized.
- b. Will the Delta Adapts: Adaptation Strategy touch on these needs at all?
5. What other stakeholders or partner agencies do you coordinate with on responding to weather and climate change-related impacts?
6. What would you like to learn from SJCOG's Regional Resiliency Implementation Plan and Adaptation Guidance document?
- Would like to see some acknowledgement of the DSC's work for flooding, as well as an acknowledgement that projects within the Delta have to go through the DSC's process.
- a. Are there specific types of tools or guidance you would use?
- b. What types of regional responses to climate change would you like to see included in the plan?
7. Are there other helpful resources from the DSC that we should be aware of for our project?
- The DSC would like SJCOG/the project to continue to use DSC's flood maps. An iteration of the maps were used in SJCOG's Vulnerability Assessment, but the maps have since been revised.
 - The DSC is just starting to scope adaptation, and has two scoping meetings for adaptation over the next week. The DSC is curious what SJCOG is looking at for adaptation and what constituents need. Annika mentioned that a Needs Assessment document will be developed that summarizes everything that was found during stakeholder interviews and outreach, including any barriers to adaptation, which can be shared with DSC when complete.
 - The DSC wanted to know if the SJCOG effort will include detailed strategies, an adaption plan, adaption pathways, or a menu of options that locals could implement. Annika responded that so far, the thinking has been more broad because the project is regional resiliency that is focused on implementation strategies, and not necessarily specific adaptation options. There could be an identification of which stakeholder groups need to come together to address vulnerabilities in certain locations, or what funding is needed. The SJCOG effort is just getting to the step of identifying specific strategies and then prioritizing them, such as prioritizing strategies for disadvantaged communities, prioritizing based on co-benefits, costs, etc.
 - The DSC wanted to know if SJCOG thought they would get down to the project level, or would they stay at a more broad level. Christine responded that this is unknow at the moment, and it may be contingent on the findings from the stakeholder engagement. Tim added that he believes that there will be some areas where there will need to be individual projects in the County, and anticipates receiving more detailed feedback on these areas from stakeholders during the stakeholder interviews. Tim added that he thinks a type of recommendation that can be made through the SJCOG effort would be to provide local jurisdictions guidance on how to use the DSC's flood maps.
 - Harriet confirmed that the latest flood maps and shapefiles can be sent to the SJCOG Project Team. The DSC does not expect that SJCOG will change the SJCOG Vulnerability Assessment, but asks that a note be included that says that the flood map data has been updated.
 - Harriet mentioned that the DSC was not able to get to identifying evacuation routes, and wanted to know if for the SJCOG Vulnerability Assessment if they listed regional evacuation routes or if this included evacuation routes at a local level. Christine added that she believed that the evacuation routes were at a local level and that the evacuation routes were identified by the San Joaquin County Emergency Services. Harriet followed up and wanted to see if she could get these shapefiles and Christine agreed.

5.2.9 CALTRANS

Attendees:

Lynn O'Connor, Chief of the Office of System Planning (Caltrans District 10)

Mary Renji, District Sustainability Manager – Program Project Management and Asset Management (Caltrans District 10)

Sinaren Pheng, Asset Integrator – Program Project Management and Asset Management (Caltrans District 10)

INTERVIEW NOTES

1. Can you provide an overview of your position with Caltrans District 10?
 - Lynn O'Connor, Chief of the Office of System Planning (Caltrans District 10) – Also climate change coordinator for planning.
 - Mary Renji, District Sustainability Manager (Caltrans District 10) – Coordinates and assists with sustainability implementation within the District.
 - Sinaren Pheng, Asset Integrator (Caltrans District 10) – Oversees asset management program as well as the sustainability program.
2. What climate change and weather-related hazards are the greatest concern to District 10?
3. To date, have you applied any of the findings of the Caltrans District 10 Adaptation Priorities Report?
 - Lynn mentioned that District 10 is using the knowledge gained from the Adaptation Priorities Report as they are working on various corridor studies throughout the District. Lynn added that it is important to integrate climate change information early in the planning process.
 - a. Has the district conducted any detailed assessments of priority locations or implemented any adaptation projects?
 - Sinaren said that the District is incorporating the vulnerable assets information identified in the Adaptation Priorities Report into planned projects. For example, in the past the District may have used plastic lining culverts. However, with the adaptation and vulnerability assessment in place, it is understood that a specific location may be prone to fires. Therefore, instead of lining the culvert with plastic, the District is now exploring alternatives such as culvert replacements, concrete lining, or other alternatives that mitigate damage from fire.
 - Sinaren also said that Caltrans is now looking at new aspects of their assets. For sustainability, one such item is fish passage, which was not looked at before. Now Caltrans is looking and planning projects for fish passage. For example, in instances where there is a culvert that is blocking fish passage, Caltrans is now looking at possibly removing the culvert and building a bridge instead.
 - b. Are there transportation improvements or adaptation-focused projects that the district has plans to implement, or would like to move forward in the near future?
 - Sinaren said that there is hope for collaboration with SJCOG on floodplains, because Caltrans has identified specific areas that are prone to flooding.
 - Lynn said that in almost every project that the District is involved with, there is some aspect that ties back to climate change.
 - Mary mentioned that there are transportation planning scoping sheets that are developed during the conceptual planning stage, and these scoping sheets include an identification of climate change needs.
4. What planning decisions do you make, if any, that depend on weather or climate (e.g. related to public health)?

- a. What additional information do you need to make future-oriented planning decisions for the district (e.g. climate data, guidance for implementing adaptation strategies)?
 - Lynn said that the District needs a better understanding of what local evacuation plans are, and will integrate this information into their corridor studies. For example, if the City of Stockton has a flood incident, how are people going to move across Caltrans highways to get out of the way of the flooding?
5. Do you feel that Caltrans District 10 has the staff capacity and resources to address challenges posed by climate change?
 - a. What other resources do you need to implement responses to climate change (e.g. staff training or educational opportunities)?
 - Sinaren said that while more staff is always welcomed, current staff capacity is probably sufficient. The primary focus should be on more training to ensure that Caltrans is looking at project development from a sustainability lens.
 - Mary said that in the updated Caltrans Strategic Management Plan, sustainability is not just a standalone principal anymore. It is now a comprehensive approach for what Caltrans does for its projects, policies, etc.
6. Responding to needs of the traveling public in the San Joaquin region:
 - a. How do you think public and stakeholder feedback should be incorporated into Caltrans adaptation decision-making?
 - Lynn said that as the District works on their corridor studies, they will be targeting local populations and stakeholders within the communities for their input, with climate change playing a big role.
 - b. What are your ideas for ensuring that climate adaptation promotes social equity in the region?
 - Lynn noted that a lot of disadvantaged communities are in close proximity to Caltrans highways. Lynn mentioned that over time Caltrans has changed a lot of their landscaping policies on state highways to minimize water use and maintenance needs in response to the drought. Caltrans use to plant a number of trees and plants along their facilities, which absorbed a lot of the dust that is created from the highways. With less watering or planting to hold down the soil, air quality is worsening in these areas. Lynn has not seen any studies that are looking into this issue, but wonders if it would be better to go back to irrigating and putting plants down or applying concrete over the dirt. These discussion need to occur because this issue is detrimental to the populations that live around by the highways.
 - Mary mentioned that the District has a District Equity Task Force to promote policies and programs that reflect principles of diversity and inclusion.
7. What coordination do you think is needed between stakeholders to ensure the transportation network in the San Joaquin Region is resilient to future climate?
8. What would you like to learn from SJCOG's Regional Resiliency Implementation Plan and Adaptation Guidance document?
 - Sinaren was interested in collaboration opportunities with SJCOG, which could include funding and grant application partnerships. Interested in the priority Implementation Strategies that come from the plan and partnerships there.
 - a. Are there specific types of tools or guidance you would use?
 - b. What types of regional responses to climate change would you like to see included in the plan?
9. What do you think are the greatest barriers to implementing adaptation in the San Joaquin region or District 10 more broadly?

5.2.10 PORT OF STOCKTON

Attendees:

Juan Villanueva, Director of Development and Planning (Port of Stockton)

Jason Cashman, Environmental and Regulatory Affairs Manager (Port of Stockton)

INTERVIEW NOTES

1. Can you provide some background on yourself and your role with the Port?
 - Juan Villanueva, Director of Development and Planning (Port of Stockton) – Has oversight over development and planning when it comes to coordination with the SJCOG, Caltrans, or any other agency that does transportation planning.
 - Jason Cashman, Environmental and Regulatory Affairs Manager (Port of Stockton)
2. Has the Port undertaken any climate change assessments of its own that we should be aware of?
 - Juan mentioned that when it comes to any type of issues regarding climate change, such as sea level rise, the U.S. Army Corps of Engineers has oversight, and will coordinate their planning efforts through the Port's Environmental Department.
3. What are the greatest climate change concerns to the Port?
 - Juan said that the Port has two Reclamation Districts (No. 404 and 403) that encompass the Port. One district has jurisdiction over Rough and Ready Island, and the other district has jurisdiction over everything outside of Rough and Ready Island. These two Reclamation Districts have authority on flood events/protection.
 - In terms of what standards are followed for new projects at the Port, Juan said that it is dependent on the project. Usually the Port will work through the Reclamation Districts, and the Reclamation Districts will coordinate with the County for flood protection, unless there is a federal nexus, in which case the U.S. Army Corps of Engineers the Corps would get involved.
4. Have there been past flood impacts at the Port? Or other weather/climate hazard impacts (e.g. extreme heat)?
 - Juan said that during the last major storm event, the Port had the same power issues that everyone else had. Juan said that the Port's main issues right now are the wildfires issue and rolling power outages related to high heat.
 - Juan said that by working with grant agencies the Port has been able to secure resiliency with back-up power. However, back-up power can only be supplied for certain areas and not the whole Port. In this type of situation the Port's main operations would be up and running but the Port's tenants could be without power.
 - a. Do you have data on past impacts (e.g. locations, outage lengths, costs)?
5. What decisions do you make that depend on weather or climate (e.g. designs)?
 - a. What current guidance and information do you use to make design decisions?
 - b. What additional information do you need to make future-oriented decisions (e.g. climate projections)?
 - From a flooding aspect, Juan mentioned that the Reclamation Districts are required to have an emergency plan and that this information is available on the County's website.
 - Juan added that the Port has an Emergency Plan and can share the plan with the Project Team.
6. Do you feel you have the staff capacity and resources to address challenges posed by climate change?

7. What other stakeholders or partner agencies do you coordinate with on weather and climate change-related impacts like flood events?
 - a. What does this coordination look like now and how could it be improved?
8. What would you like to learn from SJCOG's Regional Resiliency Implementation Plan and Adaptation Guidance document?
 - Jason was interested to learn more about studies being conducted on the levee systems surrounding all the islands in the area. Jason said that being on the Reclamation District Board, one of their main functions is to protect the land inside the levee system.
 - Juan said that he would regroup with the Port's leadership before responding so he could ensure that his response would be inclusive of the needs of the Port's other divisions.
 - Jason requested that the Project Team forward to the Port the Phase I Report and stakeholder interview questions so he could share with other Port staff.
 - a. Are there specific types of tools or guidance you would use?
 - b. What types of regional responses to climate change would you like to see included in the plan?
9. What are the greatest barriers for the Port to prepare for climate change?

5.3 METROQUEST SURVEY COMMENTS RECEIVED

- Mapping comments:
 - flooding on Bianchi under El Dorado overpass during steady rains
 - cheap slumlord's choices on rental property made living through recent heatwaves a challenge
 - When I ride my bike between Stockton and Manteca, I worry about my lung health
 - Watching this creek every year when it rains is scary.
 - The water levels almost hit the street last year.
 - Severe fog
 - Emissions from transportation and industrial sources
 - Breach levees along the San Joaquin River during the 2017 flood event
 - Subsidence
 - Sea Level Rise
 - Have tried to stay in place and not travel when air quality is extreme.
 - Our community is known for its poor air quality.
 - serious potential for sea level rise issues
 - fix this before more people die.
 - This neighborhood typically floods when there is above average rainfall.
 - Area in flood plain.
 - Oakwood Shores neighborhood evacuation in 2017 due to flooding risk after nearby levee burst
 - In Oakwood Shores neighborhood in Manteca, we could see SCU complex fire burning. Many of us prepared to evacuate or left the area in case it got too close.
 - Could not travel or go to school on multiple occasions due to wildfire smoke
 - Commuter traffic
 - Hot summer temps
 - Our area is known for its poor air quality --trucks for agriculture, major freeways, trains, & the Port--all are heavy polluters
- Transportation improvement comments:
 - Addressing traffic congestion through communities like Ripon and Manteca due to poorly functioning hwy 99/120 corridors
 - low-emission vehicles won't change anything, we need fewer personal vehicles period, and that means transit infrastructure that would allow us to function without personal vehicles.
 - Faster ACE train to the bay. Electrify the train too.

- More needs to be done to expand transportation access to areas outside of San Joaquin County, particularly toward the Bay Area. I'm still incredulous that the only regular rail service to the Bay Area from Stockton is focused on commuters. This would help to reduce climate change by reducing admissions from cars having to travel over I-5/I-205/I-580 and the Altamont Pass. The infrastructure is already there - why are we not utilizing it more?
- Commuter rail service to downtown Sacramento, preferably close to light rail stops.
- Regular schedules and dense coverage of bus routes
- More bus stops at
- 24 hour bus service, bus service to industrial complexes, extending BART into San Joaquin county without a "rail link", daily ACE train service
- demand pricing on all lanes of mainline roads
- Rail roads. Better roads and more bike lanes
- how about you actually fix the [sic] roads? 120E to 99S is a death trap, most of Manteca has poor roads due to heavy trucks.
- Connect from San Joaquin County to BART in Pleasanton.
- Transit options between population centers and out of the region feel limited
- Train through Manteca at different times throughout the day really messes up traffic.
- Community strategies comments:
 - Efficient commuted rail to Sacramento
 - More public gardens
 - Invest hard in green manufacturing. Transition the fleet to electric vehicles to keep air quality good and reduce vehicle maintenance costs
 - Get local health agencies and community organizations to work together to advance health equity. By partnering with community organizations to build power and momentum for systemic change—fundamental change in policies, processes, relationships, and power structures, as well as transformative shifts in deeply held values and norms—to address structural factors that have produced health inequities. Developing comprehensive solutions is not yet the norm. By developing such an approach—one that addresses the interrelationships of multiple factors—may create some of the biggest opportunities to achieve health, safety, and wellbeing, and reduce health inequities.
 - Community solar or gardens is an excellent idea. Creating nutritional food opportunities that are self sustaining for those in low income areas is a wonderful idea.
 - NO MORE MONEY TO THESE USELESS "CLIMATE CHANGE" PROJECTS!
 - "We need to take action NOW. There needs to be a community wide, concerted action to protecting from all aspects of Climate Change.
 - Sea level rise, very heavy rains, drought, poor air quality, ...etc."
 - Invest in infrastructure (build evacuation centers, improve levees so they don't burst again, etc.) and keep N95s in stock (after the pandemic) so everyone can have the right mask for wildfire season.
 - more awareness of the state of our levees

- Additional general comments:
 - I'm a high school biology teacher. Climate change terrifies me. Our society doesn't yet understand. Changes are accelerating. We need to do all that we can to keep water security, food security, and replant our biosphere. The longer we wait the more expensive the changes will be to make.
 - While the CA Department of Water Resources (DWR) is not a resident of San Joaquin County, we are taking climate change vulnerabilities very seriously. Some information related to climate change related to these concerns can be found in the Central Valley Flood Protection Plan 2017 and upcoming 2022. DWR has also completed a Climate Change Vulnerability Assessment that may be useful for your effort (<https://water.ca.gov/Programs/All-Programs/Climate-Change-Program/Climate-Action-Plan>).

Facebook Advertisement Comments:

- Express bus to SF
- BRT (or at least a frequent full-schedule bus route connecting to the Sacramento Light Rail, and to the BART "extender" in Brentwood
- Make better connections between routes!!!