

COMMUNITY SAFETY & RESILIENCY ELEMENT

CLIMATE ADAPTATION STRATEGY OPTIONS



The adaptation strategies included here are a set of options to be considered for inclusion in the City's Safety and Resiliency Element update. The strategies focus on helping the City prepare for the short-term (2021-2050) and more long-term (2050-2099) impacts of climate change that have been included in the **Climate Change Hazards and Vulnerabilities Report** (Hazards Report). This set of adaptation strategies responds to the impacts from climate-related hazards discussed in the Hazards Report and works to build upon the comprehensive set of plans and initiatives the City has already undertaken to reduce risk from natural hazards that will be exacerbated by climate change.

STRATEGY DEVELOPMENT AND OUTREACH PROCESS

As part of the development of these adaptation strategies, a set of meetings were held to gain feedback and brainstorm ideas through a facilitated process. The strategies include in this document reflect the feedback received at these meetings as well as internal discussions with City staff and the Resilient SLO project team. Outreach meetings included:

- Four Working Group Meetings focused on key topics included in the Resilient SLO project (i.e., Natural Systems, Built Environment, Community Resilience, and Environmental Justice)
- The Adapting to a Changing Climate Workshop – Strategies for a more Resilient SLO public workshop being held on July 22, 2021
- A meeting of the Resilience Roundtable, a community-led advisory body for the Resilient SLO project, to further develop a list of adaptation strategy options

ORGANIZATION OF THE ADAPTATION STRATEGIES

The adaptation strategies in this memo are organized into the four main hazard categories included in the Hazards Report. They are: Extreme Heat, Wildfire, Drought, and Flood. There are also several additional sets of strategies not focused on particular hazards but are intended to address multiple hazards and focus on other aspects of resilience. These additional strategy categories include: Resilient City Operations, Equity and Environmental Justice, and Social and Economic Resilience.

Each strategy includes working strategy title and a brief description of the strategy. Under each strategy category, the strategies are organized by which aspect of the City is generally focusing on based on the three focus areas for the Resilient SLO project. Definitions of the three focus areas are included below:



NATURAL SYSTEMS



BUILT ENVIRONMENT



COMMUNITY RESILIENCE

- **Natural Systems** – This category includes systems or system components of the natural environment (e.g., forests and grasslands, flora and fauna, stream health) in the City and the surrounding region that are critical to overall ecosystem health.
- **Built Environment** – This category includes the physical assets that comprise the City's built environment (e.g., roadway network, buildings, utility systems, stormwater management system) that are critical to supporting normal community functions in the City.
- **Community Resilience** – This category includes human-focused systems that provide essential services to residents and visitors in the City and are critical to maintaining normal community functions (e.g., economic activity, healthcare system, schools).

TEMPERATURE & EXTREME HEAT

RESILIENCE STRATEGIES



NATURAL SYSTEMS

CLIMATE-SMART NATURAL RESOURCE MANAGEMENT (NATURAL SYSTEMS)

Integrate climate projections regarding changes in average temperatures and extreme heat into updates of the City's natural resource planning documents including the City's set of Open

Space Conservation Plans, as they are updated, as well as the City's Open Space Conservation Guidelines. Integrate Climate-Smart Pest Management Practices into the City's Open Space Conservation Guidelines with consideration of how climate change is going to affect pest control and invasive species.

UPDATE THE CITY'S STREET TREES MASTER LIST TO PREPARE FOR INCREASES IN TEMPERATURE AND EXTREME HEAT EVENTS (NATURAL SYSTEMS)

Conduct analysis and incorporate into the City's Urban Forest Master Plan and, if necessary, update the City's Street Trees Master List to prepare for increases in minimum and maximum temperatures and extreme heat events and corresponding drought and fire risk, identifying which trees will be most vulnerable to climate impacts and which species will thrive during future increases in temperature. Ensure updated Street Trees Master List does not include highly combustible trees that increase fire risk in the City. Communicate the results of the analysis to help City residents prepare for impacts on trees on private property.



BUILT ENVIRONMENT

MONITOR COOL PAVEMENT TECHNOLOGY FOR THE CITY (BUILT ENVIRONMENT)

Monitor and pilot cool pavement technologies that may reduce the urban heat island effect being generated from the City's pavement surfaces focusing on large surface parking lots. Identify urban

heat island hotspots in the City using data from The Trust for Public Land and other sources regarding the urban heat island effect in the City and implement a cool pavement pilot project in key areas of the City to review results, including up-front capital costs and ongoing maintenance requirements. Research and adopt new standards for new development

projects, as appropriate, to use high-albedo or cool pavements for surface parking lots. Monitor roadway standards issued by both the state and federal government in order to be able to implement cool pavement standards on City roadways.

IMPLEMENT A CLIMATE-SMART URBAN HEAT ISLAND STRATEGY TO MITIGATE THE URBAN HEAT ISLAND EFFECT AND ASSOCIATED IMPACTS (BUILT ENVIRONMENT)

Develop and implement appropriate strategies for the City to use aspects of the built environment to mitigate the projected increasing impacts from the urban heat island effect. This should include a strategy to maintain and enhance the City's urban tree canopy and other vegetative features to help reduce the urban heat island effect while accounting for the effect of shifting average minimum and maximum temperatures on sensitive tree species and vegetation. Strategies should also include potential updates to the City's development standards to reduce the urban heat island effect in new development. Strategies could include:

- Integrate the Climate-Smart Green Infrastructure Strategy with regular updates to the City's Capital Improvement Program and Foundational Action Natural Solutions 2.1 in the City's Climate Action Plan which focuses on preparing the City's first Urban Forest Master Plan by 2021 and planting and maintain 10,000 new trees by 2035.
- Review and update Section 12.38.090 "Landscaping Standards" in the City's Municipal Code and other design guidelines to incorporate strategies to increase shading of buildings and parking lots to mitigate the urban heat island effect.
- Review and update City development standards, where appropriate, to include building and site design features that mitigate the urban heat island effect including reflective roofing, solar carports



INCORPORATE CLIMATE RESILIENCE FEATURES INTO THE CITY'S CLIMATE ACTION PLAN BUILDING RETROFIT PROGRAM (BUILT ENVIRONMENT)

As part of the City's building retrofit program (Foundational Actions, Buildings 2.1) included the Climate Action Plan, climate resilience retrofit features to help residents prepare for the impacts of climate change (e.g., extreme heat, wildfires, and wildfire smoke). Incorporate projections on future energy demand associated with shifts in maximum and minimum temperatures as well as increase the frequency and severity of extreme heat events. This work should include conducting a gap analysis to identify portions of the City's housing stock that are not equipped with air-conditioning or other cooling systems to address the projected increases in temperature and extreme heat events. As part of the building retrofit program, include proactive efforts (i.e., incentives, matching funds) to retrofit or assist with retrofitting the identified housing stock with climate resiliency features including:

- Adequate climate control equipment (e.g., HVAC) and air conditioning heat pumps,
- Weatherization and energy efficiency improvements to address increases in extreme heat and annual average maximum temperatures,
- Reflective roofing, green walls/roof, shade trees, and other features to reduce energy demand for cooling, and
- Home hardening improvements to protect against wildfire.



COMMUNITY RESILIENCE

DEVELOP A COMMUNITY COOL ZONES NETWORK (COMMUNITY RESILIENCE)

Work with community organizations, faith-based organizations, businesses, local government entities including SLO County, and other institutions to develop a Community Cool Zone Network comprised of air-conditioned spaces conveniently located throughout the City that can be opened during heat wave events to help prevent heat-related illness for vulnerable populations (e.g., elderly, youth, homeless, residents without air conditioning). Support network participants to conduct energy efficiency and building decarbonization improvements consistent with the City's

Climate Action Plan. Prioritize opening cool zone locations in areas with identified heat-vulnerable populations and disadvantaged communities. Assess feasibility and efficacy of providing transportation options to the cooling network location to elderly residents and transit-dependent populations. Explore funding mechanisms to support businesses and institutions for their participation in the Community Cool Zones Network.

CONDUCT COMPREHENSIVE COMMUNITY-LED OUTREACH TO PREPARE VULNERABLE POPULATIONS FOR HEAT WAVE EVENTS (COMMUNITY RESILIENCE)

Use information from the City's Resilient SLO Hazards Report that identifies areas in the City with vulnerable populations (e.g., linguistically isolated households, elderly, youth, homeless, individuals with chronic health conditions) to conduct targeted outreach to these neighborhoods and areas in the City. Increase education and training opportunities for residents to prepare for extreme heat events, with a prioritization on vulnerable populations and businesses and institutions that house and/or support vulnerable populations.

Components of the outreach should include:

- Work with community organizations and other institutions to establish a network of Community Resilience Ambassadors who can support outreach efforts, educate residents on climate preparedness, and connect residents to existing resources and organizations.
- Work with community organizations and the San Luis Obispo County Health Department to provide additional resources and training to staff working with elderly populations on how to prevent health-related impacts. Work with community organizations and schools to help mitigate the impacts of extreme heat and heat wave events on youth. Educate and train staff working with youth populations on how to prevent health-related impacts from extreme heat.
- Continually assess the effectiveness of the City's public information and education efforts during heat wave events.
- As part of the City's support of the Micro-Communities Collaborative, establish a "Neighbors Helping Neighbors" campaign to support a peer-to-peer network of individuals who can check in and provide resources to neighbors who are vulnerable to extreme heat impacts.



INCORPORATE AN EXTREME HEAT PROTOCOL INTO THE NEXT UPDATE OF THE CITY'S COMPREHENSIVE DISASTER LEADERSHIP PLAN AND INCLUDE IN THE CITY'S LOCAL HAZARD MITIGATION PLAN (COMMUNITY RESILIENCE)

As part of the next update of the City's Comprehensive Disaster Leadership Plan (i.e., Emergency Operations Plan), incorporate a protocol for emergency operations during extreme heat events in the City. Identify extreme heat thresholds which, if exceeded, would trigger the opening of cooling centers in the City as well as emergency response efforts from appropriate City departments (e.g., Police Department, Fire Department). Coordinate emergency response efforts in strategy Heat 8 regarding heat-related community outreach with this strategy.



WILDFIRE

ADAPTATION STRATEGIES



NATURAL SYSTEMS

IMPLEMENT THE CITY'S VEGETATION MANAGEMENT PLAN (NATURAL SYSTEMS)

Continue to implement the City's Vegetation Management Plan, conducting fuel reduction projects at the 12 large open space lands included in the plan, using vegetation management techniques

appropriate for each open space including manual vegetation removal; tree removal; mechanical treatment, prescribed burning, livestock grazing, and chemical treatment. Update the Vegetation Management Plan, as needed, to incorporate regulations regarding vegetation management plan, new best practices, and new funding opportunities for vegetation management projects. Work with Northern Chumash Tribal Council and other tribal bodies to incorporate, where appropriate, Traditional Ecological Knowledge approaches to vegetation management in the City.



BUILT ENVIRONMENT

IMPLEMENT THE CITY'S COMMUNITY WILDFIRE PROTECTION PLAN (BUILT ENVIRONMENT)

Continue to implement the City's Community Wildfire Protection Plan (CWPP) to reduce wildfire risk in the City's wildland-urban interface including implementation of the CWPP Tactical

Policy Measures which focus on the four key policy areas of community education, fuels management, planning, and emergency response preparedness. Update the CWPP, as needed, to incorporate new best practices, funding opportunities, new legislation regarding wildfire protection, and other wildfire protection planning resources.

AVOID WILDFIRE HAZARDS ASSOCIATED WITH NEW DEVELOPMENT IN THE CITY (BUILT ENVIRONMENT)

Avoid locating future development projects in the wildland-urban interface or in areas of the City located within a Cal Fire designated Fire Hazard Severity Zone. Ensure that new development projects include adequate measures to minimize fire hazards while remaining in compliance with housing laws regarding objective design standards and discretionary

review. Ensure that new development projects include adequate measures to minimize fire hazards. Implement the following set of policies to reduce wildfire risk associated with new development:

New Development Policies

- Require all new development located within any Cal Fire designated Fire Hazard Severity Zone to:
 - Meet or exceed the State's Fire Safe Regulations (title 14, CCR, division 1.5, chapter 7, subchapter 2, articles 1-5 commencing with section 1270) and Fire Hazard Reduction Around Buildings and Structures Regulations (title 14, CCR, division 1.5, chapter 7, subchapter 3, article 3 commencing with section 1299.01).
 - Include designs to minimize pockets or peninsulas or islands of flammable vegetation within a development.
 - Include additional access roads, where feasible, to ensure adequate access for emergency equipment and civilian evacuation concurrently. All requirements and any deviations will be at the discretion of the Fire Code Official.
 - Meet or exceed the California Building Code for Materials and Construction Methods for Exterior Wildfire Exposure (Title 24, part 2, Chapter 7A).
 - For all remodeled or rebuilt structures, require projects to meet current ignition resistance construction codes included in the State's Fire Safe Regulations.

Planning Policies

- Locate, when feasible, new essential public facilities outside of high fire risk areas, including, but not limited to, hospitals and health care facilities, emergency shelters, emergency command centers, and emergency communications facilities, or identifying construction methods or other methods to minimize damage if these facilities are located in a state responsibility area or very high fire hazard severity zone.
- Update local zoning and subdivision codes to designate wildfire hazard overlay zones and associated conditional use, site development standards, and design criteria to mitigate wildfire hazards and reduce risks to new development within the overlay zones.



- o Fire protection plans should address wildland fuel transition zones surrounding the development and include the following components:
 - » Provisions for the maintenance of vegetation within the subdivision to reduce wildfire risk
 - » Requirements for hardening of structures to mitigate fire risk that meets or exceeds the California Building Code
 - » Landscaping and defensible space design around a proposed structure that reduces wildfire risk.
- Promote the following risk reduction measures in future land use planning efforts in the City:
 - o Use wildfire risk analysis resources such as the Cal Fire's Fire and Resource Assessment Program (FRAP) data in future housing site constraints analyses to ensure future land use planning avoids locating new housing in high wildfire risk areas.
 - o Promote the use of clustered development patterns for subdivisions that require less fire suppression resources and are easier to defend during wildfire events compared to large-lot single family homes (Moritz and Butsic 2020).

DEVELOP A POLICY TO LIMIT ON-STREET PARKING IN HIGH WILDFIRE RISK AREAS DURING RED FLAG DAYS (BUILT ENVIRONMENT)

Develop policy and update the City's Municipal Code to restrict on-street parking in high wildfire risk areas in the City during Red Flag Days to ensure full access for fire trucks and emergency vehicles and increase roadway accessibility during evacuation events. Work with the City Fire Department and other departments to identify streets and neighborhoods that are at increased wildfire risk using the Cal Fire Fire Hazard Severity Zones, Wildland Urban Interface Areas identified by the City, or another internal process. Conduct community outreach to neighborhoods affected by the policy and provide detailed information on how and when the parking restrictions will be implemented.

IMPLEMENT A WILDLAND-URBAN-INTERFACE DEFENSIBLE SPACE AND HOME HARDENING PROGRAM FOR EXISTING DEVELOPMENT (BUILT ENVIRONMENT)

Implement a program to assist homeowners, landlords, and business owners in improving the defensible space for structures in or near the very high fire hazard severity zones. The program will serve to connect participants to contractors with experience in developing or improving and home hardening improvements (e.g., fire-safe building materials, fire resistant home vent upgrades) to help expedite improvements for existing development in the City. The program will seek funding to supplement the costs associated with defensible space improvements, prioritizing low-income participants and elderly or disabled residents who would not be able to implement defensible space improvements on their own. The program would be developed and administered in close collaboration with the City's Fire Department and Cal Fire to ensure appropriate standards for defensible space are implemented as part of the program.

INCREASE OPPORTUNITIES FOR BATTERY STORAGE AND ENERGY INDEPENDENCE FOR RESIDENCE AND BUSINESSES TO MITIGATE IMPACTS FROM PUBLIC SAFETY POWER SHUTOFFS (BUILT ENVIRONMENT)

Through the City's Community Development Department, proactively provide the information on funding resources and financing options for the installation of battery storage systems for existing residential and non-residential developments, prioritizing opportunities for essential services such as hospitals, grocery stores, pharmacies, and other essential businesses. Develop a streamlined permitting process, including appropriate CEQA exemptions, for the installation of small- and large-scale battery storage systems in existing residential and nonresidential development as well as providing applicants information on financing options through 3CE's Energy Resilience Programs.



DEVELOP AND IMPLEMENT A WILDFIRE SMOKE PROTECTION OUTREACH STRATEGY (COMMUNITY RESILIENCE)

Develop and implement a Wildfire Smoke Protection Outreach Strategy to help protect City's residents and visitors from poor air quality caused by wildfire smoke. Work with the San Luis Obispo

Air Pollution Control District to conduct a comprehensive outreach campaign focused on educating residents on how to protect themselves and their homes from wildfire smoke impacts. Prioritize outreach campaigns to populations who are vulnerable to poor air quality and those who work with the population (e.g., elderly care nurses and assistances, teachers), conducting educational events at convenient locations for these residents. Specific topics could include:

- General tips to avoiding wildfire smoke impacts
- Education on proper use of N95 respirators
- Publishing and sharing location of local Resilience Center with residence
- Preparing homes for wildfire smoke events and development of "clean rooms"
- Proper use of air conditioning and climate control during wildfire smoke events
- Behaviors to reduce indoor air quality impacts (e.g., avoid vacuuming, using gas-powered appliances)



DROUGHT

RESILIENCE STRATEGIES



NATURAL SYSTEMS

CONDUCT A COMPREHENSIVE ANALYSIS OF AN EXTENDED (20-YEAR) DROUGHT SCENARIO ON THE CITY'S WATER SUPPLY (NATURAL SYSTEMS)

As part of the State's Fourth Climate Change Assessment, State agencies (e.g., Department of Water Resources, California Public Utility Agency) conducted an extended (20-year) drought scenario assessment to identify what impacts would occur on the state's water supply. Using data from the Cal-Adapt tool and other available resources, the City should conduct an extended drought scenario analysis to consider the effects on the City's water supply and water demand. Research indicates that an extended drought scenario similar to the one included Fourth Climate Change Assessment could occur within the 21st century (Pierce et al. 2018) and, therefore, should be an important consideration for the City's long-term water management planning efforts.

CONTINUE TO IMPLEMENT THE CITY'S URBAN WATER MANAGEMENT PLAN AND WATER SHORTAGE CONTINGENCY PLAN (NATURAL SYSTEMS)

Continue to implement the City's Urban Water Management Plan, and Water Shortage Contingency Plan and update these plans as needed to account for future regulations and requirements. The City has taken considerable steps to assess and prepare for a long-term drought scenario through these planning efforts, including an assessment of how climate change may affect the City's water supply. As part of future updates to the Urban Water Management Plan, research the feasibility of developing a network of rainwater harvesting facilities to support aquatic systems and groundwater recharge.



BUILT ENVIRONMENT

CONTINUE TO IMPLEMENT THE CITY'S RECYCLED WATER MASTER PLAN AND UPDATE, AS NEEDED (BUILT ENVIRONMENT)

Continue to implement the City's Recycled Water Master Plan and continuing planning efforts for future increases in demand for recycled water as part of future development projects in the City including specific plan areas (e.g., Margarita Area, Orcutt Area, Airport Areas, San Luis Ranch, and Froom Ranch). Continue to allocate available funds and seek new funding opportunities to implement the capital improvement projects (Recycled Water Master Plan Chapter 7: Capital Improvement Plan) needed to meet the increased demand for recycled water for existing and new development.

CONSIDER INCORPORATION OF WATER-EFFICIENT APPLIANCE RETROFITS AS PART OF THE CITY'S FORTHCOMING BUILDING RETROFIT PROGRAM (BUILT ENVIRONMENT)

Consider including options for water-efficient appliance retrofits as part of the City's forthcoming building retrofit program being implemented as part of the Climate Action Plan. Work with the City's Utilities Department to integrate current resources and programs regarding water conservation and energy-efficient appliance retrofits into the building retrofit program. The building retrofit program can also serve to highlight the energy conservation benefits of the reduced residential and commercial water use.



ESTABLISH A PER CAPITA WATER USE REDUCTION TARGET TO BE ACHIEVED BY 2025. USE EDUCATION AND OUTREACH TO PROMOTE WATER CONSERVATION PRACTICES AND WATER EFFICIENCY RETROFITS FOR RESIDENTIAL AND NONRESIDENTIAL BUILDINGS (BUILT ENVIRONMENT)

Using information in the City's 2020 Urban Water Management Plan, establish an aggressive per capita water use reduction target to be achieved by 2025 and track yearly progress on achieving the goal. Use a suite of existing and new strategies to achieve the target through water conservation education and financial incentives for water efficiency retrofits for residential and nonresidential properties. Water conservation strategies should include:

- Continue the City's Toilet Retrofit Inspection/Verification and expand to include other low-flow appliance retrofits including faucets, showerheads, and information on low water use appliances (e.g., dishwashers, washing machines)
- Work with community organizations and contractors to educate the public about the benefits and water conservation potential of rainwater catchment systems and greywater systems
- Conduct community outreach to educate citizens on current levels of water use by end-use in the City and water conservation tips to reduce household and business water waste

IMPLEMENT A "CASH FOR GRASS" LAWN REPLACEMENT PROGRAM WITH SUPPORT FROM COMMUNITY ORGANIZATIONS AND LANDSCAPING CONTRACTORS (BUILT ENVIRONMENT)

Design and implement a "Cash for Grass" lawn replacement program to help residents and businesses reduce outdoor water use and promote native climate-smart landscaping improvements. Price lawn replacement on a square-footage basis that effectively attracts participants. Work with SLO County to adopt lessons learned and best practices from the County program. Work with community organizations to promote the program and track implementation progress.



FLOODING

ADAPTATION STRATEGIES



NATURAL SYSTEMS

PRIORITIZE CLIMATE-SMART GREEN INFRASTRUCTURE STRATEGIES FOR FLOOD MANAGEMENT (NATURAL SYSTEMS)

To account for future changes in large storm events (50-, 100-, and 500-year storm events), prioritize the use of green infrastructure strategies (compared to grey infrastructure strategies) to manage

future flood risk exacerbated by climate change. Work with public and landowners upstream of waterways passing through the City (e.g., Stenner Creek, San Luis Obispo Creek) to manage stormwater runoff through sustainable land conservation practices (e.g., conservation easements) that achieve multiple objectives for the City (e.g., carbon farming, land conservation, flood management). As part of this effort the City should, support and build upon Policy 10.2.2 B of the City's Conservation and Open Space Element which states, "Natural resources such as wetlands, flood plains, recharge zones, riparian areas, open space, and native habitats should be identified, preserved and restored as valued assets for flood protection, water quality improvement, groundwater recharge, habitat, and overall long-term water resource sustainability."

ANALYZE POST-WILDFIRE DEBRIS FLOW IMPACTS (NATURAL SYSTEMS)

Conduct a detailed assessment to identify key impact areas in the City from a post-wildfire debris flow scenario and the implications this scenario would have on stormwater runoff during larger storm events. Establish a protocol for conducting an emergency assessment of post-fire debris-flow hazards in coordination with the United State Geologic Survey to identify key areas of risk from specific wildfire events that occur in or near the City. Develop a set of pre-disaster mitigation measures to be implemented to help mitigate impacts from post-wildfire debris flow events. Mitigation measures could include:

- Rapid reforestation of wildfire-affected areas susceptible to debris flow runoff to stabilize soils;
- Communication and coordination with residents and businesses located within potential impact areas from post-wildfire debris flow events; and
- Development of analysis techniques to predict debris flow events based on rainfall and moisture conditions.



BUILT ENVIRONMENT

A CLIMATE-INFORMED WATERWAY MANAGEMENT PLAN (BUILT ENVIRONMENT)

During the next update of the City's Waterway Management Plan, incorporate the future climate-informed flood risk modeling that was developed as part of the City's climate change vulnerability assessment to account for future changes in precipitation patterns and flood risk. Incorporate future changes in precipitation patterns into the City's Drainage Design Manual to ensure that future development in the City can properly accommodate changes in runoff from small and large storm events. Incorporate climate-informed flood risk modeling in all flood management-related capital improvement projects in the current Waterway Management Plan as well as future projects. As part of the update process, develop targets to offset the increase in stormwater runoff from existing residential and nonresidential land uses through green infrastructure approaches (e.g., rain gardens, rainwater catchment barrels, green stormwater infrastructure, permeable parking lots, and pavement) to help offset climate impacts on the City's stormwater management system from climate change. Incorporate green infrastructure improvements.



GREEN INFRASTRUCTURE

"Green infrastructure" encompasses natural features, such as forests and wetlands, that provide similar or complementary flood-management benefits as engineered infrastructure. While engineered infrastructure can degrade rivers and the values they provide, green infrastructure tends to support a diverse array of other benefits. A sustainable and resilient approach to flood-risk management will deploy a mix of green and engineered infrastructure solutions, tailored to specific challenges and objectives.

The Nature Conservancy, 2014

CONTINUE TO UTILIZE REDUNDANCIES IN THE CITY'S FLOOD MANAGEMENT SYSTEM (BUILT ENVIRONMENT)

Explore opportunities to add redundancy to the City's existing stormwater and flood management systems to mitigate impacts from increased storm intensities, as needed, using detention basins, green infrastructure (e.g., bio-swales, floodplain management through conservation easements) (Hettiarachchi et al. 2018). Considering the uncertainty in the timing of changes in large storm events, design flood management system redundancies to serve multiple purposes that add value to the community (e.g., detention basins that serve as parks or recreation areas).



DEVELOP NEIGHBORHOOD READINESS PLANS AND PROMOTE FLOOD PREPAREDNESS EDUCATION (COMMUNITY RESILIENCE)

Work with community organizations to develop neighborhood readiness plans for areas of the City at increased risk of flooding. Identify priority (i.e., flood-prone) neighborhoods to serve as pilot plans for this strategy. Work with San Luis Obispo County Office of Emergency Services, community organizations, and regional partners to develop neighborhood readiness plans. Use the Neighborhood Readiness planning process to increase flood preparedness education, awareness of existing City resources (e.g., carless collection points for evacuation points), and training opportunities for City residents and business owners. Incorporate strategy to work with and support evacuation of unhoused populations living in floodplains into Neighborhood Readiness Plans.

EXPLORE FLOOD EARLY WARNING SYSTEM FOR SAN LUIS OBISPO CREEK

Work with San Luis Obispo County to explore the feasibility and benefits of developing a flood monitoring and early warning system to provide alerts to residents during large storm events. Gather information from similar communities that have early warning systems to learn about costs, benefits, and best practices for developing a flood early warning system for the City.



EQUITY & EJ

EQUITY AND ENVIRONMENTAL JUSTICE (EJ) STRATEGIES



COMMUNITY RESILIENCE

IMPLEMENT A COMMUNITY RESILIENCE ENTERPRISE FUND (COMMUNITY RESILIENCE)

Develop and administer a Community Resilience Enterprise Fund that provides micro-grants to individuals or community organizations to implement projects that support social cohesion as it relates to climate change impacts and disaster recovery. The grants would be distributed through an application process in which applicants would propose projects, explaining why the outcome of the project would increase social cohesion and increase resilience to the anticipated impacts of climate change or help to repair historical inequities that have left certain populations more vulnerable to the impacts of climate change. Grants would be administered would develop criteria to evaluate applications and grant awardees with a focus on providing grants that focus on protecting the most vulnerable populations (i.e., low-income, minority, or elderly populations).

ENSURE ALL RESILIENCE STRATEGIES ARE IMPLEMENTED IN A JUST AND EQUITABLE MANNER (COMMUNITY RESILIENCE)

Identify key community organizations working with underserved and historically disadvantaged communities and ensure these organizations and representatives from historically disadvantaged play a substantive role in the strategy implementation process.

Implement the following practices to ensure equitable strategy implementation:

- Ensure community outreach and education opportunities focused on strategy implementation include multi-lingual options for both written materials and in-person engagement. Include demographic surveys as part of community outreach events to ensure that participants are representative of the demographic makeup (e.g., race, age, ethnicity) of the City's population as a whole.
- As strategies are implemented, ensure that the goal of the strategy aligns with community needs by providing opportunities for community organizations and other stakeholders to review strategy details before implementation. Use equity metrics included in the State's Adaptation Planning Guide, or similar metrics, to develop a Equity and Environmental

Justice Project Checklist to be used during the design and development of City-led programs and capital improvement projects to ensure they are implemented equitably and, where appropriate, historically disadvantaged communities are prioritized in receiving the benefits of the project.

- Ensure that procedural equity, distributional equity, and structural equity impacts are all considered in the implementation of resilience strategies.
- Continue to use existing resources (listed below) that identify disadvantaged communities in the City and prioritize community outreach to these communities during implementation of relevant strategies.
 - o California Department of Water Resources Disadvantaged Communities Mapping Tool
 - o Public Health Alliance of Southern California's California Healthy Places Index
 - o Environmental Protection Agency's Environmental Justice Screening Tool
 - o Office of Environmental Health Hazard Assessment CalEnviroScreen Tool

RESILIENT CITY

RESILIENT CITY OPERATION STRATEGIES



BUILT ENVIRONMENT

SUPPORT THE CITY'S CURRENT CARBON NEUTRAL CITY FACILITIES PLAN AND EXPLORE THE FEASIBILITY OF A CLEAN-ENERGY MICROGRID FOR CITY FACILITIES (BUILT ENVIRONMENT)

Continue supporting the City's current Carbon Neutral City Facilities plan. As part of this plan, if appropriate, conduct a feasibility study for developing a clean energy microgrid for key City facilities to provide clean back-up power during utility disruptions (e.g., Public Safety Power Shutoffs or other disruptions) as well as providing local solar power to City facilities non-emergency use during the day. Ensure that the feasibility study includes the following details to allow for development of a City microgrid, if deemed feasible:

- A review of regulatory and operational considerations
- A conceptual shovel-ready design of the technical components for a fully connected microgrid and an islandable solar + storage system
- A phasing strategy and procurement plan for implementation
- An operational strategy that includes governance and cybersecurity
- Key considerations for operation of the microgrid during short-term and long-utility disruptions

Seek funding sources including the California Energy Commissions Electric Program Investment Charge (EPIC) Program and the Pacific Gas and Electric Community Microgrid Enablement Program (CMEP) to conduct a feasibility study.



MICROGRID

As defined by the U.S. Department of Energy Microgrid Exchange Group, a "microgrid is a group of interconnected loads and distributed energy resources within clearly defined electrical boundaries that acts as a single controllable entity with respect to the grid. A microgrid can connect and disconnect from the grid to enable it to operate in both grid-connected or island-mode."

DEVELOP AND ADOPT A CLIMATE RESILIENCY CHECKLIST FOR NEW DEVELOPMENT PROJECTS IN THE CITY TO MITIGATE THE IMPACTS OF CLIMATE-RELATED HAZARDS (BUILT ENVIRONMENT)

Similar to the City's GHG Emissions Analysis Compliance Checklist, develop and adopt a Climate Resiliency Checklist to ensure that new residential and nonresidential development in the City is designed and built to withstand the future impacts of climate change. Incorporate all appropriate policies related to new development that are included in the City's General Plan Safety Element into the checklist. Items in the Climate Resiliency Checklist should be objective and comply with all relevant housing laws to eliminate discretionary review. Checklist items could include:

- Updated energy design standards that incorporate future changes in annual average minimum and maximum temperatures
- Additional batter storage requirements for certain types of development to mitigate impacts from future utility disruptions
- Defensible space and home hardening requirements for development located in high wildfire risk areas designated by the City
- Additional building design or site plan requirements to mitigate flood-related impacts in areas with current or future flood risk
- Additional building design or landscaping requirement to reduce water consumption in new development

IMPLEMENT CLIMATE-INFORMED EMERGENCY OPERATIONS PLANNING (BUILT ENVIRONMENT)

During the City's next update of the Comprehensive Disaster Leadership Plan, incorporate climate projections and climate impact data for the Climate Change Hazards and Vulnerabilities Report into the planning process and analyze future staffing and resource requirements to adequately address the future frequency and intensity of climate related hazards in the City. Develop protocols for novel climate-related hazards that the City has previously experienced including prolonged heat wave events and wildfire smoke impacts.



INTEGRATE CLIMATE PROJECTIONS INTO CITY BUILDING AND ENGINEERING STANDARDS AND ROUTINE INFRASTRUCTURE MAINTENANCE (BUILT ENVIRONMENT)

Begin the process of evaluating and updating the City's building and engineering standards to account for future changes in key climate variables (e.g., changes in size of large storm events, maximum daily temperatures) that are likely to affect critical infrastructure. Use data from the Climate Change Hazards and Vulnerabilities Report, the Cal-Adapt tool, and supplemental climate projection data and research to inform the updates to the City's standards update process. Use an climate-informed adaptive management approach to continually monitor the performance of the updated building and engineering standards against the observed changes in climate variables, adjusting standards as need to match future changes in these variables caused by climate change.

INCORPORATE CLIMATE RISK INTO THE CITY'S CAPITAL IMPROVEMENT PROJECTS (CIP) PLANNING PROCESS (BUILT ENVIRONMENT)

Assess existing infrastructure systems vulnerable to changes in key climate variables (e.g., flooding, extreme heat) and incorporate upgrades to critical infrastructure in the City's Capital Improvement Projects (CIP) planning process. Identify key pieces of existing infrastructure that are likely to be compromised by climate impacts and prioritize these upgrades as part of the City CIP process. Use data from the Climate Change Hazards and Vulnerabilities Report, the Cal-Adapt tool, and supplemental climate projection data and research to inform an appropriate list of infrastructure upgrades.



COMMUNITY RESILIENCE

EXPLORE OPPORTUNITIES TO EXPAND ACCESS TO POST-DISASTER RECOVERY RESOURCES (COMMUNITY RESILIENCE)

Explore opportunities to expand access to post-disaster recovery resources for residents and businesses (e.g., recovery funding, recovery services). Establish metrics to help assess effectiveness

in post-disaster recovery efforts including metrics to ensure that post-disaster recovery resources are allocated equitably and consider historically disadvantaged communities. Assess potential barriers for rehabilitation and rebuilding in post-disaster situations and

establish a protocol to remove these barriers and expedite rebuilding for a post-disaster recovery scenario. This strategy aligns with Policy 9.11 "Disaster Recovery" in the City's existing Safety Element.

IMPLEMENT LONG-TERM STRATEGY TO INCREASE CITY STAFF CAPACITY TO ADDRESS CLIMATE CHANGE AND IMPLEMENT ADAPTATION STRATEGIES (COMMUNITY RESILIENCE)

Use information from the Resilient SLO Capacity Building Assessment to identify key gaps in the City's knowledge of climate adaptation planning and how to integrate the topic into their work. Establish a 1-3 strategy and workplan to increase City staff capacity to fully integrate climate change adaptation as key component of their work for appropriate departments and staff. Assess progress towards increasing staff capacity to address climate change on an annual or bi-annual basis and adjust strategy accordingly based on results and new information and guidance regarding climate adaptation planning. Establish the City's Green Team as the official working group to help implement the suite of climate adaptation strategies included in the City's Safety Element Update, identifying representatives from key City departments to lead champion climate adaptation in those departments.

INTEGRATE REGIONAL COLLABORATION INTO THE CITY'S CLIMATE ADAPTION PLANNING (COMMUNITY RESILIENCE)

Integrate regional collaboration as a key component of the City's climate adaption planning strategy, recognizing the regional nature of climate impacts and climate adaptation strategies. Continue the City's active participation in the Central Coast Climate Collaborative (4C) by sharing lessons learned, strategy collaboration opportunities, and regionally-relevant data included in the Climate Change Hazards and Vulnerabilities Report. Consistently communicate and provide updates on adaptation strategy implementation to the general public and key partners including the San Luis Obispo County, other incorporated cities in the County, and community organizations. Identify members of the City's Green Team to serve as city liaisons for regional adaptation-focused organizations and key regional climate adaptation planning efforts.

SOCIAL & ECONOMIC

RESILIENCE STRATEGIES



BUILT ENVIRONMENT

WORK COMMUNITY ORGANIZATIONS, FAITH-BASED ORGANIZATIONS, AND OTHER INSTITUTIONS TO ESTABLISH A NETWORK OF CLIMATE RESILIENCE HUBS FOR CLIMATE-RELATED HAZARD EVENTS (BUILT ENVIRONMENT)

Work community organizations, faith-based organizations, and other institutions to develop a network of conveniently located Climate Resilience Hubs including a mix of public facilities, community centers, businesses, and community-oriented facilities (e.g., churches, synagogues, mosques). Ensure the chosen facilities are equipped to provide shelter to vulnerable populations during other emergency events such as periods of poor air quality from wildfire smoke, utility disruptions, flooding events, or other climate-related hazards (CDC n.d.). Ensure the Climate Resilience Center is centrally located near transit stops to provide public transit access.



COMMUNITY RESILIENCE

IDENTIFY CLIMATE ADAPTATION FUNDING SOURCES AND ESTABLISH A CLIMATE RESILIENCE FUND (COMMUNITY RESILIENCE)

Establish a Climate Resilience Fund as part of the City's General Fund to support the implementation of climate adaptation strategies identified in the City's Safety Element. Supplement the Climate Resilience Fund by identifying and pursuing funding and financing opportunities for specific climate adaptation strategies. Identify high-priced climate adaptation strategies or capital improvement projects and research the feasibility of financing these efforts through green bonds or similar financing mechanisms.

SUPPORT ECONOMIC RESILIENCE FOR LOCAL BUSINESSES TO MITIGATE FISCAL IMPACTS FROM CLIMATE CHANGE (COMMUNITY RESILIENCE)

Use information in the City's Climate Change Hazards and Vulnerabilities Report to identify key economic sectors that are vulnerable to impacts from climate-related hazards (e.g., tourism) and develop a strategy to diversify the City's economy to avoid overreliance on economic sectors that are vulnerable to climate impacts. Work with the San Luis Obispo Chamber of Commerce to identify businesses and local industries already being affected by climate-related impacts (e.g., drought, wildfire smoke, extreme heat) and identify opportunities to help support affected industries.

SUPPORT INDIVIDUAL AND HOUSEHOLD RESILIENCE AND PREPAREDNESS TO THE IMPACTS OF CLIMATE CHANGE (COMMUNITY RESILIENCE)

Work with community organizations, the San Luis Obispo County Office of Emergency Services, and other key stakeholders to educate individuals and households about strategies to increase preparedness for emergency events and climate-related impacts. Strategies could include:

- Creating emergency kits emergency supply kits for homes, cars, and at work locations
- Creating personal emergency funds for short- and long-term emergency events
- Information on mental health and support services for post-disaster rec

ASSESS THE EFFECTS OF CLIMATE CHANGE ON FOOD INSECURITY IN THE CITY

Work with community organizations (e.g., SLO Food Bank) and the SLO County Health Department to assess potential impacts of climate change on food prices and food insecurity in the City. Partner with community organizations to address food insecurity including opportunities to support food recovery efforts as part of implementation of Senate Bill 1383 to reduce food waste and associated greenhouse gas emissions