

Annex Q Southgate Recreation and Park District

Q.1 Introduction

This Annex details the hazard mitigation planning elements specific to the Southgate Recreation and Park District (SRPD or District), a previously participating jurisdiction to the 2016 Sacramento County Local Hazard Mitigation Plan (LHMP) Update. This Annex is not intended to be a standalone document, but appends to and supplements the information contained in the Base Plan document. As such, all sections of the Base Plan, including the planning process and other procedural requirements apply to and were met by the District. This Annex provides additional information specific to SRPD, with a focus on providing additional details on the risk assessment and mitigation strategy for this District.

Q.2 Planning Process

As described above, the District followed the planning process detailed in Chapter 3 of the Base Plan. In addition to providing representation on the Sacramento County Hazard Mitigation Planning Committee (HMPC), the District formulated their own internal planning team to support the broader planning process requirements. Internal planning participants, their positions, and how they participated in the planning process are shown in Table Q-1. Additional details on plan participation and District representatives are included in Appendix A.

Table Q-1 SRPD – Planning Team

| Name | Position/Title | How Participated |
|--------------|-------------------------------|---|
| Nancy Oh San | Accounting Manager | Provided review and information on Assets and Risk and Critical Facilities section. |
| Dan Giamonna | Parks Manager | Provided information about extreme heat events and smoke air quality events. |
| Vince King | Associate Park Planner | Provided review and information on Growth and Development Trends section. |
| Juanita Cano | Associate Park Planner | Provided review and input on entire document, attended meetings and workshops. |
| Marge McCuan | Recreational Supervisor II | Provided information on Pandemic section. |
| Julia Goetz | Administrative Assistant | Provided review of entire document. |
| Paula Hansen | Administration Manager | Provided review and input on mitigation actions. |

Coordination with other community planning efforts is paramount to the successful implementation of this LHMP Update. This section provides information on how the District integrated the previously approved



2016 Plan into existing planning mechanisms and programs. Specifically, the District incorporated into or implemented the 2016 LHMP through other plans and programs shown in Table Q-2.

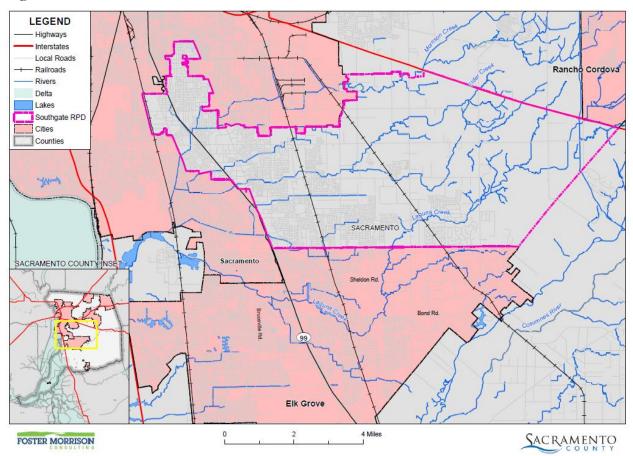
Table Q-2 2016 LHMP Incorporation

| Planning Mechanism 2016 LHMP Was Incorporated/Implemented In. | Details: How was it incorporated? |
|--|---|
| N/A | No mitigation related planning mechanisms have been completed since 2016. |

Q.3 District Profile

The District profile for the SRPD is detailed in the following sections. Figure Q-1 displays a map and the location of the District within Sacramento County.

Figure Q-1 SRPD



Data Source: Southgate District, Sacramento County GIS, Cal-Atlas; Map Date: 09/2020.

Q.3.1. Overview and Background

Southgate Recreation and Park District is an independent special district established in 1956 under the Public Resources Code. The District provides park and recreation services to 126,000 taxpayers in the rapidly urbanizing southeast area of Sacramento County, California. The District is managed by an elected five-member Board of Directors.

For over fifty years Southgate Recreation & Park District has been acquiring and developing parks and recreational facilities. The District encompasses a 52-square mile area of unincorporated South Sacramento County. In this area, the District currently maintains 46 parks, 6 community centers, 2 aquatic facilities, an 18-hole golf course, and numerous landscape corridors and nature preserves. The District's primary goal and its public charge is to provide recreation and park services to the 126,000 residents it serves. The District employs professional management and staff who manage the diverse services and facilities for the South Sacramento community.

Over the next twenty years we expect to add approximately 700 acres of park land and green space as new subdivision development occurs. Our strong tradition of Parks, Programs & Partnerships will continue to guide us, enabling us to continue serving the park and recreation needs of our socially, economically, and culturally diverse community.

The District lies east of Sacramento, south of Rancho Cordova and north of Elk Grove. The District's eastern boundary extends to Grant Line Road.

Q.4 Hazard Identification

SRPD identified the hazards that affect the District and summarized their location, extent, frequency of occurrence, potential magnitude, and significance specific to District (see Table Q-3).

Table Q-3 SRPD—Hazard Identification Assessment

| Hazard | Geographic Extent | Likelihood of Future Occurrences | Magnitude/ Severity | Significance | Climate Change Influence |
|---|----------------------|--|------------------------|--------------|--------------------------------|
| Climate Change | Extensive | Likely | Limited | Medium | - |
| Dam Failure | Significant | Occasional | Catastrophic | High | Medium |
| Drought & Water Shortage | Extensive | Likely | Limited | Medium | High |
| Earthquake | Extensive | Occasional | Catastrophic | Low | Low |
| Earthquake Liquefaction | Limited | Occasional | Critical | Low | Low |
| Floods: 1%/0.2% annual chance | Significant | Occasional | Catastrophic | High | Medium |
| Floods: Localized Stormwater | Extensive | Highly Likely | Limited | Medium | Medium |
| Landslides, Mudslides, and Debris Flow | Limited | Occasional | Limited | Low | Medium |
| Levee Failure | Extensive | Occasional | Critical | High | Medium |
| Pandemic | Extensive | Occasional | Catastrophic | Medium | Medium |
| Severe Weather: Extreme Cold and Freeze | Extensive | Highly Likely | Limited | Medium | Medium |
| Severe Weather: Extreme Heat | Extensive | Highly Likely | Limited | Medium | High |
| Severe Weather: Heavy Rains and Storms | Extensive | Highly Likely | Limited | Medium | Medium |
| Severe Weather: Wind and Tornado | Extensive | Highly Likely | Limited | Low | Low |
| Subsidence | Significant | Highly Likely | Limited | Low | Medium |
| Volcano | Extensive | Unlikely | Negligible | Low | Low |
| Wildfire | Significant | Highly Likely | Critical | High | High |

Geographic Extent

Limited: Less than 10% of planning area Significant: 10-50% of planning area Extensive: 50-100% of planning area

Likelihood of Future Occurrences

Highly Likely: Near 100% chance of occurrence in next year, or happens every year.

Likely: Between 10 and 100% chance of occurrence in next year, or has a recurrence interval of 10 years or less.

Occasional: Between 1 and 10% chance of occurrence in the next year, or has a recurrence interval of 11 to 100 years. Unlikely: Less than 1% chance of occurrence in next 100 years, or has a recurrence interval of greater than every 100 years.

Magnitude/Severity

Catastrophic—More than 50 percent of property severely damaged; shutdown of facilities for more than 30 days; and/or multiple deaths Critical—25-50 percent of property severely damaged; shutdown of facilities for at least two weeks; and/or injuries and/or illnesses result in permanent disability

Limited—10-25 percent of property severely damaged; shutdown of facilities for more than a week; and/or injuries/illnesses treatable do not result in permanent disability

Negligible—Less than 10 percent of property severely damaged, shutdown of facilities and services for less than 24 hours; and/or injuries/illnesses treatable with first aid

Significance

Low: minimal potential impact Medium: moderate potential impact High: widespread potential impact

Climate Change Influence

Low: minimal potential impact Medium: moderate potential impact High: widespread potential impact

Q.5 Hazard Profile and Vulnerability Assessment

The intent of this section is to profile the District's hazards and assess the District's vulnerability separate from that of the Sacramento County Planning Area as a whole, which has already been assessed in Section 4.3 Hazard Profiles and Vulnerability Assessment in the Base Plan. The hazard profiles in the Base Plan discuss overall impacts to the Sacramento County Planning Area and describes the hazard problem description, hazard location and extent, magnitude/severity, previous occurrences of hazard events and the likelihood of future occurrences. Hazard profile information specific to the District is included in this Annex. This vulnerability assessment analyzes the property and other assets at risk to hazards ranked of medium or high significance specific to the District. For more information about how hazards affect the County as a whole, see Chapter 4 Risk Assessment in the Base Plan.

Q.5.1. Hazard Profiles

Each hazard vulnerability assessment in Section Q.5.3, includes a hazard profile/problem description as to how each medium or high significant hazard (as shown in Table Q-3) affects the District and includes information on past hazard occurrences and the likelihood of future hazard occurrence. The intent of this section is to provide jurisdictional specific information on hazards and further describes how the hazards and risks differ across the Sacramento County Planning Area.

Q.5.2. Vulnerability Assessment and Assets at Risk

This section identifies the District's total assets at risk, including values at risk, populations at risk, critical facilities and infrastructure, natural resources, and historic and cultural resources. Growth and development trends are also presented for the District. This data is not hazard specific, but is representative of total assets at risk within the District.

Assets at Risk and Critical Facilities

This section considers the SRPD's assets at risk, with a focus on key District assets such as critical facilities, infrastructure, and other District assets and their values. With respect to District assets, the majority of these assets are considered critical facilities as defined for this Plan. Critical facilities are defined for this Plan as:

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Table Q-4 lists critical facilities and other District assets identified by the District Planning Team as important to protect in the event of a disaster. SRPD's physical assets, valued at over \$148 million, consist of the buildings and infrastructure to support the District's operations.

Table Q-4 SRPD Critical Facilities, Infrastructure, and Other District Assets

| Name of Asset | Facility Type | Replacement Value | Which Hazards Pose Risk |
|-------------------------|---------------------|-------------------|---|
| Corporation Yard Bldgs. | Maintenance Shop | \$675,701 | Levee Failure, Tornado, Severe Storm |

| Name of Asset | Facility Type | Replacement Value | Which Hazards Pose Risk |
|---|----------------------------|-------------------|---|
| Crofoot Clubhouse | Recreation Center | \$1,215,905 | Levee Failure, Tornado, Severe Storm |
| Florin Creek Recreation Center | Recreation Center | \$2,046,773 | Levee Failure, Flood, Tornado, Severe Storm |
| Fruitridge Aquatic Center | Swim Pool | \$2,153,554 | Tornado, Severe Storm |
| Fruitridge Community Center | Community Center | \$2,358,319 | Tornado, Severe Storm |
| Rizal Community Center | Community Center | \$4,615,409 | Levee Failure, Tornado, Severe Storm |
| Pat O'Brien Community Center | Community Center | \$10,660,420 | Tornado, Severe Storm |
| Pat O'Brien Community Aquatic Center | Swim Pool | \$5,028,500 | Tornado, Severe Storm |
| Scott Hokama Support Facility | Storage and Maintenance | \$2,439,277 | Tornado, Severe Storm |
| Sheldon Headquarters | Office | \$2,807,695 | Levee Failure, Tornado, Severe Storm |
| Fletcher Farm Community Center | Community Center | \$1,155,586 | Tornado, Severe Storm |
| WildHawk Golf Club | Clubhouse | \$2,033,831 | Tornado, Severe Storm |
| WildHawk Golf Club – Cart Barn | Cart Storage | \$2,432,812 | Tornado, Severe Storm |
| WildHawk Golf Club – Maintenance Bldg. | Maintenance Shop | \$663,494 | Tornado, Severe Storm |
| WildHawk Golf Course | Golf Course | \$4,500,000 | Drought, Flood, Severe Storms, Tornadoes, Extreme Heat, Climate Change |
| Gerry Green Head Start Facility | Preschool | \$1,886,378 | Tornado Severe Storm |
| Boulder Glen Park | Park | \$833,000 | Drought, Insects/Pests, Severe Storms, Tornadoes, Extreme Heat |
| Bowling Green Park | Park | \$2,682,000 | Drought, Levee Failure, Insects/Pests, Severe Storms, Tornadoes, Extreme Heat |
| Bradshaw Vineyards | Park | \$1,280,000 | Drought, Flood, Climate Change, Severe Storms, Tornadoes, Extreme Heat |
| Brittany Park | Park | \$525,000 | Drought, Climate Change, Severe Storms, Tornadoes, Extreme Heat |
| Calvine Crossing Park | Park | \$1,960,000 | Drought, Climate Change, Severe Storms, Tornadoes, Extreme Heat |
| Calvine Station Park | Park | \$1,019,000 | Drought, Climate Change, Severe Storms, Tornadoes, Extreme Heat |
| Carlisle Woods Park | Park | \$1,325,000 | Drought, Climate Change, Severe Storms, Tornadoes, Extreme Heat |

| Name of Asset | Facility Type | Replacement Value | Which Hazards Pose Risk |
|--------------------------------|---------------|-------------------|---|
| Caymus Park | Park | \$931,000 | Drought, Climate Change, Severe Storms, Tornadoes, Extreme Heat |
| Churchill Downs Community Park | Park | \$4,278,000 | Drought, Climate Change, Severe Storms, Tornadoes, Extreme Heat |
| Cochran Park | Park | \$2,492,000 | Drought, Climate Change, Severe Storms, Tornadoes, Extreme Heat |
| Cottonwood Park | Park | \$1,655,000 | Drought, Climate Change, Severe Storms, Tornadoes, Extreme Heat |
| Countryside Community Park | Park | \$3,183,000 | Drought, Climate Change, Severe Storms, Tornadoes, Extreme Heat |
| Crofoot Park | Park | \$906,000 | Drought, Levee Failure, Climate Change, Severe Storms, Tornadoes, Extreme Heat |
| Florin Creek Park | Park | \$3,870,000 | Drought, Flood, Levee Failure, Climate Change, Severe Storms, Tornadoes, Extreme Heat |
| Fountain Plaza Park | Park | \$1,378,000 | Drought, Levee Failure, Climate Change, Severe Storms, Tornadoes, Extreme Heat |
| Fruitridge Park | Park | \$3,412,000 | Drought, Climate Change, Severe Storms, Tornadoes, Extreme Heat |
| Hampton Park | Park | \$3,430,000 | Drought, Levee Failure, Climate Change, Severe Storms, Tornadoes, Extreme Heat |
| Hardester Park | Park | \$2,204,000 | Drought, Climate Change, Severe Storms, Tornadoes, Extreme Heat |
| Illa Collin Park | Park | \$3,060,000 | Drought, Climate Change, Severe Storms, Tornadoes, Extreme Heat |
| Jack W. Davis Park | Park | \$612,442 | Drought, Climate Change, Severe Storms, Tornadoes, Extreme Heat |
| Kennedy Park | Park | \$1,159,000 | Drought, Levee Failure, Climate Change, Severe Storms, Tornadoes, Extreme Heat |
| Little Hawke Park | Park | \$1,363,000 | Drought, Climate Change, Severe Storms, Tornadoes, Extreme Heat |
| Nicholas Park | Park | \$3,461,000 | Drought, Levee Failure, Climate Change, Severe Storms, Tornadoes, Extreme Heat |
| Norman S. Waters Park | Park | \$2,611,000 | Drought, Climate Change, Severe Storms, Tornadoes, Extreme Heat |
| Olde Florintown Park | Park | \$3,192,000 | Drought, Flood, Climate Change, Severe Storms, Tornadoes, Extreme Heat |
| Pacific Park | Park | \$508,000 | Drought, Levee Failure, Climate Change, Severe Storms, Tornadoes, Extreme Heat |

| Name of Asset | Facility Type | Replacement Value | Which Hazards Pose Risk |
|--|----------------|-------------------|---|
| Rainbow Park | Park | \$1,408,000 | Drought, Climate Change, Severe Storms, Tornadoes, Extreme Heat |
| Royal Park | Park | \$976,000 | Drought, Levee Failure, Climate Change, Severe Storms, Tornadoes, Extreme Heat |
| Rutter Park | Park | \$2,306,000 | Drought, Levee Failure, Climate Change, Severe Storms, Tornadoes, Extreme Heat |
| Sheldon Park | Park | \$3,822,000 | Drought, Flood, Levee Failure, Climate Change, Severe Storms, Tornadoes, Extreme Heat |
| Silver Leaf Park | Park | \$2,063,000 | Drought, Climate Change, Severe Storms, Tornadoes, Extreme Heat |
| Sky Park | Park | \$1,582,000 | Drought, Levee Failure, Climate Change, Severe Storms, Tornadoes, Extreme Heat |
| Southwoods Park | Park | \$1,374,000 | Drought, Climate Change, Severe Storms, Tornadoes, Extreme Heat |
| Sunrise Florin Park | Park | \$2,540,000 | Drought, Climate Change, Severe Storms, Tornadoes, Extreme Heat |
| Tamarindo Park | Park | \$1,543,000 | Drought, Climate Change, Severe Storms, Tornadoes, Extreme Heat |
| Toby Johnson Park | Park | \$2,143,000 | Drought, Climate Change, Severe Storms, Tornadoes, Extreme Heat |
| Vineyard Park | Park | \$618,000 | Drought, Climate Change, Severe Storms, Tornadoes, Extreme Heat |
| Vineyard Creek Park | Park | Future Park | Drought, Flood, Climate Change, Severe Storms, Tornadoes, Extreme Heat |
| Don & Brenda Notolli Community Park | Park | \$\$6,005,418 | Drought, Flood, Climate Change, Severe Storms, Tornadoes, Extreme Heat |
| Jimmie R. Yee Park | Park | \$1,615,760 | Drought, Flood, Climate Change, Severe Storms, Tornadoes, Extreme Heat |
| Vintage Park | Park | \$2,960,000 | Drought, Climate Change, Severe Storms, Tornadoes, Extreme Heat |
| Larry Gury Community Park | Park | \$\$8,683,739 | Drought, Flood, Climate Change, Severe Storms, Tornadoes, Extreme Heat |
| Willowood Park | Park | \$1,099,273 | Drought, Climate Change, Severe Storms, Tornadoes, Extreme Heat |
| Florin Creek Trail | Ped/Bike Trail | \$950,400 | Drought, Flood, Levee Failure, Climate Change, Severe Storms, Tornadoes, Extreme Heat |

| Name of Asset | Facility Type | Replacement Value | Which Hazards Pose Risk |
|----------------------|----------------|-------------------|--|
| Tillotson Parkway | Ped/Bike Trail | \$5,552,000 | Drought, Climate Change, Severe Storms, Tornadoes, Extreme Heat |
| Laguna Creek Parkway | Ped/Bike Trail | | Drought, Flood, Climate Change, Severe Storms, Tornadoes, Extreme Heat, Wildfire |

Source: SRPD

Natural Resources

The Southgate Recreation & Park District has a variety of natural resources of value to the community:

- Laguna Creek Parkway (125.5 acres)
- ➤ Bradshaw Vineyards Open Space Preserve (3.08 Acres)
- ➤ Elder Creek Open Space Preserve (15.29 acres)
- ➤ Gerber Creek Open Space Preserve (4.93 acres)
- ➤ Kingsbridge Open Space Preserve (29.36 acres)
- Dunmore Park Preserve (32.87 acres)
- Gene Andal Park Preserve (Sacramento County)
- Various mitigation banks and conservancies also identified as the Vernal Pool Prairie Preserve not owned by Southgate

Historic and Cultural Resources

There are no nationally recognized landmarks but there are still a few scattered pre-World War II buildings along Florin Rd. The area previously known as Florin was a flourishing Japanese community of Issei and Nisei immigrant farmers. One of those buildings includes Florin East Grammar School which became a segregated school for kids of oriental decent in 1923 and is now owned by the County of Sacramento and operated by Southgate RPD under a lease agreement.

Growth and Development Trends

Growth within the Southgate RPD has increased. Planning areas such as the Vineyard Springs Comprehensive Plan, North Vineyard Station Specific Plan, Florin Vineyard Community Plan, Olde Florintown Special Planning Area, and the planned West Jackson Highway Master Plan accommodate new growth in the Southgate RPD.

Development since 2016

The District has recently completed constructed of a community center, aquatic center, and support facility. In addition, the District has also constructed 3 new parks, Don and Brenda Nottoli Community Park, Larry Gury Community Park, and Jimmie R. Yee Park and updated the facilities at several parks and buildings since 2016.

Future Development

The District has limited control over future development in areas the District services. Future development in these areas parallels that of the Sacramento County Planning Area. More general information on growth and development in Sacramento County as a whole can be found in "Growth and Development Trends" in Section 4.3.1 Sacramento County Vulnerability and Assets at Risk of the Base Plan.

Olde Florintown Special Planning Area

The Final Environmental Impact Report (FEIR) for the Olde Florintown Special Planning Area (OFT SPA) was approved by the Board of Supervisors on May 25, 2011. The intent of the OFT SPA is to preserve the Historic Village Center, create additional housing opportunities, and to create a theme for the area with development standards and design guidelines. The OFT SPA is located within the unincorporated area of Sacramento County, along Florin Road approximately between Power Inn Road and Florin Perkins Road/French Road, in the South Sacramento Community Plan Area.

The District previously reviewed and commented on this plan regarding parkland dedication requirements, infill development, trail alignment along the Florin Creek drainage corridor, parking, and inclusion of a parkway along Alta-Florin Road. The District's concerns were considered throughout the County's development of the Olde Florintown Special Planning Area planning documents, land use diagram, and development standards and guidelines and were satisfactorily addressed and incorporated into the FEIR.

Florin Vineyard "Gap" Community Plan Area

In 1999, the Sacramento County Board of Supervisors initiated a community planning program for the Florin-Vineyard area, also known as the "Gap" area. The proposed Florin-Vineyard Community Plan area covers approximately 3,450+ acres and is located within the communities of Vineyard and South Sacramento. The term "Gap" has been used to refer to this area because it is located between the existing urban area to the west of Elk Grove-Florin Road and a comprehensively planned urban area to the east (i.e., North Vineyard Station and Vineyard Springs).

The Florin Vineyard Community Plan was adopted in December of 2010 and individual project applications were approved in early 2011. Additional build-out of the plan area will be reviewed on a project by project basis. Southgate Recreation and Park District will work with the County and individual project applicants to ensure that the parkland dedication requirements are met for each project and for the planning area as a whole. A pedestrian and bicycle trail network will be aligned within the Elder Creek open space and "Green Street", and 35-foot parkways will be provided along Gardner Avenue and Hedge Road.

North Vineyard Station Specific Plan Area

The North Vineyard Station Specific Plan was initiated by the Board of Supervisors in November of 1993 and approved on November 4, 1998. The Specific Plan area is approximately 1,594 acres in size and is bounded by Florin Road to the north, Gerber Road to the south, Elder Creek to the west and the extension of Vineyard Road to the east.

Southgate will own, operate and maintain the parks and open space throughout the North Vineyard Station Specific Plan Area. A pedestrian and bicycle trail will be aligned within the Gerber and Elder Creeks open space areas.

Proposed West Jackson Highway Master Plan

The West Jackson Highway Master Plan is a significant Sacramento County project that encompasses nearly 5,900 acres in the Vineyard and Cordova Community Planning Areas. The proposed project includes three alternatives. Approximately 3,000 acres (52%) of the project are located within the northern portion of the Southgate Recreation & Park District along Jackson Highway. The District will work with the development community, County, and regulatory agencies on identifying the most appropriate locations for all new parkland and associated recreation facilities. Currently there is approximately 125 acres of parks, 1,900 acres of open spaces, and multi-use trail corridors throughout the plan area. The intended result of this process is to create an overview of future park and recreation amenities in relation to residential and commercial centers.

Q.5.3. Vulnerability to Specific Hazards

This section provides the vulnerability assessment, including any quantifiable loss estimates, for those hazards identified above in Table Q-3 as high or medium significance hazards. Impacts of past events and vulnerability of the District to specific hazards are further discussed below (see Section 4.1 Hazard Identification in the Base Plan for more detailed information about these hazards and their impacts on the Sacramento County Planning Area). Methodologies for evaluating vulnerabilities and calculating loss estimates are the same as those described in Section 4.3 of the Base Plan.

An estimate of the vulnerability of the District to each identified priority hazard, in addition to the estimate of likelihood of future occurrence, is provided in each of the hazard-specific sections that follow. Vulnerability is measured in general, qualitative terms and is a summary of the potential impact based on past occurrences, spatial extent, and damage and casualty potential. It is categorized into the following classifications:

- **Extremely Low**—The occurrence and potential cost of damage to life and property is very minimal to nonexistent.
- **Low**—Minimal potential impact. The occurrence and potential cost of damage to life and property is minimal.
- ➤ **Medium**—Moderate potential impact. This ranking carries a moderate threat level to the general population and/or built environment. Here the potential damage is more isolated and less costly than a more widespread disaster.
- ➤ **High**—Widespread potential impact. This ranking carries a high threat to the general population and/or built environment. The potential for damage is widespread. Hazards in this category may have occurred in the past.
- **Extremely High**—Very widespread with catastrophic impact.

Depending on the hazard and availability of data for analysis, this hazard specific vulnerability assessment also includes information on values at risk, critical facilities and infrastructure, populations at risk, and future development.

Power Outage/Power Failure

An impact of almost all hazards below relates to power outage and/or power failures. The US power grid crisscrosses the country, bringing electricity to homes, offices, factories, warehouses, farms, traffic lights and even campgrounds. According to statistics gathered by the Department of Energy, major blackouts are on the upswing. Incredibly, over the past two decades, blackouts impacting at least 50,000 customers have increased 124 percent. The electric power industry does not have a universal agreement for classifying disruptions. Nevertheless, it is important to recognize that different types of outages are possible so that plans may be made to handle them effectively. In addition to blackouts, brownouts can occur. A brownout is an intentional or unintentional drop in voltage in an electrical power supply system. Intentional brownouts are used for load reduction in an emergency. Electric power disruptions can be generally grouped into two categories: intentional and unintentional. More information on types of power disruptions can be found in Section 4.3.2 of the Base Plan.

The District has not had any major power outages that have affected services for extended periods of time.

Public Safety Power Shutoff (PSPS)

A new intentional disruption type of power outage/failure event has recently occurred in California. In recent years, several wildfires have started as a result of downed power lines or electrical equipment. This was the case for the Camp Fire in 2018. As a result, California's three largest energy companies (including PG&E), at the direction of the California Public Utilities Commission (CPUC), are coordinating to prepare all Californians for the threat of wildfires and power outages during times of extreme weather. To help protect customers and communities during extreme weather events, electric power may be shut off for public safety in an effort to prevent a wildfire. This is called a PSPS. More information on PSPS criteria can be found in Section 4.3.2 of the Base Plan. The District has been minimally affected by power outages and/or power failures. In cases where power has been lost, most of the administration operations and recreation programs have been canceled. Administration services are computer dependent and therefore most work that is dependent on electronic devices cannot be performed when power is out. The District does not have backup generators at any of the facilities.

Climate Change

Likelihood of Future Occurrence—Likely **Vulnerability**—Medium

Hazard Profile and Problem Description

Climate change adaptation is a key priority of the State of California. The 2018 State of California Multi-Hazard Mitigation Plan stated that climate change is already affecting California. Sea levels have risen by as much as seven inches along the California coast over the last century, increasing erosion and pressure on the state's infrastructure, water supplies, and natural resources. The State has also seen increased average temperatures, more extreme hot days, fewer cold nights, a lengthening of the growing season, shifts in the water cycle with less winter precipitation falling as snow, and earlier runoff of both snowmelt and rainwater in the year. In addition to changes in average temperatures, sea level, and precipitation patterns, the intensity of extreme weather events is also changing.

The District has not noticed any notable changes and climate change is slow and therefore the District is able to adapt to changes as they happen. At this time the District has experience seasons of high rainfall and seasons of drought. Our operations are adaptable and everchanging based on weather not on specific impacts of climate change.

Location and Extent

Climate change is a global phenomenon. It is expected to affect the whole of the District, Sacramento County, and State of California. There is no scale to measure the extent of climate change. Climate change exacerbates other hazards, such as drought, extreme heat, flooding, wildfire, and others. The speed of onset of climate change is very slow. The duration of climate change is not yet known, but is feared to be tens to hundreds of years.

Past Occurrences

Climate change has never been directly linked to any declared disasters. While the District noted that climate change is of concern, no specific impacts of climate change could be recalled. The District and HMPC members did, however, note that in Sacramento County, the strength of storms does seem to be increasing and the temperatures seem to be getting hotter.

Vulnerability to and Impacts from Climate Change

The 2014 California Adaptation Planning Guide (APG) prepared by California OES and CNRA was developed to provide guidance and support for local governments and regional collaboratives to address the unavoidable consequences of climate change. California's APG: Understanding Regional Characteristics has divided California into 11 different regions based on political boundaries, projected climate impacts, existing environmental setting, socioeconomic factors, and regional designations. Sacramento County falls within the North Sierra Region characterized as a sparsely settled mountainous region where the region's economy is primarily tourism-based. The region is rich in natural resources, biodiversity, and is the source for the majority of water used by the state. This information can be used to guide climate adaptation planning in the District and Sacramento County Planning Area.

The California APG: Understanding Regional Characteristics identified the following impacts specific to the North Sierra region in which the Sacramento County Planning Area is part of:

- > Temperature increases
- Decreased precipitation
- Reduced snowpack
- Reduced tourism
- Ecosystem change
- > Sensitive species stress
- Increased wildfire

The District recognizes that climate change could have the following impacts that would affect District operations:

- > Temperature increases which could increase the rates of wildfire. Wildfire hazards in District areas that are urbanized are low but areas where development has encroached into previously rural areas are more susceptible to grass fires. The District's rural areas lie mostly to the north and east are with most being currently undeveloped. There is also larger ag residential centrally located to the District. Although most urbanized areas are unlikely to experience increased fire risk, wildfires in the Sierra Nevada and areas outside the county can affect air quality in the District.
- Decreased precipitation can result in dry soil, shallow streams, and shortages of municipal water supplies. The District would have to water earlier and later into the year.

Assets at Risk

The District recognizes that changes in the earth climate can affect many things. The District facilities that will most likely be affected would be our parks and open spaces. The drier the season the higher the likelihood of fires if these facilities do not receive sufficient water.

Dam Failure

Likelihood of Future Occurrence—Occasional **Vulnerability**—High

Hazard Profile and Problem Description

Dams are manmade structures built for a variety of uses including flood protection, power generation, agriculture, water supply, and recreation. When dams are constructed for flood protection, they are usually engineered to withstand a flood with a computed risk of occurrence. For example, a dam may be designed to contain a flood at a location on a stream that has a certain probability of occurring in any one year. If prolonged periods of rainfall and flooding occur that exceed the design requirements, that structure may be overtopped or fail. Overtopping is the primary cause of earthen dam failure in the United States.

Location and Extent

Dam failure is a natural disaster from two perspectives. First, the inundation from released waters resulting from dam failure is related to naturally occurring floodwaters. Second, a total dam failure would most probably happen as a consequence of the natural disaster triggering the event, such as an earthquake. There is no scale with which to measure dam failure. However, California's Department of Water Resources (DWR) Division of Safety of Dams (DOSD) assigns hazard ratings to dams within the State that provides information on the potential impact should a dam fail. The following two factors are considered when assigning hazard ratings: existing land use and land use controls (zoning) downstream of the dam. Dams are classified in four categories that identify the potential hazard to life and property: Low, Significant, High, and Extremely High. These were discussed in more detail in Section 4.3.7 of the Base Plan.

While a dam may fill slowly with runoff from winter storms, a dam break has a very quick speed of onset. The duration of dam failure is generally not long – only as long as it takes to empty the reservoir of water the dam held back. The District would be affected for as long as the flood waters from the dam failure takes to drain downstream.

Based on dam inundation data obtained from CA DWR and Cal OES the was discussed in Section 4.3.7 of the Base Plan, dams inside the County that can affect the District can be seen on Figure Q-2. Dams outside the County that can affect the District can be seen on Figure Q-3. The District also has areas in the Folsom Dam 235,000 cfs release scenario, which can be seen on Figure Q-4. While Figure Q-2 and Figure Q-3 illustrate dam inundation areas from an actual dam failure, Figure Q-4, the Folsom 235,000 cfs scenario reflects the likely inundation area associated with a possible "super" release of water from Folsom. This updated Folsom scenario reflects the Folsom dam improvements which make a dam failure unlikely, with any resulting downstream inundation from Folsom associated with an intentional release of water from the dam. It is anticipated that the worst-case scenario would be a 235,000 cfs release, which is comparable to a 200-year flood.

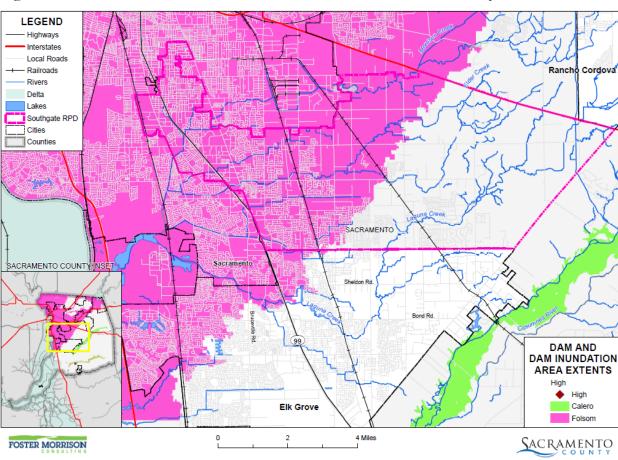


Figure Q-2 SRPD – Dam Inundation Areas from Dams Inside the County

Data Source: County-provided dam inundation data (FOLSOM_DAM_INUNDATION_AREA.shp 2016),
DWR DSOD Data 2020 and Cal OES Dam Status 10/2017, Sacramento County GIS, Cal-Atlas; Map Date: 2/2021.

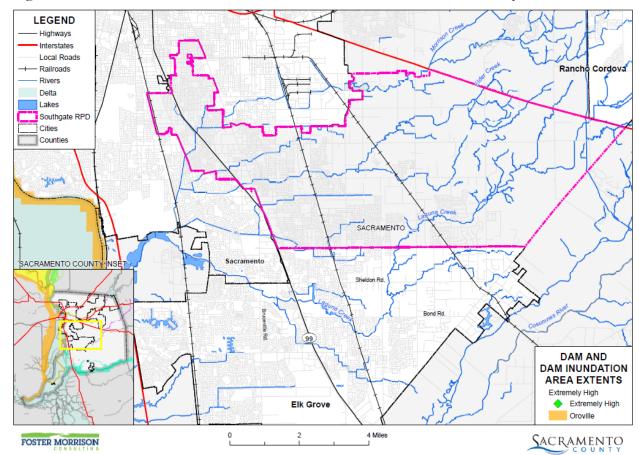


Figure Q-3 SRPD – Dam Inundation Areas from Dams Outside the County

Data Source: DWR DSOD Data 2020 and Cal OES Dam Status 10/2017, Southgate District, Sacramento County GIS, Cal-Atlas; Map Date: 9/2020.

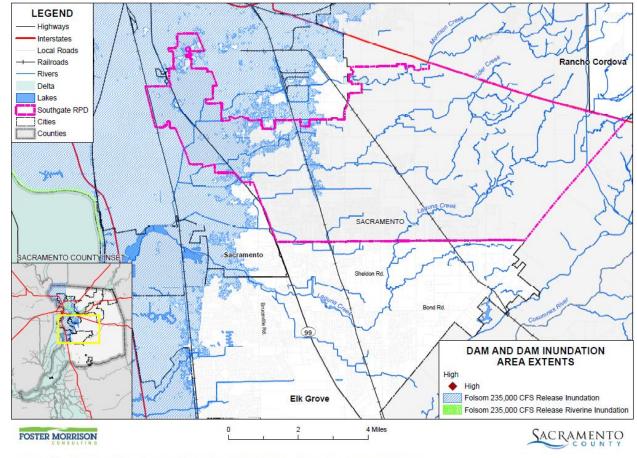


Figure Q-4 SRPD – Inundation Areas from Folsom 235,000 cfs Scenario

Data Source: County-provided dam inundation data (CA_DWR_200YEAR_FLOODPLAIN.zip 2020), DWR DSOD Data 2020, Sacramento County GIS, Cal-Atlas; Map Date: 02/2021.

Past Occurrences

There has been no federal or state disaster declarations for dam failure in the County. The District noted no other dam failure occurrences that have affected the District.

Vulnerability to and Impacts from Dam Failure

Dam failure flooding would vary by community depending on which dam fails and the nature and extent of the dam failure and associated flooding. Impacts to the District from a dam failure flood could include loss of life and injury, flooding and damage to property and structures, damage to critical facilities and infrastructure, loss of natural resources, and all other flood related impacts. Additionally, mass evacuations and associated economic losses can also be significant.

The District would be highly impacted if there was dam failure due to the majority of the facilities beginning located in the area that could potentially be flooded. Access to major highways would be compromised as most of the developed area would be flooded.

Assets at Risk

The District noted that the majority of the west side of the District would be inundated if Folsom Dam failed. If there was a release inundation the impact would be less yet there would be District property that would be affected. Table Q-5 shows the District assets would be affected.

Table Q-5 SRPD Assets at risk from Dam Inundation Areas

| Name of Asset | Facility Type |
|-----------------------------|--------------------|
| Bowling Green Park | Park |
| Crofoot Park | Park |
| Florin Creek Center | Community Center |
| Florin Creek Park & Trail | Park & Trail |
| Fountain Plaza Park | Park |
| Fruitridge Community Center | Community Center |
| Fruitridge Community Park | Park |
| Hampton Park | Park |
| Jack Davis Park | Park |
| Nicholas Park | Park |
| Pacific Park | Park |
| Rainbow Park | Park |
| Royal Park | Park |
| Rutter Park | Park |
| Sheldon Park | Park |
| District Office | Main Office |
| Sky Park | Park |
| Kennedy Park | Park |
| Olde Florintown Park | Park |
| Orange Ave | Undeveloped Parcel |
| Olde Florintown Lot | Undeveloped Parcel |
| Olde Florintown Lot | Parking Lot |
| Heritage Park | Park |
| Florin Farm & Open Space | Undeveloped Parcel |

Source: Sacramento County DWR, SRPD, FEMA

^{*}Shows property in the 200-year flood zone

Drought & Water Shortage

Likelihood of Future Occurrence—Likely **Vulnerability**—Medium

Hazard Profile and Problem Description

Drought is a complex issue involving many factors—it occurs when a normal amount of precipitation and snow is not available to satisfy an area's usual water-consuming activities. Drought can often be defined regionally based on its effects. Drought is different than many of the other natural hazards in that it is not a distinct event and usually has a slow onset. Drought can severely impact a region both physically and economically. Drought affects different sectors in different ways and with varying intensities. Adequate water is the most critical issue and is critical for agriculture, manufacturing, tourism, recreation, commercial, and domestic use. As the population in the area continues to grow, so will the demand for water.

Location and Extent

Drought and water shortage are regional phenomenon. The whole of the County, as well as the whole of the District, is at risk. The US Drought Monitor categorizes drought conditions with the following scale:

- None
- ➤ D0 Abnormally dry
- ➤ D1 Moderate Drought
- ➤ D2 Severe Drought
- ➤ D3 Extreme drought
- ➤ D4 Exceptional drought

Drought has a slow speed of onset and a variable duration. Drought can last for a short period of time, which does not usually affect water shortages and for longer periods. Should a drought last for a long period of time, water shortage becomes a larger issue. Current drought conditions in the District and the County are shown in Section 4.3.8 of the Base Plan.

Past Occurrences

There has been two state and one federal disaster declaration due to drought since 1950. This can be seen in Table Q-6.

Table Q-6 Sacramento County – State and Federal Disaster Declarations Summary 1950-2020

| Disaster Type | State Declarations | | Federal Declarations | |
|---------------|--------------------|------------|----------------------|-------|
| | Count | Years | Count | Years |
| Drought | 2 | 2008, 2014 | 1 | 1977 |

Source: Cal OES, FEMA

Since drought is a regional phenomenon, past occurrences of drought for the District are the same as those for the County and includes 5 multi-year droughts over an 85-year period. Details on past drought occurrences can be found in Section 4.3.8 of the Base Plan.

In January 2014, the Governor of California declared a State of Emergency projecting that 2014 would be the driest on record and asked Californians to conserve at least 20%. May 2015 the State Water Resource Control Board required a 25% reduction in water use. The Southgate RPD reduced water consumption and irrigation to meet the requirements. The parks, golf course and landscape corridors were more dry than usual. The Southgate RPD owns and maintains over 12,000 trees. Because of the severe drought hundreds of trees died and were removed.

The District has been working to reduce water usage in and around their facilities and in all operations. Irrigation has been reduced, whenever possible, and low water use plumbing installed in buildings. The District continues to examine practices to reduce the water used.

Vulnerability to and Impacts from Drought and Water Shortage

Based on historical information, the occurrence of drought in California, including the District, is cyclical, driven by weather patterns. Drought has occurred in the past and will occur in the future. Periods of actual drought with adverse impacts can vary in duration, and the period between droughts can be extended. Although an area may be under an extended dry period, determining when it becomes a drought is based on impacts to individual water users. Drought impacts are wide-reaching and may be economic, environmental, and/or societal. Tracking drought impacts can be difficult.

The most significant qualitative impacts associated with drought in the Planning Area are those related to water intensive activities such as agriculture, wildfire protection, municipal usage, commerce, tourism, recreation, and wildlife preservation. Mandatory conservation measures are typically implemented during extended droughts. Drought conditions can also cause soil to compact and not absorb water well, potentially making an area more susceptible to flooding. With a reduction in water, water supply issues based on water rights becomes more evident. Climate change may create additional impacts to drought and water shortage in the County and the District.

During periods of drought, vegetation can dry out which increases fire risk. Drought that occurs during periods of extreme heat and high winds can cause Public Safety Power Shutoff (PSPS) events to be declared in the County. More information on power outage and failure can be found in the discussion at the beginning of Section Q.5.3, as well as in Section 4.3.3 of the Base Plan.

The vulnerability is high because of the type of facilities the Southgate RPD owns and maintains which require lots of water in order to maintain them green, usable, and viable for recreational use by the community. Should there be a declared water shortage/drought event, the District will be forced to follow any water shortage restrictions from the County and the State. Landscaped and turfed areas may be stressed by additional water restrictions and more trees may die.

Assets at Risk

All park sites, parkways and landscape corridor vegetation; open space vegetation and wetlands; WildHawk Golf Club course; Fruitridge and Pat O'Brien Community Aquatic centers. Table Q-7 shows the District assets would be affected.

Table Q-7 SRPD – Assets at risk to Drought and Water Shortage

| WildHawk Golf Course Boulder Glen Park Bowling Green Park Bradshaw Vineyards Brittany Park Park Park Calvine Crossing Park Park Calisle Woods Park Park Caymus Park Churchill Downs Community Park Cottonwood Park Park Countryside Community Park Park Park Park Park Park Park Countryside Park Park Park Park Park Park Park Park | Name of Asset | Facility Type |
|--|--------------------------------------|---------------|
| WildHawk Golf Course Boulder Glen Park Bowling Green Park Bowling Green Park Bradshaw Vineyards Brittany Park Park Calvine Crossing Park Calvine Station Park Park Caymus Park Caymus Park Churchill Downs Community Park Cochran Park Park Cottonwood Park Park Countryside Community Park Park Florin Creek Park Fruitridge Park Hampton Park Hardester Park Little Hawke Park Norman S. Waters Park Norman S. Waters Park Park Park Park Park Park Park Park | Fruitridge Aquatic Center | Swim Pool |
| Boulder Glen Park Bowling Green Park Bradshaw Vineyards Brittany Park Park Park Calvine Crossing Park Calvine Station Park Carlisle Woods Park Caymus Park Caymus Park Cochran Park Cottonwood Park Park Countryside Community Park Park Park Park Park Park Park Park | Pat O'Brien Community Aquatic Center | Swim Pool |
| Bowling Green Park Bradshaw Vineyards Park Brittany Park Park Calvine Crossing Park Calvine Station Park Park Carlisle Woods Park Caymus Park Caymus Park Churchill Downs Community Park Park Cochran Park Cottonwood Park Park Countryside Community Park Park Park Park Park Park Park Park | WildHawk Golf Course | Golf Course |
| Bradshaw Vineyards Brittany Park Calvine Crossing Park Calvine Station Park Carlisle Woods Park Caymus Park Churchill Downs Community Park Cochran Park Countryside Community Park Crofoot Park Park Florin Creek Park Fruitridge Park Hampton Park Jack W. Davis Park Kennedy Park Cither Wark Norman S. Waters Park Park | Boulder Glen Park | Park |
| Brittany Park Calvine Crossing Park Park Calvine Station Park Park Carlisle Woods Park Park Caymus Park Caymus Park Cochran Park Park Cottonwood Park Park Countryside Community Park Park Park Park Park Park Park Park | Bowling Green Park | Park |
| Calvine Crossing Park Calvine Station Park Carlisle Woods Park Caymus Park Churchill Downs Community Park Cochran Park Cottonwood Park Countryside Community Park Crofoot Park Florin Creek Park Fruitridge Park Hampton Park Park Hardester Park Little Hawke Park Little Hawke Park Norman S. Waters Park Park Park Park Park Park Park Park | Bradshaw Vineyards | Park |
| Calvine Station Park Carlisle Woods Park Park Caymus Park Park Churchill Downs Community Park Park Cochran Park Park Cottonwood Park Park Countryside Community Park Park Crofoot Park Park Florin Creek Park Park Fruitridge Park Park Hampton Park Park Park Illa Collin Park Park Park Little Hawke Park Norman S. Waters Park Park Park Park Park Park Park Park | Brittany Park | Park |
| Carlisle Woods Park Caymus Park Churchill Downs Community Park Cochran Park Cottonwood Park Countryside Community Park Park Crofoot Park Florin Creek Park Fountain Plaza Park Hampton Park Park Hardester Park Jack W. Davis Park Little Hawke Park Norman S. Waters Park | Calvine Crossing Park | Park |
| Caymus Park Churchill Downs Community Park Park Cochran Park Park Cottonwood Park Park Countryside Community Park Park Park Park Park Park Park Park | Calvine Station Park | Park |
| Churchill Downs Community Park Cochran Park Cottonwood Park Countryside Community Park Corfoot Park Florin Creek Park Fountain Plaza Park Fruitridge Park Hampton Park Hardester Park Illa Collin Park Jack W. Davis Park Kennedy Park Norman S. Waters Park | Carlisle Woods Park | Park |
| Cochran Park Cottonwood Park Park Countryside Community Park Park Park Park Park Park Park Florin Creek Park Park Fountain Plaza Park Park Park Park Hampton Park Park Hardester Park Park Illa Collin Park Jack W. Davis Park Little Hawke Park Norman S. Waters Park Park Park Park Park Park Park Park | Caymus Park | Park |
| Cottonwood Park Countryside Community Park Park Crofoot Park Park Plorin Creek Park Pountain Plaza Park Park Park Hampton Park Hardester Park Park Jack W. Davis Park Little Hawke Park Nicholas Park Norman S. Waters Park Park Park Park Park Park Park Park | Churchill Downs Community Park | Park |
| Countryside Community Park Crofoot Park Park Park Florin Creek Park Fountain Plaza Park Fruitridge Park Hampton Park Hardester Park Illa Collin Park Jack W. Davis Park Kennedy Park Little Hawke Park Nicholas Park Norman S. Waters Park | Cochran Park | Park |
| Crofoot Park Park Florin Creek Park Park Fountain Plaza Park Park Pruitridge Park Park Hampton Park Park Hardester Park Park Illa Collin Park Park Jack W. Davis Park Kennedy Park Little Hawke Park Nicholas Park Norman S. Waters Park Park Park Park Park Park Park Park | Cottonwood Park | Park |
| Florin Creek Park Fountain Plaza Park Fountain Plaza Park Park Park Park Hampton Park Hardester Park Park Park Illa Collin Park Jack W. Davis Park Kennedy Park Little Hawke Park Nicholas Park Norman S. Waters Park | Countryside Community Park | Park |
| Fountain Plaza Park Park Pruitridge Park Park Hampton Park Park Hardester Park Park Illa Collin Park Jack W. Davis Park Kennedy Park Little Hawke Park Nicholas Park Norman S. Waters Park Park Park Park Park Park Park Park | Crofoot Park | Park |
| Fruitridge Park Hampton Park Park Hardester Park Plark Illa Collin Park Jack W. Davis Park Kennedy Park Little Hawke Park Nicholas Park Norman S. Waters Park | Florin Creek Park | Park |
| Hampton Park Park Hardester Park Park Illa Collin Park Park Jack W. Davis Park Kennedy Park Little Hawke Park Nicholas Park Norman S. Waters Park Park Park Park Park Park Park Park | Fountain Plaza Park | Park |
| Hardester Park Illa Collin Park Jack W. Davis Park Kennedy Park Little Hawke Park Nicholas Park Norman S. Waters Park Olde Florintown Park | Fruitridge Park | Park |
| Illa Collin Park Jack W. Davis Park Kennedy Park Little Hawke Park Nicholas Park Norman S. Waters Park Olde Florintown Park | Hampton Park | Park |
| Jack W. Davis Park Kennedy Park Little Hawke Park Nicholas Park Norman S. Waters Park Olde Florintown Park | Hardester Park | Park |
| Kennedy Park Little Hawke Park Park Nicholas Park Park Norman S. Waters Park Olde Florintown Park Pacific Park Rainbow Park Park Park Park Park | Illa Collin Park | Park |
| Little Hawke Park Nicholas Park Park Norman S. Waters Park Olde Florintown Park Pacific Park Park Park Park Park Park Park Park | Jack W. Davis Park | Park |
| Nicholas Park Norman S. Waters Park Olde Florintown Park Pacific Park Rainbow Park Park Park Park | Kennedy Park | Park |
| Norman S. Waters Park Olde Florintown Park Pacific Park Rainbow Park Park Park Park | Little Hawke Park | Park |
| Olde Florintown Park Pacific Park Painbow Park Park Park | Nicholas Park | Park |
| Pacific Park Rainbow Park Park Park | Norman S. Waters Park | Park |
| Rainbow Park Park | Olde Florintown Park | Park |
| | Pacific Park | Park |
| Royal Park Park | Rainbow Park | Park |
| | Royal Park | Park |

| Name of Asset | Facility Type |
|-------------------------------------|----------------|
| Rutter Park | Park |
| Sheldon Park | Park |
| Silver Leaf Park | Park |
| Sky Park | Park |
| Southwoods Park | Park |
| Sunrise Florin Park | Park |
| Tamarindo Park | Park |
| Toby Johnson Park | Park |
| Vineyard Park | Park |
| Vineyard Creek Park | Park |
| Don & Brenda Notolli Community Park | Park |
| Jimmie R. Yee Park | Park |
| Vintage Park | Park |
| Larry Gury Community Park | Park |
| Willowood Park | Park |
| Florin Creek Trail | Ped/Bike Trail |
| Tillotson Parkway | Ped/Bike Trail |
| Laguna Creek Parkway | Ped/Bike Trail |

Source: SRPD

Earthquake

Likelihood of Future Occurrence—Occasional **Vulnerability**—Low

Hazard Profile and Problem Description

An earthquake is caused by a sudden slip on a fault. Stresses in the earth's outer layer push the sides of the fault together. Stress builds up, and the rocks slip suddenly, releasing energy in waves that travel through the earth's crust and cause the shaking that is felt during an earthquake. Earthquakes can cause structural damage, injury, and loss of life, as well as damage to infrastructure networks, such as water, power, gas, communication, and transportation. Earthquakes may also cause collateral emergencies including dam and levee failures, seiches, hazmat incidents, fires, avalanches, and landslides. The degree of damage depends on many interrelated factors. Among these are: the magnitude, focal depth, distance from the causative fault, source mechanism, duration of shaking, high rock accelerations, type of surface deposits or bedrock, degree of consolidation of surface deposits, presence of high groundwater, topography, and the design, type, and quality of building construction.

Location and Extent

The amount of energy released during an earthquake is usually expressed as a magnitude and is measured directly from the earthquake as recorded on seismographs. An earthquake's magnitude is expressed in whole numbers and decimals (e.g., 6.8). Seismologists have developed several magnitude scales, as discussed in Section 4.3.9 of the Base Plan. Geological literature indicates that no major active faults transect the County; however, there are several subsurface faults in the Delta. The Midland fault, buried under alluvium, extends north of Bethel Island in the Delta to the east of Lake Berryessa and is considered inactive but possibly capable of generating a near 7.0 (Richter Scale) earthquake. This magnitude figure is speculative based on an 1895 earthquake measuring 6.9 on the Richter Scale with an epicenter possibly in the Midland Fault vicinity. However, oil and gas companies exploring the area's energy potential have identified several subsurface faults, none of which show any recent surface rupture. A second, presumably inactive, fault is in the vicinity of Citrus Heights near Antelope Road. This fault's only exposure is along a railroad cut where offsetting geologic beds can be seen. Neither the lateral extent of the trace, the magnitude of the offset, nor the age of faulting has been determined. To the east, the Bear Mountain fault zone trends northwest-southeast through Amador and El Dorado Counties. Geologists believe this series of faults has not been active in historic time. Earthquakes on the Hayward, Calaveras, and San Andreas fault could also affect the southern portion of County including the Delta area.

Another measure of earthquake severity is intensity. Intensity is an expression of the amount of shaking at any given location on the ground surface. Seismic shaking is typically the greatest cause of losses to structures during earthquakes. The District is located in an area where few earthquakes of significant magnitude occur, so both magnitude and intensity of earthquakes are expected to remain low. Seismic shaking maps for the area show Sacramento County and the District fall within a low to moderate shake risk, with most of the moderate risk in the Delta area of the County.

Past Occurrences

There have be no past federal or state disaster declarations from this hazard. The District noted no past occurrences of earthquakes or that affected the District in any meaningful way.

Vulnerability to and Impacts from Earthquake

The combination of plate tectonics and associated California coastal mountain range building geology generates earthquake as a result of the periodic release of tectonic stresses. Sacramento County lies in the center of the North American and Pacific tectonic plate activity. There have been earthquakes as a result of this activity in the historic past, and there will continue to be earthquakes in the future of the California north coastal mountain region.

Fault ruptures itself contributes very little to damage unless the structure or system element crosses the active fault; however, liquefaction can occur further from the source of the earthquake. In general, newer construction is more earthquake resistant than older construction due to enforcement of improved building codes. Manufactured buildings can be very susceptible to damage because their foundation systems are rarely braced for earthquake motions. Locally generated earthquake motions and associated liquefaction,

even from very moderate events, tend to be more damaging to smaller buildings, especially those constructed of unreinforced masonry (URM) and soft story buildings.

The Uniform Building Code (UBC) identifies four seismic zones in the United States. The zones are numbered one through four, with Zone 4 representing the highest level of seismic hazard. The UBC establishes more stringent construction standards for areas within Zones 3 and 4. All of California lies within either Zone 3 or Zone 4. The SRPD is within the less hazardous Zone 3.

Impacts from earthquake in the District will vary depending on the fault that the earthquake occurs on, the depth of the earthquake strike, and the intensity of shaking. Large events could cause damages to infrastructure, critical facilities, residential and commercial properties, and possible injuries or loss of life.

Assets at Risk

The District does not have any assets that are at risk of an earthquake.

Flood: 1%/0.2% Annual Chance

Likelihood of Future Occurrence—Occasional/Unlikely **Vulnerability**—High

Hazard Profile and Problem Description

This hazard analyzes the FEMA DFIRM 1% and 0.2% annual chance floods. These tend to be the larger floods that can occur in the County or in the District, and have caused damages in the past. Flooding is a significant problem in Sacramento County and the District. Historically, the District has been at risk to flooding primarily during the winter and spring months when river systems in the County swell with heavy rainfall and snowmelt runoff. Normally, storm floodwaters are kept within defined limits by a variety of storm drainage and flood control measures. Occasionally, extended heavy rains result in floodwaters that exceed normal high-water boundaries and cause damage.

As previously described in Section 4.3.11 of the Base Plan, the Sacramento County Planning Area and the SRPD have been subject to historical flooding.

Location and Extent

The District is traversed by Morrison Creek, Elder Creek, Gerber Creek, Florin Creek, and Laguna Creek, all which are potential sources of flooding. The SRPD has areas located in the 1% and 0.2% annual chance floodplain. This is seen in Figure Q-5.

LEGEND Highways Interstates Local Roads - Railroads Rivers Lakes Southgate RPD Cities Counties SACRAMENTO ACRAMENTO COUNT DFIRM FLOOD ZONES 1% Annual Chance Zone A Zone AE Zone AH Zone AO 0.2% Annual Chance 0.2% Annual Chance X Protected by Levee Elk Grove Other Areas FOSTER MORRISON SACRAMENTO

Figure Q-5 SRPD – FEMA DFIRM Flood Zones

Data Source: FEMA NFHL 07/19/2018, Southgate District, Sacramento County GIS, Cal-Atlas; Map Date: 09/2020.

Table Q-8 details the DFIRM mapped flood zones within the 1% and 0.2% annual chance flood zone as well as other flood zones located within the District.

Table Q-8 SRPD- DFIRM Flood Hazard Zones

| Flood Zone | Description | Flood Zone Present in the District |
|-------------------------|---|------------------------------------|
| A | 100-year Flood: No base flood elevations provided | X |
| AE | 100-year Flood: Base flood elevations provided | X |
| АН | An area inundated by 1% annual chance flooding (usually an area of ponding), for which BFEs have been determined; flood depths range from 1 to 3 feet | X |
| AO | Areas subject to inundation by 100-year shallow flooding (usually sheet flow on sloping terrain) where average depths are between one and three feet | X |
| A99 | Areas with a 1% annual chance of flooding that will be protected by a Federal flood control system where construction has reached specified legal requirements. No depths or base flood elevations are shown within these zones | X |
| Shaded X | 500-year flood the areas between the limits of the 1% annual chance flood and the 0.2-percent-annual-chance (or 500-year) flood | X |
| X Protected by Levee | An area determined to be outside the 500-year flood and protected by levee from 100-year flood | X |

| Flood Zone | 1 · · · · · · · · · · · · · · · · · · · | Flood Zone Present in the District |
|--------------|---|------------------------------------|
| X (unshaded) | Outside of flood zones | X |

Source: FEMA

Additionally, flood extents can generally be measured in volume, velocity, and depths of flooding. Expected flood depths in the District vary, depending on the nature and extent of a flood event; specific depths are unknown. Flood durations in the District tend to be short to medium term, or until either the storm drainage system can catch up or flood waters move downstream. Flooding in the District tends to have a shorter speed of onset, due to the amount of water that flows through the District.

Past Occurrences

A list of state and federal disaster declarations for Sacramento County from flooding is shown on Table Q-9. These events also likely affected the District to some degree.

Table Q-9 Sacramento County – State and Federal Disaster Declarations from Flood 1950-2020

| Disaster Type | Federal Declarations | | State Declarations | |
|--|----------------------|--|--------------------|--|
| | Count | Years | Count | Years |
| Flood (including heavy rains and storms) | 19 | 1950, 1955, 1958 (twice), 1963, 1969, 1982 (twice), 1983, 1986, 1995 (twice), 1996, 1997, 1998, 2008, 2017 (three times) | 14 | 1955, 1958, 1964, 1969, 1983, 1986, 1995 (twice), 1997, 1998, 2006, 2017 (three times) |

Source: Cal OES, FEMA

The District has not had any flood related events since 2017. No District facilities have been affected by flood events since 2016.

Vulnerability to and Impacts from Flood

Floods have been a part of the District's historical past and will continue to be so in the future. During winter months, long periods of precipitation and the timing of that precipitation are critical in determining the threat of flood, and these characteristics further dictate the potential for widespread structural and property damages. Predominantly, the effects of flooding are generally confined to areas near the waterways of the County. As waterways grow in size from local drainages, so grows the threat of flood and dimensions of the threat. This threatens structures in the floodplain. Structures can also be damaged from trees falling as a result of water-saturated soils. Electrical power outages happen, and the interruption of power causes major problems. Loss of power is usually a precursor to closure of governmental offices and community businesses. Roads can be damaged and closed, causing safety and evacuation issues. People may be swept away in floodwaters, causing injuries or deaths.

Floods are among the costliest natural disasters in terms of human hardship and economic loss nationwide. Floods can cause substantial damage to structures, landscapes, and utilities, as well as life safety issues. Floods can be extremely dangerous, and even six inches of moving water can knock over a person given a strong current. During a flood, people can also suffer heart attacks or electrocution due to electrical

equipment short outs. Floodwaters can transport large objects downstream which can damage or remove stationary structures. Ground saturation can result in instability, collapse, or other damage. Objects can also be buried or destroyed through sediment deposition. Floodwaters can also break utility lines and interrupt services. Standing water can cause damage to crops, roads, foundations, and electrical circuits. Direct impacts, such as drowning, can be limited with adequate warning and public education about what to do during floods. Other problems connected with flooding and stormwater runoff include erosion, sedimentation, degradation of water quality, loss of environmental resources, and economic impacts.

Flooding risks along Morrison Creek, Elder Creek, Gerber Creek, Florin Creek, and Laguna Creek could potentially impact several District facilities. Potential damages from flooding and flood debris would impact trees and landscaping of the parks, open spaces, and the WildHawk golf course. Flood damage to park site structures and buildings could also occur.

Assets at Risk

The District noted that WildHawk Golf Club, Laguna Creek Parkway Open Space and Trail, Bradshaw Vineyards Park, and Open Space Preserve are at risk from flooding. In addition the follow facilities in Table Q-10 are with the 200-year flood zone:

Table Q-10 SRPD – Assets at Risk to Flood (0.5% Annual Chance)

| Name of Asset | Facility Type |
|-----------------------------|--------------------|
| Bowling Green Park | Park |
| Crofoot Park | Park |
| Florin Creek Center | Community Center |
| Florin Creek Park & Trail | Park & Trail |
| Fountain Plaza Park | Park |
| Fruitridge Community Center | Community Center |
| Fruitridge Community Park | Park |
| Hampton Park | Park |
| Jack Davis Park | Park |
| Nicholas Park | Park |
| Pacific Park | Park |
| Rainbow Park | Park |
| Royal Park | Park |
| Rutter Park | Park |
| Sheldon Park | Park |
| District Office | Main Office |
| Sky Park | Park |
| Kennedy Park | Park |
| Olde Florintown Park | Park |
| Orange Ave | Undeveloped Parcel |

| Name of Asset | Facility Type | | |
|--------------------------|--------------------|--|--|
| Olde Florintown Lot | Undeveloped Parcel | | |
| Olde Florintown Lot | Parking Lot | | |
| Heritage Park | Park | | |
| Florin Farm & Open Space | Undeveloped Parcel | | |

Source: Sacramento County DWR, SRPD, FEMA *Shows property in the 200-year flood zone

Flood: Localized Stormwater Flooding

Likelihood of Future Occurrence—Highly Likely **Vulnerability**—Medium

Hazard Profile and Problem Description

Flooding occurs in areas other than the FEMA mapped 1% and 0.2% annual chance floodplains. Flooding may be from drainages not studied by FEMA, lack of or inadequate drainage infrastructure, or inadequate maintenance. Localized, stormwater flooding occurs throughout the County during the rainy season from November through April. Prolonged heavy rainfall contributes to a large volume of runoff resulting in high peak flows of moderate duration.

Location and Extent

The SRPD is subject to localized flooding throughout the District. Flood extents are usually measured in areas affected, velocity of flooding, and depths of flooding. Expected flood depths in the District vary by location. Flood durations in the District tend to be short to medium term, or until either the storm drainage system can catch up or flood waters move downstream. Localized flooding in the District tends to have a shorter speed of onset, especially when antecedent rainfall has soaked the ground and reduced its capacity to absorb additional moisture. The majority of District facilities have good drainage with the exception of Hampton Park.

Past Occurrences

There have been no federal or state disaster declarations in the County due to localized flooding. The District noted that localized flooding is an annual occurrence and affects that area described above.

Vulnerability to and Impacts from Localized Flooding

Historically, much of the growth in the District and County has occurred adjacent to streams, resulting in significant damages to property, and losses from disruption of community activities when the streams overflow. Additional development in the watersheds of these streams affects both the frequency and duration of damaging floods through an increase in stormwater runoff.

Primary concerns associated with stormwater flooding include impacts to infrastructure that provides a means of ingress and egress throughout the community. Ground saturation can result in instability, collapse, or other damage to trees, structures, roadways, and other critical infrastructure. Objects can also

be buried or destroyed through sediment deposition. Floodwaters can break utility lines and interrupt services. Standing water can cause damage to crops, roads, and foundations. Other problems connected with flooding and stormwater runoff include erosion, sedimentation, degradation of water quality, losses of environmental resources, and certain health hazards.

In most instances when localized flooding occurs the only issues District staff may have, is gaining access to the site for trash pick up or mowing. There have been no incidents of localized flooding at any of the District buildings.

Assets at Risk

Hampton Park is one of the areas that does not have good drainage and tends to flood for a few days when there are consecutive days of rain.

Levee Failure

Likelihood of Future Occurrence—Occasional **Vulnerability**—High

Hazard Profile and Problem Description

A levee is a raised area that runs along the banks of a stream or canal. Levees reinforce the banks and help prevent flooding by containing higher flow events to the main stream channel. By confining the flow to a narrower steam channel, levees can also increase the speed of the water. Levees can be natural or manmade.

Levees provide strong flood protection, but they are not failsafe. Levees are designed to protect against a specific flood level and could be overtopped during severe weather events or dam failure. For example, levees can be certified to provide protection against the 1% annual chance flood. Levees reduce, not eliminate, the risk to individuals and structures located behind them. A levee system failure or overtopping can create severe flooding and high water velocities. Levee failure can occur through overtopping or from seepage issues resulting from burrowing rodents, general erosion, excessive vegetation and root systems and other factors that compromise the integrity of the levee. No levee provides protection from events for which it was not designed, and proper operation and maintenance are necessary to reduce the probability of failure.

Figure Q-6 shows the FEMA DFIRM X Protected by Levee areas in the District. There are no project levees within the District that are part of the State plan for flood control.

Location and Extent

There is not a scientific scale or measurement system in place for levee failure. Expected flood depths from a levee failure in the District vary by event and location. The speed of onset is slow as the river rises, but if a levee fails the warning times are generally short for those in the inundation area. The duration of levee failure risk times can be hours to weeks, depending on the river flows that the levee holds back. When

northern California dams and reservoirs are nearing maximum capacity, they release water through the river systems, causing additional burdens on County levees. Levees in the District are shown on Figure Q-6.

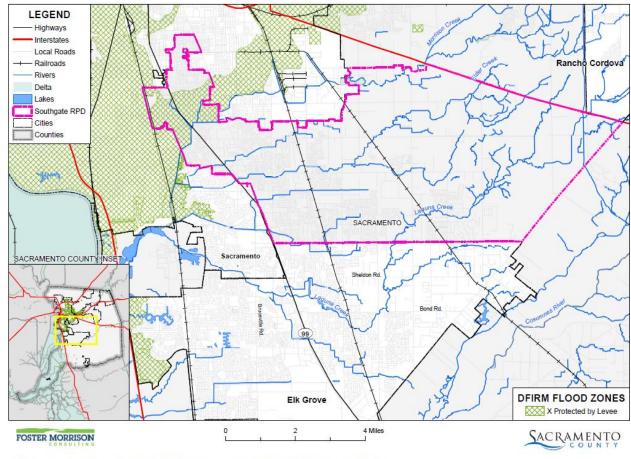


Figure Q-6 SRPD – Levee Protected Areas

Data Source: FEMA NFHL 07/19/2018, Southgate District, Sacramento County GIS, Cal-Atlas; Map Date: 09/2020.

Past Occurrences

There have been no federal or state disaster declarations from levee failure. The District Planning Team noted no past occurrences of levee failures.

Vulnerability to and Impacts from Levee Failure

A levee failure can range from a small, uncontrolled release to a catastrophic failure. Levee failure flooding can occur as the result of prolonged rainfall and flooding. The primary danger associated with levee failure is the high velocity flooding of those properties outside and downstream of the breach.

Should a levee fail, some or all of the area protected by the levees would be at risk to flooding. Impacts from a levee failure include property damage, critical facility damage, and life safety issues. Business and economic losses could be large as facilities could be flooded and services interrupted. School and road closures could occur. Road closures would impede both evacuation routes and ability of first responders

to quickly respond to calls for aid. Other problems connected with levee failure flooding include erosion, sedimentation, degradation of water quality, losses of environmental resources, and certain health hazards.

The District assets would be minimally affected but its staff could be highly affected as most are from the surrounding Sacramento area. Road closures could affect circulation and possibly the District would have to deal with evacuations from areas affected.

Assets at Risk

The following assets in Table Q-11 would be affected by levee failure:

Table Q-11 SRPD – Assets at Risk from Levee Failure

| Name of Asset | Facility Type |
|---------------------|---------------|
| Bowling Green Park | Park |
| Pacific Park | Park |
| Fountain Plaza Park | Park |
| Nicholas Park | Park |

Source: SRPD

Pandemic

Likelihood of Future Occurrence—Occasional **Vulnerability**—Medium

Hazard Profile and Problem Description

According to the World Health Organization (WHO), a disease epidemic occurs when there are more cases of that disease than normal. A pandemic is a worldwide epidemic of a disease. A pandemic occurs when a new virus emerges for which people have little or no immunity, and for which there is no vaccine. This disease spreads easily person-to-person, causes serious illness, and can sweep across the country and around the world in a very short time. The U.S. Centers for Disease Control and Prevention has been working closely with other countries and the WHO to strengthen systems to detect outbreaks of that might cause a pandemic and to assist with pandemic planning and preparation. An especially severe pandemic could lead to high levels of illness, death, social disruption, and economic loss.

Location and Extent

During a pandemic, the whole of the District, County, and surrounding region is at risk, as pandemic is a regional, national, and international event. The speed of onset of pandemic is usually short, while the duration is variable, but can last for more than a year as shown in the 1918/1919 Spanish Flu. There is no scientific scale to measure the magnitude of pandemic. Pandemics are usually measured in numbers affected by the pandemic, and by number who die from complications from the pandemic.

Past Occurrences

There has been one state and federal disaster declaration due to pandemic, as shown in Table Q-12.

Table Q-12 Sacramento County – State and Federal Pandemic Disaster Declarations 1950-2020

| Disaster Type | Federal Declarations | | State Declarations | |
|---------------|----------------------|-------|--------------------|-------|
| | Count | Years | Count | Years |
| Pandemic | 1 | 2020 | 1 | 2020 |

Source: Cal OES, FEMA

The 20th century saw three outbreaks of pandemic.

- ➤ The 1918-1919 Influenza Pandemic (H1N1)
- ➤ The February 1957-1958 Influenza Pandemic (H2N2)
- ➤ The 1968 Influenza Pandemic (H3N2)

To date, the 21st century has seen two acknowledged pandemics.

- > 2009 Swine Flu (H1N1)
- > 2019/2020 COVID 19

COVID-19 pandemic caused major shutdowns as a result of the State stay-at-home order and County public health orders. All recreational programs were shut down and District facility rentals were not allowed. Temporary and seasonal staff were laid off and administrative employees were allowed to work from home when their jobs permitted it.

Vulnerability to and Impacts from Pandemic

Pandemics have and will continue to have impacts on human health in the region. A pandemic occurs when a new virus emerges for which there is little or no immunity in the human population; the virus causes serious illness and spreads easily from person-to-person worldwide. There are several strategies that public health officials can use to combat a pandemic. Constant surveillance regarding the current pandemic, use of infection control techniques, and administration of vaccines once they become available. Citizens can help prevent the spread of a pandemic by staying home, or "self-quarantining," if they suspect they are infected. The COVID-19 pandemic has resulted in the imposition of restrictions on gatherings and widespread temporary closings of businesses, universities, and schools.

Pandemics do not directly affect the buildings, critical facilities, and infrastructure in the District. Pandemics can have varying levels of impact to the citizens of the District and greater County, depending on the nature of the pandemic.

Impacts could range from school and business closings to the interruption of basic services such as public transportation, health care, and the delivery of food and essential medicines. Hospitalizations and deaths can occur, especially to the elderly or those with pre-existing underlying conditions. As seen with COVID-19, multiple businesses were forced to close temporarily (some permanently), and unemployment rose

significantly. Supply chains for food and essentials can be interrupted. Prisons may need to release prisoners to comply with social distance standards.

Southgate Recreation & Park District was greatly impacted by the pandemic. The maintenance of parks, administration, and golf operations of the District are essential services and continued to operate with modifications. Most recreation programs and facilities closed in response to the COVID-19 pandemic. Continuing the maintenance of parks and re-opening recreation programs under public health orders and guidelines require a significant modifications and investment in labor, equipment and supplies.

Assets at Risk

Pandemics are a significant risk to the health of employees, contractors, and volunteers who maintain and operate District facilities and can result in the inability to properly maintain and operate District facilities, which are critical infrastructure..

Severe Weather: Extreme Cold and Freeze

Likelihood of Future Occurrence—Highly Likely **Vulnerability**—Medium

Hazard Profile and Problem Description

According to the National Weather Service (NWS), extreme cold often accompanies a winter storm or is left in its wake. Freezing temperatures can also occur without the accompanying winter storm.

Location and Extent

Extreme cold and freeze are regional issues, meaning the entire County is at risk to cold weather and freeze events. While there is no scale (i.e. Richter, Enhanced Fujita) to measure the effects of extreme cold and freeze, temperature data from the County from the WRCC indicates that there are 21.8 days that fall below 32°F in western Sacramento County. Freeze has a slow onset and can generally be predicted in advance for the County. Freeze events can last for hours (in a cold overnight), or for days to weeks at a time.

Past Occurrences

There has been no federal or state disaster declarations in the County for cold or freeze. The District noted that cold and freeze is a regional phenomenon; events that affected the County also affected the District. Those past occurrences were shown in the Base Plan in Section 4.3.2.

Vulnerability to and Impacts from Severe Weather: Freeze and Winter Storms

The District experiences temperatures below 32 degrees during the winter months. Freeze can cause injury or loss of life to residents of the District. While it is rare for buildings to be affected directly by freeze, damages to pipes that feed building can be damaged during periods of extreme cold.

Assets at Risk

District facilities most likely affected would be parks as water pipes could burst if exposed to extreme cold for extended periods. District personnel who work outdoors may also be affected if cold temperatures drop, likely it would make it difficult to remain outside.

Severe Weather: Extreme Heat

Likelihood of Future Occurrence—Highly Likely **Vulnerability**—Medium

Hazard Profile and Problem Description

According to FEMA, extreme heat is defined as temperatures that hover 10 degrees or more above the average high temperature for the region and last for several weeks. Heat kills by taxing the human body beyond its abilities. In extreme heat and high humidity, evaporation is slowed, and the body must work extra hard to maintain a normal temperature." Most heat disorders occur because the victim has been overexposed to heat or has over-exercised for his or her age and physical condition. Older adults, young children, and those who are sick or overweight are more likely to succumb to extreme heat.

In addition to the risks faced by citizens of the District, there are risk to the built environment from extreme heat. While extreme heat on its own does not usually affect structure, extreme heat during times of drought can cause wildfire risk to heighten. Extreme heat and high winds can cause power outages and PSPS events, causing issues to buildings in the District.

Location and Extent

Heat is a regional phenomenon and affects the whole of the District. Heat emergencies are often slower to develop, taking several days of continuous, oppressive heat before a significant or quantifiable impact is seen. Heat waves do not strike victims immediately, but rather their cumulative effects slowly affect vulnerable populations and communities. Heat waves do not generally cause damage or elicit the immediate response of floods, fires, earthquakes, or other more "typical" disaster scenarios.

The NWS has in place a system to initiate alert procedures (advisories or warnings) when extreme heat is expected to have a significant impact on public safety. The expected severity of the heat determines whether advisories or warnings are issued. The NWS HeatRisk forecast provides a quick view of heat risk potential over the upcoming seven days. The heat risk is portrayed in a numeric (0-4) and color (green/yellow/orange/red/magenta) scale which is similar in approach to the Air Quality Index (AQI) or the UV Index. This can be seen in Section 4.3.3 of the Base Plan.

Past Occurrences

There has been no federal or state disaster declarations in the County for heat. The District Planning Team note that since extreme heat is a regional phenomenon, events that affected the County also affected the District. Those past occurrences were shown in the Base Plan in Section 4.3.3.

District park and golf maintenance staff has had to make adjustments to their hours and work flow and in some instances staff has stopped working when the conditions are extreme and unhealthy. Outdoor recreation programs have been cancelled.

Vulnerability to and Impacts from Extreme Heat

The District experiences temperatures in excess of 100°F during the summer and fall months. The temperature moves to 105-110°F in rather extreme situations. During these times, drought conditions may worsen. Also, power outages and PSPS events may occur during these times as well. Health impacts are the primary concern with this hazard, though economic impacts are also an issue.

Days of extreme heat have been known to result in medical emergencies and unpredictable human behavior. Periods of extended heat and dryness (droughts) can have major economic, agricultural, and water resources impacts. Extreme heat can also dry out vegetations, making it more vulnerable to wildfire ignitions.

Extreme heat could potentially impact parks and golf maintenance workers, recreational program participants, WildHawk Golf Club customers, and vegetation. Poor air quality also resulting from extreme heat would impact any recreational programs held outdoors, WildHawk Golf customers, and parks maintenance workers. Rolling blackouts due to extreme heat would also impact district facilities.

Extreme heat impacts air quality on Spare the Air Days. Outdoor programs can be suspended or cancelled. Extreme heat also intensifies the need to water park sites, parkways, and landscape corridors, and can also affect the ability to do outdoor work for maintenance staff. Extreme heat also aggravates the drought situation that is already affecting the amount of water available for watering.

District park and golf maintenance staff has been impacted by poor air quality due to extreme heat and has had to make adjustment to work flow or send staff home in order to avoid working outdoors.

Assets at Risk

Parks, landscape corridors, and open space vegetation; outdoor recreational programs; WildHawk Golf Club and park maintenance employees.

Severe Weather: Heavy Rains and Storms

Likelihood of Future Occurrence—Highly Likely **Vulnerability**—Medium

Hazard Profile and Problem Description

Storms in the District occur annually and are generally characterized by heavy rain often accompanied by strong winds and sometimes lightning and hail. Approximately 10 percent of the thunderstorms that occur each year in the United States are classified as severe. A thunderstorm is classified as severe when it contains one or more of the following phenomena: hail that is three-quarters of an inch or greater, winds in excess of 50 knots (57.5 mph), or a tornado. Heavy precipitation in the District falls mainly in the fall, winter, and spring months.

Location and Extent

Heavy rain events occur on a regional basis. Rains and storms can occur in any location of the District. All portions of the District are at risk to heavy rains. Most of the severe rains occur during the fall, winter, and spring months. There is no scale by which heavy rains and severe storms are measured. Magnitude of storms is measured often in rainfall and damages. The speed of onset of heavy rains can be short, but accurate weather prediction mechanisms often let the public know of upcoming events. Duration of severe storms in California, Sacramento County, and the District can range from minutes to hours to days. Information on precipitation extremes can be found in Section 4.3.4 of the Base Plan.

Past Occurrences

There have been past disaster declarations from heavy rains and storms, which were discussed in Past Occurrences of the flood section above. According to historical hazard data, severe weather, including heavy rains and storms, is an annual occurrence in the District. This is the cause of many of the federal disaster declarations related to flooding.

In January 2009, a severe storm resulted in extensive damage and loss of trees throughout the District. Severe storms could also impact building structure features such as roofing and windows.

District park and golf maintenance staff usually deal with a fair amount of fallen trees or tree branches when heavy rain and winds come through the area.

Vulnerability to and Impacts from Heavy Rain and Storms

Heavy rain and severe storms are the most frequent type of severe weather occurrences in the District. These events can cause localized flooding. Elongated events, or events that occur during times where the ground is already saturated can cause 1% and 0.2% annual chance flooding. Wind often accompanies these storms and has caused damage in the past. Hail and lightning are rare in the District.

Actual damage associated with the effects of severe weather include impacts to property, critical facilities (such as utilities), and life safety. Heavy rains and storms often result in localized flooding creating significant issues. Roads can become impassable and ground saturation can result in instability, collapse, or other damage to trees, structures, roadways, and other critical infrastructure. Floodwaters and downed trees can break utilities and interrupt services.

During periods of heavy rains and storms, power outages can occur. These power outages can affect pumping stations and lift stations that help alleviate flooding. More information on power outage and failure can be found in the discussion at the beginning of Section Q.5.3, as well as in Section 4.3.3 of the Base Plan.

Assets at Risk

Parks, landscape corridors, and open space vegetation; park site play structures and shelters; all building structures and WildHawk Golf Club course.

Severe Weather: High Winds and Tornadoes

Likelihood of Future Occurrence—Highly Likely **Vulnerability**—Medium

Hazard Profile and Problem Description

High winds, as defined by the NWS glossary, are sustained wind speeds of 40 mph or greater lasting for 1 hour or longer, or winds of 58 mph or greater for any duration. High winds can cause significant property and crop damage, threaten public safety, and have adverse economic impacts from business closures and power loss. High winds can also cause PSPS events.

Tornadoes are rotating columns of air marked by a funnel-shaped downward extension of a cumulonimbus cloud whirling at destructive speeds of up to 300 mph, usually accompanying a thunderstorm. Tornadoes form when cool, dry air sits on top of warm, moist air. Tornadoes are the most powerful storms that exist. Tornadoes, though rare, are another severe weather hazard that can affect areas of the Sacramento County Planning Area, primarily during the rainy season in the late fall, winter, and early spring.

Location and Extent

The entire District is subject to significant, non-tornadic (straight-line), winds. Each area of the County is at risk to high winds. Magnitude of winds is measured often in speed and damages. These events are often part of a heavy rain and storm event, but can occur outside of storms. The speed of onset of winds can be short, but accurate weather prediction mechanisms often let the public know of upcoming events. Duration of winds in California is often short, ranging from minutes to hours. The Beaufort scale is an empirical 12 category scale that relates wind speed to observed conditions at sea or on land. Its full name is the Beaufort Wind Force Scale. The Beaufort Scale was shown in Section 4.3.5 of the Base Plan.

Tornadoes, while rare, can occur at any location in the County and District. Prior to February 1, 2007, tornado intensity was measured by the Fujita (F) scale. This scale was revised and is now the Enhanced Fujita scale. Both scales are sets of wind estimates (not measurements) based on damage. The new scale (EF) provides more damage indicators (28) and associated degrees of damage, allowing for more detailed analysis and better correlation between damage and wind speed. It is also more precise because it considers the materials affected and the construction of structures damaged by a tornado. The F Scale and EF Scale are shown in Section 4.3.5 of the Base Plan.

Past Occurrences

There has been no federal or state disaster declarations in the County for winds and tornadoes. The District noted that since high winds is a regional phenomenon, events that affected the lower elevations of the County also affected the District. Those past occurrences were shown in the Base Plan in Section 4.3.5.

Vulnerability to and Impacts from Severe Weather: Wind and Tornado

High winds are common occurrences in the District throughout the entire year. Straight line winds are primarily a public safety and economic concern. Windstorm can cause damage to structures and power

lines which in turn can create hazardous conditions for people. Debris flying from high wind events can shatter windows in structures and vehicles and can harm people that are not adequately sheltered. High winds can impact critical facilities and infrastructure and can lead to power outages. Wind can also drive wildfire flames, spreading wildfires quickly. During periods of high winds and dry vegetation, wildfire risk increases. High winds that occur during periods of extreme heat can cause PSPS events to be declared in the County. More information on power outage and failure can be found at the beginning of Section Q.5.3 above, as well as in Section 4.3.3 of the Base Plan.

Impacts from high winds in the District will vary. Future losses from straight line winds include:

- Downed trees
- Power line impacts and economic losses from power outages
- Increased PSPS events
- Occasional building damage, primarily to roofs

The District mainly deals with fallen trees and broken branches. At times there have been downed fences that are adjacent to parks and parkways.

Assets at Risk

Parks, landscape corridors, and open space; shade shelters; all building structures and WildHawk Golf Club course.

Subsidence

Likelihood of Future Occurrence—Highly Likely **Vulnerability**—Low

Hazard Profile and Problem Description

Subsidence is the gradual settling or sinking of the earth's surface over manmade or natural underground voids with little or no horizontal motion. Subsidence occurs naturally and also through man-driven or technologically exacerbated circumstances. Subsidence is worsened when groundwater drawdown exceeds the ability of the ground to naturally recharge. This is more common during periods of drought.

Location and Extent

There is no scientific scale to measure subsidence. Subsidence is measured in inches or feet of elevation change over time. Subsidence has a long speed of onset, as it occurs over many years. The duration of subsidence is long, as it is rare for subsidence to be reversed. In Sacramento County, the Delta in the southeast portion of the County is highly at risk to subsidence. In the Delta, subsidence affects the islands as well as the levees.

Past Occurrences

There have been no state or federal disasters in the County related to subsidence. No events of past subsidence have affected the District.

Vulnerability to and Impacts from Subsidence

Historically, the County has been at risk from subsidence. Vulnerability in the County from subsidence comes from several different causes:

- Compaction of Unconsolidated Soils by Earthquake Shaking (Liquefaction)
- Compaction by Heavy Structures
- ➤ The Erosion of Peat Soils
- > Fluid Withdrawal

These were discussed in detail in Section 4.3.16 of the Base Plan.

Assets at Risk

Parks, landscape corridors, and open space areas; joint use drainage basins, and creeks.

Wildfire

Likelihood of Future Occurrence—Highly Likely **Vulnerability**—High

Hazard Profile and Problem Description

Wildland fire and the risk of a conflagration is an ongoing concern for the SRPD. Throughout California, communities are increasingly concerned about wildfire safety as increased development in the foothills and mountain areas and subsequent fire control practices have affected the natural cycle of the ecosystem. Wildland fires affect grass, forest, and brushlands, as well as any structures located within them. Where there is human access to wildland areas the risk of fire increases due to a greater chance for human carelessness and historical fire management practices. Historically, the fire season extends from early spring through late fall of each year during the hotter, dryer months; however, in recent years, the risk of wildfire has become a year around concern. Fire conditions arise from a combination of high temperatures, low moisture content in the air and fuel, accumulation of vegetation, and high winds. While wildfire risk has predominantly been associated with more remote forested areas and wildland urban interface (WUI) areas, significant wildfires can also occur in more populated, urban areas.

Location and Extent

Wildfire can affect all areas of the District. CAL FIRE has estimated that the risk varies across the District and has created maps showing risk variance. Following the methodology described in Section 4.3.16 of the Base Plan, wildfire maps for the SRPD were created. Figure Q-7 shows the CAL FIRE FHSZ in the District. As shown on the maps, fire hazard severity zones within the District range from Urban Unzoned to Moderate. Figure Q-8 shows the CAL FIRE Threat Areas in the City. As shown on the maps, fire threat within the District ranges from No Threat to High.

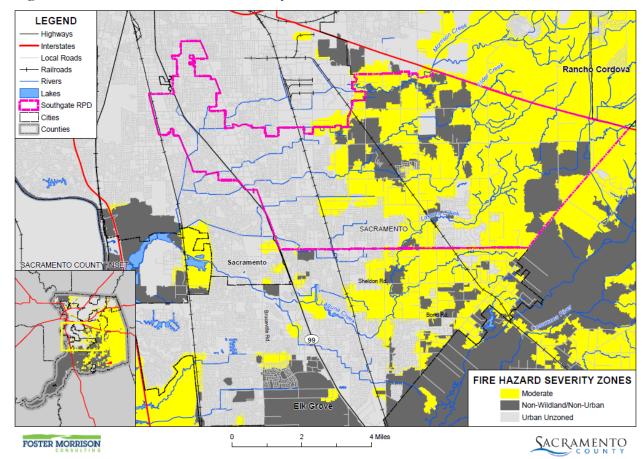


Figure Q-7 SRPD – Fire Hazard Severity Zones

Data Source: Cal-Fire 2017 (Draft 9/2007 - c34fhszl06_1, Adopted 11/2007 - fhsz06_3_34, Recommended 10/2008 - c34fhszl06_3), Southgate District, Sacramento County GIS, Cal-Atlas; Map Date: 09/2020.

LEGEND
Highways
Intervals
Local Roads
Raincods
Rivers
Lakes
Southgate RPD
Cities
Counties

SACRAMENTO COUNTY INSER

SACRAMENTO COUNTY INSER

FIRE THREAT CLASSES
LOW
Moderate
High

FOSTER MORRISON

A Miles

SACRAMENTO

SACR

Figure Q-8 SRPD - Fire Threat Areas

Data Source: Cal-Fire 2017 Fire Threat Data (fthrt14_2), Southgate District, Sacramento County GIS, Cal-Atlas; Map Date: 09/2020.

Wildfires tend to be measured in structure damages, injuries, and loss of life as well as on acres burned. Fires can have a quick speed of onset, especially during periods of drought or during hot dry summer months. Fires can burn for a short period of time, or may have durations lasting for a week or more.

Past Occurrences

There has been one state and no federal disaster declarations for Sacramento County from fire. It should be noted that this was from Southern Pacific Railroad Fires and Explosions (Roseville), so it was not truly a wildfire.

Table Q-13 Sacramento County – State and Federal Disaster Declarations Summary 1950-2020

| Disaster Type | | State Declarations | Federal Declarations | | |
|---------------|-------|--------------------|----------------------|-------|--|
| | Count | Years | Count | Years | |
| Fire | 1 | 1973 | 0 | _ | |

Source: Cal OES, FEMA

This past late summer and fall Southgate Park and Golf Maintenance staff was impacted by poor air quality due to local fires throughout the State. Workloads and work schedules were adjusted. Staff stopped working outdoors on several occasions due to poor air quality conditions.

Vulnerability to and Impacts from Wildfire

Risk and vulnerability to the Sacramento County Planning Area and the District from wildfire is of significant concern, with some areas of the Planning Area being at greater risk than others as described further in this section. High fuel loads in the Planning Area, combined with a large built environment and population, create the potential for both natural and human-caused fires that can result in loss of life and property. These factors, combined with natural weather conditions common to the area, including periods of drought, high temperatures, low relative humidity, and periodic winds, can result in frequent and potentially catastrophic fires. During the May to October fire season, the dry vegetation, and hot and sometimes windy weather results in an increase in the number of ignitions. Any fire, once ignited, has the potential to quickly become a large, out-of-control fire. As development continues throughout the County and the District, especially in these interface areas, the risk and vulnerability to wildfires will likely increase.

Potential impacts from wildfire include loss of life and injuries; damage to structures and other improvements, natural and cultural resources, croplands, and loss of recreational opportunities. Wildfires can cause short-term and long-term disruption to the District. Fires can have devastating effects on watersheds through loss of vegetation and soil erosion, which may impact the District by changing runoff patterns, increasing sedimentation, reducing natural and reservoir water storage capacity, and degrading water quality. Fires can also affect air quality in the District; smoke and air pollution from wildfires can be a severe health hazard.

Although the physical damages and casualties arising from large fires may be severe, it is important to recognize that they also cause significant economic impacts by resulting in a loss of function of buildings and infrastructure. Economic impacts of loss of transportation and utility services may include traffic delays/detours from road and bridge closures and loss of electric power, potable water, and wastewater services. Schools and businesses can be forced to close for extended periods of time. Recently, the threat of wildfire, combined with the potential for high winds, heat, and low humidity, has caused PG&E to initiate PSPSs which can also significantly impact a community through loss of services, business closures, and other impacts associated with loss of power for an extended period. More information on power outage and failure can be found at the beginning of Section Q.5.3 above, as well as in Section 4.3.3 of the Base Plan. In addition, catastrophic wildfire can create favorable conditions for other hazards such as flooding, landslides, and erosion during the rainy season.

The largest impact from fire in the District is the poor air quality. The District facilities are mainly located in developed areas where wild fires are not as common. The District does own open space areas and undeveloped parcels of land. District Park Maintenance staff does perform weed abatement on a yearly basis in order to prevent fire hazards created by vegetative growth. District properties are cleared of weeds, grass, vines, or other growth that is capable of igniting and endangering neighboring properties.

Assets at Risk

Parks, landscape corridors, and open space areas in the District are at risk to wildfire.

Q.6 Capability Assessment

Capabilities are the programs and policies currently in use to reduce hazard impacts or that could be used to implement hazard mitigation activities. This capabilities assessment is divided into five sections: regulatory mitigation capabilities, administrative and technical mitigation capabilities, fiscal mitigation capabilities, mitigation education, outreach, and partnerships, and other mitigation efforts.

Q.6.1. Regulatory Mitigation Capabilities

Table Q-14 lists regulatory mitigation capabilities, including planning and land management tools, typically used by local jurisdictions to implement hazard mitigation activities and indicates those that are in place in the SRPD.

Table Q-14 SRPD Regulatory Mitigation Capabilities

| Plans | Y/N Year | Does the plan/program address hazards? Does the plan identify projects to include in the mitigation strategy? Can the plan be used to implement mitigation actions? |
|--|-------------|---|
| Comprehensive/Master Plan/General Plan | N | |
| Capital Improvements Plan | N | |
| Economic Development Plan | N | |
| Local Emergency Operations Plan | N | |
| Continuity of Operations Plan | N | |
| Transportation Plan | N | |
| Stormwater Management Plan/Program | N | |
| Engineering Studies for Streams | N | |
| Community Wildfire Protection Plan | N | |
| Other special plans (e.g., brownfields redevelopment, disaster recovery, coastal zone management, climate change adaptation) | | |
| Building Code, Permitting, and Inspections | Y/N | Are codes adequately enforced? |
| Building Code | N | Score: |
| Building Code Effectiveness Grading Schedule (BCEGS) Score | N | Rating: |
| Fire department ISO rating: | Y | District standards and specifications reviewed and updated on a regular basis |
| Site plan review requirements | N | Score: |

| Land Use Planning and Ordinances | Y/N | Is the ordinance an effective measure for reducing hazard impacts? Is the ordinance adequately administered and enforced? |
|--|------------|--|
| Zoning ordinance | N | * 7 |
| Subdivision ordinance | N | |
| Floodplain ordinance | N | |
| Natural hazard specific ordinance (stormwater, steep slope, wildfire) | N | |
| Flood insurance rate maps | N | |
| Elevation Certificates | N | |
| Acquisition of land for open space and public recreation uses | N | |
| Erosion or sediment control program | N | |
| Other | Y | District Policy Manual |
| How can these capabilities be expande | d and im | proved to reduce risk? |
| Continue to implement programs and enfo | orce Count | y and State regulations. |

Source: SRPD

Q.6.2. Administrative/Technical Mitigation Capabilities

Table Q-15 identifies the District department(s) responsible for activities related to mitigation and loss prevention in SRPD.

Table Q-15 SRPD's Administrative and Technical Mitigation Capabilities

| Administration | Y/N | Describe capability Is coordination effective? |
|--|--------------|--|
| Planning Commission | N | |
| Mitigation Planning Committee | N | |
| Maintenance programs to reduce risk (e.g., tree trimming, clearing drainage systems) | Y | The District has maintenance crews. |
| Mutual aid agreements | N | |
| Other | | |
| Staff | Y/N FT/PT | Is staffing adequate to enforce regulations? Is staff trained on hazards and mitigation? Is coordination between agencies and staff effective? |
| Chief Building Official | N | |
| Floodplain Administrator | N | |
| Emergency Manager | N | |
| Community Planner | Y | Staff is adequate to enforce regulations. There is coordination between County agencies and District staff. |
| Civil Engineer | N | |
| GIS Coordinator | Y | Staff is trained on GIS |

| Other | Y | Parks Manager | |
|--|---|---------------|--|
| Technical | | | |
| Warning systems/services (Reverse 911, outdoor warning signals) | N | | |
| Hazard data and information | N | | |
| Grant writing | Y | | |
| Hazard analysis | N | | |
| Other | | | |
| How can these capabilities be expanded and improved to reduce risk? | | | |
| The District would need to hire full-time staff or a consultant with knowledge in understanding and mitigating | | | |

potential hazards.

Source: SRPD

Fiscal Mitigation Capabilities Q.6.3.

Table Q-16 identifies financial tools or resources that the District could potentially use to help fund mitigation activities.

Table Q-16 SRPD's Fiscal Mitigation Capabilities

| Funding Resource | Access/ Eligibility (Y/N) | Has the funding resource been used in past and for what type of activities? Could the resource be used to fund future mitigation actions? | | |
|--|---|---|--|--|
| Capital improvements project funding | Y | There are funding resources used in the past that can be used in the future. | | |
| Authority to levy taxes for specific purposes | N | | | |
| Fees for water, sewer, gas, or electric services | N | | | |
| Impact fees for new development | Y | The District participates in Development Impact Fee programs administered by the County of Sacramento. | | |
| Storm water utility fee | N | | | |
| Incur debt through general obligation bonds and/or special tax bonds | Y | | | |
| Incur debt through private activities | Y | There are funding resources used in the past that can be used in the future. | | |
| Community Development Block Grant | Y | There are funding resources used in the past that can be used in the future. | | |
| Other federal funding programs | Y | | | |
| State funding programs | Y | Grants | | |
| Other | | Assessment Districts | | |
| How can these capabilities be expanded and improved to reduce risk? | | | | |
| Continue to train staff, implement programs, enforce r | Continue to train staff, implement programs, enforce regulations, seek funding sources. | | | |

Source: SRPD

Q.6.4. Mitigation Education, Outreach, and Partnerships

Table Q-17 identifies education and outreach programs and methods already in place that could be/or are used to implement mitigation activities and communicate hazard-related information.

Table Q-17 SRPD's Mitigation Education, Outreach, and Partnerships

| Program/Organization | Yes/No | Describe program/organization and how relates to disaster resilience and mitigation. Could the program/organization help implement future mitigation activities? | | | |
|--|--------|---|--|--|--|
| Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc. | N | | | | |
| Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education) | N | | | | |
| Natural disaster or safety related school programs | N | | | | |
| StormReady certification | N | | | | |
| Firewise Communities certification | N | | | | |
| Public-private partnership initiatives addressing disaster- related issues | N | | | | |
| Other | | | | | |
| How can these capabilities be expanded and improved to reduce risk? | | | | | |
| Partner with regional partners such as SMUD, County of Operational Emergency Services, Sacramento County Water Agency, and Sac Metro Fire to train staff and implement programs and enforce regulations. | | | | | |

Source: SRPD

Q.6.5. Other Mitigation Efforts

The District has many other completed or ongoing mitigation efforts that include the following:

- The District works with both the County Department of Water Resources (DWR) and SAFCA related to creek and stream drainage issues as well as stormwater detention. The District currently has several joint-use detention basins planned with DWR that are either on District park sites or adjacent to them. These basins provide the County with adequate basins for storm water detention but at the same time during non-storm periods that land can be used for passive and active recreational purposes.
- Voters approved Proposition 68 on June 5, 2018. The measure authorized \$4 billion in general obligation bonds for state and local parks, environmental protection and restoration, water infrastructure, and flood protection projects. The largest grant is the Statewide Park Program, administered through California State Parks. This program will award funding through competitive cycles totaling \$650,275,000. To qualify, a project must be in an area with less than 3 acres park per 1,000 residents or where the median household income is below \$56,982. In 2019 the District applied for and received \$3.6M to renovate Nicholas Park; a project that is undergoing design and you will hear more about in the future. Now, the District Board directed staff to apply for two more locations, both of which have the potential to expand existing parks. In March, the District applied for \$7.4M to augment an existing grant of \$2.3M to expand and revitalize the Fruitridge Community & Aquatic Center and Park and \$8.5M to expand and renovate Jack Sheldon Park. This grant cycle is the largest

- park grant program in California history with \$395,302,155 available for competitive grant funding; however, it is highly competitive and anticipated that less than 10 percent of requested funds will be awarded. Announcements are due towards the summer of 2021, so hopefully we will have good news to report in our next issue of the Southgator.
- To mitigate winter storms and summer droughts affects District Park and Golf Maintenance staff prunes trees in parks, landscape corridors, and WildHawk Golf Club on a yearly cycle and staff responds promptly to call about trees that may pose a safety hazard. During the late spring District Park Maintenance staff clears dry brush to create fire breaks in open space areas near residential and disks soils and grasses in undeveloped parcels that have no critical habitat but will be used as parkland in the future.

Q.7 Mitigation Strategy

Q.7.1. Mitigation Goals and Objectives

The SRPD adopts the hazard mitigation goals and objectives developed by the HMPC and described in Chapter 5 Mitigation Strategy.

Q.7.2. Mitigation Actions

The planning team for the SRPD identified and prioritized the following mitigation actions based on the risk assessment. Background information and information on how each action will be implemented and administered, such as ideas for implementation, responsible office, potential funding, estimated cost, and timeline are also included. The following hazards were considered a priority for purposes of mitigation action planning:

- Climate Change
- Dam Failure
- Drought & Water Shortage
- **Earthquake**
- **Earthquake Liquefaction**
- Floods: 1%/0.2% annual chance
- Floods: Localized Stormwater
- Levee Failure
- Pandemic
- > Severe Weather: Extreme Cold and Freeze
- Severe Weather: Extreme Heat
- > Severe Weather: Heavy Rains and Storms
- Severe Weather: Wind and Tornado
- Subsidence
- Wildfire

It should be noted that many of the projects submitted by each jurisdiction in Table 5-4 in the Base Plan benefit all jurisdictions whether or not they are the lead agency. Further, many of these mitigation efforts are collaborative efforts among multiple local, state, and federal agencies. In addition, the countywide public outreach action, as well as many of the emergency services actions, apply to all hazards regardless of hazard priority. Collectively, this multi-jurisdictional mitigation strategy includes only those actions and projects which reflect the actual priorities and capacity of each jurisdiction to implement over the next 5-

years covered by this plan. It should further be noted, that although a jurisdiction may not have specific projects identified for each priority hazard for the five-year coverage of this planning process, each jurisdiction has focused on identifying those projects which are realistic and reasonable for them to implement and would like to preserve their hazard priorities should future projects be identified where the implementing jurisdiction has the future capacity to implement.

Multi-Hazard Actions

Action 1. Drought Mitigation Actions/Drought Contingency Plan

Hazards Addressed: Drought and Water Shortage

Goals Addressed: 1, 2, 3, 4

Issue/Background: In 2015 California entered its fourth year of a record-breaking drought creating an extremely parched landscape. Governor Jerry Brown declared a drought State of Emergency in January 2015 and imposed strict conservation measures statewide. Gov. Jerry Brown demanded a 25 percent cut in urban water usage due to a severe drought affecting much of California and the West.

Other Alternatives: Institute minimum reductions

Existing Planning Mechanisms through which Action will be Implemented: The Southgate RPD will continue with the implemented state mandated water conservation regulations. The Southgate RPD stopped watering by ET (evapo-transportation, i.e irrigating based on weather data). Also, with new parks and landscape development the District is specifying drought tolerant vegetation, less turf areas, less water using sprinkler systems (i.e. netafim, subterranean drip system, internet based controllers, and MP rotators.) All of which promote water conservation.

Responsible Office: Southgate RPD- Parks Department

Priority (H, M, L): High

Cost Estimate: \$100K to \$500K

Potential Funding: Unknown

Benefits (avoided Losses): Reduce water use and cost and avoid potential fines

Schedule: Ongoing

Action 2. Flood Mitigation Actions/Land Acquisition

Hazards Addressed: Floods: 1%/0.2% annual chance

Goals Addressed: 1, 2, 3, 4

Issue/Background: Areas to the west of Southgate RPD have historically been vulnerable to flooding from high water flows on Morrison Creek, Florin Creek, and Elder Creek. Park lands within the North Vineyard Station Specific Plan area have been designated in locations adjacent to Elder Creek, Gerber Creek and Laguna Creek. The park sites will have storm water detentions basins with water quality treatment functions, and trail facilities. In addition, there is also a proposed park with an integrated multi-use storm water detention basin with soccer fields adjacent to Laguna Creek within the Vineyard Springs Comprehensive Plan area. In 2016 Florin Creek Park was expanded and converted to a multi-use basin for recreational use. The basin will provide flood control for areas within the 100-year flood plain of Florin Creek and improve recreational benefits at the park site. Southgate RPD continues to pursue the acquisition of open space land when it makes geographic and economic sense and proves beneficial to Southgate RPD's long term acquisition goals.

Other Alternatives: Do nothing

Existing Planning Mechanisms through which Action will be Implemented: As new development comes along Southgate RPD will continue to pursue the acquisition of open space, and parkland, and seek joint-use opportunities with partner agencies.

Responsible Office: SAFCA, Southgate RPD, City of Sacramento, County of Sacramento, FEMA, Corps of Engineers, State Department of Water Resources

Priority (**H**, **M**, **L**): Medium

Cost Estimate: TBD cost based on project

Potential Funding: TBD

Benefits (avoided Losses): Prevent potential flooding in urbanized areas.

Schedule: Ongoing

Action 3. Conservation Easements

Hazards Addressed: Multi-hazard (Climate Change, Dam Failure, Drought & Water Shortage, Earthquake, Earthquake Liquefaction, Floods: 1%/0.2% annual chance, Floods: Localized Stormwater, Levee Failure, Pandemic, Severe Weather: Extreme Cold and Freeze, Severe Weather: Extreme Heat, Severe Weather: Heavy Rains and Storms, Severe Weather: Wind and Tornado, Subsidence, Wildfire)

Goals Addressed: 1, 2, 3, 4

Issue/Background: Development has encroached into agricultural lands, and wetlands are being lost. Southgate RPD is making an effort to acquire those lands that are considered to contain rare wildlife habitat in order to limit certain types of uses or prevent development from taking place by protecting the land for future generations.

Southgate RPD is in the process of acquiring property within the North Vineyard Station Specific Plan - Elder Creek and Gerber Creek open space preserve area associated with current subdivision developments and as a required by the U.S. Army Corps of Engineers. A conservation easement will be granted over each portion of the Preserve. The conservation easement will run with the land and protect the Preserve as wetland and wildlife habitat in perpetuity, subject to the long term management responsibilities of Southgate RPD and drainage maintenance responsibilities of Water Resources for the purpose of flood control maintenance. Wildlife Heritage Foundation will hold the Conservation Easement over the Preserve areas. Southgate RPD will manage and maintain the preserve as outline in the Open Space Preserve Operations and Management Plan for the North Vineyard Station Specific Plan - Elder and Gerber Creek.

Other Alternatives: Reduce General Plan open space requirements and increase developable land.

Existing Planning Mechanisms through which Action will be Implemented: As new development comes along Southgate RPD will continue to pursue the acquisition of open space, and parkland, and seek joint-use opportunities with partner agencies.

Responsible Office: Southgate RPD, Corps of Engineers, Sacramento County

Priority (H, M, L): Low

Cost Estimate: TBD cost will depend on available budget

Potential Funding: TBD

Benefits (avoided Losses): Provide permanent guarantee that the land will not be developed.

Schedule: Ongoing

Action 4. Multi-jurisdictional Cooperation within Watersheds

Hazards Addressed: Flood: Localized Stormwater Flooding, Floods: 1%/0.2% annual chance, Severe

Weather: Heavy Rains and Storms

Goals Addressed: 1, 2, 3, 4, 5

Issue/Background: County of Sacramento is proposing to construct a 15-acre multi-use detention basin to provide improvements for flood control at Larry Gury Community Park. The Project is a component of the Vineyard Springs Comprehensive Plan (VSCP) Drainage Master Plan (DMP). The Project is located on vacant land west of Wildhawk West Drive, within the Wildhawk West Estates subdivision, north of Laguna Creek in the Vineyard Springs community of unincorporated Sacramento County.

During large storm events, water spills out of Laguna Creek and travels north across the land to Gerber Creek in what is known as the inter-basin transfer. This inter-basin transfer is a shallow floodplain with a depth of two feet (2'), represented by a Federal Emergency Management Agency (FEMA) Special Flood Hazard Area (SFHA) Zone AO. The DMP identifies this Project's flood control basin as one of the major improvements needed to stop this inter-basin transfer. The Project improvements are the first step needed

to remove the FEMA SFHA Zone AO floodplain, removing flood risk to the properties within the interbasin transfer area, and ultimately allowing the affected area to be developed. During large storm events, the detention basin will temporarily store community stormwater runoff until it can be conveyed to Laguna Creek. Most of the time, the basin will be dry and available for use as soccer fields and other play fields in the Larry Gury Community Park. Upon completion of the Project, Southgate Recreation & Park District (SRPD) will construct and maintain the soccer and play fields with lighting, irrigated turf, and landscaping.

During large storm events, the detention basin will temporarily store community stormwater runoff until it can be conveyed to Laguna Creek. Most of the time, the basin will be dry and available for use as soccer fields and other play fields in the Larry Gury Community Park. Upon completion of the Project, Southgate Recreation & Park District (SRPD) will construct and maintain the soccer and play fields with lighting, irrigated turf, and landscaping.

Other Alternatives: Do nothing

Existing Planning Mechanisms through which Action will be Implemented: As new development comes along Southgate RPD will continue to pursue the acquisition of open space, and parkland, and seek joint-use opportunities with partner agencies.

Responsible Office: FEMA, County of Sacramento, Southgate RPD

Priority (H, M, L): Medium

Cost Estimate: \$6M

Potential Funding: Sacramento County and Development Impact Fees

Benefits (avoided Losses): Better flood control and additional recreational benefits.

Schedule: 2022 to 2023

Action 5. Storm Water Management Practices – Implement Storm Water Management Practices

as identified in Stormwater Quality Design Manual

Hazards Addressed: Flood: Localized Stormwater Flooding, Floods: 1%/0.2% annual chance, Severe

Weather: Heavy Rains and Storms

Goals Addressed: 1, 2, 3, 4

Issue/Background: Heavy rains and severe storms occur during the fall, winter and spring. The heavy storms can cause flooding as well as extensive localized drainage issues. There is a lot of growth in some areas of Southgate RPD and if not planned accordingly there may be a lack of adequate drainage systems.

Southgate RPD works collaboratively with the Sacramento County Department of Water Resources (DWR) to plan and design joint-use facilities that will provide both storm water management and recreation use to Southgate RPD residents. These types of projects keep creek drainage corridors in their natural state and provide storm water detention basins with compatible recreational uses such as trails and sports fields.

These types of projects help improve the storm water quality and drainage capacity in our neighborhoods while at the same time providing additional recreation opportunities in the community. An example of these joint-use facilities includes the Laguna Creek Parkway open space which has preserved a 130-acre portion of the 100 year flood plain of Laguna Creek while providing a multi-use trail and open space corridor for residents to enjoy. A similar joint-use open space corridor is planned for the Elder and Gerber Creek drainage corridors that traverse Southgate RPD. The Southgate RPD is also in the process of designing two storm water detention projects with the County DWR that will accommodate soccer fields within the basin areas.

Other Alternatives: Do nothing

Existing Planning Mechanisms through which Action will be Implemented: As new development comes along Southgate RPD will continue to pursue the acquisition of open space, and parkland, and seek joint-use opportunities with partner agencies.

Responsible Office: Sacramento County Department of Water Resources (DWR), Southgate RPD

Priority (H, M, L): Medium

Cost Estimate: TBD

Potential Funding: Unknown

Benefits (avoided Losses): Flooding in mitigated in new areas and adds protection to existing areas.

Schedule: Ongoing

Action 6. Severe Weather: Heavy Rains and Storms Mitigation Actions/Tree Management

Hazards Addressed: Severe Weather: Heavy Rains and Storms, Wind and Tornado

Goals Addressed: 1, 2, 3, 4

Issue/Background: Heavy rains and storms have caused trees to fall over especially when the ground becomes very saturated and the tree is weak or diseased. In past years many trees have died from the drought and will need to be removed before a big rainstorm comes through and causes them to fall over or create a hazard.

In 2012 the Southgate RPD received a grant from the Urban Forestry Program Entitled, "An Urban Forest for Every City". This Program Grant funded the development and implementation of a management plan for our urban forest which determined reasonable maintenance goals and set a standard maintenance cycle to help the District proactively manage our forest in a way that reflects the values of our community within a set budget. The grant was used to conduct a tree inventory as the first step in better understanding the needs and distribution of its trees and the value of its forest asset. A consulting arborist and certified tree risk assessor provided an inventory of all the trees in the parks, parkways, open space and landscape corridors in the Southgate RPD. The inventory noted the location, species, size, health, and potential for

infrastructure conflicts and hazards for each tree on Southgate RPD owned property as well as noting empty planting locations. High risk trees were identified and most have been removed. Southgate RPD is still in the process of developing an Urban Forest Management Plan that aims to identify actions that will support a healthy and regenerative urban forest.

Other Alternatives: Do nothing

Existing Planning Mechanisms through which Action will be Implemented:

- Southgate RPD Parks Department and Golf Department
- GIS inventory
- Planting trees with Sac Tree Foundation
- > Implementing the Urban Forest Management Plan

Responsible Office: Southgate RPD

Priority (H, M, L): Medium

Cost Estimate: TBD

Potential Funding: Unknown

Benefits (avoided Losses): Those trees identified in poor condition can be removed in a timely manner to avoid a hazardous and dangerous situation at a later time.

Schedule: Ongoing

Action 7. Integrate Local Hazard Mitigation Plan into District Master Plan

Hazards Addressed: Multi-hazard (Climate Change, Dam Failure, Drought & Water Shortage, Earthquake, Floods: 1%/0.2% annual chance, Floods: Localized Stormwater, Levee Failure, Pandemic, Severe Weather: Extreme Cold and Freeze, Severe Weather: Extreme Heat, Severe Weather: Heavy Rains and Storms, Wildfire)

Goals Addressed: 1, 2, 3, 4, 5

Issue/Background: Communities with a FEMA-approved LHMP are eligible for FEMA pre- and post-disaster grant funding and for lower costs of flood insurance to residents through the National Flood Insurance Program's (NFIP) Community Rating System (CRS). Adoption of the local hazard mitigation plan (LHMP) in accordance with the Federal Disaster Mitigation Act of 200 will allow the district to apply for these grants. The District can adopt the LHMP and incorporate it or reference it in the Master Plan.

Other Alternatives: No action

Existing Planning Mechanisms through which Action will be Implemented: Master Plan

Responsible Office: Sacramento County, Districts, and Cities

Priority (H, M, L): High

Cost Estimate: TBD dependent on the frequency of events and hazards encountered annually.

Potential Funding: District funds, grant funds

Benefits (avoided Losses): Increase knowledge of potential hazards and activities required to mitigate hazards and be prepared in order to protect lives and reduce damage.

Schedule: As soon as possible

Action 8. Covid-19 Response Plan

Hazards Addressed: Pandemic

Goals Addressed: 1, 2, 3, 4, 5

Issue/Background: The COVID-19 pandemic, also known as the coronavirus pandemic, is an ongoing global pandemic of coronavirus disease 2019 (COVID-19), which is caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The virus was first identified in December 2019 in Wuhan, China. The World Health Organization declared a Public Health Emergency of International Concern regarding COVID-19 on 30 January 2020, and later declared a pandemic on 11 March 2020.

Other Alternatives: Do nothing

Existing Planning Mechanisms through which Action will be Implemented: The District has dedicated resources immediately to identify and mitigate situations in the workplace and in public buildings which may introduce, expose, or spread COVID-19. The operations are unique to each department and program and mitigation measures will be taken in order to continue to provide a safe work practices. The plan will be updated on a regular basis for the duration of the COVID-19 situation. Along with these measures all open building facilities have been or will be fitted with MERV 13 filters along with ionization units as they are opened to the public.

Responsible Office: Southgate RPD, State of California, Centers for Disease Control and Prevention

Priority (H, M, L): High

Cost Estimate: \$275K to \$650K

Potential Funding: General fund,

Benefits (avoided Losses): Help prevent the spread of COVID-19.

Schedule: Ongoing