IMPERIAL IRRIGATION DISTRICT

SB 901 WILDFIRE MITIGATION PLAN

2020-2022

October 14, 2019

Imperial Irrigation District Wild Fire Mitigation Plan 2020 - 2022

1. Executive Summary

1.1. The Imperial Irrigation District Wild Fire Mitigation Plan meets applicable California SB 901 requirements.

1.2. The Imperial Irrigation District does not have transmission, distribution, or generation facilities, in CAL FIRE designated High or Extreme Wild Fire Hazard areas.

1.3. Long-term Wild Fire risk caused by Climate Change will remain very low.
While climate change will likely have significant impacts on temperature and other factors in the Imperial Irrigation District Service Territory, it will have very little impact on the already low likelihood of Wild Fires. Service Territory average temperatures will increase, between 3 to 5 degrees Fahrenheit by 2050.

1.4. Fire risks near Imperial Irrigation District power lines involve haystacks, Date Palms, California Fan Palms, trees, and other tall vegetation located directly under and adjacent to power lines.

1.5. Imperial Irrigation District enacted Power Line Corridor Clearance Regulation 23, in August 2019. This regulation provides the enforcement mechanism to address encroachments and imminent threats located under and adjacent to Imperial Irrigation District power infrastructure.

1.6. Although the Imperial Irrigation District does not have infrastructure located in a CAL FIRE designated High Fire Threat or Extreme Fire Threat Areas, the Imperial Irrigation District is submitting this plan that identifies existing and planned efforts with elements expected to help reduce the risk of fire ignitions caused by Imperial Irrigation District power infrastructure.

1.7. The Imperial Irrigation District SB 901 Wild Fire Mitigation Plan includes program components, such as performance metrics, continuous improvement, and responsible parties.

1.8. The initial IID SB 901 Wild Fire Plan is required to be active on January 1, 2020, with a new comprehensive plan released every (3) years thereafter.

1.9. Imperial Irrigation District will submit annual progress updates to the Imperial Irrigation District Board of Directors, and the California Wildfire Safety Advisory Board.

2. Purpose of the Imperial Irrigation District Wildfire Mitigation Plan

2.1. The Imperial Irrigation District SB 901 Wild Fire Mitigation Plan meets requirements identified in sections applicable to publicly owned electric utilities, of California Senate Bill 901 Wildfires, and California Assembly Bill 1054 Public Utilities Wildfires and Employee Protection.

2.2. This Plan describes Imperial Irrigation District efforts planned during calendar years 2020 through 2022, with elements expected to reduce the risk of fire ignitions caused by Imperial Irrigation District power infrastructure.

3. Authority To Implement The Plan

3.1. The Imperial Irrigation District Board of Directors is expected to authorize this plan in Q4 2019.

3.2. Plan oversight is performed by the Imperial Irrigation District, Energy Department, Construction and Maintenance Section, Assistant Energy Manager.

4. Imperial Irrigation District Overview

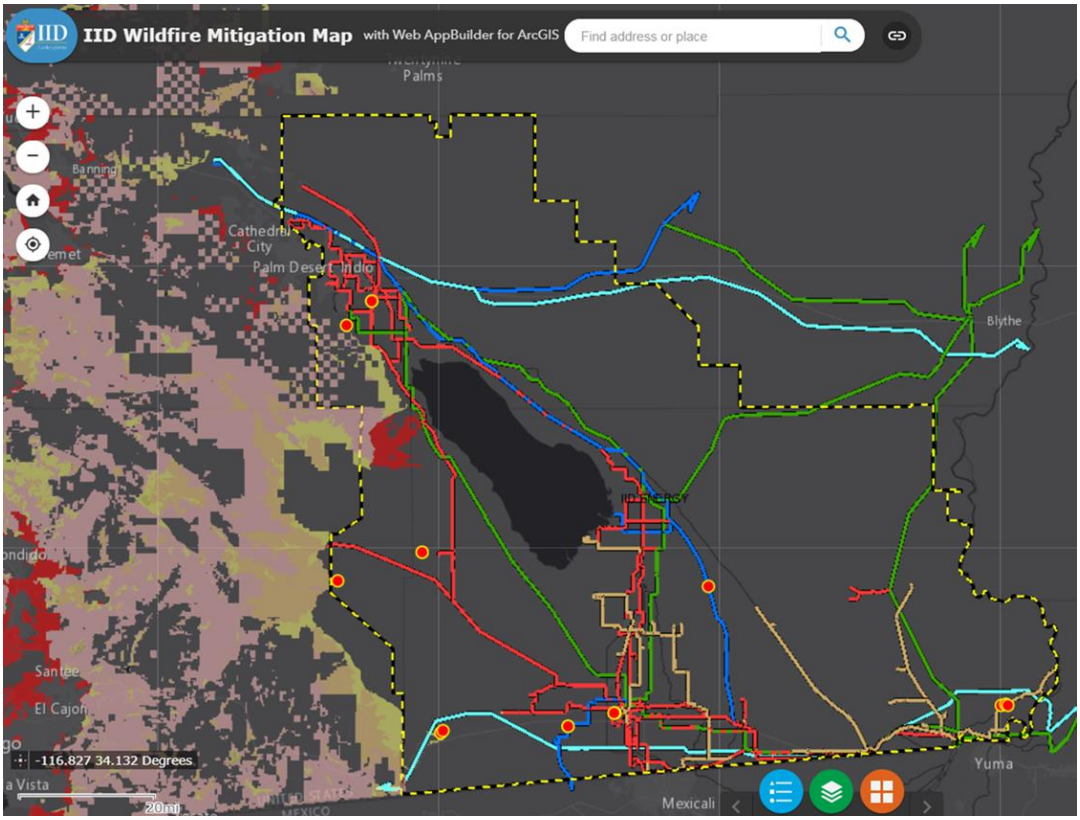
4.1. Organization Of The Imperial Irrigation District

4.1.1. Irrigation District (IID) is an irrigation special district established under Division 11 of the California Water Code, Sections 20500, which provides non-potable water, farm drainage and power services to the lower southeastern portion of California's desert.

4.1.2. Imperial Irrigation District is a transmission, distribution, and generation, energy utility. The utility operates over 1,800 miles of overhead energy transmission lines, and over 4,400 miles of overhead power distribution lines throughout its Service Territory.

4.2. Description of the Service Territory

4.2.1. The Imperial Irrigation District Service Territory is located in the southeastern corner of California. The Service Territory covers 6,471 square miles, including all of Imperial County along with parts of Riverside and San Diego counties.



4.2.2. The Service Territory is mostly uninhabited, desert with two sparsely populated irrigated farmland areas: Coachella Valley and Imperial Valley.

4.2.3. Imperial Irrigation District provides electric service to approximately 145,000 electric customers located in several population centers located throughout the 6,471 square mile Service Territory.

4.2.4. There is one CAL FIRE designated High Fire Threat area of approximately 43 square miles, located on the West side of the Imperial Irrigation District Service Territory, near the Imperial-Riverside County line. Part of the High Fire Threat area is located in the northern section of the Anza Borrego Desert State Park, continuing north, into a desert mountainous area. The area is hi-lighted in red, on the map above.

4.2.5. **There are no Imperial Irrigation District power infrastructure elements, power lines, or generation facilities located in a CAL FIRE designated High Fire Threat area, or a CAL FIRE Extreme Fire Threat area.**

4.3. Although the Imperial Irrigation District does not have infrastructure located in a CAL FIRE designated High Fire Threat or Extreme Fire Threat area, the Imperial Irrigation District is submitting this plan that identifies existing and

planned efforts with elements expected to reduce the risk of fire ignitions caused by Imperial Irrigation District power infrastructure.

5. Objectives of the Imperial Irrigation District Wildfire Mitigation Plan

5.1. Reduce the risk of fire ignitions caused by Imperial Irrigation District Power Infrastructure.

5.2. Prevent the construction of new power infrastructure in or adjacent to, CAL FIRE Designated High or Extreme Fire Threat Areas.

6. Present Fire Ignition Risks

6.1. CAL FIRE Incidents inside the Imperial Irrigation District Service Territory 2013 – 2019

CAL FIRE Incidents
Imperial Irrigation District Service Territory
2013 - 2019 (8/1/2019)

	Imperial County			Riverside County			San Diego County		
Year	Number of Incidents	Incident Location	Acres Burned	Number of Incidents	Incident Location	Acres Burned	Number of Incidents	Incident Location	Acres Burned
2013	0		0	2	Ave 66 / Pierce St	40	0		0
					Ave 54 / Tyler	40			
2014	0		0	1	Ave 62 / Van Buren	57	0		0
2015	0		0	0		0	0		0
2016	0		0	0		0	0		0
2017	0		0	2	Ave 66 / Hw111	15	0		0
					Ave 64 / Las Serenas ST	48			
2018	0		0	3	Ave 70 / Hwy 86	10	0		0
					Ave 66 / Martinez Rd	40			
					Tyler St / Vista Del Sur	15			
2019 8/1/2019	0		0	3	Ave 66 / Lincoln St	80	0		0
					Ave 66 @ Thermal	55			
					Airport Rd / Shady Lane	130			
		Total	0		Total	530		Total	0

Source: Cal Fire Statewide Fire Map and Incident Information www.fire.ca.gov/incidents/

6.2. Fire Risk Categories

6.2.1. Equipment Failure-Conductor – fire ignition due conductor failure

6.2.2. Equipment Failure-Connector Hardware – fire ignition due to connector, splice or other connector type failure

6.2.3. Equipment Failure-Insulator – fire ignition due to insulator failure, bushing failure, insulator tracking, cracked insulator, failed insulator coating, dielectric failure

6.2.4. Equipment Failure-Structure – fire ignition due to pole, cross arm or other structure failure

6.2.5. Equipment Operation-Fuse – fire ignition due to fuse operation, molten metal expulsion, sparks

6.2.6. Third Party Contact – fire ignition due to third party contact, power line corridor obstructions, vehicle vs pole accident, haystacks

6.2.7. Vegetation Conductor Contact– fire ignition due to vegetation to conductor contact

6.3. Vegetation Conductor Contact Incident Risk Table

Vegetation Conductor Contact Incident Risk Table

Item	Category	Incident	Effect	Fire Risk	Severity Consequences	Possible Cause	Mitigation Effort
1	Vegetation Conductor Contact	Vegetation Failure Dead trees and limbs falling onto conductors Date palms, California Fan Palms, tall trees in and adjacent to the wire zone	Phase-to-phase fault Phase-to-ground fault Vegetation fire ignition	Medium	Serious injury, Fatality, Reliability, Financial, damage, and loss of IID assets and facilities, difficulty in obtaining required levels of insurance	Storm Event Vegetation Inspection Failure Vegetation Management Failure	Vegetation Management Program (Section 9.3 200kV and Below Vegetation Management, Section 9.4 Transmission Vegetation Management, Section 10.3 Vegetation

Vegetation Conductor Contact Incident Risk Table							
Item	**Category**	**Incident**	**Effect**	**Fire Risk**	**Severity Consequences**	**Possible Cause**	**Mitigation Effort**
							Management Program)

6.4. Third Party Contact Incident Risk Table

Third Party Contact Incident Risk Table							
Item	**Category**	**Incident**	**Effect**	**Fire Risk**	**Severity Consequences**	**Possible Cause**	**Mitigation Effort**
1	Third Party Contact	Haystacks or other obstructions under or adjacent to power lines	Phase-to-phase fault Phase-to-ground fault Vegetation fire ignition Clearance Violation	Low to medium	Serious injury, Fatality, Reliability, Financial, damage, and loss of IID assets and facilities, difficulty in obtaining required levels of insurance	Public moving obstruction into power line corridor Haystack fire ignition by external event or possible self-ignition	Power Line Corridor Clearance Regulation 23 and corresponding SWP (Section 9.6 Power Line Clearance Regulation)
2	Third Party Contact	Mylar balloons entangling in power lines. (typically only encountered in urban areas on distribution circuits)	Phase-to phase fault Phase-to ground fault	Low	Reliability & Financial	Public losing control of balloons, balloon string entangling on power line	Imperial Irrigation District Public Information Unit conducts periodic public awareness campaigns, web site information, telephone hold messages
3	Third Party Contact	Vehicle vs pole accident	Phase-to-phase fault Phase-to-ground fault Vegetation fire ignition	Low	Serious injury, Fatality, Reliability, Financial, damage, and loss of IID assets and facilities	Loss of vehicle control	Visibility strips for all power poles and pole barriers as needed (Section 9.5 Power Line Inspection)

6.5. Animal Related Incident Risk Table

Animal Related Incident Risk Table							
Item	**Category**	**Incident**	**Effect**	**Fire Risk**	**Severity Consequences**	**Possible Cause**	**Mitigation Effort**
1	Animal	Animal/bird contact with power line	Phase-to-phase fault Phase-to-ground fault	Low	Serious injury, Fatality, Reliability, Financial, damage, and loss of IID assets and facilities, difficulty in obtaining required levels of insurance	Large bird landing or take off from cross arm, contacting energized conductor	Bird deterrents installed as needed. Expected to start investigating different options to increase distribution system reliability
2	Animal	Avian / animals waste products on insulators - tracking across insulators creating phase-to ground faults	Phase to ground fault	Low	Serious injury, Fatality, Reliability, Financial, damage, and loss of IID assets and facilities, difficulty in obtaining required levels of insurance	Birds on cross arm defecating on take-off	Section 9.5 IID Power Line Inspection

6.6. Equipment Failure Incident Risk Table

Equipment Failure Incident Risk Table							
Item	**Category**	**Incident**	**Effect**	**Fire Risk**	**Severity Consequences**	**Possible Cause**	**Mitigation Effort**
1	Equipment Failure - Conductor	Conductor failure due to external force, storm or other random event	Phase-to-phase fault Phase-to-ground fault	Low	Serious injury, Fatality, Reliability, Financial, damage, and loss of IID assets and facilities, difficulty in obtaining required levels of insurance	Storm Engineering design failure Inspection failure Maintenance failure Equipment failure	Pole loading analysis (Section 9.1 Power Line and Substation Design, Engineering and Construction) Pole intrusive testing (Section 9.5 Power Line Inspection)
2	Equipment Failure Conductor	Conductor to conductor contact or conductor contact to any surface with a difference in potential	Phase-to-phase fault Phase-to-ground fault	Low	Serious injury, Fatality, Reliability, Financial, damage, and loss of IID assets and facilities, difficulty in obtaining required levels of insurance	Equipment Failure Inspection failure Maintenance failure Engineering design failure Power line excessive power load, causing excessive conductor sag	Pole loading analysis (Section 9.1 Power Line and Substation Design, Engineering and Construction) Pole intrusive testing (Section 9.5 Power Line Inspection)
3	Equipment Failure - Structure	Poles Overloaded poles caused by excessive infrastructure installed	Structure failure Phase-to-phase fault Phase-to-ground fault Vegetation fire ignition	Low	Serious injury, Fatality, Reliability, Financial, damage, and loss of IID assets and facilities, difficulty in obtaining required levels of insurance	Improper pole selection at installation Failure to identify additional attachments during pole inspection Process failure after	Pole loading analysis (Section 9.1 Power Line and Substation Design, Engineering and Construction) Pole intrusive testing (Section 9.5.10 Minimum

Equipment Failure Incident Risk Table							
Item	**Category**	**Incident**	**Effect**	**Fire Risk**	**Severity Consequences**	**Possible Cause**	**Mitigation Effort**
						additional equipment attachment identified Engineering design failure Inspection failure Maintenance failure Installation failure	Intrusive Inspection Frequencies)
4	Equipment Failure - Structure	Poles not strong enough to withstand environmental conditions: high wind events, excessive rain, and moisture affecting ground conditions.	Structure failure Phase-to-phase fault Phase-to-ground fault Vegetation fire ignition	Low		Inspection failure Maintenance failure Engineering design failure Installation failure Equipment failure	Pole loading analysis (Section 9.1 Power Line and Substation Design, Engineering and Construction) Pole intrusive testing (Section 9.5 Power Line Inspection)
5	Equipment Failure Insulator	Insulator Tracking Insulators contaminated by dirt, dust or other creating tracking across insulators creating phase-to-ground faults.	Phase to ground fault	Low		Inspection Failure Maintenance Failure Manufacturer defect	Section 9.5 IID Power Line Inspection Program

Equipment Failure Incident Risk Table							
Item	**Category**	**Incident**	**Effect**	**Fire Risk**	**Severity Consequences**	**Possible Cause**	**Mitigation Effort**
6	Equipment Failure - Structure	Structure Cross arms break, rot, delaminate, or any other fatigue that causes failure. Equipment Failure- Cross arm or other conductor support equipment (i.e. posts, fiberglass, composites etc.)	Phase-to-phase fault Phase-to-ground fault	Low	Serious injury, Fatality, Reliability, Financial, damage, and loss of IID assets and facilities, difficulty in obtaining required levels of insurance	Inspection Failure Maintenance Failure Manufacturer defect	Power line inspection by maintenance department (Section 9.5 Power Line Inspection) Pole intrusive testing (Section 9.5.10 Minimum Intrusive Inspection Frequencies)

6.7. Equipment Operation Incident Risk Table

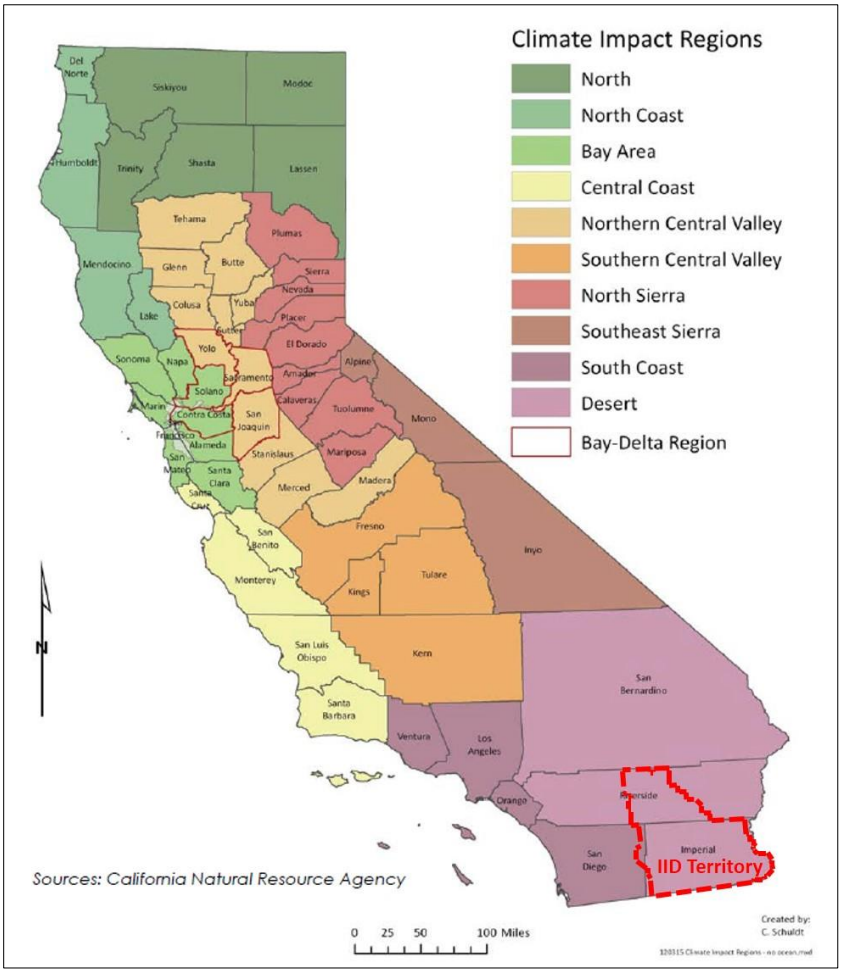
Equipment Operation Incident Risk Table							
Item	**Category**	**Incident**	**Effect**	**Fire Risk**	**Severity Consequences**	**Possible Cause**	**Mitigation Effort**
1	Equipment Operation – Fuse Operation	Expulsion Fuse operation, resulting in sparks, molten metal discharge.	Fuse operation causes molten metal, sparks resulting in fire ignition	Low	Serious injury, Fatality, Reliability, Financial, damage, and loss of IID assets and facilities, difficulty in obtaining required levels of insurance	Equipment type	Vegetation Management- Pole Base maintenance (Section 9.3 200kV and Below Vegetation Management, Section 9.4 Transmission Vegetation Management, Section 10.3 Vegetation Management Program)

7. Future Fire Risk Due To Climate Change

7.1. Projections of ecological system change within the Imperial Irrigation District Service Territory with a horizon of 60 years.

7.1.1. Climate change impacts vary widely across California. The impact of climate change in California varies across the state due to diversity in biophysical setting, climate, and jurisdictional characteristics.

7.1.2. The California Adaptation Planning Guide organized the state into climate impact regions based on county boundaries in combination with projected climate impacts, existing environmental settings, socioeconomic factors, and regional designations and organizations (see map below depicting California Climate Impact Regions designated in the "California Climate Adaptation Planning Guide," with IID territory overlay).



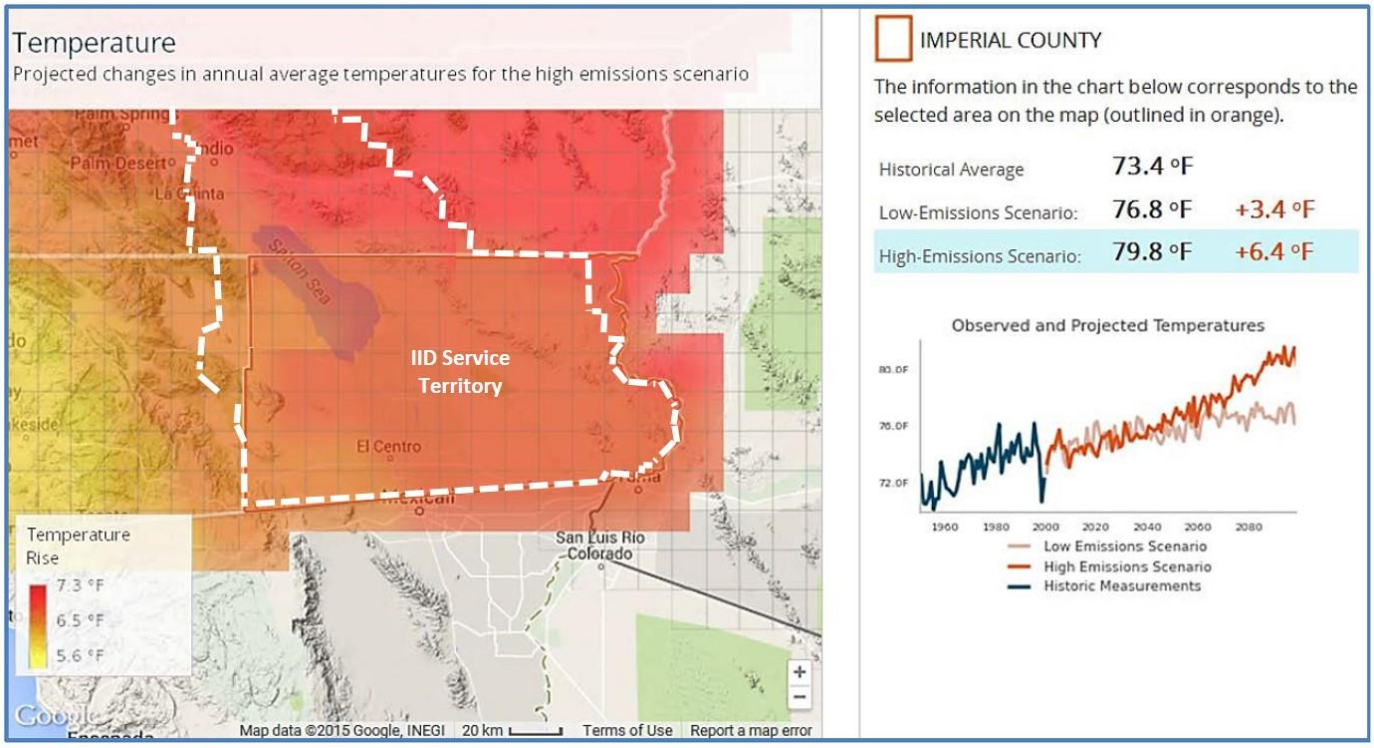
7.1.3. The IID Service Territory is located almost 100% in the "Desert Region", and the California Climate Adaptation Planning Guide provides the following ecological impact projections from climate change for that region:

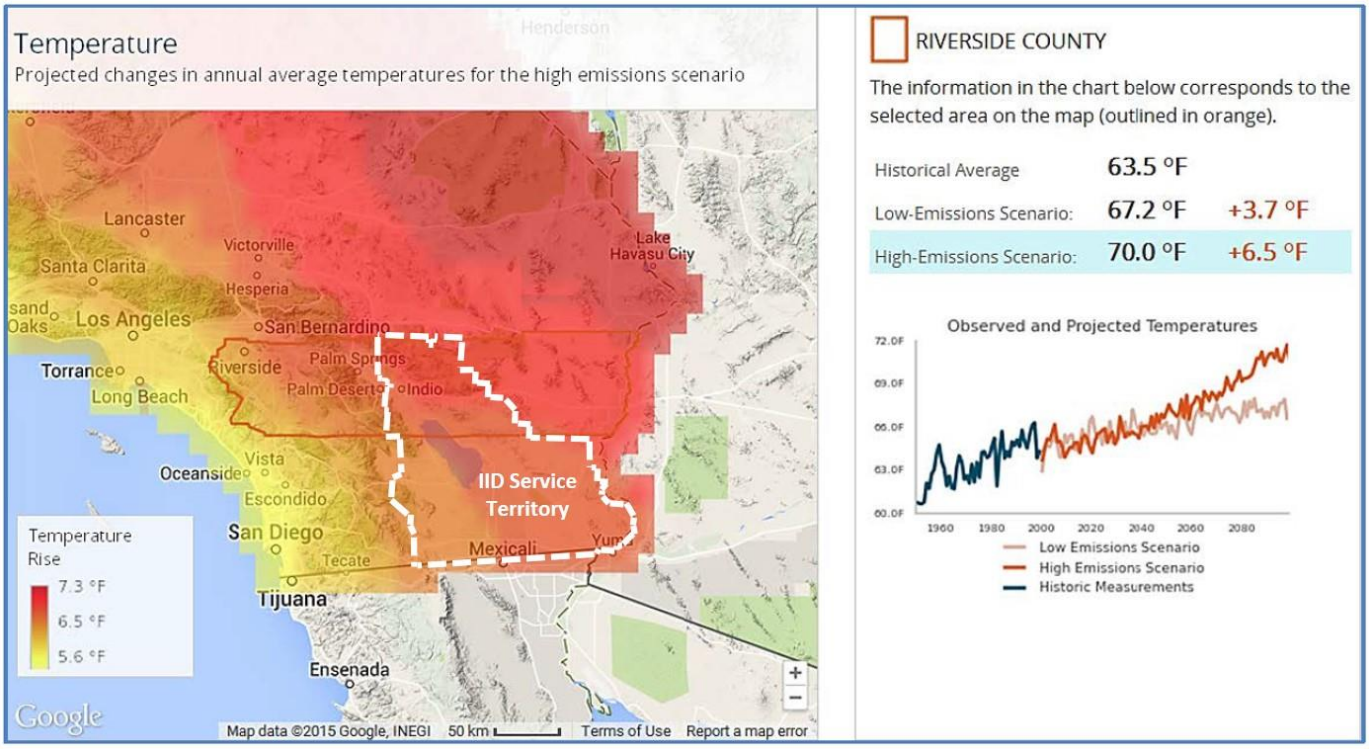
7.2. Summary of Cal-Adapt Climate Projections for the Desert Region

Temperature Change, 1990-2100	January increase in average temperatures: 2°F to 4°F by 2050 and 5°F to 8°F by 2100 July increase in average temperatures: 3°F to 5°F by 2050 and 6°F to 9°F by 2100 *(Modeled high temperatures; high carbon emissions scenario)*
Precipitation	Generally, annual rainfall will decrease in the most populous areas. Wetter areas like the western part of Riverside and southwestern San Bernardino counties will experience a 2 to 4 inch decline by 2050 and 3.5 to 6 inch decline by the end of the century. Big Bear is expected to lose around 8 inches per year by 2090. Southern Imperial County will have a small decline of about 0.5 inches. The eastern, desert portion of the region will see little to no change in annual rainfall. (CCSM3 climate model; high carbon emissions scenario)
Heat Wave	Heat waves are defined by five consecutive days over temperatures in the 100s over most of the region. Three to five more heat waves will be experienced by 2050, increasing to 12 to 16 in the western parts of the region to more than 18 to 20 in the eastern parts of the region.
Snowpack	March snowpack in the Big Bear area will diminish from the 2.5-inch level of 2010 to 1.4 inches in 2030 and almost zero by 2090. (CCSM3 climate model; high emissions scenario)
Wildfire Risk	Most areas are projected to have the same or slightly increased likelihood of wildfire risk. The major exceptions are the Mecca San Gorgonio and San Jacinto Mountains, where wildfire will be 1.5 and 2.0 times more likely. (GFDL model, high carbon emissions scenario)

Source: Public Interest Energy Research, 2011. Cal-Adapt6 (http://cal-adapt.org)

7.2.1. The following charts show a closer view of projected temperature increases for Imperial and Riverside counties through 2099 (note minor variations from projections in the table above):


Temperature
Projected changes in annual average temperatures for the high emissions scenario
IID Service Territory
El Centro
San Luis Rio Colorado
Temperature Rise
7.3 °F
6.5 °F
5.6 °F
Map data ©2015 Google, INEGI
20 km
Terms of Use
Report a map error
IMPERIAL COUNTY
The information in the chart below corresponds to the selected area on the map (outlined in orange).
Historical Average 73.4 °F
Low-Emissions Scenario: 76.8 °F +3.4 °F
High-Emissions Scenario: 79.8 °F +6.4 °F
Observed and Projected Temperatures
80.0F
76.0F
72.0F
1960 1980 2000 2020 2040 2060 2080
Low Emissions Scenario
High Emissions Scenario
Historic Measurements


Temperature
Projected changes in annual average temperatures for the high emissions scenario
Lancaster
Victorville
Santa Clarita
Hesperia
Los Angeles
San Bernardino
Riverside
Palm Springs
Palm Desert
Indio
Torrance
Long Beach
Vista
Oceanside
Escondido
San Diego
Tecate
Tijuana
Ensenada
Mexicali
Yuma
Lake Havasu City
IID Service Territory
Temperature Rise
7.3 °F
6.5 °F
5.6 °F
Map data ©2015 Google, INEGI
50 km
Terms of Use
Report a map error
RIVERSIDE COUNTY
The information in the chart below corresponds to the selected area on the map (outlined in orange).
Historical Average 63.5 °F
Low-Emissions Scenario: 67.2 °F +3.7 °F
High-Emissions Scenario: 70.0 °F +6.5 °F
Observed and Projected Temperatures
72.0F
69.0F
66.0F
63.0F
60.0F
1960 1980 2000 2020 2040 2060 2080
Low Emissions Scenario
High Emissions Scenario
Historic Measurements

7.3. Fire Threat Areas within the Imperial Irrigation District Service Territory 60 Year Horizon.

7.3.1. While all of California is subject to some degree of fire hazard, there are specific features that make some areas more hazardous.

7.3.2. Fire Hazard Severity Zones (FHSZ) were developed using a computer model. They predict the physical damage a fire is likely to cause based on the factors that influence fire likelihood and behavior. Many factors are considered such as fire history, existing and potential fuel (natural vegetation), flame length, blowing embers, terrain, and typical weather for the area. Fire Hazard Severity Zones are categorized into three categories:

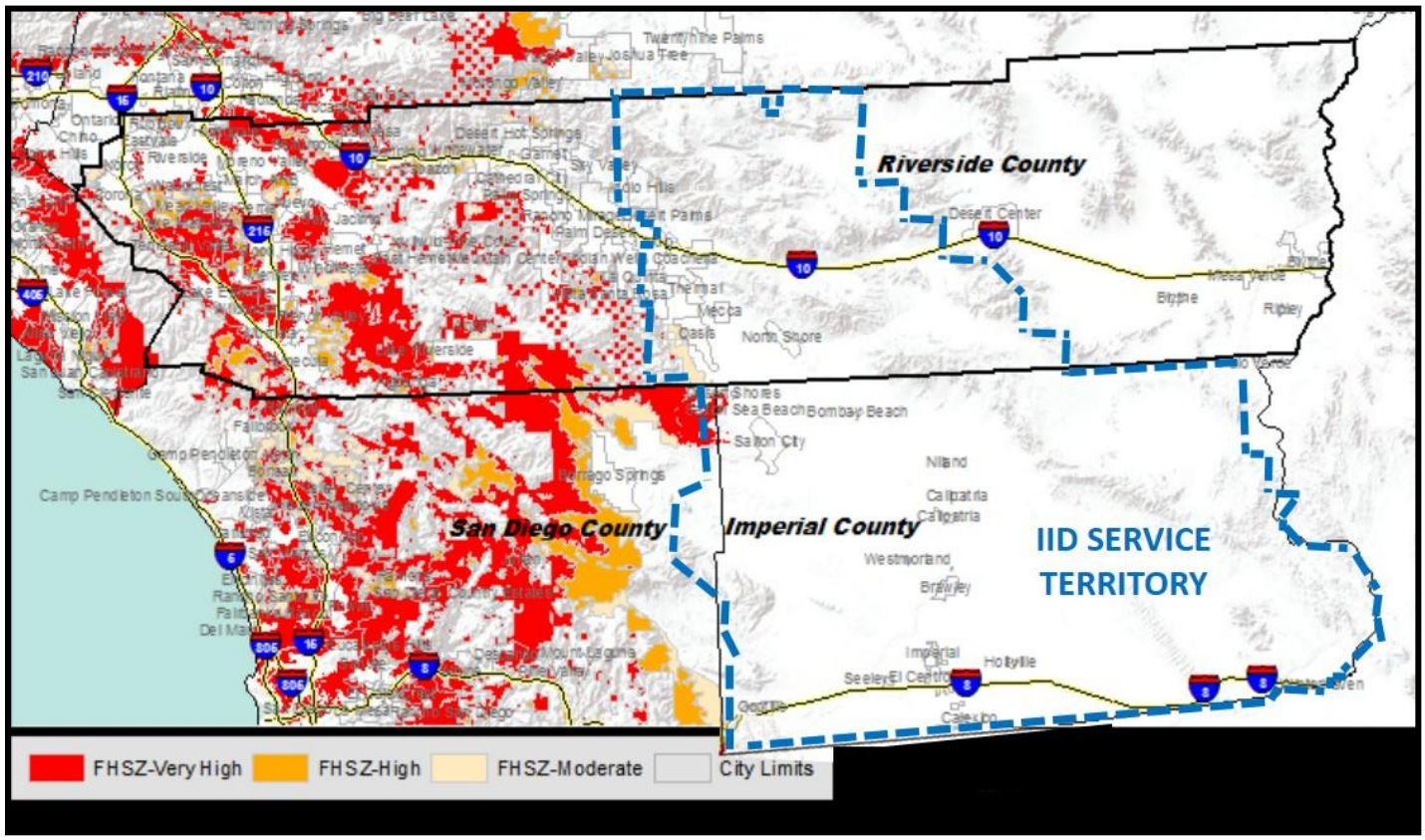
7.3.3. Moderate: Wildland areas supporting areas of typically low fire frequency and relatively modest fire behavior, or developed/urbanized areas with a very high density of non-burnable surfaces (including roadways, irrigated lawn/parks, and low total vegetation cover (<30%) that is highly fragmented and low in flammability).

7.3.4. High: Wildland areas supporting medium-to high-hazard fire behavior and roughly average burn probabilities, or developed/urbanized areas with moderate vegetation cover and more limited non-burnable cover. Vegetation cover typically ranges from 30-50% and is only partially fragmented.

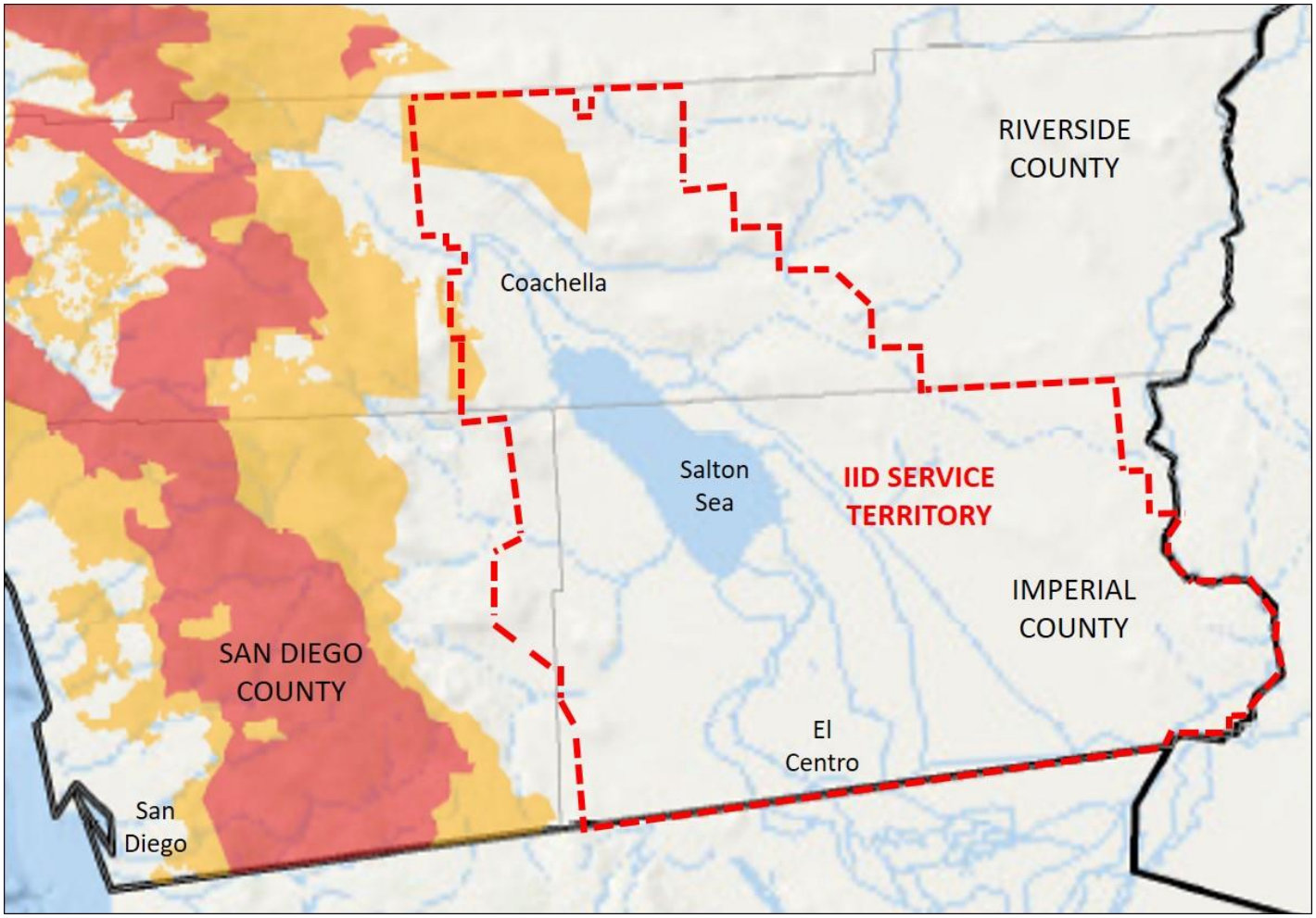
7.3.5. Very High: Wildland areas supporting high to extreme fire behavior resulting from climax fuels typified by well-developed surface-fuel profiles (e.g., mature chaparral) or forested systems where crown fire is likely, or developed/urban areas typically with high vegetation density (>70% cover) and associated high fuel continuity. This allows flames to spread over much of the area impeded only by isolated non-burnable areas.

7.3.6. The FHSZ rating system is more completely described at http://frap.fire.ca.gov/projects/hazard/fhsz_review_inst ructionsv1_3b.pdf.

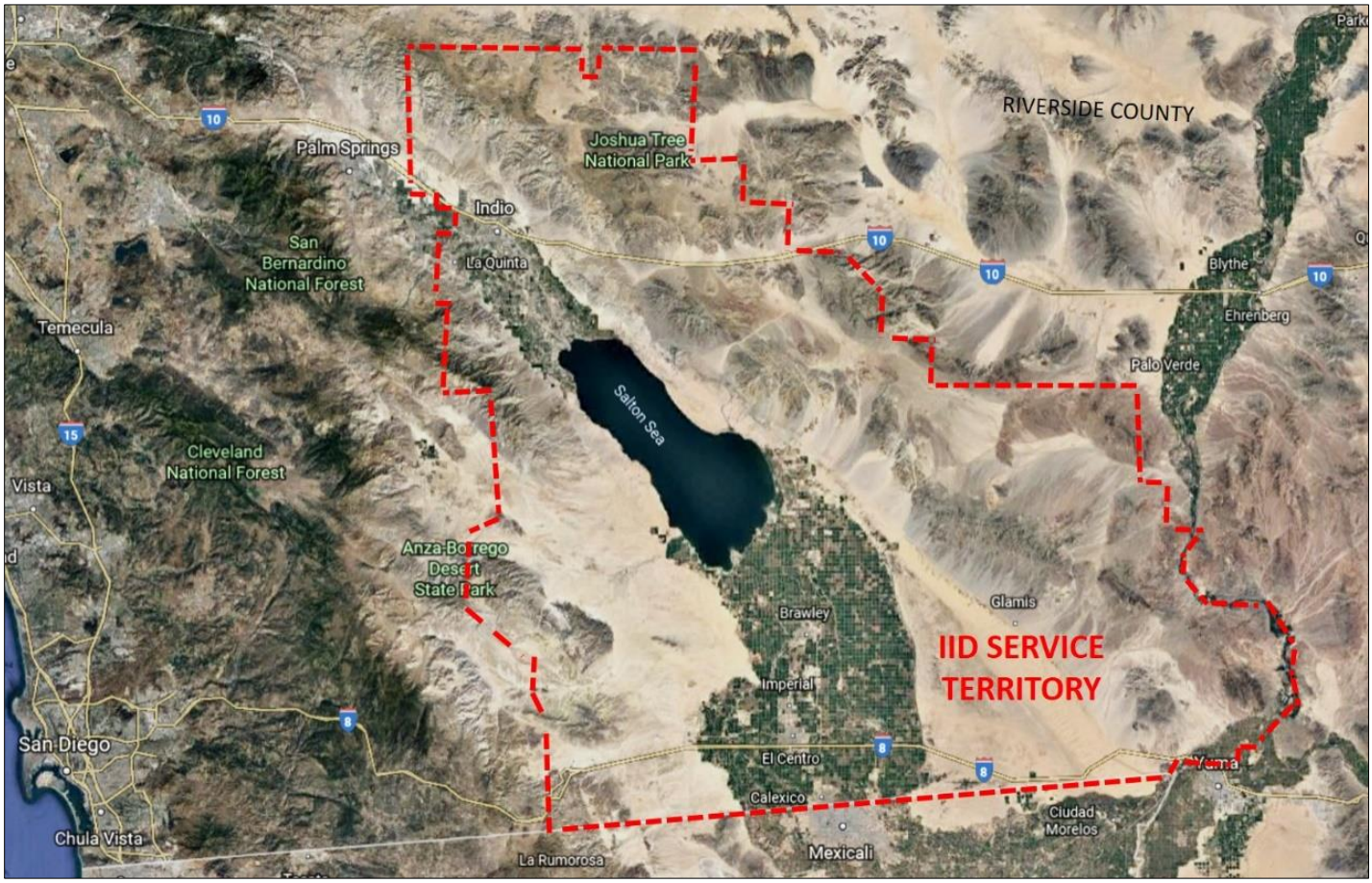
7.3.7. The Current Fire Hazard Severity Zones (FHSZ) for Imperial and Riverside Counties are shown below, with an IID Service Territory overlay - Note: Map includes only state and local responsibility areas. Also, note the small fringe hazard areas in northwest Imperial County and southwest Riverside County.



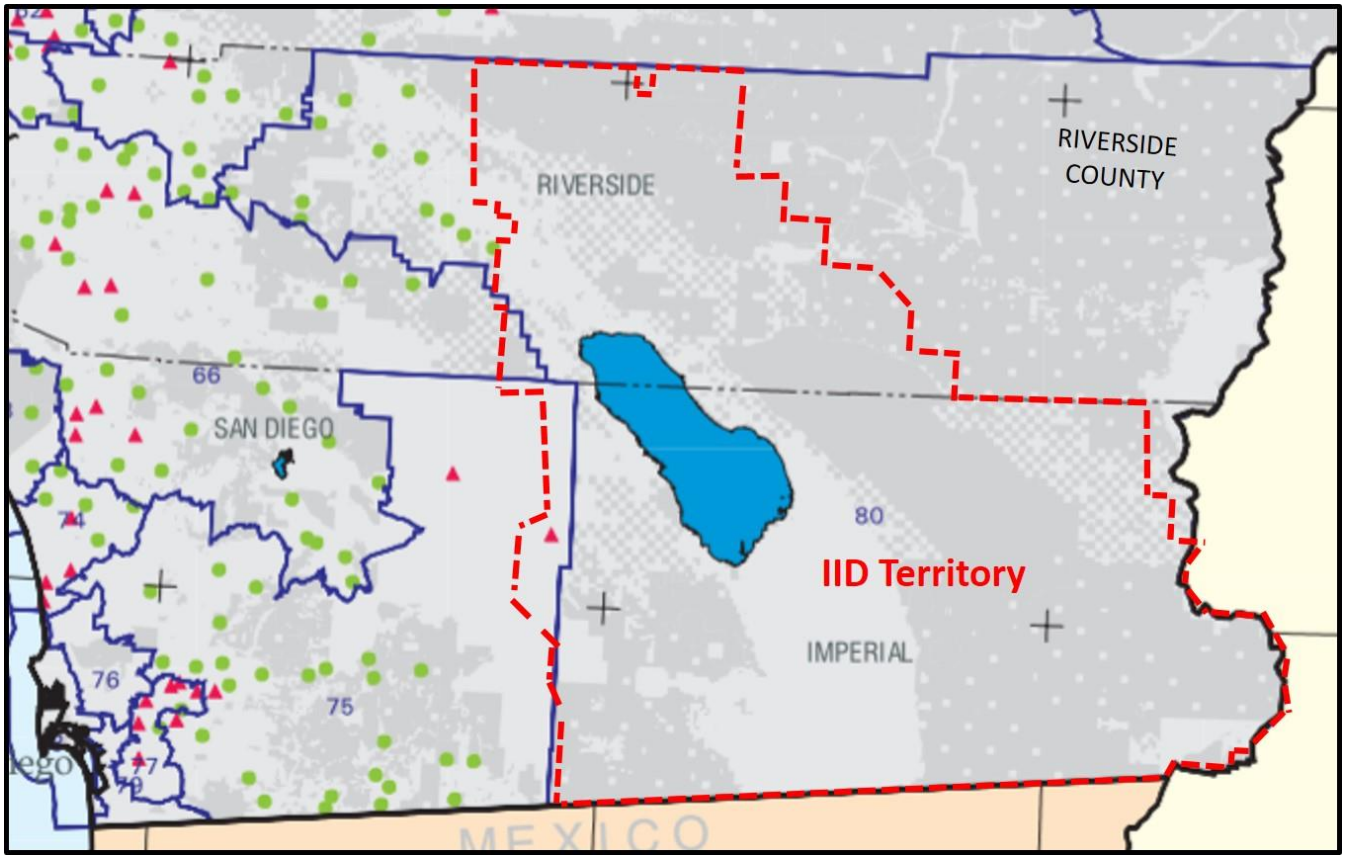
7.3.8. See below another view of the current CAL FIRE-designated zones where the IID Service Territory exists, and the lack of at-risk territory:



7.3.9. An aerial view also provides context to the designation of IID's Service Territory existing in a Desert Zone. Note lowland / flat agricultural areas and residential / commercial areas surrounded by desert terrain:



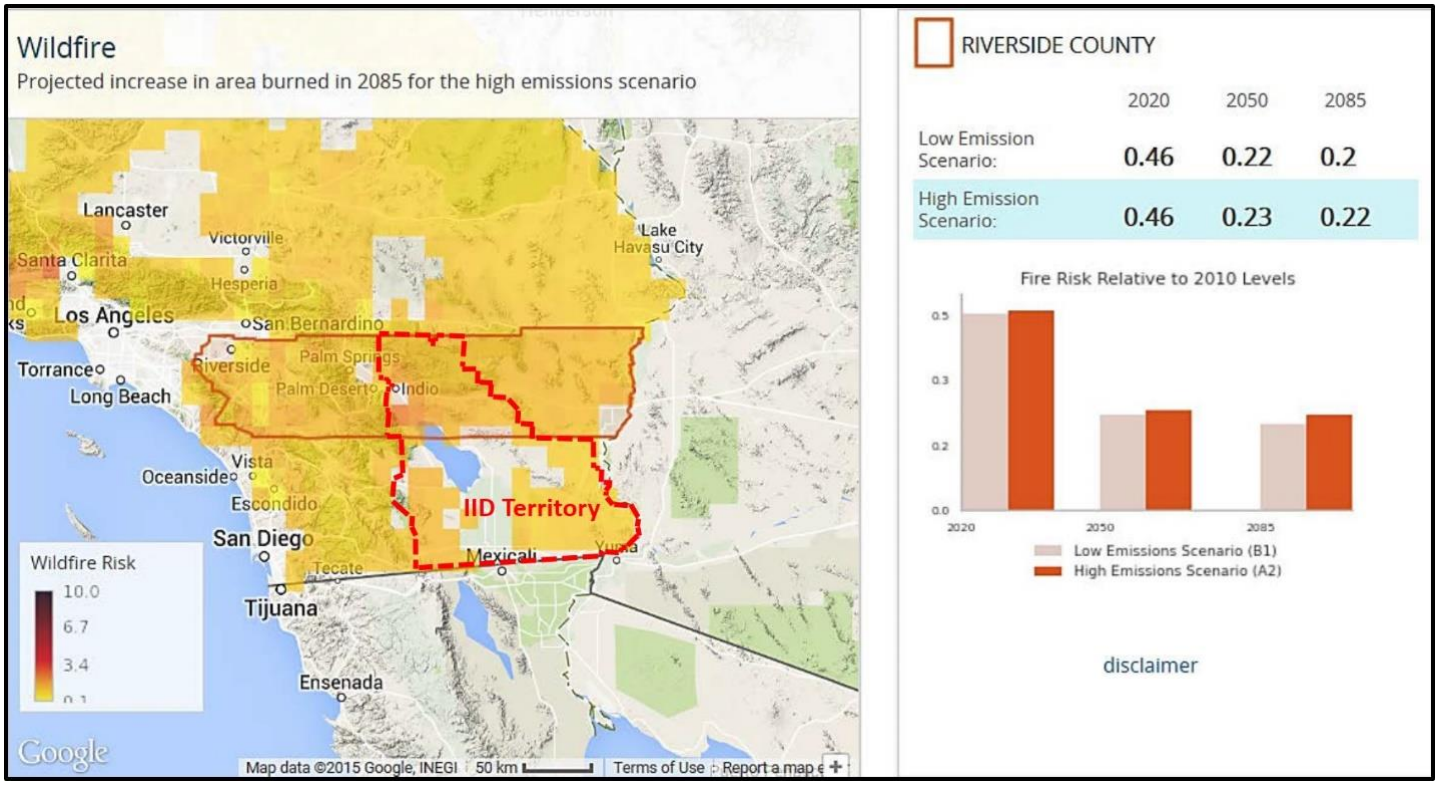
7.3.10. The CAL FIRE website also provides a map showing “Communities at Risk from Wildfire” in California. This map contains an overlay of the IID Service Territory. Note that there is one community currently at risk, as identified in the central-western section of the Service Territory near the border of San Diego County (Ocotillo Wells).

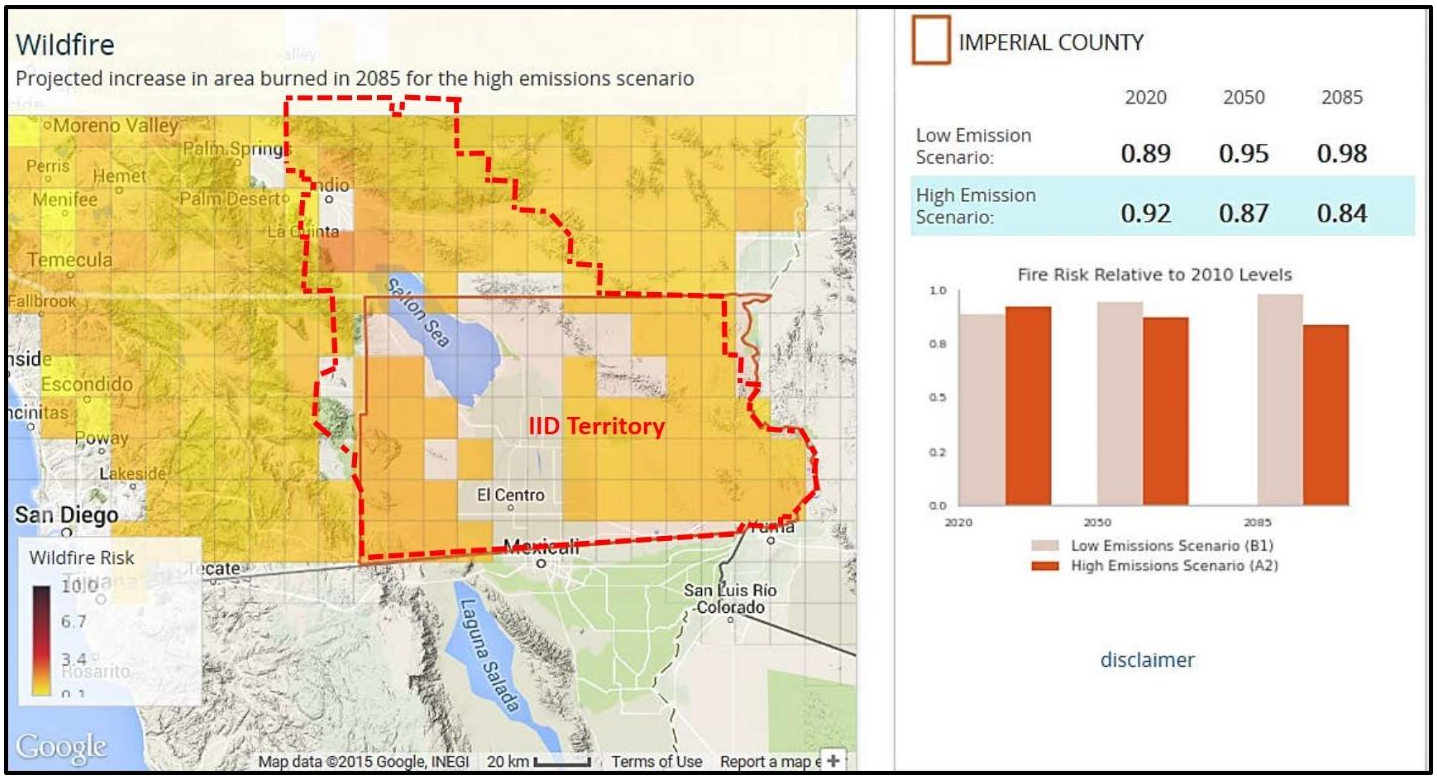


7.3.11. Periodic natural fire is an important ecosystem disturbance. Uncontrolled wildfires, however, can be extremely damaging to communities and ecosystems. Fire can promote vegetation and wildlife diversity, release nutrients into the soil, and eliminate heavy accumulation of underbrush that can fuel catastrophic fires.

7.3.12. Projected increases or decreases in potential burn areas through 2085: The maps below for Imperial and Riverside counties display the projected increase or decrease in potential area burned based on projections of the Coupled Global Climate Model (version 3) for the high carbon emissions scenario in 2085.

7.3.13. The bar graphs to the right of the maps below illustrate the projected time trend over the 21st century for both the high and low emissions scenarios. Please note that these data are modeled solely on climate projections and do not take landscape and fuel sources into account. The projections of acreage burned are expressed in terms of the relative increase or decrease (greater or less than 1) from a 2010 baseline for fires that consume at least 490 acres. The 2010 baseline reflects historic data from 1980-1989 and trends through 2010.





7.4. Climate Change Risk Conclusion" While climate change will likely have significant impacts on temperature and other factors in the Imperial Irrigation District Service Territory, it will have very little impact on the already low likelihood of wildfires.

8. Service Territory Findings - Changes to CPUC Fire Threat Map

The following are the recommendations to CAL FIRE resulting from the 2019 Service Territory survey conducted during June 2019, performed by Sacramento-based Fuentes Consulting.

Summary Report: Max Fuentes Consulting; Imperial Irrigation District Service Territory Survey

Observations and Recommendations regarding Fire Map Hazard Designations

Purpose

The intent of this document is to provide a summary of Imperial Irrigation District service territory survey conducted June 24-27, 2019.

Objectives of visit

Observe areas currently identified by CAL FIRE as “Moderate” Fire Hazard designations:

- Ocotillo
- Ocotillo Wells
- CAL FIRE designated High fire threat area, west side of IID Service territory near the Imperial / Riverside county lines

CAL FIRE Hazard Designation Observations

Vegetation

Predominant vegetation in the areas of the field survey included Salt Cedars, Date Palms, Tumbleweeds, and Palm trees.

Ocotillo

This area is designated as a “moderate” fire hazard area that is the lowest designation, provided by CAL FIRE. However, based upon the scarcity of the vegetation, very low population area, and distribution single-phase construction, the Consulting group recommends reclassification of this area as a “no-fuel” area:

- The single distribution circuit is being protected by fused cutouts from the take-off pole from the feeder.
- There is a line cross approximately halfway between the takeoff pole and the end of line. The conductor at the line cross has been sectionalized to de-energize the line going to the south (Moderate fire area) and remains energized to the North feeding the residential customers.
- There is little to no vegetation to provide fuel. In addition, the existing vegetation is not growing into the distribution lines (see pictures on the next page).

If there were an infrastructure failure (car pole, etc.) and the energized phase were to make contact with the ground, the scarcity of vegetation would not, with a reasonable degree of probability, provide enough fuel to create a significant wildfire hazard.

Ocotillo Wells

This area has no reasonable degree of probability for wildfire issues – not enough vegetation to fuel a significant fire and no growth into the lines, and should not be designated as a “Moderate” or higher hazard.

CAL FIRE Hazard Designation Recommendation Summary

Fuentes Consulting recommends that the areas of Ocotillo and Ocotillo Wells should be assigned "no-fuel" designations.

In addition, regarding the High fire threat area west of the IID Service territory near the Imperial-Riverside county line – no recommendation: IID has no infrastructure near this area

9. Existing Efforts with Elements Expected to Reduce Fire Risk

The following is a list of Imperial Irrigation District existing and planned efforts with elements expected to reduce the risk of fire ignitions caused by Imperial Irrigation District power infrastructure.

9.1. Power Line and Substation Design, Engineering and Construction

9.1.1. Imperial Irrigation District electric facilities are designed and constructed meeting or exceeding relevant federal, state, and industry standards such as National Electrical Safety Code, and IEEE Standards.

9.1.2. Imperial Irrigation District meets or exceeds industry best practices such as CPUC General Order 95.

9.2. Relay Protection

9.2.1. Relay Protection Engineering reviews all system disturbances for correct operation. In the event of an incorrect operation, disturbance analysis is performed on the protection settings, relay protective devices, and or associated hardware and equipment until root cause of event is identified. Once root cause is determined, corrective measures are implemented.

9.3. Vegetation Management Power Lines 200 kV and Below Not Subject to FERC Jurisdiction

9.3.1. The work procedures identify responsible parties, inspection cycles, clearance distance for overhead, ground mounted and underground infrastructure, details procedures to address inspection findings.

9.3.2. Imperial Irrigation District Distribution System Vegetation Management practice contains the following components:

9.3.3. *Inspection Patrols* – The Imperial Irrigation District vegetation management practice performs periodic and on-demand patrols to identify vegetation in and adjacent to, energy infrastructure. These inspections are a trigger for pruning jobs, vegetation removals, and the application of herbicides.

9.3.4. *Regulatory Requirements and Standards* – The vegetation management practice complies with applicable regulatory requirements and standards such as, California Penal Code, California Public Resources Code, National Electrical Safety Code, and Imperial Irrigation District regulations.

9.3.5. *Pruning Best Practices* – Imperial Irrigation District requires Vegetation Management Contractors to prune trees following the American National Standards Institute A300 pruning best practices.

9.3.6. *Safety* – The Imperial Irrigation District requires Vegetation Management Contractors to adhere to regulations and best practices such as, American National Standards Institute Z133, Safety Requirements for Arboricultural Operations, Occupational Safety, and Health Administration, California Department of Industrial Relations, and Imperial Irrigation District, safety work practices. Vegetation Management Contractors working for the Imperial Irrigation District are required to maintain certifications to work in electric utility environments and pruning best practices.

9.3.7. *Vegetation Control* - The goal is to maintain a vegetation control buffer of at least six (6) feet in addition to the required clearance distances, to allow at least one (1) year of vegetation growth, before vegetation growth encroaches into the Danger Zone. The Danger Zone clearance distances follow California Public Resources Code requirements: California Public Resources Code, Division 4, Part 2, Chapter 3 Mountainous, Forest-, Brush- and Grass-Covered Lands, Section 4293. Imperial Irrigation District will use specific knowledge of growing conditions to determine the appropriate time of trim clearance in each circumstance.

Clearance in All Directions Between All Vegetation and All Energized Conductors Which Are Carrying Electric Current

Operating Voltage	Clearance Distance
2,400 or more Volts, but less than 72,000 Volts	4 FT
72,000 or more Volts, but less than 110,000 Volts	6 FT
110,000 or more Volts	10 FT

9.3.8. *Customer Service* – Customers may contact the Imperial Irrigation District Call Center for vegetation related service requests and information. Customers may review Vegetation Management practice information on the Imperial Irrigation District website. As an added service, the Imperial Irrigation District offers safety inspections of customer meter panels, as part of commissioning a new service panel. In addition, Imperial Irrigation District will de-energize customer service drops to allow customers to perform work adjacent to meter panels and Imperial Irrigation District electric infrastructure.

9.4. Transmission System Vegetation Management Program - The Imperial Irrigation District Transmission System Vegetation Management program is a comprehensive vegetation management program applicable to the Imperial Irrigation District Bulk Electric System located in the IID Service Territory, which adheres to Western Electricity Coordinating Council (WECC) requirements. For transmission-level facilities, Imperial Irrigation District complies with NERC FAC-003-4, where applicable.

9.5. Imperial Irrigation District Power Line Inspection

9.5.1. Imperial Irrigation District performs inspections following the National Electric Safety Code.

9.5.2. For Bulk Electric System inspections, Imperial Irrigation District follows Western Electricity Coordinating Council (WECC) requirements.

9.5.3. For distribution circuits, Imperial Irrigation District follows industry best practices such as California Public Utilities Commission General Order 95

for construction standards and General Order 165, for inspection frequency requirements.

9.5.4. Inspections, assess power line physical condition, identify safety issues, identify deviations from construction design, and detect imminent failures. The program performs periodic, Patrol Inspections, Detailed Inspections, and Intrusive Inspections to assess the condition of field equipment.

9.5.5. The Imperial Irrigation District performs power line inspections following two standard work procedures. One procedure addresses Bulk Electric System infrastructure and the second procedure addresses power lines of 200KV and below that are not subject to FERC jurisdiction.

9.5.6. The work procedures identify responsible parties, inspection cycles, and detail procedures to address inspection findings.

9.5.7. *Inspection Frequencies* -The Imperial Irrigation District performs power line inspections with frequencies as identified in California Public Utilities Commission General Order 165, Appendix A, III, Definitions. The inspection frequency depends on the equipment type, and mounting. For example, inspection frequencies depend on, equipment mounting such as overhead, surface, or underground mounting, location such as urban or rural location, and type of equipment.

9.5.8. *Minimum Patrol Inspection Frequencies* -All Urban equipment require patrol inspections annually. All Rural overhead equipment, located in Extreme and Very High Fire Threat Zones require patrol inspections annually. All Rural equipment require patrol inspections every (2) years

9.5.9. *Minimum Detailed Inspection Frequencies* - All Urban Underground equipment require detailed inspections every (3) years. All Urban Overhead and Surface Mount equipment require Detailed inspections every (5) years. All Urban Underground equipment require Detailed Inspections every (3) years All Urban Overhead and Surface Mount equipment require Detailed Inspections every (5) years

9.5.10. *Minimum Intrusive Inspection Frequencies* - All Urban and Rural wood poles over 15 years in service without and previous intrusive inspection require an Intrusive inspection within 10 years. All Urban wood poles require an Intrusive inspection within the first 25 years of service. All Urban and Rural

wood poles that have passed an intrusive inspection require an intrusive inspection every 20 years after the first Intrusive inspection.

9.5.11. *CPUC G.O. 165 Distribution System Minimum Inspection Frequency*

Distribution Inspection Cycles (Maximum Intervals in Years)

	Patrol		Detailed		Intrusive	
	Urban	Rural	Urban	Rural	Urban	Rural
Transformers						
Overhead	1	2[1]	5	5	---	---
Underground	1	2	3	3	---	---
Padmounted	1	2	5	5	---	---
Switching/Protective Devices						
Overhead	1	2[1]	5	5	---	---
Underground	1	2	3	3	---	---
Padmounted	1	2	5	5	---	---
Regulators/Capacitors						
Overhead	1	2[1]	5	5	---	---
Underground	1	2	3	3	---	---
Padmounted	1	2	5	5	---	---
Overhead Conductor and Cables	1	2[1]	5	5	---	---
Streetlighting	1	2	x	x	---	---
Wood Poles under 15 years	1	2	x	x	---	---
Wood Poles over 15 years which have not been subject to intrusive inspection	1	2	x	x	10	10
Wood poles which passed intrusive inspection	---	---	---	---	20	20

(1) Patrol inspections in rural areas shall be increased to once per year in Extreme and Very High Fire Threat Zones in the following counties Imperial, Los Angeles, Orange, Riverside, Santa Barbara, San Bernardino, San Diego, and Ventura. Extreme and Very High Fire Threat Zones are designated on the Fire and Resource Assessment Program (FRAP) Map prepared by the California Department of Forestry and Fire Protection or the modified FRAP Map prepared by San Diego Gas & Electric Company (SDG&E) and adopted by Decision 12-01-032 in Phase 2 of Rulemaking 08-11-005. The fire-threat map is to be used to establish approximate boundaries and Utilities should use their own expertise and judgment to determine if local conditions require them to adjust the boundaries of the map.

Note: This General Order does not apply to cathodic protection systems associated with natural gas facilities.

Note: For the purpose of implementing the patrol and detailed inspection intervals in Table 1 above, the term "year" is defined as 12 consecutive calendar months starting the first full calendar month after an inspection is performed, plus or minus two full calendar months, not to exceed the end of the calendar year in which the next inspection is due.

9.6. Power Line Corridor Clearance Regulation

9.6.1. In 2019, the Imperial Irrigation District enacted the Power Line Corridor Clearance Regulation 23, and a corresponding standard work procedure, to manage power line clearance incidents. The regulation provides the Imperial Irrigation District the authority to clear power line encroachments within or adjacent to District transmission and distribution infrastructure that may threaten the reliability of the power system and pose a safety threat to persons and property. Such encroachments can take the form of vegetation, structures, haystacks, equipment, or even persons performing tasks in close proximity to Imperial Irrigation District facilities.

9.6.2. The regulation addresses, line to ground clearances within the District's rights-of-way; safety clearances for personnel working in proximity to the lines; potential hazards that could fall onto overhead lines; prohibits fires under or adjacent to power lines and other power infrastructure; and provides the Imperial Irrigation District an enforcement mechanism.

9.7. Emergency Events

9.7.1. The Imperial Irrigation District Emergency Management Unit has procedures in place to address emergencies.

9.7.2. Imperial Irrigation District Public Information Office provides an internal communications function that notifies employees and the public of events as required. Email alerts are issued to employees as required for heat advisories, energy conservation Flex Alerts, major road closures, cell telephone service outages, flash flood warnings, Red Flag Warnings, and other major weather events.

9.7.3. Imperial Irrigation District, Energy Department, System Operations Center maintains electric system situational awareness using the operations center SCADA system which includes synchro-phasor phase angle measurement units used to detect abnormal operation of the electric system. Abnormal electric system operation may load equipment to higher than normal levels.

9.8. Service Restoration After Major Events

9.8.1. Imperial Irrigation District System Operations Center restores service after major events following the latest version of the Imperial Irrigation District *System Restoration and Black-Start Plan*. This plan was developed using

the Reliability Coordinator guideline document, *General Guidelines for Transmission Operators to Use in System Restoration.*

9.9. Standardized Emergency Management System - As a local governmental agency, Imperial Irrigation District has planning, communication, and coordination obligations pursuant to the California Office of Emergency Services' Standardized Emergency Management System ("SEMS"). Applicable standard operating procedures specify roles, responsibilities, and communication for field response, local government, operational area, regional, and state.

9.9.1. Major Incident Management Imperial County

9.9.1.1. The Imperial Irrigation District, Human Resources Department, Office of Emergency Planning provides emergency and disaster preparedness services for all district departments. Those services include emergency and disaster preparedness, mitigation and recovery through Emergency Operation Plan development, training, exercises, and mutual aid implementation.

9.9.1.2. The Imperial Irrigation District, Office of Emergency Planning coordinates major event response with the Imperial County Office of Emergency Services (OES) which provides emergency management services for the County/Operational Area including its seven cities/towns and special districts. Imperial County Office of Emergency Services coordinates emergency operations activities among all the various local jurisdictions and develops written guidelines for emergency preparedness, response, recovery, and mitigation to natural / man-made disasters, and technological disasters.

9.9.1.3. The Imperial County Office of Emergency Services establishes the Imperial County / Operational Area Emergency Operations Center (EOC) when directed by County emergency management authority.

9.9.2. Major Incident Management Riverside County

9.9.2.1. The Imperial Irrigation District, Human Resources Department, Office of Emergency Planning also provides similar coordinating

activities with Riverside County Emergency Management Department.

9.10. Utility Mutual Aide Agreements

9.10.1. Imperial Irrigation District has mutual aid agreements in place with several neighboring utilities. These agreements provide a mechanism to request assistance from member utilities in case of an emergency.

9.10.2. One agreement is the *Mutual Assistance Agreement, Electric and Gas, Members of the California Utilities Emergency Association* that agreement includes several neighboring utilities: San Diego Gas and Electric, Southern California Edison, and Western Area Power Administration.

9.10.3. An additional similar agreement is in place with Arizona Public Service.

9.11. Power Lineman Training Program

9.11.1. Imperial Irrigation District has developed a comprehensive Power Lineman apprenticeship program in partnership with the local community college. This program is an apprenticeship program administered by the Apprenticeships Program, Economic, and Workforce Development Division, of Imperial Valley College.

9.11.2. Aspiring Power Linemen are required to complete two levels of coursework. The first level is required of all electrical apprenticeships and a second level is specific for the power linemen apprenticeship. In addition, students are required to complete 7,200 hours of on-the-job training at Imperial Irrigation District.

9.11.3. After successfully completing the program, students receive; an Imperial Valley College Certificate of Completion, a State of California Journeyman Electrician Certificate of Completion, and a State of California Journeyman Electrician Card.

9.11.4. The first level of course work imparts basic electrical and electrical theory. The first level includes classroom lecture hours and is composed of the following classes:

9.11.4.1. Electrical Trades I 72 lecture hours

Basic electricity and electronics mathematical functions, computations, principles of electricity, AC/DC, electro-magnetism, symbols, schematic diagrams, safety skills,

impedance, current, resistance, amperage, voltage, and circuitry

9.11.4.2. Electrical Trades II 72 lecture hours

Overview of transmission and distribution systems, various utility industry components, high voltage AC power, electrical diagrams, workplace safety, rope rigging and hand signals, substations, switchyards, three phase systems, delta wye configurations, electrical diagrams, safety rules, CAL-OSHA

9.11.4.3. Electrical Trades III 72 lecture hours

Introduction to framing, setting, guys, installation of conductors and grounds, laying out of underground line systems, assembly and installation of cross arms, pins and insulators, conductor splicing, sagging and tying, manhole and vault construction, residential underground installations

9.11.4.4. Electrical Trades IV 72 lecture hours

9.11.4.5. Introduction to maintenance of distribution and underground systems, safety procedures, hazardous materials, operation and maintenance of bucket truck, connecting pole top transformers, trouble shooting and replacement of equipment, transformers, cutouts, switches, capacitors, voltage regulators; troubleshooting and locating faults

9.11.5. The second level of course work imparts the knowledge necessary to perform power lineman activities successfully. The program includes classroom lecture hours and is composed of the following classes:

9.11.5.1. Power Lineman V 72 lecture hours

AC theory, distribution line maintenance, transmission structures, transmission line installation, climbing steel poles, de-energizing lines, rigging, high voltage, gloves, hot sticks

9.11.5.2. Power Lineman VI 72 lecture hours

Basic principles, construction, operation, maintenance procedures associated with substations and switchyards, inspect and test transformers, circuit breakers, and relays

9.11.5.3. Power Lineman VII 72 lecture hours

Theory and procedures for commercial and residential connections, watthour installations, series and multiple circuit street lighting systems, resolve outages, watt hour meter installation, complete residential commercial installation, analyze, troubleshoot and repair lighting and power loss

9.11.5.4. Power Lineman VIII 72 lecture hours

Advanced theory on the use of hot sticks, energized, de-energized repair and maintenance of poles and lines, safety practices, local and state requirements, lineman mathematics, overhead construction, line construction, general orders and electrical codes

9.12. Redesign of Vegetation Management Website

9.12.1. Imperial Irrigation District has redesigned the Vegetation Management site to make it easier for the public to find Vegetation Management information report issues and request for vegetation management service.

9.13. Monitor and Audit the Effectiveness of Power Equipment Inspections

9.13.1. IID performs monthly substation inspections. SAP automatically generates work orders monthly and inspections are recorded in GIS.

9.13.2. Inspections are specific to equipment type and the basis of the inspection is the manufacturer's recommendation.

9.13.3. Substation inspectors generate SAP notifications for any abnormal condition. These notifications are converted to work orders, and assigned to maintenance staff. Once abnormal conditions are corrected, the Work Order is closed. On a regular basis, work orders are reviewed for completeness as a quality control measure.

10. Planned Efforts with Elements Expected to Reduce Fire Risk

The following is a list of Imperial Irrigation District planned efforts, with elements expected to reduce fire ignition risk by Imperial Irrigation District power infrastructure.

10.1. No New Power Lines in High or Extreme Fire Threat Areas

10.1.1. Imperial Irrigation District expects to work with city and county planning departments to prevent land use changes in high fire threat areas where changes require building power infrastructure in CAL FIRE designated High or Extreme Fire hazard areas.

10.1.2. Expect to begin activity on an as needed basis starting in 2020.

10.2. Relay Modernization Program

10.2.1. Imperial Irrigation District budgets annually for relay modernization. These monies are subject to change annually depending on Imperial Irrigation District Board of Directors approval.

10.2.2. Imperial Irrigation District plans to replace existing electromechanical and solid-state relays with Microprocessor relays.

10.2.3. Currently Imperial Irrigation District has an installed base of 3967 relays. Of this total, 47% are Electromechanical, 14% are solid-state, and 39% are microprocessor relays.

10.2.4. For the Relay Modernization Program, Imperial Irrigation District has standardized on Schweitzer Engineering Laboratories (SEL) relays. SEL products offer modern, fast acting, communication assisted, microprocessor relays, with traveling wave technology, that quickly detect and act upon power line disturbances.

10.2.5. Expect to complete program in the early 2030's.

10.3. New Vegetation Management Program

10.3.1. The new Vegetation Management Program contains new training requirements for the Imperial Irrigation District Energy Line Clearance Section staff, and the vegetation management contractor.

10.3.2. The new Vegetation Management Program requires periodic IID staff training including safety, clearance distances, regulatory requirements, pruning best practices, customer service, herbicide application regulations, sensitive area access procedures, Emergency Management operations, and review of the Vegetation Management Program.

10.3.3. The new program requires the Vegetation Management Contractor to train Contractor personnel on pruning best practices, safety regulations, and Imperial Irrigation District operational and safety procedures. In addition, Contractor personnel require certification in tree pruning best practices personnel shall complete Imperial Irrigation District Competent Person Awareness Training (CPAT) to access substation sites.

10.3.4. Expect to begin program activities in 2020.

10.4. Community Outreach and Public Awareness

10.4.1. The new Vegetation Management Program identifies outreach activities targeting the general public, public agencies, commercial developers, housing developers, local tree trimming Contractors and landscape Contractors.

10.4.2. Communication includes safety information, information regarding Vegetation Management Danger Zones, recommended trees for the Wire Zone and Border Zone, program information, process information, self-help resources, and program contact information.

10.4.3. Communications are made through: Customer billing inserts, Imperial Irrigation District Website, Outreach Events, and Internal IID Information Events

10.4.4. The program also contains a community outreach component where Imperial Irrigation District personnel hold annual events for land developers, local government, and the public, providing information regarding power line clearance requirements, ground mounted equipment clearance requirements, best practices for planning trees adjacent to power line corridors.

10.4.5. Expect to begin program activities in 2020.

10.5. Vegetation Management Internal Imperial Irrigation District Training

10.5.1. The new Vegetation Management Program identifies at least one internal outreach/training session per year for internal Imperial Irrigation District Employees for the La Quinta and Imperial Areas.

10.5.2. Communication includes safety information, information regarding Vegetation Management Danger Zones, recommended trees for the Wire Zone and Border Zone, program information, process information, self-help resources, and program contact information.

10.5.3. Expect to begin program activities in 2020.

10.6. Disabling Re-Closer Procedure

10.6.1. Due to the low wild fire threat in the Imperial Irrigation District Service territory, Imperial Irrigation District does not disable re-closers due to anticipated Wild Fires. Imperial Irrigation District does not have a formal procedure identified for disabling re-closers. Imperial Irrigation District will continue to assess the Wild Fire threat and will develop a procedure as needed.

10.7. Public Safety Power Shutoff

Imperial Irrigation District recognizes that there may be rare occasions when a Wild Fire puts our infrastructure and our customers' safety at risk. During such events, selective de-energization of power lines may be necessary to preserve public safety, or to protect the stability and reliability of the power system. A **Public Safety Power Shutoff** may be necessary.

The following is an overview of the actions Imperial Irrigation District expects to follow in case of such event. Imperial Irrigation District expects to develop and approve a Public Safety Power Shutoff standard operation procedure by Q3 2020.

Imperial Irrigation District works ahead of any such incident, to construct a foundation, to manage incidents when these occur.

Imperial Irrigation District encourages customers to provide contact information in case Imperial Irrigation District needs to notify customers prior to, or during, a Public Safety Power Shutoff event.

Imperial Irrigation District is committed to provide advance notice to affected public safety, public agencies, first responders, and customers, so they can implement their emergency operational plans.

Imperial Irrigation District will perform best efforts to notify customers such as hospitals, emergency centers, fire departments, schools, telecommunications providers, life-support customers, and residential customers before and during an event.

Imperial Irrigation District will perform best efforts to notify affected life-support customers prior to and during a Public Safety Power Shutoff events. If general notifications (e.g., IVR and email) are unsuccessful, Imperial Irrigation District Customer Service personnel will call directly and, if necessary, deploy personnel for an in-person notification.

Imperial Irrigation District will manage Wild Fire Incidents, by escalating the response as the Wild Fire incident is identified, and becomes imminent. The watch, response, mobilization escalation steps are as follows:

1) Monitors National Weather Service Information
2) Red Flag Alert Is Received
3) IID Infrastructure in Red Flag Alert Area is Identified
4) Wild Fire Watch Is Declared
5) Wild Fire Warning Is Declared
6) Active Wild Fire Is Present
7) Wild Fire Is Contained

10.7.1. The following is a preliminary overview of the escalation steps for the planed Standard Operating Procedure.

10.7.2. Monitoring a for National Weather Service Wildfire Alerts

Situation	Procedures and Notifications
Monitoring	Imperial Irrigation District Emergency Management Unit monitors National Weather Service information and Red Flag Alerts to identify alerts that may affect Imperial Irrigation District infrastructure.
Red Flag Alert Received	National Weather Service Red Flag Alert is received for the Imperial Irrigation District Service Territory Imperial Irrigation District Emergency Management Unit assesses the Wild Fire risk to Imperial Irrigation District infrastructure and customers by evaluating the following factors: a) Location of any existing fires b) Current and potential wind speed c) Humidity levels d) Condition of dry fuel on the ground and live vegetation e) Observations from the field f) Expected conditions and Wild Fire Event duration
IID Infrastructure Present in Red Flag Alert Area	Emergency Management staff identifies Imperial Irrigation District Infrastructure in the National Weather Service Red Flag Alert area.

Situation	Procedures and Notifications
	Emergency Management staff notifies Energy Department Power Line Construction and Maintenance personnel and additional Emergency Management personnel to assess the situation. Actively monitor conditions in “at risk” locations. Notify Customer Service team providing general location, possible severity, time frame If a widespread event is expected, escalate response; perform actions in a timely manner to allow enough time to mobilize resources. Emergency Management in coordination with Power Line Construction and Maintenance continue to assess the situation. Declare IID Wild Fire Watch as required
IID Wild Fire Watch Declared	Perform **Red Flag Warning Patrols** of at risk locations, dispatch other personnel as required Emergency Management Unit notifies Imperial Irrigation District units, event location, severity, time frame, affected infrastructure • System Operations Center, • Line Construction and Maintenance, • Customer Call Center Operations, • Public Information Unit,

Situation	Procedures and Notifications
	• Substation Construction and maintenance • IID Leadership Team • Others a required Begin to evaluate options actions to protect infrastructure Public Information Unit and Customer Call Center prepare for customer and public communications Begin identifying scope and requirements of Public Safety Power Shutoff
IID Wild Fire Watch In Effect **72 hours before** wild fire event, mobilization begins	Continue **Red Flag Warning Patrols** of at risk locations, dispatch other personnel as required System Operations reviews scheduled outages and other activities for possible deferral Emergency Management Unit continues to mobilize and assess situation. For large events, consider Command Center mobilization Emergency Management Unit updates IID Leadership Team of possible IID Wildfire Event, event location, severity, time frame, affected infrastructure Consider early customer notification for anticipated large events and for events near holidays, particularly for customers such as schools, senior care centers, hospitals and other such customers needing additional advance notice

Situation	Procedures and Notifications
IID Wild Fire Watch in Effect **48 hours before** wild fire event	Identify SWPs and policy for de-energizing power lines and providing notifications under wildfire situations Identify any circuits that may be targeted for de-energization Identify and perform best efforts to notify customers served by circuits at risk Notify local emergency response agencies and other government agencies. Begin coordination activities Determine tactics to minimize the impacts of de-energizing power lines for first responders, health infrastructure, communication infrastructure, life support customers and key customers Perform best efforts to notify critical facilities and customers such as life-support customers, hospitals, emergency centers, fire departments, schools, and telecommunications providers Consider early customer notification for anticipated large events and for events near holidays, particularly for customers such as schools, senior care centers, hospitals and other such customers needing additional advance notice Perform situation assessment and declare **IID Wild Fire Warning** as required
IID Wild Fire Warning in Effect	Proceed with preparation and public notifications

Situation	Procedures and Notifications
24 hours before wild fire event	Emergency Management identifies power infrastructure in potential path of wildfire SOC determines specific circuits for potential de-energization Update local government and other agencies Stand up IID Emergency Command Center unit as necessary Perform best efforts to notify critical facilities and customers such as life-support customers, hospitals, emergency centers, fire departments, schools, telecommunications providers, key customers Post notifications on website and social media to warn of Wild Fire Warning and potential for power shutoff Send potential de-energization notifications via Interactive Voice Response (IVR) as appropriate Issue updated press release to local media Implement tactics to minimize the impacts of de-energizing power lines for first responders, health infrastructure, communication infrastructure, life support customers and key customers
Active Fire Is Present	Emergency Management, in coordination with Power Line Construction and Maintenance, communicates event location-specific information to SOC.

Situation	Procedures and Notifications
	De-energize specific circuit(s) at risk as necessary to protect the public safety, employee safety, and the stability and reliability of the power system. During a de-energization event, Imperial Irrigation District will update notifications on website and social media regarding pending and existing de-energizations Continue to coordinate with local government and agencies

10.7.2.1. Should a Wild Fire event within the IID territory have the potential for expanding outside of the territory (or already has spread outside the territory), or vice-versa, it's important that the bordering electric utilities communicate effectively about fire risks.

10.7.2.1.1. Imperial Irrigation District System Operations Center communicates with other utilities and WECC as required.

10.7.2.1.2. Imperial Irrigation District Emergency Operations Unit communicates with first responders, mutual aid, and other agencies as required

10.7.3. Re-energizing Infrastructure

10.7.3.1. IID will only restore power following a de-energization event after confirming that it is safe to do so. IID System Operations Center will direct the specific restoration priorities keeping safety (public and worker) as the top priority.

Situation	Procedures and Notifications
Wild Fire Contained Event Over	Wild Fire is sufficiently contained to allow Imperial Irrigation District Personnel to begin power restoration operations. IID assigns a task force consisting of Trouble Shooters, crews, inspectors and electrical engineers if appropriate to each circuit or portions of a circuit involved in de-energization. Crews will patrol facilities de-energized to identify any damage Crews will complete required repairs before restoring power. Imperial Irrigation District will coordinate with owners of home PV systems and co-generation systems to ensure timely and safe re-energization. Continue to coordinate with local government and agencies Once power is restored, send IVR notice to affected customers notifying that power is restored. Customer should contact Imperial Irrigation District if power still out Receive and act upon customer calls regarding power still out For major widespread events, update notifications via website, social media and issue updated press release to local media.

10.7.3.2. In directing restoration efforts to achieve the above priorities, Systems Operations Center will generally restore the following types of facilities in this order:

1) Transmission tie points

2) Generation

3) Sub-transmission circuits

4) Substations

5) Distribution circuits

6) Feeders

7) Distribution transformers

8) Service lines

10.7.3.3. In most cases, based on best available information regarding the situation and available restoration resources, staff will be dispatched to restore distribution systems to achieve the following priorities:

1) Public safety in the affected areas;

2) Worker safety in performing the restoration work;

3) Power for Life-Support customers;

4) Critical infrastructure: law enforcement, hospitals, fire department, key city & county facilities, other utility facilities (e.g., water, sewage, gas, communications), airport, traffic control, incident commander site, incident base camp, incident evacuation centers, radio stations, etc.;

5) Major commercial activities critical to continuity of community services, e.g. gas stations, food stores, supply stores, repair shops, eateries and lodging

facilities to support outside first responders (e.g., CAL FIRE), financial institutions, etc.;

6) Reduce the number of customers affected; and

7) Reduce the length of time customers have been without power

10.7.4. **Power Line Curtailments and Power Line De-energization Affecting Co-Generation Facilities**

10.7.4.1. The District when deemed necessary and appropriate in order to protect the health and safety of the community or reliability of the energy system, will enact power line curtailments and de-energize power lines. Applicable safety and regulatory compliance procedures and coordination are followed.

10.7.5. Expect to complete PSPS standard operating procedure Q2 2020

10.8. Monitor and Audit the Effectiveness of Power Line Inspections

10.8.1. Imperial Irrigation District currently has several technology initiatives to facilitate the capture of field inspection information for pole inspections and for vegetation management inspections. Work also includes integration with the Imperial Irrigation District Geographic Information System and the ERP system of record.

10.8.2. Imperial Irrigation District currently uses the existing ERP system to schedule pole inspections at a circuit level, following industry best practices such as CPUC General Order 165.

10.8.3. To standardize pole inspection assessments, Imperial Irrigation District is developing a pole inspection guide for use by power line inspectors.

10.8.4. Expect to complete the Power Line Inspection Guide in Q1 2020.

10.9. Addressing SB 901 Section 43 Biomass Power Purchase Requirement

10.9.1. SB 901 Section 43 requires utilities with existing biomass procurement contracts that meet certain criteria, to amend or establish a new contract. Statute requires that the generating facility of the existing contract be operative at any time in 2018 with a contract expiration date on or before December 2023.

10.9.2. Pursuant to Section 43, these requirements do not apply to facilities located in federal severe or extreme nonattainment areas for particulate matter or ozone.

10.9.3. The figure below shows that the majority of the Imperial Irrigation District Service Territory is in the federally classified nonattainment areas of Imperial County and the Coachella Valley in Riverside County. Therefore, Imperial Irrigation District is exempt from Section 43 biomass generation procurement requirements.

Reference: *EPA Ozone Designations 2015 Standards, California State Recommendations and EPA Response, California State Recommendation, California Air Resources Board Air Quality Planning and Science Division, Air Quality Analysis Section, Recommended Area Designations for the 0.070 PPM Federal 8-Hour Ozone Standard*

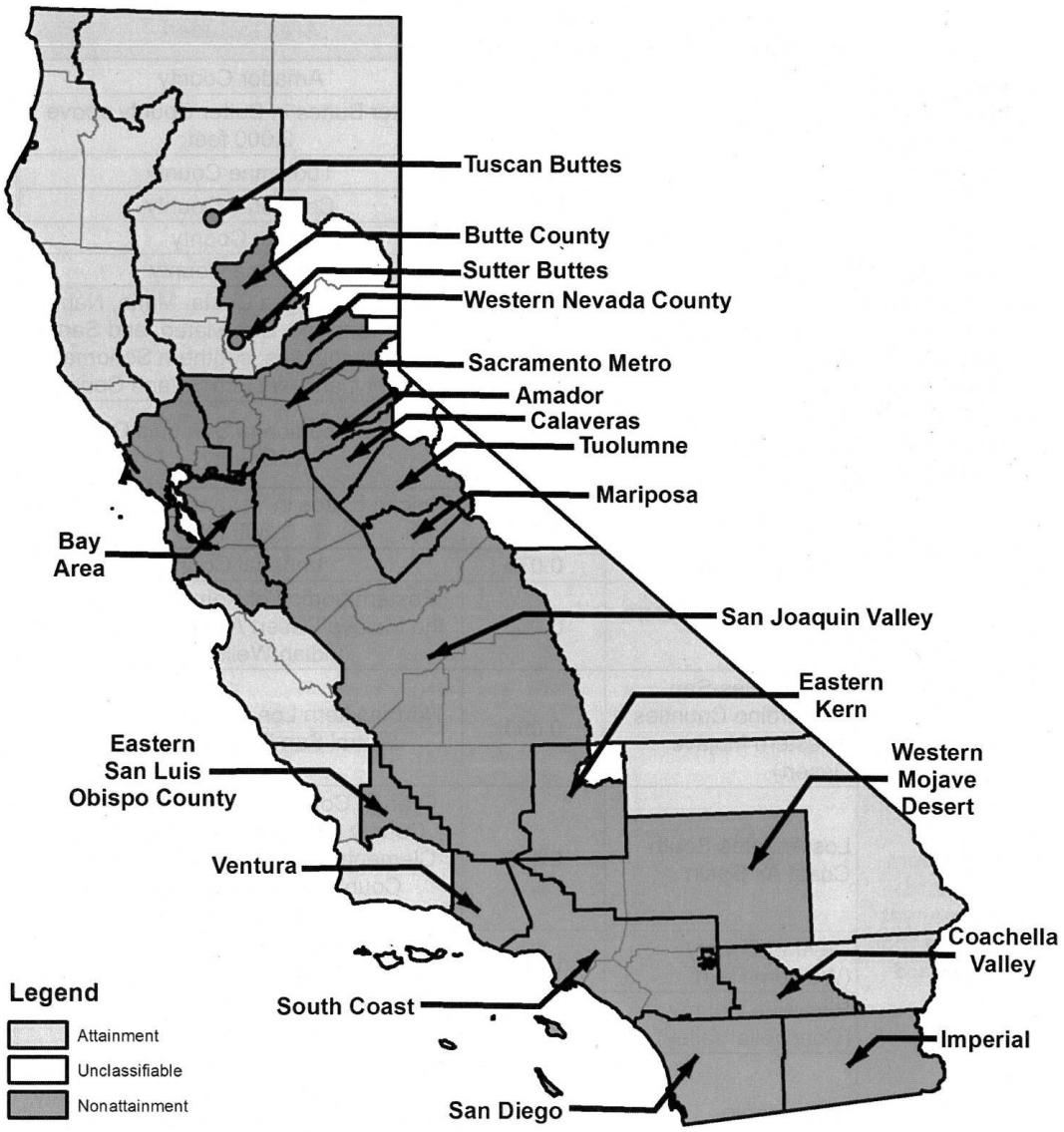
https://www.epa.gov/sites/production/files/2016-11/documents/ca-rec-enclosures.pdf

10.9.4. Notwithstanding section 10.9.3, IID is participating in procurement activities with other member agencies through the Southern California Public Power

Authority with regard to requirements established by Public Utilities Code §8388.

Figure 1

Recommended Area Designations for the 0.070 ppm Federal 8-Hour Ozone Standard



10.10. Distribution Power Line Bird Deterrents

10.10.1. Distribution Engineering expects to begin investigating additional bird deterrent options to address power line outages due to bird strikes.

10.10.2. At this time, bird deterrents are installed on an as needed basis.

10.10.3. Expect to identify options by 2021.

11. Managing the Plan

11.1. Plan Submissions

11.1.1. The Imperial Irrigation District, Energy Department, Power Line Construction and Maintenance Assistant Energy Manager, will submit a comprehensive plan to the Imperial Irrigation District Board of Directors and the California Wildfire Safety Advisory Board every three years with an annual Plan performance update.

11.2. Qualified Independent Evaluator Plan Review

11.2.1. Public Utilities Code section 8387(c) requires Imperial Irrigation District to contract with a qualified independent evaluator with experience in assessing the safe operation of electrical infrastructure to review and assess the comprehensiveness of this Wildfire Mitigation Plan.

11.2.2. The qualified independent evaluator performs several activities in support of this effort.

11.2.3. First, the independent evaluator performs an Imperial Irrigation District Service Territory Fire Hazard Survey. The Service Territory survey is performed annually.

11.2.4. Second, the independent evaluator reviews the draft Imperial Irrigation District Wild Fire Mitigation plan to assess the comprehensiveness of the plan and to assure the plan meets California SB 901, AB 1054, and AB 111 requirements.

11.2.5. Third, the independent evaluator performs a metrics performance review making recommendations to achieve metric improvements. (2021)

11.2.6. Fourth, the independent evaluator performs a review and assessment of the Imperial Irrigation District plan progress. (2021)

11.2.7. Finally, the independent evaluator will review the Imperial Irrigation District Wild Fire Mitigation Plan, to assure there are no conflicts, and there is alignment with other regulatory requirements such as, FAC-003, California PRC 4292, California PRC 4293, and other Wild Fire regulations.

11.3. Imperial Irrigation District Management Plan Submission

11.3.1. The evaluation results, including improvement suggestions, and deficiencies, are presented to the Assistant Energy Manager, Power Line Construction, and Maintenance.

11.3.2. The Assistant Energy Manager, Power Line Construction, and Maintenance, manages implementation of plan improvements and correction of deficiencies, as required.

11.3.3. Once the draft Wild Fire Mitigation Plan improvements and corrections are complete, the plan is submitted for final independent review and assessment.

11.3.4. Once the final assessment is complete, the Wild Fire Mitigation Plan, Independent Evaluator Assessment Report, and Service Territory Survey Report, are posted on the Imperial Irrigation District web site for public review and comment, presented to the Energy Consumers Advisory Committee (ECAC), and presented to the Imperial Irrigation District Board of Directors for approval.

11.4. IID Wild Fire Mitigation Approval Package

11.4.1. The Imperial Irrigation District Wild Fire Mitigation package contains several documents.

11.4.1.1. *Imperial Irrigation District SB 901 Wild Fire Mitigation Plan*

11.4.1.2. *Imperial Irrigation District Service Territory Fire Hazard Survey Report*

11.4.1.3. *Qualified Evaluator Wild Fire Plan Assessment Report*

11.4.1.4. *Performance Metrics Assessment Report, (starting in 2021)*

11.4.1.5. *Planned Efforts Progress Report, (starting in 2021)*

11.4.1.6. *Regulatory Requirements Alignment Assessment Report*

11.5. Comprehensive Wild Fire Mitigation Plan Public Comments

The plan approval process at Imperial Irrigation District provides several public comment opportunities.

11.5.1. First, the draft of the Imperial Irrigation District SB 901 Wild Fire Mitigation Plan is posted on the Imperial Irrigation District public website for a period of at least thirty days (30). The Imperial Irrigation District public website features a comment area where the public can provide written comments during the public comment period.

11.5.2. During and immediately after this period Imperial Irrigation District will seek comments from public agencies located in the Imperial Irrigation District Service Territory such as city and county fire departments.

11.5.3. Second, each new comprehensive Imperial Irrigation District SB 901 Wild Fire Mitigation Plan is presented at a public meeting of Imperial Irrigation District Energy Consumers Advisory Committee (ECAC) for comments, and recommendation for approval, to the Imperial Irrigation District Board of Directors. Public comments are also accepted during the ECAC meeting.

11.5.4. Third, the Imperial Irrigation District SB 901 Wild Fire Mitigation plan is submitted at a public meeting to the Imperial Irrigation District Board of Directors as an information item. Public comments are accepted during the Imperial Irrigation District Board meeting.

11.5.5. Lastly, the Imperial Irrigation District SB 901 Wild Fire Mitigation plan is submitted at a public meeting as an action item for approval. Usually, there is an additional and final opportunity for public comment before Plan approval.

11.6. Wild Fire Plan Performance Monitoring

11.6.1. *Planned Efforts* - Each calendar quarter the Assistant Energy Manager, Power Line Construction and Maintenance, reviews business area reports, to identify schedule and deliverable performance.

11.6.2. *Plan Performance* - The first quarter of each year, the Assistant Energy Manager, Power Line Construction and Maintenance will conduct a review of the program performance metrics, to identify deviations from desired results.

11.7. Continuous Improvement

11.7.1. *Annual Plan Review and Update* – The Assistant Energy Manager, Power Line Construction and Maintenance will perform a comprehensive review of plan performance annually as follows;

11.7.2. Review IID Wild Fire Mitigation Plan performance metrics

11.7.3. Review IID Wild Fire Mitigation Plan, Planned Efforts Progress Reports

11.7.4. Review Changes in state and federal regulatory requirements, state and federal

11.7.5. Identify plan changes and improvement opportunities

11.7.6. Work with the responsible business areas to develop an action plan

11.7.7. Develop the responsible business area quarterly progress reporting requirements

11.7.8. Adjust IID SB 901 Wild Fire Mitigation Plan.

11.7.9. Conduct public agency and public comment sessions

11.7.10. Submit to the Imperial Irrigation District governing Board for approval.

11.8. Performance Metrics

Fire Mitigation Plan Performance Metrics – The Imperial Irrigation District SB 901 Wild Fire Mitigation Program identifies several performance metrics. The metrics include the following:

11.8.1. **Number of Fire Ignitions** – The metric is the total number of fire ignitions caused by Imperial Irrigation District power infrastructure

located in the Imperial Irrigation District Service Territory for the calendar year.

11.8.1.1. *Assumptions*: Fire ignitions have several causes, such as lightning strikes, campfires, cigarettes, arson, vehicle accidents, and power infrastructure failures. Imperial Irrigation District will track the number of preventable and non-preventable fire ignitions caused by Imperial Irrigation District Power Infrastructure. Imperial Irrigation District will record ignitions caused by other sources but these are not included in the metric total.

11.8.1.2. *Indicator Type*: This is a lagging indicator of fire ignitions caused by Imperial Irrigation District power infrastructure.

11.8.1.3. *Metric Goal*: The goal is zero (0) incidents. An increasing rate or a number greater than zero is a trigger to determine the root cause of ignitions, and possible development of engineering, equipment, and operational adjustments.

11.8.2. **Number of Lines Down Incidents** – The metric is the total number of line down, incidents reported for the calendar year.

11.8.2.1. *Assumptions*: Lines down are a potential cause for fire ignitions. Each lines down incident do not result in a fire ignition.

11.8.2.2. *Indicator Type*: This is a leading indicator of fire ignitions caused by Imperial Irrigation District power infrastructure.

11.8.2.3. *Metric Goal:* The intermediate goal is a declining rate with a final goal of zero (0). An increasing rate is a trigger to determine the root cause of incidents, and possible development of engineering, equipment, and operational adjustments.

11.8.3. **Number of Imminent Threat Violations** – The metric is the total number of Imminent Threat Violations reported for the calendar year. An Imminent Threat Violation is where an energized conductor clearance distance violation, occurs. This is where equipment, crops, material, or people, breach the outer edge of the danger zone, and are closer than safety regulations permit.

11.8.3.1. *Assumptions*: Imminent Threat Violations are identified where vegetation or obstructions have entered into the danger zone space around energized equipment and power lines. The danger zone is to remain clear at all times. Some Imminent Threat Incidents may materialize into a fault resulting in a fire ignition.

11.8.3.2. *Indicator Type*: This is a leading indicator of fire ignitions caused by Imperial Irrigation District power infrastructure.

11.8.3.3. *Metric Goal*: The goal is zero (0) Imminent Threat Violations for the calendar year. An increasing rate or a number greater than zero is trigger to investigate and determine operations, public education, and outreach adjustments.

11.8.4. **Number of Encroachment Violations** – The metric is the total number of Encroachment Violations reported for the calendar year.

11.8.4.1. *Assumptions*: Encroachment Violations are identified where vegetation or obstructions have entered the power line corridor, where the obstruction causes a ground clearance violation, or has the possibility of impeding Imperial Irrigation District operations. Encroachment Violations include situations where equipment, structures, material, crops, haystacks are in or are adjacent to the power line corridor, or obstructions are located where they may impede Imperial Irrigation District Energy Department operations. Some Encroachment Violations may materialize into a fault, resulting in a fire ignition.

11.8.4.2. *Indicator Type*: This is a leading indicator of fire ignitions.

11.8.4.3. *Metric Goal*: The number of Encroachment Violations metric goal is zero. The goal is zero (0) Encroachment Violations. An increasing rate or a number greater than zero of Encroachment Violations is a trigger to investigate to determine the root cause, and to determine operations, public education, and outreach adjustments.

11.8.5. **Number of Power Infrastructure Developments in High Fire Threat Areas** – The metric is the number of new power infrastructure developments constructed during the calendar year, located in CAL FIRE Designated High Fire Threat or Extreme Fire Threat areas, in the Imperial Irrigation District Service Territory.

11.8.5.1. *Assumptions*: This does not include underground installations. One overhead power line located in a high fire threat area is counted as one incident. The expectation is that Imperial Irrigation District will actively work with City and County planning officials to prevent development requiring new power infrastructure in CAL FIRE designated High Fire Threat or Extreme Fire Threat areas.

11.8.5.2. *Indicator Type*: This is a leading indicator of fire ignitions caused by Imperial Irrigation District Power infrastructure.

11.8.5.3. *Metric goal*: Zero Power Infrastructure Developments in High Fire Threat Areas. An increasing rate or a number greater than zero is a trigger for a review of Imperial Irrigation District communications and coordination with city, and county planners.

12. Wild Fire Mitigation Plan Roles and Responsibilities

12.1. Assistant Energy Manager, Construction and Maintenance is responsible to implement, own, and manage the Imperial Irrigation District Wildfire Mitigation Plan. The Assistant Energy Manager is responsible to coordinate with federal, state, and local fire management personnel as necessary or appropriate to implement Imperial Irrigation District's Wildfire Mitigation Plan. Provide regular training on the plan for employees having obligations for implementation of this Wildfire Mitigation Plan. Take reasonable actions to reduce the fire risk caused by Imperial Irrigation District electric facilities.

12.2. Chief Electrical Engineer is responsible to identify construction standards and engineer transmission power lines and substations that comply with relevant federal, state, and industry standard requirements, including the industry standards established by the California Public Utilities Commission. The Chief Electrical Engineer shall design new transmission power lines, and substations, consistent

with the objective to reduce the fire risk caused by Imperial Irrigation District electric facilities.

12.3. Deputy Energy Manager is responsible to assure compliance to the SB 901 biomass generation requirements.

12.4. Distribution Engineering Manager is responsible to identify construction standards, engineer distribution power lines that comply with relevant federal, state, and industry best practices. The Distribution Engineering Manager shall design new distribution power lines and other distribution infrastructure consistent with the objective to reduce the fire risk caused by Imperial Irrigation District electric facilities. The Distribution Energy Manager will work with county and city planners to avoid building new power infrastructure in CAL FIRE High or Extreme fire hazard areas.

12.5. Energy Compliance Administrator is responsible to assure this plan is consistent with and does not conflict with Federal regulatory requirements. The Energy Compliance Administrator is responsible this plan complies with SB 901 and SB 1054 regulatory requirements.

12.6. Manager of System Operations is responsible to maintain operational procedures in support of the Imperial Irrigation District wild fire mitigation plan. The Manager of System Operations is responsible to operate the electric system in a manner that will minimize potential fire risks by taking reasonable actions to minimize the risk of a fire is caused by Imperial Irrigation District electric facilities.

12.7. Power Line Construction and Maintenance Scheduler is responsible to take corrective actions when the staff witnesses or is notified of fire ignitions under or adjacent to Imperial Irrigation District owned power lines. The Power Line Construction and Maintenance Scheduler is responsible to process power line inspection findings to address potential power infrastructure fire ignition sources and construction non-conformance infractions.

12.8. Public Information Officer, **General Managers Office** is responsible for communication efforts for the Imperial Irrigation District Wild Fire Mitigation plan, in particular for identified risk areas where public information efforts are included in the mitigation effort.

12.9. Superintendent Energy Construction and Maintenance is responsible to manage the Imperial Irrigation District Power Line Inspection Program. Immediately report fires following existing Imperial Irrigation District standard operating procedures and practices. Inspect power lines and report all infractions.

12.10. Supervisor Emergency Management, Human Resources Department is responsible to identify and quantify Wild Fire Mitigation Plan risks as required on SB 901.

12.11. Supervisor of Geographical Information System Administration IT Department is responsible to maintain current the California High Fire Hazard Severity Map information on the Imperial Irrigation District geographic information system. The Supervisor of Geographical Information System Administration is responsible to maintain new High Fire Threat area information identified by Imperial Irrigation District, on the Imperial Irrigation District geographic information system.

12.12. Transmission Engineering Manager is responsible to work with city and county planners to avoid building new power infrastructure in CAL FIRE designated High or Extreme Fire Threat Areas.

12.13. Vegetation Management Supervisor is responsible to manage the Imperial Irrigation District Distribution Vegetation Management Program and the Transmission System Vegetation Management Standard Work Procedure. The Vegetation Management Supervisor is responsible to manage power corridor vegetation, to prevent fire ignitions caused by vegetation encroaching into the danger zone, violating clearance distance requirements.

13. Approval

Asst. Mgr. Energy	Signature	Date
Dept. Manager	Signature	Date
Gen. Mgr. /Asst. Gen. Mgr.	Signature	Date

14. Revision History

Date Revised	Ver. Section Number	Section / Item Numbers Changed	Approved By

Appendix 1

SB 901 Wild Fire Mitigation Plan Requirements Compared to Imperial Irrigation District SB 901 Wild Fire Mitigation Plan

The purpose of the enclosed tables is to compare Public Owned Utility and Investor Owned Utility, SB 901 Wild Fire Mitigation Plan Requirements to the Imperial Irrigation District SB 901 Wild Fire Mitigation Plan

SB 901 Section 42 (b) (2) The wildfire mitigation plan shall consider as necessary, at minimum, all of the following:

Public Owned Utility SB 901 Wild Fire Plan Requirements compared to the Imperial Irrigation District SB 901 Wild Fire Mitigation Plan.

	SB 901 – POU WF Plan Requirements	IID SB 901 WF Mitigation Plan Sections
1	SB 901 Section 42 (b) (2) (A) An accounting of the responsibilities of persons responsible for executing the plan.	• Section 12: Wild Fire Mitigation Plan Roles and Responsibilities
2	SB 901 Section 42(b) (2) (B) The objectives of the wildfire mitigation plan.	• Section 5: Objectives of the Imperial Irrigation District Wildfire Mitigation Plan
3	SB 901 Section 42(b)(2)(C) A description of the preventive strategies and programs to be adopted by the local publicly owned electric utility or electrical cooperative to minimize the risk of its electrical lines and equipment causing catastrophic wildfires, including consideration of dynamic climate change risks.	• Section 9: Existing Efforts with Elements Expected to Reduce Fire Risk (various subsections) • Section 10: Planned Efforts with Elements Expected to Reduce Fire Risk (various sections) • Section 7: Future Fire Risk Due to Climate Change
4	SB 901 Section 42(b)(2)(D) A description of the metrics the local publicly owned electric utility or electrical cooperative plans to use to evaluate the wildfire mitigation plan's performance and the assumptions that underlie the use of those metrics.	• Subsection 11.8: Performance Metrics
5	SB 901 Section 42(b) (2) (E) A discussion of how the application of previously identified metrics to previous wild fire mitigation plan performances has informed the wildfire mitigation plan.	• Subsection 11.6: Wildfire Plan Performance Monitoring • Subsection 11.7: Continuous Improvement

	SB 901 – POU WF Plan Requirements	IID SB 901 WF Mitigation Plan Sections
6	SB 901 Section 42(b)(2)(F) Protocols for disabling re-closers and de-energizing portions of the electrical distribution system that consider the associated impacts on public safety, as well as protocols related to mitigating the public safety impacts of those protocols, including impacts on critical first responders and on health and communication infrastructure.	• Subsection 10.6: Disabling Re-Closer Procedure • Subsection 10.7: Public Safety Power Shutoff
7	SB 901 Section 42(b) (2) (G) Appropriate and feasible procedures for notifying a customer who may be impacted by the de-energizing of electrical lines. The procedures shall consider the need to notify, as a priority, critical first responders, health care facilities, and operators of telecommunications infrastructure.	• Subsection 10.7: Public Safety Power Shutoff
8	SB 901 Section 42(b) (2) (H) Plans for vegetation management.	• Subsection 9.3: Vegetation Management Power lines 200kV and Below Not Subject to FERC Jurisdiction • Subsection 9.4: Transmission Vegetation management Program • Subsection 9.12: Redesign of Vegetation Management Website
9	SB 901 Section 42(b) (2) (I) Plans for inspections of the local publicly owned electric utility's or electrical-cooperative's electrical infrastructure.	• Subsection 9.5: Imperial Irrigation District Power Line Inspection Program

	SB 901 – POU WF Plan Requirements	IID SB 901 WF Mitigation Plan Sections
10	SB 901 Section 42(b)(2)(J) A list that identifies, describes, and prioritizes all wildfire risks, and drivers for those risks, throughout the local publicly owned electric utility's, or electrical cooperative's Service Territory. The list shall include, but not be limited to, both of the following: - SB 901 Section 42(b) (2) (J) (i) Risks and risk drivers associated with design, construction, operation, and maintenance of the local publicly owned electric utility's or electrical cooperative's equipment and facilities. - SB 901 Section 42(b)(2)(J)(ii) Particular risks and risk drivers associated with topographic and climatological risk factors throughout the different parts of the local publicly owned electric utility's or electrical cooperative's Service Territory.	• Section 6: Present Fire Ignition Risks (various subsections) • Section 7: Future Fire Risk Due to Climate Change
11	SB 901 Section 42(b) (2) (K) Identification of any geographic area in the local publicly owned electric utility's or electrical cooperative's Service Territory that is a higher wildfire threat than is identified in a commission fire threat map, and identification of where the commission should expand a high fire threat district based on new information or changes to the environment.	• Section 8: Service Territory Survey Findings – Changes to CPUC Fire Threat Map
12	SB 901 Section 42(b) (2) (L) A methodology for identifying and presenting enterprise wide safety risk and wildfire-related risk.	• Section 6: Present Fire Ignition Risks (all subsections)
13	SB 901 Section 42(b) (2) (M) A statement of how the local publicly owned electric utility or electrical cooperative will restore service after a wildfire.	• Section 9.8: Service Restoration After Major Events

	SB 901 – POU WF Plan Requirements	IID SB 901 WF Mitigation Plan Sections
14	SB 901 Section 42(b)(2)(N) A description of the processes and procedures the local publicly owned electric utility or electrical cooperative shall use to do all of the following: - SB 901 Section 42(b) (2) (N) (i) Monitor and audit the implementation of the wildfire mitigation plan. - SB 901 Section 42(b) (2) (N) (ii) Identify any deficiencies in the wildfire mitigation plan or its implementation, and correct those deficiencies. - SB 901 Section 42(b)(2)(N)(iii) Monitor and audit the effectiveness of electrical line and equipment inspections, including inspections performed by contractors, that are carried out under the plan, other applicable statutes, or commission rules.	• Section 11: Managing the Plan (All subsections)
15	SB 901 Section 42(b) (3) The local publicly owned electric utility or electrical cooperative shall present each wildfire mitigation plan in an appropriately noticed public meeting. The local publicly owned electric utility or electrical cooperative shall accept comments on its wildfire mitigation plan from the public, other local and state agencies, and interested parties, and shall verify that the wildfire mitigation plan complies with all applicable rules, regulations, and standards, as appropriate.	• Subsection 11.5: Comprehensive Wild Fire Mitigation Plan Public Comments
16	SB 901 Section 42(c) The local publicly owned electric utility or electrical cooperative shall contract with a qualified independent evaluator with experience in assessing the safe operation of electrical infrastructure to review and assess the comprehensiveness of its wildfire mitigation plan. The independent evaluator shall issue a report that shall be made available on the Internet Web site of the local publicly owned electric utility or electrical cooperative, and shall present the report at a public meeting of the local publicly owned electric utility's or electrical cooperative's governing board.	• Subsection 11.2: Qualified Independent Evaluator Review

	SB 901 – POU WF Plan Requirements	IID SB 901 WF Mitigation Plan Sections
17	SB 901 Section 43 An electrical corporation, local publicly owned electric utility, or community choice aggregator with a contract to procure electricity generated from biomass pursuant to subdivision (b) of Section 399.20.3, commission Resolution E-4770 (March 17, 2016), or commission Resolution E-4805 (October 13, 2016), or with a contract that is operative at any time in 2018, and expires or expired on or before December 31, 2023, shall seek to amend the contract to include, or seek approval for a new contract that includes, an expiration date five years later than the expiration date in the contract that was operative in 2018, so long as the contract extension follows the feedstock requirement of subdivision (b) of Section 399.20.3. This section shall not apply to facilities located in federal severe or extreme nonattainment areas for particulate matter or ozone.	• Subsection 10.9: Addressing SB 901 Section 43 Requirements (Biomass)

Investor Owned Utility SB 901 Plan Requirements compared to the Imperial Irrigation District SB 901 Wild Fire Mitigation Plan

	SB 901 IOU WF Plan Requirements	IID SB 901 WF Mitigation Plan Sections
1	A description of the actions the electrical corporation will take to ensure its system will achieve the highest level of safety, reliability, and resiliency, and to ensure that its system is prepared for a major event, including hardening and modernizing its infrastructure with improved engineering, system design, standards, equipment, and facilities, such as undergrounding, insulation of distribution wires, and pole replacement.	• Section 9: Existing Efforts with Elements Expected to Reduce Fire Risk (various subsections) • Section 10: Planned Efforts with Elements Expected to Reduce Fire Risk (various sections)
2	A showing that the utility has an adequate sized and trained workforce to promptly restore service after a major event, taking into account employees of other utilities pursuant to mutual aid agreements and employees of entities that have entered into contracts with the utility.	• Subsection 9.11: Power Lineman Training Program • Subsection 9.4: Vegetation Management Internal Imperial Irrigation District Training • Subsection 9.10: Utility Mutual Aid Agreements

	SB 901 IOU WF Plan Requirements	IID SB 901 WF Mitigation Plan Sections
3	A description of how the plan is consistent with the electrical corporation's disaster and emergency preparedness plan prepared pursuant to Section 768.6, including both of the following: - Plans to prepare for, and to restore service after, a wildfire, including workforce mobilization and prepositioning equipment and employees. - Plans for community outreach and public awareness before, during, and after a wildfire, including language notification in English, Spanish, and the top three primary languages used in the state other than English or Spanish, as determined by the commission based on the United States Census data.	• Section 10.7 Public Safety Power Shutoff

Investor Owned Utility SB 901 Wild Fire Mitigation Plan Requirements not addressed by Imperial Irrigation District SB 901 Wild Fire Mitigation Plan

	SB 901 IOU WF Plan Requirements	IID SB 901 WF Mitigation Plan Sections
1	A description of how the plan accounts for the wildfire risk identified in the electrical corporation's Risk Assessment Mitigation Phase filing.	• Not Addressed
2	Protocols for compliance with requirements adopted by the commission regarding activities to support customers during and after a wildfire, outage reporting, support for low-income customers, billing adjustments, deposit waivers, extended payment plans, suspension of disconnection and nonpayment fees, repair processing and timing, access to utility representatives, and emergency communications.	• Not Addressed

Appendix 2

Imperial Irrigation District Service Territory Survey Findings Report

Summary Report: Max Fuentes Consulting on-site visit to Imperial Irrigation District –
Site Visit Observations and Recommendations regarding Fire Map Hazard Designations

Purpose

This is the SB 901 Service Territory Findings Report for the Imperial Irrigation District, SB 901 Service Territory Survey.

The survey included an inspection of two sites designated by CAL FIRE as Moderate Fire Threat areas, one site designated by CAL FIRE as High Fire Threat area, and several areas IID staff identified as areas of interest.

Areas Identified By CAL FIRE as Moderate or High Fire Threat Areas

- Ocotillo (In territory, moderate designation)
- Ocotillo Wells (In territory, moderate designation)
- High fire threat area *west of the territory* near the Imperial / Riverside county lines

Additional Areas of Interest Identified by Imperial Irrigation District Staff

- H-Line S80 Road – near Holtville
- Visit areas that are adjacent to High Fire area – La Quinta (Riverside County)
- Visit other areas – River Bottom, KN / KS line Twin circuit 230 kV, Imperial Dam, and S-Line Drew road where it crosses over the river
- Imperial Dam area

CAL FIRE Hazard Designation Observations

Vegetation

Predominant vegetation in the areas of the field survey included Salt Cedars, Date Palms, Tumbleweeds, and Palm trees.

Ocotillo

This area is designated as a “moderate” fire hazard, which is the lowest designation, provided by CAL FIRE. However, based upon the scarcity of the vegetation, very low population area, and distribution single-phase construction, the Consulting group recommends that this area be reclassified as a “non-designation” area:

- The single distribution circuit is being protected by fused cutouts from the take-off pole from the feeder.
- This circuit is a single-phase two-wire configuration; the construction is 8’ line arms with plenty of phase separation mid-span to eliminate any chance of conductors cross phasing, even with high winds.
- There is a line cross approximately halfway between the takeoff pole and the end of line. The conductor at the line cross has been sectionalized to de-energize the line going to the south (Moderate fire area) and remains energized to the North feeding the residential customers.
- There is little to no vegetation to provide fuel. In addition, the existing vegetation is not growing into the distribution lines (see pictures on the next page).

If there were an infrastructure failure (car pole, etc.) and the energized phase were to make contact with the ground, the scarcity of vegetation would not, with a reasonable degree of probability, provide enough fuel to create a significant wildfire hazard.

Ocotillo Wells

This area has no reasonable degree of probability for wildfire issues – not enough vegetation to fuel a significant fire and no growth into the lines, and should not be designated as a “Moderate” or higher hazard.

CAL FIRE Hazard Designation Recommendation Summary

Fuentes Consulting recommends that the areas of Ocotillo and Ocotillo Wells should be assigned “no-fuel” designations.

In addition, regarding the High fire threat area west of the territory near the Imperial / Riverside county lines – no recommendation: IID has no infrastructure near this area

Additional Site Visit Fire-Related Observations and Recommendations for Fire Risk Reduction

Olive Orchard Site

On the way to Ocotillo Wells, we visited an Olive orchard, and noted access issues to the poles -Olives trees are planted in the right of way.

The Olive trees will likely also grow up into the low hanging conductors and create a potential fire hazard. Fire prevention mitigation strategies are currently under discussion at IID.

H-Line along S80 Road (Evan Hughes Highway) near Holtville

There are no growth conditions into the overhead power lines in this area. However, there should be at least a 10' diameter of clearing around the poles at the base where there is vegetation.

Distribution circuit in La Quinta

Note that a distribution circuit in this area is located next to (but not in) a High fire designated area.

Additionally, any locations with connectors and expulsion fuses need be replaced with newer connections and equipment that mitigate/eliminate and arcing or sparking incidents at the base of the pole, regardless of the clearing of the vegetation.

KN / KS Lines - 230 kV twin circuits

No issues; line-to-ground proximity is very high and the circuits are located on steel poles.

S-Line near Drew road, where it crosses the river

The Transmission lines were on new poles and the construction was a three-phase offset that provided plenty of phase separation to eliminate phases contacting each other, even during high wind events, thus minimizing fire risk.

The distribution circuit that previously had been attached to the old poles as under-build with transmission over the top was now relocated to H-structures higher on the hills in a double dead-end configuration.

The connections on the over-arm jumpers were located on the jumpers themselves, thus eliminating hot spots and potential conductor failures if attached to the line conductors themselves.

Imperial Dam Area
Ensure that tree trimmers remove all trees and branches from areas that have been trimmed and not leave them on the ground in close proximity to the poles so that there is no additional vegetation to fuel a wildfire.

Fire-Related Observations and Recommendations for Fire Risk Reduction

Olive Orchard Site
Recommend fire risk mitigations, e.g. power line corridor clearance or line relocation strategies to reduce and eliminate risks. No CAL FIRE designation change recommended.

H-Line along S80 Road (Evan Hughes Highway) near Holtville
Ensure 10’ vegetation clearance around poles, including removal of young Salt Cedar trees under power lines. No CAL FIRE designation change recommended.

Distribution Circuit in La Quinta
Ensure 10’ vegetation clearance around poles. In addition, as required, locations with connectors and expulsion fuses need be replaced with newer connections and equipment that mitigate/eliminate and arcing or sparking incidents. No CAL FIRE designation change recommended.

River Bottom near El Centro
Ensure 10’ vegetation clearance around poles. No CAL FIRE designation change recommended.

KN / KS Lines - 230 kV twin circuits
No issues; some areas burned away from lines but clearance from poles sufficient. No CAL FIRE designation change recommended.

S-Line near Drew road, where it crosses the river

Some areas burned away from lines; sufficient vegetation clearance must be maintained to reduce fire risk. No CAL FIRE designation change recommended.

Imperial Dam Area

Ensure that tree trimmers remove all trees and branches from areas that have been trimmed. No CAL FIRE designation change recommended.

Respectfully Submitted,

Maximo M. Fuentes

Max Fuentes

Max Fuentes Consulting

Appendix 3

Independent Evaluator Assessment of Imperial Irrigation District SB 901 Wild Fire Mitigation Plan

Maximo M. Fuentes
Max Fuentes Consulting
maxfuentes@icloud.com
(916)505-7298
Gridresources.net

September 3, 2019

Angel Marcial
Imperial Irrigation District
Manager of Program Planning & Development – Energy
amarcial@iid.com
W (760) 339-9501
M (760) 275-3643

Dear Mr. Marcial:

Imperial Irrigation District's Wildfire Mitigation Plan contains the required elements listed in the provision of SB 901 and AB 1054 related to our review, Public Utilities Code Section 8386(c). The programs that will take the greatest amount of time and effort in IID's WMP involve vegetation management, system hardening, preventative strategies and inspections.

Inspection and Maintenance

SB 901 contains several provisions related to an electrical corporation's inspection and maintenance. Public Utilities Code Section 8386(c)(9) requires an electrical corporation's WMP to contain a description of its plans for inspection and maintenance of the electric infrastructure. Inspection and maintenance include conducting system patrols, using technological inspection tools, managing maintenance, and conducting vegetation inspections and management. These activities play an important role in wildfire mitigation. IID's inspection and maintenance plan is discussed below.

Vegetation Management

IID's vegetation management practice performs periodic and on-demand patrols to identify vegetation in and adjacent to, energy infrastructure. These inspections are a trigger for pruning jobs, vegetation removals, and the application of herbicides. IID's transmission system vegetation management program is comprehensive and is applicable to IID's bulk electric system located in the IID service territory, which adheres to the Western Electricity

Maximo M. Fuentes
Max Fuentes Consulting
maxfuentes@icloud.com
(916)505-7298
Gridresources.net

Coordinating Council (WECC) requirements. For transmission-level facilities, Imperial Irrigation District complies with NERC FAC-003-4, where applicable.

Powerline inspections

Imperial Irrigation District performs inspections following the National Electric Safety Code, WECC and General Order 95 for construction and General Order 165 for inspections.

New technology initiatives

Imperial Irrigation District currently has several technology initiatives to facilitate the capture of field inspection information for pole inspections and for vegetation management inspections. Work also includes integration with the Imperial Irrigation District Geographic Information System and the ERP system of record.

System Hardening

There are no short or long-term planning decisions to "harden" the system. IID's infrastructure has little to no exposure to wildfire ignitions and the current processes, and inspections that are in place provide adequate system reliability without expending additional capital for system hardening.

Preventative Strategies

- IID is working with city and county planning departments to prevent land use changes in high fire threat areas where changes require building power infrastructure in CAL FIRE designated high or extreme fire hazard areas.
- IID budgets approximately $3 million dollars annually for relay modernization.
- IID has implemented a new vegetation management program that includes increased training and best practices and is requiring their contractors to participate in the same training.

Fuentes Consulting key concerns can be summarized as follows:

- IID should move towards developing and improving key areas that lack SOP's (Standard Operating Procedures) and SWP's (Standard Work Practices) in all facets of the electrical system generation, transmission, and distribution of safe and reliable power.

Maximo M. Fuentes
Max Fuentes Consulting
maxfuentes@icloud.com
(916)505-7298
Gridresources.net

- IID should provide more granular details about how it's GO 165 program is performing, using technology to inspect, track, process data and create jobs to perform key work in areas that have been prioritized.
- IID's procedures could be improved to ensure customers are given adequate notification of possible de-energization events.
- IID needs to develop a PSPS plan that includes notifications available in Spanish or the top three primary languages in the state other than Spanish or English.

Regards,

Maximo M. Fuentes

Maximo Fuentes
Max Fuentes Consulting

Appendix 4

Regulatory Requirement and Industry Best Practice Alignment Assessment

Alignment assessment considered the following regulatory requirements:

North American Electric Reliability Corporation (NERC) regulations

California Public Resource Code regulations 4292 safety requirements

California Public Resource Code regulation 4293 safety clearance requirements,

Industry best practice, CPUC General Order 95 Over Head Power Line Construction,

Industry best practice, CPUC General Order 165 Inspections

Imperial Irrigation District Energy Department, Power Line Corridor Clearance Regulation 23

Alignment Assessment of Public Owned Utility SB 901 Plan Requirements and Imperial Irrigation District SB 901 Plan Sections with Other Regulatory Requirements

	SB 901 – POU WF Plan Requirements	**IID SB 901 WF Mitigation Plan Sections**	**SB 901 Regulation Requirement Alignment with Other Regulatory Requirements** (Alignment/Conflict)
1	SB 901 Section 42 (b) (2) (A) An accounting of the responsibilities of persons responsible for executing the plan.	• Section 12: Wild Fire Mitigation Plan Roles and Responsibilities	Alignment
2	SB 901 Section 42(b) (2) (B) The objectives of the wildfire mitigation plan.	• Section 5: Objectives of the Imperial Irrigation District Wildfire Mitigation Plan	Alignment

	SB 901 – POU WF Plan Requirements	**IID SB 901 WF Mitigation Plan Sections**	**SB 901 Regulation Requirement Alignment with Other Regulatory Requirements** (Alignment/Conflict)
3	SB 901 Section 42(b)(2)(C) A description of the preventive strategies and programs to be adopted by the local publicly owned electric utility or electrical cooperative to minimize the risk of its electrical lines and equipment causing catastrophic wildfires, including consideration of dynamic climate change risks.	• Section 9: Existing Efforts with Elements Expected to Reduce Fire Risk (various subsections) • Section 10: Planned Efforts with Elements Expected to Reduce Fire Risk (various sections) • Section 7: Future Fire Risk Due to Climate Change	Possible Conflict Caution when implementing SB 901 de-energization need to follow: NERC TPL-001-4 Transmission Operations, IRO-17-1 Outage Coordination, TOP-001-4 Transmission Operations requirements
4	SB 901 Section 42(b)(2)(D) A description of the metrics the local publicly owned electric utility or electrical cooperative plans to use to evaluate the wildfire mitigation plan's performance and the assumptions that underlie the use of those metrics.	• Subsection 11.8: Performance Metrics	Alignment
5	SB 901 Section 42(b) (2) (E) A discussion of how the application of previously identified metrics to previous wild fire mitigation plan performances has informed the wildfire mitigation plan.	• Subsection 11.6: Wildfire Plan Performance Monitoring • Subsection 11.7: Continuous Improvement	Alignment
6	SB 901 Section 42(b)(2)(F) Protocols for disabling re-closers and de-energizing portions of the electrical distribution system that consider the associated impacts on public safety, as well as protocols related to mitigating the public safety impacts of those protocols, including impacts on critical first responders and on health and communication infrastructure.	• Subsection 10.6: Disabling Re-Closer Procedure (N/A) • Subsection 10.7 Public Safety Power Shutoff	Possible Conflict Caution when implementing SB 901 de-energization need to follow: NERC TPL-001-4 Transmission Operations, IRO-17-1 Outage Coordination, TOP-001-4 Transmission Operations requirements

	SB 901 – POU WF Plan Requirements	**IID SB 901 WF Mitigation Plan Sections**	**SB 901 Regulation Requirement Alignment with Other Regulatory Requirements** (Alignment/Conflict)
7	SB 901 Section 42(b) (2) (G) Appropriate and feasible procedures for notifying a customer who may be impacted by the de-energizing of electrical lines. The procedures shall consider the need to notify, as a priority, critical first responders, health care facilities, and operators of telecommunications infrastructure.	• Subsection 10.7 Public Safety Power Shutoff	Alignment
8	SB 901 Section 42(b) (2) (H) Plans for vegetation management.	• Subsection 9.3: Vegetation Management Power lines 200kV and Below Not Subject to FERC Jurisdiction • Subsection 9.4: Transmission Vegetation management Program • Subsection 9.12: Redesign of Vegetation Management Website	Alignment
9	SB 901 Section 42(b) (2) (I) Plans for inspections of the local publicly owned electric utility's or electrical-cooperative's electrical infrastructure.	• Subsection 9.5: Imperial Irrigation District Power Line Inspection	Alignment
10	SB 901 Section 42(b)(2)(J) A list that identifies, describes, and prioritizes all wildfire risks, and drivers for those risks, throughout the local publicly owned electric utility's, or electrical cooperative's Service Territory. The list shall include, but not be limited to, both of the following: SB 901 Section 42(b) (2) (J) (i) Risks and risk drivers associated with design, construction, operation, and maintenance of the local publicly owned electric utility's or electrical cooperative's equipment and facilities. SB 901 Section 42(b)(2)(J)(ii) Particular risks and risk drivers associated with topographic and climatological risk factors throughout the different parts of the local publicly owned electric utility's or electrical cooperative's Service Territory.	• Section 6: Present Fire Ignition Risks (various subsections) • Section 7: Future Fire Risk Due to Climate Change	Alignment

	SB 901 – POU WF Plan Requirements	IID SB 901 WF Mitigation Plan Sections	SB 901 Regulation Requirement Alignment with Other Regulatory Requirements (Alignment/Conflict)
11	SB 901 Section 42(b) (2) (K) Identification of any geographic area in the local publicly owned electric utility's or electrical cooperative's Service Territory that is a higher wildfire threat than is identified in a commission fire threat map, and identification of where the commission should expand a high fire threat district based on new information or changes to the environment.	• Section 8: Service Territory Survey Findings – Changes to CPUC Fire Threat Map	Alignment
12	SB 901 Section 42(b) (2) (L) A methodology for identifying and presenting enterprise wide safety risk and wildfire-related risk.	• Section 6: Present Fire Ignition Risks (all subsections)	Alignment
13	SB 901 Section 42(b) (2) (M) A statement of how the local publicly owned electric utility or electrical cooperative will restore service after a wildfire.	• Section 9.8: Service Restoration After Major Events	Alignment
14	SB 901 Section 42(b)(2)(N) A description of the processes and procedures the local publicly owned electric utility or electrical cooperative shall use to do all of the following: SB 901 Section 42(b) (2) (N) (i) Monitor and audit the implementation of the wildfire mitigation plan. SB 901 Section 42(b) (2) (N) (ii) Identify any deficiencies in the wildfire mitigation plan or its implementation, and correct those deficiencies. SB 901 Section 42(b)(2)(N)(iii) Monitor and audit the effectiveness of electrical line and equipment inspections, including inspections performed by contractors, that are carried out under the plan, other applicable statutes, or commission rules.	• Section 11: Managing the Plan (All subsections)	Alignment
15	SB 901 Section 42(b) (3) The local publicly owned electric utility or electrical cooperative shall present each wildfire mitigation plan in an appropriately noticed public meeting. The local publicly owned electric utility or electrical cooperative shall accept comments on its wildfire mitigation plan from the public, other local and state agencies, and interested parties, and shall verify that the wildfire mitigation plan complies with all applicable rules, regulations, and standards, as appropriate.	• Subsection 11.5: Comprehensive Wild Fire Mitigation Plan Public Comments	Possible Conflict Caution -Verify Critical Infrastructure Protection (CIP) information is not contained in final IID SB 901 WF plan document. Compliance administrator will review for CIP compliance.

	SB 901 – POU WF Plan Requirements	**IID SB 901 WF Mitigation Plan Sections**	**SB 901 Regulation Requirement Alignment with Other Regulatory Requirements** (Alignment/Conflict)
16	SB 901 Section 42(c) The local publicly owned electric utility or electrical cooperative shall contract with a qualified independent evaluator with experience in assessing the safe operation of electrical infrastructure to review and assess the comprehensiveness of its wildfire mitigation plan. The independent evaluator shall issue a report that shall be made available on the Internet Web site of the local publicly owned electric utility or electrical cooperative, and shall present the report at a public meeting of the local publicly owned electric utility's or electrical cooperative's governing board.	• Subsection 11.2: Qualified Independent Evaluator Review	Alignment
17	SB 901 Section 43 An electrical corporation, local publicly owned electric utility, or community choice aggregator with a contract to procure electricity generated from biomass pursuant to subdivision (b) of Section 399.20.3, commission Resolution E-4770 (March 17, 2016), or commission Resolution E-4805 (October 13, 2016), or with a contract that is operative at any time in 2018, and expires or expired on or before December 31, 2023, shall seek to amend the contract to include, or seek approval for a new contract that includes, an expiration date five years later than the expiration date in the contract that was operative in 2018, so long as the contract extension follows the feedstock requirement of subdivision (b) of Section 399.20.3. This section shall not apply to facilities located in federal severe or extreme nonattainment areas for particulate matter or ozone.	• Subsection 10.9: Addressing SB 901 Section 43 Requirements (Biomass)	Alignment

Alignment Assessment of Investor Owned Utility SB 901 Plan Requirements and Imperial Irrigation District SB 901 Plan Sections with Other Regulatory Requirements

	SB 901 IOU WF Plan Requirements	IID SB 901 WF Mitigation Plan Sections	SB 901 Regulation Requirement Alignment with Other Regulatory Requirements (Alignment/Conflict)
1	A description of the actions the electrical corporation will take to ensure its system will achieve the highest level of safety, reliability, and resiliency, and to ensure that its system is prepared for a major event, including hardening and modernizing its infrastructure with improved engineering, system design, standards, equipment, and facilities, such as undergrounding, insulation of distribution wires, and pole replacement.	• Section 9: Existing Efforts with Elements Expected to Reduce Fire Risk (various subsections) • Section 10: Planned Efforts with Elements Expected to Reduce Fire Risk (various sections)	Alignment
2	A showing that the utility has an adequate sized and trained workforce to promptly restore service after a major event, taking into account employees of other utilities pursuant to mutual aid agreements and employees of entities that have entered into contracts with the utility.	• Subsection 9.11: Power Lineman Training Program • Subsection 9.3 Vegetation Management Power Lines 200 kV and Below • Subsection 9.10: Utility Mutual Aid Agreements	Alignment
3	A description of how the plan is consistent with the electrical corporation's disaster and emergency preparedness plan prepared pursuant to Section 768.6, including both of the following: - Plans to prepare for, and to restore service after, a wildfire, including workforce mobilization and prepositioning equipment and employees. - Plans for community outreach and public awareness before, during, and after a wildfire, including language notification in English, Spanish, and the top three primary languages used in the state other than English or Spanish, as determined by the commission based on the United States Census data.	• Section 10.7: Public Safety Power Shutoff	Possible Conflict Caution when implementing SB 901 de-energization need to follow: NERC TPL-001-4 Transmission Operations, IRO-17-1 Outage Coordination, TOP-001-4 Transmission Operations requirements

Appendix 5

Change in CAL FIRE Designation from *Moderate* to *No-Fuel; Ocotillo, Ocotillo Wells*

Maximo M. Fuentes
Max Fuentes Consulting
maxfuentes@icloud.com
(916)505-7298
Gridresources.net

September 4, 2019

Angel Marcial
Imperial Irrigation District
Manager of Program Planning & Development – Energy
amarcial@iid.com
W (760) 339-9501
M (760) 275-3643

Dear Mr. Marcial:

Max Fuentes Consulting participated in an Imperial Irrigation District service territory survey conducted June 24-27, 2019. Part of the purpose of the survey was to observe areas currently identified by CAL FIRE as "Moderate" Fire Hazard designations:

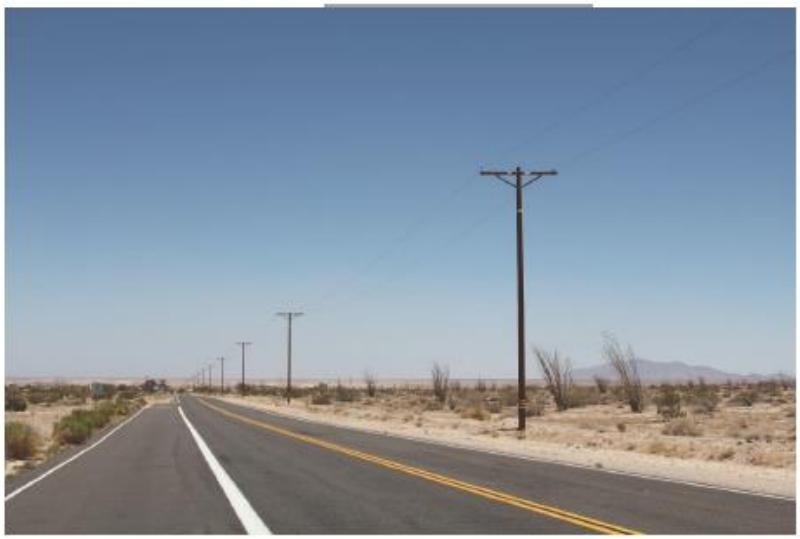
- Ocotillo
- Ocotillo Wells

Based on those observations, Max Fuentes Consulting recommends that CAL FIRE consider some potential changes to the two "Moderate" designations:

Ocotillo
Based upon the scarcity of the vegetation, very low population area, and distribution single-phase construction, the Consulting group recommends reclassification of this area as a "no-fuel" area:

- There is little to no vegetation to provide fuel. In addition, the existing vegetation is not growing into the distribution lines (see pictures on the next page).
- The single distribution circuit is being protected by fused cutouts from the take-off pole from the feeder.
- There is a line cross approximately halfway between the takeoff pole and the end of line. The conductor at the line cross has been sectionalized to de-energize the line going to the south (Moderate fire area) and remains energized to the North feeding the residential customers.

Maximo M. Fuentes
Max Fuentes Consulting
maxfuentes@icloud.com
(916)505-7298
Gridresources.net



If there were an infrastructure failure (car pole, etc.) and the energized phase were to make contact with the ground, the scarcity of vegetation would not, with a reasonable degree of probability, provide enough fuel to create a significant wildfire hazard.

Maximo M. Fuentes
Max Fuentes Consulting
maxfuentes@icloud.com
(916)505-7298
Gridresources.net

Ocotillo Wells
This area has no reasonable degree of probability for wildfire issues – not enough vegetation to fuel a significant fire and no growth into the lines, and should not be designated as a "Moderate" or higher hazard.

Regards,

Maximo M. Fuentes

END