



*Inland Empire Utilities Agency*

A MUNICIPAL WATER DISTRICT

2023

# Local Hazard Mitigation Plan

Hazard Mitigation Plan Update

Date of Districts Board Approval: XX-XX-XXXX

FEMA Approval Date: XX-XX-XXXX

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## SECTION 1. INTRODUCTION

The HMP update is a “living document” that should be reviewed, monitored, and updated to reflect changing conditions and new information. As required, the HMP must be updated every five (5) years to remain in compliance with regulations and Federal mitigation grant conditions. In that spirit, this Hazard Mitigation Plan (HMP) is an update of the Inland Empire Utilities Agency’s Hazard Mitigation Plan under review by FEMA.

### 1.1 PURPOSE OF THE PLAN

The intent of hazard mitigation is to reduce and/or eliminate loss of life and property. Hazard mitigation is defined by FEMA as “any action taken to reduce or eliminate the long-term risk to human life and property from natural hazards.” A “hazard” is defined by FEMA as “any event or condition with the potential to cause fatalities, injuries, property damage, infrastructure damage, agricultural loss, environmental damage, business interruption, or other loss.”

The purpose of the Hazard Mitigation Plan (HMP) is to demonstrate the plan for reducing and/or eliminating risk in Inland Empire Utilities Agency’s service area. The HMP process encourages communities to develop goals and projects that will reduce risk and build a more disaster resilient community by analyzing potential hazards.

After disasters, repairs and reconstruction are often completed in such a way as to simply restore to pre- disaster conditions. Such efforts expedite a return to normalcy; however, the restoring of things to pre- disaster conditions sometimes result in feeding the disaster cycle; damage, reconstruction, and repeated damage. Mitigation is one of the primary phases of emergency management specifically dedicated to breaking the cycle of damage. Hazard mitigation is distinguished from other disaster management functions by measures that make IEUA infrastructure development and the natural environment safer and more disaster resilient. Mitigation generally involves alteration of physical environments, significantly reducing risks and vulnerability to hazards by altering the built environment so that life and property losses can be avoided or reduced.

Mitigation also makes it easier and less expensive to respond to and recover from disasters.

Also, with an approved (and adopted) HMP, Inland Empire Utilities Agency is eligible for federal disaster mitigation funds/grants (Hazard Mitigation Grant Program, Pre-Disaster Mitigation, and Flood Management Assistance) aimed to reduce and/or eliminate risk.

### 1.2 AUTHORITY

In 2000, FEMA adopted revisions to the Code of Federal Regulations. This revision is known as “Disaster Mitigation Act (DMA).” DMA 2000, Section 322 (a-d) requires that local governments, as a condition of receiving federal disaster mitigation funds, have a Hazard Mitigation Plan (HMP) that describes the process for assessing hazards, risks and vulnerabilities, identifying and

prioritizing mitigation actions, and engaging/soliciting input from the community (public), key stakeholders, and adjacent jurisdictions/agencies.

Senate Bill No. 379 will, upon the next revision of a local hazard mitigation plan on or after January 1, 2017, or, if the local jurisdiction has not adopted a local hazard mitigation plan, beginning on or before January 1, 2022, require the safety element to be reviewed and updated as necessary to address climate adaptation and resiliency strategies applicable to that city or county.

### 1.3 WHAT'S NEW

The 2016 Inland Empire Utilities Agency Hazard Mitigation Plan contained a detailed description of the planning process, a risk assessment of identified hazards for the IEUA Service Area, and an overall mitigation strategy for reducing the risk and vulnerability from these hazards. Since the approval of the plan by FEMA, progress has been made by IEUA on the mitigation strategy. As part of this 2023 LHMP update, a thorough review and update of the 2018 plan was conducted to ensure that this update reflects current conditions and priorities to realign the overall mitigation strategy for the next five-year planning period. This section of the plan includes the following:

**What's New in the Plan Update.** This section provides an overview of the approach to updating the plan and identifies new analyses, data and information included in this Plan update to reflect current service area conditions. This includes a summary of new hazard and risk assessment data as it relates to the IEUA Service Area as well as information on current and future development trends affecting infrastructure vulnerability and related issues. The actual updated data and analyses are contained in their respected sections within this 2023 LHMP update.

**Summary of Significant Changes to Current Conditions and Hazard Mitigation Program Priorities.** This section provides a summary of significant changes in current conditions, changes in vulnerability, and any resulting modifications to the community's mitigation program priorities.

**2016 Mitigation Strategy Status and Successes.** This section provides a description of the status of mitigation actions from the 2016 plan and indicates whether a project is no longer relevant or is recommended for inclusion in the updated 2023 mitigation strategy.

This What's New section provides documentation of IEUA Service Area's progress or changes in their risk and vulnerability to hazards and their overall hazard mitigation program. Completion of this 2023 LHMP Update further provides documentation of the IEUA's continued commitment and engagement in the mitigation planning process.

### 1.4 NEW RISK ASSESSMENT

As part of its comprehensive review and update of each section of the plan, IEUA recognized that updated data, if available, would enhance the analysis presented in the risk assessment and utilized in the development of the updated mitigation strategy. Highlights of new data used for this Plan Update is identified below in this Section and is also sourced in context within Chapter 4, Risk

Assessment. Specific data used is sourced throughout this plan document. This new data and associated analysis provided valuable input for the development of the mitigation strategy presented in Chapter 5 of this plan. A highlight of new information and analyses contained in this plan update includes the following:

- A new assessment of updated hazards affecting the IEUA Area was completed resulting in additional hazards added to planning documents the new hazards include climate change, drought and terrorism.
- An entire rework of the risk assessment for each identified hazard. This included reworking the hazard profile and adding new hazard event occurrences; redoing the entire vulnerability analysis to add items identified below and updating the vulnerability assessment based on more recent hazard data.
- An update of the flood hazard analysis to include an updated analysis of the 100-year flood, an analysis of the 500-year flood, including the use the new and updated DFIRMs.
- An enhanced vulnerability assessment.

Incorporation and analysis of the new 2020 Census data was utilized for this LHMP update. Census data was used in an intersect analysis to determine how much of the population is exposed to flood, wildfire and earthquake hazards.

Terrorism is now a reoccurring possibility within the United States, due to the terror attack in San Bernardino County in December of 2015, a hazard profile on this matter has been added to this plan.

## 1.5 SUCCESSFUL MITIGATION IMPLEMENTATION

IEUA has completed review of past seismic retrofit studies and has applied studies to current and future projects. IEUA is also participating annually with Great California Shakeout to prepare and train employees for earthquakes.

- RP-1 and TP-1 Stormwater Drainage Upgrades to repair the old discharge line and tie in a permanent pump. This project was completed in 2022.
- Flood mitigation project at the Prado Lift Station Clean-out and overflow. This project will remove the existing manhole at Prado lift station with a sealed clean-out which can contain pressurized flows during pump station outages. This project was completed in 2021.
- Flood Mitigation project for the Victoria Basin Improvements. The basin improvement is to modify the existing mid-level outlet at the west side of the basin to allow for more basin storage. The project was completed in 202.
- Flood Mitigation project at the Montclair Basin. Montclair Basin will construct two new diversion structures from the San Antonio Creek into the Montclair Basins 2 and 3. Anticipated completion in 1-5 years.

- Flood Mitigation for RP-3 Basin. The project will create an additional recharge basin at the northern area which is occupied by abandon structures from a decommissioned wastewater treatment facility. Anticipated completion in 1-5 years.
  - Earthquake Mitigation at the TCE Plume Cleanup. The project will include three new groundwater monitoring wells, one new groundwater production well and approximately 30000 feet of raw water pipeline to distribute up to 6000 acre-feet per year of groundwater supply to the Chino II Desalter. Anticipated completion in 1-5 years.
  - Flood Mitigation project at RP-5 Biosolids Facility. The Project is for construction of a new solids handling facility at RP-5 to decommission RP-2 which is currently located below the 566' flood elevation. Anticipated completion in 1-5 years.
  - Flood Mitigation project at the Prado De-Chlorination Station Inundation Projection. Engineering to investigate whether it is more cost effective to protect in place the Prado De-Chlorination chemical storage facility metering building and injection and monitoring buildings or to relocated them above 566' of elevation. Anticipated completion in 1-5 years.
- Flood Mitigation project at the Preserve Lift Station. IEUA will be completing upgrades to electrical and mechanical equipment. Lift station design includes elevated platform for flood control. Anticipated completion in 1-5 years.

## 1.6 COMMUNITY PROFILE

### PHYSICAL SETTING

Inland Empire Utilities Agency (IEUA) encompasses approximately 242 square miles in the west end of the San Bernardino County, and generally overlies the Chino Groundwater Basin in the upper Santa Ana River (SAR) watershed. Specifically, IEUA provides services to 7 cities: Chino, Chino Hills, Fontana, Montclair, Ontario, Rancho Cucamonga, and Upland.

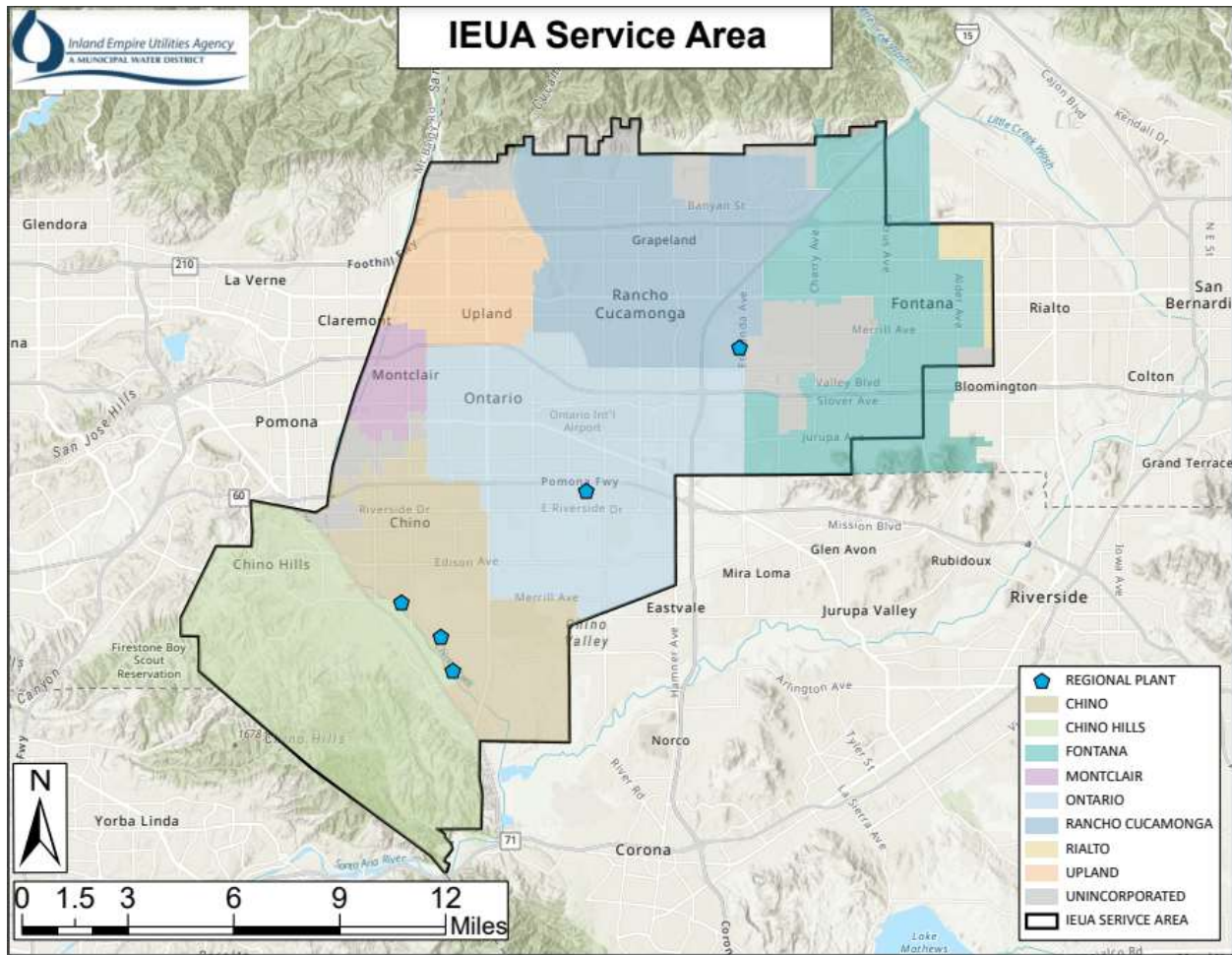
The Basin consists of an alluvial valley that is relatively flat from east to west and slopes from north to south at a one to two percent grade forming a tilted basin. Elevation ranges from about two thousand (2,000) feet in the foothills below the San Gabriel Mountains to about five hundred (500) feet near Prado Dam. From the west, the Agency extends from the Los Angeles County line to a point near the eastern boundary of the City of Fontana, and from the north it extends from the base of the San Gabriel Mountains and extends south to the Riverside County line and then southwest to the Orange County line.

According to FEMA, approximately one quarter (1/4) of the alluvial plain is subject to one hundred (100) year or five hundred (500) year flooding.

Several small creeks flowing from the San Gabriel Mountains traverse the area. The creeks flowing out of the San Gabriel Mountains have created steep alluvial fans in the northern part of

the Basin. These fans represent one of several major topographic features in the area. Other major topographic features include the Chino and Puente Hills, located along the southwest boundary of the area. These hills, which turn more rugged to the south, divide the Basin from the Pacific Ocean to the west and exert an important influence on air quality, climate, and water movement. The hills are cut by the Santa Ana and Carbon canyons, which provide major airflow corridors into the area. The final significant topographic feature in the area is the Jurupa Hills, which are surrounded by plains on the eastern boundary of the area.

Figure 1. IEUA Service Map



## HISTORY

The IEUA, formerly known as the Chino Basin Municipal Water District (CBMWD), was formed by popular vote of its residents to become a member agency of the Metropolitan Water District of Southern California (MWD) in 1950 for the purpose of importing supplemental water from the MWD to augment local stream and groundwater supplies.

The boundaries at first encompassed ninety-two point zero three (92.03) square miles of land, divided into two separate parcels. One of these included the City of Fontana and the other, the Cities of Ontario and

Upland. At that time, the population was approximately eighty thousand (80,000) people, and the assessed valuation was eighty-two million dollars (\$82,000,000).

In 1954, the land lying between the Fontana and the Ontario-Upland areas annexed to the District adding one hundred thirty-two point five (132.5) square miles of land to the service area. This brought the total land area to two hundred twenty-four point fifty-three (224.53) square miles. The population increased to one hundred thousand (100,000), and the assessed value went to one hundred four point six million dollars (\$104,600,000).

In 1958, the land lying south of the District followed suit and extended the service area to two hundred forty-one point thirteen (241.13) square miles. The population rose to one hundred forty-seven thousand (147,000), and the assessed value increased to two hundred four point four million dollars (\$204,400,000).

The last annexation took place in 1969 and brought an additional one point eleven (1.11) square miles into the Agency along the Northerly boundary. The total area now served is two hundred forty-two point two (242.2) square miles. Entities providing water within IEUA's service area include the cities of Ontario, Chino, Chino Hills and Upland; Cucamonga Valley Water District and Monte Vista Water District; San Antonio Water Company; and a portion of Fontana Water Company.

The Agency has one representative on MWD's Board of Directors and one representative on the Santa Ana Watershed Project Authority (SAWPA) Commission. Additionally, the Agency has one member that sits on the Chino Basin Watermaster (CBWM) Board.

In 1972, the Agency completed negotiations with its member agencies for the purchase of three existing domestic wastewater treatment plants. Those negotiations were the beginning of the Regional Sewerage Program.

The Agency owns and operates five (5) regional water recycling plants; several domestic/industrial trunk and interceptor sewer lines; and an indoor Co-Composting Facility. The Agency also operates the Chino Basin Desalter I.

The Agency currently owns and operates two separate recycled water systems. A northern system which consists of a recycled water outfall line designated the RWRP-4 Outfall Line, which extends from Regional Water Recycling Plant Number 1 (RWRP-1), and the RWRP-1 Outfall Line from RWRP-1 to the Prado Basin. The southern recycled water system, located within the cities of Chino and Chino Hills, consists of a seven hundred fifty thousand (750,000) gallon reservoir, a booster station, and approximately four (4) miles of distribution mains.

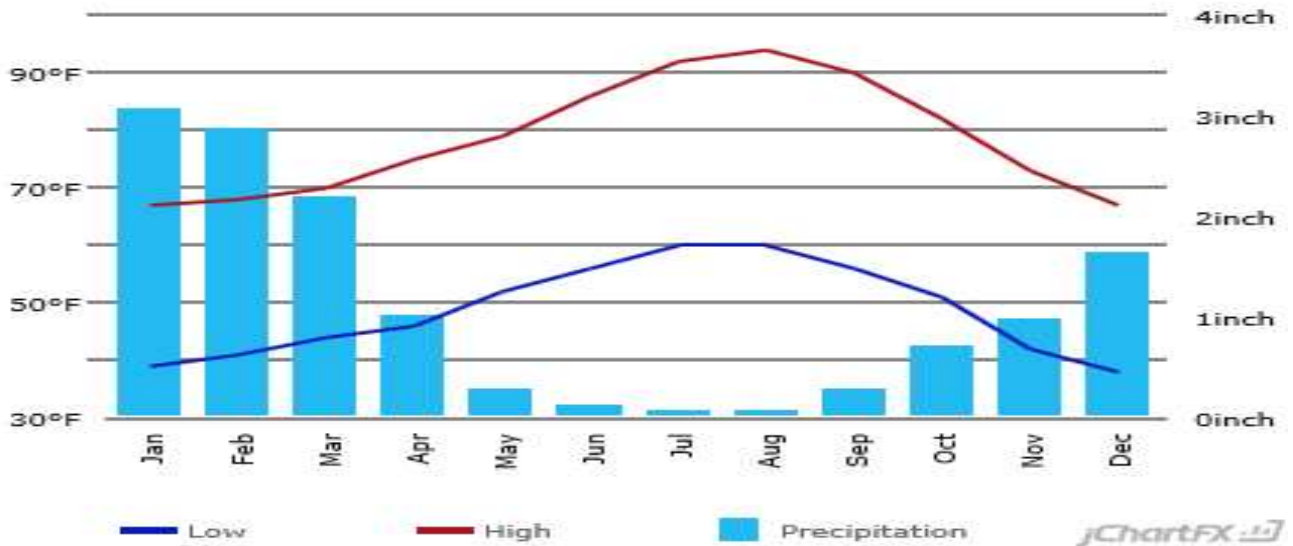
The Agency's plans under the new Regional Recycled Water Distribution System are to tie the two existing systems together, which will improve operations and reliability, plus provide recycled water over the entire service area.



## 1.7 CLIMATE

The average rainfall<sup>1</sup> for the City of Chino, where our Main Headquarters is located, is 13 inches with average temperatures ranging from 48 – 78 degrees Fahrenheit. The regions temperate, Mediterranean climate fosters moderate winters, warm summers, and generally low humidity.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
<b>Avg. Max. Temp (F)</b>	67	68	70	75	79	86	92	94	90	82	73	67	78.6 F
<b>Avg. Min. Temp (F)</b>	39	41	44	46	52	56	60	60	56	51	42	38	48.8 F
<b>Avg. Total Precipitation</b>	3.07	2.87	2.2	1.02	0.28	0.12	0.08	0.08	0.28	0.71	0.98	1.65	13.34in.



## 1.8 DEMOGRAPHICS

Demographics for our service area cities are based on Census 2020<sup>2</sup>. IEUA serves seven (7) cities with a population of approximately 825,000. See our service area cities' plans for details:

- City of Chino Hills
- City of Chino
- City of Fontana

<sup>1</sup> Average weather Chino 1981-2010 normal US Climate Data <https://www.usclimatedata.com/>

<sup>2</sup> Service area population from <http://datausa.io>

- City of Rancho Cucamonga
- City of Ontario
- City of Upland
- City of Montclair

	Chino Hills	Chino	Fontana	Rancho Cucamonga	Ontario	Upland	Montclair	Population Total
<b>Population</b>	82,800	89,170	212,704	178,060	178,194	77,348	40,041	858,317

### 1.9 EXISTING LAND USE

IEUA does not regulate Land Use within its service area. However, the Agency’s Planning and Engineering departments work together with city staff on decisions that will have an effect on Agency treatment facilities and its sewer/utility lines.

### 1.10 DEVELOPMENT TRENDS

IEUA's service area is experiencing a tremendous amount of growth in business, industry and real estate. With the fast-paced growth, the Agency has developed a Wastewater Facilities Master Plan<sup>3</sup> to build the necessary infrastructure to ensure a reliable, clean water supply. Projects include increasing the daily processing capacity of several wastewater treatment plants and expanding the Regional Recycled Water Distribution System throughout the Agency's service area. Additionally, several of the cities have future plans for master planned communities that include both residential and retail development, while other cities are fully developed and do not anticipate additional growth. All future development that will take place is planned to occur in accordance with the General Plan Land Use Zones and will consider all potential hazards identified within this 2023 LHMP. Additionally, all development will be in compliance with all Fire, Flood, and Seismic codes of the County and State at the time of development.

In 2015, during Urban Water Management Planning<sup>4</sup> efforts a comprehensive evaluation of land use trends was prepared for the region. The planning effort resulted in following projection of land use trends:

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<sup>3</sup> Prepared by ESA 2016. [IEUA-Facilities-Master-Plan-DEIR-PRINT.pdf](#)

<sup>4</sup> Planned prepared by Kennedy Jenks 2020 [Final-IEUA-2020-UWMP.pdf](#)

Land Use (du/ac)	Acreage Inventory by Year					
	2015	2020	2025	2030	2035	2040
Residential Very Low (<1 - 2)	9,089	9,504	10,155	10,282	10,115	11,522
Residential Low (3 - 7)	26,329	27,090	28,463	29,691	30,804	32,593
Residential Medium (8 - 14)	3,067	3,500	3,959	4,425	4,663	5,915
Residential High (15 - 24)	2,349	2,678	3,131	3,263	3,300	3,427
Residential Very High (25+)	231	256	283	408	466	646
Commercial	6,838	6,925	7,180	7,994	8,456	9,221
Industrial	16,974	18,587	19,856	20,141	20,306	20,420
Public/Institutional	2,979	2,990	3,066	3,095	3,289	3,334
Parks, Schools, Irrigation	5,629	5,687	5,657	5,890	5,963	6,154
Agriculture	2,026	1,534	1,175	630	376	68
Unique Water Users	863	863	852	852	852	852
Non-Irrigated	34,438	34,410	35,668	35,833	35,904	36,085
Vacant	19,724	16,512	11,090	8,032	6,042	298
<b>Total</b>	<b>130,537</b>	<b>130,537</b>	<b>130,537</b>	<b>130,537</b>	<b>130,537</b>	<b>130,537</b>

In 2014, IEUA undertook an extensive effort to develop a long-range plan to address infrastructure needs of the region, the result of that effort was the 2014 Wastewater Facilities Master Plan (WFMP). In coordination with local cities and municipalities, IEUA was able to determine current land use and project future land uses for the region. In addition, the project also elaborated further to project wastewater flows generation from the planned development trends, these projects were ultimately used as the basis for design for the facilities expansions at Regional Water Reclamation Facility No. 1 (RP-1) and RP-5.

## **SECTION 2. PLAN ADOPTION**

### **2.1 ADOPTION BY LOCAL GOVERNING BODY**

Pursuant to the mitigation planning regulations, Inland Empire Utilities Agency LHMP will be submitted to the California Office of Emergency Services (Cal EOS) for review and approval. Cal OES will conduct a review of the Plan in accordance with the Code of Federal Regulations; once this review is complete and any revisions are made, CalOES will forward the plan to FEMA for another review and revisions, as FEMA requires. CalOES will notify IEUA when FEMA has approved the final LHMP. The final approval letter of approval will be pending adoption by the Agency’s Board of Directors. The Board of Directors Resolution will be sent to CalOES, and CalOES will submit the Resolution to FEMA. SEMC will send a copy of the LHMP and Resolution to the San Bernardino Office of Emergency Management.

### **2.2 PROMULGATION AUTHORITY**

The Promulgator Authority for the adoption of the Hazard Mitigation Plan Inland Empire Utilities Agency and for the Board of Directors and incorporation of the LHMP into the San Bernardino County Operational Area Multi-Jurisdictional General Plan is:

**MARCO TULE – President**

Representing Division 1 – Cities of Upland and Montclair, the unincorporated area of San Antonio Heights, and portions of Ontario and Rancho Cucamonga

**STEVEN J. ELIE – Vice President**

Representing Division 3 – Cities of Chino and Chino Hills.

**JASMIN A. HALL – Secretary/Treasurer**

Representing Division 4 – City of Fontana, and portions of Rialto and Bloomington.

**MICHAEL CAMACHO – Director**

Representing Division 5 – City of Rancho Cucamonga, a small portion of Fontana and a portion of the unincorporated territories in Fontana’s sphere of influence.

**PAUL HOFER – Director**

Representing Division 2 – City of Ontario, the unincorporated Agricultural Preserve, and a portion of the unincorporated territories in the city of Fontana’s sphere of influence.

## 2.3 PRIMARY POINT OF CONTACT

The Point of Contact for information regarding this LHMP is:

**Tony Arellano, Safety Officer**

Inland Empire Utilities Agency

6075 Kimball Avenue, Chino, CA 91708

(909) 993-1919 (Office)

[aarellano@ieua.org](mailto:aarellano@ieua.org)

Consultant Primary Contact

**Gary Sturdivan**

Project Lead

Sturdivan Emergency Management Consulting, LLC.

(909) 658-5974

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## SECTION 3. PLANNING PROCESS

### 3.1 PREPARING FOR THE PLAN

IEUA developed a broad approach in preparation for the update to our hazard mitigation plan. As an active participant with the County of San Bernardino's Multi-Hazard Multi-Jurisdictional Mitigation Plan, IEUA used the County provided resources to assist in the development and evaluation of data to start the update of plan.

Internally IEUA has a wealth of experienced and resourceful employees that provided benefit to the program. The IEUA team participated in regular discussions, staff meetings, and in health and safety committee meetings in support of the plan update. The IEUA team were invited to the meeting through emails and Microsoft Outlook calendar. Members of this team also participated in community outreach events such as fairs and local city functions.

In addition to participating at the County level, IEUA staff participated in plan updates with local agencies that were also undergoing plan updates. This included staff from the City of Chino, Chino Hills, Chino Valley Unified School District, Chino Valley Independent Fire District, Chino Valley Medical Center, and the Chino Valley Chamber of Commerce. This team also participated in the community outreach with local businesses and members of the public through fairs and events.

The Agency's approach in updating the plan consisted of:

- Establishing the internal planning team
- Coordination with outside agencies, organizations, jurisdictions, and the public
- Documenting past events
- Posting the meeting agendas, meeting minutes, and draft LHMP onto IEUA website and asking for public input and comments on the planning process
- Conducting public outreach
- Reviewing and updating the hazards
- Reviewing and updating mitigation measures
- Plan Adoption

During the planning process, the Planning Team utilized the following plans to gain information on the hazards facing the area and mitigation goals of IEUA.

<u>Study Plan</u>	<u>Key Information</u>
<b>Urban Water Management Plan</b>	Land Use Trends
<b>2016 IEUA LHMP</b>	Hazard Identification, Mitigation Measures
<b>San Bernardino County HMP</b>	Mitigation Measures and Goals, Hazards,
<b>USGS Golden Guardian 2008</b>	Earthquakes, Affects, Planning
<b>2020 San Bernardino County LHMP</b>	Land Use For Area, Future Projects
<b>2018 California HMP</b>	Goals For The State Of California
<b>San Bernardino County Flood Control</b>	Gain Information On Future Flood Control Projects
<b>FEMA Flood Insurance Study for S.B. County</b>	Flood History

The planning process consisted of:



## 3.2 PLANNING TEAM

As identified in **Section 3.1**, there were several planning teams associated with the preparation of the update. The Hazard Mitigation Plan was compiled and authored by members of the following Agency Planning Team:

Tony Arellano  
**Safety Officer, Inland Empire Utilities Agency**  
*Description of Involvement: Member of Planning Team*

Erik Cortez  
**Safety Analyst, Inland Empire Utilities Agency**  
*Description of Involvement: Member of Planning Team*

Warren T. Green  
**Manager of Contracts and Procurement, Inland Empire Utilities Agency**  
*Description of Involvement: Member of Planning Team*

Ryan Love  
**Deputy Manager of Operations, Inland Empire Utilities Agency**  
*Description of Involvement: Member of Planning Team*

Nolan King  
**Manager of Information Technology, Inland Empire Utilities Agency**  
*Description of Involvement: Member of Planning Team*

Austin Perkins  
**GIS Specialist, Inland Empire Utilities Agency**  
*Description of Involvement: Member of Planning Team*

Victoria Salazar  
**Associate Engineer, Inland Empire Utilities Agency**  
*Description of Involvement: Member of Planning Team*

Bonita Fan  
**Senior Environmental Resource Planner, Inland Empire Utilities Agency**  
*Description of Involvement: Member of Planning Team*

Anne Pandey  
**Grants Administrator, Inland Empire Utilities Agency**  
*Description of Involvement: Member of Planning Team*

Nicole Slavin  
**External Affairs Specialist, Inland Empire Utilities Agency**  
*Description of Involvement: Member of Planning Team*



### 3.3 COORDINATION WITH OTHER EXTERNAL JURISDICTIONS, AGENCIES, AND ORGANIZATIONS

The Internal and External Planning Teams include 12 people from Inland Empire Utilities Agency, and three people from local water agencies. The County of San Bernardino OES was invited to be on the Planning Team, but they were unable to attend, however, they reviewed that plans content. In Appendix A is the meeting matrix outlining the subjects covered and the attendees.

The Planning Team participated in monthly meetings to coordinate efforts, provide input, and receive support for the LHMP. The support included receiving technical expertise, resource materials, and tools. The Agency facilitated the LHMP process and provided information which follows FEMA requirements for the program. The tools, resource materials, and other project related information are maintained on a project portal on the Agency's website <https://www.ieua.org/> which allowed access to the information by all participants and the public, screenshots are located under Appendix B. Mr. Gary Sturdivan's contact information was on each document for questions and concerns. The Planning Team reviewed the document and made corrections or voiced concerns to the consultant. These comments were discussed at the next Team meeting, and corrections were then made to the document, these meetings were not publicly held. Accomplishing a shared goal for emergency preparedness and hazard mitigation requires the coordinated efforts of various jurisdictions, agencies, and organizations.

This team's objective consisted of:

- Assisting all participating jurisdictions with the Hazard Mitigation Plan planning process
- Providing guidance for the CalOES and FEMA requirements
- Assisting in the development of regional maps and support information regarding hazards
- Providing a forum to all jurisdictions participating in the update for questions and issues to be discussed

IEUA staff participated in each of the scheduled stakeholder meetings and conference calls facilitated by SEMC related to the update project. See **Appendix A** for meeting agendas discussing LHMP update.

### 3.4 PUBLIC INVOLVEMENT/OUTREACH

In support of the Inland Empire Utilities Agency's LHMP update, the Agency solicited information from members of the public through various methods. IEUA conducted their outreach through various social media including Facebook and Instagram in order to distribute a questionnaire, along with posting sections of the draft LHMP onto IEUA website.

These methods consist of:

- Community Outreach events
- Local Emergency Coordination meetings

- Plan/Project inclusion in the Agency’s Programs which includes mitigation actions that require public involvement and are open for public comment. (10 Year Capital Improvement Plan, Annual Budget Report, etc.)

## **October 2022, The Great ShakeOut**

Inland Empire Utilities agency participated in The Great ShakeOut. Through this plan, we provide information on disaster response related to the Agency’s business and water. This information includes steps the Agency has taken to respond to earthquake emergencies that impact the Agency and the surrounding community.

### **3.5 ASSESS THE HAZARD**

A critical component of the LHMP process is to assess the likely hazards that may impact the District’s facilities and operations. It is important to have a thorough understanding of these hazards without over-analyzing remote or highly unlikely hazards.

This LHMP has been developed through an extensive review of available information on hazards HDWD has faced in the past and most likely will face in the future. The Planning Team reviewed and discussed items that have happened in the State of California as well as disasters that have happened in the District’s service area and in Southern California. The Team reviewed documents such as engineering drawings, photographs, and available geotechnical and geologic data both from the Internet and outside sources such as FEMA Hazard Mapping, San Bernardino County hazard maps, and documents.

Additionally, for each of the profiled hazards, the IEUA Planning Team then analyzed the community’s exposure to each hazard (inventory of assets) and the potential impact under scenario events. The Planning Team used HAZUS, and hazards intersect analyses recently completed within San Bernardino County to produce this information. See Section 4 for more information.

### **3.6 SET GOALS**

The goal setting process for the 2023 Hazard Mitigation Plan update consisted of the Planning Team reviewing the hazard exposure and scenario impacts developed during the Risk Assessment portion of the process. With understanding of the risk, the community is potentially facing, the Planning Team then re-evaluated the 2016 Hazard Mitigation Plan Goals and Objectives; assessed their status and effectiveness in meeting the 2016 Mitigation Measures and identified new Goals and Objectives.

### **3.7 REVIEW AND PROPOSE MITIGATION MEASURES**

The process of identifying mitigation measures began with a review and validation of the previous mitigation measures in the Agency’s 2016 Hazard Mitigation Plan. Using the existing plan as a

starting point, the planning team completed an assessment of whether the measures were still valid. Through this discussion, the development of new mitigation measures was determined.

The planning team identified and analyzed mitigation measures relative to each of the hazards that influence the Agency. This analysis assisted the Agency in developing an implementation strategy for the prioritization of mitigation measures. Meetings (both in-person and virtual) were held with the planning team, both as a group, and through meetings within their own departments to solicit input on the plan updates.

A wide variety of mitigation measures that can be identified to help reduce the impact of the hazards or the severity of damage from hazards was examined. The projects were identified to help ensure the implementation of the Planning Team's goals and objectives. The following categories were used in the review of possible mitigation measures:

1. Public Information and Education - Outreach projects and technical assistance.
2. Preventive Activities - Zoning, building codes, stormwater ordinances
3. Structural Projects - Detention basins, reservoirs, road, and bridge improvements
4. Property Protection - Acquisition, retrofitting
5. Emergency Services - Warning, sandbagging, road signs/closures, evacuation
6. Natural Resource Protection - Wetlands, protection, best management practices.

In addition to the STAPLEE methodology, each Stakeholder Planning Team incorporated other criteria/factor questions into the process to help engage and solicit input from members.

Based on STAPLEE, the Planning Team addressed the following questions to determine mitigation options:

Does the Action:

1. Solve the problem
2. Address Vulnerability Assessment?
3. Reduce the exposure or vulnerability to the highest priority hazard
4. Address multiple hazards?
5. Address more than one (1) Goal/Objective?
6. Benefits equal or exceed costs?

Can the Action:

1. Be implemented with existing funds?
2. Be implemented by existing state or federal grant programs?
3. Be completed within the 5-year life cycle of the LHMP?
4. Be implemented with currently available technologies?

Will the Action:

1. Be accepted by the community?
2. Be supported by community leaders?
3. Adversely impact segments of the population or neighborhoods?
4. Result in legal action such as a lawsuit?
5. Positively or negatively impact the environment?

Is there:

1. Sufficient staffing to undertake the project?
2. Sufficient funds to complete the project?
3. Existing authority to undertake the project?

After going through this process for each project, the Stakeholder Planning Team had the ability to identify the higher priority projects.

### 3.8 DRAFT THE HAZARD MITIGATION PLAN

The IEUA Hazard Mitigation Plan Update was drafted by the Project Manager, based on input and comments provided by the Planning Team. As indicated previously, the Planning Team used the 2011 and 2016 LHMP as a starting point but revised it to reflect updated information.

The Agency's consultant-led the Planning Team and prepared the draft LHMP with input from the Planning Team, outside water district in the area, and the public. The Planning Team reviewed and commented on the draft LHMP, and subsequent changes were made before the LHMP was finalized and adopted by the Board of Directors. All draft documents were posted on the Agency's website. Notices were sent to all water customers in the service area, via. Public Updates, Public social media that IEUA has at its disposal. Stating all LHMP documents were posted on the website and asked for comments.

The LHMP was reviewed in comparison to the FEMA-designed Review Tool. The Review Tool links the federal requirements and identifies the sections in the LHMP where the information can be found and provides a rating as to the level of compliance with the federal regulations.

Once the LHMP update was drafted the Planning Team finalized the plan and forwarded it to Cal/OES and FEMA for approval.

### 3.9 ADOPT THE PLAN

After the public review, the draft plan will be submitted to the State of California OES for review. Once the State has approved the LHMP, the document will be sent to FEMA by the State. FEMA will provide the Agency with an "Approval Pending Adoption" letter when the Hazard Mitigation Plan update meets all federal requirements. Upon receipt of this letter, the final plan

will be posted on the Agency's Website for a 30-day public comment period and then submitted to Water Agency's Board of Directors for consideration and adoption. Once adopted, the final resolution will be submitted to FEMA for incorporation into the Local Hazard Mitigation Plan, and a copy of the resolution will be sent to CalOES and FEMA. A copy of the final LHMP will be delivered to San Bernardino County office of Emergency Management.