6

Hazards, Safety, and Noise

From the Prado Regional Park in the south of the city to the hills to the southwest and the San Gabriel Mountains to the north, the scenic natural beauty of the landscape around Chino helps define the character of the community. The landscape also holds potential for natural hazards that pose risk to human health and property, including earthquakes, flooding, wildfire, and wind-related hazards. These risks are compounded by the warming of the climate, which is projected to bring increased rainfall intensity, hotter average daily temperatures, and more extreme weather events. Urban development in the area has also brought the potential for human-made disasters and disturbances.

This chapter identifies natural and human-made hazards in Chino as well as measures to promote public safety and effective emergency response and recovery. It satisfies the statutory requirements for the General Plan Safety and Noise Elements. Police, fire, and emergency medical response are also addressed in the Community Services, Parks, and Recreation Element. Utility and roadway infrastructure, which are critical facilities, are addressed in the Infrastructure Element.

Hazard Protection

Recognizing the risks facing the community, the City maintains a Local Hazard Mitigation Plan (LHMP) that articulates a plan for reducing and/or eliminating risk from natural and humanmade hazards and enhancing community resilience. The LHMP assesses risks associated with earthquakes, wildfire, flooding, drought, extreme weather, severe wind, hazardous materials accidents, terrorist attack, and other hazards specific in Chino, and it identifies mitigation goals, objectives, and projects to reduce those risks. The LHMP presents a detailed profile of each potential hazard, describing primary and secondary effects, magnitude/severity, previous occurrences, and the likelihood of future occurrences. An assessment of impacts to vulnerable populations, property, critical facilities, and infrastructure and the effects of climate change is also included. To ensure its continued effectiveness and to remain eligible for federal funding in the event of a disaster, the Federal Emergency Management Agency (FEMA) requires that the LHMP be updated every five years.

The LHMP is incorporated by reference into the Hazards, Safety, and Noise Element of the General Plan. The Chino Municipal Code also incorporates development standards and hazard risk mitigation protocols that address natural and humanmade hazards in the community. Hazards, Safety, and Noise Element policies and actions provide a framework to guide City planning and decision-making related to natural and humanmade hazards.

SEISMIC HAZARDS

Like much of California, Chino is located in a seismically active region. Major regional faults in the area include the Sierra Madre, San Jacinto, and the San Andreas Faults located approximately 12 miles, 20 miles and 43 miles from the planning area, respectively. Additionally, there are two known faults in the vicinity of Chino, as shown on **Map HSN-1**. The Chino Fault is part of the Elsinore Fault Zone, one of the major regional fault systems in Southern California. Located to the southwest of Chino, the Chino Fault runs through parts of San Bernardino County and Riverside County, generally trending northwest-southeast. It is classified as a Quaternary fault, meaning it is considered active and capable of producing significant earthquakes, though no major seismic event has been recorded on it in recent history. Estimated magnitudes for potential earthquakes on this fault range from 6.0 to 6.5 or even higher, depending on how much of the fault ruptures. The Central Avenue Fault, located within the City limit, is a lesser-known local fault. It is likely part of a network of smaller, secondary faults, possibly related to compressional forces between larger regional fault systems. It is classified as a pre-Quaternary or inactive fault and available data suggest it may have low or moderate activity compared to regional faults.

Chino Cares emergency survival kit demonstration

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Map HSN-1: Seismic Hazards

Most current map:
https://usgs.maps.arcgis.com/apps/webappviewer/index.html?id=5a6038b3a1684561a9b0aadf88412fcf

Quaternary Faults

- Well Constrained
- Moderately Constrained
- Inferred
- Alquist Priolo Fault Zone

- Parks and Recreation
- City of Chino
- Sphere of Influence

0 ½ 1 2 Miles

Data Source: U.S. Quaternary Faults, USGS, 2017; City of Chino GIS, 2023; San Bernardino County GIS, 2023; Dyett & Bhatia, 2024.

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Given the extent of known faults in the planning area and the region, the potential for seismic hazards in Chino is high. Ground shaking generated by an earthquake results in the vast majority of damage during seismic events. Seismic hazards may be addressed though adherence to existing building codes and state and local regulations, though exposure to seismic risks cannot be completely eliminated.

FLOODING HAZARDS

Located on relatively flat land in a valley surrounded by hills and mountains, Chino is susceptible to flooding. Stormwater generally drains in a southwestern and southeastern direction, following the natural slope of the land toward the Santa Ana River and Chino Creek. In the early 20th Century when Chino was a primarily agricultural community, seasonal rains often caused runoff to pool in the valley floor, flooding roads and low-lying properties. Dairies and farms relied on irrigation ditches and natural drainage for flood control. As the population grew and urban development expanded following World War II, the need for modern drainage systems emerged. In 1956, construction of the San Antonio Dam was completed, providing critical flood control for the region, including Chino, dramatically reducing downstream flood risk by containing runoff from the San Gabriel Mountains. The Post War period also saw the construction of a network of storm drains and channels in the city to convey runoff and provide flood control. Management of other storm drainage facilities in Chino primarily falls to the San Bernardino County Flood Control District (SBCFCD) and the United States Army Corps of Engineers (USACE), although the City owns and maintains the Magnolia Channel.

Map HSN-2 shows areas of Chino prone to flooding, based on Flood Insurance Rate Maps prepared by FEMA. As shown, some lower lying areas in the northern part of the city adjacent to creeks and flood control channels are located in the 500-year flood plain, meaning there is a one-in-500 chance of flooding in a given year. Extensive areas in the southern part of the city are located in the 100-year flood plain, where water backs up behind the Prado Dam and where there is a one-in-100 chance of flooding in a given year. Located approximately 2 miles south of Chino, the Prado Dam provides flood control for portions of Orange, Riverside, and San Bernardino counties. The dam is owned and operated by USACE, who together with the Orange County Flood Control District (OCFCD) have responsibility for managing the Santa Ana River and the associated Prado Dam Flood Control Basin. Planned improvements for the Prado Dam include raising the crest of the spillway designed to safely release excess water from the reservoir when it reaches its maximum capacity. Once completed, areas below the 566-foot elevation mark will be subject to flooding when the water levels rise to the top of the dam. **Map HSN-3** shows areas of Chino at risk of inundation in the event of San Antonio Dam failure and high water levels at the Prado Dam.

Mill Creek Wetlands and Educational Park

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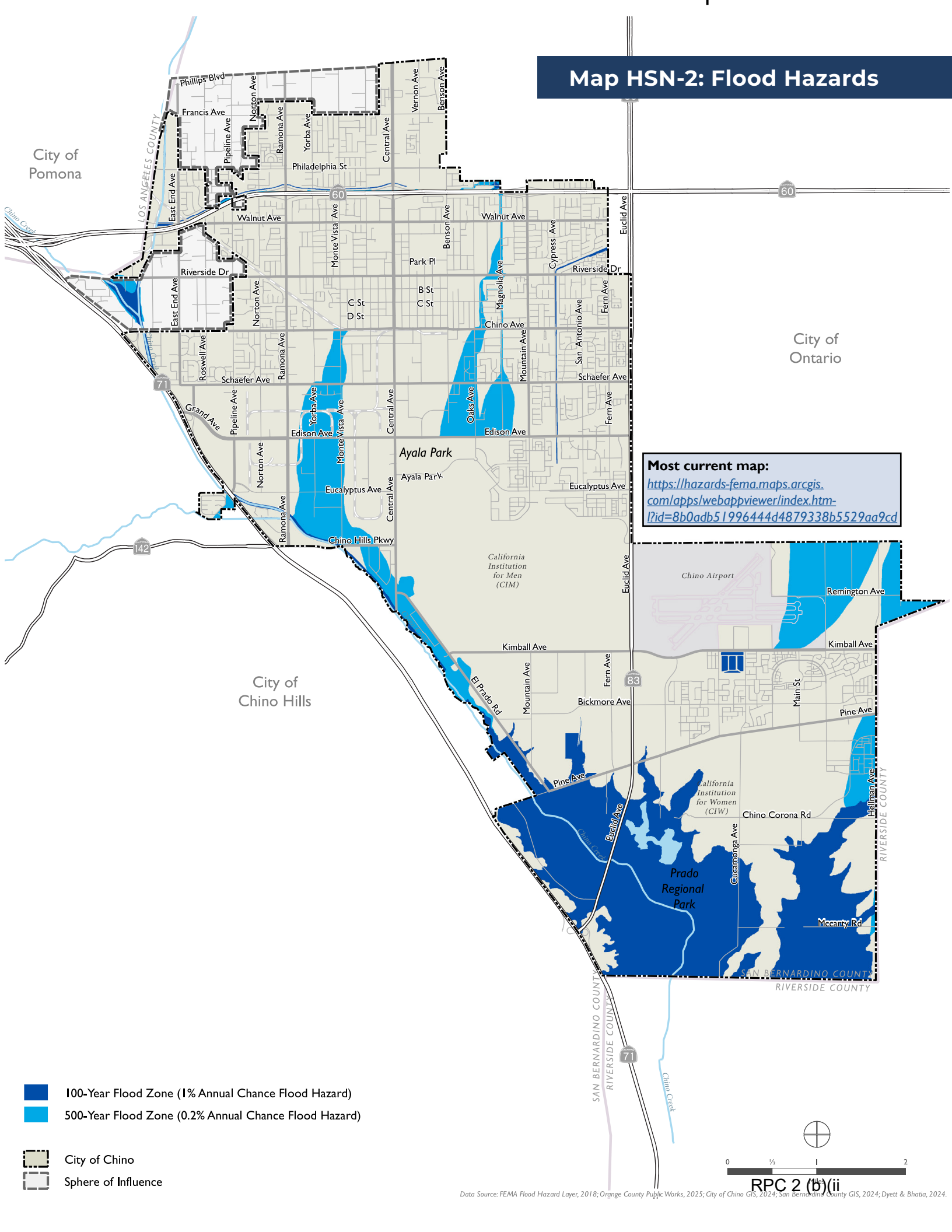
Map HSN-2: Flood Hazards



Most current map:
https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd

100-Year Flood Zone (1% Annual Chance Flood Hazard)

500-Year Flood Zone (0.2% Annual Chance Flood Hazard)

City of Chino

Sphere of Influence

0 ½ 1 2 Miles

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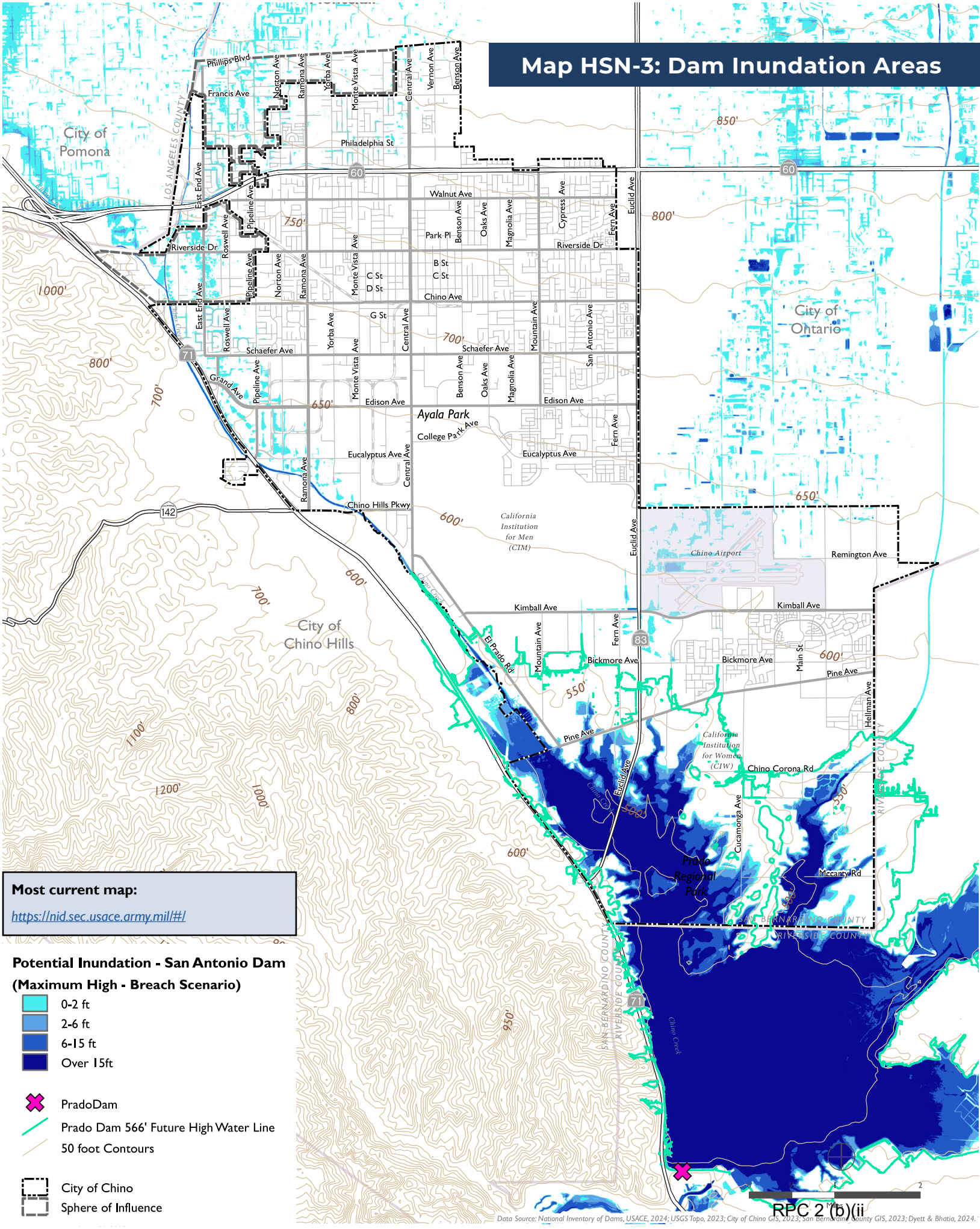
Data Source: FEMA Flood Hazard Layer, 2018; Orange County Public Works, 2025; City of Chino GIS, 2024; San Bernardino County GIS, 2024; Dyett & Bhatia, 2024.



Most current map:

https://nid.sec.usace.army.mil/#/

Potential Inundation - San Antonio Dam
(Maximum High - Breach Scenario)

- 0-2 ft
- 2-6 ft
- 6-15 ft
- Over 15ft

- PradoDam
- Prado Dam 566' Future High Water Line
- 50 foot Contours

- City of Chino
- Sphere of Influence

Data Source: National Inventory of Dams, USACE, 2024; USGS Topo, 2023; City of Chino GIS, 2023; San Bernardino County GIS, 2023; Dyett & Bhatia, 2024.

RPC 2 (b)(ii)

The City has prepared master plans of drainage that identify drainage facility improvements needed to address system capacity deficiencies and accommodate planned development citywide. In recent decades, Chino has invested heavily in storm drains, detention basins, and creek improvements. The bulk of planned storm drainage improvements are planned in southern part of the city to accommodate development envisioned in The Preserve Specific Plan area, where development has been planned outside of the 100-year flood plain. These improvements will help address localized flooding, particularly along major roadways such as Euclid and Pine. Capital improvement projects planned for the older northern part of Chino primarily address older infrastructure. Future development will be required to comply with stormwater control regulations that require the use of low impact development (LID) features to limit the volume and velocity of runoff to the City's storm drain facilities through the use of detention/retention practices and other best management practices (BMPs). Therefore, future municipal storm drainage improvements will focus on maintaining deteriorating assets or system optimization.

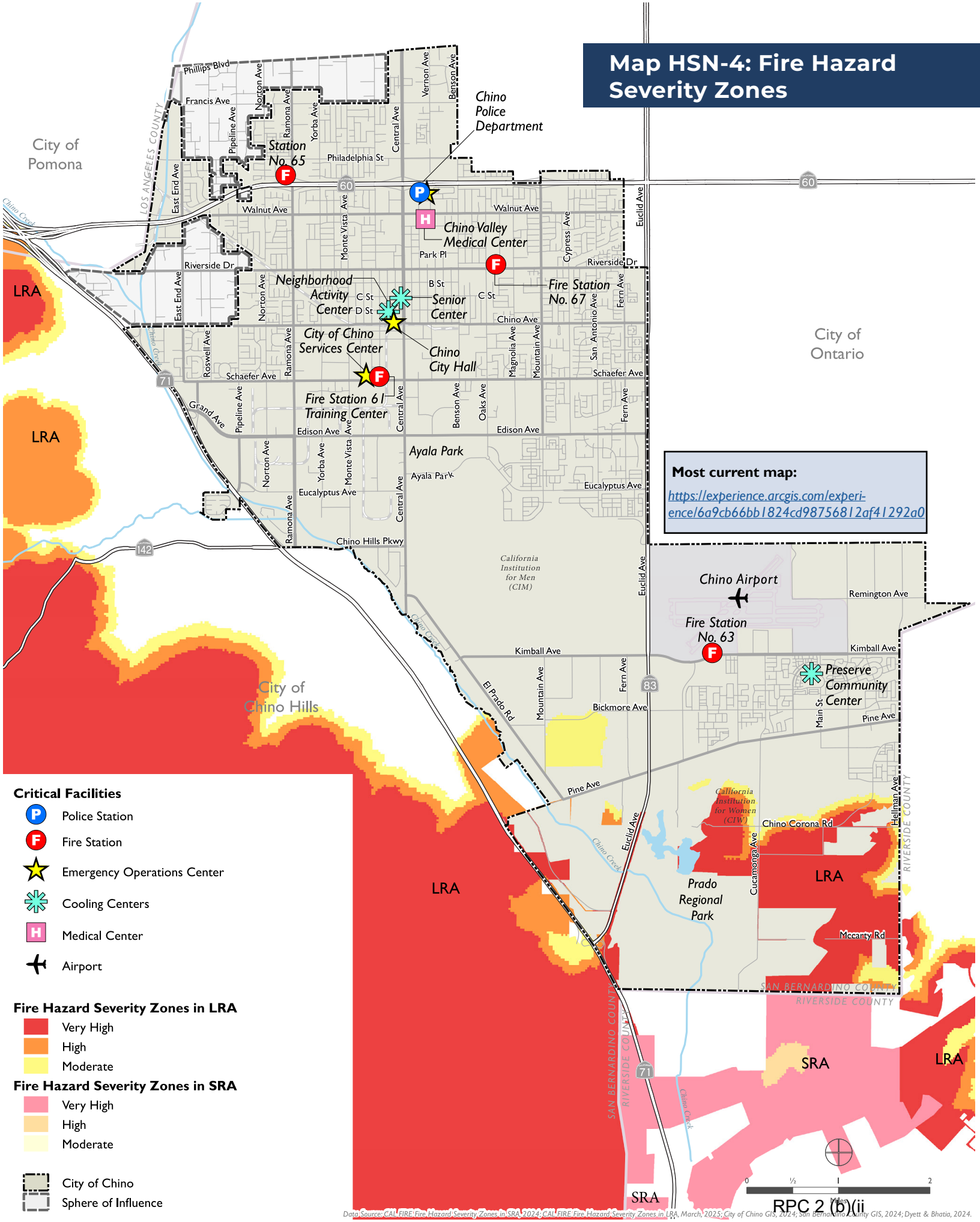
Prado Regional Park

WILDFIRE AND WIND HAZARDS

The Inland Empire is a fire-prone region by nature due to its relatively high temperatures, low humidity, and low precipitation during the summer, followed by a fall season that includes high velocity, very dry Santa Ana winds. Climate change influences these patterns by making the climate generally hotter and drier. In recent years, age-old fire patterns have been broken, with more fires occurring outside the historic fire season, and growing larger and more difficult to contain. According to data from the California Department of Forestry and Fire Protection (CAL FIRE), between 2016-2023, San Bernardino County witnessed 56 wildfire events, burning almost 78,800 acres, although with the exception of the Blue Ridge Fire, none of these events occurred near the City of Chino.

CAL FIRE has designated Fire Hazard Severity Zones (FHSZs) throughout the state based on factors such as fire history, flame length, blowing embers, proximity to wildland, terrain, and weather to indicate varying degrees of fire hazard (i.e., moderate, high, and very high). FHSZ maps evaluate physical conditions that create a likelihood that an area will burn over a 30- to 50-year period. As an urbanized community, wildfire hazard is minimal in most of Chino; however, approximately 1,095 acres in the south portion of the City are designated and Very High FHSZs (see **Map HSN-4**). Much of this land is within the Prado Regional Park, although 125.6 acres of land designated for residential use in The Preserve Specific Plan is designated as Very High FHSZ, as is a large portion of the California Institution for Women site and areas flanking Euclid Avenue south of Pine Avenue. Wildfire risk in these areas is from wind-driven fires and human factors, including sparks from vehicles on adjacent roadways, fireworks, or campfires. No critical facilities

Map HSN-4: Fire Hazard Severity Zones



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or infrastructure is located within Very High FHSZs.

Additionally, due to the city's valley-floor location, wildfires anywhere within the region negatively impact the community's air quality because the surrounding mountains trap air pollutants like wildfire smoke. Wildfire smoke includes particulate matter and volatile organic compounds that add to the pollution burden the city already faces from traffic exhaust and industrial activities. Moreover, smoke inundation events can last for weeks. Exposure to wildfire smoke can cause respiratory problems, heart issues, headaches, and nausea, and repeated exposure can lead to a host of chronic health conditions including asthma and heart disease. Regional fire hazards also impact community safety via damage to regional energy infrastructure and roads and strain on local firefighting resources.

To address wildfire risk, the Chino Valley Fire District (CVFD) cooperates with CAL FIRE through a contract with CAL FIRE for wildfire emergency response. CVFD has primary responsibility for Local Responsibility Areas (LRA) within the City limit, although the Prado Regional Park is within federal responsibility areas and unincorporated and portions of the planning area within the City's Sphere of Influence (SOI) are designated State Responsibility Areas (SRA), where the State of California is financially responsible for the prevention and suppression of wildfires. CVFD plays a vital role in wildfire prevention and preparedness, enforcing local weed abatement ordinances that require property owners to clear weeds, brush, and other combustible vegetation and conducting regular inspections to ensure compliance with defensible space requirements, especially in wildland-urban interface (WUI) zones. CVFD requires property owners to comply with local regulations for fuel reduction in high-risk areas, and works closely with the Carbon Canyon Fire Safe Council on implementing the Community Wildfire Protection Plan that provides a strategic framework to address risk and enhance wildfire resilience in the Carbon Canyon area, including at-risk communities of Brea, Chino, Chino Hills, Corona, Diamond Bar, La Habra, La Habra Heights, Placentia, Rowland Heights, and Yorba Linda.

CVFD also leads public education and community engagement efforts around wildfire prevention and preparedness. The Ready! Set! Go! Program teaches residents how to prepare for wildfire threats, including evacuation planning, home hardening, and maintaining defensible space. CVFD also participates in fire safety fairs, hosts informational sessions, and distributes preparedness materials to the community.

CVFD's Ready! Set! Go! program

HAZARDOUS MATERIALS

Hazardous materials are used in Chino for a variety of purposes. Manufacturing processes often involve various hazardous materials, including flammable liquids, toxic gases, and corrosive chemicals; hospitals, clinics and laboratories may generate medical waste; pesticides, herbicides, fertilizers may be used for landscaping and in agricultural operations. Residential homes also generate household hazardous waste, such as batteries, paints and paint thinners, cleaning products, fluorescent light bulbs, and certain electronics. Accidents can occur in the production, use, transport and disposal of these hazardous materials. The probability of accidental spills is accentuated by the fact that the region is susceptible to earthquakes.

Federal, State, and local regulatory requirements and site-specific contingency and evacuation plans help to reduce potential threats. The San Bernardino County Fire Department serves as the Certified Unified Public Agency (CUPA) and is responsible for overseeing the six hazardous materials programs in the County. The Department is responsible for inspecting facilities that handle hazardous materials, generate hazardous waste, treat hazardous waste, own/operate underground storage tanks, own/operate aboveground petroleum storage tanks, or handle other materials subject to the California Accidental Release Program. In addition, the Department maintains an emergency response team that responds to hazardous materials and other environmental health emergencies 24 hours a day, 7 days a week. Additionally, the County has a Household Hazardous Waste program with 14 collection facilities , including one collection facility in Chino.

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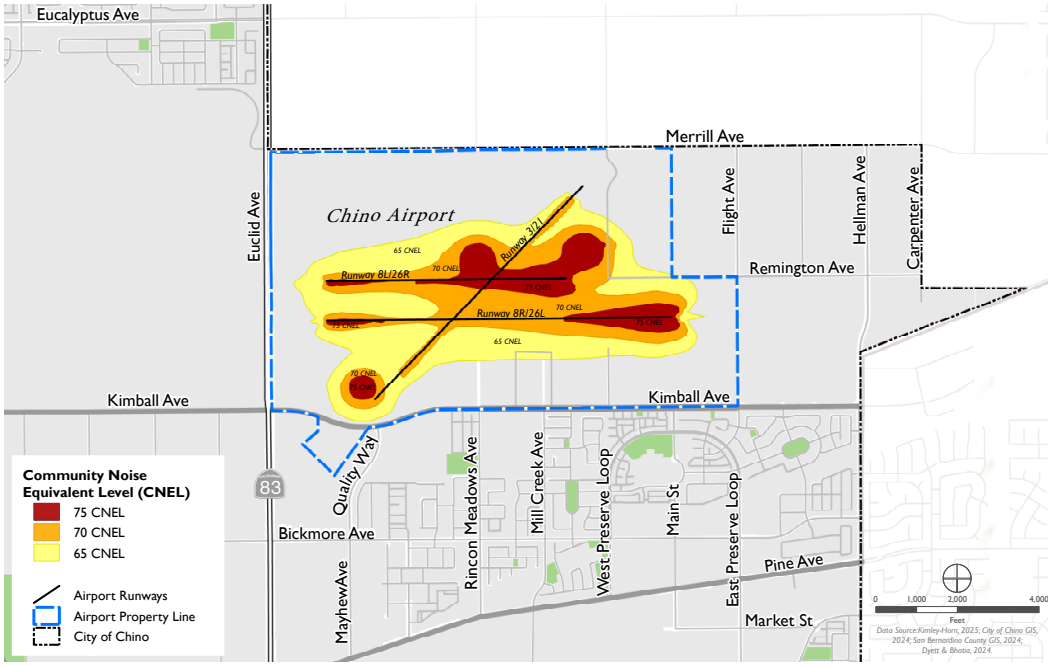
NOISE

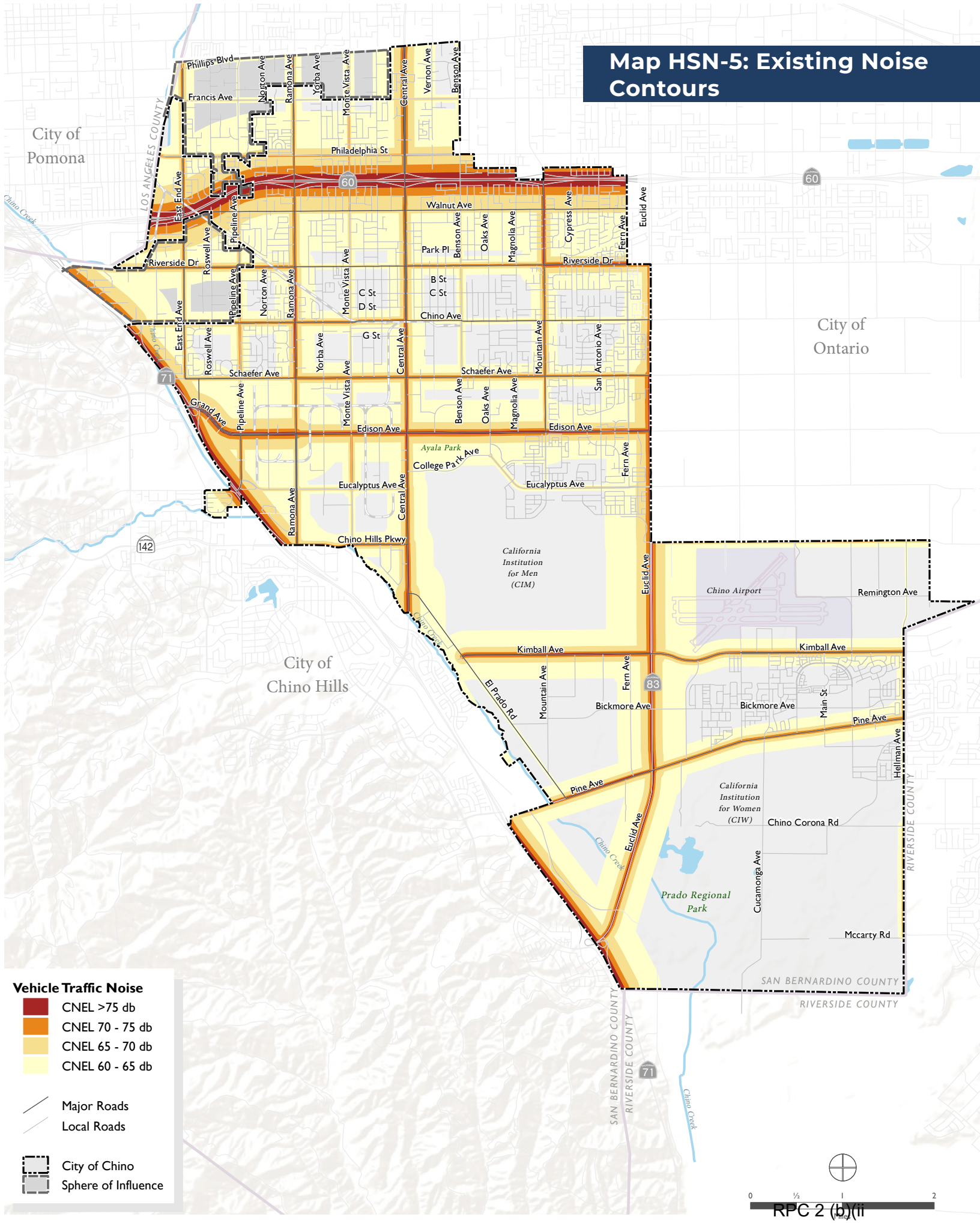
Sound shapes the way we experience the places we live, work, and play. A pleasant, healthy noise environment can reduce stress, improve health, and enhance quality of life in the community. In an urban environment, noise is a part of everyday life, but thoughtful planning and design can minimize unwanted noise. In Chino, the largest source of noise is generated by vehicle traffic on freeways and surface streets, and this will continue to be the noise source that affects most people as Chino continues to grow. Other sources of noise include non-road transportation noises, like freight rail and aircraft at the Chino and Ontario International airports; stationary point-source noises from commercial or industrial operations; and places where trucks congregate, including truck stops, repair facilities, and distribution hubs.

When noise levels are reported, they are typically expressed as a measurement over time to account for variations in noise exposure. Levels also account for varying degrees of sensitivity to noise during daytime and nighttime hours. The Community Noise Equivalent Level (CNEL) and Day-Night Noise Level (Ldn) both reflect noise exposure over an average day with weighting to reflect this sensitivity. As part of the General Plan process, existing and future noise sources were evaluated. Ambient noise monitoring was conducted to assess current noise levels in Sacramento at a variety of land uses proximate to major noise sources. Short-term daytime noise measurements were taken adjacent to major noise sources in the city. These measured noise levels included major noise sources (traffic and/or train pass-bys) in addition to non-traffic noise sources. **Map HSN-4** reflects the existing noise level contours for 60, 65, 70, and 75 dBA. **Map HSN-5** shows projected noise level contours at buildout of General Plan land uses in 2045. **Figure HSN-1** shows the existing noise contours surrounding the Chino Airport. Although the Airport's 65-CNEL noise contour does not extend beyond the boundaries of the airport property, noise from aircraft is audible in the southern part of the city and contributes to the ambient noise environment. No part of Chino is within the 60-CNEL noise contour of Ontario International Airport

Figure HSN-1: Airport Noise Contours



Map HSN-5: Existing Noise Contours



Vehicle Traffic Noise

- CNEL >75 db
- CNEL 70 - 75 db
- CNEL 65 - 70 db
- CNEL 60 - 65 db

- Major Roads
- Local Roads

- City of Chino
- Sphere of Influence

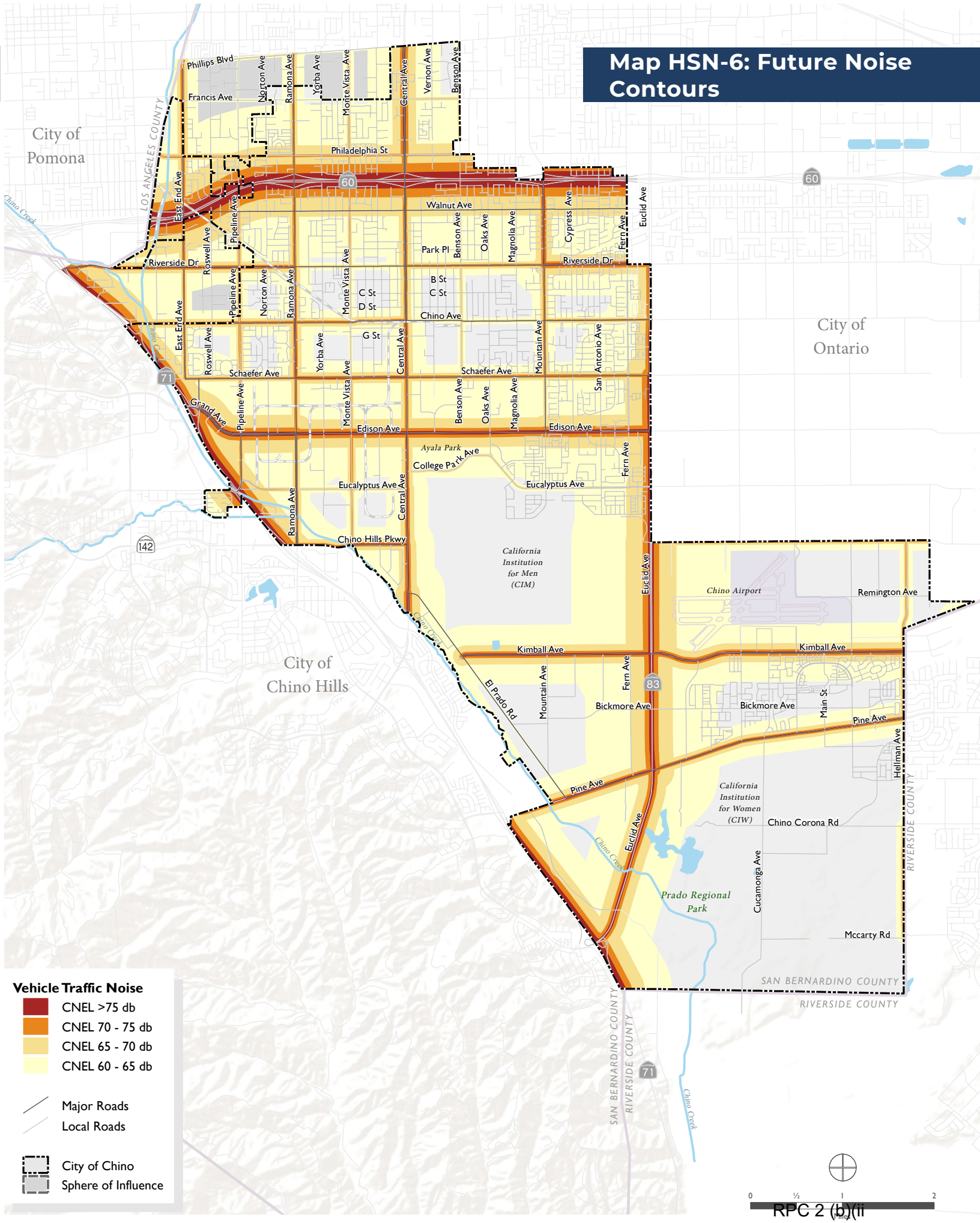
0 ½ 1 2 Miles

RPC 2 (b)(ii

Map Date: 4/14/2025

Data Source: Recon, 2025; City of Chino GIS, 2023; San Bernardino County GIS, 2023; Dyett & Bhatia, 2023.

Map HSN-6: Future Noise Contours



Vehicle Traffic Noise

- CNEL >75 db
- CNEL 70 - 75 db
- CNEL 65 - 70 db
- CNEL 60 - 65 db

- Major Roads
- Local Roads

- City of Chino
- Sphere of Influence

0 ½ 1 2 Miles

RPC 2 (b)(ii

Map Date: 4/14/2025

Data Source:Recon, 2025; City of Chino GIS, 2023; San Bernardino County GIS, 2023; Dyett & Bhatia, 2023.

HSN-1 HAZARD PROTECTION. Protect life and property from natural and humanmade hazards.

SEISMIC HAZARDS

Policies

HSN-1.1 Require that new development be sited and designed to minimize risks from seismic events, including fault rupture and seismic shaking.

HSN-1.2 Require that buildings intended for human occupancy and critical facilities be set back a safe distance (as determined by a qualified geologist) from surface traces of active and potentially active faults. As appropriate, require that proponents of projects in high-risk areas submit geotechnical investigation reports prepared by qualified professionals and demonstrate that the project conforms to all mitigation measures recommended by the reports prior to City approval.

HSN-1.3 Ensure that structures intended for human occupancy are designed and constructed to retain their structural integrity when subjected to seismic activity, in accordance with the California Building Code.

HSN-1.4 In order to maximize soil stability and erosion prevention, minimize excavation, grading, cutting, or filling during construction; permit grading operations only in areas scheduled for immediate construction or paving; require erosion prevention as a strategy in the planning and design of grading operations; and avoid or minimize removal of ground cover, vegetation, and canopies.

Actions

HSN-1.A Establish a program to inventory and evaluate earthquake hazards in existing buildings, especially buildings with unreinforced masonry (URME), and explore measures to encourage building owners to upgrade and retrofit structures to render them seismically safe.

FLOODING HAZARDS

Policies

HSN-1.5 Coordinate with the San Bernardino County Flood Control District to address storm drainage and flood control on a sub-regional basis in order to optimize the use of existing and planned conveyance facilities.

HSN-1.6 Design, construct, and maintain street and storm drain flood control systems to accommodate storm flows and comply with federal and State requirements, employing “green infrastructure” techniques as feasible and appropriate.

HSN-1.7 Permit in the 100-year floodplain only that development which represents an acceptable

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use of the land in relation to the hazards involved and the costs of providing flood control facilities. Locate critical facilities, such as hospitals, fire stations, police stations, public administration buildings, and schools outside of flood hazard areas to the extent practicable.

HSN-1.8 Review all development applications for areas within a 100-year flood hazard zone for consistency with FEMA National Flood Insurance Program (NFIP) standards to mitigate flood hazard potential.

HSN-1.9 Require that development projects employ low impact development (LID) design techniques that manage stormwater so as to infiltrate, filter, store, evaporate, and detain runoff close to the source of rainfall in order to reduce stormwater runoff and minimize increases in downstream runoff and/or impacts resulting from new development.

HSN-1.10 Through development agreements and compliance with adopted master drainage plans and existing regulations, require that new development provide necessary storm drainage improvements and ensure that upstream stormwater generators fully address stormwater needs on their property.

HSN-1.11 Protect and preserve natural features such as open space and agricultural lands within the Prado Regional Park that serve as natural mitigation against the impacts of flooding.

HSN-1.12 Refer projects proposing development below of the 566-foot elevation mark to the United States Army Corp of Engineers (USACE) to ensure that future land use proposals and activities are compatible with estimated levels and frequency of inundation. Permit only development that has been approved by USACE below the 566-foot elevation mark.

HSN-1.13 Coordinate with USACE to ensure the safety of the Prado and San Antonio Dams through regular inspection and routine maintenance.

Actions

HSN-1.B Continue to use Master Plans of Drainage to guide actions and investments to mitigate existing and future deficiencies in the municipal storm drainage system, updating periodically as need to keep them current.

HSN-1.C Prioritize capital improvement projects such as the Euclid Avenue Bridge Project and the Pine Avenue Bridge Connection that address roadway flooding in inundation-prone areas .

HSN-1.D Continue to participate in the Federal Emergency Management Agency Management Agency (FEMA) National Flood Insurance Program (NFIP), which enables property owners to

purchase flood insurance, and the Community Rating System (CRS), a voluntary incentive program that can reduce insurance costs in communities that implement floodplain management practices that go beyond the minimum requirements.

HSN-1.E HSN-1.e Maintain a proactive storm drain inspection and maintenance program to regularly clear debris from the storm drain system, identify maintenance needs, and optimize system capacity.

HSN-1.F Periodically review the risk of increased flooding hazards due to climate change and develop strategies to adapt to changing flood hazard conditions, including those related to monitoring, emergency preparedness, vegetation management, and development policies, and ensure that the City's hazard information is up-to-date regarding climate trends.

WILDFIRE AND WIND HAZARDS

Policies

HSN-1.14 Continue to participate in regional wildfire prevention initiatives and work to prevent wildland fire and to protect lives, property, and watersheds from fire dangers.

HSN-1.15 Maintain regulations and standards designed to achieve the greatest practical level of built-in fire protection to confine fires, including requirements for compliance with applicable provisions of the California Building Code, the California Fire Code, Board of Forestry Fire Safe Regulations, and California Government Code sections 51175 and 51189 related to Very High and High Fire Hazard Severity Zone.

HSN-1.16 Jointly with State, County, and other local agencies, inform property owners of wildfire risks and measures to reduce those risks, including by:

- Maintaining and making publicly available an up-to-date map of high and very high fire hazard areas consistent with CAL FIRE designations; and
- Disseminating information on fire weather watches and fire risks via the City website, social media, and newsletters.

HSN-1.17 Avoid, where feasible, locating new development in Very High Fire Hazard Severity Zones (FHSZ). If avoidance is not feasible, condition such new development on implementation of measures to reduce risks associated with that development.

HSN-1.18 Require new development in Very High and High FHSZs to prepare a Fire Protection Plan that minimizes risks by:

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- Assessing site-specific characteristics such as topography, slope, vegetation type, wind patterns etc.;
- Sitting and designing development to avoid hazardous locations (e.g. through fire breaks) to the extent feasible;
- Incorporating fuel modification and brush clearance techniques (including the removal of invasive species) in accordance with applicable fire safety requirements and carried out in a manner which reduces impacts to environmentally sensitive habitat to the maximum feasible extent;
- Using appropriate fire-safe building materials and design features, consistent with the adopted City Code and Fire and Building Code standards;
- Using fire-resistive, native plant species in landscaping;

- Complying with established standards and specifications for fuel modification, defensible space, access, and water facilities; and
- Requiring property owners to enter into a long-term maintenance agreement for vegetation management in defensible space, fuel breaks, and roadside fuel reduction.

HSN-1.19 Require that all new development located in a Very High and High FHSZs be served by adequate infrastructure, including safe access for emergency response vehicles, visible street signs, and water supplies for fire suppression.

HSN-1.20 To facilitate the orderly evacuation of residential areas within the Very High FHSZs, maintain minimum standards for roadway design, maintenance, and vegetation management.

HSN-1.21 To the extent feasible, ensure that housing, hospitals, care facilities, community centers, places of worship, and other facilities where people gather are set a minimum of 100 feet back from high voltage power lines or substations.

HSN-1.22 Work with responsible agencies and nongovernmental organizations to plan for post-fire recovery in a manner that reduces further losses or damages from future fires.

Actions

HSN-1.G Continue to collaborate with the Chino Valley Fire District to require proactive weed abatement, brush thinning, and removal services on new and existing development in Very High FHSZs in order to curb potential fire hazards, per adopted codes and ordinances.

HSN-1.H Cooperate with the CALFIRE and the Chino Valley Fire District to ensure that all portions of the Planning Area are served and accessible within an effective response time and to address regional wildfire threats.

HSN-1.I Coordinate with the Chino Valley Fire District to ensure planning for an adequate and sustainable water supply to meet fire suppression needs within Chino over the long term.

HSN-1.J Monitor issues related to damage from windstorms and undertake precautionary measures as needed, such as tree trimming in the public right-of-way.

HSN-1.K Update the municipal code to prohibit the use of fireworks and campfires on private property south of Pine Avenue in areas of elevated fire risk.

HAZARDOUS MATERIALS

Policies

HSN-1.23 Continue to require remediation of hazardous materials releases from previous land uses as part of any redevelopment activities.

HSN-1.24 Regulate development on sites with known contamination of soil or groundwater to ensure that construction workers, future occupants, adjacent residents, and the environment are adequately protected from hazards associated with contamination.

HSN-1.25 Consistent with State regulations, require proper storage and disposal of hazardous materials to reduce the likelihood of leakage, explosions, or fire, and to properly contain potential spills from leaving the site.

HSN-1.26 Promote awareness of and participation in hazardous household waste management, control, and recycling programs.

NOISE

Policies

HSN-1.27 Design for a pleasant, healthy sound environment conducive to living and working.

HSN-1.28 Ensure that noise does not have a substantial, adverse effect on the quality of life in the community.

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HSN-1.29 Protect occupants of existing and new buildings from exposure to excessive noise, particularly adjacent to freeways, major roadways, railway lines, and within areas of aircraft overflight.

HSN-1.30 Locate and design transportation facilities, industrial uses, and other potential noise generators to minimize the effects of noise on adjacent land uses.

HSN-1.31 Apply the community noise compatibility standards (**Table HSN-1**) to all new development and major redevelopment projects outside the noise and safety compatibility zones established in the Chino Airport Comprehensive Land Use Plan (ACLUP) in order to protect against the adverse effects of noise exposure. Projects within the noise and safety compatibility zones are subject to the standards contained in the ACLUP.

HSN-1.32 Require a noise study and mitigation measures for all projects that would expose people to noise levels greater than the "normally acceptable" standard and for any other projects that are likely to generate noise in excess of these standards.

HSN-1.33 Limit the potential noise impacts of construction activities on surrounding land uses through noise regulations in the Municipal Code that address allowed days and hours of construction, types of work, construction equipment, notification of neighbors, and sound attenuation devices.

HSN-1.34 Noise impacts should be controlled at the noise source where feasible (as opposed to at receptor end) with measures to buffer, dampen, or actively cancel noise sources. Site design, building orientation, building design, hours of operation, and other techniques, for new developments deemed to be noise generators shall be used to control noise sources.

HSN-1.35 Require noise buffering, dampening, or active cancellation, on roof-top or other out-door mechanical equipment located near residences, parks, and other noise sensitive land uses.

HSN-1.36 Developers shall reduce the noise impacts on new development through appropriate means (e.g. double-paned or soundproof windows, setbacks, berming, and screening). Noise attenuation methods should avoid the use of visible sound walls.

Actions

HSN-1.L Study the feasibility of using alternative pavement materials such as open-graded or rubberized asphalt pavements on high volume roadway segments adjacent to residential neighborhoods and mixed use districts to reduce noise generation. Based on the results, if appropriate conduct pilot projects and update City standards.

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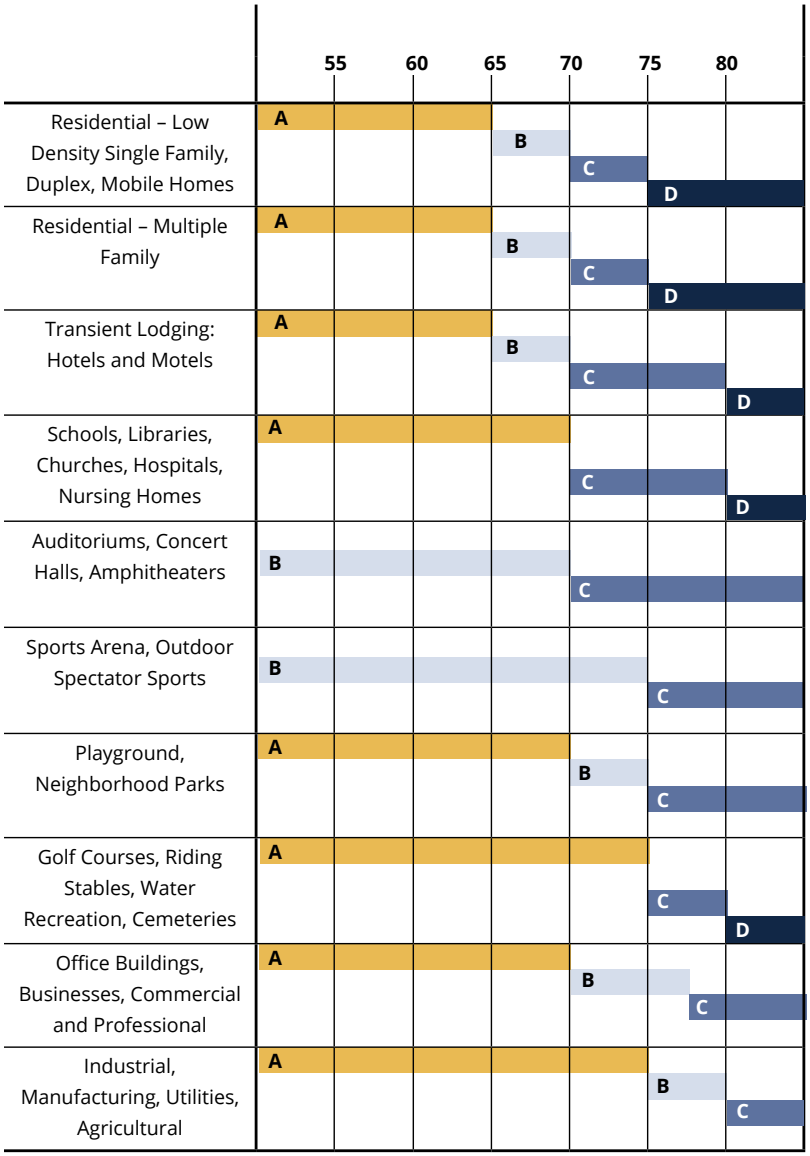
HSN-1.M Update the Municipal Code to establish controls on outdoor noise in commercial mixed use areas, such as outdoor dining terraces or public plazas. Controls may include limits on noise levels or hours of operation.

HSN-1.N Use the development review process to proactively identify and address potential noise compatibility issues.

HSN-1.O Continue to work with community members and business owners to address noise complaints and ensure voluntary resolution of issues through the enforcement of Municipal Code provisions.

Table HSN-1: Community Noise Compatibility Matrix



Normally Acceptable:
Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

Conditionally Acceptable:
New construction or development should be undertaken only after a detailed analysis of the noise reduction requirement is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

Normally Unacceptable:
New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

Clearly Unacceptable:
New construction or development should generally not be undertaken.

Source: Governor's Office of Planning and Research 2017.

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COMMUNITY RESILIENCE TO HAZARDS AND CLIMATE CHANGE

Climate change refers to long-term shifts in weather patterns, including temperature and precipitation. Over the course of the Earth's history, climate shifts have occurred naturally, but since the 1800s, human activities have been the main driver of climate change, primarily due to burning fossil fuels like coal, oil, and gas. Burning fossil fuels generates greenhouse gas (GHG) emissions that act like a blanket wrapped around the Earth, trapping the sun's heat and raising temperatures. As climate change progresses, it will continue to increase the frequency and severity of flooding, droughts, wildfires, and extreme heat events, that will both individually and collectively have increasing impacts on vulnerable populations, critical services, and infrastructure in Chino. While comprehensive, coordinated actions to reduce GHG emissions can help mitigate the extent of these impacts over the long term, additional actions must be taken to address the people, places, and infrastructure most at risk and to leverage other opportunities to effectively build community resilience to natural hazards and the effects of climate change.

The City's Climate Action Plan incorporates strategies to reduce GHG emissions, including strategies to bolster energy efficiency, reduce tailpipe emissions, and increase reliance on renewable energy sources. The LHMP also identifies a prioritized list of actions to mitigate climate risks, based on an assessment of climate vulnerabilities that describes local hazards, their extent, magnitude/severity, previous occurrences, and the likelihood of future occurrences. Hazards, Safety, and Noise Element policies focus on additional long-term actions to strengthen the resilience of community infrastructure to natural hazards and the effects of climate change, while at the same time identifying a robust framework of actions to increase public awareness and build community response capacit.

Please see the Health and Environmental Quality Element for policies that address urban heat.

A CHANGING CLIMATE

Since 2010, San Bernardino County and the State of California have experienced some of the most severe heat wave, drought, wildfire, and flooding events on record.

Heat: Chino recorded all-time record high temperatures of 120+ degrees F in 2018 and 2020.

Wildfire: Nearly 9,900 wildfires, including the Blue Ridge Fire in neighboring Chino Hills, burned about 4.3 million acres in California in 2020.

Drought: From 2012-2016, California experienced the most severe drought on record, including 13 of the 30 driest recorded months.

Flood: A series of atmospheric rivers brought unprecedented flooding to San Bernardino County communities between December 2022 and January 2023, described by the county as "sheer extreme nature that the area had not experienced since January of 1933."

Sources: OEHHA, CNRA, San Bernardino County, NOAA.

HSN-2 RESILIENT COMMUNITY. Build community resilience to natural disasters and the effects of climate change.

COMMUNITY PREPAREDNESS

Policies

HSN-2.1 Enhance collaboration with neighboring communities and agencies responsible for public safety in the region to closely coordinate and implement disaster-related plans, exercises, and training.

HSN-2.2 In partnership with the Chino Valley Fire District and other public agencies, promote community awareness and understanding of threat hazards, disaster response, and steps that can be taken to reduce personal risk by:

- Disseminating information in multiple formats to reach all segments of the community;
- Providing emergency preparedness and emergency alert information through social media, traditional media, community fairs, and direct information to neighborhood groups, residents, service clubs, and other community organizations; and
- Conducting educational seminars or evacuation practice events to enhance preparedness and response.

HSN-2.3 Proactively engage community members in supporting and helping coordinate collaborative city-wide efforts to prepare residents to respond to emergencies of all kinds.

Actions

HSN-2.A Actively promote registration for Chino Notify, the City's Community and Emergency Alert System to enhance community preparedness and emergency response. Target efforts to increase registration to residential areas that face the greatest evacuation challenges (**Map HSN-7**) as a priority.

HSN-2.B Increase participation in the Community Emergency Response Team and LISTOS program to train residents in the basic skills required to respond to their community's immediate needs in the aftermath of a disaster.

HSN-2.C In collaboration with the Chino Valley Fire District, study the feasibility of establishing Neighborhood Response Groups as a vehicle for public safety staff

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and residents to work together to raise awareness of best practices and check in on each other in the event of natural disasters. Consider promoting the establishment of Firewise Communities in Chino to achieve this objective, coordinating with Carbon Canyon communities where this model is used.

HSN-2.D Develop and maintain a network of resilience hubs at community facilities throughout Chino to serve as central points for gathering, sharing information, and accessing resources in the event of a natural or human-made disaster. Resilience hubs should be situated away from areas at risk of hazard impacts to the extent possible, located in easily accessible locations, and equipped with backup power supplies.

RESILIENT INFRASTRUCTURE

Policies

HSN-2.4 Consider climate impacts, risk, and uncertainty in designing and evaluating capital improvement projects and adjust infrastructure design standards and project locations to address asset- and site-specific vulnerabilities.

HSN-2.5 Plan for the continuity of operations at critical facilities following a disaster to help prevent interruption of emergency response.

HSN-2.6 Increase the resiliency of City-owned facilities and infrastructure to severe weather events and support homeowners and business owners in increasing the resilience of their buildings and properties, through retrofits, weatherization, and other improvements.

HSN-2.7 Require new development to underground utility lines wherever feasible and continue to coordinate with electricity and telecommunications providers to underground existing overhead lines throughout Chino.

HSN-2.8 Recommend and encourage the installation of backup generators and/or solar batteries in single-family homes to increase neighborhood energy resilience.

Actions

HSN-2.E Evaluate options for ensuring emergency power at critical facilities, including microgrids, solar capture and storage, distributed energy, and back-up generators. Consider the ability to reduce utility costs and carbon emissions in the assessment.

HSN-2.F Partner with utility providers, regional agencies, and neighboring jurisdictions to assess the vulnerability of energy infrastructure and identify improvements that increase its resilience to natural hazards.

Emergency Management and Response

With the potential for natural and human-made hazards in the planning area, it is critical that the City plan proactively to ensure the safety of residents in times of disaster. This involves ensuring that all parts of the city are accessible for both evacuation and emergency access, including areas of new development and areas of the city with fewer points of access to evacuation routes. The City recognizes the importance of emergency preparedness through the design and implementation of its Emergency Operations and Local Hazard Mitigation plans. These plans are based on the functions and principles of the Standard Emergency Management System (SEMS) and the National Incident Management System (NIMS). Principal evacuation routes in Chino include State Route 60 (SR-60), State Route 71 (SR-71), Euclid Avenue/State Route 83 (SR-83), and Chino Hills Parkway/State Route 142 (SR-142) as well as all arterial roadways within the city. Evacuation routes in the south and southwest of the city face potential disruption from a flood, earthquake, or wildfire event, which may block roadways or damage the roadway surface. In the event of widespread disruption to local evacuation routes, remaining evacuation routes may become congested, slowing down evacuation of the community or specific neighborhoods. This issue may be compounded since SR-60 and SR-71 also serve as evacuation routes for neighboring communities, and so potential disruptions may have regional effects.

EMERGENCY EVACUATION

An analysis of existing development patterns and roadway connectivity completed with the use of Geographic Information System (GIS) software indicates that some residential areas of the city have constrained emergency access. Shown on **Map HSN-7**, these evacuation-constrained properties are generally concentrated in the older, northern part of the city and in the SOI. These properties have access to only one emergency evacuation route, which can significantly impede the swift and orderly movement of residents to safer locations and can lead to congestion, delayed emergency response times, and heightened risk to life and property. However, these properties are located outside of areas at the greatest risk from hazards such as flooding, wildfire, and seismic events.

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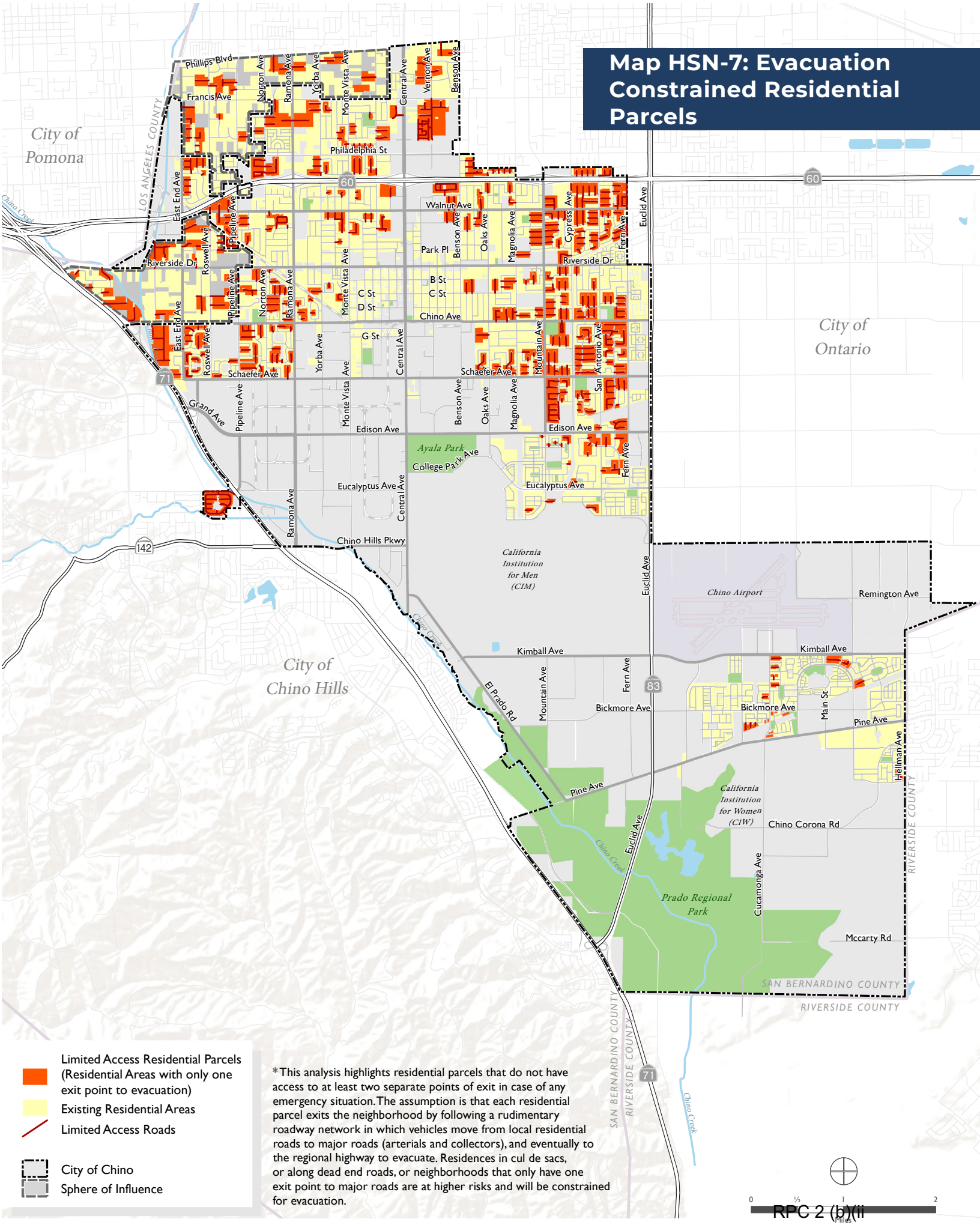
Map HSN-7: Evacuation Constrained Residential Parcels



Limited Access Residential Parcels (Residential Areas with only one exit point to evacuation)

Existing Residential Areas

Limited Access Roads

City of Chino

Sphere of Influence

*This analysis highlights residential parcels that do not have access to at least two separate points of exit in case of any emergency situation. The assumption is that each residential parcel exits the neighborhood by following a rudimentary roadway network in which vehicles move from local residential roads to major roads (arterials and collectors), and eventually to the regional highway to evacuate. Residences in cul de sacs, or along dead end roads, or neighborhoods that only have one exit point to major roads are at higher risks and will be constrained for evacuation.

0 ½ 1 2 Miles

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Map Date: 4/14/2025

Data Source: City of Chino GIS, 2023; San Bernardino County GIS, 2023; Dyett & Bhatia, 2024.

Emergency evacuation capacity in the event of a disaster was analyzed under multiple hazard scenarios (see **Maps HSN-8a and 8b**). Evacuation would be from hazard impacted areas to publicly accessible safe zones such as schools, parks, shopping centers, fairgrounds or other sites with outdoor areas that can accommodate evacuees. In the event of a natural disaster such as wildfire or flooding in the south of Chino requiring emergency evacuation, northbound Euclid Avenue would be the primary evacuation route, with eastbound Kimball and Pine potentially accessible. Under this scenario, the evacuation point would be a location such as the Chino Town Square shopping center in the northern part of the city or the Pomona Fairplex, approximately 4 miles northwest of Chino. For a disaster in the western part of the city, evacuation would be to the east along major arterials. Under this scenario, the evacuation point would be a location such as the Ontario Sports Empire south of State Route 60, between Ontario and Vineyard avenues in San Bernardino County, or the SilverLakes Equestrian and Sports Park in Norco, approximately 3 miles east of The Preserve.

An analysis of multiple factors, including household access to vehicles, network constraints, distance to available exit gateway, and traffic signal timing indicates that roadway capacity will allow for evacuation as follows:

- For a hazard scenario in the south with emergency evacuation to the north and east, evacuation could be completed in approximately 2.6 hours, with bottlenecks on Euclid Avenue;
- For a hazard scenario in the south with emergency evacuation to the north only, evacuation could be completed in approximately 6.15 hours, with bottlenecks on Euclid Avenue;
- For a hazard scenario in the west with emergency evacuation to the east, evacuation could be completed in approximately 4.5 hours, with bottlenecks on Francis Avenue and Walnut Avenue.

Evacuation times can be improved and evacuation capacity optimized with the implementation of technological and design strategies. Above all, ensuring that community members are prepared for emergency evacuation events and understand what to do is of critical importance.

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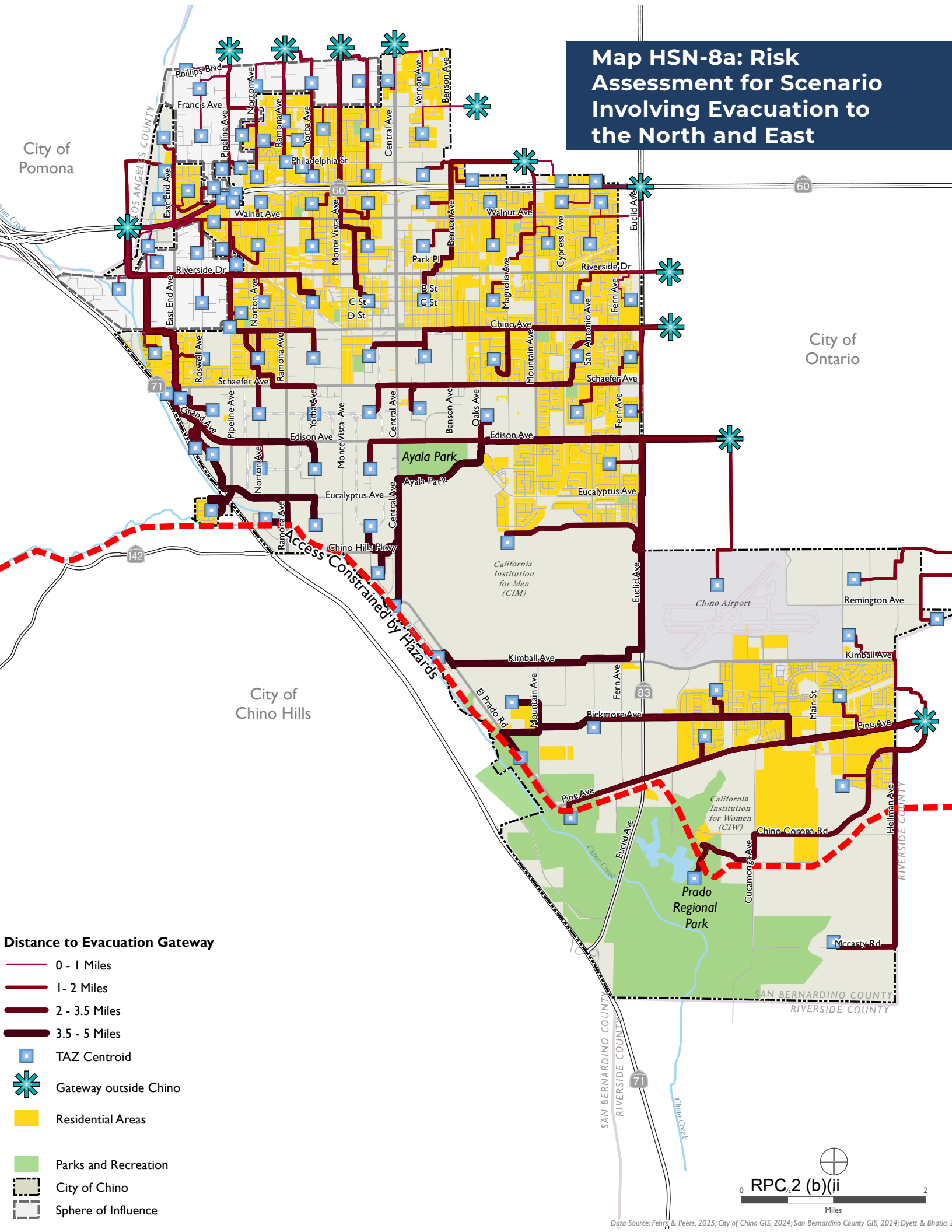
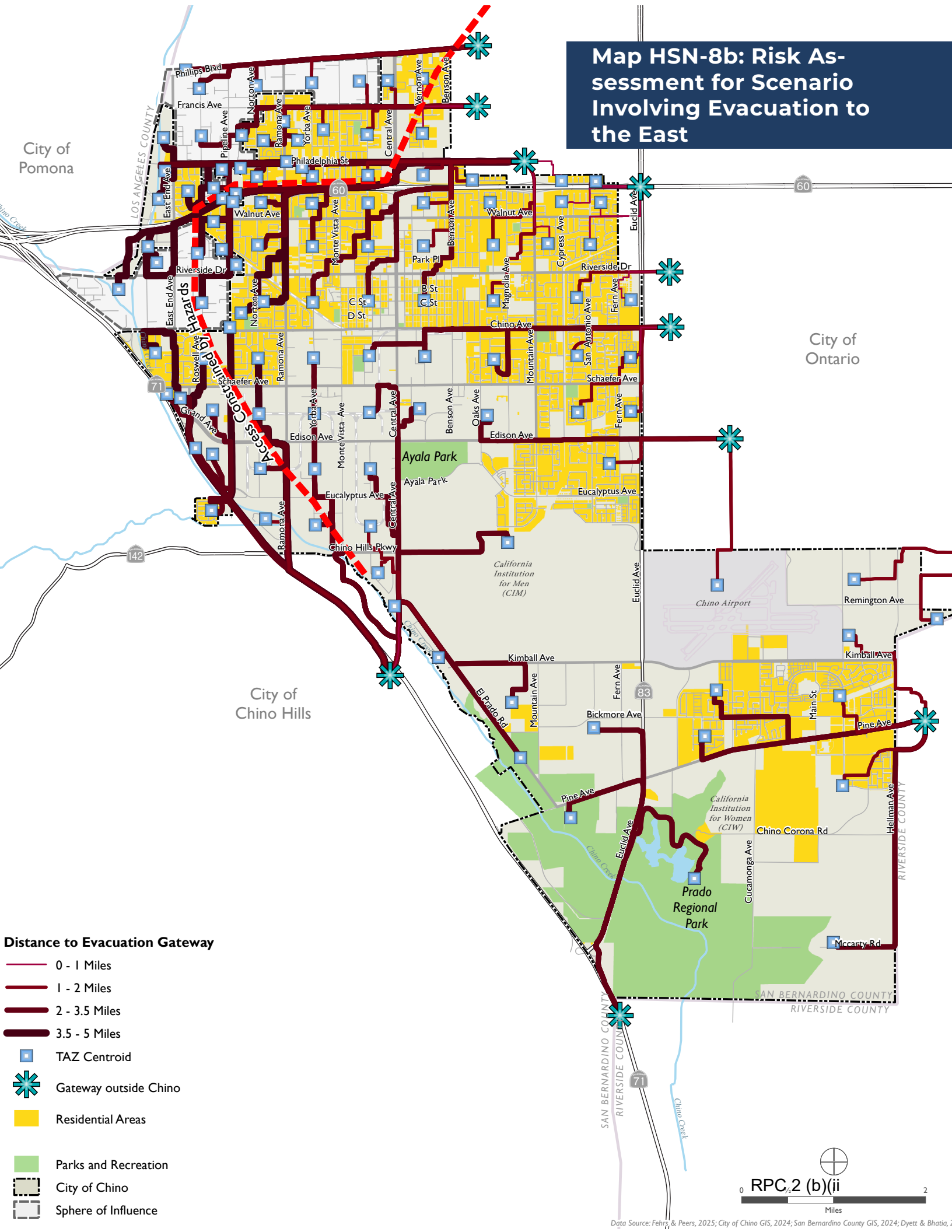
Map HSN-8a: Risk Assessment for Scenario Involving Evacuation to the North and East



Data Source: Fehrs & Peers, 2025; City of Chino GIS, 2024; San Bernardino County GIS, 2024; Dyett & Bhatia, 2

Map HSN-8b: Risk Assessment for Scenario Involving Evacuation to the East



Distance to Evacuation Gateway

- 0 - 1 Miles
- 1 - 2 Miles
- 2 - 3.5 Miles
- 3.5 - 5 Miles
- TAZ Centroid
- Gateway outside Chino
- Residential Areas
- Parks and Recreation
- City of Chino
- Sphere of Influence

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0 2 Miles

Data Source: Fehrs & Peers, 2025; City of Chino GIS, 2024; San Bernardino County GIS, 2024; Dyett & Bhatia, 2

HSN-3 **EFFECTIVE EMERGENCY RESPONSE. Provide effective emergency response to disasters and emergencies.**

Policies

HSN-3.1 Maintain and periodically update the Emergency Operations Plan to effectively prepare for, respond to, recover from, and mitigate the effects of natural or human caused disasters that require the planned, coordinated response of multiple agencies or jurisdictions.

HSN-3.2 Maintain mutual aid agreements and communication links with San Bernardino County and other neighboring jurisdictions that allow for supplemental aid from other police and fire personnel in the event of emergencies.

HSN-3.3 To facilitate the orderly evacuation of residential areas, maintain minimum standards for roadway design, maintenance, and vegetation management.

HSN-3.4 Require new residential subdivisions to have at least two ingress and egress routes that account for existing and proposed traffic evacuation volumes at buildout. Design of ingress/ egress must comply with CVFD standards.

HSN-3.5 Ensure road surfaces on designated evacuation routes can withstand extreme weather conditions and are maintained to accommodate increased traffic during evacuations.

HSN-3.6 Employ technology such as traffic cameras and wildfire early detection systems to monitor conditions and facilitate effective response.

HSN-3.7 Provide information on and build community awareness of major evacuation routes and notification systems used for emergency alerts to residents and businesses in Chino.

HSN-3.8 Use the Chino Notify Emergency Alert System to notify residents by phone, text, or email of extreme weather conditions and/ or the need to evacuate in the event of emergency. The system should also be used to broadcast the location of evacuation centers, particularly for residents of vulnerable areas and neighborhoods with constrained emergency access.

HSN-3.9 Partner with local media outlets to release evacuation information through radio, social media, and news apps can work as another channel for evacuation notices.

Actions

HSN-3.A In future updates to the Capital Improvement Program, prioritize preventative maintenance and repair on roadway segments designated as evacuation routes.

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HSN-3.B Study the feasibility of deploying dynamic message signs, roadway sensors, and other Intelligent Transportation Systems (ITS) tools to disseminate real-time traffic conditions, alternative routes, and delays to drivers, enhancing situational awareness and decision-making.

HSN-3.C Continue to conduct outreach to residents with access and functional needs and ensure that their needs are accounted for in emergency response plans.

HSN-3.D Pursue funding to facilitate structural retrofits and roadway improvements in existing residential neighborhoods without two points of emergency ingress/egress.

HSN-3.E Partner with Caltrans, San Bernardino County Transportation Authority, and neighboring jurisdictions on measures to protect critical evacuation routes such as SR60, SR71, Euclid Avenue, Kimball Avenue, and Pine Avenue, including by constructing the Euclid Avenue Bridge Project, the Pine Avenue Bridge Connection, and the Pine Avenue/SR-71 Interchange Improvements project. Develop contingency plans for operations when these and other roads are inoperable due to flooding or other disasters.

HSN-3.F Coordinate with Caltrans to identify and implement measures to temporarily increase capacity at highway ramps during emergency evacuation events. Measures may include optimizing adaptive signal systems, placing traffic cones to accommodate a higher volume of evacuating vehicles, providing real-time traffic safety and guidance information via changeable message sign (CMS) boards, and other strategies.

HSN-3.G Employ strategies to facilitate orderly evacuation in the event of an emergency. Strategies may include the following as appropriate for the situation:

- Phased evacuation schedules to reduce congestion and bottlenecks;
- Signal timing adjustments to optimize traffic flow during evacuation events;
- Traffic control at critical intersections; and/or
- Temporarily reversing direction of travel of some lanes on evacuation routes to increase capacity.

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Airport Safety

Located in the southern part of the city east of Euclid Avenue, between Merrill and Kimball, the Chino Airport is a public use airport serving private pilots, flight schools, and corporate aviation. Chino Airport is operated by San Bernardino County and the facility averages between 100,000 to 150,000 take-offs and landings annually, including flight training, private flights, charter services, and military-related activity. Chino Airport is the busiest non-commercial airport within a 20-mile radius, and it occupies 1,097 acres, has three runways, and provides full precision instrument approach capabilities.

The Chino Airport Comprehensive Land Use Plan (CLUP) was adopted in 1991 to ensure the safety and welfare of residents, businesses, and airport users while supporting continued airport operations. Under State law, local land use plans and individual development proposals are required to be consistent with policies set forth in the applicable land use compatibility plan. The CLUP establishes three airport safety zones, which restrict the development of land uses that could pose particular hazards to flight or the public in the event of an aircraft accident, as outlined in **Table HSN-2** and shown on **Map HSN-9**. While the responsibility for the preparation and adoption of compatibility plans typically falls to the county airport land use commission in California, San Bernardino County and its cities have elected to follow an alternative process provided for in State law, through which the City of Chino has been designated as the local jurisdiction responsible for leading the compatibility planning process for Chino Airport.

In 2011, the California Department of Transportation (Caltrans), Division of Aeronautics published the California Airport Land Use Planning Handbook, which local jurisdictions are required to rely on for guidance in preparing airport land use compatibility plans. The 1993 Chino Airport CLUP does not reflect the guidance set forth in the Caltrans Handbook; as such, General Plan policy calls for the City to prepare a new Land Use Compatibility Plan for the Chino Airport.

Additionally, as shown on **Map HSN-9**, areas in the north of Chino generally north of the 60 freeway are within the Airport Influence Area of Ontario International Airport. In these locations, height and certain other land use characteristics, particularly uses that attract birds, need to be restricted in order to protect the airspace required for operation of aircraft to and from the airport.

Table HSN-2: Airport Land Use Compatibility

Land Use Groups	*Aviation Safety Zones*		
	I	*II*	*III*
Residential	Clearly Unacceptable	Clearly Unacceptable	Normally Acceptable
Lodging places	Clearly Unacceptable	Clearly Unacceptable	Normally Acceptable
Educational facilities	Clearly Unacceptable	Clearly Unacceptable	Normally Acceptable
Hospitals and nursing homes	Clearly Unacceptable	Clearly Unacceptable	Normally Acceptable
Assembly uses (auditoriums, stadiums, concert halls, theaters, churches, etc.)	Clearly Unacceptable	Clearly Unacceptable	Normally Acceptable
Sports arenas and outdoor spectator sports	Clearly Unacceptable	Clearly Unacceptable	Normally Acceptable
Parks, playgrounds, recreation centers, fairgrounds and picnic grounds	Clearly Unacceptable	Normally Unacceptable	Normally Acceptable
Libraries, museums and art galleries	Clearly Unacceptable	Clearly Unacceptable	Normally Acceptable
Golf courses, commercial riding stables and water recreation	Normally Unacceptable	Normally Acceptable	Normally Acceptable
Commercial office	Clearly Unacceptable**	Clearly Unacceptable**	Normally Acceptable**
Commercial retail	Clearly Unacceptable**	Clearly Unacceptable**	Normally Acceptable
Manufacturing and warehouse/distribution	Clearly Unacceptable	Normally Acceptable	Normally Acceptable
Public utilities	Clearly Unacceptable	Normally Acceptable	Normally Acceptable
Livestock, animal breeding and animal keeping	Normally Unacceptable**	Normally Acceptable**	Clearly Acceptable
Agriculture (commercial growing and field crops)	Normally Acceptable	Clearly Acceptable	Clearly Acceptable
Conservation areas and natural recreation areas	Normally Acceptable	Clearly Acceptable	Clearly Acceptable
Uses of a hazardous nature	Clearly Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Maximum gross density (in persons per acre)	0.5	25	No Limit
Maximum assembly recommended*	10	100	No Limit

Clearly Acceptable—No restrictions.
Normally Acceptable—Restricted development undertaken only after detailed analysis and satisfactory mitigation measures are initiated.
Normally Unacceptable—No new development shall be permitted.
Clearly Unacceptable—New construction or development should not be undertaken. Furthermore, an effort should be made to relocate existing uses.

Notes:
**Assembly is the gathering together of persons for such purposes as deliberation, education, instruction, worship, entertainment, amusement, drinking or dining, or awaiting transportation, as defined in the California Building Code.*
*** Some specific uses in this group may be acceptable, provided the density criteria are met.*

Source: City of Chino, 2025

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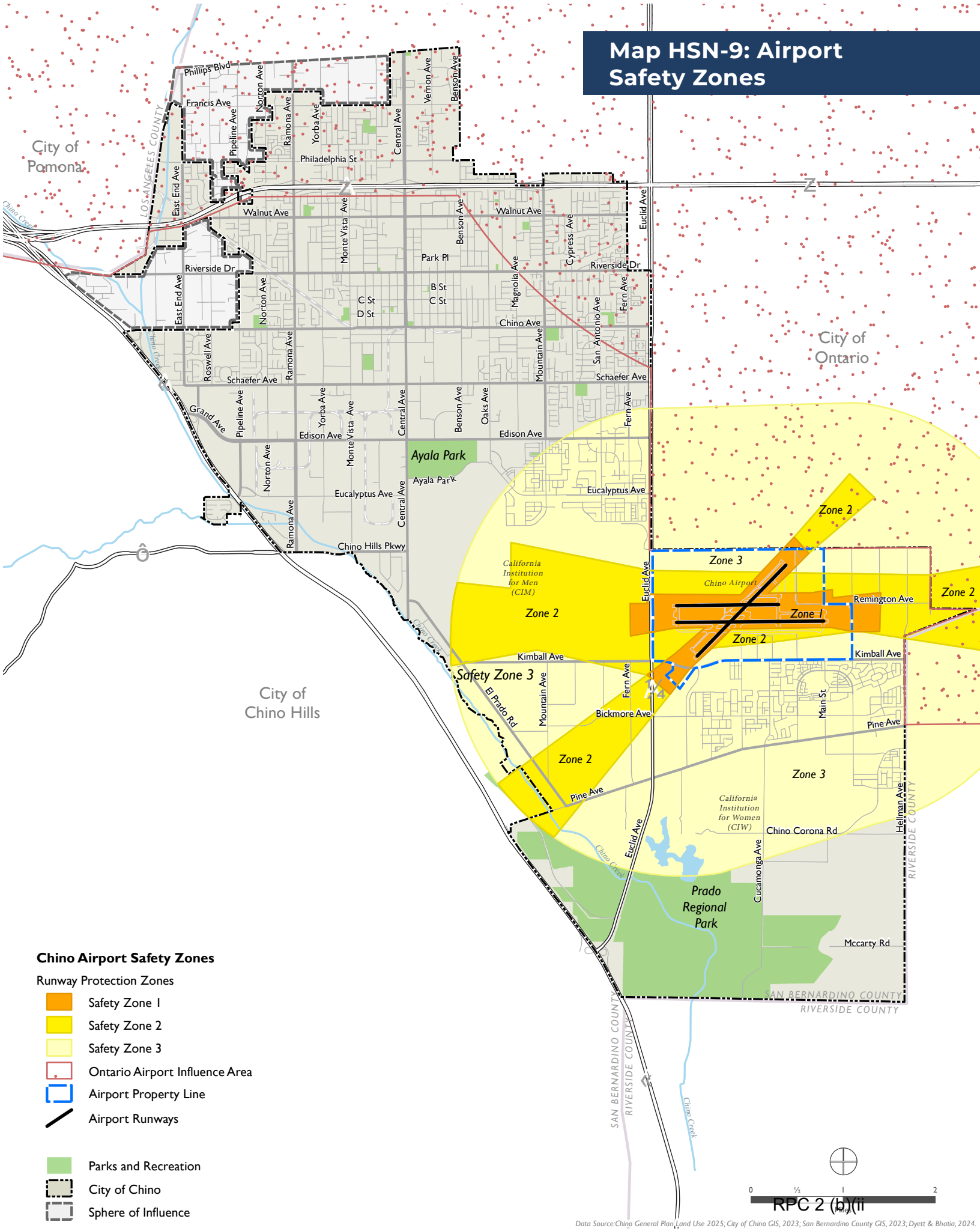
Map HSN-9: Airport Safety Zones



Chino Airport Safety Zones

Runway Protection Zones

- Safety Zone 1
- Safety Zone 2
- Safety Zone 3
- Ontario Airport Influence Area
- Airport Property Line
- Airport Runways

- Parks and Recreation
- City of Chino
- Sphere of Influence

Most current map as of June 20, 2025

0 ½ 1 2 Miles

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Data Source:Chino General Plan Land Use 2025; City of Chino GIS, 2023; San Bernardino County GIS, 2023; Dyett & Bhatia, 2024.

HSN-4 AIRPORT SAFETY: Minimize airport safety hazards and promote compatibility with airport operations.

Policies

HSN-4.1 Require that new development be consistent with the safety zone land use and noise compatibility criteria established in the Chino Airport Comprehensive Land Use Plan (ACLUP), as revised per Action HSN-4.a.

HSN-4.2 Minimize the potential for development in the Ontario or Chino Airport Influence Area, to adversely affect aircraft operations by reducing the potential for bird strikes, electromagnetic interference, glare, and other hazards to flight.

HSN-4.3 Require real estate disclosures for projects within the Chino Airport Influence Area, consistent with State law. Disclosures should notify the prospective purchasers of the potential annoyances or inconveniences associated with airport operations.

Actions

HSN-4.A Update the Chino Airport Comprehensive Land Use Plan to incorporate standards that minimize the public's exposure to excessive noise and safety hazards in areas around the Chino Airport, relying on the compatibility guidance provided by the California Airport Land Use Planning Handbook published by the California Department of Transportation (Caltrans), Division of Aeronautics. In the interim prior to completion of the update, permit development in the vicinity of the Chino Airport only if the project applicant has demonstrated compliance with guidance provided by the California Airport Land Use Planning Handbook published by the California Department of Transportation (Caltrans), Division of Aeronautics.

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