

CITY OF CHULA VISTA

Evacuation Route Capacity and Viability Study

DRAFT v2

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TABLE OF CONTENTS

1.0	Introduction	1-3
1.1.	Background	1-3
1.2.	Legislative Overview	1-3
2.0	Evacuation Routes Assessment.....	2-4
2.1.	Designated Evacuation Zones	2-4
2.2.	Evacuation Reception Centers	2-5
2.3.	Evacuation Route Vulnerability Assessment.....	2-6
2.4.	Designated Evacuation Routes	2-11
2.5.	Evacuation Route Capacity	2-12
2.6.	Distance & Travel Time to Evacuation Gateways	2-14
3.0	Safety & Traffic Control Considerations.....	3-1
4.0	Primary Evacuation Scenarios.....	4-1
4.1.	Scenario 1 – Wildfire Hazard.....	4-1
4.2.	Scenario 2 – Dam Inundation.....	4-3

Exhibits

Exhibit 2-1	Evacuation Zones	2-4
Exhibit 2-2	Evacuation Route Vulnerabilities.....	2-6
Exhibit 2-3	Vulnerable Neighborhoods.....	2-9
Exhibit 2-4:	Primary Evacuation Routes	2-12
Exhibit 2-5:	Evacuation Zone Centroids & Gateways.....	2-15
Exhibit 2-6:	Evacuation Routes to Gateway A – Fire Evacuation Zones (FEZ).....	2-18
Exhibit 2-7:	Evacuation Routes to Gateway A – Dam Inundation Zones (DIZ)	2-19
Exhibit 2-9:	Evacuation Routes to Gateway B – Dam Inundation Zones (DIZ).....	2-21
Exhibit 2-10:	Evacuation Routes to Gateway C – Fire Evacuation Zones (FEZ).....	2-22
Exhibit 2-11:	Evacuation Routes to Gateway D – Fire Evacuation Zones (FEZ)	2-23
Exhibit 2-12:	Evacuation Routes to Gateway D – Dam Inundation Zones (DIZ)	2-24
Exhibit 2-13:	Evacuation Routes to Gateway E – Fire Evacuation Zones (FEZ)	2-25
Exhibit 2-14:	Evacuation Routes to Gateway E – Dam Inundation Zones (DIZ).....	2-26
Exhibit 2-15:	Evacuation Routes to Gateway F – Fire Evacuation Zones (FEZ)	2-27
Exhibit 2-16:	Evacuation Routes to the Nearest Gateway - Fire Hazard Scenario.....	2-28
Exhibit 2-17:	Evacuation Routes to the Nearest Gateway – Flood Inundation Scenario.....	2-29
Exhibit 3-1:	Manual Traffic Control Points.....	3-1

Tables

Table 2-1: Critical Facilities2-7

Table 2-2: Hourly Roadway Evacuation Capacity.....2-13

Table 2-3: Travel Time Estimate Summary2-17

Table 3-1: Recommended Traffic Control Point Locations3-2

Table 4-1: Facilities in a Wildfire Hazard Zone.....4-1

Table 4-2: Wildfire Hazard Zone Demographics4-2

Table 4-3: Facilities in a Dam Inundation Hazard Zone4-4

Table 4-4: Dam Inundation Hazard Zone Demographics4-4

Attachments

Attachment A – Zonehaven Information

Attachment B – Travel Time Calculations

Attachment C – Wildfire Hazard Severity Zone

Attachment D – Dam Inundation Maps

1.0 Introduction

1.1. Background

Chula Vista (City) is currently undergoing an update to the Safety Element of the City's General Plan as required by California Government Code Section 65302 to address the need to protect citizens from risks associated with natural and human-caused hazards. In parallel with the Safety Element, a Vulnerability Assessment is required to satisfy California Senate Bill (SB) 379 to identify risks climate changes poses to the local jurisdiction and the geographic areas at risk from climate change. The Vulnerability Assessment identifies specific natural hazards related to climate change and evaluates the City's vulnerabilities accordingly. The Vulnerability Assessment considers physical threats to critical facilities within the City as well as physical threats to residential and non-residential structures. The vulnerability findings will then inform adaptation and resilience goals, policies, objectives, and implementation measures in the Safety Element Update. It should be noted that a Vulnerability Assessment was conducted by San Diego County as part of the Multi-Jurisdictional Hazard Mitigation Plan (MJHMP) and is included in the Safety Element for reference.

Hazards that may require an evacuation declaration include wildfires, floods, hazardous materials exposure, geologic hazards, and seismic hazards. This Evacuation Routes Assessment address the evacuation planning for potential emergency scenarios.

1.2. Legislative Overview

Under Assembly Bill (AB) 747 the City's Safety Element needs to address evacuation planning for any emergency scenarios that would warrant an evacuation of populations within the affected areas. The evacuation planning is a component of the Safety Element (SE)). This requirement became effective as of January 1, 2022 and is required for the development of a new or updated SE. In addition, Senate Bill (SB) 99 also addresses local Safety Elements and emergency evacuation routes. This legislation requires the City to identify residential developments in hazard areas that do not have at least two emergency evacuation routes.

AB 1409 includes additional requirements for the Safety Element be periodically reviewed and updated. It also requires that the SE include evacuation locations in the evacuation route planning.

This Evacuation Routes Assessment report includes a capacity analysis that identifies evacuation routes and their capacity, safety, and viability under a range of emergency scenarios applicable to the local jurisdiction. This report contains important information that will serve as a resource to the Evacuation Coordinator, Emergency Manager, and emergency management support personnel to more quickly assess and plan mitigative actions for local hazard scenarios that may lead to the eventual need to order an emergency evacuation of all or a portion of populations within the City.

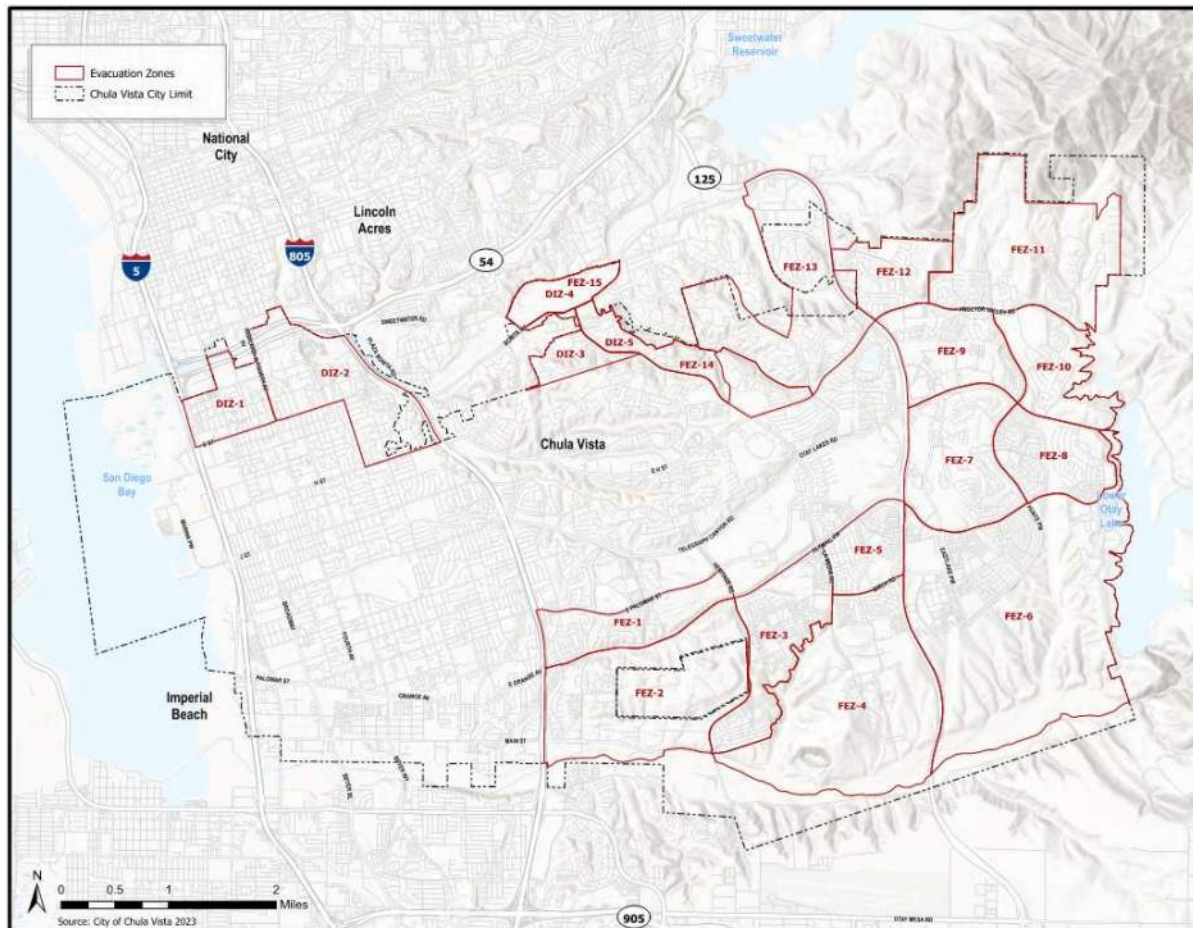
2.0 Evacuation Routes Assessment

2.1. Designated Evacuation Zones

Emergency evacuation zones for the City of Chula Vista have been developed at the County level as part of the San Diego County Zonehaven EVAC Evacuation Pre-Plan modeling program. These zones have been developed through close coordination with City staff and the Chula Vista Fire Department. Zonehaven creates online data driven smart zones that are reviewed, adjusted, and approved by local law, fire, and city staff. Zonehaven EVAC is a web-based application for first-responders to add evacuation pre-plan data and make operational decisions on changing the status of a zone during an ongoing incident.

For the purposes of this evacuation assessment, multiple Zonehaven zones were aggregated into designated evacuation zones based on logical boundaries (typically following roadways) and similar access to evacuation routes for each of the hazard scenarios that have been considered. Only areas within the City that are considered to be at risk for these hazard scenarios are shown. Zonehaven maps and corresponding list of zones are included in [Attachment A](#). As shown in [Exhibit 2-1](#), the designated evacuation zones were categorized into two types, Fire Evacuation Zones (FEZ) and Dam Inundation Zones (DIZ). Additional assessment for these hazard scenarios is provided in Chapter 4.0.

Exhibit 2-1 Evacuation Zones



2.2. Evacuation Reception Centers

Dependent upon the nature of a disaster, evacuees may have the option to evacuate to an evacuation reception center located in the immediate vicinity of the disaster.

Chula Vista has pre-identified shelters throughout the City that have been vetted by the Red-Cross and can be used as long as individuals have been directed there by first responders and the shelter has not been damaged by a disaster. Dependent on the incident, one or more of these sites could be activated as a temporary evacuation point or an overnight shelter. City staff in coordination with the Red Cross would make the determination to activate as events unfold. These locations are identified in [Table 2-1](#) and shown in [Exhibit 2-2](#).

Table 2-1: Evacuation Reception Centers

Site ID	Name	Address	Evacuation Zone
11816	Castle Park Middle School	160 Quintard St	-
54233	Castle Park High School	1395 Hilltop Dr	-
54329	Loma Verde Recreation Center	1420 Loma Ln	-
54376	Parkway Community Center	373 Park Way	-
54377	Parkway Gymnasium	385 Park Wy	-
64354	Chula Vista High School	820 4Th Ave	-
64355	La Roca Comunidad Cristiana Church	2371 Fenton St	-
73678	Eastlake High School	1120 Eastlake Parkway	FEZ-7
73743	Olympian High School	1925 Magdalena Ave	FEZ-4
73764	Rancho Del Rey Middle School	1174 East J St	-
73778	Otay Ranch High School	1250 Olympic Pkwy	FEZ-3
73842	Eastlake Middle School	900 Duncan Ranch Rd	FEZ-10
73865	Hilltop High School	555 Claire Ave	-
73929	Chula Vista Middle School	415 Fifth Ave	-
74129	Hilltop Middle School	44 East J St	-
74131	Bonita Vista High School	751 Otay Lakes Rd	-
74138	Bonita Vista Middle School	650 Otay Lakes Rd	FEZ-14 / DIZ-5
74242	Southwestern Community College	900 Otay Lakes Rd	-
154723	Corpus Christi Catholic Church	450 Corral Canyon	FEZ-13
157204	Monteville Community Center	840 Duncan Ranch Road	FEZ-10
157207	Norman Park Community Center	270 F Street	-
157213	Salt Creek Community Park & Recreation Center	2710 Otay Lakes Road	FEZ-8
157214	Veterans Park Recreation Center	785 East Palomar Street	FEZ-1
157217	Otay Recreation Center	3554 Main Street	-

FEZ = Fire Evacuation Zone

DIZ = Dam Inundation Zone

2.3. Evacuation Route Vulnerability Assessment

Evacuation route vulnerability can be expressed from several perspectives. The most direct expression of route vulnerability deals with physical features along an evacuation route that can be damaged during emergency scenarios and cause the evacuation route to be disrupted and unusable. These physical features include:

- Bridges (over rivers, creeks, and other drainage features)
- Bridges (creating grade separated roadways)
- Low points along the route that are prone to flooding
- Route locations along steep natural slopes that are prone to landslides

Exhibit 2-2 depicts physical features such as bridge structures along primary evacuation routes that may impede an evacuation if damaged at the time of an emergency which require an evacuation. The Vulnerability Assessment (separate cover) summarizes all of the critical facilities throughout. Table 2-2 below shows all of the bridges throughout the City, including those crossing the Ballona Creek and the Metro E (Expo) Line.

Exhibit 2-2 Evacuation Route Vulnerabilities

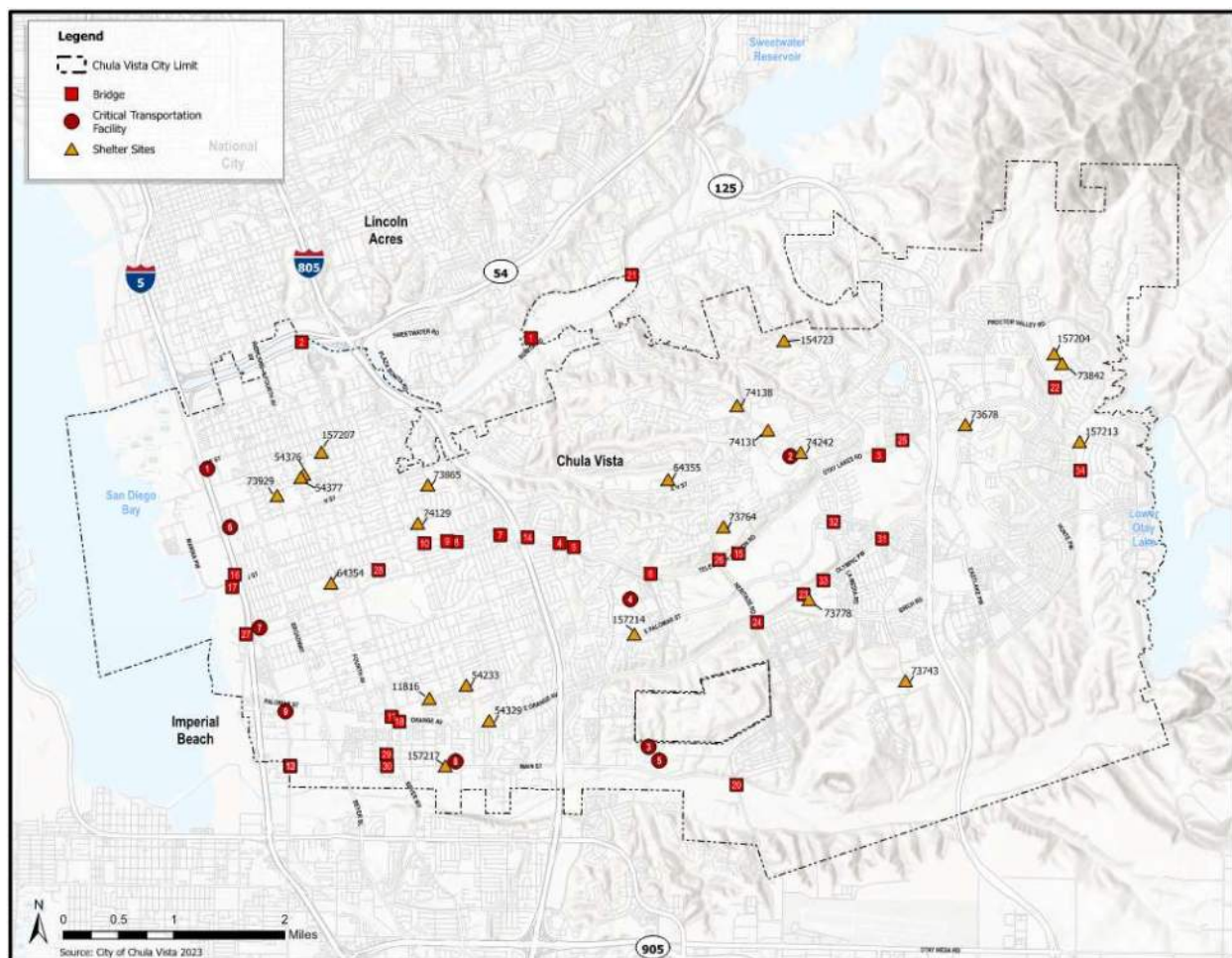


Table 2-2: Critical Facilities

Map ID	Name	Location	Evacuation Zone
Transportation			
1	Bayfront E St. Trolley Station	Woodlawn Ave. / Bayfront Station Rd.	DIZ-1
2	Bus Transit Station Facility	Gotham St. / Otay Lakes Rd.	-
3	Chula Vista Transit	Maxwell Rd. / Research Ct.	FEZ-2
4	Community Hospital of Chula Vista Heliport	North of Medical Center Ct.	-
5	CVESD School Bus Corp Yard	Maxwell Rd. / Design Ct.	FEZ-2
6	H St. Trolley Station	Woodlawn Ave. / H St.	-
7	L St. MTS Trolley Station	L St. near Industrial Blvd.	-
8	MTS Bus Maintenance Facility	Main St. / Reed Ct.	-
9	Palomar St. Trolley Station	Palomar St. / Industrial Blvd.	-
Bridges			
1	Sweetwater Rvr (Willow St) (ID 57C0011)	0.15 miles north of Bonita Rd	DIZ-4 / DIZ-5 / FEZ-15
2	Sweetwater Rvr (N. 2Nd St.) (ID 57C0235)	0.16 miles south of E.30 th & Sweetwater Rd.	DIZ-2
3	Telegraph Cyn (Otay Lakes Rd) (ID 57C0273)	0.64 miles east of La Media Rd	-
4	Telegraph Cyn Chnl (Crest Dr) (ID 57C0499)	20 ft north of Telegraph Cyn Rd	-
5	Telegraph Cyn Chnl (Paseo Del Rey) (ID 57C0500)	30 ft north of Telegraph Cyn Rd	-
6	Telegraph Cyn Chnl (Paseo Ladera) (ID 57C0501)	50 ft north of Telegraph Cyn Rd	-
7	Telegraph Cyn Chnl (Nacion Ave) (ID 57C0505)	75 feet north of Telegraph Cyn Rd	-
8	Telegraph Cyn Chnl (Camino Entrada) (ID 57C0506)	40 feet north of Telegraph Cyn Rd	-
9	Telegraph Cyn Chnl (Telegraph Cyn Rd) (ID 57C0507)	0.25 miles East of Hilltop Dr	-
10	Telegraph Cyn Chnl (Hilltop Rd) (ID 57C0508)	At Telegraph Cyn Rd	-
11	Otay River Trib. (Orange Ave) (ID 57C0509)	60 ft east of Third Ave	-
12	Main Street Underpass (ID 57C0651L)	0.25 miles east of Rte 5	-
13	Main Street Underpass (ID 57C0651R)	0.3 miles east of Rte 5	-

Table 2-2: Critical Facilities *(Continued)*

Map ID	Name	Location	Evacuation Zone
14	Telegraph Cyn (Ha lecrest Dr) (ID 57C0657)	20 ft north of Telegraph Cyn Rd	-
15	Telegraph Cyn (Telegraph Cyn Rd) (ID 57C0658)	0.17 miles east of Heritage Rd	-
16	Central Drainage (J St) (ID 57C0659)	50 ft west of Rte I-5 Ramps	-
17	Central Drainage (Bay Blvd) (ID 57C0660)	175 feet south of Of J St	-
18	Otay River Trib. (3Rd Ave) (ID 57C0661)	125 ft south of Orange St	-
20	Otay River (Heritage Rd) (ID 57C0670)	200 ft south of Main St.	FEZ-4
21	Sweetwater River (Central Ave) (ID 57C0701)	250 ft east of Sweetwater Rd	DIZ-4 / DIZ-5 / FEZ-15
22	Salt Creek (Stone Gate) (ID 57C0841)	75 ft east of Hunte Pkwy	FEZ-10
23	Poggi Canyon (Olympic Pkwy) (ID 57C0842)	0.5 miles east of Herritage Rd	FEZ-3
24	Poggi Canyon (Heritage Road) (ID 57C0843)	50 Ft south of Olympic Pkwy	FEZ-2 / FEZ-3
25	Telegraph Cyn Chnl (St. Claire Dr) (ID 57C0844)	70 Ft north of Otay Lakes Rd	-
26	Telegraph Cyn Chnl (Paseo Ranchero) (ID 57C0845)	100 Ft south of Telegraph Cyn Rd	-
27	Telegraph Canyon (Bay St) (ID 57C0846)	175 Ft south of L Street	-
28	Telegraph Cyn Chnl (2Nd Ave) (ID 57C0847)	0.12 Mi north of L St	-
29	Otay Rvr Trib. (Zenith St) (ID 57C0848)	20 Ft west of Fresno St	-
30	Otay Rvr Trib. (Main St.) (ID 57C0849)	0.13Mi east of 4Th Ave.	-
31	Olympic Pkwy Poc (E. Palomar) (ID 57C0850)	100 Ft west of E. Palomar Rd	FEZ-5
32	La Media Road Poc (ID 57C0851)	225 Ft south of E. Palomar	-
33	Otay Ranch Hs Poc (ID 57C0852)	60 Ft west of Santa Venetia	FEZ-3
34	Salt Creek (Rambling Vista Rd) (ID 57C0860)	260 Ft west of Old Jana Ranch R	FEZ-8

FEZ = Fire Evacuation Zone

DIZ = Dam Inundation Zone

Evacuation route vulnerability can also be expressed in terms of vulnerability to residents where development areas are isolated and/or areas that have access to only one evacuation route. These areas are a concern and require additional advanced planning to address emergency scenarios where an evacuation is needed, and the single evacuation route may be blocked or damaged and cannot be used.

Shown in [Exhibit 2-3](#) and summarized in [Table 2-3](#), are those residential development areas (neighborhoods) that have only one access point to a primary evacuation route. These neighborhoods were identified after a thorough review of various City-wide maps and aerial photographs and include residential developments that may be access constrained during an evacuation. If a neighborhood takes direct access to another roadway and that roadway funnels to more than one designated evacuation route, it would not be considered vulnerable. Similarly, if a neighborhood does take direct access to a designated evacuation route with only one way in and out, this would be considered a vulnerable neighborhood.

In an evacuation scenario, these neighborhoods could be exposed to an increased risk due to the lack of multiple egress opportunities and should be given earlier evacuation consideration.

Exhibit 2-3 Vulnerable Neighborhoods

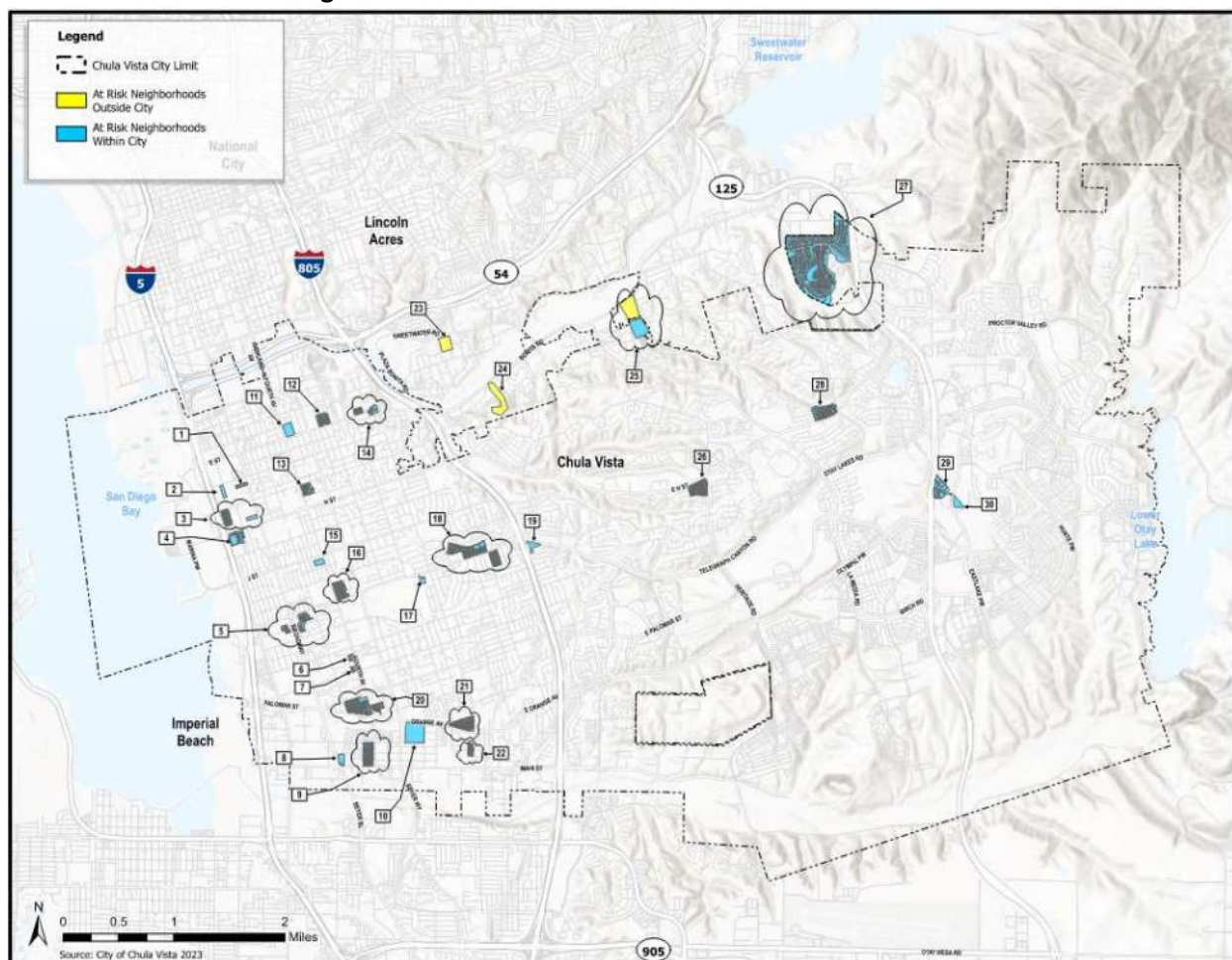


Table 2-3: Vulnerable Neighborhoods

Map ID	Name	Evacuation Zone
1	Mohawk Trailer Park	-
2	Vista Hermosa Apartments	-
3	Flamingo Trailer Park	-
4	Woodlawn Avenue	-
5	Arizona Street	-
6	Emerson Street	-
7	Village Drive	-
8	Brisa Del Mar	-
9	4 th & Montgomery	-
10	Palms Mobile Estates	-
11	North Glover Avenue	DIZ-2
12	Twin Oaks Circle	DIZ-2
13	Vance Street	-
14	Corte Helena – Toyon	DIZ-14
15	James Court	-
16	San Miguel – Sierra – Palomar	-
17	Clube View	-
18	El Capitan – Monterey	-
19	Woodland Hills	-
20	4 th & Orange	-
21	Hilltop & Orange	-
22	Holiday – Festival	-
23	Calmor Street	-
24	Randy Lane	-
25	Palm Drive	DIZ-5 / FEZ-14
26	Calle Santiago	
27	San Miguel Ranch	FEZ-13
28	Yuba Drove	FEZ-14
29	Trinidad Cove	FEZ-7
30	Rancho Buena Vista	FEZ-7

2.4. Designated Evacuation Routes

Evacuation routes effectively include all improved (paved) roads within the City. Unpaved roads may be used in an evacuation as a last resort but should not be relied on as a primary evacuation route. Local streets typically serve as direct access for adjacent residential and commercial development and while they are not designed to accommodate high traffic volumes, they serve limited development areas and are rarely required to handle traffic flows that would exceed their capacities, even under full evacuation conditions.

For the purposes of evacuation planning, the designated evacuation route street network includes roadways that are classified as collectors and above including the following:

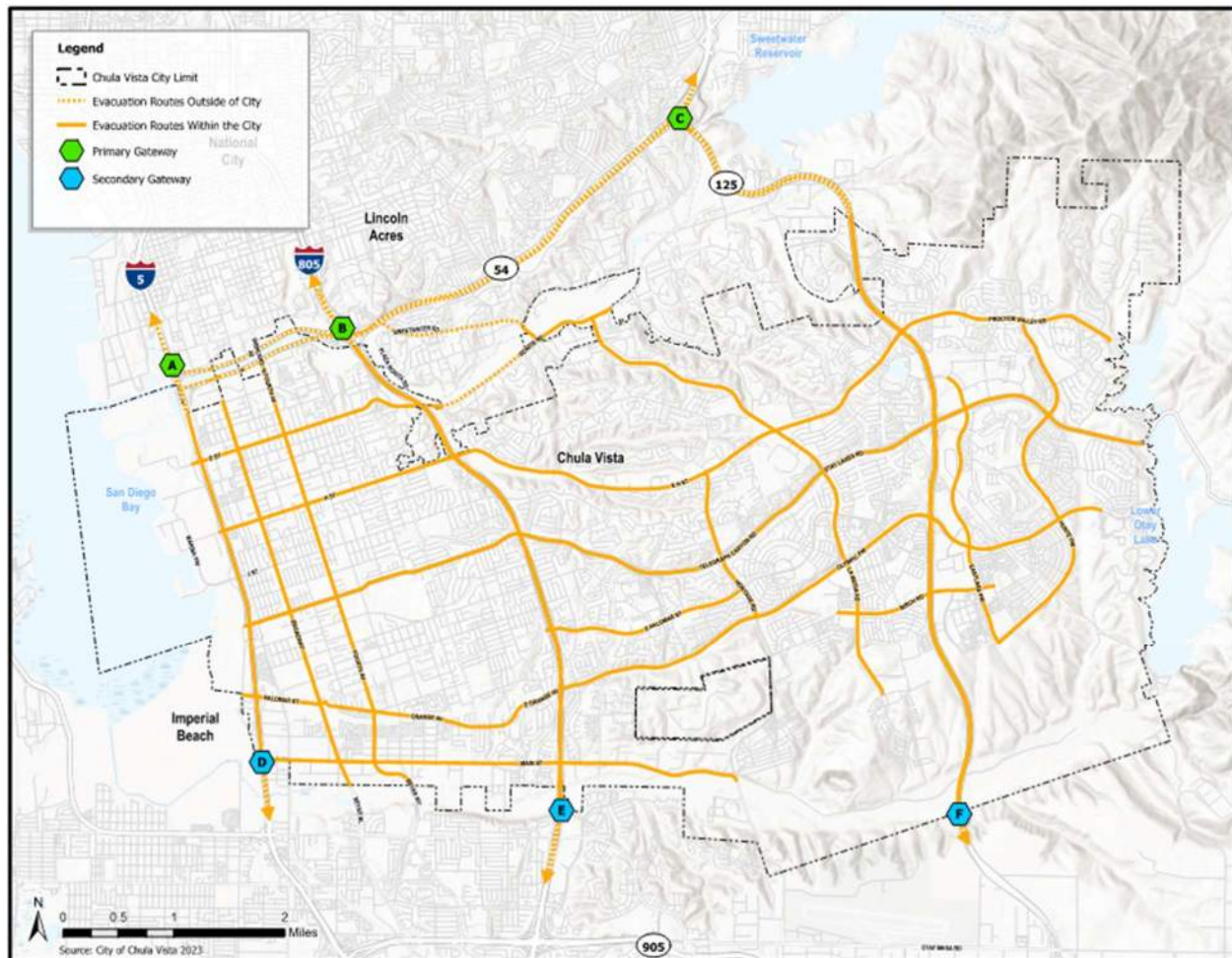
1. Freeways/Highways
2. Major Roadways
3. Gateway Streets
4. Urban Arterials
5. Commercial Boulevard
6. Neighborhood & Local Streets (in select areas)

Designated evacuation routes are the most reliable roadway facilities for the following reasons:

- These roads are designed to accommodate higher volumes of traffic in-line with their classifications.
- Access controls are more stringent on roads of higher classification.
- Intersection controls are designed to prioritize travel on roads of higher classification.
- Roadway maintenance policies prioritize roads of higher classification.

Primary evacuation routes are identified in [Exhibit 2-4](#). Note that evacuation routes shown are to gateway exit points located at or near the City boundary (refer Section 2.5). In addition, SR-125 is identified as a importation evacuation route, and while it is a toll road under emergency evacuation conditions it is presumed the evacuees would be able to access the highway without penalty or fees.

Exhibit 2-4: Primary Evacuation Routes



2.5. Evacuation Route Capacity

While the City's Circulation Element roadways are designed to serve two-way traffic, the designated of evacuation routes are assumed to use only one direction of travel in the outbound direction away from the hazard. Once the evacuation order has been made, the inbound direction is typically reserved for emergency management vehicles to transport personnel and equipment towards the hazard.

The technical definition of the maximum capacity of a road is the maximum hourly rate at which vehicles can reasonably be expected to traverse a point during a given time period under prevailing roadway, traffic and control (free-flow) conditions. The capacity of an evacuation route considers the following factors:

- Design characteristics of the roadway (i.e., lane width, shoulder width, horizontal and vertical alignment, presence of raised median)
- Number of lanes in the outbound evacuation direction
- Access control
- Percent truck traffic

The maximum “free-flow” (uninterrupted flow) capacity of a roadway segment occurs at level of service (LOS) E when the vehicle speed and vehicle spacing is at its optimum level. Under the free-flow condition, the traffic demand is fully serviced, and the service volume increases as the traffic volume and density increase, until the service volume reaches the maximum LOS E capacity for the roadway segment. As traffic volumes and the resulting vehicle density increase beyond this “critical” value, the rate at which traffic can be serviced quickly drops below the maximum capacity. Therefore, to realistically represent traffic handling capacity during congested forced flow conditions (such as during an evacuation) it is necessary to apply a capacity reduction factor. A capacity reduction factor of 0.9 (10% reduction) has been applied based upon studies that identified a fall-off in the maximum service flow rate (e.g., maximum capacity) when congestion occurs at “choke points” on a freeway segment. The estimated hourly vehicle capacities under forced flow evacuation conditions are summarized in [Table 2-4](#) for each of the five designated evacuation route classifications.

Table 2-4: Hourly Roadway Evacuation Capacity

Classification	No. Lanes (per direction)	Capacity/Lane (vphpl)	Reduction Factor	Total Capacity (veh. in outbound direction)	Diminished Capacity ⁽¹⁾ (veh. per direction)
Freeway	5	1,900	0.9	8,550	5,990
Prime Arterial	3	1,900	0.9	5,130	3,590
Major Street	3	1,900	0.9	5,130	3,590
Major Street	2	1,900	0.9	3,420	2,390
Gateway Street	2	1,900	0.9	3,420	2,390
Urban Arterial	2	1,900	0.9	3,420	2,390
Commercial Boulevard	2	1,900	0.9	3,420	2,390
Class I Collector	1	1,900	0.9	1,710	1,200
Downtown Promenade	1	1,900	0.9	1,710	1,200
Local Street	1	1,900	0.9	1,710	1,200

vphpl = Vehicles per Hour per Lane

⁽¹⁾ Assumes 30% of the available capacity will be consumed by ambient/background (non-evacuation) traffic.

It is important to note that the hourly evacuation capacity estimates shown in [Table 2-3](#) may not be fully available to evacuating traffic during the early stages of an evacuation unless strict perimeter traffic control/access has been established before the evacuation order has been given. Depending on the time of day, conditions without positive perimeter traffic control could result in background (non-evacuation) traffic consuming between 25% and 30% of the available capacity during midday and non-peak periods.

Peak period background traffic on some higher classification roadways (including those that access freeway interchanges) could represent between 70% and 100% of the available capacity. If an evacuation occurs during peak periods, perimeter traffic control will be more crucial and certain evacuation routes may not be available for use. Conversely, during late evening and early morning periods, available roadway capacity on non-freeway routes would be greater than 90% of the maximum capacity.

At grade intersection controls at locations where two designated evacuation routes merge are also an important consideration during an evacuation. The approaches to at-grade intersections are where flow

can be “interrupted” by a control device or by turning or crossing traffic at the intersection. Due to the differences in the flow conditions at intersections, separate estimates of capacity must be made for these locations. In many instances, the approach to the intersection is widened through the addition of one or more lanes (turn bays), to compensate for the lower capacity of the approach caused by the interruption of traffic flow due to the intersection control device.

Minor intersections are typically controlled by “stop” signs on the minor street approach(es) or at all intersection approaches if the streets serve similar traffic volumes. Arterial street intersections are typically controlled by traffic signals and the amount of green signal time is assigned to the intersection approaches based on the relative traffic volumes.

During an evacuation, at-grade intersections will likely become the first bottleneck locations once the evacuation is fully underway. During these conditions where traffic flows are concentrated in one direction and normal opposing traffic turning conflicts do not require signal intervention, traffic signals will not be able to efficiently manage the unique traffic demand pattern. This anticipated condition will result in the need to allocate right-of-way time to the respective competing traffic flows by imposing some form of proactive control. During evacuation conditions, control at the most critical intersections will often be provided by designated traffic control crews. In these cases, manual traffic control would supersede the normal stop sign or traffic signal control devices.

2.6. Distance & Travel Time to Evacuation Gateways

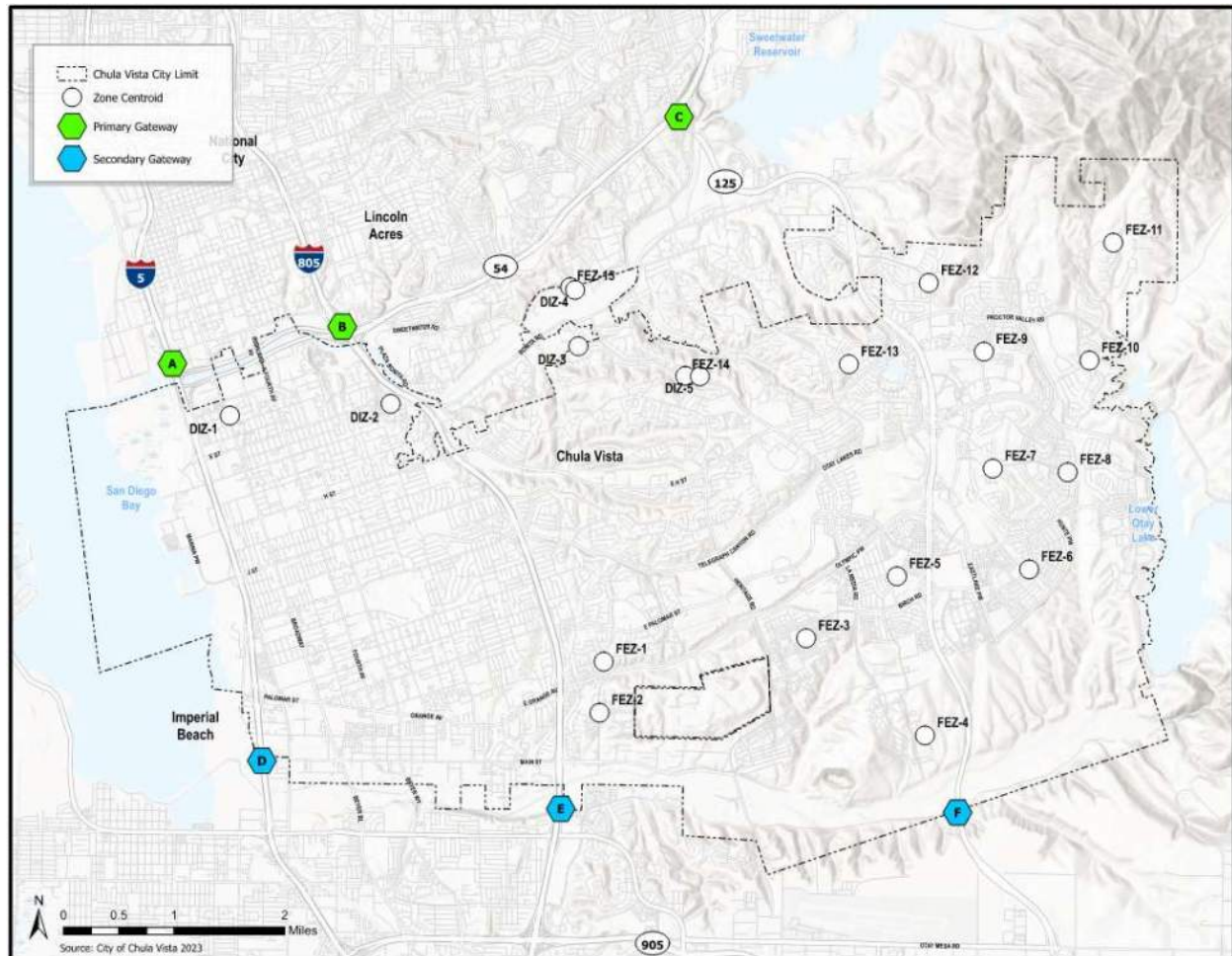
As part of the evacuation route assessment, the most direct evacuation routing from the evacuation zones shown in [Exhibit 2-1](#) to the closest primary evacuation gateways exiting the City was identified. City evacuation route gateways include the following:

- Primary Gateways:
 - Gateway A – I-5 (North)
 - Gateway B – I-805 (North)
 - Gateway C – SR-125 (North)
- Secondary Gateways:
 - Gateway D – I-5 (South)
 - Gateway E – I-805 (South)
 - Gateway F – SR-125 (South)

The gateways have been separated into two categories: Primary Gateways (A,B & C) and Secondary Gateways (D, E, & F). While Secondary Gateways may be the closest for residents located in the southern parts of the City, most destinations are likely to be to the north, not the south.

It should be noted that not all evacuation zones were assigned to each Gateway since individual gateways may not be a convenient or logical exit point for all zones. A centroid was placed at logical cross-streets approximately in the center of each zone (or sub-zone) as shown in [Exhibit 2-5](#). Recommended evacuation traffic routing was then assigned from the centroid to the most convenient Gateway shown above.

Exhibit 2-5: Evacuation Zone Centroids & Gateways



As a measure of evacuation vulnerability, travel time to each of the primary gateways was estimated for populations within each of the evacuation zones. To estimate the travel time from the centroid to the destination Gateway, the length of individual roadway segments, posted speed limits on each segment, and traffic control devices along the route (all-way stop, side-street stop, and traffic signal) were identified for each evacuation route. Travel time for each route segment was calculated based on the travel distance and posted speed. Typical intersection delay was estimated separately and was added to the segment travel time. An average delay factor of 20 seconds was used for each signalized intersection along the evacuation route. If an evacuation route passed through an unsignalized intersection, a delay factor of 10 seconds was applied if the routing passed through a stop-controlled approach. The sum of the individual roadway segment travel times and the total intersection delay were used to estimate the total travel time. A summary of the travel time estimates for each zone to the various Gateways is included in [Attachment B](#).

It is important to note that the estimated travel time is not an estimate of evacuation time, it is simply a calculation of uncongested, free-flow travel from the centroid of the evacuation zone to the assigned Gateway. As multiple zones are evacuated over time, the cumulative evacuation traffic will approach the

roadway capacity and may eventually exceed the available capacity of an evacuation route as they get closer to the evacuation Gateways. This results in congested conditions which would reduce the travel speed, and therefore increase the travel time to a Gateway.

As mentioned above, the assignment of emergency response crews at key locations to control the flow of traffic would help to significantly reduce delay times. While the free-flow travel time does not represent the evacuation time, it does provide a relative measure of the evacuation zones that would be subject to longer evacuation times. An evacuation order should consider these more remote areas and they should be prioritized in the sequencing of evacuation notifications.

The timing of evacuation notifications should consider the following factors that affect evacuation time:

1. Evacuee response time to evacuation notification (i.e. time for all evacuees to receive warning and time to prepare to leave home);
2. Estimated travel time to evacuation route gateway; and
3. Estimated added delay time due to evacuation route capacity constraints.

If the critical roadway segment that will have the limiting capacity during an evacuation can be identified, the approximate evacuation time can be calculated by dividing the number of evacuating vehicles using the critical roadway segment by the outbound capacity of the critical roadway segment. The critical segment could be located close to the evacuation zone in cases where the evacuation is limited to one or two zones. In cases where multiple zones are evacuated at the same time, the critical roadway link will likely be closer to the evacuation route gateway where the accumulation of evacuating traffic is the greatest.

Exhibit 2-6 through Exhibit 2-15 identify the designated evacuation route from the centroid of each evacuation zone to assigned Gateways throughout the City and summarize the travel times to individual Gateways. Exhibit 2-16 and Exhibit 2-17 shows the evacuation route to the nearest Gateway for each evacuation zone for the fire hazard and dam inundation scenarios. Table 2-5 summarizes the travel time estimates rounded to the nearest quarter of a minute (15 seconds)

Table 2-5: Travel Time Estimate Summary

Evac. Route	Travel Time Summary (min) Via Gateway:						Closest Primary Gateway (North)		Closest Secondary Gateway (South)	
	A I-5 (North)	B I-805 (North)	C SR-125 (North)	D I-5 (South)	E I-805 (South)	F SR-125 (South)	Via Gateway	Travel Time (minutes)	Via Gateway	Travel Time (minutes)
Fire Hazard Scenario										
FEZ-01	16.00	6.50	10.25	14.25	4.25	10.00	B	6.50	E	4.25
FEZ-02	15.25	8.00	11.50	11.50	4.00	10.75	B	8.00	E	4.00
FEZ-03	20.50	11.25	11.25	18.50	11.50	6.50	B/C	11.25	F	6.50
FEZ-04	25.75	16.75	12.50	24.00	18.50	7.75	C	12.50	F	7.75
FEZ-05	24.00	14.75	9.75	22.00	16.75	5.00	C	9.75	F	5.00
FEZ-06	26.00	16.75	10.00	24.00	19.00	7.50	C	10.00	F	7.50
FEZ-07	27.25	16.50	8.25	25.75	18.00	8.25	C	8.25	F	8.25
FEZ-08	29.25	18.50	10.50	28.00	20.00	10.00	C	10.50	F	10.00
FEZ-09	25.75	17.50	7.50	25.50	20.50	7.75	C	7.50	F	7.75
FEZ-10	28.50	18.50	10.25	28.25	20.00	9.75	C	10.25	F	9.75
FEZ-11	30.50	22.00	12.00	32.00	25.00	14.50	C	12.00	F	14.50
FEZ-12	24.00	15.75	5.75	25.50	18.75	7.25	C	5.75	F	7.25
FEZ-13	21.75	13.25	8.25	23.25	16.25	8.50	C	8.25	F	8.50
FEZ-14	21.25	12.75	12.25	22.75	15.75	12.50	C	12.25	F	12.50
FEZ-15	7.75	6.00	4.75	16.25	11.50	18.25	C	4.75	E	11.50
Dam Inundation Scenario										
DIZ-01	4.75	4.00	-	6.75	12.50	-	B	4.00	D	6.75
DIZ-02	8.00	3.50	-	10.25	6.00	-	B	3.50	E	6.00
DIZ-03	7.25	5.25	-	16.00	9.50	-	B	5.25	E	9.50
DIZ-04	7.75	6.00	-	15.75	9.25	-	B	6.00	E	9.25
DIZ-05	10.50	8.75	-	19.25	12.75	-	B	8.75	E	12.75

Exhibit 2-6: Evacuation Routes to Gateway A – Fire Evacuation Zones (FEZ)

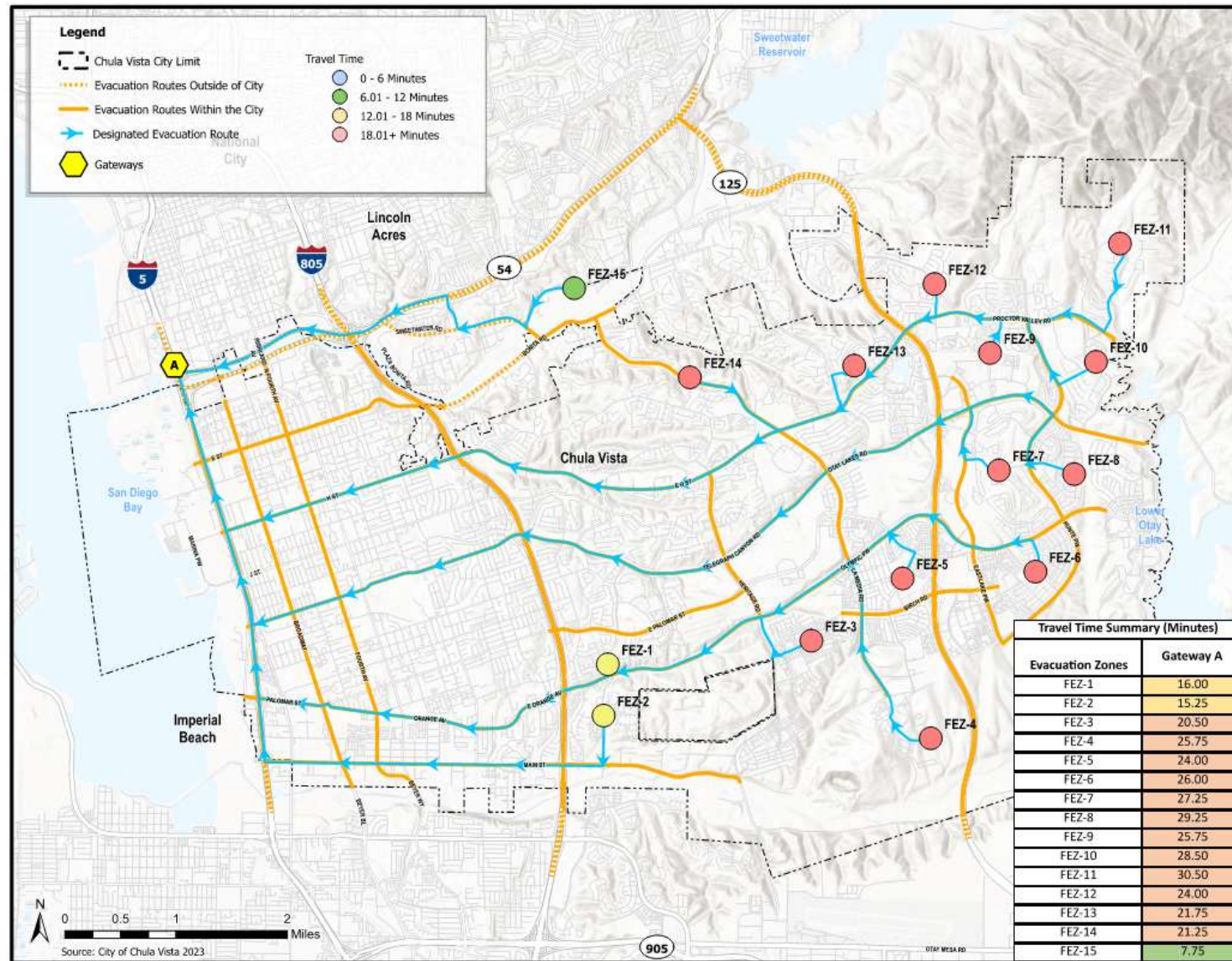


Exhibit 2-7: Evacuation Routes to Gateway A – Dam Inundation Zones (DIZ)

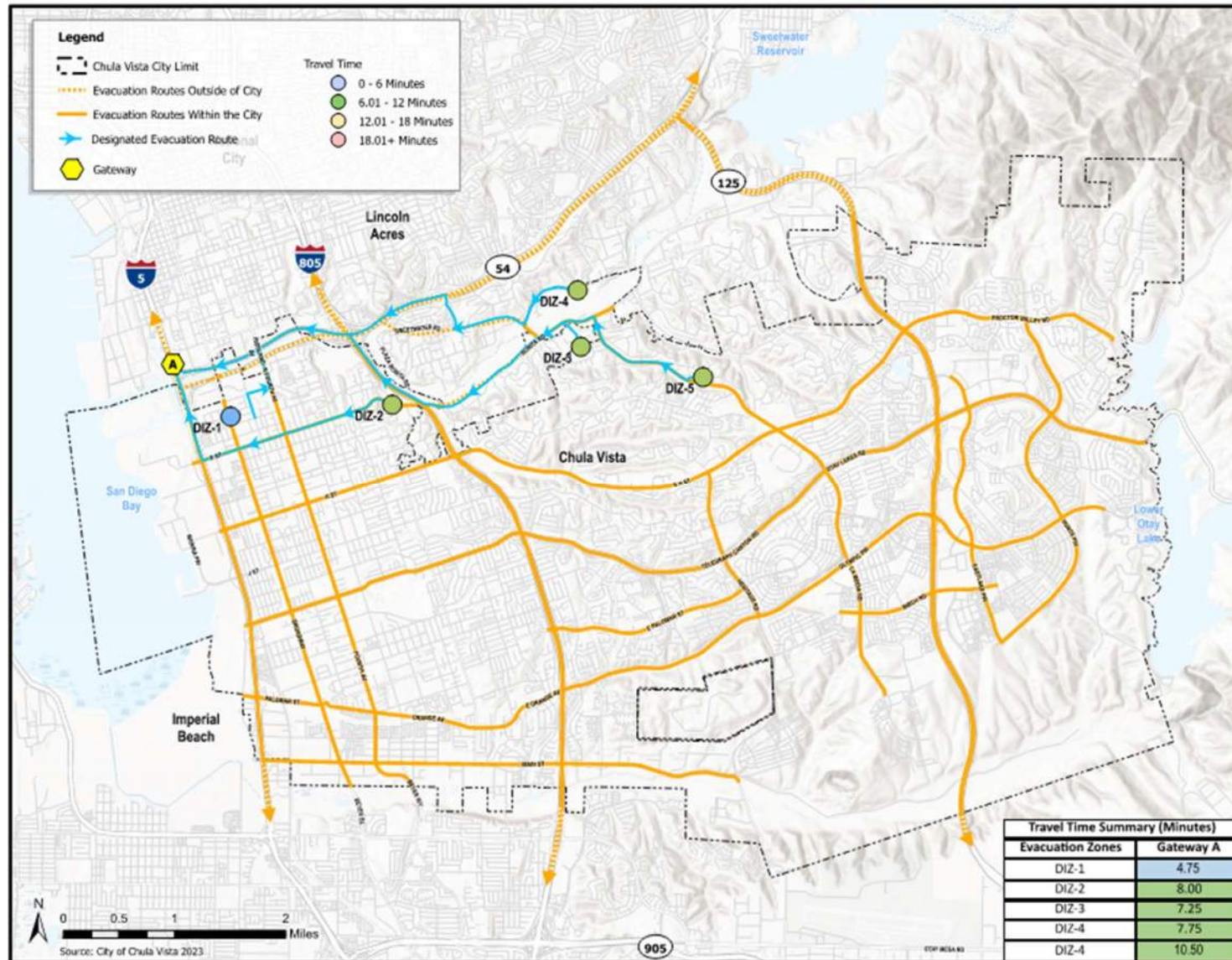


Exhibit 2-8: Evacuation Routes to Gateway B – Fire Evacuation Zones (FEZ)



Exhibit 2-9: Evacuation Routes to Gateway B – Dam Inundation Zones (DIZ)

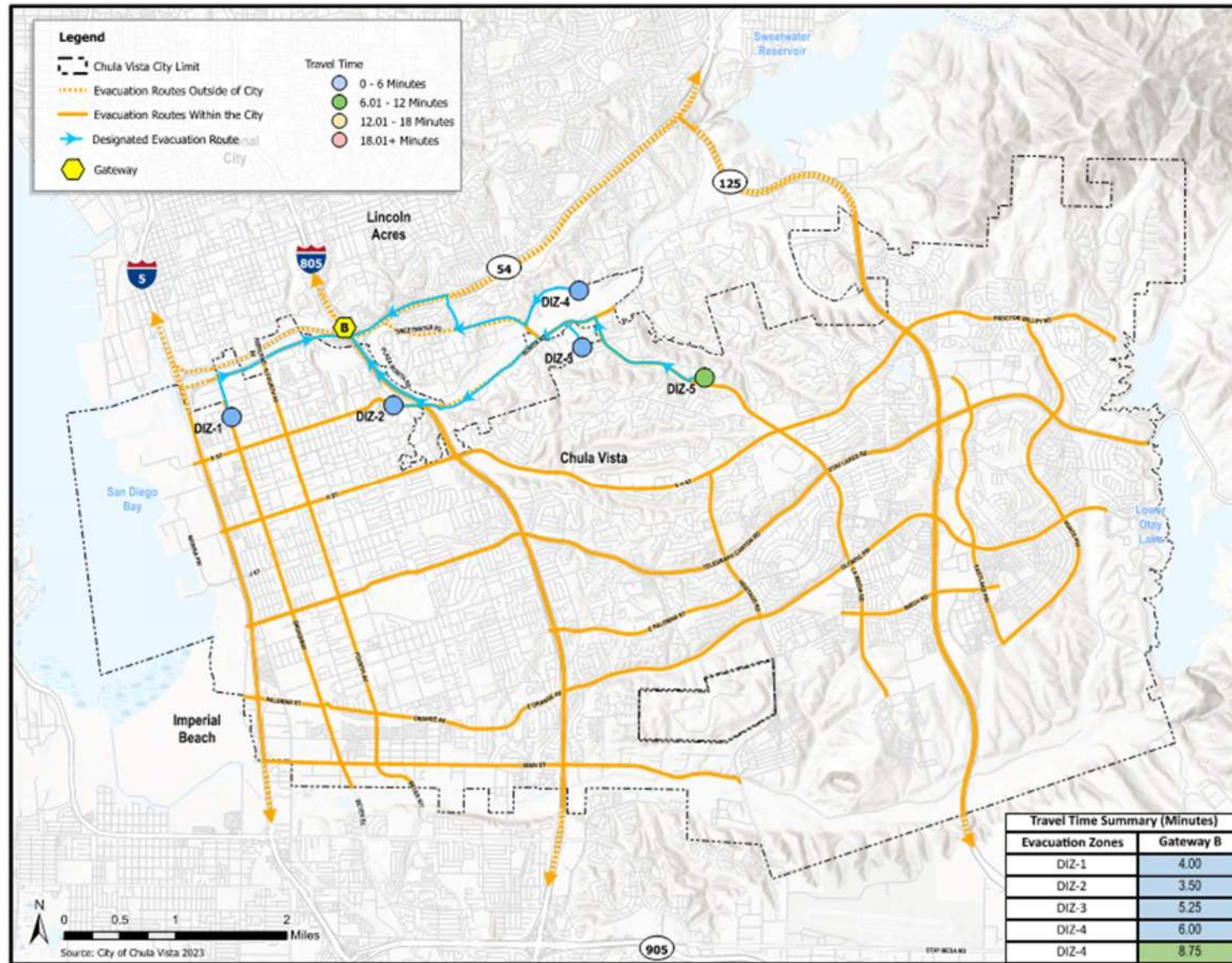


Exhibit 2-10: Evacuation Routes to Gateway C – Fire Evacuation Zones (FEZ)



Exhibit 2-11: Evacuation Routes to Gateway D – Fire Evacuation Zones (FEZ)



Exhibit 2-12: Evacuation Routes to Gateway D – Dam Inundation Zones (DIZ)

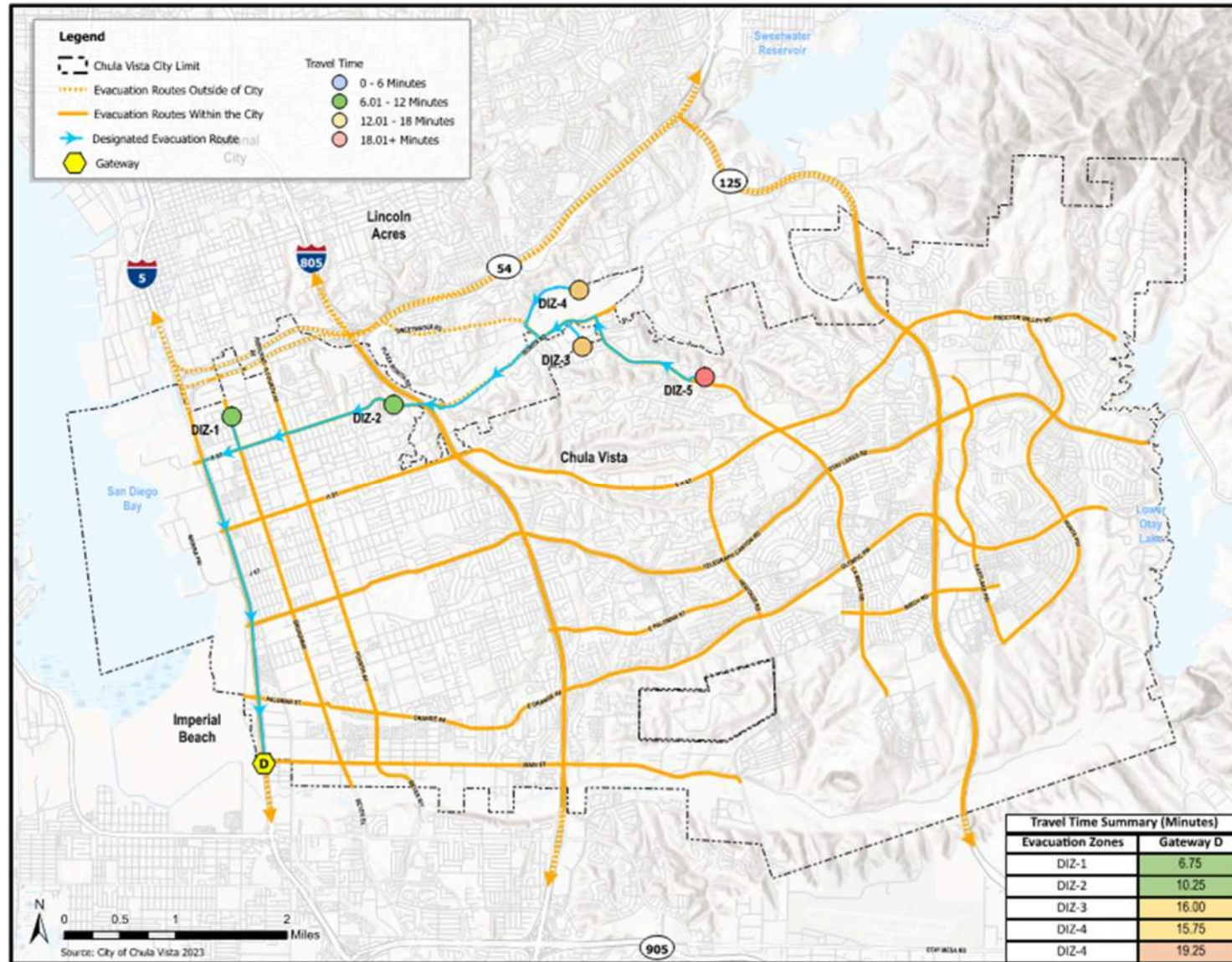


Exhibit 2-13: Evacuation Routes to Gateway E – Fire Evacuation Zones (FEZ)



Exhibit 2-14: Evacuation Routes to Gateway E – Dam Inundation Zones (DIZ)

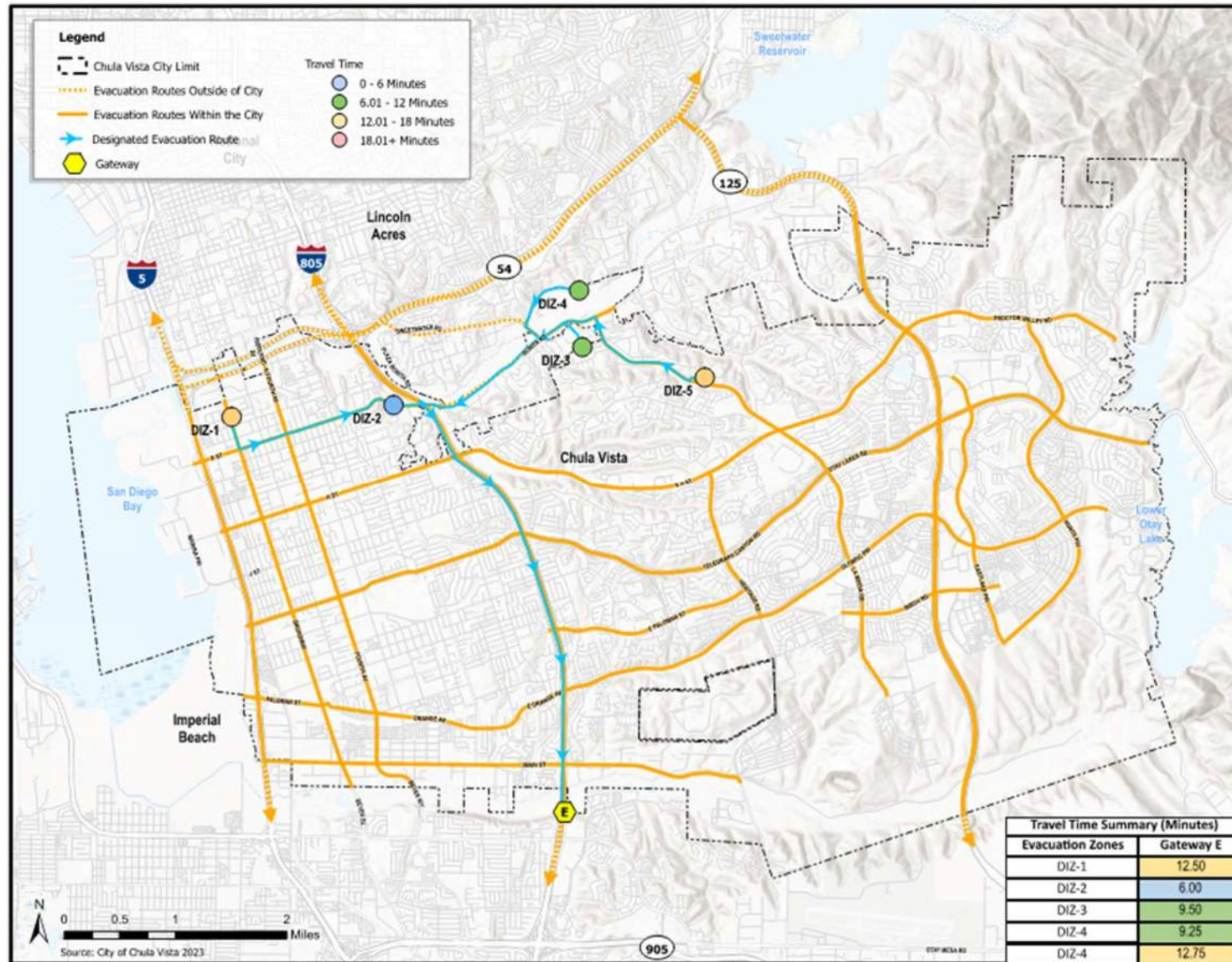


Exhibit 2-15: Evacuation Routes to Gateway F – Fire Evacuation Zones (FEZ)



Exhibit 2-16: Evacuation Routes to the Nearest Gateway - Fire Hazard Scenario

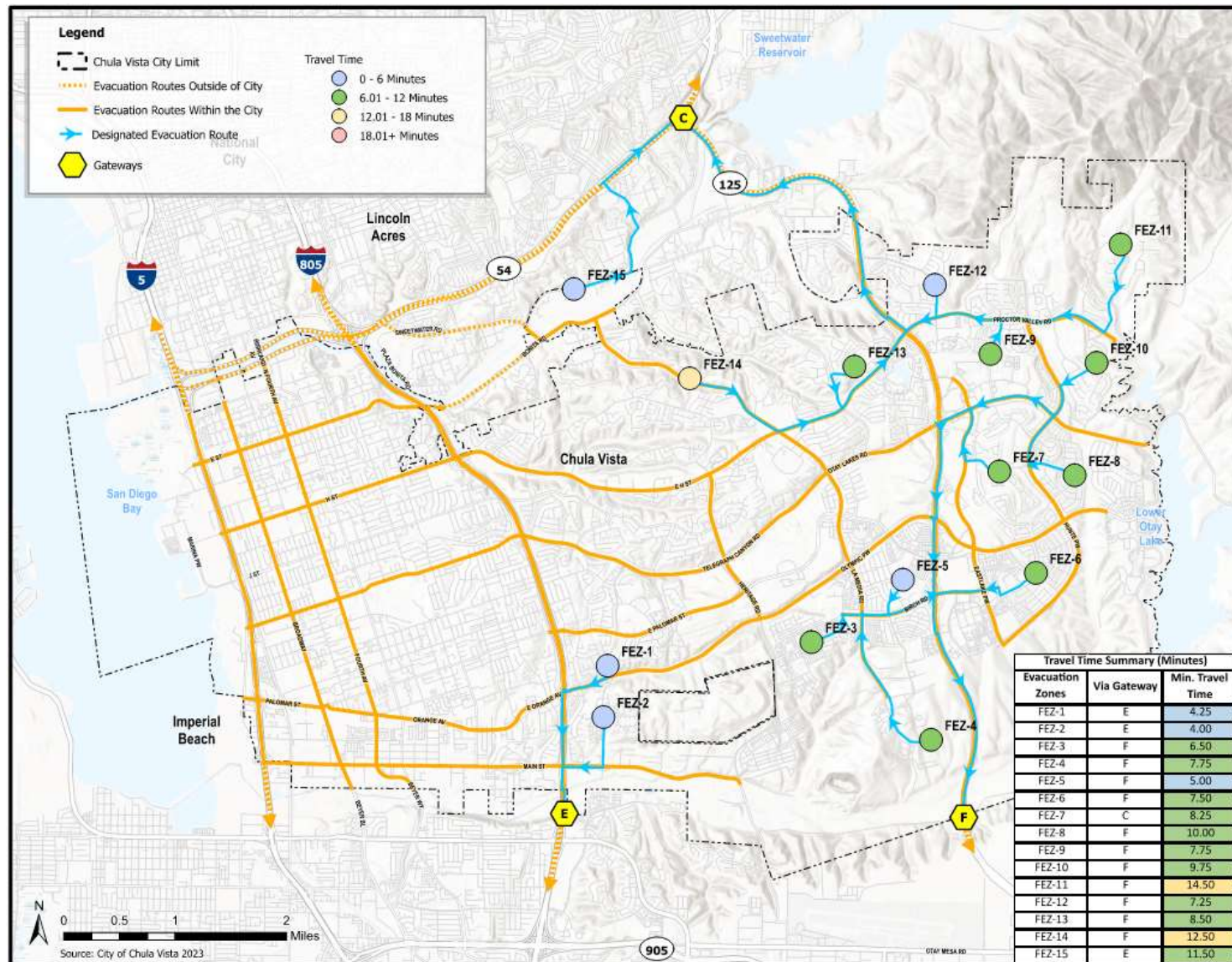
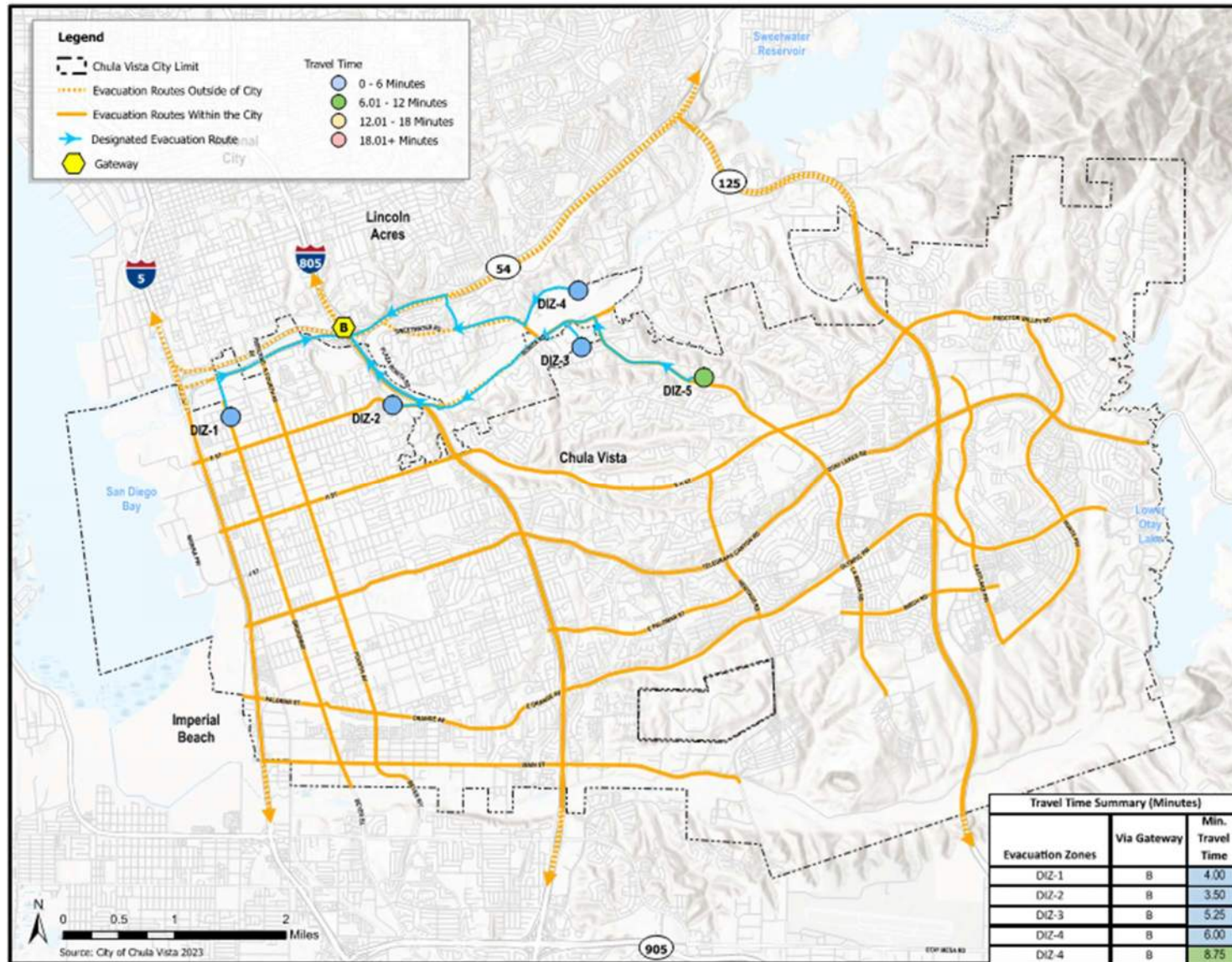


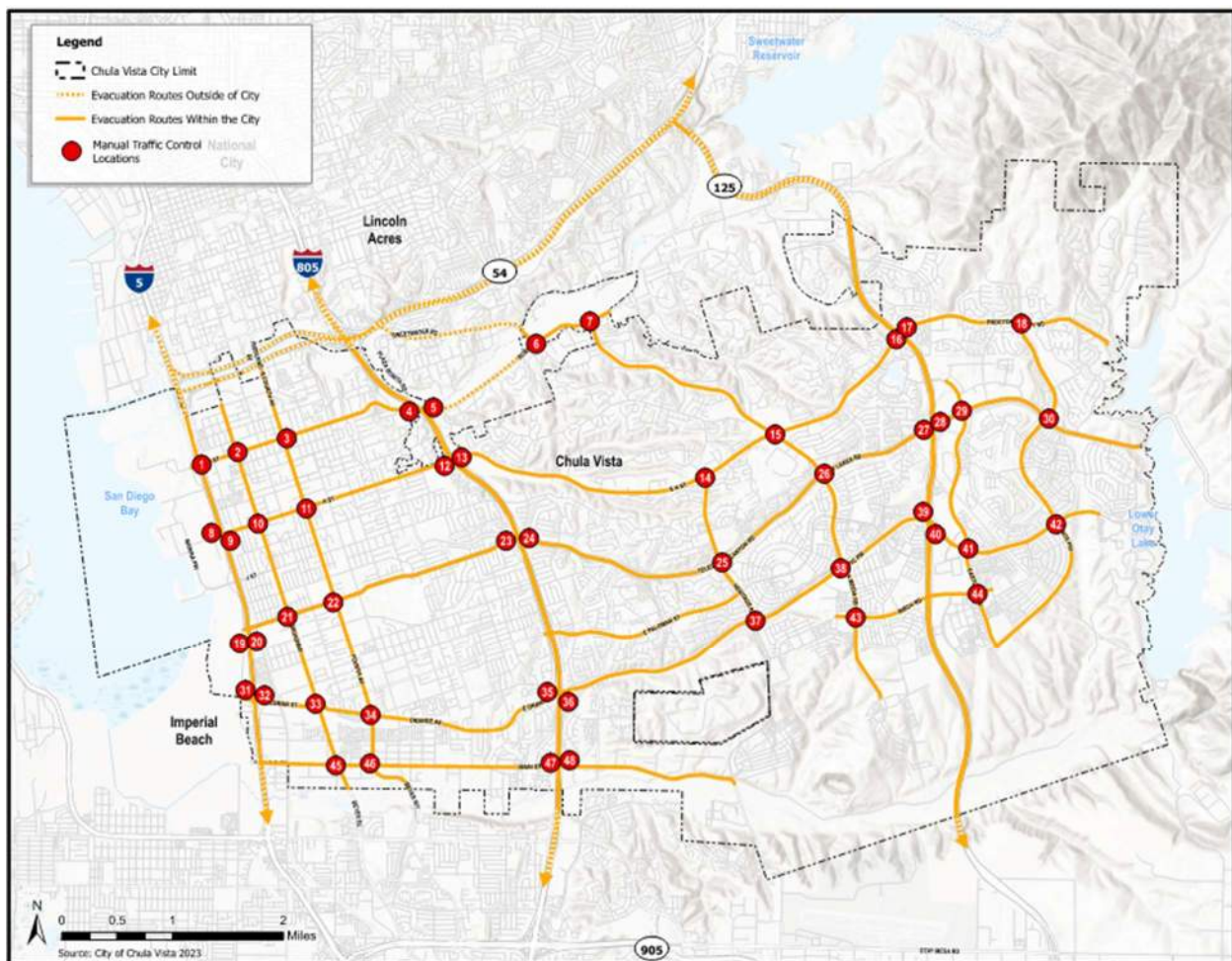
Exhibit 2-17: Evacuation Routes to the Nearest Gateway – Flood Inundation Scenario



3.0 Safety & Traffic Control Considerations

As noted earlier, at-grade intersections will likely become the first bottleneck locations once the evacuation is fully underway. During these conditions traffic signals and stop sign controls will not be able to efficiently and safely manage the evacuation traffic demand pattern. In order to maintain a safe and efficient traffic flow, it will be necessary to allocate right-of-way time to the respective competing evacuation traffic flows by imposing some form of proactive control. During evacuation conditions, manual control at the most critical intersections should be provided by designated traffic control personnel. Considering the designated evacuation routing for the City's evacuation zones and the points where major evacuating traffic flows will be merging, it is recommended that manual traffic control be considered at the locations identified in [Table 3-1](#) and shown in [Exhibit 3-1](#).

Exhibit 3-1: Manual Traffic Control Points



The need for manual traffic control at these locations will be determined by the Evacuation Coordinator and Emergency Operations Manager. Locations that should have manual traffic control established will depend on the hazard scenario being addressed and the evacuation zones that are ordered to be evacuated. In most cases, the City's Police Department would be responsible for providing the personnel needed for the manual traffic control function.

Table 3-1: Recommended Traffic Control Point Locations

ID	Location	Existing Traffic Control
1	E St and East I-5 On/Off Ramps	SIGNAL
2	E St and Broadway	SIGNAL
3	E St and 4th Ave	SIGNAL
4	Bonita Rd and West I-805 On/Off Ramps	SIGNAL
5	Bonita Rd and East I-805 On/Off Ramps	SIGNAL
6	Bonita Rd and Willow St	SIGNAL
7	Bonita Rd and Otay Lakes Rd	SIGNAL
8	H St and West I-5 On/Off Ramps	SIGNAL
9	H St and East I-5 On/Off Ramps	SIGNAL
10	H St and Broadway	SIGNAL
11	H St and 4th Ave	SIGNAL
12	E H St and West I-805 On/Off Ramps	SIGNAL
13	E H St and East I-805 On/Off Ramps	SIGNAL
14	E H St and Paseo Ranchero	SIGNAL
15	E H St and Otay Lakes Rd	SIGNAL
16	E H St West 125 On/Off Ramp	SIGNAL
17	E H St East 125 On/Off Ramp	SIGNAL
18	Proctor Valley Rd and Hunte Pkwy	SIGNAL
19	Bay Blvd and West I-5 On/Off Ramps	SIGNAL
20	Industrial Blvd and East I-5 On/Off Ramps	SIGNAL
21	L St and Broadway	SIGNAL
22	L St and 4th Ave	SIGNAL
23	Telegraph Canyon Rd and West I-805 On/Off Ramps	SIGNAL
24	Telegraph Canyon Rd and East I-805 On/Off Ramps	SIGNAL
25	Telegraph Canyon Rd and Paseo Ranchero	SIGNAL
26	Otay Lakes Rd and La Media Rd	SIGNAL
27	Otay Lakes Rd and West 125 On/Off Ramp	SIGNAL
28	Otay Lakes Rd and East 125 On/Off Ramp	SIGNAL
29	Otay Lakes Rd and Eastlake Pkwy	SIGNAL
30	Otay Lakes Rd and Hunte Pkwy	SIGNAL
31	Palomar St and West I-5 On/Off Ramps	SIGNAL
32	Palomar St and East I-5 On/Off Ramps	SIGNAL
33	Palomar St and Broadway	SIGNAL
34	Orange Ave and 4th Ave	SIGNAL
35	Olympic Pkwy and West I-805 On/Off Ramps	SIGNAL
36	Olympic Pkwy and East I-805 On/Off Ramps	SIGNAL
37	Olympic Pkwy and Hertiage Rd	SIGNAL
38	Olympic Pkwy and La Media Rd	SIGNAL
39	Olympic Pkwy and West 125 On/Off Ramps	SIGNAL
40	Olympic Pkwy and East 125 On/Off Ramps	SIGNAL
41	Olympic Pkwy and Eastlake Pkwy	SIGNAL

ID	Location	Existing Traffic Control
42	Olympic Pkwy and Hunte Pkwy	SIGNAL
43	Birch Rd and La Media Rd	SIGNAL
44	Birch Rd and Eastlake Pkwy	SIGNAL
45	Main St and Broadway	SIGNAL
46	Main St and 4th Ave	SIGNAL
47	Main St and West I-805 On/Off Ramps	SIGNAL
48	Main St and East I-805 On/Off Ramps	SIGNAL

4.0 Primary Evacuation Scenarios

Through coordination with the City's Public Works Department, as well as the Police and Fire Departments, two representative emergency scenarios have been identified which would require an evacuation of populations within select evacuation zones within the City. The two emergency scenarios include a potential fire hazard scenario and a potential dam inundation scenario. The following sections present a discussion of each emergency scenario along with the identification of corresponding evacuation procedures and recommendations for facilitating the evacuation in the event of a significant emergency.

4.1. Scenario 1 – Wildfire Hazard

This scenario represents a potential fire hazard approaching from the east through the San Diego National Wildlife Refuge, Proctor Valley, and the Otay Open Space Preserve burning towards the City limits. As identified in the Vulnerability Assessment, portions of the City along the easterly and southerly boundaries are identified as very high hazard zones – see [Attachment C](#). A wildfire in any of these zones could potentially spread into the City and threaten residential structures but are unlikely to immediately impact critical facilities.

As shown in [Table 4-1](#), facilities within the fire hazard zones include the several pump stations, the Chula Vista Transit Center, and the Fresnius Medical Care (Marina Bay).

Table 4-1: Facilities in a Fire Evacuation Zone (FEZ)

Map ID	Name	Evacuation Zone
Transportation		
3	Chula Vista Transit	FEZ-2
5	CVESD School Bus Corp Yard	FEZ-2
Bridges		
1	Sweetwater Rvr (Willow St) (ID 57C0011)	FEZ-15
20	Otay River (Heritage Rd) (ID 57C0670)	FEZ-4
21	Otay River (Heritage Rd) (ID 57C0670)	FEZ-15
22	Salt Creek (Stone Gate) (ID 57C0841)	FEZ-10
23	Poggi Canyon (Olympic Pkwy) (ID 57C0842)	FEZ-3
24	Poggi Canyon (Heritage Road) (ID 57C0843)	FEZ-2 / FEZ-3
31	Olympic Pkwy Poc (E. Palomar) (ID 57C0850)	FEZ-5
33	Otay Ranch Hs Poc (ID 57C0852)	FEZ-3
34	Salt Creek (Rambling Vista Rd) (ID 57C0860)	FEZ-8
Health Care		
7	Fresnius Medical Care Marina Bay	FEZ-9
Wastewater		
5	Wastewater Pump Station	FEZ-11
6	Wastewater Pump Station	FEZ-6
7	Wastewater Pump Station	FEZ-7
10	Wastewater Pump Station - Olympic Training Center	FEZ-10
14	Wastewater Pump Station - Salt Creek Park	FEZ-8

Table 4-2 summarizes the number of residential buildings for each of the evacuation zones within the fire hazard zone and the estimated number of vehicles associated with these residences. The estimated number of personal vehicles is based on vehicle ownership data prepared by County of San Diego, Health and Human Services Agency, Public Health Services, Community Health Statistics Unit (2023) for the City of Chula Vista.

Table 4-2: Fire Evacuation Zone Demographics

Zone	Estimated Number of Residences	Estimated Number of Personal Vehicles
FEZ-1	1688	3,020
FEZ-2	1122	2,007
FEZ-3	3001	5,369
FEZ-4	1711	3,061
FEZ-5	2083	3,726
FEZ-6	3520	6,297
FEZ-7	3278	5,864
FEZ-8	2489	4,453
FEZ-9	1670	2,988
FEZ-10	631	1,129
FEZ-11	1293	2,313
FEZ-12	1089	1,948
FEZ-13	1317	2,356
FEZ-14	915	1,637
FEZ-15	177	317
Total	25,984	46,485

If a fire hazard were to occur in the hills and open space to the east of the City, Evacuations Zones FEZ-6, FEZ-8, and FEZ-10 through FEZ-13 would potentially experience the highest risk since they are located along the City's eastern boundary closest to the fire hazard. Residents in each of these zones should be directed to travel west, away from the fire hazard. As shown in the travel time assessment above, the closest gateway to these zones are along SR-125 toll road (Gateway C to the north and Gateway F to the south). However, depending on the nature, origin, and direction of a potential fire hazard, these gateways may lead them closer to the hazard and evacuees in this case should be directed to continue west toward other gateways. The estimated travel time from these zones to the closest gateways ranges from 5.75 minutes to approximately 12 minutes; however, as discussed in Section 1.2.6, these travel time estimates are not equivalent to evacuation times and should only be used as a relative comparison for individual zones.

If a fire hazard were to occur in the Otay River Basin to the south of the City, Evacuations Zones FEZ-2, FEZ-4, and FEZ-6 would potentially experience the highest risk since they are located along the City's south eastern boundary closest to the fire hazards. While the closest gateways (Gateway E and Gateway F) show relatively fast travel times, these gateways would likely lead them closer to the hazard and residents should instead be advised to travel north towards Gateway B and Gateway C.

The evacuation routes serving these hazard zones, including Proctor Valley Road/East H Street, Otay Lakes Road / Telegraph Canyon Road, and Olympic Parkway are either 4-lane or 6-lane facilities (two to three lanes in each direction) with a one-way outbound evacuation capacity of between 2,390 and 3,590 vehicles-per-hour (vph). In total, all fire hazard evacuation zones throughout the City have an estimate of 25,984 dwelling units, or approximately 46,485 vehicles that could potentially be evacuated due to a fire hazard. However, with the multiple evacuation route options available to residents, it is unlikely that each resident would take exactly the same route. Additionally, the staggered evacuation response by evacuating residents would also spread the evacuating traffic loading on the evacuation routes over time. Therefore, the available capacity of the roadway network is estimated to be sufficient for this hazard scenario. To avoid significant congestion, incremental evacuation of these zones should be considered if advanced warning of the fire hazard permits.

In addition, while SR-125 is a toll road that charges a fee to use (typically via a transponder or license plate reader), under emergency conditions it is imperative that toll fee collection be suspended until the evacuation orders are lifted. This limits the level of conflicts residents would face during an evacuation and helps to disperse evacuation traffic loading throughout the evacuation route network.

4.2. Scenario 2 – Dam Inundation

This scenario represents a potential failure at the Sweetwater Main Dam and Reservoir which lies approximately 1.5 miles to the north of the City limits. A failure at the dam could potentially inundate residential neighborhoods and critical facilities shown in Table 4-3. Dam inundation maps are provided in [Attachment D](#).

A failure at the Sweetwater Main Dam would follow the Sweetwater River through the Bonita Golf Club, Sweetwater Regional Park, Chula Vista Golf Course, the Sweetwater River Park before finally reaching the San Diego Bay. Within the City limits, the homes surrounding the Chula Vista Golf Course between Bonita Road and Sweetwater Road would experience the highest threat levels.

The inundation maps show that flood waters flow downhill following lower elevations toward the San Diego Bay and would reach a maximum depth of more than 18 feet on average and potentially up to 42 feet. The maps show initial floodwaters would reach the Chula Vista Golf Course within 22 minutes with a maximum flood depth of 29 feet at it's peak (within 41 minutes). Floodwaters would continue to flow towards San Diego Bay and reach the I-805 interchange in approximately 55 minutes with the sections of SR-54 at risk of being flooded. The Flood inundation maps show that water would likely flow along the SR-54 under reach the I-5 interchange within 1 hour and 23 minutes.

This flooding would likely impact the availability of evacuation routes and could hinder the efficient evacuation in the event of an emergency scenario. Evacuation routing should follow a path to higher ground (higher elevation) away from the flood zone (i.e., south). While the nearest gateway (Gateway B) to the evacuation zones show travel times between 3.5 minutes and 8.75 minutes, this could be potentially be impacted by the flood inundation hazard and evacuees should be directed toward other gateways via alternate routes.

It should also be noted that the SR-125, I-805, and I-5 freeways are elevated roadways and are not anticipated to be significantly impacted by floodwaters. However, the SR-54 roadway is at a lower elevation and would experience the highest threat of flood as it travels parallel to the Sweetwater River.

Table 4-3: Facilities in a Dam Inundation Zone (DIZ)

Map ID	Name	Evacuation Zone
Transportation		
1	Bayfront E St. Trolley Station	DIZ-1
Bridges		
1	Sweetwater Rvr (Willow St) (ID 57C0011)	DIZ-4 / DIZ-5
2	Sweetwater Rvr (N. 2Nd St.) (ID 57C0235)	DIZ-2
21	Sweetwater River (Central Ave) (ID 57C0701)	DIZ-4 / DIZ-5
Health Care		
6	Fredericka Manor Care Center	DIZ-2

Table 4-4 summarizes the number of residential buildings for each of the evacuation zones effected by the dam inundation hazard scenario and the estimated number of vehicles associated with these residences.

Table 4-4: Dam Inundation Zone (DIZ) Demographics

Zone	Estimated Number of Residences	Estimated Number of Personal Vehicles
DIZ-1	420	751
DIZ-2	1,745	3,122
DIZ-3	269	481
DIZ-4	177	317
DIZ-5	513	918
SUM	3,124	5,589

Dam Inundation Zones DIZ-4 and DIZ-5 would be immediately threatened by this potential dam inundation hazard. Zone DIZ-4 should be directed to head north outside of the City limits via Sweetwater Road towards Gateway B or Gateway C (nearest) and could potentially evacuate an estimated 177 dwelling units, or 317 vehicles. Sweetwater Road is a 2-lane facility (one lane in each direction) with a one-way outbound capacity of 1,200 vehicles-per-hour (vph).

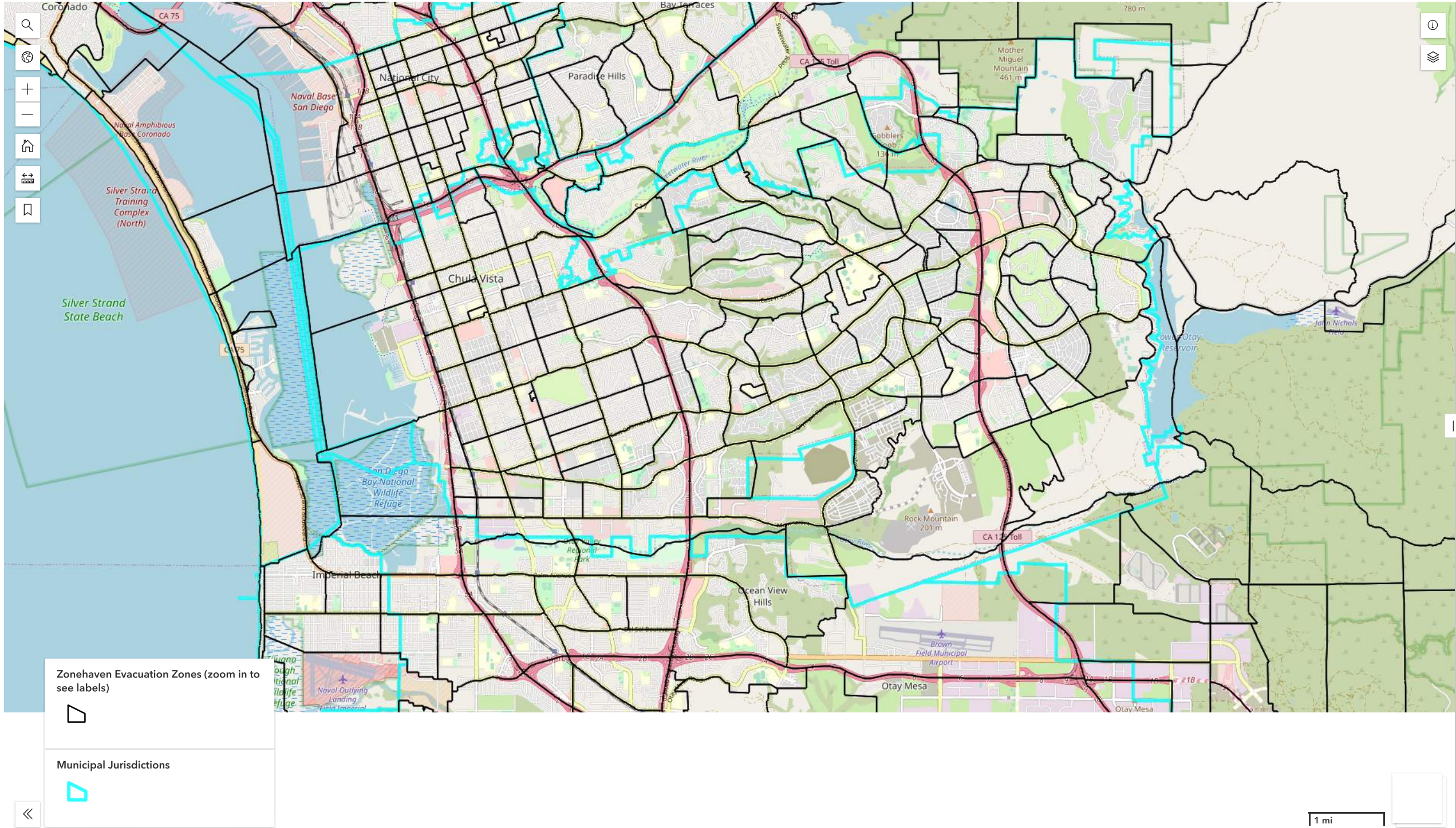
Zone DIZ-5 should be directed south on Otay Lakes Road, which is a 4-lane facility (two lanes in each direction) with a one-way outbound evacuation capacity of 2,390 vehicles-per-hour-per (vph). All of Zone DIZ-5 could potentially evacuate an estimated 513 dwelling units, or 918 vehicles, however only those residents north of Allen School Lane are shown to be at risk of flooding.

It should be noted that the Willow Street Bridge connecting Bonita Road and Sweetwater Road over the river, while elevated, could be potentially at risk of flooding and should not be utilized. Similarly, Bonita Road runs parallel to the river and is also at risk of flooding and should not be utilized.

With the multiple evacuation route options available to residents, it is unlikely that each resident would take exactly the same route. The dispersion of traffic would reduce the evacuation loading on any given

Attachment A:

Zonehaven Information



Zonehaven Correspondence Tables - City of Chula Vista

Fire Hazard Zone	Zonehaven Reference		Dam Inundation Zone	Zonehaven Reference
FHZ-1	2515		DIZ-1	2417
	2521			2420
FHZ-2	2592		DIZ-2	2424
	2593			2355
	2594			2359
FHZ-3	2525			2429
	2526		DIZ-3	2368
	2528		DIZ-4	2367
	2596		DIZ-5	2367
FHZ-4	2351			2370
	2534			
	2597			
FHZ-5	2530			
	2532			
	2533			
FHZ-6	2535			
	2536			
	2537			
	2538			
	2539			
	2540			
	2541			
	2542			
FHZ-7	2598			
	2453			
	2454			
	2455			
	2456			
	2457			
FHZ-8	2458			
	2459			
	2460			
FHZ-9	2461			
	2380			
	2381			
	2383			
FHZ-10	2384			
	2385			
	2386			
	2387			
FHZ-11	2388			
	2304			
FHZ-12	2382			
	2302			
	2305			
	2375			
	2378			
FHZ-13	2379			
	2300			
	2372			
FHZ-14	2374			
FHZ-15	2367			
	2370			
	2441			

Attachment B:

Travel Time Calculations

Gateway Destination A

Gateway Destination A						Assumed delay (seconds)					
						20	10				
Evacuation Zones	Evacuation Route #	Roadway	Link Distance (feet)	Posted Speed Limit (mph)	Link Travel Time (min)	No. Traffic Signals	No. Stop Int.	Intersection Delay (min)	Total Travel Time (min)	Rounded Travel Time	
DIZ-1	DIZ001-A	5th Ave	1330	25	0.60	1	1	0.50	1.10	1.25	
		C St	1340	35	0.44	1		0.33	0.77	1.00	
		N 4th Ave	2600	35	0.84	3		1.00	1.84	2.00	
		I-54 Freeway	4800	65	0.84			0.00	0.84	1.00	
	Total Route		10070		2.72	5	1	1.83	4.55	4.75	
DIZ-2	DIZ002-A	E St	2200	35	0.71	2		0.67	1.38	1.50	
		E St	4000	30	1.52	3		1.00	2.52	2.75	
		E St	4700	30	1.78	4		1.33	3.11	3.25	
		I-5 Freeway	4600	65	0.80			0.00	0.80	1.00	
	Total Route		15500		4.81	9	0	3.00	7.81	8.00	
DIZ-3	DIZ003-A	Allen School Rd	1800	25	0.82	1	1	0.50	1.32	1.50	
		Bonita Rd	1700	40	0.48	1		0.33	0.82	1.00	
		Bonita Rd	7300	50	1.66	1		0.33	1.99	2.00	
		I-805 Freeway	6000	65	1.05			0.00	1.05	1.25	
	Total Route		11000	65	1.92			0.00	1.92	2.00	
DIZ-4	DIZ004-A	I-54 Freeway	27800		5.93	3	1	1.17	7.10	7.25	
		Sweetwater Rd	4300	45	1.09	1		0.33	1.42	1.50	
		Sweetwater Rd	1800	45	0.45	1		0.33	0.79	1.00	
		Sweetwater Rd	2100	45	0.53	1		0.33	0.86	1.00	
	Plaza Bonita Centerway	1500	40	0.43	1		0.33	0.76	1.00		
DIZ-5	DIZ005-A	Reo Dr	650	40	0.18	2		0.67	0.85	1.00	
		SR-54 Highway	15500	65	2.71	1		0.33	3.04	3.25	
		Total Route		25850		5.39	7	0	2.33	7.72	7.75
		Ridgeview Way	900	25	0.41	1	1	0.50	0.91	1.00	
	DIZ-5	DIZ005-A	Otay Lakes Rd	5400	50	1.23	2		0.67	1.89	2.00
Otay Lakes Rd			1400	40	0.40	1		0.33	0.73	0.75	
Bonita Rd			1700	40	0.48	2		0.67	1.15	1.25	
Bonita Rd			1700	40	0.48	1		0.33	0.82	1.00	
Bonita Rd		7300	50	1.66	1		0.33	1.99	2.00		
DIZ-5	DIZ005-A	I-805 Freeway	6000	65	1.05			0.00	1.05	1.25	
		I-54 Freeway	11000	65	1.92			0.00	1.92	2.00	
		Total Route		87100		7.63	8	1	2.83	10.46	10.50
		Brandywine Ave	1270	40	0.36	1		0.33	0.69	0.75	
	DIZ-5	DIZ005-A	Olympic Pkwy	1800	45	0.45	2		0.67	1.12	1.25
Olympic Pkwy			1400	45	0.35	2		0.67	1.02	1.25	
E Orange Ave			600	40	0.17	1		0.33	0.50	0.50	
E Orange Ave			2100	40	0.60	1		0.33	0.93	1.00	
E Orange Ave		1600	40	0.45	1		0.33	0.79	1.00		
DIZ-5	DIZ005-A	E Orange Ave	850	40	0.24	1		0.33	0.57	0.75	
		Orange Ave	2100	40	0.60	1		0.33	0.93	1.00	
		Orange Ave	670	40	0.19	1		0.33	0.52	0.75	
		Orange Ave	1400	40	0.40	1		0.33	0.73	0.75	
	Orange Ave	1500	40	0.43	2		0.67	1.09	1.25		
DIZ-5	DIZ005-A	Orange Ave	2700	40	0.77	1		0.33	1.10	1.25	
		Palomar St	1200	35	0.39	2		0.67	1.06	1.25	
		Palomar St	2300	35	0.75	3		1.00	1.75	1.75	
		I-5 Freeway	4100	65	0.72			0.00	0.72	0.75	
	I-5 Freeway	14000	65	2.45			0.00	2.45	2.50		
DIZ-5	DIZ005-A	Total Route		39590		9.31	20	0	6.67	15.97	16.00
		Brandywine Ave	2600	35	0.84	2		0.67	1.51	1.75	
		Main St	2000	45	0.51	3		1.00	1.51	1.75	
		Main St	1400	40	0.40	1		0.33	0.73	0.75	
	DIZ-5	DIZ005-A	Main St	2500	40	0.71	1		0.33	1.04	1.25
Main St			1700	40	0.48	2		0.67	1.15	1.25	
Main St			3400	40	0.97	2		0.67	1.63	1.75	
Main St			2100	40	0.60	2		0.67	1.26	1.50	
DIZ-5		DIZ005-A	Main St	1250	40	0.36	1		0.33	0.69	0.75
	Main St		2800	40	0.80	1		0.33	1.13	1.25	
	Main St		1100	40	0.31	1		0.33	0.65	0.75	
	I-5 Freeway		3570	65	0.62			0.00	0.62	0.75	
	I-5 Freeway	4100	65	0.72			0.00	0.72	0.75		
I-5 Freeway	14000	65	2.45			0.00	2.45	2.50			
DIZ-5	DIZ005-A	Total Route		42520		9.75	16	0	5.33	15.09	15.25
		Santa Victoria Rd	2400	25	1.09	1	2	0.67	1.76	2.00	
		Heritage Rd	2300	40	0.65	1		0.33	0.99	1.00	
		Olympic Pkwy	8900	50	2.02	1		0.33	2.36	2.50	
	DIZ-5	DIZ005-A	Olympic Pkwy	1800	45	0.45	2		0.67	1.12	1.25
Olympic Pkwy			1400	45	0.35	2		0.67	1.02	1.25	
E Orange Ave			570	40	0.16	1		0.33	0.50	0.50	
E Orange Ave			2100	40	0.60	1		0.33	0.93	1.00	
DIZ-5		DIZ005-A	E Orange Ave	1600	40	0.45	1		0.33	0.79	1.00
	E Orange Ave		820	40	0.23	1		0.33	0.57	0.75	
	Orange Ave		2100	40	0.60	1		0.33	0.93	1.00	
	Orange Ave		670	40	0.19	1		0.33	0.52	0.75	
	DIZ-5	DIZ005-A	Orange Ave	1400	40	0.40	1		0.33	0.73	0.75
Orange Ave			1450	40	0.41	2		0.67	1.08	1.25	
Orange Ave			2700	40	0.77	1		0.33	1.10	1.25	
Palomar St			1200	35	0.39	2		0.67	1.06	1.25	
Palomar St		2300	35	0.75	3		1.00	1.75	1.75		

Gateway Destination A

Gateway Destination A						Assumed delay (seconds)						
Evacuation Zones	Evacuation Route #	Roadway	Link Distance (feet)	Posted Speed Limit (mph)	Link Travel Time (min)	20	10	Intersection Delay (min)	Total Travel Time (min)	Rounded Travel Time		
						No. Traffic Signals	No. Stop Int.					
FHZ-4	FHZ004-A	I-5 Freeway	4100	65	0.72			0.00	0.72	0.75		
		I-5 Freeway	14000	65	2.45			0.00	2.45	2.50		
		Total Route	51810		12.69	22	2	7.67	20.38	20.50		
			La Media Pkwy	2400	25	1.09	1	2	0.67	1.76	2.00	
			La Media Rd	1800	25	0.82	1	1	0.50	1.32	1.50	
			La Media Rd	3800	45	0.96	1		0.33	1.29	1.50	
			La Media Rd	2800	45	0.71	2		0.67	1.37	1.50	
			Olympic Pkwy	5800	50	1.32	3		1.00	2.32	2.50	
			Olympic Pkwy	8900	50	2.02	1		0.33	2.36	2.50	
			Olympic Pkwy	1800	45	0.45	2		0.67	1.12	1.25	
			Olympic Pkwy	1400	45	0.35	2		0.67	1.02	1.25	
			E Orange Ave	570	40	0.16	1		0.33	0.50	0.50	
			E Orange Ave	2100	40	0.60	1		0.33	0.93	1.00	
			E Orange Ave	1600	40	0.45	1		0.33	0.79	1.00	
			E Orange Ave	900	40	0.26	1		0.33	0.59	0.75	
			Orange Ave	2100	40	0.60	1		0.33	0.93	1.00	
			Orange Ave	670	40	0.19	1		0.33	0.52	0.75	
			Orange Ave	1400	40	0.40	1		0.33	0.73	0.75	
			Orange Ave	1500	40	0.43	2		0.67	1.09	1.25	
			Orange Ave	2700	40	0.77	1		0.33	1.10	1.25	
			Palomar St	1200	35	0.39	2		0.67	1.06	1.25	
			Palomar St	2300	35	0.75	3		1.00	1.75	1.75	
			I-5 Freeway	4100	65	0.72			0.00	0.72	0.75	
			I-5 Freeway	14000	65	2.45			0.00	2.45	2.50	
			Total Route	63840		15.87	28	3	9.83	25.72	25.75	
		FHZ-5	FHZ005-A	Magdalena Ave	1500	25	0.68	2	1	0.83	1.52	1.75
				E Palomar St	600	25	0.27	1		0.33	0.61	0.75
				E Palomar St	1230	35	0.40	1		0.33	0.73	0.75
				Olympic Pkwy	2700	50	0.61	1		0.33	0.95	1.00
				Olympic Pkwy	5800	50	1.32	3		1.00	2.32	2.50
				Olympic Pkwy	9000	50	2.05	1		0.33	2.38	2.50
				Olympic Pkwy	1800	45	0.45	2		0.67	1.12	1.25
Olympic Pkwy	1320			45	0.33	2		0.67	1.00	1.00		
E Orange Ave	600			40	0.17	1		0.33	0.50	0.50		
E Orange Ave	2100			40	0.60	1		0.33	0.93	1.00		
E Orange Ave	1600			40	0.45	1		0.33	0.79	1.00		
E Orange Ave	900			40	0.26	1		0.33	0.59	0.75		
Orange Ave	2100			40	0.60	1		0.33	0.93	1.00		
Orange Ave	700			40	0.20	1		0.33	0.53	0.75		
Orange Ave	1400			40	0.40	1		0.33	0.73	0.75		
Orange Ave	1500			40	0.43	2		0.67	1.09	1.25		
Orange Ave	2700			40	0.77	1		0.33	1.10	1.25		
Palomar St	1200			35	0.39	2		0.67	1.06	1.25		
Palomar St	2300			35	0.75	3		1.00	1.75	1.75		
I-5 Freeway	4100			65	0.72			0.00	0.72	0.75		
I-5 Freeway	14000			65	2.45			0.00	2.45	2.50		
	Total Route			59150		14.28	28	1	9.50	23.80	24.00	
FHZ-6	FHZ006-A			Windingwalk St	2000	25	0.91	1		0.33	1.24	1.25
				Olympic Pkwy	3300	50	0.75	2		0.67	1.42	1.50
				Olympic Pkwy	5500	50	1.25	3		1.00	2.25	2.25
				Olympic Pkwy	2700	50	0.61	1		0.33	0.95	1.00
				Olympic Pkwy	5800	50	1.32	3		1.00	2.32	2.50
				Olympic Pkwy	9000	50	2.05	1		0.33	2.38	2.50
				Olympic Pkwy	1800	45	0.45	2		0.67	1.12	1.25
				Olympic Pkwy	1400	45	0.35	2		0.67	1.02	1.25
				E Orange Ave	570	40	0.16	1		0.33	0.50	0.50
				E Orange Ave	2100	40	0.60	1		0.33	0.93	1.00
		E Orange Ave	1600	40	0.45	1		0.33	0.79	1.00		
		E Orange Ave	900	40	0.26	1		0.33	0.59	0.75		
		Orange Ave	2100	40	0.60	1		0.33	0.93	1.00		
		Orange Ave	700	40	0.20	1		0.33	0.53	0.75		
		Orange Ave	1400	40	0.40	1		0.33	0.73	0.75		
		Orange Ave	1500	40	0.43	2		0.67	1.09	1.25		
		Orange Ave	2700	40	0.77	1		0.33	1.10	1.25		
		Palomar St	1200	35	0.39	2		0.67	1.06	1.25		
		Palomar St	2300	35	0.75	3		1.00	1.75	1.75		
		I-5 Freeway	4100	65	0.72			0.00	0.72	0.75		
		I-5 Freeway	14000	65	2.45			0.00	2.45	2.50		
			Total Route	66670		15.85	30	0	10.00	25.87	26.00	
		FHZ-7	FHZ007-A	Clubhouse Dr	2100	35	0.68	2		0.67	1.35	1.50
				Eastlake Pkwy	2900	40	0.82	2		0.67	1.49	1.50
				Otay Lakes Rd	3100	50	0.70	4		1.33	2.04	2.25
				Otay Lakes Rd	5400	50	1.23	3		1.00	2.23	2.25
				Telegraph Canyon Rd	11300	50	2.57	2		0.67	3.23	3.25
				Telegraph Canyon Rd	4500	50	1.02	2		0.67	1.69	1.75
				Telegraph Canyon Rd	2600	45	0.66	3		1.00	1.66	1.75
				Telegraph Canyon Rd	1400	35	0.45	3		1.00	1.45	1.50
				E L St	1100	25	0.50	1		0.33	0.83	1.00
				E L St	3400	35	1.10	3		1.00	2.10	2.25

Gateway Destination A

						Assumed delay (seconds)				
						20	10			
Evacuation Zones	Evacuation Route #	Roadway	Link Distance (feet)	Posted Speed Limit (mph)	Link Travel Time (min)	No. Traffic Signals	No. Stop Int.	Intersection Delay (min)	Total Travel Time (min)	Rounded Travel Time
FHZ-8	FHZ008-A	L St	4000	35	1.30	3		1.00	2.30	2.50
		L St	2700	25	1.23	2		0.67	1.89	2.00
		L St	3300	35	1.07	2		0.67	1.74	1.75
		Industrial Blvd	800	40	0.23		1	0.17	0.39	0.50
		I-5 Freeway	1000	65	0.17			0.00	0.17	0.25
		I-5 Freeway	14000	65	2.45			0.00	2.45	2.50
		Total Route	63600		16.19	32	1	10.83	27.01	27.25
		Clubhouse Dr	2600	35	0.84	1	1	0.50	1.34	1.50
		Hunte Pkwy	3200	45	0.81	2		0.67	1.47	1.50
		Otay Lakes Rd	5000	50	1.14	3		1.00	2.14	2.25
		Otay Lakes Rd	3100	50	0.70	4		1.33	2.04	2.25
		Otay Lakes Rd	5400	50	1.23	3		1.00	2.23	2.25
		Telegraph Canyon Rd	11300	50	2.57	2		0.67	3.23	3.25
		Telegraph Canyon Rd	4500	50	1.02	2		0.67	1.69	1.75
		Telegraph Canyon Rd	2600	45	0.66	3		1.00	1.66	1.75
		Telegraph Canyon Rd	1400	35	0.45	3		1.00	1.45	1.50
	FHZ009-A	E L St	1100	25	0.50	1		0.33	0.83	1.00
		E L St	3400	35	1.10	3		1.00	2.10	2.25
		L St	4000	35	1.30	3		1.00	2.30	2.50
		L St	2700	25	1.23	2		0.67	1.89	2.00
		L St	3300	35	1.07	2		0.67	1.74	1.75
		Industrial Blvd	800	40	0.23		1	0.17	0.39	0.50
		I-5 Freeway	1000	65	0.17			0.00	0.17	0.25
		I-5 Freeway	14000	65	2.45			0.00	2.45	2.50
		Total Route	69400		17.47	34	2	11.67	29.12	29.25
	FHZ009-A	Lane Ave	2000	40	0.57	1	1	0.50	1.07	1.25
		Proctor Valley Rd	3700	45	0.93	3		1.00	1.93	2.00
		E H St	3900	45	0.98	3		1.00	1.98	2.00
		E H St	3300	45	0.83	1		0.33	1.17	1.25
		E H St	3700	35	1.20	3		1.00	2.20	2.25
		E H St	2400	45	0.61	2		0.67	1.27	1.50
		E H St	5100	50	1.16	2		0.67	1.83	2.00
		E H St	4700	50	1.07	3		1.00	2.07	2.25
		E H St	4500	50	1.02	2		0.67	1.69	1.75
		E H St	5100	45	1.29	2		0.67	1.95	2.00
FHZ-9	FHZ010-A	H St	4000	35	1.30	3		1.00	2.30	2.50
		H St	2700	35	0.88	3		1.00	1.88	2.00
		H St	2400	35	0.78	2		0.67	1.45	1.50
		H St	1500	35	0.49	3		1.00	1.49	1.50
		I-5 Freeway	8000	65	1.40			0.00	1.40	1.50
		Total Route	57000		14.51	33	1	11.17	25.68	25.75
	FHZ010-A	Northwoods Dr	360	25	0.16		1	0.17	0.33	0.50
		Adirondack Pl	510	25	0.23			0.00	0.23	0.25
		Stone Gate St	1800	35	0.58	1	1	0.50	1.08	1.25
		Hunte Pkwy	3900	45	0.98	1	1	0.50	1.48	1.50
		Proctor Valley Rd	1500	45	0.38	1		0.33	0.71	0.75
		Proctor Valley Rd	3700	45	0.93	3		1.00	1.93	2.00
		E H St	3900	45	0.98	3		1.00	1.98	2.00
		E H St	3300	45	0.83	1		0.33	1.17	1.25
		E H St	3700	35	1.20	3		1.00	2.20	2.25
		E H St	2400	45	0.61	2		0.67	1.27	1.50
	FHZ011-A	E H St	5100	50	1.16	2		0.67	1.83	2.00
		E H St	4700	50	1.07	3		1.00	2.07	2.25
		E H St	4500	50	1.02	2		0.67	1.69	1.75
		E H St	5100	45	1.29	2		0.67	1.95	2.00
		H St	4000	35	1.30	3		1.00	2.30	2.50
		H St	2700	35	0.88	3		1.00	1.88	2.00
		H St	2400	35	0.78	2		0.67	1.45	1.50
		H St	1500	35	0.49	3		1.00	1.49	1.50
		I-5 Freeway	8000	65	1.40			0.00	1.40	1.50
		Total Route	63070		16.28	35	3	12.17	28.44	28.50
FHZ-10	FHZ011-A	Agua Vista Dr	1700	25	0.77		2	0.33	1.11	1.25
		Agua Vista Dr	3500	25	1.59		2	0.33	1.92	2.00
		Proctor Valley Rd	3100	45	0.78	1	1	0.50	1.28	1.50
		Proctor Valley Rd	1400	45	0.35	1		0.33	0.69	0.75
		Proctor Valley Rd	1500	45	0.38	1		0.33	0.71	0.75
		Proctor Valley Rd	3700	45	0.93	3		1.00	1.93	2.00
		E H St	3900	45	0.98	3		1.00	1.98	2.00
		E H St	3300	45	0.83	1		0.33	1.17	1.25
		E H St	3700	35	1.20	3		1.00	2.20	2.25
		E H St	2400	45	0.61	2		0.67	1.27	1.50
	FHZ011-A	E H St	5100	50	1.16	2		0.67	1.83	2.00
		E H St	4700	50	1.07	3		1.00	2.07	2.25
		E H St	4500	50	1.02	2		0.67	1.69	1.75
		E H St	5100	45	1.29	2		0.67	1.95	2.00
		H St	4000	35	1.30	3		1.00	2.30	2.50
		H St	2700	35	0.88	3		1.00	1.88	2.00
		H St	2400	35	0.78	2		0.67	1.45	1.50
		H St	1500	35	0.49	3		1.00	1.49	1.50
		Total Route	63070		16.28	35	3	12.17	28.44	28.50
	FHZ011-A	Agua Vista Dr	1700	25	0.77		2	0.33	1.11	1.25
		Agua Vista Dr	3500	25	1.59		2	0.33	1.92	2.00
		Proctor Valley Rd	3100	45	0.78	1	1	0.50	1.28	1.50
		Proctor Valley Rd	1400	45	0.35	1		0.33	0.69	0.75
		Proctor Valley Rd	1500	45	0.38	1		0.33	0.71	0.75
		Proctor Valley Rd	3700	45	0.93	3		1.00	1.93	2.00
		E H St	3900	45	0.98	3		1.00	1.98	2.00
		E H St	3300	45	0.83	1		0.33	1.17	1.25
		E H St	3700	35	1.20	3		1.00	2.20	2.25
		E H St	2400	45	0.61	2		0.67	1.27	1.50

Gateway Destination A

Evacuation Zones	Evacuation Route #	Roadway	Link Distance (feet)	Posted Speed Limit (mph)	Link Travel Time (min)	Assumed delay (seconds)		Intersection Delay (min)	Total Travel Time (min)	Rounded Travel Time
						20	10			
						No. Traffic Signals	No. Stop Int.			
FHZ-12		I-5 Freeway	8000	65	1.40			0.00	1.40	1.50
	Total Route		66200		17.82	2	5	12.50	30.32	30.50
		Mt Miguel Rd	1200	40	0.34	1		0.33	0.67	0.75
		Mt Miguel Rd	800	40	0.23	1		0.33	0.56	0.75
		E H St	3900	45	0.98	3		1.00	1.98	2.00
		E H St	3300	45	0.83	1		0.33	1.17	1.25
		E H St	3700	35	1.20	3		1.00	2.20	2.25
		E H St	2400	45	0.61	2		0.67	1.27	1.50
		E H St	5100	50	1.16	2		0.67	1.83	2.00
		E H St	4700	50	1.07	3		1.00	2.07	2.25
		E H St	4500	50	1.02	2		0.67	1.69	1.75
		E H St	5100	45	1.29	2		0.67	1.95	2.00
		H St	4000	35	1.30	3		1.00	2.30	2.50
		H St	2700	35	0.88	3		1.00	1.88	2.00
		H St	2400	35	0.78	2		0.67	1.45	1.50
		H St	1500	35	0.49	3		1.00	1.49	1.50
		I-5 Freeway	8000	65	1.40			0.00	1.40	1.50
	Total Route		53300		13.57	31	0	10.33	23.91	24.00
		Rue Chamond	200	25	0.09		1	0.17	0.26	0.50
		Port Renwick	1600	25	0.73		1	0.17	0.89	1.00
FHZ-13		Corral Canyon Rd	1900	40	0.54	1		0.33	0.87	1.00
		E H St	3700	35	1.20	3		1.00	2.20	2.25
		E H St	2400	45	0.61	2		0.67	1.27	1.50
		E H St	5100	50	1.16	2		0.67	1.83	2.00
		E H St	4700	50	1.07	3		1.00	2.07	2.25
		E H St	4500	50	1.02	2		0.67	1.69	1.75
		E H St	5100	45	1.29	2		0.67	1.95	2.00
		H St	4000	35	1.30	3		1.00	2.30	2.50
		H St	2700	35	0.88	3		1.00	1.88	2.00
		H St	2400	35	0.78	2		0.67	1.45	1.50
		H St	1500	35	0.49	3		1.00	1.49	1.50
		I-5 Freeway	8000	65	1.40			0.00	1.40	1.50
	Total Route		47800		12.54	26	2	9.00	21.55	21.75
		Ridgeview Way	900	25	0.41	1	1	0.50	0.91	1.00
FHZ-14		Otay Lakes Rd	3100	50	0.70	1		0.33	1.04	1.25
		Otay Lakes Rd	2800	40	0.80	3		1.00	1.80	2.00
		E H St	2400	45	0.61	2		0.67	1.27	1.50
		E H St	5100	50	1.16	2		0.67	1.83	2.00
		E H St	4700	50	1.07	3		1.00	2.07	2.25
		E H St	4500	50	1.02	2		0.67	1.69	1.75
		E H St	5100	45	1.29	2		0.67	1.95	2.00
		H St	4000	35	1.30	3		1.00	2.30	2.50
		H St	2700	35	0.88	3		1.00	1.88	2.00
		H St	2400	35	0.78	2		0.67	1.45	1.50
		H St	1500	35	0.49	3		1.00	1.49	1.50
		I-5 Freeway	8000	65	1.40			0.00	1.40	1.50
	Total Route		47200		11.89	27	1	9.17	21.08	21.25
FHZ-15		Sweetwater Rd	4300	45	1.09	1		0.33	1.42	1.50
		Sweetwater Rd	1800	45	0.45	1		0.33	0.79	1.00
		Sweetwater Rd	2100	45	0.53	1		0.33	0.86	1.00
		Plaza Bonita Centerway	1500	40	0.43	1		0.33	0.76	1.00
		Reo Dr	700	40	0.20	2		0.67	0.87	1.00
		SR-54 Highway	5800	65	1.01	1		0.33	1.35	1.50
		SR-54 Highway	9700	65	1.70			0.00	1.70	1.75
	Total Route		25900		5.41	7	0	2.33	7.75	7.75

Gateway Destination B

Gateway Destination B						Assumed delay (seconds)					
Evacuation Zones	Evacuation Route #	Roadway	Link Distance (feet)	Posted Speed Limit (mph)	Link Travel Time (min)	20	10	Intersection Delay (min)	Total Travel Time (min)	Rounded Travel Time	
						No. Traffic Signals	No. Stop Int.				
DIZ-1	DIZ001-B	Broadway	1400	35	0.45	3		1.00	1.45	1.50	
		National City Blvd	1100	35	0.36	2		0.67	1.02	1.25	
		I-54 Freeway	8500	65	1.49			0.00	1.49	1.50	
	Total Route		11000		2.30	5	0	1.67	3.96	4.00	
	DIZ002-B	Bonita Rd	800	35	0.26	2		0.67	0.93	1.00	
		Bonita Rd	1200	35	0.39	2		0.67	1.06	1.25	
		I-805 Freeway	6100	65	1.07	1		0.33	1.40	1.50	
	Total Route		19100		1.72	5	0	1.67	3.39	3.50	
	DIZ003-B	Allen School Rd	1800	25	0.82	1	1	0.50	1.32	1.50	
		Bonita Rd	1700	40	0.48	1		0.33	0.82	1.00	
Bonita Rd		7300	50	1.66	1		0.33	1.99	2.00		
Total Route		16900		4.03	3	1	1.17	5.20	5.25		
DIZ-4	DIZ004-B	Sweetwater Rd	4300	45	1.09	1		0.33	1.42	1.50	
		Sweetwater Rd	1800	45	0.45	1		0.33	0.79	1.00	
		Sweetwater Rd	2100	45	0.53	1		0.33	0.86	1.00	
		Sweetwater Rd	3500	45	0.88	3		1.00	1.88	2.00	
		Sweetwater Rd	2700	45	0.68	1		0.33	1.02	1.25	
Total Route		14400		3.64	7	0	2.33	5.97	6.00		
DIZ-5	DIZ005-B	Ridgeview Way	900	25	0.41	1	1	0.50	0.91	1.00	
		Otay Lakes Rd	5400	50	1.23	2		0.67	1.89	2.00	
		Otay Lakes Rd	1400	40	0.40	1		0.33	0.73	0.75	
		Bonita Rd	1700	40	0.48	2		0.67	1.15	1.25	
		Bonita Rd	1700	40	0.48	1		0.33	0.82	1.00	
		Bonita Rd	7300	50	1.66	1		0.33	1.99	2.00	
		I-805 Freeway	6100	65	1.07			0.00	1.07	1.25	
		Total Route		24500		5.73	8	1	2.83	8.56	8.75
FHZ-1	FHZ001-B	Brandywine Ave	1100	40	0.31	1		0.33	0.65	0.75	
		E Palomar St	2050	35	0.67	1		0.33	1.00	1.00	
		E Palomar St	1400	35	0.45	2		0.67	1.12	1.25	
		I-805 Freeway	6700	65	1.17			0.00	1.17	1.25	
		I-805 Freeway	5000	65	0.87			0.00	0.87	1.00	
		I-805 Freeway	8800	65	1.54			0.00	1.54	1.75	
	Total Route		25050		5.02	4	0	1.33	6.35	6.50	
	FHZ-2	FHZ002-B	Brandywine Ave	2700	35	0.88	2		0.67	1.54	1.75
			Main St	2000	45	0.51	2		0.67	1.17	1.25
			I-805 Freeway	4000	65	0.70	1		0.33	1.03	1.25
I-805 Freeway			3400	65	0.59			0.00	0.59	0.75	
I-805 Freeway			6700	65	1.17			0.00	1.17	1.25	
I-805 Freeway			5000	65	0.87			0.00	0.87	1.00	
I-805 Freeway			8800	65	1.54			0.00	1.54	1.75	
Total Route		32600		6.26	5	0	1.67	7.91	8.00		
FHZ-3	FHZ003-B	Santa Victoria Rd	2000	25	0.91	1	2	0.67	1.58	1.75	
		Heritage Rd	2300	40	0.65	1		0.33	0.99	1.00	
		Olympic Pkwy	8900	50	2.02	1		0.33	2.36	2.50	
		Olympic Pkwy	2700	45	0.68	3		1.00	1.68	1.75	
		I-805 Freeway	3400	65	0.59	1		0.33	0.93	1.00	
		I-805 Freeway	6700	65	1.17			0.00	1.17	1.25	
		I-805 Freeway	5000	65	0.87			0.00	0.87	1.00	
		I-805 Freeway	8800	65	1.54			0.00	1.54	1.75	
Total Route		39800		8.45	7	2	2.67	11.12	11.25		
FHZ-4	FHZ004-B	La Media Pkwy	2400	25	1.09	1	2	0.67	1.76	2.00	
		La Media Rd	1800	25	0.82	1	1	0.50	1.32	1.50	
		La Media Rd	3800	45	0.96	1		0.33	1.29	1.50	
		La Media Rd	2800	45	0.71	2		0.67	1.37	1.50	
		Olympic Pkwy	5800	50	1.32	3		1.00	2.32	2.50	
		Olympic Pkwy	8900	50	2.02	1		0.33	2.36	2.50	
		Olympic Pkwy	2700	45	0.68	3		1.00	1.68	1.75	
		I-805 Freeway	3400	65	0.59	1		0.33	0.93	1.00	
		I-805 Freeway	6700	65	1.17			0.00	1.17	1.25	
		I-805 Freeway	5000	65	0.87			0.00	0.87	1.00	
		I-805 Freeway	8800	65	1.54			0.00	1.54	1.75	
Total Route		52100		11.78	13	3	4.83	16.61	16.75		
FHZ-5	FHZ005-B	Magdalena Ave	1500	25	0.68	2	1	0.83	1.52	1.75	
		E Palomar St	600	25	0.27	1		0.33	0.61	0.75	
		E Palomar St	1230	35	0.40	1		0.33	0.73	0.75	
		Olympic Pkwy	2700	50	0.61	1		0.33	0.95	1.00	
		Olympic Pkwy	5800	50	1.32	3		1.00	2.32	2.50	
		Olympic Pkwy	8900	50	2.02	1		0.33	2.36	2.50	
		Olympic Pkwy	2700	45	0.68	3		1.00	1.68	1.75	
		I-805 Freeway	3400	65	0.59	1		0.33	0.93	1.00	
		I-805 Freeway	6700	65	1.17			0.00	1.17	1.25	
		I-805 Freeway	5000	65	0.87			0.00	0.87	1.00	
I-805 Freeway	8800	65	1.54			0.00	1.54	1.75			
Total Route		47330		10.17	13	1	4.50	14.68	14.75		
FHZ-6	FHZ006-B	Windingwalk St	2000	25	0.91	1		0.33	1.24	1.25	
		Olympic Pkwy	3300	50	0.75	2		0.67	1.42	1.50	
		Olympic Pkwy	5500	50	1.25	3		1.00	2.25	2.25	
		Olympic Pkwy	2700	50	0.61	1		0.33	0.95	1.00	

Gateway Destination B

Gateway Destination B						Assumed delay (seconds)				
						20	10			
Evacuation Zones	Evacuation Route #	Roadway	Link Distance (feet)	Posted Speed Limit (mph)	Link Travel Time (min)	No. Traffic Signals	No. Stop Int.	Intersection Delay (min)	Total Travel Time (min)	Rounded Travel Time
FHZ-6	FHZ006-B	Olympic Pkwy	5800	50	1.32	3		1.00	2.32	2.50
		Olympic Pkwy	8900	50	2.02	1		0.33	2.36	2.50
		Olympic Pkwy	2700	45	0.68	3		1.00	1.68	1.75
		I-805 Freeway	3400	65	0.59	1		0.33	0.93	1.00
		I-805 Freeway	6700	65	1.17			0.00	1.17	1.25
		I-805 Freeway	5000	65	0.87			0.00	0.87	1.00
		I-805 Freeway	8800	65	1.54			0.00	1.54	1.75
	Total Route		54800		11.72	15	0	5.00	16.73	16.75
FHZ-7	FHZ007-B	Clubhouse Dr	2100	35	0.68	2		0.67	1.35	1.50
		Eastlake Pkwy	2900	40	0.82	2		0.67	1.49	1.50
		Otay Lakes Rd	3100	50	0.70	4		1.33	2.04	2.25
		Otay Lakes Rd	5400	50	1.23	3		1.00	2.23	2.25
		Telegraph Canyon Rd	11300	50	2.57	2		0.67	3.23	3.25
		Telegraph Canyon Rd	4500	50	1.02	2		0.67	1.69	1.75
		Telegraph Canyon Rd	2600	45	0.66	3		1.00	1.66	1.75
		I-805 Freeway (Ramp)	1600	65	0.28			0.00	0.28	0.50
		I-805 Freeway	5000	65	0.87			0.00	0.87	1.00
	I-805 Freeway	8800	65	1.54			0.00	1.54	1.75	
Total Route		47300		10.38	18	0	6.00	16.38	16.50	
FHZ-8	FHZ008-B	Clubhouse Dr	2600	35	0.84	1	1	0.50	1.34	1.50
		Hunte Pkwy	3200	45	0.81	2		0.67	1.47	1.50
		Otay Lakes Rd	5000	50	1.14	3		1.00	2.14	2.25
		Otay Lakes Rd	3100	50	0.70	4		1.33	2.04	2.25
		Otay Lakes Rd	5400	50	1.23	3		1.00	2.23	2.25
		Telegraph Canyon Rd	11300	50	2.57	2		0.67	3.23	3.25
		Telegraph Canyon Rd	4500	50	1.02	2		0.67	1.69	1.75
		Telegraph Canyon Rd	2600	45	0.66	3		1.00	1.66	1.75
		I-805 Freeway (Ramp)	1600	65	0.28			0.00	0.28	0.50
		I-805 Freeway	5000	65	0.87			0.00	0.87	1.00
		I-805 Freeway	8800	65	1.54			0.00	1.54	1.75
	Total Route		53100		11.66	20	1	6.83	18.49	18.50
FHZ-9	FHZ009-B	Lane Ave	2000	40	0.57	1	1	0.50	1.07	1.25
		Proctor Valley Rd	3700	45	0.93	3		1.00	1.93	2.00
		E H St	3900	45	0.98	3		1.00	1.98	2.00
		E H St	3300	45	0.83	1		0.33	1.17	1.25
		E H St	3700	35	1.20	3		1.00	2.20	2.25
		E H St	2400	45	0.61	2		0.67	1.27	1.50
		E H St	5100	50	1.16	2		0.67	1.83	2.00
		E H St	4700	50	1.07	3		1.00	2.07	2.25
		E H St	4500	50	1.02	2		0.67	1.69	1.75
		E H St	2300	45	0.58			0.00	0.58	0.75
	I-805 Freeway	8800	65	1.54			0.00	1.54	1.75	
Total Route		44400		10.50	20	1	6.83	17.33	17.50	
FHZ-10	FHZ010-B	Northwoods Dr	360	25	0.16		1	0.17	0.33	0.50
		Adirondack Pl	510	25	0.23			0.00	0.23	0.25
		Stone Gate St	1800	35	0.58	1	1	0.50	1.08	1.25
		Hunte Pkwy	1800	45	0.45	2		0.67	1.12	1.25
		Otay Lakes Rd	5000	50	1.14	3		1.00	2.14	2.25
		Otay Lakes Rd	3100	50	0.70	4		1.33	2.04	2.25
		Otay Lakes Rd	5400	50	1.23	3		1.00	2.23	2.25
		Telegraph Canyon Rd	11300	50	2.57	2		0.67	3.23	3.25
		Telegraph Canyon Rd	4500	50	1.02	2		0.67	1.69	1.75
		Telegraph Canyon Rd	2600	45	0.66	3		1.00	1.66	1.75
		I-805 Freeway (Ramp)	1600	65	0.28			0.00	0.28	0.50
		I-805 Freeway	5000	65	0.87			0.00	0.87	1.00
	I-805 Freeway	8800	65	1.54			0.00	1.54	1.75	
Total Route		51770		11.44	20	2	7.00	18.44	18.50	
FHZ-11	FHZ011-B	Agua Vista Dr	1700	25	0.77		2	0.33	1.11	1.25
		Agua Vista Dr	3500	25	1.59		2	0.33	1.92	2.00
		Proctor Valley Rd	3100	45	0.78	1	1	0.50	1.28	1.50
		Proctor Valley Rd	1400	45	0.35	1		0.33	0.69	0.75
		Proctor Valley Rd	1500	45	0.38	1		0.33	0.71	0.75
		Proctor Valley Rd	3700	45	0.93	3		1.00	1.93	2.00
		E H St	3900	45	0.98	3		1.00	1.98	2.00
		E H St	3300	45	0.83	1		0.33	1.17	1.25
		E H St	3700	35	1.20	3		1.00	2.20	2.25
		E H St	2400	45	0.61	2		0.67	1.27	1.50
		E H St	5100	50	1.16	2		0.67	1.83	2.00
		E H St	4700	50	1.07	3		1.00	2.07	2.25
		E H St	4500	50	1.02	2		0.67	1.69	1.75
		E H St	2300	45	0.58			0.00	0.58	0.75
	I-805 Freeway	8800	65	1.54			0.00	1.54	1.75	
Total Route		53600		13.81	22	5	8.17	21.97	22.00	
FHZ-12	FHZ012-B	Mt Miguel Rd	1200	40	0.34	1		0.33	0.67	0.75
		Mt Miguel Rd	800	40	0.23	1		0.33	0.56	0.75
		E H St	3900	45	0.98	3		1.00	1.98	2.00
		E H St	3300	45	0.83	1		0.33	1.17	1.25
		E H St	3700	35	1.20	3		1.00	2.20	2.25
		E H St	2400	45	0.61	2		0.67	1.27	1.50
		E H St	5100	50	1.16	2		0.67	1.83	2.00

Gateway Destination B

Gateway Destination B						Assumed delay (seconds)					
						20	10				
Evacuation Zones	Evacuation Route #	Roadway	Link Distance (feet)	Posted Speed Limit (mph)	Link Travel Time (min)	No. Traffic Signals	No. Stop Int.	Intersection Delay (min)	Total Travel Time (min)	Rounded Travel Time	
FHZ-13		E H St	4700	50	1.07	3		1.00	2.07	2.25	
		E H St	4500	50	1.02	2		0.67	1.69	1.75	
		E H St	2300	45	0.58			0.00	0.58	0.75	
		I-805 Freeway	8800	65	1.54			0.00	1.54	1.75	
		Total Route	40700		9.56	18	0	6.00	15.56	15.75	
		FHZ013-B	Rue Chamond	200	25	0.09		1	0.17	0.26	0.50
			Port Renwick	1600	25	0.73		1	0.17	0.89	1.00
			Corral Canyon Rd	1900	40	0.54	1		0.33	0.87	1.00
			E H St	3700	35	1.20	3		1.00	2.20	2.25
			E H St	2400	45	0.61	2		0.67	1.27	1.50
			E H St	5100	50	1.16	2		0.67	1.83	2.00
	E H St		4700	50	1.07	3		1.00	2.07	2.25	
	E H St		4500	50	1.02	2		0.67	1.69	1.75	
	E H St		2300	45	0.58			0.00	0.58	0.75	
	I-805 Freeway		8800	65	1.54			0.00	1.54	1.75	
	Total Route	35200		8.53	13	2	4.67	13.20	13.25		
	FHZ-14	FHZ014-B	Ridgeview Way	900	25	0.41	1	1	0.50	0.91	1.00
			Otay Lakes Rd	3100	50	0.70	1		0.33	1.04	1.25
			Otay Lakes Rd	2800	40	0.80	3		1.00	1.80	2.00
			E H St	2400	45	0.61	2		0.67	1.27	1.50
			E H St	5100	50	1.16	2		0.67	1.83	2.00
			E H St	4700	50	1.07	3		1.00	2.07	2.25
			E H St	4500	50	1.02	2		0.67	1.69	1.75
			E H St	2300	45	0.58			0.00	0.58	0.75
I-805 Freeway			8800	65	1.54			0.00	1.54	1.75	
Total Route			34600		57.89	14	1	4.83	12.73	12.75	
FHZ-15		FHZ015-B	Sweetwater Rd	4300	45	1.09	1		0.33	1.42	1.50
	Sweetwater Rd		1800	45	0.45	1		0.33	0.79	1.00	
	Sweetwater Rd		2100	45	0.53	1		0.33	0.86	1.00	
	Sweetwater Rd		3500	45	0.88	3		1.00	1.88	2.00	
	Sweetwater Rd		2700	45	0.68	1		0.33	1.02	1.25	
	Total Route	83600		69.41	35	2	2.33	5.97	6.00		

Gateway Destination C

Gateway Destination C						Assumed delay (seconds)				
Evacuation Zones	Evacuation Route #	Roadway	Link Distance (feet)	Posted Speed Limit (mph)	Link Travel Time (min)	20	10	Intersection Delay (min)	Total Travel Time (min)	Rounded Travel Time
						No. Traffic Signals	No. Stop Int.			
FHZ-1	FHZ001-C	Brandywine Ave	1100	40	0.31	1		0.33	0.65	0.75
		E Palomar St	2050	35	0.67	1		0.33	1.00	1.00
		E Palomar St	1400	35	0.45	2		0.67	1.12	1.25
		I-805 Freeway	6700	65	1.17			0.00	1.17	1.25
		I-805 Freeway	5000	65	0.87			0.00	0.87	1.00
		I-805 Freeway	8800	65	1.54			0.00	1.54	1.75
		I-54 Freeway	21800	65	3.81			0.00	3.81	4.00
	Total Route		46850		8.83	4	0	1.33	10.16	10.25
FHZ-2	FHZ002-C	Brandywine Ave	2500	35	0.81	2		0.67	1.48	1.50
		Olympic Pkwy		45	0.00			0.00	0.00	0.00
		Olympic Pkwy	2700	45	0.68	3		1.00	1.68	1.75
		I-805 Freeway	3400	65	0.59	1		0.33	0.93	1.00
		I-805 Freeway	6700	65	1.17			0.00	1.17	1.25
		I-805 Freeway	5000	65	0.87			0.00	0.87	1.00
		I-805 Freeway	8800	65	1.54			0.00	1.54	1.75
	I-54 Freeway	21800	65	3.81			0.00	3.81	4.00	
Total Route		50900		9.48	6	0	2.00	11.48	11.50	
FHZ-3	FHZ003-C	Santa Victoria Rd	2800	25	1.27	1	2	0.67	1.94	2.00
		Birch Rd	1000	25	0.45	1		0.33	0.79	1.00
		Birch Rd	1500	50	0.34	1		0.33	0.67	0.75
		Birch Rd	3100	50	0.70	2		0.67	1.37	1.50
		I-125 Freeway	11000	65	1.92			0.00	1.92	2.00
		I-125 Freeway	5400	65	0.94			0.00	0.94	1.00
		I-125 Freeway	20000	65	3.50			0.00	3.50	3.50
	Total Route		44800		9.14	5	2	2.00	11.13	11.25
FHZ-4	FHZ004-C	La Media Pkwy	2400	25	1.09		3	0.50	1.59	1.75
		La Media Rd	1800	25	0.82		2	0.33	1.15	1.25
		La Media Rd	3800	45	0.96	1		0.33	1.29	1.50
		Birch Rd	1500	50	0.34	1		0.33	0.67	0.75
		Birch Rd	3100	50	0.70	2		0.67	1.37	1.50
		I-125 Freeway	11000	65	1.92			0.00	1.92	2.00
		I-125 Freeway	5400	65	0.94			0.00	0.94	1.00
	I-125 Freeway	20000	65	3.50			0.00	3.50	3.50	
Total Route		49000		10.28	4	5	2.17	12.43	12.50	
FHZ-5	FHZ005-C	Magdalena Ave	2200	25	1.00	2	1	0.83	1.83	2.00
		Birch Rd	3100	50	0.70	2		0.67	1.37	1.50
		I-125 Freeway	11000	65	1.92			0.00	1.92	2.00
		I-125 Freeway	5400	65	0.94			0.00	0.94	1.00
		I-125 Freeway	20000	65	3.50			0.00	3.50	3.50
Total Route		41700		8.07	4	1	1.50	9.56	9.75	
FHZ-6	FHZ006-C	Windingwalk St	2300	25	1.05		2	0.33	1.38	1.50
		Discovery Falls Dr	500	25	0.23		1	0.17	0.39	0.50
		Birch Rd	1600	50	0.36	2		0.67	1.03	1.25
		Birch Rd	1500	50	0.34	2		0.67	1.01	1.25
		I-125 Freeway	9200	65	1.61			0.00	1.61	1.75
		I-125 Freeway	5400	65	0.94			0.00	0.94	1.00
		I-125 Freeway	20000	65	3.50			0.00	3.50	3.50
	Total Route		40500		8.03	4	3	1.83	9.86	10.00
FHZ-7	FHZ007-C	Clubhouse Dr	2100	35	0.68	2	1	0.83	1.52	1.75
		Eastlake Pkwy	2900	40	0.82	2		0.67	1.49	1.50
		Otay Lakes Rd	1500	50	0.34	1		0.33	0.67	0.75
		I-125 Freeway	5400	65	0.94			0.00	0.94	1.00
		I-125 Freeway	20000	65	3.50			0.00	3.50	3.50
Total Route		31900		6.29	5	1	1.83	8.12	8.25	
FHZ-8	FHZ008-C	Clubhouse Dr	2600	35	0.84	1	1	0.50	1.34	1.50
		Hunte Pkwy	3200	45	0.81	2		0.67	1.47	1.50
		Otay Lakes Rd	5000	50	1.14	3		1.00	2.14	2.25
		Otay Lakes Rd	1500	50	0.34	2		0.67	1.01	1.25
		I-125 Freeway	5400	65	0.94			0.00	0.94	1.00
		I-125 Freeway	20000	65	3.50			0.00	3.50	3.50
		Total Route		37700		7.57	8	1	2.83	10.40
FHZ-9	FHZ009-C	Lane Ave	2000	40	0.57	1	1	0.50	1.07	1.25
		Proctor Valley Rd	3700	45	0.93	3		1.00	1.93	2.00
		E H St	1800	45	0.45	1		0.33	0.79	1.00
		I-125 Freeway	20000	65	3.50			0.00	3.50	3.50
Total Route		27500		5.45	5	1	1.83	7.29	7.50	
FHZ-10	FHZ010-C	Northwoods Dr	360	25	0.16		1	0.17	0.33	0.50
		Adirondack Pl	510	25	0.23			0.00	0.23	0.25
		Stone Gate St	1800	35	0.58	1	1	0.50	1.08	1.25
		Hunte Pkwy	1800	45	0.45	2		0.67	1.12	1.25
		Otay Lakes Rd	5000	50	1.14	3		1.00	2.14	2.25
		Otay Lakes Rd	1500	50	0.34	1		0.33	0.67	0.75
		I-125 Freeway	5400	65	0.94			0.00	0.94	1.00
		I-125 Freeway	20000	65	3.50			0.00	3.50	3.50
	Total Route		36370		7.35	7	2	2.67	10.01	10.25
	FHZ011-C	Agua Vista Dr	1700	25	0.77		2	0.33	1.11	1.25
Agua Vista Dr		3500	25	1.59		2	0.33	1.92	2.00	
Proctor Valley Rd		3100	45	0.78	1	1	0.50	1.28	1.50	
Proctor Valley Rd		1400	45	0.35	1		0.33	0.69	0.75	

Gateway Destination C

Evacuation Zones	Evacuation Route #	Roadway	Link Distance (feet)	Posted Speed Limit (mph)	Link Travel Time (min)	Assumed delay (seconds)		Intersection Delay (min)	Total Travel Time (min)	Rounded Travel Time
						20	10			
						No. Traffic Signals	No. Stop Int.			
FHZ-11	FHZ011-C	Proctor Valley Rd	1500	45	0.38	1		0.33	0.71	0.75
		Proctor Valley Rd	3700	45	0.93	3		1.00	1.93	2.00
		E H St	1800	45	0.45	1		0.33	0.79	1.00
		I-125 Freeway	20000	65	3.50			0.00	3.50	3.50
		Total Route	36700		8.76	7	5	3.17	11.93	12.00
FHZ-12	FHZ012-C	Mt Miguel Rd	1200	40	0.34	1		0.33	0.67	0.75
		Mt Miguel Rd	800	40	0.23	1		0.33	0.56	0.75
		E H St	1800	45	0.45	1		0.33	0.79	1.00
		I-125 Freeway	20000	65	3.50			0.00	3.50	3.50
		Total Route	23800		4.52	3	0	1.00	5.52	5.75
FHZ-13	FHZ013-C	Rue Chamond	200	25	0.09		1	0.17	0.26	0.50
		Port Renwick	1600	25	0.73		1	0.17	0.89	1.00
		Corral Canyon Rd	1900	40	0.54	1		0.33	0.87	1.00
		E H St	3300	45	0.83	1		0.33	1.17	1.25
		E H St	3400	45	0.86	2		0.67	1.53	1.75
		I-125 Freeway	20000	65	3.50			0.00	3.50	3.50
		Total Route	30400		6.55	4.00	2.00	1.67	8.22	8.25
FHZ-14	FHZ014-C	Ridgeview Way	900	25	0.41	1	1	0.50	0.91	1.00
		Otay Lakes Rd	3100	50	0.70	1		0.33	1.04	1.25
		Otay Lakes Rd	2800	40	0.80	3		1.00	1.80	2.00
		E H St	3700	35	1.20	3		1.00	2.20	2.25
		E H St	3300	45	0.83	1		0.33	1.17	1.25
		E H St	3400	45	0.86	2		0.67	1.53	1.75
		I-125 Freeway	20000	65	3.50			0.00	3.50	3.50
FHZ-15	FHZ015-C	Sweetwater Rd	5300	45	1.34	1		0.33	1.67	1.75
		Briarwood Rd	1100	35	0.36	1		0.33	0.69	0.75
		Briarwood Rd	2000	35	0.65	2		0.67	1.32	1.50
		I-54 Freeway	5500	65	0.96			0.00	0.96	1.00
		Total Route	13900		3.31	4.00	0.00	1.33	4.64	4.75

Gateway Destination D

Assumed delay (seconds)

20

10

Evacuation Zones	Evacuation Route #	Roadway	Link Distance (feet)	Posted Speed Limit (mph)	Link Travel Time (min)	No. Traffic Signals	No. Stop Int.	Intersection Delay (min)	Total Travel Time (min)	Rounded Travel Time
DIZ-1	DIZ001-D	Broadway	1330	25	0.60	3		1.00	1.60	1.75
		E St	1960	30	0.74	3		1.00	1.74	1.75
		I-5 Freeway	18355	65	3.21			0.00	3.21	3.25
	Total Route		21645		4.56	6	0	2.00	6.55	6.75
	DIZ002-D	E St	2200	35	0.71	2		0.67	1.38	1.50
		E St	4000	30	1.52	3		1.00	2.52	2.75
		E St	4700	30	1.78	4		1.33	3.11	3.25
		I-5 Freeway	18355	65	3.21			0.00	3.21	3.25
		Total Route		29255		7.22	9	0	3.00	10.22
	DIZ003-D	Allen School Rd	1800	25	0.82	1	1	0.50	1.32	1.50
		Bonita Rd	1700	40	0.48	1		0.33	0.82	1.00
		Bonita Rd	7300	50	1.66	2		0.67	2.33	2.50
		Bonita Rd	2072	50	0.47	3		1.00	1.47	1.50
		E St	2200	35	0.71	1		0.33	1.05	1.25
		E St	4000	30	1.52	3		1.00	2.52	2.75
		E St	4610	30	1.75	4		1.33	3.08	3.25
		I-5 Freeway	18355	65	3.21			0.00	3.21	3.25
		Total Route		42037		10.62	15	1	5.17	15.80
	DIZ004-D	Sweetwater Rd	4300	45	1.09	1		0.33	1.42	1.50
		Willow St	1136	45	0.29	1		0.33	0.62	0.75
		Bonita Rd	7300	50	1.66	2		0.67	2.33	2.50
		Bonita Rd	2072	50	0.47	3		1.00	1.47	1.50
		E St	2200	35	0.71	1		0.33	1.05	1.25
		E St	4000	30	1.52	3		1.00	2.52	2.75
		E St	4610	30	1.75	4		1.33	3.08	3.25
I-5 Freeway		18355	65	3.21			0.00	3.21	3.25	
Total Route		43973		10.69	15	0	5.00	15.70	15.75	
DIZ005-D	Ridgeview Way	900	25	0.41	1	1	0.50	0.91	1.00	
	Otay Lakes Rd	5400	50	1.23	2		0.67	1.89	2.00	
	Otay Lakes Rd	1400	40	0.40	1		0.33	0.73	0.75	
	Bonita Rd	1700	40	0.48	2		0.67	1.15	1.25	
	Bonita Rd	1700	40	0.48	1		0.33	0.82	1.00	
	Bonita Rd	7300	50	1.66	2		0.67	2.33	2.50	
	Bonita Rd	2072	50	0.47	3		1.00	1.47	1.50	
	E St	2200	35	0.71	1		0.33	1.05	1.25	
	E St	4000	30	1.52	3		1.00	2.52	2.75	
	E St	4610	30	1.75	4		1.33	3.08	3.25	
	I-5 Freeway	18355	65	3.21			0.00	3.21	3.25	
	Total Route		49637		12.31	20.00	1.00	6.83	19.16	19.25
FHZ-1	FHZ001-D	Brandywine Ave	1270	40	0.36	1		0.33	0.69	0.75
		Olympic Pkwy	1800	45	0.45	2		0.67	1.12	1.25
		Olympic Pkwy	1400	45	0.35	2		0.67	1.02	1.25
		E Orange Ave	600	40	0.17	1		0.33	0.50	0.50
		E Orange Ave	2100	40	0.60	1		0.33	0.93	1.00
		E Orange Ave	1600	40	0.45	1		0.33	0.79	1.00
		E Orange Ave	850	40	0.24	1		0.33	0.57	0.75
		Orange Ave	2100	40	0.60	1		0.33	0.93	1.00
		Orange Ave	670	40	0.19	1		0.33	0.52	0.75
		Orange Ave	1400	40	0.40	1		0.33	0.73	0.75
		Orange Ave	1500	40	0.43	2		0.67	1.09	1.25
		Orange Ave	2700	40	0.77	1		0.33	1.10	1.25
		Palomar St	1200	35	0.39	2		0.67	1.06	1.25
		Palomar St	2300	35	0.75	3		1.00	1.75	1.75
		Palomar St	700	35	0.23	1		0.33	0.56	0.75
	I-5 Freeway	3700	65	0.65			0.00	0.65	0.75	
	Total Route		25890		7.02	21	0	7.00	14.01	14.25
	FHZ002-D	Brandywine Ave	2600	35	0.84	2		0.67	1.51	1.75
		Main St	2000	45	0.51	3		1.00	1.51	1.75
		Main St	1400	40	0.40	1		0.33	0.73	0.75
		Main St	2500	40	0.71	1		0.33	1.04	1.25
		Main St	1700	40	0.48	2		0.67	1.15	1.25
		Main St	3400	40	0.97	2		0.67	1.63	1.75
		Main St	2100	40	0.60	2		0.67	1.26	1.50
		Main St	1250	40	0.36	1		0.33	0.69	0.75
Main St		2800	40	0.80	1		0.33	1.13	1.25	
Main St		1100	40	0.31	1		0.33	0.65	0.75	
Total Route		20850		5.97	16	0	5.33	11.30	11.50	
FHZ003-D	Santa Victoria Rd	2400	25	1.09	1	2	0.67	1.76	2.00	
	Heritage Rd	2300	40	0.65	1		0.33	0.99	1.00	
	Olympic Pkwy	8900	50	2.02	1		0.33	2.36	2.50	
	Olympic Pkwy	1800	45	0.45	2		0.67	1.12	1.25	
	Olympic Pkwy	1400	45	0.35	2		0.67	1.02	1.25	
	E Orange Ave	570	40	0.16	1		0.33	0.50	0.50	
	E Orange Ave	2100	40	0.60	1		0.33	0.93	1.00	
	E Orange Ave	1600	40	0.45	1		0.33	0.79	1.00	
	E Orange Ave	820	40	0.23	1		0.33	0.57	0.75	
	Orange Ave	2100	40	0.60	1		0.33	0.93	1.00	
FHZ-2	Orange Ave	670	40	0.19	1		0.33	0.52	0.75	
	Orange Ave	1400	40	0.40	1		0.33	0.73	0.75	

Gateway Destination D

						Assumed delay (seconds)				
						20	10			
Evacuation Zones	Evacuation Route #	Roadway	Link Distance (feet)	Posted Speed Limit (mph)	Link Travel Time (min)	No. Traffic Signals	No. Stop Int.	Intersection Delay (min)	Total Travel Time (min)	Rounded Travel Time
FHZ-4	FHZ004-D	Orange Ave	1450	40	0.41	2		0.67	1.08	1.25
		Orange Ave	2700	40	0.77	1		0.33	1.10	1.25
		Palomar St	1200	35	0.39	2		0.67	1.06	1.25
		Palomar St	2300	35	0.75	3		1.00	1.75	1.75
		Palomar St	700	35	0.23	1		0.33	0.56	0.75
		I-5 Freeway	3700	65	0.65			0.00	0.65	0.75
		Total Route	38110		10.40	23	2	8.00	18.42	18.50
		La Media Pkwy	2400	25	1.09	1	2	0.67	1.76	2.00
		La Media Rd	1800	25	0.82	1	1	0.50	1.32	1.50
		La Media Rd	3800	45	0.96	1		0.33	1.29	1.50
		La Media Rd	2800	45	0.71	2		0.67	1.37	1.50
		Olympic Pkwy	5800	50	1.32	3		1.00	2.32	2.50
		Olympic Pkwy	8900	50	2.02	1		0.33	2.36	2.50
		Olympic Pkwy	1800	45	0.45	2		0.67	1.12	1.25
		Olympic Pkwy	1400	45	0.35	2		0.67	1.02	1.25
		E Orange Ave	570	40	0.16	1		0.33	0.50	0.50
		E Orange Ave	2100	40	0.60	1		0.33	0.93	1.00
		E Orange Ave	1600	40	0.45	1		0.33	0.79	1.00
		E Orange Ave	900	40	0.26	1		0.33	0.59	0.75
		Orange Ave	2100	40	0.60	1		0.33	0.93	1.00
		Orange Ave	670	40	0.19	1		0.33	0.52	0.75
		Orange Ave	1400	40	0.40	1		0.33	0.73	0.75
		Orange Ave	1500	40	0.43	2		0.67	1.09	1.25
		Orange Ave	2700	40	0.77	1		0.33	1.10	1.25
		Palomar St	1200	35	0.39	2		0.67	1.06	1.25
		Palomar St	2300	35	0.75	3		1.00	1.75	1.75
		Palomar St	700	35	0.23	1		0.33	0.56	0.75
		I-5 Freeway	3700	65	0.65			0.00	0.65	0.75
		Total Route	50140		13.58	29	3	10.17	23.76	24.00
	FHZ005-D	Magdalena Ave	1500	25	0.68	2	1	0.83	1.52	1.75
		E Palomar St	600	25	0.27	1		0.33	0.61	0.75
		E Palomar St	1230	35	0.40	1		0.33	0.73	0.75
		Olympic Pkwy	2700	50	0.61	1		0.33	0.95	1.00
		Olympic Pkwy	5800	50	1.32	3		1.00	2.32	2.50
		Olympic Pkwy	9000	50	2.05	1		0.33	2.38	2.50
		Olympic Pkwy	1800	45	0.45	2		0.67	1.12	1.25
		Olympic Pkwy	1320	45	0.33	2		0.67	1.00	1.00
		E Orange Ave	600	40	0.17	1		0.33	0.50	0.50
		E Orange Ave	2100	40	0.60	1		0.33	0.93	1.00
		E Orange Ave	1600	40	0.45	1		0.33	0.79	1.00
		E Orange Ave	900	40	0.26	1		0.33	0.59	0.75
		Orange Ave	2100	40	0.60	1		0.33	0.93	1.00
		Orange Ave	700	40	0.20	1		0.33	0.53	0.75
		Orange Ave	1400	40	0.40	1		0.33	0.73	0.75
		Orange Ave	1500	40	0.43	2		0.67	1.09	1.25
		Orange Ave	2700	40	0.77	1		0.33	1.10	1.25
		Palomar St	1200	35	0.39	2		0.67	1.06	1.25
		Palomar St	2300	35	0.75	3		1.00	1.75	1.75
		Palomar St	700	35	0.23	1		0.33	0.56	0.75
		I-5 Freeway	3700	65	0.65			0.00	0.65	0.75
		Total Route	45450		11.99	29	1	9.83	21.84	22.00
	FHZ006-D	Windingwalk St	2000	25	0.91	1		0.33	1.24	1.25
		Olympic Pkwy	3300	50	0.75	2		0.67	1.42	1.50
		Olympic Pkwy	5500	50	1.25	3		1.00	2.25	2.25
		Olympic Pkwy	2700	50	0.61	1		0.33	0.95	1.00
		Olympic Pkwy	5800	50	1.32	3		1.00	2.32	2.50
		Olympic Pkwy	9000	50	2.05	1		0.33	2.38	2.50
		Olympic Pkwy	1800	45	0.45	2		0.67	1.12	1.25
		Olympic Pkwy	1400	45	0.35	2		0.67	1.02	1.25
		E Orange Ave	570	40	0.16	1		0.33	0.50	0.50
		E Orange Ave	2100	40	0.60	1		0.33	0.93	1.00
		E Orange Ave	1600	40	0.45	1		0.33	0.79	1.00
		E Orange Ave	900	40	0.26	1		0.33	0.59	0.75
		Orange Ave	2100	40	0.60	1		0.33	0.93	1.00
		Orange Ave	700	40	0.20	1		0.33	0.53	0.75
		Orange Ave	1400	40	0.40	1		0.33	0.73	0.75
		Orange Ave	1500	40	0.43	2		0.67	1.09	1.25
		Orange Ave	2700	40	0.77	1		0.33	1.10	1.25
		Palomar St	1200	35	0.39	2		0.67	1.06	1.25
		Palomar St	2300	35	0.75	3		1.00	1.75	1.75
		Palomar St	700	35	0.23	1		0.33	0.56	0.75
		I-5 Freeway	3700	65	0.65			0.00	0.65	0.75
		Total Route	52970		13.56	31	0	10.33	23.91	24.00
FHZ-6		Clubhouse Dr	2100	35	0.68	2		0.67	1.35	1.50
		Eastlake Pkwy	2900	40	0.82	2		0.67	1.49	1.50
		Otay Lakes Rd	3100	50	0.70	4		1.33	2.04	2.25
		Otay Lakes Rd	5400	50	1.23	3		1.00	2.23	2.25
		Telegraph Canyon Rd	11300	50	2.57	2		0.67	3.23	3.25
		Telegraph Canyon Rd	4500	50	1.02	2		0.67	1.69	1.75

Gateway Destination D

Gateway Destination D						Assumed delay (seconds)				
Evacuation Zones	Evacuation Route #	Roadway	Link Distance (feet)	Posted Speed Limit (mph)	Link Travel Time (min)	20	10	Intersection Delay (min)	Total Travel Time (min)	Rounded Travel Time
						No. Traffic Signals	No. Stop Int.			
FHZ-7	FHZ007-D	Telegraph Canyon Rd	2600	45	0.66	3		1.00	1.66	1.75
		Telegraph Canyon Rd	1400	35	0.45	3		1.00	1.45	1.50
		E L St	1100	25	0.50	1		0.33	0.83	1.00
		E L St	3400	35	1.10	3		1.00	2.10	2.25
		L St	4000	35	1.30	3		1.00	2.30	2.50
		L St	2700	25	1.23	2		0.67	1.89	2.00
		L St	3300	35	1.07	2		0.67	1.74	1.75
		L St	600	40	0.17		1	0.17	0.34	0.50
		Bay Blvd	700	40	0.20			0.00	0.20	0.25
	I-5 Freeway	6800	65	1.19			0.00	1.19	1.25	
	Total Route		55900		14.90	32	1	10.83	25.73	25.75
FHZ-8	FHZ008-D	Clubhouse Dr	2600	35	0.84	1	1	0.50	1.34	1.50
		Hunte Pkwy	3200	45	0.81	2		0.67	1.47	1.50
		Otay Lakes Rd	5000	50	1.14	3		1.00	2.14	2.25
		Otay Lakes Rd	3100	50	0.70	4		1.33	2.04	2.25
		Otay Lakes Rd	5400	50	1.23	3		1.00	2.23	2.25
		Telegraph Canyon Rd	11300	50	2.57	2		0.67	3.23	3.25
		Telegraph Canyon Rd	4500	50	1.02	2		0.67	1.69	1.75
		Telegraph Canyon Rd	2600	45	0.66	3		1.00	1.66	1.75
		Telegraph Canyon Rd	1400	35	0.45	3		1.00	1.45	1.50
		E L St	1100	25	0.50	1		0.33	0.83	1.00
		E L St	3400	35	1.10	3		1.00	2.10	2.25
		L St	4000	35	1.30	3		1.00	2.30	2.50
		L St	2700	25	1.23	2		0.67	1.89	2.00
		L St	3300	35	1.07	2		0.67	1.74	1.75
		L St	600	40	0.17		1	0.17	0.34	0.50
		Bay Blvd	700	40	0.20			0.00	0.20	0.25
	I-5 Freeway	6800	65	1.19			0.00	1.19	1.25	
Total Route		61700		16.18	34	2	11.67	27.84	28.00	
FHZ-9	FHZ009-D	Lane Ave	2700	35	0.88	2	2	1.00	1.88	2.00
		Otay Lakes Rd	1500	50	0.34	1		0.33	0.67	0.75
		Otay Lakes Rd	3100	50	0.70	4		1.33	2.04	2.25
		Otay Lakes Rd	5400	50	1.23	3		1.00	2.23	2.25
		Telegraph Canyon Rd	11300	50	2.57	2		0.67	3.23	3.25
		Telegraph Canyon Rd	4500	50	1.02	2		0.67	1.69	1.75
		Telegraph Canyon Rd	2600	45	0.66	3		1.00	1.66	1.75
		Telegraph Canyon Rd	1400	35	0.45	3		1.00	1.45	1.50
		E L St	1100	25	0.50	1		0.33	0.83	1.00
		E L St	3400	35	1.10	3		1.00	2.10	2.25
		L St	4000	35	1.30	3		1.00	2.30	2.50
		L St	2700	25	1.23	2		0.67	1.89	2.00
		L St	3300	35	1.07	2		0.67	1.74	1.75
		L St	600	40	0.17		1	0.17	0.34	0.50
		Bay Blvd	700	40	0.20			0.00	0.20	0.25
	I-5 Freeway	6800	65	1.19			0.00	1.19	1.25	
Total Route		55100		14.61	31	3	10.83	25.44	25.50	
FHZ-10	FHZ010-D	Northwoods Dr	360	25	0.16		1	0.17	0.33	0.50
		Adirondack Pl	510	25	0.23			0.00	0.23	0.25
		Stone Gate St	1800	35	0.58	1	1	0.50	1.08	1.25
		Hunte Pkwy	1800	45	0.45	2		0.67	1.12	1.25
		Otay Lakes Rd	5000	50	1.14	3		1.00	2.14	2.25
		Otay Lakes Rd	3100	50	0.70	4		1.33	2.04	2.25
		Otay Lakes Rd	5400	50	1.23	3		1.00	2.23	2.25
		Telegraph Canyon Rd	11300	50	2.57	3		1.00	3.57	3.75
		Telegraph Canyon Rd	4500	50	1.02	2		0.67	1.69	1.75
		Telegraph Canyon Rd	2600	45	0.66	3		1.00	1.66	1.75
		Telegraph Canyon Rd	1400	35	0.45	3		1.00	1.45	1.50
		E L St	1100	25	0.50	1		0.33	0.83	1.00
		E L St	3400	35	1.10	3		1.00	2.10	2.25
		L St	4000	35	1.30	3		1.00	2.30	2.50
		L St	2700	25	1.23	2		0.67	1.89	2.00
		L St	3300	35	1.07	2		0.67	1.74	1.75
		L St	600	40	0.17		1	0.17	0.34	0.50
		Bay Blvd	700	40	0.20			0.00	0.20	0.25
	I-5 Freeway	6800	65	1.19			0.00	1.19	1.25	
Total Route		60370		15.96	35.00	3.00	12.17	28.13	28.25	
FHZ-11	FHZ011-D	Agua Vista Dr	1700	25	0.77		2	0.33	1.11	1.25
		Agua Vista Dr	3500	25	1.59		2	0.33	1.92	2.00
		Proctor Valley Rd	3100	45	0.78	1	1	0.50	1.28	1.50
		Proctor Valley Rd	1400	45	0.35	1		0.33	0.69	0.75
		Proctor Valley Rd	1500	45	0.38	1		0.33	0.71	0.75
		Proctor Valley Rd	3700	45	0.93	3		1.00	1.93	2.00
		E H St	3900	45	0.98	3		1.00	1.98	2.00
		E H St	3300	45	0.83	1		0.33	1.17	1.25
		E H St	3700	35	1.20	3		1.00	2.20	2.25
		E H St	2400	45	0.61	2		0.67	1.27	1.50
		E H St	5100	50	1.16	2		0.67	1.83	2.00
		E H St	4700	50	1.07	3		1.00	2.07	2.25
		E H St	4500	50	1.02	2		0.67	1.69	1.75
	E H St	5100	45	1.29	2		0.67	1.95	2.00	

Gateway Destination D

Evacuation Zones	Evacuation Route #	Roadway	Link Distance (feet)	Posted Speed Limit (mph)	Link Travel Time (min)	Assumed delay (seconds)		Intersection Delay (min)	Total Travel Time (min)	Rounded Travel Time
						20	10			
						No. Traffic Signals	No. Stop Int.			
FHZ-12	FHZ012-D	H St	4000	35	1.30	3		1.00	2.30	2.50
		H St	2700	35	0.88	3		1.00	1.88	2.00
		H St	2400	35	0.78	2		0.67	1.45	1.50
		H St	1500	35	0.49	3		1.00	1.49	1.50
		H St	246	35	0.08	1		0.33	0.41	0.50
		I-5 Freeway	14450	65	2.53			0.00	2.53	2.75
		Total Route	72896		19.02	36	5	12.83	31.86	32.00
		Mt Miguel Rd	1200	40	0.34	1		0.33	0.67	0.75
		Mt Miguel Rd	800	40	0.23	1		0.33	0.56	0.75
		E H St	3900	45	0.98	3		1.00	1.98	2.00
		E H St	3300	45	0.83	1		0.33	1.17	1.25
		E H St	3700	35	1.20	3		1.00	2.20	2.25
		E H St	2400	45	0.61	2		0.67	1.27	1.50
		E H St	5100	50	1.16	2		0.67	1.83	2.00
		E H St	4700	50	1.07	3		1.00	2.07	2.25
		E H St	4500	50	1.02	2		0.67	1.69	1.75
		E H St	5100	45	1.29	2		0.67	1.95	2.00
		H St	4000	35	1.30	3		1.00	2.30	2.50
		H St	2700	35	0.88	3		1.00	1.88	2.00
		H St	2400	35	0.78	2		0.67	1.45	1.50
		H St	1500	35	0.49	3		1.00	1.49	1.50
		H St	246	35	0.08	1		0.33	0.41	0.50
		I-5 Freeway	14450	65	2.53			0.00	2.53	2.75
		Total Route	59996		14.78	32	0	10.67	25.45	25.50
FHZ-13	FHZ013-D	Rue Chamond	200	25	0.09		1	0.17	0.26	0.50
		Port Renwick	1600	25	0.73		1	0.17	0.89	1.00
		Corral Canyon Rd	1900	40	0.54	1		0.33	0.87	1.00
		E H St	3700	35	1.20	3		1.00	2.20	2.25
		E H St	2400	45	0.61	2		0.67	1.27	1.50
		E H St	5100	50	1.16	2		0.67	1.83	2.00
		E H St	4700	50	1.07	3		1.00	2.07	2.25
		E H St	4500	50	1.02	2		0.67	1.69	1.75
		E H St	5100	45	1.29	2		0.67	1.95	2.00
		H St	4000	35	1.30	3		1.00	2.30	2.50
		H St	2700	35	0.88	3		1.00	1.88	2.00
		H St	2400	35	0.78	2		0.67	1.45	1.50
		H St	1500	35	0.49	3		1.00	1.49	1.50
		H St	246	35	0.08	1		0.33	0.41	0.50
		I-5 Freeway	14450	65	2.53			0.00	2.53	2.75
		Total Route	54496		13.75	27	2	9.33	23.09	23.25
FHZ-14	FHZ014-D	Ridgeview Way	900	25	0.41	1	1	0.50	0.91	1.00
		Otay Lakes Rd	3100	50	0.70	1		0.33	1.04	1.25
		Otay Lakes Rd	2800	40	0.80	3		1.00	1.80	2.00
		E H St	2400	45	0.61	2		0.67	1.27	1.50
		E H St	5100	50	1.16	2		0.67	1.83	2.00
		E H St	4700	50	1.07	3		1.00	2.07	2.25
		E H St	4500	50	1.02	2		0.67	1.69	1.75
		E H St	5100	45	1.29	2		0.67	1.95	2.00
		H St	4000	35	1.30	3		1.00	2.30	2.50
		H St	2700	35	0.88	3		1.00	1.88	2.00
		H St	2400	35	0.78	2		0.67	1.45	1.50
		H St	1500	35	0.49	3		1.00	1.49	1.50
		H St	246	35	0.08	1		0.33	0.41	0.50
		I-5 Freeway	14450	65	2.53			0.00	2.53	2.75
		Total Route	53896		13.10	28	1	9.50	22.62	22.75
FHZ-15	FHZ015-A	Sweetwater Rd	4300	45	1.09	1		0.33	1.42	1.50
		Willow St	1136	45	0.29	1		0.33	0.62	0.75
		Bonita Rd	7300	50	1.66	2		0.67	2.33	2.50
		Bonita Rd	2072	50	0.47	3		1.00	1.47	1.50
		E St	2200	35	0.71	1		0.33	1.05	1.25
		E St	4000	30	1.52	3		1.00	2.52	2.75
		E St	4610	30	1.75	4		1.33	3.08	3.25
		E St	563	30	0.21			0.00	0.21	0.25
		I-5 Freeway	19266	65	3.37			0.00	3.37	3.50
		Total Route	45447		11.06	15	0	5.00	16.07	16.25

Gateway Destination E

					Assumed delay (seconds)					
					20		10			
Evacuation Zones	Evacuation Route #	Roadway	Link Distance (feet)	Posted Speed Limit (mph)	Link Travel Time (min)	No. Traffic Signals	No. Stop Int.	Intersection Delay (min)	Total Travel Time (min)	Rounded Travel Time
DIZ-1	DIZ001-E	Broadway	1330	25	0.60	3		1.00	1.60	1.75
		E St	6617	30	2.51	5		1.67	4.17	4.25
		E St	2217	35	0.72	1		0.33	1.05	1.25
		Bonita Rd	1365	35	0.44	2		0.67	1.11	1.25
		I-5 Freeway	25207	65	4.41			0.00	4.41	4.50
	Total Route		36736		8.68	11	0	3.67	12.34	12.50
	DIZ-2	Bonita Rd	1365	35	0.44	3		1.00	1.44	1.50
		I-5 Freeway	25207	65	4.41			0.00	4.41	4.50
	Total Route		26572		4.85	3	0	1.00	5.85	6.00
	DIZ-3	Allen School Rd	1800	25	0.82	1	1	0.50	1.32	1.50
		Bonita Rd	1700	40	0.48	1		0.33	0.82	1.00
		Bonita Rd	7900	50	1.80	3		1.00	2.80	3.00
		I-5 Freeway	25207	65	4.41			0.00	4.41	4.50
	Total Route		36607		7.50	5	1	1.83	9.35	9.50
	DIZ-4	Sweetwater Rd	4300	45	1.09	1		0.33	1.42	1.50
		Willow St	1136	45	0.29	1		0.33	0.62	0.75
		Bonita Rd	7900	50	1.80	3		1.00	2.80	3.00
		I-5 Freeway	25207	65	4.41			0.00	4.41	4.50
	Total Route		38543		7.58	5	0	1.67	9.25	9.25
	DIZ-5	Ridgeview Way	900	25	0.41	1	1	0.50	0.91	1.00
		Otay Lakes Rd	5400	50	1.23	2		0.67	1.89	2.00
		Otay Lakes Rd	1400	40	0.40	1		0.33	0.73	0.75
		Bonita Rd	1700	40	0.48	2		0.67	1.15	1.25
		Bonita Rd	1700	40	0.48	1		0.33	0.82	1.00
		Bonita Rd	7900	50	1.80	3		1.00	2.80	3.00
		I-5 Freeway	25207	65	4.41			0.00	4.41	4.50
	Total Route		44207		9.20	10	1	3.50	12.71	12.75
FHZ-1	FHZ001-E	Brandywine Ave	1270	40	0.36	1		0.33	0.69	0.75
		Olympic Pkwy	1800	45	0.45	2		0.67	1.12	1.25
		Olympic Pkwy	1400	45	0.35	2		0.67	1.02	1.25
		I-805 Freeway	7160	65	1.25			0.00	1.25	1.25
	Total Route		11630		2.42	5	0	1.67	4.08	4.25
	FHZ-2	Brandywine Ave	2600	35	0.84	2		0.67	1.51	1.75
		Main St	2323	45	0.59	4		1.33	1.92	2.00
		I-805 Freeway	3267	65	0.57			0.00	0.57	0.75
	Total Route		8190		2.00	6.00	0.00	2.00	4.00	4.00
	FHZ-3	Santa Victoria Rd	2400	25	1.09	1	2	0.67	1.76	2.00
		Heritage Rd	7560	40	2.15	5		1.67	3.81	4.00
		Main St	7463	50	1.70	5		1.67	3.36	3.50
		Main St	2323	45	0.59	4		1.33	1.92	2.00
		I-805 Freeway	3267	65	0.57			0.00	0.57	0.75
	Total Route		23013		6.09	15	2	5.33	11.42	11.50
	FHZ-4	La Media Pkwy	2400	25	1.09	1	2	0.67	1.76	2.00
		La Media Rd	1800	25	0.82	1	1	0.50	1.32	1.50
		La Media Rd	3800	45	0.96	1		0.33	1.29	1.50
		La Media Rd	2800	45	0.71	2		0.67	1.37	1.50
		Olympic Pkwy	5752	45	1.45	3		1.00	2.45	2.50
		Heritage Rd	2290	40	0.65	1		0.33	0.98	1.00
		Heritage Rd	7560	40	2.15	4		1.33	3.48	3.50
		Main St	7463	50	1.70	5		1.67	3.36	3.50
		Main St	2323	45	0.59	4		1.33	1.92	2.00
		I-805 Freeway	3267	65	0.57			0.00	0.57	0.75
	Total Route		39455		10.68	22	3	7.83	18.50	18.50
	FHZ-5	Magdalena Ave	1500	25	0.68	2	1	0.83	1.52	1.75
		E Palomar St	600	25	0.27	1		0.33	0.61	0.75
		E Palomar St	1230	35	0.40	1		0.33	0.73	0.75
		Olympic Pkwy	2644	50	0.60	1		0.33	0.93	1.00
		Olympic Pkwy	5752	45	1.45	3		1.00	2.45	2.50
		Heritage Rd	2290	40	0.65	1		0.33	0.98	1.00
		Heritage Rd	7560	40	2.15	4		1.33	3.48	3.50
		Main St	7463	50	1.70	5		1.67	3.36	3.50
		Main St	2323	45	0.59	4		1.33	1.92	2.00
		I-805 Freeway	3267	65	0.57			0.00	0.57	0.75
	Total Route		34629		9.06	22	1	7.50	16.55	16.75
	FHZ-6	Windingwalk St	2000	25	0.91	1		0.33	1.24	1.25
		Olympic Pkwy	8780	50	2.00	6		2.00	4.00	4.00
		Olympic Pkwy	2644	50	0.60	1		0.33	0.93	1.00
		Olympic Pkwy	5752	45	1.45	3		1.00	2.45	2.50
		Heritage Rd	2290	40	0.65	1		0.33	0.98	1.00
		Heritage Rd	7560	40	2.15	4		1.33	3.48	3.50
		Main St	7463	50	1.70	5		1.67	3.36	3.50
		Main St	2323	45	0.59	4		1.33	1.92	2.00
		I-805 Freeway	3267	65	0.57			0.00	0.57	0.75
	Total Route		42079		10.61	25	0	8.33	18.93	19.00
	FHZ-7	Clubhouse Dr	2100	35	0.68	2		0.67	1.35	1.50
		Eastlake Pkwy	2900	40	0.82	2		0.67	1.49	1.50
		Otay Lakes Rd	3100	50	0.70	4		1.33	2.04	2.25
		Otay Lakes Rd	5400	50	1.23	3		1.00	2.23	2.25
		Telegraph Canyon Rd	11300	50	2.57	3		1.00	3.57	3.75

Gateway Destination E

						Assumed delay (seconds)				
						20	10			
Evacuation Zones	Evacuation Route #	Roadway	Link Distance (feet)	Posted Speed Limit (mph)	Link Travel Time (min)	No. Traffic Signals	No. Stop Int.	Intersection Delay (min)	Total Travel Time (min)	Rounded Travel Time
FHZ-8		Telegraph Canyon Rd	4500	50	1.02	2		0.67	1.69	1.75
		Telegraph Canyon Rd	2600	45	0.66	3		1.00	1.66	1.75
		Telegraph Canyon Rd	944	35	0.31	2		0.67	0.97	1.00
		I-805 Freeway	16220	65	2.84			0.00	2.84	3.00
		Total Route	49064		10.83	21	0	7.00	17.84	18.00
		Clubhouse Dr	2600	35	0.84	1	1	0.50	1.34	1.50
		Hunte Pkwy	3200	45	0.81	2		0.67	1.47	1.50
		Otay Lakes Rd	4982	50	1.13	3		1.00	2.13	2.25
		Otay Lakes Rd	3100	50	0.70	4		1.33	2.04	2.25
		Otay Lakes Rd	5400	50	1.23	3		1.00	2.23	2.25
FHZ-9	FHZ008-E	Telegraph Canyon Rd	11300	50	2.57	3		1.00	3.57	3.75
		Telegraph Canyon Rd	4500	50	1.02	2		0.67	1.69	1.75
		Telegraph Canyon Rd	2600	45	0.66	3		1.00	1.66	1.75
		Telegraph Canyon Rd	944	35	0.31	2		0.67	0.97	1.00
		I-805 Freeway	16220	65	2.84			0.00	2.84	3.00
		Total Route	54846		12.11	23	1	7.83	19.94	20.00
		Lane Ave	2000	40	0.57	1	1	0.50	1.07	1.25
		Proctor Valley Rd	3700	45	0.93	3		1.00	1.93	2.00
		E H St	3900	45	0.98	3		1.00	1.98	2.00
		E H St	3300	45	0.83	1		0.33	1.17	1.25
FHZ-10	FHZ009-E	E H St	3700	35	1.20	3		1.00	2.20	2.25
		E H St	2400	45	0.61	2		0.67	1.27	1.50
		E H St	5100	50	1.16	2		0.67	1.83	2.00
		E H St	4700	50	1.07	3		1.00	2.07	2.25
		E H St	4500	50	1.02	2		0.67	1.69	1.75
		E H St	2373	50	0.54	2		0.67	1.21	1.25
		I-805 Freeway	22065	65	3.86			0.00	3.86	4.00
		Total Route	57738		12.77	22	1	7.50	20.28	20.50
		Northwoods Dr	360	25	0.16		1	0.17	0.33	0.50
		Adirondack Pl	510	25	0.23			0.00	0.23	0.25
FHZ-11	FHZ010-E	Stone Gate St	1800	35	0.58	1	1	0.50	1.08	1.25
		Hunte Pkwy	1800	45	0.45	2		0.67	1.12	1.25
		Otay Lakes Rd	4982	50	1.13	3		1.00	2.13	2.25
		Otay Lakes Rd	3100	50	0.70	4		1.33	2.04	2.25
		Otay Lakes Rd	5400	50	1.23	3		1.00	2.23	2.25
		Telegraph Canyon Rd	11300	50	2.57	3		1.00	3.57	3.75
		Telegraph Canyon Rd	4500	50	1.02	2		0.67	1.69	1.75
		Telegraph Canyon Rd	2600	45	0.66	3		1.00	1.66	1.75
		Telegraph Canyon Rd	944	35	0.31	2		0.67	0.97	1.00
		I-805 Freeway	16220	65	2.84			0.00	2.84	3.00
FHZ-12	FHZ011-E	Total Route	53516		11.89	23	2	8.00	19.89	20.00
		Agua Vista Dr	1700	25	0.77		2	0.33	1.11	1.25
		Agua Vista Dr	3500	25	1.59		2	0.33	1.92	2.00
		Proctor Valley Rd	3100	45	0.78	1	1	0.50	1.28	1.50
		Proctor Valley Rd	1400	45	0.35	1		0.33	0.69	0.75
		Proctor Valley Rd	1500	45	0.38	1		0.33	0.71	0.75
		Proctor Valley Rd	3700	45	0.93	3		1.00	1.93	2.00
		E H St	3900	45	0.98	3		1.00	1.98	2.00
		E H St	3300	45	0.83	1		0.33	1.17	1.25
		E H St	3700	35	1.20	3		1.00	2.20	2.25
FHZ-13	FHZ012-E	E H St	2400	45	0.61	2		0.67	1.27	1.50
		E H St	5100	50	1.16	2		0.67	1.83	2.00
		E H St	4700	50	1.07	3		1.00	2.07	2.25
		E H St	4500	50	1.02	2		0.67	1.69	1.75
		E H St	2373	50	0.54	2		0.67	1.21	1.25
		I-805 Freeway	22065	65	3.86			0.00	3.86	4.00
		Total Route	66938		16.09	24	5	8.83	24.92	25.00
		Mt Miguel Rd	1200	40	0.34	1		0.33	0.67	0.75
		Mt Miguel Rd	800	40	0.23	1		0.33	0.56	0.75
		E H St	3900	45	0.98	3		1.00	1.98	2.00
FHZ-13	FHZ013-E	E H St	3300	45	0.83	1		0.33	1.17	1.25
		E H St	3700	35	1.20	3		1.00	2.20	2.25
		E H St	2400	45	0.61	2		0.67	1.27	1.50
		E H St	5100	50	1.16	2		0.67	1.83	2.00
		E H St	4700	50	1.07	3		1.00	2.07	2.25
		E H St	4500	50	1.02	2		0.67	1.69	1.75
		E H St	2373	50	0.54	2		0.67	1.21	1.25
		I-805 Freeway	22065	65	3.86			0.00	3.86	4.00
		Total Route	54038		11.84	20	0	6.67	18.51	18.75
		Rue Chamond	200	25	0.09		1	0.17	0.26	0.50
FHZ-14	FHZ013-E	Port Renwick	1600	25	0.73		1	0.17	0.89	1.00
		Corral Canyon Rd	1900	40	0.54	1		0.33	0.87	1.00
		E H St	3700	35	1.20	3		1.00	2.20	2.25
		E H St	2400	45	0.61	2		0.67	1.27	1.50
		E H St	5100	50	1.16	2		0.67	1.83	2.00
		E H St	4700	50	1.07	3		1.00	2.07	2.25
		E H St	4500	50	1.02	2		0.67	1.69	1.75
		E H St	2373	50	0.54	2		0.67	1.21	1.25
		I-805 Freeway	22065	65	3.86			0.00	3.86	4.00
		Total Route	48538		10.81	15	2	5.33	16.15	16.25

Gateway Destination E

Evacuation Zones	Evacuation Route #	Roadway	Link Distance (feet)	Posted Speed Limit (mph)	Link Travel Time (min)	Assumed delay (seconds)		Intersection Delay (min)	Total Travel Time (min)	Rounded Travel Time
						20	10			
						No. Traffic Signals	No. Stop Int.			
FHZ-14	FHZ014-E	Ridgeview Way	900	25	0.41	1	1	0.50	0.91	1.00
		Otay Lakes Rd	3100	50	0.70	1		0.33	1.04	1.25
		Otay Lakes Rd	2800	40	0.80	3		1.00	1.80	2.00
		E H St	2400	45	0.61	2		0.67	1.27	1.50
		E H St	5100	50	1.16	2		0.67	1.83	2.00
		E H St	4700	50	1.07	3		1.00	2.07	2.25
		E H St	4500	50	1.02	2		0.67	1.69	1.75
		E H St	2373	50	0.54	2		0.67	1.21	1.25
		I-805 Freeway	22065	65	3.86			0.00	3.86	4.00
	Total Route		47938		10.16	16	1	5.50	15.68	15.75
FHZ-15	FHZ015-E	Sweetwater Rd	4300	45	1.09	1		0.33	1.42	1.50
		Sweetwater Rd	1800	45	0.45	1		0.33	0.79	1.00
		Sweetwater Rd	2100	45	0.53	1		0.33	0.86	1.00
		Plaza Bonita Centerway	1500	40	0.43	1		0.33	0.76	1.00
		Reo Dr	700	40	0.20	2		0.67	0.87	1.00
	Total Route	SR-54 Highway	35970	65	6.29	1	0	0.33	6.62	6.75
			46370		8.98	7	0	2.33	11.32	11.50

Gateway Destination F

Gateway Destination F						Assumed delay (seconds)				
Evacuation Zones	Evacuation Route #	Roadway	Link Distance (feet)	Posted Speed Limit (mph)	Link Travel Time (min)	20	10	Intersection Delay (min)	Total Travel Time (min)	Rounded Travel Time
						No. Traffic Signals	No. Stop Int.			
FHZ-1	FHZ001-F	Brandywine Ave	1270	40	0.36	1		0.33	0.69	0.75
		Olympic Pkwy	19425	50	4.41	6		2.00	6.41	6.50
		125 Freeway	15194	65	2.66			0.00	2.66	2.75
	Total Route		35889		7.43	7	0	2.33	9.76	10.00
FHZ-2	FHZ002-F	Brandywine Ave	2500	35	0.81	2		0.67	1.48	1.50
		Olympic Pkwy	19425	50	4.41	6		2.00	6.41	6.50
		125 Freeway	15194	65	2.66			0.00	2.66	2.75
	Total Route		37119		7.88	8.00	0.00	2.67	10.55	10.75
FHZ-3	FHZ003-F	Santa Victoria Rd	2800	25	1.27	1	2	0.67	1.94	2.00
		Birch Rd	1000	25	0.45	1		0.33	0.79	1.00
		Birch Rd	1500	50	0.34	1		0.33	0.67	0.75
		Birch Rd	2300	50	0.52	2		0.67	1.19	1.25
		125 Freeway	10659	65	1.86			0.00	1.86	2.00
	Total Route		18259		4.45	5.00	2.00	2.00	6.45	6.50
FHZ-4	FHZ004-F	La Media Pkwy	2400	25	1.09		3	0.50	1.59	1.75
		La Media Rd	1800	25	0.82		2	0.33	1.15	1.25
		La Media Rd	3800	45	0.96	1		0.33	1.29	1.50
		Birch Rd	1500	50	0.34	1		0.33	0.67	0.75
		Birch Rd	2300	50	0.52	2		0.67	1.19	1.25
	125 Freeway	10659	65	1.86			0.00	1.86	2.00	
Total Route		22459		5.60	4.00	5.00	2.17	7.75	7.75	
FHZ-5	FHZ005-F	Magdalena Ave	2200	25	1.00	2	1	0.83	1.83	2.00
		Birch Rd	2300	50	0.52	2		0.67	1.19	1.25
		125 Freeway	10659	65	1.86			0.00	1.86	2.00
Total Route		15159		3.39	4.00	1.00	1.50	4.88	5.00	
FHZ-6	FHZ006-F	Windingwalk St	2300	25	1.05		2	0.33	1.38	1.50
		Discovery Falls Dr	500	25	0.23		1	0.17	0.39	0.50
		Birch Rd	8818	50	2.00	5		1.67	3.67	3.75
		125 Freeway	10659	65	1.86			0.00	1.86	2.00
Total Route		22277		5.14	5.00	3.00	2.17	7.30	7.50	
FHZ-7	FHZ007-F	Clubhouse Dr	2100	35	0.68	2	1	0.83	1.52	1.75
		Eastlake Pkwy	2900	40	0.82	3		1.00	1.82	2.00
		Otay Lakes Rd	1500	50	0.34	1		0.33	0.67	0.75
		Otay Lakes Rd	857	50	0.19	1		0.33	0.53	0.75
		125 Freeway	19915	65	3.48			0.00	3.48	3.50
Total Route		27272		5.52	7.00	1.00	2.50	8.02	8.25	
FHZ-8	FHZ008-F	Clubhouse Dr	2600	35	0.84	1	1	0.50	1.34	1.50
		Hunte Pkwy	3200	45	0.81	2		0.67	1.47	1.50
		Otay Lakes Rd	5000	50	1.14	3		1.00	2.14	2.25
		Otay Lakes Rd	1500	50	0.34	2		0.67	1.01	1.25
		Otay Lakes Rd	857	50	0.19	1		0.33	0.53	0.75
		125 Freeway	19915	65	3.48			0.00	3.48	3.50
Total Route		33072		6.81	9.00	1.00	3.17	9.97	10.00	
FHZ-9	FHZ009-F	Lane Ave	2700	35	0.88	2	2	1.00	1.88	2.00
		Otay Lakes Rd	1395	50	0.32	1		0.33	0.65	0.75
		Otay Lakes Rd	1500	50	0.34	2		0.67	1.01	1.25
		Otay Lakes Rd	857	50	0.19	1		0.33	0.53	0.75
		125 Freeway	19915	65	3.48			0.00	3.48	3.50
Total Route		26367		5.21	6.00	2.00	2.33	7.55	7.75	
FHZ-10	FHZ010-F	Northwoods Dr	360	25	0.16		1	0.17	0.33	0.50
		Adirondack Pl	510	25	0.23			0.00	0.23	0.25
		Stone Gate St	1800	35	0.58	1	1	0.50	1.08	1.25
		Hunte Pkwy	1800	45	0.45	2		0.67	1.12	1.25
		Otay Lakes Rd	5000	50	1.14	3		1.00	2.14	2.25
		Otay Lakes Rd	1500	50	0.34	1		0.33	0.67	0.75
		Otay Lakes Rd	857	50	0.19	1		0.33	0.53	0.75
		125 Freeway	19915	65	3.48			0.00	3.48	3.50
		Total Route		31742		6.59	8.00	2.00	3.00	9.58
	FHZ-11	FHZ011-F	Agua Vista Dr	1700	25	0.77		2	0.33	1.11
Agua Vista Dr			3500	25	1.59		2	0.33	1.92	2.00
Proctor Valley Rd			3100	45	0.78	1	1	0.50	1.28	1.50
Proctor Valley Rd			1400	45	0.35	1		0.33	0.69	0.75
Hunte Pkwy			3988	45	1.01	1	1	0.50	1.51	1.75
Hunte Pkwy			1800	45	0.45	2		0.67	1.12	1.25
Otay Lakes Rd			5000	50	1.14	3		1.00	2.14	2.25
Otay Lakes Rd			1500	50	0.34	1		0.33	0.67	0.75
Otay Lakes Rd			857	50	0.19	1		0.33	0.53	0.75
125 Freeway			19915	65	3.48			0.00	3.48	3.50
Total Route			42760		10.12	10.00	6.00	4.33	14.45	14.50
FHZ-12	FHZ012-F	Mt Miguel Rd	1200	40	0.34	1		0.33	0.67	0.75
		Mt Miguel Rd	800	40	0.23	1		0.33	0.56	0.75
		E H St	2317	45	0.59	2		0.67	1.25	1.25
	Total Route		26489	65	4.63			0.00	4.63	4.75
FHZ-13	FHZ013-F	125 Freeway	30806		5.78	4.00	0.00	1.33	7.11	7.25
		Rue Chamond	200	25	0.09		1	0.17	0.26	0.50
		Port Renwick	1600	25	0.73		1	0.17	0.89	1.00
		Corral Canyon Rd	1900	40	0.54	1		0.33	0.87	1.00
		E H St	3300	45	0.83	1		0.33	1.17	1.25
		E H St	1575	45	0.40	1		0.33	0.73	0.75

Gateway Destination F

Evacuation Zones	Evacuation Route #	Roadway	Link Distance (feet)	Posted Speed Limit (mph)	Link Travel Time (min)	Assumed delay (seconds)		Intersection Delay (min)	Total Travel Time (min)	Rounded Travel Time
						20	10			
						No. Traffic Signals	No. Stop Int.			
FHZ-14		I-125 Freeway	25602	65	4.48			0.00	4.48	4.50
	Total Route		34177		7.06	3.00	2.00	1.33	8.40	8.50
	FHZ014-F	Ridgeview Way	900	25	0.41	1	1	0.50	0.91	1.00
		Otay Lakes Rd	3100	50	0.70	1		0.33	1.04	1.25
		Otay Lakes Rd	2800	40	0.80	3		1.00	1.80	2.00
		E H St	3700	35	1.20	3		1.00	2.20	2.25
		E H St	3300	45	0.83	1		0.33	1.17	1.25
		E H St	1575	45	0.40	1		0.33	0.73	0.75
		I-125 Freeway	25602	65	4.48			0.00	4.48	4.50
	Total Route		40977		8.82	10.00	1.00	3.50	12.33	12.50
	FHZ-15	Sweetwater Rd	4300	45	1.09	1	1	0.50	1.59	1.75
		Willow St	1136	45	0.29	1		0.33	0.62	0.75
		Bonita Rd	3290	50	0.75	3		1.00	1.75	1.75
		Otay Lakes Rd	3875	40	1.10	2		0.67	1.77	2.00
		Otay Lakes Rd	2831	50	0.64	1		0.33	0.98	1.00
		Otay Lakes Rd	3100	50	0.70	1		0.33	1.04	1.25
		Otay Lakes Rd	2800	40	0.80	3		1.00	1.80	2.00
		E H St	3700	35	1.20	3		1.00	2.20	2.25
		E H St	3300	45	0.83	1		0.33	1.17	1.25
		E H St	1575	45	0.40	1		0.33	0.73	0.75
		I-125 Freeway	25602	65	4.48			0.00	4.48	4.50
	Total Route		55509		12.27	17.00	1.00	5.83	18.13	18.25

Evacuation Routes Summary (DIZ)

Evacuation Zones	Travel Time Summary (min) Via Gateway:						Closest Primary Gateway (North)		Closest Primary Gateway (North)	
	A I-5 (North)	B I-805 (North)	C 125 Freeway (North)	D I-5 (South)	E I-805 (South)	F 125 Freeway (South)	Via Gateway	Travel Time (minutes)	Via Gateway	Travel Time (minutes)
DIZ-1	4.75	4.00	-	6.75	12.50	-	B	4.00	D	6.75
DIZ-2	8.00	3.50	-	10.25	6.00	-	B	3.50	E	6.00
DIZ-3	7.25	5.25	-	16.00	9.50	-	B	5.25	E	9.50
DIZ-4	7.75	6.00	-	15.75	9.25	-	B	6.00	E	9.25
DIZ-4	10.50	8.75	-	19.25	12.75	-	B	8.75	E	12.75

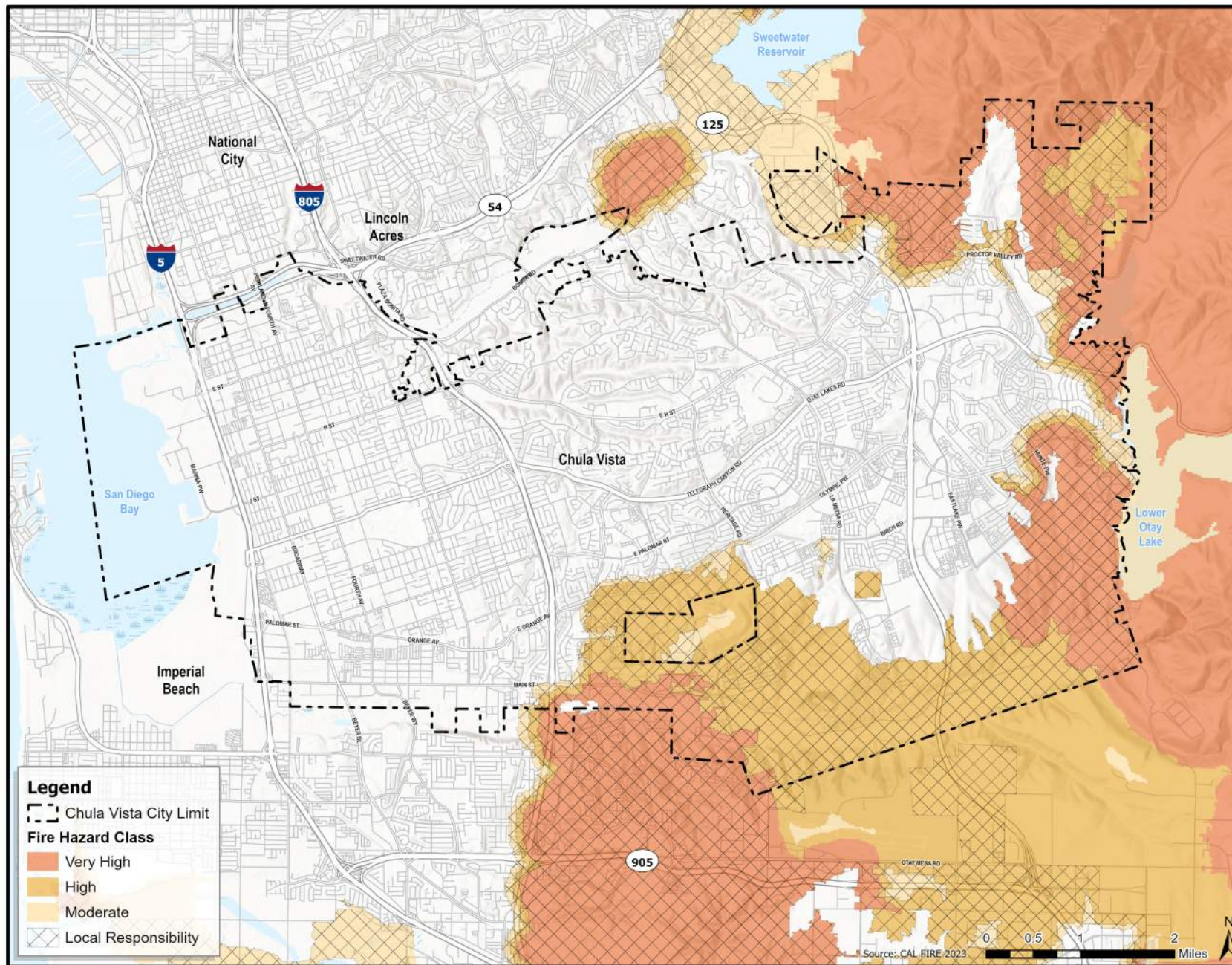
0 - 6.00 Minutes
6.01 - 12.00 Minutes
12.01 - 18.00 Minutes
18.01 + Minutes

Evacuation Routes Summary (FHZ)

Evacuation Zones	Travel Time Summary (min) Via Gateway:						Closest Primary Gateway (North)		Closest Primary Gateway (North)	
	A I-5 (North)	B I-805 (North)	C 125 Freeway (North)	D I-5 (South)	E I-805 (South)	F 125 Freeway (South)	Via Gateway	Travel Time (minutes)	Via Gateway	Travel Time (minutes)
FHZ-1	16.00	6.50	10.25	14.25	4.25	10.00	B	6.50	E	4.25
FHZ-2	15.25	8.00	11.50	11.50	4.00	10.75	B	8.00	E	4.00
FHZ-3	20.50	11.25	11.25	18.50	11.50	6.50	B	11.25	F	6.50
FHZ-4	25.75	16.75	12.50	24.00	18.50	7.75	C	12.50	F	7.75
FHZ-5	24.00	14.75	9.75	22.00	16.75	5.00	C	9.75	F	5.00
FHZ-6	26.00	16.75	10.00	24.00	19.00	7.50	C	10.00	F	7.50
FHZ-7	27.25	16.50	8.25	25.75	18.00	8.25	C	8.25	C	8.25
FHZ-8	29.25	18.50	10.50	28.00	20.00	10.00	C	10.50	F	10.00
FHZ-9	25.75	17.50	7.50	25.50	20.50	7.75	C	7.50	F	7.75
FHZ-10	28.50	18.50	10.25	28.25	20.00	9.75	C	10.25	F	9.75
FHZ-11	30.50	22.00	12.00	32.00	25.00	14.50	C	12.00	F	14.50
FHZ-12	24.00	15.75	5.75	25.50	18.75	7.25	C	5.75	F	7.25
FHZ-13	21.75	13.25	8.25	23.25	16.25	8.50	C	8.25	F	8.50
FHZ-14	21.25	12.75	12.25	22.75	15.75	12.50	C	12.25	F	12.50
FHZ-15	7.75	6.00	4.75	16.25	11.50	18.25	C	4.75	E	11.50

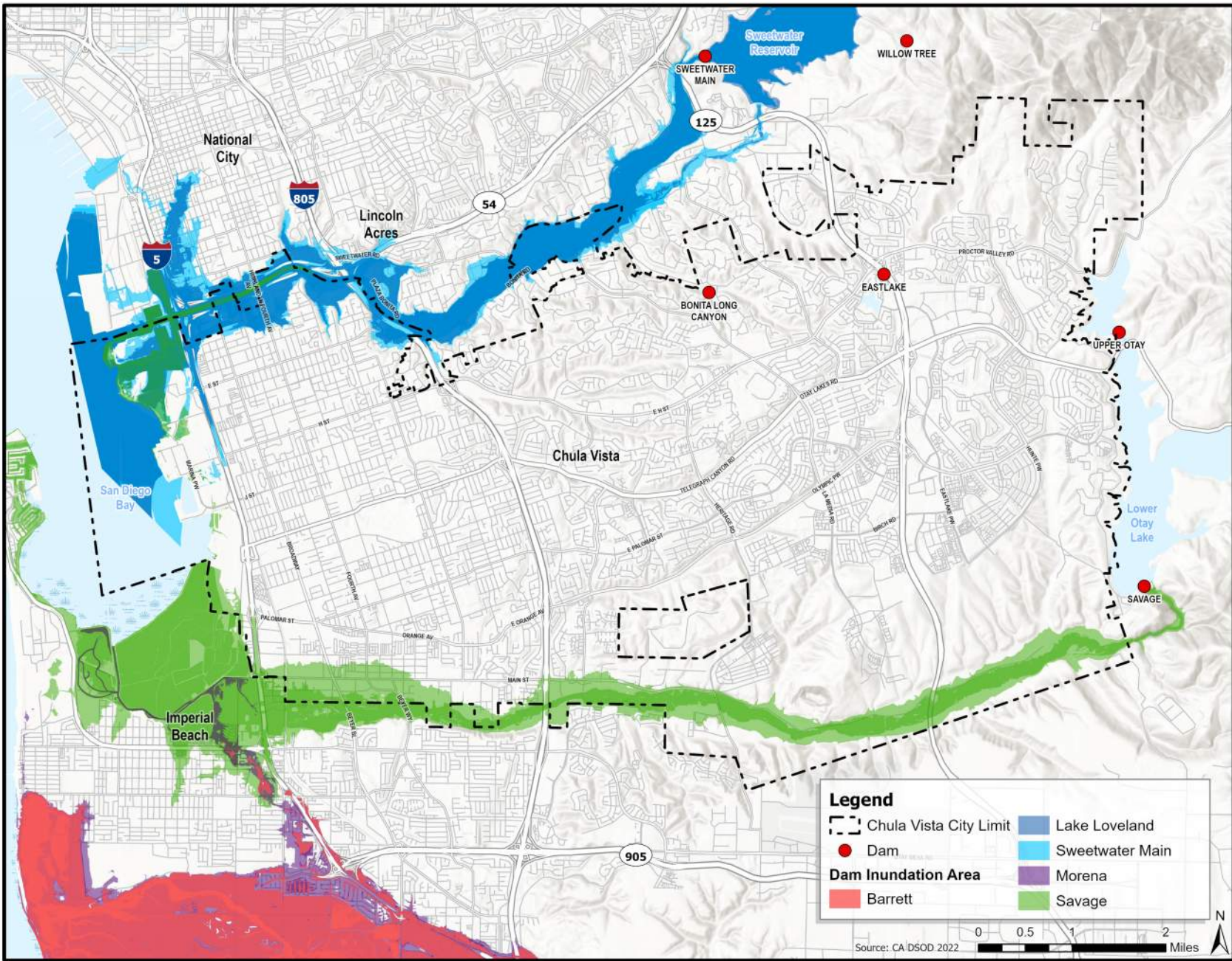
Attachment C:

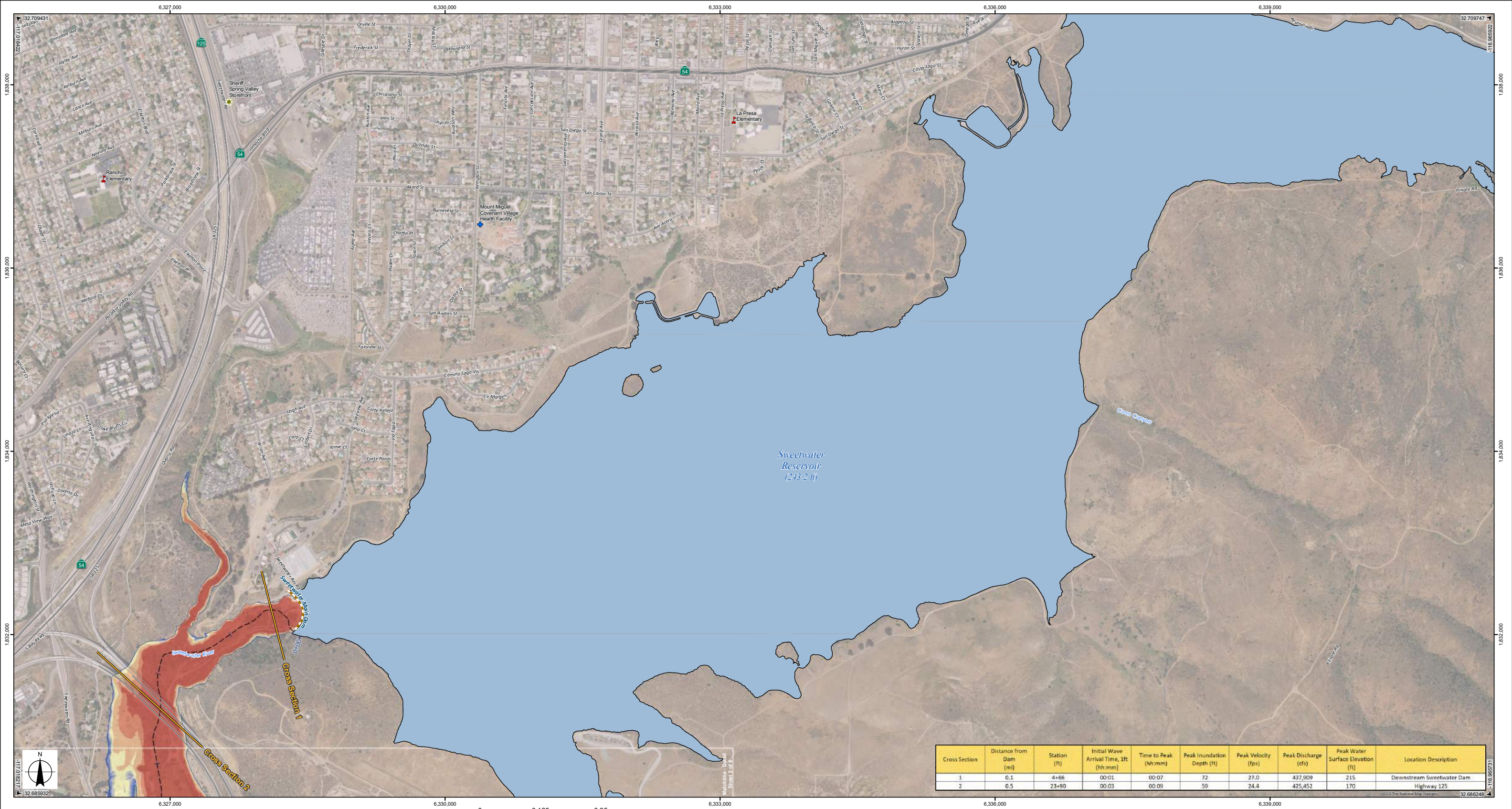
Wildfire Hazard Severity Zone



Attachment D:

Dam Inundation Maps





Cross Section	Distance from Dam (mi)	Station (ft)	Initial Wave Arrival Time, 1ft (hh:mm)	Time to Peak (hh:mm)	Peak Inundation Depth (ft)	Peak Velocity (fps)	Peak Discharge (cfs)	Peak Water Surface Elevation (ft)	Location Description
1	0.1	4+86	00:01	00:07	72	27.0	437,909	215	Downstream Sweetwater Dam
2	0.5	23+90	00:03	00:09	59	24.4	425,452	170	Highway 125

Notes:

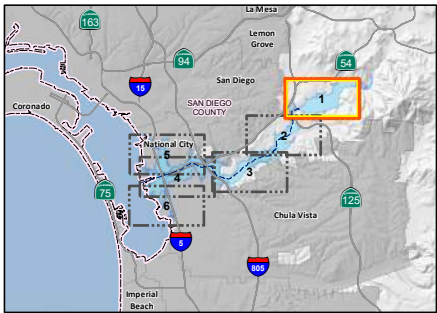
- This map was developed for the benefit of local emergency managers and the California Governor's Office of Emergency Services. The information shown is approximate and should be used as a guide for emergency response and preparation.
- The inundation map meets all applicable state and federal standards and has been prepared in consideration of potential downstream hazards by a licensed civil engineer.
- The results presented herein do not reflect the structural integrity of the dam and are not a statement of the dam's safety. The analysis presented is based on a hypothetical dam failure of Sweetwater Main Dam using 2D modeling software.
- Cross Section Values:
Distance from Dam and **Stationing** are reckoned from the centerline of Sweetwater Main Dam along the displayed Flow Path.
Distance from Dam is in miles and **Stationing** is in feet (Stationing 12+34 = 1,234').
Initial Wave Arrival Time, 1 Foot is the time to achieve 1 foot of water depth after initiation of the dam break.
Time to Peak is the time to achieve the maximum water depth after initiation of the dam break.

- Cross Section Values continued:
Peak Inundation Depth is the maximum water depth in feet.
Peak Velocity is the maximum velocity in feet per second.
Peak Discharge is an estimate of the maximum flow rate integrated over the entire cross section line in cubic feet per second.
Peak Water Surface Elevation is the maximum water surface elevation in feet.
Location Description indicates major roads that cross, or are near, the Flow Path at that cross section.
- The values displayed in the table for each cross section are the maximum for that parameter along each cross section line, except for the **Initial Wave Arrival Time, 1 Foot** and **Time to Peak** which are the minimum for that parameter along each cross section line.
- For other details refer to the supporting report "Sweetwater Main Dam Inundation Technical Study" February 2019.
- Structures are shown in the aerial photo on the maps but may not clearly display all possible structures potentially within the inundation limits.
- Map projection: State Plane, California Zone VI, Feet, North American Datum 1983. **Border Tics** display these coordinate values. All elevations are referenced to North American Vertical Datum 1988.

Legend

- School
- Law Enforcement Facility
- Fire Facility
- Licensed Healthcare Facility
- Airport
- Flow Path
- Cross Section
- Approx. Time to 1 Foot Depth (hrs.mins)
- Approx. Maximum Flooding Extent

- Source Topo Lake Levels
- Incorporated City
- Maximum Inundation Depth (feet)
 - 0 - 1
 - 1 - 2
 - 2 - 3
 - 3 - 6
 - 6 - 12
 - 12 - 18
 - > 18



Inundation Depth Map
Sunny Day Hypothetical Failure of
Sweetwater Main Dam
Flood Depth and Arrival Time
National Dam ID: CA00775 State Dam ID: 2020.000
Detail Sheet 1 of 6
San Diego County
© 2018 Sweetwater Authority

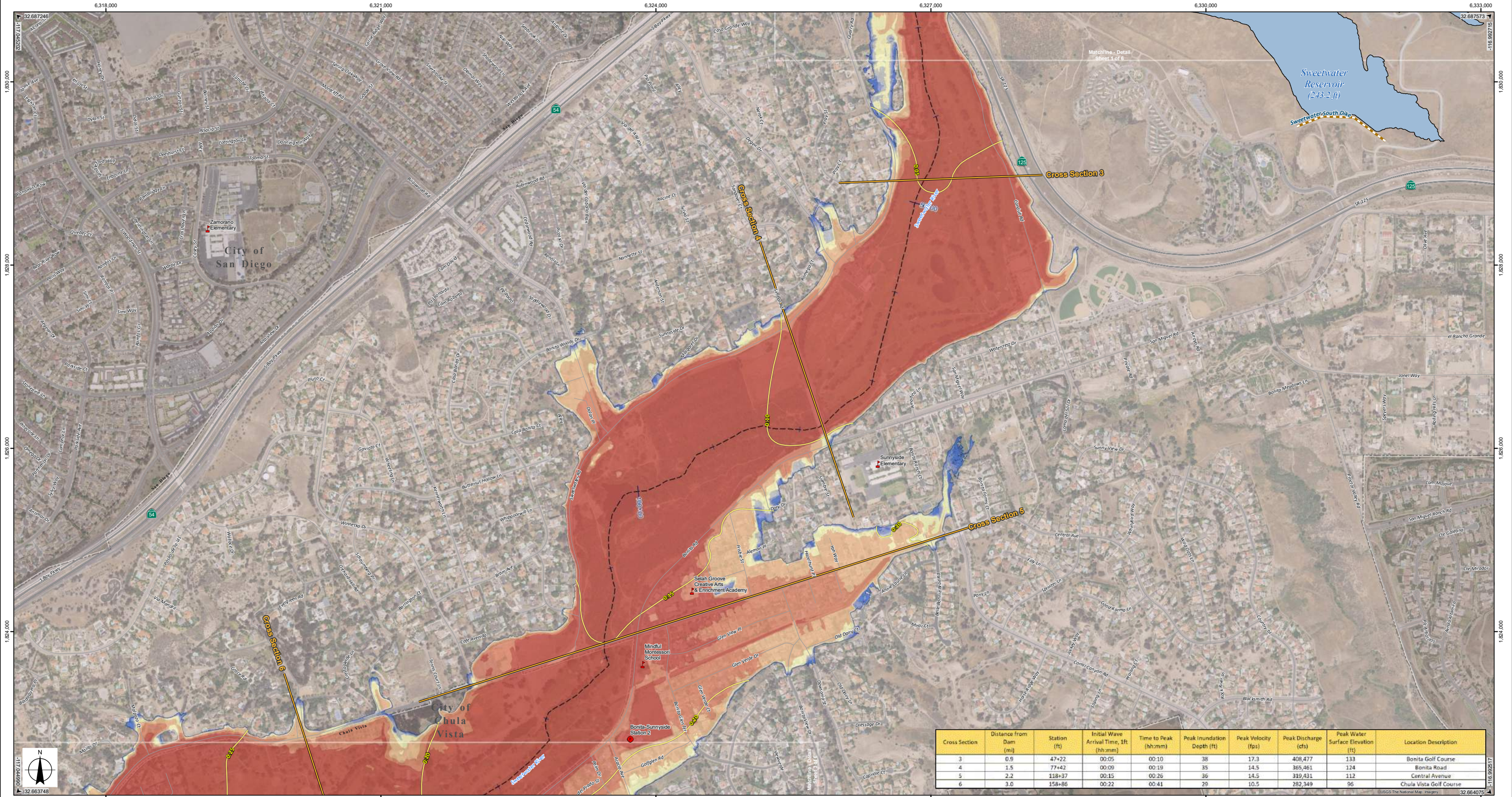
Model Date	Map Date	Description	Prepared By	Accepted By
12/10/2018	02/14/2019		GEI Consultants	---

Dam Owner:
Sweetwater Authority
505 Garrett Ave
Chula Vista, CA 91910
Information Contact: Mosher, Ron R. (619) 409-6750
Emergency Contact: (619) 409-6750

Inundation Analysis Performed by
and Inundation Maps Created By:
GEI Consultants, Inc.
Christopher Kiseick, PE 84861

Data Sources: Incorporated City Limits from CalFire, January 2017. Licensed Healthcare Facilities, Schools, Fire Stations and Law Enforcement Facilities from SanGIS, February, 2019. Highways are from CalTans, 2018

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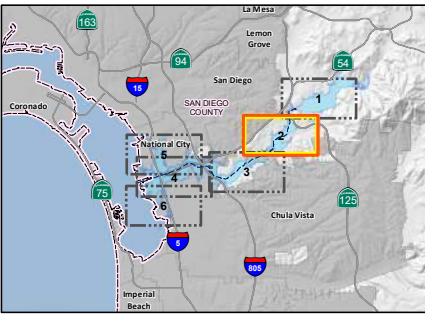
Cross Section	Distance from Dam (mi)	Station (ft)	Initial Wave Arrival Time, 1ft (h:mm)	Time to Peak (h:mm)	Peak Inundation Depth (ft)	Peak Velocity (fps)	Peak Discharge (cfs)	Peak Water Surface Elevation (ft)	Location Description
3	0.9	47+22	00:05	00:10	38	17.3	408,477	133	Bonita Golf Course
4	1.5	77+42	00:09	00:19	35	14.5	365,461	124	Bonita Road
5	2.2	118+37	00:15	00:26	36	14.5	319,431	112	Central Avenue
6	3.0	158+86	00:22	00:41	29	10.5	262,349	96	Chula Vista Golf Course

Notes:

- This map was developed for the benefit of local emergency managers and the California Governor's Office of Emergency Services. The information shown is approximate and should be used as a guide for emergency response and preparation.
- The inundation map meets all applicable state and federal standards and has been prepared in consideration of potential downstream hazards by a licensed civil engineer.
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Distance from Dam is in miles and **Stationing** is in feet (Stationing 12+34 = 1,234').
Initial Wave Arrival Time, 1 Foot is the time to achieve 1 foot of water depth after initiation of the dam break.
Time to Peak is the time to achieve the maximum water depth after initiation of the dam break.
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- For other details refer to the supporting report "Sweetwater Main Dam Inundation Technical Study" February 2019.
- Structures are shown in the aerial photo on the maps but may not clearly display all possible structures potentially within the inundation limits.
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Legend

- School
- Law Enforcement Facility
- Fire Facility
- Licensed Healthcare Facility
- Airport
- Flow Path
- Cross Section
- Approx. Time to 1 Foot Depth (hrs.mins)
- Approx. Maximum Flooding Extent
- Source Topo Lake Levels
- Incorporated City
- Maximum Inundation Depth (feet)**
 - 0 - 1
 - 1 - 2
 - 2 - 3
 - 3 - 6
 - 6 - 12
 - 12 - 18
 - > 18



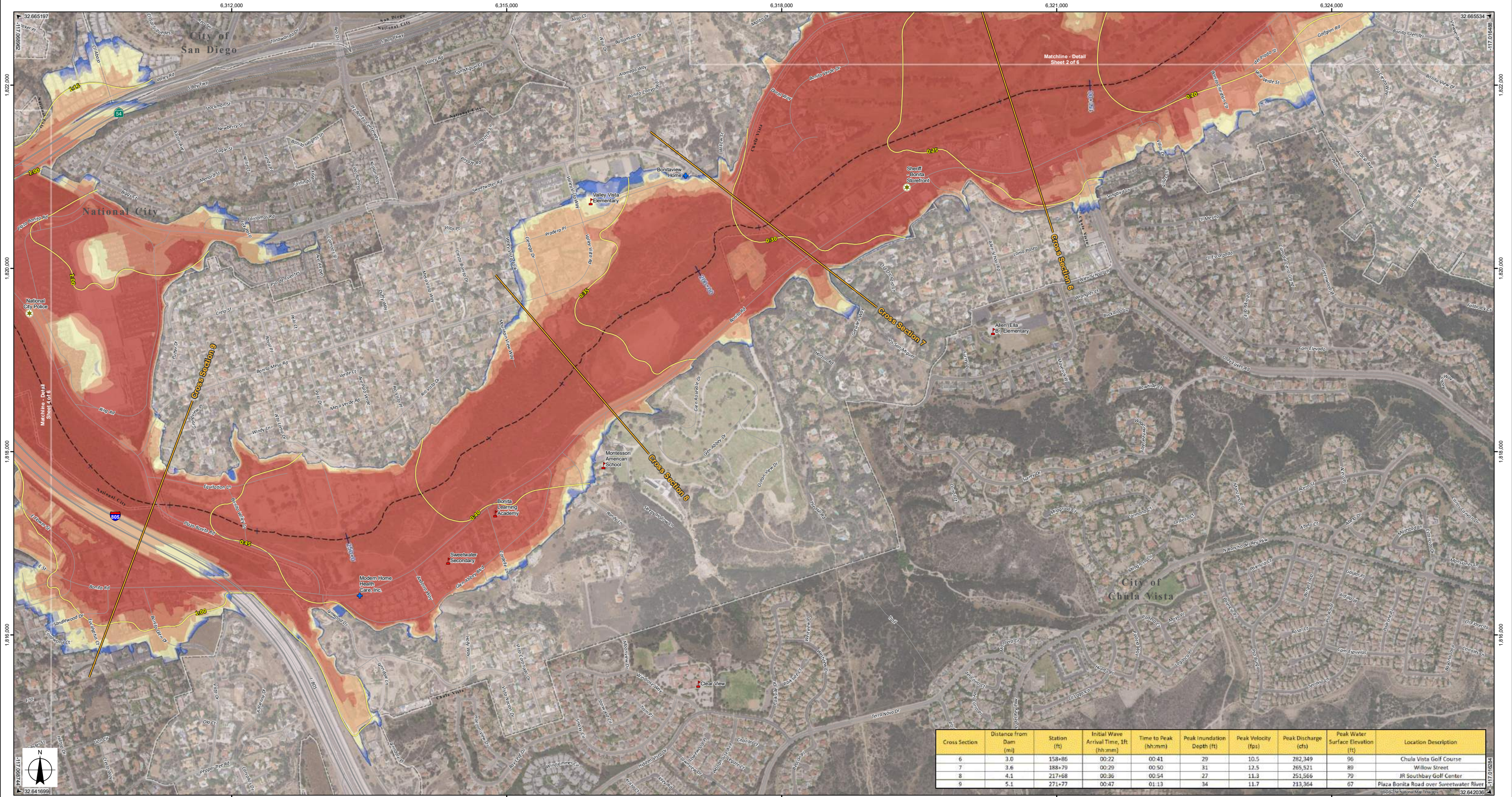
Inundation Depth Map
Sunny Day Hypothetical Failure of
Sweetwater Main Dam
Flood Depth and Arrival Time
National Dam ID: CA00775 State Dam ID: 2020.000
Detail Sheet 2 of 6
San Diego County
© 2018 Sweetwater Authority

Model Date 12/10/2018	Map Date 02/14/2019	Description	Prepared By GEI Consultants	Accepted By ---
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Dam Owner:
Sweetwater Authority
505 Garrett Ave
Chula Vista, CA 91910

Information Contact: Mosher, Ron R. (619) 409-6750
Emergency Contact: (619) 409-6750

Inundation Analysis Performed by
and Inundation Maps Created By:
GEI Consultants, Inc.
Christopher Kiseick, PE #4881



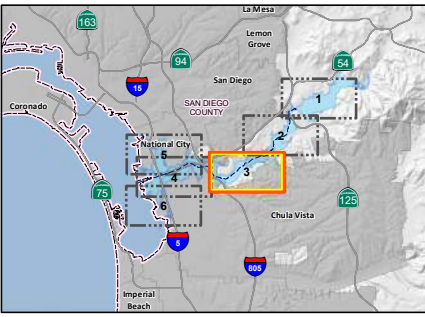
Cross Section	Distance from Dam (mi)	Station (ft)	Initial Wave Arrival Time, 1ft (h:mm)	Time to Peak (h:mm)	Peak Inundation Depth (ft)	Peak Velocity (fps)	Peak Discharge (cfs)	Peak Water Surface Elevation (ft)	Location Description
6	3.0	158+86	00:22	00:41	29	10.5	282,349	96	Chula Vista Golf Course
7	3.6	188+79	00:29	00:50	31	12.5	265,521	89	Willow Street
8	4.1	217+68	00:36	00:54	27	11.3	251,566	79	JR Southbay Golf Center
9	5.1	271+77	00:47	01:13	34	11.7	213,364	67	Plaza Bonita Road over Sweetwater River

Notes:

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- Cross Section Values:
Distance from Dam and Stationing are reckoned from the centerline of Sweetwater Main Dam along the displayed Flow Path. Distance from Dam in miles and Stationing is in feet (Stationing 12+34 = 1,234').
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Legend

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- Fire Facility
- Licensed Healthcare Facility
- Airport
- Flow Path
- Cross Section
- Approx. Time to 1 Foot Depth (hrs.mins)
- Approx. Maximum Flooding Extent
- Source Topo Lake Levels
- Incorporated City
- Maximum Inundation Depth (feet)
 - 0 - 1
 - 1 - 2
 - 2 - 3
 - 3 - 6
 - 6 - 12
 - 12 - 18
 - > 18



Inundation Depth Map

Sunny Day Hypothetical Failure of Sweetwater Main Dam

Flood Depth and Arrival Time

National Dam ID: CA00775 State Dam ID: 2020.000

Detail Sheet 3 of 6

San Diego County

© 2018 Sweetwater Authority

Model Date

12/10/2018

Map Date

02/14/2019

Description

Sweetwater Authority
505 Garrett Ave
Chula Vista, CA 91910

Information Contact: Mosher, Ron R. (619) 409-6750
Emergency Contact: (619) 409-6750

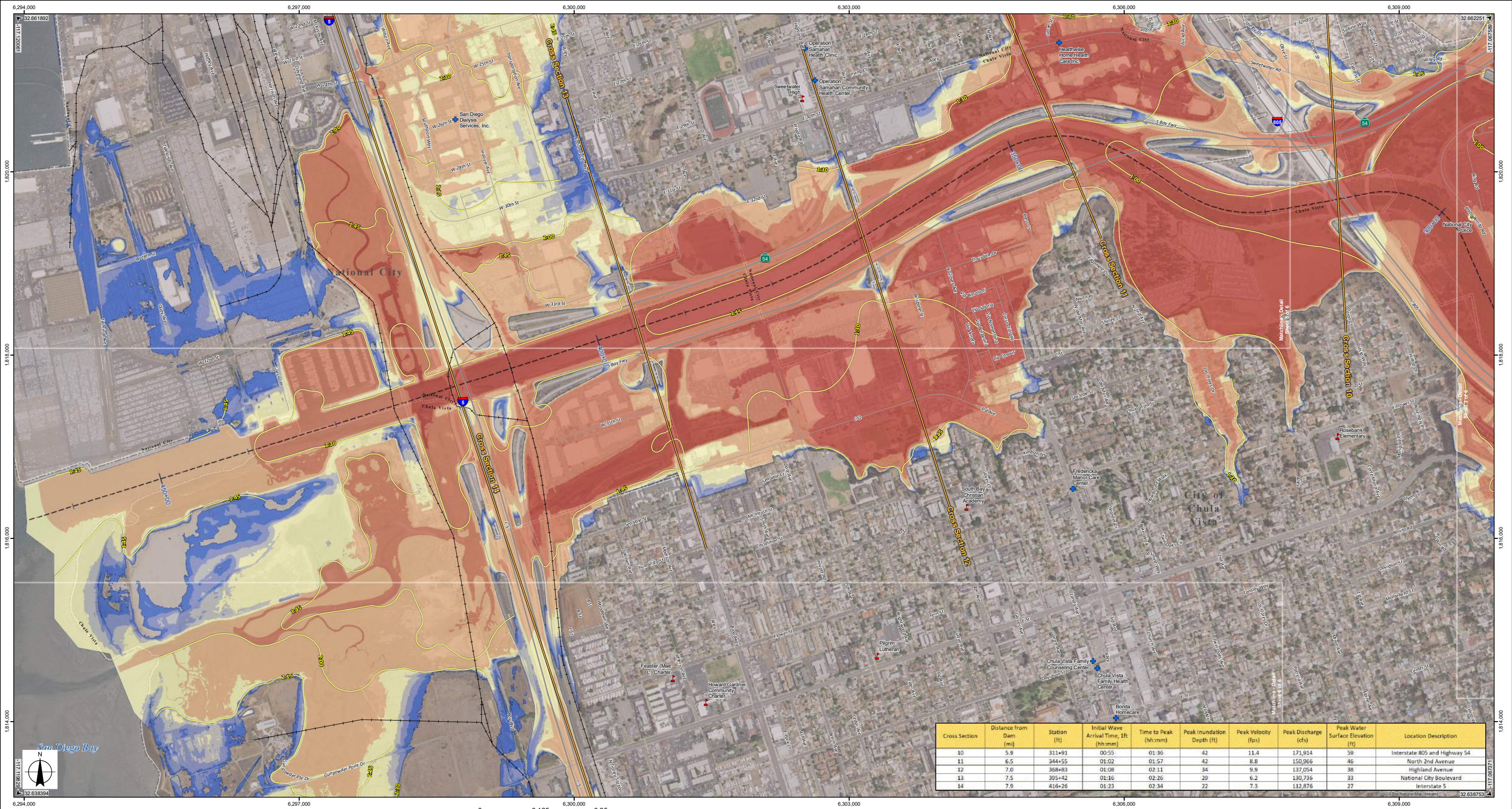
Prepared By

GEI Consultants

Accepted By

Inundation Analysis Performed by
and Inundation Maps Created By:
GEI Consultants, Inc.
Christopher Kiseick, PE 84861

Data Sources: Incorporated City Limits from CalFire, January 2017. Licensed Healthcare Facilities, Schools, Fire Stations and Law Enforcement Facilities from SanGIS, February, 2019. Highways are from CalTans, 2018



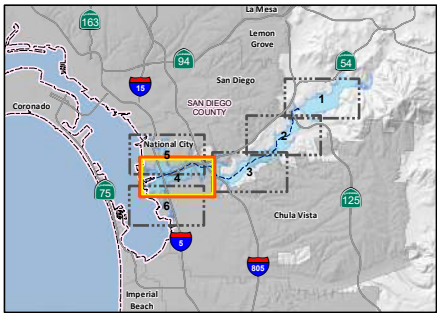
Cross Section	Distance from Dam (mi)	Station (ft)	Initial Wave Arrival Time, 1ft (hh:mm)	Time to Peak (hh:mm)	Peak Inundation Depth (ft)	Peak Velocity (fps)	Peak Discharge (cfs)	Peak Water Surface Elevation (ft)	Location Description
10	5.9	311+91	00:55	01:36	42	11.4	171,914	59	Interstate 805 and Highway 54
11	6.5	344+55	01:02	01:57	42	8.8	150,965	46	North 2nd Avenue
12	7.0	368+83	01:08	02:11	34	9.9	137,054	38	Highland Avenue
13	7.5	395+42	01:16	02:26	29	6.2	130,736	33	National City Boulevard
14	7.9	416+26	01:23	02:34	22	7.3	112,876	27	Interstate 5

Notes:

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- Law Enforcement Facility
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- Maximum Inundation Depth (feet)**
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Inundation Depth Map

Sunny Day Hypothetical Failure of Sweetwater Main Dam

Flood Depth and Arrival Time

National Dam ID: CA00775 State Dam ID: 2020.000

Detail Sheet 4 of 6

San Diego County

© 2018 Sweetwater Authority

Model Date
12/10/2018

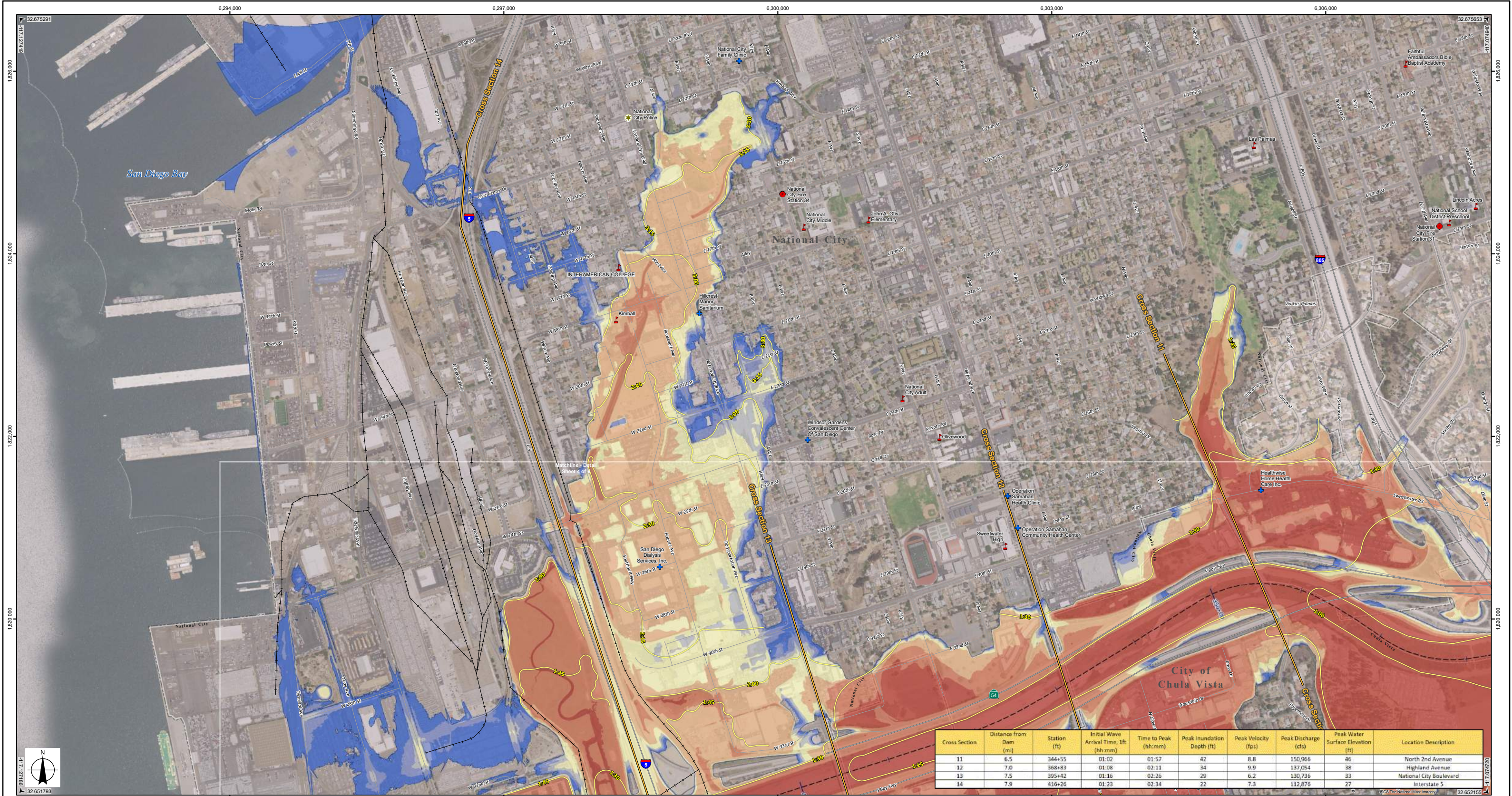
Map Date
02/14/2019

Description
Inundation Analysis Performed by and Inundation Maps Created by:
GEI Consultants, Inc.
Christopher Kiseick, PE 84861

Prepared By
GEI Consultants

Accepted By

Data Sources: Incorporated City Limits from CalFire, January 2017. Licensed Healthcare Facilities, Schools, Fire Stations and Law Enforcement Facilities from SanGIS, February, 2019. Highways are from CalTans, 2018



Cross Section	Distance from Dam (mi)	Station (ft)	Initial Wave Arrival Time, 1ft (h:mm)	Time to Peak (h:mm)	Peak Inundation Depth (ft)	Peak Velocity (fps)	Peak Discharge (cfs)	Peak Water Surface Elevation (ft)	Location Description
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Inundation Depth Map
Sunny Day Hypothetical Failure of
Sweetwater Main Dam
Flood Depth and Arrival Time
National Dam ID: CA00775 State Dam ID: 2020.000
Detail Sheet 5 of 6
San Diego County
© 2018 Sweetwater Authority

Model Date	Map Date	Description	Prepared By	Accepted By
12/10/2018	02/14/2019		GEI Consultants	

Dam Owner:
Sweetwater Authority
505 Garrett Ave
Chula Vista, CA 91910

Information Contact: Mosher, Ron R. (619) 409-6750
Emergency Contact: (619) 409-6750

Inundation Analysis Performed by
and Inundation Maps Created By:
GEI Consultants, Inc.
Christopher Kiseick, PE 84861

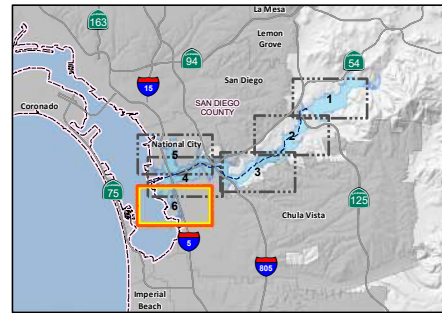


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- Airport
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- Maximum Inundation Depth (feet)
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 - > 18



Inundation Depth Map Sunny Day Hypothetical Failure of Sweetwater Main Dam Flood Depth and Arrival Time National Dam ID: CA00775 State Dam ID: 2020.000 Detail Sheet 6 of 6 San Diego County © 2018 Sweetwater Authority			
Model Date	Map Date	Description	Accepted By
12/10/2018	02/14/2019		GEI Consultants
Dam Owner: Sweetwater Authority 505 Garrett Ave Chula Vista, CA 91910			
Information Contact: Mosher, Ron R. (619) 409-6750 Emergency Contact: (619) 409-6750			
Inundation Analysis Performed by: and Inundation Maps Created By: GEI Consultants, Inc. Christopher Kiseick, PE 84861			

evacuation route. To avoid significant congestion, incremental evacuation of these zones could be considered if advanced warning of the flood hazard due to the dam breach permits.

Given the distance to Sweetwater Dam and Reservoir, Inundation maps show that initial flood waters will reach the City in just less than 25 minutes. Given the time between the dam breach and flooding effects that would impact or make evacuation routes unusable, it will be critical to develop advance warning methods that would identify a likely breach of the dam so the preemptive evacuation order could be given. One such example would be an earthquake event that causes damage to the dam but does not immediately cause a dam breach. Under some emergency scenarios such as an earthquake that does cause immediate rupture or dam breach, it may not be possible or practical to declare a vehicle-based evacuation and a shelter in place order may be more appropriate.