

## Appendix A: Example Field Safety Plan – Multiple Locations

<b>Field Site Location:</b>	<ul style="list-style-type: none"> <li>▪ First Water, Mount Wilson Trail, Sierra Madre, CA</li> <li>▪ Eaton Canyon Falls, San Gabriel Mountains, CA</li> </ul>		
<b>Activity Description:</b>	<ul style="list-style-type: none"> <li>▪ Hiking, from vehicles, 1.13 miles to Eaton Canyon Falls and 1.13 miles back to vehicles.</li> <li>▪ Hiking, from vehicles, 1.45 miles to First Water and 1.45 miles back to vehicles.</li> <li>Collecting water samples from the waterfalls and streams.</li> </ul>		
<b>Plan Created for:</b>	John Doe Research Group	<b>Date of revision:</b>	May 2023
<b>Date(s) of Travel:</b>	Every last weekend of March. Arrive at Eaton Canyon Trail (Saturday) and Mount Wilson Trail (Sunday) at 9:00 AM.		

A field safety plan serves as a tool to document your hazard assessment, communication plan, emergency procedures, and training. This plan should identify hazards, as well as precautions and actions taken to address and mitigate those hazards. Instructions:

1. Complete this field safety plan: insert specifics for your site and operations, delete irrelevant sections.
2. Complete appropriate training for your site and operations (e.g. first aid, heat illness, task-specific training).
3. Obtain immunizations and prophylaxis for your destination, if applicable (schedule 8 weeks in advance).
4. Hold a pre-trip meeting with your group and/or supervisor to review your field safety plan, travel logistics, pack list (including first aid kit), personal safety and security concerns, and any remaining training needs.
5. Register trips more than 100 miles from campus via [UC Away](#) for travel insurance documentation, location-specific travel alerts via email, and emergency/travel assistance contacts. For international work, the [Worldcue Trip Planner](#) is available to assist with planning logistics, identify local services, and provide precautions regarding local hazards. Click on “location intel” and create a “trip brief.” A mobile Worldcue app is also available after you register a specific trip/destination via UC Away.

Site Information		
<b>Location</b>	<b>Eaton Canyon Falls Latitude:</b> 34.19480 <b>First Water Latitude:</b> 34.18434	<b>Eaton Canyon Falls Longitude:</b> -118.10258 <b>First Water Longitude:</b> -118.04668
<b>Site Information</b>	Dirt trail paths, can be rocky and uneven. Wild plants are on both sides of the path. Mostly open and uncovered, but there are many trees around.	
<b>Travel to Site</b>	Participants will drive from UCR campus on paved city roads to the beginning of trails where vehicles can be parked in residential streets. See attachments for maps and directions to each location from UCR campus.	
<b>Site Access</b>	<ul style="list-style-type: none"> <li>▪ Access to Eaton Canyon Falls is through the Mount Wilson Pinecrest Gate, which is only open between 8:00 AM and 7:30 PM. After 7:30 PM, it is still possible to exit through the gate, but it is no longer possible to enter through the gate.</li> <li>▪ Access to First Water on the Mount Wilson Trail is always open.</li> </ul>	
<b>Environmental Hazards</b>	Pacific Poison Oak, Dwarf Nettle, Great Stinging Nettle, Western Rattlesnakes, Mule Deer, American Black Bears, Bobcats, Coyotes, and Raccoons are native to Eaton Canyon and Mount Wilson. There may also be Wasps, Yellow Jackets, Scorpions, Brown Widows, and Black Widows.	
<b>Security</b>	<ul style="list-style-type: none"> <li>▪ Eaton Canyon is a popular hiking area for families and pets so contact with other people is high, but there is little risk of harassment.</li> <li>▪ Mount Wilson is a more difficult trail with fewer people, but also little risk of harassment.</li> </ul>	
<b>No Go Criteria</b>	Temperatures over 100F, rain due to possible flooding, windstorms, and earthquakes over magnitude 5.0 within the week. For complex trips, consider using the <a href="#">GAR Risk Management Model</a> .	
<b>Expected Weather</b>	Weather is expected to be sunny between with temperatures in the 70s.	
<b>Drinking Water Availability</b>	<input type="checkbox"/> Plumbed water available <input checked="" type="checkbox"/> Water cooler with ice provided <input checked="" type="checkbox"/> Bottled water provided <input type="checkbox"/> Natural source and treatment methods (e.g. filtration, boiling, chemical disinfection): <b>Please note:</b> online heat illness prevention training is available via the <a href="#">UC Learning Center</a> (search using the keyword "heat", course length is 15-20 minutes).	

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<b>Access to Shade/Shelter</b>	If forecast exceeds 80°, shade must be provided by natural or artificial means for rest breaks. <input type="checkbox"/> Building structures <input checked="" type="checkbox"/> Trees <input type="checkbox"/> Temporary Canopy/Tarp <input type="checkbox"/> Vehicle with A/C <input type="checkbox"/> Other:		
<b>High Heat Procedures</b>	Required when temperatures are expected to exceed 95° F: If possible, limit strenuous tasks to morning or late afternoon hours. Rest breaks in shade must be provided at least 10 minutes every 2 hours (or more if needed). Effective means of communication, observation and monitoring for signs of heat illness are required at all times. Pre-work safety discussion required. <input checked="" type="checkbox"/> Direct supervision <input checked="" type="checkbox"/> Buddy system <input type="checkbox"/> Reliable cell or radio contact <input type="checkbox"/> Other:		
<b>Emergency Services and Contact Information</b>			
<b>Local Contact</b>	John Doe (PI on the trip) <b>Phone: 555.123.4567</b>	<b>University Contact</b> Not on trip. Provide a copy of this plan.	Joe Bloggs <b>Phone: 555.987.6543</b> <b>Frequency of check ins:</b> Every hour.
<b>Emergency Medical Services (EMS)</b>	Satellite phone device (Garmin inReach) will be used to contact EMS.		
<b>Nearest Emergency Department (ED)</b>	<b>Closest Medical Facility for Eaton Canyon:</b> Huntington Hospital, 100 W California Blvd, Pasadena, CA 91105; 626.397.5000  <b>Closest Medical Facility for Mount Wilson:</b> Monrovia Memorial Hospital, 323 S Heliotrope Ave, Monrovia, CA 91016; 626.408.9800  See attachments for maps and directions.		
<b>Cell Phone Coverage</b>	<b>Primary Number:</b> <b>Coverage:</b> None. <b>Nearest location with coverage:</b> At the residential areas where the vehicles are parked.	<b>Satellite phone/device</b>	<b>Device carried?</b> <input checked="" type="checkbox"/> yes <input type="checkbox"/> no <b>Type/number:</b> 555.246.8100
<b>Nearby Facilities</b>	<b>Closest Facility to Eaton Canyon Falls:</b> <ul style="list-style-type: none"> <li>▪ ARCO at 1633 N Altadena Drive, Pasadena, CA 91107 (1.4 miles and a 4 minute drive from the Pinecrest Gate).</li> <li>▪ Chevron at 907 E Altadena Drive, Altadena, CA 91001 (1.7 miles and a 4 minute drive from the Pinecrest Gate).</li> </ul> <b>Closest Facility to First Water:</b> <ul style="list-style-type: none"> <li>▪ Sierra Madre Gas Station at 50 S Baldwin Avenue, Sierra Madre, CA 91024 (0.9 miles and a 4 minute drive from the Mount Wilson Trailhead).</li> <li>▪ Arcadia Fire Department Station 107 at 79 W Orange Grove Ave, Arcadia, CA 91006 (1.8 miles and a 6 minute drive from the Mount Wilson Trailhead).</li> </ul>		
<b>Side Trips</b>	No side trips are permitted.		
<b>Participant Information</b>			
<b>Field Team/Participants</b>	Is anyone working alone? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No   If yes, develop a communications plan with strict check-in procedures; if cell coverage is unreliable, carry a satellite communication device or personal locator beacon.  Primary Field Team Leader: John Doe (Principal Investigator) Secondary Field Team Leader: Walter Plinge (Lab Manager) <input checked="" type="checkbox"/> Field Team/Participant list is attached as training documentation <input type="checkbox"/> Other attachment: e.g. course roster		

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<p><b>Physical Demands</b></p>	<p>The hike to Eaton Canyon Falls from the Mount Wilson Pinecrest Gate is at a decline. The path is typically level at the bottom towards the falls, but is also rocky and uneven with tree roots around the path. When the rainfall has been higher in the winter, there can be a resulting river, which is shallow, but will need to be crossed on foot. The water is about thigh-high and the river bed is rocky with boulders. There can be moments with a more vertical step up where participants will need to use their hands to climb and balance. The trail is not a loop and participants will need to hike back the way they came when heading back towards the vehicles, which will mean a steeper incline back towards the Mount Wilson Pinecrest Gate.</p> <p>The hike to First Water has a steep incline for much of the trail. The path is uneven with rocks, branches, and plants. The path can be narrow at times. The path declines a little bit to falls and stream of First Water. Participants will walk back to the vehicles the same way they came so there will be an incline away from the falls and a decline back to the vehicles.</p>
<p><b>Mental Demands</b></p>	<p>There are no mental demands outside of what would normally be experienced working outside on campus. The trips only last one typical work-day each.</p>
<p><b>First Aid Training &amp; Supplies</b></p>	<p>Cal/OSHA requires at least one trained person (with current certification) for work at remote sites. CPR also recommended.</p> <p>John Doe and Walter Plinge both were trained in Wilderness First Aid, CPR-AED, and EpiPens by Sierra Rescue.</p> <p>Location and description of group medical/first aid kit: John Doe carries the first aid kit. There is also a second first aid kit in the vehicle.</p> <p>First Aid Kit EpiPen (in accordance with AB 1386 is available in case of an allergic reaction to stinging insects.</p>
<p><b>Immunizations or Medical Evaluation</b></p>	<p>There are no special immunization or medical evaluation requirements for these trips.</p>

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Equipment and Activities – Consult with EH&S for specific training and requirements.			
<b>Research Activities</b>	<p>On this trip, the group will collect water samples from the waterfalls and streams of these two locations at the San Gabriel Mountains. These samples will be taken by filling ten pre-labelled 50 ml Falcon tubes at each sampling location (at the base of the waterfalls and further down the stream). The Falcon tubes will be sealed in zip-lock bags and carried back to the vehicles in backpacks. Participants will need to hike trails and enter bodies of water. These samples will be taken back to UCR campus labs for mineral analysis. The purpose is to analyze the content of magnesium and calcium as closely to the base of the waterfall as possible, and further down the stream to compare how quickly minerals can be taken up into the water from the surrounding rocks. This data will also be compared year after year to determine if different amounts of rainfall affect the mineral content of the water.</p> <p>See attached procedure for more information.</p>		
<b>Field Transportation</b>	Two UCR Fleet vehicles are used to travel to the sites. Vehicles will only be driven on paved roads.		
<b>Specialized Vehicles</b>	<table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">N/A.</td> <td style="width: 50%;"><b>Vehicle Training:</b> N/A</td> </tr> </table>	N/A.	<b>Vehicle Training:</b> N/A
N/A.	<b>Vehicle Training:</b> N/A		
<b>Research Tools</b>	50 ml Falcon tubes will be used to collect water samples from the falls and streams of both areas. These tubes will then be packed into zip-lock bags and carried back to the vehicles in backpacks. There is no training required for using this equipment.		
<b>Other Research Hazards</b>	<p>There is minimal climbing up a few rocks during the hike, and participants will need to cross a flowing river over different sized boulders so participants need to be sure of footing before taking another step. Collecting samples as closely to the base of the waterfall as possible requires participants to approach the waterfall. Although the waterfalls at both of these locations are smaller, during years of heavy rain, the flow becomes stronger and participants should be careful not to be pulled under by the force of the waterfall by going no closer to the falls than hip-deep in the water and being sure of footing. The work does not involve handling animals, but the areas have wildlife and people bring dogs on the hiking trails. There are no identified high-risk biological pathogens in the area, but participants should be careful and sanitize hands when eating or drinking after collecting water samples in case the water at the falls and streams are contaminated.</p>		
<b>Personal Protective Equipment</b>	<p><b>Required:</b> comfortable, closed-toed and closed-heeled shoes for hiking that have been broken-in, light and appropriate clothing for hiking that will not become water-logged when wet, change dry of clothing and dry shoes.</p> <p><b>Recommended:</b> long pants, hat, sunscreen, insect repellent.</p>		
Additional Considerations			
<b>Insurance</b>	Review the University Auto Insurance Policy (Please note, coverage differs for paid staff versus students)		
<b>International Activities</b>	Check with the Global Engagement Office (GEO) regarding required approvals. Visas, permits, finances, import/export controls, transportation of specialized equipment, and data security must be considered. See UC Global Operations ( <a href="http://ucgo.org">ucgo.org</a> ) or contact the Office of Legal Affairs or Research Administration & Compliance for further guidance		
<b>Personal Safety &amp; Security</b>	<p>Personal safety risks during free time should be considered and discussed in advance, e.g., alcohol or drug use, leaving the group, situational awareness, sexual harassment, or local crime/security concerns. Review expectations and set the tone for a safe, successful trip.</p> <p><b>High Risk Travel: UC Support Services</b></p> <p>Check the <a href="https://travel.state.gov">U.S. State Department</a> travel site for current travel alerts and you may use the <a href="#">Worldcue Trip Planner</a> 'Location Intel' tab to generate a security brief for your destination. UC also offers pre-travel security risk planning, in-country security risk assessments, and contingency planning for those traveling to high risk destinations. As soon as you know you will be travelling to a high risk area, contact Risk Services to arrange assistance.</p>		

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Campus Contacts	
<b>UCPD</b>	951.827.5552
<b>University Health Services</b>	www.ehs.ucr.edu <b>Faculty/Staff:</b> 951.222.2206 (Occupational Health) <b>Students:</b> 951.827.3031 (Campus Health Centre), 951.788.3000 (Riverside Community Hospital)
<b>EH&amp;S</b>	951.827.5528
<b>UC Travel Emergency Assistance</b>	951.827.5528 Campus Risk Services 800.527.0218 United Healthcare/UC Travel Insurance 410.453.6330 Outside the U.S. or via email assistance@uhcglobal.com.
<b>Report Injuries</b>	Call EH&S at 951.827.5528 and use the Employer’s Report of Injury. Report online at <a href="https://ehs.ucr.edu/report">https://ehs.ucr.edu/report</a>

First Aid Reference – Signs & Symptoms of Heat Illness		
Signs & Symptoms	Treatment	Response Action:
<b>HEAT EXHAUSTION</b> <ul style="list-style-type: none"> <li>• Dizziness, headache</li> <li>• Rapid heart rate</li> <li>• Pale, cool, clammy or flushed skin</li> <li>• Nausea and/or vomiting</li> <li>• Fatigue, thirst, muscle cramps</li> </ul>	<ol style="list-style-type: none"> <li>1. Stop all exertion.</li> <li>2. Move to a cool shaded place.</li> <li>3. Hydrate with cool water.</li> </ol>	Heat exhaustion is the most common type of heat illness. Initiate treatment. If no improvement, call 911 and seek medical help. Do not return to work in the sun. Heat exhaustion can progress to heat stroke.
<b>HEAT STROKE</b> <ul style="list-style-type: none"> <li>• Disoriented, irritable, combative, unconscious</li> <li>• Hallucinations, seizures, poor balance</li> <li>• Rapid heart rate</li> <li>• Hot, dry and red skin</li> <li>• Fever, body temperature above 104 °F</li> </ul>	<ol style="list-style-type: none"> <li>1. Move (gently) to a cooler spot in shade.</li> <li>2. Loosen clothing and spray clothes and exposed skin with water and fan.</li> <li>3. Cool by placing ice or cold packs along neck, chest, armpits and groin (Do not place ice directly on skin)</li> </ol>	<p><b>Call 911 or seek medical help immediately.</b></p> <p><b>Heat stroke is a life threatening medical emergency. A victim can die within minutes if not properly treated. Efforts to reduce body temperature must begin immediately!</b></p>

**Include any additional resources: route/location maps, photos of general terrain and areas requiring extra caution, etc.**

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**Signature of PI/Supervisor:**

I acknowledge this safety plan has been prepared for field work under my supervision.

Name	Signature	Date	Phone Number
John Doe		05.04.2023	555.626.8400

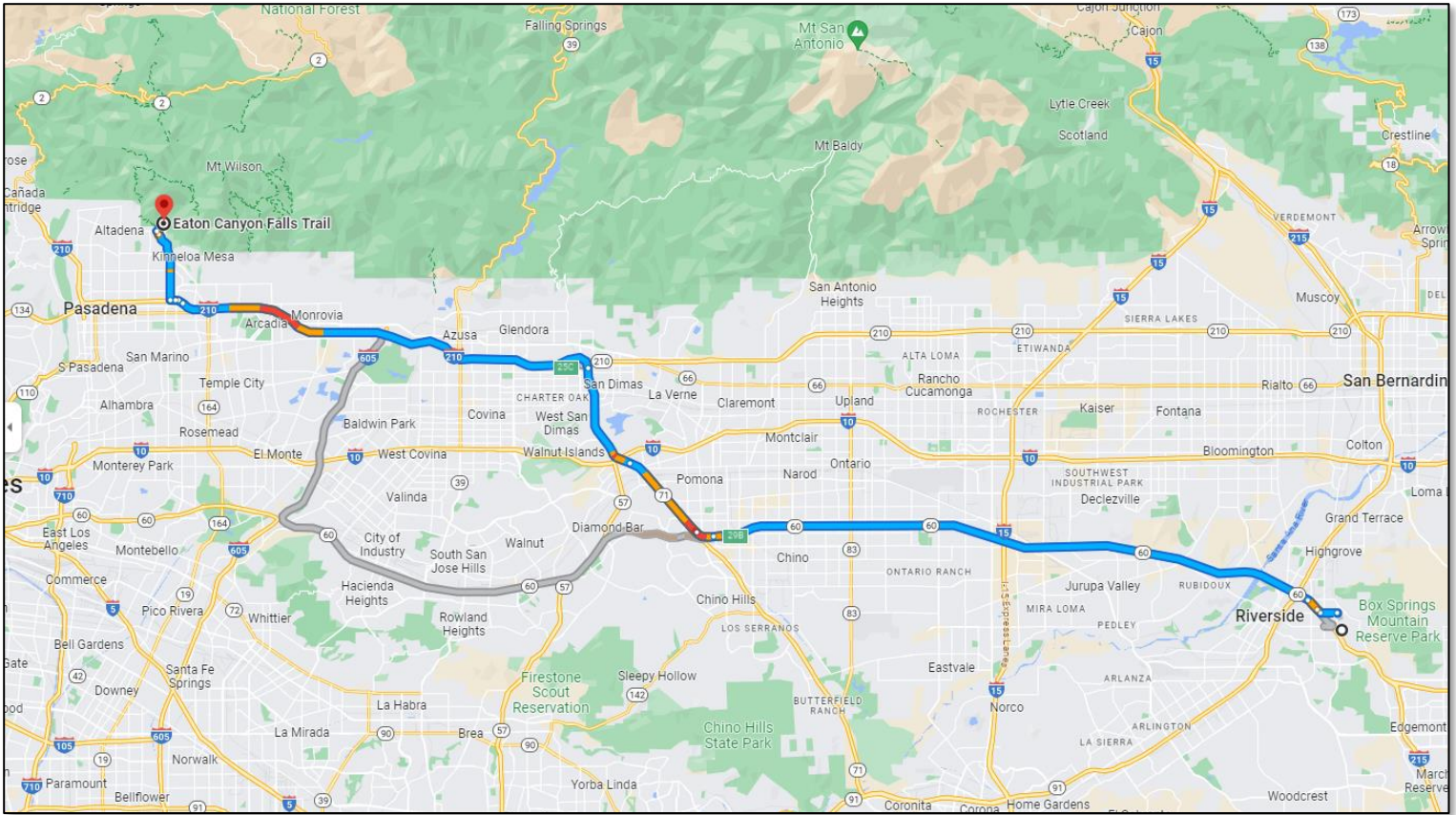
**Field Team/Participant Roster - Training Documentation**

I verify that I have read this Field Safety Plan, understand its contents, and agree to comply with its requirements.

Name/Phone Number	Signature	Date	Emergency Contact/Phone Number
Walter Plinge			555.135.7911
Mary Major			555.917.9934
Chan Tai Man			555.256.7764
Juan dela Cruz			555.946.3455
Mario Rossi			555.255.5931
Anna Kowalska			555.951.8275

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## DIRECTIONS FROM UCR TO EATON CANYON (PINECREST GATE)

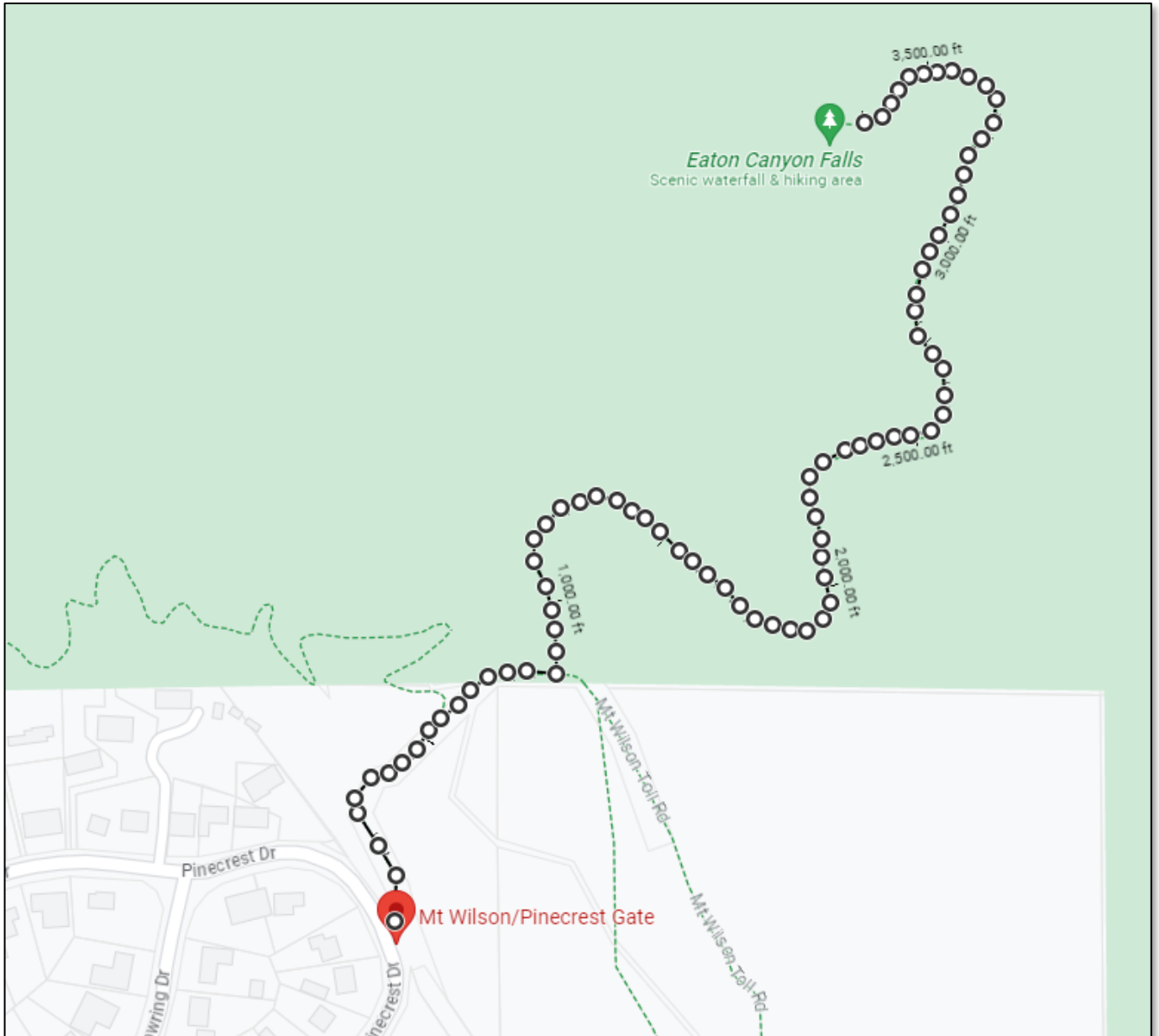


### Total 52.6 Miles

1. Take the CA-60 W / I-215 N
2. Keep left to continue on CA-60 W
3. Take exit 29B for CA-71 N towards Pomona
4. Use left two lanes to take the CA-57 N
5. Use left 3 lanes to take exit 25C to merge onto I-210 W / Foothill Fwy towards Pasadena
6. Take exit 29A towards Sierra Madre Bl / San Marino
7. Merge onto Maple St
8. Turn right onto N Altadena Dr
9. Turn right onto Crescent Dr
10. Sharp right onto Pinecrest Dr

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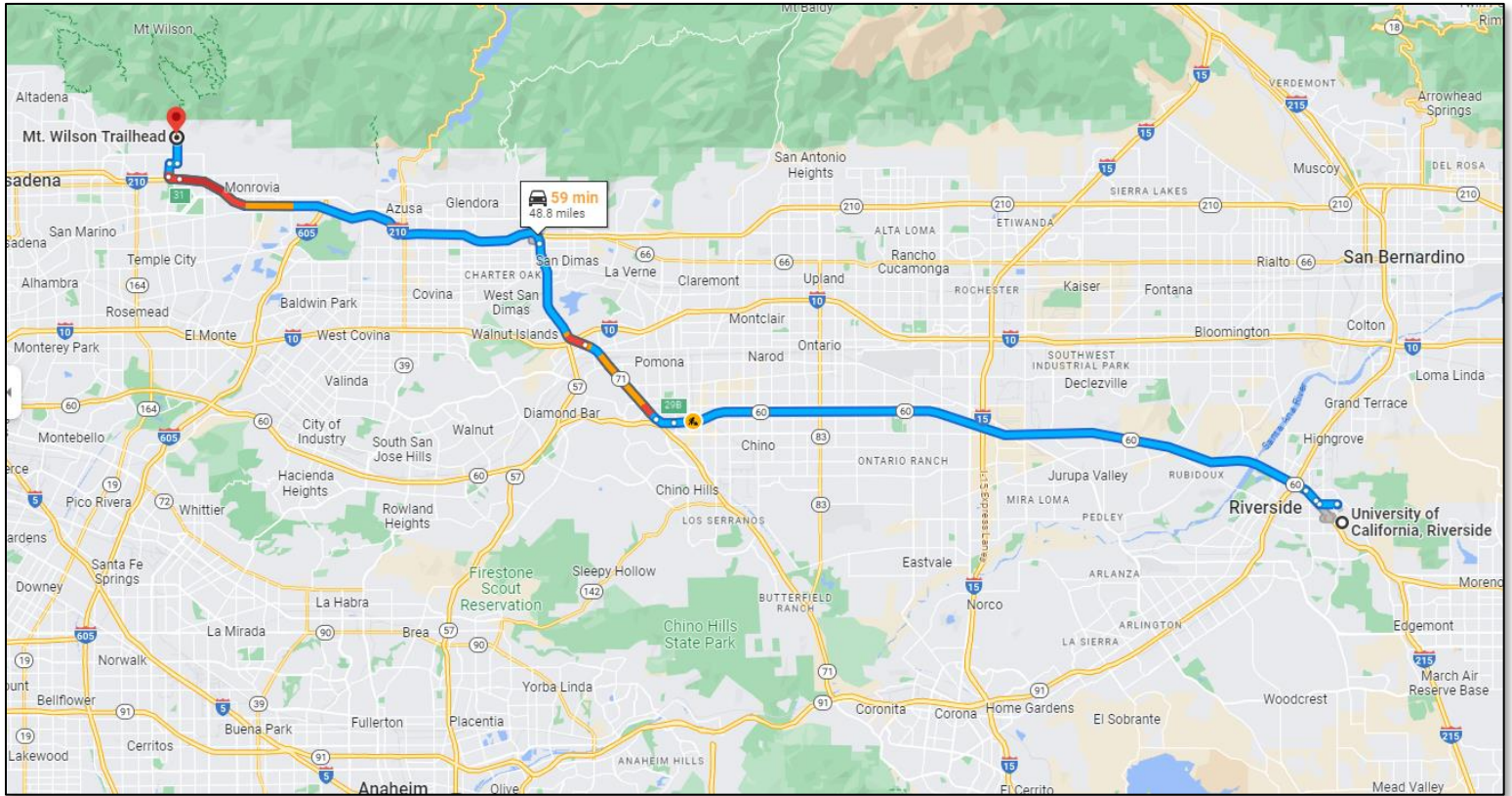
## MAP OF WALK FROM PINECREST GATE TO EATON CANYON FALLS





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## DIRECTIONS TO MOUNT WILSON TRAIL HEAD

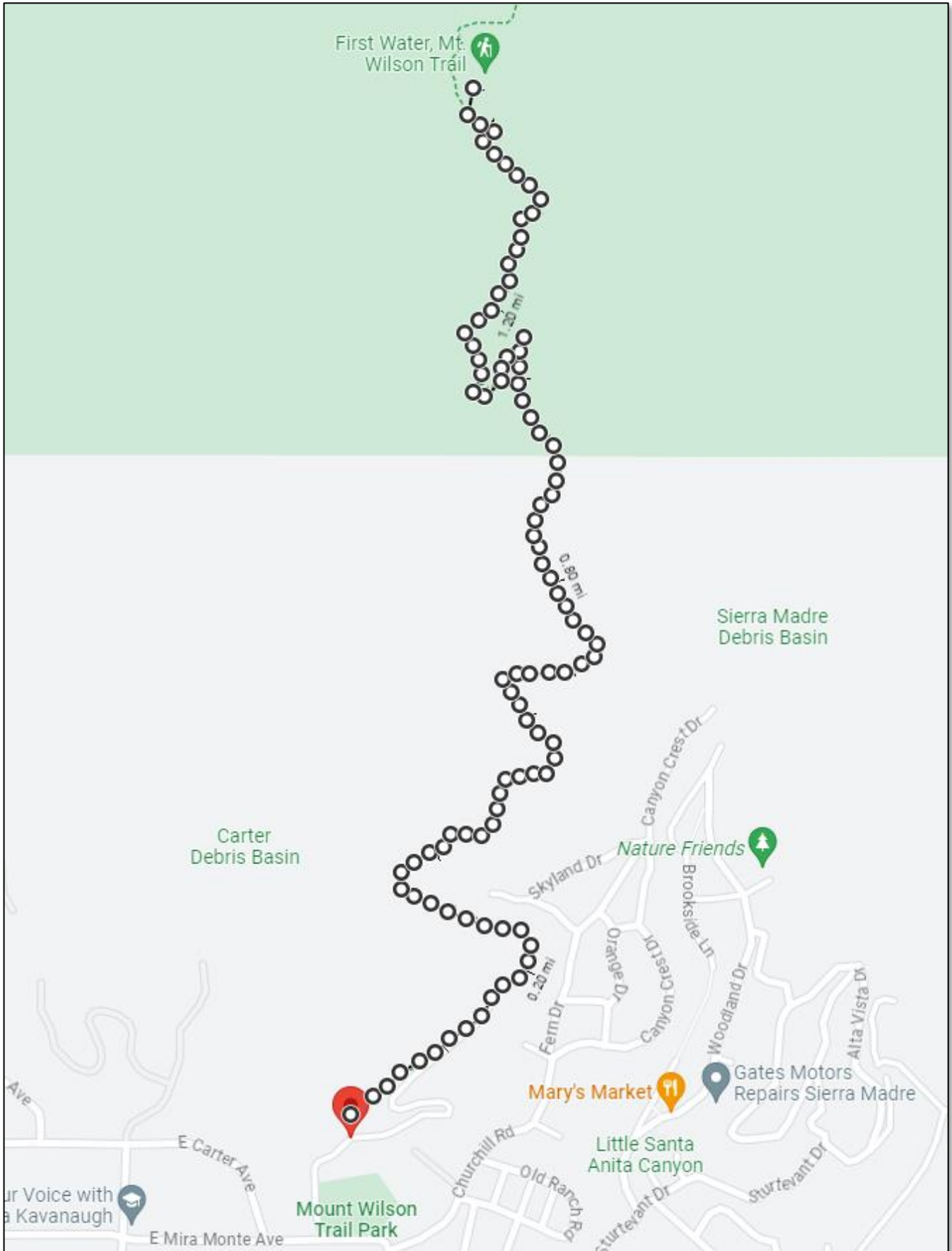


### Total 48.8 Miles

1. Take the CA-60 W / I-215 N
2. Keep left to continue on CA-60 W
3. Take exit 29B for CA-71 N towards Pomona
4. Use left two lanes to take the CA-57 N
5. Use left 3 lanes to take exit 25C to merge onto I-210 W / Foothill Fwy towards Pasadena
6. Take exit 31 for Baldwin Ave toward Sierra Madre
7. Turn right onto W Orange Grove Ave
8. Turn left onto S Mountain Trail Ave
9. Continue onto E Mira Monte Ave
10. Turn right onto Mt Wilson Trail

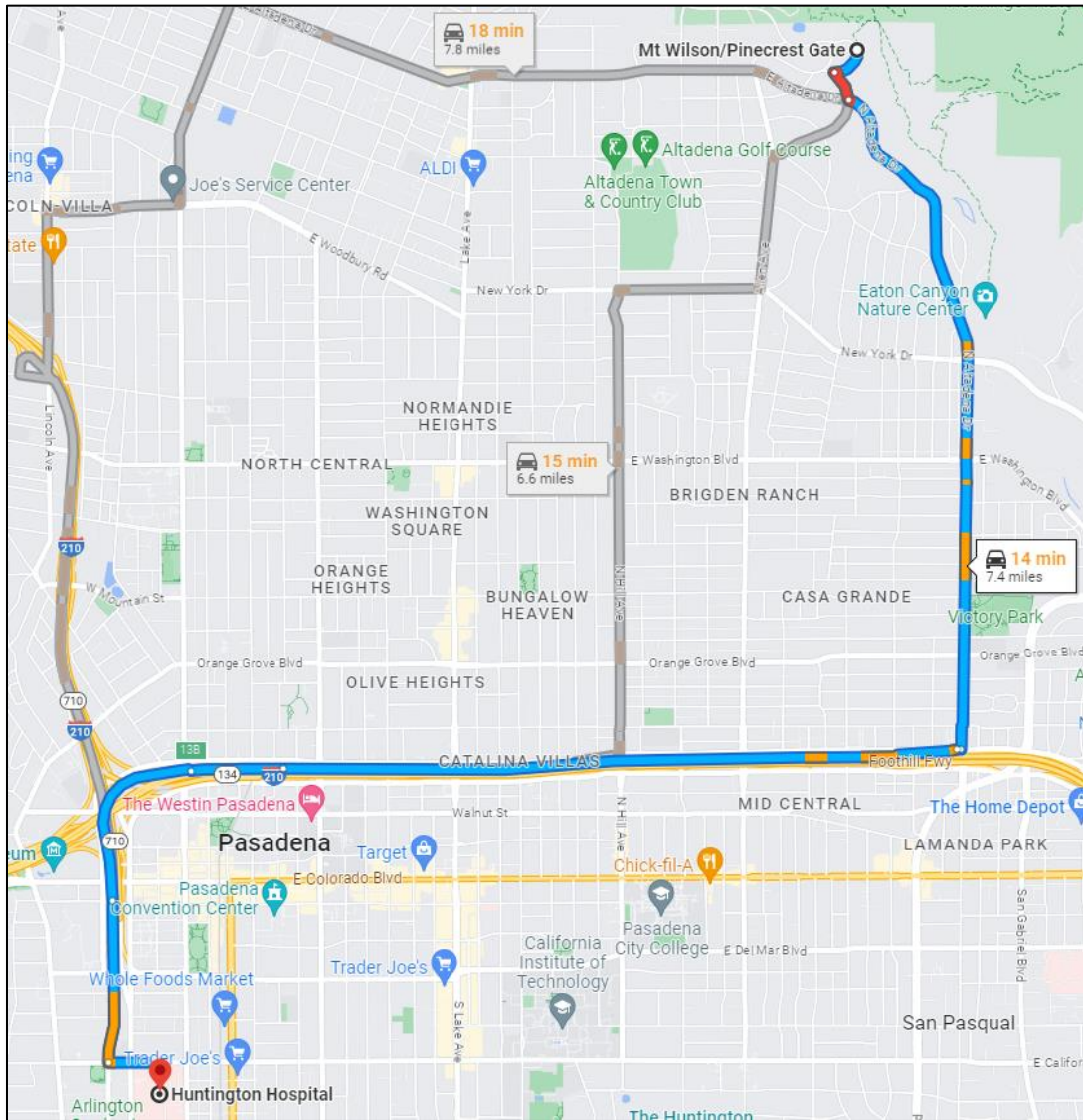
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MAP OF WALK FROM MOUNT WILSON TRAIL HEAD TO FIRST WATER



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## DIRECTIONS FROM EATON CANYON (PINECREST GATE) TO HUNTINGTON HOSPITAL

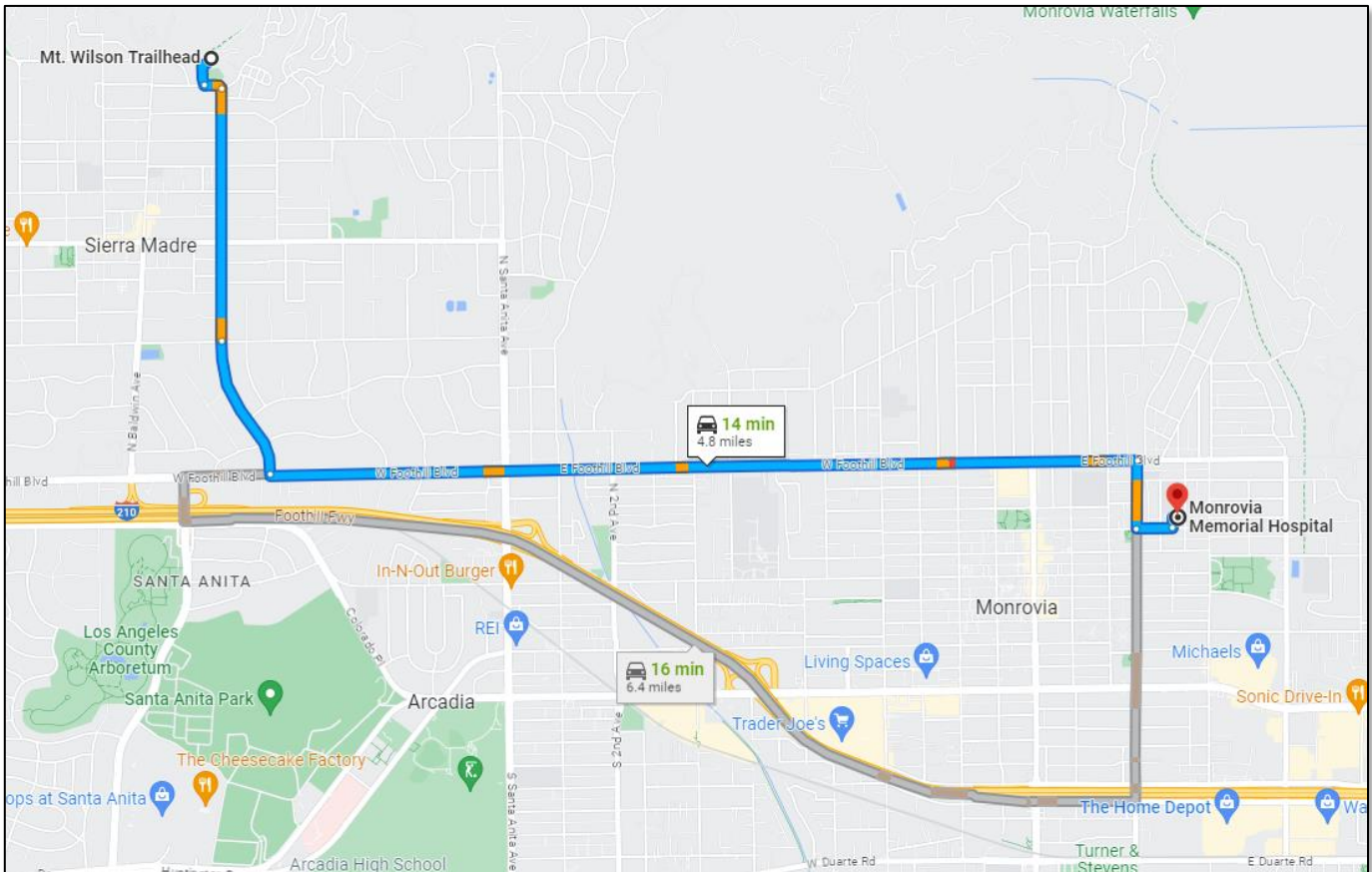


### Total 7.4 Miles

1. Head south on Pinecrest Dr toward Crescent Dr
2. Sharp left onto Crescent Dr
3. Turn left at first cross street onto N Altadena Dr
4. Turn right onto E Maple St
5. Use left two lanes to take the ramp onto I-210 W
6. Continue onto CA-134 E
7. Take exit 13B toward CA-110 / Del Mar Blvd / California Blvd
8. Merge onto CA-710 / Long Beach Fwy
9. Turn left onto W California Blvd (destination on right)

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## DIRECTIONS FROM MOUNT WILSON TRAIL HEAD TO MONROVIA MEMORIAL HOSPITAL



### Total 4.8 Miles

1. Head southwest on Mt Wilson Trail toward E Mira Monte Ave
2. Turn left onto E Mira Monte Ave
3. Continue onto N Mountain Trail
4. Continue onto San Carlos Rd
5. Turn Left onto W Foothill Blvd
6. Turn right onto California Ave
7. Turn left onto E Lime Ave
8. Turn left (destination on right)

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### Procedure:

1. Prior to the trip, all 50 ml Falcon tubes and zip-lock bags should be labelled and ready so that participants are not labelling tubes or bags at the field site.
2. Participants assemble at UCR where a roster and headcount is checked. Everyone will be assigned into pairs or a group of three to enable a buddy system during the trip.
3. Participants will be assigned to the vehicles and be in the same vehicles as their buddy or buddies. The same groupings will be used for the drive back to campus after the trip.
4. Participants drive to the location and park the vehicle in the residential area near the trail head or gate.
5. Participants hike, keeping in mind the buddy system, to the waterfall. Nothing should be carried in participants' hands during the hike to the sample site to keep hands free for a safe hike.
6. When entering the bodies of water to collect samples, especially at the waterfall base, the person's buddy or buddies should be notified and all buddies involved will keep an eye out in case of an incident, such as a slip or fall.
7. Fill the Falcon tubes, cap the tubes, and keep in zip-lock bags. Put zip-lock bags in backpacks. Nothing should be carried in participants' hands during the hike back to the vehicles to keep hands free for a safe hike back.
8. Before hiking back to the vehicles, a roster and headcount should be checked with the buddy system in place.
9. Participants may change into dry clothes at the vehicles if desired. Before driving back to campus, another roster and headcount should be checked.
10. Participants will drive in vehicles in the same groupings they were assigned when driving to the field site.

### Incident Procedure:

1. If there is an incident, determine if Emergency Medical Services needs to be contacted.
2. If there is a non-emergency injury, treat the injury with first aid. Determine if the injured party needs to go to the Emergency Room (ER).
3. Document the scene, preferably with photographs.
4. If the injured party needs to go to the ER, there should be at least three people going with them: the injured person, 1 person to drive, 1 person to assist the driver and injured person, and their respective buddies. If their buddies are unable to accompany them, the people going to the ER can be a new buddy group and the remaining people at the field site can be re-arranged in terms of buddy assignment.
5. No group should be left without supervision of either the PI or the Teaching Assistant in either going to the ER or remaining at the field site. In the worst-case scenario, it would be best for the entire field trip group to go to the ER as it is in an area with access to shade, water, food, restrooms, communication, transportation, and medical assistance.
6. Upon returning to home or campus, complete an incident report on the EH&S website at <https://ehs.ucr.edu/report>