

8.0 APPENDIX A: COMMUNITY PROFILES FOR LANE, DOUGLAS AND COOS COUNTIES

Appendix A includes additional summary information specific to each community. These data include the effects of both the earthquake and accompanying tsunami (M1, L1, and XXL1) that can inform preparation, recovery, and mitigation planning.

- A) Area analyzed:** We summarized data when possible within the community's designated urban growth boundary (UGB). Planners consider the UGB as a more inclusive and useful aggregation unit compared to city limits. However, some data are available only at the city limits level, specifically the most current population estimates and U.S. Census Bureau American Community Survey data. For unincorporated communities, we used a geospatial layer of unincorporated community boundaries compiled by the Department of Land Conservation and Development (DLCD). The summary community profile maps highlight several datasets, including the boundary used for analysis (UGB, city limits, or DLCD outline depending on data availability), building placements and tsunami zone. In addition, the maps include the results of the evacuation modeling (path distances) based on a 1.2 mps (4 fps; walk) evacuation speed (with 10-minute delay) out of the inundation zone. We distinguish the chance of successful evacuation (green lines) versus increased likelihood of fatality (red lines). In all cases, the likelihood of successful evacuation improves significantly if individuals increase their evacuation speed or leave sooner.
- B) Population demographics:** These data reflect the permanent (resident) population within each respective tsunami zone (M1, L1, and XXL1), expressed as absolute numbers and as a percentage of the total community population. A conservative estimate of the number of temporary visitors is also presented, assuming 100% occupancy of vacation homes, hotel/motels, and camping areas. Additional demographic information of the permanent population distinguishes those <65 years and those over 65 years of age.
- C) Distance to safety:** Distance to safety plots show the number of permanent and temporary residents as a function of distance to safety. The closer a person is to safety (i.e., right side of the figure) the greater the chance of successful evacuation. The distance to safety figure includes a 1.2 mps (4 fps) threshold line (vertical dash black line). Left of this line, the model assumes people will not be able to evacuate out of the inundation zone in time, while those to the right have a greater chance of surviving. We also include a two-standard-deviation gray dash line that highlights uncertainty in the 1.2 mps (4 fps) threshold, which is a function of the wave arrival time and uncertainty in peoples' travel speed. Finally, we include a cumulative percent curve to further define the proportion of people relative to safety in the community.
- D) Distance to safety and building type:** This figure is similar to C), with the exception that it now defines the tendency of people (permanent and temporary) to be in particular building types. Here we distinguish between the following building types: single-family residential, manufactured housing, multifamily residential, hotel/motel, and mobile (e.g., tent, RV, etc.). These data define where people tend to be predominantly located. For example, many coastal hotel/motels tend to be located close to the ocean and are mostly used by visitors.
- E) Building losses:** The effects of a M_w 9.0 Cascadia Subduction Zone earthquake and accompanying tsunami (M1, L1, and XXL1) in terms of economic losses and debris generated are included in this figure. For each tsunami zone, we define the number of buildings in the zone and the building replacement cost. Earthquake losses are defined for the tsunami zone and as a total for the entire community. These data are then combined with the tsunami losses calculated by Hazus. Finally,

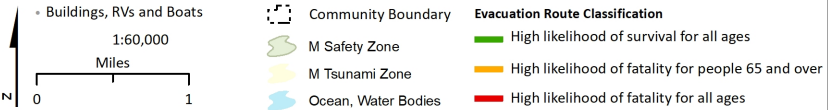
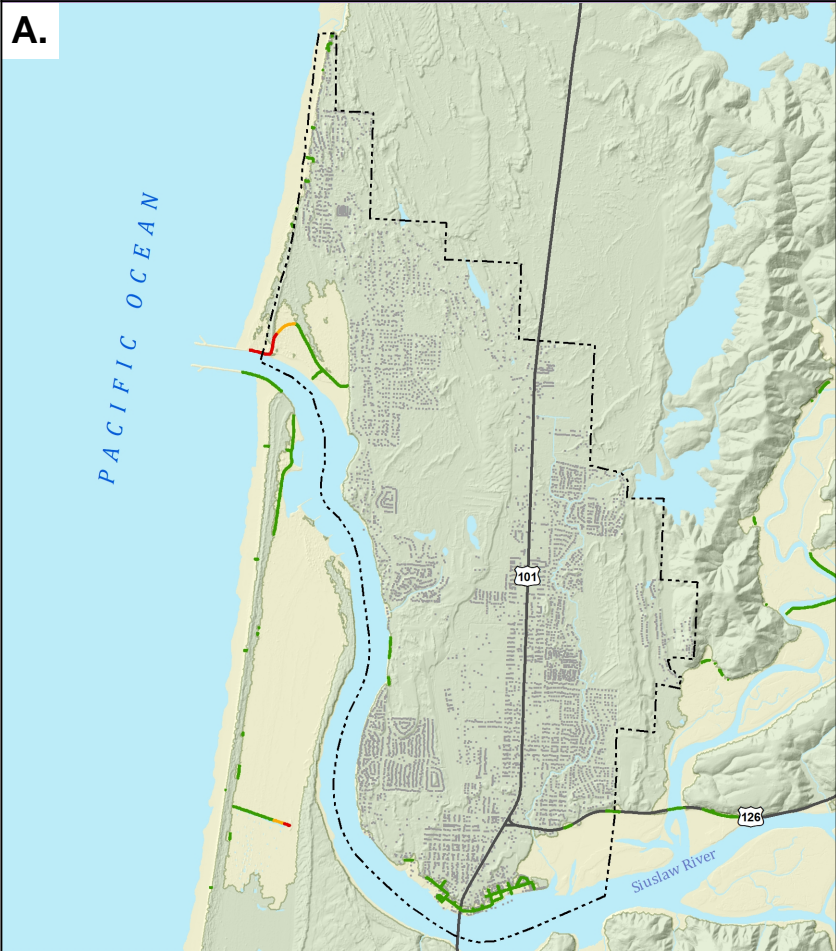
the weight of debris generated by the tsunami is also presented. As a reminder, these data do not include the weight of content in buildings and therefore reflect a minimum value.

- F) Fatalities and displaced population:** To standardize tsunami injury and fatality estimation across all communities, we assume the entire population, as a group, evacuates at 4 fps (2.7 mph), which is regarded as a moderate walk. In all cases, we factor in a 10-minute evacuation delay prior to getting underway that accounts for ~3 minutes of expected earthquake shaking and up to 7 minutes for people to organize themselves, leave the building, and begin to evacuate. For each community, we provide graphical representations of the modeled fatalities, for both permanent and temporary residents. For the temporary population we assume 10%, 50%, and 100% occupancy estimates. The displaced population is defined as the difference between the local (permanent) population and the fatalities (for permanent and temporary). Planners can apply their own judgment as to the occupancy levels associated with the temporary visitors and adjust downward from the 100% occupancy estimate.

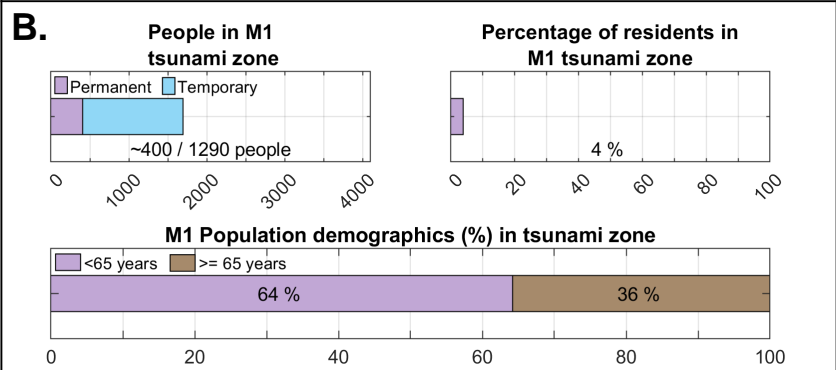
Florence - M1

Casualty estimates assume a MODERATE WALK travel speed (4 ft per second)

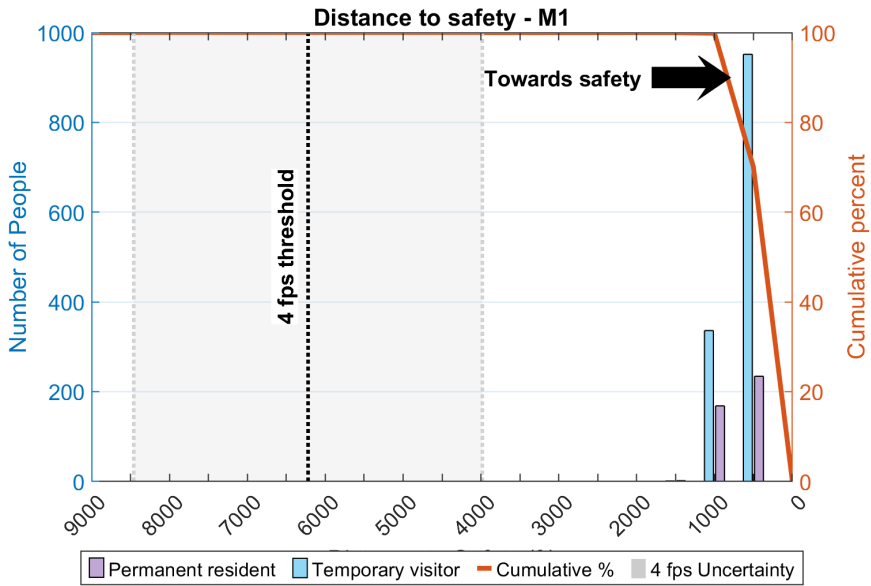
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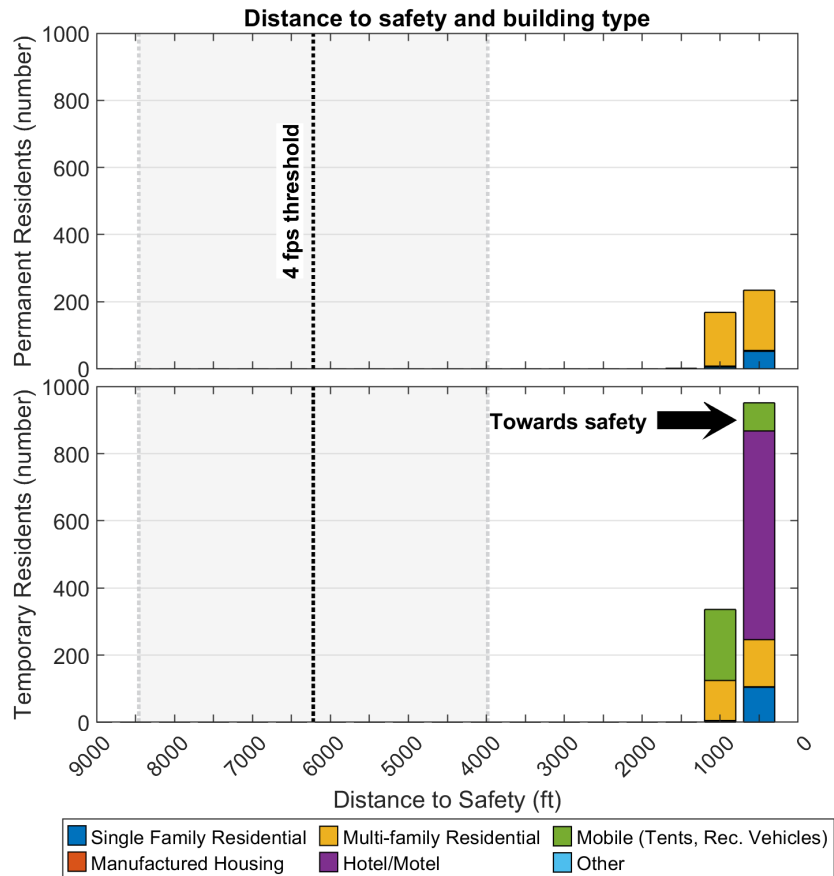
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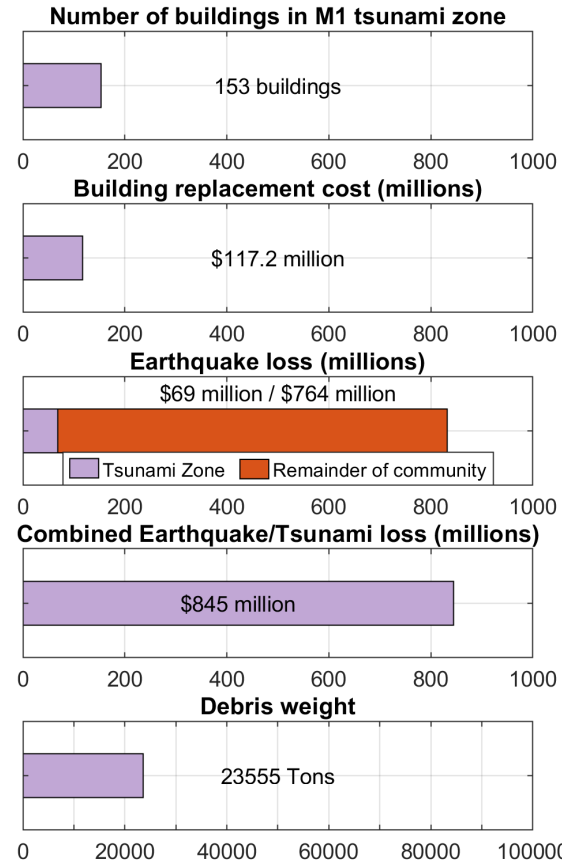
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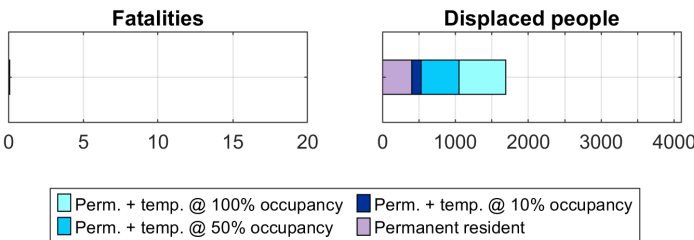
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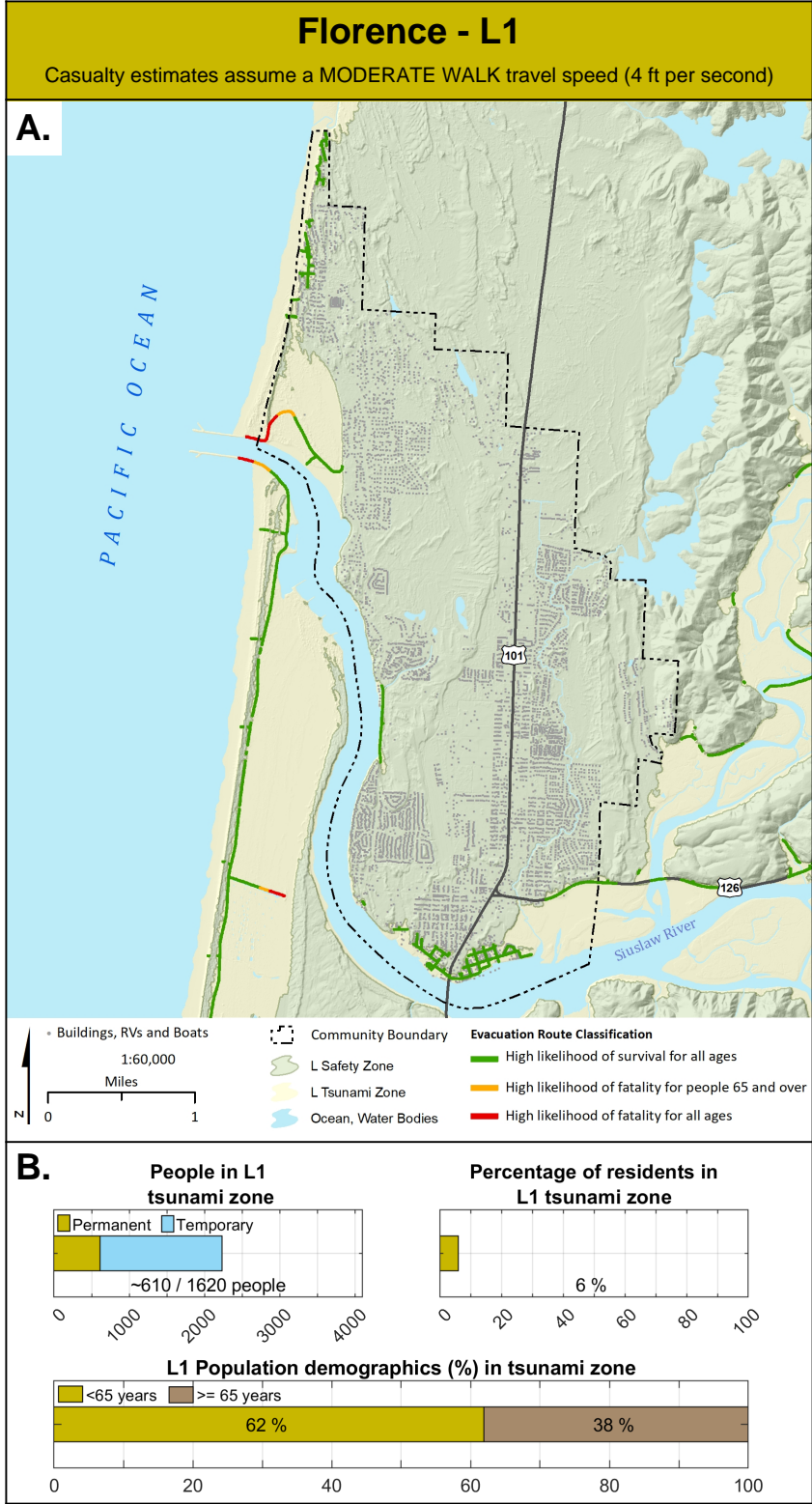
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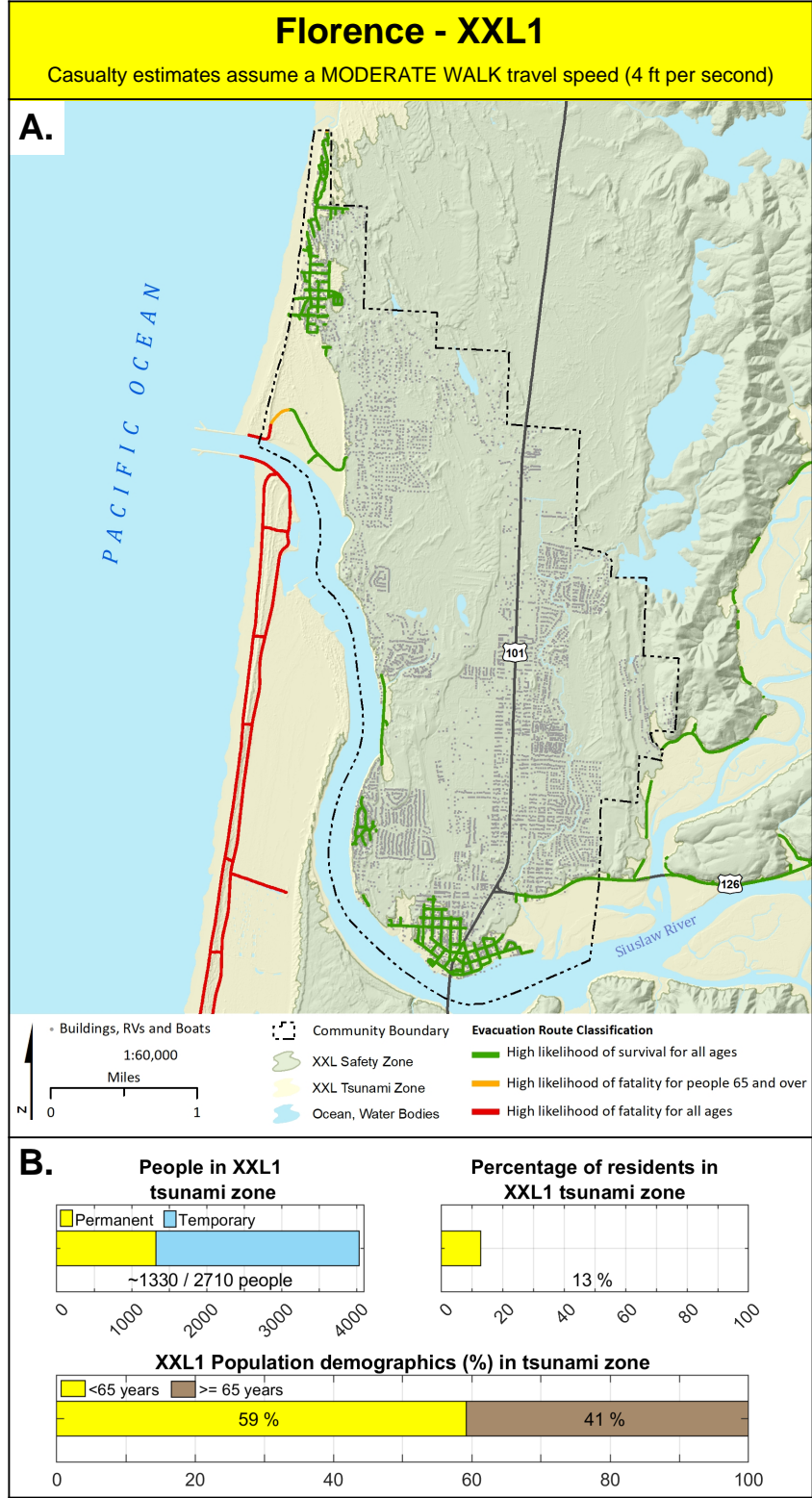


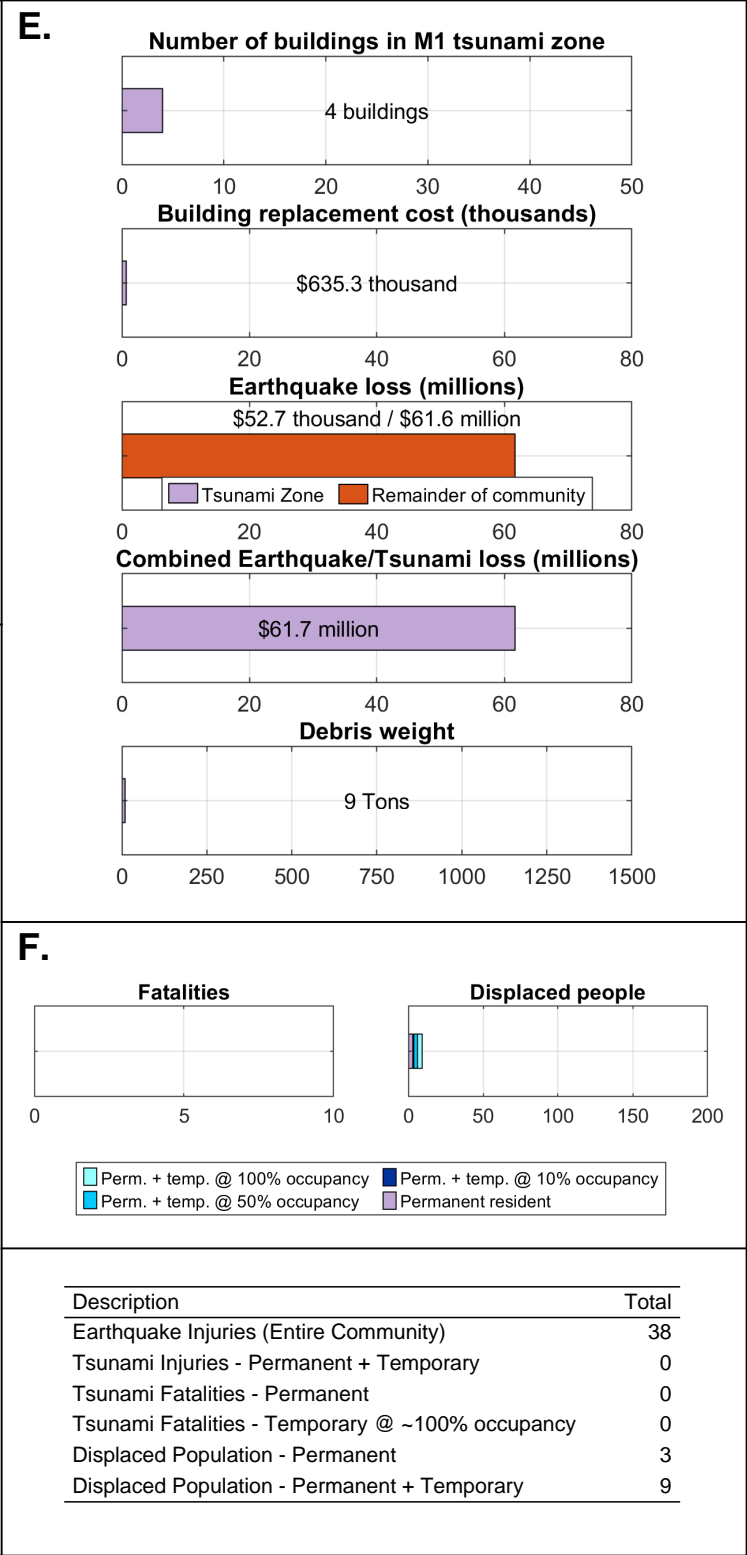
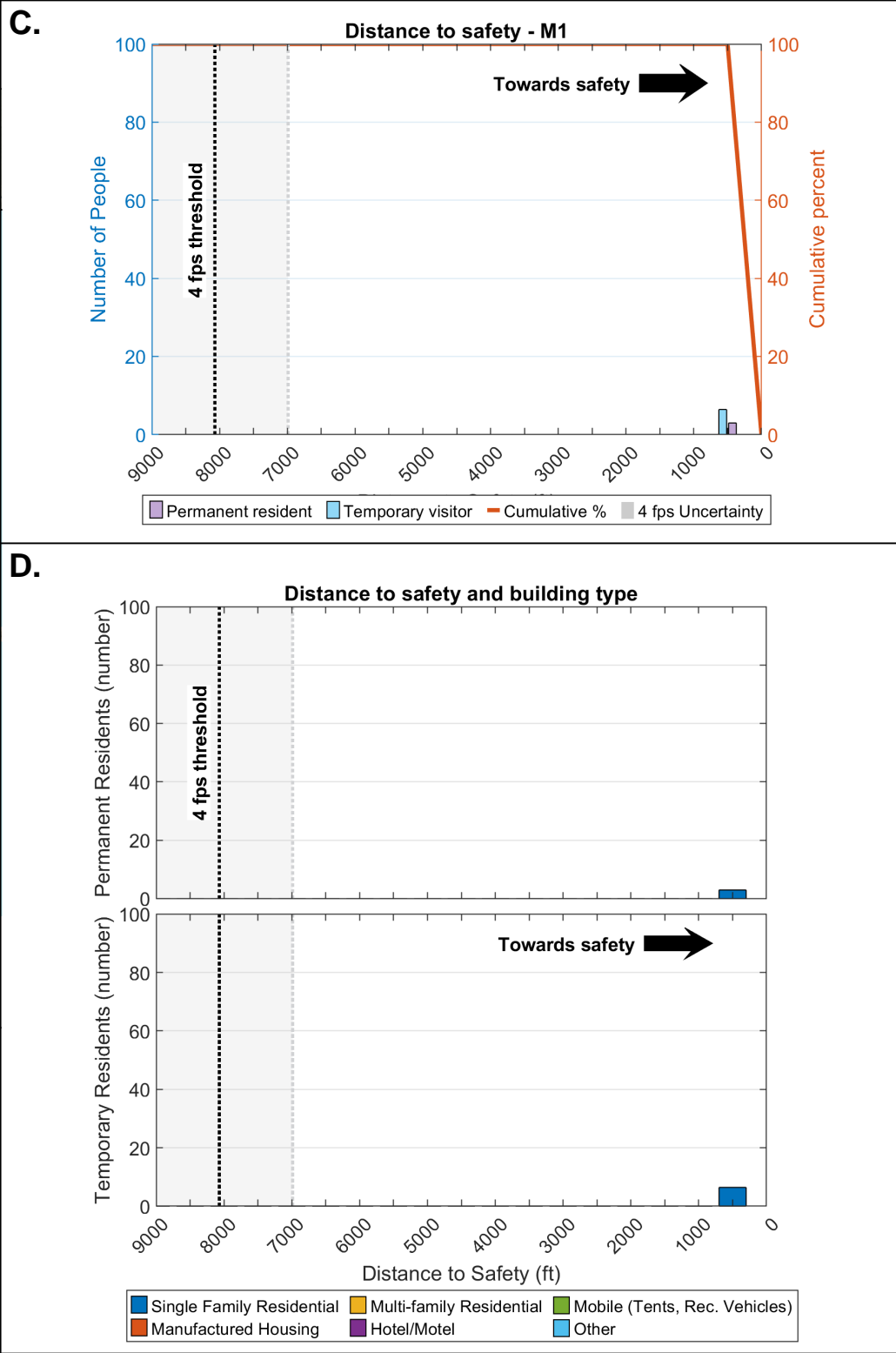
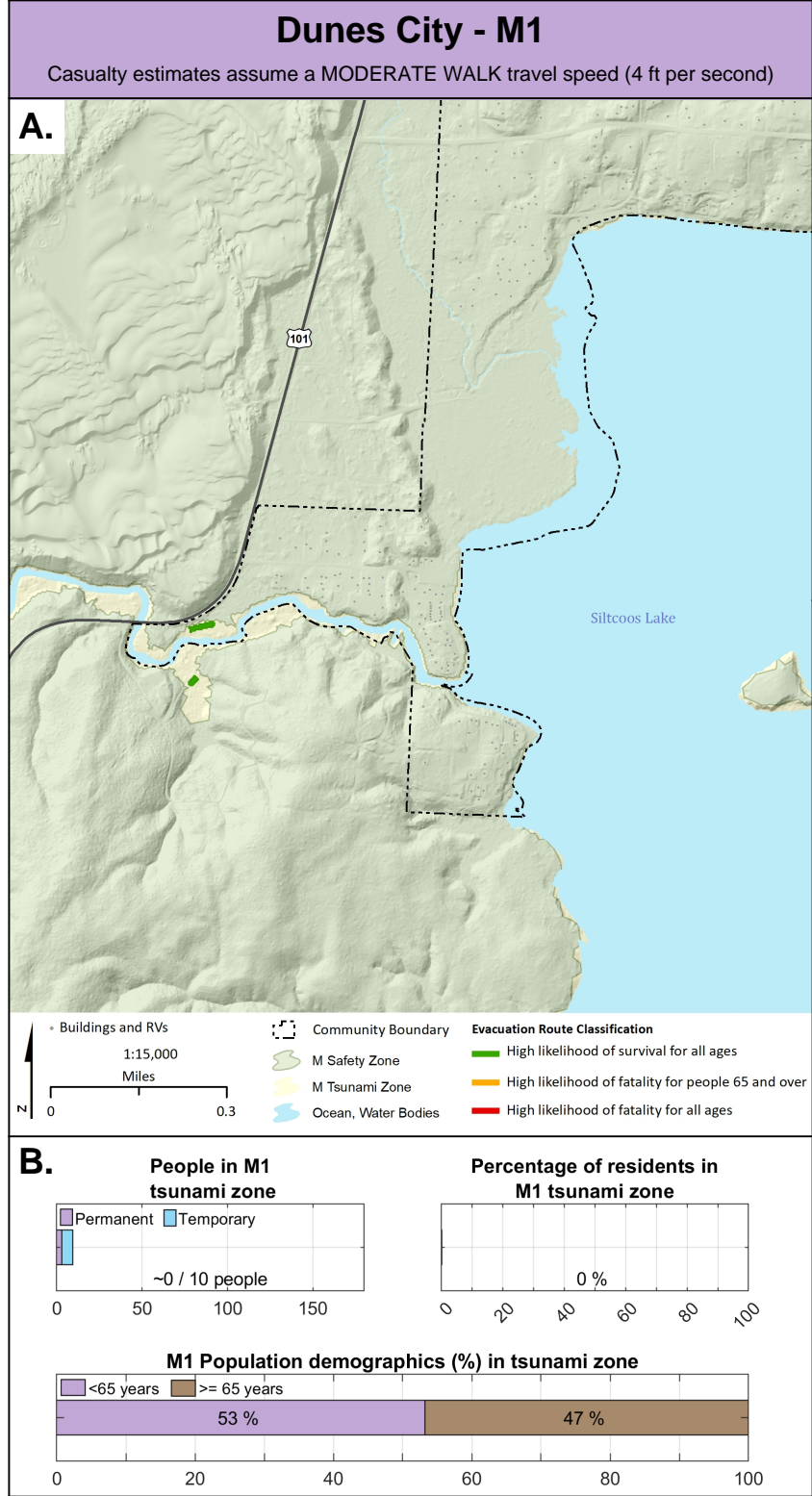
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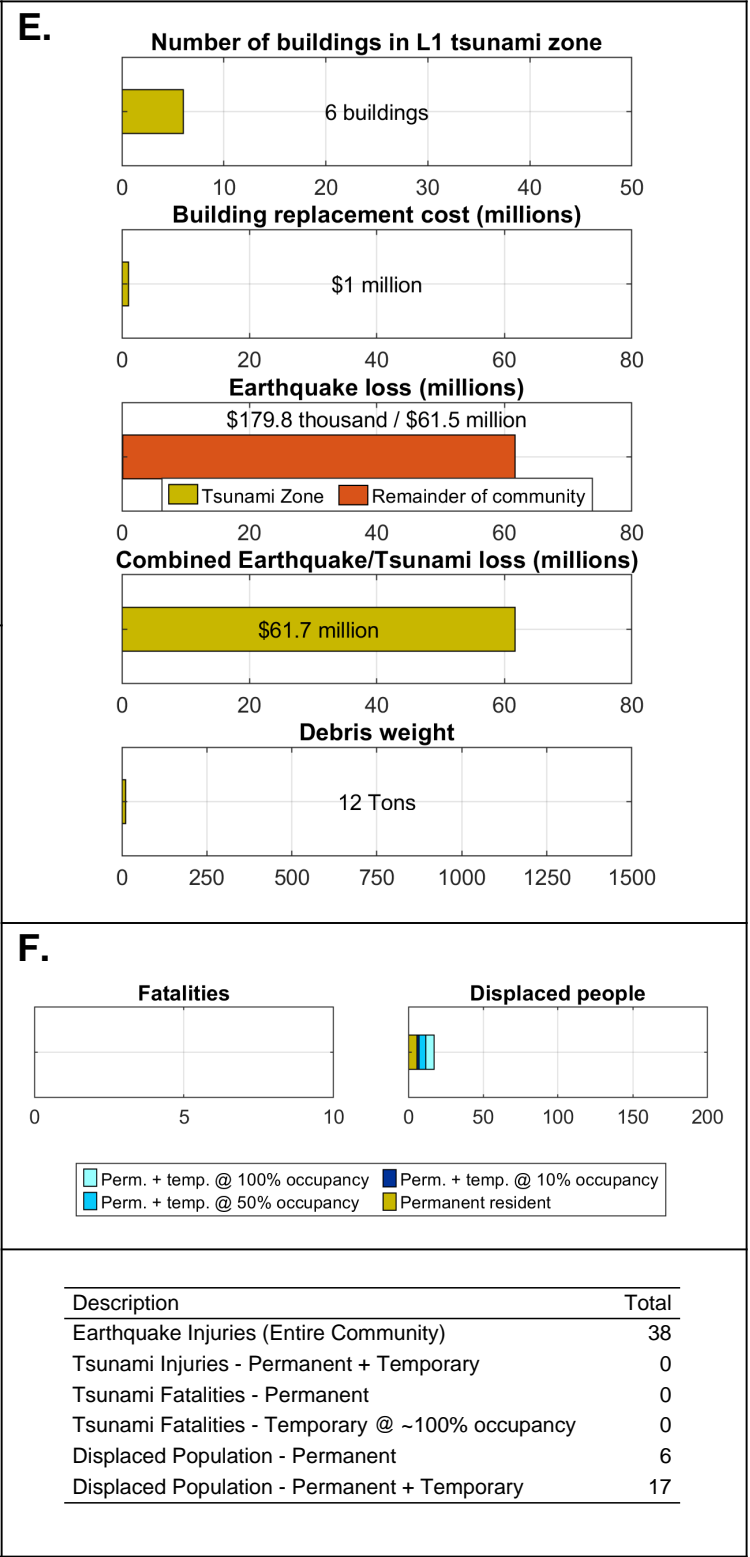
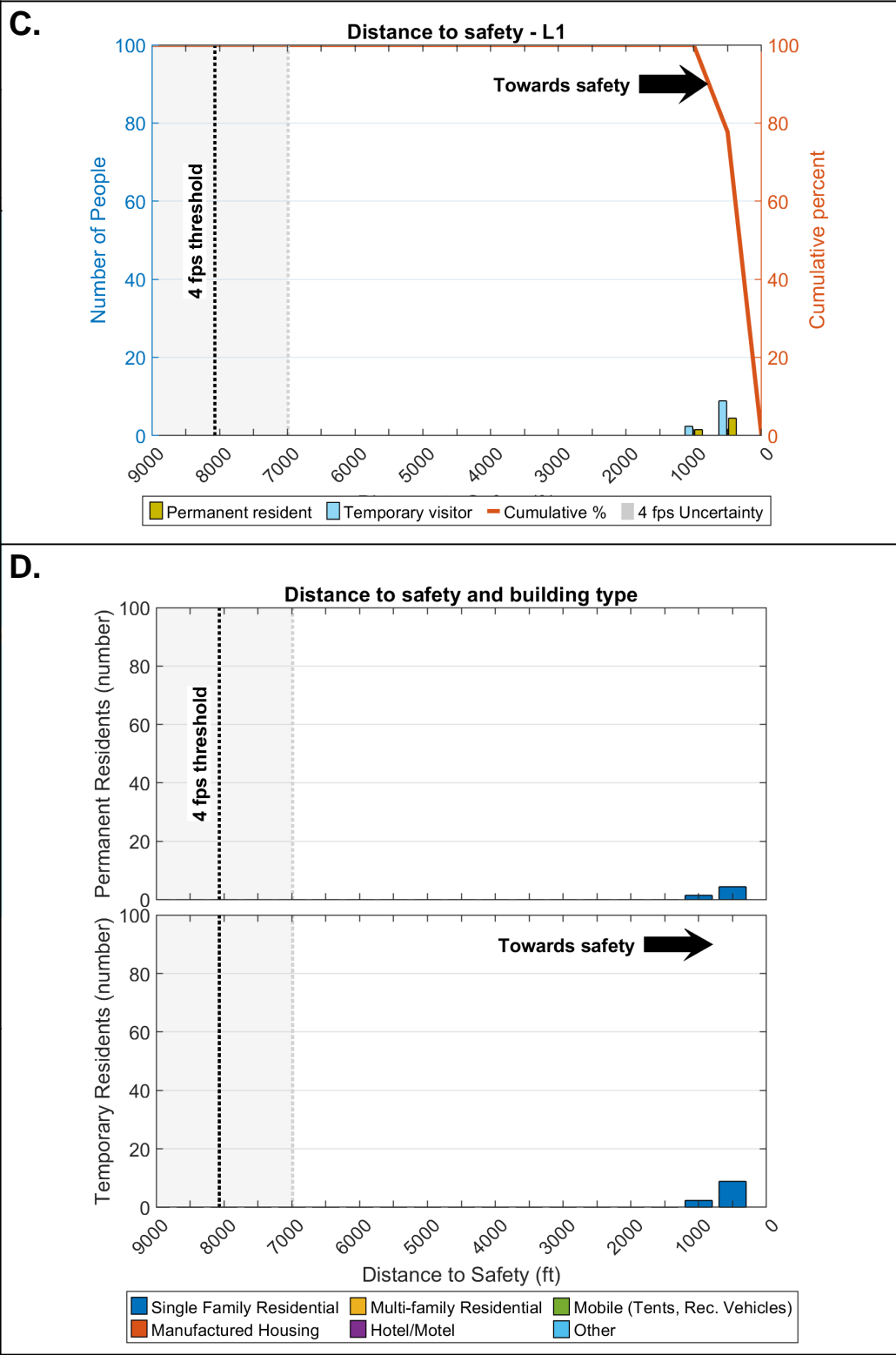
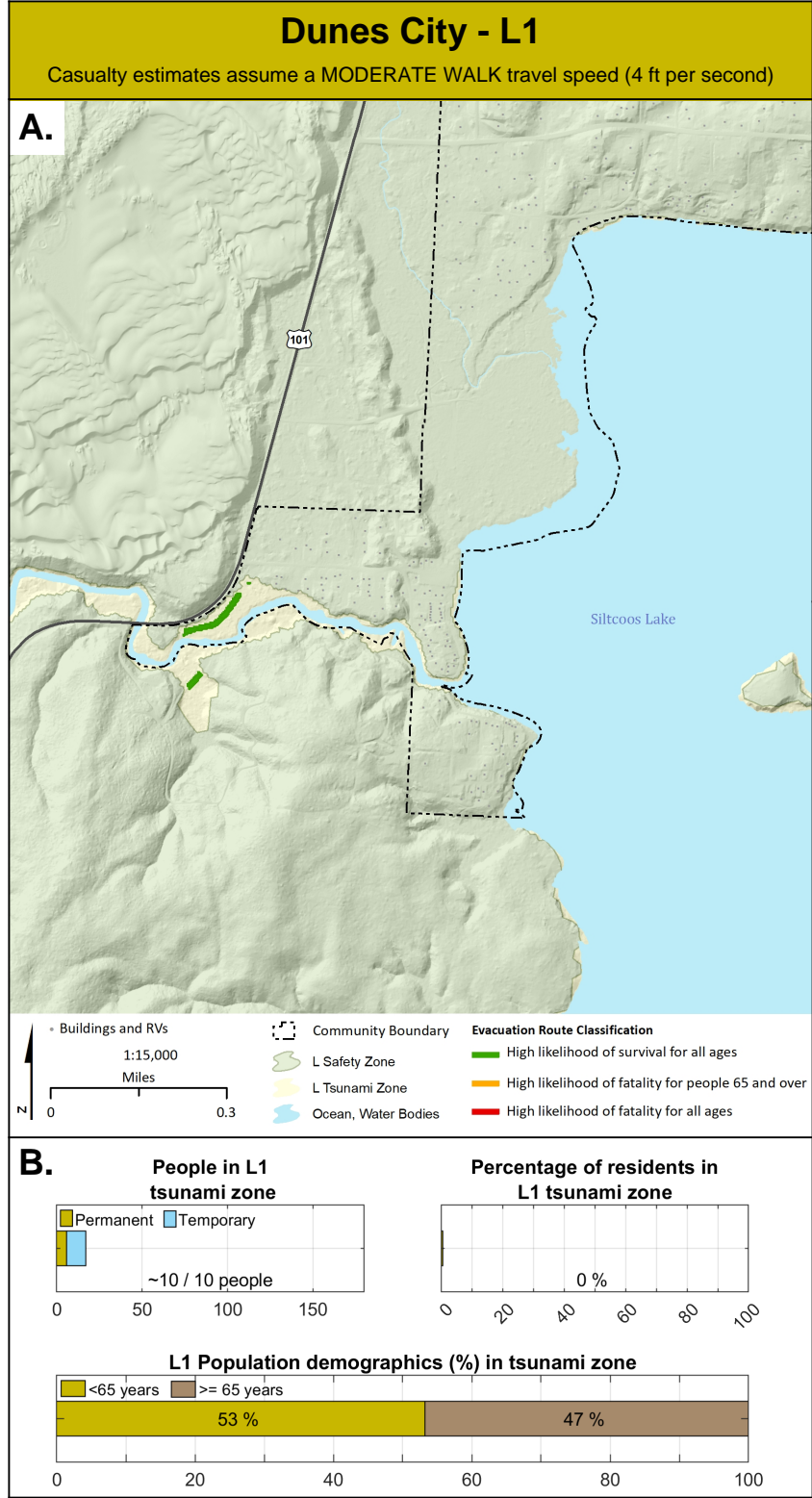


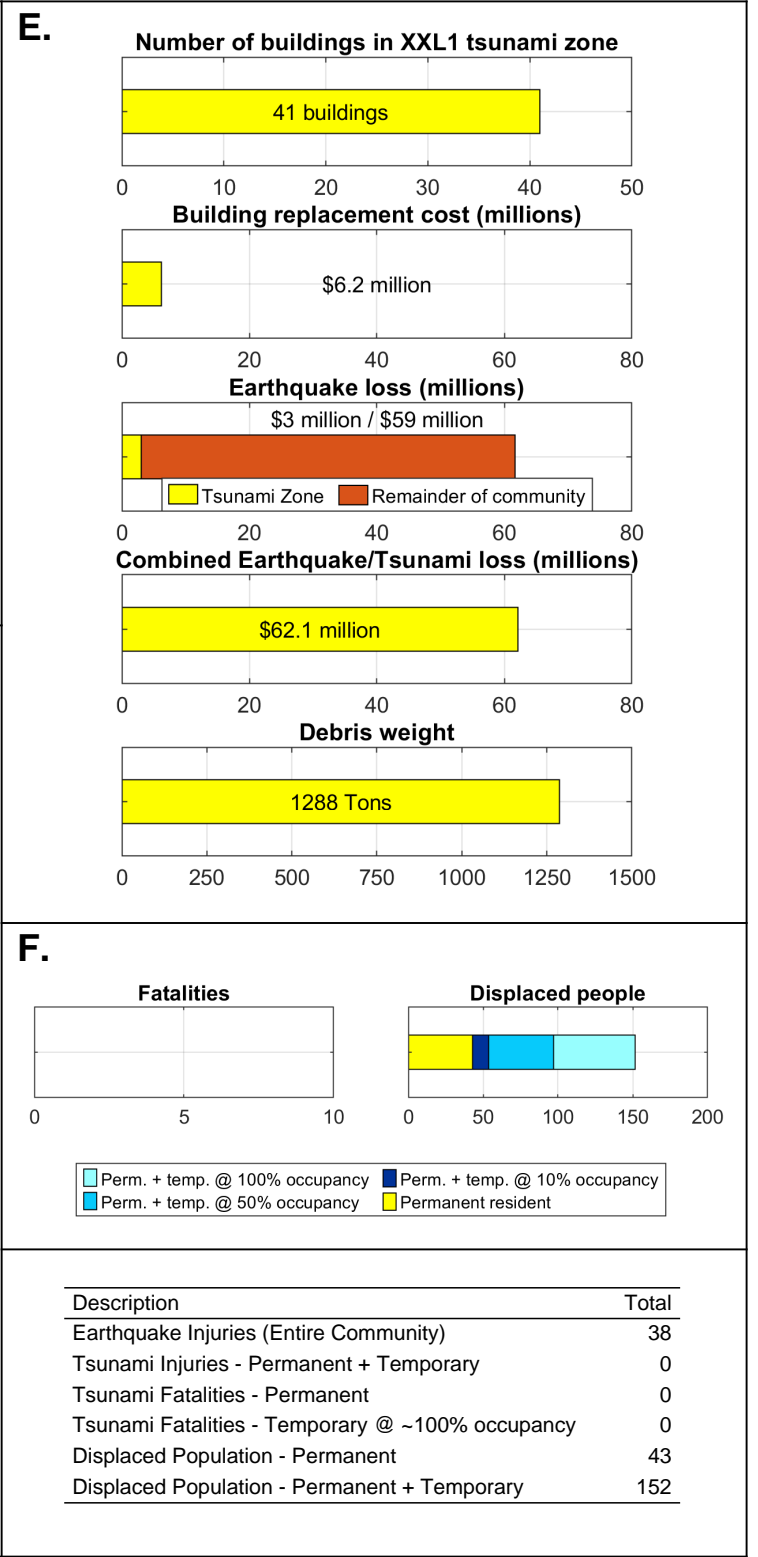
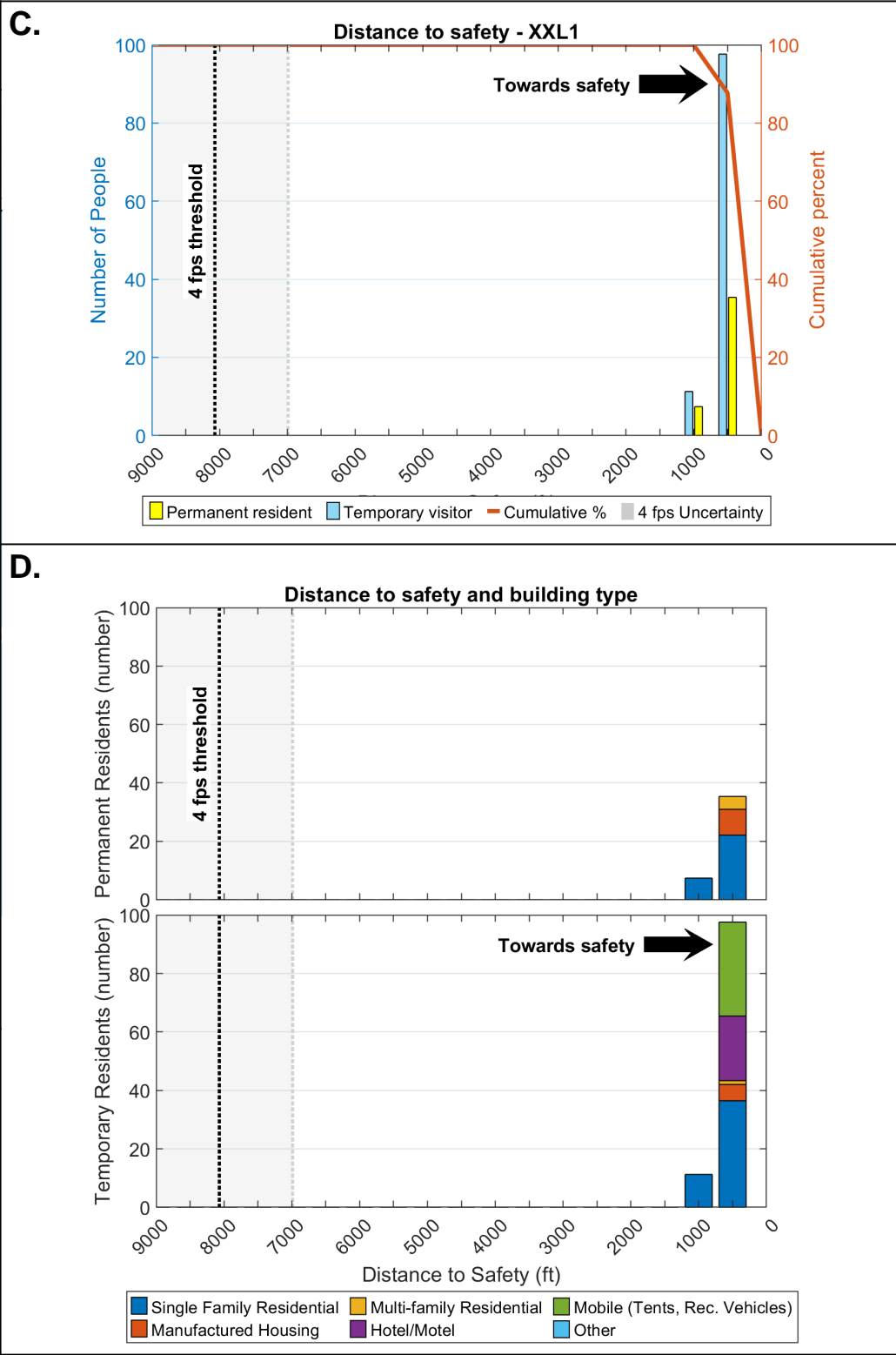
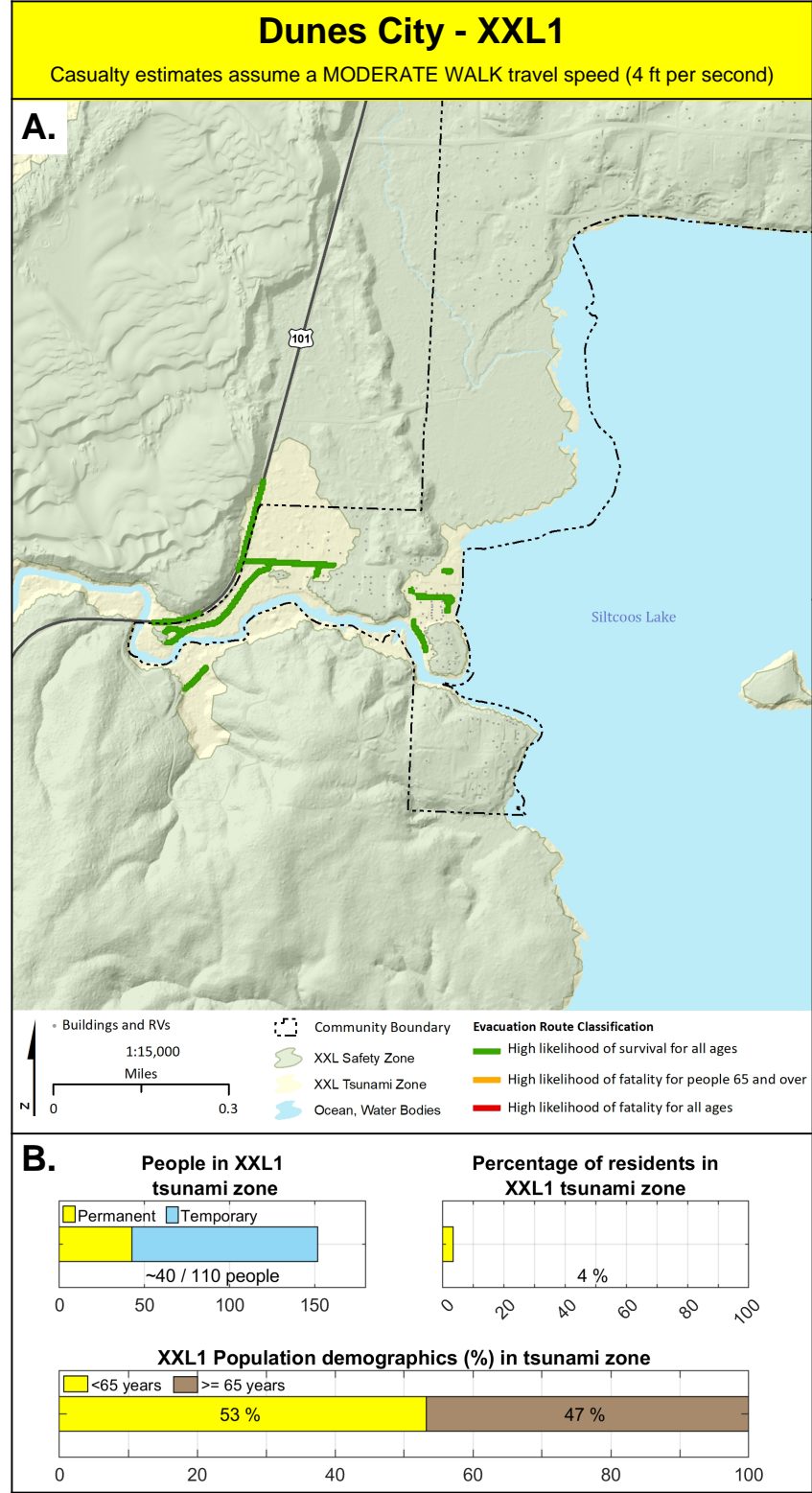
Description	Total
Earthquake Injuries (Entire Community)	515
Tsunami Injuries - Permanent + Temporary	0
Tsunami Fatalities - Permanent	0
Tsunami Fatalities - Temporary @ ~100% occupancy	0
Displaced Population - Permanent	404
Displaced Population - Permanent + Temporary	1,692

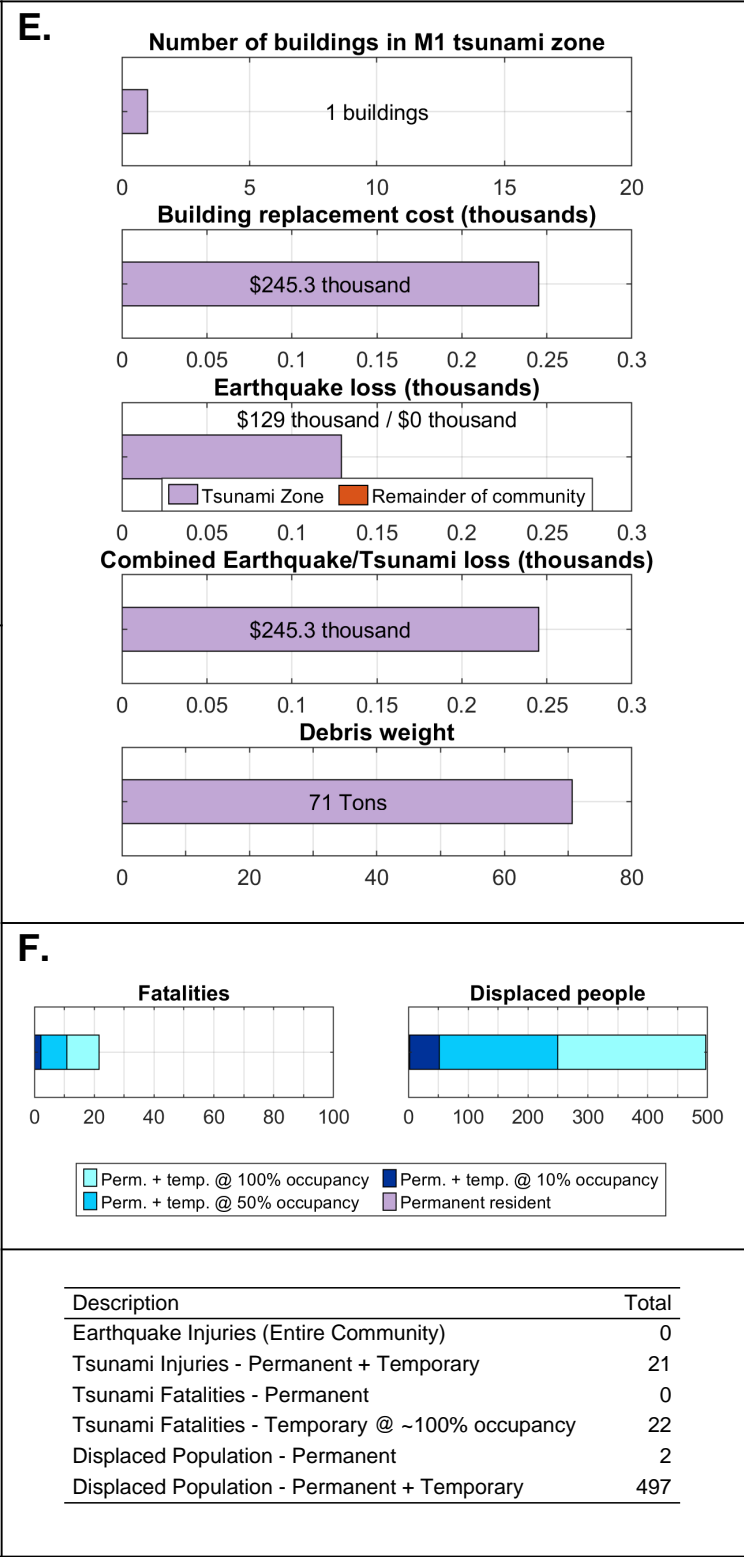
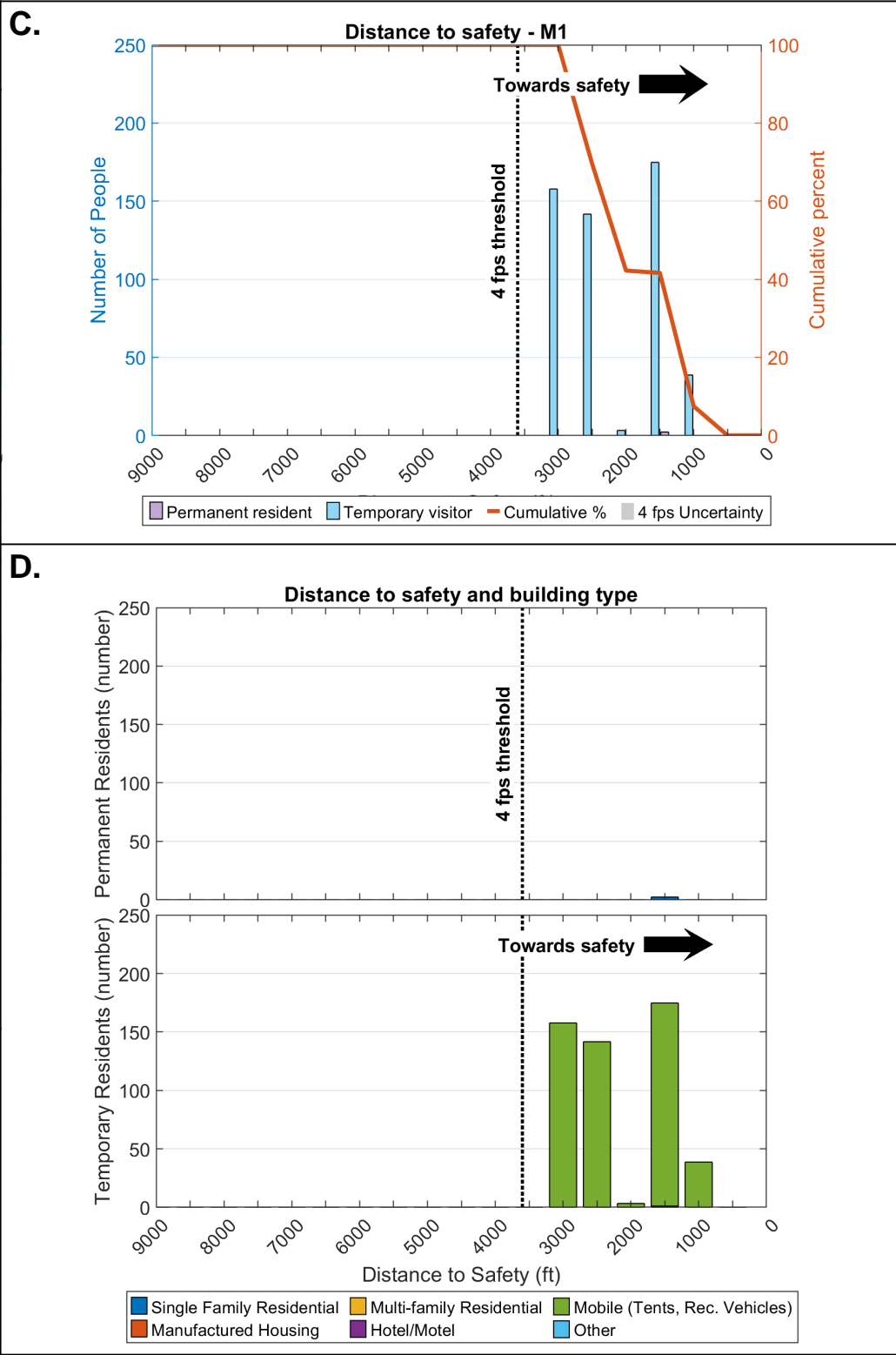
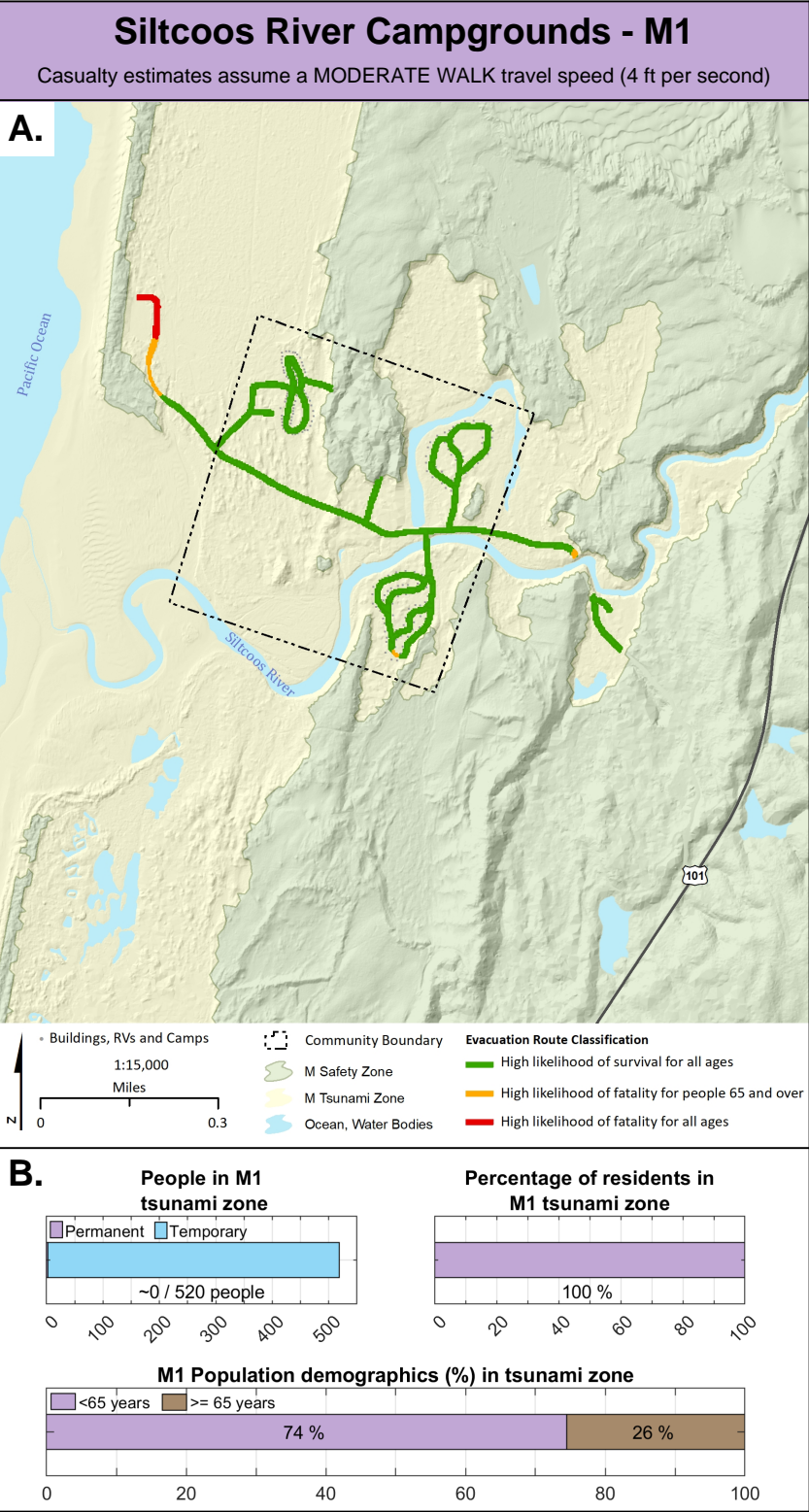


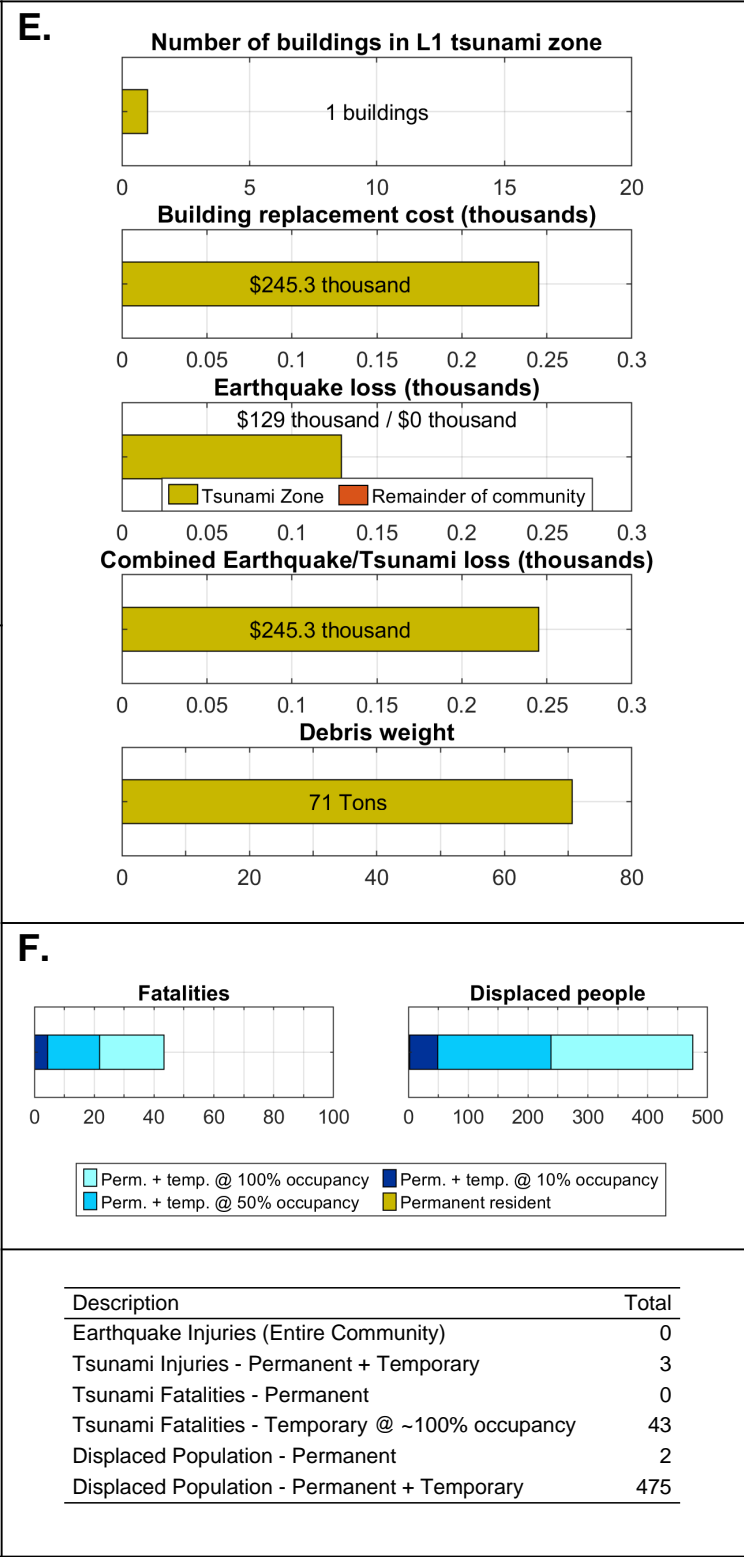
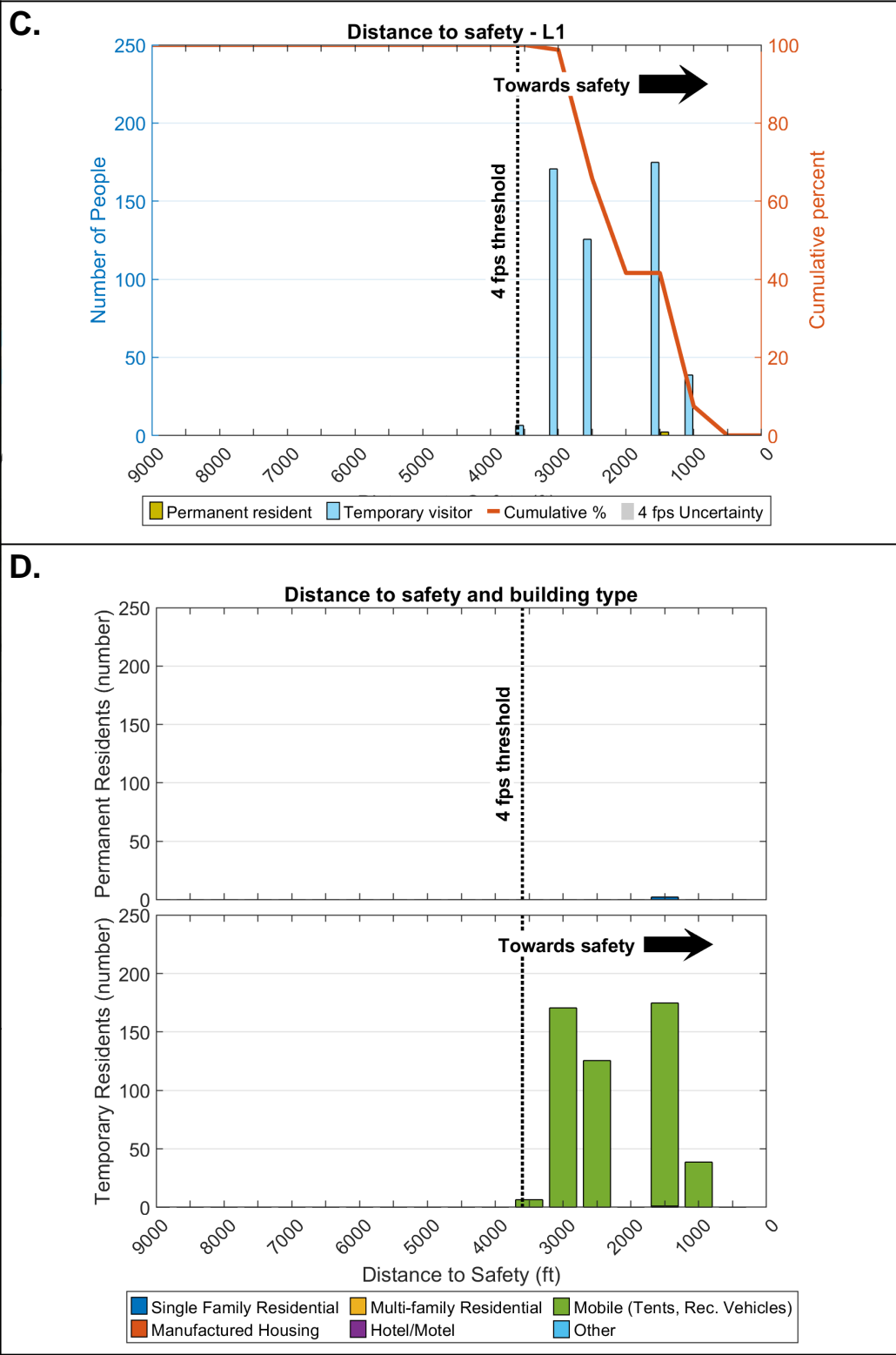
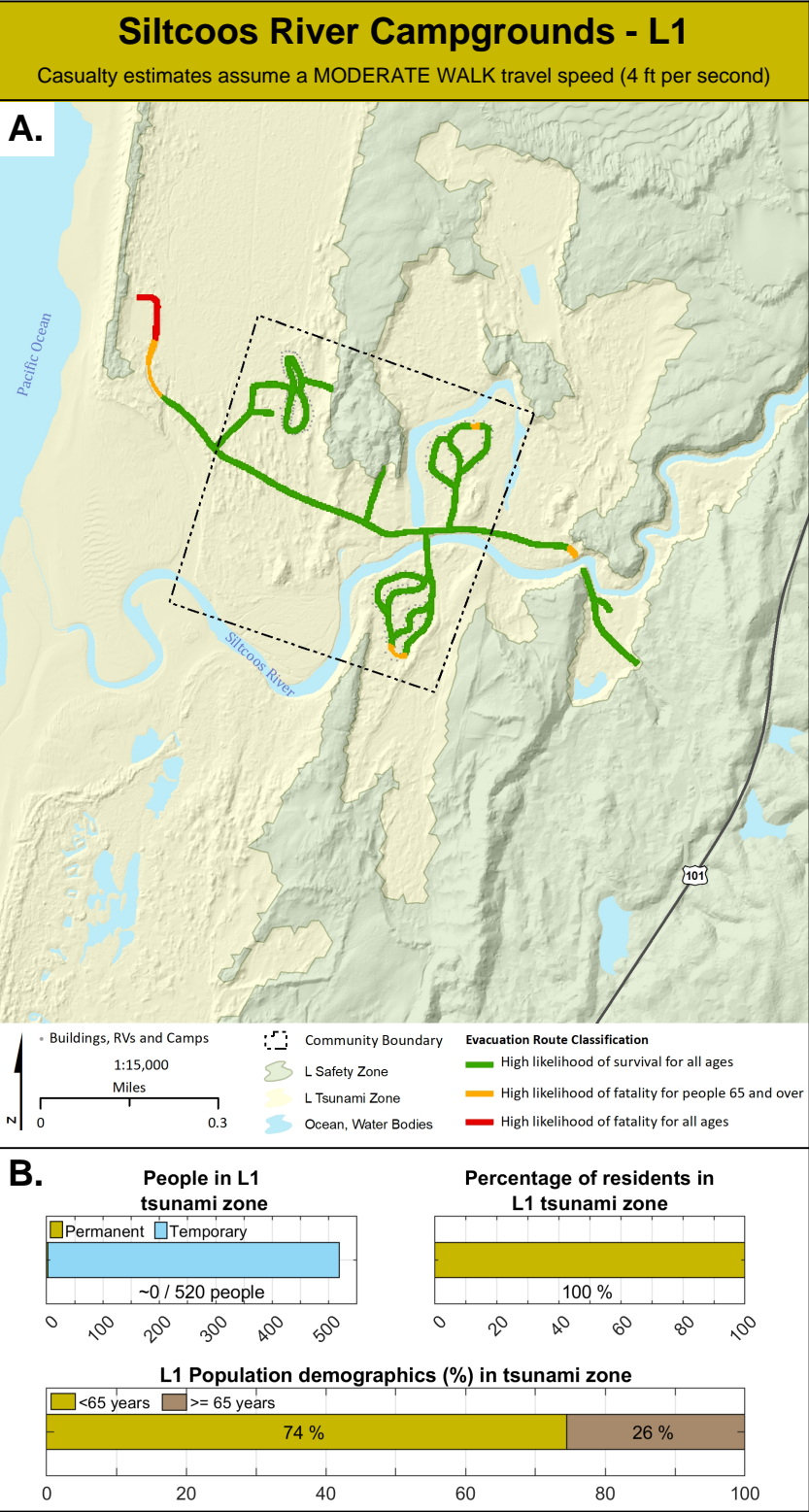


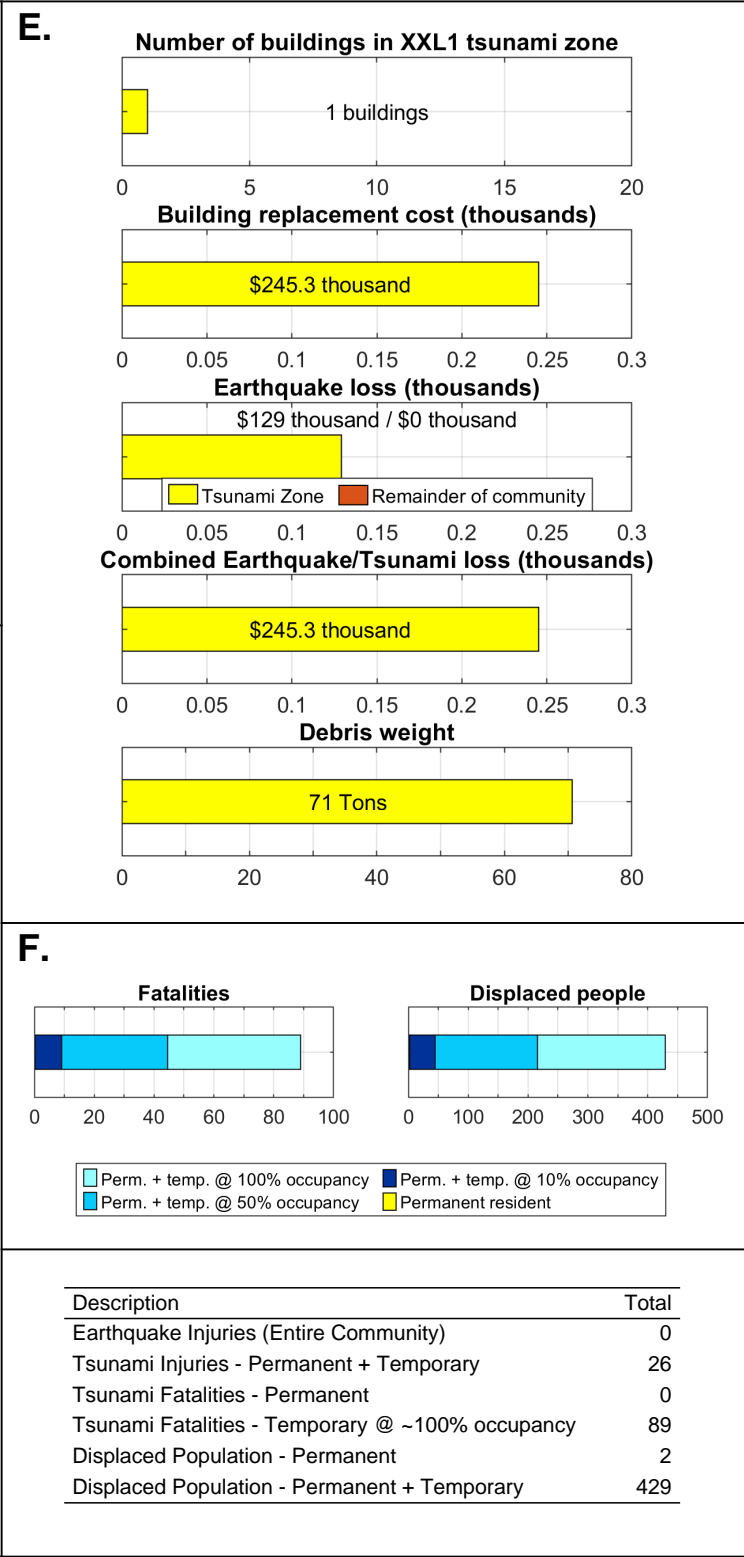
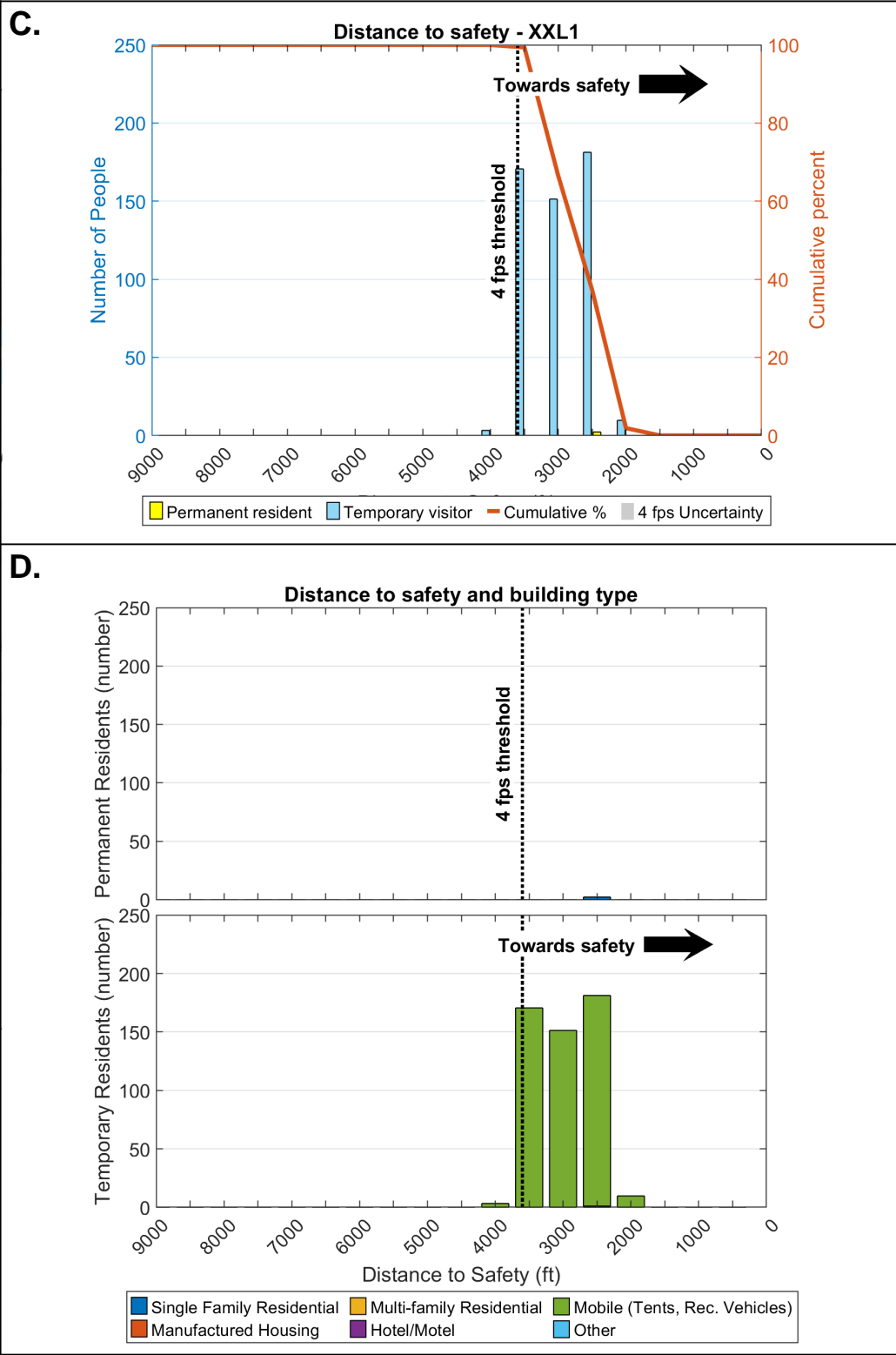
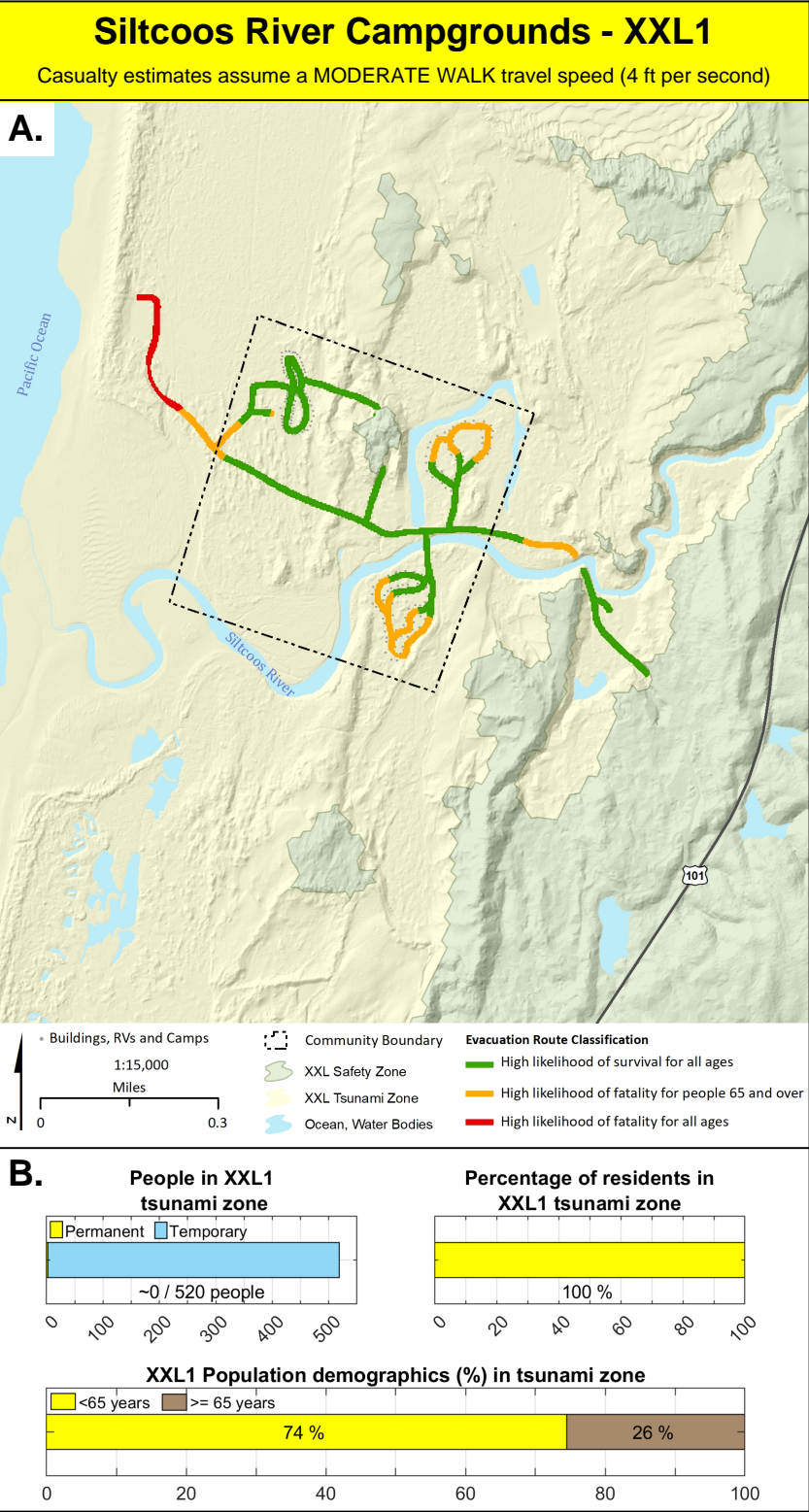


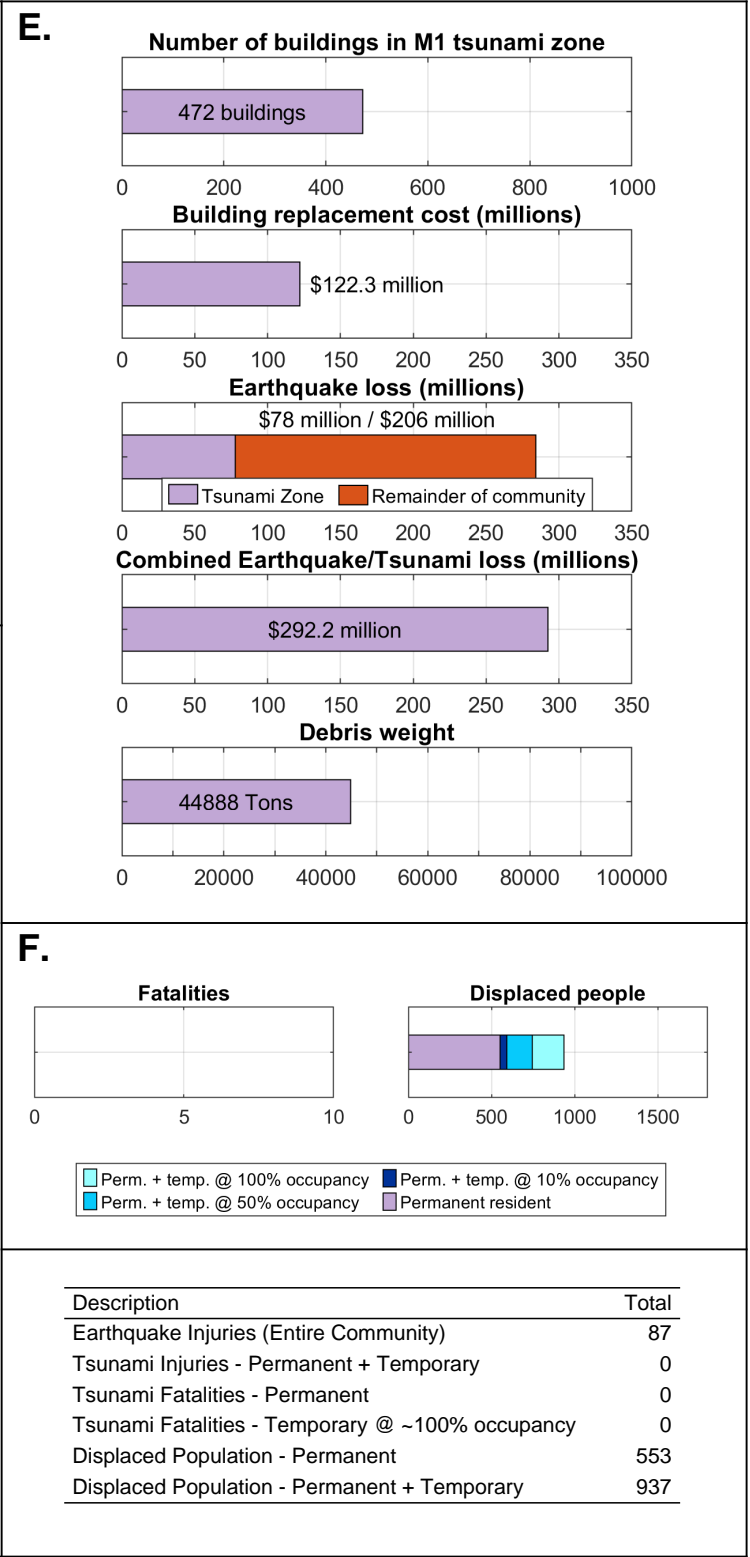
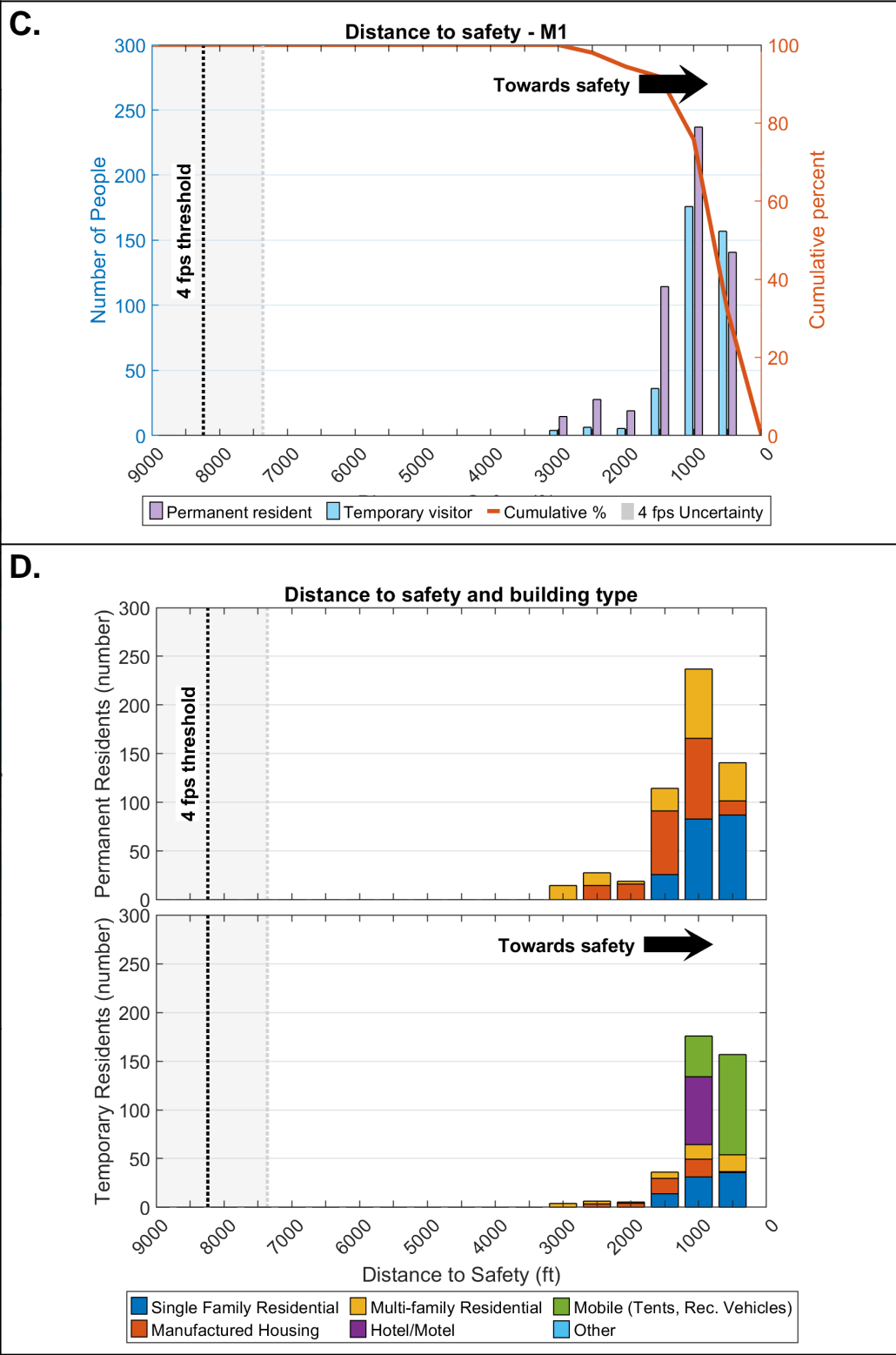
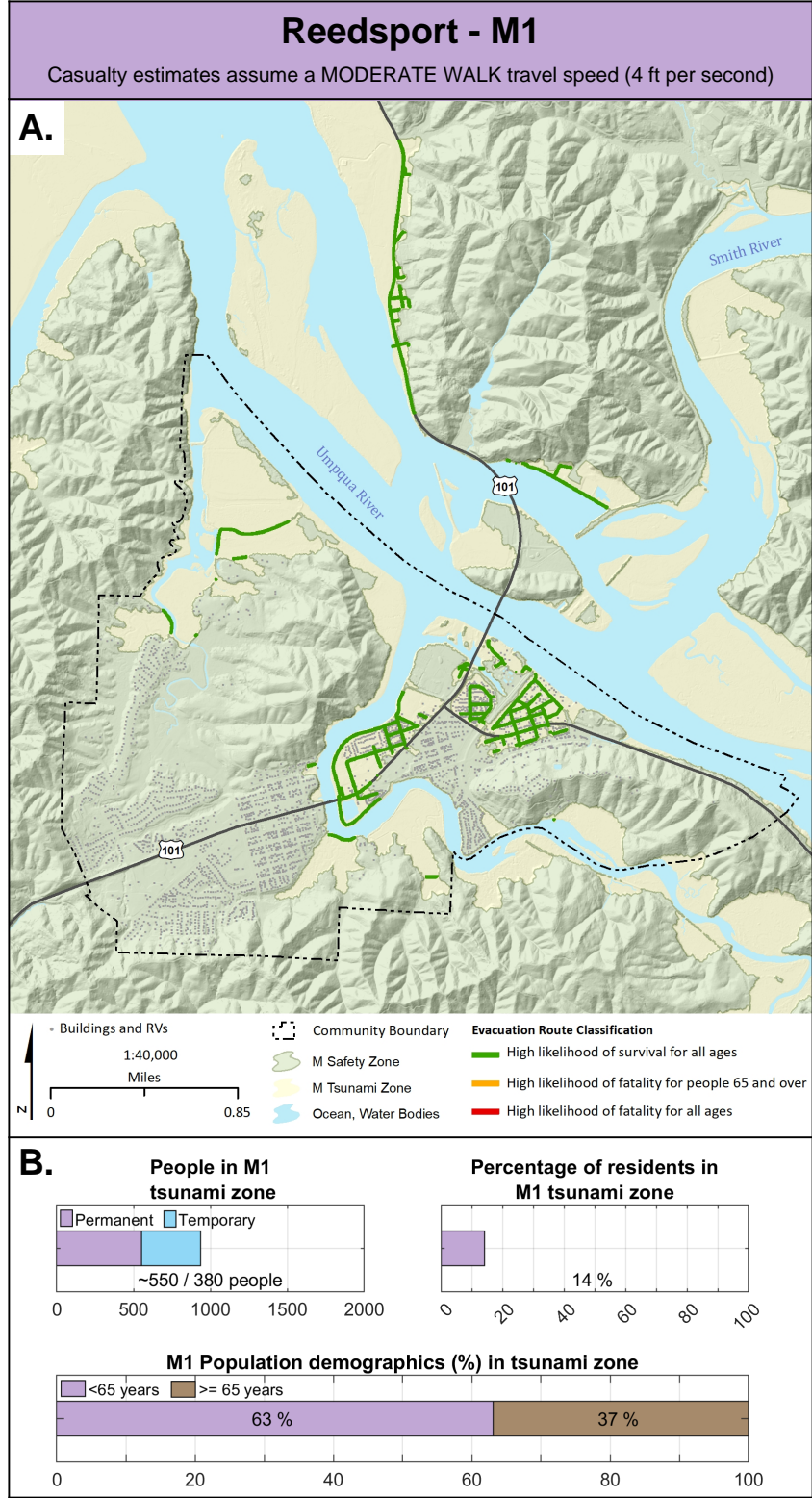








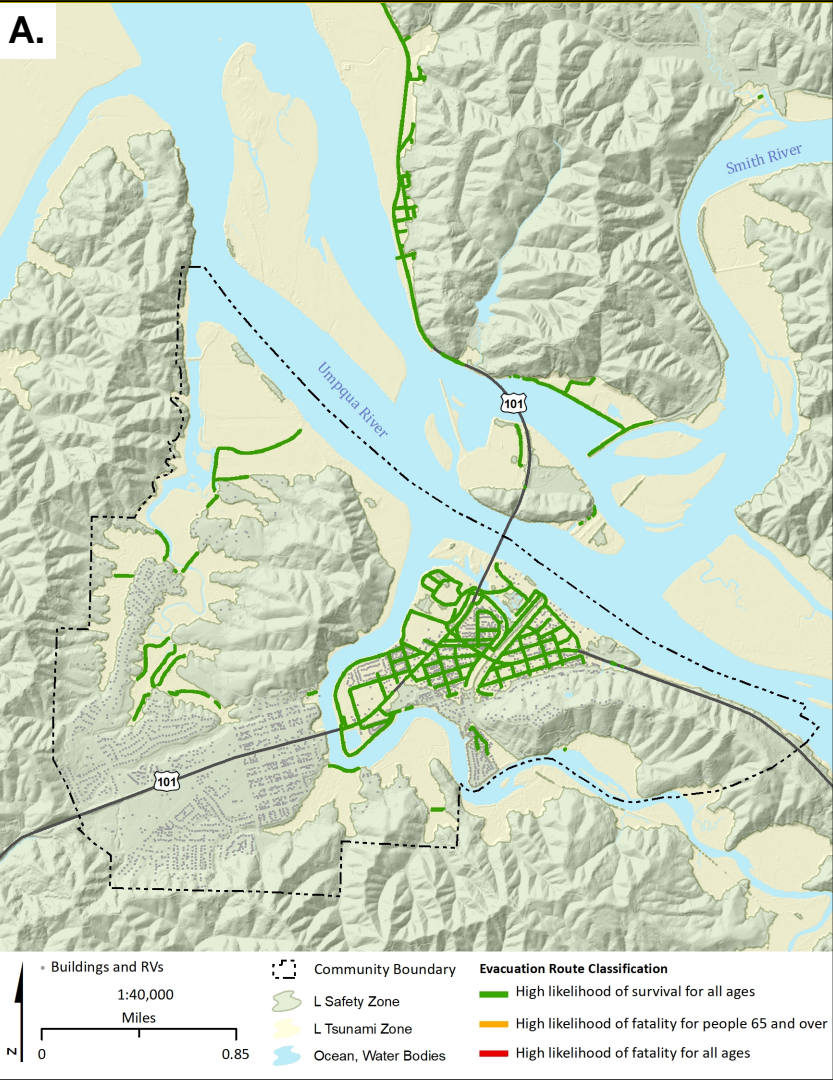




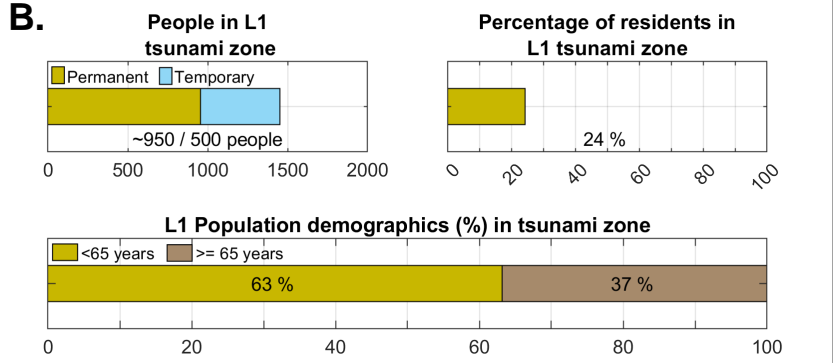
Reedsport - L1

Casualty estimates assume a MODERATE WALK travel speed (4 ft per second)

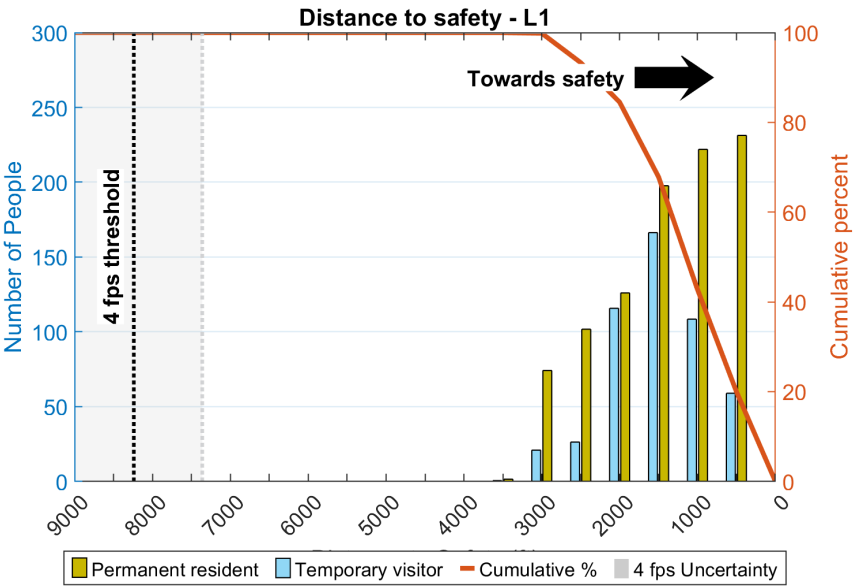
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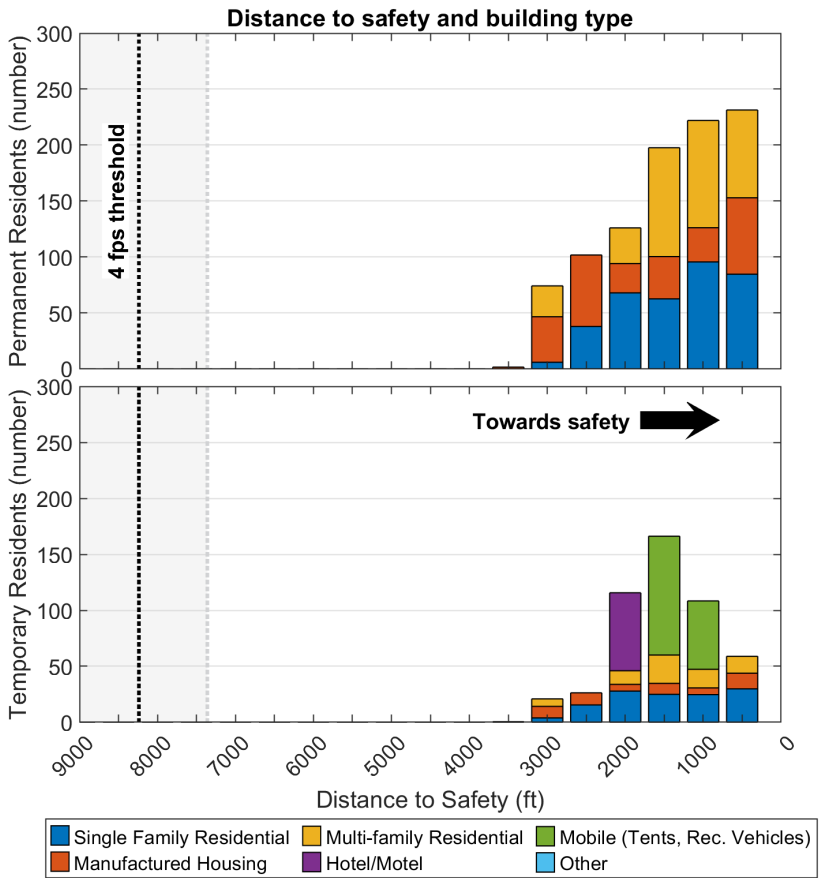
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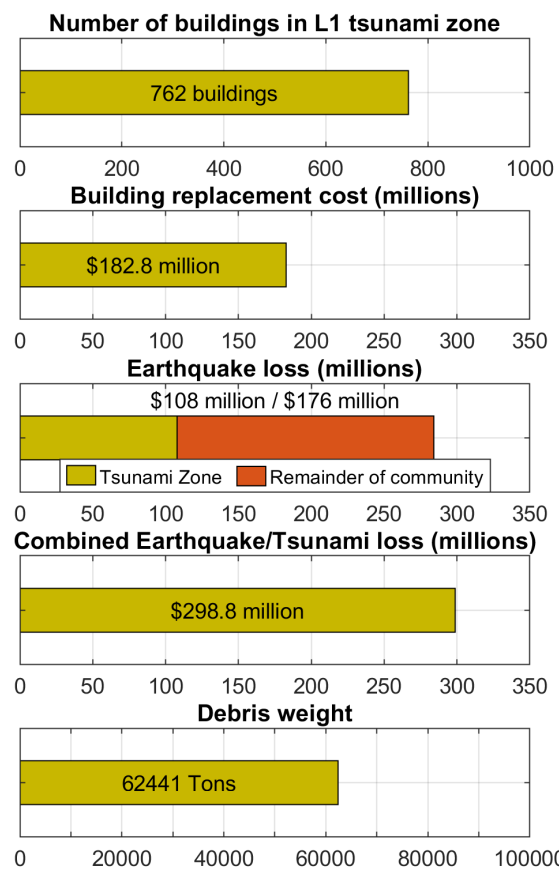
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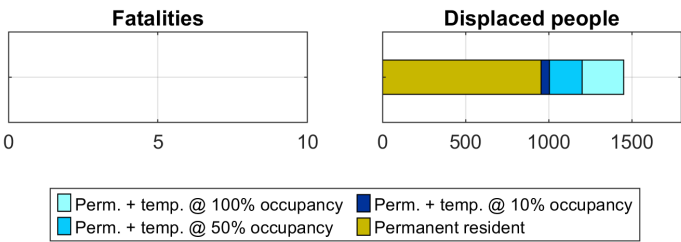
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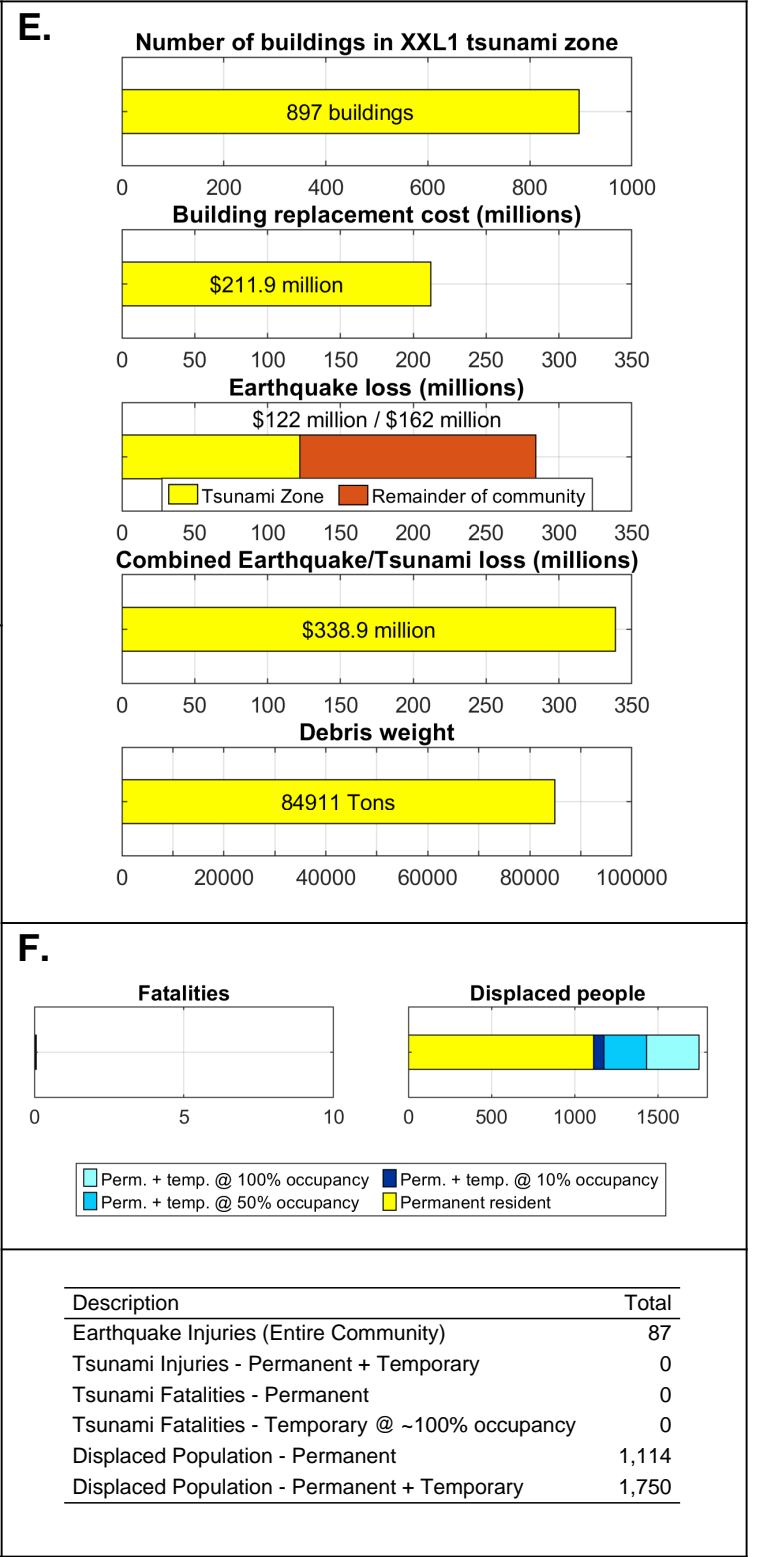
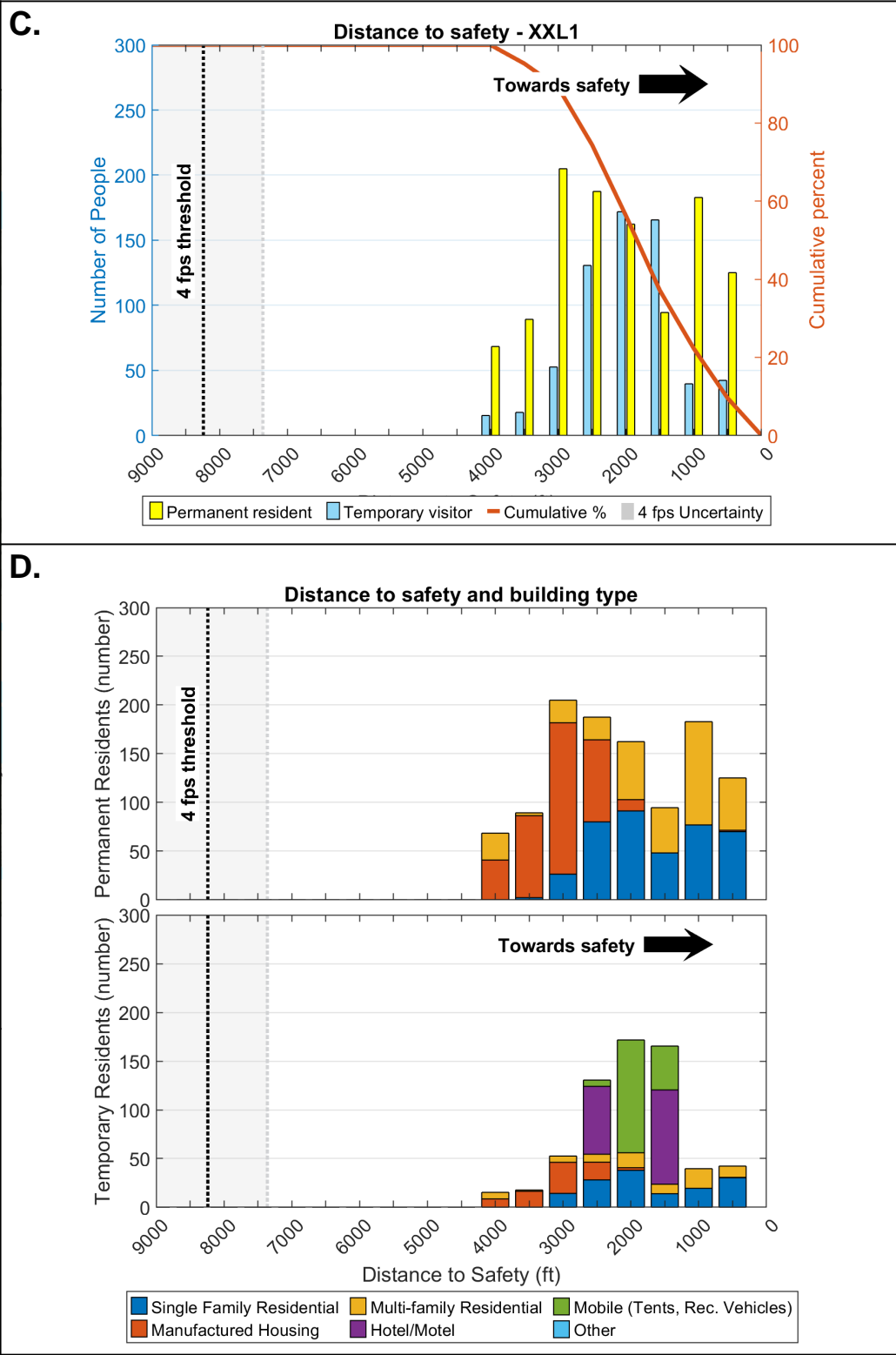
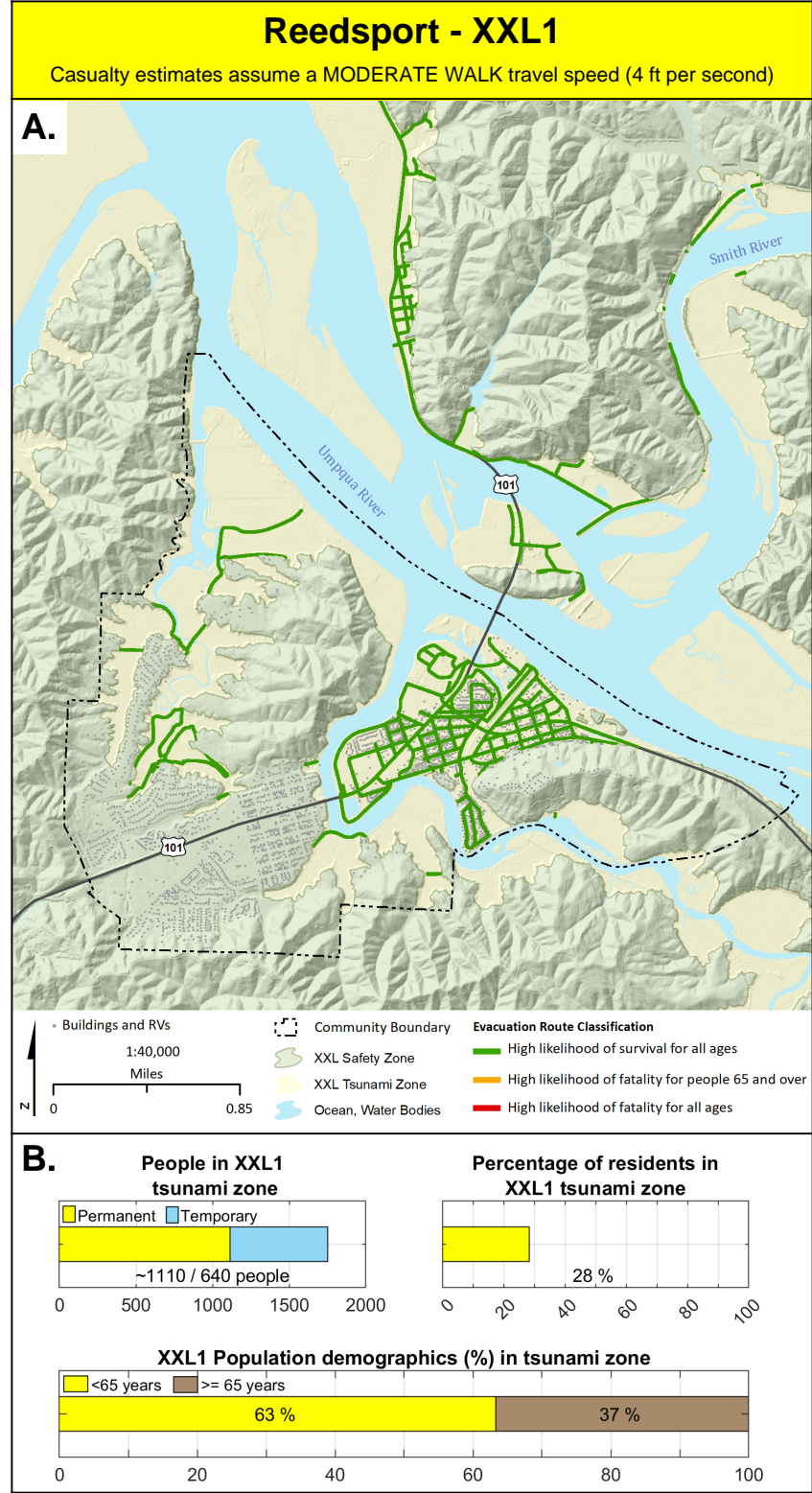
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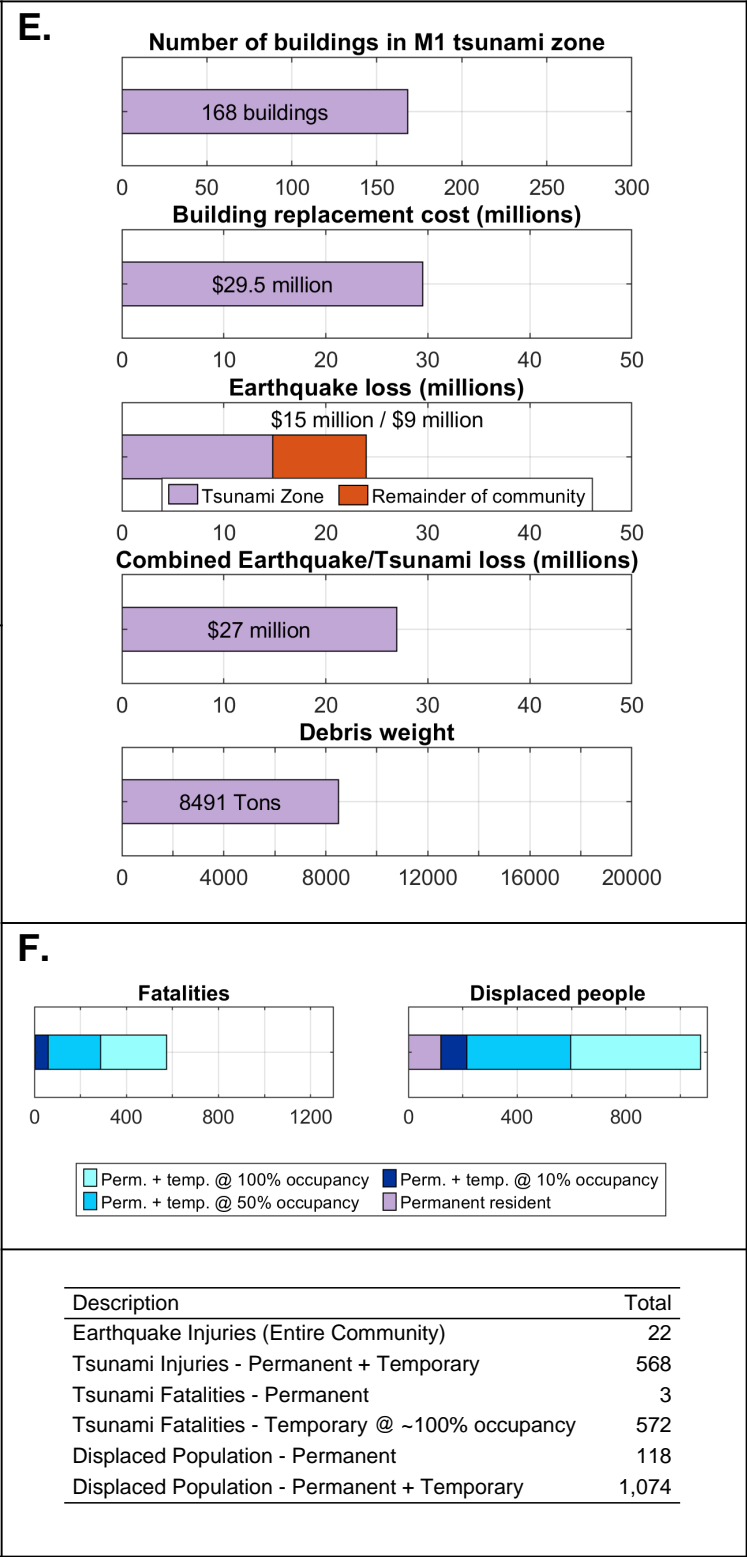
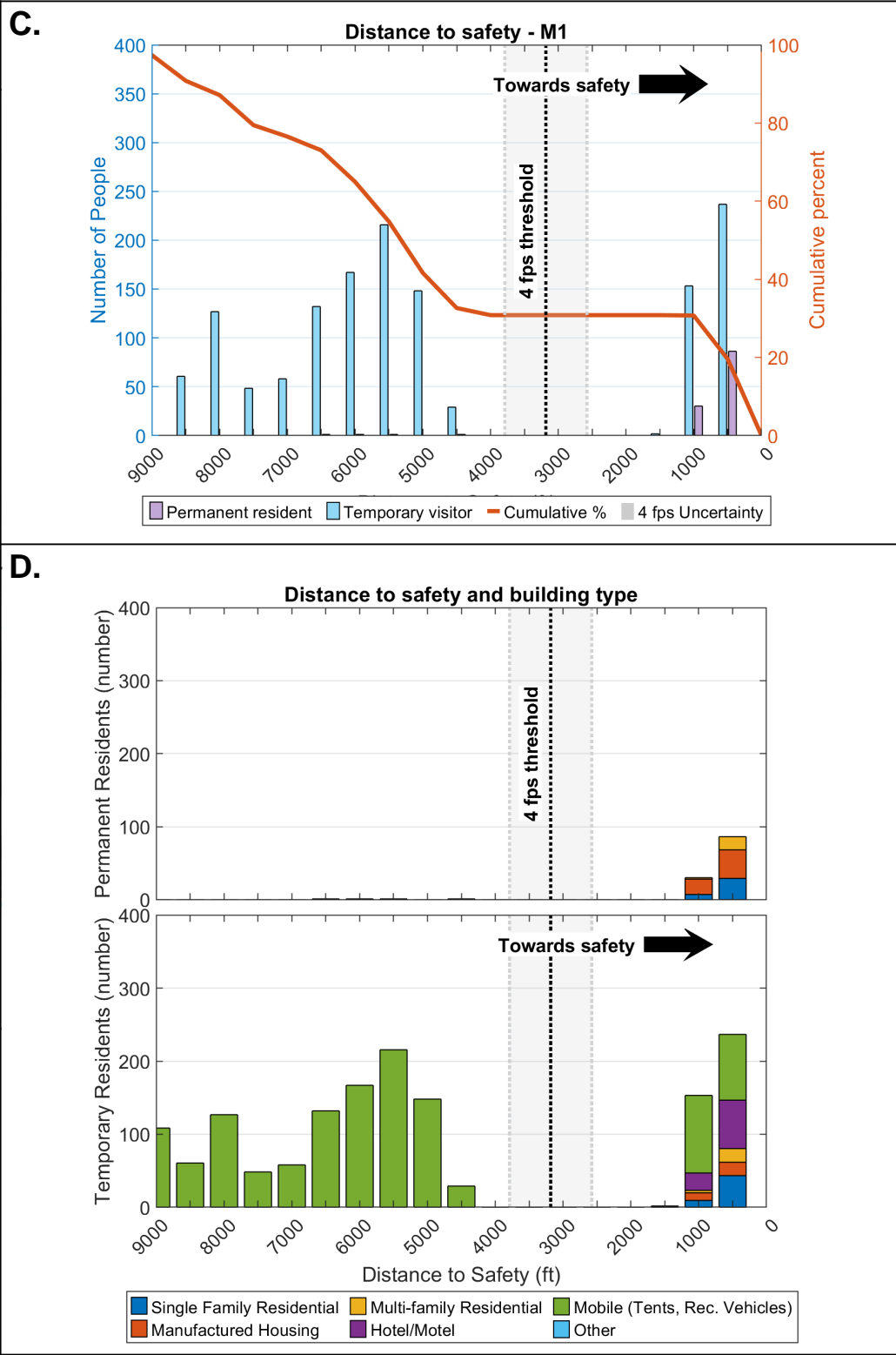
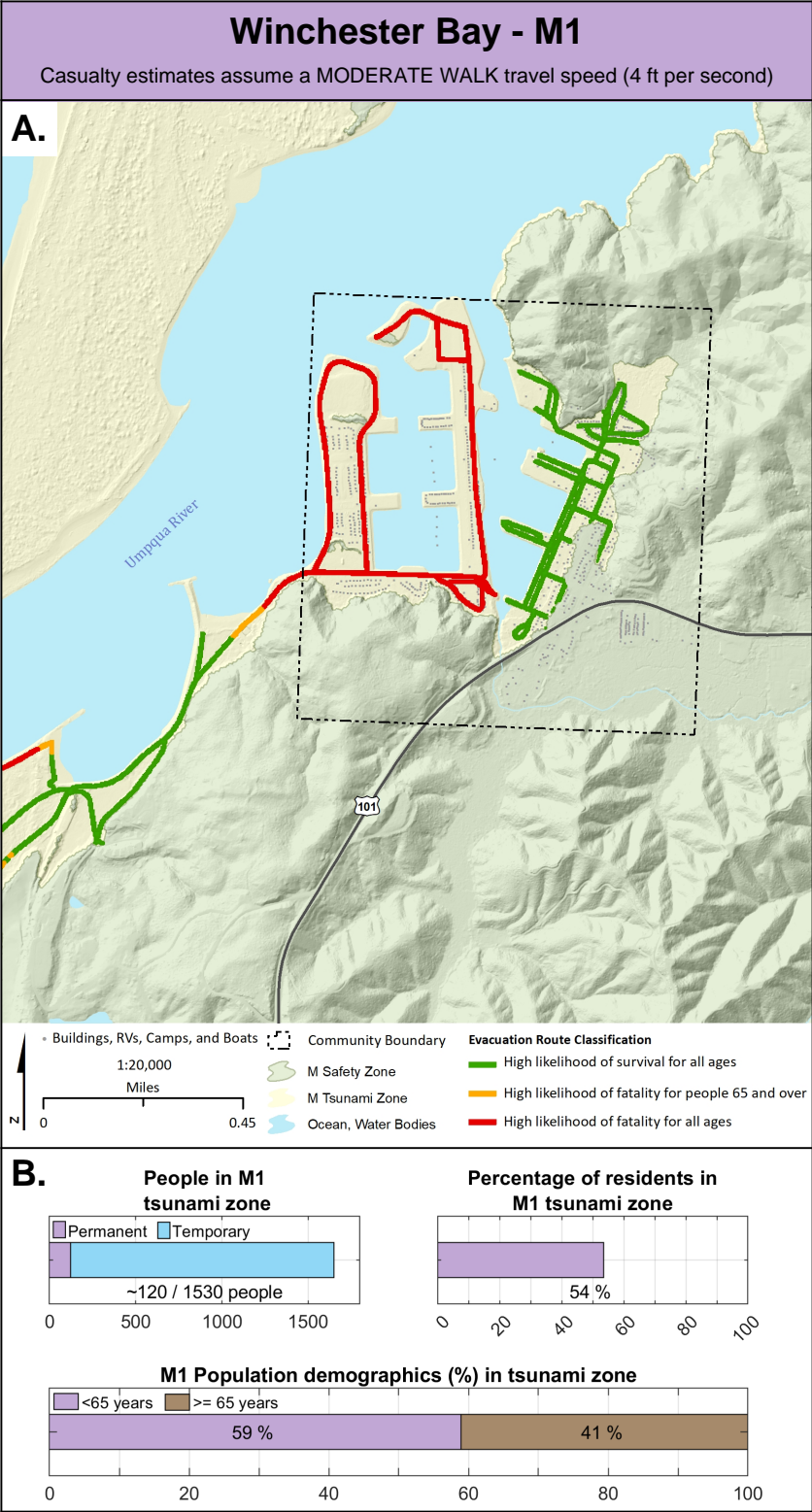


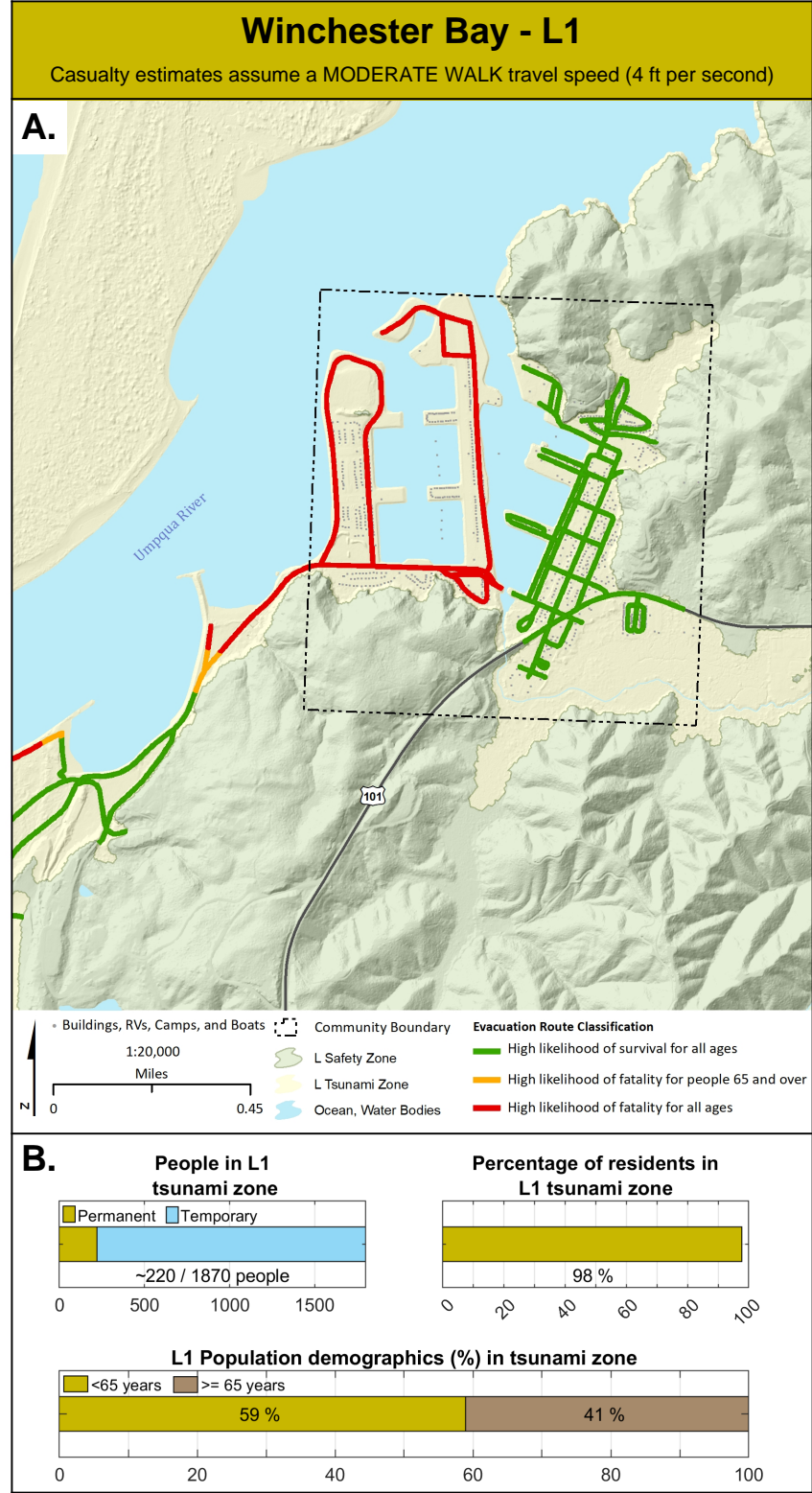
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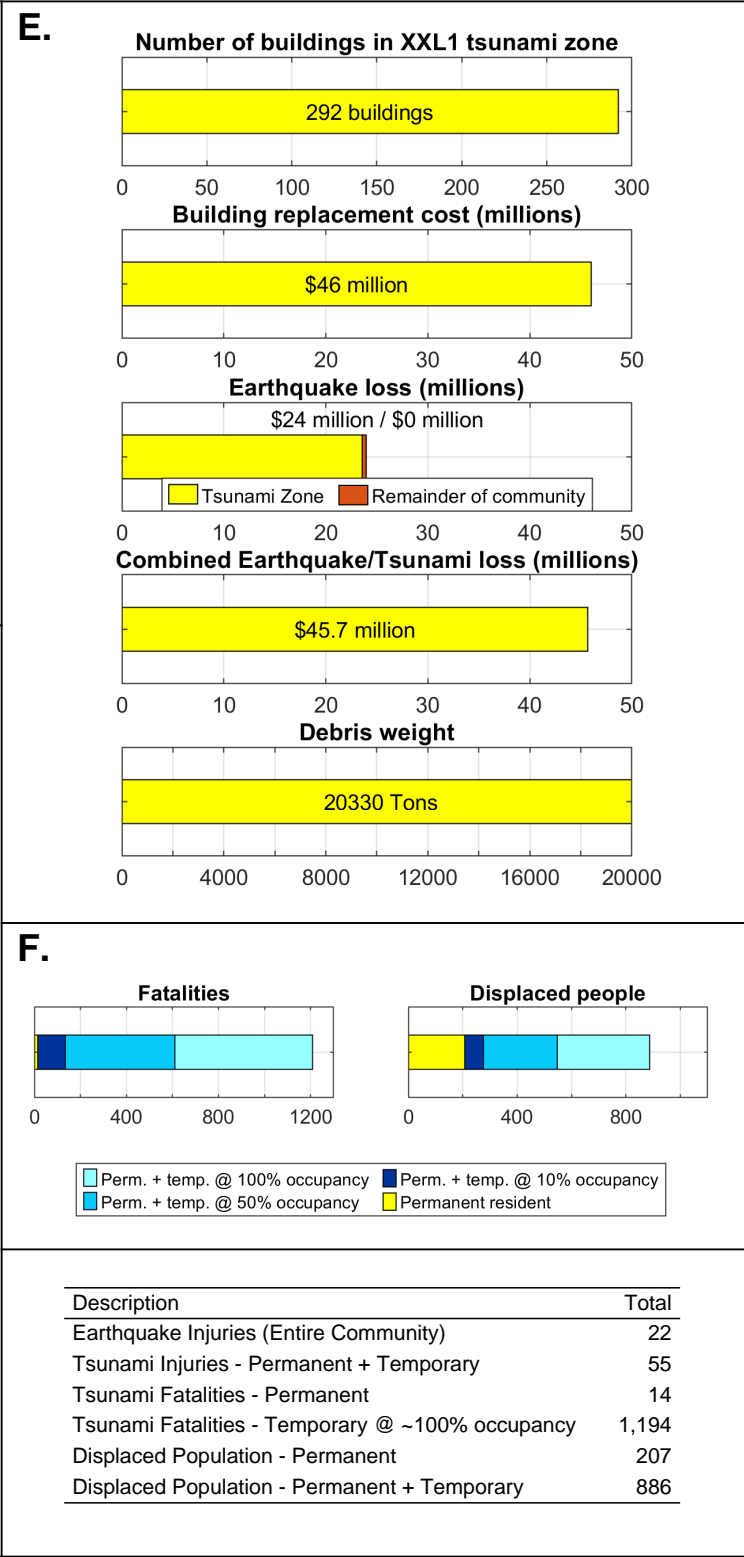
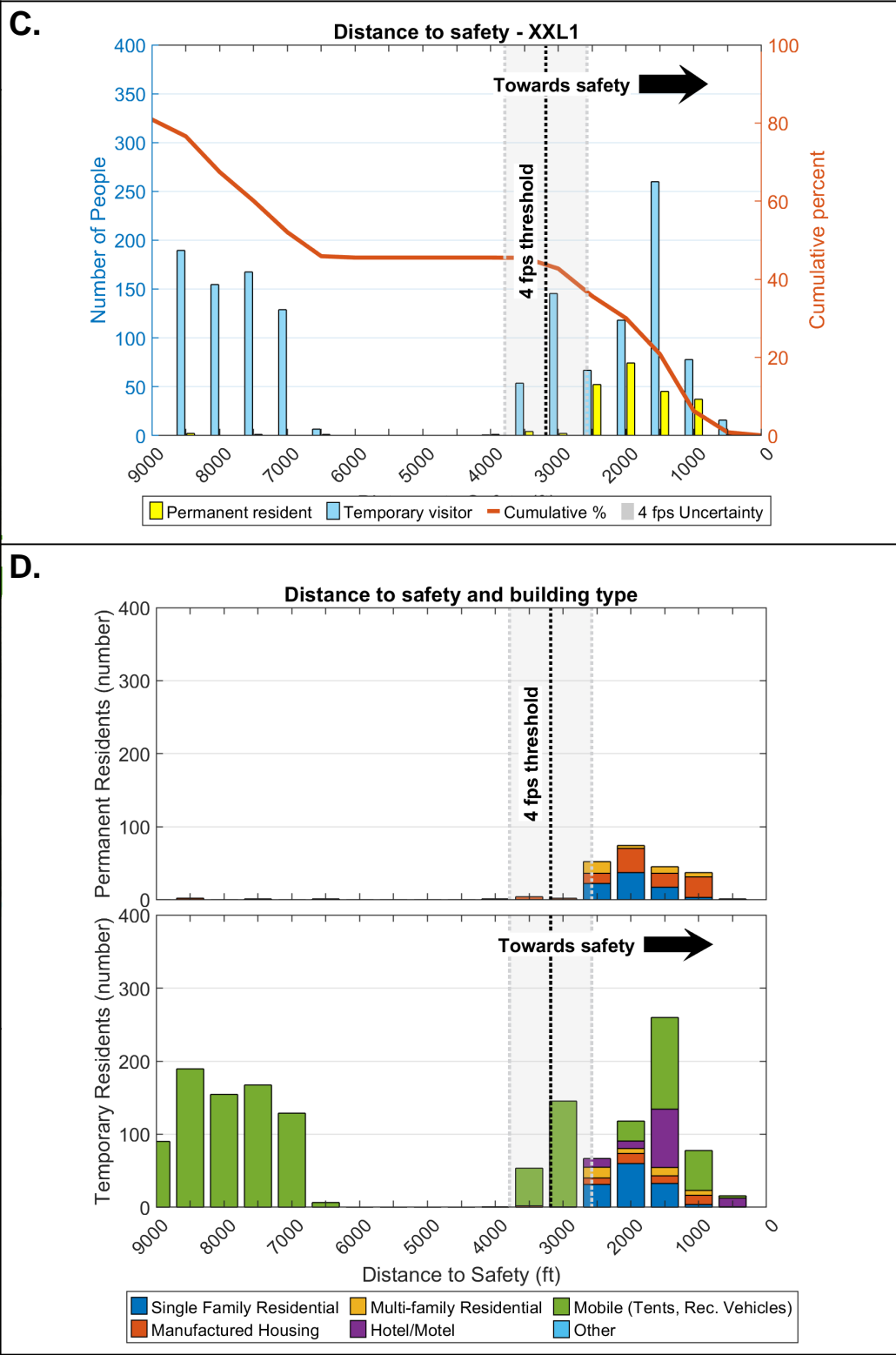
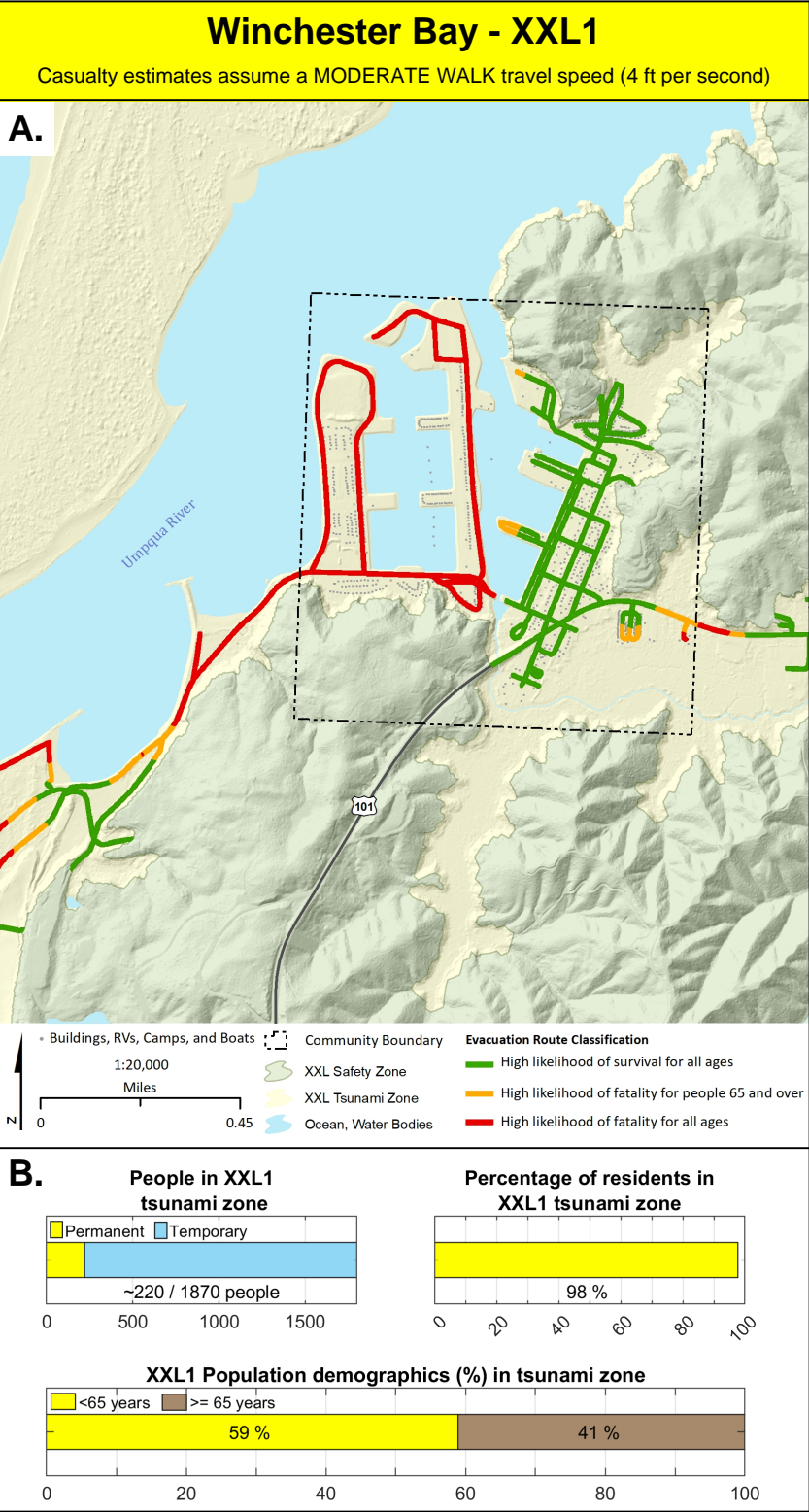


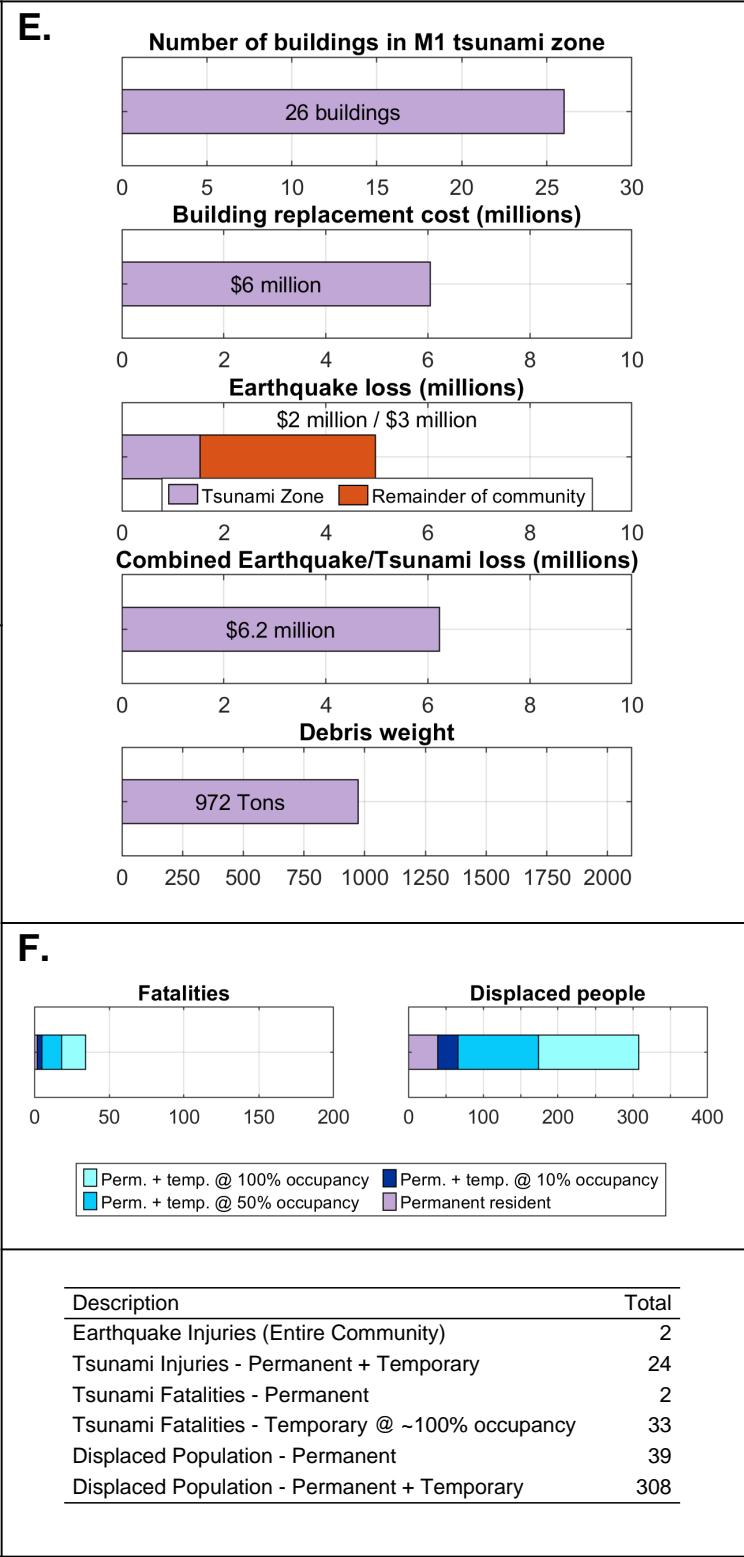
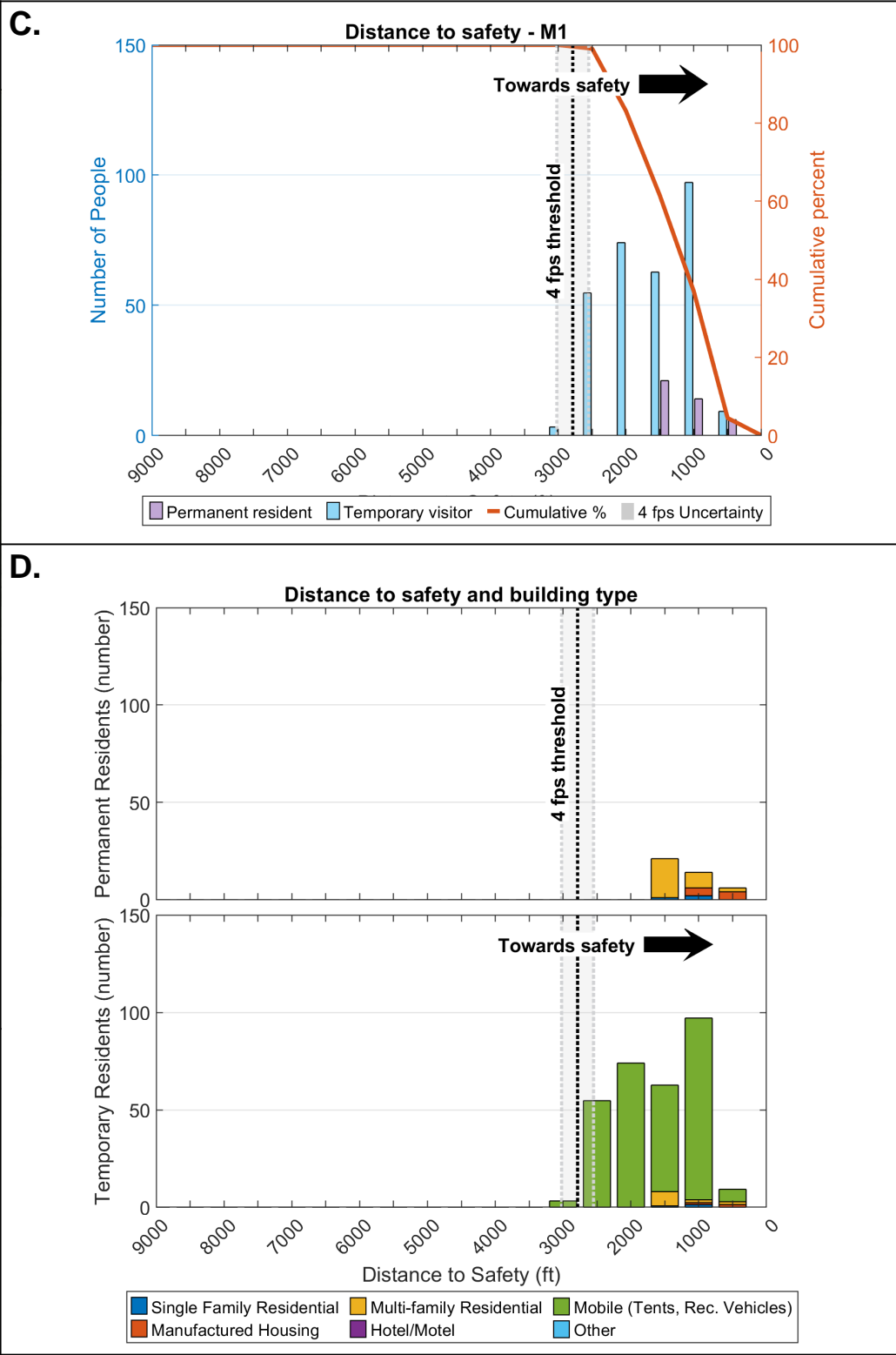
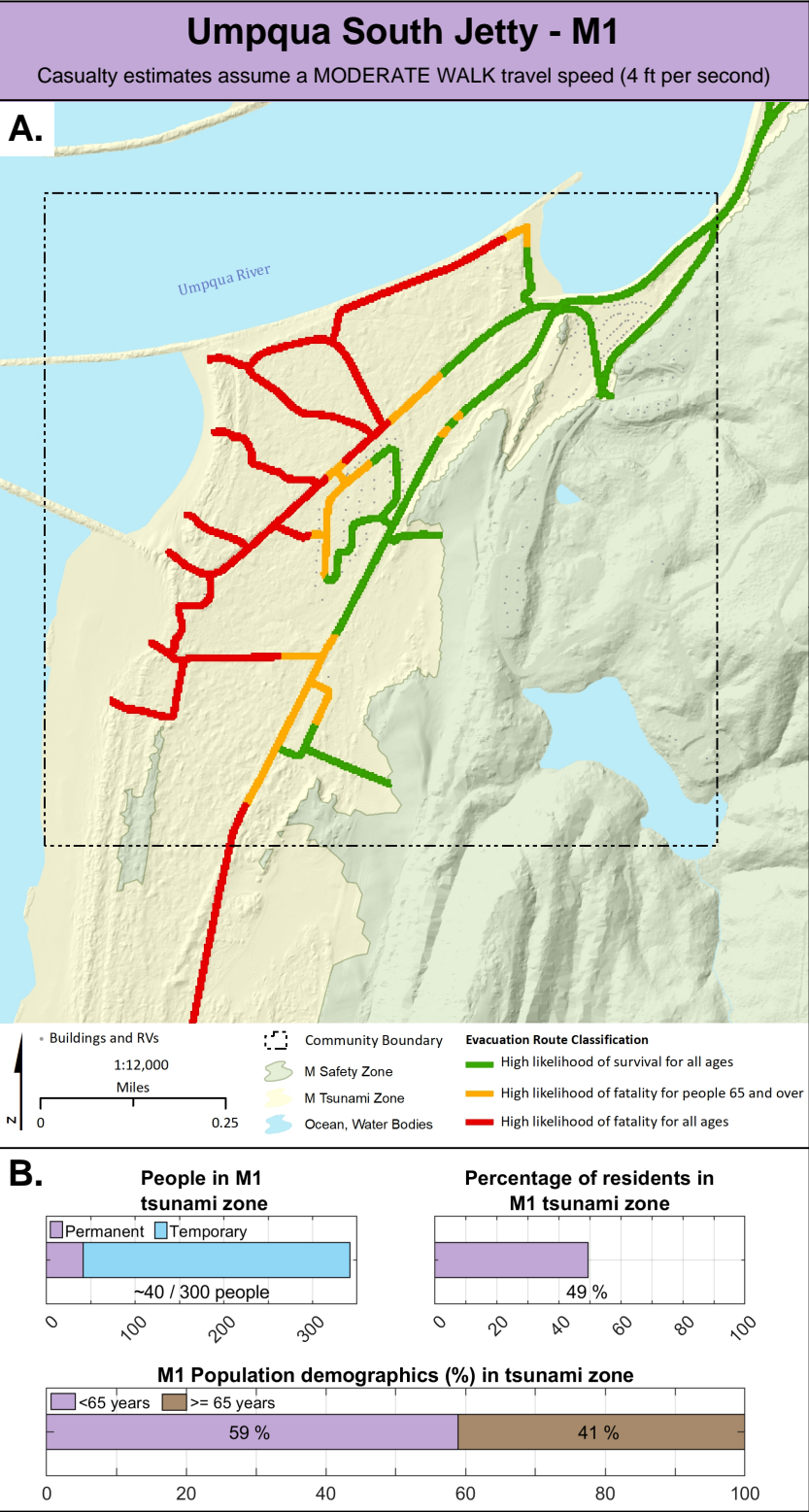
Description	Total
Earthquake Injuries (Entire Community)	87
Tsunami Injuries - Permanent + Temporary	0
Tsunami Fatalities - Permanent	0
Tsunami Fatalities - Temporary @ ~100% occupancy	0
Displaced Population - Permanent	954
Displaced Population - Permanent + Temporary	1,451

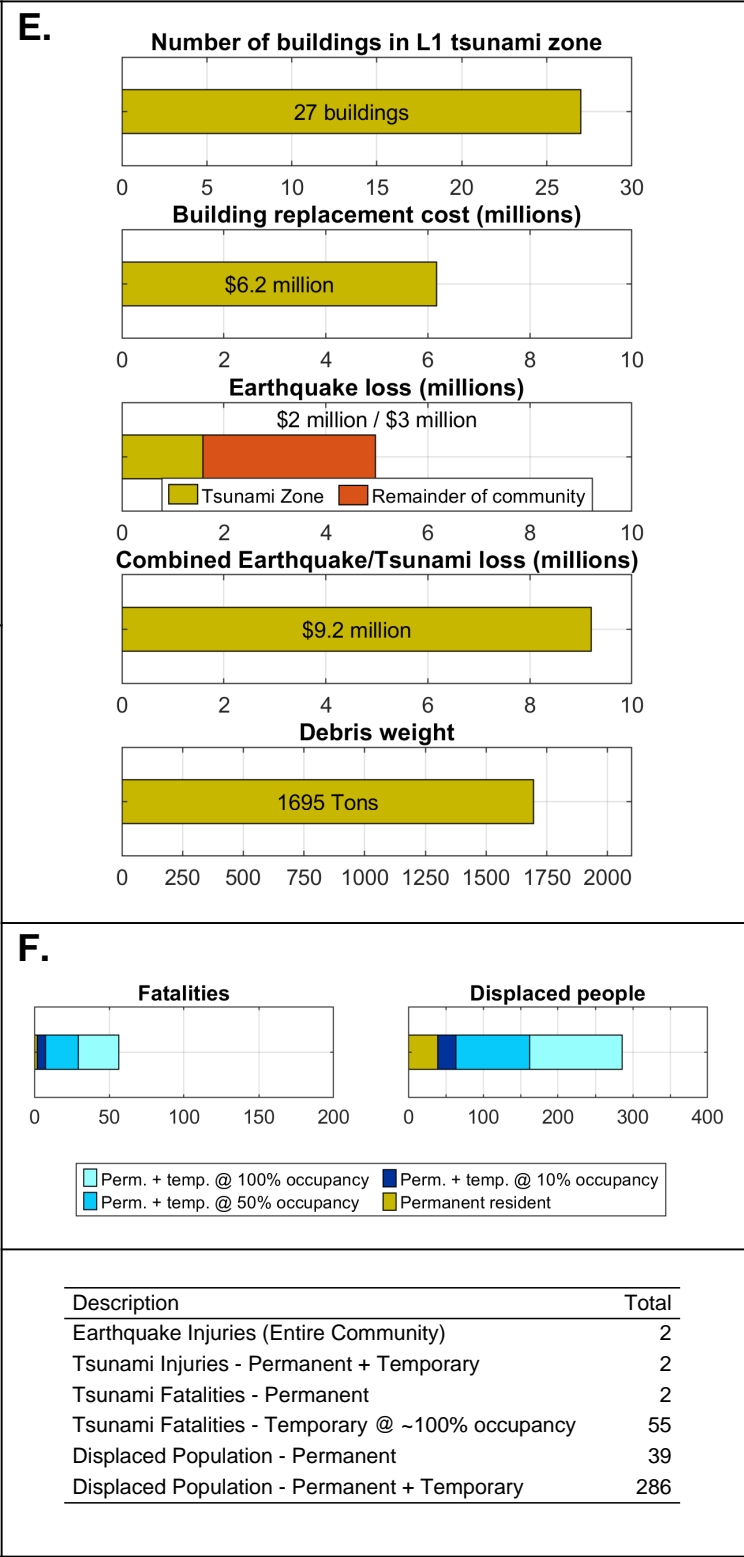
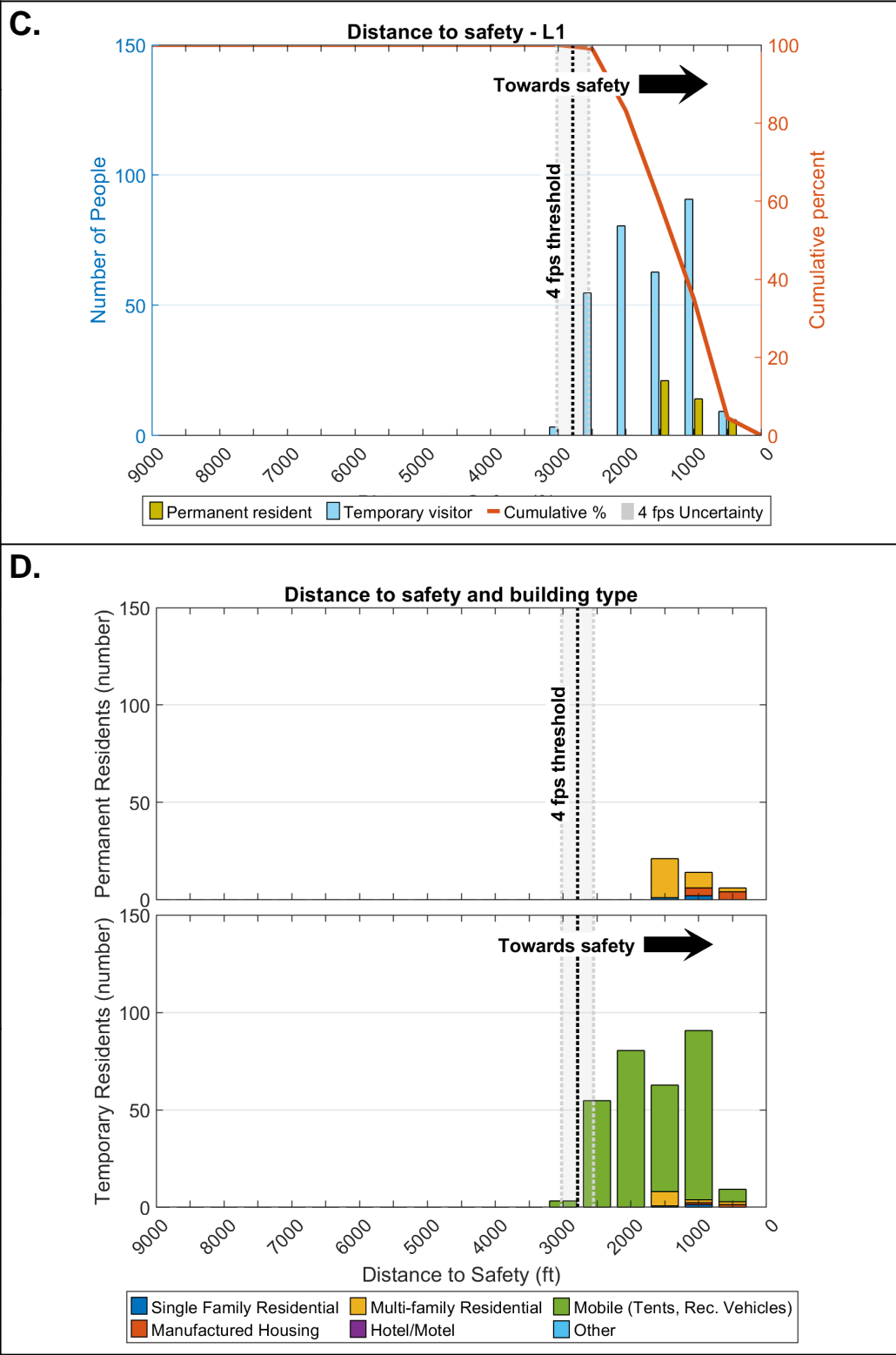
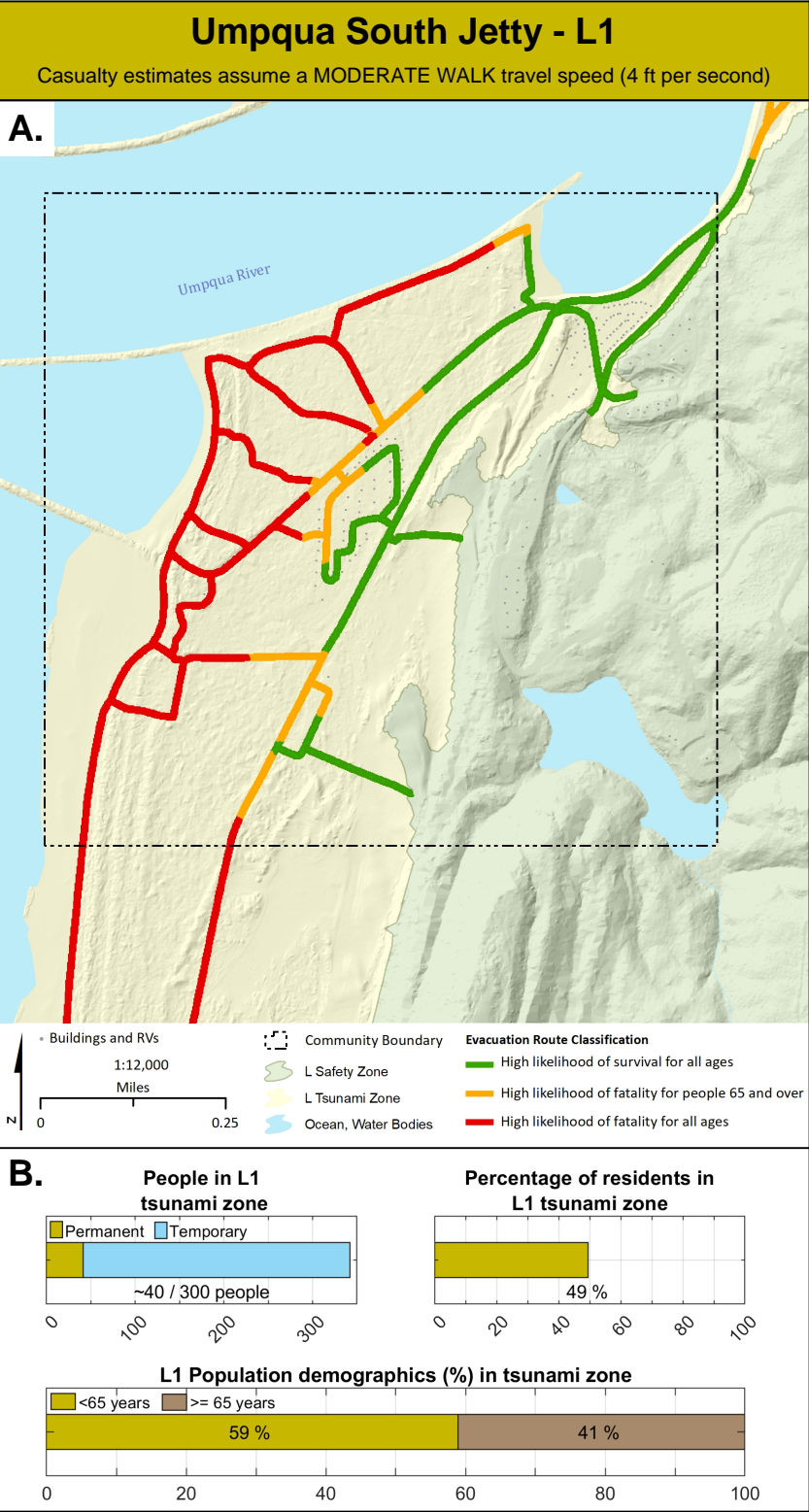


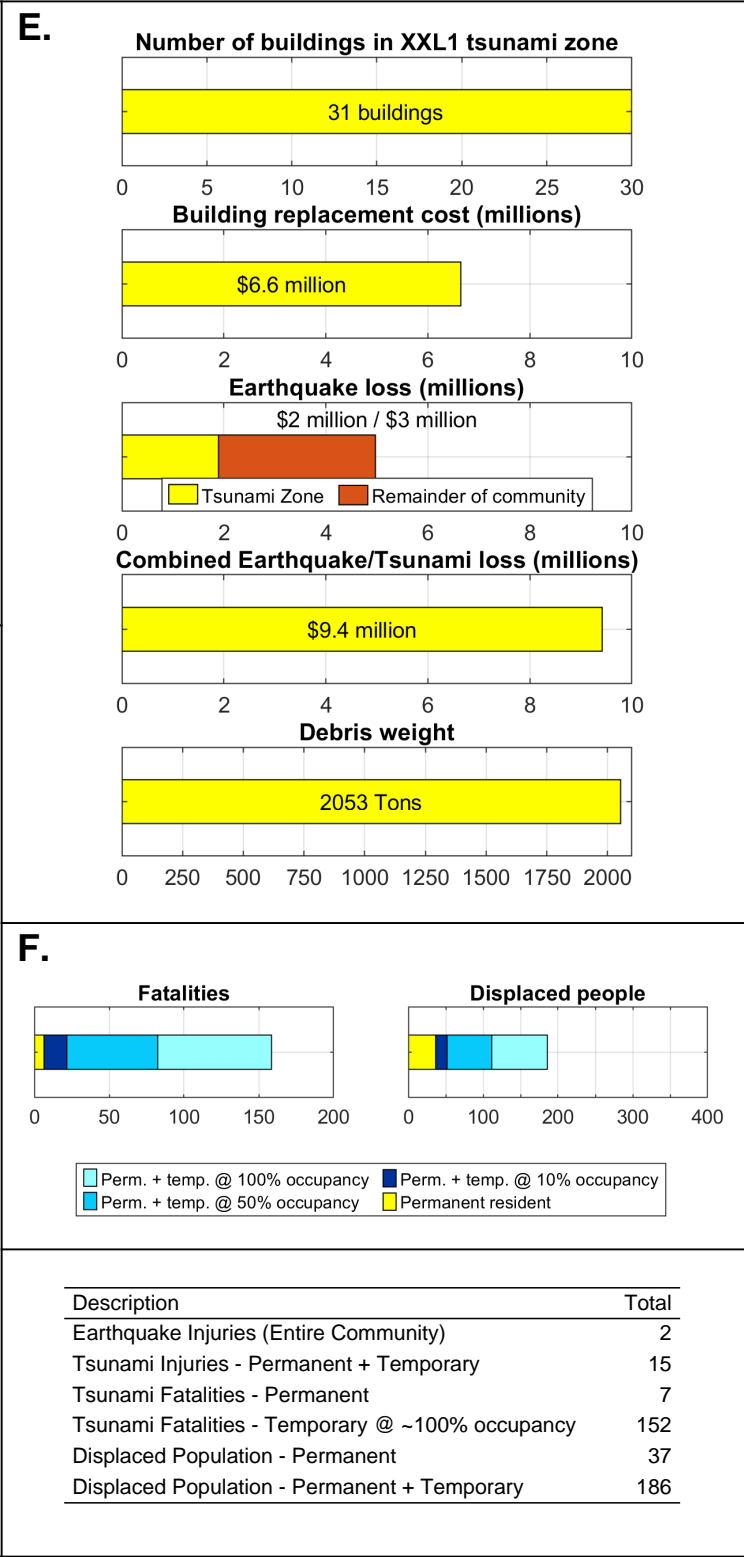
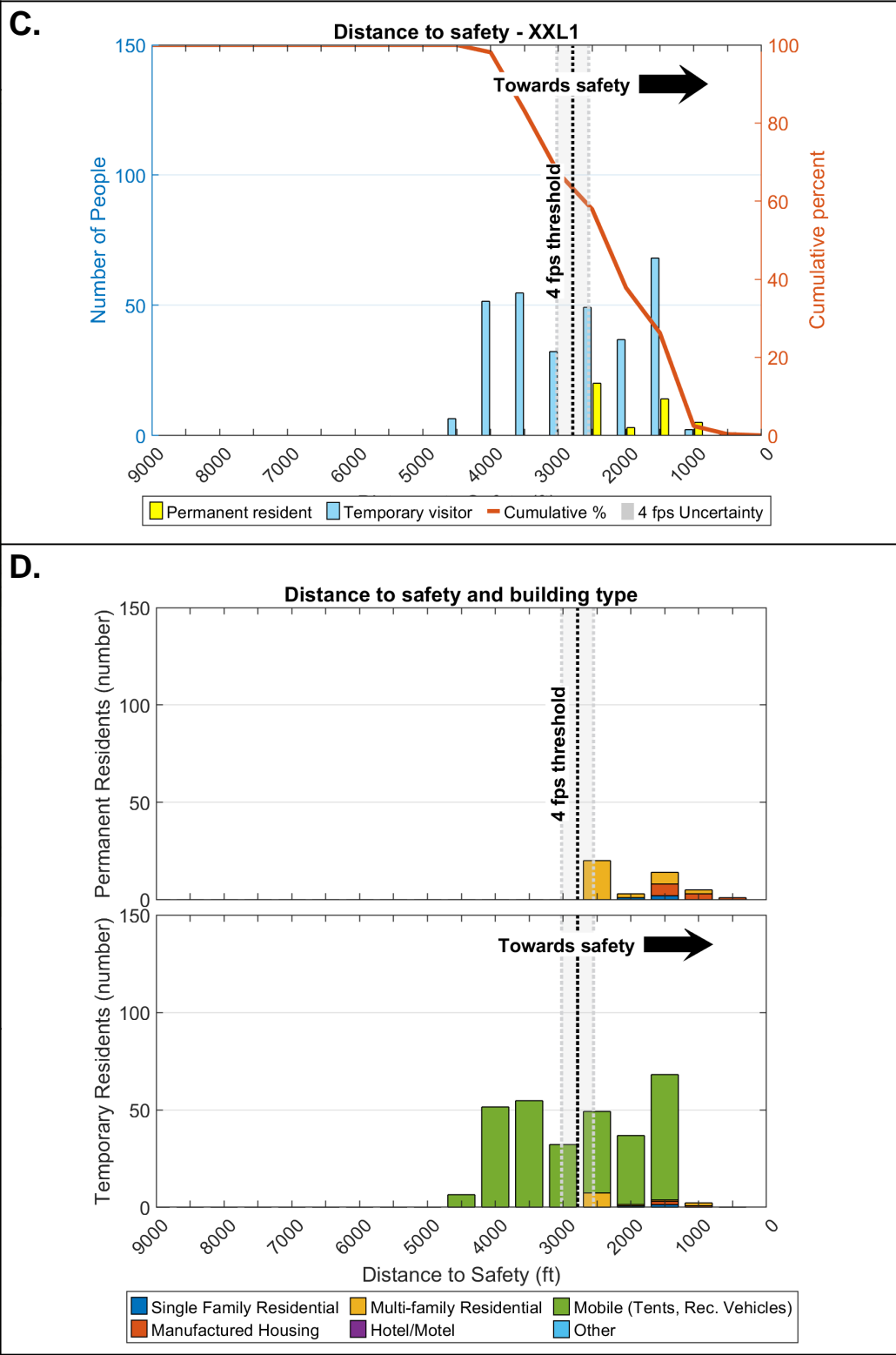
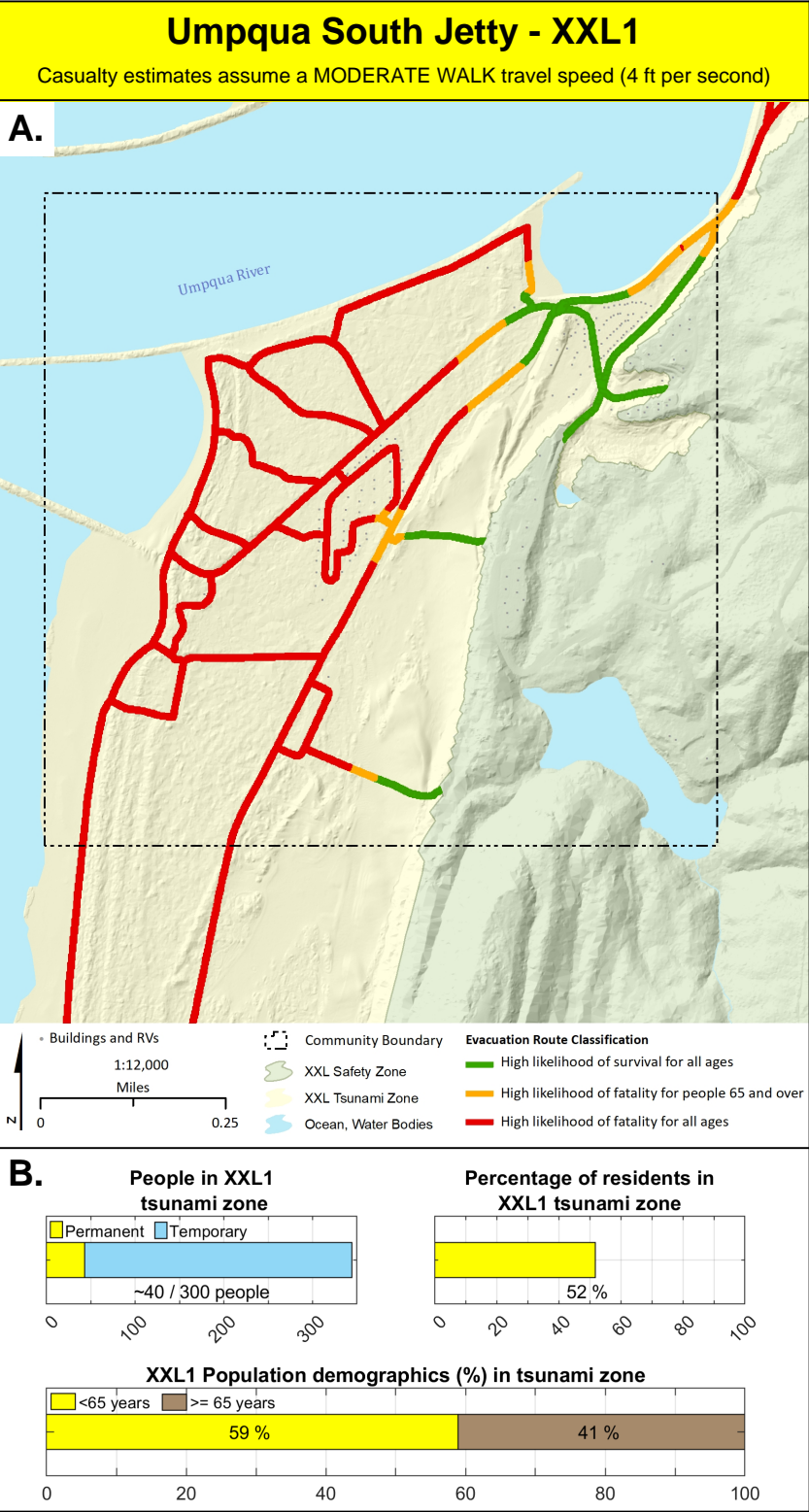








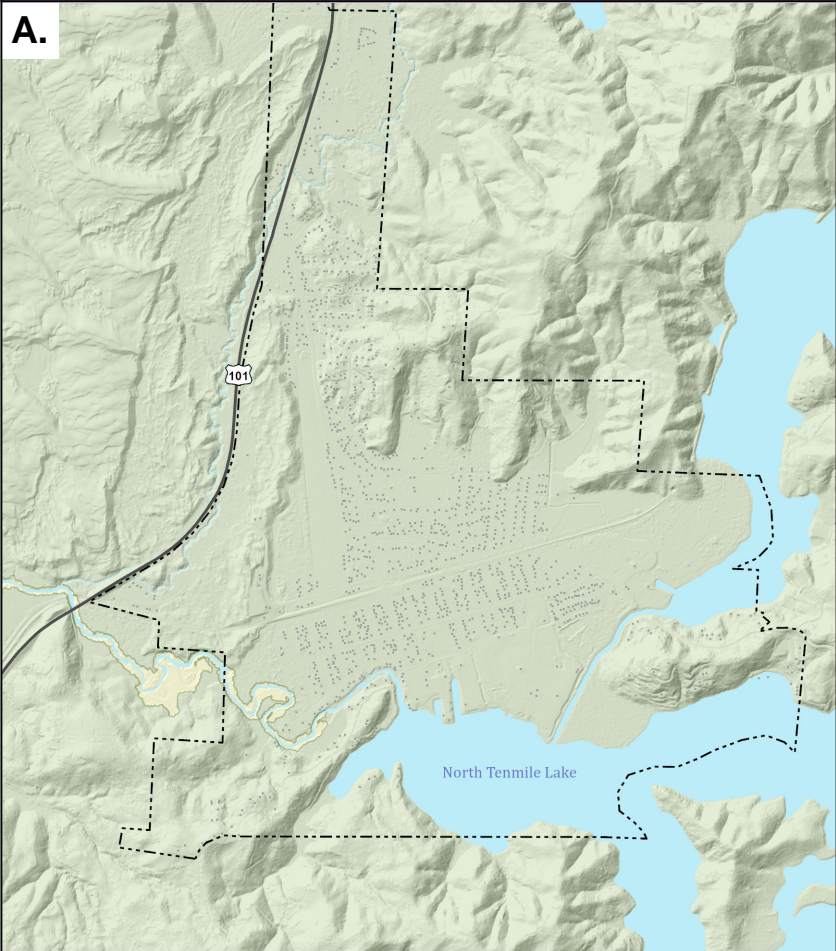




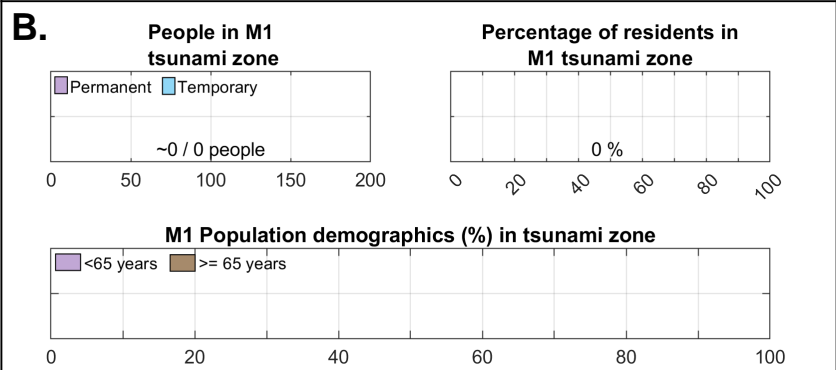
Lakeside - M1

Casualty estimates assume a MODERATE WALK travel speed (4 ft per second)

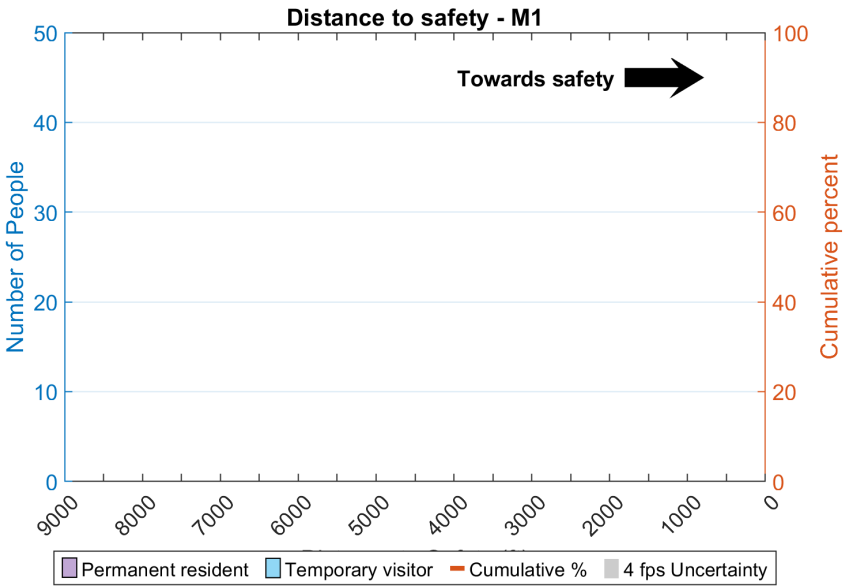
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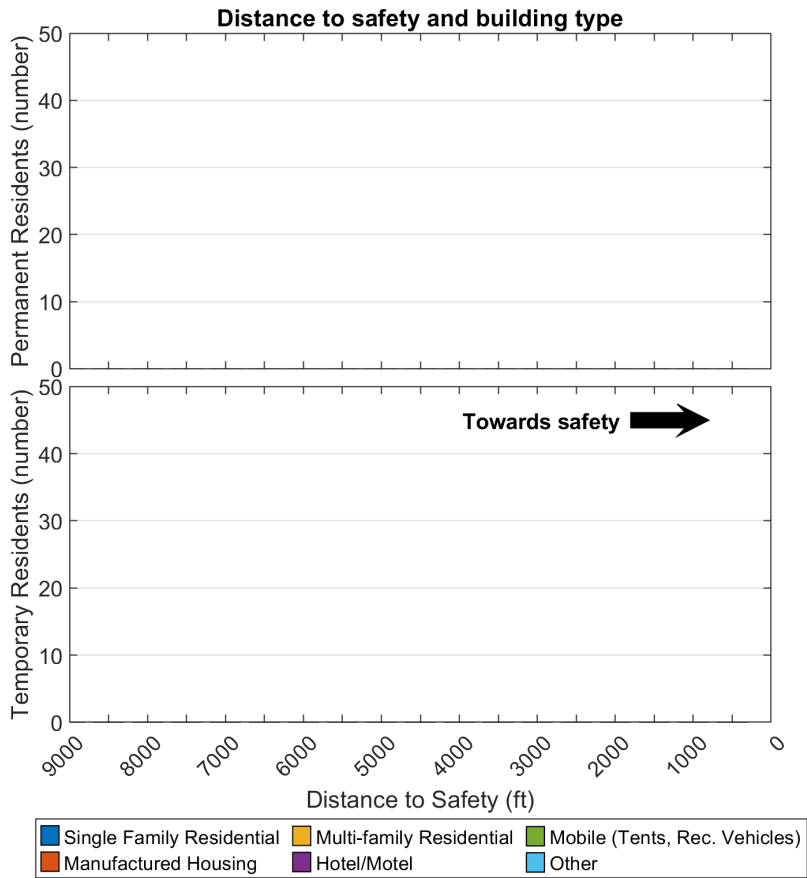
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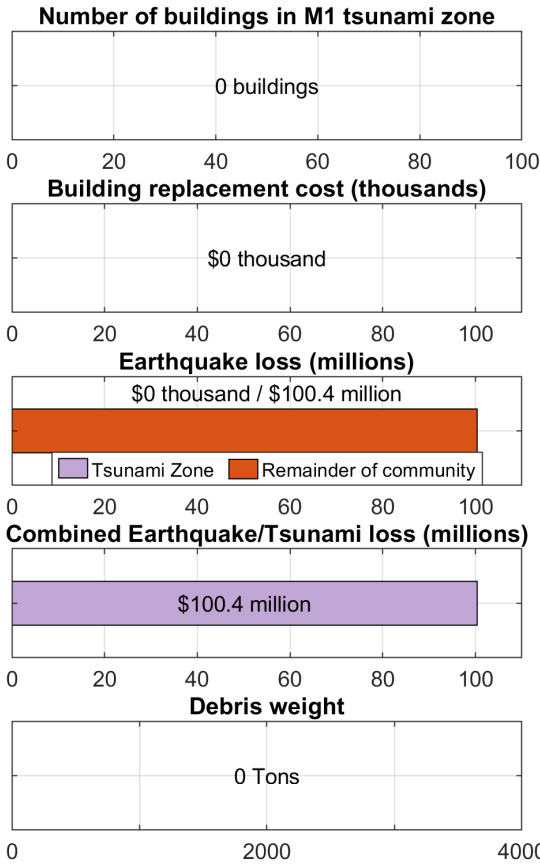
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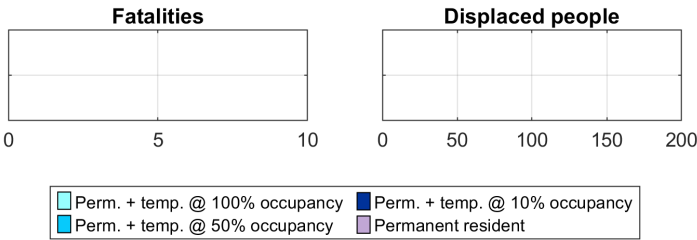
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E.



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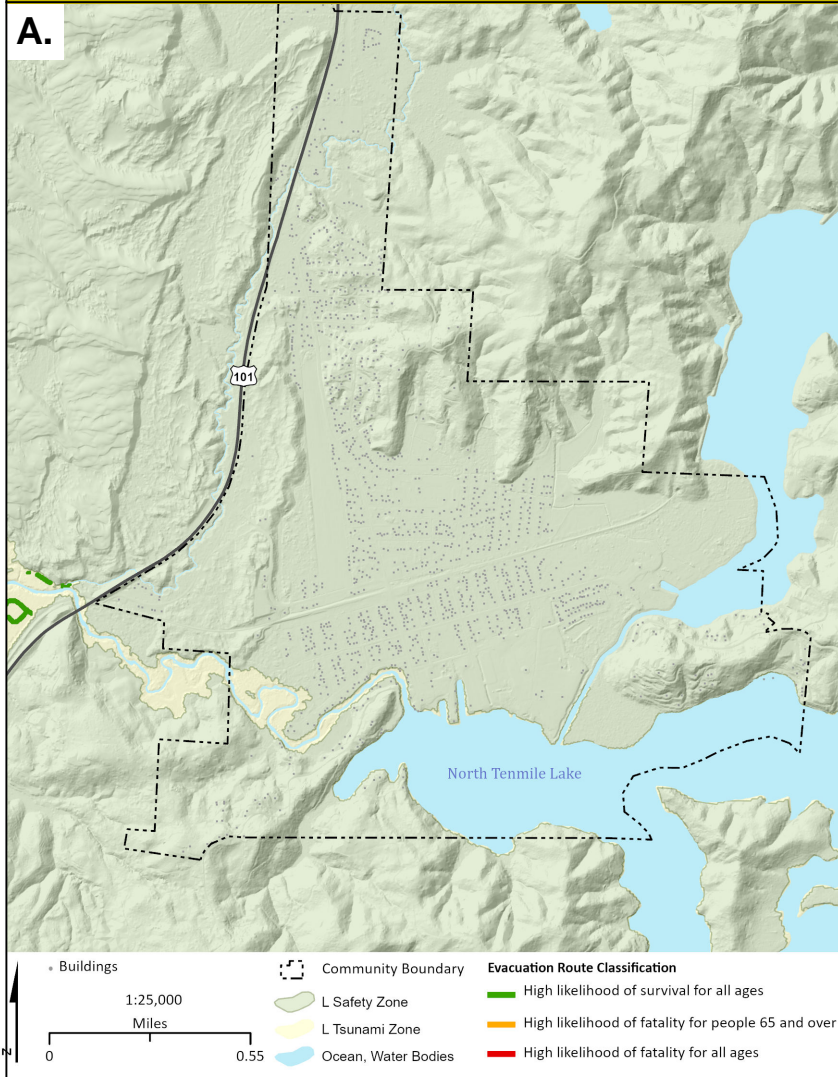


Description	Total
Earthquake Injuries (Entire Community)	76
Tsunami Injuries - Permanent + Temporary	0
Tsunami Fatalities - Permanent	0
Tsunami Fatalities - Temporary @ ~100% occupancy	0
Displaced Population - Permanent	0
Displaced Population - Permanent + Temporary	0

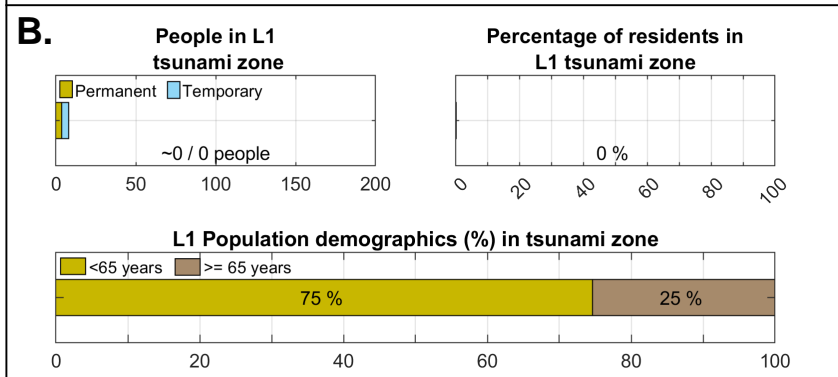
Lakeside - L1

Casualty estimates assume a MODERATE WALK travel speed (4 ft per second)

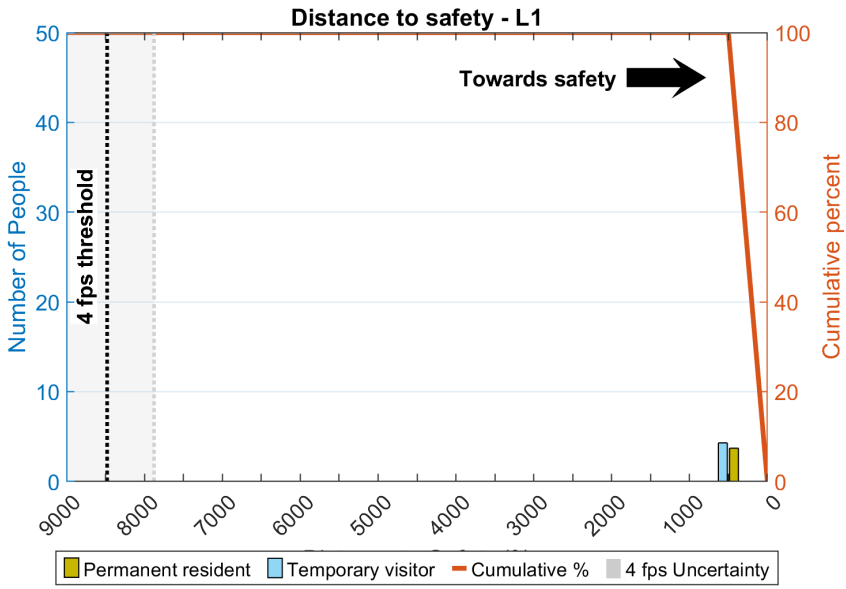
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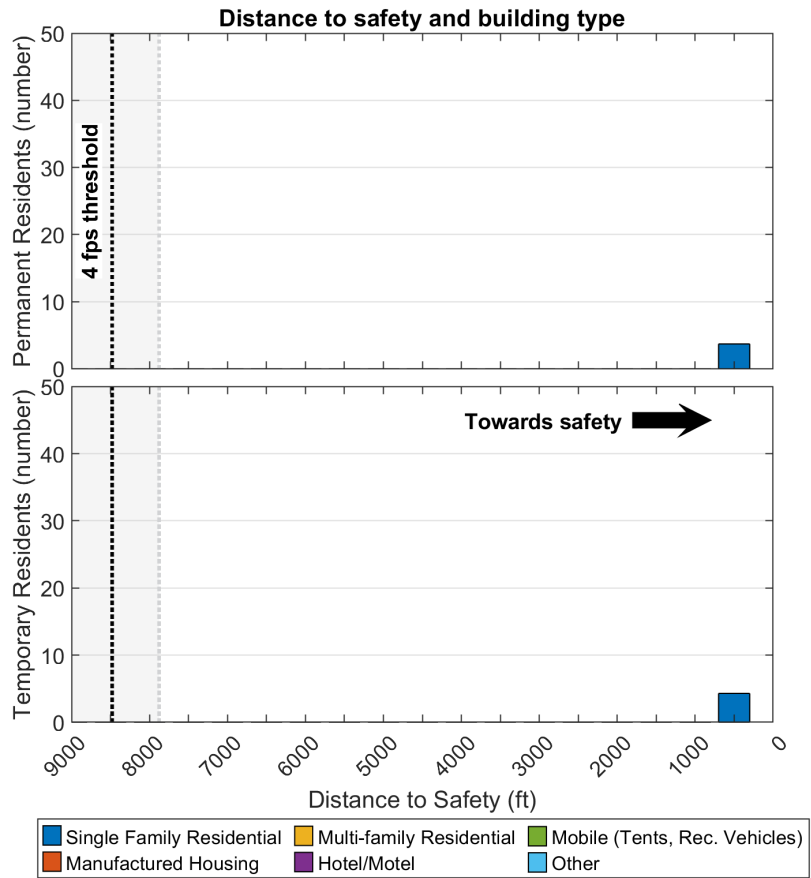
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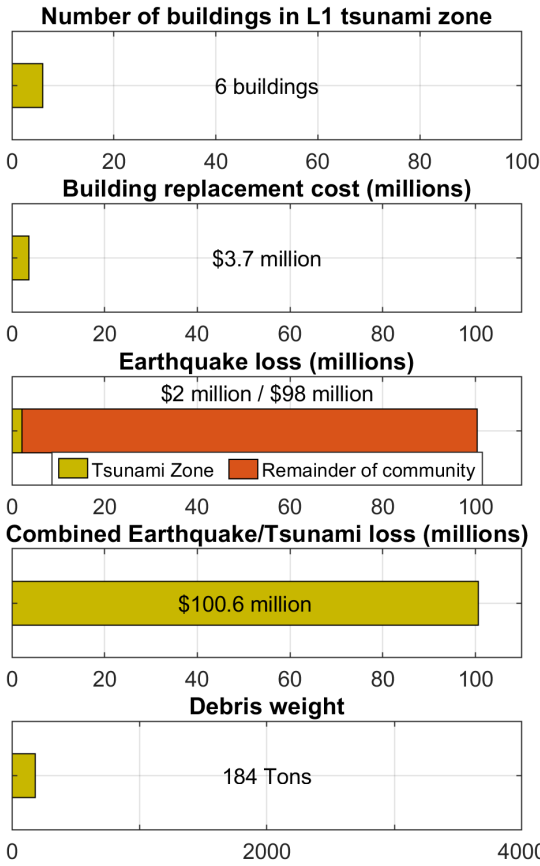
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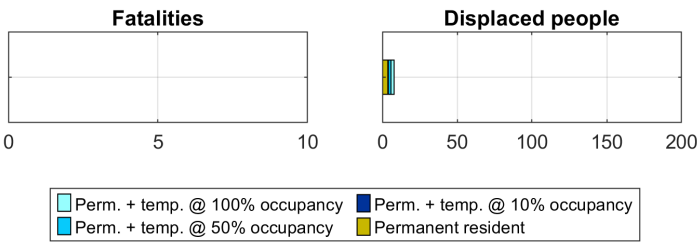
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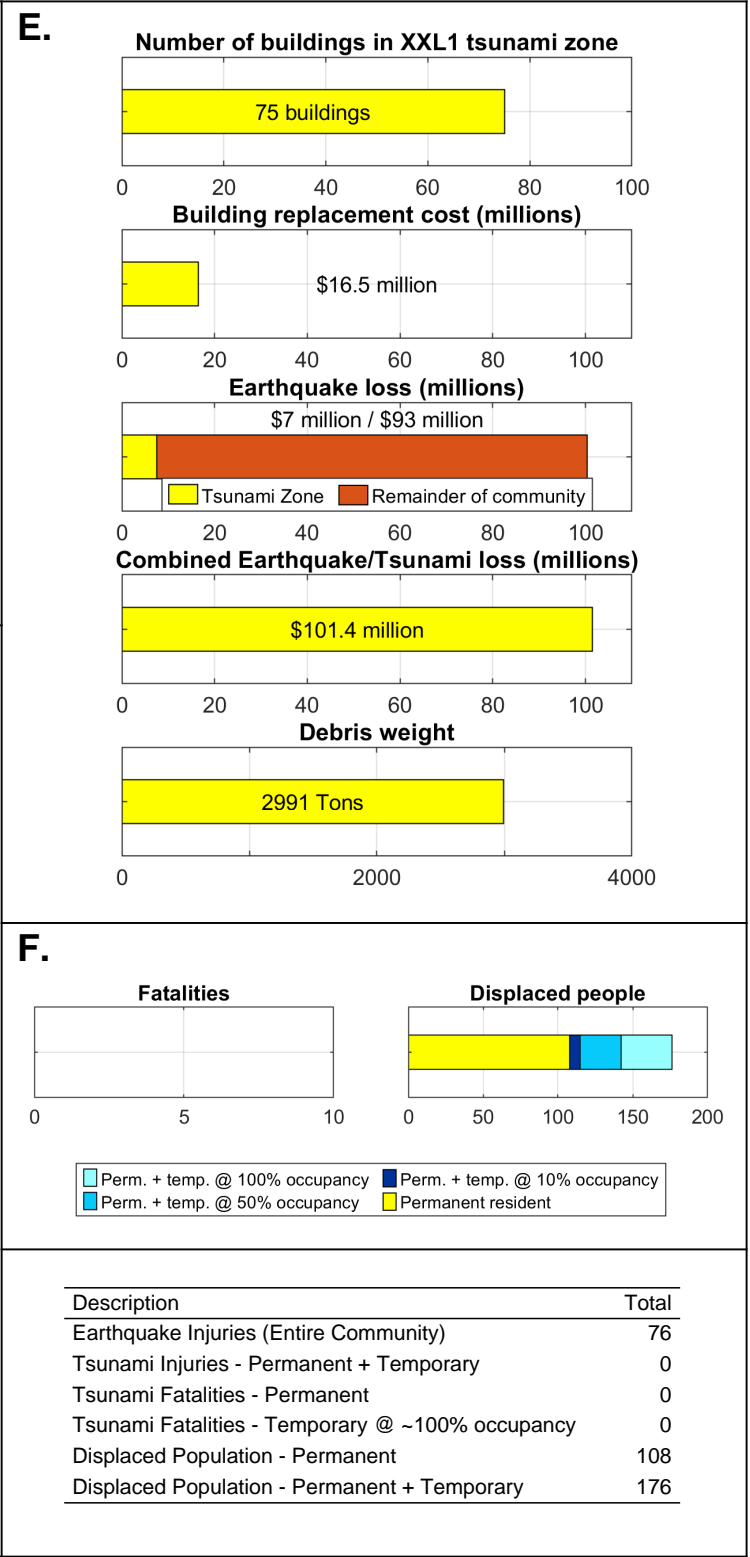
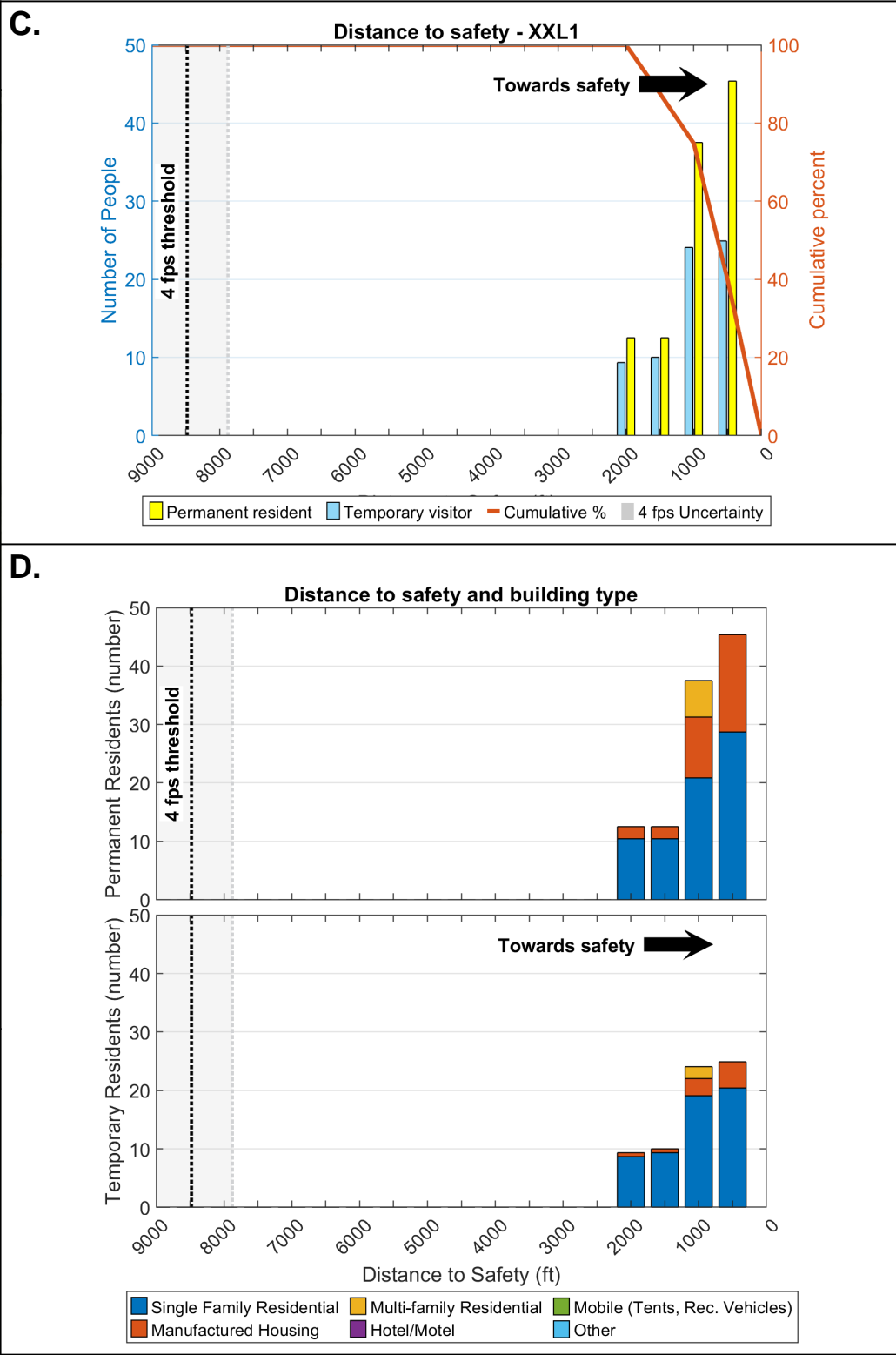
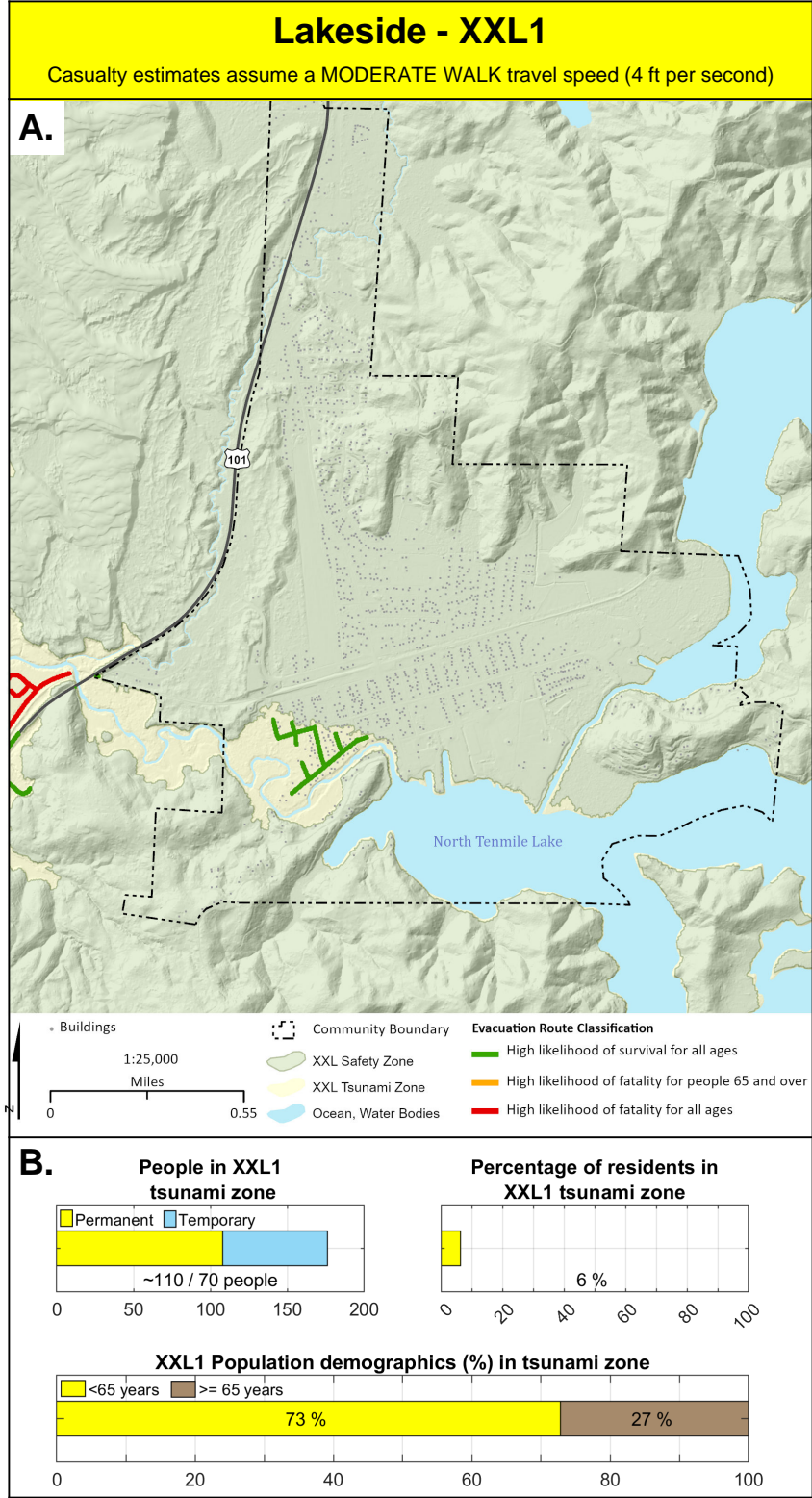
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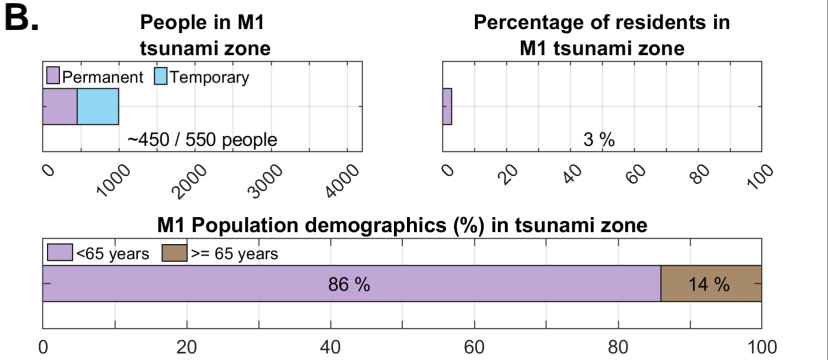
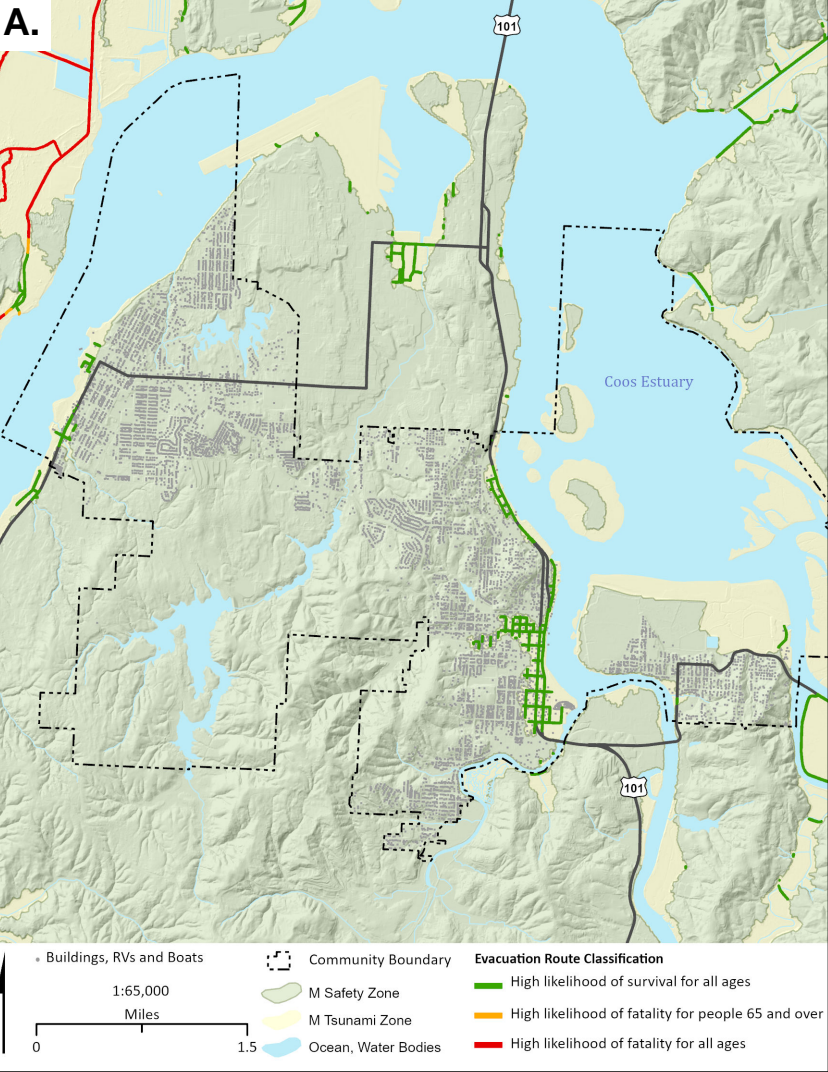


Description	Total
Earthquake Injuries (Entire Community)	76
Tsunami Injuries - Permanent + Temporary	0
Tsunami Fatalities - Permanent	0
Tsunami Fatalities - Temporary @ ~100% occupancy	0
Displaced Population - Permanent	4
Displaced Population - Permanent + Temporary	8

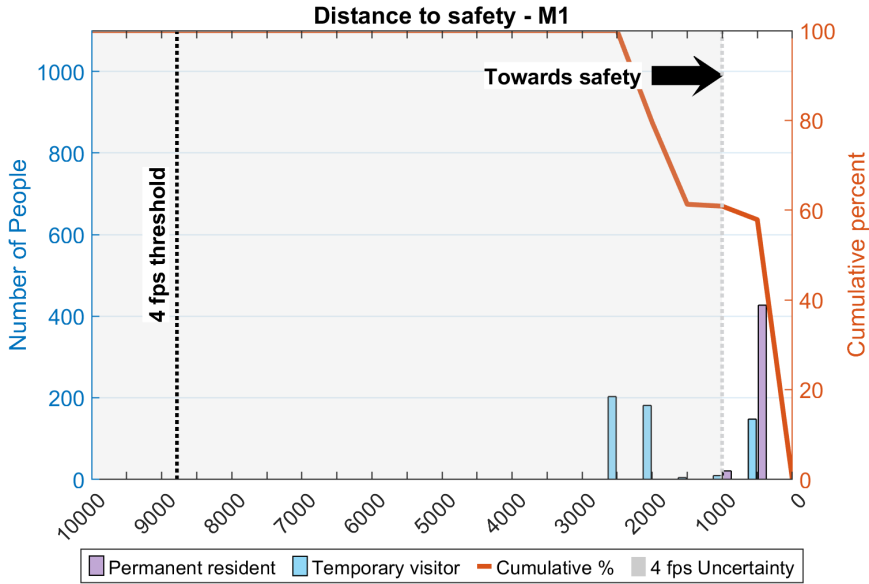


Coos Bay - M1

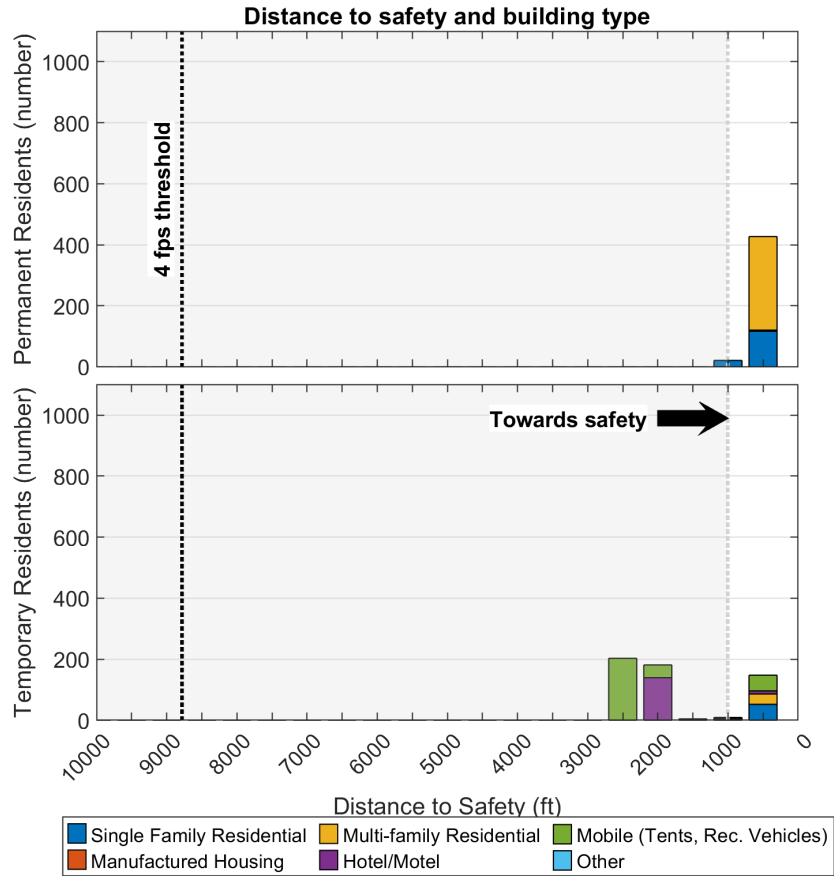
Casualty estimates assume a MODERATE WALK travel speed (4 ft per second)



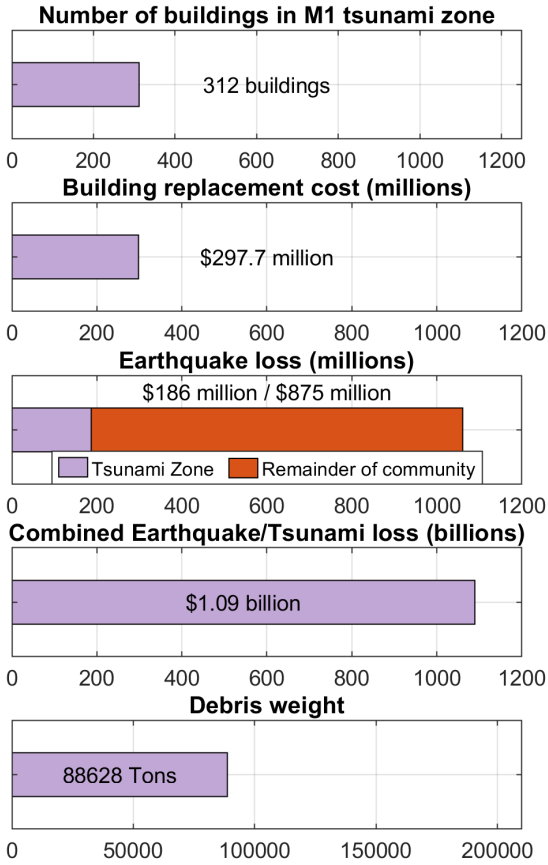
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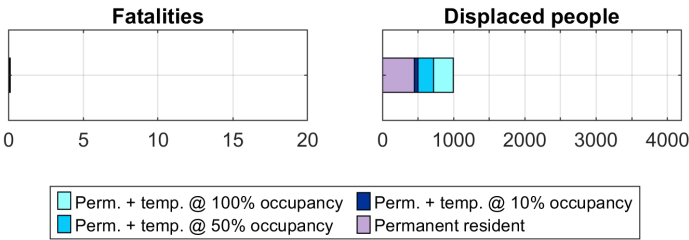
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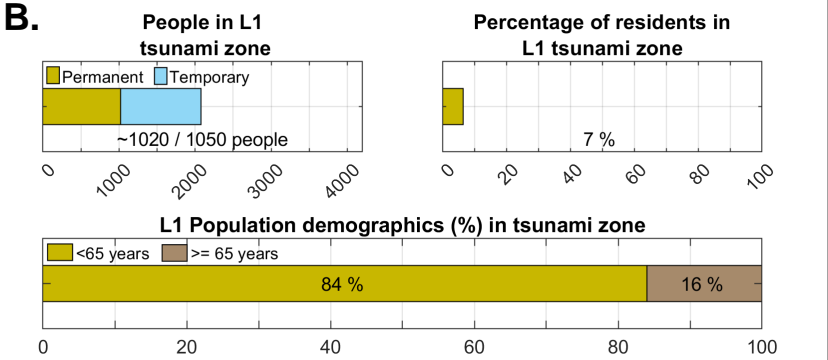
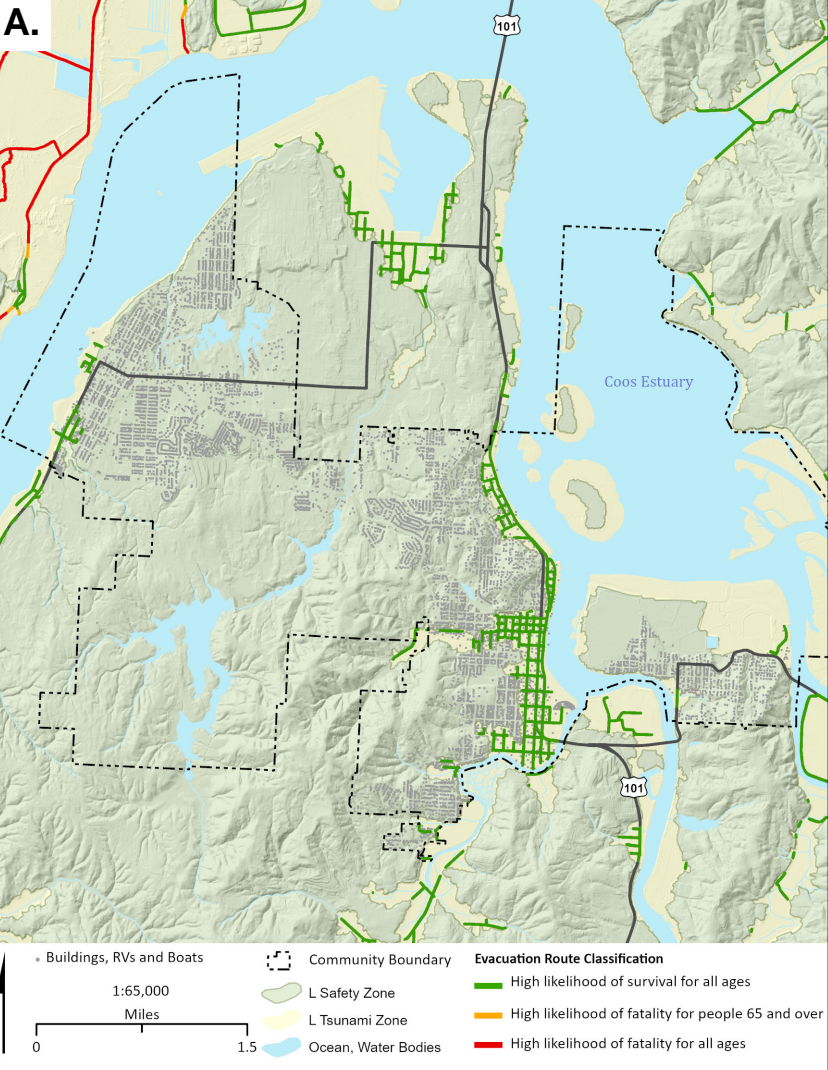
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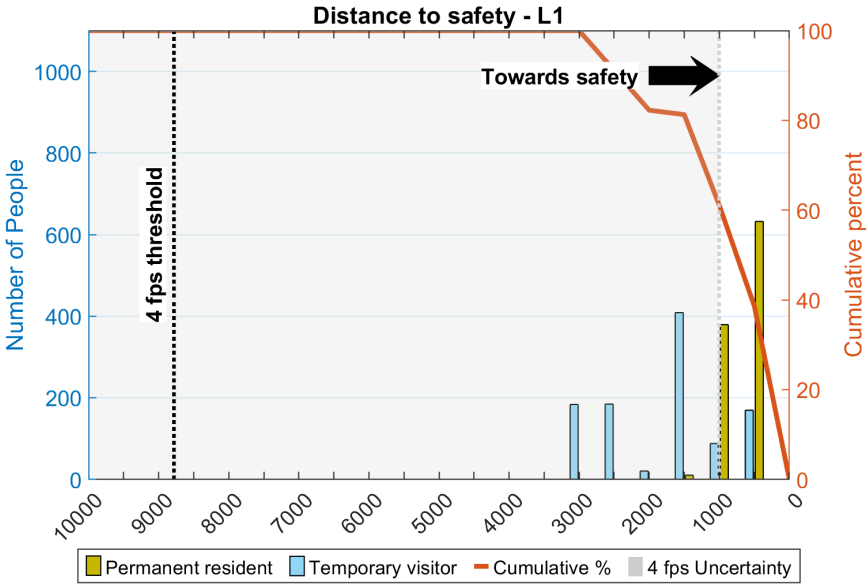
Description	Total
Earthquake Injuries (Entire Community)	441
Tsunami Injuries - Permanent + Temporary	0
Tsunami Fatalities - Permanent	0
Tsunami Fatalities - Temporary @ ~100% occupancy	0
Displaced Population - Permanent	448
Displaced Population - Permanent + Temporary	993

Coos Bay - L1

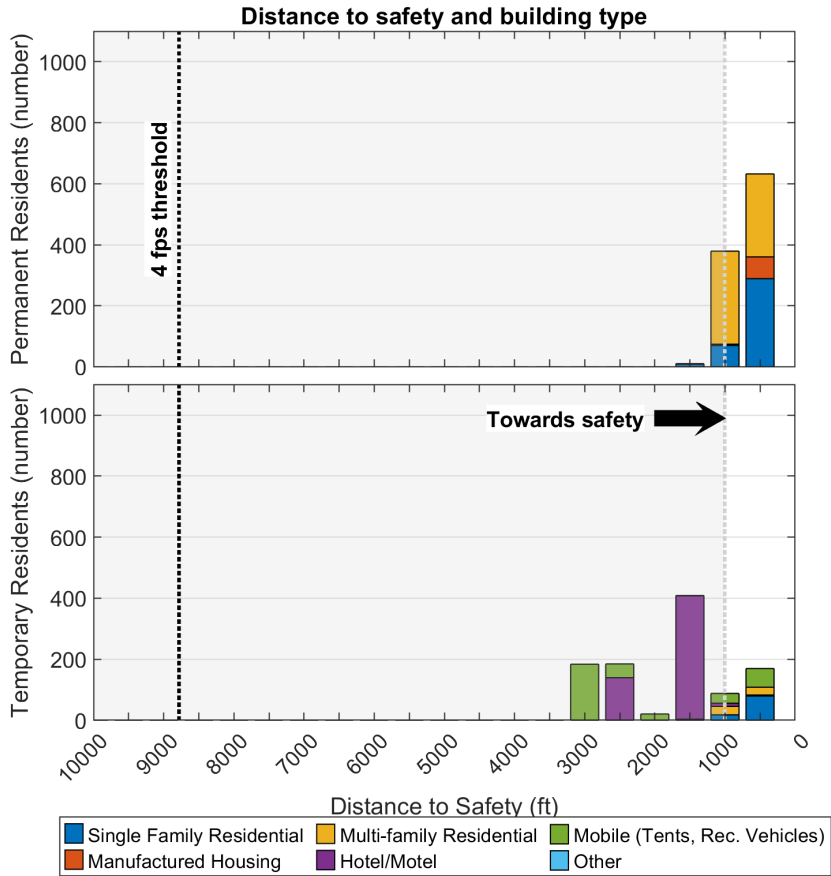
Casualty estimates assume a MODERATE WALK travel speed (4 ft per second)



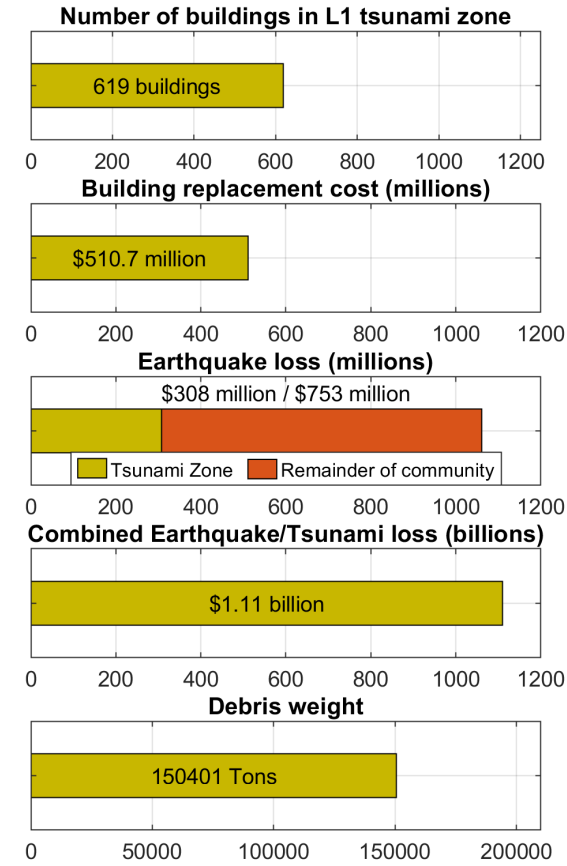
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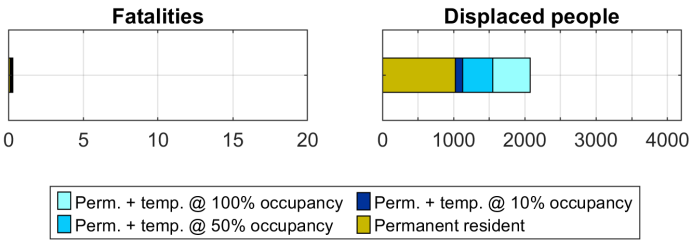
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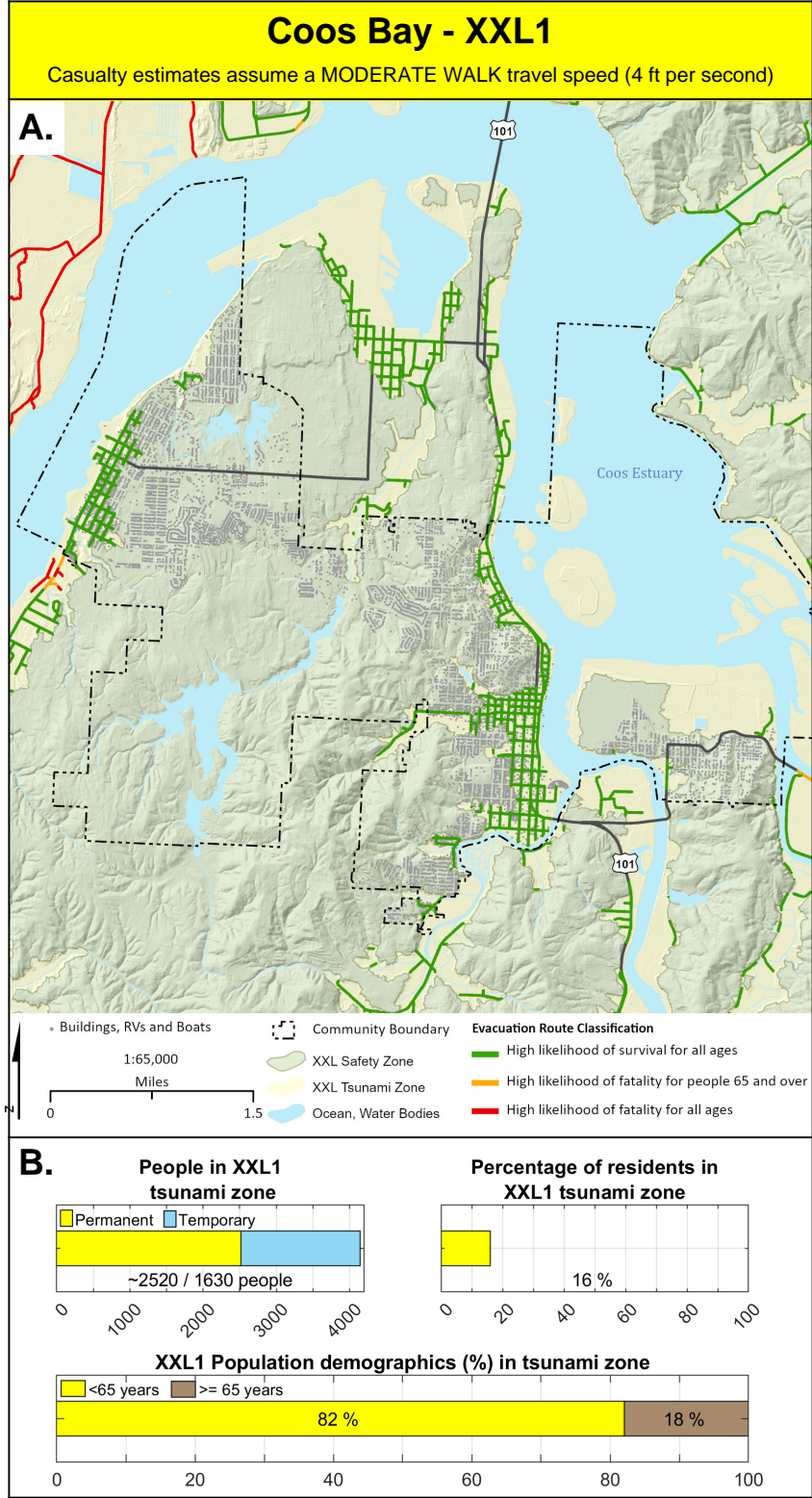
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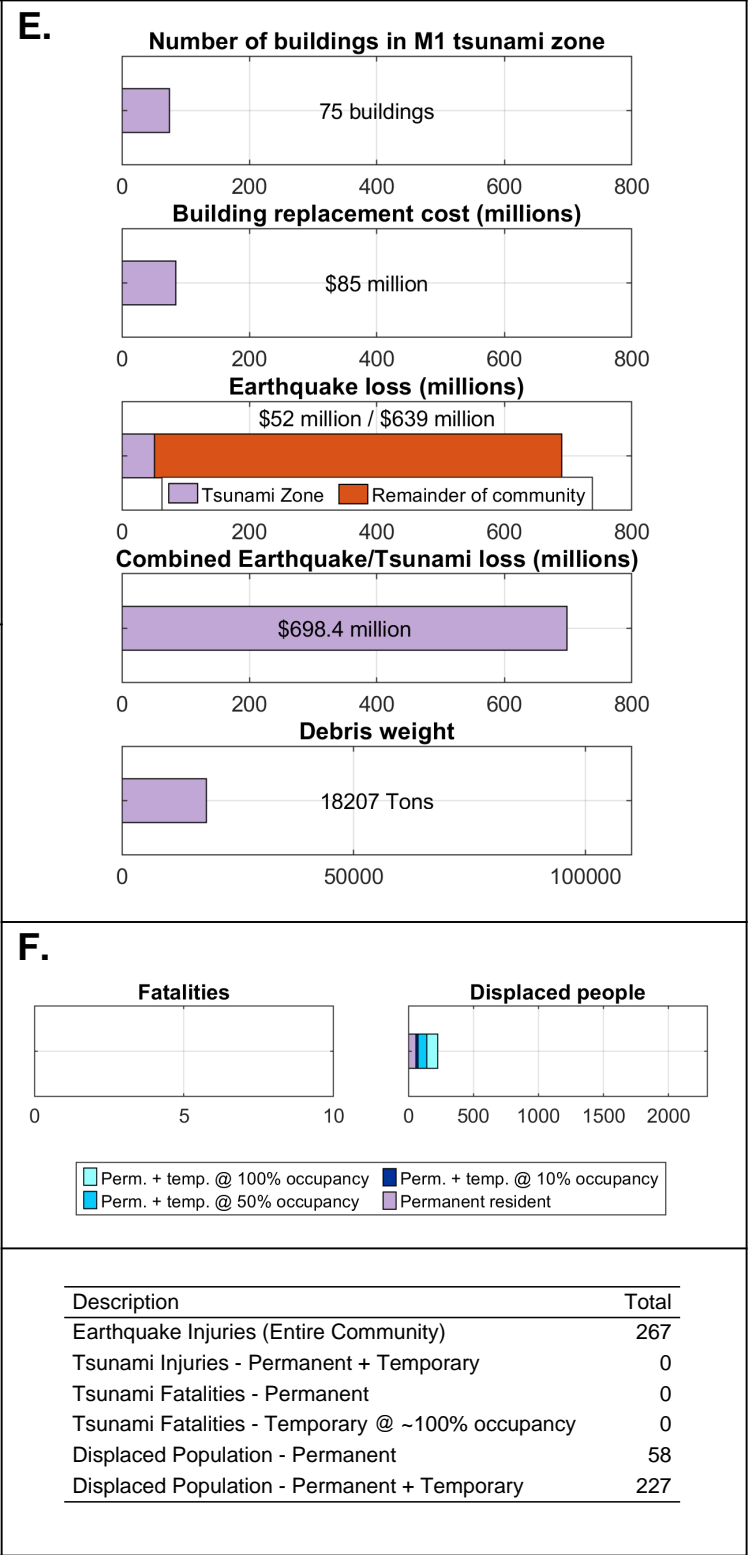
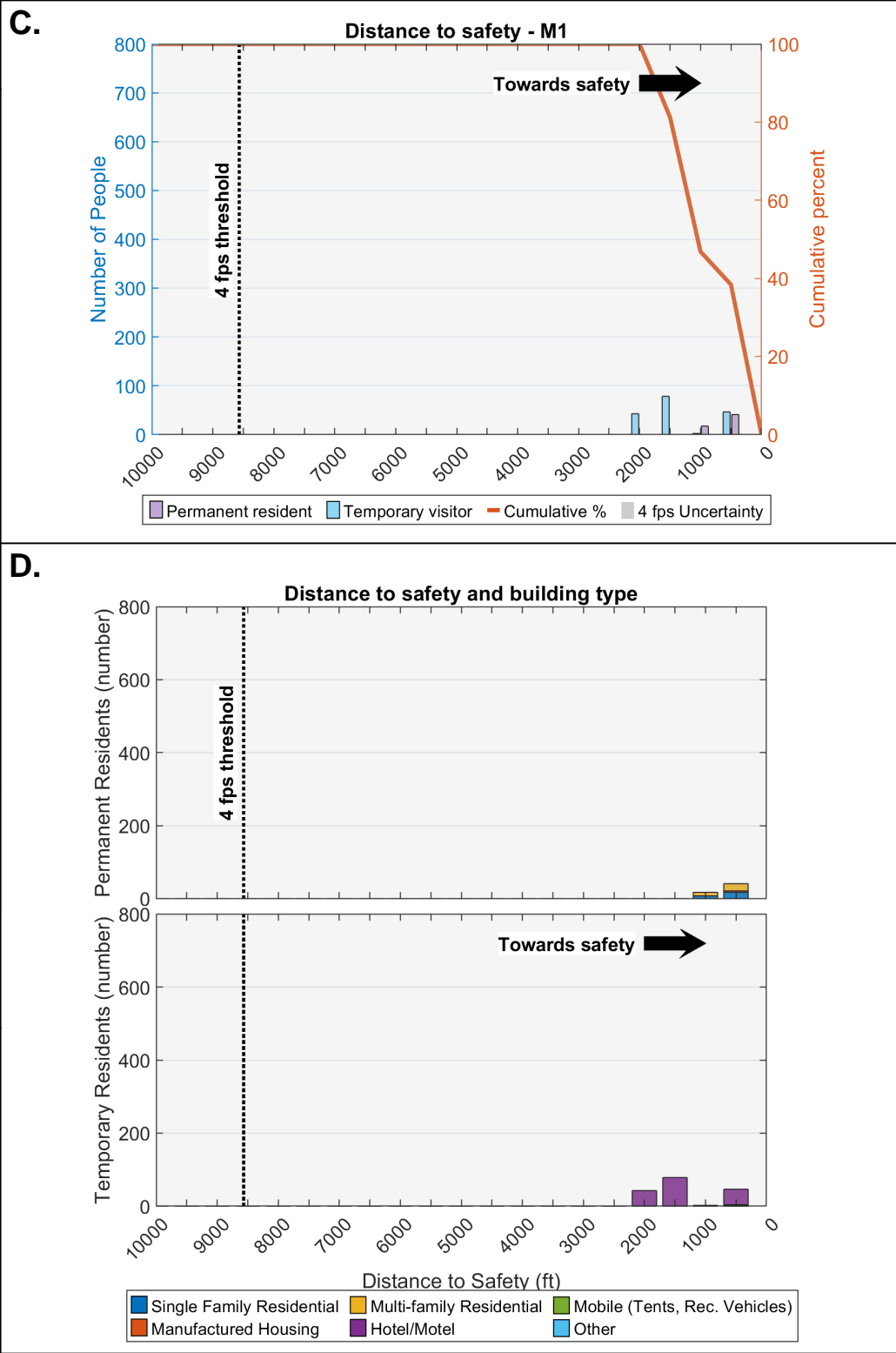
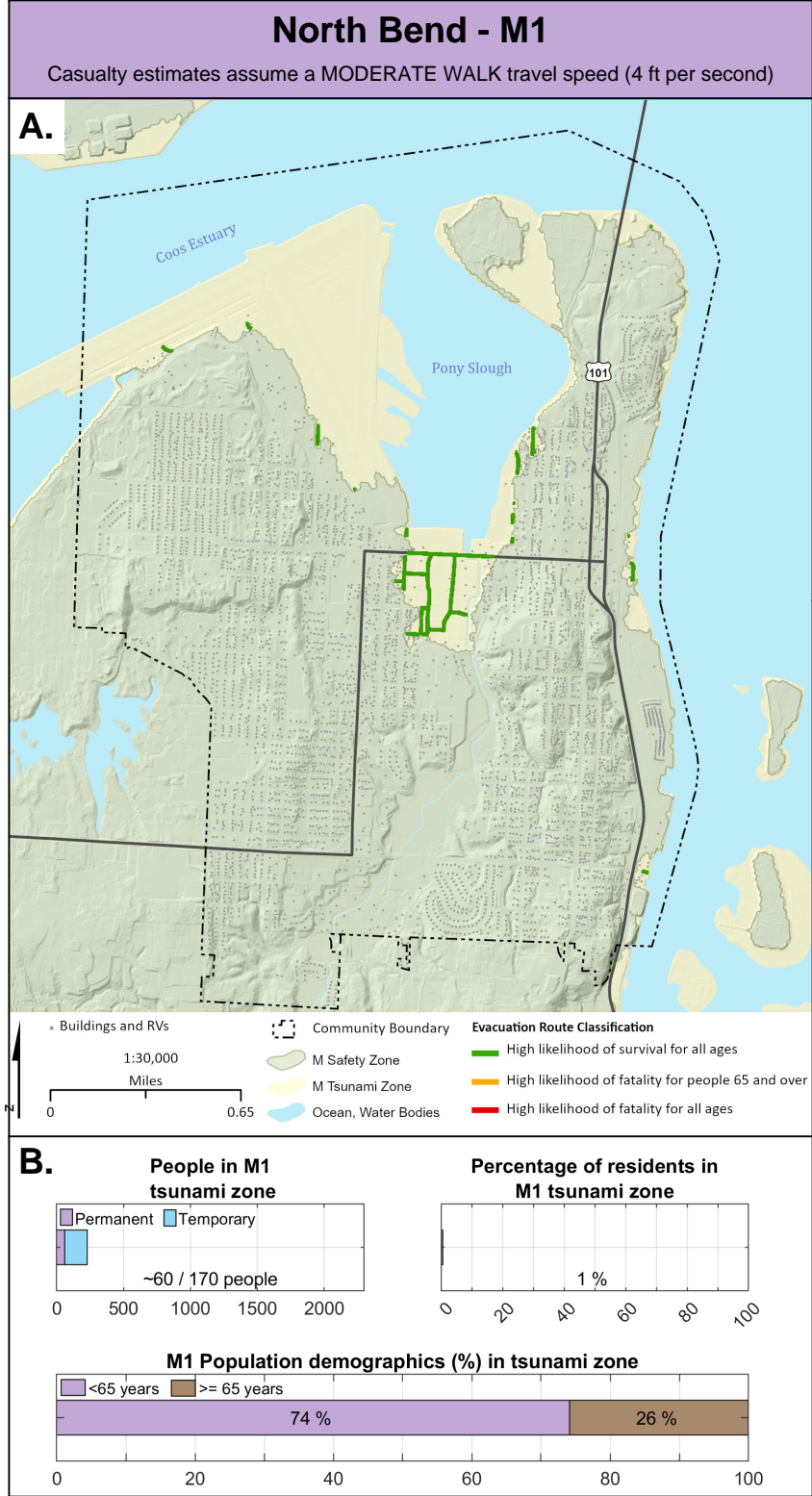


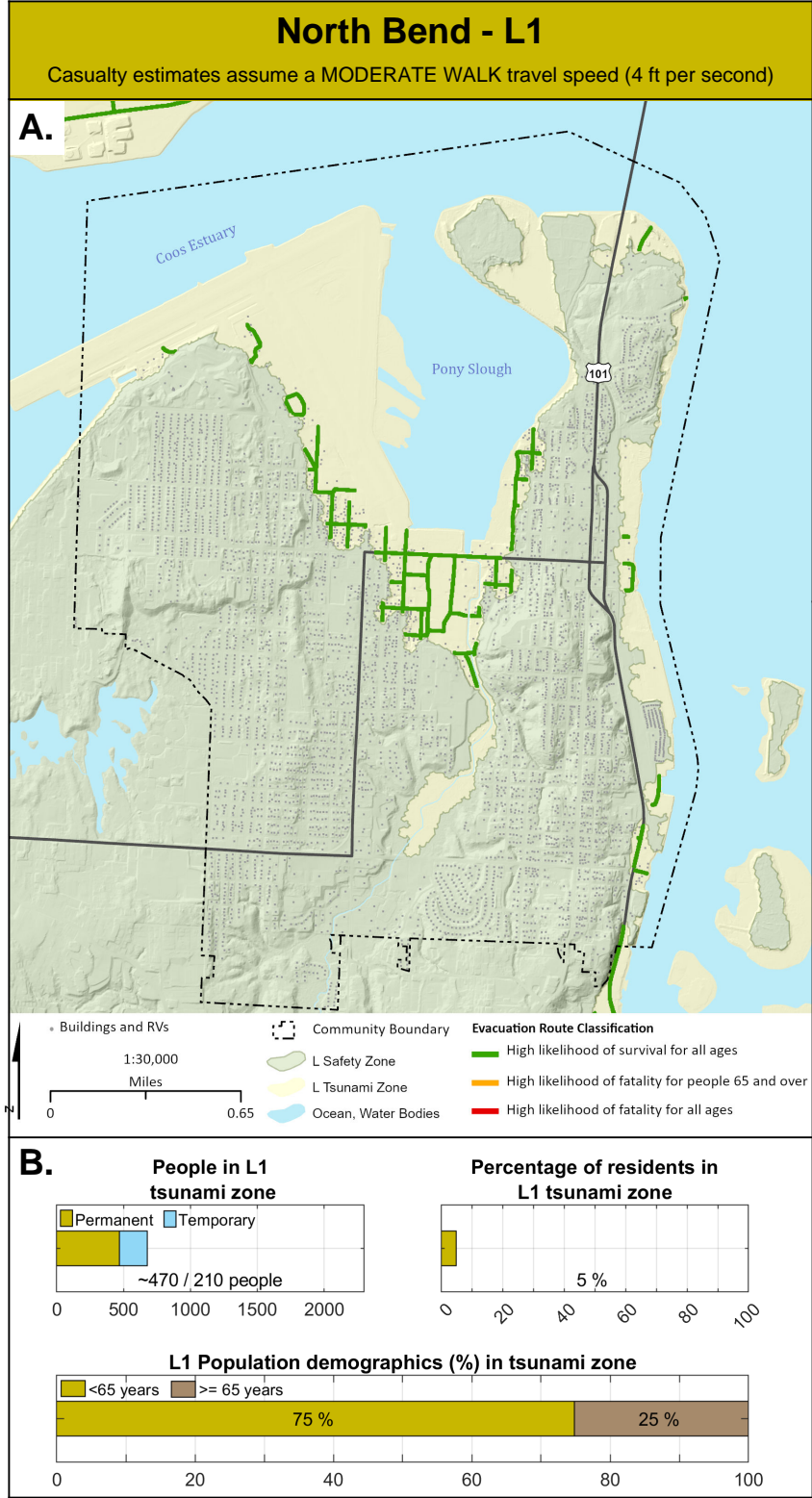
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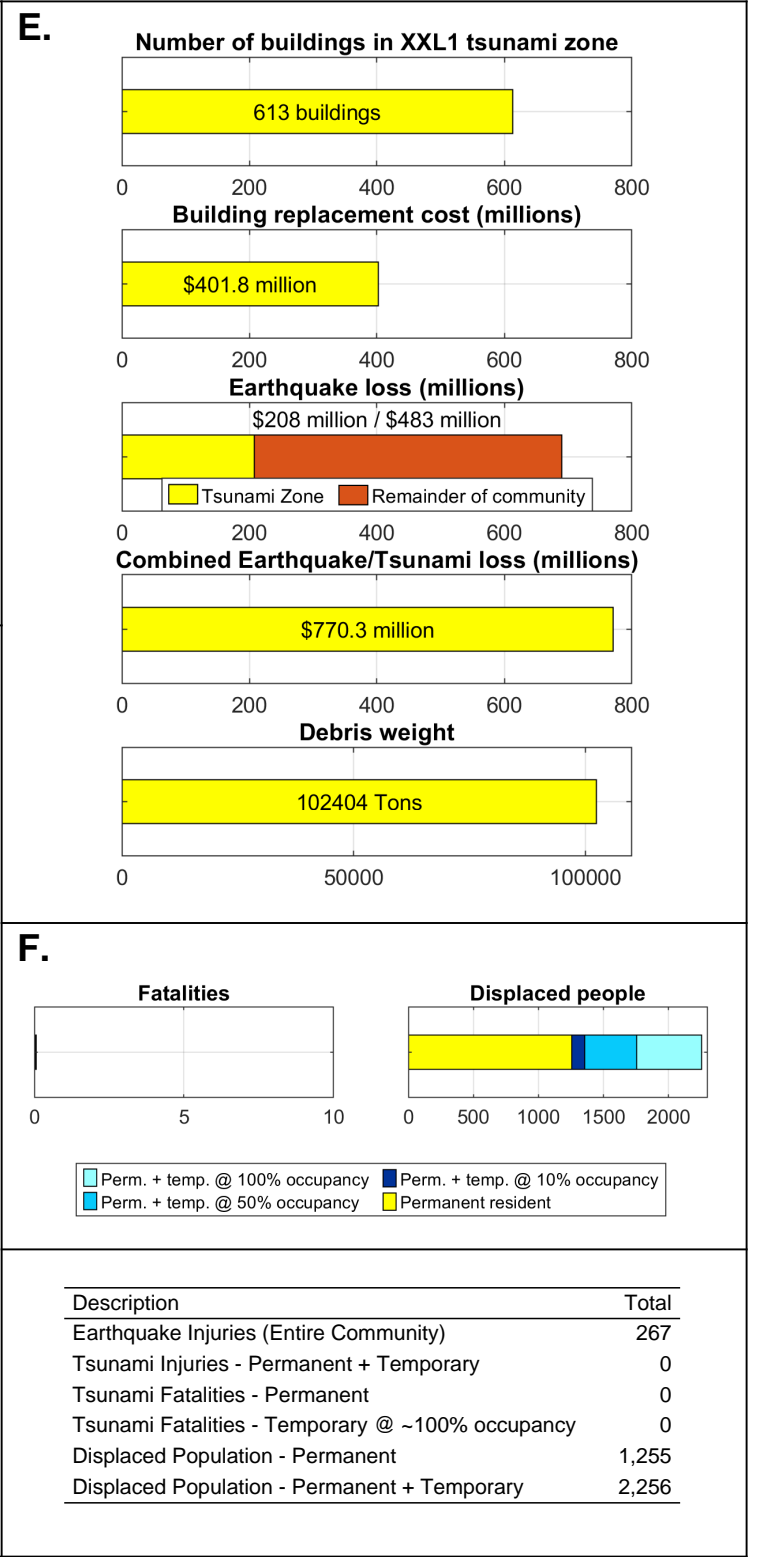
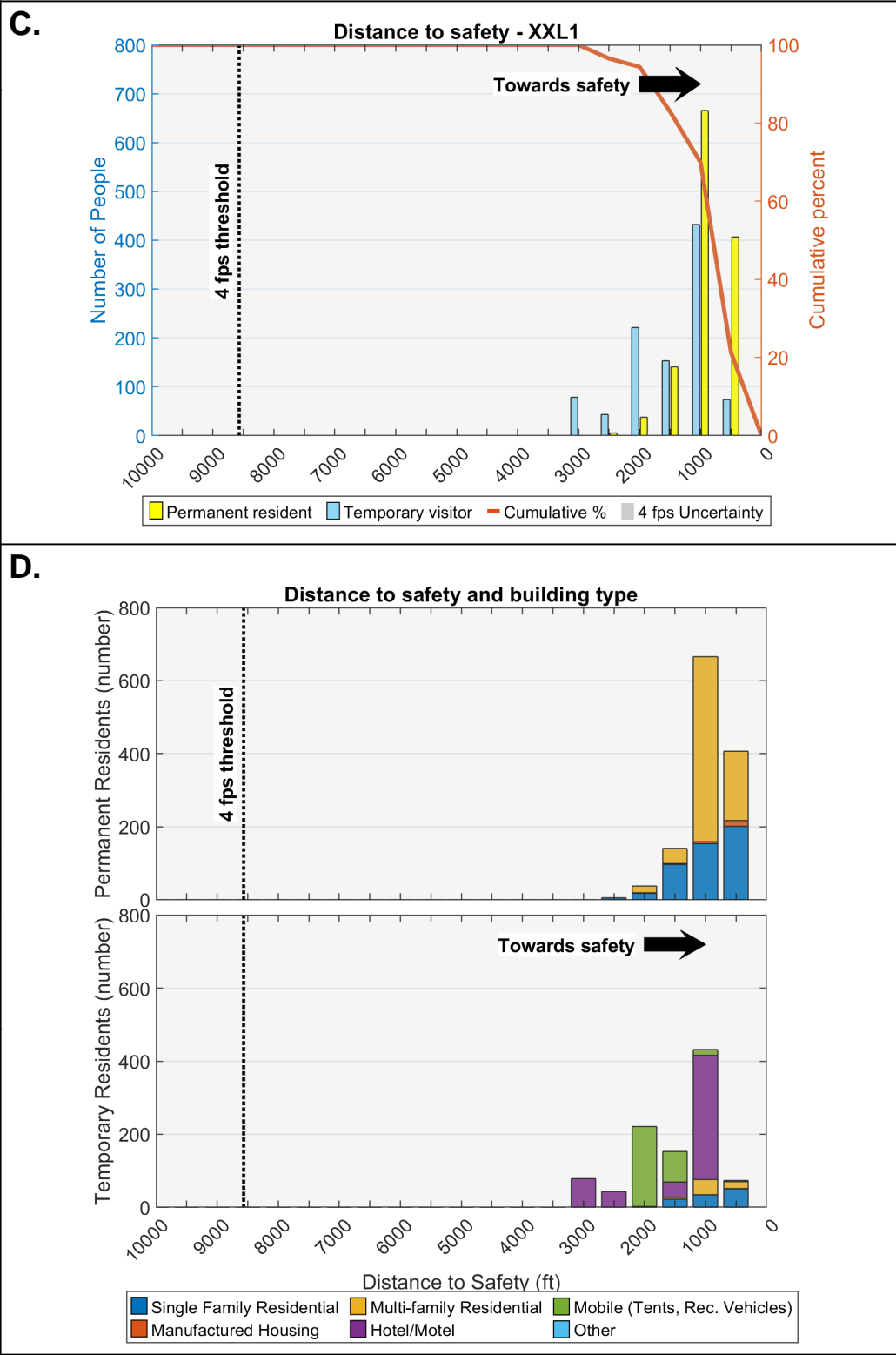
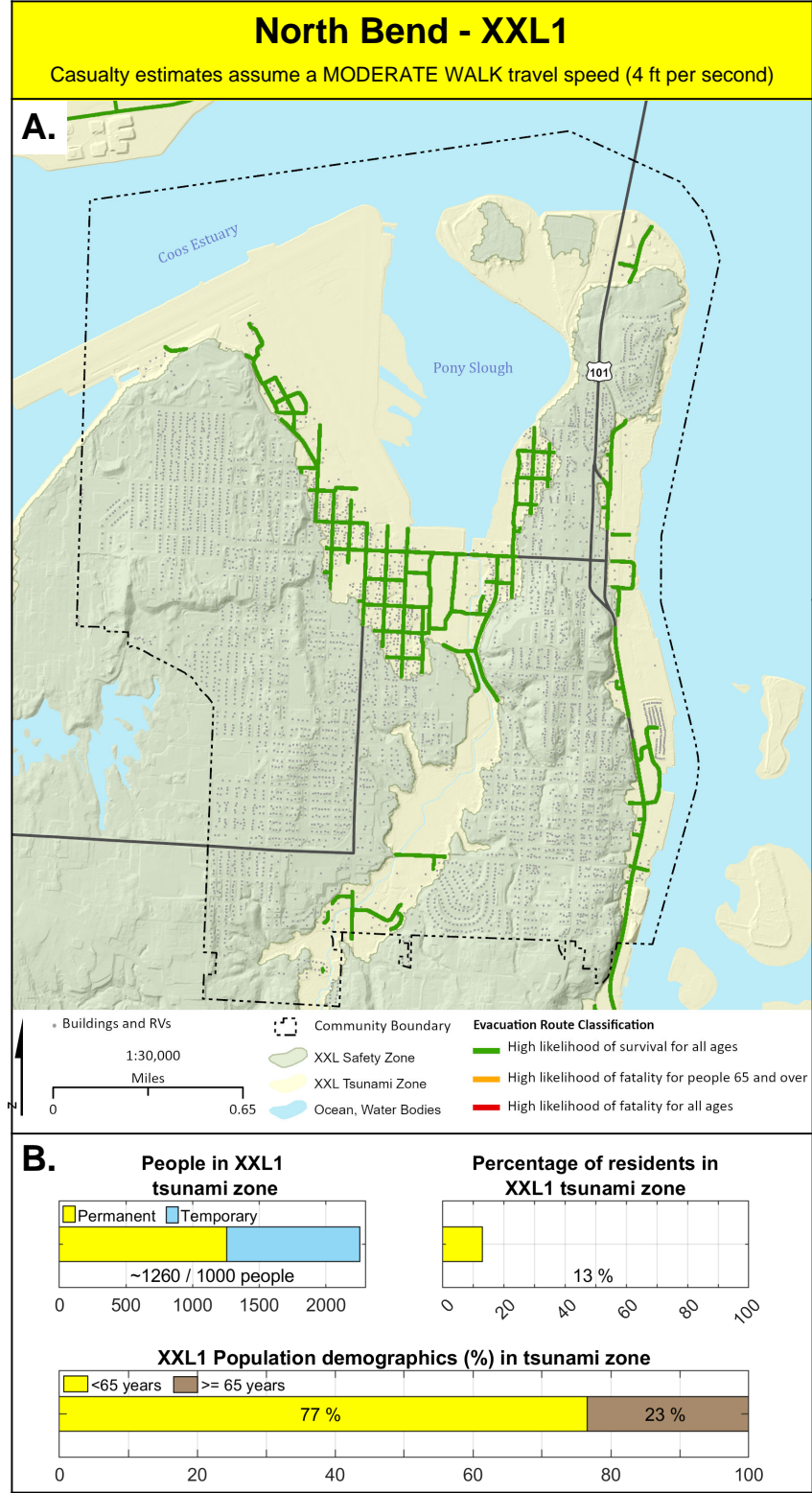


Description	Total
Earthquake Injuries (Entire Community)	441
Tsunami Injuries - Permanent + Temporary	0
Tsunami Fatalities - Permanent	0
Tsunami Fatalities - Temporary @ ~100% occupancy	0
Displaced Population - Permanent	1,021
Displaced Population - Permanent + Temporary	2,075









F.

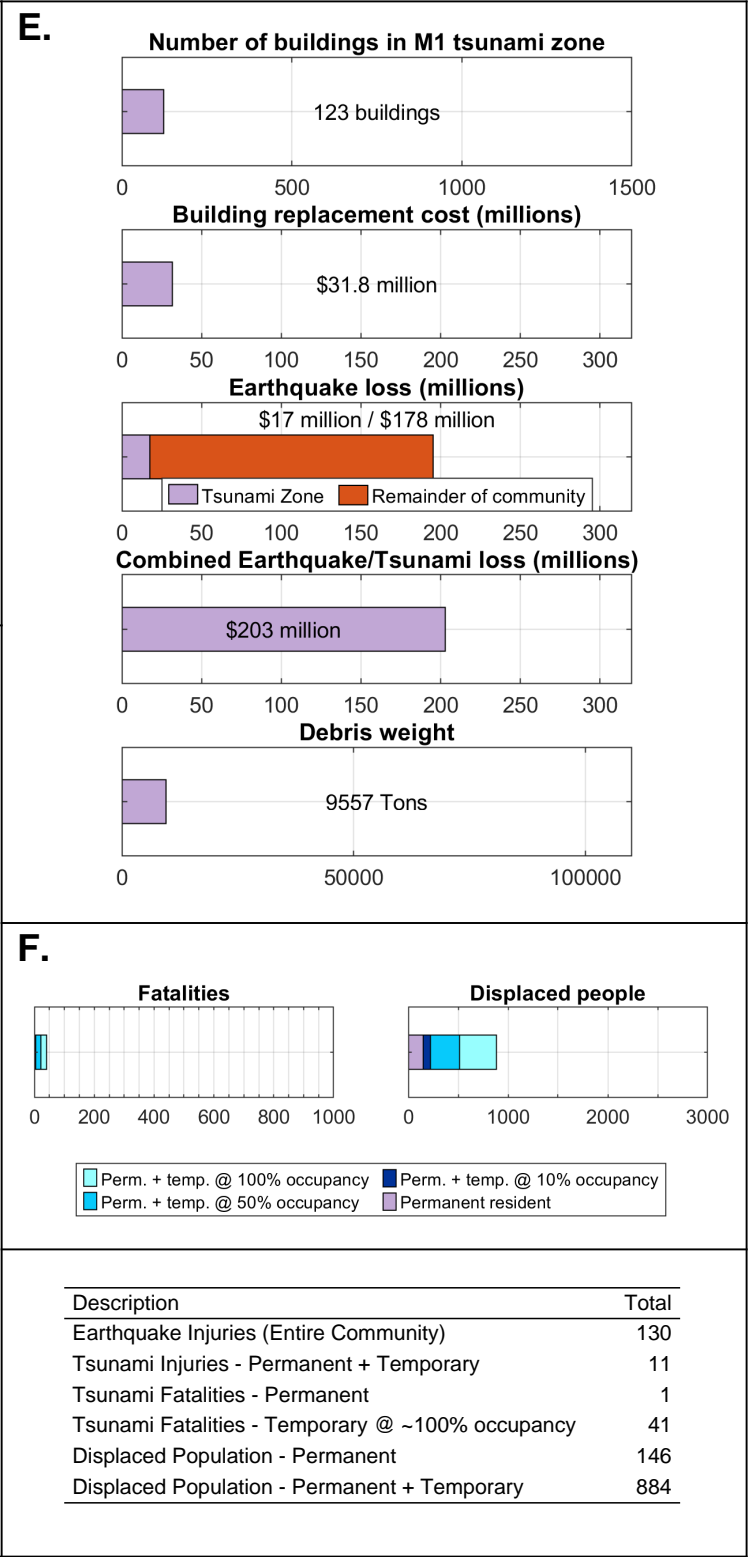
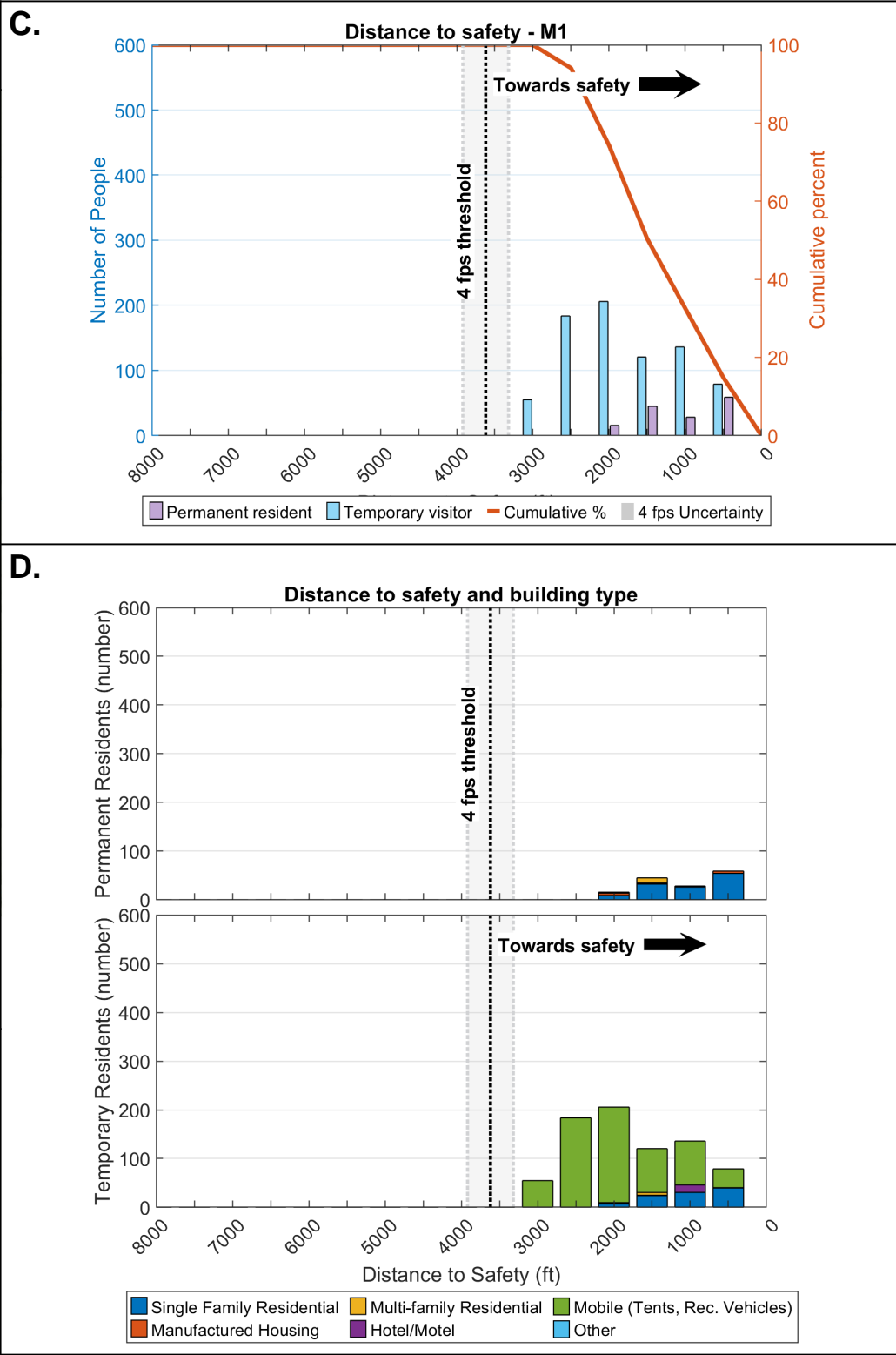
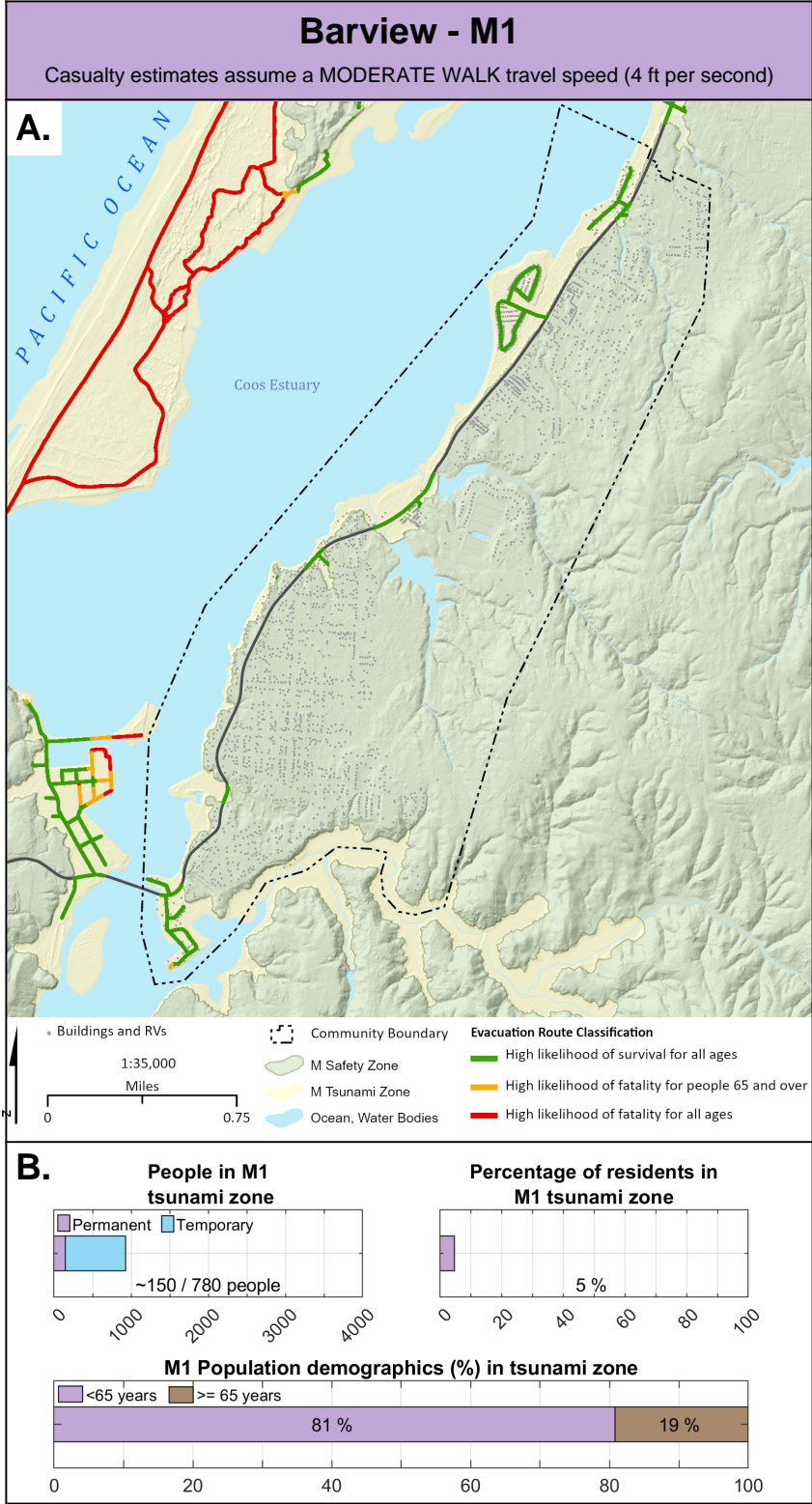
Fatalities

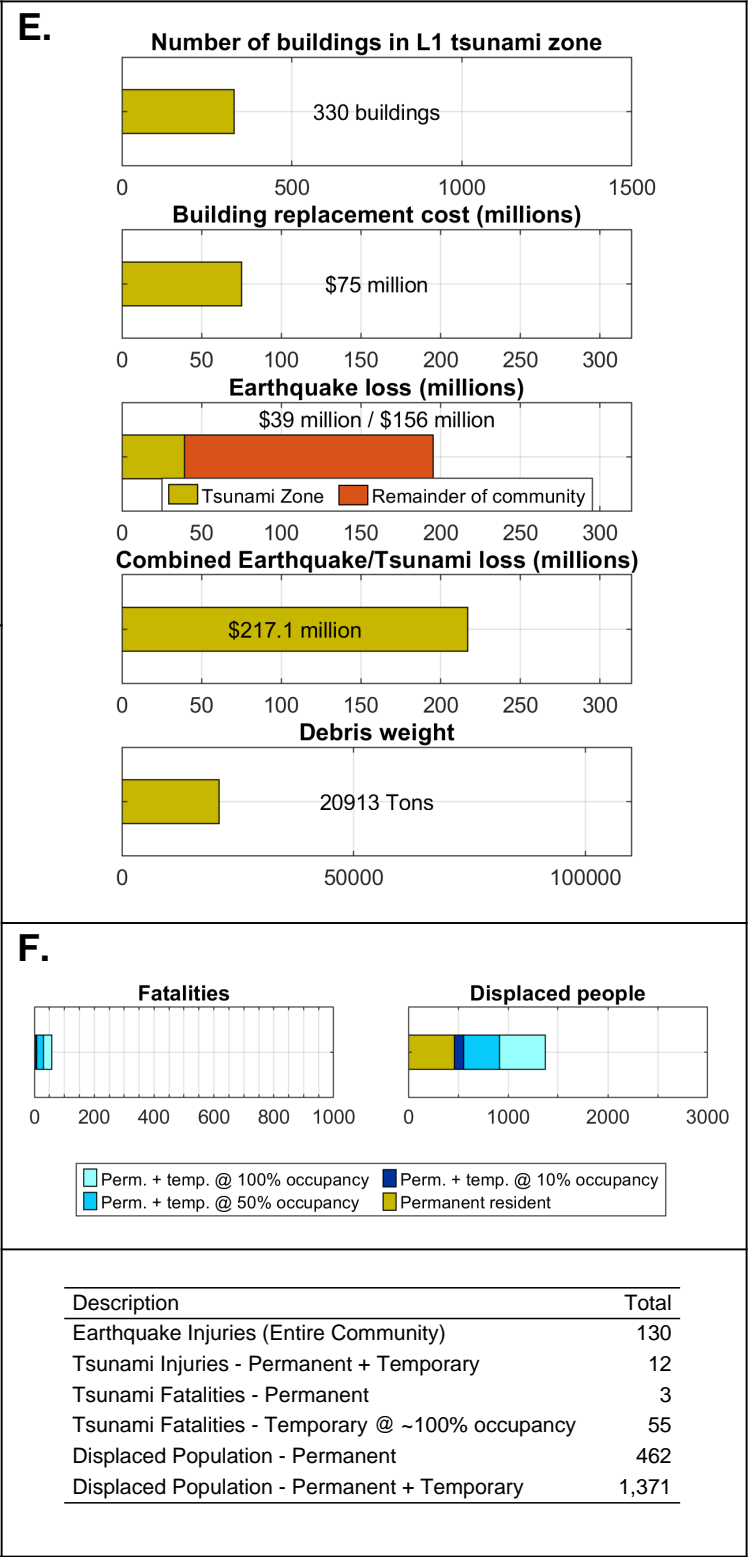
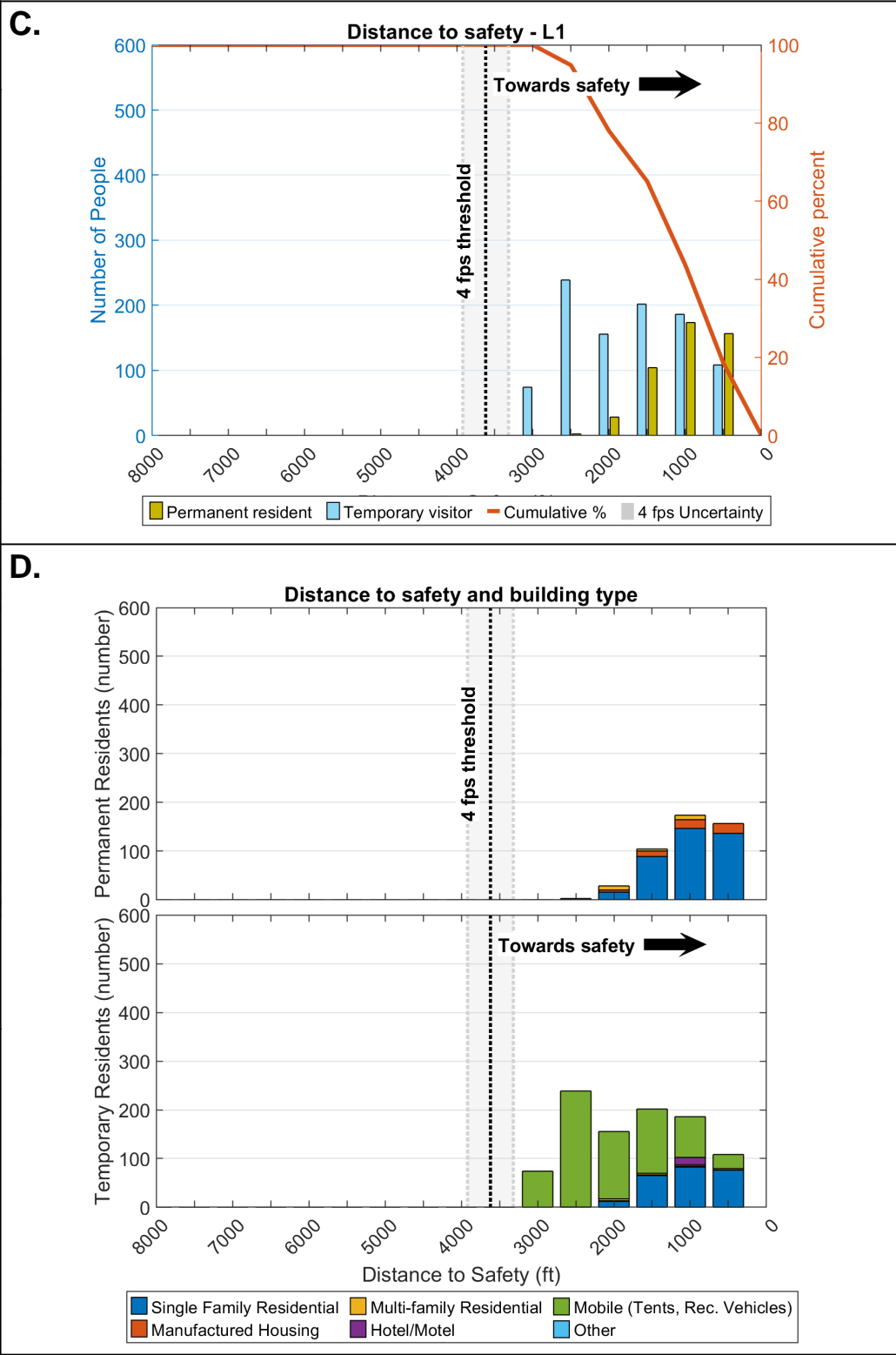
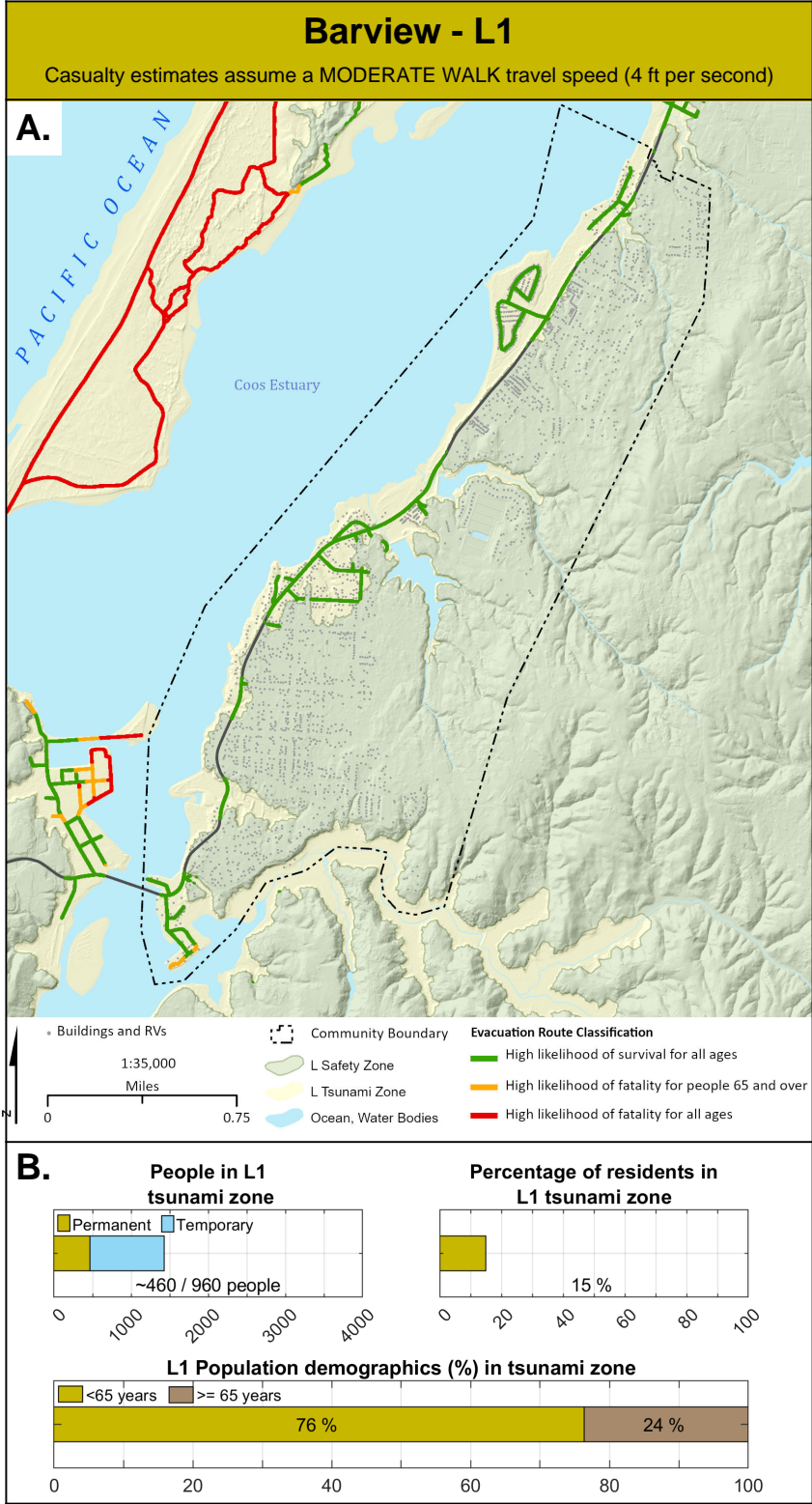
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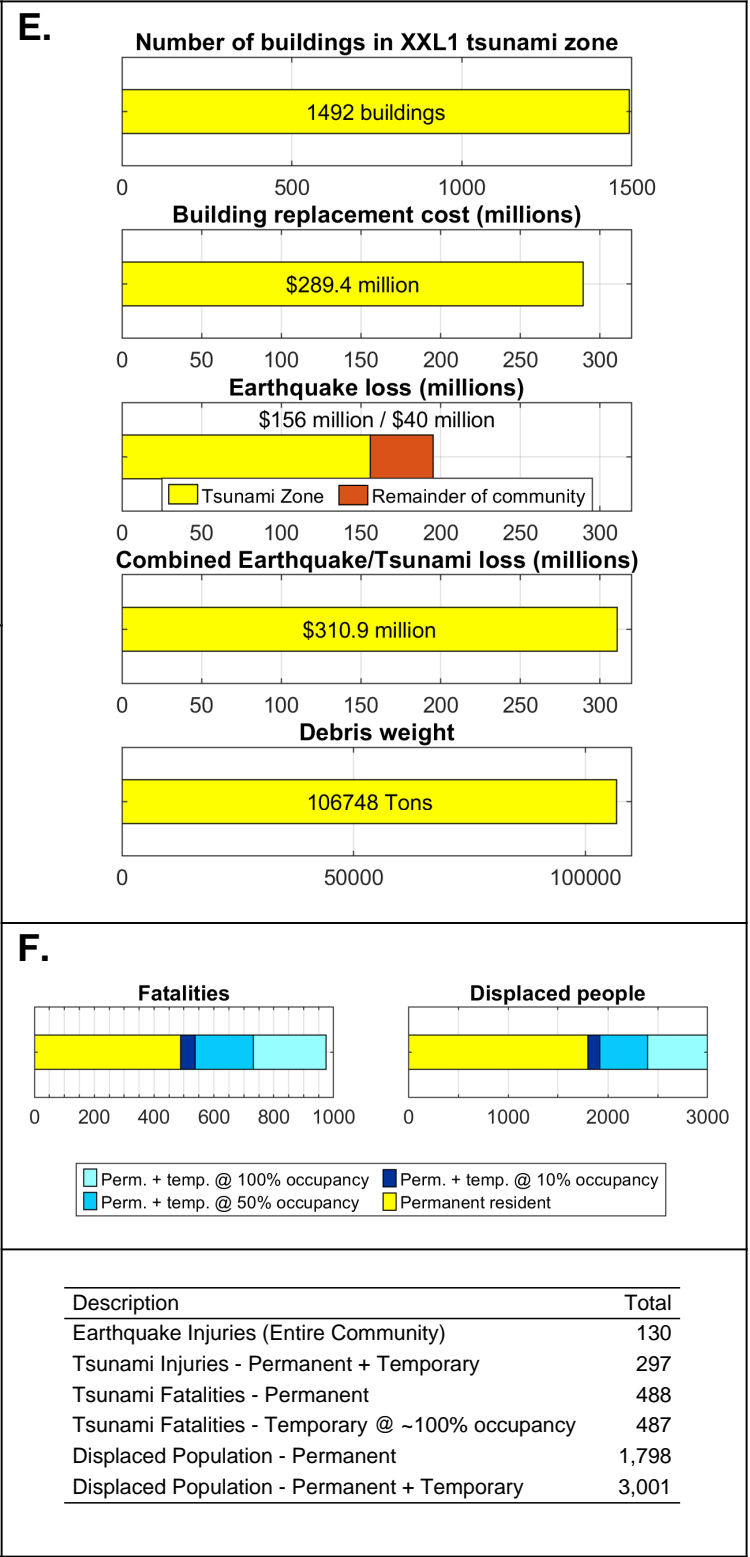
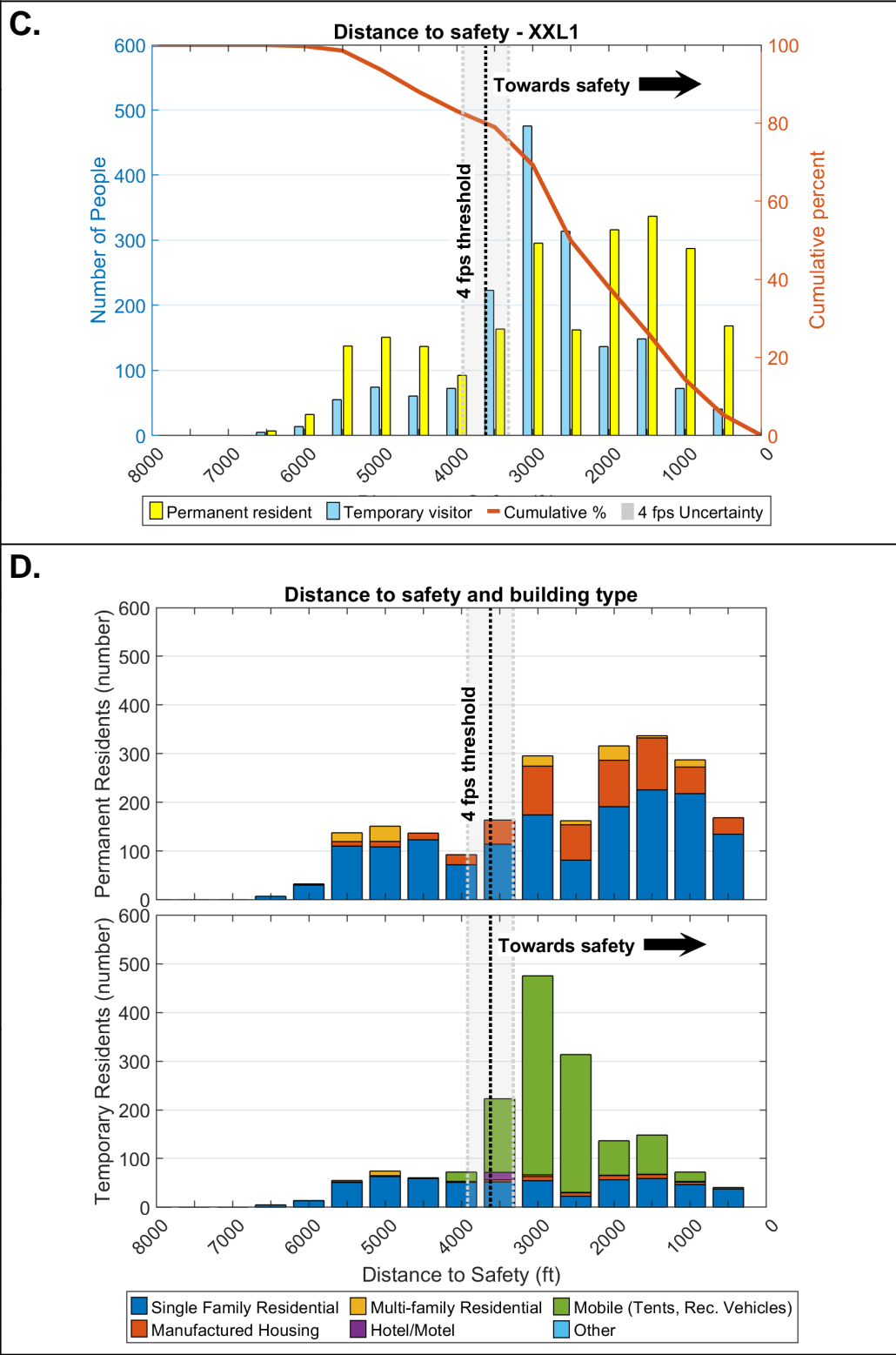
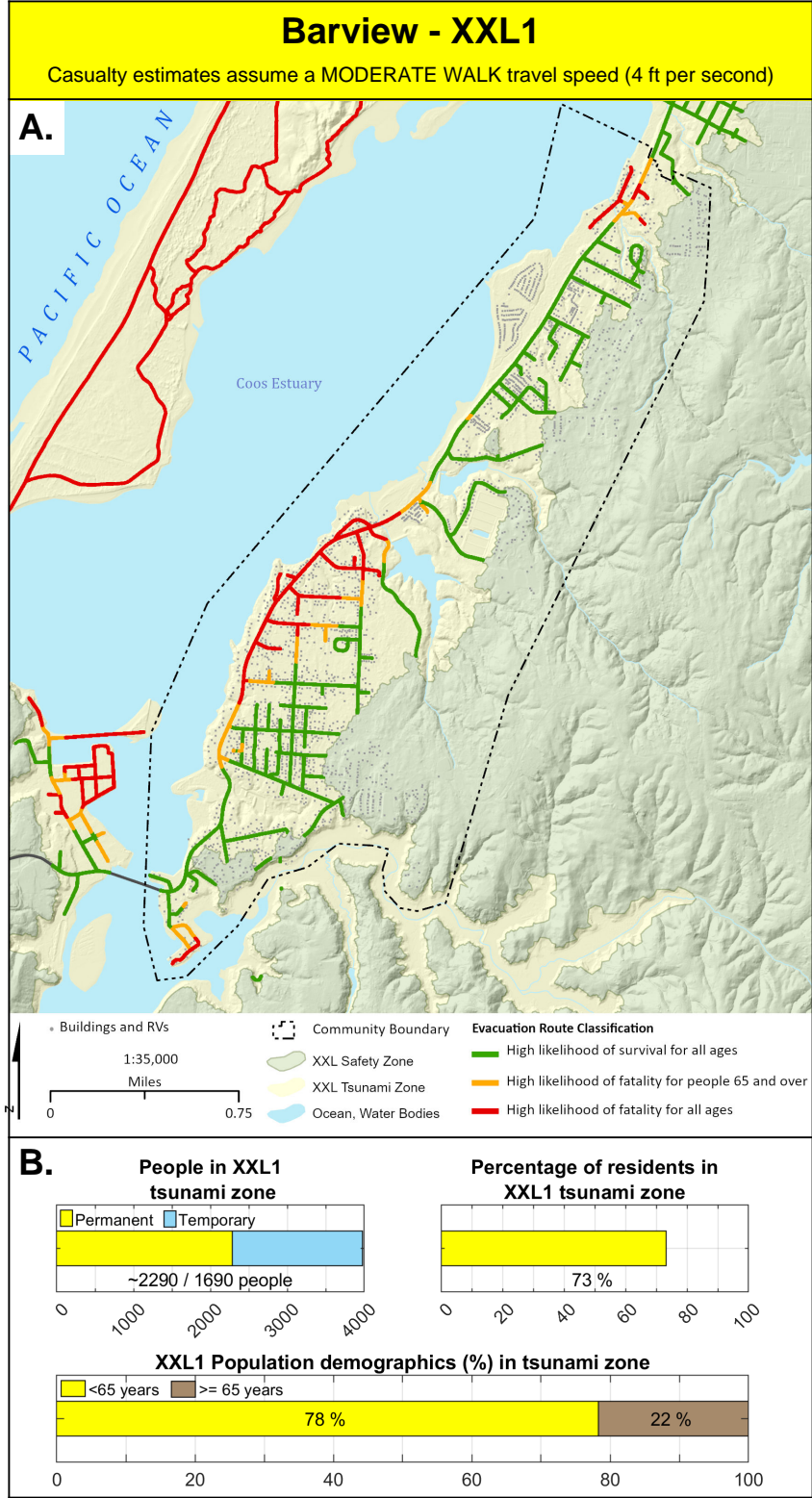
Displaced people

Perm. + temp. @ 100% occupancy Perm. + temp. @ 10% occupancy
Perm. + temp. @ 50% occupancy Permanent resident

Description	Total
Earthquake Injuries (Entire Community)	267
Tsunami Injuries - Permanent + Temporary	0
Tsunami Fatalities - Permanent	0
Tsunami Fatalities - Temporary @ ~100% occupancy	0
Displaced Population - Permanent	1,255
Displaced Population - Permanent + Temporary	2,256



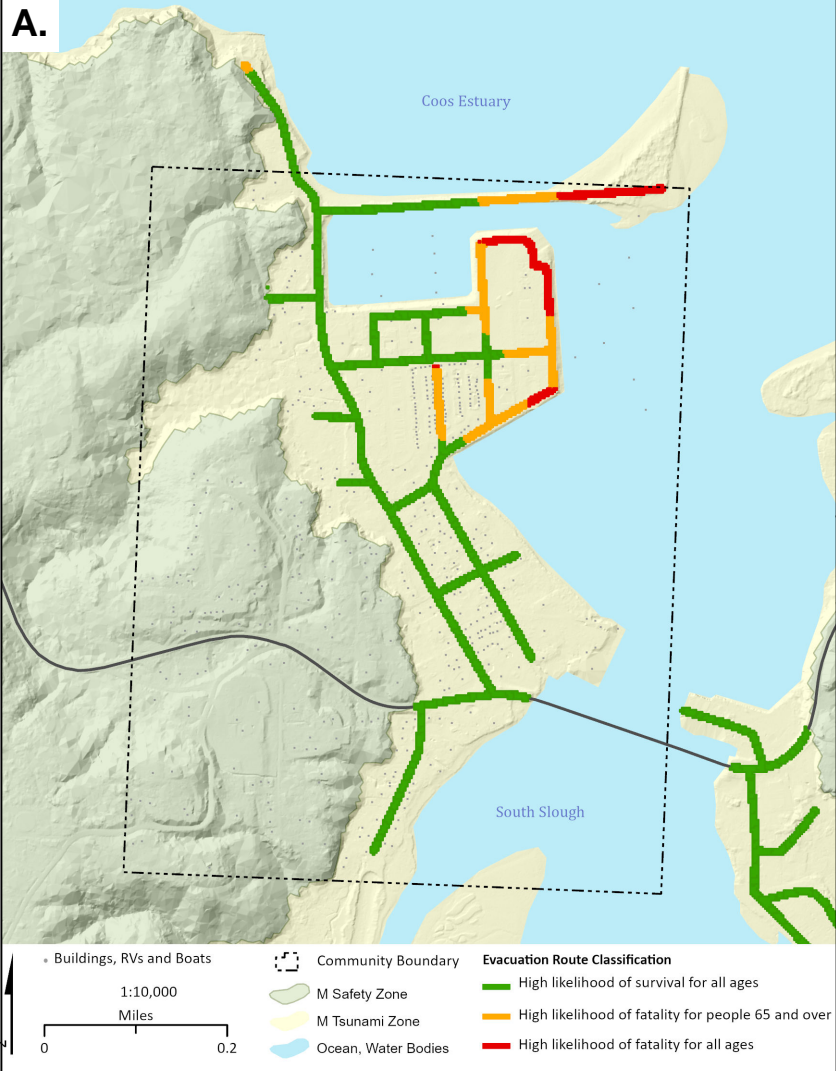




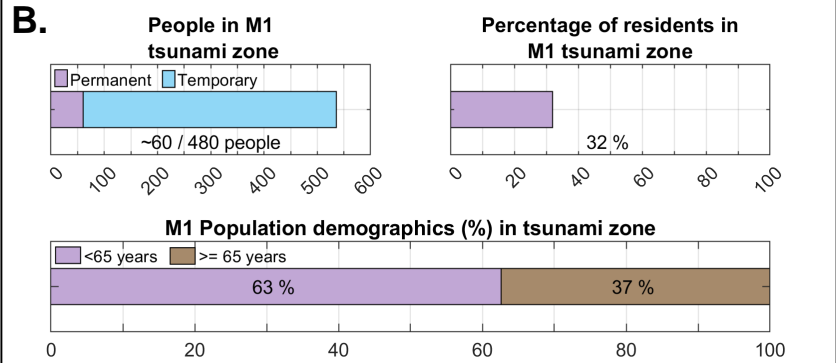
Charleston - M1

Casualty estimates assume a MODERATE WALK travel speed (4 ft per second)

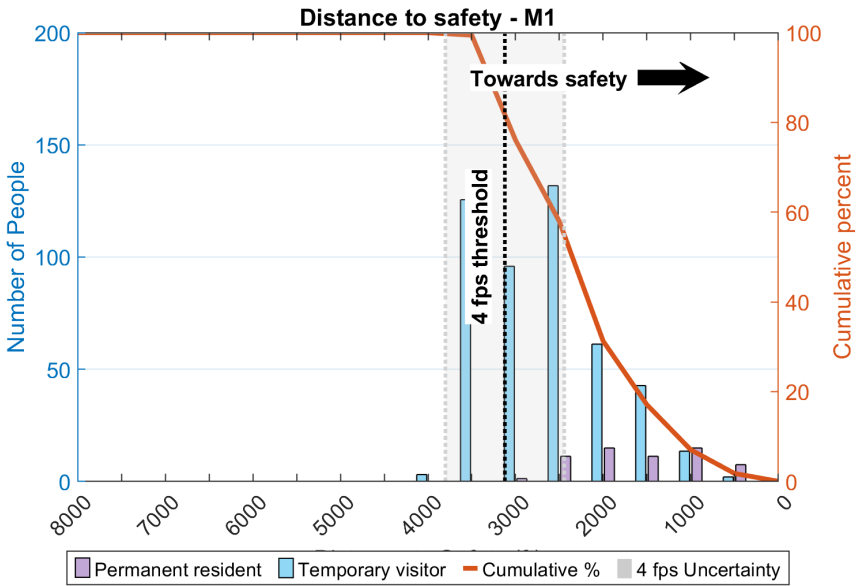
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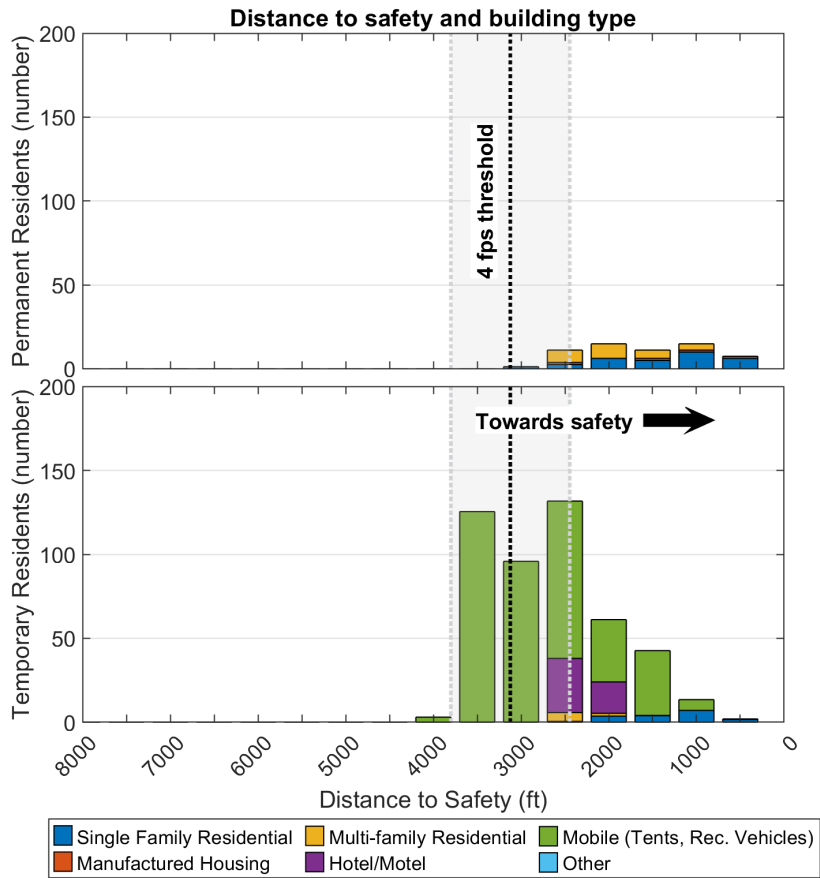
B.



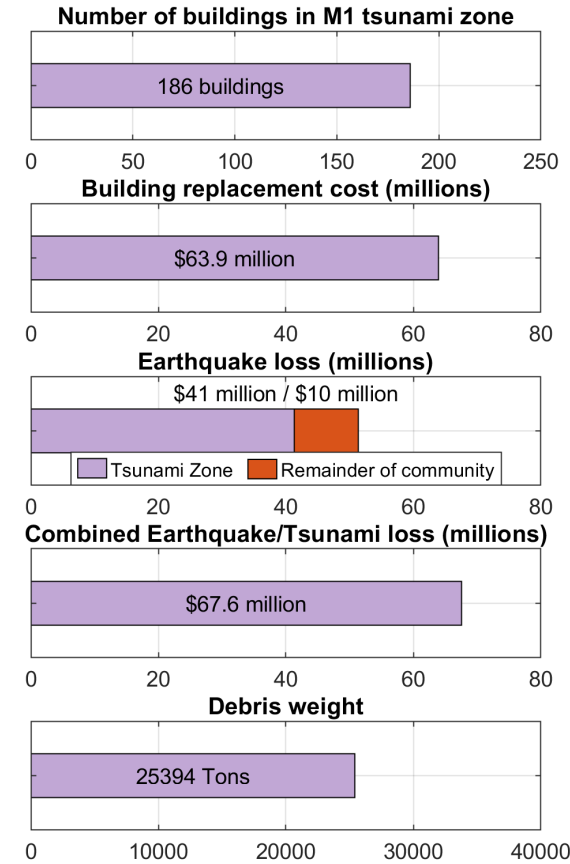
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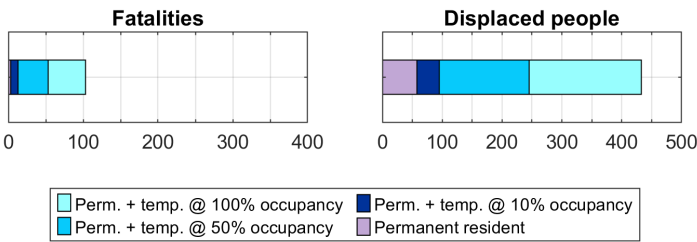
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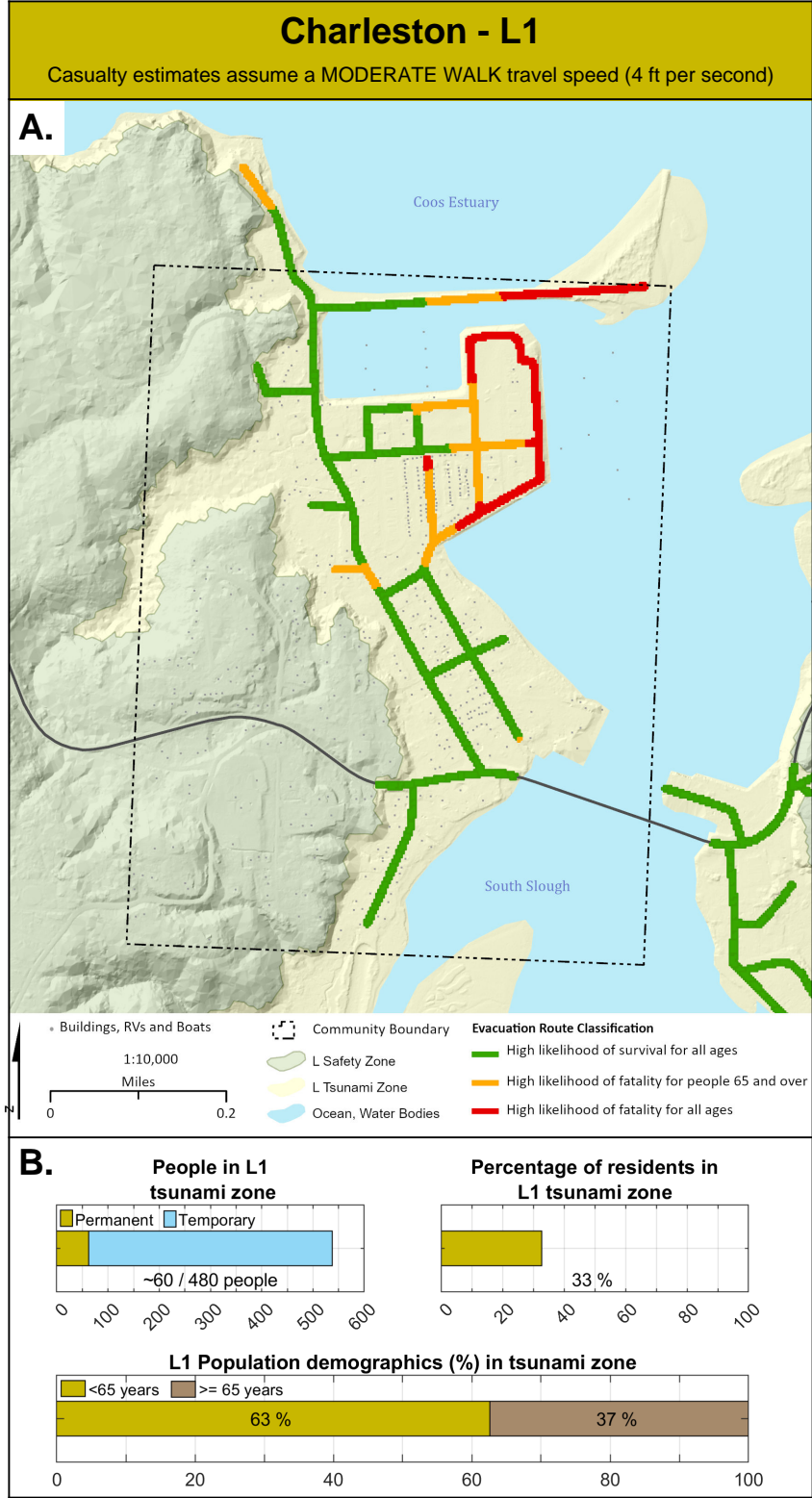
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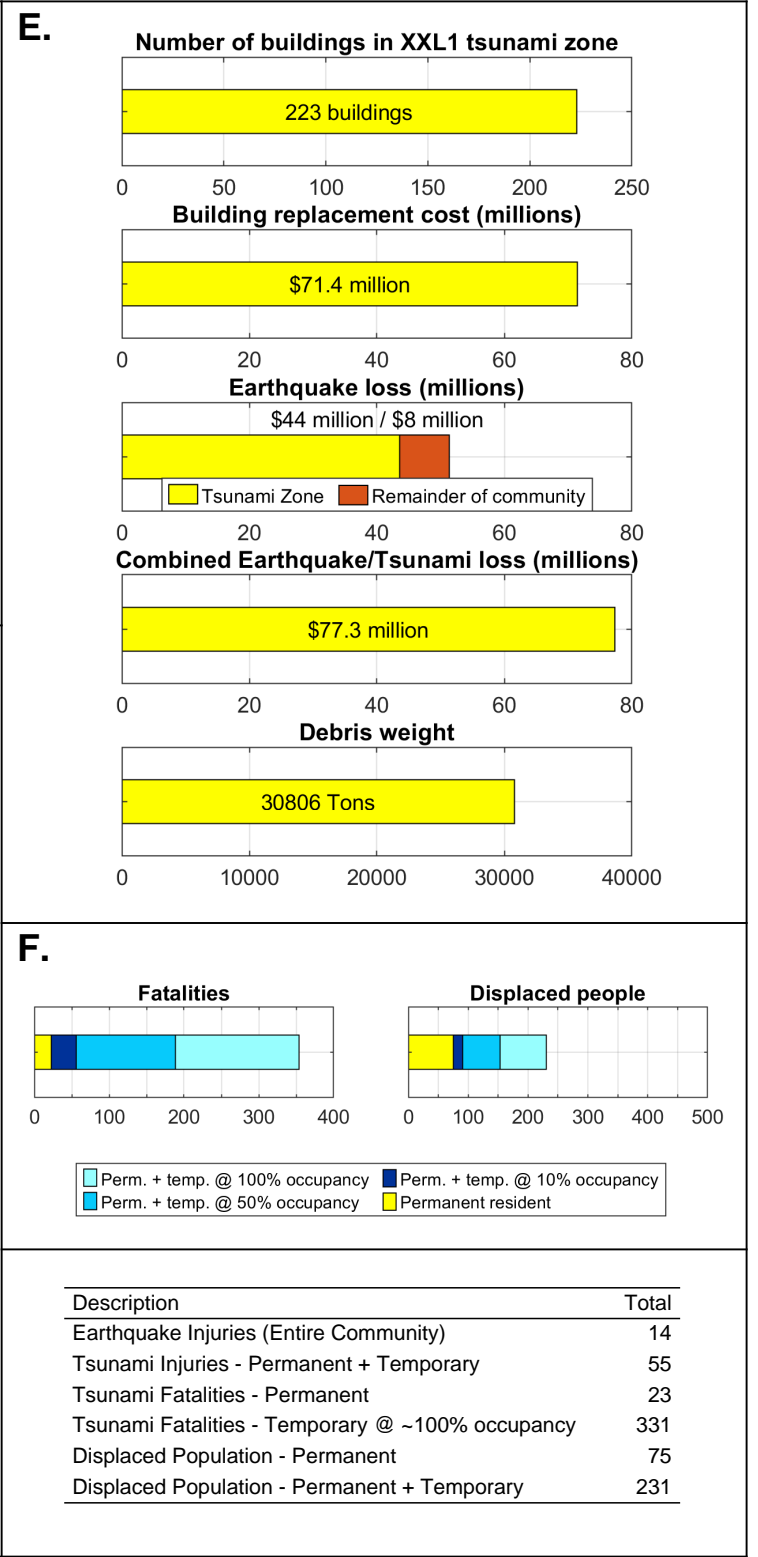
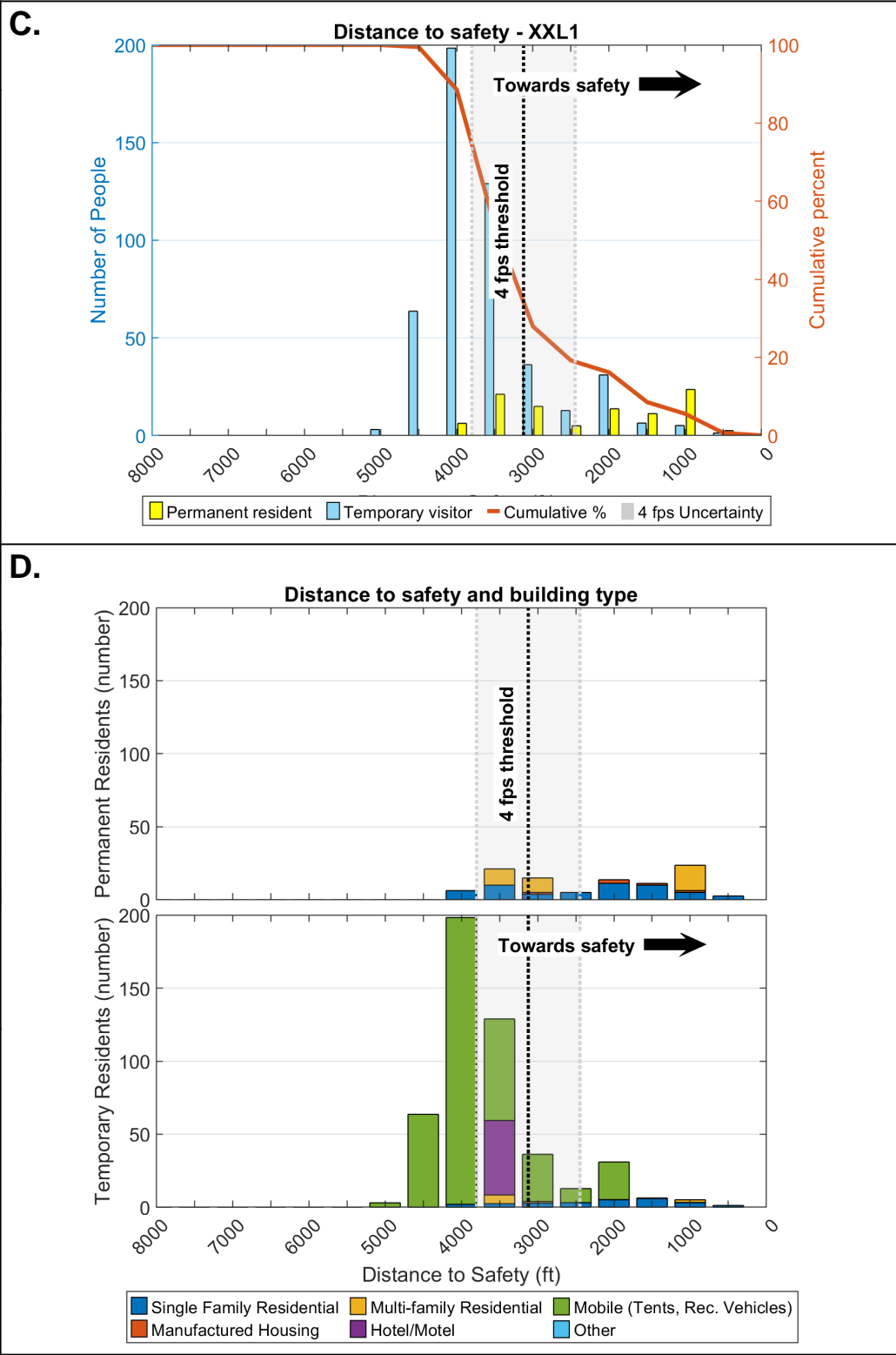
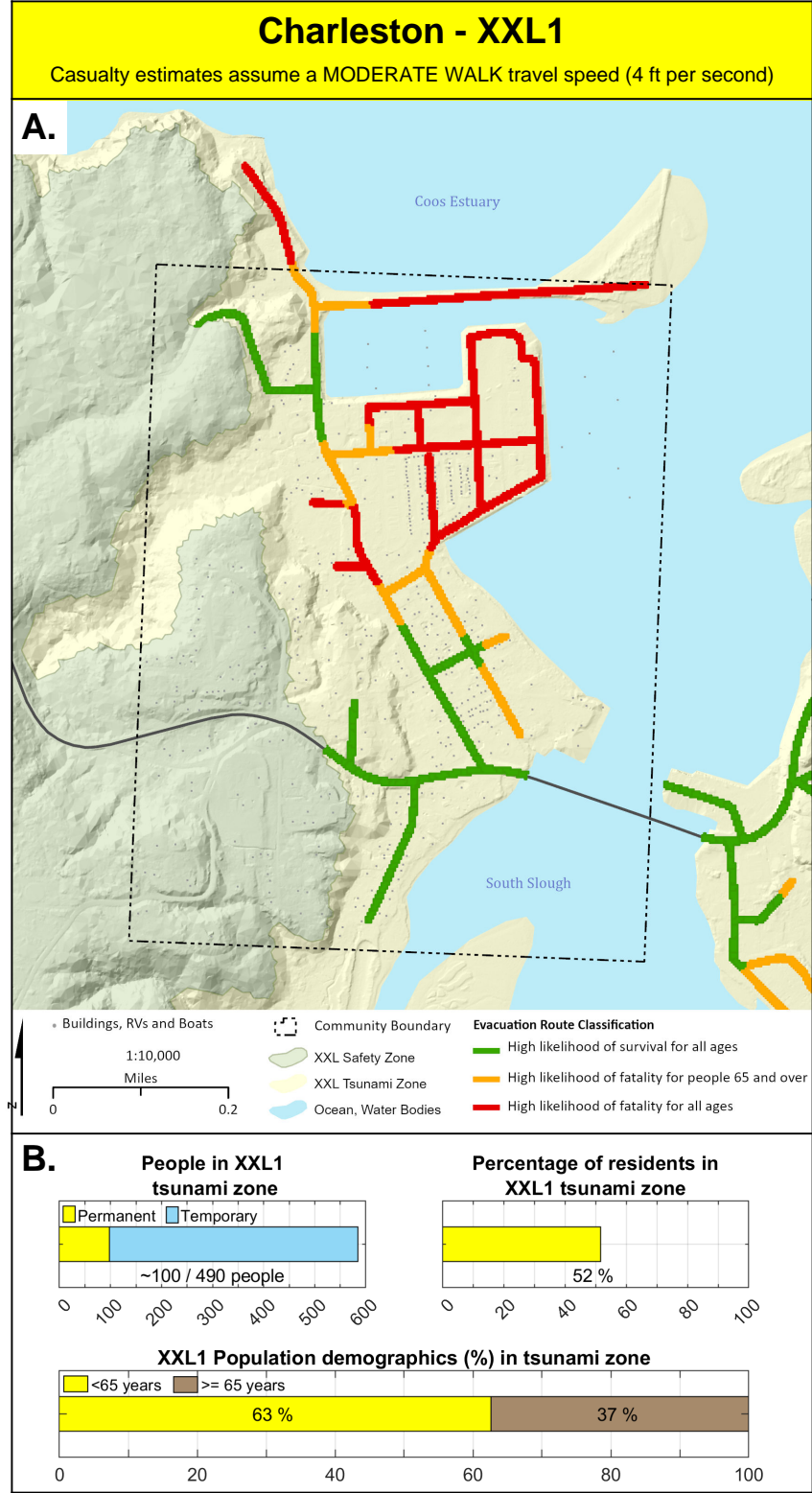


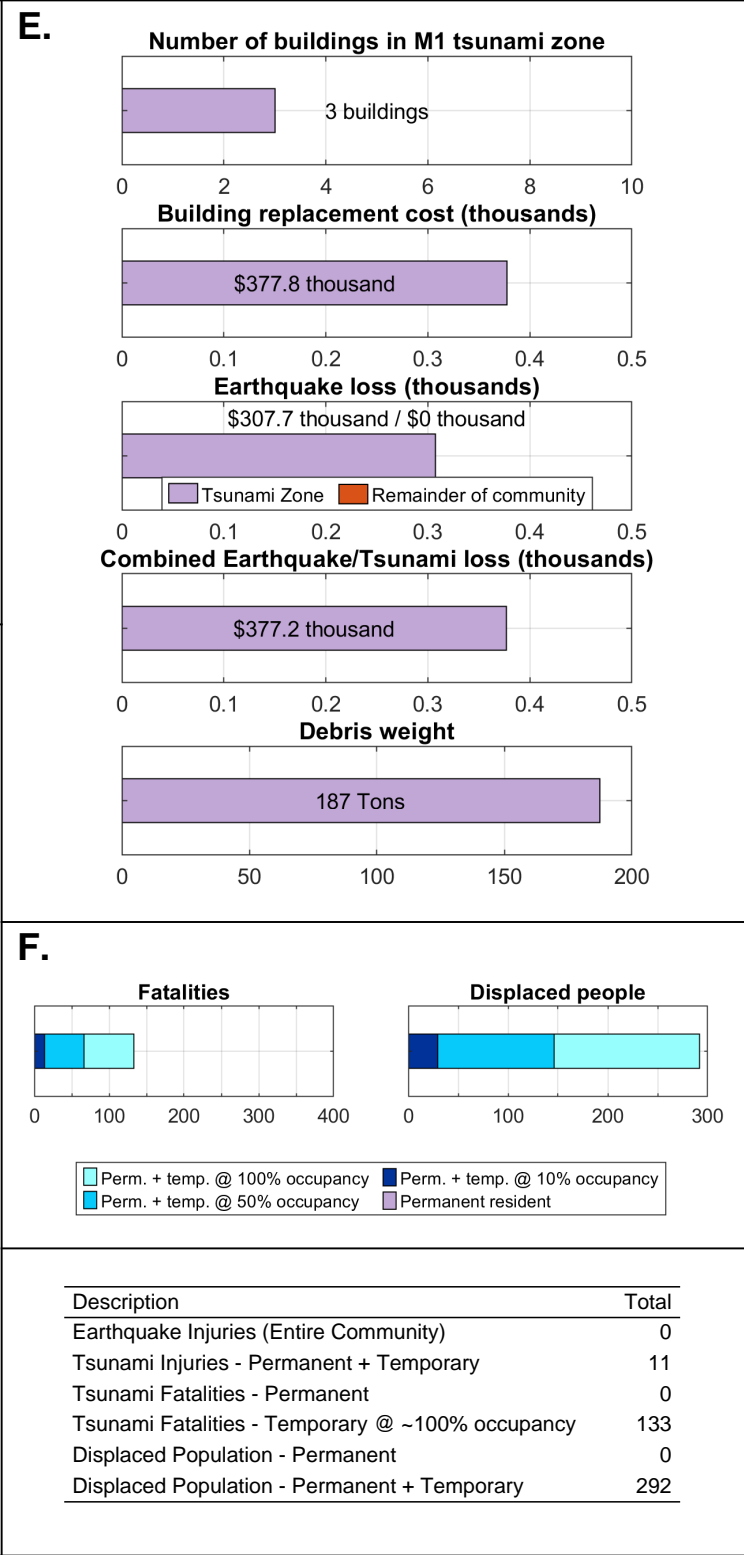
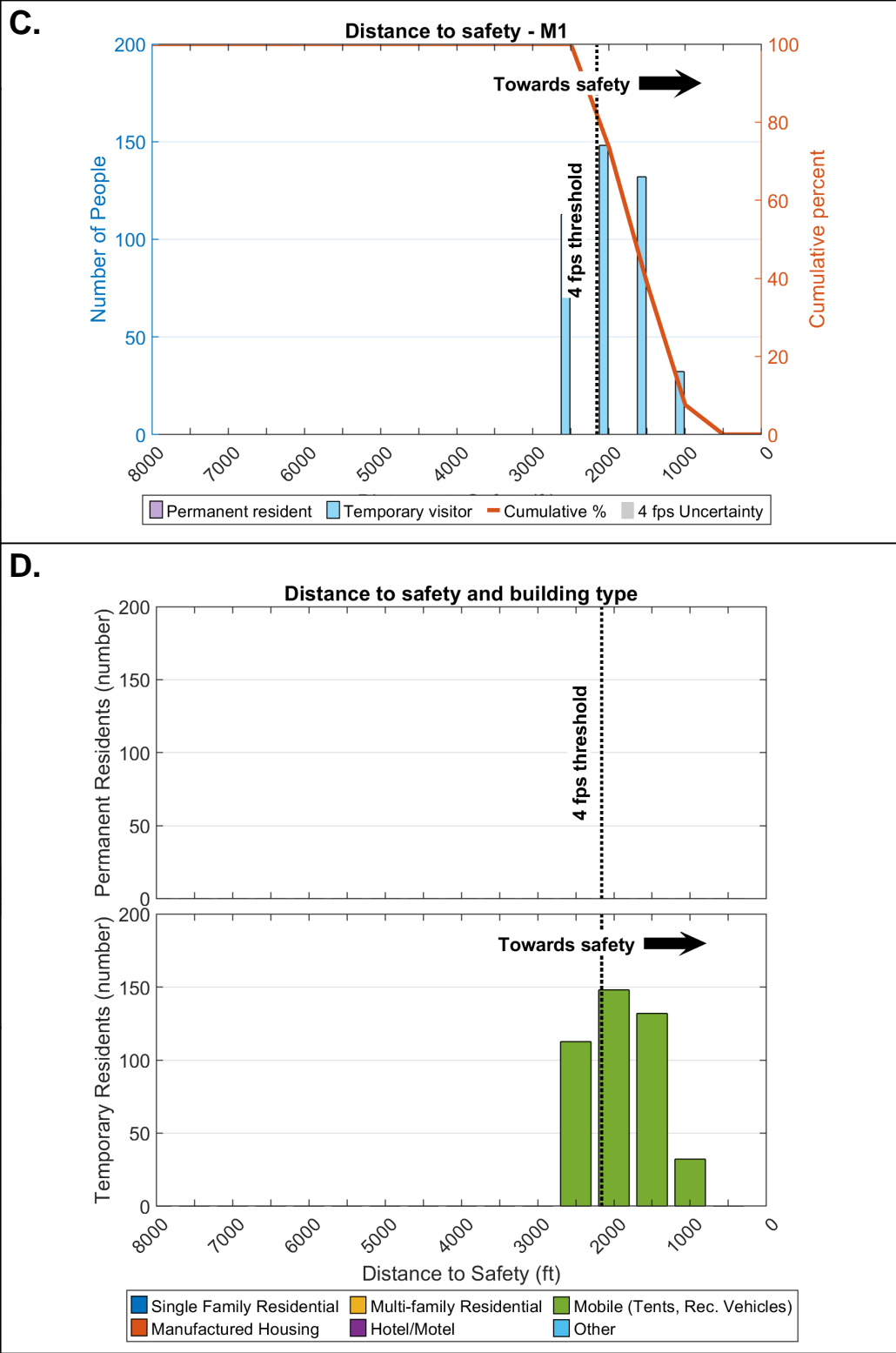
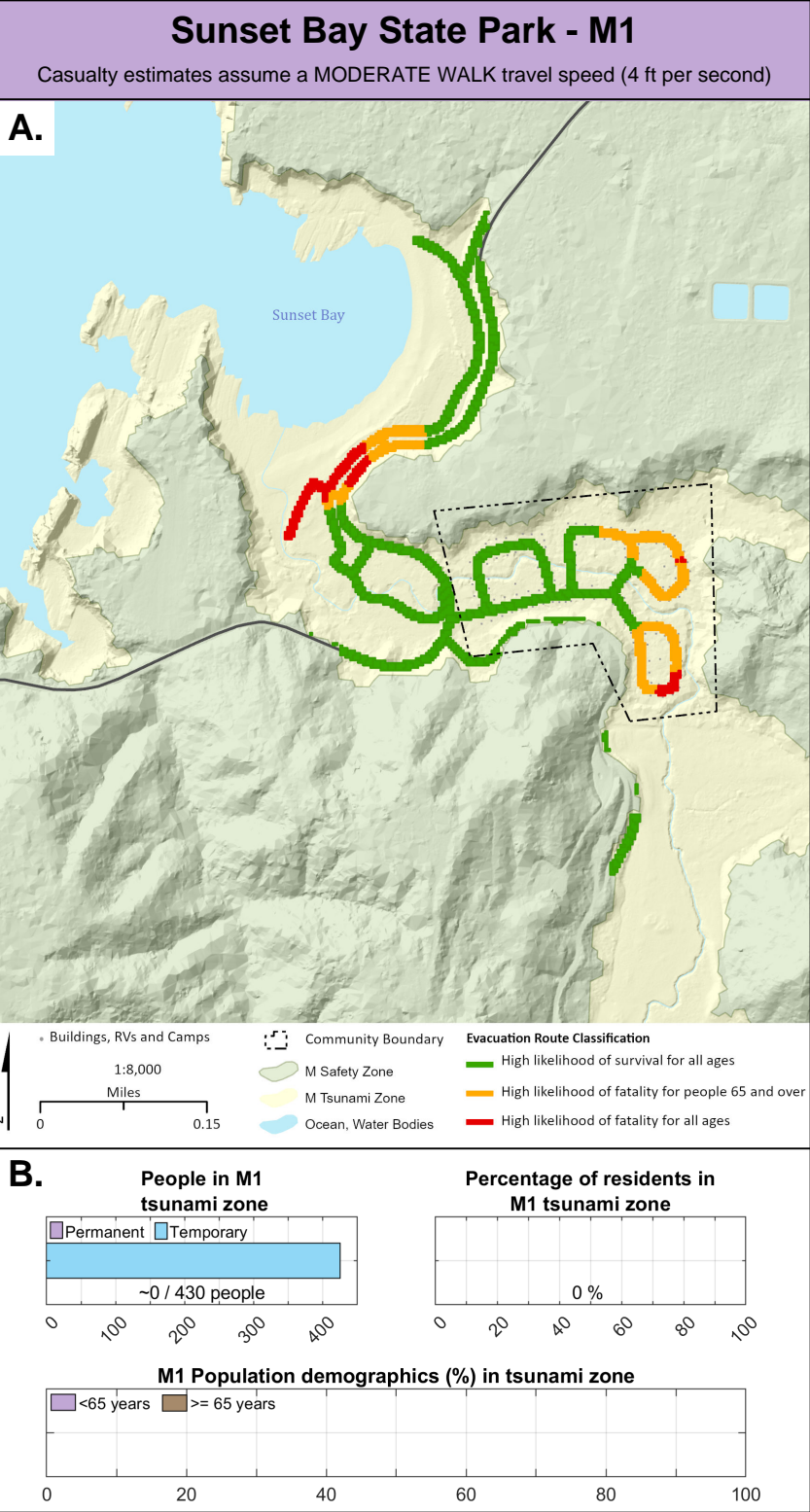
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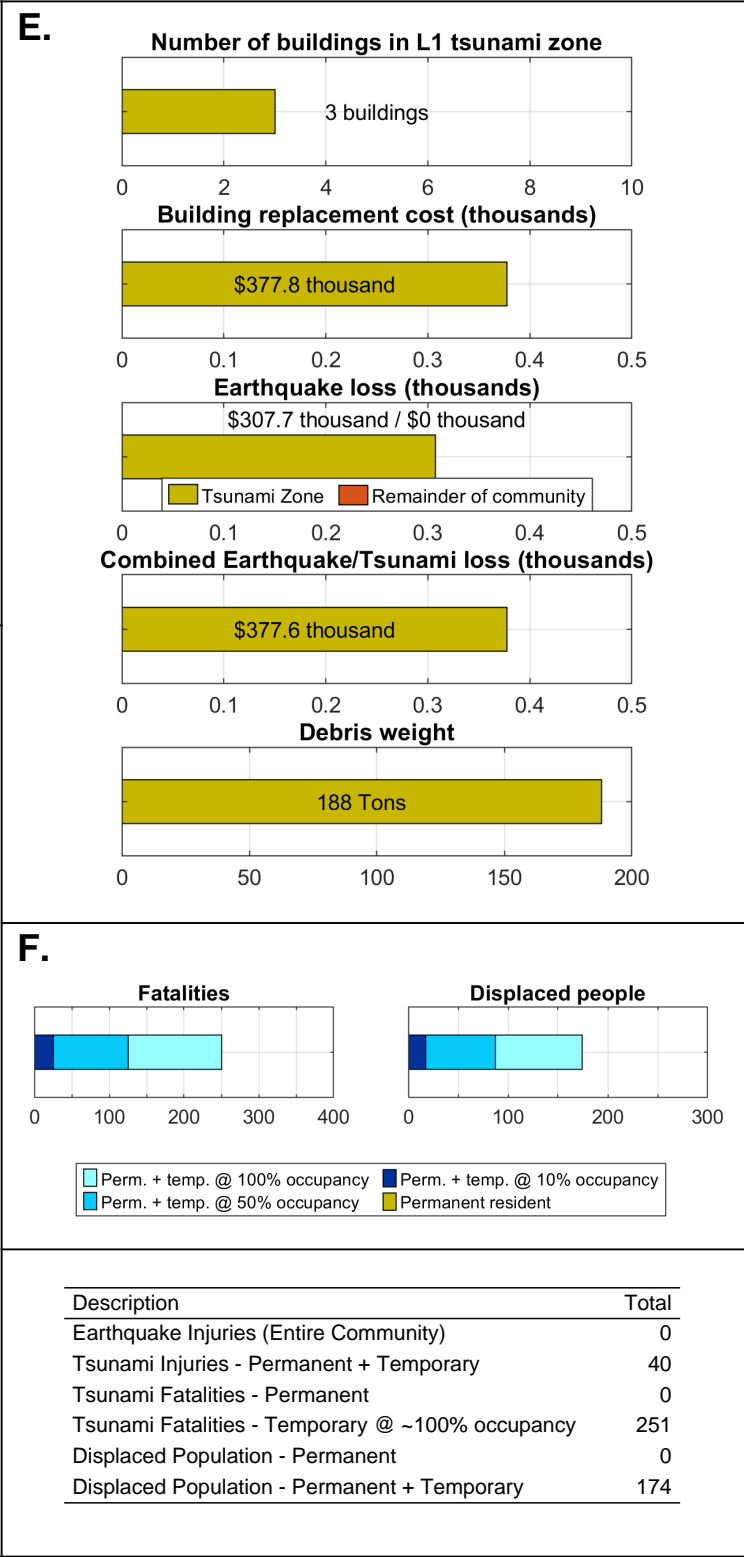
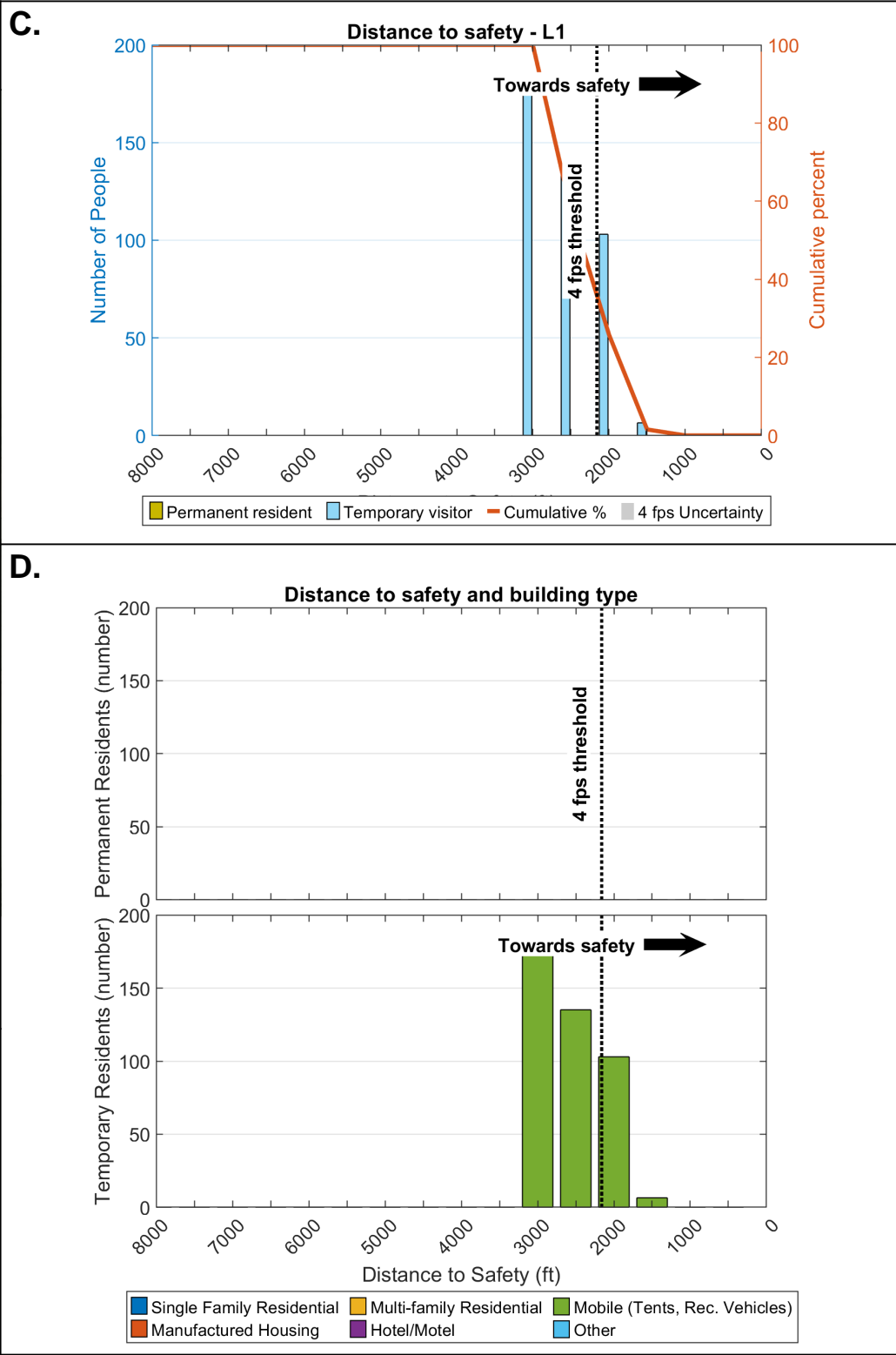
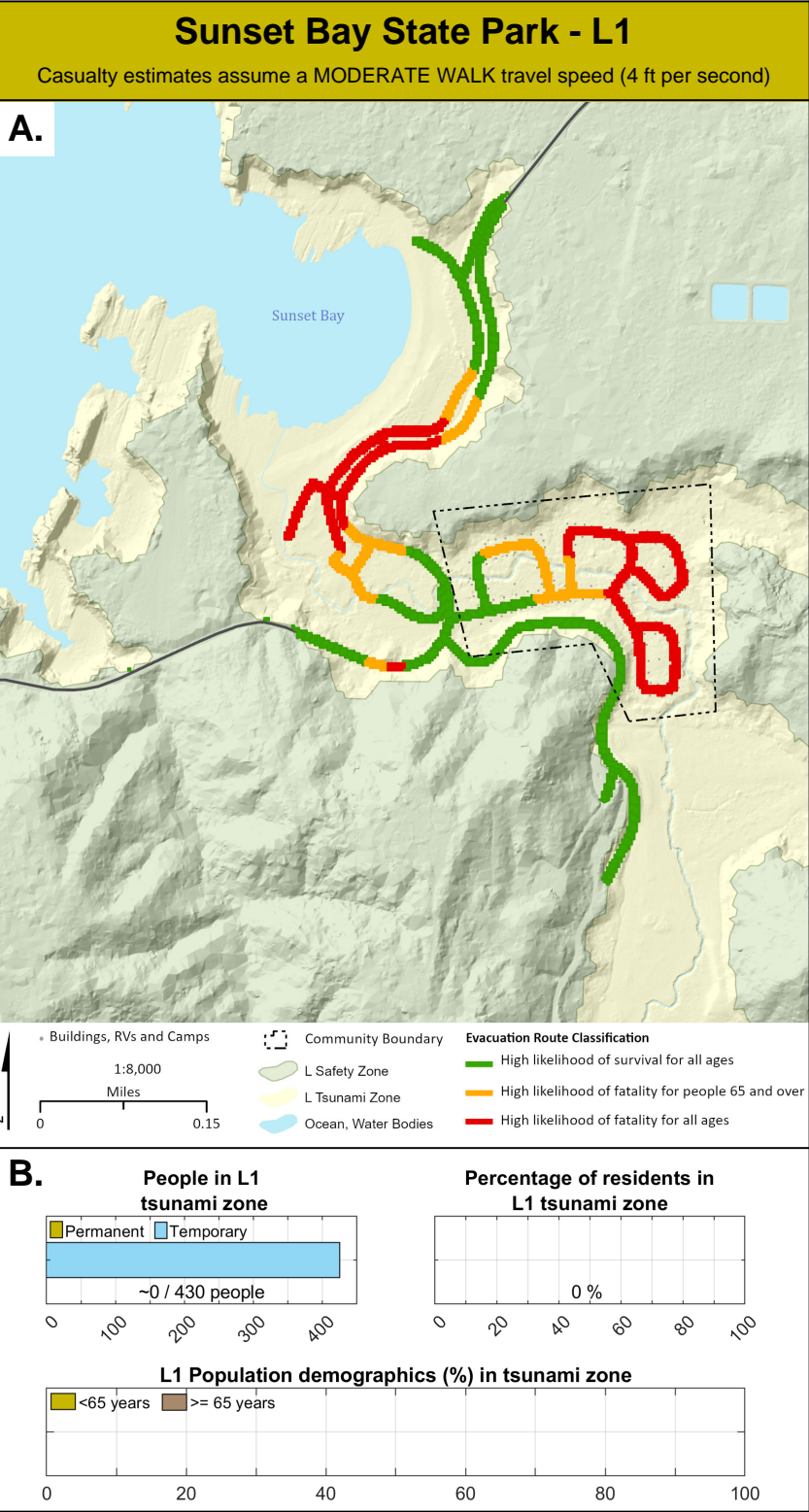


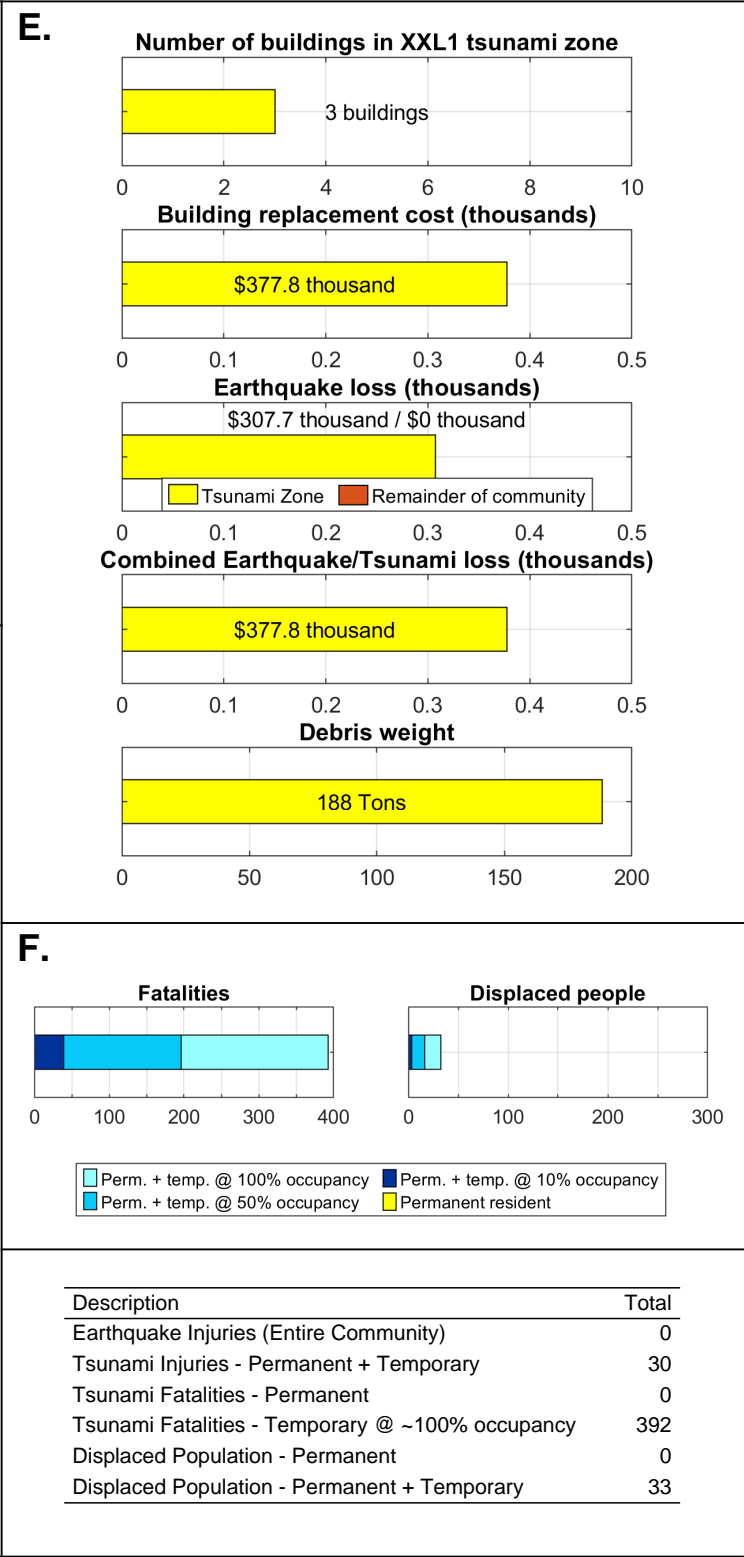
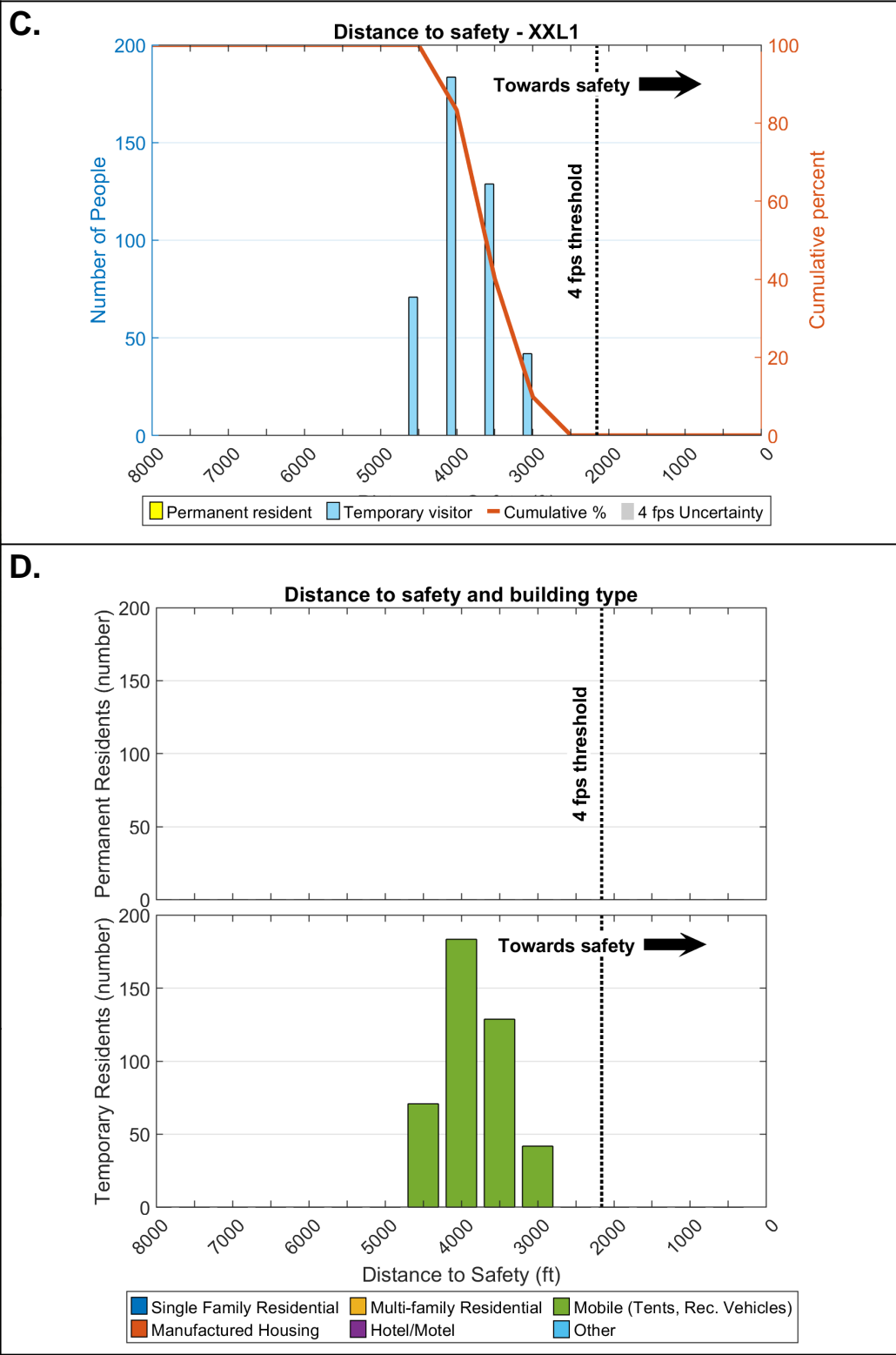
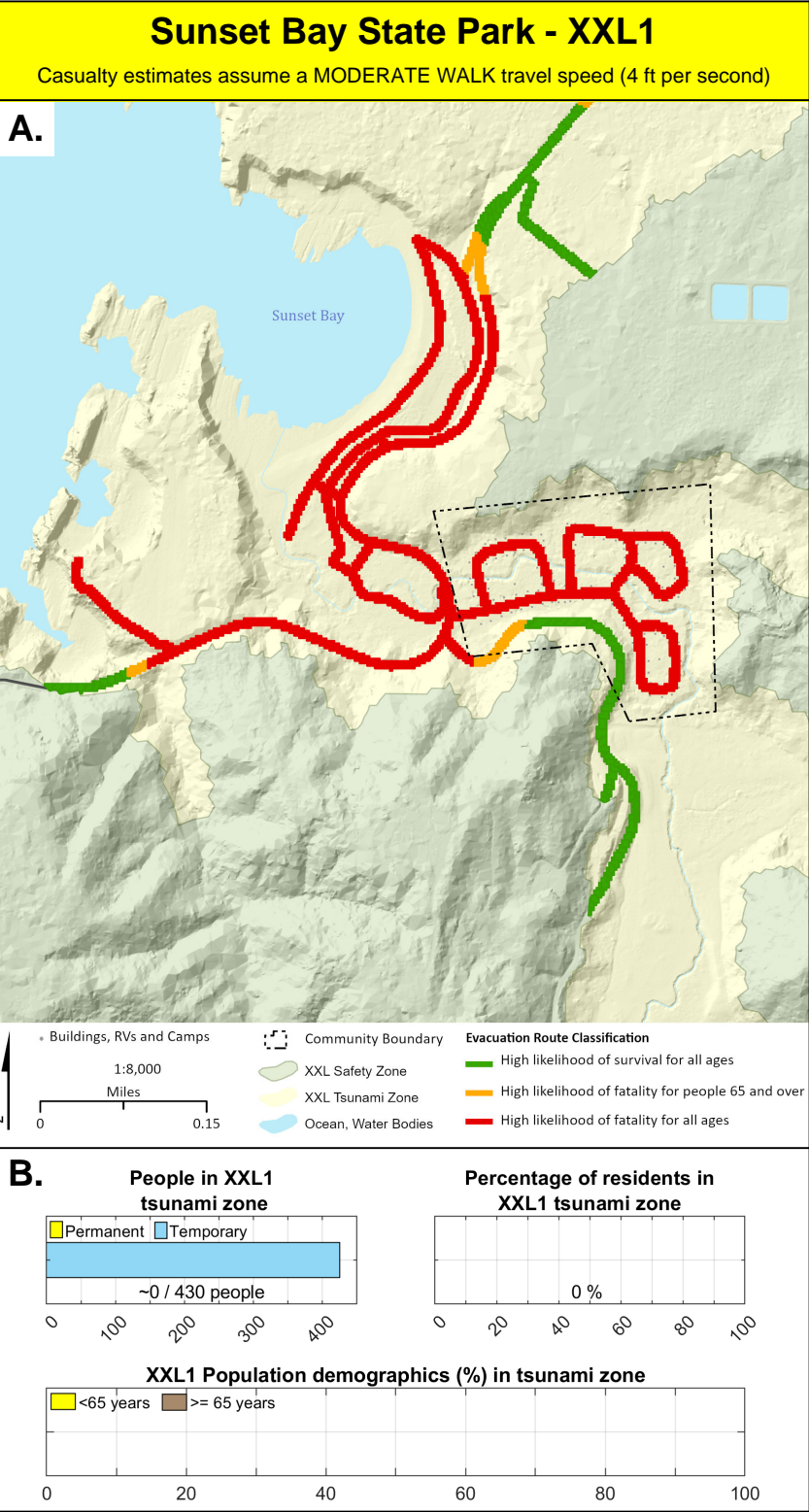
Description	Total
Earthquake Injuries (Entire Community)	14
Tsunami Injuries - Permanent + Temporary	98
Tsunami Fatalities - Permanent	3
Tsunami Fatalities - Temporary @ ~100% occupancy	100
Displaced Population - Permanent	58
Displaced Population - Permanent + Temporary	433

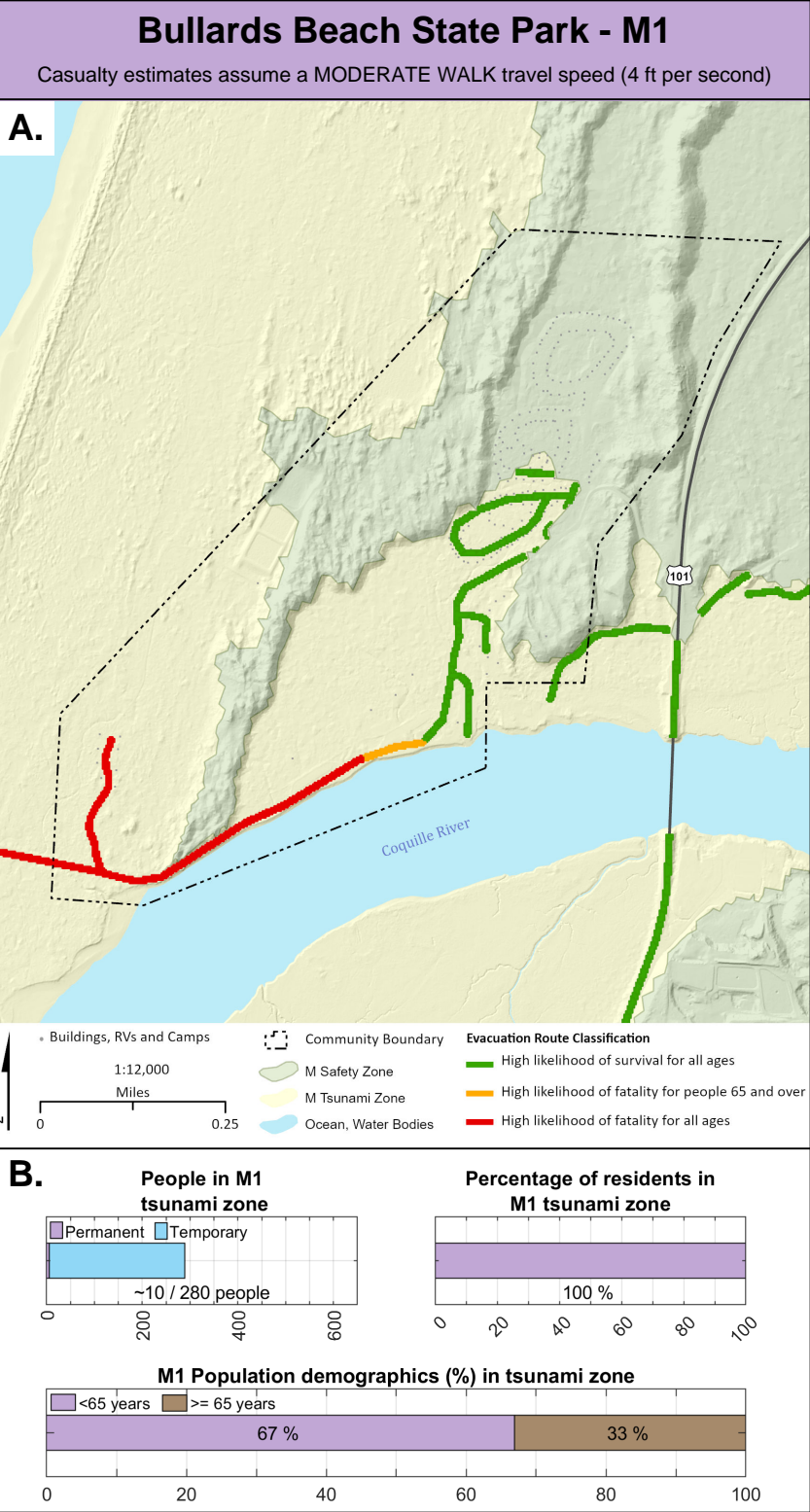


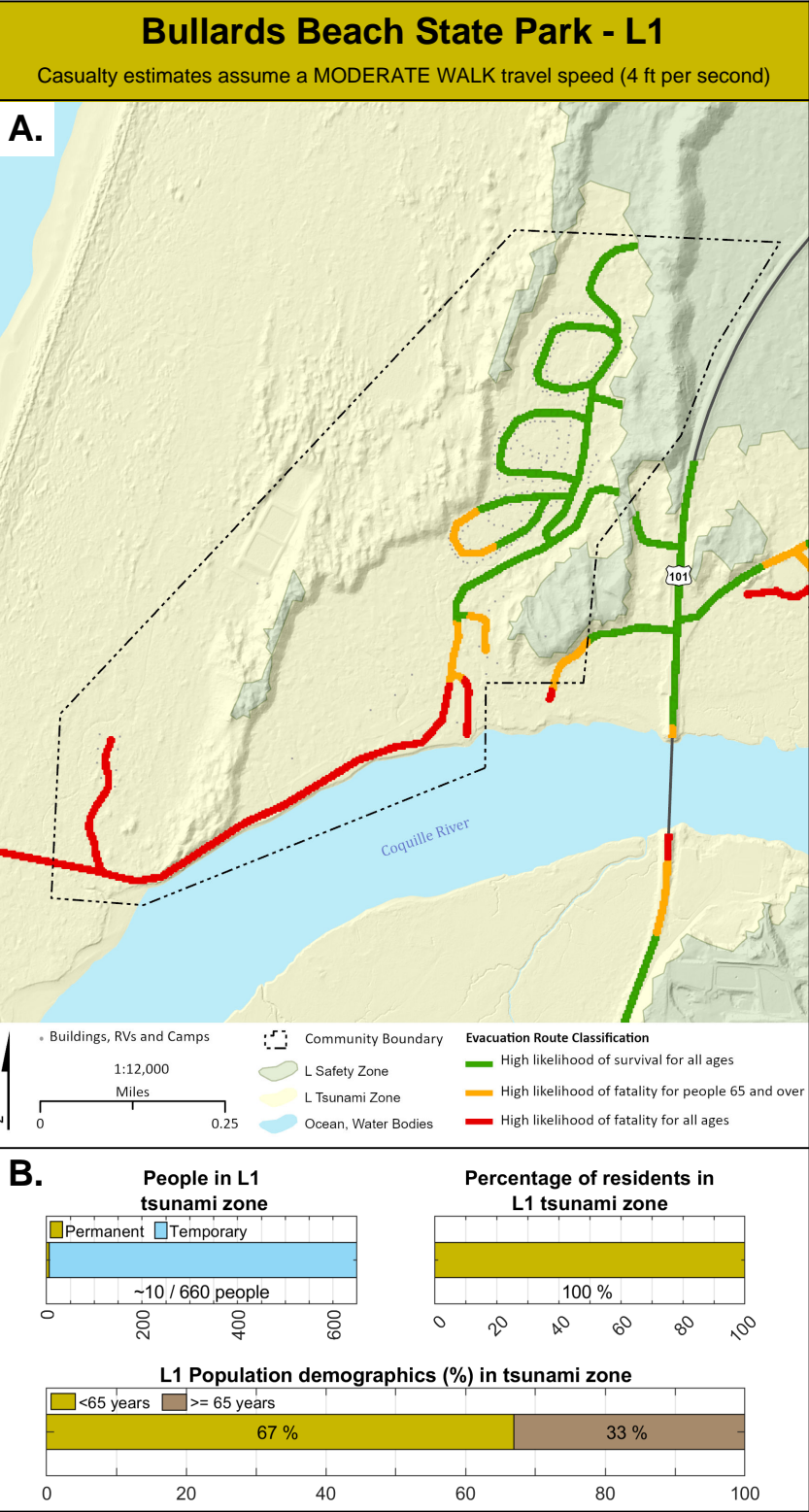












Bullards Beach State Park - XXL1

Casualty estimates assume a MODERATE WALK travel speed (4 ft per second)

A.

Buildings, RVs and Camps

Community Boundary

XXL Safety Zone

XXL Tsunami Zone

Ocean, Water Bodies

Evacuation Route Classification

- High likelihood of survival for all ages
- High likelihood of fatality for people 65 and over
- High likelihood of fatality for all ages

1:12,000

Miles

0 0.25

Coquille River

101

B.

People in XXL1 tsunami zone

Permanent Temporary

~10 / 660 people

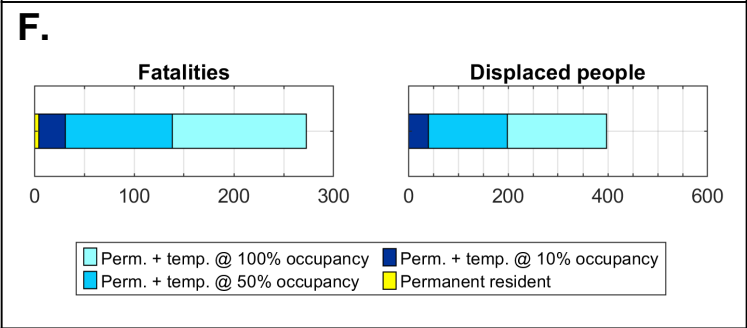
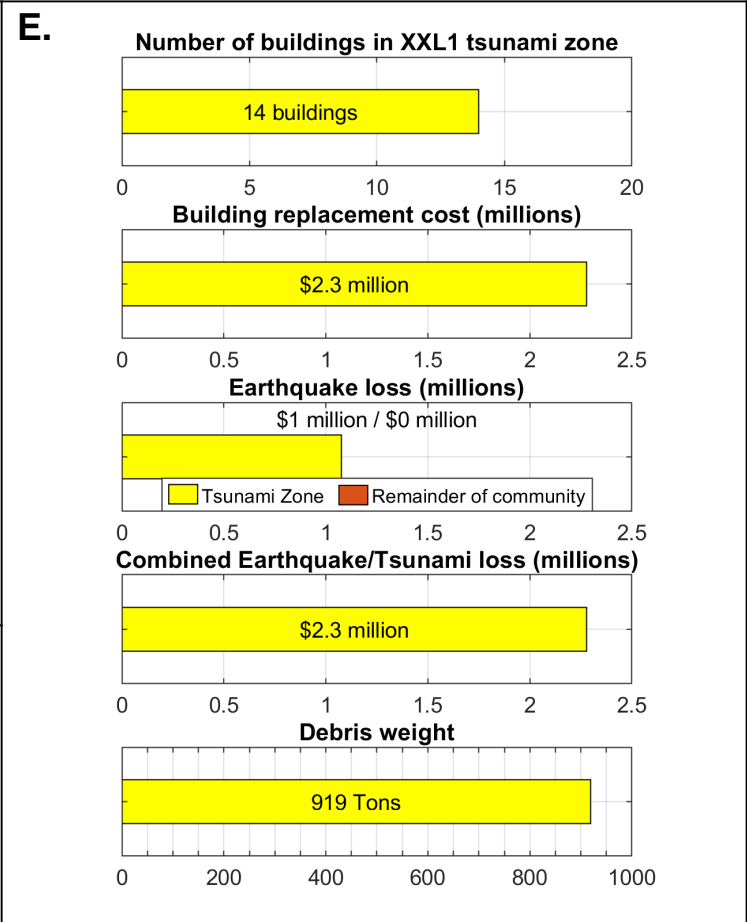
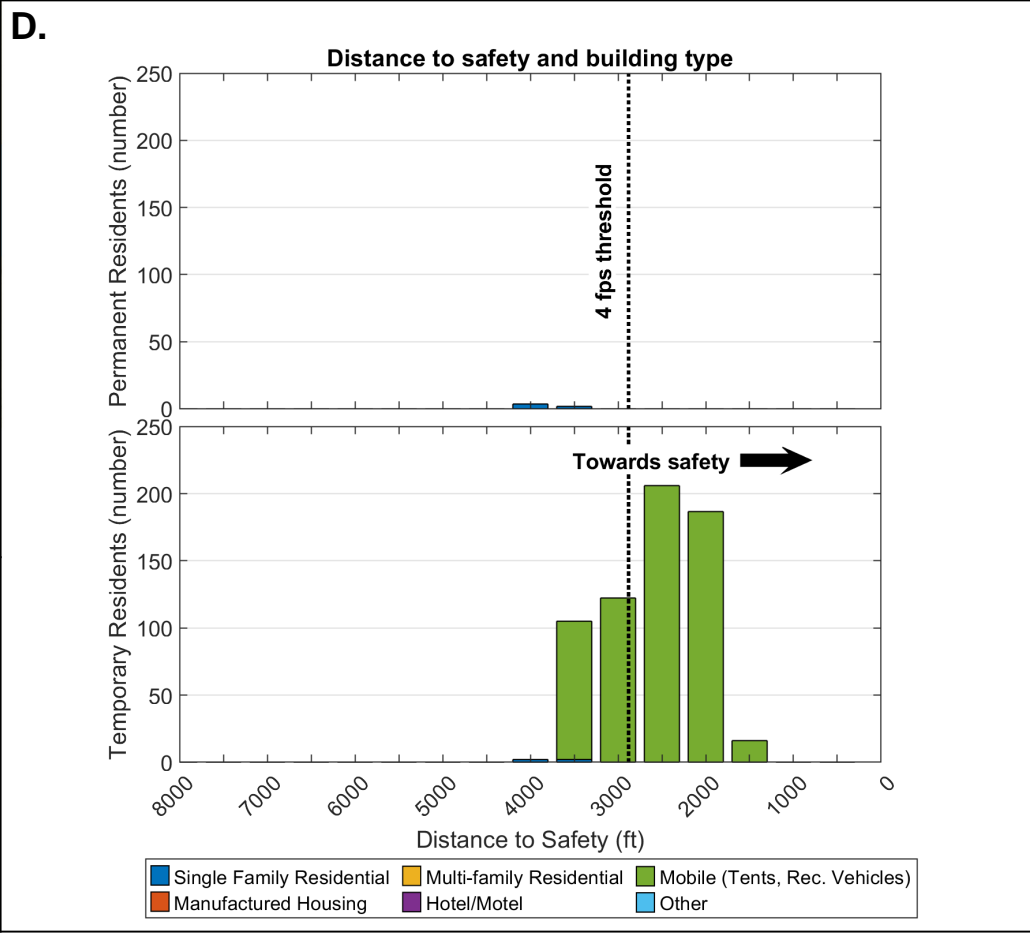
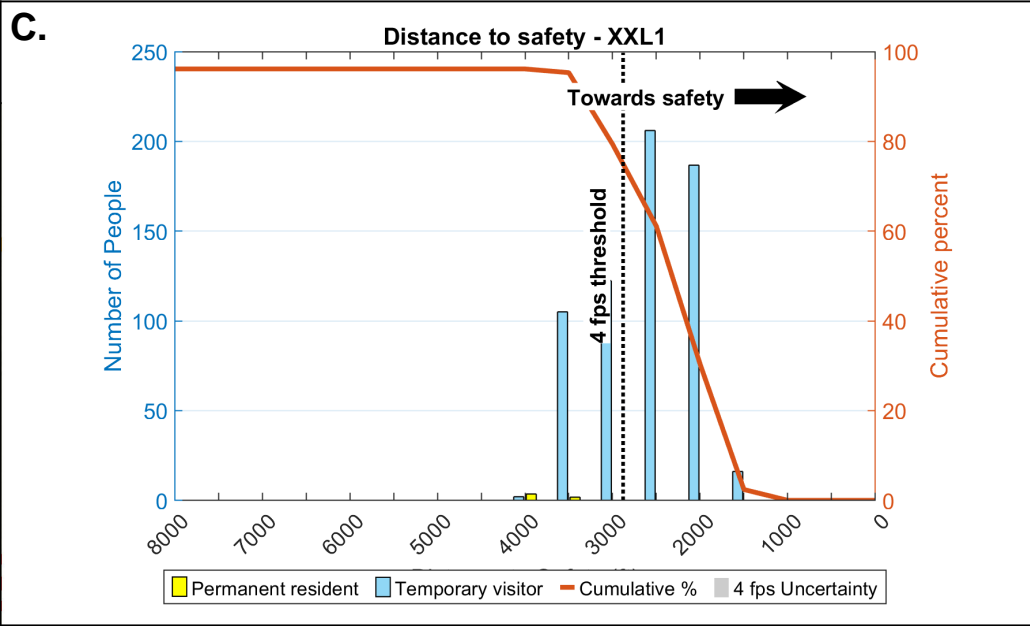
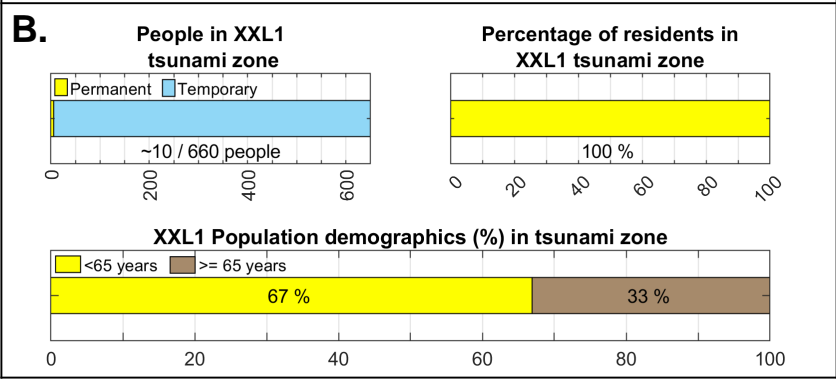
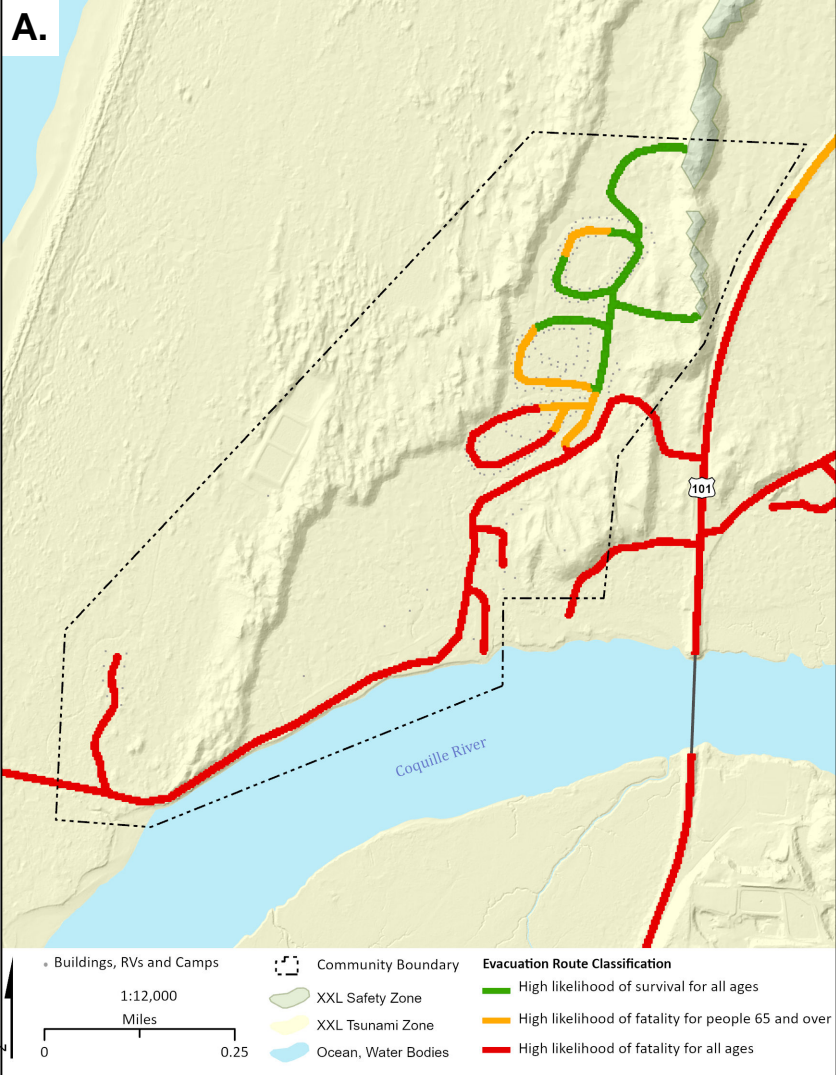
Percentage of residents in XXL1 tsunami zone

100 %

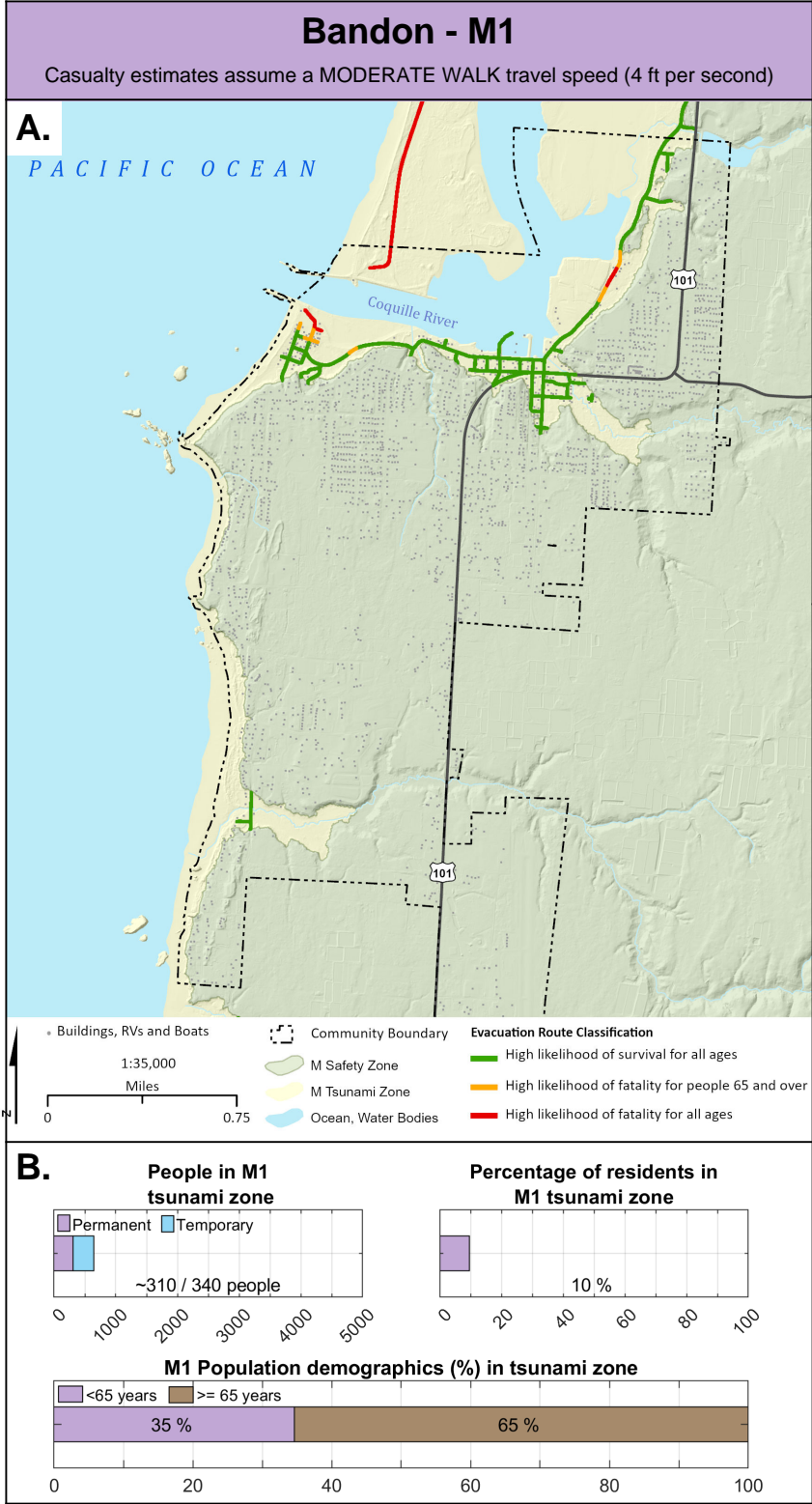
XXL1 Population demographics (%) in tsunami zone

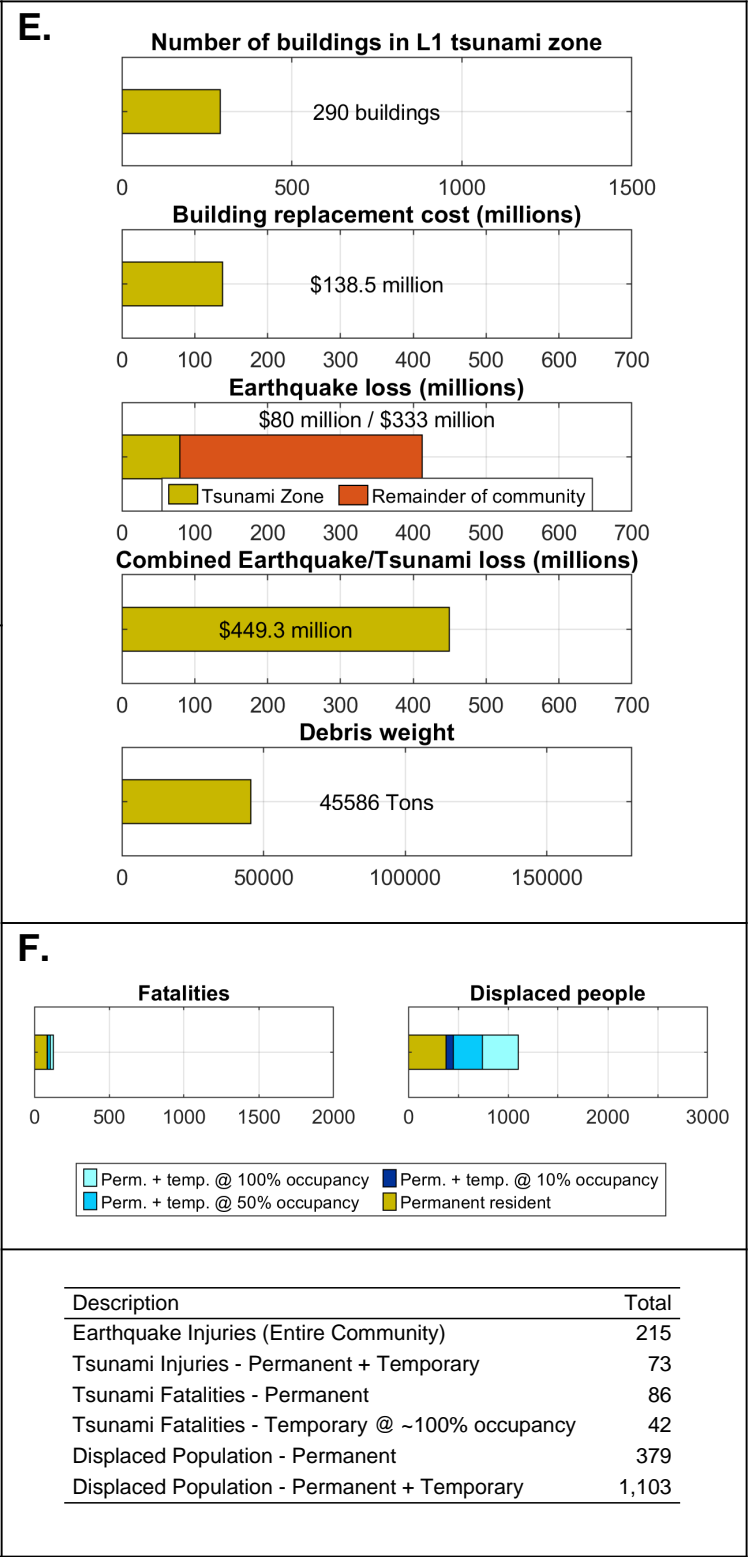
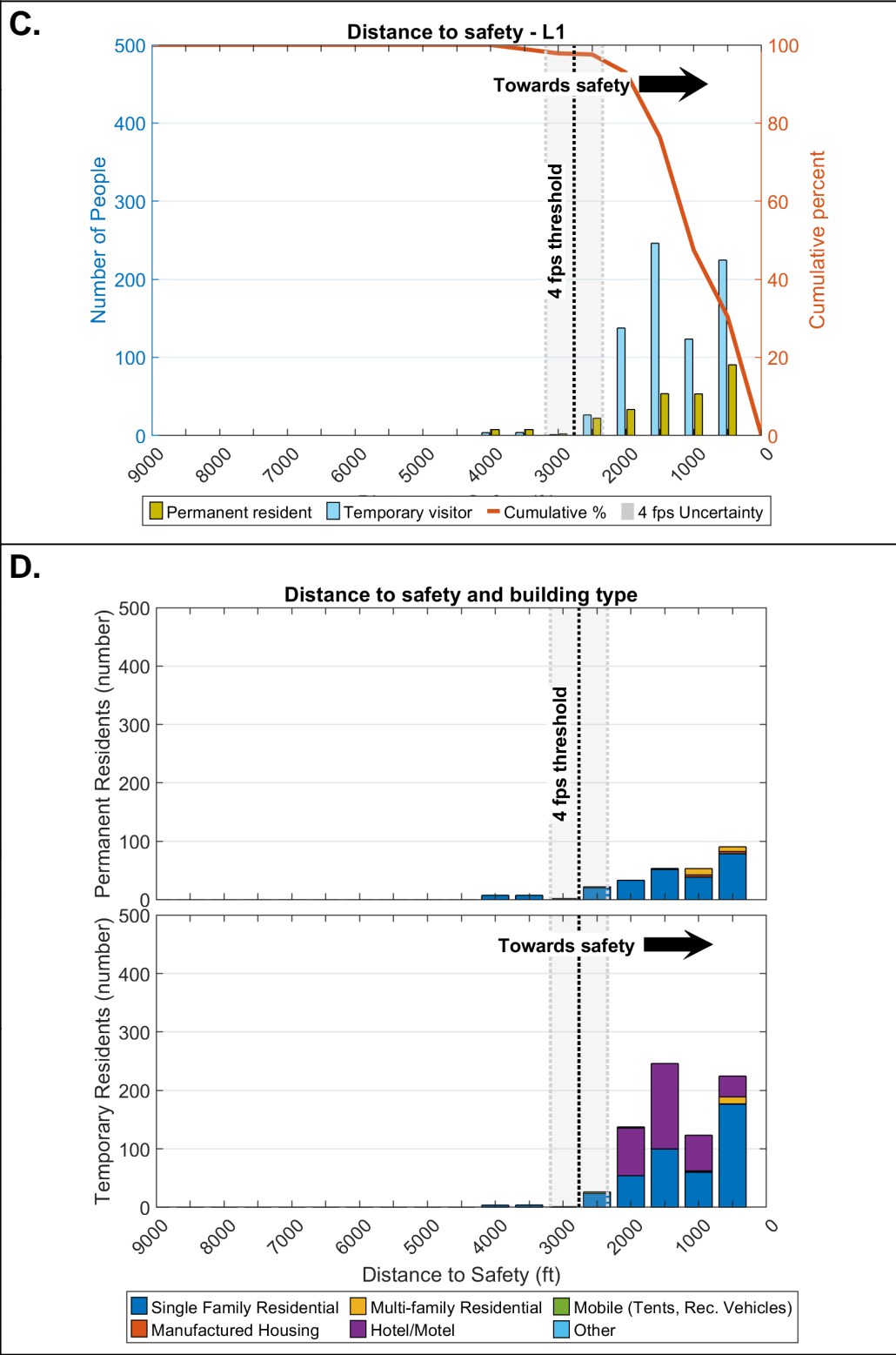
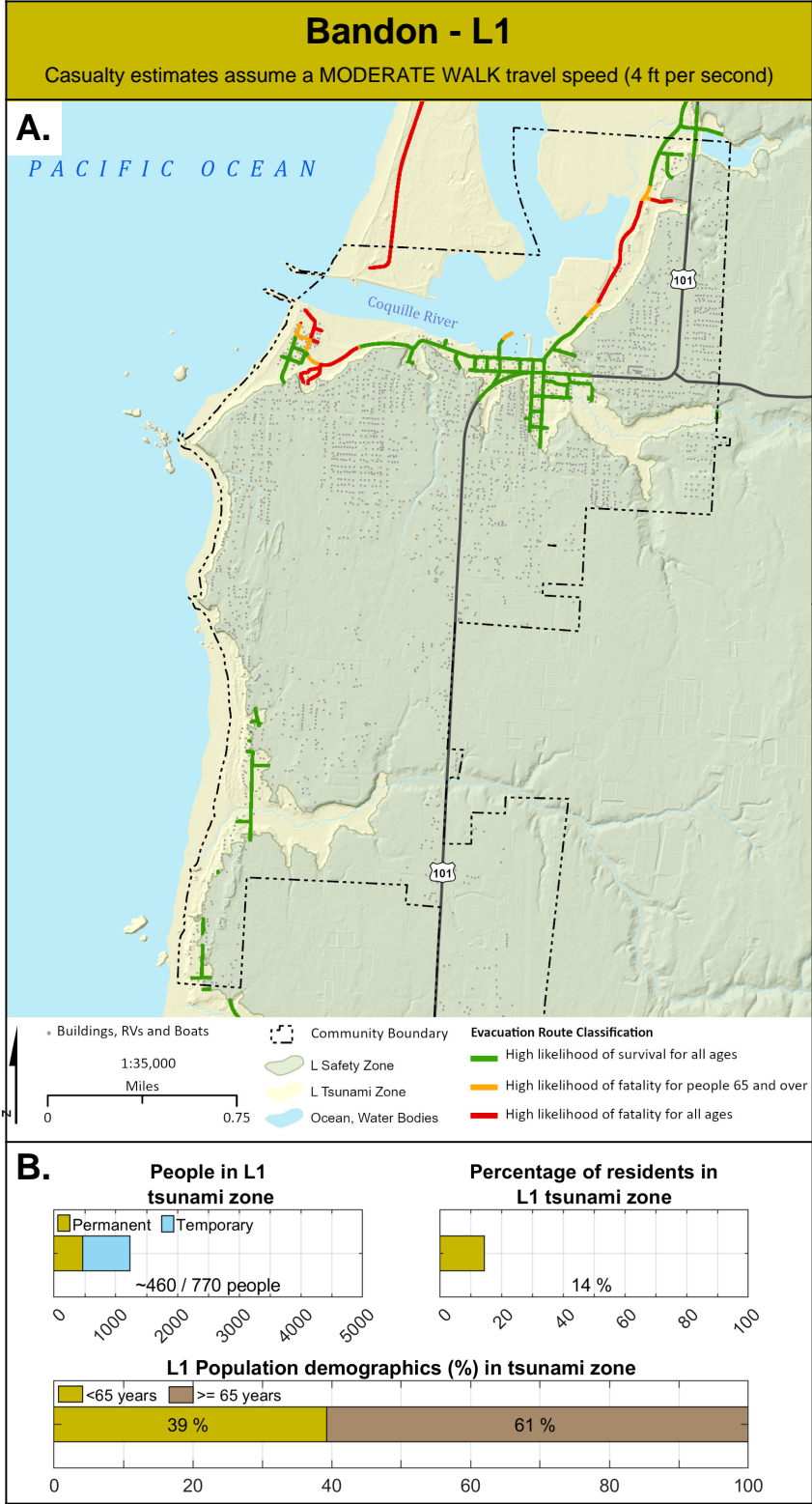
<65 years >= 65 years

67 % 33 %



Description	Total
Earthquake Injuries (Entire Community)	0
Tsunami Injuries - Permanent + Temporary	57
Tsunami Fatalities - Permanent	4
Tsunami Fatalities - Temporary @ ~100% occupancy	268
Displaced Population - Permanent	1
Displaced Population - Permanent + Temporary	397

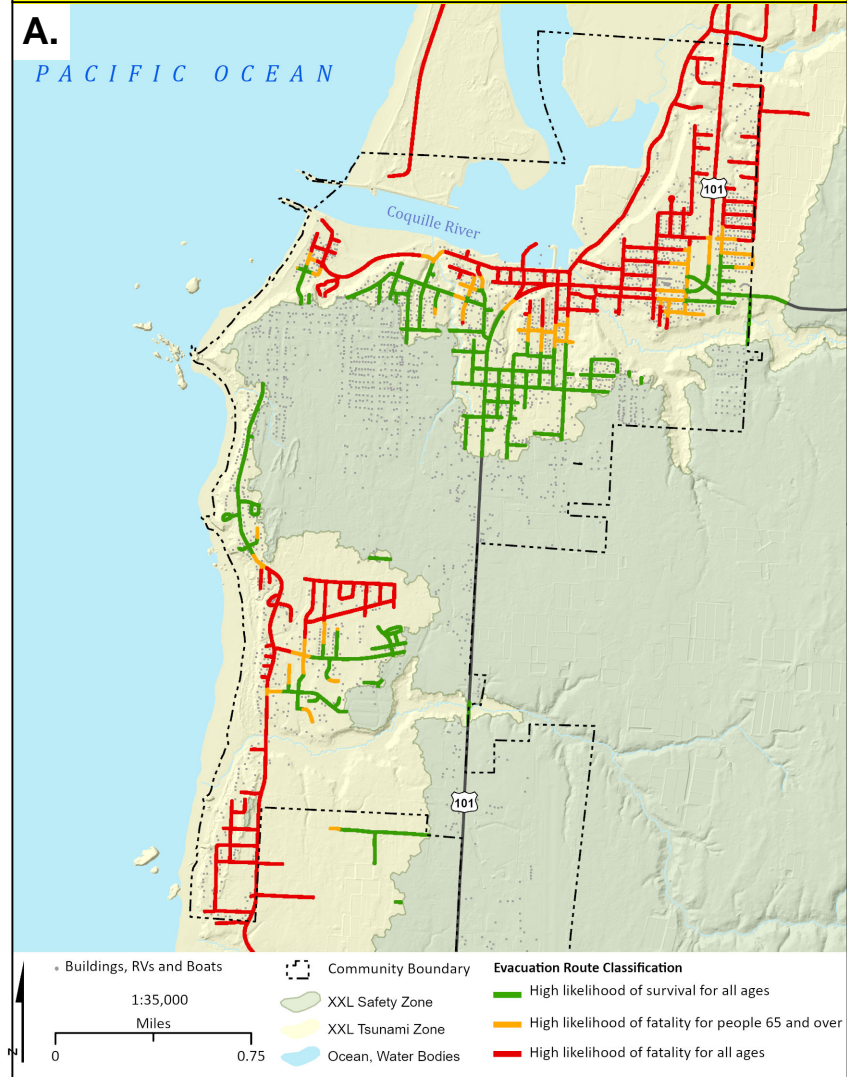




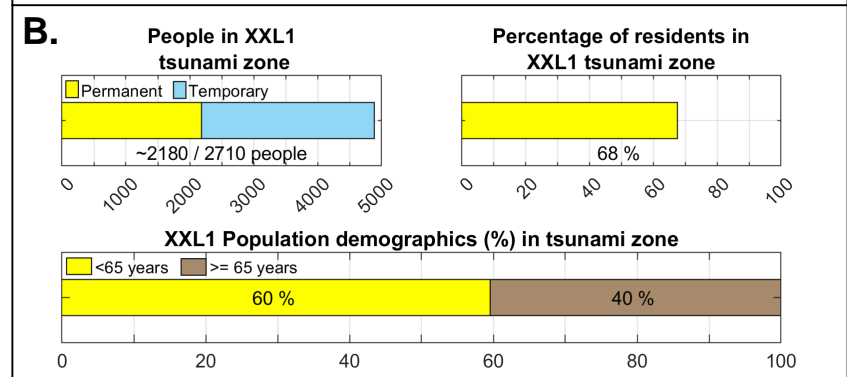
Bandon - XXL1

Casualty estimates assume a MODERATE WALK travel speed (4 ft per second)

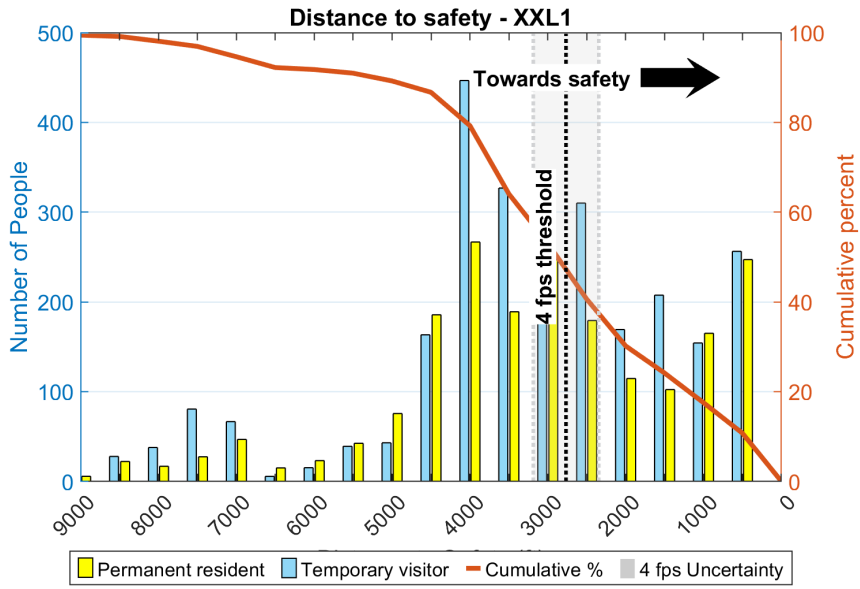
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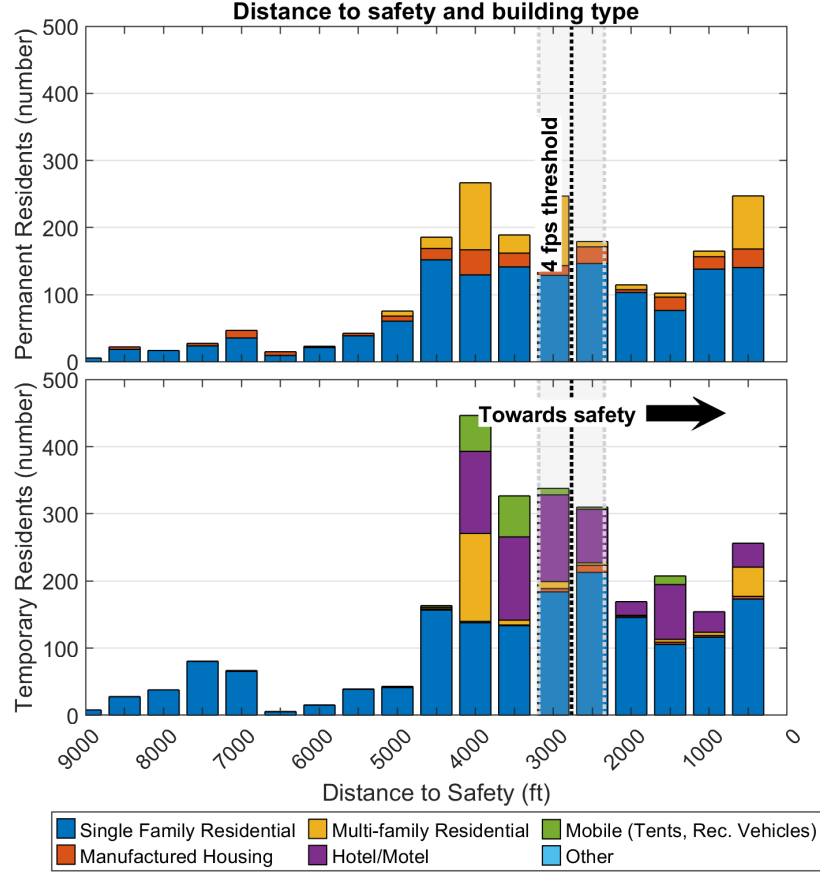
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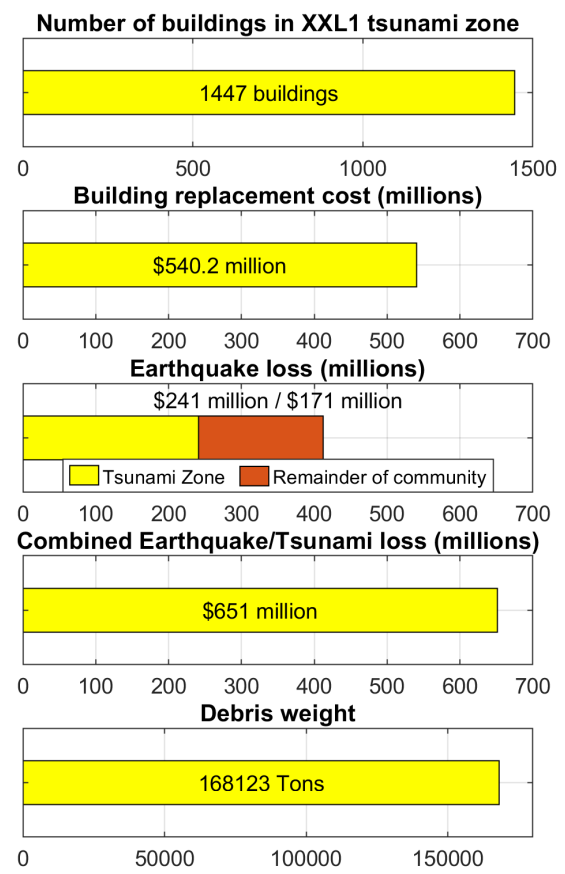
C.



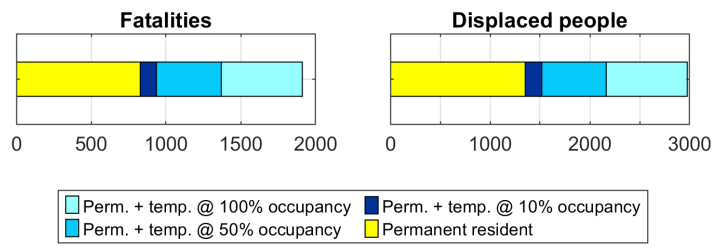
D.



E.



F.



Description	Total
Earthquake Injuries (Entire Community)	215
Tsunami Injuries - Permanent + Temporary	1,047
Tsunami Fatalities - Permanent	828
Tsunami Fatalities - Temporary @ ~100% occupancy	1,085
Displaced Population - Permanent	1,354
Displaced Population - Permanent + Temporary	2,975