

## CSAC 2017 Challenge Award Nomination

### Executive Summary:

#### Tsunami Zone App

#### Overview:

A Tsunami Hazard Zone App was developed to provide an additional tool for community tsunami hazard planning and emergency preparedness on the North Coast.

#### Challenge:

The challenge was to use existing Tsunami Hazard Zone data that had been previously used to create printed maps and make it accessible and dynamic through an online interface. For example, when used with a smart phone, we wanted to be able to use the device's GPS to zoom in to a user's current location and determine whether they are in the Tsunami Hazard Zone. Many of us carry these devices everywhere we go. We wanted people to be able to use this as part of their emergency preparedness planning efforts for home, work, school and play.

#### Innovative Solution:

The project was to create an interactive web-based GIS mapping application using the existing tsunami hazard zone data which are based on the worst case tsunami threat - a magnitude 9 earthquake on the Cascadia subduction zone. The Tsunami Hazard Zone App is providing an additional tool to present the tsunami hazard zone maps to the community and augments the existing maps and educational materials provided by the Redwood Coast Tsunami Work Group. The Tsunami Hazard Zone App provides interactive functionality such as access to the GPS on a smartphone or other device to show current location relative to the tsunami hazard zones. The community is being encouraged to access the Tsunami Hazard Zone App at home, work, school, and

### The Humboldt County Tsunami Zone Map App

Know your zone Humboldt County

- ❖ Use this App to identify if the places you work, live, or play are within a Tsunami Evacuation Zone.
- ❖ Plan ahead. Know your zone and plan your route to high ground before the earthquake and tsunami happen.

Bookmarks: Orick, Big Lagoon, Clam/Moonstone Beach, Humboldt Bay, Ferndale/Eel River, and Shelter Cove

Change base map: imagery, streets, and more

Show the legend

About app

Link to social media or e-mail

Search by address or location

Zoom in and out

Zoom to Humboldt Bay region

Find your location using GPS (smartphones and GPS enabled devices)  
\*After selecting the GPS location button, the symbol will show a tick mark.  
Press the box to enable the GPS feature and enable other search or pan features.

Scan the QR Code below or go to:  
<http://arcg.is/2q9U50p>

Works on smartphones, tablets, laptops, and desktop computers

Brought to you by the Redwood Coast Tsunami Work Group

Phone screen shown. View will vary by device.

places of recreation to identify tsunami hazard zones and evacuation areas and develop a plan prior to an earthquake or tsunami warning.

The app was developed using ESRI's ArcGIS software. The tsunami hazard zone GIS data were hosted online to create web based maps, and tools within the ArcGIS platform were used to configure the app and make it available at a publically accessible website. The Tsunami Hazard Zone App is responsive and designed to work on most smartphones, tablets, laptops and desktops. The Tsunami Hazard Zone App is accessed by following a link (<http://arcg.is/2q9U50p>) or scanning a QR code. The app is viewed similar to a webpage, and internet service is required to view the app. There is nothing to download to view the app, and you can bookmark the link on your web browser. We also included this service as a button on the county's MyHumboldt app, for easy access.

**Cost Effectiveness:**

The ArcGIS software used to create the Tsunami Hazard Zone App is used by Public Works for map production and data management for many projects and facilities and has been used for many years prior to development of the app. The initial ArcGIS software purchase cost was \$1,350, and there is an annual subscription cost of \$400. No additional costs were incurred for development and hosting of the Tsunami Hazard Zone App through the existing software subscription. All GIS data used in the app was available from previous map production efforts and no additional data collection was required. The app is free to access for the public and online hosting through the ArcGIS platform will be maintained with the current software subscription.

**Results:**

The app was released to the public in March 2017. Links and information about the Tsunami Hazard Zone App have been provided through e-mail, social media, and local news outlets. Thousands of visits to the app have recently been recorded. Future developments include adding Del Norte and Mendocino County tsunami hazard zone data to the Tsunami Hazard Zone App and offline viewing capabilities through an app that can be downloaded onto a device.

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