CEHTP Data Informs Drought Planning Efforts

After three consecutive years of extremely dry conditions, California is in a state of emergency due to drought. The drought has led to water shortages, reduced public safety due to wildfire events, and poor air and water quality. It is critical to identify which water systems are the most at risk for drinking water shortages in order to protect the public's health from the consequences of drought.

The Governor's Office of Planning and Research (OPR) is a comprehensive state planning agency that conducts long-range planning and research for the governor and his cabinet. OPR currently serves on the governor-appointed Drought Task Force, an interagency collaboration that provides recommendations for current and future state actions in response to the drought. One of OPR's roles on the task force is leading a work group that develops drought response efforts for very small water systems (those with fewer than 15 connections). These systems tend to be vulnerable because of their limited size. They also tend to be located in rural and isolated areas and lack financial
resources to mitigate drought impacts. In contrast, larger public water systems can typically access emergency drinking water funding through their municipality or other state agencies (i.e., the Department of Water Resources or the State Resource Water Control Boards Drinking Water Programs).

To make recommendations to the Drought Task Force, OPR and its working group partners utilize data from the CEHTP water boundary tool. The tool provides a digital map of water system boundaries that serve over 90% of the state's population, including small system boundaries. These data describe the geographic locations and coverage of these water systems so that outreach efforts and water conservation programs can target the most vulnerable communities. Using CEHTP data and other resources, OPR will continue its efforts to prevent and mitigate some of the most severe effects of the drought.

Health Risks from Wildfires: A Growing Public Health Concern

California's drought emergency increases the risk for wildfires. In 2014, over 2,500 wildfires have already occurred, which is a 70% increase in the average number of fires for the same time period. Wildfire smoke exposure is an important public health issue that leads to more respiratory hospital admissions, emergency department visits, and increased eye and respiratory ailments. As a result of climate change, California will likely experience an increase in the number and intensity of wildfires due to drought, water scarcity, early snow melt, soil dryness, and increasing heat.
To address the growing concern of wildfires, the British Columbia Centre for Disease Control recently held an international symposium to share best practices for public health practitioners during wildfire events. CEHTP provided expert review for a symposium report entitled "Evidence Review: Health surveillance for wildfire smoke events." The symposium disseminated information on interventions, guidelines, and data systems to track health problems and smoke exposure during wildfires. For example, experts presented a system for tracking smoke exposure and asthma medication sales in real-time, recommendations for the use of masks and filtration devices during wildfires, and evacuation guidelines for vulnerable populations. By sharing scientific expertise and learning best practices from international partners, CEHTP intends to remain at the forefront of health surveillance for wildfire events to inform policies and research aimed at protecting the public's health.

CEHTP Prepares for Geocoding Service Transition

CEHTP is preparing to discontinue its geocoding service that has been serving numerous stakeholders over the years, as part of a transition to a new geocoding tool that is offered through CDPH's Information Technology Services Division.

The CEHTP geocoding service is a suite of tools developed over the past decade by our late Geospatial Sciences Director, Craig Wolff, in response to the need he identified for a powerful, accurate, and fast geocoder for use in standard public health practice throughout California. Accurate geocoding was becoming essential for many stakeholders as a first step to link environmental and health data for research and planning purposes, and Mr. Wolff envisioned and created a tool that allowed for geocoding very large datasets, including those with confidential data.

The CEHTP suite of geocoding tools, known as the CDPH Enterprise Geocoding Service, has assisted public health programs in standardizing, verifying, and geo-referencing address data to latitude/longitude coordinates, as well as census block boundaries, medical service study areas, and zip codes. Because the tools utilized multiple commercial and public geocoding reference databases, they allowed for an accuracy rate surpassing that of many other available geocoders. User-friendly tutorials and documentation that accompanied the tool opened geocoding to a wide range of CDPH staff and their research partners.

Geocoding is critical for public health

The CEHTP geocoding service has been hugely successful. Since 2005, our service has been used over 130,000 times by nearly 100 programs...
to geocode more than 110 million addresses. Several of these programs, such as the California Birth and Death Registry, use the geocoding service in real-time, geocoding as records are entered into their registry. Use of the tool has contributed to:

- Planning tuberculosis control efforts among immigrant groups
- Investigating work-related deaths in Los Angeles County
- Evaluating cancer screening services across California
- Researching place-based mortality disparities in Alameda County
- Identifying high risk areas in California to support STD prevention and control
- HIV surveillance by CDC

This ground-breaking service has led the way for CDPH to develop its own department-wide geocoding tool. Using the criteria developed by CEHTP for accuracy, speed, usability, flexibility, and completeness, CDPH is piloting the use of its own geocoding service using ESRI’s StreetMap Premium. When the CDPH service becomes available, CEHTP will retire its suite of geocoding services by the end of 2014.

While the new CDPH geocoding service is currently only available for CDPH programs, the plan is to offer an external service available to outside partners. Support documentation is being developed for use with the service. If you are a CDPH employee, consultant, or partner, and want to learn about the new CDPH geocoding service, please contact Anne Millington, CDPH Enterprise GIS Coordinator at (916) 323-2218 or Anne.Millington@cdph.ca.gov.