Drought Task Force UPDATE

June 2014

About PG&E's Drought Task Force

The PG&E Drought Task Force convened in March 2014 to achieve the following:

- Coordinate, communicate and strategically identify drought impacts on PG&E operations, customers and communities
- Respond effectively to drought impacts and opportunities through a coordinated, "ONE PG&E" approach.

The task force meets regularly and is comprised of representatives from across PG&E, including:

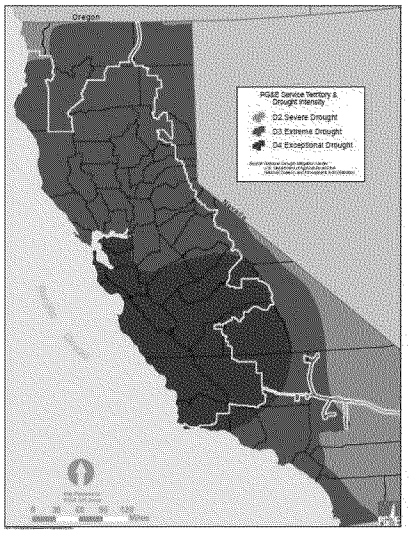
Anne Jackson, Environmental
Matt Miller, Federal Gov Relations
Russell Lowery, State Gov Relations
Matthew Plummer, State Agency Relations
Tamon Norimoto, Local Gov Relations
Dan Blair, Local Gov Relations
Kate Beardsley-Grant, Reg Relations
Melissa Brandt, Reg. Proceedings
Alexandra MacKie, Reg. Proceedings
Alvin Thoma, Power Generation
Christopher McNeece, Energy Procurement
Steve Tankersley, Vegetation Management
Jim Brisky, Electric Operations
Steven Whelan, Gas Supply Operations
Rob Stiving, Environmental
Angie Gibson, Emergency Preparedness and Response
Karen Cochran, Corporate Real Estate Strategy and Services
Karen Zelmar, Customer Care
Pat Mullen, Customer Care/Ag Task Force
Jimi Harris, Community Affairs
Lynsey Paulo, Corporate Relations
Paul Moreno, Corporate Relations

Drought Status

Currently, the U.S. Drought Monitor characterizes all of California to be in severe to exceptional drought and forecasts these conditions to persist.

Intensity: More than 24 percent of the state falls into the most intense category of drought, D4, or "exceptional" drought. A year ago, none of California was experiencing exceptional drought.

Snow Water Equivalent As of May 30, automated readings show snowpack at 3 percent of average for the date (1 percent of the April 1 average)



Heat: For January through May, temperatures were the warmest on record. Those five months averaged 5 degrees warmer than the 20th century average for January through May. Temperatures are expected to be above normal through the summer.

State Government Actions: On April 25, Governor Brown issued an executive order addressing the ongoing drought, following up on his January declaration of statewide drought emergency. The intention of the order was to manage water and further urge communities and residents to strengthen their efforts to conserve water. On May 13, the governor released a state budget revision adding $142 million to drought response efforts, including firefighting, emergency response, water management, wildlife preservation and food assistance.

Operations

HYDROELECTRIC GENERATION

With the October 2013 through May 2014 precipitation reported as the third driest on record, the total output from the hydroelectric system will be lower this year. PG&E is strategically generating less hydropower now so that we can save water in our reservoirs for generating power during the summer peak periods when demand for power is higher.

With PG&E's northern aquifers, the current storage in Lake Almanor and capabilities at Helms, the company will have a reasonable supply of peaking power to meet potential emergencies, and summer heat storms. In order to conserve water while still preserving environmental values in the affected streams, we are working closely with water agencies, first responders and regulatory agencies to address drought-associated concerns and develop mitigation measures for limited water deliveries, increased fire danger and environmental impacts.

Local Community Water Supplies

Several mountain communities are managing critically low water supplies. PG&E is supporting those communities' efforts to conserve water where possible. For example, at Pillsbury, Pinecrest and Lyons reservoirs, reduced water release rates have been developed with the appropriate stakeholders and regulatory agencies before obtaining approval from the Federal Energy Regulatory Commission.

Rates

While it is too early to know the precise effect that the drought might have on rates, PG&E anticipates some upward pressure on rates due to an overall reduction in available hydroelectric power. Although PG&E is managing reservoirs to ensure a reasonable supply of peaking power to meet potential emergencies and summer heat storms, total output from the hydroelectric systems will likely be low this year.


Pinecrest Lake, January 2014

Replacement Power

Lower output from hydroelectric sources means that PG&E must purchase replacement power, which is generally more expensive, in order to meet customer's electricity needs.

Greenhouse Gas Emissions

Although hydroelectric power represents only a portion of our energy mix, it plays a significant role in keeping PG&E's greenhouse gas emissions low. In drought conditions, PG&E needs to make up for the loss of hydropower availability with other sources, typically natural gas-fired generation. More gas-fired power generation increases the greenhouse gas emissions from the electricity we deliver to customers.

Water Rights

PG&E is among the largest holder of pre-1914 water rights due to our large hydroelectric system. More than 98 percent of the water we divert is non-consumptive, meaning we return it to the river for use downstream. The remaining nearly 2 percent of water under long-term consumptive water rights is sold to community water agencies under long-term contracts, who provide it to local farms and towns.

COLUSA, GATEWAY AND HUMBOLDT GENERATING STATIONS

PG&E's three gas-fired power plants use dry-cooling technology that requires 97 percent less water than conventional cooling technologies. These plants rely on freshwater to generate steam, cool auxiliary equipment, support fire systems and employees. These systems are largely closed loop systems that minimize the amount of water consumed.

PG&E has held meetings with the water agencies that deliver water to our power plants and anticipates no impact to our ability to deliver energy when needed to our customers. The company is closely monitoring the situation.

DIABLO CANYON POWER PLANT

Diablo Canyon Power Plant uses saltwater for once-through cooling. The plant relies on its seawater reverse osmosis system to produce the majority of its freshwater.

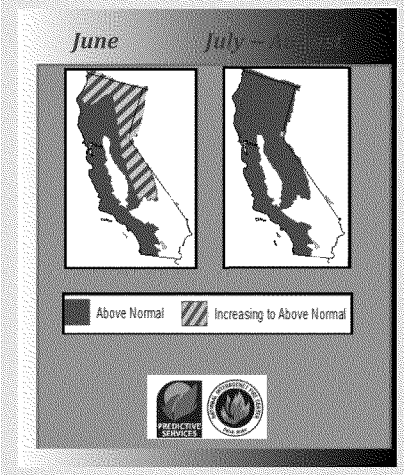
VEGETATION MANAGEMENT

PG&E's Electric Vegetation Management Program maintains the vegetation located near its overhead power lines, which reduces the threat of tree-caused power outages and fires. Under our Routine Transmission and Distribution Vegetation Management Program, 350 utility arborists and foresters inspect every mile of overhead power lines (134,000 miles of line) in PG&E's service area annually. Crews prune limbs or remove trees that could come into contact with lines or hazard trees that could spark fires, maintain fire breaks on 120,000 power poles and towers, and reduce fuel in and around power lines that provide access to fire crews responding to a fire.

Vegetation Management is implementing a range of additional actions to prepare for the increased risks associated with this drought, which go above and beyond the extensive year-round steps already being taken to prevent trees and vegetation from coming into contact with electrical facilities. These include:

- early detection and quick response to wildfires,
- additional work on high-fire risk tree identification and mitigation,
- enhanced vegetation inspections and mitigations,
- fuel reduction and emergency response access,
- early forest disease/infestation detection,
- public and private cooperative efforts and
- urban wild land interface protection.

PG&E also will partner with local Fire Safe Councils to fund nearly $5M in shovel-ready projects to reduce fire fuels, increase defensible space, augment fire patrols and increase public awareness and education.



Fire Potential Expands Through August

The potential for significant wildfire is above normal for increasing areas of the state as the summer progresses. Given warmer and drier-than-normal conditions, fuels are at critical levels in lower elevations and are expected to expand to all areas by mid-June and remain critically dry for most of the upcoming fire season.

Most of the area will experience fuels that are highly receptive to ignition and fires that are highly resistant to control efforts. Upper elevations will be prone to lightening starts by mid-June, four weeks earlier than normal.

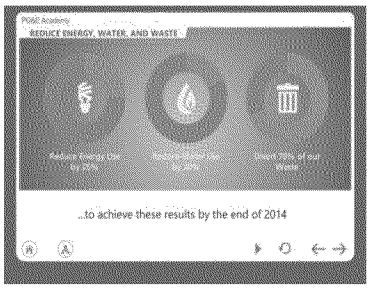
CAL FIRE reports they have responded to 1,661 wildfires across the state since January 1, burning 14,826 acres. This year's fire activity is well above the year-to-date average of 933 wildfires burning 5,895 acres.

EMERGENCY PREPAREDNESS AND RESPONSE

As part of PG&E's routine operations, the company monitors fuel conditions for wildfire risk and works closely with public safety organizations to assist in fire response activities. Eight staff meteorologists (including fire-weather specialists) monitor the current weather situation and forecasts, the National Weather Service's Red Flag Warnings, and fire threat projections from U.S. Forest Service and CAL FIRE. Fire prevention and mitigation plans and programs provide details on how the system is operated to mitigate the risk and impact of fire. For example, the plans outline specific activities to reduce the risk of fires such as restricting driving off road, restricting welding and the need to patrol a circuit before reenergizing. Many of the measures outlined in these plans are being employed earlier due to this year's increased fire risk.

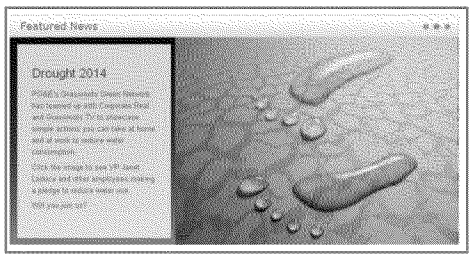
In the event of a fire threatening public safety and/or PG&E facilities, PG&E will support firefighting efforts as appropriate, through manpower and activation of PG&E's Incident Command System. PG&E has six mobile command vehicles that are mobile coordination and communications centers. They are staged across the service territory, can be deployed quickly, are able to host other emergency responders and provide Geographic Information System critical mapping information.

FACILITY WATER CONSERVATION



PG&E's offices and service centers rely on water for restrooms, kitchens, mechanical system cooling, vehicle washing and landscape irrigation. The company established a goal to reduce water use by 20 percent by the end of 2014, using 2009 as the baseline year. Key initiatives being pursued to help meet this goal include installing water efficient urinals and toilets, automatic faucets, aerators in faucets and showerheads, diligent irrigation and leak management, smart irrigation meters, real time sub meters, and drought-tolerant landscaping. The garage at the San Francisco Service Center reuses water from a natural underground stream in its mechanical and plumbing systems.

EMPLOYEE ENGAGEMENT



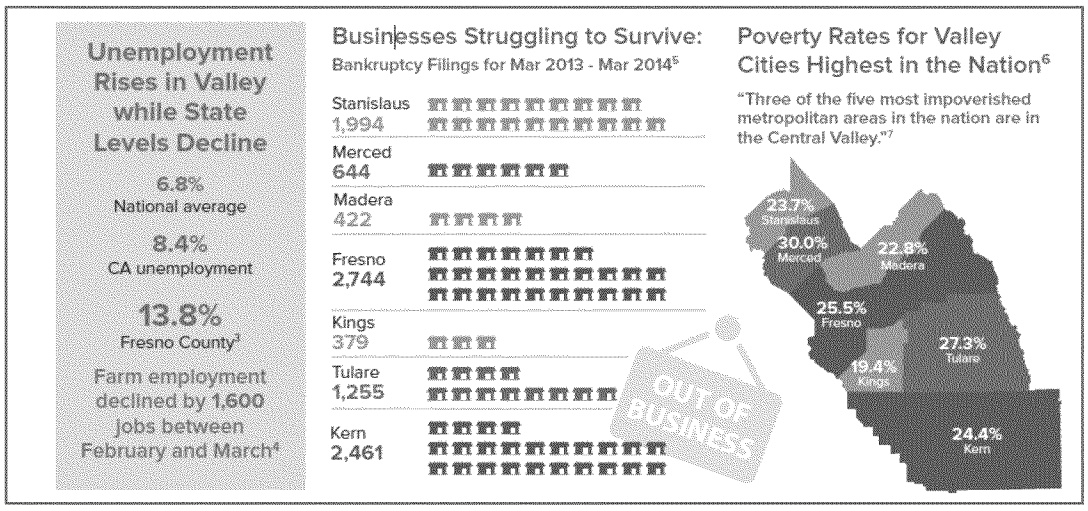
On May 1, PG&E launched an internal Water Wise Pledge Campaign to drive water conservation by employees both at work and at home. The campaign is officer-sponsored and grassroots-led and uses the company's various communication channels and multi-media resources to encourage people to make a pledge and take action to reduce their water use. To date, nearly 2,000 employees have made the pledge and are doing their part to conserve water. Outreach continues towards achieving a goal of engaging 10 percent of the company, or 2,200 employees.

Corporate Communications

Our Corporate Relations team continues to communicate potential drought impacts and PG&E's response efforts to our employees, customers and the media through numerous internal and external channels, such as PG&E's intranet site, employee emails, Currents web site, social media and through media advisories, releases and availabilities. The team also collaborates with the California Independent System Operator's communications department on projects and messaging

In addition, PG&E participated in and co-sponsored the National Integrated Drought Information System's California Drought Forums held in Sacramento in February and May.

Customers / Community



California Farm Water Coalition – May Drought Update www.farmwater.org

CUSTOMERS

PG&E is developing opportunities to help Agricultural and Food Processing customers reduc water/energy use or to assist these customers and communities with bill payment support. Example include: prioritization of customer service planning requests for pumping investments and also to return credit deposits where credit risk is low to assist with cash flow in these challenging economic times.

Targeted outreach plans are being formed for the communities most impacted by the drought to ensure high awareness of all of our services and help manage bills (e.g. pay plans), low income assistance and energy efficiency, where applicable. A multi-touch campaign focused on awareness and increased participation in our services in targeted customer segments and communities is being planned for launch in mid-July.

PG&E has also created a drought action team within its energy efficiency organization to rapidly identify, develop and deliver opportunities to our drought impacted customers. This team coordinates with PG&E's Sales and Services organization and the Marketing organizations to ensure that identified solutions are delivered in a rapid manner.

Examples of some of the initiatives that the drought team is pursuing include simplification of new measures that save water/energy and use of our training centers for drought-related educational outreach. These new energy efficiency opportunities will continue to be launched throughout the remainder of 2014 and into 2015.

COMMUNITIES

PG&E is partnering with CAL FIRE on the "One Less Spark, One Less Fire" multi-agency, public education campaign. We are also reaching out to the California Office of Social Services to discuss opportunities to support their Drought Food Assistance Program at the local community level. Currently 24 counties within the PG&E service territory are receiving drought food assistance.

U.C. Davis Assesses Economic Impact of Drought on Ag Communities

A study was recently commissioned by the California Department of Food and Agriculture to better understand the scale of needed emergency drought response. Projected impacts on the Central Valley include:

- Reduced water deliveries of 6.5 million acre feet (32 percent of normal water use) of surface water in the Central Valley
- Fallowing of an additional 410,000 acres, representing 6 percent of irrigated cropland in the Central Valley
- The loss of an estimated 14,500 seasonal and full-time jobs; about 6,400 of these jobs are directly involved in crop production
- A total cost of $1.7 billion to the Central Valley's irrigated farm industry this year, including about $450 million in additional costs of groundwater pumping
- About 60 percent of the economic losses will occur in the San Joaquin Valley and Tulare Lake Basin