BAY AREA WATER SUPPLY AND CONSERVATION AGENCY
BOARD OF DIRECTORS MEETING

November 15, 2013

Reports and media coverage of interest between November 2, 2013 and November 12, 2013

Media Coverage

Date:	November 12, 2013
Source:	ABC News
Article:	Dry October and November: Is it a drought?
Date:	November 12, 2013
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Article:	Laird reports on Bay Delta Conservation Plan
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Article	Rim fire devastation raises threat of flooding, erosion
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Publication:	Sacramento Bee
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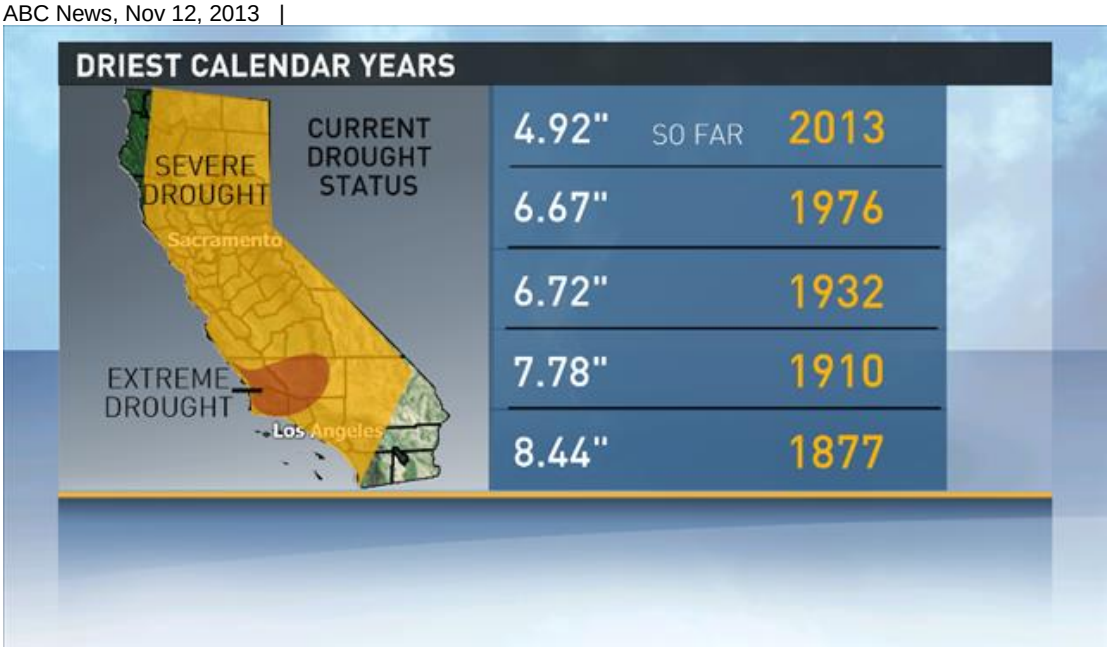
Dry October and November: Is it a drought?

ABC News, Nov 12, 2013 |



SACRAMENTO, CA - Going into the second week of November, Sacramento has yet to see rain.

The dry start to the month came on the heels of no rain for the month of October.

So far, this has been the driest calendar year in 37 years. The rain season started on July 1, but since Jan. 1, only 4.92 inches of rain has fallen. By now, the River City should have received more than 14 inches of rain.

Is it too early to call the lack of rain a drought?

The answer is yes, according to California Department of Water Resources Chief Hydrologist Maury Roos.

"We can't make a call until the rainy season is over," Roos explained. "We have seen times in the past when the season had a slow start and we made up for it."

Even with the lack of rain, area reservoirs are holding around 76 percent of average storage. Roos mentioned the drought level is 70 percent and the wettest months are still ahead.

"The rain starts to increase during the winter months," Roos said.

December generally brings in 2.76 inches of rain. That number jumps to more than 4 inches for January and 3.77 inches for February.

"If we get into December and January and it's still dry, then we should start getting concerned," Roos said.

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California, on track for record dry year, is ready to seed clouds

November 12, 2013
SF Chronicle / By John Upton

California, already parched and fire-scorched following two consecutive snow- and rain-deprived winters, is on track to experience its driest year on record.

"It's absolutely dry," Bob Benjamin, a National Weather Service forecaster, told the *San Francisco Chronicle*. "We just went through October where there was no measurable precipitation in downtown San Francisco. That's only happened seven times since records started." From the article:

The state's reservoirs are all well below their normal carrying capacity, according to Arthur Hinojosa, the chief of hydrology and flood operations for the California Department of Water Resources.

"Generally speaking, it has been dry across the state, and it has been remarkably dry where the population centers are and where the bulk of the water storage is," Hinojosa said. "Most operators plan on multiyear dry years, but nobody plans on as dry as we've seen."

The dry weather is also extending the fire season. The California Department of Forestry and Fire Protection has responded to 6,439 fires this year, almost 2,000 more fires than during an average year, said Battalion Chief Julie Hutchinson. That doesn't include fires on federal land like the Rim Fire, which burned 400 square miles in and around the Stanislaus National Forest and Yosemite National Park.

As winter approaches, water officials are getting ready to take matters into their own hands: They plan to step up cloud seeding. *The Sacramento Bee* reports:

As California concludes a second drought year and water managers hope eagerly to avoid a third, utilities across the state are poised for that first mass of pillowy gray clouds to drift ashore from the Pacific Ocean.

When it arrives, if conditions are right, they'll be ready with cloud-seeding tools to squeeze out every extra snowflake, with the goal of boosting the snowpack that ultimately feeds the state's water-storage reservoirs. …

As practiced in California and elsewhere in the West, cloud seeding involves spraying fine particles of silver iodide into a cloud system to increase snowfall that is already underway or about to begin. Silver iodide causes water droplets within the clouds to form ice crystals. As the crystals grow larger, they become snowflakes, which fall out to create more snow than the storm would have generated on its own.

Cloud seeding is done only when temperatures within the clouds are between 19 and minus-4 degrees Fahrenheit. This is the range at which silver iodide does its best work, as demonstrated by decades of research.

“It enhances precipitation that’s already occurring,” said Dudley McFadden, a civil engineer at the Sacramento Municipal Utility District who manages the utility’s cloud-seeding program. “Once you’ve got snow, you can make more with this approach.”

Of course, cloud-seeding only works when there are clouds in the air to begin with. It’s certainly not a real fix for climate change, which is drying out the American West and fueling wildfires.

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Laird reports on Bay Delta Conservation Plan

Published on 11/12/2013 - 2:38 pm
Written by Business Journal Staff

During a visit to Fresno on Tuesday, California Secretary for Natural Resources John Laird reported that progress is being made on the Bay Delta Conservation Plan that will be released for public review on Dec. 13.
He said that although there are no specifics yet on downstream water capture and storage, it will be considered as part of the plan. Laird said that once the plan and environmental impact report are released, the public would have 120 days to comment on the documents.

Laird said it is getting near time to develop an action plan to set priorities and determine what kinds of construction and storage projects should be built. “We need to take action in the next year for the next 50 years of water in California,” Laird said.

He said the opportunity to improve California’s water system only opens up about every 15 to 20 years. “We have to take advantage,” Laird said.

The Bay Delta Conservation Plan is a federal and state initiative that would be financed by the state’s water contractors and a bond initiative. Initial plans call for a twin-tunnel system to convey water through the delta region.

A preliminary Bay Delta conservation plan was released on March 14.

Laird said the last major water project in the state took place about 50 years ago. But since then the state has seen monumental population growth, he said.

“It is really important that we upgrade the system and be ready for growth,” Laird said.

Laird stressed that agriculture also needs better water reliability. “We have a boom or bust climate,” he said.

He said better storage and conveyance would provide stability to the state’s water system. “It is part of the water action plan,” Laird said.

Laird said he believes that both environmental and growth needs can be met under the Bay Delta Conservation Plan.

The goal, he said, is to balance interests.

As for cost effectiveness of the project, Laird said doubts were cast about California’s initial water project built in the 1960s. But it penciled out well, he said. He said the new plan would be designed to be cost effective in the long haul.

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November 7, 2013 - SACRAMENTO, Calif. — Although dousing the flames was foremost in people's minds during the recent Rim Fire in Stanislaus National Forest and Yosemite National Park, U.S. Geological Survey scientific work continues well after the fire is out. USGS scientists are continuing their critical research characterizing the hidden dangers faced after large wildfires.

While the fire was still smoldering in September, the multi-agency BAER (Burned Area Emergency Response) team developed a burn-severity map and shared it with USGS scientists. USGS assessed the potential for debris flows that tend to occur when the winter rains soak the steep slopes following fires by adding critical information on soil characteristics, the ruggedness of the terrain, and the typical amount of rainfall in that area in order to model the likelihood and possible volumes of debris flows. The just published Rim Fire debris-flow hazards assessment map, will help land and emergency managers focus mitigation treatments on where the greatest damage might be done by post-fire debris flows.

As the Rim Fire growth slowed and the BAER team began their onsite evaluation of post-fire threats to life and property, the USGS California Water Science Center and the San Francisco Public Utilities Commission, operator of the Hetch Hetchy Regional Water System, assessed project facilities and USGS streamgages within the fire perimeter. Many of these streamgages were scorched and in need of repair, and the facilities are now subject to increased potential of debris flows and flash flooding.

"Our ongoing science research and the relationships and collaborations we have built with wildfire responders and land managers help mitigate and reduce the hazards of wildfire in the future," said USGS Pacific Regional Director Mark Sogge.

The most time-critical task for USGS scientists now is to work with the California Department of Water Resources, Modesto Irrigation District, and Turlock Irrigation District to establish a streamgage and extensive water-quality monitoring at a location downstream from the fire extent and upstream from Don Pedro Reservoir in the Sierra Nevada foothills. Documenting the quantity and quality of water entering the reservoir, and modeling streamflow changes in response to the fire, gives reservoir managers the tools to understand the cumulative effects of the Rim Fire on future water supplies.

Throughout the fire, USGS satellite imagery , such as Landsat's before-and-after images of the Rim Fire, provided firefighters with situational awareness, and helped them mount their campaign against the intense and fast flames. Maps and satellite imagery were a daily element of Integrated Fire Command briefings.

USGS continues to work with the Calif. Dept. of Water Resources, the SFPUC, and the Don Pedro Reservoir managers to include the Rim Fire burn area data in, and thereby increase the utility of, hydrologic models currently being developed. Additional remote sensing information will be incorporated into the updated hydrologic model to help the managers understand the runoff and streamflow as it changes through the years after the fire.

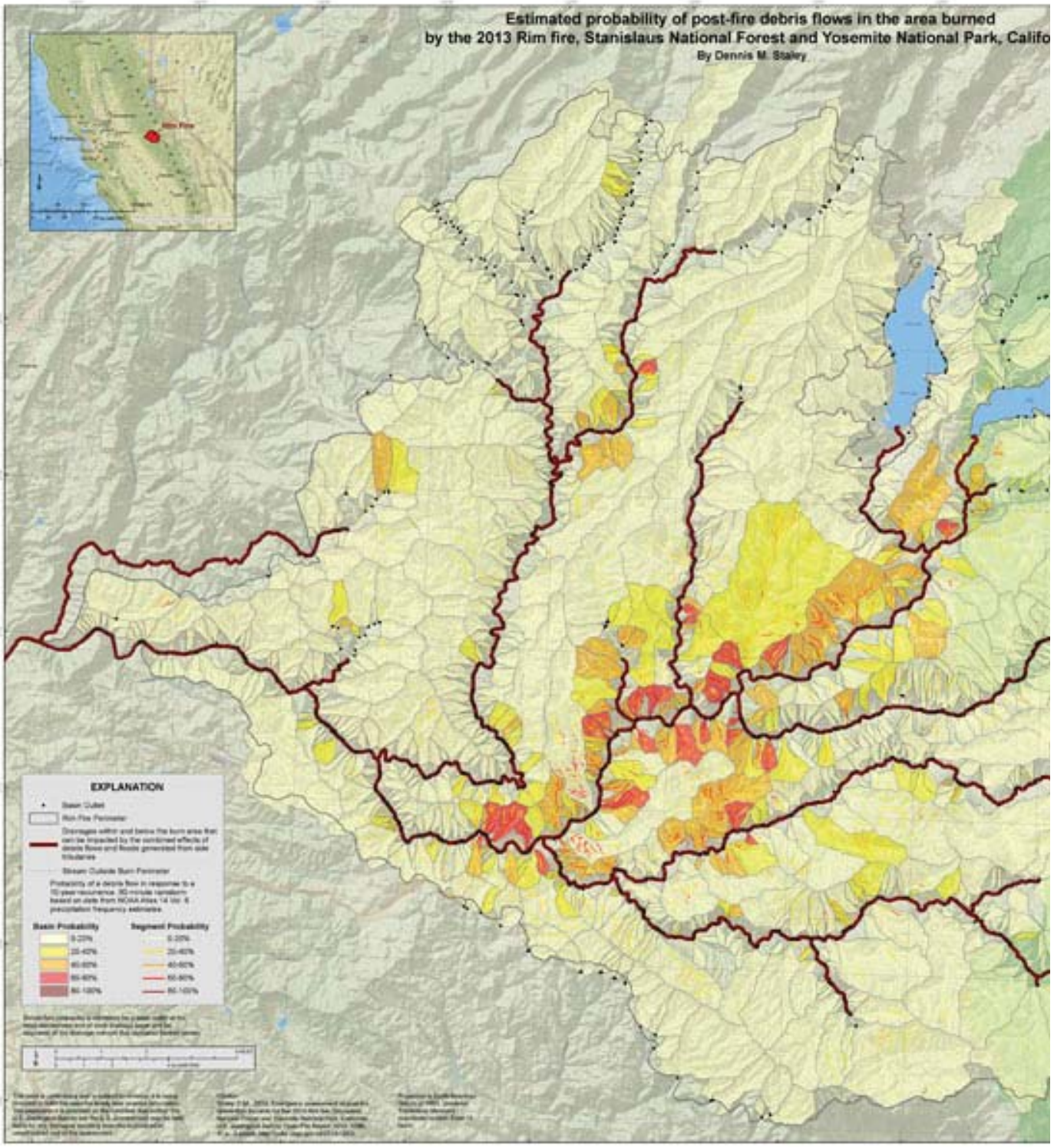
USGS is also monitoring soil moisture and incorporating soil properties, burn severity, and expected rates of vegetation recovery into a computer model to understand the hydrologic processes, responses, and sensitivities of the burned areas to a range of potential climatic conditions in the next five years.

Although the challenging job of managing such fires rests with other agencies, USGS provides the underlying science for sound land management decisions, before, during, and after wildfires. The USGS role studying natural hazards such as floods, landslides, earthquakes and volcanoes is well known, but fewer people are aware of the USGS scientific work in major wildfire events, which are one of the most regular and sometimes most devastating natural hazards in the West.

Well before the Rim Fire, USGS fire ecologists routinely provided scientific information to help state and federal agencies manage wildfire as a critical and natural ecosystem process and as a potential hazard to human life, property and infrastructure in the Sierra Nevada as well as Southern California. A new
video
tells this story. USGS ecologists also monitor the
effects of ash on wildlife
.

These are only a few of the many ways USGS scientists and experts help to manage the tremendous potential for wildfire-related calamity in the West.

Likelihood of significant debris-flow hazard within and downstream of the Rim Fire burn area. Red areas are most likely to generate debris flows. (High resolution image 36 MB PDF.)


USGS
Estimated probability of post-fire debris flows in the area burned
by the 2013 Rim fire, Stanislaus National Forest and Yosemite National Park, Califo
By Dennis M. Staley
EXPLANATION
Basin Probability
Segment Probability

RIM FIRE DEVASTATION RAISES THREAT OF FLOODING, EROSION

November 7, 2013 at 10:54 am

An overall view of the Hetch Hetchy Reservoir can be seen in Yosemite National Park on October 4, 2013. (Genaro Molina/Los Angeles Times/MCT)

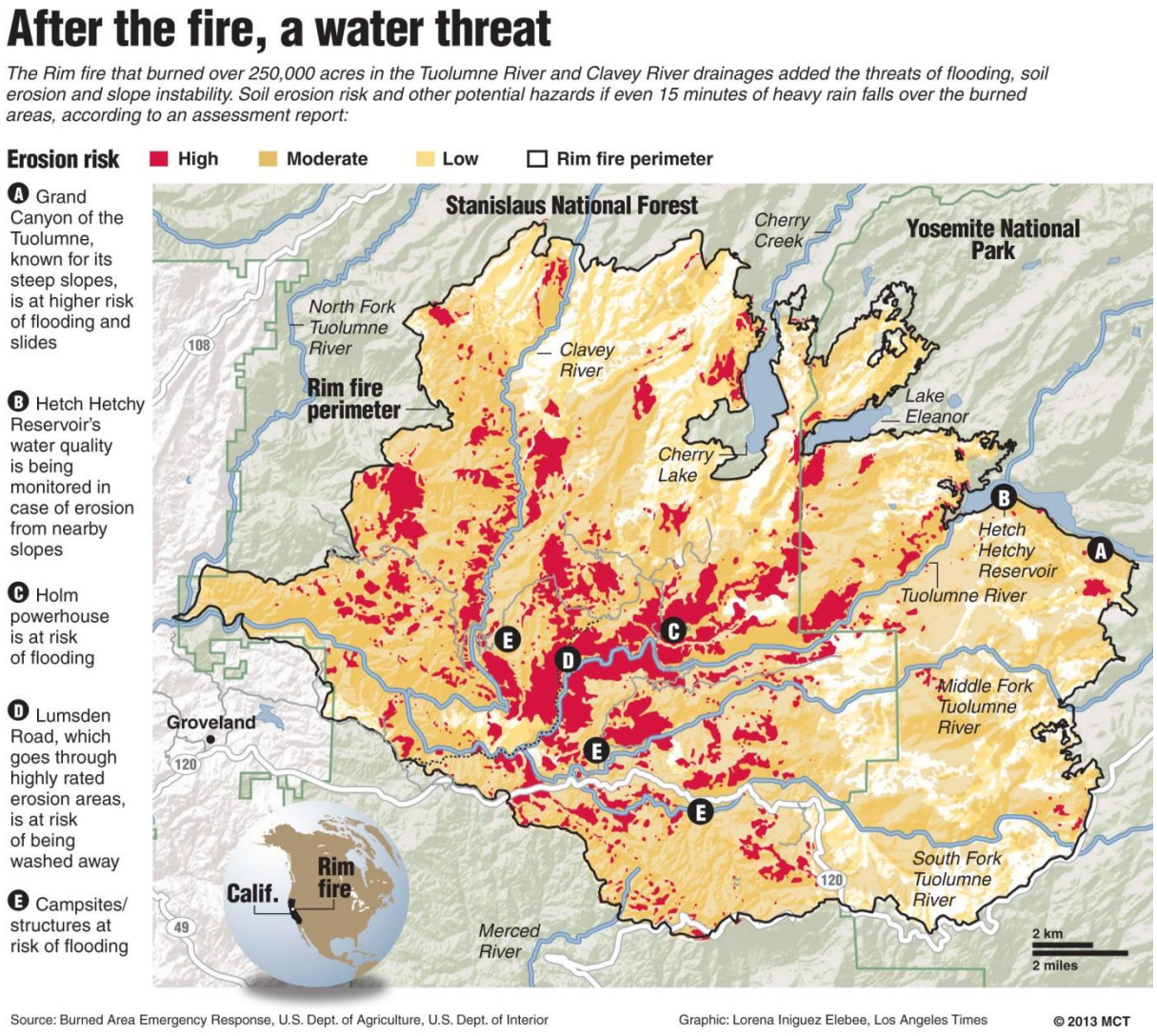
By **Tony Barboza** , *Los Angeles Times*

Summary

• Even though the Rim Fire — which ignited August 17 in the Stanislaus National Forest — is fully contained, damage from the blaze is causing other issues.
• With winter approaching, forest rangers say the charred landscape is more susceptible to flooding, erosion and instability.
• Trails and roads are at risk of washing away, cutting off access to world-class white-water rapids.
• Burned trees and debris will almost certainly be flushed downstream, fouling irrigation water supplies.
• San Francisco officials are closely monitoring hydroelectric facilities, soil conditions and water quality in and around Hetch Hetchy Reservoir.
• The U.S. Forest Service has rushed to prepare culverts, stabilize roads and trails, and put mulch and straw bales over burned soil to keep it from sliding away in heavy rain.
• Rangers have closed roads and campgrounds and posted signs to warn of falling rocks and trees.

GROVELAND, Calif. — As autumn turns to winter and rain falls over the charred landscape left behind by the Rim fire, forest rangers and emergency planners have a new worry: water.
Over 90 percent of the blaze burned in the Tuolumne River watershed, where more than 2,600 miles of streams cut through steep, now-burned slopes of the Sierra Nevada. Those mountains are primed for flooding and debris flows in a big storm.

The 410-square-mile blaze — California's third-largest on record — ignited on Aug. 17 in the Stanislaus National Forest and burned into the northwest part of Yosemite National Park. More than two months later, the fire is fully contained, but some of the most serious hazards are just now presenting themselves.
Trails and roads are at risk of washing away, cutting off access to world-class white-water rapids. Burned trees and debris will almost certainly be flushed downstream, fouling irrigation water supplies.



San Francisco officials are closely monitoring hydroelectric facilities, soil conditions and water quality in and around Hetch Hetchy Reservoir, where the fire crept around the edges of the city's drinking water supply and made some slopes more prone to erosion.

The U.S. Forest Service has rushed to prepare culverts, stabilize roads and trails, and put mulch and straw bales over burned soil to keep it from sliding away in heavy rain. Rangers have closed roads and campgrounds and posted signs to warn of falling rocks and trees.

Science and Policy Analyst William Sears, with the Hetch Hetchy Regional Water System, walks along the Hetch Hetchy Reservoir near the O'Shaughnessy Dam in Yosemite National Park on October 4, 2013. As autumn turns to winter and rain falls over the charred landscape left behind by the Rim fire, forest rangers and emergency planners have a new worry: water. (Genaro Molina/Los Angeles Times/MCT)

"The emergency's not over when the fire's out," said Jason Carkeet, utility analyst for the Turlock Irrigation District. His agency has purchased extra booms to capture logs and woody debris that the Tuolumne River is likely to dump into 26-mile-long Don Pedro Reservoir, which stores water to irrigate more than 200,000 acres of Central Valley farmland.

After two dry years, officials would welcome rain and snow, but they shudder at the thought of a storm that drops too much at once. Scientists predict that 15 minutes to an hour of intense rainfall — the type of storm that happens about every 10 years — would be enough to unleash a slurry of boulders, fine mud and brush.

Normally, rain bounces off trees and brush, slowly percolating through the soil. But after a fire, the earth sits unprotected and, if severely burned, can even repel water. With fewer twigs, leaves and vegetation to slow down the water, it picks up speed and flows over the soil in sheets.

"You get 3 inches of rain in 15 minutes, and things can happen," said Jerome DeGraff, a geologist with the U.S. Forest Service who helped draft a post-fire assessment of the burned area. The report found that 44 percent of the soil burned at high and moderate severity, a predictor of how susceptible the slopes are to slides, erosion and runoff.

Most catastrophic would be a rain-on-snow storm, in which showers fall on thin snowpack, melt it and send monster runoff downstream.

That's what happened in January 1997, when a huge storm dropped rain over snow and sent floodwaters and mounds of debris barreling down the Tuolumne River into Don Pedro Reservoir, clogging its marinas.

Though the area could use a wet winter to fill the reservoir, "we don't want gully-washers," said Carol Russell, director of the Don Pedro Recreation Agency. "If we could just have a little bit of rain all winter long, we would be happy. Of course, California doesn't really do that."

Among the routes most at risk of being obliterated is Lumsden Road, a steep, narrow dirt road that drops down a 2,000-foot canyon to the banks of the Tuolumne River and provides access to the area's most popular rafting and kayaking run.

Steve Welch, general manager of Groveland-based American River Touring Association, a nonprofit that charters white-water trips, dispatched employees down that road in August with inflatable rafts to ferry firefighters across the river as the blaze raged.

"That's our lifeline," Welch said. "It's how everyone gets to the launch point. It is now the most tenuous thing that we have, looking forward."

Before any significant rainfall, portions of roads and trails this fall have already been covered with dirt that has slid down. Trees, roots and underbrush that once held soil in place were burned away.

"Forget rain, it's already showing high rates of erosion," said Jeffrey Mount, founding director of the UC Davis Center for Watershed Sciences, who has studied, rafted and hiked along the Tuolumne for more than three decades. Once debris is set loose by rain, it could take years to work through the watershed's channels, he said.

"If you have a dry winter, you're better off because you allow some slope-stabilizing vegetation to get in," Mount said. "The re-colonization of the slopes takes place amazingly fast after that."

Tests have shown that in many areas, the soil was not as scorched as initially feared.

That includes the steep, granite valley around Hetch Hetchy Reservoir, a priority during the firefighting effort because it stores 85 percent of the drinking water supply for 2.6 million people in the Bay Area, including San Francisco and Hayward. Though some of the Rim fire burned so hot it could take away the soil's ability to absorb water, scientists for the Hetch Hetchy Regional Water System do not believe areas near the reservoir were scorched enough to be prone to major slides.

The fire's toll is more evident downstream, where hundreds of wooden utility poles were destroyed by the flames and are being replaced by helicopter. In more severely burned areas, public utility officials worry that debris flows could take out key roads used to access hydroelectric facilities that power San Francisco's airport, streetlights and city buildings.

Dusty Vaughn, a recreation specialist for the Stanislaus National Forest's Groveland Ranger District, has been patrolling the forest for hazards that could pose a risk to visitors.
He has seen some encouraging signs that a recovery is beginning to take root, such as the green grasses and ferns sprouting from blackened oak stumps.

At a calm stretch of the Tuolumne River known as Meral's Pool, Vaughn surveyed a campground that has been closed. Oak trees hollowed out by fire hung over the popular starting point for rafters. He expects some of them to topple into the river before long.

"The water's still clear," he said, but its fate depends largely on the weather. "We won't know until spring."

Read more: http://www.ryot.org/rim-fire-devastation-raises-threat-flooding-erosion/460657#ixzz2k5eBo1Yo

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EPA Report Examines Water's Importance to U.S. Economy

Submitted by Matt Williams on Wed, 11/06/2013
ACWA Water News

A new informational report from the U.S. Environmental Protection Agency details just how important water is to the U.S. economy.

Synthesizing recent studies on the topic, The Importance of Water to the U.S. Economy report released this week finds that energy production, water supply and food production together account for over 94% of water withdrawals from the nation's groundwater, streams, rivers, and lakes. This has created an energy-food-water nexus in which these sectors are interconnected.

"A major theme that emerges from analyzing water's economic importance is that everything is connected," the report said. "Although water is a local resource, water use is connected at a regional or watershed level; through commerce, trade, and other economic linkages, it is connected at a national or international level as well."

Even so, precise measurement of the economic value of water is "elusive" and more research is needed, the report added.

"EPA hopes this report will be a catalyst for a broader discussion about water's critical role in the U.S. economy," wrote Nancy Stoner, the U.S. EPA's acting assistant administrator for water.

The report is available for download at http://water.epa.gov/action/importanceofwater/

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City of Sacramento strives to lead in water conservation

By Matt Weiser, mweiser@sacbee.com

Published: Saturday, Nov. 2, 2013
Sacramento Bee

The city of Sacramento is positioning itself to become the capital region's water conservation leader, a dramatic shift after decades of opposition to even basic conservation ideas like water meters.

On Tuesday, the City Council unanimously adopted a 150-page water conservation plan that will invest millions of dollars in a host of new measures, some normally associated with thirsty desert cities.

Within two years, if the plan is carried out as proposed, the city for the first time would offer homeowners cash incentives to remove lawns. It also would extend conservation programs into thirsty commercial sectors, such as restaurants and laundries, and punish heavy water users with steeper water charges.

"Anybody who wants to look to Sacramento and say we're not doing our share is just simply not paying attention," said Vice Mayor Angelique Ashby.

The new direction is an outgrowth of several factors, including a new generation of city leaders and a growing statewide awareness that water conservation is everybody's business, even in cities such as Sacramento that are relatively wealthy in water. The city has its own water rights in the American and Sacramento rivers, so is not dependent on allocations or purchases from other entities.

Yet, in recent years, Sacramento also has moved more decisively to embrace its rivers for the esthetic and recreational pleasures they provide, from swimming and kayaking to habitat for a unique and robust salmon run. All those assets require water, and local recreationists and environmental groups have pressed for conservation to protect the rivers and the benefits they provide.

"There's been a sea change, and I think they're making a major shift in their conservation programs and the dedication of funding to it," said John Woodling, executive director of the Sacramento Regional Water Authority, which promotes collaboration on water issues in Sacramento, Placer and El Dorado counties. "It's a good thing to see. They're working against a lot of past perception, and they need to be aggressive to overcome some of that."

Another incentive comes from the state: The city is being nudged down the road to more aggressive conservation by two different California laws.

Sacramento faces a state deadline of 2025 to install water meters on all its residential customers or it could face penalties. The city resisted metering for decades: The city charter dating to 1921 actually banned water meters, and every City Council member in 1991 opposed a new state law that required meters on new homes.

The city got a slow start complying with the 2025 deadline, partly because the City Council resisted rate increases to pay for it. It agreed last year to begin increasing rates, also needed to repair aging waterworks. But 53 percent of homes remain unmetered, and the city may now depend on state grants to get the work done in time.

The city must install about 110,000 meters by 2025, at an estimated cost of $350 million.

That's where the other state law comes in. Unless Sacramento cuts water consumption 20 percent by 2020, it could be declared ineligible for state grants.

To meet that target, the city must cut its water use to 223 gallons per capita per day, a 20 percent drop from a previous 10-year average of 279 gallons. Sacramento already has met that goal, with per capita water use dropping to 207 gallons per day in 2010. But city leaders believe much of that reduction may be due to the economic recession, and could be short-lived. By 2012, consumption had climbed back to 217 gallons and is expected to keep climbing until it exceeds the target.

William Granger, Sacramento's water conservation administrator, said the city's goal is to exceed the 20 percent mandate, although a specific target has not been set.

"The main hammer is, indeed, eligibility for future grants," said Granger, who joined the city in February after 19 years of experience at Otay Water District in San Diego County, the Santa Clara Valley Water District and Marin Municipal Water District.

"But that's not our sole reason for wanting to exceed the 2020 target," he said. "There's also kind of the public perception. We want to do what we can to be a leader in the region and in the state."

The plan adopted by the City Council includes about 20 conservation measures. It includes cash incentives for homeowners to remove lawns, expanded toilets and clothes washer rebates, and rebates for "smart" irrigation controllers for large landscapes, such as in commercial areas, which can adjust watering based on the weather. The program also calls for a significant expansion of public education efforts to spread the conservation message.

Perhaps the most controversial element is so-called "conservation pricing," which imposes a tiered rate structure to make heavy water users pay more.

Most Sacramentans still pay a flat rate for water, which allows them to use all the water they want for a single monthly charge of $30 or $40, depending on home size. Metered rates – still unknown to most Sacramento ratepayers – create a basic conservation incentive by charging customers for the actual amount of water consumed: The more they use, the more they pay.

Conservation pricing goes one step further with a structure similar to many electric utilities. Once water consumption passes an established threshold in any given billing cycle, each additional unit of water costs more and the water bill increases faster.

Altogether, the new conservation measures are expected to cost $462 per acre-foot, according to the plan. This is less than Sacramento's cost of treated water in 2012, which was $579 per acre-foot. One acre-foot is enough to serve two average households for a year.

Many of the new programs will not be rolled out until July 2015 – assuming the City Council allocates additional money for conservation efforts. The new programs are expected to boost the annual cost of conservation efforts in the city Utilities Department from $1.5 million to $8.5 million, and the plan does not specify where the money will come from.

Still, the amount pales next to the potential cost to expand water treatment facilities. Without more conservation, officials estimate Sacramento will need to spend $150 million to expand water treatment capacity by 2030.

A cash incentive to remove lawns would be revolutionary in Sacramento, where decades of relatively cheap water created an urban oasis of lush lawns that is increasingly rare in water-scarce California.

Only two other municipalities in the region currently offer lawn-removal incentives. Roseville has done so since 2008, and Placer County Water Agency launched a program this year. Both offer residents $1 per square foot of lawn removed, up to $1,000 per homeowner.

In Roseville's case, the incentive is not just a credit on the homeowner's utility bill. At the completion of a lawn-removal project and inspection by the city, officials write the customer a check for the full rebate amount.

"It's one of our most popular programs," said Lisa Brown, the city's water efficiency administrator, who modeled the program after one offered in Las Vegas. "I think a lot of people don't use their lawns. What we hear most often is people don't want to do the maintenance anymore. A lot of people are really frustrated with having to mow it weekly, and fertilize it and check their irrigation all the time."

When Roseville started its "Cash for Grass" program in 2008, 40 people were waiting to sign up at 8 a.m. on the first day the program was offered, Brown said. The city instantly exhausted the $30,000 budgeted for the program. Now $60,000 is offered for turf rebates each year, and the city has removed at least 346,000 square feet of lawn since 2008 – equal to six football fields.

In most cases, Brown said, customers replace lawn with drought-tolerant landscaping that is easier to maintain. The city provides participants with a list of recommended plants, and also requires that they replace lawn sprinklers with drip irrigation.

So far, the program has saved enough water to serve 150 new homes in Roseville – without the need to find new water supplies.

"I need that type of sustained savings that gets me to a level that meets state law," Brown said.

Read more here: http://www.sacbee.com/2013/11/02/5875984/city-of-sacramento-strives-to.html#storylink=cpy

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