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Storm Water, Long a Nuisance, May Be a Parched California's Salvation

By [ADAM NAGOURNEY](#), FEB. 19, 2016



Jim Hardie, director of park operations for TreePeople, at the opening of a cistern in Los Angeles. Credit Monica Almeida/The New York Times

LONG BEACH, Calif. — The winter rains finally arrived in Southern California, bringing drenching relief in recent days to a part of the nation suffering one of the worst droughts in history. But the El Niño storms brought something else as well: a reminder of lost opportunity, on display in this coastal city, as millions of gallons of storm water slipped down the usually dry Los Angeles River and out into San Pedro Bay.

After a year in which Californians cut water use by 25 percent, storm water has become the next front in what amounts to a fundamental restructuring of Southern California's relationship with its intricate water network. More than 200 billion gallons of storm water, enough to supply 1.4 million households for a year, could be captured statewide — but instead end up spilling down sewers and drains and into the ocean, as was on display

Thursday, in the hours after the rainfall ended, at the spot where the Los Angeles River ends here.

Nowhere is the disparity felt more than in parched Los Angeles, with its short winters and its overwhelming reliance on water imported from Northern California and the Colorado River. For nearly a century, since deadly floods in 1938 killed 97 people, engineers have focused on ways to flush storm water safely out of Los Angeles as quickly as possible. Now, officials want to capture that water.

“Something that was once viewed as a nuisance is now seen as a necessity,” said Eric M. Garcetti, the mayor of Los Angeles. “We haven’t done enough.”

Mr. Garcetti invoked the legacy of William Mulholland, the city engineer who oversaw the construction of the Los Angeles Aqueduct, as he outlined policy intended to press

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Los Angeles to increase the amount of storm water captured, to 50 billion gallons by 2035 from 8.8 billion gallons now.



A greenway on the north bank of the Los Angeles River was designed to absorb storm-water runoff and enhance the natural process to clean polluted water while transforming urban streets. Credit Monica Almeida/The New York Times

“This is a Mulholland moment,” he said in an interview. “I intend to re-engineer the water system again to keep water here.”

Still, the long-predicted El Niño rains have yet to arrive with the fury that has been promised. While there was heavy rain — and, just as critically, snow — in Northern California through January, Southern California has been baking in record-high temperatures. The rain here on Thursday was the first major precipitation in more than a month.

Potentially more worrisome, the heavy January rains and snows that socked the northern part of the state — home to most of California’s reservoirs — have not kept pace into February. A critical measure, the snowpack, which provides water as it melts into the spring, was [at 94 percent of normal](#) statewide last week. Still, meteorologists, pointing to the history of El Niño storms, said the heaviest rains could arrive later this month and in March and April.

The renewed focus on storm water that began five years ago appears to have intensified in recent months. Efforts seem to be hastened by the drought, the promise of El Niño and the widening view — promoted by people like Gov. Jerry Brown, a Democrat — that because of climate change, California is entering into hotter and drier times that will tax an already overburdened water system.

“The view has changed from seeing storm water as a problem to seeing storm water as an opportunity,” said Richard G. Luthy, a professor of civil and environmental engineering at Stanford University. “By capturing storm water, we can take advantage of a local water source to

augment our urban water supply. This would mean we would become less dependent on imported water. It means we would have greater resilience against droughts.”



Commuters walk under a light rain in Downtown Los Angeles on Wednesday. Credit Nick Ut/Associated Press

He added: “There’s a realization that the answer to our problem can’t be taking water from someone else or somewhere else. Those days are over. There’s no more water to go get.”

This shift in approach will not be easy. The State Water Resources Control Board had earlier authorized [spending \\$200 million](#) on an array of projects devoted to capturing storm water. But officials said it would cost more than \$1 billion for the kind of ambitious water-collection goals set by Los Angeles, San Diego and the San Francisco Bay Area.

There is no indication where that money might come from, though Mr. Garcetti noted that in Los Angeles, at least, there would be significant cost savings by cutting back the water the city now needs to buy. Los Angeles imports about 85 percent of its drinking water.

Further, the battle to capture rain will involve more than persuading people to tear out lawns or take water-on-water-off military showers; there is no single project that can capture all the rainwater lost.

Rather, officials said, the job will require a variety of efforts: installing plots of land where water can soak into the ground (these are known as “spreading grounds”); building underground cisterns for homes and businesses; installing new drainage systems on streets, in homes and in shopping center parking lots; and issuing more of the city-subsidized 50-gallon rain barrels that have become an increasingly common sight in backyards here.

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Nathan Bock, an educator with TreePeople Center for Community Forestry, led schoolchildren on a tour to show how polluted runoff water is dumped into the ocean. Credit Monica Almeida/The New York Times

“There is so much water that is not caught,” said Marty Adams, the senior assistant general manager with the Los Angeles Department of Water and Power. “We are really kind of scratching at the surface.”

Nearly two-thirds of Los Angeles is paved, meaning water that might otherwise soak into the ground runs down streets, driveways and sidewalks and into sewers. On its way, it picks up pollutants before flowing into the Los Angeles River, which cuts across 43 miles of the region before reaching the ocean.

“Storm water is an important new resource for California that is underappreciated and undercaptured,” said Peter Gleick, a founder of the Pacific Institute, a think tank dedicated to water issues. “Governments increasingly see this as a resource, but it takes time. We are going to see a lot of water this year flood out to the ocean.”

In the future, Dr. Gleick said, “we are not going to solve California water problems with traditional big massive infrastructure that we have built in the past.”

Some advances have been made, particularly in Los Angeles. “It’s amazing, and it’s taken 20 years,” said Felicia Marcus, the head of the State Water Resources Control Board, which supervises efforts to manage the drought. “But you now have an acceleration of interest and intention and dollars really trying to go into that kind of work.”

Still, officials acknowledge that in coming weeks, there might be frequent images of water disappearing down storm drains or into the river.

“There’s a massive amount of water we throw away,” said Andy Lipkis, the founder of [TreePeople](#), an environmental group whose mission includes planting trees. For example, he said, in 2013 — then the driest year on record — “it still rained 3.6 inches on Los Angeles, and we threw away 12 billion gallons.”