Stormwater Capture in California: Innovative Policies and Funding Opportunities

EXECUTIVE SUMMARY

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PACIFIC INSTITUTE

June 2018

ED_002551_00001767-00001

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ISBN: 978-1-893790-82-7
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Cover Photo Source: Lolostock, iStock | Designer: Bryan Kring, Kring Design Studio

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STORMWATER has long been managed with the goals of mitigating flood risk and reducing water quality impairments. Yet, stormwater is increasingly being viewed as an asset in a water-short state, and a growing number of communities are investing in stormwater capture as a means of augmenting their water supplies. With longer drought periods and heavier rainfall events becoming more common, urban stormwater capture represents a significant opportunity to enhance community resiliency to climate change. Moreover, many of these projects, especially those that rely on green infrastructure, have the potential to provide additional co-benefits, such as improved air quality, wildlife habitat, reduced urban temperatures, reduced energy use, community recreation spaces, and higher property values.

Source: Dietlinde B. DuPlessis, Shutterstock

Urban stormwater presents a significant opportunity for local water supply in communities where water shortages and increasing uncertainty in imported supplies due to climate change are challenges.

In this report, we present a summary of pertinent regulations, laws, and statewide initiatives that create the legal framework for stormwater management. While primarily focused on flood control and water quality protection, state policy has also recently begun to address stormwater's supply potential. In recent years, the state has made major efforts to advance stormwater capture, from adopting statewide volumetric goals for stormwater use to clarifying the regulatory framework and dedicating funds for multi-benefit stormwater projects. While obstacles, such as lack of guidance on health and safety guidelines and inadequate funding remain, work at the state-level has supported a more holistic and integrated approach to stormwater management.

A growing number of communities have overcome policy and regulatory barriers and are using stormwater to recharge aquifers, irrigate landscapes, and provide for other uses. Local governments have developed regulations that directly or indirectly support stormwater capture,

and we highlight some of those efforts in this report. For example, the City of Gonzales made relatively modest updates to their city code, ensuring that new developments incorporate curb cuts and other low impact development (LID) features that promote stormwater infiltration. The City of Santa Monica adopted a citywide goal to source all water supplies locally by 2022 and identified stormwater as a key water source to meet that goal. San Francisco passed ordinances requiring developers to incorporate direct reuse of stormwater and other non-potable sources onsite. Each of these examples show how communities have taken concrete actions to augment local water supplies through stormwater capture.

Funding stormwater management has been a major challenge, but here, too, communities have proven themselves to be both innovative and pragmatic. For example, the Fresno County Flood Control District uses development fees to ensure future businesses and residents pay their portion of the costs to reduce flood risks, while also replenishing the local drinking water aquifer. San Mateo County adopted an integrated approach to address transportation and its impact on water quality, and Dubuque, Iowa developed partnerships to apply for funding solutions that otherwise may not have been available. Philadelphia offers a creative solution to incentivize stormwater capture on private property that comes at a much lower cost than similar structures on public land. Finally, several communities underscore the importance of careful communication and stakeholder engagement when designing and implementing a dedicated, local funding source.

While the opportunities for stormwater capture depend on site-specific factors, these examples demonstrate that there are options for communities across California to more effectively use stormwater as a local water supply. Based on the insights and lessons from the examples provided in this report, we offer a set of recommendations for expanding stormwater capture in California.

Advance state and regional policies and provide resources to help communities pursue stormwater capture for water supply.

In some cases, local communities only need support in the form of guidelines and model ordinances to advance stormwater capture. For example, statewide health and safety guidelines on stormwater reuse could empower otherwise hesitant communities to pursue policies that support capture. Additionally, state and/or regional coordination could help facilitate public-private stormwater projects, such as through alternative compliance options.

Expand state funding and reduce barriers for local funding of stormwater management.

Many state funding programs now require projects to provide multiple benefits, and stormwater capture typically meets these criteria. However, there is still limited funding available for stormwater management, and additional state and local funding sources are needed. We recommend that the state examine how to improve the usefulness and uptake of the Clean Water and Drinking Water State Revolving Funds for stormwater capture. Additionally, the state should seek ways to reduce the onerous voter-approval requirements for stormwater services. While SB 231 could help local agencies develop dedicated funding sources, it is not a silver bullet and additional policies that increase long-term funding and cover operation and maintenance (O&M) expenses should be explored.

Develop dedicated, local funding sources for stormwater management.

Local funding is needed to effectively manage stormwater. Communities that elect to establish stormwater fees should follow best practice by basing that fee on impervious area. Significant public outreach and engagement are essential for obtaining the necessary support for fees. Non-traditional partnerships can also present opportunities, such as the use of development fees or leveraging funds from the private sector to pay for stormwater projects.

Adopt policies that drive innovative and sustainable approaches for water supply.

Local communities can use a variety of tools to advance stormwater capture. They may opt to use regulatory approaches, as in San Francisco or Gonzales. They may also adopt explicit local water supply goals, as has been done in Santa Monica and Los Angeles.

Use the cross-cutting nature of stormwater management to initiate innovative partnerships.

The multi-benefit nature of stormwater projects can facilitate partnerships between agencies and organizations. Local agencies should seek partnerships that can advance stormwater projects that provide environmental, community, and economic benefits. Local opportunities to partner will be unique. Our example from the Fresno area demonstrates how a flood agency has led stormwater recharge efforts, while in San Mateo County, collaboration on stormwater management has evolved around transportation issues.

Continue research to characterize the true cost and full benefits of stormwater capture projects.

Limited data are available on the cost of stormwater capture for supply, and those that exist often fail to account for the multiple benefits of these projects. Additional research is needed so that communities better understand the opportunities for improved stormwater management and for innovative partnerships and collaborations.

For the full report, *Stormwater Capture in California: Innovative Policies and Funding Opportunities*, please visit:

http://pacinst.org/publication/stormwater-capture-in-california

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