

Stormwater Finance What We Heard From You

Participant Survey Results and Opening Thoughts



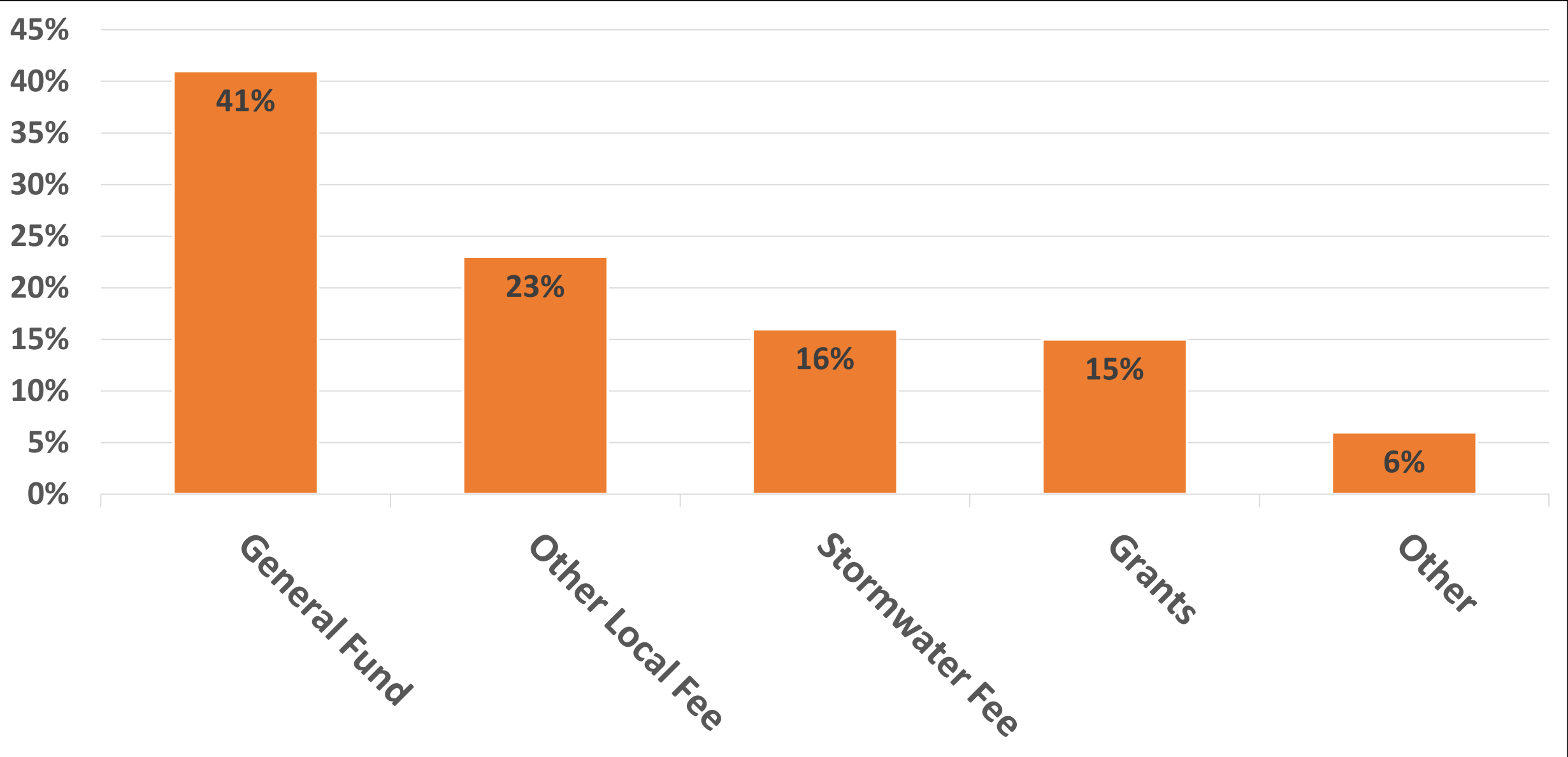
Water Infrastructure and Resiliency Finance Center

Jim Gebhardt, Director

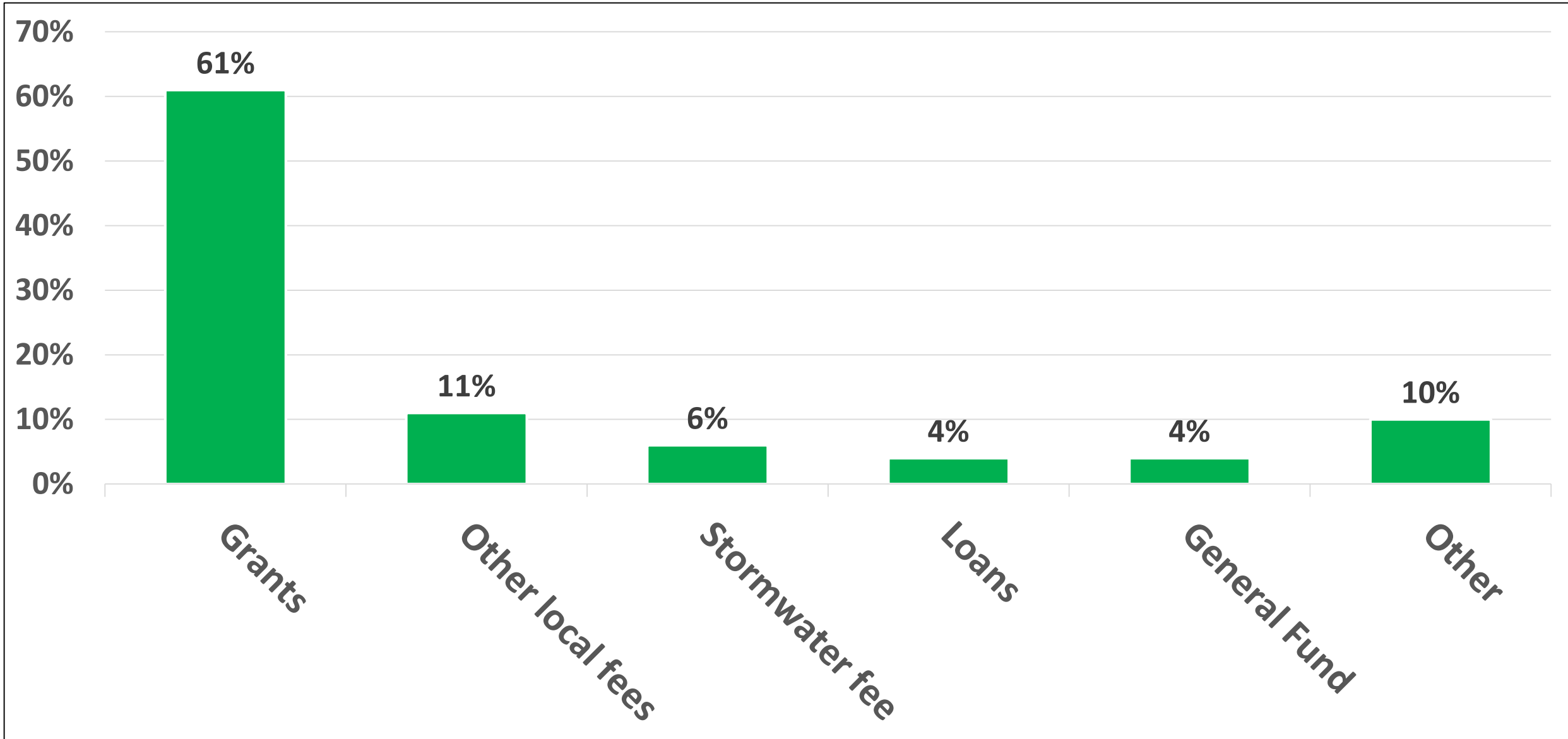
Approaches and Needs You Highlighted

- Your excellent feedback guided development of today's agenda!
- We asked about your:
 - *current and future finance strategies*
 - *key stormwater finance challenges*
 - *finance support tools you would like to have available*
 - *prospects for multi-purpose projects*
- Initial results from 342 respondents
- Fairly balanced response across CA

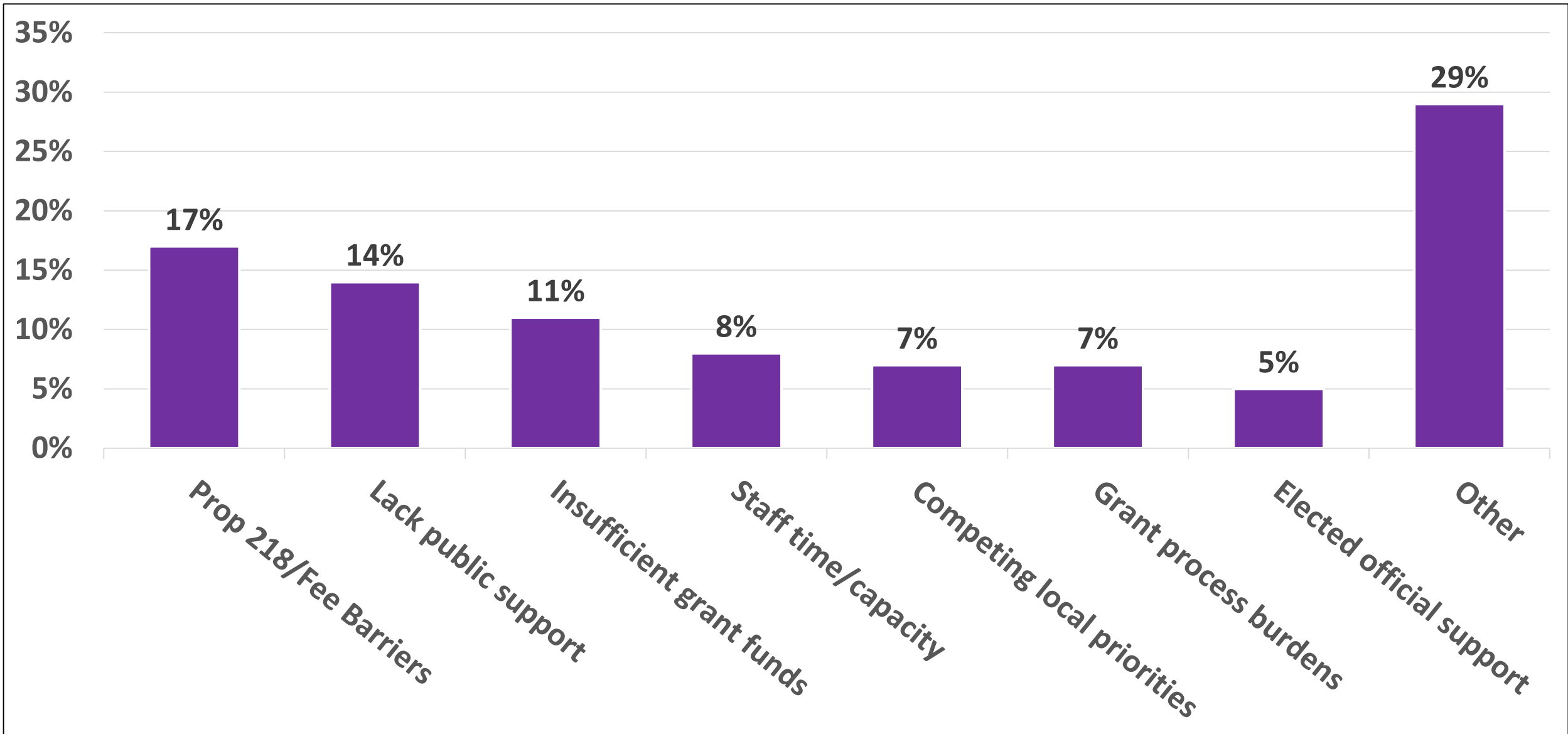
Current Funding Approaches of Respondents?



Anticipated Funding Strategies in Next Year?



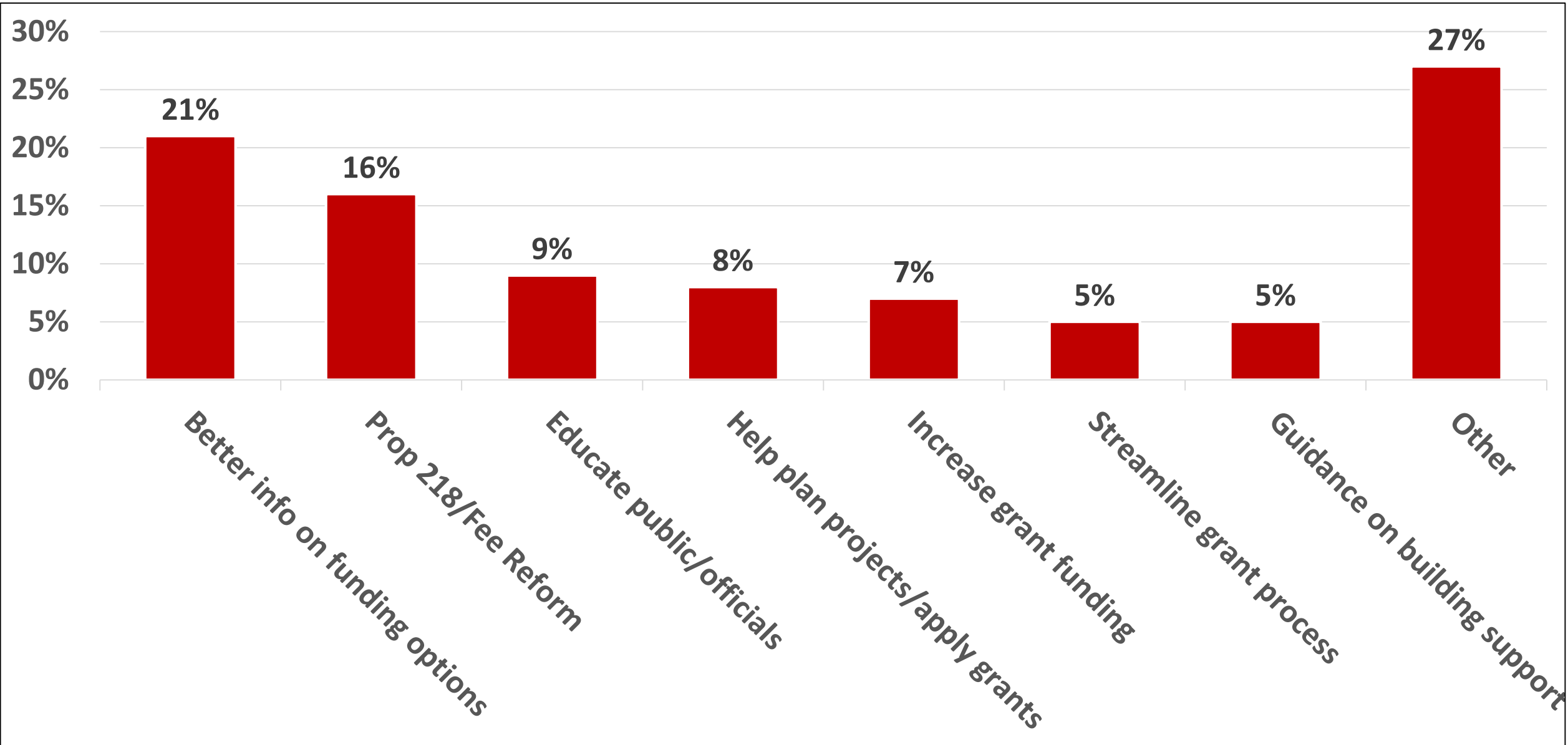
Key Impediments to Obtaining Funding?



Other Impediments Mentioned

- Lack solid long term program plans
- Burdensome grant matching requirements
- Inability to secure long term O&M funds
- Lack “shovel ready” projects to propose
- Insufficient local capacity to support fees
- Lack of good resources about funding options
- Complexities of grant management
- Limitations in other fee programs
- Burdensome or unclear permit requirements
- Insufficient coordination between grant programs
- Unfunded mandates concerns

What is the Help/Support You're Seeking?



Other Ideas for Assistance

- Modify grant programs to ensure funding for small cities
- Better grant funding program coordination
- Modify permits to provide more time to comply
- Facilitate local project planning partnerships
- Create funding dedicated to O&M and staffing
- Help with grant writing
- Help understand, build public-private partnerships
- Increase grant flexibility/reduce strings attached
- Ease grant matching requirements
- Provide finance planning/mgmt. tools
- Support for true source control programs

Biggest Needs/Issues We Heard

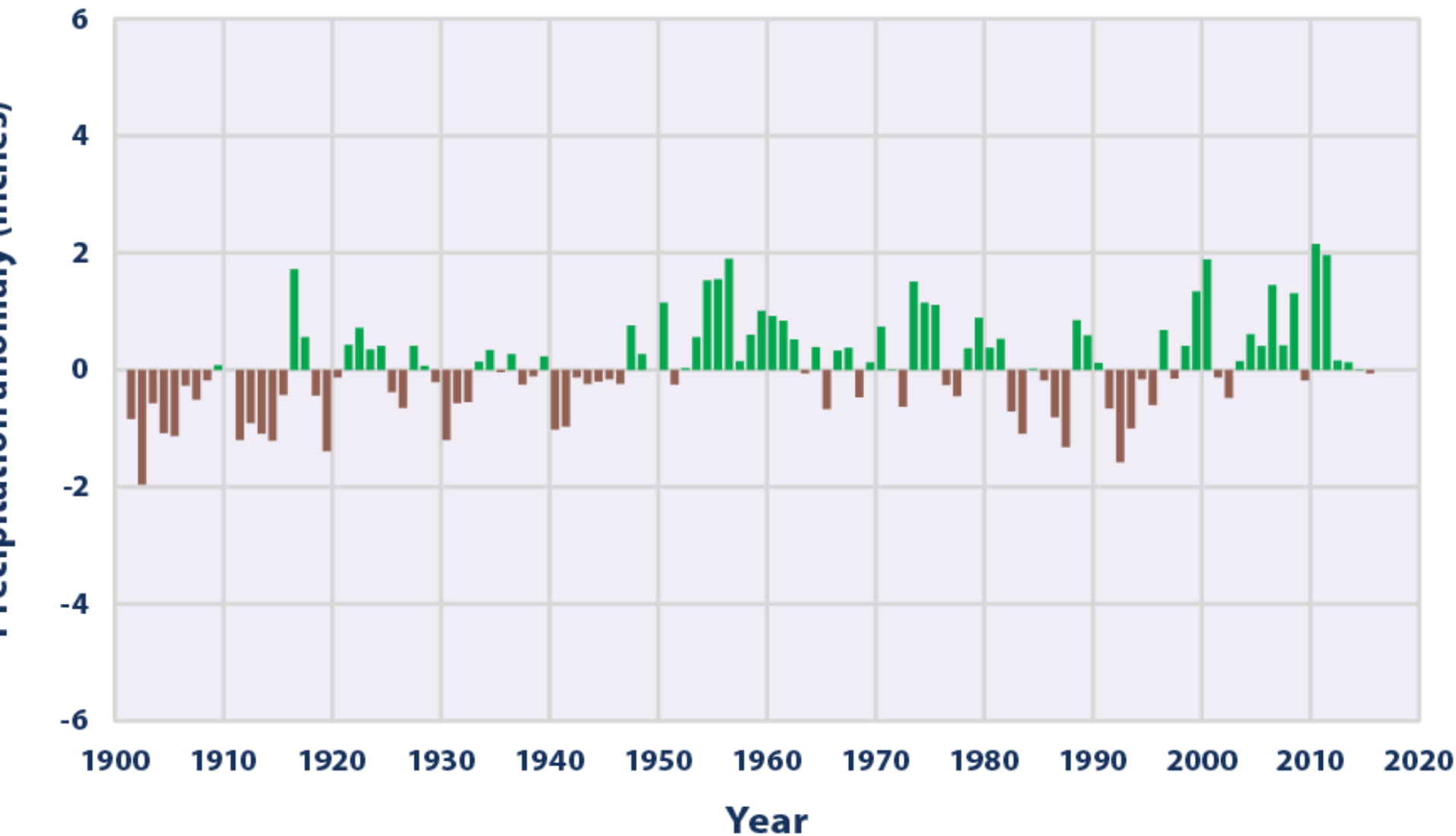
- Help with learning about funding sources
- Ease process for getting dedicated utilities and fees
- Help educating public and elected officials about stormwater
- Help with grants processes
- More grant funds
- Multi-purpose approach the wave of the future
- Keep ideas coming today!

Context for Today's Discussion

Global, U.S. and Regional Precipitation Trends

The Emerging National Response

Precipitation Worldwide, 1901–2015

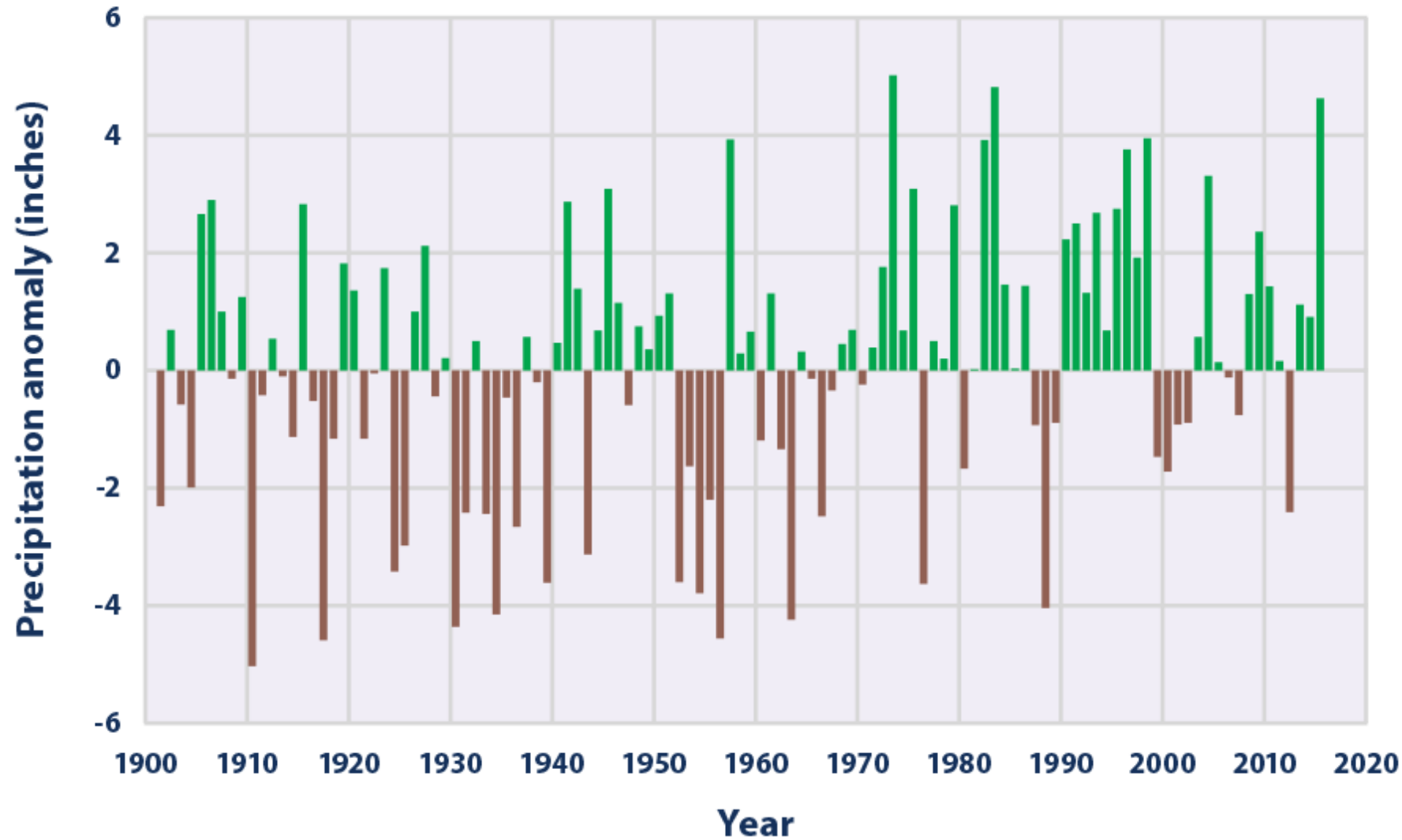


Global, U.S.
and Regional
Precipitation
Trends

Data source: Blunden, J., and D.S. Arndt (eds.). 2016. State of the climate in 2015. B. Am. Meteorol. Soc. 97(8):S1–S275.

For more information, visit U.S. EPA's "Climate Change Indicators in the United States" at www.epa.gov/climate-indicators.

Precipitation in the Contiguous 48 States, 1901–2015



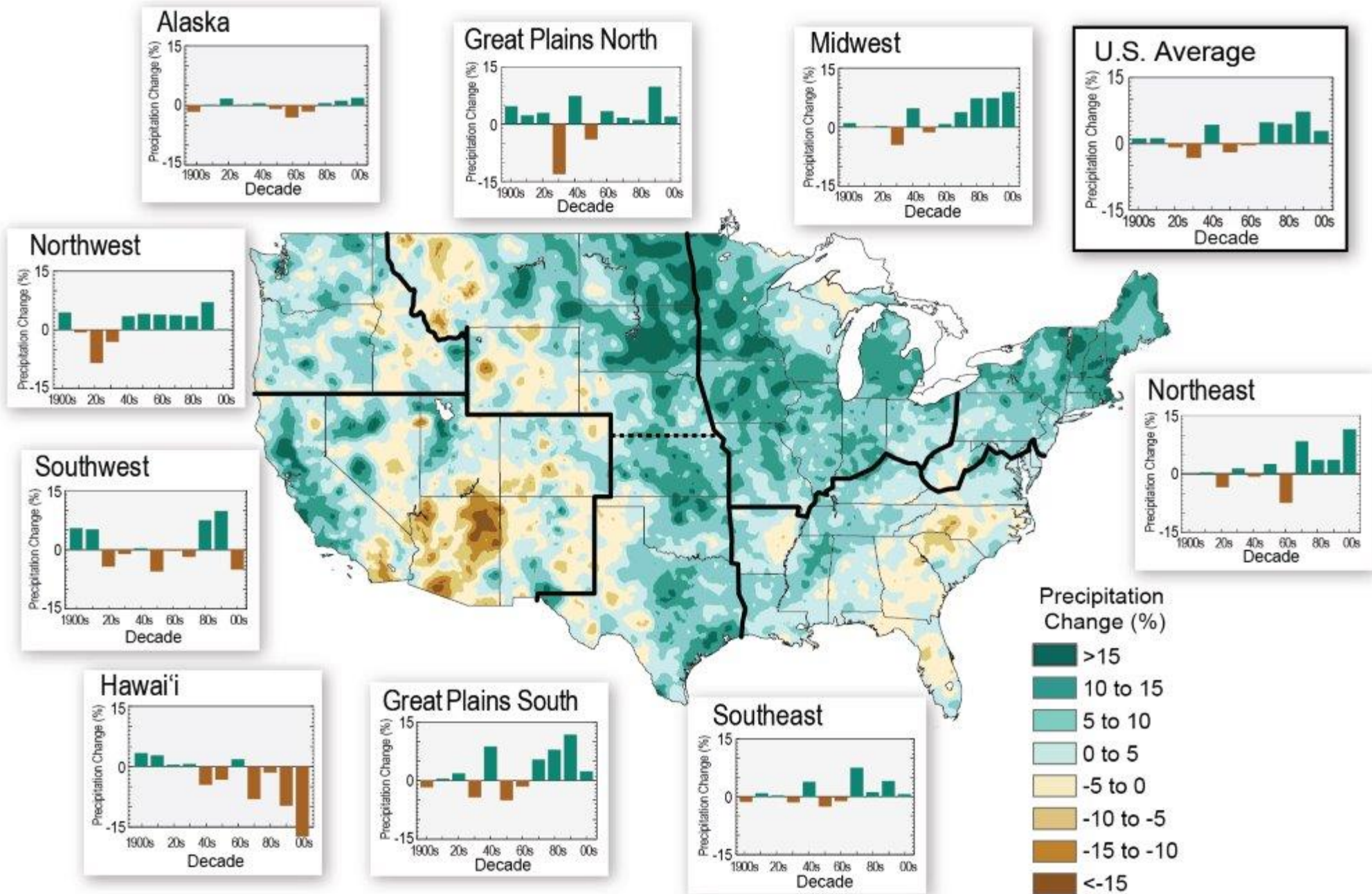
Global, U.S.
and Regional
Precipitation
Trends

Data source: NOAA (National Oceanic and Atmospheric Administration). 2016. National Centers for Environmental Information. Accessed February 2016. www.ncei.noaa.gov.

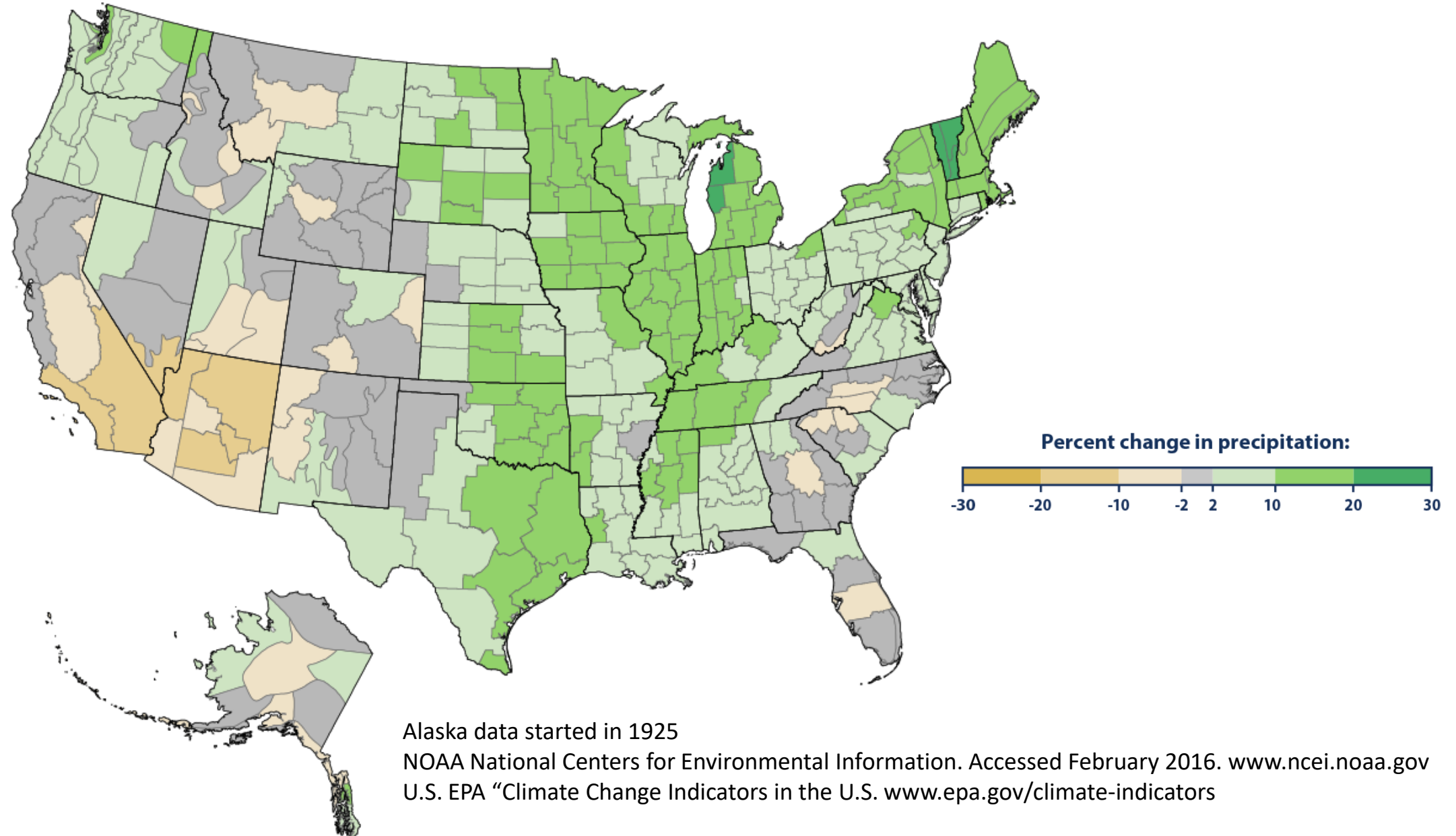
For more information, visit U.S. EPA's "Climate Change Indicators in the United States" at www.epa.gov/climate-indicators.

Observed U.S. Precipitation Change

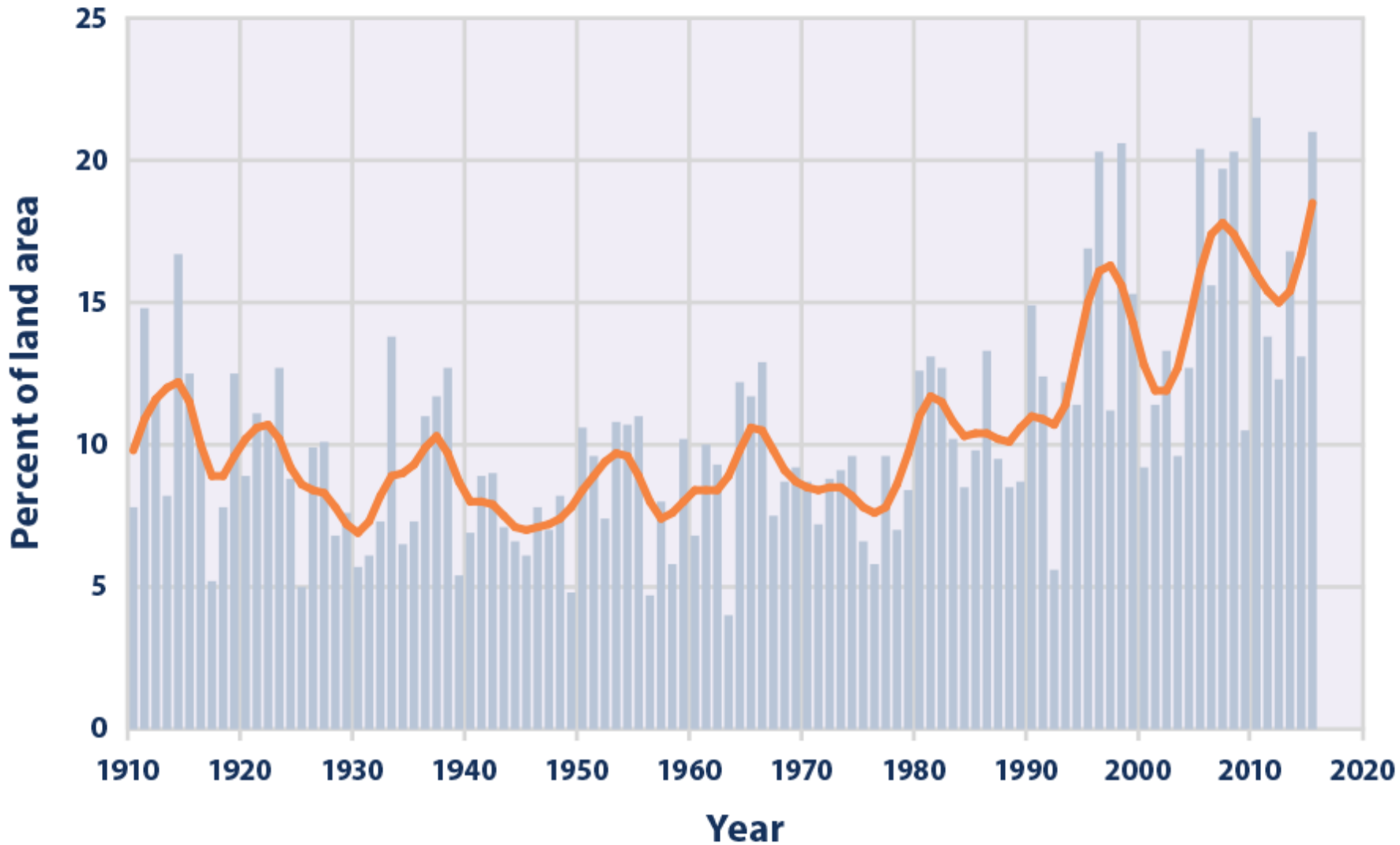
U.S. Decadal
Precipitation
Trends
1900 - 2010



Change in Precipitation in the U.S., 1901 - 2015



Extreme One-Day Precipitation Events in the Contiguous 48 States, 1910–2015



Global, U.S.
and Regional
Precipitation
Trends

Data source: NOAA (National Oceanic and Atmospheric Administration). 2016. U.S. Climate Extremes Index. Accessed January 2016. www.ncdc.noaa.gov/extremes/cei.

For more information, visit U.S. EPA's "Climate Change Indicators in the United States" at www.epa.gov/climate-indicators.

Global, U.S. and Regional Precipitation Trends

Key Points

- On average, total annual precipitation has increased over land areas in the U.S. and worldwide (see Figures 1 and 2). Since 1901, global precipitation has increased at an average rate of 0.08 inches per decade, while precipitation in the contiguous 48 states has increased at a rate of 0.17 inches per decade.
- Some parts of the U.S. have experienced greater increases in precipitation than others. A few areas, such as the Southwest, have seen a decrease in precipitation (see Figure 3). Not all of these regional trends are statistically significant, however.
- Each one degree Centigrade rise in temperature increase the moisture carrying capacity of the atmosphere by 7%.

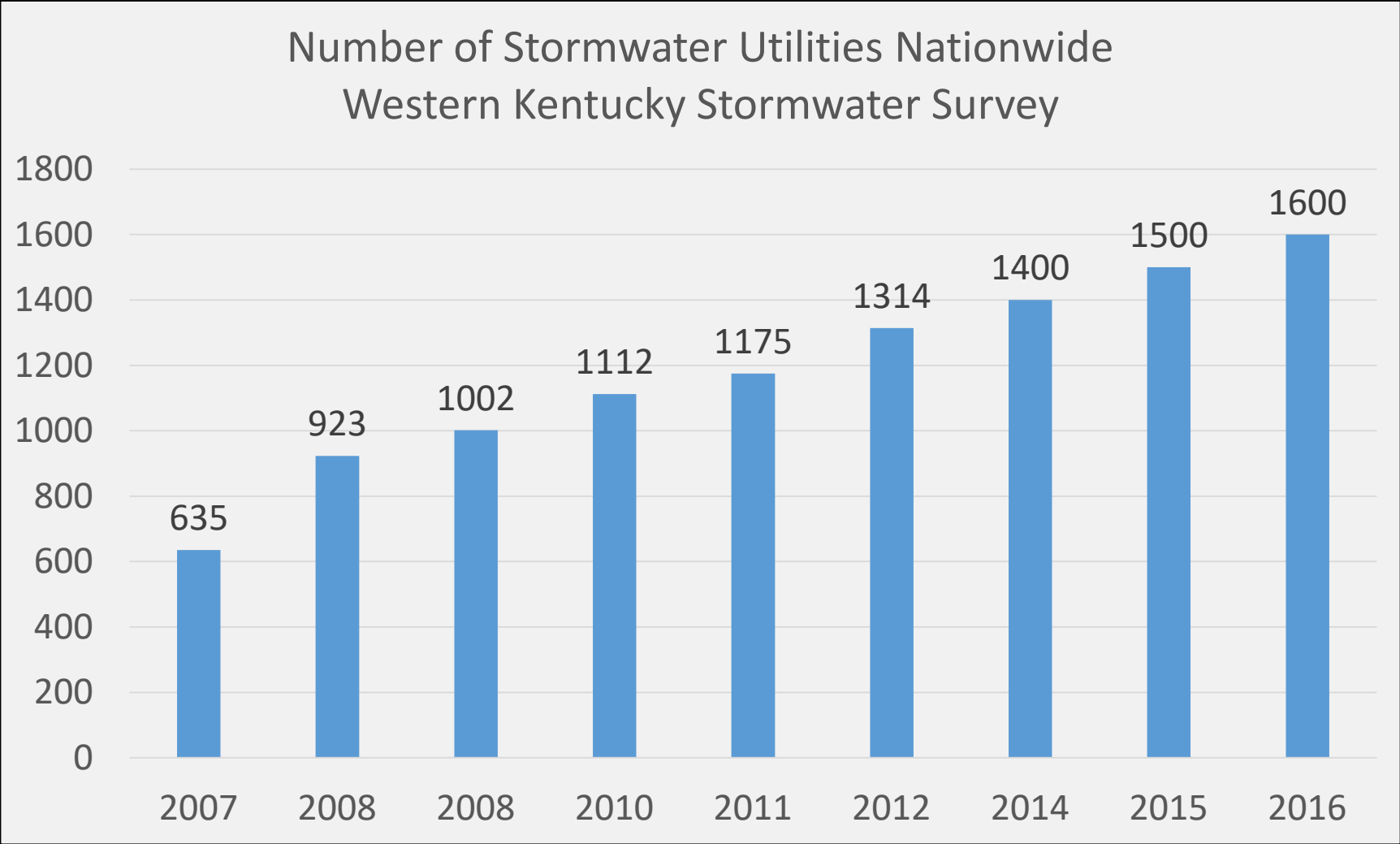
The Domestic Stormwater Challenge and Emerging Trends

- When you look at the [*National Assessed Waters Report*](#), you see that stormwater is at the top of the list of major sources of water pollution (it is only behind agriculture and atmospheric deposition).
- Trends toward increased urbanization are not expected to slow down.
- Approximately 650,000 acres of land are developed annually and by 2040 the development rate is expected to grow to 1.2 million acres per year. This development will increase impervious surfaces in the U.S. by 14.2%.
- With climate change affect on rainfall patterns, including more intense rainfall events, these urbanization trends will exacerbate stormwater pollution impacts.

The Domestic Stormwater Challenge and Emerging Trends

- Today there are over 8,000 permitted MS4 communities nationwide but the stormwater challenge is not limited to permitted communities.
- Communities are shifting from financing their stormwater program from the general fund to stormwater utilities. There has been a rapid creation of stormwater utilities, which has grown from 635 to over 1600 in the last 9 years throughout the U.S.
- These utilities have been empowered to assess fees based on stormwater related parameters as well as development activity to support needed stormwater management investment and upkeep.

Emerging National Response to the Stormwater Challenge



The Domestic Stormwater Challenge and Emerging Trends

The Questions for Today:

- What are the sustainable stormwater management models that will enjoy public support?
- Where will the needed revenues and funding come from?
- How much federal, state, NGO and private sector support can we expect?
- And at what cost?



Water Infrastructure and Resiliency Finance Center

LEADING-EDGE STORMWATER FINANCING

US EPA & WEF WEBINAR SERIES

SPRING—SUMMER 2017

The image shows a screenshot of the Water Finance Clearinghouse website. The header is dark blue with the title "Water Finance Clearinghouse" in white. Below the title is a navigation bar with links for "Home", "Resources", "Funds", "Map", "Feedback", and "Submit a Resource". A search bar is located on the right side of the navigation bar. The main content area features a large background image of a construction site with a large blue pipe being installed in a trench. Overlaid on this image are three search icons: a document icon for "Search Resources", a dollar sign icon for "Search Funds", and a location pin icon for "Map Search". At the bottom of the page is a blue footer with the heading "Quick Searches" and five icons representing different categories: "Stormwater" (cloud with lightning), "State Revolving Funds" (stack of coins), "Case Studies" (open book), "Webinars and Videos" (play button), and "Small Systems" (water tap).

Contact

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