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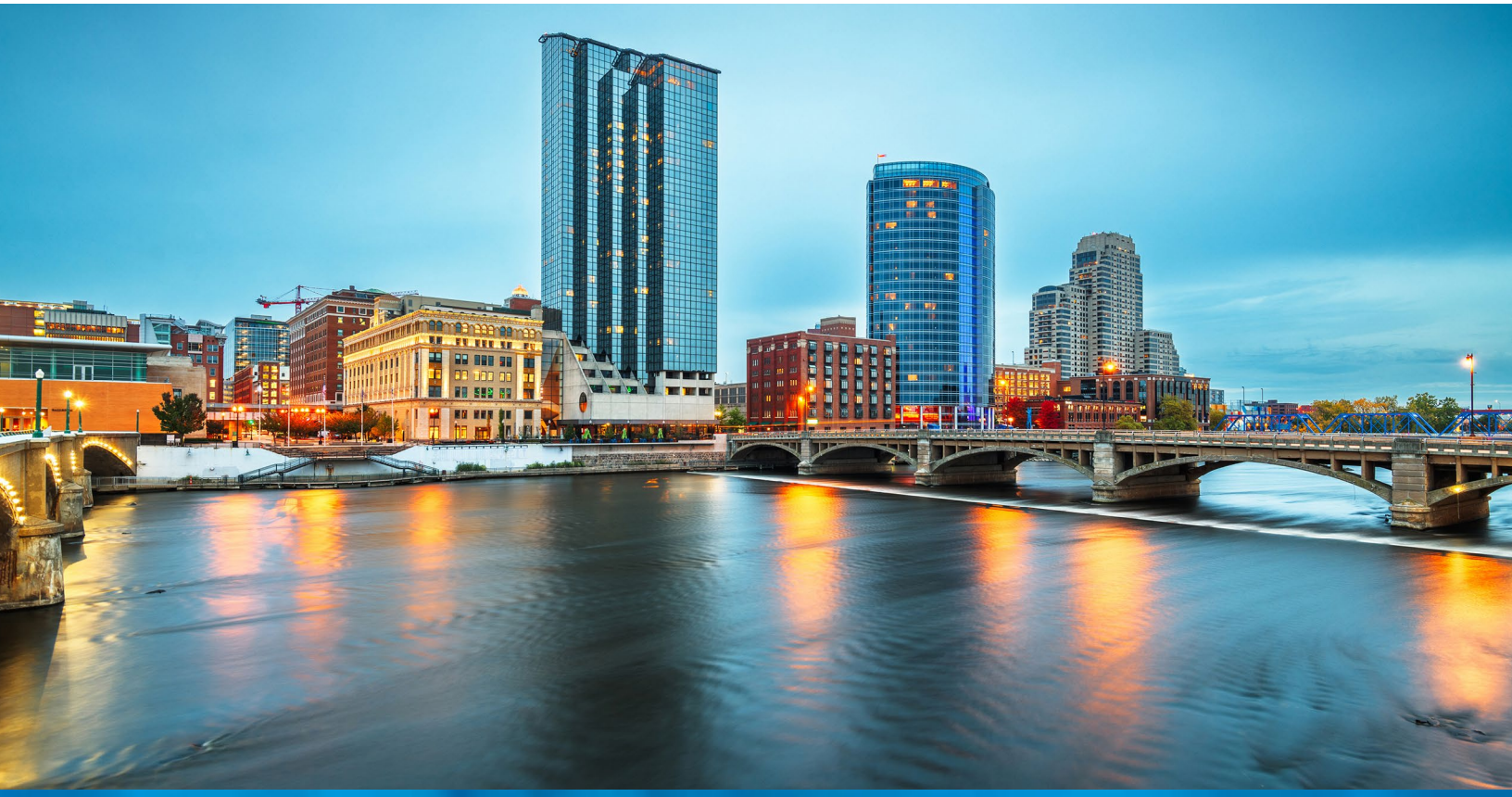
URBANWATERS

FEDERAL PARTNERSHIP

Restoring Urban Waters, Revitalizing Communities



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URBAN WATERS FEDERAL PARTNERSHIP: Partnership Approaches for Equitable Climate Resilience Planning

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Contents

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Abstract

Hazards from climate change require long-term and sustainable solutions for the communities that are most heavily affected. These communities are often least prepared to withstand climate impacts due to long-standing social vulnerabilities such as information barriers and a lack of investment and access to resources. To effectively manage the worst effects of climate change in an equitable way, there needs to be a consistent effort of long-term engagement and coordination among communities, climate technical experts, and federal, state and local government partners.

The U.S. Environmental Protection Agency's Urban Waters Federal Partnership program provides a template of consistent equitable federal engagement with local partners and many examples of multi-jurisdictional groups working together to build solutions. This paper identifies four critical lessons learned from years of Urban Waters Federal Partnership work. Several Partnership location examples are used to demonstrate the importance of partnerships across scales and sectors in addressing the impacts of climate change for all communities.

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Introduction

Environmental hazards related to climate change are a significant threat to overburdened and economically distressed communities, especially those living in high-risk areas. Research has shown that impacts from climate events are unevenly distributed with the most severe negative effects felt by the communities who are least prepared to withstand them due to previous social vulnerabilities. According to the United States Global Change and Research Program's Fifth National Climate Assessment, or NCA5, examples of social vulnerabilities are "legacies of inequitable access to residential home loans, municipal incorporation to isolate wealth in suburbs, and infrastructure investments that privileged certain neighborhoods and municipalities over others have concentrated low-income people, African Americans, and other frontline communities in places with high flood risk."[1] Such social vulnerabilities have made many urban communities particularly vulnerable to flash flooding, heat islands and other hazardous effects of a changing climate.[2] NCA5 states that "Pre-event social vulnerabilities, such as a lack of clear title for real estate, lack of financial capital, and subpar housing leave some populations at greater risk of negative impacts following a disaster…These obstacles to recovery can have long-term generational effects related to the loss of savings, housing insecurity, and displacement."[3]

For decades, conventional hazard mitigation strategies have not addressed the underlying issues that have created disproportionate challenges for overburdened or economically distressed communities. Lack of coordination between government and communities often results in a disjointed recovery and rebuilding process by the state and federal governments alone that neglects the largest concerns of those most heavily impacted. Failure to address underlying equity issues during a climate hazard event can have ramifications that last for decades. The Urban Sustainability Directors Network's *Guide to Equitable Community-Driven Preparedness Planning (2017)* has described the shortcomings of conventional approaches to equitable resilience planning:

> ***"Governments — their decisions, processes and practices — are important institutions that have underserved frontline communities and excluded them, whether intentionally and unintentionally, from public decision-making processes. These discriminatory practices have resulted in the inequitable distribution of resources, access to opportunities and poor life outcomes that many lower-income populations and communities of color face. The result is that social inequities can increase disproportionate climate risk in these communities."***[4]

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Since many institutional policy processes have these inherent biases, any policy without an intentional focus on equity will only perpetuate the disproportionate climate risk and allocation of resources for underserved communities. NCA5 Chapter 20: "Social Systems and Justice" uses the example: "the use of a cost–benefit analysis for the allocation of hazard mitigation funding, and disaster-related assistance for rebuilding, gives priority to areas of denser population and higher-value housing stock."[5] This and other similarly rigid methodologies perpetuate norms that hinder certain communities from bouncing back after natural disasters and climate-exacerbated events. By incorporating justice and bottom-up approaches to systems such as aid and sustainable planning, communities of all sizes and demographics can achieve recovery and recognition.

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For climate hazards to be addressed in an equitable way, the root causes of these social vulnerabilities must be prioritized throughout the entire mitigation process. Supporting equitable climate resilience measures is one of the main goals of the Urban Waters Federal Partnership.[6] The UWFP reconnects urban communities, particularly those that are overburdened or economically distressed, with their waterways by improving coordination among federal agencies and collaborating with community-led revitalization efforts to improve our nation's water systems and promote their economic, environmental and social benefits. The 21 UWFP designated locations across the United States and Puerto Rico form a unique collaboration of public, private, non-profit, academic and community institutions. Fifteen federal agency partners, UWFP Ambassadors (local partnership coordinators), and over 900 other state, local, Tribal, non-governmental and community-based organizations partners serve as a catalyst for local investment. The large

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network of active and robust local partners provides expertise on local priorities, challenges and resources and over time can garner trust with local communities. Many of the UWFP locations and watersheds are facing significant impacts from climate change. Phoenix, Arizona, battles record setting heat and poor water quality. Frequent flooding in the Patapsco Watershed poses challenges and concerns in Baltimore, Maryland. In San Juan, Puerto Rico, and along the eastern coast of the United States, hurricanes cause damage, displacement and coastal erosion. Overall, watersheds around the country face worsening conditions in need of strategic attention. In the 21 partnership locations, stakeholders turn to the community of peers and professionals across the Urban Waters network to help drive change.

The UWFP provides a forum to convene diverse groups of stakeholders and subject matter experts to collaborate on multi-jurisdictional watershed protection and restoration efforts. This collaborative partnership approach enables the UWFP to support and shepherd complex projects over many years, seeing them through from beginning to end. Additionally, UWFP designated locations have fostered inclusive and equitable hazard mitigation planning and climate adaptation projects through a commitment to the local community's vision. A community-first convening strategy ensures stakeholders are equal partners in efforts to mitigate, adapt and build resilience; their priorities remain on the

forefront throughout the process; and their expertise is the centerpiece of climate solutions. This paper identifies critical lessons learned from years of UWFP experience and helps demonstrate the importance of partnerships across scales and sectors in addressing the impacts of climate change for all communities.

CRITICAL LESSSONS LEARNED

The following are critical lessons learned from equitable hazard mitigation and resilience planning efforts of the Urban Waters Federal Partnership:

- The weight and convening power of federal agencies help attract and sustain the participation of key stakeholders and funding;
- Consistent coordination across a wide range of activities helps to maintain continuity of focus over time;
- Engagement and strategic convening unite key partners with technical expertise, garner applicable resources, build capacity of organizations and develop useful information for decision making; and
- Trust and relationship building engenders stakeholders' willingness to invest time and energy in the collaboration.

Measures are needed to provide near-term hazard relief for communities disproportionately experiencing the effects of climate change and a long-term and sustainable vision that addresses social vulnerabilities causing the disproportionate effects. The UWFP provides a template of consistent federal engagement with local partners and many examples of multi-jurisdictional groups working together to build solutions. The four lessons described above are critical for a climate hazard mitigation project to be successful. Several UWFP projects provide examples of how these lessons have been implemented.

Convening Power of Federal Agencies

The weight and convening power of federal agencies helps attract and sustain the participation of key stakeholders and funding.

GRAND RIVER/GRAND RAPIDS, MICHIGAN

At 252 miles long, the Grand River is the longest river in Michigan, flowing through several cities, including Grand Rapids, before emptying into Lake Michigan. The Lower Grand Watershed containing Grand Rapids is the most urban section of the river.[7] The rapids for which the city was named were replaced with dams in the 19th century, leveling out the 18-foot drop and keeping water levels constant throughout the year for industrial purposes and easy transportation of goods like lumber. Despite the industrial uses of these dams, their presence matched with urban encroachment, floodwalls and climate change have created areas along the river that impede sediment transport and fish migration and create treacherous waters for recreational river users.[8] In recent decades, climate change has exacerbated the issues of precipitation variation, rising temperatures and extreme weather that now cause intensified or sometimes unprecedented circumstances in local urban centers. The Lower Grand Organization of Watersheds, or LGROW, identified a need to add a climate component to their 2011 Lower Grand River Watershed Management Plan to address these rising hazards. LGROW wanted community

input in developing their Lower Grand River Watershed Resilience Action Plan to reflect community priorities, so they partnered with the Environmental Protection Agency to use the new Equitable Resilience Builder tool to develop community workshops.[9]

The Equitable Resilience Builder was developed by the EPA to support communities in equitable resilience planning by providing instructions and activities to prioritize community engagement techniques, equity assessment, root cause analysis and much more. The Equitable Resilience Builder's guiding principles focus on relationship and trust building within communities, using local data, recognizing trauma, facilitating actions, providing access for under resourced communities and adapting to users' specific contexts. Grand Rapids was a pilot location for this new EPA tool made publicly accessible in October 2023. LGROW partnered with the EPA and hosted three workshops for different sub-watershed communities focused mainly on how LGROW might build equity into their Watershed Resilience Plan. Community members and participants provided crucial insight into some of the ecological climate-related challenges faced such as heat, water quality and flooding. They also discussed how factors such as a lack of affordable housing and living wages play a role in 'cascading impacts' from the ecological hazards, particularly for low-income communities and communities of color. The Equitable Resilience Builder workshops produced a list of priority actions for each sub-watershed to increase resilience in the Watershed Resilience Plan. The workshops also gave LGROW a better understanding of community priorities through trust and relationship building that will continue to expand in the future. Having federal agency tools at the disposal of community groups adds another means of approach to resiliency planning that would otherwise be unavailable.

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Consistency

Consistent coordination across a wide range of activities helps to maintain continuity of focus over time.

THE BLUE RIVER KANSAS CITY, MISSOURI

The Blue River Urban Waters location (formerly Middle Blue River) in Kansas City, Missouri, formed in June 2013 around several existing projects designed to restore a portion of the Blue River ecosystem with overlapping geographies in the middle reach of the Blue River.[10] A main challenge for the Blue River is poor water quality due to sedimentation, nutrient overload, combined sewer overflows and invasive species. The river flows 42 miles northeast from its rural headwaters in Kansas through underserved communities and post-industrial stretches into Missouri and the Missouri River, the source of Kansas City's drinking water.[11] Unpredictable future climate events will likely further exacerbate existing combined sewer overflows and water quality issues as the surrounding ecosystem continues to be affected.

In 2012, the Heartland Conservation Alliance and Mid-America Regional Council began serving as co-leads for the federal partnership until the Heartland Conservation Alliance took over as the sole Ambassador organization in 2020. The Heartland Conservation Alliance was founded in part with the funding of an Urban Waters Small Grant. The UWFP and the Heartland Conservation Alliance have partnered together for over a decade to protect, connect and restore the Blue River for the benefit and enjoyment of all people in Kansas City, especially the communities most vulnerable to the effects climate change has on the Blue River. The consistent presence of the Heartland Conservation Alliance and the UWFP Ambassador allows the Alliance and UWFP to be recognized as federally connected partners the communities can trust to effectively coordinate and garner funding to support an overall vision for the future of the Blue River.

As the Ambassador host organization, the Heartland Conservation Alliance plays an instrumental role in the *Renew the Blue initiative. Renew the Blue* is a co-branding messaging campaign seeking to coordinate efforts to protect the watershed between organizations and stakeholders. The flagship project on the Blue River is the Blue River Greenway which seeks to connect Johnson County, Kansas, to Jackson County, Missouri, with a 43-mile corridor of ecological protection along the river. To date, Heartland Conservation Alliance has secured $8 million toward implementation of the initiative, including the Blue River Greenway project. A centerpiece of the Blue River Greenway project includes efforts to achieve the region's 2050 targets of 80% reduction in greenhouse gas emissions through the protection of floodplain woodlands and increased tree cover.[12] The greenway will also reduce flooding by introducing green infrastructure and restoring the Blue River's floodplain, this aspect will improve stream health while protecting human life, property, and infrastructure.

Engaging Key Partners and Building Capacity

Engagement and strategic convening unite key partners with technical expertise, garner applicable resources, build capacity of organizations and develop useful information for decision making.

THE PATAPSCO WATERSHED/BALTIMORE REGION, MARYLAND

Baltimore, Maryland, sits on the country's largest estuary, the Chesapeake Bay. One of the watersheds emptying into the Bay is the 375,000-acre Patapsco River Watershed which spans four counties, flows to the Baltimore City Harbor and ultimately empties into the Bay. In addition to the Patapsco River, the Patapsco River Watershed includes Gwynns Falls, Jones Falls and Baltimore Harbor.[13] The eastern part of Baltimore City and the Patapsco watershed has become highly developed and is subject to water quality issues from trash and urban run-off, including pollutants contributed from vacant lots. Flooding has always been a concern within this watershed, but with the intensifying effects of climate change it will present a larger and far more damaging challenge into the

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future.[14] In 2016 and 2018, deadly flash flooding events in Baltimore City and the surrounding suburbs resulted in devastating damage. These flooding events are also a good example of how social vulnerabilities affect disaster recovery. The 2016 event caused over $65 million in reduced economic activity and job loss.[15] In Howard County, Ellicott City—whose population is affluent and mostly white—received extensive media attention and $167 million in aid following the two floods. While just up the road the neighborhood of Irvington—a largely Black and low-income community—received a substantially smaller amount of media attention and aid from the same events while experiencing extensive damages and only after significant lobbying from the Stillmeadow Community Fellowship.[16] Stillmeadow is a small church that supported the community before the flood, offering services including food and clothing distribution. By doing that work with the resources available, they attracted the support of the U.S. Department of Agriculture Forest Service and the U.S. Army Corps of Engineers. Stillmeadow became a Community Resiliency Hub and a community touch point following the 2018 flooding. The Community Resiliency Hub Program is a Baltimore City initiative aimed at supporting and better provisioning community organizations so that in the event of a flood, under-resourced communities are better prepared to respond.[17]

The Patapsco Urban Waters location is led by the Baltimore Field Station of the Forest Service with support from the UWFP Ambassador. The Ambassador position was initially staffed by the consulting group SavATree and is currently staffed by the University of Maryland Cooperative Extension. Since its formation in 2011, the Patapsco UWFP serves as a convening space for stakeholders and technical experts to collaborate on challenges in the watershed. The Patapsco Urban Waters location also partners with community groups in West Baltimore, including Stillmeadow Community Fellowship. Already a strong presence in the community, the Forest Service has further supported Stillmeadow with mentoring in organizational capacity building and grant management. In 2023, five years after the flooding in 2018, Stillmeadow received a $2 million grant from the Forest Service for their PeacePark. The grant supported the creation of green space in the area for future flood mitigation and forestry education.[18] Stillmeadow remains a strong partner for the UWFP as they continue together to increase the community's flood resilience capacity.

Trust and Relationship Building

Trust and relationship building engenders stakeholders' willingness to invest time and energy in the collaboration.

THE CAÑO MARTÍN PEÑA SAN JUAN, PUERTO RICO

The Caño Martín Peña is a 3.75-mile tidal channel running through the urban center of San Juan, Puerto Rico, connecting San Juan Bay and the San José Lagoon. The channel has faced intense pollution and regular flooding from inadequate infrastructure in the densely populated and underserved communities that live adjacent to the waterways. To address this challenge, the ENLACE Caño Martín Peña Project Corporation was created and funded by the government of Puerto Rico in 2004[19] to rehabilitate the channel and to promote social and economic development in the adjacent communities.[20] Additionally, efforts to address water infrastructure in the Cantera community were spearheaded by the Company for the Integral Development of the Cantera Peninsula.[21]

In partnership with ENLACE, the U.S. Army Corps of Engineers planned an ecosystem restoration project on the Caño Martín Peña, including dredging of the channel to restore the natural hydraulic connection between the bay and lagoon and flushing out the pollutants.[22] In 2011, ENLACE received an Urban Waters Small Grant to support work on the channel. The grant was awarded to increase grassroots empowerment by promoting an understanding of environmental degradation in the channel and for continued engagement with the community in its restoration through education

Photo credit: ENLACE

and democratic action. Following the grant, the Caño Martín Peña UWFP location was officially designated in 2013 and started plugging into ongoing ecosystem restoration efforts by gaining the trust of the community-based organizations. The partnership's main intention was to bolster the work already being done in the community and to further elevate local priorities. The partnership has worked to support ENLACE and Cantera bringing together federal, state and local partners to foster a structure for coordination and improve access to resources. This collaboration helps transform community-led initiatives into implementable workplans.

Led by ENLACE in 2022, the Caño Martín Peña Comprehensive Infrastructure Master Plan was completed with the UWFP Ambassador serving as a fundamental collaborator in the process. The plan incorporates green infrastructure that enhances water quality, restores ecological function Caño Martín Peña Urban Waters

location continues to work with local government and community-based organizations in the area as a reliable convener and collaborator with over a decade of trusted partnership. In 2023, The Caño Martín Peña Comprehensive Infrastructure Master Plan was awarded the inaugural Global Impact Award by the American Society of Landscape Architects and the International Federation of Landscape Architects.[23]

Conclusion

Climate change poses significant social, economic and ecological threats to overburdened communities in high-risk areas. Communities least prepared to withstand environmental hazards caused by climate change are routinely facing increases in intensity and frequency of negative effects. Legacies of inequities and insufficient resources for sustainable planning create this climate vulnerability, these barriers make it even harder to achieve an equitable recovery following a climate event. With intentional intervention of resources and visibility, these communities can move toward sustainability and progress. Climate action needs to include an intentional focus on equity, otherwise the disproportionate climate risk and insufficient allocation of resources for underserved communities will only grow more extreme as climate change worsens. It is critical that solutions be centered on the lived experience and expertise of these communities and committed to collaboration to ensure equitable and effective outcomes.

Integrating equity practices with hazard mitigation is an effective long-term approach to helping overburdened and underserved communities adapt to climate change. These practices focus on the underlying issues of vulnerability and increased stability of social and physical systems. The UWFP has experience and success engaging with communities with high climate risk. UWFP locations have long fostered inclusive and equitable hazard mitigation planning and climate adaptation projects through a commitment to enabling the local community vision throughout the entire mitigation process. As a result, the communities around designated Urban Waters locations have fostered their resilience, putting plans and infrastructure in place to avoid debilitating damage and disorder following climate events. The weight and convening power of federal agencies, consistent coordination across activities, ability to engage a wide variety of partners and build stakeholder trust are valuable benefits of an Urban Waters Federal Partnership location and can be directly credited for their progress in equitable climate resilience. This framework of engagement provides a sustainable approach for communities to co-define their own equitable solutions, strengthening their existing partnerships while growing their networks to include new and optimized connections.

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