UPSTREAM STRATEGIES: Future Water Research & Innovation Solutions

COMMUNITY ENGAGEMENT



Equity and Environmental Justice

In the next 10 to 20 years, social equity and environmental justice issues will continue to impact how water utilities meet their committed levels of service for their ever-changing service areas. As public expectations evolve, how can utilities equitably meet the needs of their communities?

CRITICAL FUTURE DISRUPTORS

For the purposes of this effort, a disruptor is defined as something that interrupts an event, activity, or process by causing a disturbance, problem, or opportunity. Disruptors can arise as barriers to normal operations or may present opportunities to do things differently/innovate.

The following items were chosen by a diverse group of water leaders and experts as the most significant future disruptors that water utilities must anticipate and plan for.



INFORMATION MANAGEMENT & COMMUNICATION

As utilities consider technology development and deployment, decisions should be based on social and public health needs, as well as community values. If these things are not considered, income, access, and equity disparities could be exacerbated. How can utilities make sure no one is left behind?



SCALE

Depending on their unique situations, utilities may need to consider moving away from large, centralized water treatment to more decentralized systems. Alternatively, other utilities may need to consider regionalization—pooling resources with their neighbors. Instead of just focusing on growth, utilities will need to shift their focus to adaptation and implement fit-for-purpose water systems. From an equity perspective, utilities will have to grapple with how this trend toward decentralization interfaces with justice, equity, diversity, and inclusion. How can utilities implement innovative developments without leaving the disadvantaged behind?



DEMOGRAPHICS

Demographic shifts are likely to occur for many utility service areas, and utilities will need to anticipate what those changes mean for their systems. These demographic shifts could include changes in minority and/or underserved populations, age, and population migration, either between rural and urban areas or due to climate change impacts. Population migration and climate change will also result in changing land use patterns.

WRF's Upstream Strategies project convened diverse water sector leaders and experts to discuss future water challenges and related research opportunities.





WORKFORCE

As a new generation of water workers is hired, utilities may find that the values and expectations of their employees have changed, i.e., the "woke-force." As utilities seek to engage an equity lens, they will also need to consider groups that are historically underrepresented in the labor market and how they best create jobs and opportunities as a bridge to community engagement.

FACTORS OF QUANTITY & QUALITY

Water supplies will be affected by climate change impacts like extreme weather events, drought, and flooding, as well as by emerging contaminants. These disruptors have implications for environmental justice—how can utilities do their part to equitably distribute environmental benefits as well as burdens?



RESEARCH OPPORTUNITIES

Based on these critical future disruptors, experts prioritized the following targeted research areas:



ENGAGEMENT

Research is needed on new strategies for putting customers and stakeholders first, and how to build authentic relationships and effective partnerships. How can utilities improve community engagement throughout the life cycle of a project, from inception through delivery? In all these efforts, research is needed to identify ways that utilities can meaningfully engage with all their customers in a way that supports their needs beyond just providing water services in a transactional manner.



TECHNOLOGY

Research is needed to identify technologies that can better support remote engagement to exchange ideas with customers. Data sharing environments for utilities and public to exchange and access information should be explored. From a data perspective, how can utilities make the best use of data to improve equity and access? For example, could public health data be utilized in infrastructure planning considerations?



EDUCATION

Research is needed to develop effective water education curricula for students at the K-12 level, and on how water utilities can partner with public schools to implement such educational programs. Research is also needed on strategies for engaging with community advocates, particularly in underserved communities.



VALUES/MEASURES

Research is needed on how utilities can better integrate community values and equity measures into their planning and decision making. Similarly, how can community values and equity measures be better integrated into regulations and impact assessments? This will enable utilities and institutions to "speak a common language" with their customers and communities.

