



DROUGHT PREPAREDNESS IN B.C. WORKSHOP SUMMARY

WATER PLANNING LAB
SCHOOL OF COMMUNITY AND REGIONAL PLANNING
UNIVERSITY OF BRITISH COLUMBIA

On March 3rd, 2016, over fifty water specialists from local government, industry, and academia from across B.C. met at the University of British Columbia for the one-day workshop Local Drought Preparedness in B.C. The goal of the workshop was twofold:

- › *To allow local governments and water specialists to share lessons following the 2015 drought.*
- › *To identify opportunities for collaboration in building drought preparedness.*



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WORKSHOP SUMMARY

The workshop opened with a keynote address by the Chair of Metro Vancouver's Utilities Committee, Darrell Mussatto, in which he reflected on Metro Vancouver's response to the drought and described ongoing efforts to improve drought preparedness. As a result of the drought, Metro Vancouver is reviewing its Water Shortage Response Plan and aims to integrate lessons learned from the summer 2015.

Also in the morning, Jordi Honey-Rosés, Director of the Water Planning Lab at UBC, presented results from the B.C. Municipal Water Survey 2016. The report provides new, municipal-level data on water use, metering coverage, and water pricing. The report finds that water use is falling across the province, although the reasons that explain this drop remain uncertain (Honey-Rosés et al 2016). The full report and data has been made available [online](#).

The morning session closed with a roundtable discussion on lessons and priorities across B.C. The 2015 summer drought was the result of a combination of factors: a low snowpack, above normal temperatures in May and June, and little precipitation throughout the summer. The drought this summer was a major wake up call for residents across the province, especially for some smaller communities that were hit harder with water restrictions. Water shortages were so severe in the Sunshine Coast that the Regional District came within thirty days of running out. Under drought conditions, public engagement and communication is essential. But even frequent and early communication may not be enough to avoid public confusion. Inter-agency coordination is also needed. In many instances, the public was confused about which water restrictions applied in which areas, and how drought levels related to drought stages. Nearly all participants cited the need for improved coordination and public communication. Furthermore, many asked how public communication might be used

to induce short-term conservation in times of drought, as well as long-term changes in water use.

A few local governments have begun innovative programs to save water. For example, this summer the City of Vancouver launched a 'water wise' public education campaign and made efficiency changes within its own operations including retrofitting spray parks to push button control. Also, the City of Richmond is rolling out a universal water metering program with advanced metering infrastructure (AMI) technology that provides a wealth of data on municipal water use.

The afternoon consisted of break-out groups around four themes: Role of the Industrial, Commercial and Institutional (ICI) sector; Pricing and Politics; Building an Evidence-Base for Demand Management Policies; and Water Metering. Each group mapped key challenges and priorities. These challenges and priorities allowed workshop participants to identify opportunities for collaboration. Near the end of the workshop, the participants voted on those challenges and priorities most important to them.

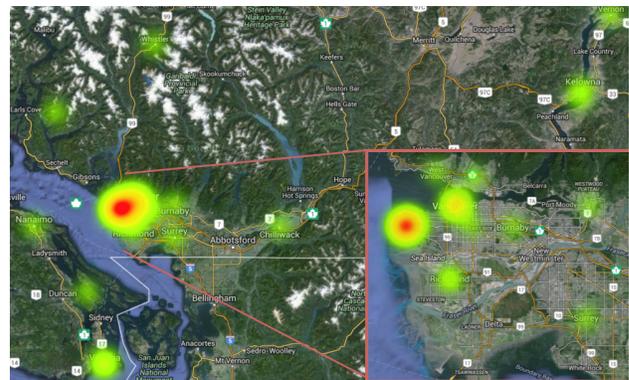


Figure 1. A heat map identifying where participants in the workshop came from.

LESSONS FROM THE ROUND TABLE

- › **Never waste a drought.** When drought is on people’s minds, it is an opportunity to test new initiatives and monitor changes. For example, the City of Vancouver learned that the quality and condition of an urban lake would still be acceptable without a top-up of potable water (Jennifer Bailey, City of Vancouver). The drought also revealed which stages of the Water Shortage Response Plan are effective—and which need attention (Inder Singh, Metro Vancouver)
- › **Incorporate risk—and climate change—in models.** The past is no longer a reliable indicator of the future. By anticipating climate-change risks, the Sunshine Coast Regional District was able to engage the public one month ahead of watering restrictions. Developing an adaptive risk framework enables resiliency in this new age of uncertainty (Steven Conrad, BCWWA)
- › **Coordination beats confusion.** The public can become confused when neighboring water providers respond differently to drought, and different water restrictions are implemented with different timelines. The drought of 2015 revealed that frequent and consistent public engagement is essential to avoid confusion and ensure public collaboration. The role for coordinating responses cannot be understated (Anna Warwick-Sears, Okanagan Basin Water Board, and Julie Pisani, Regional District of Nanaimo)

PRIORITIES: WHERE SHOULD WE FOCUS OUR EFFORTS?

The priority-mapping activity revealed the top three areas needing our collective attention.

- › **Data Collection and Sharing.** Data collection and sharing was voted as the most important priority overall, and received broad support from government officials, academics, private industry, and non-profits alike (Figure 2). In the roundtable discussion and in the break-out groups, participants pointed to the lack of data as a major challenge for municipal governments aiming to manage their water system and build drought preparedness. Local governments noted that the province might provide support for data collection and sharing, as well as help municipalities improve their predictive capacity to tailor governance strategies to respond/mitigate the effects of drought.



- › **Program Effectiveness.** Whether for water conservation programs, metering, or pricing, workshop participants wanted to know what strategies and programs have been proven to be most effective. Specifically, there is a lack of BC-specific examples: what’s the best bang for our buck? What communication strategy is most—or least—effective?
- › **Impact of Pricing on Equity.** This priority is especially resonant with government officials. If new pricing models are adopted, for conservation, to improve resilience, or for full-cost accounting, what are the societal impacts? Would changes in prices be fair and socially accepted?

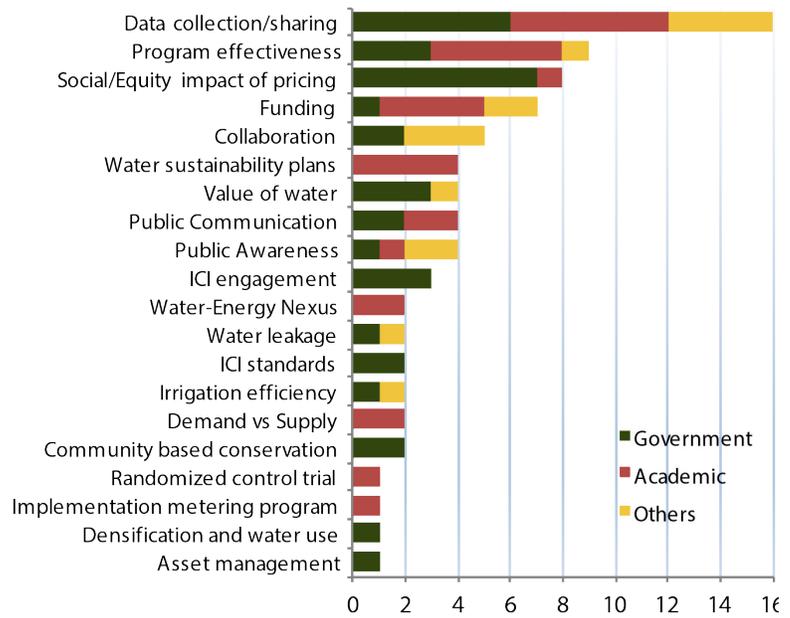


Figure 2. Workshop participants identified priority areas by voting for ideas, challenges or priorities that resonated with them.

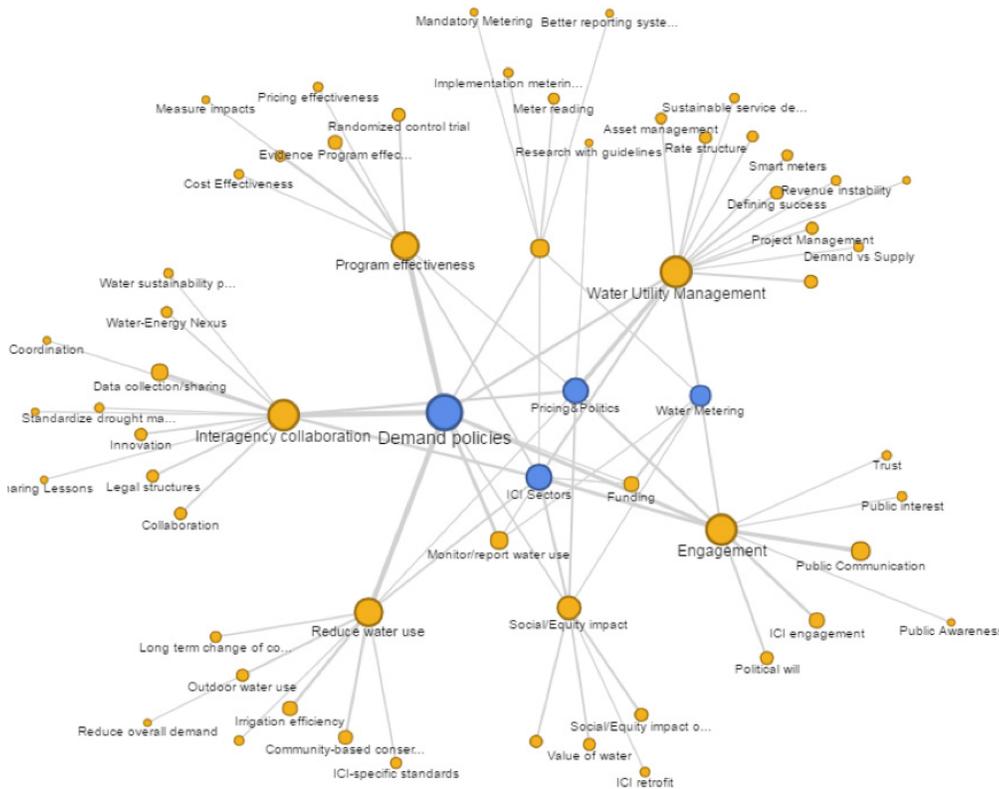


Figure 3. A network map of the challenges and priorities identified by workshop participants in the four working groups: Building an Evidence-Base for Demand Policies, Pricing and Politics, Water Metering and the ICI Sector. This map identifies challenges and priorities that were common across multiple working groups, as well as major sub-themes. Important cross cutting themes included: Engagement, Interagency Collaboration, Program Effectiveness, Reduce Water Use, Social/Equity Impact and Water Utility Management.

References:

Honey-Rosés, J., Gill, D., Pareja, C. 2016. BC Municipal Water Survey 2016. Water Planning Lab. School of Community and Regional Planning, University of British Columbia. Online URL: <http://hdl.handle.net/2429/57077>

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