



17 August, 2018

**From**

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**To**

Julie Pisani  
Program Coordinator, Drinking Water & Watershed Protection  
Regional District of Nanaimo  
6300 Hammond Bay Road  
Nanaimo BC V9T 6N2

Dear Julie

**Re: Update on 10-Year DWWP Action Plan Implementation Review**

The purpose of this letter is to provide you with an update on our review of RDN's progress on the Drinking Water and Watershed Protection (DWWP) Action Plan as it enters its 10<sup>th</sup> year of implementation. It is provided to outline our preliminary findings in advance of our final report, which will be completed in draft in mid-September, with the project wrapping up in early October.

**BACKGROUND**

The DWWP Action Plan was completed in 2007, adopted by the RDN Board in 2008, and first implemented in 2009 following a region-wide referendum that approved creation of a service and funding mechanism. At that time, it had a 10-year scope. On the advent of this ten year milestone, RDN decided to undertake a program review. The intent is to have a third party assess program status to inform an update of the DWWP Action Plan in 2019. My firm, Econics, a small, Victoria-based company that specializes in water sustainability, was selected through a competitive procurement process to conduct this review.

Objectives of the program review include:

- identify what has been completed, to what extent and on what timeline;
- identify what has not been completed, and describe why;
- identify what partnerships and resources have made this implementation possible; and,
- identify key gaps and opportunities that could be addressed in the next operational period

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Our review began in the last week of June. Over the subsequent six weeks, we gathered data through: two workshops (one with staff from several RDN departments and one with DWWP Technical Advisory Committee (TAC) members); 10 in-depth interviews with key staff and stakeholders (from the Provincial Government, industry, academia, the municipal sector, and a water stewardship group); a literature review; and, a number of meetings and discussions with program staff.

The 2007 DWWP Action Plan identifies seven key programs with 26 discrete actions that fall into three general categories: 1) water science: data collection & monitoring; 2) water education & outreach; and, 3) water policy advocacy & planning support. The summary below of our findings to date is organized by these three categories.

## **SUMMARY OF FINDINGS TO DATE**

The reader should be aware of several limitations. First, the following summary is preliminary, as the data collection phase of our work is not yet complete. Second, due to scope constraints our work is not intended to be a comprehensive, formal audit of the DWWP Program. Rather, it will comprise a general review informed by interactions with a group of key stakeholders and examination of resources largely directed to us by program staff. However, based on the work completed thus far I am very confident that we will be able to provide an objective and well-informed assessment of implementation to date. Finally, the summary below focuses on program highlights - major achievements and identified challenges. It should be noted that a great deal of work has been completed over the past ten years by DWWP staff and partners, far more than what is detailed here. This will be more comprehensively inventoried in our pending final report.

### **Water Science: Data Collection & Monitoring**

The water science theme encapsulates actions under Program 2 of the 2007 Action Plan (Water Resources Inventory & Monitoring) as well as elements of Program 6 (Water Quality Management). The goal of this work is to improve information about the Region's water resources in terms of both quality and quantity, in support of better land-use decisions and public awareness.

Major achievements by the program in this area to date include:

- ✓ **Many Data Gaps Have Been Filled** - our literature review and consultation activities all point to significant strides forward towards better monitoring and understanding of local water resources that are directly attributable to the DWWP Program. This improved understanding encompasses quality and quantity for both surface and groundwater, and to some extent aquatic ecosystem management.
- ✓ **Vulnerable Water Sources and Systems Have Been Prioritized** - Key technical projects carried out over the last ten years have clarified which watersheds and aquifers in the region are most stressed. Enhanced monitoring in these areas has commenced, and there are early signs that the results will beneficially affect land-use decision making in these areas.
- ✓ **Data Has Been Acquired Robustly and Resourcefully** - Several aspects of RDN's approach to acquiring data were lauded by outside observers. For example, the use of volunteers to collect surface water data ("citizen science") has proven cost effective, has boosted the capacity of community groups, and has fostered positive relationships between members of civil society. Similarly, enabling private well owners to share testing results through the incentive of rebates has significantly expanded the number of data points to characterize aquifers, again at low cost. A number of other similar examples can be provided.

Several challenges in this area have also emerged, including:

- **Improving Data Management** - while it is clear that data collection has been quite successful, there are opportunities to better manage data once it has been acquired. RDN staff have attempted to address this over time through various solutions, for example by partnering with the Provincial Government to host data in robust, centralized databases (e.g., EMS and Aquarius). However, in other cases data continues to be housed *in ad hoc*, local, stand-alone systems, in Excel spreadsheets and the like. Moving forward, more attention to data management, potentially by developing a comprehensive plan in partnership with the Province and other partners. (It is worth mentioning, however, that this challenge is common to many, many water management agencies at all levels of government across Canada.)
- **Further Attention to Operationalizing Data** - as the volume of data collected for both surface and groundwater grows, it is clear that greater attention (and budget resources) will need to be devoted to analysis and to turning data into useful knowledge that can inform decision making. This may prove challenging for RDN because it requires highly technical, specialized skill sets. To date, much of the work done in this area has been either outsourced to expert consulting firms, or undertaken through partnerships with appropriate organizations such as Vancouver Island University or the Province. As the analytical workload continues to grow, it is not clear whether the somewhat *ad hoc* approach used to date will continue to be sufficient, or whether a more comprehensive, long term research plan developed with partners in academia and the Province would be preferable. More consideration of how to leverage data produced through the DWWP could be a key focus of an updated DWWP Action Plan.

### Water Education & Outreach

The education and outreach theme encapsulates actions under Program 1 of the 2007 Action Plan (Public Awareness and Involvement) as well as components of Program 5 (Water Use Management) and Program 6 (Water Quality Management). The goal of this work is to empower individuals and communities to protect water and the environment.

Major achievements by the program in this area to date include:

- ✓ **Impressive Water Conservation and Sustainability Resources** - RDN's efforts to create and disseminate resources to help people reduce their water use and be good stewards are both extensive and impressive. Many end-uses (indoor and outdoor) are targeted and many communication channels continue to be employed. This is most prominent with Team WaterSmart efforts, and include a broad range of initiatives including print material, web resources, community events, workshops, school education and much more. In comparison with similar British Columbian communities or jurisdictions with a comparable population base, this work can only be characterized as exemplary.
- ✓ **Successful Partnerships for Regional Service Delivery** - RDN staff have done an extraordinary job of developing strong partnerships with other agencies to promote stewardship. These partners include the Province, member municipalities, small water purveyors, and community groups. Noteworthy examples include delivery of Team WaterSmart on behalf of Nanaimo, Parksville, Lantzville, Qualicum Beach, and in particular the development of a regionally consistent outdoor watering restriction frameworks. Another excellent illustration coordination of rebates for water efficient goods and services, which are provided seamlessly across municipal boundaries. Many other examples could be cited. These partnerships clearly leverage the resources RDN brings to bear and contribute to a shared community stewardship ethic.
- ✓ **Innovative Regionally Significant Education Programs** - RDN has developed several "niche" water sustainability programs that merit specific mention. For example, RDN's WellSMART

initiative couples workshops, wellhead upgrade rebates, and water testing incentives with educational resources and auditing offered by trained Provincial Government staff. We are unaware of a comparable program in BC. Similarly, work to promote rainwater harvesting has included a robust design and installation guidebook, workshops, rebates and other tools. These examples are consistent with water sustainability program best practice because they are highly targeted. They also use a variety of policy instruments and promotions to incentivize participation.

Several challenges in this area have also emerged, including:

- **Campaigns are Often Highly Information Intensive** - As noted above, RDN's educational resources are inarguably both extensive and impressive. However, they are often also very information intensive. By this we mean that a great deal of sometimes highly technical material is tightly packed in to communications material. The DWWP and Team WaterSmart website areas, for example, may be overwhelming from the perspective of the general public. A number of other examples can be cited. Research from fields such as environmental psychology and marketing tell us that information alone rarely leads to sustainable behaviour change. RDN has an opportunity in the future to transition to more "best-in-class" outreach methods. For example, it could make more use of well-established community-based social marketing techniques such as social norms, commitments and more vivid marketing communications.
- **Innovative Demand Management Program Delivery** - In a similar vein, much of RDN's demand management (i.e., water conservation) efforts narrowly employ education and incentives (i.e., rebates) instruments. As well, most effort is focused on the single-family residential water sector. This is very much a general observation, as there are certainly good examples of use of other techniques to be found. And again, by local standards the work is exemplary. However, if we apply the much higher standards of the most prominent and successful water conservation programs on the continent, such as examples from the Southern US or, in Canada, Ontario, there are many opportunities to innovate and improve performance. We look forward to detailing this further in our final report.
- **Branding Review** - In our review of DWWP print and web-based collateral, we discovered an issue that we have seen before with other well-developed outreach programs - the phenomena of "brand creep". This occurs when branding is done inconsistently or when the messages you are trying to communicate do not come across vividly and clearly. If this issue is left unattended, the risk is that the brand will no longer have clarity and residents become confused about who you are, what you offer, and why you exist. This problem also dilutes attention away from the entity that should usually be at the centre of communications - the Regional District of Nanaimo (and in some cases partner local governments).

To illustrate, so far we have observed use of at least 11 different logos and wordmarks in DWWP communications. In one instance, eight different logos were used on a single page. In a few cases (e.g., the WellSMART program) it is not immediately clear why a separate brand identify is required at all. This challenge is compounded by the fact that the logos of five different local governments including RDN must sometimes be incorporated into design.

Beyond logo proliferation, we also see other opportunities to improve brand consistency more generally (e.g., consistent use of colour, style elements, fonts, etc.). Our report will recommend that RDN undertake a review of DWWP branding and perhaps consider developing corporate style guidance specifically for the program.

## Water Policy Advocacy & Planning Support

The water policy advocacy and planning support theme encapsulates actions under Program 3 (Land Planning and Development) and Program 4 (Watershed Management Planning) of the 2007 Action Plan as well as elements of Program 5 (Water Use Management), and Program 7 (Adapting to Climate Change). The goal of this work is use data, knowledge and public support developed through the DWWP Program to inform better land-use decision making and public policy.

Major achievements by the program in this area to date include:

- ✓ **Foundation Laid for Future Success** - Almost all the informants we spoke to reminded us of the very long time frames needed to build a sufficient information base to adequately characterize watersheds and aquifers, and the challenges of building lasting public support for these endeavors. Over the past 10 years, RDN has created a strong foundation with data, partnerships, education, and program identity. While it is important to understand that we remain in the data building stage and that much analysis remains to be completed, there are good indicators that this foundation is now starting to support more informed decision making.
- ✓ **Specific Successes in Land-Use Planning and Informing Policy**- Particularly in the last several years, we found specific examples of the DWWP Program influencing land-use decision making. A specific example is a technical review commissioned to examine aquifer characteristics in Area H, including identification of sensitive aquifer recharge areas. This report directly influenced the Area H OCP update, which sets clear objectives and policies to protect freshwater resources. DWWP staff also supported RDN's Planning Department with creation of the *Yellow Point Aquifer Protection Development Permit Area* in amendments to the Area A OCP. This requires that new development in that permit area must have additional rainwater storage to protect the sensitive aquifer. More strategically, through DWWP, the RDN also offered the Province comments and feedback on *Water Sustainability Act* development from 2010 through 2015. We have it on good authority from contacts in the Province that this type of stakeholder feedback had a meaningful impact on shaping public policy and legislation in the new Act and its regulations.

Challenges in this area have also emerged, including:

- **Objectives Related to Land-use Planning Have Not Been Fully Realized** - Above, we noted several accomplishments in land-use planning and also discussed extensive work done so far to build a foundation in knowledge and public support for future decisions. At the same time, it is also clear that the ambitions of the 2007 Action Plan in this realm have not yet been fully met. We have seen that the reasons for this are complex, involving an array of organizational and regulatory considerations, a matter that we will delve into more in our final report.

Going forward, this challenge will certainly require further attention in the next iteration of the DWWP Action Plan. A collaborative, inter-departmental effort will be required to ensure that this updated plan reflects attainable and universally supportable goals that strike the right balance between protecting water resources and enabling community growth and development.

## Other Observations

Our research has uncovered several other opportunities to improve the impact of the DWWP that we will expand on in the forthcoming report.

- **Stronger First Nations Engagement** - RDN staff frankly concede that more work needs to be done to engage with the Qualicum, Snaw-naw-as, Snuneymuxw and other area First Nations in DWWP implementation. There are many potential opportunities. For example, while we understand invitations have been extended in the past, there are no First Nations representatives on the DWWP Technical Advisory Committee. First Nations could be key partners in watershed monitoring activities (the Qualicum First Nation has assisted with site selection in the past). Traditional ecological knowledge can enhance science-based knowledge created through the program. First Nations communities could be more frequent recipients of outreach support from Team WaterSmart (similar to support already received by municipal governments). However, individual First Nations will certainly have their own perspectives on how (or whether) they want to participate in the program. We recommend that RDN make it a priority to more actively engage with First Nations on a government-to-government basis to identify the ways in which they would like to participate in DWWP implementation in the future.
- **Enhanced Inter-Departmental Coordination** - Organizationally, there are many benefits and synergies to situating the DWWP Program within the Regional and Community Utilities Department. However, going forward, if the program is to continue to evolve into a more strategic role and become more focused on land-use and planning, we see benefits to enhancing coordination with other departments, particularly Strategic and Community Development. We would not immediately recommend reorganization, and in any case such considerations are beyond the scope of our work. However, we suggest considering other means to improve coordination including mechanisms such as inter-departmental working groups and temporary staff cross-appointments. This may result in stronger collaboration and a broader organizational focus for the program.
- **Increase Effort to Communicate the Value of the Program** - A number of informants told us that they believe more effort needs to be invested in communicating the value of the program and the value of watershed protection more broadly. Staff do a very good job of explaining the “what” (what kind of toilet should I buy? what is the water quality situation in the stream? what should I do about my well?). Going forward, we suggest much more effort should go into explaining the “why” (why should I care about watershed protection? why do particular development patterns need to change? why does the parcel tax that I pay represent outstanding value?). Integral to this is explaining clearly and concisely why watershed protection matters, not just in terms of ecosystem values, but also community, financial, and infrastructure management values. As discussed above, this is another reason to refine communications through all channels, make it less information intensive, and become more focused on deliberate key messages. We also anticipate a need to create more opportunities to communicate with RDN Board members and elected officials in partner local governments about the many benefits that the DWWP Program creates. This in turn will enable them to more actively champion the program and ensure community support is maintained.

In closing, despite the challenges outlined in this progress update, like every one of the informants we spoke to over the past six weeks, we see a very promising future for the DWWP Program. There is clear and strong support for this initiative both inside and outside the organization, support that has been strongly maintained for a decade. The result has been a long list of accomplishments, far more than what is detailed in this update memo, and covering the breadth of science and data gathering, education and outreach, and improving land use planning. People recognize that RDN has a tremendous asset in the program staff and that there are very productive partnerships enabling ongoing implementation.

Crucially, unlike virtually all other comparable programs in the province that we have worked with, the DWWP is adequately funded. Staff are able to leverage internal funding with many in-kind and cash contributions from other agencies and the private sector. This enables RDN to do much more than it could on its own.

Sincerely,

A handwritten signature in black ink, appearing to read 'Kirk Stinchcombe', with a stylized, cursive script.

Kirk Stinchcombe  
Sustainability Specialist & Chief Executive Officer