Convening for Action in the Nanaimo Region



Reference Source: "Action for Water" referendum brochure, 2008

Storyline Overview

	Chapter No. & Title	Key Messages
7	Convening for Action in Nanaimo Region	In 2003, the Nanaimo Region recognized the signs of trouble on the horizon for water and watershed health, and initiated development of a strategy – "Action for Water" – for better management and increased security of the ground and surface water resources that sustain the region.
a.	Drinking Water & Watershed Protection Program	Funded through a parcel tax, the <i>Drinking Water and Watershed Protection</i> service is a region-wide watershed function. Collaboration is an intrinsic part of the program. The program strength comes from working partnerships. Collaboration is a magnet that attracts champions.
b.	Showcasing Green Infrastructure Innovation	In 2007, the Nanaimo Region hosted the inaugural event that formally initiated inter-regional collaboration on Vancouver Island. City of Nanaimo case study experience became a signature piece of 'sharing & learning' sessions, had ripple effects and influenced other governments.
C.	Regional Strategy for Resilient Rainwater Management	The Nanaimo Region's <i>Liquid Waste Management Plan Amendment</i> charts a path forward for the next 20 years and beyond. Viewing watershed health through an asset management lens provides a driver to require that development practices maintain Water Balance integrity.
d.	Sustainable Partnerships	Partnerships are a long-term investment, and a partnership is more than a project. First Nations in the Nanaimo Region can help local government understand what 'healthy watershed' means and bring their long-term understanding to integrated watershed management.

7. Convening for Action in Nanaimo Region

The Regional District of Nanaimo (RDN) was the first regional district to embrace a leadership role within the CAVI initiative. The RDN's John Finnie, General Manager of Regional and Community Utilities, was the first CAVI Chair (2006-2011). Annual updates to the Board about CAVI activities and accomplishments enabled the Board to reaffirm commitment to inter-regional collaboration.

The RDN's contribution to inter-regional "sharing and learning" is the experience it has gained over the past decade in first developing and then implementing the precedent-setting *Drinking Water & Watershed Protection Program*.

Action for Water: "In 2008, and as the outcome of a successful referendum, the RDN became the first

regional government to create a drinking water and watershed protection service area with taxation authority in an electoral area. This was the culmination of a 6-year effort. In 2012, the service area was



expanded to include the municipalities within the regional district and they became active participants in the watershed function," reports John Finnie.



Timeline / Milestones

The timeline shown on Figure 37 identifies milestones in the evolution of the Nanaimo Region's watershed-based approach. The colour coding means:

- Blue provincial milestones;
- Black Nanaimo region milestones; and
- Green sharing of Nanaimo region case study findings at inter-regional events.

Source of Authority for Watershed Approach:

In February 2003, a staff report to the Board crystallized the *Action for Water* vision. The 2003 report is a valuable historical document. Not only did it consolidate various directives, it identified a strategy (and associated implications) for moving forward incrementally with the regional service area. Findings of relevance to other regions are:

- The primary source of authority for a regional district to undertake studies in relation to watershed protection is found in section 800.1(2)(b) of the Local Government Act.
- This section provides for coordination, research and analytical services related to the development of the regional district.
- The regional district's powers to regulate and control development through zoning bylaws enable a regional function and service area for Drinking Water & Watershed Protection.

Action for Water Video: In 2008, the RDN produced a video that drew attention to water resource impacts and explained the need for action through the local government mandates of land use planning and development standards. "The Action for Water video was a critical communication tool during the public consultation process leading up to the referendum in November 2008," recalls John Finnie.

Provincial Demonstration Applications: The Nanaimo Region is a provincial demonstration region for a water balance approach to watershed protection, starting with two chapters in the 2002 Guidebook: *Policies for Integration of Land Use Planning and Stormwater Management*, and Setting Priorities for Early Action.

RDN case study experience showcased what could be accomplished by bringing together the right people with the right knowledge at the right time to collaborate on solutions. As a result, the RDN lens for describing the value of the 'regional team approach' is **sustainable partnerships**.

Convening for Action in Nanaimo Region: Time-Line & Milestones



COLOUR CODE:

Blue = provincial milestone
Black = Nanaimo region milestone
Green = sharing at inter-regional event

Figure 37

a. Drinking Water & Watershed Protection Program

The RDN established a provincial precedent when it started the *Drinking Water & Watershed Protection* service. The program is funded through a parcel tax. The stable revenue source enables strong long-term continuity of the program.

Holistic Approach to Land and Water Use: "A growing population combined with known negative impacts created the need to tackle issues of groundwater depletion, stream degradation, surface

water contamination and the changes climate change will bring.
Land use planning and development standards cannot be effectively modified without a clear understanding of our water



resources, where they are changing and why," states Mike Donnelly, RDN Manager of Water Services.

Water Budget Study Demonstrates Leadership

Completed in March 2013, the region-wide Water Budget Study is the foundation piece for a better understanding of regional water resources (Figure 38). The assessments provide an understanding of the current water demands, availability, use, the stresses placed on rivers/creeks and aquifers by human activities, and long-term impacts of changing climate conditions on fresh water resources in the region.

By taking the lead with this baseline inventory of regional water resources, the RDN can now prioritize more detailed assessments that will enable the development of watershed management plans.

Working Partnerships Promote Collaboration

Collaboration is an intrinsic part of the *Drinking Water & Watershed Protection* program. The strength of the program comes from the working partnerships between the RDN and the four municipalities in the region – City of Nanaimo, District of Lantzville, City of Parksville and Town of Qualicum Beach. The five co-fund the service. The on-the-ground education and outreach component is known as **Team WaterSmart**.

Towards a Responsible Water Culture: "We always come back to the Drinking Water & Watershed Protection Action Plan vision. It is over-



arching, outcome-oriented and lays out what we need to do to understand and manage water in our region. The program is a 'one-stop' source for local government initiatives on water stewardship. Cooperation with the

four municipalities results in consistent messaging, efficient use of resources and a concerted effort to establish strong water-awareness and cultivate a responsible water culture in the Nanaimo region," states Julie Pisani, RDN Program Coordinator.

Shared Responsibility: Working partnerships with provincial government ministries, local stewardship groups, academic institutions and other regional governments further strengthen the program. Notable successes (Figure 39 include:

- Community Watershed Monitoring Network
- Groundwater Observation Well Network
- Water Use Reporting Centre (an initiative of the Okanagan Basin Water Board)

"The RDN embraces shared responsibility. Because we have base funding, we said we would fill gaps. This changed the RDN's relationship with the Province," explains Mike Donnelly. "Now, we pool resources to undertake work that otherwise would not get done. We are amazed by how much energy results from a collegial approach to solving problems. Collaboration is a magnet that attracts champions who want to make a difference."

Base Funding + Partnerships = Successful Program



Keys to Success in the Nanaimo Region:

Outcome-oriented, the DWWP Action Plan is over-arching and provides guidance for partnerships that make a difference over time.

- There is no 'how you do it' plan.
- There is no need for a 'grand plan' to tell the region what to do.
- Start at the project level to get started on bringing the vision to fruition.
- Link the project to the higher level vision.

Water Budget Project is foundation for better understanding regional water resources:

Where various elements of the hydrologic cycle are located.

How much water they hold.

How water moves between them.

Where water is being taken or used.

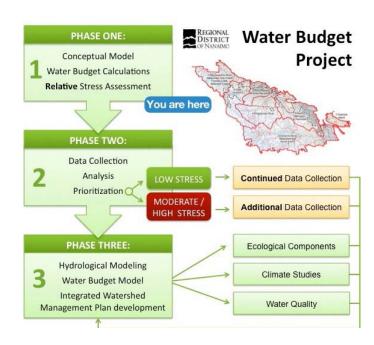


Figure 38

Community Watershed Water Quality Monitoring Network

In 2011, the Drinking Water and Watershed Protection program partnered with the Ministry of Environment and 10 steward groups to implement the Community Watershed Monitoring Network. The Ministry trains the volunteers and analyzes/stores the water quality data. The RDN provides and maintains the equipment used by volunteers.

Do More With the Same Resources: "This partnership has allowed the Ministry to study



has allowed the Ministry to study watersheds over a greater geographic range and in more eco-regions across Vancouver Island, has resulted in strong relationships with local government and interest groups, has provided valuable input and local support, and, ultimately,

has resulted in a more effective monitoring program," states Rosie Barlak, the Ministry's Environmental Impact Assessment Biologist.

Provincial Groundwater Observation Well Network

Also in 2011, the Drinking Water and Watershed Protection program partnered with the Province and the Geological Survey of Canada to more than double the number of wells in the Observation Well Network (from 17 to 31) in the Nanaimo region.

Improve the Understanding of Groundwater:

"Usually the province is responsible for drilling and maintaining observation wells, but we saw this as an opportunity to create a partnership to achieve our



goals under the Drinking Water and Watershed Protection program, to gather more data and fill gaps in the current groundwater data for our region. Pat Lapcevic, Section Head

(Ministry of Forests, Lands, and Natural Resources Operations) is the provincial government champion who embraced the shared vision and is a key partner in our regional groundwater monitoring efforts," explains Julie Pisani.

BC Water Use Reporting Centre

In 2011, the Okanagan Basin Water Board launched the web-based BC Water Use Reporting Centre (WURC) in partnership with the Province and Environment Canada. Within a year, RDN partnered with the OBWB and WURC is now used by almost all water utilities in the Nanaimo region.

Make Informed Decisions: "In general, reporting of licensed water use in B.C. is collected ineffectively if at all. However, the water use reporting software developed by the OBWB and now used in the

Okanagan and Nanaimo, would allow information on major groundwater and surface water extractions to be gathered efficiently from all over B.C. The



software also allows utilities and others involved in water management to use the data for planning and managing the resource," explains Nelson Jatel, OBWB Stewardship Director.

Rainwater Harvesting Incentive Program & Guidebook

Introduced in 2012, the *Rainwater Harvesting Incentive Program* is the first-of-its-kind in BC. It provides grants of up to \$750 for homeowners. Also in 2012, the RDN published the *Rainwater Harvesting Best Practices Guidebook*.

Achieve Multiple Beneficial Outcomes: "We stepped back from a prescriptive 'how-to-do-it' approach and adopted a guidelines approach. The Guidebook was developed through an inter-

departmental collaboration process that involved staff from long-term planning, water, building inspection and sustainability. We are promoting rainwater harvesting to reduce the



volume of groundwater drawn from aquifers during dry summer months. This will sustain critical baseflow in streams, prevent saltwater intrusion, and increase self-sufficiency," states Chris Midgley, RDN Manager of Energy and Sustainability.

Collaboration is an intrinsic part of the Drinking Water & Watershed Protection Program:



Groundwater Observation Well Network



Friends of French Creek - Water Quality Monitoring



Development Permit Areas for Water Conservation

The 'Green Communities' Amendments Act (2008) provides local government with the regulatory authority to require rainwater harvesting in a Development Permit Area

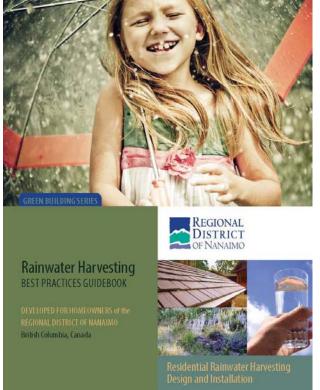


Figure 39

b. Showcasing Green Infrastructure Innovation

In 2007, the RDN partnered with the City of Nanaimo to co-host the inaugural event in the Showcasing Green Infrastructure Innovation on Vancouver Island Series. This CAVI event formally initiated the inter-regional collaboration process.

Share and Learn

'Showcasing goals' were to promote networking, build local government capacity to implement green infrastructure policies and practices, and facilitate sharing of approaches, experiences, tools and lessons learned. In the years a "Showcasing Innovation in the Nanaimo Region", City of Nanaimo experience was a feature of other inter-regional 'sharing and learning' seminars.

Ingredients for Success: "Our participation was a catalyst for the City to evaluate our progress, and reflect on lessons learned from our experience in



piloting innovation. It is about people, and most of all, it is about involving the right people at the start. The ingredients for success include passion and the willingness to take a

vision and make it happen," stated Rob Lawrance, the City's Environmental Planner.



Establish Expectations

The story of the Inland Kenworth truck and heavy equipment facility in the City of Nanaimo became a signature piece of the inter-regional program, especially the 2008 Vancouver Island Learning Lunch Seminar Series. From a City perspective, this was a milestone project. It had a ripple effect in the City. It influenced other local governments.

Dare to Be Different: The Inland Kenworth success story showcased what a collaborative approach to development site planning can accomplish. City staff challenged the design team to "dare to be different" rather than be satisfied with another routine application of unimaginative site planning practices. The proponent embraced the challenge to "design with nature" (Figure 40).

Design with Nature: "One of the early keys to success was the time that City staff, the owner's representative and the design team spent walking



the site. As we collectively began to understand both the constraints and opportunities, the design team became animated and energized. We could not help but notice the major change in

attitude as the group of design professionals began to gel as a design team," recalled Gary Noble, Development Approval Planner.

Turning the Tide in Nanaimo: "We view this project as the one that changed the thinking of the consulting community in Nanaimo, particularly on



redevelopment projects. Even in traditional, hard-piped urban areas where it would be easy to connect to storm sewers that discharge to the

ocean, project proponents are telling us that they want to be innovative when redeveloping their properties. We are turning the tide because development and redevelopment projects are now incorporating features for rainwater runoff capture," stated Dean Mousseau, Manager of Development Engineering, whenever he told the Inland Kenworth story at 'sharing and learning' sessions.

Beyond the Guidebook 2015: Towards a Watershed Health Legacy in the Georgia Basin



Inland Kenworth is located at the intersection of the Nanaimo Parkway and Northfield Road, and is close to a residential area. The site is immediately adjacent to the Northfield Marsh and is ultimately tributary to the Millstone River.

Inland Kenworth Site

DID YOU KNOW THAT working relationships developed as a result of the Inland Kenworth project led to a unique four-way partnership for green roof research at four locations on Vancouver Island, with a research focus on the potential for offsetting carbon emissions that originate from building operations. This type of research had not previously been attempted.

One of the research locations is the LEED Gold head office building of Greg Constable, who was the owner's representative for design and construction of the Inland Kenworth project.

The research partners are Vancouver Island University, Island West Coast Development (Greg Constable), Regional District of Nanaimo and City of Nanaimo.





To represent and reflect the coal mining heritage of the surrounding area, roof drainage is conveyed to a sluice box structure that discharges onto a rock garden. The water then flows via a man-made streambed that has been excavated through a rock outcrop to connect with the Northfield Road drainage system which outlets into a natural wetland. The dry streambed is filled with rock and is a distinctive and highly visible feature of the development. There is no catch basin on the site. Drainage runoff is infiltrated along the perimeter of the property.

"This is the first project that I have built without a catch basin," stated Greg Constable in 2007.



Figure 40

c. Regional Strategy for Resilient Rainwater Management

Approved by the Minister of Environment in October 2014, the Nanaimo Region's *Liquid Waste Management Plan (LWMP) Amendment* was developed through a 5-year collaborative process. It charts a path forward for the next 20 years and beyond.

The RDN will develop a regional strategy on rainwater management in coordination with member municipalities.

Rainwater management activities will then be implemented under the umbrella of the *Drinking Water & Watershed Protection Action Plan*.

'2012 Water Balance Forum' Informed Regional Initiatives

In March 2012, the RDN Board endorsed participation in the *Georgia Basin Inter-Regional Education Initiative (IREI)*. Next, in June 2012, the RDN hosted a Water Balance Forum. This was a notable event for local government professional development in the Nanaimo Region because:

- it was a 'proof-of-concept' event for the IREI and had an inter-regional audience (Figure 41);
- it has informed aspects of the *Drinking Water & Watershed Protection* program; and
- it has also informed the rainwater component of the region's LWMP process.

Recognition of the relationship between land development practices and watershed health is common to all three of the above. The Forum was about how to apply the **Water Balance Methodology** to lighten the 'water footprint', adapt to climate change, and protect stream and watershed health. Hence, the relevance.

'Parksville Primer' Looked At Groundwater Differently

It is envisioned that the *Beyond the Guidebook Primer Series* of guidance documents would provide an educational foundation for the regional strategy. The third in the series is particularly relevant. Released in 2012 by the Partnership for Water Sustainability and Living Rivers, the *Primer on Integrated Rainwater and Groundwater Management for Lands on Vancouver Island and Beyond* was developed through collaboration with the City of Parksville. The Primer informed the educational process for the Parksville Official Community Plan Review.

Groundwater and Land - They ARE Connected:

The Primer synthesized the pioneer work of Dr. Gilles Wendling. He looked at groundwater differently in the Englishman River. His findings have informed evolution of the **Water Balance Methodology**. His work has helped to establish a performance target for sustaining the movement of water through the ground, after land is urbanized.

Dr. Wendling emphasizes that time is a critically important dimension in maintaining the water balance. Also, that water is always moving. "These are fundamental concepts, yet are not always well understood," he says.

Involve the Community: "Characterizing aquifers is a complex and costly exercise because you need

wells in order to reach aquifers and to monitor the depth and fluctuation of the level of the water table. The approach that we took was to involve the community. By getting them involved in its study, the community connects to its

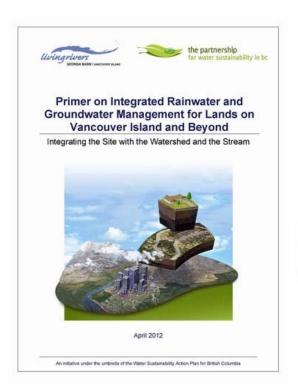


watershed, its complexity and how it works. Community members will then be able to more willingly modify their behaviour and management of the land," states Dr. Gilles Wendling.

Beyond the Guidebook 2015: Towards a Watershed Health Legacy in the Georgia Basin



2012 Nanaimo Water Balance Forum. Planning, engineering and other local government staff - including managers and supervisors - gained an understanding and appreciation of the speed and power of the Water Balance Model (scenario modelling and decision support tool) in generating useful answers in minutes rather than in hours or days.



Groundwater and Land: They ARE Connected!

DID YOU KNOW THAT these elements - rainfall, the ability of the landscape to absorb rainfall, movement of water through the ground, and the resulting flow in streams – are part of a system that we call the Water Balance. Land development short-circuits this system when the land surface is hardened and below-ground flow paths to streams are eliminated.



TIME is a critically important dimension in maintaining the Water Balance. An aquifer is NOT an underground lake. This fact is not necessarily understood by everyone. The water is always moving.

Figure 41

Sustainable Service Delivery for Watershed Systems

The 'Parksville Primer' drew attention to the 'unfunded infrastructure liability' associated with drainage practices that do not respect the Water Balance. Also, it foreshadowed application of a life-cycle approach to achieve Sustainable Service Delivery for Watershed Systems (ref. Chapter 8).

Viewing the watershed through an asset management lens provides local governments with a driver to require that development practices maintain Water Balance integrity.

Think Like a Watershed: By early 2012, the linkages between the natural Water Balance, watershed and stream health, and infrastructure liability had emerged as important pieces in ensuring 'resilient rainwater management', both fiscally and ecologically.

Apply the Whole Systems Approach: "We need to understand the sub-systems that are in play between the time that rainfall is received at the top of the tree canopy and the time that it actually gets to the stream. That's the key to the whole



systems approach," states Will Marsh, author of Landscape Planning: Environmental Applications, a classic textbook. He retired to the Comox Valley from the University of Michigan-Flint

where he was Chairman of the Department of Earth and Resource Sciences and a Director of the Laboratory for Land and Water Management.

"We too often jump too quickly to the engineering computations about this method or that method....when what we really need is a basic understanding of the land and its functions. In other words, think like a watershed," Will Marsh emphasizes.

'Worth Every Penny Workshop' Stimulated a National Dialogue

The Worth Every Penny Workshop, hosted by the RDN and held in Parksville in September 2010, provided the Province with a forum to initiate branding of the concept for 'sustainable service delivery' (reference: Chapter 3).

Part of the rollout to stimulate a national dialogue on sustainable water management, the workshop was described as the first of its kind in Canada. The workshop program was a unique blend of research and practice, and was the launch event for Worth Every Penny: A Primer on Conservation-Oriented Water Pricing (Figure 42).

The Worth Every Penny Workshop connected the dots between water pricing, sustainable service delivery and 'Beyond the Guidebook 2010'.

Conservation-Oriented Water Pricing: With little financial incentive to conserve, overconsumption threatens water supplies, community water security and the sustainability of water service infrastructure.

Move to a 'Level-of-Service' Approach: "We talk about water pricing, but we are not actually talking about the price of water. We are talking about the services to provide the water. Water pricing is a hot issue in communities across the country. Yet it remains an almost totally untapped option for helping ensure our water service infrastructure is well maintained and up to date," emphasized Kirk Stinchcombe, co-author of Worth Every Penny.

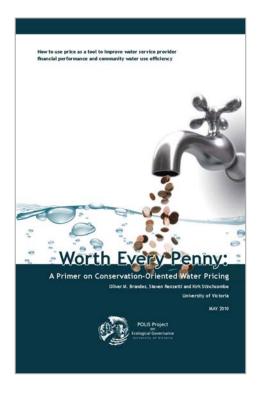
Reduce Water Footprint & Protect Watersheds:

"Effective conservation-oriented water pricing can help reconcile growing communities with the health of local watersheds and engage individuals and businesses to change their behaviour and begin reducing their water footprints," added Oliver Brandes, co-author and Co-Director of the Polis Project at the University of Victoria.

Beyond the Guidebook 2015: Towards a Watershed Health Legacy in the Georgia Basin



DID YOU KNOW THAT provincial grant programs provide local governments with incentives for implementation of new ways of doing business. Those who are proactive and show leadership are the ones who are being rewarded. (2010 Worth Every Penny Workshop hosted by the Regional District of Nanaimo)





Oliver Brandes (L) and Kirk Stinchcombe (R), co-authors of "Worth Every Penny", released in May 2010

Figure 42

d. Sustainable Partnerships

The RDN has been effective over an extended period of time in working with champions from other organizations and groups. Together they have formed 'working partnerships' that add substance to the 'regional team approach'.

Make Real the 'Regional Team Approach': "The success of our working partnerships goes back to the guidance that staff received from the Board Chair



(Joe Stanhope) a decade ago. He emphasized that RDN staff could only make the Drinking Water & Watershed Protection program happen with community help. Joe said work with others, understand their needs and take the long-term

view. We have phenomenal partnerships. The program is successful because 'it is about community'. The champions in those other organizations live here," reflects Mike Donnelly.







Englishman River walkabout with First Nations elders – September 2014

First Nations – Those Who Connect to the Land

Viewed through the RDN lens for watershed health, partnerships are a long-term investment, and more than a project. In September 2014, the RDN reached out to local First Nations to co-host the 5th in the Inter-Regional Collaboration Session, and initiated a relationship-building process.

Progress from 'Working' to 'Sustainable': "The most important thing when you are creating working partnerships is to understand the perspectives of the other partners. Listen to them. Spend time with them.



Get to know them. Perspective is very important. Building an effective partnership is not about figuring out how the other person can help you get what you want done. It is about how you can figure out how you can help that person. That is how you build a

sustainable partnership. Understand what their needs are to help them move forward," stated Randy Alexander (General Manager for Regional and Community Utilities) in his opening remarks.

"Perhaps we do not have regulatory authority in various areas. But we can bring together scientists, government agencies, First Nations and others. We are good at measuring, analyzing and planning. But we do not really understand much about what makes a watershed healthy, whether over 100 or 1000 years. As we move forward with integrated watershed management in the Nanaimo Region, our hope is that we can work with the three First Nations communities in our region. They can help us understand what 'healthy watershed' means and bring their long-term understanding to our work."



Beyond the Guidebook 2015: Towards a Watershed Health Legacy in the Georgia Basin



Our 'Regional Team Approach' is founded on 'Sustainable Partnerships'

Julie Pisani Program Coordinator, Drinking Water & Watershed Protection (DWWP) Regional District of Nanaimo July 2015

"Voters have equipped us with the ability to provide a dedicated service to understand and protect our drinking water and watersheds, funded by a parcel tax of \$8 per property per year. This sustainable funding source is obtained from, and applied back to the urban municipalities and the rural electoral areas alike. Foundationally, the program looks at understanding and managing water on a regional, watershed scale. Partnerships between the municipalities and the rural areas are a crucial part of this."

"Through the DWWP program, we are able to raise awareness and public involvement across the region, collect data and monitor our water resources, and in turn use this public awareness and scientific data to inform policy and planning decisions that protect water."

"We receive guidance from our Technical Advisory Committee, with representation from forestry companies, stewardship groups, provincial ministries, local water purveyors, academic institutions and the public-at-large. This results in a collective intelligence that steers the program, making us more nimble and able to have a well-rounded perspective on the key issues and courses of action. The connectivity across organizations that has been built through the co-participation in the DWWP program has opened doors to collaboration to achieve shared goals and pool resources."

"As we continue to focus on public education as well as science and data collection, we become better equipped to protect our water through sound planning and policy. There are questions that drive us: How much groundwater do we have? How is it recharged? How can we adapt to a changing climate? What is the current water demand? How can we improve water conservation efforts in our communities? What is the health of our creeks and streams? Can we do a better job of managing rainwater and stormwater? How do our land use decisions impact our water availability and water quality? What are better ways of developing our land while minimizing impact on water?"

"These questions are far reaching and are not something the RDN can answer alone, hence our reliance on partnerships, sustained over the long-term, to truly get to the heart of these matters. It's one thing to ask the right questions, yet another thing to respond in an effective way. We need a diversity of tools, perspectives and approaches if we are to be water resilient in our region."

"Among the many partners it takes to tackle these issues, the First Nations in our region are likely the most important. The traditional knowledge and indigenous value of the land and the water is a realm of knowing that our scientific method does not touch. Water is a resource, but it is much more that that too. It is a life force; a spiritual force. If we are to ultimately succeed in our region in managing our actions on the land so that we may protect and preserve our water, we must sustain partnerships that collectively make us much more effective together than in isolation."

"We have started building relationships in an effort to foster trust and collaboration, and it always starts with stories. Conversations about what we care about, stories about the past which help us understand the present, and dialogue about the future and positive vision about what that may look like."