

Photograph courtesy of Krysta Dawn Dyck



Collaborating for Healthy Riparian Lands: *engagement workshop for communities and municipalities*

February 23, 2017 | 8:00 am – 3:30 pm | Cochrane RancheHouse

Program

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| 8:00 - 8:30 | Registration and light breakfast |
| 8:30 - 8:45 | Welcome from Tim Giese, Chair of CEAC
Welcome from the Mike Kelly, Chair of BRBC |
| 8:45 - 9:00 | Workshop overview and introduction of special guests (Judy Stewart) |
| 9:00 - 9:20 | <i>Tools for Watershed Resiliency, Supporting Albertans in Stepping Back from the Water</i> (Eric Macknac - WWRP) |
| 9:20 - 9:45 | <i>Implementing Stepping Back From the Water – the Municipal Toolkit</i> (Joshua Haag - Aquality Environmental Consulting Ltd.) |
| 9:45 - 10:00 | Networking break |
| 10:00 - 10:30 | <i>Collaborating for Healthy Riparian Lands</i> (Norine Ambrose - Cows and Fish) |
| 10:30 - 11:00 | <i>Okotoks Riparian Bioretention Buffer</i> (Anton Skorobogatov - Source2Source) |
| 11:00 - 11:30 | <i>Goats! Calgary's weed grazing pilot and changing perceptions of urban land management</i> (Chris Manderson - City of Calgary) |
| 11:30 - 12:00 | <i>City of Calgary Riparian Action Program</i> (Harpreet Sandhu – City of Calgary) |
| 12:00 -1:00 | Lunch and networking |
| 1:00 - 1:30 | <i>Groundwater - surface water interaction and the implications of human development in riparian lands</i> (Jon Fennell – InSolutions) |
| 1:30 - 2:00 | <i>Tools for identifying, mapping, and assessing riparian habitats in Alberta</i> (Shari Clare - Fiera Biological Consulting Ltd.) |
| 2:00 - 2:30 | Workshop a Stepping Back scenario - Judy to lead |
| 2:30 - 2:45 | Networking break - prepare questions for panel Q and A |
| 2:45 - 3:15 | Panel for Q and A |
| 3:15 - 3:30 | Workshop wrap up (Judy) |

Speakers and Abstracts

Tools for Watershed Resiliency, Supporting Albertans in Stepping Back from the Water

Eric Macknac – Programs Coordinator, Watershed Resilience and Restoration Program

Eric currently works within Alberta Environment and Parks Watershed Resilience and Mitigation Branch, as part of the team delivering the Watershed Resiliency and Restoration Program (WRRP). His work with WRRP is aimed at increasing the resiliency of Alberta's communities by improving the natural ability of watersheds to mitigate the impacts of flood and drought events. This is achieved through partnerships in implementing projects supporting conservation, restoration and stewardship activities, and providing information and tools to support decision makers throughout the province.

Abstract:

Stepping Back from the Water is a beneficial management practices guide focused on the need to conserve the functions of riparian areas, which highlights recommendations for riparian setback widths and buffers. These areas are essential for maintaining watershed resiliency in the face of flood and drought, and the Watershed Resiliency and Restoration Program is working to identify tools and support required for municipalities to implement the recommendations in this guide. This presentation will focus on the toolkit, which is anticipated to improve the capacity of municipalities and counties in development decisions that support healthy watersheds and resilient landscapes. Findings from the assessment survey, the needs for tools for education and outreach, and decision-support templates will all be presented.

Implementing Stepping Back From the Water – the Municipal Toolkit

Josh Haag - Aquality Environmental Consulting Ltd.

Josh is an environmental consultant with eight years' experience with aquatic habitats throughout Alberta. His work focusses on environmental assessments and inventories, and the development and application of riparian and wetland policy. He has extensive experience with policy implementation through the development of GIS and other information-based toolsets.

Achieving Healthier Riparian Areas: Collaborating on Education, Monitoring and Management

Norine Ambrose – Cows and Fish

In her 17 years with Cows and Fish, Norine has focused on working with landowners, communities, and natural resource professionals to help them recognize the value of riparian areas. Her work with community leaders, organisations and agencies emphasises sharing lessons learned in effective program design and delivery. She combines her wetland ecology research experiences from the University of Alberta with extensive development of new outreach and monitoring tools at Cows and Fish, to help bridge science, management and education around riparian ecosystems.

Abstract:

Cows and Fish has been working with Alberta communities for over 25 years. Norine will highlight some of the work they've done with communities and municipalities on their education and extension and riparian health monitoring efforts. She will also share case studies and lessons learned from some of the riparian restoration and management work they have been involved in and encourage you to think about how you and your community can work to improve riparian health in your local area.

Okotoks Riparian Bioretention Buffer

Anton Skorobogatov – Source2Source

Anton is an interdisciplinary professional. He thrives to combine scientific knowledge and good design principles to achieve environmentally sound solutions. He works as an environmental designer for Source2Source, a consulting company. Anton is also working towards a PhD in environmental engineering, and has recently joined the board of Alberta Low Impact Development Partnership.

Abstract:

The project was constructed at the interface of the Sheep River and the new Operations Centre building in the Town of Okotoks. The intent of this project was to manage stormwater run-off from the new building and adjacent areas using an extensive riparian bio-retention system. The system was designed to utilize the biogeochemical functionality of plants and permeable soils to treat and manage stormwater.

The proposed bio-retention system was designed to offer multiple environmental benefits, including: buffering effect on the hydrological regime, attenuating the risks of flood and drought, and restoring the area's natural aesthetics and habitat. The construction was completed in 2016, yet the project grew from being a stormwater management facility to a regionally significant research site with contributions and support of the multiple partnering organizations.

A part of the site is now dedicated to a research testing area, where small scale bioretention cells will be constructed and tested for their performance. Analyzing the performance of these systems in-situ will shed light on the optimal design configurations of bioretention systems and the relative significance of the design parameters. Supporting organizations include: Bow River Basin Council, University of Calgary, Town of Okotoks, Source2Source Inc., City of Calgary Water Resources, Alberta Low Impact Development Partnership, Alberta Environment and Parks, Environment Canada; and Natural Sciences and Engineering Research Council of Canada (NSERC)

Goats! Calgary's weed grazing pilot and changing perceptions of urban land management

Chris Manderson – City of Calgary

Chris joined Calgary Parks in 1998 and has worked in Natural Area Management and Planning for the city for that entire time. He is currently leading the Urban Conservation group in Calgary Parks, which is responsible for urban ecosystem management, including planning and policy, natural area management, integrated pest management and habitat restoration. Chris has a degree in Botany from the University of Alberta. Prior to joining the City of Calgary, Chris worked for over 10 years in environmental consulting as an ecologist, with a particular interest in wetlands and plant community ecology.

Abstract:

In 2016, Calgary Parks brought in a herd of 100 goats to assess the efficacy grazing as a tool for the management of urban landscapes. Initially, the intent of the project was simply to assess the challenges of using livestock for weed control in a very busy urban park. By the end of the pilot, not only did we have six extra goats, we also gained a greater understanding of how we can engage with the public on conservation issues such as biodiversity, invasive species, and urban ecosystem management.

City of Calgary Riparian Action Program

Harpreet Sandhu – City of Calgary

Harpreet is the Team Lead of Resource Strategy at the City of Calgary Water Resources. Her responsibilities include leading the development of water management plans, policies and strategies for Calgary in the areas of riparian protection, watershed management, stormwater management and integrated water supply. Her previous positions include working with the Southern Region *Water Act* Approvals team at AEP and Director of Planning and Community Development for Skamania County, Washington, where she was responsible for regulatory decision making, watershed planning and salmon recovery efforts along the lower Columbia River.

Abstract:

The history of riparian stewardship and development in The City of Calgary extends over 100 years. In July 2013, The City of Calgary adopted its *Riparian Strategy* which articulated principles, goals, and strategies related to modern day riparian management in the context of a large metropolitan city. *The Riparian Action Program* is the 10 year implementation plan for the *Riparian Strategy* which establishes three interrelated program areas of focus for The City of Calgary: (1) land use planning, (2) health restoration and monitoring and (3) community outreach and education. A system for monitoring and evaluating program results has also been established with indicators and targets and reporting requirements to City Council. This presentation will present the overall program framework, and how Calgary is working across disciplines to protect riparian areas, rivers and creeks that face increasing pressure from competing land use interests through the integration of watershed protection and land use planning.

Groundwater – surface water interaction and the implications of human development in riparian lands

Jon Fennell – Integrated Sustainability Consultants Ltd.

Dr. Fennell is a Principal Hydrogeologist at Integrated Sustainability Consultants Ltd. with over 28 years consulting experience in the natural resource sector. His areas of specialization include physical and chemical hydrogeology, environmental forensics, water supply and waste disposal, climate analysis, risk assessment, and the development of mitigation strategies for water-related challenges.

Abstract:

In short, surface water is a result of seasonal runoff of melting snow and later seasonal precipitation. However, groundwater plays an important role in sustaining these surface water, whether they be rivers, lakes or wetlands. The balance between surface water and groundwater is becoming increasingly threatened by human development activities: therefore, it is important to understand the impacts these activities may have on the health of our water resources and dependent systems. This presentation will identify key connections between surface water and groundwater, identify some of the risks posed by human development, and explore some pre-emptive actions to ensure sustainable management of our water resources.

Tools for identifying, mapping, and assessing riparian habitats in Alberta

Shari Clare, PhD, PBIol

Shari is one of the founding Directors of Fiera Biological Consulting Ltd., an Edmonton-based consulting firm that specializes in environmental assessment, planning, and policy. She is also an Adjunct Professor at the University of Alberta where her research interests include systematic conservation planning, urban ecology, water policy, and the use of market-based instruments to improve environmental policy outcomes.

Abstract:

Riparian habitats are critical components of functional aquatic ecosystems, and the loss of riparian habitat in Alberta over the last century has been extensive. In order to improve management outcomes for riparian habitats, several important barriers must be overcome, including the development of reliable spatial inventories and tools for assessing riparian condition over large spatial extents. In this presentation, I will discuss new and emerging GIS and remote sensing methods for identifying, mapping, prioritizing, and assessing riparian condition in Alberta.