

WETLAND EDUCATION NETWORK WORKSHOP SYNOPSIS

HOSTED BY THE ALBERTA NAWMP PARTNERSHIP
MARCH 1, 2018 | EXECUTIVE ROYAL HOTEL, LEDUC, ALBERTA



PREPARED BY:
SAGEWOOD COMMUNICATIONS SOLUTIONS LTD.

net·work

/ˈnet,wɜːk/

noun

noun: network; plural noun: networks

1. a group or system of interconnected people or things.
 - a group of people who exchange information, contacts and experience for professional or social purposes.
2. a human operating system for spawning activities with a set of people who voluntarily organize themselves for collective action to solve a large problem.

verb

verb: network; 3rd person present: networks; past tense: networked; past participle: networked; gerund or present participle: networking

3. connect as or operate with a network.
 - interact with other people to exchange information and develop contacts, especially to further a common goal.

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INTRODUCTION

On March 1, 2018, the Alberta NAWMP Partnership hosted their second annual Wetland Education Network (WEN) workshop. Building on the pilot project from 2017, the purpose of this year's workshop was to give participants an opportunity to learn about best practices to advance wetland education in Alberta using the network approach.

The workshop was attended by more than 50 individuals representing stakeholder groups including various industries, agricultural groups, municipal and provincial governments, local watershed groups and educators; individuals who are interested in learning how to use education and outreach for all audiences to improve wetland health in Alberta. For the majority of participants this was their first WEN workshop. Approximately 40% of this year's participants attended the 2017 WEN workshop. A list of workshop participants is included in [Appendix A](#).

This document provides a concise overview of the workshop, important takeaways from the keynote presentations, highlights of the four program profiles presented, and valuable input and direction gathered from participants during the two breakout group discussions. The workshop agenda is included in [Appendix B](#).

PURPOSE AND DESIRED OUTCOMES

The theme of the 2018 WEN workshop was "Advancing Wetland Education in Alberta: Best Practices to Lead Change." The outcomes of the workshop were:

- Learn about excellent education and outreach techniques and see examples.
- Be inspired by the impact of using a network approach to advance this work.
- Understand where the WEN is at and have a say in where it is headed.
- Connect with others interested in advancing wetland education in Alberta.

Presenters discussed educational approaches, shared outreach techniques, highlighted the key elements of effective networks, and referenced examples of successful education/outreach programs. Through this workshop experience, participants were enabled to move forward with a common understanding of excellent wetland education and outreach and how best to collaborate to improve wetland health in Alberta.

INFORMATION AND EXPERIENCES SHARED

NETWORK MAPPING – VISUALIZING CONNECTIONS

As participants arrived, they were asked to write their name on sticky notes (different colours representing different sectors e.g. agriculture, industry, municipalities, education and public), place the sticky notes on a large poster board, then draw dotted lines from their notes to others they know and solid lines to others they have worked with.

This exercise not only provided organizers with a picture of who attended the workshop and how they are connected, it enabled participants to better understand the nature of the WEN by being able to visualize their respective connections and common contacts. An image of the network mapping exercise is in [Appendix C](#).

INTRODUCTION TO THE ALBERTA NAWMP PARTNERSHIP AND WEN

Terra Simieritsch, Alberta NAWMP Coordinator, began with an overview of NAWMP, and the role of the Alberta NAWMP Partnership in facilitating collaborative opportunities among five partner agencies for wetland conservation in the areas of direct projects, extension, policy support, science (direct studies) and communication initiatives. She stressed the importance of the networking aspect of Alberta NAWMP, highlighted key activity areas, and indicated that working together has made the work more effective and more rewarding.

KEY LEARNING: WORKING TOGETHER HAS MADE OUR WORK TO CONSERVE WETLANDS MUCH MORE ENGAGING AND THAT MUCH MORE EFFECTIVE.

Terra explained Alberta NAWMP's connection to and role in the WEN (as facilitator, funder, capacity builder), followed by a comprehensive overview of the WEN to date, highlighting the conceptual framework that was used, and the process of engagement that was implemented, to develop this platform for bringing wetland education and outreach in the province together. She touched on the highlights, common threads and key outcomes of the work done by the four sector-based stakeholder groups (Action Groups, which included industry, agriculture, municipal and public/education/First Nations) to support and advance the WEN concept. From there, Terra summarized what was heard at the 2017 WEN workshop. She explained how that input has established a clear path forward for the WEN, which has included hiring a coordinator who will focus on populating and supporting the new Action Groups, establishing a hub for WEN information and resources and engaging network members going forward.

KEY LEARNING: THERE IS RESOUNDING SUPPORT FOR THE WEN CONCEPT; WEN IS ALIVE AND WELL AND, WITH CONTINUED ENGAGEMENT AND INPUT FROM STAKEHOLDERS, IS MOVING FORWARD.

Terra's presentation is in [Appendix D](#). Learn more about the [Alberta NAWMP Partnership](#).

EDUCATION AND OUTREACH TECHNIQUES AND APPROACHES

In her presentation, Amber Bennett, with Upaya Consulting, shared foundational knowledge (high level theory) behind and the key aspects of good education and outreach, underscored with relevant examples of the holistic, framework approach to engagement.

The premise behind holistic engagement is a personal state that is cognitive, emotional and behavioral. Stated another way, holistic engagement focuses on heads – what you know, hearts – what you feel, and hands – what you do. The point being, it is not enough for people to just do something without understanding why they are doing it or without caring why they are doing it. In this context, the important pieces to think about when building out education and outreach programs include ensuring you understand:

- Not everyone is starting from the same place of understanding or knowledge; our ability to act and how effective we can be is a part of this.
- How effective we think we can be has a lot of influence over how willing we are to even engage in something.
- We are all embedded in systems; if we do not have appropriate systems or infrastructure in place then it is difficult to ask people to change their behavior.

- How empowered is an individual or a group to actually make change.
- Fear and anxiety have influence over whether or not we can and will change our thinking or our behavior.
- Our attitudes are not shaped by information, our attitudes are more strongly shaped by the people who we think are similar to us and who we trust.

Amber went on to explain the four aspects of a developmental framework for building out education and outreach programs from a holistic perspective. These aspects include:

- Values – understanding what is important to people; what they value
- Emotions – understanding that people are influenced by their emotions; by what they experience
- Systems – understanding that the absence of appropriate systems or infrastructure can impede change
- Behaviors – understanding the levers and the motivations, as well as the barriers, to behavior change

KEY LEARNING: EACH ASPECT, ON ITS OWN, IS IMPORTANT AND CAN BE EFFECTIVE. BUT WHEN CONSIDERED OR APPLIED TOGETHER, FROM A HOLISTIC VIEWPOINT, WILL ENABLE YOU TO BUILD OUT THE BEST PATH FORWARD TO INCENT CHANGE.

KEY LEARNING: WHEN BUILDING PROGRAMS, CONSIDER WHERE THE TOOLS AND STRATEGIES YOU ARE USING FALL WITHIN THIS FRAMEWORK. IF YOU HAVE SEVERAL TOOLS OR STRATEGIES WITHIN ONE QUADRANT, CONSIDER INCORPORATING SOME IN THE OTHER QUADRANTS.

Amber closed out her presentation with definitions and examples of, and relevant tools for implementing both place-based education and experiential education, including her work on the Oldman Watershed Council's Engaging Recreationalists project.

Place-based education – connecting place, self and community; using the landscape as your primary source of learning/education; having a conversation on the land; simple, nimble, easy and can be so much more effective than a brochure.

Experiential education – learning through doing; using your hands and working in communities in groups to do something on the landscape; understanding what the problems and the solutions are by connecting not only with the landscape but also to the community.

KEY LEARNING: PEOPLE'S BEHAVIOR IS OFTEN INFLUENCED BY WHETHER OR NOT THEY BELIEVE THEY CAN MAKE A DIFFERENCE. GIVE PEOPLE AN OPPORTUNITY TO ACTUALLY MAKE A DIFFERENCE, AND MAKE SURE YOU INCORPORATE A STRONG FEEDBACK LOOP INTO THE PROCESS.

KEY LEARNING: THERE IS VALUE IN STARTING WITH A SIMPLE CONVERSATION AND STARTING THAT CONVERSATION 'ON THE GROUND'. THIS CAN BE AS VALUABLE AS COMPLEX EDUCATION AND OUTREACH PROGRAMS. YOUR EFFORTS CAN BE SIMPLE AND STILL BE EFFECTIVE.

Amber's presentation is in [Appendix E](#). Learn more about Amber's work with the [Engaging Recreationalists Pilot](#).

PROGRAM PROFILES

During 15 minute rotating presentations, smaller groups of participants gained insight into and learned about four real-life examples of respected and effective education and outreach programs at work today.

MIISTAKIS INSTITUTE – WETLAND CITIZEN SCIENCE PROJECT

Danah Duke, Executive Director of Miistakis Institute, gave an overview of their Call of the Wetland project. They undertook this initiative to 1 – build understanding with Calgarians about the health and importance of urban wetlands, 2 – gather comprehensive data for species occupancy modeling in urban wetlands, and 3 – collect data to inform the City’s biodiversity strategy. With more than 4000 wetlands in the City, Miistakis initiated this program in partnership with City of Calgary and others because they recognize the importance of wetlands in an urban environment from a resiliency and a biodiversity perspective.

Launched in 2017, the three-year program was designed as a systematic citizen science initiative; a structured approach to engaging citizens in the regular and repeated collection and submission of amphibian data at 60 accessible wetlands in the Calgary area. Miistakis created an easy-to-use mobile app to facilitate citizen engagement and data collection. The app enables people to select a survey, note observations, take photos and record amphibian calls in specified wetlands. The app includes a visual and auditory ID key, enabling participants to picture the amphibians and hear their calls. Acoustic recorders have been set up in the target wetlands to correlate the data submitted via the app.

A local coordinator connects with people through the Zoo, naturalist groups, social networks and schools. The coordinator also holds training sessions in different quadrants of the city. In the program’s first year, 212 users signed up and data was submitted by 48 volunteers. They had an average of eight visits to each wetland they wanted to survey.

In addition to better understanding the health of Calgary’s wetlands through indicator species, an important spin-off of this program has been an elevated level of engagement by citizens who, besides collecting data, also reported on wetland condition e.g. garbage and mud bogging in the wetlands. With this, Miistakis has also provided a wetland condition report that the City is taking action on.

Learn more about [Call of the Wetland](#). Learn more about [Miistakis Institute](#).

COWS AND FISH – PROCESS AND COMMUNICATIONS WITH LANDOWNERS

Carolyn Ross, with Alberta Riparian Habitat Management Society, discussed the well-established Cows and Fish approach to engagement and learning, which they use to effectively resolve riparian land use issues and affect positive change on the landscape. Their circular process is a framework for action at a local level which consists of the following five elements:

1. Awareness – instilling ecological knowledge, awareness and understanding to build a common language between producers, resource managers, communities and the public about riparian area management.
2. Team Building – linking WPACs, professional groups and organizations, as well as individual landowners and others in a community to establish a strong base for program implementation is an important step in facilitating lasting change.

3. Tool Building – the actions that can be taken on the land; the tools that get implemented the most are practical, economically feasible and simple; landowners are also an important tool for sharing and explaining their experiences and their stories.
4. Community-based Action – communities and agricultural producers working at a local level to identify issues and make local decisions about how to address these issues; activities lead by a community-based process will have a more long-lasting impact.
5. Monitoring and Evaluation – includes monitoring and evaluating not only the scientific components (e.g. riparian health), but also the social side (understanding how and why communities and producers change management practices, effectiveness of awareness efforts).

To illustrate how this process has worked, Carolyn shared the example of their work with Red Deer County and the “Two Neighbours” project. The premise of this project is that if you can get people to share information, knowledge and their experiences with their neighbours, you can get more people involved in riparian management.

Learn more about [Cows and Fish](#).

OLDMAN WATERSHED COUNCIL (OWC) – ENGAGING RECREATIONALISTS

Amber Bennett (Upaya Consulting) and Sofie Forsström (Education Program Manager, OWC) explained how they developed and implemented the OWS’c Engaging Recreationalists program using a holistic approach to engagement. The aim of this comprehensive three-year pilot program was to engage backcountry off highway vehicle (OHV) users in restoring natural places, changing their behaviours to reduce negative impacts of OHV use and encouraging them to become better environmental stewards.

To build understanding and engagement they focused on conducting in-person conversations and in-depth interviews. They focused efforts on two streams of conversation; with OHV leaders in the community and with OHV users in the backcountry. Through this process they sought to identify the “three A’s”: anxiety (what they are threatened by; why they were anxious), demonstrate acknowledgement (acknowledging who they are, what the problem is and they did not feel threatened) and uncover aspirations (something has to happen so what are we going to do/what are we going to achieve).

Knowing that the ultimate goal is to have people change their behavior, but recognizing that behavior change can take a long time, both Amber and Sofie acknowledged that the purpose of this initial “soft” approach was not to push people to hard. The main focus was to start building relationships by first talking to people about their love of the backcountry, and get to a point in the relationship where you can start having a conversation about watershed education.

Learn more about [Oldman Watershed Council](#) and their [Engaging Recreationalists](#) project.

BC WILDLIFE FEDERATION – 20 YEARS OF WETLAND EDUCATION AND OUTREACH PROGRAMS

Jason Jobin, Wetlands Education Program Coordinator with BC Wildlife Federation, presented a concise overview of the Federation’s education programs. He began by stating their purpose (raise awareness about the importance of wetlands and to build capacity among a community of stewards), outlining their approach (change people’s perceptions by having people in wetlands enjoying them, learning from them; and providing people with the skills and knowledge to steward/protect wetlands), and identifying their target audiences (primarily youth and adults).

Their adult programs, which are their primary focus, consist of three core workshops: 1. Map Our Marshes – a one-day workshop focused on teaching adults how to map wetlands using GPS; 2. Wetland Keepers - a weekend workshop aimed at creating stewards of wetland in different communities; and 3. The Institute - a seven day intensive workshop that focuses primarily on restoration, and during which participants are able to design a wetland with experts; get to work with excavators; do everything from start to finish and get experience and confidence to do that in their own communities. The goal of the Institute is to give participants the skills and confidence they need to complete their wetland projects. Since 2010 they have had almost 200 participants with over 140 projects attend this workshop.

Jason concluded his presentation with an overview of why they believe their efforts have been successful over the years. Their methods of success have included:

- Tie into existing efforts (e.g. tap into existing hands-on work and research) and frameworks (e.g. use the wetland classification information in the Wetlands of BC land management handbook).
- Find the low-hanging fruit – look for the easy wins i.e. is there someone who needs just a little bit of funding or just a little bit of training that you can go and help them get over that hump.
- Identify and fill gaps – find and fill gaps in knowledge (e.g. GIS workshops) and identify gaps (e.g. do restoration work on private land).
- Be flexible – recognize that everyone is at different steps in the ‘literacy ladder’ and be prepared to adjust workshops and training based on individuals' needs.
- Stay relevant – keep up to date with legislative and technology changes.
- Partnerships – gives you a foot in the door in a community; funders look upon partnerships favorably.

Jason’s presentation is in [Appendix F](#). Learn more about BC Wildlife Federation’s [wetland education projects](#).

NETWORK BASICS

With her presentation, Christina Pickles, Wetland Education Network Coordinator, helped participants understand the basic characteristics of a network and how a network functions, including the benefits and challenges.

KEY LEARNING: NETWORKS ARE NOVEL AND FLEXIBLE COMBINATIONS OF PEOPLE, WHICH ARE MORE NIMBLE AND ADAPTABLE, AND WHICH FACILITATE A COMMON LANGUAGE AND APPROACH ON A GIVEN SUBJECT.

KEY LEARNING: NETWORKS ENABLE POOLING OF RESOURCES, IDEAS AND SKILLS, AND FACILITATE THE MOVEMENT AND DISSEMINATION OF INFORMATION QUICKLY AND WIDELY.

Christina explained the three phases of networks (connect – align – produce) and suggested these together represent a straightforward way to think about what the WEN could accomplish:

- **Connections:** Basic networks are a ‘connection network’. They are an opportunity for people to exchange information and learn from that exchange; pretty basic. But sharing that basic information is what builds trust in a group.
- **Alignment:** This tenet is about finding a shared set of ideas, goals and strategies or consistent messages. For wetland education this might consist of using common language about the benefits of wetlands (e.g. ecological, economic and social). Speaking with a consistent message can be very powerful and this elevates networks to the next level.
- **Production:** A network can also link people together for collective action. For example, networks can come together to speak about or influence policy, talk about innovative practices or develop programs, tools or resources.

KEY LEARNING: IT IS ESSENTIAL TO HAVE CONNECTION (TRUST) AND ALIGNED MESSAGES IN ORDER TO GET TO THE PRODUCTION PHASE.

In the context of the WEN, Christina then identified the roles of the WEN Coordinator, the Action Groups and the wider network and how they will support the WEN:

- WEN Coordinator will organize these types of workshops, set meetings for Action Groups (agendas, logistics); facilitate communications between Action Groups, and coordinate with Alberta NAWMP.
- Action Groups will be to speak to their sector needs, identify potential tools and delivery mechanisms for education and outreach products, create key messages and lead the design of products.
- The wider network will offer feedback to Action Groups, use the tools created by the Action Groups, consider ways to work together regionally, and provide input on what they need to be engaged. The wider network will also be encouraged to share examples of their programs and what has worked well for them.

KEY LEARNING: IF THIS NETWORK IS SOMETHING YOU ARE GOING TO ACTIVELY PARTICIPATE IN IT HAS TO FIT YOUR NEEDS.

Christina’s presentation is in [Appendix G](#).

PARTICIPANT CONTRIBUTIONS

BREAKOUT SESSION 1: FINDING COMMON GROUND

In the first breakout session, participants were asked to form groups comprised of individuals from different sectors. Facilitators recorded the conversation on flip chart paper and prompted the participants if needed. The two questions participants were asked to explore in this section included “Why wetlands?” and “Why Networks?” The purpose of this activity was to help people understand why others are there and how everyone views wetlands, with the intent of building a common understanding across sectors.

WHY WETLANDS?

There were many commonalities among individuals’ responses to this question. The most common responses centered on the important role wetlands play in and the value they provide to watershed function and health; water quality, flood attenuation; carbon storage; wildlife and biodiversity; nutrient cycling; pollutant storage; recreational function; aesthetic function. While not always understood or appreciated, they are an important feature on the landscape and an essential component of a healthy and functioning ecosystem. Participants’ verbatim responses are in [Appendix H](#).

WHY NETWORKS?

Individuals’ written comments and subsequent discussions in the breakout groups focused on a recognition that networks are important because “the whole is greater than the sum of its parts.” What this means is participants recognize that individually they have limited resources and capacity, but a network approach can help them pool, resources, be more efficient, collaborate, exchange ideas, share best practices and experiences, as well as motivate, support and learn from each other. “Don’t reinvent the wheel” was an important and common message in this discussion. Participants’ verbatim responses are in [Appendix I](#).

BREAKOUT SESSION 2: PROVIDING DIRECTION

When they arrived at the workshop, participants received one-pagers that summarized the work of their respective sector Action Groups in the 2017 WEN pilot. The summaries include information about key audiences, program ideas, key messages and delivery mechanisms for each Action Group. The pilot Action Group summaries are included in [Appendix J](#).

During the second breakout session, participants were grouped according to their sectors – agriculture, industry, municipalities, education and public. Within each group, participants were asked to provide feedback and direction to their respective sector Action Groups, and also offer suggestions on next steps, ensuring the Network moves forward in a way that is useful for participants to advance wetland education.

AGRICULTURE ACTION GROUP FEEDBACK

- 1. What questions do you have about the direction of the Action Group from the one pager you read?**
 - What are connections between wetland info (from WEN) to people in community well suited to deliver it in community?

2. **When you come back here for the 2019 workshop, what do you want to see from the Action Group?**
3. **When you come to this workshop in 2023, 5 years from now, what do you want to see from the Action Group?**
 - Have knowledge from WEN (add-on, not new idea) to have wetlands as module in Environmental Farm Plan (use Action Group member connections)
 - Basic wetland 101 course (in-person best); intro to wetlands; boots wet component; include win-win examples from landowners (approach Ag Service Boards for this):
 - need to engage youth (4H, Junior Forest Wardens, Fish & Game)
 - more willing participants to provide examples of stewardship – wetland ambassadors
 - Business plan approach (economics)
 - Have quarterly communication (info paragraphs and examples – wetland stewardship; tailored to group; what you can and can't do – from WEN)
4. **What else would you like to see the network take on?**
 - Figure out how to build relationships with Ag Fieldmen so they can deliver wetland programs or assess what landowner needs

INDUSTRY ACTION GROUP FEEDBACK

- What are the timelines and delivery methods for the Practitioner Certificate Program?
- Getting a good representation from industry; all industries; all Pro-10 designations.
- How do policy and legislation and regulation fit into the program?
- Engineers – should be Pro-10 group but some aren't; not necessarily environmental engineers
- Operators – not all of them are Pro-10
- To what groups are the practices being pitched to? Lots of groups are offering wetland education.
- Need a resource hub.
- Sifting through the program; choose programs.
- Gather from other offerings to satisfy requirements.
- Define industry.

MUNICIPAL ACTION GROUP FEEDBACK

1. **What questions do you have about the direction of the Action Group from the one pager you read?**
 - Guide went out – AAMDC, etc., Wetland Forum
 - One stop shop for municipalities; somewhat general could be updated, enlarged
 - Workshop very useful
 - Trigger action
 - Effective results today; results from forum as a basis to move ahead with the group
 - Identify needs and gaps
 - Could go to regional workshops
 - Have a field component
 - Involve more staff
 - Wetland 101 at county level
 - Councillors
 - Planning staff, etc.
 - Different levels of decision making

- Sort out – [decision making] can vary a lot in practice
 - Sort roles, responsibilities
 - Sort different areas – wetlands vs others (bigger picture)
 - Look at total landscape – not just wetlands
 - Consider all environmental effects (system)
- 2. When you come back here for the 2019 workshop, what do you want to see from the Action Group? What suggestions do you have for their direction?**
- Engaged people
 - Deliverables
 - Wide representation
 - A review of the guide
 - Regional workshop templates (preservation)
 - AAMDC, AUMA engaged
 - Train the trainer workshops
 - Directory for contact
- 3. When you come to this workshop in 2023, 5 years from now, what do you want to see from the Action Group?**
- Regional workshops – regularly updated with wetland policy changes
 - Better communication between municipalities with common borders
 - Mentor program for municipalities and developers, etc. (cross sector)
 - One stop shop for municipalities for resources
 - Succession planning framework for municipalities
- **What else would you like to see the network take on?** [NOTE: these bullets were listed under a “general” heading on the flip chart sheet]
 - Continuity when staff/government, etc. changes
 - Progress

PUBLIC AND EDUCATION ACTION GROUP FEEDBACK

1. What questions do you have about the direction of the Action Group from the one pager you read?

- Indigenous education – gap between knowledge and participation; not clear
- Lots of opportunities for info out – need more face to face opportunities
- Could use more ‘hands-on’ engagement activities vs. signs
- Need more childhood memory maker opportunities (childhood link; connect generations with family events); allows kids to connect with place and family connection/history
- How can we connect heart, hands, head
- Connection to civic side of education – so now we know, how do we take next step – the channel is moving to become active/activism
- Proximity to wetlands increase involvement/engagement (schools); ‘adopt a wetland’
- As part of curriculum connect to what’s happening in local wetland
- Post-secondary need hands-on opportunities to learn about restoration, etc.
- Emphasize a broader definition of “conserve” i.e. restore, repair, conserve improve

2. When you come back here for the 2019 workshop, what do you want to see from the Action Group? What suggestions do you have for their direction? (A year from now I’d like to see...)

- That I built connections/network
- Synergies between action groups increased
- Place-based meeting! In a wetland!
- Be able to have wetlands remain a part of the school curriculum
- Invite AB Education as a participant to the network

3. When you come to this workshop in 2023, 5 years from now, what do you want to see from the Action Group? (from now until 2023)

- Ongoing network
- Funding
- Kids who were exposed to nature in K and Gr1 will be receptive to more advanced ecological/nature education
- More involvement from First Nations – incorporate indigenous knowledge
- Project-based learning for more ages than grade 5
- The word “wetland” viewed as a benefit/positive
- Maintaining or decreasing wetland loss
- Shared perspectives of wetlands by industries
- Need for education programs for all age groups (gr 5 students, post-secondary, adults)
- Wetland education needs to evolve to be age appropriate (place, play, playful)

4. What else would you like to see the network take on?

- App (similar to Calgary)
- Scale up great regional/local projects
- A menu of organizations that we can draw on to share opportunities
- Share info of partners with each other and where they are

NEXT STEPS – WHERE TO FROM HERE

Post-workshop, the following action items will be implemented to help move the WEN forward. These include:

- Sending out a participant survey to gather feedback on this workshop.
- Sharing the list of workshop attendees.
- Populating the Action Groups with the intent of finalizing membership by mid-march and holding first meetings at the beginning of April.
- Seeking more input for the development of an online hub.
- Developing and distributing a newsletter that will be used to share ideas and resources, share what the Action Groups are accomplishing, etc.

KEY LEARNING: A NETWORK IS ABOUT MAKING CONNECTIONS AND BUILDING TRUST. PARTICIPANTS ARE ENCOURAGED TO MAKE A CONCERTED EFFORT TO CONNECT WITH SOMEONE FOLLOWING THE WORKSHOP.

The workshop wrapped up with participants sharing their final thoughts on:

What stood out during the workshop:

- The value of the trusted messenger approach.
- When educating people about something you have to think about their real life experiences. We can talk about ideals all we want but we have to think about what their lives are like and understand their perception of themselves.
- The examples of the successful programs (breakout sessions).

What could be done to improve the WEN workshop:

- The Industry Action Group breakout session discussion would have benefitted from having people from the previous action group there.
- More industry groups/people were needed at the workshop.

WORKSHOP PARTICIPANT SURVEY RESULTS

A total of 24 respondents participated in the post-workshop survey. In general, participants rated the core presentations and key participation elements of the workshops as very good. The individual case study presentations were also all ranked as very good to excellent. Respondents indicated it was a very good day, there was something for everyone, and reaffirmed the workshop was a great networking opportunity. General comments were positive and supportive of the workshop and WEN, and suggestions to improve the workshop centered on the need for more industry involvement and representation, enhanced facilitation of action group discussions and more time to hear about, discuss and dissect the case studies. More than 95% of respondents indicated they wish to receive updates on the network activities and projects; nearly 61% expressed interest in participating in an Action Group for their sector; and more than 56% are willing to provide resources and content to the Network. When asked how they see the WEN benefiting or supporting their sector, participants generally felt that it would be a good way to prevent duplication, share resources, ideas and messages across sectors, and remain connected to other individuals doing similar work around the province.

APPENDIX A: WORKSHOP PARTICIPANTS

First Name	Last Name	Position	Organization
Kim	Barkwell	Sustainable Agriculture Program Coordinator	Leduc and Wetaskiwin Counties
Clara	Bartha	Planning Advisor	Government of Alberta Municipal Services & Legislation Division
Marie	Bay Breiner	Outreach Coordinator	Athabasca Watershed Council
Susanna	Bruneau	Research & Stewardship Coordinator	Battle River Watershed Alliance
Jay	Byer	Assistant Ag Fieldman	County of Barrhead
Kevin	Cantelon	Environmental Education Coordinator	Environment and Parks
Lisa	Card	Conservation Coordinator	Highway 2 Conservation
Tricia	Coates	Investigator	Alberta Environment and Parks
Amanda	Cooper	EPO - Wetland Specialist	Alberta Environment and Parks
Alan	Corbett	Awareness Coordinator	AB Drainage Council
Kendra	Dawe	Priority Issues and Initiatives Advisor	Alberta Environment and Parks
Matt	Dow	Policy Analyst	AAMDC
Danah	Duke	Executive Director	Miistakis Institute
Jennifer	Edwards	Environmental Advisor	ATCO Pipelines & Liquids
Chris	Elder	ALUS Program Coordinator	County of Vermilion River
Mara	Erickson	Extension & Stewardship Coordinator	North Saskatchewan Watershed Alliance
Dean	Falkenberg	Executive Director	Alberta Society of Professional Biologists
Rosemarie	Ferjuc	Outreach and Communications Manager	Red Deer River Watershed Alliance
Kandra	Forbes	Education Outreach Coordinator	Milk River Watershed Council Canada
Silvie	Forest	Faculty	NAIT
Sofie	Forsstrom	Education Program Manager	Oldman Watershed Council
Alexandra	Frederickson	Outreach Coordinator	Land Stewardship Centre
Jacques	Gagnon	Resource Management	Premier Tech
Megan	Graham	Education & Outreach Coordinator	Mighty Peace Watershed Alliance
Natalie	Graveline	Educator	Inside Education
Laura	Griffin	Educational Interpreter	Ann & Sandy Cross Conservation Area
Colin	Hanusz	Program Manager	Lakeland Industry and Community Association
Trudy and Kirk	Harrold	Project Co-ordinator	Natural Connections
Thorsten	Hebben	Director, Surface Water Quality	Government of Alberta
Mac	Hickley	Projects Coordinator, Watershed Resiliency and Restoration Program	Alberta Environment and Parks
Janine	Higgins	Community Engagement Lead	Environment and Parks
Marnie	Hill	Field Land Use Coordinator	BXE
Kaylyn	Jackson	Watershed Coordinator	Lesser Slave Watershed Council

First Name	Last Name	Position	Organization
Jason	Jobin	Coordinator, Wetlands Education Program	BC Wildlife Federation
Paul	Jungnitsch	Greenhouse Gas Offsets Agrologist	Alberta Agriculture and Forestry
Emily	Kabotoff	Environmental Analyst	Strathcona County
Marissa	Koop	Senior Associate	BILD Alberta/Stantec
Cathy	MacKenzie	Head, Outreach Programs - Alberta	Ducks Unlimited Canada
Kylie	McLeod	Conservation Programs Specialist	Ducks Unlimited Canada
Don	Medcke	Assistant Agriculture Fieldman	Westlock County
Kyle	Meunier	Agricultural Fieldman	County of Barrhead
Billie	Milholland	Communication Manager	North Saskatchewan Watershed Alliance
Leanne	Mingo	Conservation programs specialist	Ducks Unlimited Canada
Raina	Mithrush	Communications Specialist	Ducks Unlimited Canada
Deepak	Muricken	Water Quality Modeller	Government of Alberta - Alberta Environment and Parks
Dave	Mussell	Community Engagement Lead	Alberta Environment and Parks
Nathalie	Olson	Education and Outreach Coordinator	Battle River Watershed Alliance
Meghan	Payne	executive Director	Lesser Slave Watershed Council
Shelagh	Pyper	Director, Education and Outreach	Fuse Consulting Ltd.
Erin	Ritchie	Education & Outreach Coordinator	Lakeland Industry and Community Association
Warren	Robb	Provincial Policy Specialist	Ducks Unlimited Canada
Carolyn	Ross	Riparian Specialist	Cows and Fish
Don	Shepert	Vice-chair	Alberta Pulse Growers
Jocelyn	Thrasher-Haug	Manager, Environmental Planning	Strathcona County
Jacolyn	Tigert	Agricultural Fieldman	Westlock County
Wanda	Watts	EPO-Wetland Specialist	Government of Alberta
Jay	White	President	Aquality Environmental Consulting Ltd
Matthew	Wilson	Provincial Wetlands Mitigation Specialist	Government of Alberta
Kate	Zeiler	School Programs Coordinator	Bow Habitat Station



Wetland Education Network

March 1, 2018 Leduc

Agenda

8:30AM	Arrival and coffee. Take a minute to add your name to the network map.
9:00AM	Welcome with Dave Mussell
9:15AM	Introduction to Wetland Education Network and Alberta NAWMP with Terra Simieritsch
9:45AM	Education and Outreach Techniques and Approaches with Amber Bennett
10:30AM	Break
10:45AM	Program Profiles <ul style="list-style-type: none"> • Miistakis – Wetland Citizen Science Project • Cows and Fish – Process and communications with landowners • Oldman Watershed Council – Engaging Recreationalists • BC Wildlife Federation – Profiling 20 years of wetland education and outreach programs
12:00PM	Lunch
1:00PM	Network Basics with Christina Pickles
1:20PM	Breakout groups. Why wetlands and why networks?
1:50PM	Break
2:00PM	Breakout groups. Feedback and direction to Action Groups
2:45PM	Wrap up
3:00PM	Departure

Thank you for attending this workshop. If you have any questions, comments or concerns, please connect with Christina Pickles, Interim Wetland Education Network Coordinator at 403-998-4782 or christina@abcee.org.

APPENDIX D: INTRODUCTION TO WEN AND ALBERTA NAWMP

A PRESENTATION BY TERRA SIMIERITSCH



March 1 2018
WEN Workshop
Terra Simieritsch, AB NAWMP Coordinator

What is NAWMP?

- International voluntary partnership among Canada, USA and Mexico to sustain abundant waterfowl and other wildlife populations through habitat conservation
- Since 1986
- Role: to connect and facilitate collaborative opportunities among agencies whose mandate includes wetlands
- Regional Groups (Prairies – Prairie Habitat Joint Venture)
- Provincial Groups

NAWMP in Alberta

- **Who?**
 - Alberta Agriculture and Forestry
 - Alberta Environment and Parks
 - Environment and Climate Change Canada
 - Ducks Unlimited Canada
 - Nature Conservancy of Canada
- All partners have some degree of mandate for wetlands and the collaboration has transformed how wetland conservation is being achieved in Alberta.
- Working together has made our work more effective and engaging.



NAWMP in Alberta

- **What?**
 - Conservation projects (retain & restore wetlands and uplands)
 - Securement total - Alberta (1986 to 2017) = 2.8M acres
 - FY17 total – Alberta = 10,586 acres, \$13M (DUC, NCC)
- **Extension**
 - Winter wheat and forage seed incentive programs
- **Policy support**
 - Provincial and Municipal Wetland Policies
 - Land Use Framework
 - Climate Change Strategy
 - Ecosystem Services Initiative



NAWMP in Alberta

- **What?**
 - Science (directed studies)
 - Waterfowl
 - Waterbirds
 - Shorebirds
 - Migratory Landbirds
 - Pollinators and wetlands
 - Communication
 - Annual Wetland Forum
 - Annual Progress Reviews
 - Hosted Working Groups (Municipal, Agricultural)
 - Stewardship (**Wetland Education & Outreach**)
 - Tours
 - Executive Breakfast Meetings



Collaboration Towards Achieving Common Goals



Wetland Education Network



Why a Wetland Education Network?

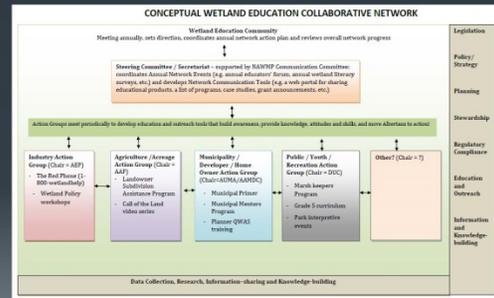
- Wetland education and outreach are important non-regulatory means of increasing wetland awareness, knowledge and stewardship
- Excellent wetland education initiatives were disconnected and competing for resources
- Stakeholders confused as to where to access accurate wetland education materials
- Need for wetland education materials for specific stakeholder groups that 'speak their language' are communicated in a way that makes sense to them
- A lot of duplication of efforts and information

AB NAWMP's Role

- Identified importance of wetland education and opportunity for collaboration to improve status quo
- Neutral entity to get the network started
- Facilitator / Coordinator
- Add capacity
- Help identify opportunities and path forward
- Provide seed funding for the network to get started



WEN Conceptual Framework



Literacy Ladder

Ladder Steps	Outcome
★ Action	I am actively managing wetlands
Skills	I have the skills to work around wetlands
Attitudes	I know how to comply with wetland legislation
Knowledge	I understand how policy, legislation and planning are used to manage wetlands
→ Awareness	I am aware that water and wetlands belong to the crown



- Action Groups populated
- 2 meetings each
- Find out wetland education and outreach needs for each Action Group
- Stayed within 'basic wetland 101' focus

2016/2017 Pilot



- Established working group used
- Awareness good – knowledge needed
- Key audiences –CAOs and planning and development staff
- Created a municipal guide to wetlands
- Discussed best means of delivery to reach audiences
- Webinar series?

Municipal Action Group

- Awareness up to advanced knowledge
- Current materials were mostly created internally
- Focus on Pro-10 due to wetland assessment potential
- Wanted a basic program that could tailored to specific industries
- Designed program modules
- "Know enough to know when to ask"
- Credit program

Industry Action Group

- Many established programs and tools
- First Nations involvement and learning
- Sub-groups each had target audience
- Locally designed curriculum additions
- Examples of wetland challenges and actions to mediate
- Personal connections
- Measuring success through proven methodologies

Public and Education Action Group

- AB NAWMP Working Group
- Self-identified that wetland education one of top 3 priorities
- Wetland awareness quite low overall
- Commodity Groups as key audience
- Relationships
- Variety of means to raise awareness
- Incentive programs, students, sitting on commodity groups, etc.

Agriculture Working Group

- Interest in continuing the WEN
- GoA Participation is key
- Don't reinvent the wheel
- Tailor information to specific audiences
- Ensure best communication channels
- 'Get your boots wet' component

Common Threads



2017 WEN Workshop

What we heard:

- Resounding support for the WEN concept
- GoA participation is key
- Coordinator needs to ensure information shared across sector groups (cross-pollination)
- Clear process for Action Group members (ToR etc.)
- Diverse membership
- Measure performance and success over time
- "All of us are smarter than any of us"

- Hire a Coordinator ✓
- Populate Action Groups
- Form a hub for WEN information and resources
- Choose how to engage network members
- Incorporate what we've heard today



Path Forward

Thank you!



t_simieritsch@ducks.ca

A PRESENTATION BY AMBER BENNETT



Excellent Environmental Education + Outreach
Wetland Education Network
February 27, 2018



Overview

- Education, outreach or engagement?
- Relational engagement
- Holistic framework
- Spotlight two approaches
- Questions & discussion

Heads, hearts & hands

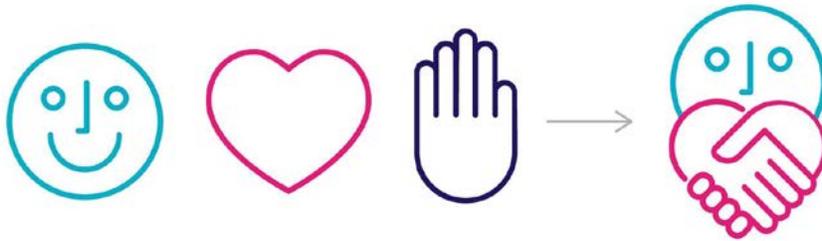
20 minutes

**Education or
Engagement
or Outreach**

“Engagement is a personal state of connection concurrently comprising of cognitive, affective and behavioural aspects.”

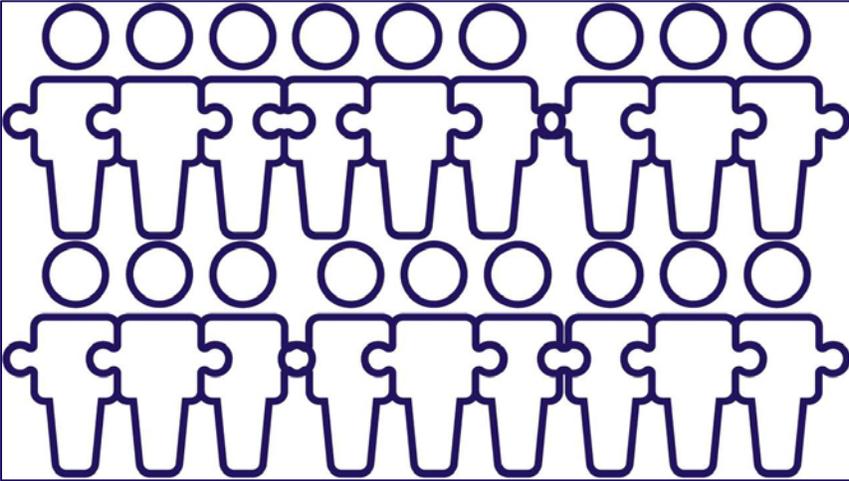
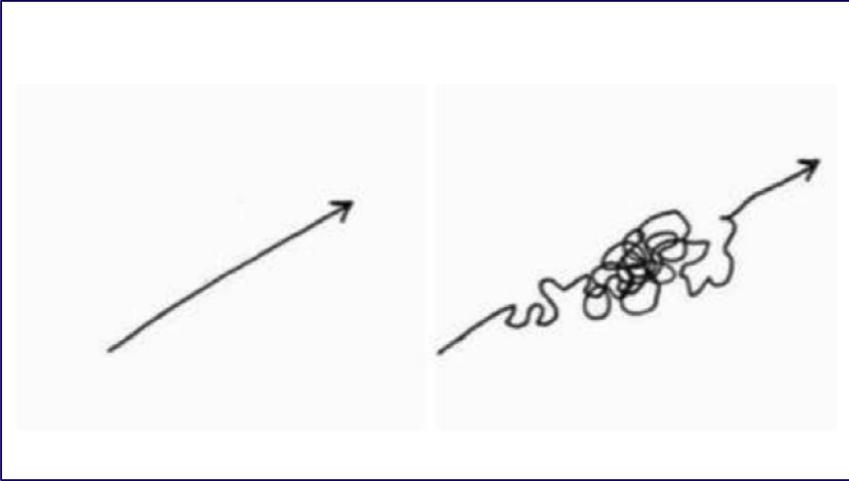
-Lorenzoni, Nicholson-Cole, & Whitmarsh, 2007

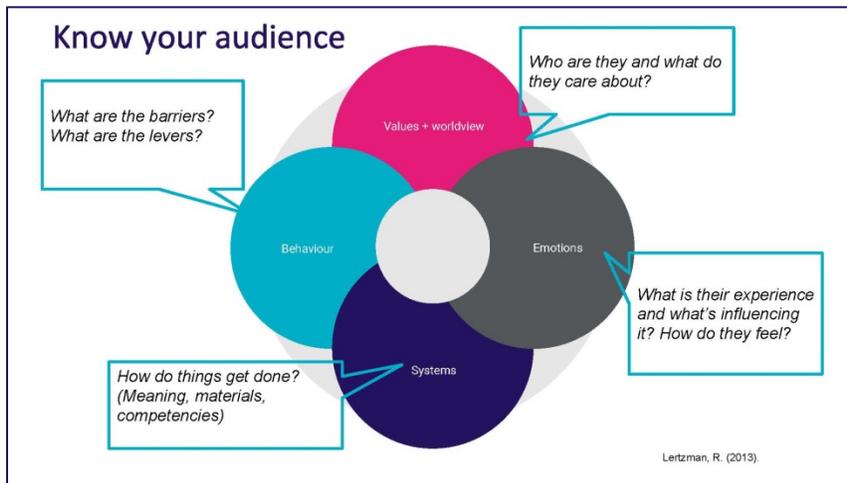
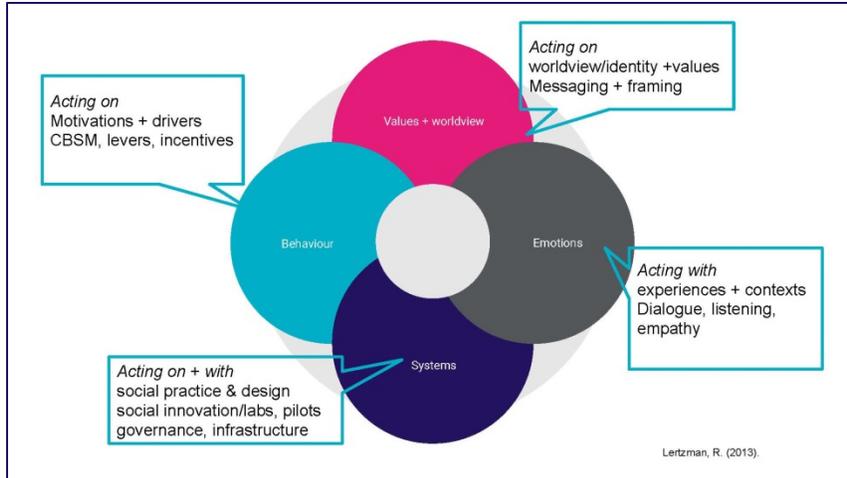
Holistic Engagement



If they knew better, they would act better.







"In the end we will conserve only what we love; we will love only what we understand; and we will understand only what we are taught"

~Baba Dioum (1968)

From Research to Practice

Place-based education

Experiential education

Connecting place, self and community

Learning through doing



Place-based education

Connecting place, self and community



Use their local landscape as primary source of learning by bringing people to wetland areas either directly or digitally

Kindles a sense of wonder, love for local, wild, acknowledging their experience and expertise

Awareness of issues and solutions, and their connection to it, ownership of the solution

Conversation, pop-ups, signage, walks + tours, webcams, incorporated with experiential



Experiential Education



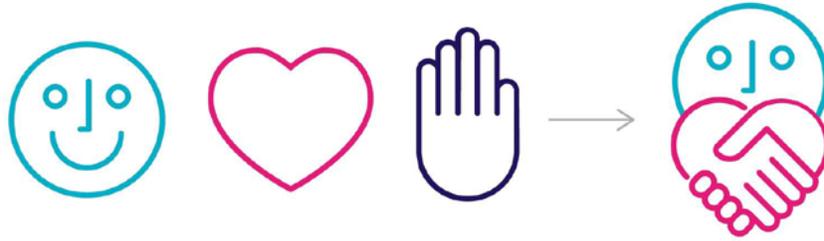
Learning through doing, moving people onto the landscape and working together

Understanding of local landscape and problems + solutions, connection to the landscape and the community, ownership of the solution, skills, identity (see themselves different, others), active hope, love, empathy >> dialogue + conversation, nimble

Restoration + stewardship, walks + tours, interpretive signage, citizen science



Moving beyond bridge, brochures and behaviour
towards holistic engagement



Questions + discussion

10 minutes

knit strategies

APPENDIX F: BC WILDLIFE FEDERATION EDUCATION AND OUTREACH PROGRAMS

A PRESENTATION BY JASON JOBIN

Advancing Wetland Education in Alberta: Best Practices to Lead Change



Jason Jobin
Wetlands Education Program Coordinator
BC Wildlife Federation

- Program overview
- Our successes
- Takeaway messages
- Time permitting: Questions




Neil Fletcher,
Manager



Jason Jobin,
Coordinator



Rotating,
Assistants/Interns



Purpose: To raise awareness about the importance of wetlands and build capacity among a community of stewards









3 Audiences

- General public and youth
- The Engaged Public
- Practitioners/Professionals

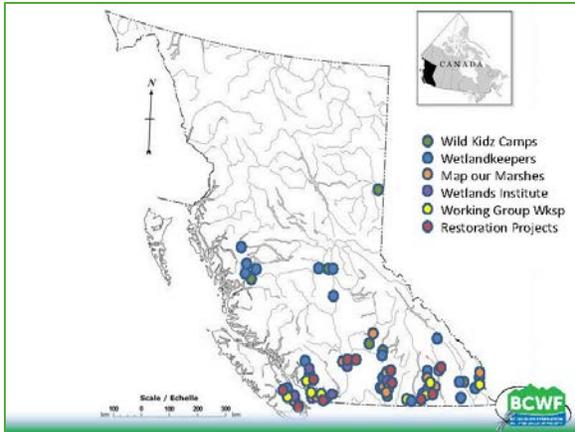


W.E.P. Workshops

- Map our Marshes
- Wetlandkeepers
- Wetlands Institute
- Restoration Workshops
- Working Group Sessions
- Special Workshops (e.g. Q-GIS)

Wetlands Institute

Nearly 200 participants with over 140 projects (since 2010)

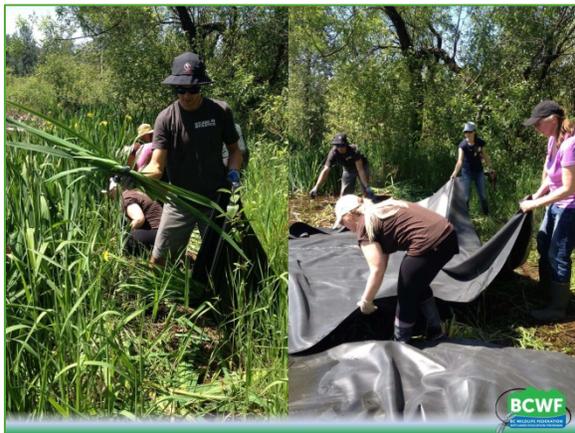


All for free



- ### Methods of Success
- Tie into existing efforts and frameworks
 - Find the low-hanging fruit
 - Identify and fill gaps
 - Be flexible
 - Stay relevant
 - Partnerships, partnerships, partnerships
- 

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- 



- ### Methods of Success
- Tie into existing efforts and frameworks
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- 

Methods of Success

- Tie into existing efforts and frameworks
- Find the low-hanging fruit
- **Identify and fill gaps**
- Be flexible
- Stay relevant
- Partnerships, partnerships, partnerships



Methods of Success

- Tie into existing efforts and frameworks
- Find the low-hanging fruit
- Identify and fill gaps
- **Be flexible**
- Stay relevant
- Partnerships, partnerships, partnerships



Methods of Success

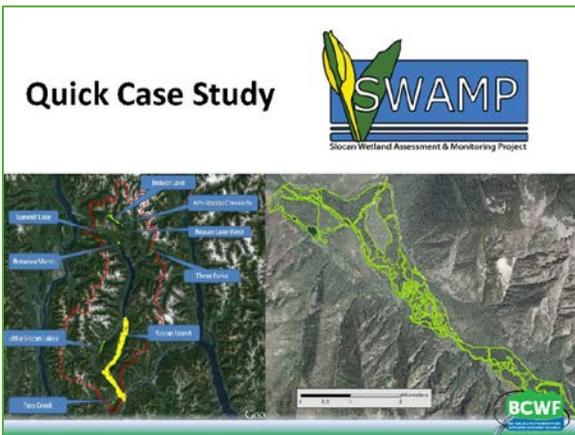
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- **Stay relevant**
- Partnerships, partnerships, partnerships





Methods of Success

- Tie into existing efforts and frameworks
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Methods of Success

- Tie into existing efforts and frameworks
- Find the low-hanging fruit
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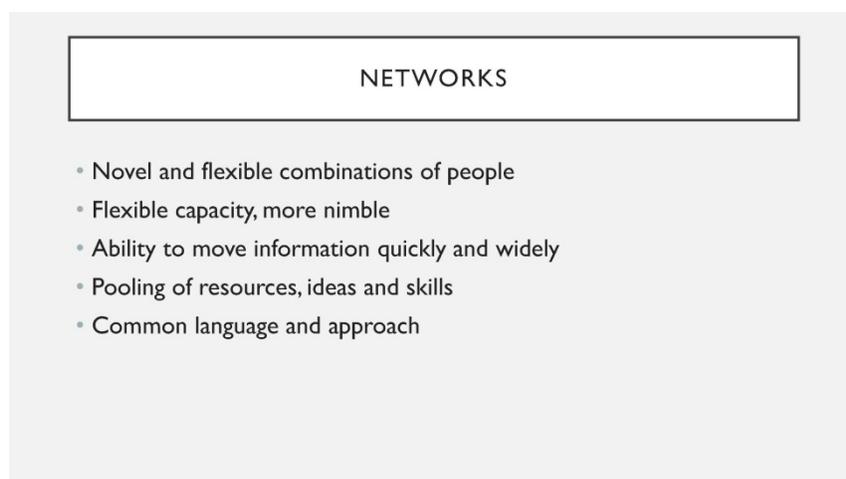
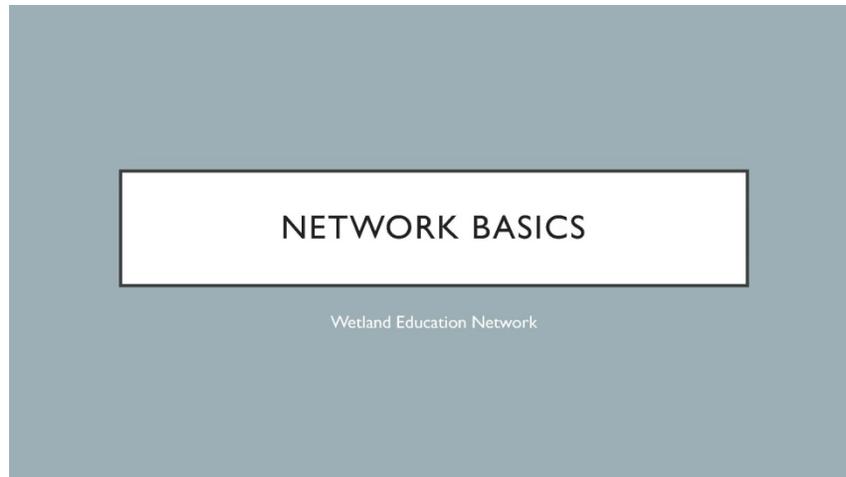
Thank you

Jason Jobin
 Wetlands Education Program Coordinator
 BC Wildlife Federation
 604-882-9988 ext 225
 jason.jobin@bcwf.bc.ca



APPENDIX G: NETWORK BASICS

A PRESENTATION BY CHRISTINA PICKLES



CONNECT → ALIGN → PRODUCE

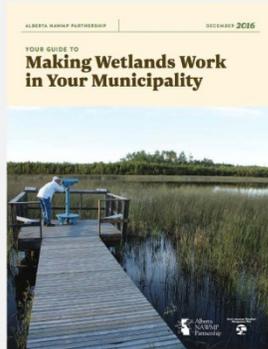
CONNECT → ALIGN → PRODUCE



CONNECT → **ALIGN** → PRODUCE



CONNECT → ALIGN → PRODUCE



ROLE - COORDINATOR

- Set meetings for the Action Groups, agenda, logistics
- Communications between Action Groups
- Support Action Groups to act on their ideas
- Connect members with each other
- Support ideas and suggestions from the larger network
- Coordinate with AB NAWMP

ROLE – ACTION GROUPS

- Chosen based on their ability to speak to their sector's needs.
- Identify tools and delivery mechanisms.
- Design products or hire a consultant to design products to meet the identified needs.
- The worker bees.

ROLE – WIDER NETWORK

- Offer feedback to the Action Groups
- Use the tools created by the Action Groups
- Consider other ways to work together – regionally?

AFTERNOON

Round 1 – Mixed sector groups

- Why Wetlands?
- Why Network?

Round 2 – Sector groups

- Feedback on direction of the Action Group from 2017

APPENDIX H: WHY WETLANDS? PARTICIPANT RESPONSES

- 80% wildlife depend on them
- Wild and beautiful
- Rare species
- Beavers
- Water quality, filtering
- Wildlife habitat
- Carbon sequestration
- Fun outdoor experiences (mudpuppies, bird watching, frog catching)
- Central AB doesn't have the freshwater lakes of ON. This is all we have
- My job
- Father-in-marriage wetland conservation on land. On "our land"
- Biodiversity
- Recreation (hunting, fishing, outdoors)
- Adding quality of fishing
- Flood/drought mitigation
- Ecosystem services (carbon storage, cultural/spiritual)
- Habitat – critical species
- Big chunk of AB
- High use/habitat wildlife
- Appreciation of nature/species (aesthetic value)
- Beavers! Amphibians!
- Childhood memories
- Love lakes
- Wildcrafting/specialized herbs/plants, medicinal plants/value
- Land stewards – family value (personal responsibility)
- Raised to value/appreciate nature
- Inspiration, happy, spiritual effect
- Economics – cost of mitigation/replacement (replacement ratios)
- Water quality
- Mud! Love it! Natural progression from being a kid (childhood connection)
- Bird migration
- Want to see wetlands conserved
- Advocate for value of wetlands
- Green infrastructure – the cove
- Clean water, clean air, clean life
- Refreshing and resilient
- Groundwater recharge
- Economic value – wetland supporting uplands; harvest (peat)
- Education value – good gateway to pique interest of kids in nature
- "epic education stories"
- Pond dip – "alien creatures" – early education
- Food source

- Trap lines
- Carbon storage
- Source of traditional lessons and story telling
- Vulnerable aspect of environment – increase protection
- Fill human physical need (heat houses)
- Filter water; store carbon; recreation for water fowlers; biodiversity
- Biodiversity/wildlife habitat; flood; drought; ecosystem services, mental health – time in nature!
Recreation – photography, canoeing, walking; water filtration/quality
- Hydrologically important!! Biodiversity that rivals the Amazon; Critically important for many species at risk, fish, amphibians; EG&S; Personally I have an affinity for wetlands for all of the above reasons, but I also appreciate wetlands as:
 - A valuable resource to illustrate a variety of ecosystem-based perspectives
 - Places of great natural beauty; places to recreate
 - I'm a wetland ecologist – I love wetlands!
 - Amenities for communities
- Drought and flood mitigation; land use management sustainability indicators; recreation; rest and relaxation; wetland and riparian areas are connected; biodiversity
- Provide important role in watershed scale function and health; water quality, flood attenuation; carbon storage; biodiversity; nutrient cycling; pollutant storage; recreational function; aesthetic function...and while not always understood and valued, are an important component of a healthy & functioning ecosystem
- Live in them; they are growing; how do we manage them; what are my obligations to wetlands; I do enjoy them; the plant and animal diversification is great source of enjoyment; water quality
- Personal – beautiful space; recreational use; fascinating how diverse wetland can be – what a healthy wetland can be; so underrated; Ecological/economical – diverse role in flood mitigation and surface water/water table interface; biodiversity; habitat for amphibians and water flow; integral role in Alberta (and beyond) landscape
- Diverse habitat – habitat for diverse species; groundwater recharge; lessen effects of drought; reduce flood event severity; beautify landscape; slow down erosion; hold runoff; increase opportunity for wildlife viewing; hunting and fishing locally and regionally; natural spaces help keep communities healthy; keeps water clean; preserves connectivity of drainage areas; part of regional aesthetics; pest control
- Role in hydrologic/climatic cycles i.e. mitigation re. flooding; reservoir for moisture; source of biodiversity flora and fauna (including pollinators); role that they play in agriculture; environmental services i.e. water quality
- Capacity to enhance water quality; storage for flood/drought mitigation; habitat for wide range of biodiversity; aesthetics and personal wellness; learning opportunities
- Water supply
- Water quality
- Flood mitigation
- Biodiversity
- Recreation – non motorized
- We live in them
- Stewardship
- Hydrological systems
- Health/mental value

- Wetlands = health; wetlands are a key function of healthy ecosystems; clean water is dependent on clean wetlands; value is to everyone
- Wetlands are highly impacted, largely ignored areas of ecological importance; aesthetically they are interesting and attractive natural areas; hubs for wildlife
- Personal: we have a pond behind our house and spend summers looking at bugs, fish and 35 species of waterfowl and songbirds – my kids love “pond studies”; Work: legislated wetland requirements for projects and compliance; good environmental stewardship; good inter-governmental relationships with industry
- Habitat for native species; provide hunting opportunities/recreation; storage of flood waters in high times and a water source in low times; groundwater recharge important for drinking water sources; pretty-attractive
- Flood and drought protection; habitat for over 80% of Alberta’s species; beautiful natural spaces; help to naturally filter water; huge variety in what type of wetland; recreation; connect everyone (wetlands are everywhere); natural capital
- They are habitat for many wildlife species; they are beautiful space on the landscape; they perform important ecological functions – filter pollutants, hold water, improve water quality; biodiversity
- Personal value childhood (and adult) memories of visiting wetlands, watching wildlife with family and friends (formative experience, nostalgia); also social value – recreation; Important habitat for plants, wildlife, etc.; Ecosystem services – nature’s “spa” filters, hold water on semi-arid landscape, mitigate flood/drought
- Biodiversity contribution (e.g. to our farm environment); opportunities for restoration activities/participation; habitat for birds, animals, etc.; water storage in the landscape/recharge groundwater; connection with children, older Albertans (childhood memories, experiences)
- Ecological factors – SAR, biodiversity, water quality, flood mitigation, etc.; aesthetic and recreation – I enjoy getting to spend time in wetland, bird watching, walking and hiking etc.; imperative to protect natural spaces; educational tools – students, families, connections
- Beauty; filters water; wildlife habitat; education tool; water sponge; recreation; calm water; economic value – free water control
- Wetlands hold our bank of biodiversity – able to mitigate society’s impacts; acts as climate mitigation (flood/drought); act as a filter for the anthropogenic effects of industry on water and air
- Wetlands naturally store water, hence a means of mitigating flood; aquifer recharge
- Habitat
- Mitigating floods
- Recreation
- Filters
- Aesthetic
- Engage with environment
- Hands on education tool
- Connect with children
- Links all Albertans
- Ecosystem services
- Spiritual, medicinal, traditional/aboriginal values
- Environmental lead in to non env audiences
- Groundwater recharge

- Water source
- Personal identity connection
- Species at risk/biodiversity
- Societal/bio indicator (ecohealth)
- I care about wetlands because they were where I fell in love with nature. They are a source of mystery and beauty.
- Working to protect wetlands was an opportunity to advocate for the 'underdog' of a really important, misunderstood ecological system.
- To have an ecosystem functional that will be able to accumulate carbon
- As a child I was given opportunities to learn about and love the outdoors. As we know to start change you need to have had opportunities to be around nature and the outdoors. Wetlands are an excellent place for place-based learning and experiential learning.
- Grew up with the impression that wetlands were wastelands. Have recently learned that they are not. It is part of my job to share that newly acquired perspective/appreciation with the agricultural community and I need help to do so.
- From a personal interest standpoint, I appreciate their role in wildlife habitat and biodiversity maintenance. More recently (and professionally) I am interested in exploring their benefits to those I work with in the ag sector.
- High biodiversity areas; in many developed places it is the last undisturbed habitat for wildlife refuge
- They have an intrinsic value as well as an extrinsic value. Personally I think they are beautiful and support a host of species. I live the biodiversity. One stop to see so much! Professionally, they have historically been overlooked or deemed "useless". Let's fix this misunderstanding. So much value!
- Wetlands are important to me for filtering the water within watersheds and maintaining a high level of water quality for drinking, aquatic ecosystems and recreation within Alberta's lakes.
- Wetlands provide amazing recreational opportunities and support a great diversity of iconic species in Canada.
- Source of mystery and beauty
- Need for wetland education
- Why not? Intrinsic
- Ecology – filtration, H2O availability – remediate human impact
- Viewing trend of watershed degradation and wetland loss in conjunction
- Value – landowners, ag producers
- Make sure we don't take them for granted and address misconceptions
- Personal experience – outdoors/wetlands
- Carbon storage
- Desire to promote play-based learning for children
- Importance of diverse types of wetlands – teach in a meaningful way
- Recreation – fishing, boating and ensuring the quality of environments gets maintained or improved
- Pass on knowledge learned that wetlands are not wastelands and tools (farm background)

APPENDIX I: WHY NETWORKS? PARTICIPANT RESPONSES

- New idea generation; learning best practices
- Freshen up boring gr 5 programs
- Power of association
- It is a support group – keeps cynicism at bay!
- Shared experience/values
- Policy to life – support and conservation on ground vs. a document
- Learn about what others have done
- Build on successes; avoid duplicating
- Keep programs fresh, validate
- Networking, nurturing relationships
- Learn/identify gaps or unmet needs
- Look outside of our own bubbles
- Align messaging with other groups
- Project collaboration
- Consider points/info from other perspectives
- Power/ability for associations – empowerment, strength in numbers (not alone)
- Keep wetlands/water a priority in land use planning and development
- Make my job easier; more effective; less duplication of work; more literate Albertans; less wetland loss; good connections (socially and professionally)
- Knowledge transfer; learn to speak the language(s) of other stakeholders; understand other contexts/interests
- To share intergenerational info; to share TEK; to create synergies; good to know you're not alone; different perspectives
- Knowledge exchange
- Bring knowledge and perspective; gain knowledge and perspective; incite action! Reduce redundancy; work load – divide and conquer
- Broaden our horizons; benefit from other knowledge; connecting with other thought and processes/experiences
- To share ideas, experiences, knowledge, values that we may better formulate policy and action
- Collaboration
- Sharing knowledge
- Seeing different perspectives
- I am interested in increasing the competence of wetland practitioners from the perspective of a regulator; leverage the group intellectual/experience; allow for succession of programs/initiatives
- Educational tools (youth, adults); how to engage with municipal, industry, First Nations, public; future programs/ workshop to bring to my area; new to my job; don't reinvent the wheel; learn from others' failures; pooling resources; collaboration
- Work towards a common goal; don't reinvent the wheel; pool resources (no pun intended); meet other people with similar goals and interests; make professional contacts
- Exchange of ideas, resources/pooling; connection to other, big picture awareness, inspiration! Opportunity to learn from other to find new words to describe experiences and impressions (common language); to develop new action plans

- Individually have limited resources and capacity – pool, collaborate, support each other; “the whole is greater than the sum of its parts”; share best practices, don’t reinvent the wetland education program and lessons learned; keep motivated and accountable
- Common language/message; shared resources; connection with peers and other sectors; support
- Avoid duplication of work; more voices/sectors = greater reach/impact; gain insight from others experiences; learn tools to take back to my WPAC; reaffirm the importance of goals/work; connect with partner organizations; insure you don’t miss the larger picture
- 2 minds are better than 1; I need information about how to best communicate with other industries/areas about wetlands; I want to better understand how people use wetlands and how other people view them; be part of a solution to valuing wetlands and conserving them for the future
- Good industry best practices; learning opportunities to develop in-house wetland resources; determine what resources are out there and how to access and provide to my group
- Collaborative effort to maximize impacts with min effort (don’t reinvent the wheel); exchange ideas; make connections with new people
- Don’t need to reinvent the wheel; give and take ideas/challenges/success; unified messaging; I like to meet new people – like-minded people! Reaffirming my work
- Avoid/don’t reinvent the wheel; pooling resources (collaboration)
- Common language/ message developed
- Exchange ideas
- Share failures
- Whole greater than sum of parts
- See the big picture
- Increases efficiency
- Succession planning
- Relationships
- Tackling difficult problems
- Best practices
- Inspiration
- Reaffirming importance of work/overall goals
- Important – follow through; plan of execution; participation; look for low hanging fruit (help others, tangible accomplishments)
- Celebrate accomplishments – see positives
- Break silos
- Understand the varying needs and gaps; move forward wetlands education in a coordinated way; learn what programs are working and ongoing
- My goal from coming to this session was to make connections with people and organizations with similar goals to mine. I am looking to partner on a wetland restoration in the Beaver River Watershed. My projects that have been a partnership with other organizations have been very successful.
- Learn from each other – don’t reinvent the wheel; jumpstart/kindle ideas; promote initiatives to grow the sphere of influence
- Refer non-compliant stakeholders to information and resources re. importance of wetlands/programs; provide incentive type programs to stakeholders to proactively protect wetlands and riparian areas.
- Maintain connections with my “niche” as well as the other sectors; avoid reinventing the wheel; find the “trusted messenger”

- The opportunity to network itself! Relationships; learn from others; don't reinvent the wheel; have input; use resources/contacts/ideas to communicate with producers.
- Share the experience of the industry regarding restoration project "positive" prospective
- Important to know what other organizations are doing locally and larger; using others learning to help my audience use the literacy ladder
- Resource and knowledge sharing; unique ideas; different perspectives; in-kind support; cost sharing; sharing my knowledge; sharing efforts connecting for future projects; source of inspiration
- I am involved in wetland education because I see a great need for it across all sectors, ages and walks of life.
- Learning from each other and about other programs
- Networking opportunities
- Connecting with people in my niche but in other stakeholder groups; gaining different perspectives
- Learning shared values among stakeholder groups
- Partnerships (looking for; found them today)
- Share knowledge and positive success stories and collaborations and research that are working well

APPENDIX J: PILOT ACTION GROUP SUMMARIES

AGRICULTURAL ACTION GROUP

Agriculture Literacy Ladder

Ladder Steps	Outcome
Action	I am stewarding wetlands on my property.
Skills	I know how to conserve wetlands and understand relevant legislation and best management practices.
Attitudes	Wetlands are an important part of my operation.
Knowledge	Wetlands provide many goods and services that benefit agriculture.
Awareness	I have wetlands on my property.

Current Situation

Overall very low awareness and knowledge of wetlands in the agricultural sector.

Audiences

Commodity Groups were identified as the PRIORITY group to work with. Other groups included: producers and landowners, agricultural fieldmen, agricultural service boards, agricultural consultants and agricultural colleges.

Two Categories of Wetland Education in the Agricultural Sector

1. Wetland Policy Education. What do I have to do?
2. Basic Wetland Education. What do I get to do? Managing wetlands on my property in a way that they become assets instead of wasteland.

Product and Tools Ideas

- Wetlands as a distinct module in the Environmental Farm Program
- Prepared materials to send out to commodity groups (assembled from existing materials but tailored to specific commodities)
- Full balanced case presentations – full cost and benefit analysis of having wetlands on agricultural properties.
- Case studies of wetland challenges to provide agriculture college students
- Award programs for shining examples of wetland retention and restoration

Program Delivery

- Incentive Programs
- Relationship Building
- Commodity Group Communications
- Presentations and Information Booths
- Involvement of Agricultural Colleges

Key Messages

- What do I have to do and what do I get to do?
- How are wetlands relevant to my operation?
- What is the whole picture when it comes to wetlands on my property?

INDUSTRY ACTION GROUP

Industry Literacy Ladder

Ladder Steps	Outcome
Action	I am actively managing wetlands
Skills	I have the skills to work around wetlands
Attitudes	I know how to comply with wetland legislation
Knowledge	I understand how policy, legislation and planning are used to manager wetlands
Awareness	I am aware that water and wetlands belong to the crown

Current Situation

Individuals at various stages of the literacy ladder. They focused their discussion on the knowledge and awareness stages.

Audiences

Pro-10 group was identified as the priority group. The Pro-10s are a group of 10 professional and technical designation associations that have been selected by the GoA to possess the ability of authenticating wetland regulatory documents. Within the Pro-10 group, the Industry Action Group create three tiers to focus their education and outreach efforts:

- Tier 1: Individuals that work in a Pro-10 field but have little or no knowledge of wetlands
- Tier 2: Individuals who have basic wetland knowledge but would like to potentially work towards becoming a Qualified Wetland Science Practitioner.
- Tier 3: Individuals that have extensive wetland knowledge and experience and are eligible to be a Qualified Wetland Science Practitioner.

Product and Tools Ideas

The group identified the Pro-10 groups and the GoA as the best groups to education the Tier 2 and 3 individuals but saw an opportunity to bridge knowledge gaps with the Tier 1 individuals.

The Industry Action Group outlined a Tier 1 course that would cover the important concepts and include: wetland identification, periodicity of wetlands, wetland functions, differentiation between peatlands and mineral wetlands, relevant policy, planning regulations and management and why wetlands are important.

Program Delivery

- Program with a defined path to becoming a Qualified Wetland Science Practitioner. A system with certificates of completion for specific course modules.
- Tailor the content to specific industries.
- In person is important so a field component can be incorporated.
- Webinars were also identified to increase accessibility and reach.

Key Messages

- This is how wetlands are relevant to you.
- Wetlands effect how you work on the landscape.

MUNICIPAL ACTION GROUP

Municipal Literacy Ladder

Ladder Steps	Outcome
Action	Actively managing wetlands within the municipality
Skills	Understand how provincial and municipal policy, legislation and planning relate to wetlands
Attitudes	Wetlands are an important component of municipalities who can play an important role in their management
Knowledge	Wetland provide many goods and services that benefit municipalities
Awareness	There are wetlands within my municipality

Current Situation

General awareness in the municipal sector but there are still some gaps.

Audiences

CAOs and Planning and Development Staff were identified as the PRIORITY group to work with. Other groups included: administrative staff, operations staff, elected officials, individuals with professional designations, provincial agricultural boards, municipal associations, agricultural fieldmen, public works, land development industry and private developers.

Product and Tools Ideas

Previous to the Wetland Education Network pilot, the Wetland Municipal Engagement Working Group created the document entitled Your Guide to Making Wetlands Work in Your Municipality (AB NAWMP 2017). The document is made up of 10 modules to support municipalities in learning about and managing wetlands.

In addition to this guide, the group identified case studies and testimonials as effective tools for educating municipalities.

Program Delivery

- Self-directed education products through a web based platform
- Webinars
- Use visuals and checklists
- Field component
- Consider a Municipal Wetland Community of Practice to share learning and experiences.

Key Messages

- Wetlands are a shared responsibility and we can help you.
- To make good decisions, you need to get your feet wet.

PUBLIC AND EDUCATION ACTION GROUP

Public and Education Literacy Ladder

Ladder Steps	Outcome
Action	I am actively involved in conserving wetlands
Skills	I know what I can do to conserve wetlands
Attitudes	We need to conserve wetlands
Knowledge	Wetlands have value and are important
Awareness	Wetlands are cool!

Current Situation

It was challenging for this group to choose one level that characterized the people they work with as they engage with people at all levels of the literacy ladder.

Audiences

Given the diversity present in this group, they identified several audiences and key groups within these audiences.

- K-12 Education. Teachers, environmental educators, specialists councils.
- Post---secondary education. Divided into polytechnics (advisory committee for key topics) and universities (teachers delivering large introductory classes in fields where the graduates could potentially be interacting with wetlands).
- Public Education. Recreationalists, recreation groups, naturalist groups.
- Indigenous Education. Employees of the Indigenous Knowledge Wisdom Centre, Elders and Hunting and Trapping Associations, Educators in Indigenous schools.

Product and Tools Ideas

- K-12 Education – The curriculum is being changed in the next few years. This will open up new opportunities for wetland education and outreach. A directory of wetland learning and activities for teachers that were directly related to curriculum concepts could be a useful tool to extent wetland education beyond the current grade 5 curriculum.
- Post-secondary Education – Tools that would engage students in critical thinking around wetland solutions.
- Public Education – Information about local wetlands through engaging citizen science projects. Link resources to historical wetland loss to help the public understand the pressures facing wetlands.
- Indigenous Education – A product suggestion for Indigenous schools was a wetland learning kit with interactive activities (dip nets, magnifying glasses etc.).

Program Delivery

- K-12 Education – Professional development sessions for teachers that were hands---on and provided teachers with a kit to take away.
- Post-secondary Education – Use real life case studies. Offering a field component was also important.
- Public Education – Wetland app, positive wetland signage, brochures in outdoor recreational areas, social media.
- Indigenous Education – The key delivery mechanism was not clear.

Key Message

- Why wetlands?

Other Topics

- Incorporating Indigenous Knowledge – This group was interested in how Indigenous knowledge and storytelling methods could be incorporated into their own programs and tools for non-Indigenous audiences. During the second meeting, an Elder was brought in to address the group.
- Measuring Success – The group noted that wetland education programs are not being evaluated in a way to measure success and impact. To help address this, received a presentation focused on evaluating education programs. They noted this is something they would like to pursue further.