Wetlands BMP Workshop

Information Management and Exchange Table Top Session

January 20, 2016

Edmonton AB

For this discussion, tables around the room were assigned one of five topics with two tables covering each of the following questions:
1) What's working well?
2) What challenges are each of us facing?
3) What are the gaps?
4) Moving forward: What should be our next steps based on collective business outcomes and organizational priorities?
5) Free parking! Participants could talk about any of the above questions or any other related topic.

Participants were asked to discuss these questions keeping in mind how their company or organization manages information, the earlier IMES presentations and demonstrations, and the BMP information available to them. The session consisted of three 20 minute segments, when 20 minutes was up participants could choose to stay at their table or they could get up and change tables to cover a different topic with a different group of people. **Disclaimer**

<u>What's working well?</u>

Table A

Conversation morphed into "what is not working well" ……. But reflected on + and - experiences

- Participants want to hear what is working well to minimize impacts
- Some hoping to get into construction techniques……… observation that landscape is very wet, mostly fen and can't avoid ….. e.g. 77% fen in one location
- Looking for concrete examples that can be used
- RE DEMOs – really liked how you could search by BMP type – e.g. construction vs planning……recommended strategies. Colorado example was best information, but it would be onerous to keep up with maintenance. It seemed like four different data bases rolled into one, could almost have four groups of specialists to manage each feature.
    - o Also liked that the Colorado bibliography data base had both links and pdfs, so not worries about dead links. Also hate the follow link only to find you need to pay $60 for a paper.
- Is there a possibility to integrate BMP updates? i.e. when something is approved by gov then they (industry) have access to updated BMP as required
- If End goal is to supply IMES for improved wetland management, then would be great if you could ID habitat type by GIS and search that specific habitat types on the system

- - BMPs have not been standardized by ecoregion to date…….. Can this be done?
    - E.g. I'm working in a patterned fen so what BMPs are applicable to this wetland type
- Workshops work well for info transfer, think of information exchange system as not just a computer system but also a human interactive component – e.g. wetland training BMP workshops
  - e.g., FP innovations has website that lists conferences to attend
  - Land Use Knowledge Network presents talks online for those who can't attend workshops – i.e. another way to do knowledge transfer
  - Proceedings/videos need to be timely so that info is not out of date by time you get it – but can get BMP info out none the less
- CAPP does have some BMPs listed but not extensive – i.e. you can download guidance documents from their website
- Case studies on Colorado website looked very useful
- Full environmental monitoring reports can be tricky to find – but could be helpful resources
- Google can be a useful tool. Can we integrate into this existing data base/tool, it's already built so why not use it?
- Issues: some items have a lot of information available, but some have very little information, amount of information is sometimes inconsistent
- Forums seem risky – who moderates comments or information itself?
- If you spend a lot of $ on mitigation then you want confidence that BMP will work – can BMPs be rated online? e.g. I give this one five stars and this one two for these reasons.
- One area for improvement is how to communicate mitigation measures to operations crew and contractors. Because often contractors are responsible for implementing the EPP so if it is not user friendly [BMP] they will not follow directions properly. So, need work to develop consistency of BMPs that are easily communicated to field staff
- Sometimes there is a big disconnect between office and field – BMPs may not be practical in practice
- National regulations in NEB (federal) are very prescriptive, but may not make sense on the ground. So you can end up with very cumbersome practices to meet the letter of the law but do not really make sense. Firm commitments are not always possible, you need flexibility to be able to adapt to best approach on site
- Pushes for new equipment and procedures all the time – and things may change between planning and implementation
- Major Projects can be very delayed by onerous approval process. What you originally put in application will change by time construction is ready. Moving target, try to satisfy regulator with enough info until engineering design is done.
- Regulator expects you to have outline of what final footprint is going to be, and when doing EIA you are working with this proposed footprint, but actual reality on ground – i.e. "as built" would be different.
- Public consultation is required and must be shown, gov can change direction and it all needs to be done again e.g. Traditional Knowledge is a requirement (not optional) but there is no good approach to integrate that into planning. Need those resource people in place to do adequate

TK, but not everyone has this capability and TK stakeholders may not want to cooperate with process. It takes time to develop these contacts in communities.

- Consultation: don't want to go out too early until you get sufficient resource information, but when you approach community sometimes people assume project is coming or a given…. (+ and – views on early consulting), so by time you go to community you are well into project development and hard to integrate TK into this.
- RE TK: are you consulting with the right people from the FN? Challenges for industry: some bands send well trained representatives and some don't – capacity issues in communities some don't understand processes that are required.
- What can work well? Work with others, networks between industry and government and external stakeholders. See best results from BMPs to TK and landowner relations and use these
   o Try to avoid silos
- Challenge to get FN into BMP discussion – hard to get them to discussion table; then some feel they have approval power over the project, or they don't want to say yes or no but want to drag it out process. FN may have a hard time trusting the proponents takes long time but proponent may not have time required - these comments may apply to all stakeholders not just FNs
- Comment: tell us what hoops we have to jump through, timing, what to use, when etc... And we will do them, cost of doing business, need consistency
- BMP info systems do not seem to exist……. Field guides, manuals exist but not a data base that is sanctioned by the approval agencies – this is needed e.g. What are acceptable practices for erosion control?
- BMPs are not detailed enough: E.g. for installation of erosion control matting it is often not installed to specs or enough to meet environmental regulations, no support or acknowledgement for those practices which are working well.
- Need to remember that the guy installing structure may not be an engineer it may not be installed properly – so we need easy to understand BMPs
- There are many BMPs around but industry & province need to put some forward and say which work and where they can be used. Need parameters so AB Env can say industry is doing best with tools and information they have at hand
- E.g. road building and geo-textile : using more may be added initial cost but save dollars in end, need this info to support decision
- We have all BMPs available for practical application of working in or near wetlands….. but no guarantee that we will get the quality needed i.e. won't be built to meet BMP goals, cost factors
- Need both environmental and economic justification for BMP use – therefore need an assessment system for BMPs
- Schedule and Cost are very important, if BMPs can help work go more smoothly and save money, then they would be very attractive e.g. if gov said "you commit to this BMP" and "your approval will be smoother" then companies would be pleased and it would provide certainty and incentive to industry
- Regulator does not encourage innovation and if BMP fails you may not get another chance to improve and learn
   o Also companies themselves may not give financial support to try BMP, but this may be changing in some companies. Some people see that if you monetize environmental

impacts BMPs are acceptable, as well social license is also very important these days. There is more awareness in companies but depends on issues at hand.

- Regulator often holds industry back from trying something new, i.e. holds back progress, not open to letting industry try new things and so trying new bmps can then hold back your review process sometimes easier to use old methods sometimes even if not better way to work
- Need to tie environmental approval process to the project budget from the start so it is not that extra cost that is the first to be reduced
- Environmental groups within companies are where "safety" division was 20 years ago. We are on the cusp of positive change with staff, new staff mean new ideas are more acceptable.
- CAPP is advocating making approval process more efficient
- In forestry, they submit a 20 year plan with 10 year renewal, long term projections also annual operating plans that follow 5 year blocks of time. So issues are different than oil & gas but BMP process they have SOPs that get submitted with 20 year plan. But BMPs for wetlands can be developed and make things better, public will be confident that forestry is taking one more step to manage the land base which were previously called muskeg/wasteland.
- More and more being environmental conscious is required, lots of good work being done by larger companies.
- We need dedicated resource for BMPs that everyone can share etc.

Table B

- There is a conversations occurring
- Company recognizes value in the information (paid/ encouraged attendance)
- Everyone has a need for wetland information and technology exists (I am not alone)
- Information tailored to user (WetlandsNetwork) – don't have to go to journals, intuitive subcategories
- Would be nice if there was just 1 place to look – mega IMES
- The practice of 'sharing' is becoming more common. Relationship building across sector but also within silos e.g. COSIA, cross-provincial
- More research and trials being done alone to see what works – more collaboration between industry and research
- All the players are in the room participating and finding common ground (some competition still exists)
- Easier to track down the right people to help
- Starting to see the same practices 'pop up' over and over – building a sense of security we have the best information available
- Cross sectors/ intra sectors
- We are being more open about our challenges/ where we got our butts kicked
- Some people willing to upload
- Connecting people with interesting ideas (getting it done was a little more tricky)
- New policy
    - Allowing for creative compensation
    - Considers the possibility of BMPs (not prescriptive, results centered)

- - Funding
- Within the company there are systems in place for reporting (SharePoint)
- Automating data entry
- Avoidance of wetlands is common practice
- BMPs more flexible than regulation – continuous improvement
- Universities are working more with industry to solve research issues
- We don't have to go through all the journals
- More trust with ENGO that understands/ is sympathetic to our issues
- The need for standardized/ common protocols recognized
- More standardization among folks collecting basic data. Meta-analysis becomes possible (encouraged/ supported by gov't) ensures useful data is collected and resources used efficiently

What challenges are each of us facing?

Table C

- Alignment of regulations (i.e. Borrow pits)
- How to prioritize the value of wetland restoration
- One size doesn't fit all
- Prefer results-based certification vs. prescriptive
- Potential integration of BMPs into certificates instead of regulations
- BMPs are at a voluntary high level compared to regulations
- Regulations aren't always flexible enough to allow for innovation
- No continuous improvement in regs – always lag
- Incorrect wetland terminology
- Below ground water flow – understanding
- Reclaiming to equivalent land capability – what is that in 50+ years
- Poor knowledge of wetland succession
- Willingness to discuss failures
- A resource of failure examples
- Understanding why it failed
- A confidential industry network to discuss failure incidents
- Lack of science
- General understanding of wetlands (i.e. Function, type, identification, value)
- Understanding the compensation regime
- What does banking compensation look like
- Scale, measure scale in the boreal, significance to the basin/catchment
- No one stop shot with reliable BMPs
- Include economics with environmental desirability

Table D

- Information management – where to find BMPs
- Development planning/approvals
- Boreal wetland BMPs not as prevalent as in other ecoregions
- **Transferability** of existing BMPs (from other regions)
- **Communication** the 'technical' aspects in various approvals and in implementation on the ground and to operators
- **Standardization** across departments, sectors, tenures of
  - Policy
  - BMPs
  - Terminology and definitions
  - Data sources/ inventory for decision making
- BMP effectiveness
  - How to determine effectiveness to achieve the set objective
  - How to track success, monitoring results and rating - *** system to guide?
  - Effective and economically feasible
  - Need publically available evaluations and ranking of BMPs – science, economic, public acceptance
  - Need collaborative approach to share results, share development costs, disseminate and educate, and define the end goal, what's successful
- Restoration BMPs – an emerging field, need to
  - Share approaches
  - Collaborate
  - Toolbox
  - What works/ what doesn't
  - Planning and decision making
- Information sources
  - Internet search
  - Partnerships/ collaboration – fRi research, COSIA
  - How to
  - **What's reliable/ valuable – how to weed out the nonsense**
- Information management
  - Strong start to many projects but peters out – how to maintain continuity? Long term maintenance
- BMP and economics
  - **Short fix but longer term cost**
  - How to track long term cost; avoid or decrease risk, enhance uncertainty around BMPs outcomes throughout lifecycle.
- Reclamation BMPs of well pads in peatlands
  - What are they?
  - Do they work?
  - What's success?
  - How long should they remain in place?
  - What about effects of the road leading to pads?
  - $$$

- To re-disturb or not?

- Regulations don't always align
- Getting BMP to the stage where they don't seem like extras
- Results based preferred vs. prescriptive
- Certifications don't translate to more $$ for your product
- No clear path to gaining enhanced social licence – BMPs a vehicle?
- Integration of BMPs with certification
- Regulations = minimum level vs. BMPs = voluntary
- Regulations make no provisions for continuous improvements
- Learning current classification requirements and abandoning past definitions and practices
- Managing for unique or rare situations – often each situation poses unique challenges that may not be directly addressed by a BMP
- Climate and imposes ongoing change to wetlands – how to manage in this environment?
- Applying wetland policy to the boreal landscape
- Difficulty in measuring benefits over time
- Information management system
- Willingness of industry to discuss/ address failures – network!
- Lack of science relative to function/ value
- Difficulty in measuring and scaling impacts in the boreal – geophysical (spatially)
- Rating system for efficacy of BMPs

What are the gaps?

Table E

- Alignment at different regulatory levels (fed/prov etc) – emphasis, value, function
- What is wetland function?
  - Definition
  - How do you quantify it
  - Consistent approach   inform a BMP
  - Lack of baseline data
- How do you define BEST management practice?
  - Who determines this?
- Avoid Wikipedia approach
- Format – report, multi-pager? One pager?
- Consistent decision tree – include regulatory requirements
- Tracking who is accessing BMPs
- Are people using BMPs?
- Approved BMPs vs. Suggested BMPs
  - Ranking
  - Proposed/new

- o Who decides this?
- Transparency
- Liability issues
- Research, information in separate place but linked
- Comments section for feedback (moderated)
- Linking/ modifying BMPs based on new information (bad science/ new science)
- How do old BMPs fall off
- Lack of co-ordinated approach to developing BMPs and determining success of BMPs
- How do you monitor BMPs consistently
- Who is not involved in this process right now?
- Transfer of spatial data – area specific
    - o Existing
    - o Collection
- Keeping info current, relevant
- Metadata, keywords, relevant search results
- Search on wetland types
- Too few/ too many results
- User feedback – moderated – continuous improvement
- Tracking use of BMPs
- BEST management practice – who decides and how is it developed? Who 'owns'?
- Contact people on BMPs – responsible accountability
- Communication tools with stakeholders
- Phone app with basic information
    - o Might be company specific
- Who writes BMPs
- Lack of training on BMPs
- Consequences of not using/ using incorrectly
- Needs to communicate to all people (all levels of expertise, literacy etc.)
- BMPs must be clear what the outcome should be
- Region specific, spatial choices
- What constitutes 'best'

Table F

- Sharing spatial information
- Little information on resource roads crossing wetlands
- Documenting failures and sharing the lessons learned from those failures
- Use of matting, details on how to best use
- Limitations of tools, practices or each BMP
- Think about whole lifecycle (ex. Reclaiming a road)
- Separate our different types of wetlands in the BMP recommendations
- How do we measure the success of BMPs, monitoring, assessment

- Establish criteria for legacy linear features
- Knowing where to find current, authoritative sources
- Ranking/ rating of BMPs relating to ecological integrity
- How many times a BMP has been tried, successful?
- Ground water maps
- What does compensation look like, can I bank compensation? Objectivity and ecosystem values relating to compensation.
- Take into account natural disturbance when measuring variance in BMP success.
- Lack of BMPs for peatlands, especially frozen
- Trust and willingness to be innovative
- Cross sector sharing of information (ex. Oil and gas and peat industry)
- Common language for tools (guidelines, best practices, rules, regulations, protocols, etc.)
- Unclear definition (target) for restoration

Moving forward: What should be our next steps based on collective business outcomes and organizational priorities?

Table G

- Like structure of last website presented – BMP Website regulatory framework required or recommended plus Law Atlas Structure of value.
    - Copyright issues need to be addressed relative to above
- Centralized repository is desired
- QC a concern, mis-information on any website where users submit info
- Planning tools, there is a need for an effective BMP site
- Need a working group from this meeting to agree what practices are/ should be part of information sharing
- Boreal issue, multiple industries add complexity
- What about roads? Permanent and temporary.
- Agricultural considerations, conversion of the boreal looking at private and crown land
- 10,000 ha transferred from public to private land last year, BMPs on private land???
- Focus on innovation how to do it right and still operate as industry
- BMPs for Yukon - developed a portal used oil and gas regions, eco-regions too much overlap
- Advice based on values, cultures, caribou, heritage resources, seismic, economic values such as wilderness tours.
- Need a system that helps field practitioners based on criteria like, for example, water quality
- Separate regulatory requirement from best practices. BMPs often developed in absence of standard.
- BMP's are in the current codes, then they out of date because better practices come along
- Change measurement paradigm to ensure BMP's are in best interest and companies willing to do BMP vs. base line regulatory requirements
- Promotion of Technical innovation. Biggest challenge is bogs, fens - non-watery wetlands
- Information is out there on the web, the trick is know where to find that information

- Step one is to connect existing entities.
- Wetlands network website is an existing entity, not one website for BMP's but one website for everything wetlands
- Website does not have to be handled/developed by DUC
- There are things missing on the web, an anonymous collaborative forum is needed and a repository for existing BMPs.
- Tracking of success and effectiveness, need examples
- Failures need to be anonymous because most people do not want to talk about them
- Forums should be good
- Wetlands Network - thumbs up and build on, make it kick ass
- Editing an existing website MAY be difficult - questions for an expert
- Funding - joint funding Govt / NGO / membership agreed as good model
- Publically accessible information is important
- Quebec approach well received - where govt / interested groups / engo's fund and participate
    - The idea of the Quebec mapping app was thumbs up
- Important contents on site include:
    - GIS capabilities
    - Mapping
    - Case studies important
    - Value of case studies- important and effective
    - Not academic
    - Ecosystems filter
    - Question - How do you promote contribution to the website??? Needs to be an incentive or??
    - Publically accessible important
    - Finish wetland mapping
    - Mapping is of fundamental important
- Avoidance is the best approach
- FRI looked good
- Behind the scenes fRi seemed good
    - Planning content first before style, but style and usability is important
- Wetland Network - when attendees went to the site it didn't work, broken links
- Who is going to look after the IMES? A working group will need to decide
- Identified the Challenges of links to other websites vs. a pdf repository - maintaining changing links is important but frustrating
- Decision making tree is important
- Fisheries and Oceans: Provides one pagers of steps to deal with your project was good, then you didn't need to apply to us this was/is useful
- Regulatory minimum - plus earn gold star, some sort of measurement method for BMPs
- Business case for BMPs - what is it?
- Cost benefit analysis for BMPs
- Dollars available if there is a real value
- Don't re-invent the wheel, but tough to answer - if existing sites could be modified

- Collaborative funding is the best approach
- Look at university students or association to undertake ongoing well-funded maintenance

Table H

Summary:
- Start simple and build up
- BMP implementation needs to come from the top down
    - Making the information available is important, need support from the top and the right contractors
- Education and awareness are essential for change
- There should be rating systems available for different BMPs
    - Likes to prioritize BMPs (ex. Reddit)
    - Apply lessons from social media
    - Ability to comment on how a BMP worked under specific conditions
    - Would be good if reports could be sent with mapped coordinates
- IMES system should have the depth and breadth of the data from the last presentation paired with the interface of the foothills. Detailed information with an intuitive interface is ideal
- Best practices cannot be easily integrated into legislation, need room for innovation.

Highlights from the notes:
IMES system
- Wetland network – easily navigable good starting point
- FOIMAS – provide info on a map online, could send info with pins
- Avoid requiring too much info to manage
- FRI: AB land use network has YouTube talks that cover a diverse media range, not only papers
- It is important to distinguish source documents from BMP documents in the database
- Is there an end product? Will there be a guidebook?

BMPs and regulation
- Can't make BMPs regulation, need room for innovation and opportunities to go beyond compliance
- Where do you set the bar? The regulatory minimum is often quite far from BMPs. Does BMP development affect that bar?
- What outcomes are we aiming for?
- Wetland policy: information sharing has a place from a regulatory standpoint
- Stakeholders are conditioned to do the minimum. However, regulation cannot be the answer because BMPs need freedom and innovation and are essentially different from regulation. Would be like trying to legislate good parenting
- Non-restrictive, outcome based legislation to support BMPs?
    - Otherwise need many BMPs legislated, and you are aiming at a moving target
    - Also legislation needs to be enforceable
- When trying to get new projects approved that are above the bar it can be difficult because regulators are liable to public opinion. There is no framework for everyone to accept risk to try something new, so innovative projects can be hard to approve

- o Access to primary literature would be helpful
- o How is performance measured to determine what is a BMP?
- o See Wetland Biotic index: Rebecca Rooney (Waterloo) stress gradient = 7 easy to measure characteristics. Way to assess wetlands before 5 y

How do we encourage people that don't have the same understanding to use BMPs?

- BMP implementation has to come from the top down, this provides pressure for all operators to be educated
- Issue: getting information to the top of the organization.
  - o Need buy in from the field
  - o Regulation is a tool to communicate to the top
- Why do some companies choose or ignore BMPs? No regulatory incentive, corporate philosophy and budgets, no economic benefit → no buy in from companies, often lifecycle costs are not considered because budgeting happens on short term timescales.
  - o Need a change in corporate culture
- Economics are primary, but social license is becoming more important
- Industry prefers economic incentive (Ex. Narrower ROW saves money on clearing.

Mechanisms for change:
- Building relationships
- Peer pressure is effective, company culture varies within and by industry
- What can you do in places where people don't care?
  - o Education

Challenges:
- Need agreement on BMPs
- Best way to communicate BMPs that are developed? Potential roadblock to organizational buy in: distrust with regulators, need to know what to do and what is coming
- Cannot force BMPs, if we make information available, some sectors of industry will be interested and competition will drive the spread of BMPs
- Once BMPs are developed how is training achieved?
  - o Boils down to company culture
- EPP may not apply, site specific plans are incredibly important

Structure of an IMES
- Should be rating systems for companies – prioritization
  - o Likes – as used on reddit
  - o Could be interactive – follow up with the person who rated it
  - o Forums could be dangerous, so think carefully about comment structure if there is one
- There are many potential options for BMPs, and there could be a range of BMPs sorted based on budgets ($, $$, $$$ filter)
- Open access literature – links to PDFs that you can download
- What do we do with 10 different BMPs on the same topic?
  - o Need to leave it open to choose for your situation
- Is there a way to sort by watersheds or another regional perspective, like land use areas?

- Depth and Breadth from the last presentation with the interface of the IMES from the foothills institute
- With situational flags, the organization could be automated
    - Still needs to have a full time administrator
- Database structured with lessons learned from social media
- Unsubstantiated ideas need an avenue for growth
- Place to share case studies and research

Free Parking!

Table J

Notes on the table: The discussions covered a range of topics, but many people who came to this free parking table didn't have anything of particular interest to discuss or wanted the opportunity to vent any and all frustrations relating to wetlands.

Some thoughts on the demos:

- Didn't understand where DUC was coming from with the IMES, didn't understand the sort of information DUC wanted included in the database and felt that DUC was coming at it from the wrong way around. Instead of asking people what they want the database to look like and how it should be formatted, DUC should have a better understanding of the information that will be included in the database.
- Felt that the demos weren't particularly useful because from where they were sitting (back of the room) they couldn't really follow what the demonstrators were doing. The volume was fine. Many at the table felt that while getting a better understanding of the sites was valuable, watching someone familiar with the site navigate through it didn't give them a good idea of how easy it would be for a new-comer to navigate.
- The websites themselves were helpful, but it would be more helpful just to have the links, explore them on their own time, and then they would have more information to evaluate on.
- Would you be able to submit or request to submit your own practices? This would be helpful, but then you would need a way to weed out bad information or out of date practices.
- Information/ website has to be current and reliable, and you have to know that it is current and reliable.
- Challenges:
    - Challenge across industries is that terminology for the same thing can often be different.
    - Also challenges with having a system that spans jurisdictions and different areas.
    - Different audiences e.g. Industry vs. municipal

Some thoughts on other topics:

- County of Grande Prairie has a Lidar 50cm resolution database that is available to the public – access to information
- Concern about regulatory process and turn-around times for municipal development permits and wetland restrictions. Significant challenges and frustration expressed.
    - How to have accountability?

- o Terminology on paper isn't always the same or consistent
- o Want BMPs to be enforced fairly and consistently across all groups
- o Jules stopped by the table and followed up with the question – where is the commitment and how can you make the people who need to commit, commit?
  - ▪ Money, fines, consequences for not following approvals or pre-empting approvals.
- Looking for a standard of BMPs that are being developed across the country – you may not be able to use all of them – but you can pick from the full suite. Some might be applicable in some areas and others not e.g., thirsty cement.
- Data management system that was built to house all of a company's environmental data collected by them and by consultants – so that they have easy access to all of the data they paid for. It is also a mechanism for them to be able to share data with others (e.g., AEP, AER).
  - o Challenge to keep both flexibility and meet all of the desired requirements
  - o Currently primarily for numerical data, but could house other types of data if appropriate forms were built in.
  - o Built for internal use, wouldn't make any sense or be navigable by external users.
- BMP Advisor – like trip advisor! Options to rank BMPs based on experience using them. Challenge is that users would have to describe their specific circumstances so that it is clear under what conditions they met with success (or not).
- BMPs are meant for specific purposes, a gap, how do we know they're best practices?
- Where is the data that supports that these are best practices?
- Many sites to find this info after the demos, which is the best for what I want?
- BMPs may be case specific, not one size fits all
- In a system, you need to say in what circumstances will this work for me?
- What are the common sense things in upfront planning describing the landscape – developing the process of applying best practices?

Table K

Gaps in knowledge
- Different agencies recommend best practices but they are often not tested, they just think it is. It would be nice to have a list that are evaluated and that aren't, if they have been tried if they work, why or why not. Get a broader perspective to get people thinking of what is a best practices
- Consistency of approaches could lead to research initiatives
- A lot of the problem is information that is not documented
- Flaw in US example is that you couldn't update it – people uploading and then it going through a filter allows interaction and allows people to share
- A lot of the ideas from the DUC roads workshop came from people who work on the ground, getting their information is key
- People at the table had heard of some of these but the wetlands network was one many even government people had not heard of.
  - o It was built without a lot of consultation with a wider audience, built internally
  - o Because of the isolation during building it has not been widely used as people don't really know about it

- NAWMP is the impetus to this thing
- WetlandsNetwork structure is good, categories are something that would be used, simplicity is good, the site seems very focus, and search ability seemed good. Structurally it was all there. Also clearly focused on wetlands, no navigation required to find the wetlands content.
- Questions and concern, integration and alignment. There are all sorts of people building stuff, in the Alberta file they have watershed regions (Mighty peace is currently developing BMPs for the area).
  - **Alignment** – in the circle here today are we aligned in our objectives? The best outcome from a tool would be different to all of us - protection, low impact mitigation, restoration. Curative vs. preventative. Are the BMPs measureable? BMPs are fairly easy to develop, consensus around the end is a different matter. How commonly aligned or misaligned are we? Figure that out and go from there
    - BMPs will flow towards a common objective, otherwise they will go in all sorts of directions.
    - i.e. no net loss – an objective, easier to wrap your mind around whether curative or preventative
  - How do we do that? Is that something government does or?
    - We have invited a discussion here that is a signal that all of us are seeing a gap and an opportunity to do things a little bit better. There is a venue for it. What we should look at is who is not here, is there a will to try and develop that. A will that would be hard for any government to turn down - Would be a powerful signal.
- We're not starting with a blank page, we're looking at existing things, looking at things at a different angle.
- What is the timeline or time frame for what comes out of this BMP initiative?
  - Using an existing platform, can be mutually beneficial if DU only wants to supply info and help them maintain the website.
  - Q. If there was an open platform, how willing would you be to add to that database with information you have
    - A. we get asked all the time for our data, because the forest sector is quite collaborative that there is generally free sharing. Tied to a professional ethics thing of practitioners.
    - Sharing info comes with a logo and feel free to share it with that light
    - Competitive advantages may not be as willing to share, they can't market themselves as the only ones who know how to do this (i.e.) or in the consulting world.
- Industry relies on consultants to have knowledge of best practices as the subject experts but as an industry they have better info of where the information is going and coming because generally they go to these workshops etc.
  - Small consulting companies
  - Big companies copy and paste reports
- Lack of consistency between consultants in their knowledge of the science and what is out there in terms of BMPs
- Does DUC establish our own evaluation process – desktop evaluation? There is value in this, may not just be DUC but a group that has the expertise on this.
  - But at the right time, location, procedure they could all be useful practices.
- Constructability constraints – we are not construction folks. This needs to be considered

- Conflicts between the regulations: Fisheries Act and wetland policy regulations
  - All BMPs have a level of efficacy, economic realities, and where you deploy it – a matter of scale.
  - Tested BMPs and then where can I viably use it.
  - From a practitioner standpoint, you don't need all the background stuff, you just want the answer
- **Applicability** – sector differences and within sector differences
  - I.e. Digging a whole or building on top of the wetland. How can these things be captured in a filter?
- Oil sector uses lots of consultants, use of database, ideally should be used by consultants to provide more up to date and current bmps and recommendations. Mitigation tends to be on the operators instead of for the consultants to tell you. Would find it super useful as they could have a discussion about the options, further external validations, and endorsed by people gives further support to operators.
  - Stronger if the government is a part of its development, gives it credibility
  - CEMA has so many guidance documents that have sort of gone into a black hole – how did that happen
    - Conducted did a gap analysis on wetland reclamation and that is where this came from. They develop a gap analysis but the forward movement lacks

Our definition of a BMP at a planning level and an operational level?
- Do you see bmps as a planning and operating thing?
  - General idea, most people think of BMPs as an operational thing, not a planning tool.
    - operating ground rules
    - Kind of, we have separate planning that relate to wetlands, caribou etc. but they often jump to mitigation because its problem solving, it is easier to focus on.
    - Landscape management is complex. It's good to have principles for planning and operational, but the applicability will always look different, whereas at an operational level it's tactical and easy to think of.
  - Forestry, look for connections between operational level BMPs and the strategic, there is a continual check back because operational things are what measures whether you meet your strategic targets.
  - And if we zoom out, what is the benefit relative to the cost. Important to have many options to choose from.
- It's fine to give people information, but who chooses who uses it. Is there something that can identify the context where that BMP works

New 20 minute (lots of transmission folks)
- We've picked the easy solutions, but no one has written it down as a BMP instead of tackling the next challenge.
  - Common language is a problem but both within a between companies
  - Common language will be something to put our foot against and advance the conversation
    - A lot of what we do as common practice are BMP's.
  - Environmental planning documents are living documents.
    - Utility industry, we have to be cautious about what language we are using, what is mitigation, engineers say we'll reclaim it, well what does that mean?

- - Language is very reflective of values, biologists' language vs engineers' language.
    - **How do we get to common language if we can't even agree on what we value**
- Boreal is different than the south – new policy devalues the south.
- Finding the balance: wetlands either needs to be protected and let change
- Policy is a pay to play

Would you build differently if you know you had to rebuild it in Alberta? (In BC you had to re plant trees and had some responsibility for x years as a result of logging)
- Problem is they only have to reclaim to economic value, not land capability. End pit lake is way different than boreal
- The governing leg should be more than just the waters act and it needs teeth
    o This would be better for wetlands, gives an equal playing roles
    o Should not be different for utilities vs. oil and gas. Utility builds stuff in the air yet they apply for things on the ground.
    o Thousands spent on applications, but then $20 to DU in compensation.
    o Rules without objectives, unintended consequences as the rules were built for oil and gas
    o Back to **balance**, you need to look at relative impact
    o Getting away from BMPs but actions could be found in BMPs whether in the code of practice, etc.
    o Let's assess ourselves, have a place to pull the BMPs, standard list of measures to protect.
    o Rules are very different between provinces