

Alberta Wetland Field Guide Stakeholder Engagement Report



In July and August of 2019, Ducks Unlimited Canada staff travelled to five locations across Alberta to hold Stakeholder Consultation Sessions on the Alberta Wetland Field Guide Project. The above is a photograph from our Calgary event held on July 16th.



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Thank you to our project funders and partners



1. Introduction

Identifying and classifying wetlands while working on the landscape is a fundamental step to managing and conserving Alberta’s vital wetland ecosystems. The Alberta Wetland Classification System (AWCS) was released in 2015 to tailor wetland classification to Alberta’s unique range of wetland ecosystems (Alberta Environment and Sustainable Resource Development, 2015). This classification system exists as an in-depth resource providing extensive details on wetland classification; however, is not an easy, convenient resource to use in the field.

With funding and support from Alberta Innovates’ Water Innovation Program and the Alberta North American Waterfowl Management Plan Partnership, Ducks Unlimited Canada (DUC) is leading the development of an Alberta Wetland Field Guide (hereinafter ‘field guide’) based on the AWCS. This project will provide the public with free, online versions of the Field Guide, in addition to hard copies available for purchase, beginning in April 2021. From April to September 2021, DUC will offer information webinars and field demonstrations at no cost to educate users on how to use the Field Guide.

1.1 Project Goals

The goals for this project are to:

1. Develop a user-friendly Field Guide to help land managers identify and classify wetlands on the land base according to the AWCS.
2. Communicate and educate practitioners about Alberta’s wetlands and the use of the Field Guide in relation to their activities on the land.
3. Raise awareness and understanding of wetlands, wetland policy, and the value of conserving Alberta’s wetlands.

2. Stakeholder Consultation

To develop a guidebook that is relevant to end users, DUC set out to get input from potential end user groups. We first shared an [online survey](#) on May 25th, 2019 to get initial input from interested and knowledgeable stakeholders on how to make the Field Guide an effective and practical field tool. Since its launch, we’ve received over 50 responses with good representation across the province and over 55 detailed comments.



Figure 1. Participants from the Calgary Engagement Session offer their feedback.

To gather additional, more detailed input on what end-users value in a field guide, DUC held stakeholder consultation sessions across the province. The location of the stakeholder sessions were influenced by the responses of the online survey. The goal of the stakeholder sessions was to raise awareness of the project and solicit feedback from a wide variety of potential end-users on the format and content of the Field Guide. Sessions were held throughout July and August in Lethbridge, Calgary, Edmonton, Slave Lake and Grande Prairie with participation both in person and online (Figure 1; Table 1).

Table 1: Stakeholder engagement summary.

Event	Date	# Invitees	Attendees	
Kick-off Webinar	May 22, 2019	100	~30 live attendees, with the webinar link still available to watch through website	
Stakeholder Survey	May 25, 2019	125 + social media promotion	56 completed surveys	
Stakeholder Engagement Sessions			In Person	Online
Edmonton	July 9, 2019	62 + social media promotion	5	3
Lethbridge	July 14, 2019		2	1
Calgary	July 15, 2019		4	4
Slave Lake	August 13, 2019		4	3
Grande Prairie	August, 14, 2019		3	3
Total			32	

Stakeholder sessions began with introductions and a 20-minute presentation describing the project, the objectives of the consultation session and summarizing the results of the online stakeholder survey. Participants were then asked to review several resources (Appendix 1) to better understand what they think is important in a guidebook and what they do and do not like about the example guidebooks, such as DUC’s Boreal Wetland Field Guide (Figure 2). Participants were given a list of questions to consider as they reviewed the resources provided which were then discussed in more detail (Appendix 2).

With these guidebooks in mind, the remainder of the session focused on discussing the questions posed to participants. Participants were asked to provide input using an online app (Mentimeter) that collects and showcases responses to allow both in person and online participants to engage (Figure 3). Each question followed with discussions amongst the group to elaborate on their answers (Appendix 3).

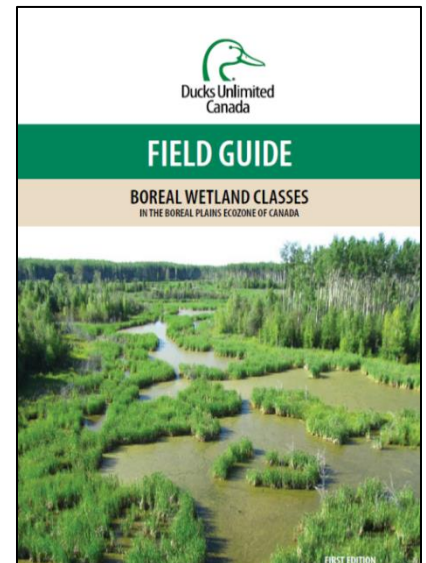


Figure 2. DUC’s Boreal Wetland Field Guide was often used as a reference during the stakeholder sessions.



Figure 3. An example of the results produced by the Mentimeter polling application. For all results, see Appendix 2.

3. What We Heard

The stakeholder consultation sessions were well attended with a total of 32 participants across the province (in-person and online) including city/ municipality representatives (e.g. City of Edmonton, County of Grande Prairie), industry (oil and gas, utilities, forestry), watershed associations (E.g. Mighty Peace Watershed Association), landowners, a First Nation representative, government representatives (AEP) and consultants.

Throughout the consultation sessions, participants took part in discussions around key themes including the format and content of the Field Guide. Discussions also focused on identifying what may be missing or what material is unnecessary using [DUC's Boreal Wetland Field Guide](#) as a reference, on classification decision keys, and on wetland fact sheets.

3.1 Guidebook Format

One of the important questions we had asked stakeholders was how they would like the Field Guide formatted, including the number of guides they'd like to see developed, the length, the type of paper and its binding. Participants were asked:

- ❖ Would you prefer that 1 or 2 field guides be developed, and why? (Namely, one covering the entire province or one for each the green zone and the white zone.)
- ❖ What is the ideal page length of a field guide?
- ❖ Do you value water resistant paper and rounded corners?
- ❖ Do you prefer coil bound, spine bound, or a small binder?

Participants in favor of one guidebook largely spoke about the potential for overlapping or duplicating material as well as one being more convenient for those who work in both areas. Perspectives for two guidebooks largely reflected the desire to only carry material that is relevant to them and often, people working in the southern part of the province do not require boreal/green zone material. Overall, the majority of stakeholders who participated supported the development of one guidebook that covers the entire province.

In terms of the format of the Field Guide, participants highlighted the importance of an online copy being available as well as hard copies. Participants largely valued coil binding, rounded corners and waterproof paper in order to make it practical to use in a field setting. While participants identified the need for brevity for a field guide to be practical, many expressed that it should be as long as needed to include the necessary information.

3.2 Content

To understand what stakeholders found valuable in a field guide and to understand what information is not necessary, stakeholder sessions focused on DUC's Boreal Wetland Field Guide as an example (Figure 2). Participants were asked:

- ❖ Looking at DUC's Boreal Wetland Field Guide, what sections would you eliminate, if required, to achieve an ideal length?
- ❖ Looking at DUC's Boreal Wetland Field Guide, what other sections or topics would you like to see included?
- ❖ Are there any other components of the field guides you looked at today that we have missed?

All consultation sessions featured excellent discussions around what pieces should be added and why. For example, many participants felt it was important to include information about seasonal variation to provide end-users an understanding of how wetlands vary within one year and between wet and dry years (Table 2). Similarly, participants engaged in excellent discussions around what material may not be necessary in a field guide, such as removing or shortening the glossary and trimming the introduction pieces.

While there was agreement among many of the stakeholders across the province on several topics, we also heard diverse opinions on topics such as the inclusion of ecosystem goods and services. Some participants felt that more information on ecosystem goods and services is important to provide greater context to end-users about why they should care about wetlands, while other participants felt the focus on should be on classifying wetlands versus providing background information. Despite the differing opinions, these discussions provided important perspectives that DUC will consider throughout the development of this Field Guide.

Table 2: Summary of the discussion of value-added and unnecessary components of field guides.

What's missing?	What's unnecessary?
<ul style="list-style-type: none"> • Many, well-labelled photos, including seasonal variations • Policy context, eg. class 1/ephemeral water body differentiation • Information on prairie wetlands • Cultivated and disturbed wetlands • Information about hydric soils • Hydrologic indicators • Invasive and non-invasive species • Information about ecosystem goods and services • Indigenous values • Medicinal uses of wetland plants • Beaver influence • Characteristic wildlife or aquatic invertebrates • Historic aerial photo review 	<ul style="list-style-type: none"> • Nothing, it's all valuable • Trim the about/introductory sections • Policy context, especially in light of frequent updates • Information about ecosystem goods and services • Glossary, or consider shortening it to key terms that are necessary to use the guide • Vegetation species scientific names • Plant identification, many other resources exist • Notes section

3.3 Classification Decision Key

One of the key pieces in DUC's Boreal Wetland Field Guide for the Boreal Plains Ecozone is a yes/no classification decision key (Figure 4). This allows end-users to classify a wetland through a series of yes/no questions. While the AWCS has a detailed classification decision key, it is not based on yes/no questions and some ambiguities remain. We asked participants if they would see value in this classification decision key being transformed into a simple, yes/no key. Most participants thought that this would be extremely valuable and make the Field Guide more user friendly by providing more direction than the current key.

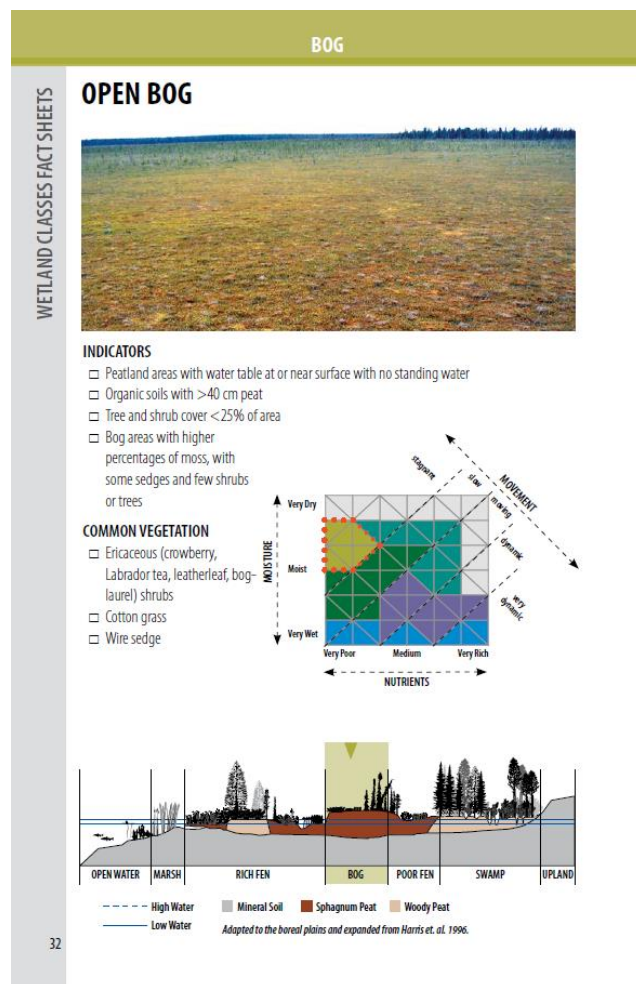


Figure 5. An example Fact Sheet from DUC's Boreal Wetland Field Guide.

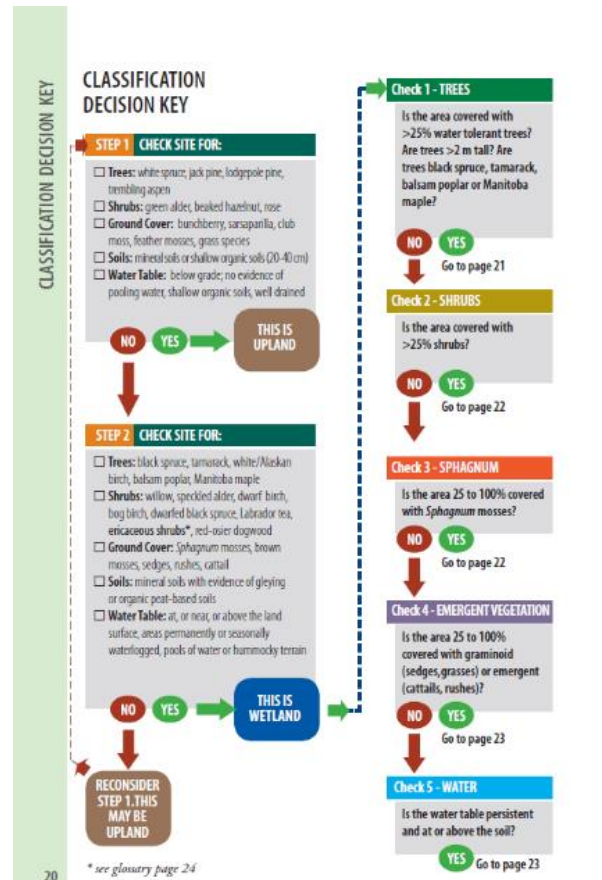


Figure 4. An example Classification Decision Key from DUC's Boreal Wetland Field Guide.

3.4 Wetland Fact Sheets

Wetland fact sheets can provide a lot of valuable, key information about a wetland type in an easy to read format (Figure 5). We asked participants if they thought wetland fact sheets within the Field Guide would be valuable and most participants agreed. What information a fact sheet may include incited much discussion during all sessions, particularly highlighting the importance of photos. Additional suggestions that were common throughout many sessions included indicator species or common vegetation, key hydrological and soil characteristics and, overall, providing this information in a simple, bullet point format. See more suggestions and considerations in Appendix 3 (Question 9).

4. What We Learned

We were extremely pleased with the number and diversity of stakeholders who engaged in the consultation sessions. We received excellent feedback and found it to be extremely valuable input to inform the development of a field guide that will be relevant and applicable to a variety of end-users.

Across the province, perspectives varied about what a field guide may look like based on the end-user's role in wetland classification and policy, as well as their location. Many perspectives aligned with our initial ideas while others provided new perspectives and understandings to consider and incorporate where applicable. With respect to the development of a field guide, the key takeaways include:

- **Photographs** – Across the province, all participants stressed the importance of photos in a wetland field guide, specifically with descriptive, informational labelling. Participants also expressed a desire for photos of wetlands through the seasons as well as pictures of disturbed wetlands, wetlands in agricultural settings, and pictures of wetland characteristics such as soils. With this feedback, we will work to incorporate as many informational pictures into the Field Guide as possible but we will need your help! We indicated to each stakeholder group that we will solicit photo submissions from the public and we have now formalized our [photo submission guidelines](#) for your use.
- **Guidebook Format** – The desired format of a guidebook varied based on users role and location of work; however, overall we heard the desire for printed copies to be available that are field friendly as well as the importance of tablet-friendly online/PDF versions. Many participants pointed out the opportunities to hyperlink to other online sources of information in a tablet version, which provides a wealth of additional supporting information. One interesting learning is participants overall response when asked about the ideal page length of a field guide. Most participants identified that the length of a field guide is less important than the information it contains and that it should be as long as it takes to get the right information communicated. There were several additional items that participants identified they would like to see included; however, many realized the importance of brevity in a field guide and put an emphasis on this.
- **Details and Supporting Content** – We received a number of excellent perspectives on the level of detail that is needed in a field guide ranging from a guidebook a lay-person could understand to a much more technical field guide that would bring all the information wetland practitioners and consultants need into one place. This feedback is extremely valuable, however challenging for the overall project objectives. While many identified the importance of a field guide being concise, there was also recognition that perhaps there is an opportunity to develop supporting materials outside of the Field Guide to meet both the more publicly accessible (eg. landowner-friendly factsheets) and more technical needs, while maintaining a concise field guide that focuses on classifying wetlands using key vegetation, soil and hydrology indicators.
- **Fact Sheets** – Wetland fact sheets are a main component in DUC's Boreal Wetlands Field Guide and overall, most participants believed these were important to incorporate into a field guide. Fact sheets might highlight or reiterate the key components that lead to a particular wetland classification, including the vegetation species, soils and hydrology characteristics. A major component of the fact sheets should be informative photos of the wetland class, form or type in different areas of the province and at different times of year, if possible.

5. Next Steps

With consultations complete, we will be entering the next phase of this project where we will begin drafting the Field Guide content based on the input received from our stakeholders. The next opportunity to formally engage in the project will be in November 2020, where stakeholders who have previously engaged with us (i.e. participated in a consultation session) will have an opportunity to provide any additional feedback on a draft version of the Field Guide. Following the stakeholder review, the Field Guide will be released in May 2021. Upon its release, online and field training opportunities will be available at no cost to end users.

In the interim, we still need your help! We are seeking photo submissions to build a photo library to use the best possible images of wetlands and wetland plants in the Field Guide. We are looking for images of wetland landscapes to showcase each class, form and type, aerial or drone images, repeat site visits showing seasonal variation, and wetland vegetation photos. Learn more about the photos we are looking for and how to contribute by reviewing our [photo submission guidelines](#)!

6. Contacts

To keep up to date on the project, stay tuned to our [website](#). For more information on project updates, photo submissions, or how to be involved, contact Kristyn Mayner by email, k_mayner@ducks.ca, or by phone: 780-930-1250.

7. References

Alberta Environment and Sustainable Resource Development (ESRD). 2015. [Alberta Wetland Classification System](#). Water Policy Branch, Policy Division, Edmonton. 66pp.

Appendix 1 – Consultation Materials

Throughout the stakeholder engagement sessions, several Field Guides and resources were provided as either hard copies or hyperlinks for participants to use as reference and to gain a better understanding about what they like and may not find necessary for inclusion in a field guide. The resources used for this included:

Alberta Environment and Sustainable Resource Development (ESRD). 2015. [Alberta Wetland Classification System](#). Water Policy Branch, Policy Division, Edmonton. 66pp.

Alberta Lake Management Society. *Aquatic Plants of Alberta, A Collection of Native and Invasive Species*.

Beckingham, J.D., and Archibald, J.H. (1996). *Field Guide to Ecosites of Northern Alberta*. Alberta, Canada: Canadian Forest Service.

Bubar, C.J., McColl, S.J., and Hall, L.M. (2009). *Weeds of the Prairies*. Edmonton, Alberta: Alberta Agriculture and Rural Development.

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Ducks Unlimited Canada. *Boreal Wetlands Fact Sheets*. Retrieved from <https://www.ducks.ca/assets/2015/09/Boreal-Wetlands-Fact-Sheets.pdf>

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Kershaw, L. J., and Allen, L. (2019). *Illustrated keys to the Vascular Plants of Alberta*. Retrieved from: https://anpc.ab.ca/?page_id=4721

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Morrison, A., and Davidson-Hunt, I. (2012). *Opaskwayak Cree Nation Guide to the Wetlands of the Saskatchewan River Delta*. Winnipeg, Manitoba: Aboriginal Issues Press.

Newmaster, S.G., Harris, A. G., and Kershaw, L.J. (1997). *Wetland Plants of Ontario*. Ontario, Canada: Lone Pine Publishing.

Soil Classification Working Group. (1998). *The Canadian System of Soil Classification Third Edition*. Ottawa, Ontario: Agriculture and Agri-Food Canada Publication.

Stewart, R.E., and Kantrud, H.A. (1971). *Classifications of Natural Ponds and Lakes in the Glaciated Prairie Region*. Bureau of Sport Fisheries and Wildlife, Washington. Retrieved from <https://pubs.usgs.gov/rp/092/report.pdf>

Royers, F., and Dickinson, R. (2007). *Plants of Alberta, Trees, Shrubs, Wildflowers, Ferns, Aquatic Plants & Grasses*. Edmonton, Alberta: Lone Pine Publishing.

Vitt, D.H. (2017). *A guide to mosses and liverworts of Alberta peatlands*. NAIT Boreal Research Institute. Retrieved from <https://www.nait.ca/NAIT/media/IndustrySolutions/BRI-Field-Guide-Mosses-Liverworts-Alberta-Peatlands.pdf>

Vitt, D. H., Marsh, J.E., and Bovey, R.B. (1988). *Mosses Lichens and Ferns of Northwest North America*. Canada: Lone Pine Publishing.

Warner, B.G., Rubec, C.D.A. (1997). *The Canadian Wetland Classification System*. Wetlands Research Centre, University of Waterloo, Waterloo, Ontario. Retrieved from http://www.gret-perg.ulaval.ca/fileadmin/fichiers/fichiersGRET/pdf/Doc_generale/Wetlands.pdf

Wetland Training Institute, Inc. (2010). *Pocket Guide to Hydric Soil Field Indicators Based on Field Indicators of Hydric Soils in the United States v. 7.0*. Glenwood, New Mexico: Scoles.

Appendix 2 – Stakeholder Consultation Handout

Alberta Wetland Field Guide Stakeholder Consultation

About you:

1. What is your role/interest in Alberta wetland classification and policy?
2. What tools and resources are you currently using to classify wetlands in Alberta?

Format:

3. Which reasons lead you to a preference for one or two field guides?
4. Thinking about the guidebook you've seen today and others you are familiar with:
 - What is the ideal length of a field guide? For example, DUC's Boreal Wetland Field Guide is 90 pages, NAIT's Guide to Mosses is 150, SK Ecosite Guide is 340 pages.
 - Do you value water resistant paper and rounded corners?
 - Do you prefer coil bound or spine bound?

Content:

5. Looking at DUC's Boreal Wetland Field Guide, which sections would you eliminate, if required, to achieve an ideal length? For example:
 - Glossary and definitions
 - Species list and scientific names
 - Plant ID section
6. Looking at DUC's Boreal Wetland Field Guide, what other section would you like to see included? For example:
 - Prairie/ parkland wetland forms and types
 - Soils
 - Disturbed sites
 - Policy
7. Are there other important components of the abovementioned field guides that we have missed?

Decision Key and Fact Sheets:

8. Would you like to see the AWCS key adapted into a Classification Decision Key with Yes/No answers?
9. What components of wetland fact sheets do you like or consider to be most valuable? For example:
 - Photos
 - Cross-sectional figures
 - Moisture, nutrient and hydrological regime diagrams
 - Bullet points of key characteristics, etc.

Appendix 3 – Mentimeter Results

The following are screenshots of the results produced by the interactive polling website, Mentimeter. The questions mirror those provided to stakeholders on their handouts and both in person and online attendees were encouraged to use their computers or mobile devices to participate. Some results are presented as word clouds, whereby common ideas receive larger font sizes. Other results are presented in various graphical formats or as text boxes. These results were displayed on the main presentation screen and the event facilitators would stimulate further discussion of each idea.

1. What is your role/ interest in Alberta wetland classification and policy?



Figure 1a. Edmonton, July 9th



Figure 1b. Lethbridge, July 14th



Figure 1c. Calgary, July 15th



Figure 1d. August 13th – Slave Lake



Figure 1e. Grande Prairie, August 14th

2. What tools and resources are you currently using to classify wetlands in Alberta?

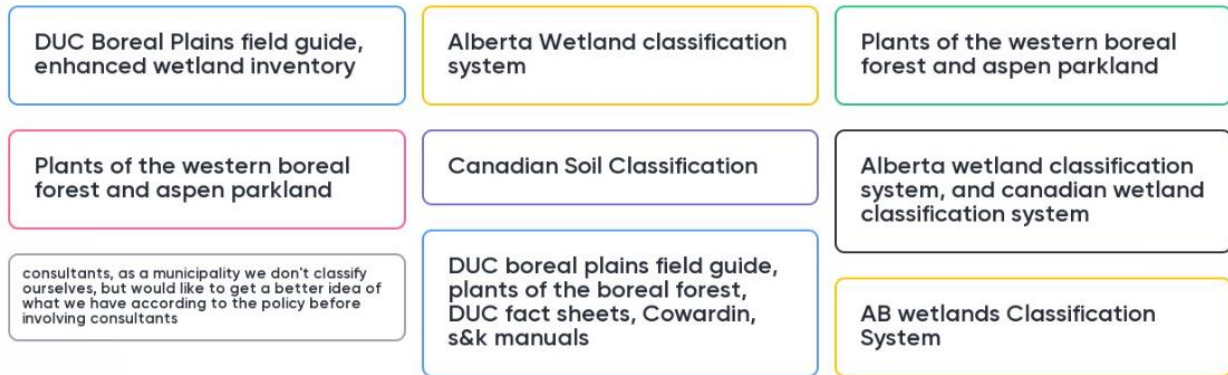


Figure 2a. Edmonton, July 9th

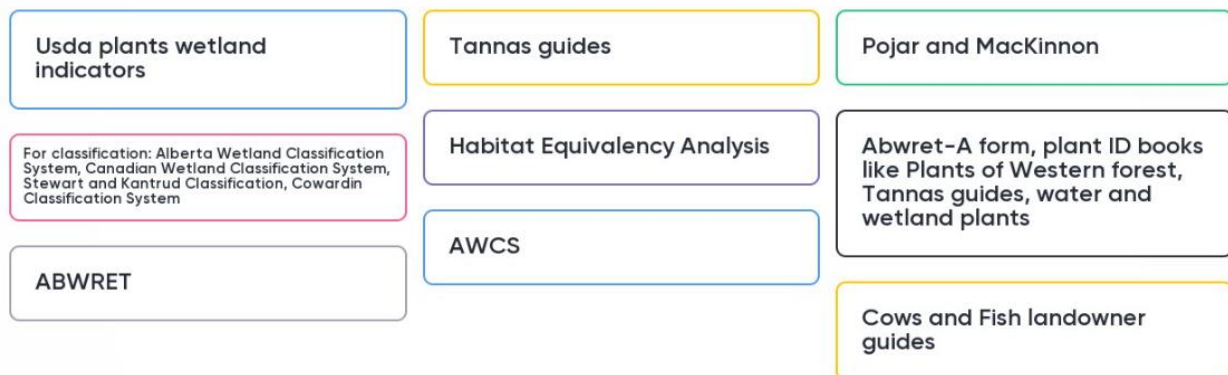


Figure 2b. Lethbridge, July 14th



Figure 2c. Calgary, July 15th

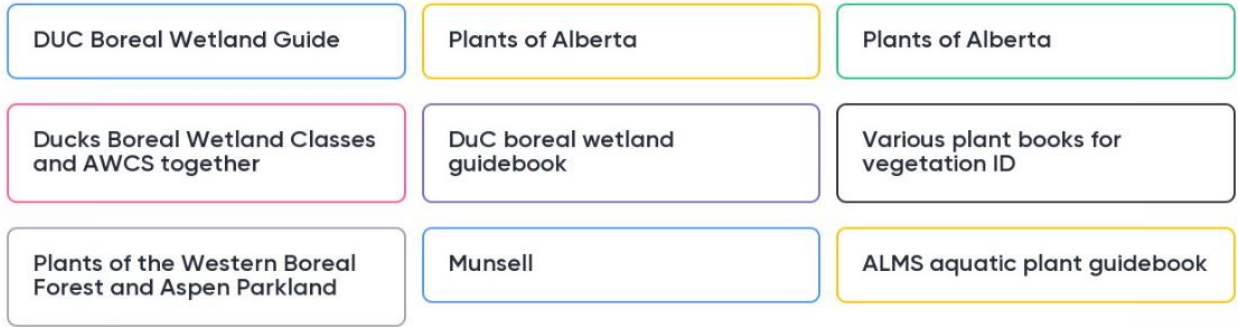


Figure 2d. Slave Lake, August 13th

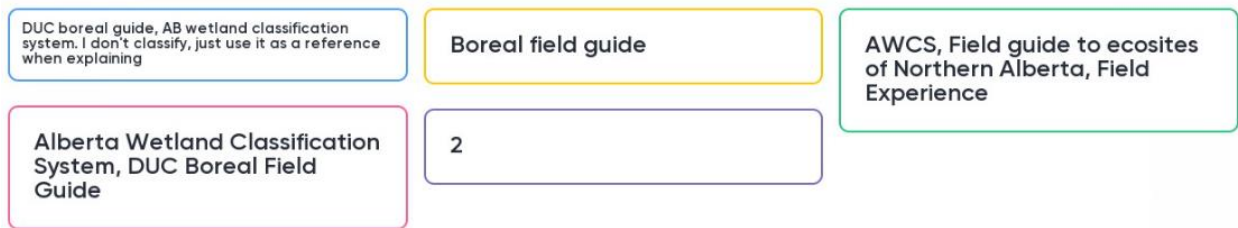


Figure 2e. Grande Prairie, August 14th

3. Which reasons leads you to a preference for one or two field guides?

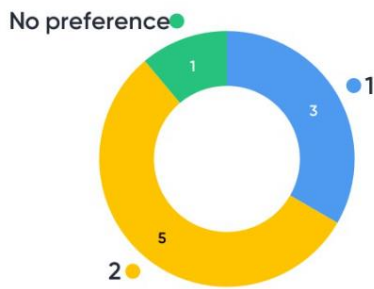


Figure 3a. Edmonton, July 9th

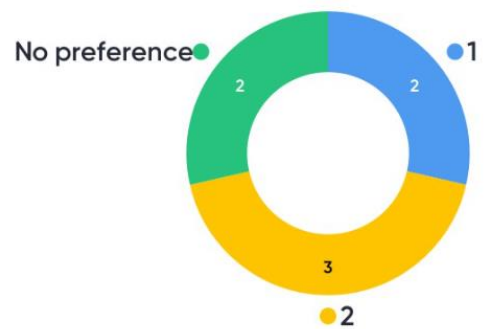


Figure 3b. Lethbridge, July 14th



Figure 3c. Calgary, July 15th

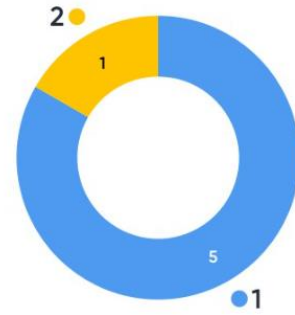


Figure 3d. Slave Lake, August 13th

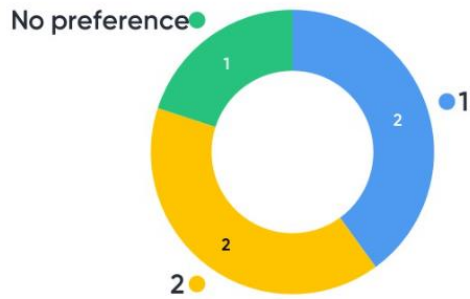


Figure 3e. Grande Prairie, August 14th

4a. What is the ideal length of a field guide?

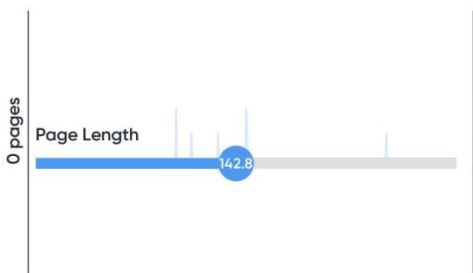


Figure 4a-a. Edmonton, July 9th

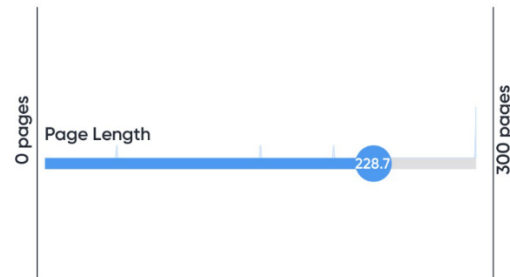


Figure 4a-b. Lethbridge, July 14th

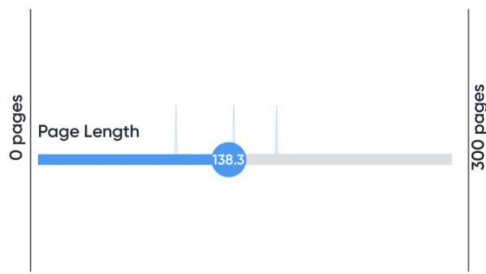


Figure 4a-c. Calgary, July 15th

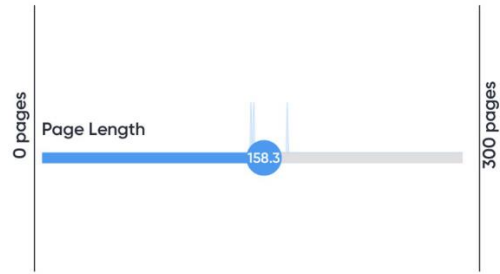


Figure 4a-d. Slave Lake, August 13th

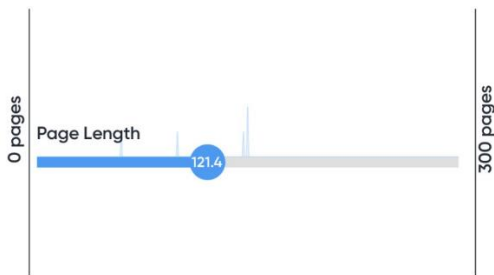


Figure 4a-e. Grande Prairie, August 14th

4b. Do you value water resistant paper and rounded corners?

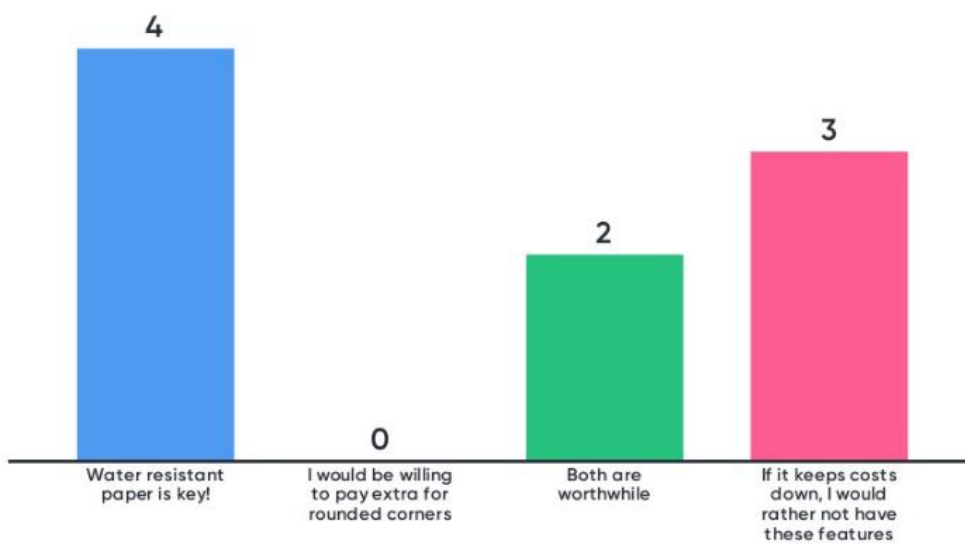


Figure 4b-a. Edmonton, July 9th

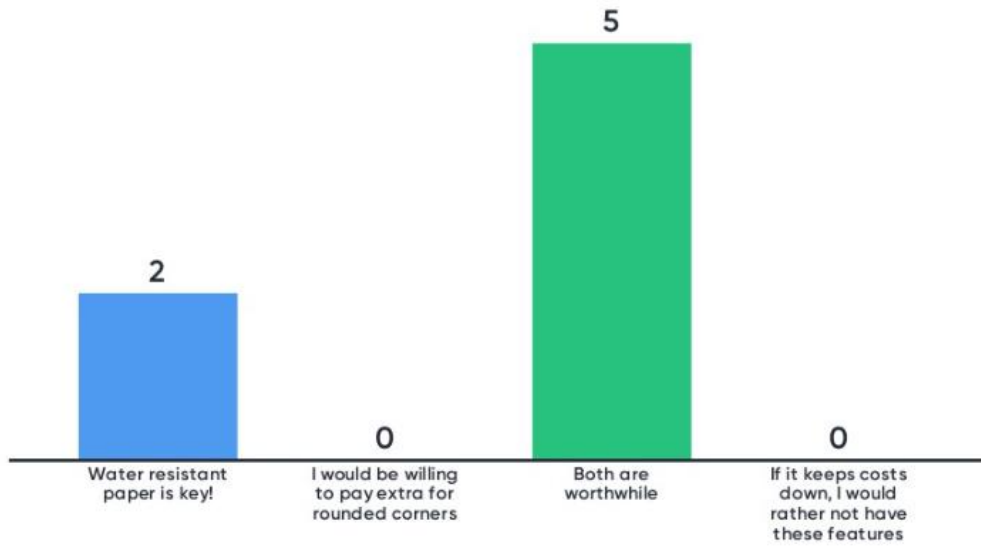


Figure 4b-b. Lethbridge, July 14th

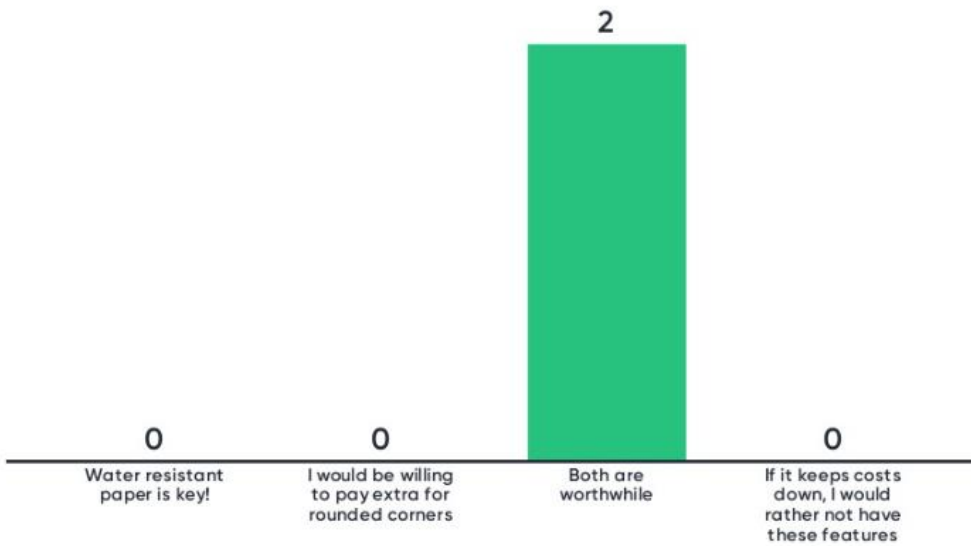


Figure 4b-c. Calgary, July 15th

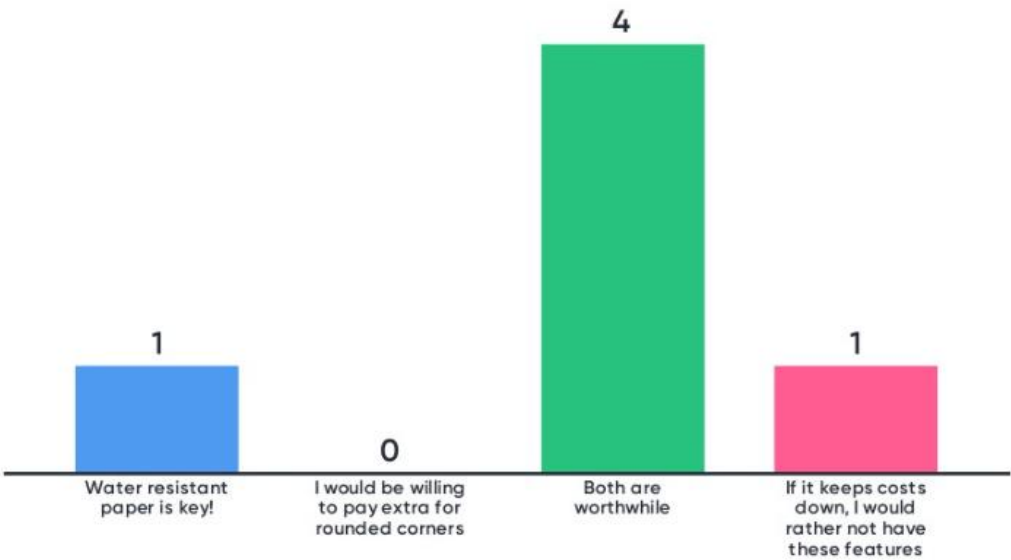


Figure 4b-d. Slave Lake, August 13th

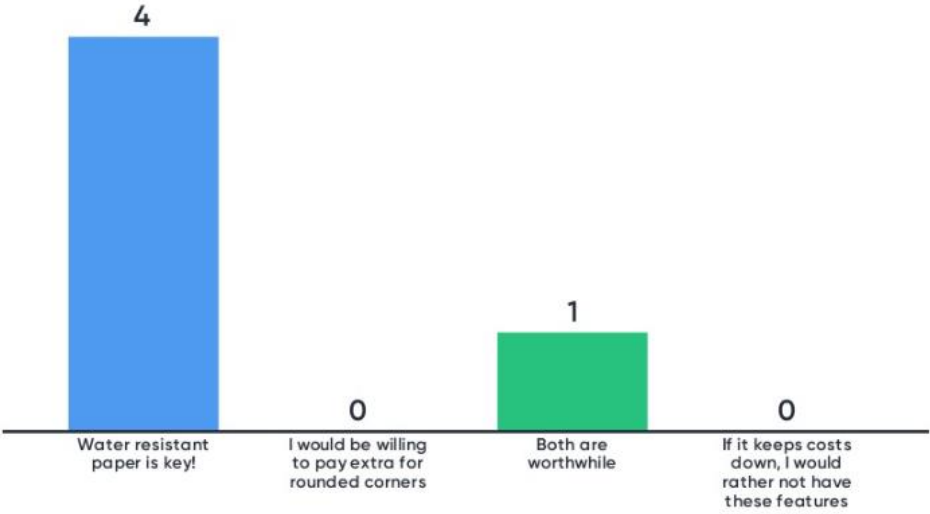


Figure 4b-e. Grande Prairie, August 14th

4c. Do you prefer coil bound, spine bound, or a small binder?

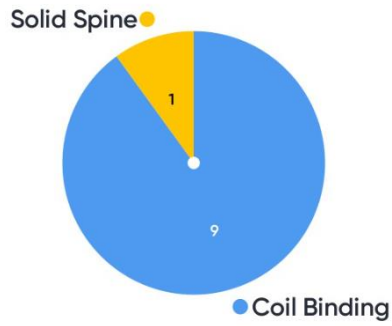


Figure 4c-a. Edmonton, July 9th

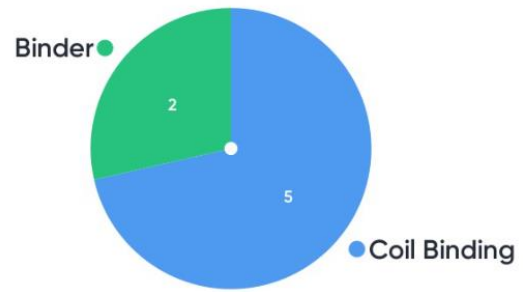


Figure 4c-b. Lethbridge, July 14th

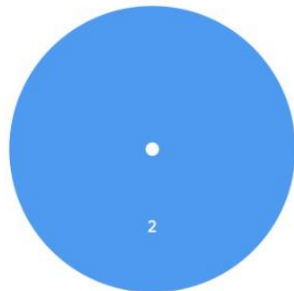


Figure 4c-c. Calgary, July 15th

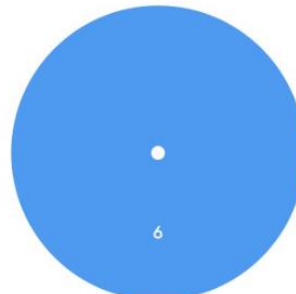


Figure 4c-d. Slave Lake, August 13th

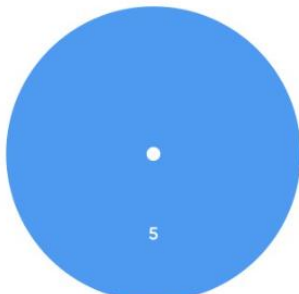


Figure 4c-e. Grande Prairie, August 14th

5. Looking at DUC's Boreal Wetland Guide, which sections would you eliminate, if required, to achieve ideal length?

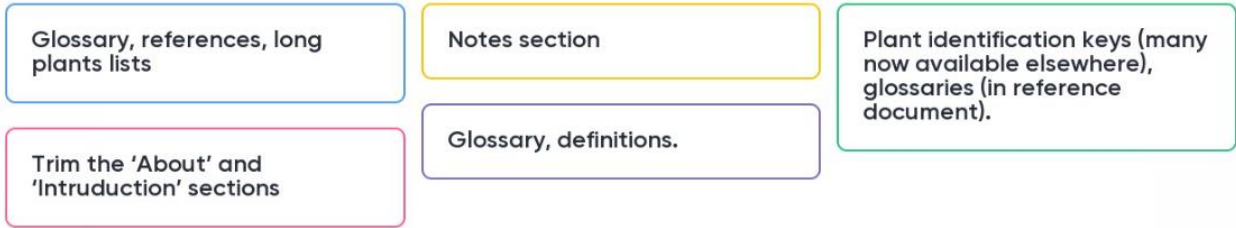


Figure 5a. Edmonton, July 9th

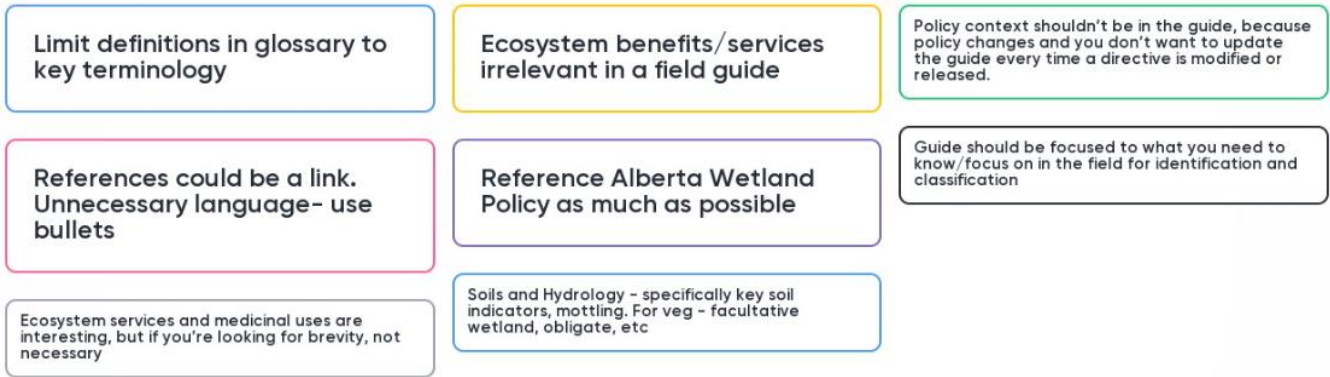


Figure 5b. Lethbridge, July 14th



Figure 5c. Calgary, July 15th

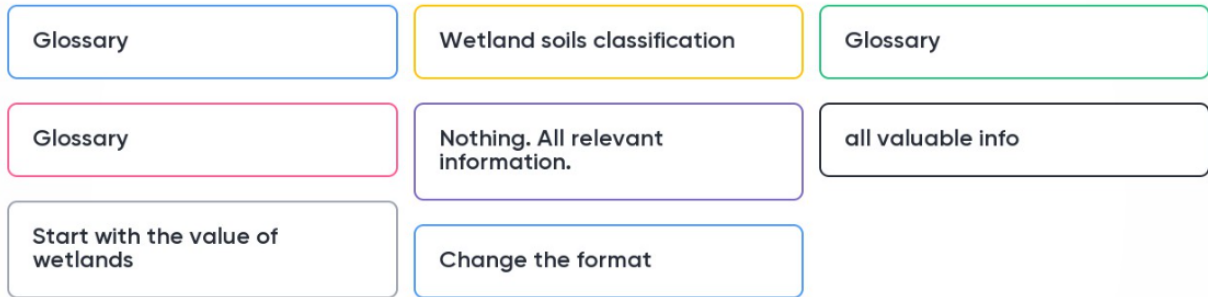


Figure 5d. Slave Lake, August 13th



Figure 5e. Grande Prairie, August 14th

6. Looking at DUC's Boreal Wetland Field Guide, what other sections would you like to see included?

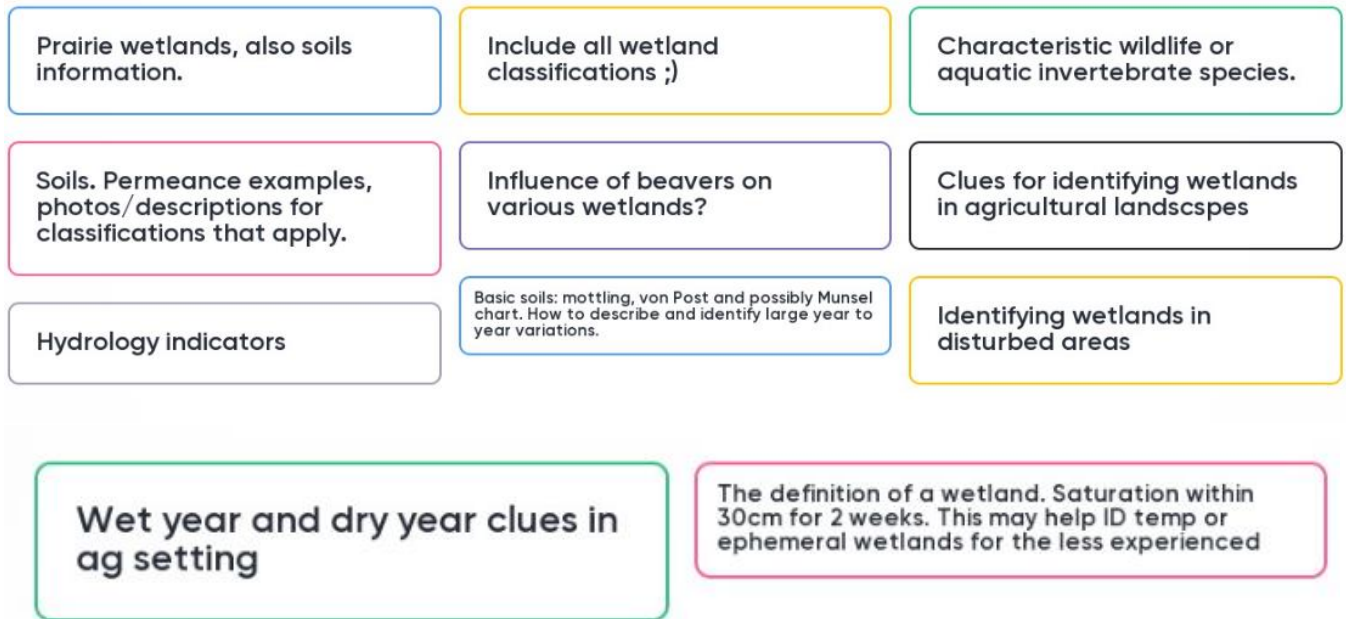


Figure 6a. Edmonton, July 9th

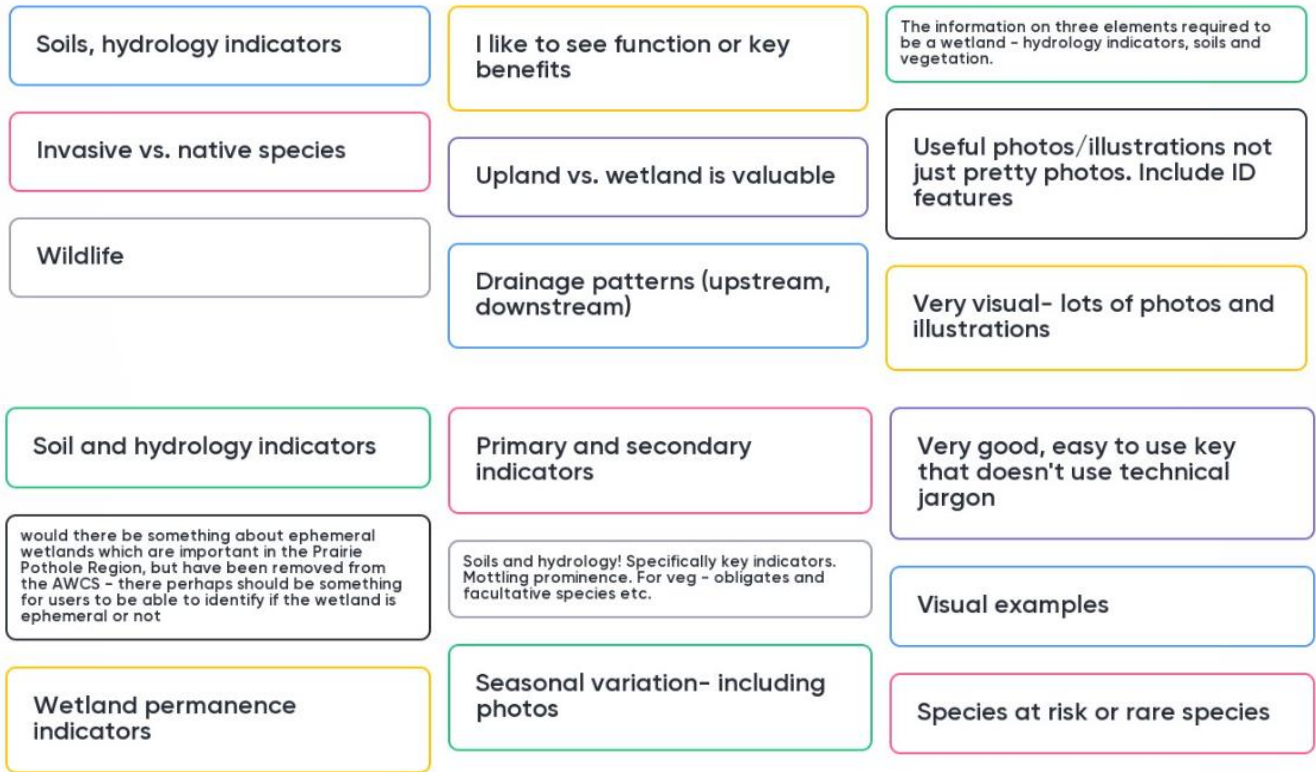


Figure 6b. Lethbridge, July 14th



Figure 6c. Calgary, July 15th



Figure 6d. Slave Lake, August 13th

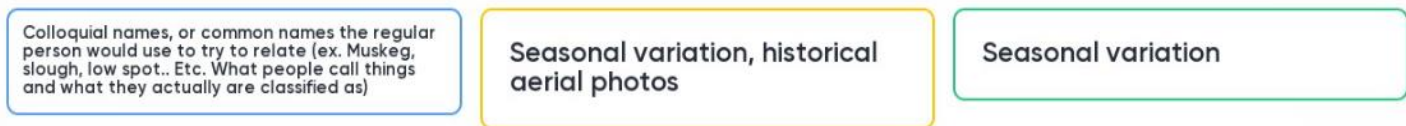


Figure 6e. Grande Prairie, August 14th

7. Are there other important components of the abovementioned Field Guides that we have missed?

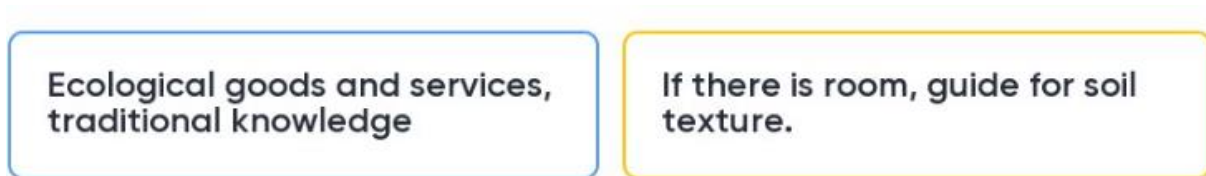


Figure 7a. Edmonton, July 9th

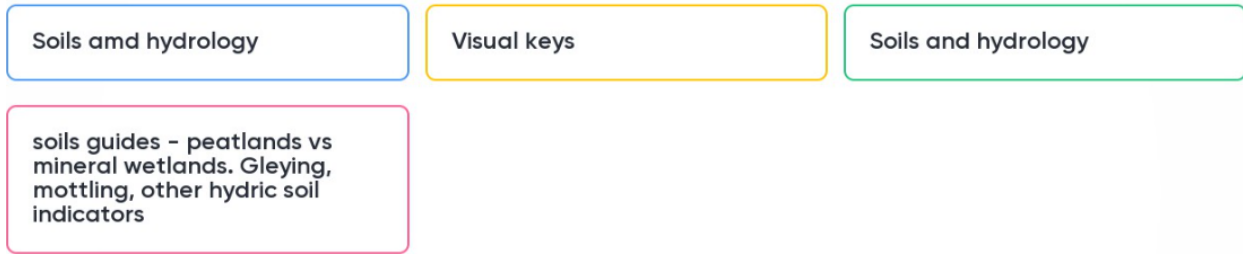


Figure 7b. Lethbridge, July 14th

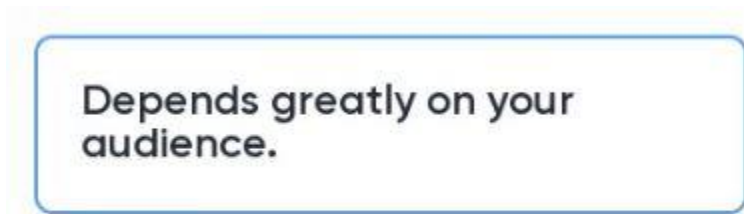


Figure 7c. Calgary, July 15th

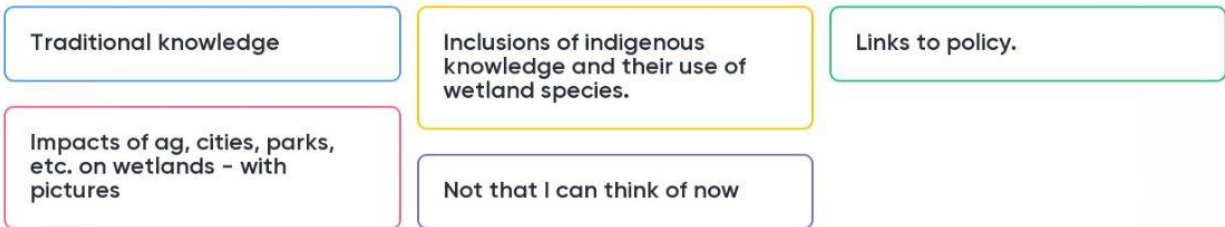


Figure 7d. Slave Lake, August 13th

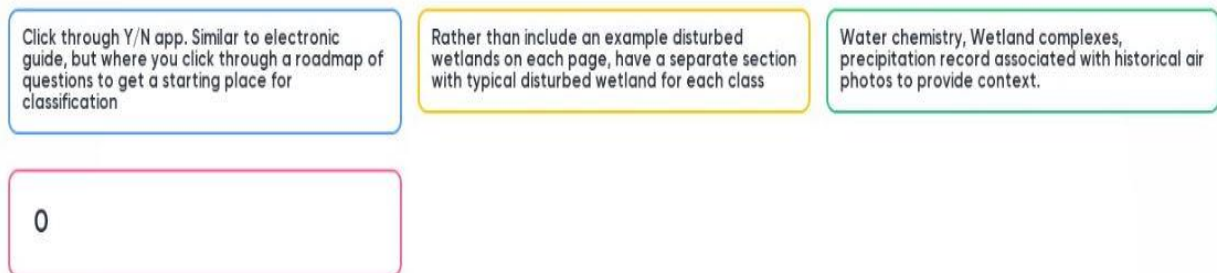


Figure 7e. Grande Prairie, August 14th

8. Would you like to see the AWCS key adapted into a Classification Decision Key with Yes/No answers?



Figure 8a. Edmonton, July 9th



Figure 8b. Lethbridge, July 14th

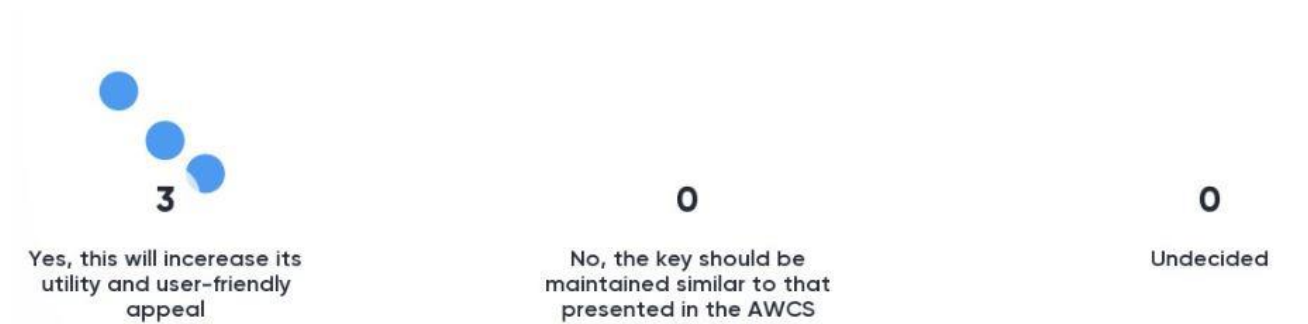


Figure 8c. Calgary, July 15th

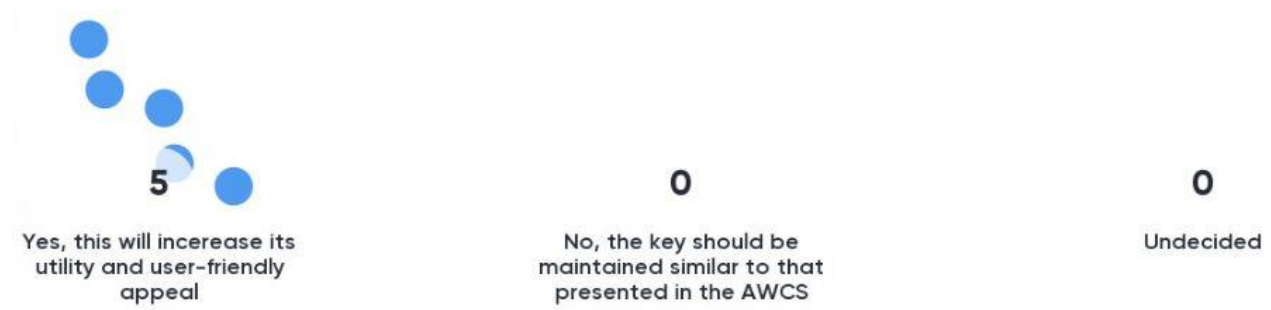


Figure 8d. Slave Lake, August 13th

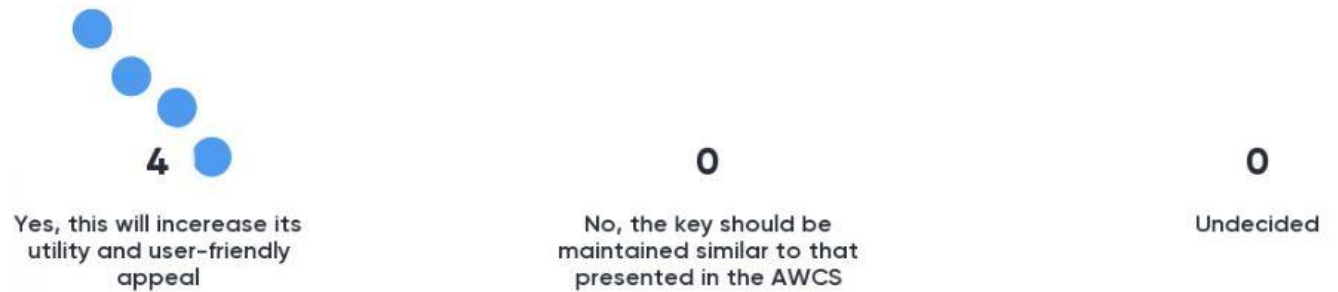


Figure 8e. Grande Prairie, August 14th

9. Which component of the Wetlands Fact Sheets do you like or consider to be most valuable?



Figure 9a. Edmonton, July 9th



Figure 9b. Lethbridge, July 14th



Figure 9c. Calgary, July 15th



Figure 9d. Slave Lake, August 13th

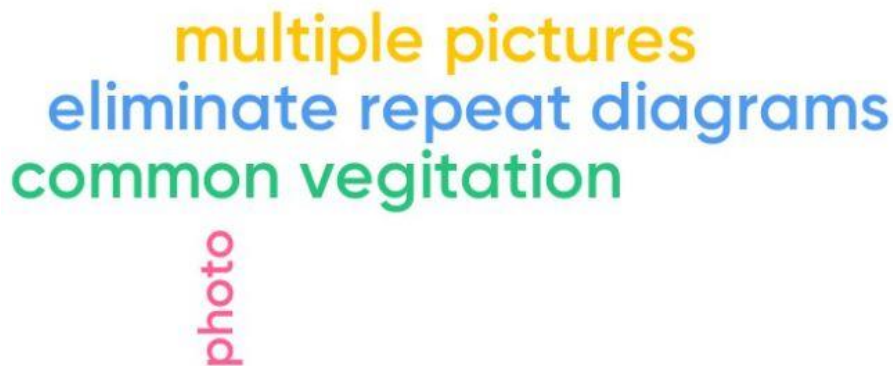


Figure 9e. Grande Prairie, August 14th