Appendix C:

WHAT WE HEARD SUMMARY

1. Introduction

Parkland County Council Policy C-AD17 "Public Consultation" outlines a framework for public consultation to inform planning and development decision making. As per this policy, a Public Consultation Plan was developed with County staff at the outset of the Environmental Conservation Master Plan (ECMP) and Policy Updates project. The Plan ensures that the level of public involvement is appropriate to project decision-making, and that consultation activities meaningfully engage all potentially affected participants.

This report describes public consultation undertaken for this project to this point, and provides a detailed account of the information gathered through consultation activities. As a living document, this report will be updated as the project progresses.

1.1 Approach to Public Consultation

Residents and stakeholders are being extensively consulted throughout the three-phase project. The participation goals for the project include:

- County-wide representation of a cross-section of residents
- Level of involvement allows for participants to be adequately consulted throughout the process
- Participants are aware of the project, and understand all project deliverables

1.2 Participants

Five distinct participant groups were identified for this project. Targeted engagement and communications strategies were developed for each group.

1. **Technical Stakeholders.** Technical stakeholders include research organizations, provincial government/agency staff, municipal government staff from adjacent municipalities, and representatives from residents' associations, environmental stewardship groups, the development industry, and the resource industry. Phone interviews and workshops will be used to present and gather technical information from this group.
2. **General Public.** The general public includes all Parkland County residents. A combination of in-person and on-line engagement activities are planned to maximize participation. Notification about in-person events will be provided through social media and print-based notification in the County newsletter, local newspapers, and through project postcards.
3. **First Nations.** Two First Nations are located within the study area. In recognition of their status as a separate level of Government, engagement with the Paul First Nation (Wabamun No. 133) and the Enoch Cree Nation (Stony Plan No. 135) will be coordinated through the Office of the Mayor.
4. **Parkland County Committees and Council.** The Environmental Advisory Committee (EAC) advises Council on environmental initiatives and programs. The EAC is comprised of one Parkland County Council member and six public members. Parkland County Council is the ultimate decision-maker for this project. Regular updates to the EAC and Council will be provided to keep these groups informed of project progress, and members will be invited to participate in workshop and open house events.
5. **Parkland County Staff.** Staff will be invited to participate in workshop events and kept informed of project progress through regular email updates. An implementation workshop will be developed for staff in Phase Three to identify tools to help achieve department objectives as they relate to the environment.

1.3 Evaluation Strategy

An on-going approach to consultation evaluation has been adopted for this project. Participation rates for on-line and in-person events will be regularly monitored, and exit-surveys after workshops and open houses will be administered.

Utilizing this evaluation strategy allows the team to adjust consultation activities throughout the project. The following adjustments were made based on feedback and evaluation:

- The response window for the initial on-line survey was extended to maximize participation as interest in the project expanded.
- Recommendations for how to improve communication and consultation events will be incorporated into planning for Phase 2 and Phase 3 consultation activities, and shared with County staff planning other engagement activities. Recommendations included:
    - "Heads up" about existing social media networks that could be used for the project
    - A request to use meeting facilities with more break-out space for group discussions
    - Larger format display material

2. Phase One

Phase One of the project updates the 2004 Environmental Conservation Master Plan, including an inventory of Environmentally Significant Areas (ESAs) and the identification of "best practices" for conservation and protection. Consultation for this phase was designed to build support and understanding for the project, and to receive input to help identify ESAs.

Phase One Consultation Objectives

- Work with technical stakeholders to identify most recent data sources for ESA modelling and analysis
- Work with the public to identify environmental priorities and management issues within Parkland County
- Present and gather feedback on ESA analysis, mapping and priority areas of conservation concern
- Work with all participants to identify a preliminary list of best management practices for the conservation and protection of environmental areas

This section describes the consultation activities that were undertaken, analyzes consultation results, and presents findings. Information gathered through Phase One consultation is being used to develop the final ECMP.

2.1 Technical Stakeholder Consultations

Over forty individual technical experts were contacted by O2 to ensure that the initial development of ESA modelling criteria was well informed and that the best available data sources were being used. A standardized interview guide was used to conduct the interviews and record responses. The following technical experts participated in the interviews:

- 21 provincial government staff
- 7 university academics
- 12 non-government organizations

The technical interviews helped identify pertinent sources of information, including spatial data sets, regional resource inventories, information and reports, and contextual knowledge and expertise. Information gathered during the interviews were critical for understanding the County's environmental resources and values, verifying the appropriateness of spatial data sources, and identifying areas of conservation value, such as ecological research areas, that had not been mapped in the past. The interviews were effective in translating local knowledge into ESA criteria and spatial data. O2 staff received some technical feedback on data, reports, and contextual knowledge and experience from 32 individuals or approximately 80% of all those contacted.

2.2 Initial Public Online Survey

An online survey was conducted to gain an understanding of the environmental priorities and environmental management issues of interest to the general public in Parkland County. Table 1 describes survey format and administration.

Table 1. Phase One Survey Overview

	Phase One Survey
Duration	September 4, 2013 – October 25, 2013
Format	Likert-scale and multiple choice Two open-ended questions
Response Rate	186 responses
Advertising	Newspaper Advertisements Parkland County Communicator Project Website Social Media Word of Mouth

Questions asked Parkland County residents to prioritize environmental values and management issues in their community for the following broad themes:

- Biodiversity and habitat values
- Water resources
- Social and cultural elements
- Development and environmental protection trends

2.2.1 Survey Findings

Survey responses informed the overall weights for ESA modelling criteria, and provided the project team with an understanding of environmental priorities for Parkland County residents. Table 2 to Table 9 present survey findings.

2.2.1.1 Resident Representation

Baseline data on resident representation was gathered to provide a complete picture of survey participants. Participants were asked to identify where they lived, the type of residence they occupied, and their age range.

As the survey was meant to gather feedback from Parkland County residents, participants who identified as residents of Spruce Grove, Stony Plain or Edmonton were screened out of the survey after the first question.

Table 2. Area of Residence

1. Where do you live?		
Answer Options	**Response Percent**	**Response Count**
In Parkland County	74%	137
In Spruce Grove	8%	14
In Stony Plain	6%	11
First Nation	1%	1
Village or Summer Village	3%	6
Other (please specify)	9%	17
Answered question		186

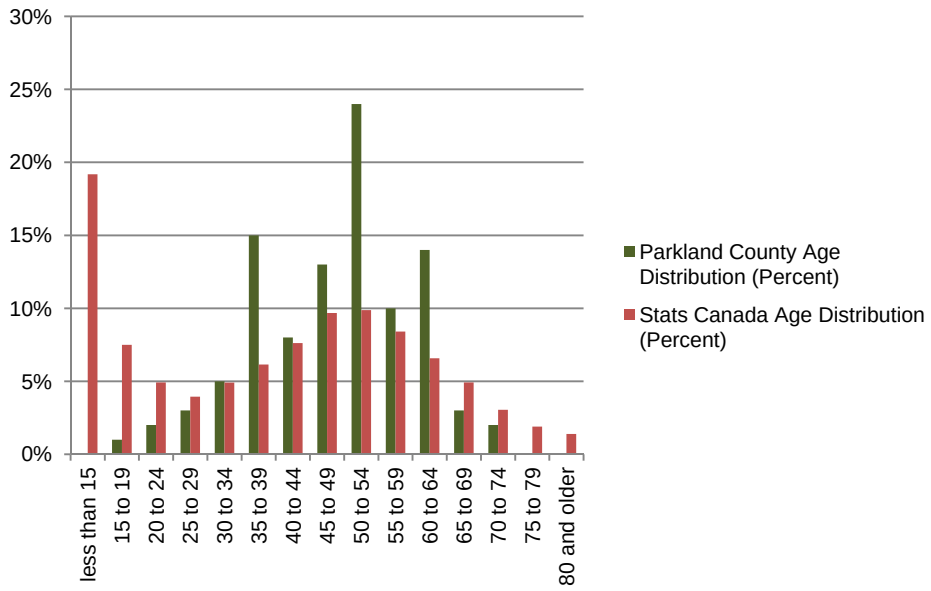
Table 3. Division of Residence

2. In which division in Parkland County do you live?		
Answer Options	**Response Percent**	**Response Count**
Division 1	15%	20
Division 2	18%	24
Division 3	7%	9
Division 4	5%	7
Division 5	27%	35
Division 6	5%	6
Don't know	23%	30
Answered question		131

Table 4. Type of Residence

3. Please tell us which of residence or community in Parkland County in which you live.		
Answer Options	**Response Percent**	**Response Count**
Working farm	9%	12
Acreage in a subdivision	69%	90
Acreage, not in a subdivision	17%	22
In a mobile home village or community	3%	4
In a hamlet	2%	3
Other (please specify)	0%	0
Answered question		131

Figure 1. Age Distribution



The results suggest that a good cross-section of Parkland County residents participated in the survey. Most respondents report living on an acreage, within a subdivision. Acreage development is the most prevalent built form within the county, and is well-represented by respondents. Participation rates from working farmers and residents living in hamlets is also consistent with built form trends.

In terms of geographic representation, there is slight under-representation from Divisions 3, 4 and 6. As was highlighted in the survey, environmental features in the western portion of the County experience different types

of development pressure than those in the east. This is underscored by the frequency of open-ended responses that identified concern for areas such as Osborne Acres, Wagner Natural Area and Lake Wabamun in the later part of the survey.

With regard to age distribution, middle-age adults were over-represented and residents aged 30 and younger were under-represented. The age distribution for this survey can be considered typical for this type of project.

2.2.1.2 Issues of Environmental Importance

Residents were asked to rate the importance of different concepts and indicators for each ESA criteria theme. Results from this portion of the survey helped assign weights to the themes, which were then used in ESA modelling and mapping. Table 5 compiles the results across all indicators, and ranks their relative level of importance to Parkland County residents. Table 6 shows the weights assigned to each criterion, and how results from the survey were utilized to assign the weight. By raising the score of an ESA criteria and environmental sensitivity layer, that criteria will contribute more towards the overall environmental significance score for a given area. By reducing a criteria weighting, more highly-weighted layers will tend to dominate. Higher weights make criteria more prominent, whereas lower weights lessen the priority given to certain criteria.

In addition to helping weight the model, findings suggest that environmental issues related to groundwater and surface water, as well as riparian areas, water quality and water quantity are most important to residents.

Table 5. Criteria Scores

Criteria	Average Survey Scores (out of 5)	Standard Deviation
Bird Habitat	4.62	0.87
Wetlands	4.61	0.78
Wildlife Habitat	4.59	0.83
Provincial Parks	4.54	0.70
Riparian Areas and Lakeshore Environments	4.54	0.74
Fish Habitat	4.53	0.66
Surface Water Resources	4.52	0.87
Groundwater Resources	4.51	0.83
Water Quantity (flowing into rivers)	4.50	0.75
Major River Valley Systems	4.50	0.75
County Conservation Areas	4.49	0.78
Lake and River Water Quality	4.41	0.91
Nature Corridors and Connecting Areas	4.41	0.91
Rare Plants	4.29	1.10
Research Areas	4.07	1.02
Scenic Quality	4.05	1.19
Landforms	3.98	1.35
Historic Resources	3.86	1.20
Recreation and Tourism Values	3.55	1.62
Steep Slopes	3.54	1.96

Table 6. ESA Criteria Weighting

Theme	# of Data Layers	Overall Theme Weight (0-1)*	Primary Justification
1- Species and Habitats	7	0.5	Data gaps, public survey
2- Landscape Ecology	9	1	Inventory of landscape, public survey
3- Wetlands Potential	3	0.5	Data gaps and errors, overlaps with several other criteria
4- Landforms	2	0.75	Public survey, steep slopes geotech and water quality considerations
5- Groundwater Resources	7	1	Public survey, inventory of landscape
6- Surface Water Resources	14	1	Public survey, inventory of landscape
7- Protected Areas	2	0.5	Should not reconfirm existing land status – many important areas will be unprotected
8- Research Areas	1	0.25	Public survey, data gaps, potential for future research even if not currently studied

*1 being most important
Overall ESA score = [(Theme 1 Scores x Weight) + (Theme 2 Scores x Weight), … etc] /8

2.2.1.3 Attitudes Toward Development and Environmental Protection

Residents were asked to identify the current balance between development and environmental protection in Parkland County, as well as specific activities of environmental concern. Table 7 and Table 8 present the results.

Table 7. Balance Between Development and Environmental Protection

11. What is the balance between development and environmental protection in Parkland County? Select the answer below that best represents your opinion.		
Answer Options	**Response Percent**	**Response Count**
Development and environmental protection are currently well balanced in Parkland County.	5%	6
Development and environmental protection are currently well balanced in Parkland County, but I am concerned about future environmental impacts due to development	54%	64
There is too much development in Parkland County	35%	42
There are too many environmental regulations and policies in Parkland County	6%	7
Answered question		119

Table 8. Level of Environmental Concern

12. How concerned are you about the environmental impacts of specific activities in Parkland County? Please indicate your level of concern with each activity listed below.							
Answer Options	**Not at all concerned**	**Slightly concerned**	**Moderately Concerned**	**Very Concerned**	**Extremely Concerned**	**Rating Average**	**Response Count**
Motorized recreation (e.g., motorize off-highway vehicle use)	9	17	19	22	46	3.70	113
Lakefront/riverfront development	9	17	18	34	35	3.61	113
Oil and gas (wells, facilities and pipelines)	2	19	35	28	29	3.56	113
Industrial/business park development	8	15	32	22	35	3.54	112
Highways and vehicle traffic	5	16	35	30	26	3.50	112
Coal mining / power plants / electricity transmission	6	17	35	27	28	3.48	113
Gravel /sand pits	7	20	31	27	27	3.42	112
Peat harvesting/forestry harvesting	14	26	36	20	17	3.00	113
Country residential and acreage development	20	20	33	26	14	2.95	113
Agriculture – livestock	29	28	33	16	7	2.50	113
Agriculture – crops	36	25	31	14	7	2.39	113
Other (please specify)							23

Note: Rating Averages that are a higher number are considered to be of greater concern to residents

The responses indicate that residents are concerned about future impacts to the environment resulting from development. This would suggest that residents support the development and implementation of environmental protection initiatives at the policy level. The project team will look to leverage this support during future consultation events to develop best management practices for inclusion in the ECMP.

The responses are also helpful for identifying specific types of activities that are of concern to residents. Motorized recreation, lakefront and riverfront development, oil and gas operations, and industrial / business park development rank quite highly as activities of concern.

It is important to note that country residential and acreage development does not rank very highly as an issue of concern to residents. However, this pattern of development does have a significant environmental impact in terms groundwater resources, species and habitat and landscape ecology. Common best practices for limiting the impacts of residential development include more compact development patterns and intensification targets. The survey findings suggest that these best practices may not resonate with Parkland County residents as acreage development is not identified as an environmental concern. This issue may need to be monitored as policy development progresses through Phase Two and Three of the project.

The analysis of open-ended responses to the “Other (please specify)” options throughout the survey provides further insight into respondent concerns about the environment. Issues and concerns, as well as opportunities and policy area suggestions are summarized in Table 9.

Table 9. Issues and Concerns

Issue / Concern
1. Impacts on groundwater and the Osborne Acres neighbourhood from industrial development
2. Inappropriate or intense recreational use of natural areas and lakes from boaters, snowmobiles and off-highway vehicles
3. Impacts to groundwater resources from sewage, residential fertilizer and some farming activities
4. Impacts to surface water resources (lakes and rivers) from lakefront development
5. Loss of wetlands
6. Noise and light pollution
7. Aerodrome/air park development

Table 10. Opportunities and Policy Suggestions

Opportunity / Policy Area Suggestion
1. Improved farmland protection
2. Improved access to recreation opportunities in nature (boat launches, designated OHV areas)
3. Improved enforcement of environmental protection legislation
4. Notification of environmental protection requirements at the development permitting stage
5. Improved tree preservation requirements or planting initiatives
6. Maintaining a connected landscape with natural areas free from development
7. Improved management of resource extraction activities
8. Protection of Wagner Natural Area

2.3 Stakeholder Workshop

One stakeholder workshop was held to present and discuss the draft inventory of Environmentally Significant Areas (ESAs) with project stakeholders. Stakeholders were given the opportunity to review the proposed ESA boundaries, as well as the results for each theme of environmental significance that contributed to the overall ESA score. Recreation, scenic and cultural resources overlays were also presented, along with a map of potential development pressures. Table 11 describes the workshop format.

Table 11. Workshop Overview

	Phase One Stakeholder Workshop
Date, Time and Location	December 4, 2013 9:30 am – 2:30 pm Muir Lake Community Hall 53424 Highway 779
Format	Rotating World Café • Fosters open discussion among stakeholders • Allows for simultaneous discussion of multiple themes in small group settings • Encourages cross-pollination of perspectives amongst participants
Attendance	48 stakeholders, representing a diverse cross-section of interests in the project: • Parkland County staff • Provincial government / agency staff • Municipal government staff (neighbouring municipalities) • Research organizations • Residents' associations • Environmental stewardship / conservation groups • Development industry • Resource industry (oil/gas/coal/gravel/peat)
Advertising	Email invitation and follow-up reminders Agenda package • Workshop agenda • Draft mapping results • Data sources/methodology table

The workshop objectives were as follows:

- Present and gather feedback on ESA analysis (modelling/mapping results)
- Receive feedback on beneficial management practices (BMPs), including industry-specific BMPs for each theme of environmental significance

The workshop included six themed stations that corresponded to mapping prepared for the project. The stations were:

- Station 1: Species, Habitats and Landscape Ecology
- Station 2: Wetlands, Landforms and Steep Slopes
- Station 3: Groundwater and Surface Water Resources
- Station 4: Protected Areas and Development Pressure
- Station 5: Recreation, Scenic and Cultural Resources
- Station 6: Environmentally Significant Areas (ESA) Inventory

2.3.1 Summary of Findings

Input was gathered at the workshop through one-on-one conversations with stakeholders, group discussions and comment sheets. This input was documented, collated and analyzed.

The following section summarizes key findings from the workshop. Input received has been directly incorporated into the ECMP, and will inform the development of municipal policies and tools in subsequent project phases.

A detailed record of findings is included at the end of this report, organized by station. Comments relating to BMPs are presented, and questions/issues requiring follow-up are tracked in a table.

2.3.1.1 ESA Analysis

Three core themes emerged from stakeholder comments in relation to ESA analysis and identification. These themes include:

1. **Data sources and methodology.** Stakeholders were very interested in understanding the data sources that were used to generate ESA results. Group discussions and one-on-one interaction helped clarify answers to specific questions about project methodology. Questions tended to focus on where data sets were obtained and the type of information they contained, and on identifying specific species occurrences within a given geographic area. Stakeholders wanted to confirm that specific species records were included in the analysis, and provided “heads up” information about species observations.

   There was also considerable discussion at the Recreation, Scenic and Cultural Resources station about more clearly defining the criteria used to generate the scores for this overlay. In addition, several stakeholders indicated that some areas highlighted in the scenic map (e.g., east side of Wabamun Lake) do not to fully represent the experience of individual users in that environment.

   How comments were addressed
   - A data sources table was used to answer questions, and the ECMP report will contain a section explaining the project methodology in greater detail.
   - The intent of the project is to identify environmentally significant areas at the County level (a regional scale). The data is therefore meant to identify species occurrences at a regional scale, rather than to provide an exhaustive list of species by individual parcel. Species of conservation concern with observations available from provincial data sets will be identified in individual ESA fact sheets.
   - For inclusion in the data sources used for this project, species occurrences must be reported and recorded in provincial databases by a registered professional biologist.
   - Given the interest in reporting species occurrences, a potential tool to consider may be a County-wide database for tracking species observations to which everyone can contribute, and that is verified by a biologist on a bi-yearly basis.
   - The criteria used for Scenic Resources were based on a provincial modelling study which in turn is based on a well developed system for mapping scenic quality developed by the United States Department of Agriculture over many years. Criteria and methodology will be better explained and referenced in the report to ensure clarity.
   - County-wide results should not be expected to be completely accurate throughout the county for all pieces of the landscape. One option to address concerns about scores and values for the scenic map is to create a simplified map calling out key scenic and cultural areas, without high/low scoring assigned to the entire county. This solution would address stakeholder feedback while still incorporating the broad regional scale models as a guide. Alternatively, if a detailed county model is desired to optimally reflect the values of Parkland County residents, this could potentially be explored as an additional project as part of the Municipal Development Plan (MDP) update.
2. **Modelling/mapping results.** Stakeholders provided comments and observations about individual ESA boundaries, individual theme scores, overall ESA scores and the classification scheme. The Wagner ESA and the Lake Wabamun ESA were given considerable attention. Specifically, suggestions were made to review the Wagner ESA to amend the boundary further east and southwest to include the additional marl

ponds that occur outside of the provincial Natural Area north of Osborne Acres and within Spruce Grove, respectively. In addition, there were questions as to why the ESA boundary along Lake Wabamun's south shore was so narrow (some people thought it was not even present based on the map scale) whereas there appears to be a large ESA along Lake Wabamun's north shore (due to the location of the Fallis Slopes ESA). It was suggested that the Lake Wabamun ESA boundary should be extended further south. It was also highlighted that the buried valley aquifer may be narrower than is shown in the Groundwater Resources map. Comments associated with boundary extensions were closely tied to concerns about policies, regulation and protection of ESA areas.

Several stakeholders also enquired about the application of the recreation, scenic and cultural resource use overlays in relation to the overall project, and about how the classification of significance will inform policy development, level of protection and jurisdiction. Additional detail about development pressures currently facing ESAs was also gathered, including a suggestion to include future transportation infrastructure pressures on the map.

How comments were addressed

- Overall scores for areas surrounding the Wagner ESA as well as the county orthophoto was reviewed at high resolution. It was determined that there are obvious gaps in provincial data inputs and that there are clearly wetlands that are likely spring-driven and most likely have the same characteristics as the marl ponds within the Wagner Natural Area itself- these are found west of Atim Road. There are also some potentially similar wetland formations within the forests located north of Osborne Acres, which, although not as visible from the orthophoto, were confirmed a technical report. As a result, boundaries of the Wagner ESA were extended outwards to include these areas.
- The consultant investigated whether the overall score for Lake Wabamun and other lakes in the County do take into consideration the riparian areas around the lake. All riparian areas around streams and lakes have been given relatively high scores based on multiple riparian area data sets. The scale of the map is what makes the boundary appear to be a thin line. In addition, in some specific cases where development around lakes has taken place, specific areas may have low scores and in some cases may have been excluded from initial draft ESA boundaries. In order to address these concerns, it was decided that all lakeshore-related ESAs will include a minimum 100 m buffer area around the lakeshore. This conservative approach will be noted and needs to be considered within policy development in future project phases.
- The identification of ESAs will help inform policy and planning to better protect these areas. ESA results present a comprehensive picture of where areas with significant environmental value are located, and will help direct County resources and attention to enhance environmental protection. The intent of the study is not to identify boundaries to the lot line, but to provide a regional picture of where areas of environmental value are located. Other processes, such as Area Structure Plans (ASPs) and subdivision / development applications will outline developer requirements to confirm boundaries of ESAs based on field surveys and more detailed information collected for that specific area. These types of policies will be explored in Phase 2 and Phase 3 of the project.
- The original intent for the Recreation, Scenic and Cultural Resources overlay is to enmesh environmental conservation with recreation values to protect valued regional landscapes. However as this may be causing confusion and a layer of complexity within the report future drafts may include this information under a separate cover.

3. **Cartography.** Stakeholders provided comments about how study findings are mapped. Several stakeholders asked to review maps at a finer grain of detail. One suggestion was to provide a land ownership layer so that people reviewing the data can comment in more detail to direct impacts to their property. Another suggestion was to include a land use layer to provide a better understanding of environmental protection within the context of broader County land uses.

   How comments were addressed

   - The project team explored the feasibility of enabling the web mapping tool to "zoom in" to ESAs in greater detail, either through higher resolution images or by including the property map as a layer in the tool. After careful review, the team determined that these updates would not improve the functionality

of the tool and would result in extremely slow connections for most users due to large size of orthophoto imagery. Instead, individual ESA fact sheets were made available for review upon request.

- Individual fact sheets for ESAs will also provide parcel boundaries and residents will be able to locate specific boundaries of their property in relation to ESAs.

2.3.2 Beneficial Management Practices (BMPs)

Stakeholders discussed beneficial management practices (BMPs) for each theme of environmental significance. In addition to a list of industry-specific BMPs, three broad themes emerged from this discussion:

1. **Education and outreach.** Stakeholders clearly identified the need for better education of residents, property owners and specific industry/user groups about environmental issues in Parkland County. Suggestions included:
    - Improved signage of environmentally significant lands
    - Fact sheets and presentations for targeted user groups (e.g. lakeshore residents, OHV users)
    - Searchable databases or an interactive mapping platform
    - Collaborative data gathering programs
    - Use language and level of detail that is easy for people to understand
    - Conduct education and outreach before disturbances occur

2. **Compliance and enforcement.** Stakeholders highlighted that a significant challenge to environmental protection is poor compliance and enforcement of policies and regulation. The following suggestions were identified for addressing compliance and enforcement issues:
    - Reward exemplary behaviour, report on violations
    - Include an environmental checklist as condition of development approval, and provide information about environmental rules, policies and best practices at the time of approval
    - Create tax incentives to encourage private stewardship
    - Emphasize the social, economic and environmental benefits of responsible land management
    - Translate policies into bylaws to ensure enforceable consequences
    - Compliance and enforcement is closely linked to education and outreach

3. **Support and Compensation**. Stakeholders frequently cited the Alternative Land Use Services (ALUS) program as an example of an approach that supports landowners implement responsible environmental land management. While there was considerable support for this type of approach, the following concerns were also identified:
    - Implementing BMPs can be costly for land owners without support (e.g. installing fences, forgoing development rights)
    - Environmental conservation should not occur at the expense of industry
    - Improved support and compensation for landowners is required

2.4 Public Open House

Two open house events were held to present and discuss the draft inventory of Environmentally Significant Areas (ESAs) with Parkland County residents. Open house attendees were invited to review display material, speak with project team members, and leave comments using sticky notes. Comment sheets were also provided. Table 12 describes the open house events.

Table 12. Public Open House Overview

	Blueberry Community Hall	Entwistle Community Hall
Date, Time and Location	December 4, 2013 9:30 am – 2:30 pm Blueberry Community Hall 53109 Range Road 15	December 5, 2013 6:00 pm 9:30 pm Entwistle Community Hall 4921-51 St Entwistle
Format	Drop-In	Drop-In
Attendance	26	8
Advertising	• Project postcards delivered to over 7,000 homes by Canada Post Unadressed Admail • Newspaper advertisements • Email invitation to project mailing list • Promotion on the website • Advertising in the Parkland County Communicator	

2.4.1 Summary of Findings

Feedback from the open house events was gathered through one-on-one conversations with attendees and comments provided by annotating maps and in comment sheets. This input was documented, collated and analyzed.

The following section summarizes key findings from the open house events. A detailed record of findings is included at the end of this report.

1. **Cartography.** Attendees generally felt that the maps were complete and accurately represented areas of significance. Several requests were made to provide maps that could be viewed at a finer scale to enable review at a greater level of detail. Also, several requests were made to include more road labels on maps for ease of interpretation. Specific comments about boundary adjustments for specific ESAs were discussed individually with project team members. Minor editorial revisions to update legends were also made.

   How comments were addressed
   - The intent of the project is to identify environmentally significant areas at the County-wide scale.
   - The project team explored the feasibility of enabling the web mapping tool to “zoom in” to ESAs in greater detail, either through higher resolution images or by including the property map as a layer in the tool. After careful review, the team determined that these updates would not improve the functionality of the tool and would result in extremely slow connections for most users. Instead, individual ESA fact sheets are being made available for review upon request and will be part of the report compilation.
   - Several more detailed maps as well as the Mayatan Lake ESA draft fact sheet were circulated to the Mayatan Lake Management Association upon request.

2. **“Heads up” observations.** Attendees reported species occurrences in specific ESAs and highlighted areas heavily used for recreation. There were also detailed discussions with representatives from Mayatan Lake and Wagner Natural Area about the inclusion of additional data in the analysis.

   How comments were addressed
   - The Mayatan Lake Management Association and Wagner Natural Area were invited to provide additional data and local inventories for the project team to review.

- More detailed planning processes such as the Area Structure Plan (ASP) and subdivision application stage will allow for additional environmental review and study at the local scale.

3. **Recommendations.** Attendees provided input on policy direction and conservation priorities. Lakes, wetlands and watersheds were frequently cited as needing priority protection. Several attendees recommended the need for improved signage of environmental reserve lands. Attendees also recommended that the study and future policies emphasize the importance of habitat connectivity. A common theme arising from comments was the idea that once something is lost, it can't be replaced and that protection should focus on the most sensitive and threatened areas first.

   How comments were addressed
   - Input will inform the development of municipal policies and tools in subsequent phases of the project

2.5 Interactive Web-Mapping

An interactive web mapping tool was developed to allow stakeholders and residents the opportunity to virtually review ESA analysis and to leave spatially referenced comments. This tool ensured that individuals who may not have been able to attend the workshop or the open house were still afforded an opportunity to participate in the project. Table 13 describes the web mapping tool format and administration.

Table 13. Web Mapping Tool Overview

	Web Mapping Tool
Duration	November 21, 2013 – February 5th, 2014
Format	Interactive mapping tool that allows users to zoom in and out and pan around the County Spatially-referenced, push-pin annotation User-controlled layers that can be toggled on or off
Total Number of Comments Left	32 comments total left by 18 separate individual users
Advertising	• Project postcards delivered to over 7,000 homes by Canada Post Unadressed Admail • Newspaper advertisements • Email invitation to project mailing list • Promotion on the website • Word of mouth • Advertising in the Parkland County Communicator

2.5.1 Summary of Findings

The web mapping tool gathered feedback from stakeholders and the public by allowing users to annotate an interactive map with comments. Input provided through the tool was documented, collated and analyzed to confirm and refine ESA analysis (modelling/mapping results), in relation to the updated and refined ESA boundaries. A detailed record of findings is included at the end of this report.

2.6 First Nations

In recognition of the government-to-government relationship between the Enoch Cree First Nation and the Paul First Nation, all consultation for this project has been directed through the Office of the Mayor.

A formal invitation to participate in the review of ESA analysis was sent by Mayor Rod Shaigec. Additional opportunities for participation will be offered and accommodated based on specific requests by the First Nations Governments.

2.7 Environmental Advisory Committee

Two presentations about the ECMP project were made to the Environmental Advisory Committee (EAC), and EAC members were invited to participate in the stakeholder workshop. The first presentation introduced the project and provided an overview of consultation activities and objectives. The second presentation provided a detailed description of ESA mapping and analysis, and sought feedback from committee members.

The following issues were discussed with the EAC:

- **Public process.** The EAC clearly emphasized the need for a wide and accessible public process for the ECMP project. The EAC noted that the project should reflect the values and address the environmental concerns of Parkland County residents.
- **Cartography.** As heard during the workshop and open house events, the EAC inquired as to whether mapping could be viewed at a finer scale. It was explained that the project team had explored the feasibility of enabling the web mapping tool to “zoom in” to ESAs in greater detail, and that after careful review, it had been determined that these updates would not improve functionality. It was also explained that the intent of the project is to identify environmentally sensitive areas at the County level (a regional scale), and not to the lot line. Individual ESA fact sheets will provide descriptions of all the ESAs, and that these fact sheets were made available to several organizations for review upon request.
- **Recreation, scenic and cultural resource use overlays.** The EAC discussed in greater detail the relationship of these overlays in relation to the overall project. Some concern was raised that the criteria currently used in the analysis is too generalized. The intent for the overlays is to enmesh environmental conservation with recreation values to protect valued regional landscapes. However as this may be causing confusion and a layer of complexity within the report future drafts may include this information under a separate cover.

2.8 Environmental Stewardship Groups

The County received detailed comments from the Mayatan Lake Management Association and the Wagner Natural Area Society. The following section summarizes comments from these stewardship groups, and outlines how comments were used to inform the evolution of the project.

2.8.1 Summary of Comments - Mayatan Lake Management Association

The Mayatan Lake Management Association (MLMA) provided a thoroughreview of several specific components of the draft ECMP. Their comments included suggestions to enhance all project theme maps, as well as specific comments directed towards the Mayatan Lake Complex ESA in particular. The MLMA also provided a detailed summary of wildlife and the locations of significant wildlife corridors in the area as reported by Mayatan Lake area residents. Table 14 below summarizes the comments provided by the MLMA, and an explanation of how these comments were considered and addressed in the draft ECMP. For the theme maps

Table 14. Mayatan Lake Management Association Comments and Responses

Comment	Response
Many people were unaware that the initial ECMP online survey would inform the draft maps, and therefore did not make specific comments in the survey.	The public online survey and its purpose were published extensively in newspaper ads, the Parkland County Communicator, the Project website, and through social media from September 4-October 25, 2013. The introduction to the survey stated that *"your feedback will be used to help rank areas of environmental significance in terms of their importance and priority Parkland County. Survey feedback will be integrated with a rigorous scientific approach to identify environmentally significant areas."* In addition, comments provided by the MLMA are being considered thoroughly now.
<u>Draft Fact Sheet comments:</u> • "The area is relatively undeveloped and has a fairly intact riparian area" • More recent water quality data is available from ALMS water testing conducted in summer 2013 • Resident reports of certain wildlife species • Correction to the publication date for the Mayatan Lake State of the Watershed Report • Revision to the completion date for recent Altalink project • Suggestion to remove mention of a proposed RV resort as the development permit for this resort was denied by Parkland County in 2012 • Suggestion to include a stronger emphasis on informed development and land use planning	Suggestions, reported observations, and proposed changes have been incorporated into the revised draft fact sheet for the Mayatan Lake ESA. The only exception is for the comment on the ALMS water quality testing data from summer 2013, which the project team could not locate. If we are provided with a narrative/summary of the ALMS water quality test results, those could be incorporated as well (if MLMA feels this is necessary and flows with the rest of the text).

Comment	Response
in the context of water quality protection under ESA management considerations	
Species and Habitats of Conservation Concern Theme Map	
MLMA feels that the weighting for this theme (0.5) is low relative to the weightings for other themes	A higher weighting would bias data rich areas as many of the data sets included under this theme are subject to non-random sampling. A change to the weight would likely introduce more errors and inconsistencies to the model in important areas which have not been subject to high field sampling intensity. Therefore the weighting was not changed.
Concern that this theme map does not accurately reflect the wildlife, habitat, and connectivity values of cultivated fields in the area	All parts of the landscape contribute to the overall environmental quality of the County. For the purposes of this study, a regional methodology was used to determine the most important environmentally significant areas at the scale of the County. At this scale, human influenced land uses such as cultivated areas were generally given lower scores for habitat value, even though these lands may indeed provide ecological values particularly at finer scales. These areas, even if they exist outside of an ESA boundary, can be addressed by best management practices which apply to lands extending beyond ESA boundaries.
Reported wildlife sightings and locations of potentially significant wildlife corridors. Suggestion to capture more of these corridors in the species and habitat map.	A section of the full draft report will be dedicated to the importance of connectivity in the County. This will include a “circuit connectivity” map—a land cover driven model highlighting areas with high levels of ecological connectivity. This map is intended to supplement, and help make sense of, the species and habitat map as well as the landscape ecology map. In addition, locations of potential wildlife corridors, as reported by residents and verified by the connectivity model, have also been called out with stylistic arrows on individual ESA inset maps.
Landscape Ecology Theme Map	
Suggestion to show linkages between the Keephills area and Wabamun Creek, and then to Jackfish/Mayatan Lake Area, and on to Kilini Creek	These linkages are addressed in the circuit connectivity map (see above comment) and in the Mayatan Lake Complex ESA inset map
Wetlands Theme Map	
Concern expressed that several wetlands within the Mayatan Lake watershed were not captured in the wetlands theme map	The wetland mapping data used in this study were sourced from provincial data sets. In these data sets, the vast majority of all wetlands > 0.5 ha are accurately mapped by the province. Wetlands in the vicinity of Mayatan Lake, including those described by MLMA, were reviewed in the project GIS files to verify that they were indeed incorporated in the wetlands map and model. These were in fact present in the provincial data, but are generally too small to be readily apparent at the County-wide scale. In addition,

Comment	Response
	the concern that drought conditions causing wetlands to dry up should not affect any provincial wetland mapping-all wetlands inventories conducted properly consider seasonal / interannual timing of imagery for interpretation purposes and wetlands are still wetlands even if they are dry.
Suggestion to include the entire quarter sections SW18-52-2-W5M and NW7-52-2-W5M in the ESA due to the presence of several large wetlands in these quarter sections	The ESA boundary was expanded to include these identified wetlands, however the entire quarter section was not added. The entire quarter section includes areas that did come out high in the model in terms of inherent ecological value. To include these areas simply because they fall within a quarter section that contains significant wetlands would unfairly bias all other similar areas in the County that were not treated as such.
Suggestion to revisit the delineated ESA boundaries for Johnny's, Mink, and Jackfish lake complexes given that these areas are so closely linked by wetlands and other connecting landscape features	These were revisited in the context of the model outputs and the air photo imagery. The ESA boundaries for Mayatan Lake were adjusted slightly, but those for Johnny's Lake and Jackfish Lake were not modified. Rather, stylized arrows highlighting important areas of connectivity between the two lake complexes were added to the inset maps for each ESA. These areas were verified by the circuit connectivity model and map.
Question pertaining to why wetlands received such a high criteria score (3) compared to other criteria. The MLMA feels that if the wetlands score is indeed this high, that the ESA boundary around Mayatan Lake and its surrounding wetlands should be increased.	The criteria weight of 3 for wetlands is a mistake/typo. It should have been 1. This has been corrected in the draft ECMP.
Suggestion to include pothole lakes around the western basin of Mayatan Lake as part of the ESA	The project team carefully considered this suggestion. The ESA boundary has been expanded to include several additional pothole lakes to the west and north of Mayatan Lake if they demonstrated high proximity/connectivity to the main Mayatan Lake complex and relatively high overall ESA scores for those areas. Additional smaller pothole lakes and wetlands to the west of Mayatan Lake that do not demonstrate high connectivity to the complex are still considered as important ESAs, but at a microsite level of significance and not a regional level of significance and therefore were not added to the Mayatan Lake ESA boundary in order to maintain consistency with the rest of the county-wide study methodology. This is not to say that these additional areas do not serve an important function but rather that it is difficult to justify including them within the Mayatan Lake Complex ESA which is of regional significance.

Comment	Response
Landforms and Slopes Theme Map	
Concern that the southern extent of the Carvel Pitted Delta landform should not be defined by highway 627	Although it appears so, the southern extent of this landform does not snap exactly to the boundaries of Highway 627 boundaries, although it is in close proximity to the road.
Groundwater Resources Theme Map	
Suggestion to adopt the broader watershed boundary as the ESA boundary given the area's considerable vulnerability to groundwater contamination	A surficial watershed boundary rarely corresponds well with subsurface groundwater flow boundaries, particularly in a rolling landscape with complex hydrogeology such as Mayatan Lake. Therefore, adopting the surficial watershed boundary would not address the general concern. In addition, as explained below, there are significant county-wide consistency problems with using entire lake watershed boundaries.
Surface Water Resources Theme Map	
Recommendation that the project team compare the data available from the State of the Watershed Report with the data used in the model	County-wide data sets will have differences in parameterization, focus, and format. Therefore, they are not always directly comparable in a quantitative sense to data in the State of the Watershed report. The county-wide data are also available in GIS spatial formats that facilitate overlay modelling. Having said that, in general a qualitative comparison between the descriptions in the State of the Watershed Report and the county-wide modelling conducted does not show any significant inconsistencies.
Suggestion to include several interesting points about the comparative depths of the eastern versus the western basin of the lake, as well as the mesotrophic status and intact riparian zones surrounding the lake	These points have all been added to the fact sheet for Mayatan Lake to provide more context.
Protected/Conservation Areas Theme Map	
Concern that not all Crown Lands around Mayatan Lake appear on the map, especially on the southeast corner of the lake (SW18-52-2-W5M, NW7-52-2-W5M, and SW7-52-2-W5M).	The Crown Land data was supplied by the Province of Alberta. The project team reviewed and compared several maps of Crown Lands, including the Parkland County Ownership map. The only piece of missing/inconsistent Crown land identification was a small island in the southern portion of Mayatan Lake, in NE12-52-2 W5M, which was not identified by the provincial data but was identified on the County map- accordingly this island was changed to be provincial Crown land. No other sources have revealed any other missing Crown Lands from either the Mayatan Lake ESA inset map or the protected/conservation areas theme map. Also, please note that municipally owned lands are identified separately from provincial Crown lands with a different type of cross-hatching.
A section of Wabamun Reserve No. 133A is missing from the draft map	The missing section from the Wabamun Reserve No. 133 was incorrectly labeled as Crown Land in the draft

Comment	Response
	map. It has now been corrected.
Suggestion to include Mayatan Lake as a site of ongoing ecological research due to the paleolimnology research being conducted there by a group from the University of Alberta	Mayatan Lake is now highlighted as an area of significant ongoing ecological research in the protected/conservation areas map. A brief description of this research has also been added to the ESA fact sheet. This change will not increase the overall ESA score for Mayatan Lake in any noticeable capacity, which still remains very high in a county-wide context.
Scenic Quality / Recreation and Tourism	
Concern expressed over the perceived subjective nature of this criteria overlay and its relevance to overall ESA identification process.	These "overlays" did not play any role in determining the overall ESA significance score. However, due to a host of similar misconceptions that these overlays seem to have generated, the project team has decided to remove the scenic quality, recreation and tourism, and historic resources criteria overlays from the ECMP to eliminate any confusion.
Environmentally Significant Areas of Parkland County (2013) (Map #14) and Mayatan Lake ESA boundary	
The MLMA feels that the above comments on the theme maps justify expanding the ESA boundary for Mayatan Lake to match the watershed boundary for the lake.	While the project team agrees that all areas within the Mayatan Lake watershed boundary undoubtedly contribute to the overall integrity of the ESA, designating the entire watershed as the ESA boundary is not feasible. All lakes and other important aquatic ESAs need to be treated consistently within the study. Applying watershed boundaries to every ESA in the County (many of which are quite large-e.g., Big Lake watershed, Wabamun Lake watershed, North Saskatchewan River watershed, etc., etc.) would essentially render the entire County as environmentally significant. A map of this nature may in fact negate the purpose of the exercise. Many of the concerns over areas that fall within the watershed boundary, but outside the proposed ESA boundary, are appropriately addressed in the best management practices proposed for the ESA. Best management practices are intended to be more holistic in nature and apply to lands extending beyond ESA boundaries. However, some adjustments to the Mayatan Lake ESA boundary have been made in response to the specific concerns and information identified above.
Concern that several areas of the proposed ESA are too narrow around portions of the lake.	All lake ESAs in the County were expanded to include a 100m buffer from the shoreline. This buffered area is not to be interpreted as a development restriction zone, but rather, a precautionary planning zone in which development must be met with extreme care for the conservation of riparian environments. More detailed tools including a riparian setback matrix model that can assist with planning decisions for any future lakeshore development will also be undertaken within the context of this study in Phase 3.

Comment	Response
Suggestion to consider expanding the ESA boundaries for Jackfish/Star Lake and Johnny's/Mink Lake in a similar fashion.	Jackfish/Star Lake Complex ESA and Johnny's/Mink Lake Complex ESA were reviewed carefully to ensure that their proposed boundaries captured all high-scoring ecologically significant features. In addition, a 100 meter buffer was added around all lakes (see comment above).

2.8.2 Summary of Comments – Wagner Natural Area Society

The Wagner Natural Society provided comments encompassing concerns over the mapping and analysis process in general, as well as more specific comments pointed at the Wagner Natural Area and Surrounding Forest ESA. Specific comments include suggestions to include several potentially significant wildlife corridors in and around the ESA. Table 15 below summarizes the comments provided by the Wagner Natural Area Society, and how these comments were applied and addressed in the ECMP.

Table 15. Wagner Natural Area Society Comments and Responses

Comment	How comments were addressed
Concern that the full breadth of data available for the Wagner Natural Area was not used in this study.	The project team feels that using additional data for well-sampled areas would unfairly bias data rich areas, like Wagner. The Wagner Natural Area and Surrounding Forest ESA is already provincially significant due to the presence of S1 and S2 ranked rare plant species that occur there. Additional data would not change the significance of the ESA or the boundaries delineated.
Concern that the ECMP may be considered and used by the County as a final assessment of environmental significance, rather than a starting point. There is a concern over how the ECMP will be used by Parkland County in terms of land use planning, development approvals, and land use management. Furthermore, the Wagner Natural Area Society feels that the regional scale of the assessment does not adequately capture the importance of local habitat connections and small scale features.	The results of Phase 1 are indeed a starting point rather than a final assessment. For the purposes of this study, a regional methodology was used to determine the most important environmentally significant areas at the scale of the County. However, the ECMP recognizes that all parts of the landscape contribute in some way to the overall environmental quality of the County. Thousands of small-scale features, or "microsite" ESAs such as local wildlife corridors, small wetlands, and streams, also play a key role in upholding ecological integrity at broader landscape scales. These microsite ESAs all have value; however due to their sheer number it was not possible to verify, map, and report on the environmental significance of each of these. Despite these limitations, potential local wildlife corridors reported by the Wagner Natural Society were verified using a land cover driven circuit connectivity model, and were indicated on the Wagner ESA inset map using stylistic arrows. Microsite features are also addressed in the best management practices proposed for the County's natural resources and individual ESAs. Best management practices are intended to be more

Comment	How comments were addressed
	holistic in nature and apply to lands extending beyond ESA boundaries. In addition, the Wagner Natural Society suggested that these features should be considered in Environmental Impact Assessments conducted at the ASP and NSP stages. The group also suggested that the active use of MR, ER, and Environmental Reserve Easements be used to conserve environmentally significant lands at the local scale. The project team wholeheartedly agrees with these suggestions and looks forward to elaborating upon the use of these conservation tools in Phase 2 of the project.
Suggestions to incorporate several additional areas surrounding the Wagner Natural Area in the revised ESA boundary. These areas include: the Fath/Kolmes property, two summer and winter wildlife feeding areas south of the Wagner Natural Area, and three local wildlife movement corridors in the area.	The project team reviewed the information provided and considered these proposed areas carefully. The ESA boundary was expanded to include the Fath/Kolmes property north of Osborne Acres. In addition, through stakeholder consultations, the project team was made aware of several marl ponds similar in nature to Wagner, located on the eastern edge of Spruce Grove. These marl ponds were also included in the expanded ESA boundary. Potential wildlife habitat and corridor areas reported by residents were not expressly included in the ESA boundary, but are considered microsite ESA areas and are denoted on the inset map with stylized arrows.
Suggestion that the vegetated drainage immediately northeast of Osborne Acres and directly west of Range Road 263A “may” not have been cleared in the last 100 years and “may” retain some of its original native character, and therefore should be defined as part of the “Wagner” block	There seems to be a very large number of vegetated ephemeral drainage corridors within Parkland County similar in nature to this one. Therefore, it would not seem appropriate or consistent to identify this area as a “provincially” significant ESA which would suggest that it is just as important as the Wagner Bog itself. This type of feature is best identified at the micro-site level of significance. This feature could potentially still be retained as open space during future planning and development.

3. Phase Two

<<To be completed as the project progresses>>

4. Phase Three

<<To be completed as the project progresses>>

5. Record of Comments

This chapter provides the record of comments from consultation events.

5.1 Phase One Stakeholder Workshop

Feedback was recorded during group discussions by annotating maps with sticky notes. Stakeholders were also invited to provide additional comments on comment sheets at the end of the event.

Feedback is presented below for each of the six themed stations. A list of BMPs is presented, followed by a table containing the issues, opportunities and comments provided for the ESA analysis maps. The table identifies individual comments made by participants, and a follow-up column indicating how the comment has been addressed.

5.1.1 Station 1: Species, Habitats and Landscape Ecology

Beneficial Management Practices

- General
    - The objective should not be to sanitize the land from development, but rather to encourage sustainable development in or near ESAs
    - The land is in trust for future use; approach ESAs as “money in the bank”
    - Sustainable habitat management
    - Consider valuation, not just protection
    - Adopt a “three generation” time frame
    - Importance of ground water potability
    - Be aware of cumulative effects given the broad areas covered by the ESAs
    - Identify areas with reclamation potential according to criteria for opportunity and ecological benefit
    - Reclaim older development around riparian areas
    - Monitoring and enforcement is unfeasible
    - Develop a reforestation process for Aspen
- Agriculture
    - Provide incentives for non-cropped areas
    - Marginal farmland has value, but development permits are costly
    - Review the Alternative Land Use Services (ALUS) program for BMP examples
    - Timing of haying to avoid sensitive species
    - Weed inspections (consult the Invasive Species Council of Alberta)
    - EGS incentives
    - Create a tax ratio tied to land management
    - Store reject bales in off-areas to avoid deer eating crops in corridors
- Oil and Gas
    - Reclamation is economically costly, and industry is choosing to keep wells in production due to these costs
    - Review the Orphan Wells Program for BMPs on contaminated sites and low production wells
- Industrial Development
    - Consider an ‘upper limit’ to industrial development around Wabamun Lake
    - Identify environmentally significant lands, but recognize that trade-offs will need to be made with the gravel industry
    - Highvale Mine - little reclamation has been done to the 30 km stretch of Highvale Mine, located near Lake Wabamun. Progressive reclamation is needed on this site. The Area Structure Plan for this area should be redone.
    - Conduct inventories of significant species and habitats before development
- Land Use
    - Transfer of development credits
    - Habitat and species protection included in guiding principles of Municipal Development Plan
    - Create a County regional development cluster. Balance of development does not necessarily have to be smaller acreages.

    - Construct sewage pump-outs rather than septic fields
    - Use the connectivity map to help target easement purchases, supported by County incentives
- Education
    - Education is needed regarding allowable activities on ESAs (e.g. signage, pamphlets, education centres)
    - Education about ESAs goes both ways between homeowners and the County
    - Conduct education and outreach before disturbances occur. This would allow landowners and developers to feel part of the process, rather than create confrontation.

Table 16. Species, Habitats and Landscape Ecology Comments

Map	Comment/Issue	Follow-Up
BMP Discussion	**Beneficial Management Practices**	
	Range of additional beneficial management practices identified by stakeholders	Feedback on specific BMPs has been incorporated/integrated into the BMP section of the report, including BMPs for Species/Habitats/Landscape Ecology, and Overall BMPs for ESAs
Species and Habitats	**Species Observations**	
	Trumpeter Swans would be here if the land was reclaimed (photo shows sticky along North Saskatchewan, west of Sturgeon Hole)	Agreed that reclamation of gravel pits in the river valley system is desirable for improving habitat and has been noted in the fact sheet for this area.
	Record hibernacula	Most snake hibernacula are undocumented. Qualified field biologists should be required to do surveys to locate, among other things, hibernacula as part of the development approvals process and the biologist doing the study should check the local Fish and Wildlife contact for any potential information (has been added to BMP section).
	Consult Fish and Wildlife Wolf records	Wolf observations were not documented in the Fish and Wildlife Management Information System (FWMIS) which was used for the project. However wolves tend to prefer connected and relatively undisturbed areas so the landscape ecology criteria generally captures wolf habitat potential. Some habitats may be suitable for wolves but not used, but this can change over time as well.
	Consult insurance records	While this is an interesting suggestion, consulting individual insurance records would be at a level of detail beyond the scope of this study. Further, insurance records are not readily available.
	Clifford E. Lee biophysical inventory is available	The fact sheet for Clifford E. Lee will include key biophysical facts. Additional information for consideration and cross-referencing is welcome if stakeholders provide it to O2, but this may be at a greater level of detail beyond the scope of this study.
	Scherdenan Flats River Valley, near Keephills CA – Oxbow area • Sawhet owls • Red sided garter snakes • Blue herons • Ladyslipper • Pileated woodpeckers	This information will be added to the Sturgeon Hole Reach ESA fact sheet.
	Blue Heron colony near Glory Hills and south of Graminia Road and west of Sanctuary Road. Nesting trees are also being built here.	The Blue heron colony has been mentioned in the Glory Hills ESA fact sheet.
	Trumpeter Swans and Pelicans have been observed at Mayatan Lake. Mayatan Lake is also used by moose, deer, etc... Wildlife corridors may connect Mayatan to other features.	This information has been described within the Mayatan Lake ESA fact sheet.
	Data + Findings	
	Use findings as baseline, and regularly update data and the ECMP	Sentence added to introductory paragraph to reflect this idea.
	Spatial resolution of the boundaries prevents detailed examination of results at local scale. There is a trade-off between accuracy of boundaries and amount of information to be presented.	The workshop used county-wide maps by necessity. The report will have more detailed inset sheets for each ESA at a finer resolution.
	The intent of the mapping is to inform policies, not draw rigorous boundaries.	Yes they are really intended as county-wide flags for large contiguous areas of environmental value and should not be interpreted as precise, hard boundaries. The report will make this clear.

5.1.2 Station 2: Wetlands, Landforms and Steep Slopes

Beneficial Management Practices

- General
  - Balance needs of business and conservation
  - Manage land with respect for the past, and as an investment in the future
  - Sustain, conserve, certainty, and opportunities (key words)
  - Encourage all landowners / land users to cultivate an ethic of “ownership”
  - Emphasize benefits of conservation easements, ALUS
  - Turn liabilities into assets (e.g. stormwater ponds as amenities)
  - Consider price value of ecosystem services
  - Manage according to areas of greatest impact (e.g. wet areas)
- Agriculture
  - Amend policy: need a permit to cut down all trees. Agriculture is currently exempt
  - Reconcile conflicting issues between agriculture and watershed stewardship
  - Use a systems perspective to protect soils and guide farming/ranching practices
  - Review the ALUS program for stewardship projects
  - Share cost of fencing to lessen the burden on the farmer
  - Consider exclusion fencing for cattle as part of ALUS
  - Education and riparian protection is needed to address fertilizer contamination in lakes
- Coal Mining/Aggregate Mining
  - Reclaim Elmdale/Whitewood mine
  - Use heli-seeding for mine reclamation
  - No wet gravel extraction
  - Remediate on site
  - Strive to improve rather than simply compensate
  - Develop better guidelines for on-site gravel pit remediation
  - Better management or reclamation of slopes near power generation facilities and mines
- Peat Harvesting
  - Conduct groundwater surveys prior to peat harvesting
  - Restore areas with native species after harvest
  - Use only wood structures for roads (corduroy roads)
- Land Use
  - Use a hydrologic connectivity map to guide development
  - Assess and record wetlands on property prior to development
  - Triple bottom line assessment process for new development
  - Avoid bare land residential developments to maintain lake carrying capacity
  - Provide information to landowners before they buy
  - Reflect bylaws in permitting and approvals process
  - Improve awareness through permit application process
- Municipal
  - Develop system to streamline bylaws such as Integrated Land Management
  - Improve ‘up front’ planning
  - Align provincial and municipal policy to the greatest degree possible
  - Monitor the water table
  - Provide small garbage cans and large recycling bins free of charge to residents
  - Manage runoff around lakes and wetlands
  - Increase fines and enforcement to discourage damage
  - Salt loading is a concern for water quality (water softener)
  - Incorporate soft infrastructure into development and remediation phases
  - Slopes
    - Develop bylaws according to slope degree
    - Maintain vegetation cover on slopes
    - Establish setbacks for steep slopes
  - Setbacks / Buffers
    - Develop floodplain setbacks and a country matrix to decipher setback requirements

        - Improve setback distance around lakes
        - Establish riparian buffers to maintain lake carrying capacity
- Education
    - Education on systems (wildlife, soil and agriculture)
    - Education important for new country residential land owners
    - Better signage for MR / ER land
    - Identify and sign conservation areas
    - Education and awareness is needed for lakeshore management
- Recreation
    - Pathways and walkways on MR / ER land
    - Ethic of stewardship for recreation
    - Create dedicated and managed areas for OHV use
    - Specify use areas and enforce them

Table 17. Wetlands, Landforms and Steep Slopes Comments

Map / Topic	Comment/Issue	Follow-Up
Best Management Practices	Range of additional best management practices identified by stakeholders	Feedback on specific BMPs has been incorporated/integrated into the BMP section of the report, including BMPs for Wetlands, BMPs for Landforms and Slopes, and Overall BMPs for ESAs
Significant Landforms	Spruce Grove marl ponds are missing	Revised Wagner Natural Area and Surrounding Areas ESA now includes these.
	Identify floodplains and flood risk on map	All provincially available data on floodplains and flood risk was reviewed and scoured during the data and literature review phase of the project. There are rumours of some older county studies but nobody on the project team is aware of these. Ben Rostron has been invited to send us any other information for review.
	Fallis Slope should be a priority area to minimize erosion	Agreed. The fact sheet for this ESA emphasizes slopes and sensitivity factors related to these steep slopes.
	Greater than 15% slope should be upper limit	Not accepted. The provincial Water Erosion Prediction Project (Jedrych and Martin 2006) considers slopes >20% as the most extreme risk for erosion in combination with other factors and accordingly separating this interval from lower intervals was considered beneficial.
Wetlands	Identify certain wetlands as priority for recovery	Agreed conceptually. However, all impacted or drained wetlands are potential targets for recovery and it is difficult to choose one over another. To a certain extent this choice will be related to resources and willingness of landowner. Having said that, O2 will consider identifying Deer Lake, Whale Lake, and Shoal Lake / Low Lake as restoration priorities in a planned discussion section of the report dealing with opportunities for restoration and reclamation.
	Extend Big Lake wetland boundary outside of County	The identified boundary of the Big Lake ESA will extend outside of Parkland County. The wetland theme map itself is specific to Parkland County and has been clipped to the County boundary for cartography and clarity purposes and cannot be changed at this point.
	The score for Wagner should be higher	Not accepted. The score for Wagner Natural Area is in fact one of the highest in the entire County and Wagner Natural Area is one of only 5 provincially significant ESAs in the entire County. Although the score will not change, the Wagner Natural Area ESA boundary will be extended to include identified marl pond formations.
	Drained areas in the south eastern portion of the County have potential for restoration	Agreed. Will consider identifying in a planned discussion section of the report dealing with opportunities for restoration and reclamation.
	Low Water Lake should be called and managed as a wetland	Agreed that any drained wetlands and drained lakes should be managed for wetland values and ideally restored, not just Low Water Lake / Shoal Lake. This has been added to the BMPs section of the report under wetlands.
	Does the data reflect wetlands that have been restored?	The data on wetlands used by the team is the provincial merged wetlands inventory which is created and maintained by Alberta Environment and Sustainable Resource Development. The data would reflect restored wetlands at the time the inventory was completed.
	A wetland boundary in Spruce Grove is not in the correct location, and should be updated based on information sent by the City. It should be updated for the purposes of planning the connections between that wetland and the Wagner Natural Area.	Spruce Grove to provide file with correct location-waiting for follow up from Spruce Grove.

5.1.3 Station 3: Groundwater and Surface Water Resources

Surface Water Resources Beneficial Management Practices

- Agriculture
    - ALUS supports payment for restoration – privately funded and allows for donations to specific areas
    - Keep aiming higher for BMPs. ALUS comes up very frequently, but it doesn't yet fully address environmental goods and services. To address those, we probably need a suite of initiatives, including ALUS (e.g. taxation, leveraging easements, regulation)
    - Hay crops and agroforestry do not seem to be a BMP. Hay can be a heavy water user and time harvesting in a riparian area can lead to erosion and sedimentation unless carefully executed.
- Industrial Development
    - Bioswales and green space reduces runoff
    - Maintain infiltration by minimizing impervious areas
    - Surface water cannot penetrate due to industrial development (eg. Acheson)
    - Industrial runoff cannot cause erosion
- Coal Mining / Aggregate Mining
    - Advocate/encourage better water recycling in aggregate washing
- Peat Harvesting
    - Monitor water quality during life cycle
    - Restoration to functional wetland over time
    - Use a 1:1 cover ratio for seed bed during reclamation to obtain vigorous regrowth in 1 year
    - Do not mine below the HC3 soil horizon (approximately 0.9 m depth in most areas)
- Country Residential Development
    - Plant native grasses for lawns
    - Better erosion and sediment control
    - Reduce salt from water softeners sent out in septic tanks around lakes
    - Communal sewage collection/treatment system is better to be used to minimize/avoid impacts to surface water and groundwater. Ownership may be an issue regarding operation and maintenance.
    - Sewage leaks/spills from pipeline transfer to Edmonton
    - Road salting construction vehicle runoff lakes (Big Lake south communities)
    - No residential fertilizing
    - No weed and feed
    - Establish minimum setbacks for all wetlands

Groundwater Resources Beneficial Management Practices

- Industrial Development
    - Recharge function to be maintained – LID development
- Coal Mining / Aggregate Mining
    - Define enforcement for class II within County jurisdiction
        - Class I – over 5 ha
        - Class II – less than 5 ha
    - Accelerate rewarding for good management
    - No mining activities that result in impacts to water – dry extraction only
        - If water stays in the pit, or is pumped from one area to another, it's not considered dewatering, and Water Act approval is not required.
        - For maintaining groundwater levels, a recharge pond may be constructed so the groundwater is not drawn down and does not affect the area downstream.
        - The regulation should not simply prohibit gravel extraction below the water table or in accordance with dry pit operation requirements. Rather, hydraulic or hydrological studies are more scientifically appropriate for decision making.
    - Account for mine water where it is started or disposed of
- Country Residential Development
    - Where is the water table map?

    - Communal sewage collection / treatment is better to be used to reduce / avoid impacts to the environment and to groundwater
    - Restrict ground-sourced heat pumps to closed loop in high-scored ground water resource areas
- Recreation
    - Vehicular activity not only in summer, but winter months (snowmobiling)
    - Conduct research on water quality on a consistent basis
- Municipal
    - Overlay zones for sensitive groundwater areas and tools to deny applications in those areas
    - Make maps available to the public using a publicly accessible GIS system

Table 18. Groundwater and Surface Water Resources Comments

Map	Comment/Issue	Follow-Up
Best Management Practices	Range of additional best management practices identified by stakeholders	Feedback on specific BMPs has been incorporated/integrated into the BMP section of the report, including BMPs for Surface Water and BMPs for Groundwater
Groundwater Map Comments	What are the risks from dewatering at coal mines?	TransAlta and/or AESRD representative specializing in mining should be able to answer this question but generally it is beyond the expertise of the team to address completely. It is certain that risks are present but to what extent and how these are mitigated is a very technical area.
	The buried valley aquifer is much more narrow than indicated on the map. See von Hauf thesis.	The von Hauff (2004) thesis was reviewed to determine whether it includes hard data and maps that would form the basis for a narrower boundary for the Beverly Buried Valley Aquifer. No such data was found. The thesis does refer to Figure 4.1 in relation to the Beverly Buried Valley, but this figure represents a simple elevation map with contours and no boundaries for any formations. The thesis does reference the Beverly Buried Valley Aquifer on p.31 as “up to 8 km wide” which is consistent with the boundaries mapped by Hydrogeological Consultants Ltd. in 1998; accordingly this boundary will continue to be used by O2 as it is the best data set available and covers the entire county from the North Saskatchewan river all the way to Sturgeon County. It has been noted in 1.2.5 (p.16) of the report that it is possible that the boundary is narrower and that professional hydrogeologists would be required to refine/determine this further as necessary.
	Use the groundwater resource map to inform potential land use decisions	Agreed. This will be part of Phase 2 and it needs to be kept in mind that vulnerable / important surficial groundwater resources are not all necessarily covered by “ESAs” if other values do not coincide on the land surface.
	Observed impacts from the aquifer in and around Mayatan Lake	Influence of groundwater and potential vulnerability of groundwater within and adjacent to Mayatan Lake has been covered in the Mayatan Lake ESA fact sheet.
Surface Water Map Comments	Why is the south shore of Wabamun Lake not scoring as high as the north shore? It may be a matter of scale. Zoom in and check.	It was investigated to confirm whether the overall score and ESA boundaries for Lake Wabamun and other lakes in the County take into consideration the riparian areas around the lake. In fact, all riparian areas around streams and lakes have been given relatively high scores based on multiple riparian area data sets. The scale of the map is what makes the boundary appear to be a thin line. In addition, in some cases where development around lakes has taken place, specific areas may have low scores and in some cases may have been excluded from initial draft ESA boundaries. In order to address these concerns, it was decided that all lakeshore-related ESAs will include a minimum 100 m buffer area around the lakeshore. This conservative approach will be noted and needs to be considered during policy development in future project phases.
	Management of subregional watersheds	Watershed management and the influence of surrounding land uses in contributing watersheds flowing into ESAs is part of the discussion on management practices as well as best management practices for the report and will also be carried forwards into Phases 2 and 3 of the project.
	Manage transportation corridors – rail and road	New transportation corridors should be identified as a high impact land

		use that should aim to avoid ESAs in Phase 2. Existing transportation corridors should have BMPs and management practices specified and will be revisited in Phases 2 and 3 as required.
	Impacts from road maintenance (salt and silt)	Added to BMPs chapter of the ECMP report
	Rail car leakage	Suggest to add an information box on rail car accidents/leakage to the report in future drafts (or to the Integrated Community Sustainability Plan).
	Agriculture is a threat to groundwater and surface water. Issues include: • Monoculture • Herbicides and pesticides • Land contouring • Riparian management • Nutrient loading	Agreed. Is noted in many aquatic / riparian ESA fact sheets. Also many BMPs for agriculture have been specified in the BMP report.
	Mine reclamation should include • Ponds • Natural tree cover	Added to BMPs under Species and Habitats as well as under Wetlands.
	Major water intakes and restrictions in surrounding areas	Has been noted in the ESA for the lower reach of the North Saskatchewan River Valley that a major water intake for the City of Edmonton is in the vicinity.
	Is there a Parkland County floodplain map?	All provincially available data on floodplains and flood risk was reviewed and scoured during the data and literature review phase of the project. There are rumours of some older county studies but nobody on the project team is aware of these. Ben Rostron has been invited to send us any other information for review.

5.1.4 Station 4: Protected Areas

Beneficial Management Practices

- Recreation
    - Encourage appropriate use
    - Create dedicated OHV trails that are accessible
    - Place cameras in known “hotspots”
    - OHV club membership fees – creates a sense of ownership and can charge money for enforcement
    - Create OHV license training (province), similar to the hunter education program which is a pre-requisite for obtaining a license
    - Lac Ste Anne County has a dedicated OHV trail system managed through private landowner agreements and license fees pay for operational costs
    - “Trail Busters” is an existing program
    - Establish areas that restrict motorized access and establish areas where they can and cannot operated OHVs
    - Provide facility with value-added features and stiff penalties
    - Ice fishing (e.g. Sylvan Lake) has the “Take Back Your Shack” program
    - ET protection – create more dock regulations for lakes in ER
    - Provincial laws of PRA increase traffic
    - Allow groups such as OHV clubs an opportunity to demonstrate that they can responsibly manage a system of trails / access points.
    - Create new access points to enhance river use for recreation and tourism by offering properly constructed accesses
- Education
    - Create an information clearing house for private stewardship
    - OHV education
    - Educate people on the importance of a habitat, e.g. sturgeon
    - Embed messages in literature for specific user groups
    - Turn maps into more interactive Google maps
    - Target the biggest user groups
    - Allow groups the chance to educate and develop buy-in among their members as part of a larger County-wide initiative. This is applicable to many different recreation groups (OHV, horse back riding, walking trails, cyclists).
- Municipal
    - Create tax incentives to encourage permanent private stewardship (e.g. caveats)
    - Council should set goals for protected areas and for increasing land under protection
    - RSMM
    - Keep intensive development away from ESAs
    - Enforcement – use creative sentencing such as having people repair damage they have caused
    - Resource extraction - plan reclamation and incorporate OHV use
    - Increase community involvement

Table 19. Protected Areas and Development Pressure

Map	Comment/Issue	Follow-Up
Protected Areas	Add "Devonian Gardens" as a label on the map	Will be addressed for final version.
	Verify legend and lands for accuracy	Will be addressed for final version.
	Western Grebe nesting area observed just west of the Town of Wabamun	There are records of observations of a western grebe in the FWMIS provincial database in this vicinity which has been incorporated in our multi-criteria model under Species and Habitats, increasing the value of this area. The fact sheet for Wabamun Lake has made note of this nesting area as well.
	Clarify legend by explaining what is meant by "identified ecological research areas"	The report itself clarifies this better. We will look at alternative wordings and try to come up with a solution. This concept is a carry-through from the Westworth Associates (2004) report.
	Some small-scale Crown lands near Mayatan Lake are not shown	These are not readily visible to human eye on a county-wide map in this cartographic template. All crown lands should show up in the detailed inset of Mayatan Lake for the fact sheet as crown lands are part of the base template for these inset maps.
	Show provincial bed and shore as protected on all water bodies	We will make note in multiple locations in the report that bed and shore of all lakes and permanent wetlands are provincial crown lands. Unfortunately the provincial crown lands data set is very deficient in this respect and the shape files on provincial crown lands are very incomplete so it is not possible to map all of these consistently without an enormous effort. Even with that effort, this would be misleading since legal bed and shore ideally should be surveyed by a professional surveyor.
	Lee Nature Sanctuary Society manages Clifford E. Lee Nature Sanctuary for Ducks Unlimited Canada (Owner)	Will be noted in the fact sheet for Clifford E. Lee.
	Add disclaimer to map: "May contain crown/provincial lands at a smaller scale than visible on this map."	Will aim to address for final version.
	CNF crossed off from legend	Will aim to address for final version.
Development Pressures	Wabamun Lake – wild water line increases residential development pressure	Comment noted
	Add recreation and tourism pressures to the map (e.g., activities such as camping and OHV use)	Comment noted. Recreation and tourism activities are generally very dispersed and a complete inventory of hotspots that is accurate is unlikely. It is difficult to map this accurately – we could highlight a few well known random camping spots but then will miss many others. Also the map is starting to become dense and complex. Will wait on directions from Parkland County staff and decide.
	Add homes to the map	Not possible to show homes on this scale
	Add CRB regional growth pressures to the map	Will investigate and aim to address for final version
	Transportation pressures include: • Yellowhead Highway expansion at eastern County boundary • Potential bridge crossing locations along the North Saskatchewan River (locations unknown, but can expect pressure for new ones) • Gravel transportation pressures along south shore of Lake Wabamun and Highway 770, south of Highway 627 • Potential future extension of highway 627 west • Potential ring road between Spruce Grove and Acheson Industrial Area • Identify the airport as a potential pressure	Will investigate and aim to address for final version
	What is the time scale of the pressures? Identify short-term and long-term development pressures.	Not accepted. There are already 10 themes on the map so doubling this would make for a very complicated and non-user friendly map.
	Not just experiencing pressure from country residential subdivision; small lake residential development pressure	Will investigate and aim to address for final version

	Add “industrial pressure” to the map, as being experienced around Wabamun Lake	This is reflected by the dark purple for the industrial facilities as well as the coal mining future development pressure circle.
	Gravel extraction currently undertaken in area marked “future pressure for gravel extraction” along the north shore of Wabamun Lake	Yes - represented by the brown in the legend
	Present development pressure for urban development around Spruce Grove and Stony Plain, coming predominantly to the south and south-east of existing boundaries around Highway 628	See CRB regional growth pressures comment above – will be investigated and addressed for final map
	Show Acheson Industrial Area as Draft ASP	Yes addressed already in new version of map produced Dec.10, 2013

5.1.5 Station 5: Recreation, Scenic and Cultural Resources

Beneficial Management Practices

- Recreation Management
  - County could provide areas for motorized activities
  - Designated trails for certain types of uses (e.g. walking, cycling, motorized)
  - Provide an information centre to help educate users about the landscapes and how to use them
  - Improved regulation and enforcement monitoring of motorized activities in sensitive areas
  - Defined regulation areas may not work
  - Recreation is highly wide-ranging across a variety of activities
  - Better provincial enforcement of fish and wildlife regulations; consider cameras
  - Opportunity to extend beyond local/regional tourism; explore national and international options
  - Create a portal on best management practices and how to protect resources. This could be an on-line portal supplied by the County to guide access.
- Visual Resource Management – Oil and Gas
  - TransAlta reclamation centre to provide education about reclamation. The Keephills site is a good example.
  - Control of oil and gas flaring has visual impacts; particularly at night – this is a regulatory challenge
  - Land valuation changes when sensitive lands are taken out of use for other activities. Will there be any compensation or support for change?
- Visual Resource Management – Country Residential
  - Setbacks from lakes for country residential areas , not just rivers
  - Landscape plans for country residential developments should be required as a permitting condition
  - Traditional country residential development can be sensitive to the landscape
- Visual Resource Management – Industrial
  - Cell tower lights have visual impacts
  - The aerodrome development will have visual impacts

Table 20. Recreation, Scenic and Cultural Resources Comments

Map	Comment/Issue	Follow-Up
Recreation + Tourism Values Map Comments	**General**	
	Golf courses are a recreation and tourism draw, but have a large environmental impact. Is this shown on the map?	Golf courses are in the Recreation and Tourism Features Inventory used for this map so are reflected on the recreation/tourism significance map. This is one of the reasons it is better to keep recreation layers as an overlay as opposed to a criteria for environmental significance.
	Recreation and tourism can create partnerships to educate visitors about sensitive areas	Agreed. Has been noted in the BMPs chapter and will be taken forward to Phases 2 and 3 for consideration.
	Tourism and recreation 'potential' may mean different things to others outside this context	Agreed. There are explanations in the report to help clarify how we were able to quantify something in a general sense even though the problem is a very qualitative and individual perception.
	Cottage living opportunities may have been missed on this map	Major cottaging areas (e.g., Seba Beach) were features in the provincial Recreation and Tourism Features Inventory used for this map so are reflected in the scores. Some small individual cottages may not be reflected in that data however.
	Opportunities / Potential	
	Ecotourism is an opportunity to help with education, achieve conservation goals, and create environmental protection	Agreed – wording in BMP chapter related to recreation and tourism has been altered to reflect this idea better
	There is tourism potential around Tomahawk as there is a lot of unspoiled area	Comment noted.
	Certified apple orchards are an opportunity for recreation and tourism	Comment noted. If not included in this report, will be shared with County staff for consideration in the MDP update.
	How do campgrounds fit within sensitive areas? There is an opportunity for this type of use in some ESAs.	Major campgrounds within ESAs should be discouraged; in some cases if campgrounds are properly planned and designed to minimize overall impacts they may be compatible with ESAs. This has been added to BMPs chapter.
	County should partner with Provincial Parks to enhance resources	Agreed. This is already reflected in the Parks and Protected Areas BMPs chapter.
	Regional tourism draw for a lot of activities mentioned	Agreed. This will be covered in the recreation / tourism section of the report.
	Values / Score	
	Wabamun Lake • East end of lake is very actively used by the general public and should have a higher value • West end of land / Seba Beach is generally closed to the general public; it is not accessible and therefore should be showing as limited value	Recreation in a broad sense also covers cottaging areas and does not necessarily distinguish between public vs. private realm. Therefore the cottaging activity at Seba Beach is considered a recreational activity.
	Jackfish Lake tourism area has limited tourism value	Again this is related primarily to cottaging activities, as well as the fishing/boating activity and boat launch present on the lake
	Tourism value of mine sites is overlooked – sites are a piece of history	Comment noted. The East Pit Lake area (rec/tourism node for mining historical activity including interpretive signs) does come out as very high. Are there any other nodes within coal mining area that are tourism nodes?
	Do u-picks have tourism value? These are not shown along Highway 16 A	U-picks are features in the provincial Recreation and Tourism Features Inventory and will influence the scores provided they have been documented properly in the database. However they are fairly small and tend to occur in agricultural areas so may not necessarily show up very high relative to other values on a county-wide map that combines data layers.
	There is possibly more value north of Highway 16 A near the Pembina River	This area comes out as one of the highest in the county and is used for

Map	Comment/Issue	Follow-Up
		river rafting, etc. Because the gorge is fairly narrow spatially the visual impression is not as great as for the large lake systems.
	The recreation map is somewhat misrepresented. The map understates provincial park boat launches, Village of Wabamun boat launches, beaches, etc…	Boat launches and intensively used beach areas are included in the provincial Recreation and Tourism Features Inventory and do influence the map. Again since they are very small in area the visual impression is not large. Addressing this issue is more of an open space/recreation master planning issue that may be beyond scope of study. This may be a valuable issue to raise as part of the MDP update.
	Big Lake area and Wagner should have more value as they are a big draw.	These areas have moderate-high values and this is partly driven by relatively low scenic value in comparison to the lake systems further west and the North Sask. River Valley-primarily due to the lack of topography (Big Lake and Wagner) and lack of views to large water bodies (Wagner), which influences the *average* person's perception of landscape scenic quality more than, for example, opportunities to view specific plant community types. They are still ecotourism draws for specific types of activities and both these areas are shown as "Front Country – More Natural" on the Recreation Opportunities Spectrum map; this classification is fairly unique in the region given their proximity to Edmonton and Highway 1 and will be called out in the final report.
	Ensure public access to the river to encourage recreation and tourism	Comment noted. Will be taken forward into Phase 2.
	Identify formal access points to the river on the map	Comment noted. More of an open space/recreation master planning issue that may be beyond scope of study. Will follow up with County Staff.
	Consider splitting the map into "existing" and "potential" values	Comment noted. Conceptually this is a good idea but difficult to do mathematically in the computer mapping system with no modelling precedent- alternative qualitative methods to achieve this effectively would require far more engagement and coordination with other initiatives that are beyond scope of study.
Scenic Quality Map Comments	**Values / Score**	
	Clifford E. Lee should have higher score	Clifford E. Lee has a moderate score driven by extreme flatness of topography primarily, as well as lack of visibility from major highway routes. From a landscape scenic quality perspective this still makes sense although site-specific plants and animals may provide ecotourism features. The question is more whether it makes sense that areas like Chickakoo Lake, N. Sask River Valley, and Jackfish Lake are considered more scenic than Clifford E. Lee overall on average, and in the opinion of the project team this does make sense. Clifford E. Lee is more of an ecotourism opportunity rather than scenic value and this is reflected by its ROS classification as Front-Country-More Natural which is unique given its proximity to Edmonton.
	Interesting that the Carvel Aquifer has value	There is no Carvel Aquifer but the Carvel Pitted Delta tends to have higher scenic value to rolling topography in general.
	Highvale Mine has been extended southward and this should be reflected in the score	Agreed. The project team will look to investigate and extend value southwards in the final version of the report.
	Why is there a higher value for the west end of Wabamun Lake?	This is primarily related to the visibility of the major coal fired industrial facility on the south shore of the lake.
	The Pembina River area should have a higher scenic value	The Pembina Gorge itself has a very high scenic value but the visual impression is not strong due to the limited area of gorge.
	Area near Devon should have a higher scenic value	Model appears to be reducing scenic value of the river valley in this vicinity due to visibility of bridge, houses, and golf course facilities. It

Map	Comment/Issue	Follow-Up
		may be reducing this too much and the team will consider how to address this moving forwards.
	Wagner Natural Area should have a higher scenic value	This is primarily due to the lack of topography (Big Lake and Wagner) and lack of views to large water bodies (Wagner), which influences the *average* person's perception of landscape scenic quality more than, for example, opportunities specific plant community types. They are still ecotourism draws for specific types of activities and both these areas are shown as "Front Country – More Natural" on the Recreation Opportunities Spectrum map; this classification is fairly unique in the region given their proximity to Edmonton and Highway 1 and will be called out in the final report
	Methodology / Cartography	
	What type of perspective was used to generate this map? The value rating will differ from person to person. Judgment criteria are an issue.	The report will document the methods better – this is based on the US Forest Service's report and calibrated by a visual preference survey of Albertans and is driven by a large amount of spatial data in an objective, repeatable modelling system.
	The criteria benchmark needs to be more explicitly defined. There appears to be inconsistency with the ranking.	The criteria used for Scenic Resources were based on a provincial modelling study which in turn is based on a well developed system for mapping scenic quality developed by the United States Department of Agriculture over many years. The model used very detailed, spatially explicit data run for the entire North Saskatchewan Region, and were calibrated by a large survey of Albertans where average public opinion was used to quantify scenic values of landscape types and various interventions (e.g., powerlines, houses, etc.) within them. The results were determined to be generally valid at the broad regional scale, and overall trends and key areas still make sense for Parkland County as confirmed by field validation in October 2013. Alternatively, if a detailed county model is desired to optimally reflect the values of Parkland County residents, this could potentially be explored as an additional project as part of the Municipal Development Plan update.
	A more clear definition of "front country" is required	Agreed. This will be included in the report.
	The methodology is too subjective. Do not feel it contributes to the study	It appears that the communications of the methods behind this work was lacking and has been lost in the shuffle. Report will attempt to rectify this. May include this work under a separate cover.
	Views can be taken for granted and should be considered for protection	Agreed. Will be considered in Phase 2 and 3 to ensure scenic values are considered in county planning and policies.
	Why were reserves and municipalities not included?	This study was led by Alberta Tourism, Parks and Recreation who provided very specific directions that scenic values in reserves and municipalities were not to be addressed by the study.
	Lakes are not shown in blue and this is confusing – bodies of water should be better outlined	Agreed. This will be considered by the project team for the final map.
	Access to Scenic Areas	
	How will scenic areas be accessed on public and/or private land? People should be allowed to enjoy these areas.	Comments noted. New BMP under visual resources added saying: "Ensure appropriate viewpoints / access points so that people can enjoy scenic resources, but ensuring that access does not unduly attract people to areas of environmental significance."
	Some areas with modest and high values are difficult to access	
	Few facilities exist for people to see key areas and their views	
	General	
	Perception of value is linked to population density – people flock to nicer areas	Comment noted
	Impacts of telecommunications infrastructure on the visual landscape should be better controlled	Point added to BMPs under visual resources
Cultural and	**Industrial Heritage**	The level of detail requested is outside the scope of the Environmental

Map	Comment/Issue	Follow-Up
Historic Resources Map Comments	Incorporate railways and their history	Conservation Master Plan. This information has been noted by the County and they will consider whether an additional historic/cultural study is required to inform the Municipal Development Plan. The map will be changed to say “historic” resources and will clearly state that this is based on the AC provincial data to prevent confusion on what is being presented.
	The railway bridge at Entwistle is a significant asset	
	The original Wabamun power plant site is an asset	
	Old mine sites are an interpretive opportunity	
	Cultural Heritage	
	Cultural mapping potential to capture values and stories. Consider consulting Hills of Hope Society	
	Show community halls and churches	
	Show old farmsteads	
	Consider addition of Douglas Cardinal buildings	
	Ensure First Nations input	
	Keephills area has First Nations assets	
	Ferries across the river	
	RR 33 known as pilgrimage road and requires input from First Nations	
	Consider hunting and fishing access	
	Opportunities	
	Improve interpretation	
	Ferry-crossing tours	
	Balance historic preservation and tourism access to let people see and enjoy resources	

5.1.6 Station 6: Environmentally Significant Areas

Beneficial Management Practices

- Education
  - Educate county residents about ER requirements, especially around lakeshores
  - Education about meaning of policies and bylaws
  - Conduct open houses or public meetings in cooperation with Lake Management Associations to reach members
  - Provide environmental education about issues in Parkland County through the schools
  - Ensure that BMPs are easy for people to understand and implement
  - Consider developing a collaborative program that includes data collection by the public – public science
  - BMPs should not just be about adaptive management, but also about creating a vision and policy intent to address future issues
- Agriculture
  - Be clear about costs/impacts of BMPs to farmers. Farmers are concerned about changing land use practices without compensation
  - Consider the ALUS program – an incentive-based program that provides compensation for exchange of use rights
- Industrial Development
  - Regulate businesses through taxation by providing tax breaks if they demonstrate environmental stewardship
  - Publish environmental track record of businesses to reward those doing a good job, and shame those doing a bad job
  - Consider a 'stewardship ISO' model, like that suggested by Michael Keys
  - TransAlta has an intake near Sturgeon Hole
- Coal Mining / Aggregate Mining
  - Consider regulation for dry-mining to avoid impacts to water
  - Address the significant water quality issues associated with dewatering activities
  - Make clear to industry how to develop in a responsible way if they are located in/near an ESA. For example, provide rationale for why area is significant (species and habitat lists etc…) to help develop environmental management plans.
- Land Use
  - Bylaws must be updated to match policies
  - Bylaws must be enforced
- Country Residential Development
  - Approval process can be very cumbersome, driving some people to "tune out" and not follow the rules
  - Apply conservation easements instead of buffer widths, as easements can be better enforced
  - Retain creekways and use easements as conditions of development to maintain landscape connectivity
  - Improve the buffer / setback around Lake Wabamun
  - Develop setbacks for shoreline development
- Recreation
  - Adopt a "trans-Canada trail" approach to recreation in the County to create connectivity between recreation features
  -
- Municipal
  - There seem to be silos between industry, community and government
  - Evaluate development through a triple-bottom line framework
  - Emphasize the economic benefits associated with ESAs
  - Create more corridors to encourage connectivity
  - With an inventory of existing conditions, consider tracking and monitoring of conditions to measure any potential changes to the quality of the environment.
  - Conduct data gathering to evaluate whether BMPs are working

- Many individual landowners do collect monitoring records. This data should be collected, centralized and shared at a regional level to show others how responsible land management can create better ecosystems
- All County land is an ESA, and should be managed well
- Provide recognition for landowners who provide ecological goods and services – leadership/champion will encourage others to do the same
- The ECMP will be a good development tool, and will provide the basis for making better decisions
- Require policies to respond to the discovery of new environmentally significant features in real time (e.g. a sensitive species on a development site)
- Management of ESAs must correspond with provincial policy
- Clarify provincial and municipal responsibilities in relation to enforcement
- Consider as part of priority rating
- BMPs for management of ESAs may not be solely located within the ESA boundary. There is a need to manage upstream conditions in order to protect water quality and riparian areas.
- Evaluate the cost benefits of natural places. e.g., Wetlands provide environmental goods and services and provide savings on infrastructure costs to residents and industry. Make these visible, and compare them to the costs of replacement if they are lost.

Table 21. Environmentally Significant Areas

Map	Comment/Issue	Follow-Up
Overall ESA Score Map Comments	The hydrologic significance of the eastern part of the Wagner area should score higher than is currently being displayed. This should then result in increasing the size of the Wagner area boundary in the ESA map.	Agreed. Based on review of provincial data and internal team discussion, the Wagner Natural Area and Surrounding Areas ESA has been revised to includes these. See section 2.3.1.1(2) for more detailed information.
	Why is the south shore of Lake Wabamun not scoring higher? The shoreline along this area is undeveloped.	To address these concerns, it was decided that all lakeshore-related ESAs will include a minimum 100 m buffer area around the lakeshore. This conservative approach will be noted and needs to be considered during policy development in future project phases.
	There is a wildlife corridor that should extend northwest to Highway 765 from a high-scoring corridor north of the Village of Wabamun	This area spans across the northern edge of the coal mine site from the "Canada Geese" ESA to the "East Pit Lake" ESA. It is agreed that this may be a significant wildlife corridor and the connectivity models indicate relatively high scores here. The overall model scores are relatively intermediate and there are many other forested corridors of similar value in the County overall. At this point in time the project team feels this is best identified at the level of a "micro-site" ESA for consistency with the rest of the mapping. Microsites are defined in this study as small-scale features which play a key role in upholding ecological integrity at larger landscape scales. However, they are not explicitly identified as individual ESAs in this study due to their vast number and small scale. Note that scores are moderately high in this area overall and that maintaining the intactness of the corridor is an important landscape management goal. A conceptual arrow at this location on the "regional linkages" map will also be considered for the final maps.
	Has the Glory Hills heron colony been captured in the score?	No; this was missing from the FWMIS database. This has been reported in the fact sheet, however. In addition, due to this heron rookery, the team will be increasing the significance level of the Glory Hills ESA upwards to either regionally or provincially significant (under review).
	There has been significant change in the hydrology of Wagner/Osborne Acres in the last ten years (flooding).	Comment noted.
	Was a risk model used as part of overall ESA identification?	All the modelling performed identifies the inherent relative risks of environmental impacts across different parts of the landscape. For a risk to occur, we would need an activity.
ESA Map Comments	**Communication / Engagement**	
	Make the information easier to understand	Comment noted, and included as part of the engagement evaluation for this project.
	Use plain language in the report	Comment noted but report is directed at a mixture of scientific and non-scientific audiences so a balance was struck.
	Use the tax roll to reach seasonal property owners who reside outside of the County	Comment noted, and passed on to County for future studies.
	Have First Nations been engaged?	In accordance with the government-to-government approach for engaging First Nations, the Office of the Mayor has invited First Nation participation in the project.
	Use existing Twitter channels to better publicize events	Comment noted and included as part of the engagement evaluation for this project.
	Cartography	
	Create a higher resolution map that allows property owners to "zoom in" and see how their properties are affected. It is difficult to review the maps at a micro level.	Comment noted. The project team explored the feasibility of enabling this function. We determined the functionality of the tool would be

		impacted if higher resolution imagery was used as the connection would be too slow for most users.
	Add ownership map to assist with review of ESA boundaries	Will be shown on individual ESA fact sheets
	Add a zoning / land use overlay to better understand land use context and development pressures, and to better consider cumulative effects of development	Comment noted-this concept is largely captured in the "Development Pressures" map.
	ESAs	
	Connectivity does not seem to coming out on the map. There do not appear to be many connectivity corridors.	Connecting areas tend to be a lighter shade of green as opposed to the dark purple – they are there it is just a matter of user perception.
	Creekways not on this map could be candidates for easements to improve connectivity	Agreed and will be emphasized in the report that lower order streams are critically important micro-site ESAs.
	Is the Western Grebe colony listed as a bird area	Yes
	What does the assignment of significance mean in terms of policy, protection and implementation?	Good questions. These questions will be addressed in greater detail through Phases 2 and 3.
	Does assignment of significance denote a jurisdictional issue?	
	Have the ESAs been analyzed against long range future infrastructure planning (e.g. Ministry of Highways, ring road)?	
	Can individual ESA fact sheets be shared? Lafarge would like to receive fact sheets for areas where their operations are located in order to inform their environmental operating plans.	Lafarge will be sent the individual fact sheet for Fallis Slopes on December 18th pending permission by Parkland County.
Comparison of ESAs	How were O2 ESA boundaries digitized? They seem to match the previous study more closely than the ESA significance scores.	O2 ESA boundaries were digitized by having the high-low scores displayed over imagery and then making decisions on which habitat complexes should be grouped together. Generally the Westworth boundaries were not consulted until after this was completed for a comparison and double-check of information.

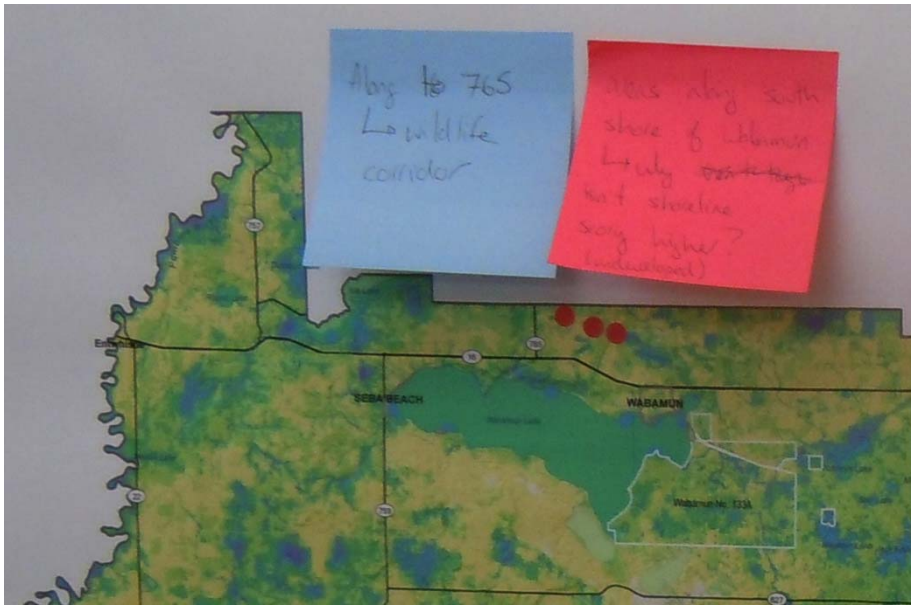


Figure 2. Potential wildlife corridor identified by stakeholder (red dots)

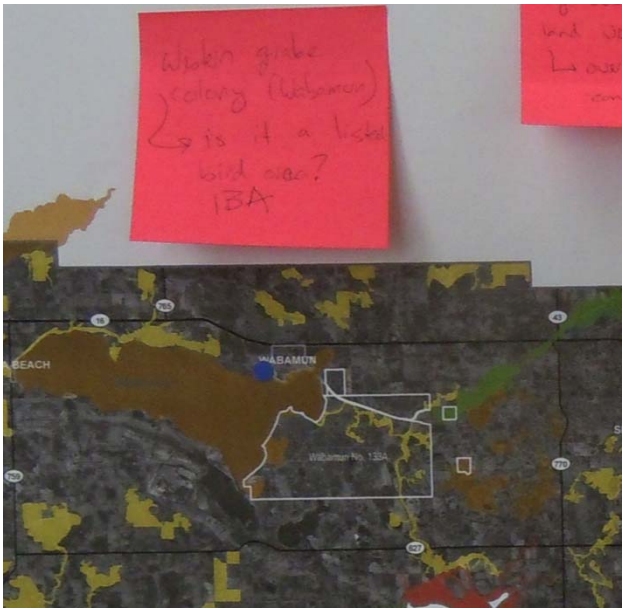


Figure 3. Potential western grebe nesting location (blue dot)

5.1.7 General Comments

Intermunicipal Planning

- With regard to Wagner Natural Area, the City of Spruce Grove will plan and manage the area between Wagner and the identified Spruce Grove fen with a focus on protecting surface water drainage and maintaining habitat connectivity.
- Include a disclaimer that regional significance for the County will not necessarily reflect things that are significant on a Town or Small City level.

Public Engagement Feedback

- The room as too bright for the powerpoint presentation.
- The maps were too small.
- Pleased that stakeholder input will be incorporated into ESA analysis.
- Good session; enjoyed the format
- The room was not well suited for the workshop format; it was too noisy. Greater separation of the break-out discussions by putting them in separate rooms would be better.

Data Sharing

- Create a mechanism for sharing data/information on environmental stewardship (eg. mine reclamation)

Mapping

- Develop maps on connectivity, wildlife, water, green spaces, transportation.
- Prepare an overall systems map to determine potential impacts to systems from proposed development.
- Identify areas appropriate for development and areas where development should be restricted.

Vision

- Identify a three-generation vision of what Parkland County has and could look like.

5.2 Phase One Open House Comments

Feedback was gathered from the public at open house events through discussion with project team members, and by annotating maps with sticky notes. The public was also invited to provide additional comments on comment sheets at the end of the event.

Public feedback is presented below in a table identifying the issues, opportunities and comments provided in response to the ESA analysis maps. The table identifies individual comments made by participants, and a follow-up column indicating how the comment has been addressed.

Table 22. Open House Comments

Comment/Issue	Follow-Up
Species and Habitats	
Significance of migratory birds at Mayatan Lake • Trumpeter swan • Pelicans • Ducks, geese, loons, etc…	This information has been described within the Mayatan Lake ESA fact sheet.
Significant nesting sites for ducks, loons, Blue heron, and many other shore birds at Mayatan Lake	
Mayatan area supports wildlife as well – moose, deer, and various predators. Suspect it may connect to areas west and north via wildlife corridors	
Landscape Ecology	
Does the study include data on wildlife movement?	Yes. A corridor connectivity index was developed and is reflected in the data/mapping as part of the "Species and Habitats" map. A greater discussion on corridor connectivity is included in the report.
How will you address the need to repair, rebuild, or expand corridors?	This issue will be addressed in Phases 2 and 3 of the study.
Groundwater Resources	
What are the artesian challenges in the exploration restricted areas?	Noted. Alberta Environment and Sustainable Resource Development should be contacted for more specific details related to each individual exploration restricted area.
Protected Areas	
Some Crown Land not shown around Mayatan Lake	These are not readily visible to human eye on a county-wide map in this cartographic template. All crown lands should show up in the detailed inset of Mayatan Lake for the fact sheet as crown lands are part of the base template for these inset maps.
Some municipal reserve land shown around Mayatan Lake	Noted. Will aim to address for final version.
It is difficult to see some smaller areas on the maps when they are enlarged	Specific ESA fact sheets will enable the review of data at a more detailed level.
133B and 3 other First Nations reserves are not shown on the map; they seem to be shown as "Crown Land" instead of "First Nations"	Noted. Will aim to address for final version.
Need for ER / MR policy to clarify public access opportunities	Agreed. Will be addressed in Phases 2 and 3 of the project.
Recreation and Tourism Values	
Are there other criteria for recreation value?	See Table 20 for a detailed discussion of criteria for recreation value used in this study.
What is the definition for recreation used in this study?	See Table 20 for a detailed discussion of criteria for recreation value used in this study.
Groomed cross-country ski trails are needed in the County	Noted. This is more of an open space/recreation master planning issue that will be shared with County Staff.
More boat launches are needed on Wabamun Lake	Noted. This is more of an open space/recreation master planning issue that will be shared with County Staff.
Isle Lake had a complete fish kill two years ago due to algae blooms. There are major algae problems.	Noted.
Scenic Quality	
Define scenic quality – some people enjoy viewing small objects such as birds, flowers, insects, etc…	The definition for scenic quality will be provided in the report. See Table 17 for a more detailed response.
Does 'scenic value' translate to an area that is environmentally significant? Why or why not?	
Development Pressures	
Fix map – Acheson boundaries do not bring industrial to Spruce Grove.	Noted. Will aim to address for final version.

Add Wagner boundary to the map	Noted. Will review and aim to address for final version.
PGA constraints map (boundary)	
CCRA constraints map (boundary)	
Note that area facing future development pressure for country residential scores fairly high in the environmental significance score.	Noted.
Overall Environmental Significance Score	
Short term recreational use of lakes can cause issues – lack of stewardship (eg. Mayatan Lake, Star Lake)	Agreed. BMPs for recreation have been developed.
Include signage for public walkways	Noted, and included in BMPs for recreation.
Better signage for MR and ER lands to increase awareness	Noted, and included in BMPs for recreation.
The connectivity of the large wetland area near Kilini Creek / Soldan Lake / Eden Lake should be considered very carefully	Noted, and will be considered for final document.
Peregrine falcons are breeding just north of Entwistle (see location on map); approximately 30 have been released	Noted, and will be reviewed for possible inclusion in ESA fact sheet.
Magnolia Park near Matthew's crossing "biggest road to nowhere"	Noted.
Random camping and driving on County	Noted, BMPs and subsequent policies for these issues will be developed.
ESA Map	
Just because something has been abused and is in poor condition doesn't mean it isn't significant – this is missing/not captured on this map	The overall scores, and identification of ESA boundaries, is based on a review of comprehensive data sets provided by provincial government agencies and research institutions. The scores for this study are intended to present an objective comparison of environmental value for all areas across the country. Some findings do not fully represent the experience of individual users in specific environments. BMPs and environmental protection policies and tools will be developed for all land across the County in Phases 2 and 3, and won't necessarily be limited to ESAs only.
Request for a more detailed map to enable the review of the Mayatan Lake ESA.	Several more detailed maps as well as the Mayatan Lake ESA draft fact sheet were circulated to the Mayatan Lake Management Association for more detailed review.
Additional data sources should be considered to develop and refine the Mayatan Lake boundaries.	The Mayatan Lake Management Association and Wagner Natural Area were invited to provide additional data and local inventories for the project team to review.
Comparison to Previous Studies	
Make this map bigger	Noted. We will endeavour to use larger format display material in future open houses, and have included this comment as part of the engagement evaluation for this project.
Careful with "multi-use trails" – this could end up meaning OHV trails	Noted. This will be clarified in BMPs, and flagged for discussion when tools and policies are developed in Phases 2 and 3.
Carefully consider removing land from existing ESA boundaries. Once protection is removed and development occurs, the land loses its environmental significance. Consider developing a specific process for evaluating removal of land from protection.	The proposed ESA boundaries were rigorously reviewed as part of this study, and carefully compared to boundaries identified as part of the 2004 ECMP (Westworrth) and the 2009 provincial ESA report (Fierra). The study team will undertake one final review of all boundaries before finalizing the document.
Are the maps accurate? Why or Why Not?	
The regional scale is a good starting point, and the ESAs / significance rating is well thought-out. How will local significance be included in planning, specifically the protection of something that is of significance locally like a corridor for wildlife movement?	This is a good question, and will be addressed in greater detail through Phases 2 and 3.
When enlarged, some maps are not accurate (eg. Crown Land boundaries are past the ESA areas)	All crown lands are GIS layers that form part of a base template. ESA boundaries that do not align with Crown lands at an enlarged scale will be reviewed. It should be noted that the intent of the study is not to identify boundaries to the lot line, but rather to provide a regional picture of where areas of environmental value are located.
Some maps do not seem to take into account established data for various wetland and lake areas.	The data on wetlands used by the team is the provincial merged wetlands inventory which is created and maintained by Alberta Environment and Sustainable Resource Development. In some cases, it is possible that the scale of the map, makes it difficult to see all wetland and lake areas. In the specific case of Wagner Natural

	Area, it was determined that there are obvious gaps in provincial data inputs and that there are clearly wetlands that are likely spring-driven and most likely have the same characteristics as the marl ponds within the Wagner Natural Area itself. This will be reflected in the final document. If there are perceived discrepancies in data, these need to be specifically identified to the project team; however it is beyond the scope of this project to conduct a detailed inventory of all wetland sites in the County.
Maps are easier to read with road labels	Noted. Individual fact sheets for ESAs will also provide parcel boundaries and people will be able to locate specific boundaries of their property in relation to ESAs.
Consider the connectivity factor in the ECMP and subsequent policies.	Connecting areas tend to be a lighter shade of green as opposed to the dark purple – they are there it is just a matter of user perception. Specific policies and tools to preserve / enhance habitat connectivity will be developed as part of Phase 2 and 3 of the project.
Difficult to assess at the scale they are shown	Noted. Individual fact sheets for ESAs will provide parcel boundaries and people will be able to locate specific boundaries of their property in relation to ESAs.
Allow for detailed review of maps at the micro level	The intent of the project is to identify environmentally significant areas at the County level (a regional scale). Individual fact sheets for ESAs will provide parcel boundaries and people will be able to locate specific boundaries of their property in relation to ESAs. Several more detailed maps as well as the Mayatan Lake ESA draft fact sheet were circulated to the Mayatan Lake Management Association for more detailed review.
The maps represent the significant areas very well	Noted.
Big Lake ESA – create a provincially significant ESA around the Big Lake area to protect sensitive habitat.	In order to address concerns about sensitive riparian area around lakes, it was decided that all lakeshore-related ESAs will include a minimum 100 m buffer area around the lakeshore. This conservative approach will be noted and needs to be considered within policy development in future project phases.
Glory Hills ESA – Glory Hills should be a regional ESA as it is adjacent to Chickakoo Lake complex designated as regional. This area currently experiences pressure from recreation users. There is also an opportunity to incorporate Glory Hills ESA with the Chickakoo Lake Complex ESA.	Due to the presence of a heron rookery, the team will be increasing the significance level of the Glory Hills ESA upwards to either regionally or provincially significant (under review). The Glory Hills ESA will be kept separate as each ESA provides a different landscape function.
Wabamun Lake ESA – Recommend a provincial designations and active management by all levels of government and industry, including CN to ensure this large lake is managed to maintain water quality and quantity.	Not accepted. When overall scores for Lake Wabamun are compared to all other lakes across the County, the study team finds that criteria for a provincial designation are not met. Lake Wabamun meets the established criteria of a regional ESA.
Devonian Gardens ESA – Recommend a provincially significant designation because of its uncommon plants.	Not accepted. This ESA does not meet the criteria for provincial designation.
Short Term Priorities	
Conserve important regional ESAs, ensuring that development fits with the environment and community interests	All comments noted. Relevant BMPs have been reviewed an incorporated into respective BMPS sections in the report. Priorities for conservation will be carried forward for consideration and inclusion as part of Phases 2 and 3 of this project.
Mayatan Lake is a good candidate for conservation because it is relatively untouched and used by wildlife, migratory birds and nesting birds.	
Water quality in lakes	
Watershed/wetland protection	
Protect environmentally significant areas before they are ruined	
Protect areas under most threat from development now	
Protect lands adjacent to ESAs to help support the naturally function of the ESA	
Consider proximity to existing ESA as part of priority rating	
Lake and wetland areas require immediate and long-term attention as they are the most vulnerable to permanent damage	
Provide bigger and better signage for environmental reserves	

Restrict wastewater and sewage discharge in watersheds	
Water quality	
Keep the wildlife on and around the lakes	
Better recreation management of ESAs along the North Saskatchewan River Valley, specifically from Highway 770 to Edwin Reach ESA and from Burtonsville Island Reach ESA.	
Incorporate the Glory Hills ESA into the Chickakoo Lake complex	
Long Term Priorities	
Nationally, internationally and provincially sensitive areas.	All comments noted. Relevant BMPs have been reviewed an incorporated into respective BMPS sections in the report. Priorities for conservation will be carried forward for consideration and inclusion as part of Phases 2 and 3 of this project.
Protection for future lakes/watersheds	
Collaboration between watershed stewardship groups, counties, province to develop watershed management plans, policies, etc…	
Habitat connections between ESAs – establishing a network of connections that have ecological significance	
Habitat protection from a connectivity perspective	
Keep natural vegetation around the lakes through setbacks	
Develop a Wabamun Lake Management Plan	
Management of access to Sturgeon Hole Reach ESA	
Kilini Creek ESA also ties into the Chickakoo Lake complex; establish a formal corridor connection.	
Development Pressures for Priority Conservation Areas	
Concerned about residential, industry, recreation (campgrounds) and municipalities expanding	Noted. These pressures are reflected in the "Development Pressures" map.
Concerned about areas most overlooked and lost as most easily succumbing to development pressure. Specifically, concerned about elements that are not considered by traditional planning approaches.	Good comment. Policies and tools for protecting environmentally significant areas will be developed County-wide. While some BMPs, policies and tools will directly apply to ESAs, many will be applicable to all County lands.
Lake and wetland areas seem most vulnerable to development from residents and tourists.	Agreed. Managing access and finding a balance between recreation and environmental protection will be addressed through policies and tools developed in Phases 2 and 3 of this project.
Developers seem to proceed with work prior to formal approval, and before residents are given a meaningful chance to review and comments. Damages from development cannot be undone.	Noted. Managing the land development and environmental approvals process will be reviewed as part of Phases 2 and 3 of this project. There is the potential to develop new tools and procedures related to this concerns.
Recreational facilities in the watersheds may impact lake areas that should be preserved.	Noted. See above comment.
Lack of conservation ethic is jeopardizing the health of the lakes	Noted. This issue will be reviewed as part of Phases 2 and 3 of this project.
Developments that are too big such as campgrounds that are located too close to the lake (require setbacks)	Noted. Major campgrounds within ESAs should be discouraged; in some cases if campgrounds are properly planned and designed to minimize overall impacts they may be compatible with ESAs. This has been added to BMPs chapter.
Public education is needed to make people more aware of their impact of their practices on the land. A webpage with educational material such as FAQs, brochures and other resources would be a excellent first step.	Noted. Public education has been included as a BMP, and will explored in greater detail as part of Phases 2 and 3 of this project.

5.3 Phase One Web Mapping

Feedback was gathered through a web mapping tool by allowing users to annotate an interactive web map with comments.

Feedback is presented below in a table identifying the issues, opportunities and comments provided in response to the ESA map. The table identifies individual comments made by participants, and a follow-up column indicating how the comment has been addressed.

Table 23. Web Mapping Comments

Comment/Issue	Follow-Up / Response
West Side of Bunkerhill/Dussault Lake ESA Please do not consider putting ATV trails in this area. Walking, skiing trails would be appropriate for this area. It is a beautiful are, with lots of wildlife and beaver ponds. Well worth preserving in a quiet environment.	Ensure public members that the ECMP plan is intended for environmental conservation and will not be used to promote new recreational activities, particularly those that are inappropriate for the area. Generally, ATV trails should be avoided within sensitive ESAs and redirected to other areas.
Wildlife Point ESA (Coal Point / Fallis) Part of this ESA includes the Franlklin Wetlands, a class 5 wetland. This should be ranked as a provincial ESA as it is a provincial resources under the Water Act. Expand the ESA as the wetland extends beyond the property boundaries of the YWCA. Specifically, the wetland goes under the CN rail line to the north, and goes east and west into adjoining properties.	The report will better describe what is meant by "provincial" ESA and provide clear criteria. The intent of this study and the classification is not to identify every wetland that may fall under provincial regulatory jurisdiction (e.g., *Water Act*), as there are probably thousands of these. We acknowledge the name "provincial ESA" could be confusing to some but we are maintaining consistency with the Fiera/ATPR work and other county ESA studies and will ensure clarity in the ECMP report.
Fallis Slopes ESA Then why did you allow clearcutting and subdividing on SW13?	This area is a new proposed ESA that did not appear in the 2004 ECMP, and therefore was likely not flagged during any past development application purposes. At this stage the new ECMP information is draft and not integrated with the Municipal Development Plan, Land Use Bylaw, or other County policies and procedures; however, this will be undertaken within this project during Phases 2 and 3. Potential tools such as new policies and procedures, incentives, improve beneficial management practices, etc., etc. are to be examined and addressed in Phases 2 and 3 in consultation with the public and industry. This will need to consider a diversity of interests and provide for fair, equitable, and environmentally appropriate land uses and beneficial management practices.
Fallis Slopes ESA Protect this area from clear cutting and gravel pits. Current penalties and required remediation are not very significant.	
Fallis Slopes ESA ESA lands need to be protected from destructive development such as gravel pits and stripping of the land. These should be prohibited on ESA lands	
Fallis Slopes ESA I echo other public comments that this area should be protected from clear cutting and gravel pits. The penalties handed out after the fact in dollar values and the required remediation are a joke. As well the remediation required to make up for the clear cutting, etc. is laughable.	
Fallis Slopes ESA Why are gravel pits being allowed on this ESA?	
Wabamun Lake ESA Would not Wabamun Lake be of national or at least provincial significance given it is a lake and under both federal jurisdiction (Fisheries Act) and provincial jurisdictions (Water Act)?	In its current condition and according to the criteria used to classify significance levels, Wabamun Lake qualifies as regionally significant but not provincially significant. It is currently not unique enough at a provincial scale. It is also clear that the lake is suffering from ecological health issues due to cumulative effects (e.g., catch and release fishery only due to fish population). The report will better describe what is meant by "provincial" and "federal" ESA criteria and provide clear criteria. Legislative authority should not be confused with significance level classification labels (see above).
Wabamun Lake ESA Wabamun Lake likely higher rating than regional some provincial significance	
North Saskatchewan River Valley Sturgeon Hole Reach ESA The discretionary land use of resource extraction in this river valley should be removed, in order to preserve this very important ESA.	At this stage the new ECMP information is draft and not integrated with the Municipal Development Plan, Land Use Bylaw, or other County policies and procedures; however, this will be undertaken within this project during Phases 2 and 3.
North Saskatchewan River Valley Sturgeon Hole Reach ESA Who manages? Provincial government responsibility dependent on what they recognize within provincial classification system.	Legislative / management authority should not be confused with the significance level classification labels (see above). The N. Sask River here and tributaries are in fact considered "Class A" fish habitat by the AESRD "*Code of Practice for Watercourse Crossings*".

North Saskatchewan River Valley Sturgeon Hole Reach ESA We've lived here for 11 years in this river valley and we've seen 2 floods this year alone and countless other over the years on 31 and 514A. Discretionary use of resource extraction should be removed from this river valley.	At this stage the new ECMP information is draft and not integrated with the Municipal Development Plan, Land Use Bylaw, or other County policies and procedures; however, this will be undertaken within this project during Phases 2 and 3 and will be considered.
North Saskatchewan River Valley Sturgeon Hole Reach ESA Restricting access to foot traffic only to sensitive areas would be a wise move. Vehicular access is resulting in havoc on many levels - public nuisance, public safety, jurisdiction issues, enforcement, destruction of habitat, the use of uncontrolled weapons, damage to agricultural lands abutting these environmental spaces, and a loss of use for others who would otherwise respectfully enjoy these places.	This will be considered during Phases 2 and 3. Implementation / enforcement / signage will also be key issues that must be addressed for questions such as these.
SW of Mayatan Lake ESA There are a number of wetland areas throughout the Mayatan watershed that form an integral part of the Mayatan Lake complex. Quite a number on this (west) side of the lake are obvious on photos yet are not part of the ESA. The ESA should be expanded into this area as well.	The project team carefully considered this suggestion. These additional smaller pothole lakes and wetlands to the west of Mayatan Lake do not demonstrate high connectivity to the complex – however they are still considered as important ESAs, but at a microsite level of significance to maintain consistency with the rest of the county-wide study methodology. This is not to say that these additional areas do not serve an important function but rather that it is difficult to justify including them within the Mayatan Lake Complex ESA which is of regional significance.
Mayatan Lake ESA Mayatan Lake and the surrounding area may be undervalued in the overlays as a habitat for birds and wildlife. It provides nesting habitat for many species including Blue Herons and many migratory birds such as loons and several varieties of ducks. The lake is used by Canada (and other varieties of) geese, pelicans, Trumpeter Swans, osprey and bald eagles. There are also numerous observations of moose and observations of predators such as cougar and wolves	This information has been incorporated into the fact sheet for Mayatan Lake in the ECMP report. This type of site-specific information is difficult to incorporate into a County-wide consistent and repeatable methodology for mapping. Regardless, Mayatan Lake and surrounding habitats have been identified as a regionally significant ESA in the draft ECMP based on the criteria identified, and at this point in time it is difficult to justify moving it upwards into a higher category.
Mayatan Lake ESA A number of small areas that are part of the Mayatan watershed are not in the ESA and yet should be. These areas (for example the SW18-52-2-W5, NW7 and SW7-52-2-W5M) may contain Crown lands, broken topography, wetlands or low areas and are also not suitable for agriculture.	Boundaries to the ESA were adjusted to include more of these areas in response to these comments as the project team found them reasonable and well justified.
Mayatan Lake ESA There are significant wetland areas around Mayatan Lake that are not included in the ESA draft maps. An expanded ESA boundary should include these areas, both around the eastern basin and western basin	Boundaries to the ESA were adjusted where well justified in order to address.
Kilini Creek ESA There are opportunities to sustain and build greater connectivity between our lakes, waterways and green spaces. This would protect our watercourses, wildlife corridors, and give us places to witness wilderness in our county. Development should be directed away from the places we value, and away from the places that connect them. There are eco-tourism opportunities in creating connectivity, protected spaces, and foot traffic only zones.	The ECMP report has placed a major emphasis on connectivity issues both within and between ESAs County-wide.
Chickakoo Lake Complex ESA (West Side) ATV's turn this area from beautiful wetlands (shooting stars, etc.) into a mud hole.	Ways to protect ESAs better will be considered during Phases 2 and 3. Implementation / enforcement / signage will also be key issues that must be addressed for questions such as these.
Hubbles Lake ESA (South Side) Restrict development around the lake especially campgrounds - keep it in good environmental condition	Ways to protect ESAs better will be considered during Phases 2 and 3.
Glory Hills ESA Glory Hills ESA reconsider as regional with link to Chickakoo Complex ESA	The project team agreed and changed this to regional significance

East of Atim Creek ESA, in SW 21-52-27 Atim Creek south of Highway 16A is an intermittent run-off channel	This may be the case but there is sufficient mature vegetation and connectivity in the Peterburn Estates and Meadowview Park subdivisions and upstream to Longhurst Lake that justifies including this part of Atim Creek in the ESA. It should be noted that many pollutant "spikes" occur during flood conditions and deep-rooted riparian vegetation within and adjacent to ephemeral channels are very important components of watershed management. In addition, portions of Atim Creek further upstream from Longhurst Lake are excluded from the ESA in this study as they exhibited very low value overall and were 100% cultivated-however restoration of this area is judged to be an important environmental management goal by the project team.
East of Mallard Park Wetland ESA, in NE 34-51-27 The lack of recognition of important water courses that connect waterbodies is a serious oversight. In particular, the course connecting Mallard Lake to the Clifford E Lee Sanctuary is given no recognition. This water course was a significant feature of the Jean Lake water management proposal developed in response to the flooding in the mid-70s. Diverting water from this stream bed could have serious negative consequences for the Sanctuary	This area appears to have been heavily impacted and it is difficult to justify including it as part of more intact ESAs. Accordingly, it is best considered to be of "micro-site" significance. Watershed management beneficial management practices as well as restoration of this stream channel section may be identified as strategic goals within the plan and also identified within Phases 2 and 3 of the project. At this point in time the information provided has been added to the Clifford E. Lee Nature Sanctuary fact sheet under "management considerations".
Between Woodland Park Wetland Complex ESA and Clifford E. Lee Nature Sanctuary It is likely important to include the creek that inputs into the Clifford E Lee complex as part of the ESA as it is one of the main sources of water to the system - originating from the Woodland Park Wetland Complex I believe.	This information will be added to the Clifford E. Lee Nature Sanctuary fact sheet to ensure it is appropriately considered. At this time there is not enough information to justify including this channel within the Clifford E. Lee Nature Sanctuary and it is best identified as a "micro-site" ESA and flagged during more detailed planning and analysis.
Between Woodland Park Wetland Complex ESA and Clifford E. Lee Nature Sanctuary Very important to have water source to sanctuary as part of ESA	
Clifford E. Lee Nature Sanctuary (West Side) The Clifford E. Lee Nature Sanctuary is a steward for a Natural Area (26 acres) just off RR264 across from sanctuary, how are these natural areas being handled in your plan?	These areas appear to have been included in the ESA but need more detail / follow-up from Cheryl Spencer-may circulate fact sheet to her prior to finalizing to ensure the right information has been included
Devonian Gardens ESA View as provincial in nature	Difficult to justify provincial significance based on the criteria used in the study
Wagner Natural Area and Surrounding Forest ESA Not merely the ESA's need to be addressed - but also the surrounding systems that support and sustain them. Prominent examples are Wagner Bog and the Clifford E. Lee Sanctuary. Both are absolutely dependent on watercourses outside their borders	The project team has ensured that the ESA fact sheets make these considerations clear
North of Wagner Natural Area, in NW 18-53-26 Suggest consideration be given to protecting or conserving land between Atim Creek ESA and Wagner Natural Area for future establishment of a wildlife corridor to restore connectivity between Big Lake/Atim Creek and Wagner Natural Area	Conceptual arrows illustrating this concept have been added to the ESA inset maps
Big Lake Surrounding Area ESA Provincial significance consideration as adjacent to internationally significant Big Lake bird area	The project team reviewed this and decided, for consistency, that since this area is not providing bird habitat and not identified as part of the globally significant bird area, it would not be consistent to call out the surrounding areas as the same classification as Big Lake itself. The surrounding areas are best kept separate as regionally significant although they have their degradation would have the potential to impact Big Lake itself, which will be reflected in the fact sheet for this ESA.

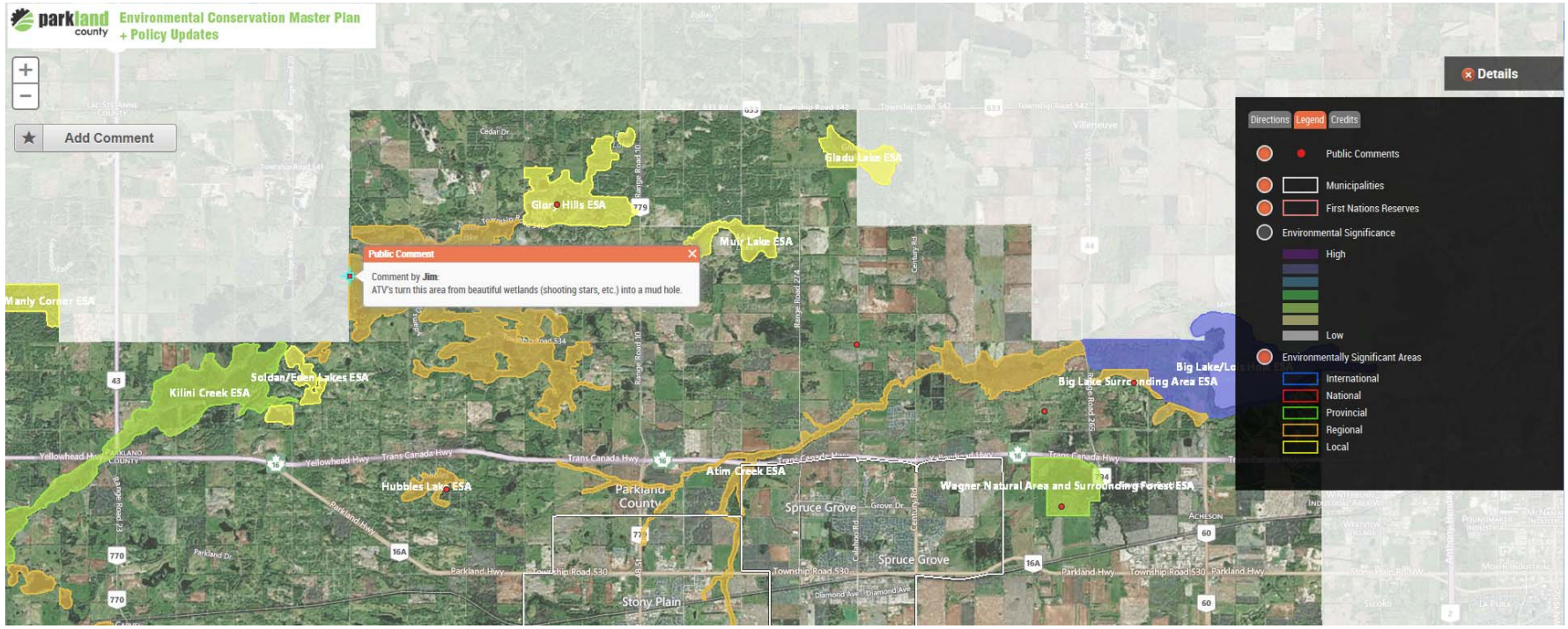


Figure 4. Sample Screenshot of Public Comments from Web Mapping Tool