



Elk River  
Watershed  
Qukin  
ʔamakʔis Collaborative  
Monitoring  
Program

# Interim Monitoring Working Group

## Second Meeting - May 30, 2022 - Meeting Notes

### Meeting objectives

- Come up with an agreed-upon method on how to develop the shortlist of priority monitoring questions
- Approve this group's terms of reference

### Attendance

1. Stella Swanson, Director, *Elk River Alliance*
2. Anne-Caroline Kroeger, Program Manager, *Elk River Alliance*
3. Cait Good, Senior Lead - Aquatic Sciences, *Teck Coal Limited*
4. Dwayne Minton, Impact Assessment Biologist, *BC Ministry of Environment and Climate Change Strategy*
5. Jon Bisset, Senior Biologist, *Jon Bisset & Associates*
6. Paige Thurston, Database & Community Engagement Coordinator, *Living Lakes Canada*
7. Chris Hust, Engineering Technologist, *City of Fernie*
8. Jesse Huisman, Director of Engineering and Public Works, *District of Elkford*
9. Nick Lapointe, Senior Conservation Biologist in Freshwater Ecology, *Canadian Wildlife Federation*

### Discussion items

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| <b>Nick Lapointe</b> | <b>Why - How</b> - are research questions, monitoring should be primarily concerned with <b>Where and When</b> .  |
| <b>Jesse Huisman</b> | Elkford citizens have a lot of selenium questions on their drinking water, but as Elkford is all Groundwater dependent it separates the residents a bit from the surface water selenium issue. Besides <b>drinking water quality</b> , we do also get questions on <b>drinking water quantities</b> . |

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| <b>Chris Hust</b>     | Same comments as Jesse. Fernie is however a mixed drinking water source (with primary intake being Fairy Creek a surface water creek) and last July and August 2021 the city had to move away from this creek. Residents then ask ‘How come there is a water boiling advisory?’ Besides drinking water quality, we are also starting to develop concern on <i>drinking water quantities</i> .  |
| <b>Jon Bisset</b>     | Fairy Creek is an “interesting creek” it is actually tough to wade through and it actually does not have the WCT population that it should have the potential for and Jon suspects this is because of its water temperature.   |
| <b>Dwayne Minton</b>  | A monitoring program should not be specifically designed to <i>assess</i> land use policies, rather it should be used to <i>inform</i> land use policies.  |
| <b>Jon Bisset</b>     | <p>The monitoring program needs to generate data, statistically speaking, that generates enough confidence, say 95% confidence, to inform management with high confidence in the information fed to managers.</p> <p>While generating monitoring data with high confidence levels is the ultimate goal this needs to be balanced with practical and ethical considerations, as seen by the example where it is not ethically or financially defensible to sample the WCT population to obtain a 95% confidence on the population status. A surrogate would need to be used instead of WCT.</p> <p>Also, we need to ask ourselves ‘What are the management questions?’ and then ‘What tools do we need to answer these management questions?’</p> |
| <b>Nick Lapointe</b>  | Asks why instead of framing monitoring questions for the monitoring program to answer to we are not simply taking the short route of looking at other long-term monitoring programs, such as the ones by the Ontario conservation authorities as the <a href="#">Lock River watershed monitoring program</a> as an example. Nick feels like we are trying to ‘reinvent the wheel’ ...  |
| <b>Stella Swanson</b> | While we reviewed a number of the watershed health report cards across Canada, we feel that a lot of these monitoring programs are not connecting the dots between land use and water quality.   |
| <b>Nick Lapointe</b>  | If we take the big categories of ‘receptors’ he would ask next ‘is it fish or macroinvertebrates?’, and taking the ‘water quality’ category, he would ask ‘is it nutrients or contaminants’  |

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|                       | <p>Whatever monitoring question we shortlist, Nick would hold on to that long list of monitoring questions, as some monitoring questions may be useful later on.</p> <p>The important first step is to recognize the broader theme of the individual monitoring questions in the long list.</p>  |
| <b>Stella Swanson</b> | <p>Agrees with Nick Lapointe that the broad categories are ‘climate change’, ‘fisheries’, ‘flows’, ‘land use’ and ‘drinking water quality’</p>   |
| <b>Cait Good</b>      | <p>Would recommend we keep the ‘lay-men’ language of ‘community questions’ when speaking to the public and to communities. However, to answer these monitoring questions, we need to develop a ‘scientific question’ of this question for which we can develop strong metrics. For example, the community often asks ‘Can I drink the water’ and ‘Can I eat the fish?’ and we can take this question and reframe it to answer it with metrics eg: Do contaminant levels exceed consumption guidelines in xxxx species ? Cait points out that communities tend to ask questions that boil down to the individual choices they need to make.</p> <p>Another example is where the community might ask ‘Are the fish happy?’. Lay-men don’t care about macroinvertebrates but scientists know that these macroinvertebrate communities need to be monitored to answer that community question.</p> |
| <b>Stella Swanson</b> | <p>What does everyone think about using the word ‘health’ in our monitoring question? She for one as a scientist always cringes at this word as it is tough to define but she knows that the communities like to use it. There are also zillions of examples of ‘watershed health reports’.</p>  |
| <b>Cait Good</b>      | <p>Cait also agrees that in developing our monitoring question, we should consider avoiding the word ‘health’ unless we define it at the start of our program.</p>   |
| <b>Dwayne Minton</b>  | <p>Agrees on our choice of broad categories or broad themes, but then the monitoring program that we build should be on establishing <i>status and trends</i> on these broad community themes.</p> <p>He agrees with Stella Swanson that we need to establish our monitoring question first, and then we are in a better position to</p>   |

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|                       | build our monitoring program and assess whether the jock river watershed monitoring program makes sense for us.   |
| <b>Paige Thurston</b> | In our scoring criteria, Paige Thurston would like us to keep the criteria ‘Does this monitoring question make people feel more hopeful?’ or at least keep it in our mind when we will communicate our results back to the public as well as when communicating to the public throughout the program.   |
| <b>Stella Swanson</b> | Agrees with Paige about there being a lot of eco-anxiety and she would not want to add to that eco-anxiety with our monitoring program.   |
| <b>Nick Lapointe</b>  | Sees that our monitoring question will need a clear answer type ‘yes’ or ‘no’ whereas a more typical monitoring program needs to establish ‘status’ and ‘trends’. So these are different things but he understands that we first want to establish our monitoring question and then we want to establish status & trends for our monitoring question.<br><br>Would like to make the case for collecting ‘baseline data’ on environmental attributes that have the ‘potential to become an issue’<br>The question is: What should we keep a <i>careful watch</i> of? |
| <b>Stella Swanson</b> | The community in Elk Valley is already well aware of the importance of knowing the ‘ <i>baseline status</i> ’ of attributes and that is why for example there was a lot of community support to monitor Alexander Creek and Lizard Creek.   |
| <b>Chris Hust</b>     | He is worried about maintaining existing dike infrastructure. The city of Fernie is built in a floodplain and keeps having to build the dike higher and higher. The city also monitors sources of drinking water for groundwater wells at James White Park and Fairy Creek.   |
| <b>Stella Swanson</b> | Stella wonders if the City of Fernie has data that they need to plan for the future?  |
| <b>Chris Hust</b>     | Says the City of Fernie has data to apply for their permits and they have also made their permit applications using a 10% climate factor.   |
| <b>Paige Thurston</b> | One of Living Lake’s projects is to develop a monitoring program for the Elk Valley hydrology, and she would like to know if the City of Fernie has gaps in monitoring that need to be filled.  |
| <b>Chris Hust</b>     | There is a data gap to be filled about the decommissioned landfill at   |

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|                       | Coal Creek and its impact on water.  |
| <b>Jesse Huisman</b>  | Open data would definitely help the district of Elkford, as they would use open data to help them build an additional groundwater well at Boivin Creek.  |
| <b>Stella Swanson</b> | <p>The next steps to follow will be to develop the monitoring question and then 'ship it' over to the managers sitting on the Steering Committee. It will be for them to decide if the monitoring question is applicable.</p> <p>Agrees with Cait's comment earlier on that all communities need to be represented. Historically monitoring programs all focused on land occupied by Teck, and little monitoring is conducted in the South Country where concerns have nothing to do with Teck, rather with BC Hydro's Elko dam.</p> |
| <b>Dwayne Minton</b>  | Echoes Stella's summary that Teck's monitoring program suits their management needs but does not suit the needs of the broader community. The South Country is a good example.   |
| <b>Anne-C Kroeger</b> | Agrees with former comment of Cait as well that we need to be transparent every step of the way with the community to honour their contributions, by presenting the community's question and the scientific questions underlying the community's questions.  |
| <b>Dwayne Minton</b>  | Comments that a lot of questions from the community in our google form are not framed as monitoring questions but they are a starting point and they can be developed.   |
| <b>Stella Swanson</b> | End of June people are available again!  |

### **Action items / next steps**

- Anne to send out ToRs.
- Anne to send out 'monitoring question spreadsheet' to ask participants to help propose some better monitoring questions
- Anne will resubmit the 'google form' to score the monitoring questions once everyone helped develop these further.