Appendix 1. Semi structured interview guide.

I thought that since it is winter right now we could start by talking about winter time...

Can you tell me what a typical winter is like?

When does it start to get cold?

When does it start snowing?

How much snow is typical in a year?

Does the snow melt or does it stick around until the spring after it has fallen?

What kind of snow do you typically get? Dry, wet, etc

What do you call that kind of snow?

Does different snow fall at different times of the year?

Does different snow fall in different places?

Do some areas get more snow than others?

Does it rain in the winter?

If so, how many times and is it becoming more frequent?

If so, does the rain freeze on top of the snow? When does the river freeze up?

Does it stay frozen all winter?

How thick does the ice get?

Can you tell me about any winters you remember as not being typical?

When was that?

How do you know when a winter is not typical?

Were the temperatures warmer? Colder?

Was there less snow? More snow? Different snow?

Changes in the timing of snow?

Have snow conditions changed?

How? Tell me about that.

What happens if the winter is not typical? **Transportation** Subsistence **Flooding** What subsistence activities take place in the winter? Do you participate in any of these? Can you tell me more about that? How far do people travel to participate in these activities? *Has that changed?* Have you noticed any changes (in subsistence fish or animals the participant mentions) over the years? Is there anything else you'd like to tell me about winter? Let's talk about spring now... Can you tell me what a typical spring is like? When does the snow begin to melt? When does the river ice typically break up? What is that like? Do you remember a spring that was not typical? What was that like? When was that? What are the signs that a spring is not typical? Were the temperatures warmer? Colder? Did the snow melt earlier? Later? Did the river break up earlier? Later? Differently? What was different? Did you notice changes in the timing of the plants budding?

What subsistence activities take place in the spring?

Do you participate in any of these?

Can you tell me more about that?

How far do people travel to participate in these activities?

Has that changed?

Have you noticed any changes (in subsistence plants or animals the participant mentions) over the years?

Is there anything else you would like to tell me about the spring?

Now I'd like to ask you the same questions about the summer...

Can you tell me about a typical summer?

When does it start to get warm?

How warm does it get?

When does it start to get dry?

When does it start to get wet?

How much rain do you get in the summer?

Do you remember a summer that wasn't typical?

What was that like?

When was that?

What are the signs that a summer is not typical?

Were the temperatures warmer? Colder?

What subsistence activities take place in the summer?

Do you participate in any of these?

Can you tell me more about that?

How far do people travel to participate in these activities?

Has that changed?

Have you noticed any changes (in subsistence plants or animals the participant mentions) over the years?

And now let's talk about fall...

What is a typical fall like?

When does it start to get cool?

When does the river start to freeze?

When it freezes does it stay frozen or does it thaw and refreeze?

What kind of precipitation do you typically get in the fall?

Rain?

Snow?

What is the snow like in the fall?

What do you call that kind of snow?

Do you remember a fall that wasn't typical?

What was that like?

When was that?

What are the signs that a fall is not typical?

Were the temperatures warmer? Colder?

Was there less snow? More snow? More or less rain?

Do you notice changes in the timing of the leaves falling?

Different weather patterns?

Different wind patterns?

What subsistence activities take place in the fall?

Do you participate in any of these?

Can you tell me more about that?

How far do people travel to participate in these activities?

Has that changed?

Now I'd like to talk more specifically about the river (be specific about what river we are talking about; Yukon/Andreafski, Yukon/Kotlik)... *frame these more specific questions in the context of what has already been discussed... "You said that the river....can you tell me more about that?"

What time of year is the river the highest?

What kind of subsistence activities take place when the river is its highest?

When is it the lowest?

What kind of subsistence activities take place when the river is low?

Does your village flood very often?

What time of year would be typical for a flood?

Have there been floods that weren't typical?

Tell me more about that...what happened?

Have you noticed any changes in the river?

What are these changes?

Changes in the banks?

Erosion?

Sandbars-more, less, different places?

Changes in freeze up or break up?

Changes in ice

Why do you think the river is changing?

Do these changes impact you in any way?

How?

What do you do to overcome these impacts?

Do you have concerns about water quality?

What concerns do you have?

Why do you have these concerns?

Where does your drinking water come from?

Has water quality changed?

Why do you think water quality has changed?

Does this impact you?

How?

Can you tell me about open leads on the river?

More? Less? Bigger? Smaller?

Are there places where the river never freezes?

Why?

New or always been there?

Is there anything else you would like to tell me about the river? Let's move on to permafrost...

Can you tell me about permafrost in St. Mary's/Kotlik/Chevak?

Is there a lot of permafrost?

Where is the permafrost?

Do you use permafrost to store food?

Have there been changes in permafrost?

What kind of changes?

More, less, just different (different how?)?

Are there specific places that permafrost seems to be thawing?

How do you know the permafrost is changing?

Do changes in permafrost impact you?

How? (buildings, injuries, transportation, food storage)

How do you overcome these impacts?

Finally I thought we could talk about St. Mary's/Kotlik/Chevak...

How long have you lived in St. Mary's/Pilot Station/Kotlik/Chevak?

Where did you grow up?

How far is that?

Is that near the Yukon River? Near the coast?

Can you tell me about what it was like growing up there? What do you value most in your village? (or What is most meaningful to you in your village?)

Tell me more about that.

Why is that the most meaningful or valuable thing in your village to you?

Is there anything else that you would like to tell me?