

Gwich'in Renewable Resources Board 2013-2014 Research Interests Summary

GRRB 2013-2014 Research interests- ungulates

| Ref | Species and pop'n/location | Research interest description | Status update |
|-----|---|--|---|
| A01 | Porcupine caribou | How many Porcupine caribou are harvested, age class, sex, harvest location? What is harvester response rate in each community? | ongoing; data collected through Gwich'in Harvest Study |
| A02 | Porcupine caribou | What is herd size, mortality rates, survivorship, sex and age class size and ratios? | ongoing |
| A03 | Cape Bathurst; Bluenose-west caribou | What is herd size, sex and age class size and ratios? | surveys conducted in 2009- 2012; subject of draft management plan |
| B01 | Porcupine caribou | Have migratory routes, or calving grounds changed? | new priority |
| B02 | Muskox *Northern Richardson Mtns | What is herd size, sex and age class size and ratios? | |
| B03 | Dall's sheep *Northern Richardson Mtns | Community monitoring program coordination | Actions identified in Draft Management Plan for Dall's Sheep in the Northern Richardson Mountains |
| B04 | Dall's sheep *Northern Richardson Mtns | Dall's sheep lamb survival and population ratios | |
| B05 | Dall's sheep *Northern Richardson Mtns | communication to communities | |
| B06 | Dall's sheep *Northern Richardson Mtns | Current status report | Status reports provided by YT in 2011, next scheduled in 2016 |
| C01 | Dall's sheep *Northern Richardson Mtns | Dall's sheep population trend information including TK | Actions identified in Draft Management Plan 2008. |
| C02 | Dall's sheep *Northern Richardson Mtns | What are population indicators? | |
| C03 | Dall's sheep *Northern Richardson Mtns | How does the harvest affect this population? What is sustainable level of harvest? | |
| C04 | Moose | Are management plan actions current? | Actions identified in Moose Management Plan 2000. |

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| D01 | Dall's sheep *Northern Richardson Mtns | How to establish a sensitive habitat decision making protocol. | |
| D02 | Dall's sheep *Northern Richardson Mtns | What vegetation information is required to evaluate sheep range? Vegetation survey? | |
| D03 | Dall's sheep *Northern Richardson Mtns | aerial survey | Last conducted in 2010. Next scheduled 2013 |
| D04 | Dall's sheep *Northern Richardson Mtns | What are risks to sheep range ? | |
| D05 | Dall's sheep *Northern Richardson Mtns | Evaluate impacts of development on Dall's sheep range. | |
| D06 | Dall's sheep *Northern Richardson Mtns | What are important health risks to sheep that can affect this population? | |
| D07 | Dall's sheep *Northern Richardson Mtns | How do predators affect sheep population? | |
| D08 | Moose | Has moose population changed between 2006 and 2011? | 2011 density estimate calculated in 8 survey blocks. Population estimate for GSA has yet to be calculated. Poster produced and shared w/communities. |

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| GRRB 2013-2014 Research interests-Fur bearers | | | |
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| Ref | Species and pop'n/location | Research interest description | Status update |
| B07 | Otter | What is abundance and distribution of otter? What is their diet? What impact are they having on other species? Ex beaver and muskrat | |
| C05 | Grizzly bear | What is the estimated grizzly bear population in the GSA? Is full GSA survey required, or localized to seasonal concentrations ex. along highway in hunting season? | Actions identified in Management Agreement for Grizzly bears in GSA 2006 |
| C06 | Grizzly bear | Are management plan actions current? | Actions identified in Management Agreement 2006 |
| C07 | Wolf | Have wolf populations increased locally? Are they having a significant impact on caribou and moose? | |
| C08 | Beaver | What is the current estimated population of beaver? What impact are they having on other species? | |
| C09 | Muskrat | What is the current estimated population of muskrat? Community members are concerned that populations may be declining. | |
| C10 | Snowshoe hare *Ft McPherson region | What is hare population estimate near Ft McPherson? Is trend in rabbit population due to natural cycle? | |
| GRRB 2013-2014 Research interests- Birds and insects | | | |
| Ref | Species and pop'n/location | Research interest description | Status update |
| C11 | Peregrine falcon *Campbell Hills | What impacts have recent developments had on Peregrine falcon populations? (gravel extraction, Territorial Park, increased flights from Airport) | |
| C12 | Songbirds *Mackenzie Delta | Assess current abundance and distribution of swallows and other songbirds in Delta | |
| D09 | Insects | Range expansion. Are 'new' insects becoming established in the GSA? | |

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| GRRB - 2013-2014 Research interests- Dolly Varden char | | | |
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| A04 | Dolly Varden *Shingle Point | Stock identification and composition of mixed stock fishery | project leads: DFO/FJMC/ AHTC survey last conducted 2012 |
| A05 | Dolly Varden *Rat River | Monitoring of critical habitat; Assessment of new habitats | habitat monitoring has not yet been conducted |
| A06 | Dolly Varden_All | Develop and present curriculum based DV conservation program for K-12 | New priority, subject to funding |
| A07 | Dolly Varden *Rat River | Population monitoring | project lead: DFO Pop`n assessments conducted 2009-2012 |
| B08 | Dolly Varden Big Fish River | Stock identification and composition | project leads: DFO/ FJMC; not GRRB priority |
| B09 | Dolly Varden * Vittrekwa River | Stock identification and composition | project leads: DFO/GRRB/FJMC last conducted in 2011; reduce priority until 2013 or 2014 |
| B10 | Dolly Varden * Rat River | DV health monitoring - char monitors to collect kidney samples for health assessment | project leads: DFO/EC no kidney sampling in 2012; project status uncertain |
| B12 | Dolly Varden *Arctic Red River | Obtain species' baseline biological information | IFMP priority for Species at Risk Act (SARA); recommend to conduct research before 2015 |
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| GRRB - 2013-2014 Research interests- other fish species | | | |
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| Ref | Species and pop'n/location | Research interest description | Status update |
| B11 | Lake Trout * Airport Lake | monitor habitat parameters to determine whether Airport Lake development is impacting Lake Trout habitat | this research has not been conducted |
| C13 | Salmon species *Mackenzie River | Salmon species (chum, coho, pink, sockeye) are being caught more frequently in the Mackenzie River system. Are salmon becoming established in the GSA? Are populations sufficient for sustainable | Project lead: DFO salmon collection project , 2011-2012 data collection in Mackenzie River system |
| D10 | Loche *Mackenzie Delta | data collection for monitoring purposes | data collected for 2 years on genetics, parasites |
| D11 | Coney *Mackenzie River | Coney observed in nets all summer rather than few weeks in July and have been found in areas not seen previously. Are they expanding their range and season? | June 2012 - staff recommend this be re-prioritized/re-defined as community concerns arise |
| D12 | Whitefish and coney *Peel, Arctic Red, Mackenzie Rivers | abnormalities observed in fish organs, including sperm ducts and eggs, (harder than normal), black spots on fish livers, red scars on whitefish and coney skin, fish flesh not firm. Are fish healthy? | |
| D13 | Whitefish and coney *Peel, Arctic Red, Mackenzie Rivers | What is the relationship between flesh firmness and water temperature, time of year (spring to fall) and location (river, lake, creek)? Harvesters have observed that the flesh of whitefish caught near Tsiigehtchic is generally firmer than those caught near Ft. McPherson. | |
| D14 | Whitefish and coney *Peel, Arctic Red, Mackenzie Rivers | Harvesters (Richard Ross, John Carmichael) have noticed unusual stomach contents including sand, in lake whitefish. What are the stomach contents and why is sand present? | |

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| D15 | Lake Trout; Grayling; N. Pike *Sandy, Travaillant | Can lakes of the GSA sustainably support a sport fishing industry? | |
| D16 | Other fish species *Nagwichoonjik (Mackenzie River) ; Chii Tiet | Range expansion? Arctic char observed in the Mackenzie. Increasing numbers of walleye (pickerel) in Chii Tiet . | Chii Tiet (drains into Mackenzie upstream of Tsiig ferry, west) |
| GRRB 2013-2014 Research interests- Forestry and vegetation | | | |
| Ref | Species and pop'n/location | Research interest description | Status update |
| C14 | Vegetation survey | What are dominant vegetation types in association with particular ecosystems in GSA? | |
| C15 | Forest disturbance - harvesting | What are sustainable forest harvesting levels in the GSA? | Forest Management Plan approved August 2012 |
| C16 | Forest disturbance - fire | How are forest fires likely to behave in the GSA and under what conditions? | |
| C17 | Forest disturbance - insects | Are spruce budworm or pine beetle negatively impacting forests in the GSA? | |
| C18 | Forest disturbance - flood | Do flooding events negatively impact forests in the GSA? What are flood frequency intervals? | |
| C19 | Forest disturbance- development | How do forestry activities impact wildlife? | |
| C20 | Forest-commercial use | How have forests and forest products in the GSA been used commercially? Is there potential for forestry expansion? | |
| D24 | Vegetation-berries | Where are berries collected? Are these sites healthy? Can traditional collecting activities be sustained at these sites? | |
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| Ref | Species and pop'n/location | Research interest description | Status update |
| D25 | Vegetation-medicinal | What medicinal plants are collected? Where are they collected? Are these sites healthy? Can traditional collecting activities be sustained at these sites? | |
| D26 | Vegetation-traditional food | Species that have been traditionally collected such as rhubarb and bear root appear to be decreasing. Why aren't these species found where they used to be? | |
| D27 | Vegetation-introduced spp | range expansion. Are introduced vegetation species becoming established in the GSA? | |
| GRRB 2013-2014 Research interests- Environment and health | | | |
| Ref | Species and pop'n/location | Research interest description | Status update |
| D17 | Erosion *Mackenzie River; Arctic Red River | Residents have observed increased frequency of river bank failure, especially during high water. Is this due to regularly occurring river processes or to permafrost melting? | Megaslump disturbance and impact on fish habitat on the Peel Plateau is subject of research by AANDC and others. Research supported by GRRB. |
| D18 | Aquatic habitat *Campbell Creek, Campbell Lake | Poorer fishing reported in system in recent years. Location close to proposed Mackenzie gas pipeline. NRRC would like baseline study prior to development | |
| D19 | Water quantity *Peel Channel, Mackenzie Delta, Arctic Red River | Fluctuating river levels affect travel on the river. What has river height and discharge volume been in recent years compared to historical data? What causes these fluctuations? | |

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| GRRB 2013-2014 Research interests- Environment and health | | | |
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| D20 | Water quantity *Peel Channel, Mackenzie Delta, Arctic Red River | What is the cause of river level fluctuations? How does this affect fish? | |
| D21 | Country Food | Country foods play important nutritional, cultural and spiritual role in the lives of the Gwich'in. It is feared that as the consumption of country food decreases, so does the health, culture and general well-being of Gwich'in. | Is not directly related to GRRB mandate. Refer to appropriate agency. |
| D22 | Water quality *Peel Channel, Mackenzie Delta, Arctic Red River | Concerns about water quality especially after H. pylori found in Aklavik drinking water (2008). Are these healthy rivers? What are contaminant levels? | |
| D23 | Water quality * Peel Channel, Mackenzie River upstream of communities | Concerns about water quality raised due to new developments on Peel and Mackenzie River watersheds. GTC would like to see monitoring stations upstream of Fort McPherson, Aklavik and Tsiigehtchic | |