LCD Analyst Meeting
6/4/2020
Attendees: Natalie, Phil, Sean, Mary

Aubin joining the analyst team
- An enthusiastic yes from all group members
- She is currently working on the land protection plan - aubin is doing all mapping for that project on elk, fish, etc

Supporting Feature Selection:
1. Using the World Database of Protected areas (https://www.protectedplanet.net/; download button "WDPA Dataset" is just above the map) and species range maps, generate a coarse estimate of relative protection status of the 'top 10' species list. Range maps are available from IUCN, NatureServe (these 2 preferred as that data is international) and USGS GAP program.
   - Rank from 1-5; wilderness or national parks = 1; wilderness, np =1 ; developed lands=5
   - Will help us determine if life history needs are met in protected areas
   - Action: **Natalie** will determine Protected area vs range by 6/23
      - natalie, let phil know where he can plug in
2. Referencing the Montana State Wildlife Action Plan, Montana Field Guide, and Species At Risk Action Plan for Waterton Biosphere Reserve, characterize the conservation status (Global, state or other ranking) for 'top 10' species.
3. Revisit data tables to evaluate what data we already know about, what additional data we may need to look for; restructure table so it reflects list of candidate features
   - evaluate if it is complete, determine where we may look for data that has gaps
   - Action: **Sean and Phil** will work on completing this task
4. Fill out Evaluation Table with the above info.
5. Build habitat and life history 'guilds' linking guilds to ecosystem/habitat features and ecological process features (Action: **Sean** is working on this).
   - We reviewed 60 management plans in total - if species were mentioned in 10 plans or more, it qualifies the species as potential focal landscape feature - so the top 10 list is actually 20 species

Fleshing out selected landscape features (starting with Cold Water Salmonids / Climate Refugia as directed by Leadership Team)
   1.   Draft conceptual models using Miradi. Start by seeking out existing models, especially models specifically relevant to Crown ecosystem
   - Natalie has begun to work on cold water salmonids
   - Action: **natalie** will send the miradi files to the group
   2.   Identify a small set (3-5) of subject matter experts (SME) that, preferably, are representative of a spectrum of stakeholders (fed/state/provincial managers; Tribal member; academics; social (i.e., recreation); economic (industry) and recruit to SME Team.
      - Potential contacts: Anne, Clint Mulhfeld, Rob Simieritch, Elliot Fox, Barry Hanson??

- Look at the CMP native salmonids list
- <mark>Action: **Natalie** will follow up with Anne</mark>
- We just need feedback and input to make sure we're headed down the right direction
3. Flesh out direct threats and contributing factors to help us understand potential sources of the "Cost" of delivering conservation
4. Building off of conceptual models, develop lists of Key Attributes which will be evaluated in terms of their usefulness as model inputs and for conservation delivery.
    a. Usefulness for modeling:
        i. Do we have reliable data describing the current condition of the attribute?
        ii. Is the data spatial or could we build spatial data from the source data?
        iii. How broadly distributed is that data (local, BC, AB, MT, project-wide)
        iv. Does the data describe a sufficient variation in condition across it's spatial distribution
    b. Usefulness for conservation delivery
        i. Would managers have tools or leverage to affect the condition or trend of the attribute?
        ii. Is the attribute easily recognizable, can it efficiently be monitored
5. Identify indicators of the key attributes that are measurable (iterate with #4) to hone in specific model inputs
    a. If/when a candidate attribute/indicator/data seems very useful but is missing one (or more) of the key traits described above, document as well as possible so we can re-evaluate later in the project.

Maps we'll want to generate. Where possible we want consistent data throughout the project area. In some cases that may not be possible. Some (maybe most) of these data should be available on ScienceBase. Action**: <mark>Phil** will work on updating these</mark>
- <mark>Perhaps aubin can help - once they're done, we can pass the maps on to Mary, and she can beautify them!</mark>
1. Landcover
2. Land stewardship, ownership, level of protection
3. Major human population centers (polygons)
4. Aquatics: lakes, large rivers, wetlands
5. Roads
6. Other infrastructure (mines, O&G, powerlines)
7. Range maps for all of the 'top 10' species
8. others

Mary's role
- Mary will post maps, notes, event dates to the website - create a standard map template
    - In the future, she'll use data visualization tools (tableau, ArcOnline)
    - take maps and pull into illustrator
    - <mark>Action: **Mary** will send along salmon run example</mark>

File sharing:

- google drive for dynamic files -> move completed documents to box ->Move from box to website
- Data layers
    - Use box and sciencebase