Analyst Team Meeting 8/20/20
Attendees: Aubin, Mary, Natalie, Phil, Matt, Erin, Sean

Feature selection survey results
- Responses needed still
    - CMP - Linh, Anne, Rob S., Erin, Mary to get a CMP lens on the response
    - FLBS - Tom Bansak will fill out from FLBS perspective
        - <mark>Action:</mark> Erin will reach out to Tom
    - Determine how many responses for MT, BC, and AB came in
- Scoring
    - Must Include (+10)
    - Should Include (+6)
    - Maybe (+1)
    - Should Not Include (-5)
    - Do Not Include (-50)
    - I Don't Know (0)
    - <mark>Action:</mark> Sean will share survey monkey pdf
- Selection process:
    - 10-15 features
    - Invasive species and human development are moreso cost layers than features
    - Can we lump wetlands, aquatic, and riparian?
    - <mark>Action:</mark> Sean can inquire about asking a stats person about breaking data into classes
    - We combine some mathematical objective approach combined with a subjective approach (of making sure we make sure selections are representative, comprehensive, extent, data available, impact, context, and contentiousness)
        - Conscientiousness of wolverine - will there be a different perception between US and CA

Human modification data
- Spatial data on human threats (ie. roads, powerlines, human settlement, ag, timber)
- Combines location of the threat and its intensity (ie. highway has more weight than dirt road)
- The planning unit layer and my initial stab at working with [Human Modification (HM)](#) data to create a cost layer (needs to be in a raster format)
- Process:
    - created a 1 km^2 hexagon grid to serve as the Planning Units = 133,123 units in the LCD project area.
        - Hexagons are better for things that move across a landscape
        - HM data comes in 300 m square pixels, so there are about 11.5 pixels in a hexagon. - this is a different resolution than the planning units - <mark style="background-color:cyan">future discussion:</mark> how do we want to deal with different resolutions?

- To merge the two layers and create what could be our first cost layer (aka resistance layer) I applied the mean of the 11 pixel-values for each hex.
- <mark>Action:</mark> Ask the tech team if this process makes sense
  - Potential consideration: if half the hexagon is occupied by like a city and the other half is undeveloped, does it murk things up too much
  - To see if something gets washed out, we could just generate
- <mark>Future Discussion:</mark> Is there an optimal planning unit number for Marxan?
    - The HM data is essentially a relative measure of the amount and intensity of 14 types of "threats" humans have placed on the landscape. High numbers (close to 1.0) indicate very modified; low numbers (near 0.0) mean little human modification.
- May be worth exploring Shannon's CMP HM map - <mark>Action:</mark> Erin/Phil will post Shannon's HM map data on sciencebase
- How do we include other costs as well like invasive species?
  - Zones allows you to customize the cost layers, so we will build customized cost layers for other features
  - Will we include risk? -HM layer is limited in that it is a snapshot of the past (2012-2017)
- Maybe consider using [colorbrewer](#) for colorblind folks

Technical Team
- After LT, send out a call for data presence/absence and/or occupancy data for those Features.

Next Meeting will be Tuesdays at 10am - Sean will send out calendar invite