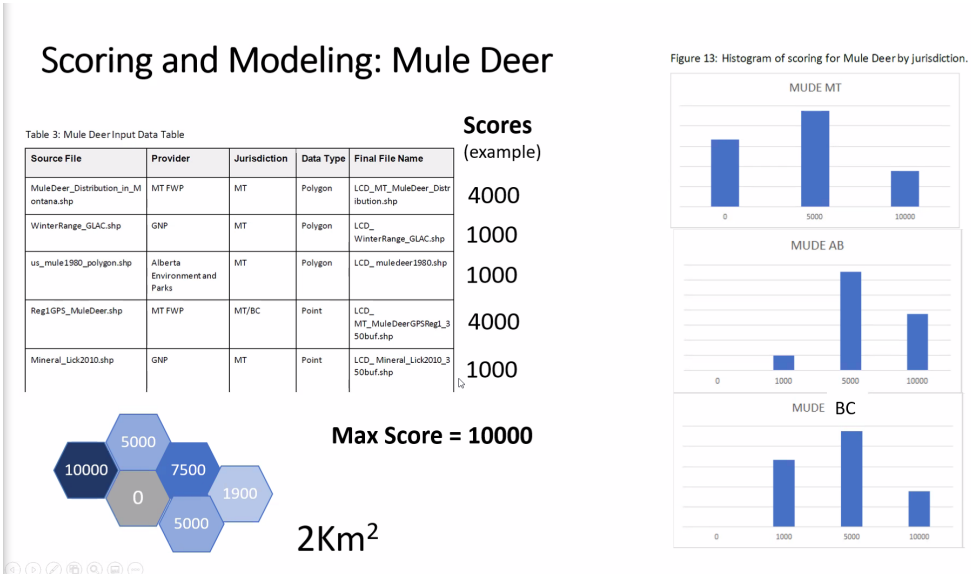
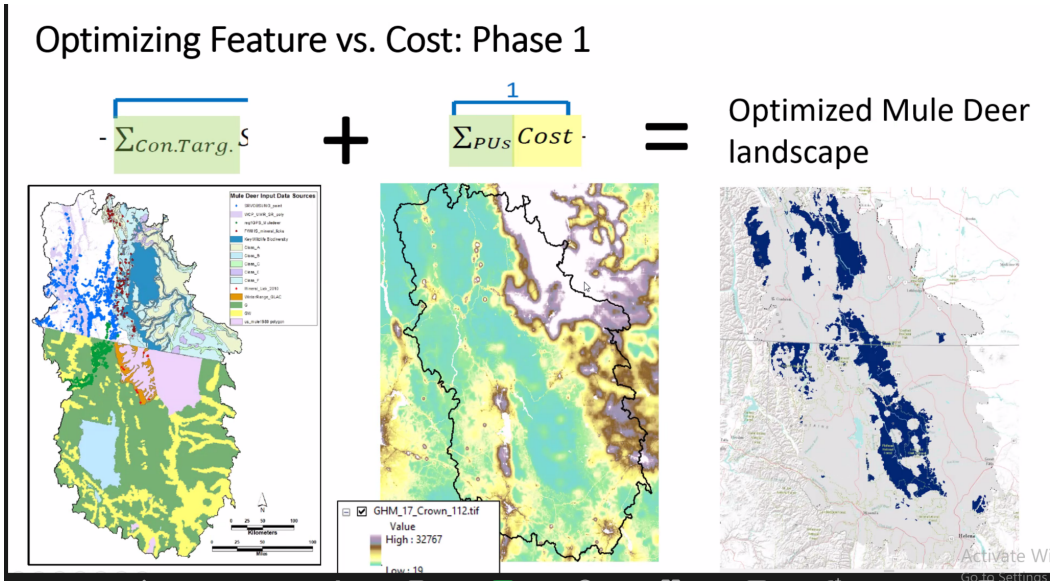
Attendees: Bailie, Sean, Natalie, Matt

New meetings

- Thursdays at 11am MT - talk specifically about models from now until december

Mule Deer Example

- Where is the feature + Cost = optimized places to invest in conservation
  - 

  - Histograms help ensure that distributions are normal
  - 

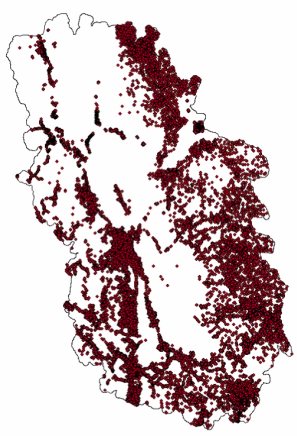
    - Now, we will be adding a more nuanced cost layers
    - Also, human modification could use some updating
- Building cost layers
  - Use conceptual models (which were reviewed by experts) to build out tables (with thresholds from experts, literature)
    - If data does not exist for an attribute, then record it for a future iteration

- Housing data and density

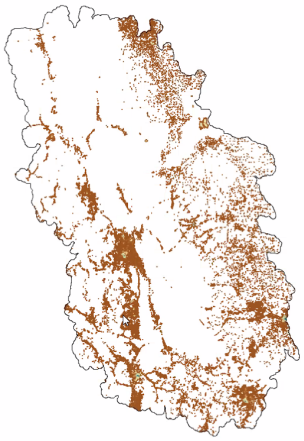
Data Discovery and Synthesis: Cost (Mule Deer)

Housing Density

Jurisdiction	File name	Source
BC	R4HOPfinalfinal_Crown_LCD.shp	Anna McIndoe
AB	Alberta_structures_ODA_v2.shp	AB Open Government
MT	SiteStructureAddressPoints.shp	MT MSDI (Montana State Library)



Housing Data



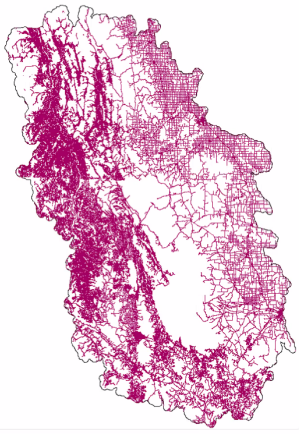
Housing Density

- Road density

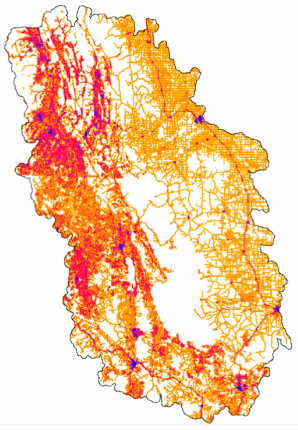
Data Discovery and Synthesis: Cost (Mule Deer)

Road Density

Crown Road Data - May 2022			
Jurisdiction	File name	Source	# of R
BC	DRA_MPAR_line.shp	BC Data Catalogue	
BC	RA_DPAR_line	BC Data Catalogue	
BC	roads	Kathy Z	
AB	NRN_AB_14_0_ROADSEG.shp	AB Open Government	
Canada			
MT	roads.shp	MT MSDI (Montana State Library)	



Road Data



Road Density

Step 4: Calculate Road Density (relative to mule deer)

Calculate Road Density in 2 sq km search radius to approximate planning unit scale. Output cell size 300m.

In ArcPro (ArcMap struggled with this analysis):

Create New Map. Add Data: Crown_LCD_PlanningUnit_Mask.shp

In Analysis\Environments: Set Output Coordinates and Processing Extent to "Same as Crown LCD PlanningUnit_Mask"

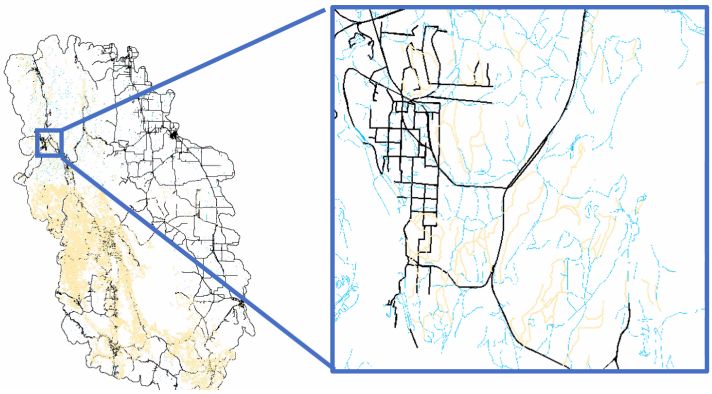
Add Data: R:\Base_Data\CROWN_LCD_Phase2\Cost_Layers_P2\Roads\ All_Roads_Crown_LCD.shp

Run: Analysis/Geoprocessing/Line Density with the following parameters:

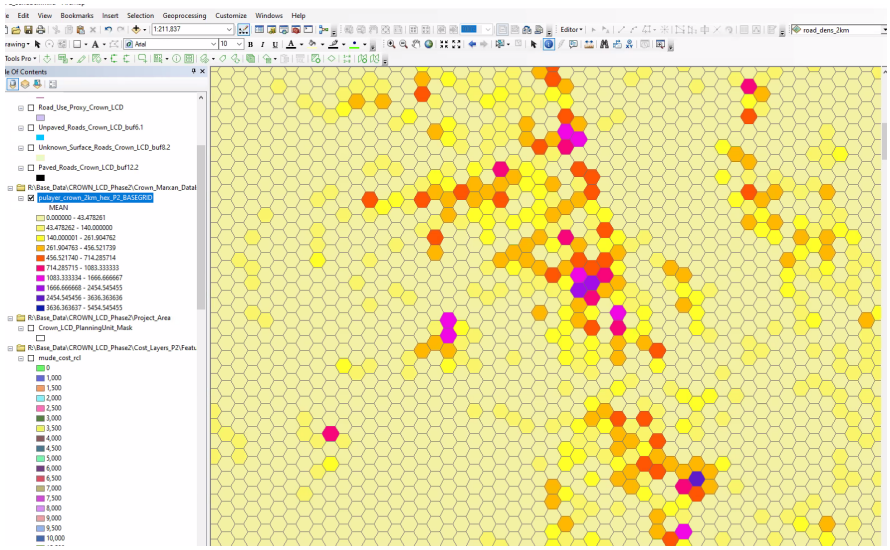
        -
        - Sean created metadata for all these processes which he will share
    - Traffic volume
        - We had info on the surface of the road (paved, gravel, dirt) - Sean estimated that roads that are paved have a higher volume of traffic on them; roads that are not paved have a lower degree of volume; unknown surfaces are put in the middle
            - For aquatic habitats, it's the opposite - natural materials can run into streams - so these things will vary by feature

Data Discovery and Synthesis: Cost (Mule Deer)

Traffic Volume



        -
    - "No data" becomes 0
        - We can't say what is happening in that hexagon
- Able to combine cost layers into hexagons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road_dens_2km
Editor
Tools Pro
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Unknown_Surface_Roads_Crown_LCD_buf8.2
Paved_Roads_Crown_LCD_buf12.2
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