

Colorado Parks and Wildlife (CPW) managers are attempting to determine suitable American Pika (*Ochotona princeps*) habitat due to rapidly progressing climate change. Pika are considered indicator species for changing climate, since increasing temperatures can cause overheating and eventually, mortality. As higher altitudes continue to warm, pika become isolated in alpine “islands” with nowhere else to go. To understand their changing distribution and how to protect these animals, managers seek habitats that meet the following requirements:

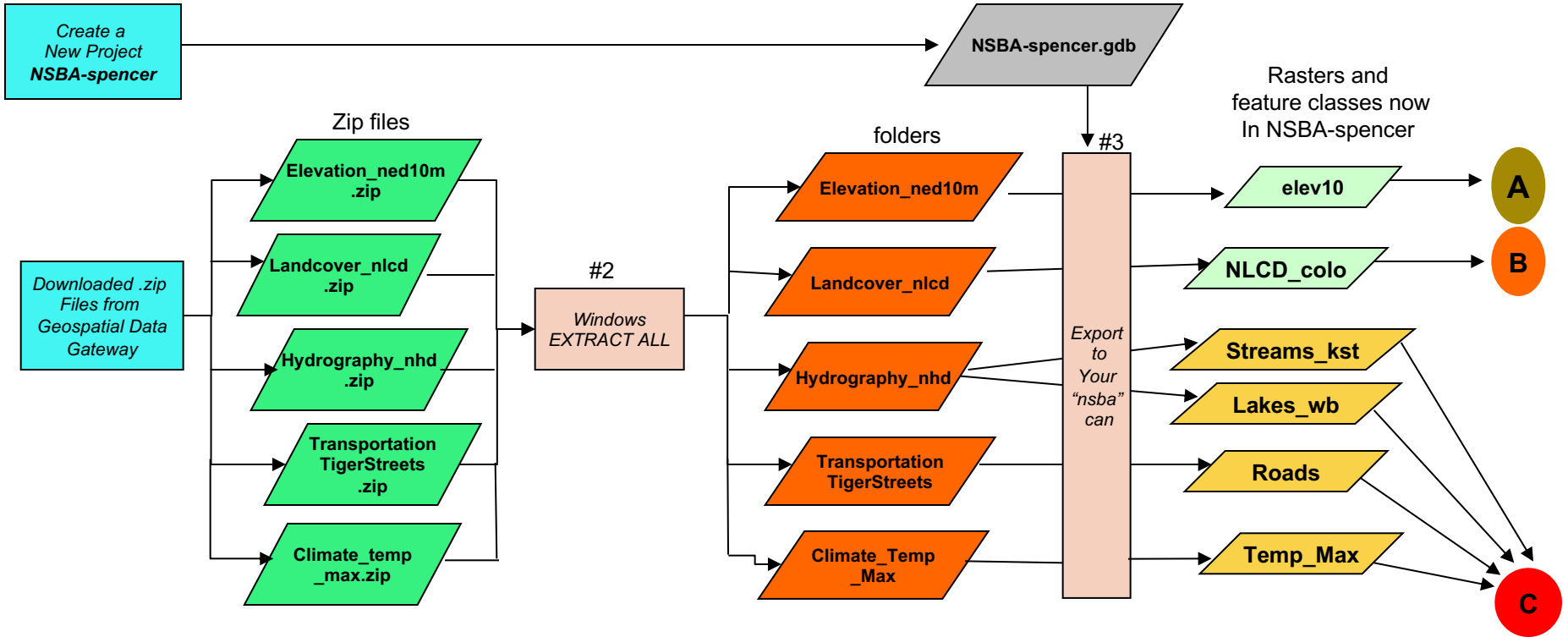
- A) Elevation greater than 3500 meters
- B) Within 50 meters of barren areas (rocky/talus/snowcapped environments)
- C) Slopes of 30 degrees or higher
- D) Annual temperatures between 37 and 47 degrees Fahrenheit (ideal climate)
- E) Northern facing aspect

**Not So Big Fun Assignment**  
 Ava Spencer  
 November 16, 2021  
 Friday PM Lab

	Data Theme	Geographic Location	Data Source	URL	Vector/Raster	Data Structure	Original Coordinate System
1	Transportation	Capitol Peak Quadrangle	Geospatial Data Gateway (USDA NRCS)	<a href="http://datagateway.nrcs.usda.gov">http://datagateway.nrcs.usda.gov</a>	Vector	File Geodatabase Feature Class	UTM North American 1983 Zone 13N
2	Streams	Capitol Peak Quadrangle	Geospatial Data Gateway (USDA NRCS)	<a href="http://datagateway.nrcs.usda.gov">http://datagateway.nrcs.usda.gov</a>	Vector	File Geodatabase Feature Class	UTM North American 1983 Zone 13N
3	Water Bodies	Capitol Peak Quadrangle	Geospatial Data Gateway (USDA NRCS)	<a href="http://datagateway.nrcs.usda.gov">http://datagateway.nrcs.usda.gov</a>	Vector	File Geodatabase Feature Class	UTM North American 1983 Zone 13N
4	National Land Cover	Colorado	Geospatial Data Gateway (USDA NRCS)	<a href="http://datagateway.nrcs.usda.gov">http://datagateway.nrcs.usda.gov</a>	Raster	TIFF	UTM North American 1983 Zone 13N
5	Elevation	Capitol Peak Quadrangle	Geospatial Data Gateway (USDA NRCS)	<a href="http://datagateway.nrcs.usda.gov">http://datagateway.nrcs.usda.gov</a>	Raster	TIFF	UTM North American 1983 Zone 13N
6	Annual Average Maximum Temperature	Colorado	Geospatial Data Gateway (USDA NRCS)	<a href="http://datagateway.nrcs.usda.gov">http://datagateway.nrcs.usda.gov</a>	Vector	File Geodatabase Feature Class	UTM North American 1983 Zone 13N
7	Pine Range	Colorado	Siemens Direct	<a href="https://www.siemensdirect.com/catalog/item/59f5ebaeed40634f54307a2a2">https://www.siemensdirect.com/catalog/item/59f5ebaeed40634f54307a2a2</a>	Raster	TIFF	NAD 1983 zoned
8	CPW Area boundary	Colorado	ArcGIS Hub	<a href="https://hub.arcgis.com/datasets/168fcc058342f11af657de6c9ce846d_10/overview">https://hub.arcgis.com/datasets/168fcc058342f11af657de6c9ce846d_10/overview</a>	Vector	Shapefile	WGS 1984

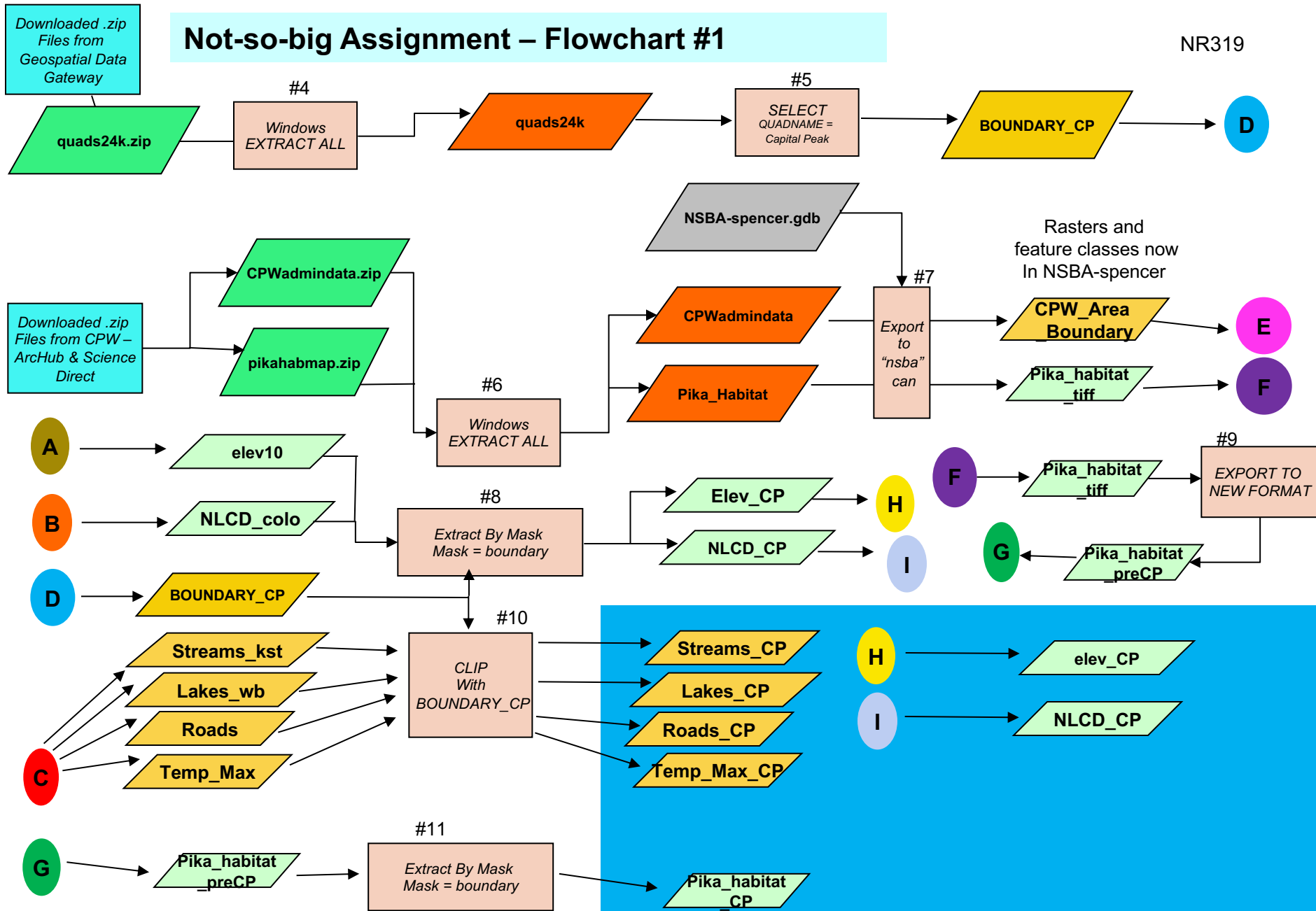
# Not-so-big Assignment – Flowchart #1

Process #1

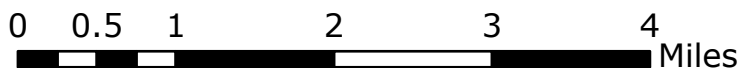
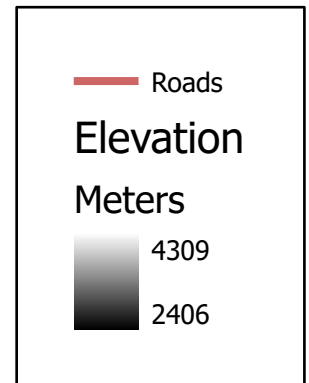
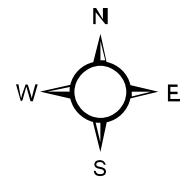
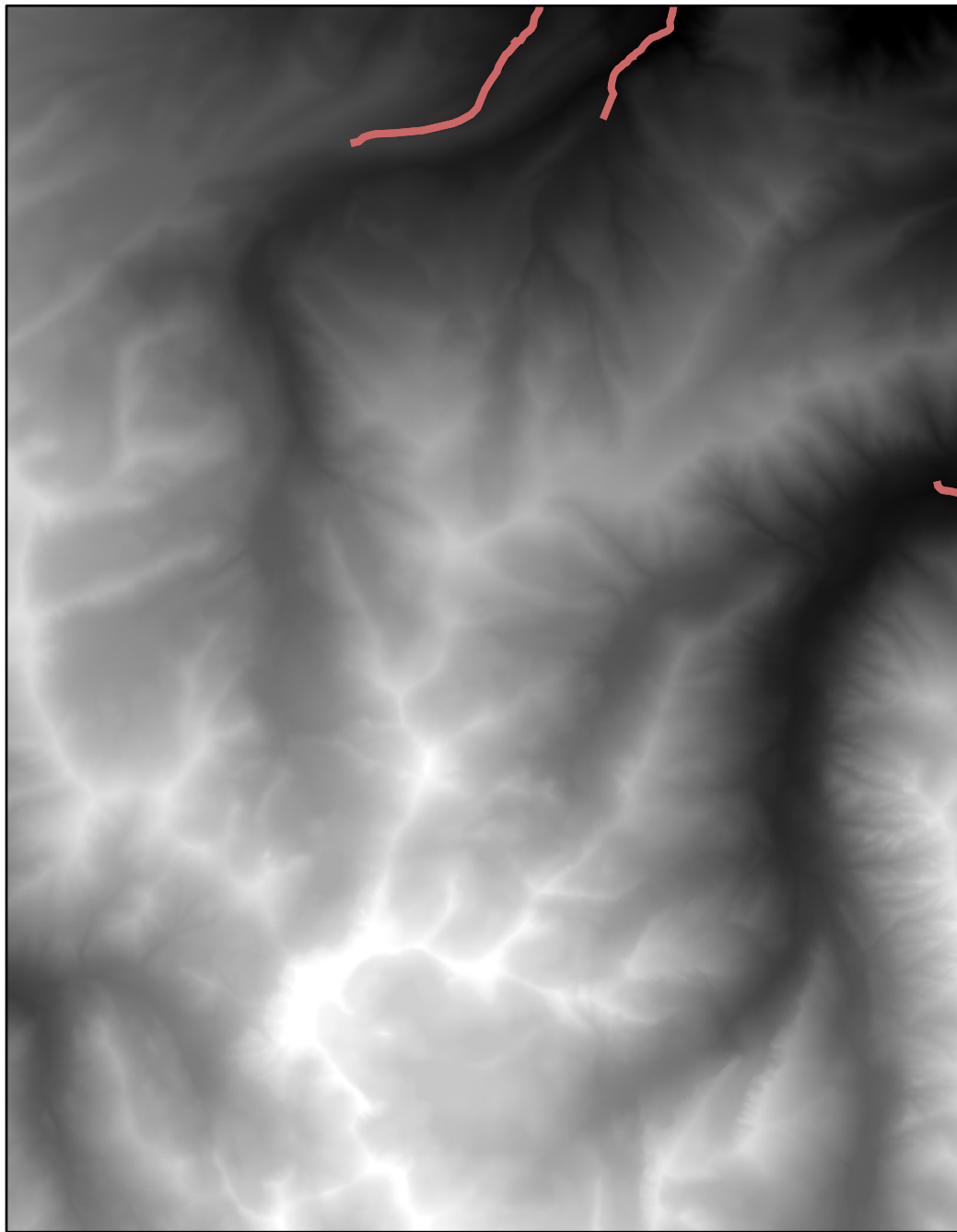


# Not-so-big Assignment – Flowchart #1

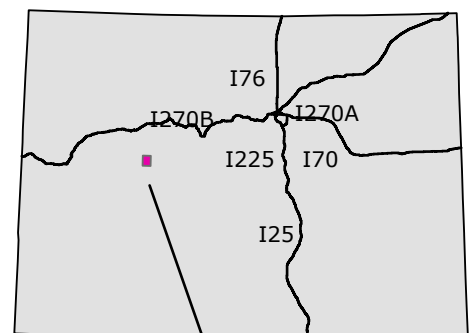
NR319



# Transportation for Capitol Peak Quadrangle, Colorado



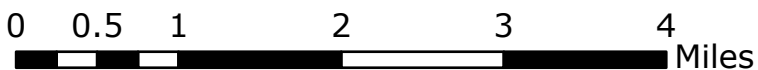
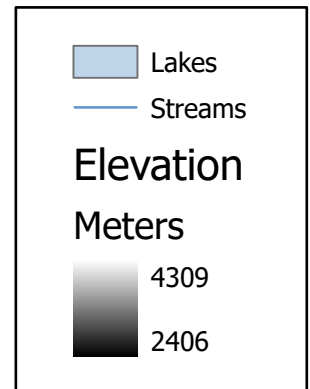
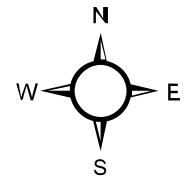
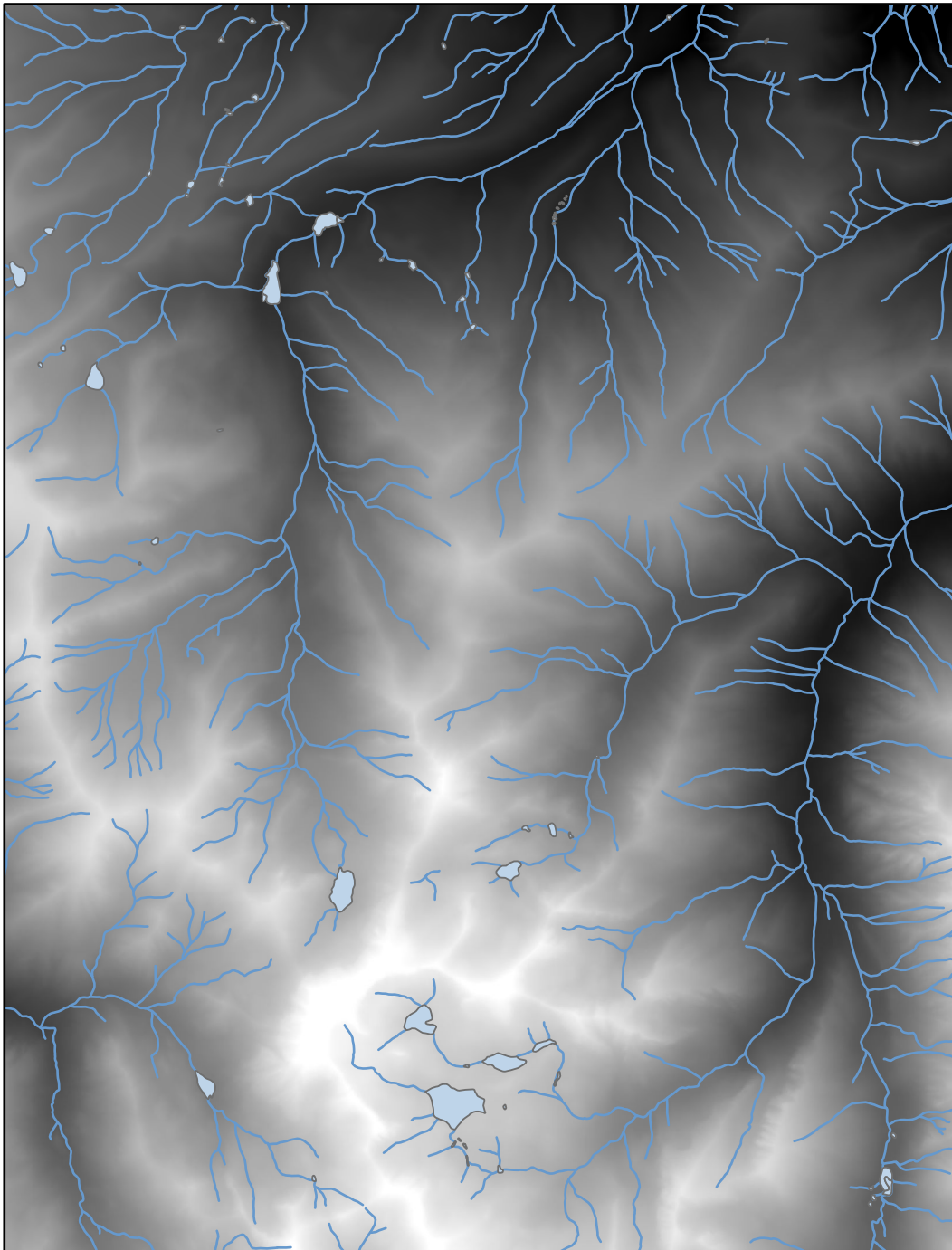
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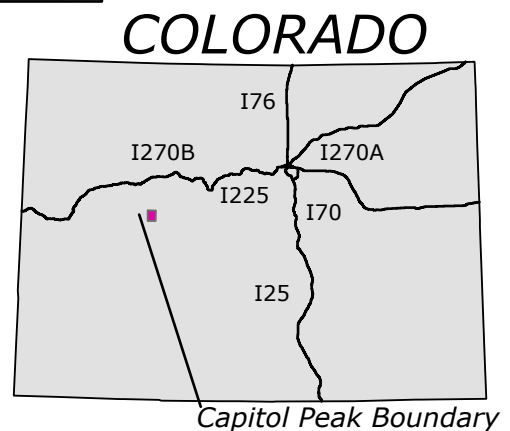
Capitol Peak Boundary

Ava Spencer  
Friday PM Lab - 11/19/21  
Projection: Transverse Mercator  
Coordinate System: NAD 1983 UTM Zone 13N  
Source: NR319 Class Data  
<http://datagateway.nrcs.usda.gov>  
[https://www.sciencebase.gov/catalog/item/168fccb0583f42f1afe57de6c9ce846d\\_10/explore59f5ebeee4b063d5d307e2a7](https://www.sciencebase.gov/catalog/item/168fccb0583f42f1afe57de6c9ce846d_10/explore59f5ebeee4b063d5d307e2a7)

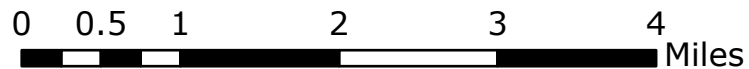
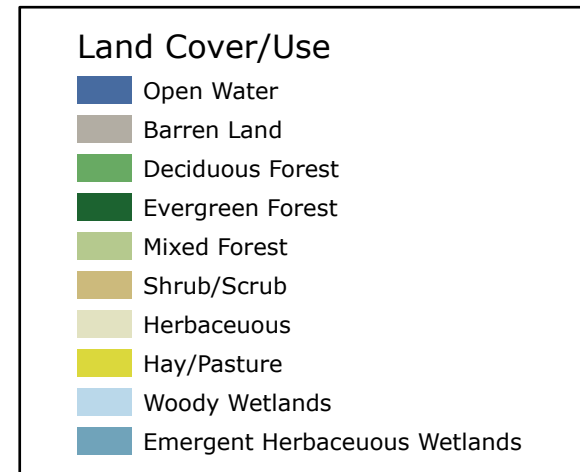
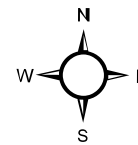
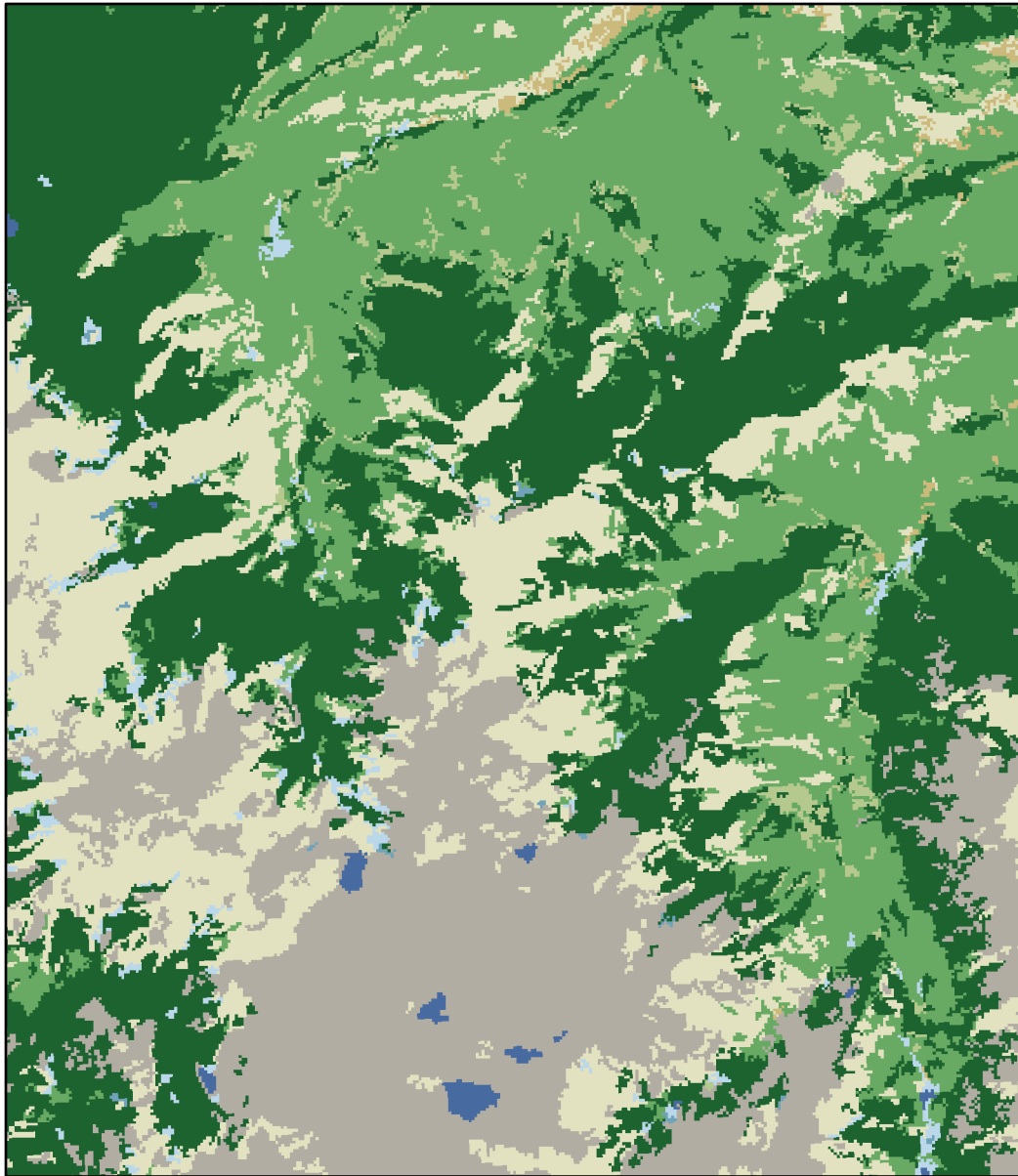
# Hydrography for Capitol Peak Quadrangle, Colorado



Ava Spencer  
Friday PM Lab - 11/19/21  
Projection: Transverse Mercator  
Coordinate System: NAD 1983 UTM Zone 13N  
Source: NR319 Class Data  
<http://datagateway.nrcs.usda.gov>  
[https://www.sciencebase.gov/catalog/item/168fccb0583f42f1afe57de6c9ce846d\\_10/explore59f5ebeee4b063d5d307e2a7](https://www.sciencebase.gov/catalog/item/168fccb0583f42f1afe57de6c9ce846d_10/explore59f5ebeee4b063d5d307e2a7)

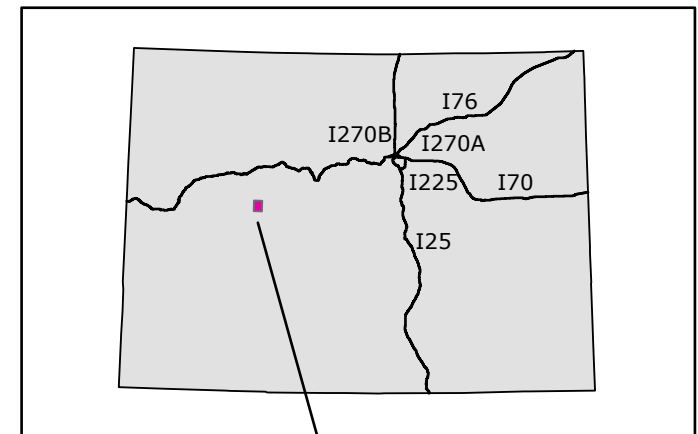


# Land Cover for Capitol Peak Quadrangle, Colorado



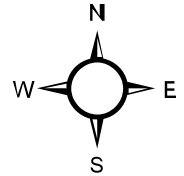
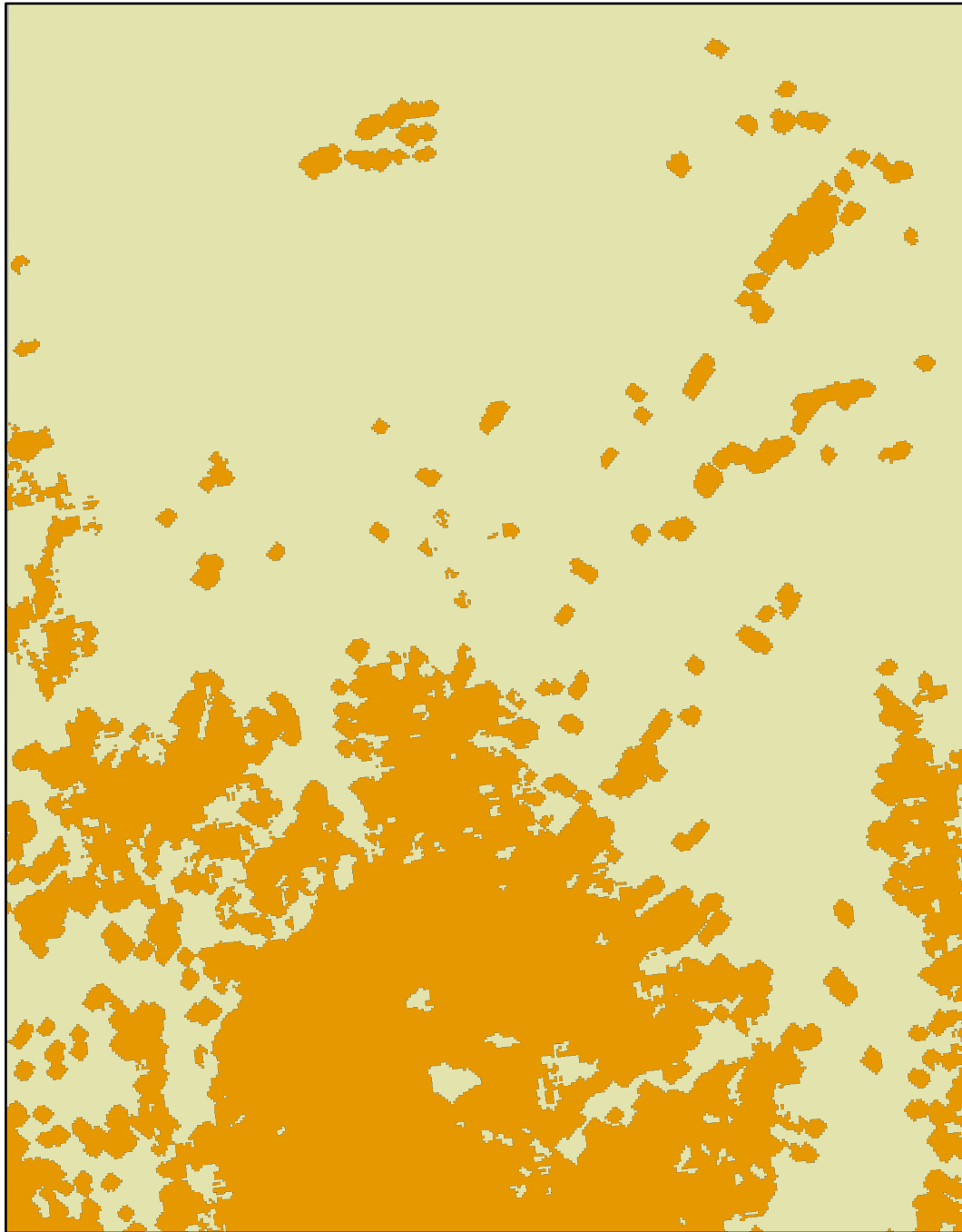
Ava Spencer  
 Friday PM Lab - 11/19/21  
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
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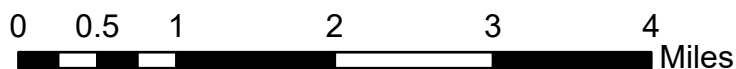


*Capitol Peak Boundary*

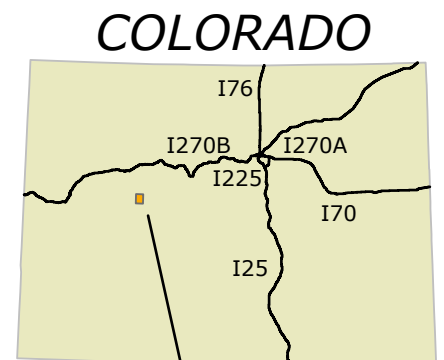
# *Pika (Ochotona princeps) Habitat for Capitol Peak Quadrangle, Colorado*



-  Pika Habitat
-  Quadrangle Boundary



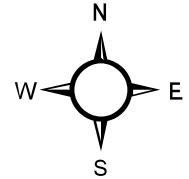
Ava Spencer  
Friday PM Lab - 11/19/21  
Projection: Transverse Mercator  
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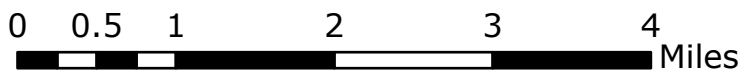
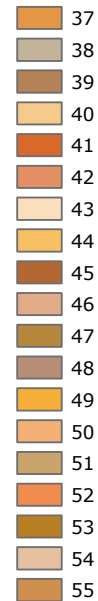
*Capitol Peak Boundary*



# Maximum Annual Temperature for Capitol Peak Quadrangle, Colorado

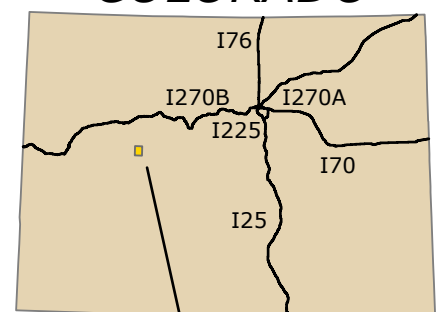


Maximum Temperature  
Fahrenheit (Degrees)



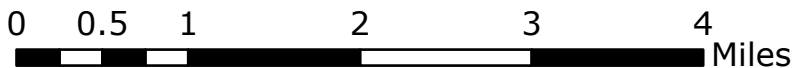
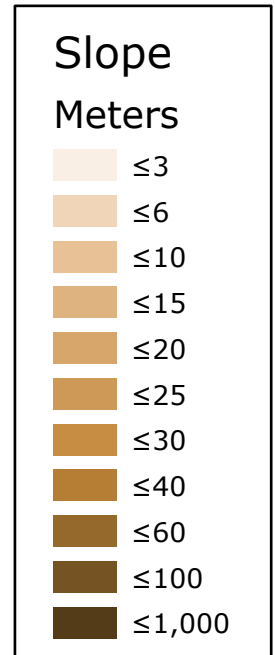
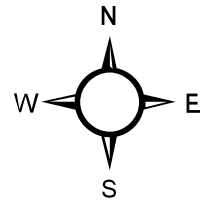
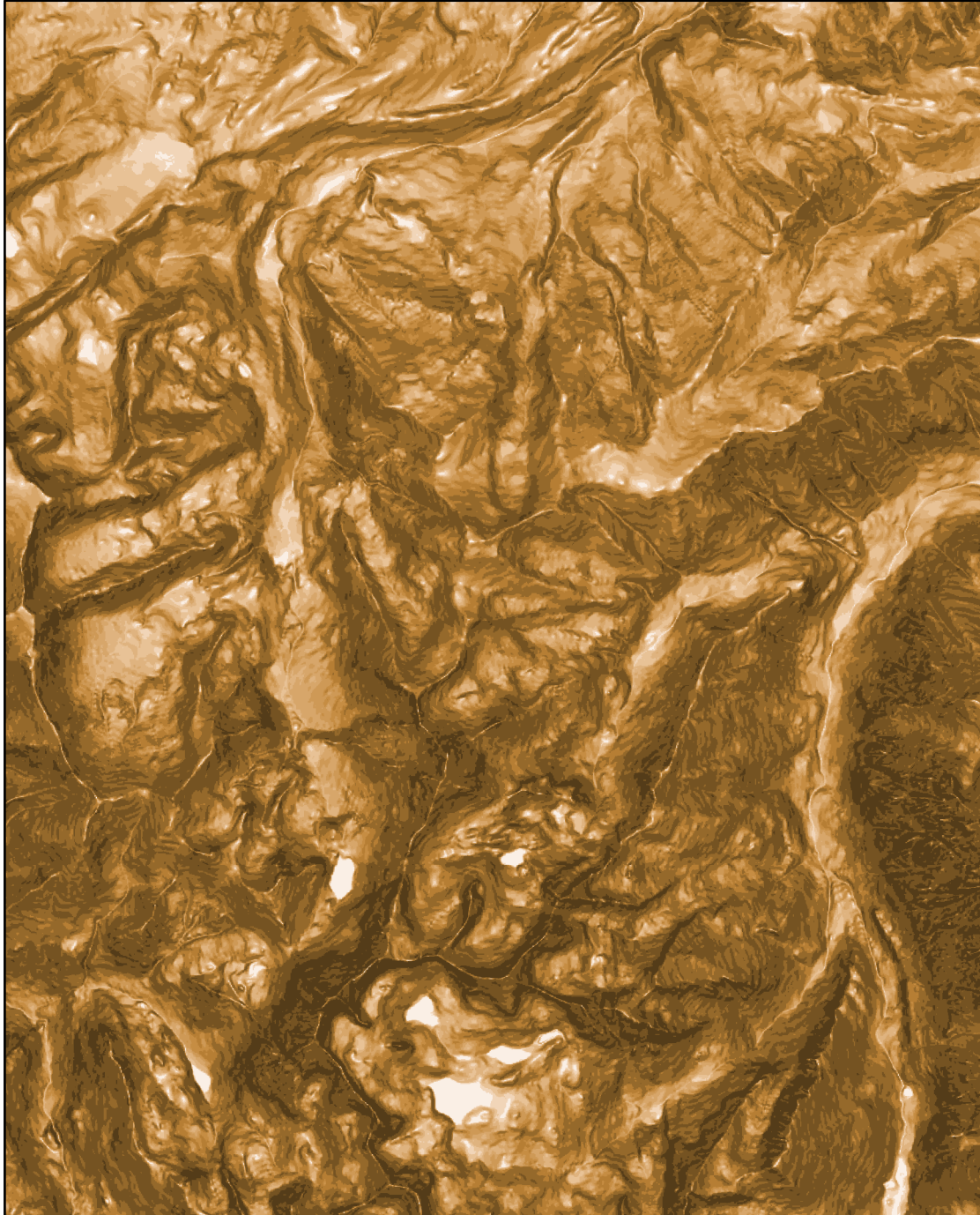
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## COLORADO

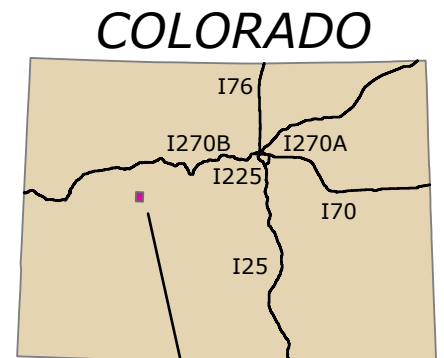


Capitol Peak Boundary

# Slope for Capitol Peak Quadrangle, Colorado

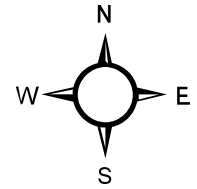
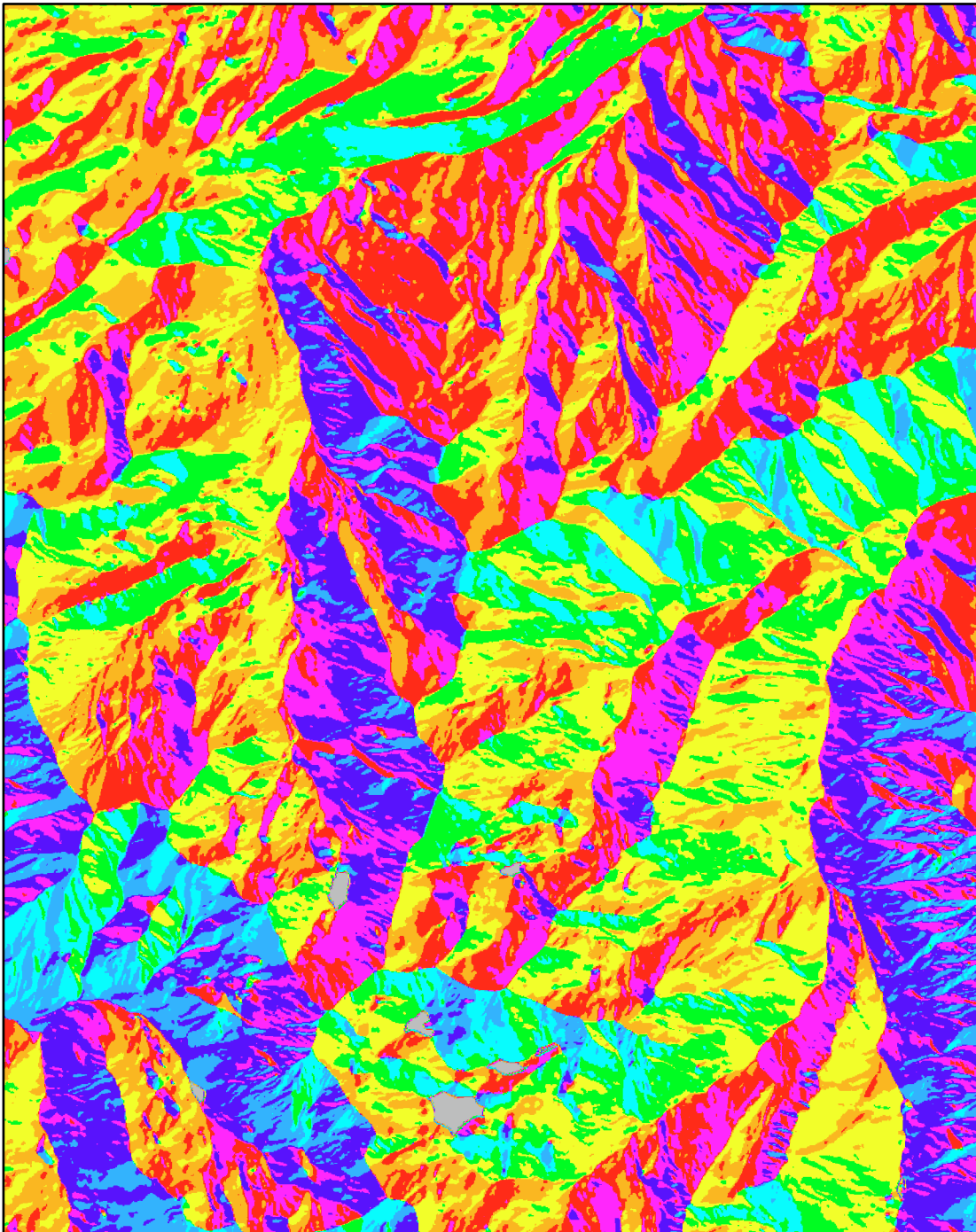


Ava Spencer  
Friday PM Lab - 11/19/21  
Projection: Transverse Mercator  
Coordinate System: NAD 1983 UTM Zone 13N  
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<http://datagateway.nrcs.usda.gov>  
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Capitol Peak Boundary

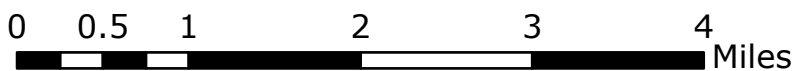
# Aspect for Capitol Peak Quadrangle, Colorado



## Aspect

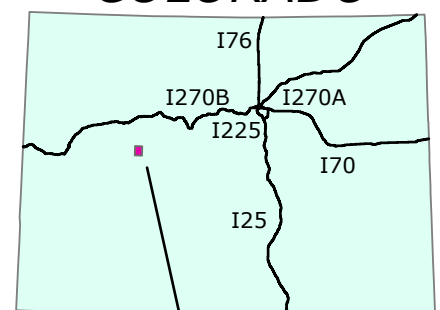
### Value

Grey	Flat (-1)
Red	North (0 - 22.5)
Orange	Northeast (22.5 - 67.5)
Yellow	East (67.5 - 112.5)
Green	Southeast (112.5 - 157.5)
Cyan	South (157.5 - 202.5)
Blue	Southwest (202.5 - 247.5)
Purple	West (247.5 - 292.5)
Magenta	Northwest (292.5 - 337.5)
Dark Red	North (337.5 - 360)



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Projection: Transverse Mercator  
Coordinate System: NAD 1983 UTM Zone 13N  
Source: NR319 Class Data  
<http://datagateway.nrcs.usda.gov>  
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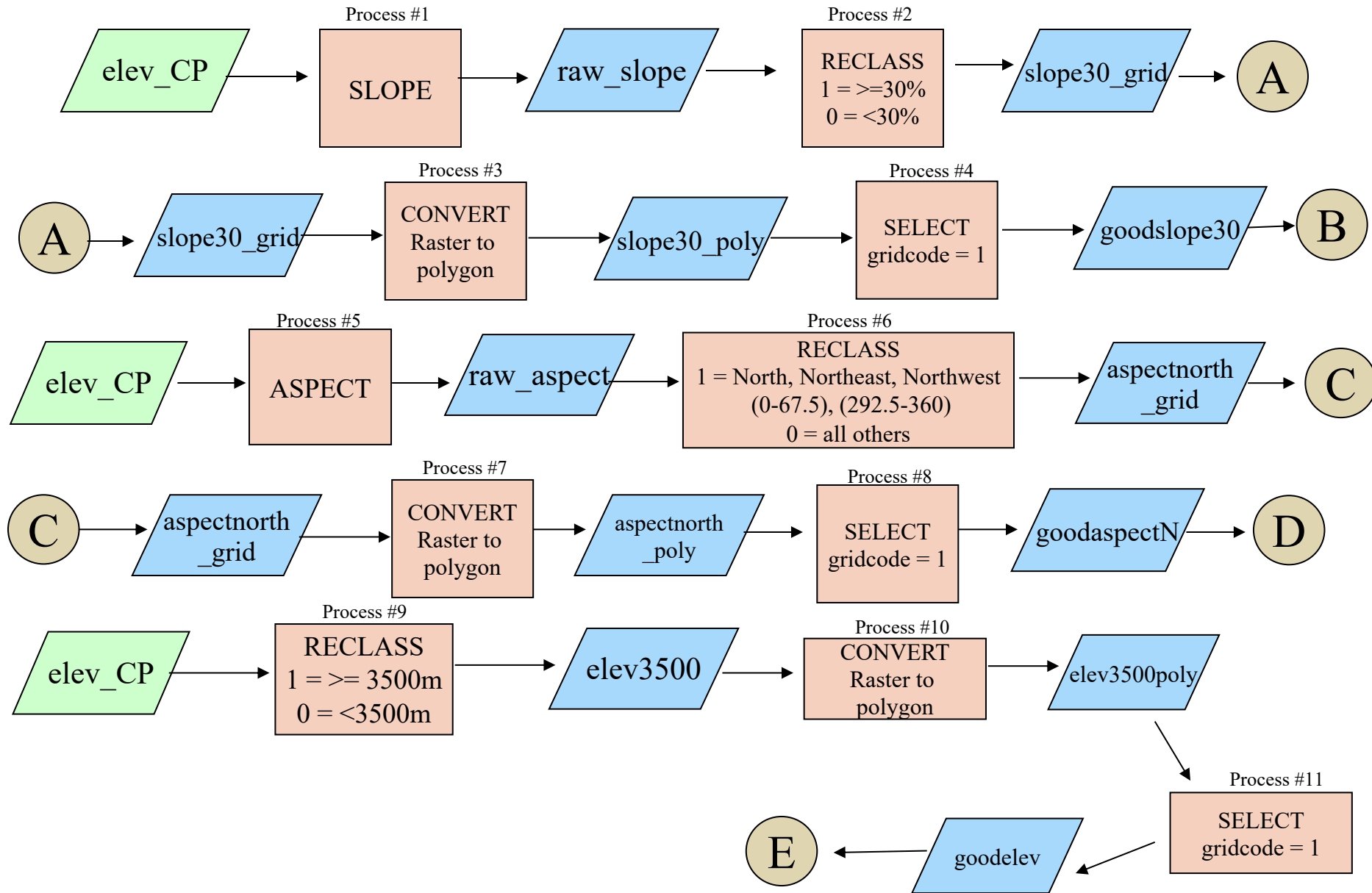
## COLORADO



Capitol Peak Boundary

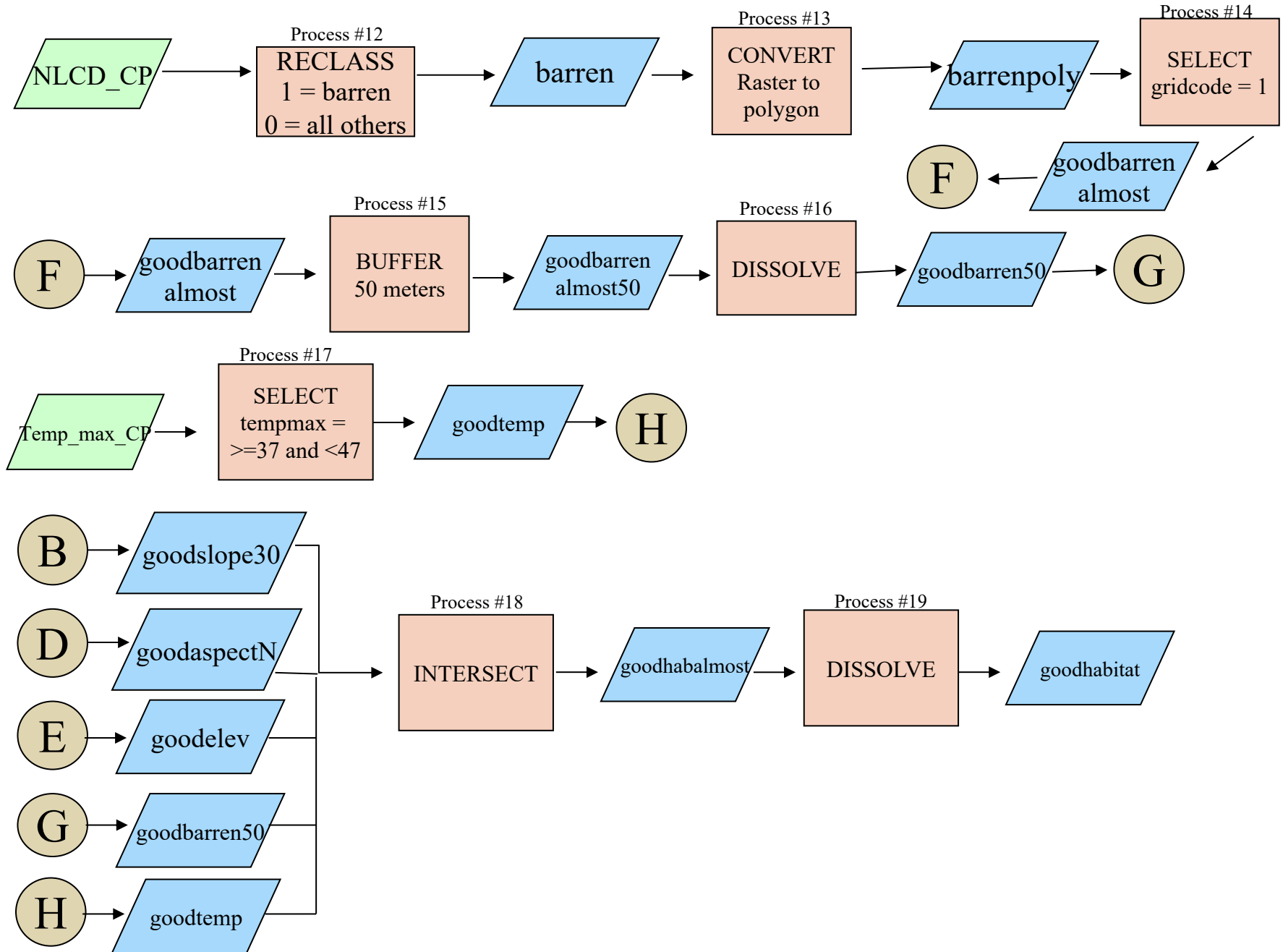
# NSBFA Flowchart #2

NR319



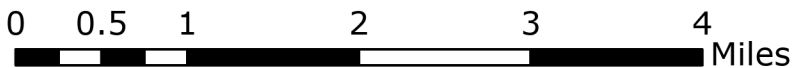
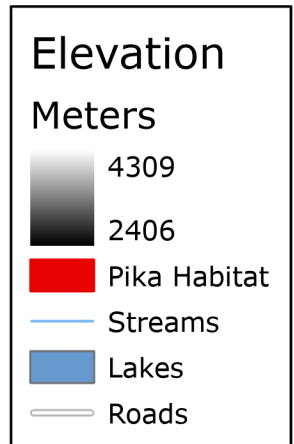
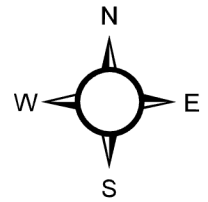
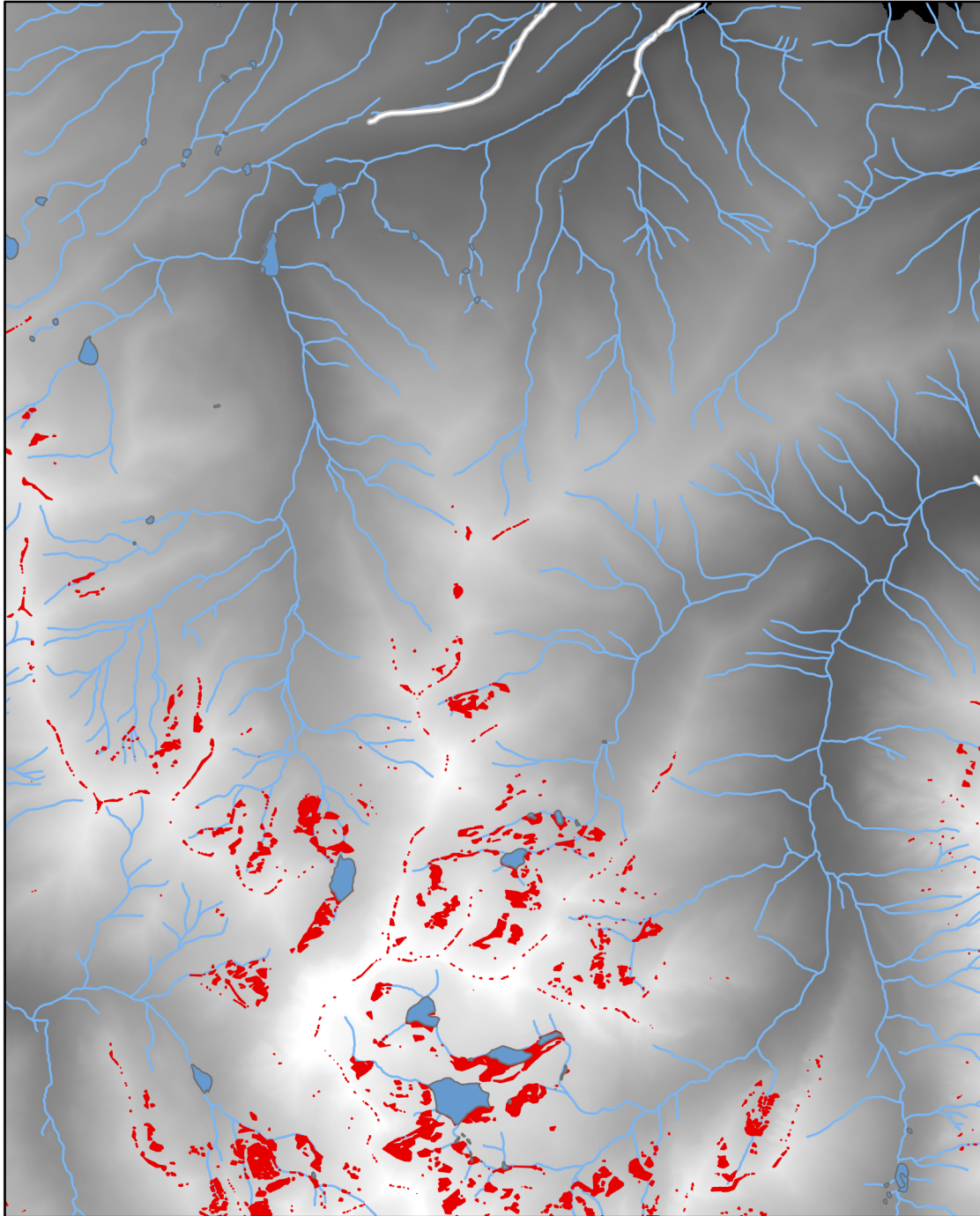
# NSBFA Flowchart #2

NR319



# Potential Habitat Sites for American Pika (*Ochotona princeps*)

Capitol Peak, Colorado



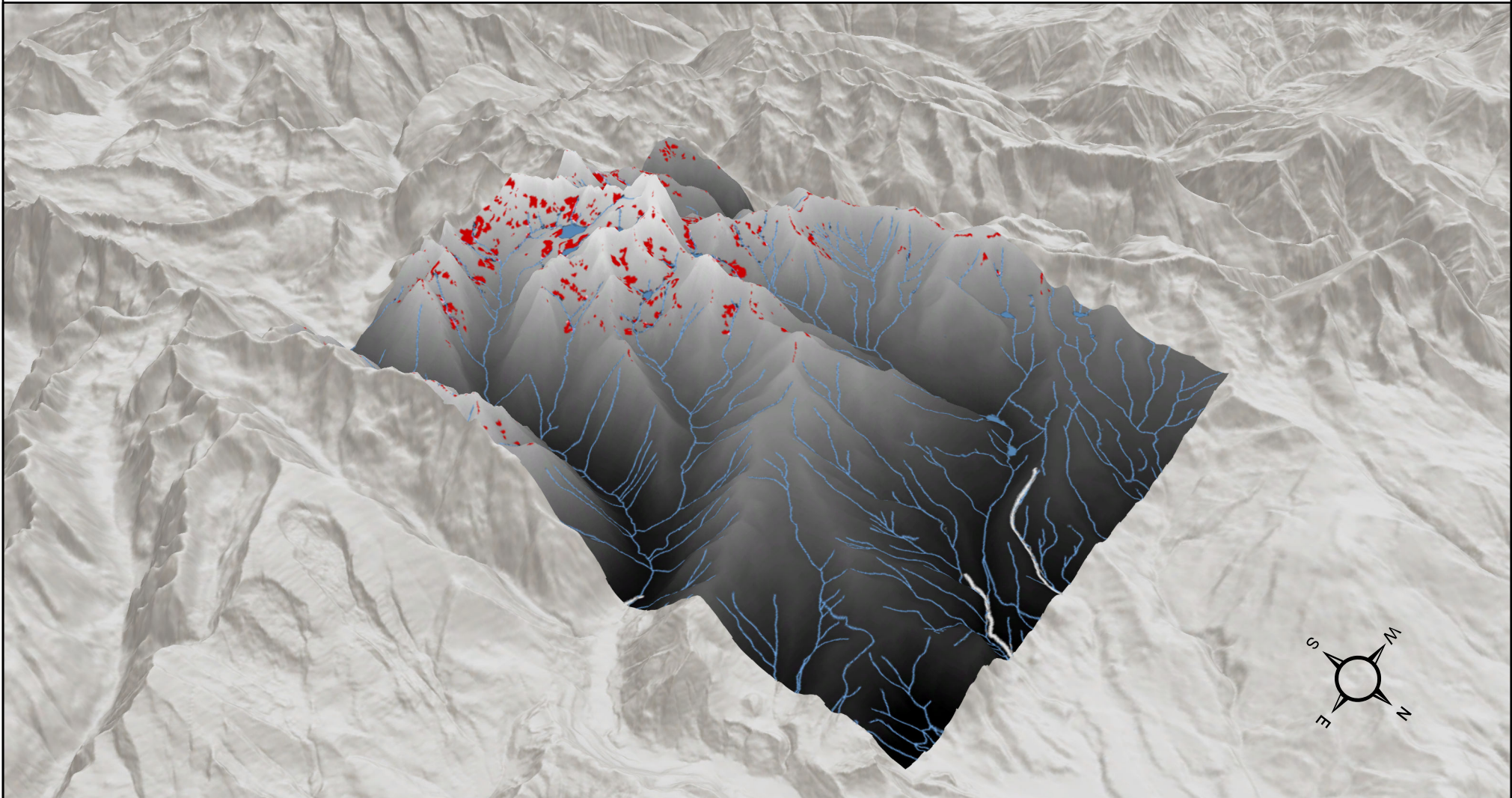
Ava Spencer  
Friday PM Lab - 11/19/21  
Projection: Transverse Mercator  
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Capitol Peak Boundary

# Potential Habitat Sites for American Pika (*Ochotona princeps*)

Capitol Peak, Colorado



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- Lakes
- Pika Habitat
- Roads
- Streams

Elevation

Meters

4309

2406