Lemmon Valley Runoff Analysis March 14, 2017

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DRI
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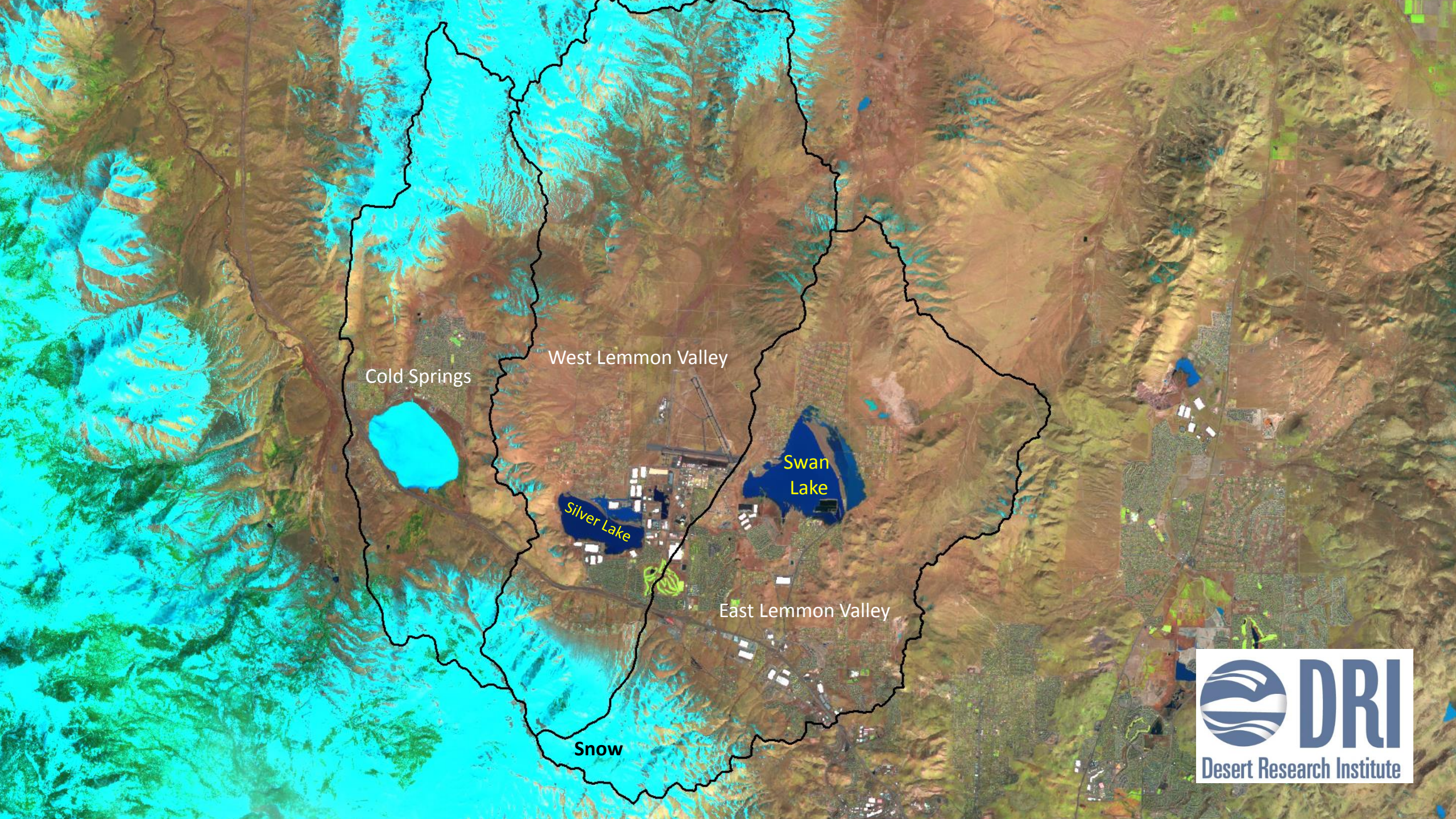
Cold Springs
West Lemmon Valley
Swan Lake
Silver Lake
East Lemmon Valley
Snow
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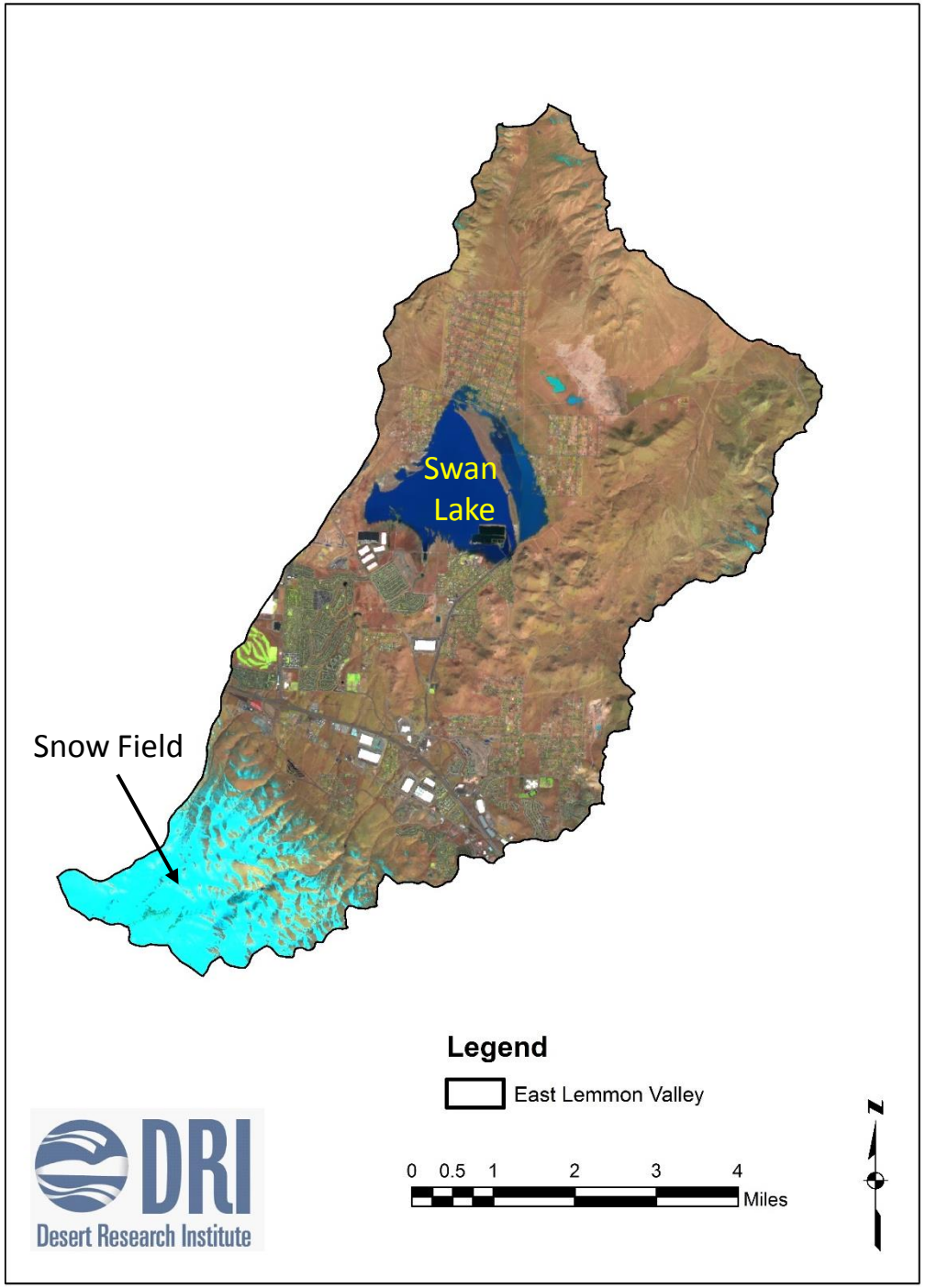
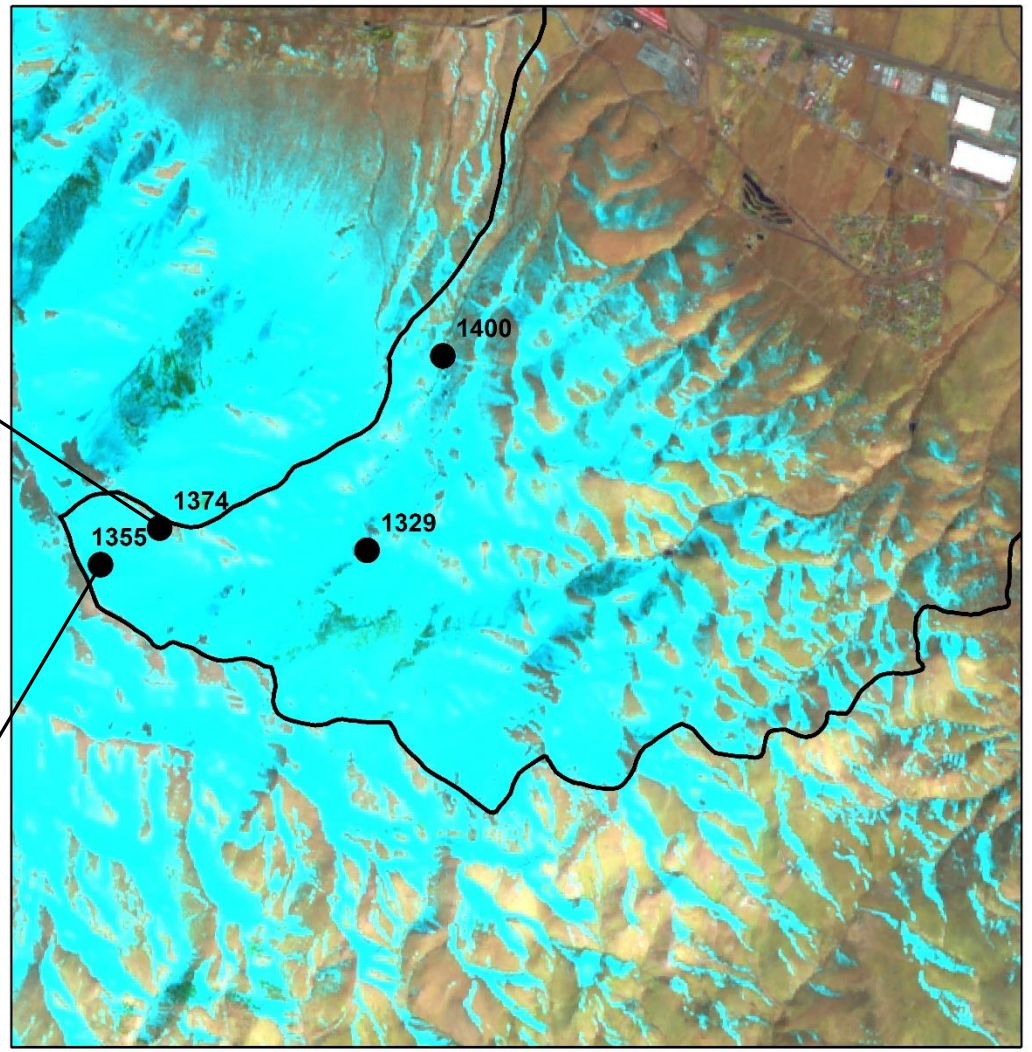
East Lemmon Valley





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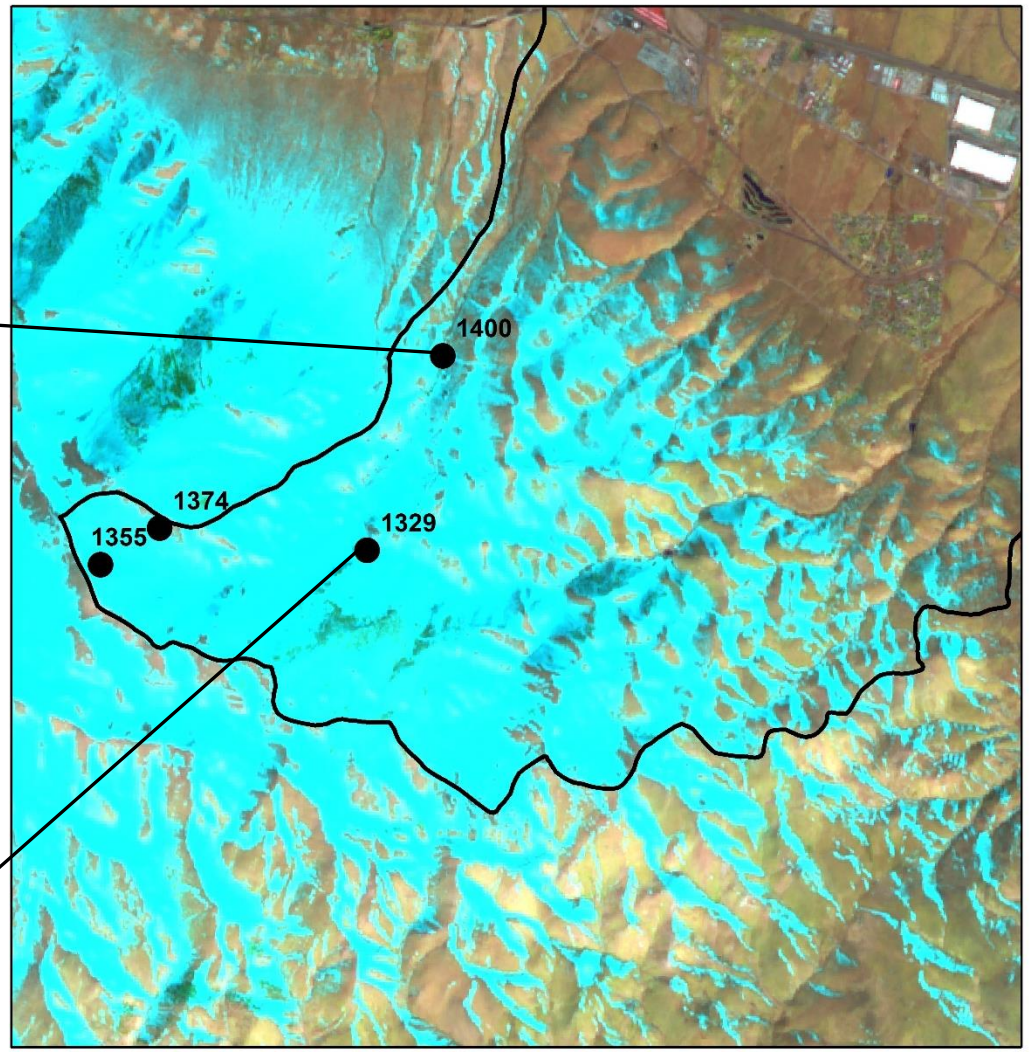
Legend

- Picture Locations
- East Lemmon Valley

N

0 0.275 0.55 1.1 1.65 2.2

Miles



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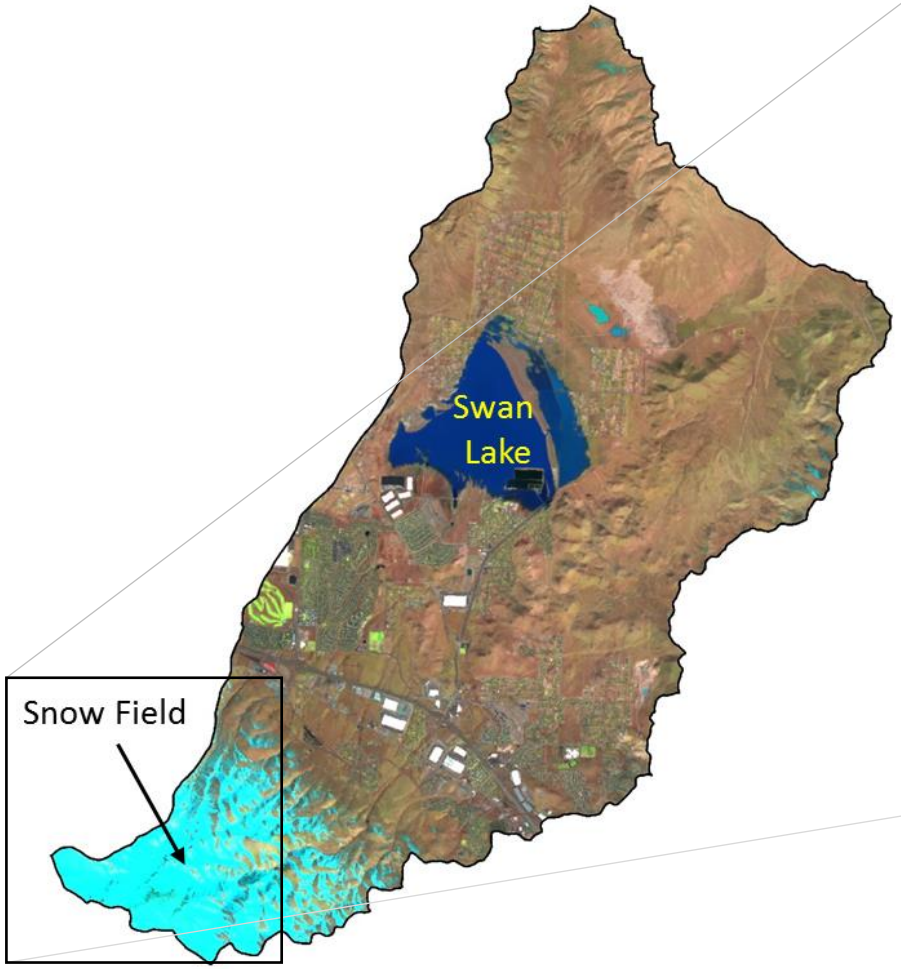
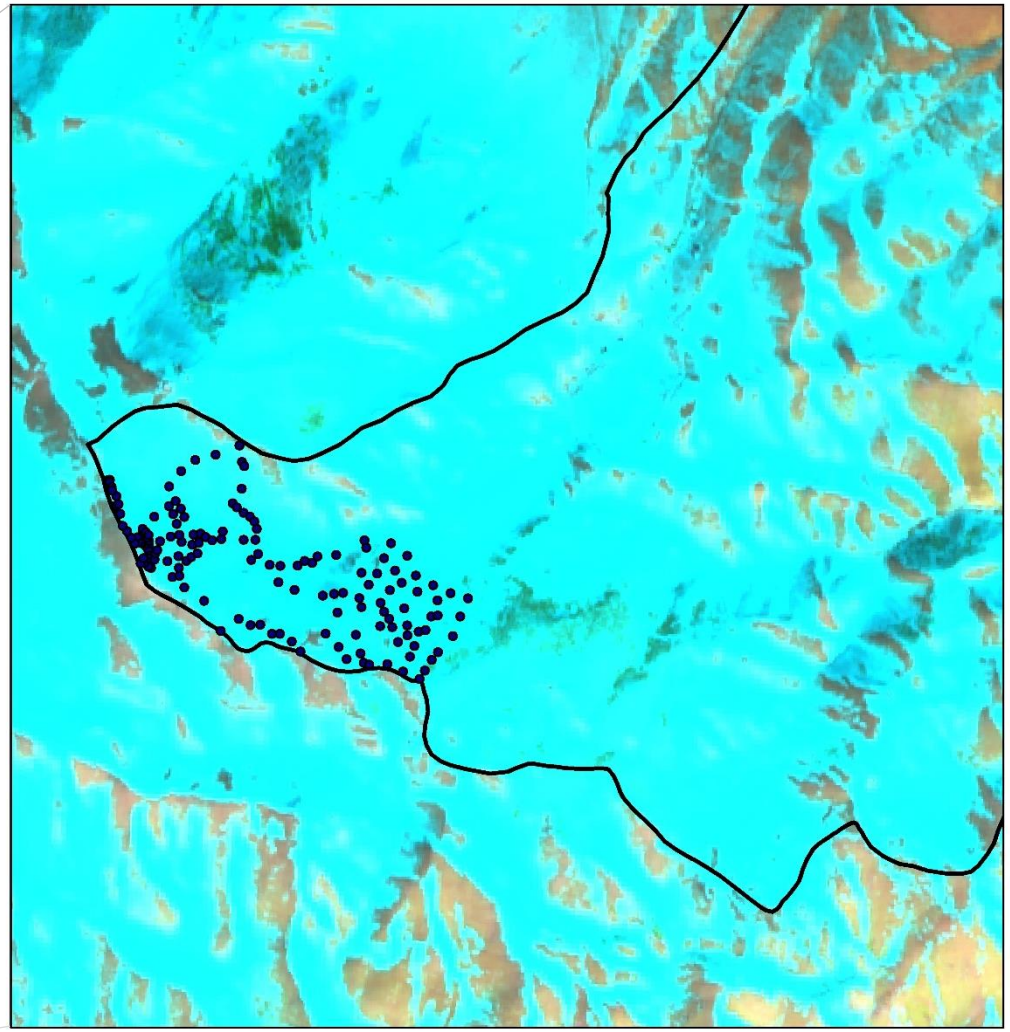
Legend

- Picture Locations
- East Lemmon Valley

0 0.275 0.55 1.1 1.65 2.2 Miles

Snow Measurements





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Legend

Snow Measurements

East Lemmon Valley

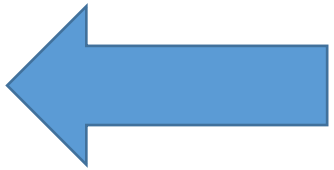
N

0 0.15 0.3 0.6 0.9 1.2

Miles

Snow Volume Estimates

- Estimate #1 - SNODAS
  - Coarse grid and no nearby SNOTEL station
  - Biased low based on field measurements
- Estimate #2 - SWE Gradient Downslope
  - Requires assumptions of SWE downslope

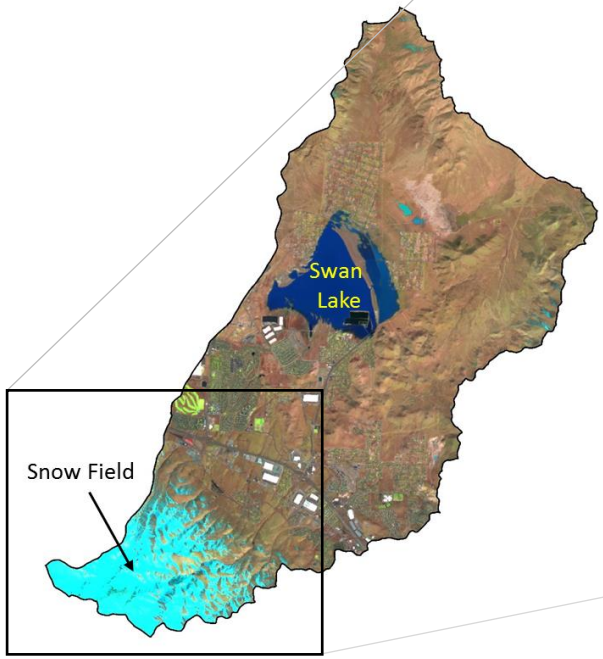


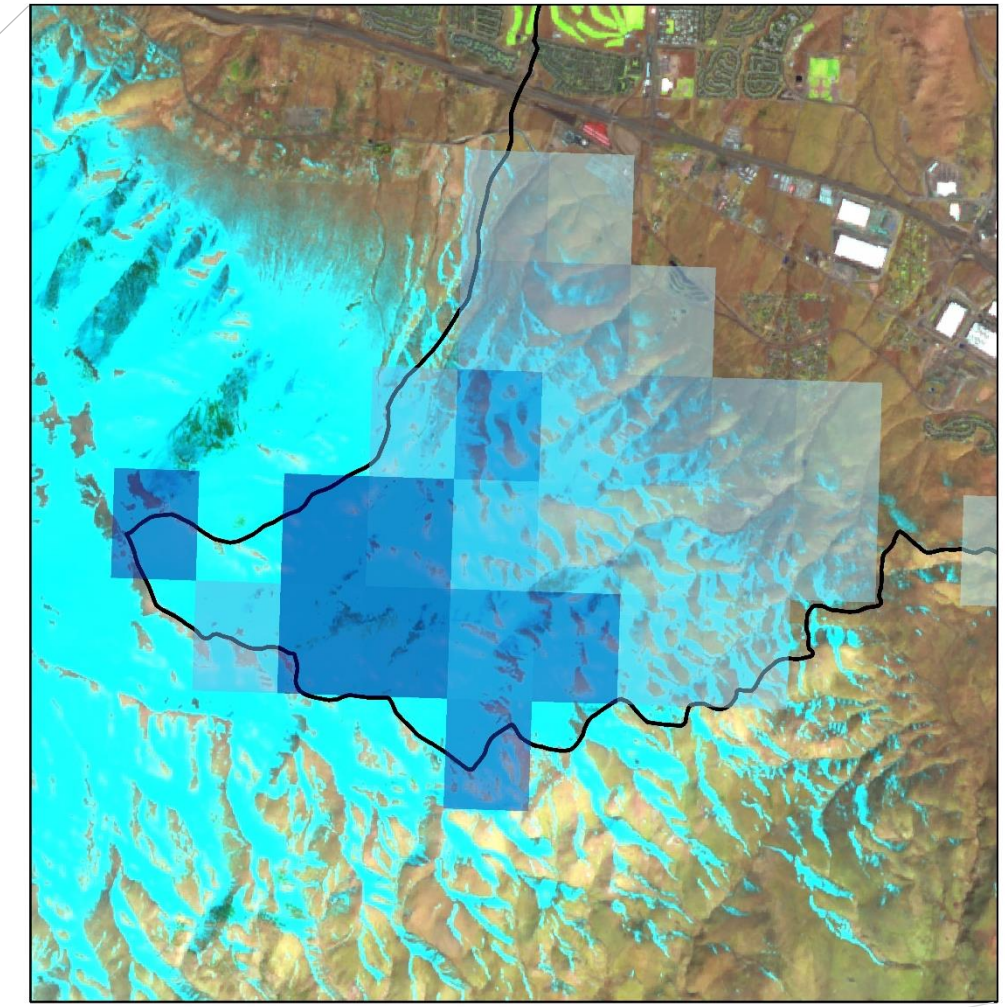
Best Estimate

- Estimate #3 - Product of Average SWE and Snow Area
  - Does not account for SWE gradient downslope

Estimate #1
SNODAS

Total Snow Water Volume = 700 acre-feet





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Legend

East Lemmon Valley

SNODAS

SWE (ft)

0.5

0.006

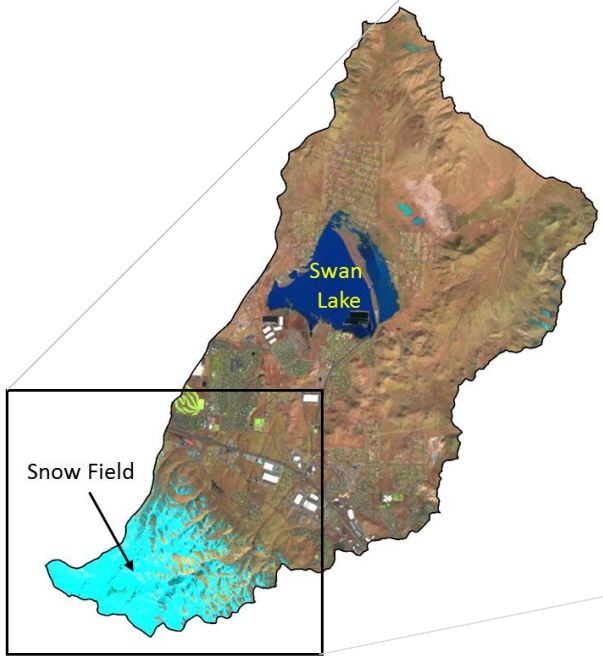
0 0.325 0.65 1.3 1.95 2.6

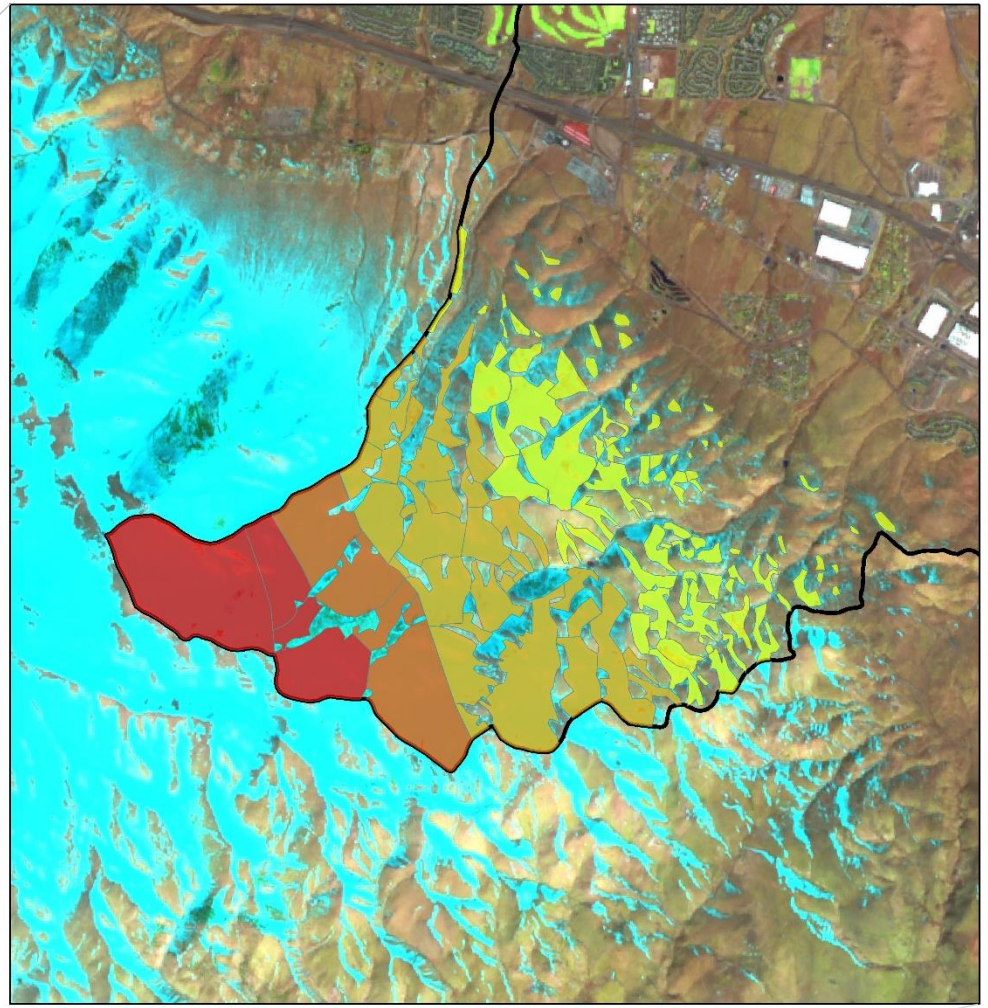
Miles

N

Estimate #2
SWE Gradient Downslope

Area = 2,100 acres
Snow Water Equivalent – varies by zone
Total Snow Water Volume = 1,500 acre-feet





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Legend

Snow Water Eq. (ft)

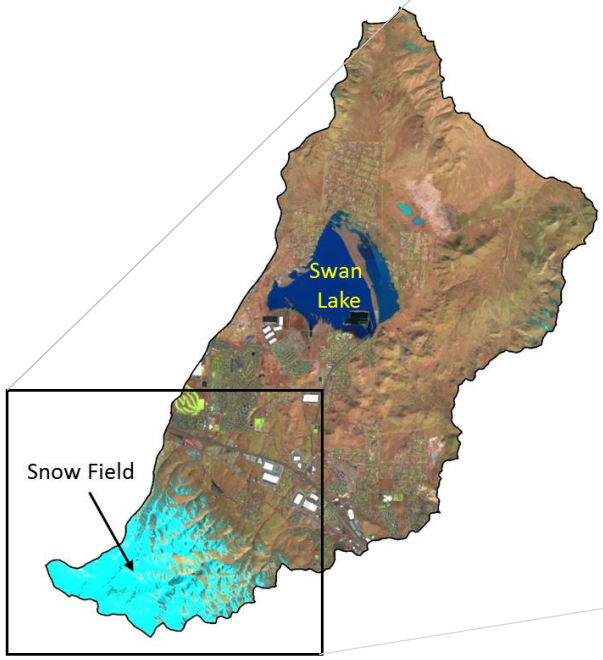
- 0.25
- 0.5
- 1.0
- 1.8
- East Lemmon Valley

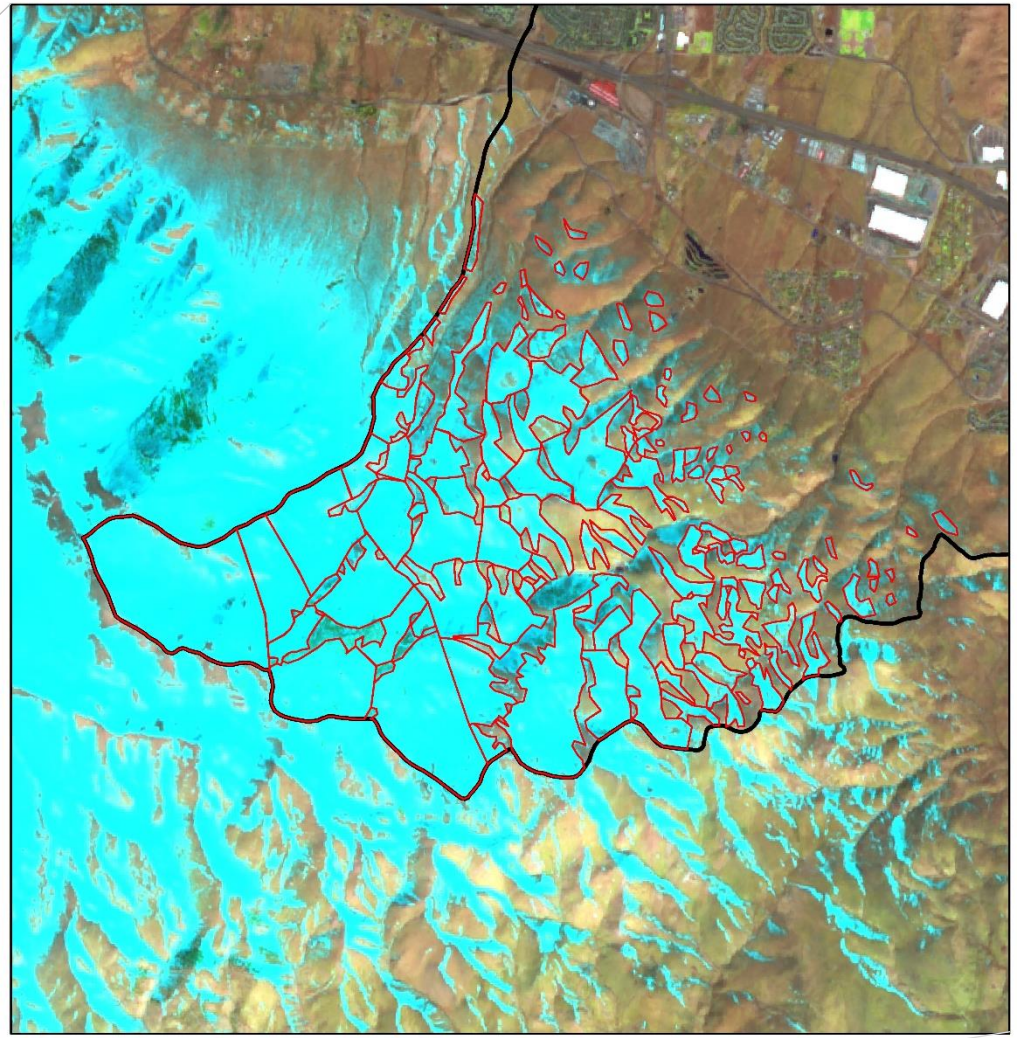
0 0.325 0.65 1.3 1.95 2.6
Miles

N

Estimate #3
Product of Average SWE and Snow Area

Area = 2,100 acres
Average Snow Water Content = 1.8 feet
Total Snow Water Volume = 3,800 acre-feet





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Legend
Snow Covered Areas
East Lemmon Valley

N

0 0.3 0.6 1.2 1.8 2.4
Miles

East Lemmon Valley
Snow Volume Summary

#	Method	Volume (acre-feet)
1	SNODAS	700
2	SWE Gradient Downslope	1,500
3	Average SWE * Snow Area	3,800

Best Estimate