

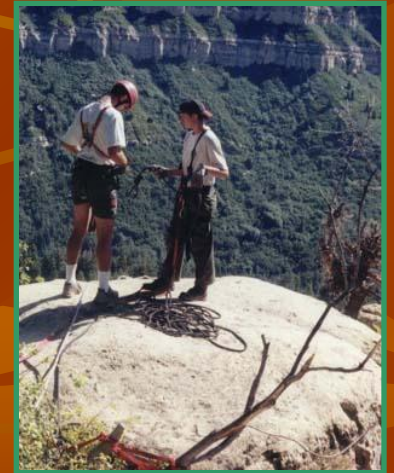
Siting Potential Dams at Camp Del Webb, Utah



Presented By: Kyle Wamser

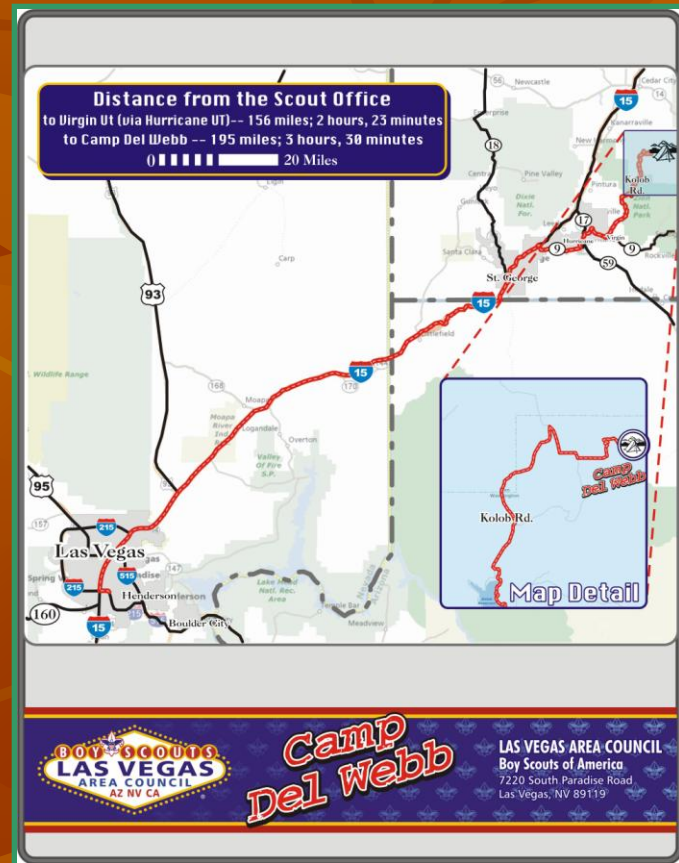
Problem

- Camp Del Webb is Lacking an Onsite Lake
 - High Adventure Bases generally need aquatics
 - Large lake nearby, but transportation is required
- Possible Solution
 - Create a small reservoir on camp land
 - GIS may be useful in identifying possible sites



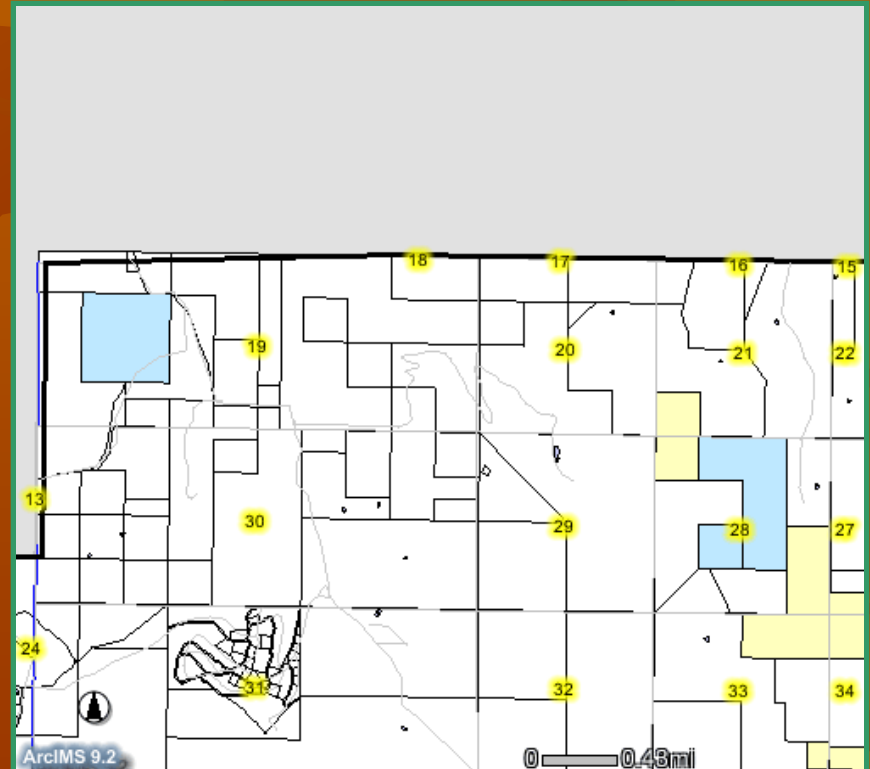
Data Collection

- Locate the Camp
 - First find the general location
 - Then determine land ownership
- Find Land Information
 - Digital Elevation Models
 - Streets
 - Other lakes
 - Wetlands
 - Historic sites
 - Other available Shapefiles



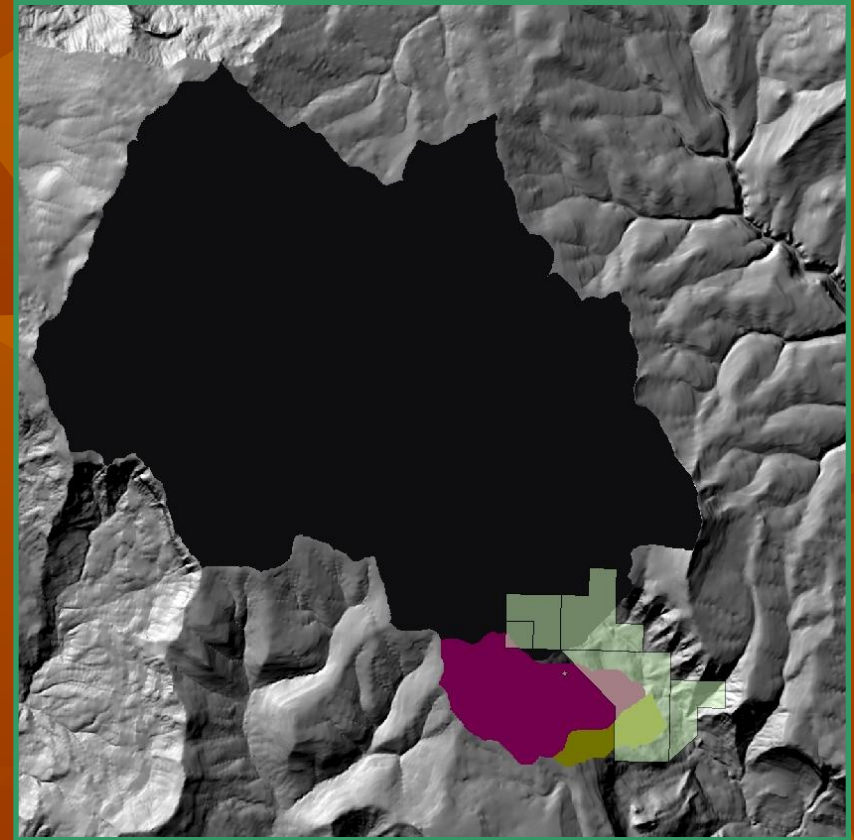
Data Collection: Locating the Camp

Account#	Summary
0144124	<p>Parcel #: 1-B Situs: Acres: 40.00</p> <p>Owner: <i>BOULDER DAM AREA COUNCIL</i> <i>BSA</i> Legal: S: 19 T: 38S R: 10W SW1/4 SE1/4 SEC 19 T38S R10W SLM</p> <p>Version: 06/22/2006 03:33:17-992 PM to: MAX</p>
0144181	<p>Parcel #: 4-A Situs: Acres: 120.00</p> <p>Owner: <i>BOULDER DAM AREA COUNCIL</i> <i>BSA</i> Legal: S: 19 T: 38S R: 10W N1/2 SE1/4; SE1/4 SE1/4 SEC 19 T38S R10WSLM</p> <p>Version: 06/13/2006 04:48:35-945 PM to: MAX</p>
0144264	<p>Parcel #: 9 Situs: Acres: 240.00</p> <p>Owner: <i>BOULDER DAM AREA COUNCIL</i> <i>BSA</i> Legal: S: 20 T: 38S R: 10W SW1/4; SE1/4 NW1/4; SW1/4 SE1/4 SEC 20T3...</p> <p>Version: 06/13/2006 04:49:13-528 PM to: MAX</p>
0144520	<p>Parcel #: 31 Situs: Acres: 140.00</p> <p>Owner: <i>BOULDER DAM AREA COUNCIL</i> <i>BSA</i> Legal: S: 28 T: 38S R: 10W S1/2 NW1/4; NW1/4 SW1/4 AND BEG AT SWCOR...</p> <p>Version: 06/14/2006 10:01:58-810 AM to: MAX</p>
0144538	<p>Parcel #: 32 Situs: Acres: 400.00</p> <p>Owner: <i>BOULDER DAM AREA COUNCIL</i> <i>BSA</i> Legal: S: 29 T: 38S R: 10W E1/2 SEC 29 & BEG AT NW COR SEC 29 T38SR...</p> <p>Version: 06/13/2006 04:49:53-765 PM to: MAX</p>
0268618	<p>Parcel #: 33-A-2 Situs: Acres: 1.00</p> <p>Owner: <i>BOULDER DAM AREA COUNCIL</i> <i>BSA</i> Legal: S: 29 T: 38S R: 10W BEG AT A PT WHICH IS S 11*36'39 E 1014....</p> <p>Version: 10/26/2006 11:38:31-409 AM to: MAX</p>

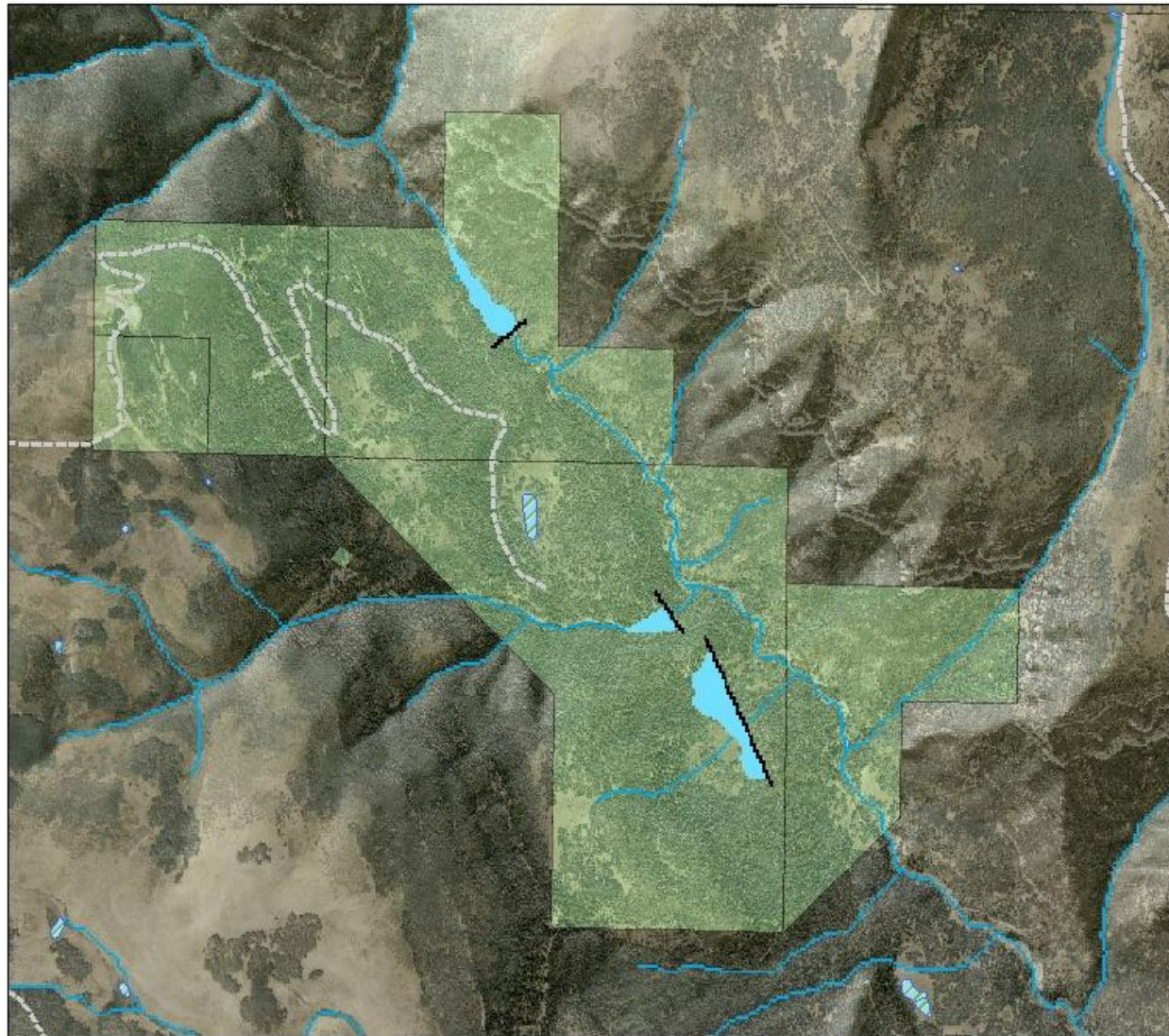


Processing

- DEMs
 - Merged four
 - Filled sinks
 - Found direction and accumulation
 - Created a hillshade
- Finding Possible Lake Locations
 - Added three potential dam sites
 - Calculated watersheds
 - Extended dams through terrain to prevent runoff on the sides
 - Calculated watershed \leq dam elevation, which identified lakes



Potential Lake Sites at Camp Del Webb



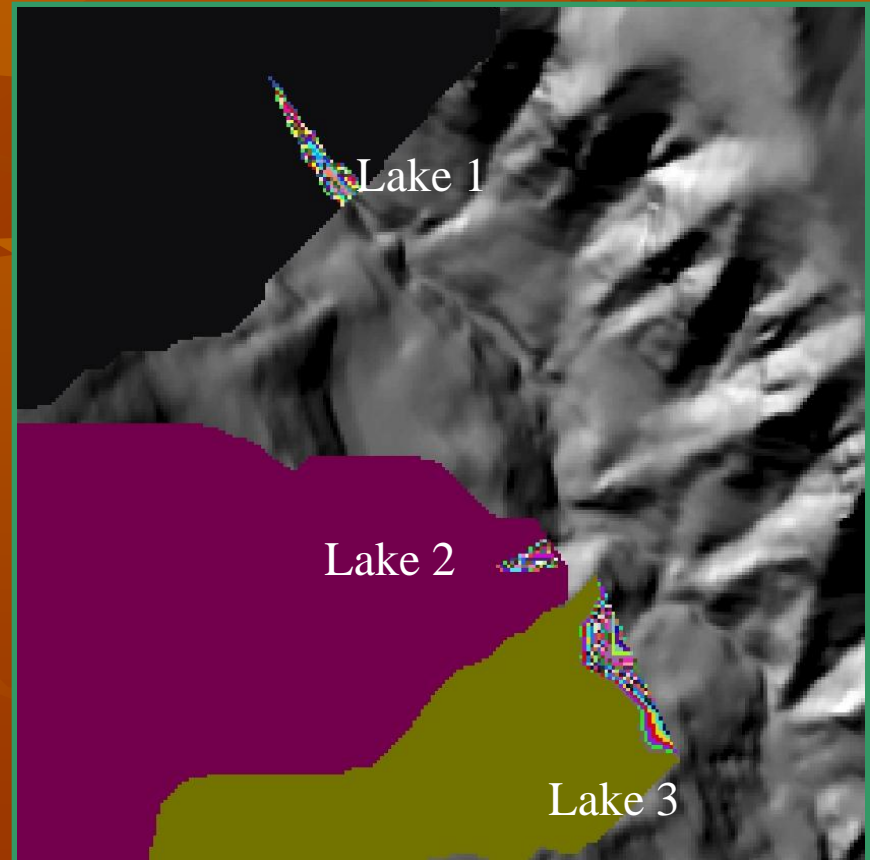
- Dams
- ☁ Potential Lake Sites
- ▨ Existing Wetlands
- Streams
- Camp Del Webb
- - - Roads



Presented By: Kyle Warnser
03 May 2007

Results

- What GIS can do:
Provide Information on Selected Sites
 - Watershed Area: 50.30 square kilometers
 - Lake Area: 21,084 square meters
 - Lake Volume: 135,900 cubic meters
- What GIS can't do:
Recommend Sites based on set Criteria
 - Right now, a user cannot request a lake that will fill to a set volume from a watershed of a certain minimum size and have a GIS output potential dam sites



Conclusion

- Problem
- Data Collection
- Processing
- Results

