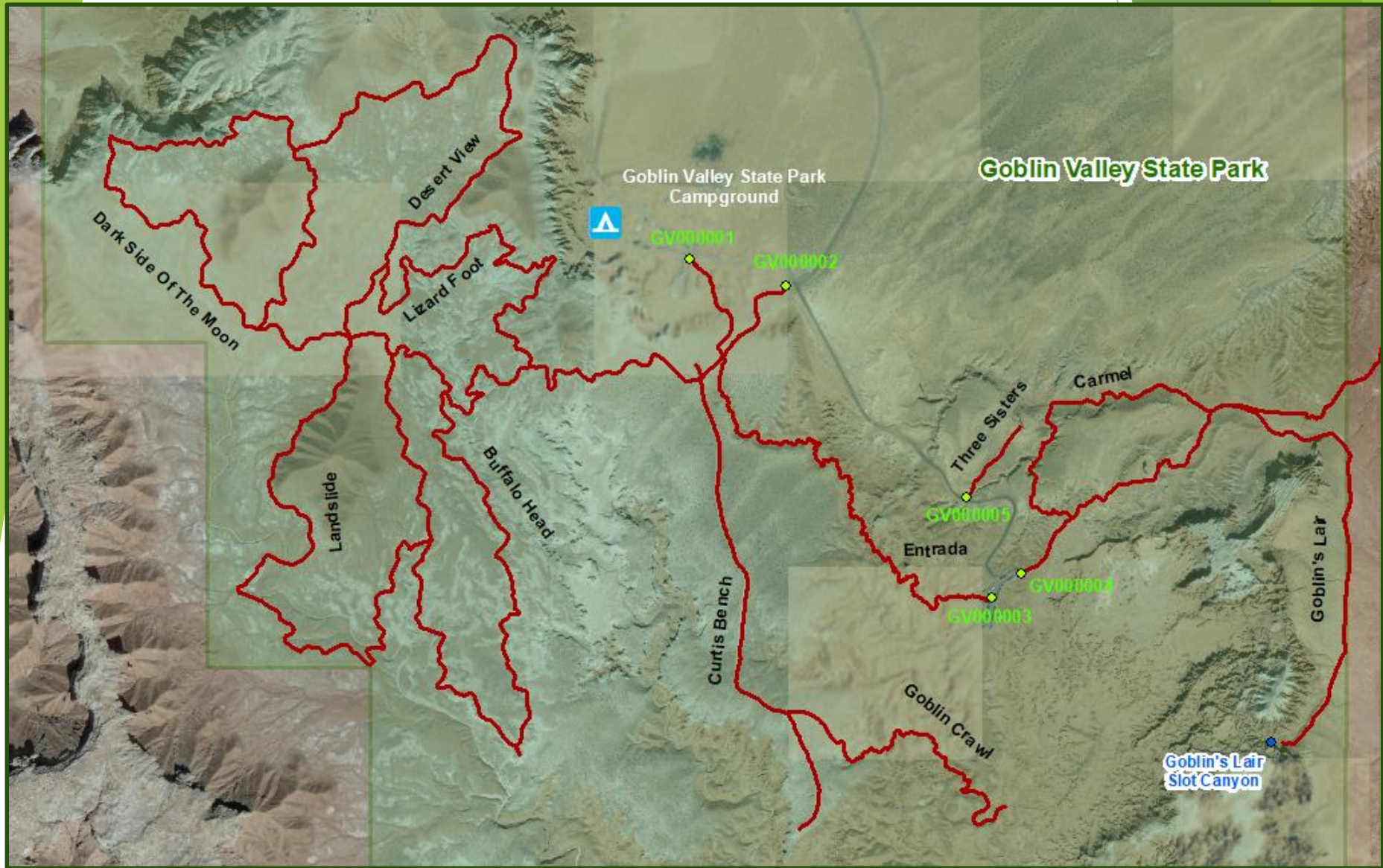


Utah Recreation Database








































Erik Neemann

4 Dec 2017



Overview

- Background
- Data
- Relationships
- Functionality

Contents	Preview	Description
Name	Type	
 BLMLand	File Geodatabase Feature Class	
 BoatRamp	File Geodatabase Feature Class	
 Campground	File Geodatabase Feature Class	
 County	File Geodatabase Feature Class	
 ForestWilderness	File Geodatabase Feature Class	
 GolfCourse	File Geodatabase Feature Class	
 HighestPeak	File Geodatabase Feature Class	
 Lake	File Geodatabase Feature Class	
 Lakes_BoatRamps	File Geodatabase Relationship Class	
 Park	File Geodatabase Feature Class	
 River	File Geodatabase Feature Class	
 Rivers_BoatRamps	File Geodatabase Relationship Class	
 Segments_to_Routes	File Geodatabase Relationship Class	
 SkiLift	File Geodatabase Feature Class	
 SkiResort	File Geodatabase Feature Class	
 SkiResort_SkiLift	File Geodatabase Relationship Class	
 SkiResort_SkiRuns	File Geodatabase Relationship Class	
 SkiRun	File Geodatabase Feature Class	
 SlotCanyon	File Geodatabase Feature Class	
 State	File Geodatabase Feature Class	
 State_AllParks	File Geodatabase Relationship Class	
 State_BLM	File Geodatabase Relationship Class	
 State_Campgrounds	File Geodatabase Relationship Class	
 State_County	File Geodatabase Relationship Class	
 State_Forest	File Geodatabase Relationship Class	
 State_Golf	File Geodatabase Relationship Class	
 State_Lake	File Geodatabase Relationship Class	
 State_Peaks	File Geodatabase Relationship Class	
 State_River	File Geodatabase Relationship Class	
 State_SkiResorts	File Geodatabase Relationship Class	
 State_SlotCanyon	File Geodatabase Relationship Class	
 State_Trailheads	File Geodatabase Relationship Class	
 State_XCSkiTrails	File Geodatabase Relationship Class	
 TH_to_Routes	File Geodatabase Relationship Class	
 TH_to_Segments	File Geodatabase Relationship Class	
 Trailhead	File Geodatabase Feature Class	
 TrailRoute	File Geodatabase Feature Class	
 TrailSegment	File Geodatabase Feature Class	
 XC_SkiTrail	File Geodatabase Feature Class	

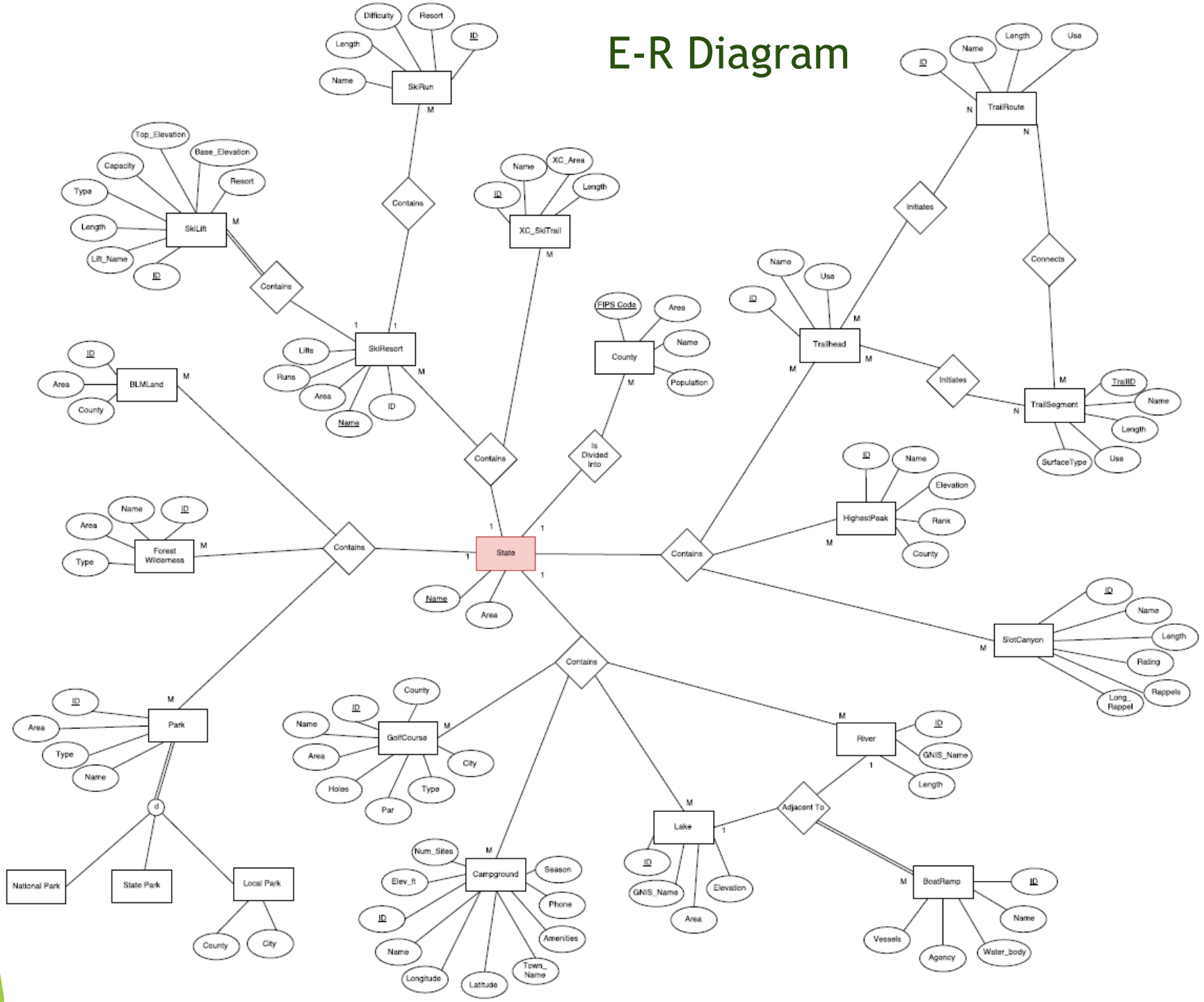
Background

- ▶ Database built to put several recreation datasets in one place
- ▶ Goal to aid trip planning (hiking, camping, boating, etc.)
- ▶ Answer questions/interrogate the data
 - ▶ What trailhead(s) leads to Goblin Valley's "Dark Side of the Moon" trail?
 - ▶ Which boat ramps provide access to Lake Powell?
 - ▶ How many lifts are in the ski resort containing "Chip's Run?"
- ▶ Data were pulled from a variety of sources
 - ▶ Utah AGRC
 - ▶ UScampgrounds.info
 - ▶ Bogley Outdoor Community
 - ▶ Skimap.org
- ▶ Additional processing needed to clean up the data

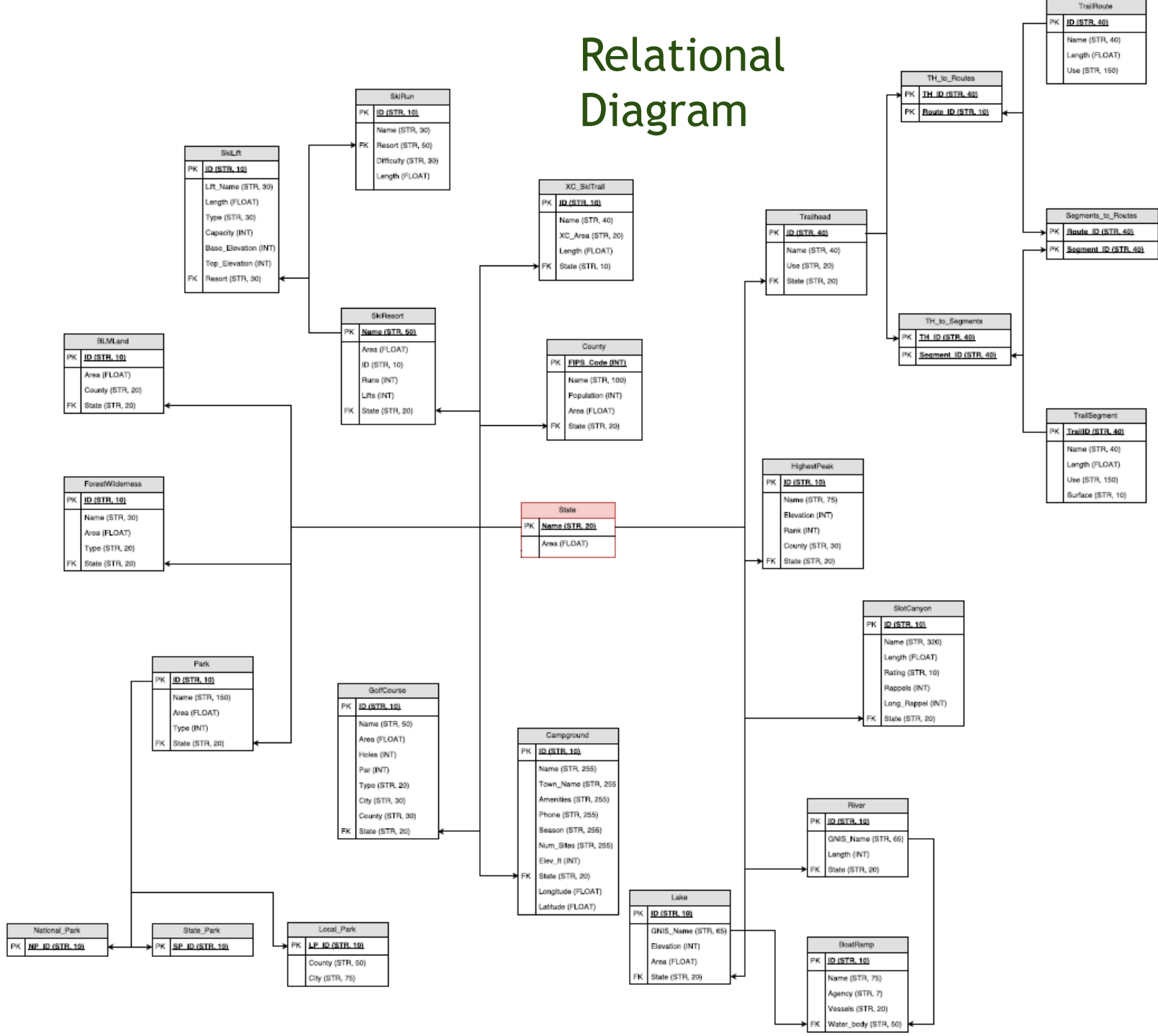
Data

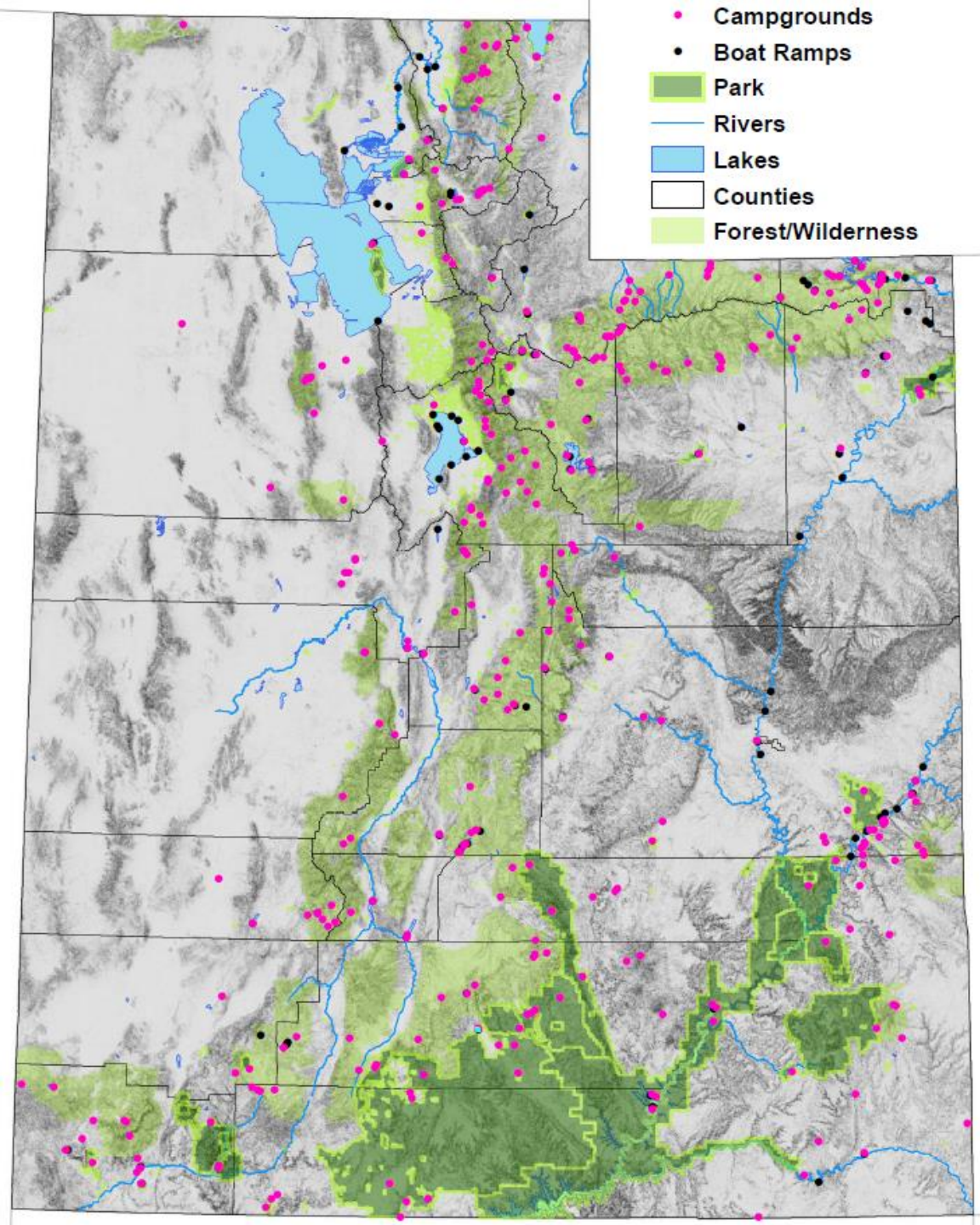
- ▶ Obtained from several sources: AGRC, open source websites
 - ▶ Campgrounds (360 points)
 - ▶ Trailheads (574 points)
 - ▶ Trail Segments/Routes (675 lines)
 - ▶ Cross Country Ski Trails (79 lines)
 - ▶ Ski Resort Boundaries (14 polygons)
 - ▶ Ski Runs (59 lines)
 - ▶ Ski Lifts (139 lines)
 - ▶ Parks (1691 polygons)
 - ▶ Rivers (58 lines)
 - ▶ Lakes (393 polygons)
 - ▶ Counties (29 polygons)
 - ▶ BLM Land (29 polygons)
 - ▶ Forests/Wilderness (15 polygons)
 - ▶ Golf Courses (115 polygons)
 - ▶ Highest Peaks (113 points)
 - ▶ Boat Ramps (116 points)
 - ▶ Slot canyons (402 points)

E-R Diagram

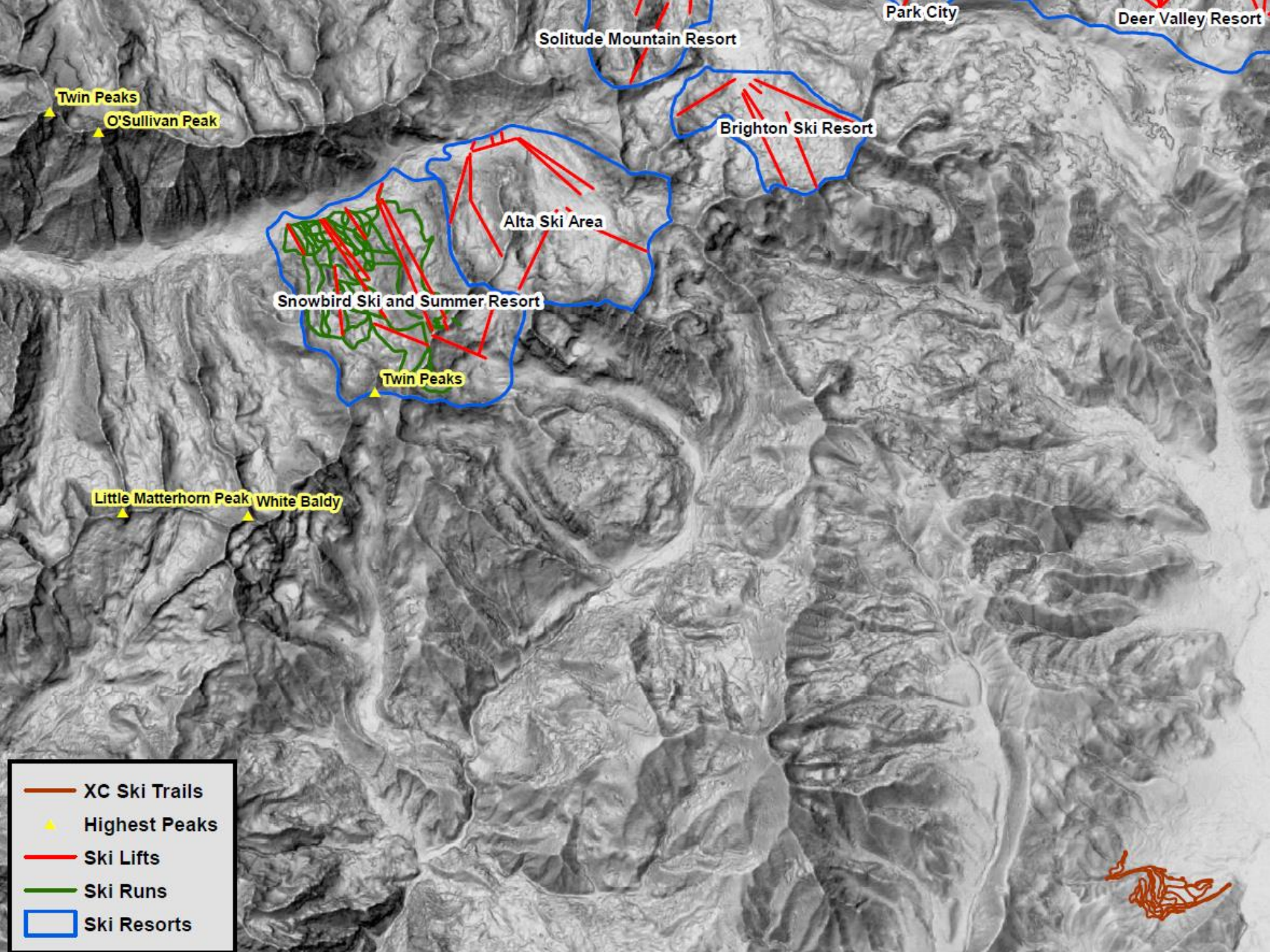


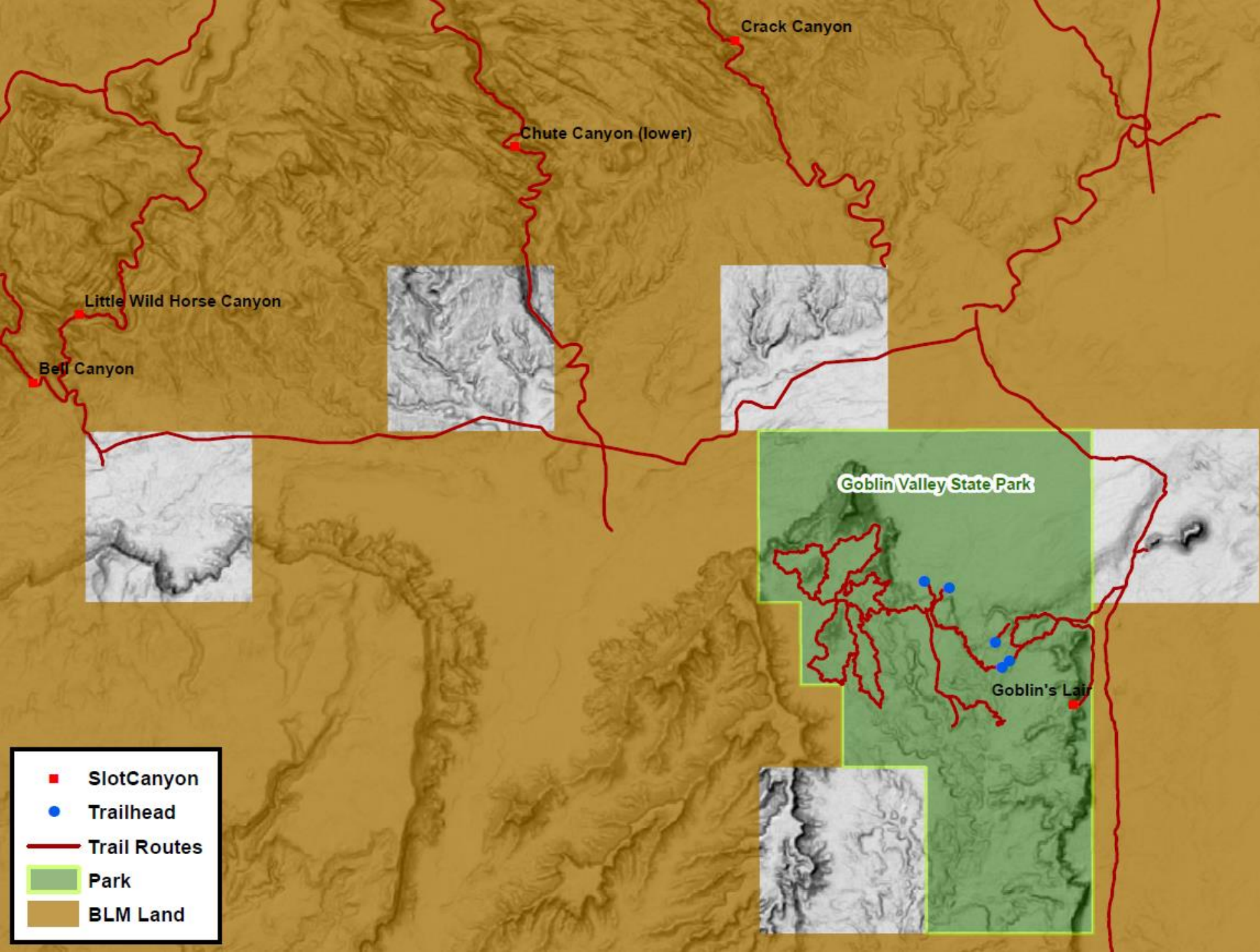
Relational Diagram





Samples of
Data





Relationship Details

- ▶ M:N Relationships
 - ▶ Trailheads to Trail Segments
 - ▶ Trail Segments to Trail Routes
 - ▶ Trailheads to Trail Routes
- ▶ Mandatory Participation
 - ▶ Ski Lifts must belong to Ski Resorts
 - ▶ Boat Ramps must be adjacent to a River or Lake
- ▶ Park subtypes
 - ▶ Local Park
 - ▶ State Park
 - ▶ National Park

Functionality - Goblin Valley Trailheads

tion Geoprocessing Customize Windows Help

1:50,000

Snapping

Editor

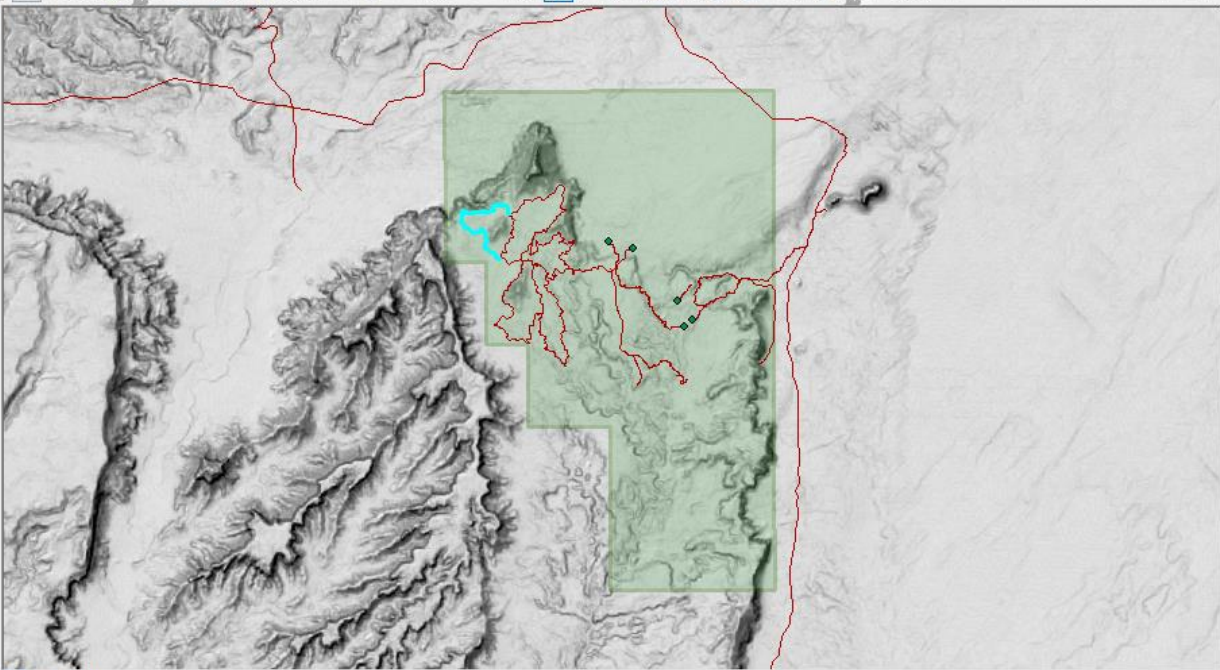


Table - TrailRoute

TrailRoute

TH_to_Routes : Trailheads

Displays the relationship classes that the current table participates in.

	Use	ID *	SHAPE_Length
HIKE	GVGoblinCraw	955.539682	
HIKE	GVEntrada	1724.217816	
BIKE HIKE	GVDesertView	2651.768385	
BIKE HIKE	GVDarksideOf	1477.303083	
HIKE	GV/CurtieRanc	1606.70278	

(1 out of 675 Selected)

TrailRoute

Trailhead

OBJECTID *	SHAPE *	Name	ID *	State *	Use
1	Point	Deer Creek Parkway North	OV21654	Utah	MTB
2	Point	Sleepy Hollow	OV55779	Utah	MTB
3	Point	Osborne	OV84736	Utah	MTB
4	Point	Dead Dog Loop	OV182462	Utah	MTB
5	Point	Inner Setting	OV216972	Utah	MTR

(0 out of 574 Selected)

Trailhead Park

Functionality - Goblin Valley Trailheads

ction Geoprocessing Customize Windows Help

1:50,000

Snapping

Editor

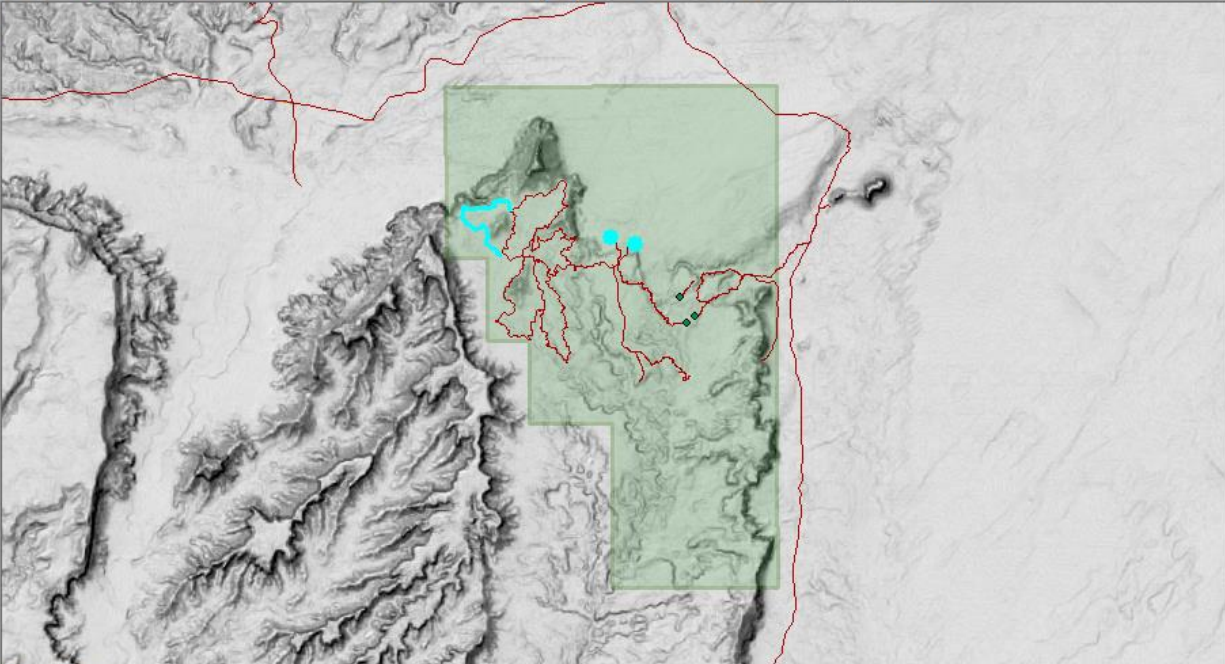


Table - Trailhead

TrailRoute

OBJECTID *	SHAPE *	Name	Use	ID *	SHAPE_Length
13087	Polyline	Goblin Crawl	HIKE	GVGoblinCraw	955.539682
13082	Polyline	Entrada	HIKE	GVEntrada	1724.217816
13090	Polyline	Desert View	BIKE HIKE	GVDesertView	2651.768385
13088	Polyline	Dark Side Of The Moon	BIKE HIKE	GVDarksideOf	1477.303083
13079	Polyline	Curtis Ranch	HIKE	GVCurtisRanc	1608.703728

(1 out of 675 Selected)

TrailRoute

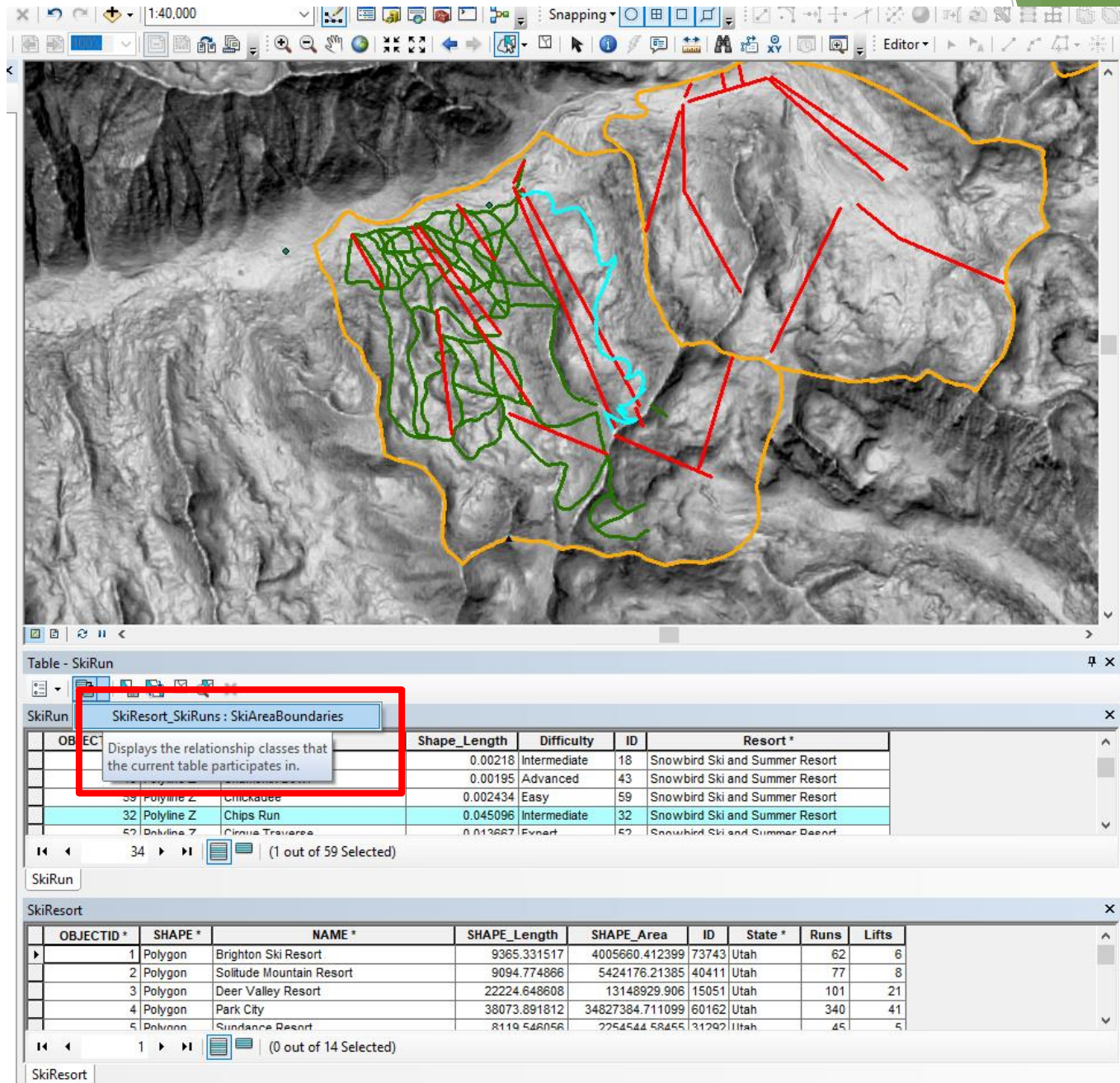
Trailhead

OBJECTID *	SHAPE *	Name	ID *	State *	Use
569	Point	Goblin Trailhead #1	GV000001	Utah	MULTI
570	Point	Goblin Trailhead #2	GV000002	Utah	MULTI

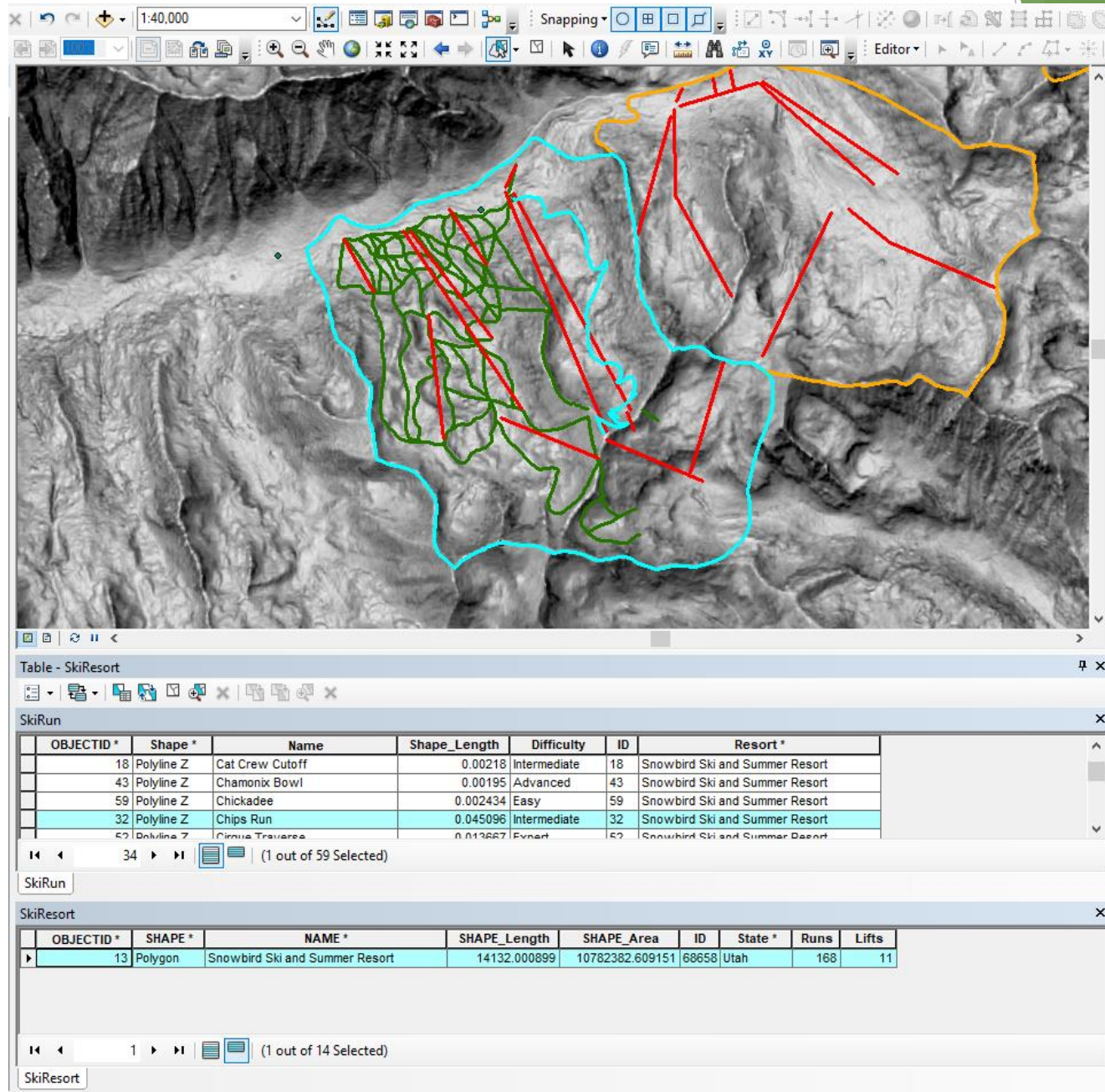
(2 out of 574 Selected)

Trailhead Park

Functionality - Chip's Run Ski Resort



Functionality - Chip's Run Ski Resort



Functionality - Lake Powell Boat Ramps

The screenshot displays a GIS application interface. At the top is a map of Lake Powell, Utah, with the lake's shoreline highlighted in cyan. Below the map are two data tables. The first table, titled 'Table - Lake', shows a list of lakes with a red box highlighting the 'Lakes_BoatRamps : BoatRamps' relationship. The second table, titled 'BoatRamp', lists specific boat ramps with their attributes.

Table - Lake

			GNIS_Name *	AreaSqKm	Elevation	SHAPE_Length	SHAPE_Area	ID	State *
			San Juan River	1.399	2132.1	6855.141659	1398174.20545	10754	Utah
			San Juan Reservoir	1.64	2263.3	6503.176806	1638397.44385	53015	Utah
			Lake Powell	267.992091	1127.8	840558.824864	228135275.496251	31780	Utah
			Lake Powell	13.772267	1127.8	157422.555292	13761261.278248	29990	Utah
			Lake Powell	47.639235	1127.8	243223.583879	47602048.4778	39448	Utah
			Lake Powell	188.125076	1127.8	966106.766896	187980791.486051	8348	Utah
			John Wesley Powell Lake	0.003	3791.8	231.799207	3447.91505	49169	Utah

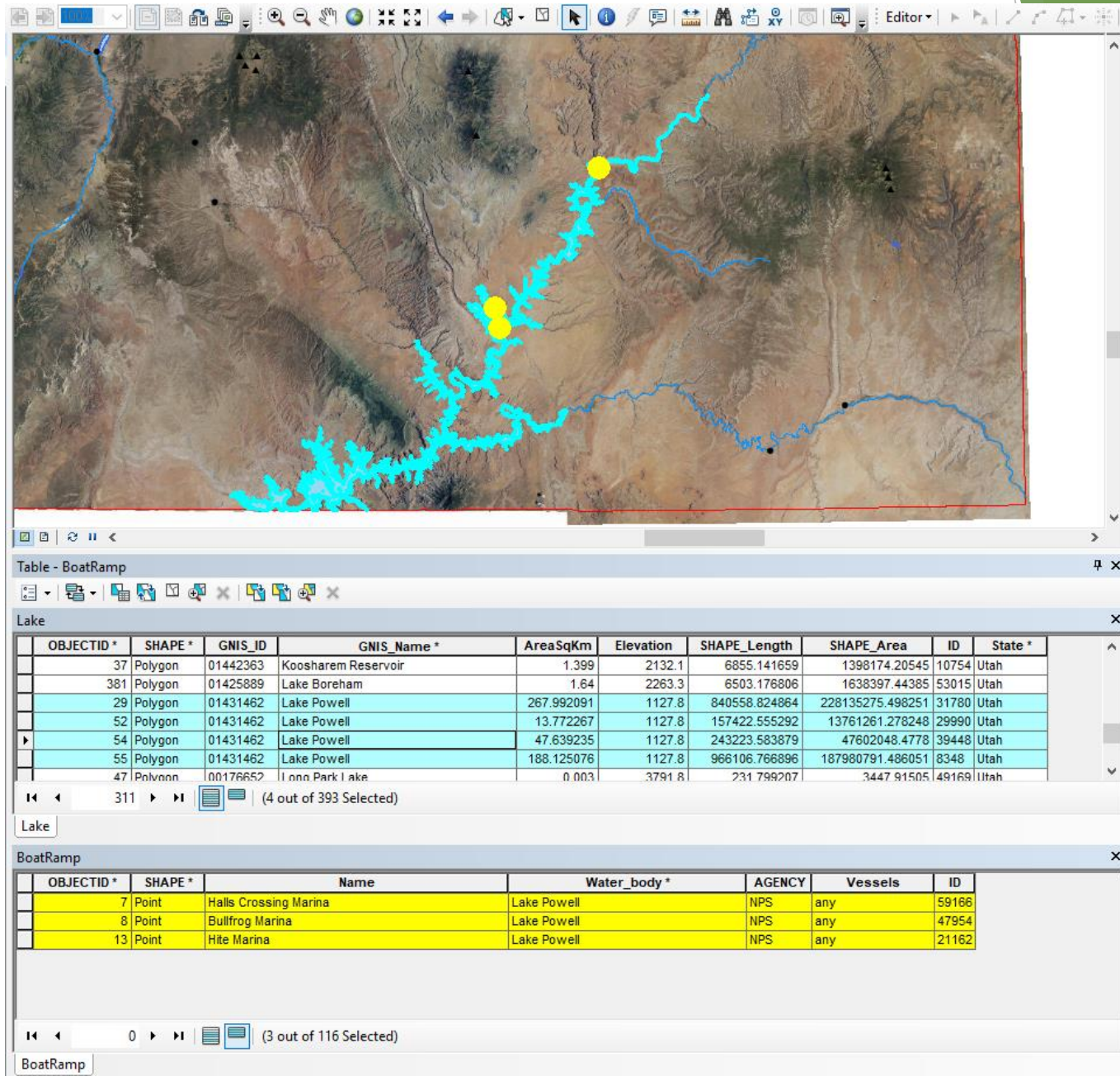
(4 out of 393 Selected)

BoatRamp

	OBJECTID *	SHAPE *	Name	Water_body *	AGENCY	Vessels	ID
	1	Point	Sand Hollow State Park	Sand Hollow Reservoir	DNR	any	46363
	2	Point	Mexican Hat	San Juan River	BLM	float	36805
	3	Point	Quail Creek State Park south	Quail Creek Reservoir	Private	any	86845
	4	Point	Quail Creek State Park north	Quail Creek Reservoir	Private	any	92881
	5	Point	Sand Island	San Juan River	BLM	float	53819
	6	Point	Gunlock State Park	Gunlock	DNR	any	23704
	7	Point	Halls Crossino Marina	Lake Powell	NPS	any	59166

(0 out of 116 Selected)

Functionality - Lake Powell Boat Ramps



Questions?

Sources:

- ▶ Utah Automated Geographic Reference Center (2017). Boundary data overview. Retrieved November 6, 2017 from <https://gis.utah.gov/data/boundaries/>.
- ▶ Utah Automated Geographic Reference Center (2017). Recreation overview. Retrieved November 6, 2017 from <https://gis.utah.gov/data/recreation/>.
- ▶ Utah Automated Geographic Reference Center (2017). Water data services overview. Retrieved November 8, 2017 from <https://gis.utah.gov/data/water/>.
- ▶ Bogley Outdoor Community (2017). Thread: The Super Amazing Canyoneering Map. Retrieved 6 November, 2017 from <http://www.bogley.com/forum/showthread.php?62130-The-Super-Amazing-Canyoneering-Map>.
- ▶ USCampgrounds.info (2017). The most comprehensive guide to Federal, State, Provincial, and Local campgrounds. Retrieved 6 November, 2017 from <http://www.uscampgrounds.info/POI/SouthwestCamp.csv>.
- ▶ Skimap.org (2017). Snowbird ski and summer resort. Retrieved 6 November, 2017 from <https://skimap.org/SkiAreas/view/226>.