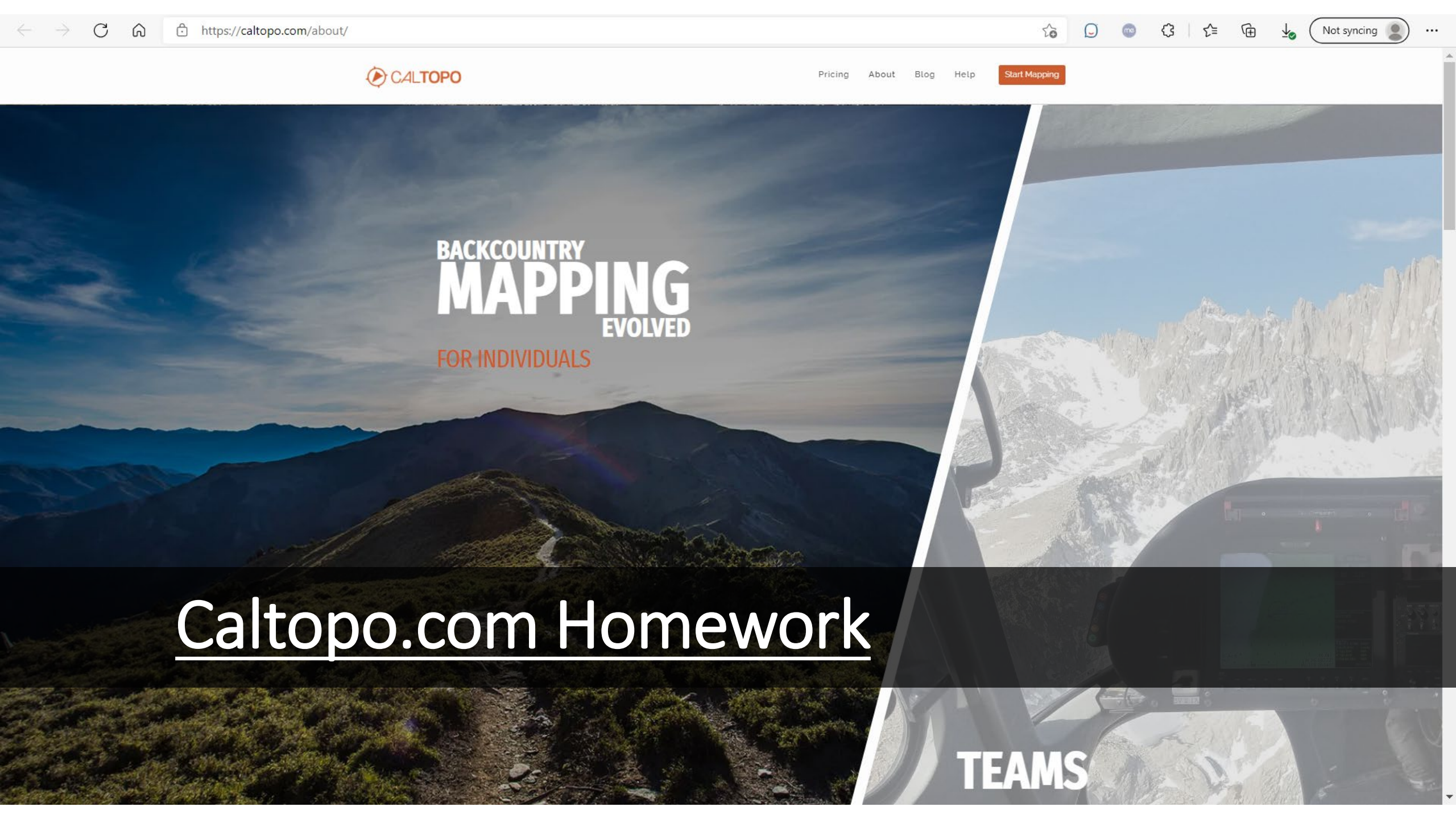




BACKCOUNTRY
MAPPING
EVOLVED
FOR INDIVIDUALS

TEAMS

Caltopo.com Homework

Snow Travel Homework Assignment

- **Assignment**

- Create a Caltopo map based on **The Plan**
- Mark **waypoints** (Markers)
- Draw line of **proposed route**
- Print map to PDF and email result /w stats to Jon & Neal
- Optional: Export GPS to phone

- **PRO Tips**

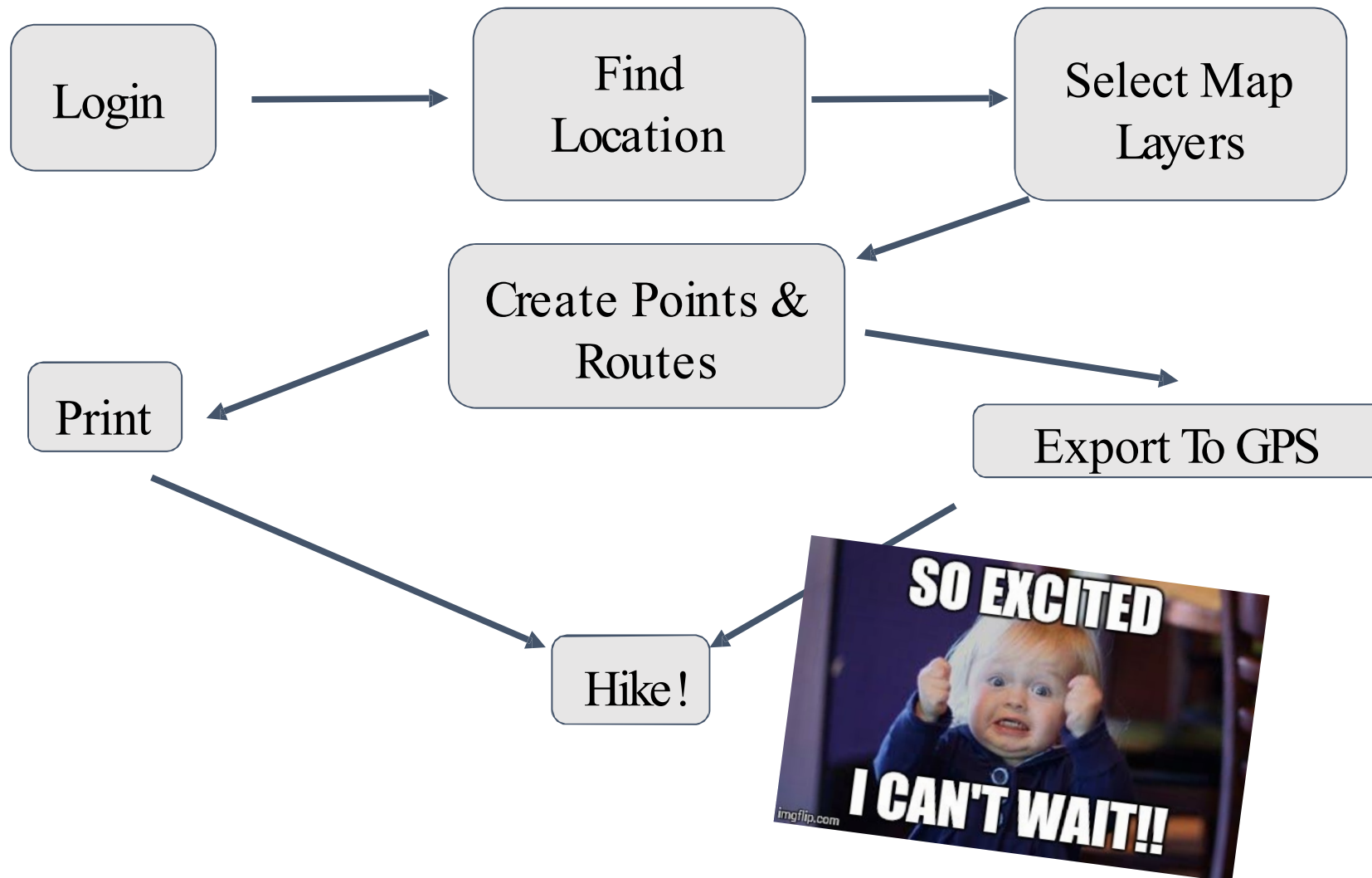
- Use a **computer** not your phone or a tablet
 - You need right click!
- Use different **map layers** to check the terrain

The Plan

1. Gather in the Icehouse Canyon TH parking lot
2. Climb to Icehouse Saddle.
3. Ascend Bighorn Peak via it's North Ridge
4. Reverse route
5. Head to **PIZZA** and **BEER** at Round Table Claremont



General Workflow



Login to Caltopo.com

Pick one of the existing online services where you already have an account.

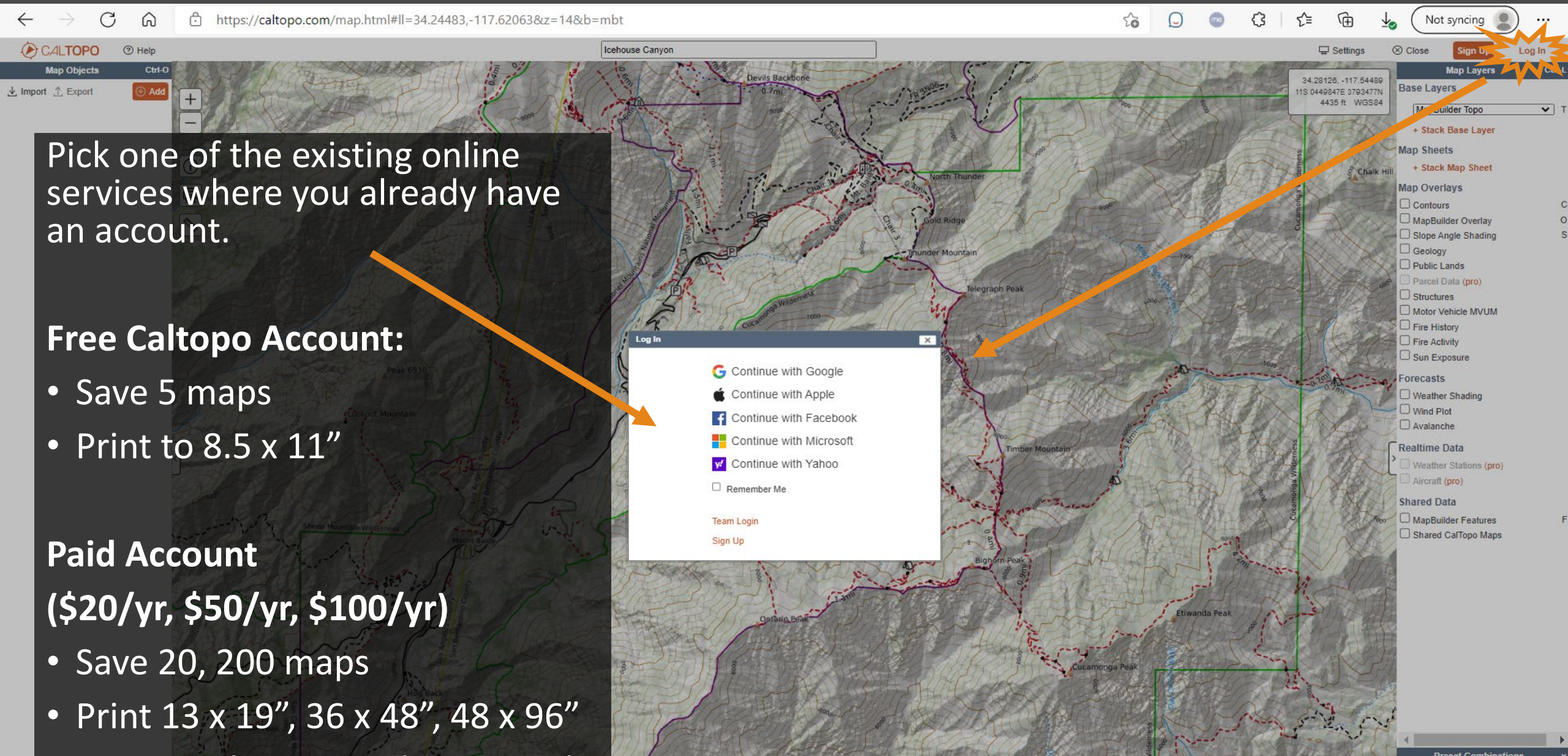
Free Caltopo Account:

- Save 5 maps
- Print to 8.5 x 11"

Paid Account

(\$20/yr, \$50/yr, \$100/yr)

- Save 20, 200 maps
- Print 13 x 19", 36 x 48", 48 x 96"



Find a location

The screenshot displays the CalTopo web application interface. At the top, a search bar contains the text "Enter coordinates or a location name". Below the search bar, a topographic map of the San Gabriel Mountains National Monument area is shown. The map features various geographical features, including peaks (e.g., Peak 6930, Lookout Mountain, Sugarloaf Peak, Telegraph Peak, Timber Mountain, Bighorn Peak, Etiwanda Peak, Cucamonga Peak), ridges (e.g., Gold Ridge, North Thunder), and wilderness areas (e.g., Cucamonga Wilderness, Sheep Mountain Wilderness). The map is overlaid with a grid of coordinates. On the right side, a sidebar contains several sections: "Base Layers" (MapBuilder Topo), "Map Sheets" (Stack Map Sheet), "Map Overlays" (Contours, MapBuilder Overlay, Slope Angle Shading, Geology, Public Lands, Parcel Data, Structures, Motor Vehicle MVUM, Fire History, Fire Activity, Sun Exposure), "Forecasts" (Weather Shading, Wind Plot, Avalanche), "Realtime Data" (Weather Stations, Aircraft), "Your Data" (Your Maps, Your Tracks), and "Shared Data" (MapBuilder Features, Shared CalTopo Maps). The bottom of the sidebar shows "Project Combinations".

Search bar: Enter coordinates or a location name

URL: <https://caltopo.com/map.html#ll=34.24484,-117.62678;z=14&cb=mta>

Map Layers: MapBuilder Topo

Map Sheets: Stack Map Sheet

Map Overlays:

- ☐ Contours
- ☐ MapBuilder Overlay
- ☐ Slope Angle Shading
- ☐ Geology
- ☐ Public Lands
- ☐ Parcel Data (pro)
- ☐ Structures
- ☐ Motor Vehicle MVUM
- ☐ Fire History
- ☐ Fire Activity
- ☐ Sun Exposure

Forecasts:

- ☐ Weather Shading
- ☐ Wind Plot
- ☐ Avalanche

Realtime Data:

- ☐ Weather Stations (pro)
- ☐ Aircraft (pro)

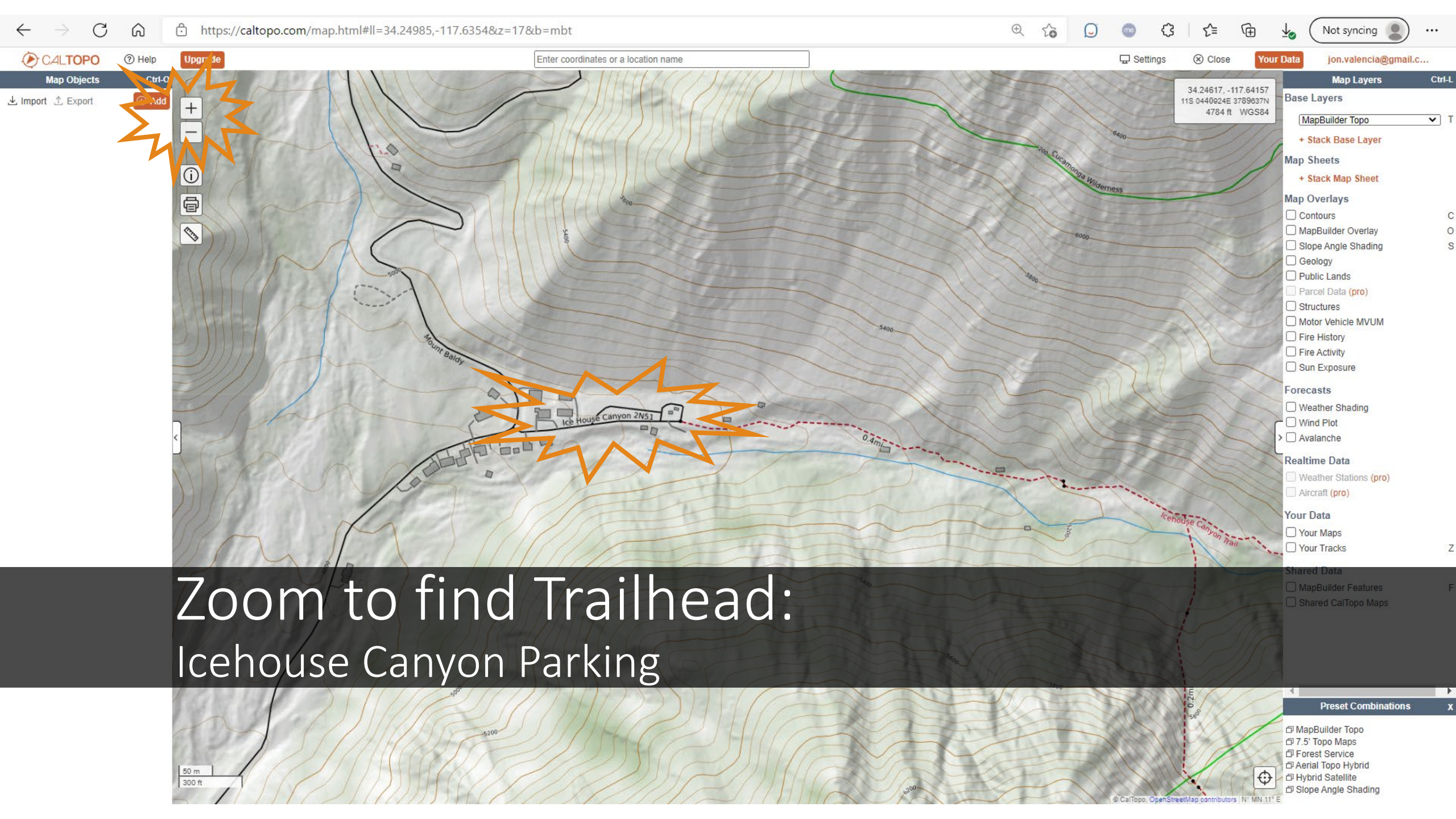
Your Data:

- ☐ Your Maps
- ☐ Your Tracks

Shared Data:

- ☐ MapBuilder Features
- ☐ Shared CalTopo Maps

Project Combinations

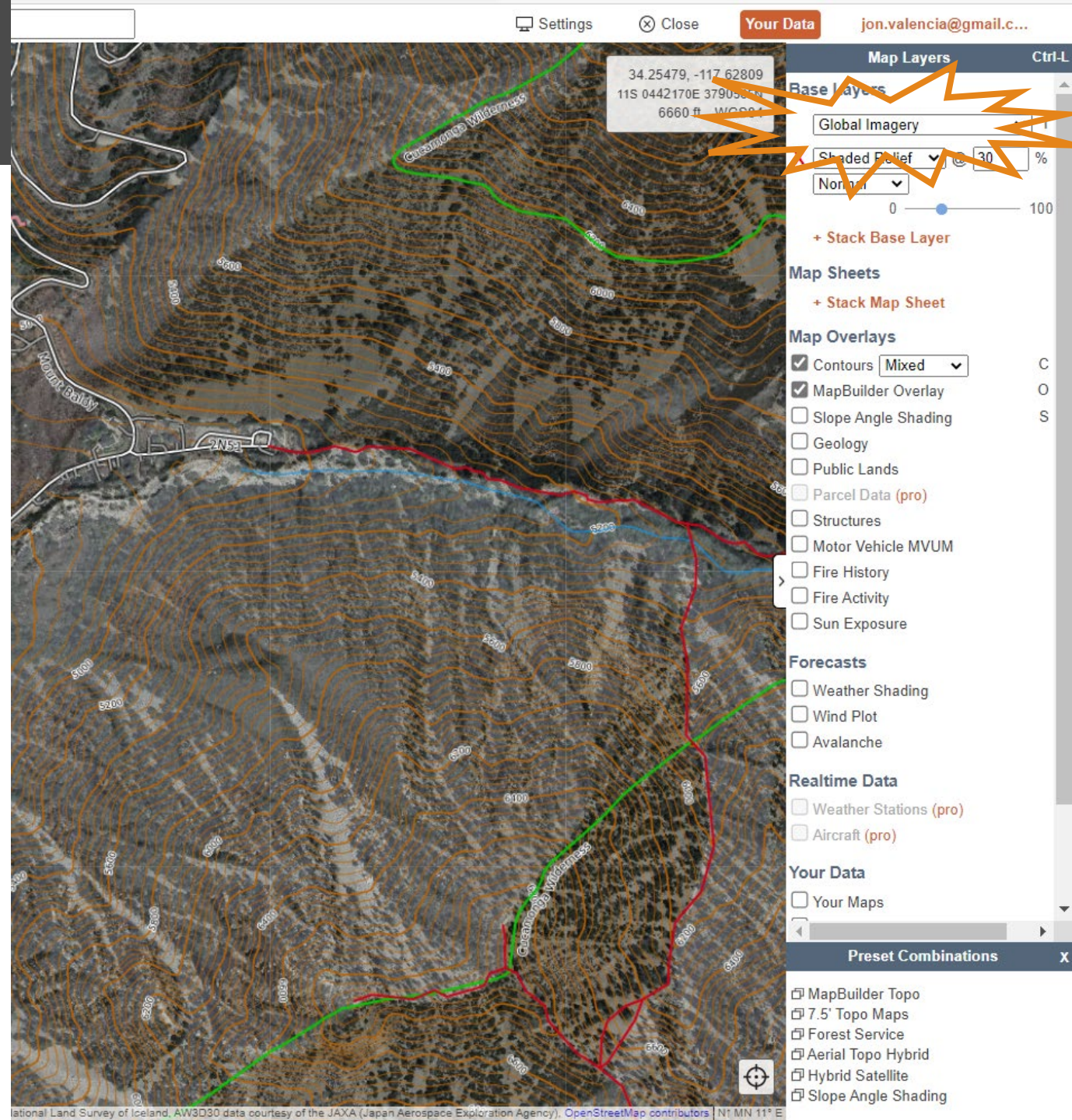


Zoom to find Trailhead:
Icehouse Canyon Parking

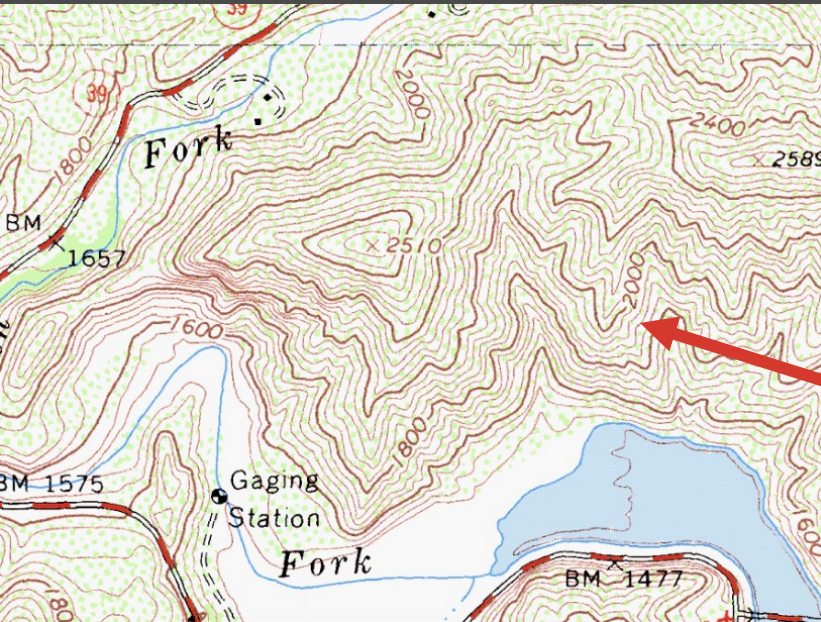
Select Map Layers

Most Useful (Preset Combinations)

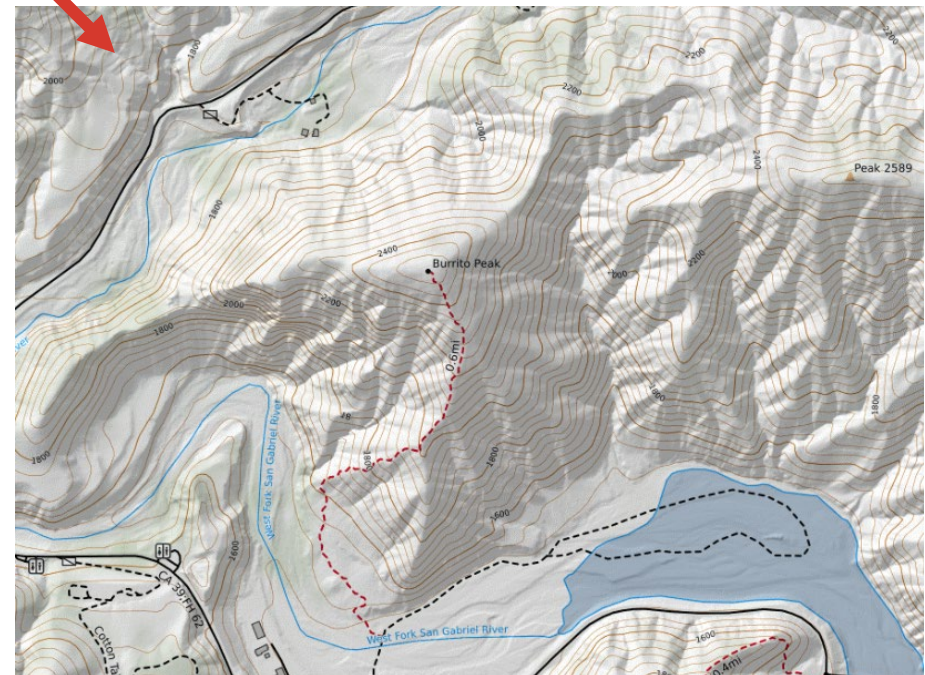
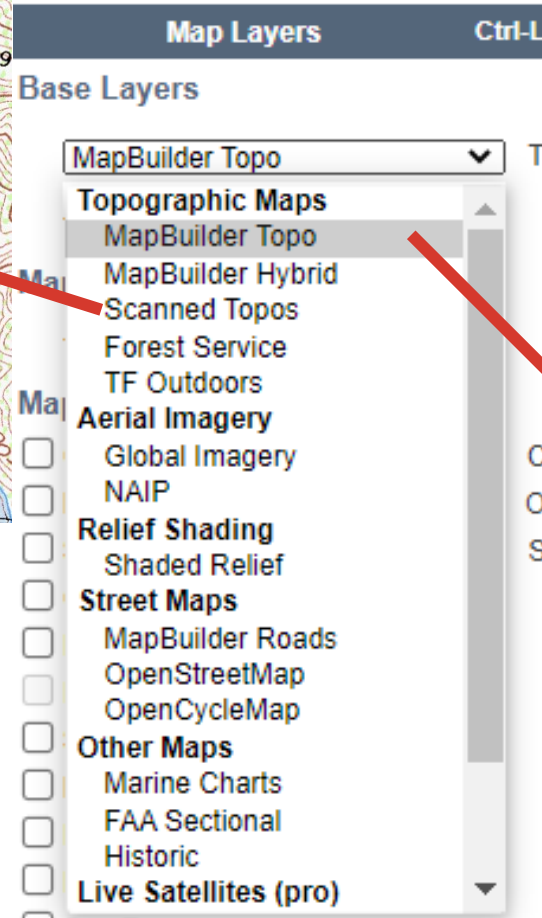
- Scanned Topo (USGS 7.5')
- MapBuilder Topo (Default)
- Hybrid Satellite (Global Imagery)
- Map Overlays
 - Contours
 - MapBuilder Overlay



Changing Map Layers



USGS 7.5'



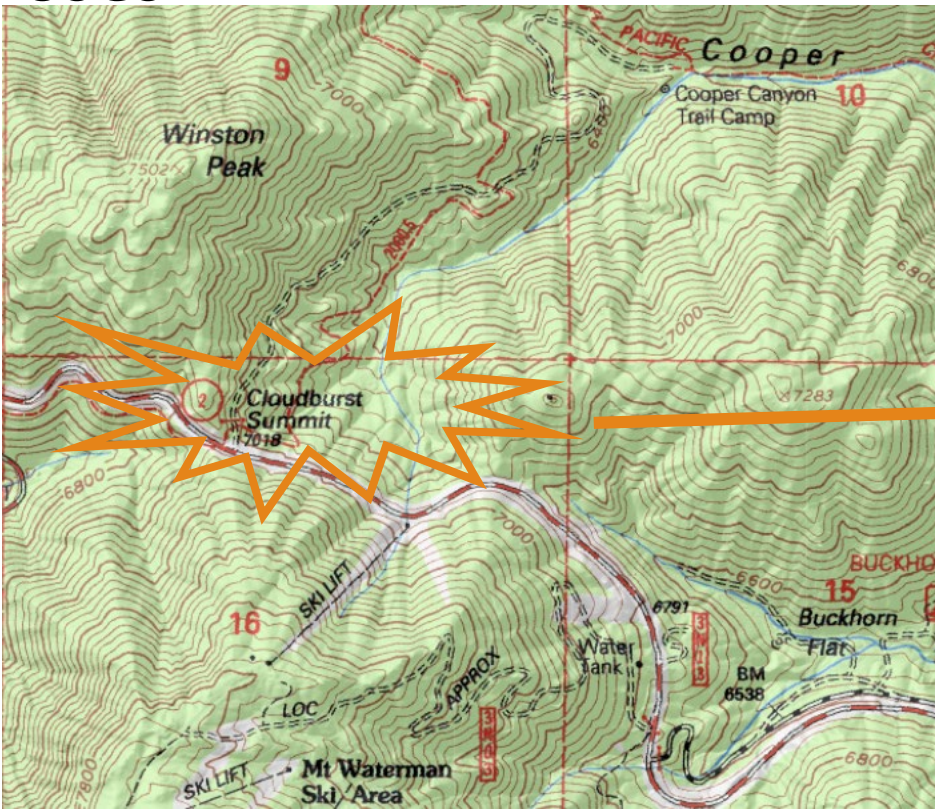
MapBuilder Topo

Tip: Use multiple map layers!

Layers can be changed without affecting your points or waypoints!

- Hybrid or Satellite view can help pick out trailheads!
- Mapbuilder Topo can show different trails than Scanned Topos
- Line tool can snap to trails so you don't have to trace them!

USGS

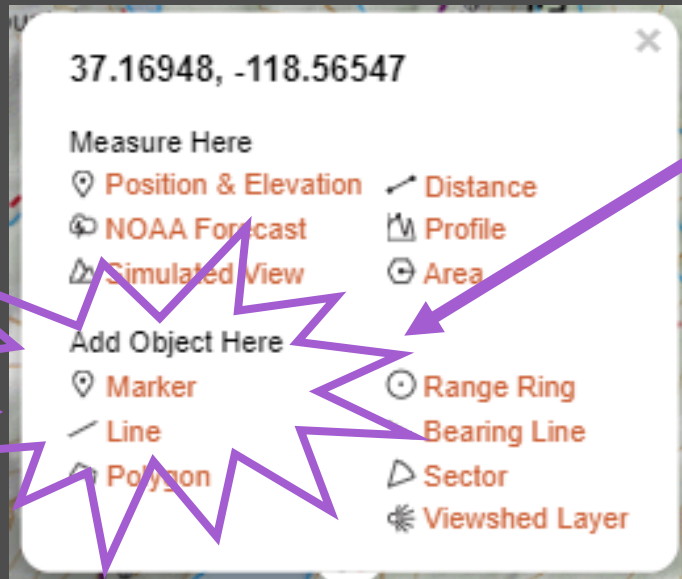


Satellite

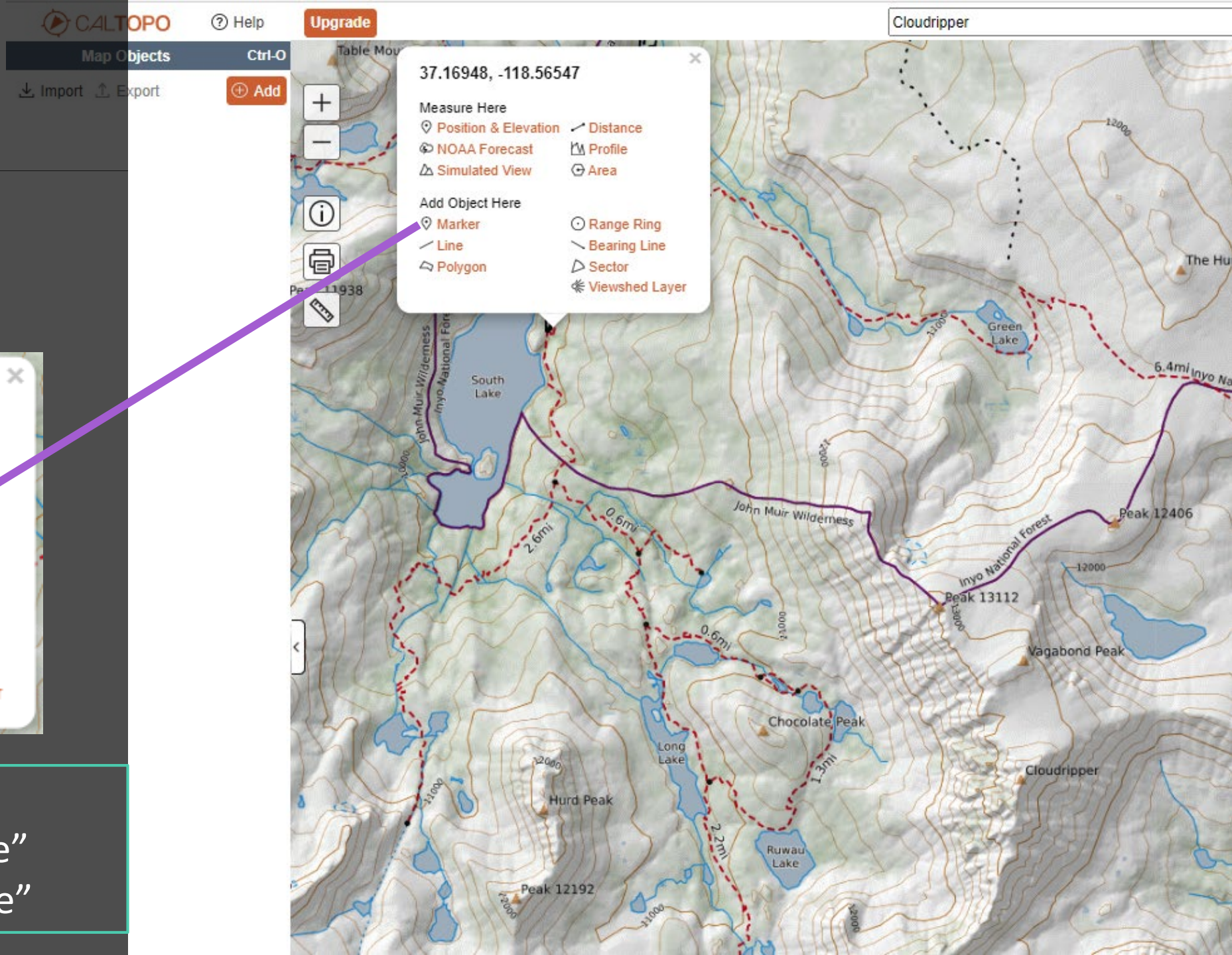


Creating:

- Waypoints (Markers)
- Routes (Lines)



1. Right click on map
2. Under "Add Object Here"
3. Select "Marker" or "Line"



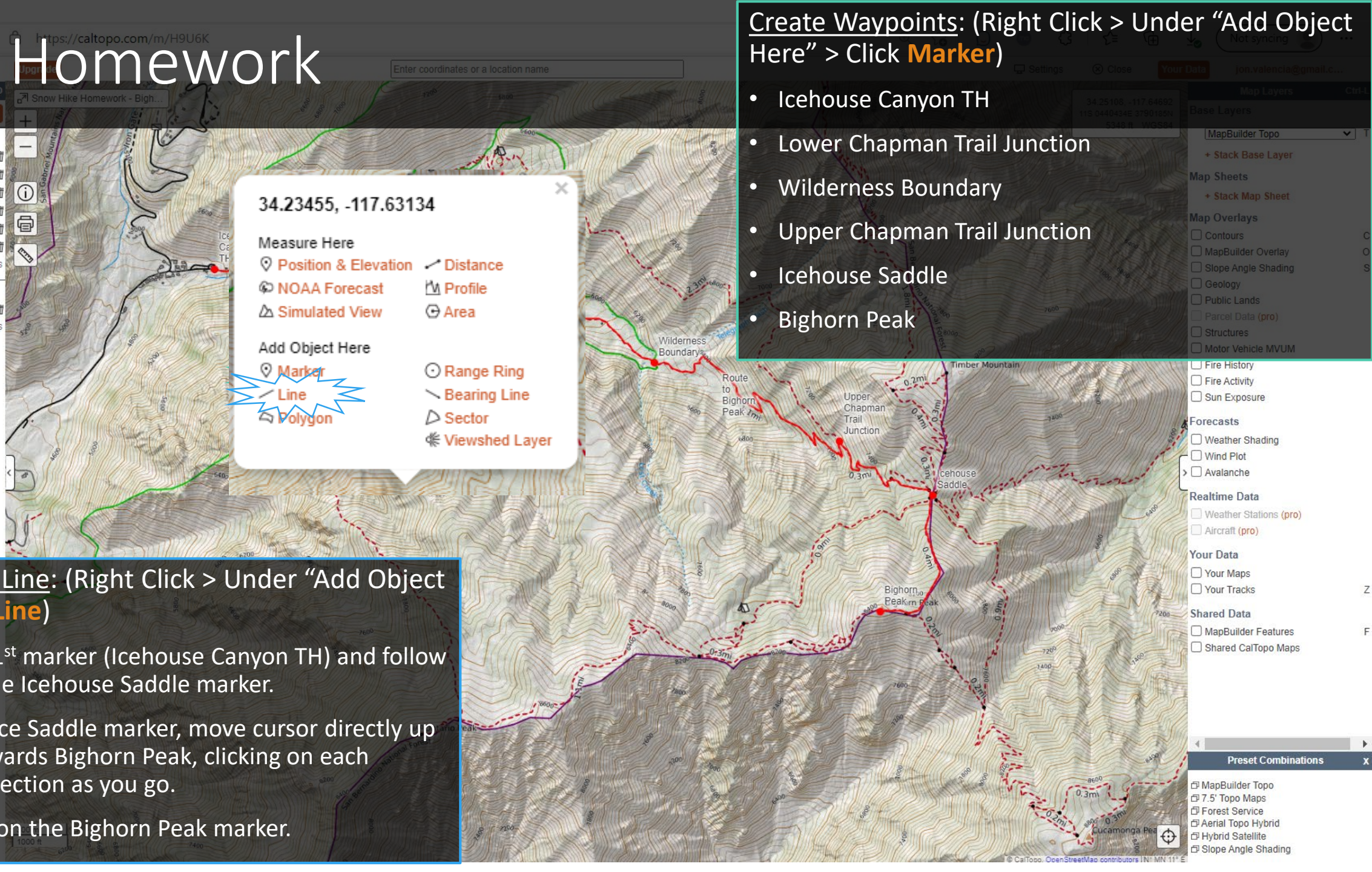
Homework

Create Waypoints: (Right Click > Under “Add Object Here” > Click **Marker**)

- Icehouse Canyon TH
- Lower Chapman Trail Junction
- Wilderness Boundary
- Upper Chapman Trail Junction
- Icehouse Saddle
- Bighorn Peak

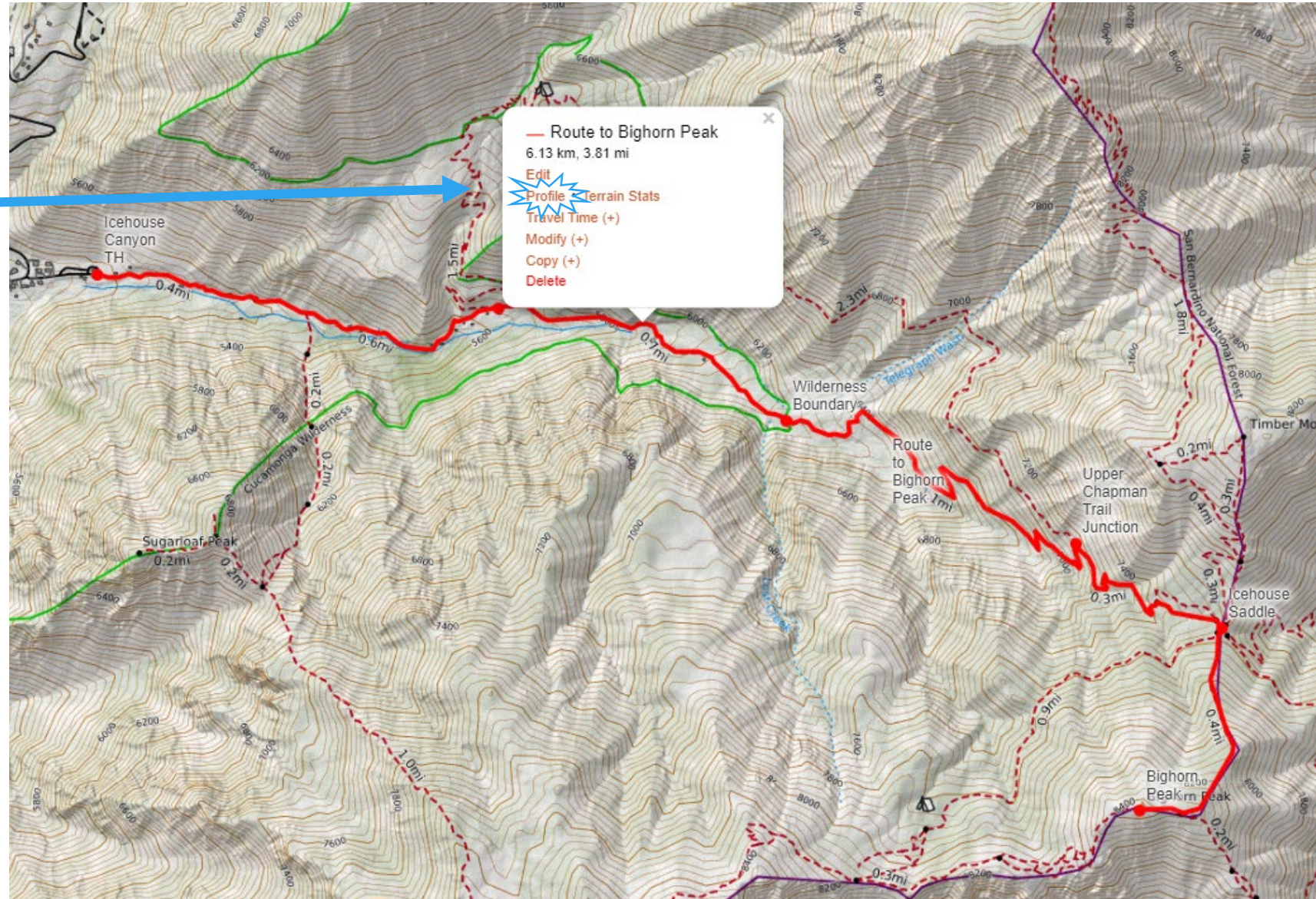
Next – Create Line: (Right Click > Under “Add Object Here” > Click **Line**)

- Click on the 1st marker (Icehouse Canyon TH) and follow the trail to the Icehouse Saddle marker.
- Click on the Ice Saddle marker, move cursor directly up the ridge towards Bighorn Peak, clicking on each change of direction as you go.
- Double click on the Bighorn Peak marker.

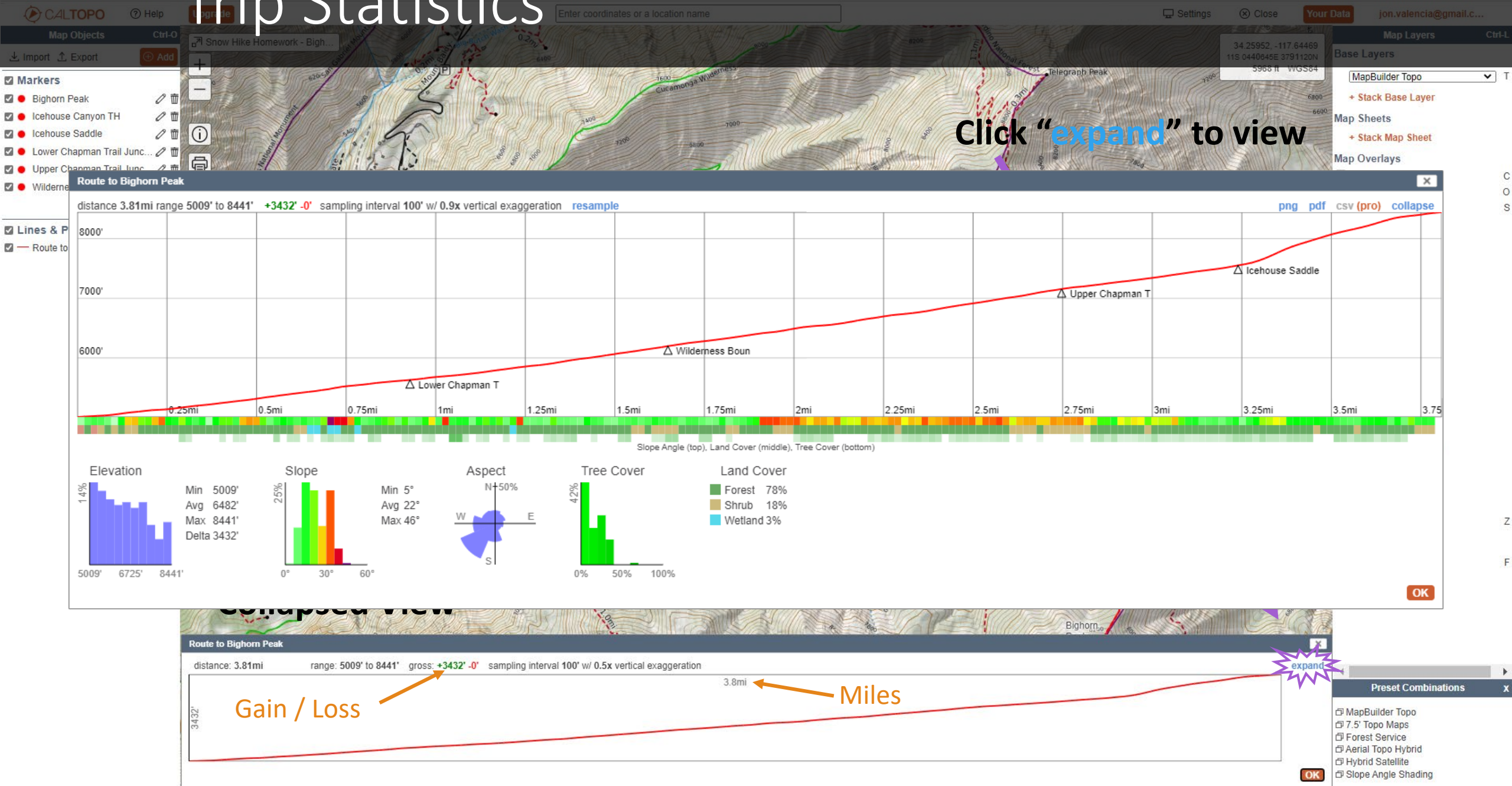


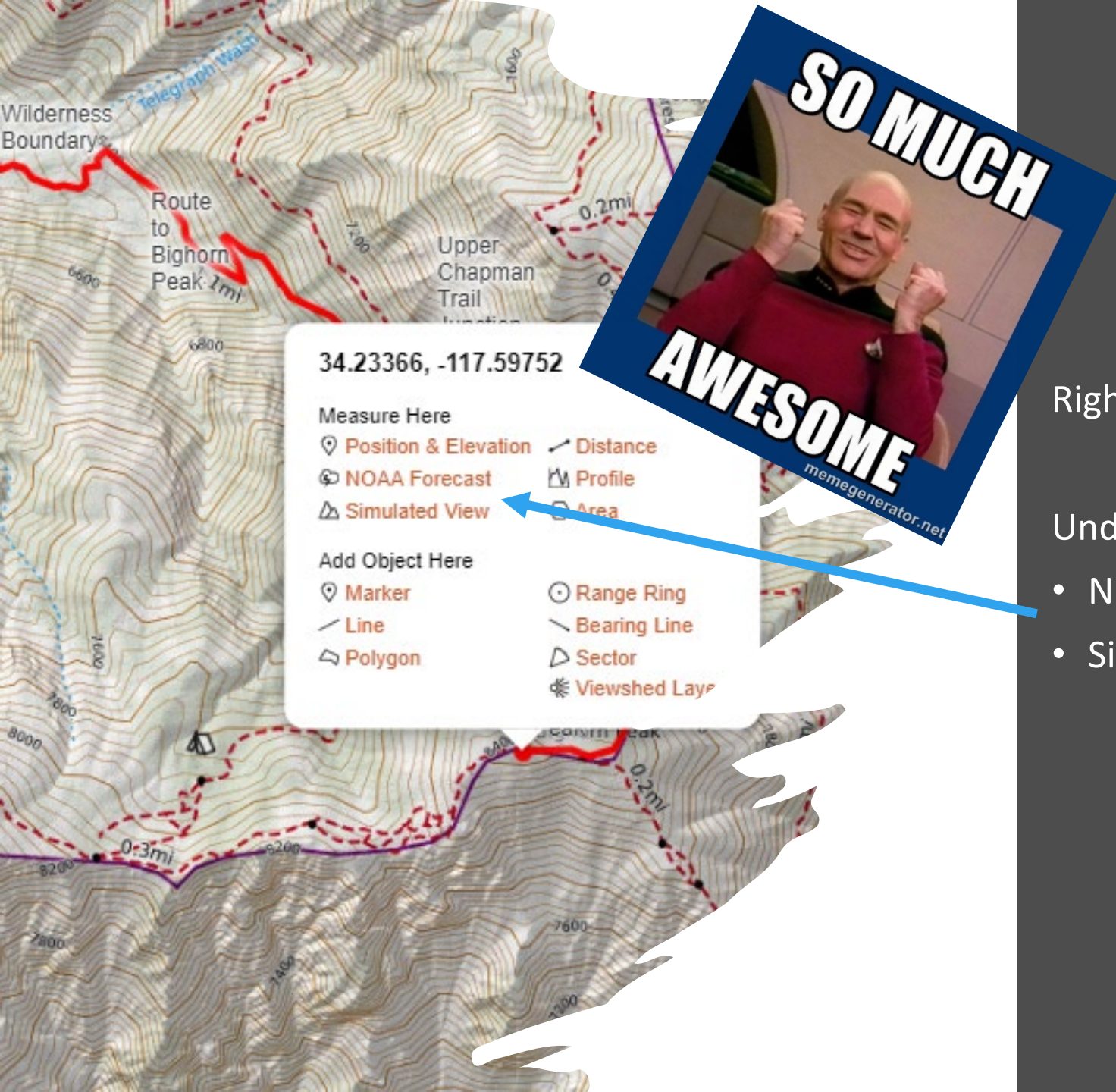
Trip Statistics

Left click your **line** and select “*Profile*”



Trip Statistics





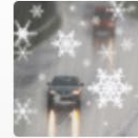
Best Hidden Feature:

Right Click Marker or point

Under "Measure Here"

- NOAA Forecast
- Simulated View

Right Click -> Under Measure Here -> NOAA

This Afternoon	Tonight	Saturday	Saturday Night	Sunday	Sunday Night	Monday	Monday Night	Tuesday
								
Partly Sunny	Heavy Rain and Areas Fog	Rain/Snow and Areas Fog then Snow and Areas Fog	Chance Snow and Areas Fog	Slight Chance Snow Showers and Areas Fog	Mostly Cloudy	Mostly Sunny	Partly Cloudy	Chance Rain/Snow
High: 45 °F	Low: 35 °F	High: 40 °F	Low: 32 °F	High: 41 °F	Low: 30 °F	High: 45 °F	Low: 32 °F	High: 43 °F

Detailed Forecast

This Afternoon	Partly sunny, with a high near 45. West wind 15 to 20 mph, with gusts as high as 30 mph.
Tonight	Rain, mainly after 10pm. The rain could be heavy at times. Areas of fog after 10pm. Low around 35. Breezy, with a southwest wind 20 to 25 mph, with gusts as high as 35 mph. Chance of precipitation is 80%. New precipitation amounts between a quarter and half of an inch possible.
Saturday	Rain before 10am, then snow. The rain could be heavy at times. Areas of fog. High near 40. Breezy, with a southwest wind 20 to 25 mph, with gusts as high as 40 mph. Chance of precipitation is 100%. New snow accumulation of less than a half inch possible.
Saturday Night	A chance of snow before 10pm, then a chance of snow showers after 10pm. Areas of fog. Otherwise, mostly cloudy, with a low around 32. Breezy, with a west wind 20 to 25 mph, with gusts as high as 40 mph. Chance of precipitation is 50%. New snow accumulation of less than a half inch possible.
Sunday	A slight chance of snow showers. Areas of fog. Otherwise, partly sunny, with a high near 41. West wind 15 to 20 mph, with gusts as high as 35 mph. Chance of precipitation is 20%.
Sunday Night	Mostly cloudy, with a low around 30.

Topographic

Click Map For Forecast



Right Click -> Under Measure Here -> View From Here



In the field



South View from 4377'

Caltopo

Save Your Map!

The screenshot shows the CalTopo web application interface. The top navigation bar includes the CalTopo logo, a 'Help' link, an 'Upgrade' button, a search bar for coordinates or location names, and links for 'Settings', 'Close', and 'Your Data'. The left sidebar contains 'Map Objects' (with 'Ctrl-O' shortcut), 'Import', 'Export', 'Add', and 'Markers' (with 'TH' shortcut). The main map area displays a topographic map of the Cedar Forest area, featuring contour lines, peaks like Sugarloaf Peak (6924), and labels for 'Cedar Forest' and 'Angels'. A 'Save As' dialog box is open in the foreground, with orange starburst highlights around the 'Save' icon in the sidebar and the dialog title. The dialog includes fields for 'Map name' (placeholder: 'choose a map name'), 'Mode' (set to 'Recreation'), and a checkbox for 'Always show these layers on load, instead of the most-recently-selected active layers'. It also has a 'Share Your Map' section with radio buttons for 'Private', 'Secret', 'URL' (selected), and 'Public'. A 'Tell Us About Your Map' text area and 'Cancel'/'Save' buttons are at the bottom right.

CalTopo

Help Upgrade

Enter coordinates or a location name

Settings Close Your Data

Map Objects Ctrl-O

Unsaved Map

Import Export Add

Markers

TH

Save As

Map name: choose a map name

Mode: Recreation

Save to your jon.valencia@gmail.com account

☐ Always show these layers on load, instead of the most-recently-selected active layers

Share Your Map

Base Permission:

- ☐ Private - only you can access this map, no exceptions
- ☐ Secret - anyone with an access code below, or who has already bookmarked the map
- ☒ URL - anyone with the map's URL
- ☐ Public - make it easy for other CalTopo users to find this map

Tell Us About Your Map

Cancel Save

Cedar Forest

CUCAMONGA WILDERNESS

5600

20 21

6400

5800

4800

Sugarloaf Peak 6924

6600

Rock Canyon

7046

ANGELS

7200

Sheep Flat

6600

Lost Short

Finding Your Saved Map

The screenshot shows the CalTopo website interface. A topographic map is visible in the background. A modal window titled 'Your Data' is open, displaying a table of saved maps. The table has columns for Name, Description, Sharing, Account, and Updated. Three maps are listed: 'Snow Hike Homework - Bighorn Peak', 'Cal Ride n' Hike', and 'Nav Noodle 4/27/19 HW'. Below the table, a message states 'You are using 3 of 5 private maps.' with an 'Upgrade For More' button. The right sidebar contains various map layers and settings, including 'Base Layers', 'Map Sheets', 'Map Overlays', 'Forecasts', 'Realtime Data', 'Your Data', 'Shared Data', and 'Preset Combinations'. A red starburst graphic highlights the 'Your Data' button in the top right corner of the map area.

Enter coordinates or a location name

Not syncing

jon.valencia@gmail.c...

Map Layers

Base Layers

Scanned Topos

+ Stack Base Layer

Map Sheets

+ Stack Map Sheet

Map Overlays

☐ Contours

☐ MapBuilder Overlay

☐ Slope Angle Shading

☐ Geology

☐ Public Lands

☐ Parcel Data (pro)

☐ Structures

☐ Motor Vehicle MVUM

☐ Fire History

☐ Fire Activity

☐ Sun Exposure

Forecasts

☐ Weather Shading

☐ Wind Plot

☐ Avalanche

Realtime Data

☐ Weather Stations (pro)

☐ Aircraft (pro)

Your Data

☐ Your Maps

☐ Your Tracks

Shared Data

☐ MapBuilder Features

☐ Shared CalTopo Maps

Preset Combinations

MapBuilder Topo

7.5' Topo Maps

OK

34.25631, -117.0083

11S 0443001E 3790743

7950 ft WGS84

Unsaved Map

Ctrl-O

Import Export

Add

Markers

TH

Bulk Ops

Your Data

Your Maps

Bookmarks

Your PDFs

Your Layers

Map Sheets

Maps Saved to Your Account

	Name	Description	Sharing	Account	Updated
X	Snow Hike Homework - Bighorn Peak		Private	Your Account	2/15/2022
X	Cal Ride n' Hike		View with URL	Your Account	2/28/2020
X	Nav Noodle 4/27/19 HW		View with URL	Your Account	4/26/2019

You are using 3 of 5 private maps. Upgrade For More

Print to PDF

  Help  Enter coordinates or a location name

Map Objects Ctrl-O

↓ Import ↑ Export 

☒ **Markers**

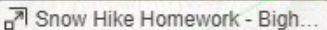
- ☒ Bighorn Peak
- ☒ Icehouse Canyon TH
- ☒ Icehouse Saddle
- ☒ Lower Chapman Trail Junc...
- ☒ Upper Chapman Trail Junc...
- ☒ Wilderness Boundary

 Bulk Ops

☒ **Lines & Polygons**

- ☒ Route to Bighorn Peak

 Bulk Ops







Topographic map showing a route to Bighorn Peak. The route is marked with a red line and includes labels for various points of interest: Icehouse Canyon TH, Lower Chapman Trail Junction, Wilderness Boundary, Route to Bighorn Peak, Upper Chapman Trail Junction, Icehouse Saddle, and Bighorn Peak. The map also shows contour lines, elevation markers, and the San Bernardino National Forest boundary.

Print to PDF

Format

General Settings

Page Size 8.5x11

Scale 1:24,000

DPI 200dpi

Title

Grid Lines

☐ UTM at Auto

☐ Lat/Lng in Degrees

Datum WGS84

Icon Size 1x

PDF Management

Save To Your Account

Keep For 7 Days

Load From

Save As New URL

Pages

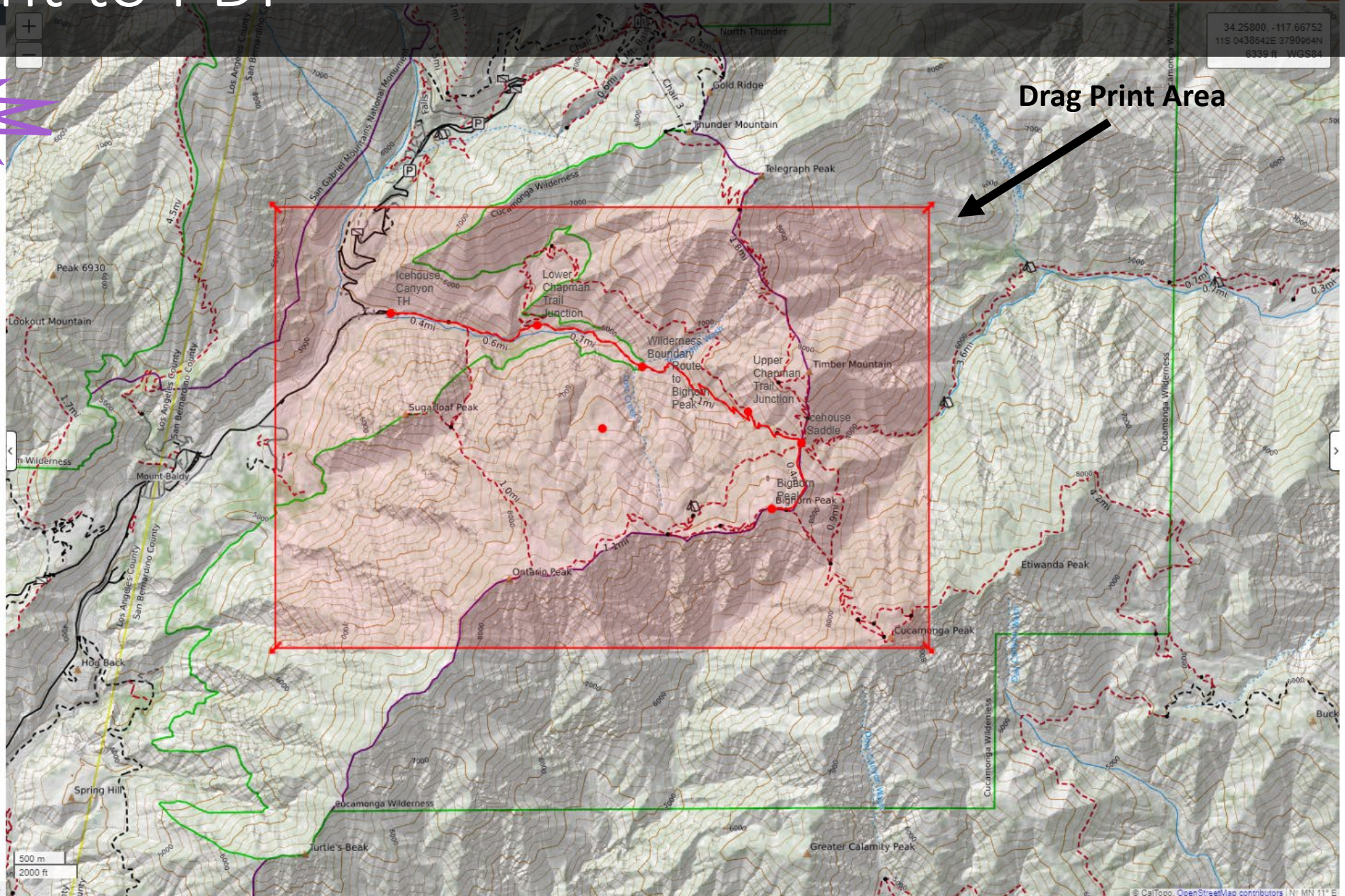
Page Scale Orientation

X 1 1:24000 Landscape

+ Add Page X Start Over

Generate PDF

Drag Print Area



Printing

- Page Size
 - 8.5 x 11 (Free account)
 - Portrait or Landscape
- Set the scale to 1:24,000
- Add pages to get the surrounding area
 - Up to 5 (Free account)
- Click on Generate PDF

CalTopo Printing

Format: Geospatial PDF

General Settings

Page Size: 8.5x11

Scale: 1:24,000

DPI: 200dpi

Title:

Grid Lines

☐ UTM at Auto

☐ Lat/Lng in Degrees

Datum: WGS84

Icon Size: 1x

PDF Management

Save To: Your Account

Keep For: 7 Days

Load From: --

Save As: New URL

Pages

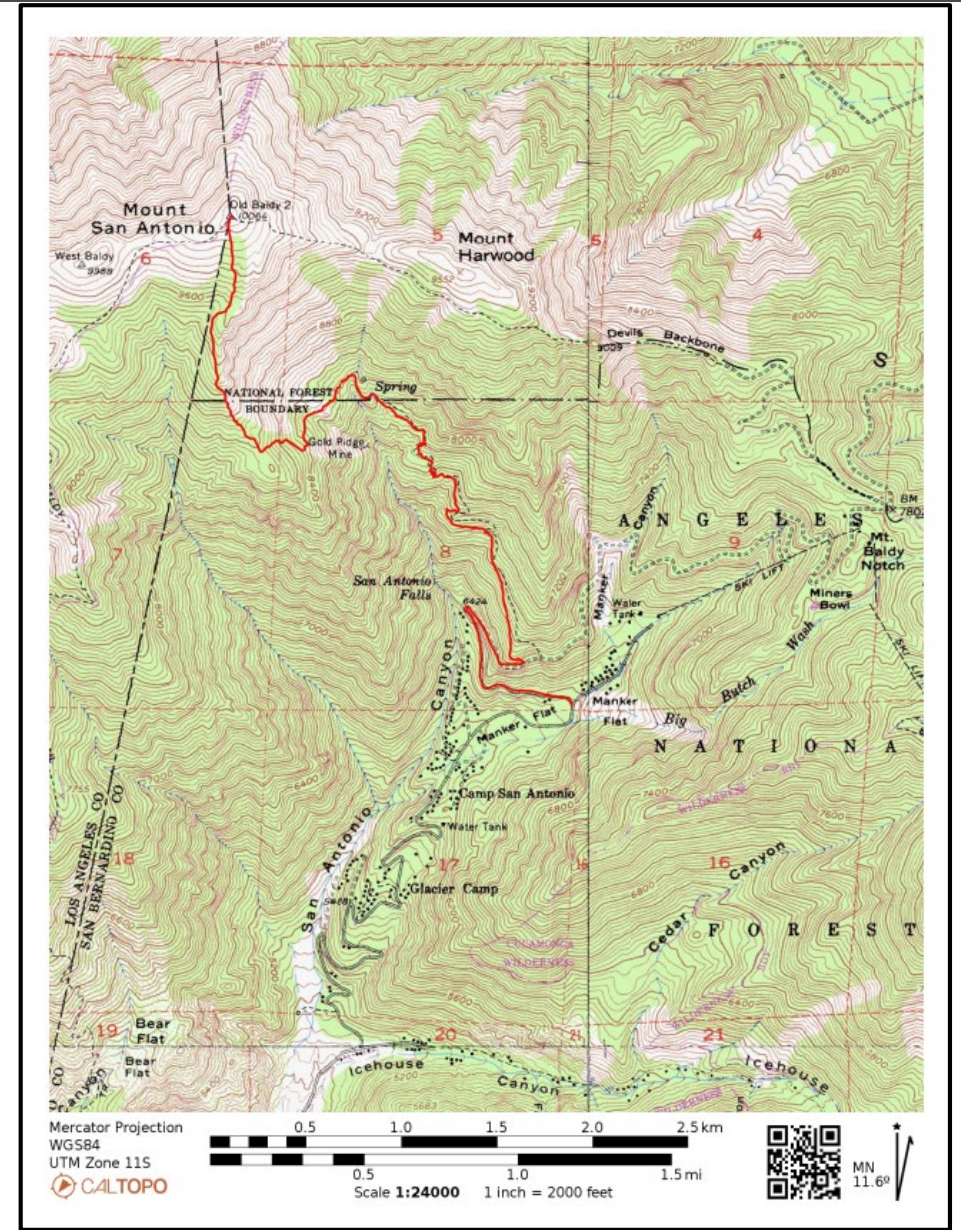
Page	Scale	Orientation
☒	Show Overview Page	
X 1	1:24000	Landscape
X 2	1:24000	Portrait
X 3	1:24000	Portrait
X 4	1:24000	Portrait

+ Add Page X Start Over

Generate PDF

Submit Your Assignment

1. Email PDF to Jon V and Neal
2. Include the RT distance of the hike
3. Include the elevation gain for the hike
4. Print for your use Saturday, February 26th



Import & Export GPS Files

The screenshot shows the CalTopo website interface. The 'Map Objects' panel on the left lists various map features, including 'Markers' and 'Lines & Polygons'. The 'Export Selection' dialog is open, showing the 'Format' dropdown set to 'GeoJSON (full backup)'. The 'GPX (handheld GPSs)' option is selected in the 'Format' dropdown. The 'Importer' dialog is also open, showing the 'Choose Files' button. The background map shows a trail route with various landmarks labeled, including Bighorn Peak, Icehouse Canyon TH, Icehouse Saddle, Lower Chapman Trail Junction, Upper Chapman Trail Junction, and Wilderness Boundary.

Export Selection

Format: GeoJSON (full backup)

- ☒ GeoJSON (full backup)
- ☒ KML (Google Earth)
- ☒ GPX (handheld GPSs)
- ☒ GPSIO Plugin (older Garmin GPSs)
- ☒ Icehouse Canyon TH
- ☒ Icehouse Saddle
- ☒ Lower Chapman Trail Junction
- ☒ Upper Chapman Trail Junction
- ☒ Wilderness Boundary
- ☒ Shape
- ☒ Route to Bighorn Peak

Importer

Choose Files No file chosen

[Connect via GPSIO](#)

Cancel **Import**

Feature	Status	Coordinates
Bighorn Peak	on map	34.23367, -117.59751
Icehouse Canyon TH	on map	34.25005, -117.63612
Icehouse Saddle	on map	34.23922, -117.59449
Lower Chapman Trail Junction	on map	34.24903, -117.62126
Upper Chapman Trail Junction	on map	34.24181, -117.59987
Wilderness Boundary	on map	34.24560, -117.61060
Route to Bighorn Peak	on map	6.13 km, 3.81 mi

Export a GPX & Import Into Gaia

1. Download the Gaia app to your phone
2. Export from Caltopo to your computer
3. Email the GPX file to yourself
4. Open the email you sent to yourself with you phone
5. Open/Save the GPX attachment from your phone

← → ↻ 🏠 <https://caltopo.com/m/H9U6K>

CALTOPO ? Help Upgrade Enter coordinates or a location name

Map Objects Ctrl-O

↓ Import ↑ Export + Add

Markers

- ✓ Bighorn Peak
- ✓ Icehouse Canyon TH
- ✓ Icehouse Saddle
- ✓ Lower Chapman Trail Junc...
- ✓ Upper Chapman Trail Junc...
- ✓ Wilderness Boundary

Lines & Polygons

- ✓ Route to Bighorn Peak

Export Selection

Format: GeoJSON (full backup)

- ✓ Check GeoJSON (full backup)
- ✓ KML (Google Earth)
- ✓ Mark Copy to New Map
- ✓ GPX (handheld GPSs)
- ✓ GPSIO Plugin (older Garmin GPSs)
- ✓ Icehouse Canyon TH
- ✓ Icehouse Saddle
- ✓ Lower Chapman Trail Junction
- ✓ Upper Chapman Trail Junction
- ✓ Wilderness Boundary
- ✓ Shape
- ✓ Route to Bighorn Peak

KML Network Link for Google Earth

on map	34.23367, -117.59751
on map	34.25005, -117.63612
on map	34.23922, -117.59449
on map	34.24903, -117.62126
on map	34.24181, -117.59987
on map	34.24560, -117.61060
on map	6.13 km, 3.81 mi

Cancel Export

Questions?

- e-mail: **jon.valencia@gmail.com**
- e-mail: **neal.robbins@l3harris.com**