



Santa Cruz County ARES Membership Meeting Minutes



Wednesday, May 20, 2026 at 1900;

In-person at the Emergency Operations Center, 5200 Soquel Avenue

Welcome

John N6QX

Introduction of New Members

Bob KO6XX (bob@slvares.org)

- 4 new members were introduced

Upcoming Activities

All

- June 6 1pm – 5pm Disaster Preparedness Event, Aptos Grange
- June 7 7pm – Neighborhood Communications test
- June 22 – 26 7am – 5:30pm each day, Perimeter Monitoring for Active Shooter Training
Sign-up <https://www.signupgenius.com/go/2026Active>
- June 27 – 28, Summer Field Day: Website available at end of week – usual stations, ham testing, celebrate 150 anniversary of K6BJ radio club
- July 4th Aptos parade
- July 15 Membership meeting replaced by a Potluck at Skypark in Scotts Valley

K6BJ Repeater Status

John N6QX

- 2m transmitter down to 1 watt for a few weeks and now returned back to usual operation mysteriously. Working with Joe, N6NRI and purchased two Kenwood repeaters (\$500 each). This weekend plan to install and hopes it will be seamless to all users; Also the 440 repeater also died.

Recaps of Recent events

- Sea Otter Classic JoMarie, KM6URE: See powerpoint and the article in Radioactive Newsletter
- SAR Support Dan, KM6GMG: lots of fun, paid off having identified locations for field operator ahead of time (see article in Radioactive newsletter)
- Big Sur Marathon Ben, KO6CNT: it was really interesting to see all different agencies involved and the amount of coordination it takes.
- POTA Jim, KN6NCG: Went to the Castro Adobe State Historic Park with a great turn out. They were able to get a tour of the site by the Park Ranger.

Cal Topo Demonstration

Ben KO6CNT

- See Powerpoint (not yet received)

Lat-Long vs UTM Coordinates

John N6QX

- See Powerpoint

Map systems and a Quiz

JoMarie KM6URE

- See Powerpoint

Voice of the members

- Jim, KN6NCG reported about an upcoming bike ride on Pescadero July 11th, Anyone interested in participating with Jim, contact him



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Net Operations

John N6QX

Wed NET Date	ARES Repeater	Repeater NET Controller
May 27*	WR6AOK	Dan, N6RJX
Jun 3	WR6AOK	Ed, N6EMA
Jun 10		
Jun 24		
July 1	?	JoMarie, KM6URE
July 8		

Next meeting June 17th at 1900



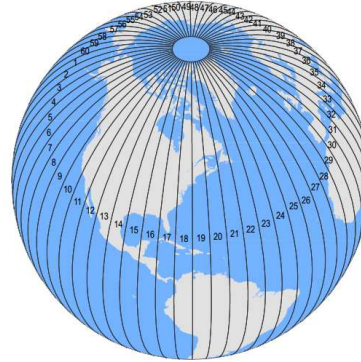
Map Coordinates



Latitude – Longitude vs. Universal Transverse Mercator



Lat - Long



UTM

5/2026

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Map Coordinates



Why talk about map coordinates?



Santa Cruz County Sheriff prefers UTM

- Easier to communicate
- Quick distance estimates between points

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Map Coordinates

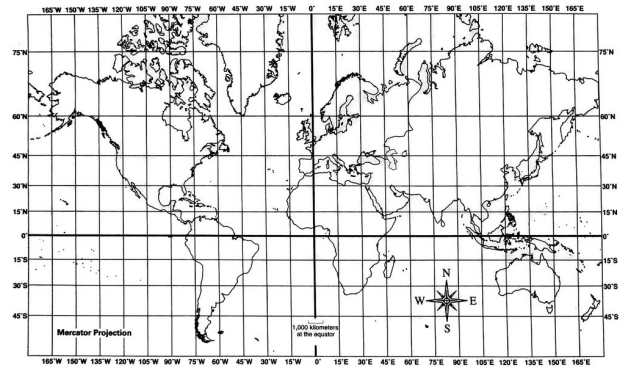


Latitude and Longitude:

- Familiar
- Historic
- Designed for a round world
- Work with Google and Apple Maps

But:

- Distance of 1° of longitude varies
 - 69 miles at equator
 - 0 miles at poles
- Notations vary
 - 36°59'45"N, 121°57'31"W
 - 36.6625°N, 121.9586°W
 - 36.6625, -121.9586



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UTM Map Coordinates



World is globally round, but locally flat.
UTM divides the world into flat rectangles.
Locations are measured in meters.


UTM coordinate is 2 numbers:

- Number of meters *east* of ref. (Easting)
- Number of meters *north* of ref. (Northing)




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Map Coordinates




Example:
(Zone 10S)

My house:	Easting	592 686	Northing	4 094 915	
EOC:	Easting	<u>-590 817</u>	Northing	<u>-4 093 637</u>	How far apart? Subtract the coordinates.
My house is		1,869 m East		1,278 m North	





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Map Coordinates







Why Santa Cruz County Sheriff prefers UTM:

- Easier to communicate
 - No decimals
 - No negatives
 - No degrees, minutes, seconds
 - Northern California is all in Zone 10S
- Quick distance estimates between points
 - Distances in meters

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Net Operations



ARES Wednesday Nets

Date	Repeater	Net Control
May 27	WR6AOK	Dan, N6RJX
June 3	WR6AOK	Ed, N6EMA
June 10		
June 24		
July 1		
July 8		

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NAVIGATION



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TOP GENERAL NAVIGATION APPS

- **Google Maps:** The most popular app, featuring real-time traffic, "Eco-Routes" for EV efficiency, and extensive business information.
- **Apple Maps:** Preinstalled on iPhones, offering high-quality 3D visuals and strong privacy-focused navigation.
- **Waze:** A community-based navigation app popular for crowdsourced traffic, accident reporting, and optimal driving routes.

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OFFLINE AND SPECIALIZED NAVIGATION APPS

- **CalTopo:** Used by SAR
- **Sygyic:** Known for robust offline maps, 3D city models, and safety features like speed camera alerts.
- **MapQuest:** A reliable, user-friendly, and free alternative for standard routing.
- **Maps.me:** Known for detailed, downloadable, fully offline maps.
- **AllTrails:** Highly used for hiking and outdoor trail navigation.
- **FarOut:** Premier app for long-distance backpacking and hiking trails.
- **Citymapper:** Popular in major cities for in-depth public transportation navigation.
- **inRoute:** Specializes in creating custom routes with weather and elevation updates.

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MAPPING SYSTEMS

Geographic Coordinate System (GCS)

- Uses a three-dimensional, ellipsoidal surface to define locations, commonly using latitude and longitude
 - **DECIMAL**
 - Example: 37.080016. -122.082573
 - **DEGREES, MINUTES, SECONDS**
 - Example: 37°04'48"N 122°04'57"W

Projected Coordinate system (PCS)

- A designated, rectangular area on a map formed by intersecting vertical (easting) and horizontal (northing) lines, used to pinpoint locations
 - **UNIVERSAL TRANSVERSE MERCATOR (UTM)**
 - grid-based, metric coordinate system that maps the earth's surface by dividing it into 60 longitudinal zones, each 6° wide; units of measure is meters
 - **Used on Topo Maps**
 - Example: 10S 581829E 4104295N
 - SAR likes to use because distance between two locations can easily be determined by calculating the subtract one from another
 - **MAIDENHEAD GRID SQUARE**
 - a grid square measures 1° latitude by 2° longitude and measures approximately 70 × 100 miles in the continental US. A grid square is indicated by two letters (the field) and two numbers (the square),
 - Example: CM87xb

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I-PHONE GOOGLE MAPS

Application Download (if needed)

1. Open the App Store.
2. Search for "Google Maps".
3. Select Google Maps and verify the publisher is Google LLC.
4. Tap Get.
5. Authenticate with Face ID, Touch ID, or your Apple ID password.
6. Wait for the download and installation to complete.
7. Tap Open.
8. Optionally sign in, and allow location permissions when prompted

Managing Offline Maps

1. Open Google Maps on your iPhone.
2. Sign in (optional, recommended to save offline maps).
3. Search the destination or area to save.
4. Tap your profile photo (or menu) at top right.
5. Select Offline maps, then tap Select your own map.
6. Resize the box, then tap Download.
7. Keep the app open until it finishes (Wi-Fi recommended).
8. To update/delete, return to Offline maps and check storage/Wi-Fi settings.

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OFFLINE APPLE MAPS ON IPHONE

1. Open Apple Maps
2. Tap profile photo/initials
3. Choose Offline Maps
4. Tap Download New Map
5. Search/select an area
 - Adjust area as needed
6. Tap Download
 - Optional: enable "Only download on Wi-Fi"
7. Manage offline maps (update/delete)

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ANDROID GOOGLE MAPS

Application Download (if needed)

1. Open the Google Play Store.
2. Search for "Google Maps".
3. Select "Google Maps" by Google.
4. Tap Install and wait for download.
5. Tap Open (or find it on your Home screen).
6. (Optional) Sign in to save places and sync.
7. When prompted, allow Location permission for best navigation.
8. (Optional) Turn on app updates in Play Store to stay current.

Managing Offline Maps

1. Open Google Maps.
2. Optional: Sign in to your Google account.
3. Tap your profile picture/initial (top right).
4. Tap Offline maps.
5. Tap "Select your own map" (or review suggested maps).
6. Zoom/pan to the area you want, then tap Download.
7. Wait for the download to finish.
8. Later: Go to Offline maps to Update, Delete, or turn on auto-update.
 - Suggested to update offline map twice a year, perhaps use time change to perform.

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NOW LET'S HAVE SOME FUN

YOU CAN USE YOUR PHONE BUT IN **AIRPLANE MODE/NO WIFI**

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1. YOU ARE ON DEPLOYMENT AND ARE ASKED
TO RELOCATE TO THE FOLLOWING LOCATION

- 37.017270, -122.002855

WHERE ARE YOU?

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2. YOU ARE ON DEPLOYMENT AND ARE ASKED
TO RELOCATE TO THE FOLLOWING LOCATION

- 10S 0584856E 4098203N

WHERE ARE YOU?

CAN YOU GET THERE BY CAR?

WHAT IS THE DISTANCE FROM ANOTHER
OPERATOR LOCATED AT 10S 0585356E 4098203N

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3. YOU ARE ON DEPLOYMENT AND ARE ASKED TO RELOCATE TO THE FOLLOWING LOCATION

- 36°58'25"N 121°55'01"W

WHERE ARE YOU?

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4. YOU ARE ON DEPLOYMENT AND ARE ASKED TO IDENTIFY THE CITY YOU ARE IN FROM A GRID SQUARE CM86XX

WHERE ARE YOU?

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5. YOU ARE ON DEPLOYMENT AND ARE ASKED TO RELOCATE TO THE FOLLOWING LOCATION

- Corner of Bay St and California St, Santa Cruz

USING A PAPER MAP – IDENTIFY A NOTABLE LANDMARK FEATURING BOARDWALKS YOU WILL BE NEAR

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ANSWERS

1. Mystery Spot
2. Henry Cowell State Park Observation Deck – public not able to drive to it. Distance is 500 meters
3. Seacliff State Beach
4. Santa Cruz
5. Neary Lagoon Wildlife Refuge

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