

January 15, 2019

Regular Meeting

Item # 7b

CoB

Avalanche Program

Update

PowerPoint Presentation

Mono County Avalanche Program winter 2018-2019



**Mono County Board of Supervisors
January 15, 2019**

4th year of Mono County avalanche program

**Installation of an additional weather station on McGee in progress
Joe Blanchard, Tony Dublino contract contacts**

Weekly avalanche advisories began Dec 1, continuing weekly through May 2019.

Road crew training on Jan 24

**Eric Diem, June Mtn ski patrol director
Avalanche rescue training Virginia Lakes**

**Community avalanche awareness, January 24, Lee Vining Community Center
Code Red, County road plowing policy**

Avalanche Highlights, March 2018

January 6-7 2019

Avalanche Forecasting Tools

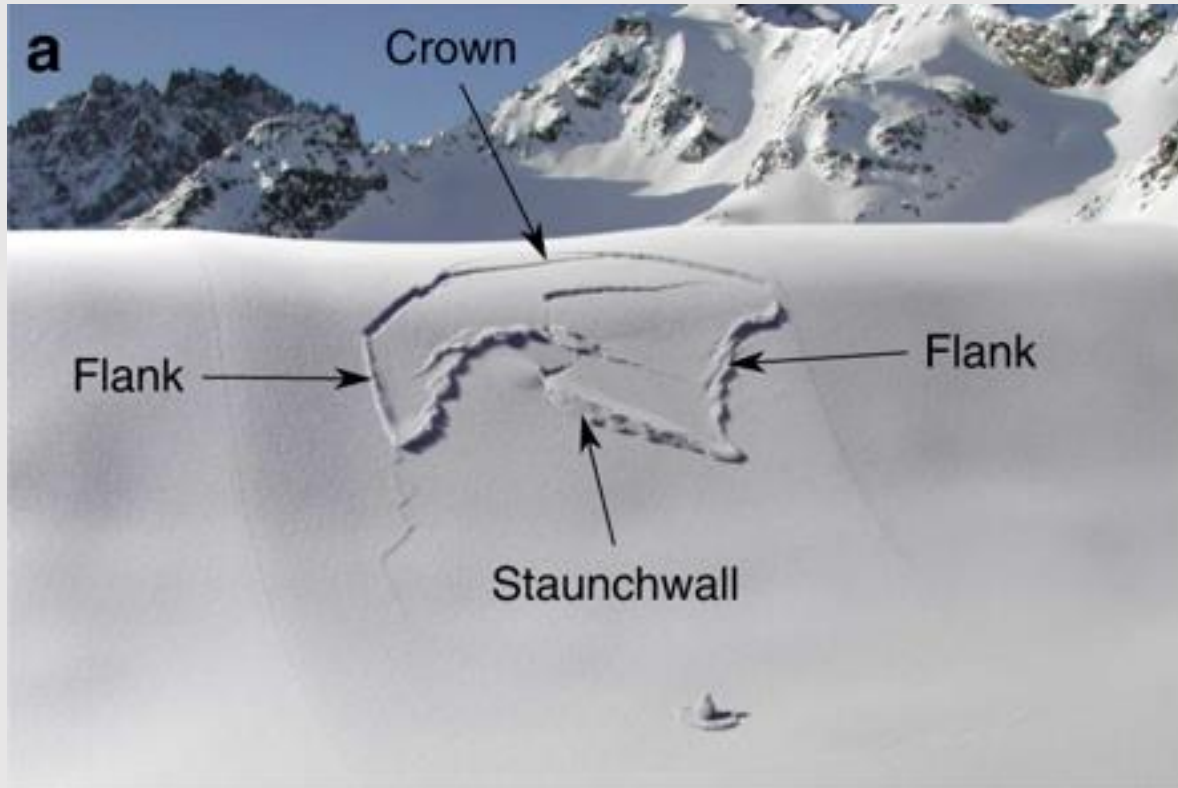
LEVEL	Description:	Description: Impact on Roads	COMMENTS
NONE	Insufficient snow cover for avalanche formation	Insufficient snow to reach the highways	No operational changes
NOTICE	Natural avalanches are very unlikely to significantly impact highway operations	Avalanches may run to within 0.25 miles of the road. Storm intensity monitored closely.	Avalanche path starting zones and tracks are snow covered. Runout zones are bare or <50% coverage.
CAUTION	Natural slab or wet snow avalanches D2 to D3 may reach runout zones upslope of the highway (possible)	Avalanches that run onto the highway will require a truck mounted snowplow to clear debris	Snow cover in avalanche starting zones, tracks and runout zones is sufficient for large avalanche to reach road. Do not work outside of vehicle
WARNING	Large Natural avalanches are almost certain to reach highways and roads.	Avalanches large enough to bury passenger vehicles, and damage buildings and maintenance vehicles are very likely	Road closures in threatened areas. Code Red. Avalanche advisories issued at least every 24 hours.

LEVEL	Description: Avalanche size	Description: Impact on Roads	COMMENTS
WARNING	Large Natural avalanches are likely to affect highway operations	Avalanches large enough to bury passenger vehicles and damage maintenance vehicles are likely	Road closures in threatened areas. Code Red.



https://static-content.springer.com/esm/art%3A10.1038%2Fs41467-018-05181-w/MediaObjects/41467_2018_5181_MOESM9_ESM.mp4

https://static-content.springer.com/esm/art%3A10.1038%2Fs41467-018-05181-w/MediaObjects/41467_2018_5181_MOESM7_ESM.mp4



Definitions

- Avalanche Forecasting

A large messy problem is divided into a set of smaller and presumably easier judgement calls

- Avalanche Hazard- source of potential harm

- Likelihood of triggering
- Destructive size – **will it reach the road?**
- “If it goes, what will happen?”

- Very Unlikely

- Possible.

- Likely

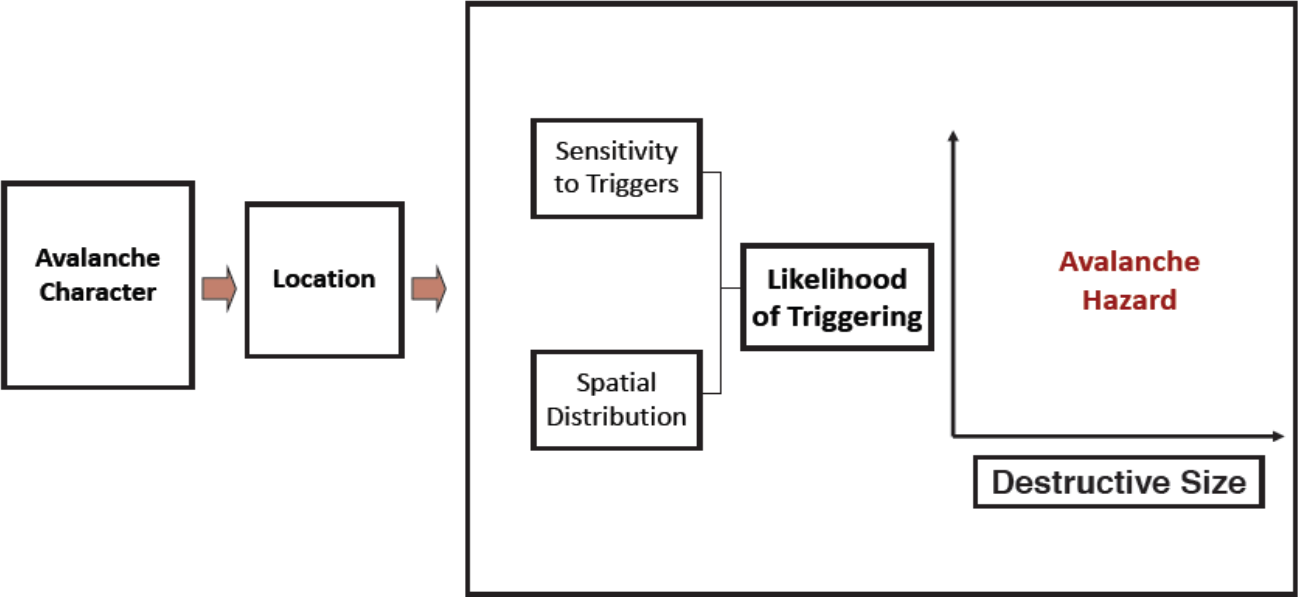
- Almost Certain



Qualitative judgements
inferred from evidence

AVALANCHE HAZARD EVALUATION WILL IT REACH THE ROAD?

Avalanche Hazard Evaluation



Scale

Spatial Scale

- Narrows
- McGee
- Swall
- Twin Lakes
- Lundy

Temporal Scale

- Minutes
- Hours
- Days

EVIDENCE AND DATA

AVALANCHES



SNOWPACK

Stratigraphy
Dry/wet?
Propagation potential
Existing snowpack depth

WEATHER

Wind Speed
Wind Direction

Precip type

Precip intensity

Precip duration

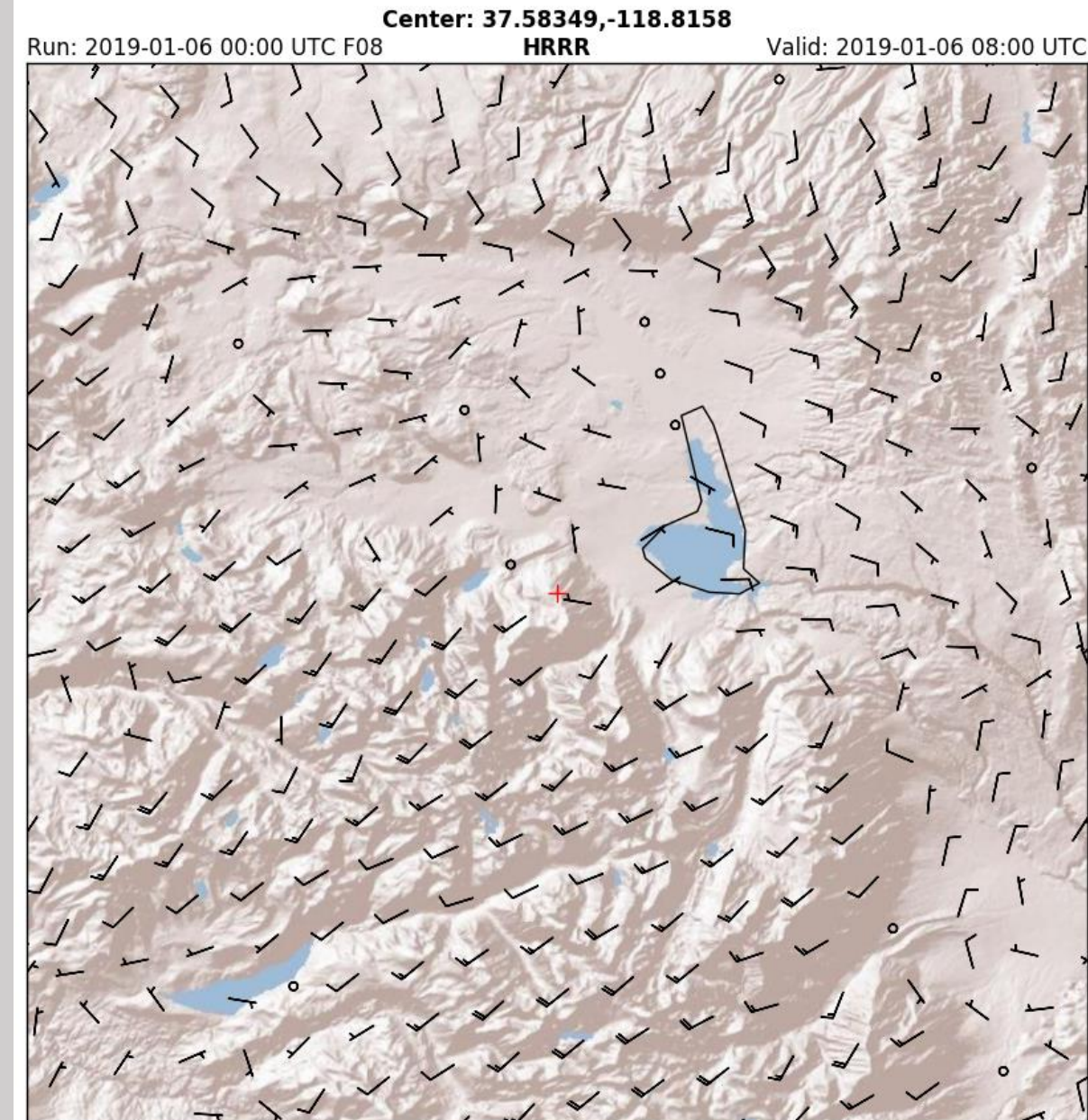
Temperature trends

TERRAIN

Avalanche Path
Slope Angle
Aspect
Shape
Elevation drop
Ground roughness

FORECASTING TOOLS

- Observations
- NWS 3 km grid
- HRRR wind and precip
- Local weather station data
- CUES
- Snow level radar
- Historic data
- Classification and Regression Tree Analysis (CART)



Customize Your Weather.gov

City, ST

Enter Your City, ST or ZIP Code

Remember Me

Get Weather

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NWS Forecast Office Reno, NV

[Weather.gov](#) > Reno, NV

Reno, NV

Weather Forecast Office

[Current Hazards](#) [Current Conditions](#) [Radar](#) [Forecasts](#) [Rivers and Lakes](#) [Climate and Past Weather](#) [Local Programs](#)

Week Timeline

Winter Weather



Sierra & Western Nevada Impact Timeline

January 15th-19th, 2019



Tuesday

Light snow showers area-wide. Morning commute impacts possible along I-80 in W. NV.



Wednesday

Gusty S/SW winds. Heavy, wet snow in the Sierra. Rain-snow line will begin high. Precipitation increasing into Thursday.



Thursday

Blizzard conditions possible. Major travel impacts. Strong S/SW winds. Moderate impacts possible above 5,500'



Friday

Precipitation will taper off as storm moves out of the area. Lingering showers possible in AM. Winds becoming light.



Saturday

Mostly sunny, with light winds. *Avalanche concerns may still be possible



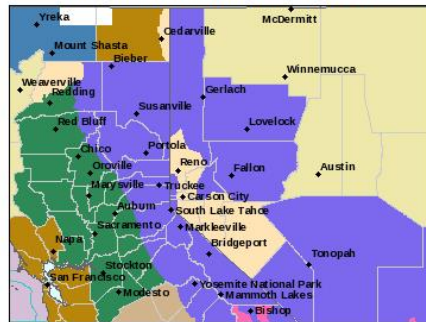
Legend

- Little to No Impact
- Low Impact
- Moderate Impact
- High Impact
- Extreme Impact

Photo credit: Rob Lipsberg

[Show Caption](#)

Click a location below for detailed forecast.

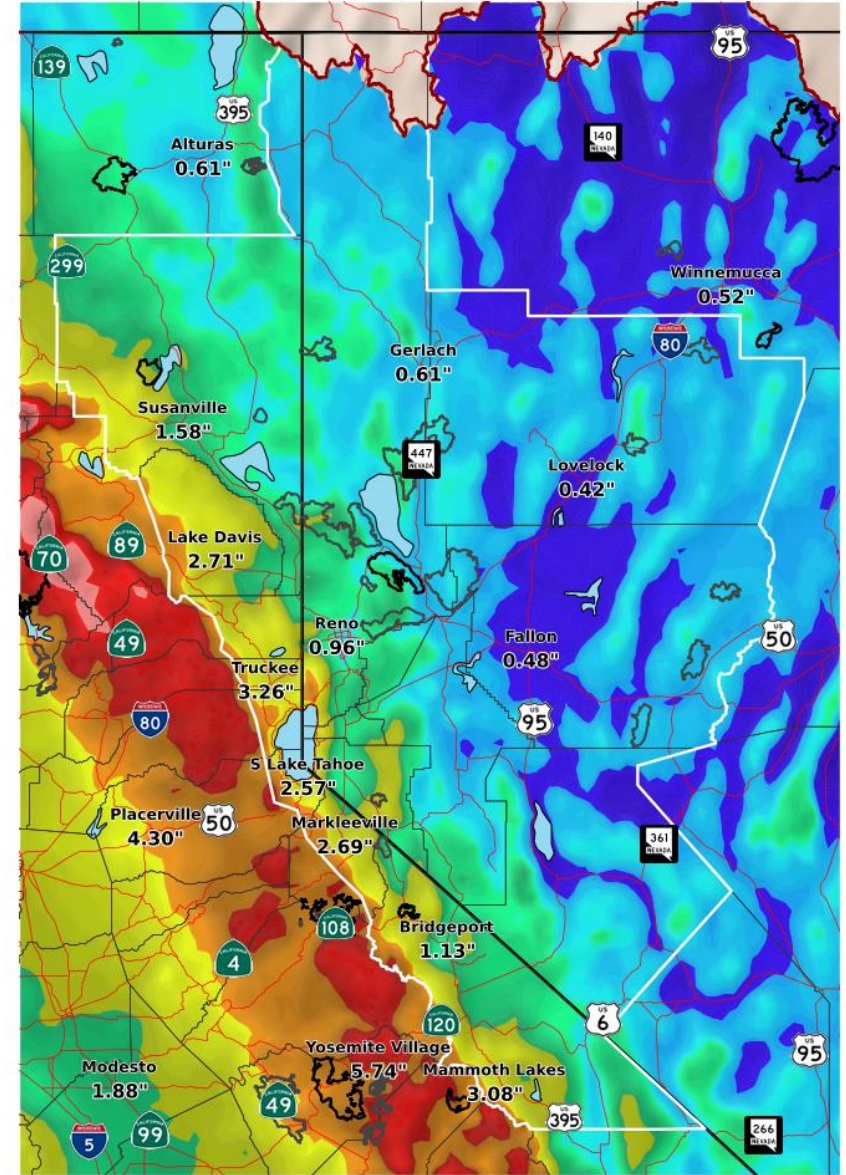


Last Map Update: Mon, Jan. 14, 2019 at 10:09:25 pm PST

[Watches, Warnings & Advisories](#)

- [Winter Storm Warning](#) ■
- [Winter Weather Advisory](#) ■
- [Small Craft Advisory For Rough Bar](#) ■
- [Small Craft Advisory](#) ■
- [Wind Advisory](#) ■
- [Gale Watch](#) ■
- [Winter Storm Watch](#) ■
- [Flood Watch](#) ■
- [High Wind Watch](#) ■
- [Special Weather Statement](#) ■
- [Marine Weather Statement](#) ■
- [Hazardous Weather Outlook](#) ■
- [Hydrologic Outlook](#) ■

6-Day Forecast Precipitation (Inches)



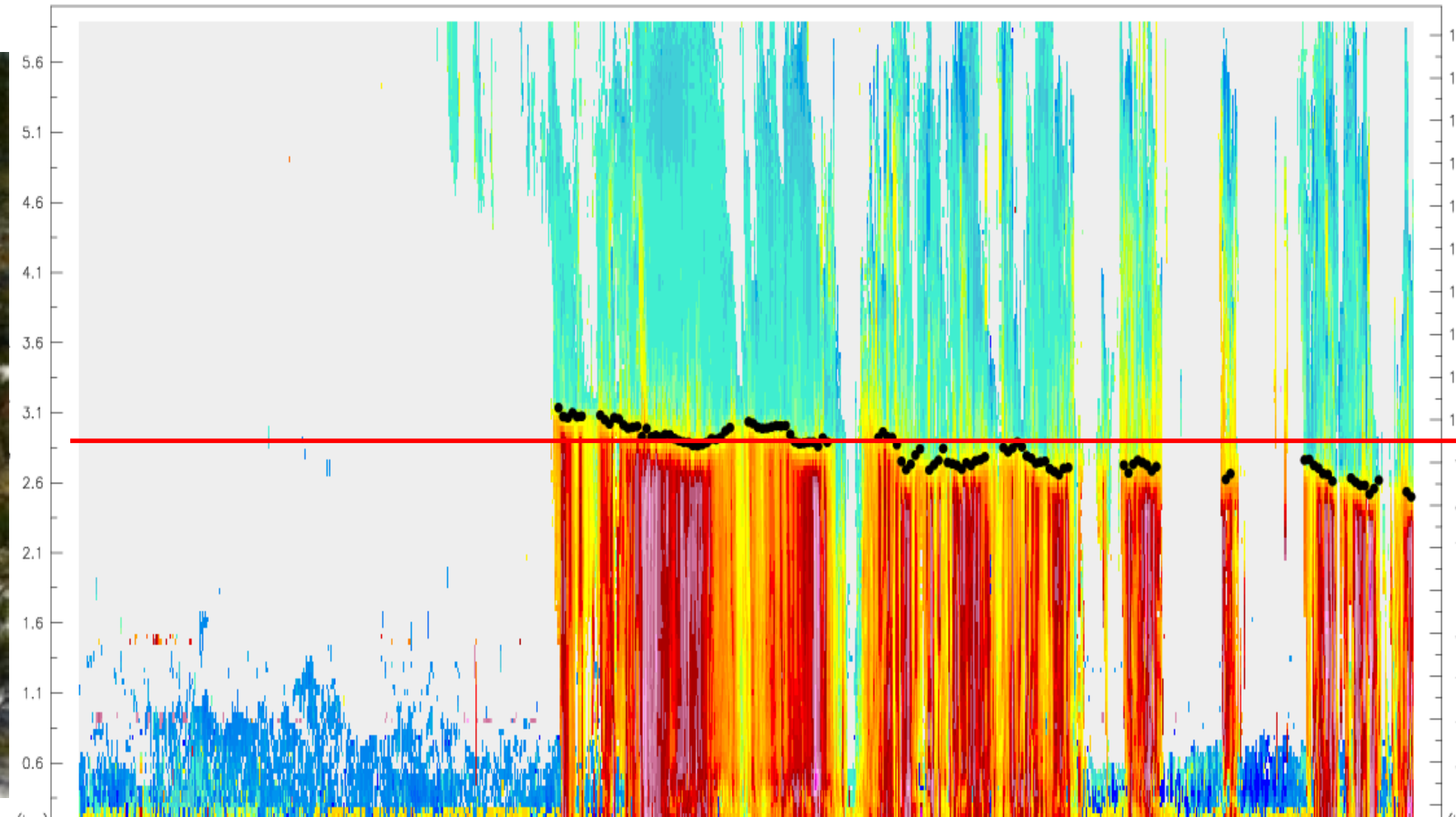
CUES

The Cold Regions Research and Engineering Laboratory (CRREL) and University of California Santa Barbara (UCSB) Energy Site

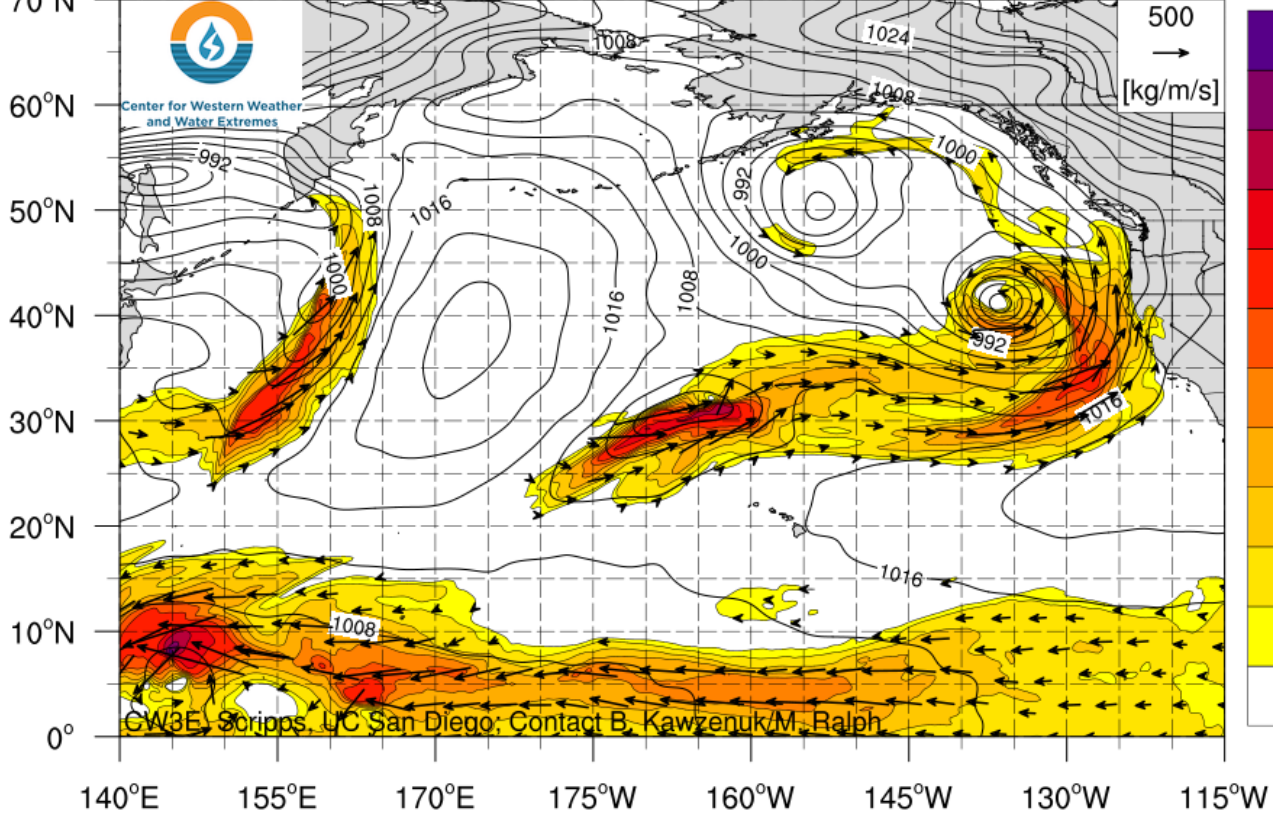


Snow Level Radar

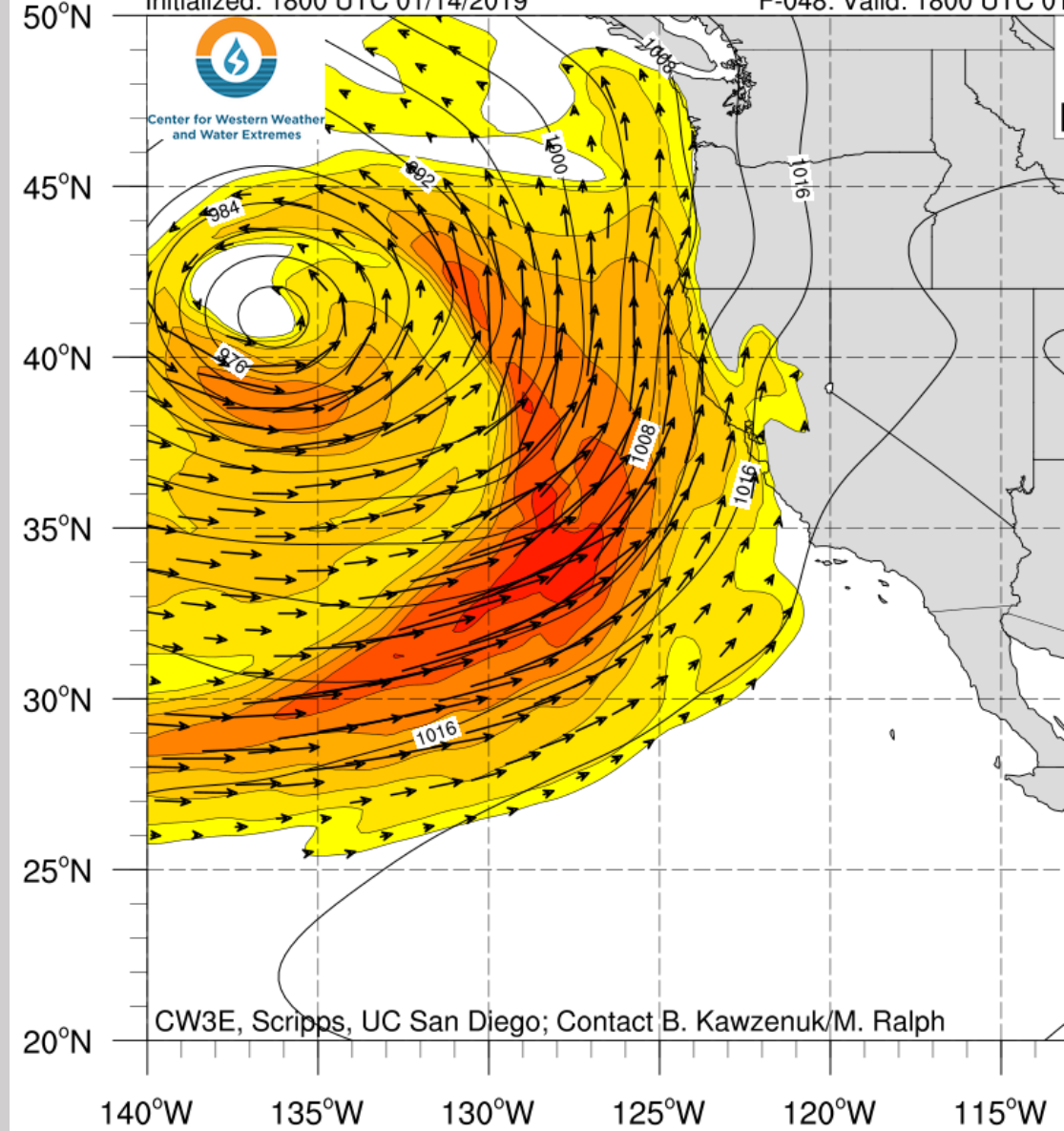
ESRL Physical Sciences Division
FMCW S-band Snow Level Radar



NCEP GFS IVT ($\text{kg m}^{-1} \text{s}^{-1}$; shaded), IVT Vector, and SLP (hPa; contours)
Initialized: 1800 UTC 01/14/2019 F-048: Valid: 1800 UTC 01/16/2019

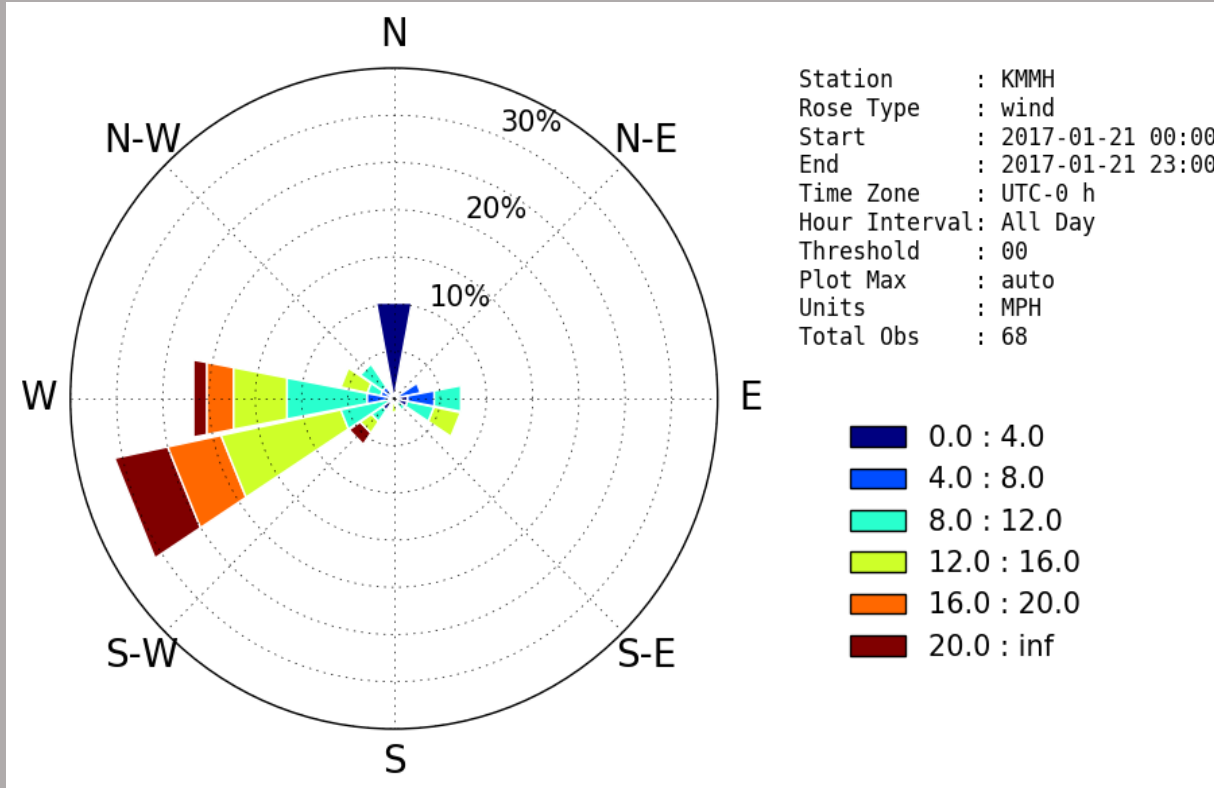


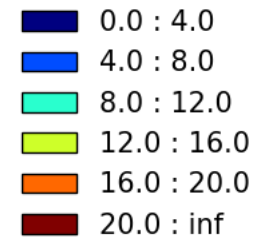
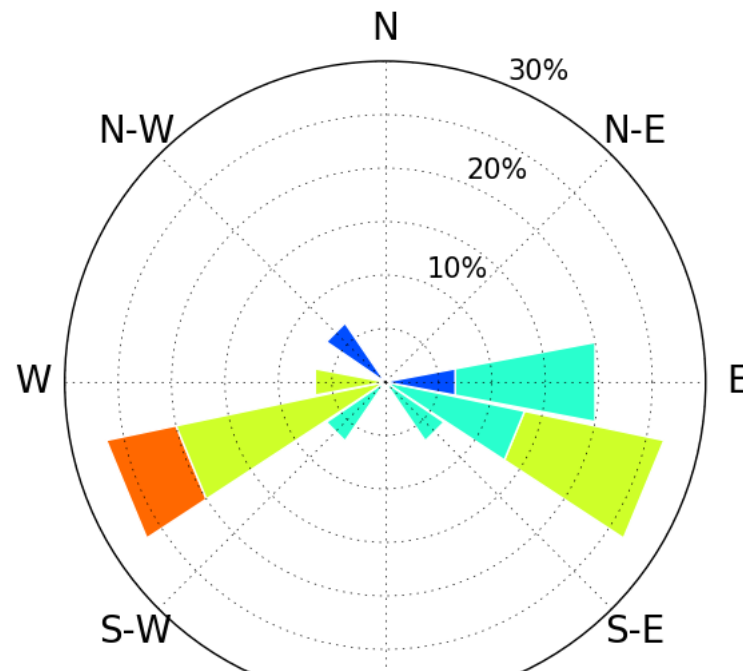
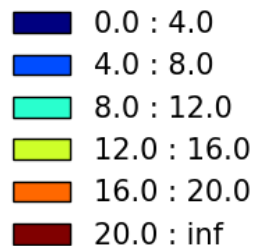
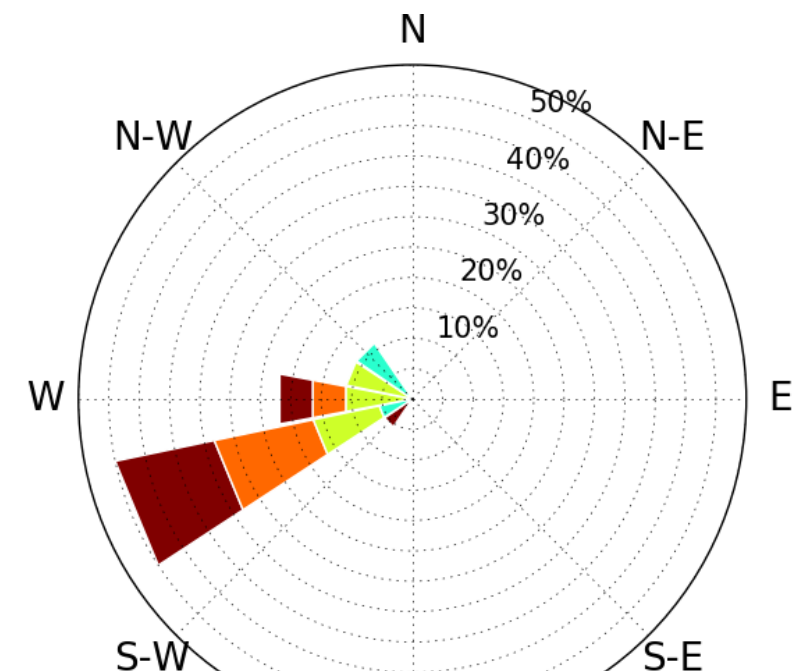
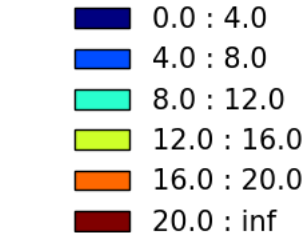
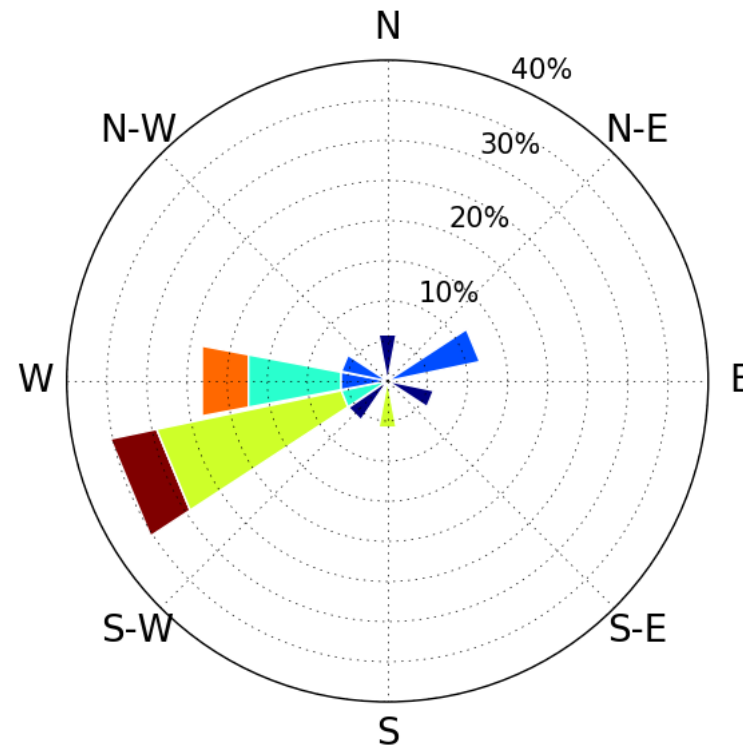
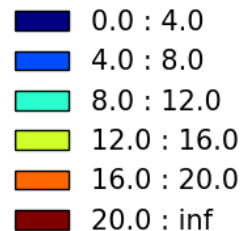
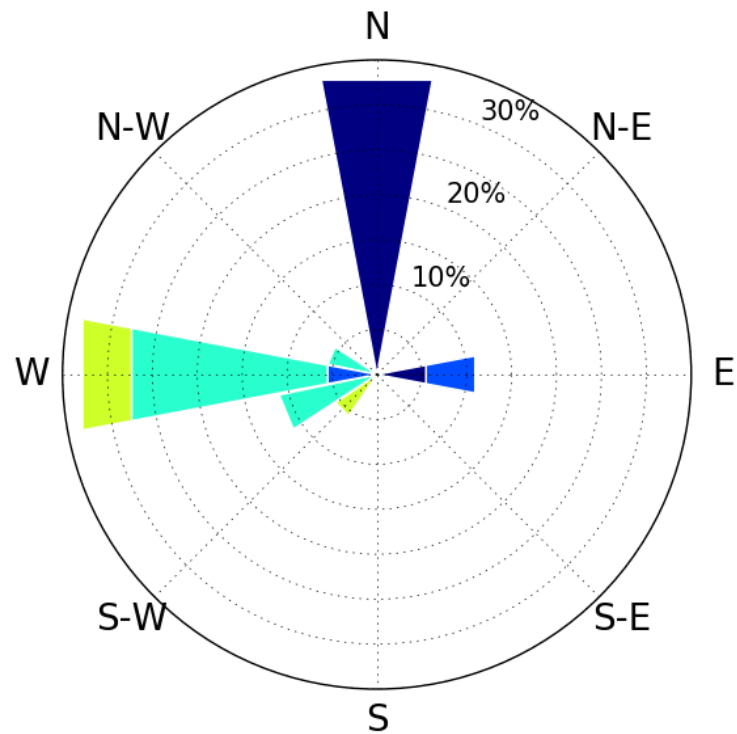
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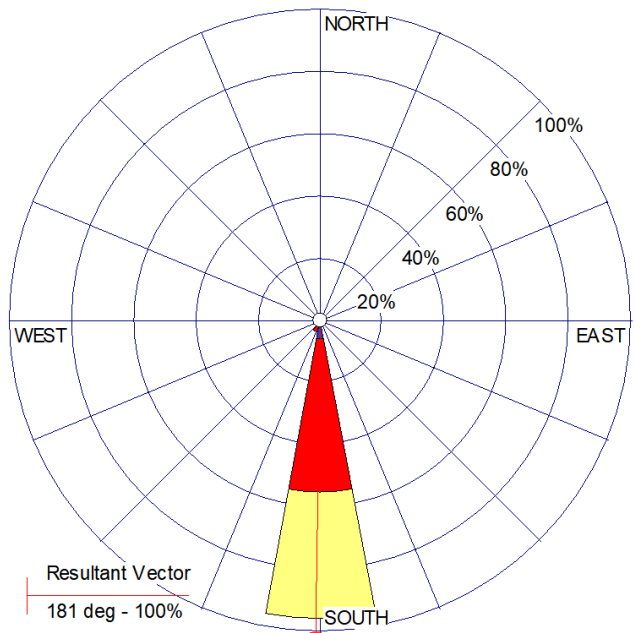


Temporal Scale

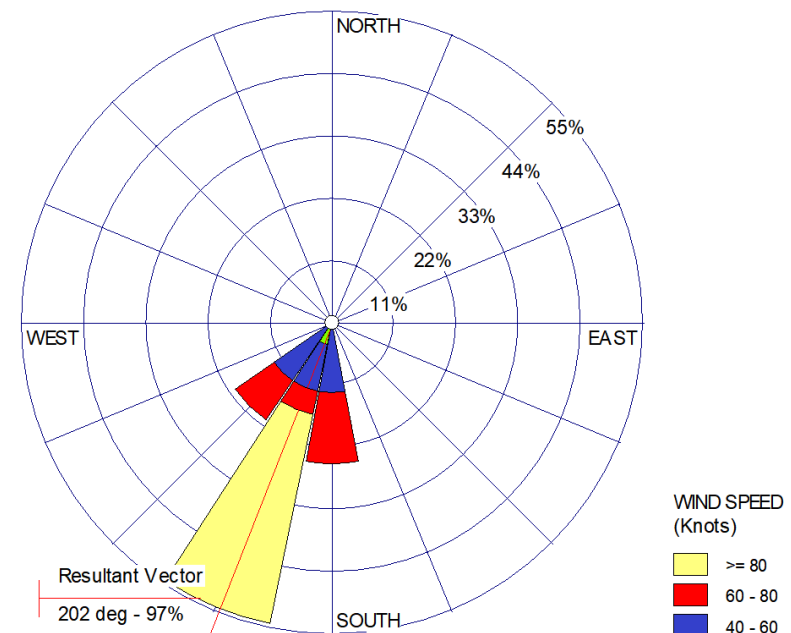
Wind rose plot Mammoth Airport, January 21, 2017







**Mammoth Summit winds
January 6-7 2019**



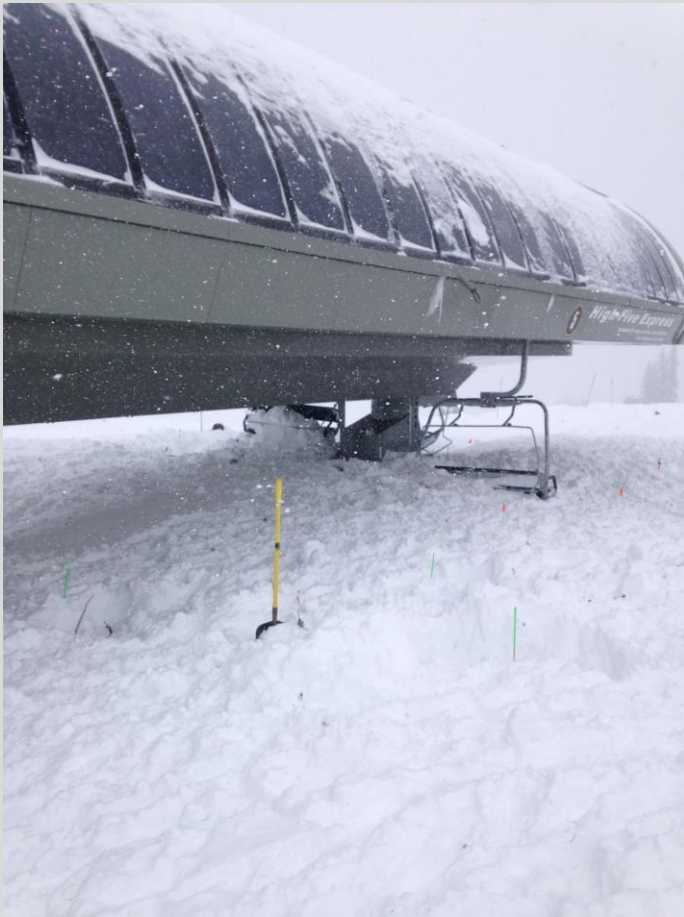
**Mono County Weather
Station winds
January 6-7 2019**

Extreme Events-Expect the Unexpected



Major Avalanche Events winter 2017-2018

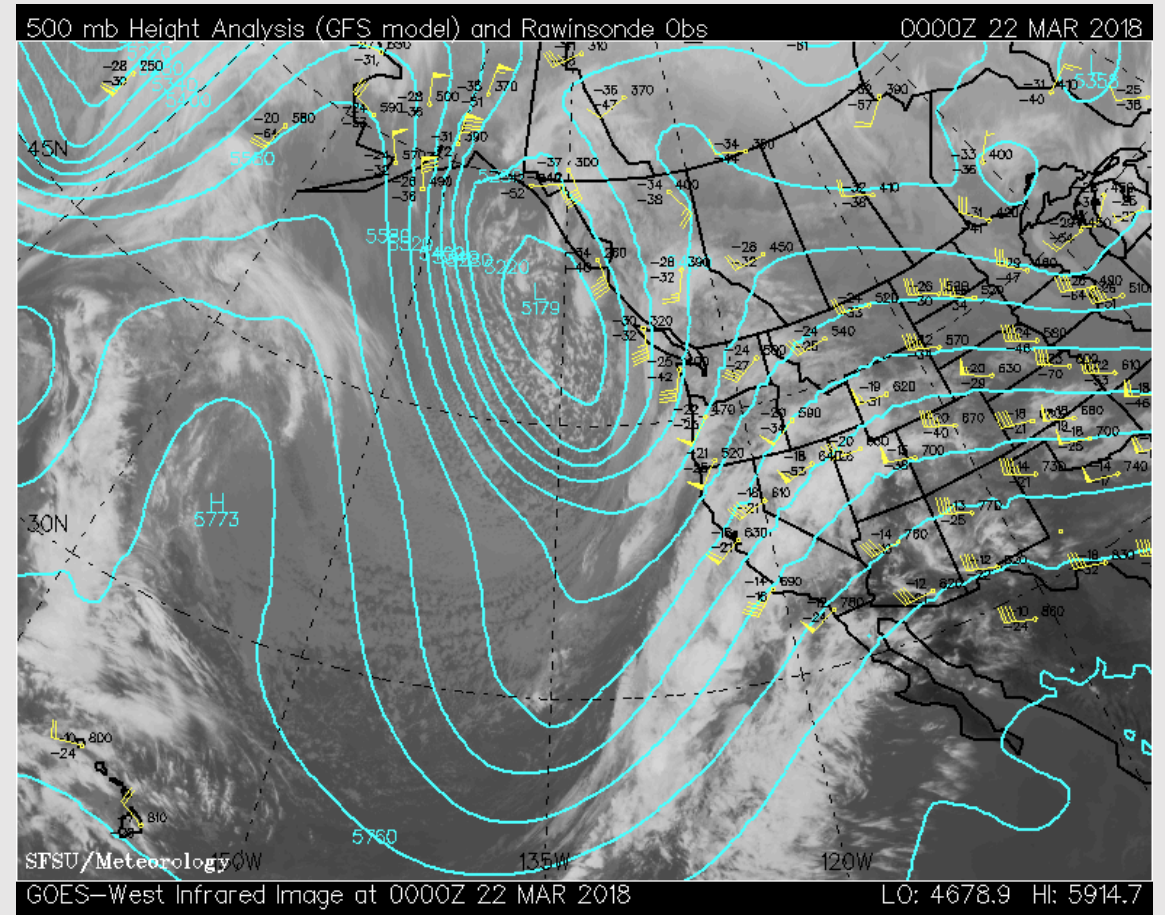
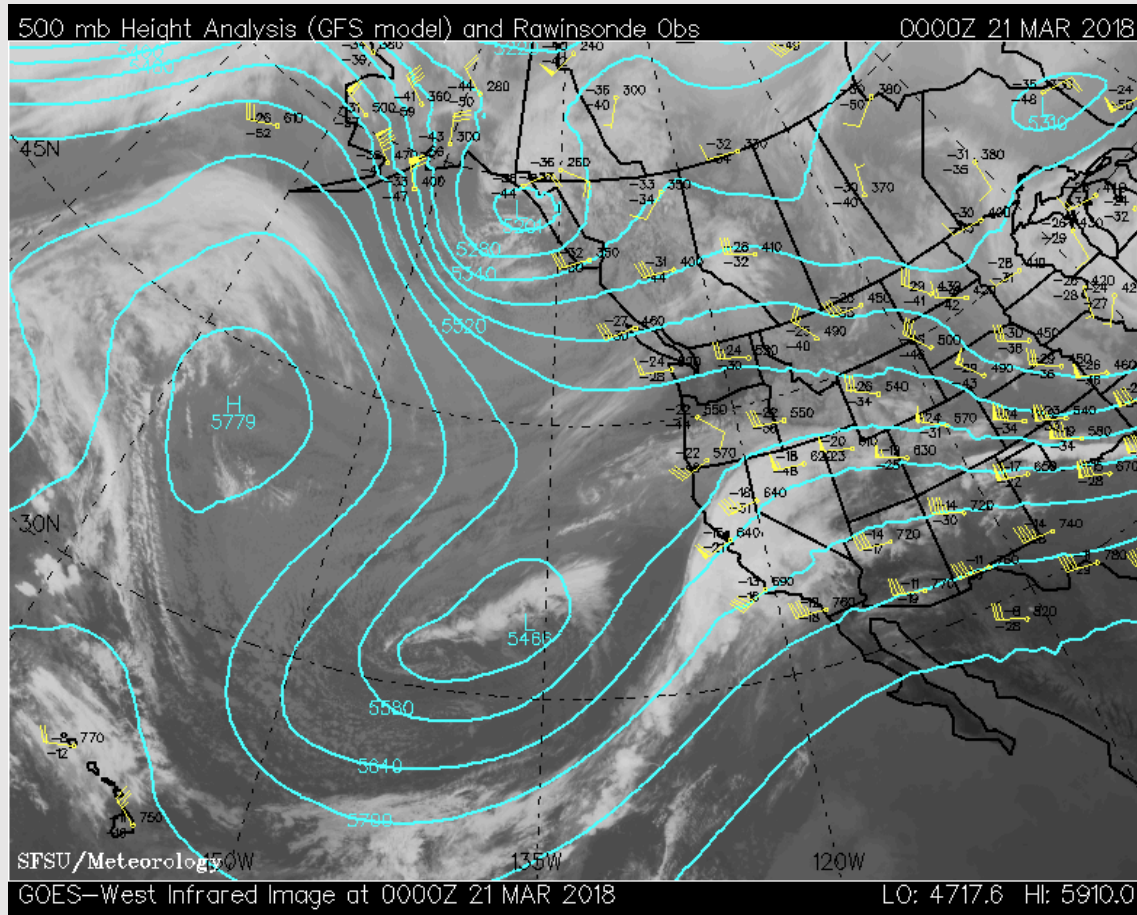
- March 4 MMSA
- ARS March 21-22
- ROS April



March 4 2018 Twin Lakes Bridgeport



March 21-22 ROS (Rain On Snow) 9,000 to 9,800 ft





Trailer Park
March 23 2018



McCoy's
March 23



Mainline
March 23



Rain on Snow April 6-7 2018



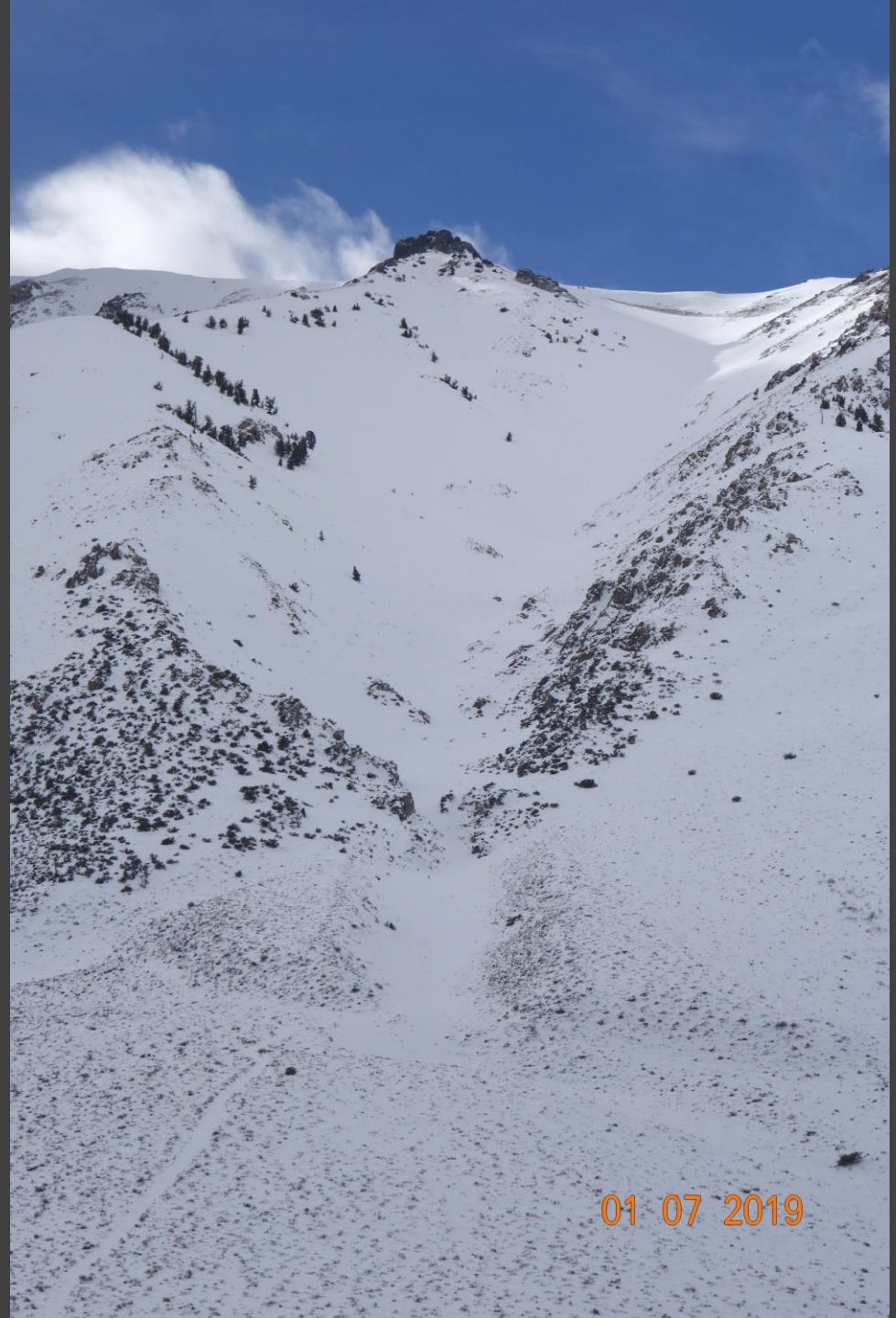


CURRENT CONDITIONS





01 06 2019



01 07 2019

Forecasting for Wet and Dry Snow Avalanches in a Changing Climate

- Snowpack structure in Start zone, track and runout
- New snow loading at top, rain/snow mix near start zones and upper track results in high density snow that changes the slab properties
- Has profound effects on lower layers
- Lower on slope, wetting and eroding facet layers if present
- Snow in avalanche paths can change from dry to wet over small scales of meters or temporal scale of minutes. Very tough conditions for highway forecasting- doesn't fit neatly.
- Wet/dry avalanches do not fit any defined avalanche problem- dry, wet, glide, slab, wind drifting. Continuum. Recognize and embrace the uncertainty.



March 23, 2018



Apr 6 2006

Unusual Weather ~ unusual avalanches

Avalanche Forecasting in a Changing Climate

Cannot rely on “ Average conditions”

Recognize when conditions are outside my realm of experience

Expect the unexpected.

- Forecasting wind slabs in fresh snow- pretty comfortable
- Slab failing on weak facet layer loaded by wind transport- not much new snow- uncommon
- Avalanche starting zones above or near rain line- uncommon but becoming more frequent
- Rain on faceted snow- UNCOMMON
- COMPLEX PROBLEM- DO NOT TRY TO SOLVE PROBLEMS WE DON'T UNDERSTAND



Do not try to
solve problems
we don't
understand

03 22 2018



03 22 2018







Forecasting for Wet and Dry Snow Avalanches

- Slab failing on weak facet layer loaded by wind transport- not much new snow- uncommon
- Avalanche starting zone above or near rain line- was uncommon but becoming more frequent on McGee Mountain
- Rain on faceted snow- UNCOMMON
- COMPLEX PROBLEM- DO NOT TRY TO SOLVE PROBLEMS WE DON'T UNDERSTAND

January 15, 2019

Regular Meeting

Item # 11a

CDD

Cannabis Ops Permit

Tilth Farms

PowerPoint Presentation

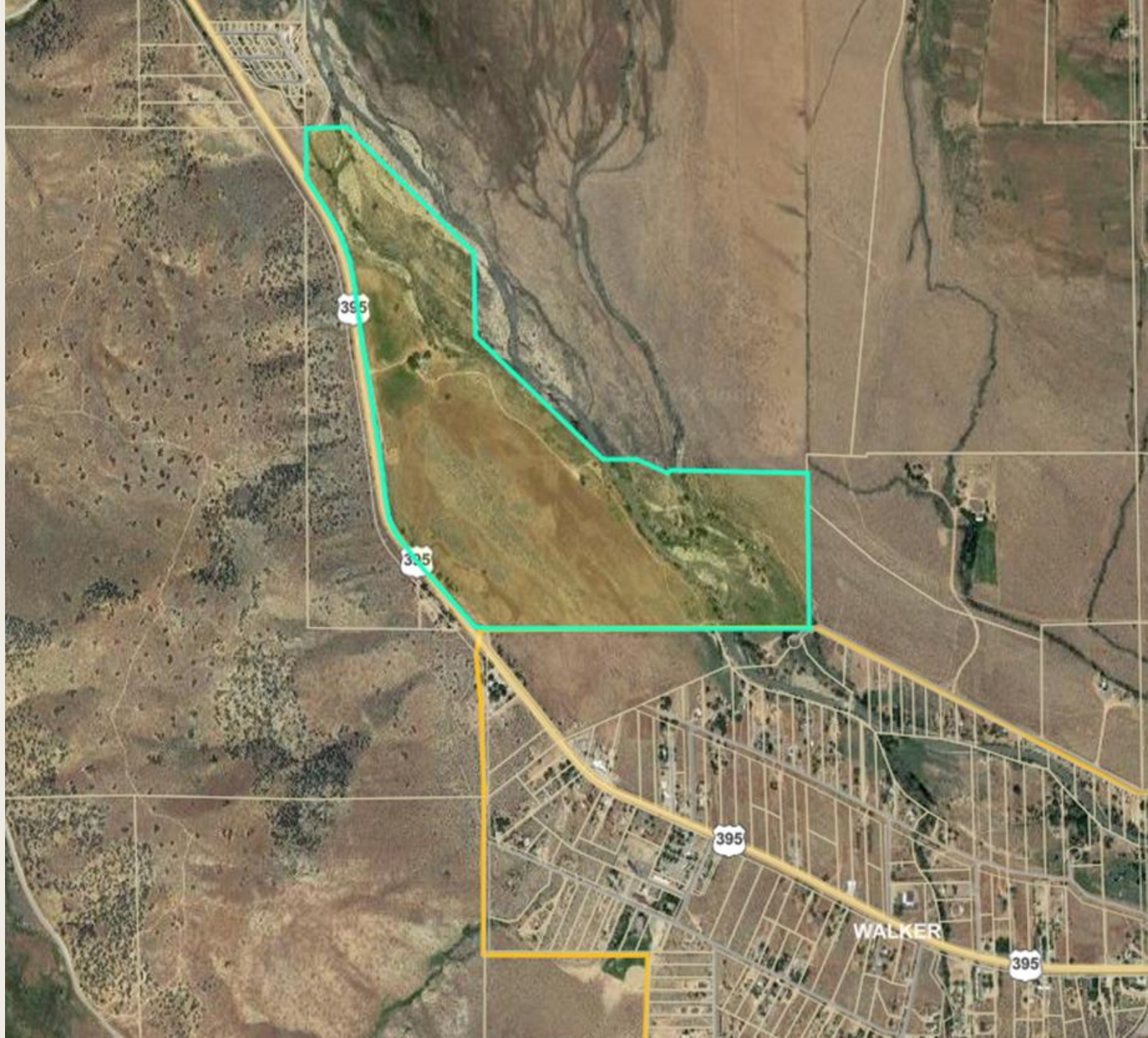
CANNABIS OPERATION PERMIT
18-002/TILTH, LLC.

Board of Supervisors
January 15, 2019

CEQA §15183

- Project consistent with development density established in General Plan
- Only impacts peculiar to the project or site need to be analyzed
- Potential impacts analyzed: land use, housing, soils, water, air quality/odors, transportation, biological resources, energy resources, hazards, noise, utilities
- No significant impacts after application of existing mitigation measures.

THE PROJECT:
108432 HWY 395,
WALKER



Permits required

- Conditional Use Permit
 - *Landownership, setbacks from sensitive sites, designation setbacks, odor control, signage, visual screening, lighting, parking, noise, and security plan.*
 - *Approved at December 20 Planning Commission meeting*
- Operation Permit
 - *Outdoor cultivation only, totaling 63,560 sq. ft/1.46 acres of canopy*
- State License
 - *Adult-Use (A-license)*
 - *Cultivation Medium Outdoor*
 - *Cultivation Small Mixed-Light Tier 1*

County Code compliance

- Section 5.60.070(B): application requirements
- Section 5.60.080: analysis process and criteria for evaluation
- Section 5.60.120: operating requirements for all cannabis businesses
- Section 5.60.130: cannabis cultivation-specific requirements

5.60.070(B), Application materials

- ☑ Contact information and Proof of Identification
- ☑ Tilth, LLC is a legal business entity and has a Seller's Permit
- ☑ No other cannabis operations by the applicant
- ☑ 24-hour emergency contact and community relations
contact: Eric Edgerton
 - *ph.775-291-1480, email Eric@tilthfarms.com*
- ☑ Proof of property ownership
- ☑ Diagram of premises, operating plan, business plan, waste management plan, confidential security plan

5.60.070(B)(14) A detailed business plan

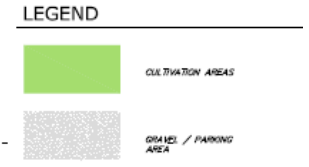
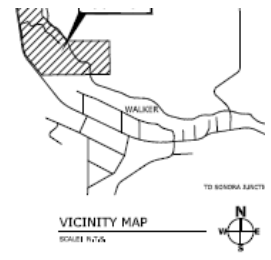
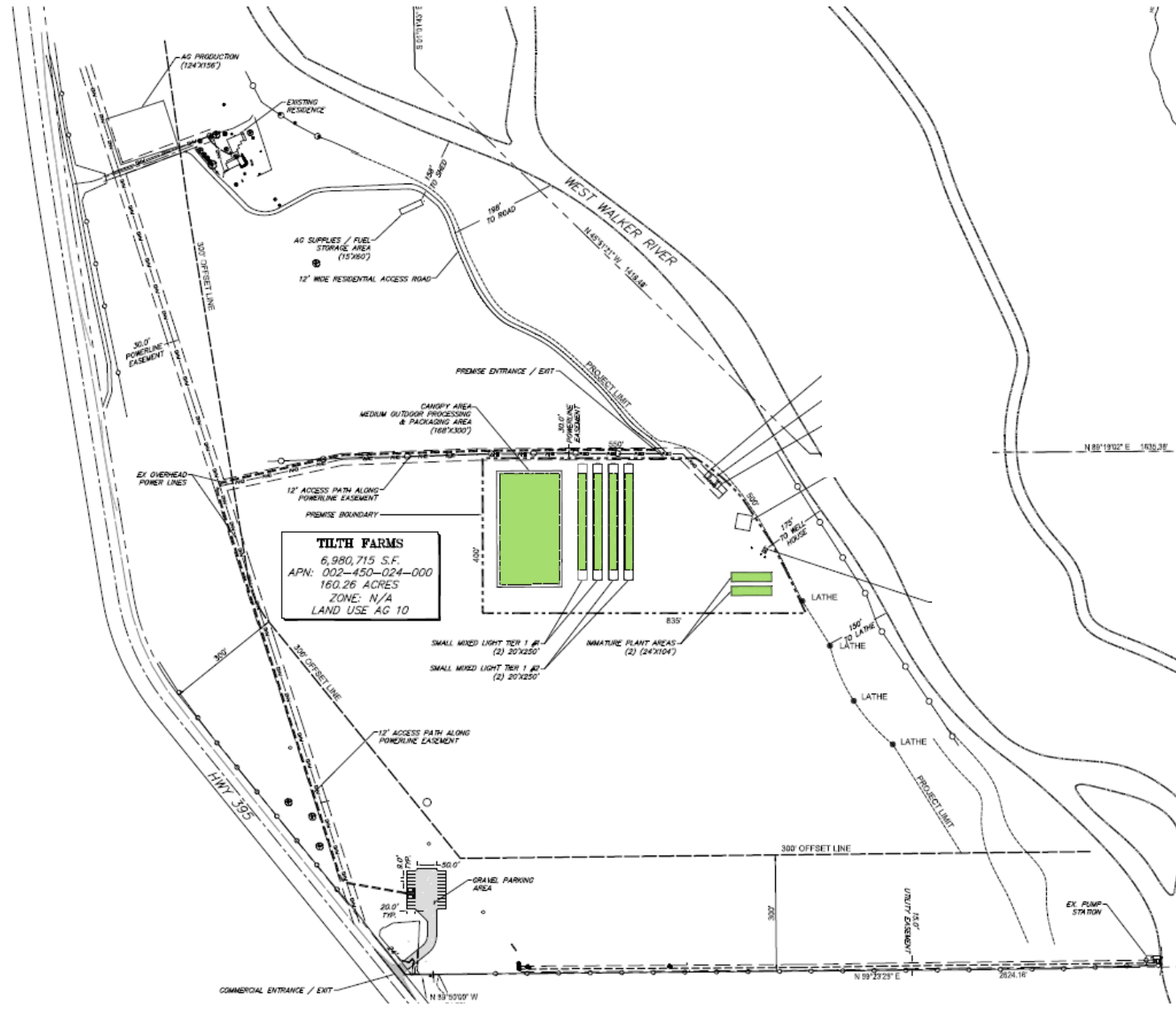
- ☑ Location dependent
- ☑ Retaining a firm to advise on business and financial matters
- ☑ Employing an Agronomic Advisor to assist in daily operations
- ☑ Employing a Development Director for research and strategies
- ☑ Inventory Protocol provided for managing inventory, destruction of plants, and harvested batches.

5.60.070(B)(15) A cannabis waste management plan, as required by business type.

- ☑ Waste management compliant with 3 CCR §§ 8108, 8308
- ☑ Waste stream to be composted on-site or recycled
- ☑ Domestic wastewater disposed via septic field
- ☑ Surface runoff will be minimized by hoop house, drip irrigation, conservation tillage practices, winter cover crops, and mulches.
- ☑ Groundwater leaching minimized by irrigation management
 - ☑ *State Water Board approved discharge*

5.60.070(B)(16): Confidential security plan

- Reviewed and approved by the County Sheriff's Office
- No State requirements
- Closed to the public
- Plan includes:
 - *Premise security*
 - *Security surveillance*
 - *Product security*
 - *Waste tracking and notification*
 - *Shipping and transportation security measures*



TILTH FARMS
 6,980,715 S.F.
 APN: 002-450-024-000
 160.26 ACRES
 ZONE: N/A
 LAND USE AG 10

SMALL MIXED LIGHT TIER 1 #1
 (2) 20'X250'
 SMALL MIXED LIGHT TIER 1 #2
 (2) 20'X250'

NATURAL PLANT AREAS
 (2) 24'X104'

300' OFFSET LINE
 300'
 150' UNIT EASEMENT
 150'

COMMERCIAL ENTRANCE / EXIT
 N 89° 50' 00" W

N 88° 13' 02" E 1633.71'

N 89° 23' 28" E 2824.16'



Operating Plan

- Outdoor cultivation area = 1.46 acres of canopy
- Two immature plant area/nursery areas = <5,000 total sq. ft.
- Site preparation in early spring
- Nursery plants transplanted in late summer
- Cover crop planted after harvest
- Drip and/or hand irrigation
- A detailed pesticide & fertilizer plan has been provided
 - *Spill Clean Up plan, Structure & Equipment Cleaning and Sanitizing Policy*
- Harvesting/preparing plants for storage in the hoop houses
- Product and waste stored in secured storage areas

Operating Plan cont'd

- The applicant will comply with METRC (track and trace)
- Sales coordinated with management and inventory control
 - *Chain of custody inventory control system (METRC)*
 - *Sold and picked up by a licensed Distributor*
- Employee training plan
 - *Background checks, drug test and interview*
 - *21 years of age*
 - *Wear valid ID badge*
 - *Safety, security and cultivation training,*
- Operating hours from dawn to dusk, 7 days a week depending of harvest schedules

MCC 5.60.120, Operating requirements

- All employees must be 21 years of age
- No persons under 21 year of age are allowed on the premises
- No cannabis shall be consumed on the premise.
- Community Relations contact: Eric Edgerton, 775-291-1480, Eric@tilthfarms.com
- The applicant or owner may not be convicted of a felony or drug related misdemeanor.
- Documentation that products are obtained from and provided to permitted and licensed cannabis operations only.

5.60.130 Additional regulations for cannabis cultivation

- Any green house must have a valid building permit
- Hoop-houses must meet regulations
- Permittees responsible and liable for safety and security in and around the cannabis operation

Analysis – MCC 5.60.080(C)

1. The commercial cannabis activity, as proposed, will comply with the requirements of state law and regulation, the Mono County General Plan, the Mono County Code and this Chapter.
2. The property has all necessary land use entitlements as required by the Mono County General Plan or is legally exempt from such requirements.
3. The applicant has demonstrated to the satisfaction of the Approval Authority that the operation, its owners and the applicant have the ability to comply with state law and regulation, the Mono County General Plan, the Mono County Code and this Chapter.
4. No applicant or owner has been convicted of a felony or a drug related misdemeanor reclassified under Section 1170.18 of the California Penal Code (Proposition 47) within the past ten (10) years, unless the Approval Authority determines that such conviction is not substantially related to the qualifications, functions or duties of the person or activity and/or there is adequate evidence of rehabilitation of the person. A conviction within the meaning of this section means a plea or verdict of guilty or a conviction following a plea of nolo contendere.

5. The Approval Authority determines that issuance of the permit is in the best interests of the community, the County, and its citizens and visitors, based on the following:

1. The experience and qualifications of the applicant and any persons involved in the management of the proposed cannabis business;

2. Whether there are specific and articulable positive or negative impacts on the surrounding community or adjacent properties from the proposed cannabis business;

3. The adequacy and feasibility of business, operations, security, waste management, odor control, and other plans or measures submitted by the applicant;

4. Whether granting the permit will result in an undesirable overconcentration of the cannabis industry in a limited number of persons or in a limited geographic area within the County;

5. Environmental impacts/benefits of the cannabis business such as waste handling, recycling, water treatment and supply, use of renewable energy or other resources, etc.; and

6. Economic impacts to the community and the County such as the number and quality of jobs created, and/or other economic contributions made by the proposed operation.

Conditions of Approval

1. The operation shall comply with all County department regulations.
2. The operation shall comply with all rules and regulations established in Mono County Code, the Mono County General Plan, and all applicable state laws.
3. This permit is nontransferable and shall terminate upon expiration or change in property ownership.
4. This permit is only valid when a Use Permit exists for the property.

Conditions of Approval

5. Prior to operating: obtain a state cannabis cultivation license, Mono County Business License, and a Mono County Tax Certificate.
6. Prior to operating: complete a Mono County LiveScan and Sheriff approval.
7. Provide proof of the state-issued license when available.
8. The County may seek verification of the information contained in this permit and application.
9. Subject to an annual inspection to ensure compliance with County Code 5.60.120. Failure to pass the annual inspection prior to the August 31 may result in denial of the renewal application.

Conditions of Approval

10. Operate only in accordance with the application and all corresponding plans reviewed and approved by the County.
11. Permit expires August 31, 2019 (unless renewed or revoked).
12. Renewal/modifications must be received by August 1 with the fee.

Make the following findings:

- The project qualifies as a CEQA Exemption pursuant to CEQA Guidelines 15183 and file a Notice of Exemption.
- **Approve findings 5.60.080(c) 1 through 5 as contained in the staff report**
- Approve Cannabis Operation Permit 18-002 subject to the conditions as recommended or with desired modifications.