

AGENDA

TRI-COUNTY TECHNICAL ADVISORY COMMITTEE

Friday, September 12, 2025

10:00 A.M.

Join Zoom Meeting:

<https://us02web.zoom.us/j/5375128983>

Dial by phone: 669 900 6833

Meeting ID: 537 512 8983

For further information on any of the agenda items please contact the Amador County Planning Department at (209) 223-6380 or email planning@amadorcounty.gov. Off-agenda items must be approved by the Tri-County Technical Advisory Committee pursuant to the emergency situation standards of Government Code Section 54956.5.

- A. Call to Order
- B. Approve Agenda
- C. Correspondence
- D. Minutes: July 11, 2025
- E. Public Matters: Informational items and persons wishing to address the Committee regarding non-agenda items
- F. Agenda Items:

ITEM 1: Discussion and possible recommendation to the Alpine County Planning Commission regarding a variance application for 342 East Meadows Drive. The request seeks a major modification to the building envelope and a driveway width of 24 feet.

ITEM 2: Deferred from July 11, 2025. Loop Road parking and drainage discussion - continued from October/November, 2024; Kirkwood Mountain Resort.

- G. Adjournment until the next regularly scheduled meeting, October 10, 2025.

SUMMARY MINUTES

TRI-COUNTY TECHNICAL ADVISORY COMMITTEE July 11, 2025

10:00 A.M.

Meeting link: <https://us02web.zoom.us/j/5375128983>

A. Call to Order:

The meeting was called to order by Chuck Beatty at 10:10 am. Members present were:

Amador County, Chuck Beatty; El Dorado County, Brendan Ferry; Alpine County, Sam Booth.

B. Approval of Agenda:

Chuck Beatty asked that Item 2, Loop Road Discussion, be deferred until the next meeting so that KMPUD staff could be present. On a motion by Brendan Ferry, seconded by Sam Booth, the agenda was approved as amended.

C. Correspondence: Any correspondence received prior to publication of the agenda has been included with the packet. Correspondence received after publication was published on Amador County's Tri-TAC web page.

D. Minutes: November 8, 2024

On a motion by Brendan Ferry and second by Chuck Beatty, the minutes were approved as published.

E. Public Matters not on the Agenda: - None.

F. Agenda Items:

ITEM 1: Review and possible approval of Kirkwood Specific Plan Mitigation Monitoring Reports from Kirkwood Mountain Resort:

4.1 (a,e), (COA_32), Avalanche Forecasting Report

4.05(j), (COA 93), Cultural Resource Materials

4.12(c), (COAs 140and 169), Sensitive Resource Materials

4.09 (b), (COA 126), Snowmaking Noise Report

4.10 (a), (COA 127), Employee Housing Report

4.7 (d), (COA 97), 2024-2025 Parking Analysis

Chuck Beatty introduced the item and asked KMR staff to provide details on the employee housing and parking reports.

Greg Kiskinen noted that KMR provides employee housing for at least 30% of their full-time staff during the ski season, with resort-owned units available in Kirkwood, as well as resort-rented units in South Lake Tahoe. The demand for in-valley housing has been reduced due to the units available in South Lake Tahoe, and the shuttle service for employees. Sam Booth asked if housing was available year-round, and asked KMR to provide data on year-round employee occupancy for the counties' annual housing element reports.

Ricky Newberry reported that parking during the 2024-2025 ski season was easier to manage and credited additional surface parking areas, the reservation-based parking program, and fee-based carpooling. Heavy snow events continue to create parking challenges as they limit available parking while encouraging more day skiers to visit Kirkwood. General discussion followed with public concern about the need for additional parking, parking decks, and parking management. The resort will continue to refine the reserved parking programs and consider options for improving parking availability in existing lots.

On a motion by Brendan Ferry, seconded by Sam Booth, the mitigation monitoring reports were unanimously approved as submitted.

CORRESPONDENCE

Re: Next Tri-Tac meeting

From Kca Treasurer <treasurer@thekca.org>
Date Fri 7/11/2025 1:33 PM
To Chuck Beatty <CBeatty@amadorcounty.gov>

You don't often get email from treasurer@thekca.org. [Learn why this is important](#)

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Sorry for being late today - I didn't get an email with the link for this session for some reason but a fellow homeowner flagged the meeting. I did make a comment in the chat at the end - I do support preserving the very limited open space we have in the Kirkwood valley. The upper tennis courts should not be rezoned to other uses as we need to preserve that space for the future enjoyment of all residents / visitors down the line. The decision to shift maintenance back to Vail was taken before I joined the board. Instead of maintaining, it was immediately graded and the prior court removed. There is significant support from the community to maintain this space and look at future options for it - and we will continue to engage the Vail team on that.

Happy to discuss.

Marc

408 386 1214

On Jul 2, 2025, at 9:19 AM, Chuck Beatty <CBeatty@amadorcounty.gov> wrote:

Good morning, Marc. Both emails were added to the TC-TAC distribution list.
Thanks,
Chuck

Chuck Beatty, AICP
Community Development Director
[Amador County Planning](#)
810 Court Street, Jackson, CA 95642
[ONLINE PERMITTING](#)

New email address! cbeatty@amadorcounty.gov

From: Kca Treasurer <treasurer@thekca.org>
Sent: Wednesday, July 2, 2025 8:56 AM
To: Chuck Beatty <CBeatty@amadorcounty.gov>
Cc: Marc Musgrove <marcjmusgrove@gmail.com>
Subject: Next Tri-Tac meeting

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Chuck

May I please be added to the list to receive updates regarding upcoming Tri-Tac meetings / agendas / minutes please?

Personal email cc'd as well here.

thanks
Marc

408 386 1214

Vail and the Kirkwood tennis courts

From Dean Donovan <dean@diamondstream.com>

Date Sun 7/13/2025 6:22 PM

To Chuck Beatty <CBeatty@amadorcounty.gov>

You don't often get email from dean@diamondstream.com. [Learn why this is important](#)

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Hi Chuck,

I am a homeowner and sometimes resident up in Kirkwood. I was really disturbed when I learned that Vail had demolished the upper sports courts on the East Meadow to put up parking without prior authorization. Our kids play on those courts during the summers and when they were little, we pulled them around on sleds there during the winters. There is a lot of additional housing contemplated at Kirkwood with many units under constructions and hundreds of open lots being marketed. Yet, there is very little recreational space in the Kirkwood plan at present. a Vail has already removed many of the amenities that used to exist in Kirkwood and having Vail simply take that space for short term parking seems like a bad long-term trade for the residents, the county and the valley.itself .

While turning more and more of Kirkood into a parking lot on an ad hoc basis might make Vail more money it isn't consistent with a healthy, growing community. In my view, the country should compel Vail's to restore the facilities and remediate the destruction they have already caused to make it clear this type of behavior will not be tolerated. After that is complete, we should welcome an integrated plan for public review as the ski resorts success is important to the community as well..

Chuck, I appreciate you looking into this situation. Hopefully Vail can present a plan that leads to healthy development for the valley and the relevant authorities can strongly signal to Vail that unauthorized actions is not an acceptable development path.

Best Regards,

Dean

Managing Director
DiamondStream Partners

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RE: Kirkwood Employee Housing

From Sam Booth <sbooth@alpinecountycal.gov>

Date Mon 7/14/2025 4:18 PM

To Frederick Newberry <fnewberry@vailresorts.com>; Allie Sturtridge <alexandra.sturtridge@vailresorts.com>;
Brendan Ferry <brendan.ferry@edcgov.us>; cbeatty@amadorgov.org <cbeatty@amadorgov.org>

Cc Gregory Kiskinen <GKiskinen@vailresorts.com>; Kelly Keith <KKeith@vailresorts.com>

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Hi Ricky,

I appreciate the introduction and prompt follow up on this after Friday's meeting.

Allie:

Each of the counties have to do reporting for our General Plan-Housing Element on the jobs/housing balance in our county and the amount and types of housing we have available. As we were reviewing the Kirkwood mitigation – housing report last week, I wondered how much of the housing Kirkwood Mountain Resort provides is utilized year round outside of just the winter season?

I believe Brendan Ferry mentioned he would also be interested in the numbers on the off-site housing provided in South Lake for his reporting on plan revisions they have going in El Dorado County.

As mentioned, this is great information for the counties to report on, but isn't directly related to the Kirkwood Specific Plan mitigation, so I wouldn't think it's necessary to present at a Tri-Tac meeting unless just for informational purposes.

Thanks,
-Sam

Samuel R. Booth, AICP

Director

Alpine County Community Development

50 Diamond Valley Rd

Markleeville, CA 96120

Office: 530-694-2140 x425



From: Frederick Newberry <fnewberry@vailresorts.com>

Sent: Monday, July 14, 2025 12:21 PM

To: Allie Sturtridge <alexandra.sturtridge@vailresorts.com>; Brendan Ferry <brendan.ferry@edcgov.us>; cbeatty@amadorgov.org; Sam Booth <sbooth@alpinecountyca.gov>

Cc: Gregory Kiskinen <GKiskinen@vailresorts.com>; Kelly Keith <KKeith@vailresorts.com>

Subject: Kirkwood Employee Housing

[EXTERNAL EMAIL] DO NOT CLICK links or attachments unless you recognize the sender and know the content is safe.

Hello,

Following up from Friday's meeting regarding Kirkwood Employee Housing and making an introduction with Allie Sturtridge, our Housing Manager.

Please let us know what info you're looking for and if we want Allie to present at an upcoming TriTAC meeting.

Thanks all,



Frederick "Ricky" Newberry (He/Him)

Vice President & General Manager

Kirkwood Mountain Resort | Vail Resorts, Inc.

fnewberry@vailresorts.com

Office: 209.258.7202

www.Kirkwood.com

"Make the Mountain Proud"

I [acknowledge](#) that I live and work on the traditional lands and territories of the Washoe Tribe

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Re: Zoned OS-R space in Kirkwood

From Chuck Beatty <CBeatty@amadorcounty.gov>
Date Tue 7/22/2025 9:41 AM
To thepetris@comcast.net <thepetris@comcast.net>

Good morning. Your comments are part of the correspondence record for the next TC-TAC meeting. However, I want to point out that the rumored tennis court rezoning hasn't been formally submitted and can't be a TC-TAC agenda or discussion item. If Vail submits a rezoning application, it will be a formal item for discussion on a future TC-TAC agenda, as well as the Alpine County Planning Commission and Board of Supervisors agendas. To keep you in the loop, I've added your email to the TC-TAC agenda distribution list.

Thanks,
Chuck

Chuck Beatty, AICP
Community Development Director
[Amador County Planning](#)
810 Court Street, Jackson, CA 95642
[ONLINE PERMITTING](#)

New email address! cbeatty@amadorcounty.gov

From: thepetris@comcast.net <thepetris@comcast.net>
Sent: Monday, July 21, 2025 4:07 PM
To: Chuck Beatty <CBeatty@amadorcounty.gov>
Subject: Zoned OS-R space in Kirkwood

[You don't often get email from thepetris@comcast.net. Learn why this is important at <https://aka.ms/LearnAboutSenderIdentification>]

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Dear Mr. Beatty,

I am writing to you as the Chair of the Tri-County Technical Advisory Committee. Our understanding is that the Committee is considering Vail's rezoning request for part of the space that is currently zoned as Open Space and Recreation (OS-R) in the 2003 Kirkwood Specific Plan. My husband and I have been homeowners in Kirkwood since 2001. Our children got to grow up enjoying the valley and all it has to offer. During the summers they used the tennis and basketball courts and the playground. We look forward to sharing these amenities with our grandchildren.

We request that the Committee recommend that the area remains zoned as is for "permanent facilities,

parks, tennis courts and similar installations". Thank you for your consideration.

Best,

Nell & Matt Petri

Sun Meadows Two #301

Kirkwood Tennis Court Concerns

From Michele Cerza <michelecerza@yahoo.com>

Date Tue 7/22/2025 6:32 PM

To sbooth@alpinecountyca.gov <sbooth@alpinecountyca.gov>; Chuck Beatty <CBeatty@amadorcounty.gov>;
brendan.ferry@edcgov.us <brendan.ferry@edcgov.us>

Cc Scott Cerza <sjcerza@mac.com>

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Dear Sam, Chuck and Brendan,

I'm a longtime Kirkwood homeowner (20 years) and share the concerns being voiced by my fellow homeowners about Vail razing the upper tennis/sport courts and preparing the area for parking, ignoring the zoning of this area as Open Space and Recreation in the 2003 Kirkwood Specific Plan.

I am also concerned that those tennis courts might have been represented in real estate marketing materials as being part of what we were buying into when we bought a home at Kirkwood and became members of the Kirkwood Community Association (KCA). Then suddenly it turns out those courts are owned by Vail, not part of the KCA after all, and they are just gone.

I hope you might add me to your email distribution list regarding TC-TAC meetings.

Thank you,

Michele Cerza
415-990-5034
Owner, Mountain Club and Sentinels West at Kirkwood
Member, Kirkwood Community Association

Conversion of tennis courts to parking at Kirkwood Meadows Ski Resort

From Bill Harrington <BHarrington@oup.vc>

Date Thu 8/7/2025 6:10 AM

To sbooth@alpinecountyca.gov <sbooth@alpinecountyca.gov>; Chuck Beatty <CBeatty@amadorcounty.gov>;
brendan.ferry@edcgov <brendan.ferry@edcgov>

Cc Bernadette Clavier <bernadette.clavier@gmail.com>

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Dear Messrs. Booth, Beatty and Ferry,

It has recently been brought to my attention that Vail Resorts has razed the upper tennis courts at Kirkwood in preparation for converting them to surface parking, done without public notice or comment period. Although Vail Resorts may view Kirkwood as one of many ski areas in its portfolio, and a nice day trip option to offer those Epic pass holders visiting South Lake, for the residents it is our community and where we spend weeks, if not months at time with friends and family. Our community is important to us, as are the various amenities that make Kirkwood such a special place to live in both winter AND summer. The upper tennis courts are an integral component of the sporting and athletic options that provide a range of options making life at Kirkwood so enjoyable.

It appears that Vail's actions are at odds with the 2003 Kirkwood Specific Plan, and as such should be subject to a fulsome and transparent review and approval process, seeking input from the seasonal and permanent residents that such a decision would impact. My understanding is that this must include an initial approval by TC-TAC, then sent to the Alpine County Planning Commission and Board of Supervisors for a vote, as well as a formal environmental review.

I look forward to following your approach to this issue and thoughtful stewardship of the Kirkwood Valley we call home.

Thank you for your consideration.

William Harrington
51019 Sentinels Way
Kirkwood, CA 95646

650-380-1408

Opposition to Rezoning Request by Vail

From Vera Teyrovsky <teyrovsky@gmail.com>
Date Mon 8/11/2025 6:30 PM
To Chuck Beatty <CBeatty@amadorcounty.gov>

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Dear Mr Beatty,

We are homeowners at Kirkwood for the last 13 years. We are writing to voice my husband and my complete opposition to the rezoning of the community space to parking for several reasons;

1. At the time of Vail's purchase of Kirkwood, Vail stated that it needed no more parking spaces to make a go of the resort and investing in new lifts.

Vail has not lived up to its promises as has not replaced any chairlifts as promised and yet has added numerous parking spaces in several different locations. Snow removal and road repair is paid for by the Kirkwood Community Association (KCA).

2. It is a serious betrayal of the law and should not be rewarded with rezoning after the fact.

3. There are few areas zoned to locate permanent recreational facilities for Kirkwood Resort. The loss of these facilities diminished the availability of recreational opportunities and value of Kirkwood homeowners.

Vail should be required to pay for either the restoration of the courts or contribute the equivalent to the rebuilding of the swimming pool and hot tubs.

We are very much opposed to the rezoning of recreational space for parking, which diminishes facilities for homeowners while increasing maintenance costs for homeowners. It also sends a clear message that Vail is not at liberty to break laws and ignore zoning. Vail should be required to pay restitution to the KCA.

Sincerely,

Vera and Georges Goupille

Sun Meadows One Unite 304

Kirkwood Meadows Drive

Kirkwood CA 95646

Notices, News, and Communications from TC-TAC: Sign me up please

From Kevin Wasserstein <kwasserstein@gmail.com>

Date Wed 8/27/2025 3:47 PM

To Chuck Beatty <CBeatty@amadorcounty.gov>

Cc Kevin Wasserstein <kwasserstein@gmail.com>

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Hi Chuck

I am a Kirkwood homeowner, and have interest in receiving all TC-TAC communications including notices of meetings and agendas, and other communications about planning activities. Please can you sign me up for these?

Also, of note, this was triggered by my recent reading of the details and concerns raised about Vail's elimination of the upper tennis courts at Kirkwood, in lieu of parking, outside of the guidelines detailed in the Kirkwood Specific Plan, designating the area for recreational use. It is horrible to hear that they acted first, without credence to these guidelines. My understanding is that they are planning to submit a rezoning request, which I hope will receive full/due process, transparency, public commentary...and if necessary, reparation of the damages for removal of the tennis courts.

Thank you for your leadership and stewardship of the community in these matters.

Best
Kevin

Kevin Wasserstein

ITEM 1



COUNTY OF ALPINE Community Development Department

Samuel R. Booth, AICP, Director

STAFF REPORT

TO: Tri-County Technical Advisory Committee

FROM: Alpine County, Community Development Department

DATE: September 12, 2025

SUBJECT: Variance Application for 342 East Meadows Drive, Kirkwood, File # 2025-219.

The review of a variance to:

- A. Allow a major modification of the building envelope for lot 208 of the East Meadows subdivision. The existing building envelope is 5,296 sq ft, the variance would remove 1,305 sq ft from the southern portion of the building envelope and add 1,305 sq ft to the northern portion of the building envelope. Keeping the building envelope at 5,296 sq ft.
- B. And to allow for a driveway with a 24 ft width – exceeding the Kirkwood Specific Plan requirement of 14 ft maximum width. These modifications are proposed for a new single-family residence and driveway access.

RECOMMENDATION

Approval of variance request and finding that project is Categorically Exempt from CEQA.

SITUATION

A. Applicant

Natalia Wieczorek
BFD/KEY Architecture
PO Box 6093
Stateline, NV 89449

B. Background

Address:	343 East Meadows Drive, Kirkwood, CA 95646
APN:	006-121-009
General Plan Designation:	Planned Development - PD
Zoning Designation:	Planned Development- PD
Environmental Processing:	Categorical Exemption, Class 5
Previous Processing:	None

C. Project description

Natalia Wieczorek has submitted a Variance Application on behalf of Brent Tetri for a major building envelope modification and an increased driveway width. The proposed project is part of the East Meadows Subdivision, when this Subdivision Map was approved a unique building envelope (See attachment 1) was created for each lot rather than having yard setback requirements. The envelopes were established to protect existing large trees, avoid steep areas and other site constraints, and to maintain separation between houses on adjoining lots.

The Tri County Technical Advisory Committee (Tri-TAC) has the authority to approve building envelope modifications that involve less than 5% of the building envelope. This application exceeds the 5% threshold, by removing 1,305 sq ft from the southern portion of the building envelope and adding 1,305 sq ft to the northern portion. There will be no change in the overall size of the building envelope (see attachment 2). As more than 5% of the envelope is being moved from one location to another the application must be processed as a variance and is subject to approval by the Planning Commission.

In addition, the applicant is requesting a driveway width of 24 ft, an increase from the 12-14 ft required by the Kirkwood Specific Plan Appendix 4 Design Ordinance, Driveway and Site Access Section C.1.a.

The applicant is requesting a variance to construct a new single-family residence and driveway. A letter from the applicant is included as Attachment 3. The request for the building envelope modification is to remove a portion of the building envelope, which is currently located on top of an existing underground electric utility line (see attachment 2) that prevents the property owner from fully using the approved building envelope and to increase the driveway width to 24 ft.

D. Criteria for Decision

Section 18.80.020 of the Alpine County Code includes the following criteria for considering zoning variances:

A. That there are exceptional or extraordinary circumstances or conditions applying to the land, building or use referred to in the application, which circumstances or conditions do not apply generally to other land, buildings, and/or uses in the district.

B. That the granting of the application is necessary for the preservation and enjoyment of the substantial property rights of the petitioner.

C. That the granting of such application will not affect adversely the health or safety of persons residing or working in the neighborhood of the property of the applicant and will not be detrimental to the public welfare or injurious to property or improvements in said neighborhood. (Ord. 453 § 26.01, 1985)

E. Issues & Staff Analysis

When the property was purchased, there was no record of the underground electric utility line in the purchase report. KMPUD also had no record of it and had to wait until the snow melted to determine if the line existed and the location on the property. Once a survey was done it was discovered that the line was within the boundary of the approved building envelope.

The moving of the building envelope will not place the structure in a location with greater site constraints, the site has similar slope along the entire property, with the steepest section being along the front of the lot (see attachment 4).

It is the opinion of the staff that the underground electric utility easement prevents the property owner from using the property as intended in the original East Meadows Subdivision Map and granting this variance is necessary to construct a reasonable single-family residence justifying the granting of this building envelope modification.

The Kirkwood Specific Plan requires driveways be between 12-14 ft to provide enough space between driveways for snow removal. The East Meadows Design Guidelines allow for driveways up to 24 ft in width. Because the East Meadows HOA is responsible for snow removal in this area of Kirkwood, staff would defer to the HOA on the driveway width. Additionally Alpine County Design Standards Table 9-1 allows a driveway width of 28 feet on other areas of the County outside of Kirkwood.

KMPUD and EMACC have reviewed and approved plans (see attachment5)

PUBLIC NOTIFICATION

Notice of the public hearing was posted according to Alpine County Code section 18.50.030. No comments have been received as of the date of this report.

ALTERNATE ACTIONS

1. Deny the application with specific findings addressing the criteria for decision listed in this report.
2. Continue the public hearing pending consideration of additional information necessary to make a decision.

RECOMMENDATION

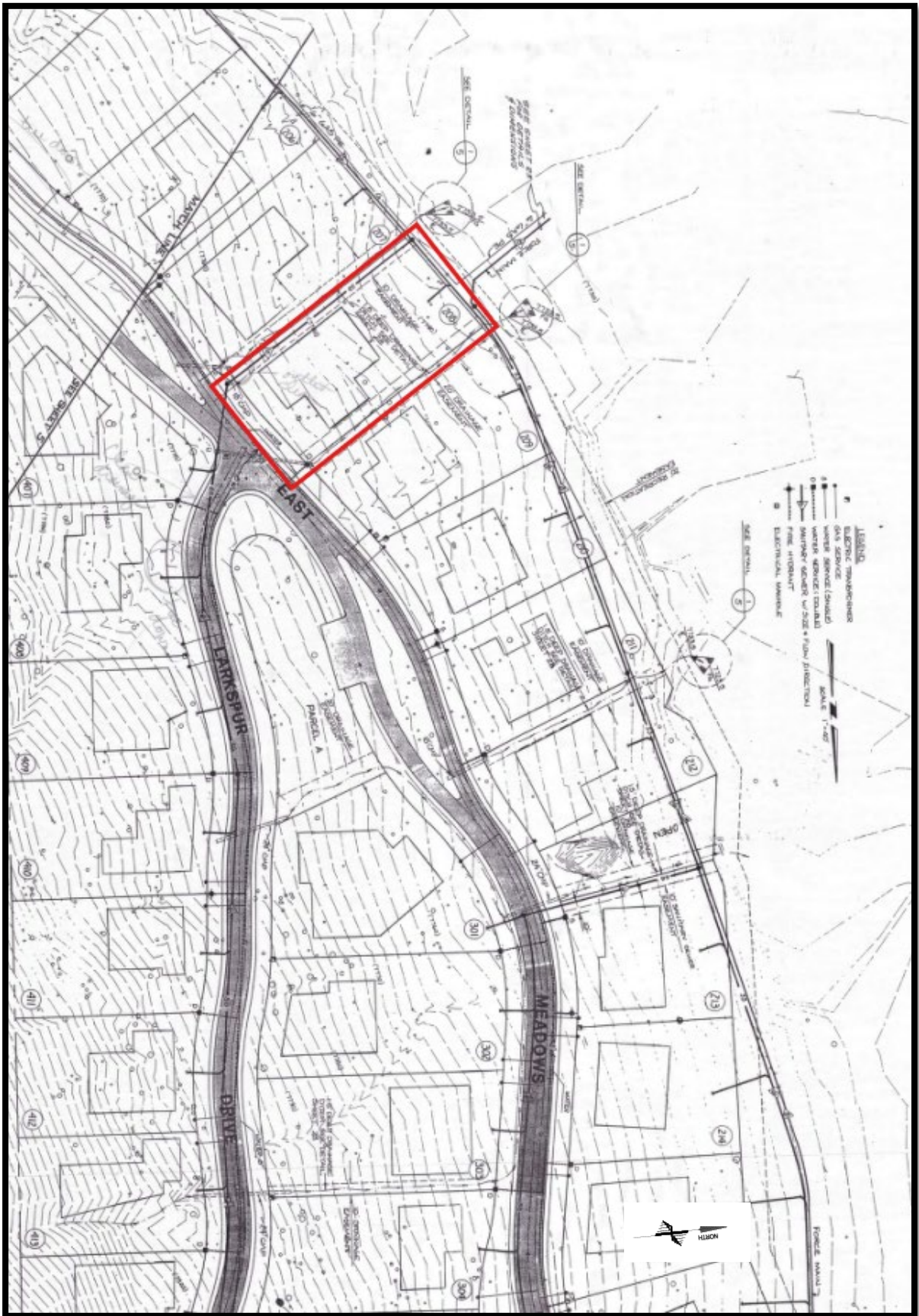
1. Approval of the zoning variance without conditions for:
 - a. A major building envelope modification
 - b. A driveway width variance to 24 feet

Respectfully submitted,

Alexa Burke
Planner II

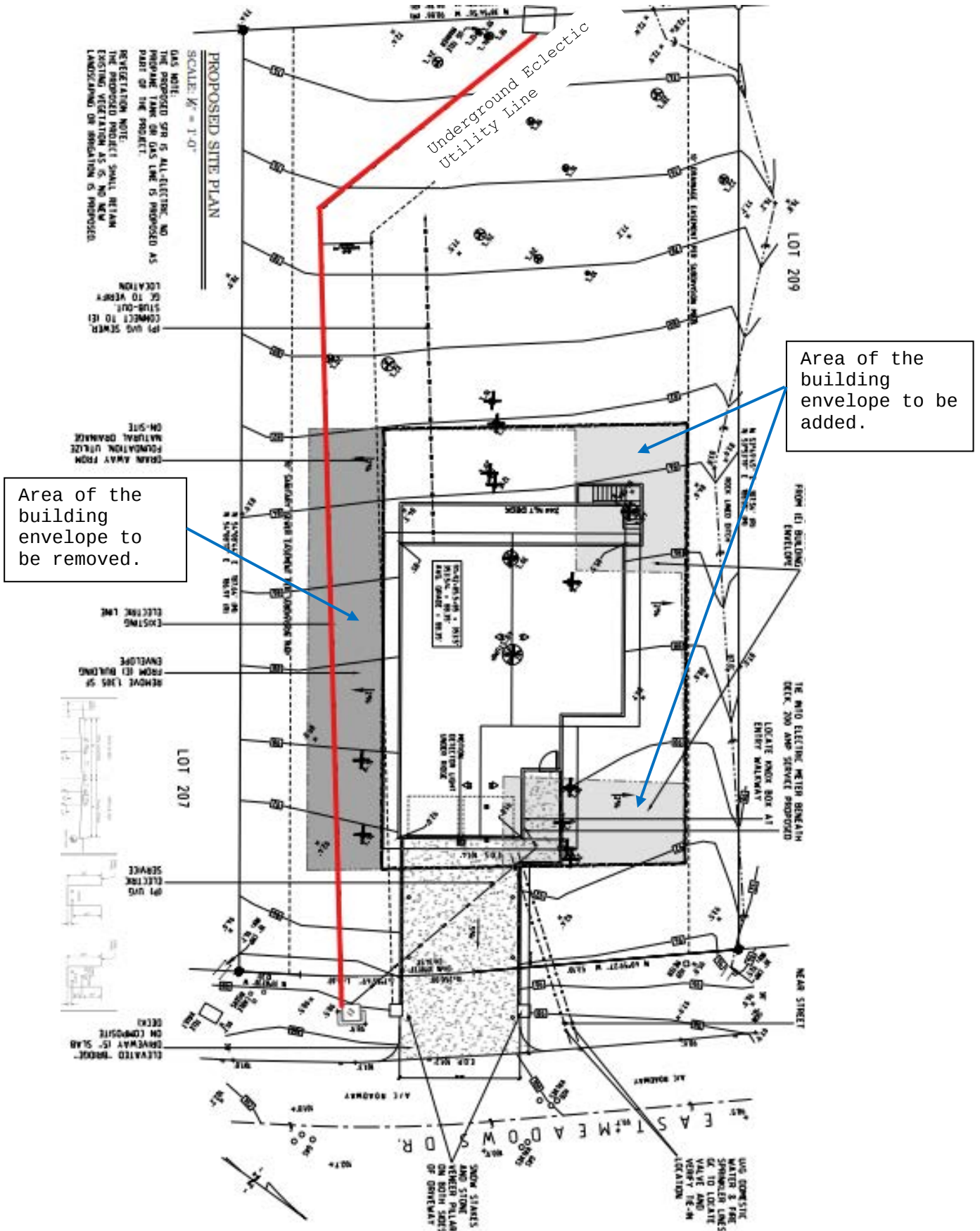
Attachments:	1.	East Meadows Building Envelopes
	2.	Site Plan
	3.	Application Materials
	4.	Site Photos
	5.	Approval from KMPUD and EMACC

Attachment 1
East Meadows Building Envelopes



Attachment 2

Site Plan



Attachment 3 Applicant Materials

BFD/KEY ARCHITECTURE

Architect: Natalia Wiecek (NV 8503, CA 39332)

Mailing Address:

PO Box 6093
Stateline, NV 89449

Office Address:

225 Kingsbury Grade, Suite B
Stateline, NV 89449
(775) 580-6288
architect@bfdkey.com

DATE: September 8, 2025

VARIANCE REQUEST – ALPINE COUNTY

342 East Meadows Dr.
Kirkwood, CA 95646

1. Because of special circumstances applicable to the property, including size, shape, topography, location or surroundings, the strict application of the zoning ordinance deprives such property of the privileges enjoyed by other property in the vicinity and under the same zoning classification.

Due to the location of an existing underground electric utility line, which was not shown on the parcel documents at time of purchase, and a preexisting transformer, the home and driveway location were not feasible to be located within the original building envelope without causing significant financial hardship for the owner.

Ultimately, we coordinated with KMPUD to locate the line. They had to wait until the snow was sufficiently melted in order to verify the location of the utility line as no one had records of it, and it was possible the line didn't actually exist. Once located, it turned out that adjusting the building envelope and moving the house as proposed would be sufficient to allow the utility line to remain as is.

The existing building envelope was laid out in such a way as to presuppose a driveway along the SE boundary line, but this is directly in line with the existing transformer and would cause the home to sit on top of the electric utility line below. Relocating the envelope as proposed allows the homeowner to enjoy the same kind of driveway access as surrounding properties, without having to relocate any the existing utilities.

KMPUD has review the change and confirmed that the proposed home location meets their requirements.

Additionally, the original envelope was located over 20' back from the front property line – the relocated property line continues this offset. As described in the Kirkwood Specific Plan, driveways serving garages which are more than 20' away from the front property line shall have a maximum driveway width of 14' at the street property line. This would create a unique condition on this parcel as the front property line is located nearly 17' away from the street right of way, and the building envelope is another 21' further back. Reducing the driveway width from the 24' at the garage, down to 14' at the property line and to the street, will negatively impact snow removal operations and deprive the owner from access enjoyed by surrounding properties, all of which have a driveway which is the same width as the garage door at minimum.

2. Granting of the variance will be in harmony with the general intent and purpose of zoning objectives and will not be materially detrimental to public health, safety or welfare, or injurious to property or improvements in the vicinity.

The variance shall allow the home to enjoy a driveway access similar to that of the neighboring properties. The relocated building envelope allows for the existing electric line and transformer to remain as installed, and will likely prevent any disruption in service to adjacent properties. The variance will not be injurious to health, safety or welfare of any adjacent properties.

Reducing the driveway width at the street to 14' would likely have a negative impact on existing services, such as snow removal, and also affect the overall harmony of the surrounding structures.

3. Granting the variance shall not constitute a grant of special privileges inconsistent with the limitations upon other properties in the vicinity and within the zone in which the property is situated.

The variance will allow the homeowner of this parcel to enjoy the same privileges as those of surrounding properties, and will not create any special privileges.

The surrounding properties enjoy driveways which are at least the same width as their garage doors and which are not impeded by existing utilities.

Attachment 4
Site Photos



Attachment 5 KMPUD and EMACC Approval

From: [Brandi Benson](#)
To: [Alexa Burke](#)
Subject: 342 East Meadows Drive
Date: Wednesday, August 20, 2025 11:34:34 AM
Attachments: [Tetri Plans 250819-SP2 PSP.pdf](#)

[EXTERNAL EMAIL] DO NOT CLICK links or attachments unless you recognize the sender and know the content is safe.

Good Morning Alexa,

KMPUD has reviewed the attached plans for 342 East Meadows Drive and takes no exception to the proposed house location relative to the existing electric line.

Brandi Benson, PE
Operations Manager
Kirkwood Meadows Public Utility District
209-258-4444 x107
www.kmpud.com

Kirkwood Meadows PUD is an equal opportunity provider and employer.

Subject: FW: 342 Larkspur
Date: Monday, September 8, 2025 10:42:02 AM

----- Forwarded message -----

From: <johnreiter@kirkwoodcp.com>
Date: Tue, Aug 19, 2025 at 7:55 AM
Subject: RE: 342 Larkspur
To: Natalia Wieczorek <architect@bfdkey.com>, Brent Tetri <tetriiba@gmail.com>

Hi Brent and Natalia – please let this email serve as approval from the EM ACC to move ahead on the Lot 208 EMD project. If you need me to submit anything more to Alpine County indicating approval from the EM ACC just let me know.

John Reiter, General Manager
Kirkwood Property Services
1499 Kirkwood Meadows Drive
PO Box 158
Kirkwood, CA 95646
O (209) 753-0244 / C (970) 799-4722
www.kirkwoodps.com www.livekirkwood.com

ITEM 2

TECHNICAL MEMORANDUM

DATE: September 2, 2022

TO: Greg Kiskinen
Director of Base Area Operations
VAIL RESORTS

FROM: Ryan Spreeman P.E. (Nevada)
Robert Anderson, P.E., CFM, WRS
R.O. ANDERSON ENGINEERING, INC.

SUBJECT: Hydrologic Analysis for
the Loop Road Parking Improvements
Kirkwood Mountain Resort, California



Introduction

The purpose of this Technical Memorandum is to present the results from the hydrologic analysis comparing the change in the peak runoff discharge for the Loop Road parking improvements. The extent of the analysis corresponds to the improved area and includes a total of 1.3 acres in Alpine County (APN 06-020-019) and in Amador County (023-270-027), California. The proposed improvements consist of grading within and adjacent to the Loop Road right-of-way to create space for additional parking area. The regraded parking areas will be pervious with the soil types and landcovers described herein, and preserve the drainage patterns for the pre-developed condition. The results of the hydrologic analysis indicate an immaterial increase in runoff generated by the 25-year 24-hour storm event for the proposed parking improvements.

Hydrologic Conditions

The analyzed subbasin consists of 1.3 acres and includes the regraded parking areas, the slopes adjacent to Loop Road, and the existing Loop Road impervious surfaces. The subbasin extends from the Kirkwood Meadows Drive and Loop Road intersection to the outfall of the existing 36-inch culvert. This culvert, although partially buried, perpetuates stormwater beneath Loop Road to the Kirkwood Meadows wetlands. This existing culvert is not affected by the proposed project improvements. An exhibit of the analyzed subbasin is provided as an enclosure to this Technical Memorandum.

For the pre-developed condition, the area analyzed includes the existing impervious surfaces and previously disturbed open spaces that are characterized by sparse trees, forest litter, and grasses with less than 30-percent ground cover. The Natural Resources Conservation Service (NRCS) web-based soil maps show that the contributing watershed soils consist of Andic Cryumbrepts-Lithic Cryumbrepts association with a corresponding Hydrologic Soil Group of B. These existing undeveloped areas were assumed to be open spaces in "poor" condition and have a correspond NRCS curve number of 79. The weighted average of the corresponding

September 2, 2022
Page 2 of 2

NRCS curve numbers for the pre-developed condition is 88. A detailed description of contributing watershed soils and the hydrologic soil group properties of each soil can be found in the NRCS Custom Soil Resource Report and Hydrologic Soil Group Map provided as an enclosure.

For the post-developed condition, the added parking areas are assumed to be a compacted aggregate base with a gravel overlay and have a corresponding NRCS curve number of 82. When combined with the existing impervious surfaces, the weighted average of the corresponding NRCS curve numbers for the pre-developed condition is 89. All curve number values were selected from the NRCS TR-55's Table 2-2a.

The subject property is shown to be in Zone 'X' and is determined to be outside of Special Flood Hazard Area (SFHA) as identified in the Flood Insurance Rate Map (FIRM) Panel 06005C0050F, issued by Federal Emergency Management Agency (FEMA) and last revised on May 20, 2010.

Results and Summary

Due to the specificity by which landcover can be represented as a numeric value, the NRCS curve number method was used to model the pre-developed and post-developed storms. Precipitation data was obtained from the *National Oceanic and Atmospheric Administration (NOAA) Atlas 14, Volume 1*. The Time of Concentration, *t_c*, within the limited subbasin was assumed to be a minimum of 10-minutes. It was determined that a **24-hr storm** with a recurrence interval of **25 years** would generate a peak flow rate of approximately **10 cfs** for both the pre-developed and improved conditions for the project subbasin. Output hydrographs and associated calculations can be found as enclosures to this Technical Memorandum.

The Loop Road parking improvements as submitted for consideration by the Tri-County Technical Advisory Committee and by Amador and Alpine Counties will generate an immaterial increase in runoff, and no significant measures will be needed to contain the onsite discharge as it specifically relates to the scope of this project.

If upon your review of this information, should you have any questions, please do not hesitate to contact me directly.

End of Technical Memorandum

Enclosures



NOAA Atlas 14, Volume 6, Version 2
Location name: Kirkwood, California, USA*
Latitude: 38.6902°, Longitude: -120.0731°
Elevation: 7769.75 ft**
* source: ESRI Maps
** source: USGS



POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan

NOAA, National Weather Service, Silver Spring, Maryland

[PF_tabular](#) | [PF_graphical](#) | [Maps_&_aerials](#)

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches) ¹										
Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.169 (0.147-0.197)	0.210 (0.182-0.245)	0.268 (0.231-0.314)	0.318 (0.271-0.377)	0.392 (0.320-0.484)	0.453 (0.361-0.575)	0.520 (0.401-0.680)	0.593 (0.442-0.804)	0.701 (0.496-1.00)	0.792 (0.537-1.18)
10-min	0.243 (0.210-0.283)	0.301 (0.260-0.352)	0.384 (0.331-0.450)	0.456 (0.389-0.540)	0.562 (0.459-0.694)	0.649 (0.517-0.824)	0.745 (0.575-0.975)	0.850 (0.633-1.15)	1.00 (0.711-1.44)	1.14 (0.769-1.69)
15-min	0.293 (0.254-0.342)	0.364 (0.315-0.425)	0.464 (0.400-0.544)	0.551 (0.470-0.653)	0.679 (0.555-0.839)	0.785 (0.625-0.997)	0.901 (0.695-1.18)	1.03 (0.766-1.39)	1.22 (0.859-1.74)	1.37 (0.930-2.05)
30-min	0.391 (0.339-0.456)	0.486 (0.420-0.567)	0.619 (0.533-0.725)	0.735 (0.627-0.871)	0.906 (0.740-1.12)	1.05 (0.834-1.33)	1.20 (0.927-1.57)	1.37 (1.02-1.86)	1.62 (1.15-2.31)	1.83 (1.24-2.73)
60-min	0.545 (0.472-0.635)	0.676 (0.585-0.790)	0.862 (0.743-1.01)	1.02 (0.873-1.21)	1.26 (1.03-1.56)	1.46 (1.16-1.85)	1.67 (1.29-2.19)	1.91 (1.42-2.59)	2.26 (1.60-3.22)	2.55 (1.73-3.80)
2-hr	0.757 (0.656-0.883)	0.940 (0.813-1.10)	1.19 (1.03-1.40)	1.41 (1.20-1.67)	1.72 (1.41-2.13)	1.97 (1.57-2.50)	2.24 (1.73-2.93)	2.53 (1.89-3.44)	2.95 (2.09-4.22)	3.30 (2.24-4.92)
3-hr	0.934 (0.810-1.09)	1.16 (1.00-1.35)	1.46 (1.26-1.71)	1.72 (1.47-2.04)	2.09 (1.71-2.58)	2.38 (1.90-3.02)	2.70 (2.08-3.53)	3.03 (2.26-4.11)	3.51 (2.49-5.02)	3.91 (2.65-5.82)
6-hr	1.39 (1.20-1.62)	1.71 (1.48-1.99)	2.14 (1.84-2.51)	2.50 (2.13-2.96)	3.02 (2.47-3.73)	3.43 (2.73-4.35)	3.86 (2.98-5.06)	4.32 (3.22-5.86)	4.98 (3.52-7.11)	5.51 (3.74-8.21)
12-hr	2.10 (1.82-2.44)	2.58 (2.23-3.01)	3.24 (2.79-3.79)	3.79 (3.23-4.49)	4.57 (3.73-5.65)	5.19 (4.13-6.59)	5.84 (4.51-7.65)	6.54 (4.87-8.86)	7.52 (5.32-10.7)	8.31 (5.63-12.4)
24-hr	3.11 (2.78-3.55)	3.86 (3.45-4.40)	4.88 (4.35-5.59)	5.74 (5.07-6.64)	6.97 (5.95-8.35)	7.96 (6.64-9.74)	9.00 (7.32-11.3)	10.1 (7.98-13.1)	11.7 (8.83-15.8)	13.0 (9.45-18.2)
2-day	4.31 (3.86-4.92)	5.39 (4.82-6.16)	6.91 (6.16-7.92)	8.23 (7.27-9.51)	10.1 (8.65-12.1)	11.7 (9.78-14.4)	13.4 (10.9-16.9)	15.3 (12.1-19.8)	18.0 (13.6-24.3)	20.3 (14.8-28.4)
3-day	5.12 (4.58-5.84)	6.44 (5.75-7.36)	8.32 (7.41-9.53)	9.97 (8.80-11.5)	12.4 (10.6-14.8)	14.4 (12.0-17.7)	16.6 (13.5-20.9)	19.1 (15.1-24.7)	22.7 (17.1-30.7)	25.7 (18.7-36.0)
4-day	5.75 (5.14-6.56)	7.27 (6.49-8.30)	9.42 (8.39-10.8)	11.3 (9.99-13.1)	14.1 (12.0-16.9)	16.4 (13.7-20.1)	18.9 (15.4-23.8)	21.7 (17.1-28.1)	25.8 (19.5-34.8)	29.2 (21.3-40.9)
7-day	7.22 (6.46-8.23)	9.16 (8.18-10.5)	11.8 (10.6-13.6)	14.2 (12.5-16.4)	17.5 (14.9-20.9)	20.2 (16.8-24.7)	23.1 (18.8-29.0)	26.2 (20.7-33.9)	30.8 (23.2-41.5)	34.5 (25.1-48.3)
10-day	8.34 (7.46-9.51)	10.6 (9.48-12.1)	13.7 (12.2-15.7)	16.3 (14.4-18.9)	20.0 (17.1-24.0)	23.0 (19.2-28.1)	26.1 (21.2-32.8)	29.5 (23.3-38.1)	34.2 (25.8-46.2)	38.1 (27.7-53.3)
20-day	11.3 (10.1-12.8)	14.4 (12.9-16.5)	18.6 (16.6-21.4)	22.1 (19.5-25.5)	26.8 (22.9-32.1)	30.5 (25.4-37.3)	34.2 (27.8-43.0)	38.1 (30.1-49.3)	43.5 (32.9-58.8)	47.8 (34.8-66.9)
30-day	13.8 (12.3-15.7)	17.7 (15.8-20.2)	22.8 (20.3-26.1)	26.9 (23.8-31.1)	32.4 (27.7-38.8)	36.6 (30.6-44.8)	40.9 (33.2-51.3)	45.2 (35.7-58.5)	51.1 (38.6-69.1)	55.7 (40.6-78.0)
45-day	17.3 (15.4-19.7)	22.2 (19.9-25.4)	28.5 (25.4-32.7)	33.5 (29.6-38.7)	40.1 (34.2-47.9)	44.9 (37.5-55.0)	49.8 (40.5-62.5)	54.7 (43.2-70.7)	61.2 (46.2-82.6)	66.1 (48.2-92.6)
60-day	20.5 (18.3-23.4)	26.4 (23.6-30.1)	33.7 (30.0-38.6)	39.5 (34.8-45.6)	46.9 (40.0-56.1)	52.3 (43.6-64.0)	57.7 (46.9-72.4)	63.0 (49.7-81.5)	70.0 (52.9-94.6)	75.3 (54.8-105)

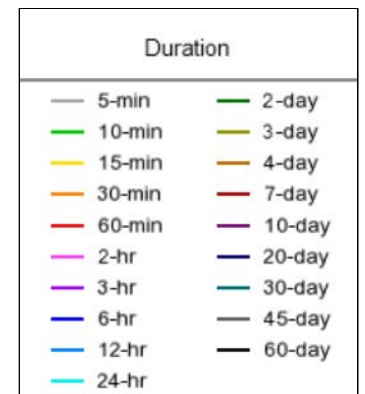
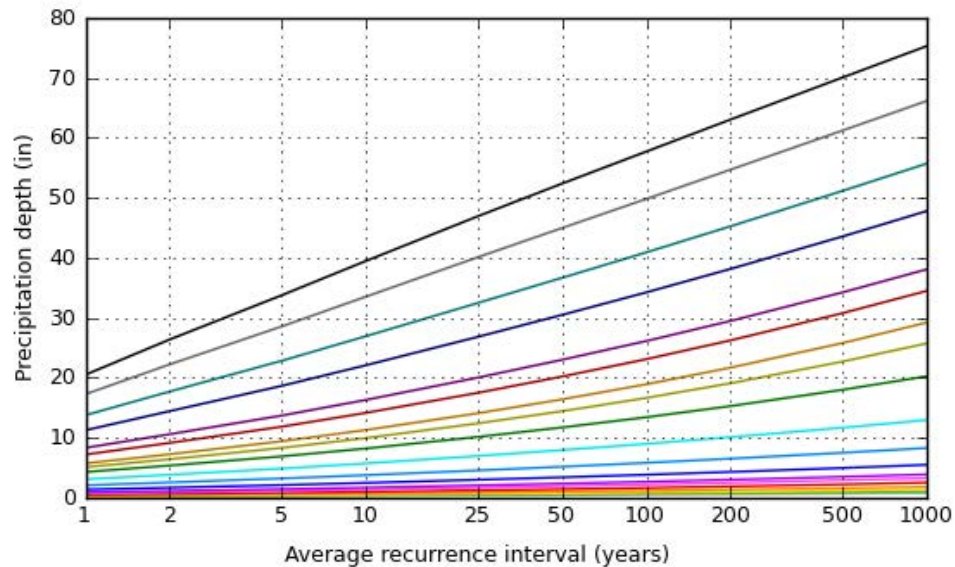
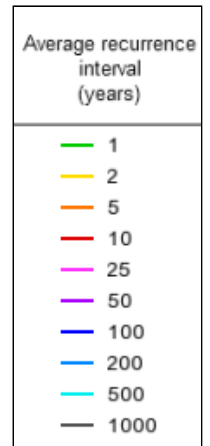
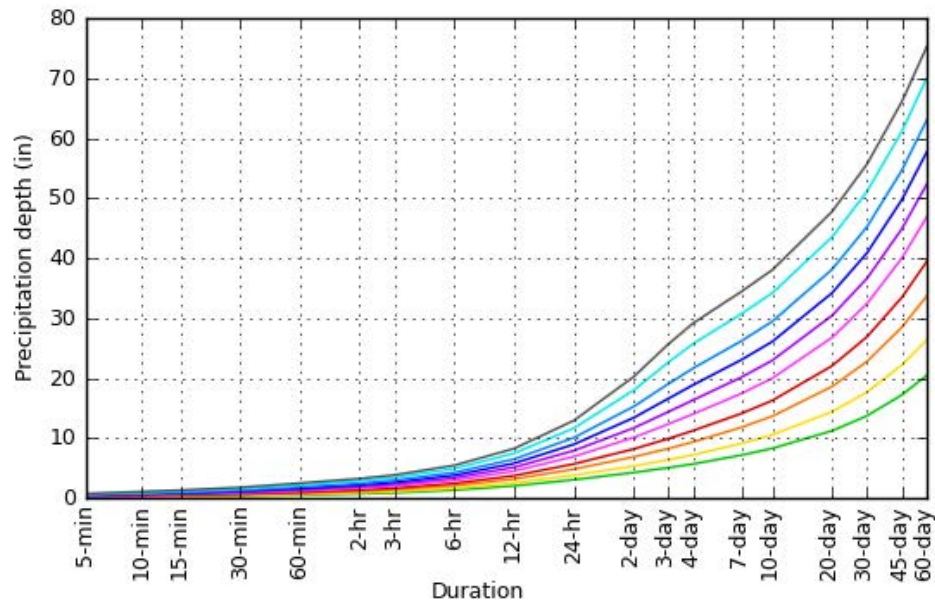
¹ Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS). Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values. Please refer to NOAA Atlas 14 document for more information.

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PF graphical

PDS-based depth-duration-frequency (DDF) curves

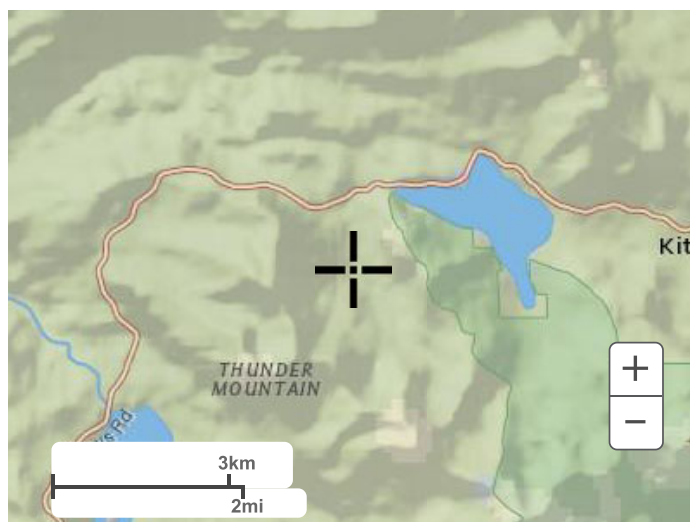
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NOAA Atlas 14, Volume 6, Version 2

Created (GMT): Fri Sep 2 16:26:05 2022

[Back to Top](#)**Maps & aerials****Small scale terrain**



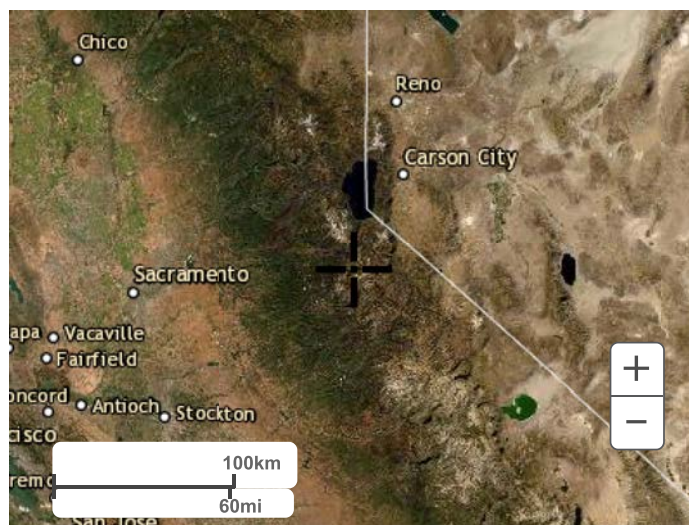
Large scale terrain



Large scale map



Large scale aerial



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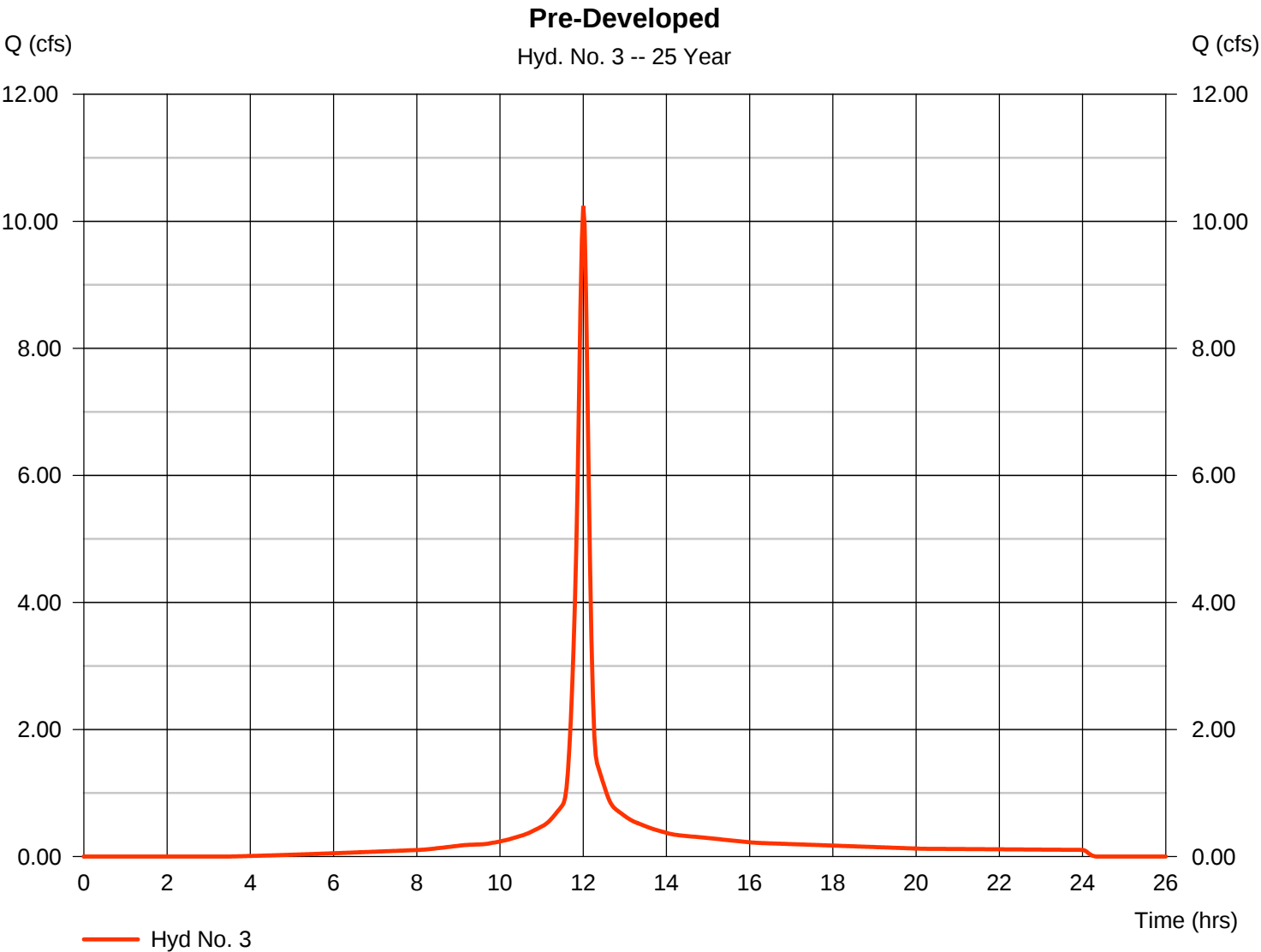
Hydrograph Report

Hyd. No. 3

Pre-Developed

Hydrograph type	= SCS Runoff	Peak discharge	= 10.24 cfs
Storm frequency	= 25 yrs	Time to peak	= 12.00 hrs
Time interval	= 2 min	Hyd. volume	= 27,912 cuft
Drainage area	= 1.340 ac	Curve number	= 88*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 6.97 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(0.732 x 79) + (0.608 x 98)] / 1.340



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2020

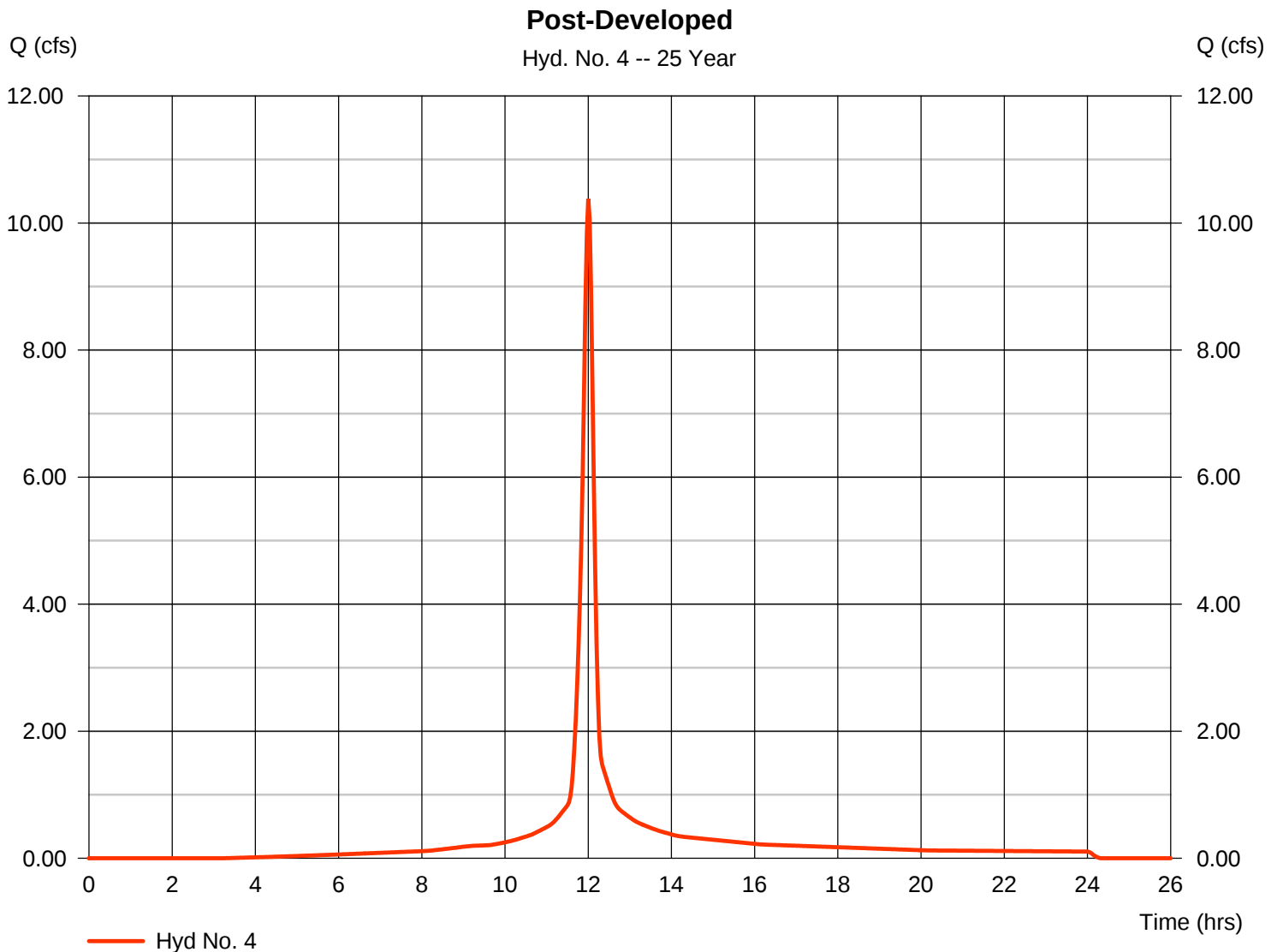
Friday, 09 / 2 / 2022

Hyd. No. 4

Post-Developed

Hydrograph type	= SCS Runoff	Peak discharge	= 10.38 cfs
Storm frequency	= 25 yrs	Time to peak	= 12.00 hrs
Time interval	= 2 min	Hyd. volume	= 28,486 cuft
Drainage area	= 1.340 ac	Curve number	= 89*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 6.97 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = $[(0.395 \times 82) + (0.608 \times 98) + (0.337 \times 79)] / 1.340$



National Flood Hazard Layer FIRMette



120°4'42"W 38°41'36"N



0 250 500 1,000 1,500 2,000 Feet 1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
		Area of Undetermined Flood Hazard Zone D
GENERAL STRUCTURES		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
		17.5
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
		Coastal Transect Baseline
MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped



The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 9/2/2022 at 1:11 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.



United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for Eldorado National Forest Area, California, Parts of Alpine, Amador, El Dorado, and Placer Counties



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map



Custom Soil Resource Report

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Eldorado National Forest Area, California, Parts of Alpine, Amador, El Dorado, and Placer Counties
Survey Area Data: Version 14, Sep 3, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 3, 2019—Oct 29, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND

MAP INFORMATION

imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
102	Andic Cryumbrepts-Lithic Cryumbrepts association, 15 to 50 percent slopes	5.0	100.0%
Totals for Area of Interest		5.0	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Eldorado National Forest Area, California, Parts of Alpine, Amador, El Dorado, and Placer Counties

102—Andic Cryumbrepts-Lithic Cryumbrepts association, 15 to 50 percent slopes

Map Unit Setting

National map unit symbol: hlq7

Elevation: 7,000 to 10,000 feet

Mean annual precipitation: 55 to 65 inches

Mean annual air temperature: 36 to 46 degrees F

Frost-free period: 90 to 100 days

Farmland classification: Not prime farmland

Map Unit Composition

Andic cryumbrepts and similar soils: 60 percent

Lithic cryumbrepts and similar soils: 25 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Andic Cryumbrepts

Setting

Landform: Mountains

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Mountainflank

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Lahar derived from andesite

Typical profile

H1 - 0 to 11 inches: sandy loam

H2 - 11 to 30 inches: sandy loam

H3 - 30 to 60 inches: weathered bedrock

Properties and qualities

Slope: 15 to 50 percent

Depth to restrictive feature: 30 to 31 inches to paralithic bedrock

Drainage class: Well drained

Runoff class: High

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Very low (about 2.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7e

Hydrologic Soil Group: B

Hydric soil rating: No

Description of Lithic Cryumbrepts

Setting

Landform: Mountains
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Mountainflank
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Lahar derived from andesite

Typical profile

H1 - 0 to 12 inches: sandy loam
H2 - 12 to 19 inches: sandy loam
H3 - 19 to 60 inches: weathered bedrock

Properties and qualities

Slope: 15 to 50 percent
Depth to restrictive feature: 19 to 20 inches to paralithic bedrock
Drainage class: Excessively drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 1.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: D
Hydric soil rating: No

Soil Information for All Uses

Soil Properties and Qualities

The Soil Properties and Qualities section includes various soil properties and qualities displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each property or quality.

Soil Erosion Factors

Soil Erosion Factors are soil properties and interpretations used in evaluating the soil for potential erosion. Example soil erosion factors can include K factor for the whole soil or on a rock free basis, T factor, wind erodibility group and wind erodibility index.

K Factor, Whole Soil (Kirkwood Timber Creek Upper Lot and Loop Road Improvements)

Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and saturated hydraulic conductivity (Ksat). Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

"Erosion factor Kw (whole soil)" indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments.

Factor K does not apply to organic horizons and is not reported for those layers.

Custom Soil Resource Report

Map—K Factor, Whole Soil (Kirkwood Timber Creek Upper Lot and Loop Road Improvements)



Custom Soil Resource Report

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

Soil Rating Polygons

	.02
	.05
	.10
	.15
	.17
	.20
	.24
	.28
	.32
	.37
	.43
	.49
	.55
	.64
	Not rated or not available

Soil Rating Lines

	.02
	.05
	.10
	.15
	.17
	.20

	.24
	.28
	.32
	.37
	.43
	.49
	.55
	.64
	Not rated or not available

Soil Rating Points

	.02
	.05
	.10
	.15
	.17
	.20
	.24
	.28
	.32
	.37
	.43
	.49
	.55
	.64
	Not rated or not available

Water Features

	Streams and Canals
	Rails
	Interstate Highways
	US Routes
	Major Roads
	Local Roads
	Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Eldorado National Forest Area, California, Parts of Alpine, Amador, El Dorado, and Placer Counties
Survey Area Data: Version 14, Sep 3, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 3, 2019—Oct 29, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND

MAP INFORMATION

imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Table—K Factor, Whole Soil (Kirkwood Timber Creek Upper Lot and Loop Road Improvements)

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
102	Andic Cryumbrepts-Lithic Cryumbrepts association, 15 to 50 percent slopes	.05	5.0	100.0%
Totals for Area of Interest			5.0	100.0%

Rating Options—K Factor, Whole Soil (Kirkwood Timber Creek Upper Lot and Loop Road Improvements)

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Layer Options (Horizon Aggregation Method): Surface Layer (Not applicable)

References

- American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.
- American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.
- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.
- Federal Register. July 13, 1994. Changes in hydric soils of the United States.
- Federal Register. September 18, 2002. Hydric soils of the United States.
- Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.
- National Research Council. 1995. Wetlands: Characteristics and boundaries.
- Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262
- Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577
- Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580
- Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.
- United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.
- United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374
- United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelpdb1043084>

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United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf