

Regular Meeting of the Board of Directors**Thursday, September 16, 2021****4:00 – 6:00 pm****The meeting will be held remotely via Zoom at: <https://us02web.zoom.us/j/89675733636>**

If you are using a computer or other device to join the meeting, you may click [here](#). A computer video camera is not required to participate. If you do not have access to a computer or internet during this meeting, or if your computer does not have audio, you can call in by phone: (669) 900-6833 and enter the meeting ID: 896 7573 3636 when prompted.

1. Call to Order
2. Approval of Agenda
3. Introduction of Guests and Staff
4. Public Comment- The Board will hear comments on items that are not on the agenda. The Board cannot act on an item unless it is an emergency as defined under Government Code Sec. 54954.2.
5. Consent Agenda The Board of Directors approves: 5.1. June 17, 2021 Draft Regular Meeting Minutes 5.2. July 1, 2021 Draft Special Meeting Minutes 5.3. August 19, 2021 Draft Regular Meeting Minutes The Board of Directors receives into record: 1.1. June 23, 2021 Half Moon Bay Review article: District spearheads new fire prevention permit process 1.2. July 7, 2021 Half Moon Bay Review article: County cuts red tape to remove hazardous trees 1.3. July 7, 2021 Half Moon Bay Review article: \$1 million slated for Quarry Park fire mitigation 1.4. August 11, 2021 Half Moon Bay Review article: Coastal Commission approves streamlined permitting process to manage vegetation 1.5. National Young Farmers Coalition's California Young Farmers Report 2019
2. Regular Agenda 2.1. Discussion about drought extent and severity and RCD programs and services. 2.2. Board will select delegate to 2021 California Association of RCDs' Conference. 2.3. Board will consider approving a Grading Permit Exemption for an agricultural access road at the Johnston Ranch property. 2.4. Board will consider Reso 2021-7: Resolution Certifying Entering into Grant Agreement with California Climate Investment Forest health Grant Program for Forest Health Treatments at Butano State Park and Post Fire Digital Imagery and LiDAR Data Collection. 2.5. Board will consider approving Fiscal Year 2020 Draft Audited Financials. 2.6. Executive Director's report 2.7. NRCS report 2.8. Directors' reports
3. Adjourn Meeting The next Regular Meeting of the Board of Directors will be October 21, 2021.

Public records that relate to any item on the open session agenda for a regular board meeting are available for public inspection. Those records that are distributed less than 72 hours prior to the meeting are available for public inspection at the same time they are distributed to all members, or a majority of the members of the Board.

Minutes of the Regular Meeting of the Board of Directors
September 16, 2021
4:00 pm – 6:00 pm
via Zoom teleconference

Directors present: Barbara Kossy, TJ Glauthier, Adrienne Etherton, Jim Reynolds

Associate Directors present: Steve Stielstra, John Keener, Kevin Watt

RCD staff present: Kellyx Nelson, Lau Hodges, Jarrad Fisher, Sara Polgar, Nicole Schmidt, Stephanie MacDonald, Adria Arko, Noah Katz, Doug Millar, Kasey Butler, Amy Kaeser, Sheena Sidhu

NRCS staff present: Jim Howard

Guests present:

Adrienne Carr, North Coast County Water District

Brigid O'Farrell

Catherine Peery, Sustainable Pescadero and Pescadero Foundation

David Liefert, Midpeninsula Regional Open Space District

Joe Pecharich, NOAA

Jonathon Cordero, Association of Ramaytush Ohlone

Julie Woodruff, Sequoia Ecological Consulting

Nicholas Erridge, Pescadero Municipal Advisory Council

Nicole Reynolds, Level Lea Farm

Rinaldo Veseliza

Rodger Reinhart

1. Call to Order

Kossy called the meeting to order at 4:01 p.m.

2. Approval of Agenda

Agenda was approved unanimously.

3. Introductions of Guests and Staff

All in attendance introduced themselves.

4. Public Comment

- Erridge gave the updates from Pescadero Municipal Advisory Council:
 - CSA 11, a local water source that supplies water to 100 people, was looking to expand to Pescadero High School.
 - Pescadero Creek is dry in places. Residents with and without water rights are pulling from the creek and are scared about the drought.
 - Hopes of building a downtown plaza; searching for solutions because the location is on a floodplain.

5. Consent Agenda

- Nelson pulled items 5.1 July 17, 2021 Draft Regular Meeting Minutes and 5.3 August 19, 2021 Draft Regular Meeting Minutes.
- Glauthier moved to approve the consent agenda as amended, Etherton seconded. Motion passed unanimously.

6. Regular Agenda

6.1 Discussion about drought extent and severity and RCD programs and services. (Presentation attached)

- After the presentation, discussion included:
 - Carr from the North Coast County Water District described their water conservation programs (e.g. “lawn be gone” and smart meters); sources of NCCWD water (water purchased from SFPUC is treated in San Bruno, nearly 15% is from local creeks); and other regional programs.
 - Liefert described Midpeninsula Regional Open Space District (MROSD) conservation grazing program and reservoir systems to relieve stress on properties and diversify water.
 - Peery shared reports of salt water intrusion at private residences near the beach.
 - Watt echoed what Liefert said; he further noted TomKat Ranch had opted to breed fewer cattle with a potential of de-stocking.
 - Watt observed ranchers selling when the market is low, slaughtering early and trucking in hay and water.
 - Pecharich from NOAA noted that some marine species needed fresh water and NOAA was working with the RCD to help better their environments.
 - Arko stated that farmers are reluctant to build new housing, which is in short supply, because of all of the uncertainty the drought had created.
 - Howard explained that the San Mateo Coast wasn’t great for depending on aquifers due to the fractured geography and abundance of iron and magnesium. NRCS has always promoted diversifying water supplies.
 - Peerey witnessed disputes over residents lawns and not sharing water.
 - There was general discussion about water witches.
 - There was discussion not sending drinkable water down the sink or toilet, and technologies for treating and recycling waste water.
 - Cordero noted the drought was a concern as the Association of Ramaytush Ohlone prepare to start a farm and garden at the lower end of San Gregorio Creek.
 - There was discussion about state and federal grant programs.
 - Polgar noted the RCD had developed a Local Hazard Mitigation Plan and once it was approved by the Federal Emergency Management Agency, the RCD could be eligible to apply for more funds for large water storage projects.
 - Pecharich explained that NOAA usually worked with RCDs or non-profits to fund projects that improve streamflow for fish.
 - Howard complimented the RCD’s level of knowledge and technical expertise and noted NRCS makes significant investments in water storage projects.
 - Glauthier noted the RCD had repaired and installed lots of ponds, but it was slow to get them online. He asked if those ponds would help in future droughts.

Nelson confirmed they would and noted several of the ponds came out of the 2014 drought.

6.2 Board will select delegate to 2021 California Association of RCDs' (CARCD) Conference.

- Etherton said she was probably available but would like to discuss it with Nelson off-line first.
- **ACTION:** Kossy moved to select Etherton as the RCD's CARCD Conference delegate, Glauthier seconded. Motion passed unanimously.

6.3 Board will consider approving a Grading Permit Exemption for an agricultural access road at the Johnston Ranch property.

- Polgar introduced and described the project.
- Discussion included risks of weed invasions and erosion.
- **ACTION:** Glauthier moved to approve the Grading permit Exemption, Etherton seconded. Motion passed unanimously.

6.4 Board will consider Resolution 2021-7: Certifying Entering into Grant Agreement with California Climate Investment Forest health Grant Program for Forest Health Treatments at Butano State Park and Post Fire Digital Imagery and LiDAR Data Collection.

- Discussion included how the digital imagery would include the CZU Fire burn area, the total project budget and scope and unit budget.
- **ACTION:** Etherton moved to approve Resolution 2021-7, Glauthier seconded. Motion passed unanimously.

6.5 Board will consider approving Fiscal Year 2020 (FY20) Draft Audited Financials.

- Glauthier noted that the auditor had made all of the requested edits, he had reviewed it, and noted the audited year was not as affected by COVID as the subsequent year.
- **ACTION:** Glauthier moved to approve the FY20 Draft Audited Financials, Reynolds seconded. Motion passed unanimously.

6.6 Executive Director's report

- Howard had been asked to take a detail in Sacramento for approximately 3 months, and Drew Mather would be acting District Conservationist and coming to Board Meetings.
- First Flush outreach will be sent out soon.
- The revised final new mission statement is: *We are/San Mateo Resource Conservation District is a local hub for conservation, helping the people of San Mateo County build a more thriving natural environment for all.*
- Rudy Espinoza-Murray was appointed to the RCD Board of Directors.
- Arko was honored with the Greenbelt Alliance's Hidden Heroes Award.

- There will be project updates at the October Meeting.

6.7 NRCS report (Howard)

No report given.

6.8 Directors' reports

- Etherton reported:
 - She had shared the First Flush information with the Coastside Families Taking Action Environmental Committee.
 - She was curious about the El Granada eucalyptus removal and had been asked about the revegetation plan for medians; Nelson confirmed San Mateo County was aware of the resident's desire to revegetate the medians.
- Glauthier had no report
- Keener had no report
- Kossy reported that she was still managing the CA Invasive Plant Facebook Page, which was up to 7.8K members.

7. Adjourn Meeting

- Kossy adjourned the meeting at 6:04 p.m.

Study Session on Drought

Meeting of the Board of Directors

September 16, 2021



D0 - Abnormally Dry

- Soil is dry; irrigation delivery begins early
- Dryland crop germination is stunted
- Active fire season begins

100.0%
of CA
(D0-D4)



D1 - Moderate Drought

- Dryland pasture growth is stunted; producers give supplemental feed to cattle
- Landscaping and gardens need irrigation earlier; wildlife patterns begin to change
- Stock ponds and creeks are lower than usual

100.0%
of CA
(D1-D4)



D2 - Severe Drought

- Grazing land is inadequate
- Fire season is longer, with high burn intensity, dry fuels, and large fire spatial extent
- Trees are stressed; plants increase reproductive mechanisms; wildlife diseases increase

93.9%
of CA
(D2-D4)



D3 - Extreme Drought

- Livestock need expensive supplemental feed; cattle and horses are sold; little pasture remains; fruit trees bud early; producers begin irrigating in the winter
- Fire season lasts year-round; fires occur in typically wet parts of state; burn bans are implemented
- Water is inadequate for agriculture, wildlife, and urban needs; reservoirs are extremely low; hydropower is restricted

87.9%
of CA
(D3-D4)



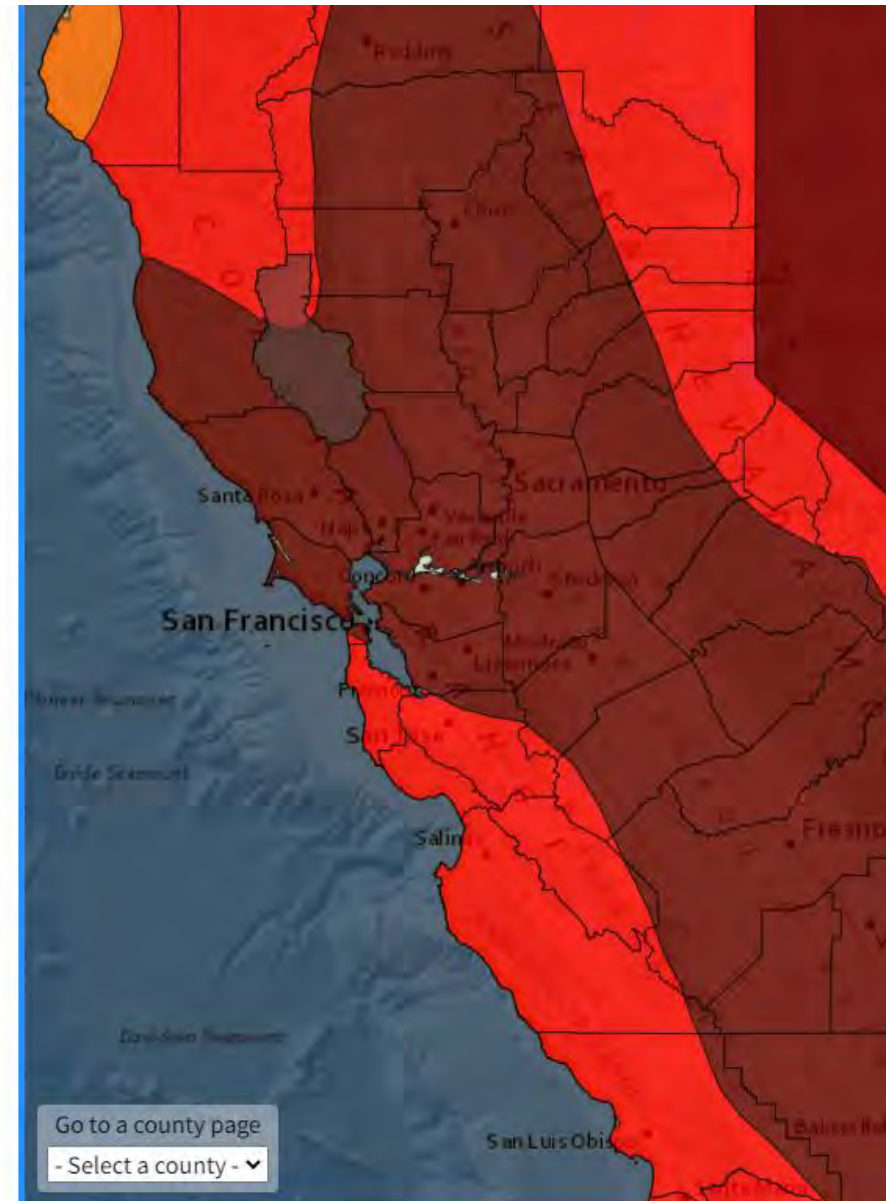
D4 - Exceptional Drought

- Fields are left fallow; orchards are removed; vegetable yields are low; honey harvest is small
- Fire season is very costly; number of fires and area burned are extensive
- Fish rescue and relocation begins; pine beetle infestation occurs; forest mortality is high; wetlands dry up; survival of native plants and animals is low; fewer wildflowers bloom; wildlife death is widespread; algae blooms appear

45.7%
of CA
(D4)

Sources:

[NDMC](#), [NOAA](#), [USDA](#)





Current & Future Drought

- Expect to continue and get worse (70-80% chance of La Niña this winter)
- Coastside vs other parts of county
- Large sections of creeks that are dry
- In some cases flow below ability of stream gages to detect
- Groundwater is lower than normal in some places and some wells running low
- Cross cutting across all RCD program areas
 - Agriculture
 - Forest health and fire resilience
 - Water quality
 - Habitat for wildlife
- Community science drought tracking tool [Drought Map Observations \(arcgis.com\)](https://arcgis.com)
- Gaps in our knowledge



Impacts to Agriculture

- Farmers fallowing fields
- Farmers expressing concern about conservation planting projects, e.g. hedgerows
- Farmers concerned about cover crop timing because rains coming later
- Ranchers selling cattle off early and losing money
- Ranchers paying to truck water in
- Ranchers paying to truck in hay and additional feed because not enough forage
- Ponds drying up that provide stock water for cattle

Impacts to Wildlife

- Ponds and other wetland habitats reduced
- Fish strandings and other mortalities
- Less freshwater inputs in lagoons contributes to higher salinity, lower dissolved oxygen, higher temperatures
- Cattle impacting creeks looking for water



Other Impacts

Water quality

- In years with less rain, can be more bacteria in some creeks during dry season- less water, higher concentration
- Expecting First Flush to be worse

Domestic water systems

- Streamflow is too low for some domestic water users to be able to pump with their systems
- Risk of impaired water quality in wells, diversions

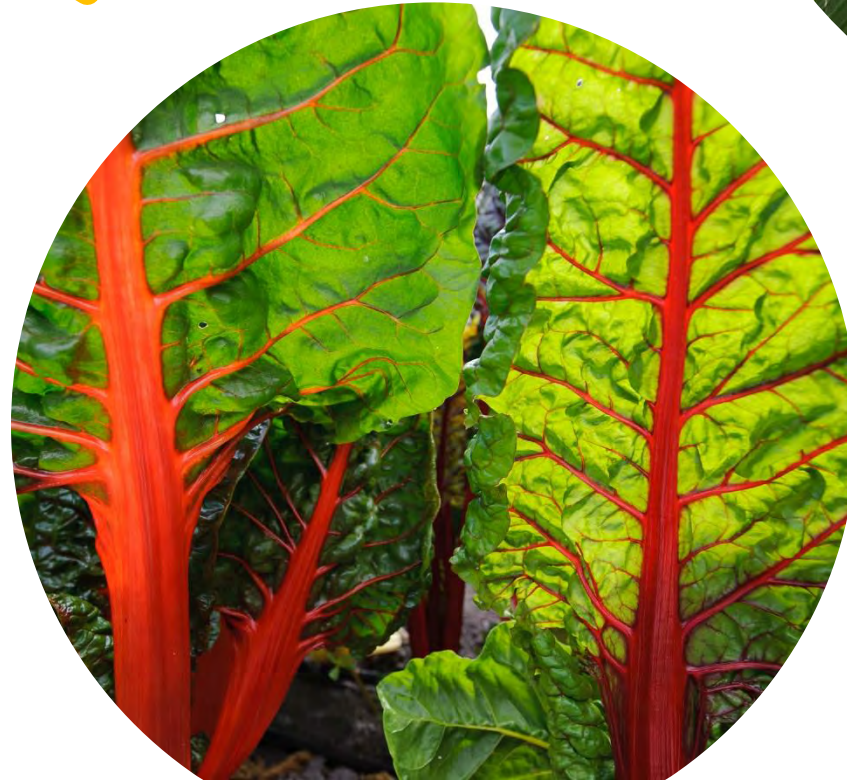
Community cohesion

- People are fighting over water, calling us to complain about other users, people making illegal dams in creeks to hold water for themselves and downstream users not getting it



Vulnerable communities

- Farmers who had been considering building farm labor housing are putting it on hold because of concerns about water
- Reduced crops grown for free for people who are unhoused or food insecure
- Farms cutting costs and reducing acreage results in lost employment opportunities for farmworkers
- Less access to alternatives, e.g. purchasing water





RCD Programs and Services

- Ag and domestic water storage
- Water recycling projects
- Ag and domestic water conservation
- Dedicating water rights to streamflow
- CIMIS station
- Stream gaging, streamflow studies, water resource analyses
- Water management plans for individual and aggregated water users
- Improving soil health and water holding capacity
- Exploring larger scale water storage opportunities
- Helping water users collaborate

Other RCD Efforts

- Cutting Green Tape
- Coordination at local, state, and federal levels: across individual water users, small community water systems/ mutual water companies, Coastside One Water, County, NOAA, etcetera
- Working on eligibility for FEMA funds
- Inclusion in County hazard mitigation planning
- Tracking state and federal funding and bringing to our district- over \$1B coming to CA for resilience work
- Hazard response- how this compares to post-fire
- Illegal activity



Challenges

- Complexity, cost, time- makes it hard to keep up with pace of climate change
 - Aligning permitting, bidding, funding, construction schedules
- Increasing sensitivity talking about water, people don't want vulnerability or exposure
- Even people who have been great conservation partners are prioritizing their water security right now because it is dire
- Unexpected, e.g. assessor's office
- Landowner expectations and community perceptions of projects
- Not enough information about groundwater and hydrology
- Incentive to conserve water upstream if someone downstream is going to take it?



Future Efforts

More work across users

Working towards larger scale and community-level solutions

Take bigger, bolder actions that includes large water storage, difficult conversations with entire communities

Getting up to scale on overall watershed health

Groundwater studies

Preparing for drought and flooding at the same time

Ongoing learning and innovation – going to need to learn to grow into this

Will we always be able to have the win win? Planning for future scenarios.

Anticipating increased regulation of streamflow and water resources

Discussion

- Additional observations of drought
- Other concerns or priorities not addressed in presentation
- Non-RCD programs and services
- Comments or questions about RCD programs and services
- Requests for help

Memorandum

Date: September 16, 2021
To: Board of Directors
From: Kellyx Nelson
Re: Recommendation to approve a Grading Permit Exemption for an agricultural access road at the Johnston Ranch property.

RCD staff recommends the Board of Directors approve a grading permit exemption for relocation of an agricultural access road proposed by Peninsula Open Space Trust (POST) on the Johnston Ranch property along Higgins Canyon Road near Half Moon Bay. (See Location Map)

Relocation of the road is necessary to preserve access for the tenant farmer to his fields and an agricultural pond on the property. The current location of the road follows the previously mapped eastern boundary of POST's property, next to the City of Half Moon Bay's Johnston House property. A recent boundary survey showed that the property line was incorrectly mapped too far to the east (i.e. on City property). The project will realign 1,450 linear feet of existing road about 100-200 feet to the west such that it follows the actual eastern edge of POST's property and the farmer's fields. The City has granted POST a thirty-foot easement along the property line for the road so that the new road alignment will not affect the farming operation.

RCD staff has determined that the project is consistent with Section 9284 (N) of Chapter 5, Article 1 of the San Mateo County Ordinance Code for exemption from the regulations for excavating, grading, filling and clearing on lands in unincorporated San Mateo County for "Agricultural use of land that is operated in accordance with a conservation plan approved by and implemented according to the practices of the Resource Conservation District (RCD) or when it is determined by the RCD that such use will not cause excessive erosion or sediment losses, based on applicable soil loss tolerance values."

RCD staff reviewed the proposed project and conducted a site visit (on June 16, 2021) with the applicant and their project engineer Tim Best (Certified Engineering Geologist). The engineering designs were reviewed by Natural Resource Conservation Service (NRCS) staff Dillon Beatty (Agricultural Engineer). POST has worked with the RCD and NRCS on prior conservation projects and Tim Best has considerable experience with RCD projects.

In an email dated August 18, 2021 (attached) NRCS determined that Tim Best's road design for Johnston Ranch meets the following criteria NRCS Design Standard 560-Access Road (attached) and, as such, meets NRCS Conservation Practice Standard 560.

- Location – Realignment shall remove portions of an existing field road with drainage and erosion issues and increases connectivity of active fields (currently in hay production) and critical water infrastructure.
- Alignment - Realignment reduces road grade to 10% or less in all sections. CPS 560 states a maximum road grade not to exceed 15%, except in special cases.
- Width – Tread width of road is 12' with 1' shoulders on each side which is in accordance with the minimum of 10' tread width plus 2' shoulders on each side for one-way traffic, per CPS 560.
- Type of Road – Ingress-egress since road shall be used as the main travel route into and out of the surrounding fields. Road is considered all purpose, and intended for one-way traffic only, per CPS 560.
- Side Slopes – All side slopes (cuts and fills) are no steeper than 3:1 (H:V). CPS 560 states a maximum slope of 2:1 (H:V)
- Drainage – The road subgrade shall be outsloped 3% to 5% along its entire length, thereby eliminating the need for inboard ditches and/or drain relief culverts. Rolling dips will be placed at approximately 450' increments, or where existing drainageways intersect road.
- Surfacing – Entire roadway is scheduled to be surfaced with 8" minimum compacted 4" minus base, placed above 6" minimum compacted subgrade. Base rock and subgrade to be separated by geotextile fabric.
- Traffic Safety – Grade and drainage features are expected to provide adequate traffic safety.
- Erosion Control – Erosion control is as scheduled in the drawing and expected to meet NRCS CPS 342, Critical Area Planting, and/or CPS 484, Mulching.
- Operation and Maintenance of the road is expected follow the Operation and Maintenance Plan - Access Road code 560, available on the NRCS EFOTG website. Site specific criteria to be provided by Tim Best.

Location Map



Sara Polgar

From: Beatty, Dillon - NRCS, Half Moon Bay, CA <dillon.beatty@usda.gov>
Sent: Wednesday, August 18, 2021 3:07 PM
To: Sara Polgar
Subject: NRCS review GRX memo
Attachments: 560_CA_OM_Access_Road_2012.pdf

Hi Sara,

Here is the revised copy approved by both Desi (Area Engineer) and Jim (District Conservationist). Let me know if I can assist you any other way, or if another revision is needed. I've attached the 560 Access Road O&M for your reference—it is also available on the NRCS EFOTG website, as stated in the memo.

MEMO:

RCD staff recommends the Board of Directors approve a grading permit exemption for improvement to an agricultural access road proposed by Peninsula Open Space Trust (POST) on their Johnston Ranch property near Half Moon Bay.

The current location of the road follows the previously mapped eastern boundary of POST's property, next to the City of Half Moon Bay's Johnston House property. A recent boundary survey showed that the property line was incorrectly mapped too far to the east (i.e. on City property). The project will realign approximately 1,400 linear feet of existing road about 200 feet to the west such that it follows the actual eastern edge of POST's property and the farmer's fields. The City has granted POST a thirty-foot easement along the property line for the road so that the new road alignment will not affect the farming operation.

RCD staff have reviewed the proposed project and conducted a site visit (on June 16, 2021) with the applicant and their project engineer Tim Best (Certified Engineering Geologist). The engineering designs have been reviewed by NRCS staff Dillon Beatty (Agricultural Engineer). POST has worked with the RCD and NRCS on prior conservation projects and Tim Best, has considerable experience with RCD projects.

Regarding NRCS Conservation Practice Standard (CPS) 560-Access Road (document attached), the road meets the following criteria:

- Location – Realignment shall remove portions of an existing field road with drainage and erosion issues and increases connectivity of active fields (currently in hay production) and critical water infrastructure.
- Alignment - Realignment reduces road grade to 10% or less in all sections. CPS 560 states a maximum road grade not to exceed 15%, except in special cases.
- Width – Tread width of road is 12' with 1' shoulders on each side which is in accordance with the minimum of 10' tread width plus 2' shoulders on each side for one-way traffic, per CPS 560.
- Type of Road – Ingress-egress since road shall be used as the main travel route into and out of the surrounding fields. Road is considered all purpose, and intended for one-way traffic only, per CPS 560.
- Side Slopes – All side slopes (cuts and fills) are no steeper than 3:1 (H:V). CPS 560 states a maximum slope of 2:1 (H:V)

- Drainage – The road subgrade shall be outsloped 3% to 5% along its entire length, thereby eliminating the need for inboard ditches and/or drain relief culverts. Rolling dips will be placed at approximately 450' increments, or where existing drainageways intersect road.
- Surfacing – Entire roadway is scheduled to be surfaced with 8" minimum compacted 4" minus base, placed above 6" minimum compacted subgrade. Base rock and subgrade to be separated by geotextile fabric.
- Traffic Safety – Grade and drainage features are expected to provide adequate traffic safety.
- Erosion Control – Erosion control is as scheduled in the drawing and expected to meet NRCS CPS 342, Critical Area Planting, and/or CPS 484, Mulching.
- Operation and Maintenance of the road is expected follow the Operation and Maintenance Plan - Access Road code 560, available on the NRCS EFOTG website. Site specific criteria to be provided by Tim Best.

As such, Tim Best's design for Johnston Ranch meets NRCS Conservation Practice Standard 560.

Thank you,
Dillon Beatty, Agricultural Engineer

This electronic message contains information generated by the USDA solely for the intended recipients. Any unauthorized interception of this message or the use or disclosure of the information it contains may violate the law and subject the violator to civil or criminal penalties. If you believe you have received this message in error, please notify the sender and delete the email immediately.

NATURAL RESOURCES CONSERVATION SERVICE CONSERVATION PRACTICE STANDARD

ACCESS ROAD

(Ft)

CODE 560

DEFINITION

A travel-way for equipment and vehicles constructed as part of a conservation plan.

PURPOSE

To provide a fixed route for vehicular travel for resource activities involving the management of timber, livestock, agriculture, wildlife habitat, and other conservation enterprises while protecting the soil, water, air, fish, wildlife, and other adjacent natural resources.

CONDITIONS WHERE PRACTICE APPLIES

Where access is needed from a private or public road or highway to a land use enterprise or conservation measure, or where travel ways are needed in a planned land use area.

Access roads range from seasonal use roads, designed for low speed and rough driving conditions, to all-weather roads heavily used by the public and designed with safety as a high priority. Some roads are only constructed for a single purpose; i.e. control of forest fires, logging and forest management activities, access to remote recreation areas, or access for maintenance of facilities.

CRITERIA

Access roads shall be designed to serve the enterprise or planned use with the expected vehicular or equipment traffic. The type of vehicle or equipment, speed, loads, soil, climatic, and other conditions under which vehicles and equipment are expected to operate need to be considered. Planned work shall comply with all federal, state and local laws and regulations.

Visual resources and environmental values shall be considered in planning and designing the road system.

Where general public use is anticipated, roads shall be designed to meet applicable federal, state and local criteria.

Sound engineering practices shall be followed to ensure that the road meets the requirements of its intended use and that maintenance requirements are in line with operating budgets.

Clearing of land and disposal shall be carried out in accordance with state laws and county ordinances.

The cross-section shall be adequate to carry collected water to protected drop inlets or on protected waterways to appropriate release points. Roads may be out-sloped only where adequate provisions are made to collect the runoff water and to discharge the flow into stable watercourses.

Location - Roads shall be located to serve the purpose intended, to facilitate the control and disposal of surface and subsurface water, to control or reduce erosion, to make the best use of topographic features, and to include scenic vistas where possible. The roads should generally follow natural contours and slopes to minimize disturbance of drainage patterns. Roads shall be located where they can be maintained and where water management problems are not created. To reduce potential pollution, roads shall be located away from watercourses and utilize buffers where possible to protect water bodies.

Alignment - The gradient and horizontal alignment shall be adapted to the intensity of use, mode of travel, the type of equipment and load weights, and the level of development.

Grades normally should not exceed 10 percent except for short lengths. Maximum grades of 18 percent should only be exceeded if necessary for special uses such as logging roads, field access roads, fire protection roads or other roads not accessible for use by the general public.

For stream crossings, the road should be aligned so that it crosses perpendicular to the channel as much as possible.

Width - The minimum width of the roadbed is 14 ft for one-way traffic and 20 ft for two-way traffic. The roadbed width includes a tread-width of 10 feet for one-way traffic or 16 feet for two-way traffic. Each type of road also requires a minimum of 2 feet of shoulder width on each side of the tread width. Single-lane logging or special-purpose roads can have a minimum width of 10 feet, with greater widths at curves and turnouts. The two-way traffic width shall be increased approximately 4 feet for trailer traffic. The shoulder width may be either gravel or grass. The minimum width of a single lane field road is 10 feet.

Turnouts shall be used on single lane roads where vehicles travel in both directions on a limited basis. Where turnouts are used, road width shall be increased to a minimum of 20 feet for a distance of at least 30 feet.

Types of Field Roads

1. Ingress-egress roads (commonly called connecting roads) are used as the main travel routes into and out of the field and may be constructed on grades as steep as loaded vehicles can travel safely, usually no steeper than 10 percent. These roads should be surfaced with either gravel or asphalt.
2. Diversion roads are placed around the hillside either on a contour or on a grade less than 2 percent. They have a cross-section sloped inward to collect and convey runoff water to a designed outlet. These roads are used mainly during harvest and

are usually surfaced with a vegetative cover.

3. Bench roads are constructed either on a contour or a grade less than 2 percent and have a cross-section sloped outward. However, on hillsides where bench roads are constructed, a diversion road is to be constructed to collect the runoff at intervals of 15 feet of vertical distance.
4. Ridge roads (sometimes called fire breaks) are constructed along ridges mainly to control the spread of fire. These roads are always maintained in a "bare" condition.
5. Logging roads are constructed in forested areas to provide management control of forest and removal of logs during timber harvesting.
6. Pasture or rangeland roads are constructed in rangeland to provide for pasture management.

Side slopes - All cuts and fills shall be designed to have stable slopes of a minimum of 2 horizontal to 1 vertical on heights of less than 4 feet. For short lengths, rock areas, or very steep hillsides, steeper slopes may be permitted, if soil conditions warrant and special stabilization measures are installed.

Areas with geological conditions and soils subject to slides shall be avoided or treated to prevent slides.

Drainage - The type of drainage structure used will depend on the intended use and runoff conditions. Culverts, bridges, fords, or grade dips for water management shall be provided at all natural drainage ways. The capacity and design shall be consistent with sound engineering principles and shall be adequate for the class of vehicle, type of road, development, or use. When a culvert or bridge is installed in a drainage way, its minimum capacity shall convey the design storm runoff without causing erosion or road overtopping. Table 1 lists minimum design storm frequencies for various road types.

Table 1

Road Type	Storm Frequency
Forest Access Roads, Farm Field Access Roads	2 year - 24 Hour
Farm Driveways, Recreation Facility Access Roads	10 year - 24 Hour
Public Access Roads, Camp grounds, Etc.	25 year - 24 Hour

An erosion-resistant low point or overflow area may be constructed across the access road to supplement culvert capacity on non-public use roads. Culverts, bridges, fords and hardened overflow areas should be installed so the road crossing does not significantly impact fish migration.

Roadside ditches shall be adequate to provide surface drainage for the roadway and deep enough, as needed to serve as outlets for subsurface drainage. At a minimum, the roadside ditch shall be 1.0 foot below the top of road surface to provide internal drainage. Ditch channels shall be designed to be on stable grades or protected with structures or linings for stability.

Water-breaks or water-bars may be used to control surface runoff on low-intensity use forest, ranch or similar roads. On steep grades where runoff and erosion is anticipated down the road, water bars should be considered. When roads are at cross slope with the land, waterbars and drop inlets shall be installed across the roadway at intervals. Where water is to be conveyed along the road for more than 150 feet, a protected ditch should be considered. Water bars must be constructed of materials that are compatible with the use and maintenance of the road surface. Water bar discharge areas must be well vegetated or have other erosion resistant materials. See Figure 1 for Recommended Spacing of Relief Culverts and Water Bars Based on Soil Type.

Surface crowning can also help direct road runoff into the side drainage ditches. Unobstructed flow into the ditches must be maintained to prevent flows from causing

roadside erosion. Provide a turnaround at the end of dead end roads. In some areas, turnarounds may also be desirable for stream, lake, recreation, or other access purposes.

To convey water down a hillside, the installation of Grassed Waterway (412) or Underground Outlet (620) will be necessary. In order to reduce sediment pollution, it may be necessary to construct Sediment Basins (350). These measures are to be designed according to the applicable practice standards.

Provide parking space as needed to keep vehicles off the road or from being parked in undesirable locations.

Surfacing - Access roads shall be given a wearing course or surface treatment if required by traffic needs, soil, climate, erosion control, or dust control. The type of treatment, if needed, depends on local conditions, available materials, and the existing road base. If these factors or the volume of traffic is not a problem, no special treatment of the surface is required. On weak bearing capacity soils such as silts, organics, and clays, the surface treatment should be underlain with a geotextile material specifically designed for road stabilization applications when the road is used on a regular basis.

Unsurfaced roads may require controlled access to prevent damage or hazardous conditions during adverse climatic conditions.

Toxic and acid-forming materials shall not be used on roads. This should not be construed to prohibit use of chemicals for dust control and snow and ice removal after considering potential impacts on stabilizing vegetation.

Utilize additional conservation practices to reduce the potential for generation and transport of particulate matter emissions.

Construction Operations - Construction operations should be carried out in such a manner that erosion and air and water pollution are minimized and held within legal limits. Construction shall include the following requirements as necessary for the job:

1. Trees, stumps, roots, brush, weeds, and other objectionable material shall be removed from the work area.
2. Unsuitable material shall be removed from the roadbed area.
3. Grading, sub-grade preparation, and compaction shall be done as needed.
4. Surfacing shall be done as needed.

Traffic safety - Passing lanes, turnouts, guardrails, signs, and other facilities as needed for safe traffic flow shall be provided. Traffic safety shall be a prime factor in selecting the angle and grade of the intersection with public highways. Preferably, the angles shall be not less than 85 degrees. The public highway shall be entered either at the top of a hill or far enough from the top or a curve to provide visibility and a safe sight distance. The clear sight distance to each side shall not be less than 300 feet or as required by local regulations.

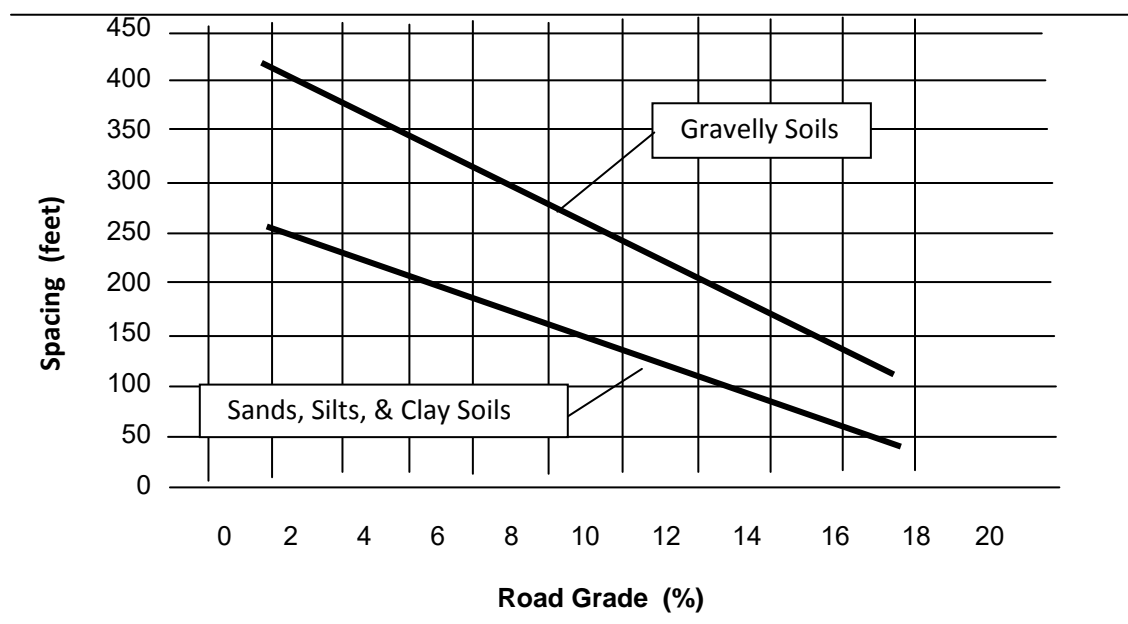
The turning radius of roads shall consider the minimum radius of the farm equipment or trucks that are expected to use the road.

Erosion control - If soil and climatic conditions are favorable, roadbanks and disturbed areas shall be vegetated as soon as possible and skid trails, landings, logging, and similar roads shall be vegetated after harvesting or seasonal use is completed (see Critical Area Planting). If the use of vegetation is precluded and protection against erosion is needed, protection shall be provided by non-vegetative materials, such as gravel or other organic or inorganic material (see Mulching), or in accordance with local regulations.

Roadside channels, cross drains, and drainage structure inlets and outlets shall be designed to be stable (see Structure for Water Control). If protection is needed, riprap or other similar materials shall be used.

Watercourses and water quality shall be protected during and after construction by erosion-control facilities and maintenance. Filter strips, water and sediment control basins, and other conservation practices shall be used and maintained as needed.

Figure 1. Recommended Spacing of Relief Culverts and Water Bars Based on Soil Types



CONSIDERATIONS

Consider visual resources and environmental values during the planning and designing of the road system.

Access roads should be located where minimal adverse impacts will affect wetlands, water bodies, air quality, and wildlife habitat. Consideration should be given to the following:

Air Quality Considerations

To reduce impaired air quality from dust from access roads, consideration should be given to the following:

- Effects from untreated, unpaved roads during harvest or heavy use periods;
- Effects from excessive speed and uncontrolled access on unpaved access roads;
- Effects from lack of dust control during construction of roads.

Water Quantity

- Effects on downstream flows or aquifers that would affect other water uses or users.
- Effects on the volume and timing of downstream flow to prohibit undesirable environmental, social, or economic effects.
- Effects on snowcatch and melt on water budget components.

Water Quality

The type of construction, maintenance, and the road's location determine the road's effect on water quality. When the access road is located across the slope, the runoff from the area upslope of the road may be retarded in the roadside ditches. This may cause sediment to be deposited in the ditch and along the roadside, reducing sediment delivery to the receiving waters. Runoff from the area downslope of the road may not be affected except where the road culverts or low water crossings may concentrate the discharge of the runoff from an uphill area. This may result in a higher carrying capacity of the outlet channel resulting in increased bank and channel erosion and direct transport of this detached sediment, de-icing salts and related pollutants.

There may be a concentration of pollutants in the roadside ditches, increased infiltration, and an increase in soluble chemicals being percolated into the soil water and into the ground water. Watch for:

- Short-term and construction-related effects of this practice on the quality of on-site downstream water courses;
- Overall effects on erosion and the movement of sediment, pathogens, and soluble and sediment-attached substances that would be carried by runoff from construction activities;
- Effects on the visual quality of water resources.

PLANS AND SPECIFICATIONS

Plans and specifications for constructing access roads shall be in keeping with this standard and shall describe the requirements for applying the practice to achieve its intended purpose.

OPERATION AND MAINTENANCE

An operation and maintenance plan will be developed and carried out for the life of the practice:

1. Inspect culverts, roadside ditches, water bars, and outlets after each major runoff event and restore flow capacity as needed.
2. Minimize the damage to vegetative buffers adjacent to the road when it is necessary to chemically treat the road surface to maintain erosion protection.
3. Maintain vegetated areas in adequate cover. Re-seed and mow as needed.
4. Fill low areas in travel treads and re-grade, as needed, to maintain road cross section.
5. Inspect roads with water-bars periodically to insure proper cross section is available and outlets are stable.
6. Conservation practices that limit particulate matter emissions should be incorporated into long-term maintenance plans.

RESOLUTION 2021-7**RESOLUTION CERTIFYING ENTERING INTO GRANT AGREEMENT WITH
CALIFORNIA CLIMATE INVESTMENT FOREST HEALTH GRANT PROGRAM FOR
FOREST HEALTH TREATMENTS AT BUTANO STATE PARK AND POST FIRE
DIGITAL IMAGERY AND LIDAR DATA COLLECTION**

WHEREAS, the San Mateo Resource Conservation District is a Special District organized under Division 9 of the California Public Resources Code with an original petition granted on July 1, 1939 and is defined in Section 3501 of the Government Code as a public agency; and

WHEREAS, the Governor of the State of California in cooperation with California State Legislature has enacted State of California Climate Investment, which provides funds to the State of California and its political subdivisions, including forest health programs; and

WHEREAS, the State Department of Forestry and Fire Protection (CAL FIRE) has been delegated the responsibility for the administration of the program within the State, setting up necessary procedures governing application by local agencies, non-profit organizations, and others under the program; and

WHEREAS, the San Mateo Resource Conservation District has submitted an application approved by board resolution and has been selected by CAL FIRE to receive funding for the project titled *Forest Health Treatments at Butano State Park and Post Fire Digital Imagery and LIDAR Data Collection*; and

WHEREAS, CAL FIRE requires a resolution from the governing body of the grant recipient authorizing a designee as an agent of the Board of Directors; and

WHEREAS, the San Mateo Resource Conservation District will enter into an agreement with the State of California to carry out this project;

NOW, THEREFORE, BE IT RESOLVED that the San Mateo Resource Conservation District Board of Directors hereby:

1. Approves the award of grant funding from CAL FIRE.
2. Certifies that the Resource Conservation District has or will have sufficient funds to operate and maintain the project.
3. Certifies that the funds under the jurisdiction of the Board of Directors are available to begin the project.
4. Certifies that the Resource Conservation District will expend grants funds prior to March 31, 2025.
5. Appoints the Executive Director a designee, as an agent of the Board of Directors to conduct all negotiations, execute and submit all documents including, but not limited to

applications, agreements, amendments, payment requests and so on, which may be necessary for the completion of the aforementioned project.

The foregoing resolution was approved and adopted on September 16, 2021, by the Board of Directors of the San Mateo Resource Conservation District.

Barbara Kossy, President

Date