COUNTY OF SAN MATEO
PLANNING AND BUILDING DEPARTMENT

DATE: March 10, 2021

TO: Planning Commission

FROM: Planning Staff

SUBJECT: EXECUTIVE SUMMARY: Consideration of a Coastal Development Permit and Planned Agricultural District Permit to drill a domestic water well, and install a water line and water tank to serve an existing single-family residence. The domestic well will replace the natural spring water box that was previously used as a source of water for the residence. The property is located at 20080 Cabrillo Highway in the unincorporated San Gregorio area of San Mateo County. The project is appealable to the California Coastal Commission.

County File Number: PLN 2019-00385 (Midpeninsula Regional Open Space District)

PROPOSAL

The applicant is proposing to construct a new domestic well, 3,500-foot water line, and install a 1,500-gallon water storage tank to supply domestic water the existing single-family residence at Toto Ranch. Toto Ranch is used primarily for cattle grazing. In addition to cattle grazing, the ranch raises a variety of domestic livestock including horses, chicken, pigs, goats, sheep, alpacas and milk cows. The proposed well location is approximately 290 feet from the south (right) property line and 300 feet from the east (rear) property line. An alternative well location approximately 150 feet from the southern property line and 600 feet from the eastern property line is also proposed if the initial location does not yet yield sufficient water. The two locations are both accessible from an existing dirt road on the property, thus significant grading or significant vegetation removal is not required. The new water line will be located parallel to the existing ranch road between the well location and the single -family residence. The existing domestic water source is currently provided by a natural spring and spring box. The spring is seasonal and now fails to provide enough water for the residence. Agricultural uses on the property include cattle grazing rotated throughout the property based on the amount of available feed. Agricultural uses on site are supported by two existing agricultural wells, which will remain in operation. Existing agriculture wells and stockponds support the agriculture uses.

RECOMMENDATION

That the Planning Commission approve the Coastal Development Permit and Planned Agricultural District Permit, County File No. PLN 2019-00385, by making the required findings and adopting the conditions of
approval listed in Attachment A.

SUMMARY

The project is consistent with General Plan Plan policies regarding Vegetative, Water, Fish and Wildlife Resources, Soil Resources, Visual Quality, Rural Land Use, as well as with all applicable Local Coastal Program policies, including those in the Land Use Component, Agricultural Component and Sensitive Habitat Components. in addition, the project meets all applicable Planned Agricultural District zoning regulations, including the substantive criteria for the issuance of a PAD Permit, as the project requires minimal site disturbance, involves minimal grading and minimal vegetation removal, and aims to provide adequate and potable well water source to the property, without impacting agricultural operations on the site or adjacent properties.

The project was reviewed at the August 10, 2020 Agricultural Advisory Committee meeting, where the committee recommended approval.

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COUNTY OF SAN MATEO
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SUBJECT: Consideration of a Coastal Development Permit and Planned Agricultural District Permit to drill a domestic water well, and install a water line and water tank to serve an existing single -family residence. The domestic well will replace the natural spring water box that was previously used as a source of water for the residence. The property is located at 20080 Cabrillo Highway in the unincorporated San Gregorio area of San Mateo County. The project is appealable to the California Coastal Commission.

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PROPOSAL

The applicant is proposing to construct a new domestic well, a 3,500-foot new water line, and install a 1,500-gallon water tank to supply domestic water to the existing single-family residence at Toto Ranch. Toto Ranch is used primarily for cattle grazing. In addition to cattle grazing, the ranch raises a variety of domestic livestock including horses, chicken, pigs, goats, sheep, alpacas and milk cows.

The proposed well location is approximately 290 feet from the south (right) property line and 300 feet from the east (rear) property line. An alternative well location approximately 150 feet from the southern property line and 600 feet from the eastern property line is also proposed if the initial location does not yet yield sufficient water. The two locations are both accessible from an existing dirt road on the property, thus significant grading or significant vegetation removal is not required. The new water line will be located parallel to an existing ranch road between the well location and the single -family residence. The existing domestic water source is currently provided by a natural spring and spring box. The spring is seasonal and now fails to provide enough water for the residence. Agricultural uses on the property include cattle grazing rotated throughout the property based on the amount of available feed. Agricultural uses on site are supported by two existing agricultural wells, which will remain in operation. The existing agriculture wells and stockponds support the agriculture uses.

RECOMMENDATION

That the Planning Commission approve the Coastal Development Permit and Planned

Agricultural Permit, County File Number PLN 2019-00385, by making the required findings and adopting the conditions of approval in Attachment A.

BACKGROUND

Report Prepared By: Olivia Boo, Project Planner, 650/363-1818

Applicant: Omar Smith, Midpeninsula Regional Open Space District (MROSD)

Owner: Midpeninsula Regional Open Space District

Location: 20080 Cabrillo Highway

APN: 081-060-100 and 081-060-110

Size: Total combined 464 acres

Existing Zoning: PAD/CD (Planned Agriculture District/Coastal Development)

General Plan Designation: Agriculture

Local Coastal Plan Designation: Agriculture

Williamson Act: The property is currently under a Williamson Act contract (County File Number AP84-4) that is set to expire December 21, 2021 pursuant to the non-renewal filed by the property owner in 2012 (PLN 2012-00216).

Existing Land Use: The parcel is improved with an existing single-family residence, an improved main road off Cabrillo Highway, storage tanks and two barns. All structures are located approximately 3,600 feet east of Cabrillo Highway. The proposed replacement domestic well is located near the ranch road, approximately 2,400 feet further southeast from the single-family residence. The property is used for cattle grazing and raises a variety of domestic livestock including horses, chicken, pigs, goats, sheep alpacas and milk cows.

Water Supply: The property is served by a natural spring and spring box on site. The spring box no longer provides enough water service for the residence, and water is trucked in occasionally throughout the year. The spring box will be abandoned once the new domestic well is installed.

Sewage Disposal: An existing septic system supports the onsite structures.

Flood Zone: Flood zone X (area of minimal flood); Community Panel Number 06081C0357F, effective August 2, 2017.

Environmental Evaluation: Categorically exempt from review under the California Environmental Quality Act ("CEQA") pursuant to CEQA Guidelines Section 15303, Class 3, construction of new small structures.

Setting: The parcel is improved with an existing single-family residence, an improved main road off Cabrillo Highway, water storage tanks and two barns. There are wetland and riparian areas located on the property, is at the northern portion near Tunitas Creek, over 2,500 feet north of the existing ranch structures. Two stockponds (to be referred to stockpond "a" and "b") that have the potential for sensitive habitat are located more than 300 feet from the proposed area to be disturbed for the domestic water line, water tank and the well location.

DISCUSSION

A. KEY ISSUES

1. Conformance with the General Plan

Staff has reviewed the proposed project and found that it complies with all applicable County General Plan policies, specifically:

a. Vegetative, Water, Fish and Wildlife Resources Policies

Policy 1.28 (*Regulate Development to Protect Sensitive Habitats*) regulates land uses and development activities adjacent to sensitive habitats in order to protect rare, endangered and unique plants and animals from the reduction in their range or degradation of their environment and protect and maintain the biological productivity of important plants and animal habitats.

The nearest wetland is more than 1,000 feet north from the proposed domestic water line, the well location and water tank, so will not be impacted by the project. The County's Geographic Information System (GIS) indicates there are no Federal or State endangered plant species located on the property. The Federal endangered California red-legged frog and the San Francisco garter snake are noted to potentially exist on the property. Coho Salmon may be found near Tunitas creek which is at the northern part of the property. Although the California red-legged frog and the San Francisco garter snake potentially exist on the property, they most likely are found in proximity to the stock ponds, with the closest stock pond "a" approximately 300 feet from the proposed water well line. The domestic well, water tank and water line, proposed at the southeast area of the parcel will be approximately 800 from another nearby stock pond (referred to as stockpond "b". Due to the distance to the

stockponds and minimal ground disturbance associated with the project, it is not expected to impact potential sensitive habitats or species associated with the stockponds.

b. Soil Resources

Policy 2.17 (*Regulate Development to Minimize Soil Erosion and Sedimentation*) and Policy 2.21 (*Protect Productive Soil Resources Against Soil Conversion*) regulates development to minimize soil erosion and sedimentation including, but not limited to, minimizing removal of vegetative cover, and regulates land uses of productive soil resources and encourages appropriate management practices to protect against soil conversion.

The well location will utilize an existing dirt path for most of the access; most of the dirt road is located on flat land, and significant vegetation removal is not required. Although the subject parcel does not contain prime soils, the County's Geographic Information System (GIS) identified the parcel as having lands suitable for agriculture. While the proposed project will convert a small area of the subject parcel for the proposed well, damage to the capability of the surrounding soil is not expected. Given the small portion of agricultural lands proposed for conversion compared to the overall parcel size, the amount of conversion is considered minor as the majority of the parcel remains available for agricultural uses, included continued grazing. Erosion and sediment control measures are included as conditions of approval.

c. Visual Quality

Policy 4.15 (*Appearance of New Development*) regulates development to propose and enhance good design, site relationships, and other aesthetic considerations. Toto Ranch is accessed by an existing paved road, from Cabrillo Highway. The proposed well location is in the southeast area of the parcel and accessible using an existing dirt gravel road. No improvements to the paved ranch road or the dirt road are necessary or required to access the well location. The proposed replacement domestic well will be located approximately 2,400 feet southeast of the single -family residence, near the ranch road. The single-family residence is 3,600 feet east of Cabrillo Highway. Due to the topography, distance, some low hills, and existing vegetation, the domestic well and infrastructure will not be visible from Cabrillo Highway. The proposed domestic well site is located approximately over 3,000 feet outside the Cabrillo Highway scenic corridor.

d. Rural Land Use

Policy 9.23 (*Land Use Compatibility in Rural Lands*) encourages compatibility of land uses in order to promote the health, safety and economy, and the maintenance of scenic and harmonious nature of the rural lands. Policy 9.30 (*Development Standards to Minimize Land Use Conflicts and Agriculture*) aims to avoid locating non-agricultural activities on soils with agricultural capability and locating non-agricultural activities in areas of agricultural parcels which cause the least disturbance to feasible agricultural activities.

The subject parcel has a General Plan land use designation of "Agriculture". The proposed well will be located on soils identified as suitable for agriculture. Given that there is no municipal water service available for the project parcel, a water well would provide water to the property for domestic purposes. Review and approval from Environmental Health Services is required. Due to the minor area of disturbance, the property continues to be available for continued grazing and other agricultural activities should they be pursued in the future.

2. Conformance with the Local Coastal Program (LCP)

The project complies with the following applicable LCP Policies:

a. Land Use Component

Policy 1.8 (*Land Uses and Development Densities in Rural Areas*) new development in rural areas shall not: (1) have significant adverse impacts, either individually or cumulatively, on coastal resources and (2) diminish the ability to keep all prime agricultural land and other land suitable for agriculture (as defined in the Agriculture Component) in agricultural production.

The proposed domestic well would have minimal impact on coastal resources, including sensitive habitat, wetland, riparian corridor and scenic views. The well will be located in a disturbed area where visual impacts are minimized and impacts to water resources and sensitive habitats are avoided. Although the domestic well will not be clustered with the existing structures, it is minor in nature and thus will not significantly diminish other lands suitable for agriculture. The remainder of the property remains available for on-site grazing; the property does not have prime soils.

b. Agricultural Component

Policy 5.6 (*Permitted Uses on Lands Suitable for Agriculture Designated as Agriculture*) conditionally permits residential uses and development considered accessory to support residential use, Policy 5.10 (*Conversion of Land Suitable for Agriculture Designated as Agriculture*) (a) (prohibits the conversion of lands suitable for agriculture within a parcel to conditionally permitted uses unless all of the following can be demonstrated. These policies allow for conditionally permitted uses, including domestic wells, provided the following can be met as discussed below:

All lands suitable for agriculture and other lands within a parcel shall not be converted to uses permitted by a Planned Agricultural Permit unless all the following criteria are met:

(1) *All agriculturally unsuitable lands on the parcel have been developed or determined to be undevelopable*.

The domestic well location is located in a low grazing area and should have no impact on grazing, due to its very small footprint. The well location was chosen due to the riparian area existing hundreds of feet north of the residence, the geology of the ridge, and the two existing agriculture wells along the southern property line (located closer to Cabrillo Highway).

(2) Continued or renewed agricultural use of the soils is not capable of being accomplished in a successful manner within a reasonable period, taking into account economic, environmental, social, and technological factors (Section 30108 of the Coastal Act).

The property does not contain prime soils, only lands suitable for agriculture, specifically Class III soils, thus no prime soils will be converted. Agricultural use of soils will continue to be preserved, as the proposed domestic well, water storage tank and water line will not have a significant impact to the on-site grazing.

(3) *Clearly defined buffer areas are provided between agricultural and non-agricultural uses.*

Other than the proposed domestic well and water line, the property will continue to maintain a clear buffer by existing fences that separate structures from range land. The ranch is divided into several pastures that are fenced. The single-family residence is the only non-agricultural use on the property.

(4) *Public services and facility expansions and permitted uses will not impair agricultural viability, either through increased assessment costs or degraded air and water quality.*

The proposed development does not require public service or facility expansion and does not limit the agricultural viability of the parcel. The proposed project does not include aspects that would result in degraded air or water quality since the well will require certification by Environmental Health Services (well drilling permit).

Policy 5.22(b) (*Protection of Agricultural Water Supplies*) seeks to ensure adequate and sufficient water supplies needed for agricultural production and that sensitive habitat protections are not diminished. Sufficient water for agriculture will remain, since there are two existing agricultural wells on site, as discussed under (*Agricultural Component*) Policy 5.6(b) and Water Supply Criteria above.

Construction of the domestic well and removal of the spring box will remove the draw from the creek thereby removing any potential impacts on sensitive habitats in the creek. For further discussion of potential impacts to sensitive habitats, see Section c., below.

c. Sensitive Habitats Component

Policy 7.3 (*Protection of Sensitive Habitats*) seeks to protect sensitive habitats from adverse impacts caused by development.

The proposed domestic well and water line are over 1,000 feet from the nearest wetland/riparian area on the property and 300 feet from the nearest stock pond/sensitive habitat area. The riparian corridor on the property is associated with Tunitas Creek which is located on the north side of the ranch. Stockpond “a”, located 300 feet from the north end of the proposed water line, is dry but has potential habitat for the California Red Legged frog, potentially sensitive habitat for various aquatic and amphibian species including the California Red-Legged frog and San Francisco Garter snake, which are federally endangered species. Other animals, black tailed deer, coyote, bobcats, badgers and many other animals are present on the ranch. The proposed well infrastructure is far enough away from both the riparian corridor and stock ponds that there will be no impact to sensitive habitat or species.

3. Planned Agricultural District (PAD) Requirements:

a. Development Standards

Development Standard	Required	Proposed
Minimum Building Site	N/A	464 acres (existing)
Minimum Side Yard	20 ft.	290 ft. (Right side) >1,800 ft. (Left side)
Minimum Front Yard	50 ft.	>3,600 ft.
Minimum Rear Yard	20 ft.	300 ft.
Maximum Building Height	36 ft.	N/A

b. The project conforms to the substantive criteria for the issuance of a PAD permit, as applicable and outlined in Section 6355 of the Zoning Regulations. As proposed and conditioned the project conforms to the following policies:

General Criteria

(1) *The encroachment of all development upon land which is suitable for agricultural uses shall be minimized.*

The San Mateo County Geographic Information System (GIS), shows there are no prime soils present on the property. Construction of the well and associated infrastructure will convert a small area of other lands suitable for agriculture, but the majority of the remaining land will be undisturbed.

(2) *All development permitted on a site shall be clustered*.

The proposed domestic well, water line and water tank will be located approximately 2,400 feet southeast of the existing single-family residence and other structures and will not be closely clustered with the existing single-family residence or barn. However, well locations are determined based on the location of groundwater, thus the proposed well cannot be clustered with existing development. The applicant's well driller determined that a better chance of finding a domestic water source would be south of the residence given the geology of the ridge and the two existing agricultural wells along the southern property line. Although the domestic well is not clustered with

the farm structures, it is located near an existing dirt and gravel road which is a disturbed area.

(3) *Every project shall conform to the Development Review Criteria contained in Chapter 20A.2 of the San Mateo County Ordinance Code*.

The project, as proposed and conditioned, conforms to the following applicable Development Review Criteria of Chapter 20A.2 of the San Mateo County Ordinance Code.

Section 6324.1 (*Environmental Quality Criteria*), Section 6324.2 (*Site Design Criteria*) and Section 6325.2 (*Primary Fish and Wildlife Habitat Areas Criteria*) seek to cluster development, minimize grading and changes in vegetative cover, locate development so that it is subordinate to the pre-existing character of the area and protect primary wildlife habitat areas.

The domestic well and infrastructure will be screened by surrounding low hills. No grading is proposed for the well, and no tree removal is proposed. As discussed earlier, the proposed well and water tank will be near the southeast corner of the parcel and will be 800 feet from stock pond “b”, where sensitive habitat exists, impacts to wildlife are not expected. The north end of the water line will be located approximately 300 from stockpond “a”. There is wildlife on the Toto Ranch property, associated with the stock ponds which provide potential habitat for various aquatic and amphibian species including the California Red -Legged frog and San Francisco Garter snake, which are federally endangered species. Other animals, such as black tailed deer, coyote, bobcats, badgers and many other animals are present on the ranch but are not federally endangered. As mentioned under General Criteria (b), the domestic well is not closely clustered with the existing structures, but out of necessity is proposed in an area where water is likely to be found. Although the domestic well is not clustered with the farm structures, it is located near an existing dirt and gravel road which is a disturbed area.

Section 6325.3 (*Primary Agriculture Resources Area Criteria*) allows only agricultural and compatible uses on primary agricultural land and agricultural preserve land, and encourages structural uses be located away from prime agricultural soils whenever possible.

The property does not contain prime soils, thus the proposed domestic well, new water line and new water storage tank will not have an impact on prime soils.

c. Water Supply Criteria

Adequate and sufficient water supplies needed for agricultural production and sensitive habitat protection in the watershed are not diminished.

The proposed domestic well will restore the domestic water source for the property and the existing spring and spring box will be abandoned once the domestic well is in place thus removing the draw from the nearby sensitive habitat (creek). The proposed domestic well, water tank, and southern end of the water line, will be located approximately 800 feet from stock pond "b" which has the potential for sensitive habitat. The north end of the proposed water line will be located 300 feet from stockpond "a". There is no impact expected to sensitive habitats associated with either stock ponds given the distance of the domestic well infrastructure to the stock pond. The existing pond is an agricultural pond and used to provide water for the cattle. Water for livestock will continue to be provided by a windmill/well and solar pump/well and a network of fourteen (14) stockponds and seasonal water catchments throughout the ranch.

d. Criteria for the Conversion of Lands Suitable for Agriculture and Other Land.

The subject parcel does not contain prime soils but is identified as having lands suitable for agriculture. Section 6355.F (Criteria for the Conversion of Lands Suitable for Agriculture and Other Land) of the San Mateo County Zoning Regulations states that the conversion of lands suitable is not allowed unless all of the following criteria are met. As discussed previously in this report, the project satisfies the required criteria.

(1) *That all agriculturally unsuitable lands on the parcel have been developed or determined to be undeveloped.*

The proposed well locations have been identified as the most likely area to find water on the parcel. The proposed wells will have minimal footprint and the overall area of disturbance is limited which allows the larger remainder of the parcel to remain available for continued grazing and future agricultural activities

(2) *Continued or renewed agricultural use of the soil is not capable of being accomplished in a successful manner within a reasonable period of time, considering economic, environmental, social and technological factors.*

The proposed wells will convert only a small portion of the parcel leaving the majority of the parcel available for continued agricultural uses.

(3) *Clearly defined buffer areas are provided between agricultural and non-agricultural uses.*

Other than the proposed domestic well, water line and water tank, the property will continue to maintain a clear buffer by the existing fences that separate structures from range land. The ranch is divided into several pastures that are fenced. The single-family residence is the only non-agricultural use on the property.

(4) *The productivity of an adjacent agricultural land will not be diminished, including the ability of the land to sustain dry farming or animal grazing.*

Agricultural uses on the property includes cattle grazing rotated throughout the property. The ranch also raises a variety of domestic livestock including horses, chicken, pigs, goats, sheep, alpacas and milk cows. The proposed domestic well involves a very small footprint, thus the grazing is not expected to be affected.

(5) *Public service and facility expansions and permitted uses will not impair agricultural viability, including by increased assessment costs or degraded air and water quality.*

The proposed well does not require public services or facility expansions. The domestic well is intended to replace domestic water for the existing single-family residence that was previously provided by a natural spring and spring box. The spring is seasonal and now fails to provide enough water for the residence and property. The well does not limit agricultural viability of the parcel. A preliminary review by the County's Environmental Health Division found that the proposed plans are in compliance with the current health standards, and thus poses no threat to water quality. The proposed project does not include aspects that would result in degraded air quality.

ENVIRONMENTAL REVIEW

The project is categorically exempt from environmental review under the California Environmental Quality Act ("CEQA") pursuant to CEQA Guidelines Section 15303, Class 3, construction of new small structures.

C. REVIEW BY THE AGRICULTURAL ADVISORY COMMITTEE

The Agricultural Advisory Committee (AAC) reviewed the project and recommended approval at their August 10, 2020 public meeting.

D. REVIEWING AGENCIES

Building Department
Environmental Health Services
California Coastal Commission

ATTACHMENTS

A. Attachment A
B. Vicinity Map
C. Plans
D. Site Photos
E. Map of Riparian Corridor and Stock Ponds
D. Resource Management Plan

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COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT A

Attachment A

County of San Mateo
Planning and Building Department

RECOMMENDED FINDINGS AND CONDITIONS OF APPROVAL

Permit or Project File Number: PLN 2019-00385 Hearing Date: March 10, 2021

Prepared By: Olivia Boo, Project Planner For Adoption By: Planning Commission

RECOMMENDED FINDINGS

Regarding the Coastal Development Permit, Find:

1. That the project, as described in the application and accompanying materials required by Section 6328.7, and as conditioned in accordance with Section 6328.14, conforms to the plans, policies, requirements and standards of the San Mateo County Local Coastal Program as described in the staff report to the Planning Commission dated March 10, 2021.

2. That the project conforms to the findings required by policies of the San Mateo County Local Coastal Program. Specifically, in regard to the Agriculture and Visual Resources Components, that the domestic well is conditionally permitted with the issuance of a Planned Agricultural District permit, that the project has been proposed to be located in an area that has been defined as "Lands Suitable for Agriculture," and that the project converts only a small portion of the parcel leaving the remaining undisturbed area available for agricultural uses. In addition, the project is not located within a scenic corridor, is not visible from scenic roadways or corridors, does not result in a significant change to natural landforms, and will not impact coastal resources and sensitive habitats.

Regarding the Planned Agricultural Permit, Find:

General Criteria

3. That the encroachment of all development upon land, which is suitable for agricultural use, is minimized. The proposed well results in only minimal site disturbance and converts only a small portion of the project parcel. The remaining portion of the parcel will be available for continued future agricultural activities.

4. That the project conforms to the Development Review Criteria contained in Chapter 20A.2 of the San Mateo County Ordinance Code. The project complies with Section 6324.1, Section 6324.2 and Section 6325.2, which addresses the

potential for environmental impacts, site design criteria and primary fish and wildlife habitat areas criteria, as the project will seek to cluster development, minimize grading, will not introduce noxious odors, chemical agents, or long-term noise and is conditioned to mitigate any significant adverse environmental impacts upon primary wildlife or marine resources, and locate development so that it is subordinate to the pre-existing character of the area.

Water Supply Criteria

5. That the existing availability of potable and adequate on site well water source for non-agricultural uses is demonstrated. The project parcel currently does not have an adequate water source for domestic purposes. The well is being proposed to provide an on-site domestic water source on the parcel.

6. That adequate and sufficient water supplies needed for agricultural production and sensitive habitat protection in the watershed are not diminished. The proposed well is not expected to result in significant groundwater depletion or interfere with groundwater recharge. The proposed domestic well will be located over 300 feet from stock pond “a” , over 800 ft. from stock pond “b”, and 1,000 feet from the wetland/riparian area thus there is no impact expected to those areas. The existing agricultural uses will continue to be supported by the existing agriculture wells and stockponds. The proposed domestic well will replace the domestic water that was drawn from the spring to provide water to the single-family residence, thus the domestic well will reduce impacts to sensitive habitats.

Criteria for the Conversion of Lands Suitable for Agriculture and Other Lands

7. That all agriculturally unsuitable lands on the parcel have been developed or determined to be undeveloped. The proposed well locations have been identified as the most likely area to find water on the parcel. The proposed wells will have minimal footprint and the overall area of disturbance is limited which allows the larger remainder of the parcel to remain available for continued grazing and future agricultural activities.

8. That the continued or renewed agricultural use of the soil is not capable of being accomplished in a successful manner within a reasonable period of time, considering economic, environmental, social and technological factors. The proposed wells will convert only a small portion of the parcel leaving the majority of the parcel available for continued agricultural uses.

9. That clearly defined buffer areas are provided between agricultural and non-agricultural uses. Other than the proposed domestic well, water line and water tank, the property will continue to maintain a clear buffer by the existing fences that separate structures from range land. The ranch is divided into several

pastures that are fenced. The single-family residence is the only non-agricultural use on the property.

10. That the productivity of adjacent agricultural lands is not diminished, including the ability of the land to sustain dry farming or animal grazing. Given the small area impacted for the well locations, no impact is expected on the productivity of adjacent agricultural lands. Based on the size of the parcel and the distance from the proposed well to adjacent parcels, the domestic well is not expected to impact water supply of adjacent properties.

11. That the public service and facility expansions and permitted uses will not impair agricultural viability, including by increased assessment costs or degraded air and water quality. The proposed well does not require public services or facility expansions. The domestic well is intended to replace domestic water for the existing single-family residence that was previously provided by a natural spring and spring box. The well does not limit agricultural viability of the parcel. A preliminary review by the County's Environmental Health Division found that the proposed plans are in compliance with the current health standards, and thus poses no threat to water quality.

RECOMMENDED CONDITIONS OF APPROVAL

Current Planning Section

1. The approval applies only to the proposal as described in this report and materials submitted for review and approval by the Planning Commission on March 10, 2021. The Community Development Director may approve minor revisions or modifications to the project if they are found to be consistent with the intent of, and in substantial conformance with this approval.

2. This permit shall be valid for one (1) year from the date of final approval, in which time a well permit shall be issued. Any extension of these permits shall require submittal of a written request for permit extension and payment of applicable extension fees sixty (60) days prior to the expiration date.

3. The applicant shall include an erosion and sediment control plan to comply with the County's Erosion Control Guidelines on the plans submitted for the building permit. This plan shall identify the type and location of erosion control measures to be installed upon the commencement of construction in order to maintain the stability of the site and prevent erosion and sedimentation off-site.

4. The property owner shall adhere to the San Mateo Countywide Stormwater Pollution Prevention Program "General Construction and Site Supervision Guidelines," including, but not limited to, the following:

a. Delineation with field markers of clearing limits, easements, setbacks, sensitive or critical areas, buffer zones, trees, and drainage courses within the vicinity of areas to be disturbed by construction and/or grading.

b. Protection of adjacent properties and undisturbed areas from construction impacts using vegetative buffer strips, sediment barriers or filters, dikes, mulching, or other measures as appropriate.

c. Performing clearing and earth-moving activities only during dry weather.

d. Stabilization of all denuded areas and maintenance of erosion control measures continuously between October 1 and April 30.

e. Storage, handling, and disposal of construction materials and wastes properly, so as to prevent their contact with stormwater.

f. Control and prevention of the discharge of all potential pollutants, including pavement cutting wastes, paints, concrete, petroleum products, chemicals, wash water or sediments, and non-stormwater discharges, to storm drains and watercourses.

g. Use of sediment controls or filtration to remove sediment when dewatering the site and obtain all necessary permits.

h. Avoiding cleaning, fueling, or maintaining vehicles on-site, except in a designated area where wash water is contained and treated.

i. Limiting and timing application of pesticides and fertilizers to prevent polluted runoff.

j. Limiting construction access routes and stabilization of designated access points.

k. Avoiding tracking dirt or other materials off-site; cleaning off-site paved areas and sidewalks using dry sweeping methods.

l. Training and providing instruction to all employees and subcontractors regarding the Watershed Protection Maintenance Standards and construction Best Management Practices.

m. Additional Best Management Practices in addition to those shown on the plans may be required by the Building Inspector to maintain effective stormwater management during construction activities. Any water leaving the site shall be clear and running slowly at all times.

n. Failure to install or maintain these measures will result in stoppage of construction until the corrections have been made and fees paid for staff enforcement time.

5. This permit does not allow for the removal of any trees. Removal of any tree with a diameter equal to, or greater than, 12 inches as measured 4.5 feet above the ground shall require a separate tree removal permit.

6. Noise sources associated with demolition, construction, repair, remodeling, or grading of any real property shall be limited to the hours from 7:00 a.m. to 6:00 p.m. weekdays and 9:00 a.m. to 5:00 p.m. Saturdays. Said activities are prohibited on Sundays, Thanksgiving and Christmas (San Mateo County Ordinance Code Section 4.88.360).

Environmental Health Services

7. Applicant must submit application, applicable fees, site plan, and approved CDP directly to Environmental Health to obtain a well drilling permit. Application and associated fees can be found on the website at https://www.smchealth.org/landuse.

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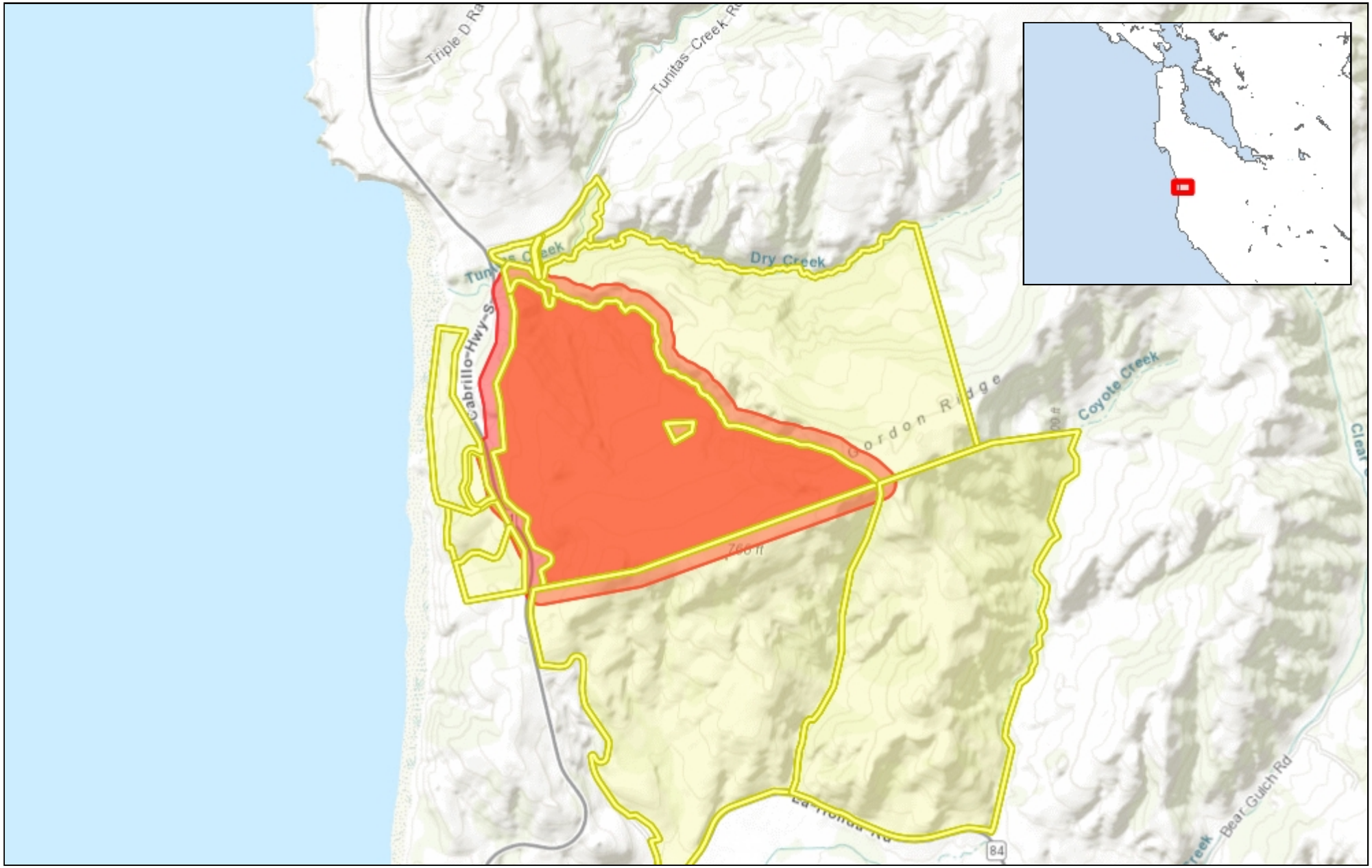
COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT B

San Mateo County

County San Mateo, CA



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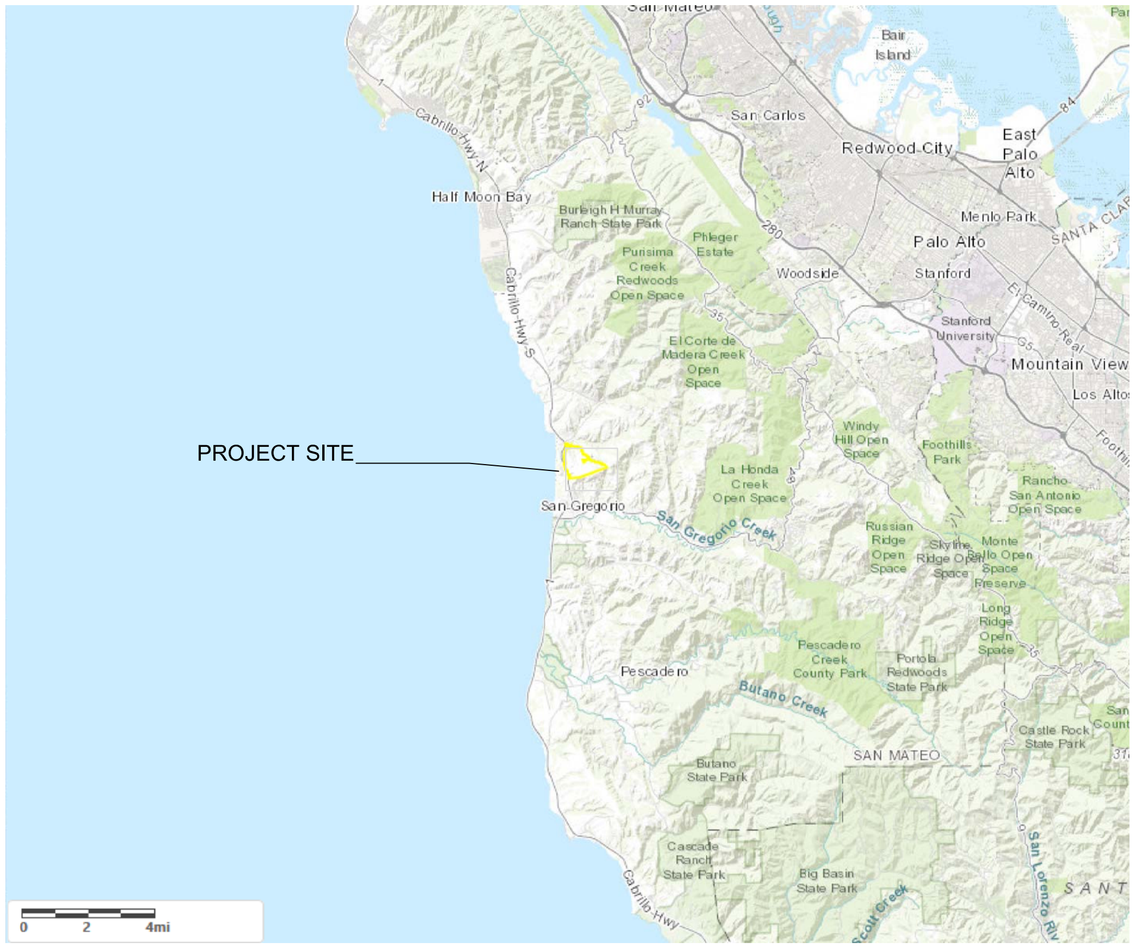
COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT C

MIDPENINSULA REGIONAL OPEN SPACE DISTRICT

TUNITAS CREEK OPEN SPACE PERSERVE
SAN MATEO COUNTY, CA

TOTO RANCH DOMESTIC WATER WELL INSTALL



VICINITY MAP

GENRAL NOTES:

1. MIDPENINSULA REGIONAL OPEN SPACE DISTRICT (OWNER OR DISTRICT SHALL BE CONTACT AT LEASE 48 HOURS PRIOR TO COMMENCEMENT OF WORK ON OR NEAR EXISTING DISTRICT FACILITIES, PHOE: 650-691-1200
2. USED MATERIALS, REJECTS, MISFITS, OR SECONDS, ETC. ARE NOT ACCEPTABLE FOR USE ON MIDPENINSULA REGIONAL OPEN SPACE DISTRICT FACILITIES.
3. ALL CONSTRUCTION SHALL BE IN CONFORMANCE WITH THESE PLANS, PROJECT SPECIFICATIONS AND MIDPENINSULA REGIONAL OPEN SPACE DISTRICT SPECIFICATIONS.
4. CONTRACTOR SHALL FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL EXISTING FACILITIES PRIOR TO COMMENCING WORK. CALL UNDERGROUND SERVICE ALERT (USA) AT 8-1-1. CONTRACTOR SHALL MAKE DISTRICT AWARE OF ANY DISCREPANCIES.
5. ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE HEALTH AND SAFETY LAWS OF THE STATE OF CALIFORNIA AND CAL/OSHA STANDARDS.
6. CONTRACTOR WILL BE RESPONSIBLE FOR THE REPAIR OF ALL PIPELINE CRACKS, WHICH DEVELOP DURING CONSTRUCTION OF IMPROVEMENTS AFFECTING EXISTING FACILITIES.
7. ALL EXCESS MATERIALS AND/OR DEBRIS SHALL BE REMOVED UPON COMPLETION OF INSTALLATION.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE DUST CONTROL AT ALL TIMES.

SPECIAL NOTE:
WHERE UNDERGROUND AND SURFACE STRUCTURES ARE SHOWN ON THE PLANS, THE LOCATIONS, DEPTHS AND DIMENSIONS OF STRUCTURES ARE BELIEVED TO BE REASONABLY CORRECT, BUT ARE NOT GARANTEED. SUCH STRUCTURES ARE SHOWN FOR THE INFORMATION OF THE ONTRACTOR, BUT INFORMATION SO GIVEN IS NOT TO BE CONSTRUED AS A REPRESENTATION THAT SUCH STRUCTURES WILL, IN ALL CASES, BE FOUND WHERE SHOWN, OR THAT THEY REPRESENT ALL STRUCTURES WHICH MAY BE ENCOUNTERED.

SITE SAFETY AND PROTECTION NOTES:
THE DUTY OF THE OWNER OR ITS AGENTS TO CONDUCT CONSTRUCTION REVIEW OF THE CONTRACTOR'S PERFORMANCE AND THE UNDERTAKING OF INSPECTIONS OR THE GIVING OF INSTRUCTIONS AS AUTHORIZED HEREIN IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTORS SAFETY MEASURES IN, ON, OR NEAR THE CONSTRUCTION SITE AND SHALL NOT BE CONSTRUED AS SUPERVISION OF THE ACTUAL CONSTRUCTION NOR MAKE THE OWNER OR ITS AGENTS RESPONSIBLE FOR PROVIDINGA SAFE PLACE FOR THE PERFORMANCE OF WORK BY THE CONTRACTOR, SUBCONTRACTORS, OR SUPPLERS, OR FOR ACCESS, VISITS, USE, WORK, TRAVEL OR OCCUPANCY BY ANY PERSON.

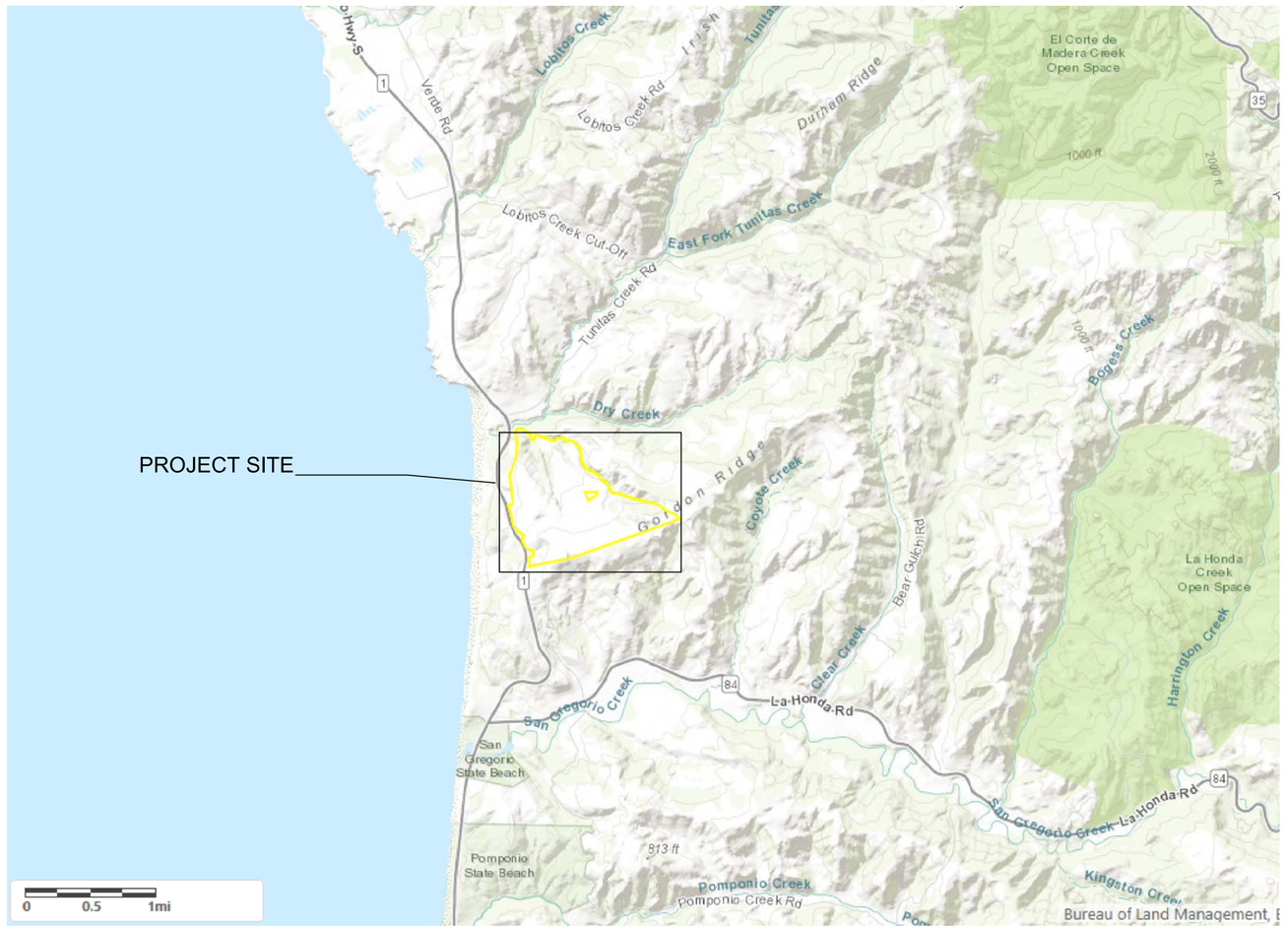
THE CONTRACTOR SHALL HAVE AT THE WORK SITE, COPIES OR SUITABLE EXTRACTS OF THE CONSTRUCTION SAFETY ORDERS ISSED BY CAL-OSHA. CONTRACTOR SHALL COMPLY WITH PROVISIONSOF THESE AND ALL OTHER APPLICABLE LAWS, ORDINANCES AND REGULATIONS. THE CONTRACTOR MUST COMPLY WITH PROVISIONS OF THE SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION PROMULGATED BY THE SECRETARY OF LABOR UNDER SECTION 107 OF THE CONTRACT WORK HOURS AND SAFETY STANDARDS ACT, AS SET FORTH IN TITLE 29 C.F.R.

TO PROTECT THE LIVES AND HEALTH OF CONTRACTOR'S EMPLOYEES UNDER THE CONTRACT, THE CONTRACTOR SHALL COMPLY WITH ALL PERTINENT PROVISIONS OF THE MANUAL OF ACCIDENT PREVENTION IN CONSTRUCTION ISSUED BY THE ASSOCIATED GENERAL CONTRACTORS OF AMERICA, INC., AND SHALL MAINTAIN AN ACCURATE RECORD OF ALL CASES OF DEATH, OCCUPATIONAL DISEASE, AND INJURY REQUIRING MEDICAL ATTENTION OR CAUSING LOSS OF TIME FROM WORK, ARISING OUT OF AND IN THE COURSE OF EMPLOYEMENT OR WORK UNDER THE CONTRACT.

THE CONTRACTOR ALONE SHALL BE RESPONSIBLE FOR THE SAFETY, EFFICIENCY AND ADEQUACY OF THE CONTRACTORS FACILITIES, APPLIANCES, AND METHODS AND FOR ANY DAMAGE, WHICH MAY RESULT FROM THEIR FAILURE OR THEIR IMPROPER CONSTRUCTION, MAINTENANCE OR OPERATION.

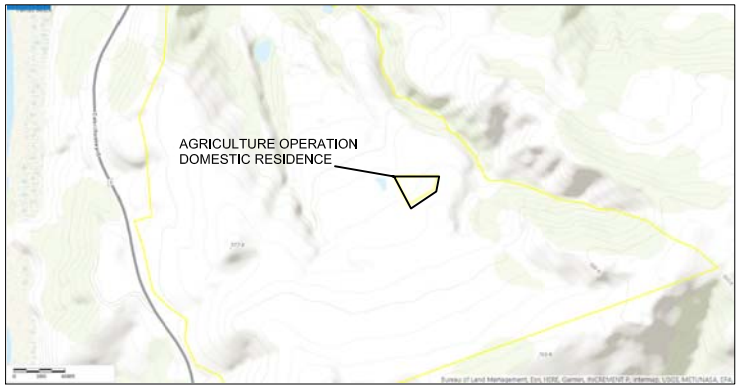
THE CONTRACTOR AGREES THAT IT SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR THE JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY: THAT THE REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS: AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNFY AND HOLD THE OWNER AND THEIR RESPECTIVE AGENTS HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR THE LIABILITYY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THEIR RESPECTIVE AGENTS.

THE OWNER AND ITS AGENTS' SITE REPSONSIBILITIES ARE LIMITED SOLEY TO ACTIVITIES OF THIER EMPLOYEES ON SITE. THESE RESPONSIBILITIES SHALL NOT BE INFERRED BY ANY PARTY TO MEAN THAT THE OWNER OR ITS AGENTS HAVE RESPONSIBILITY FOR THE SITE SAFETY. SAFETY IN, ON, OR ABOUT THE SITE IS THE SOLE AND EXCLUSIVE RESPONSIBILITY OF THE CONTRACTOR ALONE. THE CONTRACTORS METHODS OF WORK PERFORMANCE, SUPERINTENDENCE AND THE ONTRACTOR'S EMPLOYEES, AND SEQUENCING OF CONSTRUCTION ARE ALSO THE SOLE AND EXCLUSIVE RESPONSIBILITIES OF THE CONTRACTOR ALONE.



SITE MAP

Midpeninsula Regional Open Space District 330 Distel Circle Los Altos CA 94022 office: 650.691.1200	Tunitas Creek Open Space Perserve Domestic Well Installation 20080 Cabrillo HWY South Half Moon Bay, CA 94019 SAN MATEO COUNTY. CA	Date: 09/01/2019 Drafted: OKS III Project contact: Aaron Peth APeth@openspace.org OSmith@openspace.org Revision Date:	APN: 081060100 ZONING: PAD/CD	General Cover 1

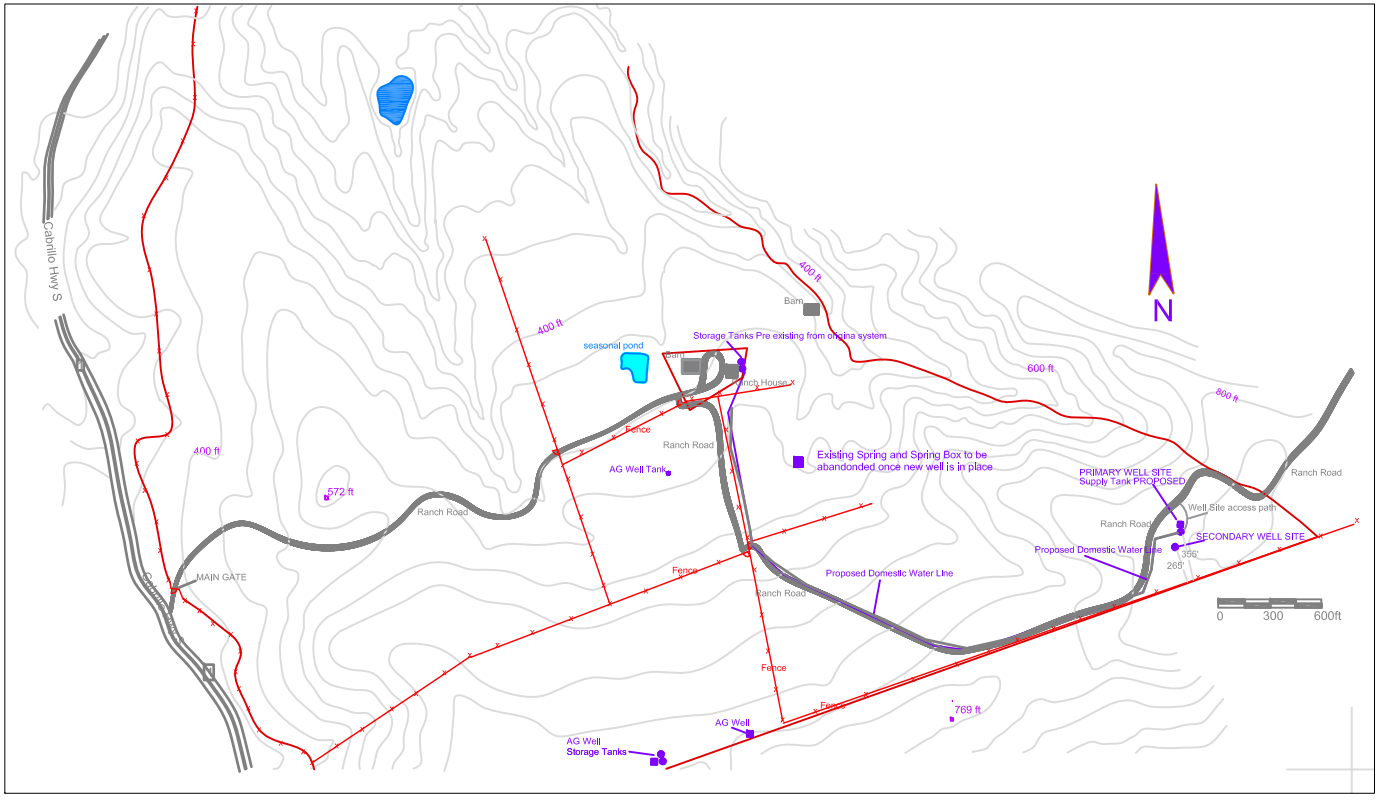


GENERAL STRUCTURE NOTES: THREE STRUCTURES ON SITE

1. DOMESTIC RESIDENCE: FARM HOUSE 3264 SQFT 4 BEDROOM, 1 BATH, 2 STORY
2. MAIN BARN: BUTLER STEEL BUILDING 3600 SQFT ONE STORY. USED FOR STORAGE OF AGRICULTURE EQUIPMENT, SUPPLIES AND PRODUCTS. BUILDING HAS SMALL OFFICE WITHIN BUILDING.
3. SECONDARY SHED 1200 SQFT EQUIPMENT STORAGE.

GENERAL WATER SYSTEM NOTES:

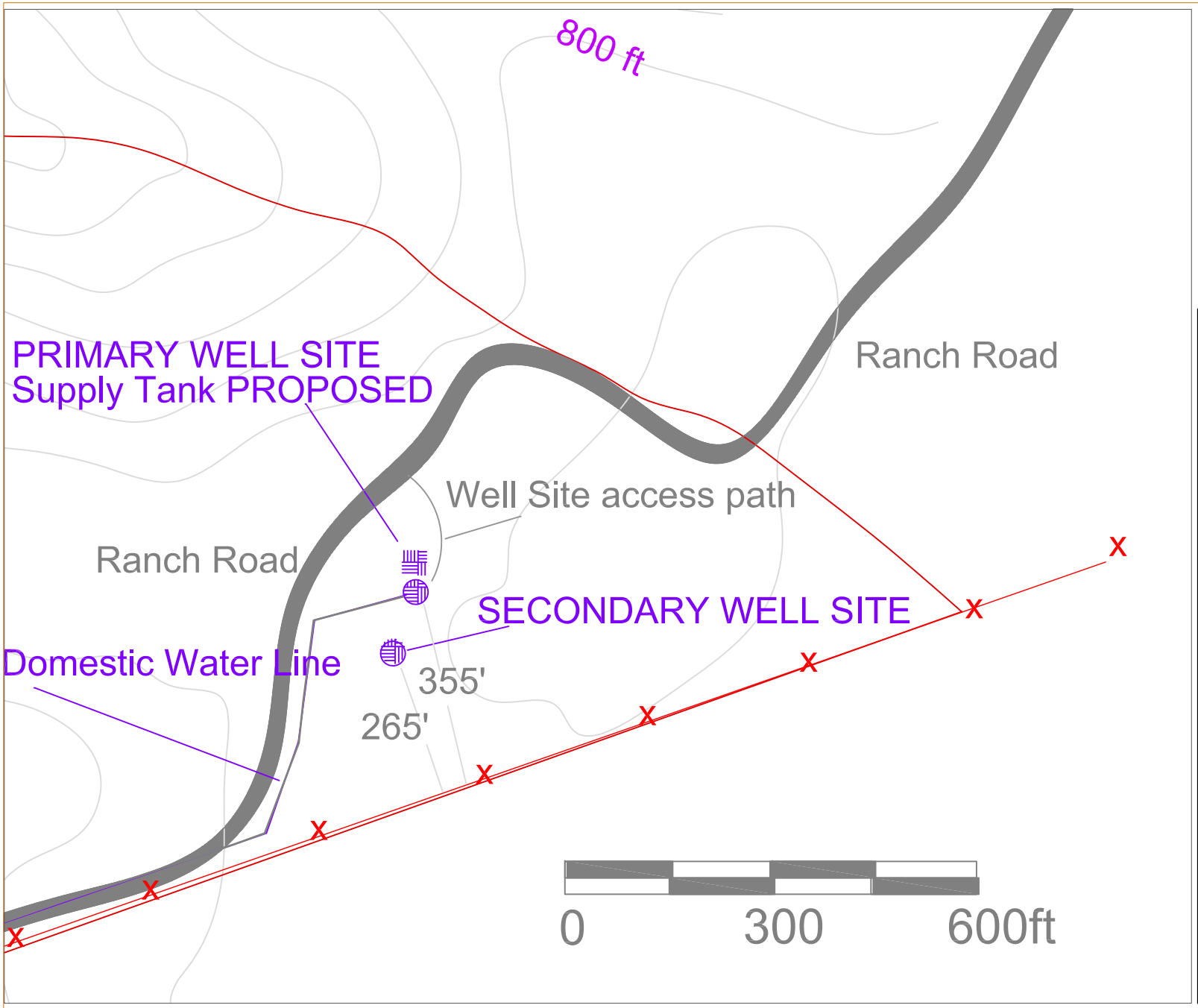
1. WIND POWERED AG WELL WITH STORAGE TANK
2. SOLAR POWERED AG WELL
3. AG WELL STOARGE TANK FOR BARNYARD AREA AND USE.
4. EXISTING DOMESTIC WATER STORAGE TANKS FED BY SEASONAL SPRING
5. NATURAL SPRING AND SPRING BOX WATER FLOW CURRENTLY SEASONAL , SPRING BOX FAILS TO PROVIDE ENOUGH WATER FOR RESIDENCE AND WATER IS TRUCKED IN AT TIMES THROUGHOUT THE YEAR. SPRING BOX IS TO BE ABANDONDED WITH CONNECTION OF PROPOSED DOMESTIC WELL.



GENERAL WATER SYSTEM NOTES:

- MAIN ENTRY GATE IS 150 OFF OF CARBILLO HWY SOUTH
- GATE IS KEY OR CODE ACCESS WITH 24HR NOTICE.

Midpeninsula Regional Open Space District 330 Distel Circle Los Altos CA 94022 office: 650.691.1200	Tunitas Creek Open Space Perserve Domestic Well Installation 20080 Cabrillo HWY South Half Moon Bay, CA 94019 SAN MATEO COUNTY. CA	Date: 09/01/2019 Drafted: OKS III Project contact: Aaron Peth APeth@openspace.org OSmith@openspace.org Revision Date:	APN: 081060100 ZONING: PAD/CD	INDEX SITE 2



GPS COORDINATES

ACCESS PATH
LAT 37.34882754
LONG -122.37422165

PRIME WELL SITE
LAT 37.34768333
LONG -122.37402351

SECONDARY WELL SITE
LAT 37.34744977
LONG -122.37424185

WELL NOTES:

New supply tank low profile 1500 gallon at well site.

Well powered by solar pump with battery back up.

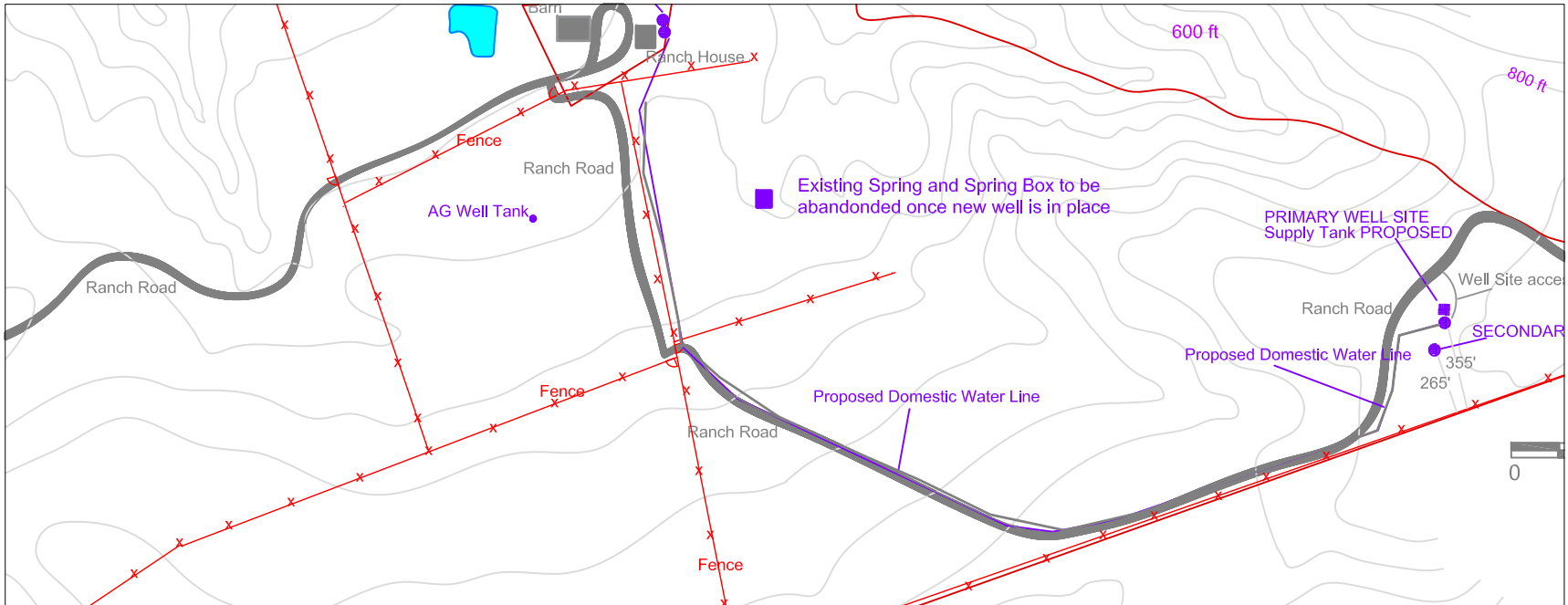
New well line to be connected from new well site to existing Domestic storage tanks near house.

Estimated new water pipe line 1.5"-2" diameter 4000 ft in length.

Well site is aproximately 860 feet in elevation, existing storage tanks are aproximately 500 feet in elevation.

Drill tailings to be spread around current proposed well site in an area less than 200 square feet.

Midpeninsula Regional Open Space District 330 Distel Circle Los Altos CA 94022 office: 650.691.1200	Tunitas Creek Open Space Perserve Domestic Well Installation 20080 Cabrillo HWY South Half Moon Bay, CA 94019 SAN MATEO COUNTY. CA	Date: 09/01/2019 Drafted: OKS III Project contact: Aaron Peth APeth@openspace.org OSmith@openspace.org Revision Date:	APN: 081060100 ZONING: PAD/CD	DETAL SITE 3



Midpeninsula Regional Open Space District 330 Distel Circle Los Altos CA 94022 office: 650.691.1200	Tunitas Creek Open Space Perserve Domestic Well Installation 20080 Cabrillo HWY South Half Moon Bay, CA 94019 SAN MATEO COUNTY. CA	Date: 09/01/2019 Drafted: OKS III Project contact: Aaron Peth APeth@openspace.org OSmith@openspace.org Revision Date:	APN: 081060100 ZONING: PAD/CD	Pipeline Detail 4

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT D

View from Cabrillo highway

View on ranch road

Existing single family house

Storage tanks near ranch house

View looking south from Ranch center

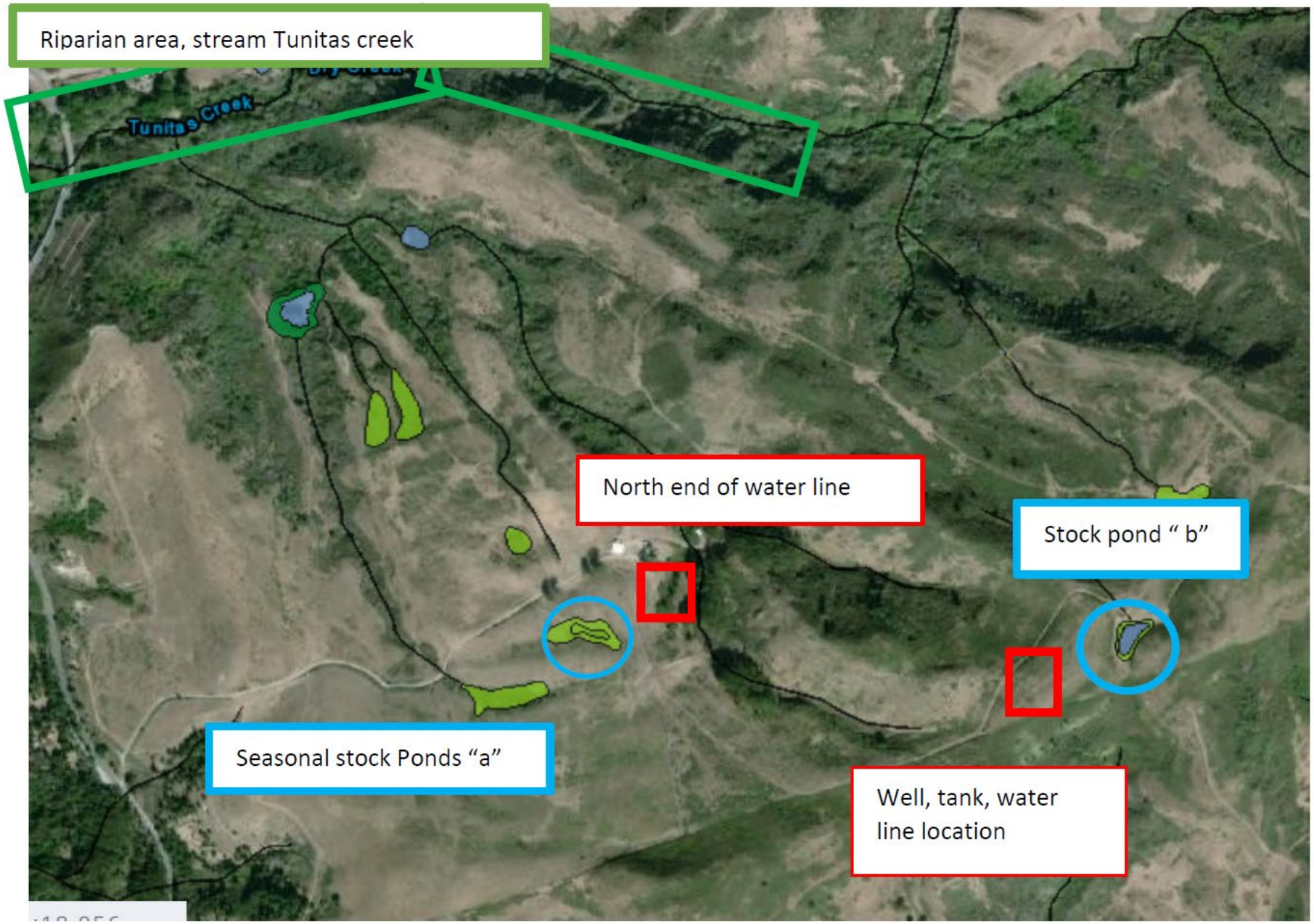
South property line

Existing ranch road, along southern property line

Well staked drill point location

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT E


Riparian area, stream Tunitas creek
Tunitas Creek
North end of water line
Stock pond " b"
Seasonal stock Ponds "a"
Well, tank, water line location

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT F

Toto Ranch

Tunitas Creek Open Space Preserve

Rangeland Management Plan

PREPARED FOR:
Midpeninsula Regional Open Space District
330 Distel Circle
Los Altos, CA 94022
(650) 691-1200

PREPARED BY:
Clayton Koopmann, California Certified Rangeland Manager (CRM) #M-100
Koopmann Rangeland Consulting
July 2018

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Attachment - B....Guidelines for RDM Monitoring, UC ANR
Attachment – C....Vegetation Composition Species List (Observed)
Attachment – D....CRLF Management Recommendations for Toto Ranch

I. PROPERTY SUMMARY INFORMATION:

Owner(s): Midpeninsula Regional Open Space District

Contact Person: Coty Sifuentes-Winter, Natural Resources Department

Phone Number: (650) 691-1200

Property Address: 20800 Cabrillo Highway S.
Half Moon Bay, CA 94019

Mailing Address: 330 Distel Circle
Los Altos, CA 94022

Date of Property Acquisition: November 30, 2012

Conservation Easement: 2007

Easement Holder: Coastside Land Trust; Reassigned to Peninsula Open Space Trust (POST) upon acquisition by Midpeninsula Regional Open Space District (Midpen) in 2012.

Assessor's Parcel # And Acreage: 081-060-101; 081-060-100; 081-060-110; 081-060-120 / 952.49 acres

Major watershed: Tunitas Creek

Type of land use: Livestock grazing/Residential/Agriculture

Zoning: PAD, Planned Agricultural District

Location Description: Toto Ranch is located on the east side of Highway 1 in unincorporated San Mateo County, approximately 9 miles south of Half Moon Bay and 1 mile north of the town of San Gregorio. Toto Ranch is adjacent to State Highway 1 and is bordered to the north by Tunitas Creek. Private grazed rangelands are present to the south and east of Toto Ranch. Toto Ranch is accessed via a paved/gravel driveway off Highway 1.

II. EXECUTIVE SUMMARY: Rangeland Management Plan (RMP)

PROPERTY DESCRIPTION & HISTORY:

The Toto Ranch property (Ranch) is located within the San Mateo County Coastside Protection Area in unincorporated San Mateo County approximately 9 miles south of the town of Half Moon Bay, California (Exhibit-A). The Ranch is comprised of four (4) assessor's parcel numbers totaling 952.49 acres located to the east of and adjacent to State Highway 1 and bordered to the north by Tunitas Creek and Dry Creek. The Ranch is north-northwest facing and topography primarily ranges from gently rolling to moderately steep slopes with two steep canyons that run south-north into the Tunitas Creek stream corridor. The level to gently rolling areas of the Ranch support annual grasslands and coastal scrub habitat with heavy coyote brush encroachment. The steeper canyon areas are comprised of dense brush and riparian corridors. Eucalyptus trees and Monterey Cypress are present in the farmyard as well as a large, dense, eucalyptus stand east of the Agricultural Lease area. Elevation ranges from 20 feet near Tunitas Creek in the northwest corner to 885 feet on the ridge top along the south border.

Historically the Ranch was used for production agriculture, with active row crop farming on the swales and ridge tops during the mid-1900's. Presently the Ranch is used primarily for cattle grazing. The existing tenant resides on the property and grazes beef cattle year-round on the grassland portion of the Ranch. In addition to cattle grazing, the tenant raises a variety of domestic livestock including horses, chickens, pigs, goats, sheep, alpacas, and milk cows in the Agricultural Lease area located near the center of the property. Livestock infrastructure includes adequate perimeter fence, livestock water troughs, a functional corral/processing facility, and "cow tight" interior pasture fencing. Water troughs around the Agricultural Lease area and front pastures are fed via a windmill-powered well and residential water is provided via a natural spring just south of the Agricultural Lease area. Fourteen ponds and wetlands, and multiple springs are located throughout the Ranch providing water for livestock and valuable habitat for wildlife. The Ranch drains south to north into Dry Creek and Tunitas Creek, totaling approximately 9,000 feet of perennial stream frontage. Tunitas Creek is a direct tributary to the Pacific Ocean.

OWNERSHIP AND MANAGEMENT GOALS:

Toto Ranch was acquired by Midpeninsula Regional Open Space District (Midpen) in 2012 with an agricultural conservation easement (Easement) in place covering the entire property. Midpen's conservation grazing goals are to manage its land utilizing livestock grazing that is protective of natural resources and compatible with public access; maintain and enhance the diversity of native plant and animal communities; manage vegetation fuel for fire protection; help sustain the local agricultural economy, and preserve and foster appreciation for the region's rural agricultural heritage. In order to achieve the goals of the conservation grazing program, this Rangeland Management Plan (RMP) will provide a framework around which resource managers,

land managers, and grazing tenants can make rangeland management decisions and adaptive management changes.

As stipulated in this RMP, conservation management practices are to be implemented by Midpen and the grazing lessee for all grazing areas of the Ranch, and applied specifically to livestock grazing operations and rangeland management. Conservation management practices include but are not limited to; maintenance and construction of livestock water developments (including onsite ponds), livestock fencing and corrals, ranch roads, and vegetation management to protect and enhance habitat for wildlife, native flora, and water quality and fire protection. Shrubland and forest areas that are not suitable for livestock grazing provide valuable wildlife habitat and should be managed to protect and enhance habitat value and connectivity for wildlife migration.

MANAGEMENT RECOMENDATIONS & RESPONSIBILITIES:

The Ranch should be operated by one lessee with a multi-year grazing lease. Conservation grazing using cattle and sheep should continue on rangeland portions of the Ranch outside of the Agricultural Lease area. Cattle loading/off-loading and processing should occur in the corral located within the Agricultural Lease area. All domestic livestock production including goats, chickens, pigs, turkeys, etc. should be confined to the Agricultural Lease area. Seven (7) horses can be used for cattle operations in rangeland. A separate lease will be prepared for the Agricultural Lease portion of the ranch.

The Ranch should be grazed year round, dependent upon available forage and livestock water, with cattle rotated between the five (5) existing pastures. If available forage and/or stock water is not adequate to support grazing livestock, cattle should temporarily be removed from the Ranch or grazing restricted to seasonal use. Water use shall be prioritized for cattle grazing the rangeland pastures under the conservation grazing program with secondary water use applied to domestic livestock within the Agricultural Lease area.

The estimated stocking rate for an average forage production year is 632.0 Animal Unit Months (AUMs) or 53.0 animal units year round, but would significantly increase with a reduction in coyote brush in the grasslands. Stocking rates for the Ranch will vary annually based on available forage and water and should be adjusted accordingly to accommodate available resources. Stocking rates (in AUMs) are estimates derived under the formulas in the RMP to be used as a starting point and then adjusted up or down accordingly based on current forage conditions. It is up to the tenant to ensure that the health and safety of the grazing animals is maintained including proper inoculations, de-worming, routine herd health checks, mineral/nutrient supplements as needed, and immediate treatment of any sick animals. Unusual conditions (e.g. extended drought or lower level of forage than anticipated) may require lower stocking rates. The District's highest goal is to maintain the long-term ecological health of the rangeland.

The monitoring program for grazed Midpen land must ensure that specified rangeland uses are in compliance with the applicable land use regulations and the land stewardship goals, objectives, and implementing guidelines. Midpen staff will use rangeland/habitat health checklists and photo point monitoring forms to monitor grasslands annually in the fall prior to rainfall.

III. Purpose of Rangeland Management Plan

The purpose of this RMP is to provide a framework for resource managers, land managers, and grazing tenants to make rangeland management decisions on the Ranch resulting in adaptive management changes to grazing practices, as needed (e.g. stocking rate reduction due to drought). The RMP addresses appropriate rangeland management practices for soil and water conservation, erosion control, pest management, nutrient management, water quality, and habitat protection on the Ranch.

This RMP should be reviewed at least every 10 years, or sooner, and updated in the event of significant changes in land use or management practices, or a change in ownership. An updated RMP may expand the specific plan for the conduct of commercial agricultural uses to include activities that are not currently being conducted on the Toto Ranch, but that are consistent with the Easement and resource management policies of Midpen.

IV. Goals and Objectives of RMP

The goals and objectives of the Rangeland Management Plan are to:

A. Describe appropriate historic, current, and potential future agricultural uses.

B. Inventory existing agricultural resources, including soils, water sources, grassland vegetation, forage quality and production, croplands, and infrastructure.

C. Determine capacity for conducting viable agricultural uses.

D. Establish provisions for minimizing erosion and transport of pollutants into creeks.

E. Provide a list of Best Management Practices (BMPs) for climate related impacts, grazing standards, invasive species management, water resources and conservation.

F. Provide specific guidance for the conduct of agricultural uses that complies with the restrictions contained in the Conservation Easement. The plan will include, as appropriate, Animal Unit Equivalents (AUE), ranch forage production estimates, available forage, crop production estimates, and capacity for any other agricultural uses described in the RMP.

The Coastal Annexation Area Mission Statement of Midpen is [1]:

"*To acquire and preserve in perpetuity open space land and agricultural land of regional significance, protect and restore the natural environment, preserve rural character, encourage viable agricultural use of land resources, and provide opportunities for ecologically sensitive public enjoyment and education. The District will accomplish this mission as a cooperative endeavor with public agencies, non-profit organizations, and individuals with similar goals.*"

In the spirit of the Mission Statement, in September 2006, Midpen formulated Goals, Policies, and Implementation Measures for potential areas of grazing land within the District.

GOAL:

Manage District land with livestock grazing that is compatible with public access, to maintain and enhance the diversity of native plant and animal communities, manage vegetation fuel for fire protection, sustain the local agricultural economy, and preserve and foster appreciation for the region's rural agricultural heritage.

GRAZING MANAGEMENT POLICIES:

Policy GM-1: Ensure that grazing is compatible with and supports wildlife and wildlife habitats.

Policy GM-2: Provide necessary infrastructure to support and improve grazing management where appropriate.

Policy GM-3: Monitor environmental response to grazing on District lands.

Policy GM-4: Utilize different livestock species to accomplish vegetation management objectives.

Policy GM-5: Preserve and foster existing and potential grazing operations to help sustain the local agricultural economy.

Policy GM-6: Provide information to the public about the region's rural agricultural heritage.

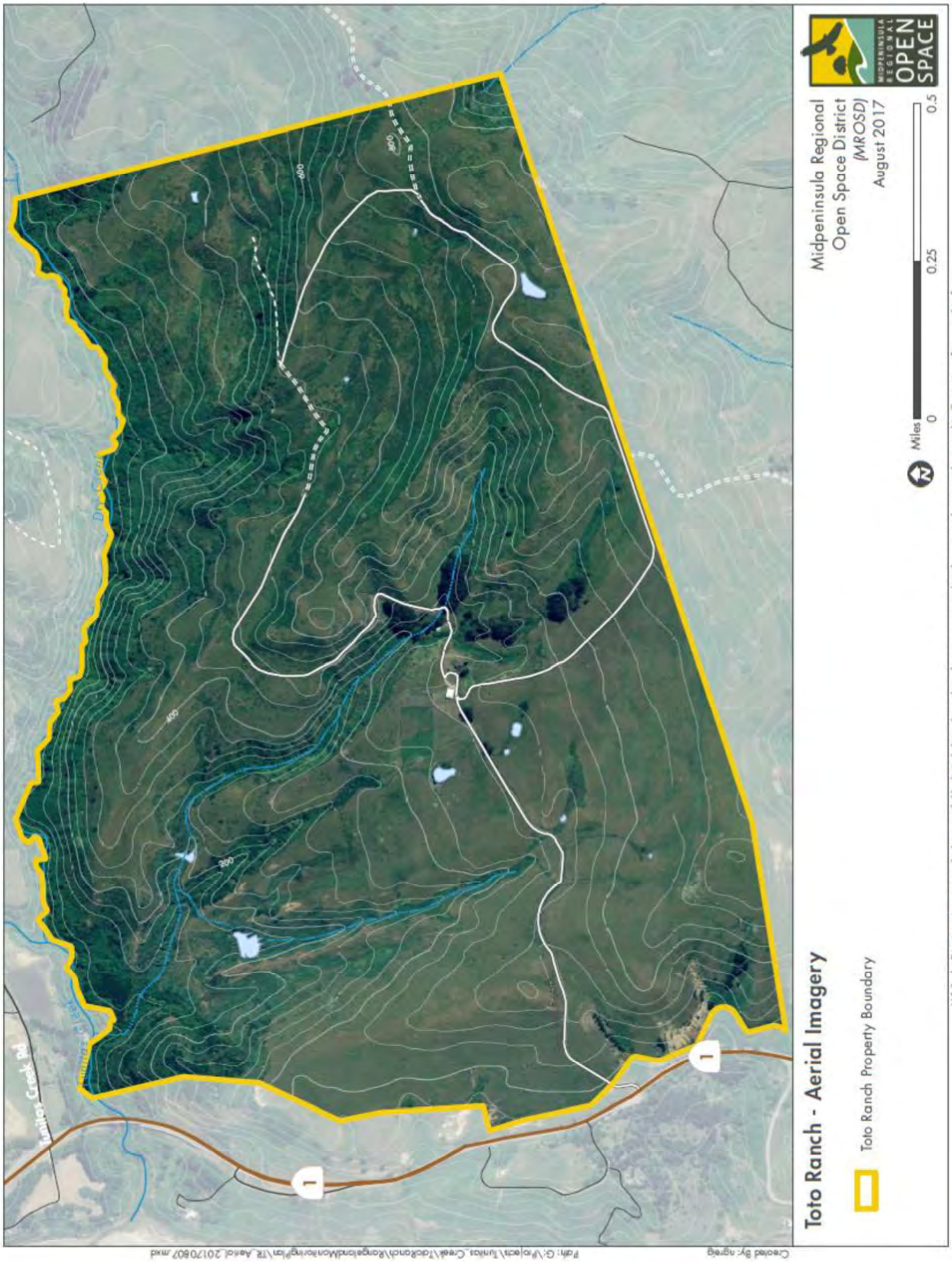
Policy GM-7: Provide public access in a manner that minimizes impacts on the grazing operation.

Policy GM-8: Grazing operations on District lands in the Coastside Protection Area will be managed in accordance with the policies established in the Service Plan for the San Mateo County Coastal Annexation Area.

EXHIBIT – A


Toto Ranch - Regional Location Map
MROSD Preserves
Other Protected Lands
Private Property
Watershed Land
Land Trust
Other Public Agency
Toto Ranch
Midpeninsula Regional Open Space District (MROSD) August 2017
Miles
0
2
4
Area of Detail
Toto Ranch
Tunitas Creek OSP
TEAGUE HILL OSP
EL CORTE DE MADERA CREEK OSP
PURISIMA CREEK REDWOODS OSP
TUNITAS CREEK OSP
LA HONDA CREEK OSP
WINDY HILL OSP
RUSSIAN RIDGE OSP
MONTE BELLO OSP
SKYLINE RIDGE OSP
THORNEWOOD OSP
Whiskey Hill Rd
Mountain Home Rd
Tripp Rd
Alpine Road
Page Mill Road
Bear Gulch Rd
Stage Rd
Verde Rd
Pescadero Creek Rd
CA State Route 35
Route 84
1

EXHIBIT – B


Toto Ranch - Aerial Imagery
Toto Ranch Property Boundary
Midpeninsula Regional Open Space District (MROSD) August 2017
Miles
0
0.25
0.5
While the District strives to use the best available digital data, these data do not represent a legal survey and are merely a graphic illustration of geographic features.
Tunitas Creek Rd
1

V. Existing Resources and Infrastructure:

Agricultural resources include elements necessary to continue agricultural uses on the Toto Ranch. These include appropriate soils, sufficient water, adequate forage, and supporting infrastructure. These agricultural resources are described below to establish the fact that the Toto Ranch is capable, at a minimum, of sustaining the current agricultural uses and that it has the potential to sustain additional agricultural uses supported by the agricultural resources.

LAND USE INFORMATION

HISTORIC LAND USE:

The property was originally owned by Alexander Gordon, a State assembly member, who in 1872 built Gordon's Chute near the mouth of Tunitas Creek, an ill-fated ramp for sliding farm goods from the top of the cliffs to ships anchored in the rolling surf. Gordon's Chute was blown away in a heavy storm in 1885 [2]. The Machado family, originally from Portugal, settled the property in the late 1800s, and ranched on the property for close to 100 years. The property was historically grazed with Holstein dairy cows and many of the hillsides and ridgetops were dryland farmed with hay and oats [2]. The Scutchfield family acquired the Ranch in the late 1970s and cattle grazing continued while farming operations ceased [3]. In 2008, POST purchased the property from the Scutchfield family. Midpen purchased the property from POST in 2012 and continued grazing operations with the existing residential/grazing tenant, Erik and Doniga Markegard. The property has been continuously grazed for over 120 years.

CURRENT LAND USE:

The Markegard family leases the property and resides on the Ranch (separate residential lease). The Ranch is currently used primarily for grass-fed beef cattle production on the productive and accessible grasslands. The tenant also produces a number of other agricultural commodities including pasture pork, chickens, goats, lambs, and turkeys that are marketed through a Community Supported Agriculture (CSA) purchasing program, at local farmer's markets, restaurants and through their website [4]. A small number of dairy cows are maintained for milk production as part of a cooperative Herd Share arrangement. The tenant hosts agricultural workshops, ranch dinners and field days on the Ranch throughout the year by permit only. In addition to cattle, a number of horses, sheep, donkeys and llamas/alpacas/emus are kept on the property and currently graze the grasslands outside of the Agricultural Lease area.

Current land uses on the ranch include:

- Livestock grazing (Beef Cattle and/or sheep with Seasonal Horse use) - Approximately 974 acres
- Residential and Agricultural Lease area (House, barns, corrals, and flight pens) – Approximately 11.5 acres

SURROUNDING LAND USE:

The surrounding rural landscape is dominated by established ranches used primarily for beef cattle production and row crop production. The region has undergone a recent increase in poultry, grass-fed meat, and egg production as well as Agricultural Lease creamery products. The highly productive flats in the region, where farmable, are ideal for certain vegetable crops, hay, and cut flower production.

The adjacent properties to the east and south of Toto Ranch are primarily grazed rangeland with associated residential/farm buildings. The land that borders the Ranch to the north includes a number of small residential lots and small farm fields in addition to grazed rangelands. State Highway-1 and the Pacific Ocean border the Ranch to the west.

In a regional context, for San Mateo County, agricultural production continues to provide significant total gross revenue value of $135,440,500 annually [5]. According to the San Mateo County Crop Report, livestock ranchers struggled with drought over the past several years resulting in an estimated decline of 22 percent in stocking rates; however, livestock numbers recovered well through 2016 posting a 14 percent increase over 2015.

Figure-1: Looking south over the Toto Ranch. Highway-1 and the Pacific Ocean to the right with surrounding rangelands to the south and east of the Ranch. Several small residential parcels neighbor Toto Ranch, located along the north side of Tunitas Creek. Note the heavily wooded, steep Dry Creek and Tunitas Creek riparian corridors (bottom of photo) that comprises much of the northern border of the Ranch. Photo Credit – POST.

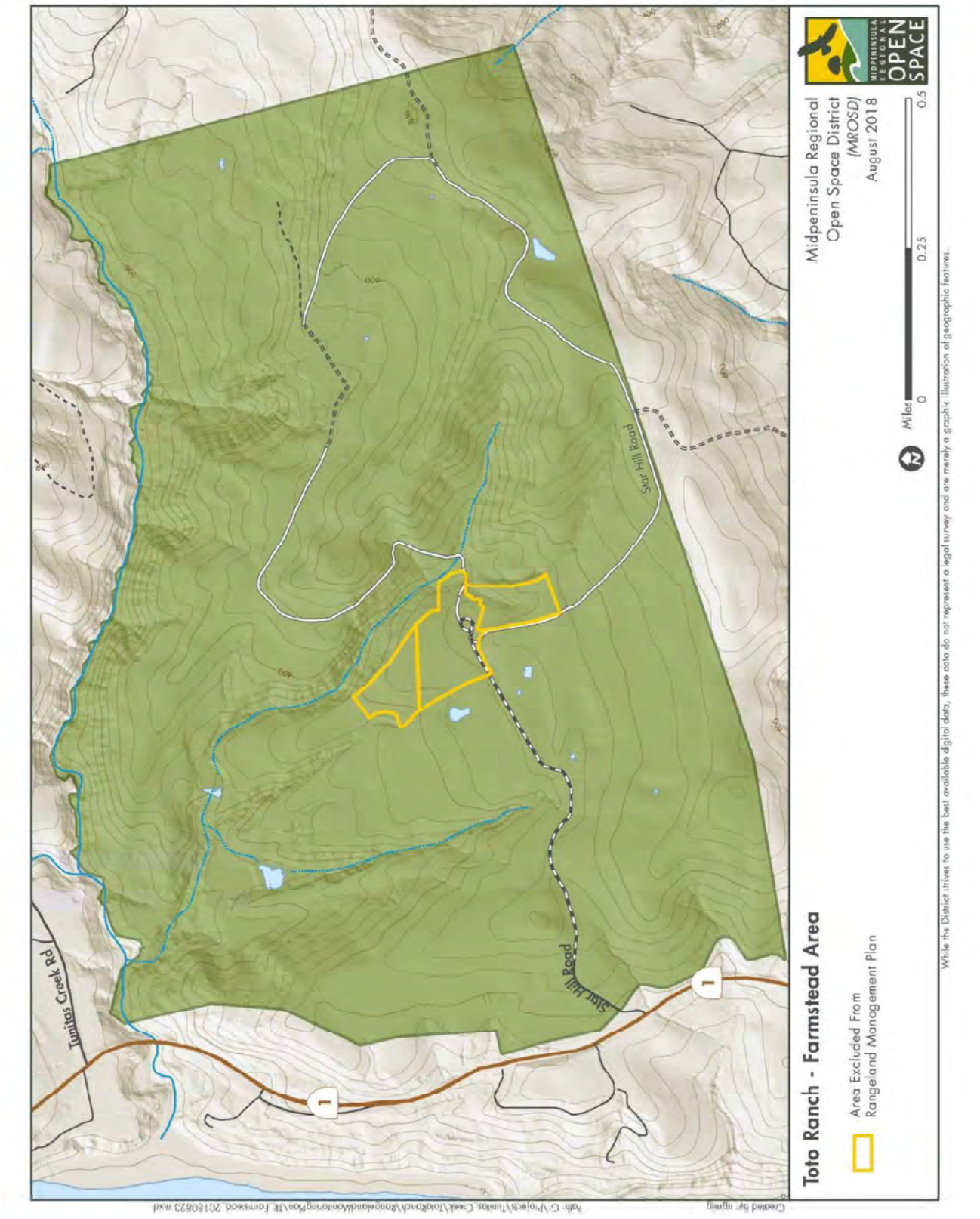
IMPROVEMENTS

ELECTRICITY AND ACCESS EASEMENTS:

Electricity is provided to the Ranch headquarters by Pacific Gas and Electric (PG&E) via utility poles that cross the ranch, stemming from a main line on Tunitas Creek Road. Municipal water is not available on the Ranch.

Figure-2: Aerial view of the Agricultural Lease area and associated buildings including hay barn (bottom right), residence (center), metal-sided shop/barn (top left) and the livestock corral (top center).

EXHIBIT-C


Toto Ranch - Farmstead Area
Area Excluded From Rangeland Management Plan
Midpeninsula Regional Open Space District (MROSD)
August 2018
Miles
0
0.25
0.5
While the District strives to use the best available digital data, these data do not represent a legal survey and are merely a graphic illustration of geographic features.
Twin Creek Rd
Star Hill Road
Star Hill Road
1
1

SOIL DESCRIPTION

The Toto Ranch is comprised of fourteen (14) soil series types (USDA Soil Conservation Service, 1985) identified on the soils map produced by Midpen (Exhibit-D). Soil composition on the property varies delineated by slope, aspect, and elevation. The majority of the ranch (49 percent) is comprised of Tierra loam/Tierra clay loam in addition to Colma loam (27 percent). Gazos loam and Lobitos loam soils are found primarily within the riparian corridors and steep brush covered slopes above the riparian corridors on the Ranch. The remaining soils are present in a very limited capacity, primarily located within the Tunitas Creek riparian corridor along the extreme northern property boundary. Colma and Tunitas loams comprise the majority of the upland grassland and coastal scrub habitat areas suitable for livestock grazing on the Ranch. Steep, densely vegetated riparian corridors and canyons provide little palatable forage for grazing livestock, but can provide shaded areas for loafing, particularly on the fringe areas adjacent to the grazeable grassland and coastal scrub habitats.

The **Colma and Colma loam** soils series consists of deep, well drained soils that formed in material weathering from softly consolidated or weakly consolidated marine sediments. Colma soils are on the foothills and have slopes of 9 to 75 percent. The mean annual precipitation is about 27 inches [6]. Used mainly for range and watershed lands, small areas have been cleared and planted to hay/silage. Where not farmed, typical vegetation composition consists of coyote brush, Lupine, and poison oak, with an understory of annual grasses and forbs with a few perennial grasses [6]. Colma soils are well drained with medium to rapid runoff, suitable for year-round use by grazing livestock without impacting soil stability or creating soil compaction provided prescribed levels of forage are left on the ground.

The **Gazos loam** soil series consists of moderately deep to bedrock, well drained soils that formed in material weathered from sandstone and shale. Gazos soils are on hills and have slopes of 9 to 75 percent. The mean annual precipitation is about 22 inches [6]. Used mostly for livestock grazing, a few areas have been cultivated for growing small grains and hay. Where not cultivated, vegetation primarily consists of annual grasses and forbs with brush and some oak trees [6]. Gazos loam soils are well drained with high to very high runoff and moderately slow permeability making them suitable for year-round grazing by livestock. It is important to leave adequate levels of forage on the soil surface to protect soil integrity and minimize the risk of erosion.

The **Lobitos loam** soil series consists of moderately deep, well drained soils that formed on moderately hard sandstone and shale. Lobitos soils are on uplands and have slopes of 5 to 50 percent. The mean annual precipitation is about 30 inches [6]. Used mostly for pasture and rangeland, some areas have been cultivated to grow grain, hay, barley, and flax. Where not cultivated, vegetation primarily consists of annual grasses and forbs with some brush including coyote brush, cascara berry, and poison oak [6]. Lobitos loam soils are well drained with moderate to rapid runoff and moderately slow permeability making them suitable for year-round grazing by livestock. It is important to leave adequate levels of forage on the soil surface to protect soil integrity and minimize the risk of erosion.

The **Tierra** soil series consists of deep, moderately well drained soils that formed in alluvial materials from sedimentary rocks. Tierra soils are on dissected terraces and low hills and have slopes of 2 to 50 percent. The mean annual precipitation is about 18 inches [6]. Used for grazing, growing grains, and growing small grains, and small areas for growing a large number of crops, though many cultivated areas have been reverted to grass. Where not cultivated, vegetation composition is primarily annual grasses and forbs [6]. Tierra soils are moderately well drained with slow to rapid runoff and very slow permeability. Tierra soils are suited to year-round livestock grazing, though areas with notably slow permeability are susceptible to soil compaction and grazing should be delayed until soil is firm enough to withstand grazing pressure, typically summer and fall months.

The **Tunitas** soil series consists of very deep, moderately well drained soils. They have formed from fine textured alluvium from mixed basic igneous and sedimentary rock sources. Tunitas soils are on nearly level to moderately steep fan terraces and alluvial fans. The mean annual precipitation is about 25 inches [6]. Most bodies of this soil class are cultivated, primarily used to grow crops including artichokes, Brussels sprouts, flax, small grains, and grain hay. Some sites are used as irrigated pasture for grazing [6]. Tunitas soils are moderately well drained with slow to medium runoff and slow permeability. Areas often receive excess water by runoff from surrounding lands and lower lying areas may have temporary high water table during rainy seasons (winter). These soils are very limited on the Ranch but grazing should occur during dry summer months when soils are firm enough to withstand grazing pressure.

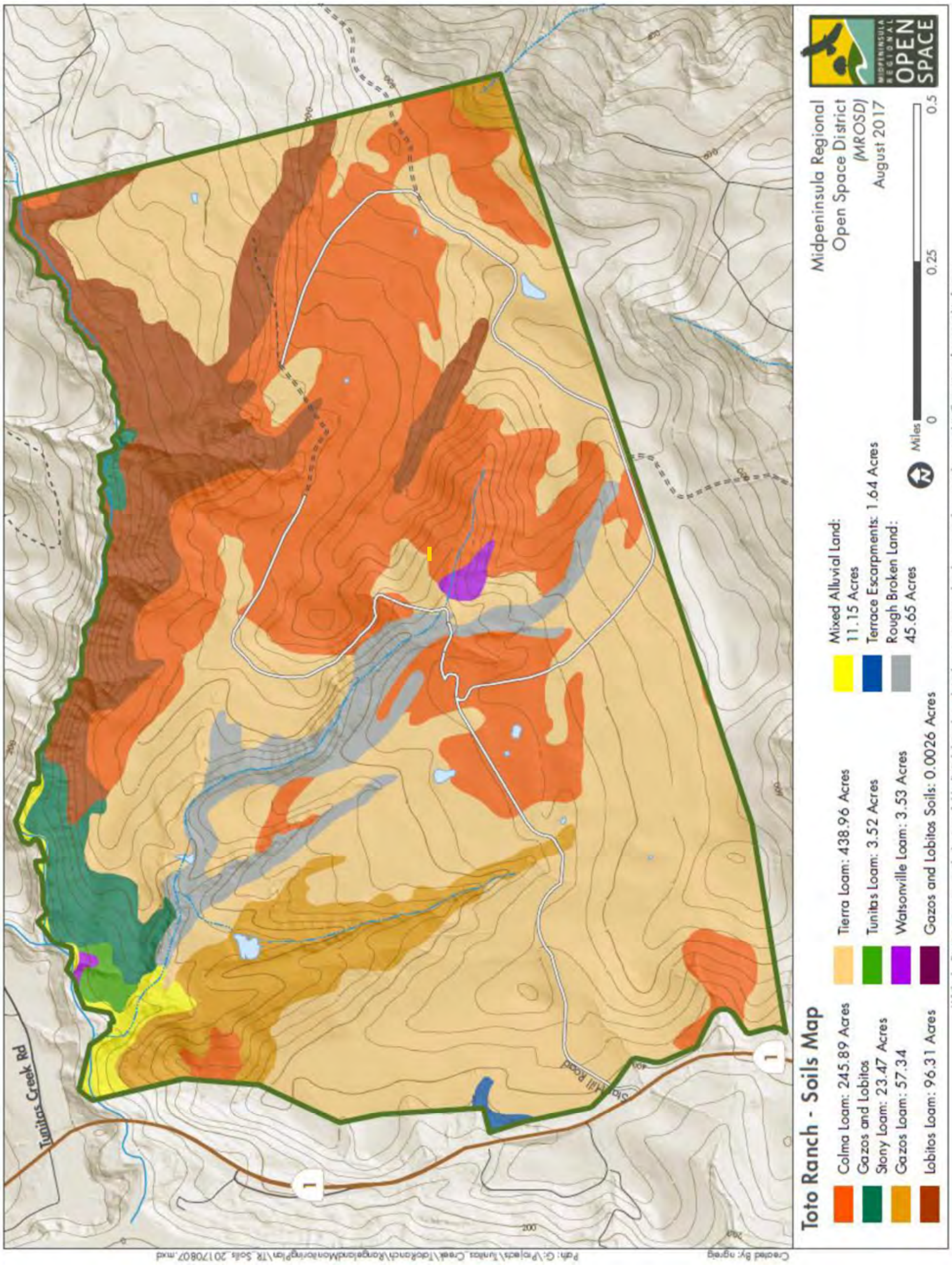
The **Watsonville** soil series consists of deep, somewhat poorly drained soils that formed in alluvium. Watsonville soils are on old coastal terraces and valleys and have slopes of 0 to 50 percent. The mean annual precipitation is about 28 inches [6]. Watsonville soils are commonly used as irrigated pasture and to grow field crops, row crops, and specialty crops such as strawberries and Brussels sprouts. Where not cultivated, vegetation typically consists of annual grasses, forbs, and a few coastal chaparral plants [6]. These soils are somewhat poorly drained because perched water tables occur during periods of heavy water applications. Slow to rapid runoff and very slow permeability make Watsonville soils very susceptible to soil compaction. Livestock grazing should be delayed until dry summer months when soils are firm enough to withstand grazing pressure.

On steeper, more erosion-prone slopes and riparian corridors susceptible to soil compaction, grazing should be delayed until soil is firm enough to withstand grazing pressure without impacting soil stability. Livestock grazing should be managed to protect the soil from erosion as loss of the surface layer can severely decrease forage productivity. The risk of erosion can be reduced by maintaining adequate plant cover and allowing sufficient residual dry matter (RDM) to remain on the soil surface at the conclusion of the grazing season.

Table-1: Delineation of soil types per acre and percent on the Toto Ranch.

SOIL SURVEY DATA – TOTO RANCH, SAN MATEO COUNTY, CA			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
ClC2	Colma loam, sloping, eroded	27.6	2.9
ClD2	Colma loam, moderately steep, eroded	115.9	12.2
ClE2	Colma loam, steep, eroded	61.1	6.4
ClF2	Colma loam, very steep, eroded	23.0	2.4
CmF3	Colma sandy loam, steep and very steep, severely eroded	20.7	2.2
GbF2	Gazos loam, very steep, eroded	58.5	6.1
GsE2	Gazos and Lobitos stony loams, steep, eroded	1.9	0.2
GsF2	Gazos and Lobitos stony loams, very steep, eroded	21.0	2.1
LlE2	Lobitos loam, steep, eroded	11.8	1.2
LlF2	Lobitos loam, very steep, eroded	80.7	8.5
Ma	Mixed alluvial land	12.5	1.3
Rb	Rough broken land	45.7	4.8
SkB	Soquel loam, gently sloping	0.6	0.1
Ta	Terrace escarpments	0.6	0.1
TcD2	Tierra clay loam, moderately steep, eroded	7.8	0.8
TeC2	Tierra loam, sloping, eroded	7.8	0.8
TeD2	Tierra loam, moderately steep, eroded	19.0	2.0
TeE2	Tierra loam, steep, eroded	256.2	26.9
TeE3	Tierra loam, steep, severely eroded	175.9	18.5
TxB	Tunitas loam, gently sloping	4.5	4.7
WmD2	Watsonville loam, moderately steep, eroded	0.9	0.1
WmE3	Watsonville loam, moderately steep and steep severely eroded	2.7	2.8
Totals for Area of Interest (AOI)		**952.3**	**100.0%**

<u>**EXHIBIT-D**</u>


Toto Ranch - Soils Map
Colma Loam: 245.89 Acres
Gazos and Lobitos Stony Loam: 23.47 Acres
Gazos Loam: 57.34
Lobitos Loam: 96.31 Acres
Tierra Loam: 438.96 Acres
Tunitas Loam: 3.52 Acres
Watsonville Loam: 3.53 Acres
Gazos and Lobitos Soils: 0.0026 Acres
Mixed Alluvial Land: 11.15 Acres
Terrace Escarpments: 1.64 Acres
Rough Broken Land: 45.65 Acres
Midpeninsula Regional Open Space District (MROSD)
August 2017
Miles
0
0.25
0.5
While the District strives to use the best available digital data, these data do not represent a legal survey and are merely a graphic illustration of geographic features.
Tunitas Creek Rd
Star Hill Road
1

VEGETATION DESCRIPTION

Overall existing rangeland conditions on the grazed pastureland on the Toto Ranch range from poor to excellent, depending on the forage type, presence of invasive vegetation, and RDM. Infestations of coyote brush and invasive thistles have historically reduced the quality of range conditions by outcompeting desirable vegetation and acting as a barrier to shade out seedlings of desirable vegetation on much of the Ranch. The majority of the ranch is comprised of rolling open grasslands/coastal scrub, heavily influenced by coyote brush encroachment. The steep drainages and riparian corridors are comprised of dense brush/woody vegetation and willows. A large stand of eucalyptus trees are present just east and south of the Agricultural Lease area. Overall, the vegetation diversity and level of desirable vegetation on the Ranch is excellent and supports an abundant, diverse wildlife population while maintaining a highly productive agricultural value.

RANGELAND PASTURES:

A combination of annual grassland and coastal scrub habitat covers approximately 60-65 percent of the Ranch comprised of a diverse vegetation composition, ranging from 100 percent annual grassland to areas heavily influenced by coyote brush. The vast majority of the grassland forage species are introduced non-native palatable grasses and low forbs that are desirable for livestock grazing. Grassland and scrubland habitats are present on the ridge tops and gentle slopes throughout the Ranch. Upland slopes and ridge tops on the Ranch were historically dryland farmed but were returned to grazed pastureland during the 1970s. These areas are highly productive and relatively free of invasive thistles, except for sparse patches. Dense woody vegetation dominates many of the small drainages and steeper canyon lands within the grazed pasture. While these areas provide little palatable forage for livestock, they provide shaded locations for loafing, particularly along fringe areas adjacent to the grasslands. Vegetation diversity and overall forage production have historically been limited in the lower-lying portions of the ranch, dominated in many areas by dense brush and willows. Invasive plant control efforts by the landowner have reduced the presence and dispersal of invasive vegetation on the Ranch when compared to historic levels. In addition to invasive plant control, the tenant has mowed coyote brush for several years, increasing desirable forage in many of the front pastures between the Agricultural Lease area and Highway-1. A comprehensive vegetation assessment was conducted on April 11, 2017, included as Attachment-C to this plan.

Figure-3: Exemplary upland habitat on the Toto Ranch comprised annual grasslands impacted by coyote brush encroachment. Many of the grassland/scrub habitat is comprised of about 60 percent annual grassland and 40 percent coyote brush.

RIPARIAN AND AQUATIC HABITAT:

A number of ephemeral streams originate on the Toto Ranch, flowing south to north into Dry Creek and Tunitas Creek. Tunitas and Dry Creeks are perennial streams that flow east to west along the north border of the Ranch. Vegetation types within the riparian corridors are very similar across the Ranch, comprised of dense woody vegetation including brush, willows, alders, and boxelder trees.

Fourteen (14) ponds and wetlands are present on the Ranch. In addition, a number of natural springs are located throughout the Ranch. Vegetation composition around the ponds is primarily annual grassland and coyote brush with the exception of the "Quarry Pond" which is surrounded by willows. Aquatic habitat adjacent to and within the stockponds consists of sedges, rushes, and a variety of other aquatic species. Stockponds and catchments located in the grasslands tend to have invasive thistles around them. A list of riparian and aquatic vegetation species observed during the April 2017 site visit are listed in Table 2.1 below.

Table 2.1 – Riparian and aquatic vegetation observed during an April 2017 site visit includes:

RIPARIAN/AQUATIC VEGETATION (OBSERVED) – April 2017	
Latin Name	**Common Name**
Acer negundo	Boxelder
Alnus rhombifolia	White alder
Alnus rubra	Red alder
Azola filiculoides	Water fern
Carex bolanderi	Bolander's sedge
Carex spp.	Sedges
Eleocharis macrostachya	Pale spikerush
Hydrocotyle ranunculoides	Water pennywort
Juncus bufonius	Toad rush
Juncus effuses	Soft rush
Juncus patens	Spreading rush
Juncus phaeocephalus	Brown-headed rush
Juncus spp.	Rushes
Juncus xiphioides	Irisleaf rush
Luzula comosa	Pacific woodrush
Nasturtium officinale	Watercress
Oenanthe sarmentosa	Water parsley
Typha latifolia	Cattails
Rubus armeniacus	Himalayan blackberry
Rumex crispus	Curly dock
Salix spp.	Willows

INVASIVE VEGETATION:

Invasive vegetation has historically impacted the growth of desirable vegetation including forage for grazing livestock. During an April 2017 site visit, a few scattered individual wooly distaff (*Carthamus lanatus*) plants were identified in the flats near the Agricultural Lease area. Milk thistle (*Silybum marianum*), Italian thistle (Carduus *pycnocephalus*) and bull thistle (Cirsium *vulgare*) are found in scattered locations across the Ranch in low densities, though these thistles tend to vary in abundance annually based on precipitation patterns but typically don't dominate grasslands under moderate grazing conditions in San Mateo County.

Onion grass (*Romulea rosea*) is found growing throughout the annual grasslands across many parts of the Ranch. Onion grass occurrences in San Mateo County are becoming more common but have not yet been rated by the California Invasive Plant Council (Cal-IPC). Onion grass is a small, erect perennial herb with bulbous roots and produces a small purple flower in the spring (Figure-4). Onion grass is difficult for grazing animals to digest and if consumed in large quantities, can create a fiber block in cattle.

Invasive plants found in the riparian corridor are primarily limited to fennel (*Foeniculum vulgare*), Himalayan blackberries (*Rubus armeniacus*), and poison hemlock (*Conium maculatum*). French broom (*Genista monspessulana*), a woody perennial, has become established in portions of Tunitas and Dry Creek. French broom is classified as a "High" concern by Cal-IPC as it spreads rapidly and will outcompete desirable vegetation. See Invasive Weed Control in Section VII for management recommendations.

Table 2.2 – Cal-IPC Rate Invasive plant species list.

INVASIVE VEGETATION (OBSERVED) – April 2017		
Latin Name	**Common Name**	**Cal-IPC Rating**
Carduus *pycnocephalus*	Italian Thistle	Moderate
Carthamus *lanatus*	Wooly distaff thistle	Moderate (alert)
Cirsium *vulgare*	Bull Thistle	Moderate
Conium *maculatum*	Poison hemlock	Moderate
Cortaderia *jubata*	Purple pampas grass	High
Delairea *odorata*	Cape Ivy	High
Foeniculum *vulgare*	Fennel	High
Genista *monspessulana*	French Broom	High
Helminthotheca *ecioides*	Bristly Ox-tongue	Limited
Silybum *marianum*	Milk Thistle	Limited

Table 2.3 – Rangeland plants not desirable for livestock grazing.

INVASIVE VEGETATION (OBSERVED) – April 2017		
Latin Name	**Common Name**	**Cal-IPC Rating**
Baccharis *pilularis*	Coyote brush	Not Rated
Romulea *rosea*	Onion Grass	Not Rated
Solanum *furcatum*	Forked nightshade	Not Rated
Solanum *douglasii*	Greenspot nightshade	Not Rated
Xanthium *spinosum*	Spiny cocklebur	Not Rated

Figure-4: Onion grass (*Romulea rosea*) found on the Toto Ranch. Note the small purple flower and bulbous root balls.

WATER SOURCES

The Toto Ranch has historically lacked ample water supply, particularly under drought conditions, to provide adequate residential and stock water year round. Livestock water within the Agricultural Lease area and pastureland adjacent to the Agricultural Lease area is provided through a number of water troughs. The water troughs are supplied via two (2) wells on the ridge near the south property boundary; one well is pumped via a solar pump and the second via a windmill (Figure-5). In addition to the developed water systems, a network of stockponds and seasonal catchments provide stock water throughout the Ranch. A number of natural springs are present but not currently developed to provide stock water. Livestock do not have access to Tunitas Creek or Dry Creek and creeks are not considered viable water sources for the livestock operation.

Residential water for the Agricultural Lease area is provided via a natural spring located on the ridge to the south of the Agricultural Lease area. Refer to Toto Ranch Water Infrastructure Map (Exhibit-E).

Figure-5: Windmill powered well located on the ridge along the southern property boundary. Well water is pumped into storage tanks and then flows via gravity to the Agricultural Lease area where water is provided to livestock in a number of water troughs.

EXHIBIT-E


Toto Ranch - Water Infrastructure
Water Distribution Line
Water Tank
Well
Water Trough
Spring
Midpeninsula Regional Open Space District (MROSD)
August 2017
OPEN SPACE
Feet
0
200
400
0
300
600
While the District strives to use the best available digital data, these data do not represent a legal survey and are merely a graphic illustration of geographic features.
Created by: ngreig
Path: G:\Projects\Tunitas_Creek\ToroRanch\RangelandMonitoringPlan\TR_WaterInfrastructure_20170807.mxd

WILDLIFE

Wildlife is abundant throughout the Toto Ranch. The riparian corridors, particularly around the stockponds, provide habitat for various aquatic and amphibian species, including the federally listed California red-legged frog (CRLF). Black tailed deer, coyote, bobcats, badgers and many other animals are present on the Ranch.

Special Status Species[1]

The California Natural Diversity Database lists a number of special status wildlife species found within the Tunitas Creek watershed, most of which are found in the lower reaches and tidal areas. A large group of Midpen staff and specialized biologists surveyed Toto Ranch in April of 2017 and developed a comprehensive list of wildlife species observed on the Ranch. Special status wildlife species potentially found in the upper portions of the watershed, and found either historically or currently on the Toto Ranch include:

A. Animals

AMPHIBIANS/REPTILES:

Rana draytonii, California red-legged frog - Federal threatened, CA species of special concern

Thamnophis sirtalis tetratania**,** San Francisco garter snake – and State Federal endangered

BIRDS:

Athene cunicularia, Burrowing owl – CA species of special concern

Circus cyaneus, Northern Harrier – CA species of special concern

Geothlypis trichas sinuosa, San Francisco common yellowthroat – USFW bird of conservation concern & CA species of special concern

Selasphorus sasin, Allen's Hummingbird - USFW bird of conservation concern

FISH:

Oncorhynchus kisutch, Coho Salmon - Federal endangered & State endangered

Oncorhynchus mykiss irideus, Steelhead Trout – Federal threatened

MAMMMALS:

Neotoma fuscipes annectens, San Francisco dusky-footed woodrat – CA species of special concern

Taxidea taxus, American badger – CA species of special concern

B. Plants

Plagiobothrys chorisianus* var. *chorisianus, Choris' popcorn flower – CNPS Rank 1B.2 & Midpen BMP

[1] This information is used for planning purposes only

EXISTING AGRICULTURAL INFRASTRUCTURE

- Agricultural Buildings

Agricultural buildings located on the Ranch include a 4,390 ft.^{2} metal-sided barn/shop with utilities and a 1,325 ft.^{2} hay barn. The metal-sided barn/shop/walk-in freezers for meat storage building is located in the main yard, includes running water, power, concrete floor, and bathroom and is in good condition. The hay barn is located just east of the residence and is in fair condition structurally; however, the roof is in poor condition.

- Corrals and Congregation Areas

A set of wood livestock corrals are located within the Agricultural Lease area used for processing and shipping/receiving livestock. The corrals are old but in fair condition and function adequately for the existing livestock operation on the Ranch. The corral is accessible year-round by truck/trailer and semi-trucks via an all-weather gravel road.

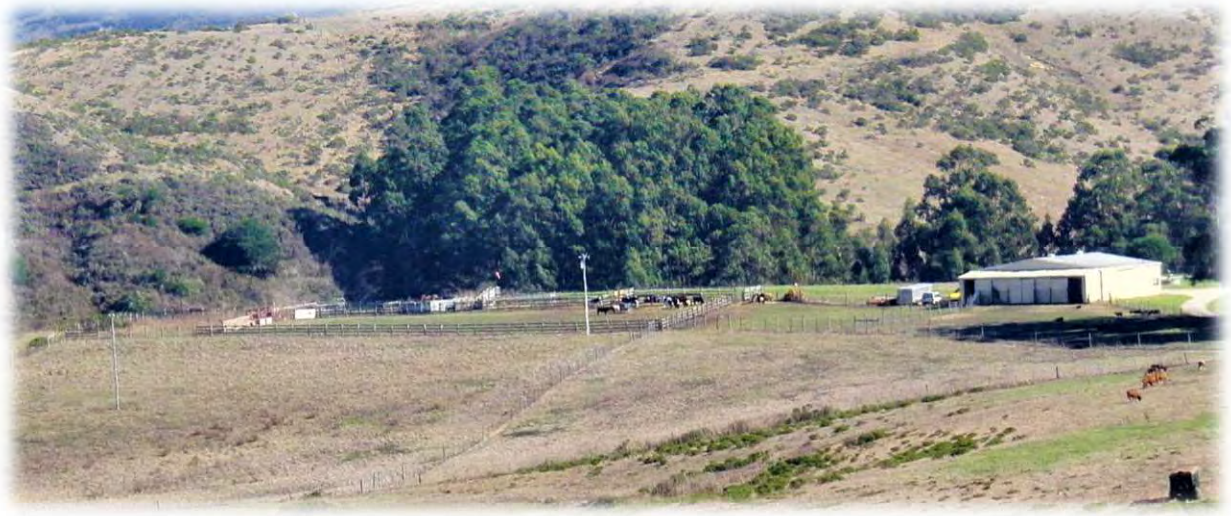


Figure-6: Wooden livestock corral with metal-sided barn/shop building (right). Small pastures or flight pens are ideal for running sheep, goats and other small livestock (foreground).

- Water Sources

Water is provided to livestock primarily through a number of plastic, concrete, and galvanized water troughs located within the Agricultural Lease area and nearby pastures. All water troughs should be equipped with wildlife escape ramps to prevent entrapment of wildlife. Water is primarily supplied by a windmill/well and solar pump/well. Water is collected in one 2,500 gallon and two (2) 5,000-gallon water storage tanks near the wells and flows via gravity to the Agricultural Lease area before distribution to the troughs in/around the Agricultural Lease area.

A network of fourteen (14) stockponds and seasonal water catchments provide stock water throughout the remainder of the Ranch, though water is often seasonal, particularly under drought conditions. Livestock tend to rely primarily on trough water around the Agricultural Lease area during late summer and fall months. Increased water distribution and placement of new water troughs would increase livestock distribution and forage utilization in more remote pastures. Residential water is provided via a natural spring above the residence, collected in a 5,000-gallon water storage tank, and then pumped to the house.

Figure-7: A plastic water trough in the pasture south of the residence. Note the invasive thistle and poison hemlock growing around the trough. These plastic troughs are designed to be temporary and should be replaced with galvanized or concrete troughs in grazed pastures. A wildlife escape ramp is missing from this trough and should be installed to protect wildlife that may fall into the water.

- Roads

State Route-1 (Cabrillo Highway), a well-traveled, paved State Highway delineates the west property boundary of the Ranch for approximately 1.2 miles. The main entrance to the Ranch originates off State Route-1, comprised of a paved/gravel road. The driveway, part of historic Star Hill Road, continues east for approximately 3/4 of a mile to the Agricultural Lease area. The driveway, where paved is in good condition; however, the gravel sections are in poor condition with numerous large potholes. The driveway receives heavy year-round use by the residential/grazing tenant with added impacts from the many field day events the tenant hosts. While the gravel section of the driveway is in poor condition, when properly maintained, the driveway poses no risk to downstream water quality.

In general, roads on the Ranch are in fair to good condition, though minimally maintained. Most Ranch roads are minimally graded with native vegetation ground cover present, often times delineated by vehicle tracks in the vegetation from continued use by the tenant. While many of the roads are stable and in good condition, several areas are impacted by active gullying/rutting from surface water flow. Winter rains will continue to cause damage to the road surface and potentially transport sediment into local streams. In addition, a number of roads, particularly along the back half of the Ranch, are overgrown with brush creating hazardous access conditions for vehicles and pose a fire risk from vehicle ignition sources during hot dry conditions.

A ranch road beginning in the Agricultural Lease area and looping around to the back half of the Ranch is impassible due to a large seep/spring creating a mud bog. The road was historically accessible but has not been used in several years. If road repairs are undertaken in this location, (installation of culvert or ford crossing, road reroute, or other) engineering oversight should ensure correct sizing and placement of erosion control features, to allow access and protection of wetland features associated with the spring.

Figure-8: Gully/rutting activity along an insloped road just south of the Agricultural Lease area. Large gully caused by surface water flow during winter storm events. Road should be re-graded and water diversion points installed to relieve surface flow to protect the integrity of the road.

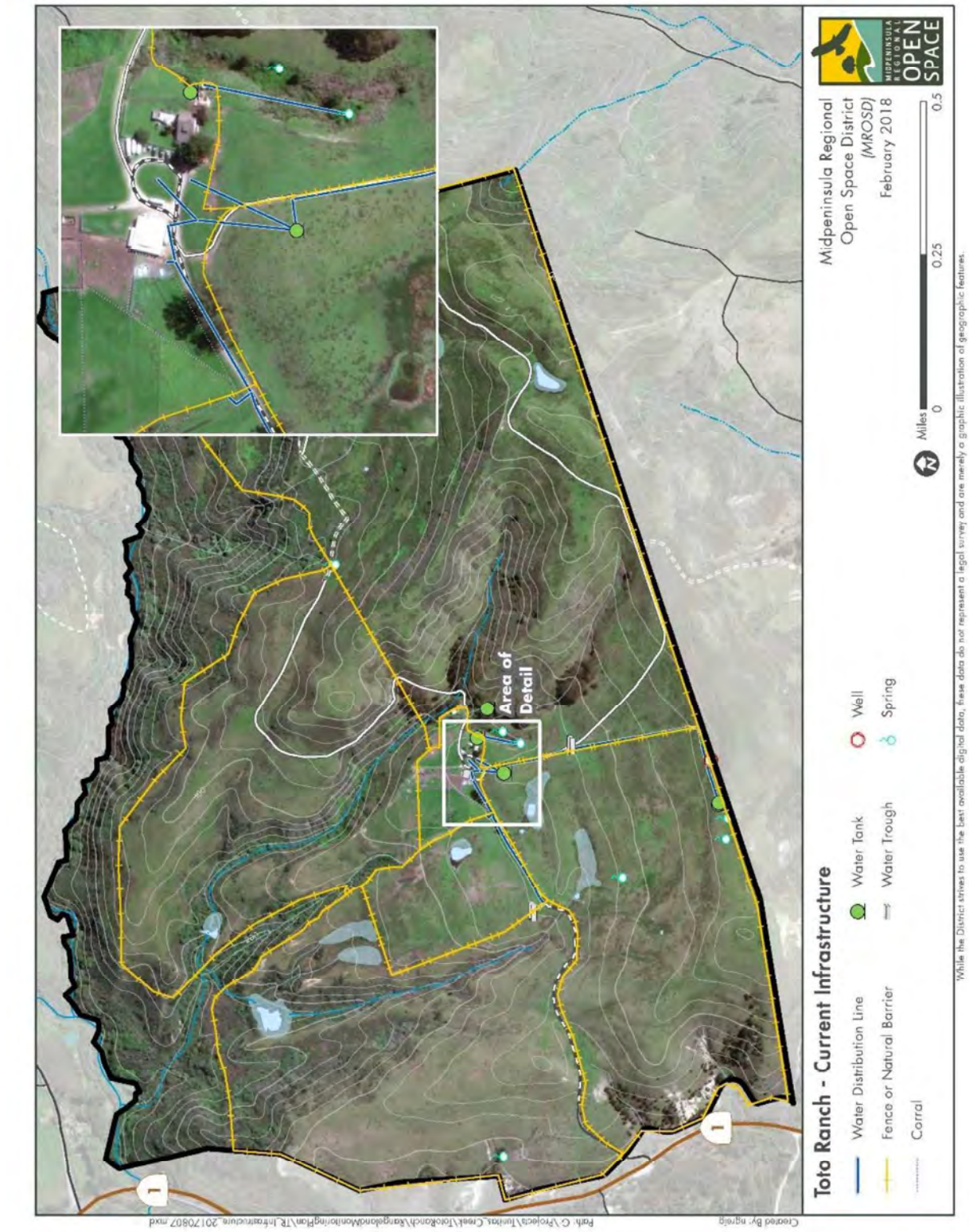
- Fencing

Toto Ranch is secured on all borders by a combination of "New Zealand style" smooth wire fencing and natural barriers. Interior pasture fencing currently divides the ranch into five (5) main pastures with numerous additional small pastures around the Agricultural Lease area. Interior pasture fencing is comprised of "New Zealand style" fencing in varying condition, barbed wire fence, and natural barriers. Maintenance of the "New Zealand style" fencing is ongoing as fences are relatively old and the smooth wire used for the fencing tends to break often when compared to traditional barbed wire fencing. Landowner has installed new barbed wire fencing along some pasture boundaries. Natural slope, rock, and brush barriers have been used historically to contain cattle in many places on the Ranch; however, the brush barriers would be ineffective if wildfire should burn boundaries of the grassland areas.

The grazing tenant installed a Management Intensive Grazing (MIG) system consisting of approximately 60 small grazing paddocks, constructed of temporary electric fencing. The MIG, located west of the Agricultural Lease area, is designed for high-intensity, short duration grazing as cattle are regularly rotated between paddocks during the "green" growing season, typically January through June. No notable resource management benefits have been derived through use of the MIG system.

Figure-9: Sample of New Zealand style smooth wire fencing on the Toto Ranch. The high tinsel smooth wire is susceptible to damage and often breaks. Most fences on the ranch are older and in varying condition.

EXHIBIT-F (Existing Infrastructure Map)



RANGELAND CONDITION

The Toto Ranch is comprised of approximately 60 percent annual grasslands and/or grassland-coastal scrub, which have historically been farmed, and more recently grazed with cattle. Grazed rangeland pastures on the ranch total approximately 940 acres excluding the Agricultural Lease area. Of the 940 acres of pastureland, approximately 546 acres are comprised of annual grassland or a coastal scrub/grassland mix that provide palatable forage for livestock.

The current grazing tenant, Erik and Doniga Markegard dba Markegard Family Grass-Fed LLC, has resided upon and leased the grazing rights on Toto Ranch since the late 1980s while under private ownership and continuing under current ownership by Midpen. Markegard Family Grass-fed currently grazes the rangeland pastures on Toto Ranch with beef cattle, a combination of stocker cattle and cow/calf pairs raised primarily to market as grass-fed beef.

Current forage conditions on the Ranch appear good with abundant palatable forage available for livestock, with an even mix of dry standing forage and emerging green vegetation. Forage conditions and residual dry matter (RDM) on the property indicate an appropriate stocking rate in relation to current forage production [7]. Livestock distribution and overall forage utilization vary based on available stockwater. Natural water sources have been limited by drought conditions over the past four years and livestock have primarily relied on water sources near the Agricultural Lease area. As a result, livestock distribution and overall forage utilization have been lower than expected, especially on the eastern half of the Ranch. The current rotational grazing regime provides good control of livestock distribution and forage utilization across the Ranch provided stockwater is available.

➢ Forage Quality

Forage quality in addition to forage quantity (annual production) play a key role in determining carrying capacity for a pasture and for the entire ranch. Forage quality as well as forage production vary somewhat across the Ranch based on soil type, topography, aspect, invasive vegetation, and water. In general, forage quality is good with a high abundance of palatable, nutritious grasses and forbs. Forage quality in some areas is negatively impacted by the presence of invasive vegetation. Several of the steeper, forested/brushy slopes provide little to no palatable forage for livestock.

Mineral and nutrient supplements are currently provided to livestock on the ranch to maximize productivity and maintain livestock health, though it is not known if mineral and/or nutrient supplements are necessary to account for potential nutrient deficiencies in native forage. A thorough nutrient analysis may be performed on forage samples from the Ranch, if desired by the livestock operator, to more accurately determine forage nutrient quality and livestock supplement requirements.

➢ Forage Production

Palatable forage production ranges from fair to excellent across the Ranch excluding the steeper, wooded slopes and dense brushy canyons. Forage production may be slightly lower around rocky outcroppings or eroded slopes, as the soil tends to be shallow, which can limit rooting and nutrient/water uptake by plants. Palatable forage production can be impacted by the presence of invasive vegetation such as distaff thistle and predominantly coyote brush, which outcompete desirable vegetation, and is evident on many sites throughout the Ranch. Highly palatable annual grasses and low growing forbs comprise the majority of vegetation available for grazing livestock. Based on the available standing forage observed during an April 2017 site visit, the current stocking rate is adequate when compared to annual forage production on the Ranch [7], though the stocking rate tends to vary seasonally.

Estimated annual forage production for the Toto Ranch is determined through estimates based on soil class provided in the San Mateo County Soil Survey (USDA, 1985). Non-forage producing areas of the Ranch, including the developed Agricultural Lease area, stockponds, forested slopes, and dense brushy canyons have been deducted from the total grassland acres utilized to calculate available dry weight forage production shown in Table-6. Dry weight forage production estimates per soil class are shown in Table-3:

Table-3: Total forage production estimates per soil class provided by NRCS.

Soil Map Unit		Approx. Acres	Total Dry Weight Forage Production (lbs./acre)		
			Unfavorable Year	Normal	Favorable Year
ClC2-D2-E2	Colma loam	246	1,800	2,500	3,000
GbF2	Gazos loam	57	1,000	1,500	1,800
GsF2	Gazos-Lobitos stony loam	23	1,000	1,500	1,800
LlF2	Lobitos loam	96	1,500	2,250	2,700
Ma	Mixed Alluvial Land - stony	11	1,000	1,500	1,800
Rb	Rough Broken Land - rocky	46	1,500	2,250	2,700
Ta	Terrace Escarpments – sandy	2	1,000	1,500	1,800
TeD2-E2-E3	Tierra loam	439	2,000	2,500	3,500
TxA	Tunitas loam	4	1,000	1,500	1,800
WmA	Watsonville loam	4	1,000	1,500	1,800
	Total Grazed Acres	**952**			

VI. Capacity for Conducting Agricultural Uses

A capacity assessment of agricultural uses on the Toto Ranch has been approximated by reviewing both current and historic agricultural uses and other factors. Information provided in the following section establishes a basis for determining potential levels of agricultural uses on the property by quantifying the carrying capacity based on existing infrastructure, forage production, soil quality, water availability, and space while protecting ecological resources.

GRAZING CAPACITY ESTIMATE

Rangeland livestock production is the primary agricultural use on the Toto Ranch in terms of acres in production. Forage production estimates are utilized to determine livestock carrying capacity and an estimated range of stocking rates. Proposed carrying capacity estimates for the Ranch are established using forage production estimates based on soil class units derived from the San Mateo County Soil Survey [8].

Table-4: Animal Unit Equivalents.

Animal Unit Equivalents	
Animal Kind & Class	**Animal Unit Equivalent**
Cow, dry	1.00
Cow, with calf	1.00
Bull, mature	1.50
Horse	1.25
Replacement Heifer (400-700 lbs.)	0.50
Replacement Heifer (700-1,000 lbs.)	0.75
Sheep, mature	0.25
Lamb, 1 year old	0.15

[1] An animal unit month (AUM) is the amount of dry forage consumed by one animal unit in one month (assuming consumption of dry weight forage equal to 3.3% of body weight), roughly equivalent to 1,020 pounds.

Table-5 depicts available forage, per the Soil Survey descriptions, for 'favorable', 'normal', and 'unfavorable' production years. 'Available forage' is calculated by deducting the RDM desired at the end of the grazing season (average of 1,000 lbs. per acre) from the total forage production. Based on available forage on the currently grazed pasture area of the Ranch, leaving an average of 1,000 pounds of RDM, the estimated carrying capacity ranges from 957.6 AUMs in a favorable year to 365.4 AUMs in an unfavorable year with an average carrying capacity of 632.0 AUMs in normal production years (Table-6).

- Favorable Production Year:
  957.6 AUMs = Approximately 80 cows year-round or 320 ewes year-round.
- Average Production Year:
  632.0 AUMs = Approximately 53 cows year-round or 212 ewes year-round.
- Unfavorable Production Year:
  365.4 AUMs = Approximately 31 cows year-round or 124 ewes year-round.

Table-5: Available dry-weight forage for grazing livestock (currently grazed pastures) derived from NRCS Soil Survey data. Calculations assume leaving an average of 1,000 pounds per acre of RDM and 10% forage loss due to natural conditions such as wind, trampling, etc. Acreage has been deducted for the farmstead area and dense brush/wooded areas that provide little to no palatable forage (393.5 acres).

Soil Map Unit		Approx. Acres	Available Dry Weight Forage Production (lbs./acre)		
			Unfavorable Year	Normal	Favorable Year
ClC2-D2-E2	Colma loam	146	800	1,500	2,000
GbF2	Gazos loam	0	0	0	0
GsF2	Gazos-Lobitos stony loam	0	0	0	0
LlF2	Lobitos loam	76	500	1,250	1,700
Ma	Mixed Alluvial Land - stony	0	0	0	0
Rb	Rough Broken Land - rocky	46	500	1,250	1,700
Ta	Terrace Escarpments – sandy	0	0	0	0
TeD2-E2-E3	Tierra loam	279	1,000	1,500	2,500
TxA	Tunitas loam	0	0	0	0
WmA	Watsonville loam	0	0	0	0
Total Grazed Acres		**547**			

Table-6: Estimated carrying capacity for Toto Ranch based on calculated available forage production on grazeable acres.

Soil Map Unit	Approximate Grassland Acres	Estimated Carrying Capacity (Animal Unit Months)		
		Unfavorable Year	Normal	Favorable Year
ClC2-D2-E2	146.0	93.4	175.2	233.6
LlF2	76.0	30.4	76.0	103.4
Rb	46.0	18.4	46.0	62.6
TeD2-E2-E3	279.0	223.2	334.8	558.0
TOTAL	**547.0**	**365.4**	**632.0**	**957.6**
Year-round Stocking Rate in Animal Units (AUs) (AUMs ÷ 12 months)		**30.5**	**52.7**	**79.8**

Stocking rates should be adjusted downward or upward annually depending on precipitation (distribution and quantity) and annual forage production. Standing forage will determine pasture rotation, at the livestock operator's discretion, provided they remain within the prescribed forage standards. At no time should there be significant areas of bare soil void of vegetation cover present in the grazed pastures. A minimum of two to three inches of forage should be left as ground cover during both the growing season and dry summer and fall months. Table-6 details the estimated carrying capacity for the Ranch, in AUMs and AUs, as derived from forage production data provided in the NRCS Soil Survey. The estimated carrying capacity for the Ranch is approximately comparable to historic stocking levels. Stocking rates (in AUMs) are estimates derived under the formulas in the RMP to be used as a starting point and then adjusted up or down accordingly based on current forage conditions at the District's sole discretion. Unusual conditions (e.g. extended drought or lower level of forage than anticipated) may require lower stocking rates. The District's highest goal is to maintain the long-term ecological health of the rangeland.

Coyote brush is well established in many of the steeper canyons and has expanded into the ridgetops and open grassland areas over time. Coyote brush encroachment in the grasslands has reduced forage production by 50 to 80 percent in many pastures. The landowner has attempted mechanical control of the coyote brush by mowing, primarily in the front pastures between the Agricultural Lease area and State Route-1. The mowing has reduced the size of the individual plants but has done little to reduce the quantity and percent cover of the coyote brush. A coyote brush encroachment management plan should be developed for the Ranch. Future brush control efforts, including chemical control, should be considered following the recommendations in the coyote brush management plan to maintain the estimated carrying capacity.

DAIRY CAPACITY

The current tenant maintains a small number of dairy cows that are used for milk production as part of a cooperative Herd Share program. A large-scale dairy operation has never been a part of operations on the Toto Ranch and adequate infrastructure including loafing barn, suitable milk parlor, and wastewater treatment infrastructure, are not currently available. Instating a dairy operation on the Ranch is not recommended based on infrastructure requirements, associated economic constraints, and potential ecological/water quality impacts.

ADDITIONAL LIVESTOCK, EQUINE, AND POULTRY

The Ranch is currently used primarily for grass-fed beef cattle production on the productive and accessible grasslands. The tenant also produces a number of other agricultural commodities including pasture pork, chickens, eggs, goats, lambs, and turkeys that are marketed through a Community Supported Agriculture (CSA) purchasing program [4]. In addition to cattle, a number of horses and llamas/alpacas/emus are kept on the property and currently graze the grasslands outside of the Agricultural Lease area. A number of small pens, flight pens, coops and additional

infrastructure are currently established within the Agricultural Lease area to support the production of small livestock and poultry. Tenant has experienced issues of predation on small livestock by coyotes and mountain lions in the past. Small livestock including pasture pigs, chickens, goats, turkeys, and llamas should be restricted to the designated Agricultural Lease area and associated small pastures. Pasture raised pigs create a large ground disturbance prone to erosion and promote the growth of invasive thistles. Pigs should be restricted to flat areas in the Agricultural Lease area.

Seven (7) working ranch horses, used as part of the grazing operation, may be kept on the property. Breeding, training, raising and selling horses (Horse Operations) are not considered agricultural uses and are not recommended on the Toto Ranch. Boarding outside horses should be prohibited. Working ranch horses will be permitted to graze in Pastures #1, #2, and #3 (front pastures) during the dry months, typically from May-October.

FIELD CROP/ORCHARD PRODUCTION

Portions of the Toto Ranch, primarily ridge tops, were historically farmed for silage/grain crops during the early to mid-1900s but have not been farmed since that time. The landowner does not plan to implement a large-scale cultivated farming operation on the Ranch and plans to continue use of the pastures for livestock grazing to foster and enhance habitat for wildlife. While Toto Ranch has suitable land for farming, sediment from the highly erodible soils on the Ranch would negatively impact downstream water quality and disrupt/destroy valuable wildlife habitat. Cultivated farming operations are not recommended in any capacity on the Ranch.

The tenant may grow vegetable crops and/or tree crops for personal use provided such production is performed within the Agricultural Lease area. Vegetable crops considered for planting by the tenant must be approved by Midpen's Natural Resources Department prior to planting and should not include any species considered by the California invasive Species Council (http://www.cal-ipc.org) as "invasive", such as fennel. Trees imported for planting on the property must be pre-approved by Midpen's Natural Resources staff and soil associated with trees and potted plants must be tested for the presence of phytopthora prior to entering the property. Any and all soils associated with potted plants and/or trees that test positive for phytopthora are strictly prohibited on the property. Prior written consent may be required by Midpen and location of vegetable garden must be pre-approved by Midpen staff. Vegetable gardens and/or small orchards should be located in an area that will not impact downstream water quality and will not decrease the grazing capacity of the Ranch.

VII. Management Recommendations & Best Management Practices (BMPs):

The Toto Ranch has a long history of diversified agricultural production. The following management recommendations and Best Management Practices (BMPs) will help ensure the

sustainability of agricultural production on the Ranch while protecting rangeland health, soil stability, water quality and the control of invasive vegetation to cooperatively conserve and enhance habitat for wildlife.

RANGELAND LIVESTOCK OPERATION

- Vegetation Prescriptions:

Leaving prescribed levels of residual dry matter (RDM) on the ground surface will provide a grassland seed crop for the following season, minimize the risk for soil erosion and sedimentation, protect water quality and reduce the presence of invasive vegetation. To protect soil stability, minimize the risk of sedimentation into local streams, and the spread of invasive vegetation, all grazed pastures on the ranch should meet the following RDM performance standards per average slope at the conclusion of the grazing season:

- 0-30% Slopes – An average minimum of two to three inches of forage – approximately an average of 800-1,000 pounds per acre per Natural Resource Conservation Service (NRCS) and University of California Cooperative Extension (UCCE) definition.
- Greater than 30% Slopes – An average minimum of three to four inches of RDM – approximately an average of 1,000-1,200 pounds per acre per NRCS and UCCE definition.

At no time should there be significant areas of bare soil void of vegetation cover in any of the grazed pastures, particularly on steep upland slopes or areas adjacent to riparian corridors. A minimum of two to three inches of forage should be left as ground cover during both the growing season and dry summer and fall months.

- Grazing Season:

A light to moderate year-round rotational grazing regime is best suited for the Toto Ranch. Rotating livestock between pastures, particularly when grazing for a short duration, will require a greater commitment by the livestock manager in terms of time and monitoring, but will ultimately enhance biodiversity, aesthetics and overall forage production. Lack of available stockwater has historically limited grazing capacity during the late summer and fall months, particularly under drought conditions. If limited water availability during summer and fall months persists, Midpen may elect to implement a seasonal grazing regime or a partially seasonal grazing regime with higher stocking rates during winter and spring and reduced stocking during the summer and fall.

In a rotational grazing regime, standing forage will determine pasture rotation, at the livestock operator's discretion, provided they remain within the recommended forage standards. On steeper, more erosion prone slopes, and riparian pastures with softer soils, grazing should be delayed until soil is firm enough to withstand grazing pressure without impacting soil stability.

Livestock grazing should be managed to protect the soil from erosion as loss of the surface layer can severely decrease long-term forage productivity.

Rotating a combination of sheep and cattle between pastures may enhance forage utilization and improve ecological benefits of grazing. Additionally, sheep require less water than cattle and may be a good grazing alternative during drought years or the dry summer months.

- Water Supply:

Livestock generally prefer the cleaner, cooler water in troughs. Developing alternative water sources will reduce dependence by livestock on stream channels/stockponds, minimizing potential impacts to aquatic vegetation and stream bank stability. In addition to stockponds, a number of galvanized, concrete, and plastic troughs are located within the Agricultural Lease area and in pastures to the south and west of the Agricultural Lease area, all fed via the wells on the ridge southwest of the Agricultural Lease area.

A number of stock water troughs are located within the Agricultural Lease area/corral and in pastures adjacent to the Agricultural Lease area, including numerous plastic troughs. More durable, permanent concrete or galvanized troughs should replace the plastic troughs. Continue to monitor water infrastructure and complete maintenance and repairs as necessary. Wildlife escape ramps should be installed in all water troughs on the Ranch.

The livestock water system providing water to the Agricultural Lease area and water troughs in pastures adjacent to the Agricultural Lease area, including the wells, solar pump, windmill, pipes, and storage tank are in excellent condition. Despite the quality infrastructure, low water yield from existing wells often limits livestock grazing capacity during summer and fall months. Water from the wells should be used strictly for livestock water and shall not be used for pasture irrigation. Irrigating annual grasslands does not provide an ecological benefit.

A large, naturally occurring spring in Field-3 located along the loop road has made the road impassible. Developing the spring following District guidance for wildlife friendly spring development and installing a solar powered pump, storage tank, and water troughs will provide a valuable water supply to Field-3, which lacks sufficient stock water. Developing this water source will allow properly timed grazing to promote distribution of the Choris' popcorn flower, which is growing near the spring. Additionally, developing the spring and distributing water to troughs in the uplands of the pasture will reduce the use of the spring by livestock and minimize the risk of the Choris' popcorn flower being trampled/damaged by cattle. A thorough assessment of the site should be performed to determine potential construction impacts and hydrologic function of the site which may affect the nearby Choris' popcorn flower population. If determined that construction is feasible without impacting the population, continue subsequent monitoring of the Choris' popcorn flower population at this site to determine changes is density and distribution and amend management practices as necessary to enhance habitat for the population. See Proposed Infrastructure & Improvements Map for location of proposed water infrastructure.

- Stockponds:

Landowner should perform routine maintenance of stock ponds, including de-silting and vegetation management to maintain water storage capacity, habitat value, and protect downstream water bodies from sedimentation, as necessary. Maintaining the spillway and berm on the stockponds will preserve storage capacity, extend lifespan of stockponds, and enhance habitat for aquatic species. Stockponds on the ranch are in good condition with the exception of a series of small ponds located near the driveway in pastures west of the Agricultural Lease area. While these ponds are small, and often seasonal, they provide a valuable water source for livestock. Well developed stockponds providing valuable wildlife habitat and an important water source for wildlife and livestock should be prioritized for maintenance and repairs over small seasonal ponds and/or catchments.

An analysis of stockponds should be performed by the landowner to determine which stockponds should be considered for maintenance and repairs based on water rights, their habitat value, stockwater value, and risk to downstream water quality. Smaller stockponds or seasonal catchments may be decommissioned and restored to natural drainage to protect downstream water quality if determined to not provide significant habitat value or an important water source for livestock.

Perennial ponds, suitable seasonal stockponds (for which water rights exist) and their associated surrounding upland habitat should be enhanced to support California red-legged frog which currently occur on site, as well as a population of San Francisco garter snake which was documented as occurring along Tunitas Creek from Highway 1 to Dry Creek during research conducted by Barry from 1971-1983 (California Natural Diversity Database).

Pond management activities require a suite of regulatory agency approvals and should not be undertaken unless approved by the District Natural Resources Department.

- Supplemental Feed:

Proper placement of livestock watering facilities and supplemental feed/mineral stations will promote good livestock distribution. Supplemental feed (mineral tubs, salt blocks, etc.) should be placed on uplands and ridge tops away from water sources and riparian features. It is recommended that supplemental forage provided to livestock be certified as "Weed Free". If certified weed free hay is not available, locally produced supplemental forage (hay) that is fed in pastures should be thoroughly inspected by Midpen Natural Resource Department staff prior to feeding to ensure it does not contain invasive vegetation that may spread seed into pastures. Supplemental feeding should not be used to extend the grazing season beyond the point at which the prescribed RDM levels are reached in the pastures.

- Fencing and Corrals:

Responsibilities for the maintenance of existing ranch infrastructure in good condition and make repairs or improvements as necessary are defined in the lease. Maintaining quality, functional infrastructure, including fencing and corrals, will increase the ease of livestock handling and effectiveness of rotating livestock between pastures as well controlling livestock access to sensitive riparian corridors. Providing safe facilities will provide a low-stress atmosphere for livestock and minimize risk of injury. Sheep grazing on the rangelands will require the installation of new mesh fence or the use of temporary electric fence to control access. Sheep should be confined to predator proof pens or paddocks during the night.
While most perimeter fence around Toto Ranch is "cow tight", many sections of the New Zealand style smooth wire fence along the west and south property boundaries are old and failing. Sections and/or all of the western and southern boundary fences should be replaced with barbed wire cattle fence as existing fence fails. Use Midpen specifications for livestock fencing including galvanized wire, steel t-posts, and galvanized pipe braces.

Install a new section of barbed wire livestock fence southeast of the Agricultural Lease area to split Field-3 into two separate pastures. Dividing this pasture will make management of the Choris' popcorn flower more feasible by allowing grazing tenant to rotate cattle and properly time grazing. Additionally, by aligning the new fence to bisect pond TC-06, the pond can be used as a water source for both pastures and grazing can be timed to protect emergent vegetation for CRLF. The fence should extend from the south property line north to an existing cross-fence that runs east from the Agricultural Lease area (approximately 3,100 linear feet). See Proposed Infrastructure and Improvements map for new fence alignment.

Old fencing that does not act as a pasture barrier may impede wildlife travel or injure wildlife/livestock. Old fencing should be removed and disposed of at a waste facility.

- Herd Health:

Maintaining a healthy, productive livestock herd is fundamental to profitability and sustainability. A herd health program that includes appropriate inoculations is recommended. De-worming livestock and providing additional nutrients will further increase productivity. It is the responsibility of the grazing tenant to ensure that the health and safety of the grazing animals is maintained including proper inoculations, de-worming, routine herd health checks, mineral/nutrient supplements as needed, and immediate treatment of any sick animals.

- Ranch Roads:

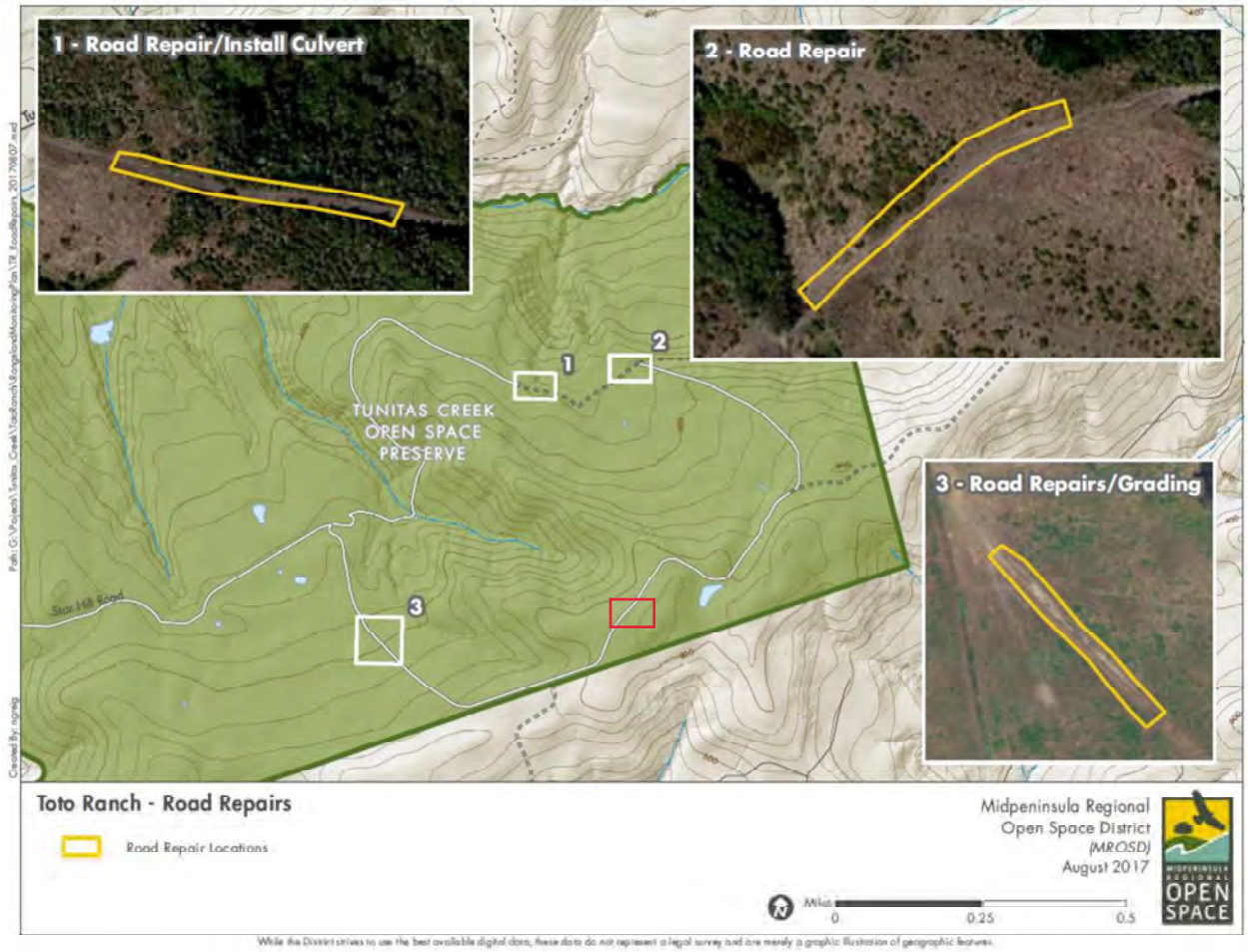
Ranch roads provide access for the grazing operation, infrastructure/ranch maintenance, restoration work, recreation, and emergency response. Landowner and/or grazing tenant should work to maintain ranch roads in good condition. Routine maintenance may include cleaning ditches and culverts, particularly during storm events, is important. Maintaining road grades, water diversions, and water bars during winter months to minimize water flow on road surfaces

is important in reducing potential soil erosion and road damage. Mowing vegetation on road surfaces is recommended to provide a safe driving environment. Mowing, as opposed to grading, is recommended to leave a vegetation cover on the road surface that helps hold soil in place during storm events and reduce the risk of erosion and damage to ranch roads. Additionally, mowing roads will not create a soil disturbance that can lead to increased spread of invasive plant species.

Two sections of ranch road are in poor condition with large ruts creating hazardous driving conditions and causing continued sedimentation of downstream waterways. These sections of road should be repaired to prevent continued damage to the driving surface and protect water quality on the Ranch (Exhibit-G). Improvements may including rocking the ditch, re-grading the road bed, revegetating the road bed/ditch, installation of rolling dips/water diversions, and installation of erosion control products such as straw waddles or silt fence. The main gravel driveway between State Route-1 and the Agricultural Lease area has many large potholes that should be graded/filled to make access to the Ranch easier, but the driveway, when properly maintained, is currently not at risk of affecting natural resource values on the property.

Any road repairs that may discharge sediment into downstream watercourses may require permits from regulatory agencies prior to implementation. Proposed road work should first be approved by District natural resources staff to ensure regulatory compliance.

EXHIBIT-G – PROPOSED ROAD REPAIRS & MAINTENANCE



➢ <u>Drought Preparedness</u>

Agricultural production has historically provided a significant source of income for the Ranch and continues to be an important factor in maintaining its sustainability. Drought conditions can severely hinder the operational capacity and productivity of a ranch and can threaten long-term sustainability. Planning ahead to accommodate for a drought can alleviate some of the potential impacts such as lack of forage, lack of water, herd health, mineral deficiencies, and overall lack of production by livestock when droughts occur. The following management practices can help alleviate the impacts of drought:

- Maintain a clean, reliable water source for livestock and maintain an increased water storage capacity. The Ranch currently has a good water supply system in place, though water production is often limited during summer/fall months. Develop additional water sources such as springs and wells if feasible. If water yield increases, increase water storage by adding additional water storage tanks for livestock drinking water.

- Lower stocking rates to slightly below the recommended carrying capacity for the forage production year to provide a small surplus of forage to carry livestock through the fall until new, green forage is available. If drought conditions persist, lower stocking rates further to extend the grazing season and use of available forage.
- Implement a grass banking system. Save forage in a designated pasture by minimizing or eliminating grazing pressure during the late spring and summer. If available forage is depleted in grazed pastures, forage will be available in the grass bank pasture.
- Store supplemental forage, such as hay, that can be fed to livestock to supplement the natural forage during a drought.
- Provide livestock with mineral/protein supplements to increase forage utilization, herd health, and overall productivity.

PATHOGEN REDUCTION AND RISK MANAGEMENT

Livestock waste contains many microorganisms such as bacteria, viruses, and protozoa. Some of these microorganisms do not cause sickness in animals or humans, however, some are pathogens, meaning they are capable of causing disease in animals and/or humans. Pathogens can be transmitted to humans directly through contact with animals and animal waste or indirectly through contaminated water or food. Common pathogens responsible for health related ailments in humans include cryptosporidium, E. coli, Leptospira, and salmonella. The following BMPs should be implemented to help reduce the risk of animal waste contaminating water sources within and downstream of the Toto Ranch:

- Restrict livestock access to Tunitas Creek, Dry Creek, and perennial tributaries to both water courses to eliminate fecal deposits in the waterway.
- Maintain a natural vegetative buffer of no less than thirty (30) feet from the top of bank in Tunitas Creek, Dry Creek, and perennial tributaries. The vegetative buffer will act as a natural filter to trap potential pathogens before they reach the water body.
- Domestic swine have a high frequency of salmonella. Restrict pasture swine rearing to flat pens within the Agricultural Lease area and maintain a minimum 100 foot vegetative buffer between swine and perennial streams.
- Control runoff and leaching from stockpiled manure, confined livestock, and corral facilities. Maintain a 100 foot vegetative buffer between corrals/confined livestock pens and perennial streams.
- Fly and vermin control in livestock facilities may also reduce the spread and subsequent infection of other animals with pathogenic bacteria. Flies and bird fecal samples from cattle farms in the U.S. have tested positive for *E. coli*. Numerous studies indicate that *Salmonella* can survive for at least several days, and for as long as nine months, on

insects and rodents, and for up to five months in rodent feces. Work to control flies and rodents in the Agricultural Lease area. Additionally, remove excess fecal waste from livestock including sheep, goats, horses, chickens, cattle, alpacas and swine within the confined livestock pens and corrals to reduce fly and insect presence.

- Provide off-stream livestock water sources such as water troughs to reduce the use of streams by cattle and other livestock for water.
- Implement a comprehensive livestock husbandry program including appropriate and timely inoculations and de-worming to minimize the risk of contracting and/or spreading disease to other livestock, humans, and wildlife.

SPECIAL STATUS SPECIES MANAGEMENT

California red-legged frog

Managing the intensity and timing of livestock grazing is important in managing waterways and upland habitat for the California red-legged frog (CRLF) as it has important consequences in terms of emergent vegetation and water quality important for breeding. Maintaining stockponds and controlling non-native predators are also important factors in protecting and enhancing habitat for CRLF. In general, livestock use of stockponds is beneficial for CRLF [9]. Appropriate timing and grazing intensity around stockponds can produce positive ecological benefits on vegetation cover, nutrient levels, and turbidity conducive to CRLF breeding and subsistence. For more specific management recommendations, please reference Attachment-D to this plan [10].

San Francisco garter snake

Management for California red-legged frog is also beneficial to San Francisco garter snake. Use of vegetation and/or fencing off portions of ponds to provide adequate escape habitat during the frog mating season (Dec to March) and San Francisco garter snake breeding season (March to June and September to October) and young frog emergence period (July to September) can be beneficial for both species.

Managing surrounding upland habitats for a mosaic of microhabitats (some open grassland, some brush, some downed woody debris areas, etc.) can also be beneficial for successful management of San Francisco garter snake.

Choris' Popcorn Flower

Choris' popcorn flower is an annual herb found in coastal prairie and coastal scrub habitats in San Mateo and portions of Santa Cruz County, listed by CNPS as "fairly endangered". The species is at risk from urban development, however, under rangeland conditions, primary threats to the species result from foot traffic/trampling and competition from non-native plants/annual grasses [11]. Choris' popcorn flower typically blooms from March-June [11] and will benefit from the reduction of annual/non-native vegetation through timed livestock grazing prior to bloom (December-February). Once flowers have dropped seed, livestock grazing may commence, typically in July. Continue to monitor for presence of the specie and note any changes in distribution and abundance of known populations. Adjust timing of grazing as necessary to promote reproduction. If trampling or vehicle traffic is noted to impact the Choris' popcorn flower, temporary fencing may be installed to protect populations.

Figure-10: Choris' popcorn flower is a rare, native annual herb found in multiple locations throughout the Toto Ranch. Special attention should be paid to avoid populations of Choris' popcorn flower when implementing projects and routine maintenance on the Ranch. Implement BMPs as necessary to protect existing populations.

EXHIBIT-H

Map of Sensitive Resources Redacted

INVASIVE PLANT CONTROL

Available forage production has been impacted by non-palatable invasive plant species resulting in reduced germination of desirable forage. Invasive plants decrease forage productivity, impact livestock health, impact wildlife habitat value, and create significant fiscal impacts to the landowner/lessee. Implementing an integrated approach to controlling pest plants is critical to the success of improving forage production and quality in grazed pastures. To prevent an increase in the current extent of invasive vegetation and avoid the introduction of new invasive species on the Ranch, the landowner should manage the ranch with the minimum goal of containing the weed infestation to its current extent and preventing the introduction of new invasive species. Invasive plant control methods must be consistent with the District's IPM program and all invasive species treatment must adhere to Midpen's Integrated Pest Management Plan (IPMP) and follow BMPs prescribed in the IPMP.

The following recommended practices are designed to reduce the presence of invasive vegetation, protect soil and water quality, and promote beneficial forage production.

- Adjust the stocking rate in order to maintain a minimum of two-three inches of beneficial, vegetation ground cover at all times.
- Application of a selective broadleaf herbicide in the spring can be an effective strategy for the control of purple starthistle and wooly distaff thistle, particularly when treating large infestations that are not easily controlled through manual methods. Follow-up inspection and manual removal of late germinating plants during the summer is can help control late germinating plants following initial herbicide treatment. A pest control recommendation must be issued from a Pest Control Advisor for any herbicide application on the property.
- Manually remove wooly distaff by digging or cutting out the plant at least five inches below the soil surface before they begin to flower. After flowering, the plants should be bagged and removed from site as seeds will continue to mature and ripen after the plant has been cut.
- Mowing can be used to manage invasive thistles, provided it is well timed and used on plants with a high branching pattern. Mowing at early growth stages results in increased light penetration and rapid regrowth of the weed. If plants branch from near the base, regrowth will occur from recovering branches. Repeated mowing of plants too early in their life cycles (rosette or bolting stages) or when branches are below the mowing height will not prevent seed production, as flowers will develop below the mower cutting height. Plants with a high branching pattern are easier to control, as recovery will be greatly reduced. Even plants with this growth pattern must be mowed in the late spiny or early flowering stage to be successful. An additional mowing may be necessary in some cases. Be sure to mow well before thistles are in flower to prevent seed spread.
- Prioritize thistle removal where the likelihood of seed spread is high such as road sides, cattle trails and loafing areas.

- **French broom** is limited on the Ranch and best controlled early as seeds remain viable in the soil for decades. Once well established, removal is extremely resource intensive. Pulling shrubs with weed wrenches is effective for broom removal in small infestations. The weed wrench removes the entire mature shrub, eliminating re-sprouting.
- Carefully monitor areas where outside feed is brought in for new invasive species and remove new weeds before they become established. If feasible, feed Certified Weed Free Hay or locally sourced hay to minimize the risk of introducing new invasive plant species.
- Do not import outside soil or fill material. It is often contaminated with invasive species and is not consistent with Easement terms.
- Be aware of seed transport on ranch equipment and clean vehicles/equipment as needed. All personnel working in infested areas shall take appropriate precautions to not carry or spread weed seed or plant and soil diseases outside of the infested area. Such precautions will consist of, as necessary based on site conditions, cleaning of soil and plant materials from tools, equipment, shoes, clothing, or vehicles prior to entering or leaving the site.
- Contact the local Natural Resource Conservation Service (NRCS) for funding and technical assistance to help with integrated pest management practices.

Onion Grass is present on Toto Ranch. Control options are limited, though effective measures include fertilizing native vegetation and maintaining an abundance of natural forage to outcompete onion grass. Close foliar removal by hand clipping or line trimming at 3-5 week intervals has proven to reduce onion grass by up to 70 percent [16].

Implement an integrated approach described above to identifying and treating invasive plants on the Ranch that are impacting forage production and grassland health including but not limited to coyote brush, yellow starthistle, wooly distaff thistle, Italian thistle, bull thistle and onion grass. Work with Midpen, UCCE and/or local NRCS or RCD to determine best options and timing for specific treatments.

ADDITIONAL/SMALL LIVESTOCK PRODUCTION

Small domestic livestock including but not limited to goats, chickens, pigs, llamas/alpacas, and horses should be confined to the designated Agricultural Lease area. Well established infrastructure including corrals, water sources, flight pens, coops, etc. exist within the Agricultural Lease area and are suitable for the production of small domestic livestock/poultry. Domestic livestock such as sheep, goats, and chickens often attract natural predators that may inadvertently affect cattle grazing on the rangeland pastures. As such, small domestic livestock should be confined to enclosed pens/barns at night to minimize the risk of predation. Production of “pasture pork” or raising of domestic pigs should be limited to pens on flat areas within the Agricultural Lease area to minimize runoff of waste and reduce the risk of impacts to water quality.

VIII. Improvements and Maintenance Recommendations Budget

Fence Repair and Installation

Install a new barbed wire livestock fence to separate Field-3 into two (2) separate pastures. Full replacement of west and south property line fences is recommended over time. Partial replacement of significantly damaged/failing sections may also be completed as an alternate to full replacement. Replacement of the west boundary fence should be prioritized over the south boundary fence, though work may be completed over several years. While 5-strand barbed wire fence is more effective, a wildlife friendly fence using 4-strand barbed wire with a smooth bottom wire is also effective, though the smooth bottom wire is susceptible to damage and may require frequent repairs. Either style fence can be made wildlife friendly if the bottom wire is situated an average of 16"-18" above the ground allowing wildlife to cross underneath while functioning to contain livestock. West boundary fenceline along State Route-1 should be 6-strand barbed wire fence to ensure cattle do not get out on the highway. Below is a list of proposed fencing improvements for the Toto Ranch.

A. West Property Boundary Fence Replace (entire replacement)
B. Field-3 Cross-Fence Install
C. South Property Boundary Fence Replace (entire replacement)
D. Removal of Old Fence/Unused Fence/MIG
E. Partial fencing of ponds may be considered as an adaptive management strategy for CRLF and SFGS
F. Two Additional water tanks in the windmill area (if water yield increases)
G. Two new westerly troughs off driveway for Pasture 1 & 2.

Road Repairs and Maintenance

Most roads on the ranch are in good condition and require little annual maintenance. The two (2) sections of road that show signs of rutting/gully activity should be repaired to maintain road integrity and protect downstream water quality. Additionally, if the Field-3 spring is developed and road surface dries out, a culvert or ford crossing should be installed and minor grading/brushing will be required to make road passable. Special attention should be Choris' popcorn flower near this location and potential impacts to the population should be mitigated for. While the access driveway between State Route-1 and the Agricultural Lease area provides year-round access and is adequate for land management and the agricultural operation, landowner may wish to improve driveway to accommodate recreational use and the heavy vehicle traffic by the tenant's field day and workshop guests.

A. Road Repairs (access road south of Agricultural Lease area) (see Exhibit G, #3)
B. Road Repairs (Field-3) (see Exhibit G, #1 and #2)
C. Road Repairs (Driveway)

Water Infrastructure Improvements

Water infrastructure improvements will enhance livestock distribution and overall forage utilization as well as potentially extending the grazing season, which is currently affected by the lack of stockwater during summer/fall months. Reference the Proposed Infrastructure map for location of proposed water system improvements.

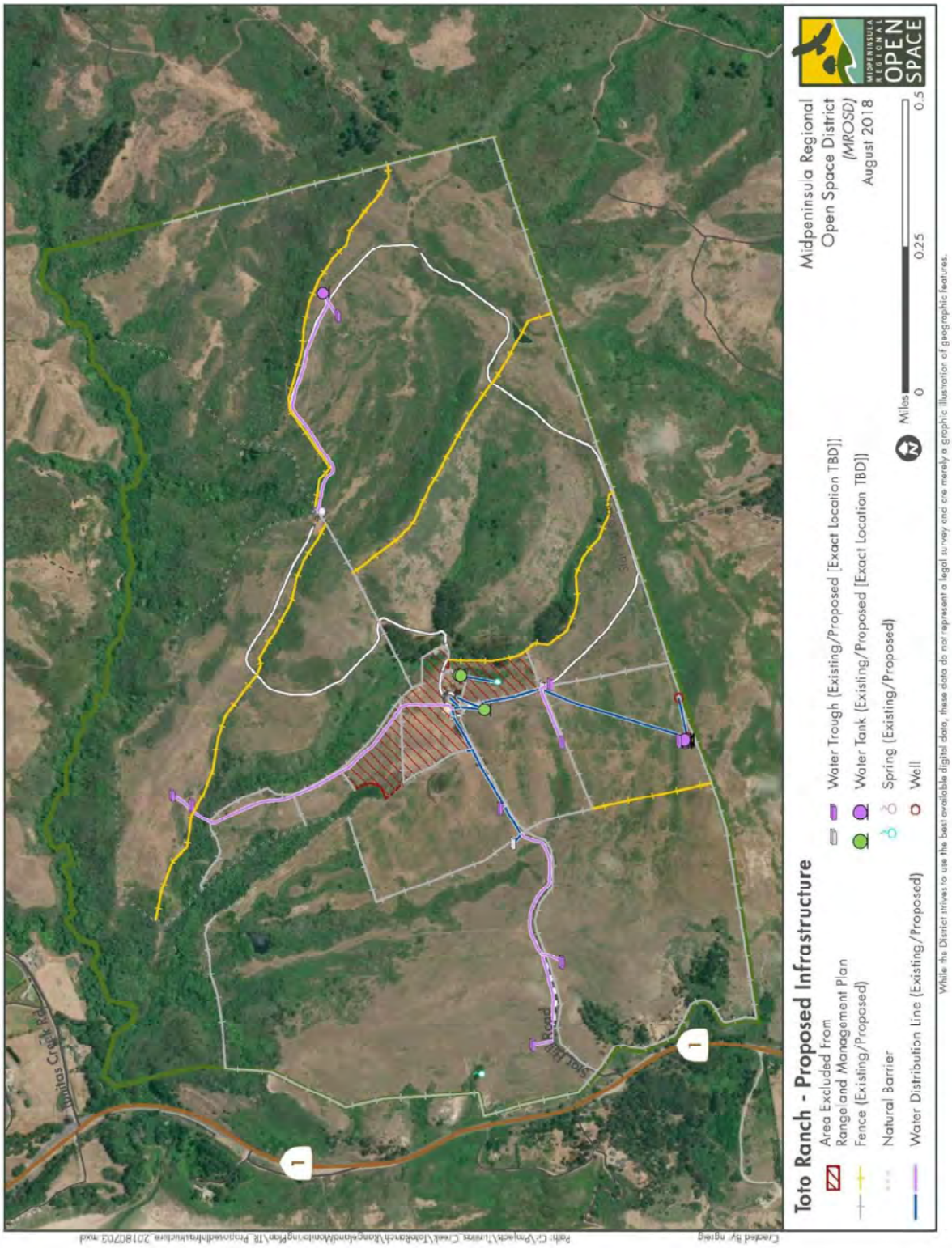
A. Replace Plastic Water Troughs (In and around Agricultural Lease area)
B. Install New Waterline and Trough North of Agricultural Lease area
C. Field-3 Water System (spring, pump, tank, pipe, and troughs)
    a. Project to be completed if no negative long term impacts to Choris' popcorn flower
D. Ensure wildlife escape ramps are present in all troughs
E. Any spring developments must adhere to the District's wildlife friendly spring development designs.

Vegetation Management

Implement an integrated approach that is consistent with the District's IPM Program to controlling invasive vegetation with a focus on wooly distaff thistle, French broom, onion grass, and coyote brush. Manual, mechanical, biological, and chemical control measures may be implemented including but not limited to timed grazing, mowing, hand digging, herbicide application, reseeding, and burning/torching. Estimated annual costs for treatment of invasive vegetation will vary based on presence and distribution of invasive vegetation and treatment methods. Develop a strategic plan for control of coyote brush on the Toto Ranch with a focus on ridge tops, around stockponds, and populations of Choris' popcorn flower.

Coyote brush is well established in many of the steeper canyons and has expanded into the ridgetops and open grassland areas over time. Coyote brush encroachment in the grasslands has reduced forage production by 50 to 80 percent in many pastures. The landowner has attempted mechanical control of the coyote brush by mowing, primarily in the front pastures between the Agricultural Lease area and State Route-1. The mowing has reduced the size of the individual plants but has done little to reduce the quantity and percent cover of the coyote brush. A coyote brush encroachment management plan should be developed for the Ranch. Future brush control efforts, including chemical control, should be considered following the recommendations in the coyote brush management plan to maintain the estimated carrying capacity.

EXHIBIT-I – PROPOSED INFRASTRUCTURE IMPROVEMENTS



IX. Recommended Monitoring Protocols

The monitoring program for the grazed rangeland pastures on the Toto Ranch is designed to ensure that the specific rangeland uses are in compliance with this Rangeland Management Plan, the agricultural conservation easement, and the land stewardship goals and objectives.

It is recommended that the landowner/operator establish a routine monitoring protocol for the Toto Ranch. The following guidelines outline suggested monitoring criteria:

- Monitor forage utilization and livestock distribution trends to ensure appropriate RDM remains on the ground to achieve desired resource management objectives, including soil stability and water quality.
- Monitor the condition of livestock infrastructure, including water systems, gates and fencing, to ensure conformity with the terms of the easement and to improve rangeland and grazing management practices.
- Monitor non-native invasive vegetation with an emphasis on location, distribution and abundance of plant species. Describe methods for treatment or control of invasive species (grazing, herbicide application, mowing, etc.) and vegetation response to treatment methods.
- Monitor ponds to ensure habitat for special status wildlife species free of invasive predators such as fish and/or bullfrogs.
- Monitor desirable vegetation including native grasses, wildflowers, and trees with an emphasis on location, distribution, and abundance. Describe any impacts, positive or negative, observed as a result of agricultural practices (farming and/or grazing).
- Monitor vegetation that was planted as part of restoration or remediation work (where applicable) with an emphasis on location, distribution, abundance, and survival rate.
- Natural climatic changes (drought, floods, fire, etc.), geologic process, and biologic cycles beyond the landowners control should be noted and described as applicable.
- Stocking rates, herd type, and duration of grazing should be noted where applicable.
- Monitor rangelands pastures that are grazed by horses. Annual point line monitoring for species composition in addition to RDM monitoring is recommended in Pastures #1, #2, and #3 to monitor potential changes in vegetation guilds.

Monitoring observations can be used as a guideline for adaptive management changes, as needed, based on the results of annual monitoring. To evaluate the above listed monitoring criteria, several baseline photo-monitoring points can be retaken and a monitoring form completed for each site on an annual basis. Monitoring should occur in the fall prior to the first fall/winter rainfall of the year. Photos in Attachment-A to this plan can be utilized as photo monitoring points for the landowner/operator and be used as a reference on which to base

future monitoring comparisons. A sample photo monitoring form can be found under Exhibit-G. Annual monitoring visits conducted by Midpen staff will document and photograph any concerns, trends, and general overall resource conditions observed throughout the property.

Recommended Monitoring Items:

- ✓ Residual Dry Matter (RDM): RDM levels can be recorded using pounds per acre and measurements can be calculated or ocular estimates dependent on the skill set and experience of the monitor. RDM average standards are based on the University of California Cooperative Extension (UCCE) and Natural Resources Conservation Service (NRCS) prescribed grazing performance standards. The prescribed RDM standard for moderate grazing is an average minimum of 800-1,000 pounds per acre of dry matter (two to three inches of standing RDM) on slopes of 0 to 30 percent, and 1,000-1,200 pounds per acre of dry matter (three to four inches of standing RDM) on slopes greater than thirty percent. Leaving prescribed levels of RDM on the ground surface will provide a grassland seed crop for the following season, minimize the risk for soil erosion and sedimentation, and protect water quality. Please reference Attachment-B, 'Guidelines for Residual Dry Matter on Coastal and Foothill Rangelands in California', for more detailed information on RDM standards and data collection.

  RDM measurements should be taken in the fall of each year at sites that are exemplary of the average RDM level in a pasture. Areas that are heavily frequented by livestock or do not adequately represent the average RDM level in a given pasture should be exempt from data collection. The following is a list of areas that should be avoided when collecting RDM samples or measurements:

  a. Areas that have burned
  b. Roads
  c. Corrals, and associated lanes and holding fields/traps
  d. Sites with low soil fertility (rock outcrops, sandy soils) or high tree cover
  e. Areas within 150 feet of water sources, stockponds, supplemental feeding sites
  f. Areas subject to damage by wildlife such as feral pigs
  g. Areas that are or have been recently cultivated

- ✓ Plant Communities Observed: Include a list of the plant communities observed within view of the photo point for example annual grassland, woodlands, wetlands, etc. Note any measurable trends or transition between plant community types from the prior year.

- ✓ Invasive Species Observed: Include a list of observed invasive plant species noting relative abundance, location, and density. Note any differences from the prior year.

- ✓ Infrastructure: Identify infrastructure relevant to the grazing and/or agricultural operation (water troughs, tanks, fencing, irrigation lines) noting location, current condition and need for adjustments or repairs.

- ✓ Soil Erosion: Identify areas that are at risk for erosion or where soil loss has occurred as a result of surface water flow, wind, fire, or human activity. These sites may include gullies, bare ground exposure, landslides, ruts, or notable surface runoff. Note historic activity and any current activity. Recommend soil protection measures.

- ✓ Access Road Observations: Note condition of road including surface condition, vegetation cover, culverts, recent maintenance or grading, and water diversion measures that are in place. Identify any signs of erosion, rutting, or gullying on the road surface or below road, particularly downstream of channel crossings.

- ✓ Wildlife Observed: Identify wildlife species observed at location of the photo point including specie information and relative abundance. Observations of special status species shall be reported to the District Natural Resources Department to be included in annual reporting to regulatory agencies.

- ✓ Annual Precipitation: Note the rainfall, in total inches, for the season. Keeping annual precipitation records is important in determining whether rainfall amount and distribution were average, below average, or above average. In average and above average rainfall years the RDM performance standards should be met. In below average rainfall years, RDM performance standards may be exceeded, but not for more than a period of two consecutive years. Annual stocking rates and grazing duration should be adjusted annually to accommodate forage production and annual precipitation.

EXHIBIT – J

GRAZING MONITORING CHECKLIST (SAMPLE)

SITE NAME_____ DATE_____ PHOTO POINT_____

MONITOR(S): _____

MEASURED RAINFALL (_____INCHES): [ ] < AVERAGE [ ] AVERAGE [ ] >AVERAGE

MONITORING ITEMS:

___RESIDUAL DRY MATTER (RDM) Lbs. PER ACRE: _____0-30% slope _____>30% slope

Estimated [ ] Actual Measurement [ ]

___PLANT COMMUNITIES OBSERVED:

[ ] Annual Grassland [ ] Mixed Forest [ ] Coyote Brush/Scrub

[ ] Oak Woodland [ ] Aquatic Habitat [ ] Riparian Habitat

[ ] Other Communities: _____

[ ] Native Grasses: _____

___WILDLIFE OBSERVED:

PLACE PHOTO HERE

INFRASTRUCTURE / ROADS (Improvements, Condition, New Items, Future Concerns, etc.):

PONDS /STREAMS /AQUATIC FEATURES (Access, Vegetation, Water Clarity, Culverts, Spillways, etc.):

VEGETATION (Invasives, Natives, Thatch Amount, Encroachment, Plant Mortality, etc.):

*Relative Abundances: 1 = 1-10 / 2 = 10-100 / 3 = 100+ / 4 = Dominant Vegetation Type

EROSION CONCERNS (Gullying, Rilling, Slides, Surface Runoff, Bare Soil, etc.):

GENERAL NOTES (Cattle info, Landscape Changes, etc.):

DISCUSSION ITEMS/CONCERNS:

REFEERENCES

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PLAN PREPARED BY:

Having prepared this Rangeland Management Plan (RMP), I certify that it is consistent with the purpose and requirements, as set forth in the relevant RMP Provisions. As with any plan, this RMP should be viewed as a living document, subject to periodic update and review as needed to reflect changing on-farm conditions over time. The RMP should be updated at least every ten years, or in the event of significant changes in the use, management, or ownership of the Property.

Clayton W. Koopmann — August 30, 2018

Clayton W. Koopmann — Date

Clayton W. Koopmann, B.S., Agricultural Management & Rangeland Resources; Owner Koopmann Rangeland Consulting; California Board of Forestry Registered Certified Rangeland Manager #100

Koopmann Rangeland Consulting

Rangeland Resource Management Services

ATTACHMENT – A

2017 Baseline Photos: Toto Ranch
Photo Point Location Map

(Baseline photos can be used as reference for establishing photo-monitoring points annually by the landowner. Long term trends can be noted when comparing the baseline photo updates against the original baseline photos.)

ATTACHMENT – B

Guidelines for Residual Dry Matter Monitoring
University of California

ATTACHMENT – C

Vegetation Composition Specie List (Observed): Toto Ranch

ATTACHMENT – D

Recommended management approach and best management practices for California red-legged frogs on the Toto Ranch

Managing Rangelands to Benefit California Red-Legged Frogs & California Tiger Salamanders – Chapters 4, 5 & 8