CITY OF CLEARLAKE

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

ENVIRONMENTAL ANALYSIS

FINAL MITIGATED NEGATIVE DECLARATION

INITIAL STUDY *(IS 2022-02)*

COMMERCIAL CANNABIS OPERATION

LOCATED AT:

2160 Ogulin Canyon Road, Clearlake, CA
Assessor's Parcel No. 010-044-21

Draft: April 4, 2022
Final: September 15, 2022

FINAL ENVIRONMENTAL INITIAL STUDY REVISED PROJECT DESCRIPTION AND PUBLIC REVIEW

The original project that was evaluated under the draft Initial Study consisted of construction and operation of a 33,600 sq.ft. building for cannabis activities, 5,000 sq.ft. office building, five - 75' x 25' greenhouses, and site improvements including 46 parking spaces. Proposed uses under this original project description consisted of manufacturing, retail delivery, distribution, processing, cultivation, and a nursery. The draft Initial Study for this project original project description was circulated for public review between April 7 and May 13, 2022. This circulation included distribution to the California State Clearinghouse and local agencies. Below are written comments received from agencies followed by Table 1, City Responses to Agency Comments.

On August 23, 2022, the project applicant submitted a scaled down, revised project description consisting of a remodel of an existing 960 square foot metal building and future development of a new 5,000 square foot building and 8 parking spaces. Proposed uses under this revised project description consists of non-volatile manufacturing, retail delivery, distribution, and processing on the same site. No greenhouses or cultivation activities are proposed as part of the revised project. This project description has been revised as a substantial down-sizing of the original project, and as such, the reduced project development and land use intensity has resulted in reduced environmental impacts as compared to the original project description. Even though the project is revised, the same overall analysis and environmental mitigation measures that apply to the original project should adequately apply to the project revision.

In accordance with Section 15073.5 of the California Environmental Quality Act (CEQA) Guidelines the City has determined that there is no need to recirculate the initial study/mitigated negative declaration since the proposed revisions don't result in more significant environmental impacts or result in any substantial changes to the mitigation measures from the original project and draft Initial Study and Proposed Mitigated Negative Declaration. As referenced in this section of the CEQA Guidelines, the City recirculation of the Initial Study/Mitigated Negative Declaration is not required since this Final Initial Study meets the following circumstances:

- Mitigation measures are the same as previously and have been determined to be equal to or more effective measures.
- No new impacts have been identified that were previously not addressed in the Initial Study as a result of written or verbal comments received on the project.
- Measures or conditions of project approval have not been added after and are not necessary to mitigate an avoidable significant effect.
- New information has been added to the Initial Study and Mitigated Negative Declaration which merely clarifies, amplifies, or makes insignificant modifications to the Mitigated Negative Declaration.

Some parts of the Draft Initial Study were revised for minor clarification to respond to agency comments. Therefore, the City, as lead agency for this project, has determined that the Initial Study does not need to be recirculated and has been determined to adequately address concerns referenced by all agencies. Therefore, this document is formalized as the Final Initial Study and the City may issue a mitigated negative declaration based on their concurrence of adequacy.

The following are comments and City responses to comment to the following agencies:

(Refer to all written correspondence following this Table)

Commenting Agency or Entity	Date	Summary of Comments	City Response
Letter from Pheakday Preciado, Environmental Health Specialist, Lake County Environmental Health Department (see attached)	September 9, 2021	Identified a number of on-site clean up needs (see attached letter).	No formal response needed. Site has been cleaned up and clearances will be obtained from Environmental Health prior to occupancy.
Email from Lori Bacca Customer Service Supervisor, Lake County Special Districts	April 7, 2022	The parcel 010-044-210 is outside of any Special Districts service area, no impact.	No response required. This project will be served by a septic system in-lieu of a community sewer system.
Letter from Lori Schmitz Environmental Scientist Division of Financial Assistance Special Project Review Unit, California Water Board	May 12, 2022	See attached letter. 1-Noted concerns with details of well; provide more details. 2-Noted concerns with project impacts on Burns Valley Creek with improvements shown within floodplain. 3-Provides list of permitting requirements	No formal response needed. All concerns addressed with Mitigation Measures GEO-1 through GEO-3. City staff will follow up to make sure all clearances are obtained and information is submitted as requested.
Letter from Lindsay Rains, Licensing Manager, California Department of Cannabis Control (DCC)	May 2, 2022	See attached letter. GC 1: Cannabis Manufacturing The IS/MND indicates that a manufacturing license is being sought from DCC. However, the IS/MND does not specify whether the Proposed Project includes manufacturing using volatile solvents. The IS/MND should provide a description of any volatile substances that will be used in product manufacture, and should include analyses of the potential environmental impacts that may result from the use of these substances. In addition, the analyses should describe and consider any measures the Proposed Project will implement that may	Comment noted. Section III, Air Quality, Section VIII, Greenhouse Gas Emissions, and Section IX, Hazards and Hazardous Materials, provides an adequate description and analysis for project impacts on these categories. Additional details will be provided to DCC upon license application submittal.

		lessen or reduce potential impacts. In particular, the document should include detailed analyses of impacts related to air quality, hazards and hazardous substances, and greenhouse gas emissions.	
DCC		GC 2: Site-Specific Reports and Studies The IS/MND references several project-specific plans and studies, such as an Air Quality Plan, Odor Control Plan, Serpentine Control Plan, Energy Usage Plan, and Erosion Control and Sediment Plan. To ensure that DCC has supporting documentation for the IS/MND, DCC requests that the City advise applicants to provide copies of all project-specific plans and supporting documentation with their state application package for annual cultivation license to DCC.	Comment noted. Plans and reports will be included with any application to DCC made by the applicant.
DCC		GC 3: Impact Analysis Several comments provided in the comment table below relate to the absence of information or support for impact statements in the document. CEQA requires that Lead Agencies evaluate the environmental impacts of proposed projects and support factual conclusions with "substantial evidence." Substantial evidence includes facts, reasonable assumptions predicated upon facts, and expert opinion supported by facts. In general, the IS/ND would be improved if additional evidence (e.g., regulatory setting, environmental setting, impact analysis and methodology, impact assessment) was provided to support the impact statements in the checklist, including the sources of information relied upon to make conclusions.	Comment noted. No new environmental issues are raised in this comment and no revisions are necessary.
DCC		GC 4: Identification of Federal, State, and Local Regulations In multiple instances throughout the document, the IS/MND states that project components "shall adhere to all Federal, State, and local agency requirements." Without more information about the requirements and regulations being referred to, it is difficult to determine whether potential impacts would be avoided. The IS/MND would be strengthened if applicable requirements and regulations were described in the context of each environmental resource.	Comment noted. No new environmental issues are raised in this comment and no revisions are necessary.

DCC		GC 5: Acknowledgement of DCC Regulations Aside from one sentence in Section XI, Land Use, the IS/MND does not acknowledge that the Proposed Project requires licenses from DCC for cultivation, distribution, manufacturing, and other cannabis-related activities. The IS/MND could be improved if it acknowledged that DCC is responsible for licensing, regulation, and enforcement of commercial cannabis activities, as defined in the Medicinal and Adult Use Cannabis Regulation and Safety Act (MAUCRSA) and DCC regulations. Additionally, the IS/MND's analysis could benefit from discussion of the protections for environmental resources provided by DCC's cultivation and manufacturing regulations. Several examples are indicated in the Specific Comments table below.	Comment noted. No new environmental issues are raised in this comment and no revisions are necessary. DCC is not responsible for local land use regulations.
DCC		GC 6: Evaluation of Cumulative Impacts It is important for CEQA analysis to consider the cumulative impacts of cannabis cultivation in the City of Clearlake. Of particular importance are topics for which the impacts of individual projects may be less than significant, but where individual projects may make a considerable contribution to a significant cumulative impact. These topics include, but are not limited to: • cumulative impacts from groundwater diversions on the health of the underlying aquifer, including impacts on other users and impacts on stream-related resources connected to the aquifer; • cumulative impacts related to noise; • cumulative impacts related to transportation; and • cumulative impacts related to air quality and objectionable odors. The traffic study for the Proposed Project discusses three other cannabis projects in the immediate project area, and discusses the	Noted. MND does take into account cumulative impacts with studies and tiering off the General Plan.

		cumulative impacts of the increased vehicle traffic on transportation, air quality, and greenhouse gas emission. The IS/MND would be improved by acknowledging and analyzing the potential for all potential cumulative impacts resulting from the Proposed Project coupled with these three projects, and any other existing or reasonably foreseeable projects in Clearlake that could contribute to cumulative impacts similar to those of the Proposed Project.	
DCC		A list of 23 specific comments were made on the document.	Most of these comments address measures to strengthen the document as recommendations. These have been taken into consideration but most of these are details of the project that are addressed when the building permit from the City and licensing in obtained from DCC. None of these comments raise new environmental issues that have, in the opinion of the City, not been adequately addressed.
Letter from Peter Minkel, Engineering Geologist, Central Valley Regional Water Quality Control Board	May 13, 2022	See attached letter. Overview of potential permitting requirements for the project regarding potential impacts to surface and groundwater quality.	The draft initial study includes recommendation and identifies various permits necessary. Mitigation measures are included in the draft initial study addressing the comments. No new environmental issues are raised in this comment and no revisions are necessary.

COUNTY OF LAKE
Health Services Department
Environmental Health Division
922 Bevins Court
Lakeport, California 95453-9739
Telephone 707/263-1164
FAX 707/263-1681

Denise Pomeroy
Health Services Director

Gary Pace, MD
Interim Public Health Officer

Craig Wetherbee
Environmental Health Director

Promoting an Optimal State of Wellness in Lake County

September 9, 2021

Will Peterson Well Drilling
P.O. Box 695
Kelseyville, CA 95451

RE: APN 010-044-21
2160 Ogulin Canyon Road, Clearlake, CA

To Whom It May Concern:

On September 9, 2021, our office performed a Field Clearance to validate the existing system for water well (permit #WE-5718 AG) issuance.

However, at the time of the Field Inspection, our office observed several structures, which include a barn, sheds, an unknown structure with a sprayed painted sign on the ground identifying it as a grey water system, and a single family dwelling with septic system (permit #3402-S) with spray paint identifying the septic tank. There were structures/kennels on property (for what appeared to be a previous Clear Lake Kennel business).

The single family dwelling with septic system (permit #3402-S) septic tank appeared to be modified. The septic tank had new plastic risers without permit from our office for the minor repairs. One side of the risers has a 4 inch radius drilled hole and a ½ inch PVC pipe sticking out of the riser lid; this makes the septic tank not water and vapor tight.

Furthermore, the single family dwelling with the unknown grey water system and/or septic system leads directly to the flood plain/channel in the back. Measurement were made from the septic tank to the flood plain/channel bank, and it was about 56 feet. There is also a large amount of refuse/trash in the flood plain/channel.

Our office will sign off on the well permit and honored the Multiple Use Permits (UP 2021-23 through 28) after the following items below are met:

1. Based on the today's observation, a minor repair permit will be required from our office to ensure the existing septic tank is water and vapor proof.
2. The existing septic system must be exposed (top of the existing septic tank must be accessible; and the ends of the leachlines exposed).

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3. The unknown structure with the grey water system must demonstrate and provide a grey water permit from the City of Clearlake Community Development or meet our new septic system requirement.
4. The unknown structure with the grey water system might need to obtain a septic tank/system abandonment permit from our office if grey water permit is not available.
5. Provide a scale overview map with everything on the property including the proposed well to be drilled (permit #WE-5718 AG).
6. Please remove all the refuse/trash inside the flood plain/channel.

Please contact this office at (707) 263-1164 if you have any questions regarding this report.

Sincerely,

Pheakdey (Pack-a-day) Preciado, R.E.H.S.
Environmental Health Specialist

cc: City of Clearlake, Community Development: Code Enforcement and Planning Division
Ogulin Hills Holdings LLC, 637 Lindaro Street, Suite 201, San Rafael CA 94901

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CALIFORNIA Water Boards

GAVIN NEWSOM GOVERNOR

JARED BLUMENFELD SECRETARY FOR ENVIRONMENTAL PROTECTION

May 12, 2022

Clearlake, City of
Attn: Mark Roberts
14050 Olympic Drive
Clearlake, CA 95422

CITY OF CLEARLAKE (CITY), MITIGATED NEGATIVE DECLARATION (MND) FOR THE OGULIN HILLS HOLDINGS, LLC- COMMERCIAL CANNABIS OPERATION PROJECT (PROJECT); SCH # 2022040072

Dear Mr. Mark Roberts:

Thank you for the opportunity to review the Mitigated Negative Declaration for the proposed Project. The State Water Resources Control Board, Division of Drinking Water (State Water Board, DDW) is responsible for issuing water supply permits pursuant to the Safe Drinking Water Act. A project requires a permit if it includes water system consolidation or changes to a water supply source, storage, or treatment or a waiver or alternative from Waterworks Standards (California Code of Regulations (CCR) title 22, chapter 16 et. seq). The above referenced Project will require a new water supply permit.

The State Water Board, DDW, as a responsible agency under CEQA, has the following comments on the City's draft MND:

- The State Water Board regulates public water systems in Lake County. The Project will create a new public water system. On PDF page 5 under "23. Federal and State Agencies:" please list "State Water Resources Control Board, Division of Drinking Water".
- The Project will use an existing well that was drilled in late September/early October 2021 for domestic and irrigation water (PDF page 28). The water will be pumped from a 400+ gallon per minute well into a new 50,000-gallon elevated water tank for distribution (PDF page 28 & Appendix E). Will the water require treatment? Further describe any new water system infrastructure that will be installed as part of the Project.
- The document states on PDF page 38, that, "The project area to be developed is not located within the vicinity of known waterways nor is it located within a designated flood zone. Therefore, the risk of flooding/runoff, landslides, slope instability, or drainage changes would not be increased due to this project" (PDF page 38). However, there are several contradictory statements in the document:
    - "The report notes that a small riparian area is present on the subject parcel. Since Burns Valley Creek travels through the site and the creek will be impacted by the project, such as erosion, sedimentation, changes in drainage patterns." (PDF page 20)
    - "However, since improvements are being constructed within the creek wetlands located down-stream will be impacted." (PDF page 21)
    - "There will be modifications to the drainage pattern of Burns Valley Creek due to grading and introduction of parking improvements withing the Burns Valley

Creek. These proposed improvements within the Burns Valley Creek area could impact and alter the existing drainage pattern of the site or the area, including the alteration of the course of a stream." (PDF page 30)

- Project designs also show Burns Valley Creek runs through the Project site and the proposed driveway and parking area occur within Zone AE, a flood zone. (PDF page 4)

Please resolve the discrepancies in the document relating to potential impacts to waters of the state and discuss possible flooding impacts related to domestic water quality. Include best management practices and/or mitigation measures to reduce impacts to waters of the state as needed.

- The Project appears to have other water quality concerns that should be addressed. Please coordinate with the following contacts to address waste discharge water quality issues and the Project permitting requirements, before going to construction:

Division / Unit	Project Issues/ Concerns	Permit	Contact	Phone Number	Email
State Water Board, Division of Water Quality (DWQ), NPDES Industrial and Construction Stormwater Unit	Stormwater Construction Impacts for construction that disturbs greater than one acre of soil	General Stormwater NPDES permit	Brandon Roosenboom	(916) 341-5566	Brandon.Roosenboom@waterboards.ca.gov & stormwater@waterboards.ca.gov
Central Valley Regional Water Quality Control Board (Central Valley Water Board, Redding), Cannabis Regulation and State Water Board, DWQ	Discharge impacts for cannabis operations	Cannabis Cultivation Waste Discharge Permit	Janae Fried	(530) 224-3291	Janae.Fried@waterboards.ca.gov & CannabisWR@waterboards.ca.gov
Central Valley Water Board, Sacramento, Non-15 Permitting	Small domestic wastewater treatment systems over 10,000 gallons per day	General Waste Discharge Requirements for Small Domestic Wastewater Treatment Systems, WQO 2014-0153-DWQ	Lani Andam	(916) 464-4723	Lani.Andam@waterboards.ca.gov

Once the MND is adopted, please forward the following items in support of the new water system's permit application to the State Water Board, DDW Mendocino District Office at DWPDIST03@waterboards.ca.gov:

- Copy of the draft and final MND and Mitigation Monitoring and Reporting Plan (MMRP);
- Copy of any comment letters received and the lead agency responses as appropriate;
- Copy of the Resolution or Board Minutes adopting the MND and MMRP; and
- Copy of the stamped Notice of Determination filed at the Lake County Clerk's Office and the Governor's Office of Planning and Research, State Clearinghouse.

Please contact Lori Schmitz of the State Water Board at (916) 449-5285 or Lori.Schmitz@waterboards.ca.gov, if you have any questions regarding State Water Board CEQA comments.

Sincerely,

Lori Schmitz

Lori Schmitz
Environmental Scientist
Division of Financial Assistance
Special Project Review Unit
1001 I Street, 16th floor
Sacramento, CA 95814

Cc:

Office of Planning and Research, State Clearinghouse

Zachary Rounds
State Water Board, DDW
Mendocino District
District Engineer

Brandon Roosenboom
State Water Board, DWQ
NPDES Industrial and Construction Stormwater Unit
Water Resources Control Engineer

Landi Andam
Central Valley Regional Board, Sacramento
Non 15 Permitting
Water Resources Control Engineer

Janae Fried
Central Valley Regional Board, Redding
Cannabis Regulation
Engineering Geologist

Department of Cannabis Control
CALIFORNIA

Gavin Newsom
Governor

Nicole Elliott
Director

May 12, 2022

Mark Roberts, Senior Planner
City of Clearlake
14050 Olympic Drive
Clearlake, CA 95422
(707) 994-8201
mroberts@clearlake.ca.us

Re: Review of Initial Study/Mitigated Negative Declaration (SCH No. 2022040072) – Ogulin Hills Holdings, LLC Conditional Use Permits and Initial Study 2022-2

Dear Mr. Roberts:

Thank you for providing the California Department of Cannabis Control (DCC) the opportunity to review responses to comments on the Final Initial Study/Mitigated Negative Declaration (IS/MND; SCH No. 2022040072) prepared by the City of Clearlake for the proposed Ogulin Hills Holdings, LLC Conditional Use Permits (CUPs) 2022-03, 2022-04, 2022-05, 2022-06, and 2022-07 (Proposed Project).

DCC has jurisdiction over the issuance of licenses to commercial cannabis businesses. DCC may issue a cannabis business license to a business that meets all licensing requirements, and where the local jurisdiction authorizes these activities. (Bus. & Prof. Code, § 26012(a).) All commercial cannabis businesses within the California require a license from DCC. For more information pertaining to commercial cannabis business license requirements, including DCC regulations, please visit: https://cannabis.ca.gov/resources/rulemaking/.

DCC expects to be a Responsible Agency for this project under the California Environmental Quality Act (CEQA) because the project will need to obtain one or more annual cannabis business licenses from DCC. In order to ensure that the IS/MND is sufficient for DCC's needs at that time, DCC requests that a copy of the IS/MND, revised to respond to the comments provided in this letter, and a signed Notice of Determination be provided to the applicant, so the applicant can include them with the application package it submits to DCC. This should apply not only to this Proposed Project, but to all future CEQA documents related to cannabis cultivation applications in the City of Clearlake.

DCC offers the following comments concerning the IS/MND.

General Comments (GCs)

GC 1: Cannabis Manufacturing

The IS/MND indicates that a manufacturing license is being sought from DCC. However, the IS/MND does not specify whether the Proposed Project includes manufacturing using volatile solvents. The IS/MND should provide a description of any volatile substances that will be used in product manufacture, and should include analyses of the potential environmental impacts that may result from the use of these substances. In addition, the analyses should describe and consider any measures the Proposed Project will implement that may lessen or reduce potential impacts. In particular, the document should include detailed analyses of impacts related to air quality, hazards and hazardous substances, and greenhouse gas emissions.

GC 2: Site-Specific Reports and Studies

The IS/MND references several project-specific plans and studies, such as an Air Quality Plan, Odor Control Plan, Serpentine Control Plan, Energy Usage Plan, and Erosion Control and Sediment Plan. To ensure that DCC has supporting documentation for the IS/MND, DCC requests that the City advise applicants to provide copies of all project-specific plans and supporting documentation with their state application package for annual cultivation license to DCC.

GC 3: Impact Analysis

Several comments provided in the comment table below relate to the absence of information or support for impact statements in the document. CEQA requires that Lead Agencies evaluate the environmental impacts of proposed projects and support factual conclusions with "substantial evidence." Substantial evidence includes facts, reasonable assumptions predicated upon facts, and expert opinion supported by facts. In general, the IS/ND would be improved if additional evidence (e.g., regulatory setting, environmental setting, impact analysis and methodology, impact assessment) was provided to support the impact statements in the checklist, including the sources of information relied upon to make conclusions.

GC 4: Identification of Federal, State, and Local Regulations

In multiple instances throughout the document, the IS/MND states that project components "shall adhere to all Federal, State, and local agency requirements." Without more information about the requirements and regulations being referred to, it is difficult to determine whether potential impacts would be avoided. The IS/MND would be strengthened if applicable requirements and regulations were described in the context of each environmental resource.

GC 5: Acknowledgement of DCC Regulations

Aside from one sentence in Section XI, Land Use, the IS/MND does not acknowledge that the Proposed Project requires licenses from DCC for cultivation, distribution, manufacturing, and other cannabis-related activities. The IS/MND could be improved if it acknowledged that DCC is responsible for licensing, regulation, and enforcement of commercial cannabis activities, as

defined in the Medicinal and Adult Use Cannabis Regulation and Safety Act (MAUCRSA) and DCC regulations. Additionally, the IS/MND's analysis could benefit from discussion of the protections for environmental resources provided by DCC's cultivation and manufacturing regulations. Several examples are indicated in the Specific Comments table below.

GC 6: Evaluation of Cumulative Impacts

It is important for CEQA analysis to consider the cumulative impacts of cannabis cultivation in the City of Clearlake. Of particular importance are topics for which the impacts of individual projects may be less than significant, but where individual projects may make a considerable contribution to a significant cumulative impact. These topics include, but are not limited to:

- cumulative impacts from groundwater diversions on the health of the underlying aquifer, including impacts on other users and impacts on stream-related resources connected to the aquifer;
- cumulative impacts related to noise;
- cumulative impacts related to transportation; and
- cumulative impacts related to air quality and objectionable odors.

The traffic study for the Proposed Project discusses three other cannabis projects in the immediate project area, and discusses the cumulative impacts of the increased vehicle traffic on transportation, air quality, and greenhouse gas emission. The IS/MND would be improved by acknowledging and analyzing the potential for all potential cumulative impacts resulting from the Proposed Project coupled with these three projects, and any other existing or reasonably foreseeable projects in Clearlake that could contribute to cumulative impacts similar to those of the Proposed Project.

Specific Comments and Recommendations

In addition to the general comments provided above, DCC provides the following specific comments regarding the analysis in the IS/MND.

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Comment No.	Section Nos.	Page No(s).	Resource Topic(s)	IS/MND Text	DCC Comments and Recommendations
1	Ques. 19-20	3-4	Description of Project, Environmental Setting	N/A (General Comment) and Figure 1 Project Site Plan (Refer to Attachment B for full plans)	The IS/MND would be improved if it included a larger-scale site plan that clearly showed site features such as the access road, creek setback, and other features referred to in the subsequent analysis. Also, Attachment B contains only a single plan sheet, not the full site plans.
2	Ques. 22-23	4-5	Other public agencies whose approval may be required	N/A (General Comment)	The IS/MND could be more informative if it identified the permit(s) or approval(s) required from each of the agencies listed.
3	Ques. 24	5	Native American Consultation	N/A (General Comment)	The document would be strengthened if it included a list of all tribes contacted as part of the AB 52 consultation process.
4	Ques. 25	5	Impact Categories defined by CEQA	N/A (General Comment)	The list of sources would be improved if it provided additional information regarding some of the references. For referenced documents, the author, title, and date of each document could be provided. For personal communications, the agency or organization, person contacted, date of contact, and method of contact should be provided. For websites, the URL and date visited should be provided. In addition, sources that are project-related studies could be made available via weblink or as attachments.
5	Ques. 25	11	Site Photos	N/A (General Comment)	The IS/MND would be more informative if it included a brief description of the location and significance of each site photo.
6	I(d)	15-16	Aesthetics	The commercial cannabis operation will occur within	The IS/MND would be improved if the analysis clarified why mitigation is needed

Comment No.	Section Nos.	Page No(s).	Resource Topic(s)	IS/MND Text	DCC Comments and Recommendations
				enclosed structures with minimal lighting used during evening/nighttime hours. All lighting will be directed downwards and shielded and adhere to the City's Lighting Design Standards. including all dark-sky requirements. Therefore, to ensure that impacts related to the Aesthetics are minimized, following mitigation measures have been implemented.	for Impact I(d). The analysis seems to imply that impacts would not be significant, although the check box indicates "Potentially Significant."
7	I(d)	15-16	Aesthetics	N/A (General Comment)	The IS/MND does not specify whether the Proposed Project would use mixed-light cultivation techniques. If the Proposed Project includes mixed-light cultivation techniques, the document would be improved if it referenced DCC's requirement that lights used in mixed-light cultivation activities must be fully shielded from sunset to sunrise to avoid nighttime glare (Cal. Code Regs., tit. 4 § 16304(a)(7)), and described how the Proposed Project will comply with these policies and regulations.
8	III(a)	17	Air Quality	The proposed Air Quality Plan indicates how the applicant Intends to minimize these Impacts.	The IS/MND would be improved if it summarized the information provided in the Air Quality Plan that would ensure air quality impacts would be less than significant.
9	III(a)	17	Air Quality	No significant odor impacts are anticipated from the proposed cultivation	The IS/MND would be improved if it contained information about proposed odor control equipment and practices.

Comment No.	Section Nos.	Page No(s).	Resource Topic(s)	IS/MND Text	DCC Comments and Recommendations
				operation, due to the proposed odor control equipment and practices, and the generous setbacks provided from public roads, property lines, and neighboring residences/ outdoor activity areas.	
10	III(a)	17	Air Quality	All property owners and residents within a 1,000-foot radius of the cannabis facility shall be provided with the contact information of the individual(s) responsible for responding to the odor complaints.	The IS/MND would be improved if the analysis described the types and locations of sensitive receptors near the project site.
11	III(a)	17	Air Quality	The proposed odor control plan seems to acknowledge that odors could be detected outside the structure without significant enhancements, such as carbon filtering.	This statement indicates that the Proposed Project could result in significant impacts related to odor. The document would be strengthened if it included a summary of the odor control plan, as well as providing the plan itself as an attachment, and providing an analysis, supported by substantial evidence, that the proposed mitigation measures would reduce impacts to less-than-significant levels. In addition, the IS/MND would be improved if it included an analysis of the Proposed Project's contribution to potential cumulative odor impacts from nearby projects. (See GC 6.)

Comment No.	Section Nos.	Page No(s).	Resource Topic(s)	IS/MND Text	DCC Comments and Recommendations
12	III(a)	19	Air Quality	AIR-10 If construction or site activities are conducted within Serpentine soils, a Serpentine Control Plan may be required. Any parcel with Serpentine soils must obtain proper approvals from LCAQMD prior to beginning any construction activities. Contact LCAQMD for more details.	The IS/MND would be improved if it included information about whether the project site is located in an area of serpentine soils.
13	IV(a)	20	Biological Resources	BIO-2. If project construction occurs between September 1 and January 31, nesting bird survey shall be conducted by a qualified biologist. Additional mitigation measures recommended in the survey report shall be implemented prior to or curing project development to avoid disturbance to migratory nesting birds.	The IS/MND would be improved if the analysis explained the timing of nesting bird surveys. Typically, these surveys take place between March 1 and August 31. Also, this measure does not appear in the Biological Report.
14	IV(c), (d)	21	Biological Resources	The project will include mitigation to wetland through implementation of Mitigation Measure BIO-5.	The checklist indicates that this impact would be less than significant. The IS/MND would be strengthened if the checklist conclusion and the analysis conclusion matched.
15	IV(e)	21	Biological Resources	The project will have minimal to no conflict with any local policies or ordinances protecting	The IS/MND would be improved if it provided supporting evidence that impacts on oak trees would be less than significant.

Comment No.	Section Nos.	Page No(s).	Resource Topic(s)	IS/MND Text	DCC Comments and Recommendations
				biological resources, such as a tree preservation policy or ordinance. However, the project may require the removal of a small cluster of grasses and/or vegetation/trees. Prior to tree removal, the applicant shall obtain a Tree Removal Permit from the City of Clearlake and if Oak Trees are to be removed, they shall be replaced in accordance with Section 18-40.050 of the City of Clearlake Municipal Code. Less than Significant Impact.	
16	V(a)	23	Cultural Resources	Additionally, Mitigation Measures BIO-5 and GEO-1 through GEO-3 ensure impacts related to the Cultural Resources are minimized, to Less than Significant Levels.	The IS/MND would be strengthened if it explained how these mitigation measures would mitigate for potentially significant impacts on cultural resources.
17	VI(a)	23	Energy	N/A (General Comment)	The IS/MND would be improved if it described how the project would meet DCC regulatory requirements regarding the use of renewable energy. (*See* GC 5 and Cal. Code Regs., tit. 4 § 16305.)
18	VII(f)	25	Geology and Soils	Disturbance of paleontological resources or unique geologic features is	The IS/MND would be strengthened if it explained how these mitigation measures would mitigate for potentially significant

Comment No.	Section Nos.	Page No(s).	Resource Topic(s)	IS/MND Text	DCC Comments and Recommendations
				not anticipated, but mitigation measures are in place to assure that in the event any artifacts are found. All potential impacts have been reduced to less than significant with the incorporated mitigation measures CUL-1 and CUL-5.	impacts on paleontological resources. In addition, the text cites mitigation measure CUL-5, but Section V, Cultural Resources, contains only three mitigation measures.
19	VIII(a)	25	Greenhouse Gas Emissions	The anticipated vehicle trip generation and project operations are not expected to generate significant levels of greenhouse gas emissions and would not degrade the air quality. Less Than Significant Impact	The IS/MND would be improved if it provided supporting evidence (e.g., quantified emission estimates, rationale for conclusion) for the statement. (*See* GC 3.)
20	IX(a)	26	Hazards and Hazardous Materials	N/A (General Comment)	The IS/MND would be strengthened if the discussion of hazardous materials included a description of manufacturing operations and any hazardous materials (e.g., volatile solvents) that might be used. The document should also explain how any hazard risk associated with volatile solvents would be mitigated.
21	X(c)	30-31	Hydrology and Water Quality	N/A (General Comment)	The IS/MND would be improved if it explained how Mitigation Measures GEO-1 through GEO-3 would reduce the impact of altering the course of the stream to a less-than-significant level.

Comment No.	Section Nos.	Page No(s).	Resource Topic(s)	IS/MND Text	DCC Comments and Recommendations
22	X(d)	31	Hydrology and Water Quality	The project site is not located in an area of potential inundation by seiche or tsunami. A portion of the parcel is located within flood zone AE of Burns Valley Creek. As indicated on the site plan, (Figure 1) access and parking improvements are proposed within the floodway. Clearlake Municipal Code section 17-5.1 outlines standards for construction within flood hazard zones. Compliance with this chapter will reduce impacts to less than significant.	The IS/MND would benefit from a discussion of the City's standards for construction within a flood zone and how they will ensure a less-than-significant impact for the proposed project. In addition, the IS/MND should provide an analysis of whether these construction standards would prevent the release of pollutants, including pesticides, fuels, and/or fertilizers.
23	XIII(a)	32	Noise	N/A (General Comment)	The document would be improved if it described the sources of noise (e.g., cultivation or manufacturing equipment, operation and maintenance activities) expected to occur during project operations and the levels of noise those sources are likely to generate. Additionally, the document should include a description of sensitive receptors, their distances from the Proposed Project site, and an analysis of whether the Project would result in noise-related impacts on sensitive receptors. The discussion should describe how Mitigation Measures NOI-1 through NOI-3 would reduce impacts to a less-than-significant

Comment No.	Section Nos.	Page No(s).	Resource Topic(s)	IS/MND Text	DCC Comments and Recommendations
					level. The analysis should also address cumulative impacts related to the three nearby projects.
24	XV	34	Public Services	Conditions of Approval have been incorporated to ensure the project adhere to all applicable requirements of the above agencies.	The IS/MND would be strengthened if it described the applicable agency requirements and Conditions of Approval that have been incorporated into the project. (*See* GC 4.)
25	XXI(a), (c)	39	Mandatory Findings of Significance	With incorporation of Mitigation Measures, the project is not anticipated to significantly impact…	The IS/MND would be improved if it listed the specific mitigation measures being relied on.
26	XXI(b)	40	Mandatory Findings of Significance	It is also noted that the City's 2040 General Plan Environmental Impact Report identifies the project site as within a major growth area; the Ogulin Canyon Industrial Center. As such, cumulative environmental impacts from development within this growth center have been previously addressed in the EIR. The implementation of and compliance with all mitigation measures identified in each section as project conditions of approval would avoid or reduce all potential impacts to less than significant levels and would not result	The IS/MND would be improved if it described the potential cumulative impacts of the project with other three projects on Ogulin Canyon Road and provide supporting evidence for the conclusion that these impacts were "previously addressed in the [General Plan] EIR." This analysis should include a discussion of cumulative impacts specific to cannabis cultivation, such as water use and odor.

Comment No.	Section Nos.	Page No(s).	Resource Topic(s)	IS/MND Text	DCC Comments and Recommendations
				in cumulatively considerable environmental impacts.	

Conclusion

DCC appreciates the opportunity to provide comments on the IS/MND for the Proposed Project. If you have any questions about our comments or wish to discuss them, please contact Kevin Ponce, Senior Environmental Scientist Supervisor, at (916) 247-1659 or via e-mail at Kevin.Ponce@cannabis.ca.gov.

Sincerely,

Rains, Lindsay@Cannabis Digitally signed by Rains, Lindsay@Cannabis
Date: 2022.05.12 12:12:33 -07'00'

Lindsay Rains,
Licensing Program Manager

California Water Boards

Gavin Newsom
Governor

Jared Blumenfeld
Secretary for
Environmental Protection

Central Valley Regional Water Quality Control Board

13 May 2022

Mark Roberts
City of Clearlake
14050 Olympic Drive
Clearlake, CA 95422
mroberts@clearlake.ca.us

COMMENTS TO REQUEST FOR REVIEW FOR THE MITIGATED NEGATIVE DECLARATION, OGULIN HILLS HOLDINGS, LLC - COMMERCIAL CANNABIS OPERATION PROJECT, SCH#2022040072, LAKE COUNTY

Pursuant to the State Clearinghouse's 4 April 2022 request, the Central Valley Regional Water Quality Control Board (Central Valley Water Board) has reviewed the *Request for Review for the Mitigated Negative Declaration* for the Ogulin Hills Holdings, LLC - Commercial Cannabis Operation Project, located in Lake County.

Our agency is delegated with the responsibility of protecting the quality of surface and groundwaters of the state; therefore, our comments will address concerns surrounding those issues.

I. Regulatory Setting

Basin Plan

The Central Valley Water Board is required to formulate and adopt Basin Plans for all areas within the Central Valley region under Section 13240 of the Porter-Cologne Water Quality Control Act. Each Basin Plan must contain water quality objectives to ensure the reasonable protection of beneficial uses, as well as a program of implementation for achieving water quality objectives with the Basin Plans. Federal regulations require each state to adopt water quality standards to protect the public health or welfare, enhance the quality of water and serve the purposes of the Clean Water Act. In California, the beneficial uses, water quality objectives, and the Antidegradation Policy are the State's water quality standards. Water quality standards are also contained in the National Toxics Rule, 40 CFR Section 131.36, and the California Toxics Rule, 40 CFR Section 131.38.

The Basin Plan is subject to modification as necessary, considering applicable laws, policies, technologies, water quality conditions and priorities. The original Basin Plans were adopted in 1975, and have been updated and revised periodically as required, using Basin Plan amendments. Once the Central Valley Water Board has adopted a Basin Plan amendment in noticed public hearings, it must be approved by the State Water Resources Control Board (State Water Board), Office of

Administrative Law (OAL) and in some cases, the United States Environmental Protection Agency (USEPA). Basin Plan amendments only become effective after they have been approved by the OAL and in some cases, the USEPA. Every three (3) years, a review of the Basin Plan is completed that assesses the appropriateness of existing standards and evaluates and prioritizes Basin Planning issues. For more information on the *Water Quality Control Plan for the Sacramento and San Joaquin River Basins*, please visit our website:
http://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/

Antidegradation Considerations

All wastewater discharges must comply with the Antidegradation Policy (State Water Board Resolution 68-16) and the Antidegradation Implementation Policy contained in the Basin Plan. The Antidegradation Implementation Policy is available on page 74 at:
https://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/sacsjr_201805.pdf

In part it states:

Any discharge of waste to high quality waters must apply best practicable treatment or control not only to prevent a condition of pollution or nuisance from occurring, but also to maintain the highest water quality possible consistent with the maximum benefit to the people of the State.

This information must be presented as an analysis of the impacts and potential impacts of the discharge on water quality, as measured by background concentrations and applicable water quality objectives.

The antidegradation analysis is a mandatory element in the National Pollutant Discharge Elimination System and land discharge Waste Discharge Requirements (WDRs) permitting processes. The environmental review document should evaluate potential impacts to both surface and groundwater quality.

II. Permitting Requirements

Cannabis General Order

Cannabis cultivation operations are required to obtain coverage under the State Water Resources Control Board's *General Waste Discharge Requirements and Waiver of Waste Discharge Requirements for Discharges of Waste Associated with Cannabis Cultivation Activities Order No. WQ 2017-0023-DWQ* (the Cannabis General Order). Cultivators that divert and store surface water (stream, lake, subterranean stream, etc.) to irrigate cannabis also need a valid water right.

The Water Boards Cannabis Cultivation Programs offer an easy-to-use online Portal for cultivators to apply for both Cannabis General Order coverage and a Cannabis Small Irrigation Use Registration (SIUR) water right, if needed. Visit the Water Boards Cannabis Cultivation Programs Portal at:
https://public2.waterboards.ca.gov/CGO

Additional information about the Cannabis General Order, Cannabis SIUR Program, and Portal can be found at: www.waterboards.ca.gov/cannabis

For questions about the Cannabis General Order, please contact the Central Valley Water Board's Cannabis Permitting and Compliance Unit at: centralvalleysacramento@waterboards.ca.gov or (916) 464-3291. For questions about Water Rights (Cannabis SIUR), please contact the State Water Board's Division of Water Rights at: CannabisReg@waterboards.ca.gov or (916) 319-9427.

Construction Storm Water General Permit

Dischargers whose project disturb one or more acres of soil or where projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit), Construction General Permit Order No. 2009-0009-DWQ. Construction activity subject to this permit includes clearing, grading, grubbing, disturbances to the ground, such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). For more information on the Construction General Permit, visit the State Water Resources Control Board website at: http://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml

Phase I and II Municipal Separate Storm Sewer System (MS4) Permits[1]

The Phase I and II MS4 permits require the Permittees reduce pollutants and runoff flows from new development and redevelopment using Best Management Practices (BMPs) to the maximum extent practicable (MEP). MS4 Permittees have their own development standards, also known as Low Impact Development (LID)/post-construction standards that include a hydromodification component. The MS4 permits also require specific design concepts for LID/post-construction BMPs in the early stages of a project during the entitlement and CEQA process and the development plan review process.

For more information on which Phase I MS4 Permit this project applies to, visit the Central Valley Water Board website at: http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/municipal_permits/

For more information on the Phase II MS4 permit and who it applies to, visit the State Water Resources Control Board at:

[1] Municipal Permits = The Phase I Municipal Separate Storm Water System (MS4) Permit covers medium sized Municipalities (serving between 100,000 and 250,000 people) and large sized municipalities (serving over 250,000 people). The Phase II MS4 provides coverage for small municipalities, including non-traditional Small MS4s, which include military bases, public campuses, prisons and hospitals.

http://www.waterboards.ca.gov/water_issues/programs/stormwater/phase_ii_municipal.shtml

Industrial Storm Water General Permit

Storm water discharges associated with industrial sites must comply with the regulations contained in the Industrial Storm Water General Permit Order No. 2014-0057-DWQ. For more information on the Industrial Storm Water General Permit, visit the Central Valley Water Board website at: http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/industrial_general_permits/index.shtml

Clean Water Act Section 404 Permit

If the project will involve the discharge of dredged or fill material in navigable waters or wetlands, a permit pursuant to Section 404 of the Clean Water Act may be needed from the United States Army Corps of Engineers (USACE). If a Section 404 permit is required by the USACE, the Central Valley Water Board will review the permit application to ensure that discharge will not violate water quality standards. If the project requires surface water drainage realignment, the applicant is advised to contact the Department of Fish and Game for information on Streambed Alteration Permit requirements. If you have any questions regarding the Clean Water Act Section 404 permits, please contact the Regulatory Division of the Sacramento District of USACE at (916) 557-5250.

Clean Water Act Section 401 Permit – Water Quality Certification

If an USACE permit (e.g., Non-Reporting Nationwide Permit, Nationwide Permit, Letter of Permission, Individual Permit, Regional General Permit, Programmatic General Permit), or any other federal permit (e.g., Section 10 of the Rivers and Harbors Act or Section 9 from the United States Coast Guard), is required for this project due to the disturbance of waters of the United States (such as streams and wetlands), then a Water Quality Certification must be obtained from the Central Valley Water Board prior to initiation of project activities. There are no waivers for 401 Water Quality Certifications. For more information on the Water Quality Certification, visit the Central Valley Water Board website at: https://www.waterboards.ca.gov/centralvalley/water_issues/water_quality_certification/

Waste Discharge Requirements – Discharges to Waters of the State

If USACE determines that only non-jurisdictional waters of the State (i.e., "non-federal" waters of the State) are present in the proposed project area, the proposed project may require a Waste Discharge Requirement (WDR) permit to be issued by Central Valley Water Board. Under the California Porter-Cologne Water Quality Control Act, discharges to all waters of the State, including all wetlands and other waters of the State including, but not limited to, isolated wetlands, are subject to State regulation. For more information on the Waste Discharges to Surface Water NPDES Program and WDR processes, visit the Central Valley Water Board website at:https://www.waterboards.ca.gov/centralvalley/water_issues/waste_to_surface_water/

Projects involving excavation or fill activities impacting less than 0.2 acre or 400 linear feet of non-jurisdictional waters of the state and projects involving dredging activities impacting less than 50 cubic yards of non-jurisdictional waters of the state may be eligible for coverage under the State Water Resources Control Board Water Quality Order No. 2004-0004-DWQ (General Order 2004-0004). For more information on the General Order 2004-0004, visit the State Water Resources Control Board website at:
https://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2004/wqo/wqo2004-0004.pdf

Dewatering Permit

If the proposed project includes construction or groundwater dewatering to be discharged to land, the proponent may apply for coverage under State Water Board General Water Quality Order (Low Threat General Order) 2003-0003 or the Central Valley Water Board's Waiver of Report of Waste Discharge and Waste Discharge Requirements (Low Threat Waiver) R5-2018-0085. Small temporary construction dewatering projects are projects that discharge groundwater to land from excavation activities or dewatering of underground utility vaults. Dischargers seeking coverage under the General Order or Waiver must file a Notice of Intent with the Central Valley Water Board prior to beginning discharge.

For more information regarding the Low Threat General Order and the application process, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2003/wqo/wqo2003-0003.pdf

For more information regarding the Low Threat Waiver and the application process, visit the Central Valley Water Board website at:
https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/waivers/r5-2018-0085.pdf

Limited Threat General NPDES Permit

If the proposed project includes construction dewatering and it is necessary to discharge the groundwater to waters of the United States, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. Dewatering discharges are typically considered a low or limited threat to water quality and may be covered under the General Order for *Limited Threat Discharges to Surface Water* (Limited Threat General Order). A complete Notice of Intent must be submitted to the Central Valley Water Board to obtain coverage under the Limited Threat General Order. For more information regarding the Limited Threat General Order and the application process, visit the Central Valley Water Board website at:
https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2016-0076-01.pdf

NPDES Permit

If the proposed project discharges waste that could affect the quality of surface waters of the State, other than into a community sewer system, the proposed project

will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. A complete Report of Waste Discharge must be submitted with the Central Valley Water Board to obtain a NPDES Permit. For more information regarding the NPDES Permit and the application process, visit the Central Valley Water Board website at: https://www.waterboards.ca.gov/centralvalley/help/permit/

If you have questions regarding these comments, please contact me at (916) 464-4684 or Peter.Minkel2@waterboards.ca.gov.

Peter Minkel

Peter Minkel
Engineering Geologist

cc: State Clearinghouse unit, Governor's Office of Planning and Research, Sacramento

CALIFORNIA ENVIRONMENTAL QUALITY ACT
ENVIRONMENTAL CHECKLIST FORM
INITIAL STUDY *(IS 2022-02)*

1. **Project Title:** Ogulin Hills Holdings, LLC **-** Commercial Cannabis Operation
2. **Permit Numbers:**
   - ***CUP 2022-04 (Manufacturing)***
   - ***CUP 2022-05 (Distribution)***
   - ***CUP 2022-06 (Retail Delivery)***

3. **Lead Agency Name/Address:** City of Clearlake 14050 Olympic Drive
   Clearlake, CA 95422

4. **Contact Person:** Mark Roberts – Senior Planner
   Phone: (707) 994-8201
   Email: mroberts@clearlake.ca.us

5. **Project Location(s):** 2160 Ogulin Canyon Road, Clearlake, CA 95422

6. **Assessor Parcel Number (APN):** 010-044-21

7. **Project Sponsor's Name/Address:** Brian Pensack, Garrett Burdick, Kim Gardner
   37 Lindaro Street, Suite 201, San Rafael, CA 94901

8. **Property Owner(s) Name/Address:** Same as Sponsor (see response to no. 7 above)

9. **Zoning Designations:** "I" Industrial, and "CB" Commercial Cannabis

10. **General Plan Designation:** Industrial

11. **Supervisor District:** District 2

12. **Average Cross Slope:** Less than 15% (excluding Burns Valley Creek)

13. **Earthquake Fault Zone**: Not within a fault zone

14. **Dam Failure Inundation Area**: Not within a Dam Failure Inundation Zone

15. **Flood Zone**: A portion of the parcel is located within flood zone AE of Burns Valley Creek.

16. **Waste Management**: Onsite waste management system

17. Water Access: Onsite well system

18. Fire Department: Lake County Fire Protection District

19. Description of Project: The proposed project includes development of industrial style structures to be used for cannabis related facilities including remodeling of an existing 960 square foot metal building and development of a new 5,000 square foot building and 8 parking spaces. Specific project uses are to include:

- *Cannabis Manufacturing (Non Volatile)*
- *Cannabis Retail Delivery and Distribution*
- *Cannabis Processing*

The project's processing, manufacturing, and distribution components will include various activities related to nonvolatile extraction of cannabis essential oils, processing and storage of cannabis extracts and plant materials including packaging of cannabis for sale, packaging and labeling of cannabis products, storage, and distribution of cannabis products, and related activities. No cultivation operations will occur.

The project operational days/hours during the harvest season will be - Monday through Saturday from 6 am to 8 pm and during non-harvest seasons - Monday through Saturday from 7 am to 6 pm.

The processing/storage and distribution building and retail delivery and office area will be situated about 150' south of the road, in the center of the parcel.

The project buildings are to be engineered metal structures. Preliminary floor plans indicate that the manufacturing and processing building will include; an intake area; processing and manufacturing areas; packaging areas; restrooms and offices; employee break room; shipping and receiving area; numerous storage areas; intake and distribution areas; and related activities. Rollup doors will provide entry into secure parking areas for loading and unloading.

The project site is accessed by a new driveway that will lead into the 8-car parking lot. ADA accessible parking will be developed near the office. Security fencing and numerous digital security cameras will be placed around the perimeter and at strategic locations in the parking lot.

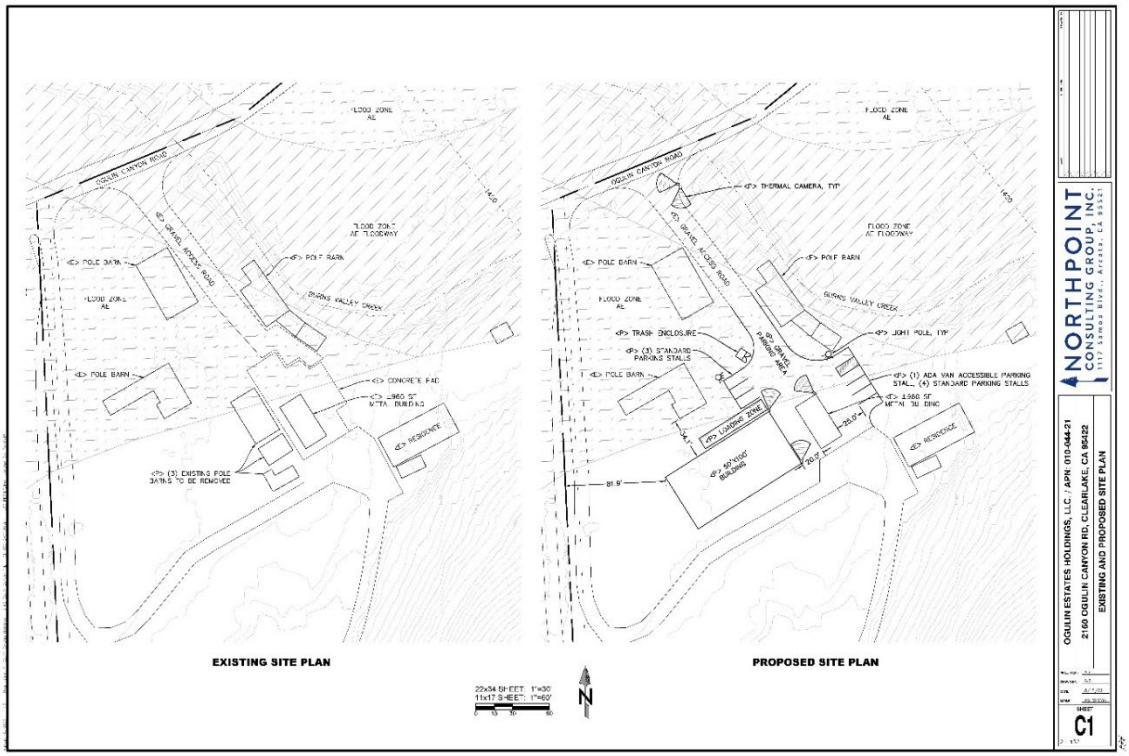


Figure 1 Project Site Plan (Refer to Attachment B for full plans)

20. Environmental Setting: The project site is approximately +/- 9.56 acres on the south side of Ogulin Canyon Road, approximately 0.46 mi east of State Route 53. The site is currently developed with a manufactured house and several former animal shelter kennels, pieces of equipment and related improvements that will be removed prior to development of this proposed project. The parcel occupies a relatively flat topography from 1,418 (mean sea level) at the entrance on Ogulin Canyon Road to 1,513 feet msl at the southeast corner. Drainage from the surrounding slopes is to Burns Valley Creek which is drains southwest to Clear Lake. Burns Valley Creek is an intermittent drainage, that flows east to west along Ogulin Canyon Road. The waterway occurs on the south side of Ogulin Canyon Road from the location of the proposed buildings and then crosses to the north side of the road just west of the driveway.

21. Surrounding Land Uses and Setting *(briefly describe the project's surroundings*):

- The parcels to the **North** across Ogulin Canyon Road have a land use designation of "Industrial" and are currently undeveloped.
- The parcels to the **South and West** have a land use designation of "Industrial" and/or "Rural Residential" and are developed with commercial/industrial or residential uses.
- The parcels to the **East** of the project site are located within the County of Lake jurisdiction and are undeveloped.

22. Other Public Agencies Whose Approval is Required: **Local Agencies**: Preliminary project plans for this project were transmitted for public agency comment a least 30 days prior to the release of this

initial study. Formal comments received from agencies have been incorporated into this initial study. Specific project approvals/permits will be City of Clearlake - Community Development (Planning, Building, Public Works); Clearlake Police Department, Lake County Fire Protection, Lake County Department of Environmental Health, Lake County Air Quality Management District, Lake County Special Districts, Local Tribal Organizations and the California Department of Cannabis Control.

23. **Federal and State Agencies:** Central Valley Regional Water Quality Control Board, CA Department of Fish and Wildlife, Cal-cannabis, Department of Public Health, California Department of Transportation (Caltrans); California Department of Food and Agriculture (CDFA); California Department of Pesticides Regulations, California Bureau of Cannabis Control and California Department of Consumer Affairs.

24. **NATIVE AMERICAN CONSULTATION:**

Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code (PRC) section 21080.3.1? ☒ **Yes** ☐ No

If yes, ensure that consultation and heritage resource confidentiality follow PRC sections 21080.3.1 and 21080.3.2 and California Government Code 65352.4

Note: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code section 21080.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code section 21082.3(c) contains provisions specific to confidentiality.

- **Response:** Notification of the project was sent to local tribes for compliance with "AB 52" Notification, which allows interested Tribes to request tribal consultation within 30 days of receipt of notice. The Community Development Department did not receive an AB 52 Tribal Consultation for this project, nor did we receive controversial comments.

25. **Impact Categories defined by CEQA:** The following documents are referenced information sources and are incorporated by reference into this document and are available for review upon request of the Community Development Department if they have not already been incorporated by reference into this report:
    - City of Clearlake General Plan
    - City of Clearlake Zoning Code/Municipal Code(s)
    - City of Clearlake Police Department
    - Use Permit Application Packet and Supplemental Materials
    - Existing & Proposed Site Plans/Architectural Plans
    - California Department of Transportation: http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm
    - U.S.D.A. Lake County Soil Survey
    - Important Farmland Map https://maps.conservation.ca.gov/agriculture/

- Lake County Serpentine Soil Mapping
- California Natural Diversity Database (https://www.wildlife.ca.gov/Data/CNDDB)
- U.S. Fish and Wildlife Service National Wetlands Inventory
- U.S.G.S. Geologic Map and Structure Sections of the Clear Lake Volcanic, Northern California, Miscellaneous Investigation Series, 1995
- Official Alquist-Priolo Earthquake Fault Zone maps for Lake County
- Landslide Hazards in the Eastern Clear Lake Area, Lake County, California, Landslide Hazard Identification Map No. 16, California Department of Conservation, Division of Mines and Geology, DMG Open –File Report 89-27, 1990
- Lake County Watershed Protection District Lake County Groundwater Management Plan - March 31, 2006
- Lake County Health Services Department
- Lake County Assessor/Recorders Office
- Lake County Special District Department
- Lake County Water Resource Department
- Clearlake Waste Solutions
- Local Water District (i.e Golden State Water; Highland Water; Konocti Water)
- Lake County Air Quality Management District (LAQMD)
- Hazardous Waste and Substances Sites List: www.envirostor.dtsc.ca.gov/public
- California Department of Forestry and Fire Protection - Fire Hazard Mapping
- Lake County Fire Protection District
- National Pollution Discharge Elimination System (NPDES)
- Central Valley Regional Water Quality Control Board
- State Water Resources Control Board
- FEMA Flood Hazard Maps
- 2010 Lake County Regional Transportation Plan, Dow & Associates, October 2010
- Cal Recycle Solid Waste Information System http://www.calrecycle.ca.gov/SWFacilities/Directory/Search.aspx
- Cal Cannabis (via Dept. of Food and Agriculture)
- California Water Resources Control Board California Department of Fish & Wildlife (CDFW
- California Department of Pesticides Regulations
- California Department of Public Health
- California Bureau of Cannabis Control
- California Department of Consumer Affairs
- Written comments received from public agencies
- PG&E
- Site visit

Figure 2 – City Vicinity Map

Figure 3 - USGS Map

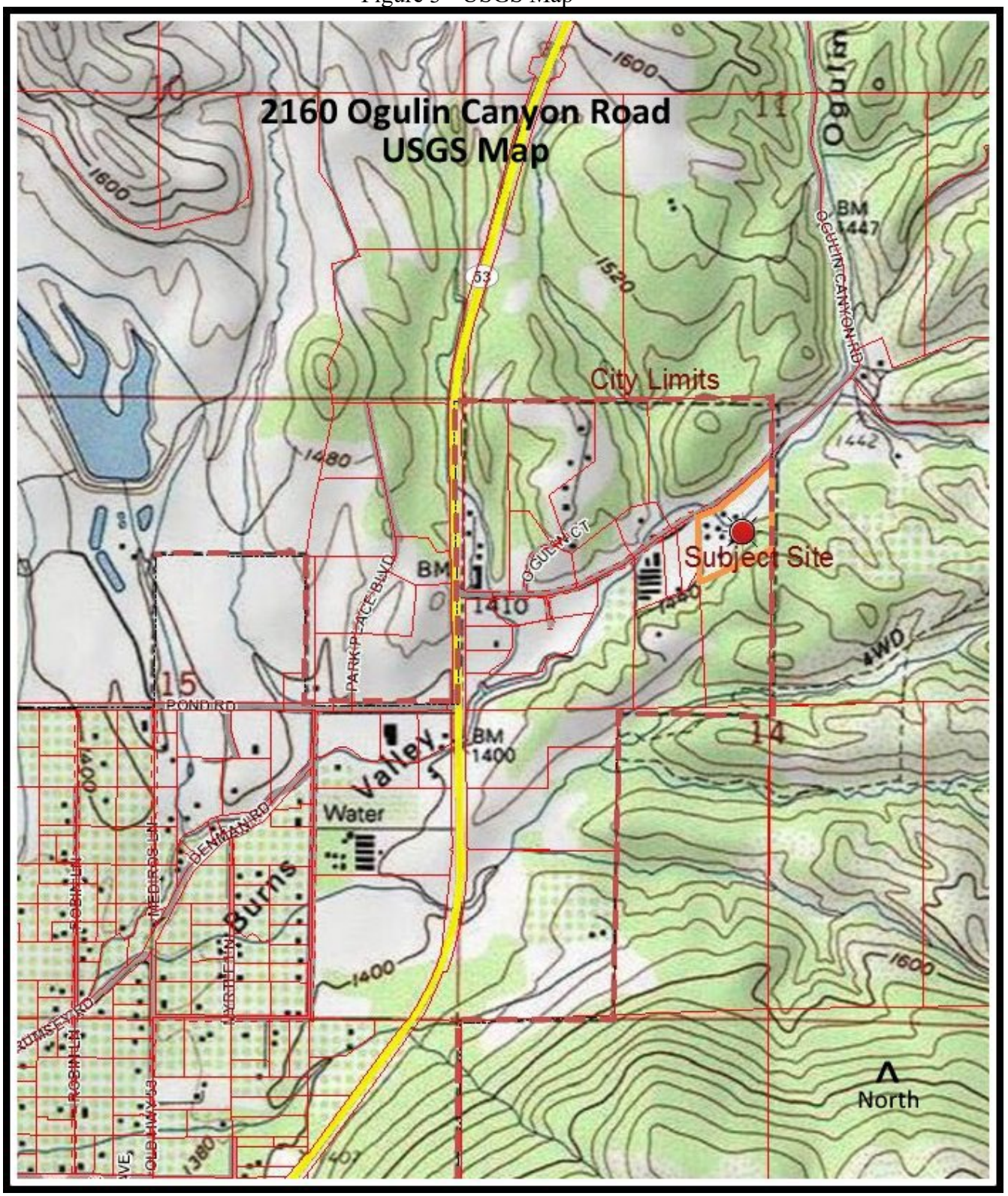


Figure 4 – Aerial/Location Map

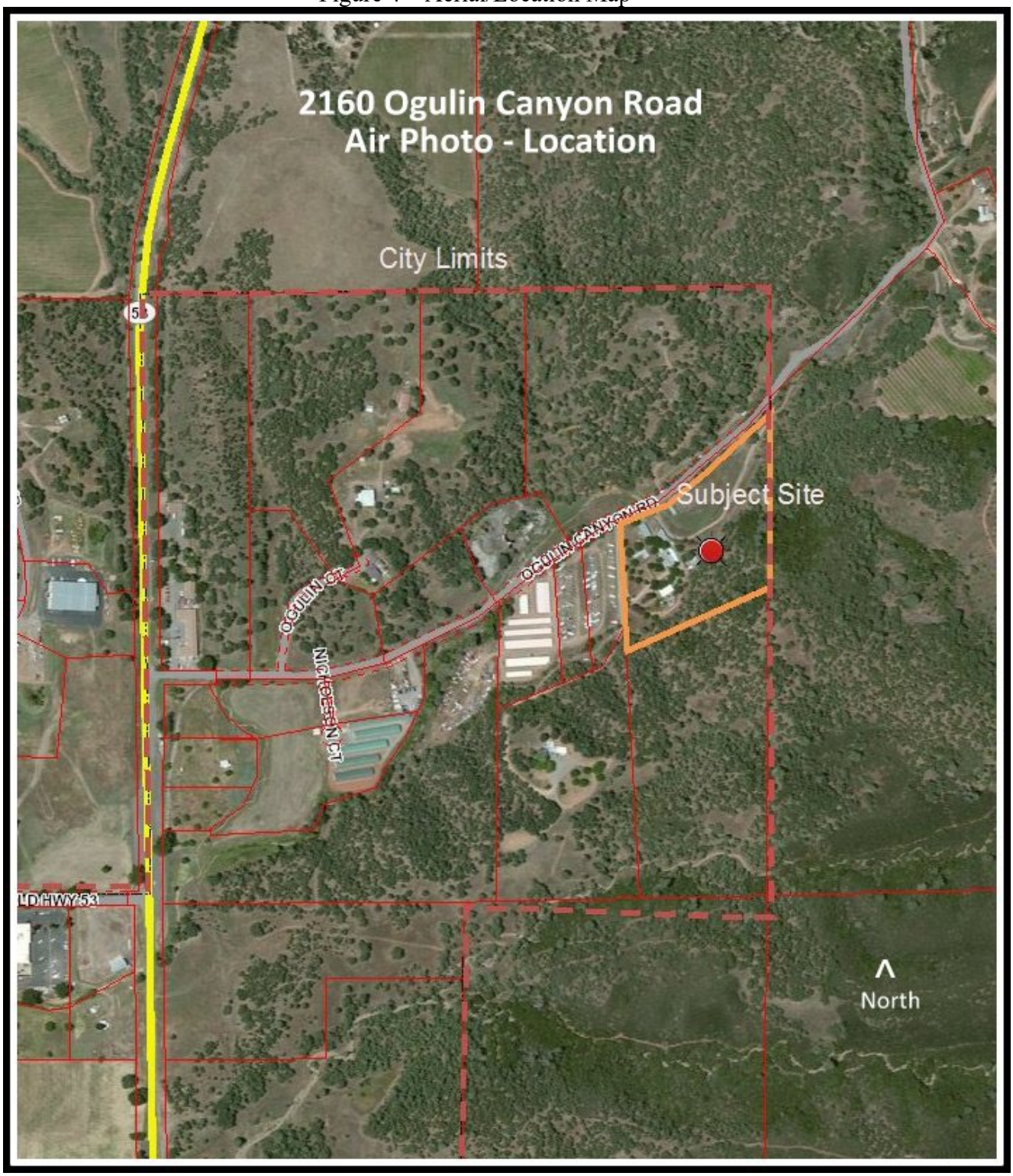
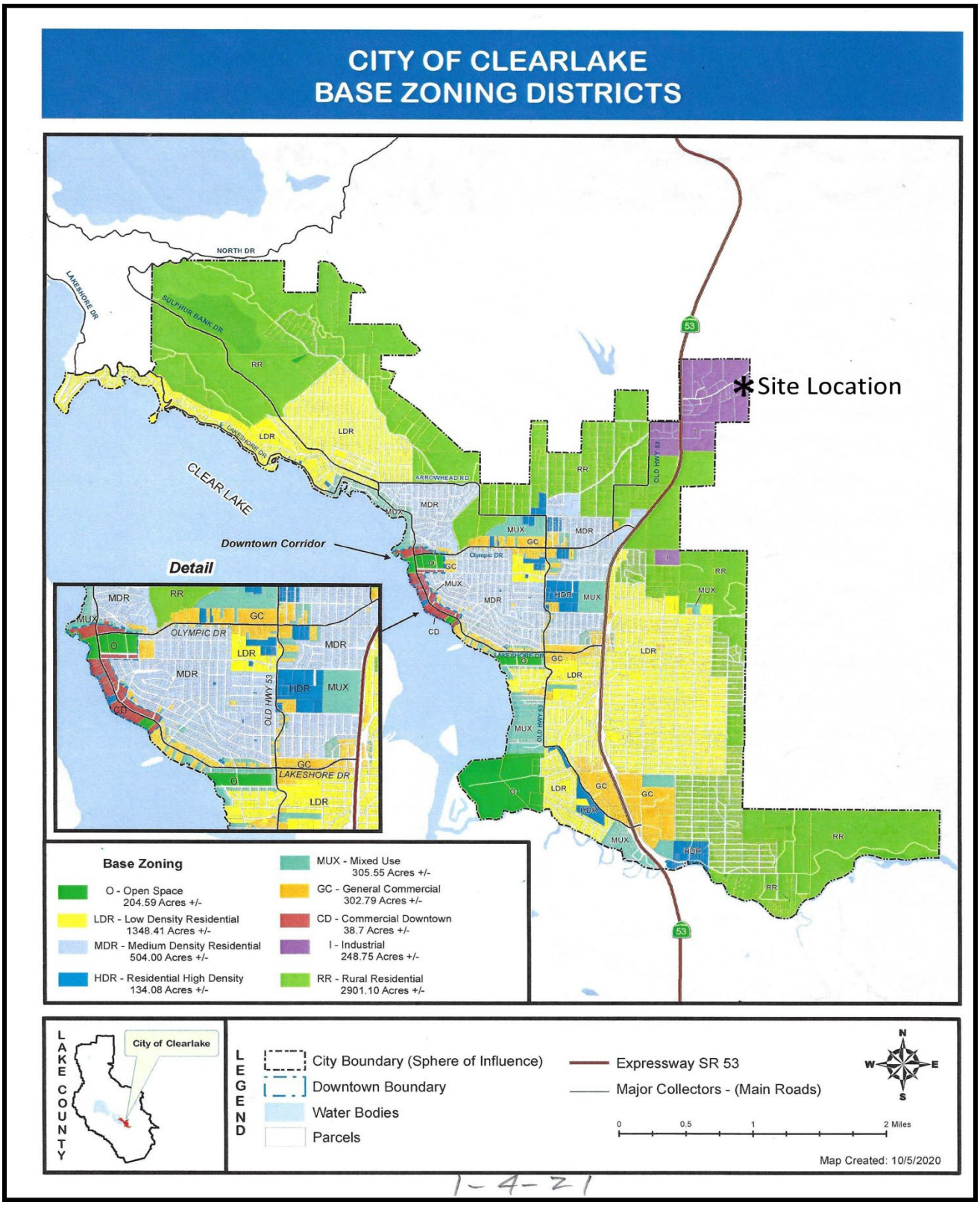


Figure 5 – Base Zoning ***Districts***



SITE PHOTOS

26. Initial Study Attachment

- Attachment A – Application Packet/Operational Plan
- Attachment B – Proposed Grading and Site Plans
- Attachment C – Biological Assessment/Report
- Attachment D – Agency Comments
- Attachment E -Water Availability Report
- Attachment F - Traffic Impact Report
- Attachment G – Technical Memorandum – Ground Water Hydrology + Addendum No. 1
- Attachment H Mitigation Monitoring Program

Environmental Factors Effected: The environmental sections checked below would be potentially affected by this project in an adverse manner, including at least one environmental issue/significance criteria that is "potentially significant impacts" as indicated by the analysis in the following evaluation of environmental impacts.

☒	**Aesthetics**	☐	Greenhouse Gas Emissions	☐	Public Services
☐	Agriculture & Forestry Resources	☒	**Hazards & Hazardous Materials**	☐	Recreation
☒	**Air Quality**	☒	**Hydrology / Water Quality**	☐	Transportation
☒	**Biological Resources**	☐	Land Use / Planning	☒	**Tribal Cultural Resources**
☒	**Cultural Resources**	☐	Mineral Resources	☐	Utilities / Service Systems
☐	Energy	☒	**Noise & Vibration**	☐	Wildfire
☒	**Geology / Soils**	☐	Population / Housing	☒	**Mandatory Findings of Significance**

DETERMINATION: (To be completed by the lead Agency)
On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ **I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.**

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Prepared By: Mark Roberts **Title: Senior Planner**

Signature: **Date:**

Alan Flora – City Manager
City of Clearlake, California

SECTION 1 - EVALUATION OF ENVIRONMENTAL IMPACTS:

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the lead agency has determined that a particular physical impact may occur, and then the checklist answers must indicate whether the impact is potentially significant, less than significant

with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4) "Negative Declaration: Less Than Significant with Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section XVII, "Earlier Analyses," may be cross-referenced).

5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:

   a) Earlier Analysis Used. Identify and state where they are available for review.
   b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
   c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures, which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

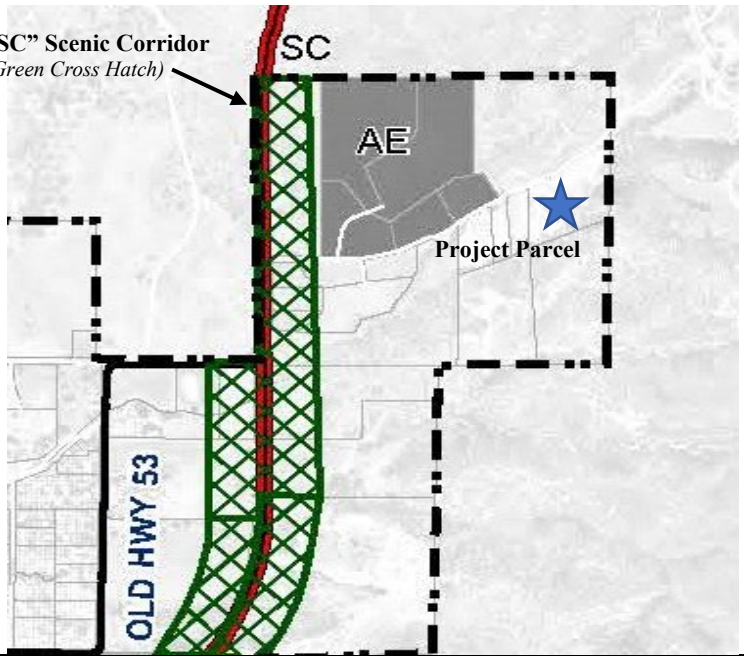
8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9) The explanation of each issue should identify:

   a) the significance criteria or threshold, if any, used to evaluate each question; and
   b) the mitigation measure identified, if any, to reduce the impact to less than significance

IMACT CATEGORIES KEY:

- **1 = Potentially Significant Impact**
- **2 = Less Than Significant with Mitigation Incorporation**
- **3 = Analyzed in Prior EIR**
- **4 = Substantially Mitigated by Uniformly Applicable Development Policies/Standards**
- **5 = Less Than Significant Impact**
- **6 = No Impact**

IMPACT CATEGORIES*	1	2	3	4	5	6	All determinations need explanation. Reference to documentation, sources, notes and correspondence.
SECTION I. AESTHETICS *Except as provided in Public Resources Code Section 21099, would the project:*							
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☐	☒	☐	The project site is in the outskirts of the City of Clearlake (City), in Lake County (County), CA and is not located within a known scenic vista/corridor. The nearest scenic vista/corridor is along Highway 53, which is greater than 1,500 feet away from the project site. All development would occur greater than 50 feet from the front property line (along Ogulin Canyon Road). **Therefore, then project will not have a substantial adverse effect on a scenic vista that is visible from a city scenic corridor. Less than significant Impact.** 
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☐	☒	☐	The project is not located within a known scenic vista/corridor and will not substantially damage scenic resources that is visible from a City Corridor, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway. All development will occur greater than 50 feet from the property line (along Olguin Canyon Road) will not require the removal of trees and/or rock outcroppings or historic structures. **Less than significant Impact.**

IMPACT CATEGORIES*	1	2	3	4	5	6	All determinations need explanation. Reference to documentation, sources, notes and correspondence.
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable General Plan policies or zoning regulations governing scenic quality.	☐	☐	☐	☐	☒	☐	The project will not substantially degrade the existing visual character or quality of public views of the site and its surroundings. All lighting will be directed downwards and adhere to all Federal, State and local agency requirements. Additionally, the project will not conflict with applicable any General Plan policies or zoning regulations governing scenic quality. The project is not located within a scenic vista/corridor. A cannabis operation is an allowable use upon securing a use permit pursuant to the City of Clearlake Municipal Code. **Less than significant impact**
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☒	☐	☐	☐	☐	The commercial cannabis operation will occur within enclosed structures with minimal lighting used during evening/nighttime hours. All lighting will be directed downwards and shielded and adhere to the City's Lighting Design Standards. including all dark-sky requirements. **Therefore, to ensure that impacts related to the Aesthetics are minimized, following mitigation measures have been implemented.** **Mitigation Measure:** **AES-1 All outdoor lighting shall be directed downwards and shielded onto the project site and not onto adjacent properties. All lighting shall comply the City of Clearlake Lighting Design Standards.**
SECTION II. AGRICULTURE AND FORESTRY RESOURCES *In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and forest carbon measurement methodology provided in Forest protocols adopted by the California Air Resources Board.* *Would the project:*							
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☐	☐	☒	The project parcel is categorized as *"Grazing Land"*. Grazing lands is a collective term used by the USDA-Natural Resources Conservation Service (NRCS) for rangeland, pastureland, grazed forestland, native and naturalized pasture, hay land, and grazed cropland. Although grazing is generally a predominant use on grazing lands, the term is also applied independently of any actual use for grazing. Grazing land is also described as land used primarily for production of forage plants maintained or manipulated primarily through grazing management. However, the commercial cannabis operation is an allowable use upon securing a Use Permit pursuant to the City of Clearlake Municipal Code. **Therefore, the commercial cannabis operation will not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring. No Impact.**
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☐	☐	☒	The project site is zoned "I" Industrial, and "CB" Cannabis Commercial. A commercial cannabis operation will not conflict with the existing zoning destinations for agricultural use(s) and/or a Williamson Act Contract. Additionally, a commercial cannabis operation is an allowable use within the above Zoning Designations upon securing a Use Permit Pursuant to the City of Clearlake's Municipal Code(s). **No Impact.**

IMPACT CATEGORIES*	1	2	3	4	5	6	All determinations need explanation. Reference to documentation, sources, notes and correspondence.
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☐	☐	☒	The project will not conflict with existing zoning for, or cause the rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)). Additionally, a commercial cannabis operation is an allowable use with the I" Industrial, and "CB" Commercial Zoning upon securing a Use Permit Pursuant to the City of Clearlake's Municipal Code(s). **No Impact**
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☐	☐	☒	The project will not result in the loss forest land or conversion of forest land to non-forest use. **No Impact**
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use.	☐	☐	☐	☐	☐	☒	The project will not involve other changes in the existing environment which, due to their location or nature, could result in conversion of farmland, to non-agricultural uses or the conversion of forest land to non-forest uses. a commercial cannabis operation is an allowable use with the I" Industrial, and "CB" Commercial Zoning upon securing a Use Permit Pursuant to the City of Clearlake's Municipal Code(s). **No Impact**
SECTION III. AIR QUALITY *Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations.* *Would the project:*							
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☒	☐	☐	☐	☐	The project has some potential to result in short- and long-term air quality impacts and other particulate matter, as well as exhaust emissions generated by earthmoving activities from site preparation, construction and during routine operations. Construction emissions are caused by onsite or offsite activities. Onsite emissions principally consist of exhaust emissions from construction equipment, motor vehicle operations, and fugitive dust from disturbed soil. The proposed Air Quality Plan indicates how the applicant Intends to minimize these Impacts. All fugitive dust (including vehicular) will be controlled by wetting soils with a mobile water tank and hoses, or by delaying ground disturbing activities until site conditions are not windy, and by eliminating soil stockpiles. Construction of the site will be minimal and some minor site improvements will be necessary but the amount of earth that needs to be moved is not significant enough to trigger a grading permit. According to the Air Quality Section of the "Project Plan"- prior to operation, a member of the staff will be assigned to handle all odor complaints. These individual(s) are responsible for responding to odor complaints 24 hours per day/seven (7) days a week, including holidays. All property owners and residents within a 1,000-foot radius of the cannabis facility shall be provided with the contact information of the individual(s) responsible for responding to the odor complaints. The operation will also develop internal policies and procedures describing the actions to be taken when an odor complaint is received. When an odor complaint is received, it will be forwarded to the manager responsible for odor control. The complaint will be logged, including the time and type of complaint, the location of the odor reception, and the contact information of the person

IMPACT CATEGORIES*	1	2	3	4	5	6	All determinations need explanation. Reference to documentation, sources, notes and correspondence.
							submitting the complaint. The incident will be investigated, and the concern identified. The manager will visit the site or facility in question and determine any deficiencies in the odor control system (where applicable) and identify remedies. The manager will prepare a written response and send it by certified mail to the person who made the complaint. The correspondence should acknowledge the complaint, describe the incident, and identify what remedial actions were taken. Section 18-43.060 of the Zoning Code indicates that all commercial cannabis operations to provide and maintain an odor control plan that requires that odors of cannabis cannot be readily detected from outside of the structure in which the permitted premises are located. The proposed odor control plan seems to acknowledge that odors could be detected outside the structure without significant enhancements, such as carbon filtering. A traffic study conducted by W-Trans, dated September 21, 2021 (Attachment F) indicates that this project would result in an increase in in traffic. The Study bases traffic impact assumptions on the number of employees during operation. In this case the project would operate at maximum capacity of eight employees with an increase of approximately 25 daily vehicle trips with a peak hour increase of about 4 trips. . This study also references three other cannabis projects in this area cumulatively increasing daily trips to 259, with a peak hour of 44. The City's 2040 General Plan (adopted in 2017) references this area as the Ogulin Canyon Industrial Center as one of several community growth areas. As such, traffic impacts from anticipated growth, including the Ogulin Canyon Industrial Center, has been reviewed for cumulative impacts. The proposed project has similar characteristics as those anticipated in the General Plan. Cumulatively with project operations, the project traffic generation rates, is not expected to result in a significant adverse air quality impact. **To ensure impacts related to the Air Quality are minimized, the following mitigation measures have been implemented.** **<u>Mitigation measures:</u>** **AIR 1: Construction activities shall be conducted with adequate dust suppression methods, including watering during grading and construction activities to limit the generation of fugitive dust or other methods approved by the Lake County Air Quality Management District. Prior to initiating soil removing activities for construction purposes, the applicant shall pre-wet affected areas with at least 0.5 gallons of water per square yard of ground area to control dust.** **AIR 2: Driveways, access roads and parking areas shall be surfaced in a manner so as to minimize dust. The applicant shall obtain all necessary encroachment permits for any work within the right-of-way. All improvement shall adhere to all applicable federal, State and local agency requirements.** **AIR 3: Any disposal of vegetation removed as a result of lot clearing shall be lawfully disposed of, preferably by chipping and composting, or as authorized by the Lake County Air Quality Management District and the Lake County Fire Protection District.** **AIR-4. During construction activities, the applicant shall remove daily accumulation of mud and dirt from any roads adjacent to the site.** **AIR-5. Grading permits shall be secured for any applicable activity from the Community Development Department, Building Division. Applicable activities shall adhere to all grading permit conditions, including Best Management Practices. All areas disturbed by grading shall be either surfaced in manner to minimize dust, landscaped or hydro seeded. All BMPs shall be routinely inspected and maintained for lifer of the project.**

IMPACT CATEGORIES*	1	2	3	4	5	6	All determinations need explanation. Reference to documentation, sources, notes and correspondence.
							AIR-6 All refuse generated by the facility shall be stored in approved disposal/storage containers, and appropriately covered. Removal of waste shall be on a weekly basis so as to avoid excess waste. All trash receptacles/containers shall remain covered at all times to prevent fugitive odors and rodent infestation. An odor control plan shall be submitted for review and approval by the City In accordance with the Zoning Code. Odor control shall be maintained to an acceptable level at all times. **AIR-7 An odor control plan shall be submitted for review and approval by the City that complies with the City's Zoning Code. Odor control shall be maintained at all times so that odor from cannabis operations on the site will not be detected outside structures. This plan shall include enhanced carbon filtering to ensure compliance with the Code.** **AIR-8 Any demolition or renovation is subject to the Federal National Emissions Standard for Hazardous Air Pollutants (NESHAP) for asbestos in buildings requires asbestos inspections by a Certified Asbestos Consultant for all major renovations and all demolition. An Asbestos Notification Form with the Asbestos inspection report must be submitted to the district at least 14 days prior to beginning any demolition work. The applicant must contact the district for more details and proper approvals. Regardless of asbestos content or reporting requirements all demolition and renovation activities should use adequate water/ amended water to prevent dust generation and nuisance conditions.** **AIR-9 Construction activities that involve pavement, masonry, sand, gravel, grading, and other activities that could produce airborne particulate should be conducted with adequate dust controls to minimize airborne emissions. A dust mitigation plan may be required should the applicant fail to maintain adequate dust controls.** **AIR-10 If construction or site activities are conducted within Serpentine soils, a Serpentine Control Plan may be required. Any parcel with Serpentine soils must obtain proper approvals from LCAQMD prior to beginning any construction activities. Contact LCAQMD for more details.** **AIR-11. All engines must notify LCAQMD prior to beginning construction activities and prior to engine Use. Mobile diesel equipment used for construction and/or maintenance must be in compliance with State registration requirements. All equipment units must meet Federal, State and local requirements. All equipment units must meet RICE NESHAP/ NSPS requirements including proper maintenance to minimize airborne emissions and proper record-keeping of all activities, all units must meet the State Air Toxic Control Measures for CI engines and must meet local regulations.** **AIR-12. Site development, vegetation disposal, and site operation shall not create nuisance odors or dust. During the site preparation phase, the District recommends that any removed vegetation be chipped and spread for ground cover and erosion control. Burning of debris/construction material is not allowed on commercial property, materials generated from the commercial operation, and waste material from construction debris, must not be burned as a means of disposal.** **AIR-13. Significant dust may be generated from increase vehicle traffic if driveways and parking areas are not adequately surfaced. Surfacing standards should be included as a requirement in the use permit to minimize dust impacts to the public, visitors, and road traffic. At a minimum, the district recommends chip**

IMPACT CATEGORIES*	1	2	3	4	5	6	All determinations need explanation. Reference to documentation, sources, notes and correspondence.
							seal as a temporary measure for primary access roads and parking. Paving with asphaltic concrete is preferred and should be required for long term occupancy. All areas subject to semi-truck / trailer traffic should require asphaltic concrete paving or equivalent to prevent fugitive dust generation. Gravel surfacing may be adequate for low use driveways and overflow parking areas; however, gravel surfaces require more maintenance to achieve dust control, and permit conditions should require regular palliative treatment if gravel is utilized. White rock is not suitable for surfacing (and should be prohibited in the permit) because of its tendency to break down and create excessive dust. Grading and re-graveling roads should utilizing water trucks, if necessary, reduce travel times through efficient time management and consolidating solid waste removal/supply deliveries, and speed limits.
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☒	☐	☐	☐	☐	**See Response to Section III(a). Therefore, all potential impacts have been reduced to less than Significant Impacts with the incorporated Mitigation Measures AIR-1 through AIR-13.**
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☒	☐	☐	☐	☐	**See Response to Section III(a). Therefore, all potential impacts have been reduced to less than Significant Impacts with the incorporated Mitigation Measures AIR-1 through AIR-13.**
d) Result in other emissions that create objectionable odors adversely affecting a substantial number of people?	☐	☒	☐	☐	☐	☐	**See Response to Section III(a). Therefore, all potential impacts have been reduced to less than Significant Impacts with the incorporated Mitigation Measures AIR-1 through AIR-13.**
SECTION IV. BIOLOGICAL RESOURCES *Would the project:*							
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, or NOAA Fisheries?	☐	☒	☐	☐	☐	☐	A Biological Resource Assessment with Botanical Survey was prepared by Lawrence Ray, Ecological Consultant, dated June 25, 2021. The report includes analyses and surveys for sensitive plants and wildlife potentially occurring in the vicinity: (See Attachment C) <u>Sensitive species</u> A total of 61 native and introduced plant taxa were identified within the survey areas during the in-season botanical survey. The term sensitive includes species having state or federal regulatory status, included on Lists 1B through 4 by the California Native Plant Society, or otherwise listed in the California Natural Diversity Database. A total of 15 sensitive wildlife species were assessed for potential occurrence at the site because of inclusion in the CNDDB database for the quadrangle and the CWHR database. Based on the habitat assessment, the following special status species have a potential to be present in their sensitive state: Obscure bumble bee, Foothill yellow legged frog; Western Pond turtle; White- tailed kite; Northern harrier; Tricolored blackbird; Grasshopper sparrow; Townsend's big-eared bat; Pallid bat; American badger; Pacific fisher; North American porcupine. <u>Wetland Determination</u> The report notes that a small riparian area is present on the subject parcel. Since Burns Valley Creek travels through the site and the creek will be impacted by the project, such as erosion, sedimentation, changes in drainage patterns. Clearances will need to be

IMPACT CATEGORIES*	1	2	3	4	5	6	All determinations need explanation. Reference to documentation, sources, notes and correspondence.
							obtained from the California Department of Fish & Wildlife that may include a Streambed Alteration Permit. This permit is expected to include a number of requirements to mitigate biological impacts to the creek to a non-significant level. **To ensure impacts related to the Biological Resources are reduced to a level of non-significance, the following mitigation measures have been implemented.** **<u>Mitigation Measures (from Biological Report):</u>** **BIO -1. Prior to development, including any site disturbance, a protocol-level botanical survey shall be completed within the location defined as being feasible for project activities to occur within this Report. The survey shall follow procedures recommended by CDFW and in accordance with the guidelines established by CNPS, from the document "*Protocols for Surveying and Evaluating Impacts to Specie Status Native Plant Populations and Sensitive Natural Communities".*** **BIO-2. If project construction occurs between September 1 and January 31, nesting bird survey shall be conducted by a qualified biologist. Additional mitigation measures recommended in the survey report shall be implemented prior to or curing project development to avoid disturbance to migratory nesting birds.** **BIO-3. Prior to any ground disturbance, the applicant shall conduct a site inspection for Burrowing Owls Presence within the project area. If Burrow Owls are observed, a pre-construction surveys shall be completed by a qualified biologist fourteen (14) days prior to site development. The survey shall be conducted to determine if the project area has active dens and determine if avoidance of these active dens can occur. If active dens are determined to be present, owl relocation shall occur to other onsite suitable habitat prior to development.** **BIO-4. If additional activities are proposed that may result in take of a listed species, agency personnel from CDFW and SFWS shall further analyze the potential impacts and provide technical assistance for any listed species. If required, guidelines for these reconnaissance surveys should be followed in accordance to the CDFW Survey and Monitoring Protocols and Guidelines, which can be located here:** https://www.wildlife.ca.gov/conservation/survey-protocols. **BIO-5. Prior to securing development permits from the City and prior to conducting any site disturbance, clearances shall be obtained as required for work in or near Burns Valley Creek, from the California Department of Fish and Wildlife; such as a Streambed Alteration Permit. Verification of this clearance shall be submitted to the City.** **BIO-6. The use of deer fencing shall be restricted to the perimeters of the proposed gardens. No deer fencing or other obstacles to wildlife passage shall be installed that will restrict wildlife movement.**
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐	☐	☐	The Biological Assessment prepared for the project notes that a small riparian area. Since Burns Valley Creek travels through the site and the creek may be impacted by the project, clearances shall be obtained from the California Department of Fish & Wildlife that may include a Streambed Alteration Permit. **Less than significant with Mitigation proposed.** **Mitigation Measure BIO-5 requires the securing proper permits prior to any disturbance within the creek channel.**

IMPACT CATEGORIES*	1	2	3	4	5	6	All determinations need explanation. Reference to documentation, sources, notes and correspondence.
c) Have a substantial adverse effect on state or federally protected wetlands (including, not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☐	☒	☐	According to the Biological Resource Assessment with Botanical Survey prepared by Lawrence Ray, Ecological Consultant (June 2021), there are no known wetlands of significance on the site**.** However, since improvements are being constructed within the creek wetlands located down-stream will be impacted. **The project will include mitigation to wetland through implementation of Mitigation Measure BIO-5.**
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☐	☒	☐	According to the Biological Resource Assessment with Botanical Survey prepared by Lawrence Ray, Ecological Consultant, the project will not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. However, since improvements are being constructed within the creek wetlands located down-stream will be impacted. **The project will include mitigation to wetland through implementation of Mitigation Measure BIO-5.**
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☐	☒	☐	The project will have minimal to no conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. However, the project may require the removal of a small cluster of grasses and/or vegetation/trees. Prior to tree removal, the applicant shall obtain a Tree Removal Permit from the City of Clearlake and if Oak Trees are to be removed, they shall be replaced in accordance with Section 18-40.050 of the City of Clearlake Municipal Code. **Less than Significant Impact.**
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☐	☒	☐	The project will not conflict with any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. However, the project may require the removal of Oak Trees. **Less Than Significant Impact**
SECTION V. CULTURAL RESOURCES *Would the project:*							
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☒	☐	☐	☐	☐	An evaluation of the potential for historical, cultural, tribal, or paleontological resources on the project site and in the vicinity of the project a cultural resource investigation was conducted by Gregory G White of Sub-Terra Resource Investigations dated April 12, 2021 (see Attachment D). This investigation included records searches, consultation with Native American tribes, and a site reconnaissance. According to the investigation, the Archaeological survey of the 9.56-acre parcel APN 10-044-021 was completed on April 9, 2021. One new archaeological site was observed near the center of the parcel in a cutbank on the north wall of deeply entrenched Burns Valley Creek. Eleven artifacts were identified, two obsidian flakes and one large basalt core, along with a dispersed scatter of eight fire-cracked cooking rocks. The archaeological deposit appears to be intact and significant and a standard DPR 523 site record was completed and will be filed with the Northwest Information Center of the California Historical Resources Information System (NWIC) with the report. Avoidance measures are recommended. As currently designed, all proposed construction activity is limited to the existing graded benches above the site to the south, and because the site is buried at a depth of 2.5–3.3 meters (8.2–10.8 feet) below surface

IMPACT CATEGORIES*	1	2	3	4	5	6	All determinations need explanation. Reference to documentation, sources, notes and correspondence.
							it is likely to exceed the depth of all proposed construction impacts including building and structure footings and underground utility installation. The site plan indicates some disturbance within the Burns Valley Creek channel for parking and access improvements. Prior to any work within the creek channel including rip-rap, hardscaping, or other channel modifications in the vicinity of the site, a professional archeologist should the retained to review the plans, evaluate potential impacts to the site, and should any be identified, make recommendations for protection or mitigation measures. **Therefore, to ensure impacts related to the Cultural Resources are avoided the following mitigation measures have been implemented.** **Mitigation Measures:** **CUL-1** During construction activities, if any subsurface archaeological remains are uncovered, all work shall be halted within 100 feet of the find and the owner shall utilize a qualified cultural resources consultant to identify and investigate any subsurface historic remains and define their physical extent and the nature of any built features or artifact-bearing deposits. **CUL-2** The cultural resource consultant's investigation shall proceed into formal evaluation to determine their eligibility for the California Register of Historical Resources. This shall include, at a minimum, additional exposure of the feature(s), photo-documentation and recordation, and analysis of the artifact assemblage(s). If the evaluation determines that the features and artifacts do not have sufficient data potential to be eligible for the California Register, additional work shall not be required. However, if data potential exists – e.g., there is an intact feature with a large and varied artifact assemblage – it will be necessary to mitigate any Project impacts. Mitigation of impacts might include avoidance of further disturbance to the resources through Project redesign. If avoidance is determined to be infeasible, pursuant to CEQA Guidelines Section 15126.4(b)(3)(C), a data recovery plan, which makes provisions for adequately recovering the scientifically consequential information from and about the historical resource, shall be prepared and adopted prior to any excavation being undertaken. Such studies shall be deposited with the California Historical Resources Regional Information Center. Archeological sites known to contain human remains shall be treated in accordance with the provisions of Section 7050.5 Health and Safety Code. If an artifact must be removed during Project excavation or testing, curation may be an appropriate mitigation. This language of this mitigation measure shall be included on any future grading plans and utility plans approved by the City for the Project. **CUL-3** If human remains are encountered, no further disturbance shall occur within 100 feet of the vicinity of the find(s) until the Lake County Coroner has made the necessary findings as to origin (California Health and Safety Code Section 7050.5). Further, pursuant to California Public

IMPACT CATEGORIES*	1	2	3	4	5	6	All determinations need explanation. Reference to documentation, sources, notes and correspondence.
							Resources Code Section 5097.98(b) remains shall be left in place and free from disturbance until a final decision as to the treatment and disposition has been made. If the Lake County Coroner determines the remains to be Native American, the Native American Heritage Commission must be contacted within 24 hours. The Native American Heritage Commission must then identify the "most likely descendant(s)". The landowner shall engage in consultations with the most likely descendant (MLD). The MLD will make recommendations concerning the treatment of the remains within 48 hours as provided in Public Resources Code 5097.98. **Additionally, Mitigation Measures BIO-5 and GEO-1 through GEO-3 ensure impacts related to the Cultural Resources are minimized, to Less than Significant Levels.**
b) Cause a substantial adverse change in the significance of an archeological resource pursuant to §15064.5?	☐	☒	☐	☐	☐	☐	**See Response to Section V(a): Less than Significant Impact with the incorporated mitigation measure CUL-1 through CUL-3.**
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐	☐	☐	**See Response to Section V(a): Less than Significant Impact with the incorporated mitigation measure CUL-1 through CUL-3.**
SECTION VI. ENERGY *Would the project:*							
a) Consume energy resources in a wasteful, inefficient, or unnecessary amount during project construction and/or operation?	☐	☐	☐	☐	☒	☐	Pacific Gas & Electric Company (PG&E) is the electricity utility provider for Clearlake and Lake County. Approximately 39% of electricity provided by PG&E is sourced from renewable resources and 47% is sourced from non-renewable GHG-free resources (PG&E 2019). PG&E may offer programs through which consumers may purchase electricity from renewable sources. There is no natural gas available for communities within Lake County, The California Building Code (CBC) contains standards that regulate the method of use, properties, performance, or types of materials used in the construction, alteration, improvement, repair, or rehabilitation of a building or other improvement to real property. The CBC includes mandatory green building standards for residential and nonresidential structures, the most recent version of which are referred to as the 2019 Building Energy Efficiency Standards. These standards focus on four key areas: smart residential photovoltaic systems, updated thermal envelope standards (preventing heat transfer from the interior to the exterior and vice versa), residential and nonresidential ventilation requirements, and non-residential lighting requirements. The project's proposed 960 sq. foot building remodel and the new 5,000-square-foot structure would be subject to the CBC 2019 Building Energy Efficiency Standards. As such the project will not consume energy resources in a wasteful, inefficient, or unnecessary amount during project construction and/or operation. **Less than Significant Impact**
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	☐	☐	☒	The proposed operations would not conflict with or obstruct an energy plan. The proposed use would adhere to all Federal, State and local agency requirements. **No Impact**

IMPACT CATEGORIES*	1	2	3	4	5	6	All determinations need explanation. Reference to documentation, sources, notes and correspondence.
SECTION VII. GEOLOGY AND SOILS *Would the project:*							
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. ii) Strong seismic ground shaking? iii) Seismic-related ground failure, including liquefaction? iv) Landslides?	☐	☐	☐	☐	☒	☐	i) Earthquake Faults There are no mapped earthquake faults on or adjacent to the subject site. ii-iii) Seismic Ground Shaking and Seismic–Related Ground Failure, including liquefaction. The mapping of the site's soil indicates that the soil is stable and not prone to liquefaction. iv) Landslides According to the Landslide Hazard Identification Map prepared by the California Department of Conservation, Division of Mines and Geology, the project parcel soil is considered "generally stable" and not located within and/or adjacent to an existing known "landslide area". Project design shall incorporate Best Management Practices (BMPs) to the maximum extent practicable to prevent or reduce discharge of all construction or post construction pollutants into the County storm drainage system. BMPs include scheduling of activities, erosion and sediment control, operation and maintenance procedures and other measures in accordance City of Clearlake Municipal Code(s). **Less Than Significant Impact**
b) Result in substantial soil erosion or the loss of topsoil?	☐	☒	☐	☐	☐	☐	The project is not anticipated to result in substantial soil erosion or the loss of topsoil, The project was substantially revised to avoid significant grading on the site. The project engineer has estimated that the project will disturb less than 50 yards of soil. The plan shall include disclosure of the location of where the export material will be relocated to and how that will be stored or used. The project shall incorporate Best Management Practices (BMPs) consistent with the City Code and the State Storm Water Drainage Regulations to the maximum extent practicable to prevent and/or reduce discharge of all construction or post-construction pollutants into the local storm drainage system. All grading measure shall adhere to all Federal, State and local agency requirements. The project shall adhere to all Federal, State, and local agencies requirements. **To ensure impacts related to the Geology and Soils are mitigated to a level of non-significance measures are proposed as follows:** **Mitigation Measures:** **GEO-1: Prior to any ground disturbance and/or operation, the applicant shall submit Erosion Control and Sediment Plans to the City for review and approval. The project shall incorporate Best Management Practices (BMPs) consistent with the City Code and the State Storm Water Drainage Regulations to the maximum extent practicable to prevent and/or reduce discharge of all construction or post-construction pollutants into the local storm drainage system.** **GEO-2: Prior to any ground disturbance, (if applicable), the applicant shall submit and obtain a Grading Permit from the City in accordance with the City of Clearlake Municipal code(s). Plans for grading shall include disclosure of location and method of treatment/storage of exported materials.**

IMPACT CATEGORIES*	1	2	3	4	5	6	All determinations need explanation. Reference to documentation, sources, notes and correspondence.
							GEO-3: The applicant shall monitor the site during the rainy season including post-installation, application of BMPs, erosion control maintenance, and other improvements as needed. Said measures shall be maintained for life of the project and replace/repaired when necessary.
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on-site or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☐	☐	☒	☐	According to the soil survey of Lake County, prepared by the U.S.D.A., the soil at the site is considered "generally stable" and there is little to no potential for landslide, subsidence, debris flows, liquefaction, or collapse. The project shall incorporate Best Management Practices (BMPs) consistent with the City Code and the State Storm Water Drainage Regulations to the maximum extent practicable to prevent and/or reduce discharge of all construction or post-construction pollutants into the local storm drainage system. **Less Than Significant Impact**
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☐	☐	☒	☐	According to the soil survey of Lake County, California prepared by the U.S.D.A, the soils discussed above in Section has a shrink-swell potential of low to high. Therefore, the commercial cannabis operation will have minimal to no substantial direct or indirect risks to life or property. The applicant will adhere to all Federal, State and local agency requirements, including all requirements in the City of Clearlake's Municipal Code(s). **Less Than Significant Impact**
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☐	☒	☐	The project parcel is currently occupied by two residences and outbuildings. The project will remove these improvements and a new septic system will be developed to accommodate the new site operations. Comments from the Lake County Department of Environmental Health indicate that the existing septic system was originally designed for a single-family residence, but was then modified, presumably to accommodate the additional trailer dwelling on the site. The Department also cited that the system has a grey water element which leaks into the creek. The letter also indicates that the creek is being used as a disposal area for trash. Proposed development will result in removing these unsafe conditions. **Less Than Significant Impact**
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐	☐	☐	Disturbance of paleontological resources or unique geologic features is not anticipated, but mitigation measures are in place to assure that in the event any artifacts are found. **All potential impacts have been reduced to less than significant with the incorporated mitigation measures CUL-1 and CUL-5.**
SECTION VIII. GREENHOUSE GAS EMISSIONS *Would the project:*							
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☐	☐	☒	☐	In general, greenhouse gas emissions can come from construction activities (operation of equipment) and from post-construction activities (routine construction/maintenance, vehicle trips, etc.). The operation would not generate a significant number of vehicle trips. The project parcels are located greater than five (5) miles away from Route 53 and are in a rural area where it is not uncommon for individual to drive greater than +/- 20 mile per trip. A traffic study conducted by W-Trans, dated September 21, 2021 (Attachment 3) indicates that this project would result in an increase in increased traffic. The Study bases traffic impact assumptions on the number of employees during operation. In this case the project would operate at maximum capacity of eight employees with an increase of approximately 25 daily vehicle trips with a peak hour increase of about 4 trips. This study also references three other cannabis projects in this area cumulatively increasing daily trips to 259, with a peak hour of 44. The City's 2040 General Plan (adopted in 2017) references this area as the Ogulin Canyon Industrial Center as one of several community growth areas. As such, traffic impacts from anticipated growth, including the Ogulin Canyon Industrial Center, has been reviewed for cumulative impacts. The proposed project has similar characteristics as those anticipated in the General Plan. The anticipated vehicle trip generation and project operations are not

IMPACT CATEGORIES*	1	2	3	4	5	6	All determinations need explanation. Reference to documentation, sources, notes and correspondence.
							expected to generate significant levels of greenhouse gas emissions and would not degrade the air quality **Less Than Significant Impact**
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☐	☒	☐	This project will not conflict with any adopted plans or policies for the reduction of greenhouse gas emissions. The City of Clearlake is within an 'air attainment' basin. In accordance with the requirements of the Lake County Air Quality Management District, an air permit will be required as a condition of the use permit, prior to issuance of a building permit for the project. **Refer to response in Section VIII(a). Less Than Significant Impact**
SECTION IX. HAZARDS AND HAZARDOUS MATERIALS *Would the project:*							
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☒	☐	☐	☐	☐	Materials associated with the operation, such as gasoline, diesel, carbon monoxide, pesticides, fertilizers and the equipment emissions may be considered hazardous if released into the environment. All hazards and hazardous materials will be stored in accordance to all Federal, State and local agency requirements. All routine construction materials and all materials associated with the proposed cultivation of commercial cannabis shall be transported and disposed of properly in accordance with all applicable Federal, State and local regulations. Chemicals Storage and Effluent: All chemicals stored and used at/by authorized personnel include but are not limited to fertilizers/nutrients, pesticides, and petroleum products (Agricultural Chemicals) and chemical sanitation products necessary to maintain a sterile and healthy work environment. All fertilizers/nutrients and pesticides, when not in use, will be stored in their manufacturer's original containers/packaging, undercover, and at least 100 feet from surface water bodies and will be stored in their designated storage area. Petroleum products will be stored under cover, in the State of California-approved containers with secondary containment and separate from pesticides and fertilizers within the existing on-site wooden garage. Sanitation products will be stored in their manufacturer's original containers/packaging within a secure cabinet inside the proposed Processing Facility. Spill containment and cleanup equipment will be maintained within the proposed Pesticides and Agricultural Chemicals Storage Area and the Processing Facility. No effluent is expected to be produced by the proposed cultivation operation. All required warning signs will be posted, and material safety data sheets (MSDS) will be kept in the area where pesticides are stored. Emergency contact information in the event of pesticide poisoning shall also be posted at the work site including the name, address, and telephone number of emergency medical care facilities. Change areas and decontamination rooms will be available off-site. Before making a pesticide application, operators will evaluate equipment, weather conditions, and the property to be treated and surrounding areas to determine the likelihood of substantial drift or harm to non-target crops, contamination, or the creation of a health hazard. In an event of a spill or leak, the contaminated soil will be stored, transported, and disposed of consistent with applicable local, state, and federal regulations. **To ensure impacts related to the Hazards and Hazardous Materials are reduced to a level of non-significance, the following mitigation measures that have been implemented.** **Mitigation Measures:** **HAZ-1: All hazardous waste shall not be disposed of on-site without review or permits from Environmental Health Department, the California Regional Water Control Board, and/or the Air Quality Board. Collected hazardous or toxic waste materials shall be recycled or disposed of through a registered waste hauler to an approved site legally authorized to accept such material.**

IMPACT CATEGORIES*	1	2	3	4	5	6	All determinations need explanation. Reference to documentation, sources, notes and correspondence.
							HAZ-2: The storage of potentially hazardous materials shall be located at least 100 feet from any existing water well. These materials shall not be allowed to leak into the ground or contaminate surface waters. Collected hazardous or toxic materials shall be recycled or disposed of through a registered waste hauler to an approved site legally authorized to accept such materials. **HAZ-3: Any spills of oils, fluids, fuel, concrete, or other hazardous construction material shall be immediately cleaned up. All equipment and materials shall be stored in the staging areas away from all known waterways.** **HAZ- 4: The storage of hazardous materials equals to or greater than fifty-five (55) gallons of a liquid, 500 pounds of a solid, or 200 cubic feet of compressed gas, then a Hazardous Materials Inventory Disclosure Statement/Business Plan shall be submitted and maintained in compliance with requirements of Lake County Environmental Health Division. Industrial waste shall not be disposed of on site without review or permit from Lake County Environmental Health Division or the California Regional Water Quality Control Board. The permit holder shall comply with petroleum fuel storage tank regulations if fuel is to be stored on site.** **HAZ - 5: All equipment shall be maintained and operated in a manner that minimizes any spill or leak of hazardous materials. Hazardous materials and contaminated soil shall be stored, transported, and disposed of consistent with applicable local, state, and federal regulations.** **HAZ - 6: All trash/refuge being stored within the Burns Valley Creek area shall be removed and disposed of properly. The creek shall not be used for trash storage/materials.** .
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐	☐	☐	The project will not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. All chemicals, pesticides, fertilizer, and other materials associated with the operation shall adhere to all Federal, State, and local agency requirements. **See Response to Section IX(a): Less than Significant Impact with the incorporated mitigation measure HAZ -1 through HAZ-5.**
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☐	☐	☒	The proposed project is not located within one-quarter mile of an existing or proposed school. **No Impact**
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☐	☐	☒	The project site is not listed as a site containing hazardous materials in the databases maintained by the Environmental Protection Agency (EPA), California Department of Toxic Substance, and Control State Resources Water Control Board. **No Impact**

IMPACT CATEGORIES*	1	2	3	4	5	6	All determinations need explanation. Reference to documentation, sources, notes and correspondence.
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☐	☐	☒	The project is not located within two (2) miles of an airport and/or within an Airport Land Use Plan. **No Impact**
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☐	☒	☐	The project would not impair or interfere with an adopted emergency response or evacuation plan. The project has been reviewed by the Lake County Department of Environmental Health, Lake County Special Districts, City of Clearlake Police Department, City of Clearlake's Community Development Department (Building, Public Works, Planning), and the Local Fire Protection District/CalFire for consistency with access and safety standards. The City of Clearlake did not receive any adverse comments. **Less Than Significant Impact**
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☐	☐	☒	☐	The project will not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires as it is located in a *"Low to Moderate"* Fire Hazard Severity Zone and within the Lake County Fire Protection District. The project was circulated for review to various agencies, include but not limited to City Engineer, City of Clearlake Police Department, City of Clearlake Building Official/Inspection, Lake County Fire Protection District and the California Department of Transportation (Caltrans). During the project review, no adverse comments were received. The application shall adhere to all current Federal, State and local agency requirements, including all mitigation measures and conditions of approval imposed on such use. **Less Than Significant Impact**
SECTION X. HYDROLOGY AND WATER QUALITY *Would the project:*							
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☐	☐	☒	☐	According to the Project Application material submitted by the applicant, the operation will be provided water through the existing onsite well located in the northern portion of the project parcel. The water then will be pumped from a well and stored in one (1) 25,000-gallon water storage tank. The project will include installation of several water storage tanks. All access roads and parking areas are/will be graveled to prevent the generation of fugitive dust, and vegetative ground cover will be preserved and/or re-established as soon as possible throughout the entire site to filter and infiltrate stormwater runoff from the access roads, parking areas, and the proposed cultivation operation. To control runoff, the operation will incorporate appropriate Best Management Practices (BMPs) consistent with City code and State Storm Water Drainage Regulations to the maximum extent practicable to prevent or reduce discharge of all construction or post-construction pollutants into the local storm drainage system. All grading measure shall adhere to all Federal, State, and local agency requirements. The proposed operation would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality. Additionally, the applicant shall adhere, obtain, and maintain all necessary federal, state and local agency permits**.** **The operation will not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality. Less Than Significant Impact**

IMPACT CATEGORIES*	1	2	3	4	5	6	All determinations need explanation. Reference to documentation, sources, notes and correspondence.
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☐	☐	☒	☐	According to the Water Availability Report dated October 2021, the water for both proposed domestic and irrigation uses will be delivered from a new water well drilled in late September/early October, 2021. This system will use ground water pumped from the well. The well is approximately 300 feet deep and has a capacity of 100+ gallons per minute (see Water Availability report). The following information is from: Lake County Watershed Protection District (administered by Lake County Water Resources Department), Lake County Groundwater Management Plan - March 31, 2006 - page 2-24 to 2-27. The project site is in the Burns Valley Groundwater Basin. Burns Valley Basin is in the Shoreline Inventory Unit. The Franciscan Formation borders the Burns Valley Basin on the north, Clear Lake borders the basin on the west, and the Cache Formation borders the basin on the south and east. The district monitors one well in the Burns Valley Basin. The monitoring well indicates that groundwater levels fluctuate from 2 feet below ground surface in the spring to 10 feet below ground surface in the fall. The data indicates that water levels rose in the Burns Valley Basin in 1981-1983. No information on groundwater movement is available. DWR estimates the useable storage capacity to be 1,400-acre feet (DWR 1960). Average-year agricultural groundwater demand in the Burns Valley basin is approximately 14 acre-feet per year. There are 86 domestic wells and 13 irrigation wells in the Burns Valley Basin. Approximately 50 percent of domestic wells are shallower than 75 feet deep, and approximately 50 percent of irrigation wells are shallower than 250 feet deep. Under the original project,, a Groundwater Hydrology Technical Memorandum (TM) by Northpoint Consulting Group was prepared for the site dated March 7, 2022, addressing groundwater hydrology for the project. Since the project was considerably downsized, with the cultivation activity omitted, water use and the associated impact on water use, has been significantly reduced. Addendum to this report was prepared to reflect modified project description as of September 2022. (refer to Attachment 4). Conclusions of this report indicate that hydrologic impacts from the project would be negligible as follows: 1. The project no longer proposes cultivation or nursery activities; therefore, the proposed irrigation demand is reduced from an annual irrigation demand of approximately 194,000 gallons per year (gpy) to zero (0) gpy. 2. Due to the scaling back of the proposed project, the number of proposed employees is reduced from 35 to 7-8 employees; a count of 8 proposed employees is used herein. Water demand based on the number of employees is assumed to be equivalent to sanitary sewer generation for factories with shower facilities, which, according to the Lake County Rules and Regulations for On-Site Sewage Disposal, would be 35 gallons per day, per person. At 35 gallons per employee per day, the proposed project employee demand would be reduced from 1,225 gallons per day (gpd) to 280 gpd. Assuming the project would operate year-round, the annual demand would be reduced from 367,500 gpy to 102,200 gpy. 3. The total estimated water demand for the proposed project using the numbers provided herein would be reduced from 561,500 gpy (1.7 acre-feet per year) to 102,200 gpy (0.3 acre-feet per year). The daily demand would be reduced from 1,875 gpd (1.3 gpm) to 280 gpd (0.2 gpm). 4. The estimated annual recharge over the project's recharge area of 23.1 acres is 6.7 AF during an average year and 4.9 AF during a dry year.

IMPACT CATEGORIES*	1	2	3	4	5	6	All determinations need explanation. Reference to documentation, sources, notes and correspondence.
							5. The annual water demand of the proposed project is approximately 0.3 AF per year. The demand represents only approximately 4% and 6% of the annual recharge during an average and dry year, respectively. Recharge in the Burns Valley Groundwater Basin is derived from rain that falls within the 12.5 square mile Burns Valley Watershed. The area used to estimate the recharge for the proposed project is only 0.3% of the Burns Valley Watershed that drains to and recharges the Burns Valley Groundwater Basin. The area used to estimate the recharge did not include the project parcel, which would provide additional recharge. Thus, the recharge estimate is a conservative (low) estimate of the available recharge over the entire recharge area. 6. The estimated storage capacity of the Burns Valley Groundwater Basin is 4,000 AF, with a usable storage capacity of 1,400 AF. According to DWR, groundwater in the Burns Valley Groundwater Basin is derived from rain that falls within the 12.5 square mile Burns Valley Watershed drainage area. The project's demand is only 0.02% of the usable storage capacity of the Burns Valley Groundwater Basin. 7. Prior use of the project parcel was as a Dog and Cat Boarding facility, including grooming and training. Water demand for this type of facilities can vary by animal, up to 10 gallons per animal per day, and total for the facility of up to 1,000 gallons per day. The proposed demand is likely less than the prior use. 8. Since project's well has sufficient yield to meet the project's demand (well capacity is 100 gpm; proposed demand is only 0.2 gpm); the project's demand is only 0.02% of the usable storage capacity of the Burns Valley Groundwater Basin; the proposed demand based on the scaled down project is less than what was used recently by the boarding and grooming business; and based on the findings of the prior Technical Memorandums on groundwater hydrology, the proposed project water use would have little to no cumulative impact on the surrounding area. **The proposed project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge. Less Than Significant Impact**
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would: i) result in substantial erosion or siltation on-site or off-site. ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site. iii) create or contribute runoff water which	☐	☒	☐	☐	☐	☐	There will be modifications to the drainage pattern of Burns Valley Creek due to grading and introduction of parking improvements withing the Burns Valley Creek. These proposed improvements within the Burns Valley Creek area could impact and alter the existing drainage pattern of the site or the area, including the alteration of the course of a stream. The applicant will implement Best Management Practices (BMPs) in accordance with all applicable federal, State and local agency requirements, including the City of Clearlake's Municipal Code which may include the placement of straw, mulch, seeding, straw wattles, and silt fencing and planting of native vegetation on all disturbed areas to prevent erosion. These measures shall be maintained for life of the project. **Less Than Significant Impact with Mitigation Measures GEO-1 through GEO-3.**

IMPACT CATEGORIES*	1	2	3	4	5	6	All determinations need explanation. Reference to documentation, sources, notes and correspondence.
would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted run-off. or iv) impede or redirect flood flows?							
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☐	☒	☐	The project site is not located in an area of potential inundation by seiche or tsunami. A portion of the parcel is located within flood zone AE of Burns Valley Creek. As indicated on the site plan, (Figure 1) access and parking improvements are proposed within the floodway. Clearlake Municipal Code section 17-5.1 outlines standards for construction within flood hazard zones. Compliance with this chapter will reduce impacts to **less than significant.**
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	☐	☒	☐	The project would not conflict with or obstruct any water quality or management plans. Additionally, to control runoff, the operation will incorporate appropriate Best Management Practices (BMPs) consistent with City code and State Storm Water Drainage Regulations to the maximum extent practicable to prevent or reduce discharge of all construction or post-construction pollutants into the local storm drainage system. All grading measure shall adhere to all Federal, State and local agency requirements. **Less than Significant.**
SECTION XI. LAND USE AND PLANNING *Would the project:*							
a) Physically divide an established community?	☐	☐	☐	☐	☐	☒	The project is in the outskirts of the city limits, and in close proximity to the County of Lake's Jurisdiction. The surrounding development includes but is not limited to commercial/industrial development and rural residential development. Therefore, the project will not physically divide an established community. Therefore, the project will not physically divide an established community. **No Impact**
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☐	☒	☐	The proposed project is consistent with the site's General Plan designation (Industrial) and zoning ("I" Industrial District); therefore, it would not require any amendments to the City's General Plan. Consistent with this land use designation, the project site is zoned Industrial, with a Cannabis Combining Zone. Therefore, this area is targeted for commercial cannabis use and development. The project is, however, be subject to a Use Permit, approved by the Planning Commission in accordance with the City of Clearlake Municipal Code. Upon issuance of the Use Permit and with the incorporated mitigation measures and conditions of approval *(including obtaining and maintaining all necessary Federal, State and local agency permits),* the project will not conflict with any land use plan or policy intended for avoiding or mitigating an environmental effect(s). Additionally, the California Department of Food & Agriculture (CDFA) is responsible for licensing and regulating cannabis cultivation and enforcements as defined in the Medicinal and Adult Use Cannabis Regulation and Safety Act (MAUCRSA), including regulations related to the cultivation of cannabis. The applicant is required to obtain a license(s) from the CDFA prior to legal cultivation occurring, including all additional Federal, State and local agency permits/license. The project is required to be licensed with the State Department of Cannabis Control (DCC) for cultivation, distribution, manufacturing and other cannabis-related activities. **Less Than Significant Impact.**

IMPACT CATEGORIES*	1	2	3	4	5	6	All determinations need explanation. Reference to documentation, sources, notes and correspondence.
SECTION XII. MINERAL RESOURCES *Would the project:*							
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☐	☐	☒	The operation would not result is the loss of availability of a known mineral resource that would be of value to the region and the residents of the state. **No Impact**
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☐	☐	☒	The operations would not result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. **No Impact**
SECTION XIII. NOISE & VIBRATIONS *Would the project:*							
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☒	☐	☐	☐	☐	Short-term increases in ambient noise levels to uncomfortable levels may be expected during project development, and routine maintenance of the project parcels. There will be vehicles entering and exiting the project premises, however these noise levels are minimal as along Ogulin Canyon Road. The applicant shall adhere to all Federal, State and local agency requirements regarding noise standards. **Therefore, to ensure impacts related to the Noise are minimized, the following mitigation measures have been implemented.** **Mitigation Measures:** **NOI-1: All construction activities including engine warm-up shall be limited to weekdays and Saturday, between the hours of 7:00am and 7:00pm to minimize noise impacts on nearby residents.** **NOI-2: Permanent potential noise sources such as, generators used for power shall be designed and located to minimize noise impacts to surrounding properties.** **NOI-3: During construction noise levels shall not exceed 65 decibels within fifty (50) feet of any dwellings or transient accommodations between the hours of 7:00 AM and 6:00 PM. This threshold can be increased by the Building Inspector or City Engineer have approved an exception in accordance with Section 5-4.4(b)(1) of the City Code. An exception of up to 80 decibels may be approved within one hundred (100) feet from the source during daylight hours. Project is expected to result in less than significant impacts with regard to noise and vibration.**
b) Generation of excessive ground borne vibration or ground borne noise levels?	☐	☐	☐	☐	☐	☒	The project is not expected to create unusual ground borne vibration due to site development or operation. The low-level truck traffic would create a minimal amount of ground borne vibration. **No Impact**

IMPACT CATEGORIES*	1	2	3	4	5	6	All determinations need explanation. Reference to documentation, sources, notes and correspondence.
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☐	☐	☒	The project is not located within an airport land use plan or within two (2) miles of a public airport. **No Impact**
SECTION XIV. POPULATION AND HOUSING *Would the project:*							
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☐	☐	☒	The project would increase employment in the area that might Induce some increased population growth, however, this growth would be negligible and not induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure. **No Impact**
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☐	☒	☐	The project will result in removal of two manufactured homes and a trailer. Existing residents on the project site will need to relocate. However, this relocation is considered to have a negligible impact on housing displacement in the City. **No Impact**

IMPACT CATEGORIES*	1	2	3	4	5	6	All determinations need explanation. Reference to documentation, sources, notes and correspondence.
SECTION XV. PUBLIC SERVICES *Would the project:*							
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services? • *Fire* • *Police Protection* • *Schools* • *Parks* • *Other*	☐	☐	☐	☐	☒	☐	The project will not result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, and/or need for new or physically altered government facilities. The projected has been circulated for agency review, including but not limited to Lake County Fire Protection, City of Clearlake Police Department, Local School Districted and the City of Clearlake – Public Works Division. Conditions of Approval have been incorporated to ensure the project adhere to all applicable requirements of the above agencies. • *Fire Protection: The project parcel has adequate fire protection through the Lake County Fire Protection District and CA Department of Forestry and Fire Protection.* • *Police Protection: The project site is served police protection through the City of Clearlake Police Department, including the Lake County Sheriff's Office.* • *Schools: The project will not result in substantial adverse impact(s) on the local school district.* • *Parks: The project will not result in substantial adverse impact(s) on the local parks.* • *Other Public Facilities: The project is will not result in substantial adverse impacts on other public facilities* **Less Than Significant Impact**
SECTION XVI. RECREATION *Would the project:*							
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☐	☐	☒	The project will not increase the use of existing neighborhood and regional parks and/or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. The project has been reviewed the City of Clearlake Public Works Department, Lake County Fire Protection District and the City of Clearlake Police Department and no adverse comments were received. **No Impact.**
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☐	☐	☒	This project does not include recreational facilities and/or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. The project has been reviewed the City of Clearlake Public Works Department, Lake County Fire Protection District and the City of Clearlake Police Department and no adverse comments were received. **No Impact.**

IMPACT CATEGORIES*	1	2	3	4	5	6	All determinations need explanation. Reference to documentation, sources, notes and correspondence.
SECTION XVII. TRANSPORTATION *Would the project:*							
a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	☐	☐	☐	☐	☒	☐	The subject property is located on the south side of Ogulin Canyon Road approximately 2,000 feet east of its intersection with State Route 53. Access to the project site would be by a private driveway off of Ogulin Canyon Road. Ogulin Canyon Road is considered a local street and State Route 53 is considered an expressway in the City's General Plan. The project will not conflict with any program or policy addressing the City's circulation system. A traffic study conducted by W-Trans, dated September 21, 2021 (Attachment F) indicates that the daily volume for Ogulin Canyon Road is 220 vehicle trips to the west of the mini storage facility and 60 vehicle trips to the east. Roadways with volumes of 400 vehicles per day or less are considered "Very Low Volume Roadways" under criteria published by the American Association of State Highway and Transportation Officials (AASHTO). The traffic study also indicates that although there are no pedestrian, transit, or bicycle facilities in the vicinity of the project sites, the existing condition is acceptable given that the project sites are located in an automobile-oriented rural area without any expected demand for walking or transit and limited demand for bicycling. Pursuant to Ordinance Number 247-2020, the City of Clearlake added Article 3-8 to chapter III of the Municipal Code allowing the collection of traffic impacts fees. The development impact fee revenue will be collected and used to cover the cost of capital facilities and infrastructure required to serve new development and growth in the city. However, impact fee revenue cannot be used to cover the operation and maintenance costs of these or any other facilities and infrastructure. A Condition of Approval will be incorporated detailing the amount due per 1,000 square feet. **Less Than Significant Impact**

IMPACT CATEGORIES*	1	2	3	4	5	6	All determinations need explanation. Reference to documentation, sources, notes and correspondence.
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	☐	☐	☒	☐	The traffic study indicates that this project would result in an increase in traffic. The Study bases traffic impact assumptions on the number of employees during operation. In this case the project would operate at maximum capacity of seven employees with an increase of approximately 25 daily vehicle trips with a peak hour increase of about 4 trips. This study also references three other cannabis projects in this industrial area cumulatively increasing daily trips to 259, with a peak hour of 44. The study evaluated traffic impacts at the intersection of SR 53/Ogulin Canyon Road and indicates that cumulatively, these projects would not result in a significant adverse impact on this intersection and this intersection would continue operating acceptably with trips from each individual project added to existing volumes and all four projects would have an acceptable effect on operation of the surrounding roadway network. The study further indicates that the daily volume for Ogulin Canyon Road is 220 vehicle trips to the west of the mini storage facility and 60 vehicle trips to the east. Roadways with volumes of 400 vehicles per day or less are considered "Very Low Volume Roadways" under criteria published by the American Association of State Highway and Transportation Officials (AASHTO). Collectively, the four projects are anticipated to result in 122 daily trips during typical operation and 259 trips during harvest conditions. Assuming that harvest conditions will account for three months out of the year, the projects would result in an annual ADT volume of 156 daily trips so even with the addition of new project trips the entire section of Ogulin Canyon Road would still have a daily volume below 400 vehicle trips per day and the designation as a "very low volume" roadway would be retained. The City's 2040 General Plan (adopted in 2017) references this area as the Ogulin Canyon Industrial Center as one of several community growth areas. As such, traffic impacts from anticipated growth, including the Ogulin Canyon Industrial Center, has been reviewed for cumulative impacts. The proposed project has similar characteristics as those anticipated in the General Plan. Regarding CEQA Section 15064.3, Vehicles Miles Traveled (VMT), the traffic study indicates that the project, combined with the other three cannabis projects, would have a less than significant impacts on VMT under small project screening threshold based on OPR guidance. **Less Than Significant Impact**
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☐	☒	☐	The traffic study indicates that no collisions recorded at the intersection of SR 53/Ogulin Canyon Road or on Ogulin Canyon Road during the most recent five-year study period. The study concludes that there are no readily apparent safety issues in the Ogulin Canyon Industrial Center. The project is expected to increase vehicle travel on Ogulin Canyon Road and increase the use of the access driveway from the project site to the Street. However, the driveway intersection has clear sight visibility. So, this increase travel is not expected to result in any significant increased hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment. **Refer Response in Section XVII(a). Less Than Significant Impact.**
d) Result in inadequate emergency access?	☐	☐	☐	☐	☒	☐	As proposed, the project is not expected to result in any impact to providing adequate emergency access. However, during times that Burns Valley Creek is heavily inundated, access and emergency access to the site operations will be constrained. The project plans were circulated for review to City of Clearlake Police Department, Lake County Fire Protection District, California Department of Transportation, Lake County Fire Protection Districts, CA Department of Transportation (Caltrans) and the City of Clearlake Community Development Department (Public Works, Building and Planning. No adverse comments were received. The applicant will obtain all the necessary Federal, State, and local agency permits for any works that occurs with the right-of-way and will be subject to the City's traffic impact fee program. Participation in this program will mitigate any cumulative impacts on the City's transportation system. **Less than Signiant impact**.

IMPACT CATEGORIES*	1	2	3	4	5	6	All determinations need explanation. Reference to documentation, sources, notes and correspondence.
SECTION XVIII. TRIBAL CULTURAL RESOURCES *Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:*							
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☒	☐	☐	☐	☐	**See Response to Section V(a): Less than Significant Impact with the incorporated mitigation measure CUL-1 through CUL-3.**
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐	☐	☐	**See Response to Section V(a): Less than Significant Impact with the incorporated mitigation measure CUL-1 through CUL-3.**
SECTION XIX. UTILITIES AND SERVICE SYSTEMS *Would the project:*							
a) Require the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, or natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☐	☐	☒	☐	The project will not impact existing and/or proposed utility/service infrastructure systems, including but not limited to water/wastewater treatment systems, storm water drainage systems, electric power, natural gas, or telecommunications facilities. The project parcels will be served on an onsite waste management system (septic) and onsite well(s) and have power through PG&E. The applicant will adhere to all necessary federal, state and local agency requirements including requirements of the Environmental Health Division of the County Health Services Department as outlined in the September 9, 2021 letter from Environmental Health (Attachment A-G). **Less Than Significant Impact**
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☐	☐	☒	☐	See response to section X-b). According to the Water Availability Report dated October 2021, the water for both proposed domestic and irrigation uses will be delivered from a new water well drilled in late September/early October, 2021. This system will use ground water pumped from the well directly into a new 50,000-gallon elevated water tanks for distribution to the building(s) plumbing system and to the greenhouses for irrigation. The well is approximately 300 feet deep and has a capacity of 100+ gallons per minute (see Water Availability report). **Less Than Significant Impact**

IMPACT CATEGORIES*	1	2	3	4	5	6	All determinations need explanation. Reference to documentation, sources, notes and correspondence.
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☐	☐	☒	The project site is situated in a rural rea of the County within the City Limits of Clearlake and requires an on-site Waste Management System (Septic). The applicant shall adhere to all Federal, State, and local regulations regarding wastewater treatment and water usage requirements. **No Impact**
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☐	☐	☒	☐	The Local Lake County landfill(s) has sufficient capacity to accommodate the project's solid waste disposal needs. The operation has been developed to help minimize the generation of waste and for the proper disposal of waste produced during the cultivation and processing of cannabis at the project site. The goal is to prevent the release of hazardous waste into the environment, minimize the generation of cannabis vegetative waste and dispose of cannabis vegetative waste properly, and manage growing medium and dispose of growing medium properly. All employees are required to follow the procedures outlined in this plan. Any deviations from this plan must be immediately brought to the attention of the operations manager(s). **Less Than Significant Impact**
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☐	☐	☒	☐	The project parcels will be served by an onsite waste management system and onsite well(s). All septic systems and/or wells shall be installed and adhere to all applicable Federal, State, and local agency requirements. All vegetative waste will be composted onsite, including all soil from any ground disturbance (if necessary). All other waste will be handled in accordance with all Federal, State, and local agency requirements and brought to a proper facility that is able to process such waste. **Less Than Significant Impact**
SECTION XX. WILDFIRE *If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:*							
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☐	☒	☐	The property is located within the State Responsibility Area (SRA) and is in a 'Moderate to High' Fire Hazard Severity Zone. The site has an average cross slope is less than 20% and has a moderate fuel load but the cultivation area will be clear of vegetation, including being routinely maintained. The SRA regulations (if applicable) will ensure adequate fire access to and on the property. SRA regulations will also ensure that measures are in place to help prevent fire and the spread of fire should one occur. The property shall maintain fire breaks around all structures, shall adhere to all necessary Federal, State, and local agency requirements. **Less Than Significant Impact**
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☐	☐	☒	☐	The project will not exacerbate wildfire risks and/or expose persons to pollutant concentrations in the event of a wildfire in the area. Additionally, the applicant will adhere to all Federal, State, and local fire requirements/regulations, including all mitigation measure and/or conditions of approval imposed on such use. **Less than Significant Impact**

IMPACT CATEGORIES*	1	2	3	4	5	6	All determinations need explanation. Reference to documentation, sources, notes and correspondence.
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☐	☒	☐	All infrastructure will be routinely maintained to ensure all Federal, State, and local agency requirements are being satisfied, including all necessary City Codes and/or regulations. Additionally, prior to operation the applicant(s) will make all necessary improvements to the project site, such as access/roadways, fuels breaks, and emergency water source/water tanks. **Less than Significant Impact**
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☐	☒	☐	The project area to be developed is not located within the vicinity of known waterways nor is it located within a designated flood zone. Therefore, the risk of flooding/runoff, landslides, slope instability, or drainage changes would not be increased due to this project. **Less Than Significant Impact**

IMPACT CATEGORIES*	1	2	3	4	5	6	All determinations need explanation. Reference to documentation, sources, notes and correspondence.
SECTION XXI. MANDATORY FINDINGS OF SIGNIFICANCE							
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐	☐	☐	This project is not anticipated to significantly impact habitat of fish and/or wildlife species or cultural/tribal resources with the incorporated mitigation measures described above. Therefore, there is minimal risk of degradation, and mitigation measures are proposed that would alleviate most or all of the project-related impacts. **With incorporation of Mitigation Measures, the project is not anticipated to significantly impact habitat of fish and/or wildlife species or cultural resources, nor will the project contribute to factors that would harm the environment or add to any wildfire risk.**
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☐	☒	☐	☐	☐	☐	All potentially significant impacts have been identified related to, Aesthetics, Air Quality, Biological Resources; Cultural/Tribal Resources; Geology & Soil; Noise & Vibration; and Hazards & Hazardous Materials. These impacts in combination with the impacts of other past, present, and reasonably foreseeable future projects in the vicinity could cumulatively contribute to significant effects on the environment if proper mitigation measures are not put in place. It is also noted that the City's 2040 General Plan Environmental Impact Report identifies the project site as within a major growth area; the Ogulin Canyon Industrial Center. Additionally, when assessing whether a cumulative effect requires an EIR, the lead agency shall consider whether the cumulative impact is significant and whether the effects of the project are cumulatively considerable. An EIR must be prepared if the cumulative impact may be significant and the project's incremental effect, though individually limited, is cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects." The cumulative environmental impacts from development within this growth center have been previously addressed in the City's 2040 General Plan Environmental Impact Report. In addition, the implementation of and compliance with all mitigation measures identified in each section as project conditions of approval would avoid and/or reduce all potential impacts to less than significant levels and would not result in cumulatively considerable environmental impacts.

IMPACT CATEGORIES*	1	2	3	4	5	6	All determinations need explanation. Reference to documentation, sources, notes and correspondence.
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐	☐	☐	The proposed project has potential to result in adverse indirect or direct effects on human beings. In particular, risks associated with, Aesthetics, Air Quality, Biological Resources; Cultural/Tribal Resources; Geology & Soil; Noise & Vibration; Hazards & Hazardous Materials and have the potential to impact human beings. Additionally, when assessing whether a cumulative effect requires an EIR, the lead agency shall consider whether the cumulative impact is significant and whether the effects of the project are cumulatively considerable. An EIR must be prepared if the cumulative impact may be significant and the project's incremental effect, though individually limited, is cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects. The cumulative environmental impacts from development within this growth center have been previously addressed in the EIR. In addition, the implementation of and compliance with all mitigation measures identified in each section as project conditions of approval would avoid and/or reduce all potential impacts to less than significant levels and would not result in cumulatively considerable environmental impacts.

INITIAL STUDY SUMMARY: Based on the review of the proposed project site and surrounding area, appropriate mitigation measures were identified to mitigate potentially significant impacts to a level below adversity for Aesthetics, Air Quality, Cultural Resources/Tribal Resources, Hazards & Hazardous Materials, Hydrology/ Water Quality, and Traffic Circulation. Assuming implementation of the identified measures and standard conditions of project approval of the City of Clearlake and other pertinent agencies, no adverse impacts are anticipated.

Add Attachments Here:

- Attachment A – Application Packet/Operational Plan
- Attachment B – Proposed Grading and Site Plans
- Attachment C – Biological Assessment/Report
- Attachment D – Water Availability Report
- Attachment E - Traffic Impact Report
- Attachment F – Technical Memorandum – Ground Water Hydrology
- Attachment G Mitigation Monitoring Program
- Attachment H Mitigation Monitoring Program

Attachment H
Mitigation Monitoring Program

City of Clearlake – Mitigation Monitoring Checklist

Project Name: 2160 Ogulin Canyon Road File Numbers: Use Permit UP 2022-07 thru 2022-07
Approval Date: May 31, 2022 EIR or Neg. etc.: Mitigated Negative Declaration

The mitigation measures outlined below were incorporated into the approval for this project in order to reduce potentially significant environmental impacts to a level of insignificance. A completed and signed checklist for each mitigation measure indicates that this mitigation measure has been complied with and implemented and fulfills the City's monitoring pursuant to Section 15097 of the CEQA Guidelines.

Mitigation Measure	Type	Monitoring Shown on Department Plans	Verified Implementation	Remarks
1.	Air Quality	Construction activities shall be conducted with adequate dust suppression methods, including watering during grading and construction activities to limit the generation of fugitive dust or other methods approved by the Lake County Air Quality Management District.		
2.	Air Quality	Driveways, access roads and parking areas shall be surfaced in a manner so as to minimize dust. Driveway approaches shall be constructed of concrete and built to minimum City of Clearlake standards.		

Mitigation Measure	Type	Monitoring Shown on Department Plans	Verified Implementation	Remarks
3.	Air Quality	The burning of construction debris is prohibited. Any disposal of vegetation removed as a result of lot clearing shall be lawfully disposed of, preferably by chipping and composting, or as authorized by the Lake County Air Quality Management District and the Lake County Fire Protection District.		
4.	Air Quality	During construction activities, the applicant shall remove daily accumulation of mud and dirt from Dam Road Extension.		
5.	Air Quality	The applicant shall secure a grading permit from the Community Development Department, Building Division and shall adhere to all grading permit conditions, including Best Management Practices. All areas disturbed by grading shall be either surfaced in manner to minimize dust, landscaped or hydro seeded.		
6.	Air Quality	All refuse generated by the facility shall be stored in approved disposal/storage containers, and appropriately covered. Removal of waste shall be on a weekly basis so as to avoid excess waste. All trash receptacles/containers shall remain covered at all times to prevent fugitive odors and rodent infestation.		

Mitigation Measure	Type	Monitoring Shown on Department Plans	Verified Implementation	Remarks
7.	Cultural and Tribal	During construction activities, if any subsurface archaeological remains are uncovered, all work shall be halted within 100 feet of the find and the applicant shall retain a qualified cultural resources consultant from the City's approved list of consultants to identify and investigate any subsurface historic remains, and define their physical extent and the nature of any built features or artifact-bearing deposits. Significant historic cultural materials may include finds from the late 19th and early 20th centuries including structural remains, trash pits, isolated artifacts, etc.		

8.	Cultural and Tribal	The cultural resource consultant's investigation shall proceed into formal evaluation to determine their eligibility for the California Register of Historical Resources. This shall include, at a minimum, additional exposure of the feature(s), photo-documentation and recordation, and analysis of the artifact assemblage(s). If the evaluation determines that the features and artifacts do not have sufficient data potential to be eligible for the California Register, additional work shall not be required. However, if data potential exists – e.g., there is an intact feature with a large and varied artifact assemblage – it will be necessary to mitigate any Project impacts. Mitigation of impacts might include avoidance of further disturbance to the resources through Project redesign. If avoidance is determined to be infeasible, pursuant to CEQA Guidelines Section 15126.4(b)(3)(C), a data recovery plan, which makes provisions for adequately recovering the scientifically consequential information from and about the historical resource, shall be prepared and adopted prior to any excavation being undertaken. Such studies shall be deposited with the California Historical Resources Regional		

Mitigation Measure	Type	Monitoring Shown on Department Plans	Verified Implementation	Remarks
		Information Center. Archeological sites known to contain human remains shall be treated in accordance with the provisions of Section 7050.5 Health and Safety Code. If an artifact must be removed during Project excavation or testing, curation may be an appropriate mitigation. This language of this mitigation measure shall be included on any future grading plans and utility plans approved by the City for the Project.		

Mitigation Measure	Type	Monitoring Shown on Department Plans	Verified Implementation	Remarks
9.	Cultural and Tribal	If human remains are encountered, no further disturbance shall occur within 100 feet of the vicinity of the find(s) until the Lake County Coroner has made the necessary findings as to origin (California Health and Safety Code Section 7050.5). Further, pursuant to California Public Resources Code Section 5097.98(b) remains shall be left in place and free from disturbance until a final decision as to the treatment and disposition has been made. If the Lake County Coroner determines the remains to be Native American, the Native American Heritage Commission must be contacted within 24 hours. The Native American Heritage Commission must then identify the "most likely descendant(s)", which parties agree will likely be the Koi Nation based upon the Tribe's ancestral ties to the area and previous designation as MLD on projects in the geographic vicinity. The landowner shall engage in consultations with the most likely descendant (MLD). The MLD will make recommendations concerning the treatment of the remains within 48 hours as provided in Public Resources Code 5097.98.		

Mitigation Measure	Type	Monitoring Shown on Department Plans	Verified Implementation	Remarks
10.	Geological	Prior to any ground disturbance and/or operation, the applicant shall submit Erosion Control and Sediment Plans to the City for review and approval. The project shall incorporate Best Management Practices (BMPs) consistent with the City Code and the State Storm Water Drainage Regulations to the maximum extent practicable to prevent and/or reduce discharge of all construction or post-construction pollutants into the local storm drainage system.		
11.	Geological	Prior to any ground disturbance, (if applicable), the applicant shall submit and obtain a Grading Permit from the City in accordance with the City of Clearlake Municipal code(s). Plans for grading shall include disclosure of location and method of treatment/storage of exported materials.		
12.	Geological	The applicant shall monitor the site during the rainy season including post-installation, application of BMPs, erosion control maintenance, and other improvements as needed. Said measures shall be maintained for life of the project and replace/repaired when necessary.		

Mitigation Measure	Type	Monitoring Shown on Department Plans	Verified Implementation	Remarks
13.	Hazards	If the project involves storage of hazardous materials equal or greater than 55 gallons of a liquid, 500 pounds of a solid, or 200 cubic feet of compressed gas the applicant will be required to submit a Hazardous Materials Inventory Disclosure Statement/ Business Plan to the Environmental Health Division via the California Electronic Reporting System. This plan shall be renewed and updated annually or if quantities increase.		
14.	Hazards	If the amount of hazardous materials is less than 55 gallons of a liquid, 500 pounds of a solid, or 200 cubic feet of compressed gas, the applicant will need to complete and submit a Hazardous Materials/ Waste Declaration stating the name of the material and the quantity to be stored on site.		
15.	Hazards	Collected hazardous or toxic materials shall be recycled or disposed of through a registered waste hauler to an approved site.		
16.	Hazards	Industrial Waste shall not be disposed of on-site without review or permit from the Environmental Health Division or the Regional Water Quality Control Board.		

Mitigation Measure	Type	Monitoring Shown on Department Plans	Verified Implementation	Remarks
17.	Hazards	Hazardous Waste must be handled according to all Hazardous Waste Control Laws. Any generation of a hazardous waste must be reported to Lake County Environmental Health within thirty days.		
15.	Hydrology	The proposed project shall be constructed in accordance with the Lake County Clean Water Program Storm Water Management Plan.		
16.	Hydrology	The project is subject to compliance with Lake County's Low Impact Development requirements (Lake County Clean Water Program).		
17.	Noise	All construction activities including engine warm-up shall be limited to weekdays and Saturday, between the hours of 7:00am and 7:00pm to minimize noise impacts on nearby residents.		
18.	Noise	Permanent potential noise sources such as, generators used for power shall be designed and located to minimize noise impacts to surrounding properties.		

Mitigation Measure	Type	Monitoring Shown on Department Plans	Verified Implementation	Remarks
19.	Noise	During construction noise levels shall not exceed 65 decibels within fifty (50) feet of any dwellings or transient accommodations between the hours of 7:00 AM and 6:00 PM. This threshold can be increased by the Building Inspector or City Engineer have approved an exception in accordance with Section 5-4.4(b)(1) of the City Code. An exception of up to 80 decibels may be approved within one hundred (100) feet from the source during daylight hours. Project is expected to result in less than significant impacts with regard to noise and vibration.		

Explanation of Headings

Type = Project (mitigation for this specific project), ongoing, and/or cumulative.
Monitoring Department = Department or agency responsible for monitoring a particular mitigation measure.
Shown on Plans = When a mitigation measure is shown on the construction plans, this column must be initialed and dated.
Verified Implementation = When mitigation measure has been implemented, this column must be initialed and dated.
Remarks = Area for describing status of ongoing mitigation measure, or other information.

City of Clearlake
4050 Olympic Dr. Clearlake, CA 95422 707-994-8201 www.clearlake.ca.us

CANNABIS BUSINESS APPLICATION
For Use Permit and Regulatory Permit

(Please print clearly and fill in/provide all that apply)

Type of Commercial Cannabis Use:

- X Commercial Cannabis Cultivation
- X Cannabis Manufacture
- X Cannabis Distributor
- ___ Cannabis Testing Laboratory
- ___ Cannabis Nursery
- X Cannabis Processor
- X Retail Deliver

REQUIRED FOR A COMPLETE APPLICATION

- ; ; Completed and signed Application Forms
- ; ; Additional Documentation
- ; ; Initial Application Fee Paid: ($TBD)

Applicants Full Name:	Ogulin Hills Holdings, LLC c/o Brian Pensack
Applicants Mailing Address:	637 Lindaro Street Suite 201 San Rafael, CA 94901
Applicants Phone Number:	415-317-2345
Applicants Email:	Brian@VanguardMarin.com
Applicants Physical Home Address:	405 Clearview Place - Petaluma, California 94952
Applicants Tax ID Number:	
Management/Community Relations Contacts:	Brian Pensack, Garrett Burdick, Kim Gardner, Richard Knoll Consulting
Applicants Height:	5'11",
Applicants Weight:	165 pounds,
Applicants Hair Color:	black,
Applicants Eye color:	Blue.
Address of Proposed Business:	2160 Ogulin Canyon Road, Clearlake, CA
Square Footage of the Proposed Buildings:	New industrial style buildings totaling 38,600 ft.^{2} o one (1) processing/storage and distribution building o one (1) retail, delivery and office building o 5 (five) 75' x 25' greenhouses
Describe the Site Plan and Floor Plan:	The proposed project includes development of industrial style structures for cannabis related facilities including a 33,600 ft.^{2} of cannabis processing, manufacturing, and distribution building and one (1) 5,000 ft.^{2} office building that will also serve as the administrative center and the cannabis delivery and storage space. The property is on the south side of Ogulin Canyon Road and will be accessed by a new

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	driveway cut into the 46-car parking lot. The new processing/storage and distribution facilities and retail delivery and office area will be situated about 150 south. Preliminary floor plans indicate that the manufacturing and processing building will include: intake area; processing and manufacturing areas; packaging areas; restrooms and offices; employee break room; shipping and receiving area, numerous storage areas, intake and distribution areas , and related activities. Rollup doors will provide entry into secure parking areas for loading and unloading.
Number of Managers/Supervisors:	4 +/-
Number of Employees:	Up to 35
Names and Addresses of Anyone Who Will act as an Owner, Manager, or Supervisor of the Facility:	Brian Pensack, Garrett Burdick (see address information above).
Describe Proposed Business and Operations:	See business plan and Project Description. The proposed business will include a cannabis drying and cold storage operation for both on-site and off-site cannabis cultivation product. Also included in the business and operations plan will be a processing, manufacturing, and distribution component which will include various activities related to extraction of cannabis essential oils, processing and storage of cannabis extracts and plant materials including packaging of cannabis for sale, extraction and storage of cannabis oils, packaging and labeling of cannabis products, storage and distribution of cannabis products, and related activities
Anticipated Gross Annual Revenues:	To be determined

Documents to Submit

Please provide additional information as required in section 18 – 12.050, 18 – 12.060, and section 5 – 25 including but not limited to the following:

1. Two passport quality, current photographs of the applicant. X

2. Passport, or valid California driver's license (not to include an AB 60 federally restricted license). X

3. Sign off by the Lake County Fire Protection District permitting the use._____

4. The applicant must complete a criminal history check for the state of California and FBI which is approved by the chief of police or his designee. X

5. A sketch or diagram depicting the interior configuration of the premises, including the total floor area drawn to scale. X
6. A site plan drawing depicting the facility and all properties within 600 feet. X
7. A lighting plan showing existing and proposed exterior and interior lighting placement and levels. X
8. A detailed security plan. X
9. An odor control plan. X
10. A detailed business plan. X
11. Previous addresses for the past five years. X
12. Property ownership and lease details. X

Agreement

Applicant signature (attach notarized documents)

I hereby certify that I will abide by the city of Clearlake's commercial cannabis ordinance number 200 – 2017 and this agreement and that the information provided in this application is, to my knowledge, true and correct. I hereby authorize city staff, including the police department, authority to conduct a criminal background check pursuant to California Penal Code section 11105 subsection be subsection 11 and 13300 subsection be subsection 11 which authorizes city authorities to access state and local summary criminal information for employment, licensing, or certification purposes; and authorizes access to federal level criminal history information by transmitting fingerprint images and related information to the Department of Justice to be transmitted to the FBI every person listed as an owner manager or supervisor of the marijuana business must submit fingerprints and other information deemed necessary by the city manager or his designee for a background check by the Clearlake Police Department. I understand that any material misrepresentation may result in either denial or revocation of the dispensary permit.

Applicant Signature: _____

Date: April 7, 2021

For Office Use Only

Approved by_____Date _____

Credit Card

Debit Card

Money order

Cash

Check Number X

Ogulin Hills Holdings, LLC
637 Lindaro Street - Suite 201
San Rafael, CA 94901
415-317-2345

April 7, 2021

Mr. Mark Roberts - Senior Planner
City of Clearlake
14050 Olympic Drive
Clearlake, CA 95422

Re: 2160 Ogulin Canyon Road - Cannabis Business Use Permit Application and Development Agreement

Dear Mr. Roberts:

Enclosed are the Cannabis Business Use Permit application forms, documents, plans, project description, safety and security plans, and related documentation for the proposed cannabis processing, manufacturing, distribution, and indoor cultivation project planned for the 9.56-acre property located at 2160 Ogulin Canyon Road in Clearlake (APN 010-044-21).

Ogulin Hills Holdings, LLC is proposing the project involving construction of cannabis related facilities including one (1) 33,600 ft.² building for a proposed manufacturing, processing, distribution center; one (1) 5,000 ft.² building for an office, and several cultivation greenhouses. The processing, manufacturing, and retail delivery/office buildings are proposed metal structures and the proposed greenhouses will comply with City architectural design standards.

Included with this application package is:

- **City of Clearlake Use Permit Application Form and $2,000 fee deposit.**
- **Project Description and Findings**
- **Project Site Plan, Lighting Plan, Security Plan, Preliminary Grading Plan**
- **Project Floor Plans**
- **Project Building Elevations**
- **Employee Health and Safety Plans**
- **Business Plan**

The Biological Report and the Cultural Resources Report are currently being developed by consultants and will be provided to the City when they have been completed.

We believe that this package of application documents and materials is sufficient for the City to initiate the project review phase. Please advise us if there is a need for additional documentation or clarification.

We look forward to working with the City Staff, the Planning Commission, and the City Council in moving this project forward.

Thank you.

Brian Pensack

Brian Pensack – Principle
Ogulin Hills Holdings, LLC

Project Description and Information
Cannabis Processing and Cultivation Facilities
2160 Ogulin Canyon Road – APN 010-044-21
Clearlake, California
Updated – March 2022

Project Information

The subject property is a 9.56-acre parcel located at 2160 Ogulin Canyon Road in Clearlake and further described as APN 010-044-21. The property is also described as - Parcel B as shown on a map filed in the Office of the County Recorder of Lake County on July 17, 1987, in Book 29 of Parcel Maps at pages 30 and 31.

The proposed project includes development of industrial style structures to be used for cannabis related facilities including a 33,600 ft.² single story building and a 5,000 ft.² office building that will also serve as the administrative center/cannabis delivery and storage space. Five - 75' x 25' greenhouses for indoor cannabis cultivation will be developed.

Specific project uses are to include:
1. Cannabis cultivation
2. Cannabis manufacturing
3. Cannabis distribution
4. Cannabis nursery
5. Cannabis processing
6. Cannabis Retail - Delivery Only

The proposed cannabis business at 2160 Ogulin Canyon Road will include a cannabis drying and cold storage operation for both on-site and off-site cannabis cultivation product. Also included in the business and operations plan will be a processing, manufacturing, and distribution component which will include various activities related to extraction of cannabis essential oils, processing and storage of cannabis extracts and plant materials including packaging of cannabis for sale, extraction, and storage of cannabis oils, packaging and labeling of cannabis products, storage and distribution of cannabis products, and related activities.

Attached are documents which provide additional operational and technical details regarding:
A. Manufacturing Activities
B. Odor Control
C. Energy
D. Groundwater Hydrology

The project operational days/hours during the harvest season will be - Monday through Saturday from 6 am to 8 pm and during non-harvest seasons - Monday through Saturday from 7 am to 6 pm.

The amount of paved surface area will include 22,660 square feet of parking lot.

Vegetation removal will be minimal and existing dilapidated, and fire damaged facilities will be demolished.

The estimated number of vehicle trips during peak harvest is 107 ADT.

Design information regarding the greenhouse, processing, and office structures is included in the building floor plans and elevation plans submitted to the City - 3-3-21.

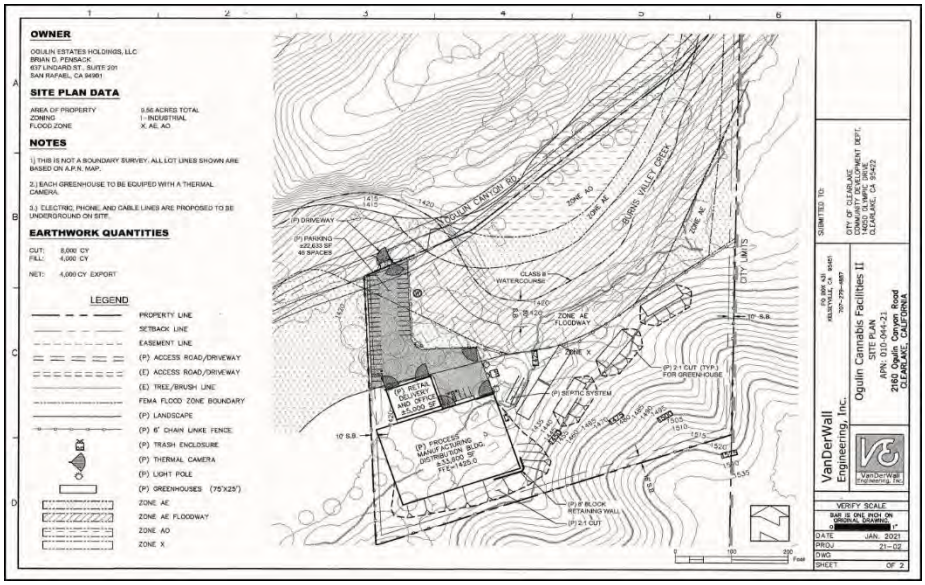
The property is located on the south side of Ogulin Canyon Road and will be accessed by a new driveway that will lead into the 46-car parking lot. The 22,600 square foot parking lot design will feature a center aisle and parking spaces developed at 90-degree angles. ADA accessible parking will be developed near the office. Security fencing and numerous digital security cameras will be placed around the perimeter and at strategic locations in the parking lot.

The new processing/storage and distribution building and retail delivery and office area will be situated about 150’ south of the road, in the southeastern quarter of the parcel. Some grading, including both cut and fill, will be necessary to facilitate construction, with preliminary earthwork locations and quantities noted on the site plan.

The proposed greenhouses will be located east of the new structure and south of the creek. Access to the cultivation areas will be by a single lane driveway within the fenced area.

Preliminary floor plans indicate that the manufacturing and processing building will include: intake area; processing and manufacturing areas; packaging areas; restrooms and offices; employee break room; shipping and receiving area; numerous storage areas; intake and distribution areas; and related activities. Rollup doors will provide entry into secure parking areas for loading and unloading.

The project buildings are to be engineered metal structures and the proposed greenhouses will comply with City architectural design standards.



The subject property is currently developed with a couple of manufactured homes and several former animal shelter kennels, a garage and storage building, pieces of equipment, and related improvements/facilities. Some of the existing site improvements will be removed as they are in poor condition or fire damaged.

Access to the site is from an existing driveway located along the western property line on the south side of Ogulin Canyon Road about a ½ mile east of Hwy 53. The driveway extends into the property and loops around to provide access to the houses, and the remainder of the existing site improvements. This existing driveway is in moderate condition.

Burns Valley Creek, a seasonal creek extends through the north easterly quadrant of the parcel and flows through an open channel from east to north west where it runs through existing culverts under Ogulin Canyon Road. There is a flood zone designation associated with the Creek, as noted on the site plan.

The surrounding land is used mainly for light industrial activities, watershed and wildlife habitat, cannabis farming, and homesite development. The Project Area is located in Ogulin Canyon on the far east side of Burns Valley and is surrounded by the Ogulin Canyon Road to the north, Burns Valley to the south, Blackeye Canyon to the east, and storage facilities to the west.

The biology and vegetation of the site is described in a biological report prepared in 2021.

The Soil Survey Geographic Database (SSURGO) maintained by the United States Department of Agriculture (USDA) and National Resource Conservation Service (NRCS) indicates that the project site is underlain primarily by soils of the Manzanita Series. Manzanita Series soils consist of very deep, well drained loam formed in alluvium from mixed rock sources. They occur on terraces with slopes of 2 to 25 percent. Manzanita Series soils are used for a wide variety of purposes, mostly agricultural, including walnut orchards, wine grape vineyards, hay, and livestock grazing, but also homesite developments (USDA-NRCS 2003).

The Clearlake area climate is characterized by warm, dry summers and cool, moist winters. Mean annual precipitation is up to 50 inches. The wet season extends from October through May. Winter precipitation in this region falls as rain under 3,300 feet with snowfall at 4 inches. Average winter temperature is 40 degrees Fahrenheit, and summer temperature highs average 86 degrees Fahrenheit (NCEI 2019).

The subject parcel is within the Clearlake City Limits on the south side of Ogulin Canyon Road. The property is zoned I – Industrial District. Section 18-2.17 of the City of Clearlake Zoning Ordinance provides detailed zoning requirements and standards.

The City of Clearlake Zoning Ordinance has specific standards regarding minimum parking requirements, street improvements, parking design standards, driveway approach standards, landscaping development standards, environmental review procedures, storm drainage provisions, and a number of other sections

dealing with trash receptacles slopes and soils, outdoor lighting, addressing, protected trees, tree protection regulations, and other requirements, all of which will be adhered to.

The subject property is also zoned CB – Commercial Cannabis Combining Zoning District. Section 18-12 of the Clearlake Municipal Code provides standards and criteria addressing commercial cannabis permits and requires among other things issuance of permits for cultivation, processing, extraction, manufacturing, testing, and distribution activities with an approved use permit and regulatory permit within areas of the City that are zoned Cannabis Business District.

Information regarding project security and operational characteristics are set forth in attached documents.

The City requires use permit approval for the proposed development and operation of commercial cannabis businesses and also requires operators to enter into a Development Agreement.

Until 2020 the City of Clearlake limited the number of commercial cannabis licenses that could be approved/obtained. The City Council recently made a decision to eliminate the cap on commercial cannabis permits and revised its zoning regulations to allow the issuance of cannabis permits pursuant to zoning and development agreement approvals.

Clearlake Zoning Ordinance Section 18-1.4.445 - Use Permits.

a. Purpose. These provisions establish the procedures for accommodating uses with special site or design requirements, operating characteristics, or which may have the potential to cause adverse effects on surrounding properties. The procedures in this section shall apply to all proposals for which a conditional use permit is required.

b. Criteria for Granting. A use permit shall be approved or approved with conditions by the Planning Commission, if, based upon information provided by the applicant, all of the following findings are made:

1. That the proposed use at the size and intensity contemplated, and at the proposed location, will provide a development that is necessary or desirable for, and compatible with, the neighborhood or the community.

Applicants Response and Findings:

- **The development at the 2160 Ogulin Canyon Road site is proposed at a size and intensity that is considered reasonable for a 9.56-acre parcel. The site plan details a proposed layout size that fits the site and provides the required improvements consistent with the City Zoning Ordinance.**
- **The City of Clearlake has recently updated its Zoning Ordinance with respect to the permit requirements and locations for cannabis businesses and as such has confirmed and verified public policy in support of cannabis processing, manufacturing, distribution, and indoor cultivation at this location.**

- **In keeping with this adopted public policy, the proposed project will provide a development that is necessary, desirable, and compatible with the community wide sentiments.**
- **The proposed project will provide a development that is compatible with the neighborhood, as there are existing cannabis operations and/or businesses in the near vicinity, including at the La Rosa Plaza site just to the west, and several existing and proposed cannabis cultivation projects to the east and north. The proposed project is actually in response to the need for cannabis processing and storage facilities in a well-planned and secure location, which in and of itself, creates a compatible land use situation.**

2. That such use as proposed will not be detrimental to the health, safety, convenience, or general welfare of persons residing or working in the vicinity, or injurious to the property, improvements, or potential development in the vicinity with respect to aspects including, but not limited to, the following:
(a) The nature of the proposed site, including its size and shape, and the proposed size, shape, and arrangement of structures,
(b) The accessibility and traffic patterns for persons and vehicles, the type and volume of such traffic, and the adequacy of proposed off-street parking and loading,
(c) The safeguards afforded to prevent noxious of offensive emissions such as noise, glare, dust, and odor,
(d) Treatment given, as appropriate, to such aspects as landscaping, screening, open spaces, parking areas, loading areas, service areas, lighting, and signs.

Applicants Response and Findings:

- **The proposed uses at the 2160 Ogulin Canyon Road Site will not be detrimental to the health, safety, convenience, or general welfare of persons residing or working in the vicinity, or injurious to the property, improvements, or potential development in the vicinity. The proposed site improvements have been well planned to minimize detrimental impacts and conflicts with people residing and working in the area, property and improvements in the neighborhood or the general welfare of the City.**
- **The project will be built to California Building Code standards and will provide for a high level of security and safety consistent with the City regulations.**
- **The site improvements will be situated in the west center of the parcel and will comply with property line setbacks from adjoining properties and structures in order to minimize perceived detrimental health, safety, morals, comfort, and general welfare impacts to people in the neighborhood and the region.**
- **The cannabis cultivation laws of the State of California and the City of Clearlake have been approved by the voters/elected officials and thus reflects the current attitudes of residents. The intent with regard to development of the cannabis project is to be sensitive to the comfort and general welfare of the Ogulin Canyon Road area by installing and operating state-of-the-art cannabis facilities and equipment in order to minimize detrimental impacts.**
- **The subject property is an existing developed area that has seen better days. The proposed project involves a moderately sized building footprint which is proportionate in size and scale with other land use activities on other properties in the vicinity.**

- **The nature of the proposed site, including the 9.56-acre size and its wide shape are conducive with the proposed size, shape, and arrangement of structures. The proposed site improvements are designed in areas that are level to moderately sloped and situated in the generalized west center of the site.**
- **The accessibility of the property is good, a new entry and driveway approach will be developed on Ogulin Canyon Road.**
- **Traffic patterns for persons and vehicles that will be using the site are good. The type and volume of traffic on Ogulin Canyon Road is relatively low when compared to other streets and roads in Clearlake. The pattern of land development to the east, north and south is rural in nature and as such the areas generate a small amount of traffic that passes by the 2160 Ogulin Canyon Road site.**
- **The proposed off-street parking and loading areas have been incorporated into the project design with 46 standard spaces shown in front of the proposed building. According to the site plan there will be a 22,600 square foot parking and loading area in the west center of the site.**
- **Although, not specifically called out on the site plan, there are many options for implementing safeguards to prevent noxious of offensive emissions such as noise, glare, dust and odor. The placement of the processing building in the west center of the site, with adequate setback distances from property lines and nearby structures is a key safeguard for reducing noise, odor, dust, and lighting concerns. There are many other conditions or mitigation measures that can be implemented including: the use of shielded and downlit lighting; A.C. Paving of the parking lot and driveways; installation of building mounted air filtration exhaust systems; and installation of landscaping or fencing to minimize noise. The project Odor Control Plan provides details regarding air filtration and odor complaint protocol.**
- **The project will provide landscaping as mandated by the City of Clearlake. Screening of site improvements or facilities such as the trash enclosures will be done to City standard.**
- **There will be open space preservation particularly around the east and northeast sides of the site and the preservation of as many trees as possible will help minimize visibility of the improvements,**
- **Proposed parking, loading, and service areas are depicted on the site plan and are adequate to serve the intended uses. Proposed lighting and signage will be commensurate with other industrial projects in the City of Clearlake.**

3. That such use or feature as proposed will comply with the applicable provisions of this Chapter and will be consistent with the policies and standards of the Clearlake General Plan. (Ord. #2010-146, S2).

Applicants Response and Findings:

- **The proposed uses at the 2160 Ogulin Canyon Road seem to be consistent with the applicable provisions of the City of Clearlake Zoning Ordinance and will be consistent with the policies and standards of the Clearlake General Plan.**
- **East of Hwy 53, the initial portion of Ogulin Canyon Road (1/2 mile) is within the City of Clearlake. The City of Clearlake General Plan Circulation Element Figure 4.1. Circulation Map**

identifies Ogulin Canyon Road as a basic street. The Clearlake General Plan Circulation Element contains a number of Goals and Policies regarding the City street system, however, there does not appear to be any policy applying specifically to Ogulin Canyon Road.

- **The Ogulin Canyon Road surface is in moderate condition, it is paved for about 2/3 miles east of Hwy 53 and transitions to gravel beyond the City limits.**

Conclusion:

This Project Description provides support for approval of the Use Permit application to allow various cannabis processing, distribution, retail delivery, cultivation, and manufacturing activities at 2160 Ogulin Canyon Road.

The 2160 Ogulin Canyon Road development concept is fairly straight forward and provides a well-planned and designed site that will encourage good site circulation, efficient operations, and economic performance.

The City of Clearlake is supportive of cannabis related land-use projects that conform to City regulations.

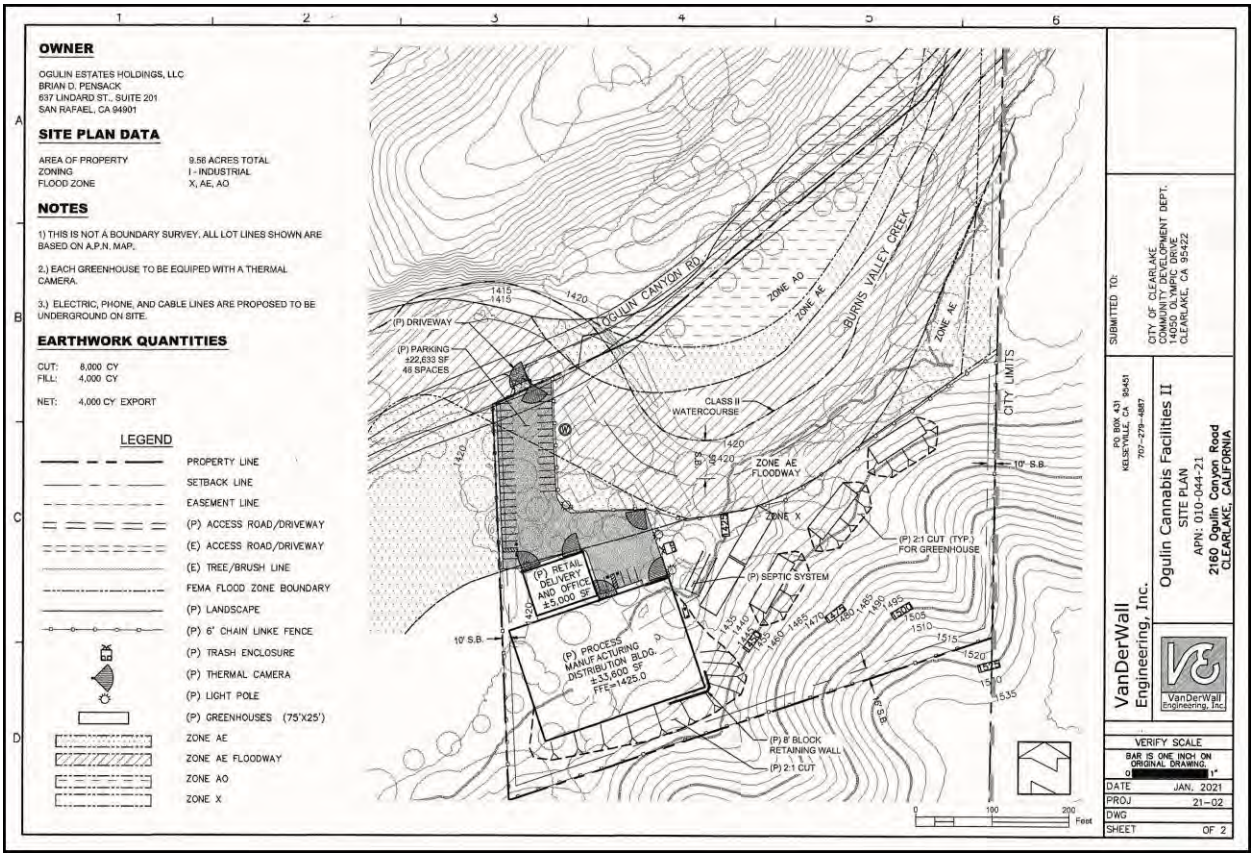
This application sets forth a project that complies with City standards, has the potential to enhance job opportunities, and generate economic development benefits.

Approval of this project will provide for numerous public benefits, enhance the Ogulin Canyon Road area, provide for the cleanup and redevelopment of the subject property, and comply with the City Zoning standards.

It is respectively requested that the City of Clearlake Planning Commission and City Council approve the Use Permit application and the associated Development Agreement.

2160 Ogulin Canyon Road – Description of Cannabis Manufacturing Activities

Cannabis manufacturing facilities will be constructed within the Processing-Manufacturing-Distribution Building and will incorporate security measures including personnel screening and the installation of secure entries and video cameras that will be strategically placed in various locations. The facilities will also be surrounded by security fencing.



The cannabis manufacturing operation will involve cannabis extraction and/or infusion processes.

California Law provides for the licensing of both volatile and nonvolatile cannabis manufacturing facilities.

Nonvolatile manufacturing involves a solvent used in the extraction process that is <u>not</u> a volatile solvent, including carbon dioxide. Volatile manufacturing involves any solvent that is or produces a gas or vapor that, when present in the air in sufficient quantities, could create explosive or ignitable mixtures. The State's examples of volatile solvents include butane, hexane, propane, and ethanol.

Cannabis manufacturing may also include mechanical extraction using screens or presses; chemical extraction using a nonvolatile solvent such as a nonhydrocarbon-based or other solvent such as water, vegetable glycerin, vegetable oils, animal fats, or food-grade glycerin; chemical extraction using a professional closed loop CO2 gas extraction system; chemical extraction using a volatile solvent; and any other method authorized by the State.

Because the proposed manufacturing processes may include both volatile and nonvolatile solvents, a State of California Type 7 cannabis manufacturing license will be required, as this license allows the use of use both nonvolatile and volatile solvents to produce extractions and infusions.

Chemical extractions must take place within a professional, closed-loop system, and must comply with local building and fire codes and State law. California law establish sound manufacturing practices, assures cannabis product safety, and sets chemical extraction requirements. Cannabis manufacturers must meet local fire code, follow all local requirements for a certified closed loop system and utilize solvents that are 99% pure.

Nature of the Activity – Cannabis Manufacturing

The cannabis manufacturing operations will be established in a portion of Building 2 which is in the center of the site

The Processing-Manufacturing-Distribution Building will be a 33,000square foot single story steel I-beam truss construction on a concrete slab type with a metal clad exterior and a metal roof.

Metal rollup doors and standard access doors will be utilized to access the cannabis manufacturing areas.

The facility operator will construct all manufacturing facilities to City of Clearlake and industry certification standards, in addition to ensuring that the site is in full compliance with all applicable local, state, and federal building code laws.

As required by the California Building Code, the operator will construct Class 1 Division 1 (C1D1) and Class 1 Division 2 (C1D2) rated facilities to contain the volatile extraction programs.

The definition of hazardous locations includes buildings or parts thereof where fire or explosion hazards may exist due to the presence of flammable gases or vapors, flammable liquids, combustible dusts or easily ignitable fibers. Class 1 locations are those in which flammable "gases or vapors" are, or may be, present in the air in quantities sufficient to produce explosive or ignitable mixtures.

The Manufacturing facilities will be designed and constructed to the highest standards to comply with California and Federal C1D1 (spark-less) construction standards. Construction activities will be overseen by qualified and trained professionals with extensive understanding in standard operating procedures, safety protocols, and maintenance schedules.

Architectural floorplans and construction details will be finalized for the manufacturing facilities and architectural/engineered construction plans and equipment details will be submitted to, plan checked by, and certified for safe operation by the City of Clearlake Community Development Department and the Lake County Fire Protection District #1 (Fire Marshal).

C1D1 facilities use outside fresh air to provide the required air flow rate over equipment. The system provides a slightly negative pressure within the lab area to prevent hazardous gasses from leaking into surrounding areas.

Gas detection alarms are used and will initiate when hazardous gas is detected. The system will activate an audible alarm and shut down power to the equipment inside the room well before dangerous gas levels are reached.

The proposed cannabis manufacturing process will involve a closed loop system.

In general, the proposed operations will involve processed cannabis material delivered to the intake area where it will be store in freezer units or on shelves. Track and Trace of cannabis materials is required. From the intake area the cannabis material moves into the extraction facilities areas. The

specific routing of the process cannabis materials depends upon operational requirements and market demand orders.

There may be a nonvolatile CO2 extraction room near or adjacent to the intake area. This area may also include CO2 extraction machines, decarboxylation ovens, and storage facilities.

Volatile extraction facilities may also be developed. Butane (BHO) and Ethanol (ETOH) are examples of the volatile materials that may be used. The butane and ethanol will be stored within a hydrocarbon solution tank and chilled to a low temperature. From the solvent tank, chilled butane and ethanol is passed through a pressurized/packed cannabis material vessel/column where the butane and ethanol dissolve the cannabis trichromes. This process results in a chemical reaction where the cannabis terpenes and trichomes are stripped off and picked up. The butane/ethanol and cannabis trichomes move to the dewaxing or cryogenic vessel where the purification process continues, and fats and lipids are purged and removed. The solvent at this stage will be purified and will contain only the active ingredient. The solution will then pass into a tank where water is added, the butane and ethanol solvents distilled and evaporated back into the closed loop system, leaving behind the concentrated cannabis oil.

Key points associated with the cannabis extraction process include:

- The cannabis extraction manufacturing process is conducted in a clean room environment under the strictest operational and safety guidelines.
- Intake materials are examined for visible contaminants, freshness, overall quality, separated into batch sizes, and tagged.
- Extraction times vary by material and the design of the extractor equipment.
- A closed loop system is utilized, and solvents are drained to storage containers and placed in the queue for recovery.
- Pesticide tests are taken regularly.
- Cannabis extraction and manufacturing is performed within C1D1 or C1D2 rooms, subject to strict Building and Fire Code standards.
- Distillation takes place within a vacuum and the finished product is a clean distillate, tested, and ready for use.
- Volatile and nonvolatile gases are to be delivered by a local vendor when needed and are held within a properly designed and operated storage tank area.

A dry goods storage area for glassware, tools, and supply storage will be constructed, and an area for final packaging and labeling of all products will be set up. Final packaging, labeling of all products, secured storage of finished goods and the outtake room will be located on the north side of the building and serves as the location of transfer of products to Building #1.

A QC - quality control area is planned for post refinement review and approval by quality control staff utilizing various protocols for all products prior to transfer into the packaging area.

All employees involved in the manufacturing process and gas handling procedures will be required to receive operational and OSHA gas handling training. A licensed supplier will deliver the small tanks of gases as needed, to a secure drop off location in accordance with safe handling protocols. The determination as to the allowable gas storage area location will be part of the city plan check process (compliance determination pursuant to the California Building Code) which will include consultation with the Lake County Fire Protection District #1.

Energy Information 2160 Ogulin Canyon Road Cannabis Project
March 2022

The subject property is a 9.56-acre parcel located at 2160 Ogulin Canyon Road in Clearlake and further described as APN 010-044-21.

The proposed project includes development of industrial structures to be used for cannabis related facilities including a 33,600 ft.^{2} single story building and a 5,000 ft.^{2} office building that will also serve as the administrative center/retail cannabis delivery and storage space. Five 25' x 75' greenhouses for mixed light cannabis cultivation are also proposed.

Specific uses proposed for the project include:
1. Cannabis cultivation and nursery
2. Cannabis manufacturing
3. Cannabis distribution
4. Cannabis processing
5. Cannabis Retail - Delivery Only

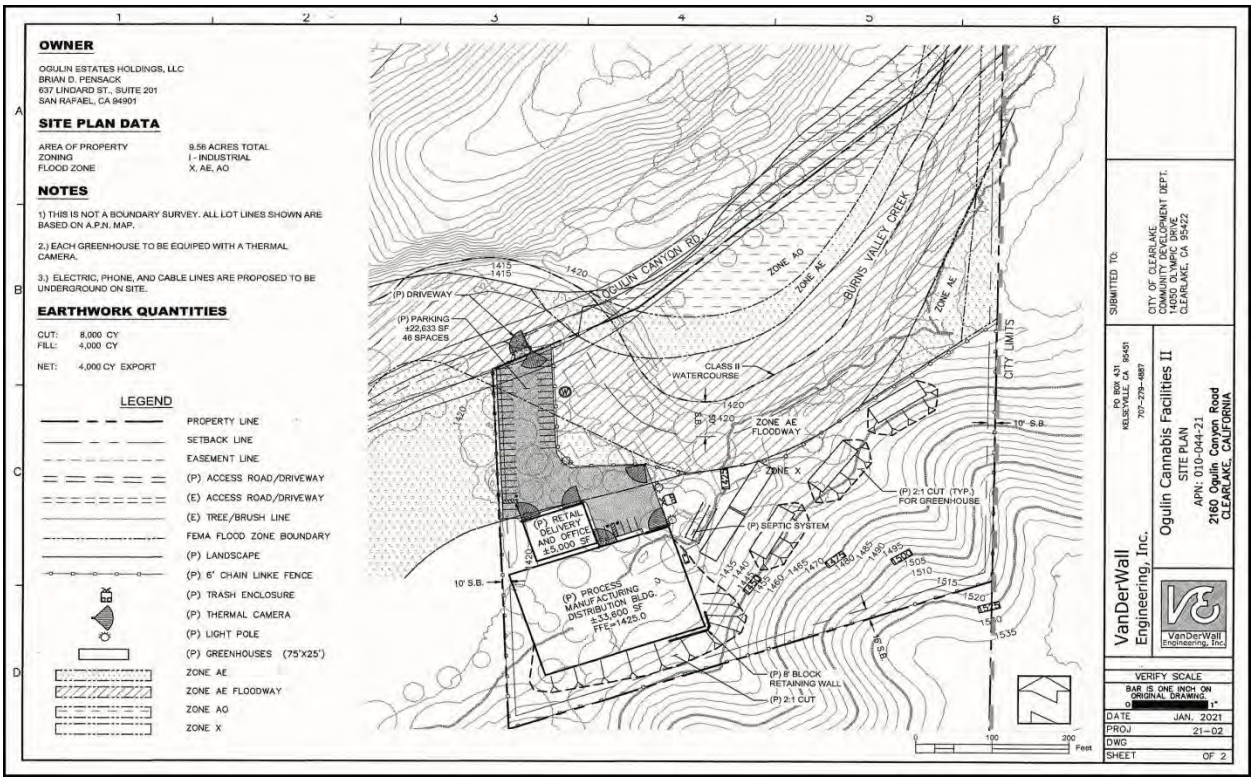
The property is located on the south side of Ogulin Canyon Road. A new 24' wide driveway will provide access to the 46-car parking lot. The 22,600 square foot parking lot design will feature a center aisle and parking spaces developed at 90-degree angles. ADA accessible parking will be developed near the office. Security fencing and numerous digital security cameras will be placed around the perimeter and at strategic locations in the parking lot.

The new processing and distribution building and the retail delivery and office area will be situated about 150' south of the Road, in the southeastern quarter of the parcel. Some grading, including both cut and fill, will be necessary to facilitate construction, with preliminary earthwork locations and quantities noted on the site plan.

The proposed greenhouses will be located east of the new structure and south of the creek. Access to the cultivation areas will be by a single lane driveway within the fenced areas.

Preliminary floor plans indicate that the manufacturing and processing building will include: intake area; processing and manufacturing areas; packaging areas; restrooms and offices; employee break room; shipping and receiving area; numerous storage areas; intake and distribution areas; and related activities. Rollup doors will provide entry into secure parking areas for loading and unloading.

The project buildings are to be engineered metal structures and the proposed greenhouses will comply with the City architectural design standards.



Local Utilities and Renewable Energy Resources

Pacific Gas & Electric Company (PG&E) is the electricity utility provider for Clearlake and Lake County. Approximately 39% of electricity provided by PG&E is sourced from renewable resources and 47% is sourced from non-renewable GHG-free resources (PG&E 2019). PG&E may offer programs through which consumers may purchase electricity from renewable sources. There is no natural gas available for communities within Lake County,

State Building Code Requirements

The California Building Code (CBC) contains standards that regulate the method of use, properties, performance, or types of materials used in the construction, alteration, improvement, repair, or rehabilitation of a building or other improvement to real property. The CBC includes mandatory green building standards for residential and nonresidential structures, the most recent version of which are referred to as the 2019 Building Energy Efficiency Standards. These standards focus on four key areas: smart residential photovoltaic systems, updated thermal envelope standards (preventing heat transfer from the interior to the exterior and vice versa), residential and nonresidential ventilation requirements, and non-residential lighting requirements. While the CBC has strict energy and green-building standards, U-occupancy structures (such as greenhouses used for cultivation activities) are typically not regulated by these standards.

Vehicle Fuel Economy Standards

In 2012, the U.S. Environmental Protection Agency (EPA) and the National Highway Traffic Safety Administration (NHSTA), on behalf of the Department of Transportation, issued final rules to reduce GHG emissions and improve corporate average fuel economy (CAFE) standards for light duty vehicles for model years 2017 and beyond. NHTSA's CAFE standards were enacted under the Energy Policy and Conservation Act since 1978. This national program requires automobile manufacturers to build a light-duty national fleet that meets all requirements under both federal programs and the standards of California and other states. This program would increase fuel economy for the fleet of cars and light-duty trucks by the model year 2025.

The California Air Resources Board (CARB) has established standards for clean gasoline and diesel fuels and fuel economies of new vehicles. CARB has also put in place innovative programs to drive the development of low-carbon, renewable, and alternative fuels such as their Low Carbon Fuel Standard (LCFS) Program pursuant to California Assembly Bill (AB) 32 and the Governor's Executive Order S-01-07.

In January 2012, CARB approved the Advanced Clean Cars Program which combines the control of GHG emissions and criteria air pollutants, as well as requirements for greater numbers of zero-emission vehicles, into a single package of standards for vehicle model years 2017 through 2025. The new rules strengthen the GHG standard for 2017 models and beyond. This will be achieved through existing technologies, the use of stronger and lighter materials, and more efficient drivetrains and engines. The program's zero-emission vehicle regulation requires a battery, fuel cell, and/or plug-in hybrid electric vehicles to account for up to 15 percent of California's new vehicle sales by 2025. The program also includes a clean fuels outlet regulation designed to support the commercialization of zero-emission hydrogen fuel cell vehicles planned by vehicle manufacturers by 2015 by requiring increased numbers of hydrogen fueling stations throughout the state. The number of stations will grow as vehicle manufacturers sell more fuel cell vehicles. By 2025, when the rules will be fully implemented, the statewide fleet of new cars and light trucks will emit 34 percent fewer global warming gases and 75 percent fewer smog-forming emissions than the statewide fleet in 2016 (CARB 2016).

All self-propelled off-road diesel vehicles 25 horsepower (hp) or greater used in California and most two-engine vehicles (except on-road two-engine sweepers) are subject to the CARB's Regulation for In-Use Off-Road Diesel Fueled Fleets (Off-Road regulation). This includes vehicles that are rented or leased (rental or leased fleets). The overall purpose of the Off-Road regulation is to reduce emissions of oxides of nitrogen (NOx) and particulate matter (PM) from off-road diesel vehicles operating within California through the implementation of standards including, but not limited to, limits on idling, reporting and labeling of off-road vehicles, limitations on use of old engines, and performance requirements.

Energy Use in Cannabis Operations.

The California Department of Food and Agriculture (CDFA) Code of Regulations includes renewable energy standards for indoor mixed-light cannabis cultivation operations. Beginning in 2023 all indoor mixed-light licensees must provide evidence of carbon offsets if the licensee's average weighted GHG emission intensity is greater than the local utility provider's GHG emission intensity. If a cultivator's

mixed-light energy use is supplied by resources with a lesser GHG-emission intensity than PG&E's GHG-emission intensity (currently approximately 85%), they would be required to acquire carbon offsets to account for the difference (California Code of Regulations [CCR] Section 8305).

Projected Energy Demand

The total energy demand of a cannabis operation depends on the type of cultivation, manufacturing, location of the project, and the types of equipment required. Outdoor cultivation involves minimal equipment and has relatively low energy demands, while indoor cultivation involves more equipment that tends to have much higher energy demands (e.g., high-intensity light fixtures, climate control systems). Specific energy uses in indoor grow operations include high-intensity lighting, dehumidification to remove water vapor and avoid mold formation, space heating or cooling during non-illuminated periods and drying processes, preheating of irrigation water, generation of carbon dioxide (CO2) from fossil fuel combustion, and ventilation and air conditioning to remove waste heat. Reliance on equipment can vary widely as a result of factors such as plant spacing, layout, and the surrounding climate of a given facility (CDFA 2017).

Comparatively, non-cultivation cannabis operations, such as storage, processing, distribution, or retail sales, tend to involve typical commercial equipment and processes that may require minor to moderate amounts of power. These non-cultivation activities are subject to the CBC and 2019 Building Energy Efficiency Standards, and do not typically result in wasteful or inefficient energy use. Activities and processes related to commercial cannabis do not typically require the demand for propane gas supplies, and it is assumed that such activities would represent a nominal portion of the county's total annual propane gas demand.

Depending on the site and type of activities, cannabis operations can include measures that promote the conservation of energy resources. Some cannabis operators are known to engage in practices that promote energy conservation and reduce overall energy demands using high-efficiency lighting or through generation and use of solar energy. However, other operations in the State engage in activities that are highly inefficient and may result in the wasteful use of energy resources. Such operations may include the use of old equipment, highly inefficient light systems (e.g., incandescent bulbs), reliance on multiple diesel generators, and other similar inefficiencies (County of Santa Barbara 2017).

During the construction and implementation of proposed projects, fossil fuels, electricity, and natural gas would be used by construction vehicles and equipment. The energy consumed during construction would be temporary and would be typical of other similar construction activities in the City. Based on the size and scope of proposed earthwork and building construction, the project would have the potential to result in minimal environmental impacts through its use of diesel fuel for construction equipment.

Mitigation measures can be applied to reduce potentially significant air quality impacts associated with use of diesel fuel equipment and would require the project contractor to avoid wasteful, inefficient, or unnecessary consumption of energy resources, such as idling

In Lake County, cannabis cultivation projects do not use natural gas. Propane gas use is typically associated with cooking appliances and space heating. Cooking appliances are not proposed as a part of the project, and all proposed space heating units would run on electricity.

The project's operational electricity needs would be met by a connection to PG&E infrastructure. The CBC 2019 Building Energy Efficiency Standards include mandatory energy efficiency standards.

The project's proposed 33,600-square-foot processing and manufacturing building, and the proposed 5,000-square-foot structure for use as a non-storefront retail dispensary and office would be subject to the CBC 2019 Building Energy Efficiency Standards; therefore, the energy demand of these uses would not be wasteful, inefficient, or unnecessary.

Unclassified occupancy structures, such as greenhouses used for cultivation activities, are exempt from CBC standards and therefore would not be subject to state-mandated energy efficiency design requirements or practices.

In order to estimate energy demand, the applicant utilized sample energy consumption rates from the County of Santa Barbara Cannabis Energy Conservation Plan Electricity Use Calculation Form (County of Santa Barbara 2018). This calculation form contains formulas for estimating electricity use of cannabis operations. The form assumes that mixed-light (greenhouse) cultivation uses 110 kWh/sf annually.

The proposed project includes 5 – 25' x 75' greenhouses containing a total of 9,375 square feet of indoor mixed-light cannabis cultivation area. Based on the energy consumption rates from the Santa Barbara County Form, the project's expected energy consumption for the mixed-light cultivation activities would be approximately 1,031,250 kWh per year. This estimate is likely on the high side, due to the climate differential in the two regions. It is much sunnier in Lake County than in Santa Barbara County which translates into a lower power demand for lighting here.

Based on the California Energy Commission Report, a generic non-cannabis commercial building uses approximately 21.25 kWh/year/sf, which would be equivalent to 199,218 kWh/year for a 9,375 square foot building.

Preparation of an Energy Conservation Plan and implementation of a combination of measures that reduces project energy use is suggested.

Upon implementation of an energy conservation plan, the project's impacts associated with energy use would be less than significant and would not be cumulatively considerable.

Fuel Use

Ongoing operation of the project would result in fuel use associated with employee motor vehicle trips and deliveries. The project would employ up to 35 full-time and seasonal employees. Vehicles used by

employees and deliveries during operation would be subject to applicable state and federal fuel economy standards and State-mandated smog inspections. Based on adherence to applicable state and federal vehicle fuel regulations and the size and scope of proposed activities, project fuel use would not result in a potentially significant environmental impact and would not be wasteful, inefficient, or unnecessary.

Therefore, potential environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources and potential conflict with state or local plans regarding renewable energy or energy efficiency would be less than significant.

Conclusion

The 2160 Ogulin Canyon Road project would not result in a potentially significant energy demand and inefficient energy use during long-term operations.

2160 Ogulin Canyon Road

Odor Control Plan

If and when an odor complaint is received, it will be forwarded to the facilities manager responsible for odor control. The odor complaint incident will be logged, including the time and type of complaint, the location of the odor receptor, and contact information of the person making the complaint. The incident will be investigated by the manager, and the problem identified. The manager will visit the facility in question and determine if there are any deficiencies in the odor control system or other issues or problems, and then identify possible remedies. These remedies if possible should be implemented immediately. The manager will prepare a written response and communicate via email and by phone with the complainant, if possible.

The communications should acknowledge the complaint, describe the incident, and identify what remedial actions have been or will be taken.

Managers responsible for responding to odor complaints at 2160 Ogulin Canyon Road in Clearlake are:
- Brian Pensack
- Garrett Burdick

Ogulin Hills Holdings, LLC Odor Complaint Protocol

1. Each odor complaint will be logged in a master odor complaint logbook indicating:

A. Time and date of complaint.
B. Name of employee who has received complaint.
C. Weather conditions at time of complaint, including wind direction.
D. Specific nature of the complaint i.e. what does the complaint involve, strong odor, weak odor, intermittent odor, continuous odor, and other details.
E. Name, address, phone number, of complainant location and distance from the 2160 Ogulin Canyon Road facilities.
F. Action taken at the time of complaint including indicating who the complaint has been referred to and any the results of any initial investigation that may have been conducted.
G. Investigation of complaint – manager will investigate the complaint and determine the validity of it, including a determination as to equipment or mechanical failures or issues, operational issues, and or any other causes for the odor complaint.
H. Report on odor complaint – The managers will issue a report on the complaint, file it in the complaint logbook, and call the complainant within five working days to report findings and resolution actions.

Odor Mitigation

Cannabis odors are considered by some people to be objectional. The 2160 Ogulin Canyon Road site cultivation greenhouse and processing operations will use state-of-the-art air filtration systems, the most effective odor neutralizer for indoor and mixed light cultivation operations. Charcoal filters may be installed in the end or sidewall areas of the processing/manufacturing/greenhouse structures. And will also be installed within the mechanical air movers on the roof of the processing building.
Air from the cultivation areas will be mechanically vented through the structures using filters thus preventing nuisance odors from escaping the structures.

No significant odor impacts are anticipated from the cultivation and processing operations, due to the use of the filtration system, limited residential population in the area, the size of the cultivation operation, and the extensive setbacks from roads, property lines, and nearby parcels.
The project may be provided with a back-up odor mitigation system – an ozone generator – which may be installed on the outside of the exhaust fans, if needed and recommended.
Should additional odor mitigation be necessary, a high-pressure atomizing system could be installed outside of the exhaust fans. This type of system generates an aerosol water vapor that binds with the cannabis terpene compounds to reduce odors.

ATTACHMENT B

OWNER

OGULIN ESTATES HOLDINGS, LLC
BRIAN D. PENSACK
637 LINDARD ST., SUITE 201
SAN RAFAEL, CA 94901

SITE PLAN DATA

AREA OF PROPERTY	9.56 ACRES TOTAL
ZONING	I - INDUSTRIAL
FLOOD ZONE	X, AE, AO

NOTES

1) THIS IS NOT A BOUNDARY SURVEY. ALL LOT LINES SHOWN ARE BASED ON A.P.N. MAP.

2.) EACH GREENHOUSE TO BE EQUIPED WITH A THERMAL CAMERA.

3.) ELECTRIC, PHONE, AND CABLE LINES ARE PROPOSED TO BE UNDERGROUND ON SITE.

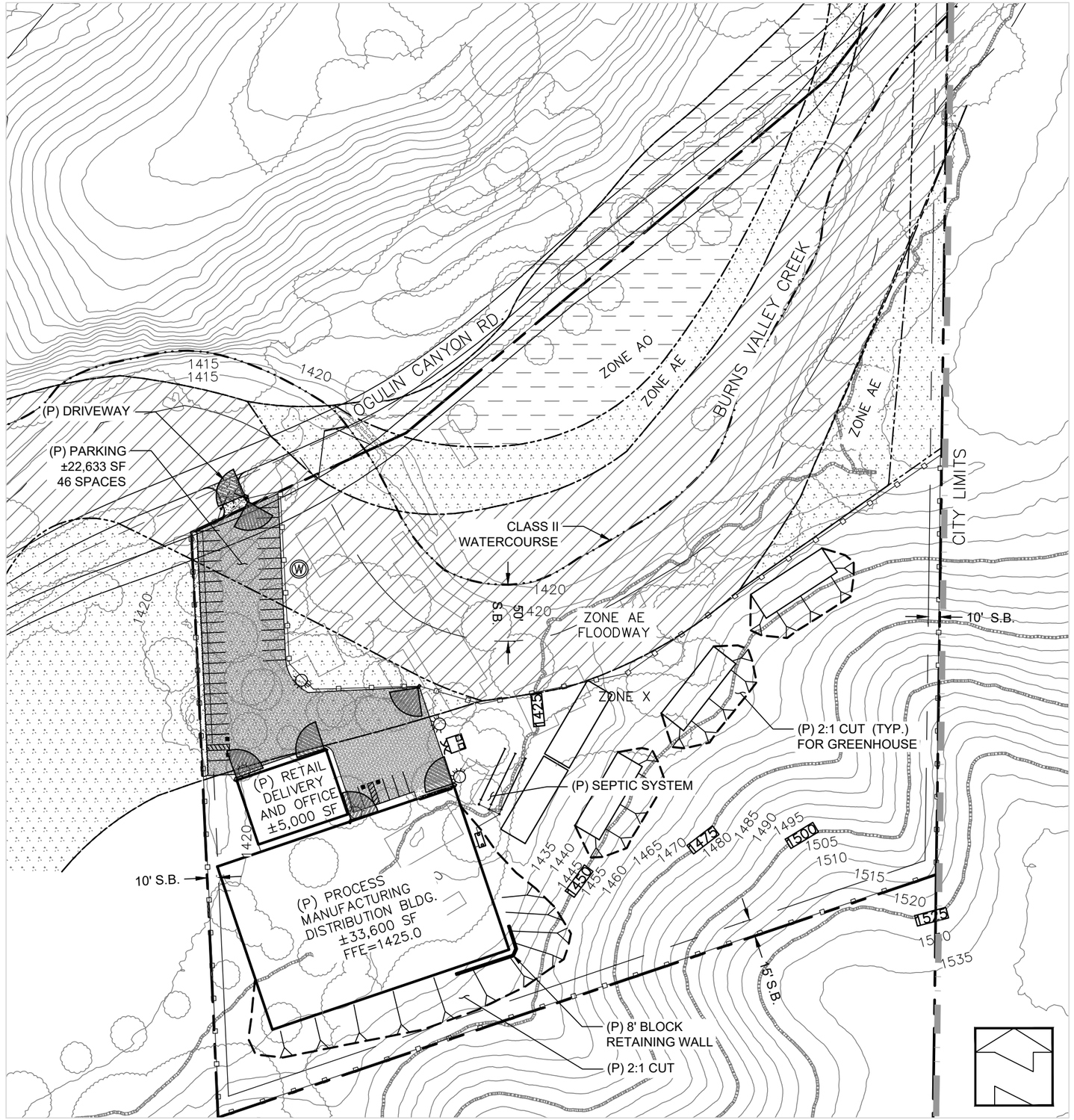
EARTHWORK QUANTITIES

CUT: 8,000 CY
FILL: 4,000 CY

NET: 4,000 CY EXPORT

LEGEND

- PROPERTY LINE
- SETBACK LINE
- EASEMENT LINE
- (P) ACCESS ROAD/DRIVEWAY
- (E) ACCESS ROAD/DRIVEWAY
- (E) TREE/BRUSH LINE
- FEMA FLOOD ZONE BOUNDARY
- (P) LANDSCAPE
- (P) 6' CHAIN LINKE FENCE
- (P) TRASH ENCLOSURE
- (P) THERMAL CAMERA
- (P) LIGHT POLE
- (P) GREENHOUSES (75'X25')
- ZONE AE
- ZONE AE FLOODWAY
- ZONE AO
- ZONE X



SUBMITTED TO:
CITY OF CLEARLAKE
COMMUNITY DEVELOPMENT DEPT.
14050 OLYMPIC DRIVE
CLEARLAKE, CA 95422

VanDerWall Engineering, Inc.
PO BOX 431
KELSEYVILLE, CA 95451
707-279-4887

Ogulin Cannabis Facilities II

SITE PLAN
APN: 010-044-21
2160 Ogulin Canyon Road
CLEARLAKE, CALIFORNIA

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	JAN. 2021
PROJ	21-02
DWG	
SHEET	OF 2

ATTACHMENT C

BIOLOGICAL RESOURCE ASSESSMENT WITH BOTANICAL SURVEY

For

Ogulin Cannabis Facilities II

2160 Ogulin Canyon Road

Lake County, California

June 25, 2021

Prepared for: Ogulin Estates Holdings,LLC

637 Lindard Street

San Rafael, CA 94901

Prepared by: Lawrence Ray,
nativeplantguy@msn.com

Ecological Consultant

201 Navigator Drive
Scotts Valley, CA
95066

CONTENTS

FIGURES AND TABLES

1.0 PROJECT DESCRIPTION

1.1 The parcel is located 2160 Ogulin Canyon Road, north-east of Clearlake, CA and approximately ½ mile east of CA State Highway 53. See **Figure 1** attached.

Figure 1;
Location

The local permitting agency is requesting completion of a botanical survey and assessment of biological resources on the property as part of the California Environmental Quality Act (CEQA) review required for new development. The initial phase of this assessment evaluates the potential of the property to contain sensitive plant and wildlife habitat. The second phase consists of field surveys, including a botanical survey listing all plant taxa[1]. The biological resource assessment will determine whether the property contains sensitive plants or potentially contains sensitive wildlife requiring mitigation under the California Environmental Quality Act (CEQA) or National Environmental Policy Act (NEPA). As used here, the terms sensitive plant or wildlife includes all state or federal rare, threatened, or endangered species and all species listed in the California Natural Diversity Database (CNDDB) list of "Special Status Plants, Animals, and Natural Communities".

A delineation of waters of the U.S. was not conducted due to the lack of water and hydric soil not present on the parcel. A wetland is defined as 1. The presence of water 2. Hydric soils and 3. Wetland plants. The presence of woody riparian species and the evidence of water flow does qualify as potential wetland. Riparian areas are considered sensitive areas and are to be protected. Setback requirements would be needed for the existing riparian area (depicted I **Section 3.3, Vegetation Types and graphically on Figure 3, Vegetation Types**). **Figure 2** of this report illustrates that the riparian area will not be altered or encroached upon in any significant way from the actions proposed in the project. All wetlands and drainages within the project area are depicted in Table 5.

1.2 **Proposed Project:** This survey covers 1 parcel totaling approximately 9.56 acres in the east central part of Lake County APN: 010-044-21. Ogulin Estates Holdings, LLC is the landholder of the parcel located in the Burns Valley creek watershed. The area proposed for development comprise approximately 2 to 3 acres in size. The area is comprised of an existing set of buildings with associated roads and service ways. Proposed project drawing is attached, see **Figure 2.**

2.0 ASSESSMENT METHODOLOGY

The basis of the biological resource assessment is a comparison of existing habitat conditions within the project boundaries to the geographic range and habitat requirements of sensitive plants and wildlife. It includes all sensitive species that occupy habitats similar to those found in the project area and whose known geographic ranges encompass it. The approach is conservative in that it tends to over-estimate the actual number of species present. The analysis includes the following site characteristics:

- Location of the project area with regard to the geographic range of sensitive plant and wildlife species
- Location(s) of known populations of sensitive plant and wildlife species as mapped in the California Natural Diversity Database (CNDDB)
- Soils of the project area
- Elevation
- Presence or absence of special features such as vernal pools and serpentine soils
- Plant communities existing within the project area

In addition to knowledge of the local plants and wildlife, the following computer databases were used to analyze the suitability of the site for sensitive species:

- California Department of Fish and Wildlife (CDFW), *California Natural Diversity Database (CNDDB)*; RareFind 5, 2021
- California Native Plant Society's (CNPS) *Electronic Inventory of Rare and Endangered Vascular Plants of California* (v9-01 0.0)
- California Department of Fish and Wildlife, *California Wildlife Habitat Relationships System (CWHR Version 9.0)*

The CNDDB and RareFind 5 databases consist of maps and records of all known populations of sensitive plants and wildlife in California. This data is continually updated by the CDFW with new sensitive species population data.

The CNPS database produces a list of sensitive plants potentially occurring at a site based on the various site characteristics listed above. While use of the CNPS inventory does not in itself eliminate the need for an in-season botanical survey, it can, when used in conjunction with other information, provide a very good indication of thesuitability of a site as habitat for sensitive plant species.

The CWHR database operates on the same basis as the CNPS inventory. Input includes geographic area, plant community (including development stage), soil structure, and special features such as presence of water, snags, cover, and food (fruit, seeds, insects, etc.).

[1] Many sensitive plants and wildlife are subspecies or varieties which are taxonomic subcategories of species. The term "taxa" refers to species and their sub-specific categories.

2.1 Botanical Survey Methods: An in-season botanical survey was conducted for the project site. The CNDDB report and maps for the Lower Lake, CA quadrangle were referenced prior to the survey. Vegetation communities were identified based on the nomenclature of *A Manual of California Vegetation* (Sawyer, Keeler-Wolf, andEvens, 2009), and mapped on a 1"=600' aerial photo (due to the large size of the survey area). Vegetation type names are based on an assessment of dominant cover species.

Plants occurring on the site were identified using *The Jepson Manual, Higher Plants of California,* 2012. Where necessary, species names were updated based on the 6th edition, *CNPS Inventory of Rare and Endangered Plants of California*. A map of the vegetation types at the site is provided in **Figure 2.**

2.2 Survey Dates: Site visits for the plant surveys, vegetation mapping, and the delineation were conducted on May 10, 18, and June 10,11, 2021.

2.3 Biological Assessment Staff: The field surveys, plant taxonomy, and vegetation mapping, were conducted by Lawrence Ray principal biologist. Mr. Ray has a Master of Science Degree in Ecology from the Antioch University/UC Berkeley and a Bachelor of Science Degree in Environmental Studies from the Antioch University. He hasover 35 years of experience as a biologist in the government and private sectors. Supportstaff was provided by Austin Ray who holds an AA Degree in Horticulture from Cabrillo College.

3.0 SITE CHARACTERISTICS

3.1Site Topography and Drainage: The parcel occupies a relatively flat topography from 1,418 (mean sea level) at the entrance on Ogulin Canyon Road to 1,513 feet msl at the southeast corner. Drainage from the surrounding slopes is to Burns Valley Creek which is drains southwest to Clear Lake. Topography is shown in **Figure 1.**

3.2 Soils: Based on the *Soil Surveys of Lake County and Mendocino County (Eastern Part), California* prepared by the U.S. Resource Conservation Service, the survey area contains the following soil types:

161-Manzanita loam, 15 to 25 percent slopes. Thisvery deep, well drained soil is on terraces. It formed in alluvium derived from mixed rock sources. The vegetation is oak, manzanita, and annual grasses.

Elevation is 1,400 to 1,600 feet. The average annual precipitation is 25 to 35 inches, the average annual airtemperature is 55 to 59 degrees F, and the average frost-free period is 160 to 200 days.
Typically, the upper 5 inches of the surface layer is light yellowish brown loam and the lower 14 inches is strong brown loam. The upper 9 inches of the subsoil isstrong brown loam, and the lower 56 inches is variegated strong brown and yellowish red clay loam.

197-Phipps complex, 30 to 50 percent slopes.
This map unit is on uplifted, dissected hills. These soils are susceptible to slumping and gullying. The vegetationis mainly oak and annual grasses. Elevation is 1,100 to 2,000 feet. The average annual precipitation is about 25 to 35 inches, the average annual air temperature is about 55 to 59 degrees F, and the average frost-free period is about 160 to 200 days.
This unit is about 50 percent Phipps clay loam, loamysubstratum, and 15 percent Phipps loam. The components of this unit are so intricately intermingled that it was not practical to map them separately at the scale used.
Included in this unit are small areas of Bally and Forbesville soils. Also included are small areas of olive gray clayey soils that form deep, wide cracks when dry and are 20 to 40 inches deep over unconsolidated sediment; highly eroded or gullied soils in steep ravines; soils on north-facing slopes that are similar to these Phipps soils but are cooler or have slopes of 50 to 75 percent; and soils that are similar to these Phipps soils but have a thick, dark-colored surface layer, have more clay throughout the profile, or have less clay in the subsoil. Included areas make up about 35 percent of thetotal acreage. The percentage varies from one area to another.
The Phipps clay loam is very deep and well drained. Itformed in alluvium derived from mixed rock sources.
Typically, the surface layer is pale brown clay loam about7 inches thick. The upper 11 inches of the subsoil is palebrown and light yellowish brown clay loam, and the lower24 inches is yellowish brown clay. The substratum to a depth of 60 inches or more is light yellowish brown clay loam.

246- Wolfcreek gravelly loam. This very deep, welldrained soil is on flood plains. It formed in alluvium derived from mixed rock sources. Slope is O to 2 percent. The vegetation is mainly annual grasses and forbs. Elevation is 1,300 to 2,600 feet. The average annual precipitation is 25 to 40 inches, the average annual air

temperature is 55 to 59 degrees F, and the average frost-free period is 150 to 205 days.

Typically, the surface layer is pale brown gravelly loam1O inches thick. The underlying material to a depth of 72inches is stratified, brown clay loam, sandy clay loam, and very gravelly sandy clay loam.
Included in this unit are small areas of Talmage soils. Also included are small areas of soils that are similar to this Wolfcreek soil but are nongravelly, have a darker colored surface layer and more clay, or are in low areasthat are subject to occasional flooding. Included areas make up about 15 percent of the total acreage. The percentage varies from one area to another.
Permeability of this Wolfcreek soil is moderately slow. Available water capacity is 7.5 to 10.0 inches. Effective rooting depth is 60 inches or more. Surface runoff is very slow, and the hazard of erosion is slight. This soil is subject to rare periods of flooding during prolonged,
high-intensity storms.

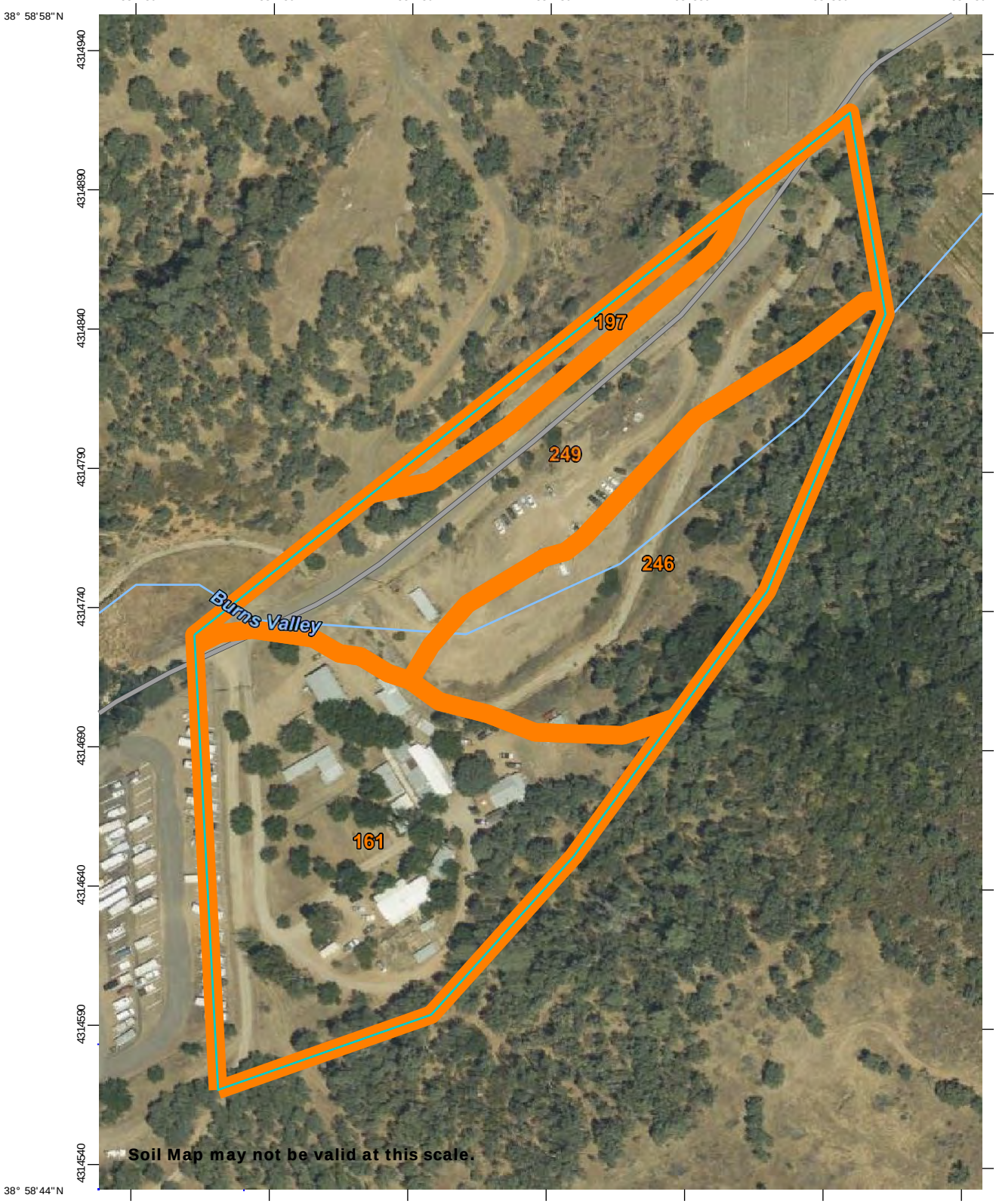
249-Xerofluvents-Riverwash complex. This map unit is on narrow flood plains adjacent to stream channels and in active stream channels. Slope is 0 to 2 percent. The vegetation is mainly sparse annual grassesand forbs. Elevation is 750 to 2,800 feet. The average annual precipitation is 25 to 40 inches, the average annual air temperature is 54 to 59 degrees F, and the average frost-free period is 135 to 200 days.

This unit is about 55 percent Xerofluvents and 30 percent Riverwash. The components of this unit are sointricately intermingled that it was not practical to map them separately at the scale used.

Included in this unit are small areas of Kelsey, Maywood Variant, and Talmage soils. Included areasmake up about 15 percent of the total acreage. The percentage varies from one area to another.
Xerofluvents consist of very deep, excessively drainedsoils that formed in alluvium derived from mixed rock sources. No single profile of Xerofluvents is typical, but one commonly observed in the survey area has a surface layer of grayish brown very gravelly sandy loam 5 inches thick. The underlying material to a depth of 84 inches is stratified, light brownish gray very gravelly loamy coarse sand and very gravelly coarse sand.

Figure 4; Soils Map

Soil Map—Lake County, California
(2160 OCnyn)



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38° 58'58"N
4314940
4314890
4314840
4314790
4314740
4314690
4314640
4314590
4314540
38° 58'44"N

Map Scale: 1:2,060 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 30 60 120 180

Feet
0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

3.3 **Vegetation Types:** This project contains five distinct plant communities or vegetation types based on or derived from the "Standardized Classification" scheme described in the California Native Plant Society (CNPS) *A Manual of California Vegetation.* These vegetation types and other cover types are listed in **Table 1.** They are described below and shown in the vegetation map provided in **Figure 2.**

Figure 2; Vegetation Map

1Blue Oak Alliance/Developed Areas with Blue Oak

2.Ruderal/Waste area dominated by Eriogonum sp

3. Chamise chaparral Shrub Alliance

4. Brome Grasslands

5. Riparian Area-Salix lasiolepis Shrub Alliance

TABLE 1. PLANT COMMUNITIES AND OTHER COVER TYPES PRESENT

COVER TYPE	Total Acres of Cover Type on Property	Percent of Property Supporting Cover Type
Blue Oak Woodland-Quercus douglasii Woodland Alliance	6.25	66
Ruderal non-specific waste area (Eriogonum)	0.94	9.8
Chamise chaparral- Adenostoma fasciculatum Shrubland Alliance	0.39	3.5
Annual brome grasslands - Bromus(diandrus,hordeaceus)	1.52	16
Riparian- Salix lasiolepis Shrubland Alliance	0.46	4.7
Total	**9.56**	**100.00**

1.Blue Oak Woodland/*Quercus douglasii* Woodland Alliance. Quercus douglasii is dominant or co-dominant in the tree canopy Aesculus californica, Juniperus californica,Pinus sabiniana, Quercus agrifolia, Q. lobata, and *Q. wislizeni*. Trees < 20 m; with conifers35m; canopy is intermittent to continuous, or savanna-like; it may be one or two tiered. Shrub layer is sparse to intermittent. Herbaceous layer is sparse or grassy, and forbs are present seasonally. **Habitats:** Valley bottoms, foothills, rocky outcroppings. Soils are shallow, low in fertility, moderately to excessively drained with extensive rock fragments. **Elevation:** 30-1900 m.

2.Ruderal/non-specific waste area. This area is dominated by extremely sparse vegetation due to high compaction of soils and extreme disturbance from industrial use. Two dominant natives cover the greatest percentage of the area; Eriogonum nudum and Eriogonum wrightii. Some scattered grasses and forbs are also present included in the Annual Brome Grassland section and are present around the margins and sparsely throughout the area.

3. Chamise chaparral/*Andenostoma fasciculatum* Shrub Alliance. *Adenostoma fasciculatum* is dominant in the shrub canopy with *A. sparsifolium, Arctostahylos glandulosa, A. manzanita, A. viscida, Ceanothus spp., Diplacus aurantiacus, Eroidictyon californicum, Eriogonum fasciculatum, Hesperoyucca whipplei, Heteromeles arbutifolia, Quercus berberidifolia, Q. wislizeni, Salvia apiana, S. leucophylla, S. mellifera,* and *Toxicodendron diversilobum*. Emergent trees may be present at low cover. Shrubs < 4 m;canopy is intermittent to continuous. Herbaceous layer is sparse to intermittent. **Habitats:**Varied topography. Soils are commonly shallow over colluvium and many kinds of bedrock. **Elevation**: 10-1800 m.

4. Annual brome grasslands/*Bromus (diandrus, hordeaceus) – Brachypodium distachyon*Bromus diandrus, B. hordeaceus, or Brachypodium distachyon is dominant or co- dominant with non-natives in the herbaceous layer. Emergent trees and shrubs may be present at low cover. Herbs < 75 cm; cover is intermittent to continuous. **Habitats:** All topographic settings in foothills, waste places, rangelands, openings in woodlands.**Elevation**: 0-2200 m.

5.Salix lasiolepis Shrubland Alliance. Arroyo willow thickets are small and scattered in the riparian area of the parcel. Also scattered are a few Fremont cottonwood (*Populus fremontii)* as well as a few *Sambucus nigra*. Found along streambanks and benches, slope seeps and stringers along drainages. **The USFWS Wetland Inventory** (1996 national list) recognizes Salix lasiolepis as a **FACW plant.** Elevation**: 0-2170**

4.0 PRE-SURVEY RESEARCH RESULTS

4.1 CNPS On-Line Electronic Inventory Analysis: A California Native Plant Society (CNPS) analysis was conducted for all plants with federal and state regulatory status, and all non-status plants on the CNPS Lists 1B through 4. The query included all plants within this area of the county occurring within the plant communities identified on the project site. The inventory lists species potentially occurring at the site; these are listed in **Table 2**. These species were included in the list of potentially sensitive species specifically searched for during field surveys. It is important to note that this list includes species for which appropriate habitat is not present on the parcel. The CNPS database search does not allow fine tuning for specific soil types and many specific habitats.

Note: *The CNPS list is used to broaden the list of sensitive species considered during the subsequent field surveys; however, it must be used with discretion because the database search does not allow fine-tuning for specific soil types or for many specific habitats required by sensitive plant taxa. Consequently, the CNPS list generated for a site may include several taxa for which the required habitat is not present.*

4.2 California Natural Diversity Database: The California Natural Diversity Database (CNDDB) and CDFW RareFind 5 data and maps for the Purdy's Gardens 7½' and adjacent quadrangles were reviewed for this project. **Table 3** presents a list of sensitive plant and wildlife species known to occur within this quadrangle. In addition to listing the species present within the quadrangle, the table provides a brief descriptor of the habitat requirements and blooming season, along with an assessment of whether the project area contains the necessary habitat requirements for each species. **Appendix A** at the end of this report lists the species within the nine quadrangles in the vicinity of this property.

4.3 **California Natural Diversity Database:** The California Natural Diversity Database (CNDDB) and CDFW RareFind 5 data and maps for the Lower Lake 7½' and adjacent quadrangles were reviewed for this project. **Table 3** presents a list of sensitive plant and wildlife species known to occur within this quadrangle. In addition to listing the species present within the quadrangle, the table provides a brief descriptor ofthe habitat requirements and blooming season, along with an assessment of whether the project area contains the necessary habitat requirements for each species. **Appendix A** at the end of this report lists the species within the nine quadrangles in the vicinity of this property.

TABLE 2. CALIFORNIA NATIVE PLANT SOCIETY'S INVENTORY OF RARE AND ENDANGERED PLANTS

Selected CNPS Plants by Scientific Name

Ogulin Cannabis Facilities II

Scientific Name	Common Name	Family	Lifeform	CRPR	CESA	FESA	Blooming Period	Habitat
Amsinckia lunaris	bent-flowered fiddleneck	Boraginaceae	annual herb	1B.2	None	None	Mar-Jun	Coastal bluff scrub, Cismontane woodland, Valley and foothill grassland
Arctostaphylos manzanita ssp. elegans	Konocti manzanita	Ericaceae	perennial evergreen shrub	1B.3	None	None	(Jan)Mar-May(Jul)	Chaparral, Cismontane woodland, Lower montane coniferous forest; volcanic
Astragalus breweri	Brewer's milk-vetch	Fabaceae	annual herb	4.2	None	None	Apr-Jun	Chaparral, Cismontane woodland, Meadows and seeps, Valley and foothill grassland (open, often gravelly); often serpentinite, volcanic
Calystegia collina ssp. oxyphylla	Mt. Saint Helena morning-glory	Convolvulaceae	perennial rhizomatous herb	4.2	None	None	Apr-Jun	Chaparral, Lower montane coniferous forest, Valley and foothill grassland; serpentinite
Ceanothus confusus	Rincon Ridge ceanothus	Rhamnaceae	perennial evergreen shrub	1B.1	None	None	Feb-Jun	Closed-cone coniferous forest, Chaparral, Cismontane woodland; volcanic or serpentinite

Scientific Name	Common Name	Family	Lifeform	CRPR	CESA	FESA	Blooming Period	Habitat
Clarkia gracilis ssp. tracyi	Tracy's clarkia	Onagraceae	annual herb	4.2	None	None	Apr-Jul	Chaparral (openings, usually serpentinite)
Collomia diversifolia	serpentine collomia	Polemoniaceae	annual herb	4.3	None	None	May-Jun	Chaparral, Cismontane woodland serpentinite, rocky or gravelly
Cryptantha dissita	serpentine cryptantha	Boraginaceae	annual herb	1B.2	None	None	Apr-Jun	Chaparral (serpentinite)
Eryngium constancei	Loch Lomond button celery		Annual herb	1B.1	endangered	endangered		Vernal pool, wetland
Fritillaria purdyi	Purdy's fritillary	Liliaceae	perennial bulbiferous herb	4.3	None	None	Mar-Jun	Chaparral, Cismontane woodland, Lower montane coniferous forest; usually serpentinite
Gratiola heterosepala	Boggs Lake hedge-hyssop	Plantaginaceae	annual herb	1B.2	**CE**	None	Apr-Aug	Marshes and swamps (lake margins), Vernal pools; clay
Hesperolinon adenophyllum	glandular western flax	Linaceae	annual herb	1B.2	None	None	May-Aug	Chaparral, Cismontane woodland, Valley and foothill grassland; usually serpentinite
Horkelia bolanderi	Bolander's horkelia	Rosaceae	perennial herb	1B.2	None	None	(May)Jun-Aug	Chaparral, Lower montane coniferous forest, Meadows and seeps, Valley and foothill grassland; edges, vernally mesic areas
Lasthenia burkei	Burke's goldfields		Annual herb	1B.1	endangered	endangered		Meadow, seeps, vernal pool, wetland
Layia septentrionalis	Colusa layia	Asteraceae	annual herb	1B.2	None	None	Apr-May	Chaparral, Cismontane woodland, Valley and foothill grassland; sandy, serpentinite
Lilium rubescens	redwood lily	Liliaceae	perennial bulbiferous herb	4.2	None	None	Apr-Aug(Sep)	Broadleafed upland forest, Chaparral, Lower montane coniferous forest, North Coast coniferous forest, Upper montane coniferous forest. Sometimes serpentinite, sometimes roadsides
Monardella viridis	green monardella	Lamiaceae	perennial rhizomatous herb	4.3	None	None	Jun-Sep	Broadleafed upland forest, Chaparral, Cismontane woodland

Streptanthus glandulosus ssp. hoffmanii	Hoffman's bristly jewelflower	Brassicaceae	annual herb	1B.3	None	None	Mar-Jul	Chaparral, Cismontane woodland, Valley and foothill grassland (often serpentinite); rocky
Streptanthus hesperidis	green jewelflower	Brassicaceae	annual herb	1B.2	None	None	May-Jul	Chaparral (openings), Cismontane woodland; serpentinite, rocky
Tracyina rostrata	beaked tracyina	Asteraceae	annual herb	1B.2	None	None	May-Jun	Chaparral, Cismontane woodland, Valley and foothill grassland
Viburnum ellipticum	oval-leaved viburnum	Adoxaceae	perennial deciduous shrub	2B.3	None	None	May-Jun	Chaparral, Cismontane woodland, Lower montane coniferous forest

KEY FOR TABLE 2:

CNPS Rare Plant-Threat Rank Definitions:

1B.1 = Rare, threatened, or endangered in California and elsewhere; seriously threatened in California
1B.2 = Rare, threatened, or endangered in California and elsewhere; moderately threatened in California
1B.3 = Rare, threatened, or endangered in California and elsewhere; not very threatened in California
2A = Presumed extinct in California, but extant elsewhere

2B.1 = Rare, threatened, or endangered in Calif., but more common elsewhere; seriously threatened in Calif.
2B.2 = Rare, threatened, or endangered in Calif., but more common elsewhere; moderately threatened in Calif.
2B.3 = Rare, threatened, or endangered in Calif., but more common elsewhere; not very threatened in Calif.

3 = Plants about which we need more information (Review List)

3.1 = Plants about which we need more information (Review List); seriously threatened in California

3.2 = Plants about which we need more information (Review List); moderately threatened in California

3.3 = Plants about which we need more information (Review List); not very threatened in California

4.1 = Plants of limited distribution (watch list); seriously threatened in California

4.2 = Plants of limited distribution (watch list); moderately threatened in California

4.3 = Plants of limited distribution (watch list); not very threatened in California

State and Federal Status:

CESA = California Endangered Species Act
FESA = Federal Endangered Species Act

SR	*= State. Rare*	*SE*	*= State Endangered.*
ST	*= State. Threatened*	*SD*	*= State Delisted*
SSC	*= CDFW Species of Special Concern*	*FP*	*= CDFW Fully Protected*
WL	*= CDFW Watch List*	*FE*	*= Federal Endangered*
FT	*= Federal Threatened*	*FD*	*= Federal Delisted*

TABLE 3. CNDDB SENSITIVE PLANT AND WILDLIFE SPECIES WITHIN THE LOWER LAKE AND ADJACENT CALIFORNIA 7½' QUADRANGLES

Habitat Type	Habitat Present
Northern Interior Cypress Forest	No
Serpentine Bunchgrass	No

Plant Species	Common Name	Habitat Requirements/ Fed-State-CNPS* Status	Blooming Season/Form	Habitat Present
Amsinckia lunaris	bent-flowered fiddleneck	Coastal bluff scrub, cismontane woodland, valley & foothill grassland; --/--/1B.2	March-June ann. herb	Habitat present but not found during surveys
Antirrhinum virga	twig-like snapdragon	Chaparral, lower montane coniferous forest,/rocky, openings, often serpentinite; --/--/4.3	June-July per. herb	Poor habitat present
Arctostaphylos manzanita ssp. elegans	Konocti manzanita	Chaparral, cismontane woodland, lower montane conif. forest/volcanic; --/--/1B.3	March-May everg. shrub	Poor habitat present
Arctostaphylos stanfordiana ssp. raichei	Raiche's manzanita	Chaparral, lower montane coniferous forest/rocky, often serpentine; --/--/1B.1	Feb.-April ann. herb	Poor habitat present
Astragalus breweri	Brewer's milk-vetch	Chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland (open, often gravelly)/often serpentinite, volcanic; --/--/4.2	April-June ann. herb	Poor habitat present
Brasenia schreiberi	watershield	Marshes & swamps/freshwater; --/--/2B.3	March-Sept rhizom. herb	Habitat not present
Calystegia collina ssp. oxyphylla	Mt. Saint Helena morning-glory	Chaparral, lower montane conif. forest, valley & foothill grassland/serpentinite; --/--/4.2	April-June rhizom. herb	Habitat not present
Carex comosa	bristly sedge	Coastal prairie, marshes and swamps (lake margins), valley and foothill grassland; --/--/2B.1	May-Sept. per. rhizom. herb	Habitat not present
Ceanothus confusus	Rincon ridge ceanothus	Closed cone conif. forest, chaparral, cismontane woodland/volcanic; --/--/1B.1	Feb.-April everg. shrub	Poor habitat present
Clarkia gracilis ssp. tracyi	Tracy's clarkia	Chaparral (openings, usually serpentinite); --/--/4.2	April-June ann. herb	Habitat not present
Collomia diversifolia	serpentine collomia	Chaparral, cismontane woodland/serpentinite, rocky or gravelly; --/--/4.3	May-June ann. herb	Habitat not present
Cryptantha dissita	serpentine cryptantha	Chaparral/serpentine outcrops; --/--/1B.2	April-June ann. herb	Habitat not present

Plant Species	Common Name	Habitat Requirements/ Fed-State-CNPS* Status	Blooming Season/Form	Habitat Present
Entosthodon kochii	Koch's cord moss	Cismontane woodland (soil); --/--/1B.3	moss	Habitat present but not found during surveys
Erythranthe nudata	bare monkeyflower	Chaparral, cismontane woodland, serpentinite seeps; --/--/4.3	May-June ann. herb	Habitat not present
Fritillaria purdyi	Purdy's fritillary	Chaparral, cismontane woodland, lower montane coniferous forest; usually serpentinite; --/--/4.3	March-June bulb. herb	Habitat not present
Gratiola heterosepala	Boggs Lake hedge-hyssop	Freshwater marsh, marshes & swamps (freshwater), vernal pools, sometimes lake margins/clay; --/SE/1B.2	April-Aug. ann. herb	Habitat not present
Hesperolinon adenophyllum	glandular western flax	Chaparral, cismontane woodland, valley & foothill grassland/usually serpentine chaparral; --/--/1B.2	May-Aug. ann. herb	Habitat not present
Horkelia bolanderi	Bolander's horkelia	Lower montane conif. forest, chaparral, meadows & seeps, valley & foothill grassland/grassy margins of vernal pools and meadows; --/ --/1B.2	June-Aug. per. herb	Habitat present but not found during surveys
Kopsiopsis hookeri	small groundcone	North Coast coniferous forest/redwood forest; --/--/2B.3 (parasitic)	April-August per. rhizom. herb	Habitat not present
Layia septentrionalis	Colusa layia	Chaparral, cismontane woodland, valley & foothill grassland/sandy or serpentine; --/--/1B.2	April-May ann. herb	Habitat present, not found during surveys
Leptosiphon acicularis	bristly leptisiphon	Chaparral, cismontane woodland, coastal prairie, valley and foothill grassland; --/--/4.2	April-July ann. herb	Habitat present but not found during surveys
Monardella viridis	green monardella	Broadleaved upland forest, chaparral, cismontane woodland; --/--/4.3	June-Sept. rhizom. herb	Habitat present but not found during surveys
Plagiobothrys lithocaryus	Mayacamas popcorn-flower	Chaparral, cismontane woodland, valley & foothill grassland/mesic; --/--/1A (presumed extinct)	April-May ann. herb	No habitat present
Ranunculus lobbii	Lobb's aquatic buttercup	Cismontane woodland, North Coast coniferous forest, valley and foothill grassland, vernal pools/mesic--/--/4.2	Feb.-May ann. herb (aquatic)	Habitat not present
Sidalcea keckii	Keck's checkerbloom	Chaparral, cismontane woodland, coastal prairie,valley and foothill grassland;Endangered/1B1/	April-May annual herb	Poor habitat present, not found

Streptanthus glandulosus ssp. hoffmanii	Hoffman's bristly jewelflower	Chaparral, cismontane woodland, valley and foothill grassland/rocky, often serpentinite; --/--/1B.3	March-July ann. herb	Habitat not present
Tracyina rostrata	beaked tracyina	Cismontane woodland, valley & foothill grassland; --/--/1B.2	May-June ann. herb	Habitat present but not found during surveys

Plant Species	Common Name	Habitat Requirements/ Fed-State-CNPS* Status	Blooming Season/Form	Habitat Present
Viburnum ellipticum	oval-leaved viburnum	Chaparral, cismontane woodland, lower montane coniferous forest; --/--/2B.3	May-June decid. shrub	Habitat present but not found during surveys

*See CNPS list for key

Wildlife Species	Common Name	Habitat Requirements, Status	Season Present	Habitat Present
Bombus occidentalis	western bumblebee	Once common in the western U.S., these bees are important pollinators of both wild plants and crops. Threats to be bee include insecticides, loss of habitat, climate change and diseases from commercial bee rearing. G4/S1	year-round	Habitat may be present
Bombus caliginosus	obscure bumble bee	A black and yellow bee found in California, Oregon, Washington. Food plant genera: Baccharis, Cirsium, Lupinus, Lotus, Grindelia, Phacelia; G3G4/CA-SNR	year-round	Poor habitat present
Taricha rivularis	red-bellied newt	Occurs near high to moderate gradient streams and rivers, riffles, pools. Burrows in soil or debris near water, emerges during fall rains to water to breed; G4/SNR	year-round	No Habitat present
Rana boylii	foothill yellow-legged frog	Riparian/aquatic: partly-shaded, shallow streams & riffles with a rocky substrate in variety of habitats; SSC/SCT/G3/S2S3	year-round	No Habitat present
Emys marmorata	western pond turtle	Aquatic turtle found in ponds, lakes, rivers, creeks, marshes & irrigation ditches with abundant vegetation and rocky or muddy bottoms; In woodland, forest, & grasslands; SSC/G3G4/S3	year-round	No Habitat present
Elanus leucurus	white-tailed kite	Open areas near woodlands and water; SFP/G5/S3	year-round	Habitat is present
Circus cyaneus	northern harrier	Coastal salt and freshwater marshes, meadows, grasslands near wetlands; nests in brush on ground; SSC/G5/S3	migratory	Habitat is present
Pandion haliaetus	osprey	Large, fish-bearing waters usually in mixed conifer habitats/typically nests are within 15 miles of good fish-producing body of water; WL/G5/S4	sometimes migratory	Habitat not present

Wildlife Species	Common Name	Habitat Requirements, Status	Season Present	Habitat Present
Agelaius tricolor	tricolored blackbird	Fresh emergent wetland (marshes) with cattails, tules, sedges. Largely endemic to California; SCE//G2G3/S1S2	year-round	No Habitat is present
Ammodramus savannarum	grasshopper sparrow	Prefers open grassland habitats with patches of bare ground and shrubby vegetation. Breeds in various types of grassland vegetation. Eats insects, grain, and seeds on the ground; SSC/G5/S3	sometimes migratory	Habitat is present
Corynorhinus townsendii	Townsend's big-eared bat	Roosts in open near relatively mesic sites, mainly montane forest habitats; SSC/G3/S2	local migrant	Habitat is present
Antrozous pallidus	pallid bat	Open, dry habitats, forest habitats, in caves, tunnels, buildings, bridges; sensitive to human disturbance; SSC/G5/S3	local migrant	Habitat is present
Pekania pennanti	fisher, West Coast DPS	No. Coast conifer forest: old-growth conifer or riparian forests; cavities, snags, logs, rocky areas; SCT/SSC/G5/S3	year-round	Poor habitat present
Taxidea taxus	American badger	Dryer open stages of shrub, forest, & herbaceous habitats. Needs friable soils for burrows and open uncultivated ground; SSC/G5/S3	year-round	Habitat is present
Erethizon dorsatum	North American porcupine	Occurs in a wide variety of coniferous and mixed woodland habitats in Sierra Nevada, Cascade, and Coast Ranges/ uses fallen and standing dead trees as cover; G5/S3	year-round	No Habitat present

KEY FOR TABLE 3:

State and Federal:

SE/ST/SD=State Endangered/Threatened/Delisted

SC/SCD=State Candidate for Listing/Delisting

SSC=CDFW Species of Special Concern

SFP=CDFW Fully Protected

WL=CDFW Watch List

FE/FT/FD=Federal Endangered/Threatened/Delisted
FPE/FPT/FPD/FP=Federal Proposed Endangered/Threatened/Delisting

FC=Federal Candidate

NatureServe Conservation Status:

G1/S1 = Global/State Critically Imperiled

G2/S2 = Global/State Imperiled

G3/S3 = Global/State Vulnerable

G4/S4 = Global/State Apparently Secure

G5/S5 = Global/State Secure

SNR=Not rated

4.4 Wildlife Habitat Analysis Results: The California Wildlife Habitat Relationships analysis lists a number of native species with sensitive and non- sensitive status as potentially occurring on the site based on the geographic location and wildlife habitats present. This list is included as **Appendix B**.

4.5 Wildlife Assessment: Based on the pre-survey research conducted for this study, a total of 15 sensitive wildlife species need to be accounted for within the project area. These consist of the species identified as present within and adjacent to the Lower Lake quadrangle by the CNDDB. Accepted protocol requires that all CNDDB species in the surrounding U.S.G.S. quadrangle be discussed even through suitable habitat may not occur on the site.

- **Western bumble bee (*Bombus occidentalis*):**
  Once common in the western and northwestern U.S., these bees are important pollinators of both wild plants and crops and has been commercially reared to pollinate crops such as greenhouse tomatoes and cranberries; they also have been an important pollinator of alfalfa, avocado, apples, cherries, blackberries, and blueberry. Since 1998 populations have declined due to insecticides, loss of habitat, climate change and diseases from commercial bee rearing. This bumblebee is a generic forager and its habitat requirements are non-specific. Identification of bees is based on their sex and markings.

- **Obscure bumble bee (*Bombus oliginosus*):**
  This bumblebee is native to the west coast; in the Coast Range it inhabits meadows. It is similar in appearance and co-exists with the common *Bombus vosnesenskii* and may be mistaken for this bee. *B. oliginosus* is threatened by climate change and loss of habitat, and does not thrive in developed urban or agricultural areas. Its food sources include plant genera *Baccharis, Cirsium, Lupinus, Lotus, Grindelia*, and *Phacelia*. There is a low potential for it to occur on the property.

- **Red-bellied newt (*Taricha rivularis*):**
  This species is often found under rocks, logs, soil or duff, or in rodent burrows in coastal woodlands and redwood forests. Newts occur near high to moderate gradient streams and rivers, in riffles, and pools. Newts burrow in soil or debris near water, and emerge during fall rains to breed; and may migrate up to a mile or more between terrestrial habitat and stream breeding sites. They usually breed in flowing water, from late February through May. Appropriate habitat for newts does not occur within the streams on the project site. Streams on the surrounding slopes are short-term seasonal drainages, these drainages generally are unsuitable for this species.

- **Foothill yellow-legged frog (*Rana boylii*):**
  These frogs are relatively common along the shaded banks of perennial headwater streams. They are heavily dependent on the presence of perennial water and are seldom far from pools where they can seek shelter from predation. The larvae require three to four months to mature, making most ephemeral (seasonal) streams unsuitable as breeding sites. Burns Valley Creek may provide suitable habitat for this species. These frogs may spend dry summer months in shallows and backwaters after stream channels become dry, which do not occur in this watershed.

- **Western pond turtle (*Emys marmorata*):**
  These turtles prefer slow or ponded water with sheltering vegetation but will range widely through less suitable habitat in search of these sites. Eggs are laid on land in sheltered nests. Stream channels are often used as movement corridors between waterways or ponds. While turtles may use the stream corridor , there is no suitable habitat on this parcel for them to remain.

- **White-tailed kite (*Elanus leucurus*):**
  Usually found near agricultural areas, the kite prefers open terrain near woodlands and water. These raptors hunt over open country and prefer large, deciduous trees surrounded by expanses of grassland, meadows, farmland, and/or wetlands for nesting and roosting sites. The property contains woodlands adjacent to expanses of open grasslands with nearby water (Clearlake); this would provide marginal habitat for kites for both nesting and hunting. This is a California Fully Protected species. All raptors are protected under the Migratory Bird Treaty Act and California Department of Fish and Wildlife code.

- **Northern harrier (*Circus cyaneus hudsonius*):**
  This raptor occurs in annual grassland and is also found at high elevations. It inhabits meadows, open grasslands and rangelands, and emergent wetlands; it prefers habitat such as the broad, open grasslands and wetlands of the Sacramento Valley where this species is commonly seen. It is seldom found in wooded or agricultural areas. Formerly called the “marsh hawk”, it nests on the ground in dense shrubby vegetation in and near wetlands. The harrier feeds on insects and small mammals, birds, etc., and competes with the red-tailed hawk for food. These raptors nest from April to August and have California Species of Concern status during that period. This parcel does not provide habitat for harriers.

- **Osprey (*Pandion haliaetus*):**
  This species occurs near large, fish-bearing waters in ponderosa pine or mixed conifer habitats where it feeds on open waters for fish, although it also takes small birds and mammals. It hunts over wide expanses of open water and usually nests in the tops of large isolated trees near shorelines. Nests are made on platforms of stickson top of large snags, dead-topped trees, or man-made structures. Nests areusually within close proximity of large fish-producing water bodies. The stick nests constructed by this species are readily apparent when present. Ospreys prefer to nest near large bodies of water and are unlikely to nest on the property.

- **Tricolored blackbird (*Agelaius tricolor*):**
  These blackbirds are colony nesters in fresh emergent wetland habitat (tule or cattail marsh), but may also occur in dense blackberry or willow shrub communities adjacent to water. Cover is required for nesting. Proximity to insects is preferred, although food includes seeds and grain. Breeding occurs April through June. The species is usually readily observed when present and has a distinctive call. This site does not contain suitable habitat for this species.

- **Grasshopper sparrow (*Ammodramus savannarum*):**
  This sparrow is a summer resident in foothills and lowlands west of the Cascade-Sierra Nevada crest from Mendocino and Trinity counties to southern California. It occurs in dry, dense grasslands with scattered shrubs for singing perches. Grasshopper sparrows are secretive in winter. They need thick grasslands and forbs for cover, and nest in small depressions on the ground. They breed from April to mid-July. Sparrows feed primarily on insects but also eat other invertebrates, grains, and forb seeds. They search for food on the ground. They may be present in the grasslands.

- **Townsend's western big-eared bat (*Corynorhinus townsendii ssp. townsendii*):**
  This bat is a California Species of Special Concern. Physical traits include bilateral nose lumps and very large ears. The most restrictive resource required by this species is daytime roosting habitat. This bat prefers caves and mines and is easily observed when present, hanging from open surfaces in mines and caves. Less frequently it will roost in tunnels, bridges, or other human-made structures, or hollow trees. Roost sites may vary from year to year. These bats typically prefer relatively mesic (moist)habitat such as streams near woodland habitats and may travel long distances for foraging. The majority of their diet consists of moths. This species is extremely sensitive to disturbance of roosting sites: These sites are frequently abandoned after being visited by humans. This property contains a riparian corridor, however it is low quality habitat for this species.

- **Pallid bat (*Antrozous pallidus*):**
  Optimal habitat for these bats consists of open, dry habitats with rocky areas, but the bats are also found in oak savanna grasslands, and in open forest and woodlands with access to riparian and open water for feeding and drinking. Foraging occurs over open country. These bats prefer the cool summer temperatures of caves, crevices, and mines as roosting sites where they are known to wedge themselves into small spaces; they will also roost in buildings, bridges, and hollow trees. Preferred roosts are high above the ground and inaccessible to terrestrial predators, although they are occasionally found roosting on the ground underneath sacks, tarps, and other objects left by humans.

  The bats have a home range of 1 to 3 miles and are known to roost with other bat species. This species of bat does not migrate long distances between seasons. It is extremely sensitive to human disturbance of roosting sites. Populations in California have declined due to habitat destruction and use of pesticides. The project site contains oak woodlands with limited water, which may provide some habitat for this species.

- **Pacific fisher, West Coast DPS (*Martes pennanti*):**
  Fishers are found mostly in dense coniferous or deciduous riparian habitats that include older trees and snags. Fishers are mainly carnivorous, eating smaller mammals, rodents, birds, carrion, and fruits. They hunt for prey on the ground and in trees. Cover is provided by cavities in large trees, snags and logs and their nests are built in protected cavities, brush-piles or logs. Young are born between February and May. Fishers are listed for a distant quad in the CNDDB near Scotts Creek, but the species has not been reported in this area since 1941. While there is no chance that they occur on this parcel due to no dense forest on this parcel.

- **American badger (*Taxidea taxus*):**
  Badgers are found mostly in drier open stages of shrub, forest, and herbaceous habitats with friable soils such as open grasslands, fields, and pastures. They are found from high alpine meadows to sea level and occur throughout the stateexcept for the northern North Coast. This species is carnivorous, eating mostly fossorial rodents; they also will eat reptiles, insects, birds, eggs, and carrion. They dig burrows in friable or sandy soil for cover and nesting, and often reuse old burrows. Breeding occurs in late summer or fall. Nests are in areas with little overstory cover, often a grass-lined den, and young are born mostly in March and April. Young become independent in 5 or 6 months. The single occurrence mapped by CNDDB within the Lakeport quadrangle is near the west boundary of the City of Lakeport onan unknown date. They would be unlikely to occur on this property.

- **North American porcupine (*Erethizon dorsatum*):**
  This large, primarily nocturnal rodent prefers conifer and hardwood forests and woodlands, but is also found in forested wetlands and chaparral. They can withstand extreme cold temperatures. Porcupines use downed logs and debris, as well as snags and tree hollows, as cover and dens. Food is vegetation including twigs, berries, roots, seeds, needles, and bark; porcupines commonly climb trees for food. The porcupine breeds from September to November or December, giving birth in the spring. Lifespan is relatively long.

  Porcupines may occur in the area and on the property. This species is listed in the CNDDB as "G5" (Global Secure) and "SNR" (Species Not Rated-California). It is therefore not a species with sensitive regulatory status although its local accounts are included in the database.

Raptors and passerines lacking sensitive regulatory status but otherwise protected under the Migratory Bird Treaty Act may also be present on the property in their sensitive status.

5.0 FIELD SURVEY RESULTS

5.1 Botanical Field Survey Results: Table 4 presents the results of the botanicalsurvey for the project. Each of the sensitive plant species potentially occurring at the site and listed in Tables 2 and 3 was specifically searched for during the surveys. The surveys identified a total of 61 plant taxa on the property.

TABLE 4. Flora of 2160 Ogulin Canyon Road

Habit	Species	Common Name	Family	Origin
forb	*Chlorogalum pomeridiaum*	Wavyleaf soap plant	Agavaceae	N
forb	*Andostoma fasciculatum*	chamise	Alismataceae	N
forb	*Allium serra*	jeweled onion	Alliaceae	N
forb	*Conium maculatum*	poison hemlock	Apiaceae	A
forb	*Lomatium dasycarpum ssp. dasycarpum*	woolly-fruited lomatium	Apiaceae	N
forb	*Lomatium macrocarpum*	Large fruited lomatium	Apiaceae	N
forb	*Sanicula bipinnata*	Poisin sanicle	Apiaceae	N
forb	*Agoseris apargioides var apargioides*	coast dandelion	Asteraceae	N
forb	*Chamomilla suaveolens*	pineapple weed	Asteraceae	A
forb	*Centaurea solstitialis*	Yellow star thistle	Asteraceae	A
forb	*Eriogonum nedum*	Naked buckwheat	Polygonaceae	N
forb	*Eriophyllum lanatum var. lanatum*	common woolly sunflower	Asteraceae	N
forb	*Madia gracilis*	gumweed, slender tarweed	Asteraceae	N
forb	*Micropus californicus*	cottontop	Asteraceae	N
forb	*Wyethia angustifolia*	narrow-leaved mule ears	Asteraceae	N
forb	*Cynoglossum grande*	grand hound's tongue	Boraginaceae	N
forb	*Lepidium nitidum var. nitidum*	shining peppergrass	Brassicaceae	N
forb	*Dichelostemma capitatum*	Blue dicks	Brodiaea	N
forb	*Lonicera interrupta*	Chaparral honeysuckle	Caprifoliaceae	N
forb	*Cerastium glomeratum*	mouse-ear chickweed, sticky mouse-ear	Caryophyllaceae	A

Habit	Species	Common Name	Family	Origin
forb	*Acmispon glaber*	deerweed	Fabaceae	N
forb	*Lupinus bicolor*	miniature lupine	Fabaceae	N
forb	*Trifolium hirtum*	rose clover	Fabaceae	A
forb	*Vicia americana var. americana*	American vetch	Fabaceae	N
forb	*Erodium cicutarium*	red-stem storksbill	Geraniaceae	A
forb	*Geranium dissectum*	cut-leaved geranium	Geraniaceae	A

Habit	Species	Common Name	Family	Origin
forb	*Toxicoscordion fremontii*	Fremont's death camus	Liliaceae	
forb	*Clarkia purpurea*	purple clarkia, winecup clarkia, four-spot	Onagraceae	N
forb	*Eschscholzia californica*	California poppy	Papaveraceae	N
forb	*Delphinium hesperium*	foothill larkspur	Ranunculaceae	N
forb	*Galium divaricatum*	Lamarck's bedstraw	Rubiaceae	N
forb	*Penstemon heterophyllus*	foothill penstemon	Scrophulariaceae	N

Habit	Species	Common Name	Family	Origin
grass	*Avena barbata*	slender wild oat	Poaceae	A
grass	*Briza minor*	small quaking grass	Poaceae	A
grass	*Bromus diandrus*	ripgut grass, ripgut brome	Poaceae	A
grass	*Bromus hordeaceus*	soft chess	Poaceae	A
grass	*Bromus jinermis*	smooth brome	Poaceae	A
grass	*Bromus laevipes*	woodland brome	Poaceae	N
grass	*Bromus madritensis ssp. rubens*	red brome	Poaceae	A
grass	*Elymus caput-medusae*	medusahead	Poaceae	A
grass	*Elymus glaucus ssp. glaucus*	blue wildrye	Poaceae	N
grass	*Festuca myuros*	rattail sixweeks grass	Poaceae	A
shrub	*Sambucus nigra ssp. caerulea*	blue elderberry	Adoxacaceae	N
shrub	*Toxicodendron diversilobum*	poison oak	Anacardiaceae	N
shrub	*Baccharis pilularis*	coyote brush, chaparral broom	Asteraceae	N
shrub	*Symphoricarpos albus var. laevigatus*	common snowberry	Caryophyllaceae	N

Habit	Species	Common Name	Family	Origin
shrub	*Arctostaphylos manzanita ssp. manzanita*	common manzanita	Ericaceae	N
shrub	*Arctostaphylos viscida*	white-leaf manzanita	Ericaceae	N
shrub	*Pickeringia montana*	chaparral pea	Fabaceae	N
shrub	*Eriodictyon californicum*	California yerba santa	Hydrophyllaceae	N
shrub	*Lepechinia calycina*	pitcher sage	Lamiaceae	N
shrub	*Ceanothus cuneatus var. cuneatus*	buckbrush	Rhamnaceae	N
shrub	*Adenostoma fasciculatum*	chamise	Rosaceae	N
shrub	*Cercocarpus betuloides var. betuloides*	birch-leaf mountain mahogany	Rosaceae	N
shrub	*Heteromeles arbutifolia*	toyon	Rosaceae	N
tree	*Quercus douglasii*	Blue oak	Fagaceae	N
Tree	*Quercus wislizeni*	interior live oak	Fagaceae	N
Tree	*Pinus sabiniana*	California foothill pine	Pinaceae	N
Tree	*Populus fremontii*	Fremont cottonwood	Salicaceae	N
Tree	*Salix lasiolepis*	Arroyo willow	Salicaceae	N

vine	*Calystegia occidentalis ssp. occidentalis*	western morning-glory	Convolvulaceae	N
	N=Native A=Alien (non-native)			

6.0SUMMARY AND RECOMMENDATIONS

6.1Summary: This biological resource assessment involved the following analyses and surveys for sensitive plants and wildlife potentially occurring in the vicinity of the project:

- Review of current California Natural Diversity Database (CNDDB) mapping of known sensitive plant and wildlife populations within the region.
- An analysis of the suitability of the site for sensitive plants and wildlife using the California Native Plant Society *On-line Inventory of Rare and Endangered Vascular Plants of California,* and the California Department of Fish and Wildlife's *California Wildlife Habitat Relations System*.
- A California Department of Fish and Wildlife protocol, floristic-level field survey of the plants occurring within the property.
- A delineation of waters of the U.S.

Sensitive Plants: A total of 61 native and introduced plant taxa were identified within the survey areas during the in-season botanical survey. As used here, the term sensitive includes species having state or federal regulatory status, included on Lists 1B through 4 by the California Native Plant Society, or otherwise listed in the California Natural Diversity Database.

Sensitive Wildlife: A total of 15 sensitive wildlife species were assessed for potential occurrence at the site because of inclusion in the CNDDB database for the quadrangle and the CWHR database. Based on the habitat assessment, the following conclusions are made regarding species with sensitive regulatory status:

- Sensitive status species that have a potential to be present in their sensitive state:

  Obscure bumble bee, Foothill yellow legged frog; Western pond turtle; White- tailed kite; Northern harrier; Tricolored blackbird; Grasshopper sparrow; Townsend's big-eared bat; Pallid bat; American badger; Pacific fisher; North American porcupine

Possible Waters of the U.S.: A small riparian area is present on this parcel. It is of very low quality and does not exhibit all three criteria for designation as wetland.

6.2Potential Impacts and Proposed Mitigation for Biological Resources:

(For all recommended mitigation measures accepted as conditions of approval, the text should be modified to use declarative language, i.e. "should" should become "shall", etc.)

- Habitat Fragmentation

Potential Impacts: The proposed gardens and processing facility shown in Figure 2 are comparatively small and unlikely to significantly impair wildlife movement through the corridor. Use of outdoor lighting has a potential to disrupt wildlife movement, much of which occursat night.

Proposed Mitigation for Habitat Fragmentation:

Measure 1: The use of deer fencing should be restricted to the perimeters of the proposed gardens. No deer fencing or other obstacles to wildlife passage should be installed that will restrict wildlife movement.

Measure 2: Outdoor lighting, if used, should be restricted to the processing facility and should be directed downward so as not to illuminate adjacent areas.

- Woodland and Forest Resources

Potential Impact: As shown in **Table 1**, the property contains a combined total of 6.25 acres of woodland. The proposed project design limits project components to the existing infrastructure areas and would not impact woodland resources.

Existing Blue Oaks within the development zone should be preserved when possible.

Proposed Mitigation for Impacts to Woodland and Forest: No mitigation recommended if the project is constructed within the area of existing infrastructure.

- Sensitive Plants and Wildlife

Potential Impacts:

Plants: No plants with sensitive regulatory status were found on the property during the floristic-level botanical survey.

Wildlife: The following wildlife species have a potential to be present on the Benmore Ranch property:

- Obscure bumble bee
- Western pond turtle
- White-tailed kite
- Northern harrier
- Grasshopper sparrow
- Pallid bat
- American badger
- North American porcupine

Use of pesticides resulting in drift has a potential to result in the incidental take of the obscure bumble bee, if present. Pesticide contamination of waterways or direct impacts to waterways has a potential to result in incidental take of foothill yellow-legged frog and/or western pond turtle downstream from the project area.

Other sensitive species listed above depend primarily on woodland, forest, and grassland habitats. Woodland and forest habitat would not be impacted by this project. Impacts to grasslands would be minimal based on the current project design.

Proposed Mitigation for impacts to Wildlife:

Measure 3: To mitigate potential impacts to obscure bumble bee, foothill yellow-legged frog, and western pond turtle, State and Federal regulations on pesticide selection and use should be strictly followed. Pesticide use should not occur during periods when winds may transport spray to adjacent areas. As an alternative, the operator may wish to use organic growing methods. It should be noted that State of California regulations for cannabis cultivation include strict standards for purity which may pre-empt use of pesticides.

- Waters of the U.S.

Potential Impacts: As shown in **Figure 2**, the development would not significantly alter the existing riparian area.

Placement of fill within Waters of the U.S. may require a Nationwide permit by the Corps of Engineers (possibly a non-reporting permit under the Nationwide Permit Program), along with a 401 Water Quality Certification from the Regional Water Quality Control Board, and 1604 Stream Alteration Agreement from the California Department of Fish and Wildlife. The County of Lake may require stream setbacks.

Erosion Control:

Potential Impacts: Vegetation clearing and grading activities have a potential to result in sediment runoff to Burns Valley Creek.

Proposed Mitigation: All work in or near waterways and wetlands should incorporate extensive erosion control measures consistent with Lake County Grading Regulations in order to avoid erosion and the potential for transport of sediments to Burns Valley Creek. Coverage under the National Pollutant Discharge Elimination System (NPDES), General Permit for Storm Water Discharges associated with a Construction Activity (General Permit) and a Storm Water Pollution Prevention Plan (SWPPP)may be required.

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APPENDIX A

CALIFORNIA WILDLIFE HABITAT RELATIONSHIPSSYSTEM

RESULTS

CALIFORNIA WILDLIFE HABITAT RELATIONSHIPS SYSTEM

supported by the

CALIFORNIA INTERAGENCY WILDLIFE TASK GROUP

and maintained by the

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

Database Version: 9.0

SPECIES SUMMARY REPORT

FE = Federal Endangered
FT = Federal Threatened
CE = California Endangered
CT = California Threatened
CF = California Fully Protected
CP = California Protected
SC = California Species of Special Concern
PE = Federally-Proposed Endangered
PT = Federally-Proposed Threatened
FC = Federal Candidate
BL = BLM Sensitive
FS = USFS Sensitive
CD = CDF Sensitive
HA = Harvest

Note: Any given status code for a species may apply to the full species or to only one or more subspecies or distinct population segments.

ID	Species Name	Status	Native/Introduced
A004	CALIFORNIA GIANT SALAMANDER		NATIVE
A006	ROUGH-SKINNED NEWT		NATIVE
A007	CALIFORNIA NEWT	SC	NATIVE
A012	COMMON ENSATINA	SC BL FS	NATIVE
A014	CALIFORNIA SLENDER SALAMANDER		NATIVE
A020	SPECKLED BLACK SALAMANDER		NATIVE
A022	ARBOREAL SALAMANDER		NATIVE
A032	WESTERN TOAD		NATIVE
A039	PACIFIC TREEFROG		NATIVE
A048	COASTAL GIANT SALAMANDER		NATIVE
A071	CALIFORNIA RED-LEGGED FROG	FT SC	NATIVE
B003	COMMON LOON	SC	NATIVE
B049	AMERICAN BITTERN		NATIVE
B050	LEAST BITTERN	SC	NATIVE
B051	GREAT BLUE HERON	CD	NATIVE
B052	GREAT EGRET	CD	NATIVE
B053	SNOWY EGRET		NATIVE
B057	CATTLE EGRET		NATIVE
B058	GREEN HERON		NATIVE
B059	BLACK-CROWNED NIGHT HERON		NATIVE
B067	TUNDRA SWAN		NATIVE
B071	SNOW GOOSE	HA	NATIVE
B075	CANADA GOOSE	HA	NATIVE
B076	WOOD DUCK	HA	NATIVE
B077	GREEN-WINGED TEAL	HA	NATIVE
B079	MALLARD	HA	NATIVE

B080	NORTHERN PINTAIL							HA	NATIVE
B083	CINNAMON TEAL							HA	NATIVE
B084	NORTHERN SHOVELER							HA	NATIVE
B085	GADWALL							HA	NATIVE
B086	EURASIAN WIGEON							HA	NATIVE

ID	Species Name	Status							Native/Introduced
B087	AMERICAN WIGEON							HA	NATIVE
B089	CANVASBACK							HA	NATIVE
B091	RING-NECKED DUCK							HA	NATIVE
B093	GREATER SCAUP							HA	NATIVE
B094	LESSER SCAUP							HA	NATIVE
B101	COMMON GOLDENEYE							HA	NATIVE
B102	BARROW'S GOLDENEYE				SC			HA	NATIVE
B103	BUFFLEHEAD							HA	NATIVE
B104	HOODED MERGANSER							HA	NATIVE
B105	COMMON MERGANSER							HA	NATIVE
B106	RED-BREASTED MERGANSER							HA	NATIVE
B107	RUDDY DUCK							HA	NATIVE
B108	TURKEY VULTURE								NATIVE
B110	OSPREY							CD	NATIVE
B111	WHITE-TAILED KITE			CF			BL		NATIVE
B113	BALD EAGLE		CE	CF			BL	FS CD	NATIVE
B114	NORTHERN HARRIER				SC				NATIVE
B115	SHARP-SHINNED HAWK								NATIVE
B116	COOPER'S HAWK								NATIVE
B117	NORTHERN GOSHAWK				SC		BL	FS CD	NATIVE
B119	RED-SHOULDERED HAWK								NATIVE
B123	RED-TAILED HAWK								NATIVE
B124	FERRUGINOUS HAWK								NATIVE
B125	ROUGH-LEGGED HAWK								NATIVE
B126	GOLDEN EAGLE			CF			BL	CD	NATIVE
B127	AMERICAN KESTREL								NATIVE
B128	MERLIN								NATIVE
B129	PEREGRINE FALCON			CF				CD	NATIVE
B131	PRAIRIE FALCON								NATIVE
B140	CALIFORNIA QUAIL				SC			HA	NATIVE
B141	MOUNTAIN QUAIL							HA	NATIVE
B145	VIRGINIA RAIL								NATIVE
B146	SORA								NATIVE
B148	COMMON GALLINULE							HA	NATIVE
B149	AMERICAN COOT							HA	NATIVE
B158	KILLDEER								NATIVE
B165	GREATER YELLOWLEGS								NATIVE
B166	LESSER YELLOWLEGS								NATIVE
B199	WILSON'S SNIPE								NATIVE

B251	BAND-TAILED PIGEON				HA	NATIVE
B255	MOURNING DOVE				HA	NATIVE
B259	YELLOW-BILLED CUCKOO	CE		PT	BL FS	NATIVE
B260	GREATER ROADRUNNER					NATIVE

ID	Species Name	Status			Native/Introduced
B262	BARN OWL				NATIVE
B263	FLAMMULATED OWL				NATIVE
B264	WESTERN SCREECH OWL				NATIVE
B265	GREAT HORNED OWL				NATIVE
B267	NORTHERN PYGMY OWL				NATIVE
B269	BURROWING OWL		SC	BL	NATIVE
B270	SPOTTED OWL	FT	SC	BL FS CD	NATIVE
B272	LONG-EARED OWL		SC		NATIVE
B273	SHORT-EARED OWL		SC		NATIVE
B274	NORTHERN SAW-WHET OWL				NATIVE
B277	COMMON POORWILL				NATIVE
B281	VAUX'S SWIFT		SC		NATIVE
B282	WHITE-THROATED SWIFT				NATIVE
B287	ANNA'S HUMMINGBIRD				NATIVE
B291	RUFOUS HUMMINGBIRD				NATIVE
B292	ALLEN'S HUMMINGBIRD				NATIVE
B293	BELTED KINGFISHER				NATIVE
B294	LEWIS' S WOODPECKER				NATIVE
B296	ACORN WOODPECKER				NATIVE
B299	RED-BREASTED SAPSUCKER				NATIVE
B302	NUTTALL'S WOODPECKER				NATIVE
B303	DOWNY WOODPECKER				NATIVE
B304	HAIRY WOODPECKER				NATIVE
B305	WHITE-HEADED WOODPECKER				NATIVE
B307	NORTHERN FLICKER				NATIVE
B309	OLIVE-SIDED FLYCATCHER		SC		NATIVE
B311	WESTERN WOOD-PEWEE				NATIVE
B317	HAMMOND'S FLYCATCHER				NATIVE
B318	DUSKY FLYCATCHER				NATIVE
B320	PACIFIC-SLOPE FLYCATCHER				NATIVE
B321	BLACK PHOEBE				NATIVE
B323	SAY'S PHOEBE				NATIVE
B326	ASH-THROATED FLYCATCHER				NATIVE
B333	WESTERN KINGBIRD				NATIVE
B337	HORNED LARK				NATIVE
B338	PURPLE MARTIN		SC		NATIVE
B339	TREE SWALLOW				NATIVE
B340	VIOLET-GREEN SWALLOW				NATIVE

B341	NORTHERN ROUGH-WINGED SWALLOW			NATIVE
B342	BANK SWALLOW	CT	BL	NATIVE
B343	CLIFF SWALLOW			NATIVE
B346	STELLER'S JAY			NATIVE

ID	Species Name	Status		Native/Introduced
B348	WESTERN SCRUB-JAY			NATIVE
B350	CLARK'S NUTCRACKER			NATIVE
B352	YELLOW-BILLED MAGPIE			NATIVE
B353	AMERICAN CROW		HA	NATIVE
B354	COMMON RAVEN			NATIVE
B356	MOUNTAIN CHICKADEE			NATIVE
B357	CHESTNUT-BACKED CHICKADEE			NATIVE
B358	OAK TITMOUSE			NATIVE
B360	BUSHTIT			NATIVE
B361	RED-BREASTED NUTHATCH			NATIVE
B362	WHITE-BREASTED NUTHATCH			NATIVE
B363	PYGMY NUTHATCH			NATIVE
B364	BROWN CREEPER			NATIVE
B367	CANYON WREN			NATIVE
B368	BEWICK'S WREN	SC		NATIVE
B369	HOUSE WREN			NATIVE
B370	WINTER WREN			NATIVE
B372	MARSH WREN	SC		NATIVE
B375	GOLDEN-CROWNED KINGLET			NATIVE
B376	RUBY-CROWNED KINGLET			NATIVE
B377	BLUE-GRAY GNATCATCHER			NATIVE
B380	WESTERN BLUEBIRD			NATIVE
B381	MOUNTAIN BLUEBIRD			NATIVE
B382	TOWNSEND'S SOLITAIRE			NATIVE
B385	SWAINSON'S THRUSH			NATIVE
B386	HERMIT THRUSH			NATIVE
B389	AMERICAN ROBIN			NATIVE
B390	VARIED THRUSH			NATIVE
B391	WRENTIT			NATIVE
B393	NORTHERN MOCKINGBIRD			NATIVE
B398	CALIFORNIA THRASHER			NATIVE
B404	AMERICAN PIPIT			NATIVE
B407	CEDAR WAXWING			NATIVE
B408	PHAINOPEPLA			NATIVE
B410	LOGGERHEAD SHRIKE	FE	SC	NATIVE
B415	CASSIN'S VIREO			NATIVE
B417	HUTTON'S VIREO	SC		NATIVE

B418	WARBLING VIREO		NATIVE
B425	ORANGE-CROWNED WARBLER		NATIVE
B426	NASHVILLE WARBLER		NATIVE
B430	YELLOW WARBLER	SC	NATIVE
B435	YELLOW-RUMPED WARBLER		NATIVE
B436	BLACK-THROATED GRAY WARBLER		NATIVE

ID	Species Name	Status	Native/Introduced
B437	TOWNSEND'S WARBLER		NATIVE
B438	HERMIT WARBLER		NATIVE
B460	MACGILLIVRAY'S WARBLER		NATIVE
B461	COMMON YELLOWTHROAT	SC	NATIVE
B463	WILSON'S WARBLER		NATIVE
B467	YELLOW-BREASTED CHAT	SC	NATIVE
B471	WESTERN TANAGER		NATIVE
B475	BLACK-HEADED GROSBEAK		NATIVE
B477	LAZULI BUNTING		NATIVE
B482	GREEN-TAILED TOWHEE		NATIVE
B483	SPOTTED TOWHEE	SC	NATIVE
B484	CALIFORNIA TOWHEE	FT CE	NATIVE
B487	RUFOUS-CROWNED SPARROW	SC	NATIVE
B489	CHIPPING SPARROW		NATIVE
B493	BLACK-CHINNED SPARROW		NATIVE
B495	LARK SPARROW		NATIVE
B497	BELL'S SPARROW	FT SC	NATIVE
B499	SAVANNAH SPARROW	CE SC	NATIVE
B501	GRASSHOPPER SPARROW	SC	NATIVE
B504	FOX SPARROW		NATIVE
B505	SONG SPARROW	SC	NATIVE
B506	LINCOLN'S SPARROW		NATIVE
B509	GOLDEN-CROWNED SPARROW		NATIVE
B510	WHITE-CROWNED SPARROW		NATIVE
B512	DARK-EYED JUNCO		NATIVE
B519	RED-WINGED BLACKBIRD	SC	NATIVE
B520	TRICOLORED BLACKBIRD	SC BL	NATIVE
B521	WESTERN MEADOWLARK		NATIVE
B522	YELLOW-HEADED BLACKBIRD	SC	NATIVE
B524	BREWER'S BLACKBIRD		NATIVE
B528	BROWN-HEADED COWBIRD		NATIVE
B532	BULLOCK'S ORIOLE		NATIVE
B536	PURPLE FINCH		NATIVE
B537	CASSIN'S FINCH		NATIVE
B538	HOUSE FINCH		NATIVE
B539	RED CROSSBILL		NATIVE

B542	PINE SISKIN						NATIVE
B543	LESSER GOLDFINCH						NATIVE
B544	LAWRENCE'S GOLDFINCH						NATIVE
B545	AMERICAN GOLDFINCH						NATIVE
B546	EVENING GROSBEAK						NATIVE
B548	CLARK'S GREBE						NATIVE
B554	PLUMBEOUS VIREO						NATIVE

ID	Species Name	Status					Native/Introduced
B656	RED PHALAROPE						NATIVE
B699	BARRED OWL						NATIVE
B773	AMERICAN REDSTART						NATIVE
B798	WHITE-THROATED SPARROW						NATIVE
B799	HARRIS'S SPARROW						NATIVE
B809	INDIGO BUNTING						NATIVE
M006	ORNATE SHREW	FE		SC			NATIVE
M012	TROWBRIDGE'S SHREW						NATIVE
M015	SHREW-MOLE						NATIVE
M018	BROAD-FOOTED MOLE			SC			NATIVE
M023	YUMA MYOTIS				BL		NATIVE
M025	LONG-EARED MYOTIS				BL		NATIVE
M027	LONG-LEGGED MYOTIS						NATIVE
M028	CALIFORNIA MYOTIS						NATIVE
M030	SILVER-HAIRED BAT						NATIVE
M031	CANYON BAT						NATIVE
M033	WESTERN RED BAT			SC	FS		NATIVE
M034	HOARY BAT						NATIVE
M037	TOWNSEND'S BIG-EARED BAT			SC	BL FS		NATIVE
M038	PALLID BAT			SC	BL FS		NATIVE
M039	BRAZILIAN FREE-TAILED BAT						NATIVE
M045	BRUSH RABBIT	FE	CE			HA	NATIVE
M047	AUDUBON'S COTTONTAIL					HA	NATIVE
M051	BLACK-TAILED JACKRABBIT			SC		HA	NATIVE
M055	YELLOW-PINE CHIPMUNK						NATIVE
M057	SHADOW CHIPMUNK						NATIVE
M059	SONOMA CHIPMUNK						NATIVE
M072	CALIFORNIA GROUND SQUIRREL						NATIVE
M075	GOLDEN-MANTLED GROUND SQUIRREL						NATIVE
M077	WESTERN GRAY SQUIRREL					HA	NATIVE
M079	DOUGLAS' SQUIRREL					HA	NATIVE
M080	NORTHERN FLYING SQUIRREL			SC	FS		NATIVE
M081	BOTTA'S POCKET GOPHER						NATIVE
M084	MAZAMA POCKET GOPHER						NATIVE

M105	CALIFORNIA KANGAROO RAT				SC				NATIVE
M112	AMERICAN BEAVER							HA	NATIVE
M113	WESTERN HARVEST MOUSE								NATIVE
M117	DEER MOUSE				SC				NATIVE
M119	BRUSH MOUSE								NATIVE
M127	DUSKY-FOOTED WOODRAT	FE			SC				NATIVE
M134	CALIFORNIA VOLE	FE	CE		SC		BL		NATIVE
M139	COMMON MUSKRAT							HA	NATIVE

ID	Species Name	Status							Native/Introduced
M146	COYOTE							HA	NATIVE
M147	RED FOX			CT			FS	HA	NATIVE
M149	GRAY FOX							HA	NATIVE
M151	BLACK BEAR							HA	NATIVE
M152	RINGTAIL			CF					NATIVE
M153	RACCOON							HA	NATIVE
M154	MARTEN				SC		FS		NATIVE
M155	FISHER				SC		FC BL FS		NATIVE
M156	ERMINE							HA	NATIVE
M157	LONG-TAILED WEASEL							HA	NATIVE
M158	AMERICAN MINK							HA	NATIVE
M160	AMERICAN BADGER				SC			HA	NATIVE
M162	STRIPED SKUNK							HA	NATIVE
M163	NORTHERN RIVER OTTER				SC				NATIVE
M165	MOUNTAIN LION				SC				NATIVE
M166	BOBCAT							HA	NATIVE
M177	ELK							HA	NATIVE
M181	MULE DEER							HA	NATIVE
R004	WESTERN POND TURTLE				SC		BL FS		NATIVE
R022	WESTERN FENCE LIZARD								NATIVE
R023	COMMON SAGEBRUSH LIZARD						BL		NATIVE
R036	WESTERN SKINK				SC		BL		NATIVE
R039	TIGER WHIPTAIL								NATIVE
R040	SOUTHERN ALLIGATOR LIZARD								NATIVE
R042	NORTHERN ALLIGATOR LIZARD								NATIVE
R046	NORTHERN RUBBER BOA			CT			FS		NATIVE
R048	RING-NECKED SNAKE						FS		NATIVE
R049	COMMON SHARP-TAILED SNAKE								NATIVE
R051	NORTH AMERICAN RACER								NATIVE
R053	STRIPED RACER		FT	CT					NATIVE
R057	GOPHERSNAKE				SC				NATIVE
R058	EASTERN KINGSNAKE								NATIVE
R059	CALIFORNIA MOUNTAIN KINGSNAKE				SC		BL FS		NATIVE

R060	LONG-NOSED SNAKE		NATIVE
R061	COMMON GARTERSNAKE	FE CE CF SC	NATIVE
R062	TERRESTRIAL GARTERSNAKE		NATIVE
R071	DESERT NIGHTSNAKE		NATIVE
R076	WESTERN RATTLESNAKE		NATIVE
R078	AQUATIC GARTERSNAKE		NATIVE

Total Number of Species: 283

Query Parameters

Included Locations

Lake Co

Included Location Seasons

Migrant, Summer, Winter, Yearlong

Included Habitats & (Stages)

Annual Grassland, Closed-cone Pine-cypress, Fresh Emergent Wetland, Lacustrine, Mixed Chaparral, MontaneHardwood, Ponderosa Pine, Valley Foothill Riparian, Wet Meadow

Habitat Suitability Threshold

Reproduction - Low, Cover - Low, Feeding - Low

Included Habitat Seasons

Migrant, Summer, Winter, Yearlong

Excluded Elements

Barren, Bogs, Brush Pile, Buildings, Campground, Cave, Dump, Fences, Jetty, Lakes, Lithic, Mine, Mud Flats, NestBox, Nest Island, Nest Platform, Pack Stations, Rivers, Salt Ponds, Sand Dune, Shrub/agriculture, Soil - Saline, Soil -Sandy, Springs - Hot, Springs - Mineral, Talus, Tidepools, Transmission Lines, Trees - Fir, Vernal Pools, Water - Fast,Wharf

Included Species AllSpecies Included

Included Special Statuses

Native

OWNER

OGULIN ESTATES HOLDINGS, LLC
BRIAN D. PENSACK
637 LINDARD ST., SUITE 201
SAN RAFAEL, CA 94901

SITE PLAN DATA

AREA OF PROPERTY	9.56 ACRES TOTAL
ZONING	I - INDUSTRIAL
FLOOD ZONE	X, AE, AO

NOTES

1) THIS IS NOT A BOUNDARY SURVEY. ALL LOT LINES SHOWN ARE BASED ON A.P.N. MAP.

2.) EACH GREENHOUSE TO BE EQUIPED WITH A THERMAL CAMERA.

3.) ELECTRIC, PHONE, AND CABLE LINES ARE PROPOSED TO BE UNDERGROUND ON SITE.

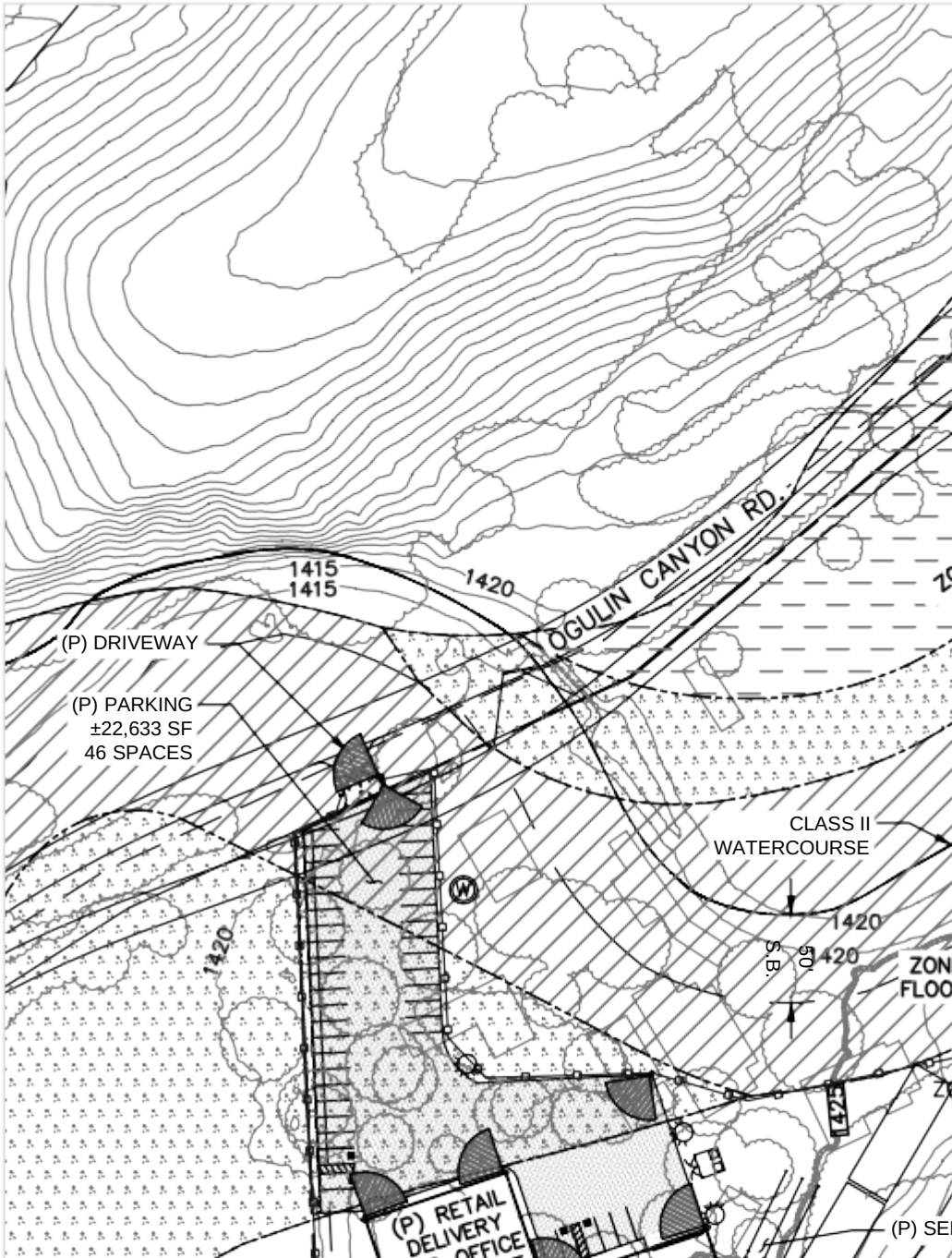
EARTHWORK QUANTITIES

CUT: 8,000 CY
FILL: 4,000 CY

NET: 4,000 CY EXPORT

LEGEND

PROPERTY LINE
SETBACK LINE
EASEMENT LINE
(P) ACCESS ROAD/DRIVEWAY
(E) ACCESS ROAD/DRIVEWAY
(E) TREE/BRUSH LINE
FEMA FLOOD ZONE BOUNDARY



ATTACHMENT D

City of Clearlake
14050 Olympic Drive, Clearlake, California 95422
(707) 994-8201 Fax (707) 995-2653

RECEIVED
APR 20 2021
BY: EH

DISTRIBUTION DATE: April 20, 2020

REQUEST FOR REVIEW (RFR)

	CITY DEPARTMENTS		LOCAL AGENCIES		STATE/FEDERAL AGENCIES
@	*Building Dept*	@	*Air Quality Management*	@	*CalTrans*
@	*Code Enforcement*	@	*Assessor's/Recorders Office*		*BLM*
@	*Police Department*	@	*Environmental Health Dept.*		*CA Dept. of Fish & Wildlife*
@	*Public Works/Engineering.*		*Lakebed Management*		*Army Core of Eng.*
		@	*Lake County Special Districts*		*U.S Fish & Wildlife Serv.*
			Lake County Water Resources	@	*Sonoma State (NWIC)*
	OTHER AGENCIES		*Lake County Tax Collector*		*CHP*
@	*PG&E*		*Lake Transit*	@	*CA Dept. of Drinking Water*
			Lake Area Planning Council		*Cal Fire*
					ABC
			WATER DISTRICT		
			Golden State Water		CANNABIS PROJECTS
		@	*Konocti Water Co,*	@	*Cal Cannabis*
			Highlands Water Co.	@	*CA Dept. Public Health (Manufacturing)*
				@	*Bureau of Cannabis Control (retailers, distributors, 3rd party testing laboratories and microbusinesses)*

REQUEST: REQUEST: *Please review and comment on the enclosed application packet material for the proposed project below. Please return all comments by* ***May 7, 2020. Please email your comments to*** mroberts@clearlake.ca.us ***or mail them to the address listed in the letterhead above.***

APPLICATIONS:

- *UP 2021-23 – Cultivation*
- *UP 2021-24 – Manufacturing*
- *UP 2021-25 – Distribution*
- *UP 2021-26 – Processing*
- *UP 2021-27 – Retail Delivery*
- *UP 2021-28 – Nursery*

LOCATION(S): 2160 Ogulin Canyon Road; Clearlake, CA 95422

APPLICANT: Ogulin Hills Holdings, LLC c/o Brian Pensack

APN(s): 010-044-210-000

LAND USE DESIGNATION(S): Commercial

GENERAL PLAN DESINATION(S): Commercial

PROPOSAL: The applicant is requesting approval of the above use permits to allow the development of a commercial cannabis operation. According to the application packet, the project includes but is not limited to the following: **Please refer to attached packet, site plans and architectural plans for further details.**

- Hours of Operation:
  - Monday Through Saturday: 8:00AM to 5:00PM.
  - Up to 35 employees
  - Up to +/- 4 managers

- Proposed Structures:
  - 33,600 SQFT cannabis processing, manufacturing, and distribution building
  - 5,000 SQFT office building that will also serve as the administrative center and the cannabis delivery and storage space.
  - Five (5) Greenhouse – Each greenhouse will be 75' X 25' (1,875 SQFT Each)

- Proposed Parking:
  - +/- 46 Parking Spaces

COMMENTS:

See attached memorandum

NAME: Tina Rubin **DATE:** 5/28/21

COUNTY OF LAKE
Health Services Department
Environmental Health Division
922 Bevins Court
Lakeport, California 95453-9739
Telephone 707/263-1164
FAX 707/263-1681

Denise Pomeroy
Health Services Director

Gary Pace, MD, MPH
Health Officer

Craig Wetherbee
Environmental Health Director

MEMORANDUM

DATE: May 28, 2021

TO: Mark Roberts, Planner

FROM: Tina Dawn-Rubin, Environmental Health Aide

RE: Multiple Use Permits
Commercial Cannabis

APN: 010-044-21 2160 Ogulin Canyon Rd, Clearlake

Lake County Division of Environmental Health (EH) has on file for the subject parcel:
APN: 010-044-21 – a 1974 septic permit 3402-S designed to service a 3 bedroom residence. The permit also indicates there is a well on the property.

The applicant must meet the EH requirements regarding Onsite Wastewater Treatment System (OWTS) and potable water.

For any proposed building permits or projects where the parcel is serviced by an OWTS or well, the applicant may need to demonstrate the location of any proposed or existing structures including residential or commercial dwellings, garages, driveways, shed, barns, green houses, non-perimeter fences, well houses, etc., *and* the location of the proposed project on a to-scale site plan prior to building permit issuance and/or project approval.

Due to the limited documentation on file for this parcel, a field clearance will be required to validate septic or well locations prior to site plan approval.

If the applicant is proposing a commercial cannabis operation and the operation will be constructing or utilizing an existing structure (i.e., processing facility) that will have plumbing for a restroom, sink, etc, that structure will be required to have its own OWTS, separate from any existing or new OWTS designed to service a residential structure.

If the applicant is proposing an OWTS, then applicant must apply for a site evaluation and, if the site is acceptable to support an OWTS, apply for a permit.

EH requires all applicants to provide a written declaration of the chemical names and quantities of any hazardous material to be used on site. As a general rule, if a material has a Safety Data Sheet, that material may be considered as part of the facilities hazardous materials declaration.

CALIFORNIA HISTORICAL RESOURCES INFORMATION SYSTEM

ALAMEDA
COLUSA
CONTRA COSTA
DEL NORTE
HUMBOLDT
LAKE
MARIN
MENDOCINO
MONTEREY
NAPA
SAN BENITO
SAN FRANCISCO
SAN MATEO
SANTA CLATA
SANTA CRUZ
SOLANO
SONOMA
YOLO

Northwest Information Center
Sonoma State University
150 Professional Center Drive, Suite E
Rohnert Park, California 94928-3609
Tel: 707.588.8455
nwic@sonoma.edu
http://www.sonoma.edu/nwic

May 6, 2021 File No.: 20-2099

Mark Roberts, Senior Planner
City of Clearlake
14050 Olympic Drive
Clearlake, California 95422

re: UP 2021-23, UP 2021-24, UP 2021-25, UP 2021-26, UP 2021-27, UP 2021-28 / APN 010-044-210, 2160 Ogulin Canyon Road / Ogulin Hills Holdings, LLC c/o Brian Pensack

Dear Mark Roberts,

Records at this office were reviewed to determine if this project could adversely affect cultural resources. **Please note that use of the term cultural resources includes both archaeological sites and historical buildings and/or structures. The review for possible historic-era building/structures, however, was limited to references currently in our office and should not be considered comprehensive.**

Project Description: The applicant is requesting approval of the above use permits to allow the development of a commercial cannabis operation. Hours of Operation: Monday Through Saturday: 8:00AM to 5:00PM. Up to 35 employees. Up to +/- 4 managers. Proposed Structures: 33,600 SQFT cannabis processing, manufacturing, and distribution building. 5,000 SQFT office building that will also serve as the administrative center and the cannabis delivery and storage space. Five (5) Greenhouse – Each greenhouse will be 75' X 25' (1,875 SQFT Each) Proposed Parking: +/- 46 Parking Spaces.

Previous Studies:

XX This office has no record of any previous cultural resource field survey for the proposed project area conducted by a professional archaeologist or architectural historian *(see recommendation below)*.

Archaeological and Native American Resources Recommendations:

XX The proposed project area has the possibility of containing unrecorded archaeological site(s). A study by a qualified professional archaeologist is recommended prior to commencement of project activities.

XX We recommend that the lead agency contact the local Native American tribe(s) regarding traditional, cultural, and religious heritage values. For a complete listing of tribes in the vicinity of the project, please contact the Native American Heritage Commission at (916) 373-3710.

___ The proposed project area has a low possibility of containing unrecorded archaeological site(s). Therefore, no further study for archaeological resources is recommended.

Built Environment Recommendations:

XX Since the Office of Historic Preservation has determined that any building or structure 45 years or older may be of historical value, if the project area contains such properties, it is recommended that prior to commencement of project activities, a qualified professional familiar with the architecture and history of Lake County conduct a formal CEQA evaluation.

Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the California Historical Resources Information System (CHRIS) Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

The California Office of Historic Preservation (OHP) contracts with the California Historical Resources Information System's (CHRIS) regional Information Centers (ICs) to maintain information in the CHRIS inventory and make it available to local, state, and federal agencies, cultural resource professionals, Native American tribes, researchers, and the public. Recommendations made by IC coordinators or their staff regarding the interpretation and application of this information are advisory only. Such recommendations do not necessarily represent the evaluation or opinion of the State Historic Preservation Officer in carrying out the OHP's regulatory authority under federal and state law.

For your reference, a list of qualified professionals in California that meet the Secretary of the Interior's Standards can be found at http://www.chrisinfo.org. If archaeological resources are encountered during the project, work in the immediate vicinity of the finds should be halted until a qualified archaeologist has evaluated the situation. If you have any questions please give us a call (707) 588-8455.

Sincerely,

Bryan Much
Coordinator

From: Fahmy Attar
To: Mark Roberts
Cc: Doug Gearhart
Subject: Re: RFR - 2160 Ogulin Canyon road Cannabis Project
Date: Monday, June 7, 2021 11:42:19 AM
Importance: High

Hello Mark,

For a Cannabis operation site, here is a list of Air Quality requirements that may be applicable to the site:

1. Off-site odor impacts should be mitigated to minimize nuisance to nearby residences, property, and public roads.

2. Any manufacturing or delivery Cannabis operations must comply with LCAQMD rules and regulations. An application must be submitted. Contact LCAQMD for more details.

3. Any demolition or renovation is subject to the Federal National Emissions Standard for Hazardous Air Pollutants (NESHAP) for asbestos in buildings requires asbestos inspections by a Certified Asbestos Consultant for all major renovations and all demolition. An Asbestos Notification Form with the Asbestos inspection report must be submitted to the District at least 14 days prior to beginning any demolition work. The applicant must contact the District for more details and proper approvals. Regardless of asbestos content or reporting requirements all demolition and renovation activities should use adequate water/ amended water to prevent dust generation and nuisance conditions.

4. Construction activities that involve pavement, masonry, sand, gravel, grading, and other activities that could produce airborne particulate should be conducted with adequate dust controls to minimize airborne emissions. A dust mitigation plan may be required should the applicant fail to maintain adequate dust controls.

5. If construction or site activities are conducted within Serpentine soils, a Serpentine Control Plan may be required. Any parcel with Serpentine soils must obtain proper approvals from LCAQMD prior to beginning any construction activities. Contact LCAQMD for more details.

6. All engines must notify LCAQMD prior to beginning construction activities and prior to engine Use. Mobile diesel equipment used for construction and/or maintenance must be in compliance with State registration requirements. All equipment units must meet Federal, State and local requirements. All equipment units must meet RICE NESHAP/NSPS requirements including proper maintenance to minimize airborne emissions and proper record-keeping of all activities, all units must meet the State Air Toxic Control Measures for CI engines, and must meet local regulations. Contact LCAQMD for more details.

7. Site development, vegetation disposal, and site operation shall not create nuisance odors or dust. During the site preparation phase, the District recommends that any removed vegetation

be chipped and spread for ground cover and erosion control. Burning is not allowed on commercial property, materials generated from the commercial operation, and waste material from construction debris, must not be burned as a means of disposal.

8. Significant dust may be generated from increase vehicle traffic if driveways and parking areas are not adequately surfaced. Surfacing standards should be included as a requirement in the use permit to minimize dust impacts to the public, visitors, and road traffic. At a minimum, the District recommends chip seal as a temporary measure for primary access roads and parking. Paving with asphaltic concrete is preferred and should be required for long term occupancy. All areas subject to semi truck / trailer traffic should require asphaltic concrete paving or equivalent to prevent fugitive dust generation. Gravel surfacing may be adequate for low use driveways and overflow parking areas, however, gravel surfaces require more maintenance to achieve dust control, and permit conditions should require regular palliative treatment if gravel is utilized. White rock is not suitable for surfacing (and should be prohibited in the permit) because of its tendency to break down and create excessive dust. Grading and re-graveling roads should utilizing water trucks if necessary, reduce travel times through efficient time management and consolidating solid waste removal/supply deliveries, and speed limits.

Best Regards,

Fahmy Attar
Air Quality Engineer
Lake County Air Quality Management District
2617 S. Main Street, Lakeport, CA, 95453
fahmya@lcaqmd.net

On Apr 20, 2021, at 10:44 AM, Mark Roberts <mroberts@clearlake.ca.us> wrote:

Good Morning,

I hope you are well. This email is in regards to the proposed project/development located at 2160 Ogulin Canyon Road; Clearlake, CA 95422. The applicant is requesting approval of multiple use permits to allow the development of a commercial cannabis operation. According to the application packet, the project includes but is not limited to the following: **Please refer to attached packet, site plans and architectural plans for further details.** If you have any concerns and/or comments on the project, please submit them **no later than May 7th, 2021.** –

- Hours of Operation:
  - Monday Through Saturday: 8:00AM to 5:00PM.
  - Up to 35 employees
  - Up to +/- 4 managers

From: Andrew White
To: Mark Roberts
Subject: RE: RFR - 2160 Ogulin Canyon road Cannabis Project
Date: Wednesday, April 28, 2021 10:05:04 AM
Attachments: image001.png
image002.png
image003.png

Good Morning,

The Police Department opposes the application as presented for failing to demonstrate compliance with City Ordinances related to the proposed operation. Additionally, although the application seems to represent that a criminal history check has been completed and approved by me. I have not reviewed or approved any criminal history check with regards to this applicant.

The security plan, consisting of one sentence, is wholly inadequate and requires further review in the interest of public safety, health and welfare.

We look forward to the applicant submitting a complete application that sufficiently demonstrates compliance with the City Code. We are also open to meeting with the applicant to address any questions or concerns as they revise their submittal.

Thank you

Andrew White | *Chief of Police*
Clearlake Police Department
14050 Olympic Dr | Clearlake, CA 95422
(O) 707 994-8251 x301 | (C) 707 681-5688 | Dispatch: 707 994-8251

From: Mark Roberts <mroberts@clearlake.ca.us>
Sent: Tuesday, April 20, 2021 10:45 AM
Subject: RFR - 2160 Ogulin Canyon road Cannabis Project
Importance: High

Good Morning,

I hope you are well. This email is in regards to the proposed project/development located at 2160 Ogulin Canyon Road; Clearlake, CA 95422. The applicant is requesting approval of multiple use permits to allow the development of a commercial cannabis operation. According to the application packet, the project includes but is not limited to the following:

Please refer to attached packet, site plans and architectural plans for further details. If you have any concerns and/or comments on the project, please submit them **no later than May 7th, 2021.** –

- Hours of Operation:
  - Monday Through Saturday: 8:00AM to 5:00PM.
  - Up to 35 employees
  - Up to +/- 4 managers

- Proposed Structures:
  - 33,600 SQFT cannabis processing, manufacturing, and distribution building
  - 5,000 SQFT office building that will also serve as the administrative center and the cannabis delivery and storage space.
  - Five (5) Greenhouse – Each greenhouse will be 75' X 25' (1,875 SQFT Each)

-

- Proposed Parking:
  - +/- 46 Parking Spaces

If you have any questions and/or need additional information, please let me know.

Sincerely,

Mark Roberts | *Senior Planner*
City of Clearlake
14050 Olympic Drive | Clearlake, CA 95422
707-994-8201

From: Lori Baca
To: Mark Roberts
Subject: RE: RFR - 2160 Ogulin Canyon road Cannabis Project
Date: Wednesday, April 28, 2021 9:49:25 AM
Attachments: image003.png
image001.png

Mark,

Parcel 010-044-210 is outside of any Special Districts service area, no impact.

Have a wonderful day!

Lori A. Baca
Customer Service Coordinator
Lori.Baca@lakecountyca.gov
Office Number (707) 263-0119
Fax (707) 263-3836

From: Mark Roberts [mailto:mroberts@clearlake.ca.us]
Sent: Tuesday, April 20, 2021 10:45 AM
Subject: [SUSPICIOUS MESSAGE] RFR - 2160 Ogulin Canyon road Cannabis Project
Importance: High

This Message contains suspicious characteristics and has originated outside your organization. This message appears to be from an individual who works for the County, but does not come from a County address.

Good Morning,

I hope you are well. This email is in regards to the proposed project/development located at 2160 Ogulin Canyon Road; Clearlake, CA 95422. The applicant is requesting approval of multiple use permits to allow the development of a commercial cannabis operation. According to the application packet, the project includes but is not limited to the following: **Please refer to attached packet, site plans and architectural plans for**

From: kcwd@mchsi.com
To: Mark Roberts
Subject: Re: RFR - 2160 Ogulin Canyon road Cannabis Project
Date: Friday, April 23, 2021 9:48:03 AM

Konocti County Water District has no comments. This area is not in our district. Thank you, Frank.

----- Original Message -----
From: "Mark Roberts" <mroberts@clearlake.ca.us>
Sent: Tuesday, April 20, 2021 10:44:30 AM
Subject: RFR - 2160 Ogulin Canyon road Cannabis Project

Good Morning,

I hope you are well. This email is in regards to the proposed project/development located at 2160 Ogulin Canyon Road; Clearlake, CA 95422. The applicant is requesting approval of multiple use permits to allow the development of a commercial cannabis operation. According to the application packet, the project includes but is not limited to the following: Please refer to attached packet, site plans and architectural plans for further details. If you have any concerns and/or comments on the project, please submit them no later than May 7th, 2021.

· Hours of Operation:

o Monday Through Saturday: 8:00AM to 5:00PM.

o Up to 35 employees

o Up to +/- 4 managers

· Proposed Structures:

o 33,600 SQFT cannabis processing, manufacturing, and distribution building

o 5,000 SQFT office building that will also serve as the administrative center and the cannabis delivery and storage space.

o Five (5) Greenhouse - Each greenhouse will be 75' X 25' (1,875 SQFT Each)

· Proposed Parking:

o +/- 46 Parking Spaces

If you have any questions and/or need additional information, please let me know.

ATTACHMENT E

Water Availability Report
2160 Ogulin Canyon Road
Cannabis Processing and Cultivation Project

The subject property is a 9.65-acre parcel located at 2160 Ogulin Canyon Road in Clearlake, California (APN 010-044-21).

The proposed project is a cannabis processing and cultivation facility that will include a 33,600 ft.² manufacturing, processing, distribution building, an attached 5,000 ft.² office and retail delivery building, and five (5) - 25' x 75' mixed light cultivation greenhouses.

A. The water source for both domestic and irrigation uses will be delivered from a new water well as noted on the site plan below. The well was drilled in late September/early October of 2021 and is approximately 300 feet deep, with a supply capacity of 100+ gallons per minute (see attached well completion report).

B. The water system will use ground water pumped from the well into a proposed new elevated 50,000-gallon water tank for distribution to the building(s) plumbing system and to the greenhouses for irrigation.

C. A water meter will be installed in the water system and water consumption will be logged. Water use efficiency will be analyzed on a regular basis and a water budget will be generated for each new grow cycle.

D. Water Demand - The California Department of Food and Agriculture (CDFA) in 2017 reported the following regarding the water use for cannabis. "According to Hammon et al. (2015), water use requirements for mixed light cannabis production (25-35 inches per year) are generally in line with water use for other agricultural crops, such as corn (20-25 inches per year), alfalfa (30-40 inches per year), tomatoes (15-25 inches per year), peaches (30-40 inches per year), and hops (20-30 inches per year).

E. Irrigation Water Demand - is from the CDFA - CalCannabis Environmental Impact Report (CDFA 2017) = 3,000 gallons per day for 1 acre of cannabis canopy. The combined land area associated with the five (5) proposed greenhouses is less than ½ acre. The daily requirement is about 1 gallon of water per minute for .5 acres of cannabis canopy (1,440 gallons per day). Using 1,440 gallons per day for .5 acre of cannabis canopy, with a grow season of 300 irrigation days annually, the annual irrigation water demand for the project is estimated to be 432,000 gallons per year.

F. Domestic Water Demand - for the light industrial warehouse and distribution land uses is estimated using the following formula: 38,600 square feet of floor area x 3.4 gallons/square foot/year = 131,240 gallons per year (+) plus 50 gallons/employee x 35 employees x 300 work days/year = 525,000 gallons /year = Total estimated water use for the 2160 Ogulin Canyon Road Processing Building = 656,240 gallons per year.

G. Total Water Demand - the estimated total water demand for the project is 1,088,240 gallons per year (Irrigation - 432,000 gallons + Domestic - 656,240 gallons).

H. Total Water Supply Capacity - the well report yield is 100 gallons per minute, which results in a supply capacity of 9+ million gallons per year (40 hours/week [2,400 minutes/week] x 52 weeks/year x 80 gallons/minute).

I. The facility will implement water conservation practices, including:

- Selection of plant varieties that are suitable for mixed light cultivation.
- The use of driplines and drip emitters (instead of spray irrigation).
- The use of mulch to reduce evaporation.
- Water application rates modified from data from soil moisture meters and weather monitoring.

- Rooftop rainwater collection (where feasible and permitted).
- Shutoff valves on hoses and water pipes.
- Daily visual inspections of irrigation systems.
- Immediate repair of leaking or malfunctioning equipment.
- Water metering and budgeting.
- Practices to prevent discharges from water supply equipment.
- Water application rates minimized as necessary to prevent runoff and water equipment leaks repaired immediately.
- Water filtration systems to be installed.
- The elevated tank will supply gravitational flow to the irrigation system. PVC pipes will deliver the water to the plants.
- Mixing tanks will be used to mix liquid fertilizers, which will then be injected into the irrigation system supply lines.
- At each planting station, black polyvinyl flexible tubes and drip emitters will be used to irrigate the plants.

I. Groundwater – The following information is from: ***Lake County Watershed Protection District Lake County Groundwater Management Plan - March 31, 2006 - page 2-24 to 27.*** The project site is in the Burns Valley Groundwater Basin. Burns Valley Basin is in the Shoreline Inventory Unit. The Franciscan Formation borders the Burns Valley Basin on the north, Clear Lake borders the basin on the west, and the Cache Formation borders the basin on the south and east.

Water-Bearing Formations:

Quaternary Alluvium

The valley lowlands contain stream channel gravel and adjacent floodplain deposits. These lowland deposits are Quaternary Alluvium and are composed of silt, sand, and gravel. The southern end of the valley has a maximum thickness of approximately 50 feet (DWR 2003). Groundwater in this formation is unconfined and typically provides water for domestic use.

Quaternary Terrace Deposits

Quaternary Terrace Deposits have been deposited on the sides of the alluvial plain in the Burns Valley Basin. The terrace deposits are approximately 15 feet above the valley

floor and slope up the valley to a similar elevation as the foothill exposures of the Cache Formation. Groundwater in this formation is not well understood.

Lower Lake Formation

The Lower Lake Formation, consisting of lake deposits, underlies the alluvial and terrace deposits in the Burns Valley Basin. The formation consists of fine sands, silts, and thick interbeds of marl and limestone (Rymer 1981) and has a maximum thickness of 200 feet (DWR 2003). The formation has low permeability and provides water to wells at up to a few hundred gallons per minute (DWR 2003).

Groundwater Hydrogeology

The Watershed Protection District monitors one well in the Burns Valley Basin. The monitoring well indicates that groundwater levels fluctuate from 2 feet below ground surface in the spring to 10 feet below ground surface in the fall. The well also indicates that water levels rose in the Burns Valley Basin in 1981-1983. No information on groundwater movement is available. DWR estimates the useable storage capacity to be 1,400-acre feet (DWR 1960). Average-year agricultural groundwater demand in the Burns Valley basin is approximately 14 acre-feet per year.

Groundwater Quality/Inelastic Land Surface Subsidence

DWR monitors a number of wells for water quality in the Burns Valley Basin. Monitoring is not extensive enough to determine trends in groundwater quality nor the overall character of groundwater in the basin. Information was not available from DHS for the Burns Valley Groundwater Basin. Current information regarding inelastic land surface subsidence is unavailable.

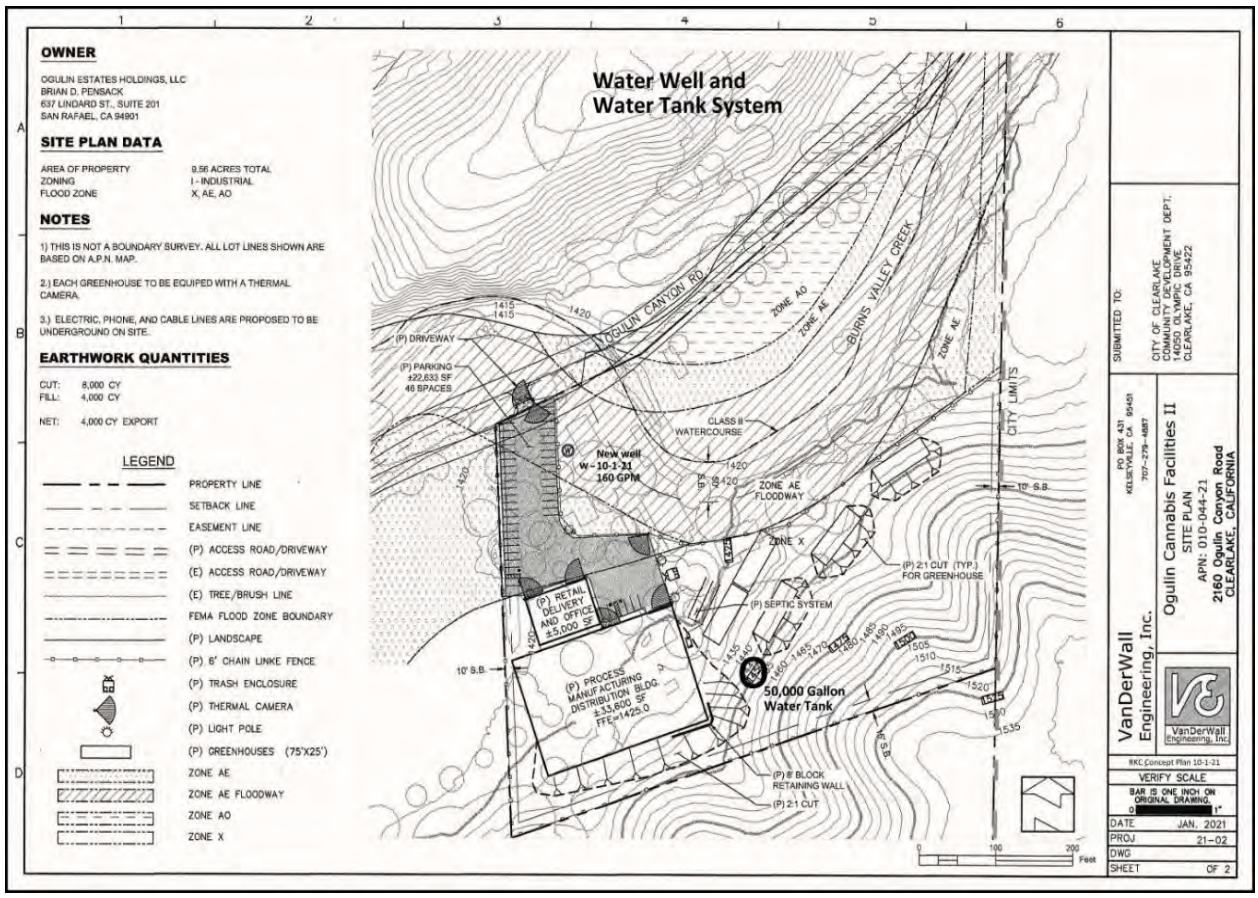
Groundwater Wells

There are 86 domestic wells and 13 irrigation wells in the Burns Valley Basin. Approximately 50 percent of domestic wells are shallower than 75 feet deep, and approximately 50 percent of irrigation wells are shallower than 250 feet deep.

Conclusion - Water Availability

Based on the fact that the new well will have a supply capacity of over 9,000,000 gallons per year and that the estimated water demand for the project is 1,088,240 gallons per year, there is adequate water availability for the project.

Water Availability Report
2160 Ogulin Canyon Road
Cannabis Processing and Cultivation Project



Richard Knoll Consulting
825 South Main Street
Lakeport, California 95453
707-349-0639
richardk2255@hotmail.com

October 14, 2021

COUNTY OF LAKE
HEALTH SERVICES DEPARTMENT
Division of Environmental Health
922 Bevins Court, Lakeport, CA 95453-9739
Telephone 707/ 263-1164 FAX: 263-1681

Denise Pomeroy
Health Services Director

Erin Gustafson
Public Health Officer

Jasjit Kang
Environmental Health Director

SEAL WITHOUT WITNESS

Permit Number: WE 5718-AG

Site Address: 2160 Ogulin Canyon RD Clearlake CA. 95422

Assessor's Parcel No: 010 - 044 - 21

Owner Name: Ogulin Hills Holdings LLC

Date: 10/1/21

REASON FOR SEAL WITHOUT WITNESS:

☐ **Emergency Seal – Explain:** _____

☒ **Inspector unable to witness**

☐ **Other:** _____

IMPERMEABLE LAYER in which annular space terminates:

2" **at a depth of** 20' **feet.**

SEALANT USED: Bentonite clay & concrete
METHOD OF PLACEMENT: pour down Hole and mix and pour concrete cap

I hereby certify that I have installed the annular seal in accordance with the provisions of the Lake County Well Ordinance and unless otherwise specified in the Lake County Well Ordinance, with the California Department of Water Resources Bulletin 74-81 or as modified by subsequent revisions or supplements.

DRILLING CONTRACTOR SIGNATURE: _____

COMPANY: will Peterson well Drilling **LICENSE NO:** 1009053

*The free Adobe Reader may be used to view and complete this form. However, software must be purchased to complete, save, and reuse a saved form.

File Original with DWR

State of California
Well Completion Report
Refer to Instruction Pamphlet
No. xxxxxx

Page 1 of 1
Owner's Well Number 2
Date Work Began 9-29-21 Date Work Ended 10-1-21
Local Permit Agency Lake County Environmental Health
Permit Number WE-5718AC Permit Date 9-28-21

DWR Use Only – Do Not Fill In
State Well Number/Site Number
Latitude N Longitude W
APN/TRS/Other

Geologic Log

Orientation ● Vertical ○ Horizontal ○ Angle Specify
Drilling Method Air Rotary Drilling Fluid NA

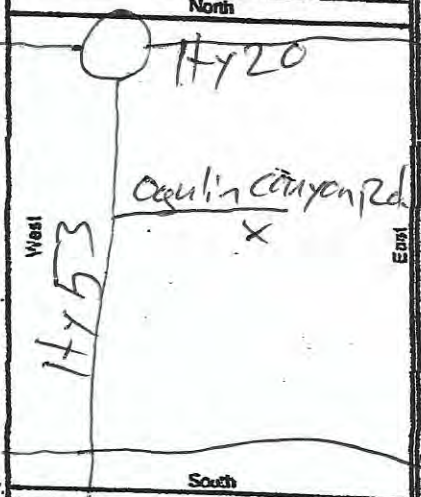
Depth from Surface Feet	to Feet	Description: Describe material, grain size, color, etc
0	20	gravel and Brown clay
20	70	gravel & tan clay
70	220	transition gravel trace of sandstone
220	240	transition gravel
240	300	green stone

Total Depth of Boring 305 Feet
Total Depth of Completed Well 300 Feet

Well Owner
Name Oaulin Hills Holdings
Mailing Address 657 Lincoln St. Suite 201
City San Rafael State CA Zip 94901

Well Location
Address 2160 Ogulin canyon RD
City Clearlake CA County LAKE
Latitude ___ Deg. ___ Min. ___ Sec. N Longitude ___ Deg. ___ Min. ___ Sec. W
Datum ___ Dec. Lat. ___ Dec. Long. ___
APN Book 010 Page 044 Parcel 21
Township ___ Range ___ Section ___

Location Sketch
(Sketch must be drawn by hand after form is printed.)



Illustrate or describe distance of well from roads, buildings, fences, rivers, etc. Indicate scale. Use additional paper if necessary. Please be accurate and complete.

Activity
● New Well
○ Modification/Repair
○ Deepen
○ Other ___
○ Destroy
Describe procedures and materials under "Destruction"

Planned Uses
● Water Supply
■ Domestic ☐ Public
■ Irrigation ☐ Industrial
○ Cathodic Protection
○ Dewatering
○ Heat Exchange
○ Injection
○ Monitoring
○ Remediation
○ Sparging
○ Test Well
○ Vapor Extraction
○ Other ___

Water Level and Yield of Completed Well
Depth to first water 80' (Feet below surface)
Depth to Static Water Level 30' (Feet) Date Measured 9-30-21
Estimated Yield * 100+ (GPM) Test Type Air Lift
Test Length 2hrs (Hours) Total Drawdown ___ (Feet)
*May not be representative of a well's long term yield.

Casings

Depth from Surface Feet	to Feet	Borehole Diameter (inches)	Type	Material	Wall Thickness (inches)	Outside Diameter (inches)	Screen Type	Slot Size If Any (inches)
0	80	9"	PH80	PVC	sch 40	4½"	None	None
80	100	9"	F480	PVC	sch 40	4½"	Perfs	.032
100	240	9"	F480	PVC	sch 40	4½"	Blanks	N/A
240	300	9"	F480	PVC	sch 40	4½"	Perfs	.032

Annular Material

Depth from Surface Feet	to Feet	Fill	Description
0	20	Concrete	SEAL
1	21	Bentonite	
21	300	Sig Rea	Gravel Pack

Attachments
☐ Geologic Log
☐ Well Construction Diagram
☐ Geophysical Log(s)
☐ Soil/Water Chemical Analyses
☐ Other ___
Attach additional information, if exists

Certification Statement
I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief
Name Will Peterson Well Drilling
Person, Firm or Corporation
P.O. Box 695 Kelseyville CA 95451
Address City State Zip
Signed [signature] 10-1-21 1009053
C-57 Licensed Water Well Contractor Date Signed C-57 License Number

DWR 188 REV 1/2005

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

OWNER

OGULIN ESTATES HOLDINGS, LLC
BRIAN D. PENSACK
637 LINDARD ST., SUITE 201
SAN RAFAEL, CA 94901

SITE PLAN DATA

AREA OF PROPERTY	9.56 ACRES TOTAL
ZONING	I - INDUSTRIAL
FLOOD ZONE	X, AE, AO

NOTES

1) THIS IS NOT A BOUNDARY SURVEY. ALL LOT LINES SHOWN ARE BASED ON A.P.N. MAP.

2.) EACH GREENHOUSE TO BE EQUIPED WITH A THERMAL CAMERA.

3.) ELECTRIC, PHONE, AND CABLE LINES ARE PROPOSED TO BE UNDERGROUND ON SITE.

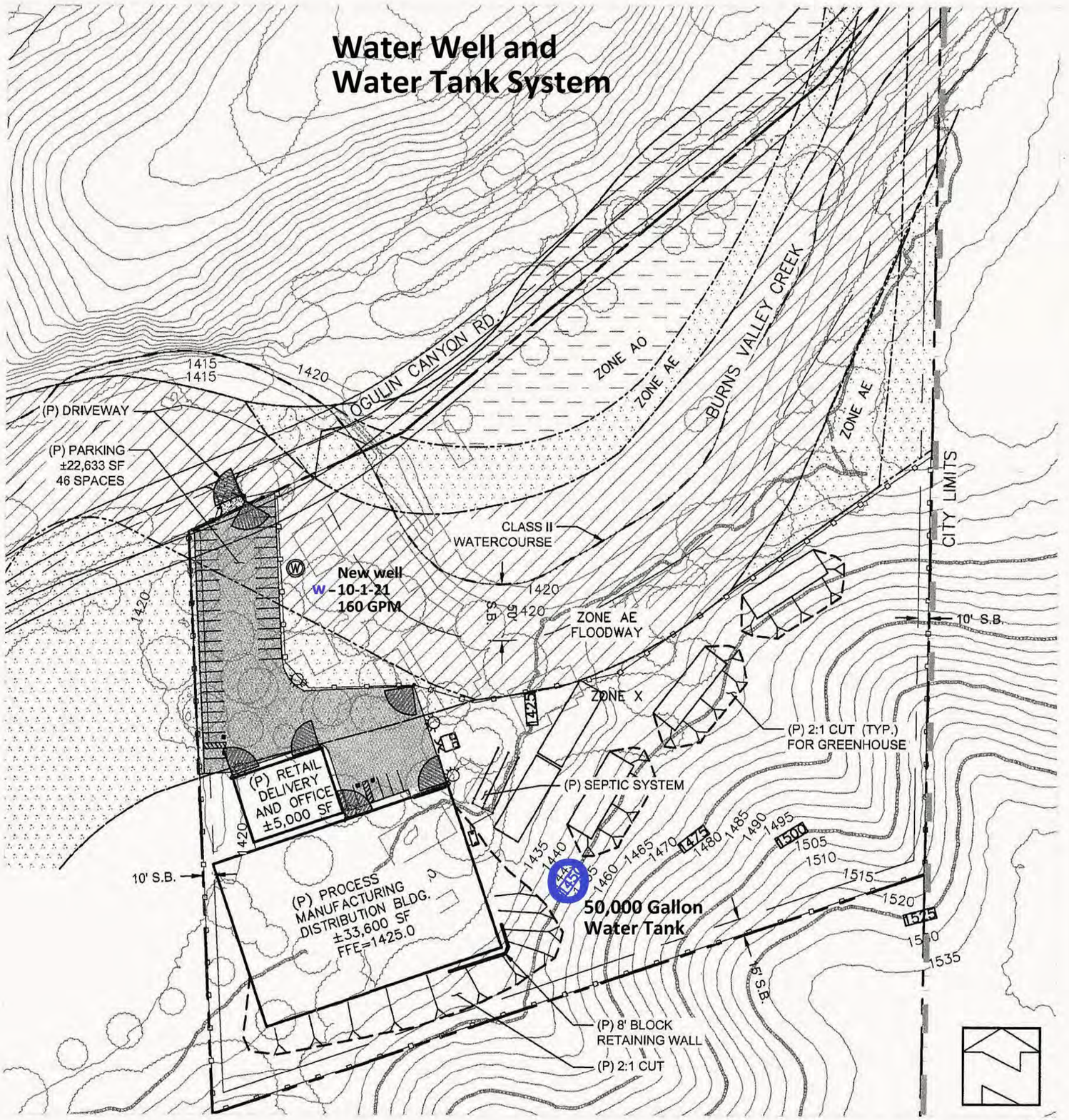
EARTHWORK QUANTITIES

CUT: 8,000 CY
FILL: 4,000 CY

NET: 4,000 CY EXPORT

LEGEND

- PROPERTY LINE
- SETBACK LINE
- EASEMENT LINE
- (P) ACCESS ROAD/DRIVEWAY
- (E) ACCESS ROAD/DRIVEWAY
- (E) TREE/BRUSH LINE
- FEMA FLOOD ZONE BOUNDARY
- (P) LANDSCAPE
- (P) 6' CHAIN LINKE FENCE
- (P) TRASH ENCLOSURE
- (P) THERMAL CAMERA
- (P) LIGHT POLE
- (P) GREENHOUSES (75'X25')
- ZONE AE
- ZONE AE FLOODWAY
- ZONE AO
- ZONE X



SUBMITTED TO:
CITY OF CLEARLAKE
COMMUNITY DEVELOPMENT DEPT.
14050 OLYMPIC DRIVE
CLEARLAKE, CA 95422

VanDerWall Engineering, Inc.
PO BOX 431
KELSEYVILLE, CA 95451
707-279-4887

Ogulin Cannabis Facilities II
SITE PLAN
APN: 010-044-21
2160 Ogulin Canyon Road
CLEARLAKE, CALIFORNIA

VanDerWall Engineering, Inc.

RKC Concept Plan 10-1-21
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	JAN. 2021
PROJ	21-02
DWG	
SHEET	OF 2

ATTACHMENT F

Traffic Impact Study for the Ogulin Canyon Road Cannabis Cultivation Facilities

Prepared for the City of Clearlake and the County of Lake

Submitted by
W-Trans

September 23, 2021

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Table of Contents

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Executive Summary

The proposed cannabis cultivation and support facilities would be located at 2185, 2160, 2050, and 1756 Ogulin Canyon Road to the east of SR 53. The two projects proposed at 2185 and 2160 Ogulin Canyon Road are at sites in the City of Clearlake and the two project sites at 2050 and 1756 are located in unincorporated Lake County. Cumulatively, the projects would include 749,995 square feet of cannabis cultivation area, 43,600 square feet of manufacturing, processing, and distribution facilities, and 8,000 square feet of office and delivery retail space. A maximum of 85 full- and part-time employees are anticipated during harvest seasons. The four proposed projects would be expected to result in a total of 259 new daily trips during the peak season, including 44 trips during the morning peak hour and 41 trips during the evening peak hour.

The operational analysis study area includes the intersection of SR 53 with Ogulin Canyon Road. Analysis indicates that the study intersection would be expected to operate acceptably at LOS A overall and LOS D or better on the stop-controlled Ogulin Canyon Road approach during both peak hours and under all scenarios evaluated, including with cumulative traffic from all four projects and upon buildout of the City of Clearlake General Plan. Each individual project was therefore determined to have an acceptable effect on operation of the surrounding roadway network.

As of the date of this analysis, the City of Clearlake and County of Lake have not yet adopted thresholds of significance related to VMT, though the *Senate Bill 743 Vehicle Miles Traveled Regional Baseline Study* was prepared for Lake Area Planning Council (LAPC) in November 2020. Many of the recommendations in the Regional Baseline Study are consistent with guidance published by the California Governor's Office of Planning and Research (OPR) in the publication *Technical Advisory on Evaluating Transportation Impacts in CEQA,* 2018. As a result, individual project-related VMT impacts were assessed based on OPR guidance. Under this guidance, each of the four proposed projects can be presumed to have a less-than-significant transportation impact on VMT under the "small project" screening threshold since each individual project would result in fewer than 110 new daily trips during the peak season and even less when averaged over the course of the year.

There were no collisions recorded at the intersection of SR 53/Ogulin Canyon Road or on Ogulin Canyon Road during the most recent five-year study period indicating that there are no readily apparent safety issues in the study area. With the increase in trips from the four projects, the entirety of Ogulin Canyon Road would have an annual ADT below the AASHTO 400-trip threshold that defines a "Very Low Volume Roadway" and since the roadway has been operating acceptably in terms of safety, it is reasonable to expect the facility to continue doing so. Additionally, adequate stopping sight distance is available on Ogulin Canyon Road for the anticipated travel speeds at the project driveways. To maintain available sight lines, it is recommended that any new landscaping or signage planned for the project frontages be placed outside the driver's vision triangle at the driveways.

Although there are no pedestrian, transit, or bicycle facilities in the vicinity of the project sites, the existing condition is acceptable given that the project sites are located in an automobile-oriented rural area without any expected demand for walking or transit and limited demand for bicycling.

The City of Clearlake and County of Lake do not have published parking requirements for cannabis cultivation and support uses so the anticipated peak parking demand was estimated based on the proposed employee count and the number of company-owned vehicles proposed for the distribution uses. It was determined that the proposed parking supply for each project would be more than adequate to meet the anticipated peak parking demand.

Introduction

This report presents an analysis of the potential transportation impacts and traffic effects that would be associated with development of four cannabis cultivation projects on Ogulin Canyon Road, with two in the City of Clearlake and two in unincorporated Lake County. The traffic study was completed in accordance with the criteria established by the City of Clearlake and County of Lake, reflects a scope of work approved by City staff, and is consistent with standard traffic engineering techniques. While a single traffic study report has been prepared for all four of the proposed projects, the CEQA-related issues have been assessed for each project individually.

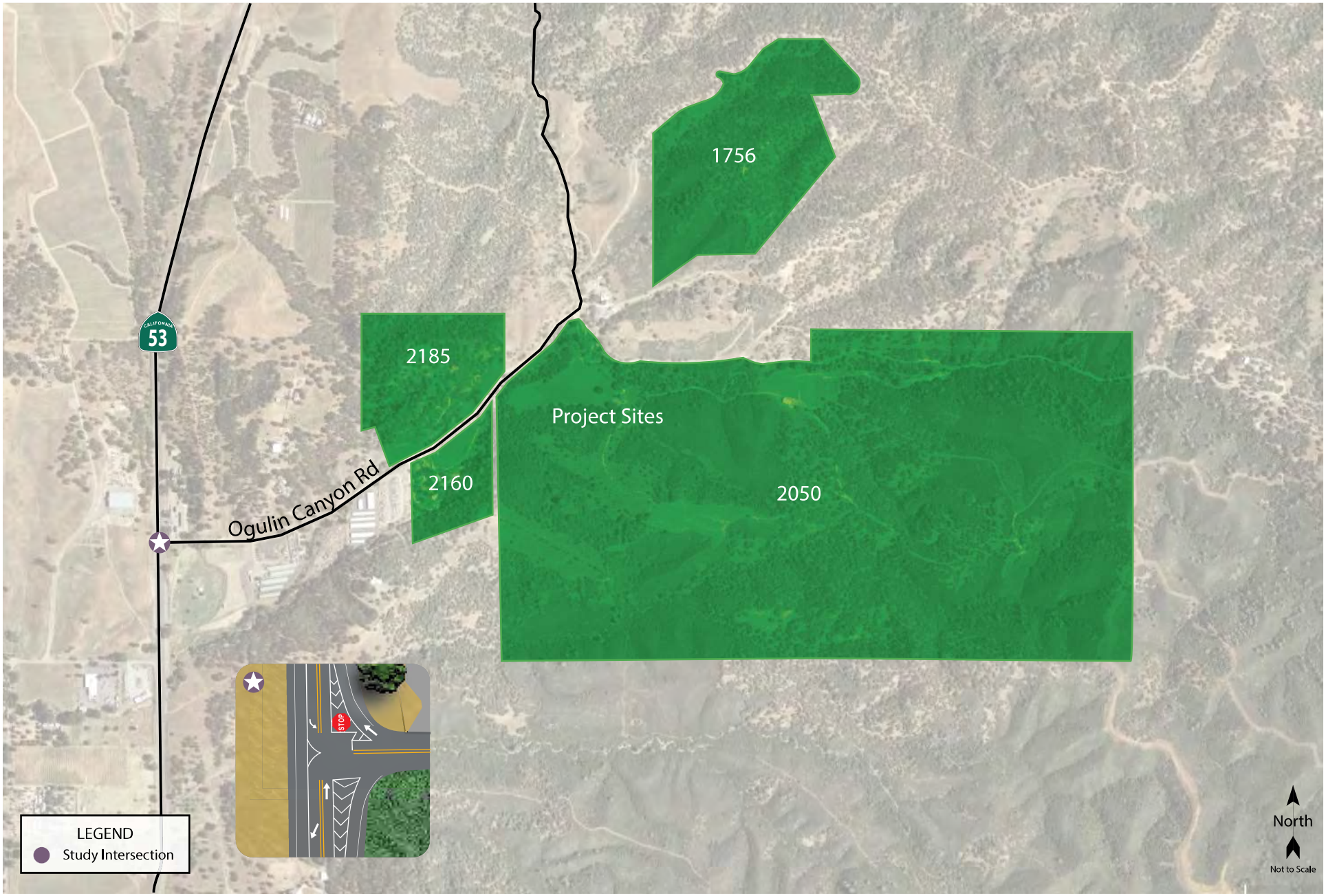
Prelude

The purpose of a traffic impact study is to provide Agency staff and policy makers with data they can use to make an informed decision regarding the potential transportation impacts and traffic effects of a proposed project, and any associated improvements that would be required to mitigate these impacts to a level of insignificance under CEQA or reduce an adverse effect to an acceptable level under the jurisdiction's General Plan or other policies. Impacts relative to access for pedestrians, bicyclists, and to transit are addressed in the context of the CEQA criteria. Consistent with SB 743, the project's transportation impacts were analyzed using VMT. While no longer a part of the CEQA review process, vehicular traffic service levels at a key intersection were evaluated for consistency with General Plan policies by determining the number of new trips that the proposed use would be expected to generate, distributing these trips to the surrounding street system based on anticipated travel patterns specific to the proposed project, then analyzing the effect the new traffic would be expected to have on the operation of the study intersection.

Project Profile

The four proposed cannabis cultivation projects would be located at 2185, 2160, 2050, and 1756 Ogulin Canyon Road to the east of SR 53. The two projects proposed at 2185 and 2160 Ogulin Canyon Road are in the City of Clearlake and the two projects at 2050 and 1756 are located in unincorporated Lake County. Cumulatively, the projects include 749,995 square feet of cannabis cultivation, 43,600 square feet of manufacturing, processing, and distribution facilities, and 8,000 square feet of office and delivery retail space. A maximum of 85 full- and part-time employees are anticipated during harvest seasons. Detailed descriptions for each of the individual projects are provided in the "Project Description" section of this report.

The study area and location of the four project sites are shown in Figure 1.



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Traffic Impact Study for the Ogulin Canyon Road Cannabis Cultivation Facilities

Figure 1 – Study Area and Existing Lane Configurations

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Transportation Setting

Operational Analysis

Study Area and Periods

The operational analysis study area selected with input from City staff consists of the intersection of SR 53/ Ogulin Canyon Road. Operating conditions during the weekday a.m. and p.m. peak periods were evaluated to capture the highest potential volumes for the proposed project as well as the highest volumes on the local transportation network. The morning peak hour occurs between 7:00 and 9:00 a.m. and reflects conditions during the home to work commute, while the p.m. peak hour occurs between 4:00 and 6:00 p.m. and typically reflects the highest level of congestion during the homeward-bound commute.

Study Intersection

SR 53/Ogulin Canyon Road is a tee intersection stop-controlled on the westbound Ogulin Canyon Road approach. The intersection has a left-turn lane on the southbound approach and channelized right-turn lanes on the northbound and westbound approaches. The westbound right-turn channelization feeds into a dedicated lane on northbound SR 53. Additionally, an acceleration lane is provided for traffic turning left from Ogulin Canyon Road onto southbound SR 53; this allows motorists to complete their left-turn movement in two stages.

The location of the study intersection and the existing lane configurations and control are shown in Figure 1.

Study Roadway

Ogulin Canyon Road is located on the east side of SR 53 and generally runs east-west with a width ranging between 16 and 25 feet. The section between SR 53 and the project driveway at the 2185 address is paved and does not have a posted speed limit. The section to the east of 2185 transitions to a mostly gravel surface with a speed limit of 15 miles per hour (mph) indicated by signing that appears to have been erected by landowners and not the County. Based on traffic count data collected on April 6, 2021 specifically for this study, Ogulin Canyon Road has an average daily traffic (ADT) volume of approximately 220 vehicles to the west of the mini storage facility and 60 vehicles to the east.

Collision History

The collision history for the study area was reviewed to determine any trends or patterns that may indicate a safety issue. Collision records were obtained from the California Highway Patrol (CHP) as published in their Statewide Integrated Traffic Records System (SWITRS) reports. For the five-year study period between April 1, 2015 through March 31, 2020, there were no recorded collisions at the study intersection of SR 53/ Ogulin Canyon Road or on the entire segment of Ogulin Canyon Road, indicating that there are no readily apparent safety issues in the study area.

Alternative Modes

Pedestrian Facilities

Pedestrian facilities include sidewalks, crosswalks, pedestrian signal phases, curb ramps, curb extensions, and various streetscape amenities such as lighting, benches, etc. Consistent with the rural location of the study area, there are no dedicated pedestrian facilities in the vicinity of the project sites, nor would such facilities be appropriate in this setting.

Bicycle Facilities

The *Highway Design Manual*, Caltrans, 2017, classifies bikeways into four categories:

- **Class I Multi-Use Path** – a completely separated right-of-way for the exclusive use of bicycles and pedestrians with cross flows of motorized traffic minimized.
- **Class II Bike Lane** – a striped and signed lane for one-way bike travel on a street or highway.
- **Class III Bike Route** – signing only for shared use with motor vehicles within the same travel lane on a street or highway.
- **Class IV Bikeway** – also known as a separated bikeway, a Class IV Bikeway is for the exclusive use of bicycles and includes a separation between the bikeway and the motor vehicle traffic lane. The separation may include but is not limited to, grade separation, flexible posts, inflexible physical barriers, or on-street parking.

There are no existing dedicated bicycle facilities on Ogulin Canyon Road or SR 53, nor are there any plans to provide such facilities in the *Active Transportation Plan for Lake County* (ATP), Lake County/ City Area Planning Council, December 2016. However, bicyclists are able to ride on the shoulders of SR 53 and share the roadway with motorists on Ogulin Canyon Road.

Transit Facilities

Transit Services in the City of Clearlake, and throughout Lake County, are provided by Lake Transit. The nearest transit stop is located approximately 2.5 miles southwest of the project sites near the intersection of Olympic Drive/Burns Valley Road, which is not within a walkable distance; therefore, the project sites are not readily accessible by transit.

Although there is a lack of transit service in the project vicinity, dial-a-ride, also known as paratransit or door-to-door service, is available for those who are unable to independently use the transit system due to a physical or mental disability. Lake Transit offers dial-a-ride service in Clearlake, Lower Lake, and Lakeport during the same days and hours as the local bus routes. Passengers certified as eligible for the Americans with Disabilities Act (ADA) paratransit service receive reservation priority when calling one day or more in advance. Additionally, passengers in areas that are not served by dial-a-ride can use the "flex-stop" service and the bus will travel up to one mile off of its regular route, as needed.

Capacity Analysis

Intersection Level of Service Methodologies

Level of Service (LOS) is used to rank traffic operation on various types of facilities based on traffic volumes and roadway capacity using a series of letter designations ranging from A to F. Generally, Level of Service A represents free-flow conditions and Level of Service F represents forced flow or breakdown conditions. A unit of measure that indicates a level of delay generally accompanies the LOS designation.

The Levels of Service for the intersection of SR 53/Ogulin Canyon Road were analyzed using the "Two-Way Stop-Controlled" intersection capacity method from the *Highway Capacity Manual* (HCM), Transportation Research Board, 6th Edition, 2018. This methodology determines a level of service for each minor turning movement by estimating the level of average delay in seconds per vehicle. Results are presented for individual movements together with the weighted overall average delay for the intersection.

The ranges of delay associated with the various levels of service are indicated in Table 1.

Table 1 – Two-Way Stop-Controlled Intersection Level of Service Criteria

LOS A	Delay of 0 to 10 seconds. Gaps in traffic are readily available for drivers exiting the minor street.
LOS B	Delay of 10 to 15 seconds. Gaps in traffic are somewhat less readily available than with LOS A, but no queuing occurs on the minor street.
LOS C	Delay of 15 to 25 seconds. Acceptable gaps in traffic are less frequent, and drivers may approach while another vehicle is already waiting to exit the side street.
LOS D	Delay of 25 to 35 seconds. There are fewer acceptable gaps in traffic, and drivers may enter a queue of one or two vehicles on the side street.
LOS E	Delay of 35 to 50 seconds. Few acceptable gaps in traffic are available, and longer queues may form on the side street.
LOS F	Delay of more than 50 seconds. Drivers may wait for long periods before there is an acceptable gap in traffic for exiting the side streets, creating long queues.

Reference: *Highway Capacity Manual*, Transportation Research Board, 6th Edition, 2018

Traffic Operation Standards

City of Clearlake

The City of Clearlake established a Level of Service (LOS) Standard of LOS D for all intersections and roadways in Policy Cl 1.3.4 of *City of Clearlake 2040 General Plan Update,* City of Clearlake, 2017. Exceptions to this may be considered by the City Council when an unacceptable LOS (E or F) would result in clear public benefit. Such circumstances may include when improvements to achieve the LOS standard would result in impacts to unique historic resources or highly sensitive environmental areas; if right-of-way acquisition is infeasible; and/or if there are overriding economic or social circumstances.

Caltrans

While the study intersection is on a State highway, Caltrans does not have a standard of significance relative to operation as this is no longer a CEQA issue. The new *Vehicle Miles Traveled-Focused Transportation Impact Study Guide* (TISG), published in May 2020, replaced the *Guide for the Preparation of Traffic Impact Studies*, 2002. As

indicated in the TISG, the Department is transitioning away from requesting LOS or other vehicle operations analyses of land use projects and will instead focus on Vehicle Miles Traveled (VMT).

Existing Conditions

The Existing Conditions scenario provides an evaluation of current operation based on existing traffic volumes during the weekday a.m. and p.m. peak periods. This condition does not include project-generated traffic volumes. Volume data for the study intersection was collected on April 6, 2021. Peak hour factors (PHFs) were calculated based on the counts obtained and used in the analysis.

Intersection Levels of Service

Under Existing Conditions, SR 53/Ogulin Canyon Road operates acceptably at LOS A overall and LOS B or C on the stop-controlled westbound approach during both peak hours. A summary of the intersection Level of Service calculations is contained in Table 2, the Existing traffic volumes are shown in Figure 2, and copies of the Level of Service calculations for all evaluated scenarios are provided in Appendix A.

Table 2 – Existing Peak Hour Intersection Levels of Service

Study Intersection ***Approach***	**AM Peak**		**PM Peak**	
	Delay	**LOS**	**Delay**	**LOS**
SR 53/Ogulin Canyon Rd	0.2	A	0.7	A
Westbound (OCR) Approach	*10.2*	*B*	*21.1*	*C*

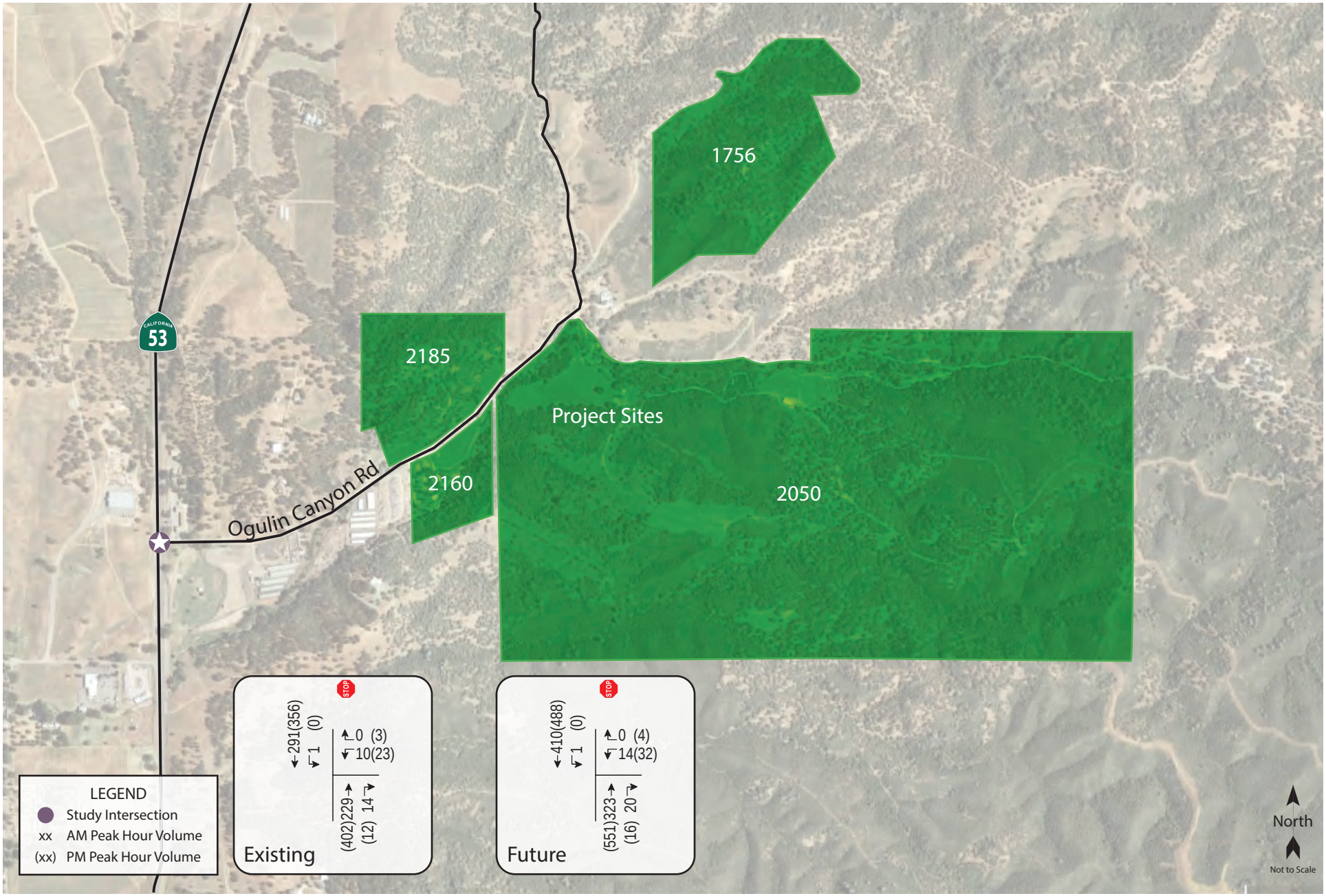
Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service; OCR = Ogulin Canyon Road

Future Conditions

Future volumes for the horizon year 2040 were developed for the study intersection using information contained in the traffic analysis that was prepared for the *City of Clearlake 2040 General Plan Update*. The study intersection was not analyzed as part of the General Plan update so a growth factor was calculated between existing and future volume projections for the nearest intersection on the SR 53 corridor that was analyzed in the General Plan analysis and then applied to the existing volumes at the study intersection in order to project likely future volumes. Anticipated General Plan buildout volumes for the intersection of SR 53/Olympic Drive, which is approximately one mile south of the study intersection, indicate a growth factor of 1.51 for the a.m. peak hour and 1.46 for the p.m. peak hour. After adjusting for the four years of growth that have already occurred since the General Plan analysis, a growth factor of 1.41 and 1.37 was applied to the existing 2021 counts in order to estimate 2040 volumes. The growth factors were applied uniformly to all movements at the study intersection. A spreadsheet indicating the growth factor calculations is provided in Appendix B.

Intersection Levels of Service

Under the anticipated Future volumes, the intersection of SR 53/Ogulin Canyon Road is expected to continue operating acceptably at LOS A overall and LOS D or better on stop-controlled westbound approach during both peak hours. Future volumes are shown in Figure 2 and operating conditions are summarized in Table 3.



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Traffic Impact Study for the Ogulin Canyon Road Cannabis Cultivation Facilities

Figure 2 – Existing and Future Traffic Volumes

W-Trans

Table 3 – Future Peak Hour Intersection Levels of Service				
Study Intersection ***Approach***	**AM Peak**		**PM Peak**	
	Delay	**LOS**	**Delay**	**LOS**
SR 53/Ogulin Canyon Rd	0.2	A	0.9	A
Westbound (OCR) Approach	*10.8*	*B*	*28.3*	*D*

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service; OCR = Ogulin Canyon Road

Project Description

The four proposed cannabis cultivation projects would be located at 2185, 2160, 2050, and 1756 Ogulin Canyon Road; the 2185 and 2160 addresses are in the City of Clearlake, while the properties at 2050 and 1756 are in unincorporated Lake County. Following are detailed descriptions of each individual project:

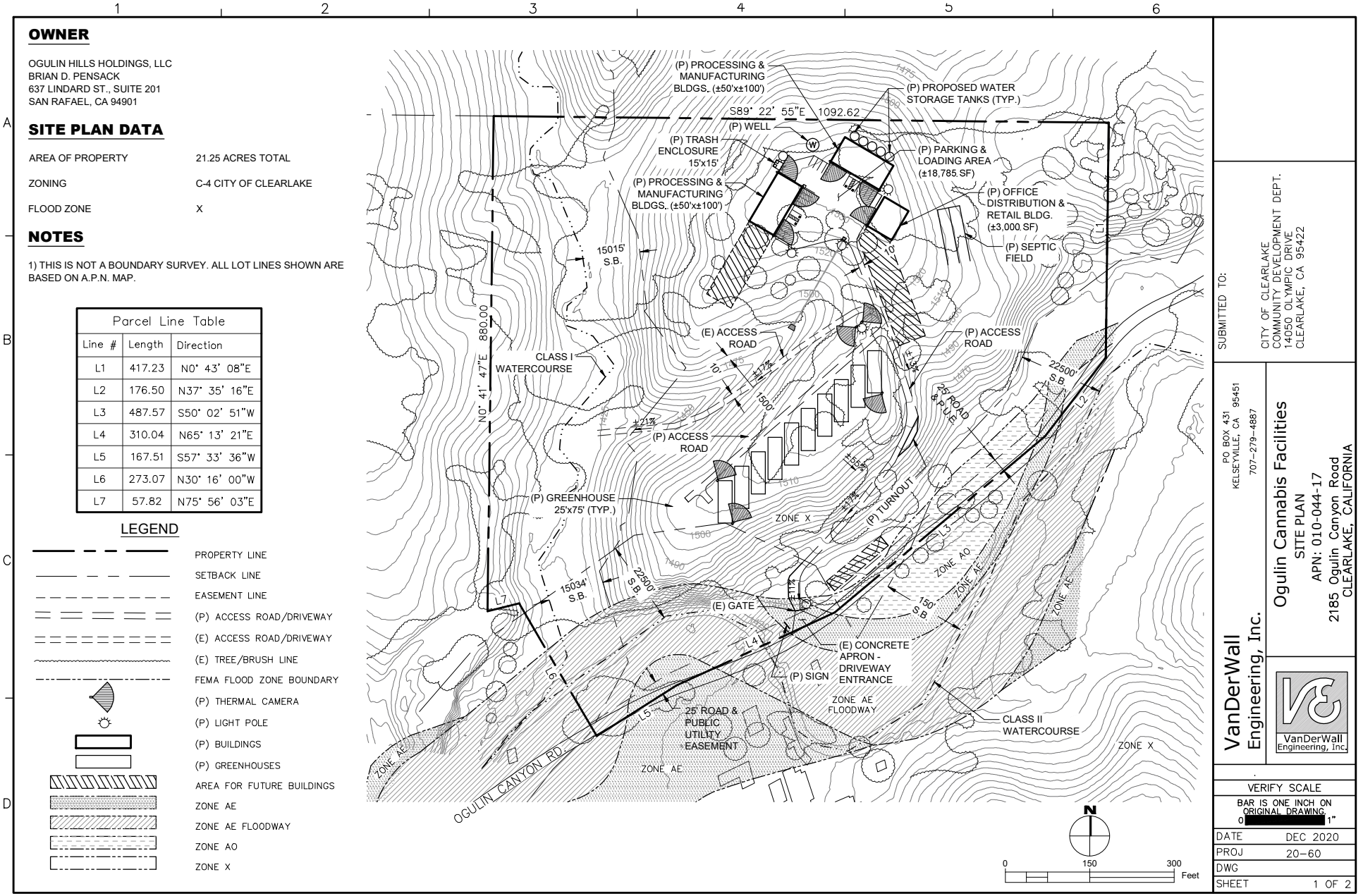
- **2185 Ogulin Canyon Road** – The first phase of the project includes 10,000 square feet of cannabis manufacturing, processing, and distribution uses, 3,000 square feet for office and retail delivery space, and ten greenhouses for mixed light cultivation totaling 18,750 square feet. During typical operation, an average of ten full-time employees are anticipated, which would increase to a total of 25 employees during harvest season.
- **2160 Ogulin Canyon Road** – The proposed project includes the development of 5,000 square feet of delivery and office space and 33,600 square feet of cannabis processing, manufacturing, and distribution uses. Five greenhouses are also proposed for indoor cannabis cultivation totaling 9,375 square feet. During the harvest season a maximum of 35 employees are anticipated.
- **2050 Ogulin Canyon Road** – The proposed Lake Vista Farms project includes 15 acres of outdoor cultivation canopy across five sites. There would be eight full-time employees during typical operation and up to 20 employees during the planting and harvesting seasons.
- **1756 Ogulin Canyon Road** – The proposed Blue Oaks Farm project consists of approximately two acres of cannabis canopy and associated storage facilities. During typical operation, there would be two employees on-site and an additional three crew members would be hired during the harvest season.

The project site plans are shown in Figures 3 through 6.

Trip Generation

To be consistent with traffic studies that have been prepared for other similar cannabis cultivation projects in Humboldt County and Sonoma County, the trip generation for the proposed projects were estimated using standard rates for "General Light Industrial" (Land Use #110) published by the Institute of Transportation Engineers (ITE) in the *Trip Generation Manual*, 10th Edition, 2017. Experience indicates that the application of rates using employees as the independent variable, rather than floor area, is better suited for cultivation projects since the cultivation, processing, manufacturing, and distribution of cannabis generally requires a substantially lower number of employees for a given floor area compared to other industrial uses. The proposed projects would be expected to generate more trips during harvest than non-harvest operation so as is typical for uses that have a "high season" the trip generation for the project was estimated using harvest employment projections considering both full-time and seasonal employees so that the resulting analysis reflects worst-case impacts during the peak season.

Based on a total of 85 employees across all four project sites, collectively the proposed projects would be expected to result in 259 trips per day on Ogulin Canyon Road during the peak season, including 44 trips during the weekday a.m. peak hour and 41 trips during the weekday p.m. peak hour. As is the case with all standard trip generation rates, although employees are the independent variable, trips generated by all aspects of the uses are included,



Source: VanDerWall Engineering, Inc. 7/2

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Traffic Impact Study for the Ogulin Canyon Road Cannabis Cultivation Facilities

Figure 3 – 2185 Site Plan

OWNER

OGULIN ESTATES HOLDINGS, LLC
BRIAN D. PENSACK
637 LINDARD ST., SUITE 201
SAN RAFAEL, CA 94901

SITE PLAN DATA

AREA OF PROPERTY	9.56 ACRES TOTAL
ZONING	I - INDUSTRIAL
FLOOD ZONE	X, AE, AO

NOTES

1) THIS IS NOT A BOUNDARY SURVEY. ALL LOT LINES SHOWN ARE BASED ON A.P.N. MAP.

2.) EACH GREENHOUSE TO BE EQUIPED WITH A THERMAL CAMERA.

3.) ELECTRIC, PHONE, AND CABLE LINES ARE PROPOSED TO BE UNDERGROUND ON SITE.

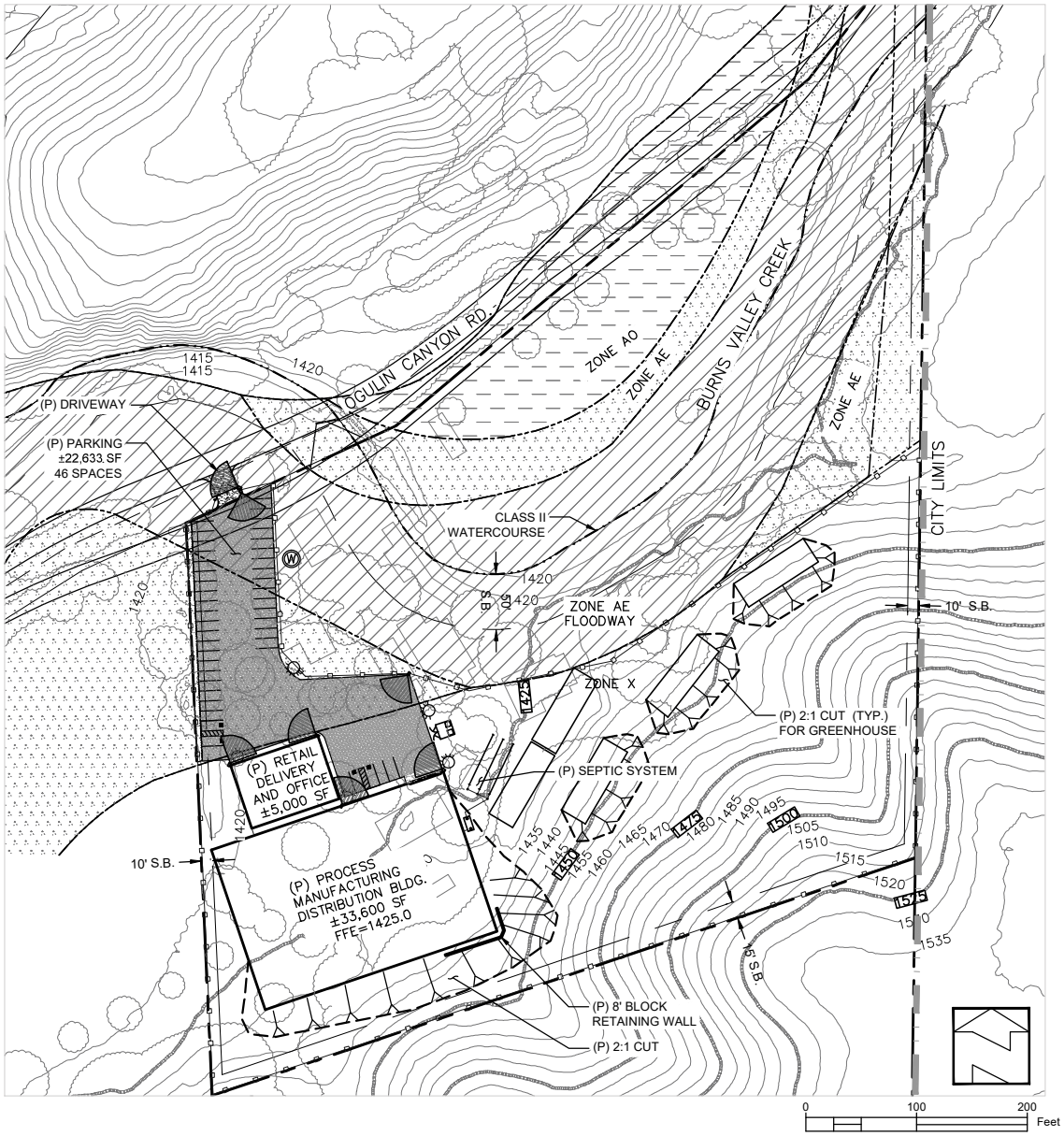
EARTHWORK QUANTITIES

CUT: 8,000 CY
FILL: 4,000 CY

NET: 4,000 CY EXPORT

LEGEND

- PROPERTY LINE
- SETBACK LINE
- EASEMENT LINE
- (P) ACCESS ROAD/DRIVEWAY
- (E) ACCESS ROAD/DRIVEWAY
- (E) TREE/BRUSH LINE
- FEMA FLOOD ZONE BOUNDARY
- (P) LANDSCAPE
- (P) 6' CHAIN LINKE FENCE
- (P) TRASH ENCLOSURE
- (P) THERMAL CAMERA
- (P) LIGHT POLE
- (P) GREENHOUSES (75'X25')
- ZONE AE
- ZONE AE FLOODWAY
- ZONE AO
- ZONE X



SUBMITTED TO:
CITY OF CLEARLAKE
COMMUNITY DEVELOPMENT DEPT.
14050 OLYMPIC DRIVE
CLEARLAKE, CA 95422

VanDerWall Engineering, Inc.
PO BOX 431
KELSEYVILLE, CA 95451
707-279-4887

Ogulin Cannabis Facilities II
SITE PLAN
APN: 010-044-21
2160 Ogulin Canyon Road
CLEARLAKE, CALIFORNIA

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	JAN. 2021
PROJ	21-02
DWG	
SHEET	OF 2

Source: VanDerWall Engineering, Inc. 7/2

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Traffic Impact Study for the Ogulin Canyon Road Cannabis Cultivation Facilities

Figure 4 – 2160 Site Plan

COVER SHEET - Five (5) Cultivation Area Site Plans

APN'S: 010-053-01 & 02 2050 and 2122 OGULIN CANYON RD
CLEARLAKE, CA

SITE PLAN DATA

	010-053-01	010-053-02
AREA OF PROPERTY	145.81	156.64 acres
ZONING	RL	RL
FLOOD ZONE	D	D

CULTIVATION LICENSE

THE INTENTION OF THIS SITE MAP IS FOR THE SUBMITTAL OF AN APPLICATION FOR A MAJOR USE PERMIT SUBMITTAL TO LAKE COUNTY CALIFORNIA AND FOR CALIFORNIA STATE LICENSE FOR 5 ACRES OF OUTDOOR CANOPY.

NOTE:
1.) THIS IS NOT A RECORD OF SURVEY. THE BOUNDARY SHOWN IS APPROXIMATE AND BASED OFF OF ASSESSOR'S PARCEL MAPS. NO SURVEY MONUMENTS ARE FOUND NOR SHOWN.
2.) CONTOURS SHOWN WERE IMPORTED FROM LAKE CO GIS MAPPING DEPARTMENT AND ALL AERIAL PHOTOS BY GOOGLE EARTH.

PROPERTY OWNER

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Garrett W. Burdick
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(415) 637-6456
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APPLICANT

Lake Vista Farms LLC
Brian Pensack
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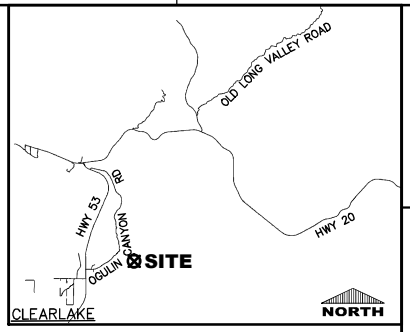
(415) 317-2365

AGENT

Mike Mitzel, Consultant
3430 Gaddy Lane
Kelseyville, CA 95451
(707) 315-1764
konoctidag@gmail.com

WELL LOCATIONS

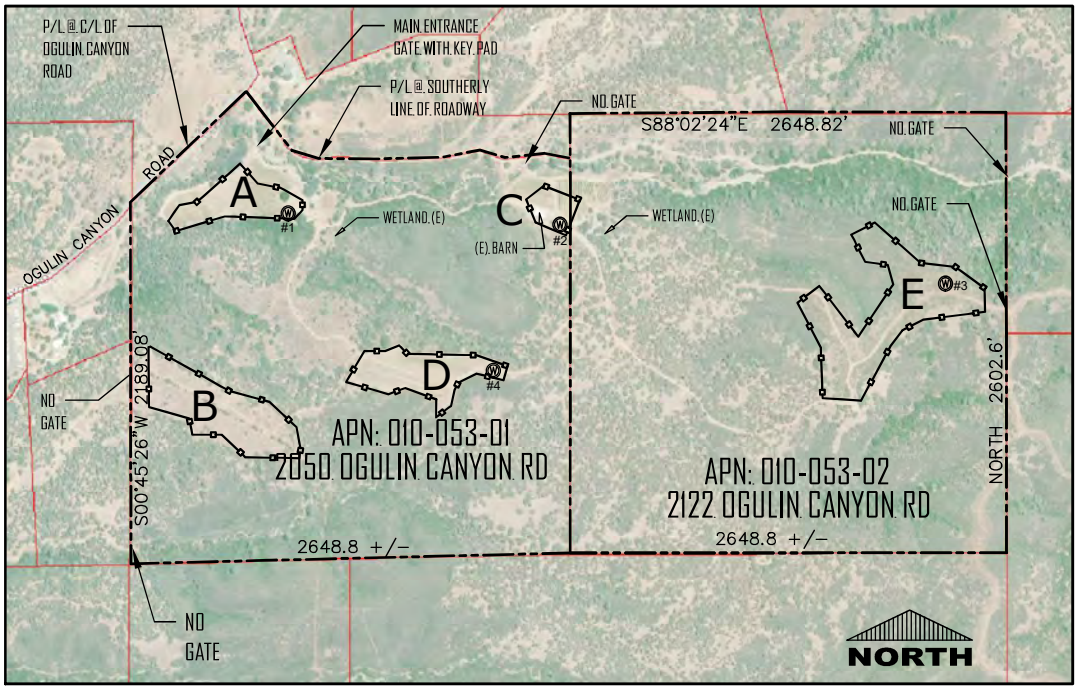
	LATITUDE	LONGITUDE
WELL #1	38°58'55.24"N....	122°35'59.64"W
WELL #2	38°58'55.32"N....	122°35'39.05"W
WELL #3	38°58'51.53"N....	122°35'10.39"W
WELL #4	38°58'46.45"N....	122°35'44.75"W
WELL #5		



LOCATION MAP

CULTIVATION AREA INDEX

NAME	CULTIVATION AREA	SHEETS
A Northwest Hops Field	3.4 ACRES	A-1 thru A-4
B Southwest Clearing	6.4 ACRES	B-1 thru B-4
C Northeast Hops Field	3.4 ACRES	C-1 thru C-5
D Central Hops Field	4.2 ACRES	D-1 thru D-4
E Chaparall Clearing	8.4 ACRES	E-1 thru E-4



SITE MAP

0 700 1400 Feet

LEGEND

- PROPERTY LINE
- CREEKS
- SETBACK LINE
- CULTIVATION FENCE (P)
- FENCE (E)
- ACCESS ROAD/DRIVEWAY
- TREE LINE
- WELL
- UTILITY POLE (P)
- TREE (E)
- LANDSCAPING TREE (P)
- STREET LIGHT (P)
- THERMAL CAMERA VIEW SHED (P)
- NON-THERMAL CAMERA VIEW SHED (P)

STORMWATER BMPS LEGEND*

- FIBER ROLLS (SE-5)
- SURFACE STABILIZATION (EC-2,6,7,8,15,16)
- SILT FENCE (SE-1)
- ROAD/PARKING LOT MGT (SC-40,43,44)
- STOCK PILE MGT (WE-1, WM-1,3)
- CHEMICAL HANDLING BMP (WM-1,2,3,4,5,6)
- SWALE MGT (EC-9, SE-6,8,9)
- WASTE MANAGEMENT (WM-5,6,7, SC-3,4)
- SEDIMENT TRAP/BASEIN (SE-2,3)
- WATER QUALITY MONITORING LOCATION

* ALL STORMWATER BMPS SHALL BE INSTALLED AND MAINTAINED AS PER CALIFORNIA STORMWATER BMP HANDBOOK.

SUBMITTED TO:
LAKE COUNTY
COMUNITY DEVELOPMENT DEPT
COUNTY OF LAKE
LAKEPORT, CA

VanDerWall Engineering, Inc.
PO BOX 431
KELSEYVILLE, CA 95451
707-279-4887

COVER SHEET
APN'S: 010-053-01 & 02
2050 & 2122 OGULIN CANYON RD
CLEARLAKE, CALIFORNIA

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	SEPT 2019
PROJ	19-37
DWG	
SHEET	1

Source: VanDerWall Engineering, Inc. 7/2

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Traffic Impact Study for the Ogulin Canyon Road Cannabis Cultivation Facilities
Figure 5 – 2050 Site Plan

COVER SHEET - Blue Oaks Farms Cultivation Site Plan

1756 OGULIN CANYON RD. . CLEARLAKE CA . . . APN: 010-055-46

SITE PLAN DATA

AREA OF PROPERTY	46.52 +/- ACRES
CULTIVATION AREA	2.0 ACRE (P)
ZONING	RL - RURAL LANDS

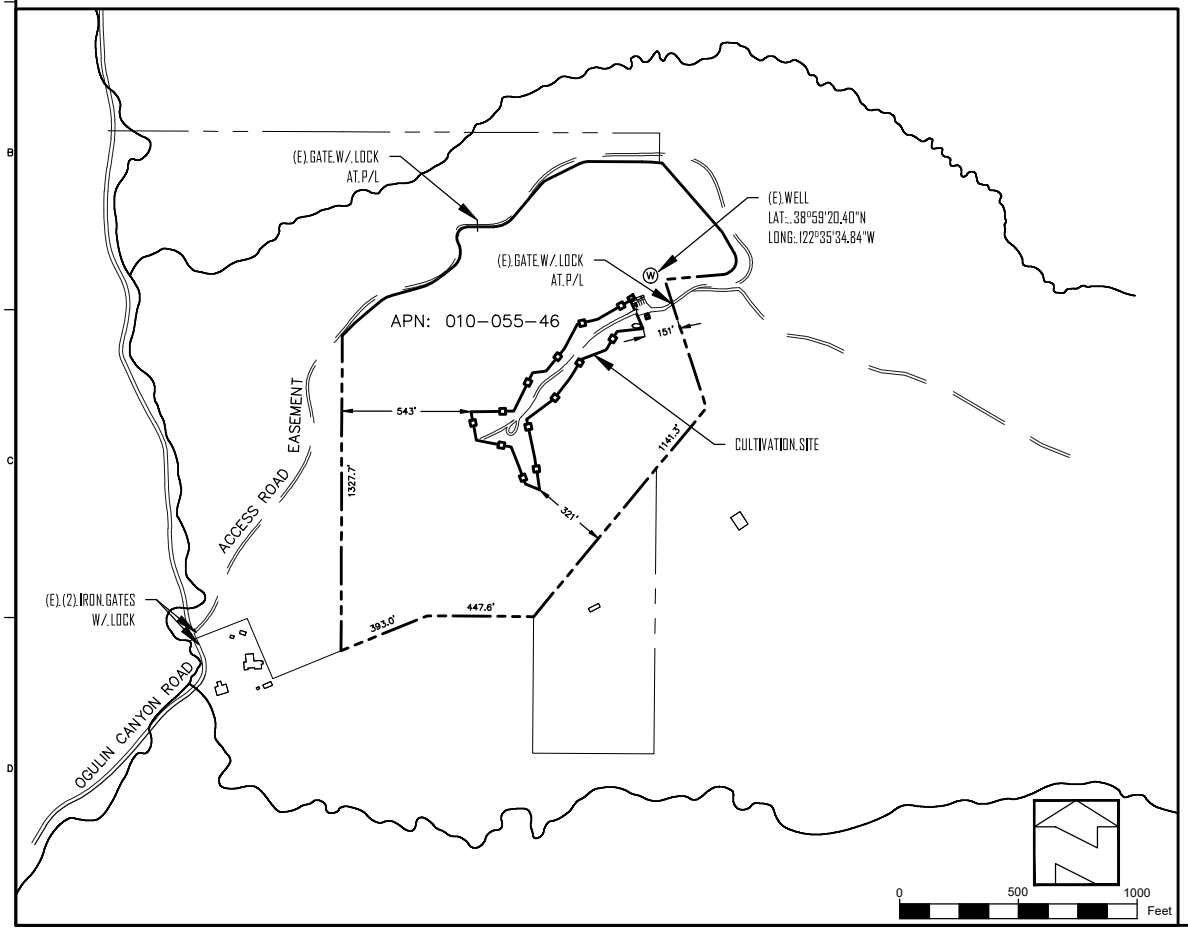
CULTIVATION LICENSE

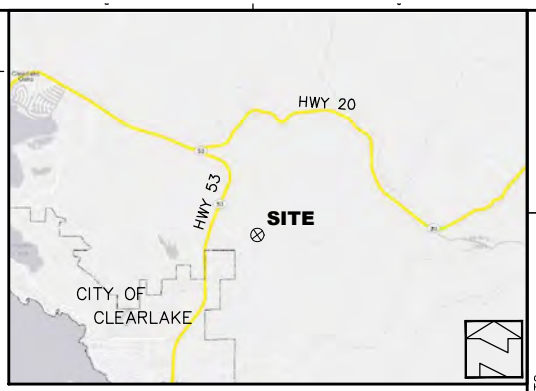
THE INTENTION OF THIS SITE MAP IS FOR THE SUBMITTAL APPLICATION FOR CALIFORNIA STATE LICENSE TYPE 3 OUTDOOR-SMALL OUTDOOR .

PROPERTY OWNER & APPLICANT

Brian Pensack, Kim Gardner
Blue Oaks Farms LLC
637 Lindaro Street Suite 201
San Rafael, CA 94901

PHONE: (415) 317-2345
EMAIL: homehelpforyou@gmail.com





LOCATION MAP

LEGEND

- PROPERTY LINE
- SETBACK LINE
- CULTIVATION FENCE (P)
- WIRE FENCE (E)
- ACCESS ROAD/DRIVEWAY
- TREE/BRUSH LINE
- W — IRRIGATION LINE (E)
- (W) IRRIGATION WELL
- SECURITY CAMERA

NOTE:
1.). THIS IS NOT A RECORD OF SURVEY. . THE BOUNDARY SHOWN IS APPROXIMATE AND BASED OFF OF ASSESSOR'S PARCEL MAPS. . NO SURVEY MONUMENTS ARE FOUND NOR SHOWN.

SITE PLAN INDEX

SUBMITTED TO:
LAKE COUNTY COMMUNITY DEVELOPEMENT DEPT.
COUNTY OF LAKE
LAKEPORT, CA

VanDerWall Engineering, Inc.
PO BOX 431
KELSEYVILLE, CA 95451
707-279-4887

Cover Sheet
Blue Oaks Farm
APN: 010-055-46
1756 OGULIN CANYON ROAD

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	NOV 202
PROJ	19-38
DWG	
SHEET	1 C

Source: VanDerWall Engineering, Inc. 7/2

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Traffic Impact Study for the Ogulin Canyon Road Cannabis Cultivation Facilities

Figure 6 – 1756 Site Plan

so trips associated with deliveries, visitors, shipments, and other activities are reflected in the rate and resulting trip estimates. The trip generation estimates for each project, as well as the sum for all four projects, are summarized in Table 4.

Table 4 – Trip Generation Summary – Harvest Conditions

Land Use	Units	Daily		AM Peak			PM Peak		
		Rate	Trips	Trips	In	Out	Trips	In	Out
2185 Ogulin Canyon Rd									
General Light Industrial	25 empl	3.05	76	13	11	2	12	3	9
2160 Ogulin Canyon Rd									
General Light Industrial	35 empl	3.05	107	18	15	3	17	4	13
2050 Ogulin Canyon Rd (Lake Vista Farms)									
General Light Industrial	20 empl	3.05	61	10	9	1	10	2	8
1756 Ogulin Canyon Rd (Blue Oaks Farm)									
General Light Industrial	5 empl	3.05	15	3	2	1	2	1	1
Total Trips			**259**	**44**	**37**	**7**	**41**	**10**	**31**

Note: empl = employees

It should be noted that under typical non-harvest operations approximately 40 employees are anticipated across all four projects and would be expected to result in 122 daily trips on average, including 21 trips during the a.m. peak hour and 20 trips during the p.m. peak hour.

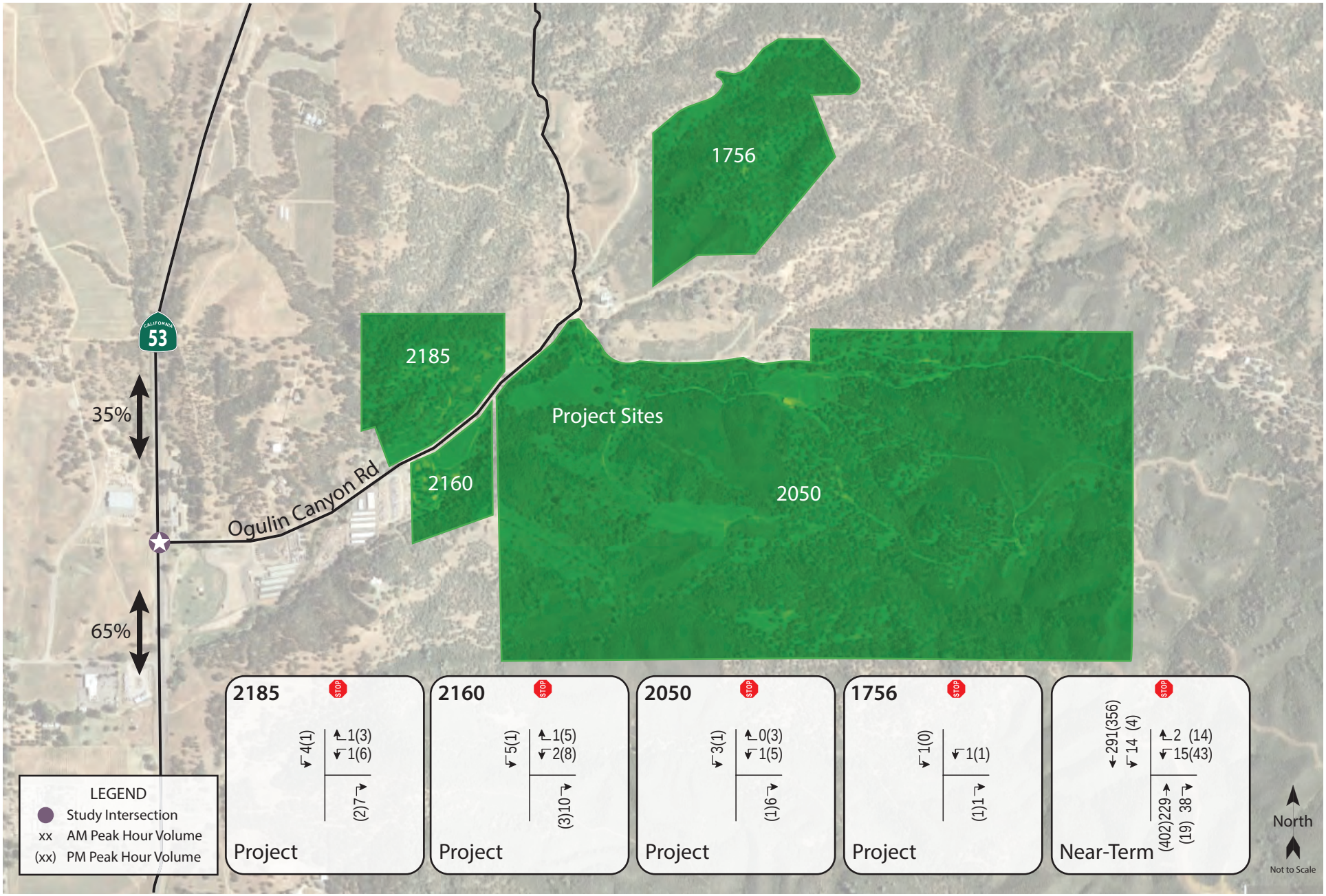
Trip Distribution

The pattern used to allocate new project trips to the street network was based on a review of the intersection turning movement volumes at SR 53/Ogulin Canyon Road and knowledge of the area and the surrounding region as well as the anticipated travel patterns for the project employees and deliveries. A distribution of 35 percent of the project trips were assigned to SR 53 north of Ogulin Canyon Road and 65 percent were assigned to the south. This information is shown on Figure 7 along with the individual project traffic volumes.

Intersection Operation

Existing plus Project Conditions

Upon adding trips associated with each individual project to Existing volumes, the study intersection of SR 53/Ogulin Canyon Road would be expected to continue operating acceptably at LOS A overall and LOS B or C on the Ogulin Canyon Road approach during both peak hours, with minor increases in delay. Individual project traffic volumes are shown in Table 5.



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Traffic Impact Study for the Ogulin Canyon Road Cannabis Cultivation Facilities

Figure 7 – Project Traffic Volumes, Trip Distribution, and Near-Term Traffic Volumes

Table 5 – Existing and Existing plus Project Peak Hour Intersection Levels of Service at SR 53/Ogulin Canyon Road								
Project ***Approach***	**Existing Conditions**				**Existing plus Project**			
	AM Peak		**PM Peak**		**AM Peak**		**PM Peak**	
	Delay	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**
2185 Ogulin Canyon Rd	0.2	A	0.7	A	0.3	A	0.9	A
Westbound (OCR) Approach	*10.2*	*B*	*21.1*	*C*	*10.2*	*B*	*20.8*	*C*
2160 Ogulin Canyon Rd	0.2	A	0.7	A	0.3	A	1.0	A
Westbound (OCR) Approach	*10.2*	*B*	*21.1*	*C*	*10.2*	*B*	*20.6*	*C*
2050 Ogulin Canyon Rd (Lake Vista Farms)	0.2	A	0.7	A	0.3	A	0.9	A
Westbound (OCR) Approach	*10.2*	*B*	*21.1*	*C*	*10.2*	*B*	*20.5*	*C*
1756 Ogulin Canyon Rd (Blue Oaks Farm)	0.2	A	0.7	A	0.2	A	0.7	A
Westbound (OCR) Approach	*10.2*	*B*	*21.1*	*C*	*10.2*	*B*	*21.2*	*C*

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service; OCR = Ogulin Canyon Road

Finding – The study intersection of SR 53/Ogulin Canyon Road would continue operating acceptably with trips from each individual project added to Existing volumes and all four projects would have an acceptable effect on operation of the surrounding roadway network.

Near-Term Conditions

Near-Term operating conditions were assessed with traffic from all four proposed projects added to the Existing volumes. As shown in Table 6, upon the cumulative addition of traffic associated with all four proposed cannabis facilities, SR 53/Ogulin Canyon Road is expected to operate acceptably at LOS A overall and LOS B or C on the stop-controlled westbound approach during both peak hours. Near-term traffic volumes are shown in Figure 7.

Table 6 – Near-Term Peak Hour Intersection Levels of Service				
Study Intersection ***Approach***	**AM Peak**		**PM Peak**	
	Delay	**LOS**	**Delay**	**LOS**
SR 53/Ogulin Canyon Rd	0.5	A	1.5	A
Westbound (OCR) Approach	*10.3*	*B*	*21.3*	*C*

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service; OCR = Ogulin Canyon Road

Finding – Under Near-Term conditions with trips from all four proposed projects added, SR 53/Ogulin Canyon Road would be expected to continue operating acceptably.

Future plus Project Conditions

Under the future traffic volumes that would be expected upon buildout of the City's General Plan, and with cumulative traffic from the four proposed projects, the study intersection of SR 53/Ogulin Canyon Road is expected to continue operating acceptably at LOS A overall and at LOS D or better on the westbound approach during both peak hours. It should be noted that the proposed projects are consistent with the industrial land use assumptions applied in the General Plan traffic analysis, so project trips could reasonably be expected to be included in the Future traffic volumes; however, to provide a conversative assessment of the project's potential traffic effects, trips from all four projects were added to Future volumes. The Future plus Project operating conditions are summarized in Table 7.

Table 7 – Future and Future plus Project Peak Hour Intersection Levels of Service								
Study Intersection ***Approach***	**Future Conditions**				**Future plus Projects**			
	AM Peak		**PM Peak**		**AM Peak**		**PM Peak**	
	Delay	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**
SR 53/Ogulin Canyon Rd	0.2	A	0.9	A	0.4	A	1.8	A
Westbound (OCR) Approach	*10.8*	*B*	*28.3*	*D*	*10.9*	*B*	*29.7*	*D*

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service; OCR = Ogulin Canyon Road

Finding – Under Future Conditions expected upon buildout of the City's General Plan and with the addition of traffic from all four projects, SR 53/Ogulin Canyon Road is expected to continue operating acceptably.

Alternative Modes

Pedestrian Facilities

Given the rural location of the project sites, the lack of existing facilities, and the nature of the proposed projects, employees are not expected to want to walk to the site.

Finding – The lack of existing dedicated facilities for pedestrians in the project vicinity is consistent with the rural setting and is therefore considered acceptable.

Bicycle Facilities

There are no bicycle facilities within the vicinity of the project sites including along SR 53 and Ogulin Canyon Road. Given the rural context, the existing condition wherein cyclists ride on the roadway shoulders of SR 53 or share the travel lanes with motorists on Ogulin Canyon Road is considered acceptable.

Finding – The lack of dedicated bicycle facilities in the vicinity of the project sites is considered acceptable for the minimal number of trips anticipated.

Transit

The lack of transit facilities serving the four projects does not result in an impact given the location and type of projects proposed.

Finding – There are no transit facilities serving the project sites; however, there is not anticipated to be any demand.

Access and Circulation

Site Access

All of the proposed projects would be accessed from existing gated driveways on Ogulin Canyon Road, except the project proposed at the 2160 address where a new driveway would be constructed. The projects in the City of Clearlake would be accessed from the segment of Ogulin Canyon Road that is paved, while the two projects in unincorporated Lake County would be accessed from the section further east with a gravel surface. The roadway has a width that varies between 16 and 25 feet and has turnouts before or after sections where the width is narrow to allow motorists to pass one another.

Very Low Volume Roadways

The daily volume for Ogulin Canyon Road is 220 vehicle trips to the west of the mini storage facility and 60 vehicle trips to the east. Roadways with volumes of 400 vehicles per day or less are considered "Very Low Volume Roadways" under criteria published by the American Association of State Highway and Transportation Officials (AASHTO). Collectively, the four projects are anticipated to result in 122 daily trips during typical operation and 259 trips during harvest conditions. Assuming that harvest conditions will account for three months out of the year, the projects would result in an annual ADT volume of 156 daily trips so even with the addition of new project trips the entire section of Ogulin Canyon Road would still have a daily volume below 400 and the designation as a "very low volume" roadway would be retained.

In the AASHTO *Guidelines for Geometric Design of Very Low-Volume Local Roads* published in 2001, design criteria are presented that are less restrictive than those applied to higher volume roads. These standards do not compromise safety, but discourage widening of lanes and shoulders, changes in horizontal and vertical alignment, and other roadside improvements except where such changes are likely to provide substantial safety benefits. To determine if the roadway has an existing safety issue that could be improved with widening, the collision history for the roadway was reviewed and it was determined that there were no collisions reported in the five-year period between April 1, 2015 and March 31, 2020, the most recent period for which data is available. While a roadway with a consistent width of at least 20 feet would be desirable, since users have been navigating the roadway safely under its current condition, no widening appears necessary.

Finding – With the increase in trips from the four projects, the entirety of Ogulin Canyon Road would have an annual ADT below the AASHTO threshold that defines a "Very Low Volume Roadway" and since the roadway has been operating acceptably in terms of safety, it is reasonable to expect the facility to continue doing so.

Sight Distance

Consideration was given to the adequacy of sight lines along Ogulin Canyon Road and the ability for opposing motorists to see one another in order to move to the side of the road for a passing maneuver to occur. Stopping sight distances were evaluated based on sight distance criteria published by AASHTO that are applicable for "Very Low Volume Roadways. These values are developed using a brake reaction time and driver deceleration that are in line with observed driver behavior on roadways with volumes below 400 vehicles per day. There is no posted speed limit on Ogulin Canyon Road between SR 53 and approximately 850 feet east of the driveway to the property at 2185 so a speed limit of 25 miles per hour (mph) was assumed for this section. The gravel section to the east has an indicated speed limit of 15 mph. For speeds of 15 and 25 mph, the recommended stopping sight distances needed for very low volume roadways are 65 and 125 feet, respectively. Based on a review of aerial photography, it was determined that sight lines between following and opposing motorists are expected to extend at least 150 feet along the paved roadway segment and 100 feet along the gravel section, which are both adequate for anticipated travel speeds.

Consideration was also given to adequacy of stopping sight distance at the project driveways. Sight lines were field measured at the two driveways within the City Limits and were determined to extend approximately 200 feet, which is more than adequate for anticipated travel speeds. Sight lines at the project driveways in unincorporated Lake County were measured using aerial imagery and determined to extend at least 100 feet, which is adequate for speeds of 15 mph, though it should be noted that given the low volume on this section of the roadway, turning movement conflicts would be minimal to non-existent.

Finding – Adequate stopping sight distance is available on Ogulin Canyon Road for the anticipated travel speeds and the very low volume roadway designation.

Recommendation – To maintain available sight lines on Ogulin Canyon Road, any new landscaping or signage planned for the project frontages should be placed outside the driver's vision triangle at the driveways.

Vehicle Miles Traveled

Background and Threshold of Significance

Senate Bill (SB) 743 established a change in the metric to be applied to determining transportation impacts associated with development projects. Rather than the delay-based criteria associated with a Level of Service (LOS) analysis, the change in Vehicle Miles Traveled (VMT) as a result of a project is now the basis for determining impacts with respect to transportation and traffic under CEQA. As of the date of this analysis, the City of Clearlake and County of Lake have not yet adopted thresholds of significance related to VMT, though the *Senate Bill 743 Vehicle Miles Traveled Regional Baseline Study* was prepared for Lake Area Planning Council (LAPC) in November 2020. Many of the recommendations in the Regional Baseline Study are consistent with guidance published by the California Governor's Office of Planning and Research (OPR) in the publication *Transportation Impacts (SB 743) CEQA Guidelines Update and Technical Advisory*, 2018. As a result, individual project-related VMT impact were assessed based on OPR guidance.

Project Impact

The OPR Technical Advisory identifies several criteria that may be used by jurisdictions to identify certain types of projects that are unlikely to have a significant VMT impact and can be "screened" from further analysis. One of these screening criteria pertains to "small projects," which OPR identifies as generating fewer than 110 new vehicle trips per typical weekday. OPR specifies that VMT should be based on a typical weekday and averaged over the course of the year to take into consideration seasonal fluctuations. As shown in Table 4, each of the four individual proposed projects is anticipated to generate less than the small project threshold of 110 daily vehicle trips during the peak season, and even less during non-harvest conditions. As a result, it is reasonable to conclude that each project can be presumed to have a less-than-significant transportation impact on VMT.

Finding – Based on OPR guidance, all four projects can be presumed to have a less-than-significant transportation impact on VMT under the small project screening threshold.

Parking

Each of the four projects was analyzed to determine whether the proposed vehicle parking supply would be sufficient for the anticipated peak parking demand. Since the City of Clearlake and County of Lake do not have published parking requirements for cannabis cultivation and support uses, the anticipated peak parking demand was estimated based on the employee count as well as the number of company-owned vehicles proposed for distribution uses. It is recommended that a minimum of one parking space be provided for each full- and part-time employee during the largest shift. Further, for the distribution components proposed for the projects located at 2185 and 2160 Ogulin Canyon Road, it is suggested that one parking space be provided for each company-owned vehicle.

Based on these rates, a minimum of 27 parking spaces would need to be provided at 2185, 37 spaces at 2160, 20 spaces at 2050, and five spaces at 1765 Ogulin Canyon Road in order to satisfy the anticipated peak demand. As shown in Table 8, the proposed parking supplies for all four projects are more than adequate for the anticipated peak demand.

Table 8 – Parking Analysis

Project	Units	Rate	Estimated Peak Demand	Proposed Supply
2185 Ogulin Canyon Rd	25 empl & 2 veh	1 space/empl & 1 space/veh	27	**32**
2160 Ogulin Canyon Rd	35 empl & 2 veh	1 space/empl & 1 space/veh	37	**46**
2050 Ogulin Canyon Rd	20 empl	1 space/empl	20	**27**
1756 Ogulin Canyon Rd	5 empl	1 space/empl	5	**6**

Notes: empl = employee; veh = company vehicle

Finding – The proposed parking supply for each project would be adequate to meet the anticipated peak season parking demand based on the proposed employee count and number of company-owned vehicles.

Conclusions and Recommendations

Conclusions

- The four proposed projects would be expected to result in a total of 259 new daily trips during the peak season, including 44 trips during the morning peak hour and 41 trips during the evening peak hour.
- Under Existing Conditions, SR 53/Ogulin Canyon Road operates acceptably at LOS A overall and LOS B or C on the stop-controlled approach and would be expected to continue operating at the same service levels with the addition of traffic from each individual project.
- Under Near-Term Conditions, which includes cumulative traffic from all four projects added to Existing volumes, SR 53/Ogulin Canyon Road would be expected to operate acceptably at LOS A overall and LOS B or C on stop-controlled westbound approach during both peak hours.
- The study intersection of SR 53/Ogulin Canyon Road would be expected to operate at LOS A overall and LOS D or better on stop-controlled approach during both peak hours under the anticipated Future volumes and with cumulative traffic from all four projects added.
- Based on OPR guidance, all four projects can be presumed to have a less-than-significant transportation impact on VMT under the small project screening threshold.
- There were no collisions recorded at the intersection of SR 53/Ogulin Canyon Road or on Ogulin Canyon Road during the most recent five-year study period indicating that there are no readily apparent safety issues in the study area.
- Although there are no pedestrian, transit, or bicycle facilities in the vicinity of the project sites, the existing condition is acceptable given that the project sites are located in an automobile-oriented rural area without any expected demand for walking or transit and limited demand for bicycling.
- With the increase in trips from the four projects, the entirety of Ogulin Canyon Road would have an annual ADT below the AASHTO 400-trip threshold that defines a "Very Low Volume Roadway" and since the roadway has been operating acceptably in terms of safety, it is reasonable to expect the facility to continue doing so.
- Adequate stopping sight distance is available on Ogulin Canyon Road for the anticipated travel speeds.
- The proposed parking supplies for all four projects are more than adequate to meet the anticipated peak parking demand.

Recommendation

- To maintain available sight lines on Ogulin Canyon Road, any new landscaping or signage planned for the project frontages should be placed outside the driver's vision triangle at the driveways.

Study Participants and References

Study Participants

Principal in Charge	Dalene J. Whitlock, PE, PTOE
Associate Engineer	Cameron Nye, EIT
Assistant Planner	Jade Kim
Graphics	Cameron Wong
Editing/Formatting	Alex Scrobonia, Cameron Wong, Hannah Yung-Boxdell
Quality Control	Dalene J. Whitlock, PE, PTOE

References

2016 Collision Data on California State Highways, California Department of Transportation, 2017

Active Transportation Plan for Lake County, Lake County/City Area Planning Council, 2016

California Manual on Uniform Traffic Control Devices for Streets and Highways, California Department of Transportation, 2014

City of Clearlake 2040 General Plan Update, City of Clearlake, 2017

Guidelines for Geometric Design of Very Low-Volume Local Roads (ADT ≤ 400), American Association of State Highway and Transportation Officials, 2001

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Highway Design Manual, 6th Edition, California Department of Transportation, 2017

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Senate Bill No. 743, California Legislative Information, http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201720180SB743

Statewide Integrated Traffic Records System (SWITRS), California Highway Patrol, 2015-2020

Technical Advisory on Evaluating Transportation Impacts in CEQA, Governor's Office of Planning and Research, 2018

Trip Generation Manual, 10th Edition, Institute of Transportation Engineers, 2017

Vehicle Miles Traveled-Focused Transportation Impact Study Guide, California Department of Transportation, 2020

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Appendix A

Intersection Level of Service Calculations

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Intersection Level Of Service Report
Intersection 1: SR 53/Ogulin Canyon Rd

Control Type:	Two-way stop	Delay (sec / veh):	10.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.016

Intersection Setup

Name	SR 53		SR 53		Ogulin Canyon Rd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	350.00	280.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00		55.00		15.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SR 53		SR 53		Ogulin Canyon Rd	
Base Volume Input [veh/h]	229	14	1	291	10	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	229	14	1	291	10	0
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	63	4	0	80	3	0
Total Analysis Volume [veh/h]	252	15	1	320	11	0
Pedestrian Volume [ped/h]	0		0		0	

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Intersection Settings

Priority Scheme	Free		Free		Stop	
Flared Lane						
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance					Yes	
Number of Storage Spaces in Median	0		0		6	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.02	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.78	0.00	10.18	9.58
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.05	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.06	0.00	1.19	0.00
d_A, Approach Delay [s/veh]	0.00		0.02		10.18	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.20					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 1: SR 53/Ogulin Canyon Rd

Control Type:	Two-way stop	Delay (sec / veh):	22.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.107

Intersection Setup

Name	SR 53		SR 53		Ogulin Canyon Rd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	350.00	280.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00		55.00		15.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SR 53		SR 53		Ogulin Canyon Rd	
Base Volume Input [veh/h]	402	12	0	356	23	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	402	12	0	356	23	3
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	109	3	0	97	6	1
Total Analysis Volume [veh/h]	437	13	0	387	25	3
Pedestrian Volume [ped/h]	0		0		0	

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Intersection Settings

Priority Scheme	Free		Free		Stop	
Flared Lane						
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance					Yes	
Number of Storage Spaces in Median	0		0		0	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.11	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	8.24	0.00	22.29	10.84
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.36	0.01
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	8.89	0.36
d_A, Approach Delay [s/veh]	0.00		0.00		21.06	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.68					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 1: SR 53/Ogulin Canyon Rd

Control Type:	Two-way stop	Delay (sec / veh):	10.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.022

Intersection Setup

Name	SR 53		SR 53		Ogulin Canyon Rd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	350.00	280.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00		55.00		15.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SR 53		SR 53		Ogulin Canyon Rd	
Base Volume Input [veh/h]	229	14	1	291	10	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.4100	1.4100	1.4100	1.4100	1.4100	1.4100
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	323	20	1	410	14	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	81	5	0	103	4	0
Total Analysis Volume [veh/h]	323	20	1	410	14	0
Pedestrian Volume [ped/h]	0		0		0	

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Intersection Settings

Priority Scheme	Free		Free		Stop	
Flared Lane						
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance					Yes	
Number of Storage Spaces in Median	0		0		6	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.02	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.96	0.00	10.75	10.01
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.07	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.06	0.00	1.68	0.00
d_A, Approach Delay [s/veh]	0.00		0.02		10.75	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.21					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 1: SR 53/Ogulin Canyon Rd

Control Type:	Two-way stop	Delay (sec / veh):	30.3
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.184

Intersection Setup

Name	SR 53		SR 53		Ogulin Canyon Rd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	350.00	280.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00		55.00		15.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SR 53		SR 53		Ogulin Canyon Rd	
Base Volume Input [veh/h]	402	12	0	356	23	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.3700	1.3700	1.3700	1.3700	1.3700	1.3700
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	551	16	0	488	32	4
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	138	4	0	122	8	1
Total Analysis Volume [veh/h]	551	16	0	488	32	4
Pedestrian Volume [ped/h]	0		0		0	

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Intersection Settings

Priority Scheme	Free		Free		Stop	
Flared Lane						
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance					Yes	
Number of Storage Spaces in Median	0		0		0	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.18	0.01
d_M, Delay for Movement [s/veh]	0.00	0.00	8.58	0.00	30.35	11.79
Movement LOS	A	A	A	A	D	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.65	0.02
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	16.33	0.57
d_A, Approach Delay [s/veh]	0.00		0.00		28.29	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	0.93					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 1: SR 53/Ogulin Canyon Rd

Control Type:	Two-way stop	Delay (sec / veh):	10.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.017

Intersection Setup

Name	SR 53		SR 53		Ogulin Canyon Rd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	350.00	280.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00		55.00		15.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SR 53		SR 53		Ogulin Canyon Rd	
Base Volume Input [veh/h]	229	14	1	291	10	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	7	4	0	1	1
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	229	21	5	291	11	1
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	63	6	1	80	3	0
Total Analysis Volume [veh/h]	252	23	5	320	12	1
Pedestrian Volume [ped/h]	0		0		0	

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Intersection Settings

Priority Scheme	Free		Free		Stop	
Flared Lane						
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance					Yes	
Number of Storage Spaces in Median	0		0		6	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.02	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.81	0.00	10.23	9.58
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.01	0.00	0.05	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.29	0.00	1.31	0.10
d_A, Approach Delay [s/veh]	0.00		0.12		10.18	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.28					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 1: SR 53/Ogulin Canyon Rd

Control Type:	Two-way stop	Delay (sec / veh):	23.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.138

Intersection Setup

Name	SR 53		SR 53		Ogulin Canyon Rd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	350.00	280.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00		55.00		15.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SR 53		SR 53		Ogulin Canyon Rd	
Base Volume Input [veh/h]	402	12	0	356	23	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	2	1	0	6	3
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	402	14	1	356	29	6
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	109	4	0	97	8	2
Total Analysis Volume [veh/h]	437	15	1	387	32	7
Pedestrian Volume [ped/h]	0		0		0	

Generated with PTV VISTRO
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Intersection Settings

Priority Scheme	Free		Free		Stop	
Flared Lane						
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance					Yes	
Number of Storage Spaces in Median	0		0		0	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.14	0.01
d_M, Delay for Movement [s/veh]	0.00	0.00	8.25	0.00	22.96	10.88
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.47	0.03
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.07	0.00	11.76	0.86
d_A, Approach Delay [s/veh]	0.00		0.02		20.79	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.93					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 1: SR 53/Ogulin Canyon Rd

Control Type:	Two-way stop	Delay (sec / veh):	10.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.019

Intersection Setup

Name	SR 53		SR 53		Ogulin Canyon Rd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	350.00	280.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00		55.00		15.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SR 53		SR 53		Ogulin Canyon Rd	
Base Volume Input [veh/h]	229	14	1	291	10	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	10	5	0	2	1
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	229	24	6	291	12	1
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	63	7	2	80	3	0
Total Analysis Volume [veh/h]	252	26	7	320	13	1
Pedestrian Volume [ped/h]	0		0		0	

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Intersection Settings

Priority Scheme	Free		Free		Stop	
Flared Lane						
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance					Yes	
Number of Storage Spaces in Median	0		0		6	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.02	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.82	0.00	10.27	9.58
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.02	0.00	0.06	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.41	0.00	1.43	0.10
d_A, Approach Delay [s/veh]	0.00		0.17		10.22	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.32					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 1: SR 53/Ogulin Canyon Rd

Control Type:	Two-way stop	Delay (sec / veh):	23.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.146

Intersection Setup

Name	SR 53		SR 53		Ogulin Canyon Rd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	350.00	280.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00		55.00		15.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SR 53		SR 53		Ogulin Canyon Rd	
Base Volume Input [veh/h]	402	12	0	356	23	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	3	1	0	8	5
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	402	15	1	356	31	8
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	109	4	0	97	8	2
Total Analysis Volume [veh/h]	437	16	1	387	34	9
Pedestrian Volume [ped/h]	0		0		0	

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Intersection Settings

Priority Scheme	Free		Free		Stop	
Flared Lane						
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance					Yes	
Number of Storage Spaces in Median	0		0		0	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.15	0.01
d_M, Delay for Movement [s/veh]	0.00	0.00	8.25	0.00	23.14	10.90
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.50	0.04
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.07	0.00	12.61	1.11
d_A, Approach Delay [s/veh]	0.00		0.02		20.58	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	1.01					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 1: SR 53/Ogulin Canyon Rd

Control Type:	Two-way stop	Delay (sec / veh):	10.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.017

Intersection Setup

Name	SR 53		SR 53		Ogulin Canyon Rd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	350.00	280.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00		55.00		15.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SR 53		SR 53		Ogulin Canyon Rd	
Base Volume Input [veh/h]	229	14	1	291	10	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	6	3	0	1	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	229	20	4	291	11	0
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	63	5	1	80	3	0
Total Analysis Volume [veh/h]	252	22	4	320	12	0
Pedestrian Volume [ped/h]	0		0		0	

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Intersection Settings

Priority Scheme	Free		Free		Stop	
Flared Lane						
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance					Yes	
Number of Storage Spaces in Median	0		0		6	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.02	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.80	0.00	10.22	9.58
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.01	0.00	0.05	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.23	0.00	1.30	0.00
d_A, Approach Delay [s/veh]	0.00		0.10		10.22	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.25					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 1: SR 53/Ogulin Canyon Rd

Control Type:	Two-way stop	Delay (sec / veh):	22.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.129

Intersection Setup

Name	SR 53		SR 53		Ogulin Canyon Rd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	350.00	280.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00		55.00		15.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SR 53		SR 53		Ogulin Canyon Rd	
Base Volume Input [veh/h]	402	12	0	356	23	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	1	1	0	5	3
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	402	13	1	356	28	6
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	109	4	0	97	8	2
Total Analysis Volume [veh/h]	437	14	1	387	30	7
Pedestrian Volume [ped/h]	0		0		0	

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Intersection Settings

Priority Scheme	Free		Free		Stop	
Flared Lane						
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance					Yes	
Number of Storage Spaces in Median	0		0		0	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.13	0.01
d_M, Delay for Movement [s/veh]	0.00	0.00	8.25	0.00	22.79	10.88
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.44	0.03
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.07	0.00	10.94	0.86
d_A, Approach Delay [s/veh]	0.00		0.02		20.53	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.88					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 1: SR 53/Ogulin Canyon Rd

Control Type:	Two-way stop	Delay (sec / veh):	10.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.017

Intersection Setup

Name	SR 53		SR 53		Ogulin Canyon Rd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	350.00	280.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00		55.00		15.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SR 53		SR 53		Ogulin Canyon Rd	
Base Volume Input [veh/h]	229	14	1	291	10	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	1	1	0	1	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	229	15	2	291	11	0
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	63	4	1	80	3	0
Total Analysis Volume [veh/h]	252	16	2	320	12	0
Pedestrian Volume [ped/h]	0		0		0	

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Intersection Settings

Priority Scheme	Free		Free		Stop	
Flared Lane						
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance					Yes	
Number of Storage Spaces in Median	0		0		6	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.02	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.78	0.00	10.20	9.58
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.05	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.12	0.00	1.30	0.00
d_A, Approach Delay [s/veh]	0.00		0.05		10.20	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.23					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 1: SR 53/Ogulin Canyon Rd

Control Type:	Two-way stop	Delay (sec / veh):	22.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.112

Intersection Setup

Name	SR 53		SR 53		Ogulin Canyon Rd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	350.00	280.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00		55.00		15.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SR 53		SR 53		Ogulin Canyon Rd	
Base Volume Input [veh/h]	402	12	0	356	23	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	1	0	0	1	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	402	13	0	356	24	3
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	109	4	0	97	7	1
Total Analysis Volume [veh/h]	437	14	0	387	26	3
Pedestrian Volume [ped/h]	0		0		0	

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Intersection Settings

Priority Scheme	Free		Free		Stop	
Flared Lane						
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance					Yes	
Number of Storage Spaces in Median	0		0		0	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.11	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	8.24	0.00	22.37	10.84
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.37	0.01
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	9.28	0.36
d_A, Approach Delay [s/veh]	0.00		0.00		21.18	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.71					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 1: SR 53/Ogulin Canyon Rd

Control Type:	Two-way stop	Delay (sec / veh):	10.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.023

Intersection Setup

Name	SR 53		SR 53		Ogulin Canyon Rd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	350.00	280.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00		55.00		15.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SR 53		SR 53		Ogulin Canyon Rd	
Base Volume Input [veh/h]	229	14	1	291	10	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	24	13	0	5	2
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	229	38	14	291	15	2
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	63	10	4	80	4	1
Total Analysis Volume [veh/h]	252	42	15	320	16	2
Pedestrian Volume [ped/h]	0		0		0	

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Intersection Settings

Priority Scheme	Free		Free		Stop	
Flared Lane						
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance					Yes	
Number of Storage Spaces in Median	0		0		6	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.02	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.87	0.00	10.39	9.59
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.04	0.00	0.07	0.01
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.90	0.00	1.80	0.19
d_A, Approach Delay [s/veh]	0.00		0.35		10.30	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.47					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 1: SR 53/Ogulin Canyon Rd

Control Type:	Two-way stop	Delay (sec / veh):	24.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.205

Intersection Setup

Name	SR 53		SR 53		Ogulin Canyon Rd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	350.00	280.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00		55.00		15.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SR 53		SR 53		Ogulin Canyon Rd	
Base Volume Input [veh/h]	402	12	0	356	23	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	7	4	0	20	11
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	402	19	4	356	43	14
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	109	5	1	97	12	4
Total Analysis Volume [veh/h]	437	21	4	387	47	15
Pedestrian Volume [ped/h]	0		0		0	

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Intersection Settings

Priority Scheme	Free		Free		Stop	
Flared Lane						
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance					Yes	
Number of Storage Spaces in Median	0		0		0	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.20	0.02
d_M, Delay for Movement [s/veh]	0.00	0.00	8.28	0.00	24.66	10.96
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.01	0.00	0.75	0.07
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.27	0.00	18.68	1.86
d_A, Approach Delay [s/veh]	0.00		0.08		21.34	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	1.49					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 1: SR 53/Ogulin Canyon Rd

Control Type:	Two-way stop	Delay (sec / veh):	11.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.031

Intersection Setup

Name	SR 53		SR 53		Ogulin Canyon Rd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	350.00	280.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00		55.00		15.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SR 53		SR 53		Ogulin Canyon Rd	
Base Volume Input [veh/h]	229	14	1	291	10	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.4100	1.4100	1.4100	1.4100	1.4100	1.4100
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	24	13	0	5	2
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	323	44	14	410	19	2
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	81	11	4	103	5	1
Total Analysis Volume [veh/h]	323	44	14	410	19	2
Pedestrian Volume [ped/h]	0		0		0	

Generated with PTV VISTRO
Version 2021 (SP 0-0)

Intersection Settings

Priority Scheme	Free		Free		Stop	
Flared Lane						
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance					Yes	
Number of Storage Spaces in Median	0		0		6	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.03	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	8.06	0.00	10.99	10.03
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.04	0.00	0.09	0.01
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.89	0.00	2.37	0.21
d_A, Approach Delay [s/veh]	0.00		0.27		10.89	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.42					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 1: SR 53/Ogulin Canyon Rd

Control Type:	Two-way stop	Delay (sec / veh):	34.8
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.303

Intersection Setup

Name	SR 53		SR 53		Ogulin Canyon Rd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	350.00	280.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00		55.00		15.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SR 53		SR 53		Ogulin Canyon Rd	
Base Volume Input [veh/h]	402	12	0	356	23	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.3700	1.3700	1.3700	1.3700	1.3700	1.3700
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	7	3	0	20	11
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	551	23	3	488	52	15
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	138	6	1	122	13	4
Total Analysis Volume [veh/h]	551	23	3	488	52	15
Pedestrian Volume [ped/h]	0		0		0	

Generated with PTV VISTRO
Version 2021 (SP 0-0)

Intersection Settings

Priority Scheme	Free		Free		Stop	
Flared Lane						
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance					Yes	
Number of Storage Spaces in Median	0		0		0	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.30	0.03
d_M, Delay for Movement [s/veh]	0.00	0.00	8.61	0.00	34.81	11.94
Movement LOS	A	A	A	A	D	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.01	0.00	1.21	0.09
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.23	0.00	30.14	2.16
d_A, Approach Delay [s/veh]	0.00		0.05		29.69	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	1.78					
Intersection LOS	D					

Appendix B

Growth Rate Calculations

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Future Growth Factor Calcuations

Traffic Impact Study for the the Ogulin Canyon Road Cannabis Cultivation Facilities

AM Peak Hour Volume

Intersection	Year	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Total
SR 53/Olympic Dr	2017	167	225	0	0	288	69	58	0	208	0	0	0	**1015**
SR 53/Olympic Dr	2040	235	400	0	0	440	95	80	0	285	0	0	0	**1535**

PM Peak Hour Volume

Intersection	Year	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Total
SR 53/Olympic Dr	2017	297	258	0	0	221	100	108	0	260	0	0	0	**1244**
SR 53/Olympic Dr	2040	370	445	0	0	415	125	135	0	330	0	0	0	**1820**

Source: City of Clearlake 2040 General Plan Update

Growth Rate Calculations

	AM	PM
Growth Factor (2017 to 2040)	1.51	1.46
Annual Growth Rate	1.8%	1.7%
Growth Factor (2021 to 2040)	1.41	1.37

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ATTACHMENT G

TECHNICAL MEMORANDUM

To: City of Clearlake Planning Department

From: Annjanette Dodd, PhD, CA PE #77756 Exp. 6/30/2023

Date: March 7, 2022

Subject: Groundwater Hydrology Addendum – 2160 Ogulin Canyon Road, Clearlake, CA, APN 010-044-21

A Groundwater Hydrology Technical Memorandum (TM) was prepared for 2160 Ogulin Canyon Road, Clearlake, CA (APN 010-044-21) dated December 23, 2021 and submitted to the City of Clearlake Planning Department. The TM addressed groundwater recharge and cumulative impacts and concluded the project's water use would not likely have a cumulative impact on the surrounding area for the following reasons:

- The cannabis demand is only 0.12% of the usable storage capacity in the BVGB; and
- There is sufficient recharge over the project's recharge area to meet the project's demand during both average and dry years.

The purpose of the TM Addendum is to provide supplemental information regarding water demand in the Burns Valley Groundwater Basin (BVGB) and potential cumulative impacts associated with implementation of the proposed project.

GROUNDWATER USE AND TRENDS IN BVGB

Review of Google Earth Imagery shows extensive agricultural development, in the form of walnut/pear orchards and vineyards, in the BVGB since at least 1985. Existing orchards and vineyards established prior to 2003 should have been included as part of the groundwater irrigation demand in the Lake County Groundwater Management Plan, however, this does not appear to be the case. According to the Lake County Water Demand Forecast, the average annual water demand for vineyards and walnut/pear orchards in Lake County is 0.5 acre-feet per acre and 2.2 acre-feet per acre, respectively. Using current Google Earth imagery, there are roughly 450 acres of existing vineyards and 150 acres of orchards in Burns Valley. Orchard production in the valley has decreased over time. Accounting for existing vineyards and orchards, the approximate agricultural demand in the valley is about 555 acre-feet per year which is supplied via existing groundwater wells. The 2006 Lake County Groundwater Management Plan stated that the agricultural demand in the BVGB during an average year is 105 acre-feet, with 14 acre-feet of this supplied from groundwater, which appears to be an underestimate of the existing groundwater agricultural demand. The estimate of existing agricultural demand of 555 acre-feet per year is likely a high estimate because most of the orchards and some of the vineyards are likely being dry farmed.

The northern residential district of the City of Clearlake relies on groundwater wells as the main source of water. The Highlands Mutual Water Company supplies the majority of residents in the lower part of the BVGB (Figure ***8***). According to the Lake County Agency Formation Commission 2021 Report on Clearlake Water Providers (ClearlakeH20_MSR-SOI_2021EDIT-2._cl_docx_(lakelafco.org)), the Highlands Mutual Water Company serves 6,072 people with water via 2,568 services connections using water drawn from Clear Lake. Approximately 120 residential parcels are not served by HMWC and are assumed to rely on groundwater wells. According to the Environmental Protection Agency (EPA,

https://www.epa.gov/watersense/how-we-use-water), the average American family uses 300 gallons of water per day, which equates to an annual demand of 40 acre-feet per year for 120 residences.

The main sources of groundwater in the BVGB are within the *Quaternary Alluvium Formation* and the *Lower Lake Formation*. *Quaternary Alluvium* is the predominant formation the southwestern portion of the BVGB, where both residential development and well development are most dense (Figure 1 and Figure 2). The alluvium has a thickness of up to 50 feet; groundwater in this formation is unconfined and typically provides water for domestic use. Wells screened in unconfined aquifers are more directly influenced by lack of rain than those screened in deeper, confined aquifers. The *Lower Lake Formation* underlies the alluvial deposits in the BVGB. This formation has low permeability and provides water to wells at up to a few hundred gallons per minute and is the dominant source of agricultural water demand in the BVGB. Note that the existing vineyards and the existing and proposed cannabis projects are located outside of the alluvial valley in the upper half of the BVGB (Figure 1).

Fortunately, there is a California Statewide Groundwater Elevation Monitoring (CASGEM) Program well located within the BVGB that has been used to monitor long-term groundwater trends (CASGEM well ID: 39925, Lat/Long: 38.96535, -122.63186, Figure ***3***) for over 50 years. The CASGEM well is drilled 177 feet below ground surface (bgs) into the deeper *Lower Lake Formation*. Groundwater levels in the CASGEM well are measured twice annually, approximately every April and November, to visualize the fall drawdown (November) and spring recharge (April). In general, since 1952, there appears to be an increasing trend in groundwater levels in the BVGB (Figure ***4***). However, a vertical shift is apparent and occurs in about 1980. Since it is unknown if this is a natural shift in the data or a shift due to change in measurement protocol, data prior to 1980 was removed. Since 1980, the data indicate that the long-term groundwater trend has been relatively stable (Figure ***5***), with consistent recharge during each annual wet season, even during years with low annual precipitation and accounting for the existing and historical agricultural demand. In addition, according to the Statewide Summary of Household Water Supply Shortage Reportage System reports (https://mydrywell.water.ca.gov/report/publicpage), no wells have been reported as going dry in the BVGB.

Well production loss in the Alluvium Formation is not surprising as Lake County has experienced a severe drought, with driest levels occurring fall of 2021. As stated above, wells screened in the shallower, unconfined aquifer, would be more directly influenced by the lack of rain and likely to lose production or go dry. There is also a likelihood that shallow groundwater in the southern portion of Burns Valley is hydrologically coupled to surface water levels in Clear Lake. As a result of the drought, surface water levels in the lake recorded in August through October of 2021 were the lowest on record since 2000, which could have a direct impact on shallow groundwater well production (Figure ***6***). Additional monitoring and reporting within the *Quaternary Alluvium* are recommended and would be helpful in understanding shallow groundwater trends in the BVGB.

FUTURE GROUNDWATER USE AND SUPPLY

The potential cumulative effects of the project were addressed in the December 2021 Technical Memorandum prepared for 2160 Ogulin Canyon Road. However, more detailed information is presented herein to further support the conclusions made in the original Technical Memorandum.

As discussed above, the current groundwater agricultural demand in the BVGB is roughly 555 acre-feet per year. Approximately 225 acre-feet is from existing vineyards in the upper portion of the BVGB and 330 acre-feet is from orchards located within the lower portion the BVGB. The current residential demand, located in the central portion of the BVGB, is approximately 40 acre-feet per year. A summary of

proposed cannabis projects and the approximate annual water demand is provided in Table 1. All the proposed projects are located in the upper portion of the BVGB east of State Highway 53 (Figure ***1***).

Table 1. Approximate water demand of proposed cannabis projects within the BVGB (information obtained from the City of Clearlake and Lake County websites and CEQAnet Database). Refer to Figure 1 for approximate locations.

Location (jurisdiction)	APN(s)	Parcel Area (acres)	Cultivation (Acres)	Cultivation % of Parcel Area	Approximate Annual Water Demand (acre-feet)
1756 Ogulin Canyon Road (County) (Blue Oak Farms)	010-055-46	46.5	2.0	4.3	3.3
2050 Ogulin Canyon Road (County) (Lake Vista Farms)	010-053-01 & 02	302.4	15.0	5.0	24.9
2185 Ogulin Canyon Road (City)	010-044-17	21.3	0.5	2.3	1.8
2160 Ogulin Canyon Road (City)	**010-044-21**	**9.6**	**0.2**	**2.1**	**1.7**
2560 Highway 53 (City)	010-048-05	15.4	1.3	8.4	4.3
2250 Ogulin Canyon Road (City)	010-044-19	13.0	0.4	3.1	1.0
Total		408.2	19.4	n/a	37.0

Table 2: Base zones designations, total areas associated with each base zone designation, parcel count, and base zone eligibility for potential cannabis cultivation within the Burns Valley Groundwater Basin.

Zone	Description	Total Parcel Area (acres)*	# of Parcels
RL	Rural Lands	1105.9	18
RR	Rural Residential	677.3	18
Split	Combined Zoning (Dominant Zones are A and RL)	136.5	4
City	Cannabis District	242	23
*This is the total area of the parcel, not just the portion within the BVGB			

To assess the potential for additional cannabis cultivation within the BVGB, not included in Table 1, a parcel inventory analysis was completed (Figure ***7*** and Table 2) to identify those parcels that meet requirements for potential cannabis cultivation with an approved permit from the Lake County or the City of Clearlake (City).

The Lake County Zoning Ordinance allows 1-acre of outdoor canopy for each 20 acres of parcel size for these zones. There are 40 parcels that are within or intersect the BVGB with a cumulative parcel area of about 1920 acres (total parcel area, not the intersected area, was used for conservativeness). Of these parcels, 10 parcels or 596 acres are existing vineyards and 2 parcels, or 349 acres have proposed cultivation shown in Table 1. Excluding these parcels, there are 28 parcels or 975 acres of base zoning that could be eligible for outdoor cultivation with a County permit. Thus, there is the potential for up to 48 acres of potentially new outdoor cultivation (the County allows only 1-acre of cultivation for each 20 acres of parcel area). However, accounting for existing development, steep topography, waterbody setbacks, flood zones, residential setbacks, and parcel setbacks, there is limited area for development and

only approximately 10 to 20 acres of new outdoor cultivation would likely be possible. The increased irrigation demand could be up to approximately 33.1 acre-feet per year assuming 3,000 gallons per day per acre for 180 days. This does not account for the fact that the project at 2050 Ogulin Canyon Road is replacing a 13.6-acre hops farm that utilized approximately 43.6 acre-feet per year of water, creating a reduction in water use of 18.7 acre-feet per year.

The City of Clearlake Zoning Ordinance allows for mixed-light/indoor cultivation in the BVGB, with a City Cannabis Permit, on 23 parcels with a total area of 242 acres. Accounting for the proposed projects listed in Table 1, existing development, steep topography, waterbody setbacks, and flood zones, only approximately 18 to 20 acres of this area could have the potential for mixed-light/indoor cultivation. The increased irrigation demand could be up to approximately 55.2 acre-feet assuming 3,000 gallons per day per acre for 300 days.

The total potential demand from both the County and City for cannabis cultivation could be up to 125.3 acre-feet per year, which includes the proposed projects listed in Table 1 and a conservative (high) estimate of total potential cultivation.

Thus, the total potential agricultural demand within the BVGB is existing, 555 acre-feet, plus proposed, 125.3 acre-feet, is approximately 680.3 acre-feet per year, with residential demand, the total groundwater demand is approximately 720.3 acre-feet per year. The dominant demand in the BVGB is associated with residential development and orchards in the lower part of BVGB and vineyards in the upper part of the BVGB.

The estimated storage capacity of the BVGB is 4,000 AF, with a usable storage capacity of 1,400 AF. The total potential demand is 51% of the usable storage capacity. According to DWR, groundwater in the BVGB is derived from rain that falls within the 12.5 square mile Burns Valley Watershed drainage area. Recharge estimates provided in Hydrology Reports for 2160 Ogulin Canyon Road, 1756 Ogulin Canyon Road, 2185 Ogulin Canyon Road, and Lake Vista Farms demonstrated that there is sufficient recharge over each project's contributing recharge area (a small fraction of the entire Burns Valley Watershed area) to meet each project's demand during both average and dry years. Overall, the proposed projects in Table 1 represent 2.6% of the usable storage capacity in the BVGB and only 5.1% of the existing demand in the BVGB.

SUMMARY AND DISCUSSION

- A Hydrology Technical Memorandum was prepared for 2160 Ogulin Canyon Road dated December 23, 2021 and submitted to the City of Clearlake Planning Department that addressed groundwater recharge and cumulative impacts and concluded that there is sufficient recharge and supply to meet the project's demand during average and dry years.
- The existing demand associated with vineyards and orchards is likely higher than reported in the 2006 Lake County Groundwater Management Plan. The higher estimate has been incorporated herein, along with estimated residential demand.
- The main sources of groundwater in the BVGB are within the *Quaternary Alluvium Formation* and the *Lower Lake Formation*. The *Quaternary Alluvium* dominates the southwestern portion of the BVGB, where both residential development and well development are most dense. The alluvium has a thickness of up to 50 feet; groundwater in this formation is unconfined and typically provides water for domestic use. Wells screened in unconfined aquifers are more directly influenced by lack of rain than those screened in deeper, confined aquifers.

- The *Lower Lake Formation* underlies the alluvial deposits in the BVGB. This formation has low permeability and provides water to wells at up to a few hundred gallons per minute and is the dominant source of agricultural water demand in the BVGB.
- Groundwater storage capacity is estimated to be 4,000 acre-feet based on an area of 1,000 acres, a saturated thickness of 50 feet, and a specific yield of 8 percent, which represents only the *Alluvium Formation* and does not account for groundwater storage capacity in the deeper *Lower Lake Formation*. Thus, the usable storage capacity is most likely an underestimate of the overall capacity of the BVGB, which has a surface area of 2,900 acres.
- Long-term groundwater monitoring in the BVGB shows a stable trend in groundwater levels within the deeper formation, with consistent recharge during each annual wet season, even during years with low annual precipitation and accounting for the existing vineyard and orchard demand that has occurred over this time.
- No wells within the BVGB were reported to the State Water Supply Shortage Reporting System. Additional monitoring and reporting within the *Quaternary Alluvium* are recommended and would be helpful in understanding shallow groundwater trends in the basin.
- The existing vineyards and the existing and proposed cannabis projects are located outside of the alluvial valley in the upper half of the BVGB.
- The dominant demand in the BVGB is associated with residential development and orchards in the lower part of BVGB and vineyards in the upper part of the BVGB. The Highlands Mutual Water Company supplies the majority of residents in the lower part of the BVGB using surface water drawn from Clear Lake. The total groundwater demand, accounting for existing agriculture, residential use, and potential cannabis projects, is approximately 720.3 acre-feet per year. The estimated storage capacity of the BVGB is 4,000 AF, with a usable storage capacity of 1,400 AF. The total potential future agricultural demand is 51% of the usable storage capacity. Thus, there is sufficient storage capacity to meet existing and proposed demand.
- Recharge estimates provided in the Hydrology Reports for 1756 Ogulin Canyon Road (Blue Oak Farms), 2050 Ogulin Canyon Road (Lake Vista Farms), 2160 Ogulin Canyon Road, and 2185 Ogulin Canyon Road, demonstrated that there is sufficient recharge over each project's contributing recharge area (a small fraction of the entire Burns Valley Watershed area) to meet each project's demands during both average and dry years.
- Overall, the proposed projects in Table 1 represent 2.6% of the usable storage capacity in the BVGB and only 6.7% of the existing demand for irrigation of existing vineyards and orchards.
- The demand associated with 2160 Ogulin Canyon Road represents only a fraction, 0.12% of the usable storage capacity of the BVGB, 0.2% of the total potential future demand in the BVGB, the total demand associated with the proposed projects listed in Table 1 is only 2.6% of the usable storage capacity of the BVGB and 5.1% of the potential future demand in the BVGB. Thus, it is unlikely that this project, in combination the existing and proposed demand, would adversely impact existing wells in the BVGB.

ATTACHMENTS

- Figure 1. Local geology (source: https://pubs.usgs.gov/imap/2362/), cultivation well locations, and CASGEM well location. QTc = Clear Lake Cache Formation, 'tb' = nonmarine terrace deposits, and 'al' = alluvium.
- Figure 2. Map of # (n) of Well Completion Reports (WCRs) with in each Public Land Survey System (PLSS) grid along with average well depth. The Burns Valley Groundwater Basin is outlined in red. Parcel coloring is provided in Figure 7.

- Figure 3. CASGEM Monitoring well location.
- Figure 4. CASGEM Monitoring Well data from 1952 to 2020.
- Figure 5. CASGEM Monitoring Well data from 1980 to 2020.
- Figure 6. Clear Lake stage height 2000 through 2021.
- Figure 7. City of Clearlake Cannabis District and Lake County parcel base zoning designations.
- Figure 8. Water Systems within the City of Clearlake Boundary (Source: ClearlakeH20 MSR-SOI 2021EDIT-2. cl docx (lakelafco.org))

QUALIFICATIONS OF AUTHOR

I have a PhD in Water Resources Engineering. In addition, I am a registered Professional Engineer with the State of California with 30-years of experience practicing and teaching Water Resources Engineering, including over 15 years of teaching, practicing, and modeling surface and groundwater hydrology.

LIMITATIONS

The study of groundwater hydrology is very complex and often relies on limited data, especially in rural areas. Recommendations and conclusions provided herein are based on professional judgment made using information of the groundwater systems and geology in Lake County, which is limited and allows only for a general assessment of groundwater aquifer conditions and recharge. NorthPoint Consulting Group, Inc. is making analyses, recommendations, and conclusions based on readily available data, including studies and reports conducted by other professionals, Lake County, the State of California, and other consultants hired by the project proponent to prepare technical studies for the proposed project. If additional information or data becomes available for the project area, the recommendations and conclusions presented herein may be subject to change.

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FIGURES

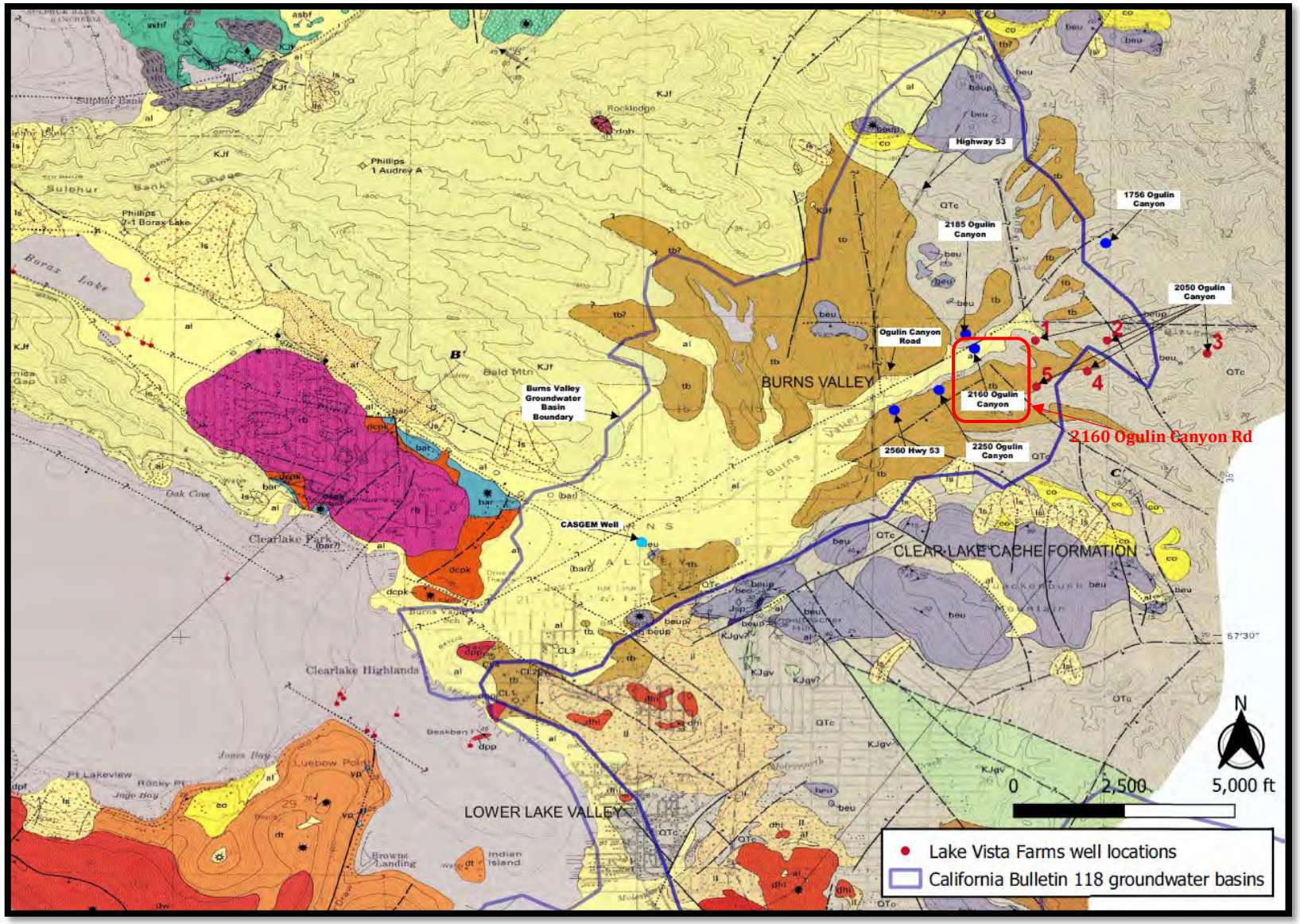

Figure 1. Burns Valley Groundwater Basin local geology (source: https://pubs.usgs.gov/imap/2362/), cultivation well locations, and CASGEM well location. QTc = Clear Lake Cache Formation, 'tb' = nonmarine terrace deposits, and 'al' = alluvium.

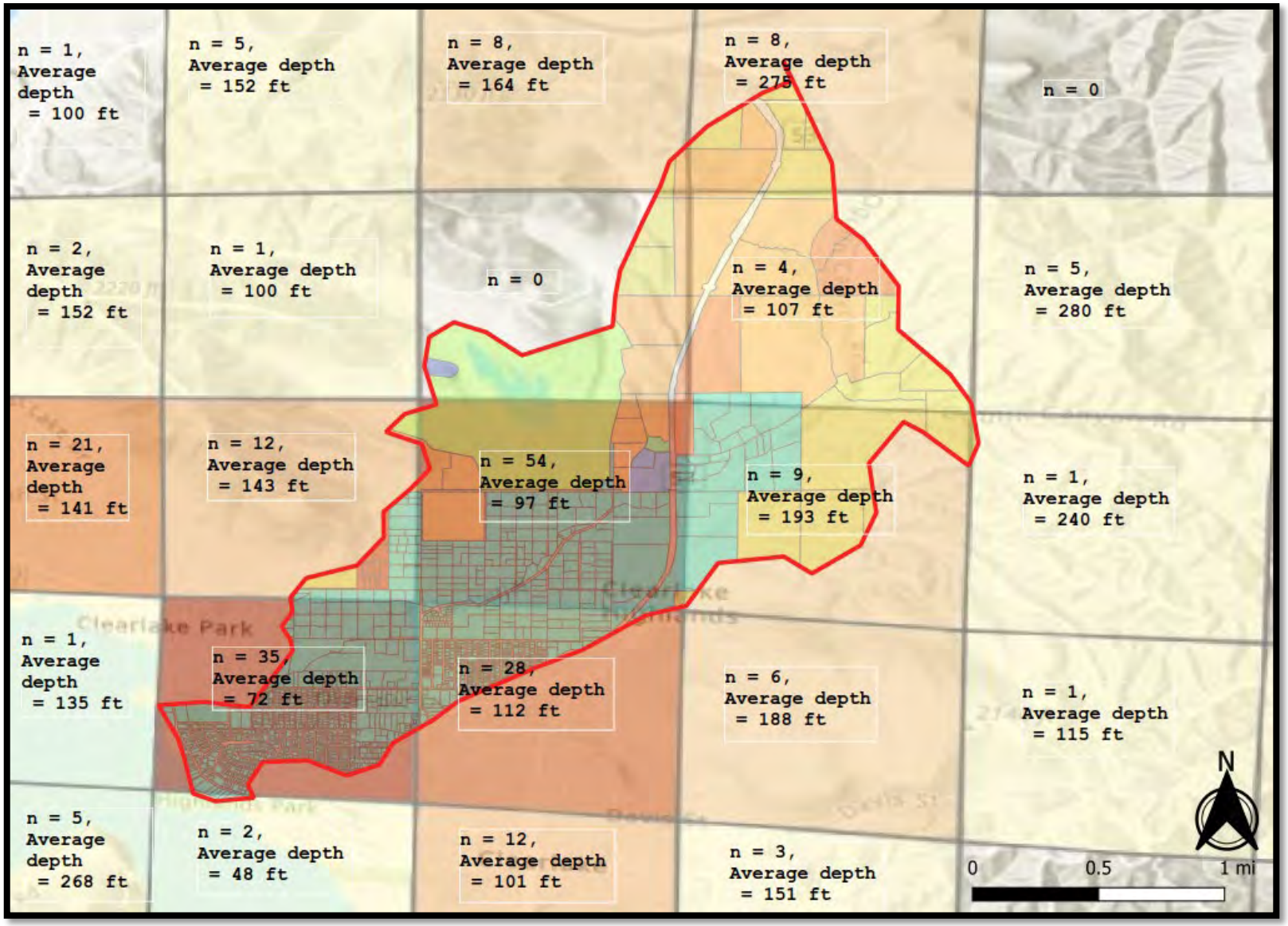

Figure 2. Map of # (n) of Well Completion Reports (WCRs) within each Public Land Survey System (PLSS) grid along with average well depth. The Burns Valley Groundwater Basin is outlined in red. Parcel coloring is provided in Figure 7.

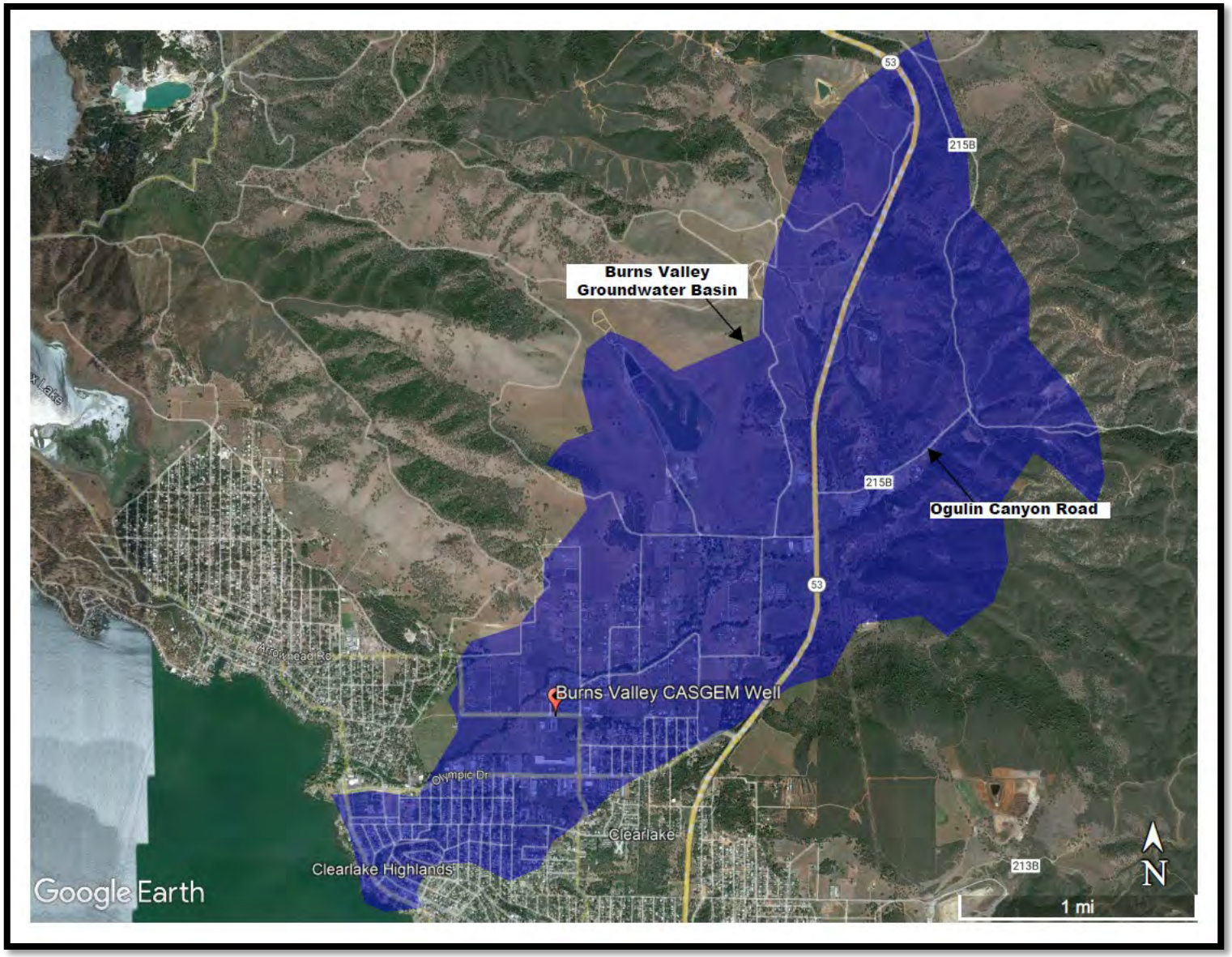

Figure 3. CASGEM Monitoring well location.

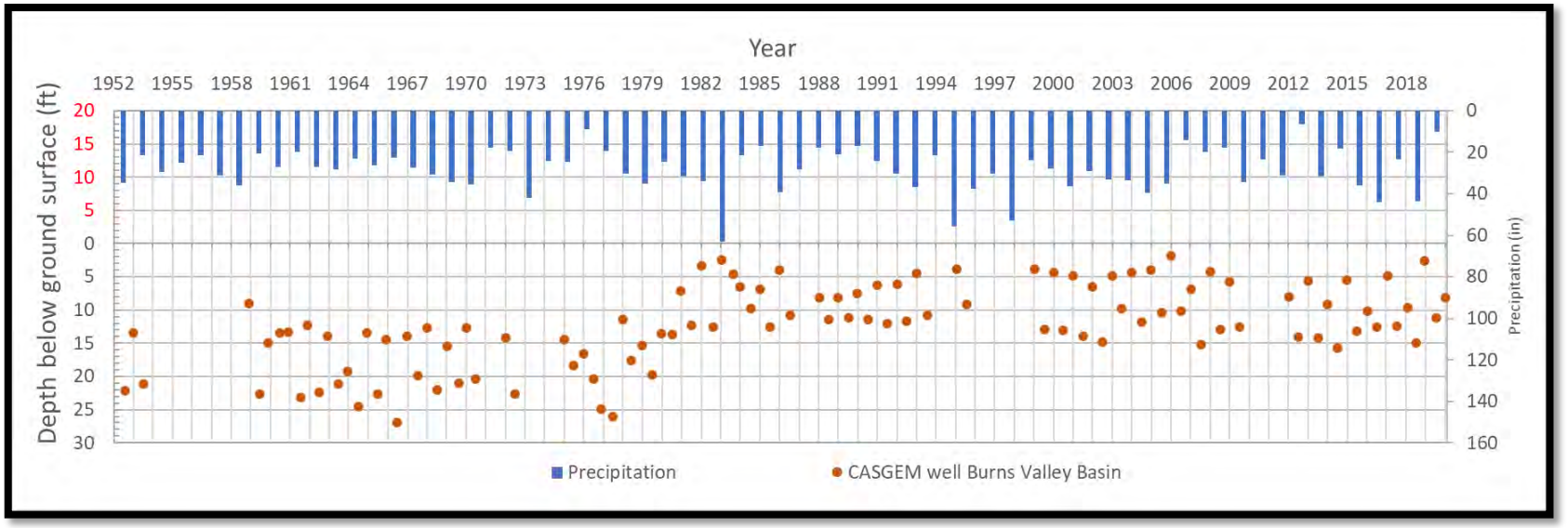

Figure 4. CASGEM Monitoring Well data from 1952 to 2020.

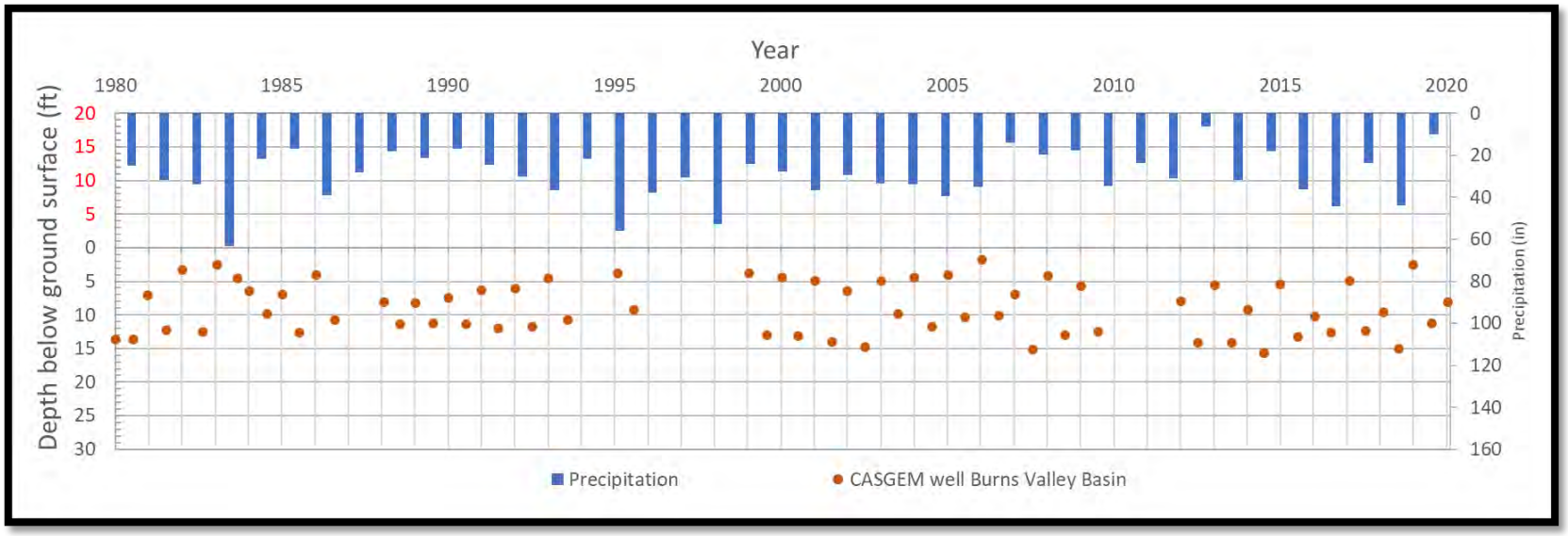

Figure 5. CASGEM Monitoring Well data from 1980 to 2020.

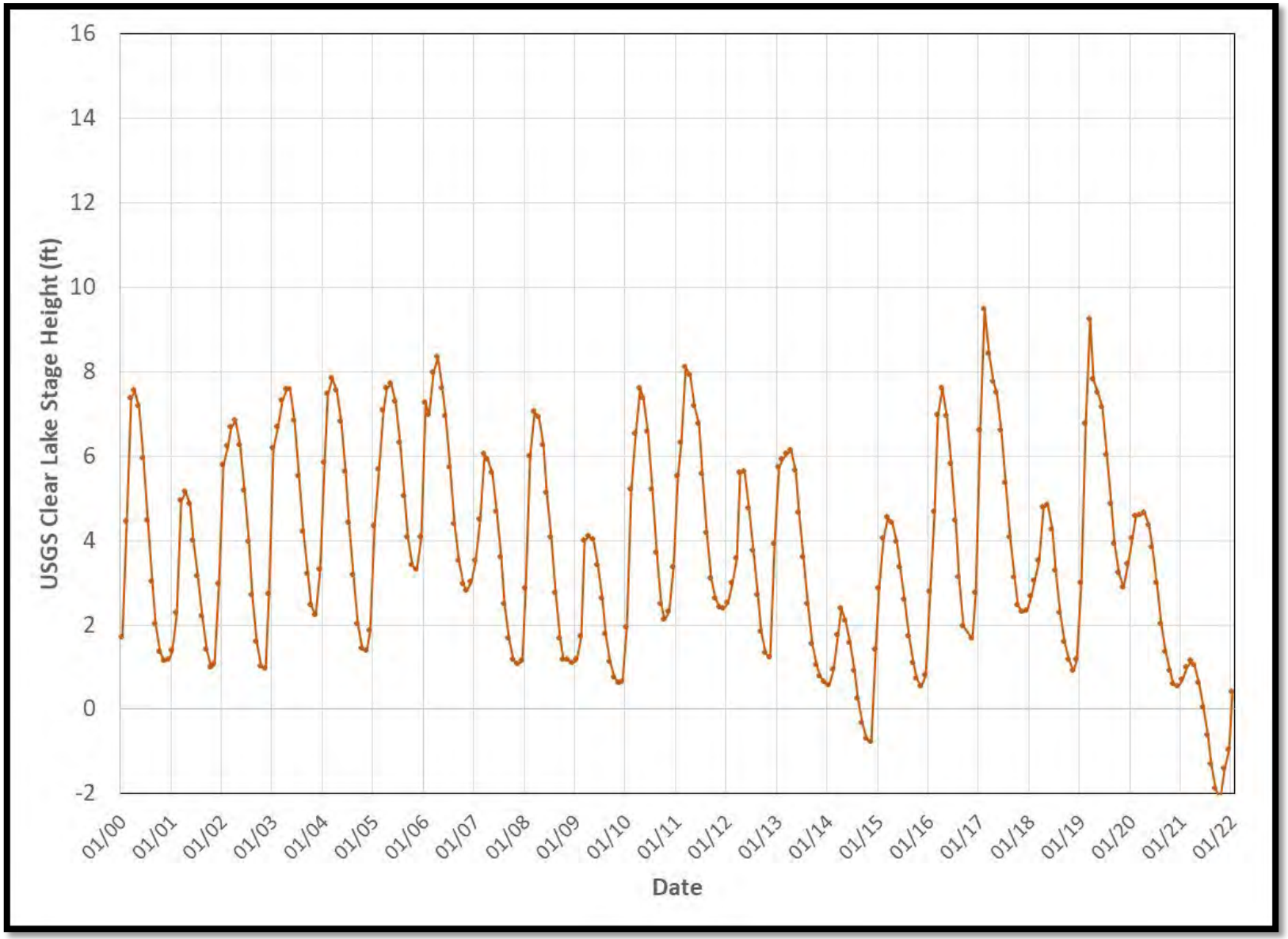

Figure 6. Clear Lake stage height 2000 through 2021.

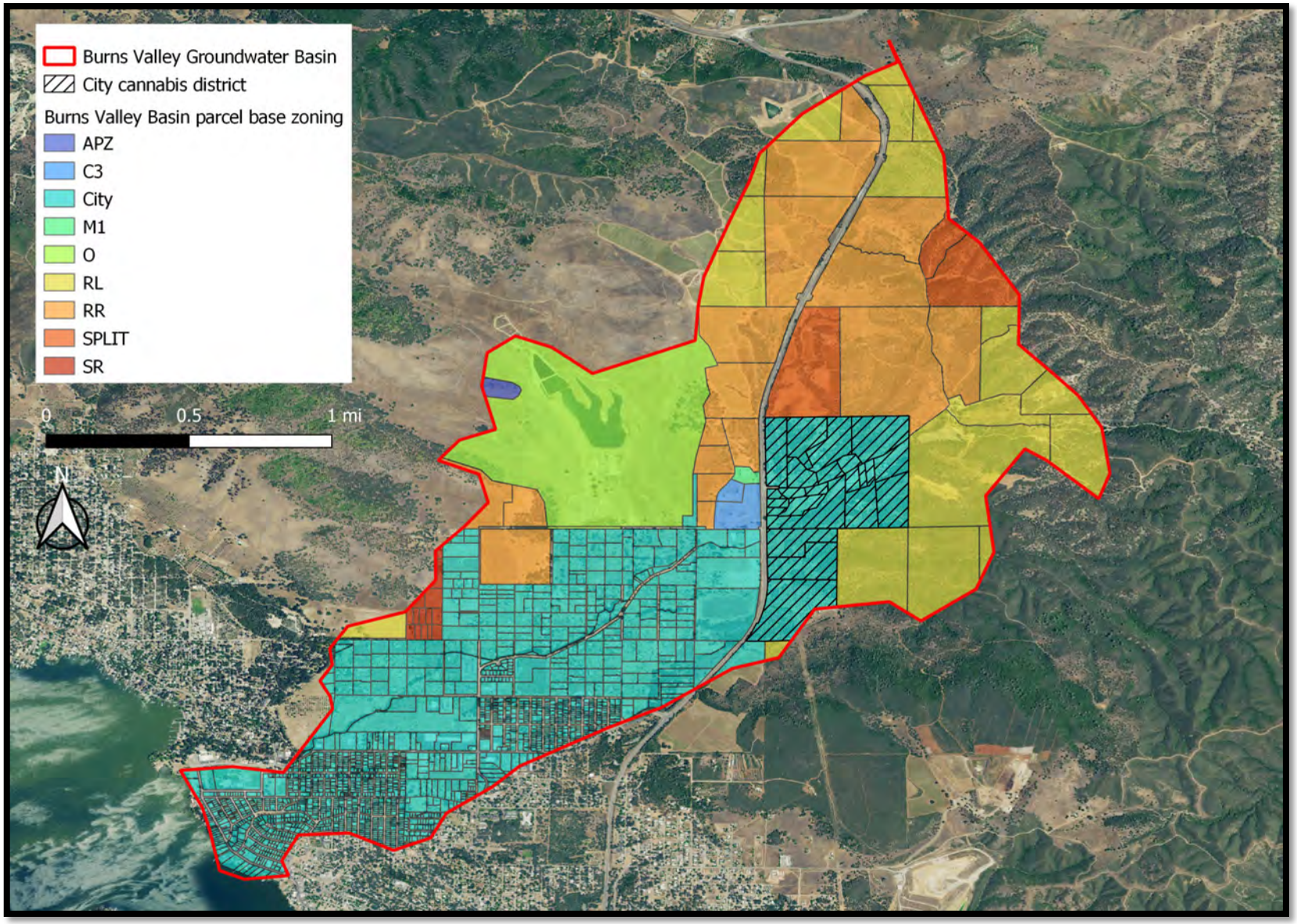

Figure 7. City of Clearlake Cannabis District and Lake County parcel base zoning designations.

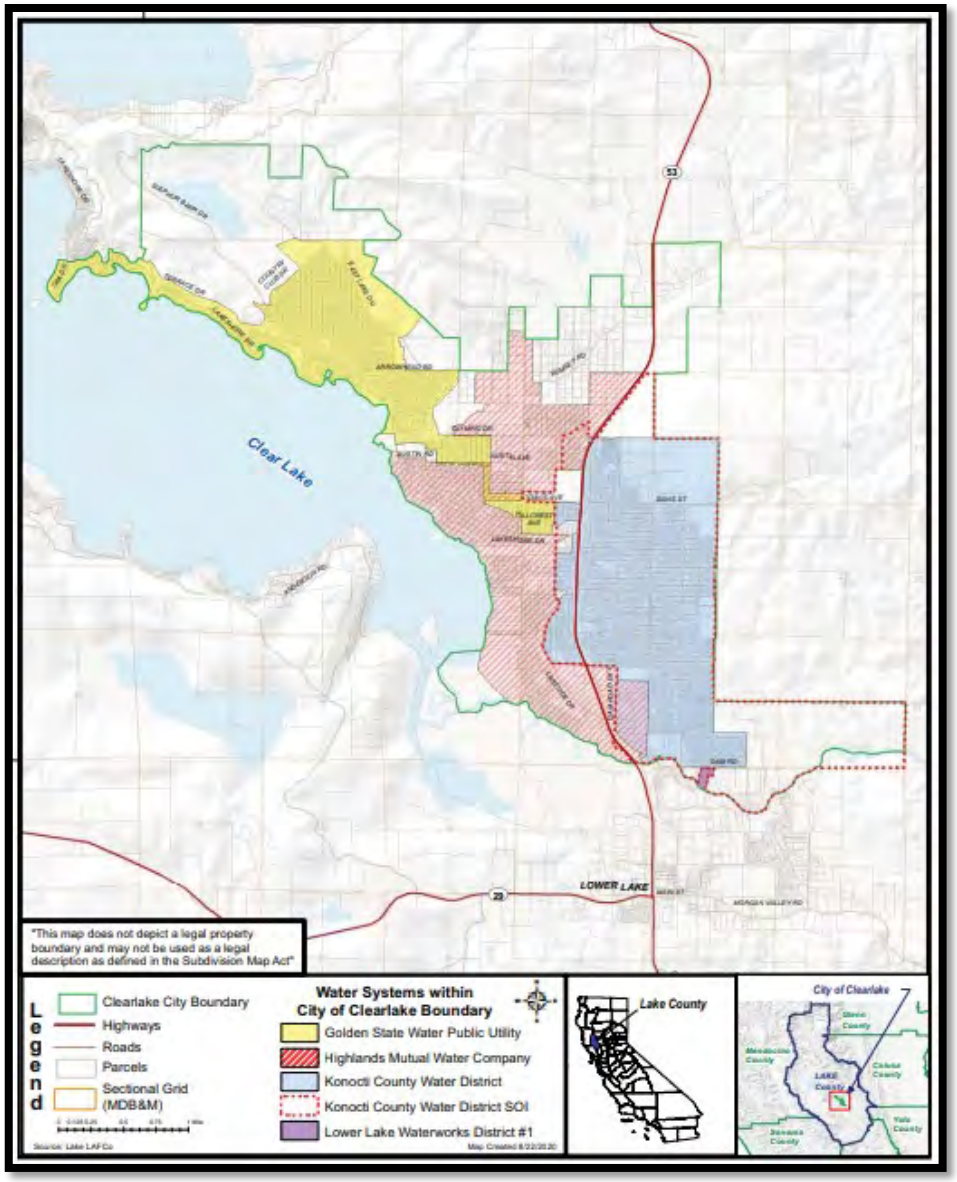

Figure 8. Water Systems within the City of Clearlake Boundary (Source: [ClearlakeH20 MSR-SOI 2021EDIT-2. cl docx (lakelafco.org)])

TECHNICAL MEMORANDUM

To: City of Clearlake

From: Annjanette Dodd, PhD, CA PE #77756 Exp. 6/30/2023

Date: January 3, 2022

Subject: Response to Appeal Comments – 2185 Ogulin Canyon Road (APN 010-044-17)

On November 15, 2021, an appeal to the Conditional Use Permits approved by the City of Clearlake (City) Planning Commission on November 9, 2021, for the proposed cannabis facilities at 2185 Ogulin Canyon Road, was submitted to the City. The appellant filed the appeal on behalf of at least 11 property owners in the Burns Valley Groundwater Basin (BVGB) area southwest of the subject property and argues the following:

1) "The subject property is within the Burns Valley Watershed. Many of the wells in Burns Valley have been adversely affected by development of property within the watershed for grape vineyards and other cannabis grow projects",
2) "The Water Availability Analysis did not discuss or analyze the cumulative effect that the use will have on the (Burns Valley) watershed nor did it address the cumulative effect of the project when combined with existing or approved projects",
3) "We feel the cumulative effect of adding this project to the existing uses should be considered prior to approval a Use Permit. On the West side there is a wine grape vineyard covering approximately 500 acres. Some of the Burns Valley property owners feel their wells were impacted by the vineyard. This year there are 2 active and permitted cannabis grow operations north of Ogulin on the East side of State Hwy 53; there is also an additional recently approved cannabis grow permit further north on Ogulin Canyon Rd from the 2185 site. The City approved a cannabis operation earlier this year at 2560 State Hwy 53 bordering Burns Valley Creek and located across from the school bus yard at Hwy 53 and Old Hwy 53. Thursday, November 18, 2021, the Lake County Planning Commission will consider a Use Permit for a cannabis grow just outside the Clearlake City Limits at 2050 Ogulin Canyon Rd; we will be attending this hearing and asking for a more extensive cumulative study of the watershed",
4) "Studies referenced in the various hydrology reports for the various projects are dated with some going back as far as 1960; the most referenced is the March 2006 Lake County Groundwater Management Plan, which is now 15 years old", and
5) "It is our feeling that a more complete hydrology study should be completed which includes the effect of this project and considering the vineyard plus the existing and approved cannabis projects to determine the impact on the water supply in the Burns Valley basin".

A Groundwater Hydrology Technical Memorandum was prepared for 2185 Ogulin Canyon Road on November 9, 2021 and submitted to the Planning Commission that addressed groundwater recharge and cumulative impacts and concluded that there is sufficient recharge and supply to meet the project's demand during average and dry years; the project's demand is only 0.1% of the usable storage capacity of the BVGB; and the potential future cannabis demand in the basin is a fraction of the usable storage capacity of the BVGB and that the proposed project water use would have little to no cumulative impact on the surrounding area. The purpose of the current Technical Memorandum (TM) is to add to the information provided in the November 9, 2021

EXISTING AGRICULTURAL GROUNDWATER USE AND TRENDS

Review of Google Earth Imagery shows extensive agricultural development, in the form of walnut/pear orchards and vineyards, in the Burns Valley since at least 1985. The existing vineyards mentioned by the appellant were established prior to 2003 and should have been considered in the Lake County Groundwater Management Plan. According to the Lake County Water Demand Forecast, the average annual water demand for vineyards and walnut/pear orchards in Lake County is 0.5 acre-feet per acre and 2.2 acre-feet per acre, respectively. Using current Google Earth imagery, there are roughly about 450 acres of existing vineyards and 150 acres of orchards in Burns Valley. Orchard production in the valley has decreased over time. Accounting for existing vineyards and orchards, the approximate agricultural demand in the valley is about 555 acre-feet per year which is supplied via existing groundwater wells. The 2006 Lake County Groundwater Management Plan stated that the agricultural demand in the BVGB during an average year is 105 acre-feet, with 14 acre-feet of this supplied from groundwater, which appears to be an underestimate of the existing groundwater agricultural demand.

The main sources of groundwater in the BVGB are within the *Quaternary Alluvium Formation* and the *Lower Lake Formation*. The *Quaternary Alluvium* dominates the southwestern portion of the BVGB, where both residential development and well development are most dense (Figure 1 and Figure 2). The alluvium has a thickness of up to 50 feet; groundwater in this formation is unconfined and typically provides water for domestic use. Wells screened in unconfined aquifers are more directly influenced by lack of rain than those screened in deeper, confined aquifers. The *Lower Lake Formation* underlies the alluvial deposits in the BVGB. This formation has low permeability and provides water to wells at up to a few hundred gallons per minute and is the dominant source of agricultural water demand in the BVGB. Note that the existing vineyards and the existing and proposed cannabis projects are located outside of the alluvial valley in the upper half of the BVGB (Figure 1).

Fortunately, there is a California Statewide Groundwater Elevation Monitoring (CASGEM) Program well located within the BVGB that has been used to monitor long-term groundwater trends (CASGEM well ID: 39925, Lat/Long: 38.96535, -122.63186, Figure ***3***) for over 50 years. The CASGEM well is drilled 177 feet below ground surface (bgs) into the deeper *Lower Lake Formation*. Groundwater levels in the CASGEM well are measured twice annually, approximately every April and November, to visualize the fall drawdown (November) and spring recharge (April). In general, since 1952, there appears to be an increasing trend in groundwater levels in the BVGB (Figure ***4***). However, a vertical shift is apparent and occurs in about 1980. Since it is unknown if this is a natural shift in the data or a shift due to change in measurement, data prior to 1980 was removed. Since 1980, the data indicate that the long-term groundwater trend has been relatively stable (Figure ***5***), with consistent recharge during each annual wet season, even during years with low annual precipitation and accounting for the existing and historical agricultural demand.

The appellant has indicated that many of the wells in the BVGB have been adversely impacted by development, the vineyards, and other cannabis projects. However, no information was provided regarding the impacted wells. Verbal correspondence with the City and Lake County have indicated anecdotal evidence of lower well production and possibly dry wells in the BVGB, however, without specific context and data, reports of 'dry wells' are only anecdotal and cannot be adequately assessed using the available data. In addition, according to the Statewide Summary of Household Water Supply Shortage Reportage System reports (https://mydrywell.water.ca.gov/report/publicpage), no wells have been reported as going dry in the BVGB.

The anecdotal evidence regarding well production is not surprising as Lake County has been in the midst of a severe drought. As stated above, wells screened in the shallower, unconfined aquifer, would be more

directly influenced by the lack of rain and likely to go dry. There is also a likelihood that shallow groundwater in the southern portion of Burns Valley is hydrologically coupled to surface water levels in Clear Lake. As a result of the drought, surface water levels in the lake recorded in August and September of 2021 were the lowest on record since 2000, which could have a direct impact on shallow groundwater well production (Figure ***6***). Additional monitoring and reporting within the *Quaternary Alluvium* are recommended and would be helpful in understanding shallow groundwater trends in the basin.

FUTURE AGRICULTURAL GROUNDWATER USE AND SUPPLY

The potential cumulative effects and the dated nature of the Lake County Groundwater Management Plan were both addressed in the November 9, 2021 Groundwater Hydrology Technical Memorandum prepared for 2185 Ogulin Canyon Road. However, more detailed information is presented herein to further support the conclusions made in the original Groundwater Hydrology Technical Memorandum.

As discussed above, the current groundwater agricultural demand in the BVGB is roughly 555 acre-feet per year. Approximately 225 acre-feet is from existing vineyards in the upper portion of the BVGB and 330 acre-feet is from orchards located within the lower portion the BVGB. A summary of proposed cannabis projects and the approximate annual water demand is provided in Table 1. All the proposed projects are located in the upper portion of the BVGB east of State Highway 53 (Figure ***1***).

Table 1. Approximate water demand of proposed cannabis projects within the BVGB (information obtained from the City of Clearlake and Lake County websites and CEQAnet Database). Refer to Figure 1 ***for approximate locations.***

Location (jurisdiction)	APN(s)	Parcel Area (acres)	Cultivation (Acres)	Cultivation % of Parcel Area	Approximate Annual Water Demand (acre-feet)
1756 Ogulin Canyon Road (County) (Blue Oak Farms)	010-055-46	46.5	2.0	4.3	3.3
2050 Ogulin Canyon Road (County) (Lake Vista Farms)	010-053-01 & 02	302.4	15.0	5.0	24.9
2185 Ogulin Canyon Road (City)	010-044-17	21.3	0.5	2.3	1.8
2160 Ogulin Canyon Road (City)	010-044-21	9.6	0.2	2.1	1.7
2560 Highway 53 (City)	010-048-05	15.4	1.3	8.4	4.3
2250 Ogulin Canyon Road (City)	010-044-19	13.0	0.4	3.1	1.0
Total		408.2	19.4	n/a	37.0

Table 2: Base zones designations, total areas associated with each base zone designation, parcel count, and base zone eligibility for potential cannabis cultivation within the Burns Valley Groundwater Basin.

Zone	Description	Total Parcel Area (acres)*	# of Parcels
RL	Rural Lands	1105.9	18
RR	Rural Residential	677.3	18
Split	Combined Zoning (Dominant Zones are A and RL)	136.5	4

City	Cannabis District	242	23
*This is the total area of the parcel, not just the portion within the BVGB			

To assess the potential for additional cannabis cultivation within the BVGB, not included in Table 1, a parcel inventory analysis was completed (Figure ***7*** and Table 2) to identify those parcels that meet requirements for potential cannabis cultivation with an approved permit from the City or Lake County. The Lake County Zoning Ordinance allows 1-acre of outdoor canopy for each 20 acres of parcel size for these zones. There are 40 parcels that are within or intersect the BVGB with a cumulative parcel area of about 1920 acres (total parcel area, not the intersected area, was used for conservativeness). Of these parcels, 10 parcels or 596 acres are existing vineyards and 2 parcels, or 349 acres have proposed cultivation shown in Table 1.

Excluding these parcels, there are 28 parcels or 975 acres of base zoning that could be eligible for outdoor cultivation. Thus, there is the potential for up to 48 acres of potentially new outdoor cultivation (the County allows only 1-acre of cultivation for each 20 acres of parcel area). However, accounting for existing development, steep topography, waterbody setbacks, flood zones, residential setbacks, and parcel setbacks, there is limited area for development and only approximately 10 to 20 acres of new outdoor cultivation would likely be possible. The increased irrigation demand could be up to approximately 33.1 acre-feet per year assuming 3,000 gallons per day per acre for 180 days. This does not account for the fact that the project at 2050 Ogulin Canyon Road is replacing a 13.9-acre hops farm that utilized approximately 43.6 acre-feet per year of water, creating a deficit of 18.7 acre-feet. Subtracting 18.7 acre-feet from 33.1 acre-feet results in an approximate increased demand of 14.4 acre-feet per year due to potential cannabis projects approved by Lake County.

The City of Clearlake Zoning Ordinance allows for mixed-light/indoor cultivation in the BVGB, with a City Cannabis Permit, on 23 parcels with a total area of 242 acres. Accounting for the proposed projects listed in Table 1, existing development, steep topography, waterbody setbacks, and flood zones only approximately 18 to 20 acres of this area could have the potential for mixed-light/indoor cultivation. The increased irrigation demand could be up to approximately 55.2 acre-feet assuming 3,000 gallons per day per acre for 300 days. The total potential demand from both the County and City for cannabis cultivation could be up to 106.6 acre-feet per year, which includes the proposed projects listed in Table 1 and a conservative (high) estimate of total potential cultivation.

Thus, the total potential agricultural demand within the BVGB is existing, 555 acre-feet, plus proposed, 106.6 acre-feet, is approximately 661.6 acre-feet per year. The dominant demand in the BVGB is associated with residential development and orchards in the lower part of BVGB and vineyards in the upper part of the BVGB. The Highlands Mutual Water Company supplies the majority of residents in the lower part of the BVGB (Figure ***8***). According to the Lake County Agency Formation Commission 2021 Report on Clearlake Water Providers (ClearlakeH20 MSR-SOI 2021EDIT-2. cl docx (lakelafco.org)), the Highlands Mutual Water Company serves 6,072 people with water via 2,568 services connections using water drawn from Clear Lake. Thus, the overall groundwater demand is mainly from agriculture.

The estimated storage capacity of the BVGB is 4,000 AF, with a usable storage capacity of 1,400 AF. The total potential agricultural demand is 47% of the usable storage capacity. According to DWR, groundwater in the BVGB is derived from rain that falls within the 12.5 square mile Burns Valley Watershed drainage area. Recharge estimates provided in Hydrology Reports for 1756 Ogulin Canyon Road, 2060 Ogulin Canyon Road, 2160 Ogulin Canyon Road, and 2185 Ogulin Canyon Road, demonstrate that there is sufficient recharge over the project's contributing recharge area (a small fraction of the entire Burns

Valley Watershed area) to meet the projects' demands during both average and dry years. Overall, the proposed projects in Table 1 represent 2.6% of the usable storage capacity in the BVGB and only 6.7% of the existing demand for irrigation of existing vineyards and orchards.

The demand associated with 2185 Ogulin Canyon Road represents only a small fraction, 0.1% of the usable storage capacity of the BVGB, only 0.3% of the total potential future demand in the BVGB, the total demand associated with the proposed projects listed in Table 1 is only 2.6% of the usable storage capacity of the BVGB and 6% of the potential future demand in the BVGB.

SUMMARY AND DISCUSSION

- A Groundwater Hydrology Technical Memorandum was prepared for 2185 Ogulin Canyon Road on November 9, 2021 and submitted to the Planning Commission that addressed groundwater recharge and cumulative impacts and concluded that there is sufficient recharge and supply to meet the project's demand during average and dry years; the project's demand is only 0.1% of the usable storage capacity of the Burns Valley Groundwater Basin (BVGB); and the potential future cannabis demand in the basin is a fraction of the usable storage capacity of the BVGB and that the proposed project water use would have little to no cumulative impact on the surrounding area.
- The existing demand associated with vineyards and orchards is likely higher than reported in the 2006 Lake County Groundwater Management Plan. The higher estimate has been incorporated herein.
- The main sources of groundwater in the BVGB are within the *Quaternary Alluvium Formation* and the *Lower Lake Formation*. The *Quaternary Alluvium* dominates the southwestern portion of the BVGB, where both residential development and well development are most dense. The alluvium has a thickness of up to 50 feet; groundwater in this formation is unconfined and typically provides water for domestic use. Wells screened in unconfined aquifers are more directly influenced by lack of rain than those screened in deeper, confined aquifers.
- The *Lower Lake Formation* underlies the alluvial deposits in the BVGB. This formation has low permeability and provides water to wells at up to a few hundred gallons per minute and is the dominant source of agricultural water demand in the BVGB.
- Long-term groundwater monitoring in the BVGB shows a stable trend in groundwater levels within the deeper formation, with consistent recharge during each annual wet season, even during years with low annual precipitation and accounting for the existing vineyard and orchard demand that has occurred over this time.
- Although there has been anecdotal evidence of wells going dry in the BVGB, no information regarding these wells was provided so that they could be adequately assessed. It is likely these wells are located in the shallower alluvium formation and are more directly influenced by lack of rain and the low water levels in Clear Lake. No wells within the BVGB were reported to the State Water Supply Shortage Reporting System. Additional monitoring and reporting within the *Quaternary Alluvium* are recommended and would be helpful in understanding shallow groundwater trends in the basin.
- The existing vineyards and the existing and proposed cannabis projects are located outside of the alluvial valley in the upper half of the BVGB.
- The dominant demand in the BVGB is associated with residential development and orchards in the lower part of BVGB and vineyards in the upper part of the BVGB. The Highlands Mutual Water Company supplies the majority of residents in the lower part of the BVGB using surface water drawn from Clear Lake. Thus, agriculture accounts for the majority of groundwater demand. The

agriculture demand, accounting for existing agriculture and potential cannabis projects, is approximately 661.6 acre-feet per year. The estimated storage capacity of the BVGB is 4,000 AF, with a usable storage capacity of 1,400 AF. The total potential future agricultural demand is 47% of the usable storage capacity. Thus, there is sufficient storage capacity to meet existing and proposed demand.

- Recharge estimates provided in the Hydrology Reports for 1756 Ogulin Canyon Road (Blue Oak Farms), 2050 Ogulin Canyon Road (Lake Vista Farms), 2160 Ogulin Canyon Road, and 2185 Ogulin Canyon Road, demonstrate that there is sufficient recharge over each project's contributing recharge area (a small fraction of the entire Burns Valley Watershed area) to meet each project's demands during both average and dry years.
- Overall, the proposed projects in Table 1 represent 2.6% of the usable storage capacity in the BVGB and only 6.7% of the existing demand for irrigation of existing vineyards and orchards.
- The demand associated with 2185 Ogulin Canyon Road represents only a small fraction, 0.1% of the usable storage capacity of the BVGB, only 0.3% of the total potential future demand in the BVGB, the total demand associated with the proposed projects listed in Table 1 is only 2.6% of the usable storage capacity of the BVGB and 6% of the potential future demand in the BVGB. Thus, it is unlikely that these projects, in combination with the 2185 Ogulin Canyon Road project, will adversely impact wells in the lower portion of the BVGB.

ATTACHMENTS

- Figure 1. Local geology (source: https://pubs.usgs.gov/imap/2362/), cultivation well locations, and CASGEM well location. QTc = Clear Lake Cache Formation, 'tb' = nonmarine terrace deposits, and 'al' = alluvium.
- Figure 2. Map of # (n) of Well Completion Reports (WCRs) with in each Public Land Survey System (PLSS) grid along with average well depth. The Burns Valley Groundwater Basin is outlined in red. Parcel coloring is provided in Figure 7.
- Figure 3. CASGEM Monitoring well location.
- Figure 4. CASGEM Monitoring Well data from 1952 to 2020.
- Figure 5. CASGEM Monitoring Well data from 1980 to 2020.
- Figure 6. Clear Lake stage height 2000 through 2021.
- Figure 7. City of Clearlake Cannabis District and Lake County parcel base zoning designations.
- Figure 8. Water Systems within the City of Clearlake Boundary (Source: ClearlakeH20 MSR-SOI 2021EDIT-2. cl docx (lakelafco.org))

QUALIFICATIONS OF AUTHOR

I have a PhD in Water Resources Engineering. In addition, I am a registered Professional Engineer with the State of California with 30-years of experience practicing and teaching Water Resources Engineering, including over 15 years of teaching, practicing, and modeling surface and groundwater hydrology.

LIMITATIONS

The study of groundwater hydrology is very complex and often relies on limited data, especially in rural areas. Recommendations and conclusions provided herein are based on professional judgment made using information of the groundwater systems and geology in Lake County, which is limited and allows only for a general assessment of groundwater aquifer conditions and recharge. NorthPoint Consulting Group, Inc. is making analyses, recommendations, and conclusions based on readily available data,

including studies and reports conducted by other professionals, Lake County, the State of California, and other consultants hired by the project proponent to prepare technical studies for the proposed project. If additional information or data becomes available for the project area, the recommendations and conclusions presented herein may be subject to change.

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FIGURES

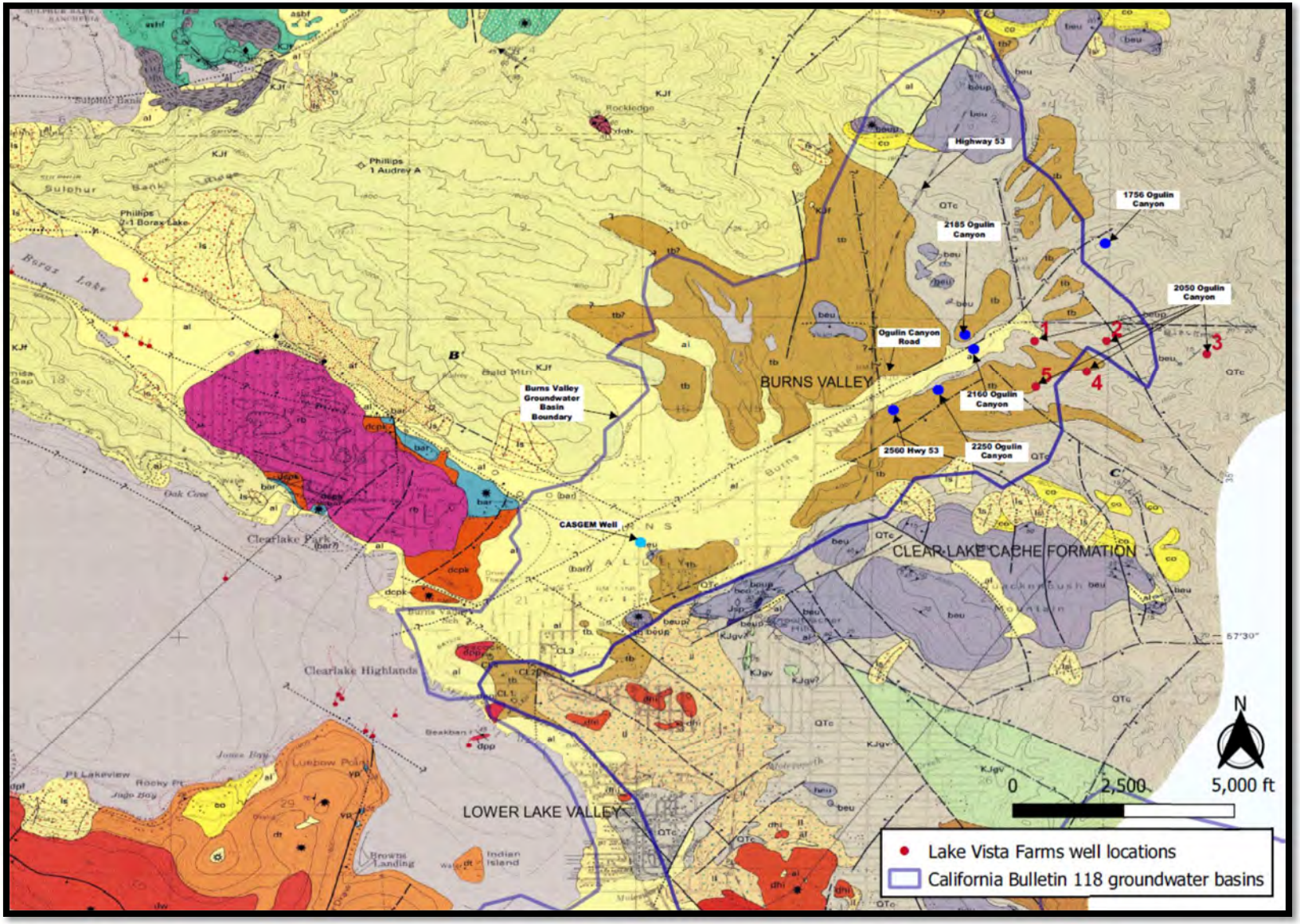


Figure 1. Burns Valley Groundwater Basin local geology (source: https://pubs.usgs.gov/imap/2362/), cultivation well locations, and CASGEM well location. QTc = Clear Lake Cache Formation, 'tb' = nonmarine terrace deposits, and 'al' = alluvium.

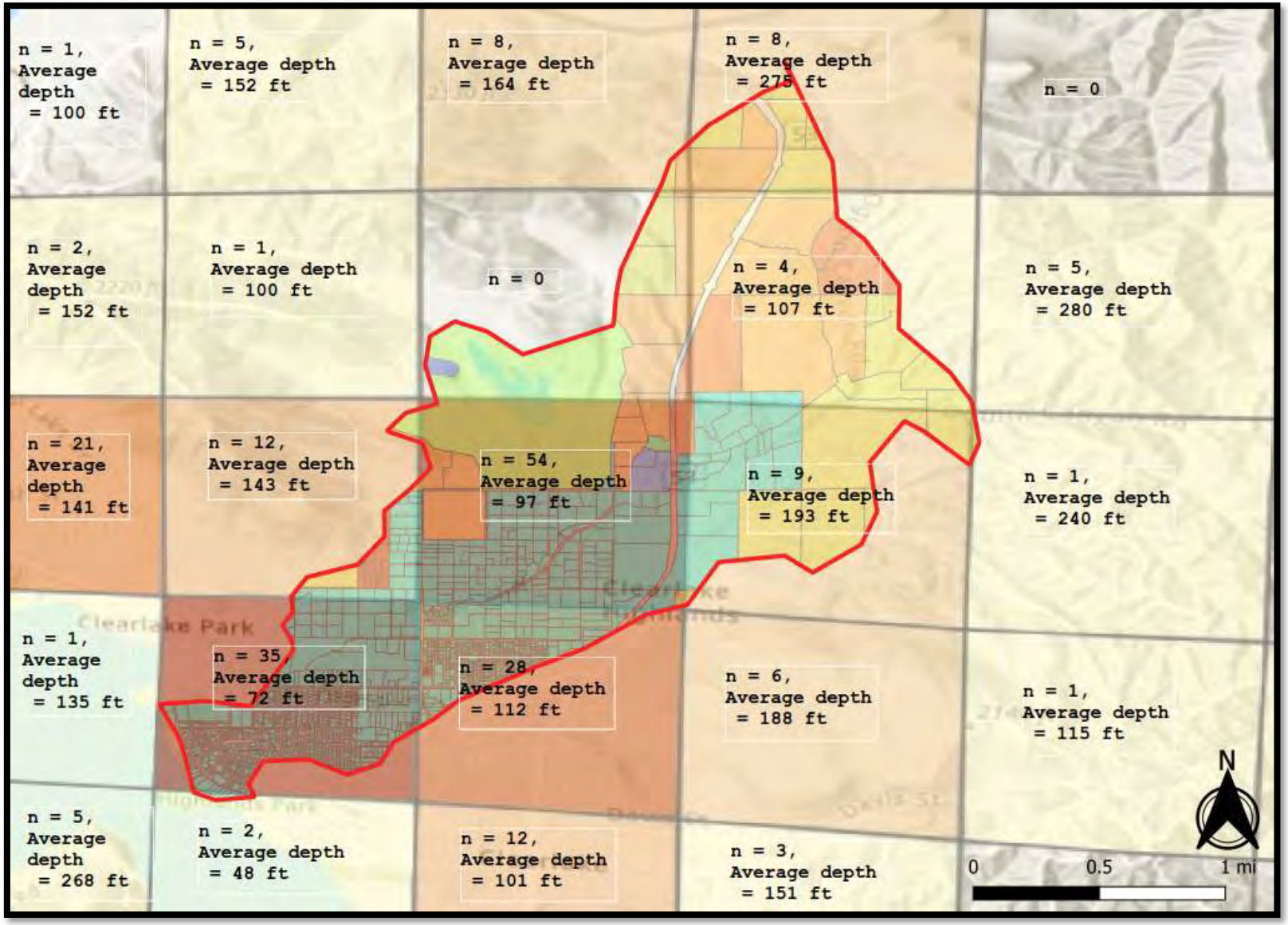
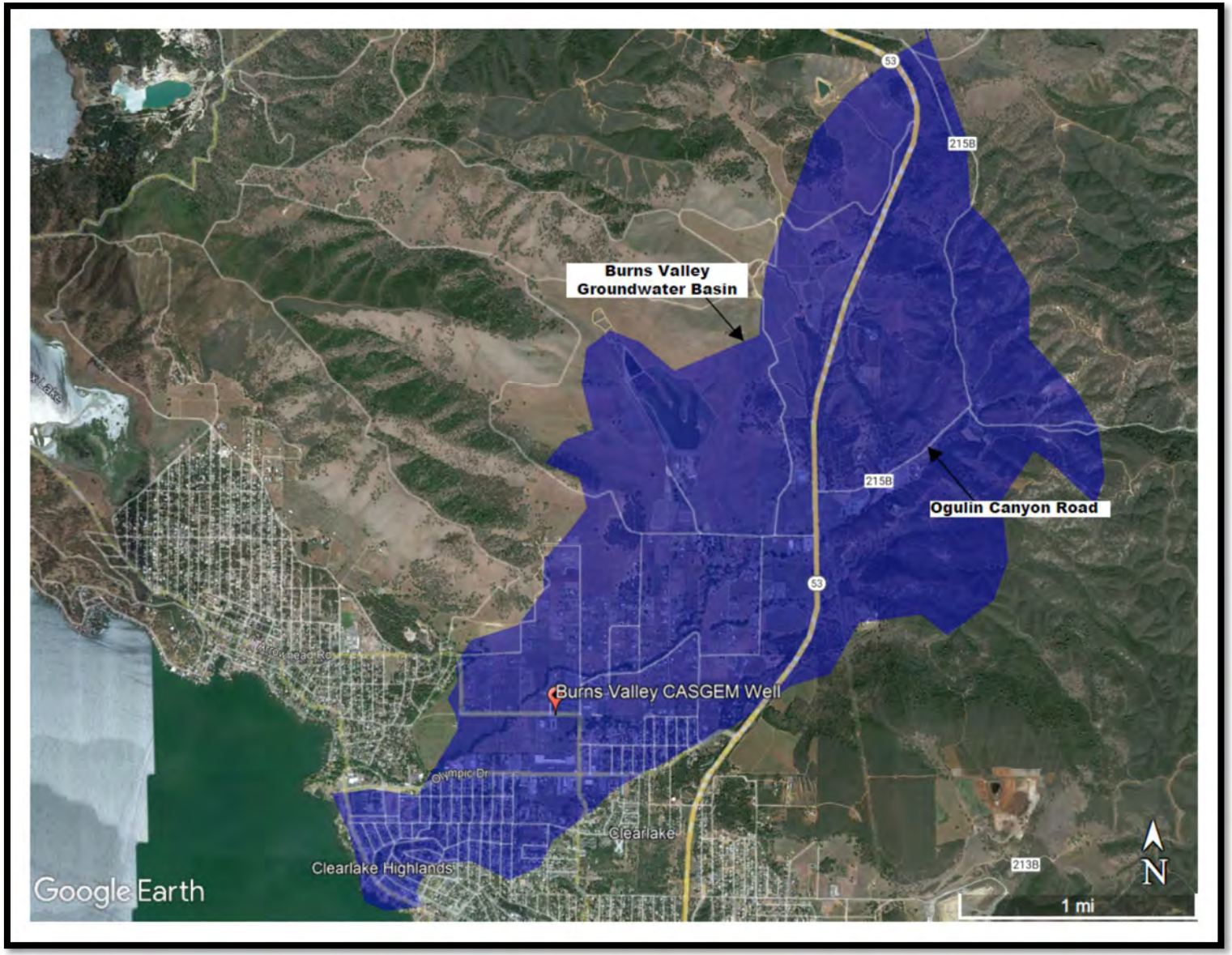


Figure 2. Map of # (n) of Well Completion Reports (WCRs) within each Public Land Survey System (PLSS) grid along with average well depth. The Burns Valley Groundwater Basin is outlined in red. Parcel coloring is provided in Figure 7.



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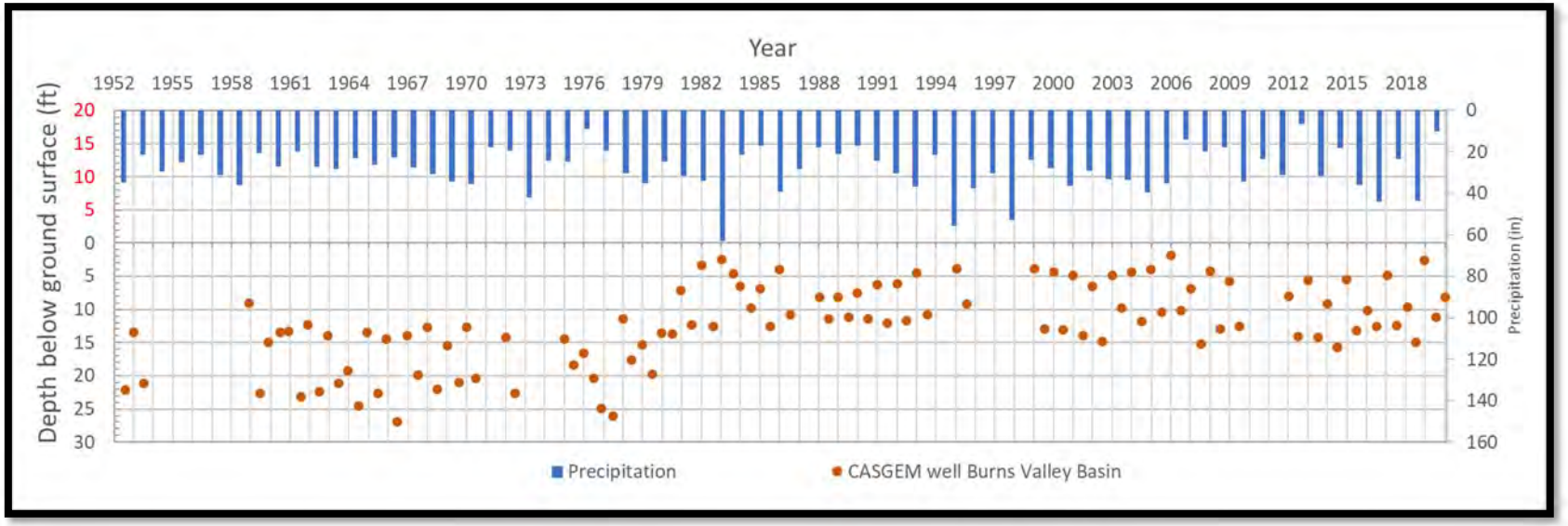

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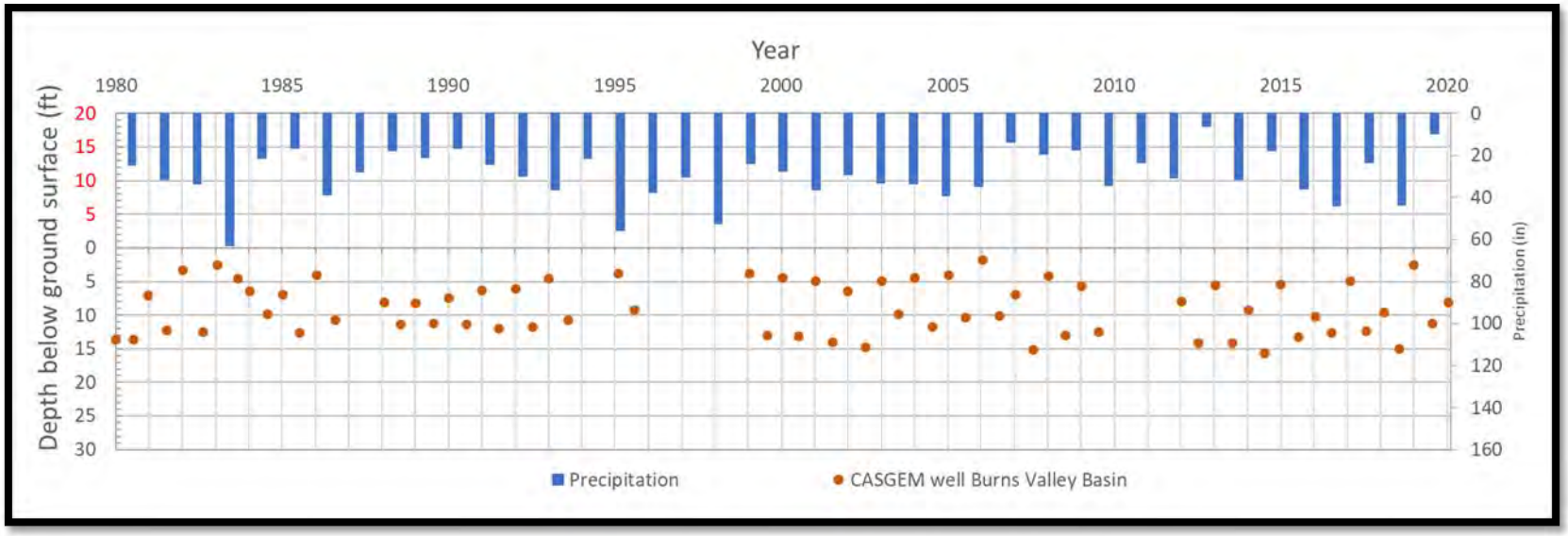


Figure 5. CASGEM Monitoring Well data from 1980 to 2020.

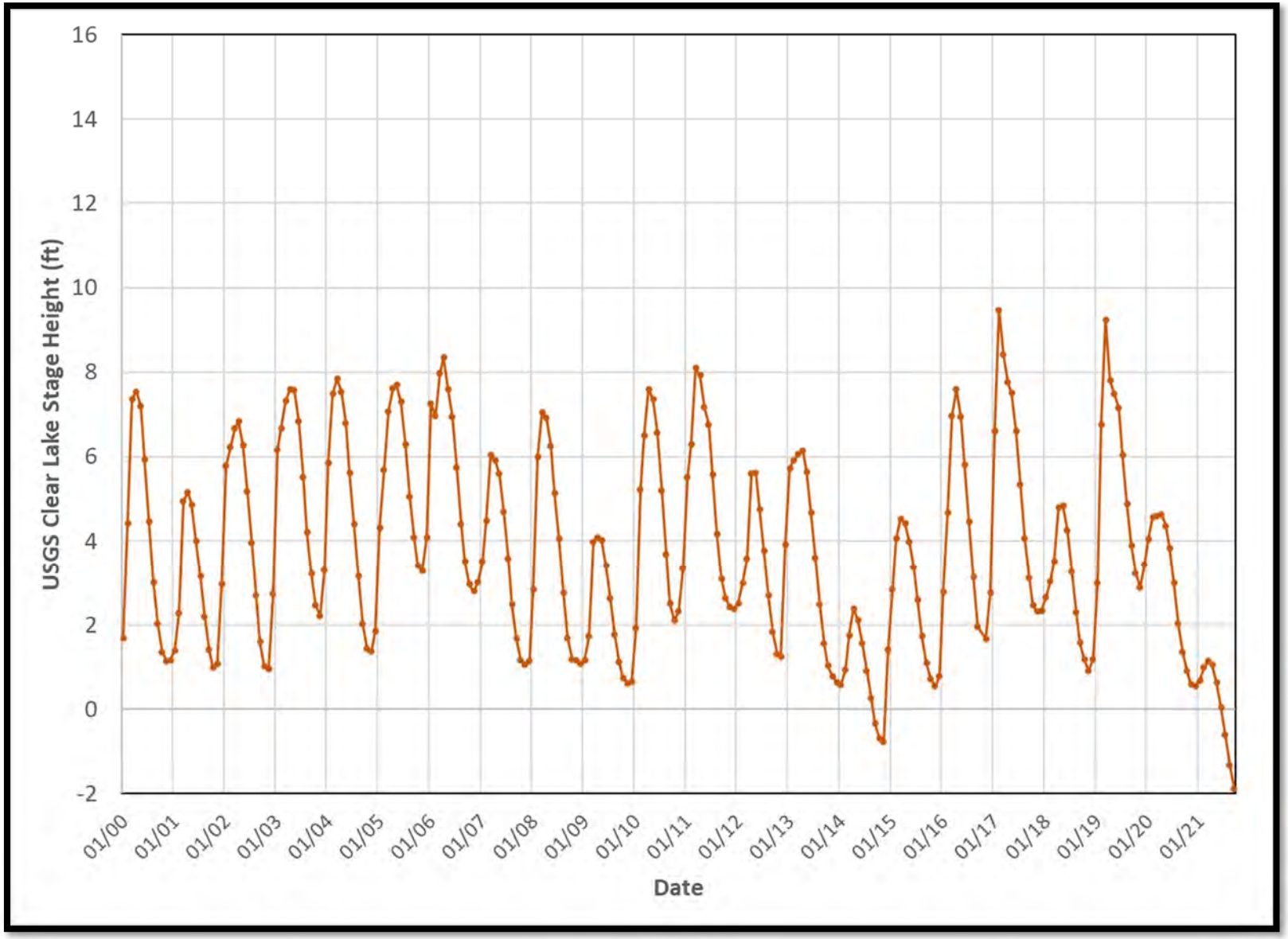
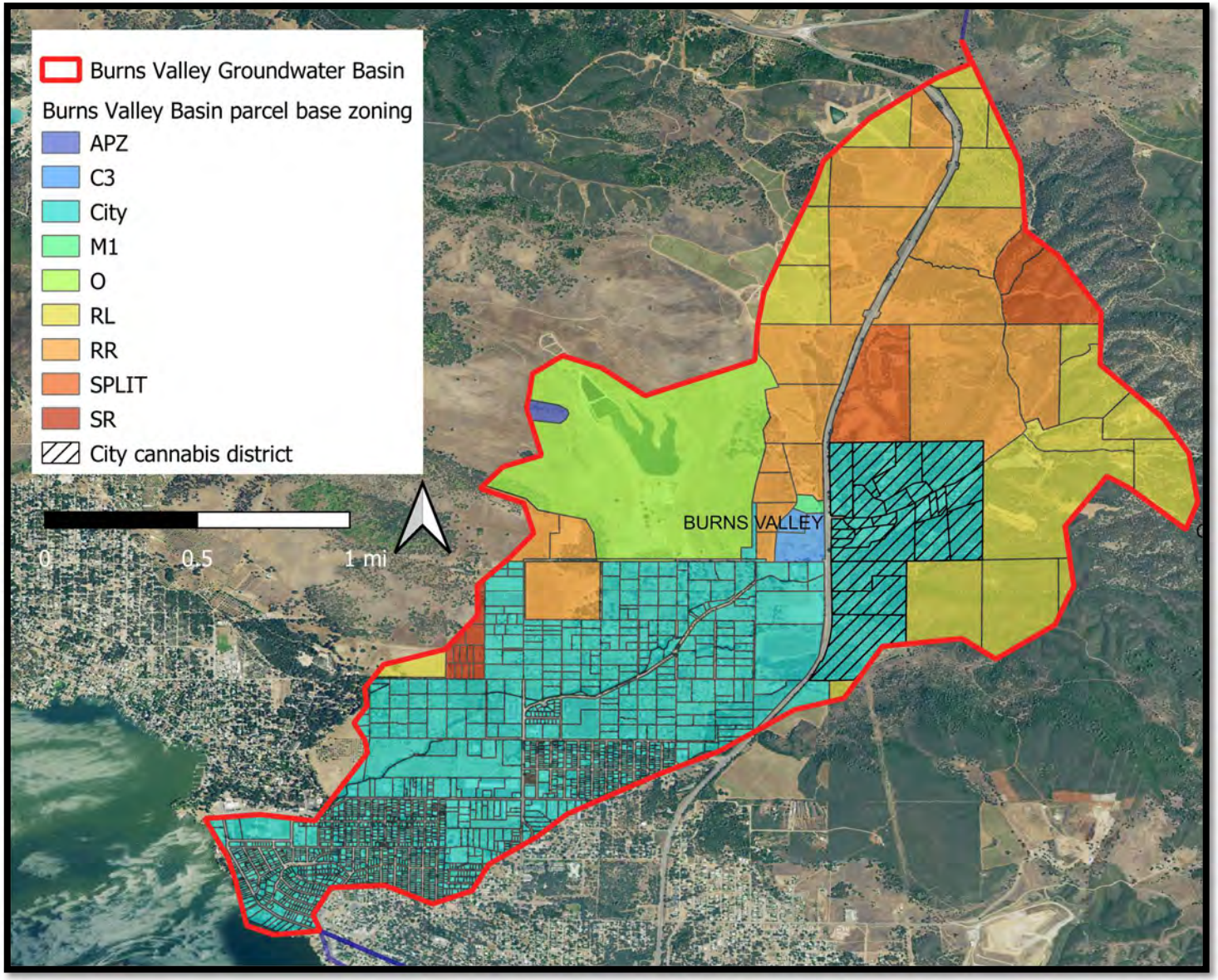


Figure 6. Clear Lake stage height 2000 through 2021.



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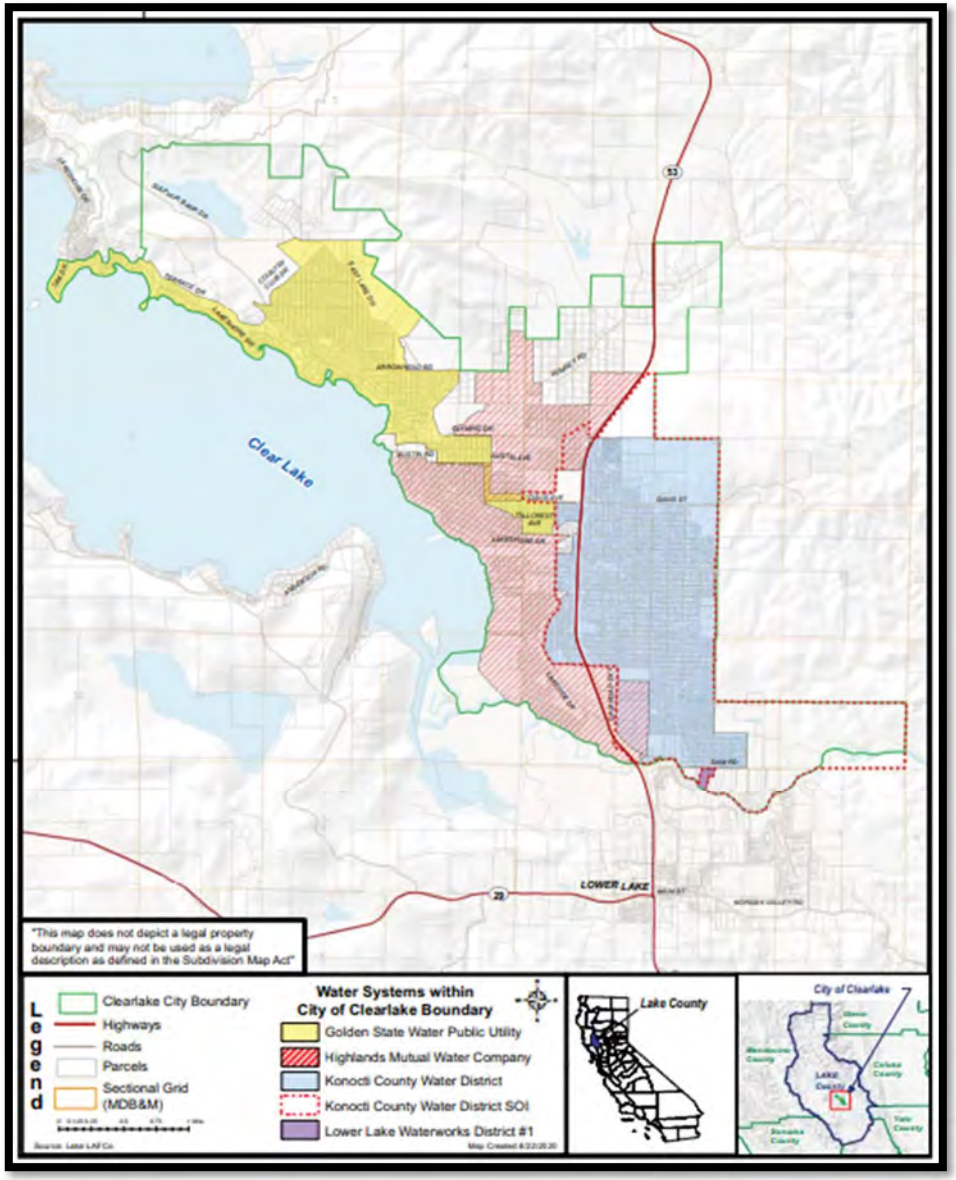


Figure 8. Water Systems within the City of Clearlake Boundary (Source: [ClearlakeH20 MSR-SOI 2021EDIT-2. cl docx (lakelafco.org)])

TECHNICAL MEMORANDUM

To: Mr. Brian Pensack

From: Annjanette Dodd, PhD, CA PE #77756

Date: November 9, 2021

Subject: Groundwater Hydrology – 2185 Ogulin Canyon Road, Clearlake, CA

PURPOSE AND BACKGROUND

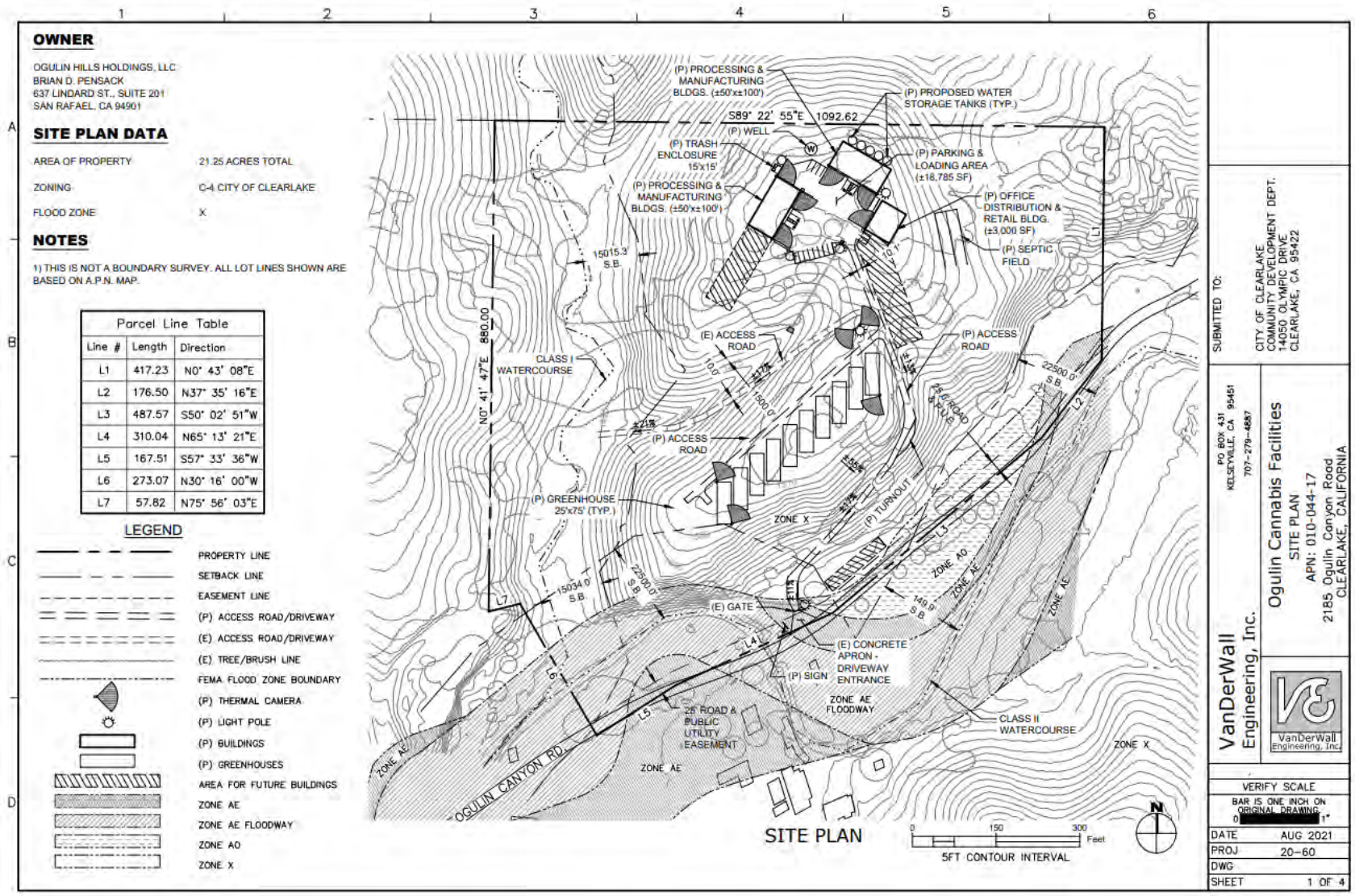
The purpose of this Technical Memorandum is to provide an evaluation of the potential impacts the proposed project would have on the surrounding groundwater resources. The project is located at 2185 Ogulin Canyon Road, Clearlake, Lake County, California. The project proposes 0.5-acres of mixed-light cannabis cultivation, 10,000 sq. ft. of manufacturing, processing, and distribution, and a 3,000 sq. ft. office, retail, and delivery building (Figure 1). A Water Availability Analysis (WAA) was prepared for the project in June 2021 by Richard Knoll Consulting and submitted to the City of Clearlake.

The estimated project water demand for cultivation (300-day cultivation period) was estimated in the WAA using standard industry values for cultivation (3,000 gallons per acre per day, or 2.1 gallons per minute) and warehouse demand (0.85 gallons per square foot, or 11,000 gallons per month). The project proposes ten employees, water demand based on the number of employees is equivalent to sanitary sewer generation for factories with shower facilities. According to the Lake County Rules and Regulations for On-Site Sewage Disposal (Lake County, 2010), the demand would be 35 gallons per day, per person. Thus, the proposed project employee demand would be 350 gallons per day or about 10,500 gallons per month, which corroborates the employee estimate provided in the WAA. The total estimated water demand for the proposed project provided in the WAA is 582,000 gallons per year or 1.8 acre-feet per year. The daily demand is about 1.3 gallons per minute (gpm).

WATER SOURCE AND SUPPLY

There is one (1) existing, permitted groundwater well (Permit Number: WE 5569AG) that will be used for cultivation (Lat/Long 38.983147, -122.604709). The well is approximately 375 feet deep and was drilled in March 2021. The well is screened between 280- and 375-feet below the ground surface. During the drilling of the well, the depth of first water was at 280-feet below the ground surface (bgs) and the static water level was estimated to be 280-feet bgs (Attachment 1 – Well Log).

The well was estimated to have a yield of 80 gpm (129.0 acre-feet per year). The potential daily demand of 1.3 gpm represents approximately 1.6% of the well yield and 2.5% of the annual well production in acre-feet.


OWNER
OGULIN HILLS HOLDINGS, LLC
BRIAN D. PENSACK
637 LINDARD ST., SUITE 201
SAN RAFAEL, CA 94901
SITE PLAN DATA
AREA OF PROPERTY 21.25 ACRES TOTAL
ZONING C-4 CITY OF CLEARLAKE
FLOOD ZONE X
NOTES
1) THIS IS NOT A BOUNDARY SURVEY. ALL LOT LINES SHOWN ARE BASED ON A.P.N. MAP.
Parcel Line Table
Line # | Length | Direction
L1 | 417.23 | N0° 43' 08"E
L2 | 176.50 | N37° 35' 16"E
L3 | 487.57 | S50° 02' 51"W
L4 | 310.04 | N65° 13' 21"E
L5 | 167.51 | S57° 33' 36"W
L6 | 273.07 | N30° 16' 00"W
L7 | 57.82 | N75° 56' 03"E
LEGEND
PROPERTY LINE
SETBACK LINE
EASEMENT LINE
(P) ACCESS ROAD/DRIVEWAY
(E) ACCESS ROAD/DRIVEWAY
(E) TREE/BRUSH LINE
FEMA FLOOD ZONE BOUNDARY
(P) THERMAL CAMERA
(P) LIGHT POLE
(P) BUILDINGS
(P) GREENHOUSES
AREA FOR FUTURE BUILDINGS
ZONE AE
ZONE AE FLOODWAY
ZONE AO
ZONE X
(P) PROCESSING & MANUFACTURING BLDGS. (±50'x±100')
(P) PROPOSED WATER STORAGE TANKS (TYP.)
S89° 22' 55"E 1092.62
(P) WELL
(P) TRASH ENCLOSURE 15'x15'
(P) PARKING & LOADING AREA (±18,785 SF)
(P) PROCESSING & MANUFACTURING BLDGS. (±50'x±100')
(P) OFFICE DISTRIBUTION & RETAIL BLDG. (±3,000 SF)
(P) SEPTIC FIELD
150 15.3' S.B.
N0° 41' 47"E 880.00
CLASS I WATERCOURSE
(E) ACCESS ROAD
(P) ACCESS ROAD
(P) GREENHOUSE 25'x75' (TYP.)
(P) TURNOUT
ZONE X
ZONE AO
ZONE AE
(E) GATE
(E) CONCRETE APRON - DRIVEWAY ENTRANCE
(P) SIGN
ZONE AE FLOODWAY
25' ROAD & PUBLIC UTILITY EASEMENT
CLASS II WATERCOURSE
OGULIN CANYON RD.
SITE PLAN
0 150 300 Feet
5FT CONTOUR INTERVAL
N
SUBMITTED TO:
CITY OF CLEARLAKE
COMMUNITY DEVELOPMENT DEPT.
14050 OLYMPIC DRIVE
CLEARLAKE, CA 95422
VanDerWall Engineering, Inc.
PO BOX 431
KELSEYVILLE, CA 95451
707-279-4857
Ogulin Cannabis Facilities
SITE PLAN
APN: 010-044-17
2185 Ogulin Canyon Road
CLEARLAKE, CALIFORNIA
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
DATE AUG 2021
PROJ 20-60
DWG
SHEET 1 OF 4

GROUNDWATER BASIN INFORMATION AND HYDROGEOLOGY

The well site is in the Burns Valley Groundwater Basin (Basin #5-17). According to the California Department of Water Resources (DWR), almost all the groundwater in the Burns Valley Basin is derived from rain that falls within the 12.5 square mile Burns Valley Watershed drainage area (DWR Bulletin 118).

The Burns Valley Basin is within the Burns Valley Watershed. The Franciscan Formation borders the Burns Valley Basin on the north, Clear Lake borders the basin on the west, and the Cache Formation borders the basin on the south and east. The valley is drained by Burns Valley Creek, flowing southwest, and eventually into Clearlake. There are three water bearing formations in the Burns Valley Basin, the Quaternary Alluvium, Quaternary Terrace Deposits, and Lower Lake Formation. The *Quaternary Alluvium* located in the valley lowlands in the southern end of the valley are composed of silt, sand, and gravel with a thickness up to 50 feet. Groundwater in this formation is unconfined and typically provides water for domestic use. *Quaternary Terrace Deposits* have been deposited on the sides of the alluvial plain in the Burns Valley Basin. The terrace deposits are approximately 15 feet above the valley floor and slope up the valley to a similar elevation as the foothill exposures of the Cache Formation. Groundwater in this formation is not well understood. The *Lower Lake Formation*, consisting of lake deposits, underlies the alluvial and terrace deposits in the basin. The formation consists of fine sands, silts, and thick interbeds of marl and limestone, and has a maximum thickness of 200 feet. The formation has low permeability and provides water to wells at up to a few hundred gallons per minute. Based on the depth of the well, it is likely in the deeper, higher yielding, water bearing formation. The California Department of Water Resources (DWR) estimated a storage capacity of the Burns Valley Basin as 4,000 AF with a usable storage capacity of 1,400 AF. Well depths mostly range between 25- and 425-feet. (CDM 2006 and California DWR 2003, 2021)

The Burns Valley Groundwater Basin has not been identified by the California Department of Water Resources (DWR) as critically overdrafted basins. Critically overdrafted is defined by DWR as, “A basin subject to critical overdraft when continuation of present water management practices would probably result in significant adverse overdraft-related environmental, social, or economic impacts." In addition, as part of the California Statewide Groundwater Elevation Monitoring (CASGEM) Program, DWR created the CASGEM Groundwater Basin Prioritization statewide ranking system to prioritize California groundwater basins in order to help identify, evaluate, and determine the need for additional groundwater level monitoring. California’s groundwater basins were classified into one of four categories high-, medium-, low-, or very low-priority. The Burns Valley Groundwater Basin is ranked as very low-priority basins by the CASGEM ranking system. (DWR, 2021)

RECHARGE RATE

The annual recharge can be estimated using a water balance equation, where recharge is equal to precipitation (P) less runoff (Q) and abstractions that do not contribute to infiltration (e.g., evapotranspiration). A simple tool that can be used to estimate runoff and abstractions, that uses readily available data, is the Natural Resources Conservation Service (NRCS) Curve Number (CN) Method (NRCS, 1986). Determination of the CN depends on the watershed’s soil and cover conditions, cover type, treatment, and hydrologic condition. The CN Method runoff equation is

$$Q = \frac{(P - I_a)^2}{(P - I_a) + S}$$

Where,

Q = runoff (inches)
P = rainfall (inches)
S = potential maximum retention after runoff begins (inches) and
I_a = initial abstraction (inches)

The initial abstraction (I_a) represents all losses before runoff begins, including initial infiltration, surface depression storage, evapotranspiration, and other factors. The initial abstraction is estimated as $I_a = 0.2S$. S is related to soil and cover conditions of the watershed through the CN, determined as $S = 1000/CN - 10$. Using these relations, the runoff equation becomes:

$$Q = \frac{(P - 0.2S)^2}{(P + 0.8S)}$$

The CN is estimated based on hydrologic soil group (HSG), cover type, condition, and land use over the area of recharge, which is estimated as the area of the Burns Valley Watershed. However, to be conservative, the project parcel area of 21.3 acres was used as the recharge area.

The recharge area soils are classified into four HSGs (A, B, C, and D) according to the soils ability to infiltrate water; where HSG A has the highest infiltration potential and HSG D has the lowest infiltration potential. HSGs are based on soil type and can be determined from the NRCS Web Soil Survey (Attachment 2). The recharge area is comprised of HSG C. The land use is undeveloped with a cover type of woods with grassland in fair condition (50% to 75% ground cover) and has a CN of 76 for HSG C.

The PRISM Climate Group gathers climate observations from a wide range of monitoring networks and provides time series values of precipitation for individual locations (https://prism.oregonstate.edu/explorer/). Using the annual precipitation from 1895 to 2020, as predicted by PRISM, the annual average precipitation over this period is 27.6 inches and the minimum precipitation over this period is 6.5 inches (Attachment 3).

Using the above information, and assuming that 50% of the initial abstraction infiltrates and the remainder is evapotranspiration (0.31 inches or 0.56 AF), the estimated annual recharge over the recharge area of 21.3 acres is 5.6 AF during an average year and 4.2 AF during a dry year (Table 1).

Table 1. Estimated annual recharge over the recharge area of the project's well.

Recharge Area (acres)	P (inches)	CN	S (inches)	I_a (inches)	Q (inches)	Recharge = $P - Q - 0.5*I_a$ (inches)	Recharge (AF)
21.3	6.5	76	3.16	0.63	3.81	2.37	4.2
21.3	27.6	76	3.16	0.63	24.17	3.14	5.6

CUMULATIVE IMPACT TO SURROUNDING AREAS

Annual water demand of the proposed project is approximately 1.8 AF per year. The demand represents

approximately 32% and 43% of the annual recharge during an average and dry year, respectively. Recharge in the Burns Valley Groundwater Basin is derived from rain that falls within the 12.5 square mile Burns Valley Watershed. The area used to estimate the recharge for the proposed project is only 0.3% of the entire recharge area. Thus, the recharge estimate is a conservative (low) estimate of the available recharge over the entire recharge area. Overall, there is sufficient recharge, on an annual basis, to meet the project's demand during both a dry year and average year.

The estimated storage capacity of the Burns Valley Basin is 4,000 AF, with a usable storage capacity of 1,400 AF. According to DWR, the groundwater in the Burns Valley Basin is derived from rain that falls within the 12.5 square mile Burns Valley Watershed drainage area. The project's demand is only 0.1% of the usable storage capacity of the Burns Valley Groundwater Basin.

According to the Lake County Groundwater Management Plan, there are 86 domestic wells and 9 irrigation wells in the Burns Valley Groundwater Basin and the agricultural demand in the basin during an average year is 105 AF per year; of this, 14 AF is supplied from groundwater. The Groundwater Management Plan is dated 2006, and does not include the demand from additional proposed cannabis cultivation projects in the Burns Valley Groundwater Basin. The total additional proposed cannabis cultivation is unknown. Assuming there is the potential for approximately 20 to 40 acres of new cannabis cultivation, the annual agricultural demand could increase by an additional 66.3 AF. Cumulatively, with the proposed project at 2185 Ogulin Canyon Road, the annual demand could increase to 82.1 AF or up to 6.0% of the usable storage capacity of the Burns Valley Basin. However, the demand of the proposed project is only 2% of the potential future demand.

Since there is sufficient recharge and supply to meet the project's demand during average and dry years; the project's demand is only 0.1% of the usable storage capacity of the Burns Valley Groundwater Basin; and the potential future cannabis demand in the basin is a fraction of the usable storage capacity. Thus, the proposed project water use would have little to no cumulative impact on the surrounding area.

Additionally, if needed in the future to create water redundancy for the project, the project could install storage for rainwater catchment. The project proposes 31,750 sq. ft. of footprint that could be utilized as rainwater catchment. The rainwater catchment potential is approximately 0.39 acre-feet (129,000 gallons) during a dry year and up to 1.7 acre-feet (546,000 gallons) during a wet year.

QUALIFICATIONS OF AUTHOR

I have a PhD in Water Resources Engineering. In addition, I am a registered Professional Engineer with the State of California with 30-years of experience practicing and teaching Water Resources Engineering, including over 15 years of teaching, practicing, and modeling surface and groundwater hydrology.

LIMITATIONS

The study of groundwater hydrology is very complex and often relies on limited data, especially in rural areas. Recommendations and conclusions provided herein are based on professional judgment made using information of the groundwater systems and geology in Lake County, which is limited and allows only for a general assessment of groundwater aquifer conditions and recharge. NorthPoint Consulting Group, Inc. is making analyses, recommendations, and conclusions based on readily available data, including studies and reports conducted by other professionals, Lake County, the State of California, and

other consultants hired by the project proponent to prepare technical studies for the proposed project. If additional information or data becomes available for the project area, the recommendations and conclusions presented herein may be subject to change.

ATTACHMENTS

1. Well Completion Report
2. NRCS Soil Survey Results
3. PRISM Climate Precipitation 1985-2020

REFERENCES

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ATTACHMENT 1

PROJECT'S WELL COMPLETION REPORT

COUNTY OF LAKE
HEALTH SERVICES DEPARTMENT
Division of Environmental Health
922 Bevins Court, Lakeport, CA 95453-9739
Telephone 707/ 263-1164 FAX: 263-1681

SEAL WITHOUT WITNESS

Permit Number: WE 5569 AG

Site Address: 2185 Ogulin Canyon Rd. clearlake CA

Assessor's Parcel No: 010 - 044 - 17

Owner Name: Ogulin Hills Holdings

Date: 4-1-21

REASON FOR SEAL WITHOUT WITNESS:

☐ **Emergency Seal – Explain:**

☒ **Inspector unable to witness**

☐ **Other:**

IMPERMEABLE LAYER in which annular space terminates:

2" **at a depth of** 23' **feet.**

SEALANT USED: Bentonite clay with concrete cap
METHOD OF PLACEMENT: Poor Down Hole Mix concrete cap

I hereby certify that I have installed the annular seal in accordance with the provisions of the Lake County Well Ordinance and unless otherwise specified in the Lake County Well Ordinance, with the California Department of Water Resources Bulletin 74-81 or as modified by subsequent revisions or supplements.

DRILLING CONTRACTOR SIGNATURE:

COMPANY: Will Peterson Well Drilling **LICENSE NO:** 1009053

*The free Adobe Reader may be used to view and complete this form. However, software must be purchased to complete, save, and reuse a saved form.

File Original with DWR

Page 1 of 1

State of California
Well Completion Report

Refer to Instruction Pamphlet

No. XXXXXX

Owner's Well Number 1

Date Work Began 3/24/2021 Date Work Ended 3/25/2021

Local Permit Agency Environmental Health

Permit Number WE 5569 AG Permit Date 2/22/2021

DWR Use Only – Do Not Fill In

State Well Number/Site Number

Latitude N Longitude W

APN/TRS/Other

Geologic Log

Orientation ● Vertical ○ Horizontal ○ Angle Specify

Drilling Method Air Rotary Drilling Fluid na

Depth from Surface Feet	to Feet	Description: Describe material, grain size, color, etc
0	40	Brown Clay, some gravel
40	380	cemented Franciscan gravels

Total Depth of Boring 380 Feet

Total Depth of Completed Well 375 Feet

Well Owner

Name Oguln Hills Holdings

Mailing Address 637 Lindaro St. Ste 201

City San Rafael State CA Zip 94901

Well Location

Address 2185 Oguln Canyon Rd.

City Clearlake County Lake

Latitude Deg. Min. Sec. N Longitude Deg. Min. Sec. W

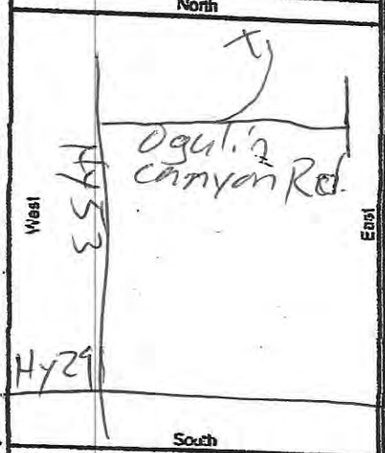
Datum Dec. Lat. Dec. Long.

APN Book 010 Page 044 Parcel 17

Township Range Section

Location Sketch

(Sketch must be drawn by hand after form is printed.)



Illustrate or describe distance of well from roads, buildings, fences, rivers, etc. and attach a map. Use additional paper if necessary. Please be accurate and complete.

Activity

● New Well
○ Modification/Repair
○ Deepen
○ Other
○ Destroy
Describe procedures and materials under "Other"

Planned Uses

● Water Supply
☐ Domestic ☐ Public
☒ Irrigation ☐ Industrial
○ Cathodic Protection
○ Dewatering
○ Heat Exchange
○ Injection
○ Monitoring
○ Remediation
○ Sparging
○ Test Well
○ Vapor Extraction
○ Other

Water Level and Yield of Completed Well

Depth to first water 280 (Feet below surface)

Depth to Static Water Level 280 (Feet) Date Measured 3/25/21

Estimated Yield * 80 (GPM) Test Type Air Lift

Test Length 2 (Hours) Total Drawdown (Feet)

*May not be representative of a well's long term yield.

Casings

Depth from Surface Feet	to Feet	Borehole Diameter (Inches)	Type	Material	Wall Thickness (Inches)	Outside Diameter (Inches)	Screen Type	Slot Size If Any (Inches)
0	280	9	F480	PVC	1/4"	4 1/2	na	na
280	375	9	F480	PVC	1/4"	4 1/2	PERF	.035

Annular Material

Depth from Surface Feet	to Feet	Fill	Description
0	1	Concrete	seal
1	23	bentonite	seal
23	375	5/16 pea	gravel pack

Attachments

☐ Geologic Log
☐ Well Construction Diagram
☐ Geophysical Log(s)
☐ Soil/Water Chemical Analyses
☐ Other

Attach additional information, if exists

Certification Statement

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief

Name Will Peterson Well Drilling
Person, Firm or Corporation

P.O. Box 1095 Kelseyville CA 95451
Address City State Zip

Signed [signature]
C-57 Licensed Water Well Contractor

4-1-21
Date Signed

1009053
C-57 License Number

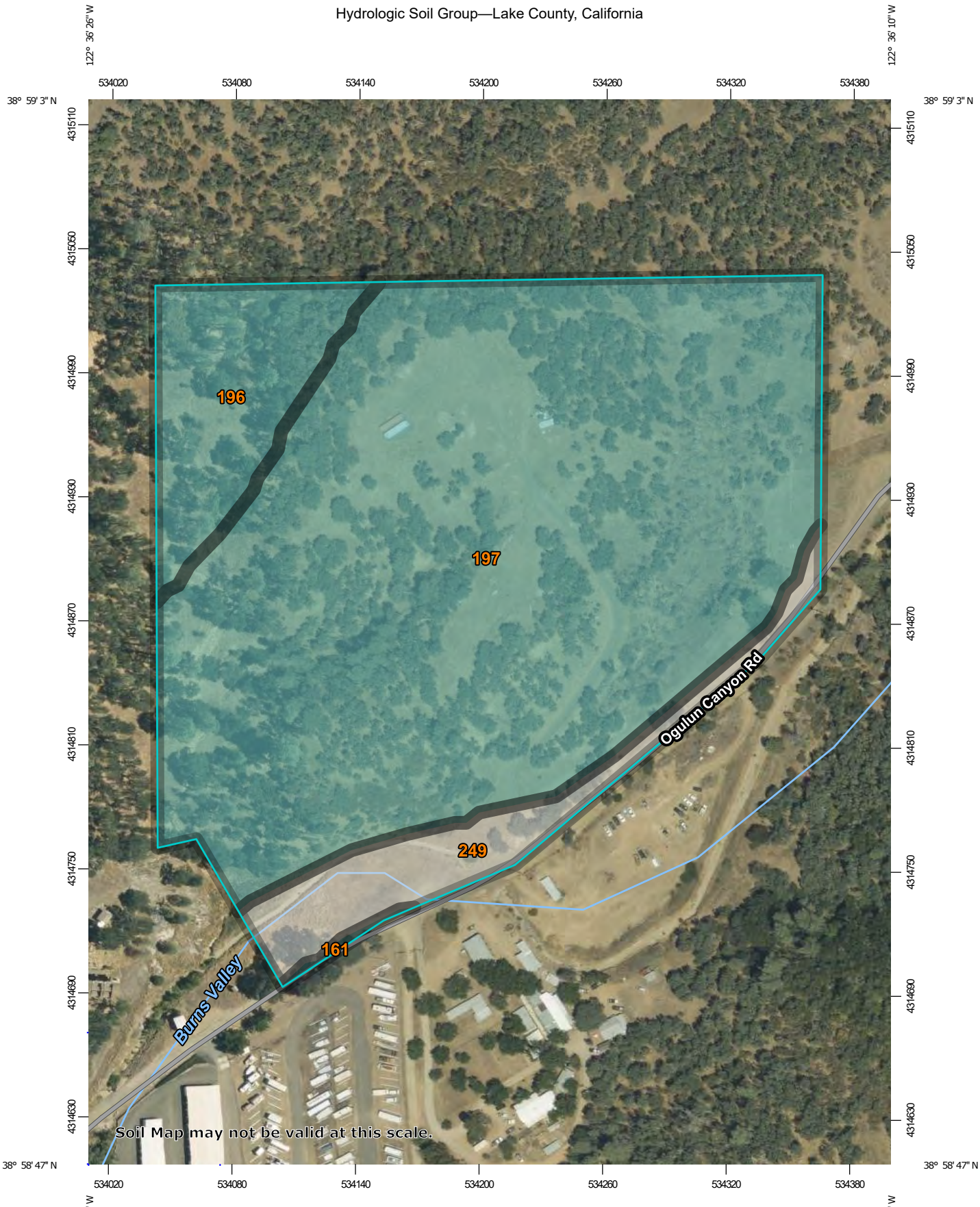
DWR 188 REV 1/2005

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

ATTACHMENT 2

NRCS SOIL SURVEY RESULTS

HYDROLOGIC SOIL GROUPS



Map Scale: 1:2,510 if printed on A portrait (8.5" x 11") sheet.

N

0 35 70 140 210 Meters

0 100 200 400 600 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Lines

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Points

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

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

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

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

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

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

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

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

Soil Survey Area: Lake County, California
Survey Area Data: Version 18, Sep 6, 2021

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

Date(s) aerial images were photographed: Jul 2, 2019—Jul 5, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
161	Manzanita loam, 15 to 25 percent slopes	C	0.0	0.2%
196	Phipps complex, 15 to 30 percent slopes	C	2.2	10.4%
197	Phipps complex, 30 to 50 percent slopes	C	17.2	81.1%
249	Xerofluvents-Riverwash complex		1.8	8.3%
Totals for Area of Interest			**21.3**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

ATTACHMENT 3

PRISM PRECIPITATION 1895-2020

PRISM Time Series Data
Location: Lat: 38.9831 Lon: -122.6047 Elev: 1637ft
Climate variable: ppt
Spatial resolution: 4km
Period: 1895 - 2020
Dataset: AN81m
PRISM day definition: 24 hours ending at 1200 UTC on the day shown
Grid Cell Interpolation: On
Time series generated: 2021-Nov-08
Details: http://www.prism.oregonstate.edu/documents/PRISM_datasets.pdf

Date	ppt (inches)
1895	33.63
1896	39.53
1897	26.55
1898	15.13
1899	36.1
1900	24.89
1901	26.27
1902	34.58
1903	26.84
1904	42.96
1905	23.18
1906	43.17
1907	35.74
1908	18.81
1909	45.51
1910	17.48
1911	33.96
1912	20.53
1913	26.29
1914	31.26
1915	35.72
1916	30.02
1917	12.99
1918	20.6
1919	23.04
1920	29.98
1921	24.18
1922	27.47
1923	14.73
1924	21.14
1925	26.24
1926	34.63
1927	28.51
1928	20.62
1929	15.3
1930	17.4

	Precip (inches)
Average	27.63
Minimum	6.49

1931	25.04
1932	12.78
1933	20.87
1934	18.96
1935	25.54
1936	25.52
1937	34.47
1938	31.9
1939	12.63
1940	46.05
1941	45.26
1942	32.35
1943	21.27
1944	26.51
1945	29.28
1946	14.21
1947	16.82
1948	23.43
1949	16.82
1950	34.39
1951	29.8
1952	34.49
1953	21.26
1954	29.45
1955	25.1
1956	21.25
1957	30.95
1958	35.77
1959	20.73
1960	27.2
1961	20.06
1962	27.13
1963	28.56
1964	23.1
1965	26.06
1966	22.75
1967	27.62
1968	30.56
1969	34.16
1970	35.49
1971	17.75
1972	19.43
1973	41.8
1974	24.09
1975	24.41
1976	8.7
1977	19.25

1978	30.31
1979	35.17
1980	24.72
1981	31.37
1982	33.74
1983	62.67
1984	21.4
1985	16.78
1986	38.8
1987	27.96
1988	17.74
1989	21.03
1990	16.9
1991	24.2
1992	30.08
1993	36.42
1994	21.42
1995	55.55
1996	37.21
1997	30.34
1998	52.68
1999	23.66
2000	27.61
2001	36.24
2002	28.87
2003	33.08
2004	33.64
2005	39.25
2006	34.93
2007	13.8
2008	19.43
2009	17.73
2010	34.1
2011	23.25
2012	30.53
2013	6.49
2014	31.39
2015	18.19
2016	35.97
2017	43.71
2018	23.67
2019	43.27
2020	10