APPENDIX A

Notice of Preparation and Comments

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State of California—The Natural Resources Agency
DEPARTMENT OF PARKS AND RECREATION

NOTICE OF PREPARATION

Preparation of an Environmental Impact Report for the Clay Pit State Vehicular Recreation Area General Plan

AND

Announcement of Public Scoping Meeting

Date: September 1, 2010

To: State Clearinghouse, Responsible and Trustee Agencies, and Interested Individuals and Organizations

Subject: Notice of Preparation of an Environmental Impact Report for the Clay Pit State Vehicular Recreation Area General Plan

Lead Agency:
California Department of Parks and Recreation
Off-Highway Motor Vehicle Recreation Division
Twin Cities District
13300 White Rock Road
Rancho Cordova, CA 95742
Contact: Jennifer Buckingham
Project Manager
Phone: (916) 985-1096
jbuck@parks.ca.gov

Consultant:
AECOM
2020 L Street, Suite 400
Sacramento, CA 95811
Contact: Kim Fettke, Project Manager
Phone: (916) 414-5881
kim.fettke@aecom.com

The California Department of Parks and Recreation (DPR) is the lead agency for the preparation of a General Plan (GP) and associated environmental impact report (EIR) for the Clay Pit State Vehicular Recreation Area (SVRA). DPR has prepared this Notice of Preparation (NOP) pursuant to Section 15082 of the California Environmental Quality Act (CEQA) Guidelines. This NOP informs agencies and the public that an EIR is being prepared to address potential impacts resulting from implementation of the proposed *Clay Pit State Vehicular Recreation Area General Plan*. Agencies should comment on the elements of potential environmental effects that are relevant to their statutory responsibilities in connection with the proposed project.

RESPONSES TO THIS NOP

Due to the time limits mandated by state law, responses to the NOP must be sent at the earliest possible date, but no later than 30 days after this notice is filed with the Governor's Office of Planning and Research/State Clearinghouse (September 1, 2010). Please send your written responses, including the name of a contact person, to:

Jennifer Buckingham
California Department of Parks and Recreation
Off-Highway Motor Vehicle Recreation Division
Twin Cities District
13300 White Rock Road
Rancho Cordova, CA 95742
Phone: (916) 985-1096
Email: jbuck@parks.ca.gov

PROJECT TITLE

Clay Pit State Vehicular Recreation Area General Plan

PROJECT LOCATION

The regional location of the Clay Pit SVRA is shown in Figure 1. The Clay Pit SVRA is a 220 acre off-highway vehicle (OHV) park operated by the Off-Highway Motor Vehicle Recreation (OHMVR) Division of DPR. Clay Pit SVRA is located within unincorporated Butte County, approximately 2 miles southwest of the City of Oroville (Figure 2). Clay Pit SVRA is located 2 miles south of State Route (SR) 162 on Larkin Road, between SR 70 and SR 99. To the north and northwest is the Oroville Municipal Airport. A light industrial area and scattered residences are located between Clay Pit SVRA and the airport. The California Department of Fish and Game's Oroville Wildlife Management Area (WMA) borders Clay Pit SVRA to the east and south. A shooting range associated with the WMA is located along the southern border. Clay Pit SVRA is located on a large shallow depression (pit), which was formed when clay was mined and used to construct the Oroville Dam. After the dam was completed, site ownership was retained by the California Department of Water Resources (DWR) while management of the site was transferred to DPR in 1981.

PROJECT DESCRIPTION

A General Plan is the primary management document for each park unit within the California State Park System, including SVRAs. The General Plan establishes the primary purpose and management direction for the park unit. An approved General Plan is typically required before DPR can move forward with site- specific improvements that are beyond minor capital outlay projects. The OHMVR Division has initiated the process of preparing a General Plan and associated EIR for Clay Pit SVRA to develop a long term management framework and to establish the foundation for future park improvements.

Preparation of the General Plan is in its early stages, so ultimate land use and resource management provisions have not yet been determined. Initial General Plan research and analysis efforts include researching existing conditions, conducting visitor surveys and stakeholder interviews, and identifying potential issues and opportunities to be addressed during the planning process. Based on the results of these efforts, planning alternatives will be developed to illustrate scenarios for how the management and visitor services at Clay Pit SVRA may be improved over the long term. A draft conceptual diagram showing some of the different uses that could be accommodated at Clay Pit SVRA has been prepared (Figure 3); however, it is important to note that the diagram is conceptual at this time and does not represent a final plan. A preferred alternative will be generated based on public input and an evaluation of the planning alternatives developed for the project. The preferred alternative will be a land use plan that will be used to prepare the General Plan.

Use areas will be designated in the General Plan. Use areas will be based on geographic relationships, resource values, management issues and goals, and visitor use and experiences. The General Plan will also contain goals and guidelines that guide Clay Pit SVRA management and provide long-term direction for development of future facilities. Such facilities may include new parking areas or access points, park maintenance facilities, interpretive kiosks, restrooms, picnic areas, and OHV tracks for all-terrain vehicles (ATVs), dirt bikes, and four-wheel drive vehicles. Preliminary use areas are described below.

Use Area 1 (Developed Area)

The developed use area would be most appropriate for built facilities like tracks, parking lots, staging areas, and obstacle courses because it contains desirable topographic features and fewer natural resources. The OHMVR Division also is planning to construct a building for on-site rangers and maintenance facilities within this use area.

Use Area 2 (Riding Area)

This area has fewer desirable topographic features and a higher density of natural resources, which may preclude or limit placement of developed facilities. This area may be left in its current state and may continue to be used for multi-purpose OHV use.

Use Area 3 (Conservation Area)

Denser, or more sensitive, natural resources in this area may provide opportunities for on-site conservation, mitigation, and resource management.

GENERAL PLAN TOPICS

Topics that are being considered as part of the General Plan process include the following:

- physical, biological, aesthetic, and cultural resources;
- land use and facilities;
- visitor use and experiences;
- operation and maintenance functions;
- planning influences, such as regional population projections and public input;
- recreational trends, opportunities, and constraints;
- access and circulation;
- law enforcement and public safety; and
- education and interpretation opportunities.

POTENTIAL ENVIRONMENTAL IMPACTS

Although the ultimate use areas and associated goals and guidelines have not yet been determined, from studying the resource characteristics and generally anticipated recreational uses of the project area the planning team has identified the types of environmental impacts that may result from implementation of the General Plan and from continued recreational use of the property. The potential environmental effects that are anticipated to be addressed in the EIR include impacts on the following resource areas:

- air quality;
- biological resources;
- circulation;
- cultural resources;
- climate change;
- geology, soils and mineral resources;
- hydrology and water quality;
- land use and management;
- noise; and
- public services and utilities.

SCOPING MEETING

A planning workshop/EIR scoping meeting has been scheduled to provide additional information about the General Plan process, review alternatives, and give interested parties an opportunity to comment on the scope and potential environmental effects of the project. The scoping meeting will be held at the following time and location:

Tuesday, September 14, 2010
6:00 pm to 8:00 pm
Eagles Hall
2010 Montgomery Street
Oroville, CA 95965

Additional information about the planning process can be found on the following website:

http://ohv.parks.ca.gov/?page_id=26300

INTENDED USES OF THE EIR

DPR will use the EIR to consider environmental effects, mitigation measures, and alternatives when reviewing the proposed General Plan. The OHMVR Commission will use the EIR to support decisions made related to its respective administration jurisdictions. The EIR will serve as the CEQA compliance document for adoption of the General Plan and implementation of a first initial project. It will also serve as the programmatic environmental document that may be referenced in implementing future actions included in the General Plan. Subsequent project-level activities identified in the General Plan will be examined in light of the program EIR to determine whether an additional environmental document must be prepared before project approval and implementation (State CEQA Guidelines 15168[c]).

By: Jennifer Buckingham Garcia

Signature: _____

Title: District Services Manager

Date: September 1, 2010

Attachments: Figure 1: Regional Location Map
Figure 2: Vicinity Map
Figure 3: Draft Conceptual Diagram

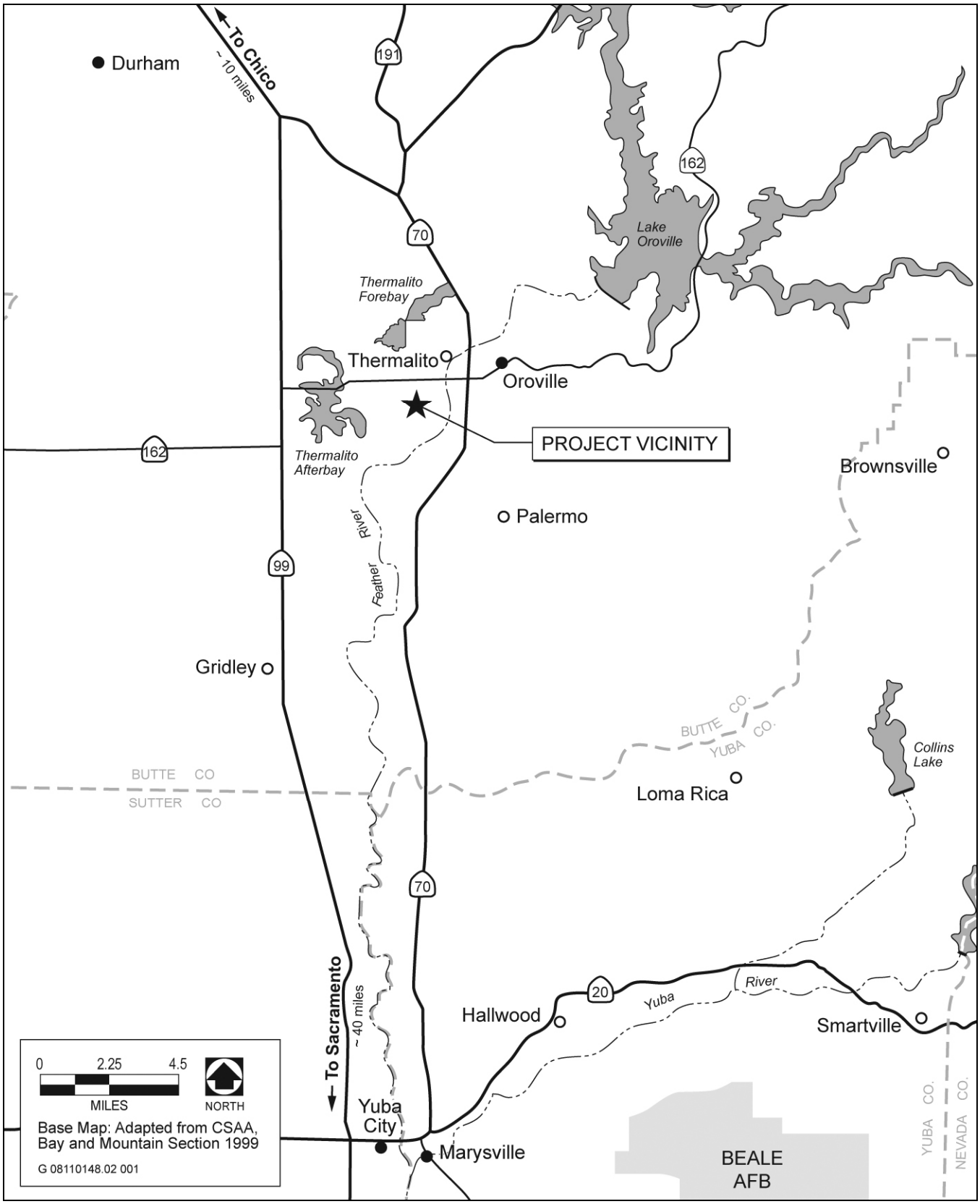

Figure 1: Regional Location Map

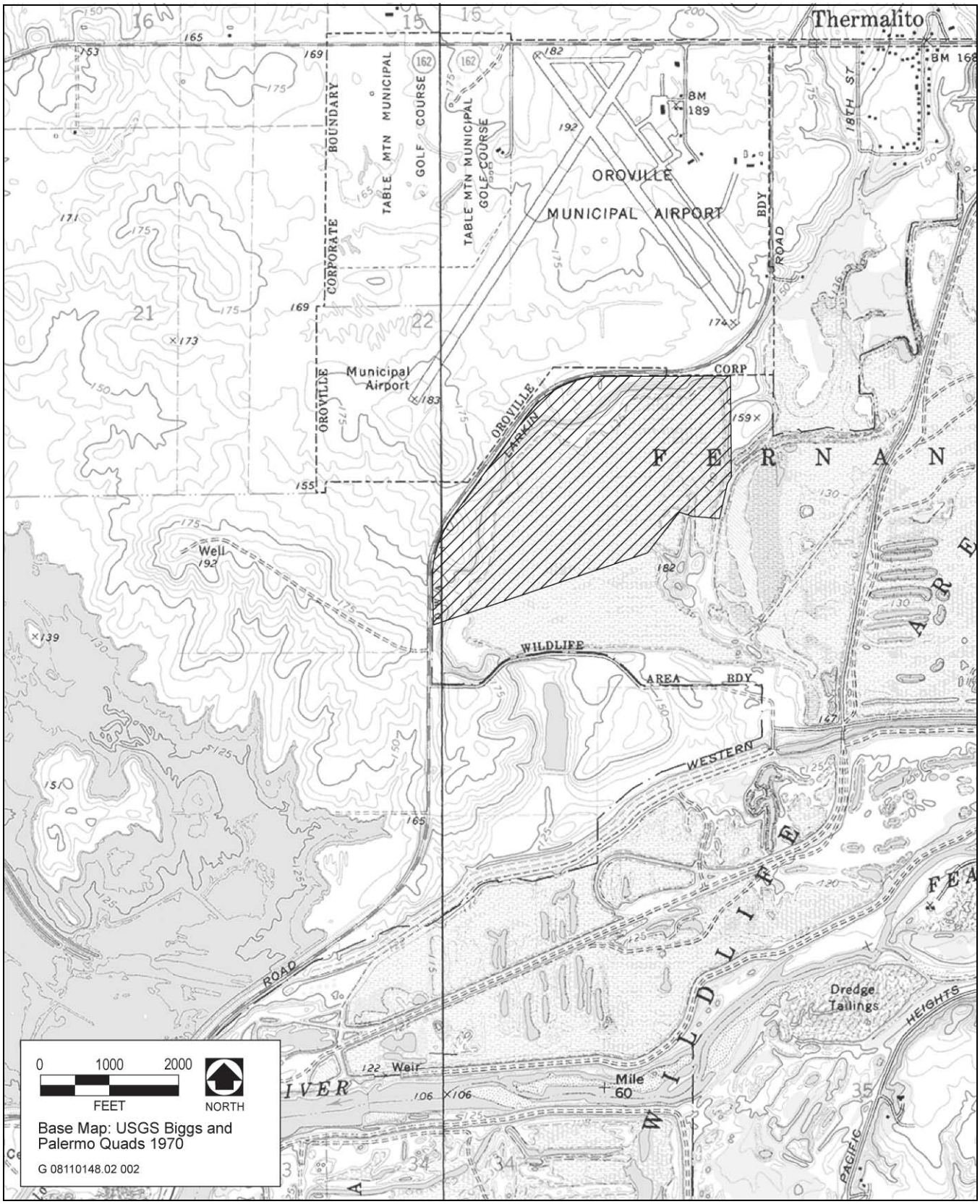

Figure 2: Vicinity Map

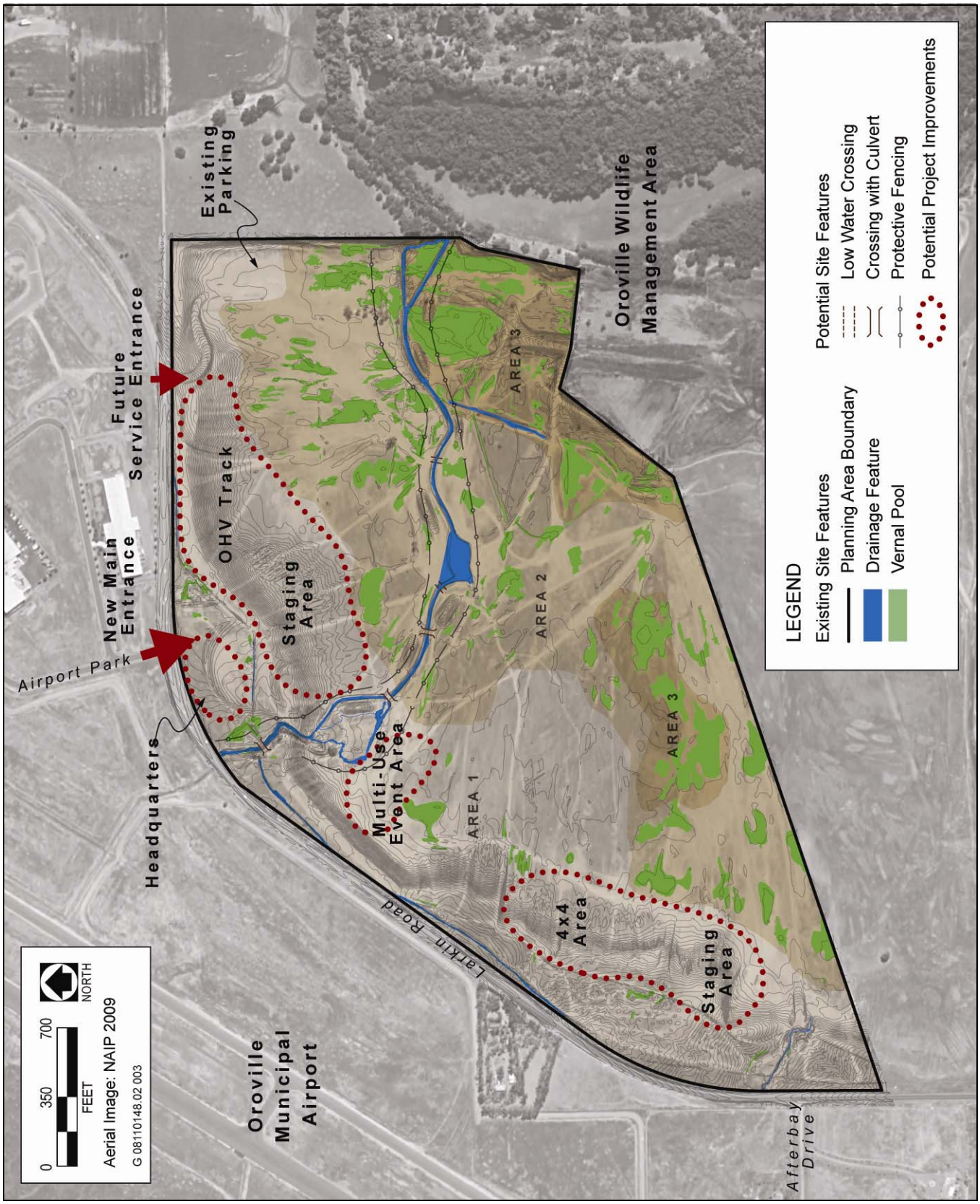

Figure 3: Draft Conceptual Diagram

Jew, Deborah

From: Buckingham, Jennifer [JBUCK@parks.ca.gov]
Sent: Tuesday, September 28, 2010 10:52 AM
To: Boyd, Elizabeth
Subject: FW: Clay Pit OHV

Hi Elizabeth,

Below is a comment to be added to our file. Also, the following names can be deleted from the mailing list as our mailers came back as undeliverable:

Oroville Municipal Airport (229 Chuck Yeager Way), Warren White (CA State Parks, One Capitol Mall), G Bros Motorsports (708 Cherry Street).

Thanks!

-----Original Message-----
From: Buckingham, Jennifer
Sent: Tuesday, September 28, 2010 10:36 AM
To: 'slippery811@digitalpath.net'
Subject: RE: Clay Pit OHV

Greetings Ken,

Thank you for providing comments and feedback on our proposed plan for Clay Pit. Your comments are greatly appreciated and will be included in our evaluation of improvement alternatives.

Jennifer

-----Original Message-----
From: slippery811@digitalpath.net [mailto:slippery811@digitalpath.net]
Sent: Thursday, September 23, 2010 10:15 PM
To: Buckingham, Jennifer
Subject: Clay Pit OHV

Jennifer,

I have been unable to attend any of the workshops due to my work schedule
or other engagements, but I would like to comment that I feel Alternative
#3 for "full development" is the clear choice for this area. It allows motorcycle, off-road autos and ATVs to have separate areas to recreate, and it better uses the overall area with designated, developed tracks. Currently, its pretty much a free for all, with limited features to actually challenge off road riders. This is by far a better plan than I had anticipated. I also like the idea of a separate beginner MX track where people like my wife may want to try out riding dirt bikes without the intimidating factors associated with more technical track features that cater to higher skilled and faster riders. I am impressed with what
has been proposed so far and will continue to follow the progress.

I do have one suggestion. In addition to finding a feasible way to remove
or reduce the countless baby head size rocks that litter Clay Pit, for

the
tracks, I would suggest forming a joint agreement for soil swapping with
say, someone like Jared Fisher of MMX in Marysville or the newly
appointed
track operator at Riverfront Park MX. They are continually looking for
more coarse or loamy soil to mix with what has historically been an
extremely sandy area at the E-Street and Riverfront MX areas. By the
same
token, Clay Pit should be looking to bring in sand. The clay and rocky
soil at Clay Pit is very hard pack, which is tough on riders and
equipment
if one takes a spill, and the clay tends to hold too much surface water
in
the winter, resulting in giant puddles that linger for weeks, well after
the rains subside. Bringing sand into the clay would provide for more
"all
weather" track conditions and soften the soil resulting in less
potential
injuries to riders. Most riders will agree that a track that is
comprised
of more loam type soil is the most ideal to ride on.

Ken Trombley
155 Spanish Garden Drive
Chico, CA. 95928

Buckingham, Jennifer

From: Buckingham, Jennifer
Sent: Friday, October 01, 2010 11:12 AM
To: 'rupinder_jawanda@dot.ca.gov'
Cc: 'scott.morgan@opr.ca.gov'
Subject: Re: Caltrans comments - Clay Pit General Plan SCH#2010092003

Good morning,

Your comment letter has been received and is greatly appreciated. Your comments will be included in our project review and planning activities.

Thank you.

Jennifer Buckingham

----- Original Message -----
From: Rupinder Jawanda <rupinder_jawanda@dot.ca.gov>
To: Buckingham, Jennifer
Cc: scott.morgan@opr.ca.gov <scott.morgan@opr.ca.gov>
Sent: Thu Sep 30 10:32:55 2010
Subject: Caltrans comments - Clay Pit General Plan SCH#2010092003

Ms. Buckingham,

Please find attached our comment letter for the Clay Pit General Plan NOP (SCH# 2010092003). Let me know if you have any questions.

(See attached file: 9-29-10 Signed Comment Letter.pdf)

Regards,

RUPINDER JAWANDA
Transportation Planner
Department of Transportation - North Office
703 B Street, Marysville, CA 95901
P 530.740.4989

DEPARTMENT OF TRANSPORTATION
DISTRICT 3
703 B STREET
P. O. BOX 911
MARYSVILLE, CA 95901-0911
PHONE (530) 741-4025
FAX (530) 741-4825
TTY (530) 741-4509

Flex your power!
Be energy efficient!

September 29, 2010

032010BUT0027
SR 162/PM 14.030
Clay Pit General Plan NOP
SCH#2010092003

Ms. Jennifer Buckingham
California Department of Parks and Recreation
13300 White Rock Road
Rancho Cordova, CA 95742

Dear Ms Buckingham,

Thank you for the opportunity to review and comment on the Notice of Preparation (NOP) for the Clay Pit State Vehicular Recreation Area General Plan Draft Environmental Impact Report (DEIR), to determine land use and resource management provisions for the property located near State Route (SR) 162 and Larkin Road in the City of Oroville. Caltrans has the following comments on the NOP.

Traffic Operations

The NOP lists "Hwy 99" as the nearest Highway in the proximity of the project; SR 162 is the nearest Highway, followed by SR 70.

As transportation impacts are addressed in the environmental document, the expected number of vehicles, usual times of arrival and departure on weekdays and weekend days, and the types of vehicles expected (especially if vehicles pulling trailers are common) should be provided. The existing SR 162/Larkin Road intersection configuration has separate left-turn lanes on SR 162 to southbound Larkin Road and northbound 20th Street; 20th Street has a single-lane for all turning movements; Larkin Road has one lane for through and left-turn movements and a second lane for right-turns. The impacts to the SR 162/Larkin Road intersection should be identified to determine if there will be a significant impact; our primary concerns are impacts to safety and traffic operations.

Encroachment Permit

All work proposed and performed within the State Right-of-Way must be in accordance with Caltrans' standards and require a Caltrans Encroachment Permit prior to commencing construction, surveying or other activities in the Right-of-Way. For more information on encroachment permits, the requirements, and an application form, please visit our web page at www.dot.ca.gov/doingbusiness and click on "Encroachment Permits" or contact the Caltrans District 3, Office of Permits at (530) 741-4403.

If you have questions or need additional information, please contact Rupinder Jawanda, Butte County IGR Coordinator, at (530) 740-4989 or e-mail at rupinder_jawanda@dot.ca.gov.

Sincerely,

LILIBETH GREEN
Chief, Office of Transportation Planning – North

DEPARTMENT OF TRANSPORTATION
DIVISION OF AERONAUTICS – M.S.#40
1120 N STREET
P. O. BOX 942874
SACRAMENTO, CA 94274-0001
PHONE (916) 654-4959
FAX (916) 653-9531
TTY 711

Flex your power!
Be energy efficient!

September 16, 2010

Jennifer Buckingham
California Department of parks and Recreation - OHMVR Division
13300 White Rock Road
Rancho Cordova, CA 95742

Dear Ms. Buckingham:

Re: California Department of Parks and Recreation's Notice of Preparation of a Draft Environmental Impact Report for Clay Pit State Vehicular Recreation Area General Plan; SCH# 2010092003

The California Department of Transportation (Caltrans), Division of Aeronautics (Division), reviewed the above-referenced document with respect to airport-related noise and safety impacts and regional aviation land use planning issues pursuant to the California Environmental Quality Act (CEQA). The Division has technical expertise in the areas of airport operations safety, noise, and airport land use compatibility. We are a funding agency for airport projects and we have permit authority for public-use and special-use airports and heliports.

The proposal is for the preparation of a General Plan for the Clay Pit State Vehicle Recreation Area to determine land use and resource management provisions in order to illustrate scenarios for how the management and visitor services may be improved over the long term.

The project site is located immediately south of the Oroville Municipal Airport.

California Public Utilities Code (PUC) Section 21659 prohibits structural hazards near airports. Depending on structural heights, including construction equipment, etc., and in accordance with Federal Aviation Regulation, Part 77 "Objects Affecting Navigable Airspace" a Notice of Proposed Construction or Alteration (Form 7460-1) may be required by the Federal Aviation Administration (FAA). Form 7460-1 is available on-line at https://oeaaa.faa.gov/oeaaa/external/portal.jsp and should be submitted electronically to the FAA.

In accordance with PUC Section 21655, prior to acquisition of land for a state building within two miles of an airport runway, the applicant is required to submit written notification to the Division of Aeronautics requesting a site evaluation. Please contact the Division's Aviation Safety Officer for Butte County, Phil Miller, at (916) 654-5507 for questions concerning the site evaluation.

Future development must be consistent with the Butte County Airport Land Use Commission (ALUC) Airport Land Use Compatibility Plan. The proposal should also be coordinated with Oroville Municipal Airport staff to ensure that the proposal will be compatible with future as well as existing airport operations.

The protection of airports from incompatible land use encroachment is vital to California's economic future. Oroville Municipal Airport is an economic asset that should be protected through effective

airport land use compatibility planning and awareness. Although the need for compatible and safe land uses near airports is both a local and State issue, airport staff, airport land use commissions and airport land use compatibility plans are key to protecting an airport and the people residing and working in the vicinity of an airport. Consideration given to the issue of compatible land uses in the vicinity of an airport should help to relieve future conflicts between airports and their neighbors.

These comments reflect the areas of concern to the Division of Aeronautics with respect to airport-related noise, safety, and regional land use planning issues. We advise you to contact our District 3 office concerning surface transportation issues.

Thank you for the opportunity to review and comment on this proposal. If you have any questions, please call me at (916) 654-5314 or by email at sandy.hesnard@dot.ca.gov.

Sincerely,

Sandy Hesnard

SANDY HESNARD
Aviation Environmental Specialist

c: State Clearinghouse, Butte County ALUC, Oroville Municipal Airport

Buckingham, Jennifer

From: slippery811@digitalpath.net
Sent: Thursday, September 23, 2010 10:15 PM
To: Buckingham, Jennifer
Subject: Clay Pit OHV

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Ken Trombley
155 Spanish Garden Drive
Chico, CA. 95928

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Ken Trombley
155 Spanish Garden Drive
Chico, CA. 95928

STATE OF CALIFORNIA Arnold Schwarzenegger, *Governor*

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-4082
(916) 657-5390 - Fax

September 14, 2010

Jennifer Buckingham
California Department of Parks and Recreation-OHMVR Division
13300 White Rock Road
Rancho Cordova, CA 95742

RE: SCH#2010092003 Clay Pit General Plan; Butte County.

Dear Ms. Buckingham:

The Native American Heritage Commission (NAHC) has reviewed the Notice of Preparation (NOP) referenced above. The California Environmental Quality Act (CEQA) states that any project that causes a substantial adverse change in the significance of an historical resource, which includes archeological resources, is a significant effect requiring the preparation of an EIR (CEQA Guidelines 15064(b)). To comply with this provision the lead agency is required to assess whether the project will have an adverse impact on historical resources within the area of project effect (APE), and if so to mitigate that effect. To adequately assess and mitigate project-related impacts to archaeological resources, the NAHC recommends the following actions:

- ✓ Contact the appropriate regional archaeological Information Center for a record search. The record search will determine:
  - If a part or all of the area of project effect (APE) has been previously surveyed for cultural resources.
  - If any known cultural resources have already been recorded on or adjacent to the APE.
  - If the probability is low, moderate, or high that cultural resources are located in the APE.
  - If a survey is required to determine whether previously unrecorded cultural resources are present.
- ✓ If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
  - The final report containing site forms, site significance, and mitigation measurers should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure.
  - The final written report should be submitted within 3 months after work has been completed to the appropriate regional archaeological Information Center.
- ✓ Contact the Native American Heritage Commission for:
  - A Sacred Lands File Check. . **USGS 7.5 minute quadrangle name, township, range and section required.**
  - A list of appropriate Native American contacts for consultation concerning the project site and to assist in the mitigation measures. **Native American Contacts List attached.**
- ✓ Lack of surface evidence of archeological resources does not preclude their subsurface existence.
  - Lead agencies should include in their mitigation plan provisions for the identification and evaluation of accidentally discovered archeological resources, per California Environmental Quality Act (CEQA) §15064.5(f). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American, with knowledge in cultural resources, should monitor all ground-disturbing activities.
  - Lead agencies should include in their mitigation plan provisions for the disposition of recovered artifacts, in consultation with culturally affiliated Native Americans.
  - Lead agencies should include provisions for discovery of Native American human remains in their mitigation plan. Health and Safety Code §7050.5, CEQA §15064.5(e), and Public Resources Code §5097.98 mandates the process to be followed in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery.

Sincerely,

Katy Sanchez

Katy Sanchez
Program Analyst
(916) 653-4040

CC: State Clearinghouse

Native American Contact List
Butte County
September 14, 2010

Mooretown Rancheria of Maidu Indians
Gary Archuleta, Chairperson
#1 Alverda Drive — Maidu
Oroville , CA 95966 — KonKow / Concow
frontdesk@mooretown.org
(530) 533-3625
(530) 533-3680 Fax

KonKow Valley Band of Maidu
Patsy Seek, Chairperson
1706 Sweem Street — KonKow / Concow
Oroville , CA 95965 — Maidu
(530) 533-1504

Mooretown Rancheria of Maidu Indians
James Sanders, Tribal Administrator
#1 Alverda Drive — Maidu
Oroville , CA 95966 — KonKow/Concow
(530) 533-3625
(530) 533-3680 FAX

April Wallace Moore
19630 Placer Hills Road — Nisenan - So Maidu
Colfax , CA 95713 — Konkow
530-637-4279 — Washoe

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed SCH# 2010092003 Clay Pit General Plan; Butte County.

COMMENTS

Clay Pit State Vehicular Recreation Area
General Plan and EIR

Dan Love, 520 990-6433 cell
(520) 534-6433

Expert on Setting Rock Crawling Areas
As well as Mud drag + Bogg.

I would love to Help for Free.

Thank you
Dan Love

COMMENTS

Clay Pit State Vehicular Recreation Area
General Plan and EIR

SUGGESTIONS

- ☐ HAVE/BUILD A HELISPOT FOR MEDICAL HELICOPTER LANDING AT AN ADVANTAGEOUS LOCATION W/ HELICOPTER/AMBULANCE CONSULT
- ☐ HAVE TRAILS FOR WALKING & BICYCLES IN ADDITION TO OHV PRIMARY PURPOSE.
- ☐ RECEPTION CENTER WITH OFFICES, RESTROOMS, SPECIAL EVENTS SUPPORT.
- ☐ TRAINING CENTER WITH UNIQUE HISTORY, ENVIRONMENT & EDUCATIONAL OPPORTUNITIES.
- ☐ POTENTIAL RV CAMPING SITES FOR USERS.

Name:_____

Address:_____

City:_____ Zip: _____

Add to mailing list: Y / N

Please give your comments back to project staff, or send comments to the project manager
(**by 5 p.m. on October 1**):

Jennifer Buckingham

California State Parks
Off-Highway Motor Vehicle Recreation Division
c/o Twin Cities District
13300 White Rock Road
Rancho Cordova CA 95742

jbuck@parks.ca.gov

Name: DAVID PITTMAN

Address: 1735 MONTGOMERY ST.

City: ORoville CA Zip: 95965

Add to mailing list: (Y) / N

Please give your comments back to project staff, or send comments to the project manager
(**by 5 p.m. on October 1**):

Jennifer Buckingham

California State Parks
Off-Highway Motor Vehicle Recreation Division
c/o Twin Cities District
13300 White Rock Road
Rancho Cordova CA 95742

jbuck@parks.ca.gov

COMMENTS

Clay Pit State Vehicular Recreation Area
General Plan and EIR

Riding area for Beginners, kids to learn to ride, separate from Big Bikes, quads Etc (for safety)
OBSTACLE course - trials, enduro type sections.
MX + cross country course
Camping areas for overnight + day use
water
· Loading + unloading ramps built into parking lots
more trees for shade
Loam, sand, or soil for safer RIDING

Recreation Outdoors Coalition

4000 Beacon Drive
Anderson, CA 96007
530-365-4732

September 9, 2010

Jennifer Buckingham
California State Parks
Off-Highway Motor Vehicle Recreation Division
c/o Twin Cities District
13300 White Rock Road
Rancho Cordova CA 95742

Re: Clay Pits SVRA

Recreation Outdoors Coalition (ROC) is a non-profit organization created to promote responsible access, multiple use, stewardship, tolerance and safety for those recreating on our public lands. We support local, State and federal land management policies while advocating environmentally sustainable recreation use.

ROC has reviewed this project and has come up with the following comments as prepared by one of our management team, Steve Uhles, retired Forest Service and BLM recreation planner and manager:

OHMVR has contacted Motocross track operators in area. They know what it takes to build and maintain MX tracks. I recommend that OHMVR look at a "niche" type of track to provide experiences not found at Riverfront or E-street. Concept is a track suited to less than state of the art motorcycles and without the "do or die" type jumps and obstacles. Not really a beginner track, but less than pro level.

It would be good to have a separate ATV track as they work differently and fun for riders using the track is not always fun for bikes. I agree with idea for youth tracks and education.

This is an opportunity to build an "Endurocross" track. This is a course with manmade challenges such as logs, rocks, water, mud, sand, huge tractor tires, car bodies, etc. The track is a small, football field sized and can host race events as well as individual riders. ATV's can use it too. It will also be fun for riders of specialized trials motorcycles.

There is a recommendation for 4X4 activities, good ideas already presented. I would consider same for utility ATV's.

Recommend designated trail system even within open areas. This creates order and flow and is more comfortable to riders.

In conservation areas, develop interpretative signing relating natural resources and OHV inter-relationships.

If events are to be held, special attention to facilities development is necessary. Day use needs are very different than event needs.

Steve notates that his comments are based on his experiences around the country and could be somewhat limited because he has not had the opportunity to visit the area.

Thank you for allowing our organization to comment on this worthwhile project.

Sincerely,

Sylvia Milligan

Sylvia Milligan, Chair – Recreation Outdoors Coalition

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APPENDIX B

Project Details and Assumptions Used for Analysis

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Clay Pit SVRA General Plan
Project Details and Assumptions Used for Analysis

Site Description

Basin is a former borrow site for clay materials.

The SVRA contains a limited number of developed facilities, including a 0.6-acre paved parking lot, two shade ramadas, two picnic tables, one vault toilet, and one interpretive sign.

The SVRA is open only for day use.

Oroville Municipal Airport is to the northeast of the SVRA.

Site Access

Site access roads are all paved and include:

- State Route 99
- State Route 70
    - Oroville Dam Boulevard (State Route 162)
- Larkin Road (Larkin Road connects to SR 162 to the north and Biggs Highway East to the south.)

Headquarters Facilities: – Build out: FY 2012-13, June through May

- Headquarters:
    - New entry off Larkin Road plus internal roadway connecting the new entry with the existing paved parking lot.
        - Total of 2.1 acres asphalt: (1.5 acres asphalt for entry plus 0.6 acre for internal roadway).
        - Assume 2.6 acres for grading prior to paving.
    - Headquarters building:
        - 2,800 sq. ft. with administrative offices, restroom, maintenance offices and some storage.
        - The office roof ridge height would be about 15 feet and the garage roof ridge height would be about 23 feet, assuming gable roofs.

- Maintenance yard
  - 0.5 acre open, fenced area for storing maintenance and patrols vehicles, ATVs, and motorcycles;
  - May include storage sheds or containers;
  - 1,800 CY of cut material from maintenance yard area to be stockpiled in upland area west of headquarters for later use elsewhere within SVRA site during construction of anticipated facilities;
  - Crushed rock road base: 0.5 acre; 6" deep (403 CY).
- Entry Kiosk:
  - 160 sq ft; constructed at same time as Headquarters building.
  - Peak of about 15' max.
  - Assume 0.1 acre graded area.
- Water well; unknown excavated volume assumed incidental.
- Engineered septic system (likely an above-ground sand filtration system) with odor control system; installed at same time as Headquarters building:
  - Approximately 100' width x 100' long x 10' deep;
  - Assume 0.3 acre graded area;
  - 3,700 CY excavated volume to be stockpiled in upland area west of headquarters for later use elsewhere within SVRA during construction of anticipated facilities; assume mass grading same time as maintenance yard mass grading;
- On-site propane tank for space and water heating:
  - Assume a 250-gallon tank. There will be no need for overnight heating and this is an average residential-size tank.
  - Assume 0.1 acre graded area.
- Overhead or underground electrical extension from Larkin Road to headquarters building.
  - If underground, assume it will be laid when entry way to headquarters is constructed.

Anticipated Facilities – Build out: FY 2016-17, June through May

Three Separate Use Areas:

Developed Use Area

- Headquarters (see above project components).
- 2 water tanks by HQ area.
- Fuel Station for gas and diesel in maintenance yard, probably 500 gallon vaults each. The fuel would be for state park vehicles, motorcycles and ATVs used by staff only, and maintenance equipment.
    - Assume 0.1 acre graded area.
- Paved road from new entrance to floor of basin plus paved road on terrace to end of proposed 4 x 4 rock crawl/recreation area.
    - Approximately 1.8 acres asphalt.
    - Assume 3 acres of graded area.
- Parking lot.
    - Approximately 0.6 acres asphalt.
- Kids track approximately 620’ long x 12’ wide - 1-acre in size - average of 3’ deep.
    - Assume 1.5 acre of graded area.
    - Assume 1.5’ of excavation and 1.5’ of berm to achieve 3-foot depth
    - 413 CY of soil movement within track area
- 110cc track 1,200’ long x 12’ wide - 2-acres - average of 4’ deep.
    - Assume 2.5 acres of graded area.
    - Assume 2.0’ of excavation and 2.0’ of berm to achieve 4-foot depth.
    - 1,067 CY of soil movement within track area.
- ATV track approximately 1 mile long x 14’ wide - 3-5 acres - average of 4’ deep.
    - Assume 6.0 acres of graded area.

    - Assume 2.0’ of excavation and 2.0’ of berm to achieve 4-foot depth.
    - 5,475 CY of soil movement within track area.
- M/X track approximately l mile long x 14’ wide - 3-5 acres - average of 4’ deep.
    - Assume 6.0 acres of graded area.
    - Assume 2.0’ of excavation and 2.0’ of berm to achieve 4-foot depth.
    - 5,475 CY of soil movement within track area.
- 4 x 4 obstacle courses, hill climbs, mud pits (10–12 acres).
    - Assume no grading.
    - 20,500 tons of rock (17 tons/truck = 1,206 truckloads).
    - An estimated 60 trucks per day for 42 haul days max.
- 12,400 CY of substrate amendment applied to all tracks at construction.
- 24-mile average round trip for each truckload of track substrate and 4x4 area rock.
- Marked and developed trails.
    - Assume 1 acre graded area.
- Informal trails
- Staging areas covered with road base where most vehicles would park
    - Assume 0.75 acre and 6” of road base
- Restrooms (vault toilets).
    - 5 toilet vaults.
    - 75 CY of excavated material assuming 50 sq. ft. per toilet and 8 feet of excavation.
    - Assume 0.1 acre graded area.
    - Excavated material used elsewhere in SVRA during construction of anticipated facilities.
    - Odor control (e.g., vent system designed for continuous fresh air flow).
    - Concrete brick construction.

- Picnic areas no permanent fire pits or grills, only portable pits and grills allowed.
- 10 ramadas and picnic tables.
- Educational facilities such as interpretive displays or an outdoor classroom area.
- Overnight use would be limited to special events.
- Track catch ponds are assumed to be 1/8th the area of the associated track (1.24 acres total).
- Excavated material from the catch ponds would be used elsewhere in SVRA during construction of anticipated facilities. Distance driven assumed to be 1/2 mile or approximately 1/2 the distance across the SRVA.

Open OHV Recreation Area

- Generally, this area would be left in its current state and would continue to be used for multi-purpose OHV use.
- Improvements could include.
    - Marked or developed trails.
        - Assume ½ acre graded area.
    - Informal trails.
- Staging areas covered with road base where most vehicles would park.
        - Assume 0.75 acre and 6" of road base.
    - Picnic areas (no permanent fire pits or grills; only portable pits and grills allowed).
    - Educational facilities such as interpretive displays or an outdoor classroom area.
- Visitor access to this area would be limited to off highway vehicles and pedestrians.
- OHV use would be along existing informal trails, along potential future marked trails, or in open terrain.
- Overnight use would be limited to special events.

Drainage Management Area

- Improvements may include:

- Drainage crossings, which may include culverts, bridges, or other features that would guide circulation through the area.
- No recreational facilities proposed.

- Access would be via two roads and informal trails and managed according to the season and site conditions.

Hours of Operation/Staffing:

- 8:00 a.m. to sunset, seven days a week.
- Overnight use would be limited to special events.
- Staffing/Employee Trip Generation:
  - Five full-time employees.
  - Two to three seasonal employees.
  - 5 employees on-site maximum at the same time.
  - 12 trips/day.

Operations and Routine Maintenance

- Summer Only Weekly Track Grooming (Per Track: MX track, ATV track, and Combined Kids' tracks).
  - 750 Dozer, 3x around tracks for grooming in summer.
    - Combined length of the four tracks is 12,380; 3x around the track is 7 miles/week.
  - 12' farm disc 4x around track for grooming in summer.
    - Combined length of the four tracks is 12,380; 4x around the track is 9.4 miles/week.
  - 4x4 wheel tractor 4x around track for grooming in summer.
    - Combined length of the four tracks is 12,380; 4x around the track is 9.4 miles/week.
- Dust Control:
  - Dust-Off will be used only on roads and staging areas. It is applied usually once/year in the spring.
  - Track watering using 4,000 gallon Water Truck.

- Truck drives on edge of track and sprays water horizontally.
- Winter.
  - Assume no watering
- Summer (May, June, July) Weekdays - 0-3x daily depending on use demand (Monday-Thursday)
  - 8 miles/day [3x around loop (all tracks) daily ~8miles/day (1 mile MX + 1 mile ATV + ¼ mile each kid track (x2) = 2.5 miles per loop x 3/day = 7.5 miles/day + assumed 0.5 mile for trips between tracks and water tank).
  - 0–144,000 gpd [(12,000 g/track x 4 tracks x 0-3x/day = 0–144,000 gpd)].
- Summer Weekends – 4-5x daily (Friday, Saturday, Sunday).
  - 11 – 13.5 miles/day [for 4x daily: (2.5 miles per loop x 4/day = 10 miles/day + assumed 1 mile for trips between tracks and water tank); for 5 x daily: (2.5 miles per loop x 5/day = 12.5 miles/day + assumed 1 mile for trips between tracks and water tank)]
  - 192,000–240,000 gpd [(12,000 g/track x 4 tracks x 4–5x/day= 192,000–240,000 g/day)]
- Summer bi-weekly mud drag refilling using 4,000 gallon Water Truck.
  - 4 miles round trip biweekly.
  - 10–15 truckloads biweekly.
  - 40,000–60,000 gpd biweekly.

- Historic Prairie City Water Usage: (estimated to be similar to Clay Pit programmatic needs).
  - Annually (2009): 24,500,000 gallons.
  - Highest Use Days (May, June, July): 178,000 gallons/day.
  - Highest Use Months (May, June, July): 3,124,600 gallons/month.
  - Aug, Sept, Oct, March, April about 50-75% usage of above.
- Substrate Amendment Annual Maintenance:
  - Once per year in the Spring (assume April on weekdays), an imported amendment of sand, rice hulls, chip bark, bark mulch, top soils will be lain over tracks for texture and to control dust by holding moisture;

- 800 tpy of amendments (640 cy, including 2 truckloads of rice hulls) applied to tracks annually;
- 12 miles between source of amendments and park (24 miles round trip);
- Up to 60 miles between rice hulls and park, two truckloads max, total of 240 miles round trip max;
- No amendments stored on site;

- 4 x 4 Area Maintenance as-needed:
  - Add rocks on an as-needed basis; not expected to be added annually.
- Mud Drag Bi-Annual Maintenance:
  - Bi-annual resurfacing of mud; mud will be damp and would not generate fugitive dust during this maintenance activity; equipment emissions would not be cumulatively substantial during this maintenance operation.

Park Usage

- Existing:
  - Approximately 80 percent of users reside within 50 miles of the SVRA, and 20 percent of users reside between 50 and 100 miles of the SVRA.
  - Peak park usage is in spring (March, April), not hot or rainy periods.
  - Park not used much during summer (July, Aug).
  - ATV's 49%, Motorcycles 40%, UTV's 1%, 4x4's 10% estimates
- Programmatic Buildout:
  - Distance traveled by users assumed to remain the same.
  - Assume 1.5 OHVs per vehicle.
  - Assume 2.5 people per vehicle.
  - 35% ATVs, 45% motorcycles, 10% utility vehicles, and 4x4s 10%.
- Peak Usage.
  - Summer Weekday.

- (Monday - Friday) 8 am-l0 am and 6pm-8pm.
- During the hottest days (especially July-August) assume no usage.

- Summer Weekends.
  - Low Heat: 9am-6pm.
  - High Heat: 8am-11am.
- Red Sticker season (September 1 through June 30):
  - Weekdays - early morning or early afternoon.
  - Weekends - all day.
- Average of 5 to 6 hours/day for highest OHV activity.

OHVs

- OHVratios: 1.5 per vehicle.
- Assume 5.5 miles per OHV per day (per State Parks)
- Existing and Project Level Ratios of OHVs.
  - Based on the CARB "Offroad" model.
- 2017 Programmatic Level Ratios of OHVs.
  - Based on the CARB "Offroad" model.
- Engine type (2-stroke or 4-stroke carbureted) and power (horsepower) of ATV's, motorcycles, and UTV's at Clay Pit will be assumed to be the same ratio as the existing Butte County inventory of registered vehicles. Engine type for 4x4's will be assumed 100% fuel injection with an average horsepower rating as determined by existing inventory in Butte County. Inventories for 4x4's are derived from the URBEMIS model and for other vehicles from the OFFROAD model.
- Red Sticker/Green Sticker ratios per DMV stats as of Oct 5, 2010:

County	Red Sticker	Green Sticker	Ratio
Butte	724	12,556	1:17.3
Plumas	132	3,568	1:27.0
Yuba	238	3,891	1:16.4
Sutter	231	4,681	1:20.3

Colusa	79	2,088	1:26.4
Glen	105	2,712	1:25.8
Tehama	208	4,571	1:22.0

Peak Weekends (after track construction in 2017)

- Twelve (12)

Special Events (after track construction in 2017)

  - Motocross Events (5 to 6 per year).
  - 4x4 Obstacle Course Events/Races (approximately 10 per year).

- Total number of OHVs during Special Events would be comparable to or lower than total number of OHVs during a Peak Weekend Day.
- Total of 16 special events per year.
- No need for off-site parking.
- Expect concessions/vendors during special events only.
- Overnight stays may be permitted during special events.

Cumulative Impact Analysis

- Although the Northern Sacramento Valley Air Basin (NSVAB) Attainment Plan doesn't address Clay Pit SVRA specifically, it includes increased emissions from OHV recreational areas as part of its future emissions inventory.
- Information in the following table is extrapolated from visitation estimates provided in Appendix C of the General Plan.

Scenario	Trip Generation [1]		OHVs [2]	
	Peak	Average	Peak	Average
Weekend April 2010 Counts	124	99	93	74
2017 Trips/OHVs				
2017 No Project Scenario [4]	142	114	107	85
2017 Net Increase in Project Visitors	71	57	53	43
Park Staff	12	12		
2017 Totals	**226**	**183**	**160**	**128**
2030 Trips/OHVs				

2030 No Project Scenarios [3]	184	147	138	110
2030 Net Increase in Project Visitors	92	74	69	55
Park Staff	12	12		
2030 Total	**288**	**233**	**207**	**165**

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APPENDIX C

Air Quality Data

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Detail Report for Summer Construction Unmitigated Emissions (Pounds/Day)

File Name: C:\Documents and Settings\wolfmj\Desktop\Projects\Clay Pit\Analysis\URBEMIS-Apvd by PB\Construction\CP Proj Level Const.mw.urb924

Project Name: Clay Pit SVRA Project Level Construction

Project Location: Feather River AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Summer Pounds Per Day, Unmitigated)

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10 Total	PM2.5 Dust	PM2.5 Exhaust	PM2.5 Total	CO2
Time Slice 5/1/2012-5/8/2012 Active	2.74	**22.02**	**12.78**	0.00	**20.00**	1.07	**21.08**	**4.18**	0.99	**5.17**	**2,349.42**
Mass Grading 05/01/2012-	2.74	22.02	12.78	0.00	20.00	1.07	21.08	4.18	0.99	5.17	2,349.42
Mass Grading Dust	0.00	0.00	0.00	0.00	20.00	0.00	20.00	4.18	0.00	4.18	0.00
Mass Grading Off Road Diesel	2.69	21.95	11.51	0.00	0.00	1.07	1.07	0.00	0.99	0.99	2,247.32
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.05	0.07	1.27	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.10
Time Slice 5/9/2012-5/15/2012 Active	0.65	4.73	3.89	0.00	0.00	0.27	0.27	0.00	0.25	0.25	598.14
Trenching 05/09/2012-05/15/2012	0.65	4.73	3.89	0.00	0.00	0.27	0.27	0.00	0.25	0.25	598.14
Trenching Off Road Diesel	0.62	4.69	3.26	0.00	0.00	0.27	0.27	0.00	0.25	0.25	547.09
Trenching Worker Trips	0.02	0.04	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	51.05
Time Slice 5/16/2012-5/18/2012	2.74	**22.02**	**12.78**	0.00	5.00	1.07	6.08	1.05	0.99	2.03	**2,349.42**
Fine Grading 05/16/2012-	2.74	22.02	12.78	0.00	5.00	1.07	6.08	1.05	0.99	2.03	2,349.42
Fine Grading Dust	0.00	0.00	0.00	0.00	5.00	0.00	5.00	1.04	0.00	1.04	0.00
Fine Grading Off Road Diesel	2.69	21.95	11.51	0.00	0.00	1.07	1.07	0.00	0.99	0.99	2,247.32
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.05	0.07	1.27	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.10
Time Slice 5/21/2012-5/25/2012	4.14	18.21	12.70	**0.01**	0.03	**1.38**	1.41	0.01	**1.27**	1.28	2,144.60
Asphalt 05/21/2012-05/25/2012	4.14	18.21	12.70	0.01	0.03	1.38	1.41	0.01	1.27	1.28	2,144.60
Paving Off-Gas	1.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	2.34	14.35	8.99	0.00	0.00	1.24	1.24	0.00	1.14	1.14	1,272.04
Paving On Road Diesel	0.24	3.71	1.18	0.01	0.02	0.13	0.15	0.01	0.12	0.13	668.37
Paving Worker Trips	0.09	0.15	2.53	0.00	0.01	0.01	0.02	0.00	0.00	0.01	204.20
Time Slice 5/28/2012-10/23/2012	1.04	7.91	4.82	0.00	0.00	0.49	0.49	0.00	0.45	0.45	917.51
Building 05/28/2012-11/02/2012	1.04	7.91	4.82	0.00	0.00	0.49	0.49	0.00	0.45	0.45	917.51
Building Off Road Diesel	1.03	7.87	4.56	0.00	0.00	0.49	0.49	0.00	0.45	0.45	893.39
Building Vendor Trips	0.00	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.78
Building Worker Trips	0.01	0.01	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19.34
Time Slice 10/24/2012-10/31/2012	**11.62**	7.92	4.98	0.00	0.00	0.49	0.49	0.00	0.45	0.45	930.10

Building 05/28/2012-11/02/2012	1.04	7.91	4.82	0.00	0.00	0.49	0.49	0.00	0.45	0.45	917.51
Building Off Road Diesel	1.03	7.87	4.56	0.00	0.00	0.49	0.49	0.00	0.45	0.45	893.39
Building Vendor Trips	0.00	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.78
Building Worker Trips	0.01	0.01	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19.34
Coating 10/24/2012-10/31/2012	10.57	0.01	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.59
Architectural Coating	10.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.01	0.01	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.59
Time Slice 11/1/2012-11/2/2012	1.04	7.91	4.82	0.00	0.00	0.49	0.49	0.00	0.45	0.45	917.51
Building 05/28/2012-11/02/2012	1.04	7.91	4.82	0.00	0.00	0.49	0.49	0.00	0.45	0.45	917.51
Building Off Road Diesel	1.03	7.87	4.56	0.00	0.00	0.49	0.49	0.00	0.45	0.45	893.39
Building Vendor Trips	0.00	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.78
Building Worker Trips	0.01	0.01	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19.34

Phase Assumptions

Phase: Fine Grading 5/16/2012 - 5/18/2012 - Grading

Total Acres Disturbed: 3.1

Maximum Daily Acreage Disturbed: 0.25

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Mass Grading 5/1/2012 - 5/8/2012 - Mass Grading Cut/fill

Total Acres Disturbed: 3.1

Maximum Daily Acreage Disturbed: 1

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

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Phase: Trenching 5/9/2012 - 5/15/2012 - Type Your Description Here
Off-Road Equipment:
1 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day
1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 0 hours per day

Phase: Paving 5/21/2012 - 5/25/2012 - Paving
Acres to be Paved: 2.8
Off-Road Equipment:
4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day
1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day
1 Paving Equipment (104 hp) operating at a 0.53 load factor for 8 hours per day
1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day
1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

Phase: Building Construction 5/28/2012 - 11/2/2012 - Default Building Construction Description
Off-Road Equipment:
1 Cranes (399 hp) operating at a 0.43 load factor for 4 hours per day
2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day
1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

Phase: Architectural Coating 10/24/2012 - 10/31/2012 - Type Your Description Here
Rule: Residential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250
Rule: Residential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250
Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250
Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

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Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: P:\2008\08110148.02\04DOCUMENT_REFS\4Test_Results_Analysis\Air Quality - GHG\Verified\CP Net Prog Level Const.urb924

Project Name: Clay Pit SVRA Net Programmatic Level Construction

Project Location: Feather River AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2016 TOTALS (lbs/day unmitigated)	2.55	21.28	12.78	0.02	25.06	0.93	26.00	5.24	0.86	6.10	3,965.15
2016 TOTALS (lbs/day mitigated)	2.55	21.28	12.78	0.02	10.34	0.93	11.28	2.17	0.86	3.03	3,965.15
2017 TOTALS (lbs/day unmitigated)	3.52	24.03	19.41	0.01	5.03	1.37	6.41	1.06	1.26	2.32	3,921.47
2017 TOTALS (lbs/day mitigated)	3.52	24.03	19.41	0.01	1.35	1.37	2.73	0.29	1.26	1.55	3,921.47

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2

Time Slice 6/1/2016-6/30/2016 Active Days: 22	2.18	16.38	11.04	0.00	20.01	0.77	20.77	4.18	0.70	4.88	2,431.14
Fine Grading 06/01/2016-06/30/2016	0.02	0.22	0.08	0.00	0.00	0.01	0.01	0.00	0.01	0.01	67.78
Fine Grading Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Off Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading On Road Diesel	0.02	0.22	0.08	0.00	0.00	0.01	0.01	0.00	0.01	0.01	67.78
Fine Grading Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading 06/01/2016-12/31/2016	2.16	16.16	10.97	0.00	20.01	0.76	20.76	4.18	0.70	4.88	2,363.36
Mass Grading Dust	0.00	0.00	0.00	0.00	20.00	0.00	20.00	4.18	0.00	4.18	0.00
Mass Grading Off Road Diesel	2.13	16.07	10.09	0.00	0.00	0.75	0.75	0.00	0.69	0.69	2,247.32
Mass Grading On Road Diesel	0.00	0.04	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.71
Mass Grading Worker Trips	0.03	0.05	0.86	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.33
Time Slice 7/1/2016-10/31/2016 Active Days: 87	2.16	16.16	10.97	0.00	20.01	0.76	20.76	4.18	0.70	4.88	2,363.36
Mass Grading 06/01/2016-12/31/2016	2.16	16.16	10.97	0.00	20.01	0.76	20.76	4.18	0.70	4.88	2,363.36
Mass Grading Dust	0.00	0.00	0.00	0.00	20.00	0.00	20.00	4.18	0.00	4.18	0.00
Mass Grading Off Road Diesel	2.13	16.07	10.09	0.00	0.00	0.75	0.75	0.00	0.69	0.69	2,247.32
Mass Grading On Road Diesel	0.00	0.04	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.71
Mass Grading Worker Trips	0.03	0.05	0.86	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.33

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Time Slice 11/1/2016-12/30/2016 Active Days: 44	2.55	21.28	12.78	**0.02**	**25.06**	0.93	**26.00**	**5.24**	0.86	**6.10**	**3,965.15**
Fine Grading 11/01/2016-12/31/2016	0.39	5.12	1.81	0.01	5.06	0.18	5.23	1.06	0.16	1.23	1,601.79
Fine Grading Dust	0.00	0.00	0.00	0.00	5.00	0.00	5.00	1.04	0.00	1.04	0.00
Fine Grading Off Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading On Road Diesel	0.39	5.12	1.81	0.01	0.06	0.18	0.23	0.02	0.16	0.18	1,601.79
Fine Grading Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading 06/01/2016-12/31/2016	2.16	16.16	10.97	0.00	20.01	0.76	20.76	4.18	0.70	4.88	2,363.36
Mass Grading Dust	0.00	0.00	0.00	0.00	20.00	0.00	20.00	4.18	0.00	4.18	0.00
Mass Grading Off Road Diesel	2.13	16.07	10.09	0.00	0.00	0.75	0.75	0.00	0.69	0.69	2,247.32
Mass Grading On Road Diesel	0.00	0.04	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.71
Mass Grading Worker Trips	0.03	0.05	0.86	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.33
Time Slice 1/2/2017-6/30/2017 Active Days: 130	**3.52**	**24.03**	**19.41**	0.01	5.03	**1.37**	6.41	1.06	**1.26**	2.32	3,921.47
Asphalt 01/01/2017-06/30/2017	1.53	9.02	8.86	0.00	0.01	0.68	0.69	0.00	0.63	0.63	1,299.03
Paving Off-Gas	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	1.42	8.87	7.29	0.00	0.00	0.67	0.67	0.00	0.62	0.62	1,072.42
Paving On Road Diesel	0.00	0.06	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.87
Paving Worker Trips	0.05	0.09	1.55	0.00	0.01	0.00	0.01	0.00	0.00	0.01	204.75
Fine Grading 01/01/2017-06/30/2017	1.99	15.01	10.55	0.01	5.02	0.69	5.71	1.05	0.63	1.69	2,622.44
Fine Grading Dust	0.00	0.00	0.00	0.00	5.00	0.00	5.00	1.04	0.00	1.04	0.00
Fine Grading Off Road Diesel	1.84	13.45	9.22	0.00	0.00	0.64	0.64	0.00	0.58	0.58	1,977.37
Fine Grading On Road Diesel	0.12	1.52	0.55	0.01	0.02	0.05	0.07	0.01	0.05	0.05	542.69
Fine Grading Worker Trips	0.03	0.04	0.78	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.37

Phase Assumptions

Phase: Fine Grading 6/1/2016 - 6/30/2016 - Sediment Basin work

Total Acres Disturbed: 0

Maximum Daily Acreage Disturbed: 0

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 16.84

Off-Road Equipment:

Phase: Fine Grading 11/1/2016 - 12/31/2016 - Substrate Haul

Total Acres Disturbed: 22.8

Maximum Daily Acreage Disturbed: 0.25

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 397.86

Off-Road Equipment:

Phase: Fine Grading 1/1/2017 - 6/30/2017 - Mass Grading

Total Acres Disturbed: 1.01

Maximum Daily Acreage Disturbed: 0.25

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 134.8

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 4 hours per day

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Phase: Mass Grading 6/1/2016 - 12/31/2016 - Mass Grading (cut)

Total Acres Disturbed: 22.8

Maximum Daily Acreage Disturbed: 1

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 3.41

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Paving 1/1/2017 - 6/30/2017 - Paving

Acres to be Paved: 2.4

Off-Road Equipment:

4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day

1 Pavers (100 hp) operating at a 0.62 load factor for 6 hours per day

1 Paving Equipment (104 hp) operating at a 0.53 load factor for 6 hours per day

1 Rollers (95 hp) operating at a 0.56 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 6 hours per day

Construction Mitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Mitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2

Time Slice 6/1/2016-6/30/2016 Active Days: 22	2.18	16.38	11.04	0.00	5.29	0.77	6.05	1.11	0.70	1.81	2,431.14
Fine Grading 06/01/2016-06/30/2016	0.02	0.22	0.08	0.00	0.00	0.01	0.01	0.00	0.01	0.01	67.78
Fine Grading Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Off Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading On Road Diesel	0.02	0.22	0.08	0.00	0.00	0.01	0.01	0.00	0.01	0.01	67.78
Fine Grading Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading 06/01/2016-12/31/2016	2.16	16.16	10.97	0.00	5.29	0.76	6.04	1.10	0.70	1.80	2,363.36
Mass Grading Dust	0.00	0.00	0.00	0.00	5.28	0.00	5.28	1.10	0.00	1.10	0.00
Mass Grading Off Road Diesel	2.13	16.07	10.09	0.00	0.00	0.75	0.75	0.00	0.69	0.69	2,247.32
Mass Grading On Road Diesel	0.00	0.04	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.71
Mass Grading Worker Trips	0.03	0.05	0.86	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.33
Time Slice 7/1/2016-10/31/2016 Active Days: 87	2.16	16.16	10.97	0.00	5.29	0.76	6.04	1.10	0.70	1.80	2,363.36
Mass Grading 06/01/2016-12/31/2016	2.16	16.16	10.97	0.00	5.29	0.76	6.04	1.10	0.70	1.80	2,363.36
Mass Grading Dust	0.00	0.00	0.00	0.00	5.28	0.00	5.28	1.10	0.00	1.10	0.00
Mass Grading Off Road Diesel	2.13	16.07	10.09	0.00	0.00	0.75	0.75	0.00	0.69	0.69	2,247.32
Mass Grading On Road Diesel	0.00	0.04	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.71
Mass Grading Worker Trips	0.03	0.05	0.86	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.33

11/28/2011 4:46:51 PM

Time Slice 11/1/2016-12/30/2016 Active Days: 44	2.55	21.28	12.78	**0.02**	10.34	0.93	11.28	2.17	0.86	3.03	**3,965.15**
Fine Grading 11/01/2016-12/31/2016	0.39	5.12	1.81	0.01	5.06	0.18	5.23	1.06	0.16	1.23	1,601.79
Fine Grading Dust	0.00	0.00	0.00	0.00	5.00	0.00	5.00	1.04	0.00	1.04	0.00
Fine Grading Off Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading On Road Diesel	0.39	5.12	1.81	0.01	0.06	0.18	0.23	0.02	0.16	0.18	1,601.79
Fine Grading Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading 06/01/2016-12/31/2016	2.16	16.16	10.97	0.00	5.29	0.76	6.04	1.10	0.70	1.80	2,363.36
Mass Grading Dust	0.00	0.00	0.00	0.00	5.28	0.00	5.28	1.10	0.00	1.10	0.00
Mass Grading Off Road Diesel	2.13	16.07	10.09	0.00	0.00	0.75	0.75	0.00	0.69	0.69	2,247.32
Mass Grading On Road Diesel	0.00	0.04	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.71
Mass Grading Worker Trips	0.03	0.05	0.86	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.33
Time Slice 1/2/2017-6/30/2017 Active Days: 130	**3.52**	**24.03**	**19.41**	0.01	1.35	**1.37**	2.73	0.29	**1.26**	1.55	3,921.47
Asphalt 01/01/2017-06/30/2017	1.53	9.02	8.86	0.00	0.01	0.68	0.69	0.00	0.63	0.63	1,299.03
Paving Off-Gas	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	1.42	8.87	7.29	0.00	0.00	0.67	0.67	0.00	0.62	0.62	1,072.42
Paving On Road Diesel	0.00	0.06	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.87
Paving Worker Trips	0.05	0.09	1.55	0.00	0.01	0.00	0.01	0.00	0.00	0.01	204.75
Fine Grading 01/01/2017-06/30/2017	1.99	15.01	10.55	0.01	1.34	0.69	2.03	0.28	0.63	0.92	2,622.44
Fine Grading Dust	0.00	0.00	0.00	0.00	1.32	0.00	1.32	0.28	0.00	0.28	0.00
Fine Grading Off Road Diesel	1.84	13.45	9.22	0.00	0.00	0.64	0.64	0.00	0.58	0.58	1,977.37
Fine Grading On Road Diesel	0.12	1.52	0.55	0.01	0.02	0.05	0.07	0.01	0.05	0.05	542.69
Fine Grading Worker Trips	0.03	0.04	0.78	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.37

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Fine Grading 1/1/2017 - 6/30/2017 - Mass Grading

For Soil Stablizing Measures, the Apply soil stabilizers to inactive areas mitigation reduces emissions by:

PM10: 84% PM25: 84%

For Soil Stablizing Measures, the Replace ground cover in disturbed areas quickly mitigation reduces emissions by:

PM10: 5% PM25: 5%

For Soil Stablizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

The following mitigation measures apply to Phase: Mass Grading 6/1/2016 - 12/31/2016 - Mass Grading (cut)

For Soil Stablizing Measures, the Apply soil stabilizers to inactive areas mitigation reduces emissions by:

PM10: 84% PM25: 84%

For Soil Stablizing Measures, the Replace ground cover in disturbed areas quickly mitigation reduces emissions by:

PM10: 5% PM25: 5%

For Soil Stablizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

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Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: P:\2008\08110148.02\04DOCUMENT_REFS\4Test_Results_Analysis\Air Quality - GHG\Verified\CP 2010 Operational.urb924

Project Name: Clay Pit SVRA Programmatic Level Operational-2010

Project Location: Feather River AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	7.78	7.63	85.53	0.06	10.78	2.06	6,363.73

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	7.78	7.63	85.53	0.06	10.78	2.06	6,363.73

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Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
SVRA	7.78	7.63	85.53	0.06	10.78	2.06	6,363.73
TOTALS (lbs/day, unmitigated)	7.78	7.63	85.53	0.06	10.78	2.06	6,363.73

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2010 Temperature (F): 85 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
SVRA		0.57	acres	220.00	125.40	6,270.00
					125.40	6,270.00

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	0.0	1.0	98.7	0.3
Light Truck < 3750 lbs	46.0	2.6	88.6	8.8
Light Truck 3751-5750 lbs	48.0	1.0	98.5	0.5
Med Truck 5751-8500 lbs	4.0	1.1	97.8	1.1
Lite-Heavy Truck 8501-10,000 lbs	0.0	0.0	68.0	32.0
Lite-Heavy Truck 10,001-14,000 lbs	0.0	0.0	44.4	55.6

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Med-Heavy Truck 14,001-33,000 lbs	0.0	6.2	18.8	75.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.0	0.0	5.6	94.4
Other Bus	0.0	0.0	0.0	100.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	0.0	57.5	42.5	0.0
School Bus	0.0	0.0	0.0	100.0
Motor Home	2.0	0.0	83.3	16.7

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	50.0	50.0	50.0	50.0	50.0	50.0
Rural Trip Length (miles)	50.0	50.0	50.0	50.0	50.0	50.0
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
SVRA				2.0	1.0	97.0

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Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: P:\2008\08110148.02\04DOCUMENT_REFS\4Test_Results_Analysis\Air Quality - GHG\Verified\CP 2017 Operational.urb924

Project Name: Clay Pit SVRA Programmatic Level Operational-2017

Project Location: Feather River AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2017 TOTALS (lbs/day unmitigated)	0.67	4.34	4.55	0.00	5.01	0.21	5.22	1.05	0.19	1.24	1,055.57
2017 TOTALS (lbs/day mitigated)	0.67	4.34	4.55	0.00	2.84	0.21	3.05	0.59	0.19	0.79	1,055.57

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	0.02	0.02	0.02	0.00	0.00	0.00	23.68

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	1.86	2.61	29.71	0.03	6.10	1.16	3,633.82

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	1.88	2.63	29.73	0.03	6.10	1.16	3,657.50

8/30/2011 5:47:12 PM

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
Time Slice 1/2/2017-12/29/2017 Active Days: 260	**0.67**	**4.34**	**4.55**	**0.00**	**5.01**	**0.21**	**5.22**	**1.05**	**0.19**	**1.24**	**1,055.57**
Mass Grading 01/01/2017-12/31/2017	0.67	4.34	4.55	0.00	5.01	0.21	5.22	1.05	0.19	1.24	1,055.57
Mass Grading Dust	0.00	0.00	0.00	0.00	5.00	0.00	5.00	1.04	0.00	1.04	0.00
Mass Grading Off Road Diesel	0.63	4.25	3.07	0.00	0.00	0.20	0.20	0.00	0.19	0.19	826.42
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.04	0.09	1.48	0.00	0.01	0.01	0.02	0.00	0.00	0.01	229.16

Phase Assumptions

Phase: Mass Grading 1/1/2017 - 12/31/2017 - Default Mass Grading
Site maintenance
Total Acres Disturbed: 22.6

Maximum Daily Acreage Disturbed: 0.25

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

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Construction Mitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Mitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
Time Slice 1/2/2017-12/29/2017 Active Days: 260	**0.67**	**4.34**	**4.55**	**0.00**	2.84	**0.21**	3.05	0.59	**0.19**	0.79	**1,055.57**
Mass Grading 01/01/2017-12/31/2017	0.67	4.34	4.55	0.00	2.84	0.21	3.05	0.59	0.19	0.79	1,055.57
Mass Grading Dust	0.00	0.00	0.00	0.00	2.83	0.00	2.83	0.59	0.00	0.59	0.00
Mass Grading Off Road Diesel	0.63	4.25	3.07	0.00	0.00	0.20	0.20	0.00	0.19	0.19	826.42
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.04	0.09	1.48	0.00	0.01	0.01	0.02	0.00	0.00	0.01	229.16

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Mass Grading 1/1/2017 - 12/31/2017 - Default Mass Grading
Site maintenance
For Soil Stablizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.00	0.02	0.02	0.00	0.00	0.00	23.68
Hearth							
Landscape							
Consumer Products							
Architectural Coatings	0.02						
TOTALS (lbs/day, unmitigated)	0.02	0.02	0.02	0.00	0.00	0.00	23.68

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Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Hdqtrs & Kiosk	1.86	2.61	29.71	0.03	6.10	1.16	3,633.82
TOTALS (lbs/day, unmitigated)	1.86	2.61	29.71	0.03	6.10	1.16	3,633.82

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2017 Temperature (F): 85 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Hdqtrs & Kiosk		23.99	1000 sq ft	2.96	71.01	3,550.52
					71.01	3,550.52

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	0.0	1.0	98.7	0.3
Light Truck < 3750 lbs	46.0	2.6	88.6	8.8
Light Truck 3751-5750 lbs	48.0	1.0	98.5	0.5

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Med Truck 5751-8500 lbs	4.0	1.1	97.8	1.1
Lite-Heavy Truck 8501-10,000 lbs	0.0	0.0	68.0	32.0
Lite-Heavy Truck 10,001-14,000 lbs	0.0	0.0	44.4	55.6
Med-Heavy Truck 14,001-33,000 lbs	0.0	6.2	18.8	75.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.0	0.0	5.6	94.4
Other Bus	0.0	0.0	0.0	100.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	0.0	57.5	42.5	0.0
School Bus	0.0	0.0	0.0	100.0
Motor Home	2.0	0.0	83.3	16.7

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	50.0	50.0	50.0	50.0	50.0	50.0
Rural Trip Length (miles)	50.0	50.0	50.0	50.0	50.0	50.0
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Hdqtrs & Kiosk				2.0	1.0	97.0

Operational Changes to Defaults

The urban/rural selection has been changed from Urban to Rural

Home-based work urban trip length changed from 10.8 miles to 50 miles

Home-based work rural trip length changed from 16.8 miles to 50 miles

Home-based shop urban trip length changed from 7.3 miles to 50 miles

Home-based shop rural trip length changed from 7.1 miles to 50 miles

Home-based other urban trip length changed from 7.5 miles to 50 miles

Home-based other rural trip length changed from 7.9 miles to 50 miles

Commercial-based commute urban trip length changed from 9.5 miles to 50 miles

Commercial-based commute rural trip length changed from 14.7 miles to 50 miles

Commercial-based non-work urban trip length changed from 7.35 miles to 50 miles

Commercial-based non-work rural trip length changed from 6.6 miles to 50 miles

Commercial-based customer urban trip length changed from 7.35 miles to 50 miles

Commercial-based customer rural trip length changed from 6.6 miles to 50 miles

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Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: P:\2008\08110148.02\04DOCUMENT_REFS\4Test_Results_Analysis\Air Quality - GHG\Verified\CP 2030 Operational.urb924

Project Name: Clay Pit SVRA Programmatic Level Operational-2030

Project Location: Feather River AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2030 TOTALS (lbs/day unmitigated)	0.51	3.02	3.50	0.00	5.01	0.13	5.14	1.05	0.12	1.17	1,056.14
2030 TOTALS (lbs/day mitigated)	0.51	3.02	3.50	0.00	2.84	0.13	2.97	0.59	0.12	0.71	1,056.14

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	0.02	0.02	0.02	0.00	0.00	0.00	23.68

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	0.56	1.18	11.00	0.04	7.89	1.49	4,649.86

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	0.58	1.20	11.02	0.04	7.89	1.49	4,673.54

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Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
Time Slice 1/1/2030-12/31/2030 Active Days: 261	0.51	3.02	3.50	0.00	5.01	0.13	5.14	1.05	0.12	1.17	1,056.14
Mass Grading 01/01/2030-12/31/2030	0.51	3.02	3.50	0.00	5.01	0.13	5.14	1.05	0.12	1.17	1,056.14
Mass Grading Dust	0.00	0.00	0.00	0.00	5.00	0.00	5.00	1.04	0.00	1.04	0.00
Mass Grading Off Road Diesel	0.50	3.00	3.02	0.00	0.00	0.12	0.12	0.00	0.11	0.11	826.42
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.01	0.03	0.49	0.00	0.01	0.00	0.02	0.00	0.00	0.01	229.72

Phase Assumptions

Phase: Mass Grading 1/1/2030 - 12/31/2030 -
Site maintenance
Total Acres Disturbed: 22.6

Maximum Daily Acreage Disturbed: 0.25

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

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Construction Mitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Mitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
Time Slice 1/1/2030-12/31/2030 Active Days: 261	0.51	3.02	3.50	0.00	2.84	0.13	2.97	0.59	0.12	0.71	1,056.14
Mass Grading 01/01/2030-12/31/2030	0.51	3.02	3.50	0.00	2.84	0.13	2.97	0.59	0.12	0.71	1,056.14
Mass Grading Dust	0.00	0.00	0.00	0.00	2.83	0.00	2.83	0.59	0.00	0.59	0.00
Mass Grading Off Road Diesel	0.50	3.00	3.02	0.00	0.00	0.12	0.12	0.00	0.11	0.11	826.42
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.01	0.03	0.49	0.00	0.01	0.00	0.02	0.00	0.00	0.01	229.72

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Mass Grading 1/1/2030 - 12/31/2030 -
Site maintenance
For Soil Stablizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.00	0.02	0.02	0.00	0.00	0.00	23.68
Hearth							
Landscape							
Consumer Products							
Architectural Coatings	0.02						
TOTALS (lbs/day, unmitigated)	0.02	0.02	0.02	0.00	0.00	0.00	23.68

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Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Hdqtrs & Kiosk	0.56	1.18	11.00	0.04	7.89	1.49	4,649.86
TOTALS (lbs/day, unmitigated)	0.56	1.18	11.00	0.04	7.89	1.49	4,649.86

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2030 Temperature (F): 85 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Hdqtrs & Kiosk		31.08	1000 sq ft	2.96	92.00	4,599.84
					92.00	4,599.84

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	0.0	1.0	98.7	0.3
Light Truck < 3750 lbs	46.0	2.6	88.6	8.8
Light Truck 3751-5750 lbs	48.0	1.0	98.5	0.5

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Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Med Truck 5751-8500 lbs	4.0	1.1	97.8	1.1
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Lite-Heavy Truck 10,001-14,000 lbs	0.0	0.0	44.4	55.6
Med-Heavy Truck 14,001-33,000 lbs	0.0	6.2	18.8	75.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.0	0.0	5.6	94.4
Other Bus	0.0	0.0	0.0	100.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	0.0	57.5	42.5	0.0
School Bus	0.0	0.0	0.0	100.0
Motor Home	2.0	0.0	83.3	16.7

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	50.0	50.0	50.0	50.0	50.0	50.0
Rural Trip Length (miles)	50.0	50.0	50.0	50.0	50.0	50.0
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Hdqtrs & Kiosk				2.0	1.0	97.0

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Commercial-based non-work rural trip length changed from 6.6 miles to 50 miles

Commercial-based customer urban trip length changed from 7.35 miles to 50 miles

Commercial-based customer rural trip length changed from 6.6 miles to 50 miles

	OHV peak	average	ROG Exhau	ROG Evap	ROG total	CO Exhaust	NOX Exhau	CO2 Exhaus	SO2 Exhaus	PM Exhaus	PM10 fugit	N2O Exhau	CH4 Exhaust	CO2 Exhau	N2O Exhau	CH4 Exhaust	Tonnes/year CO2e
					lbs/day									average tons/year			
2010	93	74	30.44	0.05	**30.48**	**148.10**	**1.21**	**283.32**	**0.24**	**0.51**	**360.33**	**0.38**	**1.86**	**41.36**	**0.03**	**0.07**	**48.48**
2017																	
no project	107	85															
new visitors	53	43															
Staff																	
Total	160	128	52.47	0.09	**52.57**	**255.52**	**2.07**	**488.16**	**0.41**	**0.88**	**344.57**	**0.66**	**3.21**	**71.27**	**0.06**	**0.13**	**83.54**
net new	53	43	17.49	0.03	**17.52**	**85.17**	**0.69**	**162.72**	**0.14**	**0.29**	**-15.76**	**0.22**	**1.07**	**23.76**	**0.02**	**0.04**	**27.85**
2030																	
no project	138	110															
w/ Project	207	165	68.12	0.18	**68.30**	**350.27**	**2.83**	**666.58**	**0.56**	**1.21**	**445.79**	**0.90**	**4.40**	**97.32**	**0.08**	**0.18**	**114.10**
net new	69	55	22.71	0.06	**22.77**	**116.76**	**0.94**	**222.19**	**0.19**	**0.40**	**85.46**	**0.30**	**1.47**	**32.44**	**0.03**	**0.06**	**38.03**

Offroad assumes roughly 3.7 miles traveled per vehicle per day

State Parks predicts that vehicles travel 22.5 miles per day at Clay Pit (average of 15 mph over 1.5 hours)

Fugitive Dust Emission Estimates
From POVs and OHVs

Emissions without consideration of watering and speed limitations

		PM10					PM2.5				
Source Type	Number	Peak Daily Trips	One-way Distance[1]	Emission Factor (lb/vmt)	Peak PM-10 (lbs/day)	Peak Net New PM-10 (lbs/day)	Peak Daily Trips	One-way Distance[1]	Emission Factor (lb/vmt)	Peak PM-2.5 (lbs/day)	Peak Net New PM-2.5 (lbs/day)
2010											
Passenger Vehicle	124	2	0.5	0.209	25.91		2	0.5	0.021	2.55	
OHVs	93	2	11.25	0.209	437.30		2	11.25	0.021	43.07	
2017											
Passenger Vehicle	226	2	0.5	0.209	47.23	21.32	2	0.5	0.021	4.65	2.10
OHVs	160	2	11.25	0.209	752.34	315.04	2	11.25	0.021	74.11	31.03
2030											
Passenger Vehicle	288	2	0.5	0.209	60.19	34.27	2	0.5	0.021	5.93	3.38
OHVs	207	2	11.25	0.209	973.34	536.04	2	11.25	0.021	95.88	52.80

1 - one-way distance on site

* Emission Calculations for travel on paved roads from EPA AP-42 Section 13.2.2-4

Travel on Unpaved Roads.

Emission Factor (AP 42 chapter 13.2.2): (reference 1)

EF = ((k*((s/12)^a)*((S/30)^d))/(M/0.5)^c)-C

	PM10	PM2.5
EF (lbs/VMT) =	0.209	0.021
Where:		
k=	1.8	0.18
Silt Loading (%) s =	4.1	4.1
a=	1	1
Mean Vehicle Speed (mph) S =	10	10
d=	0.5	0.5
Surface Moisture M=	7	7
c=	0.2	0.2
C=	0.00047	0.00036

Emissions with watering and speed limitations

Operational Watering Practice Reduction of PM

Assumes 61% reduction on unpaved roads/trails if water three times per day (WRAP Fugitive Dust Handbook, September 2006)

Per State Parks, 60% of riding would occur on unpaved roads

Assumes 44% reduction on free-riding (15 mph or less travel speed) - SMAQMD CEQA Guide Chapter 3 - also applied to existing free-riding

		PM10					PM2.5				
Source Type	Number	Peak Daily Trips	One-way Distance[1]	Emission Factor (lb/vmt)	Peak PM-10 (lbs/day)	Peak Net New PM-10 (lbs/day)	Peak Daily Trips	One-way Distance[1]	Emission Factor (lb/vmt)	Peak PM-2.5 (lbs/day)	Peak Net New PM-2.5 (lbs/day)
2010											
Passenger Vehicle	124	2	0.5	0.209	25.91		2	0.5	0.021	2.55	
OHVs	93	2	11.25	0.209	360.33		2	11.25	0.021	35.49	
2017											
Passenger Vehicle	226	2	0.5	0.209	47.23	21.32	2	0.5	0.021	4.65	2.10
OHVs	160	2	11.25	0.209	344.57	-15.76	2	11.25	0.021	33.94	-1.55
2030											
Passenger Vehicle	288	2	0.5	0.209	60.19	34.27	2	0.5	0.021	5.93	3.38
OHVs	207	2	11.25	0.209	445.79	85.46	2	11.25	0.021	43.91	8.42

California Air Resources Board (CARB)
Non-compliant OHV (Red Sticker) Riding Season Schedule

		Map Area ID	Red Sticker Riding Season	
			Riding Starts	Riding Ends
State Vehicular Recreation Areas (SVRA)				
SVRA	Clay Pit	38	1-Sep	30-Jun
State Recreation Area (SRA)	Mammoth Bar	40	Year round	
SVRA	Prairie City	53	1-Oct	30-Apr
SVRA	Carnegie	65	1-Oct	30-Apr
SVRA	Hollister Hills	75	1-Oct	31-May
SVRA	Oceano Dunes	87	Year round	
SVRA	Hungry Valley	102	1-Oct	30-Apr
SVRA	Ocotillo Wells	124	1-Oct	31-May
SVRA	Heber Dunes	128	Year Round	
Bureau of Land Management (BLM)				
Northern California				
BLM Arcata Field Office	Samoa Dunes	6	Year round	
BLM Redding Field Office	Chappie-Shasta ORV Area	8	1-Oct	30-June
BLM Eagle Lake Field Office	Fort Sage OHV Area	16	Year round	
BLM Ukiah Field Office	South Cow Mountain Recreation Area	36	Year round	
BLM Ukiah Field Office	Knoxville Recreation Area	37	Year round	
Bakersfield District				
BLM Hollister Field Office	Clear Creek Management. Area	76	1-Oct	31-May
BLM Bishop Field Office	Bishop Resource Area	82	Year round	
California Desert District				
BLM Ridgecrest Field Office	Olancha Dunes	96	Year round	
BLM Ridgecrest Field Office	Jawbone Canyon, Dove Springs	103	1- Sep	31-May
BLM Ridgecrest Field Office	Spangler Hills	104	1 Sep	31-May
BLM Barstow Field Office	Dumont Dunes	105	Year round	
BLM Barstow Field Office	El Mirage	109	1-Oct	30-Apr
BLM Barstow Field Office	Stoddard Valley	110	1-Sep	31-May
BLM Barstow Field Office	Rasor	111	1-Sep	31-May
BLM Barstow Field Office	Johnson Valley	115	1-Sep	31-May
BLM Needles Field Office	Eastern Mojave Desert Areas	118	Year round	
BLM Lake Havasu Field Office	Parker Strip	120	Year round	
BLM Palm Springs Field Office	Colorado Desert Areas	122	1-Oct	30-Apr
BLM El Centro Field Office	Lark Canyon	127	1-Oct	30-Apr
BLM El Centro Field Office	Arroyo Salado	125	1-Oct	31-May
BLM El Centro Field Office	Superstition Mountain	129	1-Oct	31-May
BLM El Centro Field Office	Plaster City	130	1-Oct	31-May
BLM El Centro Field Office	Imperial Dunes-Mammoth Wash	131	Year round	
BLM El Centro Field Office	Imperial Dunes-Glamis/Gecko	132	Year round	
BLM El Centro Field Office	Imperial Dunes-Buttercup Valley	133	Year round	
United States Forest Service (USFS)				
Shasta-Trinity National Forest				
Mc Cloud Ranger District	McCloud Area	5	Year round	
Hayfork Ranger District	Hayfork Area	7	Year round	
Plumas National Forest				
Mt. Hough Ranger District	Deadman Springs, Snake Lake	18	Year round	

Mt. Hough Ranger District	Big Creek, Four Trees, French Creek	20	Year round	
Feather River Ranger District	Cleghorn Bar, Poker Flat	22	Year round	
Beckworth Ranger District	Gold Lake	25	Year round	
Beckworth Ranger District	Dixie Mountain	27	Year round	
Mendocino National Forest				
Upper Lake Ranger District	Lake Pillsbury	33	Year round	
Upper Lake Ranger District	Elk Mountain Area	34	Year round	
Grindstone Ranger District	Davis Flat	35	Year round	
Tahoe National Forest				
Downieville Ranger District	Downieville Area	23	Year round	
Foresthill Ranger District	Foresthill OHV Area	49	Year round	
Foresthill Ranger District	China Wall	50	Year round	
Nevada City Ranger District	Nevada City District Areas	41	Year round	
Nevada City Ranger District	Fordyce	42	Year round	
Sierraville Ranger District	Sierraville Area	30	Year round	
Truckee Ranger District	Truckee District Area	43	Year round	
Truckee Ranger District	Prosser Hills Area	44	Year round	
Lake Tahoe Basin Management Unit	Kings Beach	47	Year round	
Eldorado National Forest				
Georgetown Ranger District	Mace Mill, Rock Creek	51	Year round	
Pacific Ranger District	Barrett Lake	52	Year round	

Stanislaus National Forest				
Calaveras Ranger District	Corral Hollow, Spicer	58	Year round	
Summit Ranger District	Niagara Ridge Area	60	Year round	
Mi-Wuk Ranger District	Crandall Peek, Deer Creek Area	62	1-Oct	31-May
Mi-Wuk Ranger District	Hunter Creek	63	1-Oct	31-May
Mi-Wuk Ranger District	Hull/Trout Creek	64	1-Oct	31-May
Groveland Ranger District	Date Flat, Moore Creek Area	69	1-Oct	31-May
Sierra National Forest				
Mariposa/Minarets Ranger District	Hites Cove	70	1-Oct	31-May
Mariposa/Minarets Ranger District	Miami Motorcycle Trails	71	1-Oct	31-May
Kings River-Pineridge Ranger District	Huntington Lake	77	1-Oct	31-May
Kings River-Pineridge Ranger District	Eastwood	78	1-Oct	31-May
Kings River-Pineridge Ranger District	Shaver Lake Area	79	1-Oct	31-May
Kings River-Pineridge Ranger District	Kings River, Pineridge	81	1-Oct	31-May
Hume Lake Ranger District	Quail Flat	83	1-Oct	31-May
Sequoia National Forest				
Greenhorn Ranger District	Frog Meadow Area	90	1-Oct	31-May
Tule River Ranger District	Tule River Area	93	1-Oct	31-May
Cannell Ranger District	Kennedy Meadows	95	Year round	
Inyo National Forest				
White Mountain Ranger District	Poleta	97	Year round	

Los Padres National Forest				
Santa Lucia Ranger District	Black Mountain	88	Year round	
Mt. Pinos Ranger District	Ballinger Canyon	98	1-Oct	30-Apr
Mt. Pinos Ranger District	Alamo Mountain	99	1-Oct	30-Apr
Santa Barbara Ranger District	Santa Barbara	100	1-Oct	30-Apr
Ojai Ranger District	Ortega Trail	101	1-Oct	30-Apr

Angeles National Forest				
Santa Clara/Mojave Rivers Ranger District	Drinkwater Flats	106	1-Oct	30-Apr
Santa Clara /Mojave Rivers Ranger District	Rowher Flat	107	1-Oct	30-Apr
Santa Clara/Mojave Rivers Ranger District	Littlerock	108	1-Oct	30-Apr
San Gabriel River Ranger District	San Gabriel	112	1-Oct	30-Apr
San Bernardino National Forest				
Front Country Ranger District	Lytle Creek Area	113	1-Oct	30-Apr
Mountain Top Ranger District	Lake Arrowhead Area	116	1-Oct	30-Apr
Mountain Top Ranger District	Big Bear Lake Area	117	1-Oct	30-Apr
San Jacinto Ranger District	San Jacinto Area	121	1-Oct	31-May
Cleveland National Forest				
Trabuco Ranger District	Wildomar	123	1-Oct	30-Apr
Descanso Ranger District	Corral Canyon	126	1-Oct	30-Apr
Other Jurisdictions				
Army Corps of Engineers	Black Butte Lake	32	Year round	
City of Marysville (Riverfront)	Eugene Chappie OHV Park	39	Year round	
Santa Clara County	Metcalf Motorcycle Park	66	1-Oct	30-Apr
Stanislaus County	Frank Raines-OHV Park	67	1-Oct	30-Apr
Stanislaus County	La Grange	68	1-Oct	30-Apr
San Bernardino County	Park Moabi	119	Year round	

This list was provided by the California Air Resources Board (CARB). It will be updated periodically and you may contact CARB at (800) 242-4450 for more information.

Map available from California State Parks OHMVR Division that corresponds to Map Area ID.

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: P:\2008\08110148.02\04DOCUMENT_REFS\4Test_Results_Analysis\Air Quality - GHG\Verified\CP Proj Level Const.urb924

Project Name: Clay Pit SVRA Project Level Construction

Project Location: Feather River AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	CO2
2012 TOTALS (tons/year unmitigated)	200.44
2012 TOTALS (tons/year mitigated)	200.44
Percent Reduction	0.00
2013 TOTALS (tons/year unmitigated)	94.11
2013 TOTALS (tons/year mitigated)	94.11
Percent Reduction	0.00

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

CO2

8/31/2011 8:00:19 AM

2012	200.44
Mass Grading 05/01/2012-09/30/2012	128.32
Mass Grading Dust	0.00
Mass Grading Off Road Diesel	122.48
Mass Grading On Road Diesel	0.28
Mass Grading Worker Trips	5.56
Fine Grading 08/30/2012-09/30/2012	25.84
Fine Grading Dust	0.00
Fine Grading Off Road Diesel	24.72
Fine Grading On Road Diesel	0.00
Fine Grading Worker Trips	1.12
Building 10/01/2012-03/31/2013	46.27
Building Off Road Diesel	29.48
Building Vendor Trips	9.99
Building Worker Trips	6.80

2013	94.11
Building 10/01/2012-03/31/2013	44.88
Building Off Road Diesel	28.59
Building Vendor Trips	9.69
Building Worker Trips	6.60
Asphalt 04/01/2013-06/30/2013	49.23
Paving Off-Gas	0.00
Paving Off Road Diesel	41.34
Paving On Road Diesel	1.25
Paving Worker Trips	6.64

Phase Assumptions

Phase: Fine Grading 8/30/2012 - 9/30/2012 - Default Paving Description

Total Acres Disturbed: 3.8

Maximum Daily Acreage Disturbed: 0.25

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Mass Grading 5/1/2012 - 9/30/2012 - Default Fine Site Grading Description

Total Acres Disturbed: 3.8

Maximum Daily Acreage Disturbed: 0.25

8/31/2011 8:00:19 AM

Fugitive Dust Level of Detail: Low

Onsite Cut/Fill: 63 cubic yards/day; Offsite Cut/Fill: 0 cubic yards/day

On Road Truck Travel (VMT): 1.26

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Paving 4/1/2013 - 6/30/2013 - Default Architectural Coating Description

Acres to be Paved: 2.1

Off-Road Equipment:

4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day

1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day

1 Paving Equipment (104 hp) operating at a 0.53 load factor for 8 hours per day

1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

Phase: Building Construction 10/1/2012 - 3/31/2013 - Default Building Construction Description

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 4 hours per day

2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

Construction Mitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year, Mitigated

CO2

8/31/2011 8:00:19 AM

2012	200.44
Mass Grading 05/01/2012-09/30/2012	128.32
Mass Grading Dust	0.00
Mass Grading Off Road Diesel	122.48
Mass Grading On Road Diesel	0.28
Mass Grading Worker Trips	5.56
Fine Grading 08/30/2012-09/30/2012	25.84
Fine Grading Dust	0.00
Fine Grading Off Road Diesel	24.72
Fine Grading On Road Diesel	0.00
Fine Grading Worker Trips	1.12
Building 10/01/2012-03/31/2013	46.27
Building Off Road Diesel	29.48
Building Vendor Trips	9.99
Building Worker Trips	6.80

2013	94.11
Building 10/01/2012-03/31/2013	44.88
Building Off Road Diesel	28.59
Building Vendor Trips	9.69
Building Worker Trips	6.60
Asphalt 04/01/2013-06/30/2013	49.23
Paving Off-Gas	0.00
Paving Off Road Diesel	41.34
Paving On Road Diesel	1.25
Paving Worker Trips	6.64

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Fine Grading 8/30/2012 - 9/30/2012 - Default Paving Description

For Soil Stablizing Measures, the Apply soil stabilizers to inactive areas mitigation reduces emissions by:

PM10: 84% PM25: 84%

For Soil Stablizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

For Unpaved Roads Measures, the Reduce speed on unpaved roads to less than 15 mph mitigation reduces emissions by:

PM10: 44% PM25: 44%

For Unpaved Roads Measures, the Manage haul road dust 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

The following mitigation measures apply to Phase: Mass Grading 5/1/2012 - 9/30/2012 - Default Fine Site Grading Description

For Soil Stablizing Measures, the Apply soil stabilizers to inactive areas mitigation reduces emissions by:

PM10: 84% PM25: 84%

For Soil Stablizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

9/1/2011 3:37:06 PM

Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: P:\2008\08110148.02\04DOCUMENT_REFS\4Test_Results_Analysis\Air Quality - GHG\Verified\CP Net Prog Level Const.urb924

Project Name: Clay Pit SVRA Net Programmatic Level Construction

Project Location: Feather River AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	CO2
2016 TOTALS (tons/year unmitigated)	216.78
2016 TOTALS (tons/year mitigated)	216.78
Percent Reduction	0.00
2017 TOTALS (tons/year unmitigated)	254.90
2017 TOTALS (tons/year mitigated)	254.90
Percent Reduction	0.00

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

CO2

9/1/2011 3:37:06 PM

2016	216.78
Fine Grading 06/01/2016-06/30/2016	0.75
Fine Grading Dust	0.00
Fine Grading Off Road Diesel	0.00
Fine Grading On Road Diesel	0.75
Fine Grading Worker Trips	0.00
Mass Grading 06/01/2016-12/31/2016	180.80
Mass Grading Dust	0.00
Mass Grading Off Road Diesel	171.92
Mass Grading On Road Diesel	1.05
Mass Grading Worker Trips	7.83
Fine Grading 11/01/2016-12/31/2016	35.24
Fine Grading Dust	0.00
Fine Grading Off Road Diesel	0.00
Fine Grading On Road Diesel	35.24
Fine Grading Worker Trips	0.00

2017	254.90
Asphalt 01/01/2017-06/30/2017	84.44
Paving Off-Gas	0.00
Paving Off Road Diesel	69.71
Paving On Road Diesel	1.42
Paving Worker Trips	13.31
Fine Grading 01/01/2017-06/30/2017	170.46
Fine Grading Dust	0.00
Fine Grading Off Road Diesel	128.53
Fine Grading On Road Diesel	35.27
Fine Grading Worker Trips	6.65

Phase Assumptions

Phase: Fine Grading 6/1/2016 - 6/30/2016 - Sediment Basin work

Total Acres Disturbed: 0

Maximum Daily Acreage Disturbed: 0

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 16.84

Off-Road Equipment:

Phase: Fine Grading 1/1/2017 - 6/30/2017 - Mass Grading

Total Acres Disturbed: 1.01

Maximum Daily Acreage Disturbed: 0.25

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 134.8

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 4 hours per day

Phase: Fine Grading 11/1/2016 - 12/31/2016 - Substrate Haul

Total Acres Disturbed: 1.01

Maximum Daily Acreage Disturbed: 0.25

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 397.86

Off-Road Equipment:

Phase: Mass Grading 6/1/2016 - 12/31/2016 - Mass Grading (cut)

Total Acres Disturbed: 22.6

Maximum Daily Acreage Disturbed: 1

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 3.41

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Paving 1/1/2017 - 6/30/2017 - Paving

Acres to be Paved: 2.4

Off-Road Equipment:

4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day

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1 Pavers (100 hp) operating at a 0.62 load factor for 6 hours per day

1 Paving Equipment (104 hp) operating at a 0.53 load factor for 6 hours per day

1 Rollers (95 hp) operating at a 0.56 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 6 hours per day

Construction Mitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year, Mitigated

	CO2

2016	216.78
Fine Grading 06/01/2016-06/30/2016	0.75
Fine Grading Dust	0.00
Fine Grading Off Road Diesel	0.00
Fine Grading On Road Diesel	0.75
Fine Grading Worker Trips	0.00
Mass Grading 06/01/2016-12/31/2016	180.80
Mass Grading Dust	0.00
Mass Grading Off Road Diesel	171.92
Mass Grading On Road Diesel	1.05
Mass Grading Worker Trips	7.83
Fine Grading 11/01/2016-12/31/2016	35.24
Fine Grading Dust	0.00
Fine Grading Off Road Diesel	0.00
Fine Grading On Road Diesel	35.24
Fine Grading Worker Trips	0.00

2017	254.90
Asphalt 01/01/2017-06/30/2017	84.44
Paving Off-Gas	0.00
Paving Off Road Diesel	69.71
Paving On Road Diesel	1.42
Paving Worker Trips	13.31
Fine Grading 01/01/2017-06/30/2017	170.46
Fine Grading Dust	0.00
Fine Grading Off Road Diesel	128.53
Fine Grading On Road Diesel	35.27
Fine Grading Worker Trips	6.65

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Fine Grading 1/1/2017 - 6/30/2017 - Mass Grading

For Soil Stablizing Measures, the Apply soil stabilizers to inactive areas mitigation reduces emissions by:

PM10: 84% PM25: 84%

For Soil Stablizing Measures, the Replace ground cover in disturbed areas quickly mitigation reduces emissions by:

PM10: 5% PM25: 5%

For Soil Stablizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

The following mitigation measures apply to Phase: Mass Grading 6/1/2016 - 12/31/2016 - Mass Grading (cut)

For Soil Stablizing Measures, the Apply soil stabilizers to inactive areas mitigation reduces emissions by:

PM10: 84% PM25: 84%

For Soil Stablizing Measures, the Replace ground cover in disturbed areas quickly mitigation reduces emissions by:

PM10: 5% PM25: 5%

For Soil Stablizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: P:\2008\08110148.02\04DOCUMENT_REFS\4Test_Results_Analysis\Air Quality - GHG\Verified\CP 2010 Operational.urb924

Project Name: Clay Pit SVRA Programmatic Level Operational-2010

Project Location: Feather River AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	CO2
2010 TOTALS (tons/year unmitigated)	58.06
2010 TOTALS (tons/year mitigated)	58.06
Percent Reduction	0.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	CO2
TOTALS (tons/year, unmitigated)	1,108.19

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	CO2
TOTALS (tons/year, unmitigated)	1,108.19

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Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

	CO2
2010	58.06
Mass Grading 01/01/2010-12/31/2010	58.06
Mass Grading Dust	0.00
Mass Grading Off Road Diesel	28.30
Mass Grading On Road Diesel	0.00
Mass Grading Worker Trips	29.76

Phase Assumptions

Phase: Mass Grading 1/1/2010 - 12/31/2010 - Default Mass Grading
Site maintenance
Total Acres Disturbed: 22.6

Maximum Daily Acreage Disturbed: 0.25

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 2 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 2 hours per day

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Construction Mitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year, Mitigated

	CO2
2010	58.06
Mass Grading 01/01/2010-12/31/2010	58.06
Mass Grading Dust	0.00
Mass Grading Off Road Diesel	28.30
Mass Grading On Road Diesel	0.00
Mass Grading Worker Trips	29.76

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Mass Grading 1/1/2010 - 12/31/2010 - Default Mass Grading
Site maintenance
For Soil Stablizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	CO2
SVRA	1,108.19
TOTALS (tons/year, unmitigated)	1,108.19

Operational Settings:

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Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2010 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
SVRA		0.57	acres	220.00	125.40	6,270.00
					125.40	6,270.00

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	0.0	1.0	98.7	0.3
Light Truck < 3750 lbs	46.0	2.6	88.6	8.8
Light Truck 3751-5750 lbs	48.0	1.0	98.5	0.5
Med Truck 5751-8500 lbs	4.0	1.1	97.8	1.1
Lite-Heavy Truck 8501-10,000 lbs	0.0	0.0	68.0	32.0
Lite-Heavy Truck 10,001-14,000 lbs	0.0	0.0	44.4	55.6
Med-Heavy Truck 14,001-33,000 lbs	0.0	6.2	18.8	75.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.0	0.0	5.6	94.4
Other Bus	0.0	0.0	0.0	100.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	0.0	57.5	42.5	0.0
School Bus	0.0	0.0	0.0	100.0
Motor Home	2.0	0.0	83.3	16.7

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Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	50.0	50.0	50.0	50.0	50.0	50.0
Rural Trip Length (miles)	50.0	50.0	50.0	50.0	50.0	50.0
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
SVRA				2.0	1.0	97.0

Operational Changes to Defaults

The urban/rural selection has been changed from Urban to Rural

Home-based work urban trip length changed from 10.8 miles to 50 miles

Home-based work rural trip length changed from 16.8 miles to 50 miles

Home-based shop urban trip length changed from 7.3 miles to 50 miles

Home-based shop rural trip length changed from 7.1 miles to 50 miles

Home-based other urban trip length changed from 7.5 miles to 50 miles

Home-based other rural trip length changed from 7.9 miles to 50 miles

Commercial-based commute urban trip length changed from 9.5 miles to 50 miles

Commercial-based commute rural trip length changed from 14.7 miles to 50 miles

Commercial-based non-work urban trip length changed from 7.35 miles to 50 miles

Commercial-based non-work rural trip length changed from 6.6 miles to 50 miles

Commercial-based customer urban trip length changed from 7.35 miles to 50 miles

Commercial-based customer rural trip length changed from 6.6 miles to 50 miles

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: P:\2008\08110148.02\04DOCUMENT_REFS\4Test_Results_Analysis\Air Quality - GHG\Verified\CP 2017 Operational.urb924

Project Name: Clay Pit SVRA Programmatic Level Operational-2017

Project Location: Feather River AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	CO2
2017 TOTALS (tons/year unmitigated)	137.22
2017 TOTALS (tons/year mitigated)	137.22
Percent Reduction	0.00

AREA SOURCE EMISSION ESTIMATES

	CO2
TOTALS (tons/year, unmitigated)	4.32

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	CO2
TOTALS (tons/year, unmitigated)	631.56

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	CO2
TOTALS (tons/year, unmitigated)	635.88

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

	CO2
2017	137.22
Mass Grading 01/01/2017-12/31/2017	137.22
Mass Grading Dust	0.00
Mass Grading Off Road Diesel	107.43
Mass Grading On Road Diesel	0.00
Mass Grading Worker Trips	29.79

Phase Assumptions

Phase: Mass Grading 1/1/2017 - 12/31/2017 - Default Mass Grading
Site maintenance
Total Acres Disturbed: 22.6

Maximum Daily Acreage Disturbed: 0.25

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

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Construction Mitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year, Mitigated

	CO2
2017	137.22
Mass Grading 01/01/2017-12/31/2017	137.22
Mass Grading Dust	0.00
Mass Grading Off Road Diesel	107.43
Mass Grading On Road Diesel	0.00
Mass Grading Worker Trips	29.79

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Mass Grading 1/1/2017 - 12/31/2017 - Default Mass Grading
Site maintenance
For Soil Stablizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	CO2
Natural Gas	4.32
Hearth	
Landscape	
Consumer Products	
Architectural Coatings	
TOTALS (tons/year, unmitigated)	4.32

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	CO2
Hdqtrs & Kiosk	631.56
TOTALS (tons/year, unmitigated)	631.56

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2017 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Hdqtrs & Kiosk		23.99	1000 sq ft	2.96	71.01	3,550.52
					71.01	3,550.52

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	0.0	1.0	98.7	0.3
Light Truck < 3750 lbs	46.0	2.6	88.6	8.8
Light Truck 3751-5750 lbs	48.0	1.0	98.5	0.5

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Med Truck 5751-8500 lbs	4.0	1.1	97.8	1.1
Lite-Heavy Truck 8501-10,000 lbs	0.0	0.0	68.0	32.0
Lite-Heavy Truck 10,001-14,000 lbs	0.0	0.0	44.4	55.6
Med-Heavy Truck 14,001-33,000 lbs	0.0	6.2	18.8	75.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.0	0.0	5.6	94.4
Other Bus	0.0	0.0	0.0	100.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	0.0	57.5	42.5	0.0
School Bus	0.0	0.0	0.0	100.0
Motor Home	2.0	0.0	83.3	16.7

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	50.0	50.0	50.0	50.0	50.0	50.0
Rural Trip Length (miles)	50.0	50.0	50.0	50.0	50.0	50.0
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Hdqtrs & Kiosk				2.0	1.0	97.0

Operational Changes to Defaults

The urban/rural selection has been changed from Urban to Rural

Home-based work urban trip length changed from 10.8 miles to 50 miles

Home-based work rural trip length changed from 16.8 miles to 50 miles

Home-based shop urban trip length changed from 7.3 miles to 50 miles

Home-based shop rural trip length changed from 7.1 miles to 50 miles

Home-based other urban trip length changed from 7.5 miles to 50 miles

Home-based other rural trip length changed from 7.9 miles to 50 miles

Commercial-based commute urban trip length changed from 9.5 miles to 50 miles

Commercial-based commute rural trip length changed from 14.7 miles to 50 miles

Commercial-based non-work urban trip length changed from 7.35 miles to 50 miles

Commercial-based non-work rural trip length changed from 6.6 miles to 50 miles

Commercial-based customer urban trip length changed from 7.35 miles to 50 miles

Commercial-based customer rural trip length changed from 6.6 miles to 50 miles

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: P:\2008\08110148.02\04DOCUMENT_REFS\4Test_Results_Analysis\Air Quality - GHG\Verified\CP 2030 Operational.urb924

Project Name: Clay Pit SVRA Programmatic Level Operational-2030

Project Location: Feather River AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	CO2
2030 TOTALS (tons/year unmitigated)	58.28
2030 TOTALS (tons/year mitigated)	58.28
Percent Reduction	0.00

AREA SOURCE EMISSION ESTIMATES

	CO2
TOTALS (tons/year, unmitigated)	4.32

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	CO2
TOTALS (tons/year, unmitigated)	806.76

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	CO2
TOTALS (tons/year, unmitigated)	811.08

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Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

	CO2
2030	58.28
Mass Grading 01/01/2030-12/31/2030	58.28
Mass Grading Dust	0.00
Mass Grading Off Road Diesel	28.30
Mass Grading On Road Diesel	0.00
Mass Grading Worker Trips	29.98

Phase Assumptions

Phase: Mass Grading 1/1/2030 - 12/31/2030 -
Site maintenance
Total Acres Disturbed: 22.6

Maximum Daily Acreage Disturbed: 0.25

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 2 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 2 hours per day

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	CO2
Natural Gas	4.32
Hearth	
Landscape	
Consumer Products	
Architectural Coatings	
TOTALS (tons/year, unmitigated)	4.32

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	CO2
Hdqtrs & Kiosk	806.76
TOTALS (tons/year, unmitigated)	806.76

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2030 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

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Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Hdqtrs & Kiosk		31.08	1000 sq ft	2.96	92.00	4,599.84
					92.00	4,599.84

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	0.0	1.0	98.7	0.3
Light Truck < 3750 lbs	46.0	2.6	88.6	8.8
Light Truck 3751-5750 lbs	48.0	1.0	98.5	0.5
Med Truck 5751-8500 lbs	4.0	1.1	97.8	1.1
Lite-Heavy Truck 8501-10,000 lbs	0.0	0.0	68.0	32.0
Lite-Heavy Truck 10,001-14,000 lbs	0.0	0.0	44.4	55.6
Med-Heavy Truck 14,001-33,000 lbs	0.0	6.2	18.8	75.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.0	0.0	5.6	94.4
Other Bus	0.0	0.0	0.0	100.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	0.0	57.5	42.5	0.0
School Bus	0.0	0.0	0.0	100.0
Motor Home	2.0	0.0	83.3	16.7

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	50.0	50.0	50.0	50.0	50.0	50.0

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Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Rural Trip Length (miles)	50.0	50.0	50.0	50.0	50.0	50.0
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Hdqtrs & Kiosk				2.0	1.0	97.0

Operational Changes to Defaults

The urban/rural selection has been changed from Urban to Rural

Home-based work urban trip length changed from 10.8 miles to 50 miles

Home-based work rural trip length changed from 16.8 miles to 50 miles

Home-based shop urban trip length changed from 7.3 miles to 50 miles

Home-based shop rural trip length changed from 7.1 miles to 50 miles

Home-based other urban trip length changed from 7.5 miles to 50 miles

Home-based other rural trip length changed from 7.9 miles to 50 miles

Commercial-based commute urban trip length changed from 9.5 miles to 50 miles

Commercial-based commute rural trip length changed from 14.7 miles to 50 miles

Commercial-based non-work urban trip length changed from 7.35 miles to 50 miles

Commercial-based non-work rural trip length changed from 6.6 miles to 50 miles

Commercial-based customer urban trip length changed from 7.35 miles to 50 miles

Commercial-based customer rural trip length changed from 6.6 miles to 50 miles

CO2 Emission Reductions from the Pavley I Regulation & th

Vehicle Category	Vehicle Population	Weekday VMT from EMFAC (VMT/day)	Weekday CO2 Emissions from EMFAC (tons/day)	Weekday CO2 Emission Reduction from Pavley I (tons/day)
LDA	111,716	3,457,764	1,377.17	431.10
LDT1	57,674	1,900,572	949.13	288.33
LDT2	52,755	1,722,265	879.98	192.76
MDV	21,648	719,471	499.67	106.62
Total	**243,793**	**7,800,072**	**3,705.94**	**1,018.81**

	tons/day
BAU BUTTE 2030*	5,600.00
Reductions	1,287.52
% reductions	0.23

* Modeled in EMFAC for Butte County

e Low Carbon Fuel Standard for Butte - 2030 (clay pit 2030)

Weekday CO2 Emissions after adopting Pavley I (tons/day)	% CO2 Emission Reduction from LCFS	Weekday CO2 Emission Reduction from LCFS (tons/day)	Weekday CO2 Emissions after adopting Pavley I & LCFS (tons/day)	Annual CO2 Emissions after adopting Pavley I & LCFS (MMTCO2/year)
946.07	10.00%	94.61	851.47	0.27
660.80	10.00%	66.08	594.72	0.19
687.22	10.00%	68.72	618.49	0.19
393.04	10.00%	39.30	353.74	0.11
2,687.13	**10.00%**	**268.71**	**2,418.42**	**0.76**

2030

Plan Emissions

Net Increase Associated with Plan Components

Existing Emissions		Tons CO2/yr	MT CO2e/yr
	Visitor	1108.19	1005.33
	OHV	53.44	48.48
	Maintenance	58.06	52.67
	Total Existing Emissions	1219.69	1106.48

Construction Emissions	Year	Tons CO2/yr	MT CO2e/yr	Reductions from State Measures*	Net MT CO2e/yr
	2012	200.44	181.84		181.84
	2013	94.11	85.38		85.38
	2016	216.78	196.66		196.66
	2017	254.9	231.24		231.24
	Total	766.23	695.11		695.11
	Amortized (20 years)	38.31	34.76		34.76

Area/Operational Emissions					
Area	2030	4.32	3.92		3.92
Visitor	2030	806.76	731.88	168.33	563.55
OHV	2030	41.92	38.03	3.80	34.23
Total Area/Operational		853.00	773.83		601.69
Total Emissions	2030	891.31	808.59		636.45

* Pavley and LCFS apply to on-road emissions and County average reductions were assumed to apply to Clay Pit SVRA visitors; LCFS applies to OHVs and 10% reduction was assumed

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APPENDIX D

Noise Data

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Project-Generated Construction Source Noise Prediction Model

Clay Pit SVRA

Location	Distance to Nearest Receiver in feet	Combined Predicted Noise Level (L_{eq} dBA)
Threshold*	490	60.7
	50	85.5
	165	71.8
	150	72.9
	200	69.6
	250	67.1
	300	65.0
	350	63.2
	400	61.7
	450	60.3
	500	59.1
	550	58.1
	600	57.1
	800	53.8
	2000	43.3

Assumptions:	Reference Emission Noise Levels (L_{max}) at 50 feet[1]	Usage Factor[1]
Grader	85	0.4
Dozer	85	0.4
Dump Truck	84	0.4

Ground Type	Soft
Source Height	8
Receiver Height	5
Ground Factor	0.63

Predicted Noise Level [2]	L_{eq} dBA at 50 feet[2]
Grader	81.0
Dozer	81.0
Dump Truck	80.0

Combined Predicted Noise Level (L_{eq} dBA at 50 feet)
85.5

Sources:

[1] Obtained from the FHWA Roadway Construction Noise Model, January 2006.

[2] Based on the following from the Federal Transit Noise and Vibration Impact Assessment, 2006.

$L_{eq}(equip) = E.L.+10*\log (U.F.) - 20*\log (D/50) - 10*G*\log (D/50)$

Where: E.L. = Emission Level;

U.F.= Usage Factor;

G = Constant that accounts for topography and ground effects; and

D = Distance from source to receiver.

*Project specific threshold

Project-Generated Construction Source Vibration Prediction Model

Clay Pit SRVA

Location	Distance to Nearest Receiver in feet	Predicted Vibration Level (PPV)		Predicted Vibration Level (VdB)		Equipment	Reference Distance	PPV at 25 feet (in/sec)[1]	Approximate Lv (VdB) at 25 feet[2]
		Pile Driver	Bulldozer	Pile Driver	Bulldozer				
CA Threshold (0.08 PPV)	**165**	**0.090**	**0.0052**			Pile Driver	25	1.518	112
CA Threshold (80VdB)	**165**			**87**	**62**	Bulldozer	25	0.089	87

Notes:

[1] Where PPV is the peak particle velocity

[2] Where Lv is the RMS velocity expressed in vibration decibels (VdB), assuming a crest factor of 4.

Source: Caltrans 2002, FTA 2006

Traffic Noise Prediction Model, (FHWA RD-77-108)

Model Input Sheet

Project Name : Clay Pit SVRA
Project Number : 08110148.02
Modeling Condition : Existing Weekday
Ground Type : Soft
K Factor : 10
Metric (L_{eq}, L_{dn}, CNEL) : Ldn
Traffic Desc. (Peak or ADT) : Peak

Segment	Roadway	Segment From	Segment To	Traffic Vol.	Speed (Mph)	Distance to CL	% Autos	%MT	% HT	Day %	Eve %	Night %	Offset (dB)
1	State Route 162	State Route 99	Larkin Road	280	45	100	90.3	4.3	5.4	78		22	
2	State Route 162	Larkin Road	State Route 70	880	45	100	90.3	4.3	5.4	78		22	
3	Larkin Road	State Route 162	Challenger Avenue	426	55	100	97.5	1.5	1	78		22	
4	Larkin Road	Challenger Avenue	SVRA Access	465	55	100	97.5	1.5	1	78		22	
5	Larkin Road	SVRA Acces	Airport Park	67	55	100	97.5	1.5	1	78		22	
6	Larkin Road	Airport Park	Hamilton Road	360	55	100	97.5	1.5	1	78		22	
7	Larkin Road	Hamilton Road	to the south	275	55	100	97.5	1.5	1	78		22	
8	Challenger Avenue	Larkin Road	to the west	20	35	100	97.5	1.5	1	78		22	
9	SVRA Access	Larkin Road	to the south	5	25	100	97.5	1.5	1	78		22	
10	Airport Park	Larkin Road	to the north	67	35	100	97.5	1.5	1	78		22	
11	Hamilton Road	Larkin Road	to the west	43	35	100	97.5	1.5	1	78		22	

Traffic Noise Prediction Model, (FHWA RD-77-108)

Predicted Noise Levels

Project Name : Clay Pit SVRA
Project Number : 08110148.02
Modeling Condition : Existing Weekday
Metric (Leq, Ldn, CNEL) : Ldn

		Segment		Noise Levels, dB Ldn				Distance to Traffic Noise Contours, Feet				
Segment	Roadway	From	To	Auto	MT	HT	Total	70 dB	65 dB	60 dB	55 dB	50 dB
1	State Route 162	State Route 99	Larkin Road	56.7	51.7	57.2	61	23	51	109	235	505
2	State Route 162	Larkin Road	State Route 70	61.6	56.7	62.2	66	50	108	234	503	1084
3	Larkin Road	State Route 162	Challenger Avenue	61.3	50.3	52.5	62	30	65	139	300	647
4	Larkin Road	Challenger Avenue	SVRA Access	61.7	50.7	52.9	63	32	69	148	318	686
5	Larkin Road	SVRA Acces	Airport Park	53.3	42.3	44.5	54	9	19	41	87	188
6	Larkin Road	Airport Park	Hamilton Road	60.6	49.6	51.8	61	27	58	125	268	578
7	Larkin Road	Hamilton Road	to the south	59.4	48.4	50.6	60	22	48	104	224	483
8	Challenger Avenue	Larkin Road	to the west	42.4	34.0	37.4	44	2	4	9	19	40
9	SVRA Access	Larkin Road	to the south	32.2	25.7	31.5	35	0	1	2	5	11
10	Airport Park	Larkin Road	to the north	47.7	39.2	42.6	49	4	9	19	42	90
11	Hamilton Road	Larkin Road	to the west	45.7	37.3	40.7	47	3	7	14	31	67

Traffic Noise Prediction Model, (FHWA RD-77-108)

Model Input Sheet

Project Name : Clay Pit SVRA
Project Number : 08110148.02
Modeling Condition : Existing Weekday
Ground Type : Soft
K Factor : 10
Metric (L_{eq}, L_{dn}, CNEL) : Ldn
Traffic Desc. (Peak or ADT) : Peak

Segment	Roadway	Segment From	Segment To	Traffic Vol.	Speed (Mph)	Distance to CL	% Autos	%MT	% HT	Day %	Eve %	Night %	Offset (dB)
1	State Route 162	State Route 99	Larkin Road	240	45	100	90.3	4.3	5.4	78		22	
2	State Route 162	Larkin Road	State Route 70	560	45	100	90.3	4.3	5.4	78		22	
3	Larkin Road	State Route 162	Challenger Avenue	197	55	100	97.5	1.5	1	78		22	
4	Larkin Road	Challenger Avenue	SVRA Access	230	55	100	97.5	1.5	1	78		22	
5	Larkin Road	SVRA Acces	Airport Park	207	55	100	97.5	1.5	1	78		22	
6	Larkin Road	Airport Park	Hamilton Road	220	55	100	97.5	1.5	1	78		22	
7	Larkin Road	Hamilton Road	to the south	175	55	100	97.5	1.5	1	78		22	
8	Challenger Avenue	Larkin Road	to the west	4	35	100	97.5	1.5	1	78		22	
9	SVRA Access	Larkin Road	to the south	18	25	100	97.5	1.5	1	78		22	
10	Airport Park	Larkin Road	to the north	15	35	100	97.5	1.5	1	78		22	
11	Hamilton Road	Larkin Road	to the west	25	35	100	97.5	1.5	1	78		22	

Traffic Noise Prediction Model, (FHWA RD-77-108)

Predicted Noise Levels

Project Name : Clay Pit SVRA
Project Number : 08110148.02
Modeling Condition : Existing Weekday
Metric (Leq, Ldn, CNEL) : Ldn

		Segment		Noise Levels, dB Ldn				Distance to Traffic Noise Contours, Feet				
Segment	Roadway	From	To	Auto	MT	HT	Total	70 dB	65 dB	60 dB	55 dB	50 dB
1	State Route 162	State Route 99	Larkin Road	56.0	51.0	56.5	60	21	46	98	212	456
2	State Route 162	Larkin Road	State Route 70	59.7	54.7	60.2	64	37	80	173	372	802
3	Larkin Road	State Route 162	Challenger Avenue	58.0	47.0	49.1	59	18	39	83	180	387
4	Larkin Road	Challenger Avenue	SVRA Access	58.7	47.6	49.8	59	20	43	92	199	429
5	Larkin Road	SVRA Acces	Airport Park	58.2	47.2	49.4	59	19	40	86	186	400
6	Larkin Road	Airport Park	Hamilton Road	58.5	47.4	49.6	59	19	42	90	193	416
7	Larkin Road	Hamilton Road	to the south	57.5	46.4	48.6	58	17	36	77	166	357
8	Challenger Avenue	Larkin Road	to the west	35.4	27.0	30.4	37	1	1	3	6	14
9	SVRA Access	Larkin Road	to the south	37.7	31.2	37.1	41	1	2	5	12	25
10	Airport Park	Larkin Road	to the north	41.2	32.7	36.1	43	2	3	7	15	33
11	Hamilton Road	Larkin Road	to the west	43.4	34.9	38.4	45	2	5	10	22	46

Traffic Noise Prediction Model, (FHWA RD-77-108)

Model Input Sheet

Project Name : Clay Pit SVRA
Project Number : 08110148.02
Modeling Condition : Future Weekday
Ground Type : Soft
K Factor : 10
Metric (L_{eq}, L_{dn}, CNEL) : Ldn
Traffic Desc. (Peak or ADT) : Peak

Segment	Roadway	Segment From	Segment To	Traffic Vol.	Speed (Mph)	Distance to CL	% Autos	%MT	% HT	Day %	Eve %	Night %	Offset (dB)
1	State Route 162	State Route 99	Larkin Road	335	45	100	90.3	4.3	5.4	78		22	
2	State Route 162	Larkin Road	State Route 70	935	45	100	90.3	4.3	5.4	78		22	
3	Larkin Road	State Route 162	Challenger Avenue	481	55	100	97.5	1.5	1	78		22	
4	Larkin Road	Challenger Avenue	SVRA Access	520	55	100	97.5	1.5	1	78		22	
5	Larkin Road	SVRA Acces	Airport Park	122	55	100	97.5	1.5	1	78		22	
6	Larkin Road	Airport Park	Hamilton Road	360	55	100	97.5	1.5	1	78		22	
7	Larkin Road	Hamilton Road	to the south	275	55	100	97.5	1.5	1	78		22	
8	Challenger Avenue	Larkin Road	to the west	20	35	100	97.5	1.5	1	78		22	
9	SVRA Access	Larkin Road	to the south	60	25	100	97.5	1.5	1	78		22	
10	Airport Park	Larkin Road	to the north	67	35	100	97.5	1.5	1	78		22	
11	Hamilton Road	Larkin Road	to the west	43	35	100	97.5	1.5	1	78		22	

Traffic Noise Prediction Model, (FHWA RD-77-108)

Predicted Noise Levels

Project Name : Clay Pit SVRA
Project Number : 08110148.02
Modeling Condition : Future Weekday
Metric (Leq, Ldn, CNEL) : Ldn

		Segment		Noise Levels, dB Ldn				Distance to Traffic Noise Contours, Feet				
Segment	Roadway	From	To	Auto	MT	HT	Total	70 dB	65 dB	60 dB	55 dB	50 dB
1	State Route 162	State Route 99	Larkin Road	57.5	52.5	58.0	61	26	57	123	264	569
2	State Route 162	Larkin Road	State Route 70	61.9	56.9	62.4	66	52	113	243	524	1129
3	Larkin Road	State Route 162	Challenger Avenue	61.9	50.8	53.0	63	33	70	151	326	701
4	Larkin Road	Challenger Avenue	SVRA Access	62.2	51.2	53.4	63	34	74	159	343	739
5	Larkin Road	SVRA Acces	Airport Park	55.9	44.9	47.1	57	13	28	61	130	281
6	Larkin Road	Airport Park	Hamilton Road	60.6	49.6	51.8	61	27	58	125	268	578
7	Larkin Road	Hamilton Road	to the south	59.4	48.4	50.6	60	22	48	104	224	483
8	Challenger Avenue	Larkin Road	to the west	42.4	34.0	37.4	44	2	4	9	19	40
9	SVRA Access	Larkin Road	to the south	43.0	36.5	42.3	46	3	6	12	26	55
10	Airport Park	Larkin Road	to the north	47.7	39.2	42.6	49	4	9	19	42	90
11	Hamilton Road	Larkin Road	to the west	45.7	37.3	40.7	47	3	7	14	31	67

Traffic Noise Prediction Model, (FHWA RD-77-108)

Model Input Sheet

Project Name : Clay Pit SVRA
Project Number : 08110148.02
Modeling Condition : Future Weekday
Ground Type : Soft
K Factor : 10
Metric (L_{eq}, L_{dn}, CNEL) : Ldn
Traffic Desc. (Peak or ADT) : Peak

Segment	Roadway	Segment From	Segment To	Traffic Vol.	Speed (Mph)	Distance to CL	% Autos	%MT	% HT	Day %	Eve %	Night %	Offset (dB)
1	State Route 162	State Route 99	Larkin Road	295	45	100	90.3	4.3	5.4	78		22	
2	State Route 162	Larkin Road	State Route 70	615	45	100	90.3	4.3	5.4	78		22	
3	Larkin Road	State Route 162	Challenger Avenue	252	55	100	97.5	1.5	1	78		22	
4	Larkin Road	Challenger Avenue	SVRA Access	285	55	100	97.5	1.5	1	78		22	
5	Larkin Road	SVRA Acces	Airport Park	262	55	100	97.5	1.5	1	78		22	
6	Larkin Road	Airport Park	Hamilton Road	220	55	100	97.5	1.5	1	78		22	
7	Larkin Road	Hamilton Road	to the south	175	55	100	97.5	1.5	1	78		22	
8	Challenger Avenue	Larkin Road	to the west	4	35	100	97.5	1.5	1	78		22	
9	SVRA Access	Larkin Road	to the south	73	25	100	97.5	1.5	1	78		22	
10	Airport Park	Larkin Road	to the north	15	35	100	97.5	1.5	1	78		22	
11	Hamilton Road	Larkin Road	to the west	25	35	100	97.5	1.5	1	78		22	

Traffic Noise Prediction Model, (FHWA RD-77-108)

Predicted Noise Levels

Project Name : Clay Pit SVRA
Project Number : 08110148.02
Modeling Condition : Future Weekday
Metric (Leq, Ldn, CNEL) : Ldn

		Segment		Noise Levels, dB Ldn				Distance to Traffic Noise Contours, Feet				
Segment	Roadway	From	To	Auto	MT	HT	Total	70 dB	65 dB	60 dB	55 dB	50 dB
1	State Route 162	State Route 99	Larkin Road	56.9	51.9	57.4	61	24	52	113	243	523
2	State Route 162	Larkin Road	State Route 70	60.1	55.1	60.6	64	40	85	184	396	854
3	Larkin Road	State Route 162	Challenger Avenue	59.1	48.0	50.2	60	21	46	98	212	456
4	Larkin Road	Challenger Avenue	SVRA Access	59.6	48.6	50.7	60	23	49	107	230	495
5	Larkin Road	SVRA Acces	Airport Park	59.2	48.2	50.4	60	22	47	101	217	468
6	Larkin Road	Airport Park	Hamilton Road	58.5	47.4	49.6	59	19	42	90	193	416
7	Larkin Road	Hamilton Road	to the south	57.5	46.4	48.6	58	17	36	77	166	357
8	Challenger Avenue	Larkin Road	to the west	35.4	27.0	30.4	37	1	1	3	6	14
9	SVRA Access	Larkin Road	to the south	43.8	37.3	43.2	47	3	6	14	29	63
10	Airport Park	Larkin Road	to the north	41.2	32.7	36.1	43	2	3	7	15	33
11	Hamilton Road	Larkin Road	to the west	43.4	34.9	38.4	45	2	5	10	22	46

Roadway	From	To	Existing Weekday No Project	Contours 70 dB	Contours 65 dB	Contours 60 dB	Existing Sat. Afternoon No Project	Contours 70 dB	Contours 65 dB
State Route 162	State Route 99	Larkin Road	61	23	51	109	60	21	46
State Route 162	Larkin Road	State Route 70	66	50	108	234	64	37	80
Larkin Road	State Route 162	Challenger Avenue	62	30	65	139	59	18	39
Larkin Road	Challenger Avenue	SVRA Access	63	32	69	148	59	20	43
Larkin Road	SVRA Acces	Airport Park	54	9	19	41	59	19	40
Larkin Road	Airport Park	Hamilton Road	61	27	58	125	59	19	42
Larkin Road	Hamilton Road	to the south	60	22	48	104	58	17	36
Challenger Avenue	Larkin Road	to the west	44	2	4	9	37	1	1
SVRA Access	Larkin Road	to the south	35	0	1	2	41	1	2
Airport Park	Larkin Road	to the north	49	4	9	19	43	2	3
Hamilton Road	Larkin Road	to the west	47	3	7	14	45	2	5

60 dB				
98	61	61	0.8	0.9
173	66	64	0.3	0.4
83	63	60	0.5	1.1
92	63	60	0.5	0.9
86	57	60	2.6	1.0
90	61	59	0.0	0.0
77	60	58	0.0	0.0
3	44	37	0.0	0.0
5	46	47	10.8	6.1
7	49	43	0.0	0.0
10	47	45	0.0	0.0