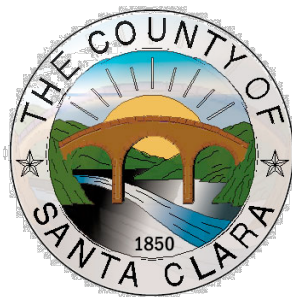


# **Planning Commission Workshop Lehigh - Permanente Quarry Reclamation Plan Amendment**

**File No.: 2250-10P(M1)-10EIR**

May 24, 2012



# Presentation Outline

- Hearing Objectives
- Scope of Review – Reclamation Plan
- Reclamation Plan & EIR
- Workshop Questions
- Other Key Issues
- Supplemental Packet
- Hearing Objectives

# Hearing Objectives

- Reclamation Plan Amendment (RPA)–
  - Substantially meets SMARA standards
- EIR – Compliance with CEQA
  - Adequately disclosed significant impacts and identify mitigation
  - All significant impacts mitigated or unable to be mitigated

# What is Reclamation?

- Every Surface Mine must have a Reclamation Plan
- Reclamation = Exit Strategy, Leave the Site in a usable end state.

## Past surface mining without Reclamation



Abandoned Talc Mine – Death Valley, CA

# What is Reclamation?

## Past surface mining without Reclamation



Est. County costs - \$7.5 million +

# What is Reclamation?

## What is Mined-Land Reclamation?

- The process of reclamation includes maintaining water and air quality, minimizing flooding, erosion and damage to wildlife and aquatic habitats caused by surface mining. The final step in this process is often topsoil replacement and revegetation with suitable plant species (<http://www.conservation.ca.gov/omr/reclamation>)
- Reclamation Plan. The applicant's (operator's) completed and approved plan for reclaiming the lands affected by his surface mining operations conducted after January 1, 1976,

# SMARA and Reclamation Plan

- SMARA Standards
  - Financial Assurance
  - Slope Stability
  - Revegetation, Wildlife Habitat
  - Drainage & Stream Protection
  - Water Quality

# Scope of Reclamation Plan

- Reclamation Plan Amendment only –
  - Does the reclamation plan adequately clean up the site?
  - Does it leave the site in a usable end state?
  - Does it remediate hazards caused by surface mining?
- Scope of Review & Approval
  - Whether RPA “substantially meets” SMARA
  - Cannot be denied based on unrelated grounds



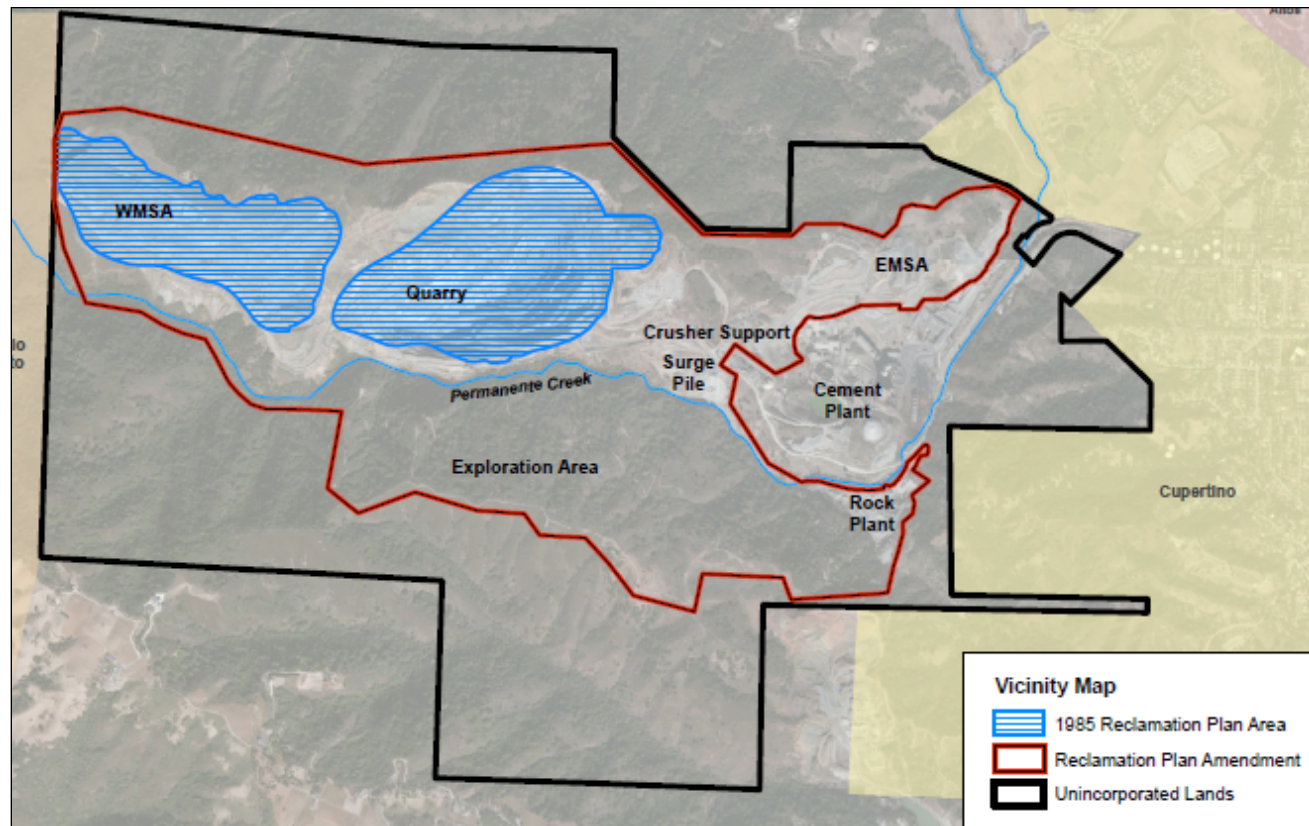
# Scope of Reclamation Plan

## Does not include:

- On-going mining (operations)
  - Surface mine is existing,
  - Surface mine is vested (BOS, 2011)
- Cement plant operations
- No new Quarry Pit proposed

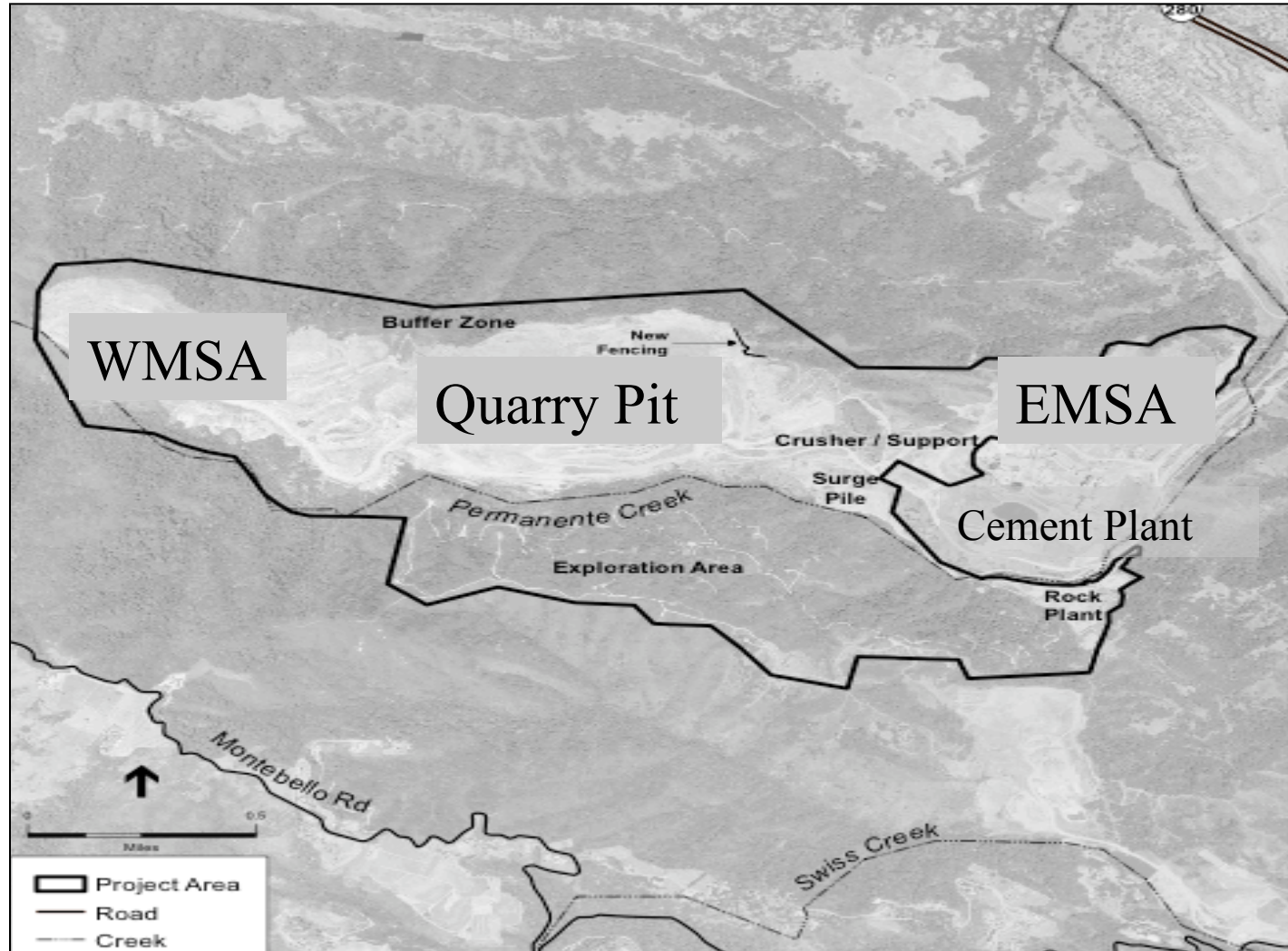
# Reclamation Plan Amendment

- Reclaims all mining disturbed areas
- Addresses violations (mining outside boundaries)
- New Financial Assurance



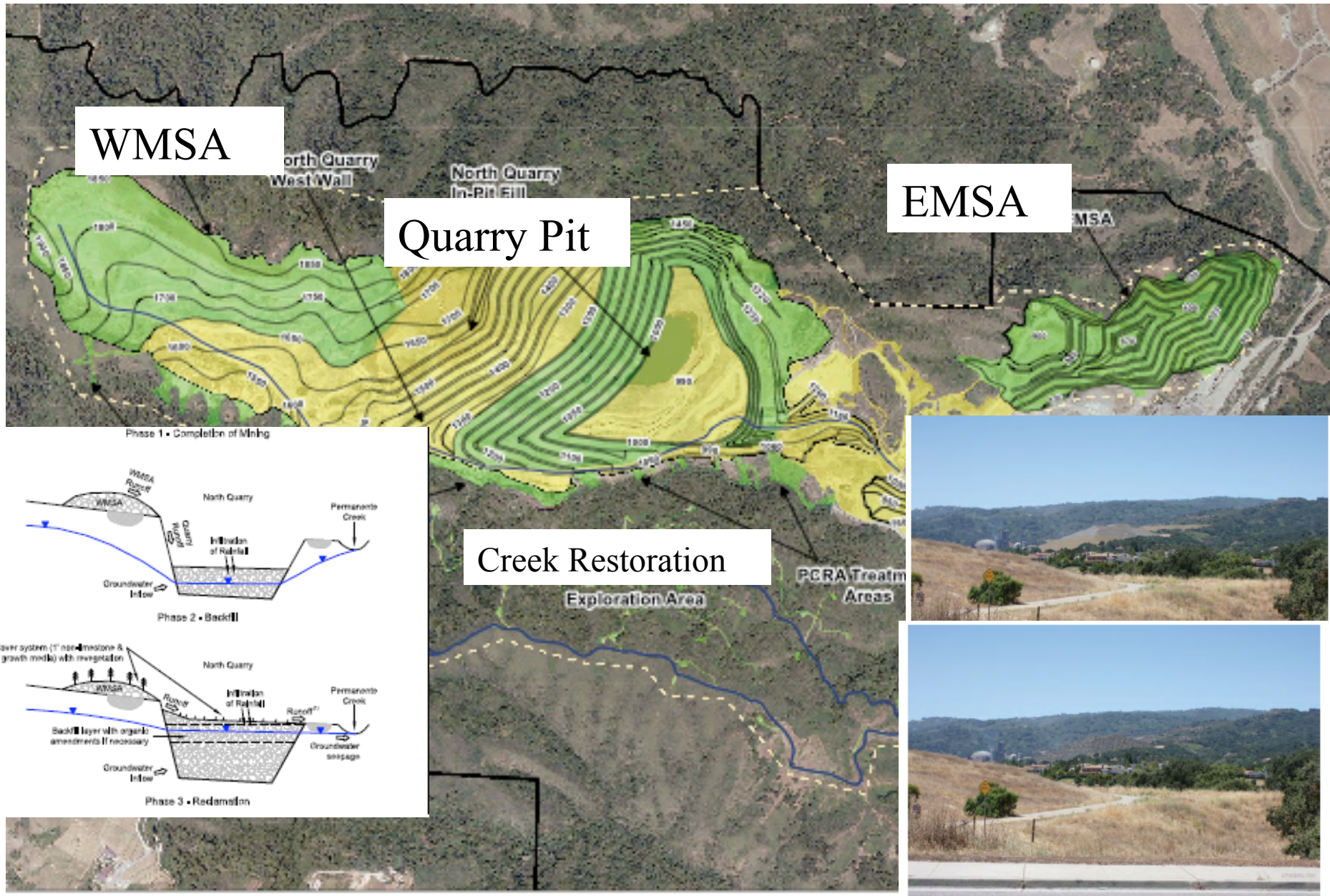
# Reclamation Plan Amendment

- New Overburden Storage (EMSA)
- Backfill of Quarry Pit with Overburden (WMSA)
- Permanente Creek Restoration
- 20 Year Plan





# Reclamation Plan



Visual Simulation of Project site five years after completion of Phase 1 (left), five years after the completion of construction in the EMSA

# Environmental Impact Report (EIR)

- Informational Document
- Certification
- Does the EIR adequately disclose the significant environmental impacts from reclaiming the surface mine?
- Does the EIR adequately identify feasible mitigation measures and project alternatives for significant impacts?

# Environmental Impact Report

- Significant and Unavoidable impacts
  - Impacts from Reclamation – 22 significant impacts
  - All mitigated except following areas
    - Visual impacts during reclamation
    - Adverse impacts to historic resources
    - Interim selenium concentrations in runoff into Permanente Creek during reclamation (Water Quality and Biological impacts)

# Questions from PC Workshop

- Selenium in Permanente Creek
- Health effects – Selenium
- Factor of Safety
- Slope Stability Scenic Easement
- EMSA – Violations
- Selenium Treatment – Costs
- Water Quality Monitoring
- Can the PC change the Reclamation Plan?

# Selenium

- What are Selenium levels downstream (SF Bay)?
  - RWQCB Standard = 5 µg/L

| Permanente Creek                        | Near WMSA | Downstream - Quarry Pit | Below Cement Plant | Downstream of site |
|---|-----------|-------------------------|--------------------|--------------------|
| Selenium Concentration (average – µg/L) | 7.2       | 62                      | 24                 | 9.9                |

Charleston Road (2003)- 1 mile before SF Bay  
**2.9 µg/L**

- Coyote Creek (1997) = 1.2 µg/L
- Guadalupe Creek (1997) = 2.7 µg/L



# Selenium

- What are the Human Health Effects of Excessive Selenium?
- Drinking Water Standard – 50  $\mu\text{g}$  /L (EPA)
- An early toxic effect of selenium is on endocrine function, particularly on the synthesis of thyroid hormones following dietary exposure of around 300 micrograms Se/d, and on the metabolism of growth hormone and insulin-like growth factor-1
- Other adverse effects of selenium exposure can be the impairment of natural killer cells activity and at higher levels, hepatotoxicity.
- Dermatologic effects, such as nail and hair loss and dermatitis, occur after exposure to high levels of environmental selenium.

(Source: . Department of Hygiene, Microbiology and Biostatistics, University of Modena and Reggio Emilia, Italy).

# Buttressing – Factor of Safety

- Is Factor of Safety used for Reclamation Adequate?
- Factor of Safety – conservative calculation of projected stability.
- If  $FOS \geq 1.0$  –design adequate.
- If  $FOS \geq 1.25$  = 25% above standard.
- FOS for reclaimed above 1.25 static, 1.0 psuedo static

# Scenic Easement

- Why is scenic easement not included in Plan?
- 1972 –Easement to maintain ridgeline
- 1987 and 2001 – landslides lower ridge.
- 2002 – Studies to restore ridgeline
  - Conclusion – restoration - significant environmental cost
  - Place fill to build up Ridgeline – greater instability
  - Work to restore – greater visual impact
- Rec. Plan – Lay back landslide area.
- Greater Stability – FOS from 0.8 to 1.57



# EMSA - Violations

- Why did County allow past (EMSA) violations?
- 2008 – Violation Issued to Mine Operator for placing overburden in EMSA.
- Operator – inability to continue mining w/o more storage.
- Agreement– maintain schedule to adopt Reclamation Plan - abate violation

# Selenium Treatment – Costs

- How much (for Selenium Treatment) is too much?
- EIR Conclusion –Reclamation restores water quality
- 

**Basin Standard**  
**5 µg/L**

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# Selenium Treatment - Costs

- During Reclamation – could exacerbate selenium.
- CH2M Hill Study – Treatment Options
  - Need water management study, additional study
  - Cost - \$33 million to \$127 million construction
  - \$6.5 million/yr. operations (\$100 million total)
- Uncertainty of treatment- further studies needed
- Once studies completed, costs known – future determination of feasibility - Planning Commission

# Water Quality Monitoring

- Is there sufficient water quality monitoring?
- Groundwater emergence from Pit following Reclamation – 14 years.
- Requirement to monitor 5 years to demonstrate compliance with standards - before reclamation complete.



# Can PC modify the Rec. Plan?

- Reclamation Plan / SMARA
  - Rec. Plan substantially meet SMARA standards
  - If PC finds does not substantially meet – direct change
- EIR Alternatives –
  - EIR evaluated three alternatives, project is environmentally superior.
  - If new alternative
    - Feasible
    - Meet Objectives / SMARA
    - Reduce Significant Impacts

# Other Key Issues

- Groundwater
  - Quarry – Bedrock Bowl – low permeability
  - Primary Recharge Zone – 2 miles from site
  - Closest groundwater wells – 4 miles from site
  - SCVWD data (1973 to 2007)-
    - 359 wells in the sampled for selenium
    - 1 sample in 1 well exceeded the Maximum Contaminant Level (MCL ) for selenium
  - Reclamation of Site will reduce selenium in groundwater & surface water.

# Other Key Issues

- Significant and Unavoidable impacts
  - Impacts from Reclamation – 22 significant impacts
  - All mitigated except following areas
    - Visual impacts during reclamation
    - Adverse impacts to historic resources
    - Interim selenium concentrations in runoff into Permanente Creek during reclamation (Water Quality and Biological impacts)
- Significant and Unavoidable impacts-
  - No feasible mitigation or alternatives
  - Mitigation only partially reduces impact

# Statement of Overriding Considerations

- Economic, social and other benefits of the Project outweigh the environmental impacts.
  - o Better protects the public health, safety, and welfare.
  - o Provides financial assurances in the event the Applicant is incapable of performing reclamation.
  - o Continues local supplies of construction materials and minimizes of adverse effects of importing construction materials.
  - o Local retention of economic and fiscal benefits of the Quarry.
  - o Preservation of local jobs.

# Supplemental Packet

- Resolution
- Conditions of Approval
- Mitigation Monitoring & Reporting Program
- Statement of Overriding Considerations
- Supplemental Correspondence

# Conclusion – PC Hearing

- Reclamation Plan
  - Substantially meet SMARA standards
  - Limitations of review
- Environmental Impact Report
  - CEQA compliance - adequate disclosure
  - all significant impacts mitigated or infeasible to mitigate
  - benefits of project outweigh environmental impacts

# Actions to be Taken

1. Certification of EIR
2. Adoption of the Mitigation Monitoring and Reporting Program
3. Make CEQA Findings – Statement of Overriding Considerations
4. Reclamation Plan

