APPENDIX H:

2013 STORMWATER AND EROSION CONTROL ANNUAL REPORT

Permanente Quarry
Stormwater and Erosion Control Annual Report 2013

LEHIGH PERMANENTE QUARRY
CUPERTINO, SANTA CLARA COUNTY, CALIFORNIA

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Date:
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EXECUTIVE SUMMARY

The purpose of this report is to document the stormwater and erosion control actions that have been completed to comply with the requirements of the Conditions of Approvals for the Permanente Quarry Reclamation Plan Amendment and Conditions of Approval.

Between December, 2012 and August, 2013, WRA, Inc. (WRA) oversaw the completion of several actions that fulfilled various Conditions of Approval at the Quarry. This report lists those actions completed and previously reported to Santa Clara County (the County) and describes those actions that have been initiated, and/or completed since the last submittal (November 29, 2012). Actions include replacement of limestone check-dams with non-limestone materials, Permanente Creek Reclamation Area (PCRA) erosion control actions, diversions of water runoff to containment basins, lining drainages with non-limestone materials, and installation of topsoil pile erosion controls. Further actions are ongoing as dictated by the Reclamation Plan Amendment and the Conditions of Approval.

1.0 INTRODUCTION

The Reclamation Plan Amendment (RPA) for Lehigh Permanente Quarry (the Quarry) located at 24001 Stevens Creek Boulevard, in unincorporated Santa Clara County, amends and supersedes the previously approved 1985 Permanente Quarry Reclamation Plan for a 20-year period to satisfy the reclamation requirements of the Surface Mining and Reclamation Act of 1975. The RPA encompasses 1,238.7 acres within the Mine Operator's 3,510-acre ownership.

Reclamation activities will be implemented in three phases over an estimated 20-year period. The Quarry is currently in Phase I which involves reclamation activities in the East Material Storage Area (EMSA) and the PCRA and continuation of existing mining activities in the Western Material Storage Area (WMSA) and Quarry Pit over approximately the next nine years.

2.0 PURPOSE

The purpose of this Compliance Actions Report is to document the stormwater and erosion control actions that have been completed to comply with the requirements of the Conditions of Approval (COAs), Approved by Planning Commission, June 7, 2012 and modified by the Board of Supervisors on June 26, 2012. This Compliance Actions Report includes those actions that have been ongoing or completed since the last submittal and refer to past actions submitted in previous reports.

3.0 REPORTING REQUIREMENTS

Generally, the COAs call for an annual report to be completed by the County by December 1 of the year and for Lehigh to present all data and compliance actions to the County by October 1. It was determined through meetings and telephone calls between the County, Lehigh Permanente staff, and WRA staff that the County would not require an annual report in 2012 and that all actions undertaken in 2012 would be reported in this 2013 annual report. This decision was made because the RPA was approved in July of 2012 and only activities occurring prior to the rainy season would have been accomplished and reported.

For the 2013 report, the County requested that the required information be submitted as early as possible due to logistical constraints. Lehigh wishes to present a report of the stormwater and erosion control actions carried out to date for the COAs. This report will serve to provide a record to the County and track the reclamation actions that have been completed to date.

4.0 COMPLIANCE ACTIONS

4.1 Compliance Actions Reported in Previous Submittals

Stormwater and erosion control actions taken to address COA compliance began immediately after RPA finalization in June 2012 and continue to the present. On November 29, 2012, Lehigh presented a report (Permanente Quarry Reclamation Plan Amendment and Conditions of Approval – Fall 2012 Compliance Actions; Appendix C) describing the various actions that took place prior to the report's submission. Actions included: the replacement of haul road check-dams, PCRA erosion control actions, diversions of water runoff to detention basins, the lining of drainages with non-limestone materials, and the installation of erosion control measures at topsoil pile erosion.

Any actions which required monitoring and maintenance since November 29, 2012 are addressed in section 4.2. Actions which have been previously reported and have not increased in effort since they were last reported are not described in this report. Other actions which were reported in the 2012 report may be characterized as part of the larger Annual Report. For example, mine operator trainings per COA 11, 78.d, and 78.m are ongoing at the level of effort previously reported and are included in other sections of the Annual Report.

4.2 Compliance Actions Completed After Submittal Number 6 (November 29, 2012)

Actions to complete or advance the fulfillments of the COAs since Submittal Number 6 (November 29, 2012) are described below. Each action is linked with a specific COA, and photographs and other evidence of some of the actions taken are provided. Appendix A is composed of a series of maps of the RPA areas, including the PCRA subareas, and shows the location of each reclamation action. Appendix B is composed of various photographs taken of the reclamation actions throughout the site and is cross-referenced with Appendix A.

4.2.1 PCRA Erosion Control Actions

Per COA 38 and consistent with the RPA, a schedule describing the implementation actions to control sedimentation, remove limestone boulders, and stabilize slopes within the PCRA in the Summer and Fall of 2012 was submitted to the County in Submittal Number 1 (July 26, 2012). The compliance actions and their amendment, if applicable, that have been completed since November 29, 2012, are described below.

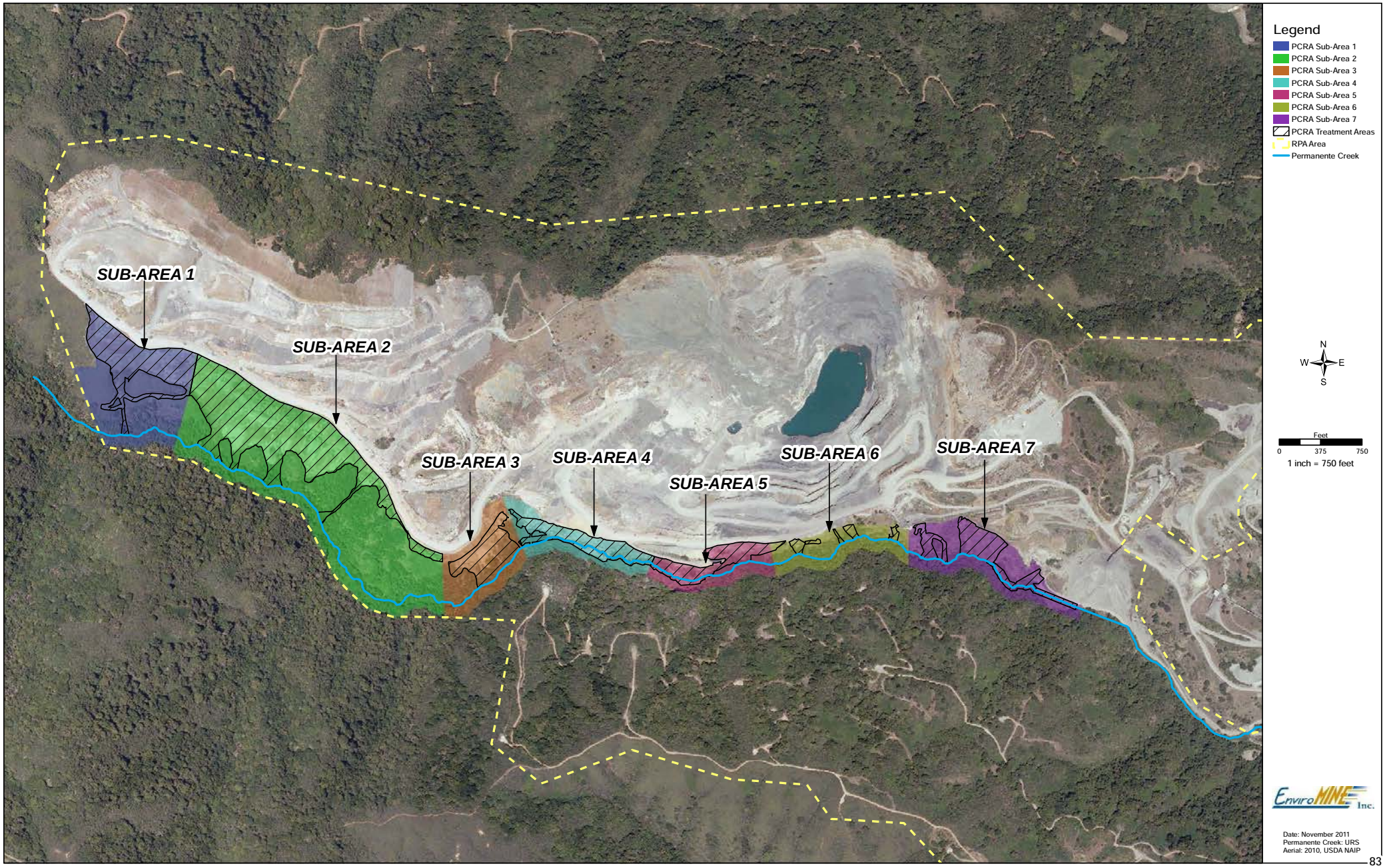
COA 78.b and the requirements outlined in Section 3.19 of the RPA call for the reclamation treatment of historic mining disturbance adjacent to Permanente Creek, described as the PCRA. The PCRA includes approximately 49.2 acres of mining related disturbance to be reclaimed. For mapping and illustrative purposes, the PCRA is divided into seven different subareas (numbered 1-7) with customized reclamation treatments for each subarea (see Figure 1).

The County has requested that Lehigh amend its reclamation plan to include newly disturbed land and re-disturbed land in the PCRA to ensure that appropriate erosion controls are in place to protect water quality in Permanente Creek. These actions emphasize erosion control and revegetation in response to the County's identification of surface erosion in portions of the PCRA. These actions have been designed to protect areas where soil disturbance has stabilized over time.

The RPA calls for erosion control actions in all the PCRA treatment areas (See Figure 1) within Phase 1, and Lehigh has begun erosion control assessments and work in all subareas. The first year of the approximately nine-year Phase 1 was 2012. Prior to November 29, 2012, erosion control actions were completed in subareas 4-7, and were started in Subareas 1 and 2. Since November 29, 2012, erosion control actions were completed in subareas 1-4, and all previous erosion controls were inspected for deficiencies and corrected as necessary.

While erosion control installation methods were based on established industry standards, the steep topography and rocky terrain required the installation methods be amended to suit the project area. For instance, rather than wooden stakes as specified in the methods, 10-inch pins with washers were used to stake straw wattles down because the wooden stakes splintered during installation in the rocky substrate.

Figure 1. Permanente Creek Restoration Area, Subareas, and Treatment Areas.



Materials used in the installations followed the recommendations in the RPA and COA 78n. No plastic monofilament was used in installations. The materials used included:

- "Bionet" burlap covered straw wattles.
- Weed-free straw bales
- All wattles used burlap encasements rather than monofilament netting

Wire-backed silt fencing was installed in Subareas 2 and 3 with the wire side facing uphill to catch any rolling rocks and prevent impacts to the fence. The silt fencing was installed with t-posts approximately every 8 feet with OSHA- approved safety caps installed on the tops of the t-stakes. Where necessary, the silt fencing was not continuous, but overlapped as appropriate for the landscape features and/or to allow wildlife passage while retaining sediments.

Hydroseeding was specified by the RPA to be completed in all subareas, but because some portions of the subareas are rich with vegetation, there was no need. Based on hydroseeding results for subareas 1, 2, 4, 5, and 6 from last year, County-appointed inspector Kit Custis determined that hydroseeding would be no more effective than the existing vegetation on hillsides, unless they were recently disturbed, in all PCRA Subareas. Because no PCRA subareas were recently disturbed, hydroseeding of the PCRA treatment subareas is not expected to be suitable this year.

Per COA 78.o, all stormwater, erosion, and sediment control BMPs were installed and inspected under the direction of either a landscape architect or a certified erosion control specialist.

The following activities have been completed to date and are provided here for each subarea:

Subarea 1

No erosion control measures were deemed necessary in Subarea 1 (see Appendix A, Figure 1a). Nearly all of Subarea 1 is located uphill of the existing access road. The far upper portion is mostly vegetated and relatively flat, and therefore has minimal erosion potential. All of the steeper parts of the subarea above the access road are heavily vegetated, and if erosion occurs, any material would be protected by the vegetation or by the access road berm downhill from those areas. A portion of Subarea 1 extends below the access road, and adequate erosion protection controls (i.e., rock berms) are in place from past efforts. The backgrounds of Photo Points 1 and 3 in Appendix B; Appendix A, Figure 1a) show the heavily vegetated slopes in Subarea 1.

Subarea 2

Subarea 2 can be divided into the portions above and below the access road. The portion above the access road (and below the haul road) is protected by the existing berm on the downhill side of the access road, although the berm had been breached in several locations. The breaches were repaired using staked-down straw bales with wattles wrapped around them (Appendix B, Photo Points 1, 2 and 3, Appendix A, Figure 1b). The access road berm along with existing vegetation is sufficient for preventing material from eroding into Permanente Creek from upslope of the access road.

The area below the access road is steep, loose, and sparsely vegetated. Because no topsoil exists, hydroseeding would likely be ineffective on these slopes. Wire-backed silt fences were

installed along the entire length of the lower Subarea 2 in a similar fashion as was carried out in Subareas 4-6 in 2012 to prevent material from entering Permanente Creek. The silt fence was installed at, or above, the toe of the slope along the uphill border of the riparian vegetation. It was installed in overlapping lengths as necessary to accommodate the heterogeneous topography and wildlife movement corridors. Photo Points 4-7 of Appendix B and Figure 1b of Appendix A show the overlapped silt fences in Subarea 2.

In 2012 all portions of Subarea 2 above the access road were hydroseeded with the best available seed mix based on the latest vegetation test plot data. No appreciable difference between the hydroseeded areas above the access road and those areas which were not hydroseeded below the access road was apparent. Additionally, any portion of the slope that has sufficient topsoil is already fully vegetated. Based on conversations with County-appointed inspector Kit Custis during his site inspections, hydroseeding in Subarea 2 was not warranted.

Subarea 3

The Treatment Areas of PCRA Subarea 3 are mostly located in extremely steep terrain without feasible access. The upper portions of Subarea 3 within approximately 100 feet of the top of the haul road berm are less steep. Wire-backed silt fences were installed as far down the slope as was safe and feasible to capture any materials originating from uphill. However, the lower portions of Subarea 3 were deemed unsafe to access, and the Mine Safety and Health Administration (MSHA) will not allow erosion control activity to take place there. During site inspections, Kit Custis agreed that the steeper areas were inaccessible. The lowest accessible portions of Subarea 3 are heavily vegetated with a band of riparian vegetation, so it was deemed more effective to avoid this protective vegetation since it is more effective than any protection that would be installed otherwise. Photo Points 15-16 of Appendix B and Figure 1c and 1d of Appendix A show the Subarea 3 silt fence installations.

Subarea 4

Erosion control was placed throughout much of Subarea 4 prior to November 29, 2012. All areas have been inspected regularly and repaired as necessary. As of August 16, 2013, these were in good condition and functioning properly. Additional erosion control measures in Subarea 4 were completed in 2013 after 100-150 feet of wire-backed silt fence was installed in the far west end. Photo Points 17-18 of Appendix B and Figure 1d of Appendix A show the 2012 straw wattles and silt fencing in Subarea 4.

Subareas 5 and 6

No new erosion control measures were implemented in Subareas 5-6. As of August 16, 2013, erosion control measures installed in the 2012 effort were in good condition and functioning properly after regular inspections and repair where necessary. Photo Points 19-22 of Appendix B and Figure 1e and 1f of Appendix A show Subareas 5 and 6.

Subarea 7

The PCRA Subarea 7 treatment areas can be divided into three portions (Figure 1): eastern, middle, and western. The eastern portion is composed of very steep hillsides adjacent to and below the existing crusher. This area is unsafe for access and moderately covered with vegetation. Any access to this portion would result in rocks falling downhill and further destabilizing the slopes, so any erosion controls would likely do more damage than leaving the area as is. The middle portion of Subarea 7 is almost completely covered in thick vegetation

composed mainly of native buckwheat. Any activity in this area would likely disturb the existing vegetation and result in a more erosive hillside. The eastern portion of the PCRA Subarea 7 treatment areas adjacent to and below Pond 13 is protected by a haul road berm which acts as a barrier to any materials entering Permanente Creek. Figures 1g and 1g of Appendix A show Subarea 7.

Overall, the PCRA Subarea 7 treatment areas were determined to have best possible erosion protection, and any further erosion controls should be aborted. Regular inspections of this area will be completed to assure erosion does not occur.

4.2.2 Non-Limestone Check Dams and Berms

Per COA 79.g, all 110 limestone-based check dams along the quarry and in the WMSA, as well as approximately 15 limestone-based check dams near the rock plant, were removed and replaced with non-limestone materials. Greenstone rock and boulders from the Permanente Quarry overburden were used for this task. Limestone from the preexisting check dams was removed for processing. These actions were completed in 2012 and included in Submittal Number 6, but they require regular inspection to ensure they are functioning properly. In 2013, the check dams and berms were cleaned out as often as was required to maintain adequate capacity. Photo Points 8-10 and 23 in Appendix B show check dams and berms along the main haul road.

4.2.3 Compliance Inspection Deficiency Actions

On February 28, 2013, Kit Custis, County-appointed inspector, performed a site inspection and created a list of deficiencies to be addressed by Lehigh. Each deficiency is linked with a specific COA, and photographs and other evidence of corrective actions taken are provided.

EMSA Organics Pile Sign

The sign that states “RECLAMATION TOPSOIL DO NOT DISTURB” at the EMSA organics pile had been damaged, but it was replaced. Photo Point 30 of Appendix B and Figure 1a of Appendix A show the new sign.

WMSA Topsoil Stockpile Erosion Controls

Repairs were required, and made, at the WMSA upper topsoil stockpile silt. Photo Points 11-12 of Appendix B and Figure 1a of Appendix A show the repaired fence.

A new soil stockpile was placed in the WMSA to receive appropriate materials from the East Wall Expansion Project in the quarry. The new WMSA topsoil stockpile is located downslope from and approximately 150 feet east of the upper WMSA soil stockpile. This stockpile is still active and materials are added regularly, though Lehigh expects to stop adding material by October 31, 2013. The stockpile is protected and bermed on all sides except for the lower western end, which is used for access. To assure that soil does not erode from the area, a silt fence with a gate was installed. As long as the topsoil pile remains active, the gate will be necessary to provide access. The bottom of a silt fence is normally buried to provide maximum erosion protection, but because the gated portion cannot be buried, the bottom is, instead, weighted with heavy chains. In addition, a sign stating “RECLAMATION TOPSOIL DO NOT DISTURB” was installed near the topsoil pile. Photo Points 13-14 of Appendix B and Appendix A, Figure 1a show the silt fencing and sign. After the soil stockpile becomes inactive and before

the wet season begins, the top of the soil stockpile will be treated with erosion controls to prevent erosion.

Erosion Control Protection on Access Road in Subarea 2

The berm along the south side of the access road in Subarea 2 had been breached in several locations, and repair was recommended. After evaluating the site, the restoration crew used staked-down, weed-free straw bales with wattles wrapped around them to close any gaps between the existing berm and the straw bales. Photo Points 2-3 of Appendix B and Figure 1b of Appendix A show examples of the bales with surrounding wattles.

Sedimentation Basin Below C-Station

Past mining activities in the Crusher/Support Area resulted in mining fines being stockpiled in the adjacent to C-Station. The fines generated at C-Station were eroding into the drainage below C-Station and into the ditches in the western EMSA. In 2012, Lehigh constructed berms across the bottom of the drainage to prevent the fines from entering the ditches. During the rains of the winter, the berms filled in and overtopped. Large volumes of fines were being mobilized and covering the non-limestone lining of the ditches that was installed in 2012.

To prevent build-up of C-Station fines in downstream ditches Lehigh constructed a series of large sedimentation basins to slow runoff and prevent fines from entering the ditches along the haul road. Three deep, connected sub-basins were built to capture water flow from Ditch A and from the ditches uphill of C-station along the EMSA haul road. The dimensions of each sub-basin ranged from 35 feet to 60 feet across and from 8 feet to 16 feet deep. A final non-limestone berm is located at the downstream end of the siltation basin series to allow settled water to pass into the ditches below. The siltation basins were designed to be excavated regularly and maintain capacity as needed.

Approximately 25 tons of fines material was excavated to build the sedimentation basins was hauled away and dumped into the quarry pit disposal area. Photo Points 24-29 of Appendix B and Figure 2b of Appendix A show the sedimentation basins built below C-Station.

EMSA Drainage Ditches

In the Crusher/Support Area, Ditch A had been eroded so as to allow run-off into the haul road (see Appendix A, Figure 2b). This drainage ditch was cleared and re-worked to maintain control of the water flow that was otherwise flowing down the road edges.

Ditches B and C had been filled with fines originating from C-Station (Appendix A, Figure 3a). These fines were removed from the ditches and hauled away and dumped into the quarry pit disposal area. The ditches were re-graded and lined with non-limestone material sourced from Stevens Creek Quarry.

Ditch C (Appendix A, Figure 3a), downslope of the road leading from the water tank to the catchment basin had been eroded and were in disrepair after the rain event of the last 2012 winter storm. Materials collected in the ditch, causing the ditch berm to overtop. Water then flowed into the haul road, and created a depression where the flow ended. These ditches were reworked, cleaned out, and deepened to maintain control of the water routes to the catchment basin. Where the existing, previously-installed rubber lining was no longer viable, the ditches were relined with non-limestone rock sourced from Stevens Creek Quarry. The catchment basin

leading to the culvert was also cleaned out and reworked to allow flow through the culvert. All materials excavated were hauled away to the quarry pit dump.

Pond 30 Drainage Channel and Outfall

The ditch draining into Pond 30 (Appendix A, Figure 3b) was reworked and relined with non-limestone material in 2012. Water running down the EMSA access road towards the eastern EMSA carried limestone sediment into that ditch and covered the non-limestone material for a reach of approximately 100 feet. During the spring of 2012, this ditch was regraded and lined with non-limestone material sourced from Stevens Creek Quarry. Erosion control materials (straw wattles) were placed at the foot of the boulders lining the ditch to maintain flows and keep the ditch clean of sediments at key points.

The Pond 30 outfall into Permanente Creek was re-lined with non-limestone material.

Photo Points 31-34 of Appendix B show the ditch upstream of Pond 30 and the Pond 30 outfall.

Subarea 7 Water Conveyance

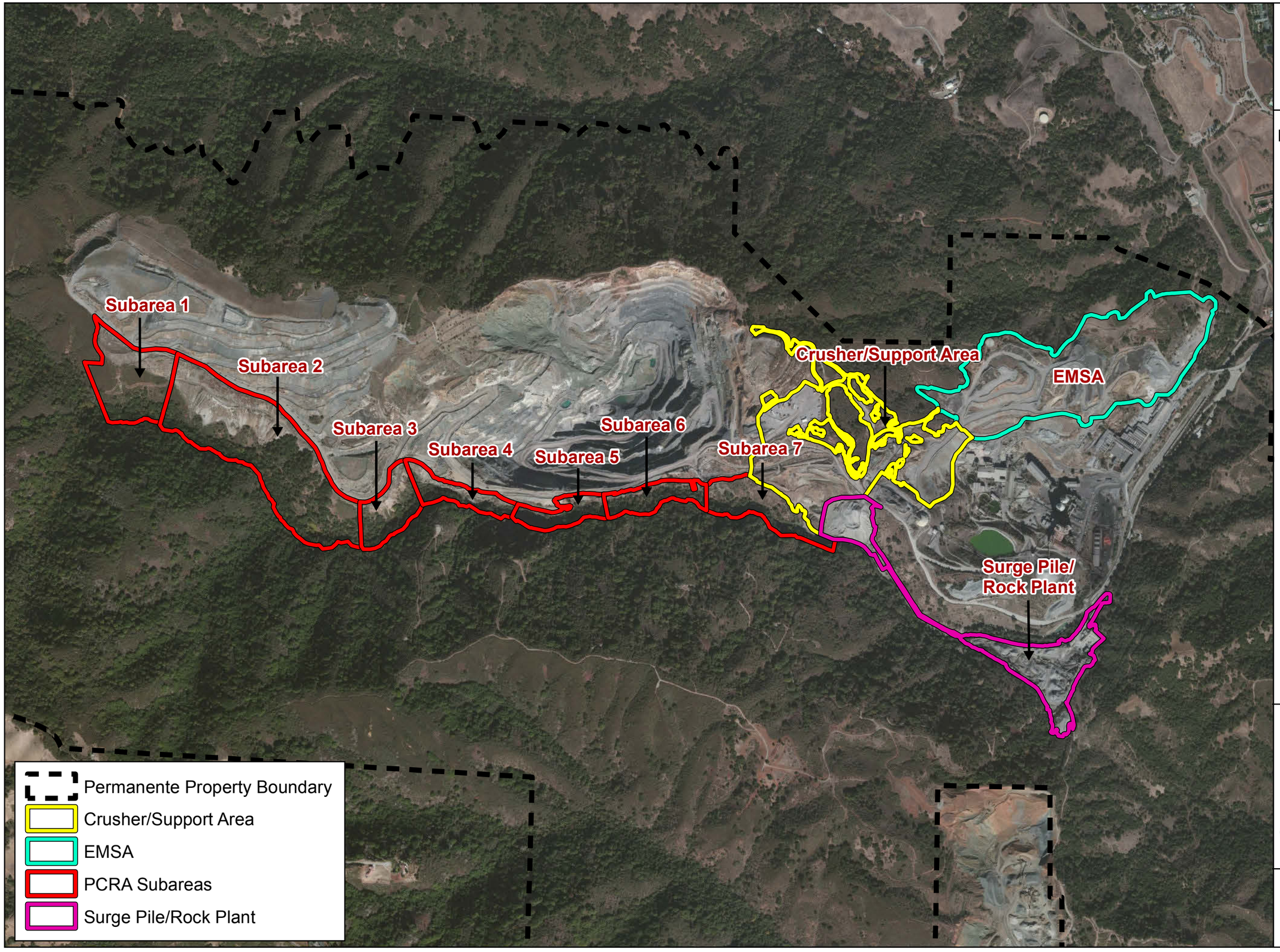
The County appointed inspector, Kit Custis, noted that the existing water flume, which traverses the middle portion of Subarea 7, occasionally conveys and leaks water, which could be a source of erosion. The flume was observed often throughout the year, and it was found that water no longer flows through the flume in appreciable amounts and is, therefore, not a concern.

5.0 SUMMARY

In 2013, Lehigh took many erosion control actions to fulfill and comply with the requirements of the COAs and the RPA. Beginning in 2013, the County requires compliance reports to be submitted annually, and this report represents the first such report. Monitoring will continue to take place, and actions will continue to be implemented in all areas to keep within compliance.

APPENDIX A

PCRA AND EMSA EROSION CONTROL INSTALLATION AND OTHER COA AREAS AND PHOTOGRAPH LOCATION MAPS



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Lehigh Permanente Quarry,
Santa Clara County,
California

Overview

Date: August 2013
Map By: Chirs Zumwalt
Aerial: ESRI Streaming 2010

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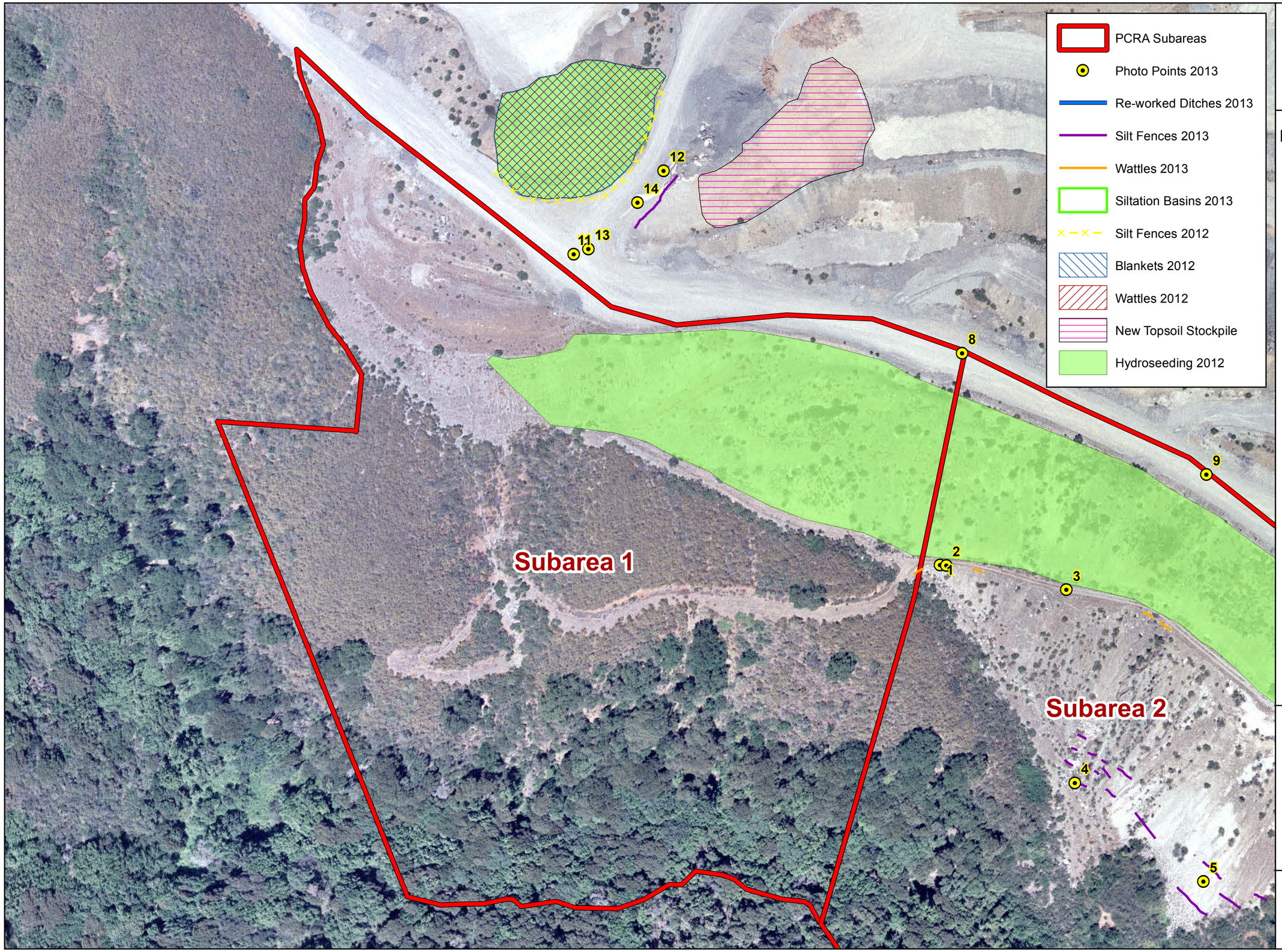

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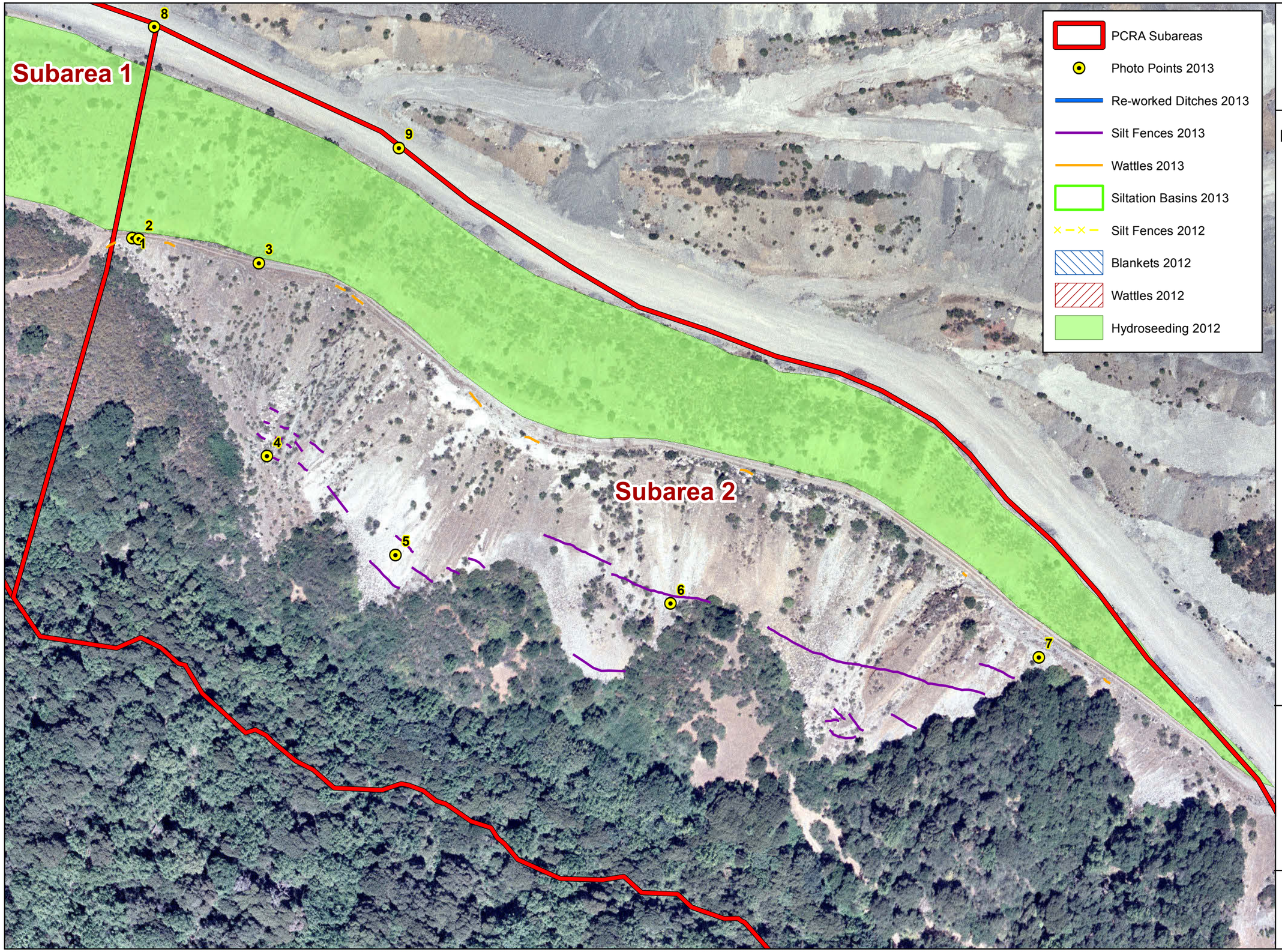
Lehigh Permanente Quarry,
Santa Clara County,
California

Figure 1a.

PCRA
Erosion Control
Installation Areas
and Picture Points

Date: August 213
Map By: Michael Rochelle
Aerial: USGS 2008

Path: L:\Acad 2000 Files\16000\16143-4\ArcMap\2013\BMP_Photo Maps\Fig 1a.mxd



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Lehigh Permanente Quarry,
Santa Clara County,
California

Figure 1b.

PCRA
Erosion Control
Installation Areas
and Picture Points

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Date: August 213
Map By: Michael Rochelle
Aerial: USGS 2008

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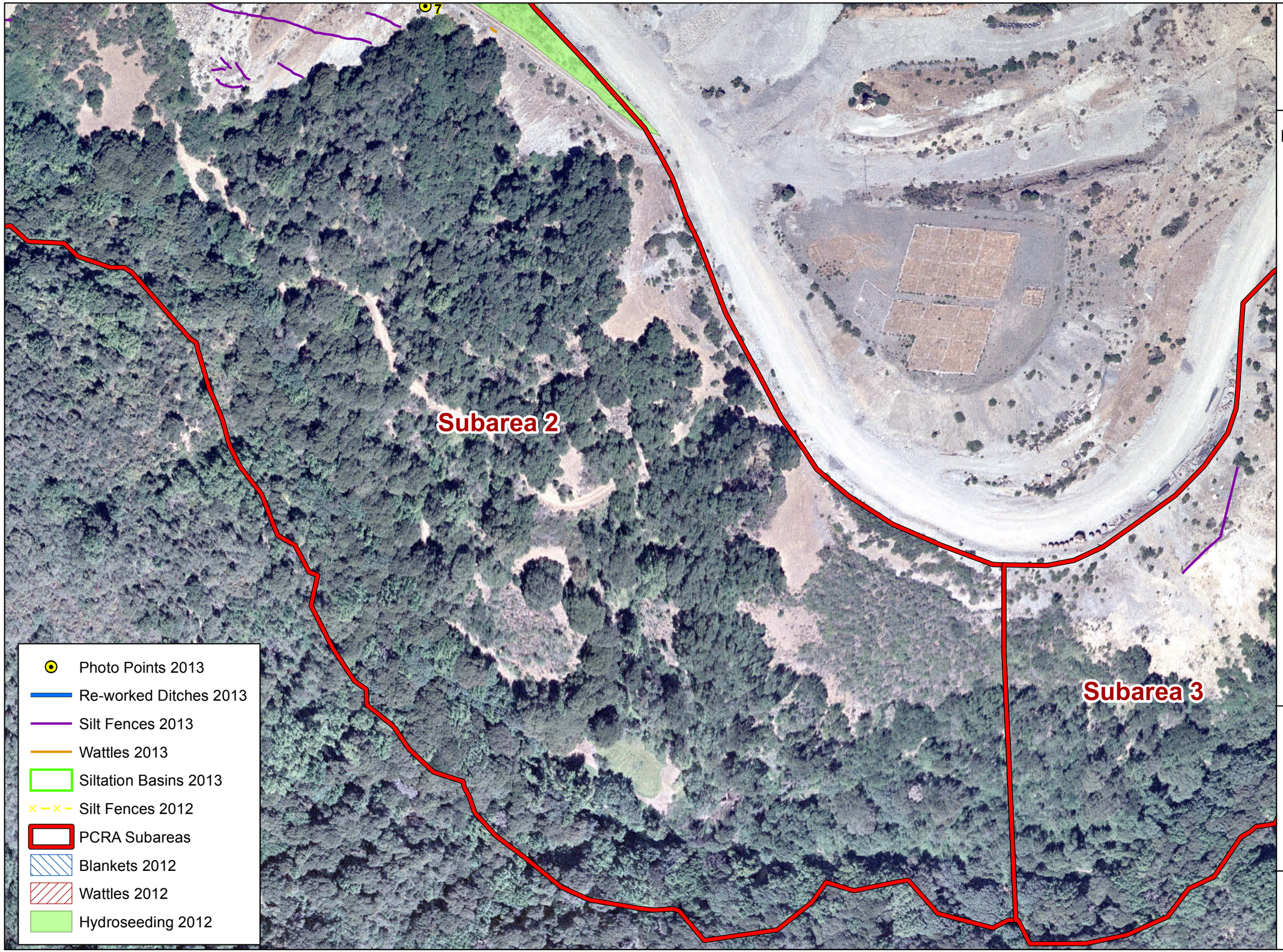

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Lehigh Permanente Quarry,
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California

Figure 1c.

PCRA
Erosion Control
Installation Areas
and Picture Points

Date: August 2013
Map By: Michael Rochelle
Aerial: ESRI Streaming 2010

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Lehigh Permanente Quarry,
Santa Clara County,
California

Figure 1d.

PCRA
Erosion Control
Installation Areas
and Picture Points

Date: August 2013
Map By: Michael Rochelle

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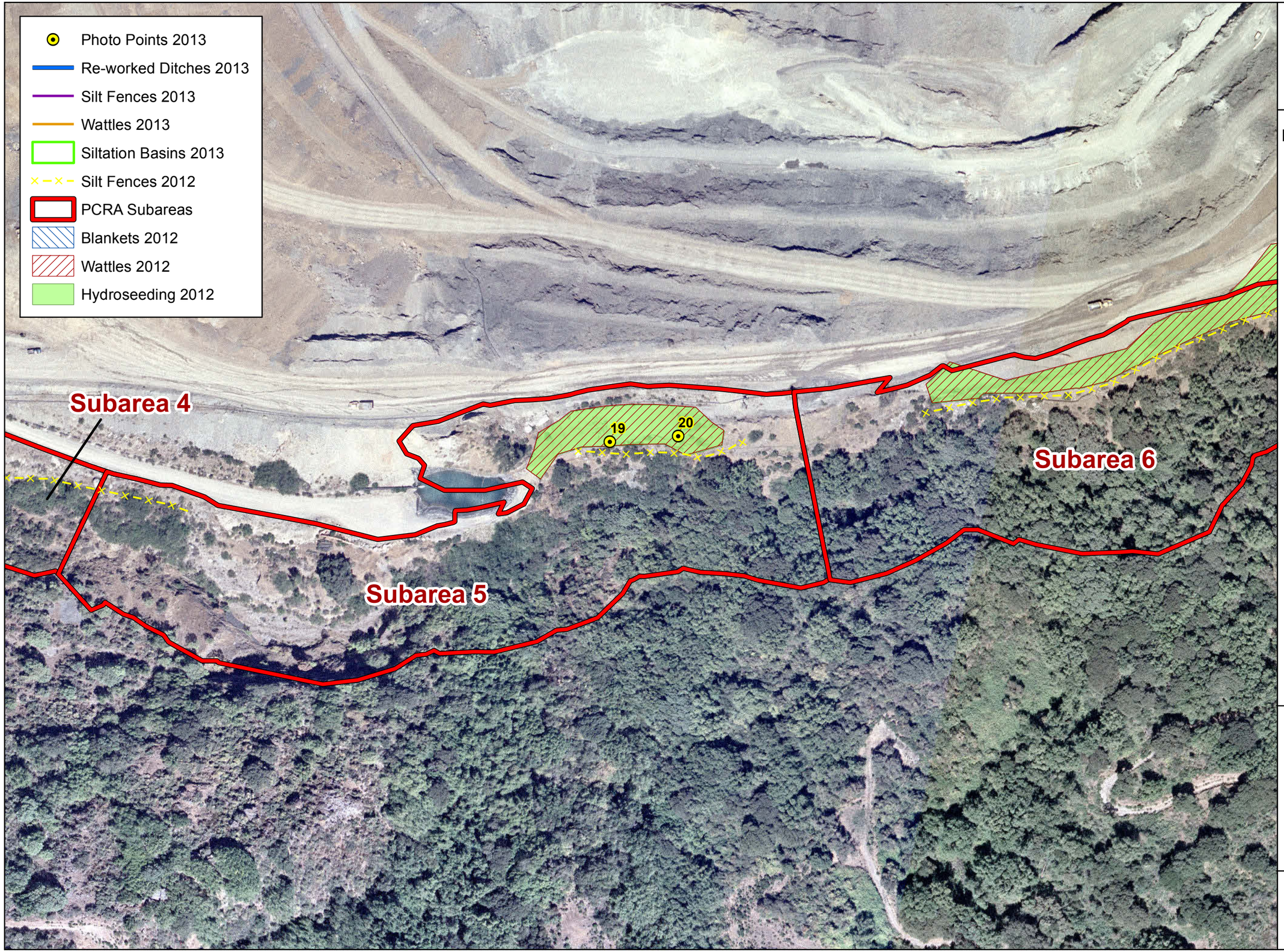

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Lehigh Permanente Quarry,
Santa Clara County,
California

Figure 1e.

PCRA
Erosion Control
Installation Areas
and Picture Points

Date: August 2013
Map By: Michael Rochelle

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Lehigh Permanente Quarry,
Santa Clara County,
California

Figure 1f.

PCRA
Erosion Control
Installation Areas
and Picture Points

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Date: August 2013
Map By: Michael Rochelle

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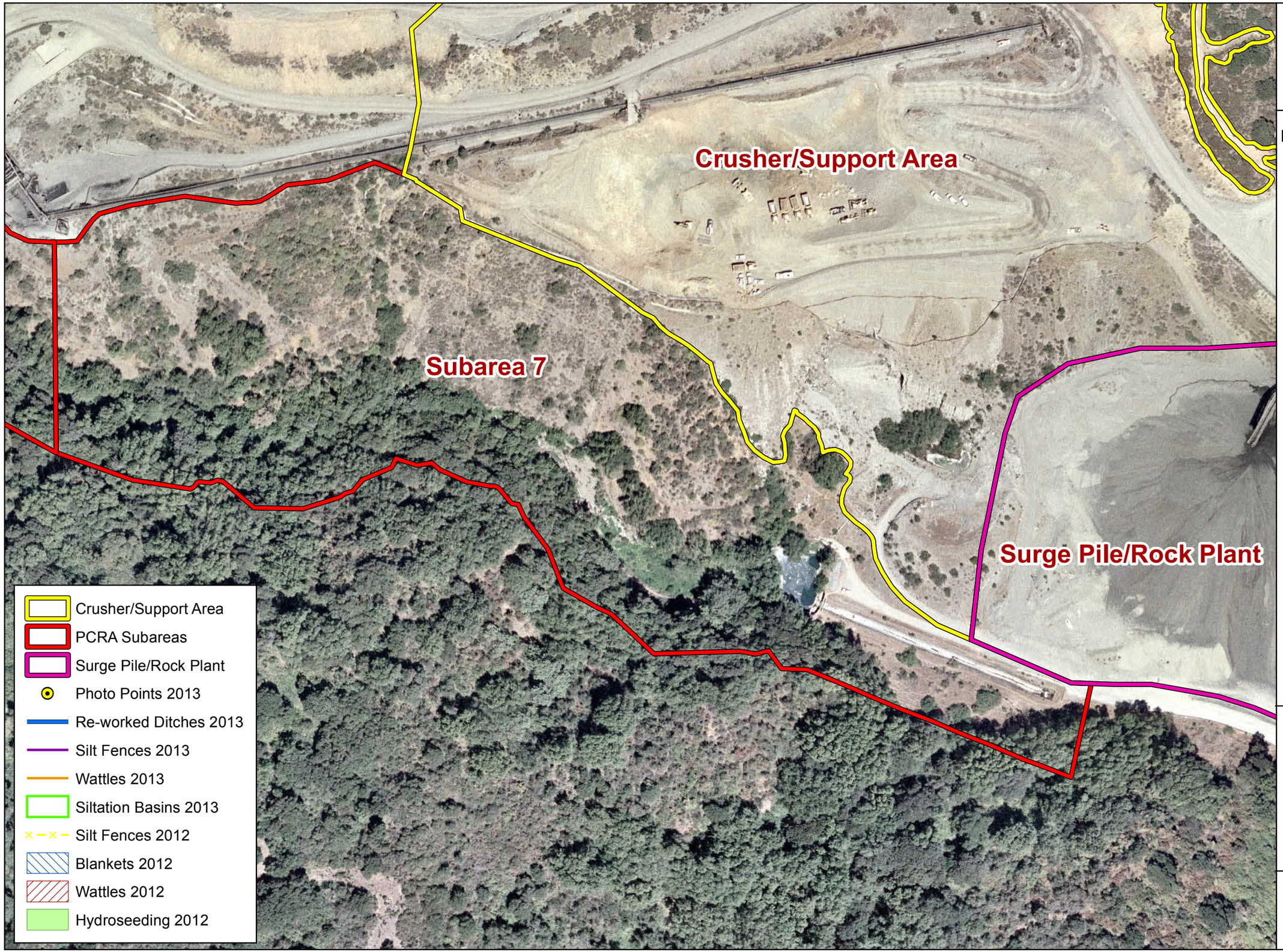

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Lehigh Permanente Quarry,
Santa Clara County,
California

Figure 1g.

PCRA
Erosion Control
Installation Areas
and Picture Points

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Feet

Date: August 2013
Map By: Michael Rochelle

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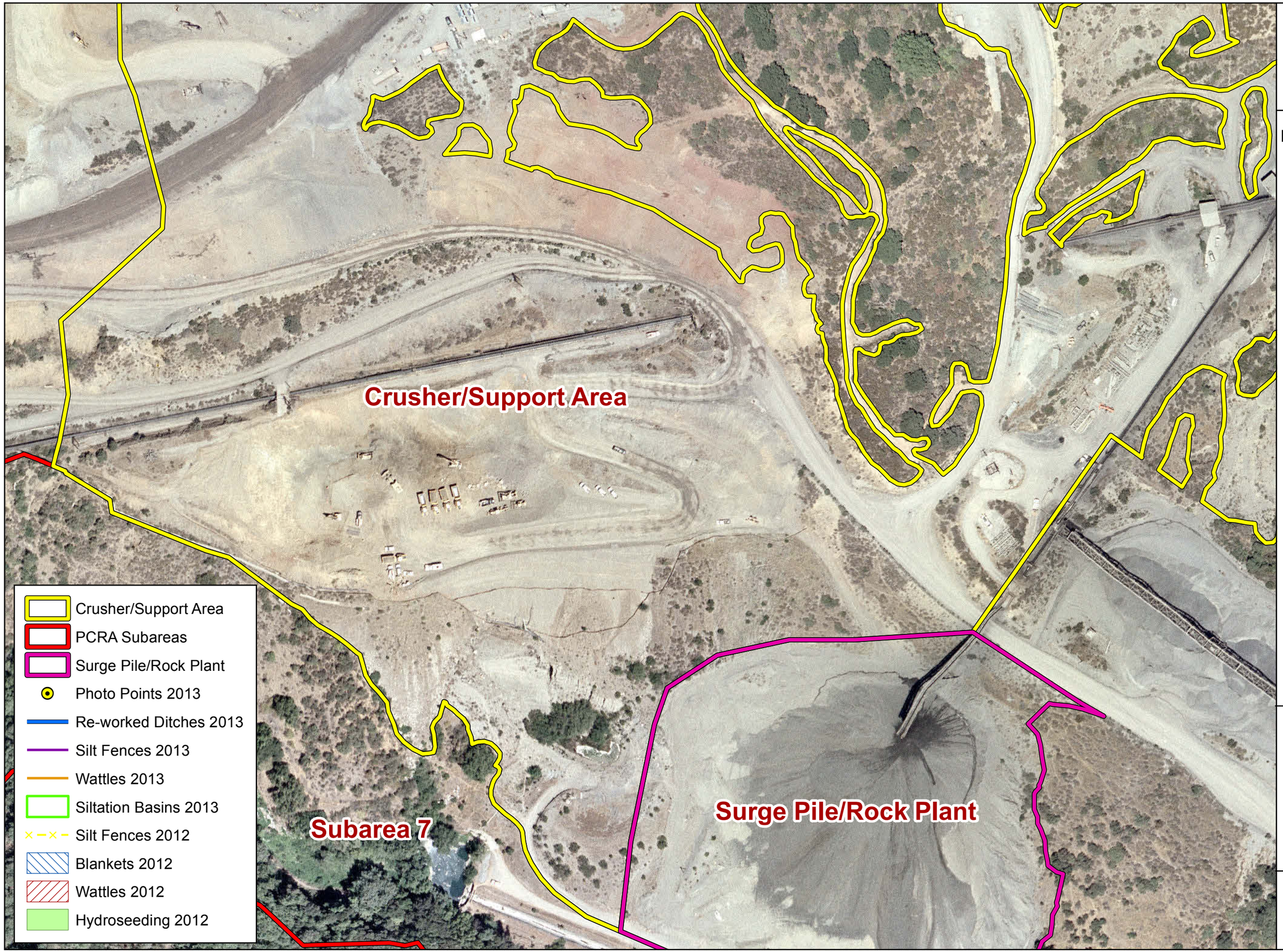

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Lehigh Permanente Quarry,
Santa Clara County,
California

Figure 2a.

PCRA
Erosion Control
Installation Areas
and Picture Points

Date: August 2013
Map By: Michael Rochelle

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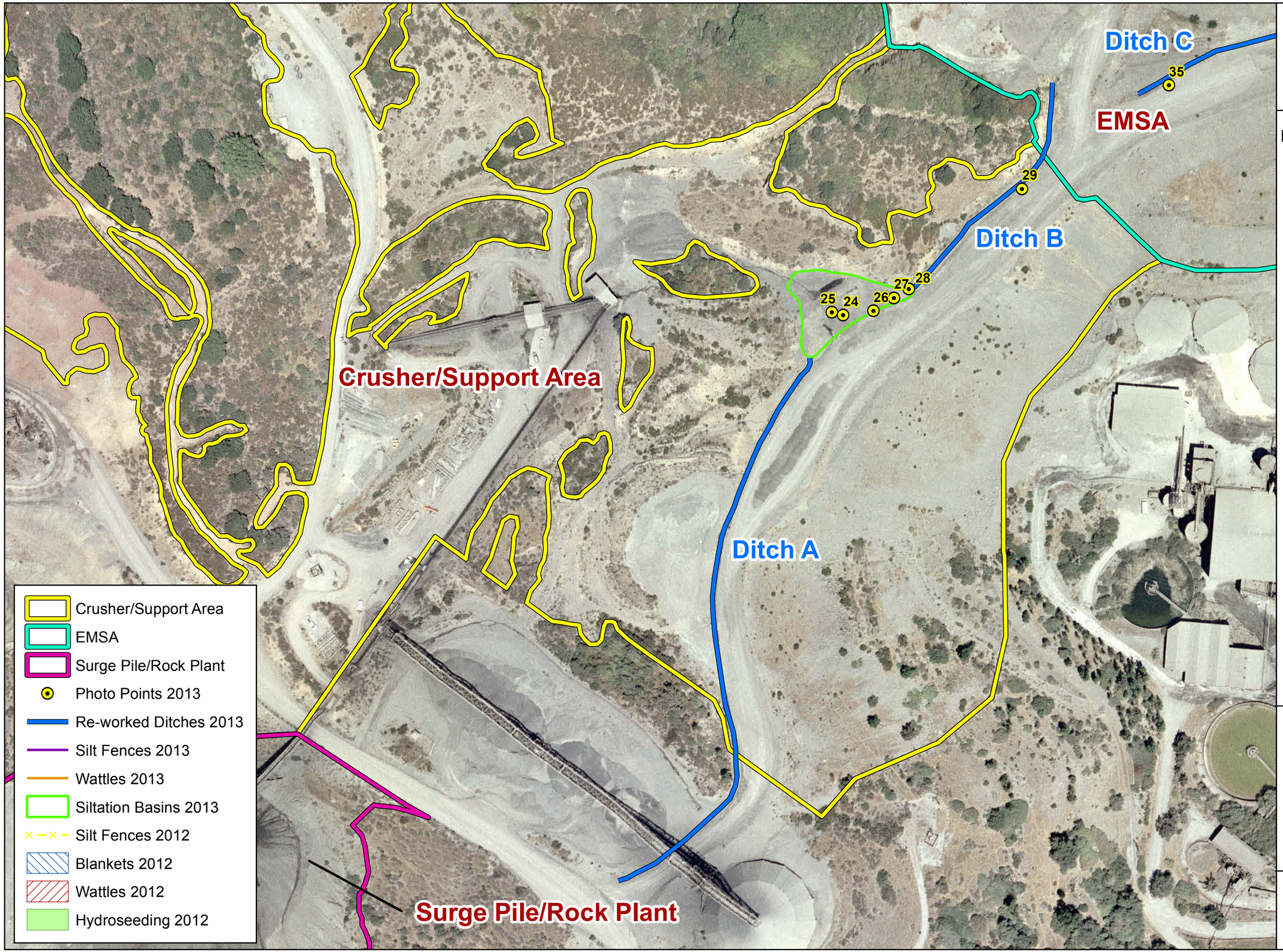

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Lehigh Permanente Quarry,
Santa Clara County,
California

Figure 2b.

PCRA
Erosion Control
Installation Areas
and Picture Points

Date: August 2013
Map By: Michael Rochelle

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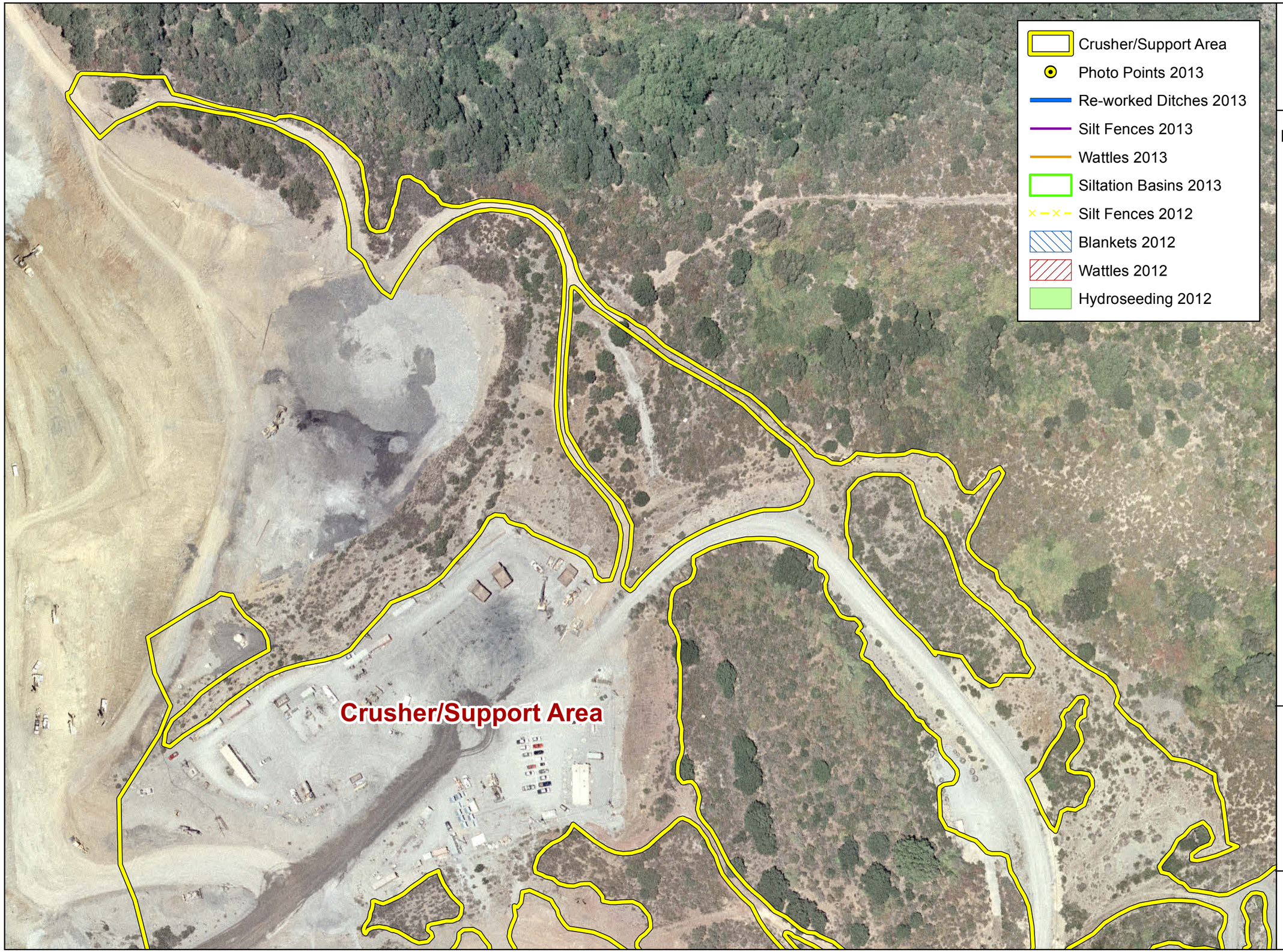

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Lehigh Permanente Quarry,
Santa Clara County,
California

Figure 2c.

PCRA
Erosion Control
Installation Areas
and Picture Points

N
W E
S

0 50 100 200
Feet

Date: August 2013
Map By: Michael Rochelle

Path: L:\Acad 2000 Files\16000\16143-4\ArcMap\2013\BMP_Photo Maps\Fig 2c.mxd

wra
ENVIRONMENTAL CONSULTANTS

Lehigh Permanente Quarry,
Santa Clara County,
California

Figure 3a.

PCRA
Erosion Control
Installation Areas
and Picture Points

N
W E
S

0 50 100 200
Feet

Date: August 2013
Map By: Michael Rochelle

Path: L:\Acad 2000 Files\16000\16143-4\ArcMap\2013\BMP_Photo Maps\Fig 3a.mxd

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ENVIRONMENTAL CONSULTANTS

Lehigh Permanente Quarry,
Santa Clara County,
California

Figure 3b.

PCRA
Erosion Control
Installation Areas
and Picture Points

Date: August 2013
Map By: Michael Rochelle

Path: L:\Acad 2000 Files\16000\16143-4\ArcMap\2013\BMP_Photo Maps\Fig 3b.mxd

wra
ENVIRONMENTAL CONSULTANTS

Lehigh Permanente Quarry,
Santa Clara County,
California

Figure 4a.

PCRA
Erosion Control
Installation Areas
and Picture Points

N
W E
S

0 50 100 200
Feet

Date: August 2013
Map By: Michael Rochelle

Path: L:\Acad 2000 Files\16000\16143-4\ArcMap\2013\BMP_Photo Maps\Fig 4a.mxd

wra
ENVIRONMENTAL CONSULTANTS

Lehigh Permanente Quarry,
Santa Clara County,
California

Figure 4b.

PCRA
Erosion Control
Installation Areas
and Picture Points

Date: August 2013
Map By: Michael Rochelle

Path: L:\Acad 2000 Files\16000\16143-4\ArcMap\2013\BMP_Photo Maps\Fig 4b.mxd

APPENDIX B

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Bottom: Photo 2: Subarea 2 access road erosion controls.

Photographs taken August 16, 2013

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Top: Photo 3: Subarea 2 access road erosion controls.

Bottom: Photo 4: Subarea 2 erosion control protection.

Photographs taken August 16, 2013

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Top: Photo 5: Subarea 2 erosion control protection.

Bottom: Photo 6: Subarea 2 erosion control protection.

Photographs taken August 16, 2013

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Top: Photo 7: Subarea 2 erosion control protection.

Bottom: Photo 8: Check dams and berms on main haul road above Subarea 2.

Photographs taken August 16, 2013

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Top: Photo 9: Check dam on main haul road above Subarea 3.

Bottom: Photo 10: Check dams on main haul road above Subarea 3.

Photographs taken August 16, 2013

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Top: Photo 11: WMSA western soil stockpile with erosion control.

Bottom: Photo 12: WMSA western soil stockpile with erosion control.

Photographs taken August 16, 2013

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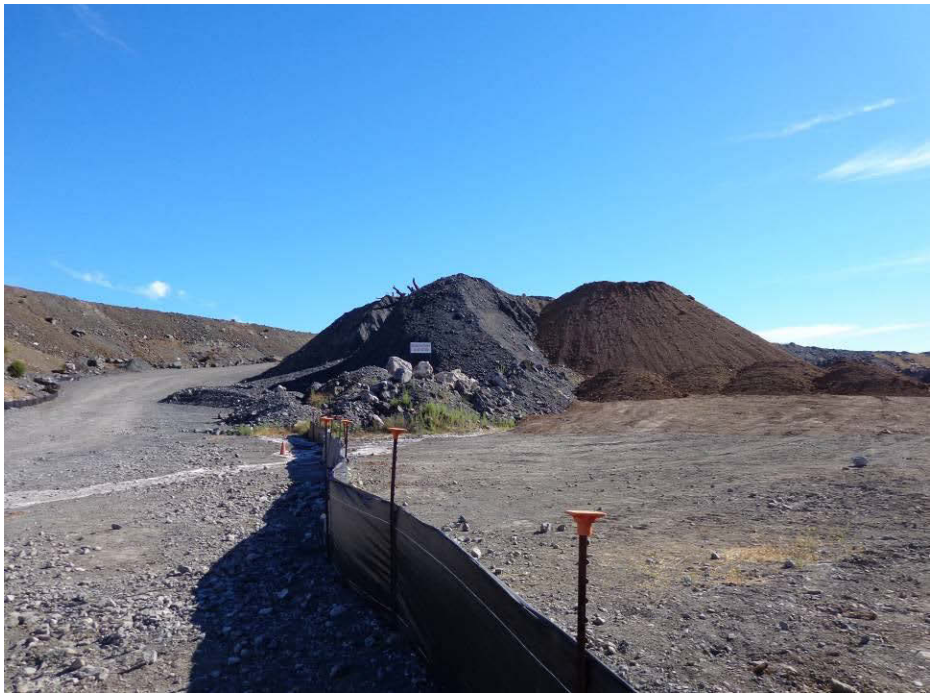

Top: Photo 13: WMSA eastern soil stockpile with erosion controls.

Bottom: Photo 14: WMSA eastern soil stockpile with erosion controls.

Photographs taken August 16, 2013

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Top: Photo 15: erosion controls in Subarea 3, view from above.

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Photographs taken August 16, 2013

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Photographs taken August 16, 2013

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Photographs taken August 16, 2013

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Photographs taken August 16, 2013

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Photographs taken August 16, 2013

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Photographs taken August 16, 2013

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Photographs taken August 16, 2013

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Photographs taken August 16, 2013

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Photographs taken August 16, 2013

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Photographs taken August 16, 2013

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Photograph taken May 30, 2013

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APPENDIX C

PERMANENTE QUARRY RECLAMATION PLAN AMENDMENT AND CONDITIONS OF APPROVAL – FALL 2012 COMPLIANCE ACTIONS

Permanente Quarry Reclamation Plan Amendment and Conditions of Approval - Fall 2012 Compliance Actions

LEHIGH PERMANENTE QUARRY
CUPERTINO, SANTA CLARA COUNTY, CALIFORNIA

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EXECUTIVE SUMMARY

The purpose of this report is to document the various actions that have been completed to comply with the requirements of the Conditions of Approvals for the Permanente Quarry Reclamation Plan Amendment and Conditions of Approval.

Between July and November, 2012, WRA, Inc. (WRA) oversaw the completion of several actions that fulfilled various Conditions of Approval at the Quarry. This report lists those actions completed and previously reported to the County and describes those actions that have been initiated, and/or completed since the last submittal (October 1, 2005). Actions include Replacement of limestone check dams with non-limestone materials, Permanente Creek Restoration Area erosion control actions, diversions of water runoff to basins, lining drainages with non-limestone materials, and installation of topsoil pile erosion controls. Further actions are ongoing as dictated by the Restoration Plan Amendment and the Conditions of Approval.

1.0 INTRODUCTION

The Reclamation Plan Amendment (RPA) for Lehigh Permanente Quarry, located at 24001 Stevens Creek Boulevard, in unincorporated Santa Clara County, amends and supersedes the previously approved 1985 Permanente Quarry Reclamation Plan for a 20-year period to satisfy the reclamation requirements of the Surface Mining and Reclamation Act of 1975. The RPA encompasses 1,238.7 acres within the Mine Operator's 3,510-acre ownership.

Reclamation activities will be implemented in three phases over an estimated 20-year period. The Quarry is currently in Phase I and involves reclamation activities in the East Material Storage Area (EMSA) and the Permanente Creek Reclamation Area (PCRA) and a continuation of existing mining activities in the East Material Storage Area (WMSA) and Quarry Pit over approximately the next nine years.

2.0 PURPOSE

The purpose of this Compliance Actions Report is to document the various actions that have been completed to comply with the requirements of the Conditions of Approval (COA) including those that have been reported in previous submittals and those that have been ongoing or completed since the last submittal.

3.0 REPORTING REQUIREMENTS

Generally, the COA call for an annual report to be completed and submitted to the County by December 1 of the year. It was determined through meetings and telephone calls between the County and Lehigh Permanente staff and WRA staff that the County would not require an annual report in 2012 and that all actions undertaken in 2012 would be reported in the 2013 annual report. The reasoning behind this was that the RPA was only approved in July of 2012 and only those activities occurring prior to the rainy season would be accomplished and reported.

Although there is no report required at this time by the County or through the various regulatory instruments (i.e., COA, EIR, or MMND), Lehigh wishes to present a report of the actions carried out to date for the COAs. This report will help to track the actions that have been completed, provide a record, and inform the County to date as a courtesy.

4.0 COMPLIANCE ACTIONS

4.1 Compliance Actions Reported in Previous Submittals

The following compliance actions have already been completed or were ongoing actions that were previously submitted to the County. We list these actions as they were submitted through the various required deadlines as listed in the Conditions of Approval:

Submittal Number 1 (July 26, 2012):

- Schedule of implementation for boulder removals and erosion control implementation pursuant to COA 38;

- Copy of monthly training topic directive regarding training to satisfy COA 54;
- Geotechnical certification for Reclamation Plan pursuant to COA 69; and
- Evidence of signage pursuant to COA 89.

Submittal Number 2 (July 31, 2012):

- Evidence of submittal of a revised FACE per COA 8 consisting of email correspondence between Gary Rudholm, Santa Clara County Planner, and Marvin Howell, Lehigh, in addition to an updated FACE letter from Sean Hungerford, HTHJ Law, to Christiana Tiedemann, California Department of Justice.;
- Field report regarding preliminary limestone boulder assessment conducted and prepared by Dave Bieber, Certified Geologist in continued fulfillment of COA 38; and
- PCRA Wetland delineation maps in order to begin PCRA work as required under COA 57.

Submittal Number 3 (August 24, 2012):

- The Final Reclamation Plan Amendment per COA 3 incorporating changes required per the Conditions of Approval was previously submitted;
- Legal descriptions for all parcels subject to the RPA per COA 4 were previously submitted to the County and Lehigh Permanente is within compliance for COA 4 with requested revisions available after GIS data is provided by the County;
- Updated Storm Water Pollution Prevention Plan (SWPPP) of the approved RPA per COA 12;
- Evidence of survey and demarcation of EMSA, Rock Plant, and WMSA RPA boundaries per COA 22;
- Site plan showing topsoil and amendment storage areas per COA 26; and
- Revised plans showing redesigned rip-rap energy dissipation for a 25 year storm event per COA 86.

Submittal Number 4 (September 25, 2012):

- Boulder Survey Report per COA 38;
- Provide Evidence of non-occupancy of Historical Society Caretaker Residence per COA 45 in lieu of conditions 43 and 44;
- Memo and evidence of membership rejection on a project level as a result of initiating action to become a reporting member of the Climate Registry per COA 71;
- GHG Reduction Plan per COA 72;
- Contract with outside California certified Engineering Geologist to provide oversight of reclamation activities per COA 74;
- Letter to substantiate Water Quality monitoring program initiation per COA 76; and
- Statement of progress (including selected photographs) of BMP Installations per COA 78.

Submittal Number 5 (October 1, 2012):

- Summary of Trainings Memo Report per COA 11, 78d and 78m;

- Report of BMP Installations documenting and demonstrating that BMP's are being implemented in all areas (including photographs) per COA 78;
- Stormwater Monitoring Plan for Phase I per COA 79;
- Findings of a technical analysis on the estimated contributions of selenium leaching from the boulders as identified in the Permanente Creek Limestone Boulder Report; and
- Notice per COA 76 that water quality sampling and monitoring began.

4.2 Compliance Actions Completed Since the Submittal Number 5

Actions to complete or advance the fulfillments of the COA since Submittal Number 5 (October 1, 2012) are described below. Most of the actions listed below were required to commence within 90 days of the application approval (i.e., September 25, 2012) and previous submittals to the County have demonstrated that actions were underway prior to that deadline. Each of these actions would have been included in the annual report for 2012, if one were required. Each action is linked with a specific COA and photographs and other evidence of actions taken are provided. Appendix A is composed of a series of maps of the RPA areas, including the PCRA subareas and shows the location of the actions that have taken place. Appendix B is composed of various photographs taken of the actions throughout the site and is cross-referenced with Appendix A. Where possible, the Appendices are referenced for each of the actions.

Actions which have been previously reported and have not increased in effort since they were last reported are not described here. For example, mine operator trainings per COA 11, 78.d, and 78.m are ongoing at the level of effort previously reported (Submittal Number 5) and they are not included in this report.

4.2.1 Replacement of Lime Stone Check Dams with Non-limestone Materials

Per COA 79.g, all 110 limestone-based check dams along the quarry and in the WMSA as well as the approximately 15 limestone-based check dams near the rock plant were removed and replaced with non-limestone materials. Greenstone rock and boulders of larger size were sourced from the Permanente Quarry overburden for this task. The limestone from the pre-existing check dams was removed for processing. Photographs 4, 8, 9, 15, 17, and 29 of Appendix B show the non-limestone check dams in place.

4.2.2 PCRA Erosion Control Actions

Per COA 38, a schedule describing the implementation actions to control sedimentation, remove limestone boulders, and stabilize slopes within the PCRA in the Summer and Fall of 2012, consistent with the RPA was submitted to the County in Submittal Number 1 (July 26, 2012). The compliance actions and their amendment, if applicable, are described below.

COA 78.b and the requirements outlined in Section 3.19 of the RPA call for the reclamation treatment of historic mining disturbance adjacent to Permanente Creek, described as the PCRA. The PCRA includes approximately 49.2 acres of mining related disturbance to be reclaimed as set forth in this section. For mapping and illustrative purposes, the PCRA is divided into seven different subareas (numbered 1-7) with customized reclamation treatments for each subarea (see Figure 1).

The County has requested that Lehigh amend its reclamation plan to include newly disturbed land and redisturbed land in the PCRA to ensure that appropriate erosion controls are in place

to protect water quality in Permanente Creek. These actions emphasize erosion control and revegetation in response to the County's identification of surface erosion in portions of the PCRA. These actions have been designed to protect areas where soil disturbance has stabilized over time.

The RPA calls for erosion control actions in all the PCRA treatment areas (See Figure 1) within Phase 1. Lehigh has completed erosion control work in all the subareas except for Subareas 3 and 7. The current year, 2012 is the first year of the approximately nine-year Phase 1 and therefore further actions in Subareas 3 and 7 as well as continued work in all subareas will follow in subsequent years. The actions taken for erosion control are summarized in Table 1 and are described in depth for each subarea below.

Table 1. PCRA Erosion Control Actions per Subarea

Subarea	Hydroseeding	Silt Fencing	Straw Wattles	Erosion Control Blankets
1	X			
2	X			
3				
4	X	X	X	X
5	X	X	X	
6	X	X	X	
7				

Erosion control installation methods employed used industry standards as a baseline, but because the terrain and topography varied significantly from that in which the standard methods were developed for, methods were changed slightly where needed to suit the specific location. At all times, experienced landscaping and restoration crews modified methods and materials as needed on an ongoing basis. For instance, rather than wooden stakes as specified in the methods, 10-inch pins with washers were used to stake the straw wattles down.

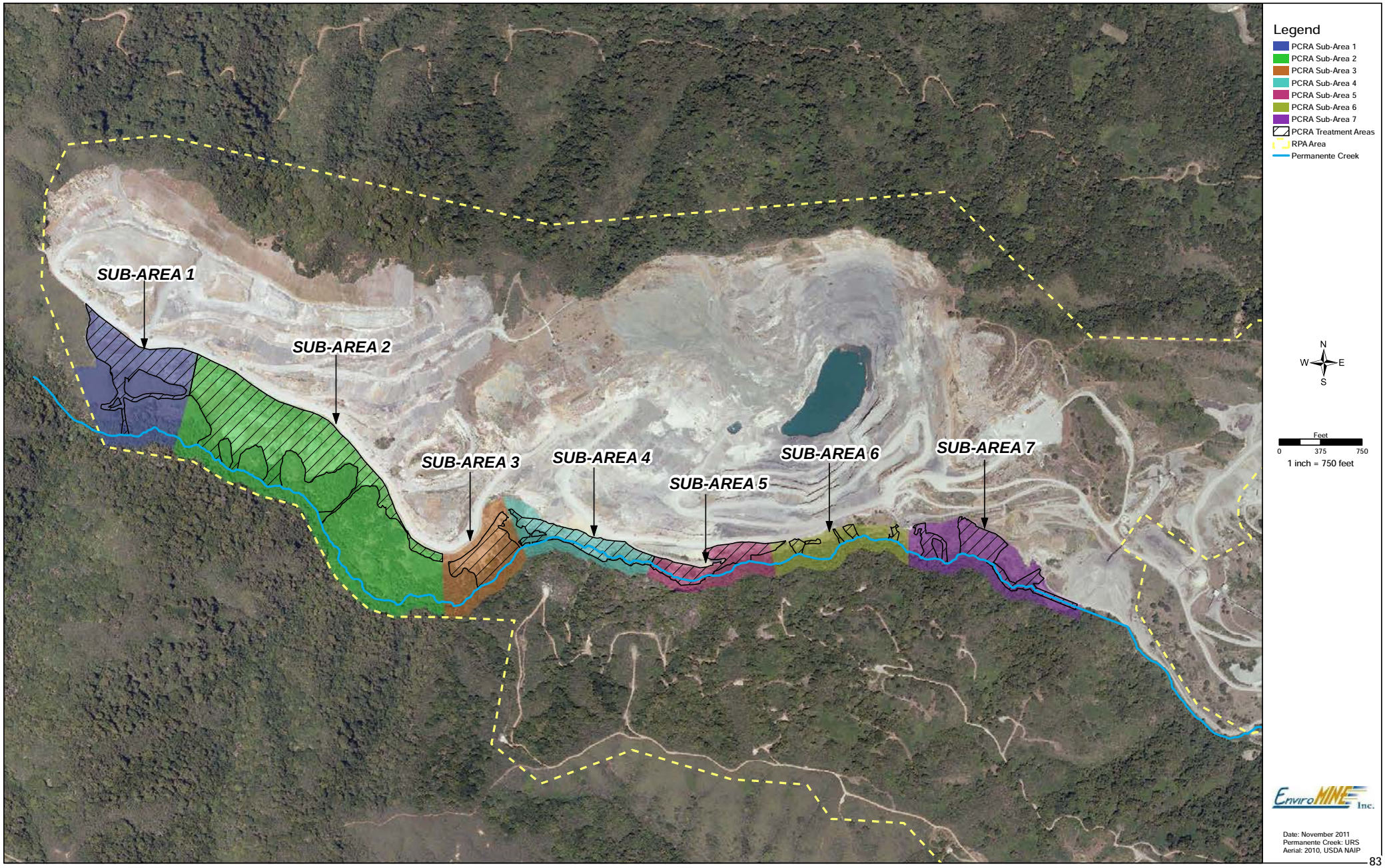
Materials used in the installations followed the recommendations in the RPA and COA 78n. No plastic monofilament was used in installations. The materials used included:

"Bionet" burlap covered straw wattles

Natural straw wattles were installed approximately every 10 to 15 feet along the contours of the hillsides. The wallet was dug into the ground so that all points contacted soils. In many instances rocks were displaced to get soil contact with the wattles. Long pins with washers were used it the rocky terrain to hold the wattles in place where wood stakes would not be driven into the substrate. Where boulders or other outcrops existed or where vegetation increased, the wattle line was moved up or down the hill and overlapped with the existing run. Straw wattles were installed in Subareas 4, 5, and 6 and at the WMSA topsoil stockpile.

ECC-2B and CC-4 "Natural Net" coconut erosion control blankets were specified by the RPA to be installed in Subarea 4. They were laid out with overlapping seams and often in an incongruous manner. The blankets were installed in between rocky areas where soil contact could be made. Blankets were stabilized with long washer pins every 2 to 4 feet depending on conditions.

Figure 1. Permanente Creek Restoration Area (PCRA) Subareas



Wire backed silt fencing was installed in Subareas 4, 5, and 6 with the wire side facing uphill to catch any rolling rocks and to prevent impacts to the fence. The silt fencing was installed with t-posts every 8 feet and safety caps on top. Where necessary, the silt fencing was broken, and overlapped to allow wildlife passage and still retain flowing sediments.

Hydroseeding was specified by the RPA to be completed in all subareas, but because some portions of the subareas are rich with vegetation, there is no need for hydroseeding all areas within all the PCRA treatment areas. Hydroseeding used a seed mix that was developed in the experimental vegetation plot programs as described in the RPA. Based on the results from the program highly successful species were selected for the particular area. The PCRA seed mix included more scrub and shrub species that were also observed to thrive on the rocky and steep hillsides. The seed mix and the amendments for the PCRA area shown in Tables 2a and 2b. The PCRA seed mix is different in composition from the generic erosion control mixtures utilized within the quarry to stabilize the topsoil stockpiles.

Hydroseed was applied from a large hydroseeding truck which could either spray the mixture from the cannon on top of the truck or be applied by hand from a hose. In most cases the cannon was used where the hillside was accessible from the haul road or from the access road in Subareas 1 and 2. In areas where the target hillslopes could not be covered with the cannon, personnel applied the mix from the hose on foot and up to 300 feet from the truck. Large portions of Subareas 4, 5 and 6 required the use of the hose application.

Per COA 78.o, all stormwater, erosion, and sediment control BMPs were installed and inspected under the direction of either a landscape architect and certified erosion control specialist.

The following activities have been completed to date and are provided here for each subarea:

Subareas 1 and 2

Subareas 1 and 2 are composed on mainly steep rocky and boulder slopes with sparse to moderate vegetation. The PCRA treatment areas within subareas 1 and 2 are widespread and do not reflect the vegetation densities that exist. Therefore, installation of wattles and silt fencing was seen to be a lower priority this year.

Hydroseeding has been completed in portions of PCRA subareas 1 and 2 between the existing access road on the hill and the WMSA haul road berm as shown in Appendix A, Maps 1a through 1c and in Appendix B, Photographs 5,7,and 10). Portions below the access road were not hydroseeded because a silt fence has not yet been installed. COA 57 requires silt fencing to be installed between jurisdictional waters or wetlands and areas sprayed with hydroseed to prevent filling of wetlands with tackifier or other hydroseed material. The access road below the area that was hydroseeded acts as a barrier to prevent tackifier and other hydroseed material from entering the creek.

Subarea 3

No erosion control work has been completed in Subarea 3 as indicated in Appendix A, Map 1c and 1d. Portions of Subarea 3 are heavily vegetated (see photographs 11-14 of Appendix B). COA 57 requires silt fencing to be installed between jurisdictional waters or wetlands and areas sprayed with hydroseed to prevent filling of wetlands with tackifier or other hydroseed material. Because silt fences have not yet been installed, this subarea was not hydroseeded. Subarea 3 is composed of very steep hills and access to the hillsides is difficult at best and unsafe.

Therefore, Subarea 3 will be treated with erosion controls in later years, where existing vegetation is sparse and conditions are safe.

Table 2a. PCRA Hydroseeding Seed Mix		
Scientific Name	**Common Name**	**Rate of application (lbs / acre)**
Shrubs		
Artemisia californica	California sagebrush	0.5
Baccharis pilularis	coyote brush	0.1
Eriogonum fasciculatum	California buckwheat	1.0
Grasses and Herbs		
*Bromus carinatus**	California brome	12
*Elymus glaucus**	blue wildrye	10
Eschscholzia californica	California poppy	1.5**
*Heterotheca grandiflora**	telegraph weed	0.5
*Lotus scoparius**	deerweed	3.0
Nassella pulchra *	purple needlegrass	5.0
*Vulpia microstachys**	three weeks fescue	6.0
Festuca rubra	Red fescue	5.0
*Lipinus nanus (innoc)**	Lupine	4.0
*Plantago erecta**	Plantain	4.0
TOTAL		**52.6**

* Santa Clara source

Table 2b. PCRA Hydroseeding Mulch and Hydroslurry Application Rates			
Treatment	Application Rate (lb / acre)	Acres	Amount
"Fiber Wood" organic mulch	1,200	7	4.2 tons
HydroStraw + Guar	2,400	7	8.4 tons
7-2-1 Biosol slow-release fertilizer	1,000	7	7,000 pounds
Seed Mix	52.6	7	N/A

Subarea 4

Subarea 4 varies widely in topography and vegetation coverage. The western portion is steep and contains vegetated and non-vegetated hillslopes above the riparian zones. The eastern portions of Subarea 4 contain large rock outcrops and a stepped bench configuration. Erosion controls were installed in non-riparian portions of Subarea 4 where vegetation was sparse and slopes were safely accessible (see Appendix A, Figures 1d and 1e and Appendix B, Photographs 16 and 18-32). Erosion controls included straw wattles which meandered through the boulder fields where appropriate and erosion control blankets in areas where they could be

installed and would be effective. Long stretches of silt fencing were installed along the lower edge of Subarea 4 with overlapping breaks to allow for wildlife corridors. Hydroseeding was also completed in all areas of Subarea 4 that were not vegetated and were safely accessible to the operations. Areas in the eastern portion of Subarea 4 below the road leading down to Pond 4 were nearly all vegetated by more than 50% and did not require erosion controls (see Appendix B, Photographs 31-32).

Subareas 5 and 6

Subareas 5 and 6 vary widely in topography and vegetation coverage with steep soil and rock slopes of varying widths to scree-topped slopes with no soils present. There were boulder outcrops with flatter areas in between and gullies meandering down to the creek. Subarea 5 is a narrow strip where it sits above the old crusher foundation on a vertical cliff and widens approaching Subarea 6. The riparian zone encroaches closely up on Subareas 5 and 6 such that large portions of the PCRA Treatment Areas are already heavily vegetated and any additional installation of erosion control treatments would only cause further erosion. Subarea 6 is a steep hillslope which is largely unsafe to access.

Erosion controls were installed in non-riparian and mostly unvegetated portions of Subareas 5 and 6 where slopes were safely accessible (see Appendix A, Figures 1e and 1f and Appendix B, Photographs 33-38). Erosion controls included straw wattles meandered along the hillslopes where appropriate and would be effective. Silt fencing was installed along the lower edge of Subareas 5 and 6 and was place across gullies and water paths to intercept flows into the creek. Hydroseeding was also completed in portions of Subareas 5 and 6 that were not vegetated and were safely accessible to the hydroseeding operations,

Subarea 7

No erosion control work has been completed in Subarea 7 as indicated in Appendix A, Figures 1f and 1g. Almost all portions of Subarea 7 are heavily vegetated with native vegetation. Thus any erosion control activities would likely impact that vegetation and increase erosion on the hillside. Hydroseeding was not performed here because the area is already mainly covered with native vegetation. Therefore, Subarea 7 will be treated with erosion controls in later years, only where existing vegetation is sparse and conditions are safe.

Per COAs 41 and 57, the wetlands and riparian community was mapped and physically delineated in the field by WRA biologists. All PCRA activities occurred outside of these areas to ensure no impacts occurred.

Per COA 59, all grading activities within the PCRA subareas 4 through 7 were conducted during the dry season (i.e., between May 1 and October 15 and prior to the rains). Other non-grading work was performed up until November 1, although those actions were performed outside of the riparian vegetation.

4.2.3 Diversion of Runoff to Basins

Per COA 78.f, All runoff generated from disturbed active and inactive reclamation areas have been diverted to temporary basins, the Quarry pit, or temporary vegetated infiltration basins and kept away from drainage pathways entering Permanent Creek. Drainage has been diverted directly to sediment control facilities, mainly by the use of the haul road berm surrounding the WMSA, the quarry and the EMSA. Photographs 4, 8, 9, 15-18, 26, 30, and 43-45 of Appendix B show the haul road berm in place. The haul road berm is regularly inspected by the quarry

personnel and any unsuitable conditions allowing water to pass over or through the berm is immediately reported and corrected. The haul road berm also acts to satisfy COA 78.g where stockpiles exist within the haul road berm.

4.2.4 Lining Drainages with Non-Limestone Materials

Per COA 78.e, 78.h, and 78.k, drainages have been lined with non-limestone material and pipes have been replaced or repaired. Well over 2,000 feet of drainages were lined with the non-limestone materials as evidenced in Photographs 40-43 and 46-55 of Appendix B. For lining drainages in the EMSA, non-limestone materials were trucked in from Stevens Creek Quarry in Santa Clara County because the proper size and composition of non-limestone materials from the Permanente Quarry was not available. Non-limestone material was also used to further segregate any fines from entering the known water courses. The off-site material brought in was tested for selenium to determine suitability prior to acquisition and placement (see Appendix C). In all, over 800 tons of 1” x 3" material was imported from Stevens Creek Quarry and utilized. In addition, signage was installed so as to not disturb the non-limestone materials as can be seen in the photographs.

Berms along ditches containing limestone were replaced with greenstone rock and boulders of larger size sourced from the Permanente Quarry overburden as their main purpose was for vehicle safety, although water may flow below them. Approximately 150 tons for greenstone was used to replace limestone-containing berms as evidenced in photographs 49 and 51 of Appendix B. In addition, signage was installed so that the non-limestone materials would not be disturbed as can be seen in the photographs.

4.2.5 Topsoil Pile Erosion Controls

Per COAs 27 and 78.b, topsoil and other soil stockpiles were treated with BMPs. The topsoils stockpile in the WMSA was stabilized to prevent erosion by installing wire-meshed silt fencing below, and straw wattles and erosion control blankets on the faces as was installed as described in the PCRA treatment areas above. Hydroseeding was also conducted using erosion control seed mixes and the proper amendments. The hydroseed mix used for the topsoil erosion control is shown in Tables 1a and 1b below. The WMSA stockpile treatments are shown in Photographs 1-3 and 5 of Appendix B.

A separate stockpile exists in the EMSA that is derived mainly from organics and silt pond dredge materials. Although this is not designed to be used as topsoil, erosion controls were installed to include silt fencing and hydroseeding with same seed mixture as depicted in Tables 3a and 3b. Installation of erosion controls will help to prevent fines from entering nearby water flows. Photographs 44 and 45 of Appendix B show these erosion control features.

5.0 SUMMARY

In 2012, Lehigh took many actions to fulfill and comply with the many requirements of the COA and the RPA. Actions will continue to be implemented in all areas to keep within compliance and annual reports will be submitted to the County starting in 2013. The first annual report will also include the actions described here.

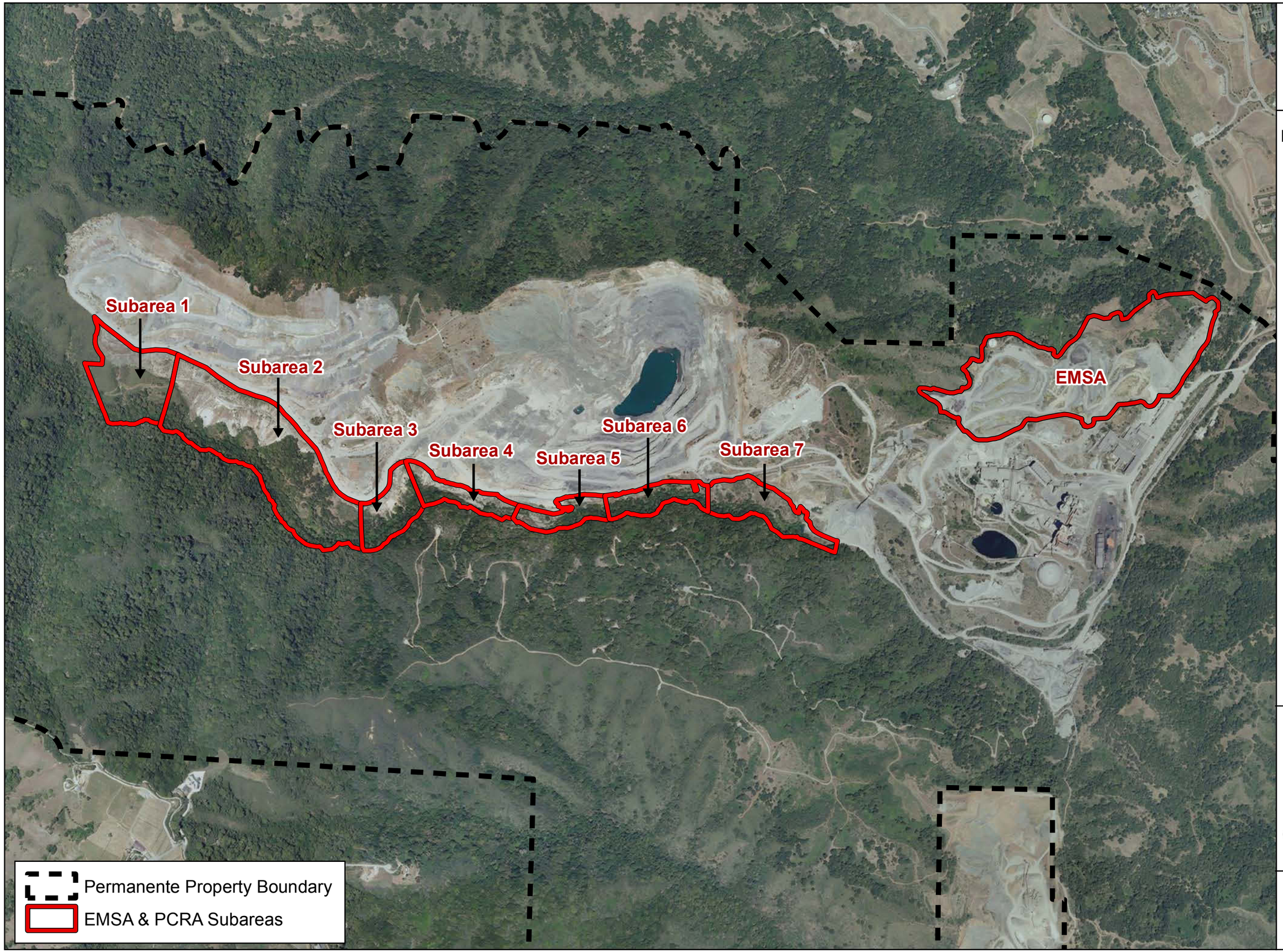
Table 3a. Quarry Stockpile Hydroseeding Seed Mix		
Scientific Name	Common Name	Rate of application (lbs / acre)
Grasses and Herbs		
*Bromus carinatus**	California brome	19
*Elymus glaucus**	blue wildrye	13
Trifolium willdenovii	tomcat clover	3
*Vulpia microstachys**	three weeks fescue	10
*Lipinus nanus (innoc)**	Lupine	5
*Plantago erecta**	Plantain	3
TOTAL		**53**

* Santa Clara source

Table 3b. Quarry Stockpile Hydroseeding Mulch and Hydroslurry Application Rates		
Treatment	Application Rate (lb / acre)	Acres
"Fiber Wood" organic mulch	2,000	2
m-binder Plantago-based tackifier	100	2
16-20-0 commercial fertilizer	350	2
Seed Mix	53	2

APPENDIX A

PCRA AND EMSA EROSION CONTROL INSTALLATION AREAS AND PHOTOGRAPH LOCATION MAPS



wra
ENVIRONMENTAL CONSULTANTS

Lehigh Permanente Quarry,
Santa Clara County,
California

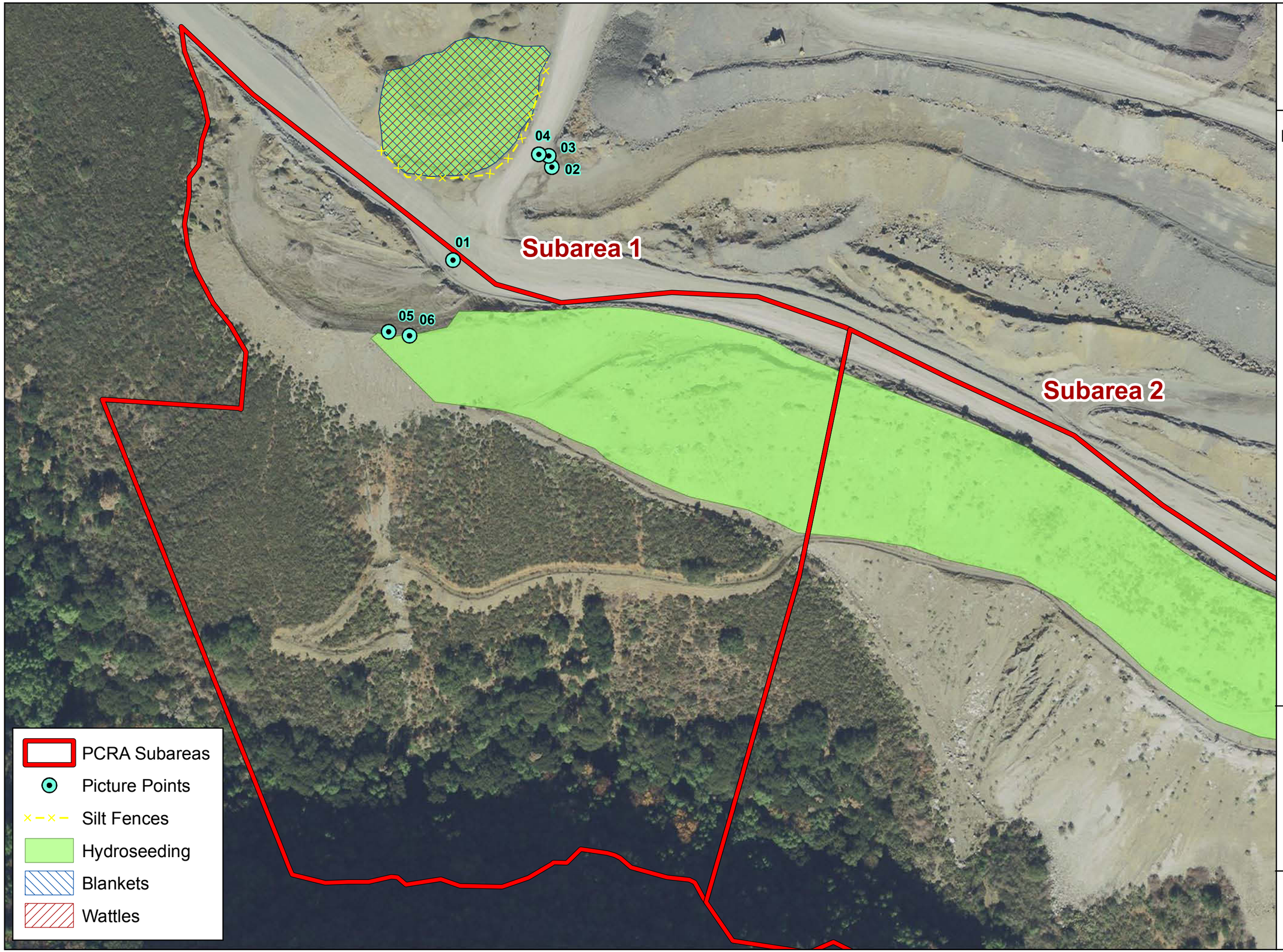
Overview

N
W E
S

0 500 1,000 2,000
Feet

Date: November 2012
Map By: Michael Rochelle
Aerial: USGS 2008

Path: L:\Acad 2000 Files\16000\16143\gis\arcmap\2012\BMP_Photo Maps\Overview.mxd



wra
ENVIRONMENTAL CONSULTANTS

Lehigh Permanente Quarry,
Santa Clara County,
California

Figure 1a.

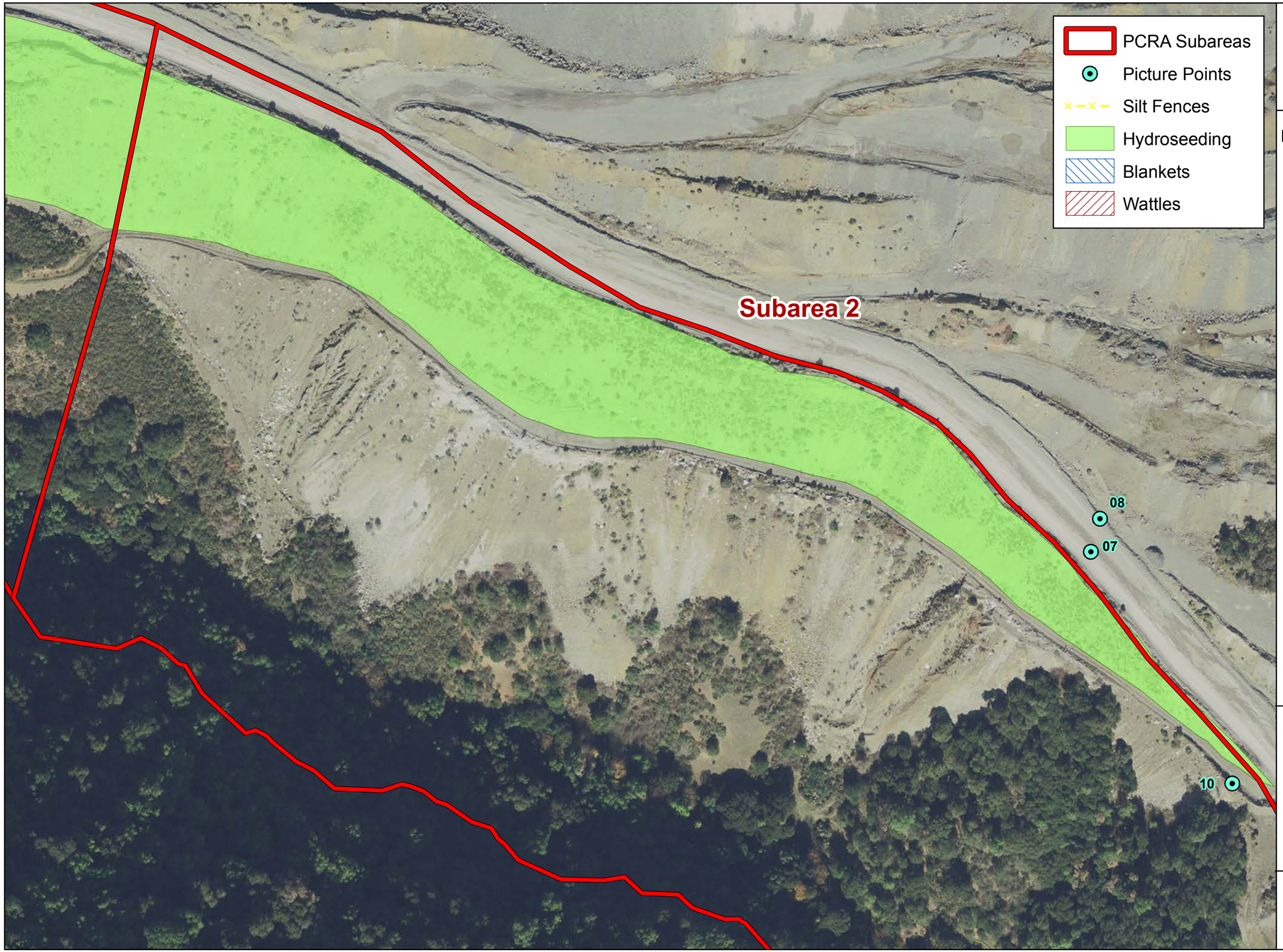
PCRA
Erosion Control
Installation Areas
and Picture Points

N
W E
S

0 50 100 200
Feet

Date: November 2012
Map By: Michael Rochelle
Aerial: USGS 2008

Path: L:\Acad 2000 Files\16000\16143\gis\arcmap\2012\BMP_Photo Maps\Fig 1a.mxd



wra
ENVIRONMENTAL CONSULTANTS

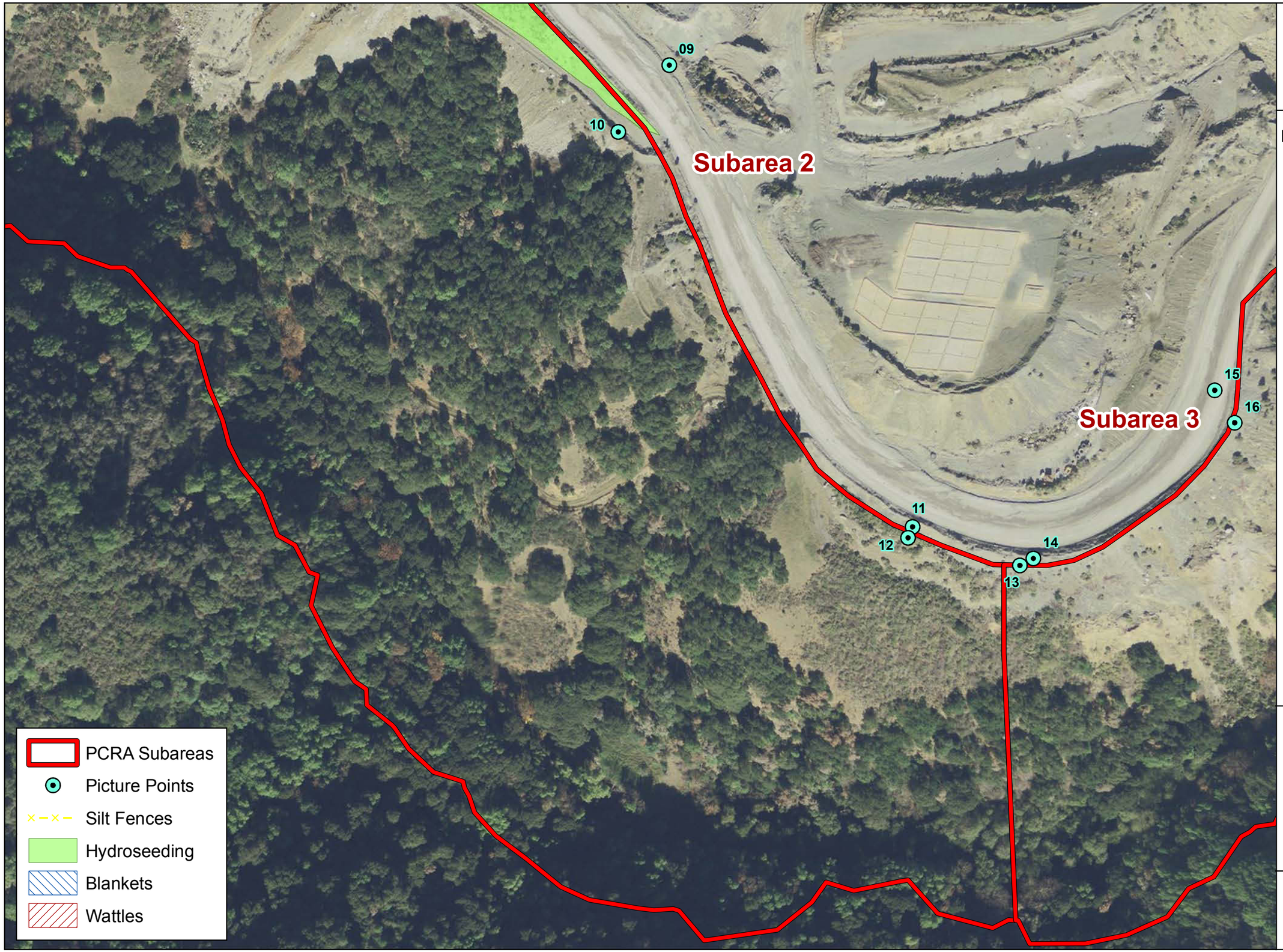
Lehigh Permanente Quarry,
Santa Clara County,
California

Figure 1b.

PCRA
Erosion Control
Installation Areas
and Picture Points

Date: November 2012
Map By: Michael Rochelle
Aerial: USGS 2008

Path: L:\Acad 2000 Files\16000\16143\gis\arcmap\2012\BMP_Photo Maps\Fig 1b.mxd



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ENVIRONMENTAL CONSULTANTS

Lehigh Permanente Quarry,
Santa Clara County,
California

Figure 1c.

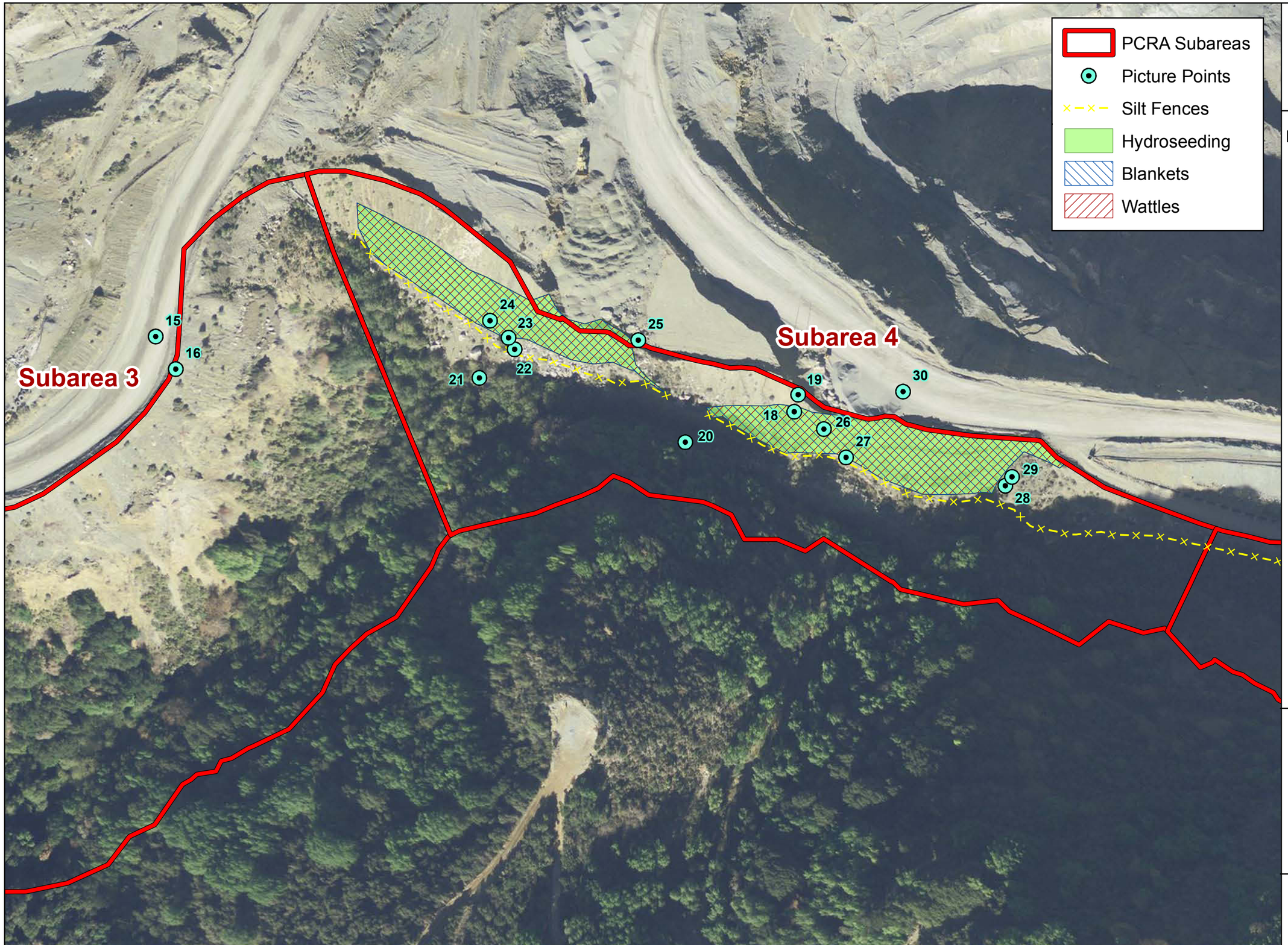
PCRA
Erosion Control
Installation Areas
and Picture Points

N
W E
S

0 50 100 200
Feet

Date: November 2012
Map By: Michael Rochelle
Aerial: USGS 2008

Path: L:\Acad 2000 Files\16000\16143\gis\arcmap\2012\BMP_Photo Maps\Fig 1c.mxd



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ENVIRONMENTAL CONSULTANTS

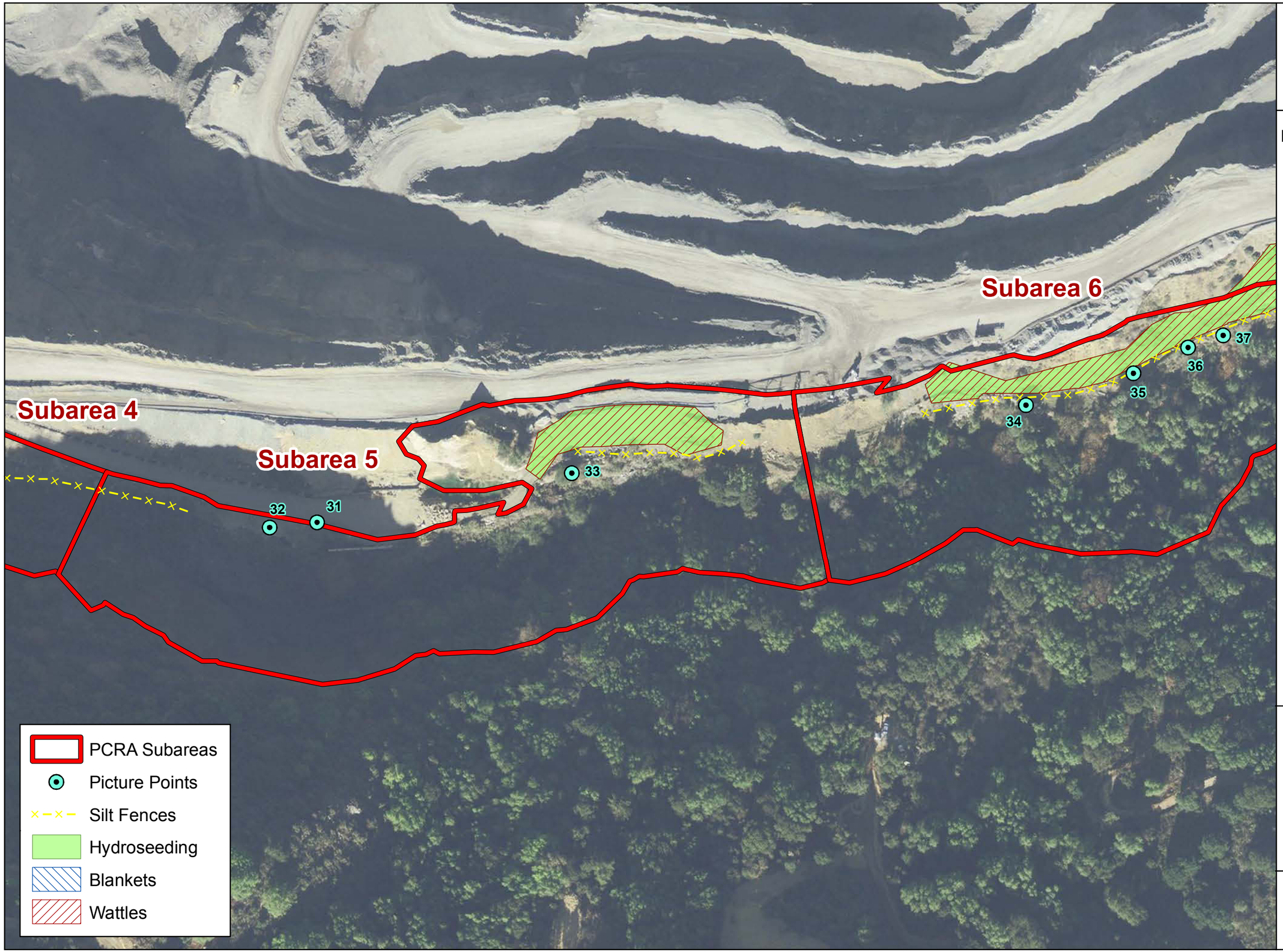
Lehigh Permanente Quarry,
Santa Clara County,
California

Figure 1d.

PCRA
Erosion Control
Installation Areas
and Picture Points

Date: November 2012
Map By: Michael Rochelle
Aerial: USGS 2008

Path: L:\Acad 2000 Files\16000\16143\gis\arcmap\2012\BMP_Photo Maps\Fig 1d.mxd



wra
ENVIRONMENTAL CONSULTANTS

Lehigh Permanente Quarry,
Santa Clara County,
California

Figure 1e.

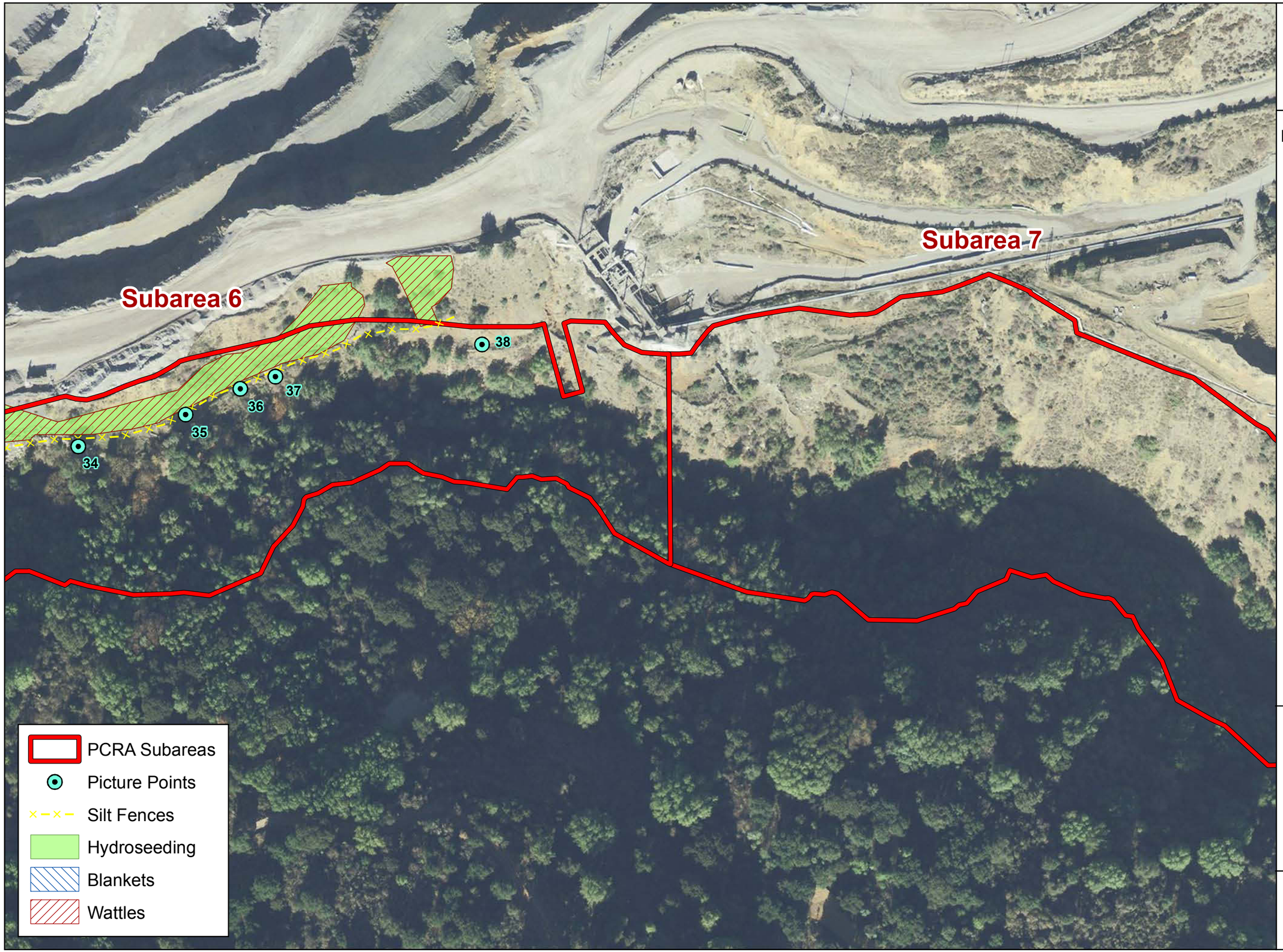
PCRA
Erosion Control
Installation Areas
and Picture Points

N
W E
S

0 50 100 200
Feet

Date: November 2012
Map By: Michael Rochelle
Aerial: USGS 2008

Path: L:\Acad 2000 Files\16000\16143\gis\arcmap\2012\BMP_Photo Maps\Fig 1e.mxd



wra
ENVIRONMENTAL CONSULTANTS

Lehigh Permanente Quarry,
Santa Clara County,
California

Figure 1f.

PCRA
Erosion Control
Installation Areas
and Picture Points

N
W E
S

0 50 100 200
Feet

Date: November 2012
Map By: Michael Rochelle
Aerial: USGS 2008

Path: L:\Acad 2000 Files\16000\16143\gis\arcmap\2012\BMP_Photo Maps\Fig 1f.mxd

wra
ENVIRONMENTAL CONSULTANTS

Lehigh Permanente Quarry,
Santa Clara County,
California

Figure 1g.

PCRA
Erosion Control
Installation Areas
and Picture Points

N
W E
S

0 50 100 200
Feet

Date: November 2012
Map By: Michael Rochelle
Aerial: USGS 2008

Path: L:\Acad 2000 Files\16000\16143\gis\arcmap\2012\BMP_Photo Maps\Fig 1g.mxd

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ENVIRONMENTAL CONSULTANTS

Lehigh Permanente Quarry,
Santa Clara County,
California

Figure 2a.

EMSA
Erosion Control
Installation Areas
and Picture Points

Date: November 2012
Map By: Michael Rochelle
Aerial: USGS 2008

Path: L:\Acad 2000 Files\16000\16143\gis\arcmap\2012\BMP_Photo Maps\Fig 2a.mxd

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ENVIRONMENTAL CONSULTANTS

Lehigh Permanente Quarry,
Santa Clara County,
California

Figure 2b.

EMSA
Erosion Control
Installation Areas
and Picture Points

N
W E
S

0 50 100 200
Feet

Date: November 2012
Map By: Michael Rochelle
Aerial: USGS 2008

Path: L:\Acad 2000 Files\16000\16143\gis\arcmap\2012\BMP_Photo Maps\Fig 2b.mxd

APPENDIX B

SITE PHOTOGRAPHS

Above: Photo 1. WMSA Stockpile erosion controls.

Below: Photo 2. WMSA Stockpile erosion controls.

Photographs taken November 9, 2012.

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Above: Photo 3. WMSA Stockpile erosion controls.

Below: Photo 4. Haul road berm isolating the WMSA from Permanente Creek at PCRA Subareas 1 and 2.

Photographs taken November 9, 2012.

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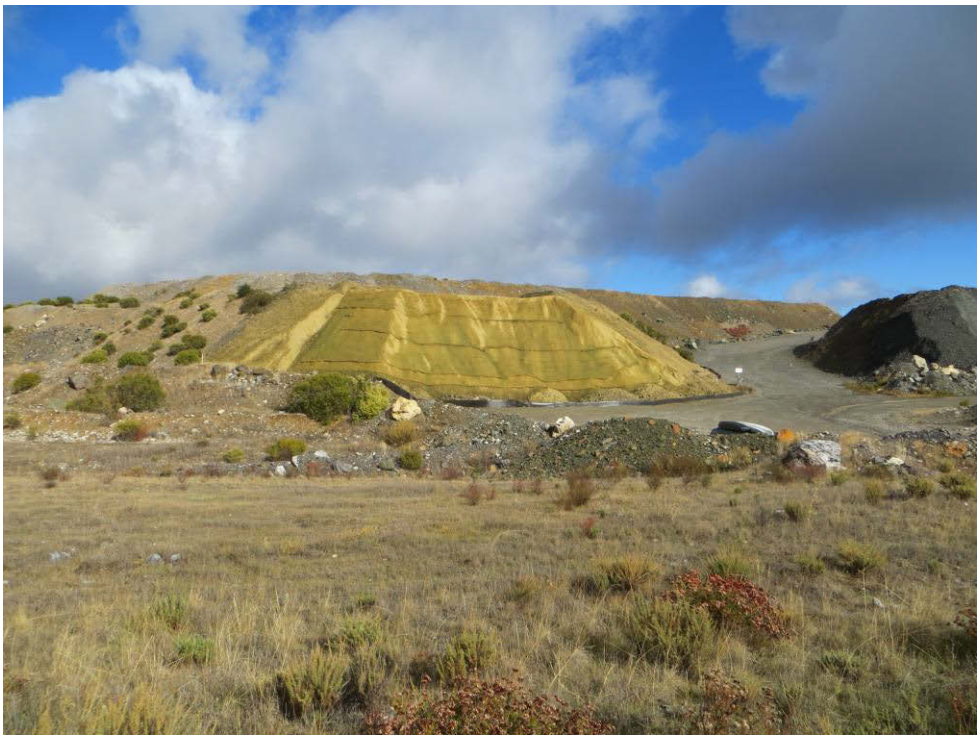

Above: Photo 5. Erosion control hydroseeding above access road in PCRA Subareas 1 and 2.

Below: Photo 6. WMSA Stockpile erosion controls.

Photographs taken November 9, 2012.

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Above: Photo 7. Erosion control hydroseeding above access road in PCRA Subareas 1 and 2.

Below: Photo 8. Haul road berm and non-limestone checkdams in WMSA.

Photographs taken November 9, 2012.

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Above: Photo 9. Haul road berm and non-limestone checkdams in WMSA, PCRA Subareas 1 and 2.

Below: Photo 10. Access road and erosion control hydroseeding above it in PCRA Subareas 1 and 2.

Photographs taken November 9, 2012.

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Above: Photo 11. PCRA Subarea 3 slope with vegetation below haul road berm.

Below: Photo 12. PCRA Subarea 3 slope with vegetation below haul road berm.

Photographs taken November 9, 2012.

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Above: Photo 13. PCRA Subarea 3 slope with vegetation below haul road berm.

Below: Photo 14. PCRA Subarea 3 slope with vegetation below haul road berm.

Photographs taken November 9, 2012.

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Above: Photo 15. Haul road berm and non-limestone checkdams in WMSA, PCRA Subarea 3.

Below: Photo 16. Overview of PCRA Subarea 4 and 5 viewed from Haul Road above PCRA Subarea 3

Photographs taken November 9, 2012.

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Above: Photo 17. Haul road berm isolating the WMSA from Permanente Creek at PCRA Subareas 1 and 2.

Below: Photo 18. Erosion controls installed below haul road berm in PCRA Subarea 4.

Photographs taken November 9, 2012.

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Above: Photo 19. Erosion controls installed below haul road berm in PCRA Subarea 4.

Below: Photo 20. Erosion controls installed on hillside above Permanente Creek in PCRA Subarea 4.

Photographs taken November 9, 2012.

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ENVIRONMENTAL CONSULTANTS

Above: Photo 21. Erosion controls installed on hillside above Permanente Creek in PCRA Subarea 4.

Below: Photo 22. Erosion controls installed on hillside above Permanente Creek in PCRA Subarea 4.

Photographs taken November 9, 2012.

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ENVIRONMENTAL CONSULTANTS

Above: Photo 23. Erosion controls installed on hillside above Permanente Creek in PCRA Subarea 4.

Below: Photo 24. Erosion controls installed on hillside above Permanente Creek in PCRA Subarea 4.

Photographs taken November 9, 2012.

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Above: Photo 25. Erosion controls installed on hillside above Permanente Creek in PCRA Subarea 4.

Below: Photo 26. Erosion controls installed below haul road berm in PCRA Subarea 4.

Photographs taken November 9, 2012.

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ENVIRONMENTAL CONSULTANTS

Above: Photo 27. Erosion controls installed below haul road berm in PCRA Subarea 4.

Below: Photo 28. Erosion controls installed below haul road berm in PCRA Subarea 4.

Photographs taken November 9, 2012.

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Above: Photo 29. Erosion controls installed below haul road berm in PCRA Subarea 4.

Below: Photo 30. Haul road berm isolating the quarry from Permanente Creek at PCRA Subarea 4.

Photographs taken November 9, 2012.

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Above: Photo 31. Vegetated areas of PCRA Subarea 4 without erosion controls.

Below: Photo 32. Vegetated areas of PCRA Subarea 4 without erosion controls.

Photographs taken November 9, 2012.

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ENVIRONMENTAL CONSULTANTS

Above: Photo 33. Erosion controls installed east of Pond 4 in PCRA Subarea 5.

Below: Photo 34. Erosion controls installed above Permanente Creek in PCRA Subarea 5.

Photographs taken November 9, 2012.

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Above: Photo 35. Erosion controls installed in PCRA Subarea 5.

Below: Photo 36. Erosion controls installed above Permanente Creek in PCRA Subarea 5.

Photographs taken November 9, 2012.

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ENVIRONMENTAL CONSULTANTS

Above: Photo 37. Erosion controls installed above Permanente Creek in PCRA Subareas 5 and 6.

Below: Photo 38. Erosion control silt fence installed in PCRA Subarea 6.

Photographs taken November 9, 2012.

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Above: Photo 39. Non-limestone rock berm in the EMSA below C-station.

Below: Photo 40. Non-limestone rock in drainages of the EMSA below C-station.

Photographs taken November 9, 2012.

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ENVIRONMENTAL CONSULTANTS

Above: Photo 41. Non-limestone rock in drainages of the EMSA below C-station.

Below: Photo 42. Non-limestone rock berm in the EMSA below C-station.

Photographs taken November 9, 2012.

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Above: Photo 43. Non-limestone rock in drainages of the EMSA below C-station.

Below: Photo 44. Erosion controls installed on organics soil piles in EMSA.

Photographs taken November 9, 2012.

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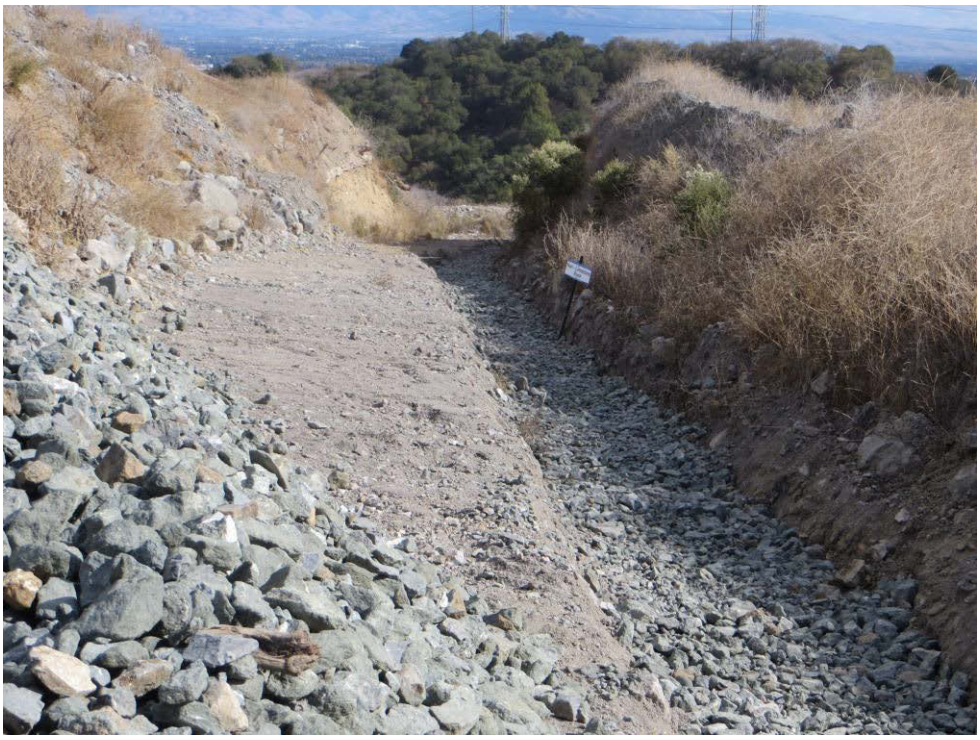
Above: Photo 45. Erosion controls installed on the organics soil pile in the EMSA.

Below: Photo 46. Non-limestone rock berm above drainage in the EMSA.

Photographs taken November 9, 2012.

wra
ENVIRONMENTAL CONSULTANTS



Above: Above: Photo 47. Non-limestone rock berm above drainage in the EMSA.

Below: Photo 48. Non-limestone rock in drainages of the EMSA.

Photographs taken November 9, 2012.

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Above: Photo 49. Non-limestone rock in drainages of the EMSA.

Below: Photo 50. Non-limestone rock in drainages of the EMSA.

Photographs taken November 9, 2012.

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Above: Photo 51. Non-limestone rock in drainages of the EMSA.

Below: Photo 52. Non-limestone rock in drainages of the EMSA.

Photographs taken November 9, 2012.

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Above: Photo 53. Non-limestone rock in drainages of the EMSA.

Below: Photo 54. Non-limestone rock in drainages of the EMSA.

Photographs taken November 9, 2012.

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Photo 55. Non-limestone rock in drainages of the EMSA.

Photographs taken November 9, 2012.

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APPENDIX C

STEVENS CREEK QUARRY MATERIALS ASSESSMENT

Alpha Analytical Laboratories Inc.
e-mail: clientservices@alpha-labs.com
Corporate: 208 Mason St., Ukiah, CA 95482 • Phone: (707) 468-0401 • Fax: (707) 468-5267
Satellite Laboratory: 6398 Dougherty Rd., Suite 35, Dublin, CA 94568 • Phone: (925) 828-6226 • Fax: (925) 828-6309

ELAP Certificate Numbers 1551 and 2728

03 October 2012

Lehigh Southwest Cement Company
Attn: Scott Renfrew
PO Box 660140 / Attention SSC AP - CEMENT
Dallas, TX 75266-0140
RE: Soil Samples
Work Order: 12I0932

Enclosed are the results of analyses for samples received by the laboratory on 09/20/12 21:35. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Sheri Speaks

Sheri L. Speaks For Robbie C. Phillips
Project Manager

Alpha Analytical Laboratories Inc.
e-mail: clientservices@alpha-labs.com
Corporate: 208 Mason St., Ukiah, CA 95482 • Phone: (707) 468-0401 • Fax: (707) 468-5267
Satellite Laboratory: 6398 Dougherty Rd., Suite 35, Dublin, CA 94568 • Phone: (925) 828-6226 • Fax: (925) 828-6309

CHEMICAL EXAMINATION REPORT

Lehigh Southwest Cement Company
PO Box 660140 / Attention SSC AP - CEMENT
Dallas, TX 75266-0140
Attn: Scott Renfrew

Report Date: 10/03/12 09:00
Project No: [none]
Project ID: Soil Samples

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
12I0932	09/20/2012 21:35	SEL HANSONCUP	PO #4500486111

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Stevens Creek Quarry	12I0932-01	Soil	09/19/12 10:00	09/20/12 21:35

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Bruce Gove
Laboratory Director

10/3/2012

Alpha Analytical Laboratories Inc.
e-mail: clientservices@alpha-labs.com
Corporate: 208 Mason St., Ukiah, CA 95482 • Phone: (707) 468-0401 • Fax: (707) 468-5267
Satellite Laboratory: 6398 Dougherty Rd., Suite 35, Dublin, CA 94568 • Phone: (925) 828-6226 • Fax: (925) 828-6309

CHEMICAL EXAMINATION REPORT

Lehigh Southwest Cement Company
PO Box 660140 / Attention SSC AP - CEMENT
Dallas, TX 75266-0140
Attn: Scott Renfrew

Report Date: 10/03/12 09:00
Project No: [none]
Project ID: Soil Samples

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
12I0932	09/20/2012 21:35	SEL HANSONCUP	PO #4500486111

Alpha Analytical Laboratories, Inc.

	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT	PQL	NOTE
Stevens Creek Quarry (12I0932-01)			**Sample Type: Soil**			**Sampled: 09/19/12 10:00**		
Metals by EPA 6000/7000 Series Methods								
Antimony	EPA 6010	AI22443	09/25/12 12:30	10/01/12 13:30	1	ND mg/kg	15	
Arsenic	EPA 7060	"	"	09/27/12 18:22	5	ND "	10	R-01
Barium	EPA 6010	"	"	10/01/12 13:30	1	**38 "**	**10**	
Beryllium	"	"	"	"	"	ND "	0.75	
Cadmium	"	"	"	"	"	ND "	1.0	
Chromium	"	"	"	"	"	**180 "**	**5.0**	
Cobalt	"	"	"	"	"	**38 "**	**10**	
Copper	"	"	"	"	"	**130 "**	**10**	
Lead	"	"	"	"	"	ND "	5.0	
Mercury	EPA 7471	AI22420	09/24/12 10:30	09/25/12 09:03	"	ND "	0.20	
Molybdenum	EPA 6010	AI22443	09/25/12 12:30	10/01/12 13:30	"	ND "	10	
Nickel	"	"	"	"	"	**96 "**	**10**	
Selenium	EPA 7740	"	"	09/27/12 12:38	"	ND "	1.0	
Silver	EPA 6010	"	"	10/01/12 13:30	"	ND "	5.0	
Thallium	"	"	"	"	"	ND "	7.0	
Vanadium	"	"	"	"	"	**120 "**	**5.0**	
Zinc	"	"	"	"	"	**79 "**	**10**	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Bruce Gove
Laboratory Director

10/3/2012

Alpha Analytical Laboratories Inc.
e-mail: clientservices@alpha-labs.com
Corporate: 208 Mason St., Ukiah, CA 95482 • Phone: (707) 468-0401 • Fax: (707) 468-5267
Satellite Laboratory: 6398 Dougherty Rd., Suite 35, Dublin, CA 94568 • Phone: (925) 828-6226 • Fax: (925) 828-6309

CHEMICAL EXAMINATION REPORT

Lehigh Southwest Cement Company
PO Box 660140 / Attention SSC AP - CEMENT
Dallas, TX 75266-0140
Attn: Scott Renfrew

Report Date: 10/03/12 09:00
Project No: [none]
Project ID: Soil Samples

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
12I0932	09/20/2012 21:35	SEL HANSONCUP	PO #4500486111

Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AI22420 - EPA 7471A Hg Soil										
Blank (AI22420-BLK1)				Prepared: 09/24/12	Analyzed: 09/25/12					
Mercury	ND	0.20	mg/kg							
LCS (AI22420-BS1)				Prepared: 09/24/12	Analyzed: 09/25/12					
Mercury	0.975	0.20	mg/kg	1.00		97.5	80-120			
Duplicate (AI22420-DUP1)		Source: 12I0853-01		Prepared: 09/24/12	Analyzed: 09/25/12					
Mercury	0.100	0.20	mg/kg		ND				20	
Matrix Spike (AI22420-MS1)		Source: 12I0853-01		Prepared: 09/24/12	Analyzed: 09/25/12					
Mercury	1.04	0.20	mg/kg	1.00	ND	94.5	60-140			
Matrix Spike Dup (AI22420-MSD1)		Source: 12I0853-01		Prepared: 09/24/12	Analyzed: 09/25/12					
Mercury	1.02	0.20	mg/kg	1.00	ND	92.5	60-140	1.95	20	
Batch AI22443 - EPA 3051 Microwave										
Blank (AI22443-BLK1)				Prepared: 09/24/12	Analyzed: 09/25/12					
Antimony	ND	15	mg/kg							
Arsenic	ND	2.0	"							
Barium	ND	10	"							
Beryllium	ND	0.75	"							
Cadmium	ND	1.0	"							
Chromium	ND	5.0	"							
Cobalt	ND	10	"							
Copper	ND	10	"							
Lead	ND	5.0	"							
Molybdenum	ND	10	"							
Nickel	ND	10	"							

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Bruce Gove
Laboratory Director

10/3/2012

Alpha Analytical Laboratories Inc.
e-mail: clientservices@alpha-labs.com
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CHEMICAL EXAMINATION REPORT

Lehigh Southwest Cement Company
PO Box 660140 / Attention SSC AP - CEMENT
Dallas, TX 75266-0140
Attn: Scott Renfrew

Report Date: 10/03/12 09:00
Project No: [none]
Project ID: Soil Samples

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
12I0932	09/20/2012 21:35	SEL HANSONCUP	PO #4500486111

Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AI22443 - EPA 3051 Microwave										
Blank (AI22443-BLK1)				Prepared: 09/24/12 Analyzed: 09/26/12						
Selenium	ND	1.0	"							
Silver	ND	5.0	"							
Thallium	ND	7.0	"							
Vanadium	ND	5.0	"							
Zinc	ND	10	"							
LCS (AI22443-BS1)				Prepared: 09/24/12 Analyzed: 09/25/12						
Antimony	17.6	15	mg/kg	20.0		88.1	85-115			
Arsenic	1.62	2.0	"	2.00		80.8	80-120			
Barium	18.3	10	"	20.0		91.5	85-115			
Beryllium	18.4	0.75	"	20.0		92.2	85-115			
Cadmium	17.2	1.0	"	20.0		86.0	85-115			
Chromium	18.2	5.0	"	20.0		91.2	85-115			
Cobalt	17.3	10	"	20.0		86.7	85-115			
Copper	19.7	10	"	20.0		98.6	85-115			
Lead	17.7	5.0	"	20.0		88.6	85-115			
Molybdenum	18.4	10	"	20.0		91.8	85-115			
Nickel	17.9	10	"	20.0		89.4	85-115			
Selenium	1.94	1.0	"	2.00		97.0	68-118			
Silver	18.0	5.0	"	20.0		89.8	78-108			
Thallium	18.5	7.0	"	20.0		92.3	85-115			
Vanadium	18.1	5.0	"	20.0		90.5	85-115			
Zinc	17.8	10	"	20.0		89.2	85-115			
Duplicate (AI22443-DUP1)		**Source: 12I0831-01**		Prepared: 09/24/12 Analyzed: 09/25/12						
Antimony	ND	15	mg/kg		ND				20	
Arsenic	7.31	8.0	"		ND				20	

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Bruce Gove
Laboratory Director

10/3/2012

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CHEMICAL EXAMINATION REPORT

Lehigh Southwest Cement Company
PO Box 660140 / Attention SSC AP - CEMENT
Dallas, TX 75266-0140
Attn: Scott Renfrew

Report Date: 10/03/12 09:00
Project No: [none]
Project ID: Soil Samples

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
12I0932	09/20/2012 21:35	SEL HANSONCUP	PO #4500486111

Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AI22443 - EPA 3051 Microwave										
Duplicate (AI22443-DUP1)		**Source: 12I0831-01**		Prepared: 09/24/12 Analyzed: 09/25/12						
Barium	319	10	"		324			1.43	20	
Beryllium	0.765	0.75	"		ND				20	
Cadmium	0.490	1.0	"		ND				20	
Chromium	31.5	5.0	"		28.1			11.4	20	
Cobalt	13.7	10	"		13.3			2.54	20	
Copper	200	10	"		193			3.61	20	
Lead	21.8	5.0	"		20.8			4.48	20	
Molybdenum	0.945	10	"		ND				20	
Nickel	25.3	10	"		23.3			8.16	20	
Selenium	ND	1.0	"		ND				20	
Silver	ND	5.0	"		ND				20	
Thallium	ND	7.0	"		ND				20	
Vanadium	46.4	5.0	"		43.5			6.41	20	
Zinc	168	10	"		162			3.65	20	
Matrix Spike (AI22443-MS1)		**Source: 12I0831-01**		Prepared: 09/24/12 Analyzed: 09/25/12						
Antimony	13.1	15	mg/kg	20.0	ND	65.7	70-130			QM-01
Arsenic	8.63	8.0	"	2.00	ND	101	70-130			
Barium	331	10	"	20.0	324	37.4	70-130			QM-4X
Beryllium	19.5	0.75	"	20.0	ND	94.0	70-130			
Cadmium	18.0	1.0	"	20.0	ND	87.5	70-130			
Chromium	46.4	5.0	"	20.0	28.1	91.7	70-130			
Cobalt	30.9	10	"	20.0	13.3	87.8	70-130			
Copper	218	10	"	20.0	193	127	70-130			
Lead	39.7	5.0	"	20.0	20.8	94.6	70-130			
Molybdenum	17.8	10	"	20.0	ND	84.4	70-130			
Nickel	40.7	10	"	20.0	23.3	86.9	70-130			

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Attn: Scott Renfrew

Report Date: 10/03/12 09:00
Project No: [none]
Project ID: Soil Samples

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
12I0932	09/20/2012 21:35	SEL HANSONCUP	PO #4500486111

Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AI22443 - EPA 3051 Microwave										
Matrix Spike (AI22443-MS1)	**Source: 12I0831-01**			Prepared: 09/24/12 Analyzed: 09/26/12						
Selenium	1.33	1.0	"	2.00	ND	66.4	7-107			
Silver	19.1	5.0	"	20.0	ND	95.7	70-130			
Thallium	16.7	7.0	"	20.0	ND	83.5	70-130			
Vanadium	62.1	5.0	"	20.0	43.5	92.9	70-130			
Zinc	177	10	"	20.0	162	72.3	70-130			
Matrix Spike (AI22443-MS2)	**Source: 12I1186-01**			Prepared: 09/27/12 Analyzed: 10/01/12						
Antimony	14.2	15	mg/kg	20.0	ND	70.9	70-130			
Arsenic	9.97	10	"	2.00	ND	117	70-130			
Barium	93.6	10	"	20.0	75.8	88.9	70-130			
Beryllium	18.4	0.75	"	20.0	ND	90.8	70-130			
Cadmium	17.6	1.0	"	20.0	ND	88.0	70-130			
Chromium	95.1	5.0	"	20.0	80.1	75.2	70-130			
Cobalt	33.7	10	"	20.0	13.9	99.1	70-130			
Copper	58.2	10	"	20.0	35.6	113	70-130			
Lead	25.8	5.0	"	20.0	7.09	93.8	70-130			
Molybdenum	19.0	10	"	20.0	ND	78.6	70-130			
Nickel	144	10	"	20.0	77.3	331	70-130			QM-04
Selenium	1.38	1.0	"	2.00	ND	69.2	7-107			
Silver	18.9	5.0	"	20.0	ND	94.7	70-130			
Thallium	17.2	7.0	"	20.0	ND	86.0	70-130			
Vanadium	48.3	5.0	"	20.0	34.0	71.6	70-130			
Zinc	75.3	10	"	20.0	51.3	120	70-130			
Matrix Spike Dup (AI22443-MSD1)	**Source: 12I0831-01**			Prepared: 09/24/12 Analyzed: 09/25/12						
Antimony	12.9	15	mg/kg	20.0	ND	64.6	70-130	1.69	20	QM-01
Arsenic	8.12	8.0	"	2.00	ND	75.3	70-130	6.03	20	

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Attn: Scott Renfrew

Report Date: 10/03/12 09:00
Project No: [none]
Project ID: Soil Samples

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
12I0932	09/20/2012 21:35	SEL HANSONCUP	PO #4500486111

Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AI22443 - EPA 3051 Microwave										
Matrix Spike Dup (AI22443-MSD1)		**Source: 12I0831-01**		Prepared: 09/24/12 Analyzed: 09/25/12						
Barium	334	10	"	20.0	324	50.1	70-130	0.762	20	QM-4X
Beryllium	19.6	0.75	"	20.0	ND	94.7	70-130	0.644	20	
Cadmium	18.1	1.0	"	20.0	ND	88.2	70-130	0.701	20	
Chromium	47.1	5.0	"	20.0	28.1	94.8	70-130	1.32	20	
Cobalt	32.2	10	"	20.0	13.3	94.2	70-130	4.09	20	
Copper	223	10	"	20.0	193	151	70-130	2.25	20	QM-4X
Lead	38.1	5.0	"	20.0	20.8	86.5	70-130	4.12	20	
Molybdenum	18.1	10	"	20.0	ND	85.9	70-130	1.58	20	
Nickel	43.1	10	"	20.0	23.3	99.3	70-130	5.91	20	
Selenium	1.31	1.0	"	2.00	ND	65.7	7-107	1.00	20	
Silver	19.2	5.0	"	20.0	ND	96.1	70-130	0.442	20	
Thallium	16.9	7.0	"	20.0	ND	84.5	70-130	1.17	20	
Vanadium	63.2	5.0	"	20.0	43.5	98.3	70-130	1.71	20	
Zinc	184	10	"	20.0	162	106	70-130	3.76	20	

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CHEMICAL EXAMINATION REPORT

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Dallas, TX 75266-0140
Attn: Scott Renfrew

Report Date: 10/03/12 09:00
Project No: [none]
Project ID: Soil Samples

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
12I0932	09/20/2012 21:35	SEL HANSONCUP	PO #4500486111

Notes and Definitions

QM-01	The spike recovery for this QC sample is outside of established control limits possibly due to a sample matrix interference.
QM-04	High RPD and/or poor percent recovery may reflect sample non-homogeneity.
QM-4X	The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.
R-01	The Reporting Limit for this analyte has been raised to account for matrix interference.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
PQL	Practical Quantitation Limit

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10/3/2012

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925-828-6226 Fax: 925-828-6309

Chain of Custody Record

Reports and Invoices will be delivered by email in .pdf format.

Lab No. 12I0932 Page ____ of ____

Signature below authorizes work under terms stated on reverse side.

Company:	Company:	Project ID:
Lehigh Southwest Cement Company		Soil Samples
Attn: Scott Renfrew	Attn:	
Address: 24001 Stevens Creek Blvd. Cupertino, CA 95014	Address:	Project No:
Phone/Fax: (408) 996-4262	Phone/Fax:	PO/Reference : PO #4500486111
Email Address: scott.renfrew@lehigh hanson.com	Email Address:	

Samplers Signature: Scott Renfrew

TAT: 10 days ◯ RUSH: 5 days ◯ 48 hours ◯ Other: ___days ◯

Lab Approval Required For Rush TATs

Temperature: 3 deg. C

Sample Notes on CDPH Source Numbers:

Sample Identification	Sampled Date	Sampled Time	40ml VOA	Poly	Amber	Glass	Other	HCL	HNO3	H2SO4	Other	None	Water	Soil	Other	Total Number of Containers	CAM 17	Sample Notes on CDPH Source Numbers
Stevens Creek Quarry	9/19/2012	10:00					X					X		X			X	Rock sample for BMP

Relinquished by	Received by	Date	Time
Scott Renfrew 9-19-12	[illegible]	9/20/12	13:00
[illegible]	[illegible]	9-20-12	8:30
[illegible]	LAB [illegible]	9-20-12	21:35

CDPH Write On EDT Report? ◯ Yes ◯ No

State System Number: _____

If "Y" please enter the Source Number(s) in the column above

CA Geotracker EDF Report? ◯ Yes ◯ No

Sampling Company Log Code:

Global ID:

EDF To (Email Address):