



DEPARTMENT OF THE AIR FORCE  
AIR FORCE REAL PROPERTY AGENCY

MEMORANDUM FOR DISTRIBUTION

30 April 2008

FROM: AFRPA/DD – McClellan  
3411 Olson Street  
McClellan CA 95652-1003

SUBJECT: Restoration Advisory Board meeting Minutes, 12 March 2008

1. Attached please find the final minutes from the 12 March 2008 Mather Restoration Advisory Board meeting, held at 10503 Armstong Ave., Mather, CA.
2. During the RAB Meeting, the group discussed holding a public tour of the cleanup systems at Mather, to include a visit to one of Boeing's perchlorate treatment plants. This tour will be held on June 11, 2008, starting at 6 p.m. and will last approximately two hours. The meeting location will be 10503 Armstrong Ave, Mather, CA, and a bus will be provided as transportation.
3. If you have any questions or comments, please contact Brian Sytsma at (916) 643-1250 extension 257.

A handwritten signature in black ink, reading "Linda Geissinger".

LINDA GEISSINGER  
AFRPA Public Affairs

Attachments:

1. Meeting Agenda
2. Slide Presentation

**FINAL Meeting Minutes**  
**Mather Restoration Advisory Board (RAB) Meeting**  
**12 March 2008**  
**Mather, CA**

**Time:** 6:00 p.m.

**Place:** Air Force Real Property Agency (AFRPA) Conference Room  
 10503 Armstrong Avenue  
 Mather, CA

**RAB Members**

<b>Present</b>	<b>Name</b>	<b>Affiliation</b>
X	Steve Hamilton	AFRPA Co-Chair
X	Sandra Lunceford	RAB Community Co-Chair
X	Jerald Drobesh	Community member
	Darcy Kennedy	Community member
	Bob McGarvey	Rancho Cordova City Council
X	Arne Sampe	Community member

X - member was present

**Other Attendees Present**

<b>Name</b>	<b>Affiliation</b>
Stanley Pehl	AFCEE/BCE
Rick Solander	AFRPA
Bill Hughes	ASE Inc.
Shelley Crull	CH2M HILL
Paul Bernheisel	AFRPA/AFCEE
Dan Shafer	MWH
Brian Sytsma	CH2M HILL
Lee Dorey	OES
Rich Muza	U.S. EPA
Peggy Okabayashi	OES
Sylvia Perscheid	Supervisor Don Nottoli's Office
Genny Lisher	Community Member
Brian Anderson	Boeing

## 1. WELCOME

Mr. Hamilton welcomed everyone to the meeting. Attendees introduced themselves. A sign-in sheet was circulated and the meeting attendees are listed above. The meeting agenda was distributed (Attachment 1).

## 2. APPROVAL OF MINUTES

RAB Community Co-Chair Ms. Lunceford recommended approval of the April RAB meeting minutes. No questions or comments were offered on the minutes, and they were approved.

## 3. ENVIRONMENTAL OVERVIEW

Mr. Muza pointed out that there is a new regulator for Mather from the California Department of Toxic Substances Control, Marcus Pierce, but he was unable to attend tonight's RAB meeting.

Mr. Hamilton gave an environmental overview and Mr. Hughes gave an update on cleanup activities using a PowerPoint presentation. Copies of the presentation slides are included as Attachment 2. Information directly included in the slides is not repeated in these minutes.

Mr. Hamilton noted that Gino Yekta, with the Integrated Waste Management Board (IWMB), oversees the landfills at Mather (note that shortly after the RAB meeting, Gino announced that Frank Davies has now replaced him as Mather's remedial project manager from IWMB).

Mr. Solander explained the role of Institutional Controls as they relate to property transfer. The State has a land-use covenant that will be set up, and there are routine inspections that help ensure the Institutional Controls are working as intended.

Mr. Hamilton stated that Records of Decision for six operable units have been signed.

Mr. Hughes stated that the drinking water at Mather is safe. He noted that one building's water does have lead at a concentration above the maximum contaminant level for lead, but that the system as a whole meets the standard as 90% of locations must be at or below 15 micrograms per liter for lead. The AFRPA office at Mather has relatively high lead (about 11 micrograms per liter). The locations with high lead are not due to the water served from the wells, but from the plumbing in the buildings.

Ms. Lunceford asked if there had been contamination in the Kiefer monitoring well. Mr. Hughes explained that there have not been any detections along Kiefer Boulevard west of Mather, but there have been detections near the southwest end of the runway near the former Kiefer Boulevard right of way on Mather. This is because the plume has been diverted south, spreading around a water-table mound caused by water soaking into the ground where sand and gravel is washed at the Granite plant. [After the meeting Ms. Lunceford clarified that her question was asking about detections near Kiefer Boulevard. Low concentrations of contaminants have been detected in perched water just above the water table in MAFB-46, and in a sample of perched water collected as well MAFB-429 was drilled in April 2007. These perched-zone concentrations are below cleanup levels. Initial results from the three well screens installed in MAFB-429 indicated concentrations of TCE above the cleanup level. A new extraction well will be installed this year to address the contamination in this area.]

The Main Base/Strategic Air Command Area groundwater treatment system is estimated to take until 2067 to complete the groundwater remediation.

The soil vapor extraction system depicted in slide 16 is from Site 10C/68, near the west end of the flight line. It is a former fuel storage and fire training area.

Mr. Hughes provided clarification that the three closed landfills at Mather that were referred to as "active" are only active in the sense that they are inspected and soil and groundwater are sampled. Landfill 4 contains municipal, industrial and construction waste. It was capped in 1996 to prevent rainwater from migrating through the landfill and negatively affecting the quality of groundwater.

Ms. Lunceford asked about chrome in monitoring wells. Mr. Hughes responded that there have been detections of chromium contamination as high as approximately 200 parts per billion but they may be a product of the stainless steel screens corroding and not contaminated groundwater. This was the case in wells near landfill Site 6, where chrome was entering the groundwater at the wells and not migrating very far into the aquifer. Ms. Lunceford asked whether the chrome detected in wells in the Landfill 4 area posed a threat to the aquifer, and it was explained that the chrome was detected in only a few wells, which would indicate a small plume. However, if the chrome has been dissolving the stainless steel in each well, as was demonstrated for wells near Site 6, that the concentrated chrome probably has not migrated far from the wells.

Mr. Drobesh asked how methane is relieved from under a landfill cap. Mr. Hughes replied that there is a felt component to the lining that allows the shallow soil gas to migrate up and through vent pipes. Deeper gas migrates to the sides of the landfill cap and out. Mr. Drobesh asked what the chemical reaction is if methane mixes

with water. Mr. Hughes replied that there would be a limited amount of methane that could dissolve in the water.

Mr. McGarvey wanted clarification on where the \$175 million spent to date on cleanup came from. Mr. Hughes replied that it is Air Force (federal) funds from the Base Realignment and Closure (BRAC) account.

Mr. Merritt inquired where the drinking water at Mather comes from. Mr. Hughes explained that 3 extraction wells in the housing community draw water up from roughly 300-500 feet deep. The groundwater plume is not deeper than 200 feet deep, so the drinking water source does not interact with the plume.

Mr. Drobesh asked if the drinking water wells are tested for perchlorate and if there is a plan if perchlorate is detected in these wells. Mr. Hughes replied that the County and Aerojet do test for perchlorate. Ms. Tatoian Cain replied that if perchlorate was found in the County drinking water wells at Mather, the regulatory agencies would require Aerojet to provide an alternate water supply. Mr. Muza stated that the California limits for perchlorate are 6 ppb, and the federal limits are 25 ppb.

Mr. Hughes added that the Main Base wells were a major source of clean water for the County water supply. Mr. Drobesh inquired whether there had been any contingency plans developed that addressed an alternative source of water should the Main Base wells become contaminated with perchlorate due to simultaneous removal of perchlorate from McDonald Douglas and Mather contaminants. The RAB requested the County to speak to them about providing alternative water to the Main Base housing area, should the need arise.

Mr. Drobesh asked if there had ever been any RAD survey and clearance of the nuclear storage facility. Mr. Hughes replied that a survey had been conducted and the results indicated no radioactive levels above the background. Mr. Drobesh requested that the Air Force perform another survey of this area.

#### **4. ACTION ITEM LIST**

The action items from this meeting are listed below.

- Email web/AR address to attendees
- Determine who is the responsible party to answer question on whether fish in Mather lake are being tested for lead
- Email August Mather RAB slides to community attendees

- Overlay parcel map on MMRP map and distribute to mtg. attendees
- Organize tour of Mather and Boeing perchlorate facility in June
- Determine Aerojets sampling frequency of drinking water wells in housing community

## **5. TOPICS FOR FUTURE RAB MEETINGS**

Mr. Drobesh requested that a perchlorate update be considered for the next RAB meeting. The group discussed the possibility of holding a public tour on June 11 that included a stop at a perchlorate treatment plant. The Air Force agreed that this would be a good idea and the tour would be coordinated at a later date.

## **6. FUTURE MEETING DATES**

The next RAB meeting date was not determined, but a public tour was tentatively scheduled for June 11, 2008.

## **7. PUBLIC COMMENTS**

No additional public comments were offered.

## **8. ROUND THE TABLE COMMENTS**

No additional RAB comments were offered.

## **9. ADJOURNMENT**

Meeting was adjourned.



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**12 March 2008**

# **Mather Environmental Cleanup Update**

**Presentation to Restoration Advisory Board (RAB)**

**by**

**Steve Hamilton**

**Air Force Real Property Agency RAB Co-chair**

**Mather BRAC Environmental Coordinator**

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## ***Cleanup Activity Updates***

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- **Field activities since last RAB meeting**
- **Upcoming field activities**
- **Property transfer status update**
- **Construction Complete goals**
- **MMRP update**
- **Groundwater cleanup update**
- **Key document update**





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## *Updates – Field Activities*

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- **Field activities since last RAB meeting**
  - **Installation of groundwater extraction well EW-13BuB, with associated pipeline, and electrical and fiber optic connections**
  - **Installation of vapor extraction and vapor monitoring wells at SVE sites**
  - **Fourth-quarter 2007 and first-quarter 2008 monitoring of groundwater, soil vapor, and landfills**



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## *Updates – Field Activities*

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- **Field activities since last RAB meeting**
  - **Repaired drainage at Site 7 Landfill cap**
  - **Aerial survey to update topographic maps for the three landfill caps**
  - **Solar fan replaced at Landfill 4 gas migration intercept trench GVP-8**



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## ***Field activities - drilling***

**Drill rig in action using  
air to remove cuttings**



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## *Updates – Field Activities*

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- **Upcoming field activities**
  - **Monitoring well installation, about 33 wells**
  - **Groundwater sampling and water-level measurements for second quarter start in April**
  - **Evaluation of soil vapor extraction (SVE) radius of influence using new extraction and observation wells**
  - **Routine operation and sampling of SVE, bioventing, and groundwater treatment systems; landfill inspection and monitoring**



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## *Updates – Field Activities*

- **Upcoming field activities**
  - **Small mammal survey at former skeet range Site 87**
  - **Magnetic survey and clearance of the rest of the former practice grenade range**
  - **Magnetic survey and clearance on east shoreline of Mather Lake**
  - **Magnetic survey and clearance of Suspected Buried Ordnance Site**
  - **Perched water pilot test at Site 7**



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## ***Field activities: measuring depth to water***

**Depth to water,  
for mapping  
groundwater flow,  
is measured at  
all wells twice  
each year**



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## ***Updates – Property Transfer***

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- **Property transfer status update**
    - **Parcel I-1 (Metropolitan Community Church) deeded in the August of 2007**
    - **Parcel Q (Heritage Community Credit Union) deeded in the October 2007**
    - **Parcel M (Mather Community Campus) planned to be deeded later in 2008**
    - **Sacramento County and AFRPA are negotiating proposed changes in size of the airport and parks parcels (A and G, respectively)**
    - **Parks lease amended to include Mather Lake in 2008**
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## ***Updates - Construction Complete***

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### **■ Construction Complete goals**

- U.S. EPA set goals for Mather under the Government Performance and Results Act**
- Construction Completion means having all remedies in place, all immediate threats eliminated and all long-term threats under control**
- Goal was set for fiscal year (FY) 2007, now is set for FY 2009**





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## ***Construction Completion Goals (cont'd)***

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- **Goals to be completed to complete construction**
  - **Adequate containment, Southwest Lobe of Main Base/SAC Area Plume (extraction well EW-13BuB to begin operation in fiscal year 08; additional monitoring wells planned for FY08)**
  - **Address MMRP sites (take necessary action or determine no action is necessary). Clearance projects planned for 3 sites FY08**



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## ***Construction Completion Goals (cont'd)***

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- **Completion of documentation for institutional controls (ICs): Establish ICs for AC&W Plume; clarify ICs identified in RODs for Soil, Groundwater, Landfill, and Basewide operable units.**
- **Complete Explanation of Significant Difference to authorize excavation of lead contamination at Site 10C/68 (revised in February and in regulatory review).**



## ***Update - Military Munitions Response Program (MMRP)***

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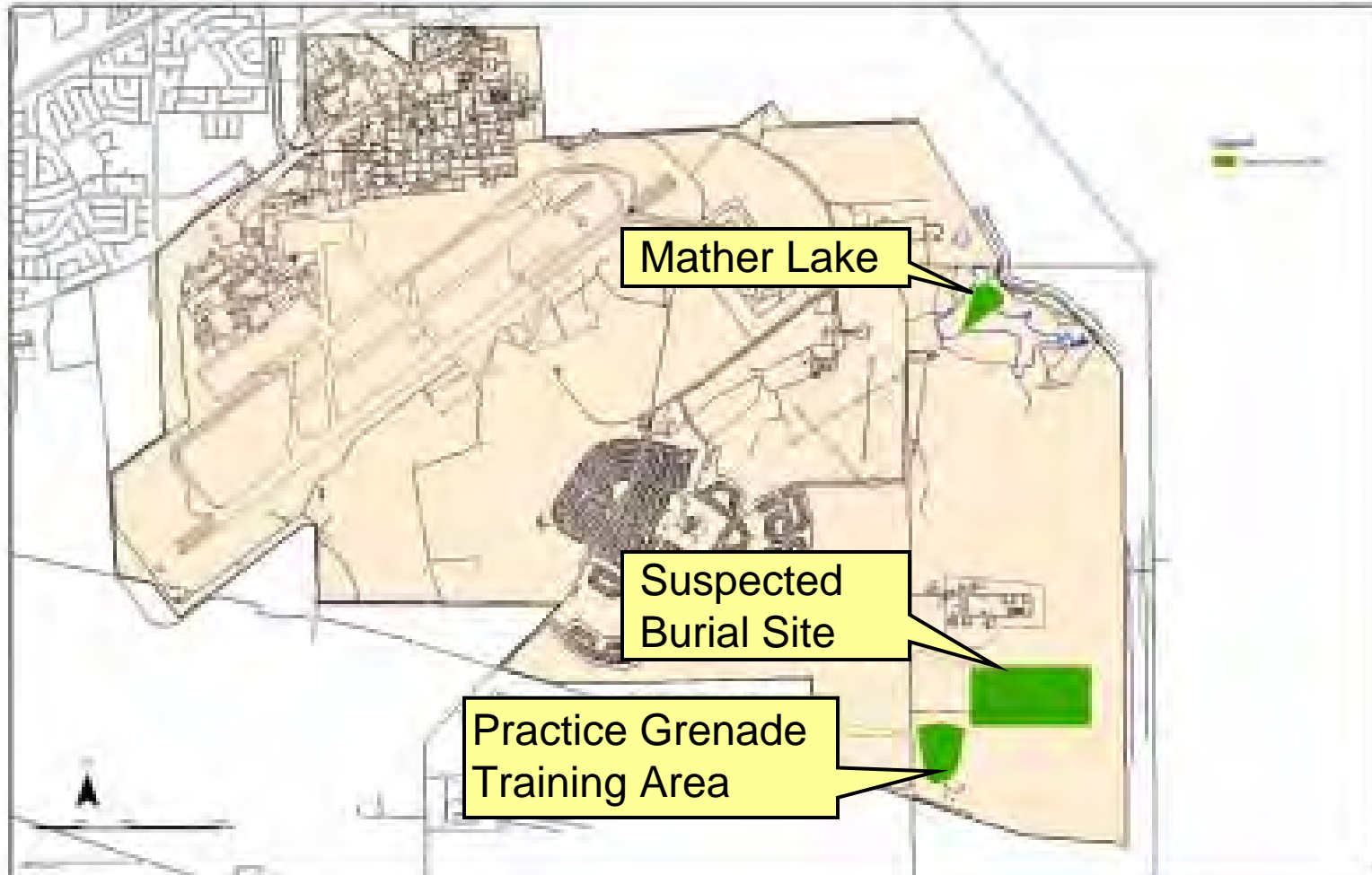
### **■ MMRP update**

- The environmental, health and safety issues related to ordnance are managed under the MMRP
  
- 3 Major MMRP Sites at Mather
  - Mather Lake: part of eastern shoreline to be cleared in 2008
  - Practice Grenade Launcher Training Area partially cleared in 2007; remainder planned for 2008
  - Suspected Burial Site, to be cleared in 2008 (also overlaps and covers MMRP clearance for IRP Site 69)



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## Map of 3 MMRP Sites



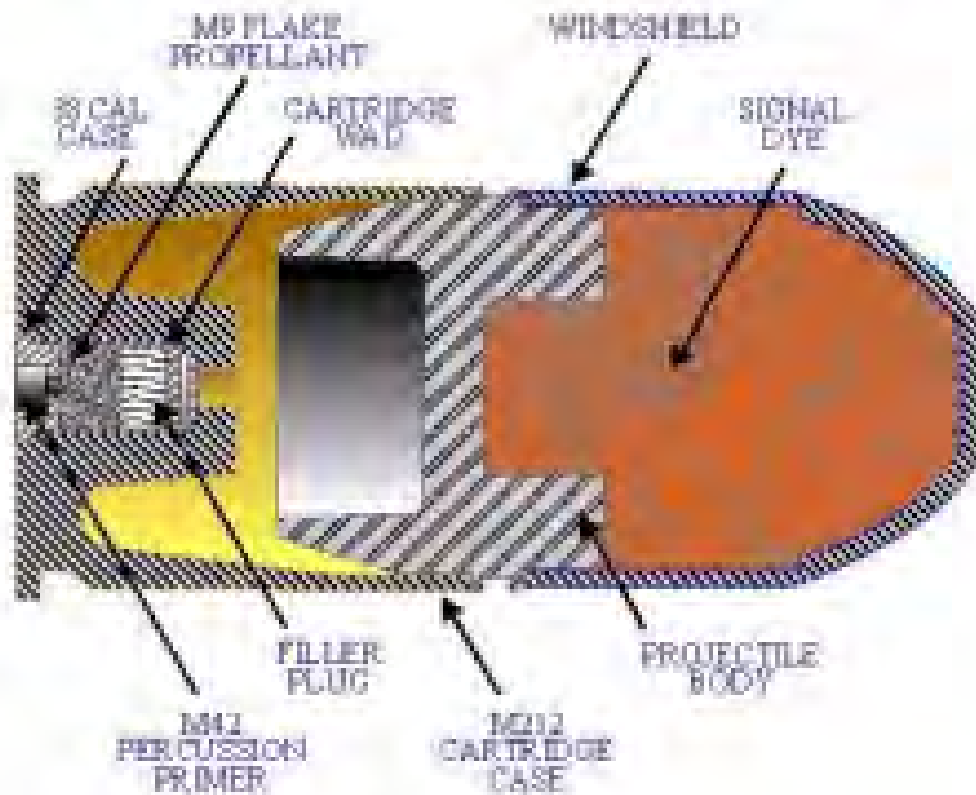
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## Update – MMRP: Practice Grenade

### 40mm M781 Practice Cartridge



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## ***Update – MMRP: Practice Grenade***



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## ***Update – MMRP: Mather Lake MMRP Site***

- Approximately 15 acres on the northeastern shore of Mather Lake (NOT near parking or picnic areas)
- The site was reportedly used one year for practice grenade launching; most of the site is underwater
- Signs are posted to keep people away from area





## ***Update – MMRP: Practice Grenade Training Area***

- About 40 acres; part of which was cleared in 2007. Only inert practice grenades found







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## ***Update – MMRP: Suspected Burial Site***

- Suspected munitions disposal area
- Estimated size is 110 Acres



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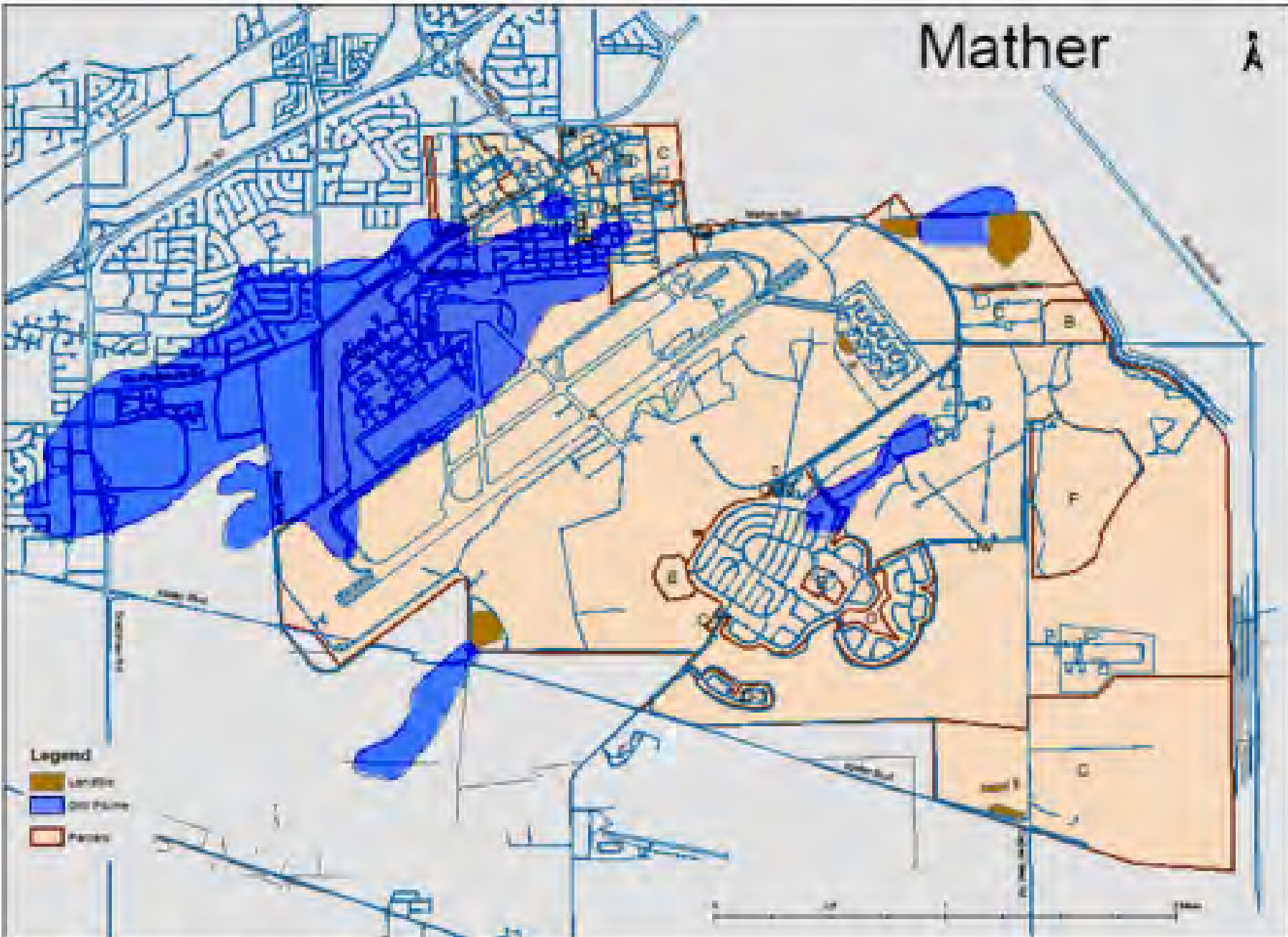
## ***Update – Groundwater Cleanup***

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- **Groundwater cleanup update**
  - **Three plumes are undergoing cleanup by AFRPA**
  - **Site 7 cleanup resumed in 2006 after 3-year for gravel mining to occur south of Mather**
  - **AC&W Plume concentrations have decreased**
  - **Main Base/SAC Area extraction has been decreased somewhat until the injection wells are augmented by additional discharge capacity**

# Mather

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**Legend**

- Landfill
- Old Plume
- Parcel

Map Document: D:\Projects\GIS\mather\mather.aprx  
Created: 11/10/2010 11:20:44 AM



## ***Update – Groundwater: Capture Zone Analysis***

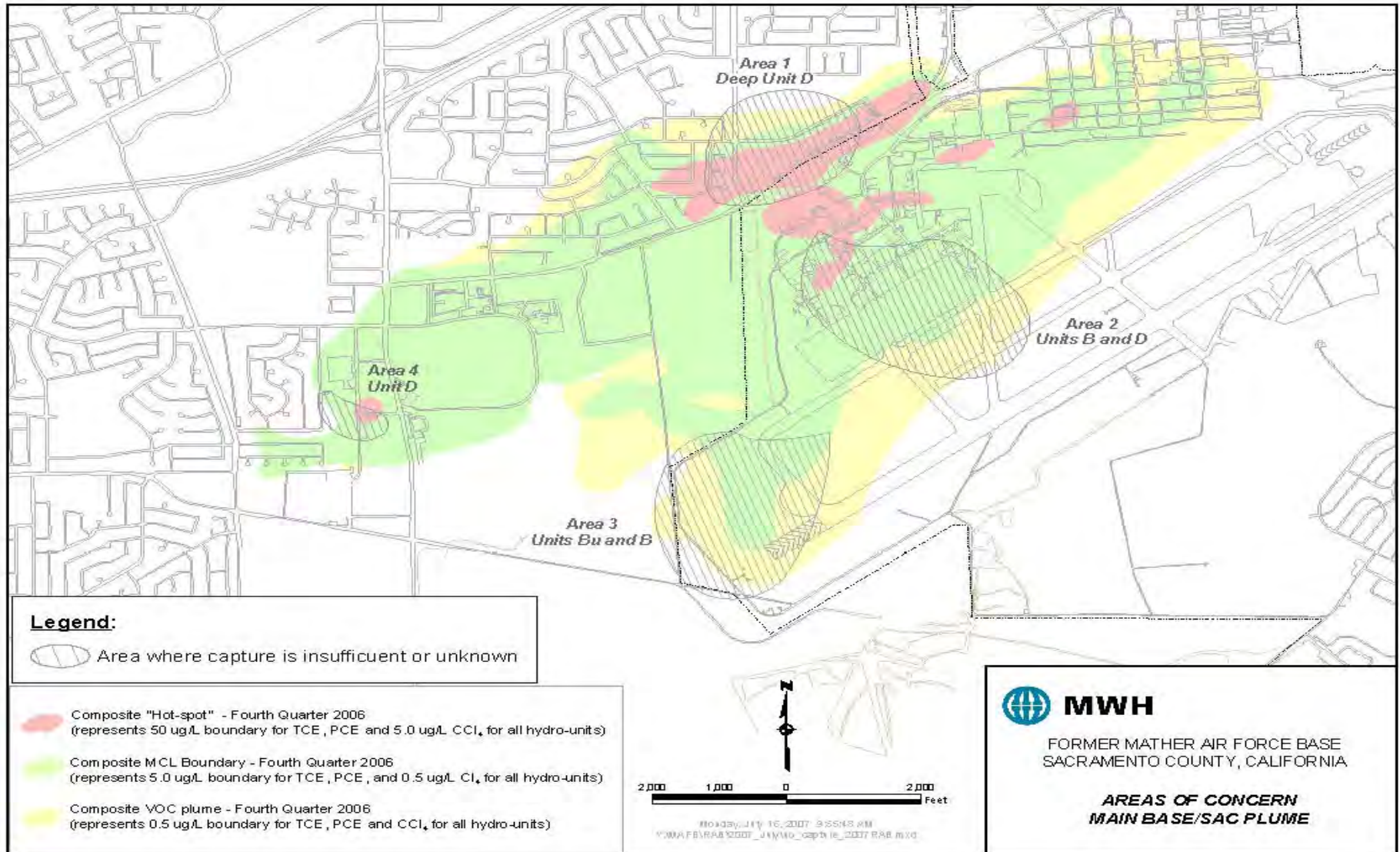
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- Capture Zone Analysis evaluated capture of Main Base/SAC Area Plume; report issued in August 2007
- The CZA identified 3 areas where plume extent is not fully defined, and capture cannot be demonstrated
- The CZA identified one area where capture has not been achieved, referred to as the Southwest Lobe
- The CZA report recommended additional wells to address these 4 deficiencies; about half of these wells were drilled in 2007 and the rest are planned to be drilled in 2008



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# Plume Map with 4 Capture Zone Analysis Areas





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# ***Key document update***

- **Reviews completed since August 07 RAB meeting**
  - Second quarter groundwater report, including 2008 sampling plan in Appendix C (January 8, 2008)
- **Other documents of interest**
  - Several work plans are being finalized for work completed during document review; no additional review expected
  - Reporting of routine monitoring (no comments expected)
    - 2Q07 groundwater report issued Nov 07
    - 3Q07 groundwater report issued Dec 07
    - 3&4Q07 SVE report issued 22 Feb 08
    - 4Q07 landfill report issued 14 Feb 08



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## ***Key document update (cont'd)***

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- **Documents in Review as of 12 March 08**
  - **Work plan for small mammal survey (plan for 2008 incorporated as an appendix) issued 3 March 2008, comments requested by the end of March to allow work to proceed**
  - **Work plan for MMRP clearance, east shore of Mather Lake issued 27 February 2008, comments due 28 April 2008**



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## ***Key document update (Cont'd)***

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### ■ **Documents to be issued later in 2008**

- Groundwater Monitoring Reports – 4Q & annual 2007 groundwater (draft to be issued 5-19-08); 1Q08 (30 June 08); 2Q08 (draft, with 2009 sampling plan, 7 Nov 08); 3Q08 (19 Dec 08)
- Soil Vapor Extraction/Bioventing Semiannual Monitoring reports – 1Q08 and 2Q08 (24 Oct 08)
- Post-closure Landfill Inspection Reports – 2Q07(8-13-07) and 3Q07 (11-12-07)
- Work plan for additional monitoring wells (date TBD)
- Institutional Control documentation (Explanation of Significant Difference [ESD] for AC&W Plume; clarifying documentation for other operable units) (dates TBD)
- ESD to authorize lead excavation at Site 10C/68 and revised work plan for the same (dates TBD)





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## ***Key document update (Cont'd)***

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- **ESDs in preparation: last briefed to the RAB in April 2007; ESDs planned for issue in 2008**
- **When issued, there will be public notice of availability**
- **An ESD, an Explanation of Significant Difference, documents changes to a remedy selected in a Record of Decision that are significant but not fundamental changes**



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## ***Key document update (Cont'd)***

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- **ESD to add Institutional Controls (ICs) to remedy for AC&W Plume**
  - **Drilling and groundwater-use restrictions**
  - **Land-use must not interfere with cleanup**
- **ESD to authorize excavation of shallow ashy layer containing lead contamination at Site 10C/68. The cleanup goal will be compatible with industrial use, but it is expected that the excavation will result in conditions compatible with unrestricted use.**



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## ***Key document update (Cont'd)***

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- **Technical memoranda will be issued to clarify ICs selected by three other Mather RODs (Landfill, Soil & Groundwater, Basewide)**
  - **ICs are not well-defined in Mather's earlier RODs.**
  - **The details of ICs are to be clarified for the other active Mather sites. The ICs are already incorporated into lease or deed restrictions; the details will be added as appropriate.**
  - **The protection of each cleanup system will be more explicitly identified as an IC for each treatment system**



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## ***Key document update (Cont'd)***

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- **ICs will be implemented through:**
  - **Lease requirements for property still owned by the Air Force**
  - **Grantee covenants in the deed when the property is transferred**
  - **State land-use covenants between grantee and the State of California may also be signed**
- **The Air Force is ultimately responsible for implementing, maintaining, and monitoring ICs before and after property transfer**



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## ***Key document update (Cont'd)***

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- **Reporting on IC Compliance**
- **Prior to transfer, the Air Force will report annually.**
- **After transfer, the transferee (property recipient) will report annually.**
- **If there is a breach of covenant, prompt reporting is required of the property owner, who must also address the problem.**



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## ***Regulatory Update***

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- **U.S. EPA: Rich Muza**
- **CA DTSC Dan Ward**
- **CA RWQCB: Marcus Pierce**



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## *Action Items*

- Provide Sandra Lunceford with a RAB copy of the AC&W and other ESDs once signed by AFRPA
- Provide parcel, site, and plume map to RAB (Lunceford & McGarvey requested)
- Provide information when property with land-use restrictions is to be transferred.
- Poll RAB members for interest in summer tour of Mather. If there is interest, schedule date and time.



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## ***Action Item List (Cont'd)***

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- Ms. Lunceford requested a larger, color version of the map and spreadsheet showing the proposed extraction by Boeing.
- The Air Force will provide a color map showing all the sites, groundwater plumes, and landfills with local streets and other reference points at all future RAB meetings.
- Ms. Lunceford requested the RWQCB's comments on the Capture Zone Analysis. Ms. Bessette will provide them to Ms. Crull, who will include those comments in the final minutes.





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## ***RAB Topics and Future Meeting Dates***

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### **■ Topics for future RAB meetings**

- Bradshaw 7C trench excavation through the Site 39 area.
- “Data gap” and replacement well plans.
- Small mammal survey at Site 87
- Landfill 4 gas monitoring
- Site 7 Perched Water – plans to dewater
- Other requests?

### **■ Future RAB Meeting Date Suggestions**

- **September 10, 2008**



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## ***Comments***

- **Regulator Comments**
- **RAB Member Comments**
- **Public Comments**



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## ***Round the Table***

- **Final Comments**
  
- **Meeting Adjourned**