



The Boeing Company
Santa Susana Field Laboratory
5800 Woolsey Canyon Road
Canoga Park, CA 91304-1148

Via E-Mail to losangeles@waterboards.ca.gov

October 31, 2014
In reply refer to SHEA-115019

Ms. Cassandra Owens
Regional Water Quality Control Board
Los Angeles Region
320 West 4th Street, Suite 200
Los Angeles, CA 90013

Dear Ms. Owens:

Subject: 2014-2015 Rainy Season Sampling and Analysis Plan (SAP), Best Management Practice (BMP) Monitoring and Performance Monitoring Programs for the Outfalls 008 and 009 Watersheds, The Boeing Company, Santa Susana Field Laboratory, Canoga Park, California (Order No. R4-2010-0090, NPDES No. CA0001309, CI No. 6027)

The Boeing Company (Boeing) is providing the enclosed BMP Monitoring and Performance Monitoring Sampling and Analysis Plan for the Outfalls 008 and 009 Watersheds for the 2014-2015 rainy season, as referenced in the October 14, 2010 BMP Plan. This document has been developed with input and in accordance with recommendations from the Santa Susana Stormwater Expert Panel and prepared for Boeing and the National Aeronautics and Space Administration (NASA). The attached plan will be posted on the Boeing External website at the following address: http://www.boeing.com/aboutus/environment/santa_susana/isra.html.

If you have any questions or require anything further, please contact Debbie Taeye at (818) 466-8849.

Sincerely,

Paul J. Costa
Environmental Operations and Compliance Manager
Santa Susana Field laboratory

Enclosure: 2014-2015 Rainy Season Sampling and Analysis Plan (SAP) Updates, Best Management Practice (BMP) Monitoring and Performance Monitoring Programs

Cc: Mr. Peter Raftery, RWQCB, e-copy only
Mr. Mazhar Ali, RWQCB, e-copy only
Mr. Buck King, DTSC, e-copy only
Mr. Allen Elliott, NASA, e-copy only
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Mr. Randy Dean, CH2M HILL, e-copy only
Mr. Brandon Steets, Geosyntec, e-copy only
Ms. Shelby Valenzuela, MWH
Mr. Alex Fischl, MWH



October 29, 2014

Ms. Deborah Taege
The Boeing Company
Santa Susana Field Laboratory
5800 Woolsey Canyon Road
Canoga Park, CA 91304

Mr. Allen Elliott
National Aeronautics and Space Administration
George C. Marshall Space Flight Center
Mail Code: AS10
Marshall Space Flight Center, AL 35812

Subject: 2014/2015 Rainy Season Sampling and Analysis Plan (SAP) Updates, Best Management Practice (BMP) Monitoring and ISRA Performance Monitoring Programs

Dear Ms. Taege and Mr. Elliott:

This letter presents the sampling and analysis plan (SAP) updates to the potential Best Management Practice (BMP) subarea and BMP performance monitoring and the ISRA performance monitoring programs for the 2014/2015 rainy season, and serves as an addendum to the 2013/2014 rainy season SAP (MWH, 2013). Potential BMP subarea monitoring is conducted at locations receiving runoff from potential source areas and other infrastructure (e.g., roads, buildings, parking areas) to assess the potential for contribution of constituents of concern (COCs) from the potential source areas to stormwater runoff and to identify locations for new BMPs. BMP performance monitoring is conducted at BMPs (e.g., B-1 Media Filter, Lower Parking Lot BMP) to assess the effectiveness of the BMPs at promoting sediment settling, removing COCs, and improving water quality to comply with NPDES permit limits. Interim Source Removal Action (ISRA) performance monitoring is conducted up- and downstream of completed ISRA areas to assess the contribution of COCs to stormwater runoff following completion of remedial activities. The results and recommendations from the 2014/2015 rainy season will be presented in the 2014/2015 annual rainy season report.

The updates to the SAP for the 2014/2015 rainy season account for BMPs planned for installation prior to or during the 2014/2015 rainy season, field observations of monitoring locations during the 2013/2014 rainy season, and an evaluation of surface water sampling data collected to date. The updates involve changes to the potential BMP subarea and BMP performance monitoring locations and the ISRA performance monitoring locations, and are described below. In addition, attached to this letter are 2014/2015 rainy season versions of the SAP tables and figures. The changes described in this letter were developed with input from and in accordance with the recommendations from the Santa Susana Site Surface Water Expert Panel (Expert Panel) and Geosyntec Consultants (Geosyntec), and were initially presented in the 2013/2014 Rainy Season Annual Report (MWH *et al.*, 2014).

BMP Monitoring Location Updates

Outfall 008

- Discontinue monitoring at potential BMP subarea monitoring locations HZBMP0001 and HZBMP0003 because the locations have been monitored for four years and based on the data collected to date the Expert Panel concluded that additional receiving water monitoring at these locations was no longer needed (Figure 1). In addition, these locations are ranked low in the BMP site ranking analysis (Geosyntec and Expert Panel, 2014). Site inspections of the Outfall 008 watershed and observations of BMP performance will continue under the site wide SWPPP.

Outfall 009

- Within the B-1 area, change B1BMP0003 and B1BMP0007 to upstream and downstream BMP performance monitoring locations, respectively, because these locations are used to monitor treatment of surface water in the vegetated channel downstream of the B-1 Media Filter (Figure 2).
- At the Lower Lot BMP, adjust the location of the mid-point monitoring location LPBMP0003 from the biofilter inlet to the sediment basin outlet box (Figure 2). This change will avoid the situation observed during the 2013/2014 rainy season where the sample point at the biofilter inlet could not be accessed due to ponding. Evidence of past or current ponding in the biofilter will be noted at the time of sampling.
- At the Building 1436 detention bioswales BMP, add up- and downstream monitoring locations ILBMP0003 and ILBMP0004, respectively, to monitor the southwestern detention bioswale, and add up- and downstream monitoring locations ILBMP0005 and ILBMP0006, respectively, to monitor the northeastern detention bioswale (Figure 3). The locations shown on Figure 3 are preliminary and may be moved pending observations of the completed BMP during rain events. Monitoring will begin once the BMP is completed (tentatively November 2014). Observations of each detention bioswale will be made at the time of sampling and will include noting the influent and effluent flow conditions and evidence of past or current ponding.
- Discontinue monitoring at potential BMP monitoring locations A2BMP0003 and A2BMP0005 along the tributary drainage below the Helipad/ELV/AP-STP areas because the locations have been monitored for three years and based on data collected to date the Expert Panel concluded that additional receiving water monitoring at these locations was no longer needed (Figure 5).
- At the ELV treatment BMP, add mid-point monitoring locations EVBMP0009 and EVBMP0010 to evaluate stormwater conditions between the settling tanks and media filter (Figure 6). Samples collected at these locations will be composited to allow a direct comparison of mid-point sample water quality to the influent and effluent water quality.

ISRA Performance Monitoring Location Updates

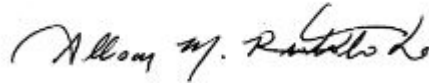
Outfall 009

- Within the ELV area, monitoring location EVSW0003 will be adjusted to monitor a combination of runoff from the slope northeast of ELV-1D and effluent from a storm drain pipe located within the eastern-most part of ELV-1C that flows into ELV-1D (Figure 6). During sample collection, the approximate percentage of flow from each source will be noted on field sheets.

Sincerely,
MWH



Alex Fischl, PMP
Project Manager



Allison Ruotolo-Lo, P.G. 9105
Professional Geologist

Attachments

Table 1, BMP Monitoring Inspection Locations and Analytical Plan

Table 2, ISRA Performance Monitoring Inspection Locations and Analytical Plan

Figure 1, Outfalls 008 and 009, BMP and Performance Monitoring Locations

Figure 2, Outfall 009, BMP and Performance Monitoring Locations, B-1 and Lower Parking Lot Areas

Figure 3, Outfall 009, BMP and Performance Monitoring Locations, AILF and IEL Areas

Figure 4, Outfall 009, BMP and Performance Monitoring Locations, LOX Area

Figure 5, Outfall 009, BMP and Performance Monitoring Locations, A2LF and ELV Areas

Figure 6, Outfall 009, BMP and Performance Monitoring Locations, AP/STP Area

References

Geosyntec and Expert Panel, 2014. SSFL Watershed 008 and 009 BMP Subarea Ranking Analysis. August 27.

MWH, 2013. 2013/2014 Rainy Season Sampling and Analysis Plan (SAP) Updates, Best Management Practice (BMP) Monitoring and ISRA Performance Monitoring Programs. October 25.

MWH, Santa Susana Field Laboratory Surface Water Expert Panel, and Geosyntec Consultants, 2014. ISRA Performance Monitoring and BMP Monitoring for Outfalls 008 and 009 Watersheds, 2013/2014 Rainy Season, Santa Susana Field Laboratory, Ventura County, California. August 29.

TABLES

Table 1
BMP Monitoring Inspection Locations and Analytical Plan
2014/2015 Rainy Season
Page 1 of 3

Table 1

| Object ID | Location | Areas Monitored | Purpose | Notes | Metals (Total Recoverable) (Method 200.7/200.8) | Metals (Total Dissolved) (Method 200.7/200.8) | Cd, Cu, Pb, Hg (Total Dissolved) (Method 200.7/200.8) | Cd, Cu, Pb, Hg (Total Recoverable) (Method 200.7/200.8) | Dioxins (Method 1613) | Total Suspended Solids (Method 2540) | Particle Size Distribution (Method ASTM D422) | Turbidity (Method 180.1) |
|------------------------------|--------------|--|---|---|--|--|--|--|--------------------------|---|--|-----------------------------|
| Outfall 009 Watershed | | | | | | | | | | | | |
| A1BMP0002 | AILF | CM-9, AILF | US South, Treatment BMP Performance Monitoring | AILF tributary drainage | | | X | X | X | X | X | |
| A1BMP0003 | AILF | CM-9, AILF, IEL, Area II Road | DS, Treatment BMP Performance Monitoring | CM-9 underdrain | | | X | X | X | X | X | |
| A2BMP0001 | A2LF | A2LF | Potential BMP Location | Tributary drainage, west | X | X | | | X | X | X | X |
| A2BMP0002 | A2LF | A2LF | Potential BMP Location | Tributary drainage, east | X | X | | | X | X | X | X |
| A2BMP0006 | CM-1 | CM-1 | US East, Treatment BMP Performance Monitoring | CM-1 eastern tributary drainage | | | X | X | X | X | X | |
| A2BMP0007 | CM-1 | CM-1 | DS, Treatment BMP Performance Monitoring | CM-1 culvert outlet | | | X | X | X | X | X | |
| APBMP0001 | Ash Pile | AP/STP, ELV | Potential BMP Location | Area II Road asphalt swale | X | X | | | X | X | X | X |
| B1BMP0003 | B-1 | B-1, Upper Parking Lot and Vegetated Area Downstream of B-1 Media Filter | US Monitoring Location of Vegetated Area Downstream of B-1 Media Filter | Culvert inlet | | | X | X | X | X | X | |
| B1BMP0004 | B-1 | B-1 Media Filter | US North, Treatment BMP Performance Monitoring | Tributary drainage | | | X | X | X | X | X | |
| B1BMP0005 | B-1 | B-1 Media Filter | US South, Treatment BMP Performance Monitoring | Asphalt swale downstream of B-1 retention basin discharge | | | X | X | X | X | X | |
| B1BMP0006 | B-1 | B-1 Media Filter | DS, Treatment BMP Performance Monitoring | B-1 Media Filter underdrain | | | X | X | X | X | X | |
| B1BMP0007 | B-1 | Vegetated Area Downstream of B-1 Media Filter | DS Monitoring Location of Vegetated Area Downstream of B-1 Media Filter | Tributary drainage; DS of B-1 storm drain culvert outlet and US of Lower Parking Lot BMP discharge to Northern Drainage | | | X | X | X | X | X | |
| EVBMP0001 | ELV | ELV, Helipad | ELV Treatment BMP Overflow Monitoring | Culvert inlet; runoff will only be present when rain events exceed ELV BMP design storm | X | X | | | X | X | X | X |
| EVBMP0002 | ELV, Helipad | Helipad | Helipad BMP Overflow Monitoring | Spillway inlet | X | X | | | X | X | X | X |

Table 1
BMP Monitoring Inspection Locations and Analytical Plan
2014/2015 Rainy Season
Page 2 of 3

Table 1

| Object ID | Location | Areas Monitored | Purpose | Notes | Metals (Total Recoverable) (Method 200.7/200.8) | Metals (Total Dissolved) (Method 200.7/200.8) | Cd, Cu, Pb, Hg (Total Dissolved) (Method 200.7/200.8) | Cd, Cu, Pb, Hg (Total Recoverable) (Method 200.7/200.8) | Dioxins (Method 1613) | Total Suspended Solids (Method 2540) | Particle Size Distribution (Method ASTM D422) | Turbidity (Method 180.1) |
|--|-------------------|----------------------------------|--|---|--|--|--|--|--------------------------|---|--|-----------------------------|
| Outfall 009 Watershed (continued) | | | | | | | | | | | | |
| EVBMP0003 | CM-1 | CM-1, Area II Road | US West, Treatment BMP Performance Monitoring | Sheetflow along Area II Road upstream of sandbag berm | | | X | X | X | X | X | |
| EVBMP0007 | ELV | ELV Treatment BMP | US, Treatment BMP Performance Monitoring | Sample port in BMP influent pipe prior to "T" connection | | | X | X | X | X | X | |
| EVBMP0008 | ELV | ELV Treatment BMP | DS, Treatment BMP Performance Monitoring | Discharge from media filter tank pipe | | | X | X | X | X | X | X |
| EVBMP0009 | ELV | ELV Treatment BMP | Mid-Point Treatment BMP Performance Monitoring | Eastern sample port between settling tanks and media filter; composite with sample from western sample port | | | X | X | X | X | X | X |
| EVBMP0010 | ELV | ELV Treatment BMP | Mid-Point Treatment BMP Performance Monitoring | Western sample port between settling tanks and media filter; composite with sample from eastern sample port | | | X | X | X | X | X | X |
| ILBMP0001 | Lower Parking Lot | IEL | Potential BMP Location | Culvert discharge under spillway chute | X | X | | | X | X | X | X |
| ILBMP0002 | AILF | CM-9, IEL, Area II Road | US East, Treatment BMP Performance Monitoring | Culvert inlet off Area II Road | | | X | X | X | X | X | |
| ILBMP0003 | IEL | Building 1436 Detention Bioswale | US, Treatment BMP Performance Monitoring | Upstream end of southwestern bioswale; DS of both influent locations | | | X | X | X | X | X | |
| ILBMP0004 | IEL | Building 1436 Detention Bioswale | DS, Treatment BMP Performance Monitoring | Southwestern bioswale effluent (subsurface 12-inch underdrain connected to existing culvert) | | | X | X | X | X | X | |
| ILBMP0005 | IEL | Building 1436 Detention Bioswale | US, Treatment BMP Performance Monitoring | Upstream end of northeastern bioswale | | | X | X | X | X | X | |
| ILBMP0006 | IEL | Building 1436 Detention Bioswale | DS, Treatment BMP Performance Monitoring | Northeastern bioswale effluent (subsurface 12-inch underdrain connected to existing culvert) | | | X | X | X | X | X | |
| LPBMP0002 | Lower Parking Lot | Lower Parking Lot BMP | US, Treatment BMP Performance Monitoring | Sample port in cistern discharge pipe | | | X | X | X | X | X | |
| LPBMP0003 | Lower Parking Lot | Lower Parking Lot BMP | Mid-Point Treatment BMP Performance Monitoring | Sediment Basin outlet box | | | X | X | X | X | X | |
| LPBMP0004 | Lower Parking Lot | Lower Parking Lot BMP | DS, Treatment BMP Performance Monitoring | Discharge from Biofilter effluent pipe | | | X | X | X | X | X | |

Table 1
BMP Monitoring Inspection Locations and Analytical Plan
2014/2015 Rainy Season
Page 3 of 3

Table 1

| Object ID | Location | Areas Monitored | Purpose | Notes | Metals (Total Recoverable) (Method 200.7/200.8) | Metals (Total Dissolved) (Method 200.7/200.8) | Cd, Cu, Pb, Hg (Total Dissolved) (Method 200.7/200.8) | Cd, Cu, Pb, Hg (Total Recoverable) (Method 200.7/200.8) | Dioxins (Method 1613) | Total Suspended Solids (Method 2540) | Particle Size Distribution (Method ASTM D422) | Turbidity (Method 180.1) |
|--|----------|-----------------------------------|--|---|--|--|--|--|--------------------------|---|--|-----------------------------|
| Outfall 009 Watershed (continued) | | | | | | | | | | | | |
| LXBMP0006 | LOX | LOX | Potential BMP Location | Sheetflow along dirt road; co-located with LXSW0010 | X* | X | | | X* | X* | X | X |
| LXBMP0007 | LOX | LOX Sandbag Berm and Slope Drains | DS, BMP Performance Monitoring | Slope drain outlet; co-located with LXSW0007 | | | X | X* | X* | X* | X | |
| LXBMP0008 | LOX | LOX Sandbag Berm and Slope Drains | DS, BMP Performance Monitoring | Slope drain outlet; co-located with LXSW0008 | | | X | X* | X* | X* | X | |
| LXBMP0009 | LOX | LOX Sandbag Berm and Slope Drains | Alternate DS, BMP Performance Monitoring | Slope drain outlet; co-located with LXSW0009 | | | X | X* | X* | X* | X | |

Abbreviations:

CM - Culvert Modification
DS - Downstream
US - Upstream
X = Collect and Analyze

Notes:

* Cd, Cu, Pb, Hg, dioxin, and total suspended solids analysis to be obtained from co-located performance monitoring sample.

Table 2
ISRA Performance Monitoring Inspection Locations and Analytical Plan
2014/2015 Rainy Season
Page 1 of 1

| Object ID | Location | Areas Monitored | Purpose | Notes | Cadmium (Total Recoverable) (Method 200.8) | Copper (Total Recoverable) (Method 200.8) | Lead (Total Recoverable) (Method 200.8) | Mercury (Total Recoverable) (Method 245.1) | Dioxins (Method 1613) | Total Suspended Solids (Method 2540) |
|------------------------------|----------|-------------------------|--------------|---|---|--|--|---|--------------------------|---|
| Outfall 009 Watershed | | | | | | | | | | |
| APSW0007 | AP/STP | AP/STP-1B, -1C-1 | US/BG | AP/STP tributary drainage | X | X | X | X | X | X |
| APSW0008 | AP/STP | AP/STP-1C-1, -1C-2 | US/BG | Intermittent stream flow | X | X | X | X | X | X |
| APSW0009 | AP/STP | AP/STP-1B, -1C-1, -1C-2 | Secondary | AP/STP tributary drainage | To Be Determined* | | | | | |
| APSW0010 | AP/STP | AP/STP-1E-1 | Secondary | Intermittent stream flow | To Be Determined* | | | | | |
| APSW0011 | AP/STP | AP/STP-1E-2 | Secondary | AP/STP tributary drainage | To Be Determined* | | | | | |
| APSW0012 | AP/STP | AP/STP-1E-3 | US/BG | Intermittent stream flow | | | | | X | X |
| APSW0014 | AP/STP | All AP/STP | DS | AP/STP tributary drainage | X | X | X | X | X | X |
| EVSW0001 | ELV | ELV-1C | US | Intermittent sheet flow | X | X | X | X | X | X |
| EVSW0002 | ELV | ELV-1C | DS | Intermittent stream flow | X | X | X | X | X | X |
| EVSW0003 | ELV | ELV-1D | US | Intermittent stream flow | X | X | X | X | X | X |
| EVSW0004 | ELV | ELV-1D | DS | Intermittent stream flow | X | X | X | X | X | X |
| ILSW0003 | IEL | IEL-2 | US | Intermittent stream flow | X | | X | X | | X |
| ILSW0004 | IEL | IEL-2 | DS | Intermittent stream flow | X | | X | X | | X |
| ILSW0005 | IEL | IEL-3 | US | Intermittent stream flow | X | X | X | X | | X |
| ILSW0006 | IEL | IEL-3 | DS | Intermittent stream flow | X | X | X | X | | X |
| LXSW0004 | LOX | LOX-1B-1, -1B-2, -1B-3 | US/BG | Intermittent stream flow | X | X | X | X | X | X |
| LXSW0005 | LOX | LOX-1B-1, -1B-2, -1B-3 | US/BG | Intermittent stream flow | X | X | X | X | X | X |
| LXSW0006 | LOX | LOX-1B-1, -1B-2, -1B-3 | US/BG | Intermittent stream flow | X | X | X | X | X | X |
| LXSW0007 | LOX | LOX-1B-1, -1B-2, -1B-3 | DS | Slope drain inlet; western end of sand bag berm | X | X | X | X | X | X |
| LXSW0008 | LOX | LOX-1B-1, -1B-2, -1B-3 | DS | Slope drain inlet; eastern end of sand bag berm | X | X | X | X | X | X |
| LXSW0009 | LOX | LOX-1B-1, -1B-2, -1B-3 | Alternate DS | Slope drain inlet; eastern end of sand bag berm | X | X | X | X | X | X |
| LXSW0010 | LOX | LOX-1B-3 | DS | Intermittent stream flow | X | X | X | X | X | X |

Abbreviations:

BG - Background Assessment
 CM - Culvert Modification
 DS - Downstream
 US - Upstream
 X = Collect and Analyze

Notes:

* Analytical suite of secondary monitoring locations will be based on the evaluation of data from primary performance monitoring locations and sampled as warranted by the primary data.

FIGURES

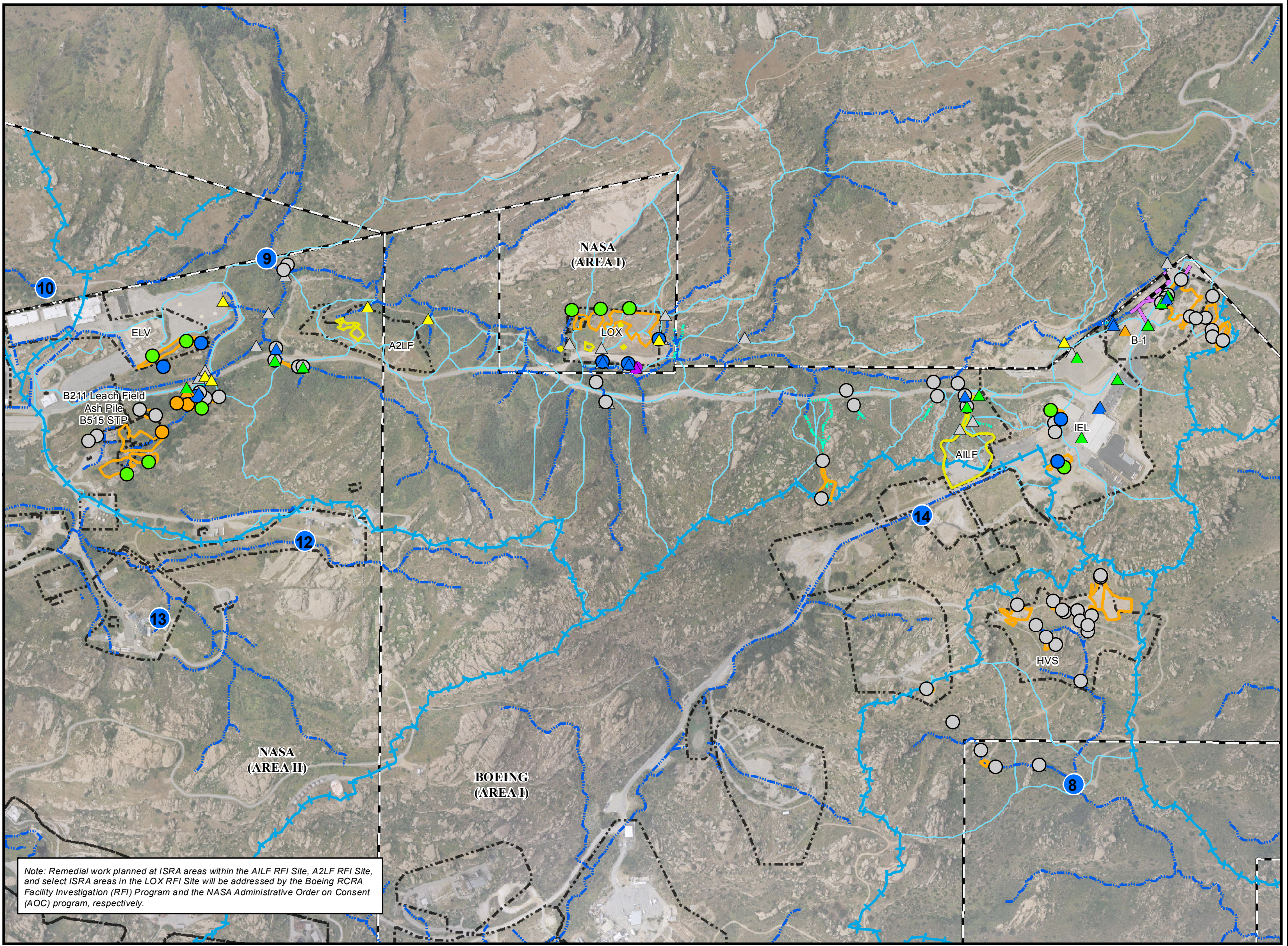
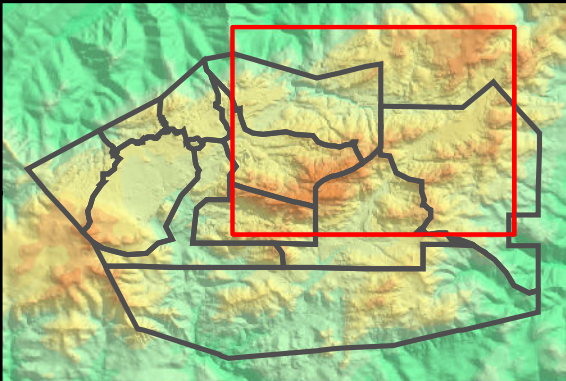
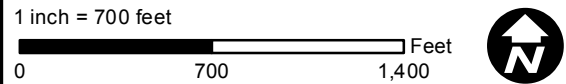
Outfalls 008 and 009 BMP and Performance Monitoring Locations

- Base Map Legend**
- Administrative Area Boundary
 - Non Jurisdictional Surface Water Pathway
 - RFI Site Boundary
 - Surface Water Divide
 - Subwatershed Boundaries
 - Drainage
 - NPDES Outfall

- Figure Legend**
- Primary Downstream ISRA Performance Monitoring Location
 - Upstream ISRA Performance Monitoring Location
 - Secondary ISRA Performance Monitoring Location
 - Discontinued ISRA Performance Monitoring Location
 - Alternate Downstream ISRA Performance Monitoring Location
 - Potential BMP Subarea Monitoring Location
 - Downstream BMP Performance Monitoring Location
 - Upstream BMP Performance Monitoring Location
 - Mid-Point BMP Performance Monitoring Location
 - Discontinued Potential BMP Subarea Monitoring Location
 - Alternate BMP Performance Monitoring Location
 - B-1 Area Stormwater conveyance Pipelines (estimated subsurface trace)
 - B1 Area Inferred Stormwater Conveyance Pipeline
 - Actual ISRA Excavation Boundary
 - Former Planned ISRA Area Boundary

Note:
 1. Aerial imagery from 2010 Sage Consulting.
 2. Rationale for discontinuing monitoring at previous sample locations can be found in the text and/or tables of the 2010/2011, 2011/2012, 2012/2013, and 2013/2014 Rainy Season Sampling and Analysis Plan.

Path: T:\projects\rock3\ISRA\Figures\PerfMbn\2012-2013 Rainy Season\Overview_11x17_Fig1.mxd
 Date: 10/29/2014



Note: Remedial work planned at ISRA areas within the AILF RFI Site, A2LF RFI Site, and select ISRA areas in the LOX RFI Site will be addressed by the Boeing RCRA Facility Investigation (RFI) Program and the NASA Administrative Order on Consent (AOC) program, respectively.

Outfall 009 BMP and Performance Monitoring Locations, B-1 and Lower Parking Lot Areas - Boeing

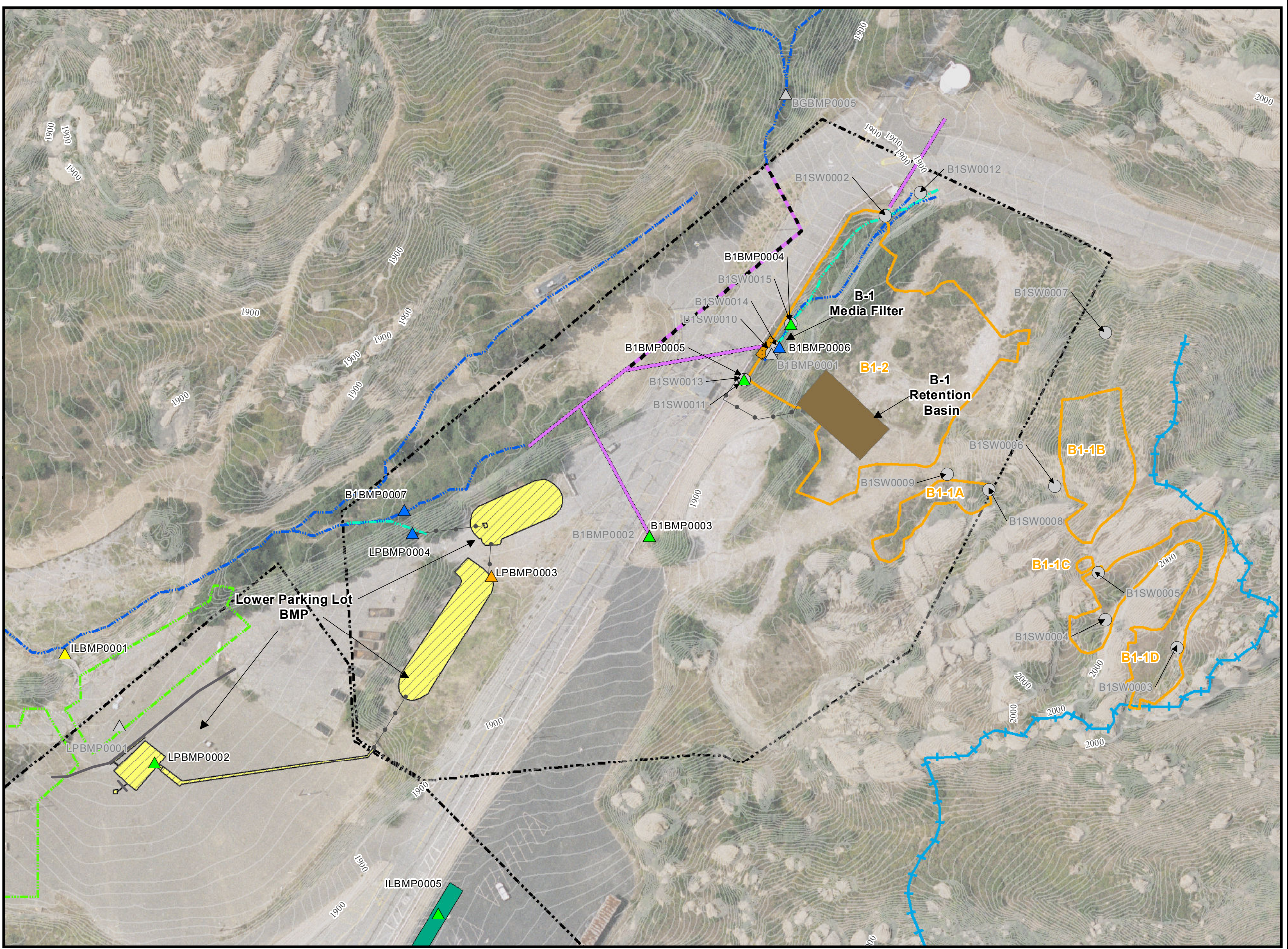
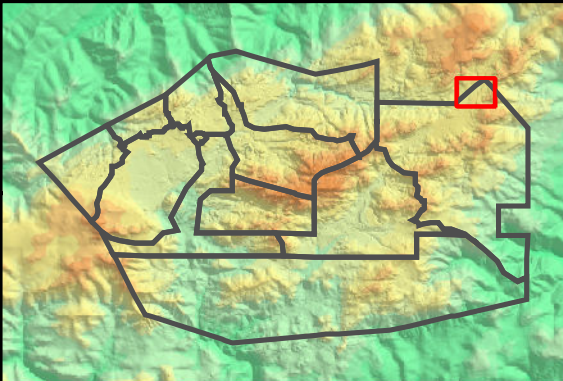
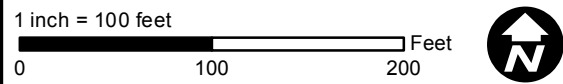
- Base Map Legend**
- Administrative Area Boundary
 - RFI Site Boundary
 - Drainage
 - Non Jurisdictional Surface Water Pathway
 - Surface Water Divide

- Figure Legend**
- Discontinued ISRA Performance Monitoring Location
 - Potential BMP Subarea Monitoring Location
 - Downstream BMP Performance Monitoring Location
 - Upstream BMP Performance Monitoring Location
 - Mid-Point BMP Performance Monitoring Location
 - Discontinued Potential BMP Subarea Monitoring Location
 - Actual ISRA Excavation Boundary
 - Asphalt/Concrete Removal Area
 - Media Filters
 - Retention Basin
 - Engineered Natural Treatment System
 - Storm Drain (estimated subsurface trace)
 - Storm Drain inferred
 - Concrete Curb
 - Conveyance Pipeline
 - Detention Bioswale (planned)

Note:

1. Aerial imagery from 2010 Sage Consulting.
2. Topographic contours from 2010 Sage Consulting.
3. Rationale for discontinuing monitoring at previous sample locations can be found in the text and/or tables of the 2010/2011, 2011/2012, 2012/2013, and 2013/2014 Rainy Season Sampling and Analysis Plan.

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Date: 10/28/2014



Outfall 009 BMP and Performance Monitoring Locations AILF and IEL Areas - Boeing

Base Map Legend

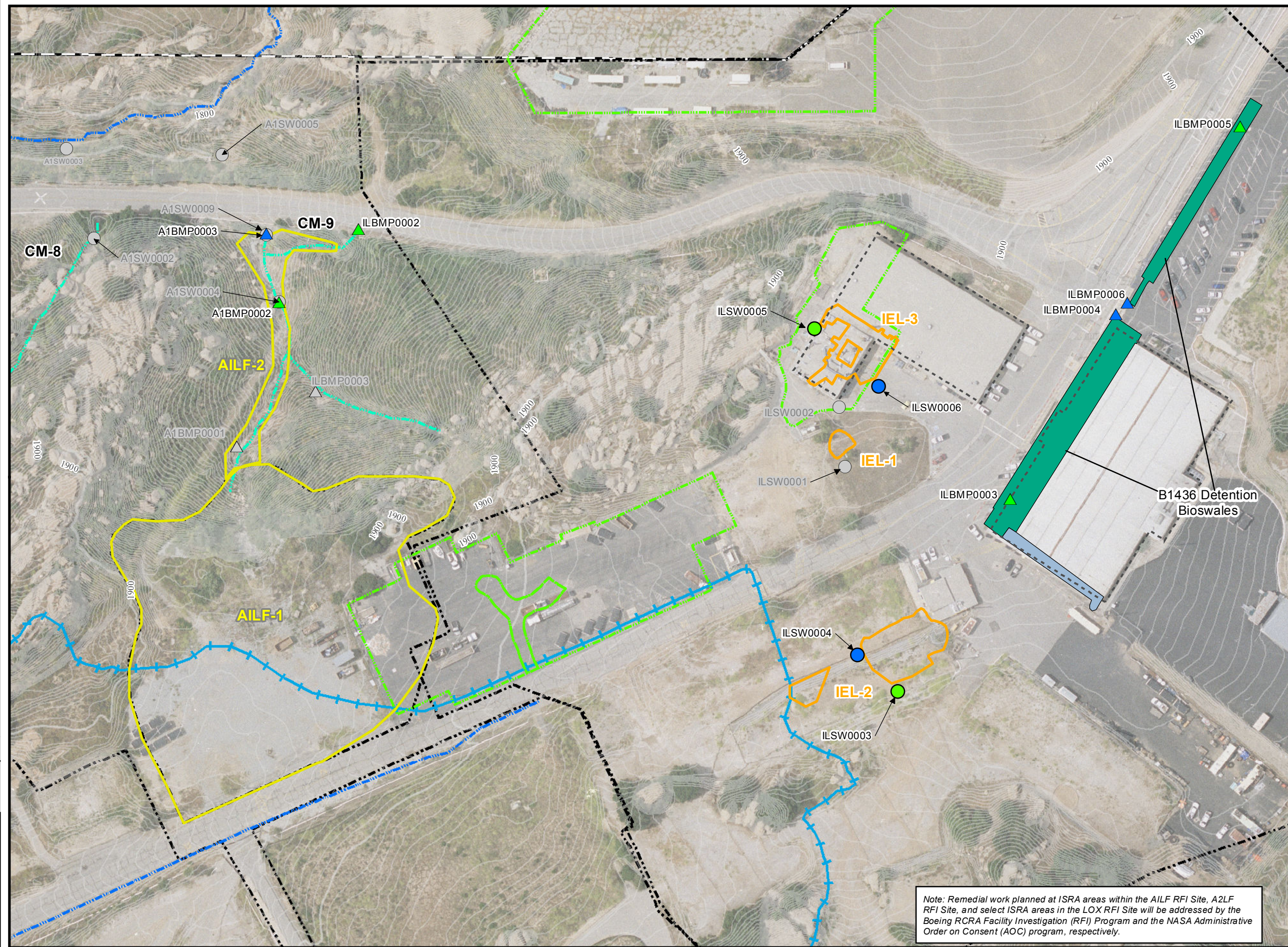
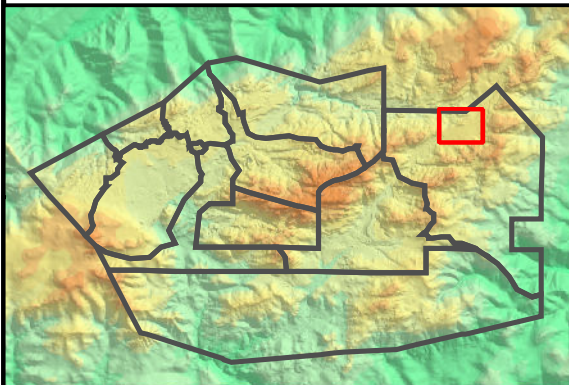
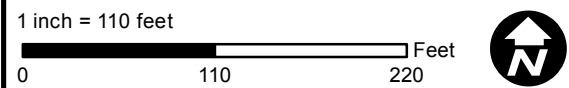
- Administrative Area Boundary
- RFI Site Boundary
- Drainage
- Non Jurisdictional Surface Water Pathway
- Surface Water Divide

Figure Legend

- Primary Downstream ISRA Performance Monitoring Location
- Upstream ISRA Performance Monitoring Location
- Discontinued ISRA Performance Monitoring Location
- Downstream BMP Performance Monitoring Location
- Upstream BMP Performance Monitoring Location
- Discontinued Potential BMP Subarea Monitoring Location
- Actual ISRA Excavation Boundary
- Former Planned ISRA Area Boundary
- Asphalt/Concrete Removal Area
- Demolition Area
- Detention Bioswale (planned)
- Rock Crib Swale (planned)

Note:
 1. Aerial imagery from 2010 Sage Consulting.
 2. Topographic contours from 2010 Sage Consulting.
 3. Rationale for discontinuing monitoring at previous sample locations can be found in the text and/or tables of the 2010/2011, 2011/2012, 2012/2013, and 2013/2014 Rainy Season Sampling and Analysis Plan.

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 Date: 10/29/2014



Note: Remedial work planned at ISRA areas within the AILF RFI Site, A2LF RFI Site, and select ISRA areas in the LOX RFI Site will be addressed by the Boeing RCRA Facility Investigation (RFI) Program and the NASA Administrative Order on Consent (AOC) program, respectively.

Outfall 009 BMP and Performance Monitoring Locations LOX Area - NASA

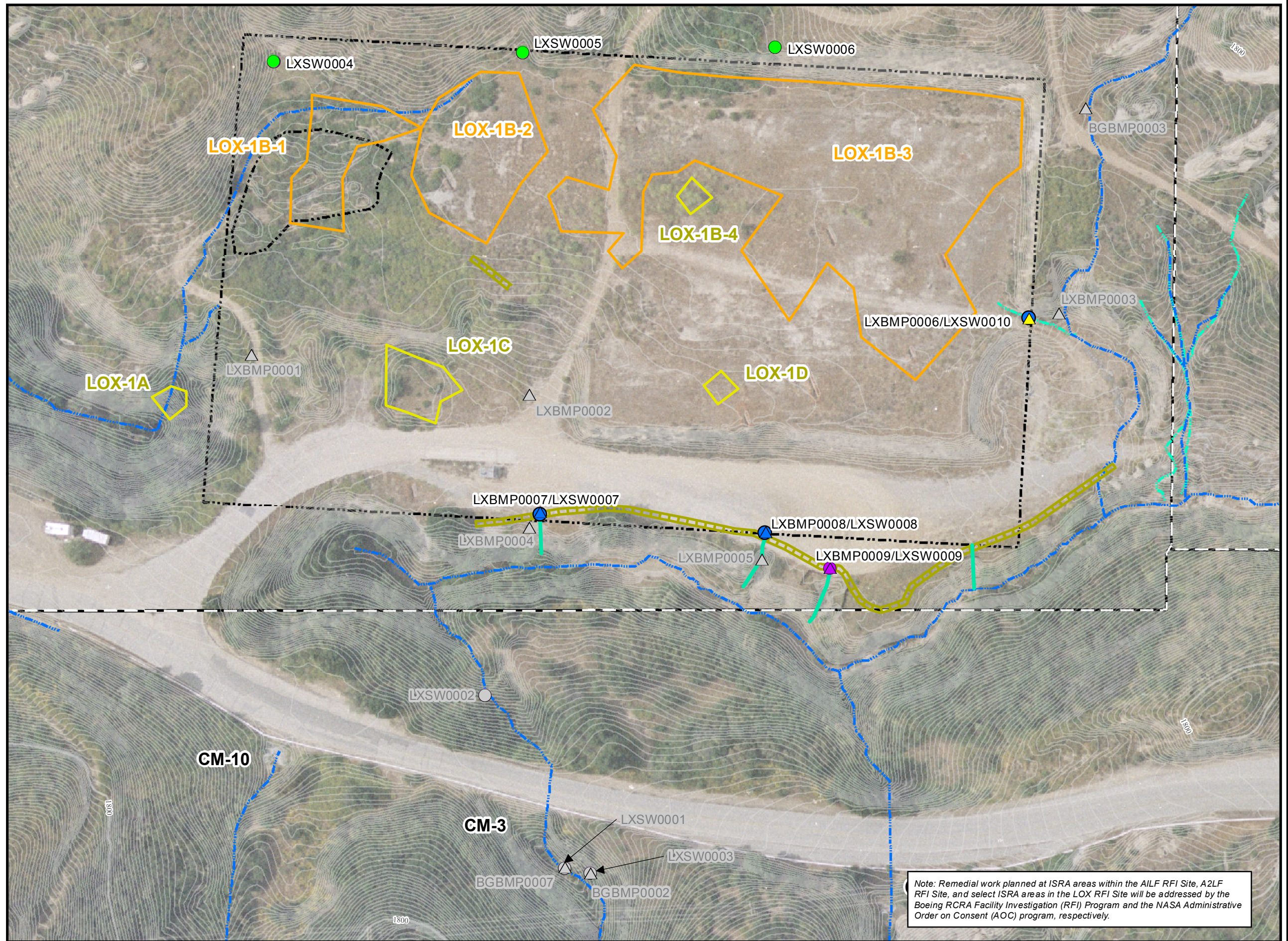
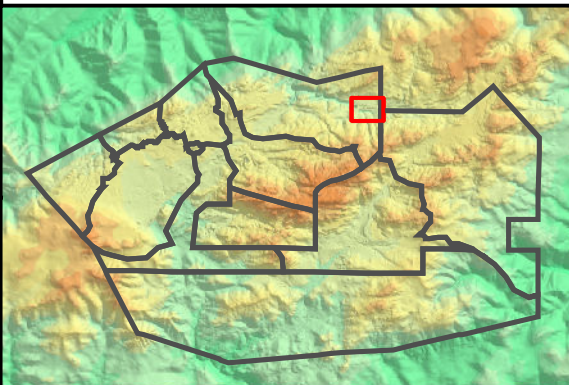
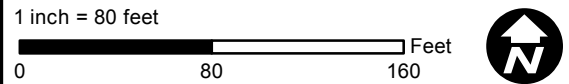
- Base Map Legend**
- Administrative Area Boundary
 - RFI Site Boundary
 - Non Jurisdictional Surface Water Pathway
 - Surface Water Divide
 - Drainage

- Figure Legend**
- Primary Downstream ISRA Performance Monitoring Location
 - Upstream ISRA Performance Monitoring Location
 - Discontinued ISRA Performance Monitoring Location
 - Alternate Downstream ISRA Performance Monitoring Location
 - Potential BMP Subarea Monitoring Location
 - Downstream BMP Performance Monitoring Location
 - Discontinued Potential BMP Subarea Monitoring Location
 - Alternate BMP Performance Monitoring Location
 - Actual ISRA Excavation Boundary
 - Former Planned ISRA Area Boundary
 - Sandbags
 - Slope Drain

Note:

1. Aerial imagery from 2010 Sage Consulting.
2. Topographic contours from 2010 Sage Consulting.
3. Rationale for discontinuing monitoring at previous sample locations can be found in the text and/or tables of the 2010/2011, 2011/2012, 2012/2013, and 2013/2014 Rainy Season Sampling and Analysis Plan.

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Outfall 009 BMP and Performance Monitoring Locations A2LF and ELV Areas - NASA

Base Map Legend

- Administrative Area Boundary
- RFI Site Boundary
- Drainage
- Non Jurisdictional Surface Water Pathway
- Surface Water Divide
- NPDES Outfall

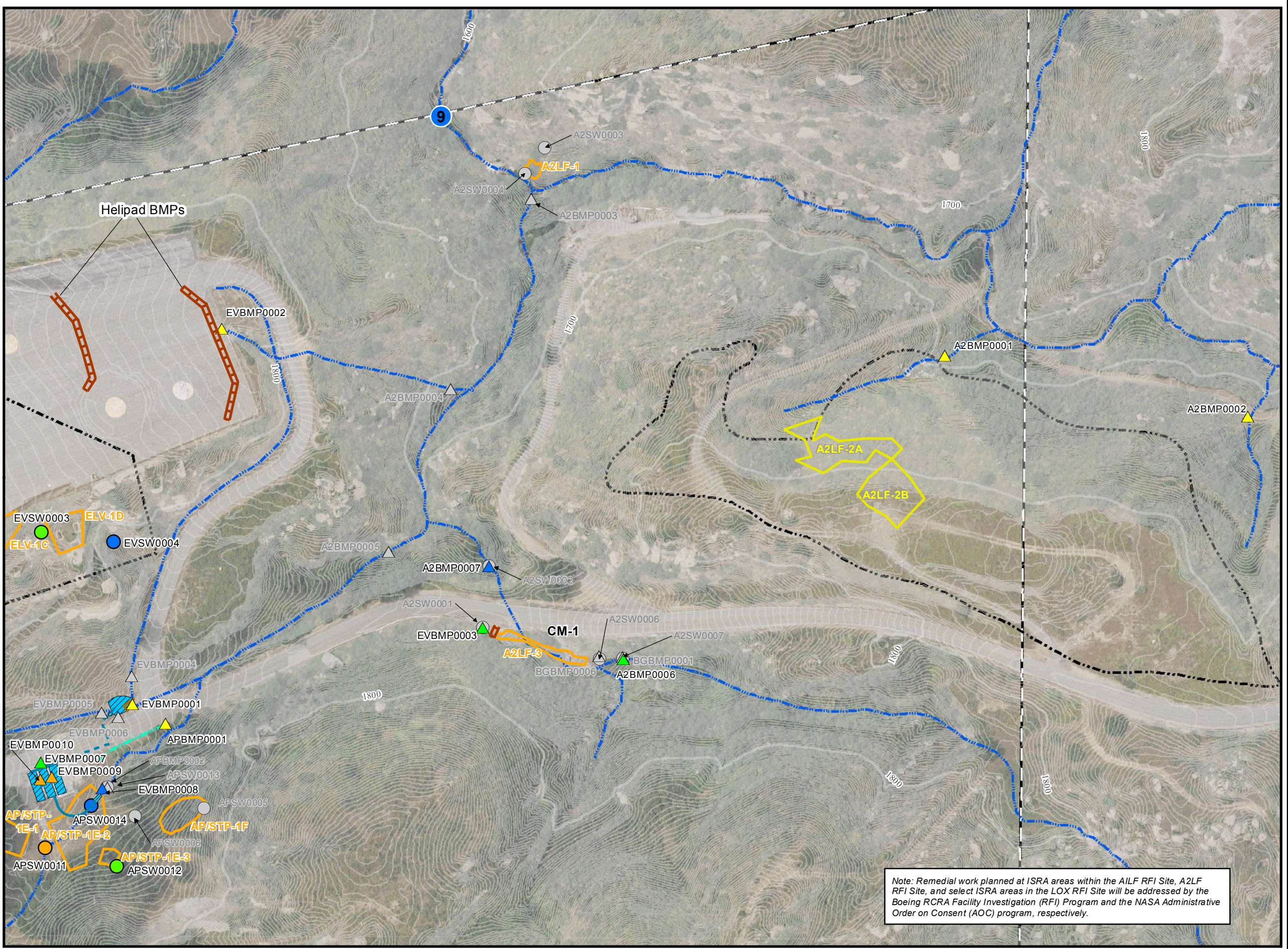
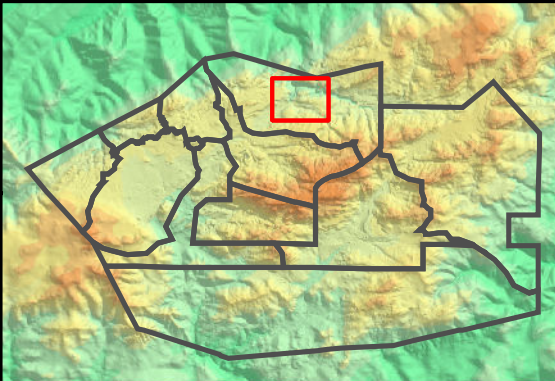
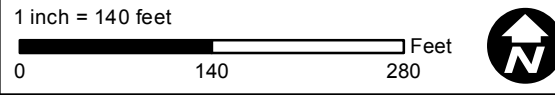
Figure Legend

- Primary Downstream ISRA Performance Monitoring Location
- Upstream ISRA Performance Monitoring Location
- Secondary ISRA Performance Monitoring Location
- Discontinued ISRA Performance Monitoring Location
- Potential BMP Subarea Monitoring Location
- Downstream BMP Performance Monitoring Location
- Upstream BMP Performance Monitoring Location
- Mid-Point BMP Performance Monitoring Location
- Discontinued Potential BMP Subarea Monitoring Location
- Actual ISRA Excavation Boundary
- Former Planned ISRA Area Boundary
- Sandbags
- Treatment BMP Feature
- Headwall
- Treatment BMP Conveyance - Pipeline (Aboveground)
- Treatment BMP Conveyance - Pipeline (Belowground)

Note:

- Aerial imagery from 2010 Sage Consulting.
- Topographic contours from 2010 Sage Consulting.
- Rationale for discontinuing monitoring at previous sample locations can be found in the text and/or tables of the 2010/2011, 2011/2012, 2012/2013, and 2013/2014 Rainy Season Sampling and Analysis Plan.

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Date: 10/28/2014



Note: Remedial work planned at ISRA areas within the AILF RFI Site, A2LF RFI Site, and select ISRA areas in the LOX RFI Site will be addressed by the Boeing RCRA Facility Investigation (RFI) Program and the NASA Administrative Order on Consent (AOC) program, respectively.



Outfall 009 BMP and Performance Monitoring Locations AP/STP Area - NASA

Base Map Legend

- Administrative Area Boundary
- RFI Site Boundary
- Drainage
- Non Jurisdictional Surface Water Pathway
- Surface Water Divide

Figure Legend

- Primary Downstream ISRA Performance Monitoring Location
- Upstream ISRA Performance Monitoring Location
- Secondary ISRA Performance Monitoring Location
- Discontinued ISRA Performance Monitoring Location
- Potential BMP Subarea Monitoring Location
- Downstream BMP Performance Monitoring Location
- Upstream BMP Performance Monitoring Location
- Mid-Point BMP Performance Monitoring Location
- Discontinued Potential BMP Subarea Monitoring Location
- Actual ISRA Excavation Boundary
- Treatment BMP Feature
- Headwall
- Treatment BMP Conveyance - Pipeline (Aboveground)
- Treatment BMP Conveyance - Pipeline (Belowground)

Note:

1. Aerial imagery from 2010 Sage Consulting.
2. Topographic contours from 2010 Sage Consulting.
3. Rationale for discontinuing monitoring at previous sample locations can be found in the text and/or tables of the 2010/2011, 2011/2012, 2012/2013, and 2013/2014 Rainy Season Sampling and Analysis Plan.

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Date: 10/28/2014

