



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

Via E-Mail

December 8, 2011
In reply refer to SHEA- 111661

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

Subject: 2011-2012 Rainy Season Sampling and Analysis Plan, Potential 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)

Dear Ms. Owens:

The Boeing Company (Boeing) is providing the attached Potential BMP and Performance Monitoring Sampling and Analysis Plan for the Outfalls 008 and 009 Watersheds for the 2011-2012 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 Taege at 818-466-8849.

Sincerely,

Tom Gallacher
Director, Santa Susana Field laboratory
Environment, Health and Safety

Attachment: 2011-2012 Rainy Season Sampling and Analysis Plan (SAP) Updates, Potential 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
Mr. Peter Zorba, NASA, e-copy only
Dr. Michael Stenstrom, Surface Water Expert Panel, e-copy only
Jon Jones, Surface Water Expert Panel
Dr. Mike Josselyn, Surface Water Expert Panel, e-copy only
Bob Gearheart, Surface Water Expert Panel, e-copy only
Dr. Robert Pitt, Surface Water Expert Panel, e-copy only
Mr. Randy Dean, CH2M HILL, e-copy only
Mr. Brandon Steets, Geosyntec, e-copy only
Ms. Bronwyn Kelly, MWH
Mr. Alex Fischl, MWH



December 8, 2011

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: 2011-2012 Rainy Season Sampling and Analysis Plan (SAP) Updates,
Potential Best Management Practice (BMP) Monitoring and Performance
Monitoring Programs

Dear Ms. Taege and Mr. Elliott:

This letter presents the sampling and analysis plan (SAP) updates to potential Best Management Practice (BMP) monitoring and performance monitoring programs for the 2011-2012 rainy season, and serves as an addendum to the 2010-2011 rainy season SAP (MWH, 2010). Potential BMP 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. In addition, monitoring of stormwater runoff quality from natural undisturbed or “stormwater background” areas located on Sage Ranch is conducted to provide reference monitoring data or site-specific stormwater background data¹. Performance monitoring is conducted up- and downstream of completed interim source removal action (ISRA) areas to assess the contribution of COCs to stormwater runoff following completion of remedial activities, and treatment BMPs to assess the effectiveness of the BMPs at promoting sediment settling and/or removing COCs.

The updates to the 2010-2011 rainy season SAP are made to account for completed ISRA areas, completed and planned BMPs, field observations, and an evaluation of surface water sampling data collected to date. The updates, which involve changes to the monitoring locations, frequency, and reporting, have been grouped into four categories, including potential BMP monitoring location updates, performance monitoring location updates, monitoring frequency updates, and reporting update. In addition, attached to this letter are 2011-2012 rainy season versions of tables, figures, and the field inspection form. The changes described in this letter were developed with input from

¹ The site-specific stormwater background dataset is for the assessment of stormwater only and is not considered part of the ongoing soil background sampling activities being conducted under DTSC oversight.

and in accordance with the recommendations from the Santa Susana Site Surface Water Expert Panel (Expert Panel) and Geosyntec Consultants (Geosyntec).

Potential BMP Monitoring Locations Updates

Outfall 008

- Along the CYN/DRG drainage, monitoring location HZBMP0002 will be discontinued (Figure 2). This location monitored flow within the CYN/DRG drainage and is located relatively close to another BMP monitoring location (HZBMP0003). Monitoring results from the 2010-2011 rainy season at both locations were consistently below the NPDES permit limit (MWH, Expert Panel, Geosyntec, and Haley & Aldrich, Inc. [H&A], 2011). Therefore, it was concluded one location is sufficient to monitor this drainage.

Outfall 009

- Within the B-1 area, monitoring location B1BMP0001 will be discontinued and monitoring locations B1BMP0004 and B1BMP0005 will be added (Figure 3). B1BMP0001 was located at the B-1 culvert inlet, where a vertical flow media filter has been installed. B1BMP0004 and B1BMP0005 will be added to monitor the performance of the B-1 media filter. Samples collected at B1BMP0004 and B1BMP0005 will be composited to allow a direct comparison of up- and downstream samples to simplify the performance evaluation of the B-1 culvert inlet.
- Within the B-1 area, monitoring location B1BMP0002 will be discontinued and monitoring location B1BMP0003 will be added (Figure 3). The B-1 retention basin modification was completed in August 2011, which included changing the discharge location. The basin previously discharged to the culvert monitored by B1BMP0002, but now discharges to the B-1 media filter culvert. To account for the revised source of surface water at B1BMP0002, the monitoring location has been renamed B1BMP0003.
- Upstream of CM-9, monitoring locations A1BMP0001 and ILBMP0003 will be discontinued and monitoring location A1BMP0002 will be added, which will be co-located with A1SW0004 (Figure 5). Monitoring results from the 2010-2011 rainy season at both discontinued locations were consistently below the NPDES permit limit (MWH, Expert Panel, Geosyntec, and H&A, 2011) and a BMP is either planned or completed upstream of each location. A vegetative swale may be installed (pending runoff observations) upstream of A1BMP0001 as described in the BMP Addendum (Geosyntec and Expert Panel, 2011) and removal of asphalt in the B324 parking lot was performed in August 2011 upstream of ILBMP0003, which will likely reduce the flow through the tributary. Therefore it was concluded one location is sufficient to monitor both drainages.
- Upstream of CM-3, monitoring location BGBMP0007 was discontinued and replaced by monitoring location BGBMP0002 during the 2010-2011 rainy season (Figure 6). BGBMP0007 was observed to be in ponded water during a previous rain event, and BGBMP0002 was established upstream of the ponded area. BGBMP0002 is no longer considered a background location because it is downstream of the Soil Borrow Area and an area of soil disturbance that began during the 2010-2011 rainy season. However, monitoring at BGBMP0002 will continue during the 2011-2012 rainy season for the

purposes of BMP monitoring based on the results from the 2010-2011 rainy season (MWH, Expert Panel, Geosyntec, and H&A, 2011).

- At LOX, monitoring locations LXBMP0001, LXBMP0002, and LXBMP0003 will be discontinued and replaced by monitoring locations LXBMP0004, LXBMP0005, LXBMP0006, respectively (Figure 6). A BMP was proposed for the LOX area in the BMP Addendum (Geosyntec and Expert Panel, 2011), and the components of the BMP located outside of the Northern Drainage have been completed, including a sandbag berm and riprap placement. LXBMP0001 and LXBMP0002 will be discontinued and replaced with LXBMP0004 and LXBMP0005 located in tributaries downstream of the sandbag berm to monitor the performance of the BMP. LXBMP0003 will be discontinued and replaced by LXBMP0006 to monitor surface flow from a portion of the LOX RFI area that flows along a dirt road before it confluences with the Sage Ranch tributary.
- Along the tributary drainage downstream of AP/STP, ELV, and A2LF, monitoring locations A2BMP0003, A2BMP0004, and A2BMP0005 will be added (Figure 7). These locations will monitor hillsides and road runoff that drain into the tributaries downstream of the two planned BMPs at ELV described in the BMP Addendum (Geosyntec and Expert Panel, 2011), in addition to providing baseline data prior to installation of two BMPs.
- Upstream of CM-1 (eastern side), monitoring locations BGBMP0001 and BGBMP0006 will be discontinued (Figure 7). Based on a review of results from the 2010-2011 rainy season, it was concluded the three background locations on Sage Ranch are sufficient to provide background data for the program.
- Upstream of CM-1 (western side), monitoring location EVBMP0003 will be added, which will be co-located with A2SW0001 (Figure 7). This location will monitor surface flow from the Area 2 Road that includes flow from the ELV area and will provide baseline data for the planned BMP at the corner of Helipad Road and Area 2 Road described in the BMP Addendum (Geosyntec and Expert Panel, 2011).

Performance Monitoring Location Updates

Outfall 008

- Within Happy Valley, monitoring location HZSW0017 was discontinued and replaced by HZSW0020 during the 2010-2011 rainy season (Figure 2). HZSW0017 was sited below a silt fence in disturbed soil (a planting area), and HZSW0020 was established upstream of the disturbed area and silt fence. Monitoring at HZSW0020 will continue during the 2011-2012 rainy season.

Outfall 009

- Within the B-1 area, monitoring location B1SW0012 will be discontinued (Figure 3). B1SW0012 is located slightly upstream of B1SW0002, and it was concluded one location is sufficient to monitor this location.
- Within the B-1 area, monitoring location B1SW0010 will be discontinued and monitoring locations B1SW0014 and B1SW0015 will be added (Figure 3). B1SW0010 was located at

the B-1 culvert inlet, where a vertical flow media filter has been installed. Therefore, B1SW0014 will replace B1SW0010 as the primary downstream monitoring location for the B-1 area and will be collected from the B-1 media filter underdrain. B1SW0015 will be a secondary monitoring location immediately upstream of the B-1 media filter.

- Within the B-1 area, monitoring location B1SW0011 will be discontinued and monitoring location B1SW0013 will be added (Figure 3). The B-1 retention basin modification was completed in August 2011, which included changing the discharge location. The basin now discharges upstream of B1SW0011. To account for the revised source of surface water, the monitoring location has been renamed B1SW0013.
- At IEL, monitoring locations ILSW0003 and ILSW0004 will be added (Figure 4). These locations will monitor surface flow up and downstream of ISRA area IEL-2, which was completed in 2011.
- Downstream of CM-9, monitoring location A1SW0005 will be discontinued and replaced by monitoring location A1SW0009 (Figure 5). A1SW0009 will be collected from the CM-9 underdrain to allow better evaluation of the CM's performance.
- Up- and downstream of CM-8 and CM-11, monitoring will be discontinued (Figure 5). The low concentrations of constituents in samples collected at these CMs limits the performance evaluation of the CMs and additional sampling is deemed unnecessary.
- Up- and downstream of CM-3, monitoring will be discontinued (Figure 6). The low concentrations of constituents in samples collected at these CMs limits the performance evaluation of the CMs and additional sampling is deemed unnecessary.
- Upstream of CM-1 (eastern side), monitoring location A2SW0006 was discontinued and replaced by A2SW0007 during the 2010-2011 rainy season (Figure 7). A2SW0006 was observed to be in ponded water during a previous rain event, and A2SW0007 was established upstream of the ponded area. Monitoring at A2SW0007 will continue during the 2011-2012 rainy season,
- At AP/STP, several monitoring additions and revisions will occur once ISRA areas AP/STP-1B, AP/STP-1C-1, AP/STP-1C-2, AP/STP-1E-1, AP/STP-1E-2, and AP/STP-1E-3 are completed. Monitoring locations APSW0009 through APSW0013 will be added, monitoring locations APSW0002 and APSW0004 will be changed from primary to secondary monitoring locations, and monitoring location APSW0006 will be discontinued (Figure 8). Due to the close proximity of the AP/STP ISRA areas, the monitoring program was developed to assess the overall effectiveness of multiple ISRA areas, similar to the approach used to monitor Outfall 008 and the B-1 area.

Monitoring Frequency Updates

- Within Outfall 008, primary performance monitoring locations (blue and green locations) will be monitored during all rain events to obtain additional data for this watershed. The recommendation to limit monitoring within Outfall 008 to three rain events during the 2011-2012 rainy season presented in the 2010-2011 rainy season summary report (MWH,

Expert Panel, Geosyntec, and H&A, 2011) was withdrawn following additional internal discussions.

- Secondary performance monitoring locations (orange locations) will be monitored only if an evaluation of data from primary performance monitoring locations (blue or green locations) suggests monitoring is warranted. The monitoring frequency and analytical suite will be based on the results of the evaluation.
- Upstream performance monitoring locations will be sampled if flow is observed, but will be analyzed only if the paired downstream performance monitoring location is also sampled or if the upstream performance monitoring location is useful for background assessment. The downstream performance monitoring location will be sampled and analyzed even if the paired upstream performance monitoring location is not sampled. The rationale for this approach is that data from upstream performance monitoring locations are not relevant for the performance evaluation without the paired downstream sample; however, data from downstream performance monitoring locations do provide relevant data for the performance evaluation even if the paired upstream location is not sampled. Upstream performance monitoring locations that are useful for background assessment are identified in Table 2.
- Potential BMP monitoring locations will be monitored at the same frequency as NPDES sampling, including when runoff is first observed during an inspection and on a weekly basis during extended rain events. The additional monitoring performed 48 hours after collection of the initial sample will not be performed during the 2011-2012 rainy season. This additional monitoring was performed during the 2010-2011 rainy season to maximize data collection over a short period of time to rapidly identify the need for BMPs.

Reporting Update

- Monitoring results from the 2011-2012 rainy season will be published in a report scheduled to be submitted to the RWQCB in August 2012 after submittal of the second quarter NPDES monitoring report. This will allow inclusion of second quarter NPDES monitoring data in the BMP and performance monitoring evaluations.

Sincerely,
MWH



Alex Fischl, PMP
Project Manager



Bronwyn Kelly, PG 8347
Surface Water Program Director

Attachments

Table 1, Potential BMP Monitoring Summary

Table 2, Performance Monitoring Summary

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

Figure 2, Outfall 008 Potential BMP and Performance Monitoring Locations

Figure 3, Outfall 009 Potential BMP and Performance Monitoring Locations, B-1 Area

Figure 4, Outfall 009 Potential BMP and Performance Monitoring Locations, IEL Area

Figure 5, Outfall 009 Potential BMP and Performance Monitoring Locations, A1LF Area

Figure 6, Outfall 009 Potential BMP and Performance Monitoring Locations, LOX Area

Figure 7, Outfall 009 Potential BMP and Performance Monitoring Locations, A2LF and ELV Areas

Figure 8, Outfall 009 Potential BMP and Performance Monitoring Locations, AP/STP Area

Attachment 2, Potential BMP Monitoring and Performance Monitoring Inspection Form

References

MWH, 2010. 2010-2011 Best Management Practices (BMP) and Interim Source Removal Action (ISRA) Performance Monitoring Sampling and Analysis Plan for the 008/009 Watershed. December 21.

MWH, Surface Water Expert Panel, Geosyntec, and H&A, 2011. ISRA Performance Monitoring and Potential BMP Subarea Monitoring for the Outfalls 008 and 009 Watersheds, 2010/2011 Rainy Season, Santa Susana Field Laboratory, Ventura County, California. July 29.

Geosyntec and Surface Water Expert Panel, 2011. Final 2011 BMP Plan Addendum, Santa Susana Field Laboratory, Ventura County, California. September 30.

Attachments

Table 1
Potential BMP Monitoring Summary
2011-2012 Rainy Season
Page 1 of 2

Object ID	Location	Purpose	Areas Monitored	Notes	Total Recoverable Metals by 200.7/200.8		Total Dissolved Metals by 200.7/200.8		Total Dioxins by 1613	Total Suspended Solids by 2540	Particle Size Distribution by ASTM D422	Turbidity
Outfall 008 Watershed												
HZBMP0001	Happy Valley	Potential BMP Location	HVS	HVS tributary drainage; co-located with HZSW0007	1	X	1	1	X	X		
HZBMP0003	Happy Valley	Potential BMP Location	CYN, DRG	CYN/DRG tributary drainage; co-located with HZSW0003	1	X	1	1	X	X		
Outfall 009 Watershed												
A1BMP0002 *	A1LF	Planned BMP Location	CM-9, A1LF, IEL	Tributary drainage; co-located with A1SW0004	1	X	1	1	X	X		
A2BMP0001	A2LF	Potential BMP Location	A2LF	Tributary drainage	X	X	X	X	X	X		
A2BMP0002	A2LF	Potential BMP Location	A2LF	Tributary drainage	X	X	X	X	X	X		
A2BMP0003	A2LF	Potential BMP Location	AP/STP, ELV, A2LF	Tributary drainage	X	X	X	X	X	X		
APBMP0001	Ash Pile	Planned BMP Location	AP/STP	Culvert inlet; co-located with APSW0013	1	X	1	1	X	X		
B1BMP0003 *	B-1	Potential BMP Location	B-1, Parking Lot	Culvert inlet	X	X	X	X	X	X		
B1BMP0004	B-1	US BMP Location	B-1 Media Filter	Tributary drainage; co-located with B1SW0015	2	X	2	2	X	X		
B1BMP0005	B-1	US BMP Location	B-1 Media Filter	Swale along road downstream of retention basin discharge; co-located with B1SW0013	2	X	2	2	X	X		
BGBMP0002 *	CM-3 Subarea	US BMP Location	CM-3, Soil Borrow Area	Tributary drainage	X	X	X	X	X	X		
BGBMP0003	Sage Ranch	Background	Sage Ranch	Tributary drainage	X	X	X	X	X	X		
BGBMP0004	Sage Ranch	Background	Sage Ranch	Tributary drainage	X	X	X	X	X	X		
BGBMP0005	Sage Ranch	Background	Sage Ranch	Tributary drainage / culvert Inlet	X	X	X	X	X	X		
EV BMP0001	ELV	Planned BMP Location	ELV, Helipad Road	Culvert inlet	X	X	X	X	X	X		
EV BMP0002	ELV, Helipad	Planned BMP Location	Helipad	Spillway inlet	X	X	X	X	X	X		
EV BMP0003	A2LF	US BMP Location	CM-1, ELV, Area II Road	Sheetflow along road; Co-located with A2SW0001	1	X	1	1	X	X		
ILBMP0001	Lower Parking Lot	Planned BMP Location	IEL	Culvert discharge under spillway chute	X	X	X	X	X	X		
ILBMP0002	A1LF	US BMP Location	CM-9, IEL, Area II Road	Culvert discharge	X	X	X	X	X	X		

**Table 1
Potential BMP Monitoring Summary
2011-2012 Rainy Season
Page 2 of 2**

Object ID	Location	Purpose	Areas Monitored	Notes	Total Recoverable Metals by 200.7/200.8	Total Dissolved Metals by 200.7/200.8	Total Dioxins by 1613	Total Suspended Solids by 2540	Particle Size Distribution by ASTM D422	Turbidity
Outfall 009 Watershed (continued)										
LPBMP0001	Lower Parking Lot	Planned BMP Location	Soil Stockpile Area	Sheetflow on asphalt	X	X	X	X	X	X
LXBMP0004 *	LOX	DS BMP Location	LOX	Sheetflow downstream of the LOX BMP (break in sandbag berm)	X	X	X	X	X	X
LXBMP0005 *	LOX	DS BMP Location	LOX	Sheetflow downstream of the LOX BMP (break in sandbag berm)	X	X	X	X	X	X
LXBMP0006 *	LOX	Planned BMP Location	LOX	Sheetflow along dirt road	X	X	X	X	X	X

Abbreviations:

X = Collect and Analyze

DS - Downstream

US - Upstream

CM - Culvert Modification

1 = Co-located with a primary performance monitoring sample, therefore, results or select results (metals) will always be used from the co-located sample (refer to Table 2).

2 = Co-located with a secondary performance monitoring sample, therefore, results or select results (metals) will sometimes be used from the co-located sample (refer to Table 2).

Notes:

* Sample location replaces previous sample location as described below:

- 1) Sample location A1BMP0002 replaces A1BMP0001 and 1LBMP0003 to monitor both tributaries at one location, which is sufficient based on data from the 2010/2011 rainy season.
- 2) Sample location B1BMP0003 replaces sample location B1BMP0002 due to reconfiguration of the B-1 retention basin discharge pipeline.
- 3) Sample location BGBMP0002 replaces sample location BGBMP0007, which was observed to be in ponded water during previous sampling events.
- 4) Sample location LXBMP0004 replaces sample location LXBMP0001 to monitor flow downstream of the LOX BMP.
- 5) Sample location LXBMP0005 replaces sample location LXBMP0002 to monitor flow downstream of the LOX BMP.
- 6) Sample location LXBMP0006 replaces sample location LXBMP0003 to monitor flow downstream of the northeastern portion of the LOX RFI area.

Table 2
Performance Monitoring Summary
2011-2012 Rainy Season
Page 1 of 3

Object ID	Location	Purpose	Areas Monitored	Notes						
					Cadmium, total by 200.8	Copper, total by 200.8	Lead, total by 200.8	Mercury, total by 245.1	Dioxin by 1613	Total Suspended Solids by 2540
Outfall 008 Watershed										
HZSW0003	Happy Valley	DS	CYN-1, DRG-1	CYN/DRG tributary drainage		X	X		X	X
HZSW0004	Happy Valley	Secondary	CYN-1, DRG-1	CYN/DRG tributary drainage	To Be Determined**					
HZSW0005	Happy Valley	US	DRG-1	CYN/DRG tributary drainage					X	X
HZSW0006	Happy Valley	US/BG	CYN-1, DRG-1	Intermittent stream flow		X	X		X	X
HZSW0007	Happy Valley	DS	All HVS	HVS tributary drainage		X	X		X	X
HZSW0008	Happy Valley	US/BG	HVS-1	Intermittent stream flow over bedrock			X		X	X
HZSW0009	Happy Valley	Secondary	HVS-1	Intermittent stream flow	To Be Determined**					
HZSW0010	Happy Valley	Secondary	HVS-3, -4	HVS tributary drainage	To Be Determined**					
HZSW0011	Happy Valley	US/BG	HVS-3, -4	Intermittent stream flow		X			X	X
HZSW0012	Happy Valley	US/BG	HVS-2C	Intermittent stream flow over bedrock			X			X
HZSW0013	Happy Valley	Secondary	HVS-2C	Intermittent stream flow	To Be Determined**					
HZSW0014	Happy Valley	US/BG	HVS-2B-1, -2B-2	Intermittent stream flow		X	X			X
HZSW0015	Happy Valley	Secondary	HVS-2B-1, -2D	Intermittent stream flow	To Be Determined**					
HZSW0016	Happy Valley	Secondary	All HVS	Intermittent stream flow over bedrock	To Be Determined**					
HZSW0018	Happy Valley	Secondary	HVS-2A	Intermittent stream flow	To Be Determined**					
HZSW0019	Happy Valley	Secondary	CYN-1	Intermittent stream flow over bedrock	To Be Determined**					
HZSW0020 *	Happy Valley	US/BG	HVS-2A, -2D	Intermittent stream flow			X		X	X
Outfall 009 Watershed										
A1SW0004	A1LF	US	A1LF/CM-9	Tributary drainage	X	X	X	X	X	X
A1SW0009 *	A1LF	DS	A1LF/CM-9	CM-9 under drain	X	X	X	X	X	X
A2SW0001	A2LF	US	A2LF-3/CM-1	Sheetflow from road, west of CM-1			X		X	X
A2SW0002	A2LF	DS	A2LF-3/CM-1	Culvert outlet			X		X	X
A2SW0003	A2LF	US	A2LF-1	Intermittent stream flow					X	X

Table 2
Performance Monitoring Summary
2011-2012 Rainy Season
Page 2 of 3

Object ID	Location	Purpose	Areas Monitored	Notes	Cadmium, total by 200.8	Copper, total by 200.8	Lead, total by 200.8	Mercury, total by 245.1	Dioxin by 1613	Total Suspended Solids by 2540
Outfall 009 Watershed (continued)										
A2SW0004	A2LF	DS	A2LF-1	Intermittent stream flow					X	X
A2SW0007 *	A2LF	US	A2LF-3/CM-1	Tributary drainage, east of CM-1			X		X	X
APSW0001	AP/STP	US	AP/STP-1A	Intermittent stream flow			X		X	X
APSW0002	AP/STP	Secondary	AP/STP-1A	Intermittent stream flow	To Be Determined**					
APSW0003	AP/STP	US	AP/STP-1D	Intermittent stream flow					X	X
APSW0004	AP/STP	Secondary	AP/STP-1D	Intermittent stream flow	To Be Determined**					
APSW0005	AP/STP	US/BG	AP/STP-1F	Intermittent stream flow					X	X
APSW0007	AP/STP	US/BG	AP/STP-1B, -1C-1	AP/STP tributary drainage	X	X	X	X	X	X
APSW0008	AP/STP	US/BG	AP/STP-1C-1, -1C-2	Intermittent stream flow	X	X	X	X	X	X
APSW0009	AP/STP	Secondary	AP/STP-1B-, -1C-1, -1C-2	AP/STP tributary drainage	To Be Determined**					
APSW0010	AP/STP	Secondary	AP/STP-1E-1	Intermittent stream flow	To Be Determined**					
APSW0011	AP/STP	Secondary	AP/STP-1E-2	AP/STP tributary drainage	To Be Determined**					
APSW0012	AP/STP	US/BG	AP/STP-1E-3	Intermittent stream flow					X	X
APSW0013	AP/STP	DS	All AP/STP	AP/STP tributary drainage	X	X	X	X	X	X
B1SW0002	B-1	Secondary	B1-2	B-1 tributary drainage	To Be Determined**					
B1SW0003	B-1	US/BG	B1-1B, -1C, -1D, -2	Intermittent stream flow over bedrock	X	X	X	X	X	X
B1SW0004	B-1	Secondary	B1-1D	Intermittent stream flow	To Be Determined**					
B1SW0005	B-1	Secondary	B1-1D	Intermittent stream flow	To Be Determined**					
B1SW0006	B-1	Secondary	B1-1B, -1C	Intermittent stream flow	To Be Determined**					
B1SW0007	B-1	Secondary	B1-1B, -1C	Intermittent stream flow	To Be Determined**					
B1SW0008	B-1	US	B1-1A	Intermittent stream flow	X				X	X
B1SW0009	B-1	Secondary	B1-1A	Intermittent stream flow	To Be Determined**					

**Table 2
Performance Monitoring Summary
2011-2012 Rainy Season
Page 3 of 3**

Object ID	Location	Purpose	Areas Monitored	Notes	Cadmium, total by 200.8	Copper, total by 200.8	Lead, total by 200.8	Mercury, total by 245.1	Dioxin by 1613	Total Suspended Solids by 2540
Outfall 009 Watershed (continued)										
B1SW0013 *	B-1	Secondary	All B-1, B-1 media filter	Swale along road downstream of retention basin discharge	To Be Determined**					
B1SW0014 *	B-1	DS	All B-1, B-1 media filter	B-1 media filter under drain	X	X	X	X	X	X
B1SW0015	B-1	Secondary	All B-1, B-1 media filter	B-1 tributary drainage	To Be Determined**					
ILSW0001	IEL	US	IEL-1	Intermittent stream flow		X		X		X
ILSW0002	IEL	DS	IEL-1	Intermittent stream flow		X		X		X
ILSW0003	IEL	US	IEL-2	Intermittent stream flow	X		X	X		X
ILSW0004	IEL	DS	IEL-2	Intermittent stream flow	X		X	X		X
LFSW0001	CTLI	US/BG	CTLI-1A, -1B	Intermittent stream flow over bedrock		X	X		X	X
LFSW0002	CTLI	DS	CTLI-1A, -1B	Tributary drainage		X	X		X	X

Abbreviations:

DS - Downstream
US - Upstream

BG - Background Assessment
CM - Culvert Modification

X = Collect and Analyze
H = Collect and place on Hold

Notes:

* Sample location replaces previous sample location as described below:

- 1) Sample location HZSW0020 replaces sample location HZSW0017, which was sited below a silt fence in disturbed soil (planting area).
- 2) Sample location A1SW0009 replaces sample location A1SW0005 in order to monitor discharge from the CM-9 underdrain as the downstream sample location.
- 3) Sample location A2SW0007 replaces sample location A2SW0006, which was observed to be in ponded water during previous sampling events.
- 4) Sample location B1SW0013 replaces sample location B1SW0011 due to reconfiguration of the B-1 retention basin discharge pipeline.
- 5) Sample location B1SW0014 replaces sample location B1SW0010 and B1BMP0001 due to installation of a media filter at the B-1 culvert inlet.

** Analytical suite of secondary monitoring locations will be based on the rationale for monitoring the location.

Outfalls 008 and 009 Potential BMP and Performance Monitoring Locations

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

- Figure Legend**
- Primary Downstream Performance Monitoring Location
 - Upstream Performance Monitoring Location
 - Secondary Performance Monitoring Location
 - Discontinued Performance Monitoring Location
 - Potential BMP Subarea Monitoring Location
 - Discontinued Potential BMP Subarea Monitoring Location
 - ISRA Excavation Boundary
 - Planned ISRA Area Boundary

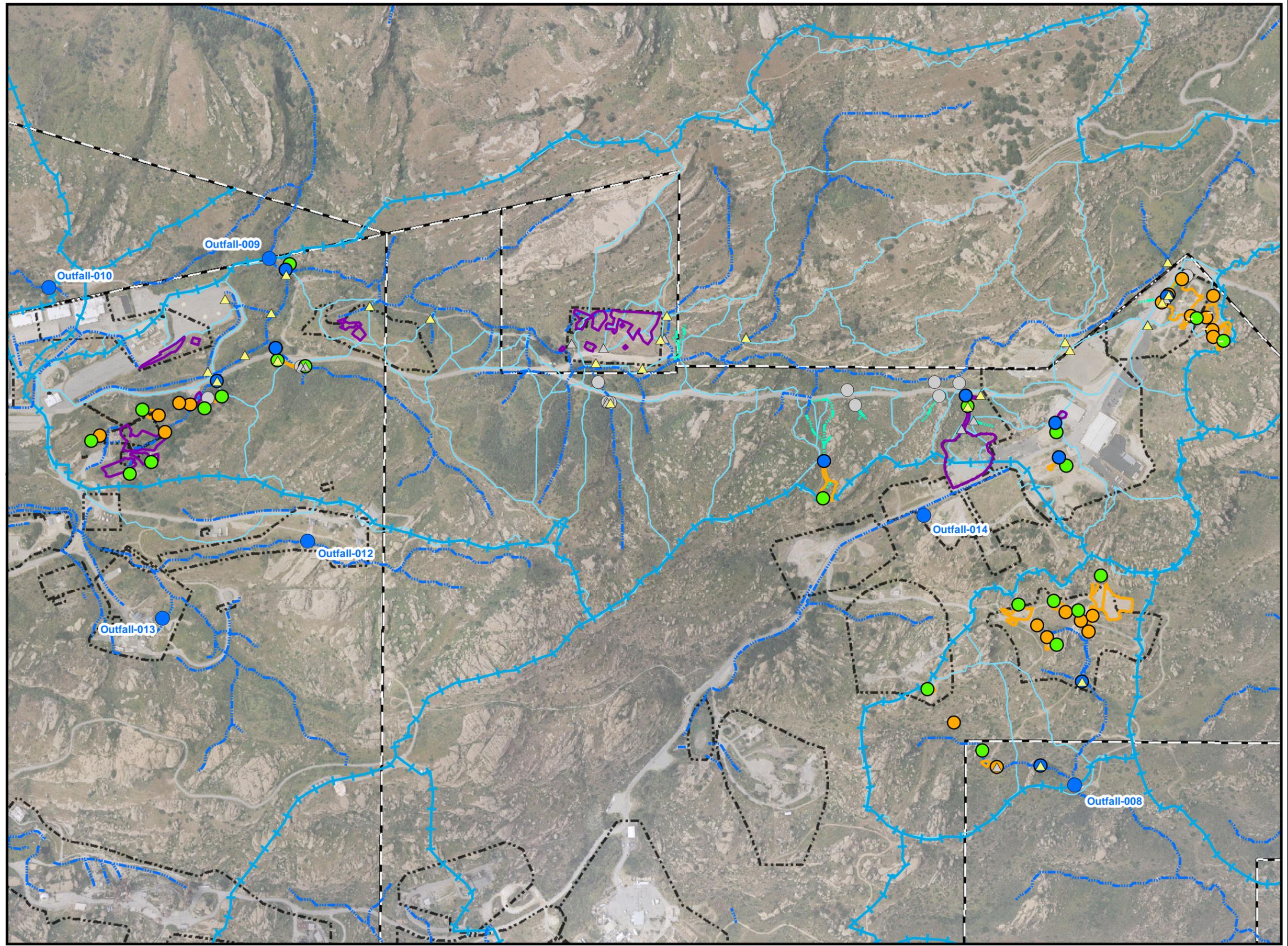
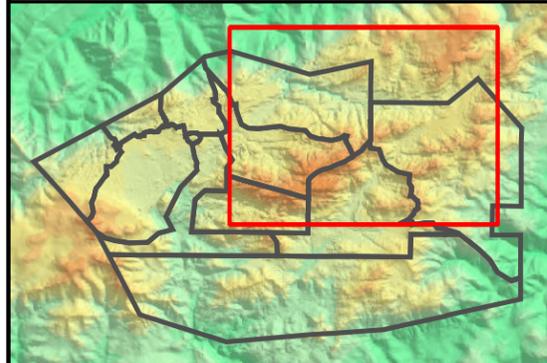
Note:

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 2011/2012 Rainy Season Sampling and Analysis Plan.
4. Inspection/sampling at offsite monitoring locations subject to property owner approval.

Path: T:\projects\rock3\ISRA\Figures\PerfMon\Overview_11x17.mxd Date: 12/8/2011

1 inch = 700 feet

0 700 1,400

Outfall 008 Potential BMP and Performance Monitoring Locations

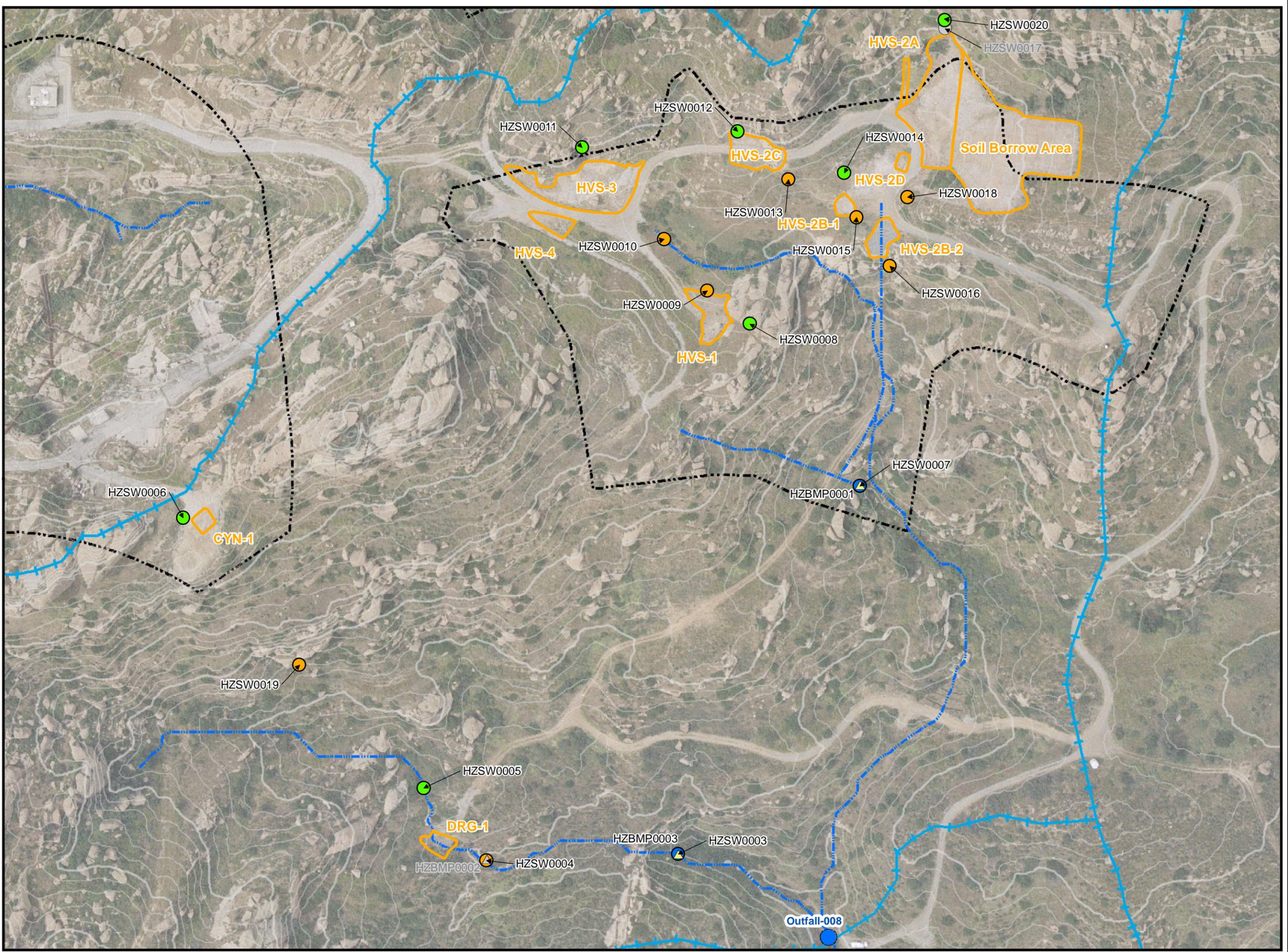
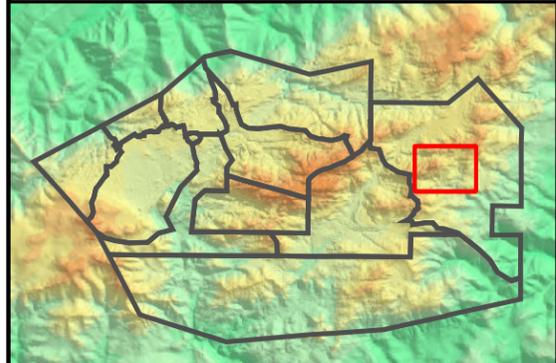
- Base Map Legend**
- Administrative Area Boundary
 - Non Jurisdictional Surface Water Pathway
 - RFI Site Boundary
 - Surface Water Divide
 - Drainage

- Figure Legend**
- Primary Downstream Performance Monitoring Location
 - Upstream Performance Monitoring Location
 - Secondary Performance Monitoring Location
 - Discontinued Performance Monitoring Location
 - Potential BMP Subarea Monitoring Location
 - Discontinued Potential BMP Subarea Monitoring Location
 - ISRA Excavation Boundary

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 2011/2012 Rainy Season Sampling and Analysis Plan.
4. Inspection/sampling at offsite monitoring locations subject to property owner approval.

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Outfall 009 Potential BMP and Performance Monitoring Locations B-1 Area

Base Map Legend

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

Figure Legend

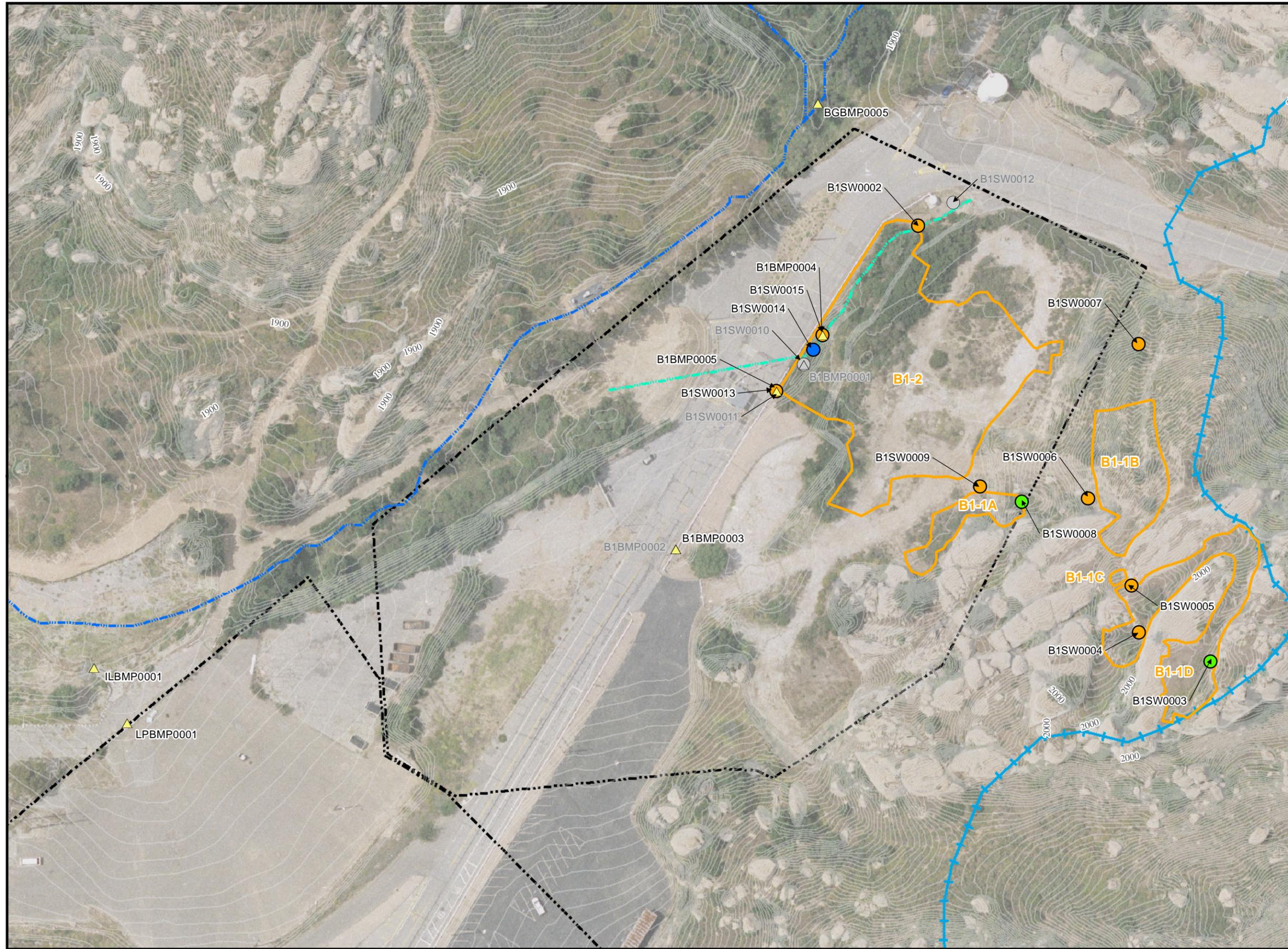
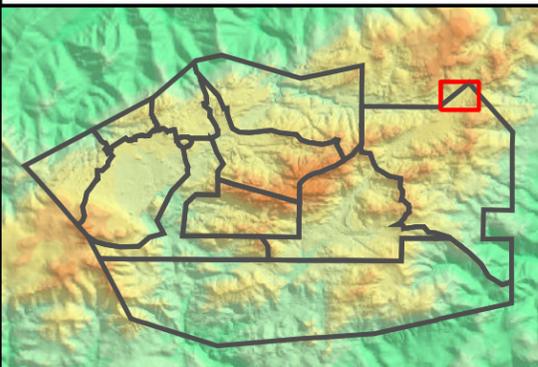
- Primary Downstream Performance Monitoring Location
- Upstream Performance Monitoring Location
- Secondary Performance Monitoring Location
- Discontinued Performance Monitoring Location
- Potential BMP Subarea Monitoring Location
- Discontinued Potential BMP Subarea Monitoring Location
- ISRA Excavation Boundary

- 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 2011/2012 Rainy Season Sampling and Analysis Plan.
 4. Inspection/sampling at offsite monitoring locations subject to property owner approval.

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Date: 12/8/2011

1 inch = 100 feet



Outfall 009 Potential BMP and Performance Monitoring Locations IEL Area

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

- Figure Legend**
- Primary Downstream Performance Monitoring Location
 - Upstream Performance Monitoring Location
 - Secondary Performance Monitoring Location
 - Discontinued Performance Monitoring Location
 - Potential BMP Subarea Monitoring Location
 - Discontinued Potential BMP Subarea Monitoring Location
 - ISRA Excavation Boundary
 - Planned ISRA Area Boundary

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 2011/2012 Rainy Season Sampling and Analysis Plan.
4. Inspection/sampling at offsite monitoring locations subject to property owner approval.

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