

Appendix B - BASMAA Regional Monitoring Coalition
 2010-2016 Stressor/Source Identification (SSID) Project Locations, Rationales, Status (*Updated February 2016*)

SSID Project ID	Date Updated	County/ Program	Creek/Channel Name	Site Code(s) or alternative site ID	Primary Creek Status Indicator(s) Triggering Stressor/Source ID Project									Creek Status Indicator Result Summary	Rationale for Proposing/Selecting Project	Current Status of Proposed Project	
					Bioassess	General WQ	Chlorine	Temp	Water Tox	Sed Tox	Sed Chem	Pathogen Indicators	Other				
AL-1	3/23/15	Alameda/ ACCWP	Castro Valley Creek	204R00047	X							X			IBI Score = 24 (Poor); Relatively high bifenthrin (pyrethroid) in sediment; >3 chemicals exceed TECs	Triad triggers were accompanied by <i>Hyalella azteca</i> water toxicity that did not reach trigger on retest. Potential sources for investigation in small watershed include freeway and urban land use areas.	SSID Project began in 2013 with sediment sampling and watershed records review; No specific sources to local MS4 identified during 2014. Pesticides as the primary stressor are supported by additional WY 2015 sediment chemistry/toxicity results from another site higher in this watershed that also showed high <i>Hyalella</i> mortality in wet season water toxicity. March 2016 UCMR includes Appendix 4A summary report describing BMPs implemented and completion of the site-specific elements of this project.
AL-2	3/23/15	Alameda/ ACCWP	Dublin Creek	204R00084	X		X					X			IBI Score = 17 (Very Poor); Relatively high bifenthrin (pyrethroid) in sediment; >3 chemicals exceed TECs	Potential sources for different triad triggers may be separable by monitoring between freeway and urban land use areas, altered vs. natural channels.	SSID Project began in 2013 with sediment sampling, watershed records review and bioassessment sampling at RMC plus a supplemental site. Bioassessment impacts were strongly associated with channel alteration and habitat quality. Review of inspection information identified no specific sources of pesticides or metals to sediment. March 2016 UCMR includes Appendix 4B progress report with schedule for review of land use inputs and freeway runoff.
AL-3	3/23/15	Alameda/ ACCWP	Crow Creek	204CRW030		X									67% of DO results < 7 mg/L in September	Potentially significant stressor on COLD beneficial use; Potential source for investigation from lake discharge or nutrient sources.	SSID Project began in 2013 with DO and water sampling; initial hypothesis regarding reservoir runoff not supported by first year's special study. Further monitoring in WY 2014 and 2015 indicated there may have been episodic contributions from urban runoff to low DO incidents observed in WY2014 but not during WY2015. March 2016 UCMR includes Appendix 4C progress report with updated WY2016 monitoring plan to evaluate summer inflows using continuous monitoring of conductivity as well as temperature.

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CC-1	1/7/16	Contra Costa/ CCCWP	Grayson Creek	207R00011	X					X	X	X			32% survival of <i>Hyalella azteca</i> in water during spring of 2012; 43.8% survival of <i>Hyalella azteca</i> in sediment during summer 2012; relatively high bifenthrin in sediment; IBI Score = 13 (Very Poor). Water toxicity confirmed by retest, 2013.	Evidence of water and sediment toxicity to <i>Hyalella azteca</i> , with concurrent high concentration of bifenthrin in sediment. Recent publications by CASQA and others indicate pyrethroid pesticide-caused toxicity is a pervasive problem in urban areas of CA. Investigation of sources and solutions could be widely beneficial.	SSID Project Part A completed, WY 2014, including testing of water and sediments from sites upstream and downstream of original Grayson Creek site. Only water samples were toxic to <i>Hyalella</i> . Water TIE and concurrent chemistry point to pyrethroid pesticides as likely causes of <i>Hyalella</i> toxicity in waters of Grayson Creek. SSID Project Part B completed, WY 2015, computing urban use amounts for six pyrethroid pesticides detected in Part A monitoring. Based on the compiled pesticide use data from 2009-2013, it appears that uses of the most toxic and impactful pyrethroids (bifenthrin and cyfluthrin) have increased in urban areas in Contra Costa County in recent years. Urban uses account for most of the annual use amounts for those six pyrethroids in Contra Costa County.
CC-2	1/7/16	Contra Costa/ CCCWP	Dry Creek	544R00025	X		X			X	X	X			60% survival of <i>Hyalella azteca</i> in sediment during summer, 2012; 0% survival of <i>Hyalella azteca</i> in water during spring of 2012; relatively high bifenthrin in sediment; IBI Score = 3 (Very Poor). Water toxicity confirmed by retest, 2013.	Evidence of water and sediment toxicity to <i>Hyalella azteca</i> , with concurrent high concentration of bifenthrin in sediment. Recent publications by CASQA and others indicate pyrethroid pesticide-caused toxicity is a pervasive problem in urban areas of CA. Investigation of sources and solutions could be widely beneficial.	SSID Project Part A completed, WY 2014, including testing of water and sediments from sites upstream and downstream of original Dry Creek site. All samples were toxic to <i>Hyalella</i> . Water and sediment TIEs and concurrent chemistry point to pyrethroid pesticides as likely causes of <i>Hyalella</i> toxicity in water and sediments of Dry Creek. SSID Project Part B completed, WY 2015, computing urban use amounts for six pyrethroid pesticides detected in Part A monitoring. Based on the compiled pesticide use data from 2009-2013, it appears that uses of the most toxic and impactful pyrethroids (bifenthrin and cyfluthrin) have increased in urban areas in Contra Costa County in recent years. Urban uses account for most of the annual use amounts for those six pyrethroids in Contra Costa County.

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CC-1	3/17/15	Contra Costa/ CCCWP	Grayson Creek	207R00011	X					X	X	X			32% survival of <i>Hyalella azteca</i> in water during spring of 2012; 43.8% survival of <i>Hyalella azteca</i> in sediment during summer 2012; relatively high bifenthrin in sediment; IBI Score = 13 (Very Poor). Water toxicity confirmed by retest, 2013.	Evidence of water and sediment toxicity to <i>Hyalella azteca</i> , with concurrent high concentration of bifenthrin in sediment. Recent publications by CASQA and others indicate pyrethroid pesticide-caused toxicity is a pervasive problem in urban areas of CA. Investigation of sources and solutions could be widely beneficial.	SSID Project Part A completed, WY 2014, including testing of water and sediments from sites upstream and downstream of original Grayson Creek site. Only water samples were toxic to <i>Hyalella</i> . Water TIE and concurrent chemistry point to pyrethroid pesticides as likely causes of <i>Hyalella</i> toxicity in waters of Grayson Creek.
CC-2	3/17/15	Contra Costa/ CCCWP	Dry Creek	544R00025	X		X			X	X	X			60% survival of <i>Hyalella azteca</i> in sediment during summer, 2012; 0% survival of <i>Hyalella azteca</i> in water during spring of 2012; relatively high bifenthrin in sediment; IBI Score = 3 (Very Poor). Water toxicity confirmed by retest, 2013.	Evidence of water and sediment toxicity to <i>Hyalella azteca</i> , with concurrent high concentration of bifenthrin in sediment. Recent publications by CASQA and others indicate pyrethroid pesticide-caused toxicity is a pervasive problem in urban areas of CA. Investigation of sources and solutions could be widely beneficial.	SSID Project Part A completed, WY 2014, including testing of water and sediments from sites upstream and downstream of original Dry Creek site. All samples were toxic to <i>Hyalella</i> . Water and sediment TIEs and concurrent chemistry point to pyrethroid pesticides as likely causes of <i>Hyalella</i> toxicity in water and sediments of Dry Creek.
SC-1	5/11/15	Santa Clara/ SCVURPPP	Coyote Creek	205COY235 (Coyote Cr. - Watson Park to Julian St.)		X									100% < 5mg/L D.O. in spring and summer periods 2012; and Pre-MRP Data	Coyote Creek supports a productive fish community and the project reach exhibits depressed dissolved oxygen that could cause biological impacts.	Project began in 2011 and was completed in 2013. Summary report was submitted in March 2014 as Appendix B1 in Part A of the Integrated Monitoring Report.
SC-2	5/11/15	Santa Clara/ SCVURPPP	Guadalupe River (and Alviso Slough)										X		Fish kills observed in 2008, 2009 & 2010.	The Guadalupe River supports a productive fish community and the project reaches exhibited fish kills that are a concern to local agencies.	Project began in 2011 and was completed in 2013. Summary report was submitted in March 2014 as Appendix B2 in Part A of the Integrated Monitoring Report.

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SC-3	5/11/15	Santa Clara/ SCVURPPP	Upper Penitencia Creek	205R00035	X										IBI Score = 23 (Poor)	Upper Penitencia Creeks supports one of the most productive steelhead communities in the Santa Clara Valley. Poor biological integrity scores may indicate impacts to steelhead and other biological communities.	Work plan was developed to assess existing data sources for potential causes for low biological condition and identify future monitoring actions. Work plan was submitted in March 2015 as Appendix B of the Urban Creeks Monitoring Report. Monitoring activities have been delayed due to the drought. Monitoring will begin in spring season of 2016.
SM-1	2/10/16	San Mateo/ SMCWPPP	San Mateo Creek	204SMA059		X									Pre-MRP data demonstrating temperatures > 19°C and DO < 7mg/L. WY2013 creek status data confirmed DO < 7 mg/L at 204SMA059 but not at 204SMA122 located approximately 4 miles upstream. Temperatures in WY2013 rarely exceeded the 19°C threshold.	San Mateo Creek is one of two creeks on the Bay-side of San Mateo County that supports a productive coldwater community. Warm temperatures and/or low DO levels may impact this valuable community.	WY2014 monitoring was conducted to investigate spatial and temporal extent of low DO. Monitoring consisted of sonde installments and a creek walk. Low DO was not observed in WY2014. Review of flow data at USGS gage below Crystal Springs Reservoir confirmed higher dry season flows in WY2014 compared to WY2013. The higher flows were the result of a new SFPUC release schedule following dam improvements that will continue into perpetuity. It appears that higher dry season flows result in reduced water temperatures and higher DO levels. Confirmation monitoring conducted in WY2015 supported the findings. Final Project Report was submitted to RWQCB staff on 7/9/15 and with the WY2015 UCMR.
SM-2	2/10/16	San Mateo/ SMCWPPP	San Mateo Creek	204SMA060									X		Pre-MRP data and WY2012 creek status grab samples had pathogen indicator (fecal coliform) densities exceeding the REC-1 WQO.	San Mateo Creek is a perennial creek with two Creekside parks. It flows through residential and commercial areas and discharges to San Francisco Bay just north of Marina Lagoon which is 303(d)-listed for bacteria.	WY2014 monitoring was conducted to investigate the magnitude and seasonal variability pathogen indicator densities. Microbial source tracking methodologies (i.e., Bacteroidales) were employed to investigate whether human and/or dog markers were present in the samples. Final Project Report submitted with the WY2015 UCMR.