

### Analytical Parameters for Assessing Water Quality from HCP Surface Water Locations

Analyses	Method	Method Description	Protocol
Volatile Organic Compounds (VOCs)	8260B	Volatile Organic Compounds	(GC/MS) SW846
Semi-volatile Organic Compounds (SVOCs)	8270C	Semivolatile Organic Compounds	(GC/MS) SW846
Organochlorine Pesticides	8081B	Organochlorine	(GC) SW846
Polychlorinated Biphenyls (PCBs)	8082A	Polychlorinated Biphenyls (PCBs)	by Gas Chromatography SW846
Organophosphorous Pesticides	8141A	Organophosphorous Pesticides	(GC) SW846
Herbicides	8151A	Herbicides	(GC) SW846
Metals (Al, Sb, As, Ba, Be, Cd, Cr (total), Cu, Fe, Pb, Mn, Hg, Ni, Se, Ag, Tl, and Zn)	6010B, 6020, 7470A	Metals, Mercury (7470A)	(ICP) SW846, (ICP/MS) SW846, (7470A) (CVAA) SW846
General Chemistry Total Alkalinity (as CaCO <sub>3</sub> ), Bicarbonate Alkalinity (as CaCO <sub>3</sub> ), Carbonate Alkalinity (as CaCO <sub>3</sub> ); Ca, Mg, Na, K, Chloride, Sulfate, Fluoride, Si, Sr, Nitrate as N, pH, Total Dissolved Solids (TDS), and Total Suspended Solids (TSS).	300, 365.4, 9040C, SM 2320B, SM 2540C, SM 2540D	Anions, Phosphorus, pH, Alkalinity, TDS, TSS	Ion Chromatography, Total EPA, SW846, SM, TDS SM, SM
Phosphorus (total)	365.4	Phosphorus,	Total EPA
Total Organic Carbon (TOC),	9060	Organic Carbon,	Total (TOC) SW846
Dissolved Organic Carbon (DOC)	415.1	DOC	EPA
Kjeldahl Nitrogen	351.2	Nitrogen, Total	MCAWW
E. Coli MPN	SM 3223B-2004	E. Coli MPN	SM

#### Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

### Analytical Parameters for Assessing Water Quality from HCP Sediment Sample Locations

Analyses	Method	Method Description	Protocol
Volatile Organic Compounds (VOCs)	8260B	Volatile Organic Compounds	(GC/MS) SW846
Semi-volatile Organic Compounds (SVOCs)	8270C	Semivolatile Organic Compounds	(GC/MS) SW846
Organochlorine Pesticides	8081B	Organochlorine	(GC) SW846
Polychlorinated Biphenyls (PCBs)	8082A	Polychlorinated Biphenyls (PCBs)	by Gas Chromatography
Organophosphorous Pesticides	8141A	Organophosphorous Pesticides	(GC) SW846
Herbicides	8151A	Herbicides	(GC) SW846
Metals (Al, Sb, As, Ba, Be, Cd, Cr (total), Cu, Fe, Pb, Mn, Hg, Ni, Se, Ag, Tl, and Zn)	6010B, 6020, 7470A	Metals, Mercury (7470A)	(ICP) SW846, (ICP/MS) SW846, (7470A) (CVAA) SW846
General Chemistry Total Alkalinity (as CaCO <sub>3</sub> ), Bicarbonate Alkalinity (as CaCO <sub>3</sub> ), Carbonate Alkalinity (as CaCO <sub>3</sub> ); Ca, Mg, Na, K, Chloride, Sulfate, Fluoride, Si, Sr, Nitrate as N, pH	300, 365.4, 9040C, SM 2320B	Anions, Phosphorus, pH, Alkalinity	Ion Chromatography, Total EPA, SW846, SM
Phosphorus (total)	365.4	Phosphorus,	Total EPA
Total Organic Carbon (TOC),	9060	Organic Carbon,	Total (TOC) SW846
Dissolved Organic Carbon (DOC)	415.1	DOC	EPA
Kjeldahl Nitrogen	351.2	Nitrogen, Total	MCAWW
E. Coli MPN	SM 3223B-2004	E. Coli MPN	SM

#### Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

### Analytical Parameters for Assessing Water Quality from HCP Stormwater Locations

Analyses	Method	Method Description	Protocol
Volatile Organic Compounds (VOCs)	8260B	Volatile Organic Compounds	(GC/MS) SW846
Semi-volatile Organic Compounds (SVOCs)	8270C	Semivolatile Organic Compounds	(GC/MS) SW846
Organochlorine Pesticides	8081B	Organochlorine	(GC) SW846
Polychlorinated Biphenyls (PCBs)	8082A	Polychlorinated Biphenyls (PCBs)	by Gas Chromatography SW846
Organophosphorous Pesticides	8141A	Organophosphorous Pesticides	(GC) SW846
Herbicides	8151A	Herbicides	(GC) SW846
Metals (Al, Sb, As, Ba, Be, Cd, Cr (total), Cu, Fe, Pb, Mn, Hg, Ni, Se, Ag, Tl, and Zn)	6010B, 6020, 7470A	Metals, Mercury (7470A)	(ICP) SW846, (ICP/MS) SW846, (7470A) (CVAA) SW846
General Chemistry Total Alkalinity (as CaCO <sub>3</sub> ), Bicarbonate Alkalinity (as CaCO <sub>3</sub> ), Carbonate Alkalinity (as CaCO <sub>3</sub> ); Ca, Mg, Na, K, Chloride, Sulfate, Fluoride, Si, Sr, Nitrate as N, pH, Total Dissolved Solids (TDS), and Total Suspended Solids (TSS).	300, 365.4, 9040C, SM 2320B, SM 2540C, SM 2540D	Anions, Phosphorus, pH, Alkalinity, TDS, TSS	Ion Chromatography, Total EPA, SW846, SM, TDS SM, SM
Phosphorus (total)	365.4	Phosphorus,	Total EPA
Total Organic Carbon (TOC),	9060	Organic Carbon,	Total (TOC) SW846
Dissolved Organic Carbon (DOC)	415.1	DOC	EPA
E. Coli MPN	SM 3223B-2004	E. Coli MPN	SM

#### Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Low Flow Sampling of Wells**

Weekly samples are to be collected from three wells in the vicinity of each spring group under specific low flow conditions as outlined below.

**Analytical Parameters for Assessing Water Quality during Low Flow Conditions (First Trigger)**

<b>Analyses</b>	<b>Method</b>	<b>Method Description</b>	<b>Protocol</b>
Dissolved Oxygen	NA	NA	NA
Conductivity	NA	NA	NA
pH	NA	NA	NA
Temperature	NA	NA	NA

*Weekly sampling frequency. Trigger levels <30 cfs flow at Comal and <50 cfs flow at San Marcos.*

**Protocol References:**

NA = Not available

**Analytical Parameters for Assessing Water Quality during Low Flow Conditions (Second Trigger)**

<b>Analyses</b>	<b>Method</b>	<b>Method Description</b>	<b>Protocol</b>
Dissolved Oxygen	NA	NA	NA
Conductivity	NA	NA	NA
pH	NA	NA	NA
Temperature	NA	NA	NA
General Chemistry Total Alkalinity (as CaCO <sub>3</sub> ), Bicarbonate Alkalinity (as CaCO <sub>3</sub> ), Carbonate Alkalinity (as CaCO <sub>3</sub> ); Ca, Mg, Na, K, Chloride, Sulfate, Fluoride, Si, Sr, Nitrate as N, pH, Total Dissolved Solids (TDS), and Total Suspended Solids (TSS).	300, 365.4, 9040C, SM 2320B, SM 2540C, SM 2540D	Anions, Phosphorus, pH, Alkalinity, TDS, TSS	Ion Chromatography, Total EPA, SW846, SM, TDS SM, SM
Total Organic Carbon (TOC),	9060	Organic Carbon,	Total (TOC) SW846

*Weekly sampling frequency. Trigger levels <20 cfs flow at Comal and <30 cfs flow at San Marcos.*

**Protocol References:**

EPA = US Environmental Protection Agency

NA = Not available

SM = "Standard Methods For The Examination Of Water And Wastewater",