

Table. 1 List of metals laboratory methods for surface water samples by data provider

This listing is a compilation from available data. Sampled years in parenthesis. All years not necessarily used in analyses. Historic methods, at times, unspecified.

Provider	Surface Water – Metals laboratory methods				
	Aluminum (Al)	Antimony (Sb)	Arsenic (As)	Barium (Ba)	Beryllium (Be)
USEPA Region 6 (2015)	EPA 200.7	EPA 200.8	EPA 200.8	EPA 200.8	EPA 200.8
USEPA Region 8 (2015)	EPA 200.7	EPA 200.8	EPA 200.8	EPA 200.8	EPA 200.8
USEPA Region 9 (2015)	EPA 200.7	EPA 200.8	EPA 200.8	EPA 200.8	EPA 200.8
USEPA Follow-up (2015-2016)	EPA 200.7 EPA 200.8	EPA 200.8	EPA 200.8	EPA 200.8	EPA 200.8
Colorado DPHE (1968-2016)	EPA 200.7 Unspecified	NA	EPA 200.8 Unspecified	EPA 200.7	EPA 200.8 Unspecified
New Mexico ED (2001-2016)	EPA 200.7 EPA 200.8 Unspecified	EPA 200.8 Unspecified	EPA 200.8 Unspecified	EPA 200.7 EPA 200.8 Unspecified	EPA 200.8 Unspecified
Utah DEQ (1975-2016)	EPA 200.7 EPA 200.8 Unspecified	EPA 200.8	EPA 200.8 Unspecified	EPA 200.8 Unspecified	EPA 200.8
Navajo Nation (1999-2015)	EPA 200.7 EPA 200.8	EPA 200.7 EPA 200.8	EPA 200.7 EPA 200.8 SM 3114-C	EPA 200.7	EPA 200.7
Southern Ute Indian Tribe (1992-2016)	EPA 200.7 SU SOP	EPA 200.8	EPA 200.8 EPA 206.2_M SU SOP	EPA 200.8	EPA 200.8
Ute Mountain Ute Tribe (1996-2015)	EPA 200.7	EPA 200.8 EPA 200.9	EPA 200.8 EPA 200.9	SM 3111-B	NA
City of Farmington (2015-2016)	EPA 200.7	EPA 200.8	EPA 200.8	EPA 200.7 EPA 200.8	EPA 200.7 EPA 200.8
River Watch (1991-2016)	EPA 200.7	NA	EPA 200.7	NA	NA
Mountain Studies Institute (2016)	EPA 200.7	NA	EPA 200.8	NA	NA
SADIE (2011-2015)	EPA 200.7 EPA 200.8 EPA 6010	EPA 200.8	EPA 200.8 EPA 6020	EPA 200.8	EPA 200.7 EPA 6010
USEPA historic (1971-2000)	NA	Unspecified	Unspecified	NA	Unspecified
USGS MiniSipper (2015)	EPA 200.8	NA	NA	NA	NA
USGS GKM Database (2000-2015)	EPA 200.7 USGS I-1472-85 USGS I-1472-87 USGS I-1472-95 USGS I-2477-92 USGS I-4471-97 Unspecified	USGS I-2477-92 USGS I-4471-97 Unspecified	USGS I-2020-05 USGS I-2063-98 USGS I-2477-92 USGS I-4020-05 USGS I-4063-98 Unspecified	EPA 200.7 USGS I-1472-85 USGS I-1472-87 USGS I-1472-95 USGS I-2477-92 USGS I-4471-97 Unspecified	USGS I-2477-92 USGS I-4471-97 Unspecified
USGS Paper 1651 (1994-2002)	ICP-AES ICP/MS	ICP-AES ICP/MS	ICP-AES ICP/MS	ICP-AES ICP/MS	ICP-AES ICP/MS

Table 1 cont.		Surface Water – Metals laboratory methods			
Provider	Boron (B)	Cadmium (Cd)	Calcium (Ca)	Chromium (Cr)	Chromium (III)
USEPA Region 6 (2015)	NA	EPA 200.8	EPA 200.7	EPA 200.8	NA
USEPA Region 8 (2015)	NA	EPA 200.8	EPA 200.7	EPA 200.8	NA
USEPA Region 9 (2015)	NA	EPA 200.8	EPA 200.7	EPA 200.8	NA
USEPA Follow-up (2015-2016)	NA	EPA 200.8	EPA 200.7	EPA 200.8	NA
Colorado DPHE (1968-2016)	EPA 200.7 Unspecified	EPA 200.8 Unspecified	EPA 200.7	EPA 200.7 Unspecified	NA
New Mexico ED (2001-2016)	EPA 200.7 Unspecified	EPA 200.8 Unspecified	EPA 200.7 Unspecified	EPA 200.8 Unspecified	NA
Utah DEQ (1975-2016)	EPA 200.7 Unspecified	EPA 200.8 Unspecified	EPA 200.7 Unspecified	EPA 200.8 Unspecified	NA
Navajo Nation (1999-2015)	EPA 200.7	EPA 200.7 EPA 200.8 EPA 200.9	EPA 200.7	EPA 200.7 EPA 200.8	EPA 200.7 SM 3500-CR(D)
Southern Ute Indian Tribe (1992-2016)	NA	EPA 200.7 EPA 200.8 SU SOP	EPA 200.7	EPA 200.7 EPA 200.8 SU SOP	Calculation
Ute Mountain Ute Tribe (1996-2015)	EPA 200.7 EPA 200.9	EPA 200.7 EPA 200.8 EPA 200.9	EPA 200.7 SM 3500-CA (C) SM 3500-CA(D)	EPA 200.8	NA
City of Farmington (2015-2016)	NA	EPA 200.7 EPA 200.8	EPA 200.7	EPA 200.7 EPA 200.8	NA
River Watch (1991-2016)	NA	EPA 200.7	EPA 200.7	NA	NA
Mountain Studies Institute (2016)	NA	EPA 200.8	EPA 200.7	NA	NA
SADIE (2011-2015)	NA	EPA 200.8 EPA 6020	EPA 200.7 EPA 200.8 EPA 6010	EPA 200.7 EPA 200.8 EPA 6010	NA
USEPA historic (1971-2000)	NA	Unspecified	EPA 215.1	Unspecified	NA
USGS MiniSipper (2015)	NA	EPA 200.8	EPA 200.8	EPA 200.8	NA
USGS GKM Database (2000-2015)	NA	EPA 200.7 USGS I-2138-89 USGS I-2477-92 USGS I-4471-97 Unspecified	USGS I-1472-85 USGS I-1472-87 USGS I-1472-95 Unspecified	EPA 200.7 USGS I-1233-93 USGS I-2020-05 USGS I-2477-92 USGS I-3233-93 USGS I-4020-05 Unspecified	NA
USGS Paper 1651 (1994-2002)	ICP-AES	ICP-AES	ICP-AES ICP/MS	ICP-AES ICP/MS	NA

Table 1 cont.		Surface Water – Metals laboratory methods			
Provider	Chromium (VI)	Cobalt (Co)	Copper (Cu)	Iron (Fe)	Lead (Pb)
USEPA Region 6 (2015)	NA	EPA 200.8	EPA 200.8	EPA 200.7	EPA 200.8
USEPA Region 8 (2015)	NA	EPA 200.8	EPA 200.8	EPA 200.7	EPA 200.8
USEPA Region 9 (2015)	NA	EPA 200.8	EPA 200.8	EPA 200.7	EPA 200.8
USEPA Follow-up (2015-2016)	NA	EPA 200.8	EPA 200.8	EPA 200.7	EPA 200.8
Colorado DPHE (1968-2016)	Unspecified	EPA 200.7	EPA 200.7 EPA 200.8 Unspecified	EPA 200.7 Unspecified	EPA 200.8 Unspecified
New Mexico ED (2001-2016)	NA	EPA 200.8 Unspecified	EPA 200.8 Unspecified	EPA 200.7 Unspecified	EPA 200.8 Unspecified
Utah DEQ (1975-2016)	Unspecified	EPA 200.8	EPA 200.8 Unspecified	EPA 200.7 Unspecified	EPA 200.8 Unspecified
Navajo Nation (1999-2015)	SM 3500-CR(D)	EPA 200.7 EPA 200.8	EPA 200.7	EPA 200.7	EPA 200.7 EPA 200.8 EPA 200.9
Southern Ute Indian Tribe (1992-2016)	SM 3500-CR(D)	EPA 200.8	EPA 200.7 EPA 200.8 SU SOP	EPA 200.7 SU SOP	EPA 200.7 EPA 200.8 SU SOP
Ute Mountain Ute Tribe (1996-2015)	NA	NA	EPA 200.7 EPA 200.8 EPA 200.9	SM 3111-B EPA 200.7 EPA 200.9 EPA 6010B	EPA 200.7 EPA 200.8 EPA 200.9
City of Farmington (2015-2016)	NA	EPA 200.8	EPA 200.8	EPA 200.7	EPA 200.8
River Watch (1991-2016)	NA	NA	EPA 200.7	EPA 200.7	EPA 200.7
Mountain Studies Institute (2016)	NA	NA	EPA 200.8	EPA 200.7	EPA 200.8
SADIE (2011-2015)	NA	EPA 200.8	EPA 200.8 EPA 6020	EPA 200.7 EPA 6010	EPA 200.8 EPA 6020
USEPA historic (1971-2000)	NA	NA	Unspecified	Unspecified	Unspecified
USGS MiniSipper (2015)	NA	NA	EPA 200.8	NA	EPA 200.8
USGS GKM Database (2000-2015)	NA	USGS I-2020-05 USGS I-2477-92 USGS I-4020-05 Unspecified	EPA 200.7 USGS I-1472-85 USGS I-1472-87 USGS I-1472-95 USGS I-2020-05 USGS I-2274-89 USGS I-2477-92 USGS I-4020-05 USGS I-4471-97 Unspecified	EPA 200.7 USGS I-1472-85 USGS I-1472-87 USGS I-1472-95 USGS I-4471-97 Unspecified	EPA 200.7 USGS I-2403-89 USGS I-2477-92 USGS I-4471-97 Unspecified
USGS Paper 1651 (1994-2002)	NA	ICP-AES ICP/MS	ICP-AES ICP/MS	ICP-AES ICP/MS SpectroPhoto	ICP-AES ICP/MS GFAAS

Table 1 cont.		Surface Water – Metals laboratory methods			
Provider	Magnesium (Mg)	Manganese (Mn)	Mercury (Hg)	Molybdenum (Mo)	Nickel (Ni)
USEPA Region 6 (2015)	EPA 200.7	EPA 200.8	EPA 245.1	EPA 200.8	EPA 200.8
USEPA Region 8 (2015)	EPA 200.7	EPA 200.8	EPA 245.1	EPA 200.8	EPA 200.8
USEPA Region 9 (2015)	EPA 200.7	EPA 200.8	EPA 245.1	EPA 200.8	EPA 200.8
USEPA Follow-up (2015-2016)	EPA 200.7	EPA 200.8	EPA 245.1 EPA 1631E	EPA 200.8	EPA 200.8
Colorado DPHE (1968-2016)	EPA 200.7 Unspecified	EPA 200.7 EPA 200.8 Unspecified	EPA 200.8 EPA 245.1 Unspecified	EPA 200.7 Unspecified	EPA 200.7 Unspecified
New Mexico ED (2001-2016)	EPA 200.7 Unspecified	EPA 200.7 EPA 200.8 Unspecified	EPA 245.1 Unspecified	EPA 200.8 Unspecified	EPA 200.8 Unspecified
Utah DEQ (1975-2016)	EPA 200.7 Unspecified	EPA 200.8 Unspecified	EPA 245.1 EPA 200.8 Unspecified	EPA 200.8	EPA 200.8 Unspecified
Navajo Nation (1999-2015)	EPA 200.7	EPA 200.7	EPA 1631E EPA 245.1	EPA 200.7 EPA 200.8	EPA 200.7
Southern Ute Indian Tribe (1992-2016)	EPA 200.7	EPA 200.7 EPA 200.8 SU SOP	EPA 245.1 EPA 7470A SU SOP	EPA 200.8	EPA 200.7 EPA 200.8 SU SOP
Ute Mountain Ute Tribe (1996-2015)	EPA 200.7 SM 3111-B SM 3500-Mg(B)	EPA 200.7 EPA 200.8 SM 3111-B	EPA 245.1 EPA 245.2	EPA 200.8	EPA 200.8 EPA 200.9
City of Farmington (2015-2016)	EPA 200.7	EPA 200.7	EPA 245.1	EPA 200.8	EPA 200.8
River Watch (1991-2016)	EPA 200.7	EPA 200.7	NA	NA	NA
Mountain Studies Institute (2016)	EPA 200.7	EPA 200.8	EPA 245.1	NA	NA
SADIE (2011-2015)	EPA 200.7	EPA 200.7	NA	EPA 200.8	EPA 200.7
USEPA historic (1971-2000)	EPA 242.1	Unspecified	Unspecified	NA	Unspecified
USGS MiniSipper (2015)	EPA 200.8	EPA 200.8	NA	NA	NA
USGS GKM Database (2000-2015)	USGS I-1472-85 USGS I-1472-87 USGS I-1472-95 Unspecified	EPA 200.7 USGS I-1472-85 USGS I-1472-87 USGS I-1472-95 USGS I-2477-92 USGS I-4471-97 Unspecified	USGS I-2462-85 USGS I-2464-01 USGS I-3462-85 USGS I-4464-01 Unspecified	EPA 200.7 USGS I-2477-92 USGS I-4471-97 Unspecified	EPA 200.7 USGS I-1472-85 USGS I-1472-87 USGS I-1472-95 USGS I-2020-05 USGS I-2477-92 USGS I-4020-05 USGS I-4471-97 Unspecified
USGS Paper 1651 (1994-2002)	ICP-AES ICP/MS	ICP-AES ICP/MS	CVAAS ICP/MS	ICP-AES ICP/MS	ICP-AES ICP/MS

Table 1 cont.		Surface Water – Metals laboratory methods			
Provider	Potassium (K)	Selenium (Se)	Silver (Ag)	Sodium (Na)	Thallium (Tl)
USEPA Region 6 (2015)	EPA 200.7	EPA 200.8	EPA 200.8	EPA 200.7	EPA 200.8
USEPA Region 8 (2015)	EPA 200.7	EPA 200.8	EPA 200.8	EPA 200.7	EPA 200.8
USEPA Region 9 (2015)	EPA 200.7	EPA 200.8	EPA 200.8	EPA 200.7	EPA 200.8
USEPA Follow-up (2015-2016)	EPA 200.7	EPA 200.8	EPA 200.8	EPA 200.7	EPA 200.8
Colorado DPHE (1968-2016)	EPA 200.7 Unspecified	EPA 200.8 Unspecified	EPA 200.8 Unspecified	EPA 200.7 Unspecified	NA
New Mexico ED (2001-2016)	EPA 200.7 Unspecified	EPA 200.8 EPA 200.9 EPA 270.2 Unspecified	EPA 200.8 Unspecified	EPA 200.7 Unspecified	EPA 200.8 Unspecified
Utah DEQ (1975-2016)	EPA 200.7 Unspecified	EPA 200.8 SM 3114-C Unspecified	EPA 200.8 Unspecified	EPA 200.7 Unspecified	EPA 200.8
Navajo Nation (1999-2015)	EPA 200.7	EPA 200.7 EPA 200.8 SM 3114-C	EPA 200.7 EPA 200.8	EPA 200.7	EPA 200.7 EPA 200.8
Southern Ute Indian Tribe (1992-2016)	EPA 200.7	EPA 200.8 SM 3500-SE (C) SU SOP	EPA 200.7 EPA 200.8 SU SOP	EPA 200.7	EPA 200.8
Ute Mountain Ute Tribe (1996-2015)	EPA 200.7 SM 3500-K (D)	EPA 200.8 EPA 200.9	EPA 200.8 EPA 200.9	EPA 200.7 SM 3500-NA(D)	NA
City of Farmington (2015-2016)	EPA 200.7	EPA 200.8	EPA 200.8	EPA 200.7	EPA 200.8
River Watch (1991-2016)	EPA 200.7	EPA 200.7	NA	EPA 200.7	NA
Mountain Studies Institute (2016)	NA	EPA 200.8	NA	NA	NA
SADIE (2011-2015)	EPA 200.7 EPA 6010	EPA 200.8	EPA 200.8 EPA 6020	EPA 200.7 EPA 6010	EPA 200.8
USEPA historic (1971-2000)	EPA 258.1	EPA 270.2 Unspecified	Unspecified	EPA 273.1	Unspecified
USGS MiniSipper (2015)	NA	NA	NA	NA	NA
USGS GKM Database (2000-2015)	SM 3120 ICP USGS I-1630-85 Unspecified	USGS I-2020-05 USGS I-2477-92 USGS I-2668-98 USGS I-4020-05 USGS I-4471-97 USGS I-4668-98 Unspecified	USGS I-2477-92 USGS I-2724-89 USGS I-2725-93 USGS I-4471-97 Unspecified	USGS I-1472-85 USGS I-1472-87 USGS I-1472-95 Unspecified	USGS I-2477-92 USGS I-4471-97
USGS Paper 1651 (1994-2002)	FAAS ICP-AES ICP/MS	ICP-AES ICP/MS	ICP-AES ICP/MS	ICP-AES ICP/MS	ICP/MS

Table 1 cont.		Surface Water – Metals laboratory methods		
Provider	Uranium (U)	U-234/235/238	Vanadium (V)	Zinc (Zn)
USEPA Region 6 (2015)	NA	NA	EPA 200.8	EPA 200.8
USEPA Region 8 (2015)	NA	NA	EPA 200.8	EPA 200.8
USEPA Region 9 (2015)	NA	NA	EPA 200.8	EPA 200.8
USEPA Follow-up (2015-2016)	NA	NA	EPA 200.8	EPA 200.8
Colorado DPHE (1968-2016)	EPA 200.8 Unspecified	EPA 200.8	EPA 200.7	EPA 200.7 EPA 200.8 Unspecified
New Mexico ED (2001-2016)	EPA 200.8	EPA 200.8 Unspecified	EPA 200.8 Unspecified	EPA 200.8 Unspecified
Utah DEQ (1975-2016)	NA	NA	EPA 200.8	EPA 200.8 Unspecified
Navajo Nation (1999-2015)	EPA 200.8	NA	EPA 200.7	EPA 200.7 EPA 200.8
Southern Ute Indian Tribe (1992-2016)	NA	NA	EPA 200.8	EPA 200.7 EPA 200.8 SU SOP
Ute Mountain Ute Tribe (1996-2015)	NA	EPA 200.8	EPA 200.8 EPA 200.9	EPA 200.7 EPA 200.8 SM 3111-B
City of Farmington (2015-2016)	NA	NA	EPA 200.8	EPA 200.7
River Watch (1991-2016)	NA	NA	NA	EPA 200.7
Mountain Studies Institute (2016)	NA	NA	NA	EPA 200.8
SADIE (2011-2015)	NA	NA	EPA 200.8	EPA 200.7 EPA 200.8 EPA 6010
USEPA historic (1971-2000)	Unspecified	NA	NA	EPA 289.1 Unspecified
USGS MiniSipper (2015)	NA	NA	NA	EPA 200.8
USGS GKM Database (2000-2015)	NA	NA	EPA 200.7 USGS I-1472-85 USGS I-1472-87 USGS I-1472-95 USGS I-1472-95 USGS I-2020-05 USGS I-4020-05	EPA 200.7 USGS I-1472-85 USGS I-1472-87 USGS I-1472-95 USGS I-2020-05 USGS I-2477-92 USGS I-4020-05 USGS I-4471-97 Unspecified
USGS Paper 1651 (1994-2002)	ICP/MS	NA	ICP-AES ICP/MS	ICP-AES ICP/MS

Table 2. List of metals laboratory methods for sediment samples by data provider

This listing is a compilation from available data. Sampled years in parenthesis. All years not necessarily used in analyses. Historic methods, at times, unspecified. Digestion methods listed if known.

Provider	Sediment – Metals laboratory methods						
	Aluminum (Al)	Antimony (Sb)	Arsenic (As)	Barium (Ba)	Beryllium (Be)	Boron (B)	Cadmium (Cd)
USEPA Region 6 (2015)	EPA 6010C Digestion: EPA 3050B	EPA 6020A Digestion: EPA 3050B	EPA 6020A Digestion: EPA 3050B	EPA 6020A Digestion: EPA 3050B	EPA 6020A Digestion: EPA 3050B	NA	EPA 6020A Digestion: EPA 3050B
USEPA Region 8 (2015)	EPA 6010C Digestion: EPA 3050B	EPA 6020A Digestion: EPA 3050B	EPA 6020A Digestion: EPA 3050B	EPA 6020A Digestion: EPA 3050B	EPA 6020A Digestion: EPA 3050B	NA	EPA 6020A Digestion: EPA 3050B
USEPA Region 9 (2015)	EPA 6010C Digestion: EPA 3050B SOP DV-IP-0015	EPA 6020A Digestion: EPA 3050B SOP DV-IP-0015	EPA 6020A Digestion: EPA 3050B SOP DV-IP-0015	EPA 6020A Digestion: EPA 3050B SOP DV-IP-0015	EPA 6020A Digestion: EPA 3050B SOP DV-IP-0015	NA	EPA 6020A Digestion: EPA 3050B SOP DV-IP-0015
USEPA Follow-up (2015-2016)	EPA 6010C Digestion: EPA 3050B	EPA 6020A Digestion: EPA 3050B	EPA 6020A Digestion: EPA 3050B	EPA 6020A Digestion: EPA 3050B	EPA 6020A Digestion: EPA 3050B	NA	EPA 6020A Digestion: EPA 3050B
CDPHE (2015-2016)	EPA 200.7	NA	EPA 200.8	EPA 200.7	EPA 200.8	NA	EPA 200.8
NMED (2002-2016)	EPA 200.8 Digestion: SOP 41415	EPA 200.8 Digestion: SOP 41415	EPA 200.8 Digestion: SOP 41415	EPA 200.8 Digestion: SOP 41415	EPA 200.8 Digestion: SOP 41415	EPA 200.7	EPA 200.8 Digestion: SOP 41415
Utah DEQ (2015-2016)	EPA 200.8 EPA 6010C	EPA 200.8 EPA 6020	EPA 200.8 EPA 6020	EPA 200.8 EPA 6020	EPA 200.8 EPA 6020	NA	EPA 200.8 EPA 6020
Navajo Nation (2015)	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B
SUIT (2016)	NA	NA	ICP	NA	NA	NA	ICP
UMUT	NA	NA	NA	NA	NA	NA	NA
City of Farmington	NA	NA	NA	NA	NA	NA	NA
River Watch	NA	NA	NA	NA	NA	NA	NA
MSI	NA	NA	NA	NA	NA	NA	NA
SADIE (2012-2014)	EPA 200.7 Digestion: EPA 200.2	EPA 200.8 Digestion: EPA 200.2	EPA 200.8 Digestion: EPA 200.2	EPA 200.8 Digestion: EPA 200.2	EPA 200.7 Digestion: EPA 200.2	NA	EPA 200.8 Digestion: EPA 200.2
USEPA historic (1981-1985)	NA	Unspecified	Unspecified	NA	Unspecified	NA	Unspecified
USGS GKM Database (1977-2000)	NA	NA	USGS I-6062-85 USGS I-6063-98 Unspecified	Unspecified	Unspecified	NA	USGS I-5020-05 USGS I-5135-85 Unspecified
USGS Paper 1651 (1994-2002)	ICP-AES	ICP-AES	ICP-AES	ICP-AES	ICP-AES	NA	ICP-AES

Table 2 cont.	Sediment – Metals laboratory methods						
Provider	Calcium (Ca)	Chromium (Cr)	Chromium (III)	Chromium (VI)	Cobalt (Co)	Copper (Cu)	Iron (Fe)
USEPA Region 6 (2015)	EPA 6010C Digestion: EPA 3050B	EPA 6020A Digestion: EPA 3050B	NA	NA	EPA 6020A Digestion: EPA 3050B	EPA 6020A Digestion: EPA 3050B	EPA 6010C Digestion: EPA 3050B
USEPA Region 8 (2015)	EPA 6010C Digestion: EPA 3050B	EPA 6020A Digestion: EPA 3050B	NA	NA	EPA 6020A Digestion: EPA 3050B	EPA 6020A Digestion: EPA 3050B	EPA 6010C Digestion: EPA 3050B
USEPA Region 9 (2015)	EPA 6010C Digestion: EPA 3050B SOP DV-IP-0015	EPA 6020A Digestion: EPA 3050B SOP DV-IP-0015	NA	NA	EPA 6020A Digestion: EPA 3050B SOP DV-IP-0015	EPA 6020A Digestion: EPA 3050B SOP DV-IP-0015	EPA 6010C Digestion: EPA 3050B SOP DV-IP-0015
USEPA Follow-up (2015-2016)	EPA 6010C Digestion: EPA 3050B	EPA 6020A Digestion: EPA 3050B	NA	NA	EPA 6020A Digestion: EPA 3050B	EPA 6020A Digestion: EPA 3050B	EPA 6010C Digestion: EPA 3050B
CDPHE (2015-2016)	NA	NA	NA	NA	EPA 200.7	EPA 200.7	EPA 200.7
NMED (2002-2016)	EPA 200.7	EPA 200.8 Digestion: SOP 41415	NA	NA	EPA 200.8 Digestion: SOP 41415	EPA 200.8 Digestion: SOP 41415	EPA 200.7 Digestion: SOP 41415
Utah DEQ (2015-2016)	EPA 200.7 EPA 6010C	EPA 6020	NA	NA	EPA 200.8 EPA 6020	EPA 200.8 EPA 6020	EPA 200.7 EPA 6010C
Navajo Nation (2015)	EPA 6010B	EPA 6010B	EPA 7196A EPA 7199	EPA 7196A EPA 7199	EPA 6010B	EPA 6010B	EPA 6010B
SUIT (2016)	NA	ICP	NA	NA	NA	ICP	NA
UMUT	NA	NA	NA	NA	NA	NA	NA
City of Farmington	NA	NA	NA	NA	NA	NA	NA
River Watch	NA	NA	NA	NA	NA	NA	NA
MSI	NA	NA	NA	NA	NA	NA	NA
SADIE (2012-2014)	EPA 200.7 Digestion: EPA 200.2	EPA 200.8 Digestion: EPA 200.2	NA	NA	EPA 200.8 Digestion: EPA 200.2	EPA 200.7 EPA 200.8 Digestion: EPA 200.2	EPA 200.7 Digestion: EPA 200.2
USEPA historic (1981-1985)	NA	Unspecified	NA	NA	NA	Unspecified	NA
USGS GKM Database (1977-2000)	NA	USGS I-5020-05 USGS I-5236-85 Unspecified	NA	NA	USGS I-5020-05 USGS I-5239-85 Unspecified	USGS I-5020-05 USGS I-5270-85 Unspecified	USGS I-5020-05 USGS I-5381-86 Unspecified
USGS Paper 1651 (1994-2002)	NA	ICP-AES	NA	NA	ICP-AES	ICP-AES	ICP-AES

Table 2 cont.		Sediment – Metals laboratory methods					
Provider	Lead (Pb)	Magnesium (Mg)	Manganese (Mn)	Mercury (Hg)	Molybdenum (Mo)	Nickel (Ni)	Potassium (K)
USEPA Region 6 (2015)	EPA 6020A Digestion: EPA 3050B	EPA 6010C Digestion: EPA 3050B	EPA 6020A Digestion: EPA 3050B	EPA 7471A	EPA 6020A Digestion: EPA 3050B	EPA 6020A Digestion: EPA 3050B	EPA 6010C Digestion: EPA 3050B
USEPA Region 8 (2015)	EPA 6020A Digestion: EPA 3050B	EPA 6010C Digestion: EPA 3050B	EPA 6020A Digestion: EPA 3050B	EPA 7471A	EPA 6020A Digestion: EPA 3050B	EPA 6020A Digestion: EPA 3050B	EPA 6010C Digestion: EPA 3050B
USEPA Region 9 (2015)	EPA 6020A Digestion: EPA 3050B SOP DV-IP-0015	EPA 6010C Digestion: EPA 3050B SOP DV-IP-0015	EPA 6020A Digestion: EPA 3050B SOP DV-IP-0015	EPA 7471A	EPA 6020A Digestion: EPA 3050B SOP DV-IP-0015	EPA 6020A Digestion: EPA 3050B SOP DV-IP-0015	EPA 6010C Digestion: EPA 3050B SOP DV-IP-0015
USEPA Follow-up (2015-2016)	EPA 6020A Digestion: EPA 3050B	EPA 6010C Digestion: EPA 3050B	EPA 6020A Digestion: EPA 3050B	EPA 7471A	EPA 6020A Digestion: EPA 3050B	EPA 6020A Digestion: EPA 3050B	EPA 6010C Digestion: EPA 3050B
CDPHE (2015-2016)	EPA 200.8	NA	EPA 200.7 EPA 200.8	NA	NA	EPA 200.7	NA
NMED (2002-2016)	EPA 200.8 Digestion: SOP 41415	EPA 200.7	EPA 200.7 EPA 200.8 Digestion: SOP 41415	EPA 245.5	EPA 200.8 Digestion: SOP 41415	EPA 200.8 Digestion: SOP 41415	NA
Utah DEQ (2015-2016)	EPA 200.8 EPA 6020	EPA 200.7 EPA 6010C	EPA 200.8 EPA 6020	EPA 7471B	EPA 200.8 EPA 6020	EPA 200.8 EPA 6020	EPA 200.7 EPA 6010C
Navajo Nation (2015)	EPA 6010B	EPA 6010B	EPA 6010B	EPA 7471A	EPA 6010B	EPA 6010B	EPA 6010B
SUIT (2016)	ICP	NA	NA	CVAAS	NA	ICP	NA
UMUT	NA	NA	NA	NA	NA	NA	NA
City of Farmington	NA	NA	NA	NA	NA	NA	NA
River Watch	NA	NA	NA	NA	NA	NA	NA
MSI	NA	NA	NA	NA	NA	NA	NA
SADIE (2012-2014)	EPA 200.7 EPA 200.8 Digestion: EPA 200.2	EPA 200.7 Digestion: EPA 200.2	EPA 200.7 Digestion: EPA 200.2	EPA 7473	EPA 200.8 Digestion: EPA 200.2	EPA 200.8 Digestion: EPA 200.2	EPA 200.7 Digestion: EPA 200.2
USEPA historic (1981-1985)	Unspecified	NA	NA	Unspecified	NA	Unspecified	NA
USGS GKM Database (1977-2000)	USGS I-5020-05 USGS I-5399-85 Unspecified	NA	USGS I-5020-05 USGS I-5454-85 Unspecified	USGS I-5462-85 Unspecified	Unspecified	Unspecified	Unspecified
USGS Paper 1651 (1994-2002)	ICP-AES	ICP-AES	ICP-AES	CVAAS	ICP-AES	ICP-AES	ICP-AES

Table 2 cont.	Sediment – Metals laboratory methods					
Provider	Selenium (Se)	Silver (Ag)	Sodium (Na)	Thallium (Tl)	Vanadium (V)	Zinc (Zn)
USEPA Region 6 (2015)	EPA 6020A Digestion: EPA 3050B	EPA 6020A Digestion: EPA 3050B	EPA 6010C Digestion: EPA 3050B	EPA 6020A Digestion: EPA 3050B	EPA 6020A Digestion: EPA 3050B	EPA 6020A Digestion: EPA 3050B
USEPA Region 8 (2015)	EPA 6020A Digestion: EPA 3050B	EPA 6020A Digestion: EPA 3050B	EPA 6010C Digestion: EPA 3050B	EPA 6020A Digestion: EPA 3050B	EPA 6020A Digestion: EPA 3050B	EPA 6020A Digestion: EPA 3050B
USEPA Region 9 (2015)	EPA 6020A Digestion: EPA 3050B SOP DV-IP-0015)	EPA 6020A Digestion: EPA 3050B SOP DV-IP-0015	EPA 6010C Digestion: EPA 3050B SOP DV-IP-0015	EPA 6020A Digestion: EPA 3050B SOP DV-IP-0015	EPA 6020A Digestion: EPA 3050B SOP DV-IP-0015	EPA 6020A Digestion: EPA 3050B SOP DV-IP-0015
USEPA Follow-up (2015-2016)	EPA 6020A Digestion: EPA 3050B	EPA 6020A Digestion: EPA 3050B	EPA 6010C Digestion: EPA 3050B	EPA 6020A Digestion: EPA 3050B	EPA 6020A Digestion: EPA 3050B	EPA 6020A Digestion: EPA 3050B
CDPHE (2015-2016)	EPA 200.8	NA	NA	NA	NA	EPA 200.7
NMED (2002-2016)	EPA 200.8 EPA 270.2 Digestion: SOP 41415	EPA 200.8 Digestion: SOP 41415	NA	EPA 200.8 Digestion: SOP 41415	EPA 200.8 Digestion: SOP 41415	EPA 200.8 Digestion: SOP 41415
Utah DEQ (2015-2016)	EPA 200.8 EPA 6020	EPA 200.8 EPA 6020	EPA 200.7 EPA 6010C	EPA 200.8 EPA 6020	EPA 200.8 EPA 6020	EPA 200.8 EPA 6020
Navajo Nation (2015)	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B
SUIT (2016)	NA	NA	NA	NA	NA	ICP
UMUT	NA	NA	NA	NA	NA	NA
City of Farmington	NA	NA	NA	NA	NA	NA
River Watch	NA	NA	NA	NA	NA	NA
MSI	NA	NA	NA	NA	NA	NA
SADIE (2012-2014)	EPA 200.8 Digestion: EPA 200.2	EPA 200.8 Digestion: EPA 200.2	EPA 200.7 Digestion: EPA 200.2	EPA 200.8 Digestion: EPA 200.2	EPA 200.8 Digestion: EPA 200.2	EPA 200.7 Digestion: EPA 200.2
USEPA historic (1981-1985)	Unspecified	Unspecified	NA	Unspecified	NA	Unspecified
USGS GKM Database (1977-2000)	Unspecified	NA	NA	NA	NA	USGS I-5020-05 USGS I-6900-85 Unspecified
USGS Paper 1651 (1994-2002)	HG-AAS	ICP-AES	ICP-AES	Passive Leach & ICP/MS	ICP-AES	ICP-AES

Table 3. Analytical methodology for metal analyses. Includes methods used for historic samples.

Metal Analysis		
Method ID	Method Technology	
EPA 7473	AAS	atomic absorption spectrometry
USGS I-1630-85		
USGS I-2020-05	cICP-MS	collision/reaction cell inductively coupled plasma-mass spectrometry
USGS I-4020-05		
EPA 7196A	colorimetric	spectrophotometer or filter photometer
SM 3500-CR (D)		
SM 3500-SE (C)		spectrophotometer
EPA 245.1	CVAAS	cold vapor atomic absorption spectrometry
EPA 245.2		
EPA 7470A		
EPA 7471A		
EPA 7471B		
USGS I-2462-85		
USGS I-3462-85		
USGS I-5462-85		
EPA 1631E	CV-AFS	cold vapor-atomic fluorescence spectrometry
USGS I-2464-01		
USGS I-4464-01		
SM 3500-CA (D)	EDTA	titration by ethylenediaminetetraacetic acid or its salts
EPA 215.1	FLAAS	flame atomic absorption spectrometry
EPA 242.1		
EPA 258.1		
EPA 273.1		
EPA 289.1		
SM 3111-B		
SM 3500-Mg (B)		
USGS I-5135-85		
USGS I-5236-85		
USGS I-5239-85		
USGS I-5270-85		
USGS I-5381-86		
USGS I-5399-85		
USGS I-5454-85		
USGS I-6900-85		
SM 3500-K (D)	FP	flame photometry
SM 3500-NA(D)		
EPA 200.9	GFAAS	graphite furnace atomic absorption spectrometry
EPA 206.2_M		
EPA 270.2		

Metal Analysis		
Method ID	Method Technology	
USGS I-1233-93	GFAAS	graphite furnace atomic absorption spectrometry
USGS I-2063-98		
USGS I-2138-89		
USGS I-2274-89		
USGS I-2403-89		
USGS I-2668-98		
USGS I-2724-89		
USGS I-2725-93		
USGS I-3233-93		
USGS I-4063-98		
USGS I-4668-98		
USGS I-6063-98		
SM 3114-C	HG-AAS	hydride generation-atomic absorption spectrometry
EPA 7199	IC	ion chromatography
SM 3500-CA (C)	ICP	inductively coupled plasma
EPA 200.8	ICP/MS	inductively couple plasma/mass spectrometry
EPA 200.8/6020		
EPA 6020		
EPA 6020A		
USGS I-2477-92		
USGS I-4471-97		
USGS I-5020-05		
SM 3120 ICP	ICP-OES	inductively coupled plasma-optical emission spectrometry
USGS I-4471-97		
EPA 200.7	ICP-AES	inductively coupled plasma-atomic emission spectroscopy
EPA 200.7/6010		
EPA 6010B		
EPA 6010C		
USGS I-1472-85		
USGS I-1472-87		
USGS I-1472-95		
USGS I-4471-97		
USGS I-5020-05		
Unspecified	Passive Leach & ICP/MS	passive leach method and inductively couple plasma/mass spectrometry
USGS I-6062-85	QTFAAS	quartz tube furnace atomic absorption spectrometry
Unspecified	SpectroPhoto	hach portable spectrophotometry
EPA 200.2	Not Applicable	solid and aqueous sample preparation (acid digestion)
EPA 3050B		solid sample preparation (acid digestion)
SOP 41415		solid sample preparation (acid digestion)

Metal Analysis		
Method ID	Method Technology	
EPA 7473	AAS	atomic absorption spectrometry
USGS I-1630-85		
USGS I-2020-05	cICP-MS	collision/reaction cell inductively coupled plasma-mass spectrometry
USGS I-4020-05		
EPA 7196A	colorimetric	spectrophotometer or filter photometer
SM 3500-CR (D)		
SM 3500-SE (C)		spectrophotometer
EPA 245.1	CVAAS	cold vapor atomic absorption spectrometry
EPA 245.2		
EPA 7470A		
EPA 7471A		
EPA 7471B		
USGS I-2462-85		
USGS I-3462-85		
USGS I-5462-85		
EPA 1631E	CV-AFS	cold vapor-atomic fluorescence spectrometry
USGS I-2464-01		
USGS I-4464-01		
SM 3500-CA (D)	EDTA	titration by ethylenediaminetetraacetic acid or its salts
EPA 215.1	FLAAS	flame atomic absorption spectrometry
EPA 242.1		
EPA 258.1		
EPA 273.1		
EPA 289.1		
SM 3111-B		
SM 3500-Mg (B)		
USGS I-5135-85		
USGS I-5236-85		
USGS I-5239-85		
USGS I-5270-85		
USGS I-5381-86		
USGS I-5399-85		
USGS I-5454-85		
USGS I-6900-85		
SM 3500-K (D)	FP	flame photometry
SM 3500-NA(D)		
EPA 200.9	GFAAS	graphite furnace atomic absorption spectrometry
EPA 206.2_M		
EPA 270.2		
USGS I-1233-93	GFAAS	graphite furnace atomic absorption spectrometry

Metal Analysis		
Method ID	Method Technology	
USGS I-2063-98		
USGS I-2138-89		
USGS I-2274-89		
USGS I-2403-89		
USGS I-2668-98		
USGS I-2724-89		
USGS I-2725-93		
USGS I-3233-93		
USGS I-4063-98		
USGS I-4668-98		
USGS I-6063-98		
SM 3114-C	HG-AAS	hydride generation-atomic absorption spectrometry
EPA 7199	IC	ion chromatography
SM 3500-CA (C)	ICP	inductively coupled plasma
EPA 200.8	ICP/MS	inductively couple plasma/mass spectrometry
EPA 200.8/6020		
EPA 6020		
EPA 6020A		
USGS I-2477-92		
USGS I-4471-97		
USGS I-5020-05		
SM 3120 ICP	ICP-OES	inductively coupled plasma-optical emission spectrometry
USGS I-4471-97		
EPA 200.7	ICP-AES	inductively coupled plasma-atomic emission spectroscopy
EPA 200.7/6010		
EPA 6010B		
EPA 6010C		
USGS I-1472-85		
USGS I-1472-87		
USGS I-1472-95		
USGS I-4471-97		
USGS I-5020-05		
Unspecified	Passive Leach & ICP/MS	passive leach method and inductively couple plasma/mass spectrometry
USGS I-6062-85	QTFAAS	quartz tube furnace atomic absorption spectrometry
Unspecified	SpectroPhoto	hach portable spectrophotometry
EPA 200.2	Not Applicable	solid and aqueous sample preparation (acid digestion)
EPA 3050B		solid sample preparation (acid digestion)
SOP 41415		solid sample preparation (acid digestion)