# SSHCZO Metadata Worksheet

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| Data File Name | **20160315\_ISCO\_time\_series.xls** |
| Date Prepared | 3/16/2016 |
| Descriptive Title | Groundwater and stream water chemistry time series  |
| Update Frequency | yearly |
| Abstract | The time-series of groundwater and streamwater chemistry were monitored at the Shale Hills Critical Zone Observatory using ISCO samplers. The sampling frequency was 1-day. The groundwater samples were collected at CZMW3 at -4m below the surface. The stream water samples were collected near the weir. Ground water and stream water chemistry 2015: DOI: 10.1594/IEDA/100715Ground water and stream water chemistry 2016: DOI: 10.1594/IEDA/100716Ground water and stream water chemistry 2017: DOI: 10.1594/IEDA/100717 |
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| Data Value Descriptions |

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| --- | --- | --- |
| * Col1
 | : label = | rundate |
| * Col2
 | : label = | Your # |
| * Col3
 | : label = | sample |
| * Col4
 | : label = | sampling date |
| * Col5
 | : label = | sampling time |
| * Col6
 | : label = | Al (ug/mL) |
| * Col7
 | : label = | Ba (ug/mL) |
| * Col8
 | : label = | Ca (ug/mL) |
| * Col9
 | : label = | Fe (ug/mL) |
| * Col10
 | : label = | K (ug/mL) |
| * Col11
 | : label = | Mg (ug/mL) |
| * Col12
 | : label = | Mn (ug/mL) |
| * Col13
 | : label = | Na (ug/mL) |
| * Col14
 | : label = | P (ug/mL) |
| * Col15
 | : label = | Si (ug/mL) |
| * Col16
 | : label = | Sr (ug/mL) |
| * Col17
 | : label = | Ti (ug/mL) |
| * Col18
 | : label = | Zn (ug/mL) |

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| Keywords | groundwater chemistry, stream water chemistry, time-series   |
| Methods | The groundwater and stream water samples were collected at daily frequency at the Shale Hills Critical Zone Observatory. The groundwater samples were collected at CZMW3 and the stream water samples were collected near the weir. To preserve sample integrity for reactive elements such as Fe and Mn, a gravitational filtration system was employed (Kim et al 2012). GFS used 0.22μm Supor membrane filters (Pall Corperation). When the ISCO samplers were full, the samples were retrieved to the laboratory and were acidified (1% v/v) using Optima Nitric acid in the GFS bottles. To recover the precipitated and adsorbed phases of solutes, the acidified samples were sit at least 24 hours and the transferred to 50mL metal free centrifuge tubes. Major cations and silica were analyzed on an inductively coupled plasma–optical emission spectrometer (ICP– OES).  |
| Sites | Shale Hills Critical Zone Observatory  |
| Publications | not published. Please embargo public access  |
| Citation | The following acknowledgment should accompany any publication or citation of these data: Logistical support and/or data were provided by the NSF-supported Susquehanna Shale Hills Critical Zone Observatory. |
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