Continuous Data

**1666\_Elk\_cont.xlsx** – this is no longer a site; this is why the data ends on 10/23/2017

**1667\_WBPine\_cont.xlsx** – you have listed as 15 minute data; it is 5 minute data until 11/17/2015 @10:55, then it changes to 15 minute data

**1669\_Blockhouse\_cont.xlsx**

**1731\_Long\_cont.xlsx**

**1805\_Pine\_cont.xlsx**

**1806\_MarshTioga\_cont.xlsx**

**1810\_Ninemile\_cont.xlsx**

**1811\_UpperPine\_cont.xlsx**

**92\_LittlePine\_Cont.xlsx**

**Sites with 4 hour data –** this is an average value from the 4 hours prior. The data are recorded every 5 minutes and then the average value is set every 4 hours. These data are set via satellite telemetry.

Data were originally collected at a 5-minute interval, but in 2015, it was determined, we did not need to collect data that often. We switched to every 15 minutes which is also how often PADEP and USGS collect data. The 5-minute and 15-minute data are discrete samples.

As cellular services becomes available at sites, we are converting the telemetry service from satellite to cellular. For sites that used to have 4 hour data, but it has changed to 15 minute data, cellular service became available at the site.

The numeric characters before the alpha characters in the continuous data files equal the Station ID in the Excel spreadsheets. (i.e. 1666\_Elk\_cont.xlsx has a Station ID of 1666).

**Data Validation**

All attempts are made to remove any questionable data from each of the continuous datasets. Aquarius software (Aquatic Informatics) is used is remove data during station O&M, remove data when the sonde is out of water, remove any data that appears to be a probe failure. We also use the software to correct data for any drift that occurs during deployment periods.

AllPineCreekChemistry.xlsx

|  |
| --- |
| Station\_ID – unique ID assigned to each site; relates all data files |
| Station Name |
| Date |
| Time |
| Parameter (units) |
| Results |
| RDL – reporting detection limit from the certified lab |

AllPineCreekMacros.xlsx

|  |
| --- |
| Activity – indicates type of data |
| Station\_ID – unique ID assigned to each site; relates all data files |
| Station Name |
| Gear – type of gear used to collect the macros; standard gear used to collect samples |
| SRBC Method – method used to collect samples; look at Method sheet to see descriptions |
| Date |
| Time |
| Macrostemum – this should be Macro (Macrostemum is a type of Macro) |
| Count – count of each macro from the subsample |

AllPineCreekFish.xlsx

|  |
| --- |
| Activity – indicates type of data |
| Station\_ID – unique ID assigned to each site; relates all data files |
| Site Name |
| Gear – type of gear used to collect fish; standard gear used to collect fish samples |
| SRBC Method – methods used to collect samples; look at Method sheet for see descriptions |
| Date |
| Time |
| Fish |
| County – should be Count; count of all fish caught by species |

There is no pattern for the chemistry, macro or fish data collected in Pine Creek. There are been many projects in the watershed starting in the 1980s. Each project has its own requirements for data collection.

Pine\_attributes.xlsx

|  |
| --- |
| Station ID – unique ID assigned to each site; relates all data files |
| Station Name |
| Alias ID |
| Latitude |
| Longitude |
| Waterbody Name |
| PercentCoal – percent of the contributing watershed underlain with coal (%) |
| DrainArea (mi2) – drainage area of contributing watershed (square miles) |
| StreamMiles – miles of streams in the contributing watershed (mile) |
| StreamDensity – stream density of contributing watershed (miles/square mile) |
| ARC – AR class of stream at site |
| StreamOrder – stream order at site |
| Water % - water land use (%) |
| DevOpenSpace % - developed open space land use (%) |
| LowUrban % - low urban use land use (%) |
| MedUrban % - medium urban land use (%) |
| HighUrban % - high urban land use (%) |
| Barren % - barren land use (%) |
| DecForest % - deciduous forest land use (%) |
| ConForest % - coniferous forest land use (%) |
| MixForest % - mixed forest land use (%) |
| Shrub % - shrub land use (%) |
| Grass % - grassland land use (%) |
| Hay/Past % - hay/pasture land use (%) |
| RowCrops % - row crop land use (%) |
| Wetland % - wetland land use (%) |
| MaxTemp – average maximum temperature at site (C) |
| MinTemp – average minimum temperature at site (C) |
| Annual Precip – average annual precipitation at site (inches) |
| Jan Precip – average January precipitation at site (inches) |
| Feb Precip – average February precipitation at site (inches |
| Mar Precip – average March precipitation at site (inches |
| Apr Precip – average April precipitation at site (inches) |
| May Precip – average May precipitation at site (inches) |
| Jun Precip – average June precipitation at site (inches) |
| Jul Precip – average July precipitation at site (inches) |
| Aug Precip – average August precipitation at site (inches) |
| Sep Precip – average September precipitation at site (inches) |
| Oct Precip – average October precipitation at site (inches) |
| Nov Precip – average November precipitation at site (inches) |
| Dec Precip – average December precipitation at site (inches) |
| CWF – designated use – Cold Water Fishes (miles) |
| EV – designated use – Exceptional Value (miles) |
| HQ-CWF – designated use – High Quality Cold Water Fishes (miles) |
| HQ-TSF – designated use – High Quality Trout Stocked Fishes (miles) |
| TSF – designated use – Trout Stocked Fishes (miles) |
| WWF – designated use – Warm Water Fishes (miles) |
| ECOREGION60 – percent of contributing watershed in Ecoregion 60 |
| ECOREGION62 – percent of contributing watershed in Ecoregion 62 |
| ECOREGION67 – percent of contributing watershed in Ecoregion 67 |
| 60a – percent of watershed in Ecoregion 60a |
| 62c – percent of watershed in Ecoregion 62c |
| 62d – percent of watershed in Ecoregion 62d |
| 67a – percent of watershed in Ecoregion 67a |
| 67b – percent of watershed in Ecoregion 67b |
| 67d – percent of watershed in Ecoregion 67d |
| Average Slope – degrees |
| Base Flow Index - percent |
| Mean Elevation - feet |
| Potential Evapotranspiration- inches |
| Limestone – percent of watershed underlain with Limestone geology |
| Sandstone – percent of watershed underlain with sandstone geology |
| Shale – percent of watershed underlain with shale geology |
| Glacial Percent – percent of watershed with glacial |
| Alluvium Percent – percent of watershed with alluvium |
| Till Percent – percent of watershed with till |
| SILT\_AL – miles of stream impaired by siltation for aquatic life; calculated from the PADEP Integrated List 2016 |
| NUT\_AL – miles of stream impaired by nutrients for aquatic life; calculated from the PADEP Integrated List 2016 |
| METAL\_AL – miles of stream impaired by metals for aquatic life; calculated from the PADEP Integrated List 2016 |
| DISTURB\_AL – miles of stream impaired by disturbance for aquatic life; calculated from the PADEP Integrated List 2016 |
| MICROB\_REC – miles of stream impaired by microbial for recreational use; calculated from the PADEP Integrated List 2016 |
| METAL\_FSH – miles of stream impaired by metals for fish consumption; calculated from the PADEP Integrated List 2016 |
| PA Impaired Miles – number of impaired miles in the watershed (miles) |
| AG\_AL – miles impaired from agriculture for aquatic life; calculated from the PADEP Integrated List 2016 |
| EXTRACT\_AL – miles impaired from extraction for aquatic life; calculated from the PADEP Integrated List 2016 |
| ATMOS\_AL – miles impaired from atmospheric deposition for aquatic life; calculated from the PADEP Integrated List 2016 |
| DEV\_AL – miles impaired by development for aquatic life; calculated from the PADEP Integrated List 2016 |
| OTHSRC\_AL – miles impaired by other sources for aquatic life; calculated from the PADEP Integrated List 2016 |
| AG\_REC – miles impaired by agriculture for recreational use; calculated from the PADEP Integrated List 2016 |
| ATMOS\_FSH – miles impaired by atmospheric deposition for fish consumption; calculated from the PADEP Integrated List 2016 |
| SZ\_NAME – drainage area size class |
| SL\_NAME – slope class |
| TEMP\_NAME – thermal class |
| HYD\_6NAME – Hydrologic Type Class |
| ALK\_NAME – buffering capacity at site |
| CON\_NAME – confinement class at site |
| ALLEGHENY MOUNTAIN – percent watershed in this Physiographic Province |
| KANAWHA - percent watershed in this Physiographic Province |
| MIDDLE - percent watershed in this Physiographic Province |
| Available Water Capacity – inches/inch |
| Percent Clay - percent |
| Erodibility Factor – no unit |
| Hydrologic Soil Group – no unit |
| Permeability – inches/hour |
| Thickness - inches |

Impaired Sources and Causes can add up to more than the total number of stream miles because a stream reach can be impaired by and for several things.

All null fields equal zero. For example, if the field CWF is null, that means there are no CWF stream miles in that watershed; if Shale is null, that means there is no shale geology in that watershed.