

Technical Memorandum BCWA



Date: February 6, 2017
To: Bear Creek Watershed Association
From: Russell N. Clayshulte, Manager

Re: BCWA TM 2016.06 P1 Station Summary

Figure 1	Inflow into BCR.....	1
Figure 2	BCR 2016 Reservoir Levels	2
Figure 3	Inflow Trend	2
Figure 4	Total Nitrogen Loading.....	2
Figure 5	Total Nitrogen Load Inflow Distribution.....	3
Figure 6	Total Phosphorus Loading and Discharge	3
Figure 7	Total Phosphorus Load Inflow Distribution	3
Figure 8	P1 Temperatures	4
Figure 9	P1 Specific Conductance	4
Figure 10	P1 pH	4
Figure 11	P1 Dissolved Oxygen.....	5
Figure 12	P1 Total Phosphorus Inflow Trend.....	5
Figure 13	Total Nitrogen Inflow Trend.....	5

The BCWA P1- routine water quality monitoring stations measure water quality inputs into Bear Creek Reservoir and outflow characterizations. The two inflow sites are on Turkey and Bear Creek. There are now two outflow monitoring sites: reservoir discharge into lower Bear Creek, and the lower edge of the watershed near Wadsworth. The P1 sites are long-term reference monitoring sites consistent with the intent of the BCWA monitoring program outlined in the Bear Creek Reservoir Control Regulation #74. The Bear Creek Reservoir 2016 data is summarized in *TM2016.01 BCR Sediment Study*, *TM2016.04 BCR 2016 Summary Statistic and Graphs*, and *TM2016.9 BCR Phytoplankton*.

The average inflow into Bear Creek Reservoir from both Turkey Creek & Bear Creek (1987-2012) was 27,100 acre-feet per year. From 2013-2016 the average inflow into Bear Creek Reservoir was 58,400 acre-feet. The 2016 inflow is estimated at 39,500 acre-feet (Figure 1) with most of the flow in April and May.

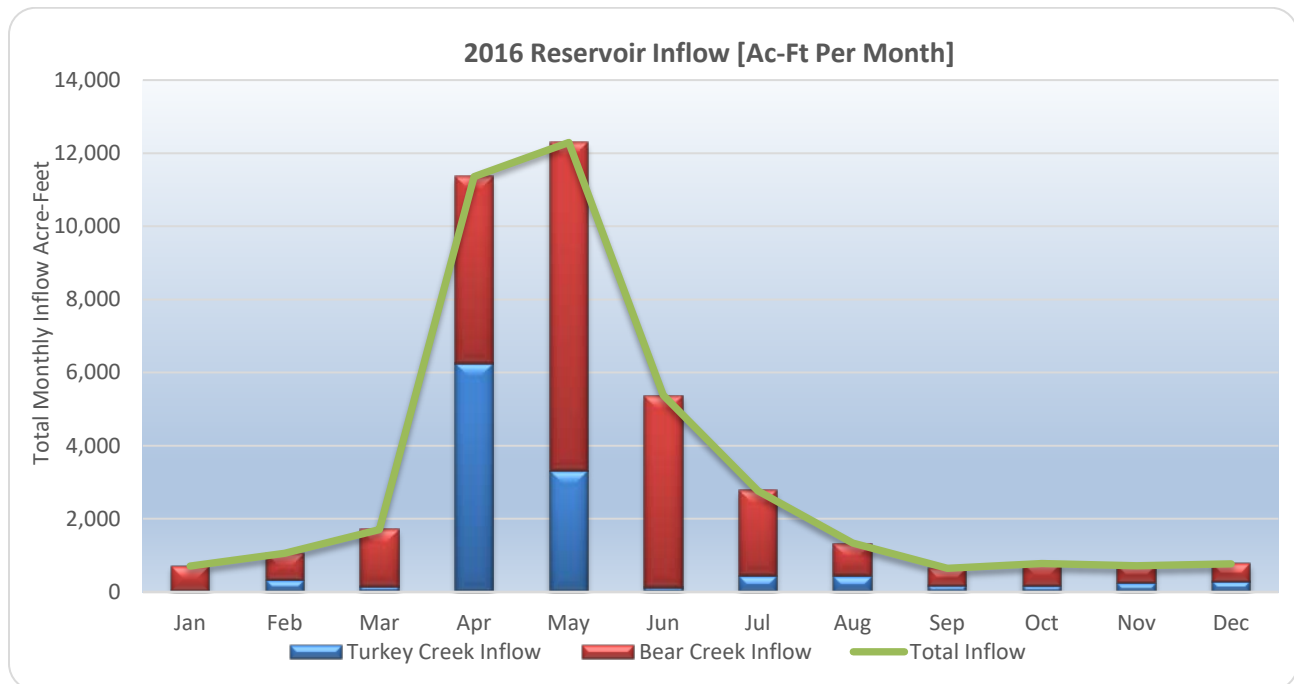


Figure 1 Inflow into BCR

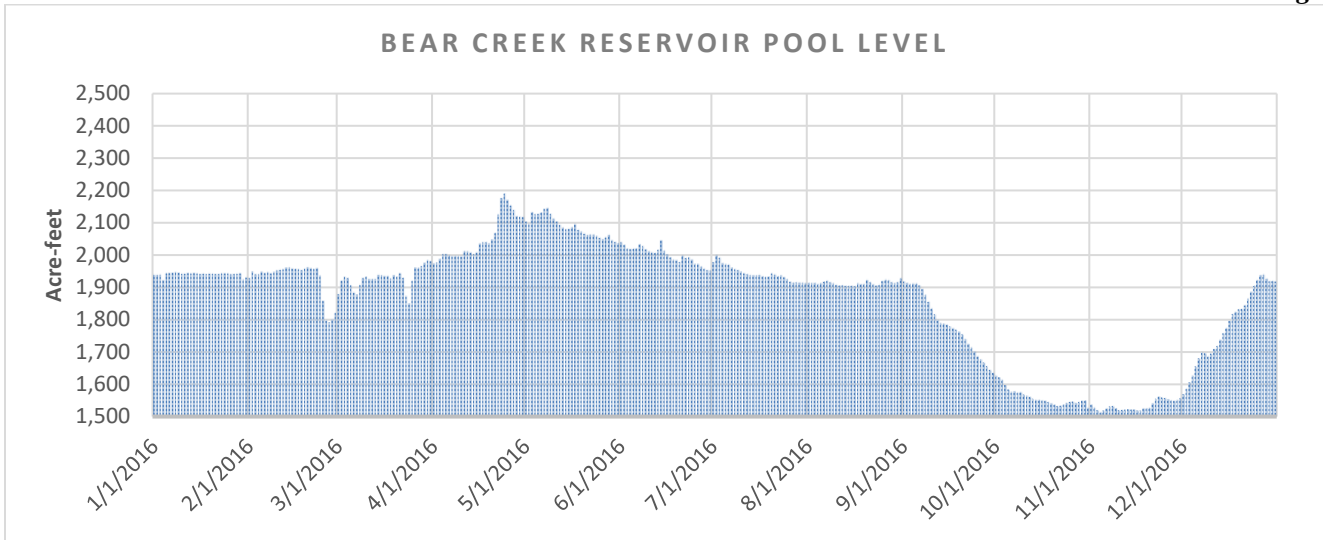


Figure 2 BCR 2016 Reservoir Levels

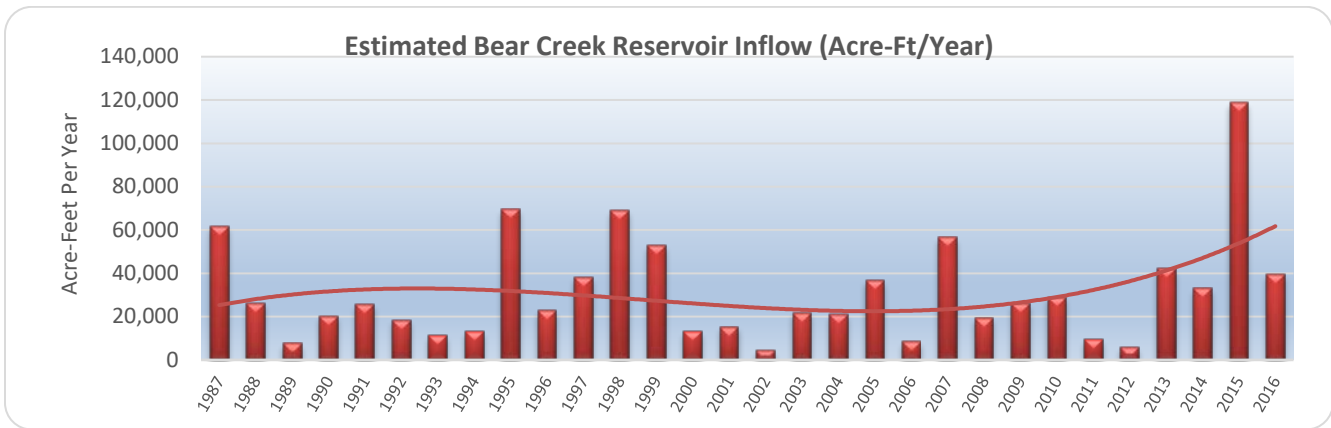


Figure 3 Inflow Trend

2016 was a normal nutrient loading year with much of the load coming in April and May. The Total Nitrogen concentrations were relatively consistent, with the loading from Bear Creek at 66%. This year included Total Phosphorus loading (5,657 pounds) with a larger load coming from the Turkey Creek drainage (about 38%), which is normally only about 20% of the total load.

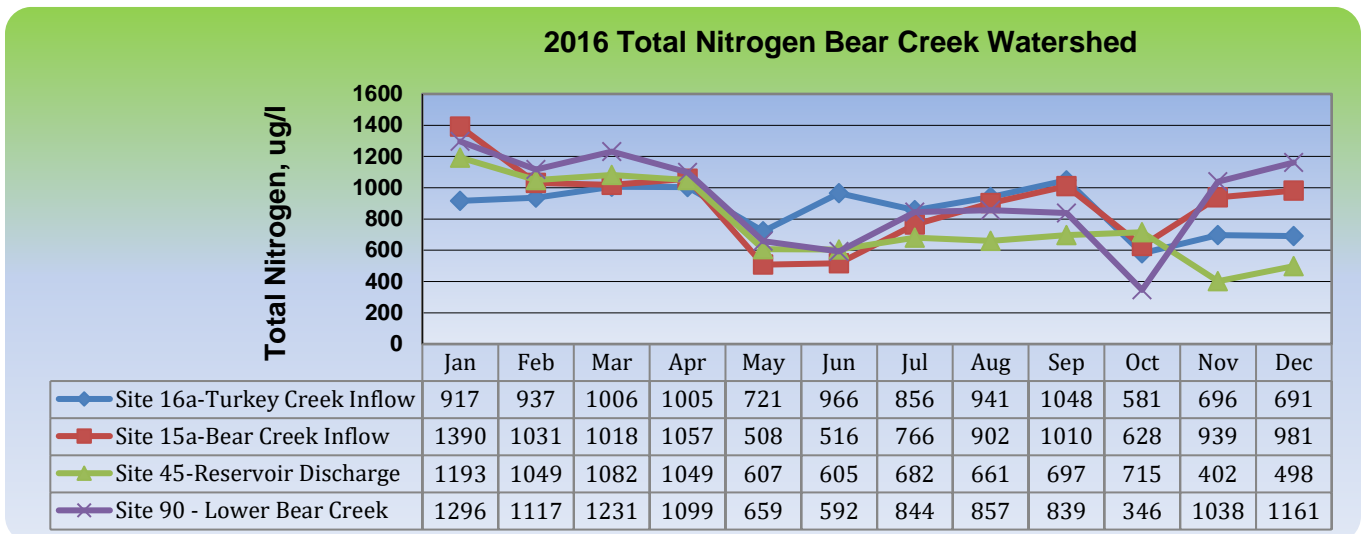


Figure 4 Total Nitrogen Loading

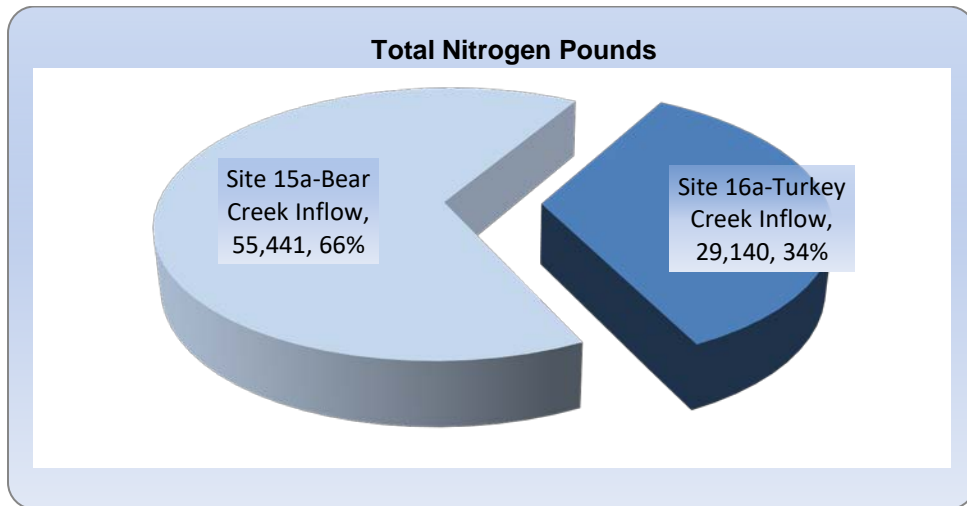


Figure 5 Total Nitrogen Load Inflow Distribution

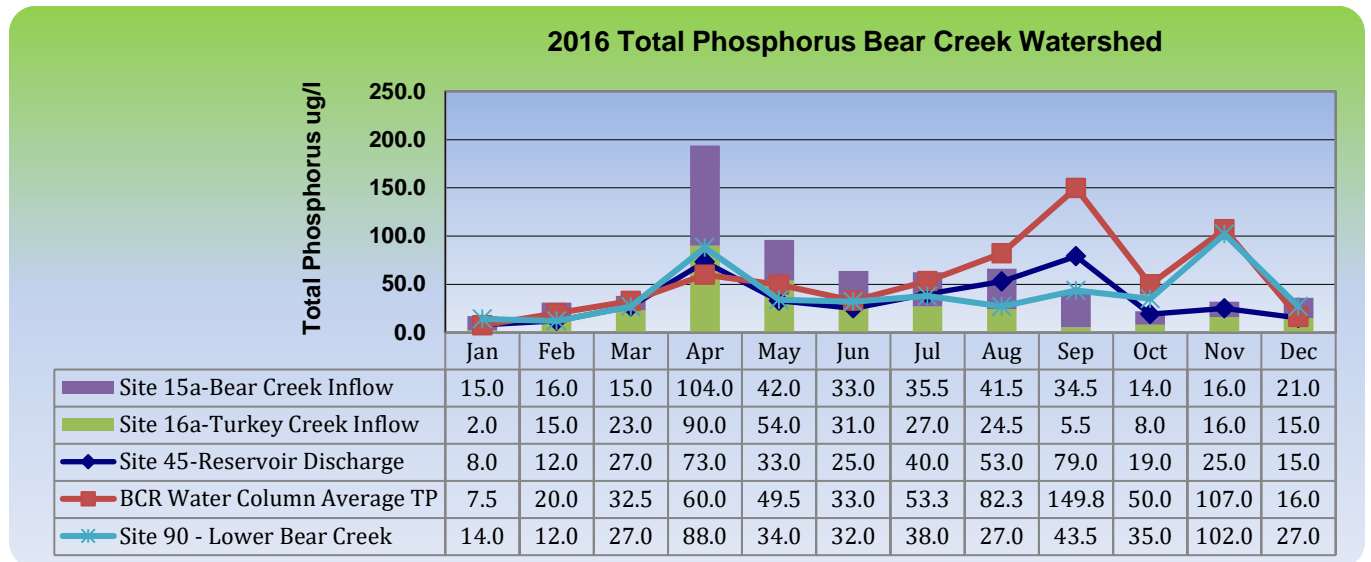


Figure 6 Total Phosphorus Loading and Discharge

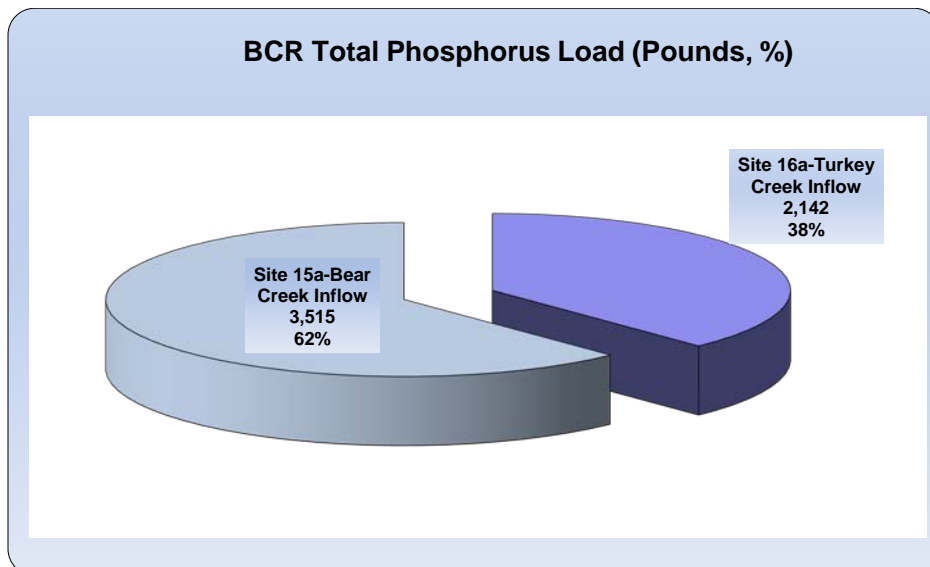


Figure 7 Total Phosphorus Load Inflow Distribution

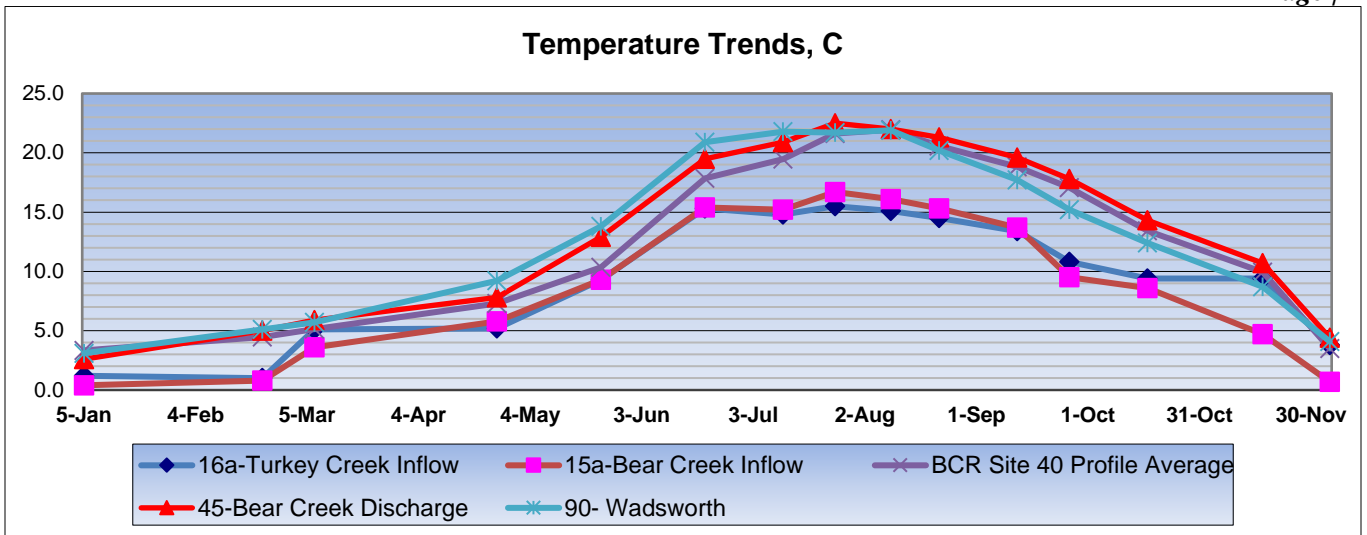


Figure 8 P1 Temperatures

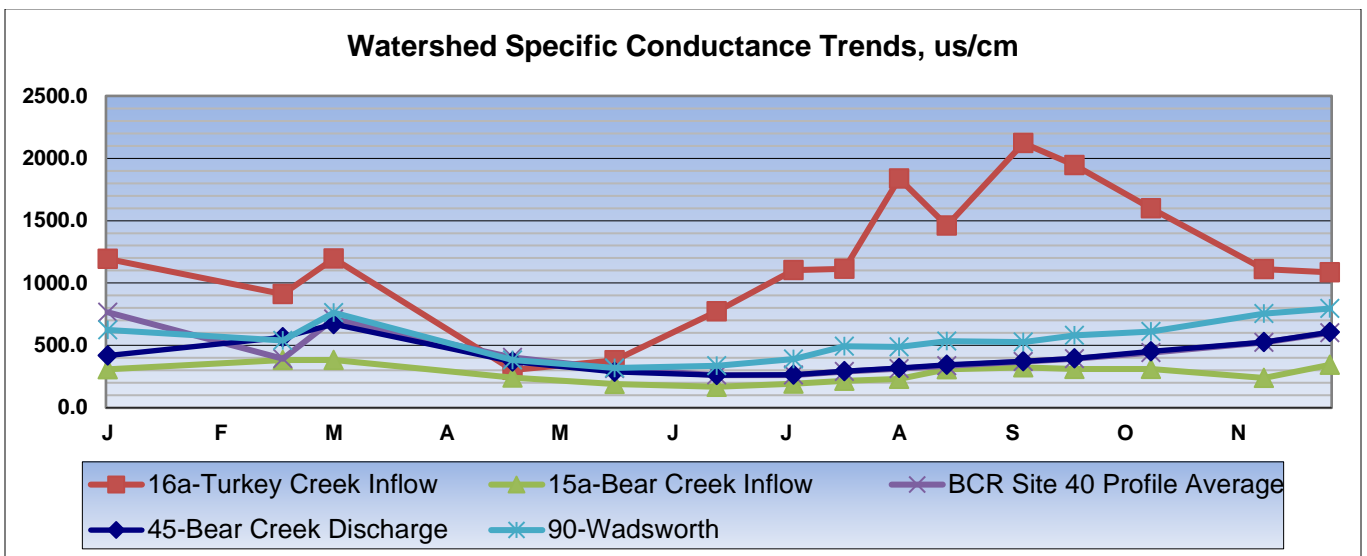


Figure 9 P1 Specific Conductance

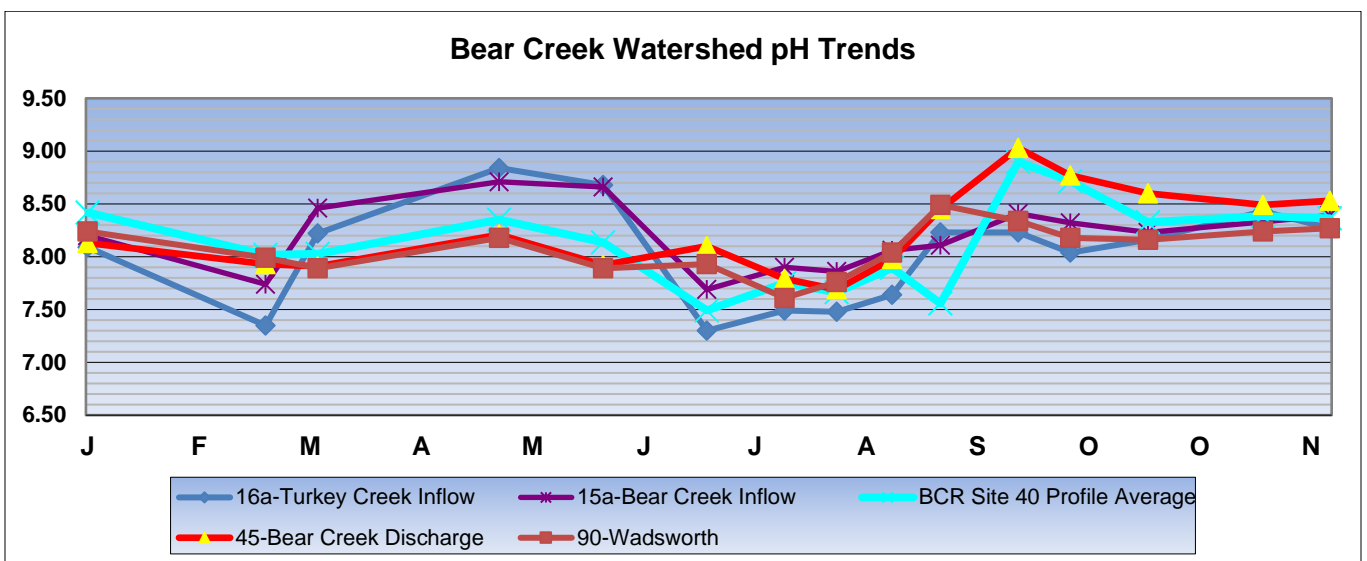


Figure 10 P1 pH

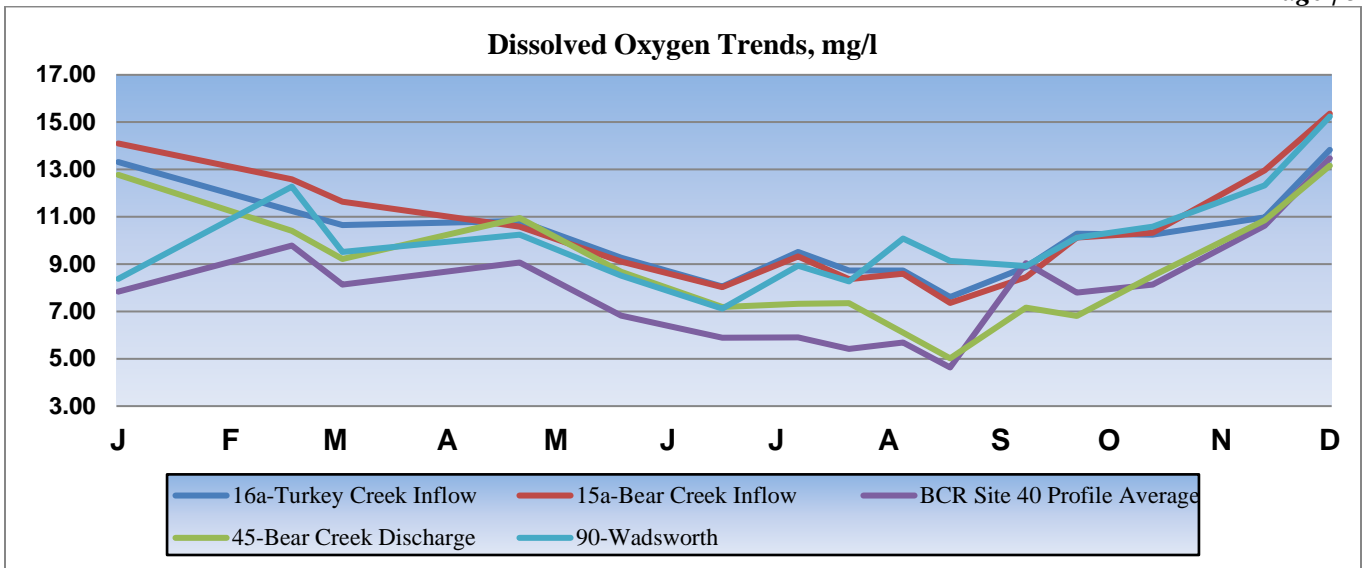


Figure 11 P1 Dissolved Oxygen

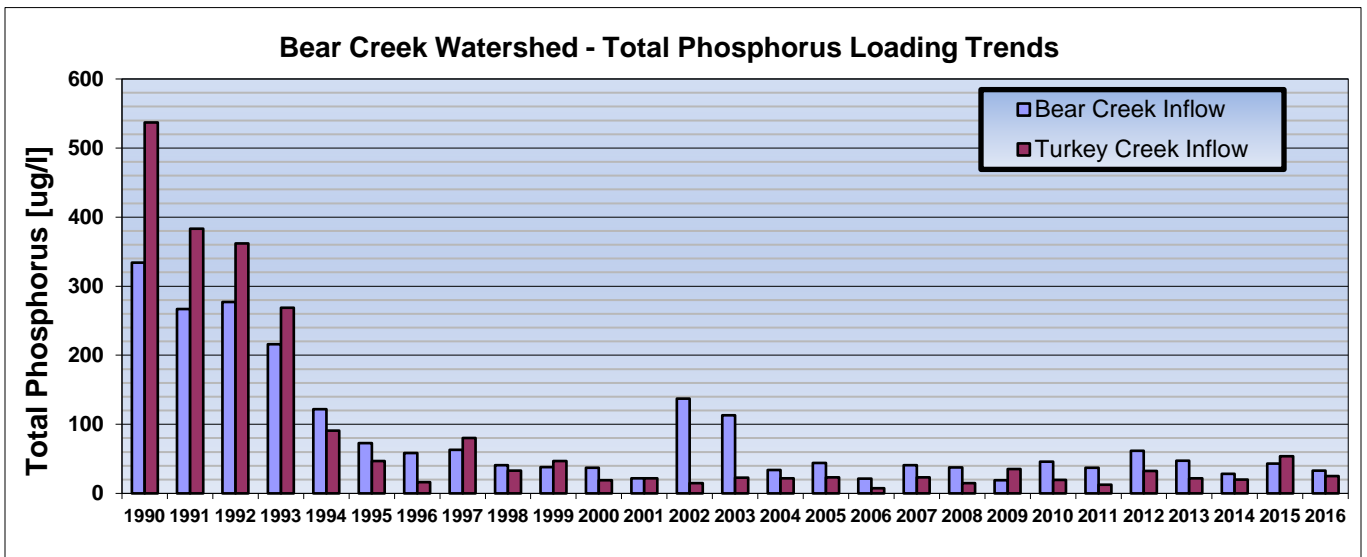


Figure 12 P1 Total Phosphorus Inflow Trend

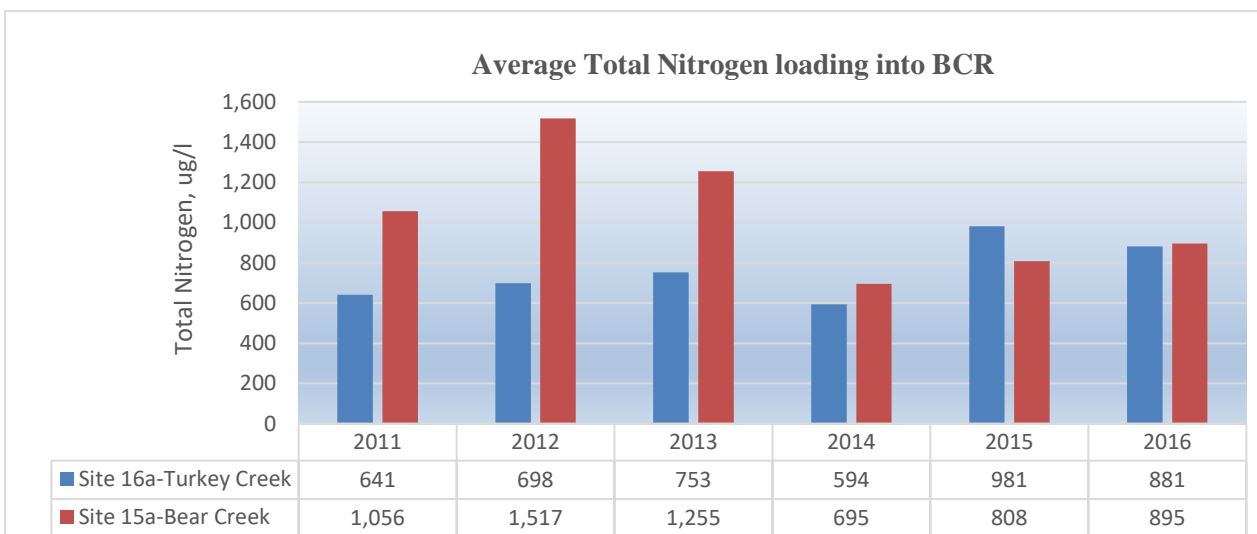


Figure 13 Total Nitrogen Inflow Trend