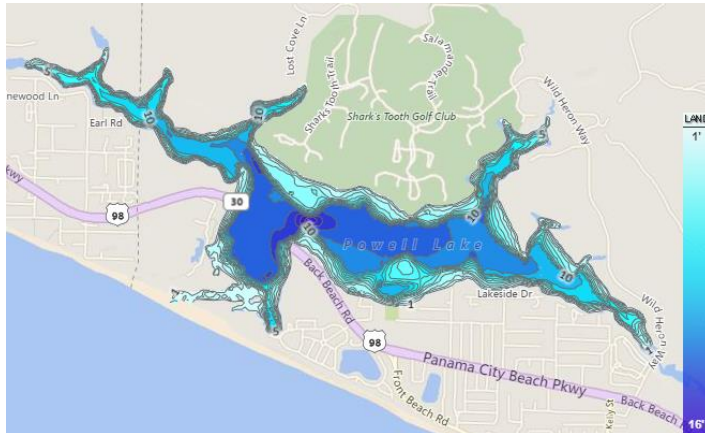


Powell Lake, Walton and Bay County



Lake Details

Outfall: present

Watershed area: 730 hectares

Lake surface area: 287 hectares

Average depth: 2.54 meters

Water Chemistry Data - 2017

Summary statistics include mean, maximum (Max), minimum (Min), median, and standard error (Std Error) calculated for total phosphorous (TP) (n = 24* samples), total nitrogen (TN) (n = 24* samples), total chlorophyll (CHL) (n = 24* samples), water transparency (Secchi Depth) (n = 24* samples), temperature (n = 22 samples), dissolved oxygen (n = 22 samples), pH (n = 22 samples), salinity (n = 22 samples), turbidity (n = 22 samples), color (n = 8 samples), and specific conductance (n = 8 samples) measurements.

**Bay County station data collected by St. Andrew Bay Watch of St. Andrew Bay Resource Management Association (RMA), Inc., www.StAndrewBayWatch.org. Nutrients, chlorophyll, color and conductivity analyzed by Florida LAKEWATCH laboratory. Because Powell Lake is sampled both by CBA (Walton County) and RMA (Bay County), the total number of monthly samples is greater than 12.

2017 Summary Statistics

	Mean	Max	Min	Median	Std Error
TP (µg/L)	12	18	10	12	1
TN (µg/L)	412	743	290	412	39
CHL (µg/L)	4	9	2	4	1
Secchi Depth (m)	1	2	0	2	0
Temperature (C)	25	31	18	26	1
Dissolved Oxygen (mg/L)	6	7	3	6	0
pH	7	7	8	8	8
Salinity (ppt)	13	19	4	15	1
Turbidity (NTU)	4	34	1	2	3
Color (Pt-co Units)	99	298	33	77	38
Specific Conductance (µS/cm)	10500	27000	3230	12500	3250

Water Chemistry Data - 1992 through 2017

Summary statistics include mean, maximum (Max), minimum (Min), median, and standard error (Std Error) summary statistics calculated on an annual basis using monthly data for total phosphorous (TP), total nitrogen (TN), total chlorophyll (CHL), water transparency (Secchi Depth), temperature, dissolved oxygen, pH, salinity, turbidity, color, and specific conductance. Summary statistics represent Long-Term analyses among annual means from 1992 through 2017.

Long-Term Summary Statistics

	Mean	Max	Min	Median	Std Error
TP (µg/L)	14	24	11	13	1
TN (µg/L)	374	506	286	370	11
CHL (µg/L)	4	6	2	4	0
Secchi Depth (m)	2	2	1	2	0
Temperature (C)	22	27	21	23	0
Dissolved Oxygen (mg/L)	6	7	6	6	0
pH	8	7	8	8	9
Salinity (ppt)	15	23	10	14	1
Turbidity (NTU)	2	9	1	2	1
Color (Pt-co Units)	40	99	22	41	7
Specific Conductance (µS/cm)	18700	28000	10500	20300	1560

Long-Term Trophic State Variable Trend Analyses

Monthly total phosphorous ($\mu\text{g/L}$), total nitrogen ($\mu\text{g/L}$), total chlorophyll ($\mu\text{g/L}$) and water transparency (m) from 1992 through 2017 for Powell Lake. These data show the intra-annual variance with trend line and associated 95% confidence level.

Kendall-Tau trend analysis results are shown for total phosphorus, total nitrogen, total chlorophyll, and water transparency on the top-left of each plot. Not significant indicates there was no significant trend measured. Positive indicates a significant, increasing trend was found over time. Negative indicates a significant, decreasing trend among years.

