## Chesapeake Bay Project - more plots plz

Compiled on Mon Nov 12 13:16:20 2018 by ohara

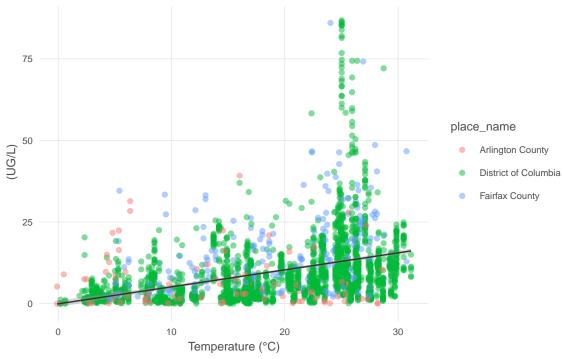
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### Plot a few parameters against each other

### Parameters vs temperature

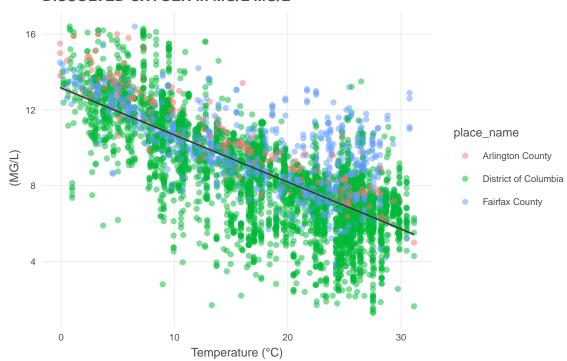
WHOLE 5-DAY BIOCHEMICAL OXYGEN DEMAND MG/L vs Temp:  $R^2=0.0197$  ACTIVE CHLOROPHYLL—a UG/L



CHLOROPHYLL-A UG/L vs Temp:  $\mathbbm{R}^2 = 0.1386$ 

ACTIVE

### **DISSOLVED OXYGEN in MG/L MG/L**



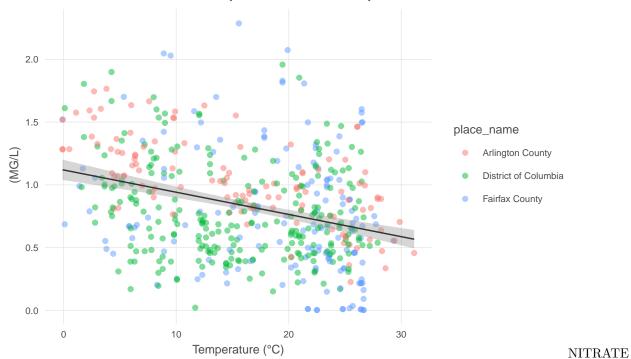
SOLVED OXYGEN IN MG/L MG/L vs Temp:  ${\bf R}^2=0.5506$ 

HARDNESS AS CACO3 MG/L vs Temp:  $R^2 = 0.0063$ 

AMMONIUM NITROGEN AS N (FILTERED SAMPLE) MG/L vs Temp:  $R^2=0.0053$  NITRITE+NITRATE NITROGEN AS N (FILTERED SAMPLE) MG/L vs Temp:  $R^2=0.0918$  NITRITE NITROGEN AS N (FILTERED SAMPLE) MG/L vs Temp:  $R^2=0.0233$ 

DIS-

### NITRATE NITROGEN as N (FILTERED SAMPLE) MG/L



NITROGEN AS N (FILTERED SAMPLE) MG/L vs Temp:  $R^2 = 0.1051$ 

PH CORRECTED FOR TEMPERATURE (25 DEG C) SU vs Temp:  $R^2 = 0.0036$ 

SALINITY UNITS IN PPT AND EQUAL TO PRACTICAL SALNITY UNITS (PSU) PPT vs Temp:  $\mathbf{R}^2=0.0692$ 

SECCHI DEPTH M vs Temp:  $R^2 = 0.0140$ 

TOTAL ALKALINITY AS CACO3 MG/L vs Temp:  $R^2 = 0.0163$ 

TOTAL DISSOLVED NITROGEN MG/L vs Temp:  $R^2 = 0.0962$ 

TOTAL DISSOLVED PHOSPHORUS MG/L vs Temp:  $R^2 = 0.0035$ 

TOTAL SUSPENDED SOLIDS MG/L vs Temp:  $R^2 = 0.0060$ 

TURBIDITY; NEPHELOMETRIC METHOD NTU vs Temp:  $R^2 = 0.0096$ 

### Parameters vs oxygen

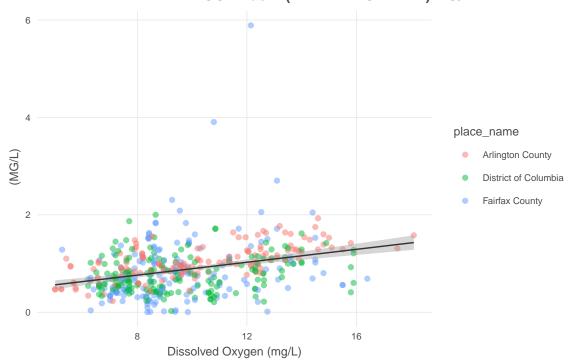
WHOLE 5-DAY BIOCHEMICAL OXYGEN DEMAND MG/L vs Dissolved Oxygen:  $R^2 = 0.0243$ 

ACTIVE CHLOROPHYLL-A UG/L vs Dissolved Oxygen:  $R^2 = 0.0699$ 

HARDNESS AS CACO3 MG/L vs Dissolved Oxygen:  $R^2 = 0.0346$ 

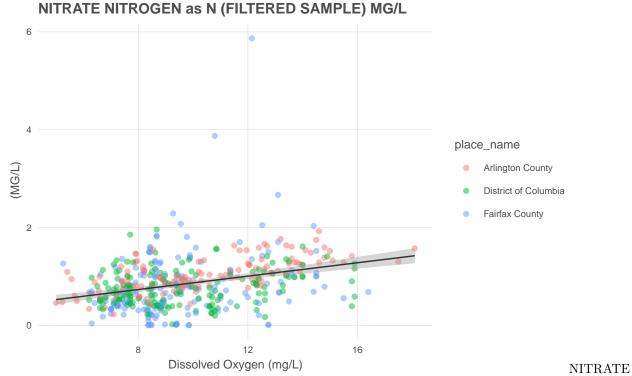
AMMONIUM NITROGEN AS N (FILTERED SAMPLE) MG/L vs Dissolved Oxygen:  $R^2 = 0.0025$ 

### NITRITE+NITRATE NITROGEN as N (FILTERED SAMPLE) MG/L



TRITE+NITRATE NITROGEN AS N (FILTERED SAMPLE) MG/L vs Dissolved Oxygen:  $\mathbf{R}^2=0.1068$ 

NITRITE NITROGEN AS N (FILTERED SAMPLE) MG/L vs Dissolved Oxygen:  $\mathbf{R}^2=0.0581$ 



NITROGEN AS N (FILTERED SAMPLE) MG/L vs Dissolved Oxygen:  $R^2 = 0.1074$ PH CORRECTED FOR TEMPERATURE (25 DEG C) SU vs Dissolved Oxygen:  $R^2 = 0.0017$ 

SALINITY UNITS IN PPT AND EQUAL TO PRACTICAL SALNITY UNITS (PSU) PPT vs Dissolved Oxygen:  $\mathbf{R}^2=0.0614$ 

SECCHI DEPTH M vs Dissolved Oxygen:  $\mathbbm{R}^2 = 0.0381$ 

TOTAL ALKALINITY AS CACO3 MG/L vs Dissolved Oxygen:  $R^2 = 0.0035$ 

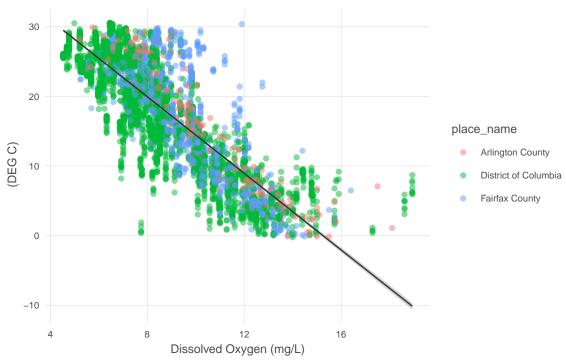
TOTAL DISSOLVED NITROGEN MG/L vs Dissolved Oxygen:  $R^2 = 0.0973$ 

TOTAL DISSOLVED PHOSPHORUS MG/L vs Dissolved Oxygen:  $R^2 = -0.0014$ 

TOTAL SUSPENDED SOLIDS MG/L vs Dissolved Oxygen:  $R^2 = 0.0026$ 

TURBIDITY; NEPHELOMETRIC METHOD NTU vs Dissolved Oxygen:  $R^2 = -0.0000$ 

### WATER TEMPERATURE DEG C



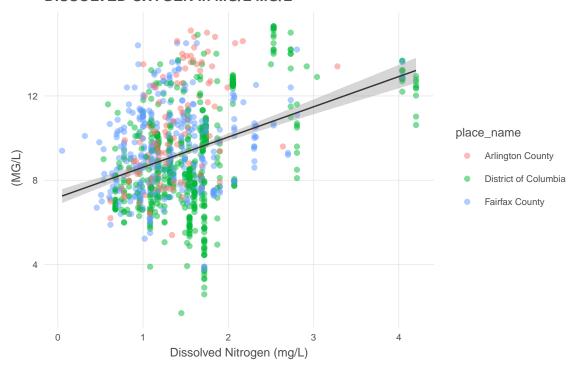
TEMPERATURE DEG C vs Dissolved Oxygen:  $R^2 = 0.6943$ 

### Parameters vs nitrogen

WHOLE 5-DAY BIOCHEMICAL OXYGEN DEMAND MG/L vs Dissolved Nitrogen:  $R^2=0.0070$  ACTIVE CHLOROPHYLL-A UG/L vs Dissolved Nitrogen:  $R^2=0.0066$ 

WATER

### **DISSOLVED OXYGEN in MG/L MG/L**



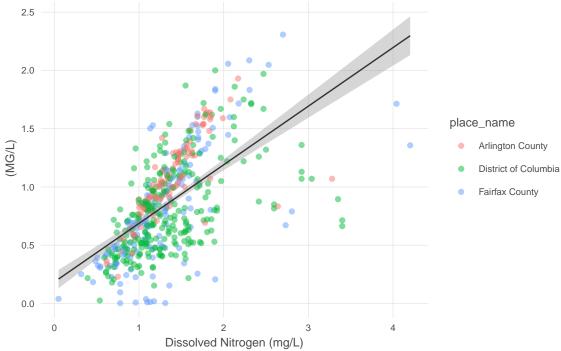
SOLVED OXYGEN IN MG/L MG/L vs Dissolved Nitrogen:  $\mathbf{R}^2=0.1415$ 

HARDNESS AS CACO3 MG/L vs Dissolved Nitrogen:  $R^2 = -0.0040$ 

AMMONIUM NITROGEN AS N (FILTERED SAMPLE) MG/L vs Dissolved Nitrogen:  $\mathbf{R}^2=0.0767$ 

DIS-

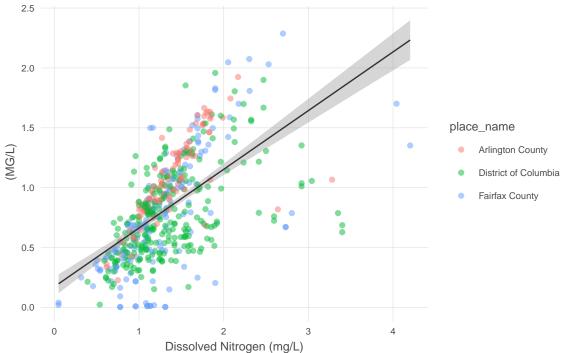
### NITRITE+NITRATE NITROGEN as N (FILTERED SAMPLE) MG/L



Dissolved Nitrogen (mg/L) NI-TRITE+NITRATE NITROGEN AS N (FILTERED SAMPLE) MG/L vs Dissolved Nitrogen: R<sup>2</sup> = 0.3626

NITRITE NITROGEN AS N (FILTERED SAMPLE) MG/L vs Dissolved Nitrogen:  $\mathbbm{R}^2 = 0.0367$ 

### NITRATE NITROGEN as N (FILTERED SAMPLE) MG/L



NITRATE

NITROGEN AS N (FILTERED SAMPLE) MG/L vs Dissolved Nitrogen:  $\mathbbm{R}^2 = 0.3513$ 

PH CORRECTED FOR TEMPERATURE (25 DEG C) SU vs Dissolved Nitrogen:  $\mathbb{R}^2 = 0.0198$ 

SALINITY UNITS IN PPT AND EQUAL TO PRACTICAL SALNITY UNITS (PSU) PPT vs Dissolved Nitrogen:  $\mathbf{R}^2=0.0590$ 

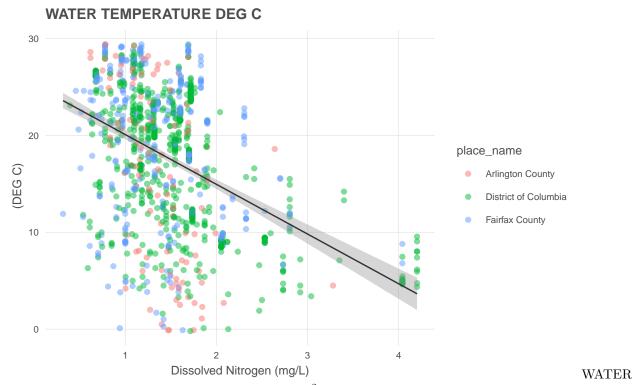
SECCHI DEPTH M vs Dissolved Nitrogen:  $R^2 = 0.0143$ 

TOTAL ALKALINITY AS CACO3 MG/L vs Dissolved Nitrogen:  $\mathbb{R}^2 = 0.0254$ 

TOTAL DISSOLVED PHOSPHORUS MG/L vs Dissolved Nitrogen:  $R^2 = 0.0177$ 

TOTAL SUSPENDED SOLIDS MG/L vs Dissolved Nitrogen:  $R^2 = 0.0201$ 

TURBIDITY; NEPHELOMETRIC METHOD NTU vs Dissolved Nitrogen:  $\mathbb{R}^2 = 0.0268$ 



### TEMPERATURE DEG C vs Dissolved Nitrogen: $\mathbf{R}^2=0.1974$

### Parameters vs phosphorus

0.025

## WHOLE 5-DAY BIOCHEMICAL OXYGEN DEMAND MG/L place\_name Arlington County District of Columbia Fairfax County

DAY BIOCHEMICAL OXYGEN DEMAND MG/L vs Dissolved Phosphorus:  ${\bf R}^2=0.1360$  ACTIVE CHLOROPHYLL-A UG/L vs Dissolved Phosphorus:  ${\bf R}^2=0.0186$ 

0.050

Dissolved Phosphorus (mg/L)

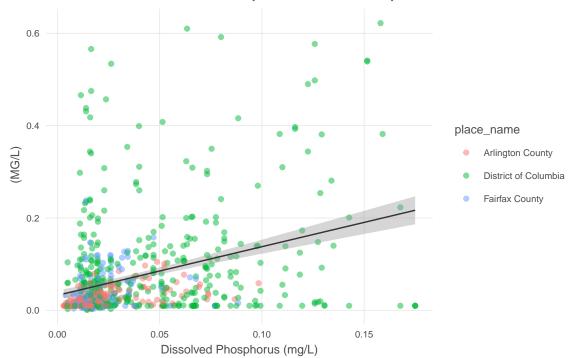
0.075

0.100

WHOLE 5-

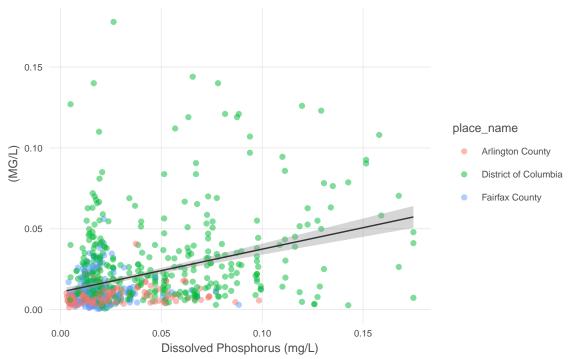
DISSOLVED OXYGEN IN MG/L MG/L vs Dissolved Phosphorus:  $R^2=0.0029$  HARDNESS AS CACO3 MG/L vs Dissolved Phosphorus:  $R^2=0.0754$ 

### AMMONIUM NITROGEN as N (FILTERED SAMPLE) MG/L



Dissolved Phosphorus (mg/L) AMMONIUM NITROGEN AS N (FILTERED SAMPLE) MG/L vs Dissolved Phosphorus:  $R^2=0.1170$  NITRITE+NITRATE NITROGEN AS N (FILTERED SAMPLE) MG/L vs Dissolved Phosphorus:  $R^2=0.0209$ 

### NITRITE NITROGEN as N (FILTERED SAMPLE) MG/L



NITRITE

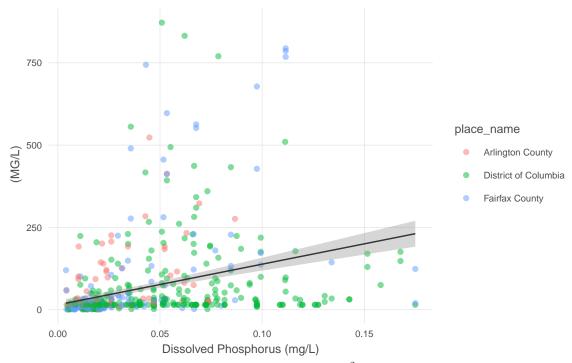
NITROGEN AS N (FILTERED SAMPLE) MG/L vs Dissolved Phosphorus:  $R^2=0.1398$  NITRATE NITROGEN AS N (FILTERED SAMPLE) MG/L vs Dissolved Phosphorus:  $R^2=0.0251$  PH CORRECTED FOR TEMPERATURE (25 DEG C) SU vs Dissolved Phosphorus:  $R^2=0.0744$  SALINITY UNITS IN PPT AND EQUAL TO PRACTICAL SALNITY UNITS (PSU) PPT vs Dissolved Phosphorus:  $R^2=0.0078$ 

SECCHI DEPTH M vs Dissolved Phosphorus:  $R^2 = 0.0656$ 

TOTAL ALKALINITY AS CACO3 MG/L vs Dissolved Phosphorus:  $R^2 = -0.0021$ 

TOTAL DISSOLVED NITROGEN MG/L vs Dissolved Phosphorus:  $\mathbb{R}^2 = 0.0256$ 

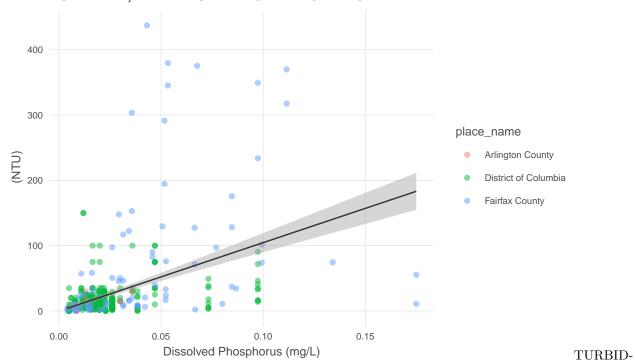
### TOTAL SUSPENDED SOLIDS MG/L



TOTAL

SUSPENDED SOLIDS MG/L vs Dissolved Phosphorus:  $\mathbbm{R}^2 = 0.1065$ 

### TURBIDITY; NEPHELOMETRIC METHOD NTU



ITY; NEPHELOMETRIC METHOD NTU vs Dissolved Phosphorus:  $\mathbf{R}^2=0.1935$ 

WATER TEMPERATURE DEG C vs Dissolved Phosphorus:  $R^2 = 0.0136$ 

### Parameters vs turbidity

WHOLE 5-DAY BIOCHEMICAL OXYGEN DEMAND MG/L vs Turbidity:  $R^2 = 0.0651$ 

ACTIVE CHLOROPHYLL-A UG/L vs Turbidity:  $R^2 = 0.0152$ 

DISSOLVED OXYGEN IN MG/L MG/L vs Turbidity:  $R^2 = -0.0002$ 

HARDNESS AS CACO3 MG/L vs Turbidity:  $R^2 = 0.0725$ 

AMMONIUM NITROGEN AS N (FILTERED SAMPLE) MG/L vs Turbidity:  $R^2 = 0.0074$ 

NITRITE+NITRATE NITROGEN AS N (FILTERED SAMPLE) MG/L vs Turbidity:  $R^2 = 0.0277$ 

NITRITE NITROGEN AS N (FILTERED SAMPLE) MG/L vs Turbidity:  $R^2 = 0.0030$ 

NITRATE NITROGEN AS N (FILTERED SAMPLE) MG/L vs Turbidity:  $\mathbbm{R}^2 = 0.0208$ 

PH CORRECTED FOR TEMPERATURE (25 DEG C) SU vs Turbidity:  $R^2 = 0.0385$ 

SALINITY UNITS IN PPT AND EQUAL TO PRACTICAL SALNITY UNITS (PSU) PPT vs Turbidity:  $\mathbf{R}^2 = 0.0046$ 

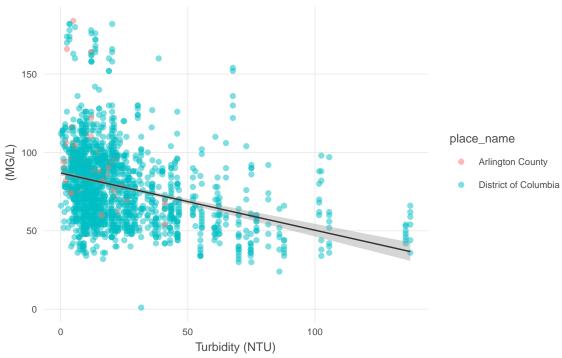
# Place\_name District of Columbia Fairfax County Turbidity (NTU)

SECCHI

TOTAL

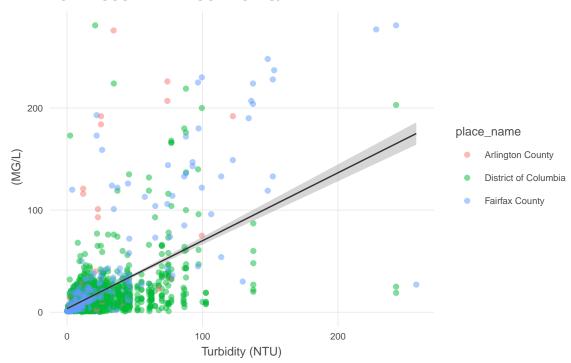
DEPTH M vs Turbidity:  $R^2 = 0.1311$ 

### **TOTAL ALKALINITY as CACO3 MG/L**



ALKALINITY AS CACO3 MG/L vs Turbidity:  $R^2=0.1068$  TOTAL DISSOLVED NITROGEN MG/L vs Turbidity:  $R^2=0.0257$  TOTAL DISSOLVED PHOSPHORUS MG/L vs Turbidity:  $R^2=0.0502$ 

### TOTAL SUSPENDED SOLIDS MG/L



 ${\rm TOTAL}$ 

SUSPENDED SOLIDS MG/L vs Turbidity:  $\mathbf{R}^2=0.3017$ 

WATER TEMPERATURE DEG C vs Turbidity:  $\mathbf{R}^2 = 0.0062$