

# **Phytoplankton biomass in a subtropical estuary: drivers, blooms, and ecological functions assessed over space and time using structural equation modeling**

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## **Supplement 1. Detailed description of paths in the SEM**

In Fig. S1, the SEM that was hypothesized as a valid multivariate model of the relationship among this set of variables is shown. This is the model tested for deviation of the model-implied covariance structure from the dataset's covariance structure. All hypothesized causal paths are shown as single-headed arrows (solid=hypothesized positive effect; dashed=hypothesized negative effect), and several of the important non-causal correlations are indicated by two-headed arrows. Other correlation pathways are not shown to reduce diagram clutter. However, correlations among the three chlorophyll variables (Chl-a, b, and c) were posited as well as a few others, including a few suggested by Mplus Modification Indices. In Fig. S1, Chl-a, b, and c are shown in the same box again to reduce clutter, but in reality they were separate variables in the SEM and so all pathways going to that box apply to all three chlorophylls. However, the same is not true for paths originating from that box. I hypothesized that only Chl-a (the total biomass variable) would affect Secchi depth, turbidity, and DO directly. Boxes with grey fill simply indicate that the variable occurs elsewhere but is repeated in the figure to avoid clutter of long, curving lines.

Direct paths (and hypothesized to be + or -)

### 1. Response variable Chl-a (and b and c):

- a. The lags L1Chla and L2Chla affect Chla. Lag variables have two functions. Last months' Chla truly affects this month's Chla because Chla does not drop back to zero each month, but instead build on what is already present. Also, using lags is essentially autoregression which accounts for cycles in the data by reducing the serial correlation among residuals. Only Chl-a had a L2 (two time step lag), all other response variables were adequately modeled with L1's. Lags are not discussed individually for the other response variables to save space.
- b. TKN and TP both (separately) are hypothesized to affect chlorophylls because they are major nutrients.
- c. TP2 is the square of TP which was added to provide a quadratic relationship for this variable's effects on Chl-a (b and c) to the SEM after exploratory graphical analyses suggested that the Chl-a response leveled off and perhaps declined at higher levels of TP.
- d. Temp (water temperature) was expected to affect Chl-a (b and c) because warmer waters have been reported to promote cell division in phytoplankton.
- e. Season was a dummy variable taking the value of 0 in the winter (dry) months (November – April) and 1 during summer (wet) months (May – October).
- f. Sal (salinity) is a proxy variable for tidal inputs. It was hypothesized to have negative effects on TKN, TP, color, and turbidity by simple dilution. Its effects on Chl-a (band c) could be variable depending on the actual phytoplankton species, and so the sign

- and magnitude of any effect is essentially dilution and/or the combined net response of all species which were not individually determined here.
- g. Inlet (distance from nearest inlet) was postulated to have a + effect on nutrients, because it would in part reflect water residence time (longer residence times further from inlets).
  - h. L1Color and L1Turb (lag 1 of color and turbidity) were hypothesized to influence phytoplankton biomass because any reduction in light penetration last month would theoretically reduce photosynthesis from then to the current month resulting in reduced biomass (chlorophylls). L1Secchi was initially postulated to have a similar effect, but this path was dropped from the final model because of no effect.
  - i. Note that Rain was not postulated to have a direct effect on Chl-a (b and c). Rather the effects of rain were indirect through paths from Rain to both nutrients, salinity, turbidity, and color variables.
2. Response variable turbidity (turb):
    - a. Turb is in part a positive function of Chl-a because the Chl-a is an indicator of phytoplankton particles that contribute to overall turbidity of the water.
    - b. Phaeo (phaeophytin) a breakdown product of Chl-a, is hypothesized to positively affect Turb as well because it reflects dead phytoplankton parts floating in the water.
    - c. Season, rain, and distance to inlet are also all posited to affect Turb.
  3. Response variable Secchi:
    - a. Secchi disk depth is a measure of water clarity and is thus negatively affected by turbidity and color of the water.
    - b. Chl-a has a direct negative effect on Secchi by absorption of light, and an indirect effect thorough its effect on turbidity.
    - c. Decreasing light penetration has been suggested as one of the triggers for shifts from a primarily benthic primary production system to a mainly planktonic one. Thus, this is one of the posed “ecological functions” explored in the SEM.
  4. Response variable Phaeo (phaeophytin):
    - a. Phaeo is affected by Chl-a since it is a breakdown product of Chl-a that is produced when phytoplankton cells are dying.
    - b. Increasing temperature is hypothesized to also increase phaeophytin by increasing mortality and/or decomposition of phytoplankton cells.
  5. Response variable dissolved oxygen (D.O.):
    - a. D.O. is a negative function of temperature just because of the physio-chemical nature of the relationship that warmer water will hold less oxygen. Also, indirectly, warmer water temperatures will increase heterotrophic metabolism which will reduce D.O.
    - b. D.O. is hypothesized to be a positive function of Chl-a because photosynthesis produces oxygen. This is a net effect (Production – Respiration) because there is no separate measure of respiration.
    - c. D.O. is hypothesized to be a positive function of increasing water clarity (Secchi disk depth). The rationale is that increasing water clarity (in those cases where turbidity for example has previously limited light penetration) will allow more light to reach the benthic primary producers (seagrass, epiphytic algae, macroalgae) and the photosynthesis by these groups will increase oxygen content of the water.
  6. Response variables Color, TKN, TP, and Sal (salinity):
    - a. These variables are hypothesized to be significantly affected by rain, distance from inlet, and season.
    - b. TKN and TP are also hypothesized to be functions of Phaeo because plankton death and decomposition will release nutrients tied up on phytoplankton cells.
    - c. Color, TKN, and TP are also in part functions of Sal (salinity) because of dilution of estuarine waters by tidal inputs of oceanic waters.

7. Response variable turbidity (Turb).
  - a. Turb is in part a function of Chl-a and Phaeo, and that link is thus expected to be positive.
  - b. Like color, I hypothesized that Turb would be negatively affected by dilution from tidal inputs (Sal) but this turned out to not be significant.
8. Response variable Rain:
  - a. Rain is hypothesized to be a function of season (increasing monthly rainfall in the summer wet season, of course) and temperature because as the summer rainy season progresses, increasingly warmer temperatures will drive more summer storms and thus rainfall.
9. Selected correlations:
  - a. TKN and TP are hypothesized to be positively correlated (double-headed arrow) because they are both in part functions of runoff into the estuary.
  - b. Season and temperature are expected to be correlated.
  - c. TP and TP2 are correlated, and TP was centered before squaring and being used in the SEM.
  - d. L1Chla and L2Chla will be correlated because they're one and two time step lags of Chl-a.

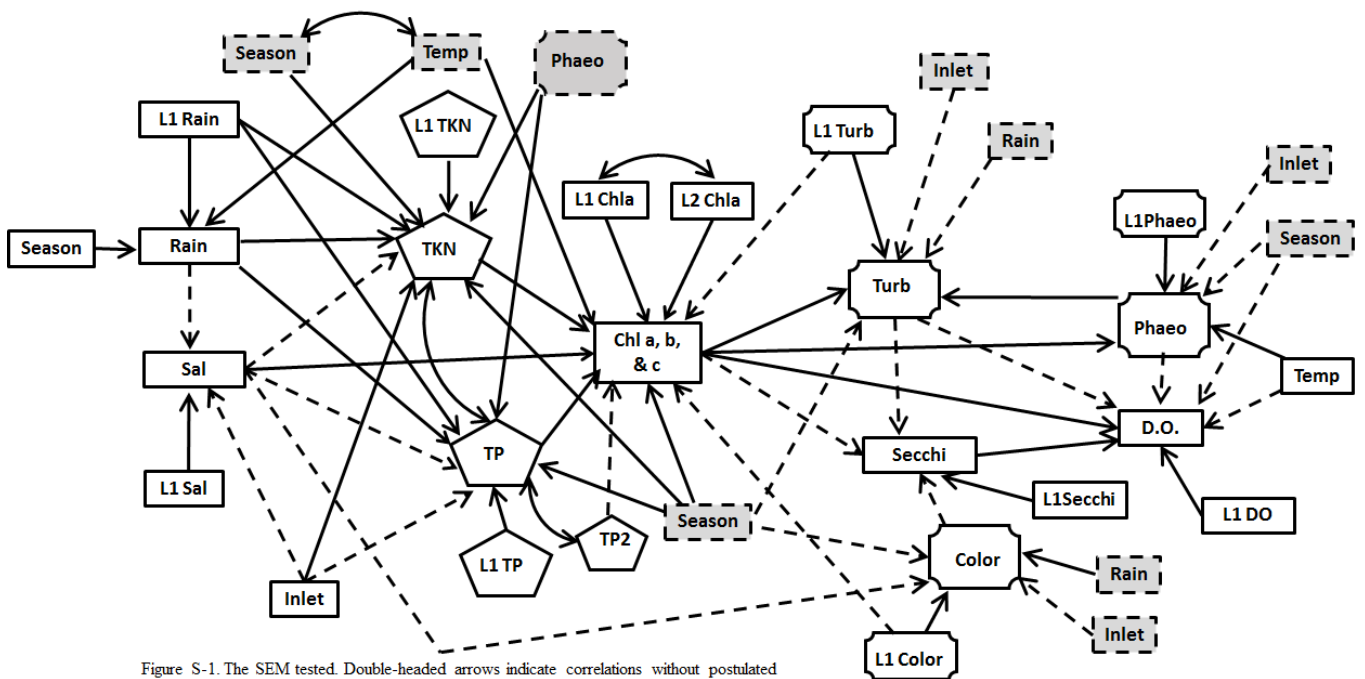


Figure S-1. The SEM tested. Double-headed arrows indicate correlations without postulated causation, while single-headed arrows (pointed at the response variable) indicate causation. Solid arrows signify + effect is hypothesized while dashed line shows a postulated negative effect.

## Important events during the set of 3-year time periods analyzed

Some features of each 3 year temporal grouping were:

a) 1992-1994 (although staying offshore, tropical storm (TS) Earl produces very heavy rainfall in southern IRL Lake Okeechobee watershed [St. Lucie River tributary to the IRL], hurricane Gordon hits northern IRL as it exits the state producing heavy rainfall in 1994),

b) 1995-1997 (drought in 1995; hurricane Erin strikes central IRL in 1995; TS Jerry hits Jupiter at the southern end of the IRL producing heavy rainfall),

c) 1998-2000 (drought in 1998 and 2000; hurricane Irene produces heavy rainfall in the southern IRL in 1999),

d) 2001-2003 (mostly normal rainfall, no serious storms),

e) 2004-2006 (a period when twin hurricanes Jeanne and Francis strike the southern IRL in 2004 and hurricane Wilma impacts both southern and northern areas in 2005; drought in 2006),

f) 2007-2009 (severe drought 2006-2007 [[www.floridadisaster.org/EMTOOLS/florida\\_drought\\_center.htm](http://www.floridadisaster.org/EMTOOLS/florida_drought_center.htm)]; TS Fay impacts the northern IRL in 2008), and

f) 2010-2012 (very cold winters in 2010 and 2011; drought in 2011; all 3 years are bloom years, with levels tapering off by 2013).

The prediction was that the dominant factors affecting Chl-a, b, and c would shift over the years, and would change differently in longer residence time vs shorter residence time groups of regions. I predicted that during bloom years (2010-2012) that those regions having blooms would have a single nutrient dominating the effects on Chl-a (b and c) rather than co-limitation. I further predicted that other factors, such as temperature, would have a greater + effect on Chl-a (b and c) during that period. An additional sub-hypothesis was that during bloom years, the negative effects of phytoplankton biomass (Chl-a) on light penetration would be greater than in other years; and, that the greater Chl-a would lead to a higher concentration of phaeophytin breakdown products which would lead to reduced D.O. because of greater decomposition-related respiration.

Supplement 2.

All years and regions of the IRL are included (Standardized Coefficients shown): Chl b&c are in the model but are not shown. Paths <0.07 are omitted

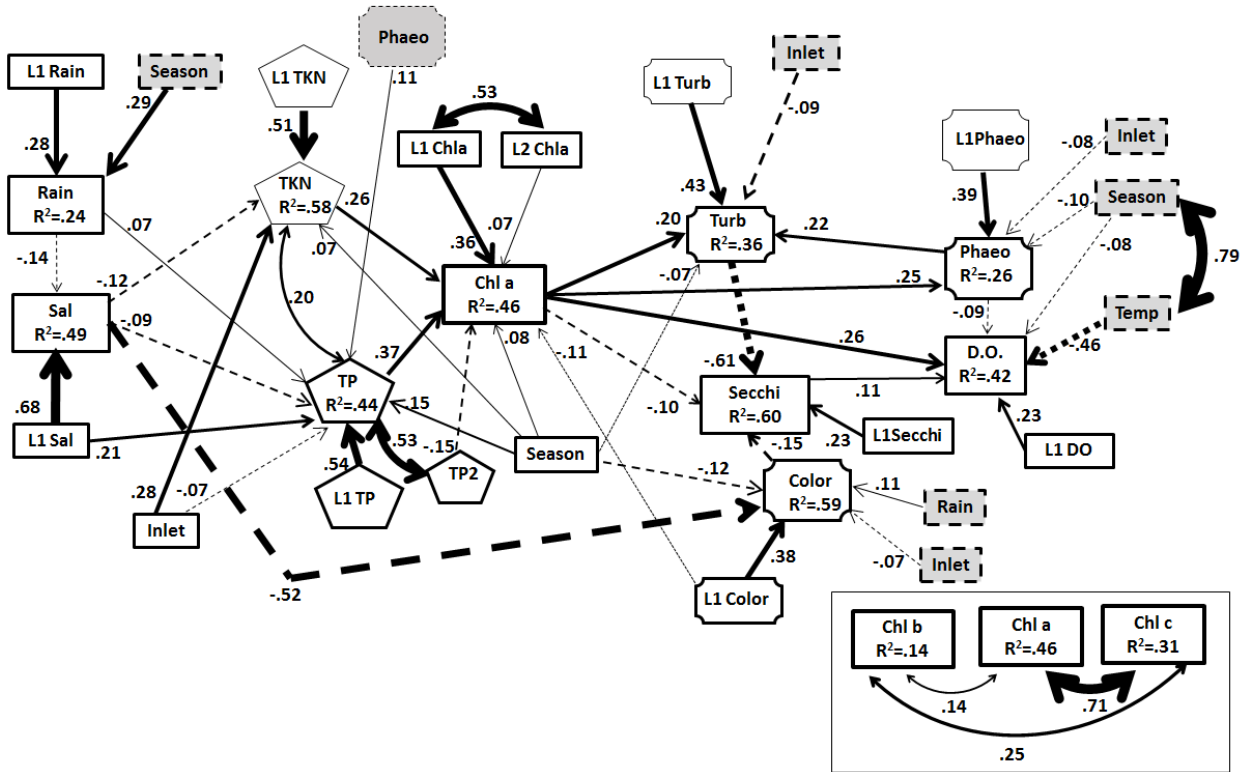


Fig. S2. The results of model A: RMSEA=0.049,  $p=.943$ ; CFI=.946, TLI=.913 AIC = 1089035; N = 10514. Each endogenous response variable (arrows pointing towards them) also has an error variance term that is not shown to reduce model clutter but is calculated in all analyses. Values are standardized path coefficients. Gray shading in a box simply indicates that it appears elsewhere in the SEM diagram and is just being re-shown in another location to reduce graphic clutter. Most correlation coefficients are not shown for the same reason. Dashed lines indicate negative effects. An ‘ns’ by a coefficient means it was not significant. Correlations among Chl-a, b, and c are shown separately at the bottom of the SEM diagram. Error terms exist for each response variable but are not shown to reduce clutter. Error terms can be calculated as  $\sqrt{1-R^2}$ .

### Supplement 3. Results for Chl-b, c, and a

Table S1. Standardized direct path coefficients for response variables Chl-b and Chl-c, to accompany the Chl-a results shown in Fig. 6 and also repeated here. The response variable is listed (along with its R-square value) in the left column, then the various predictor variables, standardized coefficients, standard errors, and p-values from left to right in columns.

|                              |          | Standardized<br>coefficient | SE    | p-value |
|------------------------------|----------|-----------------------------|-------|---------|
| CHLB<br>R <sup>2</sup> = .14 | ON       |                             |       |         |
|                              | L1CHLB   | 0.300                       | 0.011 | 0.000   |
|                              | TN       | 0.080                       | 0.014 | 0.000   |
|                              | TP       | 0.114                       | 0.014 | 0.000   |
|                              | TP2      | -0.065                      | 0.013 | 0.000   |
|                              | TEMP     | 0.088                       | 0.016 | 0.000   |
|                              | L1COLOR  | 0.003                       | 0.014 | 0.805   |
|                              | L1SECCHI | -0.052                      | 0.017 | 0.002   |
|                              | SALINITY | -0.002                      | 0.012 | 0.889   |
|                              | DIST_INL | 0.071                       | 0.014 | 0.000   |
|                              | L1TURB   | -0.063                      | 0.016 | 0.000   |
| SEASON01                     | -0.125   | 0.016                       | 0.000 |         |
| CHLC<br>R <sup>2</sup> = .31 | ON       |                             |       |         |
|                              | L1CHLC   | 0.367                       | 0.008 | 0.000   |
|                              | TN       | 0.174                       | 0.013 | 0.000   |
|                              | TP       | 0.279                       | 0.013 | 0.000   |
|                              | TP2      | -0.115                      | 0.012 | 0.000   |
|                              | TEMP     | 0.056                       | 0.014 | 0.000   |
|                              | L1COLOR  | -0.042                      | 0.012 | 0.000   |
|                              | L1SECCHI | 0.030                       | 0.015 | 0.039   |
|                              | SALINITY | 0.030                       | 0.011 | 0.005   |
|                              | DIST_INL | 0.071                       | 0.012 | 0.000   |
|                              | L1TURB   | -0.059                      | 0.014 | 0.000   |
| SEASON01                     | 0.013    | 0.014                       | 0.352 |         |
| CHLA<br>R <sup>2</sup> = .31 | ON       |                             |       |         |
|                              | L1CHLA   | 0.359                       | 0.009 | 0.000   |
|                              | TN       | 0.266                       | 0.011 | 0.000   |
|                              | TP       | 0.367                       | 0.011 | 0.000   |
|                              | TP2      | -0.147                      | 0.011 | 0.000   |
|                              | TEMP     | 0.053                       | 0.013 | 0.000   |
|                              | L1COLOR  | -0.112                      | 0.010 | 0.000   |
|                              | L1SECCHI | 0.003                       | 0.013 | 0.814   |
|                              | SALINITY | 0.031                       | 0.009 | 0.001   |
|                              | DIST_INL | -0.025                      | 0.011 | 0.018   |
|                              | L1TURB   | -0.053                      | 0.012 | 0.000   |
| SEASON01                     | 0.076    | 0.013                       | 0.000 |         |

**Supplement 4.** Full SEM results for the “by regions” analysis

Table S2. By groups (regions of the IRL) analysis, showing standardized path coefficients for all response variables and selected correlations. Response variables are shown in the first column and predictors in the second. For example, PHAEO ON means phaeophytin *regressed on* the variables listed below. “WITH” means a variable is correlated with the group of variable(s) listed below it in a hypothesized non-causative association.

Region

Jupiter to St. Lucie

|          | Estimate | S.E.  | P-Value |
|----------|----------|-------|---------|
| PHAEO    | ON       |       |         |
| L1PHAEO  | 0.208    | 0.033 | 0.000   |
| CHL_A    | 0.396    | 0.033 | 0.000   |
| TEMP     | 0.086    | 0.05  | 0.087   |
| DIST_INL | 0.022    | 0.032 | 0.487   |
| SEASON01 | -0.123   | 0.051 | 0.015   |
| DO       | ON       |       |         |
| L1DO     | 0.141    | 0.027 | 0.000   |
| CHL_A    | -0.094   | 0.034 | 0.005   |
| L1CHL_A  | -0.039   | 0.03  | 0.203   |
| TEMP     | -0.574   | 0.041 | 0.000   |
| SECCHI   | -0.058   | 0.029 | 0.045   |
| PHAEO    | 0.089    | 0.031 | 0.004   |
| DIST_INL | -0.247   | 0.026 | 0.000   |
| SEASON01 | -0.041   | 0.043 | 0.343   |
| CHL_A    | ON       |       |         |
| L1CHL_A  | 0.206    | 0.035 | 0.000   |
| L2CHL_A  | -0.004   | 0.028 | 0.900   |
| TN       | 0.05     | 0.029 | 0.082   |
| TP       | 0.246    | 0.04  | 0.000   |
| TP2      | -0.189   | 0.027 | 0.000   |
| TEMP     | 0.148    | 0.043 | 0.001   |
| L1COLOR  | -0.009   | 0.039 | 0.821   |
| L1SECCHI | -0.024   | 0.041 | 0.566   |
| SALINITY | -0.318   | 0.039 | 0.000   |
| DIST_INL | 0.087    | 0.028 | 0.002   |
| L1TURB   | -0.054   | 0.039 | 0.174   |
| SEASON01 | 0.002    | 0.043 | 0.960   |
| CHL_B    | ON       |       |         |
| L1CHL_B  | 0.016    | 0.035 | 0.647   |
| TN       | -0.091   | 0.037 | 0.014   |
| TP       | 0.048    | 0.053 | 0.366   |
| TP2      | -0.046   | 0.038 | 0.222   |
| TEMP     | 0.068    | 0.06  | 0.258   |
| L1COLOR  | 0.01     | 0.049 | 0.837   |
| L1SECCHI | 0.052    | 0.056 | 0.352   |
| SALINITY | -0.075   | 0.055 | 0.175   |
| DIST_INL | 0.02     | 0.037 | 0.594   |
| L1TURB   | 0.046    | 0.053 | 0.378   |

|            |        |       |       |
|------------|--------|-------|-------|
| SEASON01   | -0.095 | 0.059 | 0.109 |
| CHL_C      | ON     |       |       |
| L1CHL_C    | 0.358  | 0.032 | 0.000 |
| TN         | -0.131 | 0.033 | 0.000 |
| TP         | 0.1    | 0.046 | 0.031 |
| TP2        | -0.1   | 0.033 | 0.002 |
| TEMP       | 0.264  | 0.05  | 0.000 |
| L1COLOR    | 0.073  | 0.044 | 0.094 |
| L1SECCHI   | 0.114  | 0.048 | 0.017 |
| SALINITY   | -0.186 | 0.047 | 0.000 |
| DIST_INL   | 0.013  | 0.032 | 0.693 |
| L1TURB     | 0.042  | 0.045 | 0.353 |
| SEASON01   | -0.108 | 0.05  | 0.032 |
| SECCHI     | ON     |       |       |
| L1SECCHI   | 0.311  | 0.026 | 0.000 |
| TURB       | -0.52  | 0.027 | 0.000 |
| COLOR      | -0.103 | 0.03  | 0.001 |
| CHL_A      | -0.081 | 0.035 | 0.020 |
| SALINITY   | ON     |       |       |
| L1SALINITY | 0.25   | 0.029 | 0.000 |
| RAIN       | -0.242 | 0.03  | 0.000 |
| DIST_INL   | -0.12  | 0.03  | 0.000 |
| TURB       | ON     |       |       |
| L1TURB     | 0.309  | 0.027 | 0.000 |
| DIST_INL   | 0.012  | 0.026 | 0.651 |
| CHL_A      | 0.316  | 0.032 | 0.000 |
| RAIN       | 0.098  | 0.03  | 0.001 |
| SALINITY   | -0.02  | 0.032 | 0.516 |
| PHAEO      | 0.128  | 0.03  | 0.000 |
| L1PHAEO    | 0.009  | 0.028 | 0.756 |
| SEASON01   | -0.312 | 0.028 | 0.000 |
| COLOR      | ON     |       |       |
| L1COLOR    | 0.221  | 0.02  | 0.000 |
| RAIN       | 0.126  | 0.02  | 0.000 |
| SALINITY   | -0.698 | 0.016 | 0.000 |
| DIST_INL   | 0.084  | 0.018 | 0.000 |
| SEASON01   | 0.16   | 0.02  | 0.000 |
| TN         | ON     |       |       |
| DIST_INL   | 0.043  | 0.031 | 0.167 |
| RAIN       | 0.025  | 0.035 | 0.481 |
| SALINITY   | -0.286 | 0.036 | 0.000 |
| PHAEO      | -0.062 | 0.038 | 0.099 |
| SEASON01   | 0.08   | 0.033 | 0.016 |
| L1TN       | 0.266  | 0.03  | 0.000 |
| TP         | ON     |       |       |
| DIST_INL   | 0.01   | 0.022 | 0.644 |



|            |        |       |       |
|------------|--------|-------|-------|
| RAIN       | 0.153  | 0.026 | 0.000 |
| SALINITY   | -0.503 | 0.023 | 0.000 |
| PHAEO      | 0.067  | 0.025 | 0.008 |
| SEASON01   | 0.077  | 0.024 | 0.002 |
| L1TP       | 0.323  | 0.023 | 0.000 |
|            |        |       |       |
| RAIN       | ON     |       |       |
| TEMP       | 0.278  | 0.044 | 0.000 |
| SEASON01   | 0.105  | 0.045 | 0.021 |
| L1RAIN     | 0.401  | 0.026 | 0.000 |
|            |        |       |       |
| L1CHL_B    | WITH   |       |       |
| L1CHL_C    | 0.329  | 0.032 | 0.000 |
| L1SECCHI   | -0.121 | 0.036 | 0.001 |
| L1DO       | -0.022 | 0.036 | 0.549 |
| L1TURB     | 0.094  | 0.034 | 0.006 |
| TEMP       | 0.064  | 0.035 | 0.065 |
| L1COLOR    | 0.141  | 0.038 | 0.000 |
| L1CHL_A    | 0.154  | 0.035 | 0.000 |
| L2CHL_A    | 0.062  | 0.038 | 0.100 |
| L1RAIN     | -0.004 | 0.035 | 0.910 |
| L1SALINITY | -0.101 | 0.038 | 0.009 |
| DIST_INL   | 0.04   | 0.035 | 0.246 |
| SEASON01   | 0.01   | 0.035 | 0.776 |
|            |        |       |       |
| CHL_A      | WITH   |       |       |
| CHL_C      | 0.489  | 0.028 | 0.000 |
| CHL_B      | 0.102  | 0.035 | 0.004 |
|            |        |       |       |
| L1SECCHI   | WITH   |       |       |
| L1TURB     | -0.709 | 0.017 | 0.000 |
|            |        |       |       |
| CHL_C      | WITH   |       |       |
| CHL_B      | 0.25   | 0.034 | 0.000 |
| DO         | 0.026  | 0.034 | 0.450 |
|            |        |       |       |
| L1CHL_C    | WITH   |       |       |
| L1CHL_A    | 0.539  | 0.026 | 0.000 |
| L1SECCHI   | -0.184 | 0.035 | 0.000 |
| L1DO       | -0.12  | 0.035 | 0.001 |
| L1TURB     | 0.215  | 0.033 | 0.000 |
| TEMP       | -0.041 | 0.034 | 0.232 |
| L1COLOR    | 0.389  | 0.032 | 0.000 |
| L2CHL_A    | 0.271  | 0.037 | 0.000 |
| L1RAIN     | 0.208  | 0.033 | 0.000 |
| L1SALINITY | -0.279 | 0.035 | 0.000 |
| DIST_INL   | 0.119  | 0.034 | 0.000 |
| SEASON01   | -0.055 | 0.035 | 0.112 |
|            |        |       |       |
| L1CHLA_C   | WITH   |       |       |
| L2CHL_A    | 0.421  | 0.03  | 0.000 |
| SALINITY   | -0.038 | 0.024 | 0.114 |
| L1SECCHI   | -0.479 | 0.027 | 0.000 |

|            |        |       |       |
|------------|--------|-------|-------|
| LIPHAEO    | 0.467  | 0.028 | 0.000 |
| LIDO       | -0.204 | 0.033 | 0.000 |
| LITURB     | 0.483  | 0.026 | 0.000 |
| TEMP       | -0.187 | 0.032 | 0.000 |
| LICOLOR    | 0.665  | 0.02  | 0.000 |
| TEMP       | WITH   |       |       |
| COLOR      | -0.01  | 0.02  | 0.607 |
| TP         | 0.015  | 0.019 | 0.409 |
| SEASON01   | 0.804  | 0.011 | 0.000 |
| LISECCHI   | -0.032 | 0.033 | 0.332 |
| LIPHAEO    | -0.143 | 0.033 | 0.000 |
| LIDO       | 0.023  | 0.033 | 0.487 |
| LITURB     | 0.083  | 0.032 | 0.010 |
| COLOR      | WITH   |       |       |
| LISALINITY | 0.128  | 0.018 | 0.000 |
| TN         | -0.074 | 0.035 | 0.036 |
| TP         | 0.369  | 0.029 | 0.000 |
| LITURB     | 0.031  | 0.021 | 0.142 |
| TN         | WITH   |       |       |
| TP         | 0.026  | 0.034 | 0.446 |
| TP         | WITH   |       |       |
| TP2        | 0.196  | 0.028 | 0.000 |
| TURB       | WITH   |       |       |
| TN         | 0.196  | 0.032 | 0.000 |
| TP         | 0.341  | 0.029 | 0.000 |
| LITURB     | WITH   |       |       |
| SECCHI     | 0.089  | 0.025 | 0.000 |
| LIPHAEO    | 0.371  | 0.03  | 0.000 |
| LIDO       | 0.075  | 0.033 | 0.022 |
| LIRAIN     | WITH   |       |       |
| TEMP       | 0.12   | 0.031 | 0.000 |
| SALINITY   | -0.158 | 0.029 | 0.000 |
| LISECCHI   | -0.224 | 0.031 | 0.000 |
| LIPHAEO    | 0.201  | 0.033 | 0.000 |
| LIDO       | -0.271 | 0.03  | 0.000 |
| LITURB     | 0.179  | 0.031 | 0.000 |
| LICOLOR    | 0.423  | 0.027 | 0.000 |
| L1CHL_A    | 0.317  | 0.03  | 0.000 |
| L2CHL_A    | 0.178  | 0.033 | 0.000 |
| LICOLOR    | WITH   |       |       |
| TURB       | 0.008  | 0.015 | 0.603 |
| SALINITY   | -0.049 | 0.018 | 0.006 |
| TP         | 0.012  | 0.015 | 0.439 |
| TN         | -0.025 | 0.015 | 0.100 |
| LISECCHI   | -0.427 | 0.027 | 0.000 |

|            |        |       |       |
|------------|--------|-------|-------|
| LIPHAEO    | 0.451  | 0.03  | 0.000 |
| LIDO       | -0.299 | 0.03  | 0.000 |
| LITURB     | 0.369  | 0.028 | 0.000 |
| TEMP       | -0.249 | 0.03  | 0.000 |
| LITP       | WITH   |       |       |
| LICOLOR    | 0.781  | 0.013 | 0.000 |
| SALINITY   | -0.064 | 0.022 | 0.003 |
| LISECCHI   | -0.545 | 0.024 | 0.000 |
| LIPHAEO    | 0.42   | 0.029 | 0.000 |
| LIDO       | -0.199 | 0.032 | 0.000 |
| LITURB     | 0.546  | 0.023 | 0.000 |
| TEMP       | -0.103 | 0.032 | 0.001 |
| L1CHL_A    | 0.578  | 0.023 | 0.000 |
| L2CHL_A    | 0.428  | 0.029 | 0.000 |
| L1RAIN     | 0.462  | 0.026 | 0.000 |
| L1SALINITY | -0.689 | 0.018 | 0.000 |
| DIST_INL   | 0.103  | 0.032 | 0.001 |
| SEASON01   | -0.058 | 0.032 | 0.074 |
| L1CHL_B    | 0.103  | 0.035 | 0.003 |
| L1CHL_C    | 0.298  | 0.032 | 0.000 |
| LITN       | WITH   |       |       |
| L1CHL_A    | 0.281  | 0.031 | 0.000 |
| LISECCHI   | -0.189 | 0.033 | 0.000 |
| LIPHAEO    | 0.058  | 0.034 | 0.092 |
| LIDO       | -0.165 | 0.033 | 0.000 |
| LITURB     | 0.246  | 0.031 | 0.000 |
| TEMP       | -0.038 | 0.033 | 0.246 |
| LICOLOR    | 0.271  | 0.031 | 0.000 |
| L2CHL_A    | 0.188  | 0.033 | 0.000 |
| L1RAIN     | 0.155  | 0.032 | 0.000 |
| L1SALINITY | -0.325 | 0.032 | 0.000 |
| SEASON01   | 0.045  | 0.033 | 0.170 |
| L1CHL_B    | -0.038 | 0.035 | 0.277 |
| L1CHL_C    | -0.063 | 0.035 | 0.069 |
| LITP       | 0.287  | 0.031 | 0.000 |
| L1SALINI   | WITH   |       |       |
| LICOLOR    | -0.828 | 0.01  | 0.000 |
| LISECCHI   | 0.289  | 0.03  | 0.000 |
| LIPHAEO    | -0.352 | 0.033 | 0.000 |
| LIDO       | 0.2    | 0.031 | 0.000 |
| LITURB     | -0.271 | 0.031 | 0.000 |
| TEMP       | 0.265  | 0.03  | 0.000 |
| L1CHL_A    | -0.574 | 0.024 | 0.000 |
| L2CHL_A    | -0.335 | 0.032 | 0.000 |
| L1RAIN     | -0.325 | 0.029 | 0.000 |
| DIST_INL   | WITH   |       |       |
| LITN       | 0.095  | 0.032 | 0.003 |
| LISECCHI   | -0.132 | 0.034 | 0.000 |
| LIPHAEO    | 0.168  | 0.033 | 0.000 |

|            |        |       |       |
|------------|--------|-------|-------|
| L1DO       | -0.313 | 0.029 | 0.000 |
| L1TURB     | 0.146  | 0.031 | 0.000 |
| TEMP       | 0.014  | 0.032 | 0.659 |
| L1COLOR    | 0.212  | 0.031 | 0.000 |
| L1CHL_A    | 0.257  | 0.031 | 0.000 |
| L2CHL_A    | 0.285  | 0.032 | 0.000 |
| L1RAIN     | -0.097 | 0.032 | 0.002 |
| L1SALINITY | -0.139 | 0.032 | 0.000 |
|            |        |       |       |
| L1DO       | WITH   |       |       |
| SEASON01   | -0.183 | 0.031 | 0.000 |
| L1SECCHI   | -0.006 | 0.034 | 0.867 |
| L1PHAEO    | -0.02  | 0.036 | 0.567 |
|            |        |       |       |
| L1PHAEO    | WITH   |       |       |
| L1CHL_B    | 0.034  | 0.035 | 0.335 |
| L1CHL_C    | 0.379  | 0.03  | 0.000 |
| L1SECCHI   | -0.356 | 0.031 | 0.000 |
|            |        |       |       |
| CHL_B      | WITH   |       |       |
| DO         | -0.02  | 0.038 | 0.599 |
|            |        |       |       |
| L2CHLA_C   | WITH   |       |       |
| L1SECCHI   | -0.351 | 0.032 | 0.000 |
| L1PHAEO    | 0.324  | 0.032 | 0.000 |
| L1DO       | -0.022 | 0.035 | 0.531 |
| L1TURB     | 0.4    | 0.029 | 0.000 |
| TEMP       | -0.137 | 0.033 | 0.000 |
| L1COLOR    | 0.406  | 0.03  | 0.000 |
|            |        |       |       |
| SEASONRO   | WITH   |       |       |
| L1SECCHI   | 0.022  | 0.033 | 0.512 |
| L1PHAEO    | -0.142 | 0.034 | 0.000 |
| L1TURB     | 0.008  | 0.032 | 0.806 |
| L1COLOR    | -0.179 | 0.031 | 0.000 |
| L1CHL_A    | -0.113 | 0.033 | 0.001 |
| L2CHL_A    | -0.204 | 0.033 | 0.000 |
| L1RAIN     | 0.215  | 0.031 | 0.000 |
| L1SALINITY | 0.242  | 0.03  | 0.000 |
| DIST_INL   | -0.002 | 0.032 | 0.953 |
|            |        |       |       |
| TP2        | WITH   |       |       |
| L1SECCHI   | 0.185  | 0.033 | 0.000 |
| L1PHAEO    | -0.212 | 0.033 | 0.000 |
| L1DO       | 0.022  | 0.033 | 0.508 |
| L1TURB     | -0.185 | 0.032 | 0.000 |
| TEMP       | 0.091  | 0.033 | 0.006 |
| L1COLOR    | -0.233 | 0.031 | 0.000 |
| L1CHL_A    | -0.211 | 0.032 | 0.000 |
| L2CHL_A    | -0.193 | 0.033 | 0.000 |
| L1RAIN     | -0.078 | 0.032 | 0.015 |
| L1SALINITY | 0.176  | 0.033 | 0.000 |
| DIST_INL   | -0.279 | 0.031 | 0.000 |

|          |        |       |       |
|----------|--------|-------|-------|
| SEASON01 | 0.118  | 0.033 | 0.000 |
| L1CHL_B  | -0.049 | 0.034 | 0.155 |
| L1CHL_C  | -0.117 | 0.033 | 0.000 |
| L1TP     | -0.183 | 0.033 | 0.000 |
| L1TN     | -0.045 | 0.036 | 0.209 |

Region  
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|          |        |       |       |
|----------|--------|-------|-------|
| PHAEO    | ON     |       |       |
| L1PHAEO  | 0.053  | 0.027 | 0.050 |
| CHL_A    | 0.503  | 0.025 | 0.000 |
| TEMP     | 0.029  | 0.041 | 0.482 |
| DIST_INL | -0.026 | 0.036 | 0.461 |
| SEASON01 | -0.147 | 0.041 | 0.000 |

|          |        |       |       |
|----------|--------|-------|-------|
| DO       | ON     |       |       |
| L1DO     | 0.266  | 0.026 | 0.000 |
| CHL_A    | 0.1    | 0.035 | 0.004 |
| L1CHL_A  | -0.022 | 0.027 | 0.424 |
| TEMP     | -0.465 | 0.04  | 0.000 |
| SECCHI   | -0.031 | 0.032 | 0.330 |
| PHAEO    | -0.075 | 0.034 | 0.027 |
| DIST_INL | -0.061 | 0.034 | 0.072 |
| SEASON01 | 0.014  | 0.044 | 0.742 |

|          |        |       |       |
|----------|--------|-------|-------|
| CHL_A    | ON     |       |       |
| L1CHL_A  | 0.246  | 0.026 | 0.000 |
| L2CHL_A  | -0.039 | 0.021 | 0.065 |
| TN       | 0.195  | 0.028 | 0.000 |
| TP       | 0.281  | 0.039 | 0.000 |
| TP2      | -0.057 | 0.036 | 0.118 |
| TEMP     | 0.114  | 0.044 | 0.009 |
| L1COLOR  | 0.019  | 0.029 | 0.513 |
| L1SECCHI | 0.082  | 0.036 | 0.024 |
| SALINITY | -0.054 | 0.028 | 0.057 |
| DIST_INL | 0.017  | 0.024 | 0.482 |
| L1TURB   | -0.045 | 0.035 | 0.198 |
| SEASON01 | 0.034  | 0.041 | 0.411 |

|          |        |       |       |
|----------|--------|-------|-------|
| CHL_B    | ON     |       |       |
| L1CHL_B  | 0.031  | 0.029 | 0.288 |
| TN       | 0.079  | 0.031 | 0.010 |
| TP       | -0.006 | 0.045 | 0.898 |
| TP2      | -0.109 | 0.049 | 0.024 |
| TEMP     | -0.026 | 0.049 | 0.594 |
| L1COLOR  | 0.127  | 0.037 | 0.001 |
| L1SECCHI | 0.089  | 0.047 | 0.060 |
| SALINITY | -0.154 | 0.036 | 0.000 |
| DIST_INL | -0.063 | 0.042 | 0.137 |
| L1TURB   | 0.091  | 0.043 | 0.037 |
| SEASON01 | -0.015 | 0.049 | 0.766 |

|            |        |       |       |
|------------|--------|-------|-------|
| CHL_C      | ON     |       |       |
| L1CHL_C    | 0.271  | 0.028 | 0.000 |
| TN         | 0.062  | 0.03  | 0.037 |
| TP         | 0.126  | 0.042 | 0.003 |
| TP2        | 0.018  | 0.043 | 0.684 |
| TEMP       | 0.086  | 0.047 | 0.067 |
| L1COLOR    | 0.09   | 0.034 | 0.009 |
| L1SECCHI   | 0.076  | 0.042 | 0.072 |
| SALINITY   | -0.078 | 0.032 | 0.015 |
| DIST_INL   | 0.009  | 0.036 | 0.796 |
| L1TURB     | 0.022  | 0.04  | 0.572 |
| SEASON01   | 0.025  | 0.046 | 0.588 |
| SECCHI     | ON     |       |       |
| L1SECCHI   | 0.175  | 0.019 | 0.000 |
| TURB       | -0.668 | 0.017 | 0.000 |
| COLOR      | -0.085 | 0.019 | 0.000 |
| CHL_A      | -0.086 | 0.023 | 0.000 |
| SALINITY   | ON     |       |       |
| L1SALINITY | 0.189  | 0.025 | 0.000 |
| RAIN       | -0.176 | 0.028 | 0.000 |
| DIST_INL   | 0.012  | 0.025 | 0.618 |
| TURB       | ON     |       |       |
| L1TURB     | 0.207  | 0.023 | 0.000 |
| DIST_INL   | -0.015 | 0.022 | 0.496 |
| CHL_A      | 0.249  | 0.025 | 0.000 |
| RAIN       | 0.089  | 0.024 | 0.000 |
| SALINITY   | -0.005 | 0.023 | 0.839 |
| PHAEO      | 0.301  | 0.028 | 0.000 |
| L1PHAEO    | -0.144 | 0.026 | 0.000 |
| SEASON01   | -0.34  | 0.023 | 0.000 |
| COLOR      | ON     |       |       |
| L1COLOR    | 0.19   | 0.02  | 0.000 |
| RAIN       | 0.179  | 0.022 | 0.000 |
| SALINITY   | -0.471 | 0.02  | 0.000 |
| DIST_INL   | -0.099 | 0.02  | 0.000 |
| SEASON01   | 0.191  | 0.022 | 0.000 |
| TN         | ON     |       |       |
| DIST_INL   | 0.023  | 0.025 | 0.358 |
| RAIN       | 0.014  | 0.029 | 0.634 |
| SALINITY   | -0.054 | 0.028 | 0.055 |
| PHAEO      | 0.073  | 0.034 | 0.034 |
| SEASON01   | 0.118  | 0.028 | 0.000 |
| L1TN       | 0.229  | 0.024 | 0.000 |
| TP         | ON     |       |       |
| DIST_INL   | -0.048 | 0.023 | 0.038 |
| RAIN       | 0.132  | 0.021 | 0.000 |
| SALINITY   | -0.249 | 0.02  | 0.000 |

|            |        |       |       |
|------------|--------|-------|-------|
| PHAEO      | 0.156  | 0.023 | 0.000 |
| SEASON01   | 0.133  | 0.024 | 0.000 |
| L1TP       | 0.167  | 0.022 | 0.000 |
| RAIN       | ON     |       |       |
| TEMP       | 0.273  | 0.035 | 0.000 |
| SEASON01   | 0.045  | 0.035 | 0.199 |
| L1RAIN     | 0.495  | 0.02  | 0.000 |
| L1CHL_B    | WITH   |       |       |
| L1CHL_C    | 0.412  | 0.027 | 0.000 |
| L1SECCHI   | -0.054 | 0.032 | 0.092 |
| L1DO       | 0.04   | 0.031 | 0.200 |
| L1TURB     | 0.033  | 0.031 | 0.280 |
| TEMP       | -0.026 | 0.03  | 0.386 |
| L1COLOR    | 0.244  | 0.033 | 0.000 |
| L1CHL_A    | 0.195  | 0.03  | 0.000 |
| L2CHL_A    | 0.059  | 0.031 | 0.058 |
| L1RAIN     | -0.008 | 0.033 | 0.808 |
| L1SALINITY | -0.171 | 0.032 | 0.000 |
| DIST_INL   | -0.047 | 0.043 | 0.277 |
| SEASON01   | -0.092 | 0.031 | 0.003 |
| CHL_A      | WITH   |       |       |
| CHL_C      | 0.627  | 0.02  | 0.000 |
| CHL_B      | 0.185  | 0.032 | 0.000 |
| L1SECCHI   | WITH   |       |       |
| L1TURB     | -0.709 | 0.014 | 0.000 |
| CHL_C      | WITH   |       |       |
| CHL_B      | 0.4    | 0.028 | 0.000 |
| DO         | 0.153  | 0.026 | 0.000 |
| L1CHL_C    | WITH   |       |       |
| L1CHL_A    | 0.669  | 0.017 | 0.000 |
| L1SECCHI   | -0.212 | 0.029 | 0.000 |
| L1DO       | 0.107  | 0.03  | 0.000 |
| L1TURB     | 0.217  | 0.028 | 0.000 |
| TEMP       | -0.085 | 0.029 | 0.003 |
| L1COLOR    | 0.383  | 0.028 | 0.000 |
| L2CHL_A    | 0.122  | 0.033 | 0.000 |
| L1RAIN     | 0.109  | 0.031 | 0.000 |
| L1SALINITY | -0.211 | 0.029 | 0.000 |
| DIST_INL   | 0.037  | 0.037 | 0.315 |
| SEASON01   | -0.121 | 0.029 | 0.000 |
| L1CHLA_C   | WITH   |       |       |
| L2CHL_A    | 0.184  | 0.029 | 0.000 |
| SALINITY   | -0.026 | 0.019 | 0.185 |
| L1SECCHI   | -0.388 | 0.024 | 0.000 |
| L1PHAEO    | 0.515  | 0.022 | 0.000 |
| L1DO       | -0.034 | 0.03  | 0.260 |

|            |        |       |       |
|------------|--------|-------|-------|
| L1TURB     | 0.402  | 0.023 | 0.000 |
| TEMP       | -0.144 | 0.027 | 0.000 |
| L1COLOR    | 0.378  | 0.024 | 0.000 |
| TEMP       | WITH   |       |       |
| COLOR      | 0.005  | 0.019 | 0.793 |
| TP         | 0.052  | 0.017 | 0.003 |
| SEASON01   | 0.782  | 0.011 | 0.000 |
| L1SECCHI   | -0.023 | 0.028 | 0.403 |
| L1PHAEO    | -0.122 | 0.029 | 0.000 |
| L1DO       | -0.061 | 0.029 | 0.033 |
| L1TURB     | -0.03  | 0.027 | 0.255 |
| COLOR      | WITH   |       |       |
| L1SALINITY | -0.007 | 0.022 | 0.746 |
| TN         | 0.107  | 0.027 | 0.000 |
| TP         | 0.317  | 0.018 | 0.000 |
| L1TURB     | 0.008  | 0.017 | 0.645 |
| TN         | WITH   |       |       |
| TP         | 0.117  | 0.022 | 0.000 |
| TP         | WITH   |       |       |
| TP2        | 0.62   | 0.016 | 0.000 |
| TURB       | WITH   |       |       |
| TN         | 0.149  | 0.027 | 0.000 |
| TP         | 0.295  | 0.019 | 0.000 |
| L1TURB     | WITH   |       |       |
| SECCHI     | 0.132  | 0.018 | 0.000 |
| L1PHAEO    | 0.471  | 0.023 | 0.000 |
| L1DO       | 0.144  | 0.027 | 0.000 |
| L1RAIN     | WITH   |       |       |
| TEMP       | 0.124  | 0.026 | 0.000 |
| SALINITY   | -0.148 | 0.027 | 0.000 |
| L1SECCHI   | -0.1   | 0.026 | 0.000 |
| L1PHAEO    | 0.063  | 0.03  | 0.038 |
| L1DO       | -0.2   | 0.028 | 0.000 |
| L1TURB     | 0.015  | 0.026 | 0.571 |
| L1COLOR    | 0.356  | 0.023 | 0.000 |
| L1CHL_A    | 0.104  | 0.028 | 0.000 |
| L2CHL_A    | -0.049 | 0.028 | 0.085 |
| L1COLOR    | WITH   |       |       |
| TURB       | -0.04  | 0.018 | 0.024 |
| SALINITY   | -0.136 | 0.021 | 0.000 |
| TP         | -0.015 | 0.016 | 0.355 |
| TN         | 0.02   | 0.018 | 0.250 |
| L1SECCHI   | -0.166 | 0.025 | 0.000 |
| L1PHAEO    | 0.267  | 0.03  | 0.000 |
| L1DO       | -0.108 | 0.032 | 0.001 |



|            |        |       |       |
|------------|--------|-------|-------|
| L1TURB     | 0.06   | 0.025 | 0.019 |
| TEMP       | -0.226 | 0.026 | 0.000 |
| L1TP       | WITH   |       |       |
| L1COLOR    | 0.59   | 0.017 | 0.000 |
| SALINITY   | -0.111 | 0.021 | 0.000 |
| L1SECCHI   | -0.412 | 0.022 | 0.000 |
| L1PHAEO    | 0.439  | 0.027 | 0.000 |
| L1DO       | -0.133 | 0.033 | 0.000 |
| L1TURB     | 0.43   | 0.021 | 0.000 |
| TEMP       | -0.155 | 0.028 | 0.000 |
| L1CHL_A    | 0.421  | 0.022 | 0.000 |
| L2CHL_A    | 0.076  | 0.028 | 0.006 |
| L1RAIN     | 0.292  | 0.024 | 0.000 |
| L1SALINITY | -0.402 | 0.022 | 0.000 |
| DIST_INL   | -0.031 | 0.026 | 0.235 |
| SEASON01   | -0.025 | 0.026 | 0.342 |
| L1CHL_B    | 0.074  | 0.035 | 0.034 |
| L1CHL_C    | 0.268  | 0.03  | 0.000 |
| L1TN       | WITH   |       |       |
| L1CHL_A    | 0.335  | 0.024 | 0.000 |
| L1SECCHI   | -0.189 | 0.026 | 0.000 |
| L1PHAEO    | 0.232  | 0.028 | 0.000 |
| L1DO       | -0.128 | 0.029 | 0.000 |
| L1TURB     | 0.196  | 0.025 | 0.000 |
| TEMP       | -0.049 | 0.027 | 0.069 |
| L1COLOR    | 0.178  | 0.025 | 0.000 |
| L2CHL_A    | 0.035  | 0.028 | 0.208 |
| L1RAIN     | 0.085  | 0.026 | 0.001 |
| L1SALINITY | -0.092 | 0.027 | 0.001 |
| SEASON01   | 0.026  | 0.026 | 0.316 |
| L1CHL_B    | 0.09   | 0.03  | 0.003 |
| L1CHL_C    | 0.144  | 0.029 | 0.000 |
| L1TP       | 0.268  | 0.024 | 0.000 |
| L1SALINI   | WITH   |       |       |
| L1COLOR    | -0.599 | 0.017 | 0.000 |
| L1SECCHI   | 0.088  | 0.026 | 0.001 |
| L1PHAEO    | -0.178 | 0.029 | 0.000 |
| L1DO       | 0.047  | 0.029 | 0.100 |
| L1TURB     | -0.029 | 0.026 | 0.272 |
| TEMP       | 0.197  | 0.026 | 0.000 |
| L1CHL_A    | -0.238 | 0.026 | 0.000 |
| L2CHL_A    | -0.08  | 0.028 | 0.004 |
| L1RAIN     | -0.248 | 0.024 | 0.000 |
| DIST_INL   | WITH   |       |       |
| L1TN       | 0.032  | 0.026 | 0.211 |
| L1SECCHI   | -0.031 | 0.026 | 0.245 |
| L1PHAEO    | -0.004 | 0.038 | 0.911 |
| L1DO       | -0.05  | 0.039 | 0.197 |
| L1TURB     | 0.017  | 0.025 | 0.503 |

|            |        |       |       |
|------------|--------|-------|-------|
| TEMP       | 0.036  | 0.031 | 0.245 |
| L1COLOR    | -0.07  | 0.025 | 0.006 |
| L1CHL_A    | 0.043  | 0.027 | 0.113 |
| L2CHL_A    | 0.037  | 0.028 | 0.177 |
| L1RAIN     | 0.202  | 0.024 | 0.000 |
| L1SALINITY | -0.019 | 0.026 | 0.451 |
| L1DO       | WITH   |       |       |
| SEASON01   | -0.286 | 0.026 | 0.000 |
| L1SECCHI   | -0.081 | 0.031 | 0.008 |
| L1PHAEO    | 0.008  | 0.031 | 0.801 |
| L1PHAEO    | WITH   |       |       |
| L1CHL_B    | 0.167  | 0.031 | 0.000 |
| L1CHL_C    | 0.474  | 0.024 | 0.000 |
| L1SECCHI   | -0.439 | 0.025 | 0.000 |
| CHL_B      | WITH   |       |       |
| DO         | 0.014  | 0.032 | 0.651 |
| L2CHLA_C   | WITH   |       |       |
| L1SECCHI   | -0.054 | 0.029 | 0.065 |
| L1PHAEO    | 0.094  | 0.031 | 0.002 |
| L1DO       | 0.017  | 0.031 | 0.577 |
| L1TURB     | 0.078  | 0.028 | 0.006 |
| TEMP       | -0.165 | 0.028 | 0.000 |
| L1COLOR    | 0.089  | 0.03  | 0.003 |
| SEASONRO   | WITH   |       |       |
| L1SECCHI   | 0.04   | 0.026 | 0.124 |
| L1PHAEO    | -0.15  | 0.029 | 0.000 |
| L1TURB     | -0.113 | 0.025 | 0.000 |
| L1COLOR    | -0.083 | 0.025 | 0.001 |
| L1CHL_A    | -0.095 | 0.027 | 0.000 |
| L2CHL_A    | -0.224 | 0.026 | 0.000 |
| L1RAIN     | 0.264  | 0.024 | 0.000 |
| L1SALINITY | 0.112  | 0.026 | 0.000 |
| DIST_INL   | 0.007  | 0.025 | 0.791 |
| TP2        | WITH   |       |       |
| L1SECCHI   | 0.003  | 0.021 | 0.879 |
| L1PHAEO    | 0.083  | 0.026 | 0.001 |
| L1DO       | -0.038 | 0.025 | 0.134 |
| L1TURB     | -0.009 | 0.022 | 0.684 |
| TEMP       | -0.001 | 0.03  | 0.975 |
| L1COLOR    | 0.021  | 0.025 | 0.394 |
| L1CHL_A    | 0.073  | 0.022 | 0.001 |
| L2CHL_A    | 0.018  | 0.02  | 0.386 |
| L1RAIN     | -0.046 | 0.022 | 0.034 |
| L1SALINITY | 0.008  | 0.022 | 0.715 |
| DIST_INL   | -0.183 | 0.025 | 0.000 |
| SEASON01   | 0.037  | 0.026 | 0.162 |
| L1CHL_B    | 0.007  | 0.027 | 0.791 |

|         |       |       |       |
|---------|-------|-------|-------|
| L1CHL_C | 0.066 | 0.024 | 0.006 |
| L1TP    | 0.054 | 0.027 | 0.042 |
| L1TN    | 0.056 | 0.02  | 0.006 |

Region  
Ft. Pierce-Sebastian

|          |        |       |       |
|----------|--------|-------|-------|
| PHAEO    | ON     |       |       |
| L1PHAEO  | 0.384  | 0.02  | 0.000 |
| CHL_A    | 0.357  | 0.021 | 0.000 |
| TEMP     | 0.109  | 0.032 | 0.001 |
| DIST_INL | 0.033  | 0.019 | 0.076 |
| SEASON01 | -0.149 | 0.031 | 0.000 |

|          |        |       |       |
|----------|--------|-------|-------|
| DO       | ON     |       |       |
| L1DO     | 0.203  | 0.02  | 0.000 |
| CHL_A    | 0.309  | 0.026 | 0.000 |
| L1CHL_A  | -0.131 | 0.022 | 0.000 |
| TEMP     | -0.5   | 0.029 | 0.000 |
| SECCHI   | 0.064  | 0.024 | 0.007 |
| PHAEO    | -0.105 | 0.025 | 0.000 |
| DIST_INL | 0.076  | 0.018 | 0.000 |
| SEASON01 | -0.069 | 0.031 | 0.025 |

|          |        |       |       |
|----------|--------|-------|-------|
| CHL_A    | ON     |       |       |
| L1CHL_A  | 0.254  | 0.019 | 0.000 |
| L2CHL_A  | 0.068  | 0.015 | 0.000 |
| TN       | 0.166  | 0.024 | 0.000 |
| TP       | 0.383  | 0.041 | 0.000 |
| TP2      | -0.251 | 0.036 | 0.000 |
| TEMP     | 0.117  | 0.033 | 0.000 |
| L1COLOR  | -0.155 | 0.023 | 0.000 |
| L1SECCHI | 0.034  | 0.031 | 0.269 |
| SALINITY | -0.055 | 0.025 | 0.027 |
| DIST_INL | -0.058 | 0.019 | 0.002 |
| L1TURB   | 0.06   | 0.028 | 0.029 |
| SEASON01 | 0.085  | 0.03  | 0.005 |

|          |        |       |       |
|----------|--------|-------|-------|
| CHL_B    | ON     |       |       |
| L1CHL_B  | 0.233  | 0.022 | 0.000 |
| TN       | 0.033  | 0.032 | 0.296 |
| TP       | 0.202  | 0.052 | 0.000 |
| TP2      | -0.157 | 0.044 | 0.000 |
| TEMP     | 0.115  | 0.039 | 0.003 |
| L1COLOR  | -0.136 | 0.029 | 0.000 |
| L1SECCHI | -0.099 | 0.039 | 0.012 |
| SALINITY | -0.022 | 0.03  | 0.475 |
| DIST_INL | -0.005 | 0.023 | 0.817 |
| L1TURB   | -0.021 | 0.035 | 0.546 |
| SEASON01 | -0.157 | 0.038 | 0.000 |

|         |       |       |       |
|---------|-------|-------|-------|
| CHL_C   | ON    |       |       |
| L1CHL_C | 0.204 | 0.018 | 0.000 |
| TN      | 0.145 | 0.027 | 0.000 |

|            |        |       |       |
|------------|--------|-------|-------|
| TP         | 0.294  | 0.048 | 0.000 |
| TP2        | -0.192 | 0.043 | 0.000 |
| TEMP       | 0.097  | 0.037 | 0.008 |
| LICOLOR    | -0.158 | 0.026 | 0.000 |
| LISECCHI   | -0.102 | 0.035 | 0.004 |
| SALINITY   | 0.031  | 0.028 | 0.281 |
| DIST_INL   | -0.025 | 0.022 | 0.253 |
| LITURB     | -0.007 | 0.032 | 0.831 |
| SEASON01   | 0.005  | 0.035 | 0.878 |
| SECCHI     | ON     |       |       |
| LISECCHI   | 0.161  | 0.017 | 0.000 |
| TURB       | -0.558 | 0.017 | 0.000 |
| COLOR      | -0.232 | 0.016 | 0.000 |
| CHL_A      | -0.141 | 0.018 | 0.000 |
| SALINITY   | ON     |       |       |
| LISALINITY | 0.41   | 0.017 | 0.000 |
| RAIN       | -0.236 | 0.019 | 0.000 |
| DIST_INL   | 0.107  | 0.019 | 0.000 |
| TURB       | ON     |       |       |
| LITURB     | 0.323  | 0.02  | 0.000 |
| DIST_INL   | 0.036  | 0.019 | 0.050 |
| CHL_A      | 0.184  | 0.023 | 0.000 |
| RAIN       | -0.034 | 0.021 | 0.116 |
| SALINITY   | -0.083 | 0.019 | 0.000 |
| PHAEO      | 0.3    | 0.024 | 0.000 |
| LIPHAEO    | -0.094 | 0.024 | 0.000 |
| SEASON01   | -0.036 | 0.021 | 0.093 |
| COLOR      | ON     |       |       |
| LICOLOR    | 0.294  | 0.014 | 0.000 |
| RAIN       | 0.156  | 0.015 | 0.000 |
| SALINITY   | -0.563 | 0.014 | 0.000 |
| DIST_INL   | -0.04  | 0.013 | 0.002 |
| SEASON01   | 0.12   | 0.014 | 0.000 |
| TN         | ON     |       |       |
| DIST_INL   | 0.026  | 0.018 | 0.152 |
| RAIN       | 0.022  | 0.02  | 0.289 |
| SALINITY   | -0.296 | 0.019 | 0.000 |
| PHAEO      | 0.071  | 0.021 | 0.001 |
| SEASON01   | 0.118  | 0.02  | 0.000 |
| LITN       | 0.447  | 0.017 | 0.000 |
| TP         | ON     |       |       |
| DIST_INL   | 0.047  | 0.016 | 0.003 |
| RAIN       | 0.086  | 0.012 | 0.000 |
| SALINITY   | -0.148 | 0.013 | 0.000 |
| PHAEO      | 0.094  | 0.012 | 0.000 |
| SEASON01   | 0.325  | 0.017 | 0.000 |
| LITP       | 0.407  | 0.016 | 0.000 |

|            |        |       |       |  |
|------------|--------|-------|-------|--|
| RAIN       | ON     |       |       |  |
| TEMP       | 0.186  | 0.034 | 0.000 |  |
| SEASON01   | 0.192  | 0.033 | 0.000 |  |
| L1RAIN     | 0.243  | 0.02  | 0.000 |  |
| L1CHL_B    | WITH   |       |       |  |
| L1CHL_C    | 0.313  | 0.022 | 0.000 |  |
| L1SECCHI   | -0.177 | 0.024 | 0.000 |  |
| L1DO       | -0.025 | 0.025 | 0.313 |  |
| L1TURB     | 0.11   | 0.024 | 0.000 |  |
| TEMP       | -0.029 | 0.024 | 0.216 |  |
| L1COLOR    | -0.01  | 0.024 | 0.686 |  |
| L1CHL_A    | 0.224  | 0.023 | 0.000 |  |
| L2CHL_A    | 0.13   | 0.025 | 0.000 |  |
| L1RAIN     | -0.042 | 0.025 | 0.087 |  |
| L1SALINITY | 0      | 0.023 | 0.995 |  |
| DIST_INL   | 0.03   | 0.023 | 0.195 |  |
| SEASON01   | -0.08  | 0.024 | 0.001 |  |
| CHL_A      | WITH   |       |       |  |
| CHL_C      | 0.758  | 0.01  | 0.000 |  |
| CHL_B      | 0.197  | 0.024 | 0.000 |  |
| L1SECCHI   | WITH   |       |       |  |
| L1TURB     | -0.686 | 0.013 | 0.000 |  |
| CHL_C      | WITH   |       |       |  |
| CHL_B      | 0.267  | 0.022 | 0.000 |  |
| DO         | -0.003 | 0.017 | 0.873 |  |
| L1CHL_C    | WITH   |       |       |  |
| L1CHL_A    | 0.804  | 0.008 | 0.000 |  |
| L1SECCHI   | -0.358 | 0.021 | 0.000 |  |
| L1DO       | -0.041 | 0.025 | 0.096 |  |
| L1TURB     | 0.322  | 0.021 | 0.000 |  |
| TEMP       | 0.044  | 0.023 | 0.056 |  |
| L1COLOR    | 0.075  | 0.023 | 0.001 |  |
| L2CHL_A    | 0.353  | 0.021 | 0.000 |  |
| L1RAIN     | 0.072  | 0.023 | 0.002 |  |
| L1SALINITY | -0.055 | 0.023 | 0.015 |  |
| DIST_INL   | 0.024  | 0.022 | 0.278 |  |
| SEASON01   | 0.051  | 0.023 | 0.024 |  |
| L1CHLA_C   | WITH   |       |       |  |
| L2CHL_A    | 0.434  | 0.019 | 0.000 |  |
| SALINITY   | -0.044 | 0.013 | 0.001 |  |
| L1SECCHI   | -0.491 | 0.018 | 0.000 |  |
| L1PHAEO    | 0.486  | 0.018 | 0.000 |  |
| L1DO       | -0.056 | 0.024 | 0.022 |  |
| L1TURB     | 0.426  | 0.019 | 0.000 |  |
| TEMP       | 0.097  | 0.023 | 0.000 |  |
| L1COLOR    | 0.277  | 0.021 | 0.000 |  |

|            |        |       |       |
|------------|--------|-------|-------|
| TEMP       | WITH   |       |       |
| COLOR      | 0.051  | 0.014 | 0.000 |
| TP         | 0.096  | 0.014 | 0.000 |
| SEASON01   | 0.789  | 0.009 | 0.000 |
| L1SECCHI   | -0.088 | 0.023 | 0.000 |
| L1PHAEO    | -0.078 | 0.023 | 0.001 |
| L1DO       | -0.3   | 0.021 | 0.000 |
| L1TURB     | 0.032  | 0.023 | 0.158 |
| COLOR      | WITH   |       |       |
| L1SALINITY | 0.034  | 0.015 | 0.023 |
| TN         | 0.19   | 0.023 | 0.000 |
| TP         | 0.239  | 0.015 | 0.000 |
| L1TURB     | 0.004  | 0.017 | 0.807 |
| TN         | WITH   |       |       |
| TP         | 0.193  | 0.015 | 0.000 |
| TP         | WITH   |       |       |
| TP2        | 0.696  | 0.012 | 0.000 |
| TURB       | WITH   |       |       |
| TN         | 0.158  | 0.024 | 0.000 |
| TP         | 0.151  | 0.014 | 0.000 |
| L1TURB     | WITH   |       |       |
| SECCHI     | 0.086  | 0.02  | 0.000 |
| L1PHAEO    | 0.441  | 0.019 | 0.000 |
| L1DO       | -0.118 | 0.024 | 0.000 |
| L1RAIN     | WITH   |       |       |
| TEMP       | 0.326  | 0.02  | 0.000 |
| SALINITY   | -0.191 | 0.02  | 0.000 |
| L1SECCHI   | -0.152 | 0.022 | 0.000 |
| L1PHAEO    | -0.036 | 0.024 | 0.132 |
| L1DO       | -0.124 | 0.024 | 0.000 |
| L1TURB     | 0.041  | 0.022 | 0.060 |
| L1COLOR    | 0.408  | 0.018 | 0.000 |
| L1CHL_A    | 0.218  | 0.021 | 0.000 |
| L2CHL_A    | -0.018 | 0.022 | 0.421 |
| L1COLOR    | WITH   |       |       |
| TURB       | -0.006 | 0.013 | 0.625 |
| SALINITY   | -0.107 | 0.015 | 0.000 |
| TP         | -0.012 | 0.014 | 0.374 |
| TN         | 0.01   | 0.013 | 0.471 |
| L1SECCHI   | -0.37  | 0.02  | 0.000 |
| L1PHAEO    | 0.024  | 0.023 | 0.317 |
| L1DO       | -0.165 | 0.024 | 0.000 |
| L1TURB     | 0.122  | 0.022 | 0.000 |
| TEMP       | 0.045  | 0.023 | 0.047 |

|            |        |       |       |
|------------|--------|-------|-------|
| L1TP       | WITH   |       |       |
| L1COLOR    | 0.644  | 0.013 | 0.000 |
| SALINITY   | 0.007  | 0.015 | 0.639 |
| L1SECCHI   | -0.544 | 0.016 | 0.000 |
| L1PHAEO    | 0.242  | 0.022 | 0.000 |
| L1DO       | -0.318 | 0.022 | 0.000 |
| L1TURB     | 0.356  | 0.02  | 0.000 |
| TEMP       | 0.248  | 0.021 | 0.000 |
| L1CHL_A    | 0.441  | 0.018 | 0.000 |
| L2CHL_A    | 0.248  | 0.022 | 0.000 |
| L1RAIN     | 0.404  | 0.019 | 0.000 |
| L1SALINITY | -0.536 | 0.016 | 0.000 |
| DIST_INL   | 0.057  | 0.022 | 0.010 |
| SEASON01   | 0.273  | 0.02  | 0.000 |
| L1CHL_B    | 0.07   | 0.024 | 0.003 |
| L1CHL_C    | 0.272  | 0.021 | 0.000 |

|            |        |       |       |
|------------|--------|-------|-------|
| L1TN       | WITH   |       |       |
| L1CHL_A    | 0.377  | 0.02  | 0.000 |
| L1SECCHI   | -0.39  | 0.02  | 0.000 |
| L1PHAEO    | 0.194  | 0.024 | 0.000 |
| L1DO       | -0.114 | 0.025 | 0.000 |
| L1TURB     | 0.269  | 0.021 | 0.000 |
| TEMP       | 0.058  | 0.024 | 0.017 |
| L1COLOR    | 0.482  | 0.017 | 0.000 |
| L2CHL_A    | 0.218  | 0.022 | 0.000 |
| L1RAIN     | 0.183  | 0.021 | 0.000 |
| L1SALINITY | -0.437 | 0.018 | 0.000 |
| SEASON01   | 0.084  | 0.022 | 0.000 |
| L1CHL_B    | 0.044  | 0.026 | 0.089 |
| L1CHL_C    | 0.241  | 0.022 | 0.000 |
| L1TP       | 0.535  | 0.016 | 0.000 |

|          |        |       |       |
|----------|--------|-------|-------|
| L1SALINI | WITH   |       |       |
| L1COLOR  | -0.763 | 0.009 | 0.000 |
| L1SECCHI | 0.322  | 0.021 | 0.000 |
| L1PHAEO  | -0.049 | 0.023 | 0.033 |
| L1DO     | 0.038  | 0.023 | 0.103 |
| L1TURB   | -0.118 | 0.022 | 0.000 |
| TEMP     | 0.056  | 0.022 | 0.011 |
| L1CHL_A  | -0.205 | 0.022 | 0.000 |
| L2CHL_A  | -0.137 | 0.023 | 0.000 |
| L1RAIN   | -0.29  | 0.02  | 0.000 |

|          |        |       |       |
|----------|--------|-------|-------|
| DIST_INL | WITH   |       |       |
| L1TN     | -0.025 | 0.022 | 0.266 |
| L1SECCHI | 0.1    | 0.022 | 0.000 |
| L1PHAEO  | 0.054  | 0.023 | 0.017 |
| L1DO     | 0.052  | 0.022 | 0.019 |
| L1TURB   | 0.044  | 0.022 | 0.045 |
| TEMP     | 0.066  | 0.022 | 0.002 |
| L1COLOR  | -0.173 | 0.021 | 0.000 |
| L1CHL_A  | 0.003  | 0.022 | 0.876 |

|            |        |       |       |
|------------|--------|-------|-------|
| L2CHL_A    | 0.004  | 0.022 | 0.853 |
| L1RAIN     | 0.052  | 0.022 | 0.016 |
| L1SALINITY | 0.162  | 0.021 | 0.000 |
| L1DO       | WITH   |       |       |
| SEASON01   | -0.352 | 0.02  | 0.000 |
| L1SECCHI   | 0.19   | 0.024 | 0.000 |
| L1PHAEO    | -0.086 | 0.024 | 0.000 |
| L1PHAEO    | WITH   |       |       |
| L1CHL_B    | 0.283  | 0.022 | 0.000 |
| L1CHL_C    | 0.5    | 0.018 | 0.000 |
| L1SECCHI   | -0.419 | 0.02  | 0.000 |
| CHL_B      | WITH   |       |       |
| DO         | 0.008  | 0.027 | 0.761 |
| L2CHLA_C   | WITH   |       |       |
| L1SECCHI   | -0.279 | 0.022 | 0.000 |
| L1PHAEO    | 0.38   | 0.021 | 0.000 |
| L1DO       | -0.129 | 0.024 | 0.000 |
| L1TURB     | 0.265  | 0.021 | 0.000 |
| TEMP       | -0.12  | 0.023 | 0.000 |
| L1COLOR    | 0.127  | 0.023 | 0.000 |
| SEASONRO   | WITH   |       |       |
| L1SECCHI   | -0.09  | 0.023 | 0.000 |
| L1PHAEO    | -0.068 | 0.023 | 0.003 |
| L1TURB     | 0.029  | 0.022 | 0.188 |
| L1COLOR    | 0.076  | 0.022 | 0.001 |
| L1CHL_A    | 0.105  | 0.022 | 0.000 |
| L2CHL_A    | -0.115 | 0.022 | 0.000 |
| L1RAIN     | 0.322  | 0.019 | 0.000 |
| L1SALINITY | 0.039  | 0.022 | 0.074 |
| DIST_INL   | 0.003  | 0.022 | 0.902 |
| TP2        | WITH   |       |       |
| L1SECCHI   | -0.193 | 0.017 | 0.000 |
| L1PHAEO    | 0.01   | 0.018 | 0.570 |
| L1DO       | -0.166 | 0.017 | 0.000 |
| L1TURB     | 0.089  | 0.017 | 0.000 |
| TEMP       | 0.244  | 0.021 | 0.000 |
| L1COLOR    | 0.221  | 0.022 | 0.000 |
| L1CHL_A    | 0.135  | 0.017 | 0.000 |
| L2CHL_A    | 0.033  | 0.017 | 0.058 |
| L1RAIN     | 0.188  | 0.017 | 0.000 |
| L1SALINITY | -0.205 | 0.018 | 0.000 |
| DIST_INL   | -0.035 | 0.022 | 0.113 |
| SEASON01   | 0.287  | 0.021 | 0.000 |
| L1CHL_B    | -0.002 | 0.017 | 0.899 |
| L1CHL_C    | 0.059  | 0.017 | 0.000 |
| L1TP       | 0.373  | 0.02  | 0.000 |
| L1TN       | 0.213  | 0.017 | 0.000 |



Region  
 Sebastian -  
 S. end Merritt Isl.

|          |        |       |       |  |
|----------|--------|-------|-------|--|
| PHAEO    | ON     |       |       |  |
| L1PHAEO  | 0.471  | 0.026 | 0.000 |  |
| CHL_A    | 0.199  | 0.027 | 0.000 |  |
| TEMP     | 0.099  | 0.036 | 0.006 |  |
| DIST_INL | -0.005 | 0.024 | 0.845 |  |
| SEASON01 | -0.118 | 0.036 | 0.001 |  |
| DO       | ON     |       |       |  |
| L1DO     | 0.163  | 0.023 | 0.000 |  |
| CHL_A    | 0.293  | 0.024 | 0.000 |  |
| L1CHL_A  | -0.026 | 0.025 | 0.293 |  |
| TEMP     | -0.355 | 0.031 | 0.000 |  |
| SECCHI   | 0.243  | 0.022 | 0.000 |  |
| PHAEO    | -0.084 | 0.023 | 0.000 |  |
| DIST_INL | -0.033 | 0.02  | 0.108 |  |
| SEASON01 | -0.149 | 0.033 | 0.000 |  |
| CHL_A    | ON     |       |       |  |
| L1CHL_A  | 0.221  | 0.023 | 0.000 |  |
| L2CHL_A  | 0.083  | 0.017 | 0.000 |  |
| TN       | 0.286  | 0.031 | 0.000 |  |
| TP       | 0.315  | 0.029 | 0.000 |  |
| TP2      | -0.092 | 0.027 | 0.001 |  |
| TEMP     | -0.01  | 0.036 | 0.778 |  |
| L1COLOR  | -0.134 | 0.032 | 0.000 |  |
| L1SECCHI | -0.055 | 0.041 | 0.177 |  |
| SALINITY | 0.124  | 0.028 | 0.000 |  |
| DIST_INL | -0.007 | 0.026 | 0.778 |  |
| L1TURB   | -0.053 | 0.036 | 0.142 |  |
| SEASON01 | 0.088  | 0.036 | 0.014 |  |
| CHL_B    | ON     |       |       |  |
| L1CHL_B  | 0.301  | 0.029 | 0.000 |  |
| TN       | 0.14   | 0.032 | 0.000 |  |
| TP       | 0.042  | 0.034 | 0.210 |  |
| TP2      | -0.044 | 0.031 | 0.157 |  |
| TEMP     | 0.207  | 0.04  | 0.000 |  |
| L1COLOR  | -0.12  | 0.038 | 0.001 |  |
| L1SECCHI | -0.185 | 0.047 | 0.000 |  |
| SALINITY | 0.05   | 0.033 | 0.123 |  |
| DIST_INL | -0.041 | 0.029 | 0.150 |  |
| L1TURB   | -0.05  | 0.042 | 0.228 |  |
| SEASON01 | -0.18  | 0.04  | 0.000 |  |
| CHL_C    | ON     |       |       |  |
| L1CHL_C  | 0.209  | 0.023 | 0.000 |  |
| TN       | 0.277  | 0.032 | 0.000 |  |
| TP       | 0.2    | 0.032 | 0.000 |  |
| TP2      | -0.062 | 0.029 | 0.033 |  |

|            |        |       |       |
|------------|--------|-------|-------|
| TEMP       | -0.004 | 0.038 | 0.914 |
| LICOLOR    | -0.167 | 0.035 | 0.000 |
| L1SECCHI   | -0.021 | 0.045 | 0.639 |
| SALINITY   | 0.107  | 0.031 | 0.000 |
| DIST_INL   | 0.005  | 0.027 | 0.865 |
| L1TURB     | -0.01  | 0.04  | 0.806 |
| SEASON01   | 0.014  | 0.038 | 0.705 |
| SECCHI     | ON     |       |       |
| L1SECCHI   | 0.219  | 0.021 | 0.000 |
| TURB       | -0.555 | 0.021 | 0.000 |
| COLOR      | -0.297 | 0.021 | 0.000 |
| CHL_A      | -0.045 | 0.02  | 0.025 |
| SALINITY   | ON     |       |       |
| L1SALINITY | 0.663  | 0.014 | 0.000 |
| RAIN       | -0.144 | 0.018 | 0.000 |
| DIST_INL   | -0.033 | 0.019 | 0.081 |
| TURB       | ON     |       |       |
| L1TURB     | 0.386  | 0.022 | 0.000 |
| DIST_INL   | -0.079 | 0.023 | 0.001 |
| CHL_A      | 0.218  | 0.026 | 0.000 |
| RAIN       | -0.06  | 0.025 | 0.016 |
| SALINITY   | -0.171 | 0.021 | 0.000 |
| PHAEO      | 0.204  | 0.028 | 0.000 |
| L1PHAEO    | -0.159 | 0.029 | 0.000 |
| SEASON01   | 0.027  | 0.025 | 0.270 |
| COLOR      | ON     |       |       |
| LICOLOR    | 0.44   | 0.019 | 0.000 |
| RAIN       | 0.008  | 0.017 | 0.653 |
| SALINITY   | -0.516 | 0.02  | 0.000 |
| DIST_INL   | -0.073 | 0.015 | 0.000 |
| SEASON01   | 0.173  | 0.017 | 0.000 |
| TN         | ON     |       |       |
| DIST_INL   | 0.203  | 0.023 | 0.000 |
| RAIN       | -0.005 | 0.023 | 0.823 |
| SALINITY   | -0.16  | 0.02  | 0.000 |
| PHAEO      | 0.083  | 0.023 | 0.000 |
| SEASON01   | -0.044 | 0.024 | 0.072 |
| L1TN       | 0.483  | 0.023 | 0.000 |
| TP         | ON     |       |       |
| DIST_INL   | 0.064  | 0.023 | 0.006 |
| RAIN       | -0.045 | 0.021 | 0.036 |
| SALINITY   | -0.064 | 0.02  | 0.001 |
| PHAEO      | 0.148  | 0.022 | 0.000 |
| SEASON01   | 0.182  | 0.025 | 0.000 |
| L1TP       | 0.437  | 0.022 | 0.000 |
| RAIN       | ON     |       |       |

|            |        |       |       |
|------------|--------|-------|-------|
| TEMP       | 0.066  | 0.036 | 0.069 |
| SEASON01   | 0.382  | 0.037 | 0.000 |
| L1RAIN     | 0.077  | 0.024 | 0.001 |
| L1CHL_B    | WITH   |       |       |
| L1CHL_C    | 0.309  | 0.025 | 0.000 |
| L1SECCHI   | -0.148 | 0.027 | 0.000 |
| L1DO       | -0.017 | 0.027 | 0.520 |
| L1TURB     | 0.167  | 0.026 | 0.000 |
| TEMP       | -0.032 | 0.027 | 0.228 |
| L1COLOR    | -0.097 | 0.027 | 0.000 |
| L1CHL_A    | 0.282  | 0.026 | 0.000 |
| L2CHL_A    | 0.191  | 0.03  | 0.000 |
| L1RAIN     | 0.031  | 0.027 | 0.246 |
| L1SALINITY | 0.075  | 0.026 | 0.003 |
| DIST_INL   | 0.009  | 0.028 | 0.734 |
| SEASON01   | -0.04  | 0.027 | 0.138 |
| CHL_A      | WITH   |       |       |
| CHL_C      | 0.798  | 0.011 | 0.000 |
| CHL_B      | 0.206  | 0.028 | 0.000 |
| L1SECCHI   | WITH   |       |       |
| L1TURB     | -0.696 | 0.015 | 0.000 |
| CHL_C      | WITH   |       |       |
| CHL_B      | 0.24   | 0.026 | 0.000 |
| DO         | -0.001 | 0.017 | 0.935 |
| L1CHL_C    | WITH   |       |       |
| L1CHL_A    | 0.843  | 0.008 | 0.000 |
| L1SECCHI   | -0.09  | 0.028 | 0.001 |
| L1DO       | 0.216  | 0.025 | 0.000 |
| L1TURB     | 0.248  | 0.025 | 0.000 |
| TEMP       | -0.102 | 0.026 | 0.000 |
| L1COLOR    | -0.166 | 0.026 | 0.000 |
| L2CHL_A    | 0.394  | 0.025 | 0.000 |
| L1RAIN     | 0.003  | 0.026 | 0.912 |
| L1SALINITY | 0.15   | 0.025 | 0.000 |
| DIST_INL   | 0.182  | 0.027 | 0.000 |
| SEASON01   | -0.095 | 0.027 | 0.000 |
| L1CHLA_C   | WITH   |       |       |
| L2CHL_A    | 0.475  | 0.023 | 0.000 |
| SALINITY   | 0.003  | 0.013 | 0.835 |
| L1SECCHI   | -0.228 | 0.027 | 0.000 |
| L1PHAEO    | 0.383  | 0.025 | 0.000 |
| L1DO       | 0.185  | 0.026 | 0.000 |
| L1TURB     | 0.362  | 0.024 | 0.000 |
| TEMP       | -0.07  | 0.027 | 0.008 |
| L1COLOR    | -0.102 | 0.027 | 0.000 |
| TEMP       | WITH   |       |       |

|            |        |       |       |
|------------|--------|-------|-------|
| COLOR      | 0.016  | 0.016 | 0.317 |
| TP         | 0.017  | 0.015 | 0.257 |
| SEASON01   | 0.791  | 0.009 | 0.000 |
| L1SECCHI   | 0.041  | 0.027 | 0.126 |
| L1PHAEO    | -0.097 | 0.026 | 0.000 |
| L1DO       | -0.384 | 0.022 | 0.000 |
| L1TURB     | -0.036 | 0.026 | 0.169 |
| COLOR      | WITH   |       |       |
| L1SALINITY | 0.104  | 0.019 | 0.000 |
| TN         | 0.161  | 0.029 | 0.000 |
| TP         | 0.144  | 0.022 | 0.000 |
| L1TURB     | 0.029  | 0.021 | 0.159 |
| TN         | WITH   |       |       |
| TP         | 0.25   | 0.023 | 0.000 |
| TP         | WITH   |       |       |
| TP2        | 0.549  | 0.019 | 0.000 |
| TURB       | WITH   |       |       |
| TN         | 0.177  | 0.03  | 0.000 |
| TP         | 0.293  | 0.022 | 0.000 |
| L1TURB     | WITH   |       |       |
| SECCHI     | 0.043  | 0.024 | 0.081 |
| L1PHAEO    | 0.267  | 0.026 | 0.000 |
| L1DO       | -0.098 | 0.026 | 0.000 |
| L1RAIN     | WITH   |       |       |
| TEMP       | 0.311  | 0.022 | 0.000 |
| SALINITY   | -0.175 | 0.022 | 0.000 |
| L1SECCHI   | -0.013 | 0.026 | 0.630 |
| L1PHAEO    | -0.044 | 0.026 | 0.094 |
| L1DO       | -0.258 | 0.024 | 0.000 |
| L1TURB     | -0.044 | 0.026 | 0.087 |
| L1COLOR    | 0.169  | 0.025 | 0.000 |
| L1CHL_A    | 0.056  | 0.026 | 0.033 |
| L2CHL_A    | -0.056 | 0.027 | 0.038 |
| L1COLOR    | WITH   |       |       |
| TURB       | 0.043  | 0.017 | 0.011 |
| SALINITY   | -0.123 | 0.016 | 0.000 |
| TP         | 0.08   | 0.017 | 0.000 |
| TN         | 0.036  | 0.019 | 0.057 |
| L1SECCHI   | -0.476 | 0.023 | 0.000 |
| L1PHAEO    | -0.055 | 0.027 | 0.046 |
| L1DO       | -0.32  | 0.023 | 0.000 |
| L1TURB     | 0.244  | 0.024 | 0.000 |
| TEMP       | -0.005 | 0.026 | 0.834 |
| L1TP       | WITH   |       |       |
| L1COLOR    | 0.256  | 0.025 | 0.000 |

|            |        |       |       |
|------------|--------|-------|-------|
| SALINITY   | -0.003 | 0.021 | 0.894 |
| L1SECCHI   | -0.422 | 0.024 | 0.000 |
| L1PHAEO    | 0.272  | 0.026 | 0.000 |
| L1DO       | -0.234 | 0.025 | 0.000 |
| L1TURB     | 0.486  | 0.021 | 0.000 |
| TEMP       | 0.111  | 0.026 | 0.000 |
| L1CHL_A    | 0.402  | 0.023 | 0.000 |
| L2CHL_A    | 0.243  | 0.026 | 0.000 |
| L1RAIN     | 0.042  | 0.026 | 0.111 |
| L1SALINITY | -0.09  | 0.025 | 0.000 |
| DIST_INL   | 0.143  | 0.026 | 0.000 |
| SEASON01   | 0.11   | 0.026 | 0.000 |
| L1CHL_B    | 0.07   | 0.027 | 0.010 |
| L1CHL_C    | 0.251  | 0.026 | 0.000 |
| L1TN       | WITH   |       |       |
| L1CHL_A    | 0.409  | 0.024 | 0.000 |
| L1SECCHI   | -0.16  | 0.028 | 0.000 |
| L1PHAEO    | 0.213  | 0.027 | 0.000 |
| L1DO       | 0.19   | 0.026 | 0.000 |
| L1TURB     | 0.255  | 0.025 | 0.000 |
| TEMP       | -0.27  | 0.025 | 0.000 |
| L1COLOR    | 0.168  | 0.026 | 0.000 |
| L2CHL_A    | 0.387  | 0.024 | 0.000 |
| L1RAIN     | -0.101 | 0.026 | 0.000 |
| L1SALINITY | -0.248 | 0.024 | 0.000 |
| SEASON01   | -0.308 | 0.024 | 0.000 |
| L1CHL_B    | 0.132  | 0.027 | 0.000 |
| L1CHL_C    | 0.354  | 0.024 | 0.000 |
| L1TP       | 0.264  | 0.025 | 0.000 |
| L1SALINI   | WITH   |       |       |
| L1COLOR    | -0.736 | 0.012 | 0.000 |
| L1SECCHI   | 0.365  | 0.025 | 0.000 |
| L1PHAEO    | 0.041  | 0.026 | 0.114 |
| L1DO       | 0.224  | 0.024 | 0.000 |
| L1TURB     | -0.168 | 0.025 | 0.000 |
| TEMP       | 0.157  | 0.025 | 0.000 |
| L1CHL_A    | 0.127  | 0.025 | 0.000 |
| L2CHL_A    | 0.112  | 0.026 | 0.000 |
| L1RAIN     | -0.133 | 0.025 | 0.000 |
| DIST_INL   | WITH   |       |       |
| L1TN       | 0.421  | 0.022 | 0.000 |
| L1SECCHI   | 0.096  | 0.026 | 0.000 |
| L1PHAEO    | 0.07   | 0.027 | 0.010 |
| L1DO       | 0.053  | 0.025 | 0.035 |
| L1TURB     | -0.014 | 0.026 | 0.595 |
| TEMP       | -0.024 | 0.025 | 0.343 |
| L1COLOR    | -0.044 | 0.026 | 0.096 |
| L1CHL_A    | 0.21   | 0.026 | 0.000 |
| L2CHL_A    | 0.237  | 0.027 | 0.000 |
| L1RAIN     | -0.018 | 0.025 | 0.467 |

|            |        |       |       |
|------------|--------|-------|-------|
| L1SALINITY | -0.086 | 0.025 | 0.001 |
| L1DO       | WITH   |       |       |
| SEASON01   | -0.43  | 0.021 | 0.000 |
| L1SECCHI   | 0.244  | 0.026 | 0.000 |
| L1PHAEO    | -0.008 | 0.027 | 0.755 |
| L1PHAEO    | WITH   |       |       |
| L1CHL_B    | 0.322  | 0.025 | 0.000 |
| L1CHL_C    | 0.351  | 0.024 | 0.000 |
| L1SECCHI   | -0.208 | 0.027 | 0.000 |
| CHL_B      | WITH   |       |       |
| DO         | -0.047 | 0.028 | 0.093 |
| L2CHLA_C   | WITH   |       |       |
| L1SECCHI   | -0.064 | 0.03  | 0.030 |
| L1PHAEO    | 0.357  | 0.028 | 0.000 |
| L1DO       | 0.124  | 0.027 | 0.000 |
| L1TURB     | 0.2    | 0.027 | 0.000 |
| TEMP       | -0.251 | 0.026 | 0.000 |
| L1COLOR    | -0.158 | 0.027 | 0.000 |
| SEASONRO   | WITH   |       |       |
| L1SECCHI   | 0.026  | 0.027 | 0.323 |
| L1PHAEO    | -0.065 | 0.027 | 0.016 |
| L1TURB     | -0.005 | 0.026 | 0.836 |
| L1COLOR    | 0.003  | 0.026 | 0.895 |
| L1CHL_A    | -0.062 | 0.027 | 0.021 |
| L2CHL_A    | -0.185 | 0.027 | 0.000 |
| L1RAIN     | 0.382  | 0.021 | 0.000 |
| L1SALINITY | 0.135  | 0.025 | 0.000 |
| DIST_INL   | 0.003  | 0.025 | 0.892 |
| TP2        | WITH   |       |       |
| L1SECCHI   | -0.031 | 0.027 | 0.240 |
| L1PHAEO    | 0.017  | 0.027 | 0.534 |
| L1DO       | -0.054 | 0.023 | 0.018 |
| L1TURB     | 0.038  | 0.024 | 0.107 |
| TEMP       | 0.04   | 0.027 | 0.140 |
| L1COLOR    | 0.015  | 0.025 | 0.562 |
| L1CHL_A    | 0.031  | 0.025 | 0.213 |
| L2CHL_A    | 0.029  | 0.024 | 0.229 |
| L1RAIN     | 0.049  | 0.022 | 0.027 |
| L1SALINITY | 0.046  | 0.023 | 0.044 |
| DIST_INL   | -0.011 | 0.028 | 0.687 |
| SEASON01   | 0.045  | 0.027 | 0.101 |
| L1CHL_B    | 0.035  | 0.025 | 0.158 |
| L1CHL_C    | 0.037  | 0.025 | 0.138 |
| L1TP       | 0.128  | 0.03  | 0.000 |
| L1TN       | 0.025  | 0.026 | 0.338 |

Region

S. Merritt Isl. -  
TitusvilleN

|          |        |       |       |
|----------|--------|-------|-------|
| PHAEO    | ON     |       |       |
| L1PHAEO  | 0.479  | 0.023 | 0.000 |
| CHL_A    | 0.175  | 0.025 | 0.000 |
| TEMP     | 0.021  | 0.036 | 0.558 |
| DIST_INL | -0.013 | 0.022 | 0.551 |
| SEASON01 | -0.072 | 0.036 | 0.045 |
| DO       | ON     |       |       |
| L1DO     | 0.165  | 0.021 | 0.000 |
| CHL_A    | 0.369  | 0.026 | 0.000 |
| L1CHL_A  | -0.142 | 0.024 | 0.000 |
| TEMP     | -0.543 | 0.03  | 0.000 |
| SECCHI   | 0.12   | 0.021 | 0.000 |
| PHAEO    | -0.124 | 0.021 | 0.000 |
| DIST_INL | -0.086 | 0.018 | 0.000 |
| SEASON01 | -0.054 | 0.031 | 0.083 |
| CHL_A    | ON     |       |       |
| L1CHL_A  | 0.298  | 0.021 | 0.000 |
| L2CHL_A  | 0.068  | 0.015 | 0.000 |
| TN       | 0.192  | 0.023 | 0.000 |
| TP       | 0.396  | 0.026 | 0.000 |
| TP2      | 0.034  | 0.021 | 0.101 |
| TEMP     | 0.06   | 0.03  | 0.041 |
| L1COLOR  | -0.06  | 0.025 | 0.016 |
| L1SECCHI | -0.033 | 0.03  | 0.266 |
| SALINITY | 0.002  | 0.026 | 0.924 |
| DIST_INL | 0.037  | 0.023 | 0.112 |
| L1TURB   | -0.102 | 0.03  | 0.001 |
| SEASON01 | 0.061  | 0.03  | 0.040 |
| CHL_B    | ON     |       |       |
| L1CHL_B  | 0.251  | 0.032 | 0.000 |
| TN       | 0.025  | 0.03  | 0.407 |
| TP       | 0.019  | 0.036 | 0.591 |
| TP2      | -0.009 | 0.029 | 0.760 |
| TEMP     | 0.091  | 0.04  | 0.025 |
| L1COLOR  | 0.029  | 0.038 | 0.442 |
| L1SECCHI | -0.083 | 0.042 | 0.049 |
| SALINITY | 0.016  | 0.037 | 0.658 |
| DIST_INL | -0.032 | 0.032 | 0.311 |
| L1TURB   | -0.027 | 0.044 | 0.545 |
| SEASON01 | -0.158 | 0.041 | 0.000 |
| CHL_C    | ON     |       |       |
| L1CHL_C  | 0.318  | 0.02  | 0.000 |
| TN       | 0.134  | 0.026 | 0.000 |
| TP       | 0.301  | 0.03  | 0.000 |
| TP2      | 0.051  | 0.025 | 0.039 |
| TEMP     | 0.101  | 0.035 | 0.004 |
| L1COLOR  | -0.135 | 0.031 | 0.000 |

|            |        |       |       |
|------------|--------|-------|-------|
| LISECCHI   | -0.026 | 0.036 | 0.469 |
| SALINITY   | -0.076 | 0.031 | 0.014 |
| DIST_INL   | 0.035  | 0.027 | 0.193 |
| LITURB     | -0.118 | 0.036 | 0.001 |
| SEASON01   | 0.002  | 0.035 | 0.945 |
| SECCHI     | ON     |       |       |
| LISECCHI   | 0.195  | 0.019 | 0.000 |
| TURB       | -0.591 | 0.019 | 0.000 |
| COLOR      | -0.038 | 0.018 | 0.038 |
| CHL_A      | -0.144 | 0.02  | 0.000 |
| SALINITY   | ON     |       |       |
| LISALINITY | 0.873  | 0.007 | 0.000 |
| RAIN       | -0.092 | 0.01  | 0.000 |
| DIST_INL   | 0.05   | 0.012 | 0.000 |
| TURB       | ON     |       |       |
| LITURB     | 0.326  | 0.021 | 0.000 |
| DIST_INL   | 0.051  | 0.024 | 0.029 |
| CHL_A      | 0.223  | 0.025 | 0.000 |
| RAIN       | -0.046 | 0.023 | 0.051 |
| SALINITY   | -0.043 | 0.024 | 0.070 |
| PHAE0      | 0.214  | 0.026 | 0.000 |
| LIPHAEO    | -0.123 | 0.026 | 0.000 |
| SEASON01   | 0.02   | 0.024 | 0.411 |
| COLOR      | ON     |       |       |
| LICOLOR    | 0.309  | 0.033 | 0.000 |
| RAIN       | 0.029  | 0.023 | 0.213 |
| SALINITY   | -0.473 | 0.049 | 0.000 |
| DIST_INL   | 0.204  | 0.03  | 0.000 |
| SEASON01   | -0.022 | 0.024 | 0.350 |
| TN         | ON     |       |       |
| DIST_INL   | 0.025  | 0.024 | 0.298 |
| RAIN       | 0.012  | 0.023 | 0.595 |
| SALINITY   | -0.053 | 0.024 | 0.028 |
| PHAE0      | 0.049  | 0.024 | 0.039 |
| SEASON01   | 0.148  | 0.024 | 0.000 |
| LITN       | 0.566  | 0.018 | 0.000 |
| TP         | ON     |       |       |
| DIST_INL   | -0.173 | 0.024 | 0.000 |
| RAIN       | -0.013 | 0.021 | 0.534 |
| SALINITY   | 0.106  | 0.023 | 0.000 |
| PHAE0      | 0.068  | 0.022 | 0.002 |
| SEASON01   | 0.153  | 0.023 | 0.000 |
| LITP       | 0.478  | 0.019 | 0.000 |
| RAIN       | ON     |       |       |
| TEMP       | 0.087  | 0.035 | 0.014 |
| SEASON01   | 0.37   | 0.035 | 0.000 |



|            |        |       |       |
|------------|--------|-------|-------|
| L1RAIN     | 0.081  | 0.022 | 0.000 |
| L1CHL_B    | WITH   |       |       |
| L1CHL_C    | 0.269  | 0.024 | 0.000 |
| L1SECCHI   | -0.141 | 0.025 | 0.000 |
| L1DO       | -0.04  | 0.026 | 0.122 |
| L1TURB     | 0.126  | 0.026 | 0.000 |
| TEMP       | -0.037 | 0.026 | 0.143 |
| L1COLOR    | 0.091  | 0.028 | 0.001 |
| L1CHL_A    | 0.212  | 0.026 | 0.000 |
| L2CHL_A    | 0.102  | 0.03  | 0.001 |
| L1RAIN     | 0.026  | 0.025 | 0.281 |
| L1SALINITY | 0.016  | 0.026 | 0.529 |
| DIST_INL   | -0.041 | 0.026 | 0.111 |
| SEASON01   | -0.019 | 0.026 | 0.468 |
| CHL_A      | WITH   |       |       |
| CHL_C      | 0.801  | 0.01  | 0.000 |
| CHL_B      | 0.188  | 0.027 | 0.000 |
| L1SECCHI   | WITH   |       |       |
| L1TURB     | -0.731 | 0.012 | 0.000 |
| CHL_C      | WITH   |       |       |
| CHL_B      | 0.231  | 0.026 | 0.000 |
| DO         | -0.053 | 0.017 | 0.002 |
| L1CHL_C    | WITH   |       |       |
| L1CHL_A    | 0.835  | 0.008 | 0.000 |
| L1SECCHI   | -0.342 | 0.023 | 0.000 |
| L1DO       | 0.009  | 0.026 | 0.730 |
| L1TURB     | 0.365  | 0.022 | 0.000 |
| TEMP       | 0.087  | 0.025 | 0.001 |
| L1COLOR    | 0.078  | 0.027 | 0.003 |
| L2CHL_A    | 0.42   | 0.023 | 0.000 |
| L1RAIN     | 0.121  | 0.024 | 0.000 |
| L1SALINITY | -0.018 | 0.026 | 0.489 |
| DIST_INL   | -0.126 | 0.025 | 0.000 |
| SEASON01   | 0.07   | 0.025 | 0.006 |
| L1CHLA_C   | WITH   |       |       |
| L2CHL_A    | 0.577  | 0.018 | 0.000 |
| SALINITY   | 0.019  | 0.013 | 0.124 |
| L1SECCHI   | -0.499 | 0.02  | 0.000 |
| L1PHAEO    | 0.299  | 0.024 | 0.000 |
| L1DO       | 0.038  | 0.026 | 0.138 |
| L1TURB     | 0.499  | 0.019 | 0.000 |
| TEMP       | 0.132  | 0.025 | 0.000 |
| L1COLOR    | 0.141  | 0.026 | 0.000 |
| TEMP       | WITH   |       |       |
| COLOR      | -0.018 | 0.015 | 0.228 |
| TP         | 0.013  | 0.013 | 0.342 |

|            |        |       |       |
|------------|--------|-------|-------|
| SEASON01   | 0.804  | 0.008 | 0.000 |
| L1SECCHI   | -0.058 | 0.025 | 0.019 |
| L1PHAEO    | -0.06  | 0.025 | 0.018 |
| L1DO       | -0.421 | 0.02  | 0.000 |
| L1TURB     | 0.077  | 0.025 | 0.002 |
| COLOR      | WITH   |       |       |
| L1SALINITY | 0.051  | 0.036 | 0.160 |
| TN         | 0.154  | 0.026 | 0.000 |
| TP         | 0.1    | 0.023 | 0.000 |
| L1TURB     | -0.021 | 0.018 | 0.247 |
| TN         | WITH   |       |       |
| TP         | 0.382  | 0.022 | 0.000 |
| TP         | WITH   |       |       |
| TP2        | 0.406  | 0.02  | 0.000 |
| TURB       | WITH   |       |       |
| TN         | 0.277  | 0.026 | 0.000 |
| TP         | 0.357  | 0.023 | 0.000 |
| L1TURB     | WITH   |       |       |
| SECCHI     | 0.027  | 0.019 | 0.155 |
| L1PHAEO    | 0.251  | 0.024 | 0.000 |
| L1DO       | -0.094 | 0.025 | 0.000 |
| L1RAIN     | WITH   |       |       |
| TEMP       | 0.284  | 0.022 | 0.000 |
| SALINITY   | -0.289 | 0.021 | 0.000 |
| L1SECCHI   | -0.023 | 0.023 | 0.319 |
| L1PHAEO    | -0.04  | 0.024 | 0.095 |
| L1DO       | -0.221 | 0.022 | 0.000 |
| L1TURB     | 0      | 0.024 | 0.996 |
| L1COLOR    | 0.04   | 0.025 | 0.107 |
| L1CHL_A    | 0.151  | 0.024 | 0.000 |
| L2CHL_A    | -0.001 | 0.025 | 0.960 |
| L1COLOR    | WITH   |       |       |
| TURB       | 0.026  | 0.022 | 0.241 |
| SALINITY   | -0.076 | 0.023 | 0.001 |
| TP         | 0.045  | 0.022 | 0.046 |
| TN         | 0.028  | 0.024 | 0.233 |
| L1SECCHI   | -0.145 | 0.026 | 0.000 |
| L1PHAEO    | -0.051 | 0.028 | 0.064 |
| L1DO       | 0.115  | 0.025 | 0.000 |
| L1TURB     | 0.114  | 0.026 | 0.000 |
| TEMP       | -0.083 | 0.026 | 0.001 |
| L1TP       | WITH   |       |       |
| L1COLOR    | 0.079  | 0.026 | 0.002 |
| SALINITY   | 0.008  | 0.019 | 0.661 |
| L1SECCHI   | -0.47  | 0.02  | 0.000 |

|            |        |       |       |
|------------|--------|-------|-------|
| L1PHAEO    | 0.202  | 0.025 | 0.000 |
| L1DO       | -0.043 | 0.025 | 0.092 |
| L1TURB     | 0.55   | 0.018 | 0.000 |
| TEMP       | 0.12   | 0.025 | 0.000 |
| L1CHL_A    | 0.654  | 0.015 | 0.000 |
| L2CHL_A    | 0.496  | 0.02  | 0.000 |
| L1RAIN     | 0.058  | 0.024 | 0.017 |
| L1SALINITY | -0.003 | 0.026 | 0.903 |
| DIST_INL   | -0.254 | 0.023 | 0.000 |
| SEASON01   | 0.097  | 0.025 | 0.000 |
| L1CHL_B    | 0.073  | 0.026 | 0.005 |
| L1CHL_C    | 0.467  | 0.02  | 0.000 |
| L1TN       | WITH   |       |       |
| L1CHL_A    | 0.524  | 0.019 | 0.000 |
| L1SECCHI   | -0.37  | 0.023 | 0.000 |
| L1PHAEO    | 0.143  | 0.026 | 0.000 |
| L1DO       | -0.071 | 0.026 | 0.006 |
| L1TURB     | 0.418  | 0.021 | 0.000 |
| TEMP       | 0.065  | 0.025 | 0.011 |
| L1COLOR    | 0.232  | 0.025 | 0.000 |
| L2CHL_A    | 0.432  | 0.023 | 0.000 |
| L1RAIN     | 0.07   | 0.024 | 0.004 |
| L1SALINITY | -0.12  | 0.025 | 0.000 |
| SEASON01   | 0.031  | 0.025 | 0.226 |
| L1CHL_B    | 0.054  | 0.026 | 0.040 |
| L1CHL_C    | 0.348  | 0.023 | 0.000 |
| L1TP       | 0.481  | 0.02  | 0.000 |
| L1SALINI   | WITH   |       |       |
| L1COLOR    | -0.505 | 0.019 | 0.000 |
| L1SECCHI   | -0.043 | 0.025 | 0.082 |
| L1PHAEO    | 0.135  | 0.025 | 0.000 |
| L1DO       | -0.117 | 0.024 | 0.000 |
| L1TURB     | -0.016 | 0.025 | 0.527 |
| TEMP       | 0.008  | 0.024 | 0.728 |
| L1CHL_A    | 0.02   | 0.026 | 0.436 |
| L2CHL_A    | 0.007  | 0.026 | 0.787 |
| L1RAIN     | -0.079 | 0.024 | 0.001 |
| DIST_INL   | WITH   |       |       |
| L1TN       | -0.009 | 0.025 | 0.730 |
| L1SECCHI   | -0.043 | 0.024 | 0.082 |
| L1PHAEO    | -0.064 | 0.025 | 0.011 |
| L1DO       | -0.092 | 0.024 | 0.000 |
| L1TURB     | -0.009 | 0.025 | 0.729 |
| TEMP       | -0.069 | 0.024 | 0.004 |
| L1COLOR    | 0.009  | 0.026 | 0.719 |
| L1CHL_A    | -0.113 | 0.025 | 0.000 |
| L2CHL_A    | -0.116 | 0.026 | 0.000 |
| L1RAIN     | -0.002 | 0.024 | 0.942 |
| L1SALINITY | 0.419  | 0.02  | 0.000 |

|            |        |       |       |
|------------|--------|-------|-------|
| LIDO       | WITH   |       |       |
| SEASON01   | -0.448 | 0.019 | 0.000 |
| L1SECCHI   | 0.098  | 0.024 | 0.000 |
| L1PHAEO    | -0.076 | 0.026 | 0.003 |
| L1PHAEO    | WITH   |       |       |
| L1CHL_B    | 0.295  | 0.024 | 0.000 |
| L1CHL_C    | 0.32   | 0.024 | 0.000 |
| L1SECCHI   | -0.189 | 0.025 | 0.000 |
| CHL_B      | WITH   |       |       |
| DO         | -0.092 | 0.027 | 0.001 |
| L2CHLA_C   | WITH   |       |       |
| L1SECCHI   | -0.317 | 0.024 | 0.000 |
| L1PHAEO    | 0.248  | 0.027 | 0.000 |
| LIDO       | -0.059 | 0.027 | 0.029 |
| L1TURB     | 0.355  | 0.023 | 0.000 |
| TEMP       | -0.03  | 0.026 | 0.246 |
| L1COLOR    | 0.132  | 0.027 | 0.000 |
| SEASONRO   | WITH   |       |       |
| L1SECCHI   | -0.064 | 0.024 | 0.009 |
| L1PHAEO    | -0.04  | 0.026 | 0.120 |
| L1TURB     | 0.077  | 0.025 | 0.002 |
| L1COLOR    | -0.089 | 0.026 | 0.000 |
| L1CHL_A    | 0.108  | 0.025 | 0.000 |
| L2CHL_A    | -0.056 | 0.026 | 0.035 |
| L1RAIN     | 0.336  | 0.021 | 0.000 |
| L1SALINITY | 0.036  | 0.024 | 0.130 |
| DIST_INL   | -0.002 | 0.024 | 0.927 |
| TP2        | WITH   |       |       |
| L1SECCHI   | -0.107 | 0.024 | 0.000 |
| L1PHAEO    | -0.002 | 0.026 | 0.947 |
| LIDO       | 0.025  | 0.024 | 0.292 |
| L1TURB     | 0.078  | 0.024 | 0.001 |
| TEMP       | 0.013  | 0.026 | 0.616 |
| L1COLOR    | 0.038  | 0.027 | 0.149 |
| L1CHL_A    | 0.15   | 0.024 | 0.000 |
| L2CHL_A    | 0.09   | 0.024 | 0.000 |
| L1RAIN     | 0.044  | 0.022 | 0.045 |
| L1SALINITY | 0.11   | 0.025 | 0.000 |
| DIST_INL   | 0.014  | 0.026 | 0.583 |
| SEASON01   | 0.041  | 0.026 | 0.108 |
| L1CHL_B    | 0.095  | 0.026 | 0.000 |
| L1CHL_C    | 0.064  | 0.025 | 0.010 |
| L1TP       | 0.175  | 0.025 | 0.000 |
| L1TN       | 0.039  | 0.025 | 0.113 |

Region  
BANANA

PHAEO ON

|          |        |       |       |
|----------|--------|-------|-------|
| LIPHAEO  | 0.524  | 0.026 | 0.000 |
| CHL_A    | 0.11   | 0.025 | 0.000 |
| TEMP     | -0.012 | 0.037 | 0.751 |
| DIST_INL | -0.039 | 0.024 | 0.105 |
| SEASON01 | -0.082 | 0.038 | 0.030 |

|          |        |       |       |
|----------|--------|-------|-------|
| DO       | ON     |       |       |
| LIDO     | 0.188  | 0.024 | 0.000 |
| CHL_A    | 0.162  | 0.032 | 0.000 |
| L1CHL_A  | -0.05  | 0.031 | 0.106 |
| TEMP     | -0.511 | 0.033 | 0.000 |
| SECCHI   | 0.084  | 0.025 | 0.001 |
| PHAEO    | -0.109 | 0.025 | 0.000 |
| DIST_INL | 0.014  | 0.021 | 0.518 |
| SEASON01 | -0.064 | 0.035 | 0.068 |

|          |        |       |       |
|----------|--------|-------|-------|
| CHL_A    | ON     |       |       |
| L1CHL_A  | 0.38   | 0.026 | 0.000 |
| L2CHL_A  | 0.084  | 0.021 | 0.000 |
| TN       | 0.175  | 0.027 | 0.000 |
| TP       | 0.356  | 0.027 | 0.000 |
| TP2      | -0.009 | 0.021 | 0.669 |
| TEMP     | -0.047 | 0.032 | 0.140 |
| L1COLOR  | -0.055 | 0.028 | 0.048 |
| L1SECCHI | 0.01   | 0.039 | 0.797 |
| SALINITY | 0.056  | 0.025 | 0.024 |
| DIST_INL | 0.021  | 0.025 | 0.389 |
| L1TURB   | -0.077 | 0.037 | 0.035 |
| SEASON01 | 0.131  | 0.032 | 0.000 |

|          |        |       |       |
|----------|--------|-------|-------|
| CHL_B    | ON     |       |       |
| L1CHL_B  | 0.236  | 0.033 | 0.000 |
| TN       | 0.022  | 0.034 | 0.528 |
| TP       | 0.045  | 0.036 | 0.208 |
| TP2      | 0.004  | 0.029 | 0.879 |
| TEMP     | 0.111  | 0.044 | 0.010 |
| L1COLOR  | -0.094 | 0.041 | 0.024 |
| L1SECCHI | -0.166 | 0.052 | 0.001 |
| SALINITY | -0.029 | 0.034 | 0.389 |
| DIST_INL | 0.011  | 0.033 | 0.743 |
| L1TURB   | -0.167 | 0.052 | 0.001 |
| SEASON01 | -0.145 | 0.044 | 0.001 |

|          |        |       |       |
|----------|--------|-------|-------|
| CHL_C    | ON     |       |       |
| L1CHL_C  | 0.326  | 0.024 | 0.000 |
| TN       | 0.152  | 0.032 | 0.000 |
| TP       | 0.203  | 0.033 | 0.000 |
| TP2      | -0.025 | 0.027 | 0.355 |
| TEMP     | -0.056 | 0.04  | 0.156 |
| L1COLOR  | -0.044 | 0.036 | 0.227 |
| L1SECCHI | 0.034  | 0.048 | 0.473 |
| SALINITY | 0.104  | 0.031 | 0.001 |
| DIST_INL | -0.014 | 0.03  | 0.642 |

|            |        |       |       |
|------------|--------|-------|-------|
| L1TURB     | -0.137 | 0.047 | 0.004 |
| SEASON01   | 0.077  | 0.04  | 0.056 |
| SECCHI     | ON     |       |       |
| L1SECCHI   | 0.254  | 0.022 | 0.000 |
| TURB       | -0.616 | 0.022 | 0.000 |
| COLOR      | -0.084 | 0.02  | 0.000 |
| CHL_A      | -0.099 | 0.022 | 0.000 |
| SALINITY   | ON     |       |       |
| L1SALINITY | 0.92   | 0.004 | 0.000 |
| RAIN       | -0.076 | 0.01  | 0.000 |
| DIST_INL   | 0.007  | 0.01  | 0.521 |
| TURB       | ON     |       |       |
| L1TURB     | 0.498  | 0.02  | 0.000 |
| DIST_INL   | 0.043  | 0.021 | 0.042 |
| CHL_A      | 0.225  | 0.024 | 0.000 |
| RAIN       | -0.043 | 0.024 | 0.068 |
| SALINITY   | -0.04  | 0.022 | 0.073 |
| PHAEO      | 0.113  | 0.027 | 0.000 |
| L1PHAEO    | -0.137 | 0.027 | 0.000 |
| SEASON01   | -0.068 | 0.024 | 0.005 |
| COLOR      | ON     |       |       |
| L1COLOR    | 0.483  | 0.032 | 0.000 |
| RAIN       | -0.029 | 0.026 | 0.265 |
| SALINITY   | -0.245 | 0.047 | 0.000 |
| DIST_INL   | 0.038  | 0.023 | 0.109 |
| SEASON01   | 0.042  | 0.026 | 0.109 |
| TN         | ON     |       |       |
| DIST_INL   | 0.13   | 0.024 | 0.000 |
| RAIN       | -0.045 | 0.026 | 0.084 |
| SALINITY   | -0.001 | 0.023 | 0.951 |
| PHAEO      | 0.049  | 0.026 | 0.064 |
| SEASON01   | 0.031  | 0.027 | 0.251 |
| L1TN       | 0.558  | 0.021 | 0.000 |
| TP         | ON     |       |       |
| DIST_INL   | -0.107 | 0.022 | 0.000 |
| RAIN       | -0.069 | 0.023 | 0.003 |
| SALINITY   | 0.063  | 0.022 | 0.004 |
| PHAEO      | 0.073  | 0.024 | 0.002 |
| SEASON01   | 0.049  | 0.024 | 0.044 |
| L1TP       | 0.609  | 0.019 | 0.000 |
| RAIN       | ON     |       |       |
| TEMP       | 0.028  | 0.038 | 0.450 |
| SEASON01   | 0.425  | 0.038 | 0.000 |
| L1RAIN     | 0.065  | 0.025 | 0.009 |
| L1CHL_B    | WITH   |       |       |

|            |        |       |       |
|------------|--------|-------|-------|
| L1CHL_C    | 0.266  | 0.027 | 0.000 |
| L1SECCHI   | -0.093 | 0.028 | 0.001 |
| L1DO       | -0.062 | 0.03  | 0.037 |
| L1TURB     | 0.059  | 0.028 | 0.037 |
| TEMP       | -0.088 | 0.028 | 0.002 |
| L1COLOR    | -0.031 | 0.031 | 0.324 |
| L1CHL_A    | 0.136  | 0.03  | 0.000 |
| L2CHL_A    | 0.144  | 0.032 | 0.000 |
| L1RAIN     | 0.004  | 0.027 | 0.870 |
| L1SALINITY | 0.034  | 0.028 | 0.221 |
| DIST_INL   | -0.003 | 0.029 | 0.905 |
| SEASON01   | -0.053 | 0.028 | 0.061 |
| CHL_A      | WITH   |       |       |
| CHL_C      | 0.689  | 0.016 | 0.000 |
| CHL_B      | 0.081  | 0.031 | 0.010 |
| L1SECCHI   | WITH   |       |       |
| L1TURB     | -0.771 | 0.013 | 0.000 |
| CHL_C      | WITH   |       |       |
| CHL_B      | 0.209  | 0.028 | 0.000 |
| DO         | 0.049  | 0.024 | 0.037 |
| L1CHL_C    | WITH   |       |       |
| L1CHL_A    | 0.705  | 0.015 | 0.000 |
| L1SECCHI   | -0.192 | 0.028 | 0.000 |
| L1DO       | 0.059  | 0.029 | 0.043 |
| L1TURB     | 0.244  | 0.026 | 0.000 |
| TEMP       | 0.005  | 0.028 | 0.871 |
| L1COLOR    | -0.077 | 0.03  | 0.010 |
| L2CHL_A    | 0.362  | 0.027 | 0.000 |
| L1RAIN     | -0.013 | 0.027 | 0.637 |
| L1SALINITY | 0.219  | 0.027 | 0.000 |
| DIST_INL   | -0.035 | 0.028 | 0.222 |
| SEASON01   | -0.012 | 0.028 | 0.671 |
| L1CHLA_C   | WITH   |       |       |
| L2CHL_A    | 0.644  | 0.017 | 0.000 |
| SALINITY   | 0      | 0.017 | 0.994 |
| L1SECCHI   | -0.5   | 0.022 | 0.000 |
| L1PHAEO    | 0.222  | 0.03  | 0.000 |
| L1DO       | 0.019  | 0.029 | 0.520 |
| L1TURB     | 0.504  | 0.021 | 0.000 |
| TEMP       | 0.033  | 0.028 | 0.239 |
| L1COLOR    | 0.062  | 0.031 | 0.044 |
| TEMP       | WITH   |       |       |
| COLOR      | -0.025 | 0.018 | 0.167 |
| TP         | 0.004  | 0.016 | 0.822 |
| SEASON01   | 0.785  | 0.01  | 0.000 |
| L1SECCHI   | 0.037  | 0.028 | 0.180 |
| L1PHAEO    | -0.155 | 0.027 | 0.000 |

|            |        |       |       |
|------------|--------|-------|-------|
| LIDO       | -0.398 | 0.023 | 0.000 |
| L1TURB     | -0.035 | 0.027 | 0.200 |
| COLOR      | WITH   |       |       |
| L1SALINITY | 0      | 0.045 | 0.995 |
| TN         | 0.021  | 0.031 | 0.501 |
| TP         | 0.149  | 0.028 | 0.000 |
| L1TURB     | -0.032 | 0.02  | 0.117 |
| TN         | WITH   |       |       |
| TP         | 0.326  | 0.027 | 0.000 |
| TP         | WITH   |       |       |
| TP2        | 0.191  | 0.025 | 0.000 |
| TURB       | WITH   |       |       |
| TN         | 0.333  | 0.028 | 0.000 |
| TP         | 0.383  | 0.027 | 0.000 |
| L1TURB     | WITH   |       |       |
| SECCHI     | 0.101  | 0.022 | 0.000 |
| L1PHAEO    | 0.119  | 0.028 | 0.000 |
| LIDO       | -0.002 | 0.028 | 0.932 |
| L1RAIN     | WITH   |       |       |
| TEMP       | 0.279  | 0.023 | 0.000 |
| SALINITY   | -0.34  | 0.022 | 0.000 |
| L1SECCHI   | 0.073  | 0.026 | 0.005 |
| L1PHAEO    | -0.078 | 0.027 | 0.003 |
| LIDO       | -0.247 | 0.024 | 0.000 |
| L1TURB     | -0.099 | 0.025 | 0.000 |
| L1COLOR    | -0.005 | 0.028 | 0.863 |
| L1CHL_A    | 0.028  | 0.027 | 0.302 |
| L2CHL_A    | -0.1   | 0.027 | 0.000 |
| L1COLOR    | WITH   |       |       |
| TURB       | -0.057 | 0.027 | 0.036 |
| SALINITY   | -0.083 | 0.027 | 0.002 |
| TP         | 0.018  | 0.029 | 0.541 |
| TN         | -0.03  | 0.03  | 0.321 |
| L1SECCHI   | -0.25  | 0.028 | 0.000 |
| L1PHAEO    | -0.022 | 0.031 | 0.485 |
| LIDO       | 0.08   | 0.03  | 0.007 |
| L1TURB     | 0.166  | 0.028 | 0.000 |
| TEMP       | -0.082 | 0.028 | 0.003 |
| L1TP       | WITH   |       |       |
| L1COLOR    | 0.162  | 0.028 | 0.000 |
| SALINITY   | -0.009 | 0.021 | 0.670 |
| L1SECCHI   | -0.519 | 0.021 | 0.000 |
| L1PHAEO    | 0.182  | 0.028 | 0.000 |
| LIDO       | 0.026  | 0.029 | 0.371 |
| L1TURB     | 0.547  | 0.02  | 0.000 |



|            |        |       |       |
|------------|--------|-------|-------|
| TEMP       | 0.008  | 0.028 | 0.767 |
| L1CHL_A    | 0.606  | 0.018 | 0.000 |
| L2CHL_A    | 0.541  | 0.021 | 0.000 |
| L1RAIN     | -0.082 | 0.027 | 0.002 |
| L1SALINITY | 0.163  | 0.027 | 0.000 |
| DIST_INL   | -0.254 | 0.026 | 0.000 |
| SEASON01   | -0.007 | 0.028 | 0.803 |
| L1CHL_B    | 0.049  | 0.028 | 0.083 |
| L1CHL_C    | 0.284  | 0.026 | 0.000 |
|            |        |       |       |
| L1TN       | WITH   |       |       |
| L1CHL_A    | 0.422  | 0.024 | 0.000 |
| L1SECCHI   | -0.441 | 0.023 | 0.000 |
| L1PHAEO    | 0.067  | 0.029 | 0.024 |
| L1DO       | -0.018 | 0.03  | 0.537 |
| L1TURB     | 0.507  | 0.021 | 0.000 |
| TEMP       | 0.04   | 0.029 | 0.162 |
| L1COLOR    | 0.12   | 0.029 | 0.000 |
| L2CHL_A    | 0.354  | 0.027 | 0.000 |
| L1RAIN     | -0.048 | 0.027 | 0.070 |
| L1SALINITY | 0.059  | 0.028 | 0.038 |
| SEASON01   | 0.003  | 0.028 | 0.903 |
| L1CHL_B    | 0.025  | 0.029 | 0.395 |
| L1CHL_C    | 0.201  | 0.028 | 0.000 |
| L1TP       | 0.363  | 0.025 | 0.000 |
|            |        |       |       |
| L1SALINI   | WITH   |       |       |
| L1COLOR    | -0.437 | 0.023 | 0.000 |
| L1SECCHI   | -0.011 | 0.028 | 0.686 |
| L1PHAEO    | 0.114  | 0.028 | 0.000 |
| L1DO       | -0.212 | 0.026 | 0.000 |
| L1TURB     | 0.05   | 0.028 | 0.067 |
| TEMP       | 0.115  | 0.026 | 0.000 |
| L1CHL_A    | 0.269  | 0.026 | 0.000 |
| L2CHL_A    | 0.287  | 0.027 | 0.000 |
| L1RAIN     | -0.053 | 0.027 | 0.046 |
|            |        |       |       |
| DIST_INL   | WITH   |       |       |
| L1TN       | 0.282  | 0.026 | 0.000 |
| L1SECCHI   | -0.038 | 0.027 | 0.162 |
| L1PHAEO    | -0.082 | 0.028 | 0.004 |
| L1DO       | 0.011  | 0.027 | 0.673 |
| L1TURB     | 0.05   | 0.027 | 0.064 |
| TEMP       | 0.005  | 0.027 | 0.843 |
| L1COLOR    | 0.039  | 0.028 | 0.165 |
| L1CHL_A    | -0.046 | 0.028 | 0.103 |
| L2CHL_A    | -0.048 | 0.029 | 0.095 |
| L1RAIN     | -0.006 | 0.026 | 0.816 |
| L1SALINITY | 0.078  | 0.026 | 0.003 |
|            |        |       |       |
| L1DO       | WITH   |       |       |
| SEASON01   | -0.455 | 0.022 | 0.000 |
| L1SECCHI   | 0.011  | 0.028 | 0.692 |

|            |        |       |       |
|------------|--------|-------|-------|
| L1PHAEO    | 0.023  | 0.029 | 0.441 |
| L1PHAEO    | WITH   |       |       |
| L1CHL_B    | 0.425  | 0.024 | 0.000 |
| L1CHL_C    | 0.315  | 0.027 | 0.000 |
| L1SECCHI   | -0.126 | 0.028 | 0.000 |
| CHL_B      | WITH   |       |       |
| DO         | -0.056 | 0.033 | 0.085 |
| L2CHLA_C   | WITH   |       |       |
| L1SECCHI   | -0.387 | 0.026 | 0.000 |
| L1PHAEO    | 0.249  | 0.032 | 0.000 |
| L1DO       | 0      | 0.03  | 0.990 |
| L1TURB     | 0.386  | 0.024 | 0.000 |
| TEMP       | -0.071 | 0.029 | 0.013 |
| L1COLOR    | 0.056  | 0.032 | 0.080 |
| SEASONRO   | WITH   |       |       |
| L1SECCHI   | 0.029  | 0.027 | 0.296 |
| L1PHAEO    | -0.125 | 0.028 | 0.000 |
| L1TURB     | -0.026 | 0.027 | 0.332 |
| L1COLOR    | -0.095 | 0.028 | 0.001 |
| L1CHL_A    | 0.009  | 0.028 | 0.745 |
| L2CHL_A    | -0.094 | 0.029 | 0.001 |
| L1RAIN     | 0.368  | 0.022 | 0.000 |
| L1SALINITY | 0.123  | 0.026 | 0.000 |
| DIST_INL   | -0.002 | 0.026 | 0.950 |
| TP2        | WITH   |       |       |
| L1SECCHI   | -0.093 | 0.028 | 0.001 |
| L1PHAEO    | -0.07  | 0.032 | 0.027 |
| L1DO       | 0.015  | 0.03  | 0.611 |
| L1TURB     | 0.09   | 0.028 | 0.001 |
| TEMP       | 0.043  | 0.028 | 0.130 |
| L1COLOR    | -0.019 | 0.031 | 0.529 |
| L1CHL_A    | 0.161  | 0.028 | 0.000 |
| L2CHL_A    | 0.159  | 0.028 | 0.000 |
| L1RAIN     | -0.026 | 0.026 | 0.324 |
| L1SALINITY | 0.117  | 0.028 | 0.000 |
| DIST_INL   | 0.075  | 0.029 | 0.008 |
| SEASON01   | 0.048  | 0.029 | 0.092 |
| L1CHL_B    | -0.001 | 0.031 | 0.986 |
| L1CHL_C    | 0.035  | 0.03  | 0.243 |
| L1TP       | 0.211  | 0.029 | 0.000 |
| L1TN       | 0.055  | 0.029 | 0.058 |

Region  
MOSQUITO

|         |       |       |       |
|---------|-------|-------|-------|
| PHAEO   | ON    |       |       |
| L1PHAEO | 0.452 | 0.026 | 0.000 |
| CHL_A   | 0.137 | 0.032 | 0.000 |
| TEMP    | 0.101 | 0.046 | 0.029 |

|          |        |       |       |
|----------|--------|-------|-------|
| DIST_INL | -0.075 | 0.028 | 0.007 |
| SEASON01 | -0.031 | 0.046 | 0.495 |
| DO       | ON     |       |       |
| L1DO     | 0.239  | 0.029 | 0.000 |
| CHL_A    | 0.194  | 0.036 | 0.000 |
| L1CHL_A  | 0.023  | 0.031 | 0.455 |
| TEMP     | -0.494 | 0.038 | 0.000 |
| SECCHI   | 0.085  | 0.031 | 0.006 |
| PHAEO    | -0.098 | 0.026 | 0.000 |
| DIST_INL | -0.038 | 0.024 | 0.107 |
| SEASON01 | -0.116 | 0.04  | 0.004 |
| CHL_A    | ON     |       |       |
| L1CHL_A  | 0.412  | 0.026 | 0.000 |
| L2CHL_A  | 0.03   | 0.02  | 0.132 |
| TN       | 0.244  | 0.028 | 0.000 |
| TP       | 0.311  | 0.028 | 0.000 |
| TP2      | -0.088 | 0.024 | 0.000 |
| TEMP     | 0.121  | 0.035 | 0.000 |
| L1COLOR  | -0.097 | 0.023 | 0.000 |
| L1SECCHI | 0.048  | 0.031 | 0.122 |
| SALINITY | 0.043  | 0.023 | 0.062 |
| DIST_INL | 0.002  | 0.026 | 0.940 |
| L1TURB   | 0.006  | 0.029 | 0.829 |
| SEASON01 | 0.06   | 0.034 | 0.080 |
| CHL_B    | ON     |       |       |
| L1CHL_B  | 0.378  | 0.029 | 0.000 |
| TN       | -0.03  | 0.041 | 0.472 |
| TP       | 0.066  | 0.041 | 0.113 |
| TP2      | 0.001  | 0.034 | 0.976 |
| TEMP     | 0.15   | 0.051 | 0.003 |
| L1COLOR  | -0.003 | 0.035 | 0.938 |
| L1SECCHI | 0.053  | 0.044 | 0.232 |
| SALINITY | -0.004 | 0.034 | 0.910 |
| DIST_INL | 0      | 0.039 | 0.990 |
| L1TURB   | 0.002  | 0.043 | 0.965 |
| SEASON01 | -0.056 | 0.05  | 0.265 |
| CHL_C    | ON     |       |       |
| L1CHL_C  | 0.33   | 0.025 | 0.000 |
| TN       | 0.08   | 0.036 | 0.028 |
| TP       | 0.29   | 0.036 | 0.000 |
| TP2      | -0.078 | 0.03  | 0.009 |
| TEMP     | 0.166  | 0.044 | 0.000 |
| L1COLOR  | -0.053 | 0.03  | 0.077 |
| L1SECCHI | 0.084  | 0.039 | 0.033 |
| SALINITY | 0.056  | 0.03  | 0.060 |
| DIST_INL | 0.037  | 0.034 | 0.277 |
| L1TURB   | 0.005  | 0.038 | 0.889 |
| SEASON01 | 0.056  | 0.044 | 0.202 |

|            |        |       |       |
|------------|--------|-------|-------|
| SECCHI     | ON     |       |       |
| L1SECCHI   | 0.239  | 0.027 | 0.000 |
| TURB       | -0.46  | 0.027 | 0.000 |
| COLOR      | 0.034  | 0.025 | 0.170 |
| CHL_A      | -0.258 | 0.027 | 0.000 |
|            |        |       |       |
| SALINITY   | ON     |       |       |
| L1SALINITY | 0.724  | 0.015 | 0.000 |
| RAIN       | -0.108 | 0.02  | 0.000 |
| DIST_INL   | -0.029 | 0.022 | 0.174 |
|            |        |       |       |
| TURB       | ON     |       |       |
| L1TURB     | 0.316  | 0.027 | 0.000 |
| DIST_INL   | -0.054 | 0.026 | 0.038 |
| CHL_A      | 0.199  | 0.031 | 0.000 |
| RAIN       | -0.086 | 0.028 | 0.002 |
| SALINITY   | -0.021 | 0.026 | 0.430 |
| PHAEO      | 0.184  | 0.03  | 0.000 |
| L1PHAEO    | -0.089 | 0.029 | 0.002 |
| SEASON01   | 0.178  | 0.031 | 0.000 |
|            |        |       |       |
| COLOR      | ON     |       |       |
| L1COLOR    | 0.382  | 0.027 | 0.000 |
| RAIN       | 0.101  | 0.027 | 0.000 |
| SALINITY   | -0.398 | 0.035 | 0.000 |
| DIST_INL   | -0.032 | 0.025 | 0.201 |
| SEASON01   | 0.12   | 0.027 | 0.000 |
|            |        |       |       |
| TN         | ON     |       |       |
| DIST_INL   | 0.212  | 0.024 | 0.000 |
| RAIN       | 0.088  | 0.024 | 0.000 |
| SALINITY   | -0.034 | 0.023 | 0.131 |
| PHAEO      | 0.02   | 0.024 | 0.415 |
| SEASON01   | 0.207  | 0.025 | 0.000 |
| L1TN       | 0.518  | 0.024 | 0.000 |
|            |        |       |       |
| TP         | ON     |       |       |
| DIST_INL   | -0.149 | 0.027 | 0.000 |
| RAIN       | -0.009 | 0.025 | 0.703 |
| SALINITY   | -0.012 | 0.025 | 0.629 |
| PHAEO      | 0.124  | 0.025 | 0.000 |
| SEASON01   | 0.177  | 0.029 | 0.000 |
| L1TP       | 0.414  | 0.025 | 0.000 |
|            |        |       |       |
| RAIN       | ON     |       |       |
| TEMP       | 0.025  | 0.046 | 0.592 |
| SEASON01   | 0.4    | 0.045 | 0.000 |
| L1RAIN     | 0.1    | 0.029 | 0.000 |
|            |        |       |       |
| L1CHL_B    | WITH   |       |       |
| L1CHL_C    | 0.24   | 0.03  | 0.000 |
| L1SECCHI   | -0.132 | 0.033 | 0.000 |
| L1DO       | -0.128 | 0.033 | 0.000 |

|            |        |       |       |
|------------|--------|-------|-------|
| L1TURB     | 0.112  | 0.032 | 0.000 |
| TEMP       | 0.052  | 0.032 | 0.105 |
| L1COLOR    | 0.08   | 0.033 | 0.014 |
| L1CHL_A    | 0.12   | 0.032 | 0.000 |
| L2CHL_A    | 0.037  | 0.033 | 0.260 |
| L1RAIN     | -0.005 | 0.031 | 0.867 |
| L1SALINITY | 0.006  | 0.032 | 0.851 |
| DIST_INL   | -0.049 | 0.033 | 0.131 |
| SEASON01   | 0.034  | 0.032 | 0.298 |
| CHL_A      | WITH   |       |       |
| CHL_C      | 0.709  | 0.016 | 0.000 |
| CHL_B      | 0.143  | 0.032 | 0.000 |
| L1SECCHI   | WITH   |       |       |
| L1TURB     | -0.662 | 0.02  | 0.000 |
| CHL_C      | WITH   |       |       |
| CHL_B      | 0.2    | 0.031 | 0.000 |
| DO         | 0.012  | 0.025 | 0.636 |
| L1CHL_C    | WITH   |       |       |
| L1CHL_A    | 0.782  | 0.013 | 0.000 |
| L1SECCHI   | -0.436 | 0.027 | 0.000 |
| L1DO       | -0.181 | 0.032 | 0.000 |
| L1TURB     | 0.406  | 0.027 | 0.000 |
| TEMP       | 0.257  | 0.03  | 0.000 |
| L1COLOR    | 0.114  | 0.032 | 0.000 |
| L2CHL_A    | 0.439  | 0.026 | 0.000 |
| L1RAIN     | 0.172  | 0.029 | 0.000 |
| L1SALINITY | 0.096  | 0.032 | 0.003 |
| DIST_INL   | -0.037 | 0.032 | 0.242 |
| SEASON01   | 0.272  | 0.029 | 0.000 |
| L1CHLA_C   | WITH   |       |       |
| L2CHL_A    | 0.653  | 0.018 | 0.000 |
| SALINITY   | 0.027  | 0.015 | 0.071 |
| L1SECCHI   | -0.579 | 0.022 | 0.000 |
| L1PHAEO    | 0.281  | 0.03  | 0.000 |
| L1DO       | -0.219 | 0.031 | 0.000 |
| L1TURB     | 0.518  | 0.023 | 0.000 |
| TEMP       | 0.288  | 0.029 | 0.000 |
| L1COLOR    | 0.197  | 0.031 | 0.000 |
| TEMP       | WITH   |       |       |
| COLOR      | -0.023 | 0.019 | 0.233 |
| TP         | 0.019  | 0.018 | 0.292 |
| SEASON01   | 0.798  | 0.011 | 0.000 |
| L1SECCHI   | -0.28  | 0.031 | 0.000 |
| L1PHAEO    | 0.094  | 0.032 | 0.003 |
| L1DO       | -0.45  | 0.026 | 0.000 |
| L1TURB     | 0.319  | 0.028 | 0.000 |

|            |        |       |       |
|------------|--------|-------|-------|
| COLOR      | WITH   |       |       |
| L1SALINITY | 0.073  | 0.036 | 0.044 |
| TN         | 0.18   | 0.032 | 0.000 |
| TP         | 0.148  | 0.026 | 0.000 |
| L1TURB     | -0.012 | 0.022 | 0.586 |
| TN         | WITH   |       |       |
| TP         | 0.292  | 0.027 | 0.000 |
| TP         | WITH   |       |       |
| TP2        | 0.493  | 0.023 | 0.000 |
| TURB       | WITH   |       |       |
| TN         | 0.153  | 0.033 | 0.000 |
| TP         | 0.318  | 0.028 | 0.000 |
| L1TURB     | WITH   |       |       |
| SECCHI     | 0.077  | 0.026 | 0.003 |
| L1PHAEO    | 0.289  | 0.03  | 0.000 |
| L1DO       | -0.349 | 0.028 | 0.000 |
| L1RAIN     | WITH   |       |       |
| TEMP       | 0.297  | 0.027 | 0.000 |
| SALINITY   | -0.33  | 0.026 | 0.000 |
| L1SECCHI   | -0.113 | 0.03  | 0.000 |
| L1PHAEO    | 0.099  | 0.03  | 0.001 |
| L1DO       | -0.233 | 0.028 | 0.000 |
| L1TURB     | 0.099  | 0.029 | 0.001 |
| L1COLOR    | 0.186  | 0.03  | 0.000 |
| L1CHL_A    | 0.236  | 0.028 | 0.000 |
| L2CHL_A    | 0.135  | 0.029 | 0.000 |
| L1COLOR    | WITH   |       |       |
| TURB       | 0.013  | 0.027 | 0.640 |
| SALINITY   | -0.011 | 0.027 | 0.696 |
| TP         | 0.014  | 0.026 | 0.587 |
| TN         | 0.007  | 0.027 | 0.791 |
| L1SECCHI   | -0.131 | 0.034 | 0.000 |
| L1PHAEO    | 0.074  | 0.033 | 0.024 |
| L1DO       | -0.137 | 0.032 | 0.000 |
| L1TURB     | 0.184  | 0.031 | 0.000 |
| TEMP       | -0.002 | 0.032 | 0.945 |
| L1TP       | WITH   |       |       |
| L1COLOR    | 0.248  | 0.03  | 0.000 |
| SALINITY   | 0      | 0.024 | 1.000 |
| L1SECCHI   | -0.556 | 0.023 | 0.000 |
| L1PHAEO    | 0.258  | 0.031 | 0.000 |
| L1DO       | -0.265 | 0.03  | 0.000 |
| L1TURB     | 0.56   | 0.022 | 0.000 |
| TEMP       | 0.252  | 0.03  | 0.000 |
| L1CHL_A    | 0.535  | 0.023 | 0.000 |
| L2CHL_A    | 0.381  | 0.027 | 0.000 |

|            |        |       |       |
|------------|--------|-------|-------|
| L1RAIN     | 0.121  | 0.03  | 0.000 |
| L1SALINITY | 0.05   | 0.033 | 0.126 |
| DIST_INL   | -0.279 | 0.029 | 0.000 |
| SEASON01   | 0.255  | 0.029 | 0.000 |
| L1CHL_B    | 0.084  | 0.033 | 0.010 |
| L1CHL_C    | 0.397  | 0.027 | 0.000 |
| L1TN       | WITH   |       |       |
| L1CHL_A    | 0.509  | 0.024 | 0.000 |
| L1SECCHI   | -0.298 | 0.032 | 0.000 |
| L1PHAEO    | 0.108  | 0.033 | 0.001 |
| L1DO       | -0.301 | 0.03  | 0.000 |
| L1TURB     | 0.332  | 0.028 | 0.000 |
| TEMP       | 0.244  | 0.03  | 0.000 |
| L1COLOR    | 0.317  | 0.029 | 0.000 |
| L2CHL_A    | 0.365  | 0.028 | 0.000 |
| L1RAIN     | 0.263  | 0.028 | 0.000 |
| L1SALINITY | -0.165 | 0.031 | 0.000 |
| SEASON01   | 0.291  | 0.029 | 0.000 |
| L1CHL_B    | 0.008  | 0.033 | 0.811 |
| L1CHL_C    | 0.284  | 0.03  | 0.000 |
| L1TP       | 0.278  | 0.03  | 0.000 |
| L1SALINI   | WITH   |       |       |
| L1COLOR    | -0.505 | 0.024 | 0.000 |
| L1SECCHI   | -0.115 | 0.032 | 0.000 |
| L1PHAEO    | 0.019  | 0.032 | 0.548 |
| L1DO       | -0.017 | 0.032 | 0.586 |
| L1TURB     | 0.027  | 0.032 | 0.402 |
| TEMP       | 0.14   | 0.031 | 0.000 |
| L1CHL_A    | 0.077  | 0.032 | 0.016 |
| L2CHL_A    | 0.059  | 0.033 | 0.068 |
| L1RAIN     | -0.065 | 0.031 | 0.034 |
| DIST_INL   | WITH   |       |       |
| L1TN       | 0.42   | 0.026 | 0.000 |
| L1SECCHI   | 0.043  | 0.032 | 0.184 |
| L1PHAEO    | -0.137 | 0.032 | 0.000 |
| L1DO       | -0.003 | 0.032 | 0.920 |
| L1TURB     | -0.092 | 0.031 | 0.003 |
| TEMP       | -0.045 | 0.031 | 0.148 |
| L1COLOR    | 0.018  | 0.032 | 0.574 |
| L1CHL_A    | 0.005  | 0.031 | 0.868 |
| L2CHL_A    | -0.005 | 0.032 | 0.887 |
| L1RAIN     | 0.025  | 0.031 | 0.418 |
| L1SALINITY | -0.111 | 0.031 | 0.000 |
| L1DO       | WITH   |       |       |
| SEASON01   | -0.506 | 0.024 | 0.000 |
| L1SECCHI   | 0.25   | 0.032 | 0.000 |
| L1PHAEO    | -0.214 | 0.032 | 0.000 |
| L1PHAEO    | WITH   |       |       |

|            |        |       |       |
|------------|--------|-------|-------|
| L1CHL_B    | 0.249  | 0.031 | 0.000 |
| L1CHL_C    | 0.283  | 0.03  | 0.000 |
| L1SECCHI   | -0.204 | 0.033 | 0.000 |
| CHL_B      | WITH   |       |       |
| DO         | -0.046 | 0.035 | 0.184 |
| L2CHLA_C   | WITH   |       |       |
| L1SECCHI   | -0.422 | 0.028 | 0.000 |
| L1PHAEO    | 0.205  | 0.031 | 0.000 |
| L1DO       | -0.152 | 0.032 | 0.000 |
| L1TURB     | 0.385  | 0.027 | 0.000 |
| TEMP       | 0.076  | 0.032 | 0.018 |
| L1COLOR    | 0.198  | 0.031 | 0.000 |
| SEASONRO   | WITH   |       |       |
| L1SECCHI   | -0.249 | 0.031 | 0.000 |
| L1PHAEO    | 0.142  | 0.032 | 0.000 |
| L1TURB     | 0.325  | 0.028 | 0.000 |
| L1COLOR    | 0.005  | 0.031 | 0.880 |
| L1CHL_A    | 0.318  | 0.028 | 0.000 |
| L2CHL_A    | 0.085  | 0.031 | 0.007 |
| L1RAIN     | 0.306  | 0.027 | 0.000 |
| L1SALINITY | 0.134  | 0.031 | 0.000 |
| DIST_INL   | -0.004 | 0.031 | 0.893 |
| TP2        | WITH   |       |       |
| L1SECCHI   | 0.017  | 0.03  | 0.565 |
| L1PHAEO    | -0.002 | 0.029 | 0.949 |
| L1DO       | -0.018 | 0.029 | 0.549 |
| L1TURB     | 0.01   | 0.029 | 0.737 |
| TEMP       | 0.012  | 0.032 | 0.697 |
| L1COLOR    | 0.045  | 0.032 | 0.158 |
| L1CHL_A    | 0.057  | 0.029 | 0.048 |
| L2CHL_A    | 0.007  | 0.028 | 0.811 |
| L1RAIN     | 0.061  | 0.026 | 0.019 |
| L1SALINITY | -0.087 | 0.031 | 0.005 |
| DIST_INL   | 0.052  | 0.032 | 0.109 |
| SEASON01   | 0.009  | 0.032 | 0.785 |
| L1CHL_B    | 0.015  | 0.028 | 0.591 |
| L1CHL_C    | 0.052  | 0.028 | 0.064 |
| L1TP       | 0.041  | 0.033 | 0.206 |
| L1TN       | 0.092  | 0.029 | 0.002 |

## R-SQUARE

Region

| Jupiter to St. Lucie |          |       |         |
|----------------------|----------|-------|---------|
| Variable             | R-Square | S.E.  | P-Value |
| SECCHI               | 0.581    | 0.022 | 0.000   |
| DO                   | 0.504    | 0.023 | 0.000   |
| PHAEO                | 0.253    | 0.026 | 0.000   |
| TURB                 | 0.441    | 0.024 | 0.000   |
| COLOR                | 0.749    | 0.014 | 0.000   |



|          |       |       |       |
|----------|-------|-------|-------|
| CHL_A    | 0.493 | 0.025 | 0.000 |
| RAIN     | 0.341 | 0.025 | 0.000 |
| SALINITY | 0.174 | 0.023 | 0.000 |
| CHL_B    | 0.025 | 0.012 | 0.033 |
| CHL_C    | 0.297 | 0.027 | 0.000 |
| TN       | 0.184 | 0.023 | 0.000 |
| TP       | 0.59  | 0.021 | 0.000 |

Region

St. Lucie - Ft. Pierce

| Variable | R-Square | S.E.  | P-Value |
|----------|----------|-------|---------|
| SECCHI   | 0.555    | 0.018 | 0.000   |
| DO       | 0.286    | 0.022 | 0.000   |
| PHAEO    | 0.296    | 0.024 | 0.000   |
| TURB     | 0.407    | 0.022 | 0.000   |
| COLOR    | 0.461    | 0.019 | 0.000   |
| CHL_A    | 0.283    | 0.021 | 0.000   |
| RAIN     | 0.387    | 0.02  | 0.000   |
| SALINITY | 0.095    | 0.015 | 0.000   |
| CHL_B    | 0.081    | 0.019 | 0.000   |
| CHL_C    | 0.17     | 0.02  | 0.000   |
| TN       | 0.098    | 0.016 | 0.000   |
| TP       | 0.254    | 0.018 | 0.000   |

Region

Ft. Pierce-Sebastian

| Variable | R-Square | S.E.  | P-Value |
|----------|----------|-------|---------|
| SECCHI   | 0.589    | 0.016 | 0.000   |
| DO       | 0.396    | 0.018 | 0.000   |
| PHAEO    | 0.357    | 0.018 | 0.000   |
| TURB     | 0.344    | 0.018 | 0.000   |
| COLOR    | 0.693    | 0.011 | 0.000   |
| CHL_A    | 0.378    | 0.018 | 0.000   |
| RAIN     | 0.246    | 0.016 | 0.000   |
| SALINITY | 0.277    | 0.017 | 0.000   |
| CHL_B    | 0.108    | 0.014 | 0.000   |
| CHL_C    | 0.206    | 0.017 | 0.000   |
| TN       | 0.398    | 0.017 | 0.000   |
| TP       | 0.497    | 0.015 | 0.000   |

Region

Sebastian-S. end Merritt Isl.

| Variable | R-Square | S.E.  | P-Value |
|----------|----------|-------|---------|
| SECCHI   | 0.637    | 0.017 | 0.000   |
| DO       | 0.433    | 0.019 | 0.000   |
| PHAEO    | 0.323    | 0.024 | 0.000   |
| TURB     | 0.34     | 0.021 | 0.000   |
| COLOR    | 0.715    | 0.013 | 0.000   |
| CHL_A    | 0.379    | 0.021 | 0.000   |
| RAIN     | 0.222    | 0.018 | 0.000   |
| SALINITY | 0.458    | 0.018 | 0.000   |
| CHL_B    | 0.176    | 0.021 | 0.000   |
| CHL_C    | 0.254    | 0.02  | 0.000   |
| TN       | 0.457    | 0.02  | 0.000   |
| TP       | 0.31     | 0.021 | 0.000   |

Region

S. Merritt Isl. - TitusvilleN

| Variable | R-Square | S.E.  | P-Value |
|----------|----------|-------|---------|
| SECCHI   | 0.57     | 0.017 | 0.000   |

|          |       |       |       |
|----------|-------|-------|-------|
| DO       | 0.464 | 0.018 | 0.000 |
| PHAEO    | 0.297 | 0.022 | 0.000 |
| TURB     | 0.315 | 0.02  | 0.000 |
| COLOR    | 0.39  | 0.021 | 0.000 |
| CHL_A    | 0.53  | 0.017 | 0.000 |
| RAIN     | 0.227 | 0.017 | 0.000 |
| SALINITY | 0.81  | 0.008 | 0.000 |
| CHL_B    | 0.087 | 0.017 | 0.000 |
| CHL_C    | 0.328 | 0.019 | 0.000 |
| TN       | 0.37  | 0.021 | 0.000 |
| TP       | 0.355 | 0.02  | 0.000 |

Region

|          |          |       |         |  |
|----------|----------|-------|---------|--|
| BANANA   |          |       |         |  |
| Variable | R-Square | S.E.  | P-Value |  |
| SECCHI   | 0.646    | 0.017 | 0.000   |  |
| DO       | 0.422    | 0.021 | 0.000   |  |
| PHAEO    | 0.335    | 0.026 | 0.000   |  |
| TURB     | 0.437    | 0.022 | 0.000   |  |
| COLOR    | 0.393    | 0.024 | 0.000   |  |
| CHL_A    | 0.523    | 0.019 | 0.000   |  |
| RAIN     | 0.226    | 0.019 | 0.000   |  |
| SALINITY | 0.847    | 0.007 | 0.000   |  |
| CHL_B    | 0.086    | 0.018 | 0.000   |  |
| CHL_C    | 0.231    | 0.021 | 0.000   |  |
| TN       | 0.378    | 0.023 | 0.000   |  |
| TP       | 0.46     | 0.021 | 0.000   |  |

Region

|          |          |       |         |  |
|----------|----------|-------|---------|--|
| MOSQUITO |          |       |         |  |
| Variable | R-Square | S.E.  | P-Value |  |
| SECCHI   | 0.557    | 0.023 | 0.000   |  |
| DO       | 0.5      | 0.023 | 0.000   |  |
| PHAEO    | 0.292    | 0.025 | 0.000   |  |
| TURB     | 0.365    | 0.024 | 0.000   |  |
| COLOR    | 0.424    | 0.024 | 0.000   |  |
| CHL_A    | 0.603    | 0.019 | 0.000   |  |
| RAIN     | 0.212    | 0.022 | 0.000   |  |
| SALINITY | 0.539    | 0.021 | 0.000   |  |
| CHL_B    | 0.162    | 0.023 | 0.000   |  |
| CHL_C    | 0.345    | 0.024 | 0.000   |  |
| TN       | 0.559    | 0.021 | 0.000   |  |
| TP       | 0.351    | 0.024 | 0.000   |  |