

Appendix A - Long-term Trends in Water Quality Parameters

Appendix A - Section IA. Blocked seasonal Kendall Long-term trends in water quality for the James River (1985-2008). Parameters are as follows: STN=Surface total nitrogen, BTN=Bottom total nitrogen, SDIN=Surface dissolved inorganic nitrogen, BDIN=Bottom dissolved inorganic nitrogen, STP=Surface total phosphorus, BTP=Bottom total phosphorus, SPO4F=Surface dissolved inorganic phosphorus, BPO4F=Bottom dissolved inorganic phosphorus.

| Segment | Season | Parameter | '93 | | '93 | | '08 | | '08 | | Trend | | Combined | Combined |
|---------|--------|-----------|---------|--------|-----------|---------|--------|-----------|---------|------------|------------|--------------|----------|-----------|
| | | | Trend | '93 | Trend | '93 | Trend | '08 | Trend | '08 | Comparison | P value | Trend | Trend |
| | | | P value | Slope | Direction | P value | Slope | Direction | P value | Comparison | P value | Comparison | P value | Direction |
| APPTF | Annual | STN | 0.0114 | -0.024 | No Trend | 0.2196 | 0.005 | No Trend | 0.0189 | Same | 0.8243 | No Trend | | |
| APPTF | Annual | BTN | 0.1008 | -0.018 | No Trend | 0.8836 | 0.001 | No Trend | 0.3399 | Same | 0.4840 | No Trend | | |
| APPTF | Annual | SDIN | 0.3251 | -0.005 | No Trend | 0.5865 | 0.001 | No Trend | 0.3334 | Same | 0.9877 | No Trend | | |
| APPTF | Annual | BDIN | 0.1297 | -0.006 | No Trend | 0.9860 | 0.000 | No Trend | 0.4502 | Same | 0.4689 | No Trend | | |
| APPTF | Annual | STP | 0.7501 | 0.000 | No Trend | 0.0640 | -0.001 | No Trend | 0.0731 | Same | 0.1456 | No Trend | | |
| APPTF | Annual | BTP | 0.0346 | 0.003 | No Trend | 0.1490 | -0.001 | No Trend | 0.0216 | Same | 0.8171 | No Trend | | |
| APPTF | Annual | SPO4F | 0.0005 | -0.001 | Improving | 0.0002 | -0.001 | Improving | 0.0884 | Same | 0.0000 | Improving | | |
| APPTF | Annual | BPO4F | 0.0001 | -0.002 | Improving | 0.0001 | -0.001 | Improving | 0.1058 | Same | 0.0000 | Improving | | |
| JMSTF2 | Annual | STN | 0.0001 | -0.044 | Improving | 0.0629 | 0.007 | No Trend | 0.0004 | Different | 0.7754 | Improving 85 | | |
| JMSTF2 | Annual | BTN | 0.0000 | -0.110 | Improving | 0.0173 | 0.011 | No Trend | 0.0000 | Different | 0.2447 | Improving 85 | | |
| JMSTF2 | Annual | SDIN | 0.0002 | -0.020 | Improving | 0.0187 | 0.006 | No Trend | 0.0001 | Different | 0.7061 | Improving 85 | | |
| JMSTF2 | Annual | BDIN | 0.0000 | -0.055 | Improving | 0.0016 | 0.010 | Degrading | 0.0000 | Different | 0.8789 | I85-D95 | | |
| JMSTF2 | Annual | STP | 0.0000 | -0.013 | Improving | 0.0032 | -0.002 | Improving | 0.9884 | Same | 0.0000 | Improving | | |
| JMSTF2 | Annual | BTP | 0.0000 | -0.019 | Improving | 0.0521 | -0.001 | No Trend | 0.1813 | Same | 0.0000 | Improving | | |
| JMSTF2 | Annual | SPO4F | 0.0000 | -0.011 | Improving | 0.0004 | -0.001 | Improving | 0.6882 | Same | 0.0000 | Improving | | |
| JMSTF2 | Annual | BPO4F | 0.0000 | -0.015 | Improving | 0.0061 | -0.001 | Improving | 0.6638 | Same | 0.0000 | Improving | | |
| JMSTF1 | Annual | STN | 0.0808 | -0.023 | No Trend | 0.1451 | -0.005 | No Trend | 0.6824 | Same | 0.0326 | No Trend | | |
| JMSTF1 | Annual | BTN | 0.1387 | -0.029 | No Trend | 0.0063 | -0.013 | Improving | 0.0936 | Same | 0.0018 | Improving | | |
| JMSTF1 | Annual | SDIN | 0.0022 | -0.026 | Improving | 0.7376 | 0.001 | No Trend | 0.0791 | Same | 0.2437 | No Trend | | |
| JMSTF1 | Annual | BDIN | 0.0003 | -0.028 | Improving | 0.9060 | 0.000 | No Trend | 0.0705 | Same | 0.1098 | No Trend | | |
| JMSTF1 | Annual | STP | 0.1733 | 0.001 | No Trend | 0.0010 | -0.001 | Improving | 0.0004 | Different | 0.0238 | Improving 95 | | |
| JMSTF1 | Annual | BTP | 0.0008 | 0.005 | Degrading | 0.0325 | -0.002 | No Trend | 0.0005 | Different | 0.7660 | Degrading 85 | | |
| JMSTF1 | Annual | SPO4F | 0.0000 | -0.003 | Improving | 0.0000 | -0.001 | Improving | 0.0433 | Same | 0.0000 | Improving | | |
| JMSTF1 | Annual | BPO4F | 0.0000 | -0.002 | Improving | 0.0000 | -0.001 | Improving | 0.0041 | Different | 0.0000 | I85-D95 | | |
| CHKOH | Annual | STN | 0.0290 | -0.037 | No Trend | 0.2646 | -0.003 | No Trend | 0.6929 | Same | 0.0829 | No Trend | | |
| CHKOH | Annual | BTN | 0.2880 | -0.028 | No Trend | 0.0592 | -0.008 | No Trend | 0.1381 | Same | 0.0331 | No Trend | | |
| CHKOH | Annual | SDIN | 0.0751 | 0.000 | High BDLs | 0.0308 | 0.002 | No Trend | 0.0112 | Same | 0.0974 | No Trend | | |
| CHKOH | Annual | BDIN | 0.1058 | 0.000 | High BDLs | 0.4721 | 0.000 | No Trend | 0.2784 | Same | 0.7514 | No Trend | | |
| CHKOH | Annual | STP | 0.0311 | 0.003 | No Trend | 0.0221 | -0.001 | No Trend | 0.0048 | Different | 0.1149 | No Trend* | | |
| CHKOH | Annual | BTP | 0.0315 | 0.005 | No Trend | 0.0234 | -0.002 | No Trend | 0.0051 | Different | 0.1231 | No Trend* | | |
| CHKOH | Annual | SPO4F | 0.1546 | 0.000 | High BDLs | 0.0049 | 0.000 | Improving | 0.0131 | Same | 0.0023 | Improving | | |
| CHKOH | Annual | BPO4F | 0.0335 | 0.000 | High BDLs | 0.0053 | 0.000 | Improving | 0.0235 | Same | 0.0014 | Improving | | |
| JMSOH | Annual | STN | 0.0943 | -0.012 | No Trend | 0.6245 | 0.001 | No Trend | 0.2167 | Same | 0.7098 | No Trend | | |
| JMSOH | Annual | BTN | 0.1169 | 0.020 | No Trend | 0.3147 | -0.005 | No Trend | 0.1011 | Same | 0.8923 | No Trend | | |
| JMSOH | Annual | SDIN | 0.0001 | -0.013 | Improving | 0.4277 | 0.002 | No Trend | 0.0113 | Same | 0.2572 | No Trend | | |
| JMSOH | Annual | BDIN | 0.0002 | -0.015 | Improving | 0.9051 | 0.000 | No Trend | 0.0616 | Same | 0.0973 | No Trend | | |
| JMSOH | Annual | STP | 0.0000 | 0.005 | Degrading | 0.5511 | 0.000 | No Trend | 0.0136 | Same | 0.1586 | No Trend | | |
| JMSOH | Annual | BTP | 0.0000 | 0.012 | Degrading | 0.1126 | -0.002 | No Trend | 0.0001 | Different | 0.2619 | Degrading 85 | | |
| JMSOH | Annual | SPO4F | 0.1452 | 0.000 | No Trend | 0.5232 | 0.000 | No Trend | 0.9298 | Same | 0.2177 | No Trend | | |
| JMSOH | Annual | BPO4F | 0.4470 | 0.000 | No Trend | 0.2281 | 0.000 | No Trend | 0.4692 | Same | 0.1519 | No Trend | | |
| JMSMH | Annual | STN | 0.0808 | 0.013 | No Trend | 0.5925 | 0.001 | No Trend | 0.7638 | Same | 0.2069 | No Trend | | |
| JMSMH | Annual | BTN | 0.0033 | 0.019 | Degrading | 0.9060 | 0.001 | No Trend | 0.2459 | Same | 0.1694 | No Trend | | |
| JMSMH | Annual | SDIN | 0.8347 | 0.000 | No Trend | 0.5951 | 0.001 | No Trend | 0.5590 | Same | 0.7121 | No Trend | | |
| JMSMH | Annual | BDIN | 0.8542 | 0.000 | No Trend | 0.7839 | 0.000 | No Trend | 0.7326 | Same | 0.8766 | No Trend | | |
| JMSMH | Annual | STP | 0.0000 | 0.004 | Degrading | 0.5093 | 0.000 | No Trend | 0.0062 | Different | 0.1189 | Degrading 85 | | |
| JMSMH | Annual | BTP | 0.0000 | 0.003 | Degrading | 0.3958 | 0.000 | No Trend | 0.0051 | Different | 0.1976 | Degrading 85 | | |
| JMSMH | Annual | SPO4F | 0.0020 | 0.001 | Degrading | 0.3812 | 0.000 | No Trend | 0.5783 | Same | 0.0327 | No Trend | | |
| JMSMH | Annual | BPO4F | 0.0009 | 0.001 | Degrading | 0.7182 | 0.000 | No Trend | 0.2716 | Same | 0.0796 | No Trend | | |

Appendix A - Section IA. James River (1985-2008) - Continued.

| Segment | Season | Parameter | '93 | | '93 | | '08 | | '08 | | Trend | | Combined | | Combined |
|---------|--------|-----------|---------|--------|-----------|---------|--------|-----------|--------|------------|---------|--------------|----------|-----------|----------|
| | | | Trend | '93 | Trend | Trend | '08 | '08 | Trend | Comparison | P value | Comparison | Trend | Trend | Trend |
| | | | P value | Slope | Direction | P value | Slope | Direction | | | | | P value | Direction | |
| JMSPH | Annual | STN | 0.7406 | 0.001 | No Trend | 0.3983 | 0.001 | No Trend | 0.5637 | Same | 0.3600 | No Trend | | | |
| JMSPH | Annual | BTN | 0.2523 | 0.007 | No Trend | 0.0235 | 0.004 | No Trend | 0.1481 | Same | 0.0107 | No Trend | | | |
| JMSPH | Annual | SDIN | 1.0000 | 0.000 | High BDLs | 0.1425 | 0.001 | No Trend | 0.1874 | Same | 0.1779 | No Trend | | | |
| JMSPH | Annual | BDIN | 0.0774 | 0.000 | High BDLs | 0.1261 | 0.001 | No Trend | 0.4604 | Same | 0.0360 | No Trend | | | |
| JMSPH | Annual | STP | 0.5062 | 0.000 | No Trend | 0.6644 | 0.000 | No Trend | 0.4781 | Same | 0.9547 | No Trend | | | |
| JMSPH | Annual | BTP | 0.4686 | 0.001 | No Trend | 0.0601 | 0.000 | No Trend | 0.0440 | Same | 0.1919 | No Trend | | | |
| JMSPH | Annual | SPO4F | 0.2019 | 0.000 | No Trend | 0.7366 | 0.000 | No Trend | 0.3801 | Same | 0.7846 | No Trend | | | |
| JMSPH | Annual | BPO4F | 0.6865 | 0.000 | No Trend | 0.6655 | 0.000 | No Trend | 0.8396 | Same | 0.5631 | No Trend | | | |
| APPTF | Fall | STN | 0.3346 | -0.018 | No Trend | 0.6507 | 0.007 | No Trend | 0.3412 | Same | 0.8384 | No Trend | | | |
| APPTF | Fall | BTN | 0.8567 | -0.004 | No Trend | 0.6507 | 0.007 | No Trend | 0.6103 | Same | 0.8120 | No Trend | | | |
| APPTF | Fall | SDIN | 0.7157 | -0.005 | No Trend | 1.0000 | 0.000 | No Trend | 0.8266 | Same | 0.8266 | No Trend | | | |
| APPTF | Fall | BDIN | 0.7175 | -0.003 | No Trend | 0.7150 | -0.003 | No Trend | 0.9253 | Same | 0.5954 | No Trend | | | |
| APPTF | Fall | STP | 0.6295 | 0.002 | No Trend | 0.2016 | -0.001 | No Trend | 0.1737 | Same | 0.4543 | No Trend | | | |
| APPTF | Fall | BTP | 0.2270 | 0.005 | No Trend | 0.3874 | -0.001 | No Trend | 0.1531 | Same | 1.0000 | No Trend | | | |
| APPTF | Fall | SPO4F | 0.0795 | -0.002 | High BDLs | 0.0048 | -0.001 | Improving | 0.1290 | Same | 0.0008 | Improving | | | |
| APPTF | Fall | BPO4F | 0.1308 | -0.001 | High BDLs | 0.0034 | -0.001 | Improving | 0.0814 | Same | 0.0009 | Improving | | | |
| JMSTF2 | Fall | STN | 0.2062 | -0.029 | No Trend | 0.0486 | 0.013 | No Trend | 0.0177 | Same | 0.3013 | No Trend | | | |
| JMSTF2 | Fall | BTN | 0.0055 | -0.103 | Improving | 0.0086 | 0.022 | Degrading | 0.0002 | Different | 0.4349 | I85-D95 | | | |
| JMSTF2 | Fall | SDIN | 0.1317 | -0.012 | No Trend | 0.1327 | 0.007 | No Trend | 0.0385 | Same | 0.5655 | No Trend | | | |
| JMSTF2 | Fall | BDIN | 0.0032 | -0.056 | Improving | 0.0366 | 0.015 | No Trend | 0.0010 | Different | 0.7241 | Improving 85 | | | |
| JMSTF2 | Fall | STP | 0.0606 | -0.013 | No Trend | 0.1230 | -0.001 | No Trend | 0.7159 | Same | 0.0212 | No Trend | | | |
| JMSTF2 | Fall | BTP | 0.0159 | -0.020 | No Trend | 0.7994 | 0.000 | No Trend | 0.2904 | Same | 0.1355 | No Trend | | | |
| JMSTF2 | Fall | SPO4F | 0.0772 | -0.012 | No Trend | 0.2500 | -0.001 | No Trend | 0.8850 | Same | 0.0601 | No Trend | | | |
| JMSTF2 | Fall | BPO4F | 0.0694 | -0.015 | No Trend | 0.2118 | -0.001 | No Trend | 0.8596 | Same | 0.0450 | No Trend | | | |
| JMSTF1 | Fall | STN | 0.7634 | -0.022 | No Trend | 0.8494 | 0.001 | No Trend | 0.7238 | Same | 0.9744 | No Trend | | | |
| JMSTF1 | Fall | BTN | 0.9040 | 0.017 | No Trend | 0.7042 | -0.005 | No Trend | 0.6762 | Same | 0.8221 | No Trend | | | |
| JMSTF1 | Fall | SDIN | 0.3666 | -0.027 | No Trend | 0.8610 | 0.001 | No Trend | 0.5249 | Same | 0.7391 | No Trend | | | |
| JMSTF1 | Fall | BDIN | 0.2062 | -0.032 | No Trend | 0.6488 | 0.002 | No Trend | 0.2893 | Same | 0.7853 | No Trend | | | |
| JMSTF1 | Fall | STP | 0.7155 | 0.001 | No Trend | 0.0990 | -0.001 | No Trend | 0.1037 | Same | 0.2378 | No Trend | | | |
| JMSTF1 | Fall | BTP | 0.0454 | 0.005 | No Trend | 0.7642 | -0.001 | No Trend | 0.1805 | Same | 0.4070 | No Trend | | | |
| JMSTF1 | Fall | SPO4F | 0.0084 | -0.002 | Improving | 0.0153 | -0.001 | No Trend | 0.4253 | Same | 0.0006 | Improving | | | |
| JMSTF1 | Fall | BPO4F | 0.0039 | -0.002 | Improving | 0.0101 | -0.001 | No Trend | 0.4247 | Same | 0.0002 | Improving | | | |
| CHKOH | Fall | STN | 0.9131 | 0.010 | No Trend | 0.1744 | -0.012 | No Trend | 0.1777 | Same | 0.2326 | No Trend | | | |
| CHKOH | Fall | BTN | 0.8283 | 0.006 | No Trend | 0.0836 | -0.018 | No Trend | 0.0831 | Same | 0.1331 | No Trend | | | |
| CHKOH | Fall | SDIN | 0.3308 | 0.000 | High BDLs | 0.6487 | -0.003 | No Trend | 0.9134 | Same | 0.4467 | No Trend | | | |
| CHKOH | Fall | BDIN | 0.4373 | 0.000 | High BDLs | 0.5949 | -0.004 | No Trend | 0.7986 | Same | 0.4440 | No Trend | | | |
| CHKOH | Fall | STP | 0.2665 | 0.003 | No Trend | 0.0190 | -0.002 | No Trend | 0.0087 | Different | 0.0758 | No Trend* | | | |
| CHKOH | Fall | BTP | 0.2245 | 0.004 | No Trend | 0.0437 | -0.003 | No Trend | 0.0186 | Same | 0.1536 | No Trend | | | |
| CHKOH | Fall | SPO4F | 0.4990 | 0.000 | High BDLs | 0.3586 | 0.000 | No Trend | 0.4784 | Same | 0.2792 | No Trend | | | |
| CHKOH | Fall | BPO4F | 0.2801 | 0.000 | High BDLs | 0.7599 | 0.000 | No Trend | 1.0000 | Same | 0.5530 | No Trend | | | |
| JMSOH | Fall | STN | 0.1041 | -0.021 | No Trend | 0.6113 | 0.005 | No Trend | 0.2042 | Same | 0.7011 | No Trend | | | |
| JMSOH | Fall | BTN | 0.9520 | -0.001 | No Trend | 0.5730 | -0.007 | No Trend | 0.6704 | Same | 0.5842 | No Trend | | | |
| JMSOH | Fall | SDIN | 0.0351 | -0.030 | No Trend | 0.5910 | 0.004 | No Trend | 0.1380 | Same | 0.5949 | No Trend | | | |
| JMSOH | Fall | BDIN | 0.0159 | -0.023 | No Trend | 0.6949 | 0.002 | No Trend | 0.1278 | Same | 0.4046 | No Trend | | | |
| JMSOH | Fall | STP | 0.3607 | 0.003 | No Trend | 0.4583 | 0.001 | No Trend | 0.8595 | Same | 0.2623 | No Trend | | | |
| JMSOH | Fall | BTP | 0.0620 | 0.009 | No Trend | 0.1510 | -0.002 | No Trend | 0.0271 | Same | 0.7853 | No Trend | | | |
| JMSOH | Fall | SPO4F | 0.5997 | 0.000 | No Trend | 0.1446 | 0.000 | No Trend | 0.2908 | Same | 0.1163 | No Trend | | | |
| JMSOH | Fall | BPO4F | 0.4414 | 0.000 | No Trend | 0.0493 | 0.001 | No Trend | 0.1702 | Same | 0.0332 | No Trend | | | |

Appendix A - Section IA. James River (1985-2008) - Continued.

| Segment | Season | Parameter | '93 | | '93 | | '08 | | '08 | | Trend | | Combined | |
|---------|--------|-----------|--------|--------|-----------|--------|--------|-----------|--------|------------|---------|--------------|----------|-----------|
| | | | Trend | '93 | Trend | Trend | '08 | '08 | Trend | Comparison | P value | Comparison | Trend | Direction |
| JMSMH | Fall | STN | 0.9431 | 0.005 | No Trend | 0.2100 | 0.005 | No Trend | 0.2840 | Same | 0.2325 | No Trend | | |
| JMSMH | Fall | BTN | 0.5727 | -0.007 | No Trend | 0.1589 | 0.006 | No Trend | 0.1213 | Same | 0.3017 | No Trend | | |
| JMSMH | Fall | SDIN | 0.1142 | -0.024 | No Trend | 0.2422 | 0.006 | No Trend | 0.0826 | Same | 0.6855 | No Trend | | |
| JMSMH | Fall | BDIN | 0.1456 | -0.022 | No Trend | 0.5896 | 0.004 | No Trend | 0.2762 | Same | 0.9256 | No Trend | | |
| JMSMH | Fall | STP | 0.6041 | 0.000 | No Trend | 0.8397 | 0.000 | No Trend | 0.6537 | Same | 0.9285 | No Trend | | |
| JMSMH | Fall | BTP | 0.6500 | 0.000 | No Trend | 0.5991 | 0.000 | No Trend | 0.4782 | Same | 0.8291 | No Trend | | |
| JMSMH | Fall | SPO4F | 0.0757 | 0.002 | No Trend | 0.1211 | 0.001 | No Trend | 0.5493 | Same | 0.0281 | No Trend | | |
| JMSMH | Fall | BPO4F | 0.0383 | 0.002 | No Trend | 0.4510 | 0.000 | No Trend | 0.8128 | Same | 0.1098 | No Trend | | |
| JMSPH | Fall | STN | 0.5880 | -0.004 | No Trend | 0.0776 | 0.006 | No Trend | 0.0660 | Same | 0.2063 | No Trend | | |
| JMSPH | Fall | BTN | 0.5873 | 0.005 | No Trend | 0.1698 | 0.002 | No Trend | 0.3578 | Same | 0.1351 | No Trend | | |
| JMSPH | Fall | SDIN | 0.3968 | -0.003 | No Trend | 0.1911 | 0.004 | No Trend | 0.1137 | Same | 0.4721 | No Trend | | |
| JMSPH | Fall | BDIN | 0.9032 | 0.000 | High BDLs | 0.0580 | 0.003 | No Trend | 0.1133 | Same | 0.0790 | No Trend | | |
| JMSPH | Fall | STP | 0.5063 | 0.001 | No Trend | 0.4136 | 0.000 | No Trend | 0.2873 | Same | 0.7085 | No Trend | | |
| JMSPH | Fall | BTP | 0.8562 | 0.000 | No Trend | 0.1698 | 0.000 | No Trend | 0.1860 | Same | 0.2746 | No Trend | | |
| JMSPH | Fall | SPO4F | 0.4677 | -0.001 | No Trend | 0.5782 | 0.000 | No Trend | 0.3881 | Same | 0.9084 | No Trend | | |
| JMSPH | Fall | BPO4F | 0.8084 | 0.000 | No Trend | 0.5128 | 0.000 | No Trend | 0.4716 | Same | 0.6658 | No Trend | | |
| APPTF | SAV1 | STN | 0.0098 | -0.034 | Improving | 0.4013 | 0.005 | No Trend | 0.0393 | Same | 0.5363 | No Trend | | |
| APPTF | SAV1 | BTN | 0.0401 | -0.024 | No Trend | 0.9435 | -0.001 | No Trend | 0.3184 | Same | 0.2628 | No Trend | | |
| APPTF | SAV1 | SDIN | 0.7467 | -0.001 | No Trend | 0.7792 | 0.001 | No Trend | 0.6711 | Same | 0.9516 | No Trend | | |
| APPTF | SAV1 | BDIN | 0.5454 | -0.003 | No Trend | 0.9450 | 0.000 | No Trend | 0.7950 | Same | 0.7041 | No Trend | | |
| APPTF | SAV1 | STP | 0.1941 | -0.002 | No Trend | 0.3166 | -0.001 | No Trend | 0.8149 | Same | 0.1280 | No Trend | | |
| APPTF | SAV1 | BTP | 0.4609 | 0.001 | No Trend | 0.3855 | -0.001 | No Trend | 0.2568 | Same | 0.6958 | No Trend | | |
| APPTF | SAV1 | SPO4F | 0.0413 | -0.001 | High BDLs | 0.0600 | 0.000 | No Trend | 0.4657 | Same | 0.0087 | Improving | | |
| APPTF | SAV1 | BPO4F | 0.0053 | -0.001 | Improving | 0.0574 | 0.000 | No Trend | 0.6944 | Same | 0.0028 | Improving | | |
| JMSTF2 | SAV1 | STN | 0.0000 | -0.057 | Improving | 0.0594 | 0.012 | No Trend | 0.0001 | Different | 0.5899 | Improving 85 | | |
| JMSTF2 | SAV1 | BTN | 0.0000 | -0.126 | Improving | 0.0377 | 0.013 | No Trend | 0.0000 | Different | 0.1776 | Improving 85 | | |
| JMSTF2 | SAV1 | SDIN | 0.0002 | -0.028 | Improving | 0.0017 | 0.012 | Degrading | 0.0000 | Different | 0.3102 | I85-D95 | | |
| JMSTF2 | SAV1 | BDIN | 0.0000 | -0.067 | Improving | 0.0007 | 0.015 | Degrading | 0.0000 | Different | 0.7058 | I85-D95 | | |
| JMSTF2 | SAV1 | STP | 0.0000 | -0.015 | Improving | 0.2636 | -0.001 | No Trend | 0.1279 | Same | 0.0005 | Improving | | |
| JMSTF2 | SAV1 | BTP | 0.0000 | -0.023 | Improving | 0.5983 | -0.001 | No Trend | 0.0105 | Same | 0.0005 | Improving | | |
| JMSTF2 | SAV1 | SPO4F | 0.0000 | -0.013 | Improving | 0.1411 | -0.001 | No Trend | 0.2707 | Same | 0.0002 | Improving | | |
| JMSTF2 | SAV1 | BPO4F | 0.0000 | -0.018 | Improving | 0.6129 | 0.000 | No Trend | 0.0244 | Same | 0.0017 | Improving | | |
| JMSTF1 | SAV1 | STN | 0.1240 | -0.017 | No Trend | 0.0191 | -0.009 | No Trend | 0.1995 | Same | 0.0049 | Improving | | |
| JMSTF1 | SAV1 | BTN | 0.1259 | -0.027 | No Trend | 0.0011 | -0.019 | Improving | 0.0354 | Same | 0.0003 | Improving | | |
| JMSTF1 | SAV1 | SDIN | 0.0018 | -0.027 | Improving | 0.1954 | 0.007 | No Trend | 0.0080 | Different | 0.7049 | Improving 85 | | |
| JMSTF1 | SAV1 | BDIN | 0.0006 | -0.030 | Improving | 0.6506 | 0.002 | No Trend | 0.0419 | Same | 0.2166 | No Trend | | |
| JMSTF1 | SAV1 | STP | 0.0773 | 0.003 | No Trend | 0.0275 | -0.001 | No Trend | 0.0053 | Different | 0.2644 | No Trend* | | |
| JMSTF1 | SAV1 | BTP | 0.0002 | 0.005 | Degrading | 0.0417 | -0.003 | No Trend | 0.0004 | Different | 0.9554 | Degrading 85 | | |
| JMSTF1 | SAV1 | SPO4F | 0.0276 | -0.001 | No Trend | 0.0590 | 0.000 | No Trend | 0.5222 | Same | 0.0067 | Improving | | |
| JMSTF1 | SAV1 | BPO4F | 0.0456 | 0.000 | No Trend | 0.0065 | 0.000 | Improving | 0.1256 | Same | 0.0008 | Improving | | |
| CHKOH | SAV1 | STN | 0.0546 | -0.038 | No Trend | 0.3403 | -0.003 | No Trend | 0.7738 | Same | 0.1272 | No Trend | | |
| CHKOH | SAV1 | BTN | 0.7753 | -0.015 | No Trend | 0.1776 | -0.006 | No Trend | 0.2399 | Same | 0.1637 | No Trend | | |
| CHKOH | SAV1 | SDIN | 0.6896 | 0.000 | High BDLs | 0.0011 | 0.003 | Degrading | 0.0010 | Different | 0.0021 | Degrading 95 | | |
| CHKOH | SAV1 | BDIN | 0.5083 | 0.000 | High BDLs | 0.0888 | 0.001 | No Trend | 0.0672 | Same | 0.1385 | No Trend | | |
| CHKOH | SAV1 | STP | 0.1175 | 0.002 | No Trend | 0.0680 | -0.001 | No Trend | 0.0266 | Same | 0.2007 | No Trend | | |
| CHKOH | SAV1 | BTP | 0.0622 | 0.006 | No Trend | 0.1363 | -0.002 | No Trend | 0.0465 | Same | 0.3903 | No Trend | | |
| CHKOH | SAV1 | SPO4F | 0.3681 | 0.000 | High BDLs | 0.1919 | 0.000 | No Trend | 0.2778 | Same | 0.1400 | No Trend | | |
| CHKOH | SAV1 | BPO4F | 0.0599 | 0.000 | High BDLs | 0.1980 | 0.000 | No Trend | 0.4060 | Same | 0.0923 | No Trend | | |

Appendix A - Section IA. James River (1985-2008) - Continued.

| Segment | Season | Parameter | '93 | | '93 | | '08 | | '08 | | Trend | | Combined | | Combined | |
|---------|--------|-----------|--------|--------|-----------|--------|--------|----------|--------|------------|---------|--------------|----------|---------|----------|-----------|
| | | | Trend | '93 | Trend | Trend | '08 | '08 | Trend | Comparison | P value | Comparison | Trend | P value | Trend | Direction |
| JMSOH | SAV1 | STN | 0.4530 | -0.005 | No Trend | 0.1303 | 0.004 | No Trend | 0.0879 | Same | 0.3431 | No Trend | | | | |
| JMSOH | SAV1 | BTN | 0.0535 | 0.022 | No Trend | 0.9828 | 0.000 | No Trend | 0.3530 | Same | 0.3337 | No Trend | | | | |
| JMSOH | SAV1 | SDIN | 0.0024 | -0.008 | Improving | 0.0165 | 0.006 | No Trend | 0.0003 | Different | 0.5473 | Improving 85 | | | | |
| JMSOH | SAV1 | BDIN | 0.0082 | -0.006 | Improving | 0.0591 | 0.004 | No Trend | 0.0032 | Different | 0.7267 | Improving 85 | | | | |
| JMSOH | SAV1 | STP | 0.0001 | 0.005 | Degrading | 0.7212 | 0.000 | No Trend | 0.0344 | Same | 0.1377 | No Trend | | | | |
| JMSOH | SAV1 | BTP | 0.0000 | 0.010 | Degrading | 0.4012 | -0.001 | No Trend | 0.0048 | Different | 0.1820 | Degrading 85 | | | | |
| JMSOH | SAV1 | SPO4F | 0.0083 | 0.001 | Degrading | 0.0304 | 0.000 | No Trend | 0.4637 | Same | 0.0017 | Degrading | | | | |
| JMSOH | SAV1 | BPO4F | 0.1579 | 0.000 | No Trend | 0.0175 | 0.000 | No Trend | 0.1433 | Same | 0.0055 | Degrading | | | | |
| JMSMH | SAV1 | STN | 0.0285 | 0.017 | No Trend | 0.1306 | 0.003 | No Trend | 0.7170 | Same | 0.0189 | No Trend | | | | |
| JMSMH | SAV1 | BTN | 0.0004 | 0.025 | Degrading | 0.5369 | 0.002 | No Trend | 0.3030 | Same | 0.0327 | No Trend | | | | |
| JMSMH | SAV1 | SDIN | 0.6288 | 0.000 | No Trend | 0.1682 | 0.003 | No Trend | 0.3213 | Same | 0.1422 | No Trend | | | | |
| JMSMH | SAV1 | BDIN | 0.6588 | 0.000 | No Trend | 0.4123 | 0.002 | No Trend | 0.6007 | Same | 0.3422 | No Trend | | | | |
| JMSMH | SAV1 | STP | 0.0000 | 0.005 | Degrading | 0.8200 | 0.000 | No Trend | 0.0152 | Same | 0.0432 | No Trend | | | | |
| JMSMH | SAV1 | BTP | 0.0000 | 0.005 | Degrading | 0.9340 | 0.000 | No Trend | 0.0239 | Same | 0.0161 | No Trend | | | | |
| JMSMH | SAV1 | SPO4F | 0.0054 | 0.002 | Degrading | 0.1253 | 0.000 | No Trend | 0.9264 | Same | 0.0082 | Degrading | | | | |
| JMSMH | SAV1 | BPO4F | 0.0018 | 0.001 | Degrading | 0.3833 | 0.000 | No Trend | 0.5278 | Same | 0.0284 | No Trend | | | | |
| JMSPH | SAV1 | STN | 0.4079 | 0.006 | No Trend | 0.5211 | 0.001 | No Trend | 0.8690 | Same | 0.3315 | No Trend | | | | |
| JMSPH | SAV1 | BTN | 0.2215 | 0.008 | No Trend | 0.0291 | 0.004 | No Trend | 0.1822 | Same | 0.0118 | No Trend | | | | |
| JMSPH | SAV1 | SDIN | 0.1373 | 0.000 | High BDLs | 0.0194 | 0.002 | No Trend | 0.1239 | Same | 0.0059 | Degrading | | | | |
| JMSPH | SAV1 | BDIN | 0.0820 | 0.000 | High BDLs | 0.0859 | 0.001 | No Trend | 0.3453 | Same | 0.0242 | No Trend | | | | |
| JMSPH | SAV1 | STP | 0.1430 | 0.001 | No Trend | 0.6050 | 0.000 | No Trend | 0.2480 | Same | 0.8116 | No Trend | | | | |
| JMSPH | SAV1 | BTP | 0.0580 | 0.001 | No Trend | 0.1994 | 0.000 | No Trend | 0.0419 | Same | 0.8116 | No Trend | | | | |
| JMSPH | SAV1 | SPO4F | 1.0000 | 0.000 | High BDLs | 0.1776 | 0.000 | No Trend | 0.2282 | Same | 0.2282 | No Trend | | | | |
| JMSPH | SAV1 | BPO4F | 0.8013 | 0.000 | High BDLs | 0.2718 | 0.000 | No Trend | 0.2647 | Same | 0.3925 | No Trend | | | | |
| APPTF | SAV2 | STN | 0.5995 | -0.003 | No Trend | 0.0426 | 0.006 | No Trend | 0.0401 | Same | 0.1316 | No Trend | | | | |
| APPTF | SAV2 | BTN | 1.0000 | 0.000 | No Trend | 0.1391 | 0.004 | No Trend | 0.1998 | Same | 0.1857 | No Trend | | | | |
| APPTF | SAV2 | SDIN | 0.0575 | -0.005 | No Trend | 0.0914 | 0.005 | No Trend | 0.0165 | Same | 0.5524 | No Trend | | | | |
| APPTF | SAV2 | BDIN | 0.0422 | -0.006 | No Trend | 0.1654 | 0.004 | No Trend | 0.0284 | Same | 0.7900 | No Trend | | | | |
| APPTF | SAV2 | STP | 0.0645 | 0.002 | No Trend | 0.9447 | 0.000 | No Trend | 0.3546 | Same | 0.4224 | No Trend | | | | |
| APPTF | SAV2 | BTP | 0.0096 | 0.002 | Degrading | 0.8714 | 0.000 | No Trend | 0.2933 | Same | 0.1804 | No Trend | | | | |
| APPTF | SAV2 | SPO4F | 0.1434 | 0.000 | High BDLs | 0.2941 | 0.000 | No Trend | 0.7684 | Same | 0.1099 | No Trend | | | | |
| APPTF | SAV2 | BPO4F | 0.0801 | 0.000 | High BDLs | 0.1926 | 0.000 | No Trend | 0.6901 | Same | 0.0509 | No Trend | | | | |
| JMSTF2 | SAV2 | STN | 0.9321 | -0.001 | No Trend | 0.1587 | 0.003 | No Trend | 0.1924 | Same | 0.2367 | No Trend | | | | |
| JMSTF2 | SAV2 | BTN | 0.1623 | -0.014 | No Trend | 0.2222 | 0.004 | No Trend | 0.0788 | Same | 0.6944 | No Trend | | | | |
| JMSTF2 | SAV2 | SDIN | 0.0641 | -0.005 | No Trend | 0.0701 | 0.004 | No Trend | 0.0131 | Same | 0.4628 | No Trend | | | | |
| JMSTF2 | SAV2 | BDIN | 0.0071 | -0.013 | Improving | 0.0561 | 0.004 | No Trend | 0.0032 | Different | 0.6565 | Improving 85 | | | | |
| JMSTF2 | SAV2 | STP | 0.8611 | 0.000 | No Trend | 0.3475 | 0.000 | No Trend | 0.3493 | Same | 0.4612 | No Trend | | | | |
| JMSTF2 | SAV2 | BTP | 0.7875 | 0.000 | No Trend | 0.2283 | -0.001 | No Trend | 0.2236 | Same | 0.3508 | No Trend | | | | |
| JMSTF2 | SAV2 | SPO4F | 0.0045 | -0.001 | Improving | 0.1117 | 0.000 | No Trend | 0.8558 | Same | 0.0072 | Improving | | | | |
| JMSTF2 | SAV2 | BPO4F | 0.0016 | -0.002 | Improving | 0.1213 | 0.000 | No Trend | 0.9836 | Same | 0.0055 | Improving | | | | |
| JMSTF1 | SAV2 | STN | 0.7981 | 0.002 | No Trend | 0.5611 | 0.001 | No Trend | 0.7068 | Same | 0.5135 | No Trend | | | | |
| JMSTF1 | SAV2 | BTN | 0.7933 | -0.004 | No Trend | 0.8231 | -0.001 | No Trend | 0.9524 | Same | 0.7351 | No Trend | | | | |
| JMSTF1 | SAV2 | SDIN | 0.0850 | -0.006 | No Trend | 0.2449 | 0.002 | No Trend | 0.0650 | Same | 0.8272 | No Trend | | | | |
| JMSTF1 | SAV2 | BDIN | 0.0424 | -0.007 | No Trend | 0.3478 | 0.002 | No Trend | 0.0759 | Same | 0.9206 | No Trend | | | | |
| JMSTF1 | SAV2 | STP | 0.0081 | 0.002 | Degrading | 0.3594 | 0.000 | No Trend | 0.0419 | Same | 0.6900 | No Trend | | | | |
| JMSTF1 | SAV2 | BTP | 0.0034 | 0.002 | Degrading | 0.3711 | 0.000 | No Trend | 0.0338 | Same | 0.6026 | No Trend | | | | |
| JMSTF1 | SAV2 | SPO4F | 0.0504 | 0.000 | No Trend | 0.0950 | 0.000 | No Trend | 0.5291 | Same | 0.0175 | No Trend | | | | |
| JMSTF1 | SAV2 | BPO4F | 0.0817 | 0.000 | No Trend | 0.0247 | 0.000 | No Trend | 0.1993 | Same | 0.0053 | Improving | | | | |

Appendix A - Section IA. James River (1985-2008) - Continued.

| Segment | Season | Parameter | '93 | | '93 | | '08 | | '08 | | Trend | | Combined | | Combined |
|---------|---------|-----------|---------|--------|-----------|---------|--------|-----------|---------|------------|---------|--------------|----------|-----------|----------|
| | | | Trend | '93 | Trend | Trend | '08 | '08 | Trend | Comparison | P value | Comparison | Trend | Trend | Trend |
| | | | P value | Slope | Direction | P value | Slope | Direction | P value | Comparison | P value | Comparison | P value | Direction | |
| CHKOH | SAV2 | STN | 0.8721 | -0.002 | No Trend | 0.0762 | 0.004 | No Trend | 0.0861 | Same | 0.1214 | No Trend | | | |
| CHKOH | SAV2 | BTN | 0.7478 | 0.003 | No Trend | 0.1948 | 0.004 | No Trend | 0.2927 | Same | 0.1799 | No Trend | | | |
| CHKOH | SAV2 | SDIN | 0.0590 | -0.004 | High BDLs | 0.0141 | 0.005 | No Trend | 0.0026 | Different | 0.1246 | No Trend* | | | |
| CHKOH | SAV2 | BDIN | 0.0430 | -0.003 | High BDLs | 0.0572 | 0.004 | No Trend | 0.0112 | Same | 0.3183 | No Trend | | | |
| CHKOH | SAV2 | STP | 0.0006 | 0.003 | Degrading | 0.8202 | 0.000 | No Trend | 0.2735 | Same | 0.1294 | No Trend | | | |
| CHKOH | SAV2 | BTP | 0.0005 | 0.003 | Degrading | 0.8057 | 0.000 | No Trend | 0.1244 | Same | 0.2803 | No Trend | | | |
| CHKOH | SAV2 | SPO4F | 0.4337 | 0.000 | High BDLs | 0.1551 | 0.000 | No Trend | 0.2891 | Same | 0.1047 | No Trend | | | |
| CHKOH | SAV2 | BPO4F | 0.2685 | 0.000 | High BDLs | 0.0957 | 0.000 | No Trend | 0.2334 | Same | 0.0503 | No Trend | | | |
| JMSOH | SAV2 | STN | 0.5224 | 0.006 | No Trend | 0.1075 | 0.003 | No Trend | 0.2675 | Same | 0.0815 | No Trend | | | |
| JMSOH | SAV2 | BTN | 0.0332 | 0.018 | No Trend | 0.4472 | 0.002 | No Trend | 0.7365 | Same | 0.0925 | No Trend | | | |
| JMSOH | SAV2 | SDIN | 0.0584 | -0.007 | No Trend | 0.0592 | 0.005 | No Trend | 0.0101 | Same | 0.4451 | No Trend | | | |
| JMSOH | SAV2 | BDIN | 0.0584 | -0.006 | No Trend | 0.0726 | 0.004 | No Trend | 0.0127 | Same | 0.4945 | No Trend | | | |
| JMSOH | SAV2 | STP | 0.0000 | 0.005 | Degrading | 0.7039 | 0.000 | No Trend | 0.0128 | Same | 0.0699 | No Trend | | | |
| JMSOH | SAV2 | BTP | 0.0000 | 0.006 | Degrading | 0.7713 | 0.000 | No Trend | 0.0060 | Different | 0.0257 | Degrading 85 | | | |
| JMSOH | SAV2 | SPO4F | 0.5040 | 0.000 | No Trend | 0.4379 | 0.000 | No Trend | 0.3132 | Same | 0.6957 | No Trend | | | |
| JMSOH | SAV2 | BPO4F | 0.7729 | 0.000 | No Trend | 0.9093 | 0.000 | No Trend | 0.9672 | Same | 0.8049 | No Trend | | | |
| JMSMH | SAV2 | STN | 0.0214 | 0.016 | No Trend | 0.1075 | 0.003 | No Trend | 0.7365 | Same | 0.0119 | No Trend | | | |
| JMSMH | SAV2 | BTN | 0.0064 | 0.019 | Degrading | 0.3712 | 0.002 | No Trend | 0.6207 | Same | 0.0377 | No Trend | | | |
| JMSMH | SAV2 | SDIN | 0.4637 | -0.002 | No Trend | 0.0720 | 0.004 | No Trend | 0.0509 | Same | 0.2223 | No Trend | | | |
| JMSMH | SAV2 | BDIN | 0.3611 | -0.002 | High BDLs | 0.2487 | 0.002 | No Trend | 0.1423 | Same | 0.5682 | No Trend | | | |
| JMSMH | SAV2 | STP | 0.0000 | 0.005 | Degrading | 0.7039 | 0.000 | No Trend | 0.0046 | Different | 0.0313 | Degrading 85 | | | |
| JMSMH | SAV2 | BTP | 0.0000 | 0.004 | Degrading | 0.8405 | 0.000 | No Trend | 0.0197 | Same | 0.0485 | No Trend | | | |
| JMSMH | SAV2 | SPO4F | 0.6893 | 0.000 | No Trend | 0.7325 | 0.000 | No Trend | 0.6188 | Same | 0.9010 | No Trend | | | |
| JMSMH | SAV2 | BPO4F | 0.3671 | 0.000 | No Trend | 0.2834 | 0.000 | No Trend | 0.1704 | Same | 0.5608 | No Trend | | | |
| JMSPH | SAV2 | STN | 0.1251 | 0.010 | No Trend | 0.3956 | 0.002 | No Trend | 0.9842 | Same | 0.1376 | No Trend | | | |
| JMSPH | SAV2 | BTN | 0.0367 | 0.015 | No Trend | 0.0442 | 0.005 | No Trend | 0.4284 | Same | 0.0056 | Degrading | | | |
| JMSPH | SAV2 | SDIN | 0.6516 | 0.000 | High BDLs | 0.2930 | 0.002 | No Trend | 0.2449 | Same | 0.4704 | No Trend | | | |
| JMSPH | SAV2 | BDIN | 0.6377 | 0.000 | High BDLs | 0.1726 | 0.002 | No Trend | 0.1443 | Same | 0.2943 | No Trend | | | |
| JMSPH | SAV2 | STP | 0.0012 | 0.002 | Degrading | 0.5168 | 0.000 | No Trend | 0.0383 | Same | 0.3596 | No Trend | | | |
| JMSPH | SAV2 | BTP | 0.0021 | 0.002 | Degrading | 0.8757 | 0.000 | No Trend | 0.2022 | Same | 0.1201 | No Trend | | | |
| JMSPH | SAV2 | SPO4F | 0.6327 | 0.000 | No Trend | 0.4187 | 0.000 | No Trend | 0.5906 | Same | 0.3413 | No Trend | | | |
| JMSPH | SAV2 | BPO4F | 0.6991 | 0.000 | No Trend | 0.5291 | 0.000 | No Trend | 0.6771 | Same | 0.4535 | No Trend | | | |
| APPTF | Spring1 | STN | 0.0652 | -0.018 | No Trend | 0.2169 | 0.008 | No Trend | 0.0435 | Same | 0.8996 | No Trend | | | |
| APPTF | Spring1 | BTN | 0.3421 | -0.018 | No Trend | 0.6740 | 0.002 | No Trend | 0.3905 | Same | 0.9024 | No Trend | | | |
| APPTF | Spring1 | SDIN | 0.4464 | -0.005 | No Trend | 0.1545 | 0.010 | No Trend | 0.1000 | Same | 0.3858 | No Trend | | | |
| APPTF | Spring1 | BDIN | 0.3412 | -0.010 | No Trend | 0.3258 | 0.008 | No Trend | 0.1786 | Same | 0.6976 | No Trend | | | |
| APPTF | Spring1 | STP | 0.4056 | -0.002 | No Trend | 0.6596 | 0.000 | No Trend | 0.9761 | Same | 0.4188 | No Trend | | | |
| APPTF | Spring1 | BTP | 0.9482 | 0.000 | No Trend | 0.9190 | 0.000 | No Trend | 0.8806 | Same | 0.9760 | No Trend | | | |
| APPTF | Spring1 | SPO4F | 0.0481 | -0.002 | High BDLs | 0.5821 | 0.000 | No Trend | 0.6474 | Same | 0.1518 | No Trend | | | |
| APPTF | Spring1 | BPO4F | 0.0184 | -0.003 | No Trend | 0.3552 | 0.000 | No Trend | 0.7615 | Same | 0.0521 | No Trend | | | |
| JMSTF2 | Spring1 | STN | 0.2528 | -0.029 | No Trend | 0.7190 | 0.001 | No Trend | 0.3730 | Same | 0.7959 | No Trend | | | |
| JMSTF2 | Spring1 | BTN | 0.0019 | -0.084 | Improving | 0.9721 | 0.000 | No Trend | 0.1180 | Same | 0.1331 | No Trend | | | |
| JMSTF2 | Spring1 | SDIN | 0.4693 | -0.005 | No Trend | 0.1138 | 0.006 | No Trend | 0.0777 | Same | 0.3001 | No Trend | | | |
| JMSTF2 | Spring1 | BDIN | 0.0569 | -0.030 | No Trend | 0.0829 | 0.009 | No Trend | 0.0146 | Same | 0.5223 | No Trend | | | |
| JMSTF2 | Spring1 | STP | 0.0026 | -0.008 | Improving | 0.0999 | -0.002 | No Trend | 0.9776 | Same | 0.0039 | Improving | | | |
| JMSTF2 | Spring1 | BTP | 0.0023 | -0.014 | Improving | 0.0394 | -0.003 | No Trend | 0.6840 | Same | 0.0011 | Improving | | | |
| JMSTF2 | Spring1 | SPO4F | 0.0002 | -0.010 | Improving | 0.1837 | -0.001 | No Trend | 0.5746 | Same | 0.0035 | Improving | | | |
| JMSTF2 | Spring1 | BPO4F | 0.0000 | -0.010 | Improving | 0.2015 | -0.001 | No Trend | 0.4147 | Same | 0.0020 | Improving | | | |

Appendix A - Section IA. James River (1985-2008) - Continued.

| Segment | Season | Parameter | '93 | | '93 | | '08 | | '08 | | Trend | | Combined | | Combined |
|---------|---------|-----------|---------|--------|-----------|---------|--------|-----------|---------|------------|---------|--------------|----------|-----------|----------|
| | | | Trend | '93 | Trend | Trend | '08 | '08 | Trend | Comparison | Trend | Comparison | Trend | Trend | |
| | | | P value | Slope | Direction | P value | Slope | Direction | P value | Comparison | P value | Comparison | P value | Direction | |
| JMSTF1 | Spring1 | STN | 0.5873 | -0.008 | No Trend | 0.4294 | -0.005 | No Trend | 0.6745 | Same | 0.3272 | No Trend | | | |
| JMSTF1 | Spring1 | BTN | 0.1452 | -0.029 | No Trend | 0.0539 | -0.015 | No Trend | 0.2954 | Same | 0.0162 | No Trend | | | |
| JMSTF1 | Spring1 | SDIN | 0.5873 | -0.007 | No Trend | 0.5066 | 0.004 | No Trend | 0.3853 | Same | 0.7580 | No Trend | | | |
| JMSTF1 | Spring1 | BDIN | 0.3421 | -0.009 | No Trend | 0.7281 | 0.002 | No Trend | 0.4451 | Same | 0.8876 | No Trend | | | |
| JMSTF1 | Spring1 | STP | 0.8061 | 0.000 | No Trend | 0.1070 | -0.001 | No Trend | 0.1156 | Same | 0.1962 | No Trend | | | |
| JMSTF1 | Spring1 | BTP | 0.5664 | 0.001 | No Trend | 0.1138 | -0.002 | No Trend | 0.0892 | Same | 0.2572 | No Trend | | | |
| JMSTF1 | Spring1 | SPO4F | 0.0107 | -0.003 | No Trend | 0.1487 | 0.000 | No Trend | 0.9547 | Same | 0.0125 | No Trend | | | |
| JMSTF1 | Spring1 | BPO4F | 0.0195 | -0.003 | No Trend | 0.0239 | -0.001 | No Trend | 0.3314 | Same | 0.0020 | Improving | | | |
| CHKOH | Spring1 | STN | 0.0187 | -0.048 | No Trend | 0.3772 | 0.006 | No Trend | 0.1304 | Same | 0.8501 | No Trend | | | |
| CHKOH | Spring1 | BTN | 0.2933 | -0.052 | No Trend | 0.8249 | 0.004 | No Trend | 0.6040 | Same | 0.9271 | No Trend | | | |
| CHKOH | Spring1 | SDIN | 0.6985 | 0.000 | High BDLs | 0.0118 | 0.009 | No Trend | 0.0102 | Same | 0.0207 | No Trend | | | |
| CHKOH | Spring1 | BDIN | 0.4881 | 0.000 | High BDLs | 0.0873 | 0.008 | No Trend | 0.0640 | Same | 0.1384 | No Trend | | | |
| CHKOH | Spring1 | STP | 0.5538 | 0.004 | No Trend | 1.0000 | 0.000 | No Trend | 0.8501 | Same | 0.8501 | No Trend | | | |
| CHKOH | Spring1 | BTP | 0.4805 | 0.004 | No Trend | 0.5066 | -0.001 | No Trend | 0.3925 | Same | 0.6690 | No Trend | | | |
| CHKOH | Spring1 | SPO4F | 0.0736 | 0.000 | High BDLs | 0.2734 | 0.000 | No Trend | 0.5170 | Same | 0.1361 | No Trend | | | |
| CHKOH | Spring1 | BPO4F | 0.0122 | -0.001 | High BDLs | 0.1502 | 0.000 | No Trend | 0.3989 | Same | 0.0490 | No Trend | | | |
| JMSOH | Spring1 | STN | 1.0000 | -0.002 | No Trend | 0.5069 | 0.001 | No Trend | 0.5380 | Same | 0.5756 | No Trend | | | |
| JMSOH | Spring1 | BTN | 0.0470 | 0.033 | No Trend | 0.5910 | -0.003 | No Trend | 0.1535 | Same | 0.6343 | No Trend | | | |
| JMSOH | Spring1 | SDIN | 0.4339 | -0.008 | No Trend | 0.0892 | 0.006 | No Trend | 0.0580 | Same | 0.2750 | No Trend | | | |
| JMSOH | Spring1 | BDIN | 0.4339 | -0.008 | No Trend | 0.1167 | 0.007 | No Trend | 0.0749 | Same | 0.3288 | No Trend | | | |
| JMSOH | Spring1 | STP | 0.0020 | 0.009 | Degrading | 0.3934 | -0.001 | No Trend | 0.0269 | Same | 0.4837 | No Trend | | | |
| JMSOH | Spring1 | BTP | 0.0000 | 0.021 | Degrading | 0.4673 | -0.002 | No Trend | 0.0100 | Different | 0.1975 | Degrading 85 | | | |
| JMSOH | Spring1 | SPO4F | 0.3750 | 0.000 | No Trend | 0.8696 | 0.000 | No Trend | 0.5598 | Same | 0.7706 | No Trend | | | |
| JMSOH | Spring1 | BPO4F | 0.6999 | 0.000 | No Trend | 0.4320 | 0.000 | No Trend | 0.3659 | Same | 0.6200 | No Trend | | | |
| JMSMH | Spring1 | STN | 0.0259 | 0.030 | No Trend | 0.5069 | 0.002 | No Trend | 0.6343 | Same | 0.0987 | No Trend | | | |
| JMSMH | Spring1 | BTN | 0.0047 | 0.038 | Degrading | 0.7281 | -0.002 | No Trend | 0.0987 | Same | 0.3005 | No Trend | | | |
| JMSMH | Spring1 | SDIN | 0.4685 | 0.005 | No Trend | 0.1129 | 0.005 | No Trend | 0.3167 | Same | 0.0772 | No Trend | | | |
| JMSMH | Spring1 | BDIN | 0.6227 | 0.002 | No Trend | 0.5216 | 0.002 | No Trend | 0.7674 | Same | 0.4076 | No Trend | | | |
| JMSMH | Spring1 | STP | 0.0000 | 0.006 | Degrading | 0.3934 | -0.001 | No Trend | 0.0070 | Different | 0.2383 | Degrading 85 | | | |
| JMSMH | Spring1 | BTP | 0.0019 | 0.007 | Degrading | 0.5482 | -0.001 | No Trend | 0.0463 | Same | 0.3544 | No Trend | | | |
| JMSMH | Spring1 | SPO4F | 0.5812 | 0.000 | High BDLs | 0.6465 | 0.000 | No Trend | 0.8824 | Same | 0.4962 | No Trend | | | |
| JMSMH | Spring1 | BPO4F | 0.2124 | 0.000 | High BDLs | 0.5540 | 0.000 | No Trend | 0.2718 | Same | 0.9763 | No Trend | | | |
| JMSPH | Spring1 | STN | 0.2528 | 0.016 | No Trend | 0.6812 | -0.001 | No Trend | 0.3558 | Same | 0.8447 | No Trend | | | |
| JMSPH | Spring1 | BTN | 0.0536 | 0.026 | No Trend | 0.2177 | 0.007 | No Trend | 0.8666 | Same | 0.0438 | No Trend | | | |
| JMSPH | Spring1 | SDIN | 0.2063 | 0.000 | High BDLs | 0.6124 | 0.002 | No Trend | 0.9089 | Same | 0.3034 | No Trend | | | |
| JMSPH | Spring1 | BDIN | 0.0466 | 0.000 | High BDLs | 0.3428 | 0.001 | No Trend | 0.7862 | Same | 0.1243 | No Trend | | | |
| JMSPH | Spring1 | STP | 0.2760 | 0.001 | No Trend | 0.2177 | -0.001 | No Trend | 0.1042 | Same | 0.5753 | No Trend | | | |
| JMSPH | Spring1 | BTP | 0.3945 | 0.001 | No Trend | 0.9245 | 0.000 | No Trend | 0.6137 | Same | 0.7365 | No Trend | | | |
| JMSPH | Spring1 | SPO4F | 0.4831 | 0.000 | High BDLs | 0.8237 | 0.000 | No Trend | 0.9296 | Same | 0.6165 | No Trend | | | |
| JMSPH | Spring1 | BPO4F | 0.5513 | 0.000 | High BDLs | 0.9746 | 0.000 | No Trend | 0.7883 | Same | 0.8345 | No Trend | | | |
| APPTF | Spring2 | STN | 0.0860 | -0.015 | No Trend | 0.1367 | 0.007 | No Trend | 0.0296 | Same | 0.6820 | No Trend | | | |
| APPTF | Spring2 | BTN | 0.1835 | -0.019 | No Trend | 0.4204 | 0.005 | No Trend | 0.1678 | Same | 0.9755 | No Trend | | | |
| APPTF | Spring2 | SDIN | 0.4454 | 0.004 | No Trend | 0.4811 | 0.007 | No Trend | 0.8292 | Same | 0.3093 | No Trend | | | |
| APPTF | Spring2 | BDIN | 0.3412 | 0.005 | No Trend | 0.5491 | 0.004 | No Trend | 0.9754 | Same | 0.3093 | No Trend | | | |
| APPTF | Spring2 | STP | 0.1097 | -0.004 | No Trend | 0.3969 | -0.001 | No Trend | 0.9761 | Same | 0.1267 | No Trend | | | |
| APPTF | Spring2 | BTP | 0.1945 | -0.002 | No Trend | 0.7094 | -0.001 | No Trend | 0.7639 | Same | 0.3365 | No Trend | | | |
| APPTF | Spring2 | SPO4F | 0.1747 | 0.000 | High BDLs | 0.3367 | 0.000 | No Trend | 0.8046 | Same | 0.1376 | No Trend | | | |
| APPTF | Spring2 | BPO4F | 0.0791 | -0.002 | High BDLs | 0.2452 | 0.000 | No Trend | 0.8058 | Same | 0.0652 | No Trend | | | |

Appendix A - Section IA. James River (1985-2008) - Continued.

| Segment | Season | Parameter | '93 | | '93 | | '08 | | '08 | | Trend | Combined | Combined |
|---------|---------|-----------|---------|--------|-----------|---------|--------|-----------|---------|------------|--------|--------------|----------|
| | | | P value | Slope | Direction | P value | Slope | Direction | P value | Comparison | Trend | Trend | Trend |
| JMSTF2 | Spring2 | STN | 0.0047 | -0.057 | Improving | 0.5341 | 0.003 | No Trend | 0.0541 | Same | 0.4045 | No Trend | |
| JMSTF2 | Spring2 | BTN | 0.0000 | -0.117 | Improving | 0.7702 | 0.002 | No Trend | 0.0114 | Same | 0.0429 | No Trend | |
| JMSTF2 | Spring2 | SDIN | 0.0351 | -0.024 | No Trend | 0.0292 | 0.009 | No Trend | 0.0033 | Different | 0.3558 | No Trend* | |
| JMSTF2 | Spring2 | BDIN | 0.0010 | -0.059 | Improving | 0.0231 | 0.013 | No Trend | 0.0003 | Different | 0.6755 | Improving 85 | |
| JMSTF2 | Spring2 | STP | 0.0001 | -0.012 | Improving | 0.2821 | -0.001 | No Trend | 0.3846 | Same | 0.0055 | Improving | |
| JMSTF2 | Spring2 | BTP | 0.0000 | -0.019 | Improving | 0.0969 | -0.002 | No Trend | 0.4916 | Same | 0.0003 | Improving | |
| JMSTF2 | Spring2 | SPO4F | 0.0000 | -0.011 | Improving | 0.2818 | -0.001 | No Trend | 0.3266 | Same | 0.0039 | Improving | |
| JMSTF2 | Spring2 | BPO4F | 0.0000 | -0.016 | Improving | 0.7086 | 0.000 | No Trend | 0.0633 | Same | 0.0119 | No Trend | |
| JMSTF1 | Spring2 | STN | 0.2054 | -0.014 | No Trend | 0.1070 | -0.006 | No Trend | 0.4169 | Same | 0.0410 | No Trend | |
| JMSTF1 | Spring2 | BTN | 0.1134 | -0.029 | No Trend | 0.0427 | -0.017 | No Trend | 0.2957 | Same | 0.0106 | No Trend | |
| JMSTF1 | Spring2 | SDIN | 0.2054 | -0.015 | No Trend | 0.1290 | 0.009 | No Trend | 0.0499 | Same | 0.4665 | No Trend | |
| JMSTF1 | Spring2 | BDIN | 0.1835 | -0.017 | No Trend | 0.5069 | 0.006 | No Trend | 0.2240 | Same | 0.9774 | No Trend | |
| JMSTF1 | Spring2 | STP | 0.4219 | 0.000 | No Trend | 0.1374 | -0.001 | No Trend | 0.3531 | Same | 0.0861 | No Trend | |
| JMSTF1 | Spring2 | BTP | 0.2505 | 0.002 | No Trend | 0.0939 | -0.002 | No Trend | 0.0414 | Same | 0.3355 | No Trend | |
| JMSTF1 | Spring2 | SPO4F | 0.2399 | -0.001 | No Trend | 0.3353 | 0.000 | No Trend | 0.7756 | Same | 0.1541 | No Trend | |
| JMSTF1 | Spring2 | BPO4F | 0.2567 | 0.000 | No Trend | 0.1113 | 0.000 | No Trend | 0.3577 | Same | 0.0507 | No Trend | |
| CHKOH | Spring2 | STN | 0.0064 | -0.055 | Improving | 0.5417 | -0.002 | No Trend | 0.7956 | Same | 0.1543 | No Trend | |
| CHKOH | Spring2 | BTN | 0.1289 | -0.054 | No Trend | 0.1911 | -0.009 | No Trend | 0.4340 | Same | 0.0852 | No Trend | |
| CHKOH | Spring2 | SDIN | 0.4701 | 0.000 | High BDLs | 0.0072 | 0.005 | Degrading | 0.0049 | Different | 0.0177 | Degrading 95 | |
| CHKOH | Spring2 | BDIN | 0.4424 | 0.000 | High BDLs | 0.2033 | 0.003 | No Trend | 0.1469 | Same | 0.3084 | No Trend | |
| CHKOH | Spring2 | STP | 0.4865 | 0.000 | No Trend | 0.6596 | -0.001 | No Trend | 0.5154 | Same | 0.8453 | No Trend | |
| CHKOH | Spring2 | BTP | 0.5102 | 0.003 | No Trend | 0.3598 | -0.002 | No Trend | 0.2727 | Same | 0.5104 | No Trend | |
| CHKOH | Spring2 | SPO4F | 0.1148 | 0.000 | High BDLs | 0.0788 | 0.000 | No Trend | 0.1852 | Same | 0.0357 | No Trend | |
| CHKOH | Spring2 | BPO4F | 0.0084 | -0.001 | High BDLs | 0.1228 | 0.000 | No Trend | 0.3990 | Same | 0.0311 | No Trend | |
| JMSOH | Spring2 | STN | 0.8567 | -0.011 | No Trend | 0.3954 | 0.003 | No Trend | 0.3888 | Same | 0.5274 | No Trend | |
| JMSOH | Spring2 | BTN | 0.1324 | 0.030 | No Trend | 0.5563 | -0.006 | No Trend | 0.2063 | Same | 0.8183 | No Trend | |
| JMSOH | Spring2 | SDIN | 0.3062 | -0.010 | No Trend | 0.0622 | 0.007 | No Trend | 0.0312 | Same | 0.2512 | No Trend | |
| JMSOH | Spring2 | BDIN | 0.6735 | -0.006 | No Trend | 0.0939 | 0.007 | No Trend | 0.0878 | Same | 0.2079 | No Trend | |
| JMSOH | Spring2 | STP | 0.0090 | 0.007 | Degrading | 0.6129 | 0.000 | No Trend | 0.0924 | Same | 0.4323 | No Trend | |
| JMSOH | Spring2 | BTP | 0.0037 | 0.015 | Degrading | 0.1549 | -0.003 | No Trend | 0.0084 | Different | 0.9108 | Degrading 85 | |
| JMSOH | Spring2 | SPO4F | 0.0652 | 0.001 | High BDLs | 0.7998 | 0.000 | No Trend | 0.5325 | Same | 0.2810 | No Trend | |
| JMSOH | Spring2 | BPO4F | 0.6549 | 0.000 | High BDLs | 0.2290 | 0.000 | No Trend | 0.3949 | Same | 0.1920 | No Trend | |
| JMSMH | Spring2 | STN | 0.0047 | 0.030 | Degrading | 0.0939 | 0.005 | No Trend | 0.8887 | Same | 0.0047 | Degrading | |
| JMSMH | Spring2 | BTN | 0.0009 | 0.035 | Degrading | 0.5482 | 0.003 | No Trend | 0.3005 | Same | 0.0358 | No Trend | |
| JMSMH | Spring2 | SDIN | 0.1647 | 0.007 | No Trend | 0.7040 | 0.001 | No Trend | 0.7365 | Same | 0.3127 | No Trend | |
| JMSMH | Spring2 | BDIN | 0.1296 | 0.007 | No Trend | 0.8249 | -0.001 | No Trend | 0.3550 | Same | 0.5944 | No Trend | |
| JMSMH | Spring2 | STP | 0.0001 | 0.005 | Degrading | 0.7761 | 0.000 | No Trend | 0.0404 | Same | 0.1226 | No Trend | |
| JMSMH | Spring2 | BTP | 0.0008 | 0.005 | Degrading | 0.5482 | 0.001 | No Trend | 0.2995 | Same | 0.0355 | No Trend | |
| JMSMH | Spring2 | SPO4F | 0.0379 | 0.002 | High BDLs | 0.8742 | 0.000 | No Trend | 0.4122 | Same | 0.2701 | No Trend | |
| JMSMH | Spring2 | BPO4F | 0.0075 | 0.002 | Degrading | 0.7996 | 0.000 | No Trend | 0.1476 | Same | 0.3203 | No Trend | |
| JMSPH | Spring2 | STN | 0.7634 | 0.003 | No Trend | 0.5910 | -0.002 | No Trend | 0.5198 | Same | 0.7582 | No Trend | |
| JMSPH | Spring2 | BTN | 0.2528 | 0.013 | No Trend | 0.0399 | 0.008 | No Trend | 0.2079 | Same | 0.0174 | No Trend | |
| JMSPH | Spring2 | SDIN | 0.1661 | 0.000 | High BDLs | 0.9748 | 0.000 | No Trend | 0.6164 | Same | 0.5756 | No Trend | |
| JMSPH | Spring2 | BDIN | 0.0635 | 0.000 | High BDLs | 0.3934 | 0.001 | No Trend | 0.7604 | Same | 0.1797 | No Trend | |
| JMSPH | Spring2 | STP | 0.3329 | 0.001 | No Trend | 0.1070 | -0.001 | No Trend | 0.0568 | Same | 0.3408 | No Trend | |
| JMSPH | Spring2 | BTP | 0.7626 | 0.000 | No Trend | 0.7281 | 0.000 | No Trend | 0.6340 | Same | 0.8886 | No Trend | |
| JMSPH | Spring2 | SPO4F | 1.0000 | 0.000 | High BDLs | 0.8241 | 0.000 | No Trend | 0.8410 | Same | 0.8410 | No Trend | |
| JMSPH | Spring2 | BPO4F | 0.8882 | 0.000 | High BDLs | 0.3100 | 0.000 | No Trend | 0.3114 | Same | 0.4017 | No Trend | |

Appendix A - Section IA. James River (1985-2008) - Continued.

| Segment | Season | Parameter | '93 | | '93 | Trend | '08 | | '08 | Trend | Trend | | Combined | Combined |
|---------|---------|-----------|--------|--------|-----------|---------|--------|-----------|---------|------------|-------|---------|-----------|-----------|
| | | | Trend | Slope | Direction | P value | Slope | Direction | P value | Comparison | Trend | P value | Trend | Direction |
| APPTF | Summer1 | STN | 0.0759 | -0.042 | No Trend | 0.5954 | 0.003 | No Trend | 0.1734 | Same | | 0.6624 | No Trend | |
| APPTF | Summer1 | BTN | 0.0854 | -0.035 | No Trend | 0.8595 | -0.003 | No Trend | 0.4722 | Same | | 0.3044 | No Trend | |
| APPTF | Summer1 | SDIN | 0.6002 | -0.003 | No Trend | 0.7080 | -0.003 | No Trend | 0.9786 | Same | | 0.5374 | No Trend | |
| APPTF | Summer1 | BDIN | 0.3213 | -0.008 | No Trend | 0.5635 | -0.004 | No Trend | 0.9790 | Same | | 0.3055 | No Trend | |
| APPTF | Summer1 | STP | 0.9162 | 0.000 | No Trend | 0.4828 | -0.001 | No Trend | 0.5858 | Same | | 0.4879 | No Trend | |
| APPTF | Summer1 | BTP | 0.1255 | 0.003 | No Trend | 0.3544 | -0.001 | No Trend | 0.1184 | Same | | 0.9407 | No Trend | |
| APPTF | Summer1 | SPO4F | 0.1516 | 0.000 | High BDLs | 0.0660 | -0.001 | No Trend | 0.3225 | Same | | 0.0210 | No Trend | |
| APPTF | Summer1 | BPO4F | 0.0325 | -0.001 | High BDLs | 0.0801 | -0.001 | No Trend | 0.5617 | Same | | 0.0108 | No Trend | |
| JMSTF2 | Summer1 | STN | 0.0006 | -0.073 | Improving | 0.0660 | 0.020 | No Trend | 0.0012 | Different | | 1.0000 | Improving | 85 |
| JMSTF2 | Summer1 | BTN | 0.0000 | -0.139 | Improving | 0.0139 | 0.017 | No Trend | 0.0000 | Different | | 0.8725 | Improving | 85 |
| JMSTF2 | Summer1 | SDIN | 0.0041 | -0.030 | Improving | 0.0800 | 0.011 | No Trend | 0.0035 | Different | | 0.8591 | Improving | 85 |
| JMSTF2 | Summer1 | BDIN | 0.0000 | -0.068 | Improving | 0.0296 | 0.016 | No Trend | 0.0001 | Different | | 0.9133 | Improving | 85 |
| JMSTF2 | Summer1 | STP | 0.0002 | -0.016 | Improving | 0.5470 | -0.001 | No Trend | 0.2343 | Same | | 0.0240 | No Trend | |
| JMSTF2 | Summer1 | BTP | 0.0000 | -0.023 | Improving | 0.9527 | 0.000 | No Trend | 0.0373 | Same | | 0.0288 | No Trend | |
| JMSTF2 | Summer1 | SPO4F | 0.0001 | -0.013 | Improving | 0.0550 | -0.001 | No Trend | 0.9034 | Same | | 0.0004 | Improving | |
| JMSTF2 | Summer1 | BPO4F | 0.0000 | -0.019 | Improving | 0.6131 | 0.000 | No Trend | 0.1117 | Same | | 0.0132 | No Trend | |
| JMSTF1 | Summer1 | STN | 0.1593 | -0.031 | No Trend | 0.0336 | -0.010 | No Trend | 0.2586 | Same | | 0.0102 | No Trend | |
| JMSTF1 | Summer1 | BTN | 0.5664 | -0.018 | No Trend | 0.0032 | -0.023 | Improving | 0.0257 | Same | | 0.0042 | Improving | |
| JMSTF1 | Summer1 | SDIN | 0.0021 | -0.030 | Improving | 0.9764 | 0.000 | No Trend | 0.1169 | Same | | 0.1294 | No Trend | |
| JMSTF1 | Summer1 | BDIN | 0.0015 | -0.035 | Improving | 0.6369 | -0.003 | No Trend | 0.2375 | Same | | 0.0452 | No Trend | |
| JMSTF1 | Summer1 | STP | 0.0259 | 0.004 | No Trend | 0.1159 | -0.001 | No Trend | 0.0140 | Same | | 0.7470 | No Trend | |
| JMSTF1 | Summer1 | BTP | 0.0002 | 0.008 | Degrading | 0.1778 | -0.003 | No Trend | 0.0028 | Different | | 0.5362 | Degrading | 85 |
| JMSTF1 | Summer1 | SPO4F | 0.2344 | -0.001 | No Trend | 0.0236 | 0.000 | No Trend | 0.1530 | Same | | 0.0098 | Improving | |
| JMSTF1 | Summer1 | BPO4F | 0.3439 | 0.000 | No Trend | 0.0073 | -0.001 | Improving | 0.0526 | Same | | 0.0044 | Improving | |
| CHKOH | Summer1 | STN | 0.2220 | -0.044 | No Trend | 0.2481 | -0.004 | No Trend | 0.4877 | Same | | 0.1327 | No Trend | |
| CHKOH | Summer1 | BTN | 0.5071 | -0.035 | No Trend | 0.2610 | -0.006 | No Trend | 0.4015 | Same | | 0.1930 | No Trend | |
| CHKOH | Summer1 | SDIN | 0.7400 | 0.000 | High BDLs | 0.0101 | 0.002 | No Trend | 0.0088 | Different | | 0.0147 | No Trend* | |
| CHKOH | Summer1 | BDIN | 0.5040 | 0.000 | High BDLs | 0.2202 | 0.001 | No Trend | 0.1702 | Same | | 0.3071 | No Trend | |
| CHKOH | Summer1 | STP | 0.1594 | 0.002 | No Trend | 0.0787 | -0.001 | No Trend | 0.0352 | Same | | 0.2025 | No Trend | |
| CHKOH | Summer1 | BTP | 0.2972 | 0.009 | No Trend | 0.2491 | -0.002 | No Trend | 0.1517 | Same | | 0.4402 | No Trend | |
| CHKOH | Summer1 | SPO4F | 0.7165 | 0.000 | High BDLs | 0.3081 | 0.000 | No Trend | 0.2752 | Same | | 0.3559 | No Trend | |
| CHKOH | Summer1 | BPO4F | 0.7822 | 0.000 | High BDLs | 0.4430 | 0.000 | No Trend | 0.5042 | Same | | 0.4038 | No Trend | |
| JMSOH | Summer1 | STN | 0.4324 | -0.005 | No Trend | 0.6867 | 0.001 | No Trend | 0.4489 | Same | | 0.9597 | No Trend | |
| JMSOH | Summer1 | BTN | 0.2305 | 0.021 | No Trend | 0.8854 | -0.001 | No Trend | 0.4645 | Same | | 0.6318 | No Trend | |
| JMSOH | Summer1 | SDIN | 0.0038 | -0.005 | Improving | 0.6851 | 0.001 | No Trend | 0.0668 | Same | | 0.2575 | No Trend | |
| JMSOH | Summer1 | BDIN | 0.0119 | -0.005 | High BDLs | 0.9502 | 0.000 | No Trend | 0.2149 | Same | | 0.1776 | No Trend | |
| JMSOH | Summer1 | STP | 0.0022 | 0.006 | Degrading | 0.9106 | 0.000 | No Trend | 0.1185 | Same | | 0.1730 | No Trend | |
| JMSOH | Summer1 | BTP | 0.0048 | 0.008 | Degrading | 0.7575 | -0.001 | No Trend | 0.1028 | Same | | 0.2768 | No Trend | |
| JMSOH | Summer1 | SPO4F | 0.0316 | 0.001 | No Trend | 0.1517 | 0.000 | No Trend | 0.8033 | Same | | 0.0219 | No Trend | |
| JMSOH | Summer1 | BPO4F | 0.1324 | 0.001 | No Trend | 0.2371 | 0.000 | No Trend | 0.7458 | Same | | 0.0767 | No Trend | |
| JMSMH | Summer1 | STN | 0.5988 | 0.005 | No Trend | 0.9776 | 0.000 | No Trend | 0.7808 | Same | | 0.8199 | No Trend | |
| JMSMH | Summer1 | BTN | 0.0473 | 0.016 | No Trend | 0.6738 | -0.002 | No Trend | 0.2060 | Same | | 0.6130 | No Trend | |
| JMSMH | Summer1 | SDIN | 0.8078 | 0.000 | High BDLs | 0.5115 | -0.001 | No Trend | 0.4697 | Same | | 0.6564 | No Trend | |
| JMSMH | Summer1 | BDIN | 1.0000 | 0.000 | High BDLs | 0.9765 | 0.000 | No Trend | 0.9576 | Same | | 1.0000 | No Trend | |
| JMSMH | Summer1 | STP | 0.0012 | 0.004 | Degrading | 1.0000 | 0.000 | No Trend | 0.1316 | Same | | 0.1316 | No Trend | |
| JMSMH | Summer1 | BTP | 0.0002 | 0.005 | Degrading | 0.8053 | 0.000 | No Trend | 0.0490 | Same | | 0.1257 | No Trend | |
| JMSMH | Summer1 | SPO4F | 0.0068 | 0.003 | Degrading | 0.3375 | 0.000 | No Trend | 0.6789 | Same | | 0.0341 | No Trend | |
| JMSMH | Summer1 | BPO4F | 0.0157 | 0.002 | No Trend | 0.3232 | 0.000 | No Trend | 0.8251 | Same | | 0.0468 | No Trend | |

Appendix A - Section IA. James River (1985-2008) - Continued.

| Segment | Season | Parameter | '93 | | '93 | | '08 | | '08 | | Trend | | Combined | | Combined |
|---------|---------|-----------|---------|--------|-----------|---------|--------|-----------|--------|------------|---------|--------------|----------|-----------|----------|
| | | | Trend | '93 | Trend | Trend | '08 | '08 | Trend | Comparison | P value | Comparison | Trend | Trend | Trend |
| | | | P value | Slope | Direction | P value | Slope | Direction | | | | | P value | Direction | |
| JMSPH | Summer1 | STN | 0.7152 | 0.002 | No Trend | 0.5111 | 0.001 | No Trend | 0.6981 | Same | 0.4379 | No Trend | | | |
| JMSPH | Summer1 | BTN | 0.7152 | -0.005 | No Trend | 0.0601 | 0.004 | No Trend | 0.0638 | Same | 0.1449 | No Trend | | | |
| JMSPH | Summer1 | SDIN | 0.9429 | 0.000 | High BDLs | 0.0285 | 0.002 | No Trend | 0.0461 | Same | 0.0360 | No Trend | | | |
| JMSPH | Summer1 | BDIN | 0.5189 | 0.000 | High BDLs | 0.4767 | 0.001 | No Trend | 0.6824 | Same | 0.3573 | No Trend | | | |
| JMSPH | Summer1 | STP | 0.7535 | 0.000 | No Trend | 0.4115 | 0.000 | No Trend | 0.5769 | Same | 0.3695 | No Trend | | | |
| JMSPH | Summer1 | BTP | 0.3755 | 0.001 | No Trend | 0.2390 | -0.001 | No Trend | 0.1392 | Same | 0.5445 | No Trend | | | |
| JMSPH | Summer1 | SPO4F | 0.9578 | 0.000 | No Trend | 0.1179 | 0.000 | No Trend | 0.1507 | Same | 0.1804 | No Trend | | | |
| JMSPH | Summer1 | BPO4F | 0.7938 | 0.000 | No Trend | 0.5107 | 0.000 | No Trend | 0.6622 | Same | 0.4665 | No Trend | | | |
| APPTF | Summer2 | STN | 0.0704 | -0.047 | No Trend | 0.8063 | 0.001 | No Trend | 0.2497 | Same | 0.4673 | No Trend | | | |
| APPTF | Summer2 | BTN | 0.1324 | -0.036 | No Trend | 0.5515 | -0.006 | No Trend | 0.7853 | Same | 0.1930 | No Trend | | | |
| APPTF | Summer2 | SDIN | 0.2510 | -0.014 | No Trend | 0.8275 | 0.001 | No Trend | 0.4183 | Same | 0.6630 | No Trend | | | |
| APPTF | Summer2 | BDIN | 0.1317 | -0.020 | No Trend | 0.8334 | -0.002 | No Trend | 0.5445 | Same | 0.3322 | No Trend | | | |
| APPTF | Summer2 | STP | 0.9033 | 0.000 | No Trend | 0.7936 | 0.000 | No Trend | 0.8855 | Same | 0.7514 | No Trend | | | |
| APPTF | Summer2 | BTP | 0.0432 | 0.005 | No Trend | 0.5563 | -0.001 | No Trend | 0.1337 | Same | 0.6445 | No Trend | | | |
| APPTF | Summer2 | SPO4F | 0.1627 | -0.001 | High BDLs | 0.2928 | 0.000 | No Trend | 0.7928 | Same | 0.1084 | No Trend | | | |
| APPTF | Summer2 | BPO4F | 0.0603 | -0.001 | High BDLs | 0.3407 | 0.000 | No Trend | 0.9536 | Same | 0.0809 | No Trend | | | |
| JMSTF2 | Summer2 | STN | 0.0065 | -0.060 | Improving | 0.1667 | 0.018 | No Trend | 0.0114 | Same | 0.9288 | No Trend | | | |
| JMSTF2 | Summer2 | BTN | 0.0001 | -0.120 | Improving | 0.0273 | 0.017 | No Trend | 0.0002 | Different | 0.9011 | Improving 85 | | | |
| JMSTF2 | Summer2 | SDIN | 0.0094 | -0.033 | Improving | 0.1056 | 0.014 | No Trend | 0.0074 | Different | 0.8583 | Improving 85 | | | |
| JMSTF2 | Summer2 | BDIN | 0.0004 | -0.065 | Improving | 0.0512 | 0.015 | No Trend | 0.0006 | Different | 1.0000 | Improving 85 | | | |
| JMSTF2 | Summer2 | STP | 0.0021 | -0.017 | Improving | 0.3934 | -0.001 | No Trend | 0.4838 | Same | 0.0269 | No Trend | | | |
| JMSTF2 | Summer2 | BTP | 0.0005 | -0.023 | Improving | 0.8388 | 0.000 | No Trend | 0.0636 | Same | 0.1347 | No Trend | | | |
| JMSTF2 | Summer2 | SPO4F | 0.0037 | -0.015 | Improving | 0.2290 | -0.001 | No Trend | 0.7578 | Same | 0.0147 | No Trend | | | |
| JMSTF2 | Summer2 | BPO4F | 0.0019 | -0.019 | Improving | 0.8651 | 0.000 | No Trend | 0.1777 | Same | 0.0995 | No Trend | | | |
| JMSTF1 | Summer2 | STN | 0.4339 | -0.014 | No Trend | 0.0861 | -0.013 | No Trend | 0.2893 | Same | 0.0565 | No Trend | | | |
| JMSTF1 | Summer2 | BTN | 0.5880 | -0.019 | No Trend | 0.0045 | -0.025 | Improving | 0.0316 | Same | 0.0059 | Improving | | | |
| JMSTF1 | Summer2 | SDIN | 0.0134 | -0.033 | No Trend | 0.8609 | 0.001 | No Trend | 0.1544 | Same | 0.2622 | No Trend | | | |
| JMSTF1 | Summer2 | BDIN | 0.0096 | -0.039 | Improving | 0.8063 | -0.002 | No Trend | 0.2626 | Same | 0.1226 | No Trend | | | |
| JMSTF1 | Summer2 | STP | 0.0050 | 0.005 | Degrading | 0.1243 | -0.001 | No Trend | 0.0067 | Different | 1.0000 | Degrading 85 | | | |
| JMSTF1 | Summer2 | BTP | 0.0026 | 0.010 | Degrading | 0.2524 | -0.003 | No Trend | 0.0134 | Same | 0.6455 | No Trend | | | |
| JMSTF1 | Summer2 | SPO4F | 0.1928 | -0.001 | No Trend | 0.1470 | 0.000 | No Trend | 0.5220 | Same | 0.0548 | No Trend | | | |
| JMSTF1 | Summer2 | BPO4F | 0.3100 | 0.000 | No Trend | 0.0416 | -0.001 | No Trend | 0.1892 | Same | 0.0212 | No Trend | | | |
| CHKOH | Summer2 | STN | 0.6644 | -0.033 | No Trend | 0.4002 | -0.004 | No Trend | 0.5263 | Same | 0.3334 | No Trend | | | |
| CHKOH | Summer2 | BTN | 1.0000 | 0.000 | No Trend | 0.5515 | -0.003 | No Trend | 0.5481 | Same | 0.5934 | No Trend | | | |
| CHKOH | Summer2 | SDIN | 0.5582 | 0.000 | High BDLs | 0.0326 | 0.001 | No Trend | 0.0444 | Same | 0.0258 | No Trend | | | |
| CHKOH | Summer2 | BDIN | 1.0000 | 0.000 | High BDLs | 0.2274 | 0.001 | No Trend | 0.2364 | Same | 0.2364 | No Trend | | | |
| CHKOH | Summer2 | STP | 0.1444 | 0.005 | No Trend | 0.0461 | -0.001 | No Trend | 0.0185 | Same | 0.1400 | No Trend | | | |
| CHKOH | Summer2 | BTP | 0.1017 | 0.010 | No Trend | 0.2142 | -0.002 | No Trend | 0.0909 | Same | 0.4909 | No Trend | | | |
| CHKOH | Summer2 | SPO4F | 0.2472 | 0.000 | High BDLs | 0.9737 | 0.000 | No Trend | 0.8706 | Same | 0.8196 | No Trend | | | |
| CHKOH | Summer2 | BPO4F | 0.5997 | 0.000 | High BDLs | 0.8435 | 0.000 | No Trend | 0.7465 | Same | 0.9484 | No Trend | | | |
| JMSOH | Summer2 | STN | 0.5860 | -0.004 | No Trend | 0.6010 | 0.001 | No Trend | 0.4546 | Same | 0.8630 | No Trend | | | |
| JMSOH | Summer2 | BTN | 0.3062 | 0.020 | No Trend | 0.7685 | 0.003 | No Trend | 0.7959 | Same | 0.4378 | No Trend | | | |
| JMSOH | Summer2 | SDIN | 0.0245 | -0.004 | High BDLs | 0.3237 | 0.003 | No Trend | 0.0410 | Same | 0.7212 | No Trend | | | |
| JMSOH | Summer2 | BDIN | 0.0150 | -0.005 | High BDLs | 0.4704 | 0.003 | No Trend | 0.0556 | Same | 0.4957 | No Trend | | | |
| JMSOH | Summer2 | STP | 0.0180 | 0.005 | No Trend | 0.7438 | 0.000 | No Trend | 0.1503 | Same | 0.3881 | No Trend | | | |
| JMSOH | Summer2 | BTP | 0.0080 | 0.009 | Degrading | 0.6010 | 0.001 | No Trend | 0.4046 | Same | 0.0796 | No Trend | | | |
| JMSOH | Summer2 | SPO4F | 0.0407 | 0.001 | No Trend | 0.0308 | 0.001 | No Trend | 0.3544 | Same | 0.0038 | Degrading | | | |
| JMSOH | Summer2 | BPO4F | 0.1538 | 0.001 | No Trend | 0.0881 | 0.001 | No Trend | 0.4168 | Same | 0.0275 | No Trend | | | |

Appendix A - Section IA. James River (1985-2008) - Continued.

| Segment | Season | Parameter | '93 | | '93 | | '08 | | '08 | | Trend | | Combined | | Combined |
|---------|---------|-----------|--------|--------|-----------|--------|--------|-----------|------------|-----------|---------|------------|----------|---------|----------|
| | | | Trend | '93 | Trend | Trend | '08 | Trend | Comparison | Trend | P value | Comparison | Trend | P value | Trend |
| JMSMH | Summer2 | STN | 0.6212 | -0.005 | No Trend | 0.7438 | -0.001 | No Trend | 0.9527 | Same | 0.5934 | No Trend | | | |
| JMSMH | Summer2 | BTN | 0.2599 | 0.010 | No Trend | 0.6472 | -0.003 | No Trend | 0.3581 | Same | 0.9291 | No Trend | | | |
| JMSMH | Summer2 | SDIN | 0.6012 | 0.000 | High BDLs | 0.5688 | 0.001 | No Trend | 0.4361 | Same | 0.8127 | No Trend | | | |
| JMSMH | Summer2 | BDIN | 0.4079 | 0.000 | High BDLs | 0.3621 | 0.002 | No Trend | 0.2273 | Same | 0.6565 | No Trend | | | |
| JMSMH | Summer2 | STP | 0.0122 | 0.003 | No Trend | 0.9245 | 0.000 | No Trend | 0.2735 | Same | 0.2064 | No Trend | | | |
| JMSMH | Summer2 | BTP | 0.0034 | 0.004 | Degrading | 0.5271 | -0.001 | No Trend | 0.0527 | Same | 0.4155 | No Trend | | | |
| JMSMH | Summer2 | SPO4F | 0.0567 | 0.002 | No Trend | 0.1137 | 0.001 | No Trend | 0.6126 | Same | 0.0211 | No Trend | | | |
| JMSMH | Summer2 | BPO4F | 0.1105 | 0.001 | No Trend | 0.2048 | 0.000 | No Trend | 0.6910 | Same | 0.0609 | No Trend | | | |
| JMSPH | Summer2 | STN | 0.4339 | 0.007 | No Trend | 0.3591 | 0.003 | No Trend | 0.6745 | Same | 0.2287 | No Trend | | | |
| JMSPH | Summer2 | BTN | 0.9520 | -0.002 | No Trend | 0.2393 | 0.003 | No Trend | 0.2750 | Same | 0.3288 | No Trend | | | |
| JMSPH | Summer2 | SDIN | 0.9429 | 0.000 | High BDLs | 0.0027 | 0.003 | Degrading | 0.0072 | Different | 0.0050 | Degrading | 95 | | |
| JMSPH | Summer2 | BDIN | 0.7201 | 0.000 | High BDLs | 0.2969 | 0.001 | No Trend | 0.4349 | Same | 0.2594 | No Trend | | | |
| JMSPH | Summer2 | STP | 1.0000 | 0.000 | No Trend | 0.2686 | 0.000 | No Trend | 0.3270 | Same | 0.3270 | No Trend | | | |
| JMSPH | Summer2 | BTP | 0.2528 | 0.001 | No Trend | 0.1841 | -0.001 | No Trend | 0.0826 | Same | 0.5380 | No Trend | | | |
| JMSPH | Summer2 | SPO4F | 0.8550 | 0.000 | No Trend | 0.1545 | 0.001 | No Trend | 0.1689 | Same | 0.2496 | No Trend | | | |
| JMSPH | Summer2 | BPO4F | 0.6295 | 0.001 | No Trend | 0.8993 | 0.000 | No Trend | 0.7157 | Same | 0.8886 | No Trend | | | |
| APPTF | Winter | STN | 1.0000 | 0.010 | No Trend | 0.8553 | 0.002 | No Trend | 0.9018 | Same | 0.8370 | No Trend | | | |
| APPTF | Winter | BTN | 0.9066 | 0.018 | No Trend | 0.6656 | -0.004 | No Trend | 0.6249 | Same | 0.7557 | No Trend | | | |
| APPTF | Winter | SDIN | 1.0000 | -0.004 | No Trend | 0.9675 | 0.001 | No Trend | 0.9402 | Same | 1.0000 | No Trend | | | |
| APPTF | Winter | BDIN | 0.6366 | -0.014 | No Trend | 0.9659 | 0.000 | No Trend | 0.8093 | Same | 0.8722 | No Trend | | | |
| APPTF | Winter | STP | 0.0799 | 0.007 | No Trend | 0.1134 | -0.001 | No Trend | 0.0283 | Same | 0.4809 | No Trend | | | |
| APPTF | Winter | BTP | 0.2081 | 0.005 | No Trend | 0.2624 | -0.001 | No Trend | 0.1126 | Same | 0.6545 | No Trend | | | |
| APPTF | Winter | SPO4F | 0.0817 | -0.002 | No Trend | 0.0176 | -0.001 | No Trend | 0.1286 | Same | 0.0039 | Improving | | | |
| APPTF | Winter | BPO4F | 0.1054 | -0.003 | High BDLs | 0.0184 | -0.001 | No Trend | 0.1337 | Same | 0.0045 | Improving | | | |
| JMSTF2 | Winter | STN | 0.0440 | -0.056 | No Trend | 0.3160 | -0.008 | No Trend | 1.0000 | Same | 0.0701 | No Trend | | | |
| JMSTF2 | Winter | BTN | 0.0258 | -0.089 | No Trend | 0.2366 | -0.009 | No Trend | 0.8876 | Same | 0.0427 | No Trend | | | |
| JMSTF2 | Winter | SDIN | 0.0219 | -0.030 | No Trend | 0.5963 | -0.003 | No Trend | 0.6529 | Same | 0.1544 | No Trend | | | |
| JMSTF2 | Winter | BDIN | 0.0335 | -0.042 | No Trend | 0.9659 | 0.000 | No Trend | 0.4690 | Same | 0.4211 | No Trend | | | |
| JMSTF2 | Winter | STP | 0.0274 | -0.014 | No Trend | 0.0091 | -0.003 | Improving | 0.1483 | Same | 0.0009 | Improving | | | |
| JMSTF2 | Winter | BTP | 0.0165 | -0.015 | No Trend | 0.0611 | -0.003 | No Trend | 0.5767 | Same | 0.0053 | Improving | | | |
| JMSTF2 | Winter | SPO4F | 0.0155 | -0.009 | No Trend | 0.0025 | -0.002 | Improving | 0.0708 | Same | 0.0002 | Improving | | | |
| JMSTF2 | Winter | BPO4F | 0.1773 | -0.008 | No Trend | 0.0030 | -0.001 | Improving | 0.0342 | Same | 0.0010 | Improving | | | |
| JMSTF1 | Winter | STN | 0.2518 | -0.108 | No Trend | 0.7154 | 0.006 | No Trend | 0.3877 | Same | 0.8370 | No Trend | | | |
| JMSTF1 | Winter | BTN | 0.1273 | -0.089 | No Trend | 0.5844 | 0.010 | No Trend | 0.2693 | Same | 0.9323 | No Trend | | | |
| JMSTF1 | Winter | SDIN | 0.2518 | -0.058 | No Trend | 0.7755 | -0.005 | No Trend | 0.8221 | Same | 0.4535 | No Trend | | | |
| JMSTF1 | Winter | BDIN | 0.1273 | -0.053 | No Trend | 0.9659 | -0.001 | No Trend | 0.6013 | Same | 0.5466 | No Trend | | | |
| JMSTF1 | Winter | STP | 0.3291 | -0.006 | No Trend | 0.0542 | -0.003 | No Trend | 0.1828 | Same | 0.0282 | No Trend | | | |
| JMSTF1 | Winter | BTP | 0.3857 | -0.004 | No Trend | 0.3689 | -0.002 | No Trend | 0.6671 | Same | 0.2254 | No Trend | | | |
| JMSTF1 | Winter | SPO4F | 0.0142 | -0.008 | No Trend | 0.0014 | -0.001 | Improving | 0.0495 | Same | 0.0001 | Improving | | | |
| JMSTF1 | Winter | BPO4F | 0.0063 | -0.006 | Improving | 0.0004 | -0.001 | Improving | 0.0309 | Same | 0.0000 | Improving | | | |
| CHKOH | Winter | STN | 0.3865 | -0.068 | No Trend | 0.4120 | -0.008 | No Trend | 0.5968 | Same | 0.2901 | No Trend | | | |
| CHKOH | Winter | BTN | 0.4712 | -0.244 | No Trend | 0.1212 | -0.010 | No Trend | 0.1791 | Same | 0.0888 | No Trend | | | |
| CHKOH | Winter | SDIN | 0.1190 | -0.105 | No Trend | 0.3084 | -0.007 | No Trend | 0.5519 | Same | 0.1651 | No Trend | | | |
| CHKOH | Winter | BDIN | 0.4712 | -0.099 | No Trend | 0.1120 | -0.012 | No Trend | 0.1597 | Same | 0.0841 | No Trend | | | |
| CHKOH | Winter | STP | 0.4470 | 0.003 | No Trend | 0.5781 | -0.001 | No Trend | 0.4525 | Same | 0.7384 | No Trend | | | |
| CHKOH | Winter | BTP | 0.2760 | 0.009 | No Trend | 0.3689 | -0.001 | No Trend | 0.2436 | Same | 0.5599 | No Trend | | | |
| CHKOH | Winter | SPO4F | 0.8026 | 0.000 | High BDLs | 0.0032 | -0.001 | Improving | 0.0047 | Different | 0.0028 | Improving | 95 | | |
| CHKOH | Winter | BPO4F | 1.0000 | 0.000 | High BDLs | 0.0005 | -0.001 | Improving | 0.0005 | Different | 0.0007 | Improving | 95 | | |

Appendix A - Section IA. James River (1985-2008) - Continued.

| Segment | Season | Parameter | '93 | | '93 | '08 | '08 | '08 | Trend | | Combined | Combined |
|---------|--------|-----------|---------|--------|-----------|---------|--------|-----------|------------|------------|----------|-----------|
| | | | Trend | '93 | Trend | Trend | '08 | Trend | Comparison | Comparison | Trend | Trend |
| | | | P value | Slope | Direction | P value | Slope | Direction | P value | Comparison | P value | Direction |
| JMSOH | Winter | STN | 0.3929 | -0.033 | No Trend | 0.3133 | -0.011 | No Trend | 0.5992 | Same | 0.1889 | No Trend |
| JMSOH | Winter | BTN | 0.5066 | -0.046 | No Trend | 0.3133 | -0.020 | No Trend | 0.4982 | Same | 0.2227 | No Trend |
| JMSOH | Winter | SDIN | 0.0710 | -0.050 | No Trend | 0.1343 | -0.013 | No Trend | 0.4999 | Same | 0.0354 | No Trend |
| JMSOH | Winter | BDIN | 0.0842 | -0.045 | No Trend | 0.0291 | -0.017 | No Trend | 0.1319 | Same | 0.0081 | Improving |
| JMSOH | Winter | STP | 0.6674 | 0.003 | No Trend | 0.2262 | -0.002 | No Trend | 0.1856 | Same | 0.3628 | No Trend |
| JMSOH | Winter | BTP | 0.1349 | 0.015 | No Trend | 0.3705 | -0.003 | No Trend | 0.1483 | Same | 0.8364 | No Trend |
| JMSOH | Winter | SPO4F | 0.0389 | -0.003 | No Trend | 0.0231 | -0.001 | No Trend | 0.1882 | Same | 0.0036 | Improving |
| JMSOH | Winter | BPO4F | 0.2724 | -0.002 | No Trend | 0.0229 | -0.001 | No Trend | 0.0930 | Same | 0.0105 | No Trend |
| JMSMH | Winter | STN | 0.9154 | 0.003 | No Trend | 0.2299 | -0.017 | No Trend | 0.2375 | Same | 0.3142 | No Trend |
| JMSMH | Winter | BTN | 0.3524 | 0.019 | No Trend | 0.7368 | -0.002 | No Trend | 0.4982 | Same | 0.9640 | No Trend |
| JMSMH | Winter | SDIN | 0.9154 | -0.008 | No Trend | 0.1519 | -0.016 | No Trend | 0.2158 | Same | 0.1606 | No Trend |
| JMSMH | Winter | BDIN | 0.7887 | 0.004 | No Trend | 0.4197 | -0.004 | No Trend | 0.3720 | Same | 0.5237 | No Trend |
| JMSMH | Winter | STP | 0.5891 | 0.002 | No Trend | 0.7435 | 0.000 | No Trend | 0.5770 | Same | 0.9658 | No Trend |
| JMSMH | Winter | BTP | 0.5912 | 0.001 | No Trend | 0.7087 | -0.001 | No Trend | 0.5488 | Same | 0.9317 | No Trend |
| JMSMH | Winter | SPO4F | 0.8166 | 0.000 | High BDLs | 0.0585 | -0.001 | No Trend | 0.0581 | Same | 0.0983 | No Trend |
| JMSMH | Winter | BPO4F | 1.0000 | 0.000 | High BDLs | 0.4110 | 0.000 | No Trend | 0.4128 | Same | 0.4611 | No Trend |
| JMSPH | Winter | STN | 0.7124 | -0.013 | No Trend | 0.6423 | -0.003 | No Trend | 0.8371 | Same | 0.5373 | No Trend |
| JMSPH | Winter | BTN | 0.8250 | 0.003 | No Trend | 0.7863 | -0.003 | No Trend | 0.7060 | Same | 0.9181 | No Trend |
| JMSPH | Winter | SDIN | 0.6681 | 0.000 | High BDLs | 0.0885 | -0.005 | No Trend | 0.1800 | Same | 0.0777 | No Trend |
| JMSPH | Winter | BDIN | 0.2282 | 0.000 | High BDLs | 0.4859 | -0.001 | No Trend | 0.2735 | Same | 0.8267 | No Trend |
| JMSPH | Winter | STP | 0.3007 | -0.001 | No Trend | 0.7755 | 0.000 | No Trend | 0.4324 | Same | 0.7753 | No Trend |
| JMSPH | Winter | BTP | 0.4174 | -0.002 | No Trend | 0.2374 | -0.001 | No Trend | 0.5444 | Same | 0.1437 | No Trend |
| JMSPH | Winter | SPO4F | 0.2362 | 0.000 | High BDLs | 0.0702 | 0.000 | High BDLs | 0.2685 | Same | 0.0295 | No Trend |
| JMSPH | Winter | BPO4F | 0.6304 | 0.000 | High BDLs | 0.0048 | 0.000 | Improving | 0.0166 | Same | 0.0046 | Improving |

Appendix A - Section IB. Blocked seasonal Kendall Long-term trends in water quality for the Elizabeth River (1985-2008). Parameters are as follows: STN=Surface total nitrogen, BTN=Bottom total nitrogen, SDIN=Surface dissolved inorganic nitrogen, BDIN=Bottom dissolved inorganic nitrogen, STP=Surface total phosphorus, BTP=Bottom total phosphorus, SPO4F=Surface dissolved inorganic phosphorus, BPO4F=Bottom dissolved inorganic phosphorus.

| Segment | Season | Parameter | '93 Trend | | '93 Trend | '08 Trend | | '08 Trend | Trend Comparison | Trend Comparison | Combined Trend | | Combined Trend |
|---------|---------|-----------|-----------|--------|-----------|-----------|--------|-----------|------------------|------------------|----------------|-----------|----------------|
| | | | P value | Slope | | P value | Slope | | | | P value | Direction | |
| ELIPH | Annual | STN | 1.0000 | 0.000 | No Trend | 0.5415 | 0.002 | No Trend | 0.5672 | Same | 0.5872 | No Trend | No Trend |
| ELIPH | Annual | BTN | 1.0000 | 0.000 | No Trend | 0.1586 | 0.004 | No Trend | 0.1953 | Same | 0.1953 | No Trend | No Trend |
| ELIPH | Annual | SDIN | 0.8276 | 0.000 | No Trend | 0.1968 | 0.003 | No Trend | 0.2803 | Same | 0.1992 | No Trend | No Trend |
| ELIPH | Annual | BDIN | 0.6445 | 0.000 | No Trend | 0.6326 | 0.001 | No Trend | 0.8024 | Same | 0.5267 | No Trend | No Trend |
| ELIPH | Annual | STP | 0.8184 | 0.000 | No Trend | 0.2469 | 0.000 | No Trend | 0.2480 | Same | 0.3554 | No Trend | No Trend |
| ELIPH | Annual | BTP | 0.1060 | 0.001 | No Trend | 0.2963 | 0.000 | No Trend | 0.0951 | Same | 0.8404 | No Trend | No Trend |
| ELIPH | Annual | SPO4F | 0.5337 | 0.000 | No Trend | 0.7611 | 0.000 | No Trend | 1.0000 | Same | 0.5811 | No Trend | No Trend |
| ELIPH | Annual | BPO4F | 0.3081 | 0.000 | No Trend | 0.8606 | 0.000 | No Trend | 0.7727 | Same | 0.5441 | No Trend | No Trend |
| ELIPH | Fall | STN | 0.3244 | -0.026 | No Trend | 0.0499 | 0.007 | No Trend | 0.0263 | Same | 0.1674 | No Trend | No Trend |
| ELIPH | Fall | BTN | 0.5956 | 0.015 | No Trend | 0.2664 | 0.008 | No Trend | 0.4352 | Same | 0.2074 | No Trend | No Trend |
| ELIPH | Fall | SDIN | 0.6501 | -0.006 | No Trend | 0.1549 | 0.009 | No Trend | 0.1294 | Same | 0.2678 | No Trend | No Trend |
| ELIPH | Fall | BDIN | 0.8798 | -0.002 | No Trend | 0.1741 | 0.003 | No Trend | 0.1798 | Same | 0.2434 | No Trend | No Trend |
| ELIPH | Fall | STP | 0.8481 | 0.000 | No Trend | 0.4860 | 0.000 | No Trend | 0.4608 | Same | 0.6096 | No Trend | No Trend |
| ELIPH | Fall | BTP | 0.2751 | 0.001 | No Trend | 0.2295 | 0.000 | No Trend | 0.1122 | Same | 0.5705 | No Trend | No Trend |
| ELIPH | Fall | SPO4F | 0.0600 | 0.002 | No Trend | 0.8495 | 0.000 | No Trend | 0.3167 | Same | 0.5105 | No Trend | No Trend |
| ELIPH | Fall | BPO4F | 0.0245 | 0.001 | No Trend | 0.5267 | 0.000 | No Trend | 0.1211 | Same | 0.6877 | No Trend | No Trend |
| ELIPH | SAV1 | STN | 0.4414 | 0.008 | No Trend | 0.2968 | 0.003 | No Trend | 0.5503 | Same | 0.1967 | No Trend | No Trend |
| ELIPH | SAV1 | BTN | 0.2526 | 0.012 | No Trend | 0.0772 | 0.005 | No Trend | 0.2595 | Same | 0.0358 | No Trend | No Trend |
| ELIPH | SAV1 | SDIN | 0.3891 | 0.003 | No Trend | 0.2752 | 0.003 | No Trend | 0.5423 | Same | 0.1703 | No Trend | No Trend |
| ELIPH | SAV1 | BDIN | 0.3903 | 0.003 | No Trend | 0.1932 | 0.002 | No Trend | 0.4088 | Same | 0.1197 | No Trend | No Trend |
| ELIPH | SAV1 | STP | 0.1659 | 0.000 | No Trend | 0.5853 | 0.000 | No Trend | 0.2551 | Same | 0.8667 | No Trend | No Trend |
| ELIPH | SAV1 | BTP | 0.1041 | 0.002 | No Trend | 0.7056 | 0.000 | No Trend | 0.2713 | Same | 0.6680 | No Trend | No Trend |
| ELIPH | SAV1 | SPO4F | 0.7742 | 0.000 | High BDIs | 0.2393 | 0.000 | No Trend | 0.3694 | Same | 0.2314 | No Trend | No Trend |
| ELIPH | SAV1 | BPO4F | 0.5596 | 0.000 | No Trend | 0.0417 | 0.001 | No Trend | 0.1242 | Same | 0.0358 | No Trend | No Trend |
| ELIPH | SAV2 | STN | 0.1642 | 0.011 | No Trend | 0.2274 | 0.003 | No Trend | 0.6598 | Same | 0.0853 | No Trend | No Trend |
| ELIPH | SAV2 | BTN | 0.3704 | 0.007 | No Trend | 0.0604 | 0.005 | No Trend | 0.1961 | Same | 0.0357 | No Trend | No Trend |
| ELIPH | SAV2 | SDIN | 0.5238 | -0.001 | No Trend | 0.3712 | 0.001 | No Trend | 0.2697 | Same | 0.6159 | No Trend | No Trend |
| ELIPH | SAV2 | BDIN | 0.3588 | -0.002 | No Trend | 0.5314 | 0.001 | No Trend | 0.3302 | Same | 0.8711 | No Trend | No Trend |
| ELIPH | SAV2 | STP | 0.0059 | 0.001 | Degrading | 0.4740 | 0.000 | No Trend | 0.0577 | Same | 0.5357 | No Trend | No Trend |
| ELIPH | SAV2 | BTP | 0.0002 | 0.003 | Degrading | 0.8058 | 0.000 | No Trend | 0.0546 | Same | 0.1384 | No Trend | No Trend |
| ELIPH | SAV2 | SPO4F | 0.9600 | 0.000 | No Trend | 0.9105 | 0.000 | No Trend | 0.9509 | Same | 0.8858 | No Trend | No Trend |
| ELIPH | SAV2 | BPO4F | 0.2497 | 0.000 | No Trend | 0.9642 | 0.000 | No Trend | 0.6527 | Same | 0.5949 | No Trend | No Trend |
| ELIPH | Spring1 | STN | 0.3471 | 0.017 | No Trend | 0.9245 | 0.000 | No Trend | 0.7315 | Same | 0.6067 | No Trend | No Trend |
| ELIPH | Spring1 | BTN | 0.8798 | 0.004 | No Trend | 0.2969 | 0.005 | No Trend | 0.3817 | Same | 0.2938 | No Trend | No Trend |
| ELIPH | Spring1 | SDIN | 0.3097 | 0.005 | No Trend | 0.7761 | 0.000 | No Trend | 0.8411 | Same | 0.4740 | No Trend | No Trend |
| ELIPH | Spring1 | BDIN | 0.4353 | 0.003 | No Trend | 0.9245 | 0.000 | No Trend | 0.6817 | Same | 0.8147 | No Trend | No Trend |
| ELIPH | Spring1 | STP | 0.7102 | 0.000 | No Trend | 0.1835 | 0.000 | No Trend | 0.1671 | Same | 0.3237 | No Trend | No Trend |
| ELIPH | Spring1 | BTP | 0.0738 | 0.003 | No Trend | 0.5069 | -0.001 | No Trend | 0.1567 | Same | 0.8207 | No Trend | No Trend |
| ELIPH | Spring1 | SPO4F | 0.9446 | 0.000 | High BDIs | 0.4444 | 0.000 | No Trend | 0.4514 | Same | 0.5240 | No Trend | No Trend |
| ELIPH | Spring1 | BPO4F | 0.1119 | 0.000 | High BDIs | 0.3925 | 0.000 | No Trend | 0.1420 | Same | 0.9312 | No Trend | No Trend |

Appendix A - Section IB. Elizabeth River (1985-2008) - Continued.

| Segment | Season | Parameter | '93 | | '93 | | '08 | | '08 | | Trend | | Combined | |
|--------------|---------|-----------|--------|--------|-----------|--------|--------|-----------|--------|------------|---------|------------|----------|-----------|
| | | | Trend | '93 | Trend | Trend | '08 | '08 | Trend | Comparison | P value | Comparison | Trend | Direction |
| ELIPH | Spring2 | STN | 0.4192 | 0.014 | No Trend | 0.2969 | 0.004 | No Trend | 0.5672 | Same | 0.1881 | No Trend | | |
| ELIPH | Spring2 | BTN | 0.3643 | 0.015 | No Trend | 0.0622 | 0.007 | No Trend | 0.1798 | Same | 0.0358 | No Trend | | |
| ELIPH | Spring2 | SDIN | 0.4202 | 0.003 | No Trend | 0.9748 | 0.000 | No Trend | 0.7315 | Same | 0.6889 | No Trend | | |
| ELIPH | Spring2 | BDIN | 0.2527 | 0.006 | No Trend | 0.5910 | 0.001 | No Trend | 0.9767 | Same | 0.3353 | No Trend | | |
| ELIPH | Spring2 | STP | 0.4906 | 0.000 | No Trend | 0.2969 | 0.000 | No Trend | 0.2041 | Same | 0.5534 | No Trend | | |
| ELIPH | Spring2 | BTP | 0.0646 | 0.002 | No Trend | 0.8744 | 0.000 | No Trend | 0.3217 | Same | 0.4790 | No Trend | | |
| ELIPH | Spring2 | SPO4F | 0.5268 | 0.000 | High BDLs | 0.5684 | 0.000 | No Trend | 0.4113 | Same | 0.8428 | No Trend | | |
| ELIPH | Spring2 | BPO4F | 1.0000 | 0.000 | No Trend | 0.1138 | 0.000 | No Trend | 0.1608 | Same | 0.1444 | No Trend | | |
| ELIPHSummer1 | | STN | 1.0000 | 0.004 | No Trend | 0.9329 | 0.000 | No Trend | 0.9593 | Same | 0.9187 | No Trend | | |
| ELIPHSummer1 | | BTN | 0.7130 | 0.005 | No Trend | 0.5186 | 0.002 | No Trend | 0.6831 | Same | 0.4439 | No Trend | | |
| ELIPHSummer1 | | SDIN | 0.9022 | 0.000 | No Trend | 0.1227 | 0.007 | No Trend | 0.1844 | Same | 0.1387 | No Trend | | |
| ELIPHSummer1 | | BDIN | 0.8541 | 0.000 | No Trend | 0.2066 | 0.003 | No Trend | 0.2954 | Same | 0.2112 | No Trend | | |
| ELIPHSummer1 | | STP | 0.7860 | 0.000 | No Trend | 0.7575 | 0.000 | No Trend | 0.9008 | Same | 0.6717 | No Trend | | |
| ELIPHSummer1 | | BTP | 0.8744 | 0.000 | No Trend | 0.4157 | 0.000 | No Trend | 0.5358 | Same | 0.4137 | No Trend | | |
| ELIPHSummer1 | | SPO4F | 0.7469 | 0.000 | No Trend | 0.2063 | 0.000 | No Trend | 0.1955 | Same | 0.3441 | No Trend | | |
| ELIPHSummer1 | | BPO4F | 0.4892 | 0.000 | No Trend | 0.0681 | 0.001 | No Trend | 0.2055 | Same | 0.0499 | No Trend | | |
| ELIPHSummer2 | | STN | 1.0000 | -0.001 | No Trend | 0.6949 | -0.002 | No Trend | 0.7443 | Same | 0.6999 | No Trend | | |
| ELIPHSummer2 | | BTN | 1.0000 | 0.003 | No Trend | 0.9479 | 0.001 | No Trend | 0.9763 | Same | 0.9291 | No Trend | | |
| ELIPHSummer2 | | SDIN | 0.8874 | 0.002 | No Trend | 0.0580 | 0.009 | No Trend | 0.1027 | Same | 0.0703 | No Trend | | |
| ELIPHSummer2 | | BDIN | 1.0000 | -0.001 | No Trend | 0.4328 | 0.002 | No Trend | 0.4586 | Same | 0.4953 | No Trend | | |
| ELIPHSummer2 | | STP | 0.8515 | 0.000 | No Trend | 0.6949 | 0.000 | No Trend | 0.8168 | Same | 0.6432 | No Trend | | |
| ELIPHSummer2 | | BTP | 0.7606 | 0.000 | No Trend | 0.4721 | -0.001 | No Trend | 0.6449 | Same | 0.4200 | No Trend | | |
| ELIPHSummer2 | | SPO4F | 1.0000 | 0.000 | No Trend | 0.2263 | 0.001 | No Trend | 0.2708 | Same | 0.2968 | No Trend | | |
| ELIPHSummer2 | | BPO4F | 0.7609 | 0.000 | No Trend | 0.2664 | 0.001 | No Trend | 0.4201 | Same | 0.2494 | No Trend | | |
| ELIPH | Winter | STN | 0.8485 | -0.004 | No Trend | 0.2784 | -0.011 | No Trend | 0.3698 | Same | 0.2661 | No Trend | | |
| ELIPH | Winter | BTN | 0.0710 | -0.030 | No Trend | 0.9027 | -0.001 | No Trend | 0.5683 | Same | 0.4244 | No Trend | | |
| ELIPH | Winter | SDIN | 0.6906 | 0.000 | No Trend | 0.2784 | -0.007 | No Trend | 0.4067 | Same | 0.2338 | No Trend | | |
| ELIPH | Winter | BDIN | 1.0000 | 0.000 | No Trend | 0.0331 | -0.005 | No Trend | 0.0392 | Same | 0.0467 | No Trend | | |
| ELIPH | Winter | STP | 0.3855 | -0.001 | No Trend | 0.4388 | -0.001 | No Trend | 0.7029 | Same | 0.2855 | No Trend | | |
| ELIPH | Winter | BTP | 0.5019 | 0.002 | No Trend | 0.3487 | 0.001 | No Trend | 0.5737 | Same | 0.2450 | No Trend | | |
| ELIPH | Winter | SPO4F | 1.0000 | 0.000 | High BDLs | 0.0852 | 0.000 | High BDLs | 0.1078 | Same | 0.0924 | No Trend | | |
| ELIPH | Winter | BPO4F | 0.5232 | 0.000 | High BDLs | 0.0177 | 0.000 | High BDLs | 0.0130 | Same | 0.0486 | No Trend | | |

Appendix A - Section IC. Blocked seasonal Kendall Long-term trends in water quality for the York River (1985-2008). Parameters are as follows: STN=Surface total nitrogen, BTN=Bottom total nitrogen, SDIN=Surface dissolved inorganic nitrogen, BDIN=Bottom dissolved inorganic nitrogen, STP=Surface total phosphorus, BTP=Bottom total phosphorus, SPO4F=Surface dissolved inorganic phosphorus, BPO4F=Bottom dissolved inorganic phosphorus.

| Segment | Season | Parameter | '93 | | '93 | | '08 | | '08 | | Trend | | Combined | | Combined | |
|---------|--------|-----------|--------|---------|-------|-----------|---------|--------|-----------|---------|------------|-------|----------|------------|-----------|-----------|
| | | | Trend | P value | Slope | Direction | P value | Slope | Direction | P value | Comparison | Trend | P value | Comparison | Trend | Direction |
| PMKTF | Annual | STN | 0.9500 | 0.000 | | No Trend | 0.0010 | 0.008 | Degrading | 0.0051 | Different | | 0.0038 | Different | Degrading | 95 |
| PMKTF | Annual | BTN | 0.4911 | -0.005 | | No Trend | 0.5288 | 0.002 | No Trend | 0.3643 | Same | | 0.8560 | Same | No Trend | |
| PMKTF | Annual | SDIN | 0.7529 | 0.000 | | No Trend | 0.0094 | 0.006 | Degrading | 0.0144 | Same | | 0.0343 | Same | No Trend | |
| PMKTF | Annual | BDIN | 0.8690 | 0.000 | | No Trend | 0.6323 | 0.001 | No Trend | 0.6065 | Same | | 0.7430 | Same | No Trend | |
| PMKTF | Annual | STP | 0.0005 | 0.003 | | Degrading | 0.0070 | 0.001 | Degrading | 0.5412 | Same | | 0.0000 | Same | Degrading | |
| PMKTF | Annual | BTP | 0.0000 | 0.004 | | Degrading | 0.3631 | 0.001 | No Trend | 0.1425 | Same | | 0.0023 | Same | Degrading | |
| PMKTF | Annual | SPO4F | 0.0042 | 0.000 | | High BDLs | 0.0000 | -0.001 | Improving | 0.0000 | Different | | 0.0000 | Different | Improving | 95 |
| PMKTF | Annual | BPO4F | 0.0041 | 0.000 | | High BDLs | 0.0000 | -0.001 | Improving | 0.0000 | Different | | 0.0000 | Different | Improving | 95 |
| PMKOH | Annual | STN | 0.0012 | 0.028 | | Degrading | 0.2449 | 0.003 | No Trend | 0.4953 | Same | | 0.0074 | Same | Degrading | |
| PMKOH | Annual | BTN | 0.0005 | 0.050 | | Degrading | 0.1280 | 0.012 | No Trend | 0.6798 | Same | | 0.0022 | Same | Degrading | |
| PMKOH | Annual | SDIN | 0.9216 | 0.000 | | No Trend | 0.8782 | 0.000 | No Trend | 0.8427 | Same | | 0.9473 | Same | No Trend | |
| PMKOH | Annual | BDIN | 0.5979 | 0.001 | | No Trend | 1.0000 | 0.000 | No Trend | 0.7917 | Same | | 0.7917 | Same | No Trend | |
| PMKOH | Annual | STP | 0.0005 | 0.006 | | Degrading | 0.3904 | -0.001 | No Trend | 0.0110 | Same | | 0.2860 | Same | No Trend | |
| PMKOH | Annual | BTP | 0.0003 | 0.018 | | Degrading | 0.1579 | 0.003 | No Trend | 0.5717 | Same | | 0.0025 | Same | Degrading | |
| PMKOH | Annual | SPO4F | 0.0116 | 0.000 | | No Trend | 0.4551 | 0.000 | No Trend | 0.0654 | Same | | 0.6050 | Same | No Trend | |
| PMKOH | Annual | BPO4F | 0.1884 | 0.000 | | No Trend | 0.8987 | 0.000 | No Trend | 0.4816 | Same | | 0.6351 | Same | No Trend | |
| MPNTF | Annual | STN | 0.8507 | 0.001 | | No Trend | 0.1565 | 0.005 | No Trend | 0.2711 | Same | | 0.1845 | Same | No Trend | |
| MPNTF | Annual | BTN | 0.0156 | -0.013 | | No Trend | 0.4936 | 0.002 | No Trend | 0.0646 | Same | | 0.5006 | Same | No Trend | |
| MPNTF | Annual | SDIN | 0.3256 | 0.001 | | No Trend | 0.0124 | 0.004 | No Trend | 0.0905 | Same | | 0.0074 | Same | Degrading | |
| MPNTF | Annual | BDIN | 0.5848 | 0.000 | | No Trend | 0.0182 | 0.004 | No Trend | 0.0733 | Same | | 0.0188 | Same | No Trend | |
| MPNTF | Annual | STP | 0.0002 | 0.002 | | Degrading | 0.2928 | 0.000 | No Trend | 0.0059 | Different | | 0.3590 | Different | Degrading | 85 |
| MPNTF | Annual | BTP | 0.0211 | 0.001 | | No Trend | 0.1355 | -0.001 | No Trend | 0.0140 | Same | | 0.8929 | Same | No Trend | |
| MPNTF | Annual | SPO4F | 1.0000 | 0.000 | | High BDLs | 0.0000 | -0.001 | Improving | 0.0000 | Different | | 0.0000 | Different | Improving | 95 |
| MPNTF | Annual | BPO4F | 0.0287 | 0.000 | | High BDLs | 0.0000 | -0.001 | Improving | 0.0000 | Different | | 0.0000 | Different | Improving | 95 |
| MPNOH | Annual | STN | 0.0000 | 0.025 | | Degrading | 0.2122 | 0.003 | No Trend | 0.2422 | Same | | 0.0009 | Same | Degrading | |
| MPNOH | Annual | BTN | 0.0211 | 0.022 | | No Trend | 0.3574 | -0.005 | No Trend | 0.0492 | Same | | 0.7091 | Same | No Trend | |
| MPNOH | Annual | SDIN | 0.2440 | 0.001 | | No Trend | 0.2774 | 0.002 | No Trend | 0.7248 | Same | | 0.1245 | Same | No Trend | |
| MPNOH | Annual | BDIN | 0.2039 | 0.002 | | No Trend | 0.2107 | 0.003 | No Trend | 0.6190 | Same | | 0.0861 | Same | No Trend | |
| MPNOH | Annual | STP | 0.0000 | 0.006 | | Degrading | 0.8293 | 0.000 | No Trend | 0.0155 | Same | | 0.0408 | Same | No Trend | |
| MPNOH | Annual | BTP | 0.0012 | 0.006 | | Degrading | 0.8973 | 0.000 | No Trend | 0.1385 | Same | | 0.0878 | Same | No Trend | |
| MPNOH | Annual | SPO4F | 0.0603 | 0.000 | | High BDLs | 0.1536 | 0.000 | No Trend | 0.0327 | Same | | 0.6787 | Same | No Trend | |
| MPNOH | Annual | BPO4F | 0.0943 | 0.000 | | High BDLs | 0.0674 | 0.000 | No Trend | 0.0164 | Same | | 0.3814 | Same | No Trend | |
| YRKMH | Annual | STN | 0.0122 | 0.020 | | No Trend | 0.1699 | 0.003 | No Trend | 0.9745 | Same | | 0.0150 | Same | No Trend | |
| YRKMH | Annual | BTN | 0.0010 | 0.027 | | Degrading | 0.3960 | 0.004 | No Trend | 0.4412 | Same | | 0.0227 | Same | No Trend | |
| YRKMH | Annual | SDIN | 0.8027 | 0.000 | | High BDLs | 1.0000 | 0.000 | No Trend | 0.8955 | Same | | 0.8955 | Same | No Trend | |
| YRKMH | Annual | BDIN | 0.2633 | 0.000 | | High BDLs | 0.9411 | 0.000 | No Trend | 0.6751 | Same | | 0.5800 | Same | No Trend | |
| YRKMH | Annual | STP | 0.0000 | 0.005 | | Degrading | 0.9718 | 0.000 | No Trend | 0.0030 | Different | | 0.0037 | Different | Degrading | 85 |
| YRKMH | Annual | BTP | 0.0000 | 0.008 | | Degrading | 0.1644 | 0.002 | No Trend | 0.3074 | Same | | 0.0005 | Same | Degrading | |
| YRKMH | Annual | SPO4F | 0.0000 | 0.001 | | Degrading | 0.0553 | 0.000 | No Trend | 0.8526 | Same | | 0.0003 | Same | Degrading | |
| YRKMH | Annual | BPO4F | 0.0000 | 0.001 | | Degrading | 0.0089 | 0.000 | Degrading | 0.6028 | Same | | 0.0000 | Same | Degrading | |
| YRKPH | Annual | STN | 0.0035 | 0.018 | | Degrading | 0.0003 | 0.005 | Degrading | 0.0665 | Same | | 0.0000 | Same | Degrading | |
| YRKPH | Annual | BTN | 0.0000 | 0.033 | | Degrading | 0.2763 | 0.002 | No Trend | 0.3793 | Same | | 0.0046 | Same | Degrading | |
| YRKPH | Annual | SDIN | 0.9245 | 0.000 | | High BDLs | 0.8648 | 0.000 | No Trend | 0.9160 | Same | | 0.8330 | Same | No Trend | |
| YRKPH | Annual | BDIN | 0.0452 | 0.000 | | High BDLs | 0.9025 | 0.000 | No Trend | 0.5159 | Same | | 0.3805 | Same | No Trend | |
| YRKPH | Annual | STP | 0.0000 | 0.003 | | Degrading | 0.6338 | 0.000 | No Trend | 0.0251 | Same | | 0.0021 | Same | Degrading | |
| YRKPH | Annual | BTP | 0.0000 | 0.004 | | Degrading | 0.7648 | 0.000 | No Trend | 0.0023 | Different | | 0.0116 | Different | Degrading | 85 |
| YRKPH | Annual | SPO4F | 0.0037 | 0.000 | | High BDLs | 0.1419 | 0.000 | No Trend | 0.8998 | Same | | 0.0108 | Same | No Trend | |
| YRKPH | Annual | BPO4F | 0.0104 | 0.000 | | No Trend | 0.2848 | 0.000 | No Trend | 0.9496 | Same | | 0.0431 | Same | No Trend | |

Appendix A - Section IC. York River (1985-2008) - Continued.

| Segment | Season | Parameter | '93 | | '93 | '08 | '08 | '08 | Trend | | Combined | Combined |
|---------|--------|-----------|---------|--------|-----------|---------|--------|-----------|------------|------------|----------|--------------|
| | | | Trend | '93 | Trend | Trend | '08 | Trend | Comparison | Trend | Trend | Trend |
| | | | P value | Slope | Direction | P value | Slope | Direction | P value | Comparison | P value | Direction |
| PMKTF | Fall | STN | 0.7515 | -0.005 | No Trend | 0.1510 | 0.009 | No Trend | 0.1497 | Same | 0.2833 | No Trend |
| PMKTF | Fall | BTN | 0.2884 | -0.010 | No Trend | 0.4620 | 0.004 | No Trend | 0.2454 | Same | 0.8753 | No Trend |
| PMKTF | Fall | SDIN | 0.1242 | -0.009 | No Trend | 0.5133 | 0.002 | No Trend | 0.1901 | Same | 0.8843 | No Trend |
| PMKTF | Fall | BDIN | 0.3588 | -0.008 | No Trend | 0.7344 | -0.001 | No Trend | 0.9027 | Same | 0.4631 | No Trend |
| PMKTF | Fall | STP | 0.0179 | 0.004 | No Trend | 0.1716 | 0.002 | No Trend | 0.9507 | Same | 0.0187 | No Trend |
| PMKTF | Fall | BTP | 0.0156 | 0.003 | No Trend | 0.1541 | 0.002 | No Trend | 0.8701 | Same | 0.0170 | No Trend |
| PMKTF | Fall | SPO4F | 0.3651 | 0.000 | High BDLs | 0.0006 | -0.001 | Improving | 0.0069 | Different | 0.0004 | Improving 95 |
| PMKTF | Fall | BPO4F | 0.0299 | -0.001 | High BDLs | 0.0004 | -0.001 | Improving | 0.0195 | Same | 0.0000 | Improving |
| PMKOH | Fall | STN | 0.0973 | 0.035 | No Trend | 0.1492 | 0.011 | No Trend | 0.6926 | Same | 0.0350 | No Trend |
| PMKOH | Fall | BTN | 0.0112 | 0.052 | No Trend | 0.0645 | 0.024 | No Trend | 0.7313 | Same | 0.0039 | Degrading |
| PMKOH | Fall | SDIN | 0.1246 | -0.005 | No Trend | 0.4498 | 0.003 | No Trend | 0.1479 | Same | 0.8953 | No Trend |
| PMKOH | Fall | BDIN | 0.3957 | -0.005 | No Trend | 0.2144 | 0.004 | No Trend | 0.1272 | Same | 0.4956 | No Trend |
| PMKOH | Fall | STP | 0.0137 | 0.010 | No Trend | 0.6091 | -0.001 | No Trend | 0.0841 | Same | 0.3971 | No Trend |
| PMKOH | Fall | BTP | 0.0192 | 0.020 | No Trend | 0.0213 | 0.007 | No Trend | 0.3684 | Same | 0.0016 | Degrading |
| PMKOH | Fall | SPO4F | 0.8326 | 0.000 | No Trend | 0.4394 | 0.000 | No Trend | 0.5790 | Same | 0.4146 | No Trend |
| PMKOH | Fall | BPO4F | 0.8137 | 0.000 | No Trend | 0.1318 | 0.001 | No Trend | 0.2180 | Same | 0.1341 | No Trend |
| MPNTF | Fall | STN | 1.0000 | 0.000 | No Trend | 0.5459 | 0.004 | No Trend | 0.5769 | Same | 0.6199 | No Trend |
| MPNTF | Fall | BTN | 0.0396 | -0.021 | No Trend | 0.7041 | 0.002 | No Trend | 0.1805 | Same | 0.5031 | No Trend |
| MPNTF | Fall | SDIN | 0.8973 | 0.000 | No Trend | 0.8590 | 0.001 | No Trend | 0.9504 | Same | 0.8034 | No Trend |
| MPNTF | Fall | BDIN | 1.0000 | 0.000 | High BDLs | 0.8821 | 0.001 | No Trend | 0.8946 | Same | 0.8946 | No Trend |
| MPNTF | Fall | STP | 0.1148 | 0.002 | No Trend | 0.8528 | 0.000 | No Trend | 0.3324 | Same | 0.5182 | No Trend |
| MPNTF | Fall | BTP | 0.3970 | 0.000 | No Trend | 0.6838 | 0.000 | No Trend | 0.4283 | Same | 0.9426 | No Trend |
| MPNTF | Fall | SPO4F | 0.5571 | 0.000 | High BDLs | 0.0033 | -0.001 | Improving | 0.0188 | Same | 0.0034 | Improving |
| MPNTF | Fall | BPO4F | 0.1474 | 0.000 | High BDLs | 0.0014 | -0.001 | Improving | 0.0236 | Same | 0.0004 | Improving |
| MPNOH | Fall | STN | 0.0131 | 0.029 | No Trend | 0.7551 | 0.002 | No Trend | 0.3455 | Same | 0.1359 | No Trend |
| MPNOH | Fall | BTN | 0.0060 | 0.035 | Degrading | 0.4997 | -0.006 | No Trend | 0.0555 | Same | 0.4703 | No Trend |
| MPNOH | Fall | SDIN | 0.4749 | -0.001 | No Trend | 0.9418 | 0.000 | No Trend | 0.6559 | Same | 0.7503 | No Trend |
| MPNOH | Fall | BDIN | 0.8915 | 0.000 | No Trend | 0.7873 | 0.002 | No Trend | 0.7395 | Same | 0.8798 | No Trend |
| MPNOH | Fall | STP | 0.0272 | 0.006 | No Trend | 0.4620 | 0.001 | No Trend | 0.6660 | Same | 0.0842 | No Trend |
| MPNOH | Fall | BTP | 0.0909 | 0.005 | No Trend | 0.5515 | 0.001 | No Trend | 0.7795 | Same | 0.1811 | No Trend |
| MPNOH | Fall | SPO4F | 1.0000 | 0.000 | No Trend | 0.7348 | 0.000 | No Trend | 0.7839 | Same | 0.7375 | No Trend |
| MPNOH | Fall | BPO4F | 0.6501 | 0.000 | No Trend | 0.3792 | 0.000 | No Trend | 0.3083 | Same | 0.5575 | No Trend |
| YRKMH | Fall | STN | 0.2265 | 0.022 | No Trend | 0.2426 | 0.003 | No Trend | 0.6219 | Same | 0.1072 | No Trend |
| YRKMH | Fall | BTN | 0.0753 | 0.026 | No Trend | 0.1653 | 0.008 | No Trend | 0.6177 | Same | 0.0424 | No Trend |
| YRKMH | Fall | SDIN | 0.4471 | -0.005 | No Trend | 0.1052 | 0.004 | No Trend | 0.0685 | Same | 0.2633 | No Trend |
| YRKMH | Fall | BDIN | 0.5702 | -0.004 | No Trend | 0.0782 | 0.006 | No Trend | 0.0609 | Same | 0.1748 | No Trend |
| YRKMH | Fall | STP | 0.0000 | 0.006 | Degrading | 1.0000 | 0.000 | No Trend | 0.0219 | Same | 0.0219 | No Trend |
| YRKMH | Fall | BTP | 0.0000 | 0.009 | Degrading | 0.4652 | 0.001 | No Trend | 0.1671 | Same | 0.0077 | Degrading |
| YRKMH | Fall | SPO4F | 0.0227 | 0.002 | No Trend | 0.0150 | 0.001 | No Trend | 0.3064 | Same | 0.0011 | Degrading |
| YRKMH | Fall | BPO4F | 0.0070 | 0.003 | Degrading | 0.0838 | 0.001 | No Trend | 0.7773 | Same | 0.0052 | Degrading |
| YRKPH | Fall | STN | 0.0187 | 0.022 | No Trend | 0.0029 | 0.009 | Degrading | 0.0769 | Same | 0.0002 | Degrading |
| YRKPH | Fall | BTN | 0.0125 | 0.020 | No Trend | 0.0679 | 0.005 | No Trend | 0.5494 | Same | 0.0064 | Degrading |
| YRKPH | Fall | SDIN | 0.0604 | -0.006 | No Trend | 0.0969 | 0.005 | No Trend | 0.0223 | Same | 0.4340 | No Trend |
| YRKPH | Fall | BDIN | 0.6223 | -0.002 | No Trend | 0.4148 | 0.001 | No Trend | 0.3305 | Same | 0.5936 | No Trend |
| YRKPH | Fall | STP | 0.0023 | 0.005 | Degrading | 0.1510 | 0.001 | No Trend | 0.8062 | Same | 0.0058 | Degrading |
| YRKPH | Fall | BTP | 0.0023 | 0.004 | Degrading | 0.7094 | 0.000 | No Trend | 0.0842 | Same | 0.2890 | No Trend |
| YRKPH | Fall | SPO4F | 0.3764 | 0.001 | No Trend | 0.0722 | 0.001 | No Trend | 0.2364 | Same | 0.0419 | No Trend |
| YRKPH | Fall | BPO4F | 0.1051 | 0.001 | No Trend | 0.4145 | 0.000 | No Trend | 0.9754 | Same | 0.1468 | No Trend |

Appendix A - Section IC. York River (1985-2008) - Continued.

| Segment | Season | Parameter | '93 | | '93 | | '08 | | '08 | | Trend | | Combined | |
|---------|--------|-----------|--------|--------|-----------|--------|--------|-----------|------------|-----------|---------|--------------|--------------|-----------|
| | | | Trend | '93 | Trend | Trend | '08 | Trend | Comparison | Trend | P value | Comparison | Trend | Direction |
| PMKTF | SAV1 | STN | 0.7822 | 0.002 | No Trend | 0.0928 | 0.005 | No Trend | 0.2008 | Same | 0.1087 | No Trend | No Trend | |
| PMKTF | SAV1 | BTN | 0.8128 | 0.003 | No Trend | 0.6907 | -0.002 | No Trend | 0.6284 | Same | 0.8498 | No Trend | No Trend | |
| PMKTF | SAV1 | SDIN | 0.3203 | 0.004 | No Trend | 0.1247 | 0.004 | No Trend | 0.4038 | Same | 0.0651 | No Trend | No Trend | |
| PMKTF | SAV1 | BDIN | 0.3395 | 0.005 | No Trend | 0.7135 | -0.001 | No Trend | 0.4150 | Same | 0.8580 | No Trend | No Trend | |
| PMKTF | SAV1 | STP | 0.0132 | 0.003 | No Trend | 0.4641 | 0.000 | No Trend | 0.5153 | Same | 0.0560 | No Trend | No Trend | |
| PMKTF | SAV1 | BTP | 0.0003 | 0.005 | Degrading | 0.3011 | 0.000 | No Trend | 0.0051 | Different | 0.3034 | Degrading 85 | Degrading 85 | |
| PMKTF | SAV1 | SPO4F | 0.0041 | 0.000 | High BDLs | 0.0000 | -0.001 | Improving | 0.0017 | Different | 0.0000 | Improving 95 | Improving 95 | |
| PMKTF | SAV1 | BPO4F | 0.0753 | 0.000 | High BDLs | 0.0000 | -0.001 | Improving | 0.0002 | Different | 0.0000 | Improving 95 | Improving 95 | |
| PMKOH | SAV1 | STN | 0.0001 | 0.035 | Degrading | 0.4656 | -0.005 | No Trend | 0.0082 | Different | 0.1629 | Degrading 85 | Degrading 85 | |
| PMKOH | SAV1 | BTN | 0.0026 | 0.044 | Degrading | 0.8263 | 0.002 | No Trend | 0.1725 | Same | 0.0815 | No Trend | No Trend | |
| PMKOH | SAV1 | SDIN | 0.0491 | 0.004 | No Trend | 0.4893 | -0.001 | No Trend | 0.1033 | Same | 0.6569 | No Trend | No Trend | |
| PMKOH | SAV1 | BDIN | 0.1565 | 0.005 | No Trend | 0.7939 | -0.001 | No Trend | 0.3425 | Same | 0.6204 | No Trend | No Trend | |
| PMKOH | SAV1 | STP | 0.0023 | 0.006 | Degrading | 0.0336 | -0.002 | No Trend | 0.0007 | Different | 0.8076 | Degrading 85 | Degrading 85 | |
| PMKOH | SAV1 | BTP | 0.0014 | 0.019 | Degrading | 0.9426 | 0.000 | No Trend | 0.0870 | Same | 0.1123 | No Trend | No Trend | |
| PMKOH | SAV1 | SPO4F | 0.0002 | 0.002 | Degrading | 0.9458 | 0.000 | No Trend | 0.0566 | Same | 0.0739 | No Trend | No Trend | |
| PMKOH | SAV1 | BPO4F | 0.0403 | 0.000 | High BDLs | 0.7513 | 0.000 | No Trend | 0.4945 | Same | 0.2128 | No Trend | No Trend | |
| MPNTF | SAV1 | STN | 0.8123 | -0.002 | No Trend | 0.5223 | -0.002 | No Trend | 0.6913 | Same | 0.4904 | No Trend | No Trend | |
| MPNTF | SAV1 | BTN | 0.0110 | -0.018 | No Trend | 0.3339 | -0.003 | No Trend | 0.5760 | Same | 0.0282 | No Trend | No Trend | |
| MPNTF | SAV1 | SDIN | 0.0302 | 0.003 | No Trend | 0.3274 | 0.002 | No Trend | 0.8305 | Same | 0.0540 | No Trend | No Trend | |
| MPNTF | SAV1 | BDIN | 0.2344 | 0.001 | No Trend | 0.4720 | 0.001 | No Trend | 0.9839 | Same | 0.2181 | No Trend | No Trend | |
| MPNTF | SAV1 | STP | 0.0129 | 0.001 | No Trend | 0.1349 | -0.001 | No Trend | 0.0107 | Same | 0.9677 | No Trend | No Trend | |
| MPNTF | SAV1 | BTP | 0.6206 | 0.000 | No Trend | 0.0574 | -0.001 | No Trend | 0.0559 | Same | 0.1702 | No Trend | No Trend | |
| MPNTF | SAV1 | SPO4F | 0.6734 | 0.000 | High BDLs | 0.0000 | -0.002 | Improving | 0.0000 | Different | 0.0000 | Improving 95 | Improving 95 | |
| MPNTF | SAV1 | BPO4F | 0.0695 | 0.000 | High BDLs | 0.0000 | -0.002 | Improving | 0.0000 | Different | 0.0000 | Improving 95 | Improving 95 | |
| MPNOH | SAV1 | STN | 0.0000 | 0.036 | Degrading | 0.5167 | 0.003 | No Trend | 0.0274 | Same | 0.0009 | Degrading | Degrading | |
| MPNOH | SAV1 | BTN | 0.0292 | 0.035 | No Trend | 0.0429 | -0.010 | No Trend | 0.0039 | Different | 0.5752 | No Trend* | No Trend* | |
| MPNOH | SAV1 | SDIN | 0.0149 | 0.005 | No Trend | 0.7539 | -0.001 | No Trend | 0.1285 | Same | 0.3277 | No Trend | No Trend | |
| MPNOH | SAV1 | BDIN | 0.0609 | 0.005 | No Trend | 0.8528 | 0.001 | No Trend | 0.4412 | Same | 0.2737 | No Trend | No Trend | |
| MPNOH | SAV1 | STP | 0.0000 | 0.007 | Degrading | 0.3342 | -0.001 | No Trend | 0.0008 | Different | 0.0886 | Degrading 85 | Degrading 85 | |
| MPNOH | SAV1 | BTP | 0.0122 | 0.006 | No Trend | 0.2119 | -0.002 | No Trend | 0.0182 | Same | 0.8387 | No Trend | No Trend | |
| MPNOH | SAV1 | SPO4F | 0.0163 | 0.001 | High BDLs | 0.4218 | 0.000 | No Trend | 0.0592 | Same | 0.6299 | No Trend | No Trend | |
| MPNOH | SAV1 | BPO4F | 0.0141 | 0.001 | High BDLs | 0.2706 | 0.000 | No Trend | 0.0309 | Same | 0.8244 | No Trend | No Trend | |
| YRKMH | SAV1 | STN | 0.0002 | 0.033 | Degrading | 0.5205 | 0.001 | No Trend | 0.2137 | Same | 0.0180 | No Trend | No Trend | |
| YRKMH | SAV1 | BTN | 0.0012 | 0.030 | Degrading | 0.7272 | -0.001 | No Trend | 0.0582 | Same | 0.1995 | No Trend | No Trend | |
| YRKMH | SAV1 | SDIN | 0.5136 | 0.000 | High BDLs | 0.7191 | -0.001 | No Trend | 0.5223 | Same | 1.0000 | No Trend | No Trend | |
| YRKMH | SAV1 | BDIN | 0.2229 | 0.000 | High BDLs | 0.4582 | -0.002 | No Trend | 0.2208 | Same | 0.9145 | No Trend | No Trend | |
| YRKMH | SAV1 | STP | 0.0000 | 0.006 | Degrading | 0.8585 | 0.000 | No Trend | 0.0159 | Same | 0.0357 | No Trend | No Trend | |
| YRKMH | SAV1 | BTP | 0.0011 | 0.008 | Degrading | 0.7013 | 0.000 | No Trend | 0.2066 | Same | 0.0531 | No Trend | No Trend | |
| YRKMH | SAV1 | SPO4F | 0.0001 | 0.001 | Degrading | 0.1721 | 0.000 | No Trend | 0.5737 | Same | 0.0026 | Degrading | Degrading | |
| YRKMH | SAV1 | BPO4F | 0.0005 | 0.001 | Degrading | 0.0155 | 0.000 | No Trend | 0.5406 | Same | 0.0002 | Degrading | Degrading | |
| YRKPH | SAV1 | STN | 0.0018 | 0.024 | Degrading | 0.0065 | 0.005 | Degrading | 0.3675 | Same | 0.0001 | Degrading | Degrading | |
| YRKPH | SAV1 | BTN | 0.0001 | 0.049 | Degrading | 0.5455 | 0.001 | No Trend | 0.1994 | Same | 0.0183 | No Trend | No Trend | |
| YRKPH | SAV1 | SDIN | 0.5242 | 0.000 | High BDLs | 0.5490 | -0.001 | No Trend | 0.4092 | Same | 0.7832 | No Trend | No Trend | |
| YRKPH | SAV1 | BDIN | 0.0602 | 0.000 | High BDLs | 0.8780 | 0.000 | No Trend | 0.5102 | Same | 0.3483 | No Trend | No Trend | |
| YRKPH | SAV1 | STP | 0.0000 | 0.003 | Degrading | 0.5726 | 0.000 | No Trend | 0.0073 | Different | 0.0899 | Degrading 85 | Degrading 85 | |
| YRKPH | SAV1 | BTP | 0.0000 | 0.004 | Degrading | 0.7385 | 0.000 | No Trend | 0.0115 | Same | 0.0518 | No Trend | No Trend | |
| YRKPH | SAV1 | SPO4F | 0.0610 | 0.000 | High BDLs | 0.3670 | 0.000 | No Trend | 0.9842 | Same | 0.0999 | No Trend | No Trend | |
| YRKPH | SAV1 | BPO4F | 0.1598 | 0.000 | High BDLs | 0.3125 | 0.000 | No Trend | 0.7821 | Same | 0.1232 | No Trend | No Trend | |

Appendix A - Section IC. York River (1985-2008) - Continued.

| Segment | Season | Parameter | '93 | | '93 | | '08 | | '08 | | Trend | | Combined | | Combined |
|---------|--------|-----------|--------|--------|-----------|--------|-------|-----------|------------|-----------|---------|--------------|----------|--------------|--------------|
| | | | Trend | '93 | Trend | Trend | '08 | Trend | Comparison | Trend | P value | Comparison | Trend | P value | Trend |
| PMKTF | SAV2 | STN | 0.0409 | 0.013 | No Trend | 0.0008 | 0.008 | Degrading | 0.0532 | Same | 0.0001 | Degrading | 0.0001 | Degrading | Degrading |
| PMKTF | SAV2 | BTN | 0.1862 | 0.008 | No Trend | 0.0258 | 0.005 | No Trend | 0.2061 | Same | 0.0090 | Degrading | 0.0090 | Degrading | Degrading |
| PMKTF | SAV2 | SDIN | 0.9314 | 0.000 | No Trend | 0.0031 | 0.008 | Degrading | 0.0076 | Different | 0.0109 | Degrading 95 | 0.0109 | Degrading 95 | Degrading 95 |
| PMKTF | SAV2 | BDIN | 0.7629 | 0.000 | No Trend | 0.1321 | 0.004 | No Trend | 0.1378 | Same | 0.2502 | No Trend | 0.2502 | No Trend | No Trend |
| PMKTF | SAV2 | STP | 0.0000 | 0.003 | Degrading | 0.0286 | 0.001 | No Trend | 0.9333 | Same | 0.0001 | Degrading | 0.0001 | Degrading | Degrading |
| PMKTF | SAV2 | BTP | 0.0000 | 0.004 | Degrading | 0.0524 | 0.001 | No Trend | 0.5247 | Same | 0.0001 | Degrading | 0.0001 | Degrading | Degrading |
| PMKTF | SAV2 | SPO4F | 0.4566 | 0.000 | High BDLs | 0.0082 | 0.000 | Improving | 0.0354 | Same | 0.0061 | Improving | 0.0061 | Improving | Improving |
| PMKTF | SAV2 | BPO4F | 0.4819 | 0.000 | High BDLs | 0.0126 | 0.000 | No Trend | 0.0540 | Same | 0.0100 | Improving | 0.0100 | Improving | Improving |
| PMKOH | SAV2 | STN | 0.1055 | 0.015 | No Trend | 0.1461 | 0.004 | No Trend | 0.6264 | Same | 0.0385 | No Trend | 0.0385 | No Trend | No Trend |
| PMKOH | SAV2 | BTN | 0.1143 | 0.014 | No Trend | 0.0210 | 0.007 | No Trend | 0.2202 | Same | 0.0050 | Degrading | 0.0050 | Degrading | Degrading |
| PMKOH | SAV2 | SDIN | 0.9310 | 0.000 | No Trend | 0.4060 | 0.001 | No Trend | 0.5015 | Same | 0.4270 | No Trend | 0.4270 | No Trend | No Trend |
| PMKOH | SAV2 | BDIN | 0.9312 | 0.000 | No Trend | 0.7294 | 0.000 | No Trend | 0.8072 | Same | 0.7143 | No Trend | 0.7143 | No Trend | No Trend |
| PMKOH | SAV2 | STP | 0.0000 | 0.005 | Degrading | 0.5363 | 0.000 | No Trend | 0.1325 | Same | 0.0096 | Degrading | 0.0096 | Degrading | Degrading |
| PMKOH | SAV2 | BTP | 0.0000 | 0.005 | Degrading | 0.4748 | 0.000 | No Trend | 0.1074 | Same | 0.0043 | Degrading | 0.0043 | Degrading | Degrading |
| PMKOH | SAV2 | SPO4F | 0.5568 | 0.000 | No Trend | 0.0047 | 0.000 | Improving | 0.0047 | Different | 0.0224 | Improving 95 | 0.0224 | Improving 95 | Improving 95 |
| PMKOH | SAV2 | BPO4F | 0.8066 | 0.000 | No Trend | 0.0094 | 0.000 | Improving | 0.0134 | Same | 0.0264 | No Trend | 0.0264 | No Trend | No Trend |
| MPNTF | SAV2 | STN | 0.0036 | 0.009 | Degrading | 0.0346 | 0.005 | No Trend | 0.6656 | Same | 0.0011 | Degrading | 0.0011 | Degrading | Degrading |
| MPNTF | SAV2 | BTN | 0.8312 | 0.002 | No Trend | 0.0696 | 0.004 | No Trend | 0.1484 | Same | 0.0891 | No Trend | 0.0891 | No Trend | No Trend |
| MPNTF | SAV2 | SDIN | 0.5742 | 0.000 | No Trend | 0.0023 | 0.007 | Degrading | 0.0030 | Different | 0.0167 | Degrading 95 | 0.0167 | Degrading 95 | Degrading 95 |
| MPNTF | SAV2 | BDIN | 0.6671 | -0.001 | No Trend | 0.0070 | 0.005 | Degrading | 0.0100 | Different | 0.0350 | Degrading 95 | 0.0350 | Degrading 95 | Degrading 95 |
| MPNTF | SAV2 | STP | 0.0000 | 0.003 | Degrading | 0.5511 | 0.000 | No Trend | 0.1472 | Same | 0.0124 | No Trend | 0.0124 | No Trend | No Trend |
| MPNTF | SAV2 | BTP | 0.0002 | 0.003 | Degrading | 0.6589 | 0.000 | No Trend | 0.1504 | Same | 0.0271 | No Trend | 0.0271 | No Trend | No Trend |
| MPNTF | SAV2 | SPO4F | 0.5804 | 0.000 | High BDLs | 0.0078 | 0.000 | Improving | 0.0077 | Different | 0.0312 | Improving 95 | 0.0312 | Improving 95 | Improving 95 |
| MPNTF | SAV2 | BPO4F | 0.5355 | 0.000 | High BDLs | 0.0130 | 0.000 | No Trend | 0.0506 | Same | 0.0113 | No Trend | 0.0113 | No Trend | No Trend |
| MPNOH | SAV2 | STN | 0.0190 | 0.016 | No Trend | 0.0636 | 0.005 | No Trend | 0.6362 | Same | 0.0055 | Degrading | 0.0055 | Degrading | Degrading |
| MPNOH | SAV2 | BTN | 0.2680 | 0.010 | No Trend | 0.4830 | 0.002 | No Trend | 0.9664 | Same | 0.2388 | No Trend | 0.2388 | No Trend | No Trend |
| MPNOH | SAV2 | SDIN | 0.7302 | 0.000 | No Trend | 0.1391 | 0.003 | No Trend | 0.2655 | Same | 0.1377 | No Trend | 0.1377 | No Trend | No Trend |
| MPNOH | SAV2 | BDIN | 0.7627 | 0.000 | No Trend | 0.2659 | 0.002 | No Trend | 0.4227 | Same | 0.2546 | No Trend | 0.2546 | No Trend | No Trend |
| MPNOH | SAV2 | STP | 0.0000 | 0.005 | Degrading | 0.9621 | 0.000 | No Trend | 0.0162 | Same | 0.0129 | No Trend | 0.0129 | No Trend | No Trend |
| MPNOH | SAV2 | BTP | 0.0000 | 0.005 | Degrading | 0.6116 | 0.000 | No Trend | 0.0141 | Same | 0.1173 | No Trend | 0.1173 | No Trend | No Trend |
| MPNOH | SAV2 | SPO4F | 0.6160 | 0.000 | No Trend | 0.0144 | 0.000 | No Trend | 0.0143 | Same | 0.0482 | No Trend | 0.0482 | No Trend | No Trend |
| MPNOH | SAV2 | BPO4F | 1.0000 | 0.000 | No Trend | 0.0219 | 0.000 | No Trend | 0.0427 | Same | 0.0384 | No Trend | 0.0384 | No Trend | No Trend |
| YRKMH | SAV2 | STN | 0.0667 | 0.014 | No Trend | 0.0726 | 0.005 | No Trend | 0.4827 | Same | 0.0136 | No Trend | 0.0136 | No Trend | No Trend |
| YRKMH | SAV2 | BTN | 0.1055 | 0.013 | No Trend | 0.1587 | 0.004 | No Trend | 0.6446 | Same | 0.0428 | No Trend | 0.0428 | No Trend | No Trend |
| YRKMH | SAV2 | SDIN | 1.0000 | 0.000 | High BDLs | 0.8379 | 0.000 | No Trend | 0.8405 | Same | 0.8721 | No Trend | 0.8721 | No Trend | No Trend |
| YRKMH | SAV2 | BDIN | 0.7546 | 0.000 | High BDLs | 0.8379 | 0.000 | No Trend | 0.9838 | Same | 0.7306 | No Trend | 0.7306 | No Trend | No Trend |
| YRKMH | SAV2 | STP | 0.0001 | 0.003 | Degrading | 0.4736 | 0.000 | No Trend | 0.2435 | Same | 0.0149 | No Trend | 0.0149 | No Trend | No Trend |
| YRKMH | SAV2 | BTP | 0.0038 | 0.003 | Degrading | 0.4736 | 0.000 | No Trend | 0.4615 | Same | 0.0450 | No Trend | 0.0450 | No Trend | No Trend |
| YRKMH | SAV2 | SPO4F | 0.4150 | 0.000 | No Trend | 0.2018 | 0.000 | No Trend | 0.1302 | Same | 0.4005 | No Trend | 0.4005 | No Trend | No Trend |
| YRKMH | SAV2 | BPO4F | 0.7497 | 0.000 | No Trend | 0.3846 | 0.000 | No Trend | 0.3442 | Same | 0.5147 | No Trend | 0.5147 | No Trend | No Trend |
| YRKPH | SAV2 | STN | 0.0595 | 0.013 | No Trend | 0.0840 | 0.004 | No Trend | 0.5034 | Same | 0.0158 | No Trend | 0.0158 | No Trend | No Trend |
| YRKPH | SAV2 | BTN | 0.0270 | 0.018 | No Trend | 0.2854 | 0.002 | No Trend | 0.9675 | Same | 0.0504 | No Trend | 0.0504 | No Trend | No Trend |
| YRKPH | SAV2 | SDIN | 0.3958 | 0.000 | High BDLs | 0.5270 | 0.001 | No Trend | 0.3478 | Same | 0.8231 | No Trend | 0.8231 | No Trend | No Trend |
| YRKPH | SAV2 | BDIN | 0.7543 | 0.000 | High BDLs | 0.8899 | 0.000 | No Trend | 0.7838 | Same | 0.9832 | No Trend | 0.9832 | No Trend | No Trend |
| YRKPH | SAV2 | STP | 0.0000 | 0.003 | Degrading | 0.6605 | 0.000 | No Trend | 0.0811 | Same | 0.0116 | No Trend | 0.0116 | No Trend | No Trend |
| YRKPH | SAV2 | BTP | 0.0001 | 0.003 | Degrading | 0.5025 | 0.000 | No Trend | 0.1971 | Same | 0.0132 | No Trend | 0.0132 | No Trend | No Trend |
| YRKPH | SAV2 | SPO4F | 1.0000 | 0.000 | High BDLs | 0.5681 | 0.000 | No Trend | 0.6088 | Same | 0.5792 | No Trend | 0.5792 | No Trend | No Trend |
| YRKPH | SAV2 | BPO4F | 0.9049 | 0.000 | High BDLs | 0.6481 | 0.000 | No Trend | 0.7171 | Same | 0.6239 | No Trend | 0.6239 | No Trend | No Trend |

Appendix A - Section IC. York River (1985-2008) - Continued.

| Segment | Season | Parameter | '93 | | '93 | | '08 | | '08 | | Trend | | Combined | | Combined |
|---------|---------|-----------|--------|--------|-----------|--------|--------|-----------|------------|-----------|---------|------------|----------|---------|-----------|
| | | | Trend | '93 | Trend | Trend | '08 | Trend | Comparison | Trend | P value | Comparison | Trend | P value | Trend |
| PMKTF | Spring1 | STN | 0.0620 | 0.021 | No Trend | 0.0013 | 0.016 | Degrading | 0.0692 | Same | 0.0002 | Degrading | 0.0002 | 0.0002 | Degrading |
| PMKTF | Spring1 | BTN | 0.3985 | 0.009 | No Trend | 0.1218 | 0.009 | No Trend | 0.4056 | Same | 0.0732 | No Trend | 0.0732 | 0.0732 | No Trend |
| PMKTF | Spring1 | SDIN | 0.1035 | 0.010 | No Trend | 0.0010 | 0.011 | Degrading | 0.0415 | Same | 0.0002 | Degrading | 0.0002 | 0.0002 | Degrading |
| PMKTF | Spring1 | BDIN | 0.1838 | 0.008 | No Trend | 0.2426 | 0.005 | No Trend | 0.7785 | Same | 0.0857 | No Trend | 0.0857 | 0.0857 | No Trend |
| PMKTF | Spring1 | STP | 0.0173 | 0.003 | No Trend | 0.0031 | 0.003 | Degrading | 0.1916 | Same | 0.0001 | Degrading | 0.0001 | 0.0001 | Degrading |
| PMKTF | Spring1 | BTP | 0.0014 | 0.005 | Degrading | 0.0082 | 0.003 | Degrading | 0.6086 | Same | 0.0001 | Degrading | 0.0001 | 0.0001 | Degrading |
| PMKTF | Spring1 | SPO4F | 0.2738 | 0.000 | High BDLs | 0.0039 | -0.001 | Improving | 0.0292 | Same | 0.0018 | Improving | 0.0018 | 0.0018 | Improving |
| PMKTF | Spring1 | BPO4F | 0.3297 | 0.000 | High BDLs | 0.0059 | -0.001 | Improving | 0.0514 | Same | 0.0035 | Improving | 0.0035 | 0.0035 | Improving |
| PMKOH | Spring1 | STN | 0.2062 | 0.034 | No Trend | 0.6857 | 0.003 | No Trend | 0.7686 | Same | 0.3171 | No Trend | 0.3171 | 0.3171 | No Trend |
| PMKOH | Spring1 | BTN | 0.2270 | 0.053 | No Trend | 0.0968 | 0.036 | No Trend | 0.4385 | Same | 0.0379 | No Trend | 0.0379 | 0.0379 | No Trend |
| PMKOH | Spring1 | SDIN | 0.0443 | 0.007 | No Trend | 0.8659 | 0.001 | No Trend | 0.3917 | Same | 0.2494 | No Trend | 0.2494 | 0.2494 | No Trend |
| PMKOH | Spring1 | BDIN | 0.0458 | 0.009 | No Trend | 0.5896 | -0.002 | No Trend | 0.1409 | Same | 0.5960 | No Trend | 0.5960 | 0.5960 | No Trend |
| PMKOH | Spring1 | STP | 0.0136 | 0.009 | No Trend | 0.5635 | 0.001 | No Trend | 0.4209 | Same | 0.0726 | No Trend | 0.0726 | 0.0726 | No Trend |
| PMKOH | Spring1 | BTP | 0.0047 | 0.027 | Degrading | 0.4549 | 0.005 | No Trend | 0.3396 | Same | 0.0274 | No Trend | 0.0274 | 0.0274 | No Trend |
| PMKOH | Spring1 | SPO4F | 0.4258 | 0.000 | High BDLs | 0.0016 | -0.001 | Improving | 0.0014 | Different | 0.0156 | Improving | 0.0156 | 0.0156 | Improving |
| PMKOH | Spring1 | BPO4F | 0.7402 | 0.000 | High BDLs | 0.0048 | -0.001 | Improving | 0.0072 | Different | 0.0200 | Improving | 0.0200 | 0.0200 | Improving |
| MPNTF | Spring1 | STN | 0.0020 | 0.011 | Degrading | 0.1716 | 0.007 | No Trend | 0.6931 | Same | 0.0057 | Degrading | 0.0057 | 0.0057 | Degrading |
| MPNTF | Spring1 | BTN | 0.5465 | -0.007 | No Trend | 0.3720 | 0.003 | No Trend | 0.2671 | Same | 0.6953 | No Trend | 0.6953 | 0.6953 | No Trend |
| MPNTF | Spring1 | SDIN | 0.3311 | 0.004 | No Trend | 0.0005 | 0.011 | Degrading | 0.0128 | Same | 0.0004 | Degrading | 0.0004 | 0.0004 | Degrading |
| MPNTF | Spring1 | BDIN | 0.2528 | 0.004 | No Trend | 0.0022 | 0.008 | Degrading | 0.0543 | Same | 0.0012 | Degrading | 0.0012 | 0.0012 | Degrading |
| MPNTF | Spring1 | STP | 0.0216 | 0.002 | No Trend | 0.5861 | 0.000 | No Trend | 0.4711 | Same | 0.0967 | No Trend | 0.0967 | 0.0967 | No Trend |
| MPNTF | Spring1 | BTP | 0.0831 | 0.001 | No Trend | 0.7560 | 0.000 | No Trend | 0.4896 | Same | 0.2234 | No Trend | 0.2234 | 0.2234 | No Trend |
| MPNTF | Spring1 | SPO4F | 0.4434 | 0.000 | High BDLs | 0.0031 | -0.001 | Improving | 0.0026 | Different | 0.0237 | Improving | 0.0237 | 0.0237 | Improving |
| MPNTF | Spring1 | BPO4F | 0.3776 | 0.000 | High BDLs | 0.0050 | -0.001 | Improving | 0.0421 | Same | 0.0034 | Improving | 0.0034 | 0.0034 | Improving |
| MPNOH | Spring1 | STN | 0.0219 | 0.023 | No Trend | 0.3264 | 0.007 | No Trend | 0.7389 | Same | 0.0423 | No Trend | 0.0423 | 0.0423 | No Trend |
| MPNOH | Spring1 | BTN | 0.5880 | 0.017 | No Trend | 0.4088 | -0.006 | No Trend | 0.3080 | Same | 0.7022 | No Trend | 0.7022 | 0.7022 | No Trend |
| MPNOH | Spring1 | SDIN | 0.0185 | 0.010 | No Trend | 0.2620 | 0.004 | No Trend | 0.8084 | Same | 0.0290 | No Trend | 0.0290 | 0.0290 | No Trend |
| MPNOH | Spring1 | BDIN | 0.0215 | 0.009 | No Trend | 0.5733 | 0.002 | No Trend | 0.4438 | Same | 0.0849 | No Trend | 0.0849 | 0.0849 | No Trend |
| MPNOH | Spring1 | STP | 0.0003 | 0.009 | Degrading | 0.7727 | -0.001 | No Trend | 0.0326 | Same | 0.1007 | No Trend | 0.1007 | 0.1007 | No Trend |
| MPNOH | Spring1 | BTP | 0.0219 | 0.009 | No Trend | 0.2448 | -0.003 | No Trend | 0.0257 | Same | 0.7988 | No Trend | 0.7988 | 0.7988 | No Trend |
| MPNOH | Spring1 | SPO4F | 0.4877 | 0.000 | High BDLs | 0.0079 | -0.001 | Improving | 0.0067 | Different | 0.0446 | Improving | 0.0446 | 0.0446 | Improving |
| MPNOH | Spring1 | BPO4F | 1.0000 | 0.000 | High BDLs | 0.0131 | -0.001 | No Trend | 0.0351 | Same | 0.0297 | No Trend | 0.0297 | 0.0297 | No Trend |
| YRKMH | Spring1 | STN | 0.1169 | 0.020 | No Trend | 0.3601 | 0.006 | No Trend | 0.9771 | Same | 0.1140 | No Trend | 0.1140 | 0.1140 | No Trend |
| YRKMH | Spring1 | BTN | 0.2062 | 0.023 | No Trend | 0.7190 | 0.006 | No Trend | 0.7519 | Same | 0.3430 | No Trend | 0.3430 | 0.3430 | No Trend |
| YRKMH | Spring1 | SDIN | 0.0589 | 0.008 | High BDLs | 0.1911 | -0.004 | No Trend | 0.0381 | Same | 0.8178 | No Trend | 0.8178 | 0.8178 | No Trend |
| YRKMH | Spring1 | BDIN | 0.0136 | 0.003 | High BDLs | 0.4721 | -0.002 | No Trend | 0.0749 | Same | 0.6196 | No Trend | 0.6196 | 0.6196 | No Trend |
| YRKMH | Spring1 | STP | 0.0592 | 0.003 | No Trend | 0.4767 | 0.001 | No Trend | 0.7447 | Same | 0.1166 | No Trend | 0.1166 | 0.1166 | No Trend |
| YRKMH | Spring1 | BTP | 0.5443 | 0.002 | No Trend | 0.4767 | 0.002 | No Trend | 0.7674 | Same | 0.3439 | No Trend | 0.3439 | 0.3439 | No Trend |
| YRKMH | Spring1 | SPO4F | 0.2186 | 0.000 | High BDLs | 0.3762 | 0.000 | No Trend | 0.1907 | Same | 0.7378 | No Trend | 0.7378 | 0.7378 | No Trend |
| YRKMH | Spring1 | BPO4F | 0.6391 | 0.000 | High BDLs | 0.7662 | 0.000 | No Trend | 0.6263 | Same | 0.9515 | No Trend | 0.9515 | 0.9515 | No Trend |
| YRKPH | Spring1 | STN | 0.0931 | 0.023 | No Trend | 0.4136 | 0.004 | No Trend | 0.9765 | Same | 0.1337 | No Trend | 0.1337 | 0.1337 | No Trend |
| YRKPH | Spring1 | BTN | 0.0268 | 0.051 | No Trend | 0.8960 | 0.000 | No Trend | 0.2846 | Same | 0.4053 | No Trend | 0.4053 | 0.4053 | No Trend |
| YRKPH | Spring1 | SDIN | 0.0426 | 0.000 | High BDLs | 0.8489 | 0.000 | No Trend | 0.4612 | Same | 0.7125 | No Trend | 0.7125 | 0.7125 | No Trend |
| YRKPH | Spring1 | BDIN | 0.0237 | 0.000 | High BDLs | 0.3988 | -0.001 | No Trend | 0.1178 | Same | 0.9745 | No Trend | 0.9745 | 0.9745 | No Trend |
| YRKPH | Spring1 | STP | 0.0033 | 0.003 | Degrading | 0.7604 | 0.000 | No Trend | 0.2453 | Same | 0.0895 | No Trend | 0.0895 | 0.0895 | No Trend |
| YRKPH | Spring1 | BTP | 0.0326 | 0.003 | No Trend | 0.5195 | 0.000 | No Trend | 0.6144 | Same | 0.1031 | No Trend | 0.1031 | 0.1031 | No Trend |
| YRKPH | Spring1 | SPO4F | 1.0000 | 0.000 | High BDLs | 0.8953 | 0.000 | No Trend | 0.8753 | Same | 0.9250 | No Trend | 0.9250 | 0.9250 | No Trend |
| YRKPH | Spring1 | BPO4F | 0.8333 | 0.000 | High BDLs | 0.7675 | 0.000 | No Trend | 0.7067 | Same | 0.8507 | No Trend | 0.8507 | 0.8507 | No Trend |

Appendix A - Section IC. York River (1985-2008) - Continued.

| Segment | Season | Parameter | '93 | | '93 | | '08 | | '08 | | Trend | | Combined | | Combined |
|---------|---------|-----------|--------|--------|-----------|--------|--------|-----------|------------|-----------|---------|------------|----------|---------|----------|
| | | | Trend | '93 | Trend | Trend | '08 | Trend | Comparison | Trend | P value | Comparison | Trend | P value | Trend |
| PMKTF | Spring2 | STN | 0.2777 | 0.007 | No Trend | 0.0029 | 0.016 | Degrading | 0.0499 | Same | 0.0017 | Degrading | | | |
| PMKTF | Spring2 | BTN | 0.8094 | 0.002 | No Trend | 0.0447 | 0.009 | No Trend | 0.1294 | Same | 0.0649 | No Trend | | | |
| PMKTF | Spring2 | SDIN | 0.0809 | 0.010 | No Trend | 0.0089 | 0.010 | Degrading | 0.1509 | Same | 0.0016 | Degrading | | | |
| PMKTF | Spring2 | BDIN | 0.1471 | 0.010 | No Trend | 0.5057 | 0.004 | No Trend | 0.8557 | Same | 0.1824 | No Trend | | | |
| PMKTF | Spring2 | STP | 0.0326 | 0.003 | No Trend | 0.0076 | 0.002 | Degrading | 0.2165 | Same | 0.0007 | Degrading | | | |
| PMKTF | Spring2 | BTP | 0.0064 | 0.004 | Degrading | 0.0555 | 0.002 | No Trend | 0.8280 | Same | 0.0021 | Degrading | | | |
| PMKTF | Spring2 | SPO4F | 0.0329 | 0.000 | High BDLs | 0.0003 | -0.001 | Improving | 0.0185 | Same | 0.0000 | Improving | | | |
| PMKTF | Spring2 | BPO4F | 0.4042 | 0.000 | High BDLs | 0.0001 | -0.001 | Improving | 0.0014 | Different | 0.0001 | Improving | 95 | | |
| PMKOH | Spring2 | STN | 0.0616 | 0.041 | No Trend | 0.2823 | -0.008 | No Trend | 0.0582 | Same | 0.9760 | No Trend | | | |
| PMKOH | Spring2 | BTN | 0.3035 | 0.045 | No Trend | 0.2357 | 0.021 | No Trend | 0.6152 | Same | 0.1171 | No Trend | | | |
| PMKOH | Spring2 | SDIN | 0.0125 | 0.011 | No Trend | 0.7103 | 0.000 | No Trend | 0.1175 | Same | 0.3599 | No Trend | | | |
| PMKOH | Spring2 | BDIN | 0.0787 | 0.010 | No Trend | 0.6010 | -0.001 | No Trend | 0.1857 | Same | 0.6871 | No Trend | | | |
| PMKOH | Spring2 | STP | 0.1012 | 0.006 | No Trend | 0.1719 | -0.002 | No Trend | 0.0421 | Same | 0.7386 | No Trend | | | |
| PMKOH | Spring2 | BTP | 0.0291 | 0.020 | No Trend | 0.9721 | 0.000 | No Trend | 0.2749 | Same | 0.2492 | No Trend | | | |
| PMKOH | Spring2 | SPO4F | 0.3717 | 0.000 | No Trend | 0.0568 | -0.001 | No Trend | 0.0331 | Same | 0.2093 | No Trend | | | |
| PMKOH | Spring2 | BPO4F | 1.0000 | 0.000 | High BDLs | 0.1431 | 0.000 | No Trend | 0.1932 | Same | 0.1742 | No Trend | | | |
| MPNTF | Spring2 | STN | 0.0090 | 0.013 | Degrading | 0.0968 | 0.009 | No Trend | 0.9505 | Same | 0.0052 | Degrading | | | |
| MPNTF | Spring2 | BTN | 0.1846 | -0.017 | No Trend | 0.3682 | 0.003 | No Trend | 0.1345 | Same | 0.9746 | No Trend | | | |
| MPNTF | Spring2 | SDIN | 0.0446 | 0.008 | No Trend | 0.0017 | 0.010 | Degrading | 0.0742 | Same | 0.0002 | Degrading | | | |
| MPNTF | Spring2 | BDIN | 0.3346 | 0.005 | No Trend | 0.0062 | 0.007 | Degrading | 0.0624 | Same | 0.0039 | Degrading | | | |
| MPNTF | Spring2 | STP | 0.0201 | 0.002 | No Trend | 0.2620 | 0.001 | No Trend | 0.8543 | Same | 0.0321 | No Trend | | | |
| MPNTF | Spring2 | BTP | 0.7117 | 0.000 | No Trend | 0.6384 | 0.000 | No Trend | 0.8516 | Same | 0.5330 | No Trend | | | |
| MPNTF | Spring2 | SPO4F | 0.3126 | 0.000 | High BDLs | 0.0000 | -0.002 | Improving | 0.0000 | Different | 0.0013 | Improving | 95 | | |
| MPNTF | Spring2 | BPO4F | 0.2459 | 0.000 | High BDLs | 0.0006 | -0.002 | Improving | 0.0145 | Same | 0.0003 | Improving | | | |
| MPNOH | Spring2 | STN | 0.0080 | 0.025 | Degrading | 0.1100 | 0.011 | No Trend | 0.9752 | Same | 0.0056 | Degrading | | | |
| MPNOH | Spring2 | BTN | 0.3062 | 0.025 | No Trend | 0.4997 | -0.005 | No Trend | 0.2519 | Same | 1.0000 | No Trend | | | |
| MPNOH | Spring2 | SDIN | 0.0055 | 0.010 | Degrading | 0.8131 | 0.001 | No Trend | 0.2386 | Same | 0.1116 | No Trend | | | |
| MPNOH | Spring2 | BDIN | 0.0110 | 0.010 | No Trend | 0.9171 | 0.000 | No Trend | 0.2287 | Same | 0.1663 | No Trend | | | |
| MPNOH | Spring2 | STP | 0.0001 | 0.008 | Degrading | 0.8083 | -0.001 | No Trend | 0.0328 | Same | 0.0866 | No Trend | | | |
| MPNOH | Spring2 | BTP | 0.0296 | 0.009 | No Trend | 0.5789 | -0.002 | No Trend | 0.1109 | Same | 0.5276 | No Trend | | | |
| MPNOH | Spring2 | SPO4F | 0.6523 | 0.000 | No Trend | 0.1107 | -0.001 | No Trend | 0.0987 | Same | 0.2417 | No Trend | | | |
| MPNOH | Spring2 | BPO4F | 0.6126 | 0.000 | High BDLs | 0.1163 | 0.000 | No Trend | 0.0989 | Same | 0.2712 | No Trend | | | |
| YRKMH | Spring2 | STN | 0.0133 | 0.029 | No Trend | 0.7438 | 0.001 | No Trend | 0.3576 | Same | 0.1349 | No Trend | | | |
| YRKMH | Spring2 | BTN | 0.0620 | 0.027 | No Trend | 0.5128 | -0.005 | No Trend | 0.1349 | Same | 0.7301 | No Trend | | | |
| YRKMH | Spring2 | SDIN | 0.2116 | 0.002 | High BDLs | 0.3452 | -0.003 | No Trend | 0.1461 | Same | 0.8355 | No Trend | | | |
| YRKMH | Spring2 | BDIN | 0.0450 | 0.000 | High BDLs | 0.4788 | -0.002 | No Trend | 0.1221 | Same | 0.7850 | No Trend | | | |
| YRKMH | Spring2 | STP | 0.0174 | 0.004 | No Trend | 0.8960 | 0.000 | No Trend | 0.2050 | Same | 0.2997 | No Trend | | | |
| YRKMH | Spring2 | BTP | 0.5423 | 0.003 | No Trend | 0.6949 | -0.001 | No Trend | 0.5077 | Same | 0.9770 | No Trend | | | |
| YRKMH | Spring2 | SPO4F | 0.2731 | 0.000 | High BDLs | 0.8991 | 0.000 | No Trend | 0.5610 | Same | 0.7272 | No Trend | | | |
| YRKMH | Spring2 | BPO4F | 0.1651 | 0.000 | High BDLs | 0.8985 | 0.000 | No Trend | 0.6401 | Same | 0.4831 | No Trend | | | |
| YRKPH | Spring2 | STN | 0.0260 | 0.029 | No Trend | 0.1504 | 0.005 | No Trend | 0.8161 | Same | 0.0200 | No Trend | | | |
| YRKPH | Spring2 | BTN | 0.0021 | 0.059 | Degrading | 0.7685 | -0.001 | No Trend | 0.1150 | Same | 0.2980 | No Trend | | | |
| YRKPH | Spring2 | SDIN | 0.0517 | 0.000 | High BDLs | 0.2720 | -0.002 | No Trend | 0.0847 | Same | 0.7303 | No Trend | | | |
| YRKPH | Spring2 | BDIN | 0.0119 | 0.000 | High BDLs | 0.7042 | -0.001 | No Trend | 0.1947 | Same | 0.5555 | No Trend | | | |
| YRKPH | Spring2 | STP | 0.0002 | 0.003 | Degrading | 0.6472 | 0.000 | No Trend | 0.0321 | Same | 0.1827 | No Trend | | | |
| YRKPH | Spring2 | BTP | 0.0076 | 0.004 | Degrading | 0.8959 | 0.000 | No Trend | 0.2379 | Same | 0.1584 | No Trend | | | |
| YRKPH | Spring2 | SPO4F | 0.3582 | 0.000 | High BDLs | 0.7503 | 0.000 | No Trend | 0.9526 | Same | 0.5130 | No Trend | | | |
| YRKPH | Spring2 | BPO4F | 0.6762 | 0.000 | High BDLs | 0.7035 | 0.000 | No Trend | 0.8588 | Same | 0.5935 | No Trend | | | |

Appendix A - Section IC. York River (1985-2008) - Continued.

| Segment | Season | Parameter | '93 | | '93 | | '08 | | '08 | | Trend | | Combined | | Combined |
|---------|---------|-----------|--------|--------|-----------|--------|--------|-----------|------------|-----------|---------|--------------|----------|---------|----------|
| | | | Trend | '93 | Trend | Trend | '08 | Trend | Comparison | Trend | P value | Comparison | Trend | P value | Trend |
| PMKTF | Summer1 | STN | 0.1907 | -0.011 | No Trend | 0.7904 | -0.001 | No Trend | 0.6136 | Same | 0.3402 | No Trend | | | |
| PMKTF | Summer1 | BTN | 0.7944 | -0.005 | No Trend | 0.0744 | -0.013 | No Trend | 0.1874 | Same | 0.0965 | No Trend | | | |
| PMKTF | Summer1 | SDIN | 0.7519 | -0.001 | No Trend | 0.9274 | -0.001 | No Trend | 0.9162 | Same | 0.7924 | No Trend | | | |
| PMKTF | Summer1 | BDIN | 0.7513 | -0.001 | No Trend | 0.4848 | -0.003 | No Trend | 0.6735 | Same | 0.4295 | No Trend | | | |
| PMKTF | Summer1 | STP | 0.1543 | 0.002 | No Trend | 0.8760 | 0.000 | No Trend | 0.3754 | Same | 0.5367 | No Trend | | | |
| PMKTF | Summer1 | BTP | 0.0455 | 0.005 | No Trend | 0.0228 | -0.001 | No Trend | 0.0027 | Different | 0.3616 | No Trend* | | | |
| PMKTF | Summer1 | SPO4F | 0.0174 | -0.001 | High BDLs | 0.0004 | -0.001 | Improving | 0.0450 | Same | 0.0000 | Improving | | | |
| PMKTF | Summer1 | BPO4F | 0.1239 | -0.001 | High BDLs | 0.0001 | -0.001 | Improving | 0.0077 | Different | 0.0000 | Improving 95 | | | |
| PMKOH | Summer1 | STN | 0.0004 | 0.030 | Degrading | 0.5743 | -0.006 | No Trend | 0.0157 | Same | 0.1407 | No Trend | | | |
| PMKOH | Summer1 | BTN | 0.0130 | 0.050 | No Trend | 0.4151 | -0.009 | No Trend | 0.0447 | Same | 0.5412 | No Trend | | | |
| PMKOH | Summer1 | SDIN | 0.4720 | 0.002 | High BDLs | 0.1822 | -0.003 | No Trend | 0.1232 | Same | 0.4768 | No Trend | | | |
| PMKOH | Summer1 | BDIN | 1.0000 | 0.000 | No Trend | 0.4026 | -0.002 | No Trend | 0.4520 | Same | 0.4875 | No Trend | | | |
| PMKOH | Summer1 | STP | 0.1402 | 0.005 | No Trend | 0.0530 | -0.003 | No Trend | 0.0145 | Same | 0.3756 | No Trend | | | |
| PMKOH | Summer1 | BTP | 0.2764 | 0.010 | No Trend | 0.7623 | -0.001 | No Trend | 0.4124 | Same | 0.7712 | No Trend | | | |
| PMKOH | Summer1 | SPO4F | 0.0017 | 0.002 | Degrading | 0.0998 | 0.001 | No Trend | 0.8944 | Same | 0.0027 | Degrading | | | |
| PMKOH | Summer1 | BPO4F | 0.1393 | 0.001 | No Trend | 0.0520 | 0.001 | No Trend | 0.3047 | Same | 0.0151 | No Trend | | | |
| MPNTF | Summer1 | STN | 0.0602 | -0.021 | No Trend | 0.2036 | -0.005 | No Trend | 0.9273 | Same | 0.0309 | No Trend | | | |
| MPNTF | Summer1 | BTN | 0.0929 | -0.013 | No Trend | 0.1163 | -0.010 | No Trend | 0.7583 | Same | 0.0228 | No Trend | | | |
| MPNTF | Summer1 | SDIN | 0.2207 | 0.001 | High BDLs | 0.7153 | -0.001 | No Trend | 0.3420 | Same | 0.7514 | No Trend | | | |
| MPNTF | Summer1 | BDIN | 0.9558 | 0.000 | No Trend | 0.8514 | -0.001 | No Trend | 0.9134 | Same | 0.8277 | No Trend | | | |
| MPNTF | Summer1 | STP | 0.0674 | 0.001 | No Trend | 0.0644 | -0.002 | No Trend | 0.0109 | Same | 0.5157 | No Trend | | | |
| MPNTF | Summer1 | BTP | 0.6217 | 0.001 | No Trend | 0.0202 | -0.002 | No Trend | 0.0227 | Same | 0.0848 | No Trend | | | |
| MPNTF | Summer1 | SPO4F | 0.7780 | 0.000 | No Trend | 0.0000 | -0.002 | Improving | 0.0000 | Different | 0.0001 | Improving 95 | | | |
| MPNTF | Summer1 | BPO4F | 0.2060 | 0.000 | No Trend | 0.0000 | -0.002 | Improving | 0.0017 | Different | 0.0000 | Improving 95 | | | |
| MPNOH | Summer1 | STN | 0.0017 | 0.030 | Degrading | 0.6565 | 0.004 | No Trend | 0.1504 | Same | 0.0298 | No Trend | | | |
| MPNOH | Summer1 | BTN | 0.3379 | 0.023 | No Trend | 0.2509 | -0.008 | No Trend | 0.1293 | Same | 0.6874 | No Trend | | | |
| MPNOH | Summer1 | SDIN | 0.2621 | 0.001 | High BDLs | 0.8160 | -0.001 | No Trend | 0.4233 | Same | 0.6889 | No Trend | | | |
| MPNOH | Summer1 | BDIN | 1.0000 | 0.000 | No Trend | 0.5532 | 0.002 | No Trend | 0.6221 | Same | 0.5839 | No Trend | | | |
| MPNOH | Summer1 | STP | 0.0023 | 0.005 | Degrading | 0.6861 | -0.001 | No Trend | 0.0541 | Same | 0.2184 | No Trend | | | |
| MPNOH | Summer1 | BTP | 0.2769 | 0.004 | No Trend | 0.9011 | 0.000 | No Trend | 0.6465 | Same | 0.5001 | No Trend | | | |
| MPNOH | Summer1 | SPO4F | 0.0123 | 0.001 | No Trend | 0.7317 | 0.000 | No Trend | 0.3302 | Same | 0.1167 | No Trend | | | |
| MPNOH | Summer1 | BPO4F | 0.0130 | 0.001 | No Trend | 0.9270 | 0.000 | No Trend | 0.2594 | Same | 0.1974 | No Trend | | | |
| YRKMH | Summer1 | STN | 0.0299 | 0.033 | No Trend | 0.6989 | 0.001 | No Trend | 0.4216 | Same | 0.1419 | No Trend | | | |
| YRKMH | Summer1 | BTN | 0.0319 | 0.028 | No Trend | 0.7408 | -0.002 | No Trend | 0.1620 | Same | 0.4079 | No Trend | | | |
| YRKMH | Summer1 | SDIN | 0.8913 | 0.000 | High BDLs | 0.9157 | 0.000 | No Trend | 1.0000 | Same | 0.8508 | No Trend | | | |
| YRKMH | Summer1 | BDIN | 0.9429 | 0.000 | High BDLs | 0.5045 | -0.002 | No Trend | 0.5918 | Same | 0.5077 | No Trend | | | |
| YRKMH | Summer1 | STP | 0.0011 | 0.007 | Degrading | 0.5641 | -0.001 | No Trend | 0.0359 | Same | 0.2772 | No Trend | | | |
| YRKMH | Summer1 | BTP | 0.0070 | 0.008 | Degrading | 0.6796 | 0.001 | No Trend | 0.3492 | Same | 0.0960 | No Trend | | | |
| YRKMH | Summer1 | SPO4F | 0.0011 | 0.003 | Degrading | 0.0528 | 0.000 | No Trend | 0.8783 | Same | 0.0011 | Degrading | | | |
| YRKMH | Summer1 | BPO4F | 0.0013 | 0.003 | Degrading | 0.0008 | 0.001 | Degrading | 0.1496 | Same | 0.0000 | Degrading | | | |
| YRKPH | Summer1 | STN | 0.0311 | 0.026 | No Trend | 0.0225 | 0.004 | No Trend | 0.3915 | Same | 0.0020 | Degrading | | | |
| YRKPH | Summer1 | BTN | 0.0039 | 0.044 | Degrading | 0.4668 | 0.003 | No Trend | 0.4193 | Same | 0.0378 | No Trend | | | |
| YRKPH | Summer1 | SDIN | 0.4638 | 0.000 | High BDLs | 0.6084 | -0.001 | No Trend | 0.4209 | Same | 0.9014 | No Trend | | | |
| YRKPH | Summer1 | BDIN | 0.1389 | 0.001 | High BDLs | 0.5350 | 0.001 | No Trend | 0.9151 | Same | 0.2203 | No Trend | | | |
| YRKPH | Summer1 | STP | 0.0054 | 0.003 | Degrading | 0.2379 | -0.001 | No Trend | 0.0163 | Same | 0.7370 | No Trend | | | |
| YRKPH | Summer1 | BTP | 0.0002 | 0.004 | Degrading | 0.7680 | 0.000 | No Trend | 0.0390 | Same | 0.1216 | No Trend | | | |
| YRKPH | Summer1 | SPO4F | 0.0114 | 0.001 | No Trend | 0.2997 | 0.000 | No Trend | 0.7543 | Same | 0.0324 | No Trend | | | |
| YRKPH | Summer1 | BPO4F | 0.0657 | 0.001 | No Trend | 0.3015 | 0.000 | No Trend | 1.0000 | Same | 0.0697 | No Trend | | | |

Appendix A - Section IC. York River (1985-2008) - Continued.

| Segment | Season | Parameter | '93 | | '93 | '08 | '08 | '08 | Trend | | Combined | Combined |
|---------|---------|-----------|---------|--------|-----------|---------|--------|-----------|---------|------------|----------|--------------|
| | | | Trend | '93 | Trend | Trend | Slope | Direction | P value | Comparison | Trend | Trend |
| | | | P value | Slope | Direction | P value | Slope | Direction | P value | Comparison | P value | Direction |
| PMKTF | Summer2 | STN | 0.3337 | -0.009 | No Trend | 0.7614 | -0.003 | No Trend | 0.7724 | Same | 0.4217 | No Trend |
| PMKTF | Summer2 | BTN | 0.9520 | 0.004 | No Trend | 0.0175 | -0.021 | No Trend | 0.0403 | Same | 0.0551 | No Trend |
| PMKTF | Summer2 | SDIN | 0.9028 | 0.000 | No Trend | 0.7702 | -0.002 | No Trend | 0.8755 | Same | 0.7303 | No Trend |
| PMKTF | Summer2 | BDIN | 1.0000 | 0.000 | No Trend | 0.4218 | -0.003 | No Trend | 0.5101 | Same | 0.4706 | No Trend |
| PMKTF | Summer2 | STP | 0.3607 | 0.002 | No Trend | 0.2545 | -0.002 | No Trend | 0.1381 | Same | 0.6518 | No Trend |
| PMKTF | Summer2 | BTP | 0.0689 | 0.008 | No Trend | 0.0019 | -0.002 | Improving | 0.0003 | Different | 0.1008 | Improving 95 |
| PMKTF | Summer2 | SPO4F | 0.1722 | 0.000 | High BDLs | 0.0022 | -0.001 | Improving | 0.0505 | Same | 0.0008 | Improving |
| PMKTF | Summer2 | BPO4F | 0.3376 | 0.000 | High BDLs | 0.0029 | -0.001 | Improving | 0.0383 | Same | 0.0020 | Improving |
| PMKOH | Summer2 | STN | 0.0019 | 0.030 | Degrading | 0.7831 | -0.004 | No Trend | 0.0568 | Same | 0.1508 | No Trend |
| PMKOH | Summer2 | BTN | 0.0190 | 0.043 | No Trend | 0.1909 | -0.012 | No Trend | 0.0177 | Same | 0.8890 | No Trend |
| PMKOH | Summer2 | SDIN | 0.5148 | 0.001 | High BDLs | 0.2880 | -0.003 | No Trend | 0.2002 | Same | 0.6035 | No Trend |
| PMKOH | Summer2 | BDIN | 0.7834 | 0.000 | High BDLs | 0.6027 | -0.002 | No Trend | 0.5334 | Same | 0.7819 | No Trend |
| PMKOH | Summer2 | STP | 0.0528 | 0.006 | No Trend | 0.2070 | -0.002 | No Trend | 0.0364 | Same | 0.9275 | No Trend |
| PMKOH | Summer2 | BTP | 0.1835 | 0.012 | No Trend | 0.6370 | -0.001 | No Trend | 0.2704 | Same | 0.7768 | No Trend |
| PMKOH | Summer2 | SPO4F | 0.0001 | 0.003 | Degrading | 0.0624 | 0.001 | No Trend | 0.7830 | Same | 0.0004 | Degrading |
| PMKOH | Summer2 | BPO4F | 0.0030 | 0.002 | Degrading | 0.0414 | 0.001 | No Trend | 0.7498 | Same | 0.0011 | Degrading |
| MPNTF | Summer2 | STN | 0.0068 | -0.031 | Improving | 0.0451 | -0.011 | No Trend | 0.9722 | Same | 0.0012 | Improving |
| MPNTF | Summer2 | BTN | 0.1444 | -0.011 | No Trend | 0.0402 | -0.015 | No Trend | 0.4221 | Same | 0.0106 | No Trend |
| MPNTF | Summer2 | SDIN | 0.2411 | 0.001 | High BDLs | 0.2009 | -0.005 | No Trend | 0.0838 | Same | 0.6372 | No Trend |
| MPNTF | Summer2 | BDIN | 0.6955 | 0.000 | High BDLs | 0.3047 | -0.004 | No Trend | 0.2641 | Same | 0.5113 | No Trend |
| MPNTF | Summer2 | STP | 0.2417 | 0.001 | No Trend | 0.0035 | -0.003 | Improving | 0.0017 | Different | 0.0595 | Improving 95 |
| MPNTF | Summer2 | BTP | 0.4801 | 0.001 | No Trend | 0.0024 | -0.003 | Improving | 0.0026 | Different | 0.0263 | Improving 95 |
| MPNTF | Summer2 | SPO4F | 0.7056 | 0.000 | No Trend | 0.0001 | -0.002 | Improving | 0.0002 | Different | 0.0012 | Improving 95 |
| MPNTF | Summer2 | BPO4F | 0.4188 | 0.000 | No Trend | 0.0001 | -0.002 | Improving | 0.0035 | Different | 0.0002 | Improving 95 |
| MPNOH | Summer2 | STN | 0.0004 | 0.036 | Degrading | 0.6283 | -0.003 | No Trend | 0.0139 | Same | 0.0962 | No Trend |
| MPNOH | Summer2 | BTN | 0.2029 | 0.032 | No Trend | 0.0197 | -0.024 | No Trend | 0.0072 | Different | 0.2248 | No Trend* |
| MPNOH | Summer2 | SDIN | 0.4247 | 0.000 | High BDLs | 0.5588 | -0.003 | No Trend | 0.3396 | Same | 0.9718 | No Trend |
| MPNOH | Summer2 | BDIN | 0.9458 | 0.000 | High BDLs | 0.7040 | 0.001 | No Trend | 0.7907 | Same | 0.6906 | No Trend |
| MPNOH | Summer2 | STP | 0.0178 | 0.005 | No Trend | 0.2904 | -0.002 | No Trend | 0.0292 | Same | 0.7004 | No Trend |
| MPNOH | Summer2 | BTP | 0.4454 | 0.004 | No Trend | 0.2131 | -0.002 | No Trend | 0.1355 | Same | 0.5163 | No Trend |
| MPNOH | Summer2 | SPO4F | 0.0012 | 0.002 | Degrading | 0.9096 | 0.000 | No Trend | 0.1056 | Same | 0.0699 | No Trend |
| MPNOH | Summer2 | BPO4F | 0.0012 | 0.002 | Degrading | 0.9125 | 0.000 | No Trend | 0.0892 | Same | 0.1317 | No Trend |
| YRKMH | Summer2 | STN | 0.0363 | 0.034 | No Trend | 0.9395 | 0.000 | No Trend | 0.2972 | Same | 0.2409 | No Trend |
| YRKMH | Summer2 | BTN | 0.0439 | 0.037 | No Trend | 0.9061 | -0.001 | No Trend | 0.2485 | Same | 0.3419 | No Trend |
| YRKMH | Summer2 | SDIN | 1.0000 | 0.000 | High BDLs | 0.9672 | 0.000 | No Trend | 1.0000 | Same | 0.9410 | No Trend |
| YRKMH | Summer2 | BDIN | 1.0000 | 0.000 | High BDLs | 0.5672 | -0.001 | No Trend | 0.5828 | Same | 0.6340 | No Trend |
| YRKMH | Summer2 | STP | 0.0037 | 0.007 | Degrading | 0.6109 | -0.001 | No Trend | 0.0582 | Same | 0.3144 | No Trend |
| YRKMH | Summer2 | BTP | 0.0058 | 0.009 | Degrading | 0.5993 | 0.002 | No Trend | 0.3725 | Same | 0.0697 | No Trend |
| YRKMH | Summer2 | SPO4F | 0.0002 | 0.003 | Degrading | 0.1099 | 0.001 | No Trend | 0.6973 | Same | 0.0014 | Degrading |
| YRKMH | Summer2 | BPO4F | 0.0014 | 0.003 | Degrading | 0.0023 | 0.001 | Degrading | 0.2386 | Same | 0.0000 | Degrading |
| YRKPH | Summer2 | STN | 0.0801 | 0.023 | No Trend | 0.1250 | 0.003 | No Trend | 0.6836 | Same | 0.0250 | No Trend |
| YRKPH | Summer2 | BTN | 0.0378 | 0.040 | No Trend | 0.4549 | 0.004 | No Trend | 0.6592 | Same | 0.0836 | No Trend |
| YRKPH | Summer2 | SDIN | 0.6711 | 0.000 | High BDLs | 0.9343 | 0.000 | No Trend | 0.8821 | Same | 0.7668 | No Trend |
| YRKPH | Summer2 | BDIN | 0.2744 | 0.002 | High BDLs | 0.4199 | 0.002 | No Trend | 0.8515 | Same | 0.2120 | No Trend |
| YRKPH | Summer2 | STP | 0.0349 | 0.002 | No Trend | 0.1719 | -0.001 | No Trend | 0.0240 | Same | 0.9029 | No Trend |
| YRKPH | Summer2 | BTP | 0.0005 | 0.004 | Degrading | 0.8063 | 0.000 | No Trend | 0.0512 | Same | 0.1277 | No Trend |
| YRKPH | Summer2 | SPO4F | 0.0195 | 0.001 | No Trend | 0.5740 | 0.000 | No Trend | 0.4994 | Same | 0.0974 | No Trend |
| YRKPH | Summer2 | BPO4F | 0.0730 | 0.001 | No Trend | 0.4204 | 0.000 | No Trend | 0.8311 | Same | 0.1063 | No Trend |

Appendix A - Section IC. York River (1985-2008) - Continued.

| Segment | Season | Parameter | '93 | | '93 | | '08 | | '08 | | Trend | Combined | Combined |
|---------|--------|-----------|---------|--------|-----------|---------|--------|-----------|------------|------------|---------|--------------|----------|
| | | | Trend | '93 | Trend | Trend | '08 | Trend | Comparison | Trend | Trend | | |
| | | | P value | Slope | Direction | P value | Slope | Direction | P value | Comparison | P value | Direction | |
| PMKTF | Winter | STN | 0.8595 | 0.004 | No Trend | 0.0083 | 0.018 | Degrading | 0.0282 | Same | 0.0144 | No Trend | |
| PMKTF | Winter | BTN | 0.1349 | -0.025 | No Trend | 0.2366 | 0.010 | No Trend | 0.0781 | Same | 0.7107 | No Trend | |
| PMKTF | Winter | SDIN | 0.5983 | -0.010 | No Trend | 0.1011 | 0.013 | No Trend | 0.0814 | Same | 0.2300 | No Trend | |
| PMKTF | Winter | BDIN | 0.4521 | -0.018 | No Trend | 0.2019 | 0.006 | No Trend | 0.1309 | Same | 0.4014 | No Trend | |
| PMKTF | Winter | STP | 0.6569 | 0.002 | No Trend | 0.1212 | 0.002 | No Trend | 0.2561 | Same | 0.1048 | No Trend | |
| PMKTF | Winter | BTP | 0.2831 | 0.002 | No Trend | 0.5280 | 0.001 | No Trend | 1.0000 | Same | 0.2673 | No Trend | |
| PMKTF | Winter | SPO4F | 0.4047 | 0.000 | High BDLs | 0.0557 | -0.001 | No Trend | 0.1098 | Same | 0.0354 | No Trend | |
| PMKTF | Winter | BPO4F | 0.3827 | 0.000 | High BDLs | 0.0167 | -0.001 | No Trend | 0.0343 | Same | 0.0103 | No Trend | |
| PMKOH | Winter | STN | 0.2518 | -0.027 | No Trend | 0.1189 | 0.014 | No Trend | 0.0476 | Same | 0.5091 | No Trend | |
| PMKOH | Winter | BTN | 0.8604 | -0.010 | No Trend | 0.6314 | 0.015 | No Trend | 0.5703 | Same | 0.7334 | No Trend | |
| PMKOH | Winter | SDIN | 0.0684 | -0.015 | No Trend | 0.7855 | 0.004 | No Trend | 0.2367 | Same | 0.4777 | No Trend | |
| PMKOH | Winter | BDIN | 0.3865 | -0.010 | No Trend | 0.7032 | 0.004 | No Trend | 0.4997 | Same | 0.9586 | No Trend | |
| PMKOH | Winter | STP | 1.0000 | 0.000 | No Trend | 0.4225 | 0.002 | No Trend | 0.5207 | Same | 0.4586 | No Trend | |
| PMKOH | Winter | BTP | 0.5919 | 0.004 | No Trend | 0.8187 | 0.002 | No Trend | 0.9580 | Same | 0.6354 | No Trend | |
| PMKOH | Winter | SPO4F | 0.7656 | 0.000 | High BDLs | 0.2062 | -0.001 | No Trend | 0.3023 | Same | 0.1800 | No Trend | |
| PMKOH | Winter | BPO4F | 1.0000 | 0.000 | High BDLs | 0.1120 | -0.001 | No Trend | 0.1294 | Same | 0.1294 | No Trend | |
| MPNTF | Winter | STN | 0.5983 | -0.024 | No Trend | 0.0156 | 0.017 | No Trend | 0.0151 | Same | 0.0625 | No Trend | |
| MPNTF | Winter | BTN | 1.0000 | 0.004 | No Trend | 0.0302 | 0.012 | No Trend | 0.0465 | Same | 0.0465 | No Trend | |
| MPNTF | Winter | SDIN | 0.3359 | -0.012 | No Trend | 0.0310 | 0.014 | No Trend | 0.0164 | Same | 0.1415 | No Trend | |
| MPNTF | Winter | BDIN | 1.0000 | -0.001 | No Trend | 0.0180 | 0.017 | No Trend | 0.0254 | Same | 0.0319 | No Trend | |
| MPNTF | Winter | STP | 0.1228 | 0.003 | No Trend | 0.6976 | 0.000 | No Trend | 0.2924 | Same | 0.7256 | No Trend | |
| MPNTF | Winter | BTP | 0.0998 | 0.005 | No Trend | 0.8855 | 0.000 | No Trend | 0.3663 | Same | 0.5187 | No Trend | |
| MPNTF | Winter | SPO4F | 0.2433 | 0.000 | High BDLs | 0.0004 | -0.001 | Improving | 0.0021 | Different | 0.0002 | Improving 95 | |
| MPNTF | Winter | BPO4F | 0.7423 | 0.000 | High BDLs | 0.0013 | -0.001 | Improving | 0.0032 | Different | 0.0012 | Improving 95 | |
| MPNOH | Winter | STN | 1.0000 | 0.000 | No Trend | 0.4092 | 0.007 | No Trend | 0.4697 | Same | 0.4697 | No Trend | |
| MPNOH | Winter | BTN | 1.0000 | -0.002 | No Trend | 0.1983 | 0.013 | No Trend | 0.2117 | Same | 0.2489 | No Trend | |
| MPNOH | Winter | SDIN | 0.3271 | -0.012 | No Trend | 0.1447 | 0.010 | No Trend | 0.0742 | Same | 0.4170 | No Trend | |
| MPNOH | Winter | BDIN | 1.0000 | 0.000 | No Trend | 0.1900 | 0.011 | No Trend | 0.2340 | Same | 0.2000 | No Trend | |
| MPNOH | Winter | STP | 0.3284 | -0.004 | No Trend | 0.5844 | -0.001 | No Trend | 1.0000 | Same | 0.3304 | No Trend | |
| MPNOH | Winter | BTP | 0.1948 | 0.008 | No Trend | 0.3817 | 0.003 | No Trend | 0.8526 | Same | 0.1634 | No Trend | |
| MPNOH | Winter | SPO4F | 0.7656 | 0.000 | High BDLs | 0.7458 | 0.000 | No Trend | 0.8596 | Same | 0.6583 | No Trend | |
| MPNOH | Winter | BPO4F | 0.5959 | 0.000 | High BDLs | 0.5237 | 0.000 | No Trend | 0.6706 | Same | 0.4217 | No Trend | |
| YRKMH | Winter | STN | 0.5403 | -0.014 | No Trend | 0.8703 | 0.000 | No Trend | 0.6112 | Same | 0.8173 | No Trend | |
| YRKMH | Winter | BTN | 0.2330 | 0.045 | No Trend | 0.7032 | 0.005 | No Trend | 0.9186 | Same | 0.4134 | No Trend | |
| YRKMH | Winter | SDIN | 0.4275 | -0.006 | No Trend | 0.8773 | 0.000 | No Trend | 0.7557 | Same | 0.5634 | No Trend | |
| YRKMH | Winter | BDIN | 1.0000 | 0.000 | High BDLs | 0.7970 | -0.001 | No Trend | 0.8074 | Same | 0.8074 | No Trend | |
| YRKMH | Winter | STP | 0.0509 | 0.005 | No Trend | 0.8773 | 0.000 | No Trend | 0.2471 | Same | 0.3733 | No Trend | |
| YRKMH | Winter | BTP | 0.0545 | 0.008 | No Trend | 0.2366 | 0.003 | No Trend | 0.8529 | Same | 0.0515 | No Trend | |
| YRKMH | Winter | SPO4F | 0.3498 | 0.000 | High BDLs | 0.9223 | 0.000 | No Trend | 0.7240 | Same | 0.5964 | No Trend | |
| YRKMH | Winter | BPO4F | 0.1223 | 0.000 | High BDLs | 0.8839 | 0.000 | No Trend | 0.4904 | Same | 0.6790 | No Trend | |
| YRKPH | Winter | STN | 0.2853 | -0.010 | No Trend | 0.3549 | 0.005 | No Trend | 0.1686 | Same | 0.8124 | No Trend | |
| YRKPH | Winter | BTN | 0.8964 | -0.005 | No Trend | 0.6243 | -0.002 | No Trend | 0.7252 | Same | 0.5807 | No Trend | |
| YRKPH | Winter | SDIN | 1.0000 | 0.000 | High BDLs | 0.3028 | -0.001 | No Trend | 0.3158 | Same | 0.3641 | No Trend | |
| YRKPH | Winter | BDIN | 0.2673 | 0.000 | High BDLs | 0.5013 | 0.000 | No Trend | 0.3600 | Same | 0.6841 | No Trend | |
| YRKPH | Winter | STP | 0.0621 | 0.002 | No Trend | 0.3817 | 0.000 | No Trend | 0.8238 | Same | 0.0825 | No Trend | |
| YRKPH | Winter | BTP | 0.0080 | 0.003 | Degrading | 0.4143 | -0.001 | No Trend | 0.0407 | Same | 0.5360 | No Trend | |
| YRKPH | Winter | SPO4F | 0.0205 | 0.000 | High BDLs | 0.7320 | 0.000 | No Trend | 0.2659 | Same | 0.6430 | No Trend | |
| YRKPH | Winter | BPO4F | 0.0573 | 0.000 | High BDLs | 0.7701 | 0.000 | No Trend | 0.4224 | Same | 0.8135 | No Trend | |

Appendix A - Section IC. York River (1985-2008) - Continued.

| Segment | Season | Parameter | '93 | | '93 | | '08 | | '08 | | Trend | | Combined | Combined |
|---------|---------|-----------|---------|--------|-----------|---------|--------|-----------|------------|------------|------------|-----------|----------|----------|
| | | | Trend | '93 | Trend | Trend | '08 | Trend | Comparison | Trend | Comparison | P value | Trend | Trend |
| | | | P value | Slope | Direction | P value | Slope | Direction | P value | Comparison | P value | Direction | | |
| MOBPH | Annual | STN | 0.4510 | 0.010 | No Trend | 0.0000 | -0.004 | Improving | 0.0000 | Different | 0.0000 | Improving | 88 | |
| MOBPH | Annual | BTN | 0.6511 | -0.006 | No Trend | 0.0000 | -0.004 | Improving | 0.0000 | Different | 0.0000 | Improving | 88 | |
| MOBPH | Annual | SDIN | 0.8759 | 0.000 | No Trend | 0.4074 | 0.000 | High BDLs | 0.4185 | Same | 0.3981 | No Trend | | |
| MOBPH | Annual | BDIN | 0.0973 | -0.008 | No Trend | 0.3231 | 0.000 | High BDLs | 0.3796 | Same | 0.2740 | No Trend | | |
| MOBPH | Annual | STP | 0.0896 | 0.003 | No Trend | 0.0000 | 0.000 | Improving | 0.0000 | Different | 0.0000 | Improving | 88 | |
| MOBPH | Annual | BTP | 0.4510 | 0.001 | No Trend | 0.0000 | 0.000 | Improving | 0.0000 | Different | 0.0001 | Improving | 88 | |
| MOBPH | Annual | SPO4F | 0.0694 | 0.000 | High BDLs | 0.1034 | 0.000 | High BDLs | 0.0730 | Same | 0.1463 | No Trend | | |
| MOBPH | Annual | BPO4F | 0.1595 | 0.000 | High BDLs | 0.0524 | 0.000 | High BDLs | 0.0401 | Same | 0.0694 | No Trend | | |
| MOBPH | Fall | STN | 1.0000 | 0.005 | No Trend | 0.0587 | -0.003 | No Trend | 0.0568 | Same | 0.0615 | No Trend | | |
| MOBPH | Fall | BTN | 0.0159 | -0.041 | Improving | 0.0168 | -0.003 | No Trend | 0.0260 | Same | 0.0109 | No Trend | | |
| MOBPH | Fall | SDIN | 1.0000 | 0.000 | No Trend | 0.4741 | 0.000 | High BDLs | 0.4638 | Same | 0.4859 | No Trend | | |
| MOBPH | Fall | BDIN | 0.0704 | -0.013 | No Trend | 0.6043 | 0.000 | High BDLs | 0.6947 | Same | 0.5207 | No Trend | | |
| MOBPH | Fall | STP | 0.5050 | 0.002 | No Trend | 0.0002 | 0.000 | Improving | 0.0001 | Different | 0.0002 | Improving | 88 | |
| MOBPH | Fall | BTP | 1.0000 | 0.000 | No Trend | 0.0087 | 0.000 | Improving | 0.0093 | Different | 0.0084 | Improving | 88 | |
| MOBPH | Fall | SPO4F | 0.1939 | 0.000 | High BDLs | 0.0491 | 0.000 | High BDLs | 0.0613 | Same | 0.0395 | No Trend | | |
| MOBPH | Fall | BPO4F | 0.1939 | 0.000 | High BDLs | 0.1183 | 0.000 | High BDLs | 0.1417 | Same | 0.0989 | No Trend | | |
| MOBPH | SAV1 | STN | 1.0000 | -0.014 | No Trend | 0.0007 | -0.003 | Improving | 0.0008 | Different | 0.0007 | Improving | 88 | |
| MOBPH | SAV1 | BTN | 0.4298 | -0.011 | No Trend | 0.0000 | -0.004 | Improving | 0.0000 | Different | 0.0000 | Improving | 88 | |
| MOBPH | SAV1 | SDIN | 0.2076 | -0.002 | No Trend | 0.7052 | 0.000 | High BDLs | 0.6470 | Same | 0.7660 | No Trend | | |
| MOBPH | SAV1 | BDIN | 0.2363 | -0.007 | No Trend | 0.7232 | 0.000 | High BDLs | 0.7843 | Same | 0.6647 | No Trend | | |
| MOBPH | SAV1 | STP | 0.1072 | 0.004 | No Trend | 0.0092 | 0.000 | Improving | 0.0069 | Different | 0.0125 | Improving | 88 | |
| MOBPH | SAV1 | BTP | 0.4298 | 0.004 | No Trend | 0.0238 | 0.000 | No Trend | 0.0207 | Same | 0.0278 | No Trend | | |
| MOBPH | SAV1 | SPO4F | 0.1761 | 0.000 | High BDLs | 0.6663 | 0.000 | High BDLs | 0.5788 | Same | 0.7608 | No Trend | | |
| MOBPH | SAV1 | BPO4F | 0.3902 | 0.000 | High BDLs | 0.4583 | 0.000 | High BDLs | 0.4149 | Same | 0.5065 | No Trend | | |
| MOBPH | SAV2 | STN | 1.0000 | -0.001 | No Trend | 0.0000 | -0.005 | Improving | 0.0000 | Different | 0.0000 | Improving | 88 | |
| MOBPH | SAV2 | BTN | 0.8312 | 0.011 | No Trend | 0.0000 | -0.005 | Improving | 0.0000 | Different | 0.0000 | Improving | 88 | |
| MOBPH | SAV2 | SDIN | 1.0000 | 0.000 | No Trend | 0.2158 | 0.000 | High BDLs | 0.2212 | Same | 0.2119 | No Trend | | |
| MOBPH | SAV2 | BDIN | 1.0000 | 0.000 | No Trend | 0.1409 | 0.000 | No Trend | 0.1416 | Same | 0.1416 | No Trend | | |
| MOBPH | SAV2 | STP | 0.1356 | 0.002 | No Trend | 0.0002 | 0.000 | Improving | 0.0001 | Different | 0.0003 | Improving | 88 | |
| MOBPH | SAV2 | BTP | 0.2864 | 0.002 | No Trend | 0.0043 | 0.000 | Improving | 0.0034 | Different | 0.0055 | Improving | 88 | |
| MOBPH | SAV2 | SPO4F | 1.0000 | 0.000 | High BDLs | 0.2039 | 0.000 | High BDLs | 0.2051 | Same | 0.2051 | No Trend | | |
| MOBPH | SAV2 | BPO4F | 1.0000 | 0.000 | High BDLs | 0.2913 | 0.000 | High BDLs | 0.2927 | Same | 0.2927 | No Trend | | |
| MOBPH | Spring1 | STN | 0.0704 | 0.040 | No Trend | 0.0138 | -0.004 | No Trend | 0.0098 | Different | 0.0197 | No Trend* | | |
| MOBPH | Spring1 | BTN | 0.0159 | 0.056 | Degrading | 0.0194 | -0.005 | No Trend | 0.0127 | Same | 0.0298 | No Trend | | |
| MOBPH | Spring1 | SDIN | 0.7518 | -0.005 | No Trend | 0.4620 | 0.000 | High BDLs | 0.4848 | Same | 0.4411 | No Trend | | |
| MOBPH | Spring1 | BDIN | 1.0000 | -0.007 | No Trend | 0.2837 | 0.000 | High BDLs | 0.2927 | Same | 0.2766 | No Trend | | |
| MOBPH | Spring1 | STP | 0.0704 | 0.004 | No Trend | 0.0125 | 0.000 | No Trend | 0.0089 | Different | 0.0179 | No Trend* | | |
| MOBPH | Spring1 | BTP | 0.2278 | 0.005 | No Trend | 0.2118 | 0.000 | No Trend | 0.1817 | Same | 0.2471 | No Trend | | |
| MOBPH | Spring1 | SPO4F | 0.0771 | 0.000 | High BDLs | 0.1349 | 0.000 | High BDLs | 0.0676 | Same | 0.2626 | No Trend | | |
| MOBPH | Spring1 | BPO4F | 0.0771 | 0.000 | High BDLs | 0.3218 | 0.000 | High BDLs | 0.1478 | Same | 0.6295 | No Trend | | |
| MOBPH | Spring2 | STN | 0.0704 | 0.048 | No Trend | 0.0147 | -0.004 | No Trend | 0.0105 | Same | 0.0206 | No Trend | | |
| MOBPH | Spring2 | BTN | 0.2278 | 0.056 | No Trend | 0.0177 | -0.004 | No Trend | 0.0141 | Same | 0.0226 | No Trend | | |
| MOBPH | Spring2 | SDIN | 0.5050 | -0.001 | No Trend | 0.8196 | 0.000 | High BDLs | 0.8610 | Same | 0.7793 | No Trend | | |
| MOBPH | Spring2 | BDIN | 0.2278 | -0.007 | No Trend | 0.7008 | 0.000 | High BDLs | 0.7670 | Same | 0.6379 | No Trend | | |
| MOBPH | Spring2 | STP | 0.0704 | 0.004 | No Trend | 0.0875 | 0.000 | No Trend | 0.0676 | Same | 0.1132 | No Trend | | |
| MOBPH | Spring2 | BTP | 0.2278 | 0.005 | No Trend | 0.3645 | 0.000 | No Trend | 0.3210 | Same | 0.4132 | No Trend | | |
| MOBPH | Spring2 | SPO4F | 0.0771 | 0.000 | High BDLs | 0.0758 | 0.000 | High BDLs | 0.0439 | Same | 0.1307 | No Trend | | |
| MOBPH | Spring2 | BPO4F | 0.0771 | 0.000 | High BDLs | 0.1592 | 0.000 | High BDLs | 0.1026 | Same | 0.2436 | No Trend | | |

Appendix A - Section IC. York River (1985-2008) - Continued.

| Segment | Season | Parameter | '93 | | '93 | | '08 | | '08 | | Trend | | Combined | | Combined | |
|---------|---------|-----------|--------|--------|-----------|--------|--------|-----------|--------|------------|---------|--------------|----------|---------|----------|-----------|
| | | | Trend | '93 | Trend | Trend | '08 | Slope | Trend | Comparison | P value | Comparison | Trend | P value | Trend | Direction |
| MOBPH | Summer1 | STN | 0.4334 | -0.022 | No Trend | 0.0066 | -0.003 | Improving | 0.0080 | Different | 0.0055 | Improving 88 | | | | |
| MOBPH | Summer1 | BTN | 0.0676 | -0.023 | No Trend | 0.0005 | -0.004 | Improving | 0.0009 | Different | 0.0004 | Improving 88 | | | | |
| MOBPH | Summer1 | SDIN | 0.2793 | -0.002 | No Trend | 0.4485 | 0.000 | High BDLs | 0.4052 | Same | 0.4958 | No Trend | | | | |
| MOBPH | Summer1 | BDIN | 0.7940 | -0.005 | No Trend | 0.7169 | 0.000 | No Trend | 0.6950 | Same | 0.7400 | No Trend | | | | |
| MOBPH | Summer1 | STP | 0.7940 | 0.002 | No Trend | 0.0551 | 0.000 | No Trend | 0.0517 | Same | 0.0594 | No Trend | | | | |
| MOBPH | Summer1 | BTP | 0.7940 | 0.002 | No Trend | 0.0235 | 0.000 | No Trend | 0.0219 | Same | 0.0256 | No Trend | | | | |
| MOBPH | Summer1 | SPO4F | 0.2416 | 0.000 | High BDLs | 0.9297 | 0.000 | High BDLs | 0.9825 | Same | 0.8431 | No Trend | | | | |
| MOBPH | Summer1 | BPO4F | 0.5885 | 0.000 | High BDLs | 0.5030 | 0.000 | High BDLs | 0.4716 | Same | 0.5372 | No Trend | | | | |
| MOBPH | Summer2 | STN | 0.2278 | -0.038 | No Trend | 0.0133 | -0.003 | No Trend | 0.0171 | Same | 0.0105 | No Trend | | | | |
| MOBPH | Summer2 | BTN | 0.0704 | -0.026 | No Trend | 0.0013 | -0.005 | Improving | 0.0021 | Different | 0.0009 | Improving 88 | | | | |
| MOBPH | Summer2 | SDIN | 0.5465 | -0.002 | No Trend | 0.5170 | 0.000 | High BDLs | 0.4844 | Same | 0.5523 | No Trend | | | | |
| MOBPH | Summer2 | BDIN | 1.0000 | 0.002 | No Trend | 0.9305 | 0.000 | No Trend | 0.9445 | Same | 0.9168 | No Trend | | | | |
| MOBPH | Summer2 | STP | 1.0000 | 0.003 | No Trend | 0.0975 | 0.000 | No Trend | 0.0945 | Same | 0.1016 | No Trend | | | | |
| MOBPH | Summer2 | BTP | 1.0000 | 0.001 | No Trend | 0.0396 | 0.000 | No Trend | 0.0383 | Same | 0.0416 | No Trend | | | | |
| MOBPH | Summer2 | SPO4F | 0.5050 | 0.000 | High BDLs | 0.6182 | 0.000 | High BDLs | 0.6700 | Same | 0.5700 | No Trend | | | | |
| MOBPH | Summer2 | BPO4F | 1.0000 | 0.001 | High BDLs | 0.7800 | 0.000 | High BDLs | 0.7661 | Same | 0.7947 | No Trend | | | | |
| MOBPH | Winter | STN | 0.7119 | | No Trend | 0.0083 | -0.006 | Improving | 0.0073 | Different | 0.0097 | Improving 88 | | | | |
| MOBPH | Winter | BTN | 0.2679 | | No Trend | 0.0223 | -0.006 | No Trend | 0.0176 | Same | 0.0289 | No Trend | | | | |
| MOBPH | Winter | SDIN | 0.2679 | | No Trend | 0.1452 | -0.001 | High BDLs | 0.1214 | Same | 0.1744 | No Trend | | | | |
| MOBPH | Winter | BDIN | 0.7119 | | No Trend | 0.2820 | 0.000 | High BDLs | 0.3050 | Same | 0.2622 | No Trend | | | | |
| MOBPH | Winter | STP | 1.0000 | | No Trend | 0.0197 | 0.000 | No Trend | 0.0199 | Same | 0.0199 | No Trend | | | | |
| MOBPH | Winter | BTP | 1.0000 | | No Trend | 0.0286 | 0.000 | No Trend | 0.0289 | Same | 0.0289 | No Trend | | | | |
| MOBPH | Winter | SPO4F | 0.1939 | | High BDLs | | 0.000 | High BDLs | 0.0833 | Same | 0.0833 | No Trend | | | | |
| MOBPH | Winter | BPO4F | 0.1939 | | High BDLs | 0.0896 | 0.000 | High BDLs | 0.0538 | Same | 0.1524 | No Trend | | | | |

Appendix A - Section ID. Blocked seasonal Kendall Long-term trends in water quality for the Rappahannock River (1985-2008). Parameters are as follows: STN=Surface total nitrogen, BTN=Bottom total nitrogen, SDIN=Surface dissolved inorganic nitrogen, BDIN=Bottom dissolved inorganic nitrogen, STP=Surface total phosphorus, BTP=Bottom total phosphorus, SPO4F=Surface dissolved inorganic phosphorus, BPO4F=Bottom dissolved inorganic phosphorus.

| Segment | Season | Parameter | '93 | | '93 | Trend | '08 | | '08 | Trend | Comparison | Trend | Comparison | Trend | Comparison |
|---------|--------|-----------|---------|--------|-----------|---------|--------|-----------|---------|------------|------------|--------------|------------|-----------|------------|
| | | | P value | Slope | Direction | P value | Slope | Direction | P value | Comparison | P value | Direction | P value | Direction | P value |
| RPPTF | Annual | STN | 0.3813 | -0.009 | No Trend | 0.5567 | -0.002 | No Trend | 0.9193 | Same | 0.3468 | No Trend | | | |
| RPPTF | Annual | BTN | 0.0187 | -0.022 | No Trend | 0.2463 | -0.005 | No Trend | 0.9652 | Same | 0.0347 | No Trend | | | |
| RPPTF | Annual | SDIN | 0.1163 | 0.010 | No Trend | 0.5204 | 0.002 | No Trend | 0.8750 | Same | 0.1930 | No Trend | | | |
| RPPTF | Annual | BDIN | 0.0522 | 0.009 | No Trend | 0.5737 | 0.001 | No Trend | 0.7082 | Same | 0.1670 | No Trend | | | |
| RPPTF | Annual | STP | 0.0808 | 0.001 | No Trend | 0.1181 | -0.001 | No Trend | 0.0276 | Same | 0.5642 | No Trend | | | |
| RPPTF | Annual | BTP | 0.3526 | 0.001 | No Trend | 0.1347 | -0.001 | No Trend | 0.0766 | Same | 0.3760 | No Trend | | | |
| RPPTF | Annual | SPO4F | 0.6364 | 0.000 | High BDLs | 0.0000 | 0.000 | Improving | 0.0001 | Different | 0.0003 | Improving 95 | | | |
| RPPTF | Annual | BPO4F | 0.7403 | 0.000 | High BDLs | 0.0001 | 0.000 | Improving | 0.0004 | Different | 0.0001 | Improving 95 | | | |
| RPPMH | Annual | STN | 0.0235 | 0.010 | No Trend | 0.4481 | 0.001 | No Trend | 0.7046 | Same | 0.0841 | No Trend | | | |
| RPPMH | Annual | BTN | 0.0009 | 0.015 | Degrading | 0.9119 | 0.000 | No Trend | 0.1453 | Same | 0.0985 | No Trend | | | |
| RPPMH | Annual | SDIN | 0.2642 | 0.000 | High BDLs | 0.5157 | 0.000 | No Trend | 0.3024 | Same | 0.8597 | No Trend | | | |
| RPPMH | Annual | BDIN | 0.8889 | 0.000 | High BDLs | 0.9496 | 0.000 | No Trend | 0.8969 | Same | 0.9885 | No Trend | | | |
| RPPMH | Annual | STP | 0.0000 | 0.002 | Degrading | 0.5800 | 0.000 | No Trend | 0.0068 | Different | 0.0853 | Degrading 85 | | | |
| RPPMH | Annual | BTP | 0.0045 | 0.001 | Degrading | 0.1549 | 0.000 | No Trend | 0.0100 | Same | 0.9663 | No Trend | | | |
| RPPMH | Annual | SPO4F | 0.8505 | 0.000 | High BDLs | 0.8723 | 0.000 | No Trend | 0.9256 | Same | 0.8274 | No Trend | | | |
| RPPMH | Annual | BPO4F | 0.1772 | 0.000 | High BDLs | 0.5331 | 0.000 | No Trend | 0.8296 | Same | 0.3251 | No Trend | | | |
| RPPOH | Annual | STN | 0.2225 | 0.013 | No Trend | 0.0756 | 0.007 | No Trend | 0.3453 | Same | 0.0307 | No Trend | | | |
| RPPOH | Annual | BTN | 0.0064 | 0.028 | Degrading | 0.0647 | 0.008 | No Trend | 0.7570 | Same | 0.0033 | Degrading | | | |
| RPPOH | Annual | SDIN | 0.1444 | 0.000 | High BDLs | 0.7815 | 0.000 | No Trend | 0.6655 | Same | 0.3543 | No Trend | | | |
| RPPOH | Annual | BDIN | 0.0831 | 0.000 | High BDLs | 0.4958 | 0.000 | No Trend | 0.8632 | Same | 0.1634 | No Trend | | | |
| RPPOH | Annual | STP | 0.0001 | 0.005 | Degrading | 0.6246 | 0.000 | No Trend | 0.0179 | Same | 0.1306 | No Trend | | | |
| RPPOH | Annual | BTP | 0.0000 | 0.007 | Degrading | 0.4147 | 0.001 | No Trend | 0.1146 | Same | 0.0027 | Degrading | | | |
| RPPOH | Annual | SPO4F | 0.4892 | 0.000 | High BDLs | 0.0002 | 0.000 | Improving | 0.0011 | Different | 0.0002 | Improving 95 | | | |
| RPPOH | Annual | BPO4F | 0.1177 | 0.000 | High BDLs | 0.0000 | 0.000 | Improving | 0.0008 | Different | 0.0000 | Improving 95 | | | |
| CRRMH | Annual | STN | 0.0776 | 0.012 | No Trend | 0.1296 | 0.003 | No Trend | 0.5729 | Same | 0.0311 | No Trend | | | |
| CRRMH | Annual | BTN | 0.0109 | 0.020 | No Trend | 0.4568 | -0.002 | No Trend | 0.0800 | Same | 0.6919 | No Trend | | | |
| CRRMH | Annual | SDIN | 0.1393 | 0.000 | High BDLs | 0.0039 | 0.000 | Improving | 0.0013 | Different | 0.0215 | Improving 95 | | | |
| CRRMH | Annual | BDIN | 0.1661 | 0.000 | High BDLs | 0.2428 | 0.000 | No Trend | 0.1145 | Same | 0.5303 | No Trend | | | |
| CRRMH | Annual | STP | 0.0000 | 0.001 | Degrading | 0.9247 | 0.000 | No Trend | 0.0183 | Same | 0.0281 | No Trend | | | |
| CRRMH | Annual | BTP | 0.0000 | 0.002 | Degrading | 0.0045 | -0.001 | Improving | 0.0000 | Different | 0.6734 | D85-I95 | | | |
| CRRMH | Annual | SPO4F | 0.6865 | 0.000 | High BDLs | 0.7187 | 0.000 | No Trend | 0.6352 | Same | 0.8267 | No Trend | | | |
| CRRMH | Annual | BPO4F | 0.2846 | 0.000 | High BDLs | 0.4936 | 0.000 | No Trend | 0.7651 | Same | 0.3164 | No Trend | | | |
| RPPTF | Fall | STN | 0.0913 | -0.030 | No Trend | 0.5896 | 0.004 | No Trend | 0.1855 | Same | 0.7021 | No Trend | | | |
| RPPTF | Fall | BTN | 0.0536 | -0.034 | No Trend | 0.5002 | 0.005 | No Trend | 0.1189 | Same | 0.7021 | No Trend | | | |
| RPPTF | Fall | SDIN | 0.7165 | -0.003 | No Trend | 0.5563 | 0.004 | No Trend | 0.4721 | Same | 0.7517 | No Trend | | | |
| RPPTF | Fall | BDIN | 0.6718 | -0.004 | No Trend | 0.4721 | 0.005 | No Trend | 0.3882 | Same | 0.6872 | No Trend | | | |
| RPPTF | Fall | STP | 0.0813 | 0.003 | No Trend | 0.7094 | 0.000 | No Trend | 0.2339 | Same | 0.5922 | No Trend | | | |
| RPPTF | Fall | BTP | 1.0000 | 0.000 | No Trend | 0.3425 | 0.001 | No Trend | 0.4236 | Same | 0.3900 | No Trend | | | |
| RPPTF | Fall | SPO4F | 0.7362 | 0.000 | High BDLs | 0.3252 | 0.000 | No Trend | 0.2849 | Same | 0.4449 | No Trend | | | |
| RPPTF | Fall | BPO4F | 0.7362 | 0.000 | High BDLs | 0.3760 | 0.000 | No Trend | 0.3282 | Same | 0.5015 | No Trend | | | |
| RPPMH | Fall | STN | 0.4671 | -0.005 | No Trend | 0.0821 | 0.006 | No Trend | 0.0567 | Same | 0.2392 | No Trend | | | |
| RPPMH | Fall | BTN | 0.9516 | 0.000 | No Trend | 0.2422 | 0.004 | No Trend | 0.3265 | Same | 0.2742 | No Trend | | | |
| RPPMH | Fall | SDIN | 0.0228 | 0.000 | High BDLs | 0.5064 | 0.000 | No Trend | 0.1289 | Same | 0.7703 | No Trend | | | |
| RPPMH | Fall | BDIN | 0.1223 | 0.000 | High BDLs | 0.3116 | 0.001 | No Trend | 0.1128 | Same | 0.7952 | No Trend | | | |
| RPPMH | Fall | STP | 0.0074 | 0.002 | Degrading | 0.9496 | 0.000 | No Trend | 0.2364 | Same | 0.1947 | No Trend | | | |
| RPPMH | Fall | BTP | 0.1379 | 0.001 | No Trend | 0.6812 | 0.000 | No Trend | 0.2849 | Same | 0.7356 | No Trend | | | |

| | | | | | | | | | | | | |
|-------|------|-------|--------|-------|-----------|--------|-------|----------|--------|------|--------|----------|
| RPPMH | Fall | SPO4F | 0.7642 | 0.000 | High BDLs | 0.4985 | 0.000 | No Trend | 0.4431 | Same | 0.6020 | No Trend |
| RPPMH | Fall | BPO4F | 0.2384 | 0.000 | High BDLs | 0.5225 | 0.000 | No Trend | 0.2954 | Same | 0.8812 | No Trend |

Appendix A - Section ID. Rappahannock River (1985-2008) - Continued.

| Segment | Season | Parameter | '93 | | '93 | | '08 | | '08 | | Trend | | Combined | |
|---------|--------|-----------|---------|--------|-----------|---------|--------|-----------|---------|------------|------------|--------------|----------|------------|
| | | | Trend | '93 | Trend | '93 | Trend | '08 | Trend | '08 | Comparison | Trend | Trend | Comparison |
| | | | P value | Slope | Direction | P value | Slope | Direction | P value | Comparison | P value | Comparison | P value | Direction |
| RPOH | Fall | STN | 0.9040 | 0.005 | No Trend | 0.8397 | 0.002 | No Trend | 0.9297 | Same | 0.7911 | No Trend | | |
| RPOH | Fall | BTN | 0.1324 | 0.024 | No Trend | 0.5515 | 0.009 | No Trend | 0.7853 | Same | 0.1930 | No Trend | | |
| RPOH | Fall | SDIN | 0.4300 | -0.002 | High BDLs | 0.6464 | -0.001 | No Trend | 1.0000 | Same | 0.4194 | No Trend | | |
| RPOH | Fall | BDIN | 0.3251 | -0.006 | High BDLs | 0.5417 | -0.003 | No Trend | 0.9763 | Same | 0.2987 | No Trend | | |
| RPOH | Fall | STP | 0.0212 | 0.006 | No Trend | 0.7090 | -0.001 | No Trend | 0.1388 | Same | 0.4071 | No Trend | | |
| RPOH | Fall | BTP | 0.0338 | 0.007 | No Trend | 0.2925 | 0.001 | No Trend | 0.8274 | Same | 0.0429 | No Trend | | |
| RPOH | Fall | SPO4F | 0.5367 | 0.000 | High BDLs | 0.1863 | 0.000 | No Trend | 0.2992 | Same | 0.1392 | No Trend | | |
| RPOH | Fall | BPO4F | 0.2874 | 0.000 | High BDLs | 0.1091 | 0.000 | No Trend | 0.2990 | Same | 0.0549 | No Trend | | |
| CRRMH | Fall | STN | 0.8666 | 0.000 | No Trend | 0.8312 | 0.001 | No Trend | 0.9394 | Same | 0.7610 | No Trend | | |
| CRRMH | Fall | BTN | 0.6552 | 0.014 | No Trend | 0.9017 | 0.000 | No Trend | 0.9107 | Same | 0.7366 | No Trend | | |
| CRRMH | Fall | SDIN | 1.0000 | 0.000 | High BDLs | 0.0347 | 0.000 | No Trend | 0.0615 | Same | 0.0493 | No Trend | | |
| CRRMH | Fall | BDIN | 0.2534 | 0.000 | High BDLs | 0.8628 | 0.000 | No Trend | 0.7773 | Same | 0.5445 | No Trend | | |
| CRRMH | Fall | STP | 0.0042 | 0.001 | Degrading | 0.1535 | 0.000 | No Trend | 0.0049 | Different | 0.6566 | Degrading 85 | | |
| CRRMH | Fall | BTP | 0.0075 | 0.002 | Degrading | 0.3441 | 0.000 | No Trend | 0.0281 | Same | 0.5766 | No Trend | | |
| CRRMH | Fall | SPO4F | 0.7473 | 0.000 | High BDLs | 0.1348 | 0.000 | No Trend | 0.2184 | Same | 0.1215 | No Trend | | |
| CRRMH | Fall | BPO4F | 1.0000 | 0.000 | High BDLs | 0.0954 | 0.000 | No Trend | 0.1229 | Same | 0.1048 | No Trend | | |
| RPPTF | SAV1 | STN | 0.4778 | 0.009 | No Trend | 0.8199 | -0.001 | No Trend | 0.5825 | Same | 0.8834 | No Trend | | |
| RPPTF | SAV1 | BTN | 0.4778 | -0.010 | No Trend | 0.3734 | -0.005 | No Trend | 0.6600 | Same | 0.2558 | No Trend | | |
| RPPTF | SAV1 | SDIN | 0.0139 | 0.019 | No Trend | 0.8523 | 0.001 | No Trend | 0.3218 | Same | 0.1865 | No Trend | | |
| RPPTF | SAV1 | BDIN | 0.0078 | 0.020 | Degrading | 0.9670 | 0.000 | No Trend | 0.2256 | Same | 0.1987 | No Trend | | |
| RPPTF | SAV1 | STP | 0.0884 | 0.001 | No Trend | 0.0964 | -0.001 | No Trend | 0.0224 | Same | 0.5090 | No Trend | | |
| RPPTF | SAV1 | BTP | 0.0795 | 0.002 | No Trend | 0.1250 | -0.001 | No Trend | 0.0279 | Same | 0.6119 | No Trend | | |
| RPPTF | SAV1 | SPO4F | 0.2040 | 0.000 | High BDLs | 0.0334 | 0.000 | No Trend | 0.0137 | Same | 0.1352 | No Trend | | |
| RPPTF | SAV1 | BPO4F | 0.5681 | 0.000 | High BDLs | 0.0133 | 0.000 | No Trend | 0.0114 | Same | 0.0389 | No Trend | | |
| RPPMH | SAV1 | STN | 0.0025 | 0.018 | Degrading | 0.5212 | 0.002 | No Trend | 0.3986 | Same | 0.0475 | No Trend | | |
| RPPMH | SAV1 | BTN | 0.0000 | 0.026 | Degrading | 0.5623 | 0.001 | No Trend | 0.1526 | Same | 0.0140 | No Trend | | |
| RPPMH | SAV1 | SDIN | 0.9485 | 0.000 | High BDLs | 0.2704 | 0.000 | No Trend | 0.2763 | Same | 0.3127 | No Trend | | |
| RPPMH | SAV1 | BDIN | 0.6283 | 0.000 | High BDLs | 0.8360 | 0.000 | No Trend | 0.9848 | Same | 0.6894 | No Trend | | |
| RPPMH | SAV1 | STP | 0.0001 | 0.002 | Degrading | 0.4439 | 0.000 | No Trend | 0.0126 | Same | 0.2594 | No Trend | | |
| RPPMH | SAV1 | BTP | 0.0204 | 0.002 | No Trend | 0.0786 | -0.001 | No Trend | 0.0084 | Different | 0.6185 | No Trend* | | |
| RPPMH | SAV1 | SPO4F | 1.0000 | 0.000 | High BDLs | 0.8996 | 0.000 | No Trend | 0.9022 | Same | 0.9022 | No Trend | | |
| RPPMH | SAV1 | BPO4F | 0.1059 | 0.000 | High BDLs | 0.9167 | 0.000 | No Trend | 0.7316 | Same | 0.5859 | No Trend | | |
| RPOH | SAV1 | STN | 0.0264 | 0.027 | No Trend | 0.0315 | 0.008 | No Trend | 0.4092 | Same | 0.0030 | Degrading | | |
| RPOH | SAV1 | BTN | 0.0003 | 0.036 | Degrading | 0.0275 | 0.012 | No Trend | 0.8341 | Same | 0.0002 | Degrading | | |
| RPOH | SAV1 | SDIN | 1.0000 | 0.000 | No Trend | 0.7756 | 0.000 | No Trend | 0.7822 | Same | 0.8127 | No Trend | | |
| RPOH | SAV1 | BDIN | 0.6114 | 0.000 | No Trend | 0.4914 | 0.000 | No Trend | 0.7039 | Same | 0.3897 | No Trend | | |
| RPOH | SAV1 | STP | 0.0005 | 0.005 | Degrading | 0.8954 | 0.000 | No Trend | 0.1113 | Same | 0.0684 | No Trend | | |
| RPOH | SAV1 | BTP | 0.0001 | 0.007 | Degrading | 0.2818 | 0.001 | No Trend | 0.3193 | Same | 0.0041 | Degrading | | |
| RPOH | SAV1 | SPO4F | 0.8404 | 0.000 | High BDLs | 0.0076 | 0.000 | Improving | 0.0138 | Same | 0.0087 | Improving | | |
| RPOH | SAV1 | BPO4F | 0.6073 | 0.000 | High BDLs | 0.0061 | 0.000 | Improving | 0.0158 | Same | 0.0054 | Improving | | |
| CRRMH | SAV1 | STN | 0.1932 | 0.015 | No Trend | 0.0363 | 0.005 | No Trend | 0.1918 | Same | 0.0135 | No Trend | | |
| CRRMH | SAV1 | BTN | 0.0436 | 0.020 | No Trend | 0.6934 | -0.001 | No Trend | 0.2241 | Same | 0.6183 | No Trend | | |
| CRRMH | SAV1 | SDIN | 0.2606 | 0.000 | High BDLs | 0.0140 | 0.000 | No Trend | 0.0073 | Different | 0.0379 | No Trend* | | |
| CRRMH | SAV1 | BDIN | 0.5754 | 0.000 | High BDLs | 0.1163 | -0.001 | No Trend | 0.0909 | Same | 0.2028 | No Trend | | |
| CRRMH | SAV1 | STP | 0.0011 | 0.001 | Degrading | 0.4918 | 0.000 | No Trend | 0.3164 | Same | 0.0275 | No Trend | | |
| CRRMH | SAV1 | BTP | 0.0012 | 0.002 | Degrading | 0.0750 | -0.001 | No Trend | 0.0016 | Different | 0.9686 | Degrading 85 | | |
| CRRMH | SAV1 | SPO4F | 0.3893 | 0.000 | High BDLs | 0.2643 | 0.000 | No Trend | 0.1772 | Same | 0.4387 | No Trend | | |
| CRRMH | SAV1 | BPO4F | 0.6626 | 0.000 | High BDLs | 0.0691 | 0.000 | No Trend | 0.1243 | Same | 0.0603 | No Trend | | |

Appendix A - Section ID. Rappahannock River (1985-2008) - Continued.

| Segment | Season | Parameter | '93 | | '93 | | '08 | | '08 | | Trend | | Combined | |
|---------|---------|-----------|--------|--------|-----------|---------|--------|----------|---------|------------|--------|-----------|----------|-----------|
| | | | Trend | Slope | Trend | P value | Slope | Trend | P value | Comparison | Trend | P value | Trend | Direction |
| RPPTF | SAV2 | STN | 0.4318 | 0.007 | No Trend | 0.0701 | 0.004 | No Trend | 0.2172 | Same | 0.0466 | No Trend | | |
| RPPTF | SAV2 | BTN | 0.5699 | 0.005 | No Trend | 0.2360 | 0.004 | No Trend | 0.4375 | Same | 0.1823 | No Trend | | |
| RPPTF | SAV2 | SDIN | 0.7912 | 0.000 | No Trend | 0.1401 | 0.004 | No Trend | 0.1455 | Same | 0.2394 | No Trend | | |
| RPPTF | SAV2 | BDIN | 0.9648 | 0.000 | No Trend | 0.1657 | 0.003 | No Trend | 0.2314 | Same | 0.2018 | No Trend | | |
| RPPTF | SAV2 | STP | 0.0023 | 0.003 | Degrading | 0.7160 | 0.000 | No Trend | 0.2902 | Same | 0.0875 | No Trend | | |
| RPPTF | SAV2 | BTP | 0.0002 | 0.003 | Degrading | 0.8915 | 0.000 | No Trend | 0.0739 | Same | 0.1227 | No Trend | | |
| RPPTF | SAV2 | SPO4F | 0.7374 | 0.000 | High BDLs | 0.0718 | 0.000 | No Trend | 0.0693 | Same | 0.1275 | No Trend | | |
| RPPTF | SAV2 | BPO4F | 0.9148 | 0.000 | High BDLs | 0.1163 | 0.000 | No Trend | 0.1657 | Same | 0.1309 | No Trend | | |
| RPPMH | SAV2 | STN | 0.0409 | 0.012 | No Trend | 0.2274 | 0.003 | No Trend | 0.9212 | Same | 0.0415 | No Trend | | |
| RPPMH | SAV2 | BTN | 0.1055 | 0.013 | No Trend | 0.2637 | 0.003 | No Trend | 0.8276 | Same | 0.0781 | No Trend | | |
| RPPMH | SAV2 | SDIN | 0.1637 | 0.000 | High BDLs | 0.3832 | 0.001 | No Trend | 0.1552 | Same | 0.8886 | No Trend | | |
| RPPMH | SAV2 | BDIN | 0.6588 | 0.000 | High BDLs | 0.8581 | 0.000 | No Trend | 0.7047 | Same | 0.9523 | No Trend | | |
| RPPMH | SAV2 | STP | 0.0004 | 0.002 | Degrading | 0.3364 | 0.000 | No Trend | 0.4588 | Same | 0.0138 | No Trend | | |
| RPPMH | SAV2 | BTP | 0.0094 | 0.002 | Degrading | 0.4607 | 0.000 | No Trend | 0.5905 | Same | 0.0638 | No Trend | | |
| RPPMH | SAV2 | SPO4F | 0.6344 | 0.000 | High BDLs | 0.8743 | 0.000 | No Trend | 0.7477 | Same | 0.9829 | No Trend | | |
| RPPMH | SAV2 | BPO4F | 1.0000 | 0.000 | High BDLs | 0.8566 | 0.000 | No Trend | 0.8630 | Same | 0.8630 | No Trend | | |
| RPPOH | SAV2 | STN | 0.2680 | 0.010 | No Trend | 0.0134 | 0.007 | No Trend | 0.1141 | Same | 0.0066 | Degrading | | |
| RPPOH | SAV2 | BTN | 0.6092 | 0.004 | No Trend | 0.0371 | 0.005 | No Trend | 0.1241 | Same | 0.0370 | No Trend | | |
| RPPOH | SAV2 | SDIN | 0.0708 | -0.006 | High BDLs | 0.2076 | 0.003 | No Trend | 0.0449 | Same | 0.8493 | No Trend | | |
| RPPOH | SAV2 | BDIN | 0.0202 | -0.010 | High BDLs | 0.3323 | 0.003 | No Trend | 0.0449 | Same | 0.7514 | No Trend | | |
| RPPOH | SAV2 | STP | 0.0016 | 0.003 | Degrading | 0.3748 | 0.000 | No Trend | 0.4268 | Same | 0.0192 | No Trend | | |
| RPPOH | SAV2 | BTP | 0.0002 | 0.003 | Degrading | 0.7486 | 0.000 | No Trend | 0.1219 | Same | 0.0353 | No Trend | | |
| RPPOH | SAV2 | SPO4F | 0.3958 | 0.000 | High BDLs | 0.1876 | 0.000 | No Trend | 0.3944 | Same | 0.1167 | No Trend | | |
| RPPOH | SAV2 | BPO4F | 0.4388 | 0.000 | High BDLs | 0.1193 | 0.000 | No Trend | 0.2750 | Same | 0.0784 | No Trend | | |
| CRRMH | SAV2 | STN | 0.2488 | 0.010 | No Trend | 0.4002 | 0.002 | No Trend | 0.8225 | Same | 0.1988 | No Trend | | |
| CRRMH | SAV2 | BTN | 0.0879 | 0.013 | No Trend | 0.3754 | 0.002 | No Trend | 0.9837 | Same | 0.1165 | No Trend | | |
| CRRMH | SAV2 | SDIN | 0.3606 | 0.000 | High BDLs | 0.9418 | 0.000 | No Trend | 0.6545 | Same | 0.7541 | No Trend | | |
| CRRMH | SAV2 | BDIN | 0.7501 | 0.000 | High BDLs | 0.8854 | 0.000 | No Trend | 0.7760 | Same | 0.9825 | No Trend | | |
| CRRMH | SAV2 | STP | 0.0001 | 0.002 | Degrading | 0.9263 | 0.000 | No Trend | 0.0808 | Same | 0.0561 | No Trend | | |
| CRRMH | SAV2 | BTP | 0.0030 | 0.002 | Degrading | 0.4736 | 0.000 | No Trend | 0.0424 | Same | 0.4482 | No Trend | | |
| CRRMH | SAV2 | SPO4F | 0.6344 | 0.000 | High BDLs | 0.9439 | 0.000 | No Trend | 0.9117 | Same | 0.8072 | No Trend | | |
| CRRMH | SAV2 | BPO4F | 0.4605 | 0.000 | High BDLs | 0.9066 | 0.000 | No Trend | 0.8607 | Same | 0.6931 | No Trend | | |
| RPPTF | Spring1 | STN | 0.9495 | 0.005 | No Trend | 0.3428 | 0.006 | No Trend | 0.4283 | Same | 0.3653 | No Trend | | |
| RPPTF | Spring1 | BTN | 0.8990 | -0.008 | No Trend | 0.9496 | 0.001 | No Trend | 0.8875 | Same | 0.9774 | No Trend | | |
| RPPTF | Spring1 | SDIN | 0.1452 | 0.017 | No Trend | 0.2686 | 0.005 | No Trend | 0.7557 | Same | 0.0952 | No Trend | | |
| RPPTF | Spring1 | BDIN | 0.0423 | 0.020 | No Trend | 0.3272 | 0.005 | No Trend | 0.9549 | Same | 0.0702 | No Trend | | |
| RPPTF | Spring1 | STP | 0.4737 | 0.001 | No Trend | 0.8444 | 0.000 | No Trend | 0.8607 | Same | 0.5987 | No Trend | | |
| RPPTF | Spring1 | BTP | 0.1071 | 0.003 | No Trend | 0.6010 | -0.001 | No Trend | 0.2208 | Same | 0.7707 | No Trend | | |
| RPPTF | Spring1 | SPO4F | 0.5992 | 0.000 | High BDLs | 0.1033 | 0.000 | No Trend | 0.0818 | Same | 0.1867 | No Trend | | |
| RPPTF | Spring1 | BPO4F | 0.8742 | 0.000 | High BDLs | 0.1931 | 0.000 | No Trend | 0.2629 | Same | 0.1949 | No Trend | | |
| RPPMH | Spring1 | STN | 0.0620 | 0.020 | No Trend | 0.9245 | 0.000 | No Trend | 0.4171 | Same | 0.3274 | No Trend | | |
| RPPMH | Spring1 | BTN | 0.2062 | 0.021 | No Trend | 0.9748 | -0.001 | No Trend | 0.5198 | Same | 0.5568 | No Trend | | |
| RPPMH | Spring1 | SDIN | 1.0000 | 0.000 | High BDLs | 0.8003 | 0.000 | No Trend | 0.7976 | Same | 0.8419 | No Trend | | |
| RPPMH | Spring1 | BDIN | 0.2282 | 0.001 | High BDLs | 0.4673 | -0.002 | No Trend | 0.2238 | Same | 0.9324 | No Trend | | |
| RPPMH | Spring1 | STP | 0.1425 | 0.001 | No Trend | 0.2969 | 0.001 | No Trend | 0.7988 | Same | 0.1065 | No Trend | | |
| RPPMH | Spring1 | BTP | 0.8550 | 0.000 | No Trend | 0.4673 | 0.000 | No Trend | 0.5940 | Same | 0.4487 | No Trend | | |
| RPPMH | Spring1 | SPO4F | 0.1752 | 0.000 | High BDLs | 0.2462 | 0.000 | No Trend | 0.1621 | Same | 0.3736 | No Trend | | |
| RPPMH | Spring1 | BPO4F | | 0.000 | High BDLs | 0.4994 | 0.000 | No Trend | 0.4994 | Same | 0.4994 | No Trend | | |

Appendix A - Section ID. Rappahannock River (1985-2008) - Continued.

| Segment | Season | Parameter | '93 | | '93 | '08 | | '08 | Trend | | Combined | |
|---------|---------|-----------|---------|--------|-----------|---------|--------|-----------|------------|------------|----------|-----------|
| | | | Trend | '93 | | Trend | '08 | | Comparison | Trend | Trend | Combined |
| | | | P value | Slope | Direction | P value | Slope | Direction | P value | Comparison | P value | Direction |
| RPOH | Spring1 | STN | 0.5880 | 0.017 | No Trend | 0.0543 | 0.021 | No Trend | 0.1899 | Same | 0.0511 | No Trend |
| RPOH | Spring1 | BTN | 0.8567 | -0.003 | No Trend | 0.1866 | 0.010 | No Trend | 0.2124 | Same | 0.3216 | No Trend |
| RPOH | Spring1 | SDIN | 0.5079 | -0.006 | No Trend | 0.4281 | 0.003 | No Trend | 0.2914 | Same | 0.7735 | No Trend |
| RPOH | Spring1 | BDIN | 0.1662 | -0.013 | No Trend | 0.7342 | 0.004 | No Trend | 0.2914 | Same | 0.6315 | No Trend |
| RPOH | Spring1 | STP | 0.3346 | 0.006 | No Trend | 0.3061 | 0.001 | No Trend | 0.7667 | Same | 0.1564 | No Trend |
| RPOH | Spring1 | BTP | 0.0907 | 0.005 | No Trend | 0.9060 | 0.000 | No Trend | 0.3912 | Same | 0.2912 | No Trend |
| RPOH | Spring1 | SPO4F | 0.1745 | 0.000 | High BDLs | 0.3395 | 0.000 | No Trend | 0.7514 | Same | 0.1489 | No Trend |
| RPOH | Spring1 | BPO4F | 0.2317 | 0.000 | High BDLs | 0.1839 | 0.000 | No Trend | 0.4877 | Same | 0.0828 | No Trend |
| CRRMH | Spring1 | STN | 0.5667 | 0.013 | No Trend | 0.6469 | -0.002 | No Trend | 0.4937 | Same | 0.8817 | No Trend |
| CRRMH | Spring1 | BTN | 0.1521 | 0.020 | No Trend | 0.6949 | -0.004 | No Trend | 0.3265 | Same | 0.7890 | No Trend |
| CRRMH | Spring1 | SDIN | 0.0449 | 0.000 | High BDLs | 0.2868 | -0.002 | No Trend | 0.1208 | Same | 0.6051 | No Trend |
| CRRMH | Spring1 | BDIN | 0.0157 | 0.000 | High BDLs | 0.3556 | -0.001 | No Trend | 0.0876 | Same | 0.9722 | No Trend |
| CRRMH | Spring1 | STP | 0.0442 | 0.001 | No Trend | 0.8388 | 0.000 | No Trend | 0.2445 | Same | 0.4204 | No Trend |
| CRRMH | Spring1 | BTP | 0.4968 | 0.000 | No Trend | 0.1648 | -0.001 | No Trend | 0.1154 | Same | 0.3889 | No Trend |
| CRRMH | Spring1 | SPO4F | 0.1752 | 0.000 | High BDLs | 0.3643 | 0.000 | No Trend | 0.2430 | Same | 0.5365 | No Trend |
| CRRMH | Spring1 | BPO4F | 0.1640 | 0.000 | High BDLs | 0.4023 | 0.000 | No Trend | 0.2163 | Same | 0.7132 | No Trend |
| RPPTF | Spring2 | STN | 0.9520 | 0.005 | No Trend | 0.2422 | 0.008 | No Trend | 0.3274 | Same | 0.2751 | No Trend |
| RPPTF | Spring2 | BTN | 0.5465 | -0.016 | No Trend | 0.6580 | 0.004 | No Trend | 0.4838 | Same | 0.9330 | No Trend |
| RPPTF | Spring2 | SDIN | 0.1662 | 0.018 | No Trend | 0.3594 | 0.005 | No Trend | 0.8887 | Same | 0.1380 | No Trend |
| RPPTF | Spring2 | BDIN | 0.0704 | 0.019 | No Trend | 0.4294 | 0.005 | No Trend | 0.8666 | Same | 0.1170 | No Trend |
| RPPTF | Spring2 | STP | 0.2676 | 0.001 | No Trend | 0.8442 | 0.000 | No Trend | 0.4697 | Same | 0.7069 | No Trend |
| RPPTF | Spring2 | BTP | 0.1429 | 0.003 | No Trend | 0.6237 | -0.001 | No Trend | 0.2489 | Same | 0.7731 | No Trend |
| RPPTF | Spring2 | SPO4F | 0.2490 | 0.000 | High BDLs | 0.1414 | 0.000 | No Trend | 0.0672 | Same | 0.3759 | No Trend |
| RPPTF | Spring2 | BPO4F | 0.6045 | 0.000 | High BDLs | 0.0801 | 0.000 | No Trend | 0.0655 | Same | 0.1695 | No Trend |
| RPPMH | Spring2 | STN | 0.0026 | 0.026 | Degrading | 0.5069 | 0.005 | No Trend | 0.4010 | Same | 0.0438 | No Trend |
| RPPMH | Spring2 | BTN | 0.0021 | 0.035 | Degrading | 0.8249 | 0.001 | No Trend | 0.2079 | Same | 0.0987 | No Trend |
| RPPMH | Spring2 | SDIN | 0.8653 | 0.000 | High BDLs | 0.6125 | 0.001 | No Trend | 0.6998 | Same | 0.5731 | No Trend |
| RPPMH | Spring2 | BDIN | 0.2735 | 0.000 | High BDLs | 0.5271 | -0.002 | No Trend | 0.2807 | Same | 0.9547 | No Trend |
| RPPMH | Spring2 | STP | 0.1051 | 0.001 | No Trend | 0.9748 | 0.000 | No Trend | 0.4430 | Same | 0.4776 | No Trend |
| RPPMH | Spring2 | BTP | 0.6227 | 0.000 | No Trend | 0.3594 | -0.001 | No Trend | 0.2854 | Same | 0.5739 | No Trend |
| RPPMH | Spring2 | SPO4F | 0.1752 | 0.000 | High BDLs | 0.9488 | 0.000 | No Trend | 0.7515 | Same | 0.8493 | No Trend |
| RPPMH | Spring2 | BPO4F | | 0.000 | High BDLs | 0.4034 | 0.000 | No Trend | 0.4034 | Same | 0.4034 | No Trend |
| RPOH | Spring2 | STN | 0.0470 | 0.038 | No Trend | 0.0725 | 0.015 | No Trend | 0.5748 | Same | 0.0102 | No Trend |
| RPOH | Spring2 | BTN | 0.2062 | 0.029 | No Trend | 0.1648 | 0.012 | No Trend | 0.5748 | Same | 0.0629 | No Trend |
| RPOH | Spring2 | SDIN | 0.3648 | 0.009 | No Trend | 0.6837 | 0.001 | No Trend | 0.9058 | Same | 0.4072 | No Trend |
| RPOH | Spring2 | BDIN | 1.0000 | 0.001 | No Trend | 0.7604 | -0.002 | No Trend | 0.7677 | Same | 0.8132 | No Trend |
| RPOH | Spring2 | STP | 0.0620 | 0.010 | No Trend | 0.9720 | 0.000 | No Trend | 0.3475 | Same | 0.3173 | No Trend |
| RPOH | Spring2 | BTP | 0.0901 | 0.004 | No Trend | 0.5991 | 0.001 | No Trend | 0.6711 | Same | 0.1820 | No Trend |
| RPOH | Spring2 | SPO4F | 0.4671 | 0.000 | High BDLs | 0.2164 | 0.000 | No Trend | 0.3857 | Same | 0.1483 | No Trend |
| RPOH | Spring2 | BPO4F | 0.3071 | 0.000 | High BDLs | 0.0646 | 0.000 | No Trend | 0.1775 | Same | 0.0341 | No Trend |
| CRRMH | Spring2 | STN | 0.1593 | 0.023 | No Trend | 0.5344 | 0.003 | No Trend | 0.9297 | Same | 0.2282 | No Trend |
| CRRMH | Spring2 | BTN | 0.2519 | 0.017 | No Trend | 0.5563 | 0.003 | No Trend | 0.9763 | Same | 0.2980 | No Trend |
| CRRMH | Spring2 | SDIN | 0.1904 | 0.000 | High BDLs | 0.1585 | -0.001 | No Trend | 0.0961 | Same | 0.2673 | No Trend |
| CRRMH | Spring2 | BDIN | 0.3580 | 0.000 | High BDLs | 0.4638 | -0.001 | No Trend | 0.2915 | Same | 0.7594 | No Trend |
| CRRMH | Spring2 | STP | 0.2122 | 0.001 | No Trend | 0.8653 | 0.000 | No Trend | 0.4384 | Same | 0.6335 | No Trend |
| CRRMH | Spring2 | BTP | 0.4616 | 0.001 | No Trend | 0.3969 | 0.000 | No Trend | 0.2597 | Same | 0.7219 | No Trend |
| CRRMH | Spring2 | SPO4F | 0.1752 | 0.000 | High BDLs | 0.7271 | 0.000 | No Trend | 0.9452 | Same | 0.5365 | No Trend |
| CRRMH | Spring2 | BPO4F | 0.0466 | 0.000 | High BDLs | 0.8611 | 0.000 | No Trend | 0.3908 | Same | 0.5974 | No Trend |

Appendix A - Section ID. Rappahannock River (1985-2008) - Continued.

| Segment | Season | Parameter | '93 | | '93 | | '08 | | '08 | | Trend | | Combined | | Combined |
|---------|---------|-----------|--------|--------|-----------|--------|--------|-----------|------------|-----------|---------|------------|----------|--------------|----------|
| | | | Trend | '93 | Trend | Trend | '08 | Trend | Comparison | Trend | P value | Comparison | P value | Trend | |
| RPPTF | Summer1 | STN | 0.3220 | 0.013 | No Trend | 0.0487 | -0.008 | No Trend | 0.0257 | Same | 0.2075 | Same | 0.2075 | No Trend | |
| RPPTF | Summer1 | BTN | 0.5664 | -0.007 | No Trend | 0.0079 | -0.012 | Improving | 0.0393 | Same | 0.0082 | Same | 0.0082 | Improving | |
| RPPTF | Summer1 | SDIN | 0.1029 | 0.018 | No Trend | 0.2736 | -0.009 | No Trend | 0.0804 | Same | 0.8460 | Same | 0.8460 | No Trend | |
| RPPTF | Summer1 | BDIN | 0.0516 | 0.020 | No Trend | 0.2385 | -0.008 | No Trend | 0.0490 | Same | 0.9033 | Same | 0.9033 | No Trend | |
| RPPTF | Summer1 | STP | 0.2358 | 0.001 | No Trend | 0.0198 | -0.001 | No Trend | 0.0083 | Different | 0.1299 | Different | 0.1299 | No Trend* | |
| RPPTF | Summer1 | BTP | 0.1884 | 0.002 | No Trend | 0.0159 | -0.002 | No Trend | 0.0056 | Different | 0.1320 | Different | 0.1320 | No Trend* | |
| RPPTF | Summer1 | SPO4F | 0.5726 | 0.000 | High BDLs | 0.0340 | 0.000 | No Trend | 0.0274 | Same | 0.0812 | Same | 0.0812 | No Trend | |
| RPPTF | Summer1 | BPO4F | 0.8328 | 0.000 | High BDLs | 0.0180 | 0.000 | No Trend | 0.0211 | Same | 0.0356 | Same | 0.0356 | No Trend | |
| RPPMH | Summer1 | STN | 0.0179 | 0.021 | No Trend | 1.0000 | 0.000 | No Trend | 0.2640 | Same | 0.2640 | Same | 0.2640 | No Trend | |
| RPPMH | Summer1 | BTN | 0.0003 | 0.031 | Degrading | 0.8053 | -0.001 | No Trend | 0.0523 | Same | 0.1326 | Same | 0.1326 | No Trend | |
| RPPMH | Summer1 | SDIN | 1.0000 | 0.000 | High BDLs | 0.4078 | 0.000 | No Trend | 0.4053 | Same | 0.4363 | Same | 0.4363 | No Trend | |
| RPPMH | Summer1 | BDIN | 0.8890 | 0.000 | High BDLs | 0.7219 | 0.000 | No Trend | 0.6834 | Same | 0.7988 | Same | 0.7988 | No Trend | |
| RPPMH | Summer1 | STP | 0.0014 | 0.002 | Degrading | 0.0897 | -0.001 | No Trend | 0.0029 | Different | 0.9610 | Different | 0.9610 | Degrading 85 | |
| RPPMH | Summer1 | BTP | 0.0661 | 0.002 | No Trend | 0.0073 | -0.001 | Improving | 0.0012 | Different | 0.1239 | Different | 0.1239 | Improving 95 | |
| RPPMH | Summer1 | SPO4F | 0.4137 | 0.000 | High BDLs | 0.5231 | 0.000 | No Trend | 0.4024 | Same | 0.6853 | Same | 0.6853 | No Trend | |
| RPPMH | Summer1 | BPO4F | 0.1238 | 0.000 | High BDLs | 0.7205 | 0.000 | No Trend | 0.8952 | Same | 0.4143 | Same | 0.4143 | No Trend | |
| RPPOH | Summer1 | STN | 0.0237 | 0.037 | No Trend | 0.1889 | 0.006 | No Trend | 0.9226 | Same | 0.0255 | Same | 0.0255 | No Trend | |
| RPPOH | Summer1 | BTN | 0.0005 | 0.051 | Degrading | 0.1546 | 0.009 | No Trend | 0.7508 | Same | 0.0043 | Same | 0.0043 | Degrading | |
| RPPOH | Summer1 | SDIN | 0.9452 | 0.000 | High BDLs | 0.3733 | 0.000 | No Trend | 0.3819 | Same | 0.4422 | Same | 0.4422 | No Trend | |
| RPPOH | Summer1 | BDIN | 0.7786 | 0.000 | High BDLs | 0.3037 | 0.000 | No Trend | 0.2778 | Same | 0.4119 | Same | 0.4119 | No Trend | |
| RPPOH | Summer1 | STP | 0.0135 | 0.005 | No Trend | 0.4597 | 0.000 | No Trend | 0.0686 | Same | 0.6101 | Same | 0.6101 | No Trend | |
| RPPOH | Summer1 | BTP | 0.0024 | 0.008 | Degrading | 0.6668 | 0.001 | No Trend | 0.2865 | Same | 0.0677 | Same | 0.0677 | No Trend | |
| RPPOH | Summer1 | SPO4F | 0.6171 | 0.000 | High BDLs | 0.0028 | 0.000 | Improving | 0.0024 | Different | 0.0066 | Different | 0.0066 | Improving 95 | |
| RPPOH | Summer1 | BPO4F | 1.0000 | 0.000 | High BDLs | 0.0031 | 0.000 | Improving | 0.0039 | Different | 0.0046 | Different | 0.0046 | Improving 95 | |
| CRRMH | Summer1 | STN | 0.3916 | 0.011 | No Trend | 0.0192 | 0.006 | No Trend | 0.0877 | Same | 0.0121 | Same | 0.0121 | No Trend | |
| CRRMH | Summer1 | BTN | 0.0803 | 0.025 | No Trend | 0.4198 | -0.002 | No Trend | 0.1404 | Same | 1.0000 | Same | 1.0000 | No Trend | |
| CRRMH | Summer1 | SDIN | 1.0000 | 0.000 | High BDLs | 0.0721 | 0.000 | High BDLs | 0.0742 | Same | 0.0880 | Same | 0.0880 | No Trend | |
| CRRMH | Summer1 | BDIN | 0.7458 | 0.000 | High BDLs | 0.3683 | -0.001 | No Trend | 0.4598 | Same | 0.3244 | Same | 0.3244 | No Trend | |
| CRRMH | Summer1 | STP | 0.0113 | 0.001 | No Trend | 0.3581 | 0.000 | No Trend | 0.6761 | Same | 0.0417 | Same | 0.0417 | No Trend | |
| CRRMH | Summer1 | BTP | 0.0037 | 0.003 | Degrading | 0.0407 | -0.001 | No Trend | 0.0014 | Different | 0.6844 | Different | 0.6844 | Degrading 85 | |
| CRRMH | Summer1 | SPO4F | 0.0828 | 0.000 | High BDLs | 0.2601 | 0.000 | No Trend | 0.1041 | Same | 0.6014 | Same | 0.6014 | No Trend | |
| CRRMH | Summer1 | BPO4F | 0.9315 | 0.000 | High BDLs | 0.0302 | 0.000 | No Trend | 0.0351 | Same | 0.0459 | Same | 0.0459 | No Trend | |
| RPPTF | Summer2 | STN | 0.2528 | 0.018 | No Trend | 0.0177 | -0.010 | No Trend | 0.0078 | Different | 0.1236 | Different | 0.1236 | No Trend* | |
| RPPTF | Summer2 | BTN | 0.6735 | -0.004 | No Trend | 0.0019 | -0.015 | Improving | 0.0118 | Same | 0.0030 | Same | 0.0030 | Improving | |
| RPPTF | Summer2 | SDIN | 0.0589 | 0.025 | No Trend | 0.2969 | -0.009 | No Trend | 0.0682 | Same | 0.9776 | Same | 0.9776 | No Trend | |
| RPPTF | Summer2 | BDIN | 0.0443 | 0.021 | No Trend | 0.2543 | -0.007 | No Trend | 0.0492 | Same | 0.9552 | Same | 0.9552 | No Trend | |
| RPPTF | Summer2 | STP | 0.2924 | 0.001 | No Trend | 0.0162 | -0.002 | No Trend | 0.0081 | Different | 0.1024 | Different | 0.1024 | No Trend* | |
| RPPTF | Summer2 | BTP | 0.1809 | 0.002 | No Trend | 0.0114 | -0.002 | No Trend | 0.0039 | Different | 0.1098 | Different | 0.1098 | No Trend* | |
| RPPTF | Summer2 | SPO4F | 0.6134 | 0.000 | High BDLs | 0.1193 | 0.000 | No Trend | 0.0958 | Same | 0.2116 | Same | 0.2116 | No Trend | |
| RPPTF | Summer2 | BPO4F | 0.9331 | 0.000 | High BDLs | 0.0808 | 0.000 | No Trend | 0.0906 | Same | 0.1156 | Same | 0.1156 | No Trend | |
| RPPMH | Summer2 | STN | 0.2736 | 0.009 | No Trend | 0.5910 | -0.001 | No Trend | 0.3127 | Same | 0.9553 | Same | 0.9553 | No Trend | |
| RPPMH | Summer2 | BTN | 0.0157 | 0.022 | No Trend | 0.8003 | -0.001 | No Trend | 0.1698 | Same | 0.3552 | Same | 0.3552 | No Trend | |
| RPPMH | Summer2 | SDIN | 1.0000 | 0.000 | High BDLs | 0.3547 | 0.000 | No Trend | 0.3559 | Same | 0.3889 | Same | 0.3889 | No Trend | |
| RPPMH | Summer2 | BDIN | 1.0000 | 0.000 | High BDLs | 0.4294 | 0.001 | No Trend | 0.4557 | Same | 0.4557 | Same | 0.4557 | No Trend | |
| RPPMH | Summer2 | STP | 0.0026 | 0.003 | Degrading | 0.2177 | -0.001 | No Trend | 0.0124 | Same | 0.7572 | Same | 0.7572 | No Trend | |
| RPPMH | Summer2 | BTP | 0.0721 | 0.002 | No Trend | 0.0716 | -0.001 | No Trend | 0.0143 | Same | 0.4471 | Same | 0.4471 | No Trend | |
| RPPMH | Summer2 | SPO4F | 0.4137 | 0.000 | High BDLs | 0.8978 | 0.000 | No Trend | 0.7103 | Same | 0.9014 | Same | 0.9014 | No Trend | |
| RPPMH | Summer2 | BPO4F | 0.1238 | 0.000 | High BDLs | 0.2399 | 0.000 | No Trend | 0.5691 | Same | 0.0993 | Same | 0.0993 | No Trend | |

Appendix A - Section ID. Rappahannock River (1985-2008) - Continued.

| Segment | Season | Parameter | '93 | | '93 | '08 | '08 | Trend | Comparison | Combined | | Combined |
|---------|---------|-----------|--------|--------|-----------|--------|--------|-----------|------------|-----------|--------|--------------|
| | | | Trend | '93 | Trend | Trend | '08 | Trend | P value | Trend | Trend | Trend |
| RPOH | Summer2 | STN | 0.1277 | 0.027 | No Trend | 0.2969 | 0.005 | No Trend | 0.8443 | Same | 0.0979 | No Trend |
| RPOH | Summer2 | BTN | 0.0023 | 0.048 | Degrading | 0.1549 | 0.011 | No Trend | 0.9099 | Same | 0.0078 | Degrading |
| RPOH | Summer2 | SDIN | 0.6508 | 0.000 | High BDLs | 0.4000 | 0.000 | High BDLs | 0.5488 | Same | 0.3280 | No Trend |
| RPOH | Summer2 | BDIN | 0.9245 | 0.000 | High BDLs | 0.4818 | 0.000 | No Trend | 0.5485 | Same | 0.4676 | No Trend |
| RPOH | Summer2 | STP | 0.0446 | 0.005 | No Trend | 0.8249 | 0.000 | No Trend | 0.2501 | Same | 0.4488 | No Trend |
| RPOH | Summer2 | BTP | 0.0019 | 0.009 | Degrading | 0.6370 | 0.001 | No Trend | 0.2841 | Same | 0.0569 | No Trend |
| RPOH | Summer2 | SPO4F | 0.4936 | 0.000 | High BDLs | 0.0089 | 0.000 | Improving | 0.0063 | Different | 0.0183 | Improving 95 |
| RPOH | Summer2 | BPO4F | 0.8021 | 0.000 | High BDLs | 0.0259 | 0.000 | No Trend | 0.0243 | Same | 0.0388 | No Trend |
| CRRMH | Summer2 | STN | 0.8798 | 0.005 | No Trend | 0.0326 | 0.005 | No Trend | 0.0633 | Same | 0.0411 | No Trend |
| CRRMH | Summer2 | BTN | 0.1104 | 0.025 | No Trend | 0.1911 | -0.004 | No Trend | 0.0626 | Same | 0.5888 | No Trend |
| CRRMH | Summer2 | SDIN | 1.0000 | 0.000 | High BDLs | 0.2640 | 0.000 | High BDLs | 0.2629 | Same | 0.3030 | No Trend |
| CRRMH | Summer2 | BDIN | 0.8694 | 0.000 | High BDLs | 0.3859 | 0.000 | No Trend | 0.3583 | Same | 0.4403 | No Trend |
| CRRMH | Summer2 | STP | 0.0058 | 0.002 | Degrading | 0.1358 | 0.001 | No Trend | 1.0000 | Same | 0.0083 | Degrading |
| CRRMH | Summer2 | BTP | 0.0059 | 0.003 | Degrading | 0.0623 | -0.001 | No Trend | 0.0031 | Different | 0.7280 | Degrading 85 |
| CRRMH | Summer2 | SPO4F | 0.0828 | 0.000 | High BDLs | 0.4870 | 0.000 | No Trend | 0.2023 | Same | 0.9739 | No Trend |
| CRRMH | Summer2 | BPO4F | 0.3879 | 0.000 | High BDLs | 0.0292 | 0.000 | No Trend | 0.0176 | Same | 0.0802 | No Trend |
| RPPTF | Winter | STN | 0.0662 | -0.051 | No Trend | 0.6662 | -0.007 | No Trend | 0.6424 | Same | 0.2157 | No Trend |
| RPPTF | Winter | BTN | 0.0034 | -0.091 | Improving | 0.8630 | 0.005 | No Trend | 0.2245 | Same | 0.3731 | No Trend |
| RPPTF | Winter | SDIN | 0.9300 | 0.006 | No Trend | 0.2713 | 0.011 | No Trend | 0.3555 | Same | 0.2838 | No Trend |
| RPPTF | Winter | BDIN | 0.9066 | -0.003 | No Trend | 0.3084 | 0.006 | No Trend | 0.2987 | Same | 0.3760 | No Trend |
| RPPTF | Winter | STP | 0.4621 | -0.001 | No Trend | 0.8553 | -0.001 | No Trend | 0.8382 | Same | 0.5955 | No Trend |
| RPPTF | Winter | BTP | 0.0302 | -0.010 | No Trend | 0.5234 | -0.001 | No Trend | 0.7097 | Same | 0.1259 | No Trend |
| RPPTF | Winter | SPO4F | 0.3355 | 0.000 | High BDLs | 0.0001 | -0.001 | Improving | 0.0010 | Different | 0.0001 | Improving 95 |
| RPPTF | Winter | BPO4F | 0.1168 | 0.000 | High BDLs | 0.0002 | -0.001 | Improving | 0.0031 | Different | 0.0000 | Improving 95 |
| RPPMH | Winter | STN | 0.4731 | 0.008 | No Trend | 0.6987 | -0.004 | No Trend | 0.4861 | Same | 1.0000 | No Trend |
| RPPMH | Winter | BTN | 0.2688 | 0.012 | No Trend | 0.4388 | -0.009 | No Trend | 0.2173 | Same | 0.8910 | No Trend |
| RPPMH | Winter | SDIN | 0.8065 | 0.000 | High BDLs | 0.4856 | -0.007 | No Trend | 0.4413 | Same | 0.6241 | No Trend |
| RPPMH | Winter | BDIN | 0.4344 | 0.000 | High BDLs | 0.3142 | -0.004 | No Trend | 0.1993 | Same | 0.6028 | No Trend |
| RPPMH | Winter | STP | 0.0385 | 0.003 | No Trend | 0.7564 | 0.000 | No Trend | 0.2040 | Same | 0.4709 | No Trend |
| RPPMH | Winter | BTP | 0.0346 | 0.003 | No Trend | 0.9383 | 0.000 | No Trend | 0.2857 | Same | 0.3524 | No Trend |
| RPPMH | Winter | SPO4F | 0.3378 | 0.000 | High BDLs | 0.9373 | 0.000 | No Trend | 0.8207 | Same | 0.7056 | No Trend |
| RPPMH | Winter | BPO4F | 0.3378 | 0.000 | High BDLs | 0.3267 | 0.000 | No Trend | 0.2133 | Same | 0.5214 | No Trend |
| RPOH | Winter | STN | 0.1265 | -0.058 | No Trend | 0.8773 | -0.004 | No Trend | 0.5260 | Same | 0.3649 | No Trend |
| RPOH | Winter | BTN | 0.8943 | -0.018 | No Trend | 0.9590 | 0.000 | No Trend | 0.8855 | Same | 0.9617 | No Trend |
| RPOH | Winter | SDIN | 0.0684 | -0.040 | No Trend | 0.7154 | 0.005 | No Trend | 0.2490 | Same | 0.6213 | No Trend |
| RPOH | Winter | BDIN | 0.0842 | -0.045 | No Trend | 0.7845 | 0.002 | No Trend | 0.3885 | Same | 0.7302 | No Trend |
| RPOH | Winter | STP | 0.0323 | 0.005 | No Trend | 0.4379 | -0.001 | No Trend | 0.0906 | Same | 0.7613 | No Trend |
| RPOH | Winter | BTP | 0.0188 | 0.010 | No Trend | 0.9227 | 0.000 | No Trend | 0.2697 | Same | 0.3538 | No Trend |
| RPOH | Winter | SPO4F | 0.7423 | 0.000 | High BDLs | 0.0645 | 0.000 | No Trend | 0.0557 | Same | 0.0997 | No Trend |
| RPOH | Winter | BPO4F | 0.4533 | 0.000 | High BDLs | 0.0295 | -0.001 | No Trend | 0.0502 | Same | 0.0202 | No Trend |
| CRRMH | Winter | STN | 0.0517 | 0.030 | No Trend | 0.4918 | 0.005 | No Trend | 0.6568 | Same | 0.1033 | No Trend |
| CRRMH | Winter | BTN | 0.2911 | 0.030 | No Trend | 0.8187 | -0.002 | No Trend | 0.4711 | Same | 0.7574 | No Trend |
| CRRMH | Winter | SDIN | 0.2540 | 0.000 | High BDLs | 0.3816 | -0.001 | No Trend | 0.2125 | Same | 0.6777 | No Trend |
| CRRMH | Winter | BDIN | 0.0292 | 0.001 | High BDLs | 0.9472 | 0.000 | No Trend | 0.3059 | Same | 0.3663 | No Trend |
| CRRMH | Winter | STP | 0.1943 | 0.003 | No Trend | 0.9063 | 0.000 | No Trend | 0.5185 | Same | 0.3985 | No Trend |
| CRRMH | Winter | BTP | 0.0391 | 0.002 | No Trend | 0.2637 | -0.001 | No Trend | 0.0363 | Same | 0.8420 | No Trend |
| CRRMH | Winter | SPO4F | | 0.000 | High BDLs | 0.1390 | 0.000 | No Trend | 0.1390 | Same | 0.1390 | No Trend |
| CRRMH | Winter | BPO4F | 0.2801 | 0.000 | High BDLs | 0.0051 | 0.000 | Degrading | 0.0023 | Different | 0.0245 | Degrading 95 |

Appendix A - Section IE. Blocked seasonal Kendall Long-term trends in water quality for the Virginia Mainstem (1985-2008). Parameters are as follows: STN=Surface total nitrogen, BTN=Bottom total nitrogen, SDIN=Surface dissolved inorganic nitrogen, BDIN=Bottom dissolved inorganic nitrogen, STP=Surface total phosphorus, BTP=Bottom total phosphorus, SPO4F=Surface dissolved inorganic phosphorus, BPO4F=Bottom dissolved inorganic phosphorus.

| Segment | Season | Parameter | '93 | | '93 | | '08 | | '08 | | Trend | | Combined | | Combined | |
|---------|--------|-----------|--------|--------|-----------|--------|--------|-----------|------------|-----------|---------|------------|----------|-----------|----------|-----------|
| | | | Trend | '93 | Trend | Trend | '08 | Trend | Comparison | Trend | P value | Comparison | Trend | P value | Trend | Direction |
| PIAMH | Annual | STN | 0.2913 | -0.026 | No Trend | 0.0002 | -0.004 | Improving | 0.0003 | Different | 0.0002 | Different | 0.0002 | Improving | 88 | |
| PIAMH | Annual | BTN | 0.4510 | 0.019 | No Trend | 0.0026 | -0.003 | Improving | 0.0022 | Different | 0.0032 | Different | 0.0032 | Improving | 88 | |
| PIAMH | Annual | SDIN | 0.8336 | 0.000 | High BDLs | 0.0000 | -0.001 | High BDLs | 0.0000 | Different | 0.0000 | Different | 0.0000 | No Trend* | | |
| PIAMH | Annual | BDIN | 0.4772 | 0.000 | High BDLs | 0.0026 | -0.001 | High BDLs | 0.0023 | Different | 0.0031 | Different | 0.0031 | No Trend* | | |
| PIAMH | Annual | STP | 0.0449 | 0.002 | No Trend | 0.0001 | 0.000 | Improving | 0.0001 | Different | 0.0002 | Different | 0.0002 | Improving | 88 | |
| PIAMH | Annual | BTP | 0.0328 | 0.004 | No Trend | 0.0003 | 0.000 | Improving | 0.0002 | Different | 0.0006 | Different | 0.0006 | Improving | 88 | |
| PIAMH | Annual | SPO4F | 0.3058 | 0.000 | High BDLs | 0.4024 | 0.000 | High BDLs | 0.3055 | Same | 0.5311 | Same | 0.5311 | No Trend | | |
| PIAMH | Annual | BPO4F | 0.3058 | 0.000 | High BDLs | 0.4251 | 0.000 | High BDLs | 0.5111 | Same | 0.3535 | Same | 0.3535 | No Trend | | |
| POCMH | Annual | STN | 0.6367 | 0.020 | No Trend | 0.0001 | -0.007 | Improving | 0.0001 | Different | 0.0001 | Different | 0.0001 | Improving | 88 | |
| POCMH | Annual | BTN | 0.0833 | 0.022 | No Trend | 0.0001 | -0.006 | Improving | 0.0001 | Different | 0.0002 | Different | 0.0002 | Improving | 88 | |
| POCMH | Annual | SDIN | 0.4311 | 0.013 | No Trend | 0.0000 | -0.001 | Improving | 0.0000 | Different | 0.0000 | Different | 0.0000 | Improving | 88 | |
| POCMH | Annual | BDIN | 0.4311 | 0.003 | No Trend | 0.0000 | -0.001 | Improving | 0.0000 | Different | 0.0000 | Different | 0.0000 | Improving | 88 | |
| POCMH | Annual | STP | 0.3387 | 0.002 | No Trend | 0.0000 | -0.001 | Improving | 0.0000 | Different | 0.0000 | Different | 0.0000 | Improving | 88 | |
| POCMH | Annual | BTP | 0.1063 | 0.003 | No Trend | 0.0000 | -0.001 | Improving | 0.0000 | Different | 0.0000 | Different | 0.0000 | Improving | 88 | |
| POCMH | Annual | SPO4F | 0.8216 | 0.000 | High BDLs | 0.0000 | 0.000 | High BDLs | 0.0000 | Different | 0.0000 | Different | 0.0000 | No Trend* | | |
| POCMH | Annual | BPO4F | 1.0000 | 0.000 | High BDLs | 0.0010 | 0.000 | High BDLs | 0.0010 | Different | 0.0010 | Different | 0.0010 | No Trend* | | |
| CB6PH | Annual | STN | 0.2913 | 0.011 | No Trend | 0.0000 | -0.004 | Improving | 0.0000 | Different | 0.0000 | Different | 0.0000 | Improving | 88 | |
| CB6PH | Annual | BTN | 0.6511 | 0.011 | No Trend | 0.0000 | -0.005 | Improving | 0.0000 | Different | 0.0000 | Different | 0.0000 | Improving | 88 | |
| CB6PH | Annual | SDIN | 1.0000 | 0.001 | No Trend | 0.8314 | 0.000 | High BDLs | 0.8247 | Same | 0.8386 | Same | 0.8386 | No Trend | | |
| CB6PH | Annual | BDIN | 0.0973 | -0.007 | No Trend | 0.0532 | -0.001 | No Trend | 0.0682 | Same | 0.0418 | Same | 0.0418 | No Trend | | |
| CB6PH | Annual | STP | 1.0000 | 0.000 | No Trend | 0.0000 | 0.000 | Improving | 0.0000 | Different | 0.0000 | Different | 0.0000 | Improving | 88 | |
| CB6PH | Annual | BTP | 0.7604 | -0.001 | No Trend | 0.0047 | 0.000 | Improving | 0.0051 | Different | 0.0044 | Different | 0.0044 | Improving | 88 | |
| CB6PH | Annual | SPO4F | 0.0332 | 0.000 | High BDLs | 0.0158 | 0.000 | High BDLs | 0.0100 | Same | 0.0250 | Same | 0.0250 | No Trend | | |
| CB6PH | Annual | BPO4F | 0.0330 | 0.000 | High BDLs | 0.0807 | 0.000 | High BDLs | 0.0579 | Same | 0.1119 | Same | 0.1119 | No Trend | | |
| CB7PH | Annual | STN | 1.0000 | 0.000 | No Trend | 0.0000 | -0.004 | Improving | 0.0000 | Different | 0.0000 | Different | 0.0000 | Improving | 88 | |
| CB7PH | Annual | BTN | 1.0000 | -0.006 | No Trend | 0.0000 | -0.004 | Improving | 0.0000 | Different | 0.0000 | Different | 0.0000 | Improving | 88 | |
| CB7PH | Annual | SDIN | 0.0896 | -0.005 | No Trend | 0.7421 | 0.000 | High BDLs | 0.6635 | Same | 0.8243 | Same | 0.8243 | No Trend | | |
| CB7PH | Annual | BDIN | 0.4510 | -0.004 | No Trend | 0.1293 | 0.000 | No Trend | 0.1440 | Same | 0.1170 | Same | 0.1170 | No Trend | | |
| CB7PH | Annual | STP | 0.1273 | -0.002 | No Trend | 0.0000 | 0.000 | Improving | 0.0000 | Different | 0.0000 | Different | 0.0000 | Improving | 88 | |
| CB7PH | Annual | BTP | 0.4510 | 0.001 | No Trend | 0.0000 | 0.000 | Improving | 0.0000 | Different | 0.0000 | Different | 0.0000 | Improving | 88 | |
| CB7PH | Annual | SPO4F | 0.3268 | 0.000 | High BDLs | 0.5871 | 0.000 | High BDLs | 0.5225 | Same | 0.6580 | Same | 0.6580 | No Trend | | |
| CB7PH | Annual | BPO4F | 0.1722 | 0.000 | High BDLs | 0.0017 | 0.000 | High BDLs | 0.0012 | Different | 0.0025 | Different | 0.0025 | No Trend* | | |
| CB8PH | Annual | STN | 0.6511 | 0.021 | No Trend | 0.0668 | 0.001 | No Trend | 0.0729 | Same | 0.0621 | Same | 0.0621 | No Trend | | |
| CB8PH | Annual | BTN | 0.8802 | -0.001 | No Trend | 0.4090 | 0.001 | No Trend | 0.3996 | Same | 0.4202 | Same | 0.4202 | No Trend | | |
| CB8PH | Annual | SDIN | 0.0275 | -0.002 | No Trend | 0.1280 | 0.000 | High BDLs | 0.0979 | Same | 0.1664 | Same | 0.1664 | No Trend | | |
| CB8PH | Annual | BDIN | 0.0104 | -0.007 | Improving | 0.1560 | 0.000 | No Trend | 0.1145 | Same | 0.2100 | Same | 0.2100 | No Trend | | |
| CB8PH | Annual | STP | 0.0005 | -0.009 | Improving | 0.0000 | 0.000 | Improving | 0.0000 | Different | 0.0000 | Different | 0.0000 | Improving | | |
| CB8PH | Annual | BTP | 0.0015 | -0.011 | Improving | 0.0000 | -0.001 | Improving | 0.0000 | Different | 0.0000 | Different | 0.0000 | Improving | | |
| CB8PH | Annual | SPO4F | 0.0311 | 0.000 | High BDLs | 0.0000 | 0.000 | High BDLs | 0.0000 | Different | 0.0000 | Different | 0.0000 | No Trend* | | |
| CB8PH | Annual | BPO4F | 0.0150 | -0.002 | Improving | 0.0000 | 0.000 | Improving | 0.0000 | Different | 0.0000 | Different | 0.0000 | Improving | | |
| PIAMH | Fall | STN | 0.5465 | -0.043 | No Trend | 0.0230 | -0.004 | No Trend | 0.0270 | Same | 0.0201 | Same | 0.0201 | No Trend | | |
| PIAMH | Fall | BTN | 1.0000 | -0.017 | No Trend | 0.0823 | -0.003 | No Trend | 0.0864 | Same | 0.0796 | Same | 0.0796 | No Trend | | |
| PIAMH | Fall | SDIN | 0.4268 | 0.000 | High BDLs | 0.0004 | -0.001 | High BDLs | 0.0005 | Different | 0.0003 | Different | 0.0003 | No Trend* | | |
| PIAMH | Fall | BDIN | 1.0000 | 0.000 | High BDLs | 0.0225 | -0.001 | High BDLs | 0.0239 | Same | 0.0215 | Same | 0.0215 | No Trend | | |
| PIAMH | Fall | STP | 0.1138 | 0.002 | No Trend | 0.0092 | 0.000 | Improving | 0.0067 | Different | 0.0130 | Different | 0.0130 | Improving | 88 | |
| PIAMH | Fall | BTP | 0.3428 | 0.004 | No Trend | 0.0130 | 0.000 | No Trend | 0.0106 | Same | 0.0163 | Same | 0.0163 | No Trend | | |
| PIAMH | Fall | SPO4F | 0.1120 | -0.001 | High BDLs | | 0.000 | High BDLs | 0.0469 | Same | 0.0469 | Same | 0.0469 | No Trend | | |

| | | | | | | | | | | | | |
|-------|------|-------|--------|-------|-----------|--------|-------|-----------|--------|------|--------|----------|
| PIAMH | Fall | BPO4F | 0.1120 | 0.000 | High BDLs | 0.0986 | 0.000 | High BDLs | 0.2253 | Same | 0.0433 | No Trend |
|-------|------|-------|--------|-------|-----------|--------|-------|-----------|--------|------|--------|----------|

Appendix A - Section IE. Virginia Mainstem (1985-2008) - Continued.

| Segment | Season | Parameter | '93 | | '93 | '08 | '08 | '08 | Trend | Trend | Combined | Combined |
|---------|--------|-----------|--------|--------|-----------|---------|--------|-----------|---------|------------|----------|--------------|
| | | | Trend | Slope | Direction | P value | Slope | Direction | P value | Comparison | P value | Direction |
| POCMH | Fall | STN | 1.0000 | -0.001 | No Trend | 0.1828 | -0.004 | No Trend | 0.1909 | Same | 0.1770 | No Trend |
| POCMH | Fall | BTN | 0.2278 | 0.048 | No Trend | 0.0638 | -0.006 | No Trend | 0.0512 | Same | 0.0803 | No Trend |
| POCMH | Fall | SDIN | 0.5465 | 0.018 | No Trend | 0.0110 | -0.002 | High BDLs | 0.0094 | Different | 0.0133 | No Trend* |
| POCMH | Fall | BDIN | 0.5465 | 0.024 | No Trend | 0.0227 | -0.001 | No Trend | 0.0196 | Same | 0.0269 | No Trend |
| POCMH | Fall | STP | 1.0000 | -0.006 | No Trend | 0.0943 | 0.000 | No Trend | 0.0991 | Same | 0.0911 | No Trend |
| POCMH | Fall | BTP | 1.0000 | 0.002 | No Trend | 0.1160 | 0.000 | No Trend | 0.1122 | Same | 0.1215 | No Trend |
| POCMH | Fall | SPO4F | 0.1120 | 0.000 | High BDLs | 0.2262 | 0.000 | High BDLs | 0.2805 | Same | 0.1815 | No Trend |
| POCMH | Fall | BPO4F | 0.1120 | 0.000 | High BDLs | 0.2246 | 0.000 | High BDLs | 0.2829 | Same | 0.1773 | No Trend |
| CB6PH | Fall | STN | 1.0000 | 0.005 | No Trend | 0.0027 | -0.004 | Improving | 0.0026 | Different | 0.0029 | Improving 88 |
| CB6PH | Fall | BTN | 0.5465 | -0.025 | No Trend | 0.0009 | -0.005 | Improving | 0.0011 | Different | 0.0007 | Improving 88 |
| CB6PH | Fall | SDIN | 1.0000 | 0.001 | No Trend | 0.2924 | -0.001 | No Trend | 0.2852 | Same | 0.3015 | No Trend |
| CB6PH | Fall | BDIN | 0.2278 | -0.006 | No Trend | 0.5208 | 0.000 | No Trend | 0.5810 | Same | 0.4654 | No Trend |
| CB6PH | Fall | STP | 1.0000 | 0.001 | No Trend | 0.0001 | 0.000 | Improving | 0.0001 | Different | 0.0001 | Improving 88 |
| CB6PH | Fall | BTP | 1.0000 | 0.000 | No Trend | 0.0026 | -0.001 | Improving | 0.0028 | Different | 0.0025 | Improving 88 |
| CB6PH | Fall | SPO4F | 1.0000 | 0.000 | High BDLs | 0.1063 | 0.000 | High BDLs | 0.1068 | Same | 0.1068 | No Trend |
| CB6PH | Fall | BPO4F | 0.7119 | 0.000 | No Trend | 0.1114 | 0.000 | High BDLs | 0.1217 | Same | 0.1029 | No Trend |
| CB7PH | Fall | STN | 0.5465 | -0.003 | No Trend | 0.0002 | -0.006 | Improving | 0.0003 | Different | 0.0002 | Improving 88 |
| CB7PH | Fall | BTN | 0.2278 | -0.035 | No Trend | 0.0005 | -0.005 | Improving | 0.0008 | Different | 0.0004 | Improving 88 |
| CB7PH | Fall | SDIN | 0.5465 | -0.011 | No Trend | 0.8026 | 0.000 | High BDLs | 0.8446 | Same | 0.7619 | No Trend |
| CB7PH | Fall | BDIN | 1.0000 | -0.006 | No Trend | 0.4018 | 0.000 | No Trend | 0.4127 | Same | 0.3927 | No Trend |
| CB7PH | Fall | STP | 1.0000 | -0.001 | No Trend | 0.0020 | 0.000 | Improving | 0.0022 | Different | 0.0019 | Improving 88 |
| CB7PH | Fall | BTP | 1.0000 | -0.001 | No Trend | 0.0145 | 0.000 | No Trend | 0.0154 | Same | 0.0140 | No Trend |
| CB7PH | Fall | SPO4F | 0.1120 | -0.001 | High BDLs | 0.4731 | 0.000 | High BDLs | 0.3988 | Same | 0.5565 | No Trend |
| CB7PH | Fall | BPO4F | 1.0000 | 0.000 | No Trend | 0.3956 | 0.000 | High BDLs | 0.3965 | Same | 0.3965 | No Trend |
| CB8PH | Fall | STN | 0.0704 | -0.134 | No Trend | 0.0712 | 0.002 | No Trend | 0.0538 | Same | 0.0942 | No Trend |
| CB8PH | Fall | BTN | 0.0159 | -0.173 | Improving | 0.7792 | 0.001 | No Trend | 0.6544 | Same | 0.9109 | No Trend |
| CB8PH | Fall | SDIN | 0.0704 | -0.019 | No Trend | 0.2902 | -0.001 | No Trend | 0.3532 | Same | 0.2367 | No Trend |
| CB8PH | Fall | BDIN | 0.0704 | -0.028 | No Trend | 0.9129 | 0.000 | No Trend | 0.8129 | Same | 0.9855 | No Trend |
| CB8PH | Fall | STP | 0.0704 | -0.014 | No Trend | 0.0000 | -0.001 | Improving | 0.0001 | Different | 0.0000 | Improving 88 |
| CB8PH | Fall | BTP | 0.0704 | -0.032 | No Trend | 0.0003 | -0.001 | Improving | 0.0005 | Different | 0.0002 | Improving 88 |
| CB8PH | Fall | SPO4F | 1.0000 | -0.002 | No Trend | 0.0006 | 0.000 | Improving | 0.0007 | Different | 0.0006 | Improving 88 |
| CB8PH | Fall | BPO4F | 0.0704 | -0.005 | No Trend | 0.0000 | 0.000 | Improving | 0.0000 | Different | 0.0000 | Improving 88 |
| PIAMH | SAV1 | STN | 1.0000 | 0.003 | No Trend | 0.0010 | -0.004 | Improving | 0.0010 | Different | 0.0011 | Improving 88 |
| PIAMH | SAV1 | BTN | 0.6930 | 0.036 | No Trend | 0.0073 | -0.003 | Improving | 0.0066 | Different | 0.0082 | Improving 88 |
| PIAMH | SAV1 | SDIN | 1.0000 | 0.000 | High BDLs | 0.0000 | -0.001 | High BDLs | 0.0000 | Different | 0.0000 | No Trend* |
| PIAMH | SAV1 | BDIN | 0.6464 | 0.000 | High BDLs | 0.0255 | -0.001 | High BDLs | 0.0234 | Same | 0.0282 | No Trend |
| PIAMH | SAV1 | STP | 0.0268 | 0.005 | No Trend | 0.1087 | 0.000 | No Trend | 0.0812 | Same | 0.1446 | No Trend |
| PIAMH | SAV1 | BTP | 0.0484 | 0.007 | No Trend | 0.0398 | 0.000 | No Trend | 0.0291 | Same | 0.0547 | No Trend |
| PIAMH | SAV1 | SPO4F | 0.3902 | 0.000 | High BDLs | 0.5815 | 0.000 | High BDLs | 0.4857 | Same | 0.6935 | No Trend |
| PIAMH | SAV1 | BPO4F | 0.5286 | 0.000 | High BDLs | 0.2221 | 0.000 | High BDLs | 0.2560 | Same | 0.1952 | No Trend |
| POCMH | SAV1 | STN | 1.0000 | 0.021 | No Trend | 0.0005 | -0.007 | Improving | 0.0005 | Different | 0.0005 | Improving 88 |
| POCMH | SAV1 | BTN | 0.0484 | 0.036 | No Trend | 0.0001 | -0.007 | Improving | 0.0001 | Different | 0.0002 | Improving 88 |
| POCMH | SAV1 | SDIN | 1.0000 | 0.005 | No Trend | 0.0001 | -0.001 | Improving | 0.0001 | Different | 0.0001 | Improving 88 |
| POCMH | SAV1 | BDIN | 0.4298 | 0.003 | No Trend | 0.0000 | -0.001 | Improving | 0.0000 | Different | 0.0000 | Improving 88 |
| POCMH | SAV1 | STP | 0.1587 | 0.003 | No Trend | 0.0000 | -0.001 | Improving | 0.0000 | Different | 0.0000 | Improving 88 |
| POCMH | SAV1 | BTP | 0.0238 | 0.003 | No Trend | 0.0000 | -0.001 | Improving | 0.0000 | Different | 0.0000 | Improving 88 |
| POCMH | SAV1 | SPO4F | 1.0000 | 0.000 | High BDLs | 0.0006 | 0.000 | High BDLs | 0.0007 | Different | 0.0007 | No Trend* |
| POCMH | SAV1 | BPO4F | 1.0000 | 0.000 | High BDLs | 0.0071 | 0.000 | High BDLs | 0.0072 | Different | 0.0072 | No Trend* |

Appendix A - Section IE. Virginia Mainstem (1985-2008) - Continued.

| Segment | Season | Parameter | '93 | | '93 | | '08 | | '08 | | Trend | | Combined | | Combined | |
|---------|--------|-----------|--------|--------|-----------|--------|--------|-----------|--------|------------|---------|------------|----------|-----------|----------|-----------|
| | | | Trend | '93 | Trend | Trend | '08 | '08 | Trend | Comparison | P value | Comparison | Trend | P value | Trend | Direction |
| CB6PH | SAV1 | STN | 1.0000 | 0.002 | No Trend | 0.0001 | -0.004 | Improving | 0.0001 | Different | 0.0001 | Different | 0.0001 | Improving | 88 | |
| CB6PH | SAV1 | BTN | 1.0000 | -0.007 | No Trend | 0.0001 | -0.004 | Improving | 0.0001 | Different | 0.0001 | Different | 0.0001 | Improving | 88 | |
| CB6PH | SAV1 | SDIN | 0.8404 | -0.001 | No Trend | 0.3790 | 0.000 | No Trend | 0.3676 | Same | 0.3923 | Same | 0.3923 | No Trend | | |
| CB6PH | SAV1 | BDIN | 0.1143 | -0.009 | No Trend | 0.1638 | -0.001 | No Trend | 0.1979 | Same | 0.1355 | Same | 0.1355 | No Trend | | |
| CB6PH | SAV1 | STP | 0.6930 | 0.001 | No Trend | 0.0004 | 0.000 | Improving | 0.0003 | Different | 0.0004 | Different | 0.0004 | Improving | 88 | |
| CB6PH | SAV1 | BTP | 0.3141 | 0.002 | No Trend | 0.5681 | 0.000 | No Trend | 0.5233 | Same | 0.6160 | Same | 0.6160 | No Trend | | |
| CB6PH | SAV1 | SPO4F | 0.4533 | 0.000 | High BDLs | 0.1078 | 0.000 | High BDLs | 0.0955 | Same | 0.1227 | Same | 0.1227 | No Trend | | |
| CB6PH | SAV1 | BPO4F | 0.1175 | 0.001 | High BDLs | 0.4987 | 0.000 | High BDLs | 0.4334 | Same | 0.5705 | Same | 0.5705 | No Trend | | |
| CB7PH | SAV1 | STN | 1.0000 | -0.001 | No Trend | 0.0005 | -0.004 | Improving | 0.0006 | Different | 0.0005 | Different | 0.0005 | Improving | 88 | |
| CB7PH | SAV1 | BTN | 0.6930 | -0.017 | No Trend | 0.0000 | -0.004 | Improving | 0.0000 | Different | 0.0000 | Different | 0.0000 | Improving | 88 | |
| CB7PH | SAV1 | SDIN | 0.2174 | -0.005 | No Trend | 0.3473 | 0.000 | No Trend | 0.3085 | Same | 0.3907 | Same | 0.3907 | No Trend | | |
| CB7PH | SAV1 | BDIN | 0.4298 | -0.009 | No Trend | 0.2782 | 0.000 | No Trend | 0.3051 | Same | 0.2545 | Same | 0.2545 | No Trend | | |
| CB7PH | SAV1 | STP | 1.0000 | -0.001 | No Trend | 0.0000 | 0.000 | Improving | 0.0000 | Different | 0.0000 | Different | 0.0000 | Improving | 88 | |
| CB7PH | SAV1 | BTP | 0.0484 | 0.002 | No Trend | 0.0006 | 0.000 | Improving | 0.0004 | Different | 0.0009 | Different | 0.0009 | Improving | 88 | |
| CB7PH | SAV1 | SPO4F | 0.5973 | 0.000 | High BDLs | 0.4491 | 0.000 | High BDLs | 0.4155 | Same | 0.4870 | Same | 0.4870 | No Trend | | |
| CB7PH | SAV1 | BPO4F | 0.5023 | 0.000 | High BDLs | 0.0054 | 0.000 | High BDLs | 0.0047 | Different | 0.0065 | Different | 0.0065 | No Trend* | | |
| CB8PH | SAV1 | STN | 0.6930 | 0.022 | No Trend | 0.0505 | 0.002 | No Trend | 0.0552 | Same | 0.0469 | Same | 0.0469 | No Trend | | |
| CB8PH | SAV1 | BTN | 0.6930 | -0.001 | No Trend | 0.2590 | 0.001 | No Trend | 0.2453 | Same | 0.2751 | Same | 0.2751 | No Trend | | |
| CB8PH | SAV1 | SDIN | 0.1356 | -0.001 | No Trend | 0.0046 | 0.001 | Degrading | 0.0034 | Different | 0.0062 | Different | 0.0062 | Degrading | 88 | |
| CB8PH | SAV1 | BDIN | 0.0179 | -0.008 | No Trend | 0.0867 | 0.000 | No Trend | 0.0627 | Same | 0.1191 | Same | 0.1191 | No Trend | | |
| CB8PH | SAV1 | STP | 0.0057 | -0.010 | Improving | 0.0000 | 0.000 | Improving | 0.0000 | Different | 0.0000 | Different | 0.0000 | Improving | | |
| CB8PH | SAV1 | BTP | 0.0057 | -0.011 | Improving | 0.0000 | -0.001 | Improving | 0.0000 | Different | 0.0000 | Different | 0.0000 | Improving | | |
| CB8PH | SAV1 | SPO4F | 0.2298 | 0.000 | High BDLs | 0.0000 | 0.000 | High BDLs | 0.0000 | Different | 0.0000 | Different | 0.0000 | No Trend* | | |
| CB8PH | SAV1 | BPO4F | 0.0587 | -0.002 | No Trend | 0.0000 | 0.000 | High BDLs | 0.0000 | Different | 0.0000 | Different | 0.0000 | No Trend* | | |
| PIAMH | SAV2 | STN | 0.2864 | -0.017 | No Trend | 0.0002 | -0.005 | Improving | 0.0002 | Different | 0.0001 | Different | 0.0001 | Improving | 88 | |
| PIAMH | SAV2 | BTN | 0.8312 | -0.005 | No Trend | 0.0001 | -0.005 | Improving | 0.0001 | Different | 0.0001 | Different | 0.0001 | Improving | 88 | |
| PIAMH | SAV2 | SDIN | 0.8102 | 0.000 | High BDLs | 0.1150 | -0.001 | High BDLs | 0.1097 | Same | 0.1215 | Same | 0.1215 | No Trend | | |
| PIAMH | SAV2 | BDIN | 1.0000 | 0.000 | High BDLs | 0.0669 | -0.001 | High BDLs | 0.0693 | Same | 0.0655 | Same | 0.0655 | No Trend | | |
| PIAMH | SAV2 | STP | 0.0550 | 0.002 | No Trend | 0.0006 | 0.000 | Improving | 0.0004 | Different | 0.0010 | Different | 0.0010 | Improving | 88 | |
| PIAMH | SAV2 | BTP | 0.2864 | 0.002 | No Trend | 0.0006 | 0.000 | Improving | 0.0005 | Different | 0.0008 | Different | 0.0008 | Improving | 88 | |
| PIAMH | SAV2 | SPO4F | 1.0000 | 0.000 | High BDLs | 0.2232 | 0.000 | High BDLs | 0.2316 | Same | 0.2175 | Same | 0.2175 | No Trend | | |
| PIAMH | SAV2 | BPO4F | 1.0000 | 0.000 | High BDLs | 0.2917 | 0.000 | High BDLs | 0.3016 | Same | 0.2847 | Same | 0.2847 | No Trend | | |
| POCMH | SAV2 | STN | 0.8312 | -0.007 | No Trend | 0.0001 | -0.005 | Improving | 0.0001 | Different | 0.0001 | Different | 0.0001 | Improving | 88 | |
| POCMH | SAV2 | BTN | 1.0000 | 0.007 | No Trend | 0.0017 | -0.004 | Improving | 0.0017 | Different | 0.0017 | Different | 0.0017 | Improving | 88 | |
| POCMH | SAV2 | SDIN | 1.0000 | 0.001 | No Trend | 0.0155 | -0.001 | No Trend | 0.0156 | Same | 0.0156 | Same | 0.0156 | No Trend | | |
| POCMH | SAV2 | BDIN | 0.8312 | 0.002 | No Trend | 0.0225 | -0.001 | No Trend | 0.0213 | Same | 0.0243 | Same | 0.0243 | No Trend | | |
| POCMH | SAV2 | STP | 0.5224 | 0.001 | No Trend | 0.0012 | 0.000 | Improving | 0.0010 | Different | 0.0014 | Different | 0.0014 | Improving | 88 | |
| POCMH | SAV2 | BTP | 0.5224 | 0.001 | No Trend | 0.0018 | 0.000 | Improving | 0.0015 | Different | 0.0021 | Different | 0.0021 | Improving | 88 | |
| POCMH | SAV2 | SPO4F | 0.3583 | 0.000 | High BDLs | 0.0341 | 0.000 | High BDLs | 0.0397 | Same | 0.0295 | Same | 0.0295 | No Trend | | |
| POCMH | SAV2 | BPO4F | 0.7842 | 0.000 | High BDLs | 0.1205 | 0.000 | High BDLs | 0.1282 | Same | 0.1142 | Same | 0.1142 | No Trend | | |
| CB6PH | SAV2 | STN | 0.8312 | -0.007 | No Trend | 0.0000 | -0.005 | Improving | 0.0000 | Different | 0.0000 | Different | 0.0000 | Improving | 88 | |
| CB6PH | SAV2 | BTN | 0.8312 | -0.007 | No Trend | 0.0000 | -0.005 | Improving | 0.0000 | Different | 0.0000 | Different | 0.0000 | Improving | 88 | |
| CB6PH | SAV2 | SDIN | 1.0000 | 0.001 | No Trend | 0.1562 | -0.001 | High BDLs | 0.1569 | Same | 0.1569 | Same | 0.1569 | No Trend | | |
| CB6PH | SAV2 | BDIN | 1.0000 | 0.001 | No Trend | 0.2465 | -0.001 | No Trend | 0.2473 | Same | 0.2473 | Same | 0.2473 | No Trend | | |
| CB6PH | SAV2 | STP | 0.2864 | 0.001 | No Trend | 0.0003 | 0.000 | Improving | 0.0002 | Different | 0.0004 | Different | 0.0004 | Improving | 88 | |
| CB6PH | SAV2 | BTP | 0.2864 | 0.001 | No Trend | 0.0291 | 0.000 | No Trend | 0.0243 | Same | 0.0353 | Same | 0.0353 | No Trend | | |
| CB6PH | SAV2 | SPO4F | 0.7842 | 0.000 | High BDLs | 0.2913 | 0.000 | High BDLs | 0.3100 | Same | 0.2755 | Same | 0.2755 | No Trend | | |
| CB6PH | SAV2 | BPO4F | 0.7842 | 0.000 | High BDLs | 0.1984 | 0.000 | High BDLs | 0.2126 | Same | 0.1869 | Same | 0.1869 | No Trend | | |

Appendix A - Section IE. Virginia Mainstem (1985-2008) - Continued.

| Segment | Season | Parameter | '93 | | '93 | | '08 | | '08 | | Trend | | Combined | | Combined | |
|---------|---------|-----------|--------|---------|-----------|--------|--------|-----------|--------|-----------|--------|------------|----------|------------|----------|-----------|
| | | | Trend | P value | '93 | Slope | Trend | P value | '08 | Slope | Trend | Comparison | P value | Comparison | Trend | Direction |
| CB7PH | SAV2 | STN | 0.8312 | -0.007 | No Trend | 0.0000 | -0.005 | Improving | 0.0000 | Different | 0.0000 | Different | 0.0000 | Improving | 88 | |
| CB7PH | SAV2 | BTN | 0.8312 | -0.007 | No Trend | 0.0000 | -0.005 | Improving | 0.0000 | Different | 0.0000 | Different | 0.0000 | Improving | 88 | |
| CB7PH | SAV2 | SDIN | 0.8312 | -0.002 | No Trend | 0.1526 | -0.001 | High BDLs | 0.1605 | Same | 0.1463 | No Trend | 0.1463 | No Trend | | |
| CB7PH | SAV2 | BDIN | 0.8312 | -0.001 | No Trend | 0.3748 | 0.000 | No Trend | 0.3890 | Same | 0.3624 | No Trend | 0.3624 | No Trend | | |
| CB7PH | SAV2 | STP | 0.8312 | 0.001 | No Trend | 0.0002 | 0.000 | Improving | 0.0002 | Different | 0.0002 | Improving | 0.0002 | Improving | 88 | |
| CB7PH | SAV2 | BTP | 0.1356 | 0.001 | No Trend | 0.0053 | 0.000 | Improving | 0.0040 | Different | 0.0073 | Improving | 0.0073 | Improving | 88 | |
| CB7PH | SAV2 | SPO4F | 0.7842 | 0.000 | High BDLs | 0.2285 | 0.000 | High BDLs | 0.2437 | Same | 0.2159 | No Trend | 0.2159 | No Trend | | |
| CB7PH | SAV2 | BPO4F | 0.7842 | 0.000 | High BDLs | 0.1891 | 0.000 | High BDLs | 0.2019 | Same | 0.1786 | No Trend | 0.1786 | No Trend | | |
| CB8PH | SAV2 | STN | 0.8312 | -0.007 | No Trend | 0.0022 | -0.003 | Improving | 0.0024 | Different | 0.0021 | Improving | 0.0021 | Improving | 88 | |
| CB8PH | SAV2 | BTN | 0.5224 | -0.011 | No Trend | 0.0051 | -0.003 | Improving | 0.0061 | Different | 0.0044 | Improving | 0.0044 | Improving | 88 | |
| CB8PH | SAV2 | SDIN | 0.8312 | -0.001 | High BDLs | 0.6047 | 0.000 | High BDLs | 0.6230 | Same | 0.5878 | No Trend | 0.5878 | No Trend | | |
| CB8PH | SAV2 | BDIN | 0.5224 | -0.002 | No Trend | 0.9496 | 0.000 | No Trend | 0.9095 | Same | 0.9899 | No Trend | 0.9899 | No Trend | | |
| CB8PH | SAV2 | STP | 0.1356 | -0.005 | No Trend | 0.0000 | 0.000 | Improving | 0.0000 | Different | 0.0000 | Improving | 0.0000 | Improving | 88 | |
| CB8PH | SAV2 | BTP | 0.5224 | -0.006 | No Trend | 0.0026 | 0.000 | Improving | 0.0031 | Different | 0.0022 | Improving | 0.0022 | Improving | 88 | |
| CB8PH | SAV2 | SPO4F | 0.0137 | -0.001 | High BDLs | 0.0078 | 0.000 | High BDLs | 0.0125 | Same | 0.0049 | Improving | 0.0049 | Improving | | |
| CB8PH | SAV2 | BPO4F | 0.0153 | -0.001 | Improving | 0.0042 | 0.000 | High BDLs | 0.0068 | Different | 0.0026 | Improving | 0.0026 | Improving | 85 | |
| PIAMH | Spring1 | STN | 1.0000 | 0.019 | No Trend | 0.2942 | -0.003 | No Trend | 0.2866 | Same | 0.3038 | No Trend | 0.3038 | No Trend | | |
| PIAMH | Spring1 | BTN | 0.2278 | 0.042 | No Trend | 0.1897 | -0.004 | No Trend | 0.1608 | Same | 0.2242 | No Trend | 0.2242 | No Trend | | |
| PIAMH | Spring1 | SDIN | 1.0000 | 0.000 | High BDLs | 0.2193 | -0.001 | High BDLs | 0.2128 | Same | 0.2270 | No Trend | 0.2270 | No Trend | | |
| PIAMH | Spring1 | BDIN | 0.7518 | -0.044 | High BDLs | 0.1082 | -0.002 | High BDLs | 0.1174 | Same | 0.1007 | No Trend | 0.1007 | No Trend | | |
| PIAMH | Spring1 | STP | 0.0159 | 0.006 | Degrading | 0.0427 | 0.000 | No Trend | 0.0284 | Same | 0.0637 | No Trend | 0.0637 | No Trend | | |
| PIAMH | Spring1 | BTP | 0.2278 | 0.005 | No Trend | 0.0409 | 0.000 | No Trend | 0.0328 | Same | 0.0516 | No Trend | 0.0516 | No Trend | | |
| PIAMH | Spring1 | SPO4F | 0.1824 | 0.000 | High BDLs | 0.1774 | 0.000 | High BDLs | 0.1035 | Same | 0.3053 | No Trend | 0.3053 | No Trend | | |
| PIAMH | Spring1 | BPO4F | 0.1824 | 0.000 | High BDLs | 0.4138 | 0.000 | High BDLs | 0.2661 | Same | 0.6211 | No Trend | 0.6211 | No Trend | | |
| POCMH | Spring1 | STN | 0.2278 | 0.090 | No Trend | 0.2424 | -0.005 | No Trend | 0.2083 | Same | 0.2820 | No Trend | 0.2820 | No Trend | | |
| POCMH | Spring1 | BTN | 0.0704 | 0.077 | No Trend | 0.8305 | -0.001 | No Trend | 0.7351 | Same | 0.9291 | No Trend | 0.9291 | No Trend | | |
| POCMH | Spring1 | SDIN | 1.0000 | -0.007 | No Trend | 0.0144 | -0.003 | No Trend | 0.0153 | Same | 0.0138 | No Trend | 0.0138 | No Trend | | |
| POCMH | Spring1 | BDIN | 1.0000 | 0.003 | No Trend | 0.0258 | -0.002 | No Trend | 0.0248 | Same | 0.0272 | No Trend | 0.0272 | No Trend | | |
| POCMH | Spring1 | STP | 0.5465 | 0.005 | No Trend | 0.0734 | 0.000 | No Trend | 0.0655 | Same | 0.0832 | No Trend | 0.0832 | No Trend | | |
| POCMH | Spring1 | BTP | 0.5465 | 0.004 | No Trend | 0.1008 | 0.000 | No Trend | 0.0907 | Same | 0.1130 | No Trend | 0.1130 | No Trend | | |
| POCMH | Spring1 | SPO4F | 0.5403 | 0.000 | High BDLs | 0.0207 | 0.000 | High BDLs | 0.0183 | Same | 0.0236 | No Trend | 0.0236 | No Trend | | |
| POCMH | Spring1 | BPO4F | 0.1939 | 0.000 | High BDLs | 0.1648 | 0.000 | High BDLs | 0.1397 | Same | 0.1944 | No Trend | 0.1944 | No Trend | | |
| CB6PH | Spring1 | STN | 0.2278 | 0.135 | No Trend | 0.0397 | -0.005 | No Trend | 0.0323 | Same | 0.0492 | No Trend | 0.0492 | No Trend | | |
| CB6PH | Spring1 | BTN | 0.2278 | 0.062 | No Trend | 0.0177 | -0.006 | No Trend | 0.0141 | Same | 0.0226 | No Trend | 0.0226 | No Trend | | |
| CB6PH | Spring1 | SDIN | 1.0000 | -0.007 | No Trend | 0.3203 | -0.001 | No Trend | 0.3296 | Same | 0.3127 | No Trend | 0.3127 | No Trend | | |
| CB6PH | Spring1 | BDIN | 1.0000 | -0.002 | No Trend | 0.5302 | -0.001 | No Trend | 0.5424 | Same | 0.5196 | No Trend | 0.5196 | No Trend | | |
| CB6PH | Spring1 | STP | 0.2278 | 0.002 | No Trend | 0.0202 | 0.000 | No Trend | 0.0162 | Same | 0.0257 | No Trend | 0.0257 | No Trend | | |
| CB6PH | Spring1 | BTP | 0.2278 | 0.002 | No Trend | 0.7536 | 0.000 | No Trend | 0.6888 | Same | 0.8209 | No Trend | 0.8209 | No Trend | | |
| CB6PH | Spring1 | SPO4F | 0.1939 | 0.000 | High BDLs | 0.3218 | 0.000 | High BDLs | 0.1944 | Same | 0.5164 | No Trend | 0.5164 | No Trend | | |
| CB6PH | Spring1 | BPO4F | 0.1939 | 0.000 | High BDLs | 0.1290 | 0.000 | High BDLs | 0.0826 | Same | 0.2030 | No Trend | 0.2030 | No Trend | | |
| CB7PH | Spring1 | STN | 0.2278 | 0.065 | No Trend | 0.1087 | -0.005 | No Trend | 0.0914 | Same | 0.1300 | No Trend | 0.1300 | No Trend | | |
| CB7PH | Spring1 | BTN | 0.2278 | 0.065 | No Trend | 0.0431 | -0.004 | No Trend | 0.0352 | Same | 0.0534 | No Trend | 0.0534 | No Trend | | |
| CB7PH | Spring1 | SDIN | 0.5465 | -0.004 | No Trend | 0.3116 | -0.001 | No Trend | 0.3381 | Same | 0.2880 | No Trend | 0.2880 | No Trend | | |
| CB7PH | Spring1 | BDIN | 0.5465 | -0.009 | No Trend | 0.8072 | 0.000 | No Trend | 0.8482 | Same | 0.7673 | No Trend | 0.7673 | No Trend | | |
| CB7PH | Spring1 | STP | 1.0000 | 0.000 | No Trend | 0.0108 | 0.000 | No Trend | 0.0104 | Same | 0.0115 | No Trend | 0.0115 | No Trend | | |
| CB7PH | Spring1 | BTP | 0.0704 | 0.002 | No Trend | 0.2426 | 0.000 | No Trend | 0.1976 | Same | 0.2962 | No Trend | 0.2962 | No Trend | | |
| CB7PH | Spring1 | SPO4F | 0.1939 | 0.000 | High BDLs | 0.2653 | 0.000 | High BDLs | 0.1938 | Same | 0.3605 | No Trend | 0.3605 | No Trend | | |
| CB7PH | Spring1 | BPO4F | 0.1939 | 0.000 | High BDLs | 0.2195 | 0.000 | High BDLs | 0.1689 | Same | 0.2846 | No Trend | 0.2846 | No Trend | | |

Appendix A - Section IE. Virginia Mainstem (1985-2008) - Continued.

| Segment | Season | Parameter | '93 | | '93 | | '08 | | '08 | | Trend | | Combined | | Combined |
|---------|---------|-----------|---------|--------|-----------|---------|--------|-----------|---------|------------|---------|------------|----------|--------------|----------|
| | | | Trend | '93 | Trend | Trend | '08 | '08 | Trend | Comparison | Trend | Comparison | Trend | Trend | |
| | | | P value | Slope | Direction | P value | Slope | Direction | P value | Comparison | P value | Comparison | P value | Direction | |
| CB8PH | Spring1 | STN | 0.2278 | 0.058 | No Trend | 1.0000 | 0.000 | No Trend | 0.9255 | Same | 0.9255 | Same | 0.9255 | No Trend | |
| CB8PH | Spring1 | BTN | 0.5465 | 0.029 | No Trend | 0.7423 | 0.000 | No Trend | 0.7845 | Same | 0.7018 | Same | 0.7018 | No Trend | |
| CB8PH | Spring1 | SDIN | 0.5465 | -0.002 | No Trend | 0.7556 | 0.000 | High BDLs | 0.7147 | Same | 0.7980 | Same | 0.7980 | No Trend | |
| CB8PH | Spring1 | BDIN | 0.2278 | -0.005 | No Trend | 0.2471 | 0.000 | High BDLs | 0.2124 | Same | 0.2875 | Same | 0.2875 | No Trend | |
| CB8PH | Spring1 | STP | 0.0159 | -0.006 | Improving | 0.0002 | 0.000 | Improving | 0.0004 | Different | 0.0001 | Different | 0.0001 | Improving | |
| CB8PH | Spring1 | BTP | 0.2278 | -0.009 | No Trend | 0.1436 | 0.000 | No Trend | 0.1712 | Same | 0.1209 | Same | 0.1209 | No Trend | |
| CB8PH | Spring1 | SPO4F | 0.1939 | 0.000 | High BDLs | 0.0007 | 0.000 | High BDLs | 0.0010 | Different | 0.0004 | Different | 0.0004 | No Trend* | |
| CB8PH | Spring1 | BPO4F | 0.1824 | -0.002 | High BDLs | 0.0012 | 0.000 | High BDLs | 0.0018 | Different | 0.0009 | Different | 0.0009 | No Trend* | |
| PIAMH | Spring2 | STN | 0.0704 | 0.022 | No Trend | 0.1657 | -0.003 | No Trend | 0.1299 | Same | 0.2103 | Same | 0.2103 | No Trend | |
| PIAMH | Spring2 | BTN | 0.2278 | 0.037 | No Trend | 0.1764 | -0.004 | No Trend | 0.1497 | Same | 0.2083 | Same | 0.2083 | No Trend | |
| PIAMH | Spring2 | SDIN | 1.0000 | 0.000 | High BDLs | 0.0202 | -0.002 | High BDLs | 0.0202 | Same | 0.0202 | Same | 0.0202 | No Trend | |
| PIAMH | Spring2 | BDIN | 0.4268 | 0.000 | High BDLs | 0.1671 | -0.002 | High BDLs | 0.1852 | Same | 0.1512 | Same | 0.1512 | No Trend | |
| PIAMH | Spring2 | STP | 0.5465 | 0.006 | No Trend | 0.0825 | 0.000 | No Trend | 0.0738 | Same | 0.0932 | Same | 0.0932 | No Trend | |
| PIAMH | Spring2 | BTP | 0.2278 | 0.007 | No Trend | 0.1077 | 0.000 | No Trend | 0.0897 | Same | 0.1299 | Same | 0.1299 | No Trend | |
| PIAMH | Spring2 | SPO4F | 0.0771 | 0.000 | High BDLs | 0.2374 | 0.000 | High BDLs | 0.1436 | Same | 0.3802 | Same | 0.3802 | No Trend | |
| PIAMH | Spring2 | BPO4F | 0.0771 | 0.000 | High BDLs | 0.7542 | 0.000 | High BDLs | 0.5860 | Same | 0.9380 | Same | 0.9380 | No Trend | |
| POCMH | Spring2 | STN | 0.5465 | 0.062 | No Trend | 0.0868 | -0.005 | No Trend | 0.0779 | Same | 0.0977 | Same | 0.0977 | No Trend | |
| POCMH | Spring2 | BTN | 0.2278 | 0.076 | No Trend | 0.0813 | -0.005 | No Trend | 0.0676 | Same | 0.0982 | Same | 0.0982 | No Trend | |
| POCMH | Spring2 | SDIN | 0.5465 | -0.012 | No Trend | 0.0041 | -0.002 | Improving | 0.0049 | Different | 0.0035 | Different | 0.0035 | Improving 88 | |
| POCMH | Spring2 | BDIN | 1.0000 | -0.014 | No Trend | 0.0050 | -0.001 | Improving | 0.0053 | Different | 0.0048 | Different | 0.0048 | Improving 88 | |
| POCMH | Spring2 | STP | 0.0704 | 0.004 | No Trend | 0.1165 | 0.000 | No Trend | 0.0907 | Same | 0.1492 | Same | 0.1492 | No Trend | |
| POCMH | Spring2 | BTP | 0.3428 | 0.003 | No Trend | 0.0469 | 0.000 | No Trend | 0.0400 | Same | 0.0555 | Same | 0.0555 | No Trend | |
| POCMH | Spring2 | SPO4F | 0.5403 | 0.000 | High BDLs | 0.0078 | 0.000 | High BDLs | 0.0067 | Different | 0.0091 | Different | 0.0091 | No Trend* | |
| POCMH | Spring2 | BPO4F | 0.5403 | 0.000 | High BDLs | 0.1403 | 0.000 | High BDLs | 0.1278 | Same | 0.1543 | Same | 0.1543 | No Trend | |
| CB6PH | Spring2 | STN | 0.2278 | 0.092 | No Trend | 0.0551 | -0.004 | No Trend | 0.0453 | Same | 0.0676 | Same | 0.0676 | No Trend | |
| CB6PH | Spring2 | BTN | 0.2278 | 0.053 | No Trend | 0.0551 | -0.004 | No Trend | 0.0453 | Same | 0.0676 | Same | 0.0676 | No Trend | |
| CB6PH | Spring2 | SDIN | 0.5465 | -0.006 | No Trend | 0.6880 | 0.000 | No Trend | 0.7274 | Same | 0.6504 | Same | 0.6504 | No Trend | |
| CB6PH | Spring2 | BDIN | 0.5465 | -0.008 | No Trend | 0.5533 | -0.001 | No Trend | 0.5894 | Same | 0.5195 | Same | 0.5195 | No Trend | |
| CB6PH | Spring2 | STP | 0.5465 | 0.001 | No Trend | 0.0574 | 0.000 | No Trend | 0.0512 | Same | 0.0650 | Same | 0.0650 | No Trend | |
| CB6PH | Spring2 | BTP | 0.0704 | 0.002 | No Trend | 0.5301 | 0.000 | No Trend | 0.6136 | Same | 0.4540 | Same | 0.4540 | No Trend | |
| CB6PH | Spring2 | SPO4F | 0.1939 | 0.000 | High BDLs | 0.1290 | 0.000 | High BDLs | 0.0826 | Same | 0.2030 | Same | 0.2030 | No Trend | |
| CB6PH | Spring2 | BPO4F | 0.1939 | 0.000 | High BDLs | 0.1522 | 0.000 | High BDLs | 0.1211 | Same | 0.1913 | Same | 0.1913 | No Trend | |
| CB7PH | Spring2 | STN | 0.5465 | 0.052 | No Trend | 0.1250 | -0.003 | No Trend | 0.1132 | Same | 0.1390 | Same | 0.1390 | No Trend | |
| CB7PH | Spring2 | BTN | 0.5465 | 0.034 | No Trend | 0.2357 | -0.002 | No Trend | 0.2165 | Same | 0.2578 | Same | 0.2578 | No Trend | |
| CB7PH | Spring2 | SDIN | 0.3428 | -0.009 | No Trend | 0.7007 | 0.000 | High BDLs | 0.7535 | Same | 0.6502 | Same | 0.6502 | No Trend | |
| CB7PH | Spring2 | BDIN | 0.5465 | -0.011 | No Trend | 0.8343 | 0.000 | No Trend | 0.7940 | Same | 0.8755 | Same | 0.8755 | No Trend | |
| CB7PH | Spring2 | STP | 0.5465 | 0.001 | No Trend | 0.0346 | 0.000 | No Trend | 0.0307 | Same | 0.0397 | Same | 0.0397 | No Trend | |
| CB7PH | Spring2 | BTP | 0.0159 | 0.002 | Degrading | 0.3288 | 0.000 | No Trend | 0.2578 | Same | 0.4133 | Same | 0.4133 | No Trend | |
| CB7PH | Spring2 | SPO4F | 0.5403 | 0.000 | High BDLs | 0.3218 | 0.000 | High BDLs | 0.2519 | Same | 0.4132 | Same | 0.4132 | No Trend | |
| CB7PH | Spring2 | BPO4F | 0.1939 | 0.000 | High BDLs | 0.0140 | 0.000 | High BDLs | 0.0104 | Same | 0.0190 | Same | 0.0190 | No Trend | |
| CB8PH | Spring2 | STN | 0.5465 | 0.033 | No Trend | 0.2730 | 0.002 | No Trend | 0.2986 | Same | 0.2506 | Same | 0.2506 | No Trend | |
| CB8PH | Spring2 | BTN | 1.0000 | 0.029 | No Trend | 0.2574 | 0.002 | No Trend | 0.2660 | Same | 0.2507 | Same | 0.2507 | No Trend | |
| CB8PH | Spring2 | SDIN | 0.7119 | 0.000 | High BDLs | 0.1268 | 0.001 | High BDLs | 0.1184 | Same | 0.1367 | Same | 0.1367 | No Trend | |
| CB8PH | Spring2 | BDIN | 0.0704 | -0.004 | High BDLs | 0.0642 | 0.001 | High BDLs | 0.0483 | Same | 0.0856 | Same | 0.0856 | No Trend | |
| CB8PH | Spring2 | STP | 0.0159 | -0.006 | Improving | 0.0058 | 0.000 | Improving | 0.0096 | Different | 0.0035 | Different | 0.0035 | Improving | |
| CB8PH | Spring2 | BTP | 0.0704 | -0.011 | No Trend | 0.0648 | 0.000 | No Trend | 0.0862 | Same | 0.0487 | Same | 0.0487 | No Trend | |
| CB8PH | Spring2 | SPO4F | 0.5403 | 0.000 | High BDLs | 0.0001 | 0.000 | High BDLs | 0.0001 | Different | 0.0001 | Different | 0.0001 | No Trend* | |
| CB8PH | Spring2 | BPO4F | 0.3428 | -0.002 | High BDLs | 0.0000 | 0.000 | High BDLs | 0.0000 | Different | 0.0000 | Different | 0.0000 | No Trend* | |

Appendix A - Section IE. Virginia Mainstem (1985-2008) - Continued.

| Segment | Season | Parameter | '93 | | '93 | | '08 | | '08 | | Trend | | Combined | |
|---------|---------|-----------|--------|---------|-----------|-----------|---------|-----------|-----------|-----------|------------|--------------|----------|-----------|
| | | | Trend | P value | Slope | Direction | P value | Slope | Direction | P value | Comparison | Trend | P value | Direction |
| PIAMH | Summer1 | STN | 0.7940 | -0.014 | No Trend | 0.0099 | -0.003 | Improving | 0.0110 | Same | 0.0092 | Improving | | |
| PIAMH | Summer1 | BTN | 0.4334 | 0.037 | No Trend | 0.0249 | -0.003 | No Trend | 0.0215 | Same | 0.0295 | No Trend | | |
| PIAMH | Summer1 | SDIN | 0.5403 | 0.000 | High BDLs | 0.0001 | -0.001 | High BDLs | 0.0001 | Different | 0.0001 | No Trend* | | |
| PIAMH | Summer1 | BDIN | 0.1824 | 0.003 | High BDLs | 0.1168 | -0.001 | High BDLs | 0.1001 | Same | 0.1364 | No Trend | | |
| PIAMH | Summer1 | STP | 0.5885 | 0.004 | No Trend | 0.3108 | 0.000 | No Trend | 0.2901 | Same | 0.3341 | No Trend | | |
| PIAMH | Summer1 | BTP | 0.0676 | 0.007 | No Trend | 0.1969 | 0.000 | No Trend | 0.1583 | Same | 0.2438 | No Trend | | |
| PIAMH | Summer1 | SPO4F | 0.3993 | 0.000 | High BDLs | 0.8188 | 0.000 | High BDLs | 0.7207 | Same | 0.9223 | No Trend | | |
| PIAMH | Summer1 | BPO4F | 0.5885 | 0.000 | High BDLs | 0.1181 | 0.000 | High BDLs | 0.1350 | Same | 0.1050 | No Trend | | |
| POCMH | Summer1 | STN | 0.7940 | -0.005 | No Trend | 0.0011 | -0.008 | Improving | 0.0013 | Different | 0.0010 | Improving 88 | | |
| POCMH | Summer1 | BTN | 0.4334 | 0.018 | No Trend | 0.0001 | -0.008 | Improving | 0.0001 | Different | 0.0001 | Improving 88 | | |
| POCMH | Summer1 | SDIN | 1.0000 | 0.000 | No Trend | 0.0059 | -0.001 | Improving | 0.0060 | Different | 0.0060 | Improving 88 | | |
| POCMH | Summer1 | BDIN | 0.7940 | 0.001 | No Trend | 0.0008 | -0.001 | Improving | 0.0007 | Different | 0.0009 | Improving 88 | | |
| POCMH | Summer1 | STP | 0.5885 | 0.001 | No Trend | 0.0000 | -0.001 | Improving | 0.0000 | Different | 0.0000 | Improving 88 | | |
| POCMH | Summer1 | BTP | 0.0918 | 0.003 | No Trend | 0.0000 | -0.001 | Improving | 0.0000 | Different | 0.0000 | Improving 88 | | |
| POCMH | Summer1 | SPO4F | 1.0000 | 0.000 | High BDLs | 0.0017 | 0.000 | High BDLs | 0.0018 | Different | 0.0018 | No Trend* | | |
| POCMH | Summer1 | BPO4F | 1.0000 | 0.000 | High BDLs | 0.0137 | 0.000 | High BDLs | 0.0139 | Same | 0.0139 | No Trend | | |
| CB6PH | Summer1 | STN | 0.7940 | -0.015 | No Trend | 0.0007 | -0.003 | Improving | 0.0008 | Different | 0.0006 | Improving 88 | | |
| CB6PH | Summer1 | BTN | 0.4334 | -0.018 | No Trend | 0.0006 | -0.004 | Improving | 0.0007 | Different | 0.0005 | Improving 88 | | |
| CB6PH | Summer1 | SDIN | 1.0000 | 0.000 | No Trend | 0.0673 | 0.000 | High BDLs | 0.0655 | Same | 0.0700 | No Trend | | |
| CB6PH | Summer1 | BDIN | 0.1917 | -0.009 | No Trend | 0.1558 | -0.001 | No Trend | 0.1846 | Same | 0.1317 | No Trend | | |
| CB6PH | Summer1 | STP | 0.4334 | -0.002 | No Trend | 0.0055 | 0.000 | Improving | 0.0067 | Different | 0.0046 | Improving 88 | | |
| CB6PH | Summer1 | BTP | 0.5885 | -0.002 | No Trend | 0.4685 | 0.000 | No Trend | 0.4974 | Same | 0.4419 | No Trend | | |
| CB6PH | Summer1 | SPO4F | 0.3583 | 0.000 | High BDLs | 0.1060 | 0.000 | High BDLs | 0.0918 | Same | 0.1233 | No Trend | | |
| CB6PH | Summer1 | BPO4F | 0.1046 | 0.002 | No Trend | 0.7349 | 0.000 | No Trend | 0.6558 | Same | 0.8177 | No Trend | | |
| CB7PH | Summer1 | STN | 0.4334 | -0.012 | No Trend | 0.0055 | -0.003 | Improving | 0.0066 | Different | 0.0046 | Improving 88 | | |
| CB7PH | Summer1 | BTN | 0.4334 | -0.029 | No Trend | 0.0001 | -0.005 | Improving | 0.0001 | Different | 0.0001 | Improving 88 | | |
| CB7PH | Summer1 | SDIN | 0.1601 | -0.005 | No Trend | 0.0916 | 0.000 | High BDLs | 0.0758 | Same | 0.1110 | No Trend | | |
| CB7PH | Summer1 | BDIN | 0.4334 | -0.008 | No Trend | 0.2329 | 0.000 | No Trend | 0.2582 | Same | 0.2109 | No Trend | | |
| CB7PH | Summer1 | STP | 0.0676 | -0.002 | No Trend | 0.0001 | 0.000 | Improving | 0.0001 | Different | 0.0000 | Improving 88 | | |
| CB7PH | Summer1 | BTP | 0.7940 | 0.001 | No Trend | 0.0008 | 0.000 | Improving | 0.0007 | Different | 0.0009 | Improving 88 | | |
| CB7PH | Summer1 | SPO4F | 0.5050 | 0.000 | High BDLs | 0.3832 | 0.000 | High BDLs | 0.3451 | Same | 0.4266 | No Trend | | |
| CB7PH | Summer1 | BPO4F | 1.0000 | 0.000 | No Trend | 0.0120 | 0.000 | High BDLs | 0.0116 | Same | 0.0127 | No Trend | | |
| CB8PH | Summer1 | STN | 1.0000 | 0.015 | No Trend | 0.1839 | 0.001 | No Trend | 0.1846 | Same | 0.1846 | No Trend | | |
| CB8PH | Summer1 | BTN | 0.7940 | -0.001 | No Trend | 0.3491 | 0.001 | No Trend | 0.3346 | Same | 0.3657 | No Trend | | |
| CB8PH | Summer1 | SDIN | 0.2278 | 0.000 | High BDLs | 0.0021 | 0.001 | High BDLs | 0.0016 | Different | 0.0027 | No Trend* | | |
| CB8PH | Summer1 | BDIN | 0.0676 | -0.009 | No Trend | 0.3116 | 0.000 | No Trend | 0.2582 | Same | 0.3737 | No Trend | | |
| CB8PH | Summer1 | STP | 0.0676 | -0.013 | No Trend | 0.0082 | 0.000 | Improving | 0.0118 | Same | 0.0058 | Improving | | |
| CB8PH | Summer1 | BTP | 0.0188 | -0.016 | Improving | 0.0000 | -0.001 | Improving | 0.0000 | Different | 0.0000 | Improving | | |
| CB8PH | Summer1 | SPO4F | 0.2278 | 0.000 | High BDLs | 0.0016 | 0.000 | High BDLs | 0.0022 | Different | 0.0012 | No Trend* | | |
| CB8PH | Summer1 | BPO4F | 0.3993 | -0.001 | No Trend | 0.0000 | 0.000 | Improving | 0.0000 | Different | 0.0000 | Improving 88 | | |
| PIAMH | Summer2 | STN | 0.2278 | -0.025 | No Trend | 0.0087 | -0.004 | Improving | 0.0114 | Same | 0.0068 | Improving | | |
| PIAMH | Summer2 | BTN | 1.0000 | 0.037 | No Trend | 0.0224 | -0.003 | No Trend | 0.0216 | Same | 0.0237 | No Trend | | |
| PIAMH | Summer2 | SDIN | 0.5403 | 0.000 | High BDLs | 0.0011 | -0.001 | High BDLs | 0.0010 | Different | 0.0013 | No Trend* | | |
| PIAMH | Summer2 | BDIN | 0.1824 | 0.019 | High BDLs | 0.1127 | -0.001 | High BDLs | 0.0942 | Same | 0.1352 | No Trend | | |
| PIAMH | Summer2 | STP | 0.1138 | 0.005 | No Trend | 0.5442 | 0.000 | No Trend | 0.4763 | Same | 0.6180 | No Trend | | |
| PIAMH | Summer2 | BTP | 0.2278 | 0.007 | No Trend | 0.2184 | 0.000 | No Trend | 0.1876 | Same | 0.2544 | No Trend | | |
| PIAMH | Summer2 | SPO4F | 0.7518 | 0.000 | High BDLs | 0.8145 | 0.000 | High BDLs | 0.8766 | Same | 0.7562 | No Trend | | |
| PIAMH | Summer2 | BPO4F | 1.0000 | 0.000 | High BDLs | 0.1080 | 0.000 | High BDLs | 0.1143 | Same | 0.1040 | No Trend | | |

Appendix A - Section IE. Virginia Mainstem (1985-2008) - Continued.

| Segment | Season | Parameter | '93 | | '93 | | '08 | | '08 | | Trend | | Combined | | Combined |
|---------|---------|-----------|---------|--------|-----------|---------|--------|-----------|---------|------------|---------|------------|----------|-----------|----------|
| | | | Trend | '93 | Trend | Trend | '08 | '08 | Trend | Comparison | Trend | Comparison | Trend | Trend | |
| | | | P value | Slope | Direction | P value | Slope | Direction | P value | Comparison | P value | Comparison | P value | Direction | |
| POCMH | Summer2 | STN | 1.0000 | 0.040 | No Trend | 0.0005 | -0.010 | Improving | 0.0005 | Different | 0.0005 | Improving | 88 | | |
| POCMH | Summer2 | BTN | 0.2278 | 0.024 | No Trend | 0.0004 | -0.009 | Improving | 0.0003 | Different | 0.0006 | Improving | 88 | | |
| POCMH | Summer2 | SDIN | 1.0000 | 0.027 | No Trend | 0.0245 | -0.001 | High BDLs | 0.0236 | Same | 0.0259 | No Trend | | | |
| POCMH | Summer2 | BDIN | 0.5465 | 0.021 | No Trend | 0.0023 | -0.001 | Improving | 0.0019 | Different | 0.0028 | Improving | 88 | | |
| POCMH | Summer2 | STP | 1.0000 | 0.000 | No Trend | 0.0000 | -0.001 | Improving | 0.0000 | Different | 0.0000 | Improving | 88 | | |
| POCMH | Summer2 | BTP | 0.2059 | 0.003 | No Trend | 0.0000 | -0.001 | Improving | 0.0000 | Different | 0.0000 | Improving | 88 | | |
| POCMH | Summer2 | SPO4F | 1.0000 | 0.000 | High BDLs | 0.0142 | 0.000 | High BDLs | 0.0144 | Same | 0.0144 | No Trend | | | |
| POCMH | Summer2 | BPO4F | 1.0000 | 0.000 | High BDLs | 0.0191 | 0.000 | High BDLs | 0.0193 | Same | 0.0193 | No Trend | | | |
| CB6PH | Summer2 | STN | 0.5465 | -0.017 | No Trend | 0.0010 | -0.004 | Improving | 0.0012 | Different | 0.0008 | Improving | 88 | | |
| CB6PH | Summer2 | BTN | 0.5465 | -0.023 | No Trend | 0.0006 | -0.005 | Improving | 0.0008 | Different | 0.0005 | Improving | 88 | | |
| CB6PH | Summer2 | SDIN | 1.0000 | 0.000 | No Trend | 0.0572 | 0.000 | High BDLs | 0.0576 | Same | 0.0576 | No Trend | | | |
| CB6PH | Summer2 | BDIN | 0.5465 | -0.009 | No Trend | 0.1250 | -0.001 | No Trend | 0.1390 | Same | 0.1132 | No Trend | | | |
| CB6PH | Summer2 | STP | 0.5465 | -0.001 | No Trend | 0.0109 | 0.000 | No Trend | 0.0128 | Same | 0.0095 | Improving | | | |
| CB6PH | Summer2 | BTP | 0.3428 | -0.002 | No Trend | 0.3464 | 0.000 | No Trend | 0.3840 | Same | 0.3126 | No Trend | | | |
| CB6PH | Summer2 | SPO4F | 0.7237 | 0.000 | High BDLs | 0.1626 | 0.000 | High BDLs | 0.1523 | Same | 0.1747 | No Trend | | | |
| CB6PH | Summer2 | BPO4F | 0.2278 | 0.002 | No Trend | 0.8207 | 0.000 | No Trend | 0.8892 | Same | 0.7540 | No Trend | | | |
| CB7PH | Summer2 | STN | 0.5465 | -0.010 | No Trend | 0.0042 | -0.004 | Improving | 0.0051 | Different | 0.0036 | Improving | 88 | | |
| CB7PH | Summer2 | BTN | 0.5465 | -0.027 | No Trend | 0.0000 | -0.006 | Improving | 0.0000 | Different | 0.0000 | Improving | 88 | | |
| CB7PH | Summer2 | SDIN | 0.3428 | -0.005 | No Trend | 0.1309 | 0.000 | High BDLs | 0.1145 | Same | 0.1504 | No Trend | | | |
| CB7PH | Summer2 | BDIN | 0.5465 | -0.006 | No Trend | 0.1293 | -0.001 | No Trend | 0.1437 | Same | 0.1172 | No Trend | | | |
| CB7PH | Summer2 | STP | 0.0704 | -0.002 | No Trend | 0.0001 | 0.000 | Improving | 0.0002 | Different | 0.0001 | Improving | 88 | | |
| CB7PH | Summer2 | BTP | 1.0000 | -0.001 | No Trend | 0.0005 | 0.000 | Improving | 0.0006 | Different | 0.0005 | Improving | 88 | | |
| CB7PH | Summer2 | SPO4F | 0.5050 | 0.000 | High BDLs | 0.3832 | 0.000 | High BDLs | 0.3451 | Same | 0.4266 | No Trend | | | |
| CB7PH | Summer2 | BPO4F | 1.0000 | -0.001 | No Trend | 0.1013 | 0.000 | No Trend | 0.1055 | Same | 0.0982 | No Trend | | | |
| CB8PH | Summer2 | STN | 1.0000 | 0.042 | No Trend | 0.3465 | 0.001 | No Trend | 0.3563 | Same | 0.3384 | No Trend | | | |
| CB8PH | Summer2 | BTN | 1.0000 | 0.000 | No Trend | 0.5075 | 0.001 | No Trend | 0.4971 | Same | 0.5195 | No Trend | | | |
| CB8PH | Summer2 | SDIN | 0.2278 | -0.001 | High BDLs | 0.0159 | 0.001 | High BDLs | 0.0126 | Same | 0.0204 | No Trend | | | |
| CB8PH | Summer2 | BDIN | 0.2278 | -0.012 | No Trend | 0.6503 | 0.000 | No Trend | 0.5894 | Same | 0.7147 | No Trend | | | |
| CB8PH | Summer2 | STP | 0.2278 | -0.013 | No Trend | 0.0280 | 0.000 | No Trend | 0.0352 | Same | 0.0226 | No Trend | | | |
| CB8PH | Summer2 | BTP | 0.0704 | -0.010 | No Trend | 0.0000 | -0.001 | Improving | 0.0000 | Different | 0.0000 | Improving | 88 | | |
| CB8PH | Summer2 | SPO4F | 0.2278 | -0.002 | No Trend | 0.0160 | 0.000 | High BDLs | 0.0205 | Same | 0.0127 | No Trend | | | |
| CB8PH | Summer2 | BPO4F | 0.5050 | -0.001 | No Trend | 0.0000 | 0.000 | Improving | 0.0001 | Different | 0.0000 | Improving | 88 | | |
| PIAMH | Winter | STN | 0.2679 | | No Trend | 0.1750 | -0.005 | No Trend | 0.2082 | Same | 0.1475 | No Trend | | | |
| PIAMH | Winter | BTN | 0.7119 | | No Trend | 0.6859 | -0.001 | No Trend | 0.7218 | Same | 0.6519 | No Trend | | | |
| PIAMH | Winter | SDIN | 0.7119 | | High BDLs | 0.2895 | -0.001 | High BDLs | 0.2691 | Same | 0.3130 | No Trend | | | |
| PIAMH | Winter | BDIN | 0.4268 | | High BDLs | 0.6834 | 0.000 | High BDLs | 0.6319 | Same | 0.7374 | No Trend | | | |
| PIAMH | Winter | STP | 0.2679 | | No Trend | 0.0118 | 0.000 | No Trend | 0.0159 | Same | 0.0090 | Improving | | | |
| PIAMH | Winter | BTP | 0.7119 | | No Trend | 0.1335 | 0.000 | No Trend | 0.1471 | Same | 0.1224 | No Trend | | | |
| PIAMH | Winter | SPO4F | 0.4268 | | No Trend | | 0.000 | High BDLs | 0.2332 | Same | 0.2332 | No Trend | | | |
| PIAMH | Winter | BPO4F | 0.1939 | | High BDLs | | 0.000 | High BDLs | 0.0833 | Same | 0.0833 | No Trend | | | |
| POCMH | Winter | STN | 0.6015 | | No Trend | 0.0619 | -0.008 | No Trend | 0.0551 | Same | 0.0701 | No Trend | | | |
| POCMH | Winter | BTN | 0.1172 | | No Trend | 0.1913 | -0.005 | No Trend | 0.2308 | Same | 0.1581 | No Trend | | | |
| POCMH | Winter | SDIN | 0.1172 | | No Trend | 0.2018 | -0.002 | No Trend | 0.1686 | Same | 0.2409 | No Trend | | | |
| POCMH | Winter | BDIN | 1.0000 | | No Trend | 0.2022 | -0.002 | No Trend | 0.2028 | Same | 0.2028 | No Trend | | | |
| POCMH | Winter | STP | 0.6015 | | No Trend | 0.0233 | -0.001 | No Trend | 0.0205 | Same | 0.0267 | No Trend | | | |
| POCMH | Winter | BTP | 1.0000 | | No Trend | 0.0125 | -0.001 | No Trend | 0.0126 | Same | 0.0126 | No Trend | | | |
| POCMH | Winter | SPO4F | 1.0000 | | High BDLs | 0.2105 | 0.000 | High BDLs | 0.1982 | Same | 0.2251 | No Trend | | | |
| POCMH | Winter | BPO4F | 1.0000 | | High BDLs | 0.1454 | 0.000 | High BDLs | 0.1359 | Same | 0.1571 | No Trend | | | |

Appendix A - Section IE. Virginia Mainstem (1985-2008) - Continued.

| Segment | Season | Parameter | '93 | | '93 | | '08 | | '08 | | Trend | | Combined | | Combined |
|---------|--------|-----------|---------|--------|-----------|---------|--------|-----------|------------|-----------|---------|------------|--------------|-----------|----------|
| | | | Trend | '93 | Trend | Trend | '08 | Trend | Comparison | Trend | P value | Comparison | Trend | Trend | Trend |
| | | | P value | Slope | Direction | P value | Slope | Direction | | | | | P value | Direction | |
| CB6PH | Winter | STN | 0.2679 | | No Trend | 0.2708 | -0.004 | No Trend | 0.2338 | Same | | 0.3137 | No Trend | | |
| CB6PH | Winter | BTN | 0.0648 | | No Trend | 0.0896 | -0.005 | No Trend | 0.0670 | Same | | 0.1195 | No Trend | | |
| CB6PH | Winter | SDIN | 0.7119 | | No Trend | 0.5057 | -0.001 | No Trend | 0.4777 | Same | | 0.5363 | No Trend | | |
| CB6PH | Winter | BDIN | 1.0000 | | No Trend | 0.2329 | -0.001 | No Trend | 0.2338 | Same | | 0.2338 | No Trend | | |
| CB6PH | Winter | STP | 0.7119 | | No Trend | 0.0540 | 0.000 | No Trend | 0.0604 | Same | | 0.0489 | No Trend | | |
| CB6PH | Winter | BTP | 0.2679 | | No Trend | 0.0539 | 0.000 | No Trend | 0.0669 | Same | | 0.0439 | No Trend | | |
| CB6PH | Winter | SPO4F | 0.1939 | | High BDLs | 0.7948 | 0.000 | High BDLs | 0.5517 | Same | | 0.9322 | No Trend | | |
| CB6PH | Winter | BPO4F | 0.1939 | | High BDLs | 0.2219 | 0.000 | High BDLs | 0.1569 | Same | | 0.3120 | No Trend | | |
| CB7PH | Winter | STN | 0.7119 | | No Trend | 0.3833 | -0.003 | No Trend | 0.3597 | Same | | 0.4098 | No Trend | | |
| CB7PH | Winter | BTN | 0.2679 | | No Trend | 0.3353 | -0.003 | No Trend | 0.2922 | Same | | 0.3842 | No Trend | | |
| CB7PH | Winter | SDIN | 1.0000 | | No Trend | 0.9633 | 0.000 | High BDLs | 0.9634 | Same | | 0.9634 | No Trend | | |
| CB7PH | Winter | BDIN | 0.7119 | | No Trend | 0.4760 | -0.001 | No Trend | 0.4489 | Same | | 0.5057 | No Trend | | |
| CB7PH | Winter | STP | 0.4268 | | No Trend | 0.0015 | 0.000 | Improving | 0.0020 | Different | | 0.0012 | Improving 88 | | |
| CB7PH | Winter | BTP | 0.7119 | | No Trend | 0.3464 | 0.000 | No Trend | 0.3714 | Same | | 0.3244 | No Trend | | |
| CB7PH | Winter | SPO4F | 0.1939 | | High BDLs | 0.7948 | 0.000 | High BDLs | 0.5517 | Same | | 0.9322 | No Trend | | |
| CB7PH | Winter | BPO4F | 0.1939 | | High BDLs | 0.0352 | 0.000 | High BDLs | 0.0215 | Same | | 0.0599 | No Trend | | |
| CB8PH | Winter | STN | 0.0648 | | No Trend | 0.7307 | 0.001 | No Trend | 0.8367 | Same | | 0.6305 | No Trend | | |
| CB8PH | Winter | BTN | 0.0648 | | No Trend | 0.9269 | 0.000 | No Trend | 0.8189 | Same | | 0.9635 | No Trend | | |
| CB8PH | Winter | SDIN | 1.0000 | | No Trend | 0.8723 | 0.000 | High BDLs | 0.8725 | Same | | 0.8725 | No Trend | | |
| CB8PH | Winter | BDIN | 0.7119 | | No Trend | 0.6296 | 0.000 | High BDLs | 0.6632 | Same | | 0.5981 | No Trend | | |
| CB8PH | Winter | STP | 1.0000 | | No Trend | 0.0003 | -0.001 | Improving | 0.0003 | Different | | 0.0003 | Improving 88 | | |
| CB8PH | Winter | BTP | 1.0000 | | No Trend | 0.0293 | -0.001 | No Trend | 0.0296 | Same | | 0.0296 | No Trend | | |
| CB8PH | Winter | SPO4F | 0.2963 | -0.001 | High BDLs | 0.0051 | 0.000 | High BDLs | 0.0067 | Different | | 0.0039 | No Trend* | | |
| CB8PH | Winter | BPO4F | 1.0000 | | High BDLs | 0.0276 | 0.000 | High BDLs | 0.0278 | Same | | 0.0278 | No Trend | | |

Appendix A - Section IIA. Seasonal Kendall Long-term trends in water quality for the James River (1985-2007). Parameters are as follows: STN=Surface total nitrogen, BTN=Bottom total nitrogen, SDIN=Surface dissolved inorganic nitrogen, BDIN=Bottom dissolved inorganic nitrogen, STP=Surface total phosphorus, BTP=Bottom total phosphorus, SPO4F=Surface dissolved inorganic phosphorus, BPO4F=Bottom dissolved inorganic phosphorus, SCHLA=Surface chlorophyll *a*, STSS=Surface total suspended solids, BTSS=Bottom total suspended solids, SEECCHI=Secchi depth, BDO=Bottom dissolved oxygen, SSALIN=Surface salinity, BSALIN=Bottom salinity, SWTEMP=Surface water temperature, BWTEMP=Bottom water temperature.

| Segment | Season | Layer | Parameter | % BDL | P value | Slope | Baseline | % Change | Direction | Homogeneity test | |
|---------|--------|-------|-----------|-------|---------|-------|----------|-------------|------------|------------------|--|
| | | | | | | | | | | P value | |
| APPTF | Annual | S | SCHLA | 20.85 | 0.1510 | 0.00 | 30.94 | No Estimate | NO TREND | 0.2067 | |
| APPTF | Annual | S | STSS | 0.00 | 0.2491 | -0.10 | 19.50 | -10.77 | NO TREND | 0.7761 | |
| APPTF | Annual | B | BTSS | 0.00 | 0.1920 | -0.19 | 27.25 | -14.82 | NO TREND | 0.9657 | |
| APPTF | Annual | S | SECCHI | 0.00 | 0.0008 | 0.00 | 0.50 | 0.00 | UNCHANGED | 0.1647 | |
| APPTF | Annual | S | SDO | 0.00 | 0.0031 | 0.03 | 9.30 | 8.60 | IMPROVING | 0.3969 | |
| APPTF | Annual | B | BDO | 0.00 | 0.0081 | 0.03 | 8.95 | 6.70 | IMPROVING | 0.0181 | |
| APPTF | Annual | S | SSALINITY | 0.00 | 0.2095 | 0.00 | 0.01 | 0.00 | NO TREND | 0.9060 | |
| APPTF | Annual | B | BSALINITY | 0.00 | 0.1219 | 0.00 | 0.01 | 0.00 | NO TREND | 0.9395 | |
| APPTF | Annual | S | SWTEMP | 0.00 | 0.0087 | 0.05 | 19.68 | 6.10 | INCREASING | 0.3004 | |
| APPTF | Annual | B | BWTEMP | 0.00 | 0.0339 | 0.05 | 19.00 | 6.32 | NO TREND | 0.4166 | |
| JMSTF1 | Annual | S | SCHLA | 23.78 | 0.3407 | 0.00 | 16.56 | No Estimate | NO TREND | 0.0477 | |
| JMSTF1 | Annual | S | STSS | 5.60 | 0.2207 | 0.11 | 19.75 | 11.19 | NO TREND | 0.6832 | |
| JMSTF1 | Annual | B | BTSS | 2.24 | 0.0492 | 0.59 | 172.00 | 8.17 | NO TREND | 0.9958 | |
| JMSTF1 | Annual | S | SECCHI | 0.00 | 0.0000 | -0.01 | 0.60 | -28.57 | DEGRADING | 0.1580 | |
| JMSTF1 | Annual | S | SDO | 0.00 | 0.1587 | 0.01 | 8.15 | 3.31 | NO TREND | 0.2067 | |
| JMSTF1 | Annual | B | BDO | 0.00 | 0.0276 | 0.02 | 7.83 | 5.52 | NO TREND | 0.6576 | |
| JMSTF1 | Annual | S | SSALINITY | 0.00 | 0.0259 | 0.00 | 0.01 | 0.00 | NO TREND | 0.9954 | |
| JMSTF1 | Annual | B | BSALINITY | 0.00 | 0.0724 | 0.00 | 0.01 | 0.00 | NO TREND | 0.9976 | |
| JMSTF1 | Annual | S | SWTEMP | 0.00 | 0.1750 | 0.03 | 18.50 | 3.34 | NO TREND | 0.1782 | |
| JMSTF1 | Annual | B | BWTEMP | 0.00 | 0.2612 | 0.02 | 18.35 | 3.01 | NO TREND | 0.3619 | |
| JMSTF2 | Annual | S | SCHLA | 63.68 | 0.5563 | 0.00 | 3.80 | No Estimate | HIGH BDLS | 0.9725 | |
| JMSTF2 | Annual | S | STSS | 26.82 | 0.0535 | 0.00 | 9.00 | No Estimate | NO TREND | 0.8606 | |
| JMSTF2 | Annual | B | BTSS | 5.63 | 0.5869 | 0.00 | 16.25 | 0.00 | NO TREND | 0.4486 | |
| JMSTF2 | Annual | S | SECCHI | 0.00 | 0.6585 | 0.00 | 1.00 | 0.00 | NO TREND | 0.3358 | |
| JMSTF2 | Annual | S | SDO | 0.00 | 0.1816 | -0.01 | 8.75 | -2.29 | NO TREND | 0.3140 | |
| JMSTF2 | Annual | B | BDO | 0.00 | 0.4926 | 0.01 | 7.75 | 1.55 | NO TREND | 0.4775 | |
| JMSTF2 | Annual | S | SSALINITY | 0.00 | 0.1126 | 0.00 | 0.01 | 0.00 | NO TREND | 0.8314 | |
| JMSTF2 | Annual | B | BSALINITY | 0.00 | 0.0536 | 0.00 | 0.01 | 0.00 | NO TREND | 0.9781 | |
| JMSTF2 | Annual | S | SWTEMP | 0.00 | 0.7400 | 0.01 | 18.78 | 1.08 | NO TREND | 0.6237 | |
| JMSTF2 | Annual | B | BWTEMP | 0.00 | 0.2035 | 0.03 | 19.00 | 4.13 | NO TREND | 0.2412 | |
| CHKOH | Annual | S | SCHLA | 7.80 | 0.0000 | -0.42 | 22.35 | -39.64 | IMPROVING | 0.0595 | |
| CHKOH | Annual | S | STSS | 0.00 | 0.5977 | 0.00 | 17.50 | 0.00 | NO TREND | 0.6364 | |
| CHKOH | Annual | B | BTSS | 0.00 | 0.0048 | 0.58 | 27.00 | 44.91 | DEGRADING | 0.7420 | |
| CHKOH | Annual | S | SECCHI | 0.00 | 0.0000 | -0.01 | 0.60 | -25.00 | DEGRADING | 0.0617 | |
| CHKOH | Annual | S | SDO | 0.00 | 0.7547 | 0.00 | 8.83 | -0.59 | NO TREND | 0.5922 | |
| CHKOH | Annual | B | BDO | 0.00 | 0.6458 | 0.01 | 8.88 | 1.18 | NO TREND | 0.2520 | |
| CHKOH | Annual | S | SSALINITY | 0.00 | 0.0002 | 0.00 | 0.01 | 0.00 | UNCHANGED | 0.9785 | |
| CHKOH | Annual | B | BSALINITY | 0.00 | 0.0001 | 0.00 | 0.01 | 0.00 | UNCHANGED | 0.9764 | |
| CHKOH | Annual | S | SWTEMP | 0.00 | 0.5304 | 0.01 | 16.00 | 1.97 | NO TREND | 0.1594 | |
| CHKOH | Annual | B | BWTEMP | 0.00 | 0.4549 | 0.01 | 15.60 | 1.91 | NO TREND | 0.1480 | |

Appendix A - Section IIA. James River (1985-2008) - Continued.

| Segment | Season | Layer | Parameter | % BDL | P value | Slope | Baseline | % Change | Direction | Homogeneity test | |
|---------|--------|-------|-----------|-------|---------|-------|----------|-------------|------------|------------------|--|
| | | | | | | | | | | P value | |
| JMSOH | Annual | S | SCHLA | 15.99 | 0.0619 | -0.04 | 7.22 | No Estimate | NO TREND | 0.0892 | |
| JMSOH | Annual | S | STSS | 1.98 | 0.0383 | -0.25 | 662.00 | -0.91 | NO TREND | 0.6230 | |
| JMSOH | Annual | B | BTSS | 0.36 | 0.5219 | -0.25 | 290.00 | -2.07 | NO TREND | 0.9357 | |
| JMSOH | Annual | S | SECCHI | 0.00 | 0.7620 | 0.00 | 0.53 | 0.00 | NO TREND | 0.7431 | |
| JMSOH | Annual | S | SDO | 0.00 | 0.0047 | -0.02 | 8.60 | -5.14 | DEGRADING | 0.6611 | |
| JMSOH | Annual | B | BDO | 0.00 | 0.0055 | -0.02 | 8.08 | -5.65 | DEGRADING | 0.5072 | |
| JMSOH | Annual | S | SSALINITY | 0.00 | 0.0029 | 0.03 | 2.72 | 29.44 | INCREASING | 0.9564 | |
| JMSOH | Annual | B | BSALINITY | 0.00 | 0.0013 | 0.06 | 3.47 | 41.50 | INCREASING | 0.9476 | |
| JMSOH | Annual | S | SWTEMP | 0.00 | 0.3856 | 0.02 | 18.30 | 2.16 | NO TREND | 0.1912 | |
| JMSOH | Annual | B | BWTEMP | 0.00 | 0.3498 | 0.02 | 18.48 | 2.10 | NO TREND | 0.2074 | |
| JMSMH | Annual | S | SCHLA | 25.19 | 0.1308 | 0.01 | 4.47 | No Estimate | NO TREND | 0.0011 | |
| JMSMH | Annual | S | STSS | 8.61 | 0.1354 | -0.07 | 15.00 | -11.43 | NO TREND | 0.5869 | |
| JMSMH | Annual | B | BTSS | 2.90 | 0.0002 | 0.43 | 142.00 | 7.32 | DEGRADING | 0.9207 | |
| JMSMH | Annual | S | SECCHI | 0.00 | 0.9759 | 0.00 | 0.95 | 0.00 | NO TREND | 0.5372 | |
| JMSMH | Annual | S | SDO | 0.00 | 0.9216 | 0.00 | 7.55 | 0.00 | NO TREND | 0.0678 | |
| JMSMH | Annual | B | BDO | 0.00 | 0.6555 | 0.00 | 7.50 | -0.96 | NO TREND | 0.0398 | |
| JMSMH | Annual | S | SSALINITY | 0.00 | 0.2303 | 0.04 | 14.96 | 7.17 | NO TREND | 0.9748 | |
| JMSMH | Annual | B | BSALINITY | 0.00 | 0.7070 | 0.01 | 18.35 | 1.48 | NO TREND | 0.9556 | |
| JMSMH | Annual | S | SWTEMP | 0.00 | 0.7928 | 0.00 | 20.13 | 0.34 | NO TREND | 0.2608 | |
| JMSMH | Annual | B | BWTEMP | 0.00 | 0.5851 | 0.01 | 19.90 | 0.86 | NO TREND | 0.1968 | |
| JMSPH | Annual | S | SCHLA | 13.36 | 0.0050 | 0.07 | 8.19 | 21.69 | DEGRADING | 0.0001 | |
| JMSPH | Annual | S | STSS | 7.22 | 0.9828 | 0.00 | 8.25 | 0.00 | NO TREND | 0.3667 | |
| JMSPH | Annual | B | BTSS | 2.08 | 0.0053 | -0.20 | 18.45 | -26.34 | IMPROVING | 0.0087 | |
| JMSPH | Annual | S | SECCHI | 0.00 | 0.0000 | -0.01 | 1.30 | -20.91 | DEGRADING | 0.5848 | |
| JMSPH | Annual | S | SDO | 0.00 | 0.4691 | 0.00 | 8.10 | 1.11 | NO TREND | 0.0531 | |
| JMSPH | Annual | B | BDO | 0.00 | 0.0000 | 0.04 | 7.63 | 11.80 | IMPROVING | 0.3811 | |
| JMSPH | Annual | S | SSALINITY | 0.00 | 0.0322 | -0.05 | 21.56 | -5.57 | NO TREND | 0.9970 | |
| JMSPH | Annual | B | BSALINITY | 0.00 | 0.0000 | -0.16 | 24.64 | -16.01 | DECREASING | 0.4202 | |
| JMSPH | Annual | S | SWTEMP | 0.00 | 0.4562 | 0.01 | 17.40 | 1.24 | NO TREND | 0.0979 | |
| JMSPH | Annual | B | BWTEMP | 0.00 | 0.0000 | 0.06 | 16.95 | 8.50 | INCREASING | 0.0306 | |
| APPTF | Fall | S | SCHLA | 32.00 | 0.1328 | 0.00 | 8.09 | No Estimate | NO TREND | 0.0969 | |
| APPTF | Fall | S | STSS | 0.00 | 0.8929 | 0.00 | 15.00 | 0.00 | NO TREND | 0.8690 | |
| APPTF | Fall | B | BTSS | 0.00 | 0.6173 | -0.14 | 23.00 | -13.04 | NO TREND | 0.9494 | |
| APPTF | Fall | S | SECCHI | 0.00 | 0.4061 | 0.00 | 0.50 | 0.00 | NO TREND | 0.6386 | |
| APPTF | Fall | S | SDO | 0.00 | 0.0019 | 0.06 | 8.63 | 17.39 | IMPROVING | 0.1814 | |
| APPTF | Fall | B | BDO | 0.00 | 0.0014 | 0.07 | 8.23 | 20.87 | IMPROVING | 0.1089 | |
| APPTF | Fall | S | SSALINITY | 0.00 | 0.2005 | 0.00 | 0.01 | 0.00 | NO TREND | 0.8629 | |
| APPTF | Fall | B | BSALINITY | 0.00 | 0.2005 | 0.00 | 0.01 | 0.00 | NO TREND | 0.8629 | |
| APPTF | Fall | S | SWTEMP | 0.00 | 0.2118 | -0.07 | 12.25 | -12.96 | NO TREND | 0.4880 | |
| APPTF | Fall | B | BWTEMP | 0.00 | 0.2772 | -0.06 | 12.25 | -11.20 | NO TREND | 0.3559 | |
| JMSTF1 | Fall | S | SCHLA | 33.78 | 0.3007 | -0.01 | 11.27 | No Estimate | NO TREND | 0.1193 | |
| JMSTF1 | Fall | S | STSS | 8.54 | 0.6526 | 0.08 | 20.75 | 8.43 | NO TREND | 0.9863 | |
| JMSTF1 | Fall | B | BTSS | 3.66 | 0.1764 | 0.56 | 172.00 | 7.85 | NO TREND | 0.8309 | |
| JMSTF1 | Fall | S | SECCHI | 0.00 | 0.0021 | -0.01 | 0.53 | -22.86 | DEGRADING | 0.7106 | |
| JMSTF1 | Fall | S | SDO | 0.00 | 0.0396 | 0.04 | 8.80 | 10.91 | NO TREND | 0.3706 | |
| JMSTF1 | Fall | B | BDO | 0.00 | 0.0383 | 0.05 | 8.80 | 12.38 | NO TREND | 0.4228 | |
| JMSTF1 | Fall | S | SSALINITY | 0.00 | 0.2074 | 0.00 | 0.01 | 0.00 | NO TREND | 0.7447 | |
| JMSTF1 | Fall | B | BSALINITY | 0.00 | 0.2499 | 0.00 | 0.01 | 0.00 | NO TREND | 0.7387 | |
| JMSTF1 | Fall | S | SWTEMP | 0.00 | 0.1176 | -0.07 | 12.63 | -13.94 | NO TREND | 0.6430 | |
| JMSTF1 | Fall | B | BWTEMP | 0.00 | 0.2119 | -0.06 | 12.50 | -12.38 | NO TREND | 0.7289 | |

Appendix A - Section IIA. James River (1985-2008) - Continued.

| Segment | Season | Layer | Parameter | % BDL | P value | Slope | Baseline | % Change | Direction | Homogeneity test |
|---------|--------|-------|-----------|-------|---------|-------|----------|-------------|-----------|------------------|
| | | | | | | | | | | P value |
| JMSTF2 | Fall | S | SCHLA | 77.98 | 0.8300 | 0.00 | 3.10 | No Estimate | HIGH BDLS | 0.9959 |
| JMSTF2 | Fall | S | STSS | 41.92 | 0.7101 | 0.00 | 5.00 | No Estimate | HIGH BDLS | 0.8950 |
| JMSTF2 | Fall | B | BTSS | 12.86 | 0.5329 | 0.05 | 9.50 | 11.05 | NO TREND | 0.8004 |
| JMSTF2 | Fall | S | SECCHI | 0.00 | 0.2286 | 0.01 | 0.90 | 33.33 | NO TREND | 0.9295 |
| JMSTF2 | Fall | S | SDO | 0.00 | 0.1990 | 0.02 | 10.10 | 5.78 | NO TREND | 0.8478 |
| JMSTF2 | Fall | B | BDO | 0.00 | 0.2427 | 0.03 | 10.20 | 6.18 | NO TREND | 0.9026 |
| JMSTF2 | Fall | S | SSALINITY | 0.00 | 0.4881 | 0.00 | 0.01 | 0.00 | NO TREND | 0.7580 |
| JMSTF2 | Fall | B | BSALINITY | 0.00 | 0.3608 | 0.00 | 0.01 | 0.00 | NO TREND | 0.9842 |
| JMSTF2 | Fall | S | SWTEMP | 0.00 | 0.1439 | -0.08 | 11.75 | -15.43 | NO TREND | 0.7980 |
| JMSTF2 | Fall | B | BWTEMP | 0.00 | 0.2016 | -0.06 | 11.75 | -13.21 | NO TREND | 0.6905 |
| CHKOH | Fall | S | SCHLA | 9.52 | 0.0001 | -0.80 | 22.35 | -75.02 | IMPROVING | 0.1065 |
| CHKOH | Fall | S | STSS | 0.00 | 0.7465 | -0.06 | 14.00 | -9.17 | NO TREND | 0.3367 |
| CHKOH | Fall | B | BTSS | 0.00 | 0.2290 | 0.33 | 16.25 | 43.08 | NO TREND | 0.8523 |
| CHKOH | Fall | S | SECCHI | 0.00 | 0.0660 | 0.00 | 0.65 | 0.00 | NO TREND | 0.1005 |
| CHKOH | Fall | S | SDO | 0.00 | 0.1252 | -0.03 | 10.35 | -6.52 | NO TREND | 0.5993 |
| CHKOH | Fall | B | BDO | 0.00 | 0.1905 | -0.03 | 10.20 | -5.28 | NO TREND | 0.6687 |
| CHKOH | Fall | S | SSALINITY | 0.00 | 0.2228 | 0.02 | 0.81 | 52.17 | NO TREND | 0.9714 |
| CHKOH | Fall | B | BSALINITY | 0.00 | 0.2093 | 0.02 | 0.81 | 55.07 | NO TREND | 0.9764 |
| CHKOH | Fall | S | SWTEMP | 0.00 | 0.1448 | -0.08 | 13.70 | -12.84 | NO TREND | 0.6872 |
| CHKOH | Fall | B | BWTEMP | 0.00 | 0.2084 | -0.09 | 13.50 | -13.61 | NO TREND | 0.6202 |
| JMSOH | Fall | S | SCHLA | 25.81 | 0.0037 | -0.17 | 3.19 | No Estimate | IMPROVING | 0.1391 |
| JMSOH | Fall | S | STSS | 5.11 | 0.7935 | -0.05 | 662.00 | -0.17 | NO TREND | 0.4680 |
| JMSOH | Fall | B | BTSS | 0.74 | 0.9431 | -0.05 | 290.00 | -0.40 | NO TREND | 0.6393 |
| JMSOH | Fall | S | SECCHI | 0.00 | 0.9297 | 0.00 | 0.53 | 0.00 | NO TREND | 0.6434 |
| JMSOH | Fall | S | SDO | 0.00 | 0.7144 | 0.01 | 8.40 | 2.08 | NO TREND | 0.7110 |
| JMSOH | Fall | B | BDO | 0.00 | 0.4734 | 0.01 | 8.40 | 3.52 | NO TREND | 0.8818 |
| JMSOH | Fall | S | SSALINITY | 0.00 | 0.2101 | 0.10 | 3.20 | 74.37 | NO TREND | 0.7744 |
| JMSOH | Fall | B | BSALINITY | 0.00 | 0.1007 | 0.13 | 3.73 | 84.81 | NO TREND | 0.6475 |
| JMSOH | Fall | S | SWTEMP | 0.00 | 0.0440 | -0.08 | 12.70 | -15.18 | NO TREND | 0.4990 |
| JMSOH | Fall | B | BWTEMP | 0.00 | 0.0542 | -0.08 | 12.83 | -14.31 | NO TREND | 0.4426 |
| JMSMH | Fall | S | SCHLA | 45.16 | 0.8530 | 0.00 | 3.10 | No Estimate | High BDLS | 0.0025 |
| JMSMH | Fall | S | STSS | 27.86 | 0.3781 | -0.04 | 14.00 | No Estimate | NO TREND | 0.2993 |
| JMSMH | Fall | B | BTSS | 8.89 | 0.1284 | 0.20 | 142.00 | 3.38 | NO TREND | 0.4163 |
| JMSMH | Fall | S | SECCHI | 0.00 | 0.1928 | -0.01 | 1.30 | -18.46 | NO TREND | 0.8923 |
| JMSMH | Fall | S | SDO | 0.00 | 0.0367 | 0.03 | 7.40 | 9.50 | NO TREND | 0.9748 |
| JMSMH | Fall | B | BDO | 0.00 | 0.0249 | 0.04 | 7.25 | 13.02 | NO TREND | 0.8173 |
| JMSMH | Fall | S | SSALINITY | 0.00 | 0.3690 | 0.08 | 15.34 | 11.90 | NO TREND | 0.7511 |
| JMSMH | Fall | B | BSALINITY | 0.00 | 0.5836 | 0.03 | 17.89 | 4.25 | NO TREND | 0.8031 |
| JMSMH | Fall | S | SWTEMP | 0.00 | 0.0496 | -0.09 | 15.40 | -14.77 | NO TREND | 0.7973 |
| JMSMH | Fall | B | BWTEMP | 0.00 | 0.0262 | -0.09 | 15.70 | -13.90 | NO TREND | 0.8158 |
| JMSPH | Fall | S | SCHLA | 34.51 | 0.0003 | 0.09 | 3.10 | No Estimate | DEGRADING | 0.3111 |
| JMSPH | Fall | S | STSS | 24.24 | 0.9183 | 0.00 | 6.40 | No Estimate | NO TREND | 0.9446 |
| JMSPH | Fall | B | BTSS | 6.82 | 0.0005 | -0.38 | 22.88 | -39.80 | IMPROVING | 0.1523 |
| JMSPH | Fall | S | SECCHI | 0.00 | 0.0050 | -0.02 | 1.85 | -22.39 | DEGRADING | 0.3627 |
| JMSPH | Fall | S | SDO | 0.00 | 0.0186 | 0.03 | 8.15 | 8.40 | NO TREND | 0.6786 |
| JMSPH | Fall | B | BDO | 0.00 | 0.0008 | 0.05 | 7.55 | 15.63 | IMPROVING | 0.5742 |
| JMSPH | Fall | S | SSALINITY | 0.00 | 0.4225 | -0.05 | 22.66 | -5.30 | NO TREND | 0.9576 |
| JMSPH | Fall | B | BSALINITY | 0.00 | 0.0758 | -0.08 | 24.26 | -8.32 | NO TREND | 0.6874 |
| JMSPH | Fall | S | SWTEMP | 0.00 | 0.1183 | -0.05 | 14.10 | -8.51 | NO TREND | 0.9817 |
| JMSPH | Fall | B | BWTEMP | 0.00 | 0.1362 | -0.06 | 14.28 | -9.29 | NO TREND | 0.9845 |

Appendix A - Section IIA. James River (1985-2008) - Continued.

| Segment | Season | Layer | Parameter | % BDL | P value | Slope | Baseline | % Change | Direction | Homogeneity test |
|---------|--------|-------|-----------|-------|---------|-------|----------|-------------|-----------|------------------|
| | | | | | | | | | | P value |
| APPTF | SAV1 | S | SCHLA | 16.86 | 0.0041 | -0.68 | 43.51 | No Estimate | IMPROVING | 0.8495 |
| APPTF | SAV1 | S | STSS | 0.00 | 0.5688 | -0.07 | 23.75 | -6.11 | NO TREND | 0.7616 |
| APPTF | SAV1 | B | BTSS | 0.00 | 0.6920 | -0.10 | 30.25 | -6.94 | NO TREND | 0.9410 |
| APPTF | SAV1 | S | SECCHI | 0.00 | 0.0002 | 0.00 | 0.50 | -14.12 | DEGRADING | 0.1976 |
| APPTF | SAV1 | S | SDO | 0.00 | 0.2633 | 0.02 | 8.70 | 4.60 | NO TREND | 0.7127 |
| APPTF | SAV1 | B | BDO | 0.00 | 0.5760 | 0.01 | 8.20 | 2.07 | NO TREND | 0.0538 |
| APPTF | SAV1 | S | SSALINITY | 0.00 | 0.2639 | 0.00 | 0.01 | 0.00 | NO TREND | 0.7629 |
| APPTF | SAV1 | B | BSALINITY | 0.00 | 0.2080 | 0.00 | 0.01 | 0.00 | NO TREND | 0.7421 |
| APPTF | SAV1 | S | SWTEMP | 0.00 | 0.0276 | 0.06 | 22.75 | 6.04 | NO TREND | 0.1959 |
| APPTF | SAV1 | B | BWTEMP | 0.00 | 0.0838 | 0.06 | 22.50 | 6.27 | NO TREND | 0.2738 |
| JMSTF1 | SAV1 | S | SCHLA | 19.84 | 0.0079 | -0.41 | 24.30 | No Estimate | IMPROVING | 0.8764 |
| JMSTF1 | SAV1 | S | STSS | 5.54 | 0.1793 | 0.11 | 20.50 | 11.38 | NO TREND | 0.3912 |
| JMSTF1 | SAV1 | B | BTSS | 1.68 | 0.1045 | 0.73 | 37.25 | 41.40 | NO TREND | 0.9878 |
| JMSTF1 | SAV1 | S | SECCHI | 0.00 | 0.0000 | -0.01 | 0.65 | -30.77 | DEGRADING | 0.7942 |
| JMSTF1 | SAV1 | S | SDO | 0.00 | 0.9543 | 0.00 | 7.45 | 0.00 | NO TREND | 0.1590 |
| JMSTF1 | SAV1 | B | BDO | 0.00 | 0.5504 | 0.01 | 6.73 | 2.38 | NO TREND | 0.6199 |
| JMSTF1 | SAV1 | S | SSALINITY | 0.00 | 0.0233 | 0.00 | 0.01 | 0.00 | NO TREND | 0.9979 |
| JMSTF1 | SAV1 | B | BSALINITY | 0.00 | 0.0798 | 0.00 | 0.01 | 0.00 | NO TREND | 0.9987 |
| JMSTF1 | SAV1 | S | SWTEMP | 0.00 | 0.1616 | 0.03 | 23.10 | 2.92 | NO TREND | 0.1318 |
| JMSTF1 | SAV1 | B | BWTEMP | 0.00 | 0.2895 | 0.03 | 22.88 | 2.62 | NO TREND | 0.1974 |
| JMSTF2 | SAV1 | S | SCHLA | 67.89 | 0.4809 | 0.00 | 4.87 | No Estimate | HIGH BDLS | 0.8353 |
| JMSTF2 | SAV1 | S | STSS | 28.74 | 0.1177 | 0.00 | 10.00 | No Estimate | NO TREND | 0.6785 |
| JMSTF2 | SAV1 | B | BTSS | 3.59 | 0.7037 | 0.04 | 17.50 | 4.29 | NO TREND | 0.7459 |
| JMSTF2 | SAV1 | S | SECCHI | 0.00 | 0.2719 | -0.01 | 1.00 | -12.00 | NO TREND | 0.3394 |
| JMSTF2 | SAV1 | S | SDO | 0.00 | 0.0788 | -0.01 | 8.10 | -4.09 | NO TREND | 0.3280 |
| JMSTF2 | SAV1 | B | BDO | 0.00 | 0.9265 | 0.00 | 6.55 | 0.00 | NO TREND | 0.5499 |
| JMSTF2 | SAV1 | S | SSALINITY | 0.00 | 0.3105 | 0.00 | 0.01 | 0.00 | NO TREND | 0.6191 |
| JMSTF2 | SAV1 | B | BSALINITY | 0.00 | 0.2157 | 0.00 | 0.01 | 0.00 | NO TREND | 0.8611 |
| JMSTF2 | SAV1 | S | SWTEMP | 0.00 | 0.3740 | 0.03 | 24.03 | 2.50 | NO TREND | 0.7672 |
| JMSTF2 | SAV1 | B | BWTEMP | 0.00 | 0.0908 | 0.05 | 21.88 | 5.84 | NO TREND | 0.2897 |
| CHKOH | SAV1 | S | SCHLA | 6.80 | 0.0000 | -0.54 | 23.93 | -47.70 | IMPROVING | 0.4739 |
| CHKOH | SAV1 | S | STSS | 0.00 | 0.1985 | 0.15 | 17.50 | 17.57 | NO TREND | 0.4093 |
| CHKOH | SAV1 | B | BTSS | 0.00 | 0.0009 | 1.24 | 32.50 | 79.87 | DEGRADING | 0.7275 |
| CHKOH | SAV1 | S | SECCHI | 0.00 | 0.0000 | -0.01 | 0.60 | -35.00 | DEGRADING | 0.1118 |
| CHKOH | SAV1 | S | SDO | 0.00 | 0.2038 | -0.01 | 6.63 | -4.61 | NO TREND | 0.9386 |
| CHKOH | SAV1 | B | BDO | 0.00 | 0.3524 | -0.01 | 6.40 | -3.28 | NO TREND | 0.7047 |
| CHKOH | SAV1 | S | SSALINITY | 0.00 | 0.0005 | 0.00 | 0.01 | 0.00 | UNCHANGED | 0.8366 |
| CHKOH | SAV1 | B | BSALINITY | 0.00 | 0.0003 | 0.00 | 0.01 | 0.00 | UNCHANGED | 0.8379 |
| CHKOH | SAV1 | S | SWTEMP | 0.00 | 0.0807 | 0.05 | 22.58 | 4.65 | NO TREND | 0.1479 |
| CHKOH | SAV1 | B | BWTEMP | 0.00 | 0.0658 | 0.04 | 22.45 | 4.18 | NO TREND | 0.1417 |
| JMSOH | SAV1 | S | SCHLA | 12.46 | 0.0189 | -0.11 | 7.69 | -32.91 | NO TREND | 0.2249 |
| JMSOH | SAV1 | S | STSS | 2.09 | 0.2301 | -0.17 | 26.25 | -13.33 | NO TREND | 0.2717 |
| JMSOH | SAV1 | B | BTSS | 0.69 | 0.9716 | 0.00 | 57.50 | 0.00 | NO TREND | 0.7526 |
| JMSOH | SAV1 | S | SECCHI | 0.00 | 0.3632 | 0.00 | 0.63 | 0.00 | NO TREND | 0.7587 |
| JMSOH | SAV1 | S | SDO | 0.00 | 0.0004 | -0.02 | 7.30 | -8.22 | DEGRADING | 0.9195 |
| JMSOH | SAV1 | B | BDO | 0.00 | 0.0013 | -0.02 | 7.00 | -8.42 | DEGRADING | 0.6002 |
| JMSOH | SAV1 | S | SSALINITY | 0.00 | 0.0460 | 0.03 | 3.85 | 15.58 | NO TREND | 0.9616 |
| JMSOH | SAV1 | B | BSALINITY | 0.00 | 0.0551 | 0.05 | 4.36 | 25.63 | NO TREND | 0.9668 |
| JMSOH | SAV1 | S | SWTEMP | 0.00 | 0.5898 | 0.01 | 23.90 | 1.24 | NO TREND | 0.1125 |
| JMSOH | SAV1 | B | BWTEMP | 0.00 | 0.5387 | 0.01 | 23.75 | 1.28 | NO TREND | 0.1086 |

Appendix A - Section IIA. James River (1985-2008) - Continued.

| Segment | Season | Layer | Parameter | % BDL | P value | Slope | Baseline | % Change | Direction | Homogeneity test |
|---------|--------|-------|-----------|-------|---------|-------|----------|-------------|------------|------------------|
| | | | | | | | | | | P value |
| JMSMH | SAV1 | S | SCHLA | 31.34 | 0.3448 | 0.02 | 4.67 | No Estimate | NO TREND | 0.0004 |
| JMSMH | SAV1 | S | STSS | 9.00 | 0.0289 | -0.14 | 19.00 | -17.22 | NO TREND | 0.9430 |
| JMSMH | SAV1 | B | BTSS | 2.80 | 0.0021 | 0.59 | 24.75 | 50.14 | DEGRADING | 0.9520 |
| JMSMH | SAV1 | S | SECCHI | 0.00 | 0.9619 | 0.00 | 1.08 | 0.00 | NO TREND | 0.2741 |
| JMSMH | SAV1 | S | SDO | 0.00 | 0.7023 | 0.00 | 6.70 | -0.11 | NO TREND | 0.0286 |
| JMSMH | SAV1 | B | BDO | 0.00 | 0.7311 | 0.00 | 6.48 | -0.88 | NO TREND | 0.0187 |
| JMSMH | SAV1 | S | SSALINITY | 0.00 | 0.7335 | 0.01 | 15.82 | 2.12 | NO TREND | 0.9848 |
| JMSMH | SAV1 | B | BSALINITY | 0.00 | 0.7766 | -0.01 | 19.31 | -1.11 | NO TREND | 0.9996 |
| JMSMH | SAV1 | S | SWTEMP | 0.00 | 0.9850 | 0.00 | 23.73 | 0.00 | NO TREND | 0.1661 |
| JMSMH | SAV1 | B | BWTEMP | 0.00 | 0.6661 | 0.01 | 23.45 | 0.73 | NO TREND | 0.1468 |
| JMSPH | SAV1 | S | SCHLA | 18.37 | 0.0013 | 0.10 | 5.98 | No Estimate | DEGRADING | 0.1120 |
| JMSPH | SAV1 | S | STSS | 8.74 | 0.8586 | 0.00 | 9.35 | 1.01 | NO TREND | 0.0935 |
| JMSPH | SAV1 | B | BTSS | 0.96 | 0.1287 | -0.17 | 19.00 | -21.74 | NO TREND | 0.0366 |
| JMSPH | SAV1 | S | SECCHI | 0.00 | 0.0000 | -0.01 | 1.35 | -21.69 | DEGRADING | 0.6140 |
| JMSPH | SAV1 | S | SDO | 0.00 | 0.2682 | 0.01 | 7.08 | 3.09 | NO TREND | 0.2954 |
| JMSPH | SAV1 | B | BDO | 0.00 | 0.0000 | 0.04 | 6.15 | 15.61 | IMPROVING | 0.7986 |
| JMSPH | SAV1 | S | SSALINITY | 0.00 | 0.0186 | -0.07 | 22.13 | -7.13 | NO TREND | 0.9903 |
| JMSPH | SAV1 | B | BSALINITY | 0.00 | 0.0000 | -0.18 | 24.83 | -17.81 | DECREASING | 0.6120 |
| JMSPH | SAV1 | S | SWTEMP | 0.00 | 0.8292 | 0.00 | 23.10 | -0.28 | NO TREND | 0.1928 |
| JMSPH | SAV1 | B | BWTEMP | 0.00 | 0.0001 | 0.06 | 22.50 | 6.74 | INCREASING | 0.0817 |
| APPTF | SAV2 | S | SCHLA | 6.57 | 0.1263 | 0.03 | 4.49 | 14.69 | NO TREND | 0.2389 |
| APPTF | SAV2 | S | STSS | 0.00 | 0.0050 | -0.19 | 9.08 | -50.35 | IMPROVING | 0.7792 |
| APPTF | SAV2 | B | BTSS | 0.00 | 0.0276 | -0.18 | 9.08 | -47.95 | NO TREND | 0.4956 |
| APPTF | SAV2 | S | SECCHI | 0.00 | 0.0004 | -0.01 | 0.98 | -18.93 | DEGRADING | 0.0346 |
| APPTF | SAV2 | S | SDO | 0.00 | 0.0120 | 0.02 | 8.65 | 4.26 | NO TREND | 0.1700 |
| APPTF | SAV2 | B | BDO | 0.00 | 0.1367 | 0.01 | 8.53 | 2.56 | NO TREND | 0.0063 |
| APPTF | SAV2 | S | SSALINITY | 0.00 | 0.2217 | 0.00 | 9.65 | 0.00 | NO TREND | 0.7746 |
| APPTF | SAV2 | B | BSALINITY | 0.00 | 0.2310 | 0.00 | 9.65 | 0.00 | NO TREND | 0.7807 |
| APPTF | SAV2 | S | SWTEMP | 0.00 | 0.0982 | 0.04 | 19.55 | 4.97 | NO TREND | 0.1572 |
| APPTF | SAV2 | B | BWTEMP | 0.00 | 0.1708 | 0.04 | 19.05 | 4.52 | NO TREND | 0.2301 |
| JMSTF1 | SAV2 | S | SCHLA | 11.57 | 0.3161 | 0.02 | 4.94 | 9.97 | NO TREND | 0.0201 |
| JMSTF1 | SAV2 | S | STSS | 3.94 | 0.0303 | -0.16 | 9.08 | -42.39 | NO TREND | 0.7602 |
| JMSTF1 | SAV2 | B | BTSS | 0.78 | 0.1161 | -0.14 | 9.08 | -37.52 | NO TREND | 0.5181 |
| JMSTF1 | SAV2 | S | SECCHI | 0.00 | 0.0000 | -0.01 | 1.00 | -24.00 | DEGRADING | 0.1341 |
| JMSTF1 | SAV2 | S | SDO | 0.00 | 0.1193 | 0.01 | 7.85 | 2.55 | NO TREND | 0.0174 |
| JMSTF1 | SAV2 | B | BDO | 0.00 | 0.0282 | 0.01 | 7.78 | 4.04 | NO TREND | 0.0952 |
| JMSTF1 | SAV2 | S | SSALINITY | 0.00 | 0.3586 | 0.00 | 9.68 | 0.00 | NO TREND | 0.8006 |
| JMSTF1 | SAV2 | B | BSALINITY | 0.00 | 0.3915 | 0.00 | 9.68 | 0.00 | NO TREND | 0.7746 |
| JMSTF1 | SAV2 | S | SWTEMP | 0.00 | 0.0558 | 0.05 | 18.55 | 5.82 | NO TREND | 0.1577 |
| JMSTF1 | SAV2 | B | BWTEMP | 0.00 | 0.1187 | 0.04 | 18.43 | 4.67 | NO TREND | 0.3101 |
| JMSTF2 | SAV2 | S | SCHLA | 57.12 | 0.3922 | 0.00 | 4.49 | No Estimate | HIGH BDLS | 0.1764 |
| JMSTF2 | SAV2 | S | STSS | 25.65 | 0.0100 | -0.16 | 9.08 | No Estimate | IMPROVING | 0.9251 |
| JMSTF2 | SAV2 | B | BTSS | 1.07 | 0.0197 | -0.19 | 9.08 | -49.53 | NO TREND | 0.6437 |
| JMSTF2 | SAV2 | S | SECCHI | 0.00 | 0.0014 | -0.01 | 1.25 | -24.00 | DEGRADING | 0.0121 |
| JMSTF2 | SAV2 | S | SDO | 0.00 | 0.7276 | 0.00 | 8.30 | 0.29 | NO TREND | 0.0020 |
| JMSTF2 | SAV2 | B | BDO | 0.00 | 0.2215 | 0.01 | 7.58 | 2.32 | NO TREND | 0.0260 |
| JMSTF2 | SAV2 | S | SSALINITY | 0.00 | 0.4829 | 0.00 | 9.63 | 0.00 | NO TREND | 0.4572 |
| JMSTF2 | SAV2 | B | BSALINITY | 0.00 | 0.5289 | 0.00 | 9.63 | 0.00 | NO TREND | 0.5564 |
| JMSTF2 | SAV2 | S | SWTEMP | 0.00 | 0.4740 | 0.02 | 19.55 | 2.46 | NO TREND | 0.5625 |
| JMSTF2 | SAV2 | B | BWTEMP | 0.00 | 0.1717 | 0.04 | 18.93 | 4.89 | NO TREND | 0.2418 |

Appendix A - Section IIA. James River (1985-2008) - Continued.

| Segment | Season | Layer | Parameter | % BDL | P value | Slope | Baseline | % Change | Direction | Homogeneity test | |
|---------|---------|-------|-----------|-------|---------|-------|----------|-------------|------------|------------------|--|
| | | | | | | | | | | P value | |
| CHKOH | SAV2 | S | SCHLA | 3.89 | 0.2456 | 0.03 | 4.30 | 14.05 | NO TREND | 0.2580 | |
| CHKOH | SAV2 | S | STSS | 0.00 | 0.0903 | -0.14 | 9.08 | -36.44 | NO TREND | 0.5949 | |
| CHKOH | SAV2 | B | BTSS | 0.00 | 0.2545 | -0.12 | 9.08 | -32.86 | NO TREND | 0.2923 | |
| CHKOH | SAV2 | S | SECCHI | 0.00 | 0.0000 | -0.01 | 1.50 | -20.00 | DEGRADING | 0.3893 | |
| CHKOH | SAV2 | S | SDO | 0.00 | 0.0189 | 0.02 | 6.83 | 5.27 | NO TREND | 0.1448 | |
| CHKOH | SAV2 | B | BDO | 0.00 | 0.0138 | 0.02 | 6.83 | 5.90 | NO TREND | 0.0823 | |
| CHKOH | SAV2 | S | SSALINITY | 0.00 | 0.6378 | 0.00 | 20.34 | 0.00 | NO TREND | 0.5031 | |
| CHKOH | SAV2 | B | BSALINITY | 0.00 | 0.6378 | 0.00 | 20.34 | 0.00 | NO TREND | 0.5031 | |
| CHKOH | SAV2 | S | SWTEMP | 0.00 | 0.3157 | 0.03 | 21.03 | 2.85 | NO TREND | 0.2794 | |
| CHKOH | SAV2 | B | BWTEMP | 0.00 | 0.2893 | 0.02 | 21.03 | 2.80 | NO TREND | 0.2282 | |
| JMSOH | SAV2 | S | SCHLA | 6.42 | 0.1780 | 0.03 | 4.54 | 15.86 | NO TREND | 0.1134 | |
| JMSOH | SAV2 | S | STSS | 1.69 | 0.0009 | -0.25 | 9.08 | -66.12 | IMPROVING | 0.9265 | |
| JMSOH | SAV2 | B | BTSS | 0.56 | 0.0047 | -0.25 | 9.08 | -66.12 | IMPROVING | 0.9694 | |
| JMSOH | SAV2 | S | SECCHI | 0.00 | 0.0209 | 0.00 | 0.93 | -10.40 | NO TREND | 0.0011 | |
| JMSOH | SAV2 | S | SDO | 0.00 | 0.4287 | 0.00 | 8.10 | 1.24 | NO TREND | 0.0109 | |
| JMSOH | SAV2 | B | BDO | 0.00 | 0.6408 | 0.00 | 8.10 | 0.59 | NO TREND | 0.0039 | |
| JMSOH | SAV2 | S | SSALINITY | 0.00 | 0.6298 | 0.00 | 11.03 | 0.62 | NO TREND | 0.3545 | |
| JMSOH | SAV2 | B | BSALINITY | 0.00 | 0.5940 | 0.00 | 11.22 | 0.90 | NO TREND | 0.2666 | |
| JMSOH | SAV2 | S | SWTEMP | 0.00 | 0.2876 | 0.03 | 18.38 | 3.33 | NO TREND | 0.5314 | |
| JMSOH | SAV2 | B | BWTEMP | 0.00 | 0.2441 | 0.03 | 18.45 | 3.32 | NO TREND | 0.4699 | |
| JMSMH | SAV2 | S | SCHLA | 23.84 | 0.5378 | 0.01 | 4.49 | No Estimate | NO TREND | 0.1404 | |
| JMSMH | SAV2 | S | STSS | 4.35 | 0.0493 | -0.14 | 12.70 | -26.04 | NO TREND | 0.8623 | |
| JMSMH | SAV2 | B | BTSS | 0.86 | 0.4282 | -0.10 | 9.08 | -26.45 | NO TREND | 0.1231 | |
| JMSMH | SAV2 | S | SECCHI | 0.00 | 0.0299 | -0.01 | 1.08 | -11.75 | NO TREND | 0.0006 | |
| JMSMH | SAV2 | S | SDO | 0.00 | 0.3559 | 0.01 | 7.78 | 1.65 | NO TREND | 0.0174 | |
| JMSMH | SAV2 | B | BDO | 0.00 | 0.2560 | 0.01 | 7.70 | 2.34 | NO TREND | 0.0275 | |
| JMSMH | SAV2 | S | SSALINITY | 0.00 | 0.6601 | -0.02 | 16.96 | -2.55 | NO TREND | 0.7590 | |
| JMSMH | SAV2 | B | BSALINITY | 0.00 | 0.5259 | -0.02 | 18.52 | -2.90 | NO TREND | 0.6912 | |
| JMSMH | SAV2 | S | SWTEMP | 0.00 | 0.4177 | 0.02 | 18.18 | 2.37 | NO TREND | 0.5395 | |
| JMSMH | SAV2 | B | BWTEMP | 0.00 | 0.2055 | 0.03 | 17.95 | 4.01 | NO TREND | 0.4939 | |
| JMSPH | SAV2 | S | SCHLA | 12.42 | 0.6929 | 0.01 | 6.94 | 3.66 | NO TREND | 0.0322 | |
| JMSPH | SAV2 | S | STSS | 4.57 | 0.5704 | -0.03 | 9.78 | -6.85 | NO TREND | 0.0312 | |
| JMSPH | SAV2 | B | BTSS | 0.48 | 0.5102 | -0.06 | 11.58 | -13.05 | NO TREND | 0.0190 | |
| JMSPH | SAV2 | S | SECCHI | 0.00 | 0.0000 | -0.01 | 1.35 | -20.13 | DEGRADING | 0.0991 | |
| JMSPH | SAV2 | S | SDO | 0.00 | 0.0679 | 0.01 | 8.05 | 3.73 | NO TREND | 0.0325 | |
| JMSPH | SAV2 | B | BDO | 0.00 | 0.0005 | 0.02 | 7.80 | 6.67 | IMPROVING | 0.3789 | |
| JMSPH | SAV2 | S | SSALINITY | 0.00 | 0.1623 | -0.04 | 20.30 | -5.31 | NO TREND | 0.9730 | |
| JMSPH | SAV2 | B | BSALINITY | 0.00 | 0.0003 | -0.11 | 21.52 | -11.95 | DECREASING | 0.1571 | |
| JMSPH | SAV2 | S | SWTEMP | 0.00 | 0.4474 | 0.01 | 17.35 | 1.90 | NO TREND | 0.5708 | |
| JMSPH | SAV2 | B | BWTEMP | 0.00 | 0.0273 | 0.05 | 16.83 | 6.64 | NO TREND | 0.1060 | |
| APPTF | Spring1 | S | SCHLA | 16.09 | 0.8944 | 0.00 | 13.03 | No Estimate | NO TREND | 0.2332 | |
| APPTF | Spring1 | S | STSS | 0.00 | 0.0771 | -0.25 | 23.75 | -22.11 | NO TREND | 0.3734 | |
| APPTF | Spring1 | B | BTSS | 0.00 | 0.4655 | -0.18 | 26.25 | -14.17 | NO TREND | 0.2459 | |
| APPTF | Spring1 | S | SECCHI | 0.00 | 0.9369 | 0.00 | 0.53 | 0.00 | NO TREND | 0.9263 | |
| APPTF | Spring1 | S | SDO | 0.00 | 0.8396 | 0.00 | 9.90 | 0.19 | NO TREND | 0.2780 | |
| APPTF | Spring1 | B | BDO | 0.00 | 0.1908 | -0.02 | 9.70 | -4.29 | NO TREND | 0.0844 | |
| APPTF | Spring1 | S | SSALINITY | 0.00 | 0.8847 | 0.00 | 0.01 | 0.00 | NO TREND | 0.3371 | |
| APPTF | Spring1 | B | BSALINITY | 0.00 | 0.9601 | 0.00 | 0.01 | 0.00 | NO TREND | 0.3697 | |
| APPTF | Spring1 | S | SWTEMP | 0.00 | 0.0036 | 0.12 | 18.25 | 15.25 | INCREASING | 0.4659 | |
| APPTF | Spring1 | B | BWTEMP | 0.00 | 0.0128 | 0.10 | 17.25 | 13.91 | NO TREND | 0.4254 | |

Appendix A - Section IIA. James River (1985-2008) - Continued.

| Segment | Season | Layer | Parameter | % BDL | P value | Slope | Baseline | % Change | Homogeneity test | |
|---------|---------|-------|-----------|-------|---------|-------|----------|-------------|------------------|---------|
| | | | | | | | | | Direction | P value |
| JMSTF1 | Spring1 | S | SCHLA | 19.44 | 0.4188 | -0.11 | 10.72 | No Estimate | NO TREND | 0.0185 |
| JMSTF1 | Spring1 | S | STSS | 4.52 | 0.4752 | -0.14 | 24.25 | -12.37 | NO TREND | 0.5925 |
| JMSTF1 | Spring1 | B | BTSS | 0.95 | 0.7784 | 0.07 | 41.50 | 3.75 | NO TREND | 0.6958 |
| JMSTF1 | Spring1 | S | SECCHI | 0.00 | 0.0180 | -0.01 | 0.63 | -21.33 | NO TREND | 0.0993 |
| JMSTF1 | Spring1 | S | SDO | 0.00 | 0.2853 | -0.02 | 9.80 | -3.87 | NO TREND | 0.1252 |
| JMSTF1 | Spring1 | B | BDO | 0.00 | 0.8460 | 0.00 | 9.33 | -0.31 | NO TREND | 0.2230 |
| JMSTF1 | Spring1 | S | SSALINITY | 0.00 | 0.6015 | 0.00 | 0.01 | 0.00 | NO TREND | 0.7741 |
| JMSTF1 | Spring1 | B | BSALINITY | 0.00 | 0.5383 | 0.00 | 0.01 | 0.00 | NO TREND | 0.7724 |
| JMSTF1 | Spring1 | S | SWTEMP | 0.00 | 0.0015 | 0.11 | 16.38 | 15.63 | INCREASING | 0.7124 |
| JMSTF1 | Spring1 | B | BWTEMP | 0.00 | 0.0069 | 0.10 | 16.25 | 15.40 | INCREASING | 0.9171 |
| JMSTF2 | Spring1 | S | SCHLA | 69.51 | 0.1627 | 0.00 | 6.30 | No Estimate | HIGH BDLS | 0.8587 |
| JMSTF2 | Spring1 | S | STSS | 18.35 | 0.1678 | -0.12 | 9.00 | No Estimate | NO TREND | 0.7243 |
| JMSTF2 | Spring1 | B | BTSS | 0.00 | 0.3362 | -0.21 | 17.50 | -25.71 | NO TREND | 0.3456 |
| JMSTF2 | Spring1 | S | SECCHI | 0.00 | 0.7079 | 0.00 | 1.10 | 5.74 | NO TREND | 0.7220 |
| JMSTF2 | Spring1 | S | SDO | 0.00 | 0.0052 | -0.04 | 9.05 | -11.37 | DEGRADING | 0.8079 |
| JMSTF2 | Spring1 | B | BDO | 0.00 | 0.0997 | -0.03 | 8.93 | -7.31 | NO TREND | 0.8235 |
| JMSTF2 | Spring1 | S | SSALINITY | 0.00 | 0.1709 | 0.00 | 0.01 | 0.00 | NO TREND | 0.8215 |
| JMSTF2 | Spring1 | B | BSALINITY | 0.00 | 0.1390 | 0.00 | 0.01 | 0.00 | NO TREND | 0.9397 |
| JMSTF2 | Spring1 | S | SWTEMP | 0.00 | 0.1439 | 0.08 | 17.88 | 10.91 | NO TREND | 0.5179 |
| JMSTF2 | Spring1 | B | BWTEMP | 0.00 | 0.0142 | 0.12 | 15.63 | 18.51 | NO TREND | 0.4144 |
| CHKOH | Spring1 | S | SCHLA | 6.67 | 0.4006 | -0.12 | 17.38 | -14.80 | NO TREND | 0.5742 |
| CHKOH | Spring1 | S | STSS | 0.00 | 0.9561 | 0.00 | 18.50 | 0.00 | NO TREND | 0.6739 |
| CHKOH | Spring1 | B | BTSS | 0.00 | 0.3415 | 0.46 | 25.00 | 39.00 | NO TREND | 0.6478 |
| CHKOH | Spring1 | S | SECCHI | 0.00 | 0.0253 | -0.01 | 0.63 | -24.00 | NO TREND | 0.6334 |
| CHKOH | Spring1 | S | SDO | 0.00 | 0.7561 | -0.01 | 9.13 | -1.19 | NO TREND | 0.4236 |
| CHKOH | Spring1 | B | BDO | 0.00 | 0.8982 | 0.00 | 9.08 | -0.36 | NO TREND | 0.1421 |
| CHKOH | Spring1 | S | SSALINITY | 0.00 | 0.1088 | 0.00 | 0.01 | 0.00 | NO TREND | 0.9013 |
| CHKOH | Spring1 | B | BSALINITY | 0.00 | 0.1088 | 0.00 | 0.01 | 0.00 | NO TREND | 0.9013 |
| CHKOH | Spring1 | S | SWTEMP | 0.00 | 0.0296 | 0.09 | 14.35 | 12.80 | NO TREND | 0.3449 |
| CHKOH | Spring1 | B | BWTEMP | 0.00 | 0.0235 | 0.09 | 14.15 | 13.56 | NO TREND | 0.2844 |
| JMSOH | Spring1 | S | SCHLA | 11.67 | 0.7604 | -0.04 | 7.38 | -10.91 | NO TREND | 0.0885 |
| JMSOH | Spring1 | S | STSS | 0.71 | 0.0085 | -0.86 | 34.25 | -50.05 | IMPROVING | 0.6503 |
| JMSOH | Spring1 | B | BTSS | 0.70 | 0.0743 | -2.04 | 74.25 | -54.83 | NO TREND | 0.8247 |
| JMSOH | Spring1 | S | SECCHI | 0.00 | 0.1496 | 0.00 | 0.43 | 9.45 | NO TREND | 0.9026 |
| JMSOH | Spring1 | S | SDO | 0.00 | 0.0350 | -0.03 | 9.13 | -8.19 | NO TREND | 0.8678 |
| JMSOH | Spring1 | B | BDO | 0.00 | 0.0103 | -0.03 | 8.93 | -9.12 | NO TREND | 0.8967 |
| JMSOH | Spring1 | S | SSALINITY | 0.00 | 0.0507 | 0.02 | 1.88 | 19.20 | NO TREND | 0.8570 |
| JMSOH | Spring1 | B | BSALINITY | 0.00 | 0.0428 | 0.03 | 2.34 | 31.76 | NO TREND | 0.6034 |
| JMSOH | Spring1 | S | SWTEMP | 0.00 | 0.0532 | 0.07 | 16.13 | 10.16 | NO TREND | 0.7911 |
| JMSOH | Spring1 | B | BWTEMP | 0.00 | 0.0378 | 0.07 | 15.95 | 10.11 | NO TREND | 0.7526 |
| JMSMH | Spring1 | S | SCHLA | 20.00 | 0.1697 | -0.07 | 5.51 | No Estimate | NO TREND | 0.5835 |
| JMSMH | Spring1 | S | STSS | 0.00 | 0.5681 | -0.07 | 20.50 | -7.98 | NO TREND | 0.9336 |
| JMSMH | Spring1 | B | BTSS | 0.71 | 0.1070 | 0.75 | 29.00 | 51.72 | NO TREND | 0.5927 |
| JMSMH | Spring1 | S | SECCHI | 0.00 | 0.1047 | 0.00 | 0.70 | 13.19 | NO TREND | 0.7201 |
| JMSMH | Spring1 | S | SDO | 0.00 | 0.0547 | -0.02 | 9.08 | -6.17 | NO TREND | 0.9397 |
| JMSMH | Spring1 | B | BDO | 0.00 | 0.1054 | -0.02 | 8.78 | -5.90 | NO TREND | 0.7809 |
| JMSMH | Spring1 | S | SSALINITY | 0.00 | 0.5298 | 0.04 | 12.90 | 7.34 | NO TREND | 0.6830 |
| JMSMH | Spring1 | B | BSALINITY | 0.00 | 0.7257 | 0.04 | 15.79 | 6.33 | NO TREND | 0.4337 |
| JMSMH | Spring1 | S | SWTEMP | 0.00 | 0.1150 | 0.06 | 14.83 | 9.13 | NO TREND | 0.5506 |
| JMSMH | Spring1 | B | BWTEMP | 0.00 | 0.0264 | 0.07 | 14.30 | 11.32 | NO TREND | 0.9901 |

Appendix A - Section IIA. James River (1985-2008) - Continued.

| Segment | Season | Layer | Parameter | % BDL | P value | Slope | Baseline | % Change | Homogeneity test | |
|---------|---------|-------|-----------|-------|---------|-------|----------|-------------|------------------|---------|
| | | | | | | | | | Direction | P value |
| JMSPH | Spring1 | S | SCHLA | 6.78 | 0.1152 | -0.13 | 10.88 | -27.93 | NO TREND | 0.1198 |
| JMSPH | Spring1 | S | STSS | 1.90 | 0.1646 | 0.12 | 10.03 | 29.72 | NO TREND | 0.0663 |
| JMSPH | Spring1 | B | BTSS | 0.00 | 0.2076 | 0.21 | 15.50 | 32.08 | NO TREND | 0.0285 |
| JMSPH | Spring1 | S | SECCHI | 0.00 | 0.1946 | 0.00 | 1.15 | -8.70 | NO TREND | 0.3237 |
| JMSPH | Spring1 | S | SDO | 0.00 | 0.5190 | -0.01 | 9.23 | -3.30 | NO TREND | 0.1151 |
| JMSPH | Spring1 | B | BDO | 0.00 | 0.0933 | 0.02 | 8.68 | 6.21 | NO TREND | 0.1516 |
| JMSPH | Spring1 | S | SSALINITY | 0.00 | 0.4565 | -0.04 | 20.24 | -4.97 | NO TREND | 0.7510 |
| JMSPH | Spring1 | B | BSALINITY | 0.00 | 0.0001 | -0.16 | 23.94 | -16.36 | DECREASING | 0.1162 |
| JMSPH | Spring1 | S | SWTEMP | 0.00 | 0.1325 | 0.04 | 14.23 | 6.38 | NO TREND | 0.5719 |
| JMSPH | Spring1 | B | BWTEMP | 0.00 | 0.0004 | 0.10 | 11.80 | 19.77 | INCREASING | 0.8663 |
| APPTF | Spring2 | S | SCHLA | 7.69 | 0.1697 | -0.35 | 35.86 | -23.72 | NO TREND | 0.9594 |
| APPTF | Spring2 | S | STSS | 0.00 | 0.2382 | -0.15 | 23.75 | -13.22 | NO TREND | 0.4458 |
| APPTF | Spring2 | B | BTSS | 0.00 | 0.7738 | 0.09 | 27.50 | 6.65 | NO TREND | 0.6853 |
| APPTF | Spring2 | S | SECCHI | 0.00 | 0.7032 | 0.00 | 0.50 | 0.00 | NO TREND | 0.9983 |
| APPTF | Spring2 | S | SDO | 0.00 | 0.6958 | -0.01 | 9.30 | -2.87 | NO TREND | 0.6306 |
| APPTF | Spring2 | B | BDO | 0.00 | 0.0851 | -0.03 | 8.80 | -7.79 | NO TREND | 0.2075 |
| APPTF | Spring2 | S | SSALINITY | 0.00 | 0.3913 | 0.00 | 0.01 | 0.00 | NO TREND | 0.8681 |
| APPTF | Spring2 | B | BSALINITY | 0.00 | 0.3524 | 0.00 | 0.01 | 0.00 | NO TREND | 0.9283 |
| APPTF | Spring2 | S | SWTEMP | 0.00 | 0.0053 | 0.13 | 22.45 | 13.90 | INCREASING | 0.4572 |
| APPTF | Spring2 | B | BWTEMP | 0.00 | 0.0146 | 0.12 | 22.25 | 12.74 | NO TREND | 0.4205 |
| JMSTF1 | Spring2 | S | SCHLA | 14.56 | 0.0329 | -0.46 | 21.27 | -51.99 | NO TREND | 0.5273 |
| JMSTF1 | Spring2 | S | STSS | 3.45 | 0.9145 | 0.00 | 25.00 | 0.00 | NO TREND | 0.5532 |
| JMSTF1 | Spring2 | B | BTSS | 0.90 | 0.5221 | 0.42 | 40.50 | 21.85 | NO TREND | 0.8819 |
| JMSTF1 | Spring2 | S | SECCHI | 0.00 | 0.0001 | -0.01 | 0.63 | -29.54 | DEGRADING | 0.9803 |
| JMSTF1 | Spring2 | S | SDO | 0.00 | 0.5684 | -0.01 | 7.80 | -2.56 | NO TREND | 0.0288 |
| JMSTF1 | Spring2 | B | BDO | 0.00 | 0.8112 | 0.00 | 7.58 | -1.20 | NO TREND | 0.2464 |
| JMSTF1 | Spring2 | S | SSALINITY | 0.00 | 0.2208 | 0.00 | 0.01 | 0.00 | NO TREND | 0.9395 |
| JMSTF1 | Spring2 | B | BSALINITY | 0.00 | 0.2018 | 0.00 | 0.01 | 0.00 | NO TREND | 0.9892 |
| JMSTF1 | Spring2 | S | SWTEMP | 0.00 | 0.0036 | 0.11 | 22.25 | 12.08 | INCREASING | 0.6070 |
| JMSTF1 | Spring2 | B | BWTEMP | 0.00 | 0.0143 | 0.11 | 22.00 | 11.77 | NO TREND | 0.8120 |
| JMSTF2 | Spring2 | S | SCHLA | 61.78 | 0.4427 | 0.00 | 6.58 | No Estimate | HIGH BDLS | 0.4483 |
| JMSTF2 | Spring2 | S | STSS | 20.35 | 0.4952 | -0.05 | 9.50 | No Estimate | NO TREND | 0.9490 |
| JMSTF2 | Spring2 | B | BTSS | 0.00 | 0.6172 | -0.08 | 20.50 | -7.88 | NO TREND | 0.6632 |
| JMSTF2 | Spring2 | S | SECCHI | 0.00 | 0.9870 | 0.00 | 0.98 | 0.00 | NO TREND | 0.8893 |
| JMSTF2 | Spring2 | S | SDO | 0.00 | 0.0390 | -0.03 | 8.40 | -8.16 | NO TREND | 0.2517 |
| JMSTF2 | Spring2 | B | BDO | 0.00 | 0.4166 | -0.02 | 7.25 | -6.21 | NO TREND | 0.1737 |
| JMSTF2 | Spring2 | S | SSALINITY | 0.00 | 0.3242 | 0.00 | 0.01 | 0.00 | NO TREND | 0.8511 |
| JMSTF2 | Spring2 | B | BSALINITY | 0.00 | 0.1968 | 0.00 | 0.01 | 0.00 | NO TREND | 0.9932 |
| JMSTF2 | Spring2 | S | SWTEMP | 0.00 | 0.2308 | 0.07 | 22.38 | 6.97 | NO TREND | 0.5398 |
| JMSTF2 | Spring2 | B | BWTEMP | 0.00 | 0.0269 | 0.11 | 21.75 | 12.57 | NO TREND | 0.3563 |
| CHKOH | Spring2 | S | SCHLA | 7.59 | 0.0309 | -0.34 | 17.38 | -40.78 | NO TREND | 0.6654 |
| CHKOH | Spring2 | S | STSS | 0.00 | 0.5300 | -0.06 | 19.50 | -6.16 | NO TREND | 0.4079 |
| CHKOH | Spring2 | B | BTSS | 0.00 | 0.2320 | 0.62 | 30.25 | 42.81 | NO TREND | 0.7695 |
| CHKOH | Spring2 | S | SECCHI | 0.00 | 0.0810 | 0.00 | 0.55 | 0.00 | NO TREND | 0.2261 |
| CHKOH | Spring2 | S | SDO | 0.00 | 0.4865 | -0.02 | 7.78 | -4.96 | NO TREND | 0.7547 |
| CHKOH | Spring2 | B | BDO | 0.00 | 0.2182 | -0.03 | 7.73 | -7.58 | NO TREND | 0.9364 |
| CHKOH | Spring2 | S | SSALINITY | 0.00 | 0.0505 | 0.00 | 0.01 | 0.00 | NO TREND | 0.8508 |
| CHKOH | Spring2 | B | BSALINITY | 0.00 | 0.0435 | 0.00 | 0.01 | 0.00 | NO TREND | 0.8271 |
| CHKOH | Spring2 | S | SWTEMP | 0.00 | 0.0026 | 0.13 | 19.13 | 14.05 | INCREASING | 0.8528 |
| CHKOH | Spring2 | B | BWTEMP | 0.00 | 0.0020 | 0.13 | 18.98 | 14.02 | INCREASING | 0.7920 |

Appendix A - Section IIA. James River (1985-2008) - Continued.

| Segment | Season | Layer | Parameter | % BDL | P value | Slope | Baseline | % Change | Direction | Homogeneity test | |
|---------|---------|-------|-----------|-------|---------|-------|----------|-------------|------------|------------------|--|
| | | | | | | | | | | P value | |
| JMSOH | Spring2 | S | SCHLA | 8.51 | 0.4739 | -0.06 | 7.58 | -18.51 | NO TREND | 0.2644 | |
| JMSOH | Spring2 | S | STSS | 0.67 | 0.0434 | -0.60 | 48.75 | -25.85 | NO TREND | 0.4267 | |
| JMSOH | Spring2 | B | BTSS | 0.67 | 0.4002 | -0.64 | 62.50 | -21.60 | NO TREND | 0.4746 | |
| JMSOH | Spring2 | S | SECCHI | 0.00 | 0.5134 | 0.00 | 0.50 | 0.00 | NO TREND | 0.7693 | |
| JMSOH | Spring2 | S | SDO | 0.00 | 0.0052 | -0.04 | 8.33 | -10.61 | DEGRADING | 0.8604 | |
| JMSOH | Spring2 | B | BDO | 0.00 | 0.0096 | -0.03 | 8.05 | -9.32 | DEGRADING | 0.9018 | |
| JMSOH | Spring2 | S | SSALINITY | 0.00 | 0.0480 | 0.02 | 2.72 | 18.92 | NO TREND | 0.8431 | |
| JMSOH | Spring2 | B | BSALINITY | 0.00 | 0.0696 | 0.04 | 3.12 | 32.67 | NO TREND | 0.7713 | |
| JMSOH | Spring2 | S | SWTEMP | 0.00 | 0.0254 | 0.08 | 21.25 | 8.47 | NO TREND | 0.7132 | |
| JMSOH | Spring2 | B | BWTEMP | 0.00 | 0.0161 | 0.08 | 21.03 | 8.56 | NO TREND | 0.7280 | |
| JMSMH | Spring2 | S | SCHLA | 20.86 | 0.8696 | 0.00 | 5.51 | No Estimate | NO TREND | 0.0715 | |
| JMSMH | Spring2 | S | STSS | 0.00 | 0.2723 | -0.13 | 22.50 | -13.33 | NO TREND | 0.6546 | |
| JMSMH | Spring2 | B | BTSS | 0.00 | 0.0302 | 0.94 | 28.50 | 69.08 | NO TREND | 0.7073 | |
| JMSMH | Spring2 | S | SECCHI | 0.00 | 0.1389 | 0.00 | 0.65 | 14.20 | NO TREND | 0.6029 | |
| JMSMH | Spring2 | S | SDO | 0.00 | 0.0047 | -0.03 | 7.65 | -9.41 | DEGRADING | 0.4520 | |
| JMSMH | Spring2 | B | BDO | 0.00 | 0.0208 | -0.02 | 7.55 | -6.89 | NO TREND | 0.2430 | |
| JMSMH | Spring2 | S | SSALINITY | 0.00 | 0.6401 | 0.03 | 14.19 | 4.70 | NO TREND | 0.7626 | |
| JMSMH | Spring2 | B | BSALINITY | 0.00 | 0.8379 | -0.01 | 17.56 | -1.28 | NO TREND | 0.8683 | |
| JMSMH | Spring2 | S | SWTEMP | 0.00 | 0.0688 | 0.06 | 20.45 | 7.06 | NO TREND | 0.5011 | |
| JMSMH | Spring2 | B | BWTEMP | 0.00 | 0.0203 | 0.07 | 19.98 | 8.01 | NO TREND | 0.9957 | |
| JMSPH | Spring2 | S | SCHLA | 6.81 | 0.7096 | 0.02 | 9.00 | 6.36 | NO TREND | 0.5401 | |
| JMSPH | Spring2 | S | STSS | 2.92 | 0.1151 | 0.14 | 9.65 | 34.37 | NO TREND | 0.0974 | |
| JMSPH | Spring2 | B | BTSS | 0.00 | 0.4309 | 0.12 | 19.28 | 15.34 | NO TREND | 0.0241 | |
| JMSPH | Spring2 | S | SECCHI | 0.00 | 0.0086 | -0.01 | 1.20 | -16.67 | DEGRADING | 0.5824 | |
| JMSPH | Spring2 | S | SDO | 0.00 | 0.9886 | 0.00 | 7.95 | 0.00 | NO TREND | 0.3646 | |
| JMSPH | Spring2 | B | BDO | 0.00 | 0.0098 | 0.03 | 7.65 | 8.63 | IMPROVING | 0.7469 | |
| JMSPH | Spring2 | S | SSALINITY | 0.00 | 0.1439 | -0.06 | 21.28 | -7.03 | NO TREND | 0.7203 | |
| JMSPH | Spring2 | B | BSALINITY | 0.00 | 0.0000 | -0.22 | 24.43 | -21.36 | DECREASING | 0.9310 | |
| JMSPH | Spring2 | S | SWTEMP | 0.00 | 0.0965 | 0.04 | 19.25 | 4.67 | NO TREND | 0.4458 | |
| JMSPH | Spring2 | B | BWTEMP | 0.00 | 0.0001 | 0.10 | 18.45 | 13.26 | INCREASING | 0.7882 | |
| APPTF | Summer1 | S | SCHLA | 3.17 | 0.0659 | -0.68 | 47.23 | -34.60 | NO TREND | 0.8514 | |
| APPTF | Summer1 | S | STSS | 0.00 | 0.9002 | 0.00 | 24.50 | 0.00 | NO TREND | 0.8158 | |
| APPTF | Summer1 | B | BTSS | 0.00 | 0.5143 | -0.21 | 32.25 | -13.41 | NO TREND | 0.8931 | |
| APPTF | Summer1 | S | SECCHI | 0.00 | 0.0000 | -0.01 | 0.50 | -26.67 | DEGRADING | 0.2235 | |
| APPTF | Summer1 | S | SDO | 0.00 | 0.0679 | 0.04 | 8.45 | 12.21 | NO TREND | 0.8944 | |
| APPTF | Summer1 | B | BDO | 0.00 | 0.0265 | 0.03 | 8.20 | 9.72 | NO TREND | 0.6614 | |
| APPTF | Summer1 | S | SSALINITY | 0.00 | 0.7320 | 0.00 | 0.01 | 0.00 | NO TREND | 0.6164 | |
| APPTF | Summer1 | B | BSALINITY | 0.00 | 0.5820 | 0.00 | 0.01 | 0.00 | NO TREND | 0.5575 | |
| APPTF | Summer1 | S | SWTEMP | 0.00 | 0.0413 | 0.06 | 25.63 | 5.96 | NO TREND | 0.9088 | |
| APPTF | Summer1 | B | BWTEMP | 0.00 | 0.1311 | 0.06 | 25.13 | 6.19 | NO TREND | 0.8574 | |
| JMSTF1 | Summer1 | S | SCHLA | 7.49 | 0.2366 | -0.32 | 26.79 | -28.91 | NO TREND | 0.9845 | |
| JMSTF1 | Summer1 | S | STSS | 3.61 | 0.0485 | 0.27 | 19.75 | 29.00 | NO TREND | 0.3638 | |
| JMSTF1 | Summer1 | B | BTSS | 1.02 | 0.1714 | 0.92 | 33.00 | 58.33 | NO TREND | 0.8849 | |
| JMSTF1 | Summer1 | S | SECCHI | 0.00 | 0.0000 | -0.01 | 0.65 | -36.92 | DEGRADING | 0.6594 | |
| JMSTF1 | Summer1 | S | SDO | 0.00 | 0.2190 | 0.02 | 6.95 | 6.83 | NO TREND | 0.3648 | |
| JMSTF1 | Summer1 | B | BDO | 0.00 | 0.1429 | 0.02 | 6.40 | 6.81 | NO TREND | 0.8208 | |
| JMSTF1 | Summer1 | S | SSALINITY | 0.00 | 0.0873 | 0.00 | 0.01 | 0.00 | NO TREND | 0.9852 | |
| JMSTF1 | Summer1 | B | BSALINITY | 0.00 | 0.2733 | 0.00 | 0.01 | 0.00 | NO TREND | 0.9813 | |
| JMSTF1 | Summer1 | S | SWTEMP | 0.00 | 0.5937 | 0.01 | 24.88 | 1.16 | NO TREND | 0.5392 | |
| JMSTF1 | Summer1 | B | BWTEMP | 0.00 | 0.7375 | 0.01 | 25.00 | 1.08 | NO TREND | 0.3945 | |

Appendix A - Section IIA. James River (1985-2008) - Continued.

| Segment | Season | Layer | Parameter | % BDL | P value | Slope | Baseline | % Change | Direction | Homogeneity test |
|---------|---------|-------|-----------|-------|---------|-------|----------|-------------|------------|------------------|
| | | | | | | | | | | P value |
| JMSTF2 | Summer1 | S | SCHLA | 48.71 | 0.9787 | 0.00 | 4.64 | No Estimate | HIGH BDLS | 0.7235 |
| JMSTF2 | Summer1 | S | STSS | 23.08 | 0.1482 | -0.06 | 10.00 | No Estimate | NO TREND | 0.2883 |
| JMSTF2 | Summer1 | B | BTSS | 0.92 | 0.7953 | 0.04 | 18.75 | 4.67 | NO TREND | 0.3875 |
| JMSTF2 | Summer1 | S | SECCHI | 0.00 | 0.0898 | -0.01 | 0.90 | -22.22 | NO TREND | 0.1801 |
| JMSTF2 | Summer1 | S | SDO | 0.00 | 0.4634 | 0.00 | 7.90 | -1.52 | NO TREND | 0.5624 |
| JMSTF2 | Summer1 | B | BDO | 0.00 | 0.3274 | 0.01 | 6.20 | 4.06 | NO TREND | 0.8997 |
| JMSTF2 | Summer1 | S | SSALINITY | 0.00 | 0.6861 | 0.00 | 0.01 | 0.00 | NO TREND | 0.3974 |
| JMSTF2 | Summer1 | B | BSALINITY | 0.00 | 0.5151 | 0.00 | 0.01 | 0.00 | NO TREND | 0.5045 |
| JMSTF2 | Summer1 | S | SWTEMP | 0.00 | 0.3988 | 0.02 | 26.30 | 2.01 | NO TREND | 0.9026 |
| JMSTF2 | Summer1 | B | BWTEMP | 0.00 | 0.2249 | 0.04 | 25.38 | 3.98 | NO TREND | 0.6780 |
| CHKOH | Summer1 | S | SCHLA | 1.90 | 0.0000 | -0.61 | 29.45 | -43.84 | IMPROVING | 0.5585 |
| CHKOH | Summer1 | S | STSS | 0.00 | 0.2463 | 0.18 | 18.50 | 20.03 | NO TREND | 0.2079 |
| CHKOH | Summer1 | B | BTSS | 0.00 | 0.0029 | 1.50 | 35.25 | 89.36 | DEGRADING | 0.4862 |
| CHKOH | Summer1 | S | SECCHI | 0.00 | 0.0000 | -0.01 | 0.55 | -38.18 | DEGRADING | 0.0253 |
| CHKOH | Summer1 | S | SDO | 0.00 | 0.7701 | 0.00 | 6.08 | -0.93 | NO TREND | 0.9776 |
| CHKOH | Summer1 | B | BDO | 0.00 | 0.7467 | 0.00 | 5.75 | 1.30 | NO TREND | 0.7986 |
| CHKOH | Summer1 | S | SSALINITY | 0.00 | 0.0010 | 0.00 | 0.01 | 0.00 | UNCHANGED | 0.6955 |
| CHKOH | Summer1 | B | BSALINITY | 0.00 | 0.0006 | 0.00 | 0.01 | 0.00 | UNCHANGED | 0.7335 |
| CHKOH | Summer1 | S | SWTEMP | 0.00 | 0.2685 | 0.04 | 26.75 | 2.85 | NO TREND | 0.3280 |
| CHKOH | Summer1 | B | BWTEMP | 0.00 | 0.2751 | 0.04 | 26.60 | 3.03 | NO TREND | 0.3395 |
| JMSOH | Summer1 | S | SCHLA | 3.20 | 0.5710 | -0.02 | 8.07 | -6.86 | NO TREND | 0.7275 |
| JMSOH | Summer1 | S | STSS | 0.98 | 0.6727 | -0.08 | 26.00 | -6.55 | NO TREND | 0.4116 |
| JMSOH | Summer1 | B | BTSS | 0.00 | 0.5594 | 0.35 | 55.75 | 13.07 | NO TREND | 0.9179 |
| JMSOH | Summer1 | S | SECCHI | 0.00 | 0.1395 | 0.00 | 0.68 | -8.47 | NO TREND | 0.9045 |
| JMSOH | Summer1 | S | SDO | 0.00 | 0.0022 | -0.02 | 7.08 | -8.48 | DEGRADING | 0.8041 |
| JMSOH | Summer1 | B | BDO | 0.00 | 0.0064 | -0.02 | 6.88 | -8.06 | DEGRADING | 0.5407 |
| JMSOH | Summer1 | S | SSALINITY | 0.00 | 0.1779 | 0.05 | 6.21 | 18.35 | NO TREND | 0.7074 |
| JMSOH | Summer1 | B | BSALINITY | 0.00 | 0.1340 | 0.07 | 6.88 | 24.77 | NO TREND | 0.7331 |
| JMSOH | Summer1 | S | SWTEMP | 0.00 | 0.5455 | 0.02 | 25.85 | 1.47 | NO TREND | 0.3349 |
| JMSOH | Summer1 | B | BWTEMP | 0.00 | 0.5969 | 0.01 | 25.70 | 1.08 | NO TREND | 0.4041 |
| JMSMH | Summer1 | S | SCHLA | 19.43 | 0.0008 | 0.09 | 4.67 | No Estimate | DEGRADING | 0.1352 |
| JMSMH | Summer1 | S | STSS | 3.81 | 0.0663 | -0.13 | 12.00 | -26.49 | NO TREND | 0.9583 |
| JMSMH | Summer1 | B | BTSS | 0.99 | 0.0263 | 0.55 | 20.75 | 55.39 | NO TREND | 0.8253 |
| JMSMH | Summer1 | S | SECCHI | 0.00 | 0.5334 | 0.00 | 1.10 | 0.00 | NO TREND | 0.3892 |
| JMSMH | Summer1 | S | SDO | 0.00 | 0.9899 | 0.00 | 6.63 | 0.00 | NO TREND | 0.0225 |
| JMSMH | Summer1 | B | BDO | 0.00 | 0.5620 | 0.00 | 6.20 | -1.84 | NO TREND | 0.0131 |
| JMSMH | Summer1 | S | SSALINITY | 0.00 | 0.8233 | 0.01 | 17.31 | 1.68 | NO TREND | 0.8933 |
| JMSMH | Summer1 | B | BSALINITY | 0.00 | 0.9901 | 0.00 | 19.60 | -0.05 | NO TREND | 0.9885 |
| JMSMH | Summer1 | S | SWTEMP | 0.00 | 0.9802 | 0.00 | 25.13 | 0.00 | NO TREND | 0.2882 |
| JMSMH | Summer1 | B | BWTEMP | 0.00 | 0.9012 | 0.00 | 24.73 | 0.08 | NO TREND | 0.3843 |
| JMSPH | Summer1 | S | SCHLA | 9.32 | 0.0001 | 0.19 | 3.96 | 113.75 | DEGRADING | 0.2488 |
| JMSPH | Summer1 | S | STSS | 3.14 | 0.2194 | -0.06 | 9.78 | -15.21 | NO TREND | 0.5220 |
| JMSPH | Summer1 | B | BTSS | 0.78 | 0.0210 | -0.30 | 18.45 | -39.02 | NO TREND | 0.6324 |
| JMSPH | Summer1 | S | SECCHI | 0.00 | 0.0000 | -0.01 | 1.25 | -24.00 | DEGRADING | 0.5470 |
| JMSPH | Summer1 | S | SDO | 0.00 | 0.4415 | 0.01 | 6.80 | 2.05 | NO TREND | 0.1255 |
| JMSPH | Summer1 | B | BDO | 0.00 | 0.0000 | 0.04 | 5.95 | 16.57 | IMPROVING | 0.4614 |
| JMSPH | Summer1 | S | SSALINITY | 0.00 | 0.0280 | -0.07 | 23.61 | -6.78 | NO TREND | 0.9918 |
| JMSPH | Summer1 | B | BSALINITY | 0.00 | 0.0000 | -0.19 | 25.21 | -18.22 | DECREASING | 0.5758 |
| JMSPH | Summer1 | S | SWTEMP | 0.00 | 0.8232 | 0.00 | 25.38 | -0.26 | NO TREND | 0.0703 |
| JMSPH | Summer1 | B | BWTEMP | 0.00 | 0.0002 | 0.07 | 22.93 | 7.45 | INCREASING | 0.2901 |

Appendix A - Section IIA. James River (1985-2008) - Continued.

| Segment | Season | Layer | Parameter | % BDL | P value | Slope | Baseline | % Change | Direction | Homogeneity test | |
|---------|---------|-------|-----------|-------|---------|-------|----------|-------------|------------|------------------|--|
| | | | | | | | | | | P value | |
| APPTF | Summer2 | S | SCHLA | 4.35 | 0.0894 | -0.76 | 47.23 | -38.37 | NO TREND | 0.6841 | |
| APPTF | Summer2 | S | STSS | 0.00 | 0.8404 | 0.00 | 24.50 | 0.00 | NO TREND | 0.7475 | |
| APPTF | Summer2 | B | BTSS | 0.00 | 0.3997 | -0.29 | 32.25 | -18.60 | NO TREND | 0.8472 | |
| APPTF | Summer2 | S | SECCHI | 0.00 | 0.0000 | -0.01 | 0.50 | -34.29 | DEGRADING | 0.8284 | |
| APPTF | Summer2 | S | SDO | 0.00 | 0.0648 | 0.05 | 7.65 | 15.69 | NO TREND | 0.8612 | |
| APPTF | Summer2 | B | BDO | 0.00 | 0.0182 | 0.04 | 6.70 | 14.93 | NO TREND | 0.6554 | |
| APPTF | Summer2 | S | SSALINITY | 0.00 | 0.8803 | 0.00 | 0.01 | 0.00 | NO TREND | 0.4313 | |
| APPTF | Summer2 | B | BSALINITY | 0.00 | 0.7469 | 0.00 | 0.01 | 0.00 | NO TREND | 0.3797 | |
| APPTF | Summer2 | S | SWTEMP | 0.00 | 0.1278 | 0.05 | 25.63 | 4.41 | NO TREND | 0.8604 | |
| APPTF | Summer2 | B | BWTEMP | 0.00 | 0.3099 | 0.05 | 25.13 | 4.78 | NO TREND | 0.7974 | |
| JMSTF1 | Summer2 | S | SCHLA | 7.09 | 0.3064 | -0.27 | 26.75 | -24.22 | NO TREND | 0.9253 | |
| JMSTF1 | Summer2 | S | STSS | 4.04 | 0.0378 | 0.29 | 19.25 | 31.17 | NO TREND | 0.2613 | |
| JMSTF1 | Summer2 | B | BTSS | 0.93 | 0.1435 | 1.00 | 30.00 | 70.00 | NO TREND | 0.8440 | |
| JMSTF1 | Summer2 | S | SECCHI | 0.00 | 0.0000 | -0.01 | 0.68 | -35.56 | DEGRADING | 0.8212 | |
| JMSTF1 | Summer2 | S | SDO | 0.00 | 0.6568 | 0.01 | 6.95 | 2.04 | NO TREND | 0.4405 | |
| JMSTF1 | Summer2 | B | BDO | 0.00 | 0.2951 | 0.01 | 6.40 | 4.69 | NO TREND | 0.6967 | |
| JMSTF1 | Summer2 | S | SSALINITY | 0.00 | 0.1312 | 0.00 | 0.13 | 0.00 | NO TREND | 0.9278 | |
| JMSTF1 | Summer2 | B | BSALINITY | 0.00 | 0.3911 | 0.00 | 0.16 | 0.00 | NO TREND | 0.9527 | |
| JMSTF1 | Summer2 | S | SWTEMP | 0.00 | 0.9543 | 0.00 | 24.88 | -0.04 | NO TREND | 0.5814 | |
| JMSTF1 | Summer2 | B | BWTEMP | 0.00 | 0.8522 | 0.00 | 25.00 | -0.31 | NO TREND | 0.3548 | |
| JMSTF2 | Summer2 | S | SCHLA | 48.24 | 0.8079 | 0.00 | 4.64 | No Estimate | HIGH BDLS | 0.6100 | |
| JMSTF2 | Summer2 | S | STSS | 24.89 | 0.1197 | -0.07 | 10.00 | No Estimate | NO TREND | 0.1782 | |
| JMSTF2 | Summer2 | B | BTSS | 1.25 | 0.4318 | 0.15 | 14.00 | 22.50 | NO TREND | 0.4234 | |
| JMSTF2 | Summer2 | S | SECCHI | 0.00 | 0.0483 | -0.01 | 1.00 | -25.49 | NO TREND | 0.1567 | |
| JMSTF2 | Summer2 | S | SDO | 0.00 | 0.3512 | -0.01 | 7.90 | -2.20 | NO TREND | 0.4288 | |
| JMSTF2 | Summer2 | B | BDO | 0.00 | 0.5976 | 0.01 | 6.20 | 2.76 | NO TREND | 0.9388 | |
| JMSTF2 | Summer2 | S | SSALINITY | 0.00 | 0.8522 | 0.00 | 0.01 | 0.00 | NO TREND | 0.2581 | |
| JMSTF2 | Summer2 | B | BSALINITY | 0.00 | 0.7999 | 0.00 | 0.01 | 0.00 | NO TREND | 0.3695 | |
| JMSTF2 | Summer2 | S | SWTEMP | 0.00 | 0.5378 | 0.02 | 26.30 | 1.68 | NO TREND | 0.7709 | |
| JMSTF2 | Summer2 | B | BWTEMP | 0.00 | 0.3376 | 0.04 | 25.38 | 3.50 | NO TREND | 0.4744 | |
| CHKOH | Summer2 | S | SCHLA | 0.00 | 0.0001 | -0.63 | 29.45 | -45.00 | IMPROVING | 0.3722 | |
| CHKOH | Summer2 | S | STSS | 0.00 | 0.0390 | 0.36 | 17.25 | 43.96 | NO TREND | 0.8918 | |
| CHKOH | Summer2 | B | BTSS | 0.00 | 0.0013 | 2.00 | 36.25 | 115.86 | DEGRADING | 0.6423 | |
| CHKOH | Summer2 | S | SECCHI | 0.00 | 0.0000 | -0.01 | 0.65 | -46.15 | DEGRADING | 0.9891 | |
| CHKOH | Summer2 | S | SDO | 0.00 | 0.6680 | -0.01 | 6.08 | -1.78 | NO TREND | 0.9607 | |
| CHKOH | Summer2 | B | BDO | 0.00 | 0.5315 | 0.01 | 5.75 | 3.49 | NO TREND | 0.7540 | |
| CHKOH | Summer2 | S | SSALINITY | 0.00 | 0.0028 | 0.04 | 0.01 | 7687.50 | INCREASING | 0.5134 | |
| CHKOH | Summer2 | B | BSALINITY | 0.00 | 0.0019 | 0.04 | 0.01 | 9028.13 | INCREASING | 0.5518 | |
| CHKOH | Summer2 | S | SWTEMP | 0.00 | 0.7480 | 0.01 | 26.93 | 1.04 | NO TREND | 0.3909 | |
| CHKOH | Summer2 | B | BWTEMP | 0.00 | 0.7343 | 0.01 | 26.78 | 0.83 | NO TREND | 0.3789 | |
| JMSOH | Summer2 | S | SCHLA | 2.16 | 0.2862 | -0.07 | 8.07 | -22.13 | NO TREND | 0.9926 | |
| JMSOH | Summer2 | S | STSS | 1.32 | 0.8121 | -0.05 | 26.00 | -3.67 | NO TREND | 0.2446 | |
| JMSOH | Summer2 | B | BTSS | 0.00 | 0.6427 | 0.28 | 57.25 | 10.18 | NO TREND | 0.7792 | |
| JMSOH | Summer2 | S | SECCHI | 0.00 | 0.1165 | 0.00 | 0.70 | -13.19 | NO TREND | 0.9004 | |
| JMSOH | Summer2 | S | SDO | 0.00 | 0.0178 | -0.02 | 7.08 | -7.54 | NO TREND | 0.7176 | |
| JMSOH | Summer2 | B | BDO | 0.00 | 0.0171 | -0.02 | 6.98 | -7.86 | NO TREND | 0.3409 | |
| JMSOH | Summer2 | S | SSALINITY | 0.00 | 0.5394 | 0.02 | 6.41 | 7.49 | NO TREND | 0.9084 | |
| JMSOH | Summer2 | B | BSALINITY | 0.00 | 0.4215 | 0.05 | 7.10 | 17.58 | NO TREND | 0.8520 | |
| JMSOH | Summer2 | S | SWTEMP | 0.00 | 0.7812 | -0.01 | 26.05 | -0.58 | NO TREND | 0.6381 | |
| JMSOH | Summer2 | B | BWTEMP | 0.00 | 0.7258 | -0.01 | 25.90 | -1.16 | NO TREND | 0.8252 | |

Appendix A - Section IIA. James River (1985-2008) - Continued.

| Segment | Season | Layer | Parameter | % BDL | P value | Slope | Baseline | % Change | Direction | Homogeneity test |
|---------|---------|-------|-----------|-------|---------|-------|----------|-------------|------------|------------------|
| | | | | | | | | | | P value |
| JMSMH | Summer2 | S | SCHLA | 21.43 | 0.0030 | 0.09 | 4.28 | No Estimate | DEGRADING | 0.0627 |
| JMSMH | Summer2 | S | STSS | 5.16 | 0.1811 | -0.11 | 12.00 | -22.23 | NO TREND | 0.9588 |
| JMSMH | Summer2 | B | BTSS | 1.32 | 0.0750 | 0.50 | 20.25 | 51.85 | NO TREND | 0.6643 |
| JMSMH | Summer2 | S | SECCHI | 0.00 | 0.4353 | 0.00 | 1.10 | 0.00 | NO TREND | 0.2513 |
| JMSMH | Summer2 | S | SDO | 0.00 | 0.1471 | 0.01 | 6.55 | 4.07 | NO TREND | 0.7832 |
| JMSMH | Summer2 | B | BDO | 0.00 | 0.4222 | 0.01 | 6.00 | 4.00 | NO TREND | 0.1965 |
| JMSMH | Summer2 | S | SSALINITY | 0.00 | 0.9429 | -0.01 | 18.36 | -0.91 | NO TREND | 0.8467 |
| JMSMH | Summer2 | B | BSALINITY | 0.00 | 0.8523 | -0.01 | 20.42 | -1.04 | NO TREND | 0.9986 |
| JMSMH | Summer2 | S | SWTEMP | 0.00 | 0.3977 | -0.02 | 25.90 | -1.70 | NO TREND | 0.5921 |
| JMSMH | Summer2 | B | BWTEMP | 0.00 | 0.5189 | -0.01 | 25.55 | -1.17 | NO TREND | 0.6753 |
| JMSPH | Summer2 | S | SCHLA | 10.33 | 0.0001 | 0.24 | 3.85 | 150.63 | DEGRADING | 0.2606 |
| JMSPH | Summer2 | S | STSS | 3.06 | 0.1875 | -0.08 | 9.78 | -19.46 | NO TREND | 0.3694 |
| JMSPH | Summer2 | B | BTSS | 1.01 | 0.0080 | -0.38 | 17.95 | -50.29 | IMPROVING | 0.9899 |
| JMSPH | Summer2 | S | SECCHI | 0.00 | 0.0004 | -0.01 | 1.25 | -24.00 | DEGRADING | 0.3458 |
| JMSPH | Summer2 | S | SDO | 0.00 | 0.2123 | 0.01 | 6.68 | 4.90 | NO TREND | 0.1118 |
| JMSPH | Summer2 | B | BDO | 0.00 | 0.0000 | 0.05 | 5.90 | 20.97 | IMPROVING | 0.7309 |
| JMSPH | Summer2 | S | SSALINITY | 0.00 | 0.0733 | -0.07 | 24.03 | -6.68 | NO TREND | 0.9749 |
| JMSPH | Summer2 | B | BSALINITY | 0.00 | 0.0001 | -0.18 | 25.83 | -16.58 | DECREASING | 0.4389 |
| JMSPH | Summer2 | S | SWTEMP | 0.00 | 0.1645 | -0.03 | 26.15 | -2.29 | NO TREND | 0.5163 |
| JMSPH | Summer2 | B | BWTEMP | 0.00 | 0.0054 | 0.06 | 23.38 | 6.21 | INCREASING | 0.2157 |
| APPTF | Winter | S | SCHLA | 62.79 | 0.1203 | 0.00 | 3.10 | No Estimate | High BDLs | 0.9087 |
| APPTF | Winter | S | STSS | 0.00 | 0.4171 | -0.20 | 13.00 | -30.77 | NO TREND | 0.2028 |
| APPTF | Winter | B | BTSS | 0.00 | 0.4290 | -0.33 | 19.00 | -35.09 | NO TREND | 0.4607 |
| APPTF | Winter | S | SECCHI | 0.00 | 0.1744 | 0.00 | 0.55 | 0.00 | NO TREND | 0.1131 |
| APPTF | Winter | S | SDO | 0.00 | 0.5636 | 0.01 | 12.20 | 2.81 | NO TREND | 0.9170 |
| APPTF | Winter | B | BDO | 0.00 | 0.3100 | 0.03 | 12.20 | 5.11 | NO TREND | 0.5686 |
| APPTF | Winter | S | SSALINITY | 0.00 | 0.3094 | 0.00 | 0.01 | 0.00 | NO TREND | |
| APPTF | Winter | B | BSALINITY | 0.00 | 0.2155 | 0.00 | 0.01 | 0.00 | NO TREND | 0.7363 |
| APPTF | Winter | S | SWTEMP | 0.00 | 0.1162 | 0.07 | 2.75 | 58.47 | NO TREND | 0.8463 |
| APPTF | Winter | B | BWTEMP | 0.00 | 0.1762 | 0.07 | 2.75 | 59.55 | NO TREND | 0.6109 |
| JMSTF1 | Winter | S | SCHLA | 61.16 | 0.0355 | 0.00 | 3.10 | No Estimate | HIGH BDLS | 0.4818 |
| JMSTF1 | Winter | S | STSS | 7.89 | 0.6336 | 0.20 | 17.50 | 22.86 | NO TREND | 0.3735 |
| JMSTF1 | Winter | B | BTSS | 5.56 | 0.3914 | 0.69 | 47.50 | 28.95 | NO TREND | 0.8739 |
| JMSTF1 | Winter | S | SECCHI | 0.00 | 0.1280 | 0.00 | 0.45 | 0.00 | NO TREND | 0.3327 |
| JMSTF1 | Winter | S | SDO | 0.00 | 0.5773 | 0.01 | 11.58 | 2.99 | NO TREND | 0.9660 |
| JMSTF1 | Winter | B | BDO | 0.00 | 0.2914 | 0.02 | 11.55 | 5.19 | NO TREND | 0.7105 |
| JMSTF1 | Winter | S | SSALINITY | 0.00 | 0.5354 | 0.00 | 0.01 | 0.00 | NO TREND | 0.3792 |
| JMSTF1 | Winter | B | BSALINITY | 0.00 | 0.5354 | 0.00 | 0.01 | 0.00 | NO TREND | 0.3792 |
| JMSTF1 | Winter | S | SWTEMP | 0.00 | 0.5776 | 0.04 | 3.63 | 24.83 | NO TREND | 0.5464 |
| JMSTF1 | Winter | B | BWTEMP | 0.00 | 0.6332 | 0.03 | 3.63 | 19.47 | NO TREND | 0.5429 |
| JMSTF2 | Winter | S | SCHLA | 69.64 | 0.6184 | 0.00 | 3.10 | No Estimate | HIGH BDLS | 0.6306 |
| JMSTF2 | Winter | S | STSS | 27.03 | 0.6421 | 0.00 | 5.00 | No Estimate | NO TREND | 0.3552 |
| JMSTF2 | Winter | B | BTSS | 16.88 | 0.1444 | -0.27 | 29.25 | No Estimate | NO TREND | 0.1915 |
| JMSTF2 | Winter | S | SECCHI | 0.00 | 0.1394 | 0.02 | 0.60 | 92.31 | NO TREND | 0.8322 |
| JMSTF2 | Winter | S | SDO | 0.00 | 0.7502 | 0.00 | 12.95 | -0.79 | NO TREND | 0.2221 |
| JMSTF2 | Winter | B | BDO | 0.00 | 0.3108 | 0.02 | 12.40 | 4.47 | NO TREND | 0.0656 |
| JMSTF2 | Winter | S | SSALINITY | 0.00 | 0.3925 | 0.00 | 0.01 | 0.00 | NO TREND | |
| JMSTF2 | Winter | B | BSALINITY | 0.00 | 0.3325 | 0.00 | 0.01 | 0.00 | NO TREND | |
| JMSTF2 | Winter | S | SWTEMP | 0.00 | 0.6475 | -0.02 | 3.13 | -18.43 | NO TREND | 0.2107 |
| JMSTF2 | Winter | B | BWTEMP | 0.00 | 0.8660 | -0.01 | 3.25 | -3.90 | NO TREND | 0.1573 |

Appendix A - Section IIA. James River (1985-2008) - Continued.

| Segment | Season | Layer | Parameter | % BDL | P value | Slope | Baseline | % Change | Homogeneity test | |
|---------|--------|-------|-----------|-------|---------|-------|----------|-------------|------------------|---------|
| | | | | | | | | | Direction | P value |
| CHKOH | Winter | S | SCHLA | 23.08 | 0.9809 | 0.00 | 14.98 | No Estimate | NO TREND | 0.4277 |
| CHKOH | Winter | S | STSS | 0.00 | 0.9052 | 0.00 | 16.00 | 0.00 | NO TREND | 0.7962 |
| CHKOH | Winter | B | BTSS | 0.00 | 0.9429 | 0.00 | 24.50 | 0.00 | NO TREND | 0.6170 |
| CHKOH | Winter | S | SECCHI | 0.00 | 0.2394 | 0.00 | 0.60 | 0.00 | NO TREND | 0.6904 |
| CHKOH | Winter | S | SDO | 0.00 | 0.0453 | 0.05 | 12.00 | 7.82 | NO TREND | 0.7953 |
| CHKOH | Winter | B | BDO | 0.00 | 0.0116 | 0.07 | 11.45 | 11.64 | NO TREND | 0.7741 |
| CHKOH | Winter | S | SSALINITY | 0.00 | 0.2350 | 0.00 | 0.26 | 0.00 | NO TREND | 0.9201 |
| CHKOH | Winter | B | BSALINITY | 0.00 | 0.2350 | 0.00 | 0.26 | 0.00 | NO TREND | 0.9201 |
| CHKOH | Winter | S | SWTEMP | 0.00 | 0.2690 | -0.05 | 6.50 | -14.24 | NO TREND | 0.4910 |
| CHKOH | Winter | B | BWTEMP | 0.00 | 0.2473 | -0.04 | 6.40 | -13.39 | NO TREND | 0.4903 |
| JMSOH | Winter | S | SCHLA | 47.44 | 0.7039 | 0.00 | 3.80 | No Estimate | High BDLs | 0.1932 |
| JMSOH | Winter | S | STSS | 1.37 | 0.2578 | -0.70 | 68.00 | -20.69 | NO TREND | 0.9224 |
| JMSOH | Winter | B | BTSS | 0.00 | 0.7972 | -0.24 | 143.00 | -3.38 | NO TREND | 0.8287 |
| JMSOH | Winter | S | SECCHI | 0.00 | 0.1889 | 0.00 | 0.40 | 20.00 | NO TREND | 0.7066 |
| JMSOH | Winter | S | SDO | 0.00 | 0.7981 | 0.00 | 11.68 | -0.93 | NO TREND | 0.8442 |
| JMSOH | Winter | B | BDO | 0.00 | 0.6394 | -0.01 | 11.80 | -2.40 | NO TREND | 0.8225 |
| JMSOH | Winter | S | SSALINITY | 0.00 | 0.1247 | 0.05 | 1.63 | 66.26 | NO TREND | 0.2047 |
| JMSOH | Winter | B | BSALINITY | 0.00 | 0.2007 | 0.06 | 4.31 | 32.89 | NO TREND | 0.2809 |
| JMSOH | Winter | S | SWTEMP | 0.00 | 0.1476 | 0.08 | 3.35 | 59.46 | NO TREND | 0.5591 |
| JMSOH | Winter | B | BWTEMP | 0.00 | 0.1539 | 0.09 | 3.25 | 67.13 | NO TREND | 0.6947 |
| JMSMH | Winter | S | SCHLA | 16.05 | 0.8770 | 0.05 | 28.37 | No Estimate | NO TREND | 0.2952 |
| JMSMH | Winter | S | STSS | 3.90 | 0.3672 | 0.14 | 9.00 | 36.30 | NO TREND | 0.1002 |
| JMSMH | Winter | B | BTSS | 1.37 | 0.0370 | 0.88 | 11.00 | 159.09 | NO TREND | 0.3251 |
| JMSMH | Winter | S | SECCHI | 0.00 | 0.5485 | 0.00 | 1.03 | 7.32 | NO TREND | 0.3002 |
| JMSMH | Winter | S | SDO | 0.00 | 0.7655 | 0.00 | 12.13 | -0.85 | NO TREND | 0.3786 |
| JMSMH | Winter | B | BDO | 0.00 | 0.3488 | -0.02 | 12.28 | -3.91 | NO TREND | 0.9815 |
| JMSMH | Winter | S | SSALINITY | 0.00 | 0.3918 | 0.11 | 14.09 | 18.99 | NO TREND | 0.2528 |
| JMSMH | Winter | B | BSALINITY | 0.00 | 0.8480 | -0.02 | 19.12 | -1.93 | NO TREND | 0.1673 |
| JMSMH | Winter | S | SWTEMP | 0.00 | 0.2188 | 0.06 | 2.10 | 66.12 | NO TREND | 0.4213 |
| JMSMH | Winter | B | BWTEMP | 0.00 | 0.2501 | 0.07 | 2.30 | 75.19 | NO TREND | 0.4896 |
| JMSPH | Winter | S | SCHLA | 4.82 | 0.3090 | -0.17 | 22.53 | -18.62 | NO TREND | 0.0630 |
| JMSPH | Winter | S | STSS | 2.56 | 0.9162 | 0.01 | 8.65 | 3.49 | NO TREND | 0.3997 |
| JMSPH | Winter | B | BTSS | 2.53 | 0.3804 | -0.15 | 13.65 | -26.23 | NO TREND | 0.5745 |
| JMSPH | Winter | S | SECCHI | 0.00 | 0.0619 | -0.02 | 1.38 | -29.72 | NO TREND | 0.9444 |
| JMSPH | Winter | S | SDO | 0.00 | 0.1602 | -0.03 | 12.50 | -6.53 | NO TREND | 0.4193 |
| JMSPH | Winter | B | BDO | 0.00 | 0.2690 | 0.03 | 11.55 | 6.44 | NO TREND | 0.9578 |
| JMSPH | Winter | S | SSALINITY | 0.00 | 0.8060 | -0.02 | 20.05 | -2.09 | NO TREND | 0.8060 |
| JMSPH | Winter | B | BSALINITY | 0.00 | 0.0006 | -0.22 | 24.30 | -21.96 | DECREASING | 0.6483 |
| JMSPH | Winter | S | SWTEMP | 0.00 | 0.0271 | 0.09 | 2.45 | 83.93 | NO TREND | 0.8060 |
| JMSPH | Winter | B | BWTEMP | 0.00 | 0.0121 | 0.10 | 2.83 | 82.47 | NO TREND | 0.9849 |

Appendix A - Section IIB. Seasonal Kendall Long-term trends in water quality for the Elizabeth River (1985-2007). Parameters are as follows: STN=Surface total nitrogen, BTN=Bottom total nitrogen, SDIN=Surface dissolved inorganic nitrogen, BDIN=Bottom dissolved inorganic nitrogen, STP=Surface total phosphorus, BTP=Bottom total phosphorus, SPO4F=Surface dissolved inorganic phosphorus, BPO4F=Bottom dissolved inorganic phosphorus, SCHLA=Surface chlorophyll *a*, STSS=Surface total suspended solids, BTSS=Bottom total suspended solids, SEECCHI=Secchi depth, BDO=Bottom dissolved oxygen, SSALIN=Surface salinity, BSALIN=Bottom salinity, SWTEMP=Surface water temperature, BWTEMP=Bottom water temperature.

| Segment | Season | Layer | Parameter | % BDL | P value | Slope | Baseline | % Change | Direction | Homogeneity test |
|---------|--------|-------|-----------|-------|---------|-------|----------|----------|------------|------------------|
| | | | | | | | | | | P value |
| EBEMH | Annual | S | SCHLA | 4.31 | 0.7974 | -0.01 | 6.60 | -3.35 | NO TREND | 0.3216 |
| EBEMH | Annual | S | STSS | 0.43 | 0.0000 | -0.24 | 9.95 | -49.19 | IMPROVING | 0.4963 |
| EBEMH | Annual | B | BTSS | 0.00 | 0.0000 | -0.40 | 12.15 | -66.47 | IMPROVING | 0.9917 |
| EBEMH | Annual | S | SECCHI | 0.00 | 0.3816 | 0.00 | 1.00 | 0.00 | NO TREND | 0.1530 |
| EBEMH | Annual | S | SDO | 0.00 | 0.1359 | 0.02 | 6.40 | 6.13 | NO TREND | 0.8587 |
| EBEMH | Annual | B | BDO | 0.00 | 0.0028 | 0.04 | 6.10 | 12.86 | IMPROVING | 0.6224 |
| EBEMH | Annual | S | SSALINITY | 0.00 | 0.0182 | 0.08 | 16.85 | 9.18 | NO TREND | 0.5759 |
| EBEMH | Annual | B | BSALINITY | 0.00 | 0.4328 | 0.03 | 18.40 | 3.22 | NO TREND | 0.9738 |
| EBEMH | Annual | S | SWTEMP | 0.00 | 0.0100 | 0.05 | 17.00 | 5.69 | INCREASING | 0.6774 |
| EBEMH | Annual | B | BWTEMP | 0.00 | 0.0041 | 0.06 | 15.90 | 7.55 | INCREASING | 0.5371 |
| WBEMH | Annual | S | SCHLA | 0.43 | 0.0196 | -0.19 | 23.00 | -16.47 | NO TREND | 0.3714 |
| WBEMH | Annual | S | STSS | 0.00 | 0.0000 | -0.37 | 20.60 | -35.71 | IMPROVING | 0.7350 |
| WBEMH | Annual | B | BTSS | 0.00 | 0.0000 | -0.57 | 20.50 | -55.75 | IMPROVING | 0.7039 |
| WBEMH | Annual | S | SECCHI | 0.00 | 1.0000 | 0.00 | 0.60 | 0.00 | NO TREND | 0.8900 |
| WBEMH | Annual | S | SDO | 0.00 | 0.5156 | -0.01 | 7.10 | -2.62 | NO TREND | 0.5427 |
| WBEMH | Annual | B | BDO | 0.00 | 0.3497 | 0.02 | 6.90 | 4.35 | NO TREND | 0.3474 |
| WBEMH | Annual | S | SSALINITY | 0.00 | 0.0602 | 0.07 | 15.90 | 8.58 | NO TREND | 0.6918 |
| WBEMH | Annual | B | BSALINITY | 0.00 | 0.1115 | 0.06 | 16.70 | 7.07 | NO TREND | 0.8173 |
| WBEMH | Annual | S | SWTEMP | 0.00 | 0.1071 | 0.03 | 17.00 | 3.84 | NO TREND | 0.6242 |
| WBEMH | Annual | B | BWTEMP | 0.00 | 0.0471 | 0.04 | 16.15 | 5.33 | NO TREND | 0.7137 |
| SBEMH | Annual | S | SCHLA | 8.57 | 0.3828 | -0.02 | 4.05 | -10.22 | NO TREND | 0.3463 |
| SBEMH | Annual | S | STSS | 0.64 | 0.0000 | -0.22 | 8.58 | -51.58 | IMPROVING | 0.8279 |
| SBEMH | Annual | B | BTSS | 0.22 | 0.0000 | -0.53 | 13.08 | -81.58 | IMPROVING | 0.9913 |
| SBEMH | Annual | S | SECCHI | 0.00 | 0.1249 | 0.00 | 0.75 | 12.12 | NO TREND | 0.6269 |
| SBEMH | Annual | S | SDO | 0.00 | 0.3221 | 0.01 | 6.08 | 3.79 | NO TREND | 0.6880 |
| SBEMH | Annual | B | BDO | 0.00 | 0.0005 | 0.05 | 5.25 | 18.41 | IMPROVING | 0.5091 |
| SBEMH | Annual | S | SSALINITY | 0.00 | 0.0022 | 0.11 | 14.75 | 15.14 | INCREASING | 0.9167 |
| SBEMH | Annual | B | BSALINITY | 0.00 | 0.5130 | -0.02 | 18.45 | -2.60 | NO TREND | 0.9754 |
| SBEMH | Annual | S | SWTEMP | 0.00 | 0.0003 | 0.08 | 18.20 | 9.10 | INCREASING | 0.4198 |
| SBEMH | Annual | B | BWTEMP | 0.00 | 0.0000 | 0.14 | 17.10 | 16.18 | INCREASING | 0.8505 |
| ELIPH | Annual | S | SCHLA | 9.67 | 0.8493 | 0.00 | 8.63 | 0.00 | NO TREND | 0.0280 |
| ELIPH | Annual | S | STSS | 6.02 | 0.0041 | -0.13 | 8.00 | -39.13 | IMPROVING | 0.2578 |
| ELIPH | Annual | B | BTSS | 1.37 | 0.0436 | -0.22 | 16.00 | -33.38 | NO TREND | 0.0139 |
| ELIPH | Annual | S | SECCHI | 0.00 | 0.0000 | -0.01 | 1.10 | -18.18 | DEGRADING | 0.0874 |
| ELIPH | Annual | S | SDO | 0.00 | 0.0005 | 0.03 | 7.30 | 9.28 | IMPROVING | 0.0240 |
| ELIPH | Annual | B | BDO | 0.00 | 0.3486 | 0.01 | 6.70 | 2.39 | NO TREND | 0.0170 |
| ELIPH | Annual | S | SSALINITY | 0.00 | 0.0341 | -0.06 | 21.01 | -6.53 | NO TREND | 0.9974 |
| ELIPH | Annual | B | BSALINITY | 0.00 | 0.0440 | -0.05 | 24.08 | -4.71 | NO TREND | 0.9748 |
| ELIPH | Annual | S | SWTEMP | 0.00 | 0.2344 | 0.02 | 20.00 | 2.00 | NO TREND | 0.1189 |
| ELIPH | Annual | B | BWTEMP | 0.00 | 0.3681 | 0.01 | 17.90 | 1.99 | NO TREND | 0.1739 |

Appendix A - Section IIB. Elizabeth River (1985-2008) - Continued.

| Segment | Season | Layer | Parameter | % BDL | P value | Slope | Baseline | % Change | Direction | Homogeneity test | |
|---------|--------|-------|-----------|-------|---------|-------|----------|-------------|------------|------------------|--|
| | | | | | | | | | | P value | |
| EBEMH | Fall | S | SCHLA | 9.09 | 0.1755 | 0.05 | 3.15 | 30.52 | NO TREND | 0.7753 | |
| EBEMH | Fall | S | STSS | 1.75 | 0.0228 | -0.15 | 6.75 | -44.10 | NO TREND | 0.1240 | |
| EBEMH | Fall | B | BTSS | 0.00 | 0.0018 | -0.34 | 8.40 | -80.94 | IMPROVING | 0.8668 | |
| EBEMH | Fall | S | SECCHI | 0.00 | 0.4393 | -0.01 | 1.25 | -8.92 | NO TREND | 0.5053 | |
| EBEMH | Fall | S | SDO | 0.00 | 0.3866 | 0.02 | 7.15 | 6.04 | NO TREND | 0.2635 | |
| EBEMH | Fall | B | BDO | 0.00 | 0.3152 | 0.03 | 6.70 | 9.51 | NO TREND | 0.1936 | |
| EBEMH | Fall | S | SSALINITY | 0.00 | 0.4683 | -0.04 | 18.10 | -4.54 | NO TREND | 0.9063 | |
| EBEMH | Fall | B | BSALINITY | 0.00 | 0.6704 | -0.01 | 18.20 | -1.24 | NO TREND | 0.8892 | |
| EBEMH | Fall | S | SWTEMP | 0.00 | 0.0398 | 0.10 | 13.60 | 14.43 | NO TREND | 0.4927 | |
| EBEMH | Fall | B | BWTEMP | 0.00 | 0.0673 | 0.08 | 13.50 | 12.10 | NO TREND | 0.2936 | |
| WBEMH | Fall | S | SCHLA | 0.00 | 0.2268 | 0.08 | 10.25 | 16.57 | NO TREND | 0.8129 | |
| WBEMH | Fall | S | STSS | 0.00 | 0.0040 | -0.30 | 13.00 | -45.54 | IMPROVING | 0.4364 | |
| WBEMH | Fall | B | BTSS | 0.00 | 0.0011 | -0.50 | 14.05 | -70.60 | IMPROVING | 0.8819 | |
| WBEMH | Fall | S | SECCHI | 0.00 | 0.5589 | 0.00 | 0.90 | 0.00 | NO TREND | 0.9300 | |
| WBEMH | Fall | S | SDO | 0.00 | 0.8907 | 0.00 | 8.30 | 1.20 | NO TREND | 0.7251 | |
| WBEMH | Fall | B | BDO | 0.00 | 0.9011 | 0.00 | 8.00 | 1.14 | NO TREND | 0.3943 | |
| WBEMH | Fall | S | SSALINITY | 0.00 | 0.2342 | -0.07 | 17.85 | -8.12 | NO TREND | 0.9505 | |
| WBEMH | Fall | B | BSALINITY | 0.00 | 0.2334 | -0.07 | 18.00 | -7.94 | NO TREND | 0.9553 | |
| WBEMH | Fall | S | SWTEMP | 0.00 | 0.0330 | 0.12 | 11.20 | 22.25 | NO TREND | 0.3704 | |
| WBEMH | Fall | B | BWTEMP | 0.00 | 0.0191 | 0.13 | 10.95 | 23.07 | NO TREND | 0.6946 | |
| SBEMH | Fall | S | SCHLA | 20.51 | 0.2412 | 0.02 | 2.38 | No Estimate | NO TREND | 0.2070 | |
| SBEMH | Fall | S | STSS | 1.71 | 0.0042 | -0.22 | 6.73 | -64.28 | IMPROVING | 0.3862 | |
| SBEMH | Fall | B | BTSS | 0.85 | 0.0000 | -0.47 | 12.60 | -74.38 | IMPROVING | 0.9245 | |
| SBEMH | Fall | S | SECCHI | 0.00 | 0.8172 | 0.00 | 1.25 | 0.00 | NO TREND | 0.4194 | |
| SBEMH | Fall | S | SDO | 0.00 | 0.7238 | 0.01 | 6.98 | 2.39 | NO TREND | 0.3088 | |
| SBEMH | Fall | B | BDO | 0.00 | 0.4812 | 0.02 | 6.20 | 5.65 | NO TREND | 0.1069 | |
| SBEMH | Fall | S | SSALINITY | 0.00 | 0.9083 | 0.00 | 16.73 | 0.43 | NO TREND | 0.8794 | |
| SBEMH | Fall | B | BSALINITY | 0.00 | 0.6567 | -0.04 | 18.05 | -4.34 | NO TREND | 0.9041 | |
| SBEMH | Fall | S | SWTEMP | 0.00 | 0.0014 | 0.16 | 15.18 | 21.20 | INCREASING | 0.3547 | |
| SBEMH | Fall | B | BWTEMP | 0.00 | 0.0202 | 0.11 | 15.08 | 14.47 | NO TREND | 0.4653 | |
| ELIPH | Fall | S | SCHLA | 25.74 | 0.0301 | 0.03 | 3.10 | No Estimate | NO TREND | 0.4733 | |
| ELIPH | Fall | S | STSS | 15.63 | 0.0391 | -0.12 | 8.00 | No Estimate | NO TREND | 0.5403 | |
| ELIPH | Fall | B | BTSS | 3.91 | 0.0129 | -0.40 | 16.00 | -60.50 | NO TREND | 0.0967 | |
| ELIPH | Fall | S | SECCHI | 0.00 | 0.4807 | 0.00 | 1.35 | -6.84 | NO TREND | 0.3538 | |
| ELIPH | Fall | S | SDO | 0.00 | 0.0033 | 0.05 | 7.30 | 16.44 | IMPROVING | 0.9038 | |
| ELIPH | Fall | B | BDO | 0.00 | 0.0226 | 0.04 | 6.70 | 13.73 | NO TREND | 0.5986 | |
| ELIPH | Fall | S | SSALINITY | 0.00 | 0.3795 | -0.05 | 21.25 | -5.82 | NO TREND | 0.8114 | |
| ELIPH | Fall | B | BSALINITY | 0.00 | 0.9051 | -0.01 | 24.86 | -0.90 | NO TREND | 0.6999 | |
| ELIPH | Fall | S | SWTEMP | 0.00 | 0.4654 | -0.04 | 16.05 | -5.30 | NO TREND | 0.8012 | |
| ELIPH | Fall | B | BWTEMP | 0.00 | 0.1569 | -0.04 | 16.10 | -5.66 | NO TREND | 0.6160 | |
| EBEMH | SAV1 | S | SCHLA | 6.19 | 0.7688 | 0.02 | 3.55 | 9.86 | NO TREND | 0.4846 | |
| EBEMH | SAV1 | S | STSS | 0.86 | 0.0001 | -0.23 | 9.95 | -45.23 | IMPROVING | 0.5057 | |
| EBEMH | SAV1 | B | BTSS | 0.00 | 0.0000 | -0.50 | 12.60 | -79.37 | IMPROVING | 0.9635 | |
| EBEMH | SAV1 | S | SECCHI | 0.00 | 0.0274 | 0.01 | 0.95 | 11.70 | NO TREND | 0.4519 | |
| EBEMH | SAV1 | S | SDO | 0.00 | 0.2258 | 0.02 | 5.20 | 7.37 | NO TREND | 0.8687 | |
| EBEMH | SAV1 | B | BDO | 0.00 | 0.0207 | 0.03 | 4.80 | 13.24 | NO TREND | 0.3313 | |
| EBEMH | SAV1 | S | SSALINITY | 0.00 | 0.0300 | 0.08 | 17.95 | 9.05 | NO TREND | 0.5111 | |
| EBEMH | SAV1 | B | BSALINITY | 0.00 | 0.7770 | 0.01 | 18.65 | 1.36 | NO TREND | 0.8840 | |
| EBEMH | SAV1 | S | SWTEMP | 0.00 | 0.0148 | 0.05 | 23.95 | 4.42 | NO TREND | 0.3578 | |
| EBEMH | SAV1 | B | BWTEMP | 0.00 | 0.0013 | 0.08 | 23.00 | 7.06 | INCREASING | 0.3709 | |

Appendix A - Section IIB. Elizabeth River (1985-2008) - Continued.

| Segment | Season | Layer | Parameter | % BDL | P value | Slope | Baseline | % Change | Direction | Homogeneity test | |
|---------|--------|-------|-----------|-------|---------|-------|----------|----------|------------|------------------|--|
| | | | | | | | | | | P value | |
| WBEMH | SAV1 | S | SCHLA | 0.00 | 0.0319 | -0.24 | 19.25 | -25.16 | NO TREND | 0.6544 | |
| WBEMH | SAV1 | S | STSS | 0.00 | 0.0110 | -0.35 | 26.30 | -26.87 | NO TREND | 0.7507 | |
| WBEMH | SAV1 | B | BTSS | 0.00 | 0.0002 | -0.81 | 37.10 | -43.58 | IMPROVING | 0.2904 | |
| WBEMH | SAV1 | S | SECCHI | 0.00 | 0.3949 | 0.00 | 0.55 | 0.00 | NO TREND | 0.8480 | |
| WBEMH | SAV1 | S | SDO | 0.00 | 0.9798 | 0.00 | 6.60 | 0.00 | NO TREND | 0.4982 | |
| WBEMH | SAV1 | B | BDO | 0.00 | 0.2508 | 0.02 | 6.25 | 6.72 | NO TREND | 0.2779 | |
| WBEMH | SAV1 | S | SSALINITY | 0.00 | 0.0695 | 0.08 | 17.15 | 9.09 | NO TREND | 0.8284 | |
| WBEMH | SAV1 | B | BSALINITY | 0.00 | 0.0780 | 0.07 | 17.10 | 7.94 | NO TREND | 0.9400 | |
| WBEMH | SAV1 | S | SWTEMP | 0.00 | 0.2392 | 0.03 | 24.20 | 2.53 | NO TREND | 0.3362 | |
| WBEMH | SAV1 | B | BWTEMP | 0.00 | 0.1251 | 0.04 | 23.80 | 3.61 | NO TREND | 0.3536 | |
| SBEMH | SAV1 | S | SCHLA | 11.64 | 0.0784 | -0.06 | 3.75 | -33.23 | NO TREND | 0.7621 | |
| SBEMH | SAV1 | S | STSS | 0.42 | 0.0000 | -0.20 | 8.58 | -46.61 | IMPROVING | 0.9007 | |
| SBEMH | SAV1 | B | BTSS | 0.42 | 0.0000 | -0.63 | 14.60 | -86.03 | IMPROVING | 0.9875 | |
| SBEMH | SAV1 | S | SECCHI | 0.00 | 0.0117 | 0.01 | 0.75 | 25.00 | NO TREND | 0.9184 | |
| SBEMH | SAV1 | S | SDO | 0.00 | 0.7327 | 0.00 | 5.15 | 1.15 | NO TREND | 0.5867 | |
| SBEMH | SAV1 | B | BDO | 0.00 | 0.0074 | 0.05 | 4.20 | 23.81 | IMPROVING | 0.2072 | |
| SBEMH | SAV1 | S | SSALINITY | 0.00 | 0.0064 | 0.13 | 16.70 | 15.80 | INCREASING | 0.7831 | |
| SBEMH | SAV1 | B | BSALINITY | 0.00 | 0.5358 | -0.03 | 18.45 | -2.90 | NO TREND | 0.7221 | |
| SBEMH | SAV1 | S | SWTEMP | 0.00 | 0.0025 | 0.09 | 25.20 | 7.09 | INCREASING | 0.4303 | |
| SBEMH | SAV1 | B | BWTEMP | 0.00 | 0.0000 | 0.17 | 23.93 | 13.99 | INCREASING | 0.6741 | |
| ELIPH | SAV1 | S | SCHLA | 14.19 | 0.6221 | 0.00 | 7.96 | 1.08 | NO TREND | 0.5105 | |
| ELIPH | SAV1 | S | STSS | 7.20 | 0.0097 | -0.21 | 15.95 | -28.20 | IMPROVING | 0.1983 | |
| ELIPH | SAV1 | B | BTSS | 1.52 | 0.0455 | -0.29 | 26.30 | -23.12 | NO TREND | 0.0784 | |
| ELIPH | SAV1 | S | SECCHI | 0.00 | 0.0000 | -0.01 | 1.13 | -17.78 | DEGRADING | 0.0509 | |
| ELIPH | SAV1 | S | SDO | 0.00 | 0.0000 | 0.04 | 6.10 | 15.74 | IMPROVING | 0.1777 | |
| ELIPH | SAV1 | B | BDO | 0.00 | 0.3840 | 0.01 | 5.83 | 2.80 | NO TREND | 0.1174 | |
| ELIPH | SAV1 | S | SSALINITY | 0.00 | 0.0326 | -0.07 | 22.28 | -7.54 | NO TREND | 0.9856 | |
| ELIPH | SAV1 | B | BSALINITY | 0.00 | 0.1210 | -0.05 | 24.46 | -4.62 | NO TREND | 0.9906 | |
| ELIPH | SAV1 | S | SWTEMP | 0.00 | 0.6935 | 0.01 | 23.55 | 0.66 | NO TREND | 0.0615 | |
| ELIPH | SAV1 | B | BWTEMP | 0.00 | 0.6842 | 0.01 | 22.25 | 1.20 | NO TREND | 0.4553 | |
| EBEMH | SAV2 | S | SCHLA | 3.68 | 0.4767 | 0.02 | 4.30 | 8.38 | NO TREND | 0.0534 | |
| EBEMH | SAV2 | S | STSS | 0.00 | 0.0036 | -0.19 | 9.08 | -51.09 | IMPROVING | 0.8410 | |
| EBEMH | SAV2 | B | BTSS | 0.00 | 0.0006 | -0.22 | 9.08 | -58.77 | IMPROVING | 0.9819 | |
| EBEMH | SAV2 | S | SECCHI | 0.00 | 0.0004 | -0.01 | 1.50 | -17.78 | DEGRADING | 0.0118 | |
| EBEMH | SAV2 | S | SDO | 0.00 | 0.0163 | 0.02 | 6.83 | 5.63 | NO TREND | 0.1957 | |
| EBEMH | SAV2 | B | BDO | 0.00 | 0.0007 | 0.02 | 6.83 | 7.86 | IMPROVING | 0.6655 | |
| EBEMH | SAV2 | S | SSALINITY | 0.00 | 0.6988 | 0.01 | 20.34 | 1.75 | NO TREND | 0.1641 | |
| EBEMH | SAV2 | B | BSALINITY | 0.00 | 0.4258 | -0.03 | 20.34 | -3.94 | NO TREND | 0.6310 | |
| EBEMH | SAV2 | S | SWTEMP | 0.00 | 0.5166 | 0.01 | 21.03 | 1.67 | NO TREND | 0.5979 | |
| EBEMH | SAV2 | B | BWTEMP | 0.00 | 0.2234 | 0.03 | 21.03 | 3.42 | NO TREND | 0.2929 | |
| WBEMH | SAV2 | S | SCHLA | 0.00 | 0.9542 | 0.00 | 4.30 | 0.00 | NO TREND | 0.0131 | |
| WBEMH | SAV2 | S | STSS | 0.00 | 0.0049 | -0.21 | 9.08 | -54.98 | IMPROVING | 0.5629 | |
| WBEMH | SAV2 | B | BTSS | 0.00 | 0.0179 | -0.19 | 9.08 | -50.18 | NO TREND | 0.3585 | |
| WBEMH | SAV2 | S | SECCHI | 0.00 | 0.0002 | -0.01 | 1.50 | -16.00 | DEGRADING | 0.0289 | |
| WBEMH | SAV2 | S | SDO | 0.00 | 0.1540 | 0.01 | 6.83 | 3.08 | NO TREND | 0.0113 | |
| WBEMH | SAV2 | B | BDO | 0.00 | 0.0064 | 0.02 | 6.83 | 6.45 | IMPROVING | 0.2475 | |
| WBEMH | SAV2 | S | SSALINITY | 0.00 | 0.7328 | 0.02 | 20.34 | 1.83 | NO TREND | 0.2480 | |
| WBEMH | SAV2 | B | BSALINITY | 0.00 | 0.9546 | 0.00 | 20.34 | 0.20 | NO TREND | 0.4033 | |
| WBEMH | SAV2 | S | SWTEMP | 0.00 | 0.8555 | 0.01 | 21.03 | 0.59 | NO TREND | 0.8051 | |
| WBEMH | SAV2 | B | BWTEMP | 0.00 | 0.6327 | 0.01 | 21.03 | 1.36 | NO TREND | 0.7217 | |

Appendix A - Section IIB. Elizabeth River (1985-2008) - Continued.

| Segment | Season | Layer | Parameter | % BDL | P value | Slope | Baseline | % Change | Direction | Homogeneity test |
|---------|---------|-------|-----------|-------|---------|-------|----------|----------|------------|------------------|
| | | | | | | | | | | P value |
| SBEMH | SAV2 | S | SCHLA | 6.52 | 0.5129 | 0.01 | 4.30 | 8.12 | NO TREND | 0.0683 |
| SBEMH | SAV2 | S | STSS | 0.00 | 0.0005 | -0.20 | 9.08 | -53.22 | IMPROVING | 0.7594 |
| SBEMH | SAV2 | B | BTSS | 0.00 | 0.0001 | -0.26 | 9.08 | -67.56 | IMPROVING | 0.8461 |
| SBEMH | SAV2 | S | SECCHI | 0.00 | 0.0030 | -0.01 | 1.50 | -16.00 | DEGRADING | 0.0020 |
| SBEMH | SAV2 | S | SDO | 0.00 | 0.0209 | 0.02 | 6.83 | 5.57 | NO TREND | 0.0859 |
| SBEMH | SAV2 | B | BDO | 0.00 | 0.0003 | 0.02 | 6.83 | 8.62 | IMPROVING | 0.7460 |
| SBEMH | SAV2 | S | SSALINITY | 0.00 | 0.6247 | 0.02 | 20.34 | 2.49 | NO TREND | 0.1755 |
| SBEMH | SAV2 | B | BSALINITY | 0.00 | 0.1686 | -0.05 | 20.34 | -6.06 | NO TREND | 0.9696 |
| SBEMH | SAV2 | S | SWTEMP | 0.00 | 0.3004 | 0.03 | 21.03 | 3.18 | NO TREND | 0.4167 |
| SBEMH | SAV2 | B | BWTEMP | 0.00 | 0.0417 | 0.06 | 21.03 | 7.02 | NO TREND | 0.0597 |
| ELIPH | SAV2 | S | SCHLA | 9.30 | 0.9833 | 0.00 | 4.94 | 0.00 | NO TREND | 0.0306 |
| ELIPH | SAV2 | S | STSS | 3.50 | 0.1548 | -0.12 | 9.08 | -31.29 | NO TREND | 0.3834 |
| ELIPH | SAV2 | B | BTSS | 0.00 | 0.2898 | -0.11 | 9.08 | -29.93 | NO TREND | 0.2082 |
| ELIPH | SAV2 | S | SECCHI | 0.00 | 0.0000 | -0.01 | 1.30 | -26.37 | DEGRADING | 0.5376 |
| ELIPH | SAV2 | S | SDO | 0.00 | 0.0776 | 0.01 | 7.88 | 3.81 | NO TREND | 0.0522 |
| ELIPH | SAV2 | B | BDO | 0.00 | 0.0730 | 0.01 | 7.43 | 3.23 | NO TREND | 0.0072 |
| ELIPH | SAV2 | S | SSALINITY | 0.00 | 0.2011 | -0.05 | 19.93 | -5.95 | NO TREND | 0.9642 |
| ELIPH | SAV2 | B | BSALINITY | 0.00 | 0.1551 | -0.04 | 20.94 | -4.47 | NO TREND | 0.9732 |
| ELIPH | SAV2 | S | SWTEMP | 0.00 | 0.1562 | 0.03 | 18.00 | 4.00 | NO TREND | 0.2475 |
| ELIPH | SAV2 | B | BWTEMP | 0.00 | 0.1353 | 0.03 | 16.95 | 4.72 | NO TREND | 0.2884 |
| EBEMH | Spring1 | S | SCHLA | 3.39 | 0.0951 | -0.38 | 8.70 | -87.98 | NO TREND | 0.2749 |
| EBEMH | Spring1 | S | STSS | 0.00 | 0.0536 | -0.23 | 8.40 | -55.06 | NO TREND | 0.4515 |
| EBEMH | Spring1 | B | BTSS | 0.00 | 0.0059 | -0.36 | 11.90 | -61.06 | IMPROVING | 0.9379 |
| EBEMH | Spring1 | S | SECCHI | 0.00 | 0.7181 | 0.00 | 1.05 | 0.00 | NO TREND | 0.7099 |
| EBEMH | Spring1 | S | SDO | 0.00 | 0.7585 | -0.01 | 7.65 | -1.31 | NO TREND | 0.7127 |
| EBEMH | Spring1 | B | BDO | 0.00 | 0.1728 | 0.03 | 6.70 | 7.73 | NO TREND | 0.5838 |
| EBEMH | Spring1 | S | SSALINITY | 0.00 | 0.0245 | 0.16 | 14.05 | 22.66 | NO TREND | 0.4420 |
| EBEMH | Spring1 | B | BSALINITY | 0.00 | 0.7644 | 0.02 | 18.25 | 2.63 | NO TREND | 0.3485 |
| EBEMH | Spring1 | S | SWTEMP | 0.00 | 0.1031 | 0.06 | 14.70 | 7.99 | NO TREND | 0.7103 |
| EBEMH | Spring1 | B | BWTEMP | 0.00 | 0.0103 | 0.12 | 12.15 | 18.93 | NO TREND | 0.6754 |
| WBEMH | Spring1 | S | SCHLA | 0.00 | 0.0031 | -0.65 | 34.25 | -37.99 | IMPROVING | 0.8082 |
| WBEMH | Spring1 | S | STSS | 0.00 | 0.0783 | -0.34 | 24.55 | -27.71 | NO TREND | 0.1846 |
| WBEMH | Spring1 | B | BTSS | 0.00 | 0.3028 | -0.26 | 20.75 | -24.68 | NO TREND | 0.1116 |
| WBEMH | Spring1 | S | SECCHI | 0.00 | 0.9688 | 0.00 | 0.60 | 0.00 | NO TREND | 0.9759 |
| WBEMH | Spring1 | S | SDO | 0.00 | 0.0525 | -0.05 | 10.15 | -9.30 | NO TREND | 0.6341 |
| WBEMH | Spring1 | B | BDO | 0.00 | 0.8178 | 0.01 | 8.05 | 1.66 | NO TREND | 0.4264 |
| WBEMH | Spring1 | S | SSALINITY | 0.00 | 0.0297 | 0.18 | 13.65 | 26.09 | NO TREND | 0.7105 |
| WBEMH | Spring1 | B | BSALINITY | 0.00 | 0.0882 | 0.13 | 15.25 | 17.35 | NO TREND | 0.7321 |
| WBEMH | Spring1 | S | SWTEMP | 0.00 | 0.3889 | 0.03 | 15.15 | 3.53 | NO TREND | 0.7374 |
| WBEMH | Spring1 | B | BWTEMP | 0.00 | 0.1773 | 0.07 | 13.70 | 10.22 | NO TREND | 0.8137 |
| SBEMH | Spring1 | S | SCHLA | 6.09 | 0.0775 | -0.18 | 2.70 | -133.59 | NO TREND | 0.4702 |
| SBEMH | Spring1 | S | STSS | 0.00 | 0.0039 | -0.23 | 8.95 | -52.36 | IMPROVING | 0.3791 |
| SBEMH | Spring1 | B | BTSS | 0.00 | 0.0003 | -0.48 | 12.75 | -74.54 | IMPROVING | 0.7595 |
| SBEMH | Spring1 | S | SECCHI | 0.00 | 0.2132 | 0.01 | 0.73 | 20.20 | NO TREND | 0.9830 |
| SBEMH | Spring1 | S | SDO | 0.00 | 0.6451 | -0.01 | 6.80 | -2.73 | NO TREND | 0.2924 |
| SBEMH | Spring1 | B | BDO | 0.00 | 0.0775 | 0.04 | 5.83 | 12.72 | NO TREND | 0.5356 |
| SBEMH | Spring1 | S | SSALINITY | 0.00 | 0.0156 | 0.23 | 10.93 | 42.89 | NO TREND | 0.6567 |
| SBEMH | Spring1 | B | BSALINITY | 0.00 | 0.5119 | -0.06 | 18.58 | -6.68 | NO TREND | 0.7505 |
| SBEMH | Spring1 | S | SWTEMP | 0.00 | 0.0234 | 0.11 | 15.55 | 13.69 | NO TREND | 0.7815 |
| SBEMH | Spring1 | B | BWTEMP | 0.00 | 0.0001 | 0.22 | 11.93 | 36.15 | INCREASING | 0.8591 |

Appendix A - Section IIB. Elizabeth River (1985-2008) - Continued.

| Segment | Season | Layer | Parameter | % BDL | P value | Slope | Baseline | % Change | Direction | Homogeneity test | |
|---------|---------|-------|-----------|-------|---------|-------|----------|----------|------------|------------------|--|
| | | | | | | | | | | P value | |
| ELIPH | Spring1 | S | SCHLA | 5.30 | 0.0250 | -0.25 | 20.02 | -28.70 | NO TREND | 0.4318 | |
| ELIPH | Spring1 | S | STSS | 3.03 | 0.5999 | 0.10 | 11.50 | 18.12 | NO TREND | 0.5632 | |
| ELIPH | Spring1 | B | BTSS | 0.77 | 0.2611 | 0.38 | 22.80 | 33.53 | NO TREND | 0.5385 | |
| ELIPH | Spring1 | S | SECCHI | 0.00 | 0.0051 | -0.01 | 0.98 | -26.37 | DEGRADING | 0.5905 | |
| ELIPH | Spring1 | S | SDO | 0.00 | 0.4649 | -0.01 | 8.63 | -4.07 | NO TREND | 0.2490 | |
| ELIPH | Spring1 | B | BDO | 0.00 | 0.4646 | -0.01 | 8.18 | -3.86 | NO TREND | 0.0202 | |
| ELIPH | Spring1 | S | SSALINITY | 0.00 | 0.5688 | -0.05 | 19.25 | -5.82 | NO TREND | 0.7386 | |
| ELIPH | Spring1 | B | BSALINITY | 0.00 | 0.4387 | -0.03 | 21.41 | -3.46 | NO TREND | 0.7496 | |
| ELIPH | Spring1 | S | SWTEMP | 0.00 | 0.0149 | 0.07 | 14.20 | 12.36 | NO TREND | 0.4302 | |
| ELIPH | Spring1 | B | BWTEMP | 0.00 | 0.0101 | 0.08 | 13.25 | 14.83 | NO TREND | 0.6505 | |
| EBEMH | Spring2 | S | SCHLA | 3.39 | 0.6045 | -0.07 | 5.80 | -23.02 | NO TREND | 0.6759 | |
| EBEMH | Spring2 | S | STSS | 0.00 | 0.0491 | -0.22 | 8.40 | -52.38 | NO TREND | 0.4213 | |
| EBEMH | Spring2 | B | BTSS | 0.00 | 0.0035 | -0.52 | 16.65 | -62.98 | IMPROVING | 0.8367 | |
| EBEMH | Spring2 | S | SECCHI | 0.00 | 0.1623 | 0.00 | 0.85 | 6.19 | NO TREND | 0.4336 | |
| EBEMH | Spring2 | S | SDO | 0.00 | 0.6125 | 0.01 | 6.30 | 3.17 | NO TREND | 0.7790 | |
| EBEMH | Spring2 | B | BDO | 0.00 | 0.1243 | 0.03 | 5.85 | 8.70 | NO TREND | 0.7567 | |
| EBEMH | Spring2 | S | SSALINITY | 0.00 | 0.1541 | 0.07 | 16.30 | 9.04 | NO TREND | 0.7137 | |
| EBEMH | Spring2 | B | BSALINITY | 0.00 | 0.6530 | -0.04 | 19.55 | -3.80 | NO TREND | 0.8557 | |
| EBEMH | Spring2 | S | SWTEMP | 0.00 | 0.1155 | 0.06 | 19.15 | 5.88 | NO TREND | 0.7193 | |
| EBEMH | Spring2 | B | BWTEMP | 0.00 | 0.0049 | 0.12 | 18.20 | 13.46 | INCREASING | 0.8566 | |
| WBEMH | Spring2 | S | SCHLA | 0.00 | 0.0173 | -0.41 | 16.15 | -50.80 | NO TREND | 0.9601 | |
| WBEMH | Spring2 | S | STSS | 0.00 | 0.0848 | -0.40 | 23.45 | -33.96 | NO TREND | 0.1999 | |
| WBEMH | Spring2 | B | BTSS | 0.00 | 0.1491 | -0.48 | 29.90 | -32.01 | NO TREND | 0.0719 | |
| WBEMH | Spring2 | S | SECCHI | 0.00 | 0.5945 | 0.00 | 0.60 | 0.00 | NO TREND | 0.6605 | |
| WBEMH | Spring2 | S | SDO | 0.00 | 0.3784 | -0.02 | 6.85 | -7.18 | NO TREND | 0.7978 | |
| WBEMH | Spring2 | B | BDO | 0.00 | 0.6261 | 0.02 | 6.70 | 4.54 | NO TREND | 0.6131 | |
| WBEMH | Spring2 | S | SSALINITY | 0.00 | 0.2233 | 0.07 | 15.80 | 9.25 | NO TREND | 0.7635 | |
| WBEMH | Spring2 | B | BSALINITY | 0.00 | 0.2379 | 0.06 | 16.10 | 7.11 | NO TREND | 0.9926 | |
| WBEMH | Spring2 | S | SWTEMP | 0.00 | 0.4999 | 0.03 | 19.05 | 3.18 | NO TREND | 0.7638 | |
| WBEMH | Spring2 | B | BWTEMP | 0.00 | 0.2938 | 0.05 | 19.05 | 5.41 | NO TREND | 0.5872 | |
| SBEMH | Spring2 | S | SCHLA | 5.04 | 0.0536 | -0.20 | 3.73 | -105.43 | NO TREND | 0.4155 | |
| SBEMH | Spring2 | S | STSS | 0.00 | 0.0070 | -0.20 | 8.58 | -47.76 | IMPROVING | 0.3461 | |
| SBEMH | Spring2 | B | BTSS | 0.00 | 0.0000 | -0.70 | 16.08 | -87.13 | IMPROVING | 0.7292 | |
| SBEMH | Spring2 | S | SECCHI | 0.00 | 0.3452 | 0.01 | 0.75 | 15.74 | NO TREND | 0.8383 | |
| SBEMH | Spring2 | S | SDO | 0.00 | 0.7931 | -0.01 | 5.75 | -1.95 | NO TREND | 0.3067 | |
| SBEMH | Spring2 | B | BDO | 0.00 | 0.0343 | 0.05 | 5.20 | 19.13 | NO TREND | 0.7124 | |
| SBEMH | Spring2 | S | SSALINITY | 0.00 | 0.0536 | 0.15 | 13.98 | 21.85 | NO TREND | 0.6815 | |
| SBEMH | Spring2 | B | BSALINITY | 0.00 | 0.1599 | -0.10 | 20.10 | -9.54 | NO TREND | 0.7614 | |
| SBEMH | Spring2 | S | SWTEMP | 0.00 | 0.0173 | 0.11 | 20.78 | 10.88 | NO TREND | 0.8134 | |
| SBEMH | Spring2 | B | BWTEMP | 0.00 | 0.0001 | 0.24 | 18.23 | 26.16 | INCREASING | 0.8973 | |
| ELIPH | Spring2 | S | SCHLA | 4.55 | 0.2047 | -0.08 | 10.48 | -19.43 | NO TREND | 0.9942 | |
| ELIPH | Spring2 | S | STSS | 2.22 | 0.5345 | -0.10 | 13.60 | -15.36 | NO TREND | 0.2245 | |
| ELIPH | Spring2 | B | BTSS | 0.00 | 0.4110 | 0.18 | 26.30 | 14.67 | NO TREND | 0.4052 | |
| ELIPH | Spring2 | S | SECCHI | 0.00 | 0.0563 | -0.01 | 1.03 | -13.77 | NO TREND | 0.1055 | |
| ELIPH | Spring2 | S | SDO | 0.00 | 0.4826 | 0.01 | 7.38 | 4.07 | NO TREND | 0.6146 | |
| ELIPH | Spring2 | B | BDO | 0.00 | 0.8037 | 0.00 | 6.65 | 1.26 | NO TREND | 0.3393 | |
| ELIPH | Spring2 | S | SSALINITY | 0.00 | 0.3133 | -0.06 | 20.41 | -6.86 | NO TREND | 0.7635 | |
| ELIPH | Spring2 | B | BSALINITY | 0.00 | 0.3806 | -0.04 | 22.85 | -3.71 | NO TREND | 0.7473 | |
| ELIPH | Spring2 | S | SWTEMP | 0.00 | 0.0154 | 0.07 | 20.20 | 8.45 | NO TREND | 0.4304 | |
| ELIPH | Spring2 | B | BWTEMP | 0.00 | 0.1048 | 0.06 | 18.73 | 7.69 | NO TREND | 0.9248 | |

Appendix A - Section IIB. Elizabeth River (1985-2008) - Continued.

| Segment | Season | Layer | Parameter | % BDL | P value | Slope | Baseline | % Change | Direction | Homogeneity test |
|---------|---------|-------|-----------|-------|---------|-------|----------|----------|------------|------------------|
| | | | | | | | | | | P value |
| EBEMH | Summer1 | S | SCHLA | 2.53 | 0.8688 | 0.02 | 4.30 | 7.67 | NO TREND | 0.4540 |
| EBEMH | Summer1 | S | STSS | 0.00 | 0.0000 | -0.30 | 13.35 | -45.08 | IMPROVING | 0.6404 |
| EBEMH | Summer1 | B | BTSS | 0.00 | 0.0002 | -0.56 | 12.95 | -86.32 | IMPROVING | 0.7604 |
| EBEMH | Summer1 | S | SECCHI | 0.00 | 0.0043 | 0.01 | 0.85 | 19.61 | IMPROVING | 0.8133 |
| EBEMH | Summer1 | S | SDO | 0.00 | 0.1182 | 0.04 | 4.20 | 18.57 | NO TREND | 0.7404 |
| EBEMH | Summer1 | B | BDO | 0.00 | 0.0374 | 0.05 | 3.25 | 29.81 | NO TREND | 0.2416 |
| EBEMH | Summer1 | S | SSALINITY | 0.00 | 0.0223 | 0.09 | 18.20 | 10.26 | NO TREND | 0.6539 |
| EBEMH | Summer1 | B | BSALINITY | 0.00 | 0.2903 | 0.04 | 18.65 | 4.66 | NO TREND | 0.9382 |
| EBEMH | Summer1 | S | SWTEMP | 0.00 | 0.1790 | 0.04 | 26.55 | 2.64 | NO TREND | 0.2605 |
| EBEMH | Summer1 | B | BWTEMP | 0.00 | 0.2009 | 0.04 | 25.85 | 2.93 | NO TREND | 0.3936 |
| WBEMH | Summer1 | S | SCHLA | 0.00 | 0.0896 | -0.25 | 25.60 | -19.87 | NO TREND | 0.7751 |
| WBEMH | Summer1 | S | STSS | 0.00 | 0.0076 | -0.53 | 31.50 | -33.93 | IMPROVING | 0.7575 |
| WBEMH | Summer1 | B | BTSS | 0.00 | 0.0004 | -1.23 | 41.25 | -59.46 | IMPROVING | 0.9979 |
| WBEMH | Summer1 | S | SECCHI | 0.00 | 0.1633 | 0.00 | 0.45 | 0.00 | NO TREND | 0.7580 |
| WBEMH | Summer1 | S | SDO | 0.00 | 0.3815 | 0.03 | 5.45 | 11.12 | NO TREND | 0.3416 |
| WBEMH | Summer1 | B | BDO | 0.00 | 0.2177 | 0.03 | 4.40 | 14.58 | NO TREND | 0.1293 |
| WBEMH | Summer1 | S | SSALINITY | 0.00 | 0.0952 | 0.09 | 17.50 | 9.97 | NO TREND | 0.8037 |
| WBEMH | Summer1 | B | BSALINITY | 0.00 | 0.0598 | 0.09 | 17.55 | 10.66 | NO TREND | 0.9776 |
| WBEMH | Summer1 | S | SWTEMP | 0.00 | 0.8429 | 0.00 | 26.85 | 0.34 | NO TREND | 0.3566 |
| WBEMH | Summer1 | B | BWTEMP | 0.00 | 0.9454 | 0.00 | 26.70 | 0.00 | NO TREND | 0.3730 |
| SBEMH | Summer1 | S | SCHLA | 2.52 | 0.2700 | -0.10 | 9.03 | -21.69 | NO TREND | 0.5777 |
| SBEMH | Summer1 | S | STSS | 0.00 | 0.0045 | -0.18 | 8.88 | -39.44 | IMPROVING | 0.9881 |
| SBEMH | Summer1 | B | BTSS | 0.00 | 0.0000 | -0.70 | 14.90 | -93.62 | IMPROVING | 0.8471 |
| SBEMH | Summer1 | S | SECCHI | 0.00 | 0.0295 | 0.01 | 0.75 | 24.62 | NO TREND | 0.6087 |
| SBEMH | Summer1 | S | SDO | 0.00 | 0.3806 | 0.01 | 4.15 | 5.58 | NO TREND | 0.7541 |
| SBEMH | Summer1 | B | BDO | 0.00 | 0.0084 | 0.07 | 2.65 | 54.38 | IMPROVING | 0.4020 |
| SBEMH | Summer1 | S | SSALINITY | 0.00 | 0.0138 | 0.13 | 17.58 | 15.22 | NO TREND | 0.8833 |
| SBEMH | Summer1 | B | BSALINITY | 0.00 | 0.9331 | 0.00 | 18.45 | 0.25 | NO TREND | 0.4528 |
| SBEMH | Summer1 | S | SWTEMP | 0.00 | 0.1372 | 0.05 | 28.13 | 3.73 | NO TREND | 0.3147 |
| SBEMH | Summer1 | B | BWTEMP | 0.00 | 0.0022 | 0.13 | 25.50 | 10.09 | INCREASING | 0.4791 |
| ELIPH | Summer1 | S | SCHLA | 4.43 | 0.2571 | 0.05 | 8.63 | 14.56 | NO TREND | 0.4318 |
| ELIPH | Summer1 | S | STSS | 2.22 | 0.0009 | -0.31 | 15.95 | -41.41 | IMPROVING | 0.4509 |
| ELIPH | Summer1 | B | BTSS | 0.00 | 0.0059 | -0.50 | 19.25 | -54.88 | IMPROVING | 0.3800 |
| ELIPH | Summer1 | S | SECCHI | 0.00 | 0.0030 | -0.01 | 1.10 | -15.58 | DEGRADING | 0.0085 |
| ELIPH | Summer1 | S | SDO | 0.00 | 0.0000 | 0.06 | 5.75 | 23.63 | IMPROVING | 0.4245 |
| ELIPH | Summer1 | B | BDO | 0.00 | 0.9308 | 0.00 | 5.25 | 0.00 | NO TREND | 0.0267 |
| ELIPH | Summer1 | S | SSALINITY | 0.00 | 0.0610 | -0.07 | 23.39 | -6.86 | NO TREND | 0.9716 |
| ELIPH | Summer1 | B | BSALINITY | 0.00 | 0.1467 | -0.06 | 25.38 | -5.61 | NO TREND | 0.9968 |
| ELIPH | Summer1 | S | SWTEMP | 0.00 | 0.6107 | -0.01 | 24.83 | -0.48 | NO TREND | 0.1189 |
| ELIPH | Summer1 | B | BWTEMP | 0.00 | 0.6822 | -0.01 | 23.78 | -0.69 | NO TREND | 0.3540 |
| EBEMH | Summer2 | S | SCHLA | 1.69 | 0.7881 | 0.02 | 4.30 | 9.30 | NO TREND | 0.2776 |
| EBEMH | Summer2 | S | STSS | 0.00 | 0.0003 | -0.29 | 13.35 | -43.63 | IMPROVING | 0.4328 |
| EBEMH | Summer2 | B | BTSS | 0.00 | 0.0024 | -0.54 | 12.85 | -83.74 | IMPROVING | 0.5929 |
| EBEMH | Summer2 | S | SECCHI | 0.00 | 0.0205 | 0.01 | 0.90 | 18.52 | NO TREND | 0.6513 |
| EBEMH | Summer2 | S | SDO | 0.00 | 0.1632 | 0.04 | 4.00 | 19.50 | NO TREND | 0.5350 |
| EBEMH | Summer2 | B | BDO | 0.00 | 0.0234 | 0.07 | 3.00 | 44.88 | NO TREND | 0.1676 |
| EBEMH | Summer2 | S | SSALINITY | 0.00 | 0.0240 | 0.12 | 17.95 | 13.23 | NO TREND | 0.5064 |
| EBEMH | Summer2 | B | BSALINITY | 0.00 | 0.2138 | 0.06 | 18.40 | 7.01 | NO TREND | 0.9866 |
| EBEMH | Summer2 | S | SWTEMP | 0.00 | 0.3361 | 0.03 | 26.80 | 2.24 | NO TREND | 0.1475 |
| EBEMH | Summer2 | B | BWTEMP | 0.00 | 0.4463 | 0.03 | 26.45 | 2.08 | NO TREND | 0.2847 |

Appendix A - Section IIB. Elizabeth River (1985-2008) - Continued.

| Segment | Season | Layer | Parameter | % BDL | P value | Slope | Baseline | % Change | Direction | Homogeneity test | |
|---------|---------|-------|-----------|-------|---------|-------|----------|----------|-----------|------------------|--|
| | | | | | | | | | | P value | |
| WBEMH | Summer2 | S | SCHLA | 0.00 | 0.2179 | -0.23 | 25.60 | -17.83 | NO TREND | 0.6363 | |
| WBEMH | Summer2 | S | STSS | 0.00 | 0.0763 | -0.43 | 28.75 | -30.03 | NO TREND | 0.9380 | |
| WBEMH | Summer2 | B | BTSS | 0.00 | 0.0018 | -1.31 | 45.40 | -57.56 | IMPROVING | 0.9860 | |
| WBEMH | Summer2 | S | SECCHI | 0.00 | 0.3141 | 0.00 | 0.45 | 0.00 | NO TREND | 0.6006 | |
| WBEMH | Summer2 | S | SDO | 0.00 | 0.3093 | 0.04 | 5.20 | 13.85 | NO TREND | 0.2112 | |
| WBEMH | Summer2 | B | BDO | 0.00 | 0.1069 | 0.05 | 4.40 | 21.04 | NO TREND | 0.0961 | |
| WBEMH | Summer2 | S | SSALINITY | 0.00 | 0.0683 | 0.11 | 17.50 | 13.08 | NO TREND | 0.8007 | |
| WBEMH | Summer2 | B | BSALINITY | 0.00 | 0.0763 | 0.11 | 17.55 | 12.67 | NO TREND | 0.9356 | |
| WBEMH | Summer2 | S | SWTEMP | 0.00 | 1.0000 | 0.00 | 27.55 | 0.00 | NO TREND | 0.2113 | |
| WBEMH | Summer2 | B | BWTEMP | 0.00 | 0.8403 | 0.01 | 27.25 | 0.48 | NO TREND | 0.2150 | |
| SBEMH | Summer2 | S | SCHLA | 3.36 | 0.7644 | -0.02 | 9.03 | -4.13 | NO TREND | 0.8801 | |
| SBEMH | Summer2 | S | STSS | 0.00 | 0.0091 | -0.20 | 9.45 | -42.20 | IMPROVING | 0.9788 | |
| SBEMH | Summer2 | B | BTSS | 0.00 | 0.0000 | -0.64 | 14.25 | -89.26 | IMPROVING | 0.9327 | |
| SBEMH | Summer2 | S | SECCHI | 0.00 | 0.0134 | 0.01 | 0.85 | 29.41 | NO TREND | 0.8042 | |
| SBEMH | Summer2 | S | SDO | 0.00 | 0.2648 | 0.02 | 3.98 | 11.32 | NO TREND | 0.6956 | |
| SBEMH | Summer2 | B | BDO | 0.00 | 0.0134 | 0.07 | 2.55 | 58.47 | NO TREND | 0.2420 | |
| SBEMH | Summer2 | S | SSALINITY | 0.00 | 0.0192 | 0.16 | 17.13 | 18.49 | NO TREND | 0.7816 | |
| SBEMH | Summer2 | B | BSALINITY | 0.00 | 0.3988 | 0.05 | 17.98 | 5.01 | NO TREND | 0.8287 | |
| SBEMH | Summer2 | S | SWTEMP | 0.00 | 0.3184 | 0.04 | 28.95 | 2.88 | NO TREND | 0.2016 | |
| SBEMH | Summer2 | B | BWTEMP | 0.00 | 0.0185 | 0.11 | 26.95 | 8.09 | NO TREND | 0.3454 | |
| ELIPH | Summer2 | S | SCHLA | 5.96 | 0.0873 | 0.13 | 7.63 | 39.80 | NO TREND | 0.7109 | |
| ELIPH | Summer2 | S | STSS | 2.99 | 0.0027 | -0.33 | 16.35 | -41.91 | IMPROVING | 0.2739 | |
| ELIPH | Summer2 | B | BTSS | 0.00 | 0.0024 | -0.65 | 19.00 | -71.54 | IMPROVING | 0.4997 | |
| ELIPH | Summer2 | S | SECCHI | 0.00 | 0.0002 | -0.01 | 1.13 | -21.33 | DEGRADING | 0.0414 | |
| ELIPH | Summer2 | S | SDO | 0.00 | 0.0000 | 0.07 | 5.58 | 28.35 | IMPROVING | 0.7683 | |
| ELIPH | Summer2 | B | BDO | 0.00 | 0.5005 | 0.01 | 4.88 | 3.85 | NO TREND | 0.0205 | |
| ELIPH | Summer2 | S | SSALINITY | 0.00 | 0.0882 | -0.07 | 24.07 | -7.37 | NO TREND | 0.9010 | |
| ELIPH | Summer2 | B | BSALINITY | 0.00 | 0.1782 | -0.06 | 25.38 | -5.61 | NO TREND | 0.9894 | |
| ELIPH | Summer2 | S | SWTEMP | 0.00 | 0.1601 | -0.02 | 25.80 | -2.33 | NO TREND | 0.3436 | |
| ELIPH | Summer2 | B | BWTEMP | 0.00 | 0.4060 | -0.02 | 24.93 | -1.79 | NO TREND | 0.3092 | |
| EBEMH | Winter | S | SCHLA | 2.56 | 0.7487 | -0.11 | 16.56 | -13.40 | NO TREND | 0.1493 | |
| EBEMH | Winter | S | STSS | 0.00 | 0.0665 | -0.33 | 11.50 | -57.97 | NO TREND | 0.3561 | |
| EBEMH | Winter | B | BTSS | 0.00 | 0.1393 | -0.29 | 12.05 | -48.32 | NO TREND | 0.6188 | |
| EBEMH | Winter | S | SECCHI | 0.00 | 0.1463 | -0.01 | 0.95 | -21.05 | NO TREND | 0.1545 | |
| EBEMH | Winter | S | SDO | 0.00 | 0.4303 | 0.02 | 10.60 | 4.60 | NO TREND | 0.9299 | |
| EBEMH | Winter | B | BDO | 0.00 | 0.1528 | 0.07 | 9.80 | 13.61 | NO TREND | 0.8133 | |
| EBEMH | Winter | S | SSALINITY | 0.00 | 0.5876 | 0.04 | 15.95 | 5.55 | NO TREND | 0.6240 | |
| EBEMH | Winter | B | BSALINITY | 0.00 | 0.6048 | 0.05 | 17.65 | 5.67 | NO TREND | 0.9480 | |
| EBEMH | Winter | S | SWTEMP | 0.00 | 0.9019 | -0.01 | 7.25 | -2.07 | NO TREND | 0.8935 | |
| EBEMH | Winter | B | BWTEMP | 0.00 | 0.8245 | -0.02 | 7.05 | -4.82 | NO TREND | 0.8095 | |
| WBEMH | Winter | S | SCHLA | 2.70 | 0.2179 | -0.26 | 26.30 | -20.04 | NO TREND | 0.3349 | |
| WBEMH | Winter | S | STSS | 0.00 | 0.0302 | -0.36 | 13.40 | -53.57 | NO TREND | 0.3369 | |
| WBEMH | Winter | B | BTSS | 0.00 | 0.0665 | -0.31 | 12.45 | -49.60 | NO TREND | 0.6876 | |
| WBEMH | Winter | S | SECCHI | 0.00 | 0.1548 | -0.01 | 0.95 | -18.34 | NO TREND | 0.7377 | |
| WBEMH | Winter | S | SDO | 0.00 | 0.5216 | -0.03 | 13.95 | -3.65 | NO TREND | 0.5179 | |
| WBEMH | Winter | B | BDO | 0.00 | 0.9215 | 0.00 | 12.00 | 0.50 | NO TREND | 0.1376 | |
| WBEMH | Winter | S | SSALINITY | 0.00 | 0.3121 | 0.08 | 15.45 | 10.36 | NO TREND | 0.8451 | |
| WBEMH | Winter | B | BSALINITY | 0.00 | 0.6220 | 0.06 | 16.00 | 7.92 | NO TREND | 0.6992 | |
| WBEMH | Winter | S | SWTEMP | 0.00 | 0.9803 | 0.00 | 6.65 | -0.27 | NO TREND | 0.6711 | |
| WBEMH | Winter | B | BWTEMP | 0.00 | 0.8053 | 0.01 | 6.10 | 2.30 | NO TREND | 0.7422 | |

Appendix A - Section IIB. Elizabeth River (1985-2008) - Continued.

| Segment | Season | Layer | Parameter | % BDL | P value | Slope | Baseline | % Change | Direction | Homogeneity test |
|---------|--------|-------|-----------|-------|---------|-------|----------|----------|-----------|------------------|
| | | | | | | | | | | P value |
| SBEMH | Winter | S | SCHLA | 6.58 | 0.8437 | 0.06 | 5.18 | 22.90 | NO TREND | 0.4172 |
| SBEMH | Winter | S | STSS | 1.32 | 0.0043 | -0.29 | 11.58 | -49.36 | IMPROVING | 0.1265 |
| SBEMH | Winter | B | BTSS | 0.00 | 0.0059 | -0.39 | 11.63 | -66.77 | IMPROVING | 0.5464 |
| SBEMH | Winter | S | SECCHI | 0.00 | 0.5039 | 0.00 | 0.75 | -10.26 | NO TREND | 0.4090 |
| SBEMH | Winter | S | SDO | 0.00 | 0.1753 | 0.06 | 8.58 | 13.37 | NO TREND | 0.6322 |
| SBEMH | Winter | B | BDO | 0.00 | 0.0842 | 0.06 | 8.63 | 14.94 | NO TREND | 0.9901 |
| SBEMH | Winter | S | SSALINITY | 0.00 | 0.3885 | 0.09 | 12.95 | 14.04 | NO TREND | 0.7980 |
| SBEMH | Winter | B | BSALINITY | 0.00 | 0.7117 | -0.05 | 17.78 | -5.11 | NO TREND | 0.9239 |
| SBEMH | Winter | S | SWTEMP | 0.00 | 0.9019 | -0.01 | 10.85 | -1.02 | NO TREND | 0.7919 |
| SBEMH | Winter | B | BWTEMP | 0.00 | 0.1147 | 0.07 | 7.70 | 18.83 | NO TREND | 0.9787 |
| ELIPH | Winter | S | SCHLA | 3.80 | 0.2087 | -0.30 | 14.77 | -46.12 | NO TREND | 0.0869 |
| ELIPH | Winter | S | STSS | 4.00 | 0.8007 | -0.03 | 11.00 | -5.87 | NO TREND | 0.3468 |
| ELIPH | Winter | B | BTSS | 1.33 | 0.3588 | 0.37 | 17.78 | 41.19 | NO TREND | 0.1420 |
| ELIPH | Winter | S | SECCHI | 0.00 | 0.0259 | -0.01 | 1.05 | -28.57 | NO TREND | 0.8854 |
| ELIPH | Winter | S | SDO | 0.00 | 0.6995 | -0.01 | 12.50 | -1.55 | NO TREND | 0.7376 |
| ELIPH | Winter | B | BDO | 0.00 | 0.7430 | 0.01 | 11.10 | 1.71 | NO TREND | 0.9147 |
| ELIPH | Winter | S | SSALINITY | 0.00 | 0.4620 | -0.05 | 19.72 | -5.55 | NO TREND | 0.5955 |
| ELIPH | Winter | B | BSALINITY | 0.00 | 0.0670 | -0.09 | 22.07 | -9.89 | NO TREND | 0.4621 |
| ELIPH | Winter | S | SWTEMP | 0.00 | 0.1139 | 0.07 | 2.00 | 81.11 | NO TREND | 0.3034 |
| ELIPH | Winter | B | BWTEMP | 0.00 | 0.1536 | 0.07 | 2.90 | 57.32 | NO TREND | 0.5943 |

Appendix A - Section IIC. Seasonal Kendall Long-term trends in water quality for the York River (1985-2007). Parameters are as follows: STN=Surface total nitrogen, BTN=Bottom total nitrogen, SDIN=Surface dissolved inorganic nitrogen, BDIN=Bottom dissolved inorganic nitrogen, STP=Surface total phosphorus, BTP=Bottom total phosphorus, SPO4F=Surface dissolved inorganic phosphorus, BPO4F=Bottom dissolved inorganic phosphorus, SCHLA=Surface chlorophyll *a*, STSS=Surface total suspended solids, BTSS=Bottom total suspended solids, SEECCHI=Secchi depth, BDO=Bottom dissolved oxygen, SSALIN=Surface salinity, BSALIN=Bottom salinity, SWTEMP=Surface water temperature, BWTEMP=Bottom water temperature.

| Segment | Season | Layer | Parameter | % BDL | P value | Slope | Baseline | % Change | Direction | Homogeneity test | |
|---------|--------|-------|-----------|-------|---------|-------|----------|-------------|------------|------------------|--|
| | | | | | | | | | | P value | |
| PMKTF | Annual | S | SCHLA | 63.69 | 0.0857 | 0.00 | 3.10 | No Estimate | High BDLs | 0.0650 | |
| PMKTF | Annual | S | STSS | 1.43 | 0.0003 | 0.33 | 14.00 | 50.00 | DEGRADING | 0.9476 | |
| PMKTF | Annual | B | BTSS | 1.45 | 0.9231 | 0.00 | 20.50 | 0.00 | NO TREND | 0.5679 | |
| PMKTF | Annual | S | SECCHI | 0.00 | 0.0000 | -0.01 | 0.70 | -24.49 | DEGRADING | 0.2418 | |
| PMKTF | Annual | S | SDO | 0.00 | 0.0632 | 0.02 | 7.00 | 5.28 | NO TREND | 0.0182 | |
| PMKTF | Annual | B | BDO | 0.00 | 0.0187 | 0.02 | 6.83 | 7.03 | NO TREND | 0.0898 | |
| PMKTF | Annual | S | SSALINITY | 0.00 | 0.0003 | 0.00 | 0.01 | 0.00 | UNCHANGED | 0.7807 | |
| PMKTF | Annual | B | BSALINITY | 0.00 | 0.0003 | 0.00 | 0.01 | 0.00 | UNCHANGED | 0.7791 | |
| PMKTF | Annual | S | SWTEMP | 0.00 | 0.0792 | 0.04 | 18.00 | 4.82 | NO TREND | 0.0780 | |
| PMKTF | Annual | B | BWTEMP | 0.00 | 0.0970 | 0.04 | 19.10 | 4.47 | NO TREND | 0.0909 | |
| PMKOH | Annual | S | SCHLA | 26.23 | 0.0546 | 0.00 | 6.38 | No Estimate | NO TREND | 0.5665 | |
| PMKOH | Annual | S | STSS | 0.66 | 0.0140 | -0.60 | 48.00 | -30.00 | NO TREND | 0.5587 | |
| PMKOH | Annual | B | BTSS | 0.38 | 0.5063 | -0.62 | 102.00 | -12.79 | NO TREND | 0.7690 | |
| PMKOH | Annual | S | SECCHI | 0.00 | 0.0083 | 0.00 | 0.30 | 0.00 | UNCHANGED | 0.8902 | |
| PMKOH | Annual | S | SDO | 0.00 | 0.4405 | -0.01 | 6.25 | -2.13 | NO TREND | 0.2284 | |
| PMKOH | Annual | B | BDO | 0.00 | 0.3822 | -0.01 | 6.20 | -2.15 | NO TREND | 0.2702 | |
| PMKOH | Annual | S | SSALINITY | 0.00 | 0.0026 | 0.05 | 3.49 | 32.95 | INCREASING | 0.9874 | |
| PMKOH | Annual | B | BSALINITY | 0.00 | 0.0068 | 0.05 | 4.31 | 27.84 | INCREASING | 0.9328 | |
| PMKOH | Annual | S | SWTEMP | 0.00 | 0.6603 | 0.01 | 20.55 | 1.03 | NO TREND | 0.1172 | |
| PMKOH | Annual | B | BWTEMP | 0.00 | 0.3477 | 0.01 | 20.53 | 1.65 | NO TREND | 0.2055 | |
| MPNTF | Annual | S | SCHLA | 71.56 | 0.1668 | 0.00 | 3.10 | No Estimate | High BDLs | 0.6101 | |
| MPNTF | Annual | S | STSS | 28.21 | 0.8374 | 0.00 | 6.75 | No Estimate | NO TREND | 0.1774 | |
| MPNTF | Annual | B | BTSS | 19.05 | 0.9208 | 0.00 | 8.25 | No Estimate | NO TREND | 0.0393 | |
| MPNTF | Annual | S | SECCHI | 0.00 | 0.0034 | -0.01 | 1.00 | -16.18 | DEGRADING | 0.0027 | |
| MPNTF | Annual | S | SDO | 0.00 | 0.6260 | 0.00 | 6.95 | 1.23 | NO TREND | 0.6147 | |
| MPNTF | Annual | B | BDO | 0.00 | 0.2697 | 0.01 | 6.98 | 2.65 | NO TREND | 0.4736 | |
| MPNTF | Annual | S | SSALINITY | 0.00 | 0.0267 | 0.00 | 0.01 | 0.00 | NO TREND | 0.9656 | |
| MPNTF | Annual | B | BSALINITY | 0.00 | 0.0214 | 0.00 | 0.01 | 0.00 | NO TREND | 0.9688 | |
| MPNTF | Annual | S | SWTEMP | 0.00 | 0.0037 | 0.07 | 17.50 | 9.37 | INCREASING | 0.2194 | |
| MPNTF | Annual | B | BWTEMP | 0.00 | 0.0206 | 0.06 | 18.58 | 7.21 | NO TREND | 0.2885 | |
| MPNOH | Annual | S | SCHLA | 37.61 | 0.3394 | 0.00 | 4.25 | No Estimate | High BDLs | 0.4398 | |
| MPNOH | Annual | S | STSS | 0.97 | 0.7015 | 0.00 | 26.00 | 0.00 | NO TREND | 0.1073 | |
| MPNOH | Annual | B | BTSS | 0.74 | 0.2164 | 0.33 | 44.00 | 18.18 | NO TREND | 0.4716 | |
| MPNOH | Annual | S | SECCHI | 0.00 | 0.9871 | 0.00 | 0.48 | 0.00 | NO TREND | 0.3750 | |
| MPNOH | Annual | S | SDO | 0.00 | 0.1290 | 0.01 | 6.30 | 4.37 | NO TREND | 0.8080 | |
| MPNOH | Annual | B | BDO | 0.00 | 0.3127 | 0.01 | 6.08 | 2.72 | NO TREND | 0.8674 | |
| MPNOH | Annual | S | SSALINITY | 0.00 | 0.0013 | 0.08 | 3.38 | 55.74 | INCREASING | 0.9947 | |
| MPNOH | Annual | B | BSALINITY | 0.00 | 0.0016 | 0.09 | 4.31 | 49.00 | INCREASING | 0.9994 | |
| MPNOH | Annual | S | SWTEMP | 0.00 | 0.0757 | 0.03 | 20.50 | 3.25 | NO TREND | 0.5441 | |
| MPNOH | Annual | B | BWTEMP | 0.00 | 0.1277 | 0.02 | 20.33 | 2.85 | NO TREND | 0.4344 | |

Appendix A - Section IIC. York River (1985-2008) - Continued.

| Segment | Season | Layer | Parameter | % BDL | P value | Slope | Baseline | % Change | Direction | Homogeneity test |
|---------|--------|-------|-----------|-------|---------|-------|----------|-------------|------------|------------------|
| | | | | | | | | | | P value |
| YRKMH | Annual | S | SCHLA | 10.47 | 0.0445 | 0.08 | 9.59 | 20.65 | NO TREND | 0.3158 |
| YRKMH | Annual | S | STSS | 0.00 | 0.2065 | -0.17 | 27.00 | -12.96 | NO TREND | 0.8140 |
| YRKMH | Annual | B | BTSS | 0.73 | 0.0131 | 0.83 | 39.00 | 44.87 | NO TREND | 0.6325 |
| YRKMH | Annual | S | SECCHI | 0.00 | 0.6364 | 0.00 | 0.60 | 0.00 | NO TREND | 0.4334 |
| YRKMH | Annual | S | SDO | 0.00 | 0.2449 | 0.01 | 6.68 | 2.70 | NO TREND | 0.2928 |
| YRKMH | Annual | B | BDO | 0.00 | 0.6551 | 0.00 | 6.30 | -1.00 | NO TREND | 0.3524 |
| YRKMH | Annual | S | SSALINITY | 0.00 | 0.7726 | 0.01 | 12.43 | 2.22 | NO TREND | 0.9773 |
| YRKMH | Annual | B | BSALINITY | 0.00 | 0.7552 | -0.01 | 13.58 | -1.41 | NO TREND | 0.9230 |
| YRKMH | Annual | S | SWTEMP | 0.00 | 0.4400 | 0.01 | 20.05 | 1.36 | NO TREND | 0.1454 |
| YRKMH | Annual | B | BWTEMP | 0.00 | 0.2316 | 0.02 | 19.90 | 2.28 | NO TREND | 0.0561 |
| YRKPH | Annual | S | SCHLA | 11.33 | 0.0243 | 0.06 | 8.00 | 17.94 | NO TREND | 0.0178 |
| YRKPH | Annual | S | STSS | 20.89 | 0.0915 | 0.06 | 6.00 | No Estimate | NO TREND | 0.7404 |
| YRKPH | Annual | B | BTSS | 4.72 | 0.0257 | 0.29 | 17.75 | 33.80 | NO TREND | 0.6712 |
| YRKPH | Annual | S | SECCHI | 0.00 | 0.0001 | -0.01 | 1.20 | -20.00 | DEGRADING | 0.2247 |
| YRKPH | Annual | S | SDO | 0.00 | 0.0260 | 0.02 | 7.20 | 5.83 | NO TREND | 0.0799 |
| YRKPH | Annual | B | BDO | 0.00 | 0.9878 | 0.00 | 6.88 | 0.00 | NO TREND | 0.1395 |
| YRKPH | Annual | S | SSALINITY | 0.00 | 0.0054 | -0.07 | 20.65 | -7.97 | DECREASING | 0.8983 |
| YRKPH | Annual | B | BSALINITY | 0.00 | 0.0125 | -0.06 | 22.06 | -6.25 | NO TREND | 0.8646 |
| YRKPH | Annual | S | SWTEMP | 0.00 | 0.7969 | 0.00 | 19.03 | 0.57 | NO TREND | 0.4360 |
| YRKPH | Annual | B | BWTEMP | 0.00 | 0.7460 | 0.00 | 18.73 | 0.57 | NO TREND | 0.2469 |
| MOBPH | Annual | S | SCHLA | 1.25 | 0.0942 | 0.05 | 5.62 | 20.38 | NO TREND | 0.5522 |
| MOBPH | Annual | S | STSS | 2.93 | 0.0000 | -0.25 | 10.00 | -59.36 | IMPROVING | 0.9258 |
| MOBPH | Annual | B | BTSS | 1.30 | 0.0000 | -0.30 | 15.00 | -47.90 | IMPROVING | 0.2304 |
| MOBPH | Annual | S | SECCHI | 0.00 | 0.0000 | -0.02 | 1.45 | -31.03 | DEGRADING | 0.7630 |
| MOBPH | Annual | S | SDO | 0.00 | 0.0000 | 0.04 | 7.98 | 12.48 | IMPROVING | 0.8147 |
| MOBPH | Annual | B | BDO | 0.00 | 0.0000 | 0.04 | 7.68 | 13.70 | IMPROVING | 0.2719 |
| MOBPH | Annual | S | SSALINITY | 0.00 | 0.0056 | -0.06 | 22.22 | -6.86 | DECREASING | 0.9967 |
| MOBPH | Annual | B | BSALINITY | 0.00 | 0.0003 | -0.08 | 22.89 | -8.04 | DECREASING | 0.9847 |
| MOBPH | Annual | S | SWTEMP | 0.00 | 0.1268 | 0.02 | 18.45 | 2.99 | NO TREND | 0.9264 |
| MOBPH | Annual | B | BWTEMP | 0.00 | 0.0832 | 0.03 | 17.63 | 3.40 | NO TREND | 0.8636 |
| PMKTF | Fall | S | SCHLA | 71.43 | 0.7049 | 0.00 | 3.10 | No Estimate | High BDLs | 0.9939 |
| PMKTF | Fall | S | STSS | 0.00 | 0.1116 | 0.29 | 12.75 | 47.06 | NO TREND | 0.7178 |
| PMKTF | Fall | B | BTSS | 0.00 | 0.9854 | 0.00 | 20.00 | 0.00 | NO TREND | 0.5847 |
| PMKTF | Fall | S | SECCHI | 0.00 | 0.0185 | -0.01 | 0.60 | -34.78 | NO TREND | 0.4369 |
| PMKTF | Fall | S | SDO | 0.00 | 0.0549 | -0.04 | 7.00 | -13.59 | NO TREND | 0.6829 |
| PMKTF | Fall | B | BDO | 0.00 | 0.0732 | -0.04 | 6.55 | -15.18 | NO TREND | 0.8839 |
| PMKTF | Fall | S | SSALINITY | 0.00 | 0.0020 | 0.00 | 0.01 | 0.00 | UNCHANGED | 0.9717 |
| PMKTF | Fall | B | BSALINITY | 0.00 | 0.0011 | 0.00 | 0.01 | 0.00 | UNCHANGED | 0.9700 |
| PMKTF | Fall | S | SWTEMP | 0.00 | 0.0226 | 0.11 | 14.00 | 19.05 | NO TREND | 0.9421 |
| PMKTF | Fall | B | BWTEMP | 0.00 | 0.0148 | 0.15 | 15.83 | 22.02 | NO TREND | 0.8774 |
| PMKOH | Fall | S | SCHLA | 30.56 | 0.3702 | 0.00 | 3.10 | No Estimate | NO TREND | 0.2880 |
| PMKOH | Fall | S | STSS | 1.43 | 0.8387 | 0.13 | 36.00 | 8.89 | NO TREND | 0.2917 |
| PMKOH | Fall | B | BTSS | 0.00 | 0.2790 | 1.69 | 63.50 | 55.77 | NO TREND | 0.9515 |
| PMKOH | Fall | S | SECCHI | 0.00 | 0.8436 | 0.00 | 0.50 | 0.00 | NO TREND | 0.9705 |
| PMKOH | Fall | S | SDO | 0.00 | 0.0214 | -0.04 | 6.33 | -13.55 | NO TREND | 0.3802 |
| PMKOH | Fall | B | BDO | 0.00 | 0.0481 | -0.04 | 6.38 | -13.32 | NO TREND | 0.2148 |
| PMKOH | Fall | S | SSALINITY | 0.00 | 0.1306 | 0.10 | 1.90 | 126.65 | NO TREND | 0.9061 |
| PMKOH | Fall | B | BSALINITY | 0.00 | 0.1303 | 0.11 | 2.09 | 129.31 | NO TREND | 0.8566 |
| PMKOH | Fall | S | SWTEMP | 0.00 | 0.0379 | 0.08 | 17.90 | 10.94 | NO TREND | 0.9493 |
| PMKOH | Fall | B | BWTEMP | 0.00 | 0.0500 | 0.08 | 17.88 | 10.67 | NO TREND | 0.8757 |

Appendix A - Section IIC. York River (1985-2008) - Continued.

| Segment | Season | Layer | Parameter | % BDL | P value | Slope | Baseline | % Change | Homogeneity test | |
|---------|--------|-------|-----------|-------|---------|-------|----------|-------------|------------------|---------|
| | | | | | | | | | Direction | P value |
| MPNTF | Fall | S | SCHLA | 93.33 | 0.4030 | 0.00 | 3.10 | No Estimate | High BDLs | 0.8256 |
| MPNTF | Fall | S | STSS | 28.79 | 0.9069 | 0.00 | 6.00 | No Estimate | NO TREND | 0.1388 |
| MPNTF | Fall | B | BTSS | 16.92 | 0.8589 | 0.00 | 7.00 | No Estimate | NO TREND | 0.2029 |
| MPNTF | Fall | S | SECCHI | 0.00 | 0.5827 | 0.00 | 0.80 | 0.00 | NO TREND | 0.2352 |
| MPNTF | Fall | S | SDO | 0.00 | 0.1167 | -0.03 | 7.70 | -9.91 | NO TREND | 0.6110 |
| MPNTF | Fall | B | BDO | 0.00 | 0.1229 | -0.03 | 7.08 | -11.66 | NO TREND | 0.6975 |
| MPNTF | Fall | S | SSALINITY | 0.00 | 0.0382 | 0.00 | 0.01 | 0.00 | NO TREND | 0.6639 |
| MPNTF | Fall | B | BSALINITY | 0.00 | 0.0318 | 0.00 | 0.01 | 0.00 | NO TREND | 0.7206 |
| MPNTF | Fall | S | SWTEMP | 0.00 | 0.0097 | 0.14 | 13.50 | 25.40 | INCREASING | 0.9641 |
| MPNTF | Fall | B | BWTEMP | 0.00 | 0.0074 | 0.16 | 15.28 | 24.71 | INCREASING | 0.9237 |
| MPNOH | Fall | S | SCHLA | 36.36 | 0.8414 | 0.00 | 3.10 | No Estimate | High BDLs | 0.3231 |
| MPNOH | Fall | S | STSS | 2.70 | 0.2056 | 0.28 | 20.00 | 33.33 | NO TREND | 0.6362 |
| MPNOH | Fall | B | BTSS | 1.47 | 0.7151 | 0.29 | 42.25 | 14.20 | NO TREND | 0.5182 |
| MPNOH | Fall | S | SECCHI | 0.00 | 0.6706 | 0.00 | 0.50 | 0.00 | NO TREND | 0.8936 |
| MPNOH | Fall | S | SDO | 0.00 | 0.8394 | 0.00 | 6.30 | -0.59 | NO TREND | 0.7872 |
| MPNOH | Fall | B | BDO | 0.00 | 0.6142 | -0.01 | 6.53 | -3.07 | NO TREND | 0.9149 |
| MPNOH | Fall | S | SSALINITY | 0.00 | 0.0909 | 0.14 | 2.02 | 161.47 | NO TREND | 0.9906 |
| MPNOH | Fall | B | BSALINITY | 0.00 | 0.1696 | 0.12 | 2.52 | 114.08 | NO TREND | 0.9865 |
| MPNOH | Fall | S | SWTEMP | 0.00 | 0.0176 | 0.09 | 17.68 | 11.71 | NO TREND | 0.9263 |
| MPNOH | Fall | B | BWTEMP | 0.00 | 0.0183 | 0.09 | 17.63 | 11.91 | NO TREND | 0.8839 |
| YRKMH | Fall | S | SCHLA | 13.61 | 0.1525 | 0.08 | 4.90 | 39.63 | NO TREND | 0.5263 |
| YRKMH | Fall | S | STSS | 0.00 | 0.7640 | 0.05 | 15.50 | 6.47 | NO TREND | 0.4755 |
| YRKMH | Fall | B | BTSS | 0.76 | 0.1439 | 0.59 | 27.00 | 45.78 | NO TREND | 0.3561 |
| YRKMH | Fall | S | SECCHI | 0.00 | 0.1749 | 0.00 | 0.85 | -9.41 | NO TREND | 0.7192 |
| YRKMH | Fall | S | SDO | 0.00 | 0.2151 | -0.02 | 7.05 | -6.35 | NO TREND | 0.3643 |
| YRKMH | Fall | B | BDO | 0.00 | 0.0705 | -0.03 | 6.85 | -9.64 | NO TREND | 0.2918 |
| YRKMH | Fall | S | SSALINITY | 0.00 | 0.6330 | 0.03 | 10.16 | 7.22 | NO TREND | 0.7228 |
| YRKMH | Fall | B | BSALINITY | 0.00 | 0.9492 | 0.00 | 13.10 | -0.85 | NO TREND | 0.9880 |
| YRKMH | Fall | S | SWTEMP | 0.00 | 0.0467 | 0.11 | 17.73 | 15.03 | NO TREND | 0.7283 |
| YRKMH | Fall | B | BWTEMP | 0.00 | 0.0228 | 0.11 | 17.78 | 15.24 | NO TREND | 0.6601 |
| YRKPH | Fall | S | SCHLA | 29.93 | 0.0014 | 0.10 | 3.10 | No Estimate | DEGRADING | 0.1873 |
| YRKPH | Fall | S | STSS | 33.09 | 0.1126 | 0.06 | 5.00 | No Estimate | NO TREND | 0.4471 |
| YRKPH | Fall | B | BTSS | 6.02 | 0.0825 | 0.38 | 10.25 | 77.58 | NO TREND | 0.3578 |
| YRKPH | Fall | S | SECCHI | 0.00 | 0.0006 | -0.02 | 1.50 | -35.56 | DEGRADING | 0.1929 |
| YRKPH | Fall | S | SDO | 0.00 | 0.7621 | 0.00 | 7.28 | -1.65 | NO TREND | 0.5535 |
| YRKPH | Fall | B | BDO | 0.00 | 0.7990 | -0.01 | 6.60 | -3.21 | NO TREND | 0.0304 |
| YRKPH | Fall | S | SSALINITY | 0.00 | 0.3422 | -0.06 | 19.10 | -7.02 | NO TREND | 0.5429 |
| YRKPH | Fall | B | BSALINITY | 0.00 | 0.0684 | -0.10 | 22.43 | -10.91 | NO TREND | 0.9150 |
| YRKPH | Fall | S | SWTEMP | 0.00 | 0.0342 | 0.09 | 18.00 | 12.22 | NO TREND | 0.7092 |
| YRKPH | Fall | B | BWTEMP | 0.00 | 0.0195 | 0.10 | 18.20 | 13.43 | NO TREND | 0.6122 |
| MOBPH | Fall | S | SCHLA | 2.00 | 0.0453 | 0.09 | 4.16 | 52.75 | NO TREND | 0.2632 |
| MOBPH | Fall | S | STSS | 6.29 | 0.0016 | -0.30 | 6.75 | -106.88 | IMPROVING | 0.2575 |
| MOBPH | Fall | B | BTSS | 2.98 | 0.0055 | -0.44 | 7.25 | -146.76 | IMPROVING | 0.8763 |
| MOBPH | Fall | S | SECCHI | 0.00 | 0.0011 | -0.02 | 2.23 | -25.55 | DEGRADING | 0.7943 |
| MOBPH | Fall | S | SDO | 0.00 | 0.0003 | 0.05 | 8.45 | 14.20 | IMPROVING | 0.9004 |
| MOBPH | Fall | B | BDO | 0.00 | 0.0010 | 0.05 | 8.00 | 14.59 | IMPROVING | 0.8899 |
| MOBPH | Fall | S | SSALINITY | 0.00 | 0.4473 | -0.04 | 22.59 | -4.07 | NO TREND | 0.9172 |
| MOBPH | Fall | B | BSALINITY | 0.00 | 0.0820 | -0.06 | 23.21 | -6.46 | NO TREND | 0.8497 |
| MOBPH | Fall | S | SWTEMP | 0.00 | 0.7813 | -0.01 | 15.33 | -1.37 | NO TREND | 0.9172 |
| MOBPH | Fall | B | BWTEMP | 0.00 | 0.6824 | -0.02 | 14.60 | -3.11 | NO TREND | 0.9686 |

Appendix A - Section IIC. York River (1985-2008) - Continued.

| Segment | Season | Layer | Parameter | % BDL | P value | Slope | Baseline | % Change | Direction | Homogeneity test |
|---------|--------|-------|-----------|-------|---------|-------|----------|-------------|------------|------------------|
| | | | | | | | | | | P value |
| PMKTF | SAV1 | S | SCHLA | 75.60 | 0.1181 | 0.00 | 4.23 | No Estimate | High BDLs | 0.0154 |
| PMKTF | SAV1 | S | STSS | 1.40 | 0.0043 | 0.32 | 12.25 | 55.28 | DEGRADING | 0.6984 |
| PMKTF | SAV1 | B | BTSS | 1.42 | 0.4579 | -0.12 | 19.00 | -13.00 | NO TREND | 0.2455 |
| PMKTF | SAV1 | S | SECCHI | 0.00 | 0.0052 | -0.01 | 0.70 | -20.17 | DEGRADING | 0.1130 |
| PMKTF | SAV1 | S | SDO | 0.00 | 0.0001 | 0.03 | 5.48 | 13.74 | IMPROVING | 0.3976 |
| PMKTF | SAV1 | B | BDO | 0.00 | 0.0004 | 0.03 | 5.80 | 13.54 | IMPROVING | 0.2146 |
| PMKTF | SAV1 | S | SSALINITY | 0.00 | 0.0051 | 0.00 | 0.01 | 0.00 | UNCHANGED | 0.8032 |
| PMKTF | SAV1 | B | BSALINITY | 0.00 | 0.0064 | 0.00 | 0.01 | 0.00 | UNCHANGED | 0.8533 |
| PMKTF | SAV1 | S | SWTEMP | 0.00 | 0.2326 | 0.03 | 22.88 | 2.90 | NO TREND | 0.0303 |
| PMKTF | SAV1 | B | BWTEMP | 0.00 | 0.3465 | 0.02 | 22.88 | 2.48 | NO TREND | 0.0477 |
| PMKOH | SAV1 | S | SCHLA | 24.26 | 0.3372 | 0.03 | 7.54 | No Estimate | NO TREND | 0.4844 |
| PMKOH | SAV1 | S | STSS | 0.64 | 0.0011 | -0.90 | 45.00 | -48.00 | IMPROVING | 0.8469 |
| PMKOH | SAV1 | B | BTSS | 0.00 | 0.1094 | -2.00 | 148.50 | -28.28 | NO TREND | 0.6944 |
| PMKOH | SAV1 | S | SECCHI | 0.00 | 0.0159 | 0.00 | 0.45 | 0.00 | NO TREND | 0.6414 |
| PMKOH | SAV1 | S | SDO | 0.00 | 0.7374 | 0.00 | 5.83 | -1.11 | NO TREND | 0.0427 |
| PMKOH | SAV1 | B | BDO | 0.00 | 0.4020 | -0.01 | 5.58 | -2.94 | NO TREND | 0.0536 |
| PMKOH | SAV1 | S | SSALINITY | 0.00 | 0.0869 | 0.03 | 5.03 | 12.46 | NO TREND | 0.9595 |
| PMKOH | SAV1 | B | BSALINITY | 0.00 | 0.1801 | 0.03 | 5.33 | 15.02 | NO TREND | 0.8590 |
| PMKOH | SAV1 | S | SWTEMP | 0.00 | 0.8909 | 0.00 | 24.43 | 0.22 | NO TREND | 0.0356 |
| PMKOH | SAV1 | B | BWTEMP | 0.00 | 0.4585 | 0.01 | 24.45 | 1.35 | NO TREND | 0.0525 |
| MPNTF | SAV1 | S | SCHLA | 83.23 | 0.1098 | 0.00 | 4.59 | No Estimate | High BDLs | 0.5546 |
| MPNTF | SAV1 | S | STSS | 30.07 | 0.1824 | 0.00 | 6.50 | No Estimate | NO TREND | 0.1051 |
| MPNTF | SAV1 | B | BTSS | 19.57 | 0.0985 | -0.03 | 8.75 | No Estimate | NO TREND | 0.0869 |
| MPNTF | SAV1 | S | SECCHI | 0.00 | 0.2081 | 0.00 | 1.00 | 0.00 | NO TREND | 0.0012 |
| MPNTF | SAV1 | S | SDO | 0.00 | 0.1324 | 0.01 | 6.50 | 4.43 | NO TREND | 0.8257 |
| MPNTF | SAV1 | B | BDO | 0.00 | 0.0582 | 0.01 | 6.35 | 4.81 | NO TREND | 0.5943 |
| MPNTF | SAV1 | S | SSALINITY | 0.00 | 0.0864 | 0.00 | 0.01 | 0.00 | NO TREND | 0.6619 |
| MPNTF | SAV1 | B | BSALINITY | 0.00 | 0.0794 | 0.00 | 0.01 | 0.00 | NO TREND | 0.6677 |
| MPNTF | SAV1 | S | SWTEMP | 0.00 | 0.0077 | 0.08 | 23.38 | 8.21 | INCREASING | 0.1594 |
| MPNTF | SAV1 | B | BWTEMP | 0.00 | 0.0514 | 0.06 | 23.00 | 6.47 | NO TREND | 0.2734 |
| MPNOH | SAV1 | S | SCHLA | 39.64 | 0.6432 | 0.00 | 7.42 | No Estimate | High BDLs | 0.4481 |
| MPNOH | SAV1 | S | STSS | 1.27 | 0.1750 | 0.20 | 19.00 | 25.26 | NO TREND | 0.5550 |
| MPNOH | SAV1 | B | BTSS | 0.72 | 0.4891 | 0.33 | 44.00 | 18.18 | NO TREND | 0.1579 |
| MPNOH | SAV1 | S | SECCHI | 0.00 | 0.1781 | 0.00 | 0.53 | 0.00 | NO TREND | 0.8237 |
| MPNOH | SAV1 | S | SDO | 0.00 | 0.0861 | 0.02 | 5.68 | 7.05 | NO TREND | 0.4698 |
| MPNOH | SAV1 | B | BDO | 0.00 | 0.2083 | 0.01 | 5.33 | 4.10 | NO TREND | 0.5623 |
| MPNOH | SAV1 | S | SSALINITY | 0.00 | 0.0114 | 0.09 | 4.27 | 48.63 | NO TREND | 0.9186 |
| MPNOH | SAV1 | B | BSALINITY | 0.00 | 0.0095 | 0.10 | 5.02 | 46.72 | INCREASING | 0.9731 |
| MPNOH | SAV1 | S | SWTEMP | 0.00 | 0.3090 | 0.02 | 24.50 | 2.10 | NO TREND | 0.3832 |
| MPNOH | SAV1 | B | BWTEMP | 0.00 | 0.6116 | 0.01 | 24.38 | 1.09 | NO TREND | 0.3650 |
| YRKMH | SAV1 | S | SCHLA | 9.94 | 0.2642 | 0.06 | 9.59 | 15.02 | NO TREND | 0.3162 |
| YRKMH | SAV1 | S | STSS | 0.00 | 0.0368 | -0.31 | 32.75 | -20.04 | NO TREND | 0.9615 |
| YRKMH | SAV1 | B | BTSS | 0.36 | 0.4622 | 0.32 | 44.50 | 15.02 | NO TREND | 0.7327 |
| YRKMH | SAV1 | S | SECCHI | 0.00 | 0.3886 | 0.00 | 0.50 | 0.00 | NO TREND | 0.3519 |
| YRKMH | SAV1 | S | SDO | 0.00 | 0.1431 | 0.01 | 5.95 | 4.26 | NO TREND | 0.1562 |
| YRKMH | SAV1 | B | BDO | 0.00 | 0.6561 | 0.00 | 5.53 | -1.28 | NO TREND | 0.1074 |
| YRKMH | SAV1 | S | SSALINITY | 0.00 | 0.4884 | -0.03 | 13.61 | -5.10 | NO TREND | 0.9772 |
| YRKMH | SAV1 | B | BSALINITY | 0.00 | 0.2602 | -0.04 | 15.31 | -5.49 | NO TREND | 0.8924 |
| YRKMH | SAV1 | S | SWTEMP | 0.00 | 0.5443 | 0.01 | 24.28 | 1.04 | NO TREND | 0.0289 |
| YRKMH | SAV1 | B | BWTEMP | 0.00 | 0.3075 | 0.02 | 24.40 | 1.55 | NO TREND | 0.0136 |

Appendix A - Section IIC. York River (1985-2008) - Continued.

| Segment | Season | Layer | Parameter | % BDL | P value | Slope | Baseline | % Change | Direction | Homogeneity test | |
|---------|--------|-------|-----------|-------|---------|-------|----------|-------------|------------|------------------|--|
| | | | | | | | | | | P value | |
| YRKPH | SAV1 | S | SCHLA | 12.17 | 0.0019 | 0.11 | 8.00 | 32.71 | DEGRADING | 0.3419 | |
| YRKPH | SAV1 | S | STSS | 19.19 | 0.4411 | 0.06 | 6.00 | No Estimate | NO TREND | 0.5551 | |
| YRKPH | SAV1 | B | BTSS | 3.91 | 0.5160 | 0.14 | 22.00 | 13.02 | NO TREND | 0.7656 | |
| YRKPH | SAV1 | S | SECCHI | 0.00 | 0.0000 | -0.01 | 1.25 | -22.59 | DEGRADING | 0.1920 | |
| YRKPH | SAV1 | S | SDO | 0.00 | 0.0021 | 0.03 | 6.38 | 9.83 | IMPROVING | 0.0911 | |
| YRKPH | SAV1 | B | BDO | 0.00 | 0.8821 | 0.00 | 5.15 | 0.54 | NO TREND | 0.0772 | |
| YRKPH | SAV1 | S | SSALINITY | 0.00 | 0.0009 | -0.10 | 21.83 | -11.00 | DECREASING | 0.9774 | |
| YRKPH | SAV1 | B | BSALINITY | 0.00 | 0.0141 | -0.07 | 23.58 | -7.12 | NO TREND | 0.9570 | |
| YRKPH | SAV1 | S | SWTEMP | 0.00 | 0.9150 | 0.00 | 23.80 | -0.05 | NO TREND | 0.2406 | |
| YRKPH | SAV1 | B | BWTEMP | 0.00 | 0.7654 | 0.00 | 23.25 | -0.52 | NO TREND | 0.0990 | |
| MOBPH | SAV1 | S | SCHLA | 2.05 | 0.0244 | 0.09 | 5.73 | 36.33 | NO TREND | 0.6066 | |
| MOBPH | SAV1 | S | STSS | 3.53 | 0.0001 | -0.21 | 9.90 | -52.00 | IMPROVING | 0.8108 | |
| MOBPH | SAV1 | B | BTSS | 1.90 | 0.0007 | -0.25 | 16.50 | -36.41 | IMPROVING | 0.0703 | |
| MOBPH | SAV1 | S | SECCHI | 0.00 | 0.0000 | -0.02 | 1.28 | -34.45 | DEGRADING | 0.9565 | |
| MOBPH | SAV1 | S | SDO | 0.00 | 0.0000 | 0.04 | 7.25 | 13.88 | IMPROVING | 0.9514 | |
| MOBPH | SAV1 | B | BDO | 0.00 | 0.0000 | 0.05 | 6.90 | 16.41 | IMPROVING | 0.2395 | |
| MOBPH | SAV1 | S | SSALINITY | 0.00 | 0.0044 | -0.08 | 22.29 | -8.53 | DECREASING | 0.9991 | |
| MOBPH | SAV1 | B | BSALINITY | 0.00 | 0.0015 | -0.08 | 22.72 | -8.84 | DECREASING | 0.9724 | |
| MOBPH | SAV1 | S | SWTEMP | 0.00 | 0.4364 | 0.02 | 22.00 | 1.69 | NO TREND | 0.8773 | |
| MOBPH | SAV1 | B | BWTEMP | 0.00 | 0.2055 | 0.02 | 21.85 | 2.44 | NO TREND | 0.6454 | |
| PMKTF | SAV2 | S | SCHLA | 50.24 | 0.0066 | 0.00 | 3.24 | No Estimate | High BDLs | 0.8251 | |
| PMKTF | SAV2 | S | STSS | 1.69 | 0.9451 | 0.00 | 9.08 | 0.00 | NO TREND | 0.0169 | |
| PMKTF | SAV2 | B | BTSS | 2.30 | 0.3683 | -0.08 | 9.08 | -20.97 | NO TREND | 0.1602 | |
| PMKTF | SAV2 | S | SECCHI | 0.00 | 0.0000 | -0.02 | 1.30 | -30.77 | DEGRADING | 0.8636 | |
| PMKTF | SAV2 | S | SDO | 0.00 | 0.0004 | 0.02 | 7.33 | 7.53 | IMPROVING | 0.7059 | |
| PMKTF | SAV2 | B | BDO | 0.00 | 0.0002 | 0.02 | 7.13 | 8.34 | IMPROVING | 0.6630 | |
| PMKTF | SAV2 | S | SSALINITY | 0.00 | 0.4598 | 0.00 | 9.65 | 0.00 | NO TREND | 0.5402 | |
| PMKTF | SAV2 | B | BSALINITY | 0.00 | 0.4608 | 0.00 | 9.65 | 0.00 | NO TREND | 0.5446 | |
| PMKTF | SAV2 | S | SWTEMP | 0.00 | 0.0706 | -0.05 | 19.30 | -5.88 | NO TREND | 0.7200 | |
| PMKTF | SAV2 | B | BWTEMP | 0.00 | 0.0844 | -0.04 | 19.18 | -5.12 | NO TREND | 0.7661 | |
| PMKOH | SAV2 | S | SCHLA | 13.55 | 0.0369 | 0.02 | 4.35 | 12.95 | NO TREND | 0.7315 | |
| PMKOH | SAV2 | S | STSS | 0.52 | 0.0105 | -0.22 | 29.30 | -18.20 | NO TREND | 0.9569 | |
| PMKOH | SAV2 | B | BTSS | 0.00 | 0.0959 | -0.16 | 9.08 | -42.47 | NO TREND | 0.5409 | |
| PMKOH | SAV2 | S | SECCHI | 0.00 | 0.0040 | 0.00 | 0.80 | -8.33 | DEGRADING | 0.0024 | |
| PMKOH | SAV2 | S | SDO | 0.00 | 0.0009 | 0.02 | 7.30 | 7.08 | IMPROVING | 0.4242 | |
| PMKOH | SAV2 | B | BDO | 0.00 | 0.0010 | 0.02 | 7.35 | 6.94 | IMPROVING | 0.4076 | |
| PMKOH | SAV2 | S | SSALINITY | 0.00 | 0.8536 | 0.00 | 12.17 | 0.00 | NO TREND | 0.5000 | |
| PMKOH | SAV2 | B | BSALINITY | 0.00 | 0.7276 | 0.00 | 12.27 | -0.89 | NO TREND | 0.5820 | |
| PMKOH | SAV2 | S | SWTEMP | 0.00 | 0.0702 | -0.03 | 18.48 | -4.33 | NO TREND | 0.5950 | |
| PMKOH | SAV2 | B | BWTEMP | 0.00 | 0.1060 | -0.03 | 18.40 | -4.48 | NO TREND | 0.6933 | |
| MPNTF | SAV2 | S | SCHLA | 59.62 | 0.0800 | 0.00 | 3.54 | No Estimate | High BDLs | 0.3670 | |
| MPNTF | SAV2 | S | STSS | 35.36 | 0.2231 | -0.08 | 9.08 | No Estimate | High BDLs | 0.3612 | |
| MPNTF | SAV2 | B | BTSS | 22.73 | 0.1448 | -0.11 | 9.08 | No Estimate | NO TREND | 0.2742 | |
| MPNTF | SAV2 | S | SECCHI | 0.00 | 0.0000 | -0.02 | 1.30 | -30.77 | DEGRADING | 0.4557 | |
| MPNTF | SAV2 | S | SDO | 0.00 | 0.0067 | 0.02 | 7.18 | 5.57 | IMPROVING | 0.4379 | |
| MPNTF | SAV2 | B | BDO | 0.00 | 0.0005 | 0.02 | 7.18 | 6.93 | IMPROVING | 0.7883 | |
| MPNTF | SAV2 | S | SSALINITY | 0.00 | 0.2711 | 0.00 | 9.63 | 0.00 | NO TREND | 0.6639 | |
| MPNTF | SAV2 | B | BSALINITY | 0.00 | 0.2711 | 0.00 | 9.63 | 0.00 | NO TREND | 0.6639 | |
| MPNTF | SAV2 | S | SWTEMP | 0.00 | 0.3014 | -0.02 | 19.05 | -2.48 | NO TREND | 0.9375 | |
| MPNTF | SAV2 | B | BWTEMP | 0.00 | 0.2247 | -0.03 | 18.93 | -3.34 | NO TREND | 0.9181 | |

Appendix A - Section IIC. York River (1985-2008) - Continued.

| Segment | Season | Layer | Parameter | % BDL | P value | Slope | Baseline | % Change | Direction | Homogeneity test |
|---------|---------|-------|-----------|-------|---------|-------|----------|-------------|-----------|------------------|
| | | | | | | | | | | P value |
| MPNOH | SAV2 | S | SCHLA | 24.29 | 0.0235 | 0.00 | 3.58 | No Estimate | NO TREND | 0.4022 |
| MPNOH | SAV2 | S | STSS | 0.52 | 0.3213 | -0.11 | 11.80 | -23.16 | NO TREND | 0.1563 |
| MPNOH | SAV2 | B | BTSS | 0.59 | 0.1105 | -0.15 | 9.55 | -37.70 | NO TREND | 0.4911 |
| MPNOH | SAV2 | S | SECCHI | 0.00 | 0.0083 | 0.00 | 0.90 | -7.02 | DEGRADING | 0.0016 |
| MPNOH | SAV2 | S | SDO | 0.00 | 0.0002 | 0.02 | 7.30 | 7.24 | IMPROVING | 0.7742 |
| MPNOH | SAV2 | B | BDO | 0.00 | 0.0004 | 0.02 | 7.35 | 7.26 | IMPROVING | 0.5601 |
| MPNOH | SAV2 | S | SSALINITY | 0.00 | 0.9584 | 0.00 | 11.31 | 0.00 | NO TREND | 0.6424 |
| MPNOH | SAV2 | B | BSALINITY | 0.00 | 0.9831 | 0.00 | 11.78 | 0.00 | NO TREND | 0.6045 |
| MPNOH | SAV2 | S | SWTEMP | 0.00 | 0.2688 | -0.02 | 18.55 | -2.74 | NO TREND | 0.8666 |
| MPNOH | SAV2 | B | BWTEMP | 0.00 | 0.1778 | -0.03 | 18.35 | -3.74 | NO TREND | 0.8810 |
| YRKMH | SAV2 | S | SCHLA | 5.13 | 0.0013 | 0.08 | 6.22 | 28.93 | DEGRADING | 0.8712 |
| YRKMH | SAV2 | S | STSS | 0.00 | 0.0635 | -0.17 | 9.08 | -44.08 | NO TREND | 0.6280 |
| YRKMH | SAV2 | B | BTSS | 0.29 | 0.4190 | -0.10 | 9.08 | -25.45 | NO TREND | 0.1622 |
| YRKMH | SAV2 | S | SECCHI | 0.00 | 0.0037 | -0.01 | 0.90 | -14.81 | DEGRADING | 0.0028 |
| YRKMH | SAV2 | S | SDO | 0.00 | 0.0001 | 0.03 | 7.35 | 8.56 | IMPROVING | 0.9805 |
| YRKMH | SAV2 | B | BDO | 0.00 | 0.0012 | 0.02 | 7.30 | 7.33 | IMPROVING | 0.7225 |
| YRKMH | SAV2 | S | SSALINITY | 0.00 | 0.4659 | -0.02 | 15.98 | -3.67 | NO TREND | 0.9112 |
| YRKMH | SAV2 | B | BSALINITY | 0.00 | 0.4062 | -0.02 | 16.48 | -3.45 | NO TREND | 0.7379 |
| YRKMH | SAV2 | S | SWTEMP | 0.00 | 0.0763 | -0.05 | 18.33 | -5.94 | NO TREND | 0.7473 |
| YRKMH | SAV2 | B | BWTEMP | 0.00 | 0.1008 | -0.03 | 18.13 | -4.46 | NO TREND | 0.8345 |
| YRKPH | SAV2 | S | SCHLA | 7.55 | 0.2462 | 0.03 | 6.66 | 10.25 | NO TREND | 0.3673 |
| YRKPH | SAV2 | S | STSS | 16.76 | 0.4925 | -0.05 | 8.80 | No Estimate | NO TREND | 0.1491 |
| YRKPH | SAV2 | B | BTSS | 2.89 | 0.1755 | -0.13 | 9.08 | -35.18 | NO TREND | 0.2074 |
| YRKPH | SAV2 | S | SECCHI | 0.00 | 0.0000 | -0.01 | 1.40 | -24.85 | DEGRADING | 0.2055 |
| YRKPH | SAV2 | S | SDO | 0.00 | 0.0016 | 0.02 | 7.53 | 7.11 | IMPROVING | 0.6662 |
| YRKPH | SAV2 | B | BDO | 0.00 | 0.0023 | 0.02 | 7.40 | 7.21 | IMPROVING | 0.4834 |
| YRKPH | SAV2 | S | SSALINITY | 0.00 | 0.0530 | -0.06 | 19.68 | -6.89 | NO TREND | 0.9956 |
| YRKPH | SAV2 | B | BSALINITY | 0.00 | 0.1419 | -0.04 | 20.59 | -5.00 | NO TREND | 0.9823 |
| YRKPH | SAV2 | S | SWTEMP | 0.00 | 0.0927 | -0.04 | 17.43 | -4.90 | NO TREND | 0.8205 |
| YRKPH | SAV2 | B | BWTEMP | 0.00 | 0.1008 | -0.03 | 17.30 | -4.25 | NO TREND | 0.8264 |
| MOBPH | SAV2 | S | SCHLA | 1.23 | 0.1061 | 0.03 | 4.38 | 17.85 | NO TREND | 0.6609 |
| MOBPH | SAV2 | S | STSS | 1.88 | 0.0006 | -0.17 | 9.68 | -41.43 | IMPROVING | 0.9783 |
| MOBPH | SAV2 | B | BTSS | 1.13 | 0.0495 | -0.11 | 10.68 | -25.29 | NO TREND | 0.2995 |
| MOBPH | SAV2 | S | SECCHI | 0.00 | 0.0000 | -0.02 | 1.50 | -32.00 | DEGRADING | 0.6774 |
| MOBPH | SAV2 | S | SDO | 0.00 | 0.0000 | 0.03 | 7.95 | 9.62 | IMPROVING | 0.8862 |
| MOBPH | SAV2 | B | BDO | 0.00 | 0.0000 | 0.03 | 7.68 | 9.83 | IMPROVING | 0.4518 |
| MOBPH | SAV2 | S | SSALINITY | 0.00 | 0.0687 | -0.06 | 19.81 | -7.27 | NO TREND | 0.9987 |
| MOBPH | SAV2 | B | BSALINITY | 0.00 | 0.0613 | -0.06 | 19.88 | -6.98 | NO TREND | 0.9991 |
| MOBPH | SAV2 | S | SWTEMP | 0.00 | 0.9185 | 0.00 | 17.60 | 0.53 | NO TREND | 0.6788 |
| MOBPH | SAV2 | B | BWTEMP | 0.00 | 0.8459 | 0.00 | 17.00 | -0.47 | NO TREND | 0.8389 |
| PMKTF | Spring1 | S | SCHLA | 93.02 | 0.0467 | 0.00 | 3.10 | No Estimate | High BDLs | 0.5133 |
| PMKTF | Spring1 | S | STSS | 1.39 | 0.0048 | 0.58 | 15.75 | 76.98 | DEGRADING | 0.6721 |
| PMKTF | Spring1 | B | BTSS | 0.00 | 0.1252 | 0.50 | 20.25 | 51.85 | NO TREND | 0.7597 |
| PMKTF | Spring1 | S | SECCHI | 0.00 | 0.0000 | -0.02 | 0.90 | -44.44 | DEGRADING | 0.7220 |
| PMKTF | Spring1 | S | SDO | 0.00 | 0.0754 | 0.03 | 8.05 | 8.33 | NO TREND | 0.4563 |
| PMKTF | Spring1 | B | BDO | 0.00 | 0.0421 | 0.04 | 7.83 | 11.50 | NO TREND | 0.3357 |
| PMKTF | Spring1 | S | SSALINITY | 0.00 | 0.3753 | 0.00 | 0.01 | 0.00 | NO TREND | 0.3835 |
| PMKTF | Spring1 | B | BSALINITY | 0.00 | 0.3815 | 0.00 | 0.01 | 0.00 | NO TREND | 0.3964 |
| PMKTF | Spring1 | S | SWTEMP | 0.00 | 0.0305 | -0.08 | 17.63 | -10.83 | NO TREND | 0.7860 |
| PMKTF | Spring1 | B | BWTEMP | 0.00 | 0.0409 | -0.07 | 17.25 | -9.41 | NO TREND | 0.8262 |

Appendix A - Section IIC. York River (1985-2008) - Continued.

| Segment | Season | Layer | Parameter | % BDL | P value | Slope | Baseline | % Change | Direction | Homogeneity test |
|---------|---------|-------|-----------|-------|---------|-------|----------|-------------|-----------|------------------|
| | | | | | | | | | | P value |
| PMKOH | Spring1 | S | SCHLA | 35.96 | 0.4591 | 0.00 | 4.53 | No Estimate | High BDLs | 0.7041 |
| PMKOH | Spring1 | S | STSS | 0.00 | 0.1561 | -0.64 | 90.00 | -16.97 | NO TREND | 0.8471 |
| PMKOH | Spring1 | B | BTSS | 0.00 | 0.8780 | 0.83 | 134.50 | 12.39 | NO TREND | 0.6582 |
| PMKOH | Spring1 | S | SECCHI | 0.00 | 0.4326 | 0.00 | 0.25 | 0.00 | NO TREND | 0.3293 |
| PMKOH | Spring1 | S | SDO | 0.00 | 0.1559 | 0.02 | 7.88 | 6.94 | NO TREND | 0.2388 |
| PMKOH | Spring1 | B | BDO | 0.00 | 0.1600 | 0.02 | 7.90 | 6.46 | NO TREND | 0.2178 |
| PMKOH | Spring1 | S | SSALINITY | 0.00 | 0.1266 | 0.01 | 3.17 | 8.00 | NO TREND | 0.8423 |
| PMKOH | Spring1 | B | BSALINITY | 0.00 | 0.4460 | 0.01 | 3.86 | 5.19 | NO TREND | 0.4544 |
| PMKOH | Spring1 | S | SWTEMP | 0.00 | 0.0316 | -0.05 | 16.03 | -8.19 | NO TREND | 0.5065 |
| PMKOH | Spring1 | B | BWTEMP | 0.00 | 0.0613 | -0.06 | 15.85 | -8.33 | NO TREND | 0.5617 |
| MPNTF | Spring1 | S | SCHLA | 90.80 | 0.6689 | 0.00 | 3.10 | No Estimate | High BDLs | 0.3416 |
| MPNTF | Spring1 | S | STSS | 15.07 | 0.3659 | 0.04 | 9.50 | No Estimate | NO TREND | 0.9364 |
| MPNTF | Spring1 | B | BTSS | 10.00 | 0.5507 | 0.09 | 11.13 | 16.66 | NO TREND | 0.3225 |
| MPNTF | Spring1 | S | SECCHI | 0.00 | 0.0008 | -0.02 | 1.08 | -37.21 | DEGRADING | 0.2780 |
| MPNTF | Spring1 | S | SDO | 0.00 | 0.5806 | 0.01 | 7.88 | 2.34 | NO TREND | 0.6408 |
| MPNTF | Spring1 | B | BDO | 0.00 | 0.1073 | 0.02 | 7.73 | 6.21 | NO TREND | 0.6844 |
| MPNTF | Spring1 | S | SSALINITY | 0.00 | 0.5089 | 0.00 | 0.01 | 0.00 | NO TREND | |
| MPNTF | Spring1 | B | BSALINITY | 0.00 | 0.5089 | 0.00 | 0.01 | 0.00 | NO TREND | |
| MPNTF | Spring1 | S | SWTEMP | 0.00 | 0.2962 | -0.03 | 17.38 | -4.31 | NO TREND | 0.8959 |
| MPNTF | Spring1 | B | BWTEMP | 0.00 | 0.1810 | -0.05 | 17.25 | -6.79 | NO TREND | 0.9143 |
| MPNOH | Spring1 | S | SCHLA | 62.07 | 0.3366 | 0.00 | 3.10 | No Estimate | High BDLs | 0.1906 |
| MPNOH | Spring1 | S | STSS | 0.00 | 0.3577 | 0.31 | 43.00 | 17.44 | NO TREND | 0.2770 |
| MPNOH | Spring1 | B | BTSS | 0.00 | 0.7489 | 0.14 | 44.00 | 7.79 | NO TREND | 0.7425 |
| MPNOH | Spring1 | S | SECCHI | 0.00 | 0.2638 | 0.00 | 0.33 | 0.00 | NO TREND | 0.4794 |
| MPNOH | Spring1 | S | SDO | 0.00 | 0.0529 | 0.02 | 8.10 | 6.95 | NO TREND | 0.5282 |
| MPNOH | Spring1 | B | BDO | 0.00 | 0.0903 | 0.02 | 8.10 | 6.84 | NO TREND | 0.2993 |
| MPNOH | Spring1 | S | SSALINITY | 0.00 | 0.2185 | 0.00 | 2.82 | 2.43 | NO TREND | 0.8979 |
| MPNOH | Spring1 | B | BSALINITY | 0.00 | 0.1635 | 0.02 | 2.86 | 12.60 | NO TREND | 0.9932 |
| MPNOH | Spring1 | S | SWTEMP | 0.00 | 0.2472 | -0.04 | 16.10 | -5.78 | NO TREND | 0.6794 |
| MPNOH | Spring1 | B | BWTEMP | 0.00 | 0.1281 | -0.05 | 15.88 | -7.02 | NO TREND | 0.8433 |
| YRKMH | Spring1 | S | SCHLA | 12.36 | 0.0145 | 0.32 | 11.44 | 64.03 | NO TREND | 0.7012 |
| YRKMH | Spring1 | S | STSS | 0.00 | 0.8513 | -0.13 | 42.75 | -6.27 | NO TREND | 0.5989 |
| YRKMH | Spring1 | B | BTSS | 0.00 | 0.1244 | 1.79 | 66.75 | 53.71 | NO TREND | 0.7758 |
| YRKMH | Spring1 | S | SECCHI | 0.00 | 0.5400 | 0.00 | 0.43 | 0.00 | NO TREND | 0.2549 |
| YRKMH | Spring1 | S | SDO | 0.00 | 0.0195 | 0.04 | 8.05 | 11.47 | NO TREND | 0.9973 |
| YRKMH | Spring1 | B | BDO | 0.00 | 0.1778 | 0.03 | 7.88 | 7.93 | NO TREND | 0.6894 |
| YRKMH | Spring1 | S | SSALINITY | 0.00 | 0.8411 | 0.01 | 11.31 | 2.32 | NO TREND | 0.8515 |
| YRKMH | Spring1 | B | BSALINITY | 0.00 | 0.9543 | 0.00 | 12.88 | 0.50 | NO TREND | 0.4162 |
| YRKMH | Spring1 | S | SWTEMP | 0.00 | 0.0377 | -0.08 | 15.98 | -11.54 | NO TREND | 0.7910 |
| YRKMH | Spring1 | B | BWTEMP | 0.00 | 0.0586 | -0.06 | 15.45 | -9.12 | NO TREND | 0.9180 |
| YRKPH | Spring1 | S | SCHLA | 5.71 | 0.5437 | -0.06 | 14.06 | -9.77 | NO TREND | 0.7300 |
| YRKPH | Spring1 | S | STSS | 16.34 | 0.2077 | 0.15 | 8.50 | No Estimate | NO TREND | 0.4191 |
| YRKPH | Spring1 | B | BTSS | 4.23 | 0.5239 | 0.25 | 22.75 | 21.98 | NO TREND | 0.2535 |
| YRKPH | Spring1 | S | SECCHI | 0.00 | 0.0487 | -0.01 | 1.33 | -18.11 | NO TREND | 0.3211 |
| YRKPH | Spring1 | S | SDO | 0.00 | 0.2127 | 0.02 | 8.88 | 6.76 | NO TREND | 0.6334 |
| YRKPH | Spring1 | B | BDO | 0.00 | 0.2763 | 0.02 | 8.25 | 7.22 | NO TREND | 0.3980 |
| YRKPH | Spring1 | S | SSALINITY | 0.00 | 0.1324 | -0.06 | 19.39 | -7.88 | NO TREND | 0.9130 |
| YRKPH | Spring1 | B | BSALINITY | 0.00 | 0.3979 | -0.03 | 20.59 | -3.67 | NO TREND | 0.7911 |
| YRKPH | Spring1 | S | SWTEMP | 0.00 | 0.0514 | -0.06 | 14.35 | -10.24 | NO TREND | 0.9120 |
| YRKPH | Spring1 | B | BWTEMP | 0.00 | 0.0585 | -0.05 | 12.68 | -9.47 | NO TREND | 0.8928 |

Appendix A - Section IIC. York River (1985-2008) - Continued.

| Segment | Season | Layer | Parameter | % BDL | P value | Slope | Baseline | % Change | Direction | Homogeneity test |
|---------|---------|-------|-----------|-------|---------|-------|----------|-------------|-----------|------------------|
| | | | | | | | | | | P value |
| MOBPH | Spring1 | S | SCHLA | 2.66 | 0.8954 | 0.01 | 4.70 | 5.84 | NO TREND | 0.9131 |
| MOBPH | Spring1 | S | STSS | 2.89 | 0.0081 | -0.16 | 9.90 | -39.60 | IMPROVING | 0.8888 |
| MOBPH | Spring1 | B | BTSS | 1.85 | 0.5687 | -0.05 | 12.83 | -9.48 | NO TREND | 0.1105 |
| MOBPH | Spring1 | S | SECCHI | 0.00 | 0.0001 | -0.03 | 1.73 | -34.78 | DEGRADING | 0.4452 |
| MOBPH | Spring1 | S | SDO | 0.00 | 0.0014 | 0.05 | 9.30 | 13.64 | IMPROVING | 0.5016 |
| MOBPH | Spring1 | B | BDO | 0.00 | 0.0010 | 0.06 | 8.93 | 14.93 | IMPROVING | 0.1122 |
| MOBPH | Spring1 | S | SSALINITY | 0.00 | 0.1788 | -0.07 | 19.79 | -8.90 | NO TREND | 0.9723 |
| MOBPH | Spring1 | B | BSALINITY | 0.00 | 0.1564 | -0.07 | 19.84 | -9.03 | NO TREND | 0.9914 |
| MOBPH | Spring1 | S | SWTEMP | 0.00 | 0.5589 | 0.02 | 15.25 | 2.68 | NO TREND | 0.4235 |
| MOBPH | Spring1 | B | BWTEMP | 0.00 | 0.8723 | 0.01 | 13.65 | 0.96 | NO TREND | 0.6016 |
| PMKTF | Spring2 | S | SCHLA | 75.28 | 0.9126 | 0.00 | 3.10 | No Estimate | High BDLs | 0.0697 |
| PMKTF | Spring2 | S | STSS | 0.00 | 0.0033 | 0.50 | 12.50 | 84.00 | DEGRADING | 0.7897 |
| PMKTF | Spring2 | B | BTSS | 0.00 | 0.2676 | 0.29 | 17.25 | 35.81 | NO TREND | 0.4766 |
| PMKTF | Spring2 | S | SECCHI | 0.00 | 0.0007 | -0.01 | 0.78 | -35.73 | DEGRADING | 0.1022 |
| PMKTF | Spring2 | S | SDO | 0.00 | 0.0059 | 0.04 | 6.68 | 12.78 | IMPROVING | 0.7959 |
| PMKTF | Spring2 | B | BDO | 0.00 | 0.0014 | 0.04 | 6.58 | 15.64 | IMPROVING | 0.7420 |
| PMKTF | Spring2 | S | SSALINITY | 0.00 | 0.1389 | 0.00 | 0.01 | 0.00 | NO TREND | 0.8577 |
| PMKTF | Spring2 | B | BSALINITY | 0.00 | 0.1389 | 0.00 | 0.01 | 0.00 | NO TREND | 0.8577 |
| PMKTF | Spring2 | S | SWTEMP | 0.00 | 0.0794 | -0.07 | 22.13 | -7.67 | NO TREND | 0.5578 |
| PMKTF | Spring2 | B | BWTEMP | 0.00 | 0.0655 | -0.07 | 21.88 | -7.24 | NO TREND | 0.7369 |
| PMKOH | Spring2 | S | SCHLA | 26.09 | 0.1110 | 0.06 | 5.40 | No Estimate | NO TREND | 0.5996 |
| PMKOH | Spring2 | S | STSS | 0.00 | 0.0393 | -1.00 | 81.50 | -29.45 | NO TREND | 0.6087 |
| PMKOH | Spring2 | B | BTSS | 0.00 | 0.5869 | -1.21 | 134.50 | -17.97 | NO TREND | 0.6158 |
| PMKOH | Spring2 | S | SECCHI | 0.00 | 0.1803 | 0.00 | 0.30 | 0.00 | NO TREND | 0.2035 |
| PMKOH | Spring2 | S | SDO | 0.00 | 0.1315 | 0.02 | 6.03 | 8.13 | NO TREND | 0.2521 |
| PMKOH | Spring2 | B | BDO | 0.00 | 0.3270 | 0.02 | 6.18 | 6.48 | NO TREND | 0.1418 |
| PMKOH | Spring2 | S | SSALINITY | 0.00 | 0.2021 | 0.01 | 4.38 | 6.17 | NO TREND | 0.9151 |
| PMKOH | Spring2 | B | BSALINITY | 0.00 | 0.5471 | 0.01 | 4.86 | 4.69 | NO TREND | 0.5241 |
| PMKOH | Spring2 | S | SWTEMP | 0.00 | 0.0186 | -0.07 | 20.75 | -7.52 | NO TREND | 0.5324 |
| PMKOH | Spring2 | B | BWTEMP | 0.00 | 0.0710 | -0.06 | 20.78 | -6.66 | NO TREND | 0.5447 |
| MPNTF | Spring2 | S | SCHLA | 71.43 | 0.8755 | 0.00 | 3.40 | No Estimate | High BDLs | 0.5349 |
| MPNTF | Spring2 | S | STSS | 25.64 | 0.2955 | 0.04 | 7.25 | No Estimate | NO TREND | 0.8801 |
| MPNTF | Spring2 | B | BTSS | 17.11 | 0.7357 | 0.00 | 12.50 | No Estimate | NO TREND | 0.3645 |
| MPNTF | Spring2 | S | SECCHI | 0.00 | 0.0008 | -0.02 | 1.08 | -39.40 | DEGRADING | 0.2660 |
| MPNTF | Spring2 | S | SDO | 0.00 | 0.3200 | 0.01 | 6.88 | 3.88 | NO TREND | 0.9150 |
| MPNTF | Spring2 | B | BDO | 0.00 | 0.0528 | 0.02 | 6.83 | 7.49 | NO TREND | 0.9285 |
| MPNTF | Spring2 | S | SSALINITY | 0.00 | 0.6935 | 0.00 | 0.01 | 0.00 | NO TREND | |
| MPNTF | Spring2 | B | BSALINITY | 0.00 | 0.6511 | 0.00 | 0.01 | 0.00 | NO TREND | |
| MPNTF | Spring2 | S | SWTEMP | 0.00 | 0.7315 | -0.01 | 22.13 | -1.39 | NO TREND | 0.8245 |
| MPNTF | Spring2 | B | BWTEMP | 0.00 | 0.5029 | -0.03 | 22.38 | -2.96 | NO TREND | 0.8173 |
| MPNOH | Spring2 | S | SCHLA | 45.56 | 0.3518 | 0.00 | 3.63 | No Estimate | High BDLs | 0.2164 |
| MPNOH | Spring2 | S | STSS | 0.00 | 0.1654 | 0.33 | 28.50 | 27.57 | NO TREND | 0.3501 |
| MPNOH | Spring2 | B | BTSS | 0.00 | 0.1665 | 0.92 | 44.00 | 50.11 | NO TREND | 0.1618 |
| MPNOH | Spring2 | S | SECCHI | 0.00 | 0.8606 | 0.00 | 0.43 | 0.00 | NO TREND | 0.6977 |
| MPNOH | Spring2 | S | SDO | 0.00 | 0.0200 | 0.03 | 6.13 | 10.69 | NO TREND | 0.6399 |
| MPNOH | Spring2 | B | BDO | 0.00 | 0.0276 | 0.03 | 5.90 | 11.20 | NO TREND | 0.7052 |
| MPNOH | Spring2 | S | SSALINITY | 0.00 | 0.1653 | 0.04 | 3.25 | 26.85 | NO TREND | 0.8023 |
| MPNOH | Spring2 | B | BSALINITY | 0.00 | 0.1037 | 0.06 | 4.23 | 31.43 | NO TREND | 0.9174 |
| MPNOH | Spring2 | S | SWTEMP | 0.00 | 0.2638 | -0.04 | 20.83 | -4.84 | NO TREND | 0.6804 |
| MPNOH | Spring2 | B | BWTEMP | 0.00 | 0.1292 | -0.06 | 20.60 | -6.63 | NO TREND | 0.8436 |

Appendix A - Section IIC. York River (1985-2008) - Continued.

| Segment | Season | Layer | Parameter | % BDL | P value | Slope | Baseline | % Change | Direction | Homogeneity test | |
|---------|---------|-------|-----------|-------|---------|-------|----------|-------------|-----------|------------------|--|
| | | | | | | | | | | P value | |
| YRKMH | Spring2 | S | SCHLA | 8.84 | 0.0514 | 0.19 | 9.12 | 50.45 | NO TREND | 0.4358 | |
| YRKMH | Spring2 | S | STSS | 0.00 | 0.1110 | -0.54 | 43.00 | -25.32 | NO TREND | 0.5679 | |
| YRKMH | Spring2 | B | BTSS | 0.00 | 0.3887 | 1.03 | 73.00 | 28.16 | NO TREND | 0.7956 | |
| YRKMH | Spring2 | S | SECCHI | 0.00 | 0.1872 | 0.00 | 0.43 | 0.00 | NO TREND | 0.1483 | |
| YRKMH | Spring2 | S | SDO | 0.00 | 0.0134 | 0.03 | 6.10 | 10.68 | NO TREND | 0.9919 | |
| YRKMH | Spring2 | B | BDO | 0.00 | 0.1928 | 0.02 | 5.95 | 8.47 | NO TREND | 0.6902 | |
| YRKMH | Spring2 | S | SSALINITY | 0.00 | 0.9315 | 0.01 | 12.06 | 1.39 | NO TREND | 0.8799 | |
| YRKMH | Spring2 | B | BSALINITY | 0.00 | 0.6161 | -0.03 | 13.63 | -4.45 | NO TREND | 0.5640 | |
| YRKMH | Spring2 | S | SWTEMP | 0.00 | 0.0264 | -0.08 | 20.48 | -9.23 | NO TREND | 0.8730 | |
| YRKMH | Spring2 | B | BWTEMP | 0.00 | 0.0805 | -0.06 | 20.28 | -7.05 | NO TREND | 0.8829 | |
| YRKPH | Spring2 | S | SCHLA | 5.03 | 0.1957 | 0.09 | 8.95 | 23.57 | NO TREND | 0.2020 | |
| YRKPH | Spring2 | S | STSS | 21.29 | 0.0999 | 0.16 | 6.00 | No Estimate | NO TREND | 0.6558 | |
| YRKPH | Spring2 | B | BTSS | 2.05 | 0.8661 | -0.06 | 31.75 | -3.50 | NO TREND | 0.8748 | |
| YRKPH | Spring2 | S | SECCHI | 0.00 | 0.0709 | -0.01 | 1.33 | -15.09 | NO TREND | 0.1986 | |
| YRKPH | Spring2 | S | SDO | 0.00 | 0.0096 | 0.03 | 7.20 | 11.11 | IMPROVING | 0.1757 | |
| YRKPH | Spring2 | B | BDO | 0.00 | 0.2994 | 0.02 | 6.88 | 8.27 | NO TREND | 0.3689 | |
| YRKPH | Spring2 | S | SSALINITY | 0.00 | 0.1400 | -0.06 | 20.25 | -7.58 | NO TREND | 0.9000 | |
| YRKPH | Spring2 | B | BSALINITY | 0.00 | 0.2825 | -0.04 | 20.90 | -4.76 | NO TREND | 0.8589 | |
| YRKPH | Spring2 | S | SWTEMP | 0.00 | 0.0514 | -0.06 | 19.03 | -7.73 | NO TREND | 0.9120 | |
| YRKPH | Spring2 | B | BWTEMP | 0.00 | 0.0236 | -0.07 | 18.73 | -9.13 | NO TREND | 0.9729 | |
| MOBPH | Spring2 | S | SCHLA | 2.09 | 0.6263 | 0.03 | 5.14 | 13.16 | NO TREND | 0.7793 | |
| MOBPH | Spring2 | S | STSS | 2.06 | 0.0404 | -0.13 | 9.90 | -31.27 | NO TREND | 0.9261 | |
| MOBPH | Spring2 | B | BTSS | 1.62 | 0.6263 | -0.05 | 14.00 | -9.03 | NO TREND | 0.1555 | |
| MOBPH | Spring2 | S | SECCHI | 0.00 | 0.0000 | -0.03 | 1.40 | -42.86 | DEGRADING | 0.6000 | |
| MOBPH | Spring2 | S | SDO | 0.00 | 0.0003 | 0.04 | 7.80 | 13.12 | IMPROVING | 0.8028 | |
| MOBPH | Spring2 | B | BDO | 0.00 | 0.0001 | 0.05 | 7.33 | 16.00 | IMPROVING | 0.2501 | |
| MOBPH | Spring2 | S | SSALINITY | 0.00 | 0.0806 | -0.08 | 20.44 | -9.47 | NO TREND | 0.9419 | |
| MOBPH | Spring2 | B | BSALINITY | 0.00 | 0.0237 | -0.09 | 20.57 | -10.77 | NO TREND | 0.5617 | |
| MOBPH | Spring2 | S | SWTEMP | 0.00 | 0.7746 | 0.01 | 19.18 | 1.46 | NO TREND | 0.7045 | |
| MOBPH | Spring2 | B | BWTEMP | 0.00 | 0.4828 | 0.02 | 18.05 | 3.17 | NO TREND | 0.2248 | |
| PMKTF | Summer1 | S | SCHLA | 30.83 | 0.0059 | -0.06 | 7.19 | No Estimate | IMPROVING | 0.1578 | |
| PMKTF | Summer1 | S | STSS | 2.94 | 0.1391 | 0.18 | 11.50 | 32.61 | NO TREND | 0.6604 | |
| PMKTF | Summer1 | B | BTSS | 3.96 | 0.0825 | -0.38 | 18.00 | -43.75 | NO TREND | 0.5876 | |
| PMKTF | Summer1 | S | SECCHI | 0.00 | 0.4523 | 0.00 | 0.63 | 0.00 | NO TREND | 0.6761 | |
| PMKTF | Summer1 | S | SDO | 0.00 | 0.0001 | 0.03 | 4.80 | 17.00 | IMPROVING | 0.6892 | |
| PMKTF | Summer1 | B | BDO | 0.00 | 0.0003 | 0.04 | 5.35 | 16.34 | IMPROVING | 0.9705 | |
| PMKTF | Summer1 | S | SSALINITY | 0.00 | 0.0938 | 0.00 | 0.01 | 0.00 | NO TREND | 0.5482 | |
| PMKTF | Summer1 | B | BSALINITY | 0.00 | 0.1149 | 0.00 | 0.01 | 0.00 | NO TREND | 0.6558 | |
| PMKTF | Summer1 | S | SWTEMP | 0.00 | 0.0147 | 0.06 | 25.50 | 5.57 | NO TREND | 0.2838 | |
| PMKTF | Summer1 | B | BWTEMP | 0.00 | 0.0416 | 0.07 | 26.00 | 6.11 | NO TREND | 0.2145 | |
| PMKOH | Summer1 | S | SCHLA | 7.26 | 0.4667 | 0.07 | 9.46 | 18.13 | NO TREND | 0.2022 | |
| PMKOH | Summer1 | S | STSS | 0.92 | 0.0036 | -0.93 | 33.00 | -67.53 | IMPROVING | 0.5999 | |
| PMKOH | Summer1 | B | BTSS | 0.00 | 0.0239 | -3.65 | 182.75 | -41.96 | NO TREND | 0.9505 | |
| PMKOH | Summer1 | S | SECCHI | 0.00 | 0.0059 | 0.00 | 0.45 | 24.24 | IMPROVING | 0.9891 | |
| PMKOH | Summer1 | S | SDO | 0.00 | 0.7127 | 0.00 | 4.93 | -2.19 | NO TREND | 0.4568 | |
| PMKOH | Summer1 | B | BDO | 0.00 | 0.3338 | -0.01 | 4.78 | -5.03 | NO TREND | 0.7190 | |
| PMKOH | Summer1 | S | SSALINITY | 0.00 | 0.2122 | 0.07 | 5.61 | 30.27 | NO TREND | 0.7279 | |
| PMKOH | Summer1 | B | BSALINITY | 0.00 | 0.1851 | 0.08 | 6.74 | 27.29 | NO TREND | 0.7654 | |
| PMKOH | Summer1 | S | SWTEMP | 0.00 | 0.3421 | 0.02 | 26.03 | 1.73 | NO TREND | 0.1249 | |
| PMKOH | Summer1 | B | BWTEMP | 0.00 | 0.1311 | 0.03 | 25.90 | 2.32 | NO TREND | 0.2172 | |

Appendix A - Section IIC. York River (1985-2008) - Continued.

| Segment | Season | Layer | Parameter | % BDL | P value | Slope | Baseline | % Change | Direction | Homogeneity test |
|---------|---------|-------|-----------|-------|---------|-------|----------|-------------|------------|------------------|
| | | | | | | | | | | P value |
| MPNTF | Summer1 | S | SCHLA | 36.89 | 0.1095 | -0.02 | 7.25 | No Estimate | High BDLs | 0.3945 |
| MPNTF | Summer1 | S | STSS | 43.69 | 0.1622 | 0.00 | 6.00 | No Estimate | High BDLs | 0.0586 |
| MPNTF | Summer1 | B | BTSS | 30.00 | 0.1070 | -0.05 | 8.75 | No Estimate | NO TREND | 0.0705 |
| MPNTF | Summer1 | S | SECCHI | 0.00 | 0.4090 | 0.00 | 1.00 | 0.00 | NO TREND | 0.0028 |
| MPNTF | Summer1 | S | SDO | 0.00 | 0.0821 | 0.02 | 6.15 | 6.63 | NO TREND | 0.9468 |
| MPNTF | Summer1 | B | BDO | 0.00 | 0.0950 | 0.01 | 5.85 | 5.35 | NO TREND | 0.6826 |
| MPNTF | Summer1 | S | SSALINITY | 0.00 | 0.5794 | 0.00 | 0.01 | 0.00 | NO TREND | 0.9937 |
| MPNTF | Summer1 | B | BSALINITY | 0.00 | 0.5425 | 0.00 | 0.01 | 0.00 | NO TREND | 0.9745 |
| MPNTF | Summer1 | S | SWTEMP | 0.00 | 0.0009 | 0.11 | 25.63 | 10.44 | INCREASING | 0.3565 |
| MPNTF | Summer1 | B | BWTEMP | 0.00 | 0.0116 | 0.09 | 26.50 | 8.33 | NO TREND | 0.5445 |
| MPNOH | Summer1 | S | SCHLA | 10.00 | 0.8704 | -0.01 | 9.65 | -1.33 | NO TREND | 0.4365 |
| MPNOH | Summer1 | S | STSS | 0.92 | 0.4739 | 0.13 | 17.50 | 18.49 | NO TREND | 0.4891 |
| MPNOH | Summer1 | B | BTSS | 1.02 | 0.3132 | 0.71 | 40.00 | 37.50 | NO TREND | 0.0386 |
| MPNOH | Summer1 | S | SECCHI | 0.00 | 0.0678 | 0.00 | 0.58 | 0.00 | NO TREND | 0.8085 |
| MPNOH | Summer1 | S | SDO | 0.00 | 0.2399 | 0.02 | 5.20 | 6.92 | NO TREND | 0.5316 |
| MPNOH | Summer1 | B | BDO | 0.00 | 0.6918 | 0.00 | 4.98 | 1.51 | NO TREND | 0.8788 |
| MPNOH | Summer1 | S | SSALINITY | 0.00 | 0.0176 | 0.13 | 7.29 | 41.76 | NO TREND | 0.7124 |
| MPNOH | Summer1 | B | BSALINITY | 0.00 | 0.0190 | 0.14 | 7.80 | 43.48 | NO TREND | 0.8179 |
| MPNOH | Summer1 | S | SWTEMP | 0.00 | 0.1827 | 0.03 | 26.25 | 3.14 | NO TREND | 0.4992 |
| MPNOH | Summer1 | B | BWTEMP | 0.00 | 0.3225 | 0.03 | 25.95 | 2.51 | NO TREND | 0.4888 |
| YRKMH | Summer1 | S | SCHLA | 3.21 | 0.8180 | -0.01 | 9.81 | -3.00 | NO TREND | 0.4615 |
| YRKMH | Summer1 | S | STSS | 0.00 | 0.0579 | -0.28 | 23.75 | -24.34 | NO TREND | 0.7756 |
| YRKMH | Summer1 | B | BTSS | 0.50 | 0.8332 | 0.10 | 42.25 | 4.97 | NO TREND | 0.4089 |
| YRKMH | Summer1 | S | SECCHI | 0.00 | 0.3044 | 0.00 | 0.58 | 0.00 | NO TREND | 0.3721 |
| YRKMH | Summer1 | S | SDO | 0.00 | 0.1906 | 0.01 | 5.50 | 4.03 | NO TREND | 0.4551 |
| YRKMH | Summer1 | B | BDO | 0.00 | 0.7310 | 0.00 | 5.18 | -1.66 | NO TREND | 0.3063 |
| YRKMH | Summer1 | S | SSALINITY | 0.00 | 0.4506 | -0.04 | 15.34 | -6.04 | NO TREND | 0.8596 |
| YRKMH | Summer1 | B | BSALINITY | 0.00 | 0.2551 | -0.04 | 16.80 | -5.85 | NO TREND | 0.8182 |
| YRKMH | Summer1 | S | SWTEMP | 0.00 | 0.1449 | 0.03 | 25.85 | 2.60 | NO TREND | 0.1686 |
| YRKMH | Summer1 | B | BWTEMP | 0.00 | 0.1042 | 0.03 | 25.53 | 2.79 | NO TREND | 0.0408 |
| YRKPH | Summer1 | S | SCHLA | 4.05 | 0.0055 | 0.11 | 7.88 | 33.25 | DEGRADING | 0.6737 |
| YRKPH | Summer1 | S | STSS | 15.17 | 0.8026 | 0.00 | 6.00 | No Estimate | NO TREND | 0.5509 |
| YRKPH | Summer1 | B | BTSS | 2.99 | 0.4760 | 0.17 | 21.50 | 16.28 | NO TREND | 0.5242 |
| YRKPH | Summer1 | S | SECCHI | 0.00 | 0.0317 | -0.01 | 1.18 | -13.47 | NO TREND | 0.2792 |
| YRKPH | Summer1 | S | SDO | 0.00 | 0.0002 | 0.04 | 5.83 | 15.98 | IMPROVING | 0.4064 |
| YRKPH | Summer1 | B | BDO | 0.00 | 0.7511 | 0.01 | 4.75 | 3.69 | NO TREND | 0.4050 |
| YRKPH | Summer1 | S | SSALINITY | 0.00 | 0.0067 | -0.11 | 22.73 | -11.17 | DECREASING | 0.8201 |
| YRKPH | Summer1 | B | BSALINITY | 0.00 | 0.0253 | -0.08 | 23.87 | -7.95 | NO TREND | 0.8259 |
| YRKPH | Summer1 | S | SWTEMP | 0.00 | 0.6779 | 0.01 | 24.98 | 0.70 | NO TREND | 0.6160 |
| YRKPH | Summer1 | B | BWTEMP | 0.00 | 0.9287 | 0.00 | 24.48 | -0.28 | NO TREND | 0.3587 |
| MOBPH | Summer1 | S | SCHLA | 0.45 | 0.0782 | 0.09 | 7.70 | 27.02 | NO TREND | 0.8343 |
| MOBPH | Summer1 | S | STSS | 1.04 | 0.0005 | -0.30 | 12.00 | -59.45 | IMPROVING | 0.6260 |
| MOBPH | Summer1 | B | BTSS | 0.15 | 0.0000 | -0.42 | 21.40 | -47.66 | IMPROVING | 0.5437 |
| MOBPH | Summer1 | S | SECCHI | 0.00 | 0.0000 | -0.02 | 1.18 | -34.04 | DEGRADING | 0.9457 |
| MOBPH | Summer1 | S | SDO | 0.00 | 0.0000 | 0.03 | 6.78 | 12.28 | IMPROVING | 0.7189 |
| MOBPH | Summer1 | B | BDO | 0.00 | 0.0002 | 0.04 | 5.95 | 15.13 | IMPROVING | 0.1684 |
| MOBPH | Summer1 | S | SSALINITY | 0.00 | 0.0110 | -0.08 | 23.01 | -8.60 | NO TREND | 0.9999 |
| MOBPH | Summer1 | B | BSALINITY | 0.00 | 0.0045 | -0.09 | 23.38 | -9.39 | DECREASING | 0.8426 |
| MOBPH | Summer1 | S | SWTEMP | 0.00 | 0.1764 | 0.03 | 25.65 | 2.79 | NO TREND | 0.7921 |
| MOBPH | Summer1 | B | BWTEMP | 0.00 | 0.0328 | 0.04 | 25.05 | 3.83 | NO TREND | 0.8061 |

Appendix A - Section IIC. York River (1985-2008) - Continued.

| Segment | Season | Layer | Parameter | % BDL | P value | Slope | Baseline | % Change | Direction | Homogeneity test |
|---------|---------|-------|-----------|-------|---------|-------|----------|-------------|------------|------------------|
| | | | | | | | | | | P value |
| PMKTF | Summer2 | S | SCHLA | 24.72 | 0.0173 | -0.09 | 6.12 | No Estimate | NO TREND | 0.0743 |
| PMKTF | Summer2 | S | STSS | 4.00 | 0.3456 | 0.15 | 12.25 | 25.21 | NO TREND | 0.5433 |
| PMKTF | Summer2 | B | BTSS | 5.41 | 0.0622 | -0.50 | 18.00 | -58.33 | NO TREND | 0.4839 |
| PMKTF | Summer2 | S | SECCHI | 0.00 | 0.4949 | 0.00 | 0.60 | 0.00 | NO TREND | 0.4676 |
| PMKTF | Summer2 | S | SDO | 0.00 | 0.0008 | 0.04 | 4.70 | 18.13 | IMPROVING | 0.4806 |
| PMKTF | Summer2 | B | BDO | 0.00 | 0.0038 | 0.04 | 5.08 | 17.04 | IMPROVING | 0.9578 |
| PMKTF | Summer2 | S | SSALINITY | 0.00 | 0.1063 | 0.00 | 0.01 | 0.00 | NO TREND | 0.3758 |
| PMKTF | Summer2 | B | BSALINITY | 0.00 | 0.1309 | 0.00 | 0.01 | 0.00 | NO TREND | 0.4720 |
| PMKTF | Summer2 | S | SWTEMP | 0.00 | 0.0023 | 0.09 | 25.50 | 8.08 | INCREASING | 0.7450 |
| PMKTF | Summer2 | B | BWTEMP | 0.00 | 0.0056 | 0.09 | 26.00 | 8.58 | INCREASING | 0.7049 |
| PMKOH | Summer2 | S | SCHLA | 3.23 | 0.9762 | 0.00 | 10.48 | -0.46 | NO TREND | 0.2412 |
| PMKOH | Summer2 | S | STSS | 1.25 | 0.0238 | -0.82 | 19.00 | -104.16 | NO TREND | 0.4366 |
| PMKOH | Summer2 | B | BTSS | 0.00 | 0.0305 | -3.70 | 182.75 | -42.52 | NO TREND | 0.9141 |
| PMKOH | Summer2 | S | SECCHI | 0.00 | 0.0241 | 0.00 | 0.45 | 20.51 | NO TREND | 0.9735 |
| PMKOH | Summer2 | S | SDO | 0.00 | 0.4447 | -0.01 | 4.90 | -5.55 | NO TREND | 0.3961 |
| PMKOH | Summer2 | B | BDO | 0.00 | 0.3339 | -0.01 | 4.73 | -5.08 | NO TREND | 0.5259 |
| PMKOH | Summer2 | S | SSALINITY | 0.00 | 0.3190 | 0.07 | 6.68 | 24.70 | NO TREND | 0.5281 |
| PMKOH | Summer2 | B | BSALINITY | 0.00 | 0.2591 | 0.09 | 7.17 | 29.30 | NO TREND | 0.5635 |
| PMKOH | Summer2 | S | SWTEMP | 0.00 | 0.0611 | 0.04 | 26.48 | 3.72 | NO TREND | 0.5353 |
| PMKOH | Summer2 | B | BWTEMP | 0.00 | 0.0293 | 0.04 | 26.38 | 3.41 | NO TREND | 0.4639 |
| MPNTF | Summer2 | S | SCHLA | 34.44 | 0.0243 | -0.05 | 8.59 | No Estimate | NO TREND | 0.8410 |
| MPNTF | Summer2 | S | STSS | 46.05 | 0.0195 | -0.04 | 5.50 | No Estimate | High BDLs | 0.2084 |
| MPNTF | Summer2 | B | BTSS | 30.14 | 0.0406 | -0.09 | 8.00 | No Estimate | NO TREND | 0.0639 |
| MPNTF | Summer2 | S | SECCHI | 0.00 | 0.6083 | 0.00 | 0.88 | 0.00 | NO TREND | 0.0263 |
| MPNTF | Summer2 | S | SDO | 0.00 | 0.0703 | 0.02 | 5.73 | 9.17 | NO TREND | 0.9800 |
| MPNTF | Summer2 | B | BDO | 0.00 | 0.1493 | 0.01 | 5.45 | 6.61 | NO TREND | 0.4733 |
| MPNTF | Summer2 | S | SSALINITY | 0.00 | 0.6898 | 0.00 | 0.01 | 0.00 | NO TREND | 0.9471 |
| MPNTF | Summer2 | B | BSALINITY | 0.00 | 0.6755 | 0.00 | 0.01 | 0.00 | NO TREND | 0.8495 |
| MPNTF | Summer2 | S | SWTEMP | 0.00 | 0.0003 | 0.14 | 25.63 | 12.90 | INCREASING | 0.6971 |
| MPNTF | Summer2 | B | BWTEMP | 0.00 | 0.0032 | 0.11 | 26.50 | 9.81 | INCREASING | 0.9349 |
| MPNOH | Summer2 | S | SCHLA | 6.82 | 0.3213 | -0.08 | 9.77 | -19.83 | NO TREND | 0.8524 |
| MPNOH | Summer2 | S | STSS | 1.27 | 0.7465 | 0.08 | 14.50 | 12.81 | NO TREND | 0.3506 |
| MPNOH | Summer2 | B | BTSS | 1.39 | 0.8443 | -0.11 | 36.00 | -6.48 | NO TREND | 0.1314 |
| MPNOH | Summer2 | S | SECCHI | 0.00 | 0.0888 | 0.00 | 0.60 | 0.00 | NO TREND | 0.6410 |
| MPNOH | Summer2 | S | SDO | 0.00 | 0.5535 | 0.01 | 5.20 | 3.55 | NO TREND | 0.4629 |
| MPNOH | Summer2 | B | BDO | 0.00 | 0.9502 | 0.00 | 4.95 | 0.00 | NO TREND | 0.8176 |
| MPNOH | Summer2 | S | SSALINITY | 0.00 | 0.0479 | 0.13 | 7.84 | 40.79 | NO TREND | 0.5084 |
| MPNOH | Summer2 | B | BSALINITY | 0.00 | 0.0484 | 0.14 | 8.23 | 41.19 | NO TREND | 0.6315 |
| MPNOH | Summer2 | S | SWTEMP | 0.00 | 0.0497 | 0.05 | 26.58 | 4.86 | NO TREND | 0.9729 |
| MPNOH | Summer2 | B | BWTEMP | 0.00 | 0.1019 | 0.04 | 26.35 | 4.05 | NO TREND | 0.8727 |
| YRKMH | Summer2 | S | SCHLA | 1.61 | 0.6545 | -0.02 | 10.17 | -5.79 | NO TREND | 0.3096 |
| YRKMH | Summer2 | S | STSS | 0.00 | 0.2345 | -0.21 | 22.50 | -19.72 | NO TREND | 0.8834 |
| YRKMH | Summer2 | B | BTSS | 0.67 | 0.8664 | 0.06 | 38.25 | 3.43 | NO TREND | 0.2358 |
| YRKMH | Summer2 | S | SECCHI | 0.00 | 0.8034 | 0.00 | 0.58 | 0.00 | NO TREND | 0.4795 |
| YRKMH | Summer2 | S | SDO | 0.00 | 0.5313 | 0.01 | 5.65 | 2.83 | NO TREND | 0.4531 |
| YRKMH | Summer2 | B | BDO | 0.00 | 0.4096 | -0.01 | 5.25 | -4.81 | NO TREND | 0.2860 |
| YRKMH | Summer2 | S | SSALINITY | 0.00 | 0.3321 | -0.06 | 16.05 | -9.55 | NO TREND | 0.8223 |
| YRKMH | Summer2 | B | BSALINITY | 0.00 | 0.2505 | -0.05 | 17.12 | -7.11 | NO TREND | 0.6588 |
| YRKMH | Summer2 | S | SWTEMP | 0.00 | 0.0224 | 0.05 | 26.15 | 4.13 | NO TREND | 0.5879 |
| YRKMH | Summer2 | B | BWTEMP | 0.00 | 0.0183 | 0.04 | 25.98 | 3.75 | NO TREND | 0.0935 |

Appendix A - Section IIC. York River (1985-2008) - Continued.

| Segment | Season | Layer | Parameter | % BDL | P value | Slope | Baseline | % Change | Direction | Homogeneity test | |
|---------|---------|-------|-----------|-------|---------|-------|----------|-------------|------------|------------------|--|
| | | | | | | | | | | P value | |
| YRKPH | Summer2 | S | SCHLA | 4.86 | 0.0524 | 0.08 | 7.88 | 24.98 | NO TREND | 0.6875 | |
| YRKPH | Summer2 | S | STSS | 11.46 | 0.5794 | -0.05 | 6.50 | -18.02 | NO TREND | 0.4218 | |
| YRKPH | Summer2 | B | BTSS | 3.33 | 0.5250 | 0.14 | 19.25 | 15.58 | NO TREND | 0.3265 | |
| YRKPH | Summer2 | S | SECCHI | 0.00 | 0.0063 | -0.01 | 1.18 | -17.76 | DEGRADING | 0.6420 | |
| YRKPH | Summer2 | S | SDO | 0.00 | 0.0084 | 0.03 | 5.58 | 15.07 | IMPROVING | 0.4476 | |
| YRKPH | Summer2 | B | BDO | 0.00 | 0.6916 | 0.01 | 4.90 | 4.59 | NO TREND | 0.2399 | |
| YRKPH | Summer2 | S | SSALINITY | 0.00 | 0.0044 | -0.12 | 23.06 | -12.36 | DECREASING | 0.9925 | |
| YRKPH | Summer2 | B | BSALINITY | 0.00 | 0.0224 | -0.09 | 23.89 | -8.81 | NO TREND | 0.7963 | |
| YRKPH | Summer2 | S | SWTEMP | 0.00 | 0.3297 | 0.02 | 25.88 | 2.27 | NO TREND | 0.8288 | |
| YRKPH | Summer2 | B | BWTEMP | 0.00 | 0.4645 | 0.02 | 24.93 | 2.15 | NO TREND | 0.6857 | |
| MOBPH | Summer2 | S | SCHLA | 0.59 | 0.1087 | 0.09 | 8.02 | 26.96 | NO TREND | 0.6576 | |
| MOBPH | Summer2 | S | STSS | 1.35 | 0.0004 | -0.36 | 15.50 | -55.92 | IMPROVING | 0.6943 | |
| MOBPH | Summer2 | B | BTSS | 0.19 | 0.0001 | -0.48 | 23.90 | -48.51 | IMPROVING | 0.4041 | |
| MOBPH | Summer2 | S | SECCHI | 0.00 | 0.0000 | -0.01 | 1.18 | -29.61 | DEGRADING | 0.8724 | |
| MOBPH | Summer2 | S | SDO | 0.00 | 0.0001 | 0.04 | 6.60 | 14.50 | IMPROVING | 0.5675 | |
| MOBPH | Summer2 | B | BDO | 0.00 | 0.0011 | 0.04 | 5.48 | 19.51 | IMPROVING | 0.0809 | |
| MOBPH | Summer2 | S | SSALINITY | 0.00 | 0.0284 | -0.08 | 23.01 | -8.69 | NO TREND | 0.9982 | |
| MOBPH | Summer2 | B | BSALINITY | 0.00 | 0.0434 | -0.08 | 23.38 | -8.59 | NO TREND | 0.9738 | |
| MOBPH | Summer2 | S | SWTEMP | 0.00 | 0.2827 | 0.02 | 26.43 | 2.17 | NO TREND | 0.6064 | |
| MOBPH | Summer2 | B | BWTEMP | 0.00 | 0.1561 | 0.03 | 25.43 | 2.82 | NO TREND | 0.8863 | |
| PMKTF | Winter | S | SCHLA | 83.33 | 0.1472 | 0.00 | 3.10 | No Estimate | High BDLs | 0.7079 | |
| PMKTF | Winter | S | STSS | 0.00 | 0.1301 | 0.38 | 19.50 | 38.95 | NO TREND | 0.7092 | |
| PMKTF | Winter | B | BTSS | 0.00 | 0.6063 | 0.18 | 25.00 | 14.77 | NO TREND | 0.6568 | |
| PMKTF | Winter | S | SECCHI | 0.00 | 0.3373 | 0.00 | 0.55 | 0.00 | NO TREND | 0.4547 | |
| PMKTF | Winter | S | SDO | 0.00 | 0.4170 | -0.02 | 12.10 | -2.98 | NO TREND | 0.5964 | |
| PMKTF | Winter | B | BDO | 0.00 | 0.8418 | 0.01 | 12.05 | 1.90 | NO TREND | 0.9680 | |
| PMKTF | Winter | S | SSALINITY | 0.00 | 0.3245 | 0.00 | 0.01 | 0.00 | NO TREND | 0.9546 | |
| PMKTF | Winter | B | BSALINITY | 0.00 | 0.3325 | 0.00 | 0.01 | 0.00 | NO TREND | 0.9725 | |
| PMKTF | Winter | S | SWTEMP | 0.00 | 0.4755 | 0.05 | 3.00 | 40.71 | NO TREND | 0.6682 | |
| PMKTF | Winter | B | BWTEMP | 0.00 | 0.4485 | 0.05 | 3.00 | 42.23 | NO TREND | 0.6902 | |
| PMKOH | Winter | S | SCHLA | 56.41 | 0.0391 | 0.00 | 3.10 | No Estimate | High BDLs | 0.8997 | |
| PMKOH | Winter | S | STSS | 0.00 | 0.8248 | -0.15 | 86.00 | -4.32 | NO TREND | 0.8184 | |
| PMKOH | Winter | B | BTSS | 2.94 | 0.8392 | 0.38 | 72.00 | 10.42 | NO TREND | 0.7606 | |
| PMKOH | Winter | S | SECCHI | 0.00 | 0.1400 | 0.00 | 0.30 | 0.00 | NO TREND | 0.8011 | |
| PMKOH | Winter | S | SDO | 0.00 | 0.5353 | -0.01 | 12.10 | -1.76 | NO TREND | 0.8812 | |
| PMKOH | Winter | B | BDO | 0.00 | 0.7003 | 0.00 | 12.05 | -0.90 | NO TREND | 0.7001 | |
| PMKOH | Winter | S | SSALINITY | 0.00 | 0.0441 | 0.16 | 0.70 | 555.32 | NO TREND | 0.4544 | |
| PMKOH | Winter | B | BSALINITY | 0.00 | 0.0269 | 0.19 | 0.98 | 468.29 | NO TREND | 0.5576 | |
| PMKOH | Winter | S | SWTEMP | 0.00 | 0.8980 | 0.01 | 2.30 | 9.46 | NO TREND | 0.9319 | |
| PMKOH | Winter | B | BWTEMP | 0.00 | 0.7812 | 0.01 | 2.35 | 14.10 | NO TREND | 0.8476 | |
| MPNTF | Winter | S | SCHLA | 93.02 | 0.5275 | 0.00 | 3.10 | No Estimate | High BDLs | | |
| MPNTF | Winter | S | STSS | 10.53 | 0.6018 | 0.07 | 11.00 | 13.49 | NO TREND | 0.9796 | |
| MPNTF | Winter | B | BTSS | 10.53 | 0.0336 | 0.57 | 8.00 | 142.86 | NO TREND | 0.9732 | |
| MPNTF | Winter | S | SECCHI | 0.00 | 0.0211 | -0.02 | 0.75 | -53.33 | NO TREND | 0.4880 | |
| MPNTF | Winter | S | SDO | 0.00 | 0.9692 | 0.00 | 12.40 | 0.00 | NO TREND | 0.2961 | |
| MPNTF | Winter | B | BDO | 0.00 | 0.7742 | 0.02 | 12.60 | 2.86 | NO TREND | 0.3235 | |
| MPNTF | Winter | S | SSALINITY | 0.00 | 0.6511 | 0.00 | 0.01 | 0.00 | NO TREND | | |
| MPNTF | Winter | B | BSALINITY | 0.00 | 0.6511 | 0.00 | 0.01 | 0.00 | NO TREND | | |
| MPNTF | Winter | S | SWTEMP | 0.00 | 0.6027 | 0.03 | 2.50 | 31.22 | NO TREND | 0.9403 | |
| MPNTF | Winter | B | BWTEMP | 0.00 | 0.7743 | 0.03 | 2.50 | 26.67 | NO TREND | 0.9430 | |

Appendix A - Section IIC. York River (1985-2008) - Continued.

| Segment | Season | Layer | Parameter | % BDL | P value | Slope | Baseline | % Change | Homogeneity test | |
|---------|--------|-------|-----------|-------|---------|-------|----------|-------------|------------------|---------|
| | | | | | | | | | Direction | P value |
| MPNOH | Winter | S | SCHLA | 67.44 | 0.1446 | 0.00 | 3.10 | No Estimate | High BDLs | 0.3637 |
| MPNOH | Winter | S | STSS | 0.00 | 0.0045 | -1.00 | 60.00 | -40.00 | IMPROVING | 0.9375 |
| MPNOH | Winter | B | BTSS | 0.00 | 0.4255 | 0.74 | 30.50 | 48.27 | NO TREND | 0.6843 |
| MPNOH | Winter | S | SECCHI | 0.00 | 0.0697 | 0.00 | 0.30 | 0.00 | NO TREND | 0.2773 |
| MPNOH | Winter | S | SDO | 0.00 | 0.9078 | 0.00 | 12.40 | -0.48 | NO TREND | 0.6963 |
| MPNOH | Winter | B | BDO | 0.00 | 0.6296 | 0.01 | 12.35 | 1.85 | NO TREND | 0.5597 |
| MPNOH | Winter | S | SSALINITY | 0.00 | 0.3546 | 0.03 | 0.32 | 250.00 | NO TREND | 0.5289 |
| MPNOH | Winter | B | BSALINITY | 0.00 | 0.3159 | 0.07 | 0.31 | 574.19 | NO TREND | 0.6465 |
| MPNOH | Winter | S | SWTEMP | 0.00 | 0.3255 | 0.05 | 2.10 | 58.02 | NO TREND | 0.7768 |
| MPNOH | Winter | B | BWTEMP | 0.00 | 0.2173 | 0.05 | 2.00 | 65.77 | NO TREND | 0.8154 |
| YRKMH | Winter | S | SCHLA | 22.35 | 0.5339 | 0.08 | 10.29 | No Estimate | NO TREND | 0.0532 |
| YRKMH | Winter | S | STSS | 0.00 | 0.6031 | -0.18 | 18.25 | -19.41 | NO TREND | 0.3862 |
| YRKMH | Winter | B | BTSS | 2.67 | 0.0276 | 2.15 | 29.38 | 146.35 | NO TREND | 0.5036 |
| YRKMH | Winter | S | SECCHI | 0.00 | 0.5590 | 0.00 | 0.68 | 0.00 | NO TREND | 0.2681 |
| YRKMH | Winter | S | SDO | 0.00 | 0.4850 | -0.01 | 12.13 | -2.71 | NO TREND | 0.6462 |
| YRKMH | Winter | B | BDO | 0.00 | 0.7646 | -0.01 | 12.03 | -1.09 | NO TREND | 0.5627 |
| YRKMH | Winter | S | SSALINITY | 0.00 | 0.2747 | 0.11 | 8.71 | 31.02 | NO TREND | 0.7539 |
| YRKMH | Winter | B | BSALINITY | 0.00 | 0.3224 | 0.09 | 11.18 | 19.68 | NO TREND | 0.5861 |
| YRKMH | Winter | S | SWTEMP | 0.00 | 0.8732 | 0.01 | 2.18 | 11.28 | NO TREND | 0.9682 |
| YRKMH | Winter | B | BWTEMP | 0.00 | 0.6901 | 0.03 | 2.40 | 26.98 | NO TREND | 0.8420 |
| YRKPH | Winter | S | SCHLA | 11.90 | 0.0697 | -0.25 | 17.70 | -32.81 | NO TREND | 0.3746 |
| YRKPH | Winter | S | STSS | 23.46 | 0.3364 | 0.10 | 8.50 | No Estimate | NO TREND | 0.7496 |
| YRKPH | Winter | B | BTSS | 8.00 | 0.1129 | 0.74 | 11.75 | 126.02 | NO TREND | 0.8044 |
| YRKPH | Winter | S | SECCHI | 0.00 | 0.9681 | 0.00 | 1.13 | 0.00 | NO TREND | 0.8414 |
| YRKPH | Winter | S | SDO | 0.00 | 0.2642 | -0.03 | 12.58 | -6.47 | NO TREND | 0.3590 |
| YRKPH | Winter | B | BDO | 0.00 | 0.0863 | -0.04 | 12.15 | -8.35 | NO TREND | 0.9682 |
| YRKPH | Winter | S | SSALINITY | 0.00 | 0.8528 | 0.01 | 18.18 | 1.89 | NO TREND | 0.8801 |
| YRKPH | Winter | B | BSALINITY | 0.00 | 0.6650 | 0.03 | 20.99 | 2.86 | NO TREND | 0.2286 |
| YRKPH | Winter | S | SWTEMP | 0.00 | 0.9682 | 0.01 | 2.48 | 11.39 | NO TREND | 0.9364 |
| YRKPH | Winter | B | BWTEMP | 0.00 | 0.5231 | 0.04 | 3.33 | 25.67 | NO TREND | 0.7795 |
| MOBPH | Winter | S | SCHLA | 0.00 | 0.2475 | -0.11 | 7.66 | -35.53 | NO TREND | 0.6436 |
| MOBPH | Winter | S | STSS | 4.42 | 0.0087 | -0.28 | 13.30 | -50.73 | IMPROVING | 0.6367 |
| MOBPH | Winter | B | BTSS | 1.66 | 0.0017 | -0.54 | 22.53 | -57.35 | IMPROVING | 0.4133 |
| MOBPH | Winter | S | SECCHI | 0.00 | 0.2547 | -0.01 | 1.48 | -22.19 | NO TREND | 0.9855 |
| MOBPH | Winter | S | SDO | 0.00 | 0.3962 | 0.02 | 12.10 | 4.57 | NO TREND | 0.5814 |
| MOBPH | Winter | B | BDO | 0.00 | 0.4639 | 0.03 | 11.95 | 5.46 | NO TREND | 0.4543 |
| MOBPH | Winter | S | SSALINITY | 0.00 | 0.5914 | -0.04 | 20.40 | -5.10 | NO TREND | 0.5065 |
| MOBPH | Winter | B | BSALINITY | 0.00 | 0.3300 | -0.05 | 20.82 | -5.70 | NO TREND | 0.2823 |
| MOBPH | Winter | S | SWTEMP | 0.00 | 0.1327 | 0.07 | 3.30 | 53.42 | NO TREND | 0.7362 |
| MOBPH | Winter | B | BWTEMP | 0.00 | 0.1184 | 0.08 | 3.05 | 61.37 | NO TREND | 0.9329 |

Appendix A - Section IID. Seasonal Kendall Long-term trends in water quality for the Rappahannock River (1985-2007). Parameters are as follows: STN=Surface total nitrogen, BTN=Bottom total nitrogen, SDIN=Surface dissolved inorganic nitrogen, BDIN=Bottom dissolved inorganic nitrogen, STP=Surface total phosphorus, BTP=Bottom total phosphorus, SPO4F=Surface dissolved inorganic phosphorus, BPO4F=Bottom dissolved inorganic phosphorus, SCHLA=Surface chlorophyll *a*, STSS=Surface total suspended solids, BTSS=Bottom total suspended solids, SEECHI=Secchi depth, BDO=Bottom dissolved oxygen, SSALIN=Surface salinity, BSALIN=Bottom salinity, SWTEMP=Surface water temperature, BWTEMP=Bottom water temperature.

| Segment | Season | Layer | Parameter | % BDL | P value | Slope | Baseline | % Change | Direction | Homogeneity test | |
|---------|--------|-------|-----------|-------|---------|-------|----------|-------------|------------|------------------|--|
| | | | | | | | | | | P value | |
| RPPTF | Annual | S | SCHLA | 30.03 | 0.4075 | 0.00 | 12.39 | No Estimate | NO TREND | 0.7764 | |
| RPPTF | Annual | S | STSS | 2.35 | 0.4347 | -0.06 | 24.75 | -5.30 | NO TREND | 0.4885 | |
| RPPTF | Annual | B | BTSS | 2.47 | 0.1963 | -0.25 | 36.75 | -14.29 | NO TREND | 0.8704 | |
| RPPTF | Annual | S | SECCHI | 0.00 | 0.0693 | 0.00 | 0.50 | 0.00 | NO TREND | 0.4499 | |
| RPPTF | Annual | S | SDO | 0.00 | 0.0994 | -0.01 | 8.88 | -3.38 | NO TREND | 0.0914 | |
| RPPTF | Annual | B | BDO | 0.00 | 0.0574 | -0.02 | 8.60 | -5.02 | NO TREND | 0.0676 | |
| RPPTF | Annual | S | SSALINITY | 0.00 | 0.0000 | 0.00 | 0.01 | 0.00 | UNCHANGED | 0.9936 | |
| RPPTF | Annual | B | BSALINITY | 0.00 | 0.0000 | 0.00 | 0.01 | 0.00 | UNCHANGED | 0.9257 | |
| RPPTF | Annual | S | SWTEMP | 0.00 | 0.1741 | 0.03 | 16.33 | 4.08 | NO TREND | 0.3761 | |
| RPPTF | Annual | B | BWTEMP | 0.00 | 0.1178 | 0.03 | 17.75 | 3.95 | NO TREND | 0.5612 | |
| RPPOH | Annual | S | SCHLA | 20.62 | 0.0000 | 0.18 | 5.04 | No Estimate | DEGRADING | 0.5839 | |
| RPPOH | Annual | S | STSS | 0.73 | 0.2555 | -0.14 | 31.00 | -9.68 | NO TREND | 0.6493 | |
| RPPOH | Annual | B | BTSS | 0.37 | 0.0364 | 0.50 | 39.00 | 26.92 | NO TREND | 0.3129 | |
| RPPOH | Annual | S | SECCHI | 0.00 | 0.0217 | 0.00 | 0.40 | 0.00 | NO TREND | 0.2327 | |
| RPPOH | Annual | S | SDO | 0.00 | 0.0003 | 0.03 | 8.63 | 8.35 | IMPROVING | 0.0015 | |
| RPPOH | Annual | B | BDO | 0.00 | 0.3974 | 0.01 | 8.65 | 2.13 | NO TREND | 0.1218 | |
| RPPOH | Annual | S | SSALINITY | 0.00 | 0.0783 | 0.00 | 2.17 | 0.00 | NO TREND | 0.9863 | |
| RPPOH | Annual | B | BSALINITY | 0.00 | 0.2115 | 0.00 | 2.59 | 0.00 | NO TREND | 0.9570 | |
| RPPOH | Annual | S | SWTEMP | 0.00 | 0.1087 | 0.03 | 16.00 | 4.56 | NO TREND | 0.0904 | |
| RPPOH | Annual | B | BWTEMP | 0.00 | 0.2609 | 0.02 | 16.40 | 2.93 | NO TREND | 0.1519 | |
| RPPMH | Annual | S | SCHLA | 9.81 | 0.0008 | 0.08 | 8.33 | 23.16 | DEGRADING | 0.1833 | |
| RPPMH | Annual | S | STSS | 23.28 | 0.0967 | -0.04 | 7.00 | No Estimate | NO TREND | 0.2272 | |
| RPPMH | Annual | B | BTSS | 8.69 | 0.2790 | 0.07 | 10.75 | 15.95 | NO TREND | 0.0837 | |
| RPPMH | Annual | S | SECCHI | 0.00 | 0.0027 | -0.01 | 1.28 | -15.69 | DEGRADING | 0.1868 | |
| RPPMH | Annual | S | SDO | 0.00 | 0.0020 | 0.02 | 8.20 | 6.26 | IMPROVING | 0.2746 | |
| RPPMH | Annual | B | BDO | 0.00 | 0.7525 | 0.00 | 7.03 | -0.60 | NO TREND | 0.3509 | |
| RPPMH | Annual | S | SSALINITY | 0.00 | 0.0000 | -0.12 | 15.30 | -18.62 | DECREASING | 1.0000 | |
| RPPMH | Annual | B | BSALINITY | 0.00 | 0.0002 | -0.09 | 17.02 | -12.90 | DECREASING | 0.9984 | |
| RPPMH | Annual | S | SWTEMP | 0.00 | 0.3592 | 0.01 | 17.90 | 1.42 | NO TREND | 0.1207 | |
| RPPMH | Annual | B | BWTEMP | 0.00 | 0.7799 | 0.00 | 16.23 | 0.38 | NO TREND | 0.1142 | |
| CRRMH | Annual | S | SCHLA | 15.45 | 0.0441 | 0.04 | 7.33 | No Estimate | NO TREND | 0.4250 | |
| CRRMH | Annual | S | STSS | 58.06 | 0.0067 | 0.00 | 5.00 | No Estimate | High BDLs | 0.0187 | |
| CRRMH | Annual | B | BTSS | 37.04 | 0.0274 | 0.00 | 13.50 | No Estimate | High BDLs | 0.2651 | |
| CRRMH | Annual | S | SECCHI | 0.00 | 0.0000 | -0.02 | 1.95 | -19.23 | DEGRADING | 0.0983 | |
| CRRMH | Annual | S | SDO | 0.00 | 0.4566 | 0.01 | 8.53 | 1.88 | NO TREND | 0.8988 | |
| CRRMH | Annual | B | BDO | 0.00 | 0.1510 | -0.02 | 7.33 | -5.84 | NO TREND | 0.7556 | |
| CRRMH | Annual | S | SSALINITY | 0.00 | 0.0000 | -0.12 | 16.51 | -16.82 | DECREASING | 0.9984 | |
| CRRMH | Annual | B | BSALINITY | 0.00 | 0.0001 | -0.09 | 16.84 | -13.23 | DECREASING | 0.9918 | |
| CRRMH | Annual | S | SWTEMP | 0.00 | 0.2486 | 0.02 | 18.50 | 2.21 | NO TREND | 0.3791 | |
| CRRMH | Annual | B | BWTEMP | 0.00 | 0.9940 | 0.00 | 17.83 | 0.00 | NO TREND | 0.0209 | |

Appendix A - Section IID. Rappahannock River (1985-2008) - Continued.

| Segment | Season | Layer | Parameter | % BDL | P value | Slope | Baseline | % Change | Homogeneity test | |
|---------|--------|-------|-----------|-------|---------|-------|----------|-------------|------------------|---------|
| | | | | | | | | | Direction | P value |
| RPPTF | Fall | S | SCHLA | 39.25 | 0.1968 | 0.00 | 11.38 | No Estimate | High BDLs | 0.2925 |
| RPPTF | Fall | S | STSS | 4.37 | 0.9572 | 0.00 | 27.00 | 0.00 | NO TREND | 0.9100 |
| RPPTF | Fall | B | BTSS | 2.44 | 0.5554 | -0.18 | 43.75 | -8.80 | NO TREND | 0.7362 |
| RPPTF | Fall | S | SECCHI | 0.00 | 0.0736 | -0.01 | 0.50 | -27.50 | NO TREND | 0.7900 |
| RPPTF | Fall | S | SDO | 0.00 | 0.0215 | -0.05 | 10.65 | -10.27 | NO TREND | 0.1076 |
| RPPTF | Fall | B | BDO | 0.00 | 0.0408 | -0.04 | 10.55 | -8.25 | NO TREND | 0.1176 |
| RPPTF | Fall | S | SSALINITY | 0.00 | 0.0000 | 0.00 | 0.01 | 0.00 | UNCHANGED | 0.7505 |
| RPPTF | Fall | B | BSALINITY | 0.00 | 0.0000 | 0.00 | 0.01 | 0.00 | UNCHANGED | 0.7505 |
| RPPTF | Fall | S | SWTEMP | 0.00 | 0.5589 | 0.03 | 9.00 | 7.00 | NO TREND | 0.8493 |
| RPPTF | Fall | B | BWTEMP | 0.00 | 0.3805 | 0.03 | 9.00 | 8.00 | NO TREND | 0.8915 |
| RPPOH | Fall | S | SCHLA | 20.27 | 0.0391 | 0.10 | 5.27 | No Estimate | NO TREND | 0.8268 |
| RPPOH | Fall | S | STSS | 1.49 | 0.5554 | 0.15 | 19.00 | 16.40 | NO TREND | 0.8359 |
| RPPOH | Fall | B | BTSS | 0.00 | 0.0548 | 0.87 | 28.25 | 64.73 | NO TREND | 0.5149 |
| RPPOH | Fall | S | SECCHI | 0.00 | 0.2811 | 0.00 | 0.60 | 0.00 | NO TREND | 0.3995 |
| RPPOH | Fall | S | SDO | 0.00 | 1.0000 | 0.00 | 9.85 | 0.00 | NO TREND | 0.0060 |
| RPPOH | Fall | B | BDO | 0.00 | 0.5027 | -0.02 | 9.50 | -4.42 | NO TREND | 0.0530 |
| RPPOH | Fall | S | SSALINITY | 0.00 | 0.3592 | -0.01 | 4.57 | -7.69 | NO TREND | 0.4446 |
| RPPOH | Fall | B | BSALINITY | 0.00 | 0.4431 | -0.01 | 4.32 | -5.39 | NO TREND | 0.5206 |
| RPPOH | Fall | S | SWTEMP | 0.00 | 0.1477 | 0.09 | 11.35 | 18.65 | NO TREND | 0.2068 |
| RPPOH | Fall | B | BWTEMP | 0.00 | 0.1903 | 0.06 | 11.20 | 13.43 | NO TREND | 0.3545 |
| RPPMH | Fall | S | SCHLA | 11.31 | 0.0068 | 0.10 | 5.80 | 40.36 | DEGRADING | 0.6251 |
| RPPMH | Fall | S | STSS | 36.58 | 0.1323 | -0.04 | 6.00 | No Estimate | High BDLs | 0.8115 |
| RPPMH | Fall | B | BTSS | 11.11 | 0.9087 | 0.00 | 13.50 | 0.00 | NO TREND | 0.3635 |
| RPPMH | Fall | S | SECCHI | 0.00 | 0.4466 | -0.01 | 1.50 | -10.00 | NO TREND | 0.9460 |
| RPPMH | Fall | S | SDO | 0.00 | 0.2179 | 0.01 | 8.85 | 3.61 | NO TREND | 0.2677 |
| RPPMH | Fall | B | BDO | 0.00 | 0.9201 | 0.00 | 7.93 | 0.78 | NO TREND | 0.0220 |
| RPPMH | Fall | S | SSALINITY | 0.00 | 0.0666 | -0.09 | 18.08 | -12.21 | NO TREND | 0.9321 |
| RPPMH | Fall | B | BSALINITY | 0.00 | 0.0910 | -0.07 | 19.46 | -8.30 | NO TREND | 0.8530 |
| RPPMH | Fall | S | SWTEMP | 0.00 | 0.1562 | 0.05 | 12.98 | 9.25 | NO TREND | 0.2351 |
| RPPMH | Fall | B | BWTEMP | 0.00 | 0.1440 | 0.05 | 13.33 | 9.66 | NO TREND | 0.2641 |
| CRRMH | Fall | S | SCHLA | 27.03 | 0.0018 | 0.09 | 5.07 | No Estimate | DEGRADING | 0.8195 |
| CRRMH | Fall | S | STSS | 82.35 | 0.7238 | 0.00 | 5.00 | No Estimate | High BDLs | 0.1401 |
| CRRMH | Fall | B | BTSS | 56.67 | 0.1265 | 0.00 | 8.00 | No Estimate | High BDLs | 0.2372 |
| CRRMH | Fall | S | SECCHI | 0.00 | 0.0019 | -0.03 | 2.50 | -30.55 | DEGRADING | 0.3108 |
| CRRMH | Fall | S | SDO | 0.00 | 0.8341 | 0.00 | 9.20 | 0.00 | NO TREND | 0.2727 |
| CRRMH | Fall | B | BDO | 0.00 | 0.6542 | -0.01 | 8.20 | -3.52 | NO TREND | 0.0487 |
| CRRMH | Fall | S | SSALINITY | 0.00 | 0.0218 | -0.10 | 19.11 | -12.62 | NO TREND | 0.9281 |
| CRRMH | Fall | B | BSALINITY | 0.00 | 0.0580 | -0.09 | 19.25 | -11.47 | NO TREND | 0.4146 |
| CRRMH | Fall | S | SWTEMP | 0.00 | 0.2306 | 0.04 | 13.10 | 7.85 | NO TREND | 0.4208 |
| CRRMH | Fall | B | BWTEMP | 0.00 | 0.1283 | 0.05 | 13.10 | 9.16 | NO TREND | 0.3297 |
| RPPTF | SAV1 | S | SCHLA | 31.57 | 0.3543 | -0.06 | 25.14 | No Estimate | NO TREND | 0.4712 |
| RPPTF | SAV1 | S | STSS | 1.97 | 0.1175 | -0.14 | 24.75 | -12.12 | NO TREND | 0.6211 |
| RPPTF | SAV1 | B | BTSS | 1.76 | 0.0806 | -0.34 | 35.75 | -19.89 | NO TREND | 0.9892 |
| RPPTF | SAV1 | S | SECCHI | 0.00 | 0.6905 | 0.00 | 0.40 | 0.00 | NO TREND | 0.4635 |
| RPPTF | SAV1 | S | SDO | 0.00 | 0.1242 | -0.02 | 8.35 | -4.31 | NO TREND | 0.0500 |
| RPPTF | SAV1 | B | BDO | 0.00 | 0.0114 | -0.03 | 7.88 | -8.08 | NO TREND | 0.0641 |
| RPPTF | SAV1 | S | SSALINITY | 0.00 | 0.0000 | 0.00 | 0.01 | 0.00 | UNCHANGED | 0.9498 |
| RPPTF | SAV1 | B | BSALINITY | 0.00 | 0.0000 | 0.00 | 0.01 | 0.00 | UNCHANGED | 0.6748 |
| RPPTF | SAV1 | S | SWTEMP | 0.00 | 0.4200 | 0.02 | 23.63 | 2.02 | NO TREND | 0.2644 |
| RPPTF | SAV1 | B | BWTEMP | 0.00 | 0.2724 | 0.02 | 24.00 | 2.27 | NO TREND | 0.2543 |

Appendix A - Section IID. Rappahannock River (1985-2008) - Continued.

| Segment | Season | Layer | Parameter | % BDL | P value | Slope | Baseline | % Change | Direction | Homogeneity test |
|---------|--------|-------|-----------|-------|---------|-------|----------|-------------|------------|------------------|
| | | | | | | | | | | P value |
| RPOH | SAV1 | S | SCHLA | 15.15 | 0.0000 | 0.35 | 9.33 | No Estimate | DEGRADING | 0.4440 |
| RPOH | SAV1 | S | STSS | 0.72 | 0.0726 | -0.25 | 29.00 | -18.10 | NO TREND | 0.4497 |
| RPOH | SAV1 | B | BTSS | 0.00 | 0.1233 | 0.43 | 41.00 | 21.95 | NO TREND | 0.0854 |
| RPOH | SAV1 | S | SECCHI | 0.00 | 0.0092 | 0.00 | 0.58 | 0.00 | UNCHANGED | 0.0645 |
| RPOH | SAV1 | S | SDO | 0.00 | 0.0001 | 0.04 | 7.03 | 13.32 | IMPROVING | 0.0022 |
| RPOH | SAV1 | B | BDO | 0.00 | 0.2986 | 0.01 | 6.58 | 4.56 | NO TREND | 0.0919 |
| RPOH | SAV1 | S | SSALINITY | 0.00 | 0.0341 | 0.00 | 3.99 | -0.55 | NO TREND | 0.9816 |
| RPOH | SAV1 | B | BSALINITY | 0.00 | 0.1090 | 0.00 | 4.34 | 0.00 | NO TREND | 0.9193 |
| RPOH | SAV1 | S | SWTEMP | 0.00 | 0.3029 | 0.02 | 24.08 | 2.43 | NO TREND | 0.0351 |
| RPOH | SAV1 | B | BWTEMP | 0.00 | 0.5279 | 0.01 | 24.65 | 1.39 | NO TREND | 0.0754 |
| RPPMH | SAV1 | S | SCHLA | 9.91 | 0.0013 | 0.10 | 8.49 | 28.20 | DEGRADING | 0.5761 |
| RPPMH | SAV1 | S | STSS | 22.42 | 0.0354 | -0.09 | 7.00 | No Estimate | NO TREND | 0.2078 |
| RPPMH | SAV1 | B | BTSS | 6.39 | 0.4142 | 0.07 | 9.25 | 17.26 | NO TREND | 0.0396 |
| RPPMH | SAV1 | S | SECCHI | 0.00 | 0.0144 | -0.01 | 1.20 | -12.92 | NO TREND | 0.0713 |
| RPPMH | SAV1 | S | SDO | 0.00 | 0.0007 | 0.03 | 6.93 | 8.79 | IMPROVING | 0.3429 |
| RPPMH | SAV1 | B | BDO | 0.00 | 0.1828 | -0.01 | 5.95 | -5.43 | NO TREND | 0.5354 |
| RPPMH | SAV1 | S | SSALINITY | 0.00 | 0.0004 | -0.11 | 16.06 | -16.82 | DECREASING | 0.9999 |
| RPPMH | SAV1 | B | BSALINITY | 0.00 | 0.0113 | -0.08 | 17.02 | -11.60 | NO TREND | 0.9781 |
| RPPMH | SAV1 | S | SWTEMP | 0.00 | 0.9925 | 0.00 | 23.10 | 0.00 | NO TREND | 0.0511 |
| RPPMH | SAV1 | B | BWTEMP | 0.00 | 0.4306 | -0.01 | 22.98 | -1.07 | NO TREND | 0.0705 |
| CRRMH | SAV1 | S | SCHLA | 15.61 | 0.2211 | 0.05 | 11.24 | No Estimate | NO TREND | 0.4091 |
| CRRMH | SAV1 | S | STSS | 53.46 | 0.0009 | 0.00 | 8.00 | No Estimate | High BDLs | 0.1085 |
| CRRMH | SAV1 | B | BTSS | 35.92 | 0.0287 | -0.10 | 12.00 | No Estimate | High BDLs | 0.2005 |
| CRRMH | SAV1 | S | SECCHI | 0.00 | 0.0000 | -0.02 | 1.75 | -21.10 | DEGRADING | 0.0464 |
| CRRMH | SAV1 | S | SDO | 0.00 | 0.5765 | 0.01 | 7.18 | 2.19 | NO TREND | 0.6983 |
| CRRMH | SAV1 | B | BDO | 0.00 | 0.0601 | -0.03 | 6.43 | -11.21 | NO TREND | 0.7527 |
| CRRMH | SAV1 | S | SSALINITY | 0.00 | 0.0001 | -0.13 | 17.48 | -17.65 | DECREASING | 0.9992 |
| CRRMH | SAV1 | B | BSALINITY | 0.00 | 0.0003 | -0.10 | 17.59 | -13.65 | DECREASING | 0.9995 |
| CRRMH | SAV1 | S | SWTEMP | 0.00 | 0.3935 | 0.01 | 23.80 | 1.46 | NO TREND | 0.1176 |
| CRRMH | SAV1 | B | BWTEMP | 0.00 | 0.5260 | -0.01 | 23.68 | -0.89 | NO TREND | 0.0048 |
| RPPTF | SAV2 | S | SCHLA | 17.04 | 0.0501 | 0.03 | 4.30 | No Estimate | NO TREND | 0.5571 |
| RPPTF | SAV2 | S | STSS | 1.08 | 0.1523 | -0.13 | 9.08 | -33.06 | NO TREND | 0.4450 |
| RPPTF | SAV2 | B | BTSS | 1.44 | 0.0630 | -0.16 | 9.08 | -43.56 | NO TREND | 0.6865 |
| RPPTF | SAV2 | S | SECCHI | 0.00 | 0.0000 | -0.01 | 1.50 | -18.46 | DEGRADING | 0.1321 |
| RPPTF | SAV2 | S | SDO | 0.00 | 0.0005 | 0.02 | 8.10 | 5.93 | IMPROVING | 0.8504 |
| RPPTF | SAV2 | B | BDO | 0.00 | 0.0008 | 0.02 | 8.00 | 6.43 | IMPROVING | 0.8723 |
| RPPTF | SAV2 | S | SSALINITY | 0.00 | 0.0741 | 0.00 | 9.63 | 0.00 | NO TREND | 0.0009 |
| RPPTF | SAV2 | B | BSALINITY | 0.00 | 0.0761 | 0.00 | 9.63 | 0.00 | NO TREND | 0.0010 |
| RPPTF | SAV2 | S | SWTEMP | 0.00 | 0.3211 | -0.02 | 18.30 | -2.80 | NO TREND | 0.9477 |
| RPPTF | SAV2 | B | BWTEMP | 0.00 | 0.4249 | -0.01 | 18.30 | -1.64 | NO TREND | 0.9561 |
| RPOH | SAV2 | S | SCHLA | 7.55 | 0.0010 | 0.06 | 3.91 | 38.41 | DEGRADING | 0.5843 |
| RPOH | SAV2 | S | STSS | 0.56 | 0.0276 | -0.19 | 9.08 | -49.19 | NO TREND | 0.3433 |
| RPOH | SAV2 | B | BTSS | 0.57 | 0.1413 | -0.14 | 9.08 | -37.36 | NO TREND | 0.1038 |
| RPOH | SAV2 | S | SECCHI | 0.00 | 0.0005 | -0.01 | 0.85 | -17.65 | DEGRADING | 0.0299 |
| RPOH | SAV2 | S | SDO | 0.00 | 0.0001 | 0.03 | 8.10 | 7.56 | IMPROVING | 0.9410 |
| RPOH | SAV2 | B | BDO | 0.00 | 0.0011 | 0.02 | 8.10 | 6.60 | IMPROVING | 0.7241 |
| RPOH | SAV2 | S | SSALINITY | 0.00 | 0.1021 | 0.00 | 10.71 | 0.00 | NO TREND | 0.9986 |
| RPOH | SAV2 | B | BSALINITY | 0.00 | 0.1160 | 0.00 | 19.25 | 0.00 | NO TREND | 0.9990 |
| RPOH | SAV2 | S | SWTEMP | 0.00 | 0.1568 | -0.03 | 18.25 | -4.23 | NO TREND | 0.7286 |
| RPOH | SAV2 | B | BWTEMP | 0.00 | 0.1383 | -0.03 | 18.90 | -4.13 | NO TREND | 0.8370 |

Appendix A - Section IID. Rappahannock River (1985-2008) - Continued.

| Segment | Season | Layer | Parameter | % BDL | P value | Slope | Baseline | % Change | Homogeneity test | |
|---------|---------|-------|-----------|-------|---------|-------|----------|-------------|------------------|---------|
| | | | | | | | | | Direction | P value |
| RPPMH | SAV2 | S | SCHLA | 6.27 | 0.0388 | 0.05 | 5.48 | 20.54 | NO TREND | 0.8044 |
| RPPMH | SAV2 | S | STSS | 19.95 | 0.2515 | -0.07 | 8.80 | No Estimate | NO TREND | 0.3717 |
| RPPMH | SAV2 | B | BTSS | 7.58 | 0.6053 | 0.04 | 8.45 | 10.49 | NO TREND | 0.0162 |
| RPPMH | SAV2 | S | SECCHI | 0.00 | 0.0000 | -0.02 | 1.35 | -28.96 | DEGRADING | 0.0654 |
| RPPMH | SAV2 | S | SDO | 0.00 | 0.0024 | 0.02 | 7.95 | 6.04 | IMPROVING | 0.5585 |
| RPPMH | SAV2 | B | BDO | 0.00 | 0.0197 | 0.02 | 7.38 | 5.03 | NO TREND | 0.2786 |
| RPPMH | SAV2 | S | SSALINITY | 0.00 | 0.0143 | -0.08 | 17.18 | -11.23 | NO TREND | 0.9682 |
| RPPMH | SAV2 | B | BSALINITY | 0.00 | 0.0110 | -0.08 | 17.42 | -11.45 | NO TREND | 0.9605 |
| RPPMH | SAV2 | S | SWTEMP | 0.00 | 0.1984 | -0.03 | 17.80 | -3.48 | NO TREND | 0.6940 |
| RPPMH | SAV2 | B | BWTEMP | 0.00 | 0.1339 | -0.03 | 16.25 | -4.01 | NO TREND | 0.7470 |
| CRRMH | SAV2 | S | SCHLA | 6.91 | 0.0242 | 0.04 | 4.94 | 20.41 | NO TREND | 0.6792 |
| CRRMH | SAV2 | S | STSS | 50.51 | 0.0122 | -0.07 | 8.00 | No Estimate | High BDLs | 0.9154 |
| CRRMH | SAV2 | B | BTSS | 28.25 | 0.1004 | -0.11 | 8.60 | No Estimate | NO TREND | 0.5275 |
| CRRMH | SAV2 | S | SECCHI | 0.00 | 0.0000 | -0.02 | 1.85 | -25.95 | DEGRADING | 0.4204 |
| CRRMH | SAV2 | S | SDO | 0.00 | 0.0055 | 0.02 | 7.98 | 6.02 | IMPROVING | 0.6014 |
| CRRMH | SAV2 | B | BDO | 0.00 | 0.0556 | 0.01 | 7.73 | 4.60 | NO TREND | 0.1748 |
| CRRMH | SAV2 | S | SSALINITY | 0.00 | 0.0301 | -0.07 | 17.73 | -8.95 | NO TREND | 0.9922 |
| CRRMH | SAV2 | B | BSALINITY | 0.00 | 0.0236 | -0.07 | 17.78 | -9.49 | NO TREND | 0.9763 |
| CRRMH | SAV2 | S | SWTEMP | 0.00 | 0.3311 | -0.02 | 18.30 | -2.81 | NO TREND | 0.6160 |
| CRRMH | SAV2 | B | BWTEMP | 0.00 | 0.0546 | -0.04 | 17.83 | -5.39 | NO TREND | 0.3574 |
| RPPTF | Spring1 | S | SCHLA | 41.53 | 0.5715 | 0.00 | 4.26 | No Estimate | High BDLs | 0.4576 |
| RPPTF | Spring1 | S | STSS | 1.72 | 0.6352 | 0.11 | 24.00 | 9.72 | NO TREND | 0.7304 |
| RPPTF | Spring1 | B | BTSS | 1.73 | 0.8268 | -0.08 | 34.00 | -4.75 | NO TREND | 0.7374 |
| RPPTF | Spring1 | S | SECCHI | 0.00 | 0.1337 | 0.00 | 0.50 | -19.09 | NO TREND | 0.3038 |
| RPPTF | Spring1 | S | SDO | 0.00 | 0.0951 | 0.02 | 8.85 | 4.52 | NO TREND | 0.8157 |
| RPPTF | Spring1 | B | BDO | 0.00 | 0.1283 | 0.02 | 8.65 | 6.40 | NO TREND | 0.9844 |
| RPPTF | Spring1 | S | SSALINITY | 0.00 | 0.0000 | 0.00 | 0.01 | 0.00 | UNCHANGED | 0.7588 |
| RPPTF | Spring1 | B | BSALINITY | 0.00 | 0.0000 | 0.00 | 0.01 | 0.00 | UNCHANGED | 0.7658 |
| RPPTF | Spring1 | S | SWTEMP | 0.00 | 0.3275 | -0.03 | 14.63 | -4.69 | NO TREND | 0.9232 |
| RPPTF | Spring1 | B | BWTEMP | 0.00 | 0.4830 | -0.01 | 14.50 | -2.07 | NO TREND | 0.9149 |
| RPPOH | Spring1 | S | SCHLA | 23.81 | 0.0094 | 0.21 | 3.35 | No Estimate | DEGRADING | 0.2806 |
| RPPOH | Spring1 | S | STSS | 0.00 | 0.4820 | -0.25 | 48.00 | -10.94 | NO TREND | 0.1293 |
| RPPOH | Spring1 | B | BTSS | 0.00 | 0.5638 | 0.42 | 65.00 | 13.46 | NO TREND | 0.0910 |
| RPPOH | Spring1 | S | SECCHI | 0.00 | 1.0000 | 0.00 | 0.30 | 0.00 | NO TREND | 0.9209 |
| RPPOH | Spring1 | S | SDO | 0.00 | 0.0326 | 0.04 | 9.13 | 9.89 | NO TREND | 0.8542 |
| RPPOH | Spring1 | B | BDO | 0.00 | 0.1790 | 0.03 | 9.65 | 6.22 | NO TREND | 0.6976 |
| RPPOH | Spring1 | S | SSALINITY | 0.00 | 0.2820 | 0.00 | 0.76 | 0.00 | NO TREND | 0.9703 |
| RPPOH | Spring1 | B | BSALINITY | 0.00 | 0.3287 | 0.00 | 0.85 | 0.00 | NO TREND | 0.9966 |
| RPPOH | Spring1 | S | SWTEMP | 0.00 | 0.1103 | -0.06 | 15.28 | -9.78 | NO TREND | 0.5379 |
| RPPOH | Spring1 | B | BWTEMP | 0.00 | 0.0878 | -0.06 | 14.90 | -10.22 | NO TREND | 0.8326 |
| RPPMH | Spring1 | S | SCHLA | 13.07 | 0.4309 | 0.07 | 10.51 | 15.30 | NO TREND | 0.8456 |
| RPPMH | Spring1 | S | STSS | 16.67 | 0.5654 | 0.04 | 8.25 | No Estimate | NO TREND | 0.5743 |
| RPPMH | Spring1 | B | BTSS | 6.31 | 0.0035 | 0.50 | 8.10 | 148.15 | DEGRADING | 0.8268 |
| RPPMH | Spring1 | S | SECCHI | 0.00 | 0.0191 | -0.01 | 1.00 | -34.29 | NO TREND | 0.0411 |
| RPPMH | Spring1 | S | SDO | 0.00 | 0.2881 | 0.01 | 9.45 | 3.62 | NO TREND | 0.5355 |
| RPPMH | Spring1 | B | BDO | 0.00 | 0.9429 | 0.00 | 9.03 | 0.00 | NO TREND | 0.6163 |
| RPPMH | Spring1 | S | SSALINITY | 0.00 | 0.0254 | -0.13 | 13.81 | -21.86 | NO TREND | 0.8798 |
| RPPMH | Spring1 | B | BSALINITY | 0.00 | 0.0181 | -0.12 | 15.11 | -18.75 | NO TREND | 0.8977 |
| RPPMH | Spring1 | S | SWTEMP | 0.00 | 0.1648 | -0.04 | 14.00 | -6.61 | NO TREND | 0.4246 |
| RPPMH | Spring1 | B | BWTEMP | 0.00 | 0.0910 | -0.04 | 12.75 | -6.93 | NO TREND | 0.5962 |

Appendix A - Section IID. Rappahannock River (1985-2008) - Continued.

| Segment | Season | Layer | Parameter | % BDL | P value | Slope | Baseline | % Change | Homogeneity test | |
|---------|---------|-------|-----------|-------|---------|-------|----------|-------------|------------------|---------|
| | | | | | | | | | Direction | P value |
| CRRMH | Spring1 | S | SCHLA | 19.10 | 0.3151 | 0.05 | 10.65 | No Estimate | NO TREND | 0.4960 |
| CRRMH | Spring1 | S | STSS | 42.35 | 0.1877 | 0.00 | 6.75 | No Estimate | High BDLs | 0.7044 |
| CRRMH | Spring1 | B | BTSS | 27.78 | 0.8823 | 0.00 | 7.00 | No Estimate | NO TREND | 0.6051 |
| CRRMH | Spring1 | S | SECCHI | 0.00 | 0.0015 | -0.03 | 1.90 | -37.89 | DEGRADING | 0.2857 |
| CRRMH | Spring1 | S | SDO | 0.00 | 0.5012 | 0.01 | 9.68 | 3.61 | NO TREND | 0.9857 |
| CRRMH | Spring1 | B | BDO | 0.00 | 0.5504 | -0.01 | 9.38 | -3.75 | NO TREND | 0.9832 |
| CRRMH | Spring1 | S | SSALINITY | 0.00 | 0.0655 | -0.09 | 15.07 | -14.79 | NO TREND | 0.9280 |
| CRRMH | Spring1 | B | BSALINITY | 0.00 | 0.0471 | -0.09 | 15.14 | -14.63 | NO TREND | 0.8358 |
| CRRMH | Spring1 | S | SWTEMP | 0.00 | 0.3422 | -0.03 | 14.20 | -5.07 | NO TREND | 0.2790 |
| CRRMH | Spring1 | B | BWTEMP | 0.00 | 0.0199 | -0.06 | 13.98 | -10.68 | NO TREND | 0.2485 |
| RPPTF | Spring2 | S | SCHLA | 27.76 | 0.5206 | 0.04 | 8.51 | No Estimate | NO TREND | 0.5921 |
| RPPTF | Spring2 | S | STSS | 2.48 | 0.8478 | -0.03 | 24.00 | -2.83 | NO TREND | 0.9673 |
| RPPTF | Spring2 | B | BTSS | 2.49 | 0.4638 | -0.26 | 34.50 | -15.72 | NO TREND | 0.9536 |
| RPPTF | Spring2 | S | SECCHI | 0.00 | 0.9112 | 0.00 | 0.40 | 0.00 | NO TREND | 0.6745 |
| RPPTF | Spring2 | S | SDO | 0.00 | 0.2227 | 0.01 | 8.48 | 3.54 | NO TREND | 0.4646 |
| RPPTF | Spring2 | B | BDO | 0.00 | 0.5568 | 0.01 | 8.03 | 3.32 | NO TREND | 0.4245 |
| RPPTF | Spring2 | S | SSALINITY | 0.00 | 0.0000 | 0.00 | 0.01 | 0.00 | UNCHANGED | 0.8163 |
| RPPTF | Spring2 | B | BSALINITY | 0.00 | 0.0000 | 0.00 | 0.01 | 0.00 | UNCHANGED | 0.8316 |
| RPPTF | Spring2 | S | SWTEMP | 0.00 | 0.8748 | -0.01 | 22.50 | -0.74 | NO TREND | 0.3049 |
| RPPTF | Spring2 | B | BWTEMP | 0.00 | 0.9087 | 0.00 | 21.63 | 0.04 | NO TREND | 0.3061 |
| RPPOH | Spring2 | S | SCHLA | 15.38 | 0.0058 | 0.28 | 4.41 | No Estimate | DEGRADING | 0.2623 |
| RPPOH | Spring2 | S | STSS | 1.33 | 0.0753 | -0.67 | 44.50 | -31.46 | NO TREND | 0.1159 |
| RPPOH | Spring2 | B | BTSS | 0.00 | 0.5517 | -0.56 | 55.00 | -21.48 | NO TREND | 0.1010 |
| RPPOH | Spring2 | S | SECCHI | 0.00 | 0.6067 | 0.00 | 0.38 | 0.00 | NO TREND | 0.6773 |
| RPPOH | Spring2 | S | SDO | 0.00 | 0.0008 | 0.05 | 7.75 | 15.48 | IMPROVING | 0.3761 |
| RPPOH | Spring2 | B | BDO | 0.00 | 0.1058 | 0.03 | 7.78 | 8.64 | NO TREND | 0.6174 |
| RPPOH | Spring2 | S | SSALINITY | 0.00 | 0.1537 | 0.00 | 1.26 | 0.00 | NO TREND | 0.9710 |
| RPPOH | Spring2 | B | BSALINITY | 0.00 | 0.2364 | 0.00 | 1.64 | 0.00 | NO TREND | 0.9509 |
| RPPOH | Spring2 | S | SWTEMP | 0.00 | 0.1160 | -0.07 | 20.88 | -7.66 | NO TREND | 0.5095 |
| RPPOH | Spring2 | B | BWTEMP | 0.00 | 0.1348 | -0.06 | 21.25 | -6.59 | NO TREND | 0.7138 |
| RPPMH | Spring2 | S | SCHLA | 9.41 | 0.1648 | 0.07 | 8.95 | 19.47 | NO TREND | 0.5941 |
| RPPMH | Spring2 | S | STSS | 17.99 | 0.7634 | 0.03 | 6.75 | No Estimate | NO TREND | 0.6268 |
| RPPMH | Spring2 | B | BTSS | 5.60 | 0.0126 | 0.37 | 8.20 | 108.57 | NO TREND | 0.5405 |
| RPPMH | Spring2 | S | SECCHI | 0.00 | 0.0015 | -0.02 | 1.30 | -27.69 | DEGRADING | 0.2920 |
| RPPMH | Spring2 | S | SDO | 0.00 | 0.0565 | 0.03 | 7.65 | 7.96 | NO TREND | 0.4311 |
| RPPMH | Spring2 | B | BDO | 0.00 | 0.5567 | -0.01 | 6.70 | -3.10 | NO TREND | 0.8660 |
| RPPMH | Spring2 | S | SSALINITY | 0.00 | 0.0181 | -0.12 | 14.49 | -19.20 | NO TREND | 0.9456 |
| RPPMH | Spring2 | B | BSALINITY | 0.00 | 0.0531 | -0.10 | 15.53 | -15.66 | NO TREND | 0.8187 |
| RPPMH | Spring2 | S | SWTEMP | 0.00 | 0.1025 | -0.04 | 19.63 | -4.69 | NO TREND | 0.5496 |
| RPPMH | Spring2 | B | BWTEMP | 0.00 | 0.0143 | -0.06 | 17.50 | -7.68 | NO TREND | 0.9618 |
| CRRMH | Spring2 | S | SCHLA | 7.45 | 0.6224 | 0.03 | 12.62 | 5.80 | NO TREND | 0.2885 |
| CRRMH | Spring2 | S | STSS | 39.77 | 0.7967 | 0.00 | 6.50 | No Estimate | High BDLs | 0.7663 |
| CRRMH | Spring2 | B | BTSS | 20.78 | 0.7878 | 0.00 | 8.00 | No Estimate | NO TREND | 0.3328 |
| CRRMH | Spring2 | S | SECCHI | 0.00 | 0.0001 | -0.02 | 1.85 | -23.59 | DEGRADING | 0.8599 |
| CRRMH | Spring2 | S | SDO | 0.00 | 0.3367 | 0.02 | 7.83 | 5.11 | NO TREND | 0.9504 |
| CRRMH | Spring2 | B | BDO | 0.00 | 0.4919 | -0.02 | 7.23 | -6.64 | NO TREND | 0.9955 |
| CRRMH | Spring2 | S | SSALINITY | 0.00 | 0.0188 | -0.12 | 15.62 | -17.93 | NO TREND | 0.9009 |
| CRRMH | Spring2 | B | BSALINITY | 0.00 | 0.0253 | -0.09 | 15.82 | -14.09 | NO TREND | 0.9499 |
| CRRMH | Spring2 | S | SWTEMP | 0.00 | 0.3745 | -0.02 | 20.95 | -2.56 | NO TREND | 0.2713 |
| CRRMH | Spring2 | B | BWTEMP | 0.00 | 0.0075 | -0.07 | 20.20 | -7.92 | DECREASING | 0.3270 |

Appendix A - Section IID. Rappahannock River (1985-2008) - Continued.

| Segment | Season | Layer | Parameter | % BDL | P value | Slope | Baseline | % Change | Direction | Homogeneity test | |
|---------|---------|-------|-----------|-------|---------|-------|----------|-------------|------------|------------------|--|
| | | | | | | | | | | P value | |
| RPPTF | Summer1 | S | SCHLA | 6.59 | 0.2862 | -0.21 | 26.66 | -19.15 | NO TREND | 0.8765 | |
| RPPTF | Summer1 | S | STSS | 0.94 | 0.0609 | -0.20 | 24.75 | -17.32 | NO TREND | 0.3609 | |
| RPPTF | Summer1 | B | BTSS | 1.56 | 0.1511 | -0.34 | 33.75 | -21.06 | NO TREND | 0.9062 | |
| RPPTF | Summer1 | S | SECCHI | 0.00 | 0.7223 | 0.00 | 0.40 | 0.00 | NO TREND | 0.2490 | |
| RPPTF | Summer1 | S | SDO | 0.00 | 0.0353 | -0.03 | 7.55 | -9.93 | NO TREND | 0.5750 | |
| RPPTF | Summer1 | B | BDO | 0.00 | 0.0023 | -0.04 | 7.38 | -13.56 | DEGRADING | 0.6477 | |
| RPPTF | Summer1 | S | SSALINITY | 0.00 | 0.0000 | 0.00 | 0.01 | 0.00 | UNCHANGED | 0.8128 | |
| RPPTF | Summer1 | B | BSALINITY | 0.00 | 0.0000 | 0.00 | 0.01 | 0.00 | UNCHANGED | 0.3358 | |
| RPPTF | Summer1 | S | SWTEMP | 0.00 | 0.1610 | 0.04 | 26.13 | 3.58 | NO TREND | 0.1944 | |
| RPPTF | Summer1 | B | BWTEMP | 0.00 | 0.1179 | 0.04 | 25.75 | 3.68 | NO TREND | 0.1647 | |
| RPPOH | Summer1 | S | SCHLA | 4.80 | 0.0000 | 0.45 | 9.57 | 113.17 | DEGRADING | 0.9015 | |
| RPPOH | Summer1 | S | STSS | 0.97 | 0.0906 | -0.27 | 24.50 | -23.38 | NO TREND | 0.6347 | |
| RPPOH | Summer1 | B | BTSS | 0.98 | 0.3015 | 0.35 | 34.50 | 21.52 | NO TREND | 0.2107 | |
| RPPOH | Summer1 | S | SECCHI | 0.00 | 0.0114 | 0.00 | 0.63 | -14.77 | NO TREND | 0.0277 | |
| RPPOH | Summer1 | S | SDO | 0.00 | 0.0000 | 0.05 | 6.58 | 19.78 | IMPROVING | 0.7733 | |
| RPPOH | Summer1 | B | BDO | 0.00 | 0.0753 | 0.02 | 6.25 | 8.30 | NO TREND | 0.6558 | |
| RPPOH | Summer1 | S | SSALINITY | 0.00 | 0.1820 | -0.01 | 4.65 | -6.78 | NO TREND | 0.9019 | |
| RPPOH | Summer1 | B | BSALINITY | 0.00 | 0.3473 | -0.01 | 4.79 | -7.01 | NO TREND | 0.6770 | |
| RPPOH | Summer1 | S | SWTEMP | 0.00 | 0.1437 | 0.04 | 26.18 | 3.48 | NO TREND | 0.2435 | |
| RPPOH | Summer1 | B | BWTEMP | 0.00 | 0.3444 | 0.02 | 26.10 | 1.97 | NO TREND | 0.1933 | |
| RPPMH | Summer1 | S | SCHLA | 3.75 | 0.0007 | 0.14 | 7.72 | 44.85 | DEGRADING | 0.5403 | |
| RPPMH | Summer1 | S | STSS | 20.28 | 0.0058 | -0.18 | 7.00 | No Estimate | IMPROVING | 0.2473 | |
| RPPMH | Summer1 | B | BTSS | 9.38 | 0.3389 | -0.12 | 12.75 | -23.33 | NO TREND | 0.1231 | |
| RPPMH | Summer1 | S | SECCHI | 0.00 | 0.3943 | 0.00 | 1.15 | 0.00 | NO TREND | 0.1602 | |
| RPPMH | Summer1 | S | SDO | 0.00 | 0.0001 | 0.04 | 6.55 | 13.47 | IMPROVING | 0.7820 | |
| RPPMH | Summer1 | B | BDO | 0.00 | 0.6641 | -0.01 | 5.38 | -2.70 | NO TREND | 0.5826 | |
| RPPMH | Summer1 | S | SSALINITY | 0.00 | 0.0114 | -0.11 | 17.23 | -14.91 | NO TREND | 0.9946 | |
| RPPMH | Summer1 | B | BSALINITY | 0.00 | 0.1399 | -0.06 | 17.82 | -7.86 | NO TREND | 0.9151 | |
| RPPMH | Summer1 | S | SWTEMP | 0.00 | 0.8816 | 0.00 | 25.15 | 0.06 | NO TREND | 0.1924 | |
| RPPMH | Summer1 | B | BWTEMP | 0.00 | 0.5025 | -0.01 | 25.13 | -1.01 | NO TREND | 0.2713 | |
| CRRMH | Summer1 | S | SCHLA | 4.76 | 0.9598 | 0.00 | 11.24 | 0.00 | NO TREND | 0.4662 | |
| CRRMH | Summer1 | S | STSS | 53.51 | 0.0005 | -0.04 | 7.50 | No Estimate | High BDLs | 0.0480 | |
| CRRMH | Summer1 | B | BTSS | 27.18 | 0.0063 | -0.20 | 14.00 | No Estimate | IMPROVING | 0.3210 | |
| CRRMH | Summer1 | S | SECCHI | 0.00 | 0.0136 | -0.01 | 1.48 | -11.62 | NO TREND | 0.0267 | |
| CRRMH | Summer1 | S | SDO | 0.00 | 0.3917 | 0.01 | 6.60 | 4.31 | NO TREND | 0.6659 | |
| CRRMH | Summer1 | B | BDO | 0.00 | 0.2858 | -0.02 | 4.95 | -10.69 | NO TREND | 0.7470 | |
| CRRMH | Summer1 | S | SSALINITY | 0.00 | 0.0009 | -0.15 | 18.17 | -19.82 | DECREASING | 0.9994 | |
| CRRMH | Summer1 | B | BSALINITY | 0.00 | 0.0099 | -0.10 | 18.38 | -12.90 | DECREASING | 0.9911 | |
| CRRMH | Summer1 | S | SWTEMP | 0.00 | 0.3271 | 0.02 | 25.75 | 1.84 | NO TREND | 0.2829 | |
| CRRMH | Summer1 | B | BWTEMP | 0.00 | 0.8039 | 0.00 | 25.50 | -0.36 | NO TREND | 0.0687 | |
| RPPTF | Summer2 | S | SCHLA | 5.31 | 0.3301 | -0.29 | 26.66 | -26.02 | NO TREND | 0.7132 | |
| RPPTF | Summer2 | S | STSS | 0.00 | 0.0467 | -0.25 | 25.75 | -20.39 | NO TREND | 0.2632 | |
| RPPTF | Summer2 | B | BTSS | 0.85 | 0.1681 | -0.38 | 33.25 | -23.92 | NO TREND | 0.7852 | |
| RPPTF | Summer2 | S | SECCHI | 0.00 | 0.9705 | 0.00 | 0.40 | 0.00 | NO TREND | 0.1607 | |
| RPPTF | Summer2 | S | SDO | 0.00 | 0.0234 | -0.04 | 7.05 | -13.24 | NO TREND | 0.5383 | |
| RPPTF | Summer2 | B | BDO | 0.00 | 0.0018 | -0.05 | 6.98 | -16.34 | DEGRADING | 0.6766 | |
| RPPTF | Summer2 | S | SSALINITY | 0.00 | 0.0000 | 0.00 | 0.01 | 171.43 | INCREASING | 0.6235 | |
| RPPTF | Summer2 | B | BSALINITY | 0.00 | 0.0000 | 0.00 | 0.01 | 165.71 | INCREASING | 0.1839 | |
| RPPTF | Summer2 | S | SWTEMP | 0.00 | 0.3445 | 0.03 | 26.25 | 2.71 | NO TREND | 0.1097 | |
| RPPTF | Summer2 | B | BWTEMP | 0.00 | 0.2956 | 0.03 | 26.00 | 2.99 | NO TREND | 0.0945 | |

Appendix A - Section IID. Rappahannock River (1985-2008) - Continued.

| Segment | Season | Layer | Parameter | % BDL | P value | Slope | Baseline | % Change | Direction | Homogeneity test |
|---------|---------|-------|-----------|-------|---------|-------|----------|-------------|------------|------------------|
| | | | | | | | | | | P value |
| RPPOH | Summer2 | S | SCHLA | 2.20 | 0.0000 | 0.52 | 9.91 | 125.50 | DEGRADING | 0.7774 |
| RPPOH | Summer2 | S | STSS | 0.00 | 0.3436 | -0.16 | 18.50 | -17.69 | NO TREND | 0.7099 |
| RPPOH | Summer2 | B | BTSS | 1.32 | 0.0801 | 0.61 | 30.00 | 42.88 | NO TREND | 0.4917 |
| RPPOH | Summer2 | S | SECCHI | 0.00 | 0.0006 | -0.01 | 0.68 | -29.63 | DEGRADING | 0.2532 |
| RPPOH | Summer2 | S | SDO | 0.00 | 0.0001 | 0.05 | 6.35 | 19.65 | IMPROVING | 0.7004 |
| RPPOH | Summer2 | B | BDO | 0.00 | 0.1981 | 0.02 | 6.13 | 7.84 | NO TREND | 0.5159 |
| RPPOH | Summer2 | S | SSALINITY | 0.00 | 0.3287 | -0.02 | 5.14 | -10.18 | NO TREND | 0.8076 |
| RPPOH | Summer2 | B | BSALINITY | 0.00 | 0.5660 | -0.02 | 5.50 | -9.32 | NO TREND | 0.5337 |
| RPPOH | Summer2 | S | SWTEMP | 0.00 | 0.0731 | 0.05 | 27.53 | 4.26 | NO TREND | 0.2281 |
| RPPOH | Summer2 | B | BWTEMP | 0.00 | 0.2069 | 0.03 | 27.43 | 2.84 | NO TREND | 0.1452 |
| RPPMH | Summer2 | S | SCHLA | 3.70 | 0.0022 | 0.16 | 8.04 | 46.69 | DEGRADING | 0.3502 |
| RPPMH | Summer2 | S | STSS | 19.22 | 0.0010 | -0.24 | 8.50 | No Estimate | IMPROVING | 0.6645 |
| RPPMH | Summer2 | B | BTSS | 10.74 | 0.1435 | -0.25 | 12.75 | -47.48 | NO TREND | 0.1247 |
| RPPMH | Summer2 | S | SECCHI | 0.00 | 0.6536 | 0.00 | 1.05 | 0.00 | NO TREND | 0.0894 |
| RPPMH | Summer2 | S | SDO | 0.00 | 0.0006 | 0.04 | 6.48 | 14.01 | IMPROVING | 0.5956 |
| RPPMH | Summer2 | B | BDO | 0.00 | 0.7965 | 0.00 | 5.38 | -2.01 | NO TREND | 0.3877 |
| RPPMH | Summer2 | S | SSALINITY | 0.00 | 0.0228 | -0.11 | 18.07 | -14.39 | NO TREND | 0.9775 |
| RPPMH | Summer2 | B | BSALINITY | 0.00 | 0.2024 | -0.06 | 18.85 | -7.19 | NO TREND | 0.7721 |
| RPPMH | Summer2 | S | SWTEMP | 0.00 | 0.6567 | 0.01 | 26.40 | 0.71 | NO TREND | 0.1144 |
| RPPMH | Summer2 | B | BWTEMP | 0.00 | 0.9314 | 0.00 | 26.08 | 0.00 | NO TREND | 0.3440 |
| CRRMH | Summer2 | S | SCHLA | 6.52 | 0.6609 | 0.03 | 11.24 | 6.76 | NO TREND | 0.3736 |
| CRRMH | Summer2 | S | STSS | 54.22 | 0.0000 | -0.15 | 9.00 | No Estimate | High BDLs | 0.5418 |
| CRRMH | Summer2 | B | BTSS | 30.26 | 0.0155 | -0.20 | 16.00 | No Estimate | NO TREND | 0.1769 |
| CRRMH | Summer2 | S | SECCHI | 0.00 | 0.0699 | -0.01 | 1.58 | -12.03 | NO TREND | 0.0131 |
| CRRMH | Summer2 | S | SDO | 0.00 | 0.5960 | 0.01 | 6.38 | 2.98 | NO TREND | 0.4986 |
| CRRMH | Summer2 | B | BDO | 0.00 | 0.3090 | -0.02 | 4.60 | -11.86 | NO TREND | 0.5514 |
| CRRMH | Summer2 | S | SSALINITY | 0.00 | 0.0044 | -0.15 | 18.77 | -19.18 | DECREASING | 0.9923 |
| CRRMH | Summer2 | B | BSALINITY | 0.00 | 0.0211 | -0.10 | 19.13 | -12.55 | NO TREND | 0.9582 |
| CRRMH | Summer2 | S | SWTEMP | 0.00 | 0.2180 | 0.02 | 27.10 | 2.15 | NO TREND | 0.1997 |
| CRRMH | Summer2 | B | BWTEMP | 0.00 | 0.6258 | 0.01 | 26.55 | 1.03 | NO TREND | 0.0767 |
| RPPTF | Winter | S | SCHLA | 63.16 | 0.5901 | 0.00 | 3.10 | No Estimate | High BDLs | 0.8815 |
| RPPTF | Winter | S | STSS | 4.26 | 0.7475 | 0.11 | 25.50 | 8.28 | NO TREND | 0.0805 |
| RPPTF | Winter | B | BTSS | 7.45 | 0.9268 | -0.09 | 46.50 | -3.75 | NO TREND | 0.0663 |
| RPPTF | Winter | S | SECCHI | 0.00 | 0.3684 | 0.00 | 0.45 | -6.14 | NO TREND | 0.4634 |
| RPPTF | Winter | S | SDO | 0.00 | 0.7647 | -0.01 | 12.90 | -1.20 | NO TREND | 0.3692 |
| RPPTF | Winter | B | BDO | 0.00 | 0.7138 | 0.01 | 12.70 | 1.37 | NO TREND | 0.7223 |
| RPPTF | Winter | S | SSALINITY | 0.00 | 0.0008 | 0.00 | 0.01 | 0.00 | UNCHANGED | 0.7814 |
| RPPTF | Winter | B | BSALINITY | 0.00 | 0.0011 | 0.00 | 0.01 | 0.00 | UNCHANGED | 0.8290 |
| RPPTF | Winter | S | SWTEMP | 0.00 | 0.0617 | 0.11 | 2.00 | 129.14 | NO TREND | 0.1786 |
| RPPTF | Winter | B | BWTEMP | 0.00 | 0.1480 | 0.08 | 3.00 | 63.56 | NO TREND | 0.3594 |
| RPPOH | Winter | S | SCHLA | 61.90 | 0.3545 | 0.00 | 3.10 | No Estimate | High BDLs | 0.4219 |
| RPPOH | Winter | S | STSS | 0.00 | 0.8044 | -0.17 | 42.00 | -7.94 | NO TREND | 0.8043 |
| RPPOH | Winter | B | BTSS | 0.00 | 0.6033 | 0.48 | 43.00 | 22.36 | NO TREND | 0.3344 |
| RPPOH | Winter | S | SECCHI | 0.00 | 0.5275 | 0.00 | 0.35 | 0.00 | NO TREND | 0.7676 |
| RPPOH | Winter | S | SDO | 0.00 | 0.2480 | -0.02 | 12.80 | -4.12 | NO TREND | 0.7636 |
| RPPOH | Winter | B | BDO | 0.00 | 0.1043 | -0.03 | 12.85 | -6.06 | NO TREND | 0.3470 |
| RPPOH | Winter | S | SSALINITY | 0.00 | 0.8204 | 0.00 | 0.50 | 0.00 | NO TREND | 0.9141 |
| RPPOH | Winter | B | BSALINITY | 0.00 | 0.5391 | 0.00 | 0.41 | 0.00 | NO TREND | 0.6999 |
| RPPOH | Winter | S | SWTEMP | 0.00 | 0.0236 | 0.13 | 2.90 | 107.59 | NO TREND | 1.0000 |
| RPPOH | Winter | B | BWTEMP | 0.00 | 0.0360 | 0.13 | 2.95 | 108.47 | NO TREND | 0.8961 |

Appendix A - Section IID. Rappahannock River (1985-2008) - Continued.

| Segment | Season | Layer | Parameter | % BDL | P value | Slope | Baseline | % Change | Homogeneity test | |
|---------|--------|-------|-----------|-------|---------|-------|----------|-------------|------------------|---------|
| | | | | | | | | | Direction | P value |
| RPPMH | Winter | S | SCHLA | 19.68 | 0.3710 | -0.06 | 9.42 | No Estimate | NO TREND | 0.1185 |
| RPPMH | Winter | S | STSS | 22.36 | 0.3338 | 0.10 | 7.75 | No Estimate | NO TREND | 0.7918 |
| RPPMH | Winter | B | BTSS | 7.02 | 0.5741 | 0.13 | 16.50 | 18.96 | NO TREND | 0.2920 |
| RPPMH | Winter | S | SECCHI | 0.00 | 0.0204 | -0.03 | 1.50 | -43.76 | NO TREND | 0.9441 |
| RPPMH | Winter | S | SDO | 0.00 | 0.5163 | -0.02 | 13.40 | -4.34 | NO TREND | 0.7125 |
| RPPMH | Winter | B | BDO | 0.00 | 0.7123 | -0.01 | 12.30 | -1.12 | NO TREND | 0.2395 |
| RPPMH | Winter | S | SSALINITY | 0.00 | 0.0515 | -0.18 | 14.58 | -29.46 | NO TREND | 0.7387 |
| RPPMH | Winter | B | BSALINITY | 0.00 | 0.0475 | -0.16 | 17.27 | -22.63 | NO TREND | 0.8743 |
| RPPMH | Winter | S | SWTEMP | 0.00 | 0.0455 | 0.08 | 3.23 | 62.25 | NO TREND | 0.7257 |
| RPPMH | Winter | B | BWTEMP | 0.00 | 0.0557 | 0.09 | 2.68 | 78.28 | NO TREND | 0.6870 |
| CRRMH | Winter | S | SCHLA | 19.51 | 0.9824 | 0.00 | 4.45 | No Estimate | NO TREND | 0.8069 |
| CRRMH | Winter | S | STSS | 62.79 | 0.2774 | 0.00 | 5.00 | No Estimate | High BDLs | 0.9889 |
| CRRMH | Winter | B | BTSS | 51.43 | 0.6872 | 0.00 | 5.00 | No Estimate | High BDLs | 0.7218 |
| CRRMH | Winter | S | SECCHI | 0.00 | 0.6411 | -0.01 | 2.75 | -7.93 | NO TREND | 0.9689 |
| CRRMH | Winter | S | SDO | 0.00 | 0.5068 | -0.03 | 12.65 | -4.78 | NO TREND | 0.7052 |
| CRRMH | Winter | B | BDO | 0.00 | 0.4521 | -0.03 | 12.75 | -5.33 | NO TREND | 0.8381 |
| CRRMH | Winter | S | SSALINITY | 0.00 | 0.4133 | -0.09 | 15.81 | -13.28 | NO TREND | 0.8884 |
| CRRMH | Winter | B | BSALINITY | 0.00 | 0.4130 | -0.06 | 16.50 | -9.18 | NO TREND | 0.9582 |
| CRRMH | Winter | S | SWTEMP | 0.00 | 0.2072 | 0.07 | 3.80 | 43.40 | NO TREND | 0.5645 |
| CRRMH | Winter | B | BWTEMP | 0.00 | 0.1293 | 0.07 | 3.55 | 44.66 | NO TREND | 0.6224 |

Appendix A - Section IIE. Seasonal Kendall Long-term trends in water quality for the Virginia Mainstem (1985-2007). Parameters are as follows: STN=Surface total nitrogen, BTN=Bottom total nitrogen, SDIN=Surface dissolved inorganic nitrogen, BDIN=Bottom dissolved inorganic nitrogen, STP=Surface total phosphorus, BTP=Bottom total phosphorus, SPO4F=Surface dissolved inorganic phosphorus, BPO4F=Bottom dissolved inorganic phosphorus, SCHLA=Surface chlorophyll *a*, STSS=Surface total suspended solids, BTSS=Bottom total suspended solids, SEECHI=Secchi depth, BDO=Bottom dissolved oxygen, SSALIN=Surface salinity, BSALIN=Bottom salinity, SWTEMP=Surface water temperature, BWTEMP=Bottom water temperature.

| Segment | Season | Layer | Parameter | % BDL | P value | Slope | Baseline | % Change | Direction | Homogeneity test | |
|---------|--------|-------|-----------|-------|---------|-------|----------|-------------|------------|------------------|--|
| | | | | | | | | | | P value | |
| PIAMH | Annual | S | SCHLA | 9.45 | 0.4447 | 0.03 | 7.69 | 8.84 | NO TREND | 0.9213 | |
| PIAMH | Annual | S | STSS | 18.85 | 0.0000 | -0.15 | 6.00 | No Estimate | IMPROVING | 0.8735 | |
| PIAMH | Annual | B | BTSS | 9.69 | 0.0000 | -0.19 | 12.25 | -36.69 | IMPROVING | 0.9138 | |
| PIAMH | Annual | S | SECCHI | 0.00 | 0.0000 | -0.02 | 1.80 | -31.75 | DEGRADING | 0.5732 | |
| PIAMH | Annual | S | SDO | 0.00 | 0.0000 | 0.06 | 9.20 | 15.95 | IMPROVING | 0.9806 | |
| PIAMH | Annual | B | BDO | 0.00 | 0.0000 | 0.06 | 8.28 | 16.71 | IMPROVING | 0.4031 | |
| PIAMH | Annual | S | SSALINITY | 0.00 | 0.0050 | -0.07 | 18.17 | -9.56 | DECREASING | 0.9992 | |
| PIAMH | Annual | B | BSALINITY | 0.00 | 0.0039 | -0.07 | 18.92 | -8.64 | DECREASING | 0.9845 | |
| PIAMH | Annual | S | SWTEMP | 0.00 | 0.3676 | 0.02 | 17.65 | 2.10 | NO TREND | 0.4068 | |
| PIAMH | Annual | B | BWTEMP | 0.00 | 1.0000 | 0.00 | 16.88 | 0.00 | NO TREND | 0.5715 | |
| POCMH | Annual | S | SCHLA | 0.61 | 0.0405 | 0.07 | 8.65 | 18.29 | NO TREND | 0.4075 | |
| POCMH | Annual | S | STSS | 1.20 | 0.0001 | -0.31 | 13.50 | -54.70 | IMPROVING | 0.2995 | |
| POCMH | Annual | B | BTSS | 0.75 | 0.0001 | -0.33 | 17.15 | -46.65 | IMPROVING | 0.3517 | |
| POCMH | Annual | S | SECCHI | 0.00 | 0.0000 | -0.01 | 1.10 | -29.75 | DEGRADING | 0.0726 | |
| POCMH | Annual | S | SDO | 0.00 | 0.0000 | 0.03 | 9.00 | 6.67 | IMPROVING | 0.9847 | |
| POCMH | Annual | B | BDO | 0.00 | 0.0138 | 0.02 | 8.10 | 4.66 | NO TREND | 0.8729 | |
| POCMH | Annual | S | SSALINITY | 0.00 | 0.0004 | -0.08 | 19.02 | -9.59 | DECREASING | 0.9440 | |
| POCMH | Annual | B | BSALINITY | 0.00 | 0.0009 | -0.07 | 18.98 | -8.48 | DECREASING | 0.9424 | |
| POCMH | Annual | S | SWTEMP | 0.00 | 0.4520 | 0.01 | 18.80 | 1.50 | NO TREND | 0.8496 | |
| POCMH | Annual | B | BWTEMP | 0.00 | 0.7941 | 0.00 | 18.70 | 0.36 | NO TREND | 0.7881 | |
| CB6PH | Annual | S | SCHLA | 1.64 | 0.5708 | 0.02 | 6.84 | 5.55 | NO TREND | 0.5236 | |
| CB6PH | Annual | S | STSS | 8.62 | 0.0000 | -0.12 | 7.45 | -38.26 | IMPROVING | 0.5598 | |
| CB6PH | Annual | B | BTSS | 0.96 | 0.0005 | -0.21 | 15.00 | -33.02 | IMPROVING | 0.0219 | |
| CB6PH | Annual | S | SECCHI | 0.00 | 0.0000 | -0.02 | 2.00 | -28.42 | DEGRADING | 0.3408 | |
| CB6PH | Annual | S | SDO | 0.00 | 0.0000 | 0.04 | 8.50 | 12.35 | IMPROVING | 0.7164 | |
| CB6PH | Annual | B | BDO | 0.00 | 0.0017 | 0.02 | 7.09 | 8.08 | IMPROVING | 0.3762 | |
| CB6PH | Annual | S | SSALINITY | 0.00 | 0.0112 | -0.05 | 19.69 | -6.37 | NO TREND | 0.9980 | |
| CB6PH | Annual | B | BSALINITY | 0.00 | 0.0011 | -0.05 | 23.41 | -5.54 | DECREASING | 0.9947 | |
| CB6PH | Annual | S | SWTEMP | 0.00 | 0.7545 | 0.00 | 17.38 | 0.41 | NO TREND | 0.5711 | |
| CB6PH | Annual | B | BWTEMP | 0.00 | 0.9884 | 0.00 | 16.50 | 0.00 | NO TREND | 0.6717 | |
| CB7PH | Annual | S | SCHLA | 2.08 | 0.0917 | 0.04 | 5.10 | 16.70 | NO TREND | 0.2026 | |
| CB7PH | Annual | S | STSS | 7.89 | 0.0000 | -0.10 | 7.00 | -34.29 | IMPROVING | 0.8327 | |
| CB7PH | Annual | B | BTSS | 1.24 | 0.0002 | -0.21 | 15.00 | -33.80 | IMPROVING | 0.0289 | |
| CB7PH | Annual | S | SECCHI | 0.00 | 0.0000 | -0.03 | 2.10 | -28.57 | DEGRADING | 0.1139 | |
| CB7PH | Annual | S | SDO | 0.00 | 0.0000 | 0.04 | 8.30 | 10.41 | IMPROVING | 0.9236 | |
| CB7PH | Annual | B | BDO | 0.00 | 0.0019 | 0.02 | 7.70 | 6.93 | IMPROVING | 0.8800 | |
| CB7PH | Annual | S | SSALINITY | 0.00 | 0.0271 | -0.05 | 20.82 | -5.96 | NO TREND | 0.9145 | |
| CB7PH | Annual | B | BSALINITY | 0.00 | 0.2034 | -0.02 | 24.43 | -2.31 | NO TREND | 0.7423 | |
| CB7PH | Annual | S | SWTEMP | 0.00 | 0.1954 | 0.01 | 16.33 | 1.80 | NO TREND | 0.6741 | |
| CB7PH | Annual | B | BWTEMP | 0.00 | 0.6312 | 0.00 | 16.00 | 0.69 | NO TREND | 0.5153 | |

Appendix A - Section IIE. Virginia Mainstem (1985-2008) - Continued.

| Segment | Season | Layer | Parameter | % BDL | P value | Slope | Baseline | % Change | Direction | Homogeneity test |
|---------|--------|-------|-----------|-------|---------|-------|----------|-------------|------------|------------------|
| | | | | | | | | | | P value |
| CB8PH | Annual | S | SCHLA | 3.03 | 0.0569 | 0.05 | 4.48 | 26.80 | NO TREND | 0.0023 |
| CB8PH | Annual | S | STSS | 7.87 | 0.3790 | 0.02 | 6.53 | 7.82 | NO TREND | 0.3280 |
| CB8PH | Annual | B | BTSS | 1.04 | 0.0482 | -0.10 | 11.73 | -20.52 | NO TREND | 0.6276 |
| CB8PH | Annual | S | SECCHI | 0.00 | 0.0000 | -0.03 | 2.03 | -31.60 | DEGRADING | 0.3094 |
| CB8PH | Annual | S | SDO | 0.00 | 0.0068 | 0.02 | 8.28 | 4.80 | IMPROVING | 0.4875 |
| CB8PH | Annual | B | BDO | 0.00 | 0.0000 | 0.03 | 7.73 | 7.96 | IMPROVING | 0.2966 |
| CB8PH | Annual | S | SSALINITY | 0.00 | 0.0003 | -0.08 | 25.53 | -7.46 | DECREASING | 0.9913 |
| CB8PH | Annual | B | BSALINITY | 0.00 | 0.0000 | -0.06 | 29.92 | -4.56 | DECREASING | 0.6640 |
| CB8PH | Annual | S | SWTEMP | 0.00 | 0.4740 | 0.01 | 15.93 | 1.28 | NO TREND | 0.3430 |
| CB8PH | Annual | B | BWTEMP | 0.00 | 0.1914 | 0.02 | 15.63 | 3.38 | NO TREND | 0.4874 |
| PIAMH | Fall | S | SCHLA | 9.59 | 0.3936 | 0.05 | 5.60 | 19.43 | NO TREND | 0.6450 |
| PIAMH | Fall | S | STSS | 34.25 | 0.0043 | -0.20 | 5.25 | No Estimate | IMPROVING | 0.7759 |
| PIAMH | Fall | B | BTSS | 16.44 | 0.0167 | -0.21 | 7.25 | No Estimate | NO TREND | 0.3695 |
| PIAMH | Fall | S | SECCHI | 0.00 | 0.0001 | -0.03 | 2.40 | -33.33 | DEGRADING | 0.8040 |
| PIAMH | Fall | S | SDO | 0.00 | 0.0001 | 0.06 | 8.95 | 17.22 | IMPROVING | 0.6258 |
| PIAMH | Fall | B | BDO | 0.00 | 0.0001 | 0.07 | 8.35 | 19.16 | IMPROVING | 0.9985 |
| PIAMH | Fall | S | SSALINITY | 0.00 | 0.2204 | -0.05 | 19.52 | -6.52 | NO TREND | 0.7994 |
| PIAMH | Fall | B | BSALINITY | 0.00 | 0.1535 | -0.06 | 20.10 | -7.60 | NO TREND | 0.9134 |
| PIAMH | Fall | S | SWTEMP | 0.00 | 0.6753 | -0.02 | 14.90 | -3.22 | NO TREND | 0.8652 |
| PIAMH | Fall | B | BWTEMP | 0.00 | 0.6304 | -0.02 | 14.50 | -2.70 | NO TREND | 0.8261 |
| POCMH | Fall | S | SCHLA | 1.52 | 0.0093 | 0.16 | 4.91 | 77.83 | DEGRADING | 0.7100 |
| POCMH | Fall | S | STSS | 2.24 | 0.0118 | -0.34 | 10.00 | -81.09 | NO TREND | 0.6557 |
| POCMH | Fall | B | BTSS | 1.49 | 0.0107 | -0.39 | 13.75 | -68.37 | NO TREND | 0.8985 |
| POCMH | Fall | S | SECCHI | 0.00 | 0.0013 | -0.02 | 1.25 | -34.15 | DEGRADING | 0.7875 |
| POCMH | Fall | S | SDO | 0.00 | 0.0465 | 0.02 | 9.33 | 6.31 | NO TREND | 0.5951 |
| POCMH | Fall | B | BDO | 0.00 | 0.1442 | 0.02 | 9.20 | 5.59 | NO TREND | 0.6734 |
| POCMH | Fall | S | SSALINITY | 0.00 | 0.0185 | -0.12 | 21.40 | -13.75 | NO TREND | 0.4124 |
| POCMH | Fall | B | BSALINITY | 0.00 | 0.0067 | -0.11 | 21.52 | -12.05 | DECREASING | 0.7666 |
| POCMH | Fall | S | SWTEMP | 0.00 | 0.8581 | -0.01 | 13.65 | -1.04 | NO TREND | 0.9071 |
| POCMH | Fall | B | BWTEMP | 0.00 | 0.6964 | -0.02 | 13.65 | -3.41 | NO TREND | 0.8804 |
| CB6PH | Fall | S | SCHLA | 1.33 | 0.3967 | 0.03 | 6.27 | 13.10 | NO TREND | 0.9510 |
| CB6PH | Fall | S | STSS | 8.37 | 0.0120 | -0.20 | 5.60 | -85.10 | NO TREND | 0.6594 |
| CB6PH | Fall | B | BTSS | 1.34 | 0.0019 | -0.39 | 12.14 | -76.62 | IMPROVING | 0.8505 |
| CB6PH | Fall | S | SECCHI | 0.00 | 0.0433 | -0.02 | 2.15 | -20.93 | NO TREND | 0.7306 |
| CB6PH | Fall | S | SDO | 0.00 | 0.0002 | 0.05 | 8.88 | 13.16 | IMPROVING | 0.7804 |
| CB6PH | Fall | B | BDO | 0.00 | 0.0040 | 0.04 | 7.75 | 11.61 | IMPROVING | 0.8371 |
| CB6PH | Fall | S | SSALINITY | 0.00 | 0.4562 | -0.02 | 21.61 | -2.68 | NO TREND | 0.8775 |
| CB6PH | Fall | B | BSALINITY | 0.00 | 0.0987 | -0.06 | 24.22 | -5.56 | NO TREND | 0.8838 |
| CB6PH | Fall | S | SWTEMP | 0.00 | 0.5686 | -0.02 | 14.83 | -3.51 | NO TREND | 0.9611 |
| CB6PH | Fall | B | BWTEMP | 0.00 | 0.4301 | -0.04 | 15.20 | -5.56 | NO TREND | 0.9702 |
| CB7PH | Fall | S | SCHLA | 0.88 | 0.2035 | 0.04 | 5.25 | 19.37 | NO TREND | 0.9339 |
| CB7PH | Fall | S | STSS | 8.92 | 0.0159 | -0.20 | 5.09 | -94.35 | NO TREND | 0.7850 |
| CB7PH | Fall | B | BTSS | 2.04 | 0.0179 | -0.21 | 14.48 | -35.03 | NO TREND | 0.9692 |
| CB7PH | Fall | S | SECCHI | 0.00 | 0.0245 | -0.02 | 2.40 | -20.00 | NO TREND | 0.9472 |
| CB7PH | Fall | S | SDO | 0.00 | 0.0022 | 0.04 | 8.48 | 11.83 | IMPROVING | 0.9980 |
| CB7PH | Fall | B | BDO | 0.00 | 0.0139 | 0.03 | 7.90 | 8.68 | NO TREND | 0.8172 |
| CB7PH | Fall | S | SSALINITY | 0.00 | 1.0000 | 0.00 | 23.19 | 0.00 | NO TREND | 0.9771 |
| CB7PH | Fall | B | BSALINITY | 0.00 | 0.2796 | -0.04 | 25.56 | -4.16 | NO TREND | 0.4736 |
| CB7PH | Fall | S | SWTEMP | 0.00 | 0.6931 | 0.01 | 14.55 | 1.79 | NO TREND | 0.9081 |
| CB7PH | Fall | B | BWTEMP | 0.00 | 0.9883 | 0.00 | 14.70 | 0.00 | NO TREND | 0.7697 |

Appendix A - Section IIE. Virginia Mainstem (1985-2008) - Continued.

| Segment | Season | Layer | Parameter | % BDL | P value | Slope | Baseline | % Change | Homogeneity test | |
|---------|--------|-------|-----------|-------|---------|-------|----------|-------------|------------------|---------|
| | | | | | | | | | Direction | P value |
| CB8PH | Fall | S | SCHLA | 1.45 | 0.0981 | 0.08 | 3.21 | 59.59 | NO TREND | 0.0570 |
| CB8PH | Fall | S | STSS | 5.17 | 0.5225 | 0.03 | 5.63 | 12.66 | NO TREND | 0.8812 |
| CB8PH | Fall | B | BTSS | 0.00 | 0.0243 | -0.26 | 14.28 | -43.59 | NO TREND | 0.9632 |
| CB8PH | Fall | S | SECCHI | 0.00 | 0.0328 | -0.02 | 2.00 | -21.82 | NO TREND | 0.6177 |
| CB8PH | Fall | S | SDO | 0.00 | 0.1284 | 0.02 | 8.63 | 4.59 | NO TREND | 0.6704 |
| CB8PH | Fall | B | BDO | 0.00 | 0.0199 | 0.03 | 7.70 | 8.15 | NO TREND | 0.7499 |
| CB8PH | Fall | S | SSALINITY | 0.00 | 0.1287 | -0.06 | 25.73 | -5.69 | NO TREND | 0.6264 |
| CB8PH | Fall | B | BSALINITY | 0.00 | 0.0128 | -0.07 | 30.38 | -5.75 | NO TREND | 0.7319 |
| CB8PH | Fall | S | SWTEMP | 0.00 | 0.5315 | 0.02 | 14.43 | 2.77 | NO TREND | 0.2086 |
| CB8PH | Fall | B | BWTEMP | 0.00 | 0.4040 | 0.03 | 14.80 | 4.73 | NO TREND | 0.5506 |
| PIAMH | SAV1 | S | SCHLA | 11.60 | 0.2138 | 0.06 | 7.77 | 17.19 | NO TREND | 0.8327 |
| PIAMH | SAV1 | S | STSS | 22.95 | 0.0004 | -0.14 | 6.00 | No Estimate | IMPROVING | 0.7614 |
| PIAMH | SAV1 | B | BTSS | 10.93 | 0.0001 | -0.20 | 12.63 | -38.02 | IMPROVING | 0.9753 |
| PIAMH | SAV1 | S | SECCHI | 0.00 | 0.0000 | -0.02 | 1.60 | -32.14 | DEGRADING | 0.4959 |
| PIAMH | SAV1 | S | SDO | 0.00 | 0.0000 | 0.06 | 7.78 | 19.29 | IMPROVING | 0.8512 |
| PIAMH | SAV1 | B | BDO | 0.00 | 0.0000 | 0.06 | 6.78 | 21.41 | IMPROVING | 0.1478 |
| PIAMH | SAV1 | S | SSALINITY | 0.00 | 0.0072 | -0.08 | 18.91 | -9.99 | DECREASING | 0.9982 |
| PIAMH | SAV1 | B | BSALINITY | 0.00 | 0.0070 | -0.07 | 19.41 | -9.20 | DECREASING | 0.8835 |
| PIAMH | SAV1 | S | SWTEMP | 0.00 | 0.9072 | 0.00 | 21.70 | -0.34 | NO TREND | 0.3395 |
| PIAMH | SAV1 | B | BWTEMP | 0.00 | 0.3171 | -0.02 | 21.48 | -2.05 | NO TREND | 0.6758 |
| POCMH | SAV1 | S | SCHLA | 0.30 | 0.0932 | 0.06 | 8.96 | 16.18 | NO TREND | 0.5486 |
| POCMH | SAV1 | S | STSS | 2.35 | 0.0006 | -0.31 | 13.08 | -56.21 | IMPROVING | 0.3801 |
| POCMH | SAV1 | B | BTSS | 1.47 | 0.0015 | -0.32 | 18.43 | -41.61 | IMPROVING | 0.1869 |
| POCMH | SAV1 | S | SECCHI | 0.00 | 0.0000 | -0.01 | 1.08 | -27.91 | DEGRADING | 0.0631 |
| POCMH | SAV1 | S | SDO | 0.00 | 0.0017 | 0.02 | 7.33 | 7.21 | IMPROVING | 0.9477 |
| POCMH | SAV1 | B | BDO | 0.00 | 0.0927 | 0.01 | 6.95 | 4.60 | NO TREND | 0.6562 |
| POCMH | SAV1 | S | SSALINITY | 0.00 | 0.0078 | -0.07 | 19.11 | -8.53 | DECREASING | 0.9949 |
| POCMH | SAV1 | B | BSALINITY | 0.00 | 0.0121 | -0.06 | 19.24 | -7.51 | NO TREND | 0.9513 |
| POCMH | SAV1 | S | SWTEMP | 0.00 | 0.9240 | 0.00 | 23.23 | 0.09 | NO TREND | 0.7880 |
| POCMH | SAV1 | B | BWTEMP | 0.00 | 0.7674 | -0.01 | 22.98 | -0.57 | NO TREND | 0.7341 |
| CB6PH | SAV1 | S | SCHLA | 2.64 | 0.2301 | 0.04 | 6.32 | 15.91 | NO TREND | 0.5825 |
| CB6PH | SAV1 | S | STSS | 11.18 | 0.0130 | -0.08 | 5.98 | -32.69 | NO TREND | 0.2972 |
| CB6PH | SAV1 | B | BTSS | 1.47 | 0.1461 | -0.09 | 11.95 | -18.61 | NO TREND | 0.0060 |
| CB6PH | SAV1 | S | SECCHI | 0.00 | 0.0000 | -0.03 | 1.98 | -30.38 | DEGRADING | 0.3618 |
| CB6PH | SAV1 | S | SDO | 0.00 | 0.0000 | 0.05 | 7.33 | 16.06 | IMPROVING | 0.8937 |
| CB6PH | SAV1 | B | BDO | 0.00 | 0.0052 | 0.03 | 5.51 | 12.16 | IMPROVING | 0.1747 |
| CB6PH | SAV1 | S | SSALINITY | 0.00 | 0.0410 | -0.05 | 20.02 | -6.57 | NO TREND | 0.9588 |
| CB6PH | SAV1 | B | BSALINITY | 0.00 | 0.0383 | -0.04 | 24.26 | -4.24 | NO TREND | 0.9640 |
| CB6PH | SAV1 | S | SWTEMP | 0.00 | 0.4818 | -0.01 | 22.23 | -1.54 | NO TREND | 0.6809 |
| CB6PH | SAV1 | B | BWTEMP | 0.00 | 0.2893 | -0.02 | 21.65 | -2.04 | NO TREND | 0.9741 |
| CB7PH | SAV1 | S | SCHLA | 3.22 | 0.0041 | 0.07 | 4.55 | 37.77 | DEGRADING | 0.7980 |
| CB7PH | SAV1 | S | STSS | 9.53 | 0.0172 | -0.07 | 6.25 | -25.60 | NO TREND | 0.6166 |
| CB7PH | SAV1 | B | BTSS | 1.74 | 0.0216 | -0.15 | 13.76 | -25.85 | NO TREND | 0.0024 |
| CB7PH | SAV1 | S | SECCHI | 0.00 | 0.0000 | -0.03 | 2.13 | -33.88 | DEGRADING | 0.3872 |
| CB7PH | SAV1 | S | SDO | 0.00 | 0.0000 | 0.03 | 7.65 | 10.46 | IMPROVING | 0.8996 |
| CB7PH | SAV1 | B | BDO | 0.00 | 0.0036 | 0.03 | 6.28 | 9.82 | IMPROVING | 0.8411 |
| CB7PH | SAV1 | S | SSALINITY | 0.00 | 0.0534 | -0.05 | 21.33 | -6.04 | NO TREND | 0.6948 |
| CB7PH | SAV1 | B | BSALINITY | 0.00 | 0.1385 | -0.03 | 25.37 | -2.84 | NO TREND | 0.6793 |
| CB7PH | SAV1 | S | SWTEMP | 0.00 | 0.9925 | 0.00 | 22.60 | 0.00 | NO TREND | 0.6811 |
| CB7PH | SAV1 | B | BWTEMP | 0.00 | 0.3293 | -0.01 | 21.93 | -1.37 | NO TREND | 0.8186 |

Appendix A - Section IIE. Virginia Mainstem (1985-2008) - Continued.

| Segment | Season | Layer | Parameter | % BDL | P value | Slope | Baseline | % Change | Direction | Homogeneity test | |
|---------|--------|-------|-----------|-------|---------|-------|----------|----------|------------|------------------|--|
| | | | | | | | | | | P value | |
| CB8PH | SAV1 | S | SCHLA | 4.87 | 0.0128 | 0.07 | 4.44 | 40.26 | NO TREND | 0.0388 | |
| CB8PH | SAV1 | S | STSS | 8.68 | 0.0808 | 0.05 | 6.35 | 20.79 | NO TREND | 0.9139 | |
| CB8PH | SAV1 | B | BTSS | 0.91 | 0.5607 | -0.03 | 10.83 | -7.57 | NO TREND | 0.3961 | |
| CB8PH | SAV1 | S | SECCHI | 0.00 | 0.0000 | -0.04 | 2.20 | -40.61 | DEGRADING | 0.8690 | |
| CB8PH | SAV1 | S | SDO | 0.00 | 0.0194 | 0.02 | 7.68 | 5.21 | NO TREND | 0.2105 | |
| CB8PH | SAV1 | B | BDO | 0.00 | 0.0000 | 0.03 | 6.44 | 12.36 | IMPROVING | 0.8430 | |
| CB8PH | SAV1 | S | SSALINITY | 0.00 | 0.0005 | -0.09 | 25.30 | -8.66 | DECREASING | 0.9968 | |
| CB8PH | SAV1 | B | BSALINITY | 0.00 | 0.0000 | -0.06 | 29.92 | -4.69 | DECREASING | 0.6241 | |
| CB8PH | SAV1 | S | SWTEMP | 0.00 | 0.1977 | -0.02 | 21.58 | -1.90 | NO TREND | 0.8713 | |
| CB8PH | SAV1 | B | BWTEMP | 0.00 | 0.4626 | -0.01 | 19.38 | -1.61 | NO TREND | 0.9348 | |
| PIAMH | SAV2 | S | SCHLA | 6.44 | 0.2056 | 0.03 | 4.94 | 13.73 | NO TREND | 0.4107 | |
| PIAMH | SAV2 | S | STSS | 12.83 | 0.0016 | -0.13 | 7.95 | -40.13 | IMPROVING | 0.8717 | |
| PIAMH | SAV2 | B | BTSS | 4.15 | 0.0096 | -0.13 | 9.28 | -34.70 | IMPROVING | 0.9563 | |
| PIAMH | SAV2 | S | SECCHI | 0.00 | 0.0000 | -0.02 | 1.78 | -28.97 | DEGRADING | 0.7069 | |
| PIAMH | SAV2 | S | SDO | 0.00 | 0.0000 | 0.03 | 8.68 | 9.22 | IMPROVING | 0.9966 | |
| PIAMH | SAV2 | B | BDO | 0.00 | 0.0000 | 0.03 | 8.03 | 10.33 | IMPROVING | 0.7261 | |
| PIAMH | SAV2 | S | SSALINITY | 0.00 | 0.0276 | -0.08 | 18.46 | -9.75 | NO TREND | 0.9770 | |
| PIAMH | SAV2 | B | BSALINITY | 0.00 | 0.0119 | -0.08 | 18.64 | -10.30 | NO TREND | 0.9381 | |
| PIAMH | SAV2 | S | SWTEMP | 0.00 | 0.3262 | -0.02 | 17.48 | -2.75 | NO TREND | 0.5656 | |
| PIAMH | SAV2 | B | BWTEMP | 0.00 | 0.2421 | -0.02 | 17.08 | -3.03 | NO TREND | 0.5774 | |
| POCMH | SAV2 | S | SCHLA | 0.21 | 0.0119 | 0.06 | 5.19 | 25.50 | NO TREND | 0.7750 | |
| POCMH | SAV2 | S | STSS | 1.46 | 0.0219 | -0.17 | 10.68 | -37.47 | NO TREND | 0.9195 | |
| POCMH | SAV2 | B | BTSS | 0.84 | 0.0767 | -0.14 | 11.40 | -29.01 | NO TREND | 0.6243 | |
| POCMH | SAV2 | S | SECCHI | 0.00 | 0.0000 | -0.02 | 1.50 | -34.29 | DEGRADING | 0.8081 | |
| POCMH | SAV2 | S | SDO | 0.00 | 0.0003 | 0.02 | 8.08 | 6.93 | IMPROVING | 0.8049 | |
| POCMH | SAV2 | B | BDO | 0.00 | 0.0053 | 0.02 | 7.95 | 5.47 | IMPROVING | 0.6032 | |
| POCMH | SAV2 | S | SSALINITY | 0.00 | 0.0309 | -0.06 | 19.03 | -7.57 | NO TREND | 0.9887 | |
| POCMH | SAV2 | B | BSALINITY | 0.00 | 0.0751 | -0.05 | 19.07 | -6.71 | NO TREND | 0.9990 | |
| POCMH | SAV2 | S | SWTEMP | 0.00 | 0.5737 | -0.01 | 17.63 | -1.50 | NO TREND | 0.8858 | |
| POCMH | SAV2 | B | BWTEMP | 0.00 | 0.3900 | -0.02 | 17.50 | -2.74 | NO TREND | 0.8127 | |
| CB6PH | SAV2 | S | SCHLA | 2.16 | 0.1118 | 0.04 | 4.59 | 19.07 | NO TREND | 0.4746 | |
| CB6PH | SAV2 | S | STSS | 8.67 | 0.0637 | -0.08 | 7.65 | -23.89 | NO TREND | 0.5519 | |
| CB6PH | SAV2 | B | BTSS | 1.01 | 0.3727 | -0.06 | 10.16 | -14.10 | NO TREND | 0.0316 | |
| CB6PH | SAV2 | S | SECCHI | 0.00 | 0.0000 | -0.02 | 1.85 | -27.80 | DEGRADING | 0.6821 | |
| CB6PH | SAV2 | S | SDO | 0.00 | 0.0005 | 0.02 | 7.89 | 6.94 | IMPROVING | 0.7573 | |
| CB6PH | SAV2 | B | BDO | 0.00 | 0.0009 | 0.02 | 7.35 | 6.97 | IMPROVING | 0.3067 | |
| CB6PH | SAV2 | S | SSALINITY | 0.00 | 0.0318 | -0.06 | 19.07 | -8.02 | NO TREND | 0.9962 | |
| CB6PH | SAV2 | B | BSALINITY | 0.00 | 0.0352 | -0.06 | 21.29 | -6.54 | NO TREND | 0.9970 | |
| CB6PH | SAV2 | S | SWTEMP | 0.00 | 0.5844 | -0.01 | 17.13 | -1.56 | NO TREND | 0.4933 | |
| CB6PH | SAV2 | B | BWTEMP | 0.00 | 0.7229 | -0.01 | 16.40 | -1.15 | NO TREND | 0.5760 | |
| CB7PH | SAV2 | S | SCHLA | 2.67 | 0.0556 | 0.04 | 4.30 | 20.36 | NO TREND | 0.3952 | |
| CB7PH | SAV2 | S | STSS | 8.29 | 0.0301 | -0.09 | 7.08 | -28.98 | NO TREND | 0.8404 | |
| CB7PH | SAV2 | B | BTSS | 1.44 | 0.1652 | -0.11 | 10.93 | -23.22 | NO TREND | 0.0868 | |
| CB7PH | SAV2 | S | SECCHI | 0.00 | 0.0000 | -0.02 | 2.05 | -26.81 | DEGRADING | 0.4318 | |
| CB7PH | SAV2 | S | SDO | 0.00 | 0.0001 | 0.03 | 8.23 | 8.05 | IMPROVING | 0.8443 | |
| CB7PH | SAV2 | B | BDO | 0.00 | 0.0011 | 0.02 | 7.70 | 6.65 | IMPROVING | 0.4194 | |
| CB7PH | SAV2 | S | SSALINITY | 0.00 | 0.0335 | -0.07 | 19.77 | -7.96 | NO TREND | 0.8942 | |
| CB7PH | SAV2 | B | BSALINITY | 0.00 | 0.1009 | -0.04 | 21.52 | -4.73 | NO TREND | 0.9734 | |
| CB7PH | SAV2 | S | SWTEMP | 0.00 | 0.9032 | 0.00 | 16.23 | -0.30 | NO TREND | 0.6953 | |
| CB7PH | SAV2 | B | BWTEMP | 0.00 | 0.7459 | -0.01 | 15.80 | -0.97 | NO TREND | 0.5739 | |

Appendix A - Section IIE. Virginia Mainstem (1985-2008) - Continued.

| Segment | Season | Layer | Parameter | % BDL | P value | Slope | Baseline | % Change | Direction | Homogeneity test |
|---------|---------|-------|-----------|-------|---------|-------|----------|-------------|------------|------------------|
| | | | | | | | | | | P value |
| CB8PH | SAV2 | S | SCHLA | 3.59 | 0.1538 | 0.03 | 4.55 | 14.75 | NO TREND | 0.2928 |
| CB8PH | SAV2 | S | STSS | 9.47 | 0.4025 | -0.04 | 6.93 | -13.43 | NO TREND | 0.3183 |
| CB8PH | SAV2 | B | BTSS | 1.01 | 0.2346 | -0.10 | 9.08 | -26.45 | NO TREND | 0.2081 |
| CB8PH | SAV2 | S | SECCHI | 0.00 | 0.0000 | -0.02 | 1.98 | -26.04 | DEGRADING | 0.7720 |
| CB8PH | SAV2 | S | SDO | 0.00 | 0.0004 | 0.02 | 8.26 | 6.78 | IMPROVING | 0.5039 |
| CB8PH | SAV2 | B | BDO | 0.00 | 0.0000 | 0.02 | 7.90 | 7.43 | IMPROVING | 0.4037 |
| CB8PH | SAV2 | S | SSALINITY | 0.00 | 0.0755 | -0.06 | 21.38 | -6.17 | NO TREND | 0.9594 |
| CB8PH | SAV2 | B | BSALINITY | 0.00 | 0.0077 | -0.06 | 24.74 | -5.47 | DECREASING | 0.4051 |
| CB8PH | SAV2 | S | SWTEMP | 0.00 | 0.6946 | -0.01 | 16.05 | -1.45 | NO TREND | 0.2180 |
| CB8PH | SAV2 | B | BWTEMP | 0.00 | 0.7644 | -0.01 | 15.58 | -0.80 | NO TREND | 0.2756 |
| PIAMH | Spring1 | S | SCHLA | 18.28 | 0.6337 | -0.07 | 8.83 | No Estimate | NO TREND | 0.7974 |
| PIAMH | Spring1 | S | STSS | 24.21 | 0.0229 | -0.10 | 5.75 | No Estimate | NO TREND | 0.4975 |
| PIAMH | Spring1 | B | BTSS | 14.74 | 0.1472 | -0.09 | 9.63 | -21.37 | NO TREND | 0.8336 |
| PIAMH | Spring1 | S | SECCHI | 0.00 | 0.0000 | -0.04 | 2.00 | -43.64 | DEGRADING | 0.4691 |
| PIAMH | Spring1 | S | SDO | 0.00 | 0.0013 | 0.06 | 9.70 | 15.28 | IMPROVING | 0.9955 |
| PIAMH | Spring1 | B | BDO | 0.00 | 0.0006 | 0.08 | 9.58 | 19.11 | IMPROVING | 0.2903 |
| PIAMH | Spring1 | S | SSALINITY | 0.00 | 0.0566 | -0.10 | 15.67 | -15.31 | NO TREND | 0.8170 |
| PIAMH | Spring1 | B | BSALINITY | 0.00 | 0.0181 | -0.11 | 15.77 | -17.08 | NO TREND | 0.7948 |
| PIAMH | Spring1 | S | SWTEMP | 0.00 | 0.3287 | -0.03 | 14.58 | -4.61 | NO TREND | 0.2376 |
| PIAMH | Spring1 | B | BWTEMP | 0.00 | 0.2109 | -0.03 | 13.63 | -5.92 | NO TREND | 0.2720 |
| POCMH | Spring1 | S | SCHLA | 0.00 | 0.1564 | 0.13 | 7.97 | 40.15 | NO TREND | 0.5536 |
| POCMH | Spring1 | S | STSS | 2.73 | 0.2996 | -0.13 | 15.00 | -20.00 | NO TREND | 0.8496 |
| POCMH | Spring1 | B | BTSS | 1.65 | 0.7701 | -0.05 | 15.58 | -8.35 | NO TREND | 0.5244 |
| POCMH | Spring1 | S | SECCHI | 0.00 | 0.0000 | -0.03 | 1.53 | -49.18 | DEGRADING | 0.6158 |
| POCMH | Spring1 | S | SDO | 0.00 | 0.0633 | 0.03 | 9.40 | 7.57 | NO TREND | 0.5992 |
| POCMH | Spring1 | B | BDO | 0.00 | 0.4916 | 0.01 | 9.18 | 2.91 | NO TREND | 0.9620 |
| POCMH | Spring1 | S | SSALINITY | 0.00 | 0.0678 | -0.07 | 17.11 | -10.08 | NO TREND | 0.8918 |
| POCMH | Spring1 | B | BSALINITY | 0.00 | 0.1985 | -0.06 | 17.44 | -8.12 | NO TREND | 0.9821 |
| POCMH | Spring1 | S | SWTEMP | 0.00 | 0.7148 | -0.01 | 14.58 | -1.37 | NO TREND | 0.6520 |
| POCMH | Spring1 | B | BWTEMP | 0.00 | 0.4297 | -0.03 | 14.13 | -5.01 | NO TREND | 0.5123 |
| CB6PH | Spring1 | S | SCHLA | 3.60 | 0.9088 | 0.01 | 8.33 | 2.45 | NO TREND | 0.4894 |
| CB6PH | Spring1 | S | STSS | 13.28 | 0.6674 | -0.01 | 6.00 | -4.54 | NO TREND | 0.3687 |
| CB6PH | Spring1 | B | BTSS | 1.53 | 0.3519 | 0.07 | 13.33 | 12.98 | NO TREND | 0.0313 |
| CB6PH | Spring1 | S | SECCHI | 0.00 | 0.0002 | -0.04 | 2.25 | -39.39 | DEGRADING | 0.4983 |
| CB6PH | Spring1 | S | SDO | 0.00 | 0.0856 | 0.03 | 10.13 | 7.50 | NO TREND | 0.5635 |
| CB6PH | Spring1 | B | BDO | 0.00 | 0.1399 | 0.02 | 9.08 | 5.58 | NO TREND | 0.1276 |
| CB6PH | Spring1 | S | SSALINITY | 0.00 | 0.0712 | -0.08 | 17.09 | -10.71 | NO TREND | 0.9829 |
| CB6PH | Spring1 | B | BSALINITY | 0.00 | 0.0806 | -0.07 | 22.90 | -7.26 | NO TREND | 0.9845 |
| CB6PH | Spring1 | S | SWTEMP | 0.00 | 0.7310 | -0.01 | 13.05 | -1.83 | NO TREND | 0.1710 |
| CB6PH | Spring1 | B | BWTEMP | 0.00 | 0.9429 | 0.00 | 11.45 | -0.16 | NO TREND | 0.2360 |
| CB7PH | Spring1 | S | SCHLA | 4.17 | 0.5667 | 0.03 | 5.14 | 13.13 | NO TREND | 0.2365 |
| CB7PH | Spring1 | S | STSS | 11.44 | 0.3822 | -0.03 | 6.25 | -13.10 | NO TREND | 0.6842 |
| CB7PH | Spring1 | B | BTSS | 1.67 | 0.8188 | 0.02 | 12.28 | 4.58 | NO TREND | 0.0439 |
| CB7PH | Spring1 | S | SECCHI | 0.00 | 0.0000 | -0.04 | 2.43 | -41.24 | DEGRADING | 0.1779 |
| CB7PH | Spring1 | S | SDO | 0.00 | 0.0211 | 0.05 | 9.38 | 12.80 | NO TREND | 0.5301 |
| CB7PH | Spring1 | B | BDO | 0.00 | 0.1600 | 0.02 | 8.81 | 5.75 | NO TREND | 0.2270 |
| CB7PH | Spring1 | S | SSALINITY | 0.00 | 0.0758 | -0.09 | 19.41 | -11.23 | NO TREND | 0.5116 |
| CB7PH | Spring1 | B | BSALINITY | 0.00 | 0.2764 | -0.04 | 24.11 | -3.84 | NO TREND | 0.7132 |
| CB7PH | Spring1 | S | SWTEMP | 0.00 | 0.7964 | 0.00 | 13.00 | 0.65 | NO TREND | 0.3812 |
| CB7PH | Spring1 | B | BWTEMP | 0.00 | 0.9771 | 0.00 | 12.25 | -0.05 | NO TREND | 0.2362 |

Appendix A - Section IIE. Virginia Mainstem (1985-2008) - Continued.

| Segment | Season | Layer | Parameter | % BDL | P value | Slope | Baseline | % Change | Direction | Homogeneity test | |
|---------|---------|-------|-----------|-------|---------|-------|----------|-------------|-----------|------------------|--|
| | | | | | | | | | | P value | |
| CB8PH | Spring1 | S | SCHLA | 6.32 | 0.8696 | -0.02 | 5.02 | -9.89 | NO TREND | 0.2820 | |
| CB8PH | Spring1 | S | STSS | 10.14 | 0.2826 | 0.06 | 5.65 | 24.96 | NO TREND | 0.9331 | |
| CB8PH | Spring1 | B | BTSS | 1.75 | 0.5707 | 0.05 | 8.80 | 13.94 | NO TREND | 0.2445 | |
| CB8PH | Spring1 | S | SECCHI | 0.00 | 0.0001 | -0.04 | 2.20 | -39.32 | DEGRADING | 0.5993 | |
| CB8PH | Spring1 | S | SDO | 0.00 | 0.0861 | 0.03 | 9.50 | 7.79 | NO TREND | 0.2328 | |
| CB8PH | Spring1 | B | BDO | 0.00 | 0.0116 | 0.03 | 9.08 | 8.13 | NO TREND | 0.1025 | |
| CB8PH | Spring1 | S | SSALINITY | 0.00 | 0.1994 | -0.06 | 23.23 | -6.08 | NO TREND | 0.6486 | |
| CB8PH | Spring1 | B | BSALINITY | 0.00 | 0.0103 | -0.06 | 29.43 | -4.83 | NO TREND | 0.1385 | |
| CB8PH | Spring1 | S | SWTEMP | 0.00 | 0.9050 | -0.01 | 12.83 | -1.26 | NO TREND | 0.0464 | |
| CB8PH | Spring1 | B | BWTEMP | 0.00 | 0.9881 | 0.00 | 10.38 | 0.26 | NO TREND | 0.0675 | |
| PIAMH | Spring2 | S | SCHLA | 13.08 | 0.8523 | 0.02 | 7.93 | 6.66 | NO TREND | 0.3960 | |
| PIAMH | Spring2 | S | STSS | 16.51 | 0.1135 | -0.09 | 5.75 | No Estimate | NO TREND | 0.6681 | |
| PIAMH | Spring2 | B | BTSS | 6.42 | 0.0163 | -0.17 | 11.50 | -35.05 | NO TREND | 0.7737 | |
| PIAMH | Spring2 | S | SECCHI | 0.00 | 0.0000 | -0.03 | 1.83 | -39.45 | DEGRADING | 0.2516 | |
| PIAMH | Spring2 | S | SDO | 0.00 | 0.0040 | 0.05 | 9.23 | 13.36 | IMPROVING | 0.8920 | |
| PIAMH | Spring2 | B | BDO | 0.00 | 0.0015 | 0.07 | 7.63 | 21.38 | IMPROVING | 0.1933 | |
| PIAMH | Spring2 | S | SSALINITY | 0.00 | 0.0489 | -0.09 | 17.57 | -12.94 | NO TREND | 0.8614 | |
| PIAMH | Spring2 | B | BSALINITY | 0.00 | 0.0107 | -0.11 | 18.00 | -14.28 | NO TREND | 0.9229 | |
| PIAMH | Spring2 | S | SWTEMP | 0.00 | 0.3175 | -0.03 | 18.58 | -3.82 | NO TREND | 0.2814 | |
| PIAMH | Spring2 | B | BWTEMP | 0.00 | 0.2323 | -0.03 | 17.85 | -4.68 | NO TREND | 0.2664 | |
| POCMH | Spring2 | S | SCHLA | 0.49 | 0.0450 | 0.14 | 7.43 | 45.85 | NO TREND | 0.3922 | |
| POCMH | Spring2 | S | STSS | 2.45 | 0.1736 | -0.21 | 13.08 | -37.83 | NO TREND | 0.9612 | |
| POCMH | Spring2 | B | BTSS | 1.46 | 0.2579 | -0.19 | 17.75 | -25.63 | NO TREND | 0.1256 | |
| POCMH | Spring2 | S | SECCHI | 0.00 | 0.0000 | -0.03 | 1.75 | -34.29 | DEGRADING | 0.5689 | |
| POCMH | Spring2 | S | SDO | 0.00 | 0.0326 | 0.02 | 8.03 | 7.16 | NO TREND | 0.5863 | |
| POCMH | Spring2 | B | BDO | 0.00 | 0.9314 | 0.00 | 7.85 | 0.00 | NO TREND | 0.7624 | |
| POCMH | Spring2 | S | SSALINITY | 0.00 | 0.0712 | -0.07 | 18.21 | -9.47 | NO TREND | 0.9130 | |
| POCMH | Spring2 | B | BSALINITY | 0.00 | 0.1152 | -0.07 | 18.26 | -9.17 | NO TREND | 0.8411 | |
| POCMH | Spring2 | S | SWTEMP | 0.00 | 0.9429 | 0.00 | 19.25 | -0.06 | NO TREND | 0.4291 | |
| POCMH | Spring2 | B | BWTEMP | 0.00 | 0.5284 | -0.01 | 19.05 | -1.79 | NO TREND | 0.4114 | |
| CB6PH | Spring2 | S | SCHLA | 3.21 | 0.8411 | -0.01 | 6.99 | -4.29 | NO TREND | 0.4275 | |
| CB6PH | Spring2 | S | STSS | 11.82 | 0.8523 | -0.01 | 5.25 | -3.23 | NO TREND | 0.5013 | |
| CB6PH | Spring2 | B | BTSS | 1.55 | 0.0831 | 0.14 | 10.16 | 33.96 | NO TREND | 0.2558 | |
| CB6PH | Spring2 | S | SECCHI | 0.00 | 0.0000 | -0.03 | 2.23 | -35.51 | DEGRADING | 0.3804 | |
| CB6PH | Spring2 | S | SDO | 0.00 | 0.0054 | 0.05 | 8.05 | 14.24 | IMPROVING | 0.8626 | |
| CB6PH | Spring2 | B | BDO | 0.00 | 0.2460 | 0.02 | 6.51 | 5.96 | NO TREND | 0.0706 | |
| CB6PH | Spring2 | S | SSALINITY | 0.00 | 0.0587 | -0.09 | 18.38 | -12.31 | NO TREND | 0.9685 | |
| CB6PH | Spring2 | B | BSALINITY | 0.00 | 0.1562 | -0.06 | 22.90 | -5.88 | NO TREND | 0.9526 | |
| CB6PH | Spring2 | S | SWTEMP | 0.00 | 0.4917 | -0.02 | 18.50 | -2.73 | NO TREND | 0.3687 | |
| CB6PH | Spring2 | B | BWTEMP | 0.00 | 0.3744 | -0.02 | 17.38 | -3.44 | NO TREND | 0.8551 | |
| CB7PH | Spring2 | S | SCHLA | 3.65 | 0.1876 | 0.06 | 4.17 | 35.35 | NO TREND | 0.4486 | |
| CB7PH | Spring2 | S | STSS | 10.53 | 0.6884 | -0.02 | 5.68 | -7.15 | NO TREND | 0.9797 | |
| CB7PH | Spring2 | B | BTSS | 1.75 | 0.2024 | 0.12 | 11.28 | 26.20 | NO TREND | 0.3027 | |
| CB7PH | Spring2 | S | SECCHI | 0.00 | 0.0000 | -0.04 | 2.30 | -44.72 | DEGRADING | 0.2919 | |
| CB7PH | Spring2 | S | SDO | 0.00 | 0.0015 | 0.05 | 8.23 | 14.91 | IMPROVING | 0.8777 | |
| CB7PH | Spring2 | B | BDO | 0.00 | 0.0804 | 0.02 | 7.30 | 8.22 | NO TREND | 0.4399 | |
| CB7PH | Spring2 | S | SSALINITY | 0.00 | 0.0392 | -0.10 | 20.01 | -12.28 | NO TREND | 0.4675 | |
| CB7PH | Spring2 | B | BSALINITY | 0.00 | 0.1692 | -0.05 | 24.21 | -5.18 | NO TREND | 0.7370 | |
| CB7PH | Spring2 | S | SWTEMP | 0.00 | 0.8410 | 0.00 | 17.60 | 0.34 | NO TREND | 0.4203 | |
| CB7PH | Spring2 | B | BWTEMP | 0.00 | 0.5379 | -0.01 | 16.73 | -1.79 | NO TREND | 0.6817 | |

Appendix A - Section IIE. Virginia Mainstem (1985-2008) - Continued.

| Segment | Season | Layer | Parameter | % BDL | P value | Slope | Baseline | % Change | Direction | Homogeneity test | |
|---------|---------|-------|-----------|-------|---------|-------|----------|----------|------------|------------------|--|
| | | | | | | | | | | P value | |
| CB8PH | Spring2 | S | SCHLA | 5.71 | 0.1891 | 0.07 | 4.47 | 37.80 | NO TREND | 0.8066 | |
| CB8PH | Spring2 | S | STSS | 11.19 | 0.4555 | 0.04 | 6.35 | 15.37 | NO TREND | 0.9835 | |
| CB8PH | Spring2 | B | BTSS | 1.86 | 0.2826 | 0.07 | 10.73 | 16.43 | NO TREND | 0.4857 | |
| CB8PH | Spring2 | S | SECCHI | 0.00 | 0.0000 | -0.04 | 2.20 | -46.75 | DEGRADING | 0.8479 | |
| CB8PH | Spring2 | S | SDO | 0.00 | 0.0252 | 0.03 | 8.26 | 9.72 | NO TREND | 0.6069 | |
| CB8PH | Spring2 | B | BDO | 0.00 | 0.0002 | 0.04 | 7.83 | 11.33 | IMPROVING | 0.8845 | |
| CB8PH | Spring2 | S | SSALINITY | 0.00 | 0.0489 | -0.09 | 23.90 | -9.18 | NO TREND | 0.9972 | |
| CB8PH | Spring2 | B | BSALINITY | 0.00 | 0.0002 | -0.07 | 29.92 | -5.40 | DECREASING | 0.6619 | |
| CB8PH | Spring2 | S | SWTEMP | 0.00 | 0.2630 | -0.03 | 17.43 | -4.10 | NO TREND | 0.5322 | |
| CB8PH | Spring2 | B | BWTEMP | 0.00 | 0.2268 | -0.03 | 15.63 | -4.55 | NO TREND | 0.7974 | |
| PIAMH | Summer1 | S | SCHLA | 1.76 | 0.1245 | 0.07 | 7.95 | 21.73 | NO TREND | 0.9720 | |
| PIAMH | Summer1 | S | STSS | 7.69 | 0.0018 | -0.18 | 8.25 | -53.33 | IMPROVING | 0.5552 | |
| PIAMH | Summer1 | B | BTSS | 1.78 | 0.0012 | -0.25 | 19.00 | -31.04 | IMPROVING | 0.8427 | |
| PIAMH | Summer1 | S | SECCHI | 0.00 | 0.0000 | -0.02 | 1.35 | -32.32 | DEGRADING | 0.2893 | |
| PIAMH | Summer1 | S | SDO | 0.00 | 0.0000 | 0.06 | 7.28 | 20.38 | IMPROVING | 0.6449 | |
| PIAMH | Summer1 | B | BDO | 0.00 | 0.0145 | 0.05 | 6.45 | 18.60 | NO TREND | 0.0974 | |
| PIAMH | Summer1 | S | SSALINITY | 0.00 | 0.0738 | -0.07 | 19.41 | -8.50 | NO TREND | 0.9919 | |
| PIAMH | Summer1 | B | BSALINITY | 0.00 | 0.1512 | -0.06 | 19.99 | -6.96 | NO TREND | 0.7529 | |
| PIAMH | Summer1 | S | SWTEMP | 0.00 | 0.1819 | 0.03 | 25.10 | 2.87 | NO TREND | 0.6562 | |
| PIAMH | Summer1 | B | BWTEMP | 0.00 | 0.8109 | 0.00 | 24.83 | 0.26 | NO TREND | 0.8132 | |
| POCMH | Summer1 | S | SCHLA | 0.35 | 0.4576 | 0.03 | 10.03 | 7.91 | NO TREND | 0.4046 | |
| POCMH | Summer1 | S | STSS | 0.00 | 0.0012 | -0.39 | 15.50 | -60.22 | IMPROVING | 0.1478 | |
| POCMH | Summer1 | B | BTSS | 0.00 | 0.0002 | -0.47 | 21.75 | -51.90 | IMPROVING | 0.4049 | |
| POCMH | Summer1 | S | SECCHI | 0.00 | 0.0003 | -0.01 | 0.75 | -26.67 | DEGRADING | 0.0167 | |
| POCMH | Summer1 | S | SDO | 0.00 | 0.0060 | 0.02 | 7.05 | 8.05 | IMPROVING | 0.9936 | |
| POCMH | Summer1 | B | BDO | 0.00 | 0.0755 | 0.02 | 6.73 | 5.71 | NO TREND | 0.3258 | |
| POCMH | Summer1 | S | SSALINITY | 0.00 | 0.0179 | -0.07 | 19.37 | -9.26 | NO TREND | 0.9554 | |
| POCMH | Summer1 | B | BSALINITY | 0.00 | 0.0344 | -0.06 | 19.56 | -7.67 | NO TREND | 0.7038 | |
| POCMH | Summer1 | S | SWTEMP | 0.00 | 0.5290 | 0.01 | 25.05 | 1.12 | NO TREND | 0.5493 | |
| POCMH | Summer1 | B | BWTEMP | 0.00 | 0.6503 | 0.01 | 25.03 | 0.64 | NO TREND | 0.6180 | |
| CB6PH | Summer1 | S | SCHLA | 1.00 | 0.1725 | 0.05 | 6.32 | 19.70 | NO TREND | 0.4272 | |
| CB6PH | Summer1 | S | STSS | 6.76 | 0.0021 | -0.13 | 8.28 | -38.93 | IMPROVING | 0.4914 | |
| CB6PH | Summer1 | B | BTSS | 0.58 | 0.0059 | -0.31 | 15.13 | -49.36 | IMPROVING | 0.1757 | |
| CB6PH | Summer1 | S | SECCHI | 0.00 | 0.0000 | -0.03 | 1.83 | -32.88 | DEGRADING | 0.5998 | |
| CB6PH | Summer1 | S | SDO | 0.00 | 0.0000 | 0.05 | 7.10 | 16.68 | IMPROVING | 0.7328 | |
| CB6PH | Summer1 | B | BDO | 0.00 | 0.1764 | 0.02 | 4.98 | 9.79 | NO TREND | 0.2283 | |
| CB6PH | Summer1 | S | SSALINITY | 0.00 | 0.1367 | -0.05 | 20.45 | -5.71 | NO TREND | 0.7492 | |
| CB6PH | Summer1 | B | BSALINITY | 0.00 | 0.2590 | -0.03 | 24.86 | -2.49 | NO TREND | 0.8320 | |
| CB6PH | Summer1 | S | SWTEMP | 0.00 | 0.8816 | 0.00 | 25.80 | 0.12 | NO TREND | 0.4973 | |
| CB6PH | Summer1 | B | BWTEMP | 0.00 | 0.6197 | -0.01 | 24.70 | -0.92 | NO TREND | 0.8219 | |
| CB7PH | Summer1 | S | SCHLA | 1.96 | 0.0077 | 0.08 | 4.62 | 43.50 | DEGRADING | 0.8251 | |
| CB7PH | Summer1 | S | STSS | 6.38 | 0.0099 | -0.10 | 7.41 | -31.36 | IMPROVING | 0.4394 | |
| CB7PH | Summer1 | B | BTSS | 0.93 | 0.0011 | -0.34 | 18.00 | -45.07 | IMPROVING | 0.0313 | |
| CB7PH | Summer1 | S | SECCHI | 0.00 | 0.0000 | -0.03 | 1.95 | -33.57 | DEGRADING | 0.4077 | |
| CB7PH | Summer1 | S | SDO | 0.00 | 0.0004 | 0.03 | 7.25 | 9.86 | IMPROVING | 0.5761 | |
| CB7PH | Summer1 | B | BDO | 0.00 | 0.1465 | 0.02 | 5.83 | 6.87 | NO TREND | 0.8198 | |
| CB7PH | Summer1 | S | SSALINITY | 0.00 | 0.1467 | -0.05 | 21.76 | -5.63 | NO TREND | 0.5617 | |
| CB7PH | Summer1 | B | BSALINITY | 0.00 | 0.6732 | -0.01 | 25.55 | -1.02 | NO TREND | 0.6206 | |
| CB7PH | Summer1 | S | SWTEMP | 0.00 | 0.7752 | 0.00 | 25.80 | 0.29 | NO TREND | 0.3569 | |
| CB7PH | Summer1 | B | BWTEMP | 0.00 | 0.6461 | -0.01 | 24.70 | -0.67 | NO TREND | 0.4618 | |

Appendix A - Section IIE. Virginia Mainstem (1985-2008) - Continued.

| Segment | Season | Layer | Parameter | % BDL | P value | Slope | Baseline | % Change | Direction | Homogeneity test |
|---------|---------|-------|-----------|-------|---------|-------|----------|----------|------------|------------------|
| | | | | | | | | | | P value |
| CB8PH | Summer1 | S | SCHLA | 2.41 | 0.0018 | 0.10 | 4.32 | 57.53 | DEGRADING | 0.0432 |
| CB8PH | Summer1 | S | STSS | 9.09 | 0.0893 | 0.07 | 7.00 | 22.58 | NO TREND | 0.6461 |
| CB8PH | Summer1 | B | BTSS | 0.98 | 0.3719 | -0.06 | 10.83 | -12.90 | NO TREND | 0.7776 |
| CB8PH | Summer1 | S | SECCHI | 0.00 | 0.0000 | -0.04 | 2.20 | -41.43 | DEGRADING | 0.8862 |
| CB8PH | Summer1 | S | SDO | 0.00 | 0.2056 | 0.01 | 7.56 | 3.21 | NO TREND | 0.0922 |
| CB8PH | Summer1 | B | BDO | 0.00 | 0.0001 | 0.03 | 6.25 | 10.82 | IMPROVING | 0.4752 |
| CB8PH | Summer1 | S | SSALINITY | 0.00 | 0.0071 | -0.08 | 25.65 | -7.45 | DECREASING | 0.9346 |
| CB8PH | Summer1 | B | BSALINITY | 0.00 | 0.0140 | -0.05 | 29.84 | -4.04 | NO TREND | 0.5514 |
| CB8PH | Summer1 | S | SWTEMP | 0.00 | 0.8914 | 0.00 | 24.90 | -0.09 | NO TREND | 0.8672 |
| CB8PH | Summer1 | B | BWTEMP | 0.00 | 0.9308 | 0.00 | 22.28 | 0.48 | NO TREND | 0.9371 |
| PIAMH | Summer2 | S | SCHLA | 0.77 | 0.2484 | 0.07 | 7.95 | 21.24 | NO TREND | 0.9463 |
| PIAMH | Summer2 | S | STSS | 7.75 | 0.0015 | -0.19 | 9.00 | -51.11 | IMPROVING | 0.5423 |
| PIAMH | Summer2 | B | BTSS | 1.55 | 0.0089 | -0.24 | 19.00 | -30.84 | IMPROVING | 0.7100 |
| PIAMH | Summer2 | S | SECCHI | 0.00 | 0.0033 | -0.01 | 1.35 | -25.40 | DEGRADING | 0.9551 |
| PIAMH | Summer2 | S | SDO | 0.00 | 0.0000 | 0.07 | 7.23 | 23.25 | IMPROVING | 0.7311 |
| PIAMH | Summer2 | B | BDO | 0.00 | 0.0110 | 0.06 | 5.93 | 23.34 | NO TREND | 0.0612 |
| PIAMH | Summer2 | S | SSALINITY | 0.00 | 0.1080 | -0.07 | 19.41 | -8.50 | NO TREND | 0.9576 |
| PIAMH | Summer2 | B | BSALINITY | 0.00 | 0.3276 | -0.05 | 20.14 | -6.18 | NO TREND | 0.6309 |
| PIAMH | Summer2 | S | SWTEMP | 0.00 | 0.2542 | 0.03 | 25.63 | 2.60 | NO TREND | 0.4467 |
| PIAMH | Summer2 | B | BWTEMP | 0.00 | 0.9534 | 0.00 | 25.63 | -0.06 | NO TREND | 0.7162 |
| POCMH | Summer2 | S | SCHLA | 0.00 | 0.8265 | -0.01 | 11.22 | -1.75 | NO TREND | 0.9809 |
| POCMH | Summer2 | S | STSS | 0.00 | 0.0010 | -0.40 | 17.50 | -54.86 | IMPROVING | 0.1088 |
| POCMH | Summer2 | B | BTSS | 0.00 | 0.0024 | -0.45 | 21.75 | -49.95 | IMPROVING | 0.2457 |
| POCMH | Summer2 | S | SECCHI | 0.00 | 0.0235 | -0.01 | 0.73 | -18.39 | NO TREND | 0.0226 |
| POCMH | Summer2 | S | SDO | 0.00 | 0.0193 | 0.02 | 6.90 | 8.70 | NO TREND | 0.9612 |
| POCMH | Summer2 | B | BDO | 0.00 | 0.0178 | 0.02 | 6.60 | 7.61 | NO TREND | 0.6819 |
| POCMH | Summer2 | S | SSALINITY | 0.00 | 0.0538 | -0.06 | 19.47 | -7.78 | NO TREND | 0.8764 |
| POCMH | Summer2 | B | BSALINITY | 0.00 | 0.1017 | -0.05 | 19.79 | -6.37 | NO TREND | 0.5357 |
| POCMH | Summer2 | S | SWTEMP | 0.00 | 0.8954 | 0.00 | 25.60 | 0.22 | NO TREND | 0.4877 |
| POCMH | Summer2 | B | BWTEMP | 0.00 | 0.9185 | 0.00 | 25.43 | 0.20 | NO TREND | 0.4837 |
| CB6PH | Summer2 | S | SCHLA | 1.19 | 0.0587 | 0.07 | 6.11 | 26.05 | NO TREND | 0.6812 |
| CB6PH | Summer2 | S | STSS | 6.55 | 0.0016 | -0.16 | 8.90 | -42.20 | IMPROVING | 0.4811 |
| CB6PH | Summer2 | B | BTSS | 0.57 | 0.0016 | -0.38 | 18.00 | -50.91 | IMPROVING | 0.2728 |
| CB6PH | Summer2 | S | SECCHI | 0.00 | 0.0000 | -0.02 | 1.83 | -30.94 | DEGRADING | 0.5073 |
| CB6PH | Summer2 | S | SDO | 0.00 | 0.0001 | 0.05 | 7.09 | 16.60 | IMPROVING | 0.5419 |
| CB6PH | Summer2 | B | BDO | 0.00 | 0.0568 | 0.03 | 4.43 | 18.68 | NO TREND | 0.3377 |
| CB6PH | Summer2 | S | SSALINITY | 0.00 | 0.3161 | -0.04 | 20.45 | -4.19 | NO TREND | 0.6416 |
| CB6PH | Summer2 | B | BSALINITY | 0.00 | 0.3301 | -0.02 | 25.06 | -2.28 | NO TREND | 0.6463 |
| CB6PH | Summer2 | S | SWTEMP | 0.00 | 0.8187 | -0.01 | 26.08 | -0.67 | NO TREND | 0.3930 |
| CB6PH | Summer2 | B | BWTEMP | 0.00 | 0.5961 | -0.01 | 25.45 | -0.95 | NO TREND | 0.6458 |
| CB7PH | Summer2 | S | SCHLA | 2.00 | 0.0074 | 0.09 | 4.62 | 48.55 | DEGRADING | 0.8364 |
| CB7PH | Summer2 | S | STSS | 5.96 | 0.0059 | -0.12 | 7.41 | -37.72 | IMPROVING | 0.4402 |
| CB7PH | Summer2 | B | BTSS | 0.78 | 0.0001 | -0.40 | 21.75 | -43.71 | IMPROVING | 0.1341 |
| CB7PH | Summer2 | S | SECCHI | 0.00 | 0.0000 | -0.02 | 1.93 | -27.80 | DEGRADING | 0.6810 |
| CB7PH | Summer2 | S | SDO | 0.00 | 0.0030 | 0.03 | 7.10 | 8.45 | IMPROVING | 0.3815 |
| CB7PH | Summer2 | B | BDO | 0.00 | 0.1053 | 0.02 | 5.83 | 9.59 | NO TREND | 0.8189 |
| CB7PH | Summer2 | S | SSALINITY | 0.00 | 0.4309 | -0.03 | 21.76 | -3.78 | NO TREND | 0.5565 |
| CB7PH | Summer2 | B | BSALINITY | 0.00 | 0.9771 | 0.00 | 25.81 | 0.03 | NO TREND | 0.5616 |
| CB7PH | Summer2 | S | SWTEMP | 0.00 | 0.7743 | 0.00 | 25.90 | -0.36 | NO TREND | 0.3505 |
| CB7PH | Summer2 | B | BWTEMP | 0.00 | 0.4648 | -0.01 | 24.88 | -1.14 | NO TREND | 0.3444 |

Appendix A - Section IIE. Virginia Mainstem (1985-2008) - Continued.

| Segment | Season | Layer | Parameter | % BDL | P value | Slope | Baseline | % Change | Homogeneity test | |
|---------|---------|-------|-----------|-------|---------|-------|----------|-------------|------------------|---------|
| | | | | | | | | | Direction | P value |
| CB8PH | Summer2 | S | SCHLA | 2.46 | 0.0032 | 0.12 | 3.88 | 73.84 | DEGRADING | 0.0192 |
| CB8PH | Summer2 | S | STSS | 8.33 | 0.0781 | 0.07 | 7.00 | 23.90 | NO TREND | 0.5162 |
| CB8PH | Summer2 | B | BTSS | 0.51 | 0.2764 | -0.07 | 9.78 | -18.11 | NO TREND | 0.7045 |
| CB8PH | Summer2 | S | SECCHI | 0.00 | 0.0000 | -0.03 | 2.18 | -36.78 | DEGRADING | 0.8507 |
| CB8PH | Summer2 | S | SDO | 0.00 | 0.2400 | 0.01 | 7.31 | 3.65 | NO TREND | 0.0405 |
| CB8PH | Summer2 | B | BDO | 0.00 | 0.0004 | 0.03 | 6.10 | 10.82 | IMPROVING | 0.2961 |
| CB8PH | Summer2 | S | SSALINITY | 0.00 | 0.0143 | -0.08 | 26.02 | -7.38 | NO TREND | 0.8308 |
| CB8PH | Summer2 | B | BSALINITY | 0.00 | 0.0805 | -0.05 | 29.82 | -3.83 | NO TREND | 0.4660 |
| CB8PH | Summer2 | S | SWTEMP | 0.00 | 0.7635 | 0.00 | 24.93 | -0.26 | NO TREND | 0.7437 |
| CB8PH | Summer2 | B | BWTEMP | 0.00 | 0.8411 | 0.01 | 22.50 | 0.98 | NO TREND | 0.8384 |
| PIAMH | Winter | S | SCHLA | 20.00 | 0.3649 | -0.11 | 6.98 | No Estimate | NO TREND | 0.8853 |
| PIAMH | Winter | S | STSS | 24.44 | 0.0315 | -0.15 | 13.35 | No Estimate | NO TREND | 0.1795 |
| PIAMH | Winter | B | BTSS | 17.78 | 0.0069 | -0.23 | 13.50 | No Estimate | IMPROVING | 0.4922 |
| PIAMH | Winter | S | SECCHI | 0.00 | 0.1958 | -0.02 | 1.80 | -25.40 | NO TREND | 0.4681 |
| PIAMH | Winter | S | SDO | 0.00 | 0.0386 | 0.05 | 11.90 | 10.37 | NO TREND | 0.9523 |
| PIAMH | Winter | B | BDO | 0.00 | 0.0697 | 0.04 | 11.50 | 8.35 | NO TREND | 0.9530 |
| PIAMH | Winter | S | SSALINITY | 0.00 | 0.6475 | -0.06 | 16.49 | -8.11 | NO TREND | 0.9130 |
| PIAMH | Winter | B | BSALINITY | 0.00 | 0.7056 | -0.03 | 17.56 | -3.99 | NO TREND | 0.9001 |
| PIAMH | Winter | S | SWTEMP | 0.00 | 0.0449 | 0.09 | 2.10 | 97.96 | NO TREND | 0.4941 |
| PIAMH | Winter | B | BWTEMP | 0.00 | 0.0699 | 0.08 | 2.40 | 80.91 | NO TREND | 0.5488 |
| POCMH | Winter | S | SCHLA | 1.69 | 0.2970 | -0.09 | 11.79 | -18.61 | NO TREND | 0.5836 |
| POCMH | Winter | S | STSS | 0.00 | 0.3382 | -0.26 | 24.00 | -26.17 | NO TREND | 0.0541 |
| POCMH | Winter | B | BTSS | 0.00 | 0.2418 | -0.41 | 29.00 | -34.14 | NO TREND | 0.1271 |
| POCMH | Winter | S | SECCHI | 0.00 | 0.7485 | 0.00 | 0.70 | 0.00 | NO TREND | 0.3889 |
| POCMH | Winter | S | SDO | 0.00 | 0.0671 | 0.04 | 11.90 | 8.27 | NO TREND | 0.3034 |
| POCMH | Winter | B | BDO | 0.00 | 0.3597 | 0.02 | 11.90 | 3.12 | NO TREND | 0.2833 |
| POCMH | Winter | S | SSALINITY | 0.00 | 0.9321 | -0.01 | 17.76 | -1.18 | NO TREND | 0.9706 |
| POCMH | Winter | B | BSALINITY | 0.00 | 0.8481 | -0.01 | 17.84 | -1.74 | NO TREND | 0.7375 |
| POCMH | Winter | S | SWTEMP | 0.00 | 0.0737 | 0.10 | 1.50 | 152.00 | NO TREND | 0.7987 |
| POCMH | Winter | B | BWTEMP | 0.00 | 0.1057 | 0.07 | 1.50 | 110.86 | NO TREND | 0.6477 |
| CB6PH | Winter | S | SCHLA | 0.31 | 0.0672 | -0.16 | 9.72 | -39.96 | NO TREND | 0.7651 |
| CB6PH | Winter | S | STSS | 6.01 | 0.0076 | -0.25 | 13.56 | -44.24 | IMPROVING | 0.6945 |
| CB6PH | Winter | B | BTSS | 0.54 | 0.0365 | -0.28 | 19.56 | -34.39 | NO TREND | 0.7937 |
| CB6PH | Winter | S | SECCHI | 0.00 | 0.5245 | -0.01 | 1.48 | -10.51 | NO TREND | 0.6531 |
| CB6PH | Winter | S | SDO | 0.00 | 0.2786 | 0.02 | 12.19 | 3.39 | NO TREND | 0.6811 |
| CB6PH | Winter | B | BDO | 0.00 | 0.6540 | 0.01 | 11.38 | 1.69 | NO TREND | 0.5254 |
| CB6PH | Winter | S | SSALINITY | 0.00 | 0.3315 | -0.07 | 19.09 | -8.76 | NO TREND | 0.7937 |
| CB6PH | Winter | B | BSALINITY | 0.00 | 0.0227 | -0.09 | 22.71 | -10.02 | NO TREND | 0.9405 |
| CB6PH | Winter | S | SWTEMP | 0.00 | 0.0791 | 0.07 | 2.88 | 57.81 | NO TREND | 0.7085 |
| CB6PH | Winter | B | BWTEMP | 0.00 | 0.0700 | 0.07 | 3.10 | 50.65 | NO TREND | 0.5131 |
| CB7PH | Winter | S | SCHLA | 0.00 | 0.0400 | -0.19 | 8.78 | -50.69 | NO TREND | 0.9405 |
| CB7PH | Winter | S | STSS | 4.42 | 0.0068 | -0.15 | 9.10 | -39.56 | IMPROVING | 0.9260 |
| CB7PH | Winter | B | BTSS | 0.25 | 0.0567 | -0.32 | 24.65 | -31.47 | NO TREND | 0.6005 |
| CB7PH | Winter | S | SECCHI | 0.00 | 0.7078 | 0.00 | 1.65 | -4.04 | NO TREND | 0.6531 |
| CB7PH | Winter | S | SDO | 0.00 | 0.1557 | 0.04 | 11.70 | 7.48 | NO TREND | 0.3699 |
| CB7PH | Winter | B | BDO | 0.00 | 0.4216 | 0.02 | 11.28 | 4.79 | NO TREND | 0.5127 |
| CB7PH | Winter | S | SSALINITY | 0.00 | 0.2393 | -0.09 | 19.67 | -11.48 | NO TREND | 0.7507 |
| CB7PH | Winter | B | BSALINITY | 0.00 | 0.8665 | 0.01 | 21.92 | 0.95 | NO TREND | 0.0964 |
| CB7PH | Winter | S | SWTEMP | 0.00 | 0.0397 | 0.09 | 2.53 | 81.96 | NO TREND | 0.5760 |
| CB7PH | Winter | B | BWTEMP | 0.00 | 0.0476 | 0.08 | 3.05 | 64.75 | NO TREND | 0.5755 |

Appendix A - Section IIE. Virginia Mainstem (1985-2008) - Continued.

| Segment | Season | Layer | Parameter | % BDL | P value | Slope | Baseline | % Change | Homogeneity test | |
|---------|--------|-------|-----------|-------|---------|-------|----------|----------|------------------|---------|
| | | | | | | | | | Direction | P value |
| CB8PH | Winter | S | SCHLA | 1.14 | 0.0792 | -0.16 | 7.70 | -50.14 | NO TREND | 0.6010 |
| CB8PH | Winter | S | STSS | 2.91 | 0.0103 | -0.20 | 8.45 | -57.87 | NO TREND | 0.8867 |
| CB8PH | Winter | B | BTSS | 1.43 | 0.1096 | -0.35 | 12.20 | -69.40 | NO TREND | 0.6955 |
| CB8PH | Winter | S | SECCHI | 0.00 | 0.7631 | 0.00 | 2.00 | 0.00 | NO TREND | 0.6779 |
| CB8PH | Winter | S | SDO | 0.00 | 0.3748 | 0.02 | 11.90 | 3.86 | NO TREND | 0.9921 |
| CB8PH | Winter | B | BDO | 0.00 | 1.0000 | 0.00 | 11.35 | 0.00 | NO TREND | 0.9384 |
| CB8PH | Winter | S | SSALINITY | 0.00 | 0.1002 | -0.14 | 25.85 | -12.79 | NO TREND | 0.9707 |
| CB8PH | Winter | B | BSALINITY | 0.00 | 0.1846 | -0.03 | 29.64 | -2.81 | NO TREND | 0.2390 |
| CB8PH | Winter | S | SWTEMP | 0.00 | 0.1668 | 0.06 | 3.05 | 51.01 | NO TREND | 0.5253 |
| CB8PH | Winter | B | BWTEMP | 0.00 | 0.0347 | 0.10 | 3.65 | 63.48 | NO TREND | 0.8962 |