

Tidal Trends in Water Quality:

APPENDIX

Virginia Mainstem 2018 Tributary Summary

April 15, 2021

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# 1. Bottom Total Nitrogen

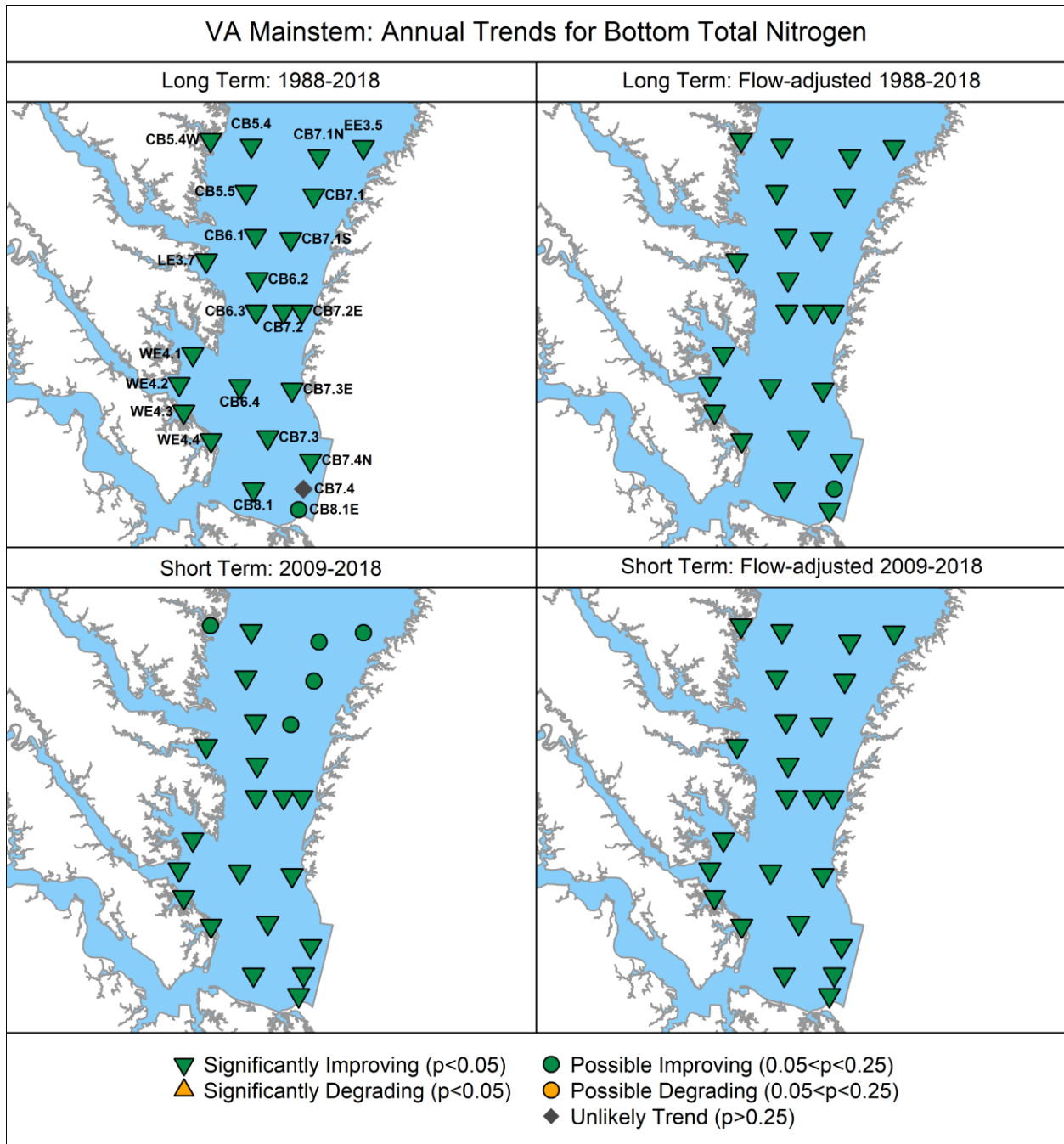


Figure A-1. Bottom total nitrogen trends.

### Annual Bottom Total Nitrogen Data and Average Predictions

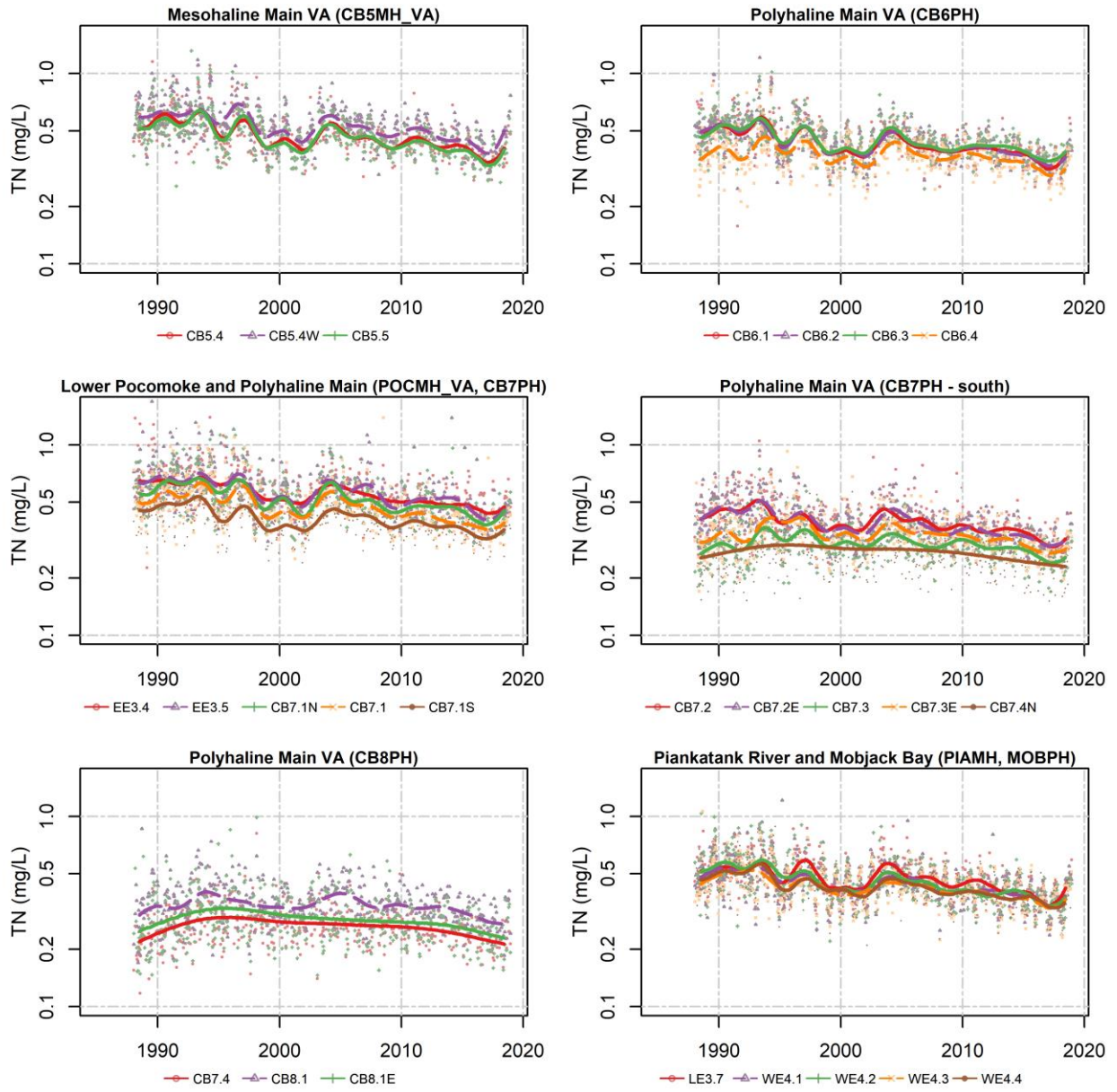


Figure A-2. Bottom total nitrogen data (dots) and average long-term pattern generated from non-flow adjusted GAMs.

## 2. Bottom Total Phosphorus

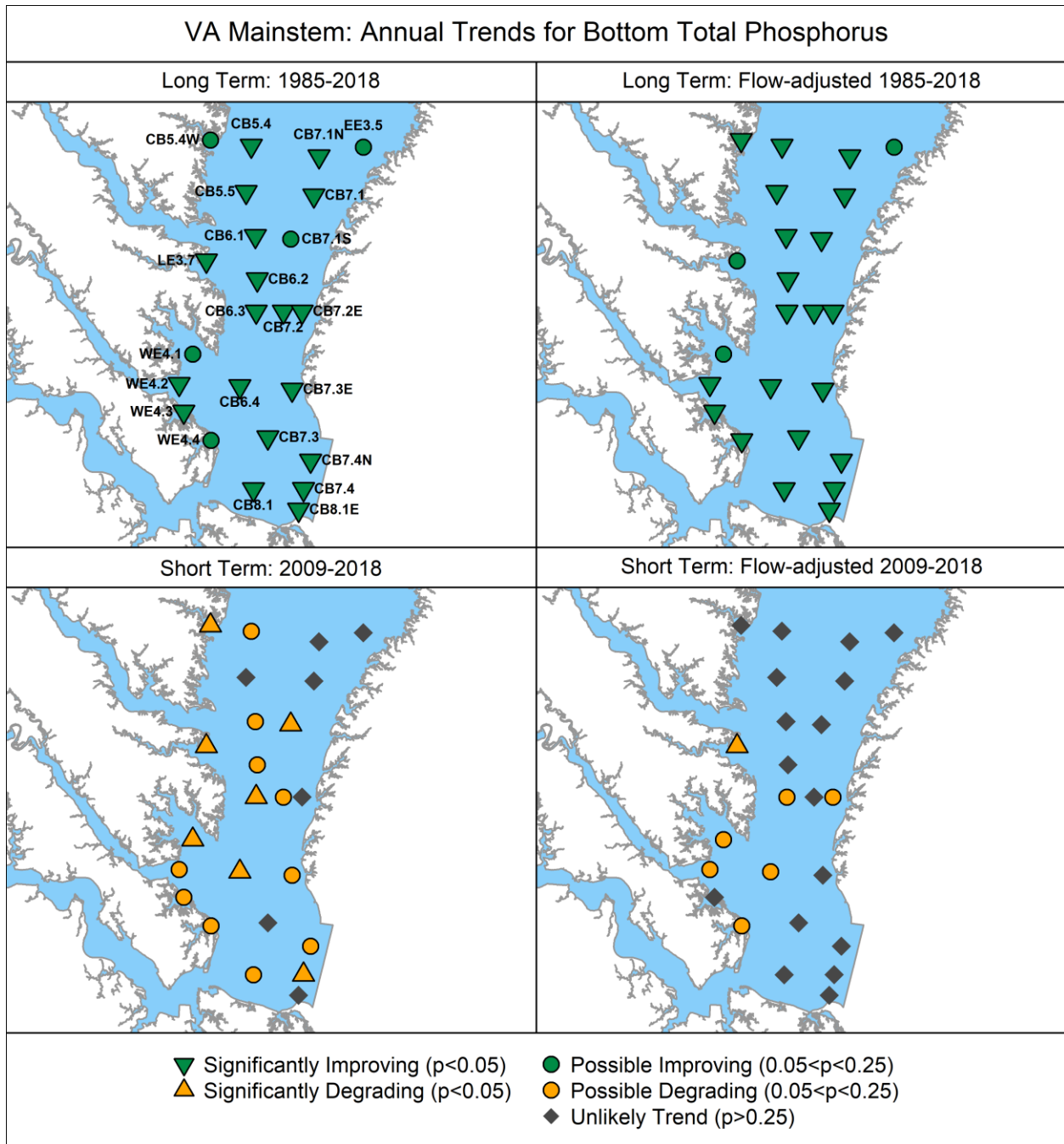


Figure A-3. Bottom total phosphorus trends.

### Annual Bottom Total Phosphorus Data and Average Predictions

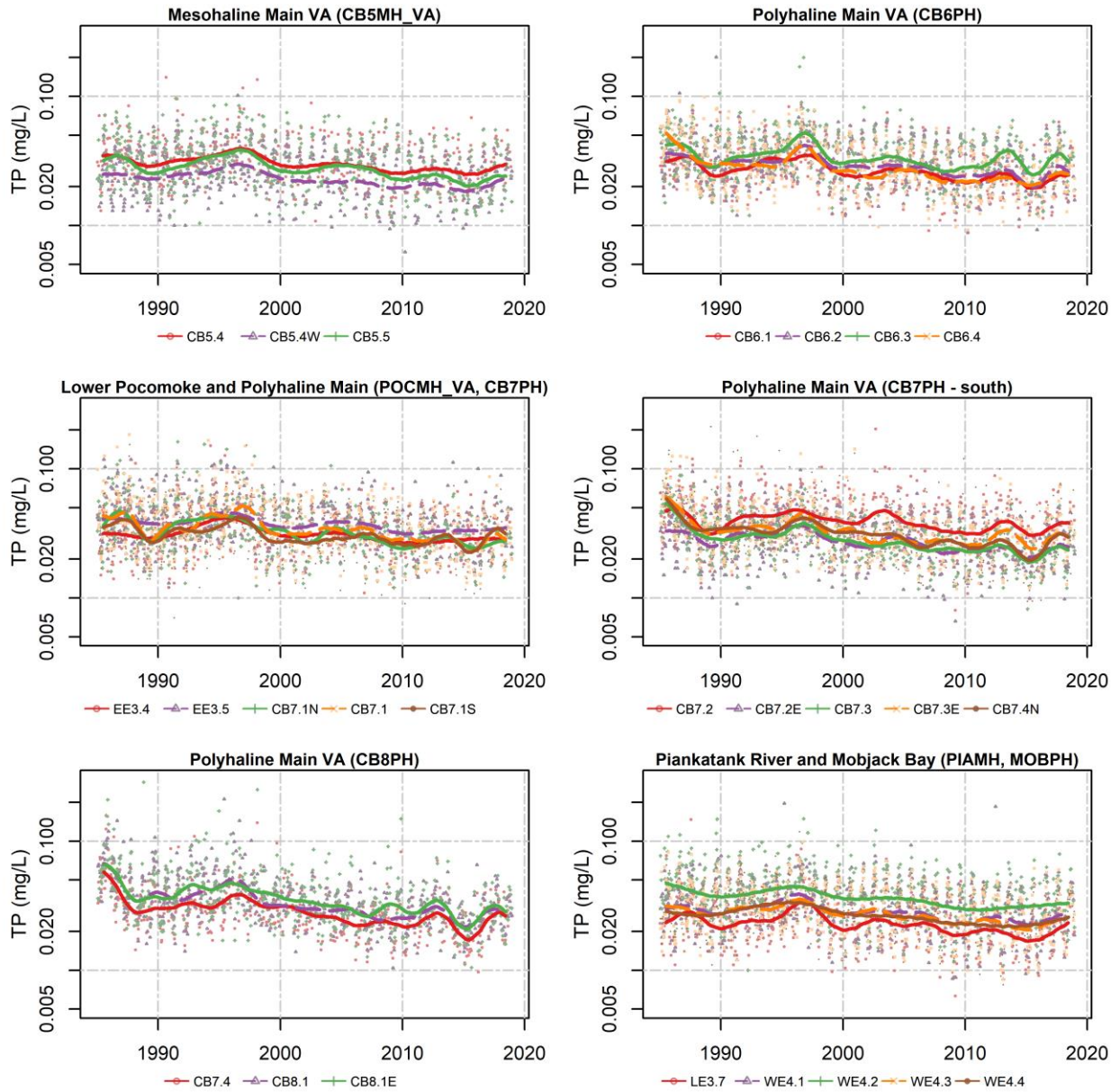


Figure A-4. Bottom total phosphorus data (dots) and average long-term pattern generated from non-flow adjusted GAMs.

### 3. Surface Dissolved Inorganic Nitrogen (DIN)

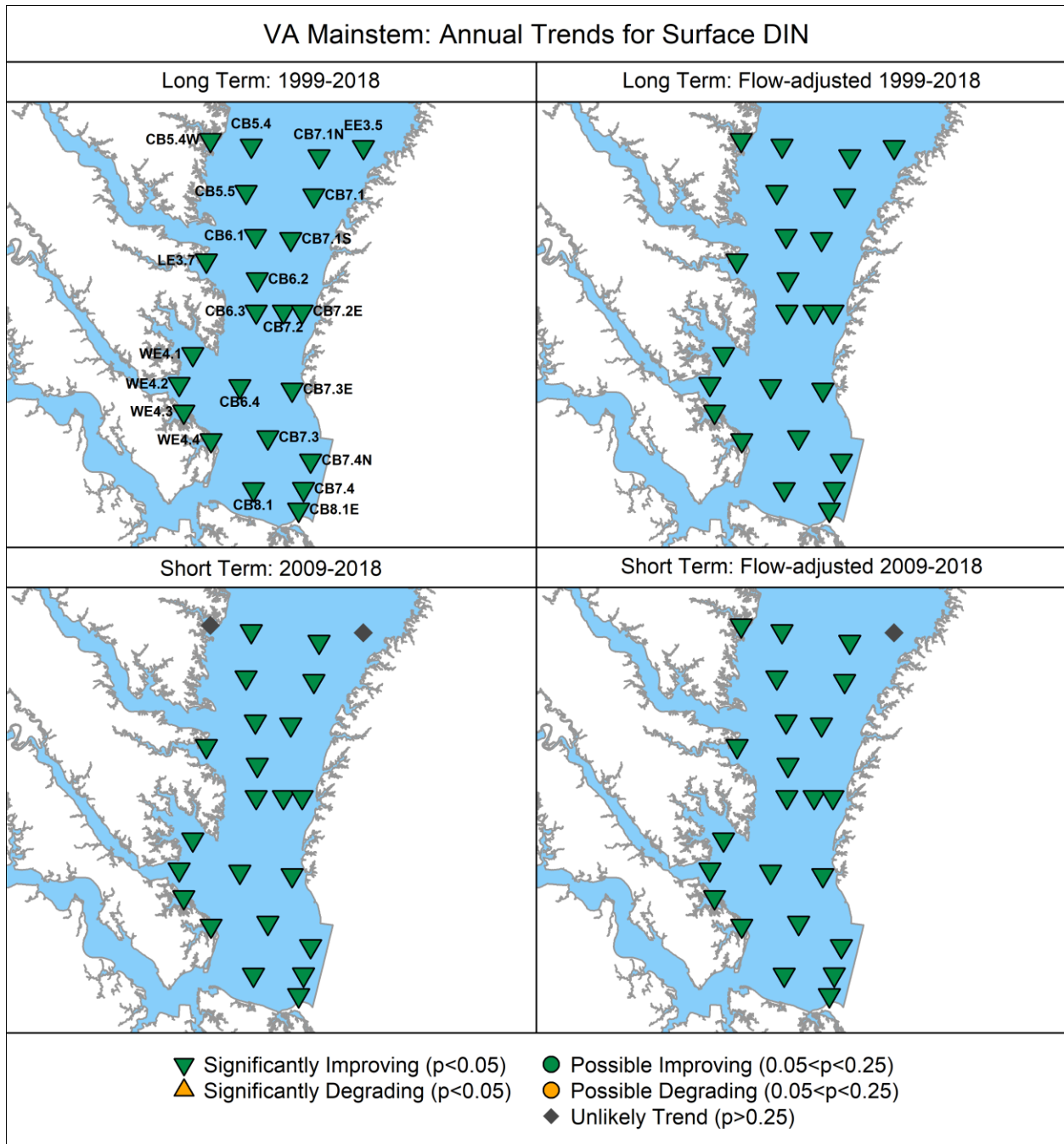


Figure A-5. Surface DIN trends.

### Annual Surface Dissolved Inorganic Nitrogen Data and Average Predictions

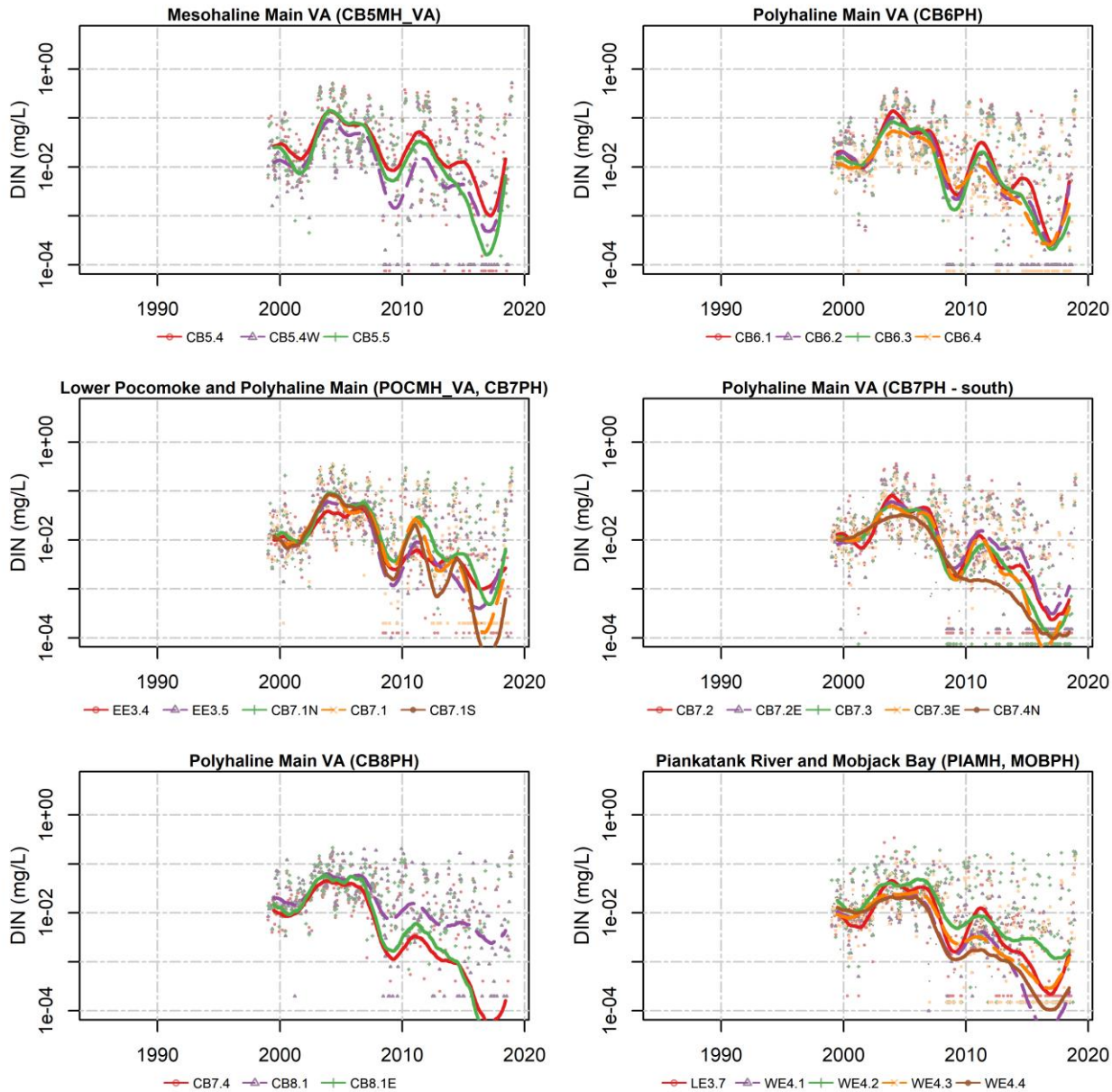


Figure A-6. Surface DIN data (dots) and average long-term pattern generated from non-flow adjusted GAMs.



## 4. Surface Orthophosphate (PO4)

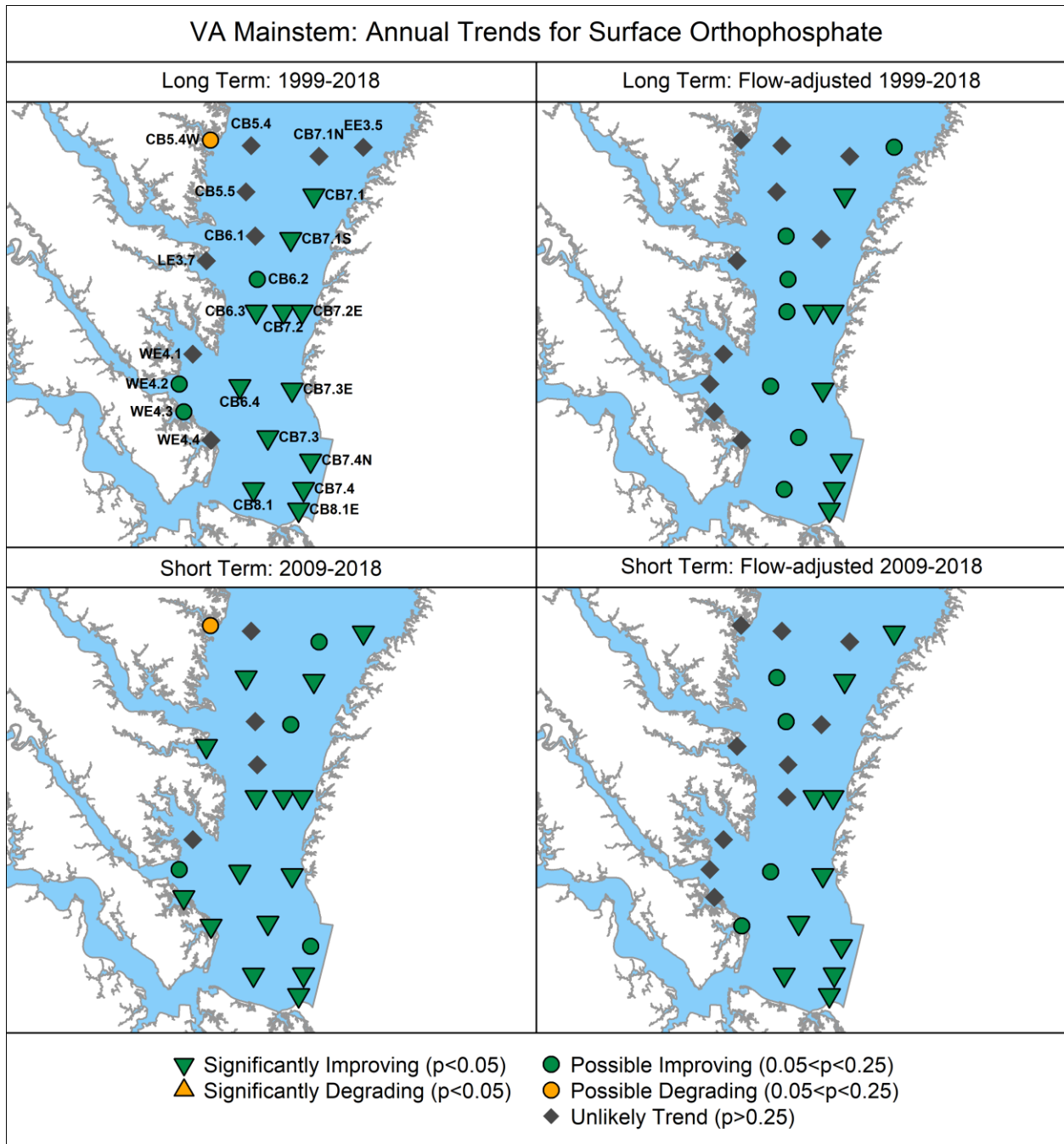


Figure A-7. Surface orthophosphate trends.

### Annual Surface Orthophosphate Data and Average Predictions

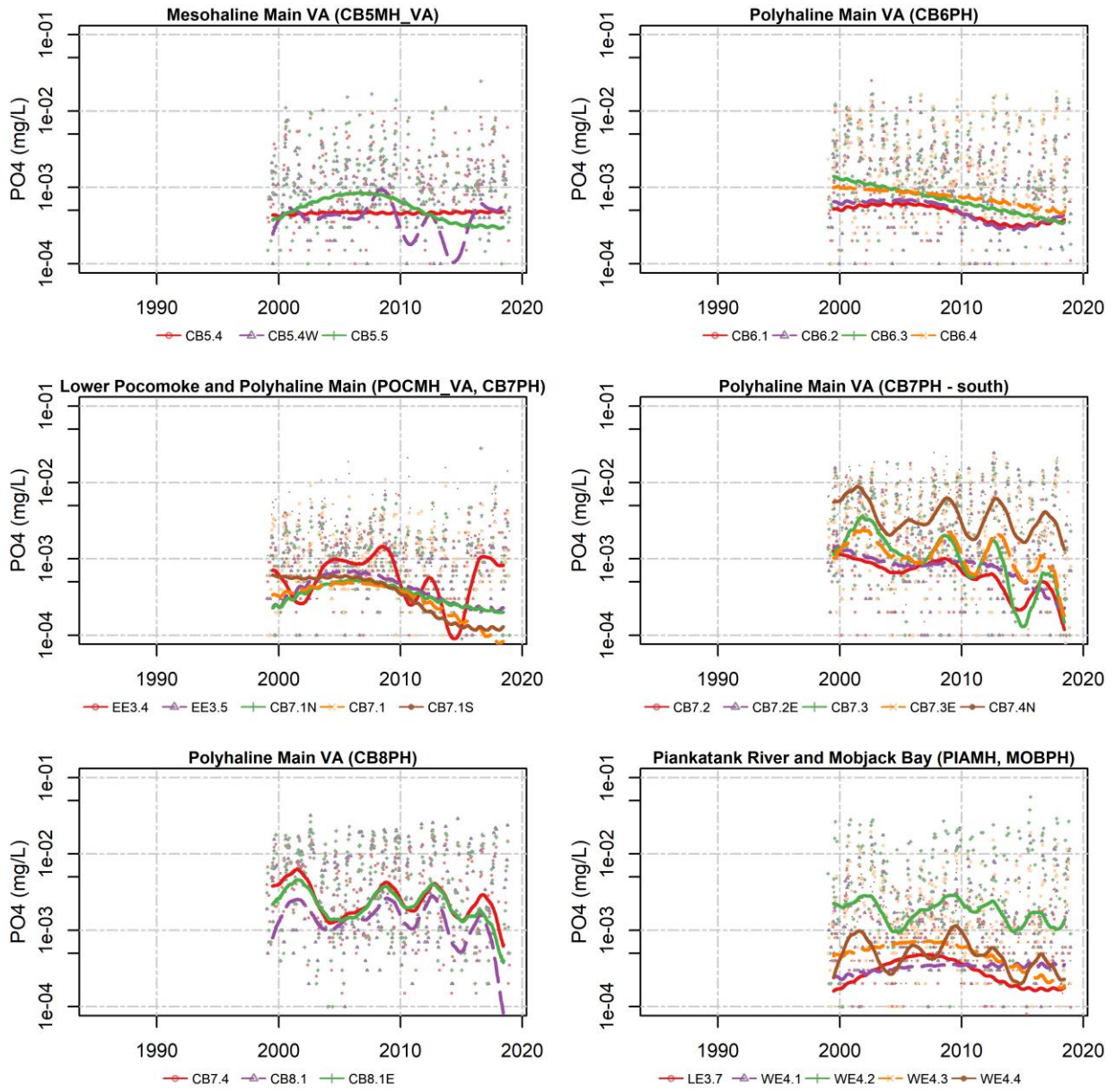


Figure A-8. Surface orthophosphate data (dots) and average long-term pattern generated from non-flow adjusted GAMs.

## 5. Surface Total Suspended Solids (TSS)

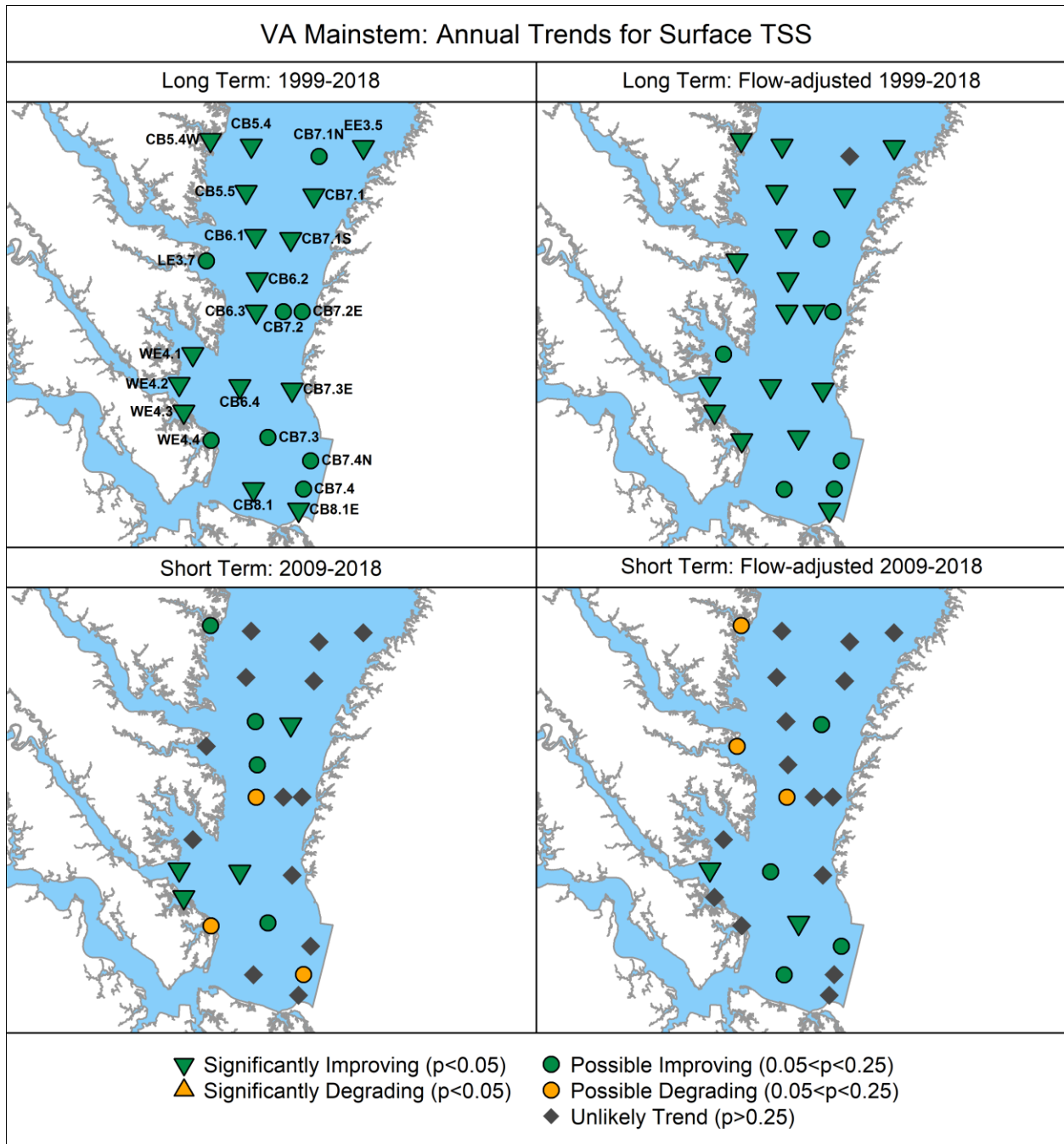


Figure A-9. Surface TSS trends.

### Annual Surface Total Suspended Solids Data and Average Predictions

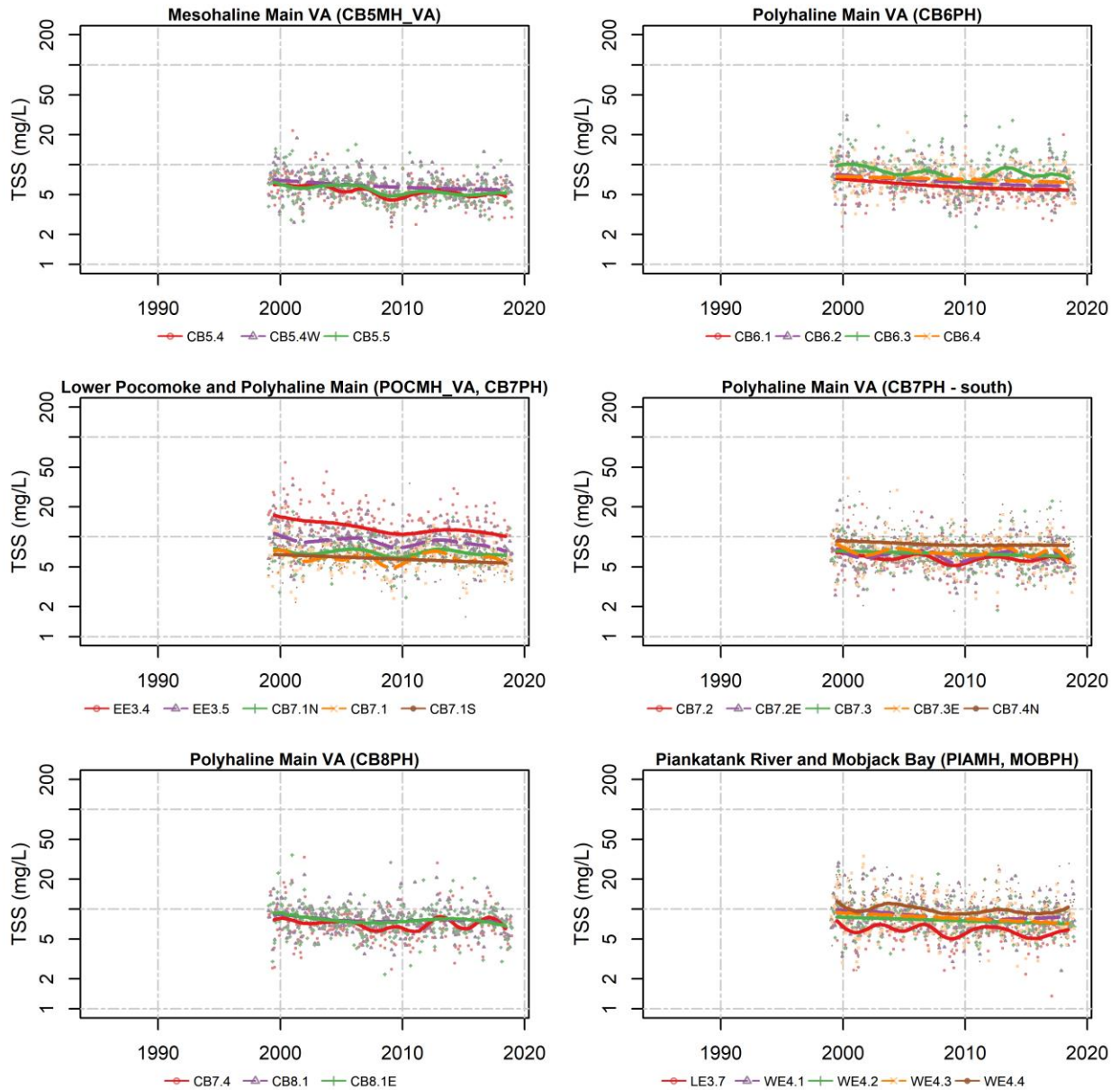


Figure A-10. Surface TSS data (dots) and average long-term pattern generated from non-flow adjusted GAMs.

## 6. Summer Surface Dissolved Oxygen (DO)

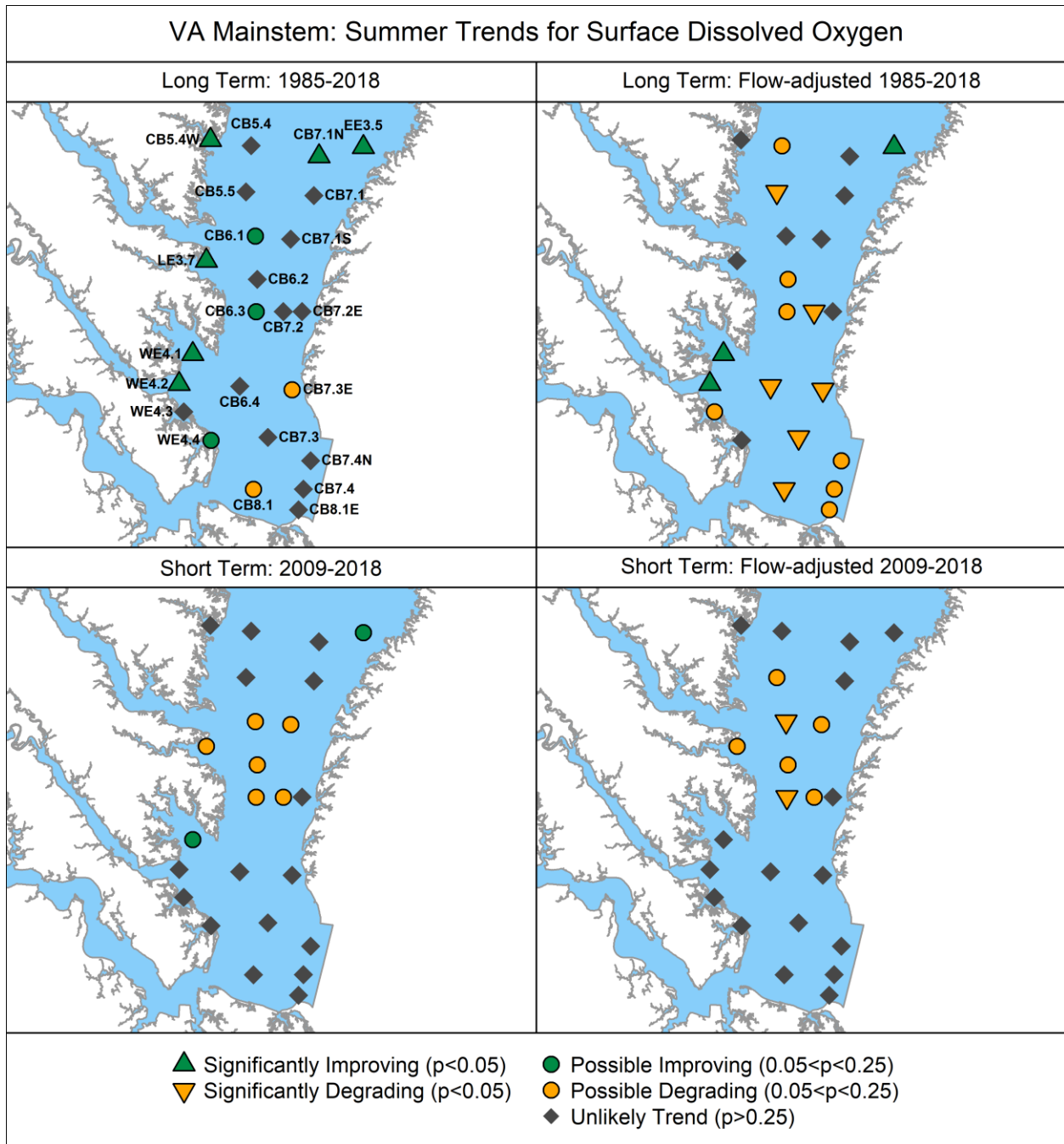


Figure A-11. Summer (June-Sept) surface layer DO trends.

### Summer (June-Sept) Surface DO Data and Average Predictions

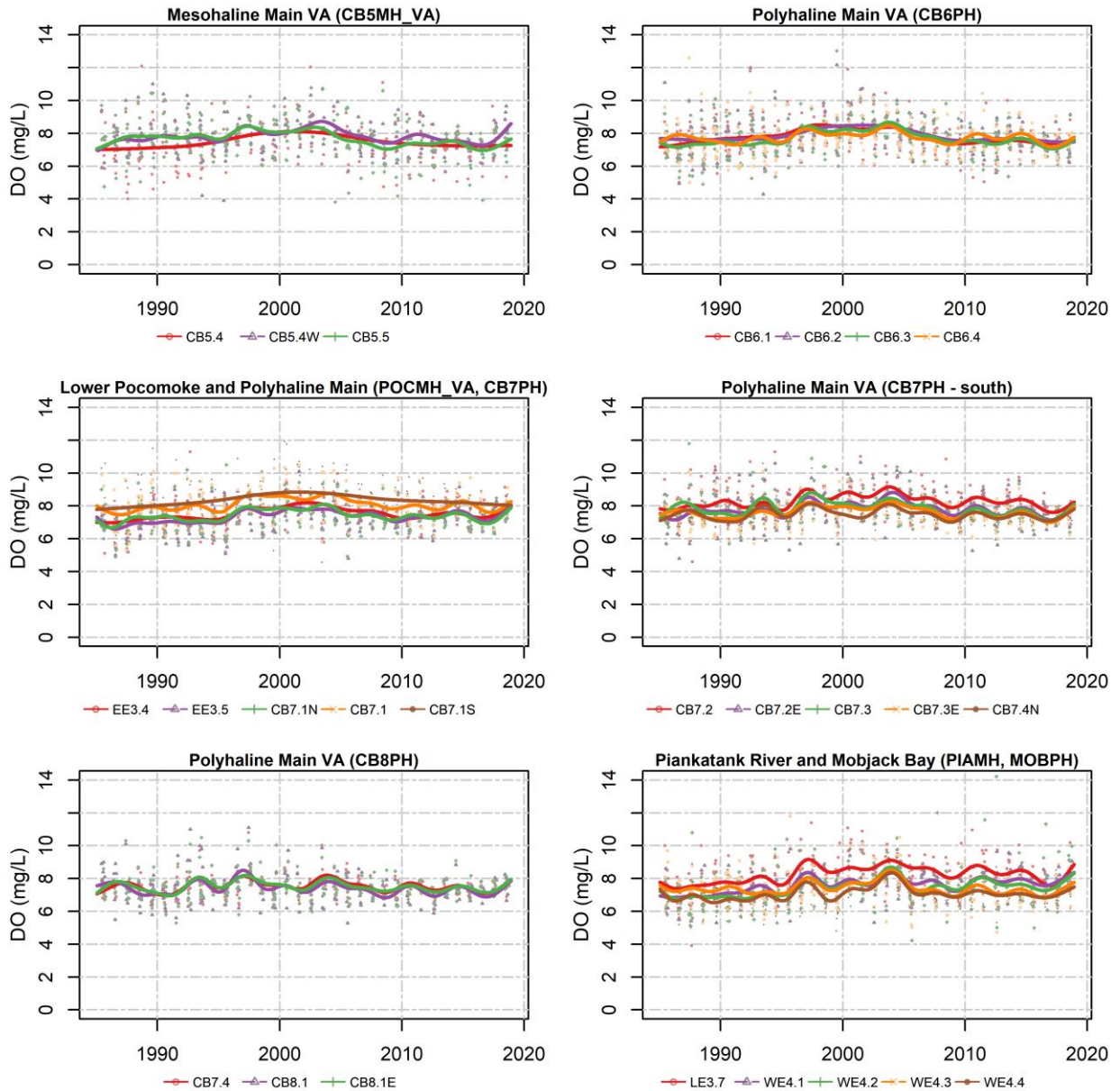


Figure A-12. Summer (June-Sept) surface DO data (dots) and summer mean long-term pattern generated from non-flow adjusted GAMs.

## 7. Surface Water Temperature

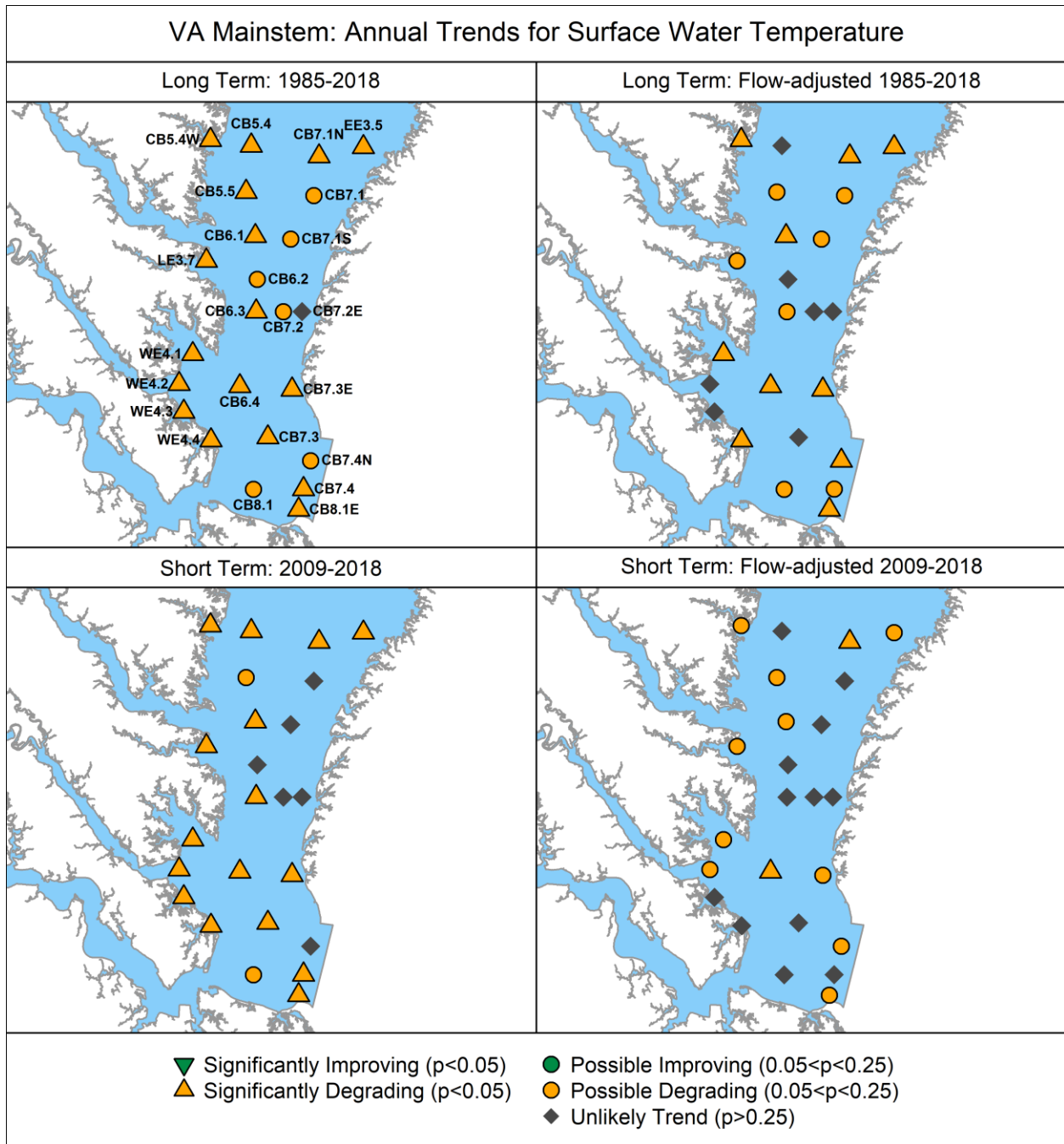


Figure A-13. Surface layer water temperature trends.

### Annual Surface Water Temperature Data and Average Predictions

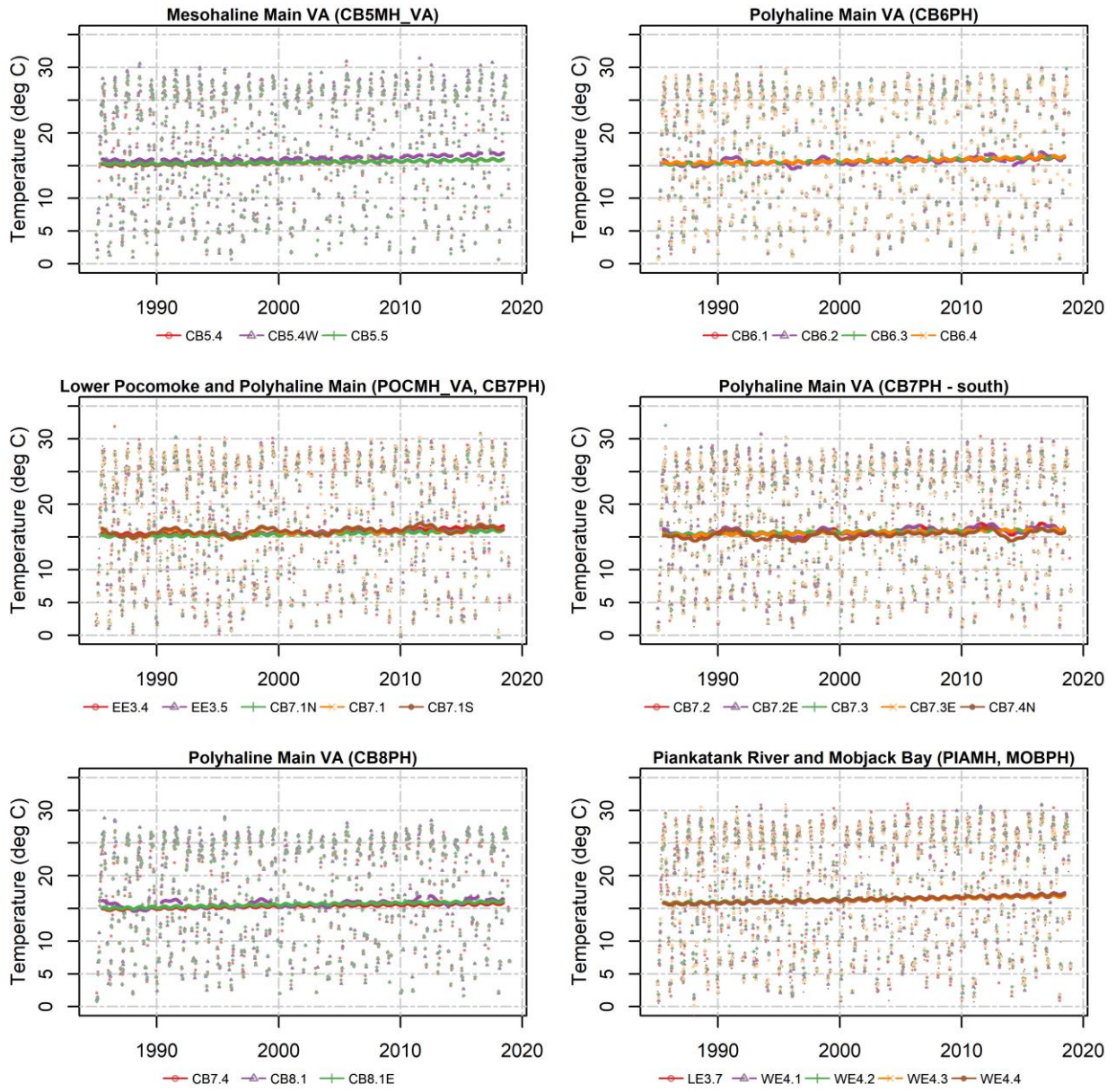


Figure A-14. Surface water temperature data (dots) and average long-term pattern generated from non-flow adjusted GAMs.