

# Pasquotank Water Quality Assessment Team



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# Team Members



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# Abstract

The Pasquotank River Watershed is fed by multiple tributaries surrounded by varying landforms such as swamp, farmlands, and urban development. In order to determine how the landforms affected the water quality of the Pasquotank River Watershed, tests were performed to calculate the water quality index. The tests included dissolved oxygen, pH, salt, total dissolved solids, and conductivity. Field readings were recorded for the air/water temperature, wind speed/direction, and turbidity.



# Key Words

- ◆ **Dissolved Oxygen**
- ◆ **Salinity**
- ◆ **Conductivity**
- ◆ **Turbidity**
- ◆ **Total Dissolved Solids (TDS)**
- ◆ **pH**
- ◆ **Water quality**

# Equipment Used

**Lamotte Pocket Tester**



**Dissolved Oxygen Meter**



**Skymate Wind Meter**



**Secchi disk**



# Water Sampling Device      Thermometer

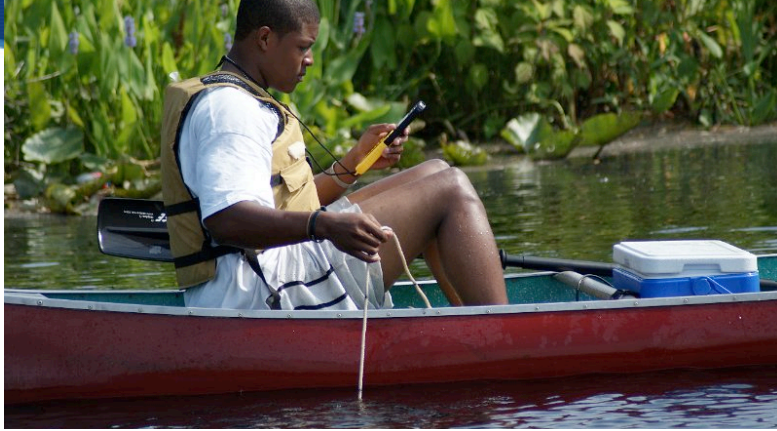




# Methods

- Gather Water Samples
- Test Samples
- Analyze Data

# Field Work





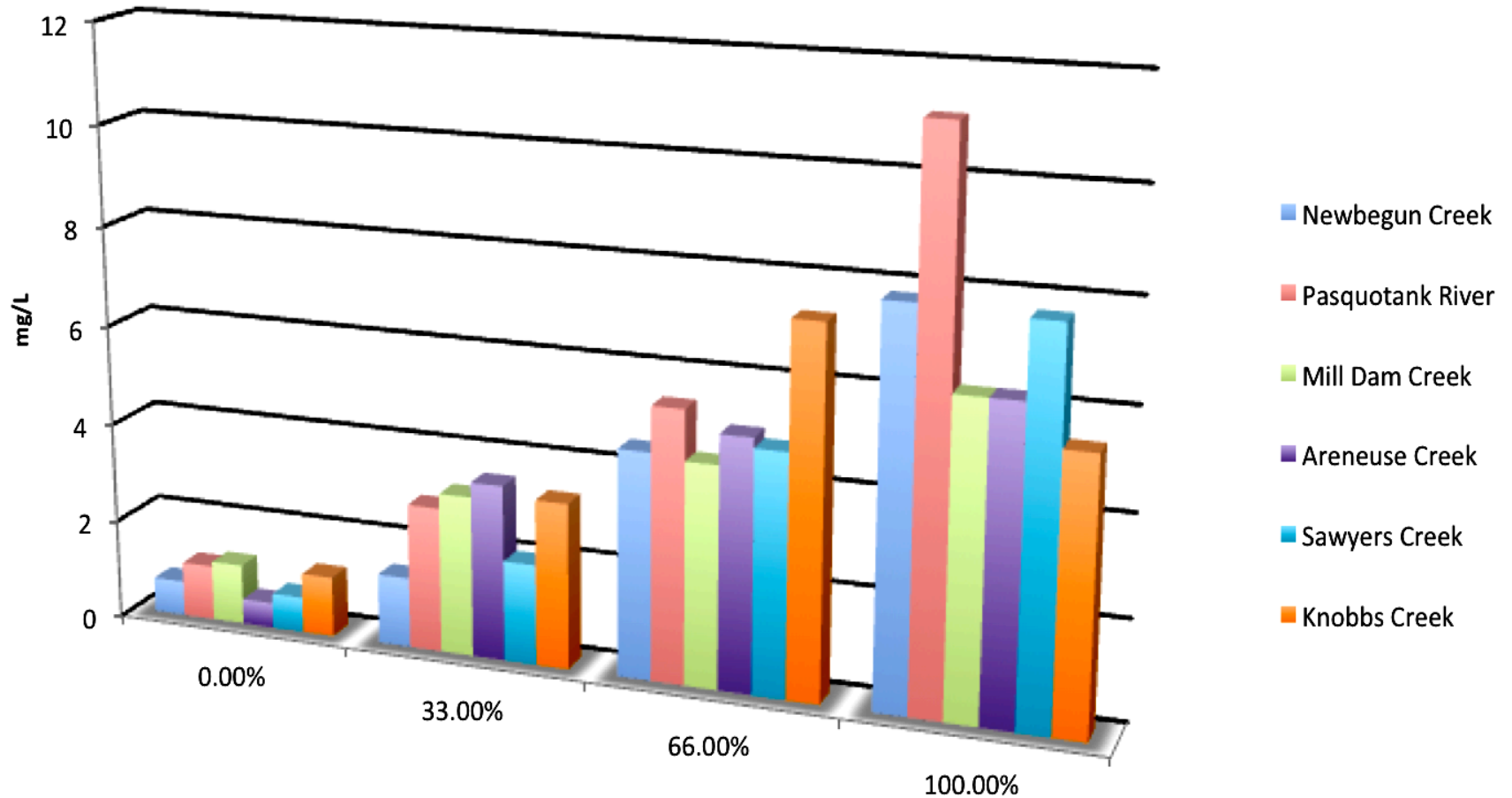






# RESULTS

# Dissolved Oxygen



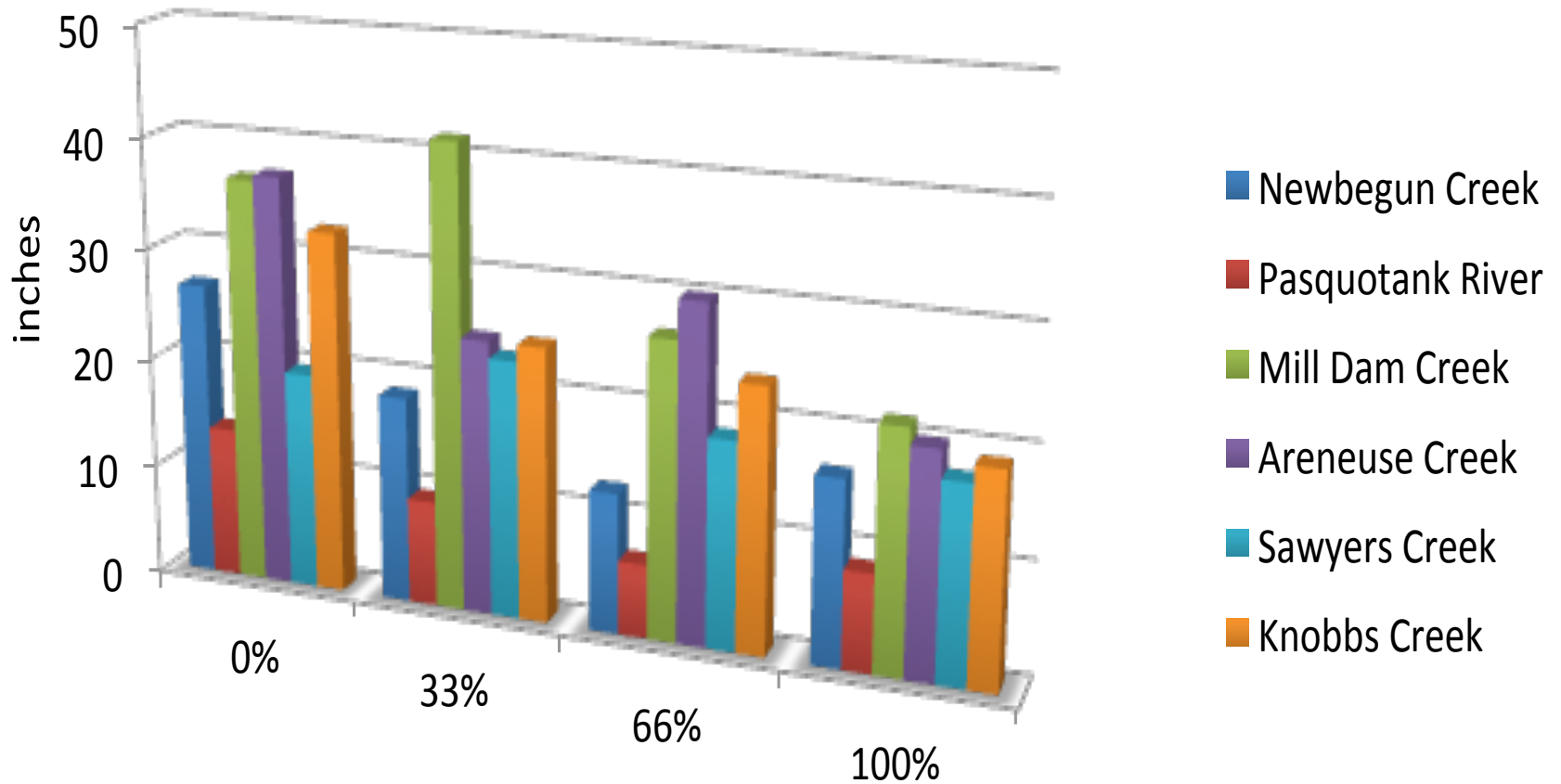
# Dissolved Oxygen Percent Saturation

	Newbegun	Pasquotank	Mill Dam	Areneuse	Sawyers	Knobbs
0%	8.4	13.6	15.1	6.3	8.2	14.6
33%	17.6	35.2	41	45.6	24.3	40.8
66%	59.7	67.9	56.3	65.2	60.4	93.5
100%	96.4	137.2	79.4	79.4	98.6	67.9
Avg*	45.5	63.5	48.0	49.1	47.9	54.2

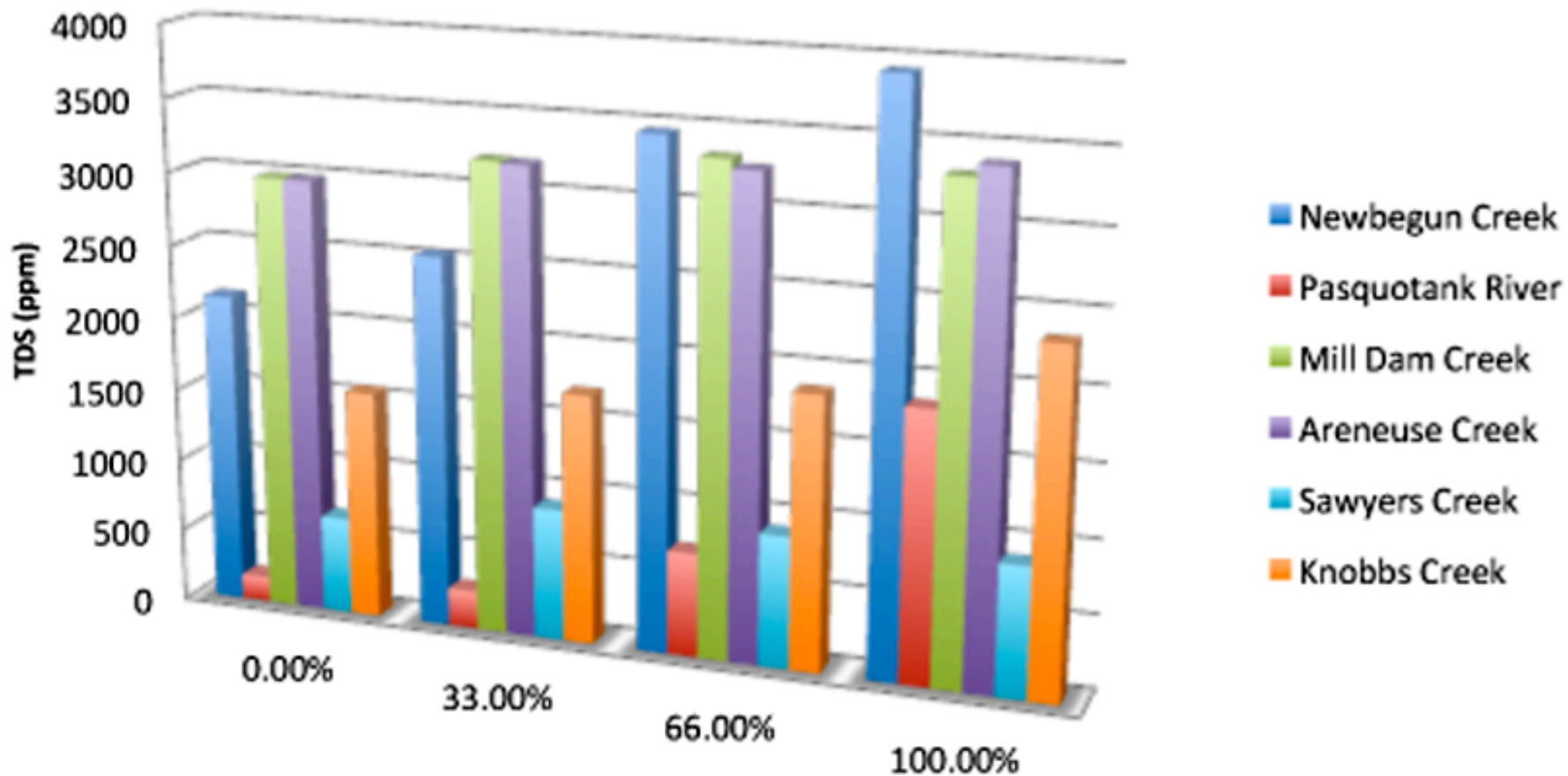
\*Average Percent Saturation



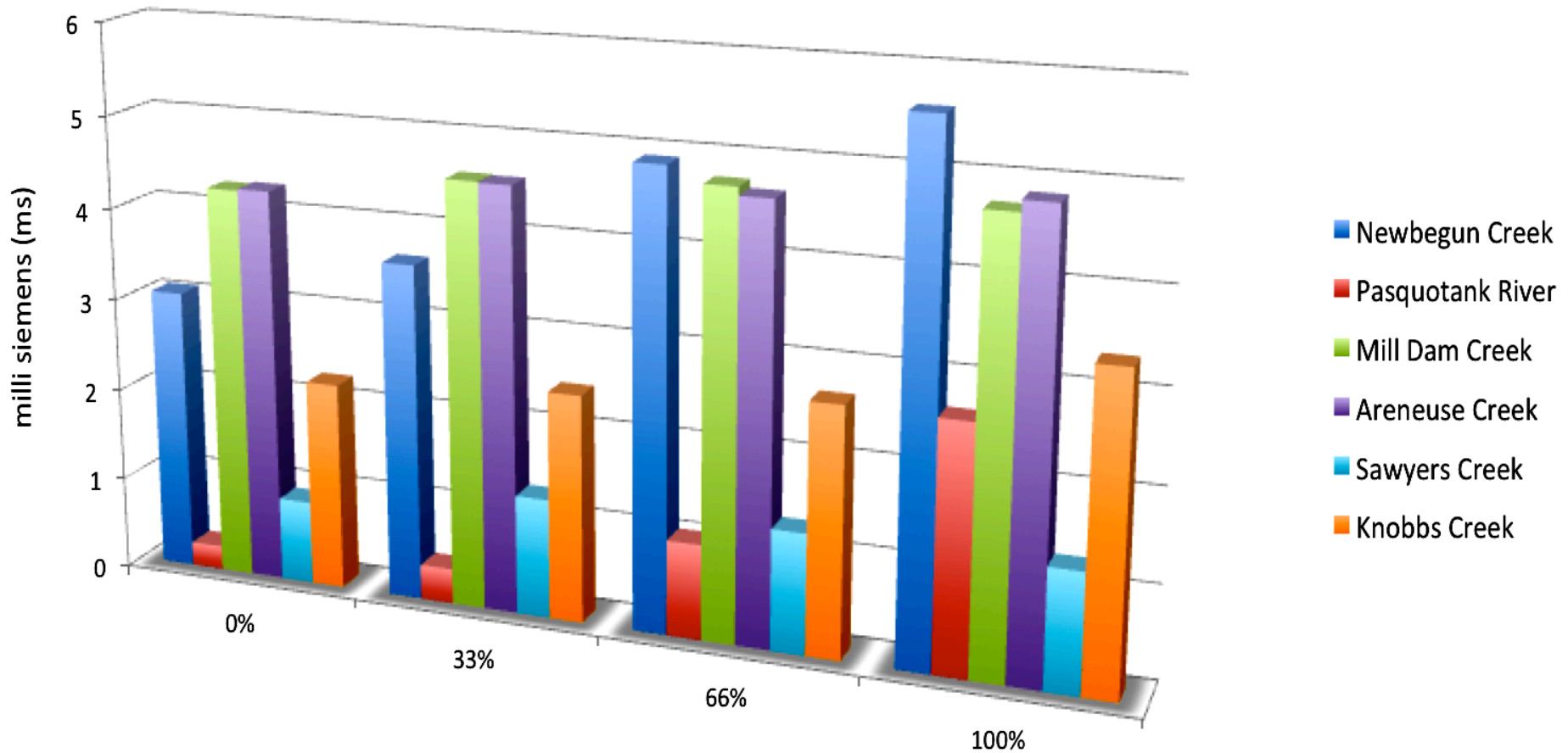
# Turbidity



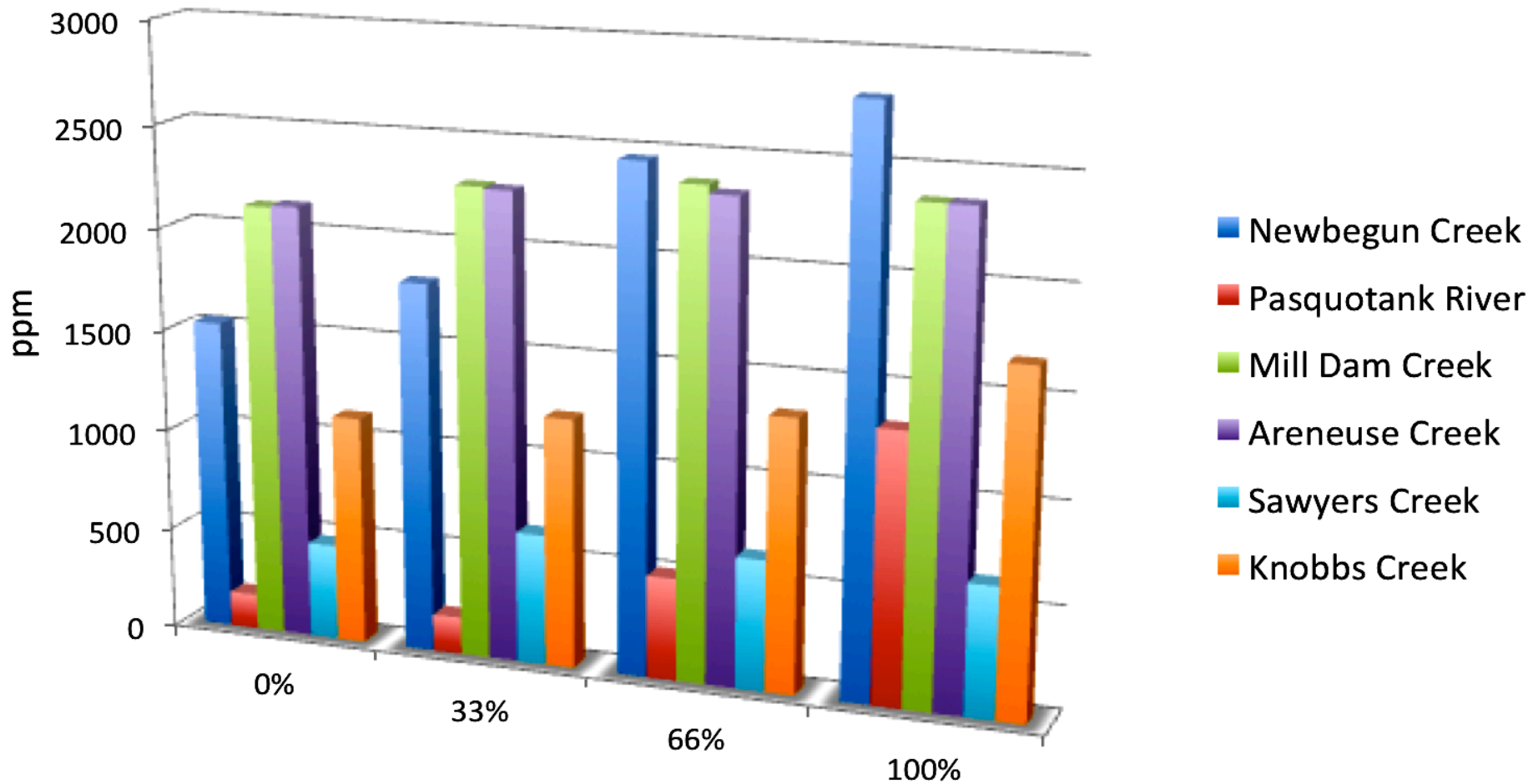
# Total Dissolved Solids



# Conductivity



# Salinity



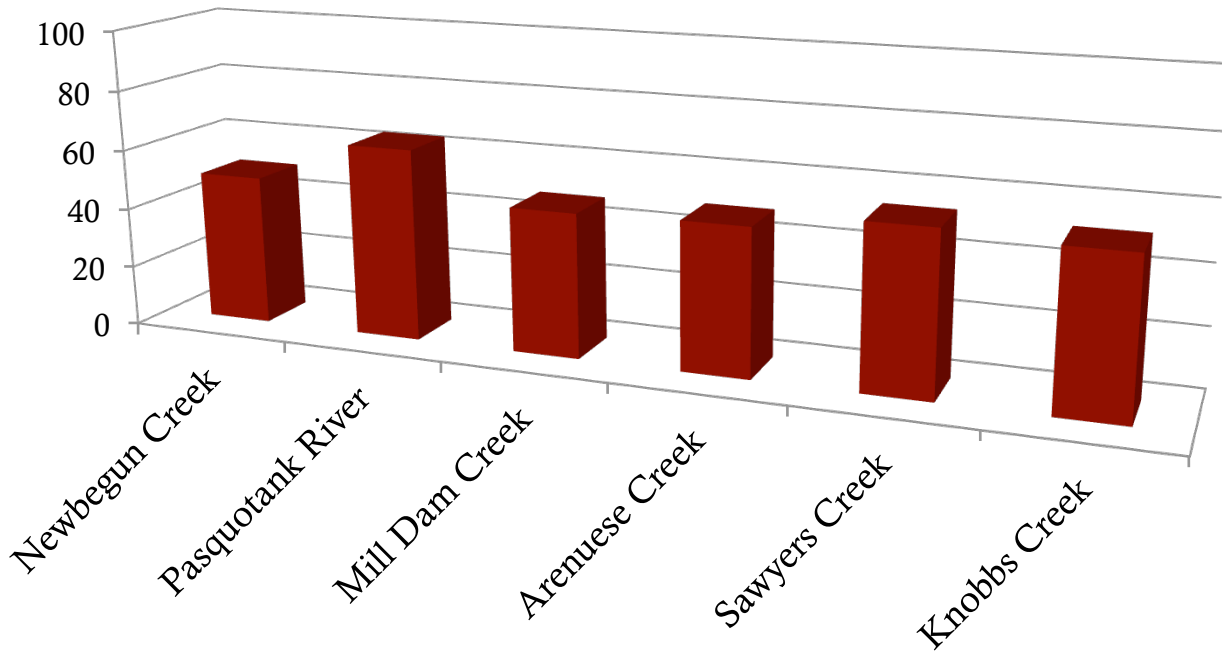


# WQI

Water Quality Index	
Newbegun Creek	50
Pasquotank River	64
Mill Dam Creek	48
Areneuse Creek	49
Sawyers Creek	54
Knobbs Creek	52

# WQI

## Water Quality Index



# Conclusion

- 💧 Water Quality Index
- 💧 Trend of Water Quality Parameters
- 💧 How Landforms Impact Water Quality

# Future Work

- ◆ Repeat Study
- ◆ Improve Testing Methods
- ◆ Assess Changes in Landforms



# Acknowledgements

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- 💧 URE Staff
- 💧 Mr. Je'aime Powell
- 💧 Patrina Bly
- 💧 Mr. Jeff Wood

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