

# Analysis of Trading Ratios for Water Pollution Control Trading Systems

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- **Background** – Trading is a tool to lower MC of pollution control.
- **Issue** - Reactive pollutants require a ratio for geographic equivalency.
- **Question** – How are existing systems addressing this issue?
- **Method** – Literature review and analysis of existing systems.
- **Answer** – Most systems use a ratio but for a variety of reasons.

# Components of Geographic-Trading Ratio

- Waterway Location
- Site location
- Uncertainty

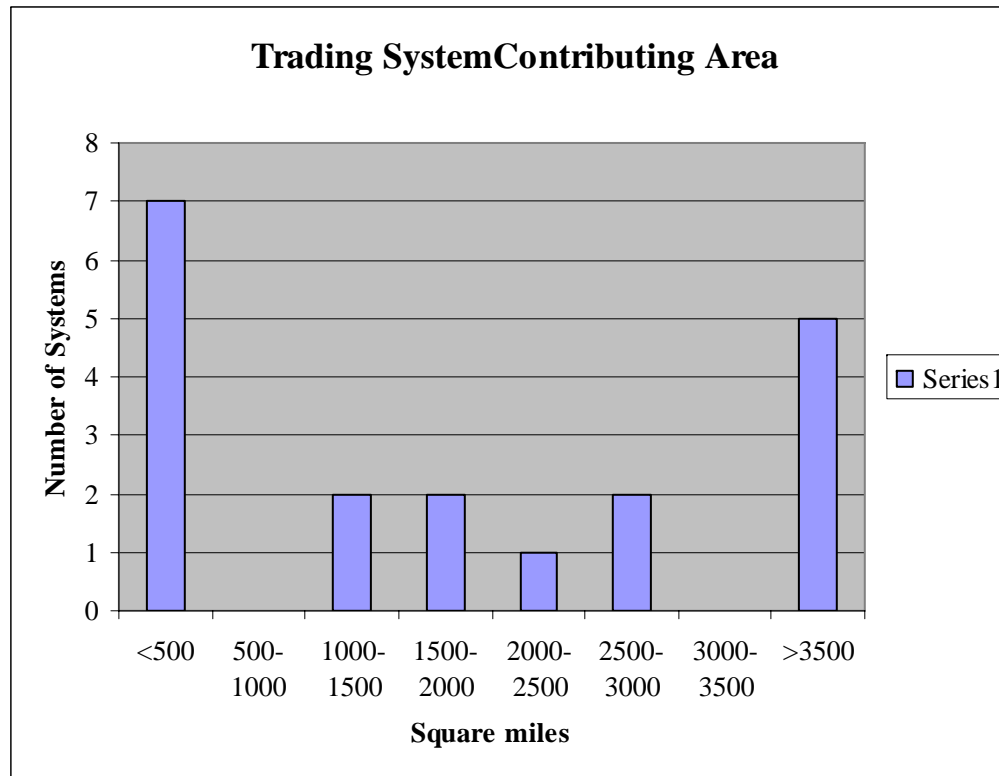
# Summary of Existing Systems

- 29 systems
- Primary use is offset.
- Most common pollutants are nutrients.
- 1984 -2005.
- Few ongoing systems.

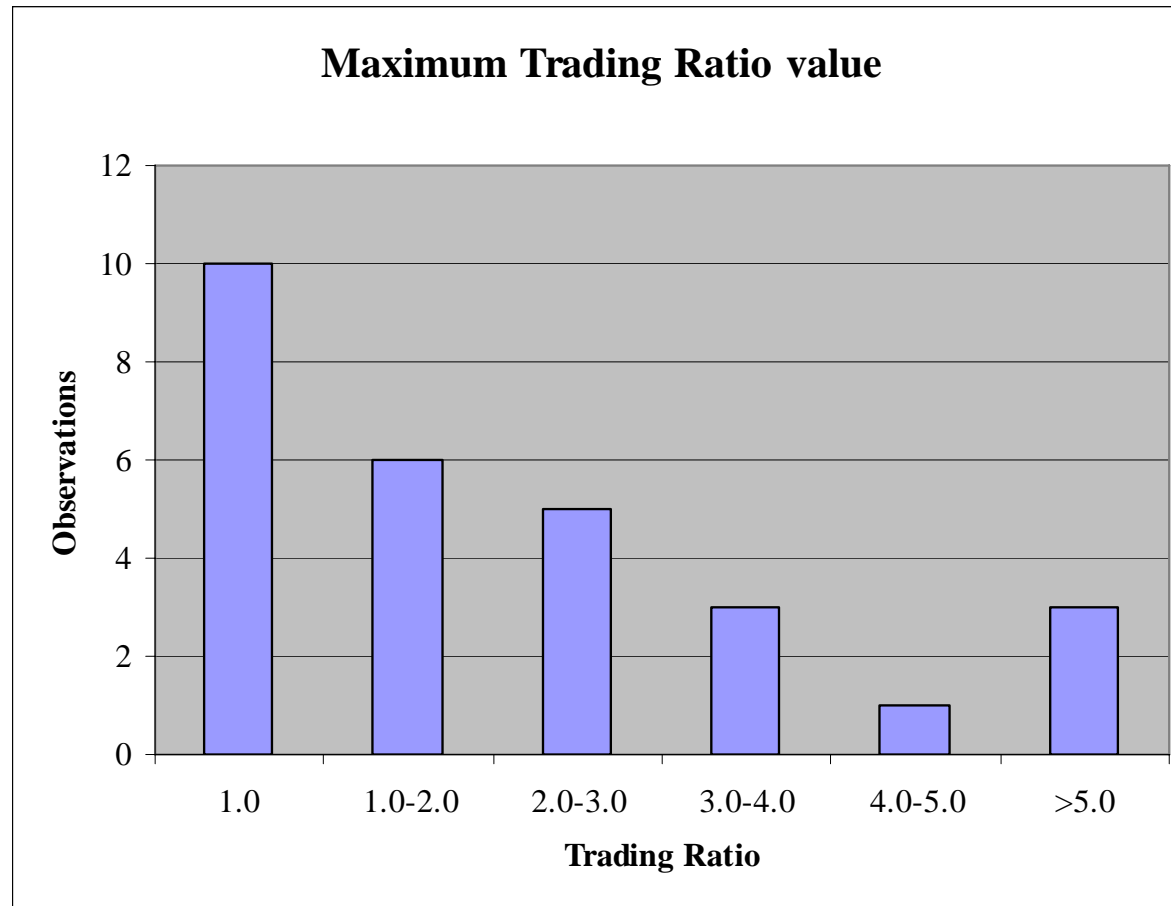
# Example Applications

- Zones - Ct Long Island Sound
- Formula – Lower Boise River
- Factors and Fixed Values – Most Systems

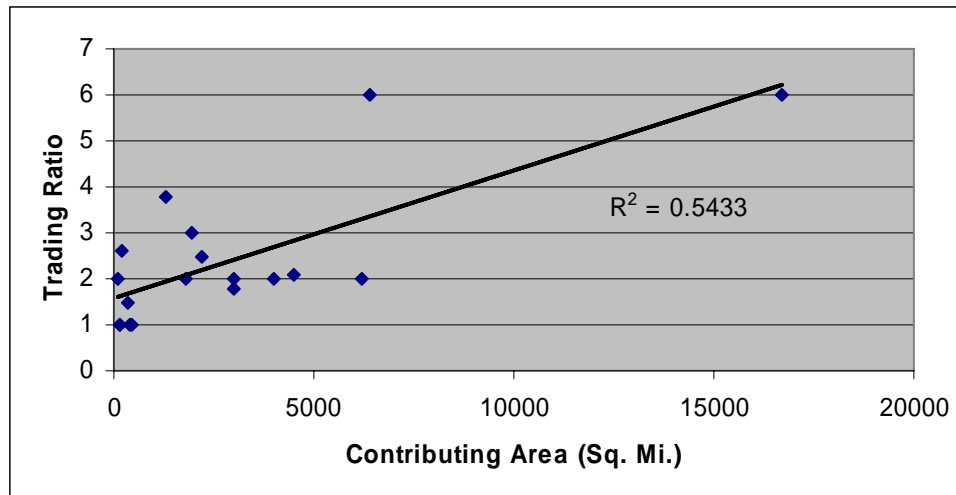
# Basin Area



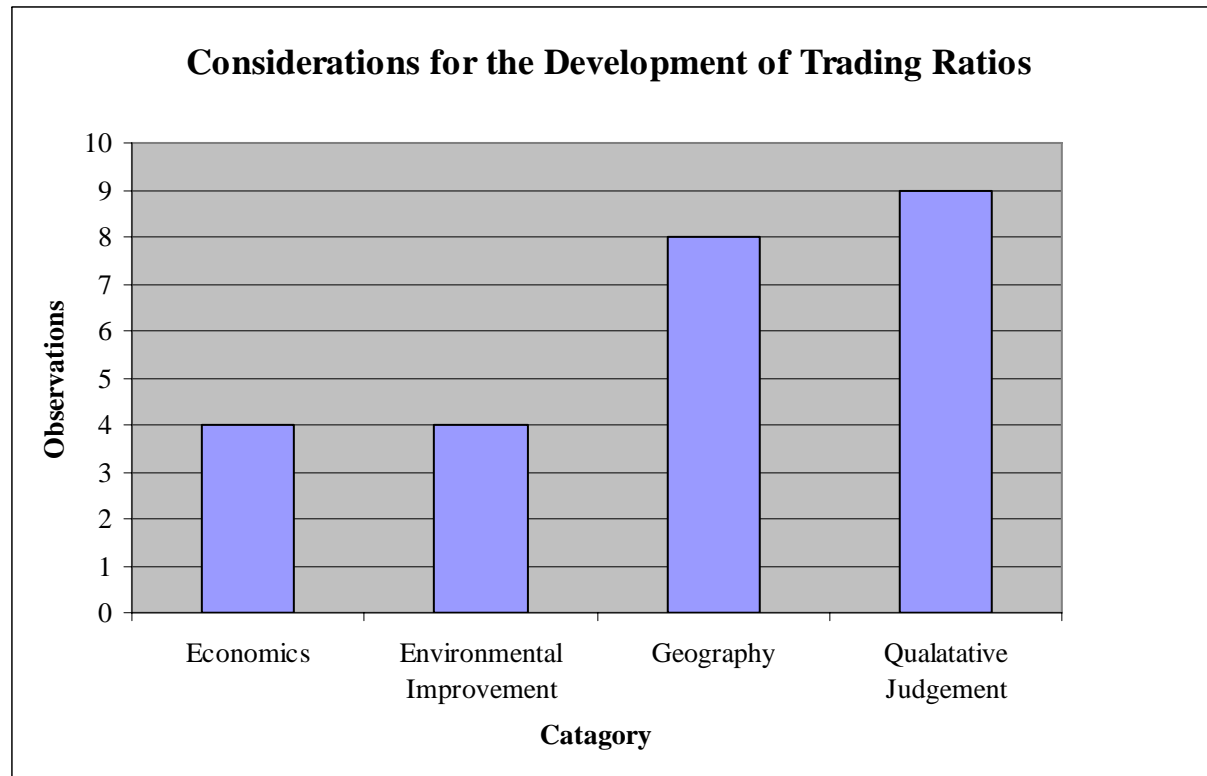
# Values of Trading Ratios for Existing Systems



# Basin Area Regression



# Considerations for Development of Trading Ratios



# Summary

- Most Systems inherently consider geographic area.
- Only a few systems directly consider area.
- Typical values are less than 2.0.

# Lessons Learned

1. Consider factors separately during development.
2. Publish values after development for certainty.
3. Use pre-established zones, formulas, values, or factors.
4. Most safety values are small.
5. Select BMPs from list.