City of Grand Rapids
Grand River Water Quality Monitoring

Green CiTTS Webinar
November 9, 2011
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History

- Program began in 1969
- Partnership of communities, universities, colleges and the Center For Environmental Study.
Monitoring Parameters

- Sample temperature (°C)
- Dissolved oxygen (mg/L)
- pH (pH units)
- BOD-5 (mg/L)
- Total suspended solids (mg/L)
- Fecal coliform (#FC/100mL)
- E. coli (#EC/100mL)
- Chlorides (mg/L)
- Conductivity (uS/cm)
- Total phosphorus (mg/L)
- Ammonia as nitrogen (mg/L)
- Nitrites as nitrogen (mg/L)
- Nitrates as nitrogen (mg/L)
- Total chromium (ug/L)
- Total Copper (ug/L)
- Total iron (ug/L)
- Total mercury (ug/L)
- Total nickel (ug/L)
- Total silver (ug/L)
- Total zinc (ug/L)
- Hardness (mg/L CaCO3)
WQI is a weighted calculation based on the measurements of Dissolved Oxygen, Temperature, pH, BOD, Total Suspended Solids, Chloride, Fecal Coliform, Phosphate, and Nitrate.
Data Uses

- Data Trends
- IDEP – Illicit Discharge Elimination Program
- TMDL Tracking
- Other Anomalies

Grand Rapids Area Water Quality Index

http://www.arcgis.com/home/webmap/viewer.html?webmap=e07a47ad42014b54bb6a0a6f197fc9f7
Fecal Coliforms >15,000 colonies per 100 mL

November 2006
Results

- Historical Trends
- IDEPs
- Anomalies
- Upstream/Downstream Comparison
- Regional Cooperation