

Monitoring Subcommittee Meeting III

December 3, 2009 4:30-6:00 p.m.

Attendees: Ron Turco, Sara Peel, Megan Heller, Melissa Baldwin, Jay Beugley, Chad Jafvert, Heather Gall, Tim Lathrop, Laura Bowling, Greg Michalshi, Indrajeet Chaubey, Brad Talley, Katherine Ortegon

Target Values Discussion:

- Peel explained that target values are needed as a means of comparing current and historic water quality data. The target values do not have to be the same values used to set goals; however, it is recommended that values be similar.
- Peel presented a series of parameters and potential target values. The parameter list is based on historically-collected water quality data and includes: temperature, dissolved oxygen, pH, conductivity, *E. coli*, total ammonia, nitrate-nitrogen, total Kjeldahl nitrogen, total phosphorus, total suspended solids, turbidity, QHEI, mIBI, and IBI. Peel explained that the first six parameters (temperature through ammonia) are established via the Indiana Administrative Cod (IAC), while QHEI, mIBI, IBI, total phosphorus, and nitrate-nitrogen values have been established by IDEM for use while determining impaired waterbody status. Alternate values are available for all of these including values for nitrate-nitrogen, total Kjeldahl nitrogen, and total phosphorus recommended by the USEPA through their water quality criteria efforts.
- The following discussion and/or decisions were made:
 - Use standards when available and set long-term and intermediate target concentrations separately for the Wabash River and its tributaries. The long-term goal of the committee is 1) to reduce the peak concentration not the base concentration and 2) to develop long-term rolling geometric monthly mean target concentration for target parameters (nitrate-nitrogen, total suspended solids/turbidity, and total phosphorus).
 - IAC standards for temperature, pH, dissolved oxygen, conductivity (total dissolved solids), and *E. coli* will be used. Temperature values were requested to be provided and are contained at the end of these minutes.
 - Total Kjeldahl nitrogen values were discussed and no decision was made. The committee requested further detail as to the number of TKN collections historically.
 - Nitrate-nitrogen target values were discussed with the decision that 10 mg/L is too high for surface water quality targets while 1 mg/L may be too low of a concentration. Turco indicated that Little Pine Creek "bleeds" nitrate with concentrations typically greater than 12 mg/L while Elliot Ditch concentrations are relatively low measuring less than 2 mg/L typically.
 - Total phosphorus concentrations of 0.3 mg/L, the value IDEM uses for listing waterbodies, was considered too high as a long-term target value but will serve as an interim target concentration.

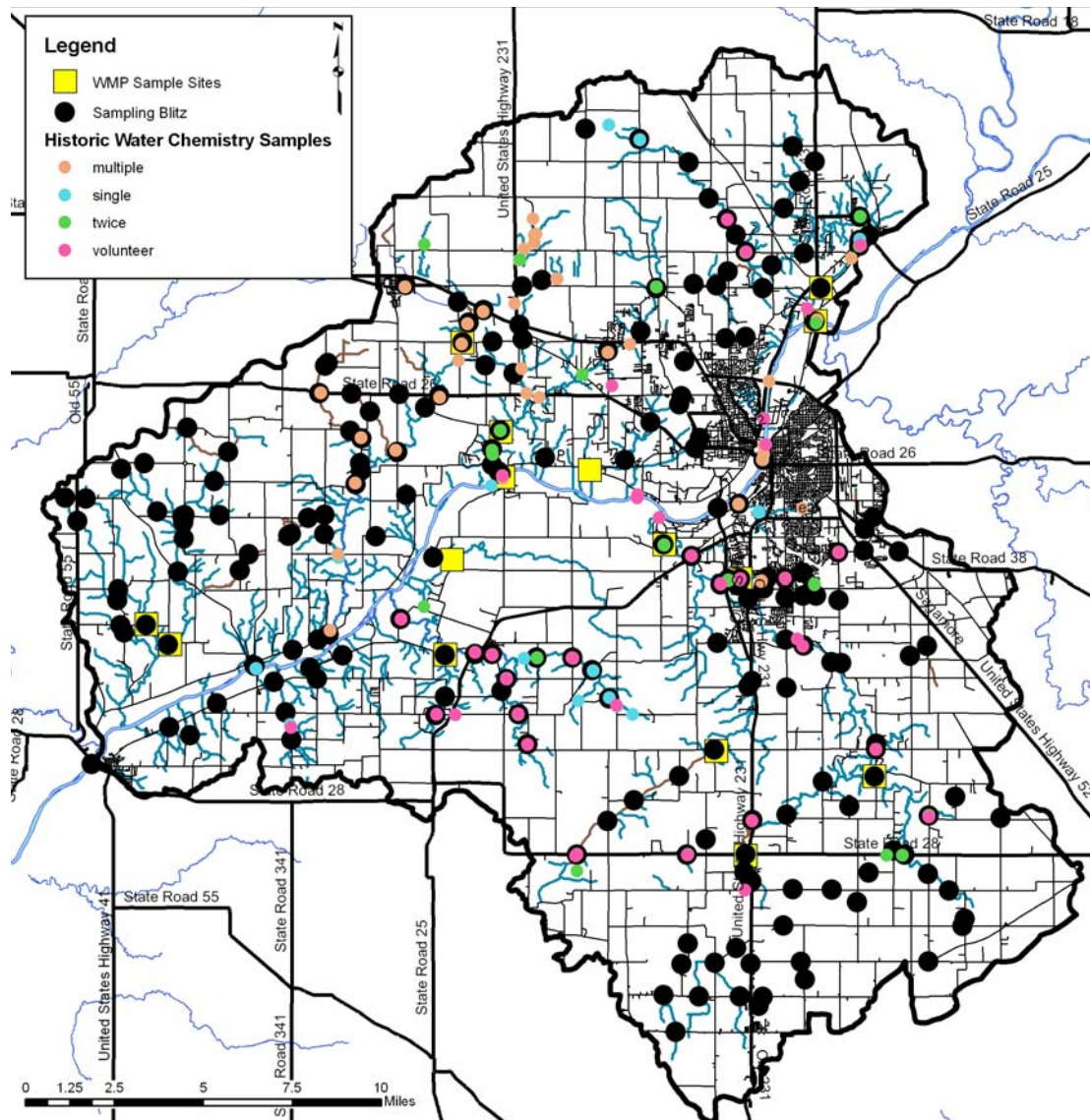
Water Quality Data Sets:

- Data sets for data collected by IDEM (monthly at multiple Wabash River locations), by Heather Gall and Chad Jaffvert at the Purdue Animal Sciences facility, via the Wabash Sampling Blitz, by Ron Turco and Megan Heller at the 319-project sites was presented.

- The committee requested that Sampling Blitz sites with high laboratory concentrations (ammonia, nitrate, orthophosphate) be targeted for follow-up sampling. A plan by which this can be accomplished will be discussed with the Purdue advisory committee and presented at the next monitoring committee meeting.
- Analysis methods will be developed for the slew of data being collected on a weekly and 15-minute basis at our gaging stations. Potential uses of these data will be presented at the next monitoring committee meeting.

Follow up data:

Based on historic water quality data – a majority of sites have only been sampled one time (blue and black), twice (2002 and 2003 once annually; green), or by volunteers (pink). Yellow squares indicate current sample sites with most shown biological sample sites only. Under the preferred method by the steering committee, only those sites shown in orange or yellow squares on the Wabash River, Elliot Ditch, Little Pine Creek, or Little Wea Creek can be used for management decisions.



From IAC 327 Article 2 4(D) Water temperatures shall not exceed the maximum limits in the following table during more than one percent (1%) of the hours in the twelve (12) month period ending with any month. At no time shall the water temperature at such locations exceed the maximum limits in the following table by more than three (3) degrees Fahrenheit (one and seventeenths (1.7) degrees Celsius):

Table 6-4

	Ohio River Main Stem °F(°C)	Other Indiana Streams °F(°C)
January	50 (10.0)	50 (10.0)
February	50 (10.0)	50 (10.0)
March	60 (15.6)	60 (15.6)
April	70 (21.1)	70 (21.1)
May	80 (26.7)	80 (26.7)
June	87 (30.6)	90 (32.2)
July	89 (31.7)	90 (32.2)
August	89 (31.7)	90 (32.2)
September	87 (30.7)	90 (32.2)
October	78 (25.6)	78 (25.5)
November	70 (21.1)	70 (21.1)
December	57 (14.0)	57 (14.0)