Biological Water Quality Subcommittee

2009 (FY10) Program Results

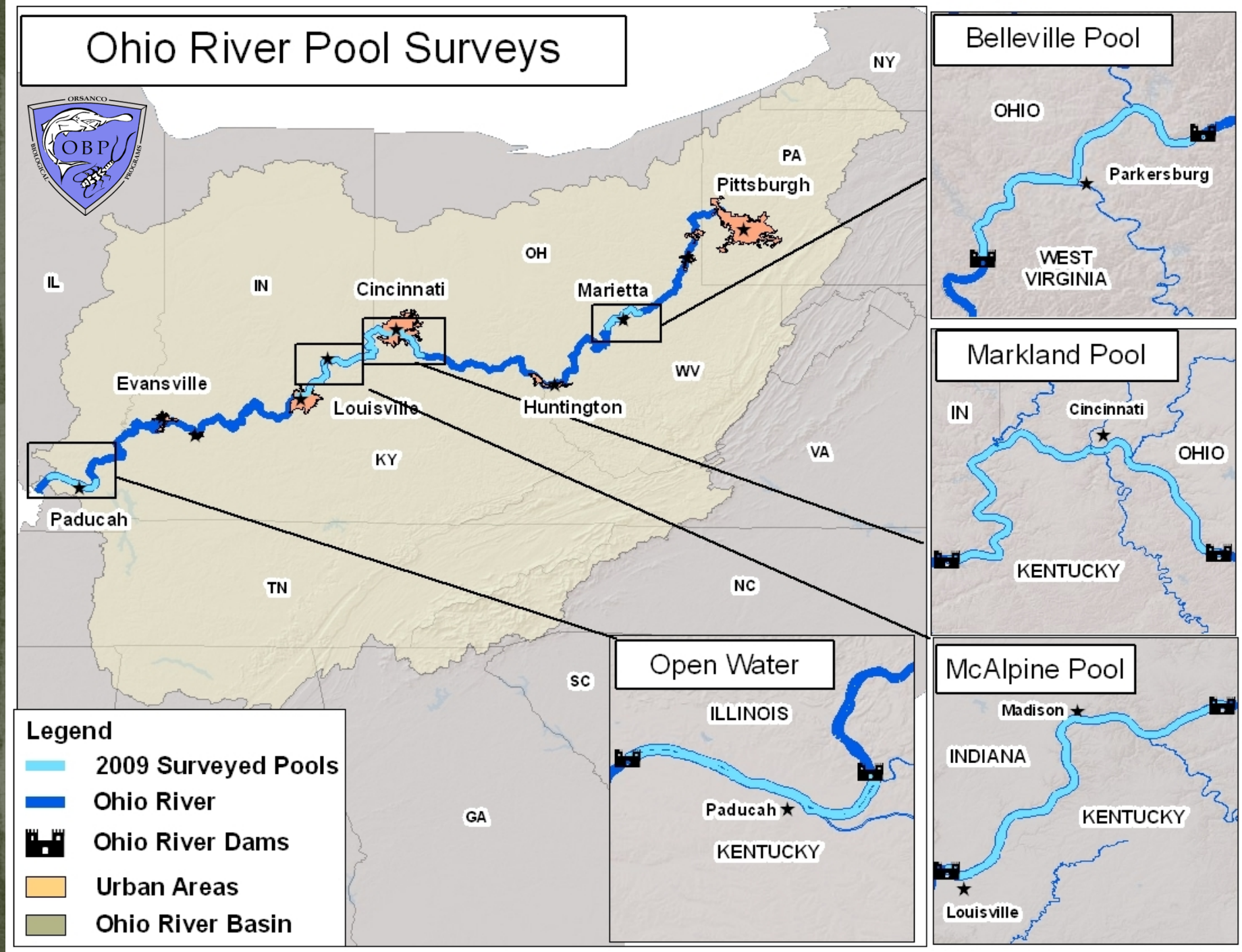
2010 (FY11) Program Recommendations

2009 Field Studies

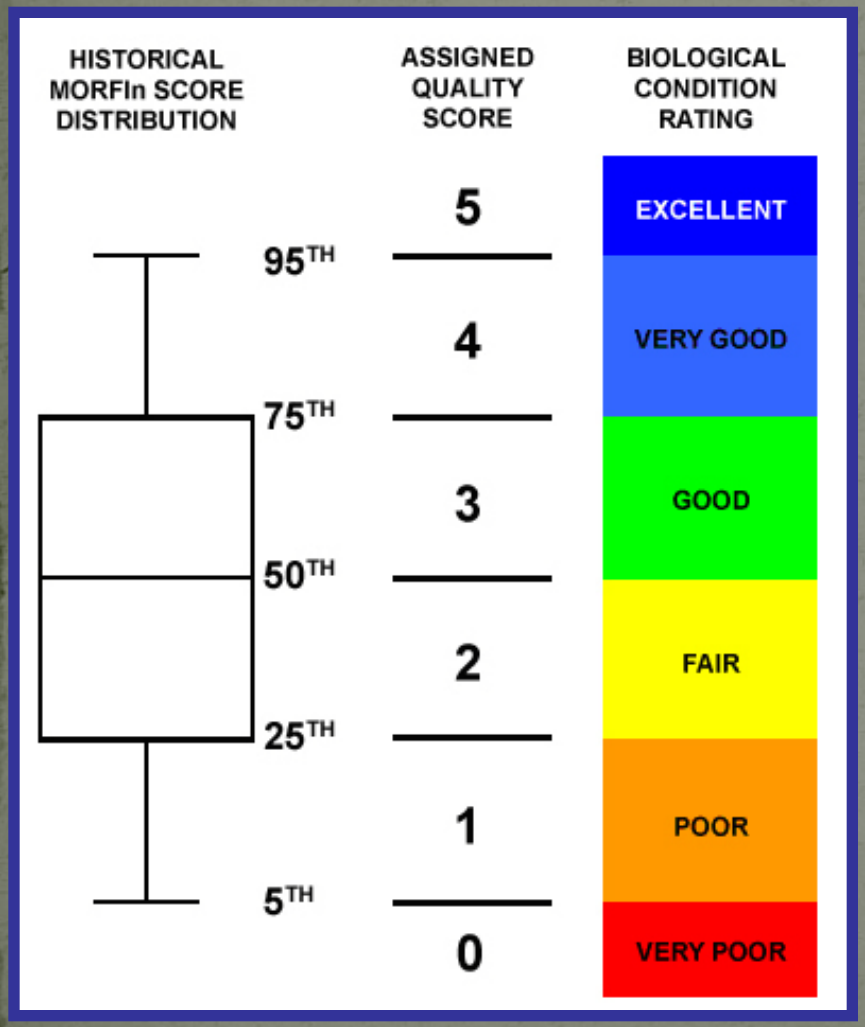
- Pool Surveys
  - Fish – 305(b)
  - Macroinvertebrates – (index development)
  - Water Quality (3 rounds)
- Fixed Stations (6th year)
- Grant / Co-op Activities
  - EMAP-GRE (ongoing; 3rd field season; 2 yrs remaining)
  - USEPA – National Rivers and Streams Assessment (NRSA)

Pool Surveys

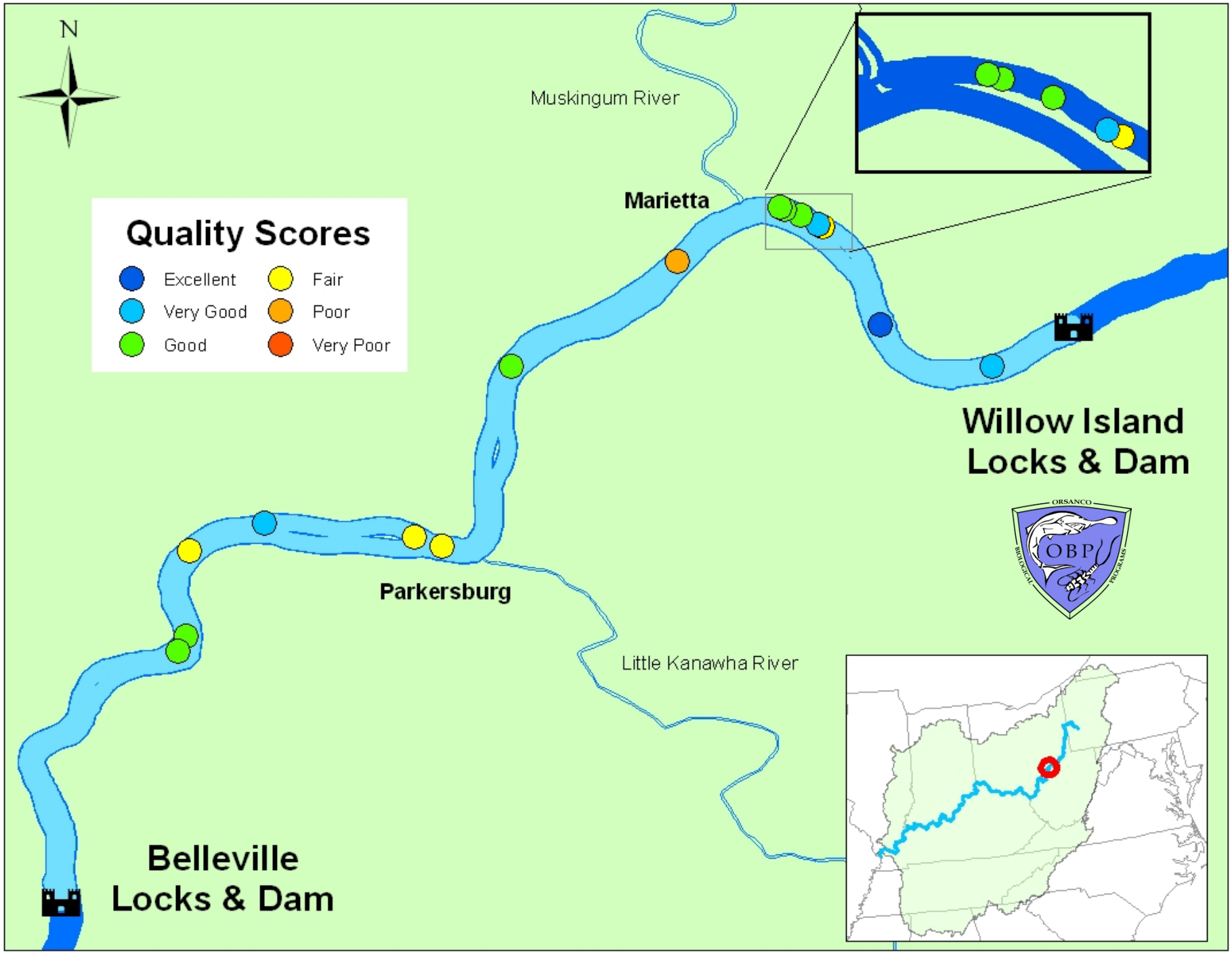
- 2009 – Marked completion of 1st rotation through all pools.
  - 5-year schedule (2005-2009)
- Data for 100% of resource now available for 305(b)

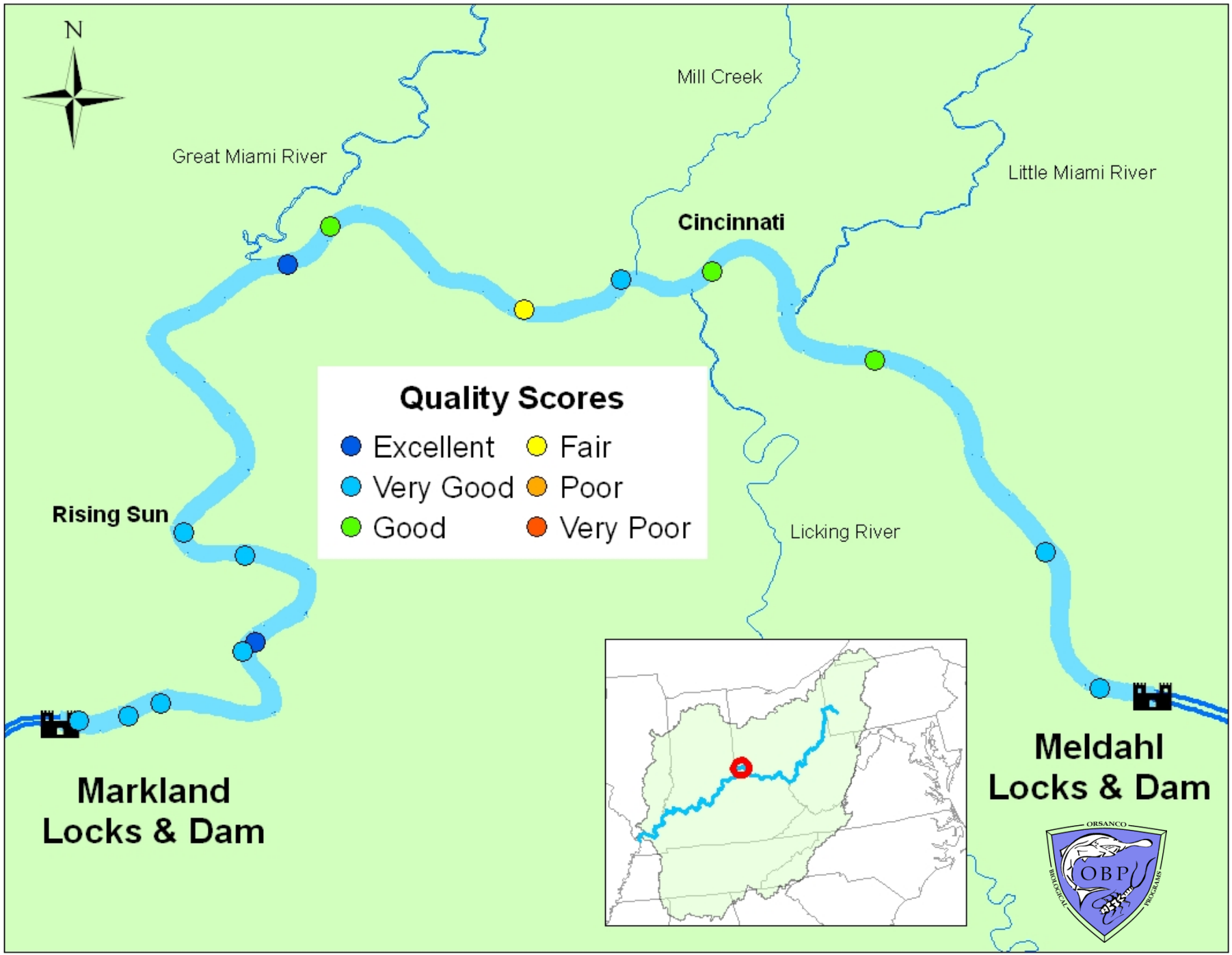

Ohio River Pool Surveys
ORSANCO
OBP
BIOLOGICAL PROGRAMS
NY
PA
Pittsburgh
OH
IL
IN
Cincinnati
Marietta
WV
Evansville
Louisville
Huntington
KY
VA
Paducah
TN
NC
SC
GA
Belleville Pool
OHIO
Parkersburg
WEST VIRGINIA
Markland Pool
IN
Cincinnati
OHIO
KENTUCKY
Open Water
ILLINOIS
Paducah
KENTUCKY
McAlpine Pool
Madison
INDIANA
KENTUCKY
Louisville
Legend
2009 Surveyed Pools
Ohio River
Ohio River Dams
Urban Areas
Ohio River Basin

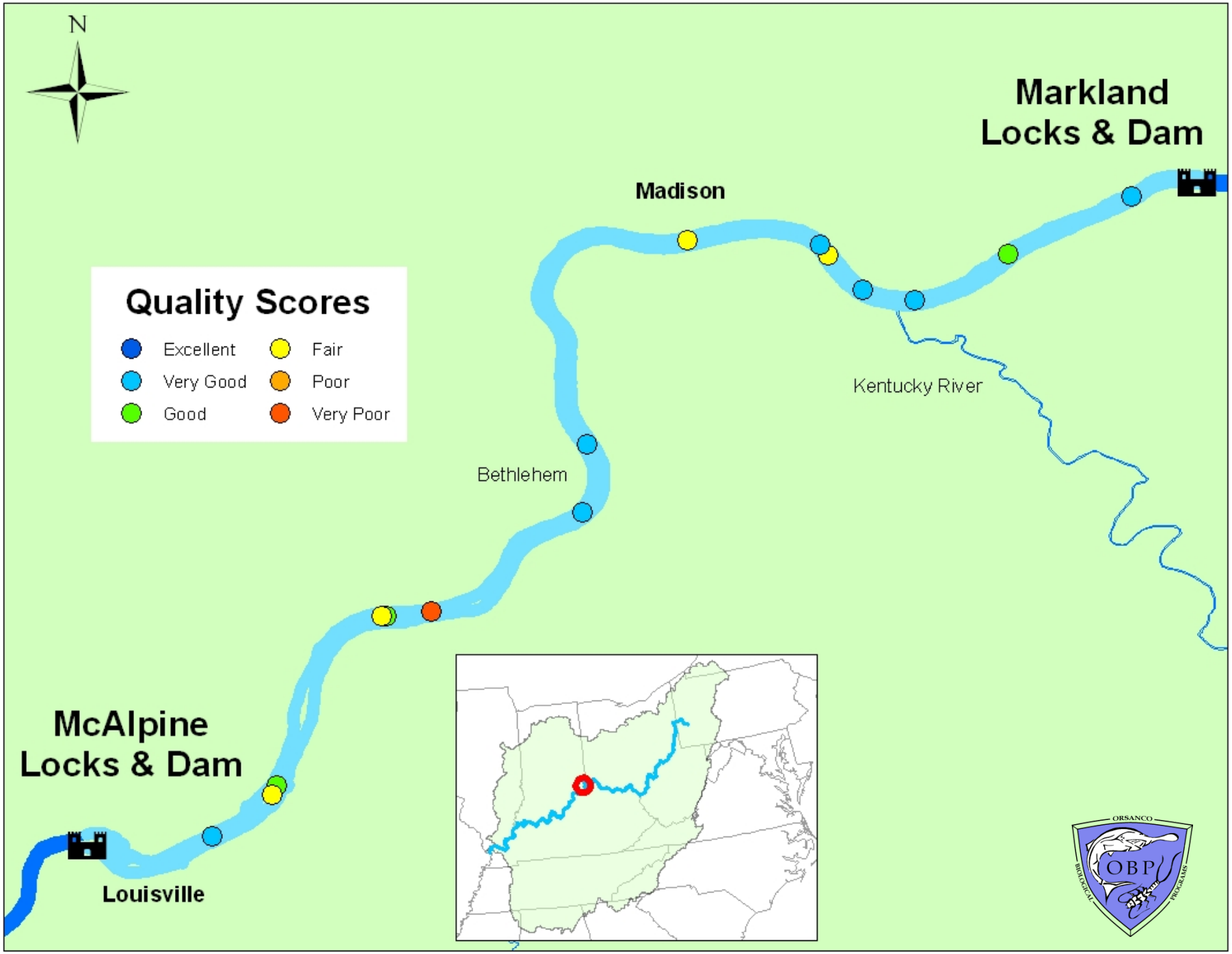
Review of new Assessment Approach



- Maintained the original 13 metrics
- Shifted to continuous scoring method for metrics
- Added resolution to the habitat classes
  - 5 instead of 3
- Added A Fish Quality Score
  - Assigned based on performance relative to historical distribution of MORFIn scores for each habitat
- Lastly, Average Site Quality Scores to obtained a Condition Rating for the Pool


N
Muskingum River
Marietta
Quality Scores
Excellent
Very Good
Good
Fair
Poor
Very Poor
Willow Island
Locks & Dam
ORSANCO
OBP
BIOLOGICAL
PROGRAMS
Parkersburg
Little Kanawha River
Belleville
Locks & Dam


N
Mill Creek
Great Miami River
Little Miami River
Cincinnati
Quality Scores
Excellent
Very Good
Good
Fair
Poor
Very Poor
Rising Sun
Licking River
Markland
Locks & Dam
Meldahl
Locks & Dam
ORSANCO
OBP


N
Markland
Locks & Dam
Madison
Quality Scores
Excellent
Very Good
Good
Fair
Poor
Very Poor
Kentucky River
Bethlehem
McAlpine
Locks & Dam
Louisville
ORSANCO
OBP
BIOLOGICAL
PROGRAMS

N

Locks & Dam 53

Smithland
Locks & Dam

Locks & Dam 52

Paducah

Tennesse River

Cairo

Quality Scores

- Excellent
- Very Good
- Good
- Fair
- Poor
- Very Poor

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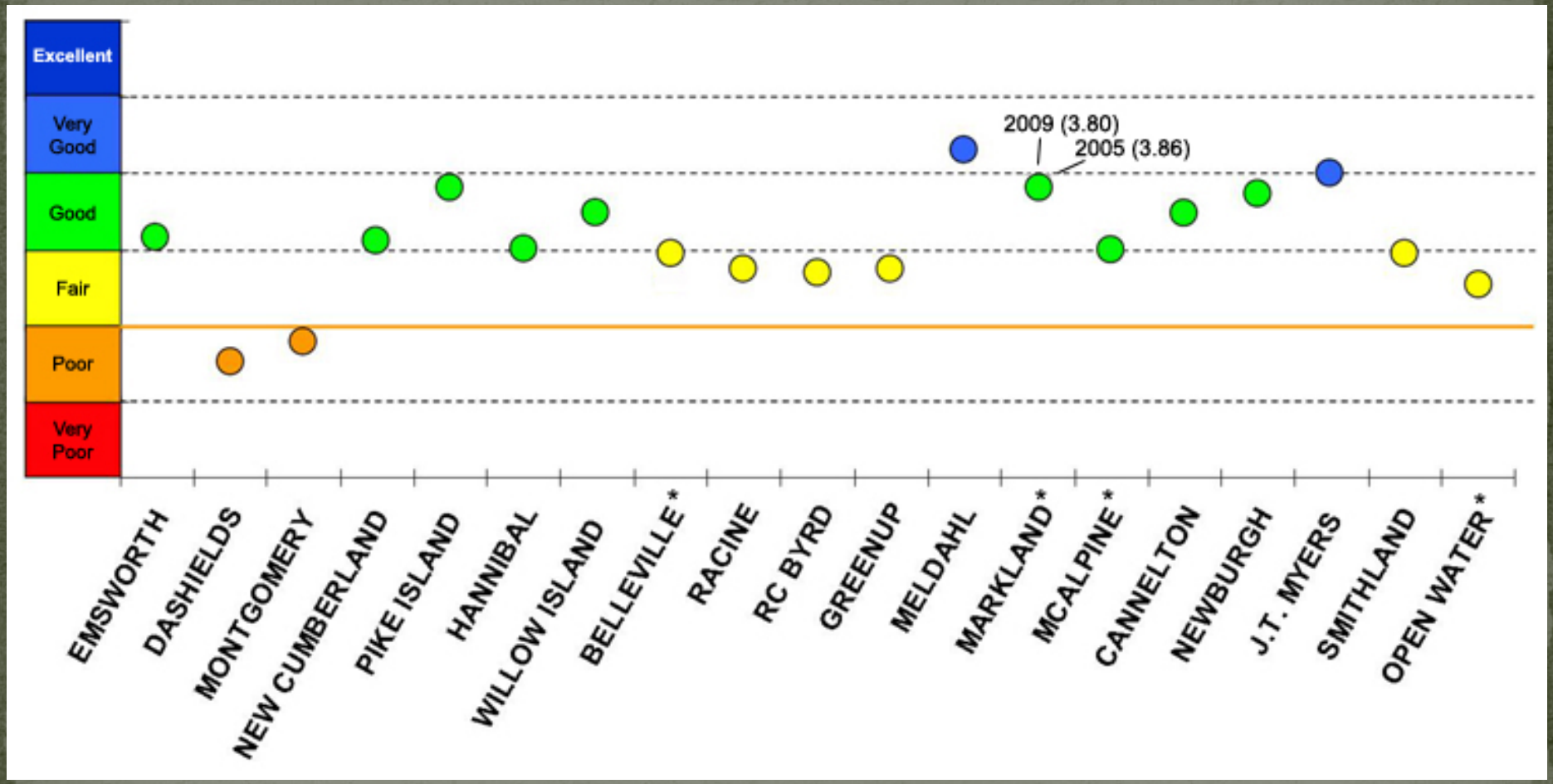
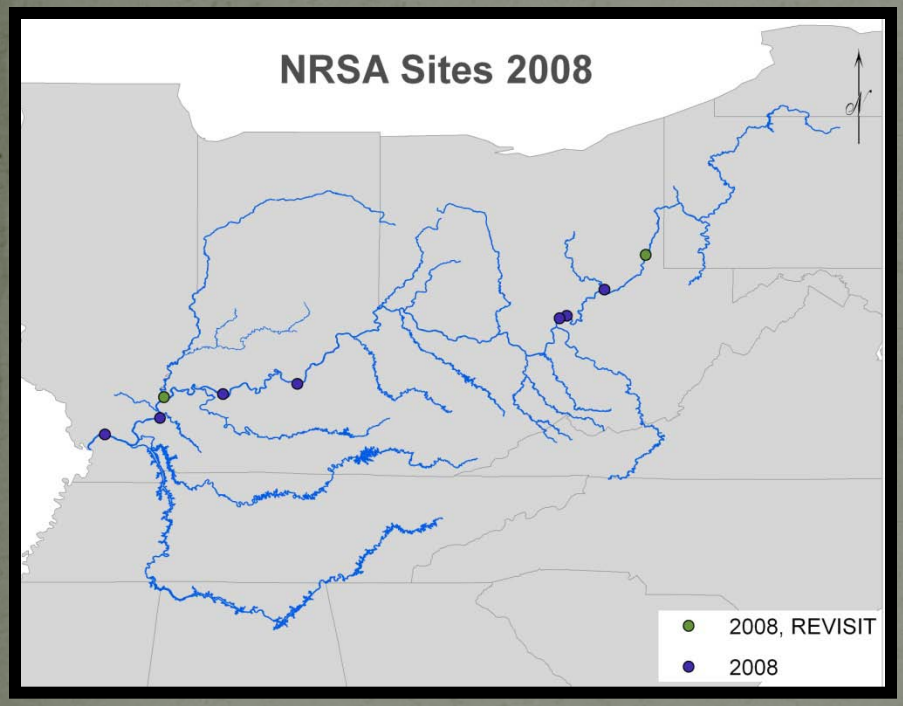
BIOLOGICAL PROGRAMS

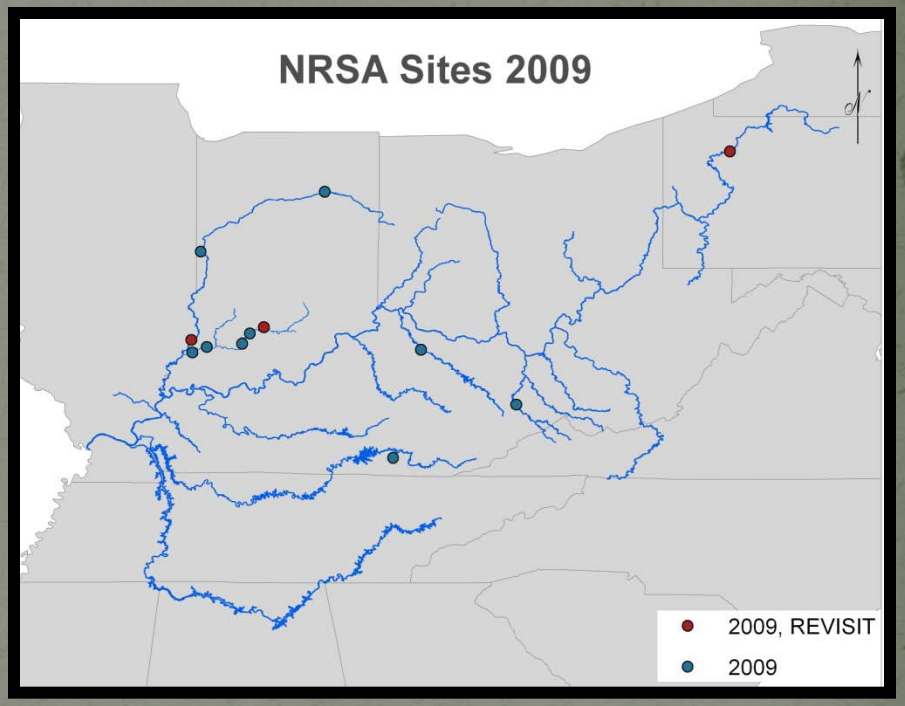
The average quality score for each pool surveyed as of 2009



(= pools surveyed in 2009). Data points are color-coded to indicate the biological condition of a pool.*

USEPA NRSA (National Rivers & Streams Assessment)





NRSA

- 27 Sites
- $6,000 per site
- Cost to execute sampling: ≈$1,500/site
- Balance of funds utilized to complete several additional studies, enhance ongoing monitoring efforts and support other programs/objectives

NRSA

- Emerging Contaminants Study
- Mercury Study
- Supported addition of a 4th pool for monitoring/assessment (fish and macroinvertebrates)
  - Support from USACE for WQ (3 rounds)
- Staff training; software/hardware purchases to enhance GIS capabilities; graduate student support; etc.

2010 (FY11) Program Recommendations

Pool Surveys
Lockchamber Sampling
Data Assessment

Pool Surveys

- Minimum of 2 pool surveys; 3 pools if time/resources allow
  - Pools representing a range of condition; test newly developed indicators
    - Macroinvertebrate IBI
    - Periphyton (Diatom) IBI
  - Candidate Pools

Pool	Original Condition (year)
Montgomery	Poor
Racine	Fair
J.T. Meyers	Very Good

Lockchamber Sampling

- Suspend Sampling Programs
- Re-evaluate need in 2015
- Assist PA with lockchamber surveys on the Monongahela River

Data Assessment

- Temporary shift in focus from field studies to data assessment
- Use '6th' year primarily for 'catch up'
- Resume more aggressive assessment schedule in 2011 (FY12)
- 'Special Studies' might be needed to fill data gaps; enhance knowledge; otherwise improve assessment approach
  - SAV study proposed

FY11 Additional

- Continue pursuit of extramural funding to support monitoring, assessment and research efforts
  - EPRI - Genetic diversity of Longnose gar (*Lepisosteus osseus*) and Bluegill (*Lepomis macrochirus*) in the Ohio River.
  - USFWS – GIS; spatial analysis; modeling; fish habitats; various spatial scales
  - USEPA – Continuing Emerging Contaminants Research

Questions ?