



OFFICE OF THE LIEUTENANT GOVERNOR
EVELYN SANGUINETTI – LIEUTENANT GOVERNOR

Joint Meeting
Illinois River Coordinating Council
Mississippi River Coordinating Council
Ohio and Wabash Rivers Coordinating Council

Wednesday, July 27th, 2016
11:00 AM

Shedd Aquarium
1200 S. Lake Shore Dr.
Chicago, IL 60605

Conference Number: 1-888-806-4788
Access Code: 8040585503#
Host password: 399545

I. Call to Order and Roll Call

Lieutenant Governor Evelyn Sanguinetti called the meeting to order at 11:02 AM.

She then asked Lavinia Jurkiewicz to take the roll.

Member Agencies

Illinois Environmental Protection Agency, Emily Clamp
Illinois Department of Natural Resources, Jim Herkert
Illinois Department of Transportation, Jeff Kern
Illinois Soil and Water Conservation District, Stephen Fulling

Illinois Department of Agriculture, Joe Bybee

Citizen Members

Illinois River Coordinating Council

Doug Blodgett (representative), Michael Sutfin, Jason Marquis (representative), Darren Melvin, Allen LaPointe, David St. Pierre (representative)

Mississippi River Coordinating Council

Jennifer Walling, Wendell Shauman (representative), Reed Wilson

Ohio and Wabash River Coordinating Council

Jason McNeil, Tyrone Coleman

Quorum was met in all three Councils.

I. Introductions and Opening Remarks

Lt. Gov Sanguinetti welcomed members to the third quarterly meeting. She thanked the members for their work in promoting the ecological and economic benefits of Illinois' rivers, and Allen LaPointe for welcoming Council members to the Shedd Aquarium for the meeting.

She brought up that the Shedd is instrumental in educating millions of people about the importance of water resources and water habitat research.

Approval of meeting minutes from June 14th, 2016– Lt. Governor Evelyn Sanguinetti

Lt. Governor Sanguinetti then opened the floor for corrections to the minutes from the June 14th, 2016 meeting. There were no corrections brought forward.

Lt. Governor Sanguinetti asked for a motion to approve the minutes. Allen LaPointe made the motion and Emily Clamp seconded.

New Business

- a. Illinois Department of Natural Resources – Alligator Gar Reintroduction Program- Dan Stephenson presenting on behalf of Nathan Grider
 - i. Gar Taxonomy
 - Two genera- *Lepisosteus* and *Atractosteus*
 - a. Four types native to IL- Longnose gar, Shortnose gar, Spotted gar, and Alligator gar
 - ii. Gar: A Living Fossil
 - Fossils date back to crustaceous era
 - Alligator gar date back ~5.3 million years
 - Now are only extant in North America and Central America
 - iii. Size
 - Largest fish in the Mississippi River Basin and 2nd largest in North America
 - Largest caught in Illinois was 7'6" and 176 lbs.
 - iv. Life History and Ecology
 - Gar can breath air, survive low dissolved oxygen
 - Prefer sluggish pools, backwater lakes
 - Spawning is variable and spawn can be induced by floods, move to backwater
 - Female maturity at ~11 yrs, Male maturity at ~6 yrs
 - v. Diet
 - A lie-in-wait, opportunistic feeder
 - Abundance of shad and non-game fish in diet
 - Can also consume large prey

- vi. Range and Status
 - Alarming population decline over the last 50 years
 - Vulnerable to extinction
 - Reintroduction efforts in many states
- vii. History in Illinois
 - Considered rare in IL
 - Was listed as 'endangered'; delisted in 1994
 - Current status: extirpated
- viii. Why Reintroduce Them?
 - Ecological benefits such as increased biodiversity and positive food chain effects
 - Program Resources are readily available
 - Human usefulness for commercial and recreational fishing
- ix. Animal Attacks on Humans
 - Zero alligator gar attacks in recorded history
- x. Public Interest
 - There has been positive public interest in alligator gar reflected in various journalistic publications.
- xi. Reintroduction Status
 - 2009: Project proposed
 - 2010: 9500 fry received, stocked 96 at Duck Island, Banner, Rice Lake.
 - 2011: 100 released to Spunky Bottom , 36 to Rice Lake, 37 to Cordova Exelon for rearing, 83 to Powerton
 - 2012: No fish received from USFWS, 37 released in lower Kaskaskia River, Spunky Bottoms research
 - 2013: 4,500 released in Hennepin-Hopper, 657 in Sanganois, 242 in Lower Kaskaskia
 - 2014: No fish received from USFWS, recaptured stocked AG from Powerton(49.2" & 27 lb) for State Fair
 - 2015: No fish received, bowfishermen harvested AG in Lower Kaskaskia, 9 AG with an average length of 51 inches and 36.3 pounds collected from Powerton – 3 displayed at State Fair
 - 2016: Resuming stocking program, updating plans
- xii. Alligator Gar Study Findings
 - Found no significant difference in growth rates or body condition between IL and LA populations studied.
 - Alligator gar are tolerant and thrive in a wide range of habitats.
 - The largest individual grew from egg to 38 inches and 14 lbs. in only 17 months.
 - Growth rates from May to September 29, 2011 for young-of-year averaged 1 inch and 1.5 ounces per week (before stocking), and 1.5

inch and 1.8 ounces during the 2012 growing season in Spunky Bottoms.

- Diet Findings:
 - a. Opportunistic feeding behavior displayed with no preference shown for sport fish
 - b. Non-game fish were the dominant prey

xiii. What's Next for Alligator Gar?

- Continue reintroduction and monitoring
- Public education and outreach
- Identify research needs/conduct research
- Implement regulations
- Establish recreational opportunity

xiv. *QUESTIONS*

- Lt. Governor Sanguinetti inquired about the definition of a fingerling
 - a. Stephenson responded that a fingerling is anything from one inch to- in the case of alligator gar- eighteen inches. It is less than one year old and is a sub-adult.
- Allen LaPointe commended IDNR on this important work and offered the assistance of the Shedd if needed.
- Costin asked if there are other species that IDNR is looking to reintroduce.
 - a. Stephenson answered no, the paddlefish and sturgeon are both in good numbers currently.
- Walling mentioned the legislative resolution that passed in both the House and Senate supporting the restocking of alligator gar in Illinois' rivers, which passed unanimously in both chambers.

b. Metropolitan Water Reclamation District of Greater Chicago - Illinois Waterway Monitoring Program- Dustin Gallegher

i. Outline

- What is the Illinois Waterway Monitoring Program (ILWWMP)
- Brief History of the ILWWMP
- Significant Findings
- Water Quality Improvement Efforts
- Future ILWWMP Considerations

ii. The Illinois Waterway Monitoring Program

- A monitoring program designed by the District to assess water quality and sediment quality in the Illinois waterway downstream of the District's discharges
- Important times for water quality
- 1972 Passage of the Clean Water Act

- 1974 Illinois Pollution Control Board amends water quality standards for Chicago area waterways
 - The District invested in improvements in operations and to its infrastructure to achieve water quality improvements
- iii. ILWWMP Design
- The study area covered 133 of the 327 river miles within the ILWW
 - Six navigational pools were monitored
 - Lockport, Brandon Road, Dresden Island, Marseilles, Starved Rock, Peoria
 - Forty-nine stations were selected for water sampling
 - Fourteen of the 49 stations were selected for sediment sampling
 - Seasonal monitoring trips involved a 4-day downstream trip followed by a 4-day upstream trip
 - The ILWWMP was managed under the guidance of a quality assurance project plan
- iv. ILWWMP Station Locations
- Lockport, Brandon Road, Dresden Island, Marseilles, Starved Rock, Upper Peoria, Lower Peoria
- v. List of Water Quality Parameters Measured for the ILWWMP
- Water Temperature, Total Suspended Solids, Total Organic Carbon, Turbidity, Conductivity, Five-Day Biochemical Oxygen Demand, Dissolved Oxygen, pH, Ammonia Nitrogen, Un-ionized Ammonia, Total Kjeldahl Nitrogen, Nitrite plus Nitrate Nitrogen, Total Nitrogen, Nitrite Nitrogen, Nitrate Nitrogen, Total Phosphorus, Chlorophyll a, Total Cyanide, Phenols, FOG, Hardness, Total Calcium, Total Magnesium, Fecal Coliform, *E. Coli*
 - Total and Soluble Metals
 - Arsenic, Cadmium, Chromium, Copper, Iron, Lead, Manganese, Mercury, Nickel, Silver, and Zinc
- vi. ILWWMP History
- The first monitoring trips occurred in 1977
 - From 1983 – 2011 seasonal monitoring continued with the exception of 1998 (29 total individual years)
 - Each station was typically sampled 6 times per year for water quality
 - More frequent monitoring occurred for the years 1989 – 1991
 - Mandated by the Illinois Pollution Control Board (R1987 - 027)
- vii. Description of sampling processes
- Sample stations were marked with GPS and river mile markers
 - Water samples were collected from a boat in the center of the waterway at a 3 foot depth with a submersible drainage pump

- Samples were transported to District and contractor laboratories within 24 hours
- viii. Significant Findings
- Analysis of yearly ILWWMP data found some spatial patterns in the water quality data
 - Increases in the downstream direction are noticeable for
 - Dissolved Oxygen
 - pH
 - Total Suspended Solids
 - Turbidity
 - Chlorophyll *a*
 - Decreases in the downstream direction are noticeable for
 - Ammonia Nitrogen and Total Nitrogen
 - Temperature
 - Fecal Coliform
 - Total Phosphorus
- ix. Water Quality Improvement Efforts
- Regulatory / Permits
 - New WQ Criteria and WQ Standards applied
 - NPDES Permit renewals (5 times during the ILWWMP)
 - WWTP upgrades
 - Infrastructure Improvements
- x. MWRDGC Infrastructure and Operations Improvements
- 1979 User Charge Ordinance Implemented
In-stream Aeration on North Shore Channel
 - 1980 In-stream Aeration on North Branch Chicago River
 - 1985 Mainstream TARP Tunnel System Completed
Mainstream and Calumet TARP Pump Station On-line
Expanded Secondary Treatment Capacity at Calumet WRP
USEPA Approval of Pretreatment Program
 - 1986 Calumet-Sag Leg TARP Tunnel Completed
 - 1990 Improved Nitrification at Stickney, Calumet, and O'Brien WRPs
 - 1992 Side-stream Aeration Along Calumet-Sag Channel
 - 1993 Implementation of Part 503 Biosolids Regulations
 - 1994 Side-stream Aeration – Calumet & Little Calumet Rivers
Additional Side-stream Aeration Along Calumet-Sag Channel
 - 1998 Majewski Reservoir Completed
 - 1999 DesPlaines TARP Tunnel System Completed
 - 2003 Thornton Transitional Reservoir On-line
 - 2006 Phase 1 TARP, Pollution Control Tunnels Completed

xi. Future ILWW Monitoring Considerations

- Further investigations on water quality impacts from:
- Phosphorus Reduction and Recovery
- New Water Quality Standards in the CAWS
- Thornton Composite Reservoir
- McCook Reservoir
- Draft monitoring program has been written

xii. Questions

- Lt Governor Sanguinetti questioned how technology has changed to allow for better treatment of water.
 - a. Gallagher noted that some of the oldest methods are still used, but that some areas like nutrient recovery are advancing rapidly. Small tweaks can make big differences, for instance changes in aeration processes. UV technology for disinfection is a developing area of technology.
 - Steve Fulling inquired about nitrogen and phosphorus recovery.
 - a. Gallagher mentioned the Ostara plant for phosphorus removal.
 - LaPointe commented that the area where they are seeing the most advancement is in nutrient reduction strategy, and also brought up technologies such as UV treatment and experimentation with ozone. Additionally, that the biggest challenges entail removing substances that treatment is not designed to address, such as birth control.
 - He also asked if the monitoring that took place at different points down the river was compared to effluent or the first spots monitored on the river.
 - a. Gallagher said that the study was just looking at trends, and didn't necessarily consider particular sources. He also noted that the summary report will be on their website within the year.
 - Shore asked why the program was halted in 2011.
 - a. Gallagher responded that there were some financial issues and they had to refocus the goal of the project.
- c. Shedd Aquarium- Assessing the distribution, status, and conservation of several fishes found across northern IL- Dr. Philip Willink
- i. Dr. Willink noted that many of these results are preliminary
 - ii. Shiner fish- Rosyface or Carmine
 - No known anatomical differences between the species
 - Must look at genetic sequence
 - Moderately sensitive

- iii. Ozark Minnow
 - Fewer samples
 - Far more common in the Ozarks
 - Disjunct population in IL and southern WI
 - a. Fragmented populations
 - Likes clear water, avoids mud and cobble
- iv. Mottled Sculpin
 - Small brown fish, 3-4in and lives on bottom
 - Likes cooler, cold, clearer water
 - Map of distribution
 - Two sub-species, decipherable by the lateral line pore count
 - Great Lakes Mottled Scuplin in Lake Michigan and Rock Basin
 - a. Rapidly disappearing
 - i. Round goby tends to outcompete mottled sculpin
 - North Mottled Sculpin in Upper Illinois and Wabash
 - No apparent overlap
 - Will County- many species disappearing along line of urban sprawl
 - a. Aquifer depletion contributing
 - Doing fine in the Fox River, no declines in population
- v. Banded Killifish
 - Currently listed as threatened in IL
 - However from 1970-2000 to post-2000, increase has been observed in Illinois River
- vi. Status of the fish is often watershed dependent based on factors such as habitat loss, invasive species etc.
- vii. *Questions*
 - *Lt. Governor Sanguinetti questioned about the zebra mussel.*
 - a. Dr. Phil explained that they are very efficient water filterers but when they are in the quadrillions in number, they can take over habitats and filter out microscopic food for other organisms. They have drastically changed our ecosystems.
 - b. The zebra mussels have been outcompeted and replaced in Lake Michigan by quagga mussels.

V. Member Updates and Reports

LaPointe (Shedd Aquarium) thanked members for gathering at the Shedd Aquarium and elaborated on the prolific research conducted at the Shedd.

Stephenson (IDNR) updated they are conducting basin surveys and continuing their Asian carp monitoring, adding that they've removed over 4 million lbs of Asian carp from Illinois water.

Shore (*Metropolitan Water Reclamation District*) said that in May there was a ceremony launching the Nutrient Recovery Project, and elaborated on the phosphorus recovery process. She also mentioned fecal coliform monitoring projects and an Aug. 27th Cal-Sag plunge event.

Mulligan, a representative of Doug Blodgett (*The Nature Conservancy*) said that Blodgett is excited the Dixon Mounds Museum has reopened and wants to invite the Council to hold a meeting there. Further, she said the Mackinaw River Program has recently completed a business plan for a City of Bloomington water plan.

Joe Bybee on behalf of Poe (*IL Dept. of Agriculture*) updated that soil and water conservation districts will be restating programs thanks to the stopgap budget, and will be looking into cost-share dollars for traditional practices. They received federal funding from a Natural Resources Conservation Service for Nutrient Loss Reduction Strategy- related programs.

Kern (*IDOT*) spoke about a bridge update project over the Ohio River along US-51.

Fulling (*Soil and Water Conservation District*) said they are continuing their efforts with Nutrient Loss Reduction Strategy and rolling out many of the programs on the ground.

Walling (*IL Environmental Council*) updated the group about initiatives concerning storm water and flooding.

Coleman (Mayor of Cairo) said that they are preparing for tree and vegetation removal and river beautification projects.

VI. Public Comments

None.

VII. Adjournment & Closing Remarks

Lt. Governor Sanguinetti thanked members for their participation and asked for a motion to adjourn at 12:41PM. Coleman made the motion and LaPointe seconded.