

# ACFS TUC Institutional Options Study: Phase 2 Report

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Authors: Shannon Bonney, Laurie Fowler, Clare Ellis, Andrew Masak, and Brittany Zwald

Contributors: Tom Ankersen, Steve Leitman, Hollie Hall, and Estelle Robachaux

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## Introduction

In Phase 2 of the Institutional Options Study, the TUC began the process of refining the institutional continuum by (1) conducting a literature review and a second set of interviews with select Transboundary Water Management Institutions (TWMIs), focusing on the consensus-building process that facilitated their assumption of hard management functions and (2) probing the ACFS Governing Board to determine which functions its members think are most important to obtain more information about quickly in order to move forward with discussions about TWMI models for the ACF.

The work was performed by a University of Georgia Ph.D. student (Shannon Bonney), and law students in the Environmental Practicum at the University School of Law and Odum School of Ecology (Clare Ellis, Andrew Masak, and Brittany Zwald) and the Conservation Clinic at the University of Florida Levin School of Law (Hollie Hall and Estelle Robichaux) under the direction of law professors Laurie Fowler, Tom Ankersen, and Richard Hamann, with input from Florida State University water planner Steve Leitman.

In October 2012-January 2013, the TUC undertook a literature review and interviewed members of the Ohio River Valley Water Sanitation Commission, the Delaware River Basin Commission, the Susquehanna River Basin Commission, and the Interstate Commission on the Potomac River Basin, all groups which perform some hard functions that were previously undertaken by state agencies or others, to learn more about the process they used to build the consensus necessary to make this transition and the actual steps involved. In addition, the TUC interviewed a representative of the Metropolitan North Georgia Water Planning District; we had intended this interview to be a part of the Phase 1 Institutional Options Report but it was postponed several times as a result of staff turnover.

## Brief Analysis of Interviews and Literature Review

### Issues of State and Federal Rights

Balancing the need to manage water resources at a watershed scale and the sovereignty of individual states is a complicated process. Each TWMI interviewed approaches this process in a way that's adapted to the political, economic, and climatic forces of their respective basins. Additionally, this balance evolves over time even within the same watershed. The recent push for increased state autonomy in water management experienced by some of the TWMIs has mainly been concentrated on regulatory functions rather than on planning, monitoring, modeling, and coordinating functions<sup>1</sup>.

The development of TWMIs with regulatory authority often entails a degree of transfers in power from state and federal entities. However, in exchange for the sovereign power given up by state agencies they gain a "say in what happens in the management of the river

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<sup>1</sup> From interview with Robert Tudor from Delaware River Basin Commission on 12/11/12.

system in the areas beyond their border where they normally would be powerless”<sup>2</sup>. This has been compared to a “double-edged sword” where “you give up a little to get a lot”.<sup>3</sup> The representatives we interviewed stressed repeatedly that their organizations were created to work with and complement, rather than replace, existing state agencies and functions.<sup>4</sup>

One interesting fact that arose in both the initial and follow-up interviews is an increase in the historic tension between making system-scale decisions and ensuring state sovereignty in water management caused by the issue of fracking. In the Delaware River Basin, for example, natural gas deposits that are recoverable by hydraulic fracturing have been recently discovered. Two of the four states that are party to the Delaware River Basin Compact (Pennsylvania and New Jersey) are interested in developing these resources. A contentious debate has developed around the regulation of fracturing. This issue was also raised in initial interviews with the Chesapeake Bay Program (CBP), Susquehanna River Basin Commission (SRBC), and Ohio River Valley Water Sanitation Commission (ORSANCO).

### **Budget Constraints**

Shrinking state and federal budgets during the prolonged economic recession has taken its toll in several ways on TWMIIs. Budgetary pressures can promote appreciation for the utility of TWMIIs that coordinate state and federal efforts to make programs run more efficiently. However, these same pressures can lead to reduced perceptions of the benefits accrued through transboundary water management and possibly to the misconception of TWMIIs with regulatory functions as being redundant and overly bureaucratic. In the Delaware River Basin, for example, budgetary pressures have led to increased reliance on the member states’ NPDES process pursuant to the federal Clean Water Act rather than the DRBC to regulate water quality<sup>5</sup>. The purpose of this shift is to reduce redundancies in obtaining two approvals (from both the state environmental protection agency and the DRBC) for projects that may affect water quality<sup>6</sup>. Currently, there are negotiations to change the authorizations of the DRBC to “eliminate or significantly constrain” its authority to approve wastewater treatment proposals<sup>7</sup>.

### **Coordination Functions**

Numerous examples exist of coordination among state agencies, federal agencies, and TWMIIs to reduce regulatory and other program redundancies as well as to increase budgetary efficiencies. The DRBC “work[s] hand and glove with the NPS [National Park Service] to leverage each other’s capability and resources”<sup>8</sup>. The National Water Quality Monitoring Council (NWQMC), an organization co-chaired by representatives of the EPA

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<sup>2</sup> From Interview with Rich Cairo and Tom Beaudy of the Susquehanna River Basin Commission.

<sup>3</sup> Id.

<sup>4</sup> From Interview with Rich Cairo and Tom Beaudy of the Susquehanna River Basin Commission and interview with Robert Tudor from Delaware River Basin Commission on 12/11/12.

<sup>5</sup> Id.

<sup>6</sup> Id.

<sup>7</sup> Id.

<sup>8</sup> Id.

and USGS, was created in 1997 to “develop collaborative, comparable, and cost-effective approaches for monitoring and assessing our Nation’s water quality”<sup>9</sup>. This collaboration involves a total of 35 representatives from federal agencies, academia, tribes, state natural resource agencies, industry, stakeholders, and TWMI (Great Lakes Commission, Gulf of Mexico Alliance, and Delaware River Basin Commission)<sup>10</sup>. The NWQMC, in association with 80 stakeholders, established demonstration sites for the National Monitoring Network (NMN) in three basins around the United States<sup>11</sup>. Program tasks undertaken at one of the demonstration sites, the Delaware River Basin, included: coordinating current water quality efforts to “optimize current water quality activities among federal, state, local, and private entities to minimize redundancy, [and to] assist in comparability and data-gap analysis”<sup>12</sup>.

### Other Benefits

The representative of ORSANCO discussed the power of a collective voice. Because the Commission represents a large group of states with common interests, it receives greater attention from the federal government and is able to achieve what individual states may not be able to.

Several of the states within the Ohio River Basin have elected not to join ORSANCO. The Commission focuses its monitoring and studies primarily on the main stem of the river. One of the states bordering the main stem, West Virginia, conducted a study of the benefits of ORSANCO membership in relation to costs and concluded that as a result of the value of the data provided by the agency, the state realized benefits valued at three times its membership dues. But in states such as Tennessee, whose borders encompass mostly tributaries and smaller streams rather than the main stem, the cost of membership could potentially outweigh the benefits.

The ICPRB pre-dates the establishment of independent state regulatory bodies and the symbiotic relationship between ICPRB and its member states is partly attributable to that fact. The emergence of state natural resource and environment protection agencies in the 1970s made it incumbent on ICPRB to carve out a meaningful role for itself in the modern administrative era. This role includes supplementing state agencies’ staff resources and providing a basin-wide viewpoint for water quality issues. But ICPRB suggests the biggest benefit to its member states is its neutrality and disinterested study of interstate water resources issues. For example, the ICPRB helped the states of Maryland, D.C. and Virginia resolve discrepancies in the inconsistent Total Maximum Daily Load standards each had established. The Commission undertook an independent study to generate a suite of load

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<sup>9</sup> Taken from “About the Council”, [http://acwi.gov/monitoring/about\\_the\\_council.html](http://acwi.gov/monitoring/about_the_council.html), assessed on 1/30/13.

<sup>10</sup> “About the Council”, <http://acwi.gov/monitoring/members.html>, assessed on 1/30/13.

<sup>11</sup> “National Monitoring Network Demonstration Areas”, <http://acwi.gov/monitoring/network/pilots/index.html>, assessed on 1/30/13.

<sup>12</sup> “A Pilot Study to Inventory and Enhance Data Exchange for Physical, Chemical, and Biological Water-Quality Data in Watersheds, Estuaries, and Coastal areas of the Delaware River Basin in Support of the National Water Quality Monitoring Network for U.S. Coastal Waters and their Tributaries” (2007, p. 3), accessed online on 1/30/13

at: [http://acwi.gov/monitoring/network/pilots/dlrbay/ltr\\_interest\\_delaware\\_river\\_basin.pdf](http://acwi.gov/monitoring/network/pilots/dlrbay/ltr_interest_delaware_river_basin.pdf).

allocations sufficient to meet the varying water quality standards in each jurisdiction. Each of the three member states benefited from the process and the ultimate resolution was a result of multi-jurisdictional cooperation.

Similarly compelling is the persuasive power of the ICPRB's technical studies in prompting regional cooperation in water supply issues in times of extreme drought. Starting in the 1970's, ICPRB began constructing simulations which took into account the private water resources of each of the basin's three utilities'. The models demonstrated to water utility managers the collective benefits, including increase reliability, of sharing water resources in the region.

### **Building Trust**

Trust in the data and recommendations of TWMI are imperative for successful implementation, especially if the TWMI primarily uses soft management approaches. An example is the DRBC's collaborative effort to develop PCB regulations. The proposed regulations were created through a consensus process of a committee composed of DRBC technical staff, industry, public wastewater representatives, and other stakeholders. Engaging those who are most likely to bear the cost of the regulations (i.e. industry and public wastewater representatives) during the entire process facilitates a mutually shared feeling of ownership over and trust in the legitimacy of the final product.

### **General Advice**

The ICPRB representative, Carlton Haywood, summarized the view of many of our interviewees. He extolled the virtues of an independent entity capable of advising from a neutral stance and of providing technical assistance to the states. He finds it difficult to imagine states ceding regulatory authority over water issues when such authority is already entrenched. However, a transparent advisory board that reports to all interested parties may well be the key to achieving global objectives in the region.

## **A Qualitative Assessment of ACFS Perceptions of TWMI Functions based on a Group Facilitation Exercise**

### **Introduction and Process Description**

On December 13, 2012 at the regular meeting of the Apalachicola-Chattahoochee-Flint Stakeholders (ASFS) Governing Board, the TUC conducted a small group facilitation exercise. The purpose of the exercise was twofold: (1) to prioritize future information needs based on feedback provided by the governing board members and (2) to stimulate thinking on the functions, form and structure of any transboundary water management institution in the ACF. The TUC began the exercise by reviewing the Institutional Options (IO) Report it had prepared and previously presented to the ACFS. The IO Report surveyed selected TWMI based on a typology of functions these institutions perform. These functions are:

*Coordination and Building Collaboration; Education; Data Acquisition, Coordination, & Dissemination; Water Conservation; Agricultural Practices; Recreation; Restoration; Flood*

*Control; Planning; Regulatory Review; Managing for Ecological Flows; Hydroelectric Power; Adaptive Management*

The TUC provided a fairly in-depth description of each function, including examples of the exercise of each of these functions by particular TWMI. TUC faculty and students then facilitated discussions within four randomly-selected groups of governing board members. The discussion groups considered eleven of the 13 functions described by the TUC report. The Coordination and Building Collaboration function was not on the original list of functions to discuss, but emerged as a high priority in many of the small group discussions and in the debriefing conversation of the entire ACFS group. Adaptive management is a tool that can be used to enhance the performance of any of the functions. For the sake of time it was not included in the discussion.

Three questions were used to guide the discussion:

- Would this be a useful function for a TWMI in the ACF to address?
- What further information would you like to know about how other TWMI undertake this function?
- What other organizations are undertaking this function within the ACF?

In addition, the group members were asked to achieve informal consensus on the relative priority (high, medium or low) in terms of the need for more information about that function; in most cases the groups seemed to equate this task with prioritizing the value of such a function in the ACF.

This memorandum synthesizes the information gleaned by the facilitators during the 45-minute break-out sessions and the brief plenary session that followed. It should be noted that this is not a comprehensive or systematic analysis of the opinions of the governing board. No effort was made to achieve consensus among members. Nevertheless, the exercise does offer a glimpse into the functions some governing board members deem as particularly important in the ACF and the most pressing information needs of the ACFS in moving forward with discussions about a TWMI.

### **Summary and Synthesis**

The groups identified two functions as the highest priority: 'Coordination and Building Collaboration' and 'Planning'.

Seven functions were considered a high priority for future research: 'Agricultural Practices', 'Coordination and Dissemination of Data', 'Ecological Flows', 'Education', 'Recreation', 'Water Conservation', and 'Water Quality'.

The groups varied in their prioritization of the 'Regulatory Review' function. Additionally, within groups there was not consensus on how much of a priority regulatory review should be. It appears more information is needed on different types of regulatory review, especially those in the category of soft management.

Three functions were identified as lesser priorities: 'Flood Control', 'Power Generation', and 'Restoration'.

The groups had the most specific suggestions regarding future research areas for the functions of 'Regulatory Review', 'Planning', and 'Ecological Flows'.

## **HIGHEST PRIORITY**

### **Coordination and Collaboration**

This was not explicitly assigned as a discussion topic for the small groups (rather coordination of data was assigned). However this function still came up as a high priority by most of the groups and was the focus of the plenary discussion. The governing board members raised a variety of points in relation to the coordination and collaboration functions. They suggested that existing institutions and programs within the ACF could be strengthened through better coordination. The ACF Stakeholders have already had success in this regard. Pursuing coordinating functions may have more potential than pursuing regulatory functions. Coordination and education can be seen as a stepping-stone that may earn credibility for a newly formed TWMI; this could later lead to some kind of regulatory role in the event that is determined a priority.

#### *Key information needs:*

Exploration of the Tennessee-Tombigbee Authority as an example institution for the coordination and collaboration function.

### **Planning**

Both groups assigned to consider the planning function identified it as a high priority for a potential TWMI. One member pointed out that the ACFS' Sustainable Water Management Plan could serve as the plan for the basin and could be updated regularly and maintained as a "living document." Two planning scenarios were suggested by the groups. A potential TWMI could review and coordinate existing plans or it could be responsible for developing and adopting its own plan. Governing board members suggested that the TWMI's planning function would create institutional memory and serve to provide consistency throughout the basin and over time. They also stated that transboundary planning is critical for successful water management and the process itself might prompt the erosion of state barriers.

There were concerns expressed specifically over the current lack of basin-wide economic planning and the need to integrate it with water planning. One governing board member suggested that the Department of Economic Opportunity (Florida based) and the Department of Community Affairs (Georgia based) experiment with ways to work together on economic planning. One group pointed out that there are gaps between the levels of planning in the various river systems as can be seen by comparing planning efforts on the Chattahoochee and Flint Rivers.

The Metropolitan North Georgia Water Planning District (MNGWPD) was highlighted as an example of an organization currently undertaking transboundary planning functions (the MNGWPD focuses on planning across city and county lines rather than across state lines).

*Key information needs:*

- \*How do TWMI's achieve their planning objectives using soft management approaches?
- \*How can all the existing plans required and/or performed by organizations in the ACF be brought together?
- \*How does an institution address issues of spatial scale (i.e. local, state, regional) in planning?
- \*Are other organizations in the ACF basin engaged in sustainable water planning?
- \*How do water management plans and land use plans interact in other states?
- \*Investigate other basins and the ACF to determine how the states coordinate with different sectors for implementation of existing plans

## **HIGH PRIORITY**

### **Agricultural Practices**

The group considering agricultural practices assigned it a high priority. It suggested a TWMI should emphasize the advocacy of best management practices, monitoring and education, rather than engaging in a regulatory function. Concern was expressed over the increasing consumptive demands of water for irrigation purposes, downstream impacts, and the importance of conservation in that regard. One member pointed out that the density of agriculture water permits issued in the basin are uneven, with the Flint Basin having many (particularly groundwater withdrawal permits) and the Apalachicola Basin having few. Another point raised is uncertainty in the degree of connection between surface and groundwater sources. The group acknowledged the complicated nature of managing for groundwater resources on account of the fact that aquifer boundaries do not necessarily correlate surface watershed boundaries.

*Key information needs:*

- \*Determine the conservation approaches and outreach resources underway in the ACF Basin in order to find ways to coordinate and maximize the effectiveness of current efforts.

### **Coordination and Dissemination of Data**

The group that explicitly considered this found it to be a high priority function for a TWMI in the basin. However, it is noteworthy that the discussion of data access and management came up in several groups. One group coined the term "data transparency." Another suggested that different sources of data analysis might cause confusion and a lack of cooperation; several suggested that a TWMI might help to develop better policy on data at a basin-wide level. Members suggested that there are large gaps in the standardization and dissemination of data that could be filled by a TWMI. They pointed out that data collection is already occurring at multiple levels within the watershed, but without collaboration among organizations. Even if a TWMI is never created, governing board members said there is still a need to improve collaboration and coordination of data collection efforts and to determine how to best use the data that has already been collected.

*Key information needs:*

- \*How do TWMI's make data available?
- \*How do they achieve consistency and transparency in data?
- \*How do they equitably share and communicate information?

## **Ecological Flows**

Two groups considered ecological flows and both considered it a high priority. One group began by assigning it a medium priority but raised the priority after further discussion. One group agreed they would like to see ecological flows as a function of a potential TWMI, particularly for the Flint River.

*Key information needs:*

- \*More explicit research on the tradeoffs between environmental and societal needs.
- \*How have other TWMI's managed ecological flows using soft management approaches?
- \*How is accurate demand data collected by other TWMI's?
- \*How have other basins educated their constituencies about upstream and downstream issues, particularly in relation to ecological flows?
- \*Provide examples of Corps' efforts to restore natural flow regimes in any of their other projects located in the United States. Note: this information is currently being investigated by TUC and there are many examples found throughout the literature.

## **Education**

Only one group discussed the education function. They categorized it as a high priority and pointed out that education goes hand-in-hand with conservation, agricultural practices, and planning. The need for education across all ages and sectors in the basin was emphasized. The group suggested that potential basin-wide education projects could work within existing educational institutions given some collective oversight. The group suggested that there are existing institutions that are not utilizing their full authority to approach the issues facing the ACF Basin. This group asked the question "could we be a coordinating entity that takes a portion of the money allocated by government for education and coordinate its distribution to address regional objectives?" The group discussed the relative importance of educating water users versus updating to more efficient systems. The group suggested that relying on grants to fund education and other critical functions might be a short-term solution at best.

*Key information needs:*

- \*Research educational strategies that have been particularly successful in other basins.

## **Recreation**

Only one group discussed recreation; they considered it to be a high priority. Several members of the group thought that a TWMI in the ACF basin should play an active role in the management of recreation but were not sure what this recreation function would look like. They believe recreation is important to the basin because it is tied to tourism, both activities that have positive economic benefits. The group pointed out that there are

conflicting recreation interests between upstream and downstream users as well as between reservoirs and rivers.

*Key information needs:*

\*Creation of an inventory that identifies the recreation interests in the ACF Basin and enumerates the number of users for each interest

### **Water Conservation**

One group considered this function and assigned it a high priority. It was described as the “cheapest and easiest” function to perform. In fact the group suggested that any basin-wide water management effort should “lead with conservation”. The members discussed the difference in how well some parts of the ACF Basin are engaged in water conservation compared to other parts. There was disagreement among the members regarding the utility of recycling and reusing water. Some thought that the use of greywater and other reuse techniques constitute a consumptive use of water because the water is not going back into the system for downstream uses. Others thought that reusing water is one way to reduce demands in a basin with a finite amount of water. They pointed out that water can be reused, even multiple times, but eventually it is going to be discharged into the basin and therefore available for downstream uses.

*Key information needs:*

\*How do TWMI communicate with and educate the public on water conservation issues?  
\*Research strategies that organizations use to accurately price water to reflect its full value  
\*Look more closely at the Metropolitan Water District of Southern California as an example of a TWMI with successful water conservation measures

### **Water Quality**

Only one group discussed water quality; they ranked it as a high priority, but only after beginning the discussion by assigning it a medium priority. The group initially discussed a hard management regulatory role as a means for addressing the function, but ultimately appeared more interested in a “policy-setting” role. They discussed developing consistent water quality regulations and standards across the states (but without the responsibility for enforcement). This group emphasized the interrelated nature of water quantity and water quality.

*Key information needs:*

\*Assemble information on all current ongoing water quality data gathering in the ACF Basin.  
\*Determine if there are gaps  
\*Determine how other TWMI prioritize data gathering and address gaps in the data

### **MIXED PRIORITY**

#### **Regulatory review**

This function was discussed by three groups and each group set a different priority for the function – high, low and undetermined. It should be noted that in at least one group this

term created some confusion that had to be addressed in order to facilitate the discussion. This may have contributed to the differing priorities assigned to the function. However, all three groups seemed to suggest that they were not interested in a TWMI that would have plenary regulatory and implementation powers across the spectrum of other functions (i.e., hard management authority as characterized in the TUC report).

With full regulatory and implementation authority temporarily “off the table,” the discussion of this function in each of the groups appeared to center on whether the potential TWMI should be a policy-setting entity or a policy-guiding entity. It should be noted that this terminology was developed after the fact by the TUC and it reflects the TUC’s best understanding of what the groups were suggesting in characterizing the way the regulatory review function would be exercised in a TWMI. For example, one group suggested that a TWMI could set uniform standards across the basin and require consistency with a basin-wide plan that the TWMI developed and approved. Even though such an entity might set policy, it would not implement it. As the TUC understood the discussions, a policy-guiding entity would serve in a formal advisory role to the policy setting, regulatory and implementation organizations already operating in the basin through commenting on proposals.

One group discussed pros and cons for a TWMI with regulatory review functions, now and in the future. They prioritized soft management and advisory functions in the short term. Any more formal regulatory review authority they saw as a possibility on a longer time scale (e.g. 10 years). This group explained there are already a number of institutions operating in the basin with authority over regulatory review. They suggested that a better use of time and resources may be to focus on coordinating existing regulatory organizations in the basin and to take advantage of opportunities created by gaps in the current regulatory landscape. Efforts to establish basin-wide management of water resources may be expedited and more adaptable if existing institutions are used, rather than trying to start from scratch.

Key information needs:

- \*Great interest in hearing more about TWMI’s within this spectrum of policy authority
- \*Are there examples of the Corps formalizing stakeholder group contributions to policy determinations beyond the notice and comment process it provides to all interested persons?
- \*How do other TWMI’s function in soft management activities in a formal manner in relation to both water quantity and water quality?
- \*How do TWMI’s develop uniform recommendations and disseminate those recommendations?
- \*Provide examples of and information about how TWMI’s can be advisory bodies with ‘teeth’
- \*Investigate the current institutions with regulatory authority in the ACF Basin to determine where gaps and opportunities exist
- \*More case studies of how other TWMI’s approach the regulatory review function

## **LOW PRIORITY**

The three functions of flood control, restoration, and power generation, all received low priority ratings by the groups that considered them. Consequently, there was little discussion about their role in an ACF TWMI and information needs related to those functions.

## Next Steps

Based on the information gained from the December governing board meeting, we suggest the TUC undertake the following actions:

### **1. Conduct a GAPS Analysis**

Identify the water management functions that are currently being undertaken in the ACF as well as water management functions essential for effective multi-state planning and sustainable management of the ACF basin that are currently *not* being undertaken. Identify opportunities for a transboundary water management institution to undertake essential functions identified by the GAPS analysis. The analysis would be based on a review of existing laws, policy documents, mission statements and other literature as well as phone interviews with ACF stakeholders to clarify uncertainties. The TUC would present a draft of the GAPS analysis to members of the governing board to elicit feedback and suggestions before finalizing the document.

### **2. Peer to Peer Meeting Concentrating on Informational Needs Identified by the Governing Board as Well as Results of the GAPS Analysis**

Organize and facilitate a full-day meeting of the ACFS Governing Board with members of the Interstate Council on Water Policy (ICWP) which includes the leaders of the transboundary water management institutions interviewed for the Institutional Options Report. The focus of the meeting would be on how functions identified in the GAPS analysis described above are performed by the transboundary water management institutions the speakers represent and to answer questions about their respective business models and governance schemes. The TUC would work with the ACFS Executive Committee to identify which members of the ICWP should participate in this discussion based on the applicability of their expertise to the ACF.

### **3. Research and draft a report addressing the issues the ACFS Governing Board members identified as high priority information needs in the group facilitation exercise described above.**

These issues are listed in the Draft Letter of Agreement for Services/Institutional Options Part 4.

### **4. Organize and participate in a planning meeting with the ACFS Executive Committee and its facilitators to identify and evaluate options for moving the dialogue about a transboundary water management institution forward to stakeholders beyond the ACFS membership.**

## Appendix 1. Interviews

## A. Delaware River Basin Commission

Questions by Shannon Bonney, responses by Robert Tudor in *blue text*

1. In the previous interview it was stated that the DRBC “started with a voluntary organization in the 1930s, so there was some development and a path forward”. A) Did the voluntary organization evolve directly into the DRBC?

See reference to “Commissions on Interstate Cooperation “ and Incodel on pages 31 and 32 of Reference in Item b. below.

B) Are there documents that describe this process?

*Damming the Delaware: The Rise and Fall of Tocks Island Dam*, by Richard C. Albert, 1987.

2. On the WRA website it is stated, “In 1961, the WRA successfully participated in the development of a federal-interstate compact and the creation of the Delaware River Basin Commission. Since then, the WRA has remained active in monitoring activities of the DRBC and other agencies of the four Basin states.”

A) How do the DRBC and the Water Resources Association of the Delaware River Basin interact?

The DRBC has several standing advisory committees and the Executive Director of the WRA (Bob Molzahn) is one of many sector based voting members. Bob has been very pro-active in representing Business and Industry sector on a few recent DRBC initiatives: he led subcommittee on process to develop new Water Loss Accounting program and collaboration with the American Water Works Association on new software to track and account for water loss; he is currently helping on a subcommittee to work with a DRBC consultant to evaluate and update our Water Charging program—water user fees to pay for water storage at ACOE reservoirs to repel salt line during droughts (i.e., protect drinking water in times of scarcity). DRBC staff also helped organize and participate in WRA Fall Conference—most recent of which focused on “Energy, Water, and the Environment in the Delaware River Basin”. Lastly, WRA functions as watch dog organization: raise flags when stakeholders think DRBC strategic direction or regulation is wrong-headed or not viable from sector perspective.

B) Do you have knowledge of how this voluntary organization was able to help develop the compact?

Limited knowledge—but reference document in 1b above has nice write up on pp. 57 and 58 about the Delaware River Basin Advisory Committee and its evolution to the Water Resources Association of the Delaware River Basin in 1959.

C) Which players in addition to members of the WRA were involved with the development of the compact?

Three things happened in 1959: WRA public outreach campaign; the ACOE publicly announced its preliminary reservoir plan for the DRBC; and the Syracuse study was completed (see discussion on p.58). “The bottom line of the Syracuse research was that a water-resources agency be established by compact for the Delaware River Basin... What

was new was that the federal government be a partner in the compact arrangement with the four Delaware River Basin states.”

D) In the previous interview it was stated that the WRA was a “really good outside push to get it [the compact] through the legislatures”. Could you describe this more in detail? This is described in the book—two hundred or so groups formed the WRA and initiated a public outreach campaign.

3. In general could you describe in more detail the process of getting the compact approved by the legislatures? How long did this process take? Were there states that signed on significantly earlier or later than others? Were there conflicts, pushbacks, or obstacles that had to be overcome in order to get the compact passed?

Nice write up on pp. 58 -61.

4. In the previous interview it was stated that the DRBC staff does a lot of the monitoring, but “we also make sure that we coordinate with other federal agencies”. Could you describe this process of coordination more? Which federal agencies? Do you divide the responsibilities of monitoring?

We conduct several monitoring programs, which are summarized nicely in the attached PowerPoint. In brief, most of non-tidal river (upper half of basin) is part of the National Wild and Scenic River Program with water quality better than standard. The National Park Service has adopted Management Plans for three large reaches of the mainstem river, which focus on protecting this high water quality. DRBC adopted the anti-degradation program, which governs wastewater management in these areas. This entails both monitoring and modeling to ensure “no measure change to water quality overtime”. We work hand and glove with NPS to leverage each other’s capability and resources. (Nice write up on this in EPA Healthy Waters document highlighting case studies around the country)

We also work closely with EPA using Clean Water Act section 106 grants to monitor the Estuary (lower half of Basin) and make assessments of compliance with water quality standards and designated uses. The states focus on the tributaries and DRBC focuses on the shared waters. DRBC takes lead for both states and federal government that involve region scale TMDLs: PCBs, CBOD, VOCs, and Nutrients. We also do a lot of cutting edge work on metals, emerging contaminants.

5. Could you explain more about building trust between the technical staff and industry?

As alluded to earlier, much of detailed work of the commission happens via technical staff working with and through Standing Advisory Committees. An example involved regulation of PCBs down to the part per quadrillion level. We formed a special Implementation Advisory Committee that formulated a model program that recognized that traditional Clean Water Act construct would not work for this legacy pollutant. Worked through consensus to get industry, public wastewater, and other stakeholder to agree on novel pollution control that exhibited the following features: multi-media (air, land and water), point and non-point controls (not just industry), very sophisticated monitoring with

extremely low detection limits; pollutant minimization plans in lieu of water quality effluent limits; anti-backsliding provisions, ten year assessment and report of program effectiveness. We engaged industry throughout process and they have some ownership of the final product.

6. Can you talk more about the process of deciding how much water is allocated to each state during drought conditions? In general can you speak more about the process of updating the flow management plan? Is this a contentious process? What factors are used to determine allocation? What actors are involved in this conversation?

This is very complicated because it involves the Supreme Court Decree Parties, which are slightly different than the Commission (no federal government; and addition of New York City who owns 270 billion gallons of storage in three reservoirs at top of basin). Decree provides for changes but only if all parties agree. DRBC staff functions as facilitator (me) and technical support to Decree Parties. We also use DRBC standing committee (Regulated Flow Advisory Committee) to engage public on flow negotiations and add a measure of transparency to negotiation process.

Challenge has been to come up with flow management policy and operations that convert water supply reservoirs into multi-objective reservoirs (water supply; flood mitigation; and ecological flow). Policy makers have embraced principle of adaptive management, but want to see all new management scenarios modeled to be sure of no surprises.

Agreements are codified so that decision making is automatic as drought conditions worsen—i.e., there are specific drought curves (specifying levels of drought) and release policies for each.

7. In the previous interview it was highlighted that the DRBC works to ensure it does not duplicate efforts of the state agencies in the realm of water quality (such as through administrative agreements). Could you explain more about this process? How have the responsibilities of the state agencies and the DRBC evolved over time?

There is constant tension between interest in state water sovereignty and using Commission to make decisions on systems basis without regard for political boundaries. The situation has been exacerbated in recent years by discovery of natural gas in shale formations a mile below the earth's surface in two of the four states and overall state of the economy. This has resulted in a shifting pendulum away from DRBC wastewater management and reliance on using state NPDES processes to avoid duplication and redundancy associated with two approvals. Negotiations are underway to eliminate or significantly constrain DRBC docket authority for wastewater treatment approvals.

Having said that, the Administrative Agreement worked well over past two years to clarify State role in tributaries and DRBC role in shared waters. The more aggressive "one stop permitting" approach has yet to go through a public rulemaking process, and I would expect some resistance from environmental stakeholders.

8. Does the DRBC coordinate with the ACOE, or other state and federal agencies, in its flood control efforts?

Yes, they are a strong partner on our Flood Advisory Committee. We spent last three years developing a very robust Flood Warning System with ACOE, USGS and NOAA. Please go to Programs, and Flood loss reduction on DRBC web page for details. Important point here is that no one organization had capability to do this on its own. It is true case study of the sum being greater than the individual parts.

DRBC also recently participated in an ACOE led process to develop a Regional Sediment Management Plan, which attempt to integrate across three Corps missions: Navigation; Flood Control; and Ecosystem Restoration. Point here is sometimes they participate in DRBC led process; and sometimes vice versa.

9. In the previous interview it was mentioned that the DRBC is discussing what its role with agriculture should be, beyond regulating water withdrawals. Can you describe this in more detail? What other roles could the DRBC take on? Is this an internal push or is there a push from outside the DRBC?

DRBC role in regulating agricultural water withdrawals is sharply reduced as a function of Administrative Agreement process—and that was one of the intended goals. We have emphasized our role in long term Water Supply planning as part of our Sustainable Water Resources Strategy-2060. We are working with states in that regard to get better water use information in both the Agriculture and Power sectors—and keying in particular on consumptive water use. Latter is very important when take it in conjunction with ecological flow policy and climate change adaption policy. We want to be sure we have sufficient water to meet all uses 50 years down the road.

We make a point to invite Agriculture Sector reps. to stakeholder meetings keying on future direction of water management. Will have reps. here this Thursday for NOAA Integrated Water Resources Science and Services (IWRSS) meeting focused on agreeing on priority issues, information gaps, and development of decision support tools.

10. It was stated in the previous interview “as the state programs grow and states are more interested in working in their own boundaries, a state’s rights type of idea, it makes it more difficult for states to work with each other”. Could you describe this balance between basin-wide planning and state’s rights in more detail?

See #7 above. DRBC plays a role in Planning, Management and Regulation on systems basis without regard for political boundaries. Push back of late from the states seems to be confined to regulatory arena. States continue to be interested in our long term planning role, monitoring role; modeling and assessment role; and setting basin wide standards. With everyone facing significant budget constraints (including applicants for regulatory approvals) there is a real push for efficiency and avoiding redundancy in regulatory realm.

11. In the previous interview it was stated that in the future the DRBC might take on less of a regulatory role with “states taking over more of the implementation with the DRBC in more of a planning role”. Can you speak more about this? What may cause this transition? Is it an issue of funding or of a change in values? What may be the strengths and weaknesses of such a transition?

Periodic assessment of priorities and value added is healthy. Budget constraints and values (too much and too many layers of government) both play a role on figuring out what is the right work for an interstate-federal compact agency. See #12 above for nature of discourse in the current re-balancing, but this will probably shift yet again in the future. It is important for agency to be flexible and adaptive. Please see “Case Studies in Integrated Water Resources Management: From Local Stewardship to National Vision” by the American Water Resources Association, Policy Committee—November 2012. DRBC is one of seven case studies, and includes a quote germane to your query: “Effective governance in the water sector is not linear, prescriptive and logical; rather it tends to be adaptive and ‘messy’, responding to the dynamic nature of the political and economic forces operating at the time, and in response to changing environmental conditions (floods, hurricanes, droughts)” Bruce P. Hooper (2006). *Integrated River Basin Governance and Key Performance Indicators*. IWA Yearbook.

12. In the previous interview it was stated “we need more states/countries to have transboundary water institutions but it’s difficult because each state needs to give up a little bit of its sovereignty”. This is the crux of the follow-up interview. Could you talk more about this? How was the DRBC able to convince states to give up sovereignty? Was there pushback in the beginning and over time? How much sovereignty was relinquished? Do you have recommendations for other regions attempting to walk this path towards a transboundary water institution with regulatory authority?

I would read, “Damming the Delaware” to ascertain the political and economic forces operating at the time. Also, DRBC mission and emphasis has changed as a result of changing environmental conditions. See Flood Loss Reduction Program and background documents. After three floods in three years (2004, 5 & 6) Governors of four states co-signed letter asking Executive Director to establish Interstate Flood Mitigation Task Force and to develop recommendations in a six month time frame. This was major driver for DRBC activity over last 8 years. Recent attention has shifted to reducing economic burden of regulation at multiple levels of government and downsizing to address revenue shortfalls.

Flexibility and adaptability are needed to address changing environmental, political and economic conditions. Having said DRBC capacity in all three arenas (Planning, Management and Regulation) is what makes us effective.

## B. Susquehanna River Basin Commission

*Interview questions and analysis by Andrew Masak, responses by Rich Cairo and Tom Beaudy in blue text.*

1. I understand that the Susquehanna River Basin Commission was not formed out of any particular dispute over water allocation, but rather by people who were involved in the formation of the Delaware River Basin Commission who saw the SRBC as a natural second interstate compact. What led these authorities to come to the bargaining table with one another?

The greatest factor in mitigating concerns that they are giving up a portion of their sovereign power to an interstate compact agency is the fact that they now have a say in what happens in the management of the river system in areas beyond their borders where they would normally be powerless. It's a double-edged sword. You give up a little to get a lot. You get a say in the management of the entire system and you have an opportunity to participate in an effort to craft a comprehensive plan for the management of the basin. Yes, this may be a bit harder in terms of convincing an upstream state, but a compact at least can help to head off the possibility that the upstream state will end up before the Supreme Court of the United States where the Court will be forced to exercise some kind of an equitable apportionment of the river, leaving them with an uncertain outcome. It's so much better to have an interstate mechanism or an interstate forum in which problems can be systematically worked out and resolved prior to engaging in the uncertainties of litigation. The Supreme Court is never particularly fond of having to adjudicate disputes among sovereigns and has recommended in many of its decisions that an interstate compact mechanism is the far better method of dealing with these problems. The old Felix Frankfurter article from the 1925 Yale Law Review on the desirability of interstate mechanisms for managing large interstate rivers is highly enlightening in this regard.

2. Maryland quickly signed onto the compact and New York was soon to follow. Why did Pennsylvania stall the compact in their state legislature?

Issues with Pennsylvania were complex and stemmed from power plays in their state legislature. They are laid out in extreme detail in the book "The Susquehanna Compact: Guardian of the River's Future."

3. Who were the major players that held up the compact in Pennsylvania? How were they convinced to cede power?

Completely unexpected at the outset, the efforts to pass legislation for Pennsylvania to join the Susquehanna River Basin Compact faced extreme uphill challenges. Severe opposition threatened to derail the process several times, including in August 1967 when the Speaker of the House of Representatives pigeonholed the legislation in the Appropriations Committee.

4. Were there any compromises that had to be made in the language of the compact to allay concerns over authority of the commission?

Not specifically. The SRBC indicates that the commission was not intended to create a super agency for the region. The founding philosophy was that the commission was to work

through existing agencies. It had broad authority and enabling legislation but refused to use the full extent of this authority.

5. Did New York have any issues with the compact being the state with the headwaters located in it?

None known.

6. Can you explain a bit more why these three parties came together in the absence of a conflict? Would there have been a compact if there were a conflict? Was the relative peace among water stakeholders a major factor allowing for this compact?

This commission was a direct result of the success of the Delaware River Basin Commission (DRBC). Officials saw the DRBC as something to be emulated, especially in a river basin so close geographically.

7. Are there other organizations that also have authority of water resources in the SRB? Specifically, what role does the Army Corps of Engineers play in the SRB?

The Army Corps of Engineers is now ex-officio designated to the SRBC. A district engineer is appointed to the SRBC and is directly involved with voting. At first, the Army Corps of Engineers was only an advisor in the projects and implementation of the commission. However, beginning in the 1990s the Corps has a direct vote. The member is an ex-officio North Atlantic Commander.

8. In our conversation last spring you mentioned that the SRBC is a good model that should be replicated elsewhere. Can you explain a bit more why you think so? What steps would you take to form an interstate compact in today's political climate? Importantly, how would you go about seeking compromise from upstream and downstream stakeholders with divergent interests?

The SRBC believes that what it has done with respect to complementing work that is already ongoing in the region is essential. Do not duplicate efforts already done by the states. First, the states will be resistant to an organization taking away their power. Second, it is often the case that the respective states already have innovative or at the very least, functional, working mechanisms in place that should not be thrown out but enhanced by a commission.

9. Do any of the states in the SRBC resent that they joined the SRBC? Have things changed since the inception of the SRBC to make them wish they had not relinquished authority to a centralized water management regime?

No states really have any reservations to this organization. However, the commission has had to adapt to many new issues and circumstances including hydraulic fracking in the region. This was an unexpected development and something the commission was not initially set up to tackle.

10. Can you explain how the SRBC is dealing with the Marcellus Shale issue? Are there lessons to be learned in other contexts from this new issue?

The Marcellus Shale issue is a contemporary example of how valuable this organization or other similar organizations can be in a variety of inter-state contexts. This issue is

profoundly different and new compared to traditional water issues. Addressing the ramifications of fracking through the SRBC was the main obstacle to be confronted. The SRBC looked at water-use patterns to determine what action would best accomplish the goals of the member-states. The SRBC used its authority already delegated, issued an executive order, went through proposed rule-making, and most importantly, quickly brought in a regulatory scheme.

### Concluding Remarks

Members of the SRBC had several important recommendations for any type of solution to the issues facing the ACF river basin. First, and perhaps most importantly, the SRBC suggests that for any interstate compact, the members should proscribe the scope of delegation of authority. To that end, a constrained approach in the use of that authority is beneficial in getting member-states to accept the relinquishment of some of their traditional state functions in this area. The SRBC indicated that it has been quite successful by constraining its own action and working in conjunction with the states' respective agencies already working in water issues, that being said, it also acknowledged that it has significant authority that many other interstate water compacts do not have or cannot feasibly achieve. In particular it pointed to the Great Lakes and St. Lawrence water commissions as examples of compacts with more limited authority. Additionally, the SRBC suggests that the ACF should only be set up to regulate major allocations of water and does not need broad delegation. This would allay some of the fears of member states and accomplish the goal of managing water allocation events that have the greatest effect on the system.

Second, the member-states and Atlanta need to move beyond the money issue and realize that an institutional structure is less threatening to water security than future litigation. This uncertainty should be leveraged and used to the advantage of a compact. Any litigated solution is bound to be worse than a consensual solution.

Finally, the SRBC stressed the importance of having the federal government as a strategic partner. This partnership allows the SRBC and hopefully a similar institution in the ACF river basin as a neutral organization, or at the very least not a negative organization. The neutral vote of a federal actor in decision brings a sense of objectivity to the organization. With this actor comes certain civility because of the ability to affect the member-states.

## C. Ohio River Valley Water Sanitation Commission

*Questions by Clare Ellis, responses by Sam Dinkins 11/26/2012*

ORSANCO was established by interstate compact on June 30, 1948. The Commission is a partnership among eight states and the federal government. Its member states are: Illinois, Indiana, Kentucky, New York, Ohio, Pennsylvania, Virginia, and West Virginia. ORSANCO's Compact focuses specifically on water quality, as water quality impairment in the Ohio River Basin was the driving force behind the Commission's formation.

While ORSANCO is currently non-regulatory as to water quantity, it does have some regulatory authority over water quality. ORSANCO sets water quality standards for its member states in the Ohio River Basin; while it does not have ultimate responsibility for enforcement of these standards, one of its main functions is to review NPDES permits issued by its member states in order to make sure ORSANCO's minimum pollution standards are met.

A couple of features unique to ORSANCO's history and functions were the focus of my follow-up interview. First, the Commission has recently made a move towards the management of water quantity issues in the Ohio River Basin. It formed a Water Resources Committee in 2010 to study water resources and to assess whether there was an appropriate role for the Commission in overseeing resource allocation. Secondly, ORSANCO's ability to address Basin-wide issues has been somewhat hindered by the fact that not all of the states in the Ohio River Basin joined in the original Compact. Six "holdout" states declined joining the Commission; my follow-up with ORSANCO probed the reasons why these states held out – specifically why these states perceived the advantages of and impediments to membership differently from the Commission's member states.

My follow-up interview with Sam Dinkins, Manager of Water Resources Assessment for ORSANCO, focused on these two topics.

***Move Towards Water Resources Management in the Basin.*** ORSANCO's Water Resources Committee formed in June 2010. A product of the Commission's Water Resources Initiative, the Committee's purpose is to consider what role the Commission might play in managing water resources in the Basin. Because ORSANCO's Compact does not provide for money to be spent on water resource allocation issues, the Initiative has been wholly privately funded. The Committee is still in the early stages of its work; it has met only three times since it was populated and had its inaugural meeting in January 2011. At this point, the Committee's work is best characterized as exploratory in nature.

There are three branches of the Committee's current work, the end product of each being to generate a Characterization Report. The three branches of the Committee's work are as follows:

- 1) Inventory of the Water Resources: Specifically, the Committee is crafting a description of those resources, focusing on hydrology, patterns of water use and consumption, and

major issues that could impact the sustainability of the water resources in the future (i.e. climate change, basin transfers, and shale gas development).

- 2) Review of existing laws and regulations that govern water resources.
- 3) Culmination Report: The purpose of this report is to define what issues need to be addressed in the Basin, to consider whether there is an appropriate role for the Commission in managing water resources, and to propose a long-term sustainable funding mechanism for the Commission to deal with these issues, given that they fall outside of the scope of ORSANCO's Compact. Mr. Dinkins commented that the spectrum of potential outcomes of the Committee's work is broad.

The Committee could ultimately recommend that ORSANCO remain merely a forum for the discussion of water allocation issues. A less likely outcome (one for which there is not currently very much support among ORSANCO's members) would be for the Compact to be changed in order to give the Commission authority over the allocation of water resources.

Right now, the work of ORSANCO's Water Resources Committee is deliberative and pre-emptive, the purpose being to "head off potential problems" rather than tackling existing ones. While the Commission does not currently have any plans to take on any "hard" functions such as regulating water distribution, the goal of the Committee's work is to set up a framework to deal with water allocation issues if they should arise in the future.

***Dealing with the holdout problem.*** To understand why some states in the Ohio River Basin have found it not in their interest to join the Commission, I asked Mr. Dinkins to describe the benefits of membership and to explain why some states did not perceive such benefits as worth the costs.

He explained that one of the biggest advantages of ORSANCO membership is the monitoring work and technical expertise of the Commission staff. ORSANCO is the primary entity dealing with water quality issues on the main stem of the Ohio River. States that border the main part of the river rely upon ORSANCO to monitor its water quality; they get the benefits of the Commission's large-scale studies of the river and their understanding of the river system. Such expertise contributes significantly to the member states' abilities to improve the quality of the water from the river that reaches their state.

For the states bordering the main branch of the Ohio River, the benefit of membership in relationship to its costs has been quantified as roughly a 3 to 1 ratio. Mr. Dinkins cited West Virginia's recent "Sunset Review" (each state's periodic review of the benefits of ORSANCO membership in relation to its costs) which concluded that, given the data ORSANCO gathered about the river and the cost of such data acquisition if the state were to rely exclusively on its own funds, West Virginia was realizing benefits from the Commission's work that totaled approximately three times its membership dues.

Another benefit of ORSANCO membership is the power of a collective voice. Because the Commission represents a large group of states with common interests, it is able to achieve what individual states may not be able to. As an example, Mr. Dinkins mentioned the Ohio River Congressional Caucus, which formed in 2009. The Caucus is a bi-partisan group

whose aim is to “address critical economic, infrastructure, agricultural, environmental, and community issues within the Ohio River Basin.”<sup>13</sup> Because of the bigger audience for issues of concern to caucus members, they receive greater federal attention than those raised by individual states.

Mr. Dinkins explained that states that are not on the main stem of the River realize fewer benefits from ORSANCO’s monitoring work. The Commission’s regulatory focus has been exclusively on the main stem of the Ohio, even though Compact gives it broader authority. For a state like Tennessee, whose borders encompass mostly tributaries and smaller streams of the Ohio River and doesn’t border its main stem, the costs of membership could potentially outweigh the benefits. Given the Commission’s funding formula—which is based upon a state’s population and land area in the Basin—Tennessee would be the second largest funder of the Commission but would potentially realize the fewest benefits.

I asked Mr. Dinkins whether there have been any attempts by member states to leave the Commission. While there have been no attempts by member states to withdraw from the Compact, he did mention West Virginia’s refusal to pay its membership dues in 1950. The culmination of this controversy was a Supreme Court case, *State ex rel. Dyer v. Sims*,<sup>14</sup> in which the Court upheld the validity of the Compact as well as the West Virginia legislature’s 1939 Act ratifying and approving it.<sup>15</sup> The result of the ruling in West Virginia’s case has been to dampen any objections states may have toward making appropriations for paying their share of the Commission’s expenses.

While the states’ interests fluctuate and change with the times, ORSANCO has the benefit of a culture of cooperation and cohesion among its state members. Mr. Dinkins attributed this trait to the fact that ORSANCO doesn’t perform functions that detract from any state’s autonomy in addressing issues within its borders. While the Commission does have regulatory authority over water quality—in the sense that it sets minimum standards for the Basin—the states are totally in control of their own permitting and enforcement processes. Differences of opinion do arise, on occasion, particularly on the restrictiveness or laxity of ORSANCO’s proposed standards. Generally, however, when it comes to voting on issues of concern to the whole Basin, the vote of the membership is unanimous.

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<sup>13</sup> <http://www.orsanco.org/ohio-river-basin-congressional-caucus>

<sup>14</sup> 341 U.S. 22 (1951).

<sup>15</sup> *Id.* at 25-26.

## D. Interstate Commission on the Potomac River Basin

*Questions by Clare Ellis, responses by Carlton Haywood 11/16/2012*

ICPRB was created by Compact in 1940, prompted by the recognition that “abatement of existing pollution and the control of future pollution of interstate streams can best be promoted through a joint agency representing the several states.”<sup>16</sup> The Compact was amended in 1970, after years of severe drought in the region, to accommodate the burgeoning recognition that “the regulation, control and prevention of pollution is directly affected by the quantities of water in said streams and the uses to which such water may be put.”<sup>17</sup>

ICPRB membership includes representatives of Pennsylvania, Virginia, Maryland, West Virginia, the District of Columbia, and the federal government.

ICPRB maintains distinctive relationships with both state agencies and the three major water utilities in the metropolitan D.C. area. My follow-up with Carlton Haywood, Executive Director of ICPRB, focused on the Commission’s non-regulatory, “white hat” approach to working with the states on water quality issues. It also focused on ICPRB’s efforts—beginning in the 1960’s and culminating with the Compact’s amendment in 1970—to foster a Basin-wide approach to water resource management. Specifically, we discussed the genesis of the Cooperative Water Supply section of the Commission (“Co-op”), which brought together the three main water suppliers in the area and forged among them a Water Supply Coordination agreement.

***“White Hat” Regulatory Character.*** ICPRB considers itself as a close partner of its member states, calling itself an agency “of the states” rather than one standing apart from them. In maintaining its relationship with its state members, ICPRB has successfully established a culture of non-partisanship and neutrality. While its Compact charges the Commission with a responsibility for stimulating action in response to issues in the Basin, ICPRB does so only by studying the issues, capitalizing upon its technical expertise, and delivering the results of its technical studies to the member states. The Commission is apolitical; it does not engage in any sort of advocacy, lobbying, or campaigning.

Mr. Haywood described ICPRB’s non-partisan approach to issues affecting the Basin as a by-product of its technical expertise. It has developed a reputation for nimble problem solving; the Compact’s broad charge (essentially, to study the water quality and water resources in the Basin) gives the Commission flexibility to pick and choose its projects and to work on particular issues that are of importance to its member states.

We discussed the fact that the symbiotic relationship between ICPRB and its member states is in some measure attributable to the fact that ICPRB pre-dates the states’ independent regulatory bodies. However, Mr. Haywood also pointed out that the emergence of state natural resources and environmental protection agencies in the 1970’s—with their large

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<sup>16</sup> Public Law 91-407, 84 Stat. 856 (1970).

<sup>17</sup> Id.

budgets and broad statutory mandates to address environmental quality—put ICPRB to the task of carving out a role for itself in the modern administrative state.

Even though they have their own agencies to deal with water issues, states still glean the benefit of ICRPB's expertise in certain areas. The states also benefit from the Commission's ability to supplement state agencies' staff resources and to lend a basin-wide view of water quality issues. But still, the biggest benefit of ICPRB to its member states is its neutrality and disinterested study of interstate water resources issues.

As an example of such benefits in action, Mr. Haywood discussed the recent efforts of the states of Maryland, D.C. and Virginia to address impairments to the waters of the tidal Potomac. The three jurisdictions had set inconsistent TMDL's and turned to ICPRB and a private consultant to resolve the discrepancies. In the end, ICPRB's neutrality was essential; the Commission undertook an independent study and generated one suite of load allocations sufficient to meet the differing water quality standards in each jurisdiction. All three jurisdictions, as members, benefitted from participating in the process, and the ultimate resolution was a result of multi-jurisdictional cooperation.

***Transition to Coordinated Water Supply.*** Because of extreme drought in the region in the 1960's, the idea of managing Potomac River Basin water resources as a system—rather than as a network of disconnected water utilities—began to gain traction. ICPRB played an instrumental role in getting the region's water utilities to sign on to a Water Supply Coordination agreement in 1982. Ever since then, the operations committee of the ICPRB's Co-op section has included the managers of the region's three major water utilities. These utilities therefore work cooperatively with ICPRB on a regular basis to manage water supply issues in the Basin.

Essential to ICRPB's success in convincing the water utilities to sign the Water Supply Coordination agreement and to join the Commission's Co-Op section was the persuasive power of ICPRB's technical studies. Starting in the 1970's, ICPRB began constructing simulations, which took into account each of the utilities' private water resources (i.e. off-river reservoirs). The Commission's models demonstrated to water utility managers the collective benefits of sharing water resources in the region. Specifically, ICPRB's models demonstrated that cooperation and sharing resources would increase the reliability of the system as a whole. This was key to getting the utilities to sign the Water Supply Coordination agreement.

The agreement binds the utilities to abide by operations directions given by the Co-op during times of drought. It essentially provides that all three utilities will draw down all their reservoirs so that each has a comparable probability of being able to refill. This way, all the utilities share risks and work cooperatively to deal with the challenges of low water supplies. The Commission's ability to model different scenarios, to structure their analyses in a way that accommodates everyone's interests and concerns, and to be responsive has been key to the work of the Co-op section. By building consensus and fostering communication, the Co-op is able to make sure that everyone is comfortable with the results of its decisions.

***General Advice, Transitioning to Inter-State Management.*** ICPRB's many successes in fostering multi-jurisdictional cooperation on water resources management are potentially instructive for the ACFS. Mr. Hoffman extolled the virtues of an independent entity capable of advising from a neutral stance and of providing technical assistance to states. In his opinion, it is difficult to imagine states ceding regulatory authority over water issues when such authority is already entrenched. However, an advisory body that reports to all interested parties and that is transparent may well be the key to achieving global objectives in the region.

## E. Metropolitan North Georgia Water Planning District

Questions by Brittany Zwald, responses by Steve Haubner in blue text

### **Synopsis:**

The Metro North Georgia Water Planning District was created by the Georgia Legislature in 2001 through the efforts of local governments wishing to unify. The institution is advisory in nature, creating long-term model plans giving local governments the discretion to implement those plans. The district focuses on planning for water quality, water supply, and wastewater management. The governing board is made of representatives from the local governments affected and political appointees. There are subcommittees guiding specific areas, and a small day-to-day staff to manage planning. The institution is funded in large part by member dues with a small share coming from the Georgia Legislature.

### **Introduction:**

Steve works for both the Atlanta Regional Commission (ARC) and the Metro North Georgia Water Planning District (MNGWPD). He is also an ACFS general board member for both the ARC and the MNGWPD. The ARC is a regional planning body for the 10 county metro area. With the 2001 legislation creating the MNGWPD, the ARC planning staff was implemented to work as the MNGWPD planning staff. Steve is paid in part by ARC and in part by MNGWPD, which are separate legal entities despite overlapping boards.

### **Background:**

1. What is your official capacity in the institution?
2. What duties do you have?
3. How long have you been involved with the institution in this capacity and in any other capacity?
4. Were you involved with the institution when it formed?
5. Were there any major issues that hindered the establishment of the institution, such as resistance from the counties? Do you know this from firsthand experience?

Steve is a Principal Engineer at ARC and has worked there for 16 years in the division formerly called the Environmental Planning Division. While the division does a great deal of regional planning, 90% of the work is in water resources planning including regional water supply planning and watershed planning. He and Pat Stevens are the tri-state resource contacts. The MNGWPD was started with water quality in mind more than water supply or wastewater management. In the late 1990's, Atlanta was combating TMDL issues under threat by the deferral government, and the Metro Chamber of Commerce came together about the district with that in mind. The ARC covers a 10 county region while the water district originally included 16 counties and now covers 15 counties. There were some minor planning and territory issues amongst the different regional commissions covered at the start, but those were easily worked out.

### **Opinions:**

6. What would you say are the primary strengths of the institution?
7. What would you say are the primary weaknesses of the institution?

8. What are the particular challenges of managing across jurisdictions?
  - a. How has your organization met these challenges?
9. What would you do differently in terms of this institution if you were able to start over?
10. Do you have recommendations for others attempting to form a transboundary water resources institution?

Strengths- The water district brings together 15 different counties for an overall 107 local government bodies to address key issues of water supply, quality, and wastewater management.

It is state law mandated as opposed to the optional regional planning that previously existed and there is EPD enforcement bringing teeth to the program. There is continuous ongoing cooperation between local governments, and they work together on regional policy issues to provide a unified voice. It provides a level playing field in terms of standards preventing different metro counties and governments from being pitted against each other.

Weaknesses- The region is large and fragmented making uniform policy difficult, but that is a fact of life, not an institutional flaw. The institution works with 52 local level planners to create a large-scale plan rather than creating a regional plan to be followed on a lower level.

The institution is not in charge of its own destiny, even in planning, because there is deference to local infrastructure. Though granted the right to contract and develop, the water district will not undertake development and has no plans of building a planning district reservoir.

**Functions:**

11. Is the organization actively engaged in all of the functions granted to it? If not, which powers has the district not used?
12. Has there been resistance from the counties in the adoption of the model ordinances as authorized by the district authority?
13. What would you say are the primary objectives of the institution? Would you say water quality or water supply is the bigger focus?
14. Do you face challenges in accomplishing your objectives within the institution? If so, what are they?
15. Has the institution made any major milestones in reaching its objectives? If so, what were they?

The institution uses all of its functions, with the exception of contracting and development, including planning and meetings. The main functions of the water-planning district are planning for water supply, water quality, and wastewater management. Water supply, or conservation, has been the biggest focus in the last six years since the 2007 drought caused many issues in the basin. The institution still works with all the aspects of planning even with a focus on supply.

Major milestones include the 2002 production of model ordinances for storm water and wastewater management plans, the 2009 updates of all current plans, and the rolling success of whenever a local government implements the model plans. The operations are

ongoing and continued intergovernmental coordination and implementations of plans are continuing successes of the institution.

Local government interaction is a continuous and ongoing part of the institution. Local governments are the parties at the table coming up with the plan. They essentially voluntarily agree to regulate themselves. The process in implementing the plan is held up by no more than the typical lag in adopting local legislation.

**Decision Making:**

16. How much influence do outside organizations such as the EPD, DNR, or Atlanta Regional Commission have on the decision making of the board of the district, or would this district be considered an extension of those actors?
17. How much influence do the agendas of the individual counties within the district have on the decision making of the board of the district?
18. What role does the Army Corp of Engineers play in the district in terms of decision making, or planning especially in the Lake Lanier Basin? Does the North Metro Water District have any influence with the Corp?
19. With the EPD retaining permitting authority and the local governments adopting the ordinances complying with the plan established by the district, would you classify the district as advisory in nature or as an active party in the management of the water resources in the district? If you consider it advisory in nature, would like to see a more active role by the district, and if so, what active authority would best serve that purpose?
20. With the Lake Lanier basin being one of the most contentious water issues in the southeast, how does the possibility of changes in the actions of the Corp of Engineers or potential litigation outcomes effect the long term planning of the district?
21. How often are the model ordinances, plans, and goals of the district updated?

The ARC has no say in the water district board activities, but there is a lot of cross over in the personnel. The EPD provides planning guidance, and other state organizations sometimes take part in the meetings through the public comments section in both informal and formal means. There is no formal relationship with the Army Corps of Engineers. The ARC coordinates with many of the local utilities through the river/lakes management systems. There is no formalized relationship because the water-planning district focuses on long term planning rather than the Corps day-to-day, though they do use Corps data. The ARC does the daily water planning distinctly from the water-planning district. The function of the institution is advisory in nature. The district creates plans and provides forums while EPD enforces and local governments implement and do the day-to-day work.

**Structure:**

22. What is the organizational structure?
23. How many people are involved with the day-to-day operations of the institution (staff vs. volunteer)?
24. Who would you say are the primary players in the institution and what are their roles?
25. How do the primary players of your institution communicate?
26. What is the frequency of membership turnover for this institution?

There is a governing board consisting of both appointees and representatives. The district staff is comprised of ARC members who do the day-to-day activities with one staff member for each planning area and a couple of administrative members coming to 8-10 day to day staff. There are technical standing committees with four subcommittees, including one on education and public awareness, and there are six basin advisory councils. Each of these are comprised of volunteer members with quarterly meetings. Some of the staff and members of been there since the beginning of the district in 2001, and turnover rates largely depend on local government turnover.

**Funding:**

27. What is the institution's primary source of funding?
28. Are these sources of funding stable?
29. Does funding vary from year to year?
30. Are there specific individuals or groups within the organization that are responsible for fundraising?
31. Are there specific individuals or groups within the organization that are responsible for overseeing funds?
32. Does the budget change over time?
33. Is the primary source of funding today the same as the initial source of funding for the institution? If not, what brought about this change?

The funding is dues based with a small portion of Georgia Legislation allocated funds. Each county pays on a pro-rated basis. In active planning years, the dues double to cover costs, but they are generally stable outside of that increase. There is no fundraising, but there are active lobbying efforts for increased in state funds.

**Other Notes:**

The Metro North Georgia Water Planning District and the Atlanta Regional Commission are both ACFS members. The ARC is involved in the tri-state water litigation, with the legal funding paid by utility companies in the metro area. For any follow up questions, Brad Curry is a good contact.

## **Appendix 2. Notes from Collaborative Session at December 13, 2012 Governing Board Meeting**

### **Education**

#### Shannon's Group (Group 2)

High priority

Goes hand-in-hand with conservation, agricultural practices, and planning

Work within existing education institutions

There are examples of less leaky systems which brings up an issue of how much to invest in education versus updating to more efficient systems

Look at others to see which education strategies have been successful

A lot of education needed for all ages

There are existing institutions that are not utilizing full authority to approach regional issues

Could a TWMI be a coordinating entity that takes a piece of the money allocated by government for education and coordinate its distribution to address regional objectives

Relying on grants may be short-term solution

### **Coordinating and Disseminating Data**

#### Brittany's Group (Group 4)

High Priority

Different sources of data and analysis cause confusion and lack of cooperation

A TWMI can help develop better policy in this regard

Data collection exists but w/o collaboration

What is the best way to make data available? How do other TWMI's provide this data?  
Suppose a new TWMI is never created, we still need to figure out how to deal w/ this issue of data collaboration

What should be done w/ the info the ACF basin already has?

Access to available university data

Big gaps in standardization of data and data dissemination that need to be filled!

## Coordination and Collaboration

### Shannon's Group (Group 2)

Coordinating function is critical

We should maximize existing institutions and program potential

General coordination function important

It is an easy first step and happening currently in the basin

Pursuing coordinating functions may have more potential than regulation

Coordination can be used as a stepping-stone

Coordination and education can be a way to earn credibility before talking about establishing regulatory authority

## Planning

### Hollie & Estelle's Group (Group 1)

*Do you think that a TWMI would aid in this function?*

Critical to have – mandatory

Lack of planning was what got us into this mess in the first place

Would create institutional memory and consistency over time

*How would a TWMI be of value for this function?*

A TWMI could aid to bring consistency across the basin depending upon on what the institutions mission...

Planning has resulted in this 'water issue' discussion.

Economic planning is most needed for the future but also the most overlooked up to this point; water limitation was not a glaring issue until about 30 years...

Involvement in planning is critical for success and might break down state barriers as consistency of data reporting developed, planning in a transparent manner...  
transparent data

*What further information would you like to know about this function and how TWMI's are performing it in other basins?*

How did they achieve their planning objectives using soft management approaches?

How to achieve consistency and transparency in data

When have other plans been successfully implemented?

What entities have achieved this hybrid existence?

*How would this information help the ACFS?*

Would a TWMI do the planning and submit it to the decision makers...

*What existing organizations are undertaking this function w/n the ACF? [We'll have a cheat sheet listing possible organizations for each group to consider.]*

We are doing this with sustainable water management plan... A TWMI would maintain the SWMP as a living document and update it each 5 years or so.

Metropolitan North Georgia Planning District (MNGPD) - Has done good work that can be learned from. Good water conservation program. This organization handles 80% of the population in the basin. Trans county trans city but not trans state.

Brittany's Group (Group 4)

High priority

How can we bring together all the existing plans required/performed by current organizations and address issues of scale—local, state, regional, etc.?

Gaps between the levels of planning in the various river systems—Chattahoochee vs. Flint

Differences amongst sites in comprehensive or other land use planning  
Is anyone else in the basin besides ACFS doing sustainable water planning?

Dept. of Economic Opportunity (FL) and DCA (GA) need to test deal w/ water management plans v. work together

How states deal w/ water management plans v. land use plans

Coordination between segments and states for plans that do exist

## **Environmental Flows**

Hollie & Stella's Group (Group 1)

*Do you think that a TWMI would aid in this function?*

Yes, very helpful

Without involvement in managing ecological flows the ship will sink; that's what it's all about.

*What further information would you like to know about this function and how TWMI's are performing it in other basins?*

We have to know what the minimum is for the environment and tradeoffs between environmental needs and society needs. The ACF represents both ecological and societies values.

It would be really helpful to know how other TWMI's have managed ecological flows from a soft management perspective.

How to take care of the environment

### Andrew's Group (Group 3)

High importance

Would like to see this part of TWMI, address Flint.

Case Studies –

How is the most accurate demand data collected?

Educate downstream constituencies of upstream issues and vice versa.

Has Corps ever tried to restore flows via its projects anywhere in the U.S?

Examples: Riverkeepers, Nature Conservancy, Florida Blue Wave

## **Water Conservation**

### Shannon's Group (Group 2)

High priority

It's the easiest and cheapest function

Some areas of basin are doing better than others

This is the 1<sup>st</sup> thing you do and is feel good for the consumer

“Lead with conservation”

Touch base with MWDSC because they are a good example of TWMI which addresses water conservation

Many types of conservation strategies

Households can have serious leakage issues depending on their age, in some cases the losses can be 29%

Recycling and grey water is a component of water conservation that can be addressed  
There is concern that greywater is in fact consumptive because it's not going back into the basin for downstream uses

However there is a finite amount of water so reuse is one way to reduce demand

You can have reuse but still discharge it into the basin (for example a plant may reuse water 3 times, but still discharge it)

Look into how other TWMI's are most effectively communicating and educating the public on water conservation

The true cost of water is greater than what is charged

A TWMI or other research institution can explore ways to more accurately price water so it reflects its full value

A current example is in Northwest Florida: middle school systems have a 7-day curriculum on water conservation and water issues

## Restoration

### Andrew's Group (Group 3)

Low to no priority

Question 1= only if related to organization. Probably not that important for organization

Question 3= Ft. Benning, Nature Conservancy, USDA – wetlands reserve

## Regulatory Review

### Hollie & Estelle's Group (Group 1)

*Do you think that a TWMI would aid in this function?*

Yes, but...

A TWMI should not control permit issuances/ police/ or participate in hard management; rather they should play an advisory role to agencies;

*Is gaining more information about this function a high, medium or low priority to you?*

Learning how other TWMI's function in soft management activities in a formal manner is a high priority for water quality and water quantity

*What further information would you like to know about this function and how TWMI's are performing it in other basins?*

What is the success rate of institutions that start as a new institution vs. those that go through incremental changes?

It would be good to gain information about the successes of TWMI's so that we can learn about what soft management roles are most feasible

How are other TWMI's developing uniform recommendations and disseminating those recommendations.

How can a TWMI's be an advisory body that has teeth?

How do TWMI's equitably share and communicate information?

What is the feasibility of TWMI regulatory review based on how a TWMI is created?

*What existing organizations are undertaking this function w/n the ACF?*

Water councils. But could a TWMI provide universal representation to the water management councils.

Not working across the boundaries, but each state has their own regulatory body the most aggressive is Florida then GA then AL...

Pulp and paper people, industry, EPA, industry associations, nature conservancy, watch dog organizations

*General comments:* Clearly had issues separating themselves from the future/potential TWMI. Affects their ability to assess regulatory review. Had ideas of what their TWMI could do that the ACFS does not currently do; want more information on that. Want soft management with teeth. Consistency of water quality standards and transparency in data – very good.

### Shannon's Group (Group 2)

There is a distinction between regulatory review and regulatory authority

Review- comment on other's who have the authority

Authority- vested with the authority to make decisions

Low, but mixed priority

There are already institutions with this authority (Corps and states)

This may be a higher priority on a long time scale (e.g. 10 years)

Is there an advantage to one unified voice for regulatory review?

Are there deficiencies that may arise from having one entity rather than 3?

The time frame matters

Will we be able to react more quickly using existing institutions that already have regulatory authority?

There is precedence for dividing authority (rather than one organization being responsible the entire scope)

A possibility is the corps and states maintain their current authorities?

How regulatory authority is divided depends on the delegation

We need to tailor any combination or division of regulatory authority to the ACF basin

Resources are likely better spent in other places

This is a long-range goal that is not currently important

We should look at the current arrangement of institutions with regulatory authority to see where gaps and opportunities are

Andrew's Group (Group 3)

Not sure whether it should be high importance or not

Advisory capacity for stakeholders in rule making or advisory capacity for the TWMI in rulemaking

Would rather have stakeholders rather than new body in control of regulatory review.

Clear lines of authority, more examples (case studies) of how others are doing this

Examples of existing organizations with regulatory authority in the ACF Basin include: EPD, Corps, DEP, NFWFMD

## **Power Generation**

Andrew's Group (Group 3)

Low to no importance

Question 1= No priority.

Question 3= SEPA – market power for Corps. Currently GA Power, Corps, Southern Company, Progress, Duke

Andrew's notes:

Seem to think everything relating to power is controlled by power industry itself, so they did not want to mess with function.

## Recreation

### Brittany's Group (Group 4)

High priority  
Conflicting recreation interests in reservoirs

They need an inventory of what those interests are in the basin and the numbers of different users

Tied to tourism, economic impacts of recreational activities and tourism

It's a Corps of Engineers management issue

They think an ACFS institution SHOULD directly manage recreation but don't know what that would look like

## Agricultural Practices

### Shannon's Group (Group 2)

High priority

A large percentage of the water that could enter the bay is going to agricultural use

Large consumptive user of water and the biggest demand is at the worst times of the year

In the future there will be increased demands for agriculture as population rises

Will these demands be met by more irrigation or other techniques such as crop rotation and planting efficient crop types?

Conservation measures can be used to help fill demand without extra irrigation

The density of agriculture water permits is varied across the basin (few agriculture permits in Apalachicola and lots in Flint)

Approaches that can be used by TWMI are varied but include: Advocating practices to minimize agriculture consumptive use, permitting thresholds, more emphasis on monitoring and BMP education rather than regulation

Can we coordinate current extension efforts?

There is value in improving communication across states (we can learn from past projects to inform current and future agricultural policy)

Example of current efforts in basin- UF Ag Extension

Agency and farmer relationships can be based on a regulation or a technical assistance

Groundwater is the largest consumer not surface

Groundwater aquifers do not necessarily have the same boundaries as surface water basins

There are some TWMI that currently address groundwater

For example the 3 southern Florida water management districts manage groundwater (and put caps on withdrawals, after which new permits are required to use other sources like desalination)

In the Flint River basin there is evidence that the surface and groundwater resources are connected but it is still unclear what the recharge rates are

We should develop relationships with existing agricultural institutions to optimize program delivery

## Water Quality

Hollie & Estelle's Group (Group 1)

*Do you think that a TWMI would aid in this function?*

Yes, greatly.

*How would a TWMI be of value for this function?*

Developing a tri-boundary agreement that relinquishes control of water quality management by separate methods for each state and uses and shared approach across the basin.

Provisioning of information, synthesis of issues.

Water Quality and quantity linked inexorably.

Develop consistent standards across states...

Integrating states' issues - promoting uniform regulations and standards (but NOT enforcement)

*Is gaining more information about this function a high, medium or low priority to you?*

HIGH... (But actually maybe more medium)

*What further information would you like to know about this function and how TWIMs are performing it in other basins?*

Ongoing water quality data gathering

Prioritizing data gathering/gaps

*Are existing organizations undertaking this function w/n the ACF?*

EPA Region 4

USGS

## **Flood Control**

Brittany's Group (Group 4)

Lowest priority

Connected to planning

Sacrificing flood control for another function or vice versa

Application to land use and development runoff

Input to the Corps for policy changes on changing weather patterns and sea level rise

MNGWPD & COE flood plain planning

Stormwater runoff management, are other institutions doing this>

Stormwater permitting—done by NFWMD

## **Miscellaneous Notes**

Andrew's Group (Group 3)

Who regulates the Flint River since the Corps is not involved?

Restoration of navigation? Dredging?

**Gather more information on conflict resolution within the ACFS organization itself**

**Want to learn more about why Georgia, Florida, or Alabama would give up power?**

Shannon's Group (Group 2)

Coordinating and collaboration function important

There are 2 approaches to move forward:

Have the ACFS take on additional responsibilities vs. ACFS makes recommendations to the state for the creation of a (quasi) governmental agency

Either approach may work

The approach used will change funding opportunities and authorizations needed

We can look at Tennessee-Tombigbee Authority for an example

Should we continue to address the navigation function?

