One Glass for Two People: A Case of Water Use Rights in the Eastern United States

 $b\gamma$

Jeffrey A. Steinmetz, Department of Biology, Francis Marion University Reed M. Perkins, Department of Environmental Science, Queens University of Charlotte

Background on Water Use Rights

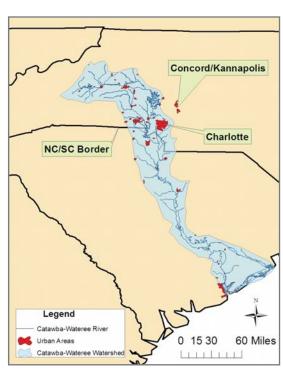
In the United States, the issue of water use rights is typically considered a matter for western states. For decades, Arizona, Nevada, California, and others have wrestled with conflicts arising from multiple interest groups demanding access to a very limited (and unpredictable) amount of water. Legal and policy solutions in the west are typically rooted in a patchwork of centuries-old allocation rulings, most based on the principal "first in time, first in right." In other words, the first user to take the water also acquires the future right to that water. In contrast, the eastern United States, rich in rivers and lakes, is often considered to have plenty of water, and while not immune to water controversies, the region certainly has been less prone to them. As eastern urban populations have continued to grow, however, this has started to change. Without the history and legal precedent so common in the west, civic leaders have struggled to find bases for answers. To no one's surprise, water debates challenge basic ideas of regional identity, economic fairness, and ecological ethics.

This case study focuses on the growing issue of water use rights in the southeastern United States. The central question is who (if anyone) has a right to use the water in the Catawba-Wateree River. If multiple parties have a right to the water, how are those rights prioritized? The stakeholders and their positions are diverse. Some perspectives, such as that of the Catawba Riverkeeper Foundation (i.e., that the ecological integrity of the river must be protected), are expected. Others, like that of the city of Charlotte (i.e., that water should be diverted from its own water supply), are unexpected. The diverse collection of stakeholders battling over the river's water, as well as the novelty of the case's details, led to a rare instance of "original jurisdiction" by the U.S. Supreme Court, in which the normal path of judicial review is bypassed and the case is heard first by the Supreme Court.

The Catawba River

From its origins in the Appalachian Mountains of North Carolina, the Catawba River flows east then south through a series of dammed reservoirs to Charlotte and into South Carolina. In north-central South Carolina, the river is dammed yet again to form Lake Wateree, after which the river assumes the name "Wateree River" and flows into the Santee River, entering the Atlantic Ocean north of Charleston. Over its course, the main stem of the Catawba is approximately 220 miles long and is dammed 11 times. It links the three major ecological regions of the southeast: the mountains, the piedmont, and the coastal plain.

The Catawba-Wateree system has twice been identified as under significant threat. In 2008, it was named the most endangered river in the country by the watchdog group, American Rivers. In 2010, the Catawba-Wateree watershed was named one of the top 10 most endangered places in the southeast by the Southern Environmental Law Center. Of particular concern in both instances was the lack of adequate planning for present and future river resource use. Future planning is a particular concern given that Mecklenburg County,



where Charlotte is located, grew by 32% from 2000–2010. The dams along the Catawba-Wateree are an important source of hydroelectric power for parts of North and South Carolina. The lakes formed behind these dams are used as a source of cooling water for several nuclear and coal-burning power plants. According to the U.S. Environmental Protection Agency (EPA), four of the top 44 highest hazard coal ash ponds in the United States are located on the Catawba River. One reservoir, Mountain Island Lake near Charlotte, is the primary source of drinking water for the city of Charlotte. Approximately 1.3 million people in North and South Carolina depend on the Catawba-Wateree River for water and electricity. The river is also important for recreation and real estate development.

The Issue

In the early 2000s, the elected officials of Concord and Kannapolis in North Carolina faced an unpleasant reality: their cities' rates of population and economic growth could not be sustained by the amount of water present in their local Rocky River watershed. In 2006, they petitioned the state of North Carolina to approve an inter-basin transfer (IBT) of 25 million gallons of water a day from the Catawba River. Other towns in North Carolina and South Carolina that are part of the Catawba-Wateree watershed fought this request for water transfer. They argued that they will need the water in the future as they also continue to grow. Unlike many towns that take water from a river or lake and return it to the same basin, water transferred to the Rocky River system will not end up back in the Catawba-Wateree basin. In addition, the towns argued that in drought years there may not be enough water to guarantee supply for the Concord/Kannapolis area. The Catawba Riverkeeper Foundation accused politicians and managers in both states of "sucking the river dry." After a long series of hearings, in 2007 the North Carolina Environmental Management Commission (ECM) approved an IBT of 10 million gallons a day (MGD). Following the ECM ruling, the State of South Carolina filed a case with the U. S. Supreme Court, which the court agreed to hear, unless the parties came to an agreement prior to that event.

The Major Stakeholders

For the Transfer

- 1. The State of North Carolina and the towns of Concord and Kannapolis. The state and these towns are experiencing growth and increasing water demands for residential, commercial and industrial use. Without this water, city leaders feel that the potential for population and economic growth would be significantly reduced.
- 2. *The City of Charlotte*. The city of Charlotte is concerned that not allowing the transfer will affect its ability to provide drinking water and sewage services to its citizens. Perhaps surprisingly, Charlotte is for the transfer of water, mostly out of concern that municipal claims to the river be given high priority; the fewer restrictions placed on how a city uses the Catawba River, the better.
- 3. Duke Energy and Catawba River Water Supply Project (CRWSP). Duke Energy is a private company responsible for managing several reservoirs and hydroelectric facilities along the Catawba River, including Lake Wylie, Mountain Island Lake, and Lake Norman. If South Carolina's claims to the Catawba become codified, it may limit Duke's ability to produce electrical power, particularly in drought years. The CRWSP is a public entity that supplies drinking water to both North and South Carolina through the Catawba River Water Treatment Plant. More water to South Carolina may limit CRWSP's ability to provide drinking water to individuals in both North and South Carolina. Additionally, CRWSP already transfers water out of the Catawba River watershed, and fears this ruling could limit its ability to continue these transfers.

Against the Transfer

- 4. *Towns in North Carolina within the Catawba River basin.* There is currently plenty of water, with enough to spare, for these towns. However, they are concerned that their future growth will be limited if too much of the Catawba River is diverted to another basin. This position puts them at odds with Charlotte's civic leaders.
- 5. *The State of South Carolina*. South Carolina is concerned that diverting water upstream will deny towns within South Carolina the ability to use, and derive economic benefit from, the water. They argue that a state upstream should not get to divert water from a shared resource without input from those downstream.

6. Catawba Riverkeeper Foundation. The Catawba Riverkeeper Foundation (CRF) is a nonprofit environmental group dedicated to protecting the Catawba River and its watershed for human use and wildlife. The CRF and other environmental groups worry that diverting too much water could affect wildlife habitat and water quality in the Catawba.

Role-Playing Exercise

For this exercise, you will be divided into teams that will be taking the role of different stakeholders trying to negotiate a settlement to this lawsuit. In the class period before this exercise, your instructor will give you some homework questions and you will be assigned to a stakeholder group. Once assigned a group, you should get together with the members of your group and plan your strategy. Are you for or against the transfer? Do you want more or less water diverted? What are you willing to compromise? Are there other ways of getting or conserving water?

Day 1 – Background

At the end of class, you will be given a set of questions to answer as homework. Your written answers are due at the start of the next class period and you should be prepared to discuss the answers in class. This homework assignment will provide the necessary background information for you to successfully complete the subsequent activities.

Between Days 1 & 2 – Homework

Research and prepare written answers to the homework questions.

Day 2 — Preparation and Starting Positions

Your written answers must be handed in at the start of this class period. Your instructor will then facilitate a discussion of these answers to ensure that everyone understands the background material. In the second half of this class period, your instructor will divide you into your stakeholder groups. Groups will then have a chance to meet and discuss their team's strategy for putting together their written position statement.

Between Days 2 & 3 — Preparing Oral and Written Position Statements

You will collaborate with the other members of your group on the oral presentation, but each member of the group must hand in his or her own paper with supporting information. Details on each are below.

• Oral Presentation

Each stakeholder group should prepare a short (3–5 minutes) formal presentation of their position (PowerPoint, Prezi, etc.). This presentation should inform the other stakeholders of your initial position. Your "position" is really an *argument* as to what should happen. This should include not only your conclusion (or "bottom line"), but also your reasons/evidence for why this is the best course of action. Your bottom line is what you are arguing for in the settlement (How much water, if any, should be diverted? What about possible future transfers? What happens in drought years? etc.). You must include at least *four different reasons* that support your conclusions. You should present detailed evidence to back up your argument. Provide facts, figures, case studies, expert testimony, information on economic impacts, references, etc.

• Written Assignment

Each student should turn in a clearly defined position statement with four different reasons for taking that position ranked in order from your strongest to weakest argument. You should have at least one reference for each of your reasons. You do not need to write a major paper for this. It is fine if you turn in one page that outlines your position in one to two paragraphs, followed by four complete bullet points (i.e., phrased in complete sentences) for each of your reasons and conclusions. References should be given in either CSE or MLA format.

In addition to simply presenting your position, you should come prepared to defend it and challenge your classmates' positions (think what concessions you want to ask them for, and be prepared for them to ask you to make concession to your position as well). To make sure you are prepared for this, you must do the following:

• Anticipate at least one major concession you think you'll be asked to give up and prepare a response. Your written assignment should include what the concession is and your short response (would you accept it? if not, why not?).

• Think about the opposing points of view. Your written assignment should include at least two concessions that you will ask of other stakeholders.

Day 3 — Presentations and Starting Negotiations

At the start of this class period, each student should turn in their own written position statements/arguments/ concessions. In addition, each stakeholder group will present formal starting positions to the other stakeholders. These positions will serve as the starting point for negotiations. As soon as all the presentations have been made, students may begin the negotiation process.

Between Days 3 & 4 — Negotiations and Progress Reports

As soon as the class period is completed, you should continue negotiations. You may want to think about dividing your stakeholder team up by assigning each person on your team one or two other stakeholders to negotiate with and to report back on these negotiations to the group for the group's consideration. To ensure that negotiations have been taking place, and that each group is prepared for the final negotiations, each group must provide a written progress report at the start of the next class period. This short, written report should outline which groups you interacted with, what concessions were discussed, and provide a draft of your preferred settlement. The settlement should include the following: (1) To approve or not approve the IBT, and (2) If it is approved, what conditions, if any, are attached to that approval.

Day 4 - Final Negotiations, Vote and Wrap-Up

This is it. The court mandated deadline for the settlement is fast approaching. Start the class by turning in the written progress reports to your instructor. You will then have until halfway through this class period to reach a settlement, or the case goes to court. From your preliminary negotiations between class periods, you should be prepared to work out a final settlement. In order for the settlement to be approved, *four* of the *six* stakeholders must sign off on it. Remember, if a settlement is reached, no one will get everything they want, but will have more control over the outcome. If it goes to court, it is entirely possibly that one set of stakeholders will get nothing that they want! After the vote, your instructor will lead a wrap-up discussion of this exercise.

Homework Questions

You should answer the following questions for homework before the first day of the case study.

- 1. Define the following terms: aquifer, groundwater, surface water, drainage basin/watershed, inter-basin transfer, stakeholder, water rights.
- 2. Identify several different ways water is used. Think about who is using the water and what it is being used for. What groups/activities use the most water?
- 3. Who has a right to use any given water source? How much water can they use? Explain the difference between riparian water rights and prior appropriation water rights. Where are each used?
- 4. What conditions affect groundwater availability? What conditions affect surface water availability? Think about what changes in use or in the environment might make water more or less available.

Resources

You may wish to use the following references as a starting point for your investigation of water rights in general and this case specifically.

Catawba RiverKeepers. About the Catawba-Wateree River.

http://www.catawbariverkeeper.org/about-the-catawba/catawba-wateree-facts/ Accessed 26 April 2011.

Kinnard, Meg. 2007. State sues N.C. over river's use. Associated Press. June 8, 2007.

http://www.postandcourier.com/news/2007/jun/08/state_sues_n_c_over_rivers_use/ Accessed 26 April 2011.

Bureau of Land Management—Water Rights Policy.

http://www.blm.gov/nstc/WaterLaws/blmwaterpolicy.html Accessed 26 April 2011.

B

Image in title block is ©PictureArt - Fotolia.com. Map created by authors in ArcGIS. Case copyright held by the **National Center for Case Study Teaching in Science**, University at Buffalo, State University of New York. Originally published August 31, 2011. Please see our **usage guidelines**, which outline our policy concerning permissible reproduction of this work.