A Case Study of Hydropolitics in the Upper San Juan Basin: Animas-La Plata

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The Animas - La Plata Project (ALP) is a major institutional change to water resources management in the upper San Juan River basin. Conceived in the early development phase of the Colorado River basin, the project was initially planned to provide water for irrigation, generate hydroelectric power, provide flood control and silt retention. It was authorized by Congress in 1968. Within five years of this, two federal acts were passed that significantly influenced the original plan: The Clean Water Act of 1972 and the Endangered Species Act of 1973. The story of the ALP is the classic example of conflicting interests in the American West: Planned dams and diversions, which would benefit citizens within the project boundaries, are challenged by naturalists representing endangered fish; all while Native American Tribes in the project region assert their right to water allocated to them by treaties in the late 19th century. Conflict is not the only side of the story, however, as there are examples of extreme cooperation and compromise. As the story unfolds on a small scale, the events reflect broader societal shifts in attitude about the value of nature and human efforts to alter it. Ultimately, there are winners, losers and those in between.

Upper San Juan Basin

The upper San Juan basin encompasses 3,430 square miles, and portions of three states, Arizona, Colorado and New Mexico. The major tributaries within the basin include the San Juan, Animas, Florida, La Plata, Los Pinos, and Mancos Rivers. Of all the 6-digit accounting units within the UC Region, the Upper San Juan is governed by the most interstate compacts, four. The major issues in the basin include American Indian water rights, endangered fish recovery, and water diversion projects. Settlements have recently been reached with the Navajo, Apache, and Ute Nations. Instream flows are maintained for two endangered fish species, the Colorado Pikeminnow and the Razorback Sucker (USFWS 2007). Two projects transfer water out of the basin, the Animas-La Plata and San Juan-Chama projects.

Case Study Selection

In order to look for further indicators of conflict and mechanisms that foster cooperation, a case study was non-randomly and purposively selected (Creswell 2003; Sheskin 1985, Yin 1994) based on the results of the temporal and spatial analysis portions of the UC project. Following examples from available literature, the case study included document analysis and interviews with key stakeholders (Tang 1991; Ivey et al. 2002; Lopez-Gunn 2003). Interviews targeted key informants for data collection, because they play a unique role in the decision making process, have an intimate knowledge and understanding of the process, and are involved in and offer insight into the process. Targeting key informants allowed for their accumulated knowledge, expectations, and considerations, that are available nowhere else, to be tapped (Feldman 1981; Hooper 2001; Sheskin 1985).
This case study provides insight into the mechanisms that drive cooperation within the UC Region. The findings are not meant to be representative of the entire region, but rather to provide lessons learned. The upper San Juan basin was selected for several reasons. The ideal case study would have a large number of events reported, a large number of extreme cooperative events (+4 and +5), and a small number of extreme conflictive events (-4 and -5), or to put it another way, a high ratio of extreme cooperative events to extreme conflictive events. The reasoning for selecting based on extreme events is that it takes a lot of interaction and deliberation to reach a compact or peaceful settlement. These are the types of scenarios that will hypothetically yield the best understanding of institutional capacity.

Three basins stuck out as potential case studies: Rio Grande-elephant Butte, Upper Rio Grande, and Upper San Juan. These were the top three basins in terms of number of events and number of extreme cooperative events in the larger UC study, and are ranked in the order listed. The upper San Juan basin stood out because it has a ratio of more than 2:1 (extreme cooperation : extreme conflict), while the other two are approximately 1:1 ratios.

**Methods**

Fifteen semi-structured interviews were conducted in the upper San Juan basin in the spring of 2008. Individuals were selected from multiple organizations outside of the USBR in order to get a different perspective on hydropolitics in the basin. Using the WWIS UC Event Database, stakeholder groups were selected as potential sources for people to interview. Interviews were conducted with people from four stakeholder groups: Native Americans, environmentalists, water users, and federal government. These groups represent the major interests in the Animas-La Plata project. Interview subjects were given details about the project and signed consent forms according to the Oregon State University human subjects policy. Responses were compiled into groups based on similarity, and to protect the confidentiality of individual participants.

A document analysis was also conducted to get additional information on the hydropolitics of the upper San Juan basin. Newspapers, reports and articles were utilized in this study. Information collected from these sources was compared to interview responses to better understand the current state of the basin.

**Timeline of Major Events**

The following timeline was created using multiple sources, the UC Events Database, USBR (2006) and Durango Herald (2009). The latter has an interactive timeline of events. Major turning points are discussed at the end of the timeline.

*Timeline of Events*
April 11, 1956 – Congress authorized a feasibility study for the Animas-La Plata Project (ALP) as part of the Colorado River Storage Act.

January 1, 1962 – The USBR found the ALP to be “engineerly sound and financially sound and feasible.”

September 26, 1968 – As part of the Colorado River Basin Project Act of 1968, Congress authorized construction of the ALP. The original project consisted of two reservoirs and a diversion, which included 48 miles of canals and tunnels. This would have diverted more than 191,000 acre-feet of water to Colorado and New Mexico for irrigation, municipal and industrial uses.

September 1, 1979 – The ALP was expanded to include two new reservoirs, Ridges Basin and Southern Ute.

July 1, 1980 – The USBR released the Final Environmental Statement for the ALP.

1980/81 - At the end of the Carter administration, all public works projects scheduled for construction were suspended, including the AL-P. Had this not been the case, the project would most likely look different today.

March 5, 1986 – The San Juan Water Commission is formed with the signing of the Joint Powers Agreement. Members include the cities of Aztec, Bloomfield, and Farmington, New Mexico, San Juan County and the San Juan Rural Waters Users Association. By entering into this agreement, all members agreed that water allocated to them through the ALP “should be held for the use and benefit of all the citizens, municipalities, water users associations and other water users in San Juan County, New Mexico.” (SJWC 1986) Essentially, these governments agreed to manage ALP water collectively, and share all costs associated with the construction of the ALP.

July 1, 1986 – A cost-sharing arrangement was accepted by the Department of the Interior, which would require states and local partners to provide 38 percent of the project’s up-front funding.

December 10, 1986 – The Colorado Ute Indian Water Rights Final Settlement Agreement was signed. One of the most influential events related to the ALP project, as it would later bring about major changes.

November 1, 1988 – The Colorado Ute Indian Water Rights Settlement Act was passed by Congress, which resolved senior water rights claims by both the Southern Ute Indian and Ute Mountain Ute Tribes. In addition to allowing for future development, the Act protected existing water uses.

May 4, 1990 – The USFWS issued a draft biological opinion, which concluded that the ALP would jeopardize the existence of the Colorado pikeminnow, and endangered species. No reasonable and prudent alternative to the ALP was identified.
October 22, 1991 – Citing compliance issues with the Clean Water Act, NEPA and the Administrative Procedures Act, the Sierra Club Legal Defense Fund filed a Notice of Intent to sue over the ALP.

October 25, 1991 – The USFWS issued a Final Biological Opinion. It offered a reasonable and prudent alternative, which limited depletions from the Animas River to 57,100 acre-feet annually in order to protect the pikeminnow. This Biological Opinion also removed impediments to ALP construction. It also included an endangered fish recovery program aimed at helping the Colorado pikeminnow. This event opens the door for litigation that comes the following year.

October 26, 1991 – A groundbreaking ceremony for the ALP was held near Durango.

February 25, 1992 – The Sierra Club Legal Defense Fund, representing the Four Corners Action Coalition, Sierra Club, Colorado Wildlife Federation, Taxpayers for the Animas River and Southern Utah Wilderness Alliance, filed a lawsuit to stop construction of the ALP.

April 23, 1992 – Construction was halted pending the completion of the Environmental Impact Statement started in 1980.

September 17, 1992 – An injunction was granted, prohibiting all ground-disturbing activities related to the ALP were prohibited in order to protect cultural resources.

June 19, 1996 – A lawsuit was filed against the EPA by the Southern Ute Indian Tribe, Ute Mountain Ute Tribe and the Animas-La Plata Water Conservancy District. The suit claimed the EPA was obstructing the implementation of the Colorado Ute Mountain Water Rights Settlement Act.

October 9, 1996 – Supporters and opponents of the ALP met with the Governor of Colorado, the Lt. Governor and the Secretary of the Interior to discuss unresolved concerns in an attempt to reach consensus on future project alternatives. Several pending lawsuits were put on hold, as the participants reached a “Stand Still” agreement. Ultimately, the meetings lead to a significant change to the ALP.

August 11, 1998 – In order to address concerns over Endangered Species and Clean Water Act requirements, the Department of Interior recommended a scaled-down version of the project, ALP “Lite”. The project will no longer have a once primary component, irrigation. It will be used instead to fill water rights of two Ute Indian Tribes. The Navajo Nation becomes a stakeholder in the project two years later. Because the project resolves Indian water rights claims, traditional cost-benefit analyses do not apply.
December 21, 2000 – The USBR released and EIS and Record of Decision that identified ALP Lite as the preferred alternative. Congressional authorization was still needed, as the alternative provided benefits to the Colorado Ute Indian Tribes that were not exactly the same as those laid out in the 1988 Ute Settlement Act. Congress gave authorization in the Colorado Ute Settlement Act Amendments of 2000.

September 11, 2001 – The terrorist attacks result in additional security measures being added to the project.

November 9, 2001 – The USBR Commissioner granted approval to begin construction on the ALP project.

April 1, 2002 – The following four tasks were started: 1) cultural resource mitigation program field work; 2) inlet conduit pipeline sleeve construction; 3) haul road construction by Weemuniche Construction Authority; and 4) final route selection for the Navajo Nation Municipal Pipeline.

June 1, 2002 – Construction on the inlet conduit to Ridges Basin Dam began.

November 1, 2002 – Construction was started on Ridges Basin Dam.

January 1, 2003 – The cost for the project is projected to increase from $338 million to $500 million, and the estimated completion date is pushed back to 2011 from 2009.

May 9, 2003 – Construction was started on the Durango Pump Plant.

January 1, 2004 – Excavation of the Durango Pumping Plant, intake structure, and fish bypass were nearly completed. Additionally, Ridges Basin Reservoir was renamed Lake Nighthorse in honor of a champion for the project, retiring Colorado Senator Ben Nighthorse Campbell.

April 13, 2005 – The Durango City Council voted to pay over $1 million as a down payment for water from the ALP. This did not guarantee water, but ensured the city a better buy-in cost when the project is completed. The Animas La Plata Water Conservancy District board voted to buy 700 acre-feet of water from the ALP for a drinking water district in La Plata County.

May 19, 2005 – The House Appropriations Committee earmarked $56 million for the project in the 2006 federal budget.

August 13, 2005 – Two hundred people gathered at the Ridges Basin Dam site and watched workers spread impervious clay on the excavated floor of the reservoir.

November 8, 2005 – Congress allocated $56 million for the ALP project in the 2006 budget, $4 million more than the Bush administration recommended.
February 18, 2006 – The federal government purchased more than 100 acres of land it had condemned for just over $3 million in order to further ALP construction.

July 19, 2007 – The U.S. House of Representatives approved $60 million for the ALP; $2 million more than requested in President Bush’s budget, and $3 million less than the Senate version.

September 6, 2007 – As part of a five year project in the Ridges Basin, SWCA Environmental Consultants collected between 800,000 and 900,000 artifacts from prehistoric peoples who lived in the project area, which would be under water in the future.

November 10, 2007 – A topping-out ceremony was held at the completed Ridges Basin Dam.

December 18, 2007 – In order to ensure the water used to fill Lake Nighthorse would be clean, the Durango city council started a project to redirect outflow from the city’s sewage treatment plant, even though this water is treated.

October 17, 2008 – A ceremony was held as the ALP was 97 percent completed. Federal, state and local government officials, members of three tribes, and Colorado and New Mexico residents were in attendance.

January 13, 2009 – Construction was started at Ridges Basin for a project to supply drinking water to southwest La Plata County.

March 15, 2009 – Congress approved $5 million for the ALP, the majority of which will be used for the Navajo Nation Municipal Pipeline.

April 20, 2009 – The USBR started the Durango Pumping Plant and began storing water for ALP customers.

Synopsis of Major Events

The ALP is a major institutional change to the upper San Juan Basin. Ultimately, the project was constructed even with major challenges from opponents, albeit a scaled down version. The first challenge to the project came at the end of the Carter administration in late 1980, when all public works construction was put on hold. This put the future of the project in question. In 1986, the project would get new life when the Colorado Ute Indian Water Rights Settlement was signed, which would ultimately ensure the construction of the ALP. This was ratified by Congress two years later. Also in 1986, local New Mexico governments signed a landmark agreement to collectively manage their share of ALP water. This is the highest form of cooperation, unification of government power and responsibility. The Joint Powers Agreement was the direct result of the ALP. Two opinions from the USFWS would further influence the ALP. In 1990,
it was determined the ALP would jeopardize the endangered Colorado pikeminnow, and no reasonable and prudent alternative was offered. In 1991, the agency offered a reasonable and prudent alternative to the project in its Final Biological Opinion. The day after the opinion was released, a groundbreaking ceremony was held. Four months later, the Sierra Club Legal Defense Fund filed a lawsuit to stop construction. Another lawsuit was filed in 1996, this time by proponents of the project against the EPA. They claimed that the agency was obstructing the implementation of the Ute Settlement Act. That same year, a major step toward consensus was taken. Colorado Governor Roy Romer called a meeting of stakeholders to try and reach an agreement. The lawsuits were put on hold, and the meeting would lead to a scaled down version of the project, ALP-Lite, which was formally proposed by the Department of the Interior in 1998. Because of the reduction of the size of the ALP, the main beneficiaries of the original project, agricultural water users, were removed from the project. In 2001, the Commissioner of Reclamation approved construction to begin. In April 2009, the Durango Pumping Plant was started, and water began being stored.

**Stakeholder Thoughts on the Animas-La Plata Project**

The Animas-La Plata (ALP) Project was conceived in the 1940s as a broad development plan for the Colorado River basin, and authorized by Congress in 1968. It was originally authorized as a multi-purpose project for irrigation, hydroelectric power generation, flood control, and silt retention. Following the authorization of the project, Colorado and New Mexico approved the Animas-La Plata Project Compact in 1969. Involving environmental interests, Indian water rights, municipal uses, and irrigation, the project has been the focus of debate since near the time of its authorization. The ALP project links the major hydropolitical issues that are being experienced across the western United States: American Indian water rights, instream water rights, and traditional project-oriented uses.

The project brings out a range of opinions depending on which stakeholder group one talks with. Traditional Western water users, irrigation and power, favored the project as they would have been the primary beneficiaries. Many water user associations were formed with agreements signed for the cooperative management of water from the project. Multiple environmentalists said it was an “economic dog” from the beginning. In the 1980s and 1990s, because of the Endangered Species Act, the project was downsized to ALP Lite and later ALP Ultra-Lite. Water users, who were the original beneficiaries of the project, felt that their interests were ignored as the project was downsized. American Indians benefitted greatly from the downsizing, as they became the primary beneficiaries. As one former federal government employee stated,

*The project became an Indian water rights project, and therefore, did not need to be economically feasible. The Animas-La Plata project was wrapped in an Indian blanket to gain approval. The project will go down as the Golden Fleece of all Golden Fleeces.*
In the 1990s, President Clinton, Secretary of the Interior Babbitt, the Southern Utes, and the Ute Mountain Utes began collaborating. Originally, the Clinton administration opposed the project, but backed it once it had been considerably scaled down. President Bush too would sign on to the project. Utes were hired to build the Ridges Dam portion of the project with federal tax dollars. The workers also had to be trained in dam construction, which was viewed by some as a waste of time and money. The Utes wanted a settlement with a fixed quantity of water as opposed to a percentage. The Southern Ute Tribe, through federal reserved water rights, could take over a large share of Colorado and New Mexico water, which makes environmental groups unhappy, as they believe the water should be left in the channel. The project will also benefit the Navajo Nation from the project by creating a new municipal water supply line. Environmentalists and water users see the project as a cash generating mechanism for Native Americans. As one environmentalist summed up her vision of the future of ALP water:

"Ultimately, there is no market for the Ridges water. As oil and gas revenues decline, the price of water will increase. The tribe will market this water to Las Vegas, Los Angeles, Phoenix, whoever is the highest bidder, and will become a broker of water. The tribe doesn’t need money, but is financially smart."

There is still a lot of opposition to the project, even though it is nearly operational. The environmental community sees itself as the watchdog of the USBR, as it feels the agency has consistently ignored instream needs for power and water development. Indeed, a report to Congress in 1946 includes a proposal for the Animas-La Plata project. The title of the report, *The Colorado River: A Natural Menace Becomes a National Resource*, (USDOI 1946) exemplifies the motivation for water development of the time, and set the stage for conflict with environmental groups. Water user groups are quick to point out that a “cottage industry” formed around opposition to the ALP project. An employee of a water user association stated, “Opposing the ALP was their [environmentalists] reason for waking up in the morning.” Despite the perceived favoritism for Native American interests, many Utes still feel they were robbed when the project was downsized.

**Lessons Learned**

The Animas-La Plata project history spans more than 50 years from its proposal to the completion of Ridges Dam. The project has been the center of major conflict and cooperation. A lot of people at the local, state, and federal level worked to keep the original project alive, kill it, and change its purpose. Many turning points occurred over the project’s half century history. There are many differing perspectives on the project, and a turning point for cooperation may also be the starting point of tangential conflict, and vice versa. The adage “you can’t please all of the people all of the time” is quite appropriate to the situation surrounding the ALP project and more generally water resources in the upper San Juan River basin. Each party at the table has an objective, and as one regional water resources manager said, “represents the interests of his or her organization and sticks to this position.” Local water managers are caught in the middle.
Much of the deliberation took place in Washington D.C., which is out of the jurisdiction of those who deal with conflict daily. This puts them in a difficult situation. In a survey of USBR water managers (Clark 2007), it was felt that the USBR is generally reactive and “throws money at conflict.”

The USBR should not forget history, but also should not dwell on past conflicts. Efforts should be taken to become a proactive leader in building cooperation between organizations at all levels, local, state, federal and non-governmental. The following lessons learned were derived from the analysis of interview responses. These lessons provide a foundation on which the USBR can begin to build a reputation of collaboration building. The lessons come out of the upper San Juan basin, but are applicable to basins across the West.

- There are many unsettled issues in the basin that lead many to believe more conflict will occur in the future.
- Stakeholder groups are focused on their interests, and conflict occurs when a group believes it has been wronged.
- Parties that have been involved in a conflict are less likely to cooperate with an opponent in the future.
- There is also a tendency for groups to cooperate with those with whom they have cooperated in the past.
- Some stakeholder groups do not fully trust the USBR.
- Not all organizations within the basin have access to data of sufficient quantity and/or quality to make informed water resources management decisions.
- A history of cooperation exists in the basin, which could help to build trust and collaboration.

Recommendations

The U.S. Bureau of Reclamation has a real opportunity to build trust with stakeholder groups in the upper San Juan basin while also helping to reduce conflict. The major lessons that came out of this case study point to a two-part approach that will help to improve data access in the basin, increase communication within and between stakeholder groups, build trust between stakeholder groups (including USBR), monitor areas and/or issues of interest, and ultimately foster cooperation while reducing conflict.
**Recommendation 1:**

The USBR should create and maintain a publicly accessible data sharing website using non-proprietary data from the WWIN and other sources (Figure 1). The creation of such a website will achieve multiple objectives. First, the site would provide organizations access to current USBR data. Users could also post additional datasets not already included. Improving data availability will help organizations to make better decisions, and get all parties together with regard to the data involved in any potentially conflictive situation. A similar program was established in catchments in the Murray-Darling basin in Australia (Hooper 2002).

The second objective to be achieved by this website would be trust and relationship building. This system of exchange would help to foster feelings of good will between stakeholder groups, and create an avenue for dialogue. Further, as the creator and maintainer of the website, the USBR could potentially improve its image with untrusting stakeholder groups. The website should host a discussion board where users discuss topics of interest within the basin in a public online forum. This would provide another way of increasing communication and understanding within the upper San Juan.

Third, because the website would require registration, topics and areas of interest could be monitored by the USBR. Monitoring who is accessing which data could give managers a “heads-up” on issues important to different stakeholder groups in different regions of the basin. Like the data section of the website, the forum section could also provide insight into the hydropolitics of the basin. The USBR and others could start topics of interest, follow posts, and participate in discussions. News stories would provide good discussion topics.

**Recommendation 2:**

The USBR should host multiple water conflict transformation workshops for managers within and outside of the agency. Using the skills-building workbook Sharing Water, Building Relations: Managing and Transforming Water Conflict in the US West (Doerrmann, Lach and Wolf 2007), stakeholders from all interests could play the role of someone else in a simulated conflict. This would build understanding within the basin and between organizations.
Figure 1. Conceptual model for a website for sharing water resources data and information.
References


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