Description:
This ECS will focus on two major components: flyfishing and water rights. During the flyfishing component of the ECS, students will spend three guided days on the San Juan River in northwestern New Mexico (one of the best tailwater fisheries in North America) and will also spend one day flyfishing locally. For the water rights component of the ECS, students will speak with legal, social, cultural, and economic experts on issues related to the conservation and use of water in the American southwest.

Essential Questions:
- What is flyfishing?
- What equipment and skills are necessary for flyfishing enjoyably, safely, responsibly, sustainably, and successfully?
- What are the local, state, federal, tribal, and treaty-based legal bases for understanding and protecting water rights in the San Juan watershed?
- What competing interests lead to water use and water rights conflicts and disputes in the San Juan watershed?
- What are the historical and cultural bases of those interests?
Leader, Tippet, and Line

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On the first day of the Fly Fishing and Water Rights ECS, we watched a PBS documentary, "Western Water—And Power," which explained the history of early settlers that moved to the West and how they moved water from the Gunnison River to the settlers in the Uncompahgre Valley. They did this by digging six miles through a tunnel carved through the Black Canyon. The documentary also explained the current state of affairs dealing with Colorado's rivers and how both the upper states (New Mexico, Colorado, Utah, and Wyoming) and the lower states (Arizona, California, and Nevada) have a claim on a certain amount of the water flowing through.

After the documentary, Mr. Ryan W. Farr, a local attorney from Monson, Cummins and Shohet—the firm that got CSS the rights to the on-campus pond—visited us to inform us about the legal side of the struggle for water.

We discussed different political topics, such as the prisoner's dilemma, and how they related to how the other states would choose what was best for them when claiming water. The topics talked about were discussed in a way that made sense to everyone so that everyone could genuinely grasp why California, Wyoming, Arizona, Colorado, etc. divided up the water in the way in portions.

The most exciting thing on the second day of the Fly Fishing and Water Rights ECS was working on our research projects. In our partner pairing, we analyzed information from various sources to prepare a presentation for a topic of our choice. An example of a topic chosen is as follows: can we limit the amount of water consumed by the livestock industry? We worked on our research topics in parts throughout the day; this taught us many essential research skills.
These presentations will be discussed even more when we can present to you all on Parents’ Night!

We also learned about flies and fly fishing rods by using Dr. Moulton’s fly fishing rods and flies. We watched two documentaries, The West: One Sky Above Us and America Before Columbus. We talked about the differences between federal and state laws. We also covered Article 1, Section 8, Clause 3 of the U.S. Constitution, which contains the Commerce Clause. It gives Congress the ability to regulate what is being bought, sold, transported over state lines, and more. Congress can even regulate the production of something in California that is distributed to the citizens of California because it could affect the prices in other states.

On the third day of our ECS, we went to Angler’s Covey and were fitted for wading boots and waders before heading to Quail Lake. We arrived at Quail Lake and began putting together fly rods and tying flies to our lines. Once we finished putting the fly rods together, we started to practice casting techniques and we watched Dr. Moulton’s demonstration on the proper ways to cast a fly rod before we fished on the lake. Some of us felt some small bites, but most of us did not. Some had problems with the rods, lines and/or their flies. A few students were too cold, because they had not prepared well enough for a whole day of fly fishing, so we were forced to return to campus early and work on our presentations.
Thursday, March 2, Week 1
On the fourth day of our ECS, we arrived at school at 6:40 a.m. to drive up to Shawnee so that we could go fly fishing on the North Fork of the South Platte River. Once we got to the river, we split into groups of three and got a quick overview of how to properly fly fish. The groups were spread across the river according to the guides’ preferences, and with tips from the guides, everyone quickly caught large, numerous trout. After a few hours of continuous wading, we all stopped back at the ranch pavilion for freshly grilled burgers. Over lunch, groups compared how many fish they had caught, and the size of each respective fish. Quickly, it became a competition over which group could pull out the most fish by the end of the day. At the end of the day, one group caught the winning score of 36 fish! And a member of the same group caught the largest fish of the day. After it all, we returned to school triumphant in our catches and having learned how to catch a trout on a river.

Friday, March 3, Week 1
Today our class took a trip to The Heller Center. The Heller family, full of philanthropists and artists, gave the land through a trust to the University of Colorado at Colorado Springs (UCCS), guaranteeing that no new development could take place on the land. We were then given a presentation
in the historic Heller house by UCCS professor 'Ilahaeva Tua’one, who talked to us about sharing water in Colorado. She also explained many problems that Native Americans face in getting water rights and access to water on their reservations. One of these problems is that the Native American reservations were given due consideration in the Colorado River Compact. After lunch, we went to the Fountain Creek Nature Center. There we learned about how making cities with lots of concrete causes water to not seep into the ground, which then causes runoff into streams and also causes erosion. We also talked about water pollution and how we can stop it. We then got a tour of the Fountain Creek Nature Center and were able to see lots of wildlife in their natural habitat. We ended our day by checking our bags and journaling.

Monday, March 6, Week 2
Today we left Colorado Springs and headed to Durango. We gathered at 8 a.m. at CSS, with all of us pumped for the 7-hour car ride ahead of us. We grabbed our bags along with a glazed doughnut and migrated to the bus, which was pleasantly spacious and comfortable. However, we soon got bored of sitting around on the bus. People started playing card games and socializing. After a couple of bathroom breaks at the gas station and power naps on the bus, we arrived safely at Durango thanks to Dr. Gillon. We were awed by the place we were staying in. Pool table, TV, comfortable and well-sized rooms, it had it all. Once we called dibs on the rooms we’re residing in, we decided on the teams that are going to cook for the rest of the students on Tuesday and Wednesday. We headed to Walmart to get our groceries. When got back, Dr. Gillon cooked some delicious burgers for us. Stuffed and exhausted from our long trek to Durango, we settled down and watched Rocky.
Tuesday, Week 2
Today we woke up and ate a stomachable breakfast of fruity instant oatmeal. Once we all ate and got ready, we set off for Chaco Canyon (after having to change plans from the hatchery and museum because the museum changed its hours). Dr. Moulton played classic rock and the rest of us conversed or slept. The drive took a turn for the worse when we had to drive on a 15-mile dirt road. Due to the lackluster suspension of the van and the bumpiness of the road, the 15-mile drive took about 45 minutes. We finally arrived at the visitor center for the park and ate lunch before heading inside.

Inside, we were shown the park on a map, including trails and ruins. Then we went to the first of the ruins, named Hungo Pavi. Hungo Pavi was a pretty small building compared to the other ruins we saw. From there, we went to Pueblo Bonito, the biggest group of ruins that we visited, with much taller walls than the other two. We also were allowed to walk around the inside of the ruins and we saw large circular holes in the ground where we believe the Ancestral Puebloan people stored their grains. The third and final ruins we visited were named Chetro Ketl, which was similar to Pueblo Bonito but was a little bit smaller.

Wednesday, Week 2
The most exciting thing about our Fly Fishing and Water Rights ECS today was that this was our first day of fishing on the San Juan River! The
cooking crew for today woke up at 6 a.m. and once we all finished eating breakfast, we set off for the San Juan River. We were divided into pairs and sent to either sink or swim, just like our flies. We practiced our casting techniques from last week. Although more fish were caught on the Platte River, today was a fantastic learning experience. This was also the first time in the ECS when we fished off of boats. The boats were 3-seaters; the pair of students or teachers on either side with the guides from Duranglers helping (and rowing!) from the middle. We fished until about 3:30 p.m. On our way back to the house, we stopped at Walmart for groceries. We finally arrived home, where we ate egg and chicken fried rice for dinner.

Thursday, Week 2
Our second day of fly fishing on the San Juan River started out pretty good. Once again, we woke up early, ate breakfast, and drove down to Texas Hole at Navajo Lake State Park. For the first part of the day, we caught a normal amount of fish. As the day went on, the fishing slowed down, but we all still had a really fun time. All of us learned a lot of new tips and tricks from our guides and were able to test them out on the water. We were actually able to learn a lot more when the fishing slowed down. Since the fish weren’t really active, we were able to practice some things without fear of missing out on fish. After practicing all the new tips and tricks (and once the fish started feeding again), we all started catching a lot more fish than the day before.

Our guides were all very helpful and knowledgeable. If someone wasn’t catching fish, the guides could point out exactly what they could do better. Whether it was how to properly mend or leave slack in the line, it was interesting to see the patterns of water where the guides wanted us to fish. By the end of the second day, some groups could already throw out their line where they thought the guides wanted it without direction, based on where the deeper water met with faster or slower-moving water.
Friday, Week 2
We indulged in some delectable biscuits and gravy before embarking on our third and final day of fishing on the San Juan River with our lovely guides. The fishing started off slow but once it stopped raining and the weather warmed, the number of fish quickly piled up. There was much joy and excitement throughout all of the groups on the drift boats. Almost everyone caught fish up to and in excess of 20 inches, which was quite an improvement from the start of the trip.

In order to keep up the tradition, Rowdy outfished everyone on the trip. In a large controversy, Dr. Moulton lost a hard-fighting fish in an incident with another boat. After many fish and much rain, it was, unfortunately, time to go home. Dread set in among the crew as the snow slowly settled over the road. Everyone was wondering if or when we would get home on Sunday. We got reassurance that even if it snowed feet for the next few days, our trip would only be delayed a couple of hours. We had some fresh spaghetti for dinner, and it was quite delicious. Overall it was an excellent day, but it was bittersweet as it was the last day of fishing.

Saturday, Week 2
Today, we slept in after our exhilarating week of fly fishing on the San Juan river. We arose to the aroma of sausage, bacon, and buttery scrambled eggs. After we were filled up with breakfast, we got ready and headed to the fish hatchery in Durango. Unfortunately, the office and museum
Tuesday, Week 3
Our day began at a crisp 7:30 and a trip to the Colorado Springs Utilities Conservation & Environmental Center. After a quick presentation and tour around the building, we departed to the trans mountain Twin Lakes diversion tunnel. After an arduous two-hour drive through the mountains, we arrived at the tunnel. Everyone was dispersed among the cars and we soon drove through the four-mile-long tunnel. It was quite a surreal experience being in complete and utter darkness for so long, but it was well worth the view that greeted us on the other side. The end of the tunnel gave way to an excellent view of the mountains surrounding a small cabin and frozen reservoir.

After a short stop for lunch, we departed for the Otero Pump Station, where we arrived after another ride through the tunnel. Some interesting facts about the Otero Pump Station are as follows: it has the capability to pump over 118 million gallons of water each day (this water is the largest source for both Colorado Springs and Aurora). The Otero Pump Station uses the Twin Lakes to supply its water. The pipeline itself uses a complex system of valves, turns, elevation changes, and more to move the previously mentioned millions of gallons of water daily. The valves, for example, add or remove water to prevent vacuums in the pipes (these vacuums would rupture the pipes and take weeks to repair). Repairs are performed with assistance from massive vehicles (excavators, snow plows, snowmobiles, chained trucks, and more).

at the hatchery were closed, even though we had been informed the previous day that it was going to be open. We still got to see the hatchery where the fish were being bred. We also had fun watching the fish fight over the fish food we threw into the tanks.

After the fish hatchery, we headed over to Farmington, New Mexico. There, we ate lunch and went to the Museum of Navajo Art & Culture. While we were there, we decided to stay and hear a presentation by Lyle Harvey Báhózhóní. He told us some very interesting Navajo folklore. I was engrossed by the stories and the Navajo culture fascinated me, especially the stories about the Cicada sacrificing himself so that he could prove to the bird people that his people were worthy of living in the fourth world. After the presentation, we loaded back into the van and headed home. We were famished from the long day of travel and we waited patiently for Keeton and Hudson to make our delicious burger dinner, with some of the patties marinated in Dr. Pepper.

Sunday, Week 2
Due to road conditions on Wolf Creek Pass, we took a long detour through New Mexico and returned to CSS later than expected. But we got to see Taos, the landscape around Abiquiu, and the Rio Grande Gorge on our way home.