



**Study Guide**  
**by**  
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## About the Teacher's Guide

This booklet is designed to help you incorporate **Wind River** into your curriculum. Inside, you will find background information, activities and discussion questions, and resources for additional information. The film, activities and discussion questions are interdisciplinary in nature — encompassing ecology, natural resources, law, Native American issues, sociology, history, government, American Studies, and agriculture — and are designed for students of high school age and older. Simply select the questions and activities that best suit your needs, or use them all.

**Wind River** will expose students to the issues of water rights, Native American treaty rights and the sustainable use of natural resources in the West.

The goals of the film and the activities and discussion questions presented in the teacher's guide are to:

- Introduce students to a “case study” of the fight over western water rights, and to provide them with a basic understanding of the issues and their implications
- Encourage students to make their own critical evaluation of individual, social, and governmental perspectives regarding water use issues
- Help students draw useful parallels between the issues presented in the video and water use issues in their own communities
- Provide students with critical thinking skills that can foster problem-solving actions

# WIND RIVER

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## About the Film

**Wind River** is a modern-day story of cowboys and Indians – in a battle for water rights. White farmers and ranchers on the Wind River Indian Reservation in central Wyoming are fighting to protect their long-held water rights for irrigated agriculture. The Shoshone and Northern Arapaho Tribes are fighting to save the de-watered Wind River and a part of their own heritage.

This is a classic example of the changing face of the West, as environmentalists and Indian activists use the courts in an attempt to curtail some of the traditional, but harmful, practices of white ranchers and farmers.

## Background Information

The rivers of the arid West are ruled by agriculture and irrigation, and nowhere is this truth more evident than on the Wind River Indian Reservation in northwest Wyoming. In the 1930s, the U.S. Bureau of Reclamation built hundreds of dams for the purpose of diverting water for irrigation in the West. On the Wind River Indian Reservation, the federal government promised land and water to white farmers willing to move west and irrigate the land. Non-Indian irrigation projects began popping up along the river on the Reservation, and soon the tribes no longer had control over their most prized resource, the Big Wind River.

Over the past sixty years, irrigation has ruled the Wind River on the Reservation, with devastating ecological results. Each year the river is de-watered to such an extent that the U.S. Fish and Wildlife Service is concerned that it lacks the integrity necessary to maintain trout and other native fish species. Riparian areas are left dry during irrigation season, making habitat scarce for wildlife. In addition, Diversion Dam, the largest irrigation diversion on the Wind River, dumps tons of sediment downstream during spring and summer in a process called “sluicing”. Extreme sedimentation events, on top of de-watering, have taken their toll on native fish species. The rare burbot (a freshwater cod), the sauger, the flathead chub, and the Yellowstone cutthroat trout — all of whom once found a home in the river — have been drastically reduced in numbers.

The Shoshone and Northern Arapaho Tribes have argued for years that non-Indian farmers on the Reservation are using more water than they need, and that a portion of water should remain in the river for fisheries and wildlife (this is what is called “instream flow” in western water rights). The State of Wyoming has all but ignored pleas by the tribes to make irrigators use water more efficiently. Instead, the state Water Engineer defends the use of water for irrigation, saying it is not illegal for irrigators to take more water than the law has granted them.

The rules for water use in the western United States have for decades been defined by what is called the Prior Appropriation Doctrine. The doctrine is often explained by the phrase, “First in time, First in right”. This means that the person who begins using the water first gets the first water right, the second water user gets the second water right, and so on. These water rights are “tied to the land” — if a person who has a water right on a certain parcel of land moves, then the water right stays with that parcel of land, and the next person to move onto that piece of land gets the water right that comes with that property.

With the Prior Appropriation Doctrine in place, it would seem logical that the tribes of the Wind River Reservation would get the first water rights, since they lived there long before any others. But this was not the case in the Wind River in

Wyoming. The non-Indian farmers who moved there in the early 1900s were granted the first water rights by the State of Wyoming. This was because, in the view of the state, the tribes were not “using” the water of the Wind River, because they were not diverting it for agriculture. They were using the water for drinking, cooking, fishing, and cleaning, but not specifically to grow crops. In the eyes of the government, these traditional uses of the water did not fall under the uses guaranteed under the Prior Appropriation Doctrine, so they began diverting the water for non-Indian irrigation projects along the Wind River. Soon most of the water was used entirely for non-Indians, and the tribes were left with a de-watered river with very little value.

Richard Baldes, a Shoshone tribal member and a 25-year veteran of the US Fish and Wildlife Service, has made it his lifelong struggle to protect the Wind River. He says that irrigation policies by the state and local irrigators have ruined the ecological integrity of the river, causing irreparable damage to the river and to the Indian tribes, who for years used the river as a sustainable fishery, before it was de-watered.

The controversy came to a head in the 1990s when the tribes attempted to force the State Engineer to leave a small amount of water in the river to protect fisheries. Under their own Tribal Water Code, the tribes adopted an “instream flow” water right on the river below Diversion Dam. The instream flow permit would have forced non-Indian irrigators to allow some water to remain in the river, and prevent it from drying up.

The state sued the tribes over the instream flow water right, fearing it would take water away from non-Indian irrigators upstream. In 1992, the case went before the Wyoming Supreme Court. In a landmark decision, called Big Horn III, the Court ruled that the tribes did not have the right to maintain an instream flow permit, and that they could only use their water rights -- granted by the Second Treaty of Fort Bridger of 1868 -- for agricultural and domestic purposes. The decision has devastating implications not only for the Wind River, but also for the jurisdictional sovereignty of the Wind River tribes. It grants administration of all water rights on the reservation to the State of Wyoming, and takes jurisdiction away from the tribes.

Currently, the Wyoming Supreme Court decision still stands. The non-Indian irrigators still divert all the water that they want, Diversion Dam continues to release large amounts of sediment down river, and the tribes have little in the way of a native fishery on the Wind River. The tribes and the State of Wyoming have been in negotiations for almost a decade, with no apparent results.

Richard Baldes continues the fight to return the Wind River to its former glory, but in a place where irrigation rules over all else, it is an uphill battle.

## **Learning Objectives**

After viewing this film, your students will be able to:

- explain the concepts of water rights and treaty rights.
- explain the causes of conflict over water rights on the Wind River Indian Reservation.
- identify the interested parties and describe their positions on water rights allocation.
- explain the concept of instream flow.
- explain why the Shoshone and Northern Arapaho Tribes want to use their water rights for instream flow.
- describe how diverting water for irrigation affects the Wind River.
- draw parallels between the issues presented in the video and water use issues in their own communities.
- assess other conflicts over natural resource use.

## **Key Concepts**

- After water has been diverted for agricultural use, there is no longer enough water in the Wind River to maintain a viable fishery in the summer.
- Many white farmers and ranchers believe that the value of a natural resource is defined by its use to humans – Native Americans have a fundamentally different view of natural resource use.
- Environmentalists look at the Wind River as a key element of a larger ecosystem, which is damaged when there is no instream water flow.

## Discussion Questions & Activities

### *Before the film*

**Wind River** looks at issues surrounding resource allocation. What types of conflicts arise when people compete for the use of a limited resource? Who should control the allocation of limited natural resources? On what basis should these decisions be made?

Discuss water uses in your own watershed. How do you use water in your daily life and where does that water come from? If you do not know where your water comes from, how can you find the answer? Who do you share this water with and how do they use the water? Are there industrial, agricultural and/or recreational uses of the same water source? How do these competing uses affect each other?

Hold a class discussion on different cultural views of natural resources. In what ways does water influence a culture? How does culture influence the use of water? How does the dominant American culture view natural resource use? What other cultural views exist in America and how do they differ? How can two different cultures, with conflicting beliefs and values, share a limited natural resource?

### *During the film*

#### **Issue Investigation**

Students will investigate the battle over water in the western United States. While watching the film **Wind River**, students should identify the key players in the issue, as well as their positions, beliefs, and values.

*Positions:* Where a person stands “officially” on an issue. (i.e., in support of allowing Indian water rights to be used for instream flow).

*Beliefs:* A person’s beliefs often come out in opinion statements which may be phrased as “I think”..., “I believe...”, or “in my opinion...”. Beliefs may be stated much more subtly, though.

Students need to listen carefully to find each person’s beliefs. Belief statements (quotes from each player in the issue) should be used as supporting evidence.

Values: can be inferred from a person’s position and belief statements regarding an issue and give insight into why a person feels the way they do or supports a certain position. Values may fall into the following categories:

<u>Value</u>	<u>Definition</u>
Ecological	pertaining to the maintenance of natural biological systems.
Educational	concerning the accumulation, use, and communication of knowledge; learning about something.
Egocentric	pertaining to a focus on self-centered needs and fulfillments; a “me” value.
Ethical/Moral	pertaining to present and future human responsibilities; rights and wrongs, and standards of conduct.
Legal	relating to national, state, or local laws; law enforcement; lawsuits.
Political	the activities, functions, and policies of governments and its agents.
Religious	the use of belief systems based on faith or dogma.
Social	pertaining to sharing human empathy, feelings, and status; a “togetherness” value.

After viewing **Wind River** and using this investigation technique, students should be able to answer the following discussion questions in small groups: What is the main issue presented in **Wind River**? Who are the key players and what are their positions, beliefs and values regarding this issue? What is your position on this issue?

### ***After the film***

#### **Role Playing**

After viewing **Wind River** and completing the preceding issue investigation activity, the class should again break into groups of

4-6 students. Assign each student the role of one of the key players involved in the issue of western water rights as identified in the issue investigation activity (i.e., tribal representative, rancher, farmer, environmentalist, fisheries biologist, etc.). Each student should identify their character's position and beliefs on the issue to the rest of the group. Working together, each group must confront the problem of water rights and water usage: if everyone who holds a water right uses their allotted amount of water, the river will be completely dry by midsummer. Can each group reach consensus on how to manage the limited water resource available to them. Is anyone left out? Do conservation measures need to be implemented or laws changed?

Have your students interpret the filmmaker's point of view. Did the film fairly present all sides of the issue? If not, which sides were not fairly represented?

In the film, Bill Brown defines the beneficial use of water as agriculture, livestock and domestic uses. How would you define beneficial use? Do you feel these are the only beneficial uses of water? Create a list of other water uses that you feel are beneficial. Who or what do they benefit? Compare your definition of beneficial use and your list of uses with your classmates'. How do their ideas differ from yours? What similarities are there?

According to Donald Worster, the Bureau of Reclamation's motto is "Total control for greater wealth". In your opinion, is this an appropriate mission for a government agency? Can a natural system such as a river ever be totally controlled? How do you think "wealth" is defined in this statement? How should it be defined? Who benefits from this control/wealth and who is left out?

### **In My Backyard**

Have the students investigate a local water use or water rights issue happening in their community. Students should be able to identify the issue, the key players and their positions and values. The students should first form an issue investigation plan. How will they identify the issue and key players involved? How will they investigate each player's position and values? They may

wish to utilize the Internet, library or newspapers, conduct personal interviews with community members, or any combination of creative research techniques. If a serious conflict exists, what solutions are being discussed? Can your students think of new solutions? Encourage the students to present their findings to local, state or federal authorities.

## Glossary of Terms

**Best Management Practices** — Methods adopted by resource users designed to mitigate harm to the environment that might result from their activities.

**Biodiversity** — A measure of the distinct characteristics, qualities, or elements of plant and animal life in a defined area: a measure of biological differences.

**Conservation** — The use of water-saving methods to reduce the amount of water needed for homes, lawns, farming, and industry, thus increasing water supplies for optimum long-term economic and social benefits.

**Consumptive Use** — The use of a resource that reduces the supply (e.g., removing water from a source such as a river or lake without returning an equal amount). Examples are the intake of water by plants, humans, and other animals and the incorporation of water into the products of industrial or food processing.

**Cubic feet per second (cfs)/cubic meters per second (cms)** — Units typically used in measuring stream flow that express rate of discharge. The measurement is equal to the discharge in a stream cross section one foot wide and one foot deep (or one meter wide and one meter deep), flowing with an average velocity of one foot (or meter) per second; 1 cfs = 44.8 gallons per minute (gpm); 1 cms = 1,000 liters per second.

**Culture** — The collective body of understanding, belief, and behavior among a given group of people; depends on the human capacity for learning and transmitting knowledge from one generation to another.

**Depletion** — The loss of water from surface water reservoirs or ground water aquifers at a rate greater than that of recharge.

**Direct water use** — Uses of water that are apparent (e.g., washing, bathing, cooking).

**Discharge** — An outflow of water from a stream, pipe, ground water system, or watershed.

**Downstream** — In the direction of a stream's current. In relation to water rights, refers to water uses or locations that are effected by upstream uses or locations.

**Ground water** — Water found in spaces between soil particles underground (located in the zone of saturation)

**Ground water system** — All the components of subsurface materials that relate to water, including aquifers (confined and unconfined), zones of saturation and water tables.

**Headwaters** — The source of a stream.

**Indirect water use** — Uses of water that are not immediately apparent to the consumer. For example, a person indirectly uses water when driving a car because water was used in the production process of steel and other parts of the vehicle.

**Instream flow** — The natural flow of water in a stream. In legal terms, instream flow refers to the minimum amount of water required in a stream to maintain the existing aquatic resources, associated wildlife and riparian habitat.

**Instream use** — Uses of water within a stream's channel (e.g., by fish and other aquatic life, or for recreation, navigation, and hydroelectric power production).

**Irrigation** — The controlled application of water to cropland, hay fields, and/or pastures to supplement that supplied by nature.

**Nonconsumptive use** — Instream use of water that does not reduce the supply; or, removing water and returning it to the source without reducing the supply (e.g., navigation and fisheries).

**Sovereignty** — Independent power or authority.

**Treaty** — A formal agreement reached by negotiation between two or more nations.

**Tributary** — A stream that contributes its water to another stream or body of water.

**Upstream** — Toward the source or upper part of a stream; against the current. In relation to water rights, refers to water uses or locations that affect water quality or quantity of downstream water uses or locations.

**Water quality** — The chemical, physical, and biological characteristics of water with respect to its suitability for a particular use.

**Water right** — A legal right to use a specified amount of water for beneficial purposes.

## **Additional Resources**

### ***Books***

Anderson, Terry. **Water Crisis: Ending the Policy Drought.** John Hopkins Press, 1983.

Burton, Lloyd. **American Indian Water Rights and the Limits of Law.** University Press of Kansas, 1991.

Dillon, John. **Water Rights and Ecology on the Wind River Indian Reservation: The Collision of Histories, A Tradition of Neglect and Suggestions for Resolution.** Thesis, University of Montana, 1998.

El-Ashry, Mohamed and Diana Gibbons. **Troubled Waters: New Policy for Managing Water in the American West.** World Resource Institute, 1986.

Fradkin, Philip. **A River No More: The Colorado River and the West.** University of Arizona Press, 1984.

Folk-Williams, John. **Water in the West: What Indian Water Means to the West.** Western Network, 1982.

Foreman, Richard. **Indian Water Rights: A Public Policy and Administrative Mess.** The Interstate Printers and Publishers Inc., 1981.

Gillilan, David and Thomas Brown. **Instream Flow Protection: Seeking a Balance in Western Water Use.** Island Press, 1997.

Goldfarb, William. **Water Law.** Butterworth Publishers, 1984.

High Country News, ed. **Water in the West: A High Country News Reader.** Oregon State University Press, 1951.

High Country News, ed. **Western Water Made Simple.** Island Press, 1987.

Powledge, Fred. **Water: The Nature, Uses and Future of Our Most Precious and Abused Resource.** Farrar, Straus & Giroux, 1983.

Pringle, Laurence. **Water: The Next Great Resource Battle.** MacMillan, 1982.

Reisner, Marc. **Cadillac Desert: The American West and Its Disappearing Water.** Penguin Books, 1987.

Stegner, Wallace. **Beyond the One-Hundredth Meridian: John Wesley Powell and the Second Opening of the West.** University of Nebraska Press, 1982.

### *Periodicals*

**High Country News**  
P.O. Box 1090  
Paonia, CO 81428

**U.S. Water News**  
230 Main Street  
Halstead, KS 67056

## ***Law Reviews***

Blumm, Michael C. "Unconventional Waters: The Quiet Revolution in Federal and Tribal Minimum Streamflows," 19 Ecology Law Quarterly 445 (1992).

Brienza, Susan D. "Wet Water vs. Paper Rights: Indian and Non-Indian Negotiated Settlements and Their Effects," 11 Stanford Environmental Law Journal 151 (1992).

Feldman, Stephen. "Supreme Court's New Sovereign Immunity Doctrine," 18 Harvard Environmental Law Review (1994).

Kirk, Peggy. Casenotes "Cowboys, Indians and Reserved Water Rights: May a State Court Limit How Indian Tribes Use Their Water?" 28 Land and Water Law Review 467 (1993).

Membrino, Joseph. "Indian Reserved Water Rights, Federalism and the Trust Responsibility," 27 Land and Water Law Review 1.

Taylor, Jeff and Duane Birdbear. "State Jurisdiction to Adjudicate Indian Reserved Water Rights" 18 Natural Resources Journal 221 (1978).

Rusinek, Walter. "A Preview of Coming Attractions? Wyoming v. United States and the Reserved Rights Doctrine" 17 Ecology Law Quarterly 335 (1990).

Shay, Monique, Comment, "Promises of a Viable Homeland, Reality of Selective Reclamation: A Study of the Relationship between the Winters Doctrine and Federal Water Development in the Western United States" 19 Ecology Law Quarterly 547 (1992).

Squillace, Mark. "A Critical Look at Wyoming Water Law" 24 Land and Water Law Review 325 (1989).

Wilkinson, Charles. "Aldo Leopold and Western Water Law: Thinking Perpendicular to the Prior Appropriation Doctrine" 24 Land and Water Law review 1 (1989).

*Winters v. United States*, 207 U.S. 564 (1908).

## ***Web Sites***

High Country News  
<http://www.hcn.org/>

Chehalis River Council  
<http://www.crcwater.org/>

National Water Rights Digest  
<http://www.ridenbaugh.com/nwrdr/index.htm>

U.S. Bureau of Reclamation  
<http://www.usbr.gov/uc/>

U.S. Fish and Wildlife Service  
<http://www.fws.gov/>

U.S. Water News  
<http://www.uswaternews.com/homepage.html>

Water Resource Data System  
University of Wyoming  
“Wyoming Water Law: A Summary” by James Jacobs, Gordon Fassett and Donald Brosz.  
<http://library.wrds.uwyo.edu/wrp/90-17/90-17.html>

Wyoming Department of Agriculture  
<http://wyagric.state.wy.us/>

Wyoming Department of Environmental Quality  
<http://deq.state.wy.us/>

Wyoming Game and Fish Department  
<http://gf.state.wy.us/>

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