



# Public Lands Curriculum

Examining the past  
to build a more  
equitable future



## **The Wilderness Society recognizes Native American and Indigenous peoples as the longest serving stewards of the land.**

We respect their inherent sovereignty and self-determination and honor treaty rights, including reserved rights that exist off their reservations.

We acknowledge the historic and ongoing injustices perpetrated against Indigenous peoples and are committed to being more conscientious and inclusive and working with Indigenous peoples to advance the establishment of trust and respect in our relationships.

We seek the guidance of Native American and Indigenous peoples to effectively advocate for the protection of culturally significant lands and the preservation of language and culture.

We strive to support actions that respect the priorities, traditional knowledge, interests and concerns of Native American and Indigenous peoples to ensure a more just and equitable future.



## **Educators, outdoor program leaders, and supporters of public lands:**

We are thrilled to share a curriculum on public lands and waters in the United States. We hope it will be a useful tool for building connections between people and America's natural landscapes.

Public lands are an important part of United States history, and they play a significant role in American life. Each year, millions of people visit public lands to relax, engage in ceremonial activities, recreate, connect with nature, and escape the stresses of the working world. These visits are an indispensable part of the American experience.

Because of their role in American life, The Wilderness Society believes it is important for everyone to have an understanding of public lands. To be accurate and complete, our understanding must include a recognition that the network of public lands we have today was Indigenous land long before the United States became a nation. In addition, when we talk about decisions made to protect public lands, we must place those decisions in the broader historical and social context in which they were made, and acknowledge that the story of public lands includes some of the most controversial and troubling aspects of American history.

This belief has driven the development of the Public Lands Curriculum. A fuller reckoning with the history of public lands also compels us to act now to build a more equitable conservation community and public lands system. We hope the curriculum will generate dialogue among conservationists, recreationists and others with an interest in public lands. We also hope the curriculum will enable outdoor educators to increase understanding amongst students and visitors and inspire them to care for America's natural landscapes.

Jamie Williams

President | The Wilderness Society

## Acknowledgements

This curriculum is the product of a collaboration between many people.

The Wilderness Society appreciates the Avarna Group's coauthorship of these materials and their tremendous work advancing equity in the environmental community. We also appreciate the valuable input of Daisy Purdy, Honor Keeler, Dr. Rae Gould and Yufna Soldier Wolf, who helped us include the perspectives of Indigenous peoples throughout this curriculum. Other contributors include Megan Luce and Jasmin Estrada of the Appalachian Mountain Club, Sarah Johnson of Wild Rose Education, Taishya Adams of Outdoor Afro, Matt Baker-White, Jill Pelto, Jade Leyva, Xavier Cortada, and Dr. Kathleen Hynes. Many former and current staff and interns of The Wilderness Society also contributed to the development of this curriculum. Contributing and consulting staff members include Greg Aplet, Michael Casaus, Barb Cestero, Meda Dewitt, Ben Greuel, Karlin Itchoak, Keeley Meehan, Scott Miller, Danielle Stickman, Julia Stuble, Lydia Weiss, and Tim Woody. Our former colleagues Andrea Alday, Alexa Sutton Lawrence and Hannah Malvin also contributed to this resource. The following interns and fellows assisted with content review and creation: Melissa Diamond, Andrew Hartnett, Julia Marsh, Sarah McIntosh, and Keegan Shea.

The Wilderness Society is committed to the work of making public lands more inclusive and welcoming to all. We know that this work is ongoing in the same way that this curriculum is a work in progress and a living document. We hope this curriculum will help move you forward on your equity journey in the way that it has moved us forward on ours.

We are interested in learning about the efforts of others who are also undertaking the work of creating a more inclusive conservation narrative. We invite you to submit your feedback and comments to us so that we can collaborate with you to improve the curriculum for future use. Please send your comments to [curriculumfeedback@twc.org](mailto:curriculumfeedback@twc.org).

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# How to Use This Curriculum

This resource is intended for use with high-school aged participants and above. Facilitating this information with younger audiences will require significant adaptation.

## The modules are divided into three sections:

**Background Reading:** The background reading will prepare you to discuss and teach the information in each module. The background reading can also be used to create new activities if desired.

**Instructional Material:** The instructional materials consist of lesson plans that can be used in their current form or adapted to meet the needs of the program or audience. Suggestions for adaptation can be found within the lesson plans.

**Additional Materials:** In some modules, the curriculum contains additional materials that supplement the background reading and lesson plans. These materials are ready to print and/or laminate for use in classrooms or teaching in the field.

The modules can be used however is appropriate for you and your participants - as stand-alone material or all together to create a complete set of lessons. Ideally, your participants would read all six modules and you would facilitate all of the activities. However, the modules were created to stand alone if necessary.

## When facilitating the activities, keep the following tips in mind:

**“Yes and...”:** This tactic is used to affirm everyone’s thoughts and experiences and to hold and understand two seemingly conflicting or paradoxical pieces of information as part of a greater narrative. Rather than saying, “yes, but...”—which puts you into opposition with your participants—say, “yes, and...” to signal that you have heard them and would like to add another thought, perspective, or idea to the conversation.

### Ask open-ended questions and

**WHALE:** While conveying the curriculum’s specific messaging is important, wait for the participants to come to realizations on their own.

The best way to do this is to ask open-ended questions or have participants reflect on questions in small groups or pairs. After you’ve asked an open-ended question, make sure to give the group time to answer.

You can use the acronym **WHALE** to make sure that the group has time and space to answer your question. If you’re having trouble getting responses to large group questions, shift to partner sharing.

**Wait**  
**Hesitate**  
**Ask (again)**  
**Listen**  
**Explain**

**Scuba diving by choice:** Expect participants to only dive as deeply as they feel comfortable. For example, some of the social history in Module 2 can be difficult to learn about, and may cause difficulty or discomfort for some participants. It’s unreasonable to expect that everyone will be willing to share all of their experiences, especially if you have limited time to teach. However, if participants do share a deep experience, make note of it, thank them, and give space for them to feel heard.

### Checking assumptions and bias:

When engaging with this curriculum, it is important that both the facilitator and students understand that assumptions about the way that any individual relates to nature based on their race or ethnicity are harmful, and perpetuate stereotypes. While we must consider the ways that historical and current injustices impact the collective relationship of different communities to outdoor spaces, we must also consider that each person, regardless of their race, has a unique relationship to nature and the outdoors. Understanding historical trauma requires us to understand that we cannot assume how it shows up for different people. It is essential that we listen to the stories shared by individuals in connection to their relationship with nature, and

understand that the way one person experiences the outdoors does not necessarily mean that everyone who shares their racial or ethnic identity feels the exact same way, though they may share common experiences.

## However you choose to use this curriculum, we hope that you and your participants will take away the following important points:

1. Public lands are for all people.
2. The history of public lands in the United States is long and complicated. It should be considered in the context of social and political movements to fully understand how—and for whom—public lands were protected, and who was negatively affected by this process.
3. By acknowledging and respecting past and current experiences and contributions of Black, Indigenous, and People of Color, we can create more inclusive and welcoming experiences on public lands and in the conservation movement.
4. Public lands offer important solutions to combat the climate change and biodiversity crisis.
5. We all can engage in the fight to protect and access the benefits of public lands.

## Notes about language and identity:

Language is important, and wherever possible in this curriculum, we have prioritized naming the identities of individuals, communities, and tribes as they wish to be named. However, in historical references or instances where we refer to large groups of people, we have developed practices and guidelines for consistency.

The terms “America” and “American” are widely used to refer to South, Central, and North America and the people living in all these regions. However, throughout this curriculum, the term “American(s)” is used to refer to the people who were and are still living in what is the United States today. This includes people who settled in the United States freely and those who were forcibly brought to the U.S. through enslavement and relocation. Additionally,

in this curriculum the term “American(s)” does not refer to a person’s citizenship or immigration status. This term is also used to refer to land that is a part of the modern day United States (i.e., the American West).

In this curriculum, the term “African American” is used to refer to those who were enslaved Africans and their descendants. We use the term “African American” in a more historical context, generally referring to people and

communities before the 20th century. This timeframe roughly corresponds to the start of the “contemporary time period”.

In this curriculum, the terms “Black person/people”, “Black American”, and “Black community(ies)” are used in a contemporary context and refers broadly to those who identify as descendants of enslaved Africans, people from Africa, as well as other racial identities and cultures that identify as Black (i.e., Afro-Caribbean or Afro-Latino).

## Land Acknowledgements

A land acknowledgement is a formal statement that seeks to recognize the unique and enduring relationship that exists between Indigenous Peoples and place. Although they have recently become more commonplace, land acknowledgments are not a new practice. They have been conducted for centuries by many Indigenous communities.

Opening an event, meeting, class, or any gathering with a land acknowledgement provides an opportunity to:

- Offer recognition and respect and begin to repair relationships with Indigenous Peoples and with the land.
- Admit ignorance, support larger truth-telling efforts, and create a broader public awareness of the history that has led to this moment.
- Counter the “doctrine of discovery” and value the experiences and narratives of the people who were here before colonization.
- Remind people that colonization is ongoing and has long-lasting and negative consequences for Indigenous Peoples of the United States and beyond.
- Learn from Indigenous protocols, entering spaces with reverence and respect.
- Recommend ongoing action and relationships to support Indigenous-led initiatives on public lands.

Whenever you are addressing a group, we encourage you to consider beginning your gathering with a land acknowledgment. Begin by contacting the Indigenous Peoples of your location and ask them whether it would be appropriate and desirable for you to deliver a land acknowledgment at your gathering. If so, invite them to participate in the land acknowledgment, offering an appropriate gift or compensation in return.

Before formulating your land acknowledgement, we recommend you take the following steps to ensure that your acknowledgement is respectful and impactful:

1. Land acknowledgments should be specific to the location of your gathering. Take the time to learn about the Indigenous Peoples of the area and the treaties that govern and affect relations with them.
2. If you aren’t able to engage with Indigenous people in person, consult the links provided (and others you may discover) to identify the peoples who historically inhabited the area and the non-Anglicized names they gave those places. Include multiple peoples in the acknowledgement if necessary. Do your best to identify all of the Indigenous communities that regarded the area as a homeland, but understand this can sometimes be difficult and in some instances is disputed.

3. Be cautious about referring to the area as the “traditional land” of Indigenous Peoples. The concept of traditional land and land ownership is a colonial concept rooted in boundary development. These are often inconsistent with relationships to land in some Indigenous cultures. “Ancestral lands” is generally a better term.
4. Your land acknowledgement will be more impactful if it goes beyond recognizing the historical and contemporary presence of Indigenous Peoples. Consider including a statement that our ongoing colonial presence on Indigenous lands compels us to take action now to counteract the effects of colonization. If possible, include a Reconciliation Action Plan that identifies specific actions and commitments you make to counteract those colonizing effects.

We provide a framework for a simple land acknowledgement below. However, before developing a land acknowledgement based on a pre-written script, consider the abilities of the group you will be addressing. In some cases, it may be more effective to provide a framework for discussion and let participants write the acknowledgment themselves.

Again, we emphasize that, whenever possible, a land acknowledgement should be drafted collaboratively with people indigenous to the place you’re in.

**A basic land acknowledgment could include the following statements:**

- “We are on the ancestral land of the \_\_\_\_\_ (People).”
- “I respectfully acknowledge the \_\_\_\_\_ (People) of \_\_\_\_\_ (ancestral place name), who have been here since time immemorial.”
- “We acknowledge that this is the land of the \_\_\_\_\_ (People) and perhaps others of which we are ignorant. Indigenous Peoples have lived, worked and traveled here since time immemorial. We are just visitors here. We respect their communities, past, present and future, and recognize them as the original peoples of this land.
- We commit ourselves to \_\_\_\_\_ (actions) to honor the people who were here before us and to reduce the adverse effects of colonization of these lands.”

After the land acknowledgement, pause and invite any Indigenous people in the room to share. Do so even when there are no known Indigenous people in attendance. When verbally acknowledging land, this seemingly awkward pause can give more meaning to what might otherwise come across as a “check list” item, or might seem like co-option if there is someone present who has ancestral ties to place or who is involved in indigenous rights initiatives.

## **Finding Original Names of Tribes and Places**

Only Tribal leaders are true authorities on their lands and history, but there are many sources of original Tribal names that can be helpful in these conversations. We recommend the website [native-land.ca](http://native-land.ca). This Indigenous-led non-profit website features an interactive map that is

being constantly improved by the community. More resources can be found at the website [whose.land](http://whose.land).

Original place names are also important. Wherever possible, original names used by peoples indigenous to a place should be given alongside Euro-American names. The best source we have found for original place names is [tribalnationsmaps.com](http://tribalnationsmaps.com). A map with tribes and place names can be downloaded for a modest fee. We encourage you to use maps like these to facilitate a discussion about place names.

# What do we mean by public lands?

### Main Takeaways

**Federal public lands are for everyone.**

**Federal public lands are managed under many different departments within the federal government.**

**Lands can be under different designations and managed according to different goals and objectives.**

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## What are “public lands”?

Public lands and waters are areas of land and water that are open for public use and are managed by government agencies with guidance and support from people residing in the United States. Public lands are different from private lands, which are owned by an individual, a business or another type of non-governmental organization and are generally not open for public use.

Most public lands are managed by the federal government, by a state or local government, or by a sovereign tribal nation. Other lands open for public use include conservation easements on private land that are often managed by nonprofit land trusts that provide public access. Some private lands are also accessible via special hunting and fishing permits.

In formulating our working definition of public lands, we recognize that the term has different meanings to different people. As acknowledged at the beginning of this curriculum, Indigenous peoples are the longest serving stewards of the land. Since the arrival of Europeans, Indigenous peoples have faced and continue to face significant historical and ongoing injustices. As such, many Indigenous peoples think about public lands very differently.

From some Indigenous people’s perspective, public lands are stolen lands that were taken from Indigenous people and later transformed into the public parks, forests and refuges we know today. For Indigenous peoples, both public and private lands across the United States were and continue to be ancestral homelands, migration routes, ceremonial grounds, and hunting and harvesting places of great significance. Because of this, Indigenous

communities remain deeply connected to and reliant on these places even though their ancestors may have been forcibly removed from them.

To best protect these lands for future generations and prevent the deep racial injustices of the past from being repeated, the entire history of public lands must be acknowledged. No portion of this history should be forgotten or overlooked. In the later modules of this curriculum, we provide a more detailed review of public lands history and provide pathways for engagement with a fuller story of public lands. We offer this as a step forward, though we recognize that there are still gaps in our knowledge and we have not yet captured the complete story.

While we strive to deepen our knowledge, we should remember that people think about public lands in different ways and value public lands for different reasons. In order to fully engage people as advocates, activists and leaders in the public lands movement, we must embrace and respect all these viewpoints. Without that recognition and respect, the promise of public lands can never be fully realized.

## What are “Federal public lands”?

This curriculum will focus primarily on federal public lands and waters. Federal public lands and waters are areas of public land and water that are managed by one of eight federal land management agencies. These federal government agencies are tasked with managing these lands and waters in trust for all people. It is important to note that not all federally managed lands are public. For example, public access is tightly restricted on military bases. This curriculum will focus on the more than 640 million acres of federal parks, forests, preserves, and historic sites that are open to the public.

## Who manages federal public lands?

Federal public lands are primarily managed by agencies spread across four executive departments of the federal government: the Department of the Interior, the Department of Agriculture, the Department of Commerce, and the Department of Defense. The agencies and their departments are listed below:

### **MOST FEDERAL LANDS ARE MANAGED BY THESE FOUR AGENCIES:**

#### **National Park Service (NPS) [Dept. of the Interior]**

MISSION: To preserve unimpaired the natural and cultural resources and values of the National Park System for the enjoyment, education, and inspiration of this and future generations.

#### **Forest Service (USFS) [Dept. of Agriculture]**

MISSION: To sustain the health, diversity, and productivity of the nation's forests and grasslands to meet the needs of present and future generations.

#### **Fish and Wildlife Service (USFWS) [Dept. of the Interior]**

MISSION: To work with others to conserve, protect and enhance fish, wildlife and plants and their habitats for the continuing benefit of the American people.

#### **Bureau of Land Management (BLM) [Dept. of the Interior]**

MISSION: To sustain the health, diversity, and productivity of America's public lands for the use and enjoyment of present and future generations.

### **THESE AGENCIES ALSO MANAGE FEDERAL LAND:**

#### **Bureau of Indian Affairs (BIA) [Dept. of the Interior]**

MISSION: To enhance the quality of life, to promote economic opportunity, and to carry out the responsibility to protect and improve the trust assets of American Indians, Indian tribes, and Alaska Natives.

#### **Bureau of Reclamation (BoR) [Dept. of the Interior]**

MISSION: To manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

#### **National Oceanic and Atmospheric Administration (NOAA) [Dept. of Commerce]**

MISSION: To conserve and manage coastal and marine ecosystems and resources.

#### **Army Corps of Engineers (ACoE) [Dept. of Defense]**

MISSION: To deliver vital public and military engineering services; partnering in peace and war to strengthen our Nation's security, energize the economy and reduce risks from disasters.

## How are public lands managed?

Some lands have special designations that protect them for recreation and conservation. Others are preserved for wildlife and the intrinsic value of the ecosystem. Others are managed for more intensive commercial uses such as mining, logging, grazing, and energy development. Still others are preserved for their cultural significance.

Different designations and agencies have different management mandates, which determine the specific approaches to administering and regulating public lands.

## Land designations:

**National Parks:** managed by NPS to preserve the natural and cultural resources of an area and to provide for the enjoyment of the area and its resources for future generations.

**National Forests and Grasslands:** managed by USFS to provide for multiple uses and sustained yield of products and services, including timber, recreation, range, watersheds, and fish and wildlife.

**National Wildlife Refuges:** managed by USFWS for the conservation, management, and restoration of fish, wildlife, and plant resources and their habitats. Wildlife-dependent recreation in refuges is facilitated where compatible.

**National Conservation Lands:** managed by BLM and designated to conserve, protect, enhance, and manage public lands for the benefit and enjoyment of present and future generations.

**National Historic Sites and Parks:** managed by NPS to recognize an area of national historic significance.

**National Marine Sanctuaries:** managed by NOAA for the nation's system of marine protected areas, to conserve, protect, and enhance their biodiversity, ecological integrity, and cultural legacy.

**National Monuments:** managed by NPS, USFWS, BLM, and/or USFS (in some cases, may be managed jointly). Designated by Congress or the President to protect objects or areas of natural, historic, or scientific interest.

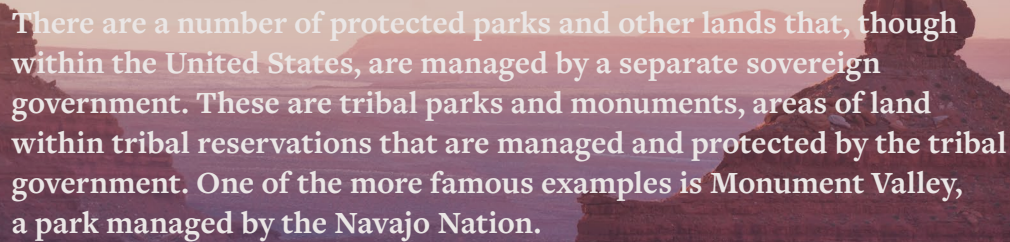
**National Recreation Areas:** managed by NPS, BLM, or USFS for conservation and recreation purposes; designated for a specific purpose and may have other values that contribute to public enjoyment.

**National Scenic and Historic Trails:** managed by BLM, NPS, and USFS as part of the National Trails System; National Historic Trails trace the routes of historically significant events, while National Scenic Trails are longer trails managed for recreation that pass through especially scenic and significant areas.

**Wild and Scenic Rivers:** managed by NPS, USFWS, BLM, or USFS to preserve outstanding natural, cultural, and recreational values; protected in a free-flowing condition for the enjoyment of present and future generations.

**Wilderness:** managed by NPS, USFWS, BLM, or USFS based on the lack of noticeable human impact, outstanding recreation opportunities, and other historic, ecological, scientific, and educational value of the land. Wilderness is designated by Congress and limits commercial activity, motorized equipment, and mechanized travel or tools, making it the most protective designation.

**Wilderness Study Areas:** land set aside for wilderness designation; managed to ensure the land is unimpaired for preservation until Congress designates it as wilderness or releases the land for other uses.



There are a number of protected parks and other lands that, though within the United States, are managed by a separate sovereign government. These are tribal parks and monuments, areas of land within tribal reservations that are managed and protected by the tribal government. One of the more famous examples is Monument Valley, a park managed by the Navajo Nation.

## What can you do on federal public lands?

The status and management designation of a particular area of federal public lands or waters determines the kinds of activities that are permissible in those areas. Some activities are generally permissible on all federal public lands, including designated Wilderness. However, they may be subject to limitations imposed by land management agencies in specific locations, during specific times of year, and during ceremonial use by Indigenous peoples.

Other activities are only permissible in areas outside designated Wilderness. Mining, logging, road building and energy development are generally only allowed in non-Wilderness areas of the National Forests and Bureau of Land Management lands, although some exceptions exist. In general:

- **Hiking, fishing, ceremony and prayer, hunting, rock climbing, wildlife viewing, photography, horseback riding, kayaking, canoeing, and rafting** are generally allowed on all federal public lands and waters, including Wilderness. As noted above, these activities may be limited in specific locations and at specific times. Livestock grazing can occur on all federal public lands, including Wilderness, subject to location-specific limitations.
- All activities allowed in Wilderness, plus **mountain biking, off-road vehicles, RVs, motor boats, and scenic driving** are generally allowed on federal public lands outside designated Wilderness, subject to location-specific limitations determined by the managing agencies. Motorized and mechanized travel (including mountain biking) are prohibited in designated Wilderness.
- **Construction and road building, mining, logging, and energy development** also occur on public lands. However, they are generally prohibited in areas designated as Wilderness.

### Generally allowed on all federal public lands and waters, including Wilderness:

Hiking  
Fishing  
Ceremony and prayer  
Hunting  
Rock climbing  
Wildlife viewing  
Photography  
Horseback riding  
Kayaking  
Canoeing  
Rafting  
Livestock grazing

### Generally allowed on federal public lands outside designated Wilderness:

All Wilderness activities  
  
+  
  
Mountain biking  
Off-road vehicles  
RVs  
Motor boats  
Scenic driving

### Generally limited to non-Wilderness on National Forests and BLM lands:

Construction  
Road building  
Mining  
Logging  
Energy Development

In addition to these general rules, Congress sometimes provides exceptions to these rules to allow non-conforming uses when designating a specific area as Wilderness. For example, a limited quantity of motorboats are allowed in the Boundary Waters Canoe Area Wilderness, and aircraft are allowed in certain Wilderness areas in the west. Always check local rules and respect closures when visiting an area.

## Module

# 1

## Lesson

# 1

# Personal Connection to Public Lands

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## Lesson at a Glance

### Gallery Walk and Pair Share

**(15 min):** Participants will discuss personal connections to the outdoors by viewing and discussing visuals of outdoor places and public lands.

### Brainstorm and Discussion (20 min)

Participants will brainstorm ideas that come to mind with the words “public lands”, review the definition of public lands, and discuss complicated aspects of public lands management and connection to land.

### Conclusion (5 min):

Material review and questions

## Learner Outcomes

### Participants will:

- Discuss the role of public lands and the outdoors in childhood and adult experiences.
- Have a basic understanding of the term “public lands” and the complicated nature of public lands in the United States.

## Getting Ready

**Time:** 40 minutes

**Materials:** Outdoor Spaces cards, butcher paper and pencil/markers

**Preparation:** Material collection, place public lands cards around instructional space

**Location:** Indoor or outdoor with room to sit in a circle and move around

**Objective:** To explore personal connections to public lands and develop a basic understanding of the definition of public lands.

## Gallery Walk and Pair Share (15 min)

1. Distribute public lands visuals around the instructional space, with enough room for participants to gather in groups. Ensure that the images represent a wide variety of ways that people can connect with the outdoors, including urban and rural scenes and a variety of types of people doing different things.

Ask the group to think quietly for a minute what role the outdoors played in their childhood. Give the group 2 minutes to locate a visual that best describes their childhood experiences of being outside. After individual reflections, ask the small groups to discuss their choice with participants that chose the same visual or as a whole group, depending on group size.

2. Ask the group to move to a visual that best describes their connection to the outdoors in the present and allow time for discussion.

3. Pose the following questions to the group or pair up to discuss:

*Was your choice of visual different from your childhood to now?*

*How did your initial exposure to the outdoors affect how you view or experience the outdoors now?*

*Was there a moment, event, or place that changed your perspective on being outdoors, for better or worse?*

*What kinds of feelings come up when you think about your connection to the outdoors?* Ask participants to share as they feel comfortable. Note that we all have different relationships to the outdoors and to land, rooted in negative and positive feelings based on our experiences and the experiences collectively of the groups that we identify with.

*Has an outdoor space ever felt like home? A beach, tree fort, bench in a city park, waterfall or overlook, etc.*

*Have you ever felt so connected to a place that it felt like ‘yours’?*

*What made it special?*

4. Ask the group to consider that if your connection to the outdoors was forged in your backyard, farm or city park, or on federal public lands.

*So what are ‘public lands’?*

## Public Lands Brainstorm (20 min)

1. Create small groups of 3-5 people and pass out butcher paper and markers to each group.
2. Pose the question to the group, “What are public lands?” Explain that we will be doing a group brainstorm, and their task is to think of words, images, people, places, and ideas that come to mind for “public lands.” There is no correct answer, and ideas may be written as words, phrases, or doodles. Encourage participants to open their minds up and be creative. Allow 5 minutes.
3. Ask each group to post their brainstorm in a central location and allow the group to silently review each paper. After 2 minutes, pose the following questions:

*Are there similarities?*

*Differences?*

Remind participants that we all have a different relationship to public lands so these brainstorm visuals may look very different from group to group.

4. Post and review the following definition of public lands and waters: **Public lands and waters are areas of land and water that are open for public use and are managed by government agencies with guidance and support from people residing in the United States.** Offer the following concepts for discussion:

- a. Lands considered “public lands” are the current and ancestral homelands, migration routes, ceremonial grounds, hunting and harvesting places for Indigenous peoples who were forcibly removed historically and currently. From some Indigenous people’s perspective, public lands are stolen lands that were taken from Indigenous people and later transformed into the public parks, forests and refuges we know today.

*Why is it important to consider that different people have different relationships to public lands? What does that mean as people offer “guidance and support” for public lands management?*

- b. Protection and management of public lands means that land is managed for use by different stakeholders- from ceremony and prayer, to recreation, to resource extraction and energy development.

*What does this mean for the nature of public lands management? What happens when two (or more) stakeholders have competing interests in public land use?*

## Conclusion (5 min)

1. Go around the group and ask each person to share a word or phrase that reflects what they learned in this lesson. Review that relationships to the outdoors and to public lands are complicated- each person connects to land in different ways and each way is valid and extremely personal. Just like people connect to land in a myriad of ways, public lands are managed in many ways. Public lands are an amazing, complicated resource that we all share.
2. Time for questions.

### Adapt the Lesson

Create public lands visuals that reflect the green spaces in and around the instructional location.

Consider adding in a group contract discussion to promote respect and emotional safety within the group, especially around the discussion of negative experiences in the outdoors.





















Outdoor Spaces Cards



Module 1 | Lesson 1 Materials









## Module

# 1

## Lesson

# 2

# Management and Uses of Public Lands

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## Lesson at a Glance

### Rapid Fire Brainstorm (5 min):

Participants will collectively create a list of the different types of public lands.

### Each One Teach One Activity (30 min):

Participants will teach about the map of public lands, federal land designations, and activities on different types of public lands.

**Conclusion (5 min):** Round robin or pair share. Questions.

## Learner Outcomes

### Participants will:

- Explore maps of federal public lands.
- Learn about the different agencies within the federal government that manage public lands.
- Learn about the different designations for public lands and recognize Wilderness as the most protective type of land designation.
- Understand the different uses for public lands and their potential conflicts.

## Getting Ready

**Time:** 40 minutes

**Materials:** Each One Teach One fact sheets, print out of federal lands map, agency logos and missions, print out of organizational chart and designations cards, print out of land use icons

**Preparation:** Examples of land designations relevant to the audience and location

**Location:** Indoor or outdoor with room to sit in a circle and move around

### Objective:

To understand public lands distribution, how federal public lands are managed, different designations, and how uses differ depending on that designation.

## Rapid Fire Brainstorm (5 min)

1. Divide participants into groups of 3-5 people. Assign a scribe and piece of butcher paper to each group. Give the groups 3 minutes to brainstorm different types of lands found in the United States. Note that examples could include federal (National Parks or Forests), state (Parks, Recreation Areas), and private lands (Preserves, Conservation Areas).
2. After 3 minutes, have each group put a star by each of the examples of federally managed public lands. Mention that the focus of the lesson will be on federally managed public lands.

## Each One Teach One Activity (30 min)

Divide participants into 3 groups and provide a fact sheet for each topic and associated teaching materials. Give the groups 15 minutes to plan their lesson to the group, 5 minutes to present. Have groups present in the order listed below. As each group is presenting, the participants should write down 3-5 main takeaway points to share at the close of the lesson.

### 1. Public Lands Distribution

*What percentage of the country is public lands?*

*How many acres are federal public lands in the US?*

Poll the group for their thoughts before giving the correct answer. Who was closest? Are the numbers surprising?

**(Answer: 640 million acres, 26% - in all 50 states!)**

Present the map of federal public lands to the group. Ask the group to make observations about the distribution of public lands in the country.

*Is it surprising? Why do you think it is that way?*

As the country expanded westward, the government claimed ownership of land across the country. Through dispossession, genocide, and relocation, many Indigenous people were removed from these lands (although some still live on their aboriginal lands). Most of these lands were then transferred to individuals through grants and homestead acts. Other lands became state land when states entered the Union. However, the federal government retained ownership of some parts. In the East, the government had to purchase and acquire land later on, specifically for the purpose of conservation, not for

expansion. This was done through Acts of Congress and was generally a lot more complicated, hence the relatively small amounts of federal public lands in the East.

Allow participants to review the cards that show the different agencies that manage public lands and their mission statements. Ask participants why they think multiple agencies are involved. Ask the participants to locate some public lands near to where they live and point them out on the map- answers could include city parks, privately owned conservation land, state parks, or federally-managed lands. Present the following questions:

*How do you or your community use the land?*

*How did you find out about it?*

*Who lived there before you did and where are those people now?* (If time, use this prompt to introduce the <https://native-land.ca/> resource for identifying ancestral lands.)

## 2. Federal Land Designations

Present the Land Management Agency organizational chart. Note that under each agency are different ways that lands are designated within that agency.

Pass out the designation cards and have each person read out their card. Note that some of the designations may be managed by multiple agencies. Pose the following questions to the group:

*Can you think of an example of your type of designation?*  
Be prepared with relevant examples to your group and location.

*What challenges are there if one type of designation is managed by multiple agencies?* For example, National Monuments are managed by NPS, USFWS, BLM, and USFS. The potentially competing missions of these agencies might cause inconsistencies in management.

*What is the most protective type of designation?*

*What is (are) the least?*

**(Answer: Wilderness is the most protective. Non-Wilderness areas of National Forests and BLM land are the least protective.)**

## 3. Federal Land Uses

The designation of a particular area of federal lands or water generally determines what activities can and cannot take place in those areas. The general rules are described below. However, activities may be subject to limitations imposed by land managers in specific locations, during specific times of year, and during ceremonial use by Indigenous peoples.

Review the allowed activities using the land use icon cards.

- a. **Hiking, fishing, ceremony and prayer, hunting, rock climbing, wildlife viewing, photography, horseback riding, kayaking, canoeing, and rafting** are generally allowed on all federal public lands and waters, including Wilderness. As noted above, these activities may be limited in specific locations and at specific times. Livestock grazing can occur on all federal public lands, including Wilderness, subject to location-specific limitations.
- b. All activities allowed in Wilderness, plus **mountain biking, off-road vehicles, RVs, motor boats, and scenic driving** are generally allowed on federal public lands outside designated Wilderness, subject to location-specific limitations determined by the managing agencies. Motorized and mechanized travel (including mountain biking) are prohibited in designated Wilderness.
- c. **Construction and road building, mining, logging, and energy development** also occur on public lands. However, they are generally prohibited in areas designated as Wilderness.

Ask each person to choose two activities that may potentially come into conflict and take 1 minute to think about why and ways to mitigate the conflict. Ask for volunteers to share their thoughts. Example: off-road vehicles and wildlife viewing.

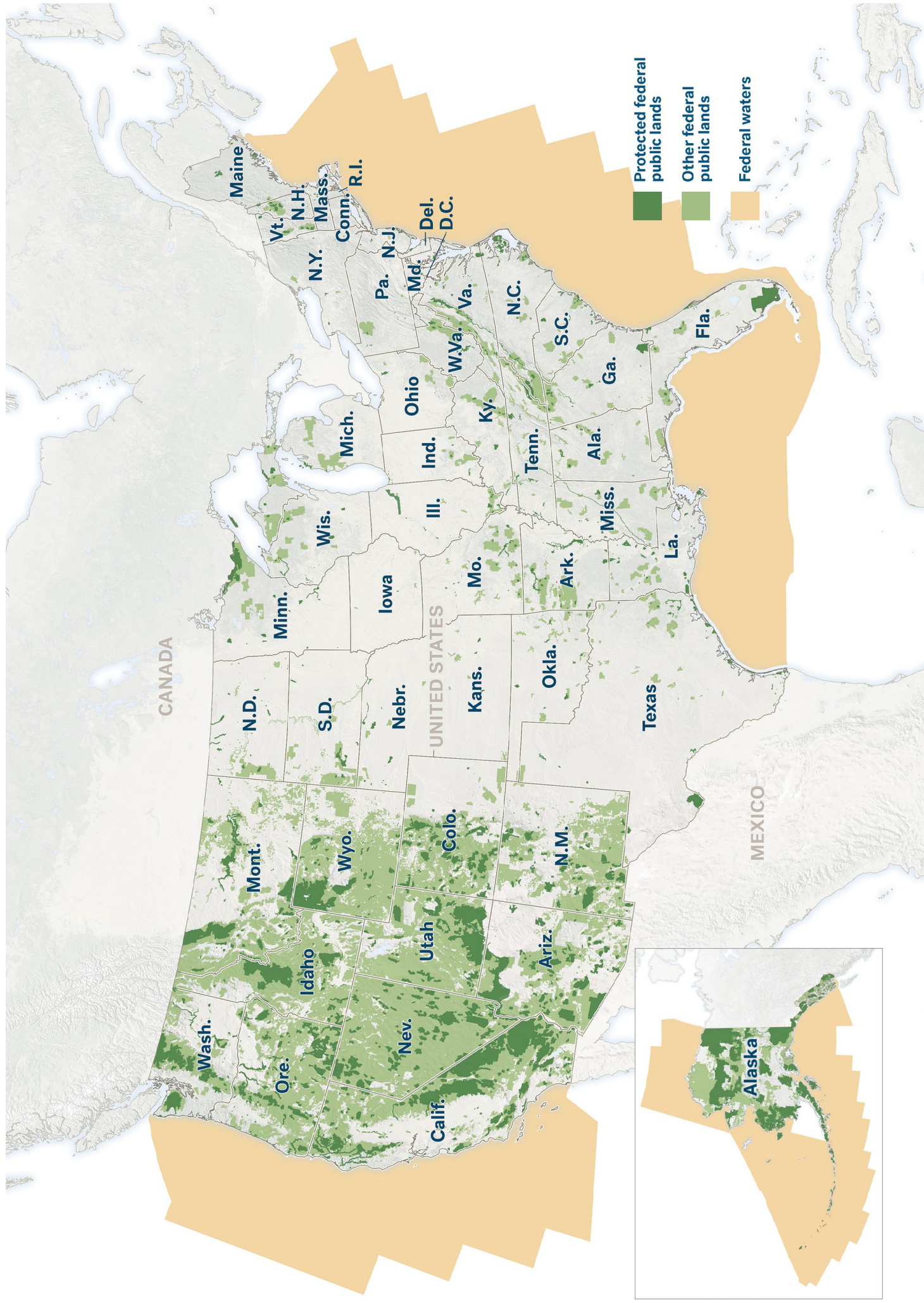
## Conclusion (5 min)

1. Ask students to review their take away points for Each One Teach One lesson with a partner then pose the following questions: Why are public lands so complicated to manage? Do the challenges associated with managing public lands relate to anything in your life? Ask for volunteers to share their responses.

### Adapt the lesson:

Instructors are encouraged to provide local maps and locally relevant case studies in addition to or in place of the ones provided.

The Each One Teach One lessons can also be taught in small groups of 3 participants each, with each participant responsible for one Each One Teach One lesson. Make sure to print out enough teaching materials for each group.



## Bureau of Indian Affairs

(BIA)



### Mission:

Enhance the quality of life, to promote economic opportunity, and to carry out the responsibility to protect and improve the trust assets of American Indians, Indian tribes and Alaska Natives.

## Bureau of Reclamation

(BOR)



### Mission:

Manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

## National Park Service

(NPS)



### Mission:

Preserve unimpaired the natural and cultural resources and values of the national park system for the enjoyment, education, and inspiration of this and future generations.

## U.S. Fish & Wildlife Service

(USFWS)



### Mission:

Work with others to conserve, protect, and enhance fish, wildlife, plants, and their habitats for the continuing benefit of the American people.

## Bureau of Land Management

(BLM)



### Mission:

Sustain the health, diversity, and productivity of the public lands for the use and enjoyment of present and future generations.

## U.S. Forest Service

(USFS)



### Mission:

Sustain the health, diversity, and productivity of the Nation's forests and grasslands to meet the needs of present and future generations.

## National Oceanic and Atmospheric Administration

(NOAA)

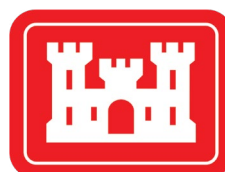


### Mission:

Understand and predict changes in climate, weather, oceans, and coasts, to share that knowledge and information with others, and to conserve and manage coastal and marine ecosystems and resources.

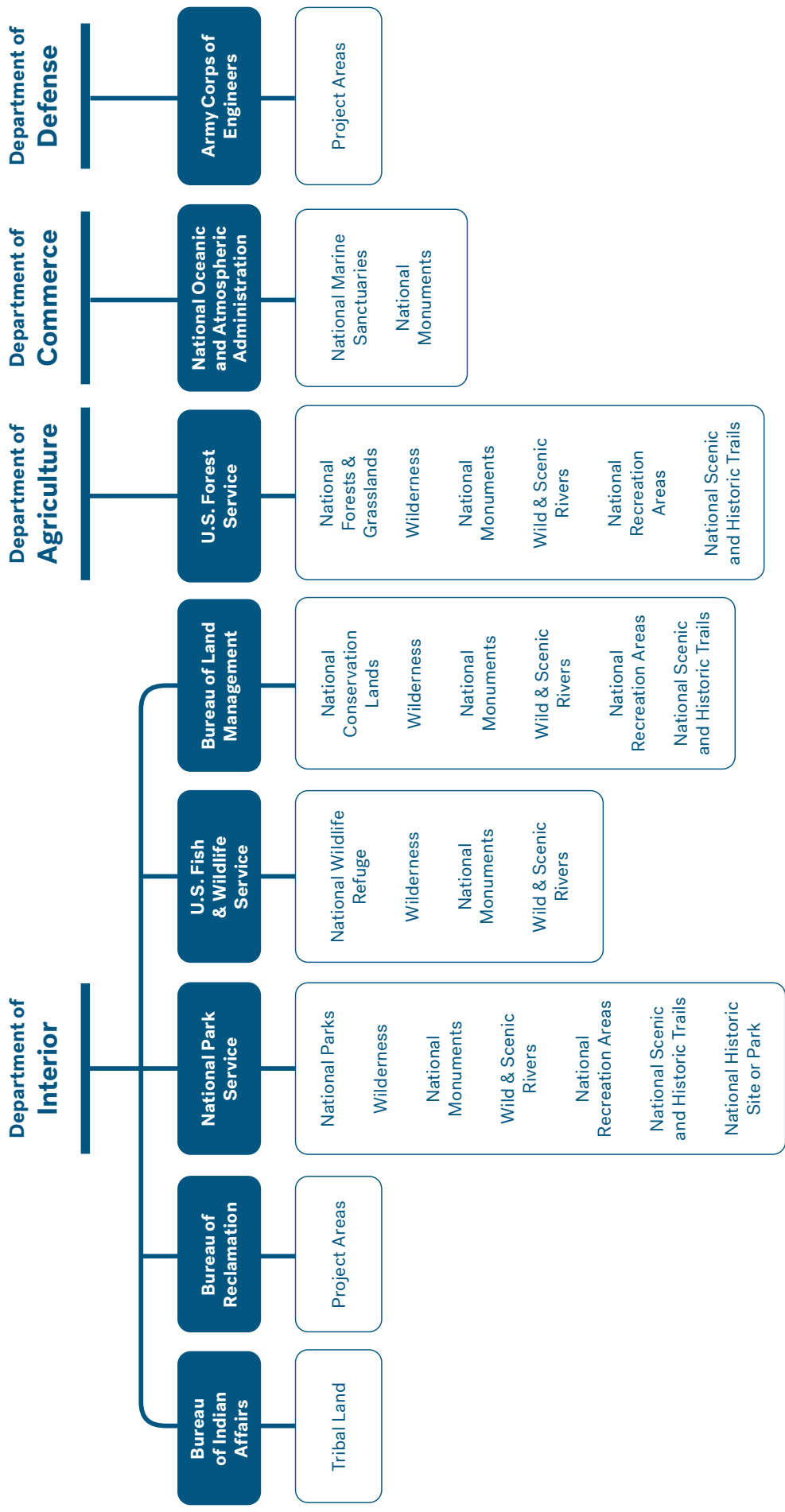
## Army Corps of Engineers

(USACE)



### Mission:

Provide vital public engineering services in peace and war to strengthen our Nation's security, energize the economy, and reduce risks from disasters.



## National Parks

Managed by NPS

### MISSION:

Preserves unimpaired the natural and cultural resources and values of the national park system for the enjoyment, education, and inspiration of this and future generations.

## Wild & Scenic Rivers

Managed by one of four agencies  
(depending on the river)

### MISSION:

Designated to preserve outstanding natural, cultural, and recreational values; protected in a free-flowing condition for the enjoyment of present and future generations.

## National Conservation Lands

Managed by BLM

### MISSION:

Designated to conserve, protect, enhance, and manage public lands for the benefit and enjoyment of present and future generations.

## Other BLM Land

Managed by BLM

### MISSION:

Designated to conserve, protect, enhance, and manage public lands for the benefit and enjoyment of present and future generations.

## National Marine Sanctuaries

Managed by NOAA

### MISSION:

For the Nation's system of marine-protected areas, to conserve, protect, and enhance their biodiversity, ecological integrity, and cultural legacy.

## National Wildlife Refuges

Managed by USFWS

### MISSION:

For the conservation, management, and restoration (where appropriate) of fish, wildlife, and plant resources and their habitats. Wildlife-dependent recreation in refuges is facilitated where compatible.

## National Recreational Areas

Managed by one of three agencies  
(depending on the area)

### MISSION:

For conservation and recreation purposes; designated for a specific purpose, and may have other values that contribute to public enjoyment.

## National Monuments

Managed by one of four agencies  
(depending on the monument)

### MISSION:

Designated by Congress or the President to protect objects or areas of historic or scientific interest.

## National Forests & Grasslands

Managed by USFS

### MISSION:

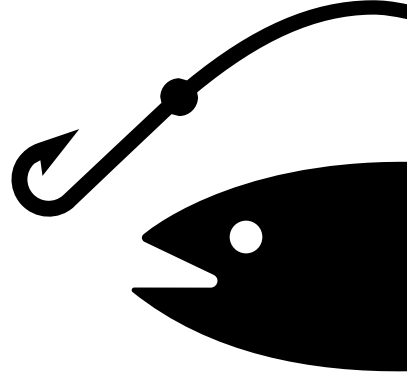
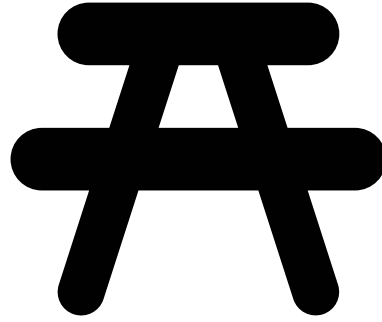
Provides for multiple use and sustained yield of products and services, including timber, recreation, range, watersheds, and fish and wildlife.

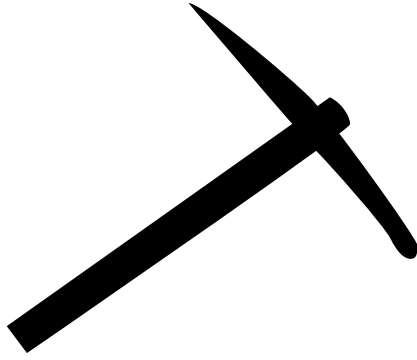
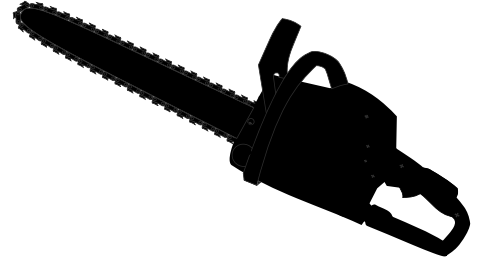
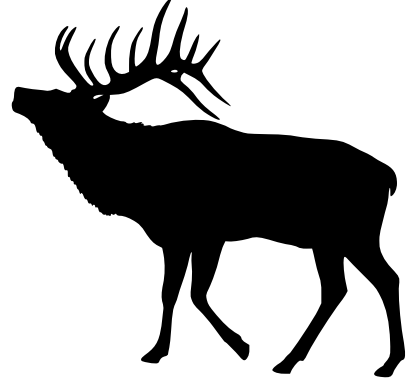
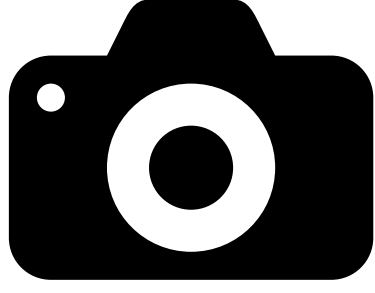
## Wilderness

Managed by one of four agencies  
(depending on the wilderness area)

### MISSION:

Wilderness is the most protective type of land designation and limits commercial activity, motorized equipment, and mechanized travel or tools.





## Module 2

# How did Public Lands Come to Be?

### Main Takeaways

**Federal public lands in the United States were created within the context of complex social and historical movements and mindsets.**

**A more complete understanding of public lands requires acknowledgement of the people and cultures who have been negatively affected throughout the complex history of public lands.**

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This module will examine the history of federal public lands and waters in the United States. It is important for people to know the history of public lands so that we can understand the perspectives of others who have different types of connections to these places.

When conservationists talk about the establishment of federal public lands in the United States, they sometimes focus on governmental decisions to protect land for future generations. However, the protection of lands as public did not occur in a vacuum. The conservation of these places reflects the larger social, cultural, and political forces and events of United States history. These influences are as diverse as the lands themselves.

With this module, we provide a more comprehensive history of federal public lands. In doing so, we include the stories of some of the people and communities that have been left out of the traditional colonizer-settler narrative.

However, the history presented in no way encompasses the complete story of the many people with connections to public lands. This curriculum remains a living document that will continue to evolve as we engage with more communities and broaden our understanding and knowledge base.

As we move forward enjoying, sharing, and preserving our public lands, understanding the broader historical context can help us act more intentionally and work to build a more equitable conservation movement and public lands system.

We recognize that the terms “America” and “American” are widely used to refer to South, Central, and North America and the people living in all these regions. However, throughout this curriculum, the term “American(s)” is used to refer to the people who were and are still living in what is the United States today. This includes people who settled in the United States freely and those who were forcibly brought to the U.S. through enslavement and relocation. Additionally,

in this curriculum the term “American(s)” does not refer to a person’s citizenship or immigration status in the U.S. This term is also used to refer to land that is a part of the modern day U.S. (i.e., the American West).

## Historical Overview

### Time Immemorial

History is conveyed in different ways by different cultures. For the Indigenous peoples of the Americas, history begins at time immemorial - time before the reach of human memory. The history of connection to the land before memory is passed on through oral tradition. Different tribes have different origin narratives, some indicating that people rose from the center of the earth (Hopi) or that man hatched from eggs (Chinook). Indigenous knowledge about the populating of what is today known as the North American continent is one form of knowledge.

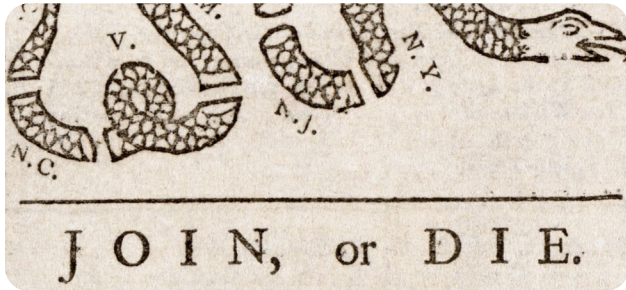
Scientific knowledge also contributes to our understanding of when people were present on this continent. Archaeological data indicates that humans were in this hemisphere at least 20,000 years ago, supporting Indigenous knowledge of a presence on this land going back into deep time. Pre-Colonial population estimates vary, but Indigenous people numbered in the millions before the arrival of Europeans, with multiple and diverse peoples across the hemisphere

Before European colonization beginning in the 15th century, Indigenous peoples had developed into sovereign tribes or nations, some independent and some nested within larger confederations. Each of these nations followed different traditions and had distinct leadership organizations. Intricate systems of trade and barter existed along trade routes throughout the continent, as well as flourishing agricultural

and scientific practices. In many cases, these practices were more advanced than those in Europe at the same time. Because of the violent suppression of these nations by European colonists and the failure to include Indigenous history in public education systems, our knowledge of the peoples and cultures on this landscape is incomplete. However, it is growing, both through academic study and sharing Indigenous knowledge of the past and present.

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## European Contact and Colonization



In the late 15th century, Europe was in the midst of an economic boom fueled largely by global trade from Asia and Africa. The desire for more efficient trade routes to southeast Asia (at the time called the East Indies) led trading nations like Spain and Portugal to finance expeditions across the Atlantic Ocean. On one of these expeditions, an explorer named Christopher Columbus accidentally made his way to an island in the Caribbean. At the time, he was thought to be the first European to have set foot in the Americas. However, new evidence suggests that the Vikings may have explored North America, possibly even into the New England area around 1000 A.D. In contrast to the Europeans, Viking exploration focused on acquiring wealth, resources, and enslaved peoples. For the Vikings, colonization was a secondary goal.

At the time of Columbus' arrival, the European powers were operating under the Doctrine of Discovery, a principle established to legitimize colonization of lands outside of Europe. The Doctrine, authorized by the Pope, claimed that European countries could seize lands occupied by Indigenous people who were not subjects of a European Christian monarch. Reports from Christopher Columbus and other explorers told of untapped resources and unending riches, and described the Indigenous peoples they encountered as "savages" who could be easily overpowered. After Columbus' arrival, European nations entered a race to colonize and establish trading enterprises on the North American continent. The Spanish sent many expeditions into the southeast region of what is now the United States, including expeditions led by Ponce de Leon in 1513 and Hernando de Soto in the 1540's, although evidence suggests that Spanish explorers trading enslaved people set foot on the Florida peninsula at an earlier time. In 1534, Jacques Cartier began his first of three explorations of Canada's Gulf of Saint Lawrence and the Saint Lawrence River and claimed the land as New France, convinced that he had reached Asia in search of riches. Additionally, in 1602 the Dutch commissioned Henry Hudson to explore the present day Hudson River area in search of a

trade route to the Indies. The Dutch established settlements near present-day Albany, NY and Hartford, CT.

During these early explorations, one of the main motivations was the enslavement of Indigenous people to work locally and in mines and plantations in the European settlements in the Caribbean. From 1670 to 1715, it is estimated that between 24,000 and 51,000 Indigenous people were removed from their ancestral lands in the southeastern part of the North American continent and enslaved by the British. In New France (what is now Canada), records show that approximately 4,000 people were enslaved, the majority of whom were Indigenous people. Though most of the enslavement of Indigenous people was done by European settlers, inter-tribal enslavement also occurred between warring tribes.

Between 1607 and 1732, England established thirteen colonies along the East Coast of North America. The Dutch, French, Swedish, Scottish, and Spanish also founded settlements in North America during this time. The colonists brought with them the European concept of private land ownership. They believed that land can be privately owned by individual people, and viewed ancestral Indigenous land as wild and in need of clearing for cultivation and development.

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## African Enslavement



Privately owned land required significant human labor in order to meet European demand for "productive," cultivated landscapes. In the early 1600s, colonists were hungry for labor and created a variety of inducements to urge more able-bodied workers to come to the colonies. Among these inducements was the concept of a "headright" – which meant that for each person a colonist brought to the colonies, they would be granted a certain amount of additional land. Headrights motivated the larger landowners to bring in large numbers of indentured servants, who would sign contracts to work a set number of years before becoming landowners themselves. Although these contracts appeared to be an easy and exciting way for impoverished people to acquire passage to the colonies, they were often abused by contract holders, and people were indentured for far longer than agreed to.

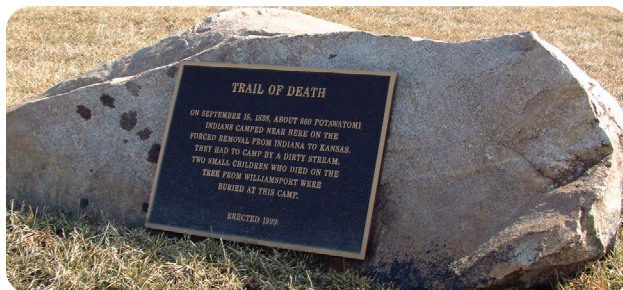
When the indenture system fell short of labor needs in the new colonies, the European powers turned to slavery, exploiting political turmoil in West and Central Africa to induce wealthy kings and chiefs to sell and export enemy combatants and captured civilians as laborers for Europeans.

By 1660, a system of land cultivation dependent on the kidnapping and enslavement of African men, women, and children was well-established in the colonies of both North and South America. By 1860, when the last known ship carrying enslaved Africans arrived in the United States, the Trans-Atlantic Slave Trade had transported an estimated 12.5 million Africans to European colonies in North and South America, 10.7 million of whom survived the journey. As enslaved people, these African laborers were not permitted by their European and American overlords to own land, vote, learn to read or write, marry, gather in groups, organize, speak their language, practice most of their traditional customs, or participate in the American economic or political system.

Although some African Americans were born free (descendants of pre-slavery indentured Africans, free Natives, or white ancestors) or became free during the period of enslavement, slavery and racism still shaped and dominated their daily lives. The institution of slavery transformed African Americans' relationship to the land. Many enslaved African Americans spent their days planting, harvesting, and doing hard labor in fields under brutal conditions that included physical and psychological traumas and reflected deeply entrenched racial power dynamics. Violence and subjugation of African Americans and white supremacy were early hallmarks of African Americans' relationships with land and open spaces.

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## Genocide, Tribal Sovereignty and Broken Treaties



Upon their arrival, European colonizers immediately began occupation of Indigenous lands. Much of this occupation was accomplished through warfare, genocide, and slavery. In addition, many Indigenous people died of diseases carried by European colonists for which Indigenous people had no natural immunities. From the Europeans' perspective, these mass deaths left vast tracts of land "unoccupied" and available for the taking. Cultural differences between Europeans and Indigenous peoples were perceived by Europeans as evidence that Indigenous peoples were less than human, like the enslaved African laborers, further justifying the barbaric tactics the Europeans used.

By the 1700s, European countries had entered into numerous treaties with tribes. Many of these treaties recognized the principle in European law that the leadership of an Indigenous tribe had the legal standing of a sovereign government. Indigenous people were considered members of a sovereign nation, and the relationship between the European country and the tribe was a nation to nation relationship.

When the United States Constitution was adopted in 1787, it gave Congress the authority to regulate commerce with "foreign nations and among the several states, and with the Indian tribes." In the Marshall Trilogy of Supreme Court cases between 1823 and 1832, the Supreme Court affirmed the status of the tribes as sovereign nations. Federal courts have also recognized a "general trust relationship" between the federal government and federally recognized tribes, under which the government has a duty to protect tribal treaty rights, lands, assets, and resources.

Between the time of European colonization and passage of the Indian Appropriations Act of 1871, the British and United States governments entered into hundreds of treaties with tribal governments. Many of these treaties were written to either contain Indigenous peoples or take away their land. The Appropriations Act of 1871 ended the practice of interacting with or recognizing tribes through treaties. Ostensibly, those treaties that were in effect at the time of the Appropriations Act would remain in force. However, many of the promises made in those treaties were subsequently broken by the United States government.

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## Early Relocations



In contrast to the European model of private land ownership, many Indigenous communities held and continue to hold a fundamentally different concept of land use and land ownership. Generally, Indigenous communities believe that people belong to the land and should live in ethical reciprocity with nature. While there is no singular view held by all Indigenous peoples, many modern Indigenous communities continue to follow cultural and religious practices that are strongly based on connections to the landscape and sharing common lands.

In 1763, the British Crown temporarily defined the limits of colonial land in North America. The Royal Proclamation of 1763 designated the lands east of the Appalachian Mountains as colonial lands, and the land west of the divide as an Indian Reserve. The Proclamation canceled all colonial land claims within the Indian Reserve, and prohibited colonists from purchasing land in the reserve without the permission of the British Crown.

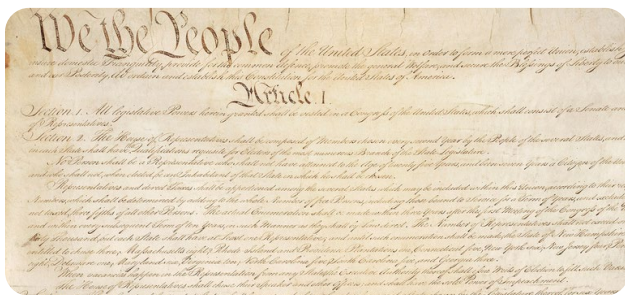
The Royal Proclamation and the designation of the Proclamation Line had different effects for Indigenous peoples depending on location. For Indigenous peoples who lived west of the divide, the Proclamation temporarily limited westward expansion and recognized their right to remain on their ancestral land. In

contrast, many Indigenous peoples who lived east of the line were ultimately forced to move west because their ancestral lands were now considered to belong to the colonies, though some tribes remained on their Eastern homelands.

Shortly after the Royal Proclamation was issued, angry colonists and land speculators quickly began pressuring the Crown to move the Proclamation Line westward, which the Crown did through treaties signed with the Haudenosaunee and GWY(tsa-la-gi)/Cherokee peoples in 1768 and again with the GWY/Cherokee people in 1770. These three additional treaties moved the boundary so that colonial lands included what is now Kentucky and West Virginia.

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## Establishment of the Public Domain



In 1776, the thirteen original British colonies declared their independence from Great Britain. The Revolutionary War that followed lasted until 1783. When the United States adopted and then ratified the United States Constitution in 1789, it declared that “[t]he Congress shall have power to dispose of and make all needful rules and regulations respecting the territory or other property belonging to the United States.”

The Constitution does not describe which lands were to be considered public lands or part of the public domain. However, beginning with the cessions to the federal government of land claims by some of the original 13 colonies at the time the Constitution was ratified and continuing with the subsequent acquisition of claims by foreign nations, most of the land west of the 13 original colonies eventually came to be considered part of the public domain. As a result, many lands inhabited by Indigenous peoples were considered by the government to be public domain lands even though they were already occupied by Indigenous peoples.

With the adoption of the United States Constitution and the acquisition of land by purchase, cession, annexation and by treaty, the United States government became a large landowner early in the 19th century. In 1812, the government began the process of disposing of a portion of that land. In that year, the General Land Office (GLO) was formed. The GLO was created to survey and dispose of government land. In doing so, the GLO would play a pivotal role in westward migration and the settlement of the West. During its existence, the GLO administered two important land ownership and disposal laws: the Preemption Act and the Homestead Act. By 1849, the GLO was part of the Department of the Interior. In 1946, the GLO became part of the Bureau of Land Management.

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## Territorial Acquisition and Western Exploration



Purchase of the Louisiana Territory from France in 1803 prompted President Thomas Jefferson to launch the Lewis and Clark Expedition, which explored the northern plains and Pacific Northwest from 1804 to 1806. The expedition sought to map the new territory, find a navigable transportation route across the western half of the continent, establish a territorial claim to the region, assess the available resources, and establish relationships with Indigenous tribes along the Missouri River. Jefferson placed special importance on declaring United States dominion over the lands occupied by the tribes.

The expedition could not have been undertaken without the support of the many Indigenous tribes and tribal members across the country who guided and interacted with Lewis and Clark. At the same time, the expedition hastened the dispossession of Indigenous lands by stoking the growing fascination of white settlers and their descendants with the West and causing an influx of explorers, miners, fur traders, and others.

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## Manifest Destiny, Settler Colonialism and Early Wilderness Values



Throughout the 19th century, many Americans strongly believed in Manifest Destiny. Manifest Destiny was the idea that American settlers were destined to expand across North America. Historians have identified three component beliefs that comprised Manifest Destiny:

- Belief in the special virtues of the American people and their institutions.
- Belief that it was the mission of the United States to redeem and remake the West in the image of agrarian America.

- Belief in an irresistible destiny to accomplish this essential duty, sometimes described as a divine destiny or the will of God.

The widespread belief in these principles drew many colonists west, and allowed them to assume that their actions were sanctioned and perhaps even required by divine will. Because of their adherence to this belief system, the act of conquering and domesticating the frontier was a source of pride for colonists.

However, the use of the terms “frontier” and “pioneer,” both then and now, reinforces the perception of the West as being empty land available for the taking and erases the presence of Indigenous inhabitants. In truth, this westward expansion was an example of settler colonialism in which European settlers sought to replace the Indigenous populations with settlements and farmland owned and occupied by Europeans. This colonization was not merely an organic movement driven by individuals. It was official United States government policy.

It is also worth emphasizing that American attitudes toward wild landscapes in the 19th century did not usually include conservation as we think of it today. The people moving westward generally saw no value in preserving landscapes in their natural state. Some considered undeveloped land to be evil, chaotic, dark, and sinister. This was, in part, because these lands were often the source of very real hardship and danger. However, it also reflected their belief that land should be put to productive use such as farming or industry. Thus, settlers viewed their migration with spiritual overtones. They saw it as the conversion of darkness into light, of barren to productive, the giving of order to chaos and the transformation of evil into good.

These beliefs shaped settlers’ attitudes toward Indigenous people as well. As is common with settler colonialism, early Americans viewed themselves as racially superior to Indigenous people. Many European colonists and their descendants considered Indigenous people to be “savages” who were part of the wilderness and should be given the same status as animals. As a result of this dehumanization, settlers and the armies mustered in their name felt they had license to kill Indigenous people or relocate them and dispossess them of their lands.

The beliefs and perceptions of wilderness held by the settlers contrasted greatly with those of enslaved African Americans in the southern United States. By the beginning of the 19th century, all of the states in the North had abolished slavery (New Jersey was the last, in 1804). This greatly increased the opportunity for enslaved Africans in the southern United States to emancipate themselves by fleeing to freedom in the North. However, the road to freedom was a dangerous one, and in order to evade being caught, many African Americans followed routes through ‘undeveloped’ areas to reach safety. Some of these escapees even formed temporary or semi-permanent colonies of refuge in difficult-to-reach wilderness areas; these were known as maroon colonies, and the act of escaping to them was called marronage. These colonies are a powerful testament to the enslaved African Americans’ resistance to

oppression, and a hallmark of the unique way in which they saw a connection between wilderness and freedom.

The connection between freedom and wilderness was often shared by members of free People of Color communities across the eastern United States. Free People of Color were largely African Americans of partially Indigenous or European ancestries. They often descended from colonial era intermarriage between Black, white, and Indigenous indentured servants. Their ranks also included some Indigenous people, an occasional South Asian or South American immigrant, and a large number of people of mixed race parentage.

However, even free People of Color were prohibited by their race from attending schools, voting, or engaging fully in the social or political freedoms enjoyed by white citizens. As a result of the often-violent discrimination they encountered, these people frequently settled in “undesirable”, geographically marginal areas – sometimes close to friendly Indigenous tribes or tolerant white religious communities like the Quakers. For free People of Color, whose very existence challenged the racist assumptions and strict racial hierarchy of the early United States, hiding could be essential for survival. To this day, some descendants of these communities continue to occupy areas close to wilderness.

## Assimilation and Relocation



Colonial attitudes towards Indigenous peoples were reflected in a series of government actions taken during the 19th century that were a direct attack on Indigenous culture and cultural ties to ancestral lands. These actions were aimed at forcing Indigenous people to assimilate into white European culture, and to relocate and live in “Indian territory” and later on Indian reservations.

The designation of “Indian territory” and the relocation of Indigenous people to that territory was sometimes asserted as a way to protect Indigenous communities from encroachment by European settlers. However, in practice these designations afforded very limited protection from white encroachment. Ultimately, relocation made it possible for Europeans to settle the ancestral lands of Native Americans and convert the land to what they viewed as more productive uses such as agriculture, logging, mining, and grazing. Relocation also made it possible for the United States to establish the federal public lands system that we have today.

The Indian removal period began in earnest in 1830 when President Andrew Jackson signed the Indian Removal Act. This Act called for the removal of Indigenous peoples, including the Chickasaw, Choctaw, Muscogee/Creek, Seminole, and GWY/Cherokee people, from their ancestral lands mostly in Southern states in exchange for lands in what would become parts of Oklahoma. The Act was strongly supported by Southerners who wanted access and title to the lands occupied by the tribes. Many tribes objected to their removal and resisted the states and federal government. The journey of the GWY/Cherokee from their ancestral lands in the southeast to Oklahoma became known as the Trail of Tears because of its devastating effects. On the forced march, tribal members faced hunger, disease, exhaustion, and death. Out of 15,000 Indigenous people forced into the march, over 4,000 died.

Early in the Indian removal period, a Western explorer and writer named George Catlin envisioned the western United States as a protected reserve where Indigenous people would be allowed to continue to roam freely and live in the way they had historically lived without being confined to small areas. Catlin is sometimes credited with the first articulation of the national park concept in the United States. However, his vision for this park was very different from the type of park we know today. Unlike the vision of wilderness that emerged later in the 19th century, Catlin saw Indigenous people as a feature of the landscape. He did not regard the western landscape as empty of humans. This vision contrasted with many of those who came after him.

A number of influential forces ensured that Catlin's vision of the West as a reserve for Indigenous peoples would not become national policy. In 1846, Britain relinquished its claim on Oregon, and two years later, much of what is now the southwestern United States was acquired through the Mexican American War. These acquisitions had different overtones than the Louisiana Purchase forty years earlier. The Southwest was seen as conquered land acquired as the result of the United States military victory over Mexico. This contributed to a sense of national destiny to bring American values and governance to the western United States. Included in this, sometimes implicitly and sometimes explicitly, was a moral duty to subjugate Indigenous people living in the West, who were seen as inherently inferior to white settlers of European descent.

At the time of the Indian Removal Act in 1830, most of the officially recognized "Indian territory" was in present day Oklahoma. Less formally, the land west of the Missouri River and east of the Rocky Mountains was also considered Indian territory during this period. However, increased migration of settlers across this land during the 1840s and 1850s dispelled any notion that the land west of the Missouri River would remain Indian territory for very long. Events such as the passage of the Kansas-Nebraska Act in 1854 forced midwestern tribes that had been relocated by treaty to Iowa, Missouri, Kansas, and Nebraska into another round of treaty negotiations and land concessions. Ultimately, many of them were forced onto smaller reservations in Oklahoma.

In 1851, Congress passed the Indian Appropriations Act. This Act appropriated funds to move the western Native American tribes onto reservations established in the

western states. This was the beginning of the western reservation system that still exists today. The relocation of the western tribes to reservations ignored Indigenous peoples' cultural and spiritual connections to their ancestral homelands.

There were many other acts passed between 1871 and 1889 under the title of "Indian Appropriations." These acts addressed the status of Indigenous nations as "wards of the government," the ability to sell land, and the settlement of "unassigned lands" by European settlers and their descendants.

The Dawes Act of 1887 was yet another legislative action that sought to assimilate Indigenous peoples into white settler conventions. Under the Dawes Act, most land designated as tribal land was surveyed to be divided up into individual allotments to be given to tribal members. Those individuals who accepted the parcels and agreed to live separately from the tribe were granted United States citizenship. This had the effect of dismantling tribal governments and privatizing communally held land. Any 'excess' land was confiscated by the federal government and sold on the open market. The Dawes Act dramatically reduced the amount of land occupied by Native Americans over the next few years.

In another effort to achieve assimilation, late in the 19th century the federal government began forcibly removing some Indigenous children from their families and ancestral lands and taking them to distant boarding schools for re-education. At the schools, Indigenous children faced many kinds of brutality, from forced assimilation to physical and sexual abuse. They were forced to dress in European American styles, forbidden from speaking their Indigenous language, and converted to Christianity. The children that resisted these rules were often met with physical retaliation from their teachers. In some cases, children at the boarding schools were forbidden from traveling back to their ancestral lands or from receiving family visitors, further severing their ties to Indigenous culture. In recent years, hundreds of unmarked graves of Indigenous children have been found near these boarding schools in Canada and the United States. It is estimated that 4,000 to 10,000 Indigenous children died in boarding schools. The full extent of what occurred in these boarding schools is still unknown.

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## Free People of Color



Before the Civil War, a small but growing number of African Americans gained their freedom and joined the communities

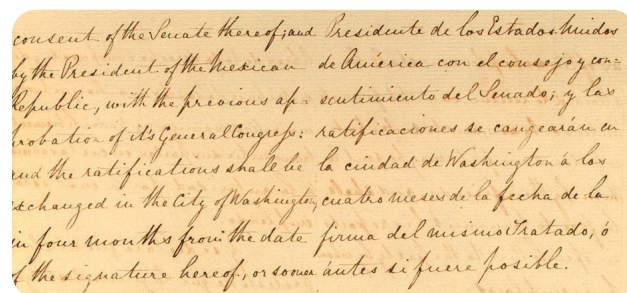
of free People of Color across the United States. Although these communities grew in size, there remained limitations on their political and legal power. Despite this fact, free African Americans and free People of Color became significant drivers of the growing movement to abolish slavery throughout the United States, which began to grow larger and more vocal in the early 1800s.

At the same time, a series of slave revolts (Denmark Vesey, 1822; Nat Turner, 1831) increased white Southerners' fears of both enslaved African Americans and the free People of Color. During the period of Indigenous removal, white Southerners also passed a series of laws targeting the free People of Color for removal. Members of this class were to be sent either to the West or to the new American colony of Liberia in Africa. These removal laws generally made it illegal for a free person of color to reside in the county or state where they were adopted and imposed punishments ranging from fines to jail for white people caught supporting or abetting them in staying. Although the free People of Color were of diverse origins, their most vulnerable members were African American and mixed-race; for these people, the legal punishment for being caught residing in states that had expelled them was to be sold into slavery. Historians have not yet uncovered exactly how many people were enslaved or re-enslaved during this period in this manner.

As a result, from 1830 to 1860, many free African Americans were forced to migrate out of the South, seeking survival and the possibility of refuge in the North and West. Those who had close previous ties to Indigenous tribes (or who were related to enslaved African Americans held by Indigenous people) were sometimes removed under the Indian Removal Act, ending up in Oklahoma, Kansas, and Texas. Those who came from strictly insular communities of free people often migrated toward the Midwest, to try to seek freedom through homesteading the land – they themselves becoming participants in western expansion. Others chose not to migrate, risking (and sometimes sacrificing) their own freedom to remain close to enslaved parents, spouses, children, or other family members in the South.

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## Further Acquisitions



consent of the Senate thereof, and Presidente de los Estados Unidos by the President of the Mexican Republic, with the previous approval of its General Congress: ratificaciones se canjearán en la ciudad de Washington a los cuatro meses de la fecha de la firma del mismo tratado, o de la signature hereof, or sooner antes si fuere posible.

The United States acquired Texas in 1845, setting the stage for the 1846-48 Mexican American War. The war ended with the Treaty of Guadalupe Hidalgo, which established the Rio Grande River as the southern boundary of the United States. Through the treaty, Mexico ceded to the

United States parts of what is now Texas, all of California, and a large area comprising roughly half of New Mexico, most of Arizona, Nevada, Utah, and parts of Wyoming and Colorado. Mexicans in the annexed areas were given the choice of relocating to within Mexico's new boundaries or receiving United States citizenship. Ninety percent chose to remain and become U.S. citizens.

Many Mexicans held the title to their land through grants signed by the Spanish or Mexican government over a century earlier. The treaty signed in 1848 included a provision that the United States would respect these titles and allow the new citizens to remain on their land. In practice, however, Mexican-Americans were often unable to protect themselves when European American settlers from the Eastern United States made claims and tried to settle on their land. Attempts by Mexican-Americans to enforce their land grants were often ignored, and the few cases that made their way into a court were tried in English. Many Spanish-speaking citizens were unable to understand or speak for themselves during these proceedings.

While white settlers from the East were allowed to own land, build houses, and accrue wealth, Mexican-Americans were often relegated to low-wage work in segregated mining and railroad towns. Additionally, passage of the Reclamation Act in 1902 allowed private corporations to draw water from federal public lands, effectively superseding Mexican-American water rights protected in the treaty of Guadalupe Hidalgo.

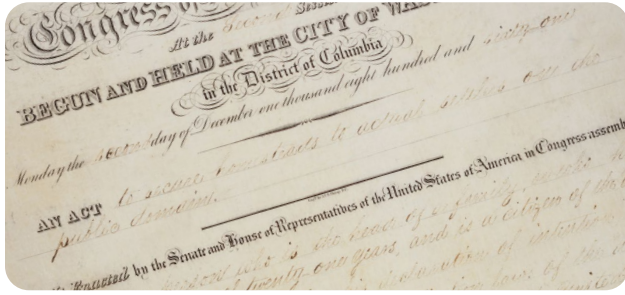
Homesteaders were blocked from settling certain areas of the Mexican Cession. However, instead of allowing Mexican-Americans to live in these areas, they became part of the public domain including areas of public lands that we have today.

In addition to the acquisition of the Southwest, in 1867 President Andrew Johnson signed the Alaska Purchase treaty with Russia. Through this treaty, the United States acquired about 370 million acres of territory for \$7.2 million. Prior to the treaty, Russia's activity in Alaska was largely missionary work and fur trapping and was limited to coastal islands and accessible mainland. Nevertheless, during the Russian occupation, it is estimated that 50,000 Native Alaskans (half of the population) were killed due to warfare, disease, and enslavement. When Alaska became a United States territory, the remaining Native Alaskans were regarded the same as other Indigenous persons were at the time - they had no rights as United States citizens, could not vote, own property, and were subjected to the same assimilation practices.

The acquisition of Alaska significantly increased U.S. territory and ultimately resulted in a major expansion of the federal estate. Today, there are 104 million acres of federally protected parks and wildlife refuges in Alaska.

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## Legislative Milestones



In 1862, Congress passed the Homestead Act, which provided homesteaders with 160 acres of government land for farming purposes. Ultimately, more than 270 million acres of land was given away for free to 1.6 million homesteaders. This amounted to nearly 10% of the total area of the United States.

Also in 1862, Congress passed the first of a series of Pacific Railroad Acts that provided government funding for constructing the first transcontinental railroad. The construction of a network of railroads throughout the country would later contribute significantly to efforts to protect a portion of the federal estate for conservation and recreation purposes. The railroads made it possible for eastern Americans to see and experience the undeveloped lands of the West. They were the basis for the “See America First” tourism campaign that sought to encourage people from the eastern United States to vacation in the American West rather than going to Europe. In this way, the development of the rail network contributed to a burgeoning movement to protect some lands for their natural beauty and scenic value.

While the construction of the railroad system was considered a sign of progress and a great national achievement, there were adverse consequences. In some instances, a portion of the land acquired to build the railways was seized from Indigenous peoples, leading to their relocation. The railroads also advertised “hunting by rail,” contributing to the decimation of the buffalo, a vital food source to the Native American people of the Plains region. Additionally, the railroads themselves were built predominantly by East Asian laborers through the use of exploitative and discriminatory labor practices. Chinese immigrants began arriving in the 1860s, and worked on the railroads at a grueling pace in perilous working conditions. They were paid just one-third of what their white counterparts received.

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## Emancipation and Special Field Order #15

In 1863, President Lincoln put the Emancipation Proclamation into effect, which granted freedom to the 3.5 million people who had been enslaved in Confederate-held lands. Full abolition of slavery and involuntary servitude came in 1865 with the ratification of the 13th Amendment to the Constitution.

In January of 1865, before the ratification of the 13th Amendment, General William Tecumseh Sherman issued Special Field Order #15, setting aside land in coastal South

Carolina, Georgia, and Florida to grant “a plot of not more than (40) acres of tillable land” to every family of formerly enslaved people. This plan was designed in consultation with the leaders of several African American churches in Savannah, as well as with prominent abolitionists and representatives of both the formerly enslaved and freeborn African American communities. Through land ownership, these families hoped to acquire full recognition as individual humans, and full access to the benefits of citizenship.

Under Sherman’s order, a total of over 400,000 acres of land would have been distributed to formerly enslaved families. This land would have been under the control of an entirely African American local governance. However, the hopes of these freed families were quickly dashed in the fall of 1865 when President Andrew Johnson overturned the field order and returned the land to its former Confederate owners (provided they took an oath of loyalty to the Union). This field order (and its subsequent reversal) became the basis for the rallying cry of “40 acres and a mule” that continues to shape national conversations about reparations for enslavement in the United States.

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## Birth of the Colonial Conservation Movement



In the mid-1800s, settler attitudes toward wilderness began to change. The development of the West and the growing exploitation of natural resources began to cause concerns. Some settlers, many of them wealthy urbanites in the eastern states, started to view wilderness through a romantic lens and began to see nature as pristine, divine, inspirational, and a way to become closer to God. This is reflected in the Transcendentalist art and writing of the time by Thomas Cole, Henry David Thoreau, George Catlin, and Ralph Waldo Emerson, as well as the landscape paintings of the Hudson River School which portrayed unspoiled natural beauty. A common sentiment among Transcendentalists is captured in this Thoreau quote: “In wildness is the preservation of the world,” marking the wilderness as a cultural resource.

Some of the earliest conservation efforts occurred in the cities of the East, where it was often wealthy city-dwellers who sought to develop and protect public green spaces for common use. New York’s Central Park, created in 1857, was an early example of urban conservation in the United States. The history of the creation of Central Park is discussed in more detail in Module 3. The designer of Central Park, Frederick Law Olmsted, created dozens of urban parks across the country in his lifetime, focusing on curating natural spaces

that were accessible to all classes of people.

Growing concern over the exploitation of natural resources led to the first acts of land conservation. These acts were influenced and shaped by wealthy European Americans and their evolving view of the wilderness. Many of these actions coincided with and were made possible by the creation of the Indian reservation system and the relocation of Indigenous peoples within that system. Noteworthy early examples include:

**Yosemite Valley:** In 1864, President Lincoln granted Yosemite Valley to California as a public park. Some saw this action as a way to preserve the valley for its beauty. Others felt that Yosemite's primary benefit would be commercial tourism. Although celebrated as a significant conservation victory, the park could not have been designated without the forced dispossession of Yosemite Valley from the Ahwahneechee/Miwok people. The Mariposa Battalion was a militia group who were sent to the valley to remove the Ahwahneechee/Miwok in 1851. The Battalion burned the Ahwahneechee/Miwok villages and destroyed their food supply. The name "Yosemite" is derived from the Ahwahneechee/Miwok cry heard by Battalion members during the raid. Battalion members thought it was a place name, but in reality it was the Ahwahneechee/Miwok word for "killers." A handful of Ahwahneechee/Miwok who survived the raid were allowed to stay on the land, but only as a cultural attraction, performing basket weaving and other traditional activities for tourists.

**Yellowstone National Park:** In 1872, Congress designated Yellowstone as the first National Park. Park proponents were motivated by a desire to protect the area for people's enjoyment, and to prevent commercialization and the pillaging of natural resources and historical artifacts. However, similar to Yosemite, the land that is now Yellowstone National Park is vital land for many of the surrounding Indigenous tribes, including the Shoshone, Apsaalooke/Crow, Bannock, Tukudika/Sheep Eater, and Aaniiih/Gros Ventre tribes. Indigenous people had long lived and hunted on these lands and managed the area's ecosystems using fire. These activities were seen by the federal government as contrary to the purpose of protecting the park as untouched, uninhabited wild land and, as a result, the Tukudika/Sheep Eater people were removed in 1879. Various tribes continued to seasonally hunt within the park boundaries until 1895, when local law men raided an encampment of Bannock people and arrested them, killing one man and two children. Tribal leaders looked to the government to punish the raiders and uphold hunting rights that had been laid out in a treaty with the Bannock people in 1869. At first the Bannock hunting rights were honored in court. However, in 1896 the U.S. Supreme Court ruled that the Wyoming hunting rights granted by the treaty with the Bannock people were invalidated when Wyoming became a state in 1890.

**Adirondack Forest Preserve:** From 1885-1910, lands in New York's Adirondack Mountains were reorganized into a Forest Preserve to be managed by the state. New laws were passed restricting fishing, hunting, and making fires and the state began to patrol the forest. Settlements of subsistence families and people who were poor were not included on the official map of the Adirondacks and were evicted from their homes.

In contrast, wealthy settlers maintained land ownership and put up fences and signs to keep poor people out of their lands. Along with establishing the Forest Preserve, the state passed lumber trespassing laws criminalizing the cutting of trees except by lumber companies, developed arson laws prohibiting fires, and erected fire observation stations to enforce arson laws.

During Henry David Thoreau's lifetime (1812-1862), a limited number of people subscribed to his views on wilderness and land protection. However, as the century wore on, this gradually changed as more people became concerned about overdevelopment. From 1870 onward, John Muir, a Scottish American explorer who was inspired by the writings of Ralph Waldo Emerson, traveled extensively in the high Sierra region of California, the Pacific Northwest, and Alaska, and published articles and essays about his travels. Muir believed wild spaces should be protected from human impact, including the impacts of Indigenous peoples, and that a person could be closer to God, improve themselves, and find a true home in the wilderness. Along with his supporters, he would later form the Sierra Club, and be directly involved in numerous high profile land protection campaigns.

The ideas of the Transcendentalists and other conservationists were, in many cases, taken from long-standing practices that were typical ways of life for many Indigenous communities. The problems that worried conservationists, such as exploitation of natural resources and dwindling connections to nature, had only come about after European arrival and colonization on the continent. These writers, thinkers, and advocates were effectively arguing for a return to the Indigenous way of life that had been in balance with the environment since time immemorial.

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## Growing Conservation Movement and Policy Changes — 1890-1920



By the late 19th century, an increasing number of people, many of them wealthy, began to adventure in the western landscape. Many of these people were inspired by Theodore Roosevelt, who began promoting land and water conservation for the benefit of recreation, hunting, and fishing. Roosevelt believed that a connection to nature fostered and encouraged the uniquely American quality of rugged individualism. Roosevelt warned of the dangers of "eroding masculinity" presented by industrialization and the closing of the frontier. He saw outdoor recreation, hunting, and fishing as a way to counterbalance the ease of city life. These activities were mostly catered toward

men. Theodore Roosevelt put 230 million acres of land into federal management as parks and monuments during his Presidency. Most of these lands remain public lands today. However, Roosevelt also supported Indigenous assimilation efforts and, as a result of his actions, many Indigenous peoples were dispossessed of their ancestral lands and moved to reservations.

During this period, the United States government was shifting its focus away from giving land to private owners, and moving toward land retention and management. In 1891, Congress passed the Forest Reserve Act. The Act gave the president the authority to create forest reserves, which later became National Forests.

This period also featured a growing debate about preservation versus conservation, with those increasingly concerned with the protection of wild places pitted against those who believed natural resource extraction was also an appropriate use of public lands. The main architects of this debate were John Muir, founder of the Sierra Club (discussed above), and Gifford Pinchot, the first Chief of the United States Forest Service. Muir believed natural resources should be preserved for their intrinsic values and the needs of future generations. Pinchot espoused a utilitarian view that natural resources should be extracted for the benefit of people, and should be managed for long-term sustainability.

Several noteworthy federal public lands events took place during the first decades of the 20th century. Among them:

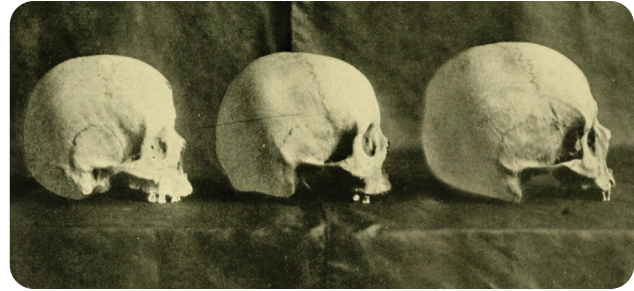
- 1903** Pelican Island is declared the first National Wildlife Refuge.
- 1905** The United States Forest Service is established and given responsibility for managing the forest reserves created under the Forest Reserves Act of 1891.
- 1906** Passage of the Antiquities Act gives the president the authority to establish National Monuments that have objects of historic or scientific importance. Devils Tower, known to some tribal communities as Bear's Lodge or Mato Tipila, is established as the first National Monument. Devil's Tower was and is still considered a significant spiritual site for multiple Indigenous tribes in the region.
- 1911** The Weeks Act allows the federal government to purchase private land in service of protecting watersheds and streams, as well as setting aside land for forest reserves.
- 1916** The National Park Service is established to "conserve the scenery and the natural and historic objects and the wild life [of the National Parks] and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations." The National Park Service is the only agency to have enjoyment in its mission, which makes recreation a part of the federal government's land management mandate.
- 1920s** The "See America First" campaign launched by the railroads in the 1880s starts to resonate with the American public when the National Park Service begins portraying national parks as national assets and encourages cross country train travel to visit them.

**1924** New Mexico's Gila Wilderness is established as the first Primitive Area.

Many of these actions defined federal public lands as we know them today.

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## Conservation and Eugenics



As leaders in the environmental movement were advocating for conservation and preservation, some were also connected to the eugenics movement. Eugenics is the belief that some groups of people are genetically inferior to others, and that the groups judged to be inferior should be excluded from reproduction. Racist eugenic thinking focused on protecting an Aryan gene pool and sometimes was connected to the conservationist mindset of protecting wild nature.

One prominent figure in both movements was Madison Grant. In conservation, he is credited with helping establish the Bronx Zoo, helping found Glacier and Denali National Parks, and saving several species from extinction. At the same time, he was a formative leader in the eugenics movement, in 1916 authoring *The Passing of the Great Race*, a book heralding white supremacy. Eugenicist ideals influenced some conservation advocacy organizations and architects of the conservation movement, including Theodore Roosevelt and Gifford Pinchot.

The eugenics movement also influenced several areas of public policy in the first part of the 20th century. Advocates touted the benefits for the environment as a justification for implementation of these policies. Grant's book contributed to the passage of the Immigration Act of 1924, limiting "undesirable" immigration from Eastern and Southern Europe and Africa and outlawing immigration from Asia and the Middle East. Other policies limited reproduction by people eugenicists considered to be socially inadequate. States enacted laws that led to forced sterilization of 64,000 Americans with mental illnesses, epilepsy, disabilities, criminal records, and those living in poverty. Twenty-eight states outlawed interracial marriage, and six states inserted anti-miscegenation laws into their constitutions. These anti-miscegenation laws criminalized interracial marriage and sometimes sexual relations between people of different races. Most interracial marriage prohibitions remained in place until the late 1960s.

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## The Right To Participate in the Democratic Process



Although the actions described above to designate and protect federal public lands were noteworthy, we should acknowledge that nearly all of these decisions were made by white men. They were not made by a democratically representative cross section of the United States population that included people from all identities and backgrounds. At the time these decisions were made, white men were the only persons guaranteed the right to vote. As a result, white men were the only persons with a reliable opportunity to participate in the land management decision making process. For other groups, opportunities to participate came much later.

The Fifteenth Amendment to The Constitution, adopted in 1870, ostensibly gave male citizens of all races the right to vote. However, men of color were prevented from voting in many states through legal and physical limitations for another 100 years. In some places, white residents used violence to prevent People of Color from voting. These violent tactics included vigilante mob murders called lynchings. Lynchings were often presented as acts of justice for a variety of innocent activities or fabricated crimes. In addition to being killed for attempting to vote, People of Color were killed for walking on the wrong side of the street or for various accusations of insubordination. During the period of Jim Crow, at least 4,000 African Americans and People of Color were murdered in documented lynchings, though the total number killed is probably much higher.

Democratic participation improved somewhat in 1920 when the nation ratified the 19th Amendment to the United States Constitution, giving women the right to vote. Ratification of the 19th Amendment made decisions about the management of public lands somewhat more democratic. However, in practical terms, the 19th Amendment only extended the right to vote to white women. Continued discrimination in the voter eligibility laws prevented African American men and women from voting for another 45 years.

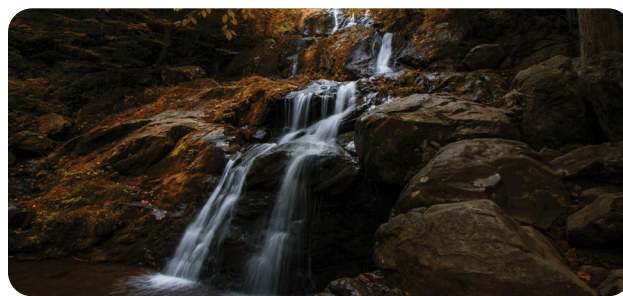
In 1924, the Indian Citizenship Act granted Indigenous people United States citizenship. Before passage of the Act, there were limited pathways to citizenship and voting rights for Indigenous people. The Indian Citizenship Act was controversial, even among tribal members. Some tribes and Indigenous people opposed the Act out of fear that it would undermine their rights as citizens of sovereign

nations and erode their sovereignty over ancestral lands. Despite this opposition, the Act became law in 1924. However, the Act did not immediately confer voting rights on Indigenous people. Some states withheld these rights for many years. New Mexico did not allow Indigenous people to vote until 1962.

In 1965, Congress passed the Voting Rights Act. The Voting Rights Act gave meaning to the Fifteenth Amendment to The Constitution by outlawing the discriminatory voting processes that denied People of Color access to the ballot for decades. This allowed dramatically more People of Color to participate in the democratic process. Despite passage of the Voting Rights Act, some voter suppression efforts continue to this day.

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## Public Lands During the Great Depression



From the early 1920s through World War II, the conservation and preservation movement advanced slowly. The Great Depression halted many conservation efforts into the 1930s. However, during the era of the New Deal, government leaders saw conservation as an opportunity to create jobs. In 1933, the Civilian Conservation Corps (CCC) was created as a New Deal jobs program that offered young, unmarried men jobs, many of them on public lands. The CCC built many of the roads and structures that we see on public lands today. African Americans and Indigenous people were able to join the CCC. However, most lived and worked in segregated camps. A smaller program employed women during the same time period.

In 1934, Congress passed the Indian Reorganization Act, also known as the Wheeler-Howard Act. The goal of the Act was to encourage Indigenous nation sovereignty, restore some of the lands that had been lost due to the Dawes Act of 1887 and its subsequent amendments, and promote entrepreneurship, education, and employment opportunities. Indigenous peoples were allowed to vote on whether the act would apply to their tribe; it was rejected by 77 tribes and accepted by 266 tribes.

In 1935, Congress created Shenandoah National Park in the Blue Ridge mountains of Virginia. Creation of the park is a noteworthy act of land protection in the Eastern United States. However, the park was created by condemning private land and displacing 500 poor white families living in the area. Those people who were not physically removed were forced to leave when their subsistence hunting and fishing practices were criminalized.

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## The Postwar Years



In the early 1940s, conservation efforts fell by the wayside when the United States became embroiled in World War II. However, the latter half of the 1940s saw the re-emergence of federal public land management as a priority. In 1946, Congress created the Bureau of Land Management (BLM). Upon formation, BLM took over the functions of the General Land Office and the Grazing Service. It also became the biggest land manager in the United States, with 248 million acres of surface lands and 700 million acres of subsurface mineral rights. Shortly thereafter, Congress created the United States Fish and Wildlife Service in 1949. The Fish and Wildlife Service took over the management of the United States's National Wildlife Refuges.

During this period of renewed interest in federal land management, the government attempted to break up sovereign tribal nations and force assimilation through a series of laws promoting “Indian termination.” Between the mid-1940’s to mid-1960’s, the federal government terminated recognition of over 100 tribes, removed 2.5 million acres of trust land from reservations, and allowed states to exercise jurisdiction over tribes and reservations. Additionally, in 1956, Congress passed another relocation act that paid for relocation expenses and vocational training to encourage Indigenous people to leave reservations and settle in select urban areas, with the stated intent of making Indigenous people self-sufficient. Around 31,000 Indigenous people moved to cities, often far from their ancestral lands.

By the 1960s and 70s, the environmental movement in the United States was energized, this time with a focus not only on protection of public lands, but also protection of air and water quality around the nation. Rachel Carson’s 1962 book *Silent Spring* exposed the threat of environmental degradation caused by the chemicals used in pesticides and manufacturing and raised awareness of ecological issues in the United States. Immigrant farm workers laid the groundwork in the fight for the regulation of pesticides and continue to advance the cause to this day.

In the 1960s and 70s, Congress passed several laws that furthered the protection of federal public lands for conservation and recreation. These included:

**1964** The Wilderness Act, which authorizes the designation of wilderness areas, the highest form of federal public land preservation. The Wilderness Act established the National Wilderness Preservation System, which now encompasses 803 Wilderness areas totaling 111 million acres.

**1964** The Land and Water Conservation Fund Act (LWCF), which established an annual funding mechanism for acquiring high-value parcels of land for addition to National Parks, Forests, and Wildlife Refuges. LWCF also provides funding each year for the development of state and local parks and recreation facilities.

**1966** The National Historic Preservation Act, which created the National Register of Historic Places, National Historic Landmarks, and State Historic Preservation Offices to preserve sites of historical or archaeological significance.

**1968** The Wild and Scenic Rivers Act, which protects certain rivers and river corridors for their wild, scenic, and recreational value.

**1968** The National Trails System Act, which established the National Trails System that includes the Appalachian Trail, the Continental Divide Trail and the Pacific Crest Trail.

**1970** The National Environmental Policy Act (NEPA). NEPA is a bedrock law governing the federal decision making process that requires environmental review of the impact of proposed federal agency actions.

**1973** The Endangered Species Act, which protects fish and wildlife species at risk of extinction.

**1980** The Alaska National Interest Lands Conservation Act, a complex and wide-ranging law that sought to reconcile the needs of Indigenous subsistence hunters with the desire to create Wilderness areas in Alaska.

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## Changing Indigenous Legal Status



During the 20th century, Congress began to be more receptive to activism and advocacy of Indigenous peoples in favor of their rights. Throughout the last several decades, significant legal strides have been taken to protect Indigenous rights to land and cultural survival, though these rights continue to face significant challenges.

In 1978, following centuries of persecution at the hands of the United States government, the American Indian Religious Freedom Act (AIRFA) granted all “American Indian, Eskimo\*, Aleut, and Native Hawaiians” religious freedom and protected their right to conduct religious practices and ceremonies, some of which take place on public lands. Prior to this act, many Indigenous religious practices were prohibited by law. (\*Note that the term “Eskimo” is considered by many to be a derogatory term

due to its close ties to colonialism and white supremacy, and people who are not Indigenous to the Arctic region should not use this term. It is used here only because it was used in AIRFRA.)

In the Arctic, as natural resource extraction became more economically profitable in the region, some Alaska Natives protested, arguing their land ownership rights were not being properly recognized. What followed was the passage of the Alaska Native Claims Settlement Act (ANCSA) on December 18, 1971. ANCSA authorized Alaska Natives to select and receive title to 44 million acres of land, and \$962,000,000 in cash as settlement of their aboriginal claim to lands within the state. Only a few years following this recognition of Indigenous rights to the economic benefits of the land in the Arctic region, the federal government took a huge step to protect federal public lands and Indigenous subsistence rights through the passage of the Alaska National Interest Lands Conservation Act (ANILCA) in 1980. This act protected 104 million acres of Alaska's highest value conservation lands as national parks, national wildlife refuges, national forests, national monuments, and conservation areas. ANILCA helped to both safeguard wildlife habitat and wilderness areas, as well as protect traditional and culturally important subsistence resources and practices for Native Alaskans.

In 1990, following advocacy by Indigenous leaders, Congress passed the Native American Graves Protection and Repatriation Act (NAGPRA), which established the right of "Indian Tribes and their lineal descendants" to recover possession of human remains, sacred objects, and other important items that were taken illegally or unethically, often to be kept in museums and universities. The Act requires certain institutions to identify and repatriate such items to their original communities. Two years after the passage of NAGPRA, Congress amended the National Historic Preservation Act to include culturally important sites for Indigenous communities. This qualified Indigenous cultural and religious sites to be added to the National Register of Historic Places, and requires federal agencies to evaluate the impact of all federally funded or permitted projects on historic properties through a process known as Section 106 Review.

In the present day, Indigenous tribes and nations have a unique legal position regarding federal public lands management. In addition to constitutional, treaty, and statutory requirements, each federal public land management agency has its own established policy requiring consultation with Indigenous governments on a variety of federal public land management decisions. In some locations, federal land managers are exploring co-management of public lands with Native Nations and entities like the Bears Ears Intertribal Coalition. These co-management arrangements involve shared decision-making based in part on the Traditional Knowledge of indigenous groups combined with Western science. Each one of these co-management arrangements is unique to the location in which they are being implemented. For more discussion on land co-management, see Module 5 — Current Issues in Public Lands Management.

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## Civil Rights and Public Lands



The United States' system of federal public lands was developed during a time when discrimination against Black Americans, and the violent enforcement of that discrimination, was protected by law. From the end of the Civil War Reconstruction period in 1877 until 1964, Jim Crow laws established and enforced a pervasive system of racial segregation in the United States. These laws separated Black Americans and other People of Color from white people in motels, restaurants, public transportation, public schools, colleges and universities, marriage, and many other legal and social institutions. Restrictive voting laws and practices also limited the rights of Black citizens and others to vote to change these laws, primarily in southern states.

Jim Crow laws were applied in some national parks in southern states through the designation of "Negro areas" within the parks. Black people were allowed to visit the parks, but were directed to camp and picnic in designated areas where they could not be seen by white people.

Generally, the parks followed local law and custom regarding segregation. Some bathroom facilities differed in quality with comfort stations for white visitors and pit toilets for People of Color. Some picnic grounds were segregated, as well as dining rooms, coffee shops, cabins, and even parking lots. Park visitors and civil rights groups sent many letters to the National Park Service objecting to segregation in national parks. One school teacher wrote that parks should be like embassies, with full rights for all.

Despite this discrimination, national parks were the only public parks available to People of Color in some areas. In 1939, Department of the Interior Director Harold Ickes experimented with integrating a single picnic area in Shenandoah National Park hoping to show it could be successful. By 1945 all picnic areas, overnight areas, and concessions were desegregated in Shenandoah National Park.

In 1964, Congress passed the Civil Rights Act, which outlawed discrimination on the basis of race, color, religion, sex, or national origin. The Act prohibited the states from discriminating in the voter registration process and outlawed racial segregation in schools, employment, and public spaces. The following year, Congress passed the Voting Rights Act of 1965 with the specific purpose of enforcing the voting rights conferred to People of Color by the Fifteenth Amendment to the United States Constitution. The Fair Housing Act, passed in 1968, outlawed discrimination in the real estate market on the basis of race, sex, sexuality, or citizenship. These landmark pieces of legislation ended

state-sanctioned racial segregation and enabled people to more fully participate in the democratic process. This has reduced the legal barriers that kept People of Color from fully enjoying our public lands, though many social and cultural barriers remain in place.

Throughout the 1960s, other populations that had been subject to discrimination continued to struggle to achieve acceptance and equal rights. Before 1962, homosexuality was illegal in the United States. However, in that year, Illinois became the first state to decriminalize homosexuality by repealing the state's sodomy laws. This began the slow process of destigmatizing homosexuality. Several states followed suit in subsequent years. In 1969, police raided the Stonewall Inn in New York City, a gay bar that served as a safe space for gay and lesbian people. The raid incited the Stonewall uprising, a protest against violence towards lesbian, gay, bi-sexual, trans, and queer people (LGBTQ). Within two years, LGBTQ rights groups were formed in every major United States city. In 2016, the Stonewall Inn was designated a National Monument, the first federal unit recognizing LGBTQ history.

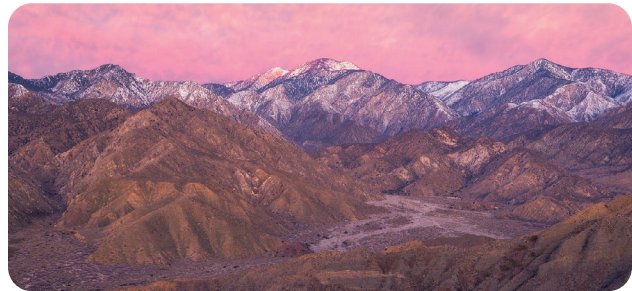
As these communities gained legal nondiscrimination protections, their rights, dignity, and wellbeing increasingly became part of the cultural consciousness. These considerations also found their way into federal public land management and decision making. Recently, several new land designations recognized the struggle for civil rights.

- 2015** President Obama designated Honouliuli, the site of a former Japanese internment camp, as a National Monument in recognition of the internment of Japanese Americans during World War II.
- 2016** President Obama designated Bears Ears National Monument in southeastern Utah. The monument includes numerous sites that are sacred to the Diné/Navajo, Hopi, Nuchu/Ute, Ute Mountain Ute, and A:shiwi/Pueblo of Zuni people who are a part of the Bears Ears Inter-Tribal Coalition. The coalition fought for decades to protect cultural artifacts in the monument from theft. The designation created a structure in which sovereign tribal nations would co-manage the monument and sit alongside the National Park Service in making land management decisions.
- 2016** Stonewall became the first National Monument site dedicated to LGBTQ history one year after the Supreme Court legalized same sex marriage.
- 2017** President Obama designated three national monuments, Reconstruction Era, Birmingham Civil Rights, and Freedom Riders, to honor the Civil Rights movement.

- 2019** The John D. Dingell Jr. Conservation, Management and Recreation Act designated the Medgar and Myrlie Evers Home National Monument in Mississippi to honor the Civil Rights movement and Medgar Evers' assassination in 1963.

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## Federal Public Lands Today



Today, there are approximately 640 million acres of federal public land in the United States. Some lands are managed by agencies with a multiple use mandate, which requires balancing conservation, protection, and extractive industry. Other lands are managed by agencies that focus more on protection of land, water, wildlife, and historic and cultural resources. Each agency has a degree of discretion about how to manage lands within their jurisdiction.

Public lands are under constant pressure from interests that would like to use these lands and waters for other purposes. Efforts to conserve and protect federal public lands have long faced opposition from industries who believe the opportunity to extract resources from federal public lands should be prioritized.

At the same time, the protection of federal public lands for conservation and recreation consistently draws significant Congressional support. In early 2019, Congress passed the John D. Dingell, Jr. Conservation, Management, and Recreation Act - legislation that provides new protections for 2.3 million acres of federal public land and permanently reauthorizes and funds the Land and Water Conservation Fund. The Act passed both chambers of Congress by wide margins and was signed by Former President Trump.

The tension between protection of public lands and the development of those lands for commercial purposes will be discussed in more detail in Module 5.

## Module

# 2

## Lesson

# 1

# History of Public Lands

## Lesson at a Glance

### Timeline Activity (30 min):

Participants will examine public lands and social history events and share initial reactions.

### Debrief of Timeline Activity (25 min):

Pair and big group discussions with question prompts.

### Conclusion (5 min):

Review of concepts and feelings.

## Learner Outcomes

### Participants will:

- Learn about important events in the history of public lands.
- Understand that the federal public lands system was created in the context of complex social and historical movements.
- Recognize the importance of social history in defining access and stakeholders in the creation of public lands.

## Getting Ready

**Participants:** any

**Time:** 1 hour

**Materials:** Timeline events, paper for additions to timeline

**Preparation:** Lay out timeline events

**Location:** A large, flat space

**Objective:** To understand the history of public lands and waters in the context of diversity, equity, inclusion, and access.

## Timeline Activity (30 min)

1. Identify the area to create the timeline and identify one end as Time Immemorial, and the other end as today. Lay out 25-30 relevant events, making sure to include both environmental and social history.
2. Highlight some of the events that participants may know. Ask participants for any other events they would like to add and write them on a piece of paper to add to the timeline.
3. Have participants walk through the timeline. Ask students to do the walk silently and read each event.
4. As people have finished perusing the material, ask them to pair up and discuss their initial impressions and what surprised them until everyone has had an opportunity to review the timeline.

## Debrief of Timeline Activity (25 min)

After reading through the timeline together, allow participants to reflect independently through writing or silent contemplation:

*What is your immediate reaction to the timeline?*

Participants' feelings run the gamut from "mind blown!" to "guilty" to "tell me something I didn't know" to "no reaction" to "confused." Remind participants that all reactions are valid and in some ways representative of our relationship(s) to history and public lands.

*Is any of this information new? How is this representation of history the same or different from what you have read or have been taught?*

### Discuss these questions in pairs, then as a whole group:

*How are social conditions like slavery related to public lands?*

Mention that public lands creation, expansion, and management did not happen in a vacuum. The creation of public lands is reflective of attitudes past and present, for better or for worse. For example, although slavery may seem tangential to public lands management, the legacy of slavery impacts Black and African American perception, experiences, engagement, and participation in public lands management.

*Who created public lands and for whom were public lands created and protected? Who was excluded? What events in the timeline illustrate exclusion in the public lands and conservation movement?*

*How might the inability to vote have impacted everyone but white men? How might this have prevented these people from participating as decision makers in the birth of the public lands movement?*

Before 1965, African Americans, while they had the right to vote based on the ratification of the 15th Amendment on February 3, 1870, often times they did not have the ability to vote or participate in any public lands management decisions, because during most of this timeline they were fighting for basic rights due to slavery and the subsequent Jim Crow Laws.

Women of all races, on the other hand, did not have the right to vote until the 19th Amendment was ratified in 1920, so they too could not participate in public land management decisions prior to 1920. The ratification of the 19th Amendment opened up participation opportunities for white women, however, African American and Indigenous women were still not guaranteed the right to vote until much later.

Many groups like African Americans, Asian Americans, Latinxs/Chicanxs, Indigenous people, women, LGBTQ people, and non-Christians had concerns outside of public lands related to their physical and cultural survival. At the same time, policy makers actively prevented many such groups from being a part of the decision making processes. Some of these concerns facing groups who were not white European American males include slavery, genocide, forced removal/internment, and legalized discrimination.

*Given the exclusive nature of the public lands and conservation movement, what are some of the impacts of these events on public lands management and people's connection to land?*

- a. **Indigenous Dispossession:** Dispossession of Indigenous land resulted in small parcels of often non-arable land sectioned off for Indigenous peoples.
- b. **Erasure:** Most public lands are touted as “untrammeled, pristine, and untouched” with no discussion of Indigenous peoples who lived or currently live on these lands. Indigenous peoples are relegated to the status of a relic. Additionally, some public lands overlaid areas that have become culturally important or sacred to African Americans, including former plantation lands and cemeteries, refuge maroon colonies, and newfound sacred sites for the religions (some still practiced today) carried over by enslaved Africans.
- c. **Distortion of Indigenous presence:** To the extent Indigenous peoples are mentioned, their narrative is distorted (e.g. Ahwahneechee/Miwok people were allowed to remain in Yosemite Valley if they performed native art for tourists).
- d. **Cultural appropriation:** Camps and outdoor programs often appropriate Indigenous culture, symbols, or other icons such as totem poles, feathers, and teepees, while simultaneously distorting or erasing the history of the Indigenous peoples.

- e. **Failure to acknowledge the trauma of racism in outdoor spaces:** Even well-meaning people may assume that the historic connections to land and artifacts of nature are universal; in fact, for many African Americans (especially older African Americans), spaces like formerly segregated parks, groves of trees where people may have been lynched, or mentions of things like hunting may recall painful and traumatic memories of racist violence.
- f. **Assumptions about environmental connections and what it means to “recreate” in nature:** Some assume that there is only a single way to connect to nature, namely, the John Muir-style solitary escape into “pristine” wilderness. The reality is that different communities connect in different ways based on their culture and history.
- g. **Myopic environmental and conservation curriculum:** The traditional narrative not only doesn't mention Indigenous people, People of Color, LGBTQ people, and to some extent women, but presents a narrow point of view generally held by notable white men from the 1800s and early 1900s, people such as John Muir, Theodore Roosevelt, Henry David Thoreau, Ralph Waldo Emerson, Gifford Pinchot, and Aldo Leopold.
- h. **Myopic understanding of protection and conservation:** Organizations often do not include communities' needs in the protection and conservation decision-making. Protection is often in service of the health of flora and fauna, or for traditional forms of recreation. Specific needs like Indigenous subsistence hunting and fishing and spiritual practices are not considered. In addition, conservation movements rely on science and may not value or consider traditional ecological knowledge or other ways of knowing.

## Conclusion (5 min)

1. Ask the participants to describe in one word how this activity made them feel. Acknowledge feelings of guilt, sadness, and anger.
2. Ask and allow for silent reflection, then group share:  
*How can we take pride in and advocate for our public lands without ignoring the complicated history surrounding them?*
3. Conclude on a hopeful note: there is a lot that we can do to bring to light a more complex and inclusive narrative: listening and learning, creating an welcoming experience on public lands, advocating for all voices to be heard in decision-making processes.

## Adapt the Lesson

Add in locally relevant events to the timeline.

To promote group work, allow students to order the events without looking at the dates.

**Indigenous Peoples have lived on this land since time immemorial.**

Native American Nations govern, respect, manage, and maintain ancestral lands.

Evidence for **Viking presence** in North America.

European countries, including England, Spain, and France, explore the Caribbean, Central and North America in search of trade routes. Operating under the Doctrine of Discovery, European countries legitimized colonization, invalidated Indigenous land ownership, and enslaved Indigenous peoples.

**Establishment of 13 British Colonies** along the East Coast of the North American continent. The Dutch, French, Swedish, Scottish, and Spanish also founded settlements during this time. Despite already being occupied by many Indigenous peoples, explorers and settlers take credit for discovering the land and claim it as their own. This starts a narrative that the land and waters belong to the European settlers rather than Indigenous peoples.

**African enslavement** begins with 20 Angolans who arrived in Virginia. The labor of enslaved peoples enables the settlement and development of land across many of the original British colonies. Slavery and its debate shapes and influences many early U.S. land decisions including the Louisiana Purchase and the Annexation of Texas. Slavery also shapes African Americans' relationship to the land. Many enslaved Africans spent their days planting, harvesting, and doing hard labor in fields often under brutal conditions including physical and psychological threats. Engagement with land was linked to a social hierarchy and reflected deeply entrenched racial power dynamics. Violence and subjugation of African Americans and white supremacy were early hallmarks of African Americans' relationships with land and open spaces. Ultimately over 400,000 Africans are enslaved and brought to North America.

Time Immemorial

~1000 AD

Late 1400's and 1500's

1607-1732

1619

Britain set the **Proclamation Line** to temporarily define the limits of colonial land in North America. Lands east of the Appalachian Mountains were declared colonial lands and the land west of the divide as an Indian Reserve. The Proclamation canceled all colonial land claims within the Indian Reserve and prohibited colonists from purchasing land in the Indian Reserve. Through subsequent treaties in 1768 and 1770 with Indigenous peoples, present day Kentucky and West Virginia were declared colonial lands.

The **Treaty of Paris**, marking the end of the American Revolutionary War (1775-83), acknowledges the sovereignty of the United States and defines the original borders of the United States as all of the land east of the Mississippi River, north of Florida and south of Canada (almost the exact border we have today).

The U.S. Constitution establishes the **government's authority over "property belonging to the United States"** and specifically the right to retain, dispose of, and manage lands. At the time of the Constitution's adoption, lands that were not under private or state ownership and were not claimed by a foreign power were considered part of the public domain.

Purchase of the Louisiana territory from France causes President Jefferson to launch the **Lewis and Clark Expedition**, by which the U.S. seeks to explore and map the new territory, find a navigable route across the western half of the continent, establish a territorial claim to today's Pacific Northwest region, assess the resources in the new territory, and establish relationships with Indigenous tribes throughout the region. Jefferson places special importance on declaring U.S. dominion over the lands occupied by the tribes. The expedition could not have been successfully undertaken without the support of Indigenous tribes and tribal members like Sacagawea and many others who guided Lewis and Clark.

**U.S. General Land Office (GLO)** is formed to survey and sell government-owned land. During its existence, the GLO administers two important land ownership/disposal laws; the Homestead Act and the Preemption Act.

1763

1783

1789

1804-1806

1812

Signed by President Andrew Jackson, the **Indian Removal Act** calls for the removal of Indigenous people, including the Chickasaw, Choctaw, Muscogee/Creek, Seminole, and **GWY**(tsa-la-gi)/Cherokee people, from their ancestral lands mostly in Southern states in exchange for lands in what would become parts of Oklahoma.

As part of the implementation of the Indian Removal Act, Indigenous people are forced to give up their lands east of the Mississippi River, in what is now Georgia and Tennessee, to move to lands in what would become Northern Oklahoma. Indigenous people later call this journey the **Trail of Tears** where they face internment, hunger, disease, and exhaustion. Out of 15,000 Indigenous people forced into the march, over 4,000 died.

The **Treaty of Guadalupe Hidalgo**, which ends the Mexican-American war, establishes the southern boundary of the United States as the Rio Grande River. Through the treaty, Mexico cedes parts of what is now Texas, all of California, and a large area comprising roughly half of New Mexico, most of Arizona, Nevada, Utah, and parts of Wyoming and Colorado. The treaty included a provision that the United States would respect land and water titles and allow the new citizens to remain on their land. However the U.S. ultimately does little to uphold those claims.

The **Indian Appropriations Act** displaces Indigenous populations across the United States. Fifty-six million acres of sovereign tribal lands (mostly west of the Mississippi) are established to permanently relocate Indigenous populations from across the country. Additional appropriations acts were passed between 1871 and 1889 and addressed the status of Indigenous nations as ‘wards of the government’, the ability to sell land, and the settlement of “unassigned lands” by European settlers and their descendants.

New York City’s **Central Park** is designed by Frederick Law Olmsted as an early example of urban conservation.

1830

1838

1848

1851

1857

The **Pacific Railway Act** provides government support for building the first transcontinental railroad. Some of the land acquired to build the railway is seized from Indigenous peoples. Railroads are built predominantly by East Asian laborers through the use of exploitative labor practices. The railroad, which was essential to getting people from the East to see public lands in the West, contributed to the decimation of the buffalo population, a vital food source for Native American people of the Plains region.

The **Homestead Act** provides homesteaders with 160 acres of land. A portion of the land made available under the Homestead Act was initially dispossessed from Indigenous people.

Under the **Yosemite Grant Act**, President Lincoln grants Yosemite Valley to California as a public park. The park could not have been designated without the forced dispossession in 1851 of Yosemite Valley from the Ahwahneechee/Miwok people. Some of the first park patrollers were the Buffalo Soldiers, an all African American army regiment.

General Sherman issues **Special Field Order #15**, setting aside land in coastal South Carolina, Georgia, and Florida to grant “a plot of not more than (40) acres of tillable land” to every family of formerly enslaved people. Months later, President Andrew Johnson overturned the order and returned the land to its former Confederate owners.

President Andrew Johnson signs the **Alaska Purchase** and acquires approximately 370 million acres for \$7.2 million. Native Alaskans were subjected to the same assimilation practices as Indigenous people in the continental U.S. Today, 220 million acres are federally protected parks and refuges in Alaska.

1862

1862

1864

1865

1867

The **Indian Appropriations Act** ended the practice of interacting with or recognizing tribes through treaties. Ostensibly, those treaties that were in effect at the time of the Appropriations Act remained in force. However, many of the promises made in those treaties were subsequently broken by the United States Government when it served the government's interests.

**Yellowstone** is designated by Congress as the **first National Park**.

Enacted in cities and states across the south after the Civil War, the first **Jim Crow Laws** legalize racial segregation and discrimination. Although slavery is abolished in 1865, African Americans continue to experience severe discrimination. Parks at the time are segregated with separate campgrounds and picnic areas for white people and People of Color. Public lands are not equally available and accessible to all when people enter the park. People of color are also terrorized by the rise of the Ku Klux Klan which carried out acts of violence, such as lynching, in wooded areas.

The **Chinese Exclusion Act** is passed to temporarily limit the immigration of Chinese people to the U.S. This law is the first of its kind to restrict immigration and target a specific national group. The Act was made permanent and more restrictive in 1902 and it wasn't until 1943, when China became a member of the Allied Nations in WW2 that the Act was repealed. Chinese and other East Asian laborers were instrumental in the construction of the transcontinental railroad, the mechanism of the 'See America First' campaign which encouraged people to travel west to experience the beauty of public lands.

Lands in the Adirondacks are reorganized into a **Forest Preserve**. New laws are passed restricting fishing, hunting, and making fires and law enforcement begins patrolling the Preserve. People not on the official map of the Adirondacks are deemed squatters and evicted. Wealthy residents put up fences and signs to keep poor people out of their lands. The state passes lumber trespassing laws criminalizing the cutting of trees except by lumber companies. It also passes arson laws prohibiting fires, and erects fire observation stations to enforce these prohibitions.

1871

1872

1877

1882

1885-1910

The **Dawes Act** is passed, calling for most designated tribal land to be divided up into individual allotments and those who accepted the parcels and agreed to live separately from the tribe were granted citizenship, effectively dismantling tribal governments and communally held land. Any excess land was confiscated by the federal government and sold on the open market. The Dawes Act dramatically reduced the amount of land owned by Native Americans over the next few years.

The federal **Forest Reserve Act** authorizes the president to create forest reserves, which later become National Forests under the purview of the Forest Service.

The **Reclamation Act** formalizes the ability of private corporations and agriculture to draw water from federal public lands. The Reclamation Act often supersedes Mexican-Americans claims to water rights that were initially protected in the Treaty of Guadalupe de Hidalgo.

Pelican Island is declared the first **National Wildlife Refuge**.

The **U.S. Forest Service** is established.

1887

1891

1902

1903

1905

The **Antiquities Act** gives the president the authority to establish National Monuments that have objects of historic or scientific importance. Bear's Den, also known as Devil's Tower, in Wyoming is established as the first National Monument. This was and is still a culturally significant area to many Indigenous tribes in the area.

The **Weeks Act** allows the federal government to purchase private land in service of protecting watersheds and streams, as well as setting aside land for forest reserves.

The **National Park Service** is established through the National Park Service Organic Act.

The **19th Amendment** grants women the right to vote. Prior to this date women of all races were unable to vote. This limited their ability to formally participate in public lands management decisions. The 19th Amendment opened up participation opportunities for white women. However, African American and Indigenous women are not guaranteed the right to vote until later.

The **See America First** tourism campaign gains traction when the National Park Service begins portraying national parks as national assets during the 1920s and encourages cross country train travel to visit these places. The campaign, launched earlier by railroads such as the Northern Pacific, Santa Fe, and Great Northern, is an attempt to increase rail ridership by promoting places like Yellowstone, Glacier, and Grand Canyon National Parks as tourist destinations.

1906

1911

1916

1920

1920s

The **Equal Rights Amendment** is introduced to prohibit discrimination based on sex. It eventually passes Congress in 1972, but fails to receive enough state ratifications to become law. Even though women could now vote, they continue to experience discrimination based on sex.

New Mexico's **Gila Wilderness** is established as the **first Primitive Area**.

The **Indian Citizenship Act** grants Indigenous people citizenship. It is met with a mixed reaction from Indigenous people, as some wish to remain as sovereign nations and citizens. The Act creates fear that Indigenous people will lose even further sovereignty over their ancestral lands after 300 years of dispossession.

The **Civilian Conservation Corps (CCC)** is created as a New Deal jobs program that offers young, unmarried men jobs on public lands. A similar series of "She-She-She" camps employ a small number of women on public lands for a short time. African Americans and Indigenous people were able to serve, mostly in segregated camps.

The **National Housing Act** creates the Federal Housing Administration, which permits redlining in housing deeds and covenants to prohibit People of Color and Jewish people from receiving loans, owning, or living in houses in certain neighborhoods. This impacts some people's basic rights to own land and property.

1923

1924

1924

1933

1934

The **Indian Reorganization Act** encourages Indigenous nation sovereignty, restores some of the lands that had been lost due to the Dawes Act of 1887 and its subsequent amendments, and promotes entrepreneurship, education, and employment opportunities for Indigenous peoples.

Establishment of **The Wilderness Society**.

**Shenandoah National Park** is created, and 500 families are displaced in the process. This is one of many public lands areas along the Appalachian Mountains that is created through the displacement of poor white families. To the extent families are not physically removed, they are forced out due to criminalization of subsistence hunting and fishing practices.

**Japanese Internment Camps** are established during World War II. America's Japanese citizens (some multigenerational) are interned in camps throughout the U.S. Most of these camps were on land that today is part of the federal public lands system.

The **Bureau of Land Management (BLM)** is established and takes over the responsibilities of the former General Land Office.

1934

1935

1935

1942

1946

The **U.S. Fish and Wildlife Service (USFWS)** is established.

Congress passes the **Indian Relocation Act**, which provided for relocation expenses and vocational training to encourage Indigenous peoples to leave reservations, settle in select urban areas, and become more “self-sufficient.” This Act is part of a series of laws promoting “Indian termination” from the mid-1940s to mid-1960s - the federal government terminated recognition of over 100 tribes, removed 2.5 million acres of trust land from reservations, and granted states jurisdiction over tribes and reservations.

Illinois becomes the first state to **decriminalize homosexuality** by repealing sodomy laws. Several states follow in the years to come, starting to legalize and destigmatize homosexuality.

Rachel Carson’s 1962 book **Silent Spring** exposed the threat of environmental degradation caused by the chemicals used in pesticides and manufacturing and raised awareness of ecological issues in the U.S. Immigrant farm workers laid the groundwork in the fight for the regulation of pesticides and continue to advance the cause.

The **Wilderness Act** establishes Wilderness, the highest form of federal land preservation.

1949

1956

1962

1962

1964

The **Civil Rights Act** is passed, opening the door for people of all identities, regardless of race, color, religion, sex, or national origin, to access public accommodations throughout the U.S.

The **Land and Water Conservation Fund**, a critical conservation and recreation program, is created from the royalties of off-shore oil and gas drilling.

The **Voting Rights Act** provides legal protection against racial discrimination in exercising the right to vote. This act marks the point in time that all Americans are fully eligible to participate in public lands management decision-making.

The **Wild and Scenic Rivers Act** is passed to protect rivers and river corridors.

The **National Trails System Act** establishes the National Trails System, which establishes the Appalachian Trail and the Pacific Crest Trail.

1964

1964

1965

1968

1968

The **Indian Civil Rights** Act grants Indigenous people most of the Bill of Rights, including the right to free speech, freedom from unreasonable search and seizure, and protection against cruel and unusual punishment. It is worth noting that this act came after the Civil Rights Act, and that up to this date discrimination against Indigenous people was both condoned and legal.

Police raid the **Stonewall Inn** in New York City, an establishment created as a safe space for gay and lesbian people, inciting the Stonewall Riots that protest violence against LGBTQ people. Within two years of this event, LGBTQ rights groups sprouted up in every major U.S. city.

Congress passes the **The National Environmental Policy Act** requiring environmental review of the impact of proposed federal agency actions.

Following the discovery of oil in the Arctic, some Alaska Natives protested, arguing their land ownership rights were not recognized. In compensation, the **Alaska Native Claims Settlement Act (ANSCA)** authorized Alaska Natives to select and receive title to 44 million acres of land, and \$962,000,000 in cash as settlement of their aboriginal claim to lands within the state.

The **Endangered Species Act** passes to protect fish and wildlife.

1968

1969

1970

1971

1973

The **American Indian Religious Freedom Act (AIFRA)** grants all “American Indian, Eskimo, Aleu, and Native Hawaiians” religious freedom under the United States Constitution and protects their right to conduct religious practices and ceremonies, some of which take place on public lands. For centuries prior to this act, many Indigenous religious practices were prohibited by law.

**Alaska National Interest Lands Conservation Act (ANILCA)** protects 104 million acres of Alaska’s highest value conservation lands as national parks, national wildlife refuges, national forests, national monuments, and conservation areas. The law helped to safeguard wildlife habitat and wilderness areas, as well as traditional and culturally important subsistence resources and practices.

The **Americans with Disabilities Act** prohibits discrimination against people with disabilities in all areas of public life including employment, transportation, public accommodations, and access to state and local government services.

The **Native American Graves Protection and Repatriation Act (NAGPRA)** establishes the right of “Indian Tribes and their lineal descendants” to recover possession of human remains, sacred objects, and other important objects that were taken illegally or unethically. The act requires certain institutions to identify and repatriate such items to their original communities.

During the first National People of Color Environmental Leadership Summit, the participants draft the **17 principles of Environmental Justice** to guide the fight against environmental discrimination.

1978

1980

1990

1990

1991

First enacted in 1966 to protect historic properties and archeological sites from destruction, the original **National Historic Preservation Act** did not mention Indigenous people or their culturally important sites. In 1992 the act was amended to include Native American cultural and religious sites on the National Historic Register. Among other things, the act requires federal agencies to evaluate the impact of all federally funded or permitted projects on historic properties (buildings, archaeological sites, etc.) through a process known as Section 106 Review.

The **Defense of Marriage Act (DOMA)** passes, barring the federal government from legally recognizing the validity of same-sex marriages.

The **Omnibus Public Land Management Act** adds millions of acreage to existing federal protection schemes, expands the types of designations, and expands the role of agencies in protecting federal public lands.

The **Matthew Shepard and James Byrd Jr. Hate Crimes Prevention Act** is signed, which extends the definition of a hate crime to include hate crimes based on gender identity, gender expression, sexual orientation, and ability.

**Honouliuli**, the site of a former Japanese internment camp, is designated a National Monument.

1992

1996

2009

2010

2015

**Stonewall** becomes the first National Monument site dedicated to LGBTQ history, one year after the Supreme Court legalizes same-sex marriage.

President Obama designates **Bears Ears National Monument** in southeastern Utah. The monument, designated at the request of the Bears Ears Inter-Tribal Coalition, includes numerous sites that are sacred to Hopi, Diné/Navajo, Nuchu/Ute, Ute Mountain Ute, and A:shiwi/Zuni tribal members.

Three national monuments, **Reconstruction Era, Birmingham Civil Rights, and Freedom Riders**, are designated to honor the civil rights movement.

**Medgar and Myrlie Evers National Monument** (Mississippi) is created to honor the civil rights movement and Medgar Evers's assassination in 1963.

2016

2016

2017

2019

## Module

# 2

## Lesson

# 2

# Early Attitudes and Perceptions of Wilderness

## Lesson at a Glance

**Journal Activity (10 min):** Participants will reflect on their own values and perceptions of “wilderness” and discuss.

**Word Clouds Activity (20 min):** Participants will read passages describing foundational concepts of North American colonization and early land-based values and will create group ‘word cloud’ visuals.

**Small and Large Group Debrief (20 min):** Groups will discuss connections between foundational concepts and early values in small groups, then combine with other groups to share ideas. Large group will converge to review concepts.

**Journal Activity and Conclusion (10 min):** Participants will consider how Manifest Destiny, settler colonialism, and early wilderness values are reflected with their own perceptions of wilderness.

## Learner Outcomes

### Participants will:

- Review the concepts of Manifest Destiny and settler colonialism and explore early land-based values.
- Understand how foundational concepts of European colonization of North America connect to early land-based values.
- Connect personal perceptions of wilderness to historical concepts.

## Getting Ready

**Time:** 1 hour

**Materials:** paper for journaling, seven large pieces of paper, printed cards for word cloud activity, markers and pencils

**Location:** A space to sit in a circle and move around

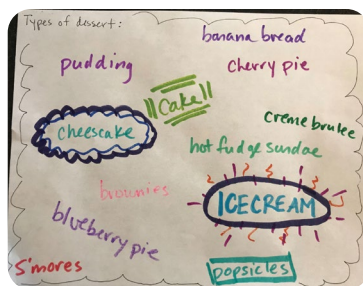
### Objective:

To understand how the connection between foundational concepts of European colonization and early land-based values have influenced current day perceptions of wilderness.

## Journal Activity (10 min)

1. Ask participants to think about the word “wilderness.” What thoughts, ideas, emotions, and images come to mind? Take five minutes to journal silently. This can be in the form of a paragraph, words and phrases, and/or drawings.
2. Bring the group back together and take a few minutes to share and discuss responses. Create a ‘word cloud’ of the group’s responses- a visual way to call attention to repeated topics, themes, and concepts. As participants share, note common words and concepts on a large piece of paper. If a word is mentioned more than once, emphasize the word or concept in some way on the paper ie. add more color to words that are repeated, make the font bold.

Word cloud example: *What is your favorite dessert?*



3. Note any trends that you’re seeing.
4. **Ask:** *Where do you think our perceptions of wilderness come from?*
5. **Conclude:**

The concept of ‘wilderness’ and our public lands system is rooted in the foundational values that drove the colonization of North America. We’re going to explore these early wilderness values and other topics in more word cloud activities.

## Word Clouds Activity(20 min)

1. Break participants into six groups. Give each group a large piece of paper and one of the cards explaining Manifest Destiny, settler colonialism, and four early wilderness values. Ask each group to create their own 'word cloud' based on the concepts on their cards.
2. After 10 minutes, ask the groups to use the remaining 10 minutes to visit other concepts and add to the word clouds, either by adding a new word or concept or highlighting one already identified.

## Small and Large Group Debrief (20 min)

1. Ask the group to come back together and explain that settler colonialism and Manifest Destiny provided the foundation for European settlement of North America and, ultimately, is the foundation on which the conservation movement and early wilderness values was created. Briefly review the 6 concepts, identifying the main concepts noted below.

*Foundational Concepts of North American Colonization:*

- **Settler colonialism:** settlers intend to stay, replace original populations through violent domination, legal actions and assimilation. The settlers believe they are racially superior to Indigenous people.
- **Manifest Destiny:** belief that American settlers were destined to expand across North America. 3 themes- that American people and institutions were inherently special; that an agrarian and domesticated America is an ideal state; expansion was irresistible, essential, and was the will of God. Preserving landscapes in their natural states wasn't a part of this- natural landscapes were considered evil, chaotic, and sinister, dangerous places that were empty and needed to be converted to productive places.

*Early Land-Based Values*

- **Transcendentalism:** wilderness as a place where one could commune with God through appreciating beauty. Though wilderness was still a potentially dangerous place, facing its challenges was a noble endeavor. A person could be closer to God, improve themselves, and find a true home in the wilderness.
- **Preservation:** wild spaces should be protected from any human impact.
- **Conservation:** wilderness had resources that humans were entitled to extract and use. Conservation advocates for extracting resources responsibly so that they will be available for future generations.
- **Rugged individualism:** connection to nature fosters and encourages rugged individualism to combat the ease of city life and the dangers of "eroding masculinity" presented by industrialization.

2. Divide the group into small discussion groups (2-3 people) and ask them to respond to the following questions:

*What connections do you see between the foundational concepts of North American settlement (settler colonialism and Manifest Destiny) and early land-based values? What are some similarities or common themes in the word clouds?*

*How are the land-based values different from the foundational concepts of North American settlement (settler colonialism and Manifest Destiny)? What words and themes in the word clouds highlight differences?*

3. Ask each small group to combine with another, share their thoughts, and discuss common themes. After 5 minutes, ask for a few volunteers to share with the big group.

## Journal Activity and Conclusion (10 min)

1. Ask participants to take 5 minutes of quiet reflection to revisit their journal entry about what wilderness means and pose the following question:

*How are these concepts (settler colonialism, Manifest Destiny, transcendentalism etc) reflected in your own perceptions of wilderness?*

If time, ask participants to consider completing a final word activity cloud in their journal and offer this quote:

*"Mother Earth is not a resource. She is an heirloom." David Ipina, Yurok Tribe*

2. Offer space for participants to share their thoughts on the journal prompt or the final word cloud. Note that these values discussed are the basis for the current day system of conservation and land management. Pose these questions for discussion.

*What voices are missing? What other values and ways of knowing should we consider?*

Conclude with the importance of including the perceptions and values of all people in the conservation movement, especially those that have been historically excluded and erased.



## Foundational Concepts of North American Colonization

**Colonialism** is the process by which one country controls the political activities and economic resources of another through (1) forced entry into their territory; (2) alteration and destruction of Indigenous cultures and patterns of social organizations; (3) domination of Indigenous people; and (4) development of elaborate justifications for these actions. The colonizers' actions all work to benefit the home country.

**Settler colonialism** is a type of colonialism where the colonists stay on the land they colonize and never intend to leave. In the U.S., settler colonialism takes the form of stimulating economic growth through development and natural resource extraction, and implementing political structures that disadvantage People of Color, Indigenous people, women, non-Christians, and other communities who face oppression.

*“The history of the United States is a history of settler colonialism — the founding of a state based on the ideology of white supremacy, the widespread practice of African slavery, and a policy of genocide and land theft.”*

Roxanne Dunbar-Ortiz  
Indigenous Peoples' History of the United States, 2014

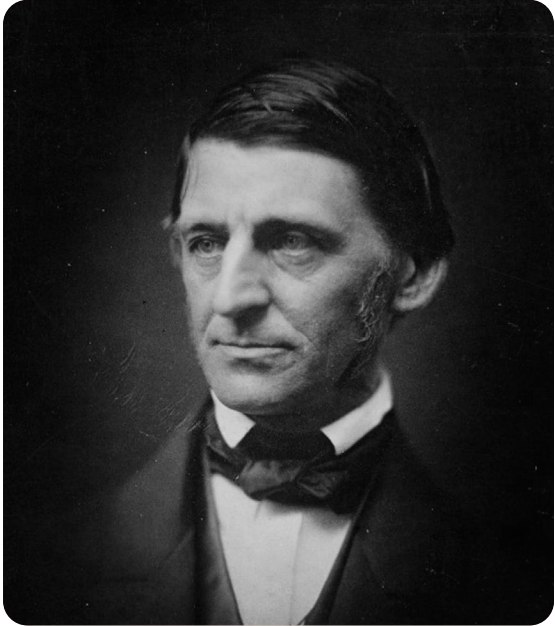


## Foundational Concepts of North American Colonization

**Manifest Destiny** was the belief that American settlers had a divine destiny to settle the West, and spread new American thought, culture, and institutions. Manifest Destiny was rooted in the idea that white European settlers were racially and culturally superior to other peoples, especially the Indigenous people they encountered and killed along the way. Early European settlers of North America saw land as theirs for the taking. They claimed land without consideration for Indigenous peoples who inhabited these lands, or the potential need to set land aside for conservation or public use.

*"This is our high destiny, and in nature's eternal, inevitable decree of cause and effect we must accomplish it. All this will be our future history, to establish on earth the moral dignity and salvation of man — the immutable truth and beneficence of God."*

John L. O'Sullivan  
The Great Nation of Futurity, 1839



## Early Land-Based Values

**Transcendentalism** — wilderness as a place where one could commune with God through appreciating beauty. Though wilderness was still a potentially dangerous place, facing its challenges was a noble endeavor. By fully immersing in nature, people and society can improve and by understanding nature, we can understand truth.

*“Nature is the place where God can be found. Nature is thus sacred; it is a source of nourishment, of beauty and inspiration. It is in Nature, therefore, and in Nature alone, that man can find what he needs: it is where God speaks to him; it is where man can regenerate himself, without the help of traditional, institutional religion—since his only religion, indeed, is Nature.”*

Ralph Waldo Emerson  
Nature, 1836

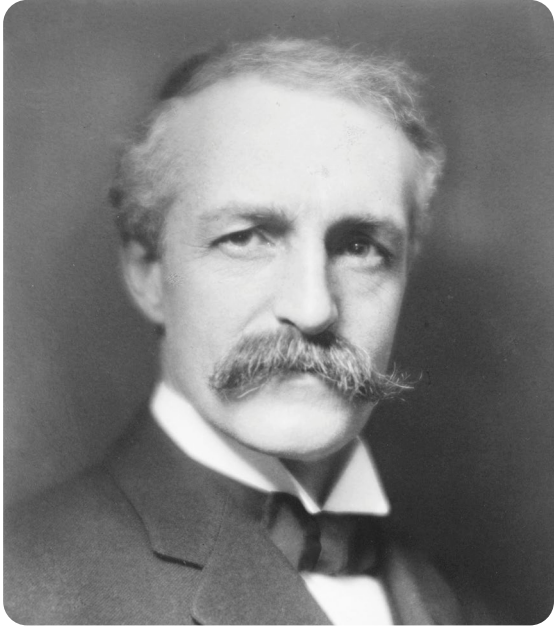


## Early Land-Based Values

**Preservation** — wild places should be protected from any human impact. A person could be closer to God, improve themselves, and find a true home in wilderness. All beings have worth, regardless of their value for human use.

*“As in Yosemite, the sublime rocks of its walls seem to glow with life, whether leaning back in repose or standing erect in thoughtful attitudes, giving welcome to storms and calms alike, their brows in the sky, their feet set in the groves and gay flowery meadows, while birds, bees, and butterflies help the river and waterfalls to stir all the air into music... Everybody needs beauty as well as bread, places to play in and pray in, where Nature may heal and cheer and give strength to body and soul alike...”*

John Muir  
The Yosemite, 1912



## Early Land-Based Values

**Conservation** — wilderness has resources that humans were entitled to extract and use. Conservation advocates for extracting resources responsibly so that they will be available for future generations.

*“The central thing for which Conservation stands is to make this country the best possible place to live in, both for us and for our descendants. It stands against the waste of the natural resources which cannot be renewed, such as coal and iron; it stands for the perpetuation of the resources which can be renewed, like the food-producing soils and the forests; and, most of all, it stands for equal opportunity for every American citizen to get his fair share of benefit from these resources, both now and hereafter...It recognizes fully the right of the present generation to use what it needs and all it needs of the natural resources now available, but it recognizes equally our obligation so to use what we need that our descendants shall not be deprived of what they need...”*

Gifford Pinchot,  
The ABC of Conservation, 1909



## Early Land-Based Values

**Rugged Individualism** — connection to nature fosters and encourages toughness and reliance on the self to combat the ease of city life and the dangers of “eroding masculinity” presented by industrialization.

*“A life of ignoble ease, a life of that peace which springs merely from lack either of desire or of power to strive after great things, is as little worthy of a nation as of an individual... If you are rich and are worth your salt, you will teach your sons that though they may have leisure, it is not to be spent in idleness; for wisely used leisure merely means that those who possess it, being free from the necessity of working for their livelihood, are all the more bound to carry on some kind of non-remunerative work in science, in letters, in art, in exploration, in historical research-work of the type we most need in this country...”*

President Theodore Roosevelt  
Strenuous Life, 1899

# Connections to Land and Water

### Main Takeaways

**While many of their stories have often been buried and ignored, Black, Indigenous, and People of Color have connections to the land, and all play an important role in conservation.**

**By sharing stories, we can deepen our understanding of how history plays a role in the many ways that people connect to public lands and waters.**

As we work to make the history of public lands more comprehensive and inclusive, it is important to acknowledge the multitude of ways people connect with nature and examine how historical and current events and attitudes shape these connections. Although the stories of Indigenous peoples, Black Americans, and other racially and ethnically diverse communities have largely been actively erased and ignored throughout United States history, these groups played and continue to play a role in the preservation of federal public lands, wilderness, and other shared public spaces. The widely publicized stories of John Muir, Theodore Roosevelt, Henry David Thoreau, Edward Abbey, and Aldo Leopold are a piece of public lands history, but to understand a more complete story of public lands we must give thoughtful attention to the environmental perspectives of Black, Indigenous, and People of Color.

This module explores the various ways in which people connect with the shared legacy of land and water, and provides a more all-encompassing history of the conventional stories around public lands. Some of these stories may be familiar, and some may be new. We encourage you to consider all of these stories in the context of the social and historical movements in which they occurred or are occurring. This compilation is far from exhaustive. We encourage you to seek out additional buried stories and share them with fellow participants and in your communities. Doing so is one way to uplift those who have been discriminated against throughout U.S. history and the conservation movement.

## Racially and Ethnically Diverse Leaders in Conservation History

Due to historical racism and discrimination, many early examples of Black, Indigenous, and People of Color (BIPOC) in conservation are in service positions. Later in the module we highlight several examples of BIPOC leadership in conservation.

In the 1770's, **Brister Freeman** and **Zilpah White**, freed Black Americans, lived around Walden Pond, which would later become the famed retreat of writer, environmentalist, and activist Henry David Thoreau. Prior to Thoreau's residency, Walden was a settlement for those who escaped slavery. The stories of Freeman and White, among other freed people, served as an inspiration to Thoreau.

**Sacagawea**, a Lemhi Shoshone woman, served as interpreter and guide for Lewis and Clark and the Corps of Discovery, starting in 1804. As a teenager, she traveled with her infant, helping negotiate passage over lands inhabited by various tribes and securing additional guides and horses for the party. She received no compensation for her services, but her French husband received \$500.

**The Buffalo Soldiers**, an all Black American army regiment, were among the first park and backcountry rangers, patrolling Yosemite and Sequoia National Parks on horse and bicycle. They served as park rangers between 1891 and 1913 when the United States Army was the official administrator of these National Parks. The Buffalo Soldiers were also recognized for

their exceptional horsemanship. They protected the parks from illegal grazing, poachers, timber thieves, and wildfires. They also oversaw the construction of park infrastructure, including the first trail to the top of Tumanguya, also known as Mount Whitney — the highest mountain in the contiguous U.S. — and the first wagon road into Sequoia National Park's renowned Giant Forest.

**Tie Sing**, a Chinese backcountry cook, worked for the U.S. Geological Society as they mapped and explored Yosemite National Park in 1915. Sing led an expedition of men who would eventually be instrumental in the management of federal public lands, including Stephen Mather, first director of the National Park Service.

**Charles Young** (1864–1922) was a military veteran who became acting superintendent of Sequoia and General Grant National Parks in 1903, the first Black American to hold the superintendent role. Young oversaw the creation of infrastructure and worked to suppress wildfires, poaching, and illegal grazing within the parks.

**George Washington Carver** (1864–1943) was a Black American agricultural scientist, botanist, and environmentalist who developed methods for improving soil in order to maintain sustainable harvests.

Black American men were allowed entry to serve in the **Civilian Conservation Corps** (1930–1942) but often faced discrimination, despite New Deal legislation banning the practice. Black American enrollment was capped at 10% and thousands of men were turned away. While a few camps were racially integrated, most Black Americans lived and worked in segregated camps. Their involvement in the CCC is largely undocumented though some Black American companies worked on special projects. In an area of Forest City, in Rutherford County North Carolina, for example, Company 5423-C workers gullied and fenced over 3,000 acres. They planted hundreds of trees and shrubs to reshape the land and stabilize the erosion. Indigenous people also participated in the CCC-Indian Division (CCC-ID) developing infrastructure on reservations. The CCC-ID was administered by tribal leaders with the assistance of the Bureau of Indian Affairs.

## Connections to Land — Examples of Dispossession and Placemaking by Black Communities

Historically and currently, racially and ethnically diverse communities of all types have been blocked from access to United States public lands. Colonization, eminent domain, segregation, and other forms of structural violence made existing on public lands nearly impossible for Black Americans for centuries. The federal public lands system in the United States was initially developed during a time when Jim Crow laws enforced legalized discrimination against Black Americans. This form of segregation extended to some national parks in Southern states which established “Negro Areas” within the parks. Beyond being unable to camp and picnic in areas where they could be seen by white visitors, Black visitors were often forced to use bathroom facilities, picnic grounds, dining rooms, coffee shops, cabins, and

parking lots of inferior qualities to their white peers. Despite the segregation and violence that Black, Indigenous, and People of Color have faced in the outdoors, their connections to the land remain strong. In the United States, Black people in particular have faced a uniquely intense legacy of violence and discrimination. White supremacy that grew out of slavery and ensuing anti-Blackness have plagued the United States since its inception. The following stories highlight how specifically Black communities have been historically dispossessed of public lands in the United States, and have also built places of safety and community amid the violence and injustice they faced and continue to face. In more recent years, efforts have been made to shift systems of power, such as through the #LandBack movement, whereas the majority of the stories documented here are examples of BIPOC folks working within existing systems of power.

### Seneca Village

One of most well-known urban public spaces in the United States is New York City's Central Park. Maintained by the Central Park Conservancy, the 843-acre park was first established in 1855 on the ancestral homelands of the Lenape people. The land was formerly a farm that was parceled out and sold by its owners to Black Americans, a practice rarely done at the time. Owning land was largely a gate-kept right, as it was a sign of Black American families' upward mobility, level of education and attainment, and a step to obtaining the right to vote. Of the 100 Black American New Yorkers eligible to vote in 1845, 10 lived in Seneca Village, however Black Americans who could legally vote still faced massive barriers to voting.

A group of free Black Americans who were associated with the African Methodist Episcopal Church were the first to purchase property on the land currently known as Central Park in 1825 — two years before the city of New York ended slavery in 1827. This community of mainly free Black Americans, called Seneca Village, was integrated and included some Irish and German residents. The community consisted of 70 buildings, including three churches and a school- one of the first schools available for Black American students at the time.



Historians believe that Seneca Village was a middle class community as there were many skilled Black American tradesmen residing there. Seneca Village's geographic distance from the established New York City neighborhoods allowed for many residents to take up jobs that were not primarily manual labor-based- which was atypical for many Black Americans. At this time in New York City's history, most of

the city's population lived below 14th Street; the region above 59th Street was only sporadically developed and was semi-rural or rural in character.

In 1855, planners in New York City decided to establish a public park on the site of Seneca Village to increase the city's economic value and desirability. Plans were made and the land was seized from Seneca Village community members without consultation. While landowners were compensated, many residents felt that their land had been undervalued. This example of community destruction and displacement was one early and prominent example of the use of eminent domain in United States history.

Today there are few indications of the history of Seneca Village in the landscape. Since the late 1990s, a group of historians and archaeologists have been working to uncover the history of Seneca Village. In 2011, members of the Seneca Village Project organized an archaeological research effort focused on uncovering the identities of these former residents.

### American Beach

As discussed in Module 2, segregation kept Black people from freely enjoying United States public lands and spaces for Black people to recreate and relax were few and far between. When and where recreation was allowed, in a segregated world Black people were always at risk of being subjected to discrimination and humiliation. However, Black people across the country worked to make spaces for themselves in whatever capacity they could. One of these individuals was Abraham Lincoln Lewis, Florida's first Black millionaire and founder of Afro-American Life Insurance Company in Jacksonville, Florida.

In the 1930s, in the coastal counties of Nassau and Duval, there were no beaches open to Black people- "Whites only" signs covered Florida beaches. As Black people attempted to enjoy public lands, often they were subject to verbal harassment and physical beatings from local residents and the police. Lewis recognized the importance of having outdoor spaces for enjoyment and mental health and in 1935 he founded American Beach, Florida's first Black beach. American Beach was originally founded to give Lewis' employees a place to recreate but it became a safe haven for Black people throughout Florida and the South. Throughout the mid-20th century, American Beach was advertised as a place for Black people to enjoy "Recreation and Relaxation Without Humiliation." It drew Black people from all backgrounds, even celebrity authors and musicians like Zora Neale Hurston, James Brown, and Ray Charles. Desegregation in the 1960s decreased visitorship, but in the 1970s MaVynne Betsch (Lewis' granddaughter), also known as the Beach Lady, fought for its preservation. Her dream was realized when American Beach was recognized as a National Historic Site in 2002, three years before her death.

### Idlewild

Idlewild is a small community in Michigan currently with a population of 732, but in the first half of the 20th century it was a booming resort for Black people looking for reprieve from the segregated world. Originally the homelands of the Odawa/Ottawa people, it was homesteaded and developed by four white couples who saw an opportunity to sell land to a growing Black population. When Idlewild was first established

### 'The Negro Motorist Green Book'

Often simply called 'The Green Book', this series of books was first published in 1936 and were the brainchild of Harlem-based postal carrier Victor Hugo Green. Green, like many Black people at the time, had become frustrated with the risks of interstate travel. Many Black travelers couldn't find places to eat or sleep and needed to avoid "Sundown Towns" that required Black people to leave their city borders before sunset. Though largely unknown to white people, 'The Green Book' eventually sold upwards of 15,000 copies per year and was widely used by Black business travelers and vacationers alike. In his memoir "A Colored Man's Journey Through 20th Century Segregated America," Earl Hutchinson Sr. described purchasing a copy in preparation for a road trip he and his wife took from Chicago to California. "The 'Green Book' was the bible of every Negro highway traveler in the 1950s and early 1960s," he wrote. "You literally didn't dare leave home without it." For many Black people and other People of Color, this level of precaution when leaving the house was not novel, and public parks have also been unsafe for Black travelers during times of segregation.

Similar efforts to make travel for BIPOC and LGBTQ+ people safer are being created today in various other formats like [misterb&b](#), [noirbnb](#), and [Inclusive Journeys](#).

in 1912 it was only the third resort in the United States that catered to Black visitors. As one of the few places in the country Black people could relax, buy property, and build prosperous lives, Idlewild attracted an array of prominent Black historical figures, including Madam C.J. Walker and W.E.B. DuBois. After World War II ended, an influx of Black entrepreneurs began to invest in Idlewild. Businessmen like Phil Giles, Arthur "Big Daddy" Braggs, and William N. "Sunny" Wilson developed elaborate nightspots and business centers that added to Idlewild's appeal. During the height of visitation tens of thousands of people would come throughout the summer for recreation and entertainment. The lakes and wilderness of western Michigan offered beaches and boating opportunities when outdoor recreation was largely inaccessible for Black people in the United States. Idlewild also became a regular performance spot for Black performers and hosted famous musicians like Louis Armstrong, Aretha Franklin, The Four Tops, and many others. In its peak, Idlewild was known as "The Black Eden of Michigan." Once segregation was outlawed, Idlewild suffered a sharp decline in visitation as Black families and community members sought new frontiers in an integrating United States. In recent years, the current residents of Idlewild have taken steps to preserve the historic town and save its legacy.

### Sag Harbor

In the 1940s another Black beachfront community sprung forth in the midst of segregation to provide safe space for rest

and relaxation when most public lands were unwelcoming to Black people. Sag Harbor, Azurest, and Ninevah (or SANS) were subdivisions in Sag Harbor, New York. Before the American Revolution, East Hampton was a Black and Native American enclave, however when Sag Harbor became a United States entry port, the Black and Native population were pushed to an area southeast of the town. Maude Terry, a Brooklyn school teacher, vacationed in Sag Harbor in the 1940s and envisioned an investment opportunity for a Black summer community. The owner of what would become Azurest was struggling to sell on the marshy area and made a deal with Terry to partner together. In a world where buying property was gatekept from the Black community, Terry had huge success selling plots to Black people. She went on to manage the Azurest Syndicate, which made it possible for Black people to receive loans and mortgages to buy parcels and fund construction in the Sag Harbor area. The area grew in popularity for affluent Black people and Sag Harbor, Azurest, and Ninevah became cornerstone vacation spots throughout the Civil Rights Era. Today, residents and visitors are fighting for the preservation of the historical site.

### Allensworth, CA

Allensworth, California was another early haven for Black Americans looking to live a life safe and secluded from racism and segregation. It was originally established by Colonel Allen Allensworth, who was born an enslaved person in 1842 and escaped behind Union lines to serve as a chaplain for the 24th Infantry. He eventually retired as a lieutenant-colonel in 1906 with the highest rank of any Black United States soldier. After retirement, Allensworth met Professor William Payne and they worked together to establish a “Race Colony” with the goal of advancing Black people socially. It was governed and built entirely by Black community members and reached a peak population of around 300 residents in the early 1920s. It was home to the United States’ first Black elected officials- Josephine Allensworth, Oscar Overr, and William H. Hall were elected to the school board in 1912. However, the community was short lived, as the Pacific Farming Company broke its deal to deliver sufficient irrigation water to the community- building only four wells as compared to ten in a neighboring white town. After fighting expensive legal battles with the company, Allensworth’s population dwindled. In the 1960’s high levels of arsenic were found in the water and most of the remaining residents left, leaving Allensworth a ghost town. In the 1970’s California Parks and Recreation established Allensworth as a Historic Park to preserve its history as a haven for Black people.

### Oak Bluffs, MA

Martha’s Vineyard is a beautiful remote island location for New England’s affluent vacationers, though many are unaware of the Black history that took place in the small town of Oak Bluffs on the island. Originally inhabited by the Pauquunaukit Wampanoag/Pokanoket and the Wampanoag people, enslaved Africans came to the island, forced to work on white farms. However, in the 18th century freed Black Americans, Black laborers, sailors, and whalers came to the island to make a living off of whale oil. White landowners were willing to sell them land in an area known as Cottage City and this very early population of Black people laid the

foundation of a Black community on Martha’s Vineyard that would continue to grow. Once slavery was abolished, more and more Black people came to Martha’s Vineyard and, in the early 20th century, Cottage City was renamed Oak Bluffs, for the grove of oak trees that grew across the town. Eventually, middle class Black people began buying and renting vacation properties in the area. Oak Bluffs was branded “Inkwell”, a pejorative term referring to the skin color of Oak Bluffs’ inhabitants. Still, the rest of the island, like most of the country, was closed to Black people, so Oak Bluffs became one of the few places where Black people could vacation and enjoy the outdoors safely. In 1912, Charles Shearer and his wife, Henrietta Shearer opened the first inn for Black people on the island: Shearer Cottage. The Cottage was a great success and was often overbooked throughout the summer. Through its heyday, Shearer Cottage hosted Black celebrities including Madam CJ Walker, Ethel Waters, Paul Robeson, and later Lionel Richie and the Commodores. While much of Oak Bluffs’ history goes unrecognized and the town itself is now over 89 percent white, Oak Bluffs and Shearer Cottage are some of the few historic Black places that remain intact today.

## Contemporary Stories of Connection

The work to make public lands accessible and welcoming to all people requires understanding and respecting how people connect to the outdoors. Only when people forge & rediscover their own connections to the land around them will they feel inspired to protect nature and work to ensure that all people can access the benefits of public lands. The following stories illustrate examples of Black, Indigenous, and People of Color and organizations leading the conservation and environmental justice movement.

The city of Tucson, Arizona is home to **Saguaro National Park** and about 44 percent of Tucson’s population identifies as Hispanic and/or Latinx. Despite Latinx representation, of the park’s roughly 650,000 annual visitors, less than two percent self-identify as Hispanic. In an effort to become more culturally relevant and increase visitorship, the park created and hosted a viewing of a potential advertisement to a Latinx focus group. The ad featured a Latino man walking through the woods. The focus group responded with confusion: “Where’s his family?” or “What’s he running from?” In the words of a Latino school administrator in Saguaro, “rugged individualism” just doesn’t apply. “It’s like no, I’m going to bring my whole family, we’re going to be loud, we’re going to explore.”

The lessons learned by the City of Houston as they embark upon a \$220 million parks project called **Bayou Greenways 2020** are illuminating for federal public land management agencies. The Bayou Greenway will ultimately be a 150-mile network of continuous hiking trails, biking paths, and green space that will run throughout Houston. When the city’s parks and recreation department conducted its Master Plan Parks Survey in 2014, the majority of respondents replied that they wanted their neighborhoods and parks linked to biking and walking paths. Upon closer look, about two-thirds of the people who responded to the survey were white with household

incomes over \$75,000. To correct this misrepresentation, a group of researchers from Rice University conducted another survey in partnership with the Houston Parks and Recreation Department. This survey aimed to capture the voices of Black and Latinx Houstonians to find out what they wanted from the new park upgrades. The results showed that priorities differed from those of the initial survey- community connectivity was ranked last among priorities for Black and Latinx Houstonians. These respondents indicated that they wanted clean, functioning public bathrooms and water fountains, better lighting to make parks safer at night, better playground equipment, and an array of recreational infrastructure.

To explore the historical relationship of communities of color and the outdoors, a group of hikers from **Outdoor Afro** followed portions of the Appalachian Trail that overlap the Underground Railroad, following a path that Harriet Tubman may have taken.

There are a handful of **modern examples of Black placemaking** in the United States. In her article ‘Black and Brown Placemaking Rooted in Identity and Ownership’, Ebony Walden writes “Local projects that I have worked on as an urban planning consultant that desire to reimagine once prosperous Black neighborhoods in our current landscape have craved this rootedness in cultural identity, art, business and prosperity. These values and ideas were reflected in the recent neighborhood plan for the area of Jackson Ward, VA and the Staff Hill Small Area Plan that I worked on in Charlottesville’s Vinegar Hill, a Black community razed by Urban Renewal. Both projects’ values and goals were rooted in equity and Black prosperity and created a vision for homeownership, entrepreneurship, and cultural arts rooted in Black American history and culture. There are models for this type of placemaking around the country. There is Domino Park in Little Havana in Miami, a park infused with art, community and play specifically for Latinos; or Homecoming, an art project that preserves and celebrates Black stories and presence in the Hill Neighborhood in Pittsburgh.”

In August of 2018, Jolie Varela and Indigenous women from **Indigenous Women Hike** traveled to Nüümü Poyo, a historical Paiute trading route which overlaps with portions of the John Muir Trail and Pacific Crest Trail. The group traveled under the American Indian Religious Freedom Act of 1978 which protects the rights of Native Americans to exercise their traditional religions, connecting with Paiute history and educating other hikers and the conservation community about reclaiming Native American lands and heritage.

In 2018, **Tyler Lau**, a dual citizen of the U.S. and Hong Kong known on the trail as “The Prodigy,” became the first person of color and the 10th person in history to complete the Triple Crown: hiking the Pacific Crest Trail, the Continental Divide Trail, and the Appalachian Trail in a calendar year. Tyler hiked 8,000 miles to raise awareness and support for public lands, People of Color on public lands, and organizations that serve youth of color in Montana, California, and the Northeast.

The Sierra Club and the National Council of La Raza’s 2012 **National Latinos and the Environment** survey

investigated the stereotype that Latinx people do not care about public lands and conservation. The survey dispels this stereotype as it reports that:

- 9-in-10 (92%) Latinx voters agree that they “have a moral responsibility...this earth — the wilderness and forests, the oceans, lakes and rivers.”
- More than 9-in-10 Latinx voters (94%) say outdoor activities such as fishing, picnics, camping, and visiting national parks and monuments are important to them and their families.
- Nearly 7-in-10 (69%) Latinx voters say they would support the president designating more federal public land as national monuments.

**MaVynne Betsch** donated all of her wealth, including her home, to environmental causes starting in the 1970s. She convinced the National Park Service to protect 8.2 acres of sand dunes on Amelia Island’s American Beach. Her great grandfather had purchased it in the 1930’s so Black people could live on and visit the beach in Florida during Jim Crow segregation.

**Marquettea Goodwine** (known as Queen Quet), along with her community in South Carolina, was instrumental in establishing the Gullah Geechee Cultural Heritage Corridor. Designated in 2006, the federally recognized heritage site celebrates the unique culture of the Gullah Geechee people who have traditionally resided in the coastal areas and the sea islands of North Carolina, South Carolina, Georgia, and Florida.

Starting in 1972, **John Francis**, the Planetwalker, spent 22 years refusing to ride in cars walking across the U.S. to spread a message of environmental respect and awareness of the harmful effects of oil spills. For 17 of those years, Francis did not speak. During his vow of silence, he completed three college degrees, including a PhD in Land Management from the University of Wisconsin - Madison, which he walked to from Montana.

Contemporary **Acequia farmers** in Southern Colorado and Northern New Mexico are Indo-Hispanic farmers who have a unique understanding of high desert ecology that informs their farming, seed saving practices, water sharing practices, community relations, and erosion prevention. Though often not marked as “conservationists” by the environmental community, their farming practices and place-based knowledge certainly center around conserving the health of the land and community.

The **Ancestral Land Corps Program** is a Southwest Conservation Corps program currently run by and for Indigenous peoples who are engaging in various projects to improve land and community on Native land.

Farmer and homesteader **Israel Lafayette Jones**, who was likely born into slavery, bought three islands in Key Biscayne, FL in the late 1800s. A guide and naturalist, his son **Lancelot Jones** resisted developers and sold the land to the National Park Service to create Biscayne National Park in 1980.

**Black/Land** (<http://www.blacklandproject.org>) is a project that brings together and amplifies the stories, knowledge, and language Black Americans across the country are already

using to discuss their relationship with land and place. Through personal interviews, founder and director of Black/Land Project, Mistinguette Smith, collects and analyzes these stories of connection to build a shared resource, for and by these Black communities, of their “powerful traditions of resourcefulness, resilience, and regeneration.”

The **National Association of Tribal Historic Preservation Officers** was founded in 1998 to bring together tribal government officials who work to preserve the culture and traditions of Indigenous peoples in the

United States. Occasionally partnering with the National Park Service, the association is committed to tribal sovereignty, confidentiality within religious places, and the preservation of Indigenous cultures beyond the boundaries of reservations.

Many Indigenous-led organizations, like the **Native American Fish and Wildlife Society**, promote the conservation of natural resources on tribal reservations and around the world using Indigenous methods, called traditional ecological knowledge (TEK).

## Organizations and People to Follow

There are many people and organizations who are committed to amplifying and telling a broader range of stories surrounding conservation and recreation. The landscape is ever growing and changing. Several of these organizations

and people are social media influencers in the space. Look up the websites, social media feeds, and events for the following organizations and continue to update this list on your own.

<b>Adventures for Hopi</b>	<b>Greening Youth Foundation</b>	<b>Outdoor Afro</b>
<b>Asian Pacific Environmental Network</b>	<b>HECHO (Hispanics Enjoying Camping, Hunting, and the Outdoors)</b>	<b>Outdoor Asian</b>
<b>Bears Ears Inter-Tribal Coalition</b>	<b>Hispanic Access Foundation</b>	<b>PGM ONE (People of the Global Majority in the Outdoors, Nature, and Environment)</b>
<b>Black Freedom Outfitters</b>	<b>Homoclimbtastic</b>	<b>Pride Outside</b>
<b>Brothers of Climbing</b>	<b>Indigenous Women Climb</b>	<b>Queer Nature</b>
<b>Brown Environmentalist</b>	<b>Indigenous Women Hike</b>	<b>Soul River</b>
<b>Brown Girls Climb</b>	<b>Latino Outdoors</b>	<b>Team Blackstar Skydivers</b>
<b>Brown People Camping</b>	<b>LGBTQ Outdoor Summit</b>	<b>The Gwich'in Steering Committee</b>
<b>Color the Crag</b>	<b>Melanin Basecamp</b>	<b>The Venture Out Project</b>
<b>Diversify Outdoors</b>	<b>Native Women's Wilderness</b>	<b>Tierra Libertad</b>
<b>Earthtone Outside</b>	<b>Natives Outdoors Nepantleras</b>	<b>Trail Brothers Initiative</b>
<b>Fat Girls Hiking</b>	<b>Next 100 Coalition</b>	<b>Unlikely Hikers</b>
<b>Flash Foxy</b>	<b>Nuestra Tierra Conservation Project</b>	<b>Utah Diné Bikéyah</b>
<b>Green Latinos</b>	<b>OUT There Adventures</b>	<b>Women of Color in Nature</b>
<b>Green Muslims</b>		

## Module

# 3

## Lesson

# 1

# Voices in the Conservation Movement

## Lesson at a Glance

**Experiences of Black, Indigenous, and People of Color (25 min):** Participants will read stories of diversity in the outdoors and discuss.

**Conclusion (5 min):**  
Reflection and questions

## Learner Outcomes

### Participants will:

- Explore experiences and contributions of Black, Indigenous, and People of Color in the public lands movement.
- Name one way they can help honor all connections to public lands and waters.

## Getting Ready

**Time:** 20-30 minutes

**Materials:** Printed stories

**Location:** Indoor or outdoor with room to sit in a circle

**Objective:** To understand the importance of including all people and experiences in the conservation narrative.

## Experiences of Black, Indigenous, and People of Color (25 min)

1. Explain that the traditional history that we tell about public lands and conservation doesn't include the stories of all people, especially the experiences and contributions of Black, Indigenous and People of Color. Black, Indigenous, and People of Color experienced and still are experiencing dispossession, genocide, and erasure in the name of land conservation and the public lands system, however these marginalized groups also have been leaders in the protection of land and are helping people feel welcome on public lands. These stories represent some of the varied experiences that Black, Indigenous, and People of Color have had in relation to the public lands narrative, and highlight the contributions which may have been erased or overlooked.
2. Pass out printed stories and have each participant read a different story aloud about the experiences of racially and ethnically diverse communities on public lands. Facilitators may also choose to run this activity as a "gallery walk" (posting stories around the room and allowing participants to digest the material in silence) or as a "pair share" or "round robin" activity (each student pairs with another student to share their story).
3. Debrief:

*Which stories do you connect with? Why?*

*What stories surprised you? Why?*

*Why is it important to tell these stories in addition to the publicized stories of John Muir, Aldo Leopold, Theodore Roosevelt, etc.? By learning about these people and groups, we can honor their contributions to the preservation of public lands and help people understand that we all can play a role in helping to protect nature. Public lands aren't just for wealthy white people- they are for everyone and it's important for all people to be able to access the benefits of time spent in nature.*

*Do you know any other organizations or individuals who can help create a more inclusive narrative of the conservation movement?*

*What does diversity in the outdoors mean or look like to you?*

## Conclusion (5 min)

1. Ask participants to share one way they will help honor these connections to the land and stories from people whose voices traditionally haven't been represented in the conservation movement.
2. Allow time for questions.

**Sacagawea**, a Lemhi Shoshone woman, served as interpreter and guide for Lewis and Clark and the Corps of Discovery, starting in 1804. As a teenager, she traveled with her infant, helping negotiate passage over lands inhabited by various tribes and securing additional guides and horses for the party. She received no compensation for her services, but her French husband received \$500.

**Tie Sing**, a Chinese backcountry cook, worked for the U.S. Geological Society as they mapped and explored Yosemite National Park in 1915. Sing fed an expedition of men who would eventually be instrumental in the management of federal public lands, including Stephen Mather, first director of the National Park Service.

**The Buffalo Soldiers**, an all African American army regiment, were among the first park and backcountry rangers, patrolling Yosemite and Sequoia National Parks both on horse and bicycle. Charles Young became acting military superintendent in 1903, the first African American to hold the superintendent role. Young oversaw the creation of infrastructure and worked to suppress wildfires, poaching, and illegal grazing within the parks.

**George Washington Carver** (1864-1943) was an African American agricultural scientist, botanist, and environmentalist who developed methods for improving soil in order to maintain sustainable harvests.

In the 1770's, **Brister Freeman and Zilpah White**, freed African Americans, lived around Walden Pond, famed retreat of writer, environmentalist and activist Henry David Thoreau. Prior to Thoreau's residency, Walden was a settlement for people who escaped slavery, and the stories of Freeman and White, among other freed people, served as an inspiration to Thoreau.

African American men were allowed entry to serve in the **Civilian Conservation Corps** (1930-1942) but often faced discrimination, despite New Deal legislation banning the practice. African American enrollment was capped at 10% and thousands of men were turned away. While a few camps were racially integrated, most African Americans lived and worked in segregated camps. Their involvement in the CCC is largely undocumented, though some African American companies worked on special projects. In an area of Forest City, in Rutherford County North Carolina, for example, Company 5423-C workers gullied and fenced over 3,000 acres. They planted hundreds of trees and shrubs to reshape the land and stabilize the erosion. Indigenous peoples also participated in the CCC-Indian Division developing infrastructure on reservations. The CCC-ID was administered by tribal leaders with the assistance of the Bureau of Indian Affairs.

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**Outdoor Afro** continues to give voice to the myriad of African American and Black experiences in the outdoors. One connection that is often talked about is the healing aspect of nature. They support #HealingHikes for those who are healing from traumatic experiences or those who need to de-stress. One Outdoor Afro group recently explored portions of the Appalachian Trail that overlap with the Underground Railroad, following a path that Harriet Tubman may have taken.

**Latino Outdoors** has been working to tell the myriad of stories about the outdoors in the Latinx community. Latino Outdoors is a network of leaders committed to engaging Latinxs in the outdoors, connecting families and youth with nature, and supporting a community of storytellers to explore and share their personal experiences.

More than 9-in-10 **Latinx voters** (94%) say outdoor activities such as fishing, picnics, camping, and visiting national parks and monuments are important to them and their families. Latinx voters also express strong support for the protection of public lands and waters.

Starting in 1972, **John Francis**, the Planetwalker, spent 22 years refusing to ride in cars walking across the U.S. to spread a message of environmental respect and awareness of the harmful effects of oil spills. For 17 of those years, Francis did not speak. During his vow of silence, he completed three college degrees, including a PhD in Land Management from the University of Wisconsin — Madison, which he walked to from Montana.

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**NativesOutdoors** is working directly with tribal governments, community organizations, and individuals on increasing access to outdoor recreation and connecting resources and opportunities for Indigenous communities within the outdoor industry.

# Climate Change, Biodiversity, and Public Lands

### Main Takeaways

Human activities over the past ~150 years are driving the rise of global temperatures, which in turn, negatively impact the planet's ecosystems and biodiversity.

We know from a variety of sources — Indigenous knowledge, scientific and agricultural data, as well as our current lived experiences — both climate change and biodiversity loss are happening.

Public lands offer a variety of solutions to the climate change and biodiversity crises, because with proper land management, public lands can simultaneously address the inequitable impacts, biodiversity loss, and climate change mitigation.

## What are climate change and biodiversity loss, and how do we know this is happening?

Alex Sánchez, co-founder of the organization Voces Unidas de las Montañas, shared his story about how climate change is impacting his family and community as a part of the “Communities at the Heart of Climate Action” collection which highlights community members who are committed to protecting the people and places they call home.

Alex Sánchez grew up in a small town on the Mexican Pacific Coast called “El Colorado,” named after its bright red soil. Farming and ranching were at the heart of the community. Many families, including his own, produced corn, beans, and watermelon and raised livestock.

By the time Alex was nine, climate change combined with unfavorable agricultural trade policies made it almost impossible for the family business to remain productive. It became too hard to make ends meet. In search of better opportunities, the Sánchez family migrated north. By a twist of fate, they settled in another place called Colorado — this time in the United

States. They made El Jebel, a small town in the Roaring Fork Valley, their new home.

“Migration worldwide is tied to climate,” says Sánchez. “It’s tied to policies that are made by governments and institutions that create unintended consequences, and emigration is one of them.”

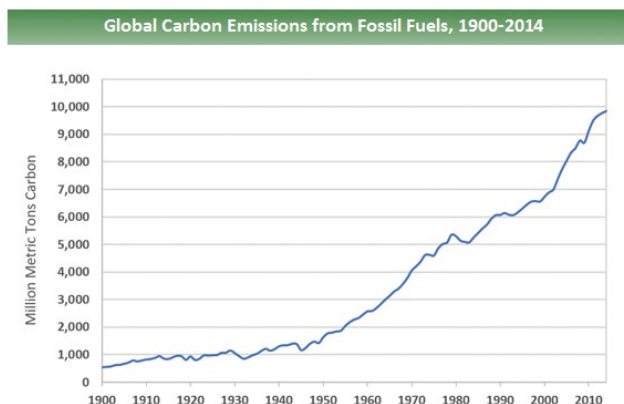
The experience had a lasting impact on Sánchez’s life. In Colorado, he became keenly aware of climate change and pollution around him. He noticed that communities of color were disproportionately burdened by the fossil fuel industry’s unchecked pollution and the resulting climate change impacts — including hotter days and smoke from nearby forest fires.

“On the Western slope in Colorado, it’s no secret where the pollution, bad water, and negative effects of industry ends up,” he says. “It’s next to communities that happen to be low income, that happen to be working families, that happen to be People of Color.”

## Climate Change

Our planet’s climate has changed many times throughout its history. Over geologic time our planet has been both warmer and cooler than it is now. However, in the past 100 years, our

planet’s average temperature has more rapidly risen compared to all other times in history, dating back several millennia. These changes have caused major landscape and species fluctuations (ice ages, mass extinctions, etc), but typically these changes happened over thousands of years, not hundreds



Source: Boden, T.A. Marland, G., and Andres, R.J. (2017). Global, Regional, and National Fossil-Fuel CO<sub>2</sub>Emissions. Carbon Dioxide Information Analysis Center, Oak Ridge National Laboratory, U.S. Department of Energy, Oak Ridge, Tenn., U.S.A. doi 10.3334/CDIAC/00001\_V2017.

of years as is happening now. We know this from many sources, but some of the strongest evidence is ice-core data that shows atmospheric gas composition including greenhouse gases, past air temperature variations, and glacial accumulation and melt rates. During the past 100 years, carbon emissions have rapidly increased and so have global temperatures. In this same 100 year period, history shows significant increase in extraction and burning of fossil fuels, major deforestation, and extraction of hard rock minerals, along with changes in global commerce. This has resulted in a recognition that these changes in human activities from 1900 to the present are driving climate change.

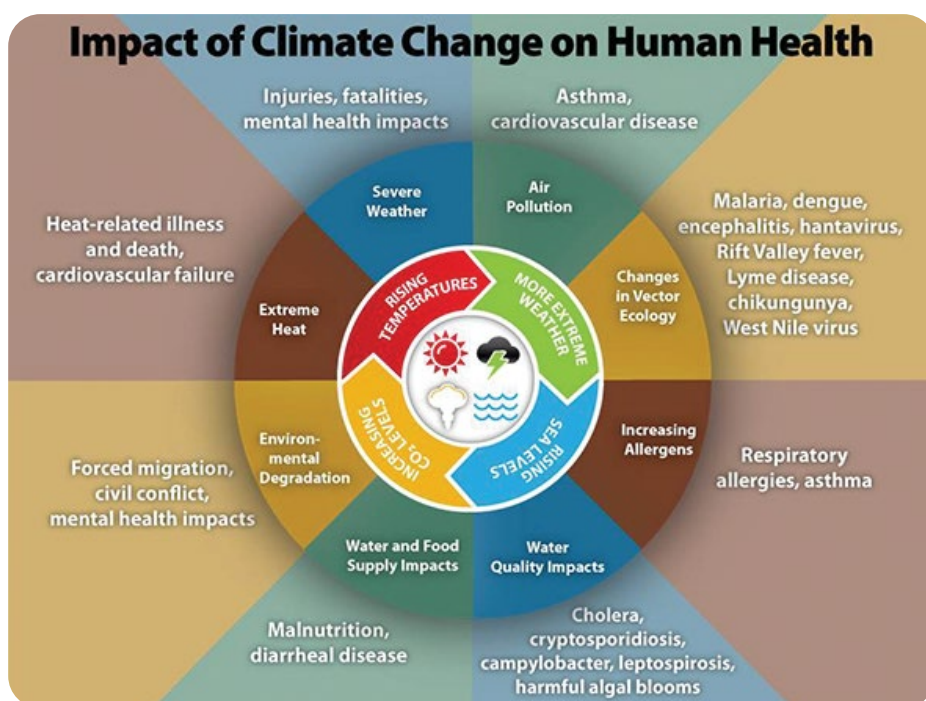
Carbon dioxide, methane, and nitrous oxide are called greenhouse gases because they trap heat from the sun in Earth's atmosphere, similar to how a greenhouse used for growing plants traps heat from the sun, or how a car gets hot on a sunny day. Although the greenhouse effect is a natural process, human activities including agriculture, carbon emissions, industrial processes, and deforestation are increasing greenhouse gas concentrations resulting in a rise of average temperatures at unnatural and unprecedented rates. This increase in global average temperature is called global warming, and it is the root cause of the climate change many communities are currently experiencing.

In addition to ice-core data and other Western measurements of climate change, there are other ways we know that climate change is happening. Indigenous peoples have been aware of and tracking climate change for many years. Many tribes and Indigenous groups have traditions related to ecosystems and specific plants and animals and as temperatures have warmed over the past 100 years, Native cultures are observing the shifting dates of traditional

ceremonies. For example, a 2016 USDA report describes how a spring Bread Dance ceremony is traditionally held by the Shawnee people when a particular tree's leaves become the size of squirrel ears. In recent years, Shawnee elders have noted this benchmark is happening earlier in the spring. Understanding of the world that is based on connectedness to land, ecology, and tradition is known as traditional ecological knowledge (TEK), and there are countless examples of tribal members using TEK to identify a changing climate. Other observations of the natural world also indicate a major shift in our climate. Farmers around the globe have reported hotter growing seasons, harsher winters, wetter monsoon seasons, and generally more challenging growing conditions for crops. In the past 10 years, firefighters have battled wildfires that are bigger, hotter, and spread faster than many can remember. While most of the narratives about climate change in the mainstream media focus on "Western" scientific data, it's important to acknowledge the many ways of experiencing and knowing our climate is changing.

The Intergovernmental Panel on Climate Change (IPCC), a large group of scientists convened by the United Nations, found atmospheric concentrations of CO<sub>2</sub>, methane, and nitrous oxide are higher than any time in the last 800,000 years. Since the turn of the 20th century, the planet has warmed 1.8°F (1°C) and is on track to continue warming. Scientists point to human industrial activities as a cause for this change in atmospheric conditions and the related warming. In a special report released in 2018, the IPCC found global warming will soon exceed 2.7°F (1.5°C), "leading to irreversible loss of the most fragile ecosystems, and crisis after crisis." The effects of climate change are different in scope and severity for every community and can include:

- more frequent and severe weather events
- increased flooding and erosion, particularly along coastlines
- extreme heat, droughts, and wildfires



Source: cdc.gov

- reduced agricultural yields and food insecurity
- loss of outdoor tourism and recreation economies
- migration of peoples displaced by these effects

Climate change is an existential threat to all of us, but its effects are felt disproportionately among low-income communities and communities of color. A 2017 United Nations report identified three ways communities who experience social inequity, including low-income communities and Black, Indigenous, and People of Color, are bearing the brunt of the effects of climate change :

- Increased exposure to climate change's effects, i.e.; living outdoors, in flood-prone areas, or without air conditioning.
- Increased likelihood of being harmed by climate change's effects, i.e.; food insecurity, loss of livelihood, and health problems such as respiratory and cardiovascular diseases, injuries from severe weather events, heat related illnesses, mental health problems, as well as water and insect-borne diseases.
- Decreased ability to cope and recover from the damage suffered, i.e.; inequitable access to legal or medical assistance, inequitable distribution of relief funds after natural disaster, or loss of culturally significant subsistence practices.

It is important to recognize these disparate impacts are not by accident - they are the result of past and current unjust social and economic systems rooted in systemic racism. These inequities are often referred to as environmental racism, and strategies to rectify it are called environmental justice.

## Biodiversity Loss

Biodiversity refers to the variety of life in an ecosystem, from simple cells and microbes to complex plants and animals. It also includes the ecological processes and services that sustain life in an ecosystem, such as nutrient recycling and pollination. Scientists have found the Earth has entered a sixth era of mass-extinction. Since 1900, a total of 198 species have gone extinct, and another 279 are possibly extinct. In 2019, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) estimated another one million animal and plant species could go extinct within the next few decades. In addition to species extinction, population sizes among monitored animal species are shrinking. Scientists have noted a 68% average reduction in population size among 4,392 monitored animal species between 1970 and 2016.

Similar to climate change, many Native communities have identified biodiversity loss through cultural, agricultural, and oral traditions. The Quileute Tribe in Washington state is unable to find smelt eggs to make "stinky-eggs" in time for Honoring Elders Day, and the Iñupiaq of Alaska connect sea

## Brock's Story: "My Climate Story" Project

The Fraser Basin Council Youth Program created the "My Climate Story" platform in 2018 for youth from a diversity of backgrounds across British Columbia, Canada to share how climate change is affecting their communities, and what inspires them to take action on climate change and environmental issues.

This story from Brock, a member of the Métis people, highlights the impacts of climate change on the Fraser River run of sockeye salmon.

Born and raised along the shores of the Little Shuswap Lake, near the mouth of the Adams River, I have always had a great appreciation for the journey of the sockeye salmon who also share this home at the beginning and end of their lives. As a child I spent many crisp autumn afternoons walking along the banks of the frigid river as bright red swarms twisted and reshaped the flowing water. The smells so pungent, yet oddly magnetic and comforting, as the salmon melted back into the earth to be recycled and resuscitated into the web of re-creation, spun out again to continue on the cycle that started since time immemorial. I recall the words of local Secwepemc elders weaving images into our minds and hearts of the importance of sq̓l̓tenuw̓i (the sockeye), summoning stories of when the river ran so red you could walk across it without ever touching the water.

In August 2018, I joined a canoe full of young leaders and we journeyed down the Fraser River from the headwaters

near Mount Robson, through ten biogeoclimatic zones, to the Salish Sea. Along the way we were welcomed by Indigenous fishers, whose eyes gleamed of hope for a year of abundant and healthy salmon, mirroring their own perseverance of traditions and culture. With each stroke we took, we knew that the strength and rhythm of our paddles were a mere fraction of the power and stamina the sockeye expelled swimming against us. As water beads dripped down to our fingers, we reflected on how this precious resource, which carves its way through the heart of the province, is what the sockeye rely on to navigate home and bring life to a new generation. Every year, their route along the Fraser becomes more challenging, the water is more shallow, the temperature is warmer, and the banks are eroding.

That autumn, I returned home to Tsútswe'w Provincial Park along the Adams River. To witness once again the splendor of this incredible phenomenon. Sadly, as I stared into the river, I only spotted speckles of red, a trend that is now all too common. These mighty warriors are becoming less and less. As they channel back to this place, something has begun. The vessel that carries their spirit can no longer cope with increasing pressures of such a task. Their decomposing bodies cast a glow that leaks into the pebbles that make the beds for the eggs, and for a moment they look like stars. Sparkling in the vast dark waters that once ran red.

ice loss and altered whale migration to less successful whale hunts. In southeast Alaska, Native people have seen shellfish unable to produce calcium carbonate shells due to ocean acidification. Toxic algae outbreaks have also become more common, threatening traditionally local species. The Amskapi Piikani/Blackfeet people identified that “sage, berries, sweetgrass, and willows are seen as declining in population...the trees are moving further up the mountain...there is an increase in the number of grizzly bears, mountain lions, and wolves within the Blackfeet Nation, and along with this increase ‘there’s a lot of predation.’”

In the ancestral homelands of the Ojibwe or Chippewa, now known as the states of Minnesota, Wisconsin, and Michigan, 11 Ojibwe tribes have formed an intertribal natural resource agency called the Great Lakes Indian Fish and Wildlife Commission (GLIFWC). In 2018, GLIFWC interviewed tribal elders, harvesters, and knowledge-holders to complete a Climate Change Vulnerability Assessment on 60 beings, or species of interest, across the Ceded Territories. The Ojibwe have reserved treaty rights to hunt, fish, and gather in the Ceded Territories as they have since time immemorial, so the biodiversity and ecological health of the region is critically important to their food security, livelihoods, and culture. Two species highlighted in the report as extremely vulnerable to increased warming were Waabooz (Snowshoe Hare) and Manoomin (Northern Wild Rice). Climate change not only threatens species vital to the biodiversity of ecosystems, but also to the traditional ways of people who have inhabited these and neighboring lands for thousands of years.

Maintaining biodiversity is beneficial for many reasons. When an ecosystem has diversity in its plant and animal populations, it is inherently more resilient to short term events like wildfires and flooding. Diversity in plant life increases soil fertilization, controls erosion which improves water quality, and helps with pollination. Biodiversity also refers to genetic diversity within species which is beneficial in preventing disease outbreaks. Biodiversity also provides numerous benefits to humans, including but not limited to:

- **Food security** — Agricultural production, hunting, fishing, and gathering are all dependent on biodiversity. Pollination, nutrient recycling, and pest regulation are all ecosystem services that enhance food production on both wild and working landscapes.
- **Pollination** — For many plants to fruit and reproduce, a pollinator is needed to transfer pollen between plants. Insects like bees and beetles, birds, and bats that feed on nectar are all pollinators. Many essential human food resources require pollination to produce.
- **Nutrient recycling** — Nutrient recycling is best visualized as a food web, with different species of plants and animals both consuming and contributing nutrients into the ecosystem.
- **Pest regulation** — Diverse ecosystems are more resistant to pests and have a healthier balance of predator and prey populations. This resilience to pests can reduce the impact of natural disasters like wildfires, floods, and hurricanes by preventing damage that would be exacerbated during these events.

- **Medicines** — Biodiversity is essential for both natural medicines and the development of pharmaceuticals. Plants, fungi, and even wildlife anatomy contribute to medicines and pharmaceuticals.

While there are many important cultural, ecological, and biological reasons that biodiversity is important, it is also important to recognize the financial value to biodiversity as well: IPBES estimated the value of biodiversity at around \$24 trillion per year, based on the economic value of each of the benefits biodiversity provides to humans.

## How can public lands address the climate and biodiversity crises?



Public lands offer solutions to sustainably develop renewable energy, mitigate the effects of a warming globe and increased greenhouse gases, and protect critical habitat for preserving biodiversity. Additionally, public lands policy can rapidly start to address environmental justice issues, especially for communities most affected by climate change and biodiversity loss.

The Convention on Biological Diversity, which was originally established in 1992 and now has 196 member-countries, established an international goal of conserving 17% of each country’s terrestrial area and 10% of each country’s ocean waters, which scientists say is not enough to preserve Earth’s biosphere from irreparable harm. Several scientific and environmental organizations began calling for a new goal: placing 30% of Earth’s lands and waters into conservation status by 2030 (also known as ‘thirty by thirty’). The Convention included the 30x30 initiative as a target in the official Global Biodiversity Framework draft published in 2021. Independently, President Biden issued Executive Order 14008 in January 2021, establishing a national goal of conserving 30% of U.S. lands and waters by 2030. Federal agencies collaborated to release the Conserving and Restoring America the Beautiful report in 2021, which was the first step in developing a conservation plan reflecting the 30x30 vision in the United States. Ultimately, the goal of this movement is centered around preserving land, protecting ecosystems, and placing land in non-extractive statuses. Designations such as Wilderness, Wildlife Refuges, National Recreation Areas, Wilderness Study Areas, and National Parks/Monuments help reach this goal.

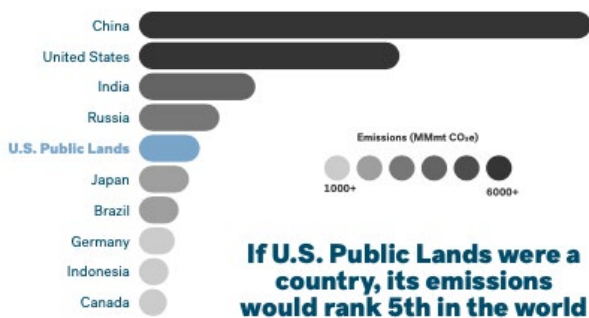
The 30x30 initiative is an important step forward in recognizing the self-determination of Indigenous peoples and the value of TEK. One of the core principles of the 30x30 initiative is “regular, meaningful, robust consultation with

Tribal Nations.” This represents a significant departure from the way tribes and Indigenous groups have been “consulted” on land management decisions in the past and ensures TEK will receive an important role in shaping future land management strategies. Findings from the 2019 IPBES report documents that tribes and Indigenous groups are effectively preserving biodiversity. Although Indigenous groups only own, occupy, or manage 25% of the world’s land, 80% of the world’s biodiversity is found on those lands.

The 30x30 goal is an ambitious and important goal, relying on the many benefits of public lands to address the effects of climate change and biodiversity loss. The following are specific ways that public lands can be a solution to these crises.

## Renewable Energy on Public Lands

The federal government controls access to 2.4 billion acres of minerals (e.g., coal, oil, and natural gas) located under the surface of the United States. Scientists have reached consensus: in order to reduce average temperatures on Earth, we must cut down on greenhouse gas emissions caused by burning fossil fuels. Currently, the lifecycle emissions of fossil fuels produced on public lands account for nearly a quarter of greenhouse gas emissions in the United States. If federal public lands were a country, these lands would be the world’s fifth largest emitter of greenhouse gases. Although resource extraction on public lands is a big part of carbon emissions, most of these emissions can be eliminated with a shift in federal energy policy.



In 2019, there were 96 large-scale renewable energy projects on public lands generating more than 5,000 megawatts (5 gigawatts) and powering more than 2 million homes. Although these projects are substantial, they represent less than 5% of the total available capacity for renewable energy production in the United States. In 2020, Congress adopted a national goal of producing 25 gigawatts of solar, wind, and geothermal electricity by 2025, but that would still be less than 25% of the capacity for renewable energy.

In May of 2021, Congressman Mike Levin reintroduced the Public Lands Renewable Energy Development Act (PLREDA) in an attempt to ensure these projects are sited responsibly with minimal impacts to wildlife, and to create a Renewable Energy Resource Conservation Fund that supports expanding recreational access, conservation and restoration work, and other important stewardship activities.

The Bureau of Land Management (BLM) has already identified over 700,000 acres as Designated Leasing Areas (DLAs) for renewable energy development that meet three criteria:

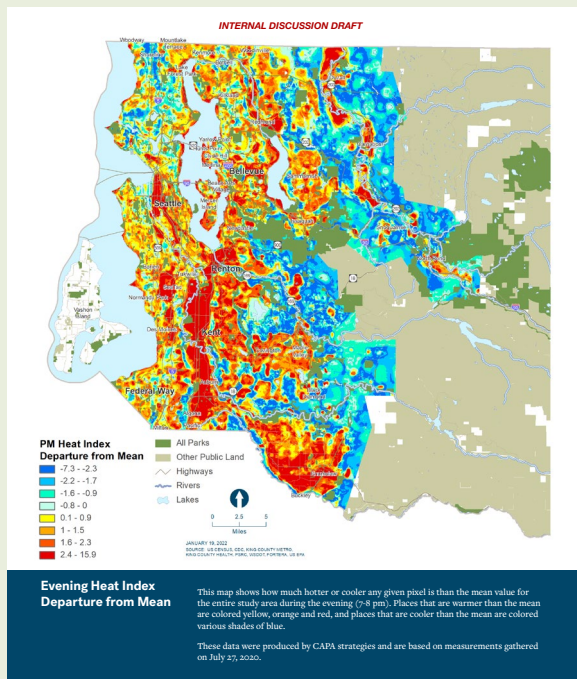
- excellent solar or wind resources
- proximity to existing or planned transmission and highway corridors
- lower environmental, social, cultural, and recreational impacts

By utilizing appropriate federal public lands for renewable energy development and decreasing fossil fuel extraction, the United States would significantly reduce emissions, construct sustainable energy infrastructure, and create lasting economic benefits for workers and communities. In terms of climate change and biodiversity, this policy change would represent a major shift towards a sustainable future, resulting in lower global average temperatures and more resilient ecological communities.

## Heat Equity — Urban Parks and Green Space

The 1995 Chicago heat wave killed over 700 people in the course of five days of record temperatures. Most of the victims were Black, elderly, and low-income Chicagoans. The disaster sparked increased public scrutiny of what the EPA now calls “heat islands” and “heat equity.” Intra-urban heat islands are areas of a city dominated by concrete and steel hardscaping which exacerbate the effects of sun and heat. The Trust for Public Land’s (TPL) 2020 report revealed additional data supporting green space as a solution to the heat island and climate crisis. According to the report, areas within a 10-minute walk of a park are up to 6 degrees cooler than areas farther away. Increasing access to local parks has great potential to reduce heat-related illness as well as promote physical activity and social cohesion. Parks and green space mitigate the effects of hot weather, but racially discriminatory urban planning practices such as redlining and interstate highway development have forced low-income communities and People of Color into higher density and industrial neighborhoods. Those same discriminatory urban planning practices have ensured wealthier neighborhoods have parks and green space that mitigate heat.

As climate change exacerbates the effects of heat islands, communities are looking for ways to protect both environmental and human health. The city of Albuquerque, New Mexico is seeking to reduce the effects of heat islands and promote climate resiliency by planting 100,000 trees in 10 years. A report by The Nature Conservancy found the city’s tree canopy is being degraded by extreme heat and drought caused by climate change, limited capacity for proper tree care, and poor species and site selection. In response, experts evaluated and scored 136 tree species on a total of 15 criteria, including but not limited to: temperature and drought tolerance, urban compaction tolerance, pest and disease resistance, and whether the species supports wildlife. Without the thoughtful and concerted effort of the “Let’s Plant ABQ” campaign, Albuquerque’s urban forests would be vulnerable to dramatic dieback, and residents would suffer dramatic health impacts in turn.



## King County and City of Seattle Heat Island Mitigation Strategy

King County and City of Seattle applied for a FEMA hazard mitigation grant in 2021 that would help fund the development of a countywide urban heat island mitigation strategy. This grant would provide funding for urban and street tree planting, increased public access to greenspace, incentives for energy efficiency retrofits and green roofs, increased access to cooling centers, and increased outreach and education about managing heat impacts on health. Reducing heat impacts is one of many priority actions in King County's updated Strategic Climate Action Plan, which provides strategies to cut countywide greenhouse gas emissions in half by the end of this decade, prepare for the impacts of climate change, and build more sustainable and resilient frontline communities.

Public lands can be a potential solution to heat islands. Local city planning efforts can ensure parks and green space are included in development and all communities have equitable access to these important places. These planning processes are often open to public comment and grassroots campaigns led by citizens and community groups can impact planning decision-making. The City of Seattle and King County in western Washington state undertook a heat-mapping project in the summer of 2021. King County's Strategic Climate Action Plan includes reducing heat impacts as a priority action to prepare for climate change and build resilient communities.

## Carbon Sequestration

An important way land conservation can mitigate climate change is by capturing and storing carbon dioxide, a greenhouse gas that causes an increase in global temperature. Through photosynthesis and the carbon cycle, plants capture carbon and store it in vegetation and the soil. Because of these natural processes, many public lands are carbon sinks - places that absorb more carbon than they release. Maintaining carbon sinks is essential to slowing and mitigating climate change.

Forests are critically important carbon sinks, storing carbon in woody vegetation and the soil. The United States Forest Service (USFS) manages over 190 million acres in 154 National Forests. The 16.8 million acre Tongass National Forest is a rainforest in southeast Alaska - the largest temperate rainforest on the planet. According to a 2021 study, the Tongass accounts for 44% of the carbon capture in the whole United States National Forest system.

Wetlands, like those in Everglades National Park, the National Wildlife Refuge System, and Waterfowl Production Areas (WPAs), trap organic matter and slow decomposition, storing carbon in the soil. Wetland soils are capable of holding 40% soil carbon, compared to the .5%- 2% soil carbon in most agricultural soils. A 2016 study published in *Nature* found that despite accounting for only 5%-8% of the planet's surface, wetlands hold 20%-30% of global soil carbon. When wetlands are drained, dredged, or filled, that stored carbon enters the atmosphere, speeding up the greenhouse effect.

## Preserving and Protecting Intact Ecosystems

In addition to slowing climate change and mitigating its effects, conserving public lands will be instrumental in slowing the rate of biodiversity loss and protecting intact ecosystems. Preserving habitat, migration corridors, and breeding/calving grounds are three ways to preserve biodiversity through land protection.

### Habitat

In 2019, the IPBES found that 75% of Earth's land surface and 66% of marine environments have been altered by humans. Forests have been cleared for agriculture and timber, wetlands have been polluted, and grasslands over-grazed. These changes have reduced habitat spaces for many species; wildlife and native flora need habitat for food and population security. Some species can adapt to vastly different conditions, while others can only survive in very specific habitats. By protecting the most ecologically sensitive areas, which often have the richest biodiversity, we can sustain healthy populations of wildlife whether they are endangered, threatened, or common.



### Migration corridors

Animals migrate to find food, better habitat, breed and rear their young, and to expand their range. Migrations can be seasonal or spontaneous and include individual animals or millions at a time. Roads and human activity present significant barriers to animal movement. Even fences around pastures and rangelands can present a significant barrier to some species like the pronghorn antelope, which rarely jumps fences because they are a plains animal that did not evolve to jump over obstacles. Pronghorn have been observed walking for miles down a fence line until they can go under the fence on their bellies.

In the Northern Rocky Mountains, ensuring natural connectivity between distinct grizzly bear populations is crucial for viability of the species. Bears in the Greater Yellowstone Ecosystem (GYE) are isolated from other populations of bears, namely the Northern Continental Divide Ecosystem (NCDE) population in and around Glacier National Park. This isolation has been identified as a long-term threat to the genetic viability of the GYE bears. Human development in the Missoula and Bitterroot Valleys of Montana is preventing grizzly migration between the two recovery zones. In 2018, an NCDE bear made its way south into the Bitterroot Valley, but was relocated after digging holes on a golf course. The bear was released in the Seeley Lake area to the northeast, but had to be euthanized a year later due to conflicts with humans.

Wildlife crossings connecting public lands dissected by roads are becoming a valuable tool for land managers in the United States. Several states, such as Washington and Montana, have already built wildlife crossings over major roads like I-90 and Highway 200 that were once a major barrier and source of mortality for migrating wildlife. In the Pigeon River Gorge between Great Smoky Mountains National Park and Cherokee National Forest, Interstate 40 divides Tennessee and North Carolina. The 28-mile stretch of highway has been identified as a “death trap” due to increased high-speed traffic and a lack

of wildlife-friendly infrastructure. The Safe Passage project is studying wildlife movements and seeking to build wildlife crossings over and under I-40 to mitigate the increased mortality resulting from traffic through the gorge. Plans to build a wildlife crossing in Los Angeles are expected to break ground in 2022. This crossing over the 101 freeway at Liberty Canyon in Agoura Hills will provide a vital link in the chain connecting the Santa Monica Mountains, Simi Hills, and the Santa Susana Mountains allowing all animals to move freely between these open spaces.

### Breeding/Calving/Spawning Grounds

Many animals require a particular habitat to breed and raise their young. Spotted owls require old growth forest for nesting, waterfowl need the prairie potholes of the North Central United States and Central Canada, and salmon need clean, cool water in their natal streams.

The coastal plain east of Prudhoe Bay, Alaska, known as the “1002 Area” of Arctic National Wildlife Refuge, is the calving grounds for the Porcupine Caribou Herd. The Refuge, which is home to 42 fish species, 37 land mammals, 8 marine mammals, and more than 200 migratory and resident bird species, also includes the country’s largest Wilderness area. The 1.5 million acre coastal plain, the calving grounds of the Porcupine herd and biological heart of the Refuge, was not included in the Wilderness designation. Oil and gas companies have lobbied to open the 1002 area to drilling for decades. For the Gwich’in people, who have hunted, fished, and trapped in the region since time immemorial, the Porcupine herd provides a central part of their diet and culture. Gwich’in leaders, scientists, and conservation groups agree that allowing drilling, road building, and other extractive industrial activity in the 1002 area would have a devastating effect on the area’s biodiversity and the Gwich’in way of life. Permanent protection of the coastal plain is imperative to preserving the caribou calving grounds and this important ecosystem on which the Gwich’in depend.

## Appalachian Landscape Conservation Cooperative (Appalachian LCC)



The Appalachian LCC is a science and management partnership between various public and private organizations working to protect the biodiversity of the Appalachian region and create a coordinated landscape-level conservation effort. The LCC contains the most significant biodiversity “hot spot” east of the Rocky Mountains and is the largest contiguous biodiversity hot spot area in the nation. The Central and Southern Appalachians are unrivaled in the United States for aquatic species diversity and comparable only to China for forest diversity. Approximately 198 species are federally listed as threatened or endangered. Of these, 108 or 54% are aquatic species (primarily mussels and fish). Additionally, the LCC supports the 30x30 initiative of supporting landscape conservation.

### What actions can you take to help?

As an individual, the challenges brought up in this module can feel overwhelming; it’s easy to get discouraged and feel helpless. While these are natural and normal feelings, it is important to remember the collective actions of many individuals can have major impacts when it comes to climate change and biodiversity loss. There is plenty of information online about steps you can take to reduce your own impact on climate change — simple things like changing incandescent light bulbs to LEDs, turning off lights at home when you’re not using them, reducing heating and cooling system loads in the home by 1-2 degrees, and reducing food waste. These strategies make a difference when undertaken by millions of people over many years, although they also sometimes feel very small in comparison to the scale of the biodiversity/climate crises today. Below are some additionally impactful ways you can influence the climate change and biodiversity conversations in today’s world.

- Plant habitat gardens. Urban pollinator gardens can be as small as a few feet square, and in more suburban/rural areas, planting wildflower meadows encourages native species of pollinators. Additionally, you can help native species like mason bees by building bee houses, put out hummingbird feeders during migration season, and plant food sources like milkweed that are vital to various insects and animals.

- Engage in a restoration project as a volunteer. This might be a half-day event identifying and removing invasive species of plants, a day of cleaning up a dump-site and removing garbage from public lands, or a bigger project like stabilizing and rerouting a stream to help with habitat.
- Support climate friendly legislation. This can be in the voting booth, at campaign rallies, or in public local government forums/meetings. The more people who are advocating for climate-responsible governance, the more likely our elected officials will support it.
- Learn about and educate others on the benefits of biodiverse, natural ecosystems and landscapes. After wolves were reintroduced in Yellowstone National Park, many species including elk and deer populations benefited; yet, there exists a strong anti-wolf movement in the Greater Yellowstone Ecosystem. Similarly, beavers provide vital habitat to many species of native fish, migratory birds, and plant species; yet, in many parts of the country beavers are seen as nuisance animals. By learning about the ecological benefits of these species and sharing knowledge with others, you can encourage environmentally responsible land management practices.
- Encourage traditional land management strategies when possible. For example, in much of the western states, Indigenous peoples set small-scale burns in the forestlands to maintain a healthy forest ecosystem with little disease, few invasive insects, and low large-scale wildfire risk. As traditional land management practices decreased or were outlawed, forests became overgrown and larger, destructive fires have become common. Today many land managers are working to thin forests and to manage with “prescribed burns,” returning to practices closer to traditional management strategies of these areas. Publicly supporting this type of work is vital to its long-term success and to the ecological restoration that is important in these areas.
- Support community-based organizations fighting for climate equity issues. This could be directly donating time, money, or other resources to these efforts; it might be canvassing a neighborhood and advocating for a policy, protesting, donating money to support a specific campaign, or offering to speak publicly about a climate-related inequity you’ve seen or experienced.
- Spend time on public lands. Go for a hike, explore a nearby nature center, or stop for a few minutes at a public park. By engaging with public lands, you are validating their existence. Document your visit on social media-share it as widely as you’re comfortable to make others aware of these resources.
- Make climate change/biodiversity loss visible. If you’re an artist, content creator, or have a social media profile, create, share, and encourage climate/biodiversity focused art projects. There are many artist-activists today focusing on climate change and biodiversity with the goal of making these issues visible and important to a broader audience. By joining this movement or sharing this work, you can amplify these efforts.



Community Members organizing an Earth Day planting event.

- Write opinion pieces or letters to the editor about public lands in your community.

These strategies will not change the world on their own, however they will make a direct appeal to land managers, policy makers, and elected officials who create local and global policies that impact these issues on a broader scale. These strategies can also elevate the pressing need for change in the eyes of elected officials and voters. Since many potential large-scale solutions to these challenges can

be addressed through public land management and policy, there is a real opportunity to influence elected officials through public support and visibility. On a larger scale, public support of these issues can influence leaders globally, through trans-national agreements and summits. The climate and biodiversity crises did not emerge overnight, and will not disappear rapidly either. With many people taking small steps toward non-extractive, ecologically-responsible practices, we can begin to address them.

## Module

# 4

## Lesson

# 1

# Climate Change Mixer

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## Lesson at a Glance

### Participant Read/Digest (10 min):

Participants will read perspective card(s) (human, species, or location) and prepare to represent the perspective(s) to others during the mixer activity.

**Mixer Activity (30 minutes):** Participants will read/represent and listen to other perspectives and complete a worksheet with prompts.

### Conclusion and Reflection Questions

*(Whole group, think/pair/share, or written; 10+ minutes):* Participants will reflect on climate change, interpret the perspectives represented in the activity, and consider their own personal perspective/story of climate change.

## Learner Outcomes

### Participants will:

- Be able to voice perspectives on climate change.
- Understand how climate change impacts humans, species, and places.
- Express their own story/understanding of climate change and how it impacts their lives.

## Getting Ready

**Time:** 45-60 minutes

**Materials:** Mixer perspective cards, printed reflection questions, materials for written reflection (optional)

**Preparation:** Spread mixer perspective cards out on a table/ground for participants to select

**Location:** Indoor or outdoor, with enough space for participants to move around; for a large group reflection, having a space for all participants to sit or stand in a circle.

**Number of participants:** 5-30

**Objective:** To promote understanding of the impacts of climate change on people, species, and places.

### Participant Read/Digest (10 min)

Participants will choose or receive at least one identity card, representing either human perspectives on climate change, impacts on species, or changes to landscapes/places. After distributing roles, distribute name tags for participants to fill out, using the name of the person/species/location they are assigned. For those less familiar with expressing others' views, having a leader model what level of expression is expected can be very helpful in engaging the group. Participants will read the perspective they will be voicing and plan on how they will express the views represented; remind learners that they should be internalizing the perspective assigned to them, and memorizing as much of the information as possible.

### Mixer Activity (30 minutes)

During the mixer, participants will engage with others and express the viewpoints on their cards, and/or their own experiences with climate change. There are several ways to facilitate this activity, depending on the level of comfort/experience/engagement of the group:

## Facilitation Considerations

An important part of this lesson is preparing participants to respectfully voice perspectives — not only their own perspective but also that of another being (person, plant, animal, or place). Respectful dialogue is essential as participants are taking on the persona of someone with whom they may or may not share a background. It's important to acknowledge that many groups are stereotyped based on their identities and to set the expectation that stereotypes and disrespectful role play have no place in the learning environment. For recommendations on facilitating role play activities, visit this resource created by the Zinn Education Project (<https://www.zinnedproject.org/materials/climate-crisis-mixer>). Some key guidance to share with learners include:

- Speak using your own accent, language, and mannerisms
- Speak as if you are your assigned person/species/location
- Use I/we statements, and encourage participants to “become” their perspective

1. For less engaged groups, consider setting up a rotating structure (similar to “speed dating”) so participants have facilitated short bursts of engagement throughout the time.
2. For a moderately engaged group, consider setting a target of interacting with x number of “people,” y number of “places,” and z number of “species” to allow for greater autonomy but still have structure to encourage continuous engagement.
3. For a highly engaged group, consider a more self-directed approach, allowing participants to fully mix with each other for the duration of the activity. Encourage participants to talk 1:1 instead of in small groups- this encourages more interaction for all participants, and doesn’t allow for disengagement during the time.

For all groups, having a timekeeper who is rotating participants every 2-3 minutes can be very helpful. Ask participants to complete the “Questions to Answer During the Mixer” worksheet and make notes on the questions while they interact with others. Participants can also make notes on their emotional reactions, any larger themes that they identify, and what perspectives surprise them through these conversations.

## Conclusion and Reflection Questions

*(Whole group, think/pair/share, or written; 10+ minutes)*

Facilitate some or all of the following questions:

1. If you had to write down a similar profile for yourself, your family, your school, or your community, what would that focus on? What is your climate change story?
2. What perspective did you hear that was new to you or that surprised you the most/least? How does this perspective compare to perspectives you’ve heard in the past?
3. Think about the news media and what you have heard about climate change in the popular media streams that you consume. How do those perspectives and voices align with the voices you’ve heard in this mixer?
4. How are people, places, and species connected in the conversation about climate change and biodiversity?
5. Public lands offer an opportunity to develop unique and large-scale solutions to some of the issues voiced by various perspectives in this mixer. What are some of the public land-based solutions that you heard or that you can think of after doing this activity?
6. Consider the human perspectives shared in this activity; is there someone that you could take joint action with? Who is this? What action might you take together? How would it support both their perspectives on climate change as well as your own personal one?

These questions can be facilitated in different ways. A common practice is “think/pair/share”, where learners first have a set amount of time to independently think about a question, then pair up with another person to talk about it, and then share out to the whole group. If you have a more engaged/confident group, jumping into a whole group reflection can also be an effective strategy. Written reflection can also be a valuable tool.

Lesson adapted from *A People’s Curriculum for the Earth*, ed. Bill Bigelow and Tim Swinehart; Rethinking Schools, 2014. Used by permission. See the Zinn Education Project for an updated version: <https://www.zinnedproject.org/materials/climate-crisis-mixer>

### Adapt the lesson

- Find local species that have been affected by climate change and integrating those into the cards
- Have participants write their own perspectives on climate change and how it has affected them and use these in future lessons
- Have participants do a research project about one of the perspectives or ideas that surprised them in the perspectives represented

## **Climate Change Mixer Questions**

(Suggested During Activity)

**1. Find a voice who is hurt by climate change. Who is this? How have they been hurt or how might this individual be hurt in the future?**

**2. Find a voice who might benefit from climate change, or who contributes substantially to climate change. Who is this? How might the voice benefit or in what way does this voice contribute?**

**3. Find a voice who has been forced to move because of climate change, or may have to move. Who is this? Why might they have to leave and where will they go?**

**4. If a person or family is forced to make a change (career wise, if an oil rig or coal mine closes, or location wise, if a home or employer is destroyed by flooding or wildfire), what resources should be provided to this person, and by whom?**

**5. Find a voice who is affected by climate change in a way that is similar to how you're affected. Who is this? How are your situations similar?**

**6. Find a voice whose story involves a connection between.....**

A) water and climate change. Who is this? What's the connection?

B) fire and climate change. Who is this? What's the connection?

C) biodiversity and climate change. Who is this? What's the connection?

**7. Find a voice who has an idea about what should be done to deal with climate change — or a voice who is taking action in some way. Who is this? What is the idea or action they are taking?**

# Larry Gibson

## Mountaintop removal activist, Kayford Mountain, West Virginia

They say that to move away from oil we need to rely more on “clean coal,” mined here in the USA.

Clean coal. That’s a lie. That so-called clean coal comes from mountains in Appalachia that have been destroyed by coal companies, like Massey Energy. They blast mountains apart to get at the coal and dump every-thing they don’t want in the valleys and streams, poisoning everything around.

When they talk about clean coal, they sure don’t mean how they got it. They want you to focus on the fact that burning coal today produces less sulfur dioxide than it used to. That’s the stuff that causes smog and acid rain. But burning coal still releases about twice as much carbon dioxide as natural gas, and a third more than oil — for the same amount of energy. And carbon dioxide is a greenhouse gas, the gasses that cause global warming.

So mining coal is bad for the people of Kentucky and West Virginia, but it’s also bad for the planet.

I’ve been fighting mountaintop removal of coal for more than 25 years. I’m not going to sit around and watch my home and the planet be destroyed. The coal companies care about the money. For me, it’s not about the money. It’s about the land. My mother gave me birth. The land gives me life.

# Chris Loken

## Apple grower, Hudson Valley, New York

Everybody is saying awful things about global warming, and I know that it’s bad for a lot of people. But recently Fox News did a report on climate change “winners” and they came to talk to me. As they said in their report, “There are some upsides to global warming.”

Frankly, I saw this coming. I knew that things were going to get warmer and you know what they say about a crisis: It’s also an opportunity.

I live in a beautiful place. Rolling hills. Good for apple trees. But I decided to diversify. Right next to the apples, I planted peach, apricot, and plum trees. Years ago. As I say, I saw this coming. These trees wouldn’t have survived the winters of the old pre-global warming days. But our winters are getting milder, and I’m betting my trees will do just fine. As I told the Fox News people: “This farm here has been set up for the future.” It’s not easy running a farm these days, and if the weather decides to cooperate a little bit, who am I to argue? I’m sorry for those folks who are hurt by all this, but I’ve got to think of my family.

# Stephanie Tunmore

## Greenpeace climate campaigner

I joined the environmental organization Greenpeace because I felt like I had to do something to make the world a better place. To me, it seems that climate change is the most dangerous problem facing humanity and the environment. The consequences of global warming will be catastrophic, and we have to do something.

I’ve been working to save the Arctic. People think of the Arctic as just one big empty block of ice and snow. Either that, or where Santa Claus and the elves live. But it’s an unbelievable place. There are species of birds and fish that are found only there and a few other places. Polar bears, musk oxen, and caribou reside there; and in the summer, snowy owls, ducks, and swans migrate there to nest. But already Alaska’s North Slope has been taken over by 28 oil production plants, almost 5,000 wells, and 1,800 miles of pipes.

But the oil companies see global warming and the melting ice as an opportunity to drill for even more oil and gas. Haven’t we learned anything? Why are we looking for more fossil fuels? The good thing is that more and more people are determined to stop oil development. We’ve taken direct action and have confronted the oil drillers in places like the Beaufort Sea, where we towed a fiberglass dome with two Greenpeace activists inside into a BP Northstar oil-drilling construction area. Two other activists unfurled a banner: “Stop BP’s Northstar, Save the Climate.” Direct action. That’s what it will take to stop these oil-drilling criminals.

# Rafael Hernandez

## Immigrant rights activist, The Desert Angels, U.S.-Mexico border

In 1986, I crossed the border from Mexico to the United States, looking for a better life for my family. Now I am committed to helping migrants in need. My group, Los Angeles del Desierto — The Desert Angels — patrols both sides of the Mexican-California border near San Diego. We look for lost migrants and leave water, clothing, and food at key spots in desert locations to help people on their journey.

Recently, we rescued María Guadalupe Beltrán, a 29-year-old mother of four who had been burned severely in the huge Harris Fire on the border. Her father had died in Mexico and she had returned home to attend his funeral. She was caught in the fire coming back into the United States. But after suffering terribly, Beltrán died of her injuries. Afterward, I spoke to her husband, Rafael, who sat by her hospital bed for two weeks. He told me: “I asked the Virgin: ‘Tell me whatever you want, please just don’t take her.’ But she did. At 11 in the morning my wife went away. She died at 11.” Six migrants died in the fire and eight were injured.

The border patrol has pushed migrants to cross in unsafe desert areas. And global warming is making these areas even more unsafe, more deadly. Climate experts say that these wildfires, just like the awful ones in Greece, Australia, and Colorado, are going to happen more and more as the climate shifts. So María and other wildfire victims are also victims of global warming.

# Richard H. Anderson

## CEO, Delta Airlines, Atlanta

I am CEO of Delta Airlines, and live in Atlanta. I’m a businessman and a lawyer, and have been in the airline business for more than 20 years. My job is to oversee Delta’s long-term goals. Ultimately, I need to keep the company profitable for our investors and a secure and fulfilling place to work for our 80,000 employees.

I’ve been reading that air travel is bad for global warming. People say our jets produce a huge amount of carbon dioxide and other greenhouse gasses that increase global warming. An article I read recently said, “Flying is one of the most destructive things we can do.” This researcher concluded that “the only ethical option . . . is greatly to reduce the number of flights we take.”

But ethics are complicated: Don’t I have an ethical responsibility to my employees and stockholders — and to the 160 million customers who fly Delta every year, on more than 15,000 flights each day? And that means expanding air travel, advertising low fares, and trying to get people to take vacations to faraway places like Japan and China, to keep Delta profitable. Sure, we will try to pollute less, but we’ll leave global warming to the politicians and scientists to figure out. I’m a businessman.

# Steve Tritch

## President and CEO, Westinghouse Electric

Before I became the head of Westinghouse I was senior vice president for Nuclear Fuel, providing nuclear fuel products and services to nuclear power plants throughout the world. Before that, I led the merging of the former ABB nuclear businesses into Westinghouse Electric, and was senior vice president of nuclear services. And before that, in 1991, I became manager of the Nuclear Safety Department, and later was appointed general manager of Westinghouse’s Engineering Technology. Today, I belong to the American Nuclear Society and serve on the Nuclear Energy Institute’s board of directors. I guess you could call me Mr. Nuke.

You might say that I’m a man on the hot seat these days. Not only are we running out of easy-to-find oil, but oil is also blamed for global warming. Coal is an abundant source of power, but it produces even larger amounts of greenhouse gasses than oil — or natural gas. People are looking to my company, Westinghouse, for solutions. The solution is obvious: nuclear power. As I tell my employees, “What’s good for the planet is good for Westinghouse.”

Sure, the accident at the Fukushima nuclear plants in Japan was serious, and people were hurt. But the whole industry has learned from this accident, and even Japan still knows that nuclear power is the best way to go. The real threat is global warming. Global warming could destroy much of life on Earth. But nuclear power produces no greenhouse gasses. They say nuclear power has dangers. Well, last year 5,200 Chinese coal miners died in accidents — and that’s a lot more than have ever been hurt in a nuclear power accident. I see hope for the planet and Westinghouse is here to play our part.

# Nancy Tanaka

## Orchard Owner, Hood River Valley, Oregon

Our family has owned and operated fruit orchards in Oregon's Hood River Valley since my husband Ken's grandparents bought land here in 1917. The only time our family left this land was when the U.S. government locked our family in internment camps during World War II. But that's another story.

Every generation of our family has farmed this land. And then we woke up to the front-page article in our local newspaper. It was a shocker. In fact, it scared us half to death. A study by Oregon State University found that 75 percent of the water during the summer months in the Upper Middle Fork of the Hood River comes from melting glaciers on Mt. Hood. And because of global warming, the glaciers are disappearing. That's our river. Well, we don't own it, but it's the river that irrigates our pears and cherries. Our family has grown fruit on this land since before we were born, and now they tell us that our irrigation water may be disappearing?

To tell you the truth, I never knew so much of the river's water in the summer came from glaciers. You see, glaciers on Mt. Hood are kind of small compared with glaciers on other mountains. Scientists say the problem is that glaciers have been shrinking because of global warming. I always thought global warming might affect the Arctic and the polar bears, but not the Upper Middle Fork of the Hood River.

# Trisha Kehaulani Watson

## Environmental lawyer, Hawaii

I was born and raised in the valley of Manoa, in the district of Kona (known today as Honolulu), on the island of Oahu. I am Native Hawaiian. I am a lawyer specializing in environmental law — but much of my knowledge comes from talking with my family and kupuna, our elders.

Over the years, I have seen the beaches I played on my entire life steadily erode. In many places, the sand is disappearing.

My valley has always been very waiwai (wealthy, rainy, with much fresh running water), yet the waters have changed. We have far more unstable weather. When I was a little girl my grandfather used to take me down to the streams to watch the water rise when the heavy rains came. But things are much different today. The heavy rains are devastating. A few years ago we had a terrible flood wash through the valley. Since then, my street has been shut down numerous times due to dangerous flooding.

The seasons have also changed. It gets much colder than it used to, and also much hotter. The plants have changed because of it. Fruits come at unusual times of the year. Flowers bloom at different times of the year. Health problems also result from these weather changes.

The Earth is not well.

# James Hansen

## Former director, Goddard Institute for Space Studies, National Aeronautics and Space Administration (NASA), New York, City

I am a scientist, but I am also a grandfather. So that makes me especially interested in the future.

Recently, I was arrested at the White House in Washington, D.C., protesting the construction of the 1,700-mile Keystone XL Pipeline to send oil from the Tar Sands of Alberta, Canada, to Texas. Why would a scientist and a grandfather commit civil disobedience and get arrested? That's simple. If this pipeline is built and they continue to take this especially dirty and polluting oil from the Canadian Tar Sands, it makes it very unlikely that we will be able to stabilize the climate and avoid the disastrous effects that we are already beginning to see. As I've said, this pipeline is the fuse to the biggest carbon bomb on the planet.

Many years ago, I was one of the first scientists to warn that as we burn more fossil fuels — coal, oil, natural gas — the carbon dioxide created will heat the Earth to dangerous levels, with terrible, terrible consequences. I thought people would respond to scientists' rational arguments that we needed to end our addiction to fossil fuels. Now I know we need to take more drastic action.

So I volunteered to be arrested with 1,200 other people to draw attention to the importance of stopping this deadly pipeline from being built. I am more than 70 years old, but if need be, I will keep getting arrested.

## Robert Lovelace

### Ardoch Algonquin First Nation leader, Ontario, Canada

A few years ago, I was sentenced to six months in jail and ordered to pay a \$15,000 fine. What was my “crime”? Trespassing on my own land — trying to block a uranium company, Frontenac Ventures, from prospecting on and polluting Algonquin Indian land. It began when we noticed people cutting down trees on land we had never ceded to the Canadian government. Someone had given Frontenac a prospecting license and they had gotten a court to issue an injunction against “trespassing.” But this is our land, and Algonquin Indians and our non-Indian supporters organized a 101-day blockade to physically stop Frontenac from destroying the land. I was arrested and became a political prisoner.

Because of global warming, the nuclear power industry is claiming it is the “clean” alternative, because nuclear power does not generate greenhouse gasses like coal or oil. The price of uranium shot from \$43 a pound in 2006 to \$75 a pound a couple of years after. It came down as a result of the 2011 nuclear disaster in Japan, but it will go back up. Canada is already the world’s leading exporter of uranium, and many in our government want to increase exports and turn Canada into an “energy superpower.”

There is nothing good about uranium mining. Uranium mining has no record other than environmental destruction and negative health issues. Mining companies clearcut the land and destroy the Earth to get at the uranium. Uranium can’t be stored safely and other uranium mines around Canada have left land polluted with heavy metals like arsenic. And nuclear power itself is not clean. Nuclear waste stays radioactive for thousands of years and no one has found a safe way to store nuclear poisons that long.

## Paulette Richards

### Miami, Florida

I live in Liberty City, a mostly low-income and African American neighborhood in Miami, Florida. I love this neighborhood. Just walk down the street and you can smell that wonderful Haitian fried pork and plantains coming out of people’s houses. I bought my home back in 2001 for \$90,000. Recently, I’ve struggled to make mortgage payments because without health insurance my cancer treatments left me with a lot of debt. Somehow, the real estate people must have heard that I was short of money, because I have been getting phone calls everyday from people wanting to buy my home.

It’s the rising seas, caused by climate change. That’s why the rich white folks want my house. For years, those people wanted to live down near the water. They still do, but now they are starting to see that with climate change, it’s risky to live near the ocean. The city of Miami says that by 2060, the sea level will rise anywhere from 14 to 34 inches. For years and years, because of segregation and racism, banks wouldn’t lend to People of Color, and we were only allowed to live in the less desirable high ground — the coral ridge, stretching from north Miami-Dade County to the upper Florida Keys. That’s why suddenly, all the real estate people and developers are trying to buy our places and sell them for lots more money. Community activists in my neighborhood call it “climate gentrification.” And as housing prices go up, so do the taxes. People who rent homes or businesses are seeing their rents skyrocket. What are they supposed to do? But I didn’t buy a house for investment. I bought this to live in, to die in. It’s my legacy, my home, my worth. Without that what else do I have? The good news is that this community is organizing and fighting back — people are talking about rent control and freezing taxes, and forcing developers to build affordable housing, if they want to do business here. This is my community; I’m not going anywhere.

## Matthew Gilbert

### Member of Gwich’in Tribe, Northern Alaska/Northwestern Canada

I am a member of the Gwich’in, the northernmost Indigenous nation on the American continent. There are about 8,000 Gwich’in. Because of global warming, we are threatened as a people.

We survive mostly from hunting caribou. Less snowfall is making sled and snowmobile transportation more difficult. Creeks are freezing later, and the ice is too thin to carry heavy loads. Lakes are drying up.

The worst threat is to the caribou. In 10 years, their number dropped from 178,000 to 129,000. Calves drown when they try to cross rivers that are usually frozen. My grandfather remembers vast numbers of caribou moving in waves near their village during spring and summer. No more. Our environment is in chaos. The hunters find it harder and harder to find the caribou that feed our people.

We must reduce greenhouse gasses. My people are dying.

# Tom Conway

## Miami, Florida

I know that climate change is going to hurt people. But here's the thing: With any change comes opportunity, and if you're smart, you'll take advantage of opportunities that come your way. I am a developer in Miami. Basically, I buy places as inexpensively as I can and then I fix them up either to rent or to re-sell.

As I say on my website, I have a "sharp financial foundation" and "an analytical aptitude." I began to notice that property values in certain inland neighborhoods were going up faster than property values on the beach. Sure, beachfront property is still expensive and desirable, but the scientists say that by 2060 the sea level here will rise by 14 to 34 inches, so people are becoming more interested in the parts of Miami on higher ground. For years, areas like Liberty City, Little Haiti, and Overtown were where the poor people lived. In these higher ground neighborhoods, property values are increasing three times the average in the rest of Miami-Dade County. So I'm going into these neighborhoods and buying up businesses and homes as cheaply as I can. For example, I just bought up a couple of shopping centers in the Little Haiti neighborhood. The tenants — a travel agency, a tuxedo shop, a clothing store, some restaurants, a tax preparation place, and other businesses — had been there for years, some as long as 30 years, and weren't paying much rent. As wealthier people move into the neighborhood, they want other kinds of businesses — businesses that can pay a lot more rent. So I evicted all the tenants in order to remodel my new shopping centers. I followed the law and gave people 15 days to move out.

People in the community protested — they are still protesting. "Climate gentrification!" they called it. They said I am a racist, because the tenants I removed were Black and I'm white. Look, I have nothing against the former tenants of my buildings. This is just business. I can make more profit renting to people who have more money, people who feel that with climate change, the neighborhoods on higher ground are a safer risk.

# Elizabeth Easton

## Beaumont, Texas/Oakland, California

I guess you could say that I am a climate change refugee. I now live in a big old lot behind an Office Depot with about a hundred other people in Oakland, California. We live in cars, in tents, in old campers, in tiny houses people have put together. But I used to live in Beaumont, Texas, about 90 miles from Houston. Here's the story.

In August of 2017, Hurricane Harvey made landfall on the coast of Texas. Harvey had winds of 150 miles per hour when it hit. In Beaumont, where I lived, we got more than 50 inches of rain! I had never seen anything like it. The worst thing is that the little house where I was renting lost water service — the whole city water system shut down. No drinking water, no way to flush the toilet. It was terrible. Beaumont opened a shelter, but conditions were so unsanitary in the shelters that the city had to get us out of there. I know that there have always been hurricanes, but I heard a scientist on the news who said that climate change made storms like Hurricane Harvey three times as likely, and Hurricane Harvey had 38 percent more rain than if there wasn't any global warming.

I didn't have much, but I lost everything in that storm. I liked Beaumont, but I had to get out of there, so I took a bus to Oakland, California, where I have family. But it is way too expensive to live here. There is no place I can afford. I lost almost everything in the hurricane. Now, my home is here, behind this big Office Depot. I paid someone to let me stay here, but it's not safe — especially at night. Here, I feel forgotten, tossed aside. People talk about the "homeless crisis." For me, it all started with a hurricane, fueled by climate change.

# Glacier National Park

## Montana, USA

There's no question, the summers are getting hotter and the winters are changing - I can feel it. These changes are threatening the very landscapes I'm famous for. Whole acres of my glacial ice are melting and I've already watched over half of my remaining glaciers slowly melt away in the past 50 years. The scientists that come to measure and take photos of my melting glaciers say that what I have left of this impressive ice could be gone in just ten more years. But they warn that's just an estimate because glacial melting is a vicious cycle; the more glaciers recede the faster they will continue to melt. Will people still come to see me if there are no glaciers to see?

My whole landscape is already feeling the changes. When the glaciers are gone, my summer streams will barely flow without the seasonal meltwater, endangering the whole habitat that these cold clean streams provided. From insects to plants to animals - everyone will notice. Even the animals that walk my rocky cliff faces will notice the change - mountain goats use the glacial ice as air conditioning in the hot summer sun, and with less ice and hotter days coming I worry about my mountain goat residents.

I'm starting to feel naked without my glaciers and I fear for all the beings that I'm watching struggle to adapt to my changing landscape.

# Fair Bluff, North Carolina

## Columbus County, USA

I was never a big town, but now there's only a few residents left to even call me a town. Our main street was a pretty riverside downtown, right along the Lumber River. Until the flooding started. We'd always had flooding now and then (downtown is built on the floodplain) but now scientists say severe storms and the flooding they bring are the new normal, all thanks to climate change.

I've been told warmer temperatures and warmer ocean waters means more evaporation happens out over the ocean, so more water is sucked up into these big storms and then dumped right onto our flood prone town during each storm. I remember in 2016 Hurricane Matthew caused the Lumber River to flood - and I mean really flood - putting all our houses, roads, and stores underwater for weeks. But that wasn't it; we'd barely rebuilt when the next one hit. 2018 brought Hurricane Florence, and it happened all over again. My residents who could, started leaving. It's just too hard to rebuild and repair your house over and over, knowing another big hurricane, and another big flood will come.

And that's just the problem. We're already living with climate change but it will only get worse from here since severe weather, like hurricanes, are only expected to become more intense in the coming years. We can't take more intense rains and flooding, we are still repairing from the damage we already have. I'm shrinking and soon I'll be a climate change ghost town.

# Gila National Forest

## Arizona/New Mexico Border, USA

I'm a pretty diverse forest and an important habitat for many critters of the southwest like the Mexican spotted owl, so just like many of my neighboring states, wildfires and drought are a growing concern for me.

Sweltering temperatures, even for this area, have been melting any snow we got before spring has barely started. Everything is hot and dry, so forest fires are starting easily, just a strike of lightning can start a blaze. I know this because that's exactly what happened with the Whitewater-Baldy Fire that burned 297,845 acres of forest. That's a lot of my forest, but a lot of it actually did okay.

We're used to fires here; the U.S Forest Service who manages the forest has a policy of letting small fires burn naturally when it's safe. And there's good news because their tactic seems to be working. The Whitewater-Baldy Fire was expansive but burned at lower temperatures in the areas that had been burned recently by these smaller fires. More frequent low severity fire is better for the trees and the animals in the forest because it burns built up vegetation so there's less fuel for bigger fires and new vegetation grows back quickly. This new growth after a fire is important because it helps keep the debris and ash in place that could otherwise harm fish like the Gila Trout and cause flooding when summer rain storms come.

Although this management approach of the Forest Service doesn't mean I'm immune to high severity burns in the future, I might be a more resilient forest and have a better chance against climate change.

# North Cascades National Park

## Pacific Northwest, Washington State, USA

Maybe you've seen photos of my majestic snow capped mountains and green forests spreading up to the huge slopes? Those glaciers feed rivers and streams, keeping the forest green with ferns and huckleberry bushes. That's the mountains of the Pacific Northwest, or at least what it has been.

But lately when there's any talk of glaciers the photos getting passed around aren't to show off my beauty, but instead to see how much the glaciers are receding. Planes have been flying overhead here for years taking photos documenting how those glaciers are shrinking. What used to be glaciers that covered whole valleys are now just patches clinging to the shadiest side of the ridges. And while the glaciers shrink each year, the rivers run lower in the summers and the forests dry out a little bit more, leaving space for wildfire to creep in and burn longer and hotter each and every summer. Not only are the old trees that were home to so many animals burned, but trails and campgrounds close, and smoke obscures those beautiful views I brag about. Things just aren't the same as they were in the past.

# Monongahela National Forest

## West Virginia, USA

The early 20th century stripped me of too much of my red spruce habitat already but it's endangered once again. The logging and mining in the forest weren't exactly good for the health of trees. And now even though people are replanting trees and restoring habitat these red spruce trees aren't out of the woods yet. Now the dry summers and heat waves are reaching up into the mountains where these trees once found refuge. But there's nowhere else for them to go, living on top of mountains means no where to migrate too, just risk replacement as the drought tolerant life moves up the mountains.

But why do I care about the red spruce? Well for one, I wouldn't be the same forest without them, but they're not just trees. Salamanders that are already endangered themselves, keep cool in the shade this treed habitat provides. And the brook trout of West Virginia's cold water streams risk living in stream temperatures that are too warm if the spruce cover is lost. I'm used to change but I hate to lose all this to climate change.

# Valles Caldera National Preserve

## Jemez Mountains, New Mexico, USA

Did you know that land can get scars just like humans can? My grasslands and forests have vast wildfire burn scars of dead trees and ash, especially from the big fire that blazed here in 2011. Some people even described that 2011 fire as a mega-fire. The drought fueled the fire with the dried out grassland and forest letting it burn hotter than other fires. The heat was so intense that it left some places completely burned and dead, with no living trees or even a seed for miles. No seeds means no new trees to hold everything in place and prevent erosion, which means burn scars last even longer and my very land could be washed away with each rain.

But a historic fire like this gets people's attention. Scientists have been studying the soil since the 2011 burn, because it's not just the trees that are impacted by fire. The research is showing that some soils can return to the same or even better condition after the fire passes through. The heat increased some nutrients in the soil and created better conditions for plants to uptake the nutrients they need to grow, though there are some negative effects too. These findings could be so important because the soil and all that goes on within it can change how a forest regrows. All this goes to show that fires and how they impact all parts of the forest are not all good or all bad and there's still so much to learn.

The one thing I do know is that even after the trees that are replanted by helping hands have grown and soils have regenerated, there will be more fire in my future.

# Okefenokee National Wildlife Refuge

## Florida/Georgia Border, USA

Everyone seems to be talking about the big wildfires in the western U.S. these days and the droughts and rising temperatures that are causing them. But I'll tell you it's not just happening in the West. You might only hear about the hurricanes that hit here in the southeast on the news, but the drought is here too. Even a swamp wetland like me has been dried out just like droughts have done to forests in the West. A swamp might sound like a wet place that wouldn't burn very well, but when the water dries out after too many hot dry days, the decomposing plants that accumulate making my swamp a rich ecosystem are exposed and become fuel for any spark of fire.

Over the past 15 years there's been too many fires to count that burn in a cycle as drought conditions dry the swamp and then fires burn across the refuge. Like many places, fire is natural here, but these big fires that burn for months and come back with the drought each year are dangerous and becoming more common.

# Boundary Waters Canoe Area

## Minnesota, USA/Canada Border

For now I'm still the Boundary Waters the people know, but you should probably come to see my boreal forest and extensive lakes before things change. It's the trees that will start to move on first; I can tell the black spruce, balsam fir, paper birch and others are already feeling parched in the summers. And I hear that the summers will keep getting hotter, and if that heat starts evaporating more moisture than we get, things will start to shift. I know my rocky soils won't be able to support a whole boreal forest when they're dried out so the forest will have to give way to something different.

The oak and maple trees from further south have already started to move up with the warming conditions and when it really heats up the grasses won't be far behind. I'll have shed my boreal forest with its spruce and fir trees, so you might not recognize me in my new coat of grasslands but I'll still be here in this future of climate change.

# West Maui Reef System

## Hawaii, USA

When you picture coral reefs in the tropical water of Hawaii you probably think of colorful coral and fish of all kinds swimming through the vibrant structures. That's what you'll see in my reef system too, we even have organisms that don't live anywhere else on earth. But some areas are looking a little more dull recently.

It's not just the air temperatures that are rising around the world, but us underwater ecosystems are feeling rising water temperatures too. Warmer waters might sound nice for swimming, but when a marine heatwave comes, the corals are more likely to bleach. It's called coral bleaching because coral literally gets bleached of their color — the symbiotic algae that give coral their color and food leave due to the stress of the high water temperatures. If the heatwave continues for too long and the algae don't return this can even kill the coral. That's just what happened in 2015 when I saw living corals die due to a heatwave. Dead coral doesn't just look bad to tourists who want to come to Maui to scuba dive, but it also means the fish that live in these reefs face trouble too. Without habitat these reef fisheries could decline, changing the whole food web.

But it won't just be the animals of the reef that feel these heat waves, everything's connected in the reef, and the food web includes humans who fish these waters too.

# Red Rock Lakes National Wildlife Refuge

## Greater Yellowstone Ecosystem, USA

I'm home to over 200 species of birds, including many migratory species that use my wetlands and lakes to breed and overwinter. Originally I was designated as a wildlife refuge to give protection to trumpeter swans who were struggling due to lost nesting grounds. I'm proof that protecting important habits can really save animals because I now host a rebounded and healthy population of these swans.

Although the refuge has been a great success, many of the birds I host might start facing challenges as the climate here changes. Warmer temperatures in both the summer and winter seasons and less water availability means that other non-native species, of plants and animals, will likely start colonizing the refuge to take advantage of new conditions that suit their needs. While new species move in, species like wetland rushes that traditionally made up most of the wetlands might not be able to compete in the drier conditions. With all this change of new species coming and others getting pushed out, my whole habitat could start looking very different. I might not be the right place for many of the birds that have long called me home, and they might even have to move on to new locations. But I'll still be here as things change into the future, providing habitat to whoever can successfully make their home here.

## Gila Trout

### Gila River, USA

I'm one of the rarest trout species in the U.S, but it's certainly not easy being rare. I've been fighting to survive for a long time already. I was even listed as an official endangered species back in 1973. Although I'm doing better, they only call me a threatened species now, I'm facing new challenges.

Before I took cold mountain water for granted, but now I have to worry about the temperature of the water I'm swimming in, or if there's even any water to swim in. With less water in the streams from less winter precipitation the streams aren't full anymore and the rising air temperatures heat these especially shallow waters quickly. I can't survive long in waters that are too warm; it makes life difficult at all stages of life. Fires are also burning away the vegetation on the banks of the creeks, exposing those of us living in the water to even more heat. The ash from these fires is also dangerous. When too much ash gets washed into the creek when it rains it can be toxic and even deadly to us already stressed Gila trout.

But we're not totally on our own. Recently, when fires are looking particularly dangerous forest managers will move us to a safer section of stream. With people looking out for us and good forest fire management we'll have a shot at continuing to survive in the Gila River.

## American Bullfrog

### Columbus County, USA

Everyone's talking about how life is getting harder, but I've got to say us bullfrogs are doing okay - I'd even say we're doing good!

It's not so hard to survive when I can find more habitat as places are warming up. Some people might call it "invading" but I'm just living where I can find a good home and food to eat. I'm originally from the eastern U.S, but I've found good spots across the country and even down in South America and on other continents. I can travel pretty far on my own, even miles in a night time rain, but sometimes humans are even helping me get to new places and they don't even know it. Even the warming temperatures are helpful because now I'm living in places that used to be too cold.

I'm well adapted to living with changes. I'll eat just about anything so it's easy to stay well fed even in a new place. I eat invertebrates, snakes, frogs, rodents, and even my own young if I need to. Plus, away from my original home I have less predators who are adapted to hunting and eating me which makes life easier too. For now I'm going to keep enjoying what climate change is giving me so you won't hear me complaining.

# Southern Pine Beetle

## Eastern Texas to Maryland, USA

I might be small, almost too small for you to see with your eyes, but I'm making big moves in this warming world. I burrow into pine trees to lay eggs and live inside the wood. I'll admit that when I make my home in a tree it can cut the tree off from water and nutrients and the tree eventually dies. But I'm just doing what I can to survive and even thrive.

These days it's even easier to find trees to burrow into since so many trees are already weak from drought and overcrowding. Weak trees are good for us beetles because they can't fend us off. Whole forests of these weak trees are helping us Southern Pine Beetles move in and reproduce quickly, which is great for our growing population.

All this warmer weather is great in other ways too. We're from the South where it's warm all year, so our biggest danger is when temperatures drop below 14 degrees F. But we've noticed even up in the northeastern U.S. the winters aren't as cold these days and less freezing temperatures means we can survive all winter instead of dying off with the winter freezes. As long as temperatures keep warming we'll keep going where we can find trees and mild winters. Maybe we'll even head up into Canada in a few years when the winters warm up a bit.

# Western Larch

## Crown of the Continent, USA

I'm a unique kind of conifer tree that takes part in the annual fall foliage show in the northwestern U.S. and Canada. My needles turn a bright yellow and orange in the fall with the other deciduous trees and then fall off for the winter. But in the future the fans of my colorful needles may have to search further and further north to find me.

Dry and warm conditions could start shrinking my already limited habitat zone in the northern U.S., pushing me further into Canada. My seedlings prefer cooler and wetter areas to start our long lives, so these young larches may suffer in the heat. All of this change could weaken us, making larches more susceptible to diseases and insect outbreaks that threaten to further shrink our population. And like other western trees, the danger of fire looms on the horizon. But I might have some advantages here. I'm fire resistant to natural low severity fires thanks to my thick bark and deciduous needles. Fire even helps distribute my seeds. All this is helping me in the short term, but as drought encourages fires to burn hotter and longer, my natural adaptations might not be enough to spare me from fire damage and the impacts of climate change.

# Peach Trees

## California to Georgia, USA

As a peach tree, success comes when we bloom plenty of blossoms that turn into juicy fruit in the summer. But it's not only sun and blue skies that makes a peach tree bloom. It's cold winters that we need to bring the country a booming peach harvest.

Peach trees need between 650 to 850 hours in the winter that are below 45 degrees F to have successful spring blooms when the temperatures start to rise. These cold winter hours that we call 'chilling hours' allow the tree to go dormant for the winter until the spring temperatures signal the time to bloom. But if we can't get enough chilling hours we stay dormant, unable to bloom.

Winters aren't as cold as they used to be. Recently some places aren't even getting enough cold winter days to fulfill the needed chilling hours, and my lack of spring peach blossoms prove it. The warm winter of 2017 caused so many of us Georgia fruit trees to stay dormant we hardly had fruit that year. It's just a shame to see us peach trees bare with hardly any fruit to share around. Some scientists are looking to wild peach trees to get clues about how to create climate change resilient fruit trees, but until then I'll be hoping for cold winters.

# Corn

## Iowa, USA

Iowa and the Midwest are known as the Corn Belt of the U.S. for a reason - we've been growing successfully for many years. But we might not be bragging much longer. We've all heard about the drought and warmer temperatures climate change is bringing. So far our corn plants have been getting by knowing that after an extra hot day a cool night will follow. But now even the cover of night is not going to provide a reprieve from the summer sun. We usually use nighttime as a chance to breathe out, literally releasing oxygen without losing too much water to the sun. But now warmer nighttime temperatures mean we get no break from the heat and we'll lose more water to evaporation. These frequent hot days and nights mean we won't grow as tall and will look dried out and brown. We might even lose some of the development of our corn kernels we're known for.

As a plant I know the soil is the other half of the equation. The soil helps me get the nutrients and water I need to grow strong. But these drying conditions mean that soil can be washed or swept away in the strong storms we do get. It's hard to grow from unhealthy and eroding soil so we can't risk losing too much of it. Some farmers are finding ways to protect the soil by using cover crops when corn plants are out for the season. We're going to need these techniques to help us keep growing like we have been through these changes.

# Monarch Butterfly

## United States

I've become an icon because of my extensive migration patterns from the U.S. down to Mexico and back again every year. Although this migration path has never been easy, life at every step of the way is becoming more challenging and our numbers are shrinking because of it.

Before migration can even start, we begin our lifecycle as eggs laid on our favorite plant - milkweed. Once we transition to life as caterpillars, milkweed becomes our food too. Milkweed used to be abundant amidst crops in the midwest, making for great Monarch habitat. But the use of pesticides and pesticide resistant crops means we're losing our habitat on milkweed.

Habitat loss isn't our only struggle though, warming temperatures are confusing our internal calendars that tell us when to head south for the winter. We usually depend on the first cool fall days to tell us when to leave the northern U.S., but lately warm fall temperatures mean we are staying up north longer, up to six weeks sometimes. This later migration cue means we're traveling south later and risk getting caught in cold winter weather and storms. These storms are terrifying for such a small being and are oftentimes deadly. Fewer and fewer of us are surviving the harrowing journey to Mexico where the Monarch Butterfly Biosphere Reserve offers some protection. But even within this reserve our habitat on oyamel fir trees is not guaranteed. The oyamel fir is another species threatened by climate change, making it difficult to know if our winter safehaven will be around in the future.

# American Lobster

## New Jersey to Maine, USA

I used to be found all along the Northeast coast of the U.S., but recently water temperature changes are hurting lobsters in the southern waters.

As sea surface temperatures rise in my southern range, off the coast of New Jersey, New York and Connecticut, the lobster populations there have been falling. These warming waters make it harder for our young in the larval stages to survive to become adults. Temperatures above 20 degrees C increase our stress levels and weaken our immune systems making us susceptible to mass die offs and deadly parasites. This all sounds like us lobsters are in hot water, and we are, but thankfully our populations in northern areas of the Atlantic coast seem to be doing just fine for now.

Lobsters in Maine aren't yet experiencing sea surface temperatures warming above the 20 degree C/68 degree F stress threshold that is causing death further south. The Maine population is actually booming, as lobstermen will tell you. Although these cooler waters up north are keeping our population numbers up, we might have to keep shifting north as sea surface temperatures continue to rise. Even the Maine waters could soon be too warm. Researchers here in Maine tell us that these waters are warming 99% faster than sea surface temperatures in the rest of the world's oceans. All this warming makes it hard to tell where we'll be in the future, but it's likely we'll be further north where temperatures might stay cooler.

# Steelhead Salmon

## California, Oregon, Washington, USA

I'm one of the Pacific salmon species that migrates from freshwater to the ocean to grow into an adult and then back to my home freshwater stream to spawn and reproduce. These travels mean my habitat stretches great distances, but it seems that there's similar problems appearing across the waters I swim through.

Both in the freshwater streams us steelhead salmon are born in and then return to, and in the salty Pacific Ocean, water temperatures are increasing. Our inland waters are warming due to high temperatures and less tree cover over streams due to deforestation and development. Low stream flows due to shrinking glaciers and water diversion for other uses will only further this warming. Cold water not only keeps us salmon cool enough to survive at our early life stages, but it also holds more oxygen than warmer waters. We need plenty of dissolved oxygen in the water to breathe, just like humans need oxygen to breathe. And once we've migrated out to the ocean, cold waters aren't always a guarantee there either. Marine heat waves are becoming more frequent, and warm ocean waters make survival in our adult stages difficult too.

If only we could return to the furthest reaches of our traditional habitat in the mountains where waters may still be cold and clean. But the construction of dams from California up to Washington have shrunk our available spawning habitat and contributed to smaller population sizes. Fish ladders and other technologies at some dams are helping a few of us move up stream, but the loss of so much spawning habitat is hard to overcome.

# Eastern Beech Tree

## Appalachian Mountains, USA

As a common part of many forests in the eastern U.S., I'm concerned about where I'll be with this changing climate. The rising temperatures and more frequent droughts are concerning to many of us trees of the Appalachian Mountains and I'm worried about how I'll grow in these conditions. A warmer climate is likely to benefit my biggest nemesis, beech bark disease. This disease occurs when a scale insect and the fungal infection that follows infects our thin bark. It can kill young and old beech trees alike. Many of us are already infected, likely making us more susceptible to the stressors and pests that a warming climate will bring.

With more frequent drought and wildfires I'm again at risk because of my thin bark that does little to protect against fire. In stands where beech bark disease has taken hold the downed trees and limbs will only provide more fuel, creating more dangerous fires. On the other hand, winter will still bring challenges too. Like other hardwood trees, we can suffer damage after strong winter storms and we're slow to heal and regrow. With more extreme storms likely there's no doubt we'll keep facing losses to these storms. These weaknesses make me susceptible to the threats of climate change that could begin to push me out of my home forests.

## Module

# 4

## Lesson

# 2

# Art and Climate Change

## Lesson at a Glance

### **Silent Gallery Walk (15 minutes):**

Participants will look at and reflect on artwork related to climate change and biodiversity.

**Questions, Reflections (10 minutes):** Participants will discuss the work they've seen in small groups.

### **Data driven artwork discussion (10 minutes):**

Participants will dive deeper into Jill Peltó's artwork, looking at examples of data-driven visual storytelling.

**Data driven artwork (20+ minutes):** Using the artistic style of Jill Peltó, participants will be able to create their own visualization of climate change.

### **Conclusion (5 minutes):**

Final questions, comments, continuations.

## Learner Outcomes

### **Participants will:**

- Work with real data relevant to climate change or biodiversity loss and create an artistic piece
- Be introduced to three artist's work that is relevant to climate change, biodiversity loss, and public lands in the United States
- Reflect on how visual media can inspire awareness and action of climate change and biodiversity loss

## Getting Ready

**Time:** 1 hour +

**Materials:** High quality printouts of climate change and/or biodiversity-related artwork, colored pencils, watercolors, pencils, blank white paper, tracing paper (optional), rulers, scissors, enough relevant data charts for each student, markers, chart paper if groups will be observing one art piece in a small group.

**Preparation:** Spread gallery walk images out on tables, with significant distance between them so that 3-5 people can look at each piece comfortably. Have art supplies and data charts easily accessible.

**Location:** A location with tables or other writing surfaces; preferably an outdoor pavilion or other space closely connected to nature.

**Number of participants:** 1-30 participants

**Objective:** To experience and create climate change advocacy through art.

## Silent Gallery Walk (15 min)

A Silent Gallery Walk is a method for participants to engage with new material independently. Preface that you will be leading a discussion about questions, reflections, and observations participants have about the piece after the gallery walk. It can be helpful to set an expectation of how many "talking points" you want each person to have for this. Each piece of work has a short caption underneath it in the curriculum. You may choose to leave these visible during the initial gallery walk or to "reveal" them at a later time.

Introduce participants to the concept of a Gallery Walk by encouraging these guidelines:

1. Please be silent and keep your observations to yourself as you view the work. Each learner is experiencing this work in their own way — by remaining silent and observing the work, you are allowing your peers the opportunity to discover their own observations just as you are discovering the work yourself.
2. You may record your observations or curiosities on a piece of paper or in a notebook.
3. Try to spend at least two minutes with each piece; if you're highly engaged or excited by a piece, you may want to spend longer- this is natural. By spreading your time more evenly throughout all of the work, you may find connections to a piece you aren't initially drawn to.
4. As you visit each piece, try to maintain a few feet of physical distancing between yourself and others; this distancing can enhance your experience as well as theirs. If you notice the piece of work you were going to visit next has a crowd around it, change your strategy to visit another one they are representing. Have each group assign a note taker and a presenter.

## Questions, Reflections (10 mins)

Guide participants in a reflective conversation about the artwork displayed. Begin with questions that allow for sharing of initial thoughts and reactions:

- *What did this make you think about?*
- *What do you think ties these pieces together?*
- *Why do you think we're looking at this body of work?*
- *How do you feel after viewing this work? What emotions came up for you during this exercise?*
- *What assumptions does this work challenge/reinforce?*

After initial reactions, offer the following questions to guide the group to a discussion about biodiversity, environmental justice, and climate change.

- *Where do you see climate change or biodiversity loss represented?*
- *Why did the artist say this piece was related to climate change? What do you see that links this work to climate change or biodiversity loss?*
- *What power structures does this work reinforce/break down?*
- *How did the artist create this work? What tools or techniques do you think the artist used?*

## Data Driven Artwork Discussion (10 minutes)

Review Jill Peltó's artwork with the students. She creates pieces by taking climate data charts and using them to tell stories about the effects of climate change on the environment.

"Landscape of Change" uses four line graphs: sea level rise, glacier volume decline, increasing global temperatures, and the increasing use of fossil fuels. While the piece is from 2015, it tells a story that is relevant more today than ever. Ask participants if they can identify specific data lines.

"Gulf of Maine Temperature Variability" highlights the temperature fluctuation and temperature increase that sea water in the Gulf of Maine has experienced over the past 15 years; it also highlights the native species (codfish, lobsters, shrimp, and burrowing clams) that have been impacted by ocean acidification and depleted fish stocks. Ask students to consider what will happen to the people who rely on these species to provide for their families if this trend continues.

## Creating data drive artwork (15+ minutes)

Ask participants to choose a dataset to create their own art in the style of Jill Peltó. Ideally, provide data charts related to local issues. There are several sources for global data available online:

- [wxshift](#)
- [climate.gov](#)

- [skepticalscience.com](#)

- [www.eia.gov/beta/states/states/mt/data/dashboard/renewables](#)

Participants can create art directly onto a graph they have printed or hand-drawn. They can also trace a graph onto a different piece of paper, especially if using paints. Participants can also use multiple datasets to make more complicated pieces. As participants create their own artwork, encourage them to consider including aspects of the environment, plant and animal species, and human interaction.

## Conclusion (5 minutes)

Final questions, comments, continuations.

*What story did you choose to tell with data, and why?*

*How did this activity increase your understanding of data, storytelling, and climate? Suggest if students are interested in contributing to data collection, they participate in a community science project!*

*What are ways of knowing that the climate is changing? What stories have you heard that the data supports or contradicts? Aside from numbers, how do communities know that change is happening?*

*Many Indigenous and Native communities have commented on climate change and how their traditional ways are at risk; yet these stories and commentary are not typically told in western scientific circles. How does this activity highlight other ways of knowing?*

*How does public land link to this activity? (Some links are: Data collection happening on public lands, imagery of public lands, science about biodiversity on public lands)*

*All artwork for this lesson used with permission from the artists.*

## Adapt the lesson

- For a highly engaged group, consider having participants self-select into small groups around the artwork displayed that they are especially interested in or drawn to. Ask participants to write down what they notice or wonder about the artwork, asking them to avoid statements that start with "I like" or "I don't like." Groups can present to the larger group.
- For an extended project, consider asking participants to collect their own data for several weeks or months prior to this activity and use it to create their artwork.
- Consider splitting into two lessons- the Silent Gallery Walk as part 1 and the Art Creation as part 2. Additionally, after participants create their own work, they could repeat the silent gallery walk process with their original pieces.

[illegible]

**I Have a Soul:** Is a piece that encompasses the duality of the Earth as well as the individual one represented as the day and the night. The tree as a central piece represents life itself and many things that come with it. Each branch ends with a hand doing something meaningful and fun. Many cultural subjects are depicted here for inspiration about diversity. Characters in the painting include: John Lennon, Gandhi, Isaac Newton, Virgin of Guadalupe and her son, Buddha, the feathered serpent, Catrina (Mexican iconic day of the dead figure), Krishna among others.

## Jade Leyva



**Let Your Creative Heart Flow:** This piece was created as the basic design for a seed mural Jade Leyva did with 19 detained young women at a youth detention center in Albuquerque, NM. The theme was created by her to inspire young people to let their creativity flow and they can then see how it evolves into beautiful things. The landscape is inspired in the central New Mexico area, the Rio Grande, local indigenous people, plants and fauna.

## Jade Leyva

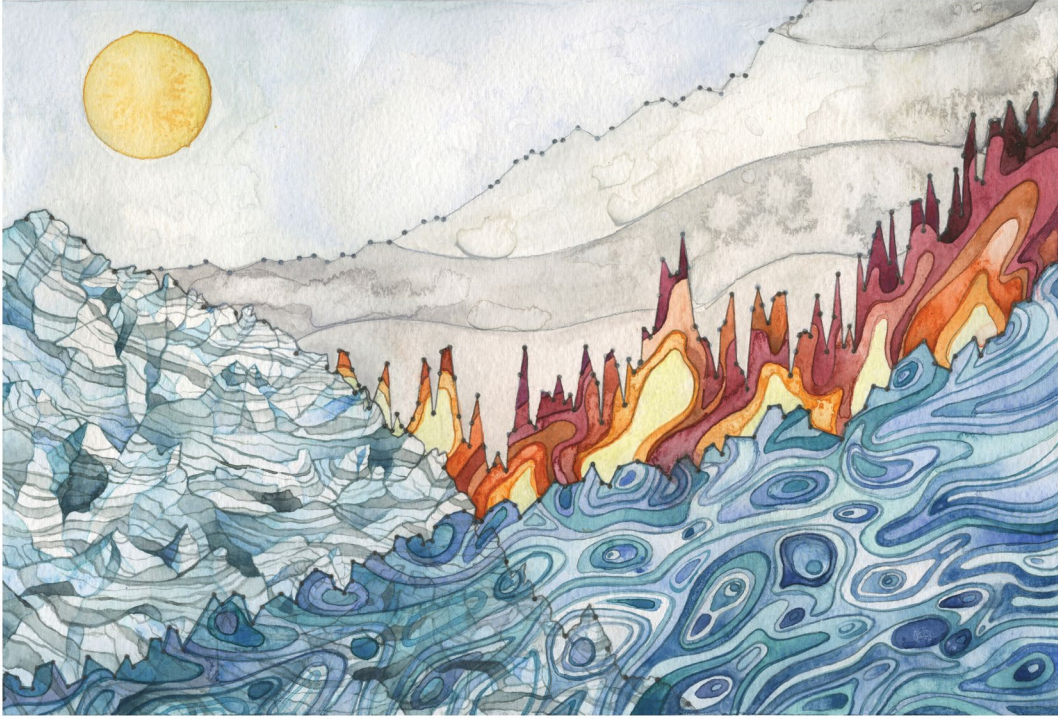


**Bee the Change:** This segmented mural was part of Jade Leyva's environmental awareness project which included several large scale murals made with seeds brought by Jade Leyva into 105 different locations in New Mexico. This one mural has 9 sections and they were designed by many New Mexico Artists that Jade Leyva asked to volunteer their work for it, including Endion Schichtel, Priscilla Garcia, Noel Dora Chilton, Ashley Cummings, Cate Clark, Christian Michael Gallegos, Dona Dowell, Dennie York, Emily Schuyler & Jade Leyva.

Each hexagon measures 3' wide and it was created by different communities gluing on seeds following the painted colors and patterns previously painted by local artists. All this work on this piece was meant to raise awareness about the importance of bees and their deep connection to everything else. This mural was donated to Valle del Oro Wildlife Refuge in Albuquerque and to be and it will be used to educate the community about bees.

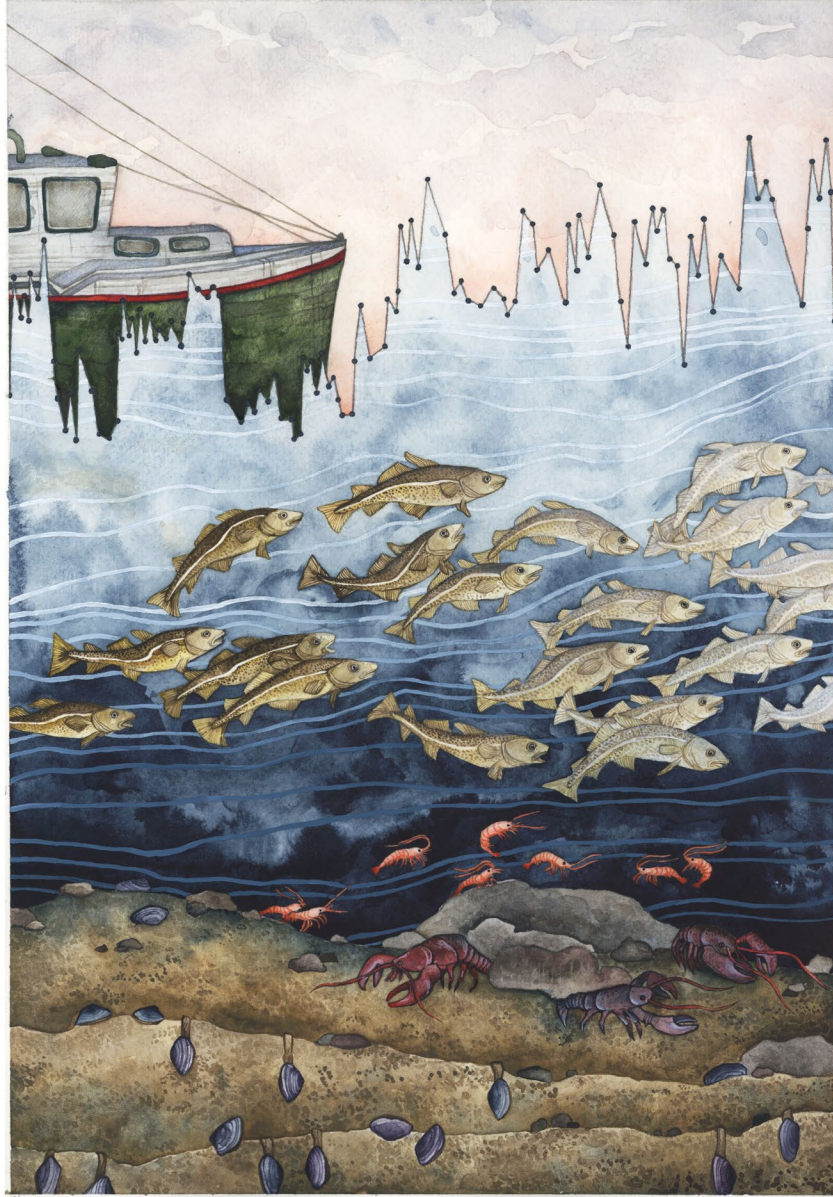
We handed out free educational material and organic, local & drought tolerant wildflower seeds encouraging people to help our little buzzing friends by planting them in their gardens.

## Jill Pelto



**Landscape of Change** uses data about sea level rise, glacier volume decline, increasing global temperatures, and the increasing use of fossil fuels. These data lines compose a landscape shaped by the changing climate, a world in which we are now living.

## Jill Pelto



**Gulf of Maine Temperature Variability** tells the story of increasing temperature fluctuations in Maine's coastal marine environment. The watercolor uses ocean temperature data from the past 15 years to highlight how greater variability affects various species including ourselves. The piece also highlights the inattention to the coupled relationship between human action and environmental responses that has contributed to depleted fish stocks and increased ocean acidification. This Gulf of Maine story spans the water column: from the burrowing clams and bottom-dwelling lobster and shrimp, to the overfished cod which disappear across the painting as they struggle to return to a changing habitat, and finally up to the surface where fishers and managers may adopt sustainable practices or continue the practices that have resulted in overfishing and by-catch. Each species has a complex interaction with the environment, and if the imbalance of our give-and-take relationship with the ocean persists, we will continue to see new stresses that irreversibly change ocean conditions within the intertidal mudflats and into the yet unexplored ocean depths.

## Xavier Cortada



**Pinecrest Mangrove Forest 2, 2019:** In 2019, Xavier Cortada created Pinecrest Mangrove Forest, the county's first urban mangrove forest alongside his 200-ft long mural which was unveiled with representatives from local schools coming to plant the mangroves. The path between the mural and mangrove forest serves as a public space that connects Pinecrest Gardens and the Pinecrest Community Center. The area is also a beautiful backdrop to the popular Farmers Market held every Sunday year-round. Fifteen years after Miami Mangrove Forest, Cortada led the creation of Pinecrest Mangrove Forest, a mural that depicts the fully-grown mangrove forest the seedlings from the original mural would eventually become. However, Pinecrest Mangrove Forest functions more than just a metaphoric reforestation of the local area, but as a prompt for literal reforestation, a conceptual and practical evolution from its predecessor.

Mangroves are salt-tolerant plants that eventually grow into large trees most often found along coastlines. The environmental impact of mangrove trees existence in coastal areas should not be understated, as mangroves actively stabilize coastlines by reducing erosion and combat sea level rise by allowing for a buildup of sediment in the water. They also serve as an integral part of coastal ecosystems, the trees themselves providing shelter for a variety of marine and avian life. After witnessing the removal of mangrove forests within his community, Cortada set out to reclaim urban environments for nature through the planting and exhibition of mangroves throughout Miami. The focus of mangroves in Cortada's work can be initially seen in projects like Miami Mangrove Forest, a large-scale public art project from 2004 that saw the artist and volunteers paint mangrove propagules along the underbelly of Miami's I-95 interstate in an effort to create a conceptual reforestation of the urban area. This eventually led way to a literal reforestation of the urban Miami area in the Reclamation Project, initiated in 2006. The Reclamation Project was an attempt at reintroducing nature into the built environment, specifically to strengthen coastlines from storm surges, but also an acknowledgment of the precarious nature of such a meeting. Plan(T) builds upon this by looking towards the future, the importance of utilizing salt-tolerant mangroves to address issues of climate change facing Miami being paramount.

## Xavier Cortada



**Underwater HOA Elevation Drive, 2018:** Mapping the topography of a conceptual coastline is the basis of Cortada's *Underwater HOA* project, necessary "to make the invisible visible." Working in conjunction with Cortada's Antarctic Ice Paintings from 2006, Underwater HOA is a participatory art project that depicts South Florida's vulnerability to sea-level rise, specifically this vulnerability towards homeowners within South Florida. At Pinecrest Village's main thoroughfare, Killian Drive, featured Underwater Markers along a 2.5-mile stretch, between US1 and Red Road, to show drivers the gradual increase in elevation from one end of the street to the next. Art students from four local high schools helped Cortada map the elevation of four major intersections along Pinecrest's Killian Drive by painting his markers on the roadway.

## Xavier Cortada



**Endangered World (2009):** Eastern Hemisphere drawings, 180 graphite drawings on paper, each 9" x 12" 2009. The work depicts endangered animals originally featured in the artist's 2008 North Pole installation. Each animal represents an endangered or threatened species located at one of the globe's 360 longitudinal degrees; this image shows the 180 species of the Eastern Hemisphere. In addition to this installation, Cortada has leveraged this project to include participatory online and social media efforts, installation pieces at the Biscayne National Park, the North and South poles, Holland, and in the Netherlands. Cortada encourages participants to "adopt" a species and engage in eco-actions to help rebuild the ecosystems that these endangered animals need to survive.

# Current Issues in Public Lands Management

### Main Takeaway

**Public lands and waters offer many ecological, social, cultural, and economic benefits.**

**Every type of use of public lands provides benefits and also has impacts on the land and other users.**

**Land managers must balance legal requirements and the varying interests of public lands user groups when making land management decisions.**

## Introduction

Public lands and waters provide significant benefits to people, the environment, and the economy. They provide these benefits in a variety of ways depending on how the lands and waters are being managed and used. Every type of use of public lands provides some sort of benefit to the user or to the public. At the same time, many of these uses also have adverse impacts on the environment or on other public lands users.

Land managers, employed at the local, state, and federal levels, must make management decisions based on the laws and policies that govern the lands they manage, and also on the needs and interests of user groups. Making these decisions can be a challenging process. These decisions nearly always involve multiple user groups whose interests may be in conflict with one another. Sometimes, user group interests partially coincide and partially conflict. Land managers must weigh these interests in determining how a particular area of public lands will be managed.

This module will provide readers with an introduction to the wide range of uses and interests in public lands and waters and review some current issues for land managers and public land users. In doing so, we hope to help learners develop a framework for understanding the complex issues that land managers face every day.

## Benefits and Impacts of Public Lands Uses

### Recreation

Public lands and waters support a wide variety of recreational activities. This includes camping, climbing, hiking, backpacking, paddling, biking, skiing, fishing, hunting and other non-motorized activities. It also includes boating, off-highway driving, heli-skiing, e-biking, snowmobiling, and

RV camping. Module 1 provides an overview of where each of these recreation activities are permissible.

Recreation is the most popular use of public lands and waters. In a typical year, the lands and waters managed by the National Park Service see about 250 million recreation visits. Many more people visit lands managed by other land management agencies.

The benefits of public lands recreation use are significant. Individual benefits include improved physical and mental health, improved quality of life, opportunities to build community and establish a connection to cultural and natural history, and opportunities to experience quiet and solitude in natural spaces. Collectively, recreational users also contribute to a robust and growing outdoor recreation economy.

At the same time, like many of the other uses listed below, recreation can have adverse impacts on natural resources like plants and wildlife, particularly in areas of overuse or when recreation is poorly managed. Recreational use is also largely incompatible with natural resource extraction activities. Consequently, these activities generally do not occur in the same area.

### Education

Public lands offer a unique opportunity for a wide range of education relating to the natural sciences, cultural history, art, applied mathematics, and other subjects. Outdoor spaces support educational opportunities that are nature-based and experiential and that complement traditional classroom learning. Public lands also provide learning opportunities for adults through field-based interpretive signage, visitor centers, and a variety of educational presentations. These activities are generally low-impact, but do not often occur in the same area as natural resource extraction activities.

## Spiritual and Cultural Uses

As we explain in Module 2, Indigenous peoples have lived on and used the lands and waters that we now consider public lands since time immemorial. Despite being displaced and relocated, violently in some cases, Indigenous people continue to have a deep spiritual connection to these places and continue to use them for a variety of spiritual and cultural practices. Examples include conducting tribal ceremonies, hunting, fishing and gathering of sacred medicine and herbs. Non-Indigenous people also report feeling a spiritual connection to nature and often visit public lands for this reason.

Providing opportunities for these activities benefits the individuals that hold these beliefs. It also benefits humanity as a whole by preserving important and diverse cultural and spiritual traditions. Protecting lands for spiritual and cultural activities usually requires land managers to limit other uses. Recreational activities like rock climbing and photography are sometimes incompatible with cultural activities. Natural resource extraction is also incompatible and sometimes alters or damages sacred sites on public lands.

## Subsistence Hunting, Fishing and Gathering

Subsistence hunting, fishing and gathering is another important land use. Subsistence uses are longstanding traditional uses for Indigenous and Tribal groups. In addition, non-native homesteaders also engage in subsistence activities in some locations.

To a lay person, subsistence means using public lands as a source of food, clothing, warmth, construction materials, and other basic needs for yourself or your family. However, for Indigenous communities, subsistence activities are deeply connected to history and culture, and engaging in subsistence practices is essential for their cultural survival. The continuation of subsistence practices enables different generations to share their knowledge and value systems with one another. In this respect, subsistence goes beyond meeting basic nutritional and physical needs. Protecting subsistence uses helps to preserve traditional ways of life and culture that are important to Indigenous communities and part of the history of the United States.

Subsistence activities are particularly common in Alaska, where rural communities harvest about 18,000 tons of wild foods each year. Federal laws like the Alaska National Interest Lands Conservation Act (ANILCA) recognize and protect subsistence use of fish and game for Alaska Native communities. The State of Alaska goes further in recognizing all Alaska residents as qualified subsistence users.

## Landscape Preservation and Conservation

Another type of land use is preserving the land in its natural state. Under this form of land use management, preserving the natural characteristics and systems of the land are the highest priority. This is different from managing land for recreation or scientific research, although there is significant overlap. On lands managed for recreation, land managers may tolerate some natural resource impacts in order to provide recreation opportunities. On lands managed for preservation, recreation is limited when doing so is necessary to protect

plants, wildlife, and natural processes. Land designations like Wilderness, discussed in Module 1, prioritize preservation of lands in their natural state.

Land preservation provides significant public benefits, sometimes referred to as ecosystem services. This includes filtration of air and water, healthy habitats for wildlife, preservation of diverse plant and animal communities, climate change mitigation, and protection of wildlife migration routes. However, in order to realize these benefits, extractive uses must be largely excluded and some forms of recreation must be limited. More information about these limitations can be found in Module 1.

One recent development in land preservation is the movement in some countries to grant certain landscapes and waterways “personhood,” or to acknowledge that these places are living beings. In New Zealand, India, and Columbia, rivers have been granted rights as living entities. In Ecuador and Bolivia, constitutional amendments have recognized the rights of “Mother Earth.” These steps have given a name as well as legal standing to ecosystems and large landscapes. To date, these actions have not been replicated in the United States. Many of the land management strategies, practices, and histories in North America have been anthropocentric (i.e., human-oriented), particularly during the settler-colonialist period that started in 1492. The movement to give landscapes and rivers legal standing is a shift in this thinking that would recognize that relatively unaltered landscapes have rights and value in their natural state.

## Tribal Co-Management and Land Back

In recent years, there have been calls from Native Americans and others to achieve a greater degree of land justice in the United States. Land justice is equitable access to land and the return of power and land to Native Americans.

The movement to return access, management and sometimes public land itself to Indigenous peoples is sometimes called the “Land Back” movement. However, this reference is an oversimplification. Restoring Indigenous peoples’ relationship to the land can take many different forms, some known today and some yet to be developed. These forms of restoration lie along a continuum from co-management of the lands to outright ownership of the lands by a tribal entity. We describe the different restoration strategies briefly below but emphasize that each one of these strategies has its own variants, and each specific application of these methods involves complexities that we do not attempt to summarize here.

1. **Co-Stewardship/Co-Management** — a contractual arrangement between a government entity and a tribal entity that gives the tribe authority over some of the management functions of a public land unit that would otherwise be retained by the government entity.
2. **Easement** — An easement is the right to use the property of another for a specific purpose. Easements can be used to give Tribes the authority to monitor and protect the ecological health of an area of privately held land. They can also be used to restore cultural and spiritual connections

to lands. One example is a “spirit easement” acknowledging that the property is open and welcoming to all spirits of a Tribe’s deceased people.

3. **Stewardship/Management** — Complete tribal management of a park or other public land unit. Many of the parks where this form of management exists are completely within a tribal nation.
4. **Land Transfer** — Transfer of legal ownership of lands from a government to a tribal entity.
5. **Land Purchase** — Purchase of legal ownership by a tribal entity. In some cases, purchased land is then transferred into Trust for the Tribe through the Bureau of Indian Affairs.

Employing these strategies to restore Indigenous peoples’ relationship to the land has significant public benefits. It achieves some degree of land justice and begins to correct historical wrongs done during the colonial settlement of the United States. It also expands the role that traditional knowledge plays in the management of public lands and helps educate non-Indigenous people on the relationships that Indigenous peoples have had to the land since time immemorial.

### Scientific Research

Public lands and waters are natural laboratories that provide limitless opportunities for scientific research. This scientific research benefits the public in countless ways. It helps us develop new medicines and technologies, increases our understanding of climate change and natural disasters, helps us forecast the weather, and expands our knowledge of the natural world. Scientific research sometimes has impacts on the landscape, such as when it requires the installation of infrastructure like data collection devices and built laboratories. However, scientists generally try to keep these impacts to a minimum to preserve the integrity of the ecosystem and the validity of the data collected.

### Public/Private Gathering Spaces

Public lands provide outdoor gathering spaces for public and private parties and events, particularly on the local and regional level. This includes family gatherings, community and religious group events, rallies and other First Amendment activities. These uses improve social, mental, and physical health, help build stronger communities and enable people to express their views to their neighbors and their government. In addition, the revenue received from these events often help the managing agency offset the expenses incurred in maintaining these public facilities. At the same time, large events can concentrate use in one area, which increases impacts and may require more built infrastructure and regular oversight from the managing agency.

### Greenway Connectivity

Another beneficial use for public lands is to provide greenway connectivity. In many cities, public land resources provide commuting pathways for cyclists and pedestrians, access to water sources for living organisms, and outdoor greenspace for local residents. Cities across the country are working to connect and expand existing greenways. For example, the Boston Metropolitan Planning Council is aiming to connect 1,400 miles of trails and greenways in the Boston area.

### Renewable Energy Development

Public lands are increasingly being used for renewable energy development. Certain locations on public lands are ideal for solar, wind and geothermal energy generation. Generating renewable energy on public lands helps cities to reduce their dependence on carbon-based energy sources, thereby reducing the release of greenhouse gasses and slowing the effects of climate change. Renewable energy projects also provide jobs for nearby communities. At the same time, the construction and operation of renewable energy facilities can have adverse effects on nearby plants and animals. Active management is required to reduce the impacts of solar energy arrays on sensitive desert ecosystems and to reduce the number of bird strikes from wind turbines.

### Natural Resource Extraction

Federal public lands and waters also support significant amounts of natural resource extraction. This includes drilling for oil and natural gas, mining for various types of minerals, harvesting timber in the National Forests, and grazing livestock on Forest Service and Bureau of Land Management lands. These activities provide benefits to the public by supplying us with raw materials like oil, natural gas, lumber and food products that we use in our everyday lives. They also provide employment opportunities to local communities and royalty revenue to the land management agencies. At the same time, natural resource extraction activities have significant negative impacts on other user groups and can cause irreversible damage to landscapes on both a large and small scale.

## Management Issues on Public Lands and Waters

Managing public lands and waters involves many complicated issues and questions. These issues impact the users of public lands and the agencies and people who are responsible for managing these lands. The most pressing issues change over time, which makes it difficult to compile a comprehensive list. However, to provide an overview, we describe some of the leading issues facing users and land managers at the time of the publication of this curriculum.

### ISSUES FOR USERS OF PUBLIC LANDS AND WATERS

#### Access to public lands for recreation and education

For some people, public lands are readily available and accessible in their everyday lives. However, public lands are not easily accessible for everyone. Some people face barriers to accessing public lands. These barriers take various forms. Examples include:

- **Transportation** — Many people living in urban areas and people without financial means lack the transportation capabilities necessary to travel to public lands. This inability to get there is one of the biggest barriers to sharing in the benefits of public lands.
- **Entrance fees** — Some public lands charge entrance fees. When they are modest, these fees pose a minimal



barrier. However, in some cases these fees can be significant, and can deter people from visiting public lands, particularly people of limited means.

- **Cost of equipment** — Some recreational activities like rock climbing and paddling require participants to have specialized equipment. The cost of this equipment can be a barrier to visiting public lands.
- **Accessibility of trails and facilities** — The physical accessibility of trails and other recreation features can be a barrier to people with disabilities.
- **Lack of knowledge of recreation** — Some recreation activities require specialized skills. This can serve as a barrier to participation in these activities.
- **Lack of information about public lands** — Some people have difficulty accessing accurate information about where public lands are located, how to access them, and what facilities and services they provide. This is particularly true for people with disabilities who need more information to plan a trip.

#### **Access to public lands for spiritual, cultural and subsistence activities**

Access to public lands and waters is also a significant challenge for Indigenous peoples seeking to use areas on public lands for spiritual, cultural and subsistence activities. As explained above, Indigenous communities have been using lands and waters that are now public since time immemorial for ceremonies, rituals and hunting and fishing activities. Unfortunately, these long-standing historical connections have not been fully recognized and respected. During westward colonial expansion, some sovereign tribal nations entered into treaties with the United States that were supposed to guarantee hunting and fishing rights on lands that are now part of the public lands system. However, in many cases, those treaties have not been honored. There have also been instances in which sites that are sacred to Indigenous Peoples have been damaged by natural resource extraction or desecrated intentionally and

unintentionally by public land users. As a result, important tribal connections to public lands have been adversely affected.

#### **Negative experiences on public lands**

For many people, visiting public lands is a positive experience. However, some people report experiences of exclusion and othering when they visit public lands. This is particularly true for People of Color. People may feel unwelcome because the staff of the public lands management agencies are still predominantly white and therefore do not reflect the identities of the general population. However, some othering experiences can be traced to narrow views on proper public lands etiquette and the “right” way to recreate that have developed in the recreation and outdoor communities.

Some visitors have negative experiences on public lands because of the lack of an accurate and representative history of these places. Land managers often do not do enough to acknowledge the historical presence and significant contributions of Indigenous people and People of Color. Module 3 of this curriculum highlights the voices and actions of noteworthy leaders of color in the public lands movement.

Acts of exclusion on public lands can sometimes take on more extreme forms. Some Black, Indigenous, People of Color and LGBTQ+ visitors continue to experience violence and threats of violence when they visit parks and other public lands. These threats usually come from white people who believe that People of Color and LGBTQ+ people do not belong in “their” parks. Parks and public lands also contain thousands of examples of place names that honor and glorify historical figures associated with racism, oppression and genocide. These place names contribute to feelings of exclusion on public lands for some visitors.

#### **Inaccurate perceptions about appreciation for the outdoors**

Research shows that there is a perception and stereotype that People of Color do not appreciate the outdoors and public lands. The reality is that people have different ways of

appreciating and connecting with nature and the outdoors. This may include ways that are not reflected in the dominant narrative about public lands appreciation. This was true historically and it remains true today.

Module 3 of this curriculum tells the story of some of the connections that People of Color have forged with nature and the outdoors. These stories demonstrate that People of Color have always connected with the outdoors and with public spaces. Telling these stories makes public lands history more multidimensional and relevant to users of today. More recently, the success of organizations like Outdoor Afro, Latino Outdoors and the organizations in the Diversify Outdoors coalition has clearly demonstrated that interest in the outdoors among People of Color, while already strong, constantly grows when these communities have proper access to green spaces.

## **ISSUES FOR LAND MANAGERS**

### **Lack of funding and resources for public lands management**

Federal land management agencies continue to struggle with the limited resources they have been given to maintain and protect public lands. From 2010 through 2021, the agencies were significantly underfunded. As a result, they were unable to adequately operate programs to maintain and connect people to public lands, and they also lost a significant percentage of the staff they need to keep the agencies operating effectively. The combined effect is a growing backlog in repair and restoration work and an overburdened workforce that has trouble meeting unreasonable performance expectations. This lack of agency resources exacerbates nearly every other issue on public lands.

### **Energy development and greenhouse gas emissions from public lands**

The federal government leases public land for oil and gas extraction, with roughly 26 million acres under lease nationwide. Oil and gas companies pay fees and royalties to extract oil and gas from public lands in a few different ways. However, many of these fees are very low and have not kept pace with the rate of inflation. This creates opportunities for abuse of the system. For example, the federal royalty rate energy companies pay on the dollar value of oil or gas produced is lower than the rate set by the states and by private landowners, which incentivizes fossil fuel development on public lands over wildlife habitat, conservation, and recreation. Likewise, the bonds energy companies are required to post to cover the cost of cleaning up wells after they stop producing rarely cover the full cost of cleanup at the end of their extractive life. This forces communities and taxpayers to pick up the difference.

One result of all of this energy development on public lands is that federal public lands continue to be a major greenhouse gas emitter. According to a report from the U.S. Geological Survey, greenhouse gas emissions from federal energy production on federal public lands are a significant percentage of total U.S. emissions. Over the past decade, approximately 40% of total U.S. coal production, 26% of U.S. oil and 23%

of U.S. natural gas were produced from U.S. federal public lands and waters. If federal public lands were a country, they would rank 5th in the world in total emissions behind China, India, the United States, and Russia. If these high emissions continue, the United States will have difficulty achieving its greenhouse gas reduction goals.

## **Climate Change on Public Lands**

As the average temperature of the planet continues to rise, all species that rely on public lands for their survival are affected. Public lands protections safeguard some of the most fragile ecosystems from the frequent severe weather events, increased flooding and erosion, extreme heat, droughts, and wildfires that are a result of climate change. Human communities are also affected by these climate change-induced stresses to our public lands. As ecosystems change, people that rely on the wildlife and plant diversity for subsistence and medicine are seeing less availability of important resources. Communities that rely on public lands to draw tourists and recreationists are seeing less support for local economies due to changing landscapes and weather patterns.

Although public lands are negatively affected by climate change, they are also a vital part of the solution. When managed appropriately, public lands offer an opportunity to sustainably develop renewable energy, mitigate the effects of a warming globe and increased greenhouse gasses, and protect critical habitat for preserving biodiversity. For more information about public lands and climate change, see Module 4.

## **Wildfire Management**

Land managers are responsible for managing wildfires on public lands. Fires are a natural part of a forest's life cycle. However, for the past several years, wildfires across the country and the world have been growing more severe. Today, fires are burning hotter and longer, extending the fire season and making fires much more dangerous. This is partly because climate change is increasing forest temperature and making forests drier, which makes it easier for fires to start and spread. It is also because the historic practice of suppressing all fires immediately instead of letting them burn where and when it is safe to do so has led to a buildup of dead or dying trees and plants on the forest floor that can catch fire very easily.

More recently, land managers have been trying a more balanced approach. This strategy includes removing small trees so larger trees can thrive and setting closely-monitored "prescribed fires" to burn away dead plant material so that it does not accumulate and serve as fuel for larger, uncontrolled fires.

Wildfire management also consumes a significant portion of the land management agencies' budgets. The agencies have seen a significant increase in the overall cost of fire management over the last two decades. As the lead fire management agency, most of these costs fall upon the U.S. Forest Service. In some recent years, more than half of the Forest Service budget was spent on wildfire prevention and suppression. By necessity, some of this money was taken from other Forest Service programs, making it difficult for the agency to fulfill its responsibilities in those areas. Recent

reforms in fire funding have reduced this “borrowing” practice. However, fire management costs continue to be a challenge for the agencies.

### **Balancing the interests of multiple user groups**

As explained in the introduction, land managers make management decisions based on a range of important considerations. First and foremost, they must comply with legal requirements imposed upon them by Congress. Nearly all of the land designations described in Module 1 carry with them legal obligations that the agencies are supposed to meet when they make management decisions. This can be a challenging process.

Perhaps the most important legal requirement imposed upon the land management agencies is that they are generally required to invite the public to participate in the land management decision making process. To comply with this requirement, the agencies usually provide the public with an opportunity to comment before they make major management decisions. Inevitably, the interests of different segments of the public conflict with one another, either entirely or in part. Land managers must balance these interests in deciding what activities will be allowed or prioritized in a particular area of public lands.

### **Lack of racial and ethnic diversity in public land use**

Research shows that the racial and ethnic demographics of people visiting certain public lands does not reflect the demographics of the United States. A disproportionate number of visitors to public lands are white, with Latinx, Black, Asian, and Indigenous people visiting at a rate below their percentage of the population. As discussed in the previous section, this could be due to lack of access to and negative experiences on public land. The land management agencies regard this unbalanced representation as a serious problem and are working to attract diverse groups to public lands.

### **Overcrowding**

The Covid-19 pandemic triggered a significant increase in the number of recreational visits to public lands as people looked to the outdoors as a way to engage in relatively safe activities with family and friends. This increase in public land usage intensified already robust visitation rates before the pandemic. The combined result has been significant overcrowding on public lands, particularly in front country areas that are popular with new visitors. Overcrowding is a major challenge for land managers. It generates high automobile traffic, overburdened parking lots and increases trash, human waste, and physical impacts on the landscape. It also increases disturbances of wildlife in its native habitat and the number of potentially dangerous human-wildlife interactions. Land managers have been forced to respond to overcrowding issues by implementing visitation limitations in some locations. These limitations take various forms, including temporary park closures and limited-entry permit systems for high use areas.

### **Management of cultural resources**

In the previous section, we described the issues Indigenous people face in accessing public lands for spiritual, cultural

and subsistence activities. Land managers face a related challenge in managing public lands to protect opportunities for these important uses. Historically, the agencies managed public access primarily for recreation and adventure activities. However, the agencies have recently begun doing more to recognize the cultural and spiritual significance of the lands and waters within their jurisdiction.

One agency responsibility that remains a big challenge is protecting sacred sites from theft and vandalism. As discussed above, agency staff resources have shrunk significantly over the past decade or so. Consequently, it is difficult to maintain an effective law enforcement presence across large areas of public lands. This has resulted in many instances of vandalism and theft of sacred objects from sites that are significant to Indigenous communities.

### **Rollback of land protections**

When Presidential administrations change in Washington, D.C., public lands protections established by previous administrations are sometimes rolled back by the new administration. These reversals make it difficult for land managers to know how to manage public lands over the long term. This occurred in 2017, when former President Trump reduced the size of two National Monuments, thereby undoing land protections that applied to these areas and opening them up for mineral and energy development. President Trump’s actions were reversed in 2021 when President Biden restored protections to these areas.

### **Proposals to transfer federal public lands to state control**

In recent years, numerous proposals have been made to transfer control of some federal lands to the states in which those lands are located. These proposals are the subject of passionate debate. Advocates for these transfers argue that the states should have the right to control lands within their boundaries. Opponents of these transfers point to conditions that were imposed when these states were admitted into the union, and to past history that indicates that when states are given control over federal lands they often sell them to private interests, primarily for mineral, oil, and gas development. These sales reduce or eliminate public access to these lands and generally result in the destruction of natural resources.

In the accompanying lesson plan, we provide a few case studies of contemporary land management issues. In each case study we describe the interests of the various user groups that have taken an interest in the landscape and some of the legal issues involved. These case studies are not meant to be a comprehensive set of examples. Similar issues exist in other areas of the public lands system. These case studies are representative of the challenges land managers face in making management decisions.

Land managers must make management decisions based on the laws and policies that apply to the lands and waters they manage, and also on the needs and interests of the multiple user groups that make use of these lands and waters. Balancing all these considerations can be a difficult and challenging process for land managers.

## Module

# 5

## Lesson

# 1

# Analyzing Public Lands Conflicts

## Lesson at a Glance

### Participant Read/Digest (10 min):

Participants will learn about a contemporary land management case study.

### Worksheet Completion (20-30 minutes):

Participants will complete a worksheet and develop a land management proposal.

### Real-Time Management Solutions and Reflection (15 minutes):

Participants will learn about solutions and current actions related to the case study and will reflect on the complicated nature of public lands management.

## Learner Outcomes

### Participations will:

- Understand that managing public lands and waters involves many complicated issues and questions.
- Identify conflicts and compromises that can occur when public lands are managed for multiple user group interests.

## Getting Ready

**Time:** 45+ minutes

**Materials:** Information about a land management case study, copies of worksheet, butcher paper, markers

**Location:** Indoor or outdoor; for a large group reflection, having a space for all participants to sit or stand in a circle would be best.

**Number of students:** 5-30

**Objective:** To provide a tool for participants to think critically about public lands conflicts and solutions.

## Participant Read/Digest (10 min)

Divide participants into groups of 2-4 people. Provide groups with a land management case study and allow time for the group to read the information. Instruct students to only read the front of their case study sheet. If participants have access to the internet, consider allowing groups to do some searching for more information on their case study (articles, maps etc).

## Worksheet Completion (20-30 minutes)

Allow time for participants to complete the case study worksheet. Participants should be prepared to present a brief overview of their case study and proposed management strategy and may utilize butcher paper and markers for their presentation if desired.

After each group presents their land management proposals, encourage participants to challenge each other's proposals and allow presenters to defend their decisions. The following questions may help groups constructively processes their proposals:

1. Which interest groups received the most of what they wanted? Which received the least? Why do you think that this is an equitable way of settling this disagreement?
2. How does history play into the management decision that you are proposing/support? How do you think land managers should consider the historical context of the lands they manage in making decisions?
3. When should your management decision/proposal be revisited? What is a condition for changing the management decision in the future?
4. Which interest groups might be invisible? (For an example of an "invisible interest group" in history, you can use the example of Native peoples during the creation of the National Parks and National Forests; while not recognized at the time, they have a clear and direct interest in management today.)
5. What challenges will exist after your management plan goes into effect? Do you think that your solution will be durable and conclusive?

## Real-Time Land Management Solutions and Reflection (15 minutes)

Once participants have completed their presentations, allow each group 10 minutes to read the back of their case study sheet for information on how the issue is being addressed by land managers. In small groups, ask them to discuss the following questions:

1. How similar is your proposed management plan to the actual events that you read about?
2. Based on the user groups that you identified, was any group given preference over another in the real-time management plan? If so, why do you think that is?
3. Do you agree with the management plan/solution? If your case study doesn't have a management plan identified, in what ways can you be involved in determining the outcome? Why should you care about the outcome?

As a large group, ask participants to summarize the real-time management plans/solutions that accompany their case study and their discussion.

As a group reflection exercise, ask participants to summarize their impressions after completing this lesson in one word—you should hear words like 'confusing' or 'complicated'. Note that managing public lands for maximum benefits of the land and people is a tough job, and we can help guide decision-makers by engaging in the process along the way as discussed in Module 6.

### Adapt the Lesson

Apply this lesson to a small scale public lands parcel, a city park or greenway that students are familiar with.

Consider using this lesson as a longer-term project framework for students to engage in research and stakeholder engagement.



### Devils Tower National Monument

Devils Tower, known to some tribal communities as Bear's Lodge or Mato Tipila, is a tower of igneous rock rising 1,267 feet over the Belle Fourche River on the traditional lands of the Lakota, Tsistsistas/Cheyenne, and Kiowa tribes in what is today northeastern Wyoming. Devils Tower has the distinction of being the first National Monument designated under the Antiquities Act of 1906. Today, it is a popular tourist destination. As rock climbing grew in popularity in the late 1980s and early 1990s, thousands of climbers journeyed to Devils Tower with the intent to climb the formation. The rock is a unique geologic feature offering routes ranging from 5.6 (fairly easy) to 5.13 (very hard). Intense interest in climbing Devils Tower continues to this day.

However, long before Devils Tower became popular with rock climbers, various tribal groups visited the area annually to pray and conduct ceremonies connected to the summer solstice. Each tribal group has their own stories of the place, but pipe ceremonies, sun dances, and vision quests are all held near (and in relation to) the tower in order to renew life and spirituality. The tribes consider rock climbing during these ceremonies disturbing and sacrilegious. Devils Tower is also a nesting area for peregrine falcons, a raptor species once classified as Endangered but removed from Endangered status in 1999 due to stable population sizes. Climbing during nesting season can disturb the falcons' reproductive cycle.

In an effort to balance these disparate interests, the National Park Service has imposed two limitations on rock climbing on Devils Tower. The first limitation is a complete, mandatory ban on climbing every April to protect peregrine falcons during their nesting season. The second limitation, imposed in 1995, is a voluntary ban that discourages but does not completely prohibit climbing during the month of June, which is one of the most important months for tribal ceremonies. Since these climbing limitations have been implemented, several lawsuits have been filed both in support of and against Indigenous religious rights and climbers' access. The overwhelming majority of climbing organizations today support closure during the voluntary limitation period and prominent voices in the climbing community have written articles about how climbing should not occur during that time. Despite this fact, each June a few hundred climbers travel to Devils Tower to climb during the voluntary ban.



### Arctic National Wildlife Refuge

The Arctic National Wildlife Refuge is a 19.3 million-acre area of land located in the northeastern corner of Alaska. It is the ancestral and modern-day homeland of the Indigenous Gwich'in and Iñupiat peoples and is managed by the U.S. Fish and Wildlife Service (USFWS). The Gwich'in and Iñupiat depend on the Arctic Refuge and its resources to sustain their communities, cultures and ways of life. The Porcupine Caribou Herd, in particular, is a primary source of food for the Gwich'in, who identify themselves as caribou people and base many of their cultural practices on their relationship with the herd. The caribou migrate each summer to the coastal plain of the refuge to birth and nurse their calves, so there is much fear that oil drilling there would negatively impact the caribou. The coastal plain—a 1.5 million-acre strip of land between the Brooks Range and the Arctic Ocean—also provides important habitat for moose, wolves, eagles, lynx, wolverine, three species of bears, and many other animals. The refuge includes a large area of designated wilderness, but the coastal plain is outside the wilderness boundary.

Since the 1970s, there has been debate about whether to allow energy companies to drill for oil and gas in the Arctic Refuge. Under the law that created the refuge, drilling for oil on the coastal plain has been illegal for decades, and only Congress could vote to change that rule. Despite the fact that extractive industries provide thousands of jobs in northern Alaska, nearly all Gwich'in oppose drilling in the Arctic Refuge— a view shared by many Iñupiat and other Alaska Native tribes.

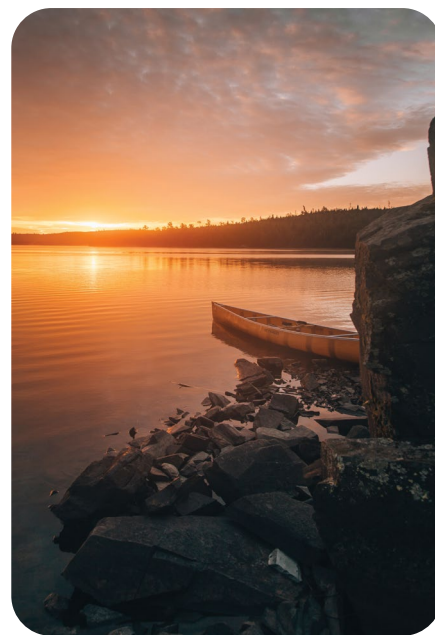
In the 1980s, USFWS recommended that the coastal plain be opened to oil and gas development in the interests of national security and economic development. However, Congress did not grant permission for drilling. Later, in the 1990s and 2000s, Congress several times debated whether to preserve the coastal plain or allow oil and gas extraction. Then, in 2017, Congress passed and President Trump signed legislation that opened the area to drilling.

As a result of 2017 legislation, the United States government auctioned off nine oil and gas leases in 2020. Knowing that drilling on the coastal plain would be risky, expensive and highly controversial, major oil companies decided to not enter a single bid. Seven of the leases were purchased by an economic development corporation owned by the state of Alaska; another was purchased by a real-estate investment firm; and one lease was purchased by an Australian oil and gas company. But in June 2022, that company canceled the lease and requested a refund. This lack of interest on the part of energy companies may be attributable to a public outcry in opposition to drilling in the refuge, especially that of the Gwich'in and Iñupiat peoples. In addition, America's six largest banks announced they will refuse to finance oil and gas extraction in the refuge and a number of insurance companies around the world have policies that prohibit financing and underwriting extraction work in the Arctic Refuge.

Shortly after President Biden took office in 2021, Interior Secretary Deb Haaland suspended all of the leases sold in the 2020 lease sale, insisting that additional review was needed on how drilling would impact the landscape. As a result of that suspension, there has been no further movement toward drilling in the Arctic Refuge as of Spring 2022. Unless Congress acts to protect the coastal plain—the 2017 Tax Cuts and Jobs Act, which contained a provision to open the refuge to drilling—will require another lease sale to be held before the end of 2024.

## The Boundary Waters Canoe Area Wilderness

The Boundary Waters Canoe Area Wilderness (BWCAW) is approximately one million acres of federally designated Wilderness located in the traditional homelands of the Anishinaabe (Ojibwe) people. Today, these lands and waters are part of the Superior National Forest in Northern Minnesota and are the most visited wilderness in the National Wilderness Preservation System. With over 2000 miles of pristine rivers and streams and over 1,000 lakes, the BWCAW is highly-valued for recreation, scientific study, and habitat for several endangered species. The recreation industry that has grown up around the Boundary Waters provides thousands of jobs in the area and is estimated to produce nearly \$100 million in revenue in the region.



In addition to the ecological and recreation value of the region, the lands of Northern Minnesota are rich with taconite, the raw material used to produce iron, and sulfide ore, the raw material used to produce copper. The U.S. Forest Service has allowed mining in areas near the BWCAW since the 1940s. However, the overwhelming majority of this mining has been for taconite and iron production rather than sulfide and copper production. Sulfide ore mining brings new risks including acid mine drainage and other heavy metal pollution to the abundant and interconnected waters of the area. These risks are unlike those from taconite mining. Taconite mining has not had a major impact on the Wilderness to date.

Mining also provides economic benefits to northern Minnesota. In the Iron Range to the west of the Boundary Waters, the mining industry has historically provided thousands of jobs and is still a major employer in the region today. Proponents of mines near the Boundary Waters claim that mining could produce jobs for this region as well, although some economic studies question whether a mining-based economy would outperform the existing recreation-based economy.

In 2012, a Chilean mining company purchased two old mining leases in the Superior National Forest. These parcels are located five miles from the boundary of the BWCAW and are upstream of a large portion of the Boundary Waters watershed. The company would like to mine copper-sulfide ore using a process that is likely to leach toxic minerals and chemicals into the water, posing a significant threat to the pristine waters in the Wilderness area.

The mining proposal sparked the formation of a coalition known as Save the Boundary Waters, consisting of a number of environmentalists, hunters and anglers, and recreation-focused businesses and user groups. Some Indigenous groups and Tribes have also supported the campaign. Save the Boundary Waters is proposing protections for the entire BWCAW watershed. The debate over the mine has pitted some traditional allies against one another. Recreation and conservation interests are against the mine, whereas some organized labor unions are supporting the mine in the hopes that it will provide jobs in the area.

During the Obama administration in 2016-2017, the U.S. Forest Service determined that the mine would cause irreversible damage to the region. The agency canceled the mining leases and proposed a 20-year mining ban around the BWCAW. In 2018 and 2019, the Trump Administration reversed this decision and reinstated the leases to allow the mine. However, the Bureau of Land Management was legally required to carry out official environmental reviews and permitting processes before mining operations could begin.

In early 2022, the Biden Administration again canceled the two active leases, saying the Trump administration's renewal of the leases was unlawful because it did not comply with applicable laws and regulations. The Biden Administration also announced that it plans to pursue the 20-year mining ban first issued during the Obama administration. The mining company has stated that it will challenge the Biden Administration's actions in court.

# CASE STUDY WORKSHEET

What land/water is being discussed?

What unique geographic features are involved (rivers, mountains, etc)?

What federal agency manages the land?

User/Interest Group Name	Desired outcome for Land/Water use? Is this use exclusive?	Benefits to this use?	Drawbacks to this use?

\* If more user groups/interest groups are identified, complete this same process on extra paper.

**Answer the following questions with the user groups and specific area above in mind:**

<p><b>What is the managing agency's mission and designation of the land?</b></p>	
<p><b>Based on mission and designation, which groups should be given priority consideration and why?</b></p>	
<p><b>Thinking globally and long term, what are appropriate land, water, and air protections for this land?</b></p>	
<p><b>Questions to Research</b></p>	

*How can this land be managed to reduce user conflict and ensure that all user needs are met?*

**On another sheet of paper, describe what a proposal for the best use of this land would be. Include which groups would benefit, what advantages/drawbacks would be for the management decision, and your reasons why you think this is the best management decision for the area.**

# Call to Action: What Can You do for Public Lands?

### Main Takeaway

**Everyone can advocate for the protection of public lands.**

Passionate individuals play a critical role in ensuring the continued protection and responsible management of our public lands and waters. Here are some things that you can do to help make sure our public lands are inclusive and will always be around for future generations to enjoy.

- Share your passion for wild places with others and be open to learning about other people's passion for land.
- Educate yourself through books, social media, radio, and articles about public lands, public lands issues, and public lands history at the state, local, and federal levels.
- Continue to connect the dots between social issues and environmental issues. Learn about the social complexities behind public land management close to home and nationally.
- Visit public lands near you and learn about projects that are occurring. For instance, you may find a timber sale marked for harvest during a hike and be inspired to find out more.
- Realize that all things are connected and every decision you make impacts ecosystems around the world. We cannot build a fence around our public lands and expect them to remain safe and healthy functioning ecosystems.
- Join organizations that monitor projects on public lands and contribute your support and voice in favor of what you believe.
- Submit comments on public lands issues and participate in community hearings on public lands decisions at the local, state, and federal level.
- Participate in or organize volunteer work on public lands.
- Call, write, or meet with your elected officials when bills or policy are up for vote and let them know that you care about public lands.
- Vote in local, state, and national elections! Support candidates who share your environmental values.
- Run for office and champion conservation.
- Recognize and respect the myriad ways in which people connect with the outdoors and public lands and advocate for all connections to public lands.
- Research and share your learning about Indigenous peoples, how places are named, and the connection to local public lands history. Include land acknowledgements on written materials and at the beginnings of events. Whenever possible and appropriate, use the Indigenous names of places and advocate for changing place names that perpetuate racial slurs and stereotypes.

Federal public lands and waters are for all people and we all have the responsibility to care for them. Having a basic understanding of the decision-making process can help you be actively involved in federal public lands protection. When considering the designation of federal public lands, there are different procedures for different kinds of designations:

- **National Monument** — this designation can be made by the president under the Antiquities Act without legislative branch (House/Senate) approval. National Monuments can also be established by Congress through the legislative process.
- **National Park** — the creation of a National Park requires legislative action in the form of a bill passed by Congress. Lands with other designations, like National Monuments and National Recreation Areas, may be converted to a National Park by an act of Congress.
- **Wilderness Area** — the designation of a Wilderness area requires an act of Congress. In most instances, Congress considers an area of federal public land for Wilderness designation after the agency that manages the land completes an eligibility study and determines that the area meets the criteria in the Wilderness Act of 1964. If the land is deemed eligible, the managing agency submits a recommendation for Wilderness designation to the president who then makes the recommendation to Congress. Congress introduces a bill and confers the designation through the legislative process.

Not all public lands management decisions focus on the creation of new protected tracts of land. The scope of public lands decision-making is broad and also includes:

- Development of land use plans by managing agencies. These plans go by various names but they all determine the way a specified area will be managed for ten years or more. They are a vital part of the land management process and offer many opportunities for the public to provide input.
- Development and modification of recreation management policies and practices. Examples include policies governing rock climbing, mountain biking, snowmobiling, outfitting, and guiding on public lands.
- Natural resource extraction decisions, such as opening up areas of public land for mining, logging, grazing, or oil and gas development.
- Securing funding for the creation of public spaces. One source is the Land and Water Conservation Fund, which provides funding to conserve lands and develop recreational facilities.

Regardless of the focus, federal public lands decisions requiring legislative action typically go through the following process:

1. **Coalition building** — a group of concerned and/or affected people, businesses, and organizations work together to create a shared vision for a legislative proposal.
2. **Sponsor recruitment** — the coalition identifies and recruits a senator or representative to introduce the bill in Congress.

3. **Committee consideration** — once introduced, the bill is sent to one or more committees for consideration. Committees generally hold hearings and then amend and vote on the bill. If the committee passes the bill, it is sent to the full House or Senate for a vote.
4. **Floor debate or unanimous consent** — if a committee passes a bill, that bill goes to the floor of the House or Senate for a vote. Some bills that are not controversial get approved by unanimous consent.
5. **Vote** — bills must pass in both the House of Representatives and the Senate before being sent to the president.
6. **Presidential signature/veto** — once passed by both the House and Senate, the president either signs the bill into law or vetoes the bill and sends it back to Congress. Congress can override a presidential veto with a 2/3 vote in both the House and Senate.

While this process may look straight-forward, it requires diligence and perseverance on the part of sponsors and advocates. Sometimes it takes years to complete. Often, a bill can go into a committee for review and come out for a vote looking very different, with new language added that doesn't relate to the intent of the original bill. Additionally, a bill may pass in one chamber but be rejected in the other, in which case the bill may go back to the first chamber for revisions. There are many opportunities to engage in the process and advocate for federal public lands legislation through involvement in local coalitions and communicating with elected officials all throughout the legislative process.

## A Guide to Changing Offensive Place Names in the United States

The National Association of Tribal Historic Preservation Officers and The Wilderness Society have released a guide to help local communities change offensive place names on public lands. The goal of the guide is to shed light on the oppressive history of colonization as it relates to public lands and to begin to change offensive place names across the country so that our public lands are more inclusive and welcoming. We encourage you to think about offensive place names nearest you and hope that you would consider taking action to rename them. The guide is free and available to anyone. Please download “A Guide to Changing Offensive Place Names in the United States,” or visit [wilderness.org/placenames](https://wilderness.org/placenames) to learn more.

## Module

# 6

## Lesson

# 1

# Advocacy Toolbox and the Art of Persuasion

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## Lesson at a Glance

**Legislative Process Review and the Advocacy Toolbox (15 min):** Participants will put the legislative process cards in order and discuss where they can get involved in the process.

**Practicing Persuasive Writing (30 min):** Participants will choose issues to practice writing letters to their representatives and local policy makers.

**Conclusion (5 min):** Share out, legislative process and toolbox review, and questions.

## Learner Outcomes

### Participants will:

- Review the basic legislative process.
- Understand the many ways in which they can get involved in the legislative process and advocate for public lands and waters.
- Practice persuasive letter writing.

## Getting Ready

**Time:** 50 min

**Materials:** Multiple sets of legislative process cards based on groups size, flip chart, markers, paper, pencils

**Preparation:** None

**Location:** Indoor or outdoor with room to sit in a circle.

**Objective:** To create a public lands advocacy toolbox and practice persuasive letter writing and arguments.

## Legislative Process Review (15 min)

1. Explain to participants that having a basic understanding of the federal decision making process can help you be actively involved in federal public lands protection.
2. Divide participants into groups of 2-5 people and pass out sets of legislative process cards to each group. Allow 2-3 minutes for each group to put the process cards in order. Allow each group to report out and discuss the results. As you review the correct order, ask the group where they think it's possible for constituents to get involved in the process, noted by the \*\*.
  - a. **Idea for change** — an individual or group is motivated to make their community better. \*\*These come from you!
  - b. **Coalition building** — a group of concerned and/or affected people, businesses, and organizations work together to create a shared vision for a legislative proposal. \*\*Get involved with organizations that are part of coalitions looking to put forward legislation, attend informational meetings, tell businesses that you support their work, help gather letters of support and petition signatures.
  - c. **Congressional sponsor recruitment** — the coalition identifies and recruits a senator or representative to introduce the bill in Congress. \*\*Contact your elected official and let them know that you support or oppose potential legislation.
  - d. **Introduction into Congress** — the sponsor in either the House or the Senate introduces the bill for consideration.
  - e. **Committee consideration** — the bill is sent to one or more committees. The committees generally hold a hearing, amend the bill, then vote on the bill. If the committee passes the bill, it is sent to the full House or Senate for a vote.
  - f. **Floor debate or unanimous consent** — the bill goes to the floor of the House or Senate for floor debate prior to a vote. Bills that are not controversial bypass the floor debate process and get approved by unanimous consent. \*\*Contact your elected officials and let them know you support or oppose the bill.
  - g. **Vote** — bills must pass in both the House of Representatives and the Senate. \*\*Contact your elected officials and let them know you support or oppose the bill.

- h. **Presidential signature/veto** — if the bill passes in both chambers it is sent to the president. The president signs the bill into law or vetoes the bill and sends it back to Congress.
- 3. Discuss other tactics in the “Advocacy Toolbox”, including:
  - a. Visit your public lands and share enjoyment with all people
  - b. Stay informed and educated on public lands issues so you can weigh in
  - c. Join organizations that monitor public lands projects and support their work
  - d. Make public comments and participate in community hearings on public lands decisions
  - e. Use social media to amplify your voice in support of public lands
  - f. Volunteer to help maintain public lands near you
  - g. Call and/or write a letter to your federal and local policy makers when public lands bills are up for vote
  - h. Vote!
  - i. Run for office and champion conservation of our public lands for all people
  - j. Organize peaceful demonstrations, rallies and marches to encourage public engagement

### Practicing Persuasive Writing (30 min)

1. Explain that one of the most effective ways to advocate for what you believe in is to write, email, or call your representatives in Congress or local policy makers. Persuasive writing is an art and there are some basic tips that can help you get your point across clearly and concisely. Write the tips on paper or a whiteboard.
  - a. **Identify who you are:** Depending on the scenario, introduce yourself. If writing to a legislator, make sure they know that you are a constituent by including your address.
  - b. **Get to the point:** Early in your message you should highlight specifically what you are communicating about. Be as specific with this as possible. List the name of the bill or legislation if applicable.
  - c. **Identify why it matters:** Help your audience make a connection as to why it matters to them. Personal stories or anecdotes can be a good way of doing this.
  - d. **Call to action:** Finish the message with a call to action—either asking a decision maker to do something or asking people to help your advocacy campaign by doing something.

2. Ask each participant to identify an issue they care about. It can be related to the environment, conservation, or something different.
3. Ask each student to write one message. They can choose the issue, their stance, and their audience and the message can be in the form of an email, letter, or script for a phone call to their representative.
4. When the participants are finished with their message, ask them to pair up and share their message, offering feedback for their partner. Ask the participants to consider the following:

*Is it clear what their stance on the issue is?*

*Is there a clear call to action tied to the message?*

### Conclusion (5 min)

1. Ask the group if anyone is willing to share their persuasive message with the group.
2. Note that contacting elected officials has shown to be a very powerful way to advocate for issues that are important. Review the advocacy toolbox and solicit questions.

#### Adapt the lesson

For groups needing more physical activity, consider making the legislative process review into a relay race.

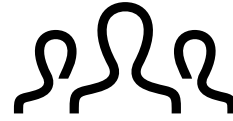
Consider assigning locally relevant topics for participants to craft their persuasive messages.

If more time is available, participants could practice persuasive speeches by role playing local lawmakers and concerned citizens. Allow time to frontload the roles and issues so participants can prepare their arguments and responses.



## Idea for Change

An individual or group is motivated to make their community better.



## Coalition Building

A group of concerned and/or affected people, businesses, and organizations work together to create a shared vision for a legislative proposal.



## Congressional Sponsor Recruitment

The coalition identifies and recruits a Senator or Representative to introduce the bill in Congress.



## Introduction into Congress

Sponsor in either the House or the Senate introduces the bill for consideration.



## Committee Consideration

The bill is sent to one or more committees of jurisdiction. Committees generally hold a hearing, amend the bill, then vote on the bill. If the committee passes the bill, it is sent to the full House or Senate for a vote.



## Floor Debate or Unanimous Consent

Bill goes to the floor of the House or Senate for floor debate prior to a vote. Bills that are not controversial bypass the floor debate process and get approved by unanimous consent.



## Vote

Bills must pass in both the House of Representatives and the Senate.



## Presidential Signature/Veto

The President signs the bill into law or vetoes the bill and sends it back to Congress.

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## Agency Websites

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[nps.gov](https://nps.gov)

U.S. Forest Service  
[fs.fed.us](https://fs.fed.us)

U.S. Fish and Wildlife Service  
[fws.gov](https://fws.gov)

Bureau of Land Management  
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National Oceanic and Atmospheric Administration  
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Bureau of Indian Affairs  
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Bureau of Reclamation  
[usbr.gov](https://usbr.gov)

## Contact Information

Get in touch with The Wilderness Society for more information about public lands or wilderness, to inquire about how to use this resource for your outdoor programs, or to share your ideas about public lands education!

[curriculum\\_feedback@twls.org](mailto:curriculum_feedback@twls.org)

### Liz Vogel

Education & Youth Engagement Director  
[liz\\_vogel@twls.org](mailto:liz_vogel@twls.org)

### Paul Sanford

Senior Policy Analyst  
[paul\\_sanford@twls.org](mailto:paul_sanford@twls.org)

### Sharon Musa

Urban to Wild Specialist- Los Angeles  
[sharon\\_musa@twls.org](mailto:sharon_musa@twls.org)

### Campbell Simmons

Equity Associate  
[campbell\\_simmons@twls.org](mailto:campbell_simmons@twls.org)