

# Story of Your Place Example: Alder Creek Community Forest

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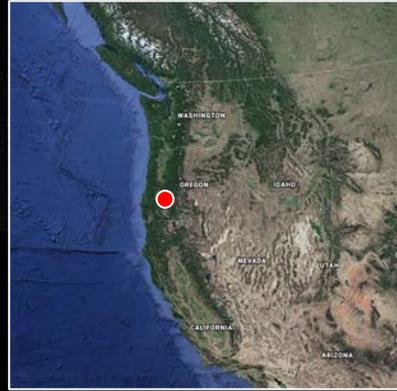
Jim Proctor, Lewis & Clark College ([jproctor@lclark.edu](mailto:jproctor@lclark.edu))

Nancee Hunter, Center for Geography Education in Oregon

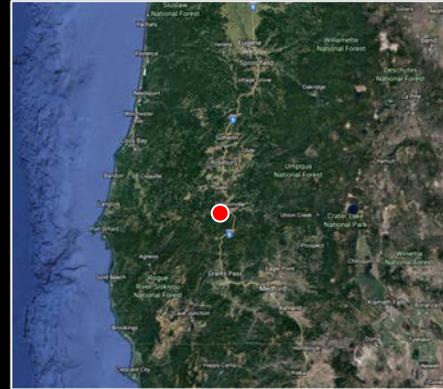
Isaac Ashby, Alder Creek Community Forest

Lynn Hill, Glide School District

# Where is Alder Creek Community Forest?



U.S. Pacific Northwest



Southwest Oregon

ACCF is located on the Proctor Memorial Forest, one mile west of Canyonville in rural SW Oregon, in the U.S. Pacific Northwest, on planet Earth.

Address: 829 Canyonville-Riddle Road, Riddle OR

Geolocation: Latitude 42.92°N, longitude 123.30°W



Proctor Memorial Forest  
Boundary + Trails

# What Follows

We'd like to introduce you to the details of Story of Your Place (SoYP) via a worked example of ACCF. Use this menu to navigate the main sections.

- [Background on place](#)
- [SoYP geo-inquiry process](#)
  - [Step 0](#): Prepare
  - [Step 1](#): Ask
  - [Step 2](#): Collect
  - [Step 3](#): Visualize
  - [Step 4](#): Create/Act

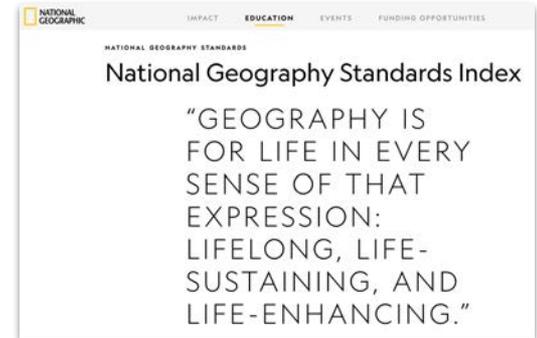
# Thinking of a Location as a *Place*

## [National Geography Standards: Place](#)

“Places are locations having distinctive features that give them meaning and character that differs from other locations. Therefore, places are human creations, and people’s lives are grounded in particular places. We come from a place, we live in a place, and we preserve and exhibit fierce pride over places.”

A place is more than just a location: it has *physical* and *human* characteristics, and is both *unique* compared to other places and *connected* to other places.

Places bring geography to life. Places connect us to the world.



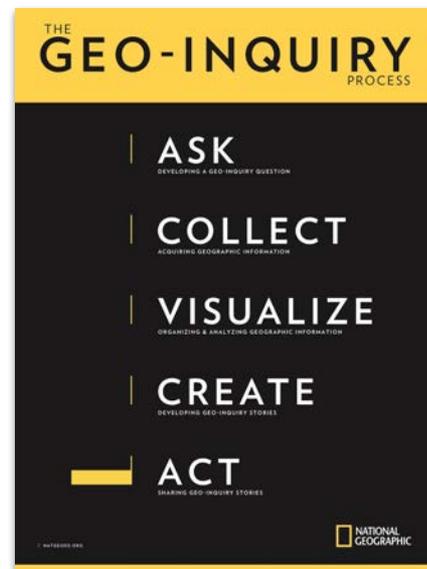
See [www.nationalgeographic.org/standards/national-geography-standards](http://www.nationalgeographic.org/standards/national-geography-standards)

# Choosing a SoYP Place

- Some criteria (RPD)
  - *Richness*: It's a place with interesting history, cultural/natural features, etc.
  - *Popularity*: It's a place people will recognize and be interested in
  - *Doability*: Your class can get to it, ask questions/collect data about it, etc.
- Some questions
  - *How big/small should our place be?* It's all about RPD tradeoffs—talk with us
  - *What about a \_\_\_\_\_ as our place?* School site: maybe. Community: maybe. Park: maybe!
  - *Can we share a place with another class/school?* YES!! Could divide up steps/tasks
- Some plans
  - SoYP 2019-20: Approximately six places in Douglas County for pilot study
  - SoYP 2020-21: Add approx. six places throughout OR after summer 2020 [C-GEO](#) Institute
  - SoYP 2021-22: Continue to support these one dozen SoYP projects; closing conference?

# SoYP Process & Geo-Inquiry Framework

- What is it?
  - “The Geo-Inquiry Process relies on using a geographic perspective, offering a unique lens to analyze space, place, and the interconnections between both the human and natural world.”
  - From inquiry-based learning (Ask) to story outcome (Create/Act)!
  - For resources, see Geo-Inquiry [Educator Guide](#); [Student Worksheets](#)
- How does it apply to SoYP?
  - Step 0: Prepare. Preliminary SoYP activities + choose a place
  - Step 1: Ask. Formulate questions about your place
  - Step 2: Collect. Collect information (“data+”) to answer questions
  - Step 3: Visualize. Analyze/chart/map this information
  - Step 4: Create/Act. Create and present a SoYP from above
  - 🖱️ We will get into details of these steps via ACCF example



See [www.nationalgeographic.org/education/programs/geo-inquiry](http://www.nationalgeographic.org/education/programs/geo-inquiry)

# Step 0: Prepare

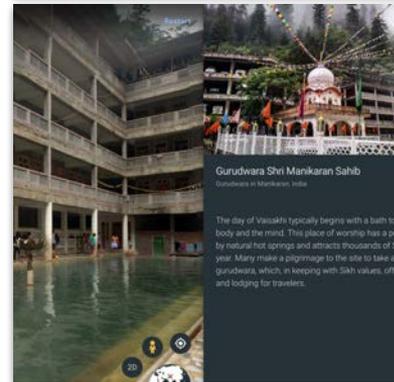
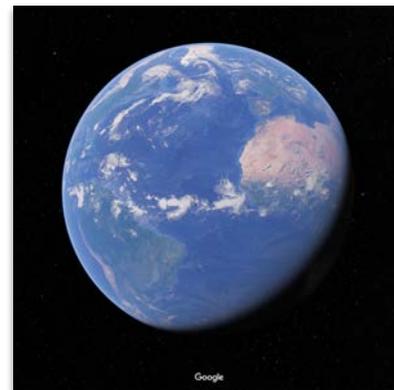
- A. Explore places around the world
  - We'll use Google Earth Web Voyager
- B. Explore repositories related to your possible place
  - ACCF: Douglas County Museum + Pioneer Indian Museum + old-timers + ...
- C. Define and bound your place
  - ACCF: easy! It's the Proctor Memorial Forest. But must further bound for data collection
- D. Explore maps of your place
  - We'll use the Oregon Explorer Digital Library, plus ACCF maps
- E. Finally!: Get outdoors and explore your place
  - Open-ended ACCF field reconnaissance prompted by Ask guiding questions/categories

# 0-A: Explore Places with Google Earth Web

1. Prepare a structured inquiry around [main features of places](#), anticipating [SoYP guiding questions](#)
2. Using Chrome, go to [earth.google.com/web](http://earth.google.com/web), and select [Google Earth Voyager](#). Choose a few places that illustrate these features.
3. Explore these places with your class. In what ways:
  - Do they include *human* features? *physical* features?
  - Are they *unique*? How are they different from Douglas County?
  - Are they *connected* to other places? How do we connect to them?

☞ Feel free to adjust this exercise to suit your class.

See also [National Geographic Resource Library](#); [Atlas of the Pacific NW](#)



## O-B: Explore Repositories

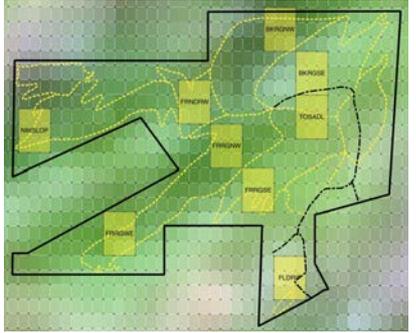
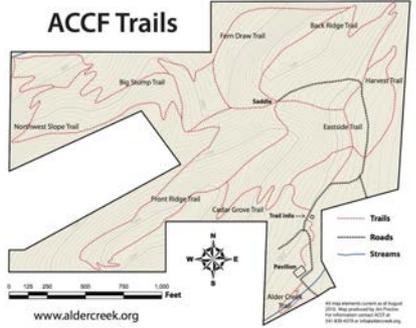
- Where can you go to learn about your potential place?
- ACCF site is in southern Douglas County, so...
  - [Douglas County Museum](#), Roseburg. Exhibits + archival photos/docs
  - [Pioneer-Indian Museum](#), Canyonville. Exhibits/tours
  - [Cow Creek Tribe](#) (longtime dwellers in southern Oregon)
  - Old-timers (recommended by [South Umpqua Historical Society](#))
  - Proctor family (owners of Proctor Memorial Forest, site of ACCF)
- Encourage journaling to note observations + questions
  - General reconnaissance at this point; will zoom in to place later



Lewis & Clark students learning about Douglas County via Commissioners & Museum, 2016

# 0-C: Define and Bound Your Place

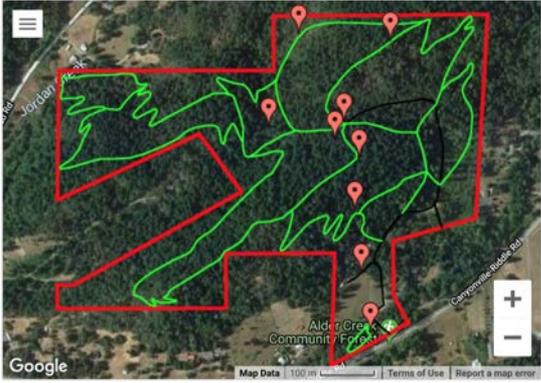
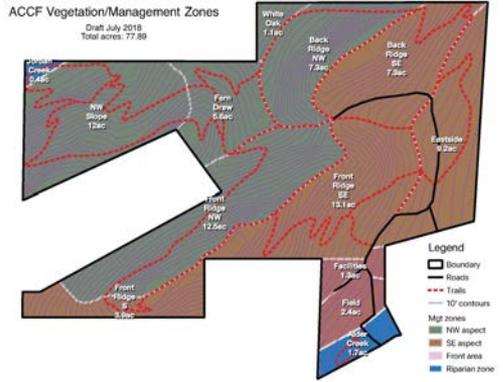
- Remember those three criteria for choosing a place
  - *Richness*: ACCF site part of south Douglas County ecology/culture
  - *Popularity*: ACCF site used as training center for K-12 education
  - *Doability*: 80 acres may be doable for some but not all activities
- ACCF site easier than other places to define/bound
  - ACCF site: Proctor Memorial Forest one mile W of Canyonville, OR
  - Some places may have fuzzy definitions/boundaries; not ACCF
- But how do Geo-Inquiry on ACCF site?
  - Let's anticipate steps 1-2-3 (Ask/Collect/Visualize)
  - Some questions can apply to the whole site (e.g., its history)
  - But others hard to answer for whole site (e.g., temperature)
  - For ACCF site: use Landsat plots as sub-places as needed



ACCF/PMF boundaries, showing roads, trails, and topography; and ACCF Landsat plots located on satellite pixels to scale up/down

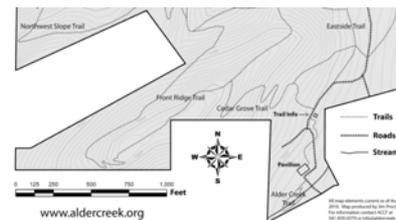
# 0-D: Explore Maps of Your Place

- C-GEO [map resources](#) and [atlases](#)
- [Oregon Explorer](#) (natural resource digital library)
  - Search by Canyonville (town near ACCF) or O'Shea Creek (nearby subwatershed #171003020508)
  - [Oregon Explorer Atlas](#): Selected natural resource layers
  - [Oregon Explorer Map Viewer](#): Interactive GIS; all layers
  - [Wildlife Viewer](#): Expected species with details on each!
  - [Communities Reporter](#): Socioeconomic data by location
- ACCF site maps
  - Thematic maps, e.g., vegetation/management zones
  - Online mashup maps [new site link to come]
  - Here too, journaling to note observations + questions



# O-E: Get Outdoors & Explore Your Place

- Learning goals
  - Connect preliminary map exploration with field reconnaissance
  - Develop map-based navigation skills
  - Develop powers of observation
  - Start to brainstorm possible questions (from [categories](#))
- Many activities possible
  - [Map & compass adventure](#) (preparation: [reading a topo map](#))
  - [Canopy tree identification](#)
  - Scavenger hunt? Silent listening quest?
- Conclude activity with journaling at ACCF pavilion
  - Summarize observations & major student questions
  - Relate to SoYP [guiding questions](#) in preparation for step 1



#### Vocabulary

- **Contour lines:** Lines of equal elevation; reveal topography (hills/valleys). A map with contour lines on it is also called a topo (topography) map.
- **Map legend:** Clues to symbols found on map
- **Map orientation:** Where cardinal directions (N/E/S/W) are on map
- **Map scale:** Relationship between map distance and real-world distance
- **Slope/aspect:** Steepness (slope) & direction (aspect) of topography

Sample map & compass + canopy tree [activity on ACCF site](#)

# Step 1: Ask

Note: Modified SoYP [Geo-Inquiry student worksheets](#) incorporated into this and subsequent steps

- A. Learn about good inquiry questions
  - Use SoYP student worksheet #1
- B. Review SoYP guiding questions
  - ACCF site settlement, land use, human/physical dimensions, comparison/connection
  - We will pose inquiry questions for all six guiding question categories
  - But we will only answer the first three in this worked example
- C. Brainstorm possible questions
  - Use SoYP student worksheet #2 and Inquiry Question Tool
- D. Get feedback on potential questions
  - Identify people connected to ACCF site for their input on draft questions
- E. Finalize SoYP questions
  - Use SoYP student worksheet #5

# 1-A: Learn About Good Inquiry Questions

- Geo-inquiry is all about asking and answering inquiry questions
  - [Inquiry-based learning](#) puts teachers and students in very different roles vs. traditional learning
  - NGSS [three-dimensional learning](#) approach, [science education resources](#), etc. stress inquiry
- Inquiry questions have two important properties
  - *Answerable* (information exists or can be collected)...but *not answerable via simple lookup*
  - *Significant* to student and community as contribution to knowledge, solution to problem, etc.
  - These will be covered in 1-E when students finalize SoYP inquiry questions
- Broad Geo-Inquiry framework stresses three dimensions of an inquiry question
  - Where is it? Why is it there? Why care?
  - These all apply to SoYP, and possibly other inquiry dimensions as well, to be covered in 1-B
- SoYP student worksheet #1
  - Use to stress two important properties and three dimensions of Geo-Inquiry questions

# 1-B: SoYP Guiding Questions

- SoYP questions based on broad categories related to [place](#)
  - Ensure that participating classes cover the main dimensions of place
  - Provide opportunities for comparability between SoYP classes/places
- Step 1 goal: One good inquiry question for each category
  - *Settlement*: Who has lived in or near this place?
  - *Land Use*: How have they utilized its resources?
  - *Physical*: What are the physical and biological characteristics of this place?
    - Some will be addressed via core GLOBE activities (step 2)
  - *Human*: What are its cultural, psychological, economic, etc. characteristics?
  - *Comparison*: How does this place compare with other places?
  - *Connection*: How does this place connect to other places?

**Settlement**

**Land Use**

**Physical**

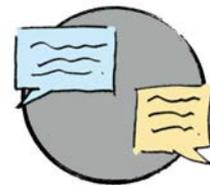
**Human**

**Comparison**

**Connection**

# 1-C: Brainstorm Possible Questions

- Started in O-E; now apply Geo-Inquiry & SoYP categories
  - Emphasize that all questions are good questions!
  - But some are better for inquiry and place
- Possible SoYP inquiry questions worksheet #2
  - Simple listing of questions, with Geo-Inquiry and place in mind
- SoYP Inquiry Question Tool (from worksheet #45)
  - Choose one framing word/category/action word for each question
- Pulling together student inquiry questions
  - Has your class brainstormed good *inquiry questions*?
  - Has your class brainstormed questions for each *SoYP category*?

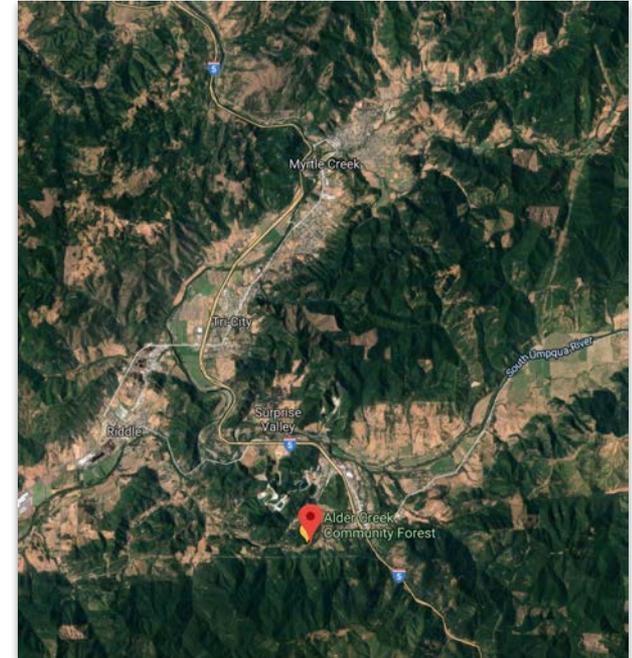


STUDENTS SHOULD QUESTION  
ANSWERS AS OFTEN AS THEY  
ANSWER QUESTIONS.



# 1-D: Get Feedback on Potential Questions

- Good questions also come from listening to others connected to this place
  - ACCF: PMF landowner & family; ACCF board, caretaker, staff
  - Related schools (e.g., [SUSD](#)), organizations (e.g., [STEAM Hub](#)), etc.
- Sample feedback
  - SoYP Human category draft question: “What does the ACCF site mean to students who learn there?”
  - Interviews with participating teachers may confirm significance of question, plus how to answer



Communities surrounding ACCF site

# 1-E: Finalize SoYP Questions

For ACCF site, here are sample inquiry questions following the step 1 process and concluding with worksheet #5, Refining Your SoYP Questions

- *Settlement: Who has lived in or near this place?*
  - How did the mid-1800s Cow Creek tribal land cession affect Euro-American settlement?
- *Land Use: How have they utilized its resources?*
  - How has land management on the ACCF site impacted land cover over the last 80 years?
- *Physical: What are the physical and biological characteristics of this place?*
  - How and why do minimum and maximum air temperatures vary annually on the ACCF site?
- *Human: What are its cultural, psychological, economic, etc. characteristics?*
  - What does the ACCF site mean to students who learn there?
- *Comparison: How does this place compare with other places?*
  - Where are other educational forests in OR, and how do they compare as places with ACCF?
- *Connection: How does this place connect to other places?*
  - How may ACCF benefit from connecting with others participating in [Trees Around the GLOBE?](#)

## Step 2: Collect

- A. Confirm information needs for SoYP questions
  - Use SoYP student worksheet #3
  - ACCF example focuses on first three of six finalized SoYP inquiry questions
- B. Brainstorm potential information sources
  - Use SoYP student worksheet #6
  - Settlement (Cow Creek land cession): Historical archives; settlement data
  - Land use (land mgt/cover): Air photos 1939–; related information
  - Physical (max/min temp): Existing temperature data
- C. Plan an information gathering strategy
  - Use SoYP student worksheet #7/8
  - ACCF example will provide one possible timetable
- D. Collect/store/document information
  - Use SoYP student worksheets #9, 10, 29/38
  - ACCF example largely based on existing data
- E. Verify information adequacy to answer SoYP questions

## 2-A: Confirm Information Needs

- Need-to-Know Questions worksheet #3
  - Determine Need-to-Know priorities for questions finalized in 1-E (also below)
- Information needs for ACCF questions (\* = examples we'll complete in this presentation)
  - \*Settlement: How did the mid-1800s Cow Creek tribal land cession affect Euro-American settlement?
    - Do archival research on Euro-American settlement before/after 1853 treaty
  - \*Land use: How has land management on the ACCF site impacted land cover over the last 80 years?
    - Develop timeline of ownership/management; use e.g. [UO air photos collection](#) to determine land change
  - \*Physical: How and why do minimum and maximum air temperatures vary annually on the ACCF site?
    - Use monthly min/max air temperature data from ACCF FLDRIP (field/riparian area) [Landsat plot](#)
  - Human: What does the ACCF site mean to students who learn there?
    - Work with teachers in 2019-20 to develop/implement qualitative before/after survey of students
  - Comparison: Where are other educational forests in OR, and how do they compare as places with ACCF?
    - Determine forests via [learnforests.org](#), then situate in [Oregon ecoregions](#) to compare
  - Connection: How may ACCF benefit from connecting with others participating in Trees Around the GLOBE?
    - Determine participants via TAG [campaign community map](#), then research these places

## 2-B: Brainstorm Information Sources

### A. SoYP student worksheet #6

- Background information sources and need-to-knows

### B. Information sources for each ACCF SoYP question ([1st 3 q's](#) + sample sources)

- Settlement (before/after Cow Creek land cession): Historical archives; settlement data
  - [Oregon Explorer](#) archives (e.g., [History of Native Americans in Umpqua Basin](#))
  - [Cow Creek](#) website (e.g., [The Cow Creek Story](#))
  - Douglas County Planning Dept [Historical Resources](#)
  - [Douglas County Museum](#) (including [Online Collections Database](#))
- Land use (land mgt/cover): Air photos 1939–; related information
  - [University of Oregon Aerial Photography Collection](#)
  - [Douglas County Surveyor's Office Online Aerials](#)
  - Misc. publications on Douglas County land use history
- Physical (max/min temp): Existing temperature data, FLDRIP Landsat plot
  - ACCF FLDRIP weather station temperature data, 2018, plus general site climate information
  - [Comparison temperature data available from GLOBE for sites around the world]

## 2-C: Plan Information Gathering Strategy

- SoYP student worksheet #7/8
  - Deciding What Data You Need/Planning Data Collection
  - Further refinement of target data plus planning how to collect data
- Information gathering strategy for ACCF SoYP ([1st 3 q's](#))
  - Settlement (before/after Cow Creek land cession): Historical archives; settlement data
    - Lynn to do archival/data research online and via physical archives, late July/early Aug
  - Land use (land mgt/cover): Air photos 1939–; related information
    - Jim had previously obtained air photos; some related info obtained via literature search
    - Isaac to construct/interpret air photo data from images supplied by Jim, early Aug
  - Physical (max/min temp): Existing temperature data, FLDRIP Landsat plot; related climate info
    - Isaac had previously synthesized 2018 temperature data in monthly summary sheet
    - Jim to construct charts for ACCF (and possibly comparative) data
  -  As a worked example, these three questions were chosen both (a) to illustrate different sorts of data/information needs, and (b) because they required relatively little new data collection!

## 2-D: Collect/Store/Document Information

- SoYP student worksheets #9, 10, 29/38
  - Evaluating resources; Taking notes; Collecting data in the field; Collecting geospatial data
- ACCF data research (SoYP [questions #1-3](#))
  - Collect
    - Settlement: Mostly done via online research
    - Land use: Many images retrieved via UO library request; some directly downloaded
    - Physical: Temperature data collected/reported automatically via [WeatherUnderground](#)
  - Store
    - Settlement: Stored in series of Google Docs in shared folder
    - Land use: Images stored in series of shared Google Drive folders
    - Physical: WeatherUnderground data downloaded into Google Sheet
  - Document
    - Settlement: All text + images include source URL in shared GoogleDoc
    - Land use: Sources for all images provided in overview document
    - Physical: [Source of temperature data known as ACCF weather station]

## 2-E: Verify Information Adequacy

- Back to focused ACCF SoYP [questions #1-3](#)
  - Settlement: How did the mid-1800s Cow Creek tribal land cession affect Euro-American settlement?
    - Tribal land cession effects relatively available/retrieved online
    - Euro-American settlement details not always available; general trends retrieved
  - Land Use: How has land management on the ACCF site impacted land cover over the last 80 years?
    - [Question deliberately worded to include only period for which air photo data available]
    - Air photo evidence generally quite good; poor quality, however, btw 1949-2004
    - Land management history not always available; often inferred via air photos
  - Physical: How and why do minimum and maximum air temperatures vary annually on the ACCF site?
    - How: Excellent data quality to analyze min/max annual temperature variance
    - Why: Background maps/info on global/North American climate provide general explanation

## Step 3: Visualize

Note: Geo-Inquiry guide focuses on mapping spatial data; below we focus on a broader range of SoYP data

- A. Brainstorm desired outcomes for each SoYP question & related information
  - Focusing on ACCF SoYP questions #1-3
- B. Determine data analysis strategy to achieve desired outcomes
  - Full span of qualitative to quantitative analysis possible
  - Some analysis involves spatial data, thus mapping & GIS potentially relevant
- C. Perform analysis and produce outcomes
  - Student worksheet #13: Analyzing Your Data
  - For spatial data, see Geo-Inquiry Visualize section and worksheets #14-15

## 3-A: Brainstorm Desired Outcomes

- ACCF SoYP [questions #1-3](#)
  - How did the mid-1800s Cow Creek tribal land cession affect Euro-American settlement?
    - Details of tribal land cession
    - Timeline of key events before and after land cession
    - Explanation of settlement trends before/after tribal land cession
    - Image gallery/slideshow
  - How has land management on the ACCF site impacted land cover over the last 80 years?
    - Image gallery/slideshow with annotations of land use/cover evidence
    - Timeline of key periods in land management history
    - Explanation of causes of land cover change, including/not limited to land management
  - How and why do minimum and maximum air temperatures vary annually on the ACCF site?
    - Chart of 2018 monthly min/max temperature, with annotations of key changes
    - Maps of general regional climate, including implications for temperature variation

## 3-B: Determine Data Analysis Strategy

- ACCF SoYP [questions #1-3](#)
  - How did the mid-1800s Cow Creek tribal land cession *affect* Euro-American settlement?
    - *Reconstruction* of 1853 treaty & land cession details
    - *Sequencing* of cession & settlement events in chronological order
    - *Cause/effect linking* of settlement with cession and related events
  - How has land management on the ACCF site *impacted* land cover over the last 80 years?
    - *Crude air photo geolocation* by overlaying ACCF boundaries onto air photos
      - [Could rectify air photos to measure land use/cover polygons & quantify change]
      - [Note that sequencing automatically done via air photo metadata]
    - *Air photo interpretation* by detecting key land use/cover areas
    - *Reconstruction* of management information
    - *Cause/effect linking* of sequenced land use/cover changes
  - *How* and *why* do minimum and maximum air temperatures *vary* annually on the ACCF site?
    - *Simplification* of daily temperature data to monthly max/min
    - *Plotting* of monthly max/min data points on time series line chart
    - *Comparison* of plotted temperature change with predicted climate zone behavior

## 3-C: Perform Analysis/Produce Outcomes

- Student worksheet #13
  - Analyzing your data: Sequence of looking for e.g. patterns/trends to answer question
- ACCF SoYP [questions #1-3](#)
  - How did the mid-1800s Cow Creek tribal land cession affect Euro-American settlement?
    - 1853 treaty an effect, not just a cause, of expanded settlement via US government actions
  - How has land management on the ACCF site impacted land cover over the last 80 years?
    - Primarily due to ranching (field management) and timber harvesting (forest management)
  - How and why do minimum and maximum air temperatures *vary* annually on the ACCF site?
    - Typical summer-dry variation of Mediterranean climates; relatively mild interior valley winters

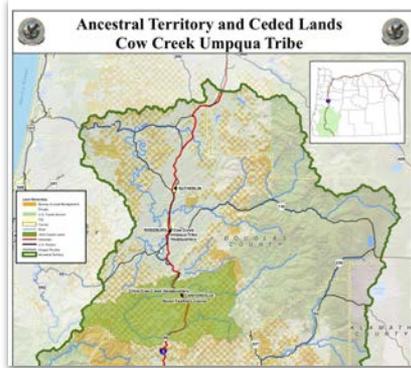
# Analysis Outcomes: Settlement



1841 sketch, Henry Eld



Cow Creek children/families



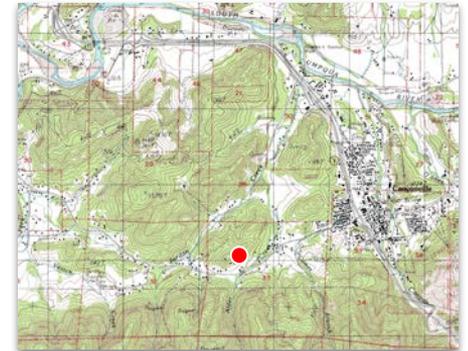
Ceded lands, 1853 treaty



Sue Shaffer & tribal government offices, 2004



PMF Area (1855 GLO)



PMF Area (1986 USGS)



How did the mid-1800s Cow Creek tribal land cession affect Euro-American settlement?

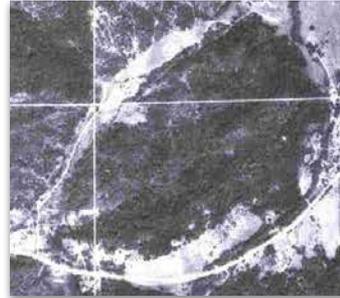
# Analysis Outcomes: Land Use



1939



1949



1972



1999



2014 + ACCF boundary

## Main Changes in Land Use/Cover

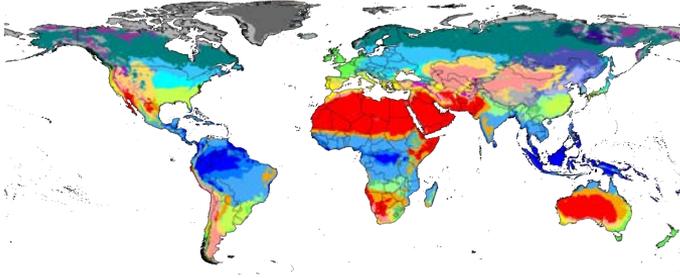
- 1939: SE slopes logged
- 1949: NE slopes logged; Proctor structures built
- 1972: Infill of trees into cleared field/logged forest
- 1999: Continued afforestation
- 2014: New Proctor structures; some logging
- 2017: Drought-induced tree mortality [no image]

## History of PMF Area Euro-American Ownership

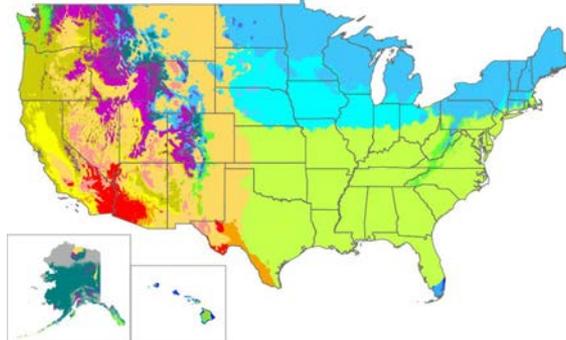
- 1850: Daniel Bollenbaugh Donation Land Claim
- 1918: Simon Bollenbaugh inherits property (d. 1937)
- 1945: Robert & Virginia Proctor purchase property
- 2001: Jim Proctor inherits from parents/siblings
- 2003: Jim Proctor purchases adjoining property

How has land management on the ACCF site impacted land cover over the last 80 years?

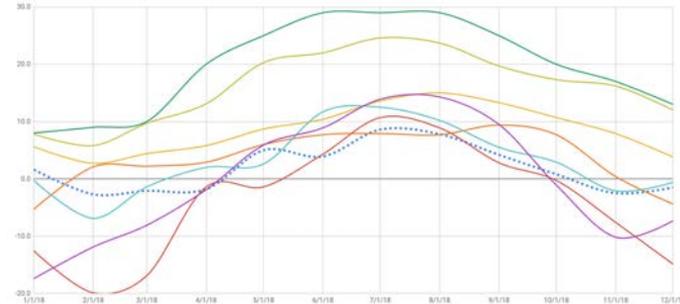
# Analysis Outcomes: Physical



Köppen climate maps for world & US. Westside Oregon is Köppen Csb (Warm Summer Mediterranean).

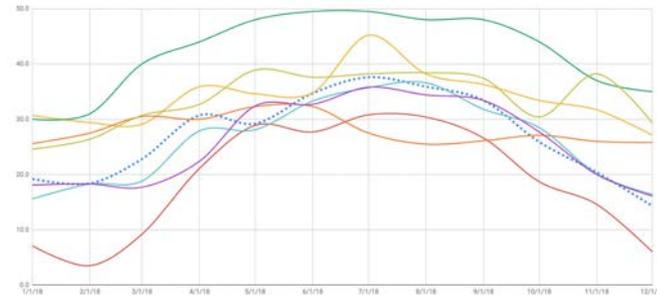


2018 Monthly Minimum Temperatures (°C)



2018 Monthly Min Temp, ACCF & GLOBE Sites

2018 Monthly Maximum Temperatures (°C)



2018 Monthly Max Temp, ACCF & GLOBE Sites

- ACCF
- Lithuania
- California
- Oman
- Mexico
- France
- Massachusetts
- Taiwan

How and why do minimum and maximum air temperatures vary annually on the ACCF site?

## Step 4: Create/Act

- A. Create a Step 1/2/3 narrative for each SoYP question
  - Recount the process and outcomes of formulating/answering each individual SoYP question
- B. Brainstorm overarching lessons from step 4-A for your place
  - Now mix what you have learned from all questions; what will be your SoYP key points?
- C. Storyboard your SoYP, including all key elements
  - Determine a slide by slide sequence and general content, following our SoYP guidelines
- D. Decide on an appropriate outcome format
  - Many options: some more easy/difficult. All should result in an outcome to be shared online.
  - Easy: Powerpoint (PDF). Difficult: ESRI Story Map. We will provide support!
- E. Produce your story, then share online and via other means
  - Who would be interested in hearing your story: parents? community? Other schools?
  - We will help with sharing your SoYP online

## 4-A: Create Narrative for Each SoYP Question

- ACCF SoYP [questions #1-3](#)
  - How did the mid-1800s Cow Creek tribal land cession affect Euro-American settlement?
    - Analysis: 1853 treaty an effect, not just a cause, of expanded settlement via US govt actions
    - Narrative: Visual/textual time-based story of US expansionism/Euro-American settlement primarily for resource extraction livelihoods, eliminating Cow Creek competition via treaty
  - How has land management on the ACCF site impacted land cover over the last 80 years?
    - Analysis: Primarily due to ranching (field mgt) and timber harvesting (forest management)
    - Narrative: Also a visually-based story: impacts of management actions & inactions on land cover. Not all cover change a function of land use, however (e.g., recent drought).
  - How and why do minimum and maximum air temperatures *vary* annually on the ACCF site?
    - Analysis: Typical variation of warm/dry-summer Mediterranean (Köppen Csb) climates; relatively mild Oregon interior valley winters
    - Narrative: Zoom out from ACCF site temp (i.e., weather) to regional/global climate patterns

## 4-B: Brainstorm Overarching Lessons

- Synthesizing answers to ACCF SoYP [questions #1-3](#) we see several key points
  - This place is typical of many low-elevation rural interior valley landscapes of SW Oregon
    - Significant but relatively common settlement, land use, & physical/biological characteristics
    - More recent features are unique given ACCF/educational use of land
  - But this place has changed a great deal over time
    - Settlement and land use: big changes. Possibly physical/biological properties as well?
  - Change has generally occurred in a [punctuated](#) manner, with some [gradualism](#) as well
    - Punctuated equilibrium an episodic (vs. step by step) theory of evolution that may apply here
    - Punctuated equilibrium drivers: Mid-19th century resource exploitation/Cow Creek cession; ~WWII logging boom & settlement; change in land ownership; formation of ACCF
    - Gradualism: Forest encroachment onto fields; forest regrowth following harvest
  - Causes of change are both [endogenous](#) and [exogenous](#)
    - Endogenous causes: E.g., land-based resources, Cow Creek tribal settlement
    - Exogenous causes: E.g., U.S. expansionism into Far West; natural resource markets
  - Change will most likely occur in future, creating new challenges and opportunities
    - One example: Recent drought, fires suggest new normal of climate change

## 4-C: Storyboard Your SoYP

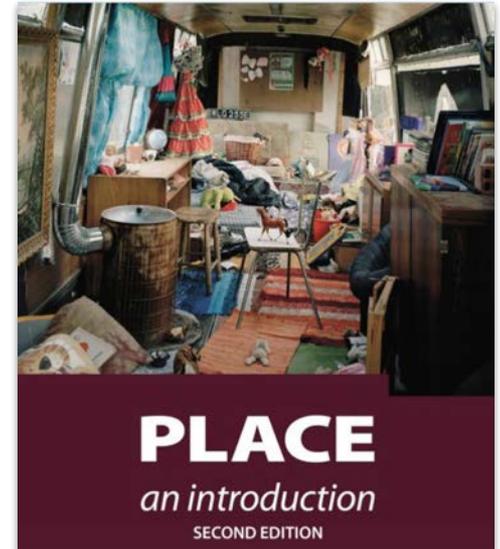
- Storyboarding
  - A slide by slide sequence of images, charts, maps, text, and other visual elements
  - Includes all elements below, starting with overview, moving into details, ending with big lessons
  - See instructor guide pp. 32-34; student worksheet #19 possibly helpful
  - Technical elements of e.g. image production: see instructor guide p. 35
- Include the following elements
  - *Identification info*: Name and location of place; name of your class/school; date; contact info
  - *Your place intro*: How and why you selected this place; map of the place; how significant
  - *Your place questions*: SoYP questions following six guiding questions (Step 4-A)
  - *What you learned*: Overarching lessons about this place (Step 4-B)
  - *Next steps*: What you plan to do to share the story/follow up actions
  - *Acknowledgements and references*: For any resources used to create your SoYP

## 4-D: Decide Outcome Format

- Three choices and pluses/minuses
  - Powerpoint (or Google Presentation)
    - Pluses: Simple, easy, well known, can readily do slide by slide to apply storyboard design
    - Minuses: Can be super boring; tends to be text heavy (like this presentation!)
  - Video production
    - Pluses: Highly compelling to video-happy audience (think YouTube)
    - Minuses: Production time to assemble storyboard into video format is huge
  - [ArcGIS StoryMap](#)
    - Pluses: Nice looking; can integrate spatial data; nice panel-by-panel narrative; already online
    - Minuses: Learning curve; some application glitches here and there
  - Remember, all stories must be in a format that can be shared online with others
    - Powerpoint: Export as PDF for ACCF to upload
    - Video: Upload to YouTube or Vimeo (ACCF channel)
    - Story Map: [Already in online format once published]
    - But this is not the only way you can share your story!...consider potential audiences

## 4-E: Produce/Share Your Story

- Here's where we would assemble the pieces...
  - Identification info (see cover slide)
  - Your place intro: ACCF/PMF; our worked example intent
  - Your place questions & answers narrative (4-A)
    - How did the mid-1800s Cow Creek tribal land cession affect Euro-American settlement?
    - How has land management on the ACCF site impacted land cover over the last 80 years?
    - How and why do minimum and maximum air temperatures vary annually on the ACCF site?
  - What you learned: Overarching lessons about PMF ~ *change* (4-B)
  - Next steps: E.g., questions (#4-6) we did not yet explore
  - Acknowledgements/references: Lots!...important to communicate



Place cover (Tim Cresswell, 2015)