Climate Politics in the American West

Is Red the New Green?
Climate politics?

- Mitigation versus Adaptation
- Weather v Climate
- Elements of risk: hazard, exposure, vulnerability
- Political resistance from political polarization v political inertia related to collective action
What is the American West?
John Wesley Powell
The Stanford Connection

WALLACE STEGNER

BEYOND the Hundredth MERIDIAN

John Wesley Powell and the Second Opening of the West
Lane Center uses the 100th Meridian Line
100TH MERIDIAN
OKLAHOMA/TEXAS STATE LINE

THE 100TH MERIDIAN FIRST MARKED THE BOUNDARY BETWEEN THE REPUBLIC OF TEXAS AND THE VAST LOUISIANA PURCHASE. ESTABLISHING THIS BOUNDARY WAS ONE OF THE MOST FAR REACHING EVENTS IN WHICH THE NATION ENGAGED.

IN 1927, THE U.S. SUPREME COURT ESTABLISHED THE OK/TX STATE LINE ALONG THIS BOUNDARY. THE 100TH MERIDIAN CHAPTER, NSDAR, DEDICATE THIS PROJECT TO IDENTIFY THIS STATE LINE LOCATED 4 MILES WEST OF HOLLIS, OK. ON U.S. HIGHWAY 62.

SPONSORED BY THE HARMON CO. HISTORICAL SOCIETY DEDICATED BY 100TH MERIDIAN CHAPTER NSDAR
JULY 1991

WILLIS GRANITE PRODUCTS
CHAPTER OKLAHOMA
the aridity line has shifted East
Sub-regions of the West?
Drawing from:

- BLC research on **environmental governance**
- BLC field research in **water, energy and land management**
- BLC conferences on **Rural West/State of the West**
- BLC new **survey on regional attitudes** toward climate policies
What residents like most

California

Oklahoma

CA v OK
What residents like least

CA v OK

California

Oklahoma
What all Westerners like most and least about their states

Like the most
- weather
- mountains
- beautiful climate

Like the least
- heat
- government
- taxes
- traffic
- living
1. Is the American West a distinctive region with distinctive climate challenges?

2. How polarized is the American West region on climate policy?
Aridity

Water scarcity, severe droughts, and wildfires
Water Disputes Common in the West

"Discussing Water Rights, A Western Pastime"
Supreme Court Backs Oklahoma Over North Texas Water District

The United States Supreme Court has unanimously ruled in favor of Oklahoma in a major case over delivery of water from the Red River.

BY KATE GALBRAITH  JUNE 13, 2013  9 AM
Also, distinctive seasonality.
Higher year to year variability
Variability affected perceptions of early settlers/explorers
Warming trend on top of aridity...

Temperature change, 1895-2018

Note: NOAA does not provide data for Alaska or Hawaii for this time period. (Washington Post)
More water stress....
Water Scarcity as a regional problem
Historic and Projected Water Supply and Demand

Billion-dollar weather and climate disasters frequency mapping: 1980-2018*

- Droughts and Heat Waves
- Winter Storms
- Tropical Cyclones
- Flooding
- Wildfires
- Severe Local Storms

*Adjusted for 2018 dollars.
Natural disasters such as wildfires, floods, and droughts have become more frequent and severe.
Natural disasters such as wildfires, floods, and droughts have become more frequent and severe.

- Dem: 60% Strongly Agree, 30% Agree, 10% Neither agree nor disagree
- Rep: 70% Strongly Agree, 20% Agree, 10% Neither agree nor disagree
- Ind/other: 80% Strongly Agree, 15% Agree, 5% Neither agree nor disagree

Legend:
- Don't know/no opinion
- Strongly Disagree
- Disagree
- Neither agree nor disagree
- Agree
- Strongly Agree
In sum,

Aridity + Rising temperatures:

• Worsens existing *water scarcity* and *storage* problems

• Worsens tensions between *fish, farms and people*

• Worsens tensions between *states that share aquifers/rivers* (e.g. Texas-Oklahoma, Colorado River basin)

• Worsens *wildfire problems*
Abundant and Diverse Energy Resources

Opportunity for collaboration or competition only?
Great things are done when men and mountains meet.

*William Blake*
The American West’s Fossil Fuel Legacy
Darker colors represent areas known to contain coal beds that are of commercial value at the present time or that may be of value to the future. In general the minimum thicknesses included are 14 inches for anthracite and bituminous coal, and 30 inches for subbituminous coal and lignite.

Lighter colors represent areas of doubtful value for coal. These may be divided into three classes- (1) areas containing thin or irregular beds, which generally have little or no value, but which locally may be thick enough to mine; (2) areas in which the coal is poor in quality; and (3) areas where information on the thickness and quality of coal beds is meager or lacking.

Source: U.S. Energy Information Administration.
But the West also has abundant renewable resources.
Photovoltaic Solar Resource of the United States

Annual average solar resource data are shown for a tilt = latitude collector. The data for Hawaii and the 48 contiguous states are a 10 km satellite modeled dataset (SUNY/NREL, 2007) representing data from 1998-2009.

The data for Alaska are a 40 km dataset produced by the Climatological Solar Radiation Model (NREL, 2003).

This map was produced by the National Renewable Energy Laboratory for the U.S. Department of Energy. B. J. Roberts 19 September 2012.

NREL
NATIONAL RENEWABLE ENERGY LABORATORY
WY: Extractive State Economies
CA: Strong Commitment to Renewables

SB100: California’s Ambitious Electricity Decarbonization Goals

- Power sector goals (SB100):
  - 50% renewables by 2026
  - 60% renewables by 2030
  - 100% carbon-free electricity by 2045
  - On track to meet 2020 and 2030 goals

Source: California Energy Commission, staff analysis November 2018
An alternative possibility: complementarity and coordination
In sum,

The Abundance of Energy Resources:
• Creates economic opportunities for many Western states
• Opportunities for trading across the grid (e.g. dealing with intermittency)

But also:
• Tensions between extractive v coastal states
• Heightened partisan tensions across the region
The Federal Role in the West

If the Federal Government can’t lead, who can?
West is Distinctive in Relation to the US Government

Federal Land as a Percentage of Total State Land Area
# Federal Land-Management Agencies and Their Functions

<table>
<thead>
<tr>
<th>Name of Agency</th>
<th>Year Created</th>
<th>Amount of Land Administered</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. Forest Service (Agriculture Dept.)</td>
<td>1905</td>
<td>192.9 million acres, mostly in the West; manages more than half of all federal lands in the East</td>
<td>Protect lands, wilderness, water flows; provide timber, recreation, livestock grazing, wildlife and fish habitat</td>
</tr>
<tr>
<td>National Park Service (Interior Dept.)</td>
<td>1916</td>
<td>79.7 million acres, about 66 percent of it in Alaska</td>
<td>Preserve unique resources while making them available for public recreation</td>
</tr>
<tr>
<td>Fish and Wildlife Service* (Interior Dept.)</td>
<td>1940</td>
<td>89.1 million acres, 86 percent of it in Alaska</td>
<td>Conserve plants and animals; uses such as timber, grazing and minerals development are secondary priorities</td>
</tr>
<tr>
<td>Bureau of Land Management (Interior Dept.)</td>
<td>1946</td>
<td>247.3 million acres, mostly rangeland; 99.9 percent in 12 Western states, including Alaska</td>
<td>Provide recreation, grazing, timber, conservation and protection of watershed, wildlife and fish habitats</td>
</tr>
<tr>
<td>Department of Defense</td>
<td>1947</td>
<td>14.5 million acres, mostly in the West</td>
<td>Support mission-related activities</td>
</tr>
</tbody>
</table>

* Created when two federal agencies were consolidated; also administers nearly 210 million acres of marine refuges and national monuments.

The Sagebrush Rebellion

Part II

Country Side as Well in Stitches

Ready to kick ol’ Dubba’s britches

Non-Stop Adventure

You’ll be thrilled
Lavoy Finicum and Ammon Bundy
Malheur Refuge, Oregon, 2016
The federal government owns too much land in my state

- West coast
- Plains
- BorderSW
- Interior

% of sampled group

- Strongly Agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly Disagree
- Don't know/no opinion
The federal government owns too much land in my state

Party Affiliation

Dem

Rep

Ind/other

Legend:
- Don't know/no opinion
- Strongly Disagree
- Disagree
- Neither agree nor disagree
- Agree
- Strongly Agree
There are too many federal government regulations in my state

- West coast
- Plains
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- Interior

% of sampled group

Legend:
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- Strongly Agree

% of sampled group
What does this mean for climate politics?

• Feds created the West through infrastructure (e.g. highways, dams, etc.) land sales, subsidies, etc.

• But Feds may not be able to help the West become sustainable due to suspicion, polarization, paralysis

• This means states/communities will have to develop their own collective solutions to **common pool resource** (e.g. water) and **negative externality climate issues** (e.g. fires and smoke)
1. Is the American West a distinctive region with distinctive climate challenges?

2. How polarized is the American West region on climate policy?
Partisanship by Trump Vote
Partisanship by Gallup Party affiliation
Walking the walk, but not talking the talk?

U.S. Installed Wind Power Capacity, Top States

- Texas 1
- Oklahoma 2
- Iowa 3
- California 4
- Kansas 5
- Illinois 6
- Minnesota 7
- Oregon 8
- Colorado 9
- Washington 10
- North Dakota 11
- Indiana 12
- Michigan 13
- New York 14
- New Mexico 15
- Wyoming 16
- Nebraska 17
- Pennsylvania 18
Total Potential Wind Capacity: 10,640,080 MW

Source: AWS Truepower, NREL
<table>
<thead>
<tr>
<th>Energy Source</th>
<th>Republican/Lean Rep</th>
<th>Democrat/Lean Dem</th>
<th>U.S. Adults</th>
</tr>
</thead>
<tbody>
<tr>
<td>More solar panel farms</td>
<td>84</td>
<td>93</td>
<td>89</td>
</tr>
<tr>
<td>More wind turbine farms</td>
<td>79</td>
<td>91</td>
<td>85</td>
</tr>
<tr>
<td>More offshore drilling</td>
<td>22</td>
<td>64</td>
<td>39</td>
</tr>
<tr>
<td>More hydraulic fracturing</td>
<td>25</td>
<td>60</td>
<td>39</td>
</tr>
<tr>
<td>More coal mining</td>
<td>20</td>
<td>60</td>
<td>37</td>
</tr>
<tr>
<td>More nuclear power plants</td>
<td>39</td>
<td>53</td>
<td>44</td>
</tr>
</tbody>
</table>
Case Study: Georgetown, Texas

- Population: 54,000+
- Electric customers: 24,000+
- 100% renewable energy goal by 2018
- NRG Energy and EDF Renewable Energy
- Spinning Spur 3 wind farm and new NRG solar farm
“In the short term, our solar and wind farms will provide more overall energy than we need. This means we will be able to sell extra solar and wind power we don’t use, providing an overall benefit to power users in the state.”

“No, environmental zealots have not taken over our city council, and we’re not trying to make a statement about fracking or climate change. Our move to wind and solar is chiefly a business decision based on cost and price stability.”
Talking the talk, but not walking the walk?

Washington Initiative 732 — Create Carbon Emission Tax — Results: Rejected

BY THE NEW YORK TIMES  AUG. 1, 2017, 11:27 AM ET

<table>
<thead>
<tr>
<th>ANSWER</th>
<th>VOTES</th>
<th>PC%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>1,102,149</td>
<td>40.7%</td>
</tr>
<tr>
<td>No</td>
<td>1,693,492</td>
<td>59.3%</td>
</tr>
</tbody>
</table>

88% reporting (1,760 of 2,000 precincts)

Voters rejected Initiative 732 — Create Carbon Emission Tax — in Washington on Tuesday. The measure called for taxing the sale or use of certain fossil fuels and electricity generated from fossil fuels. Washington would have been the first state to place a tax on carbon emissions.
Not just once but twice rejected...

Intitiative 1631 - carbon fee
County-by-county results, in Tuesday’s vote count.

Source: Washington Secretary of State
MARK NOWLIN / THE SEATTLE TIMES
Upgrade my residence and make it more disaster resistant

Buy insurance to cover natural disaster damages

Move to a safer place

Pay a special tax to create funds for disaster relief

Pay a special tax to prevent/limit disaster damages

Authorize local governments to have more restrictive land use policies

% Respondents who are willing to take steps
- Buy an electric car/vehicle
- Travel by plane less frequently
- Pay a carbon tax
- Purchase and install solar panels on my home
- Allow wind turbines to be installed near my home
- Replace existing appliances with more energy efficient ones
- Divest of any stock you own in companies that produce or sell fossil fuels

% Respondents who are willing to take steps
Lessons maybe?

• Many Republicans are more fairly characterized as **all of the above** re energy policy

• If a energy option offers a **positive return to the consumer**, it will be adopted even by those who are predisposed by political party to oppose it

• But when a measure like a **carbon tax imposes** costs on the consumers, support will weaken even among nominal supporters
End