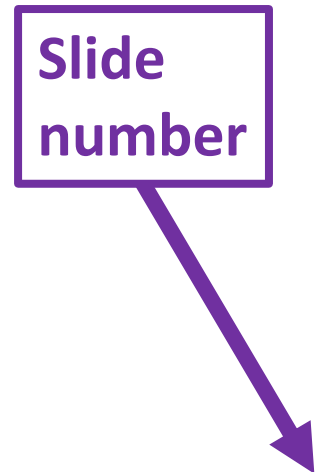


# Examples of good and bad slides

Pete Wilcoxon

Max 401

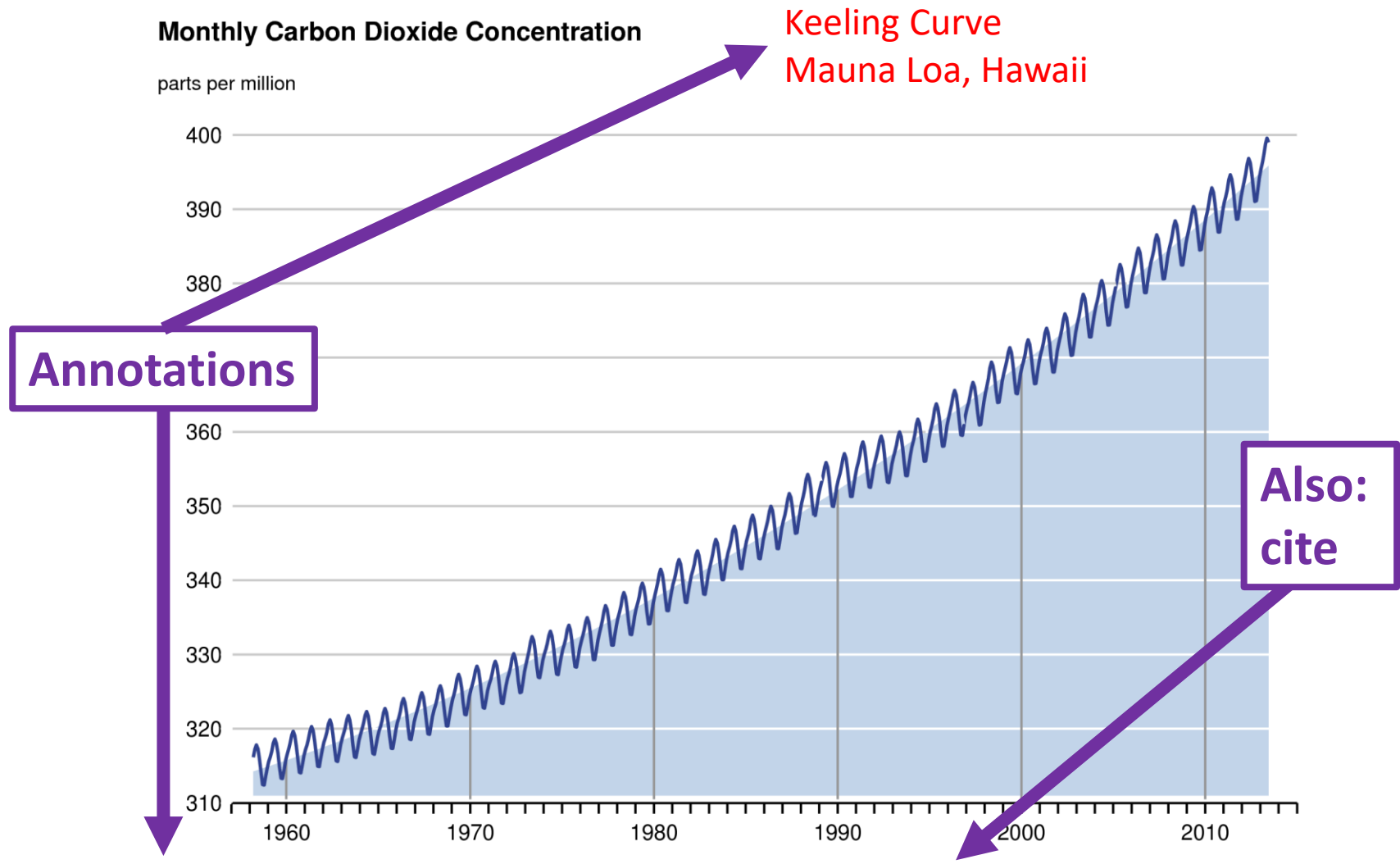


# Fact 1: CO<sub>2</sub> is a greenhouse gas

- Physics of the gas:
  - Transparent to visible and ultraviolet (UV) light
  - Absorbs and reradiates infrared (IR) light
- Physics of radiation:
  - Radiation from the Sun: visible or UV
  - Radiation from the Earth: mostly IR
- Implication:
  - Other things equal, less radiation out than coming in

# Fact 2: CO2 in the atmosphere is increasing

Better



Pre-industrial:  
280 ppm

Source: Scripps CO2 Program, scrippscos2.ucsd.edu

# Uncertainty raises risks

Lame

- Increased risks for future generations
  - Sunny day tidal flooding
  - Storm surge flooding
  - More severe droughts
  - Wider range for tropical diseases
  - Impacts on crops
  - ...
- Not certain, but more likely with climate change
- Increased risk is a cost imposed on future
  - Economic terminology: **negative externality**

Missed opportunities!

Tells rather  
than shows

# Increased risks

Better



# Increased risks

Better



# Increased risks

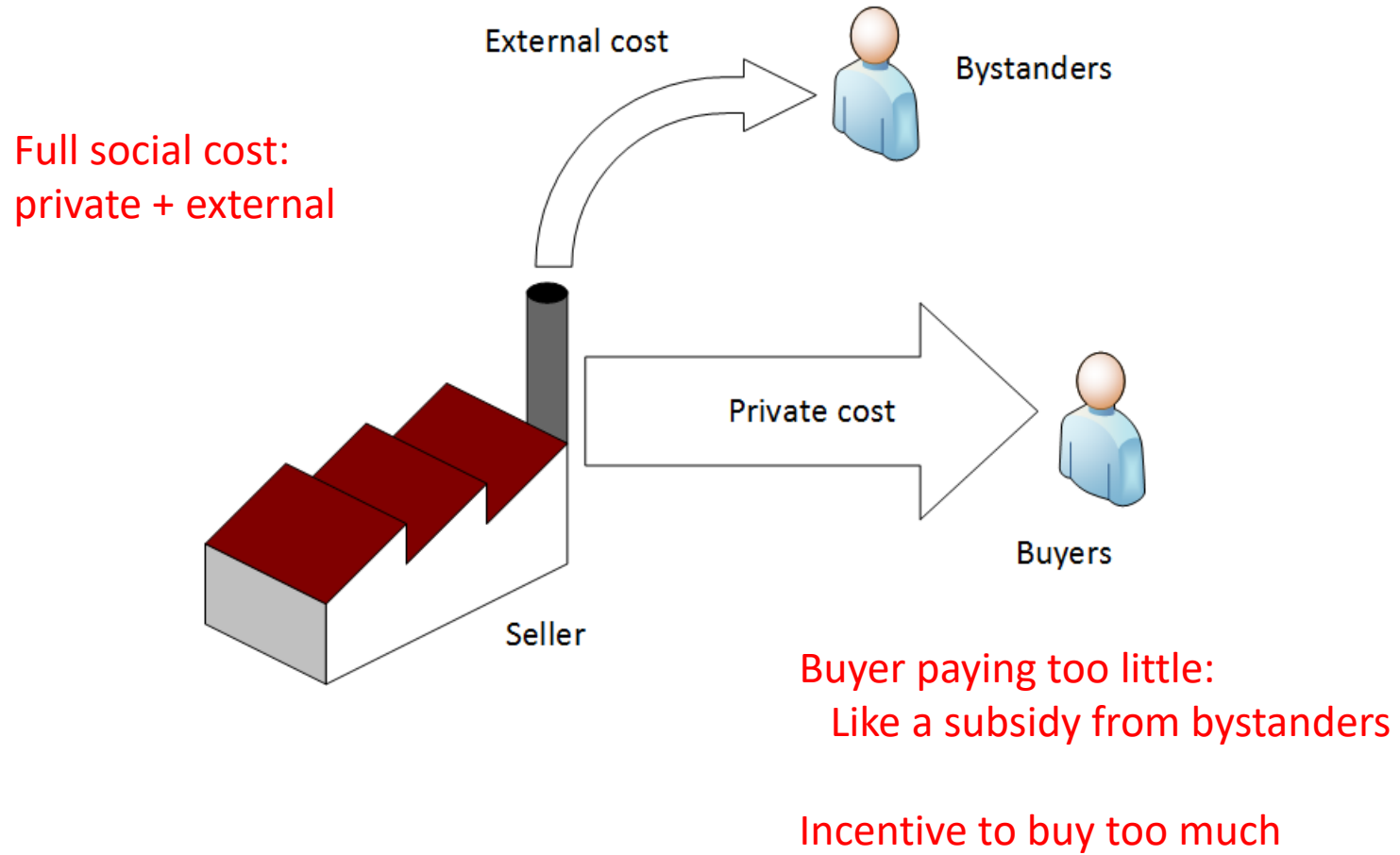
Better



Sunny day photo: [www.businessinsider.com](http://www.businessinsider.com); Storm surge photo: [scied.ucar.edu](http://scied.ucar.edu); Drought: [www.adb.org](http://www.adb.org)

# Externalities distort incentives

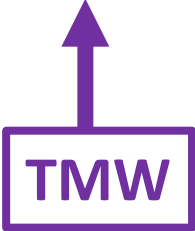
Better





# Example externality: particulates

Public costs imposed by coal and vehicles  
Not included in private costs to producers and drivers



Tianamen Square, Beijing, 2014

chinadaily.com.cn

# Clean Power Plan

- EPA policy to reduce emissions from **existing** power plants
- Less coal; more renewables and natural gas



AES Somerset  
Coal, 655 MW  
Lake Ontario



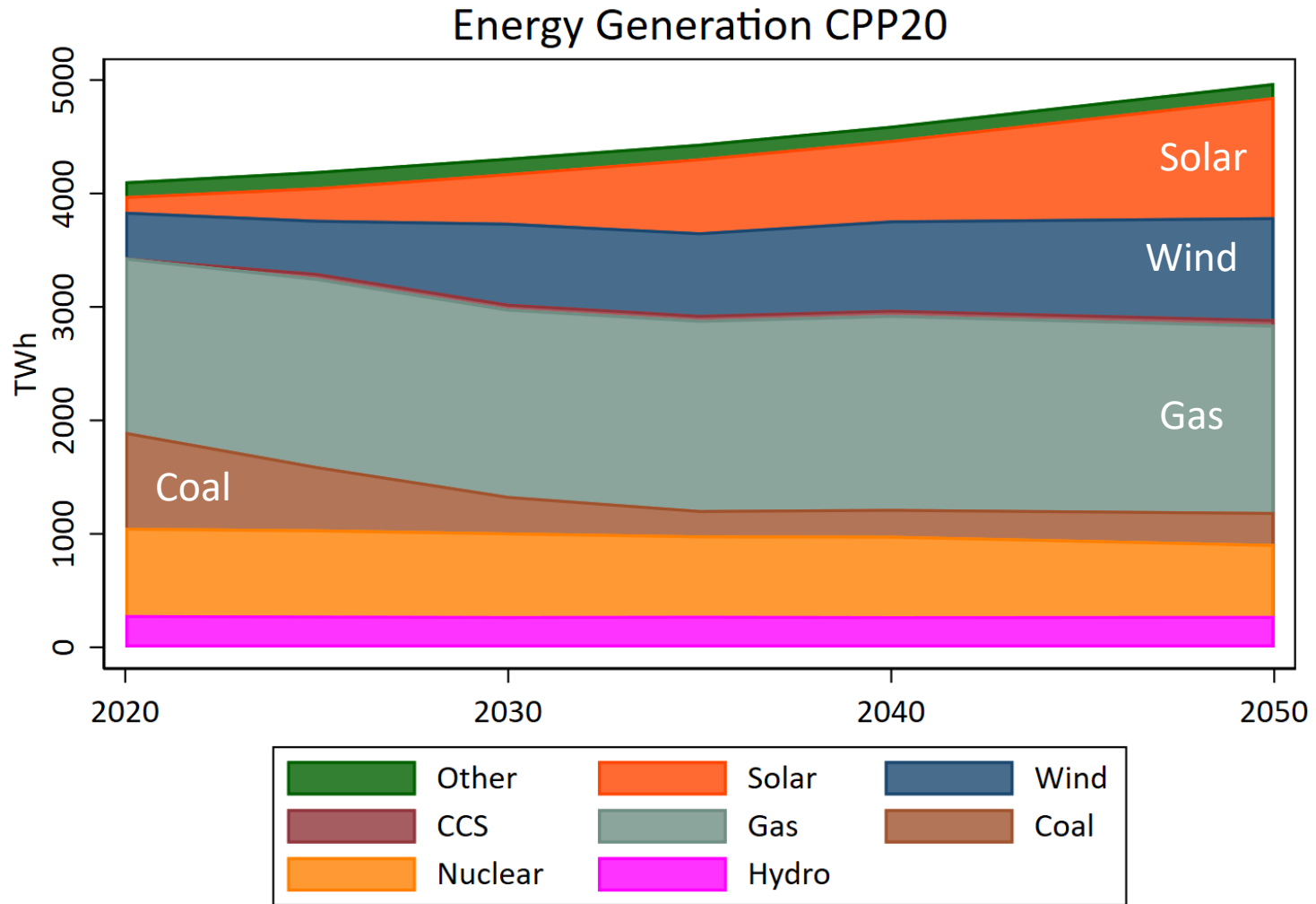
Astoria Energy  
Gas, 1120 MW  
NYC



Photos: NYS DEC  
and Google Street View

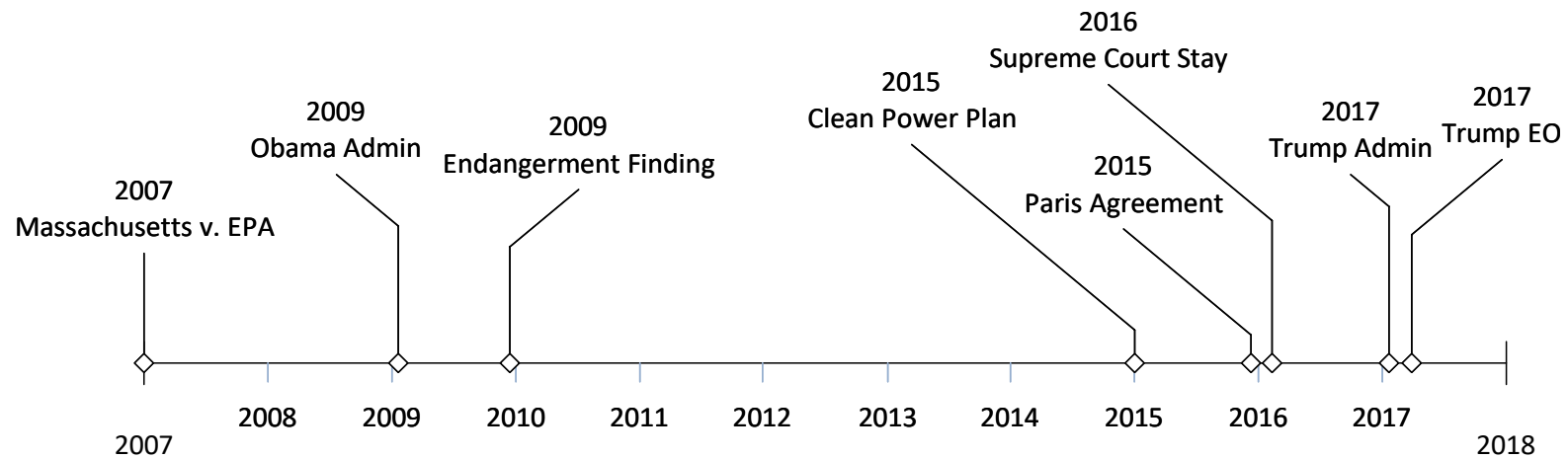
# Impact of the CPP on electricity generation

Better



# Where does it stand now?

OK but  
font is  
too small

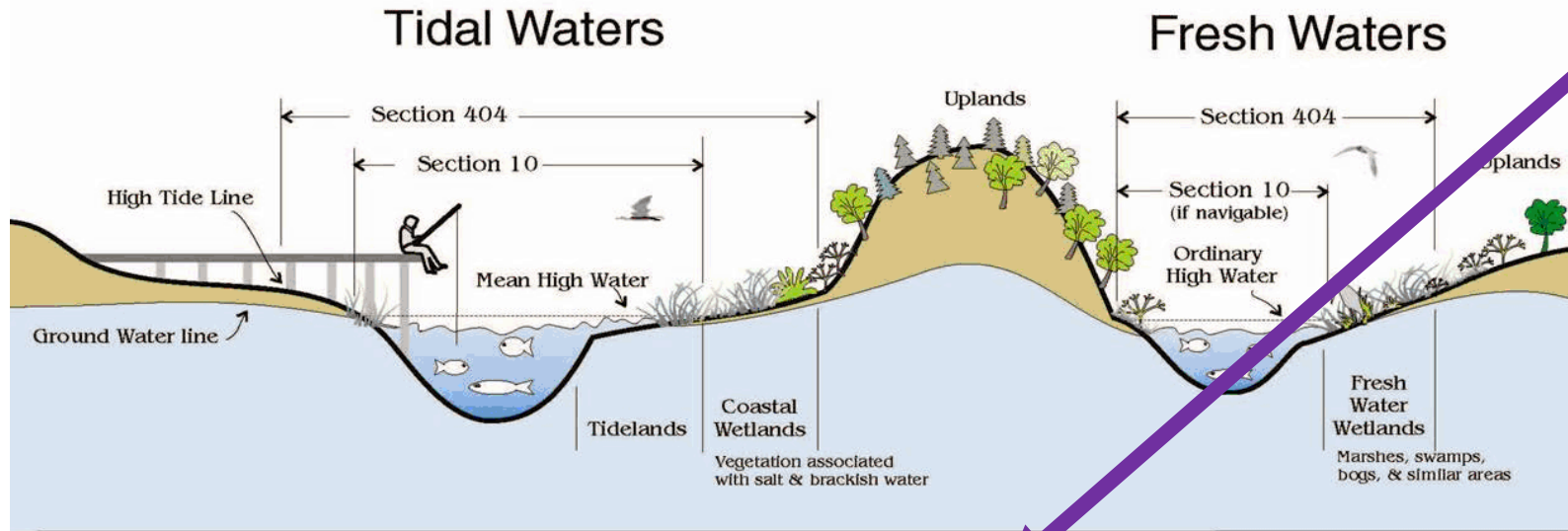


# Army Corps authority

Long standing agreement:  
 Navigable waters  
 + continuously-flowing tributaries  
 + adjacent wetlands

TMW.  
 Better to trim  
 legend

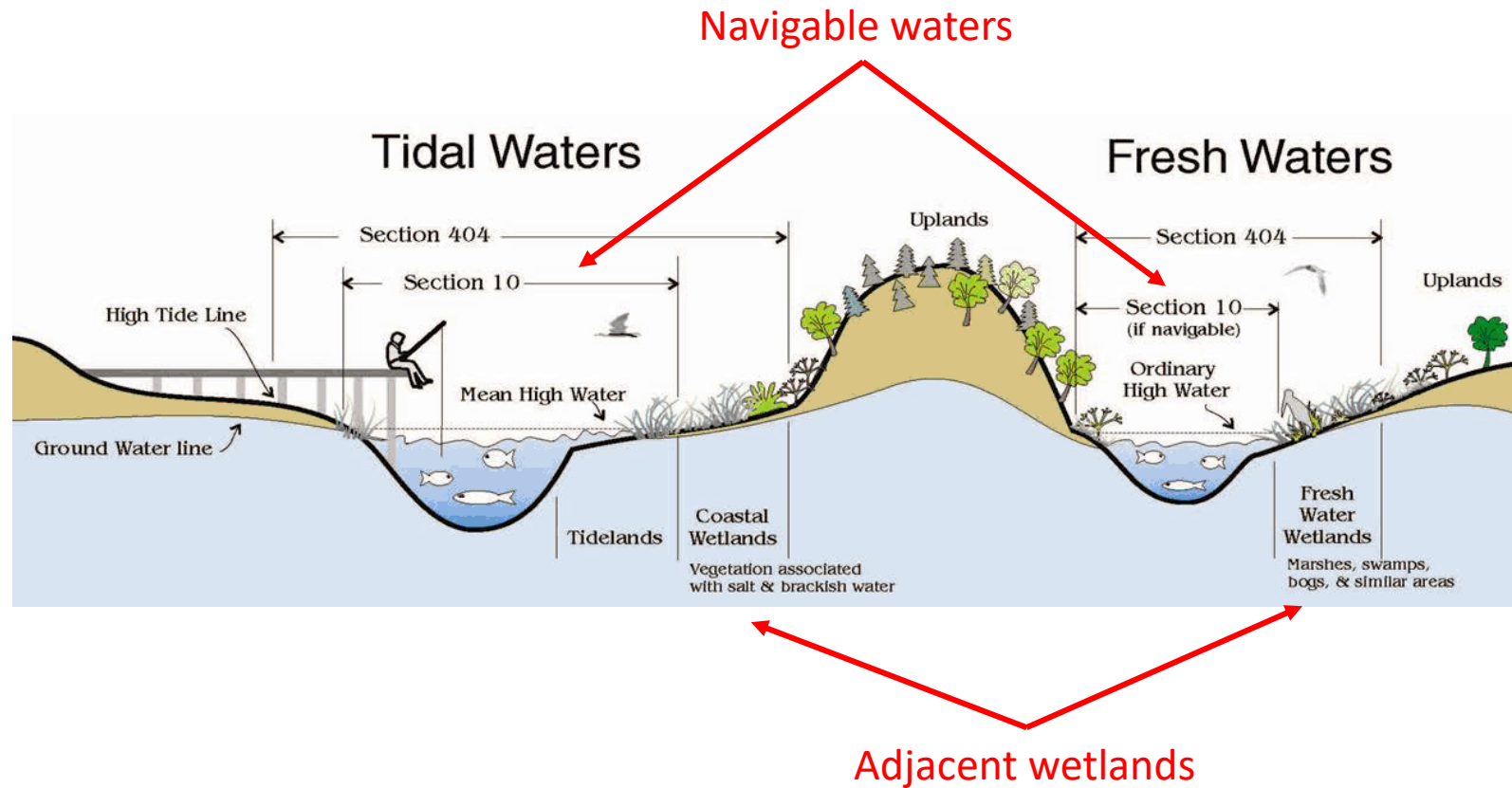
## CORPS OF ENGINEERS REGULATORY JURISDICTION



- |  |   |  |  |
|--|---|--|--|
| Typical examples of regulated activities | <p><b>Section 103</b><br/>                 Ocean Disposal of Dredged Material</p> <p>Ocean discharges of dredged material</p> | <p><b>Section 404</b><br/>                 Discharge of Dredged or Fill Material (all waters of the U.S.)</p> <p>All filling activities, utility lines, outfall structures, road crossings, beach nourishment, riprap, jetties, some excavation activities, etc.</p> | <p><b>Section 10</b><br/>                 All Structures and Work (navigable waters)</p> <p>Dredging, marinas, piers, wharves, floats, intake / outtake pipes, pilings, bulkheads, ramps, fills, overhead transmission lines, etc.</p> |
|--|---|--|--|

# Army Corps authority

Better

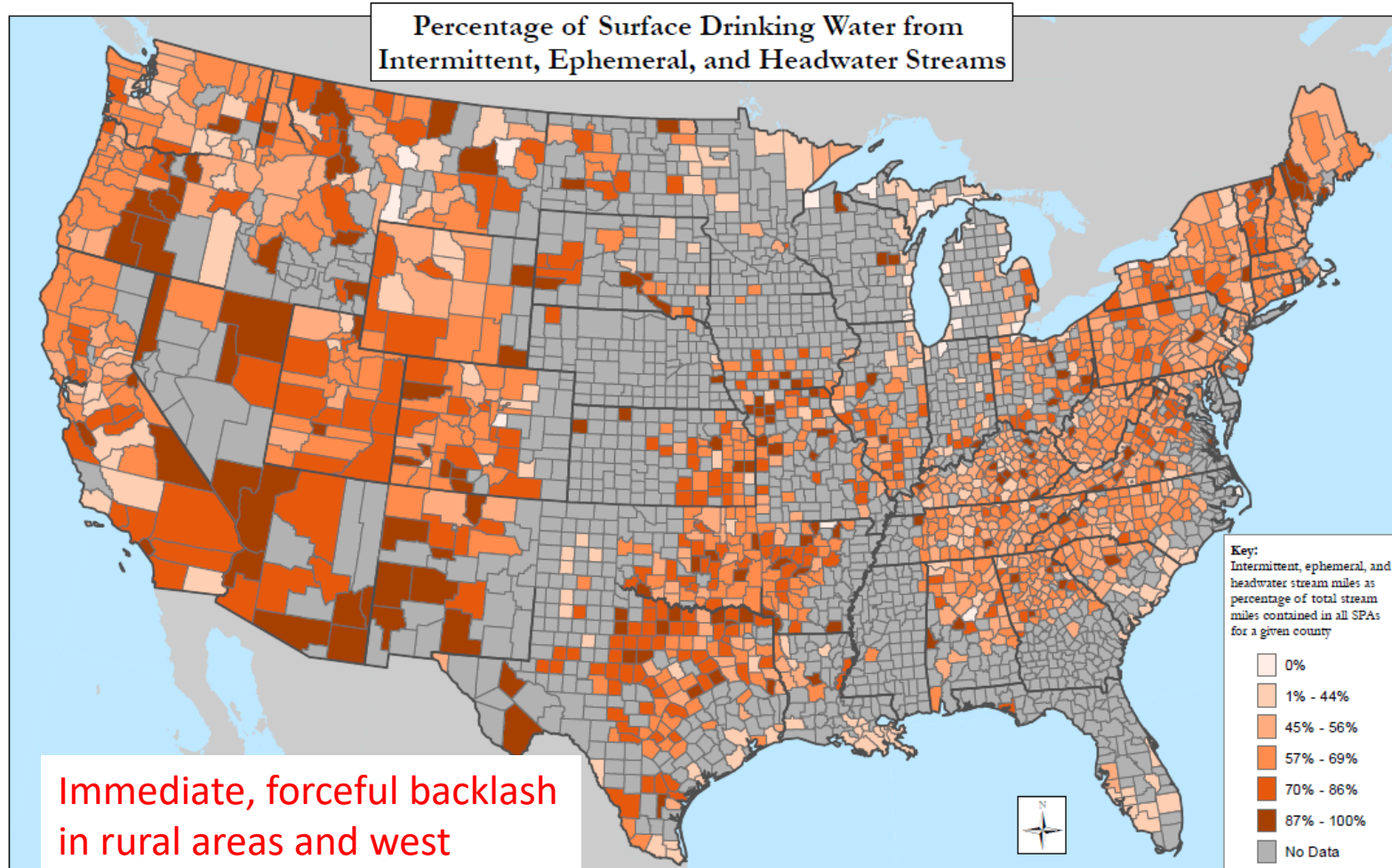


# Result was WOTUS

- Significant nexus includes:
  - Headwaters streams
  - Intermittent streams
  - Ephemeral streams
  - Bodies connected by groundwater

# Rough gauge of the scope...

Better



[https://www.epa.gov/sites/production/files/2015-04/documents/2009\\_10\\_15\\_wetlands\\_science\\_surface\\_drinking\\_water\\_surface\\_drinking\\_water\\_national\\_counties.pdf](https://www.epa.gov/sites/production/files/2015-04/documents/2009_10_15_wetlands_science_surface_drinking_water_surface_drinking_water_national_counties.pdf)



# Summary

1. Show rather than tell
2. Minimize bullet points
3. Avoid TMW
4. Annotate illustrations



Why bullets here?  
Key point is that it's a list