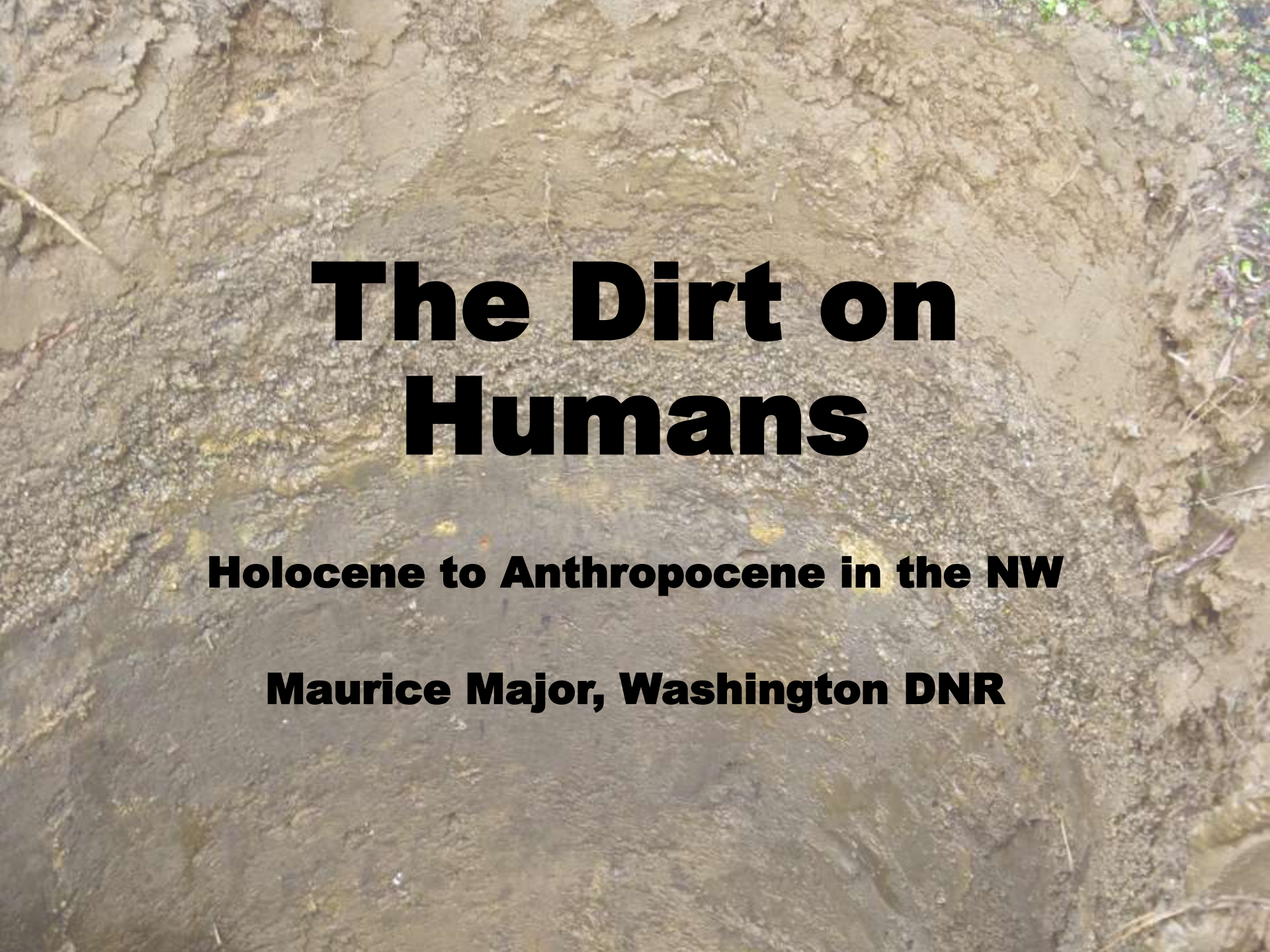

The Dirt on Humans

Holocene to Anthropocene in the NW

Maurice Major, Washington DNR

Soils are fundamental to human settlement

- Post-Pleistocene, plants become more crucial
- Before fertilizers, agriculture depended on soil
- In the NW, soils were crucial:
  - Wet meadows with camas
  - Dry lithosols with bitterroot and lomatiums

If humans show up, the soil's gonna change.

- Settlements concentrate nutrients
- Humans affect flora and fauna in our habitats
- Agriculture speeds up this process
- We affect how sediment accumulates and erodes
- Next thing you know, we're in the Anthropocene

Prairie Anthropocene

- Charcoal in the soil
- Lots of edges and food for prey animals
- Lots of small disturbances
- After the burning and harvesting stopped, succession took over
- GLO shows prairies where soil types did not predict

Midden Anthropocene

- Trees grow bigger in middens
- Middens sweeten the soil
- Elevation
  - Old shorelines may be in the woods now
  - Sites may change elevation

Ancient Harbor Parasequence: Soil Signature of Regime Change

- Urban waterfronts break disperse wave energy and change deposition
- Harbor sediment is a cultural catchment
- Stratigraphy holds chronologically ordered data on human activity

Soil is the known unknown for archaeologists

- Most archaeologists don't know much about soil
- Soil contains physical and chemical evidence of cultural behavior
- We used to toss charcoal, and now regret that. Same will happen with soil.

What do archaeologists do with soil?

- Impose chronological order on artifacts
- Find out when humans arrived
- Find out where humans lived
- Find out what humans ate

What do archaeologists look for in soil?

- Lithostratigraphic units
- Anomalies (non-natural parent material (you know, artifacts, but also bulk and manuport deposition), digging, erosion, deposition)
- Regime changes (charcoal, prairies, non-comformities,…)
- Soil chemistry can get to very specific activities