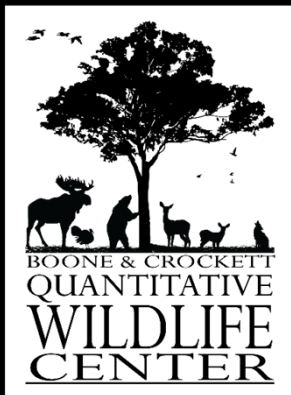




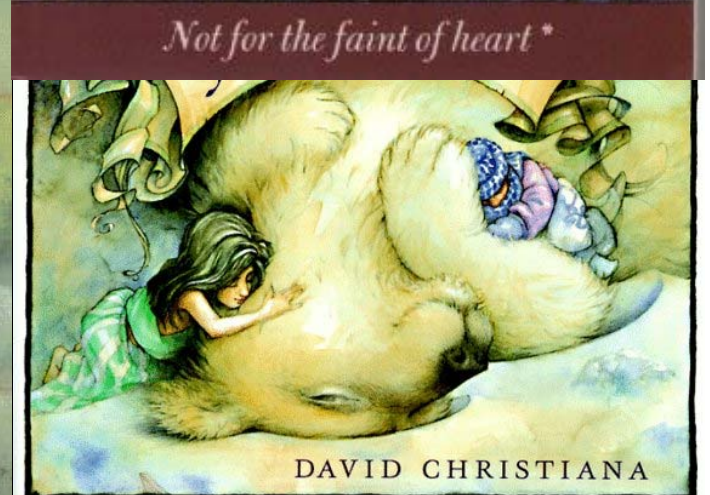
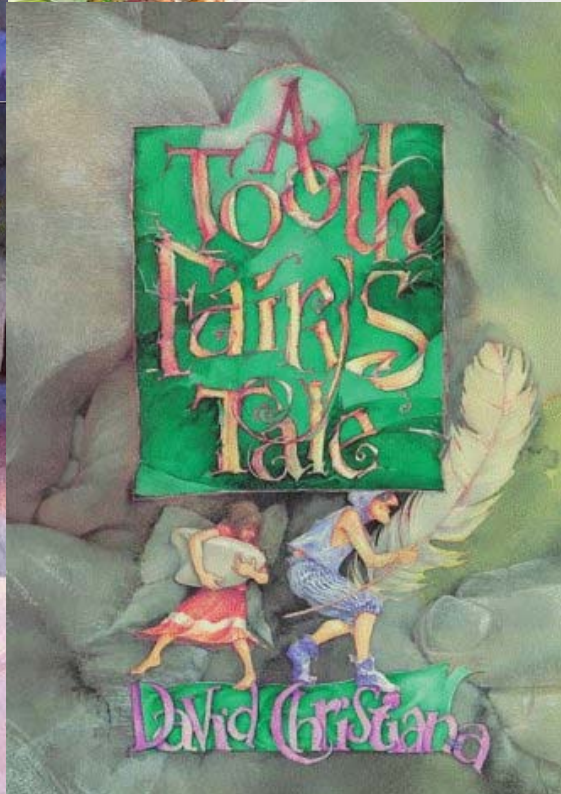
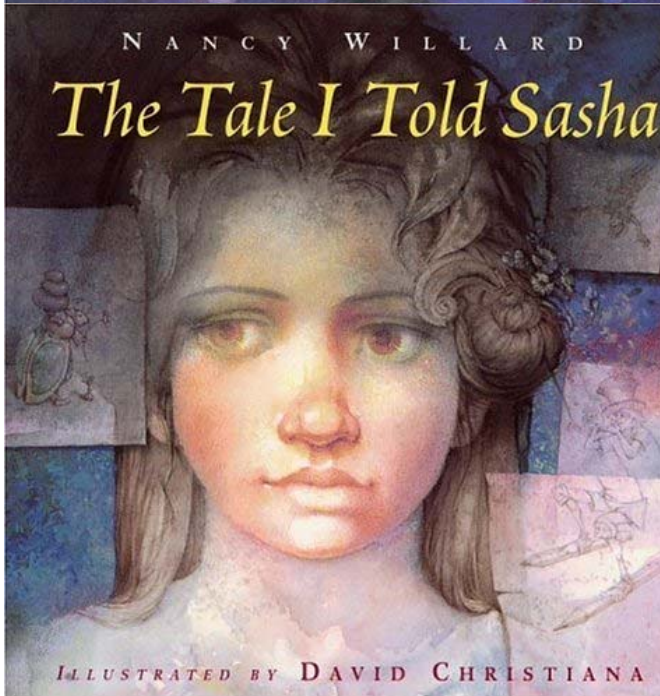
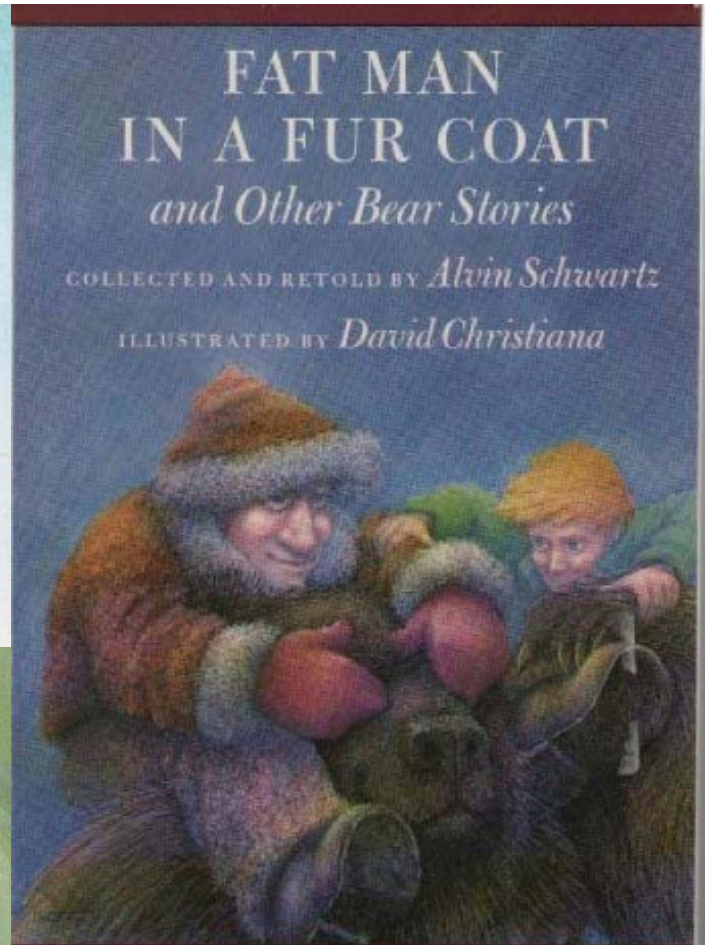
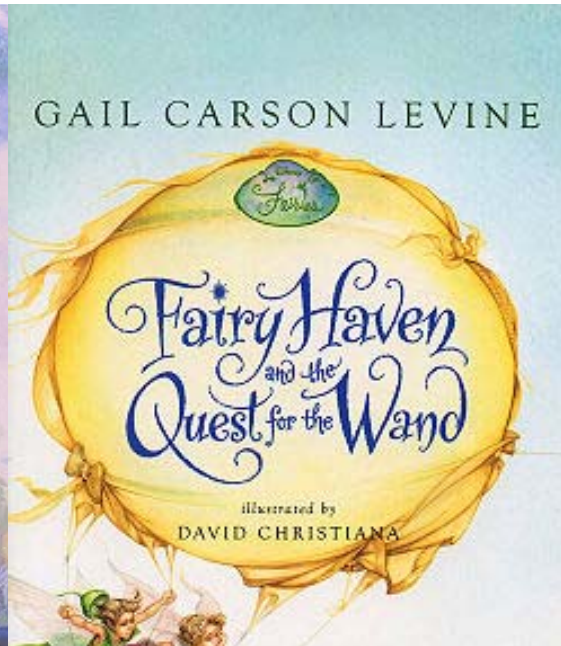
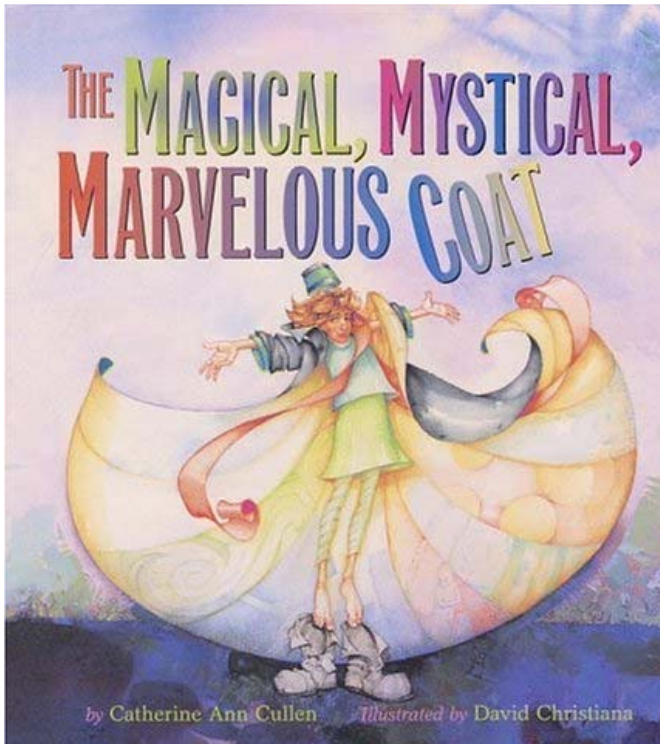
Oak regeneration as a social process



Christopher Hoving
Michigan DNR and Michigan State University

Burning Issues Symposium
February 5, 2019

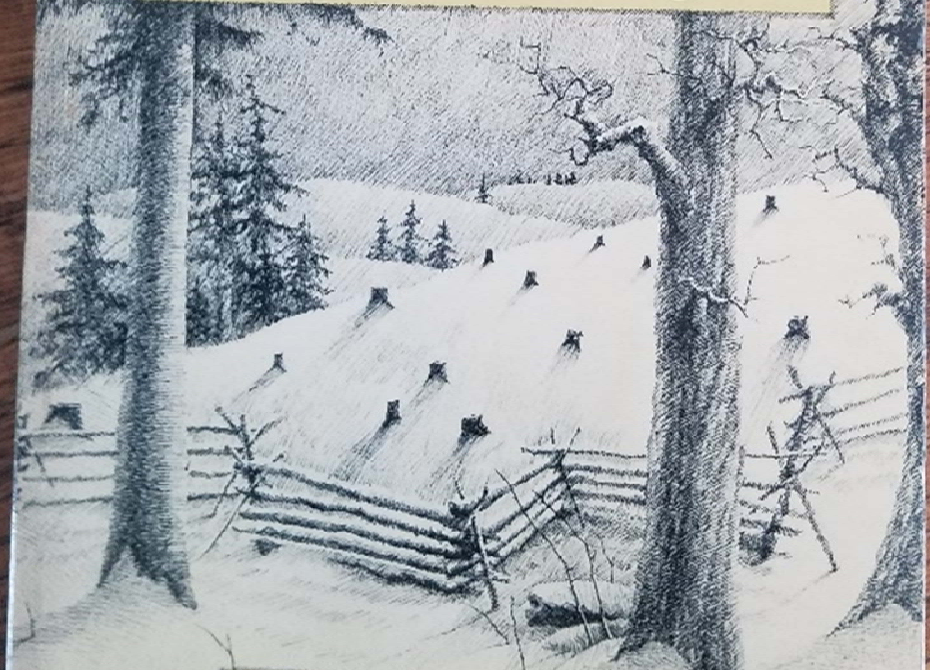






CHANGES IN THE LAND

Indians, Colonists, and the
Ecology of New England



WILLIAM CRONON

W. Cronon 1983

“What most impressed English visitors was the Indians’ burning of extensive sections of the surrounding forest once or twice a year... Here was the reason the southern forests were so open and parklike; not because the trees naturally grew thus, but because the Indian’s preferred them so.”

William Cronon – Changes in the Land (1983)





PRAIRIE DO NOT DISTURB
- CONTACT -
AMTRAK DISTRICT ENGINEER
616-687-2222



Mesophication

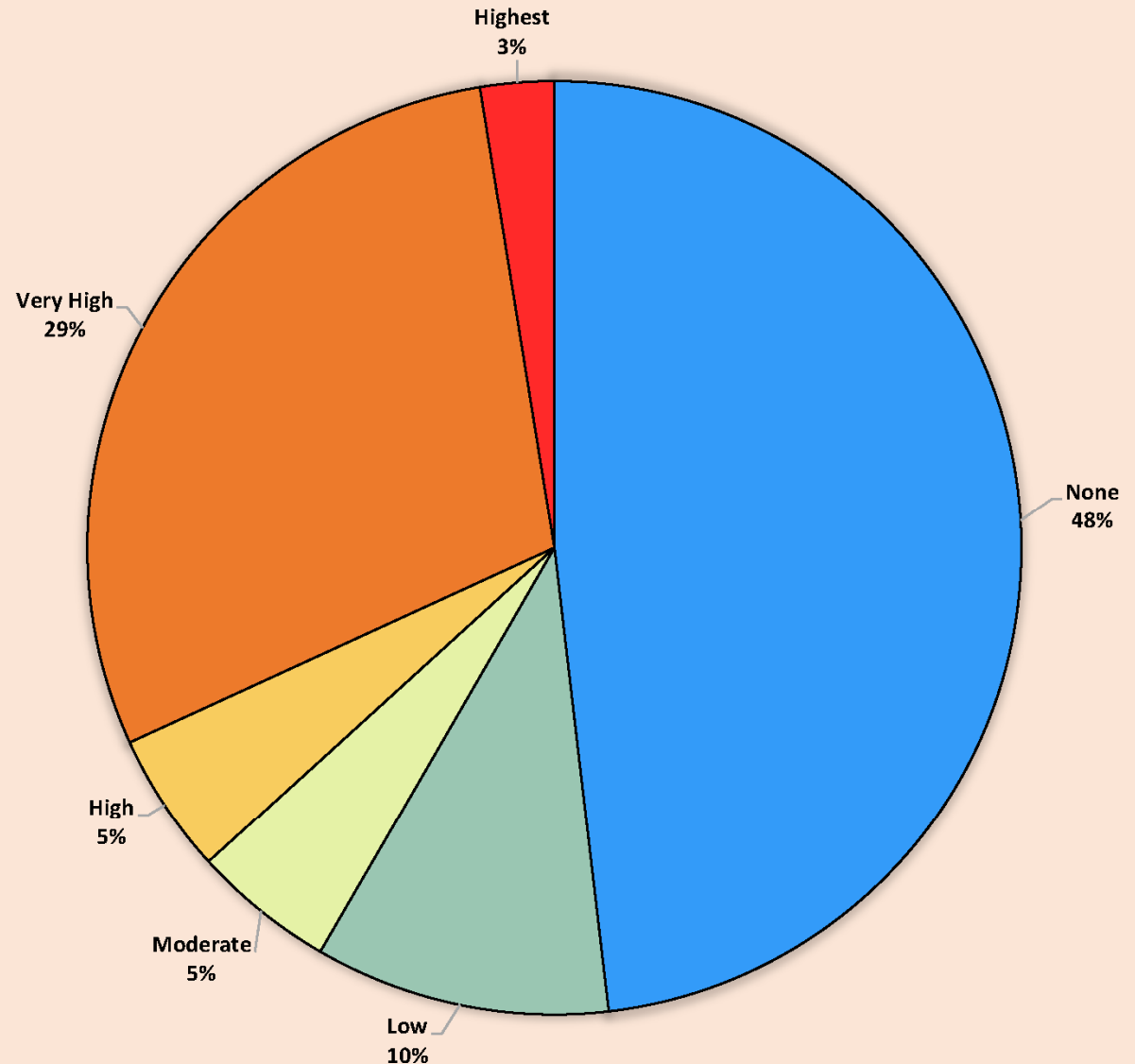


PROPORTION OF TOTAL ACREAGE BY FIRE NEEDS SCORE

Southern Lower MI

Fire Need	ACRES
None	19,8846
Low	42,191
Moderate	20,303
High	20,235
Very High	120,904
Highest	10,552
Grand Total	413,031

**Typically burn
~50% of need
each year**



Objectives

- Document rules of social behavior
 - state land managers
 - regarding oak regeneration and prescribed fire
- Document variation in rules
 - among individual land managers
 - among DNR divisions



Preliminary Results

- Round 1 of interviews
 - 10 hours of interviews
 - 68,900 words
- Themes
 - Teleconnection
 - Pyro-diversity
 - Procedural fairness

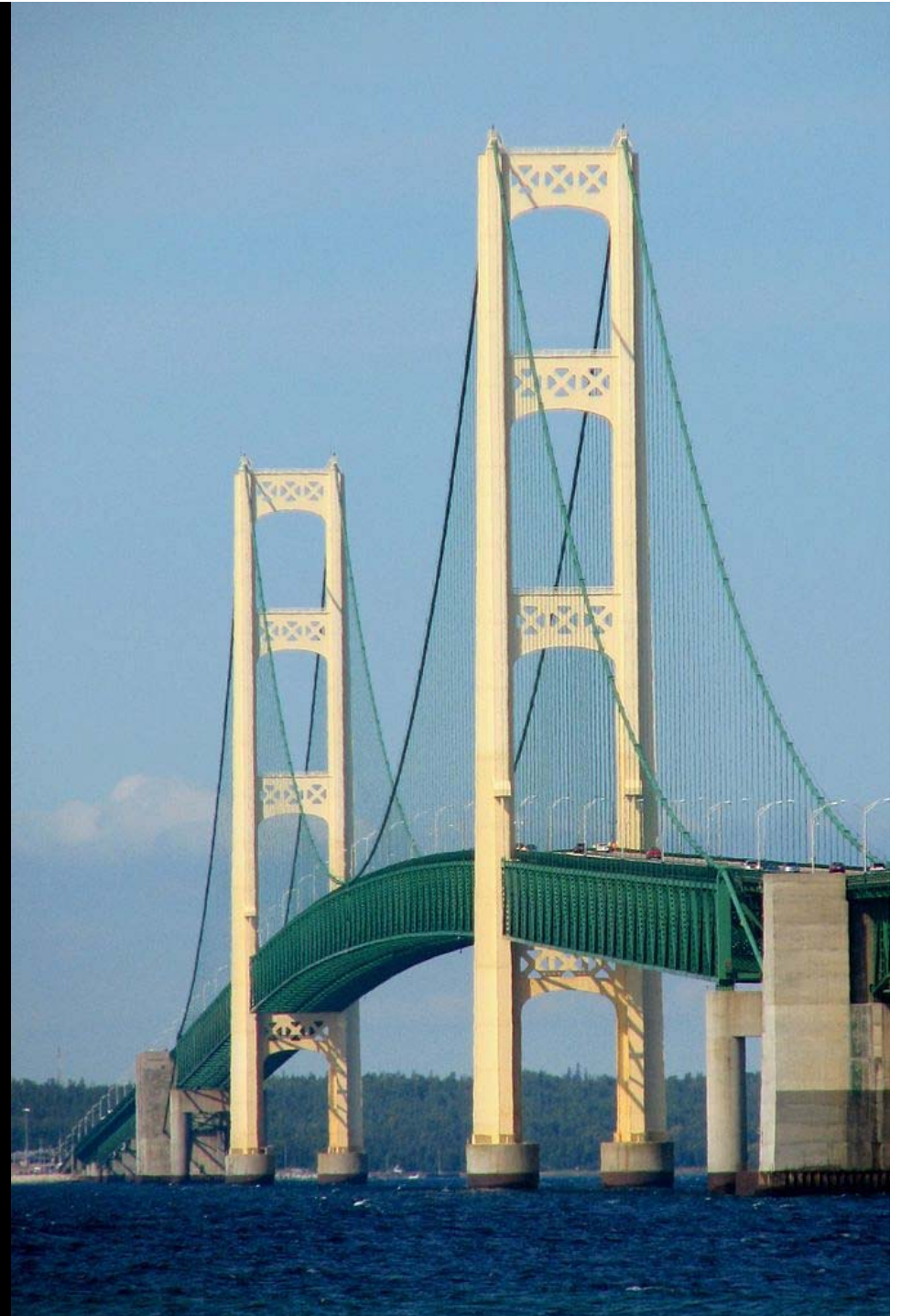


Theme 1: Teleconnection

- *“...fighting wildfires, that's certainly part of the mission. I don't fault them for doing that, but when they do that, the staff get pulled from southern Michigan... the reason they're not getting done is that they have everyone doing wildfire suppression and they're not available for prescribed fire.”*

Theme 1: Teleconnection

- Managers want to burn outside April/May window
- Need FRD staff and equipment to burn
- Fire danger in northern Michigan (summer)
- Replacing college students out West (fall)
- Distant systems affect capacity to burn outside April/May window



Theme 2: Pyro-diversity matters

“What is it that fire does to help maintain these fire adapted systems... How does it differ from growing season to dormant season? ...if we do a scattered approach... going to a completely different area the next year... That effectively took away any productive outcomes that the fire did initially... we are rendering these fires useless by not following up with them. We need to learn the fire disturbance frequencies in some of these places.”

Theme 2: Pyrodiversity

- Variation limited in
 - Fire intensity
 - Seasonality
 - Frequency
 - Size
- Variation high in
 - Geography



Theme 3: Procedural fairness

“...just trying to make sure that none of the regions gets left out in the cold. This is a game. It's nothing but a game... and the regions play it for whatever they think they can get away with.”

Theme 3: Procedural fairness

“I think that depends on the person. So like personally when I do that, I am very honest and follow it to a T...I think at times, I can't say I have personally done this, but at times there may be a tendency to not propose a burn if you determine that it's not going to rank well. Or try really hard when you propose it to get it to rank well. I think there is a lot of variation in... in how you, I guess, interpret the different scoring factors.”

Theme 3: Procedural fairness

“...when I write my FTPs and stuff I know what they are looking for. And I have tried to coach people in this. When you write FTPs, these are the things you have to highlight if you want your burn to rank out well... And I can lead the horse to water, but I can't make them drink.”

Theme 3: Procedural fairness

- Scarce resources
 - High fire need
 - Not enough resources to burn all high need areas
- Process to prioritize who gets resources
- Zero sum competition



Theme 3: Procedural fairness

- Motivation and demotivation
 - To the victor the spoils
 - Sour grapes
- Erodes trust in process
- Generates SLP scale geographic diversity



Take home messages

- Land management agencies are human organizations
- Within agency culture matters
- Agency culture affects the amount, distribution, and frequency of prescribed fire on state lands in southern Michigan in complex ways
- Culture change is possible, but neither fast nor easy



Acknowledgements

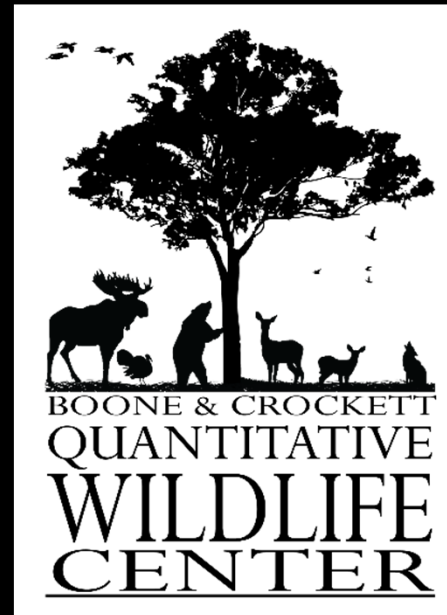
Pat Lederle

Emily Pomeranz

Interviewees

William F. Porter

Arika Ligmann-Zielinska



MICHIGAN STATE
UNIVERSITY

Chris Hoving

hovingc@michigan.gov

hovingch@msu.edu