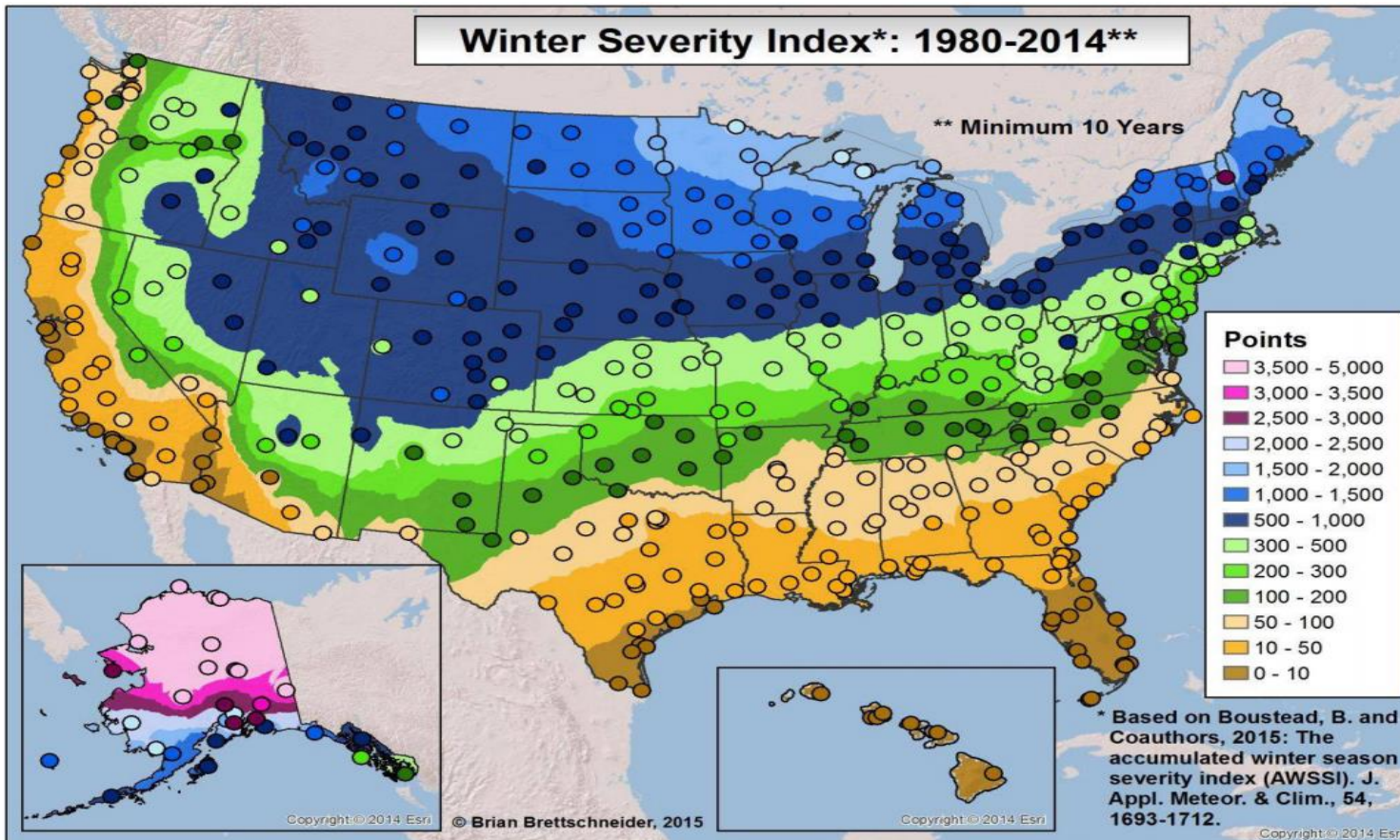




# RECREATION ON THE SUPERIOR NATIONAL FOREST—MONITORING CHANGE

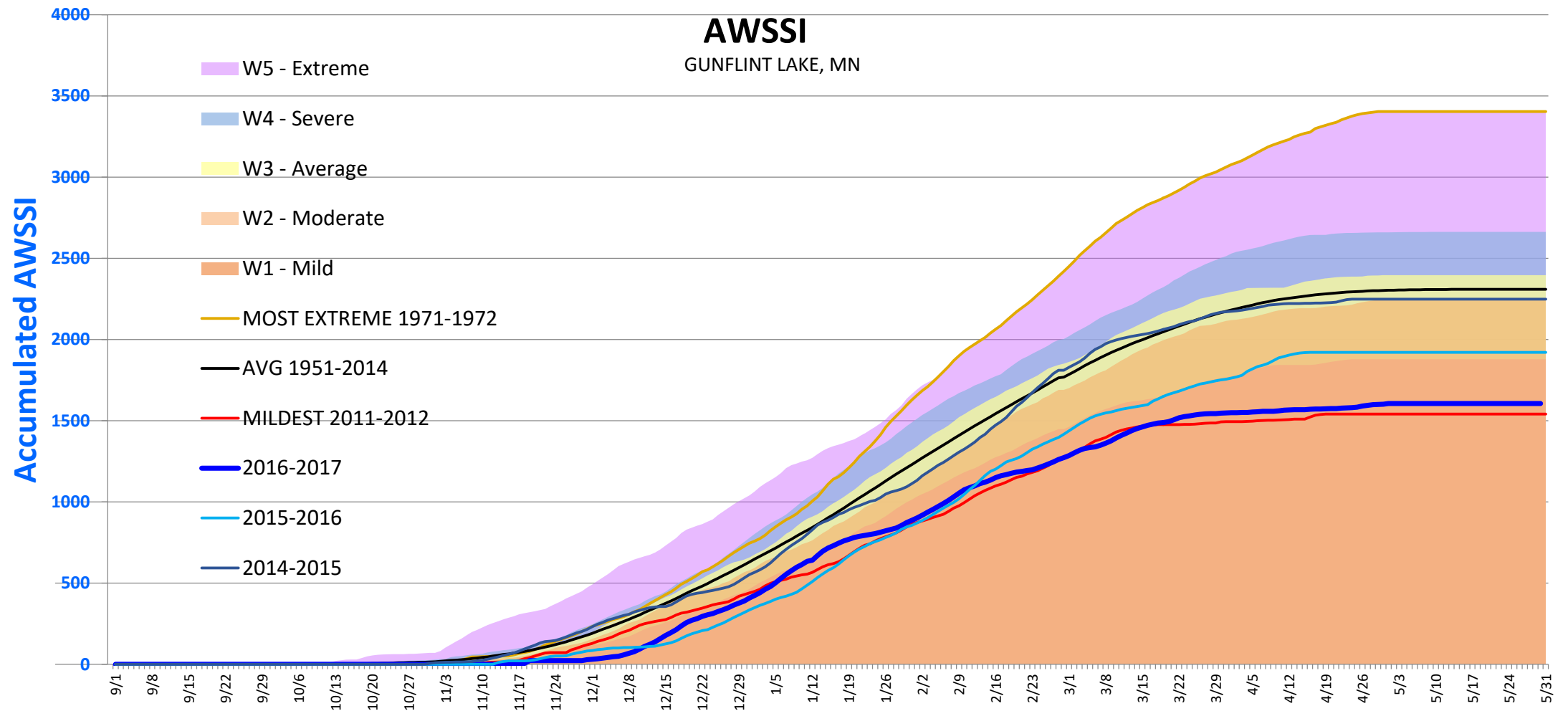
KATIE FRERKER, ECOLOGIST & JON BENSON, RECREATION PLANNER



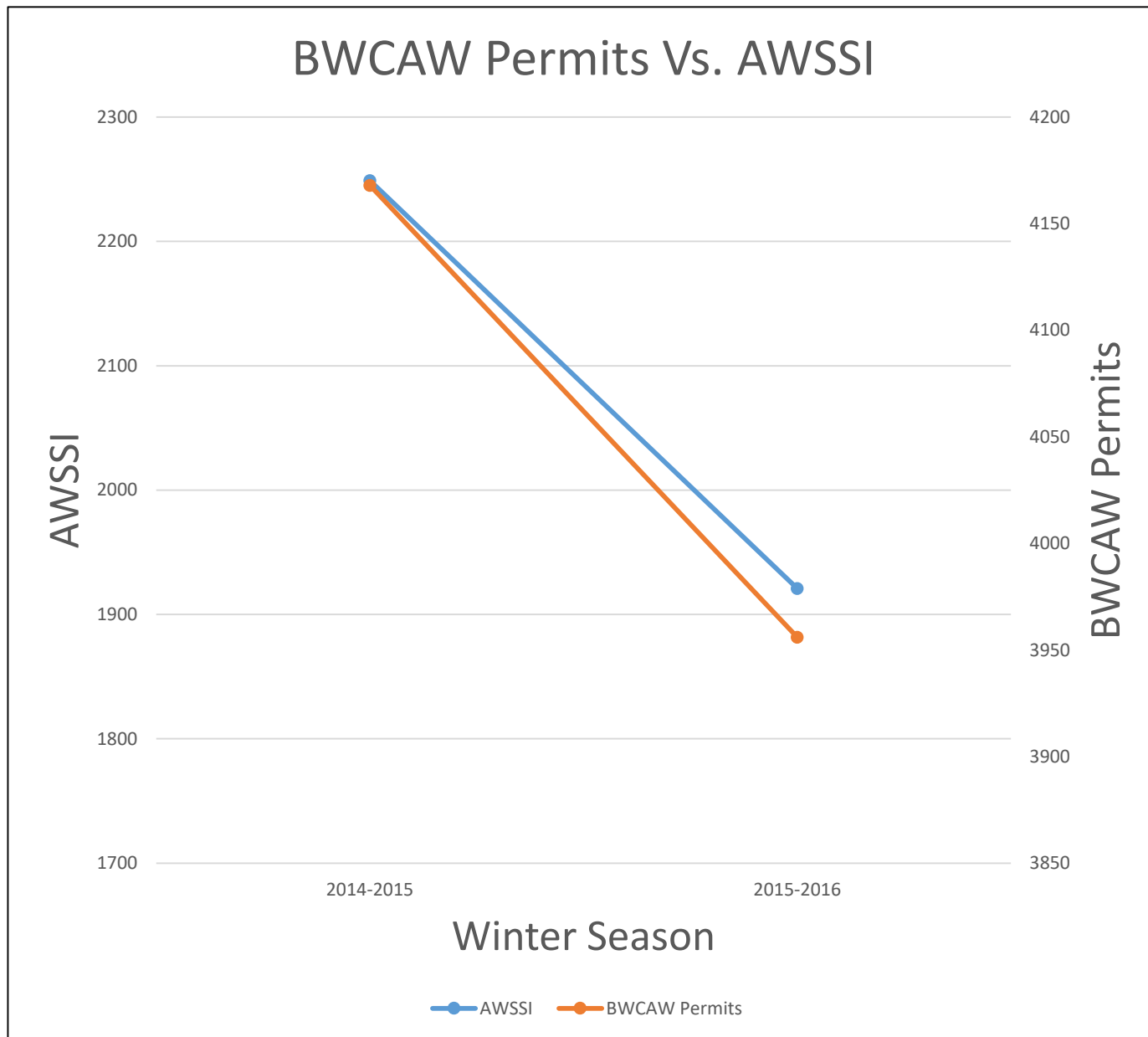


- Accumulated Winter Season Severity Index (AWSSI):
- Max/min temperature
- Snowfall
- Snow depth

# Climate Change Monitoring



AWSSI initial findings



# Winter Severity Monitoring





## Winter Severity Monitoring- Other Indicators?

- Lynx indicator
- Deer populations
- Recreational Use/  
Snowmobile vs  
OHV metrics





# Outdoor Recreation

- According to the US Bureau of Economic Analysis, the outdoor recreation economy accounted for 2.2 percent of the gross domestic product in 2016.
- On the North Shore, outdoor recreation accounts for a much larger percentage of the economy as it is the primary economic driver in Cook County





# Outdoor Recreation

- There are a wide variety of seasonal uses on the Forest.
  - Snow-Free Season
    - Boating/ Canoeing
    - Camping
    - Hiking
    - Biking
    - OHV Use
    - Etc...
  - Snow Season
    - Skiing/ Snowshoeing
    - Snowmobiling
    - Winter camping
    - Etc...





# Recreation Management

- Each type of use requires trail and facilities maintenance
- Snow Trails
  - Tofte and Gunflint Districts
    - 330 miles of designated snowmobile trails
    - 280 miles of designated ski trails
- Terra Trails
  - Tofte and Gunflint District
    - 165 miles of OHV roads and trails (not including County or other jurisdiction)
    - 358 miles of hiking trails
    - 36 miles of single track bike trails





## Snowmobile Trails

- The majority of these trails are managed in collaboration with trail partners through the State of Minnesota Grant-In-Aid Trails Program.



## Snowmobile Trail Maintenance

- Snowmobile Trail maintenance is primarily completed by volunteer trail groups through the Grant-In-Aid Program or by the State of Minnesota. Over the past few winters there has been a noticeable increase in weather related maintenance
  - Ice and wind storms blowing overstory trees across the trail
  - Large and persistent rain events which decrease the number of days where the trail is suitable for mowing by heavy equipment





# Grant-In-Aid Snowmobile Trails

- Snowmobile Trail maintenance and grooming is completed with funding assistance from the MN Snowmobile Trails Assistance Program (Grant-In-Aid)
- Established in 1973
- Includes 21,000 miles in Minnesota
- Primarily funded through state gas tax revenue and snowmobile registration fees





A shorter snow season means fewer snowmobile registrations

- The overall number of snowmobiles registered has declined from a high of 277,000 sleds in 2006 to 196,000 sleds in 2016
- This brings an element of unpredictability with regard to the fund balance and the amount that can be paid out to clubs for grooming and maintenance





## Effects of a smaller GIA fund balance

- A reduction in the number of snowmobile registrations means fewer dollars are available for GIA clubs to maintain trails
- The standards for trail maintenance remain the same, but fewer dollars exist to complete the work. This generally means grooming is less frequent





## OHV Riding

- Along with a decrease in snowmobile registrations, there has been a consistent increase in off-highway vehicle purchases over the same time period.
- This is likely attributable to an extended spring and fall season that go along with a shorter winter season





- The demand for OHV trails has increased, while the demand for new snowmobile trails has decreased

# OHV Riding





## Ski Trails

- Ski Trail Maintenance is similar to snowmobile trail maintenance with the primary difference being the desire for perfectly groomed and tracked trails
- Climate change can have a substantial impact on the ski trail corridor as a variety of hardwood species such as oak expand their range to the north





## New recreational activities

- In addition to a shorter ski season, maintenance challenges, and a change in species composition, emerging recreational uses such as fat tire biking present additional challenges
- Fat tire biking is a quickly growing recreational use by the active community as a way to extend the amount of the snow season that can be used to recreate.





- Recreation is changing both in terms of users and the types of activities they participate in
- Land managers have a responsibility to adjust and adapt or face ecological, economic, and sociological challenges

## Conclusions