

Wisconsin Forestry Center - Prescribed Fire for Forest Management

Prescribed Fire & Interfering Vegetation

Jack McGowan-Stinski
Program Manager
<http://lakestatesfiresci.net/index.html>
mcgowan-stinski.1@osu.edu



1


Land Steward & Fire Manager TNC in MI & WI

Instructor/ Cadre

Consultant/Contractor

Seasonal


- DNR in MI, MN, WI
- USFS in WI & MI



UW-Stevens Point & Central MI Univ

Program Manager for LSFSC

A network of fire managers and scientists interested in the fire-dependent ecosystems of the northern Lake States region.



Lots of Rx & wildfire

2

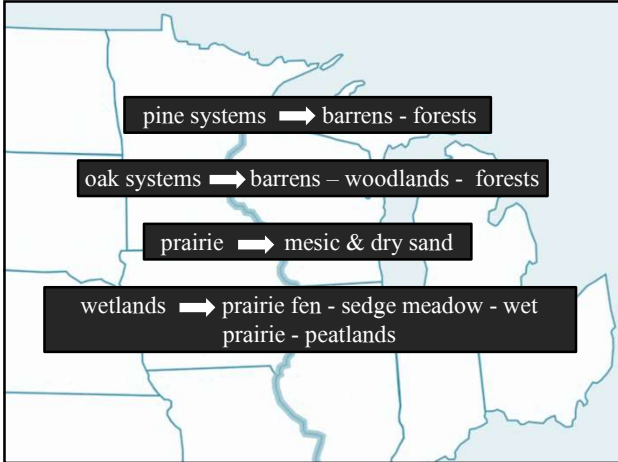
Joint Fire Science Program (JFSP) & Fire Science Exchange Network (FSEN)

15 Fire Science Consortia or Exchanges across the U.S.

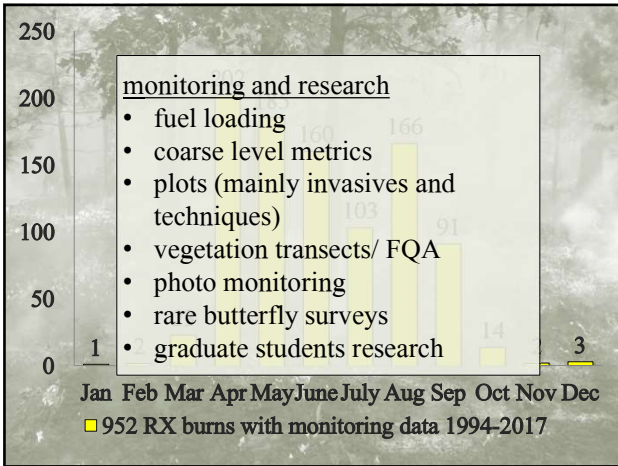
~ 14 + Years of knowledge exchange -



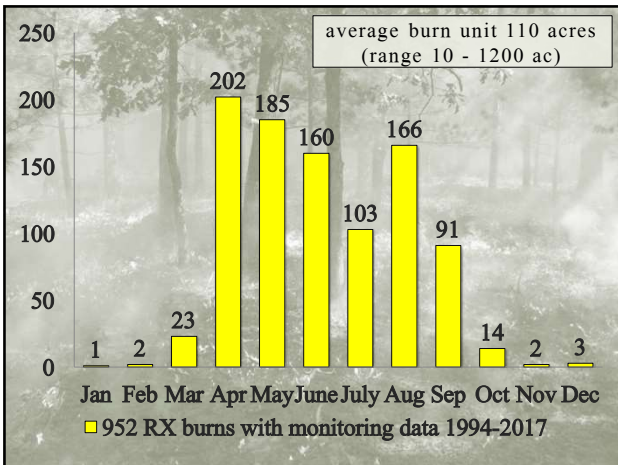
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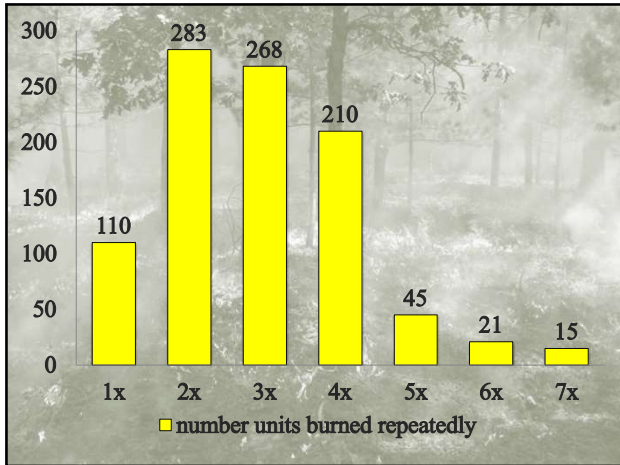
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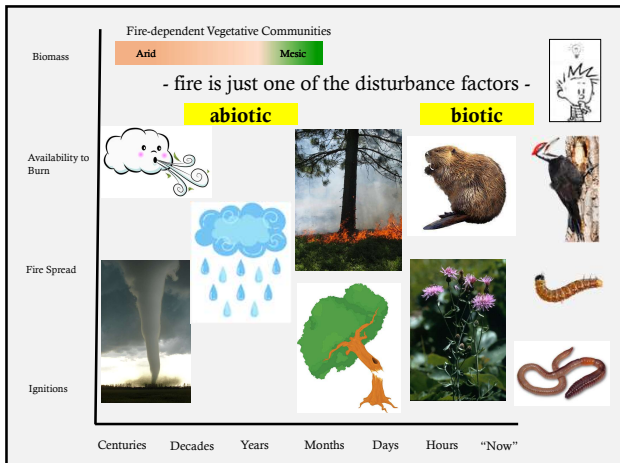
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What is Interfering Vegetation?

any plant species that complicates restoration or management of fire-dependent systems

1. non-native invasive plants
2. competitive native plants



10

Invasive's and Competitive Natives

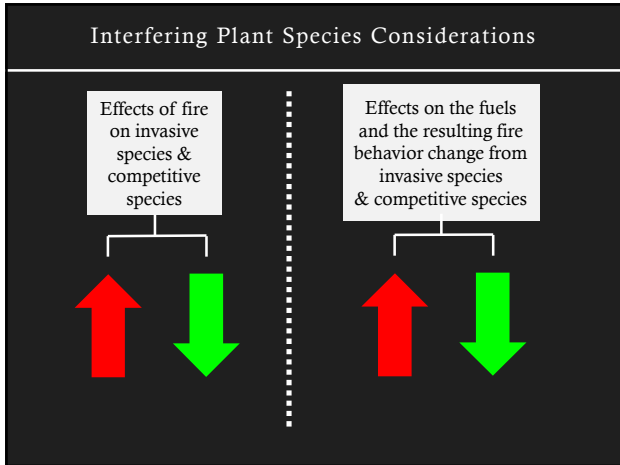
<p><u>Woody</u></p> <ul style="list-style-type: none"> • Buckthorns • Olives • Multiflora Rose • Honeysuckles • Tree-of-heaven • Black Locust • Barberrys • Privets <ul style="list-style-type: none"> • Mesophytes • Maples • Red cedar • Hazelnut 	<p><u>Herbaceous</u></p> <ul style="list-style-type: none"> • Garlic Mustard • Bouncing Bet • Myrtle • Dame's Rocket • Spotted Knapweed • St. Johnswort • <i>Phragmites</i> • Hybrid Cattails • Reed canary grass <ul style="list-style-type: none"> • Bracken fern • Pennsylvania sedge • Dominant prairie grasses
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11

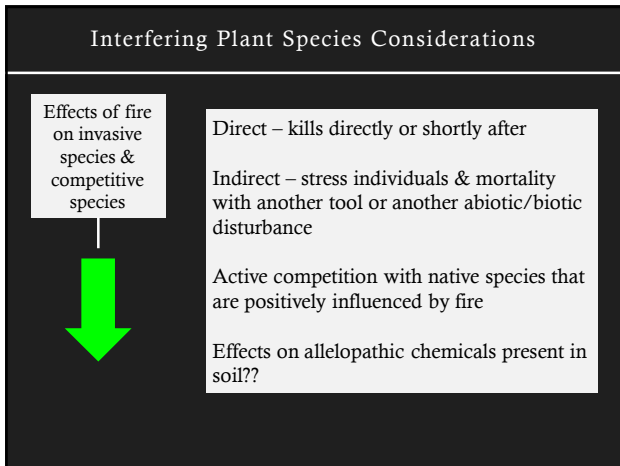
3 Main Fire & Plant Species Considerations

<p>Effects of fire on the invasive & competitive species</p>	<p>Effects on the fuels and the resulting fire behavior change from invasive species & competitive species</p>	<p>Fire operations can spread invasive species</p>
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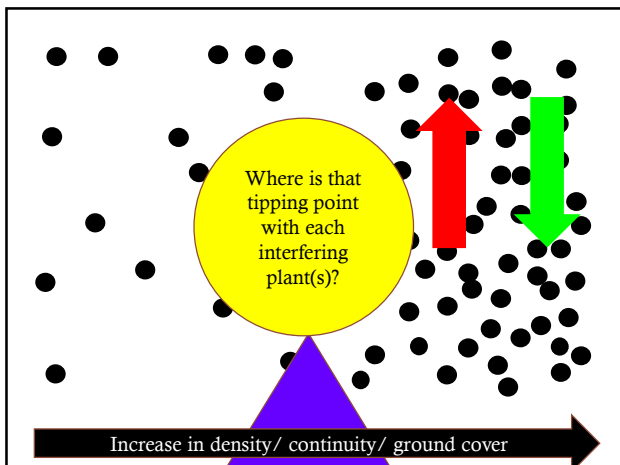
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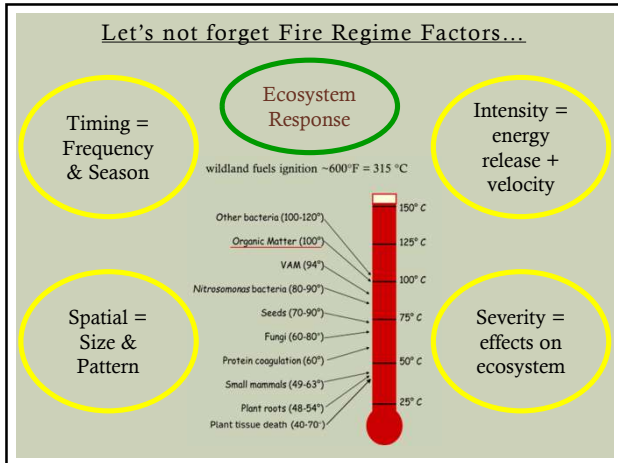
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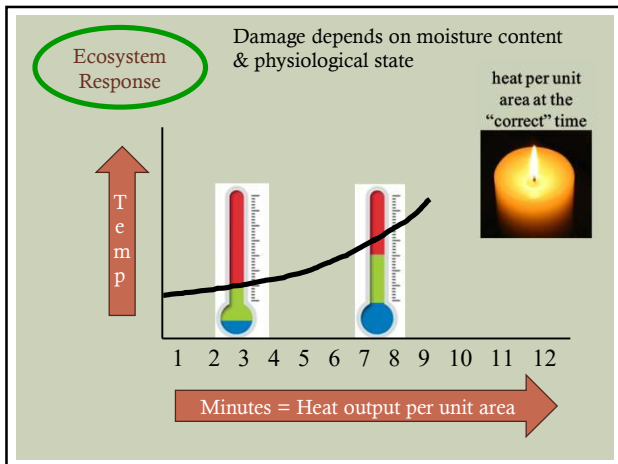
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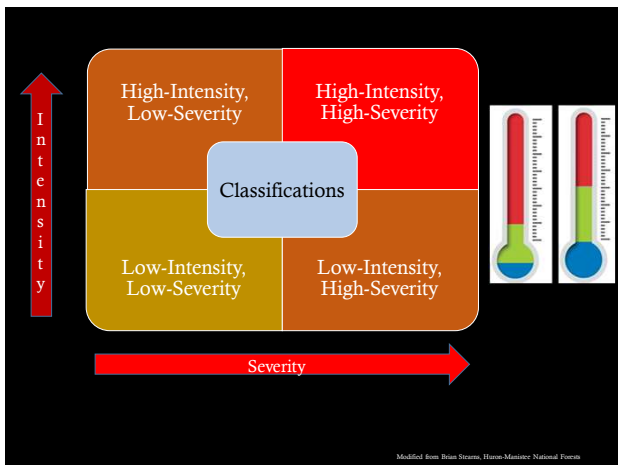
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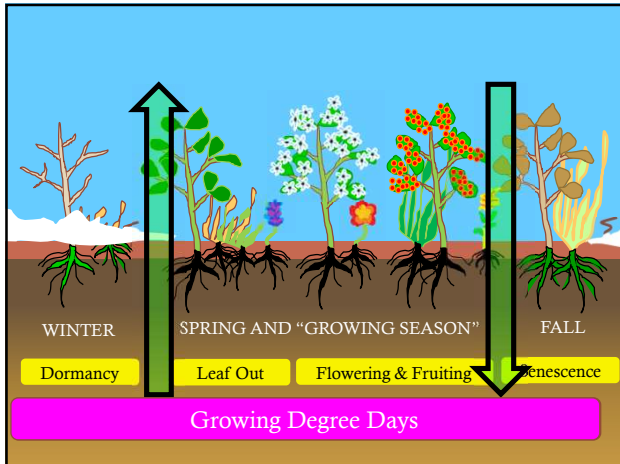
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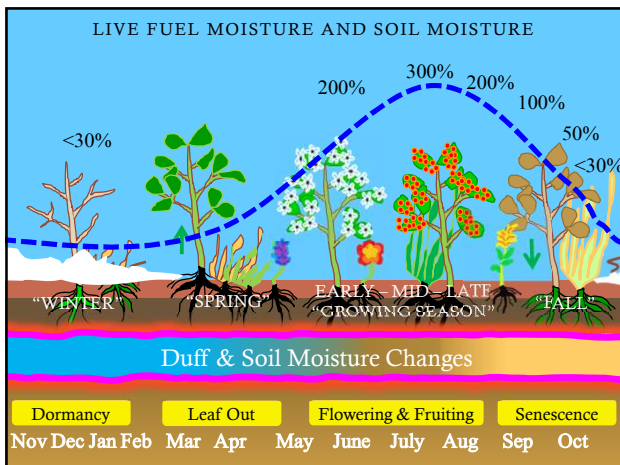
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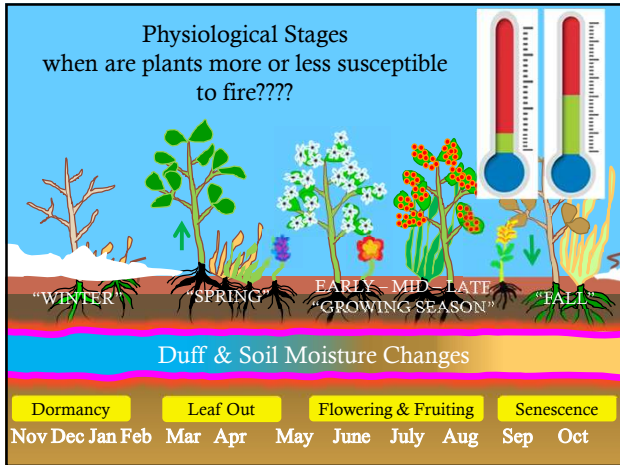
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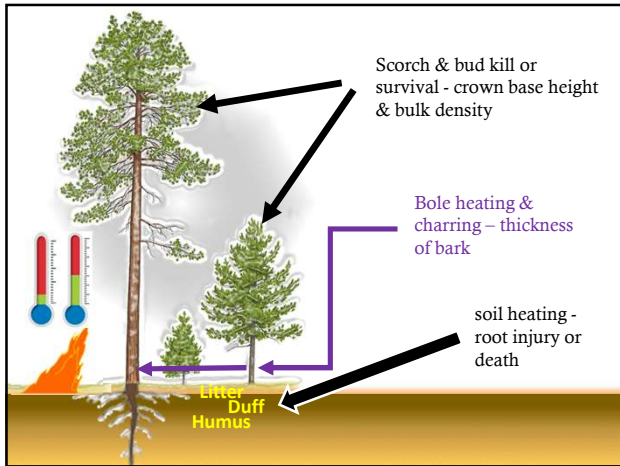
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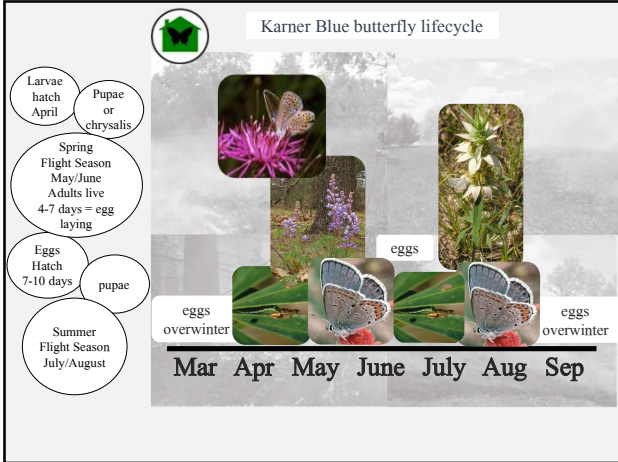
The timing of the fire determines which species will be positively or negatively impacted (native plants)

	April-May	June-Aug	Sept	Oct-Nov
Grasses and sedges				
Warm season	↑	↓	↔	↑
Cool season	↓	↑	↑	↓?
Forbs				
Early-flowering forbs	↓	↑	↑	↓?
Mid-flowering forbs	↓	↑	↑	↑?
Late-flowering forbs	↑	↓	↑	↑?
Legumes (<i>Fabaceae</i>)	↑	↑	↑	↑

Population Increase ↑ Decrease ↓ ~Same ↔

Note: it is better to use yearly Phenology, but illustrated above in general terms with calendar dates for N. Midwest

24



28



29

Can be controlled with fire – even though many studies say fire increases knapweed

- Late spring and summer burns best
- Increase in density decreases fuel loads and fire behavior
 - need other tools first if too dense (>20 rosettes/m²)
- Allelopathy - natural herbicide called catechin - reduced by volatilizing chemical from soil through heat

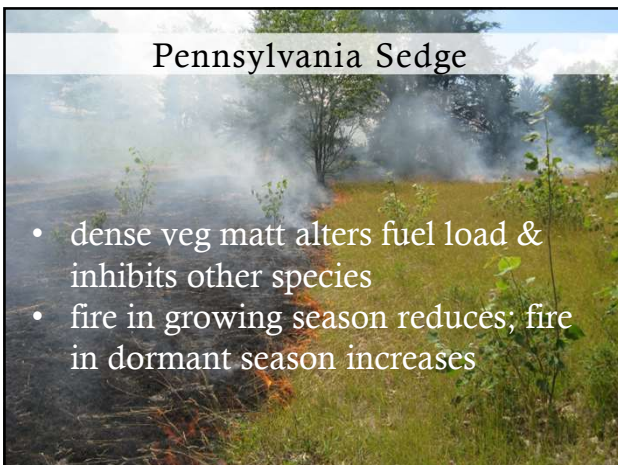
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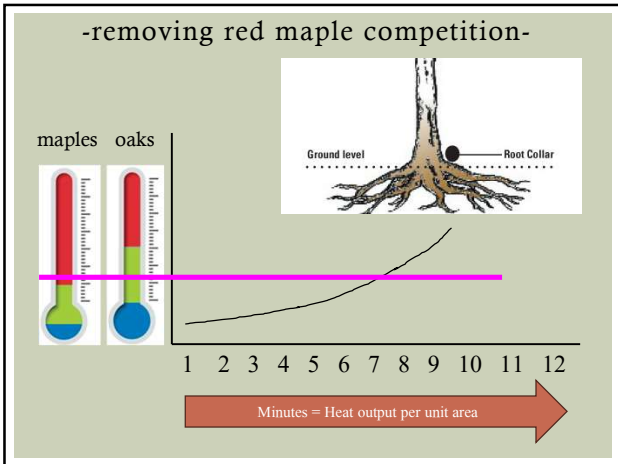
removing red maple competition...

400 acre RX June



backing fire (photos July) heading fire

34



35



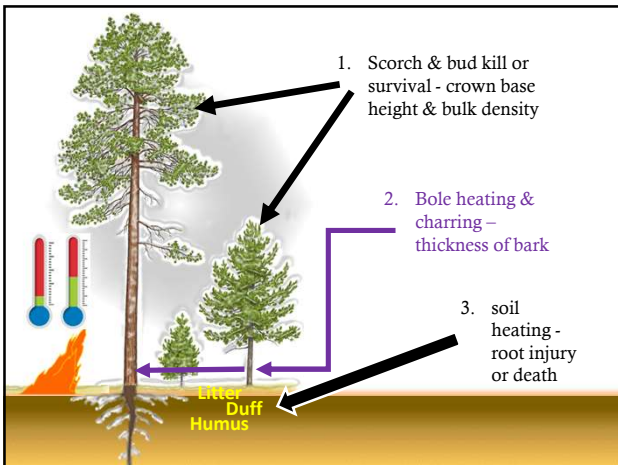
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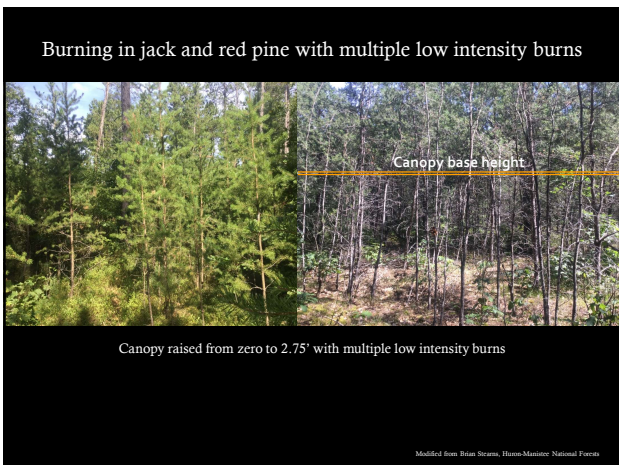
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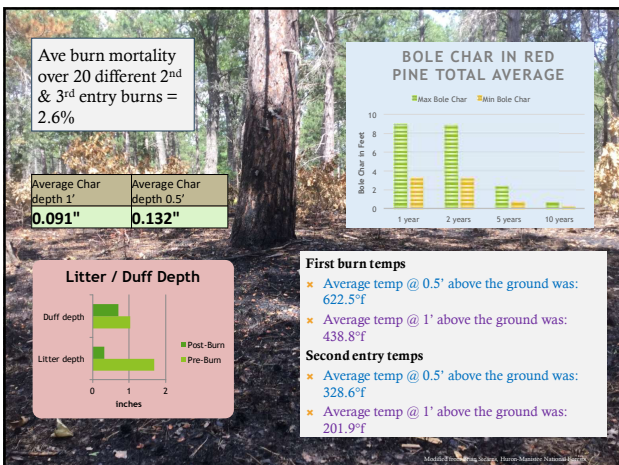
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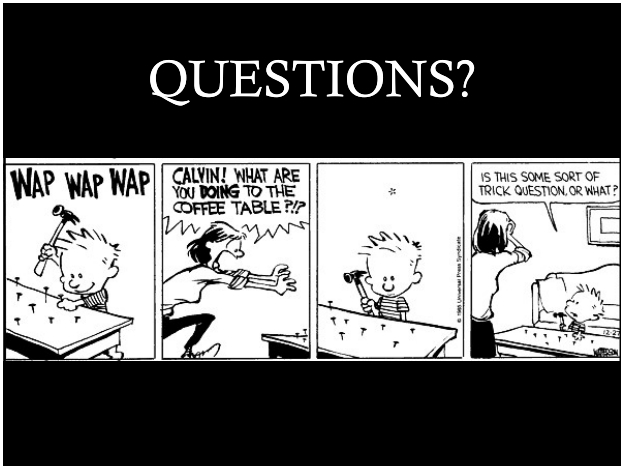
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47
