



SIS Study: Discoveries from the Field

June 2017



**Columbia
River
Basin**



- BPA Service Area
- Other Utilities' Service Areas
- Agriculture



Columbia River Basin Irrigation

BPA Irrigated
628,000 Acres



Non-BPA Irrigated
1,090,000 Acres



Southern Idaho Irrigation

BPA Irrigated
151,000 Acres



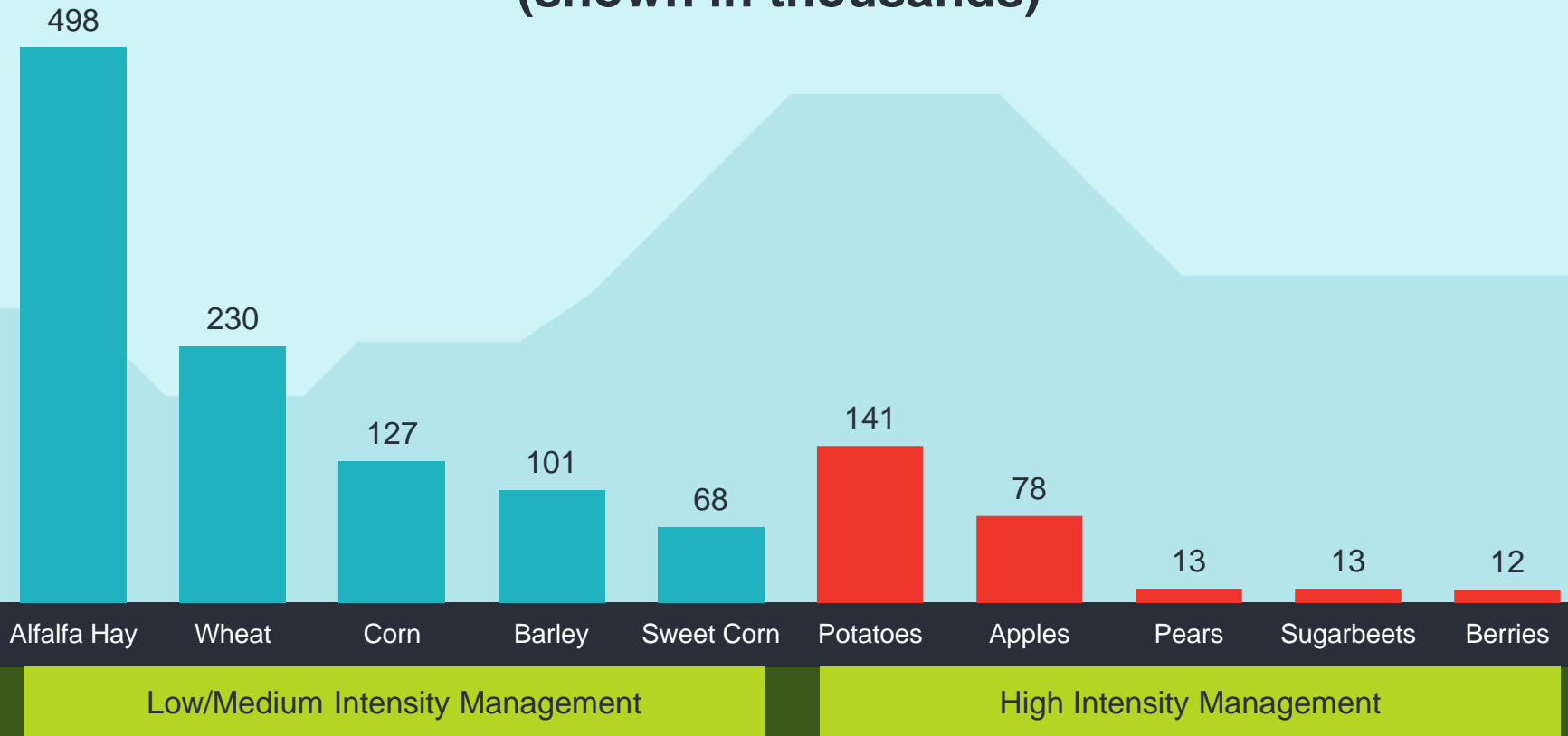
Non-BPA Irrigated
2,145,000 Acres



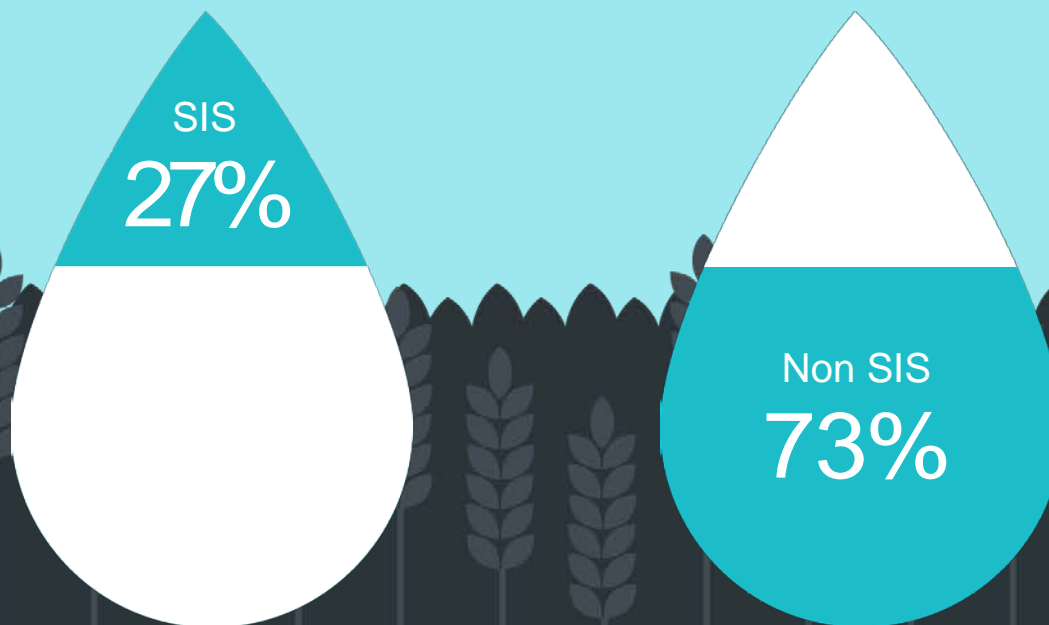
In BPA's territory, there is roughly four times as much irrigated agriculture in the Columbia River Basin than in Idaho



Number of Acres by Crop Type (shown in thousands)

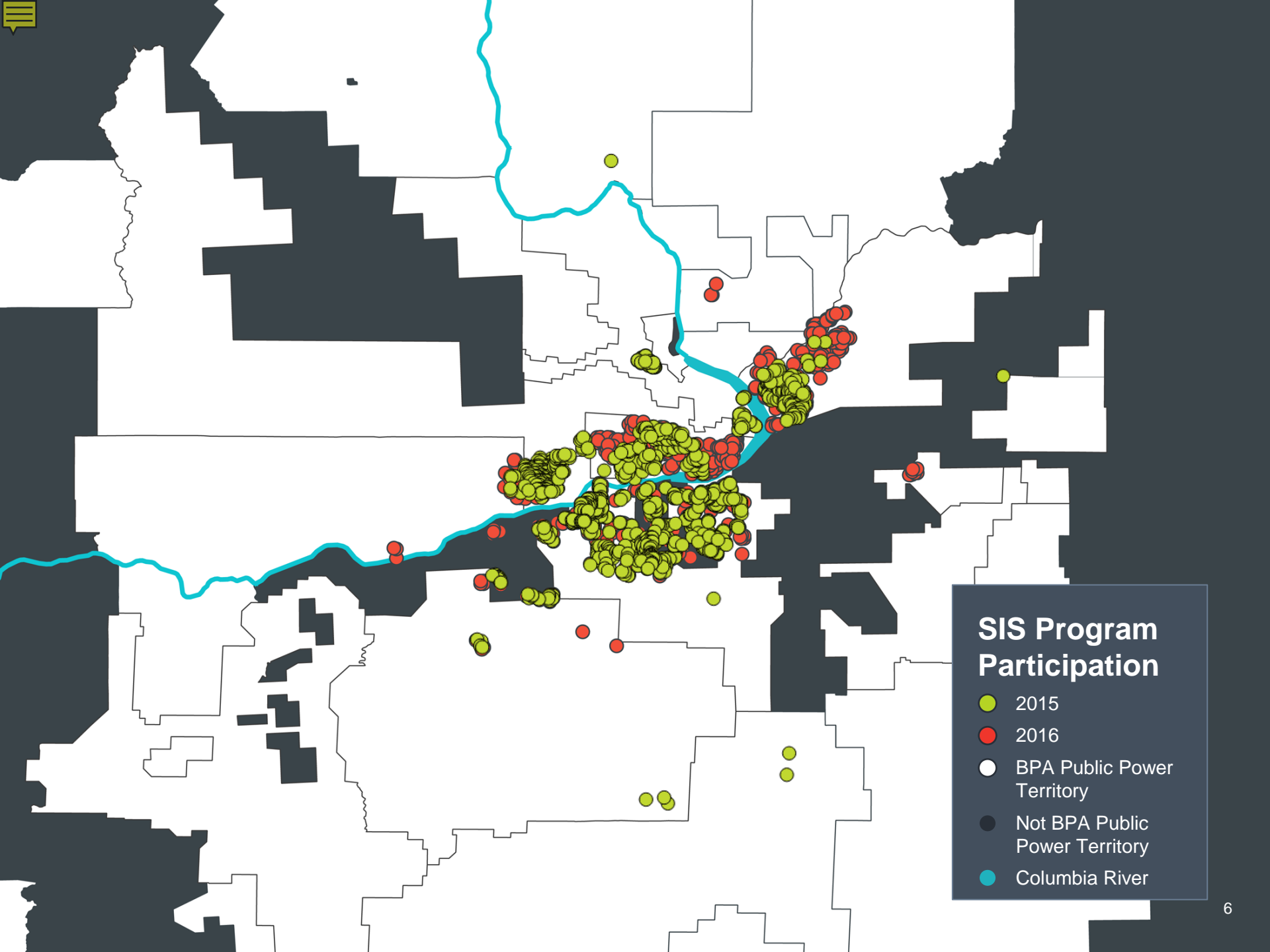


What are the different crop types that are irrigated in BPA's territory?



Scientific Irrigation Scheduling

In BPA Territory

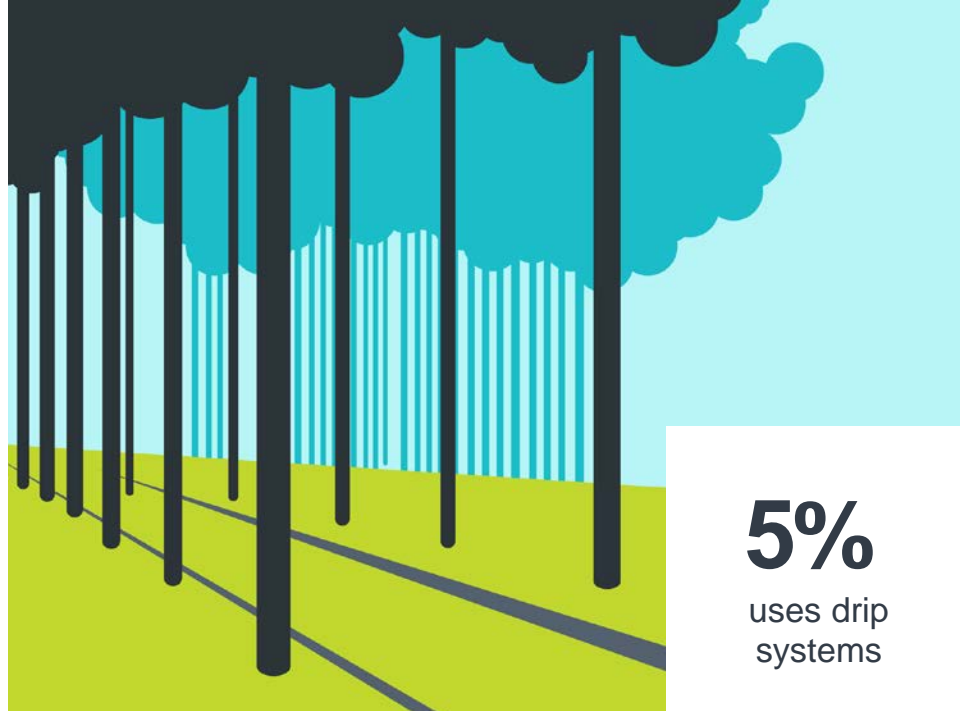


SIS Program Participation

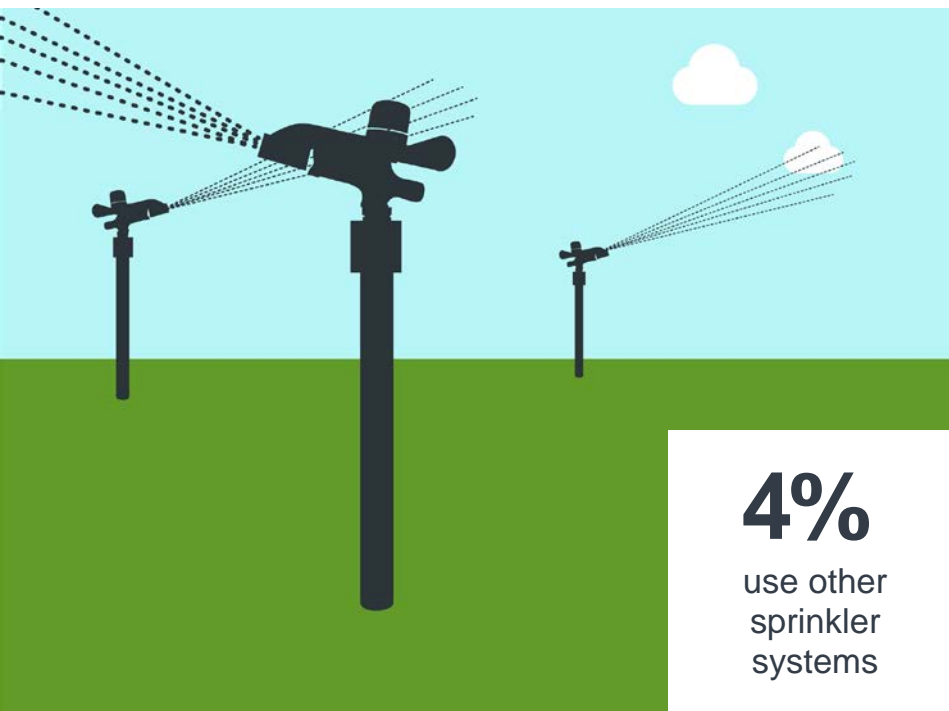
- 2015
- 2016
- BPA Public Power Territory
- Not BPA Public Power Territory
- Columbia River



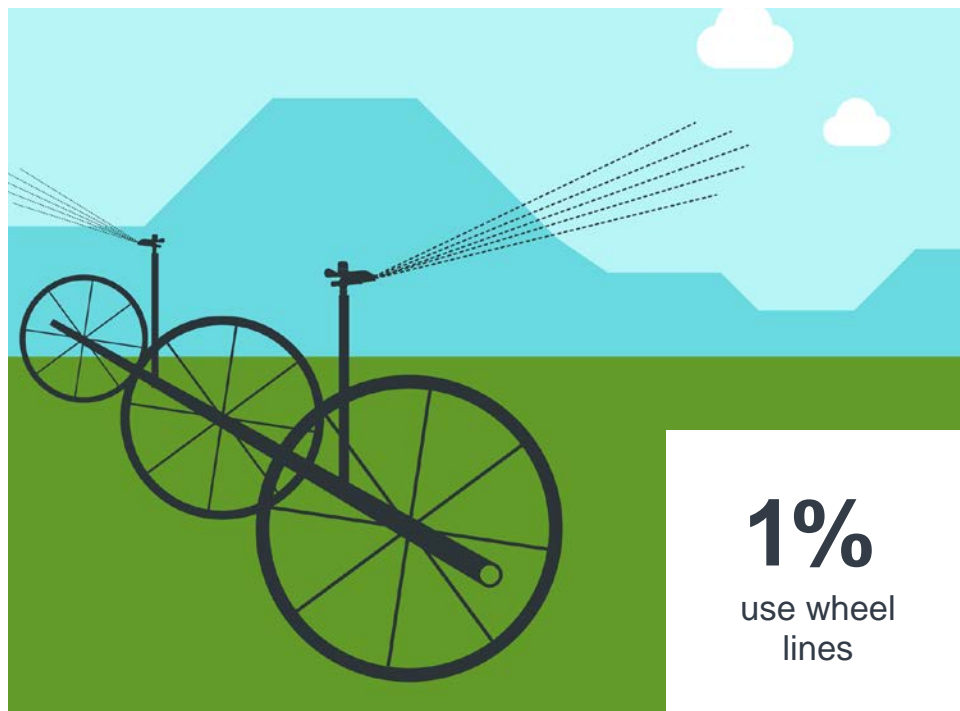
90%
of fields use
center pivots



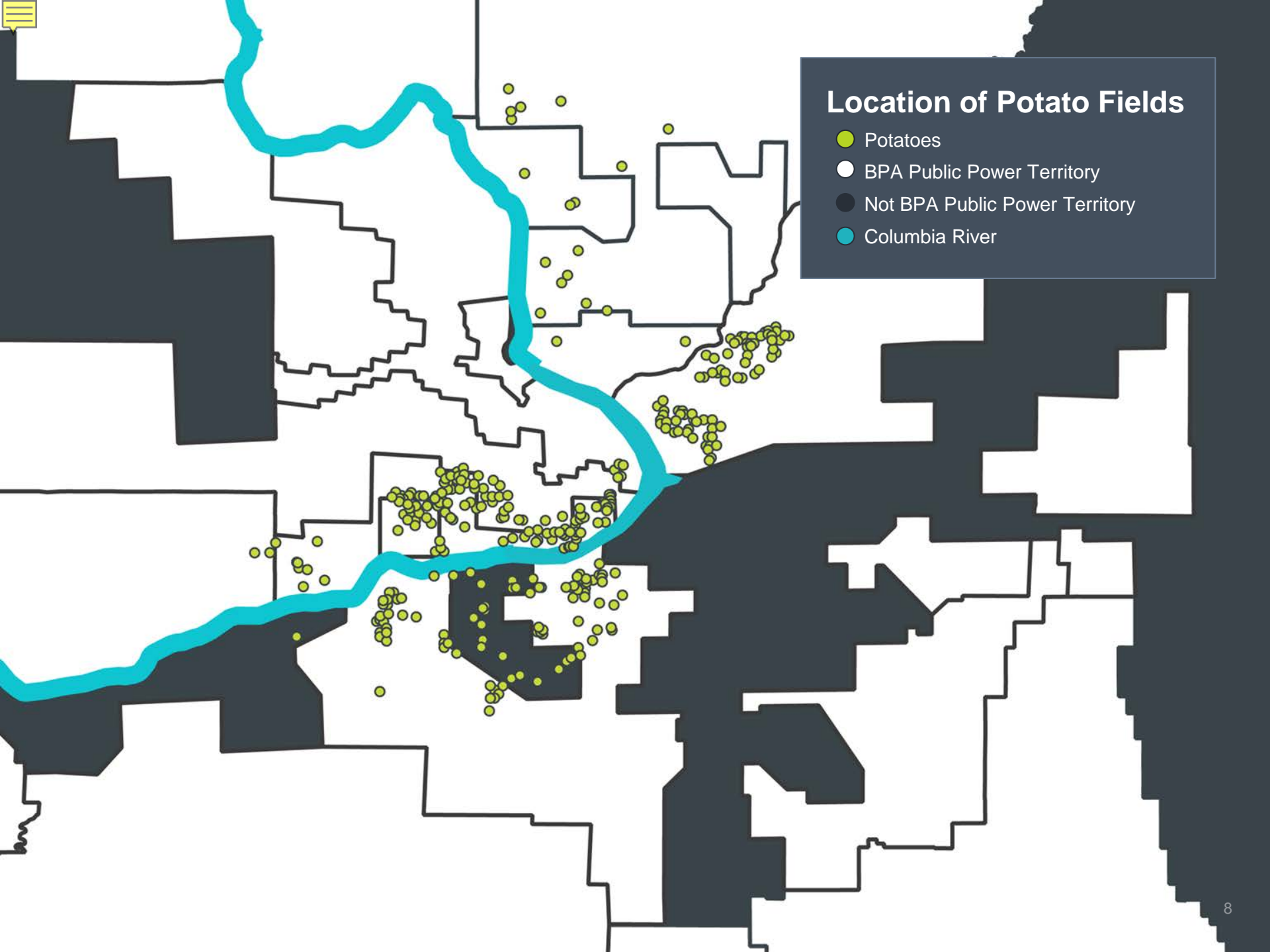
5%
uses drip
systems



4%
use other
sprinkler
systems

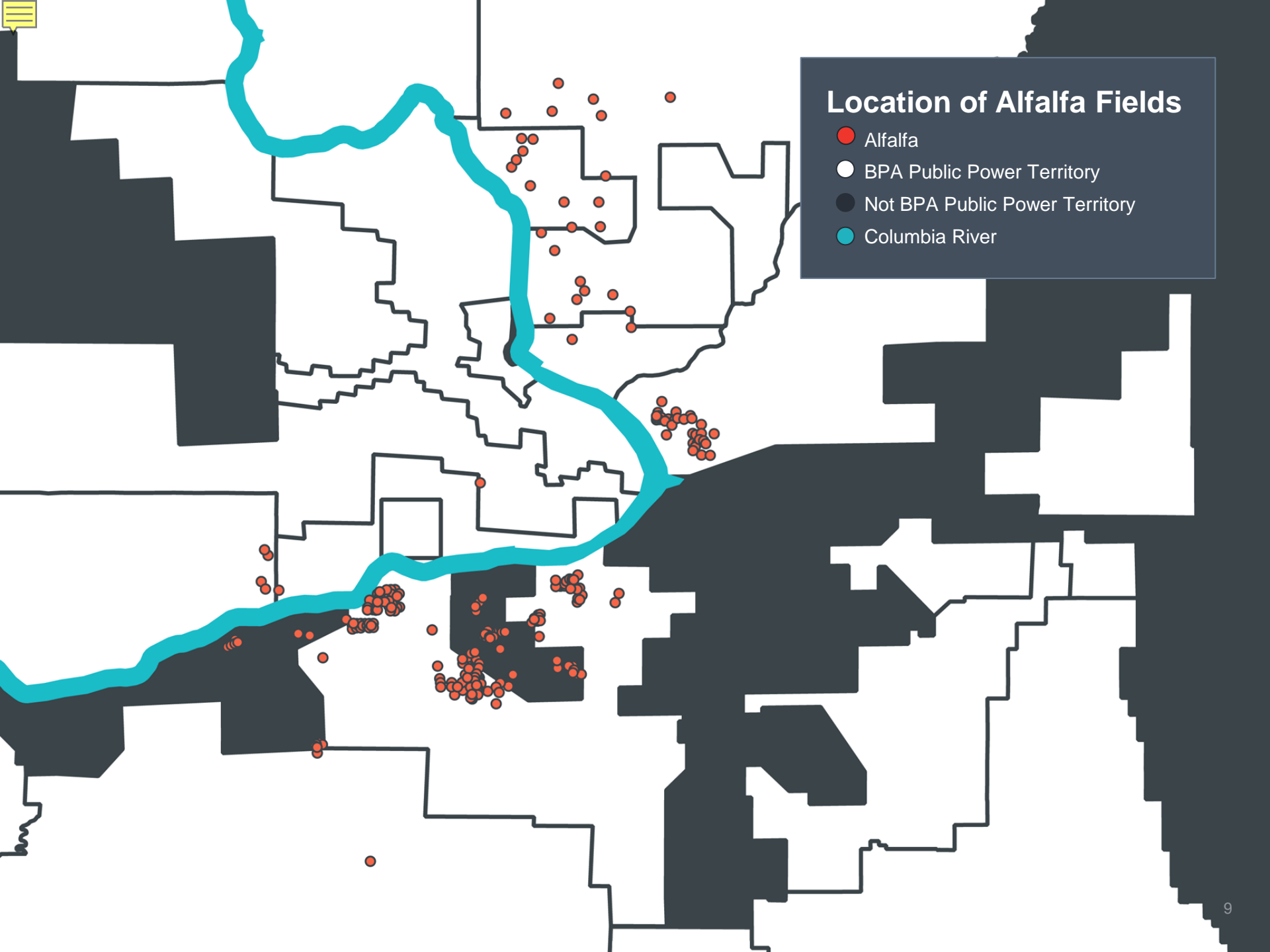


1%
use wheel
lines



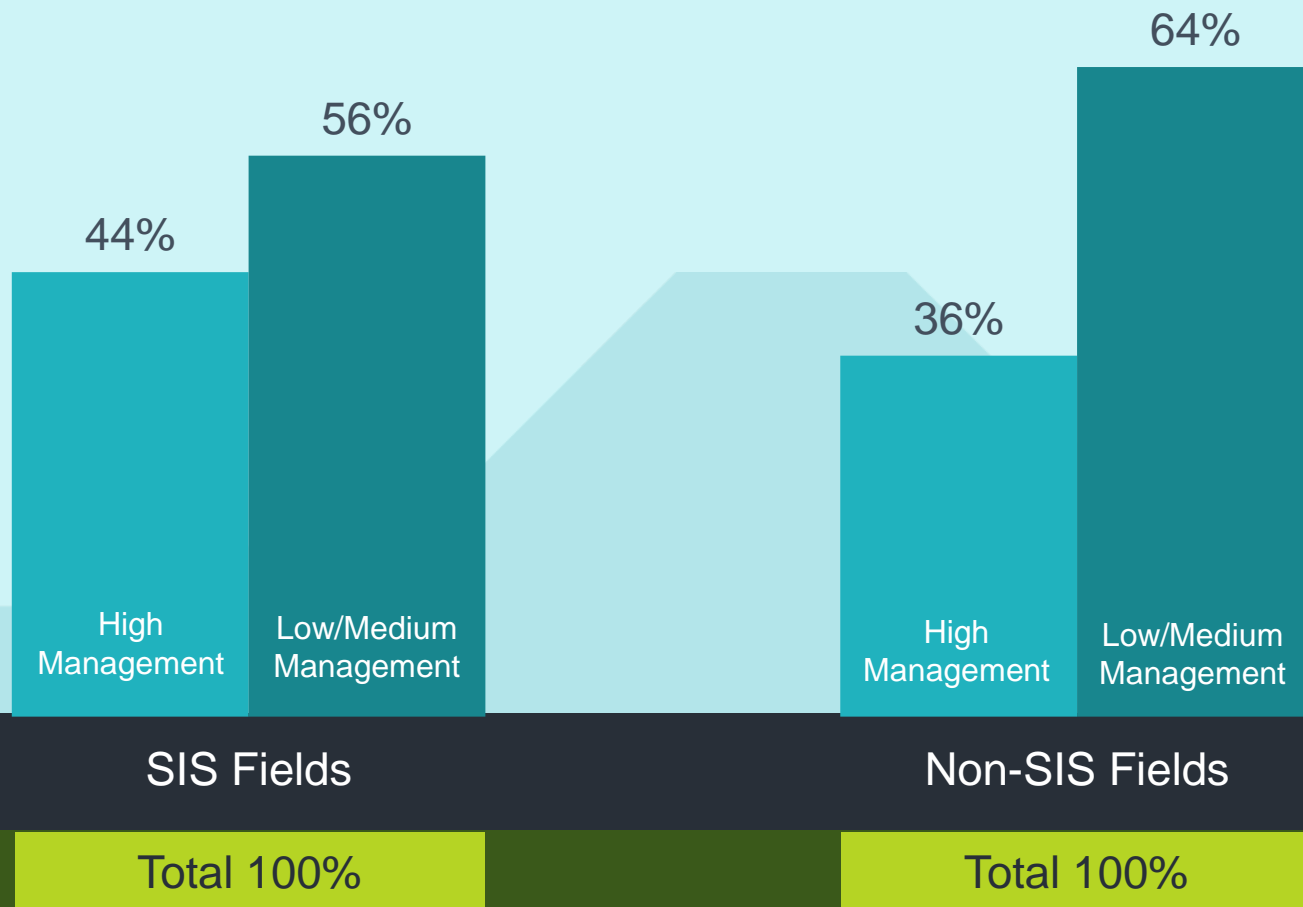
Location of Potato Fields

- Potatoes
- BPA Public Power Territory
- Not BPA Public Power Territory
- Columbia River

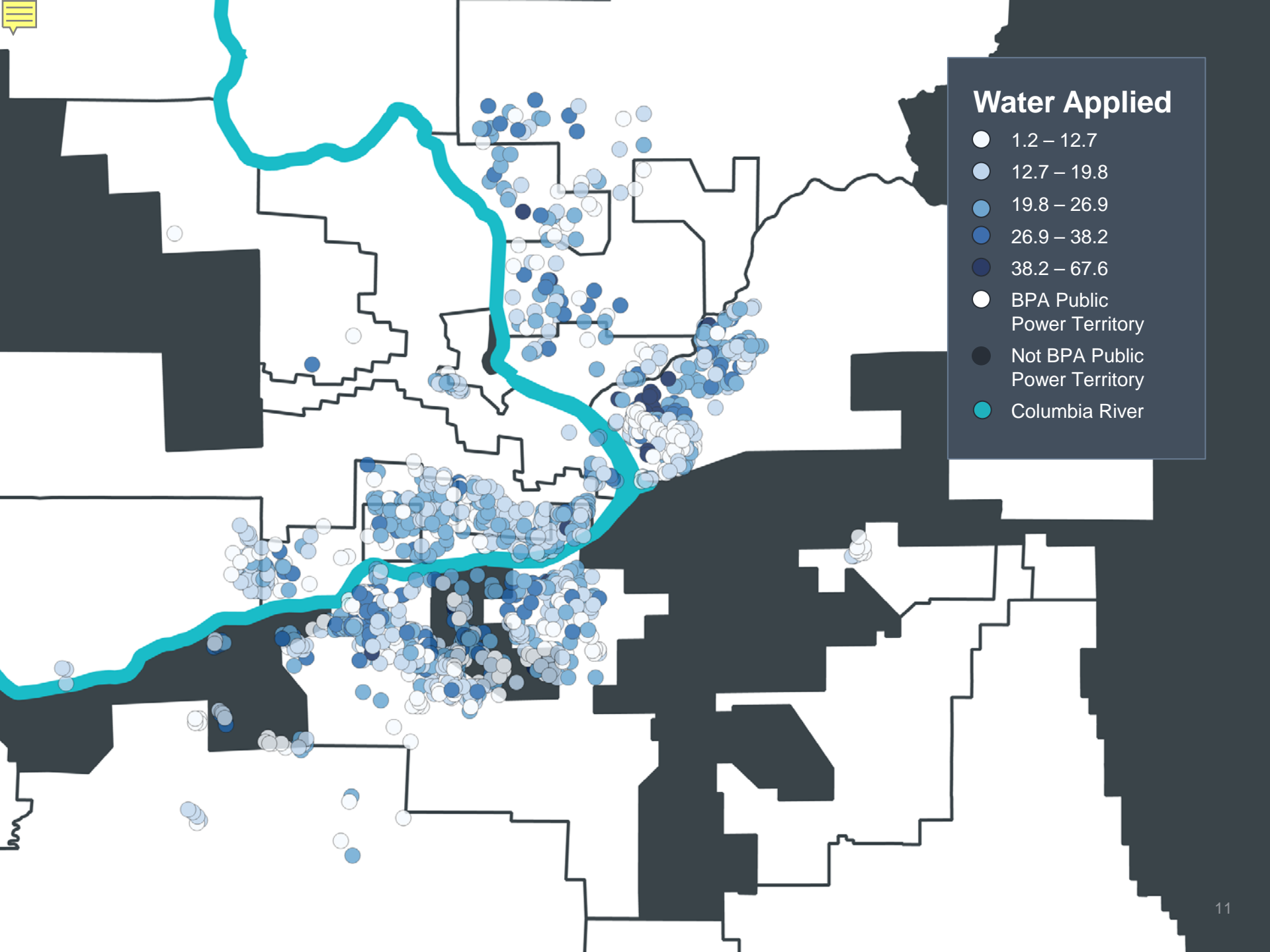


Location of Alfalfa Fields

- Alfalfa
- BPA Public Power Territory
- Not BPA Public Power Territory
- Columbia River



Not a dramatic difference
between crop types within SIS
fields and non-SIS fields





The amount of fields using SIS is similar regardless of incentive availability.

Field Study Category	BPA Utility Without SIS Program	BPA Utility With SIS Program
SIS Program	0%	27%
Non-SIS	77%	71%
SIS Non-Program	23%	2%
Total	100%	100%

Lift, ft.

(Relative to 324.3 ft)

● 0 – 180

● 180 – 408

● 408 – 637

● 637 – 866

● 866 – 1094

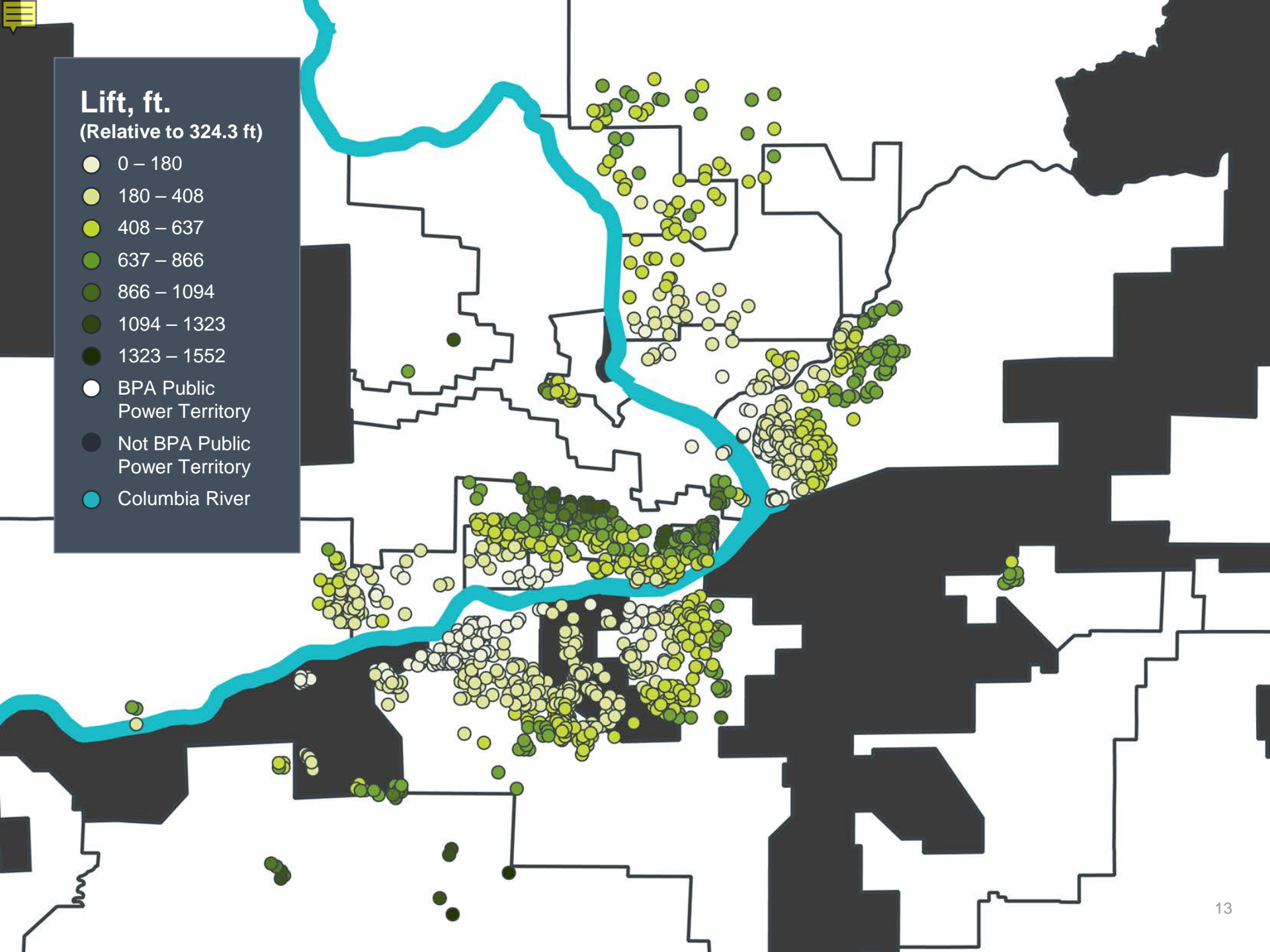
● 1094 – 1323

● 1323 – 1552

○ BPA Public Power Territory

● Not BPA Public Power Territory

● Columbia River





The future
is data-based
agriculture

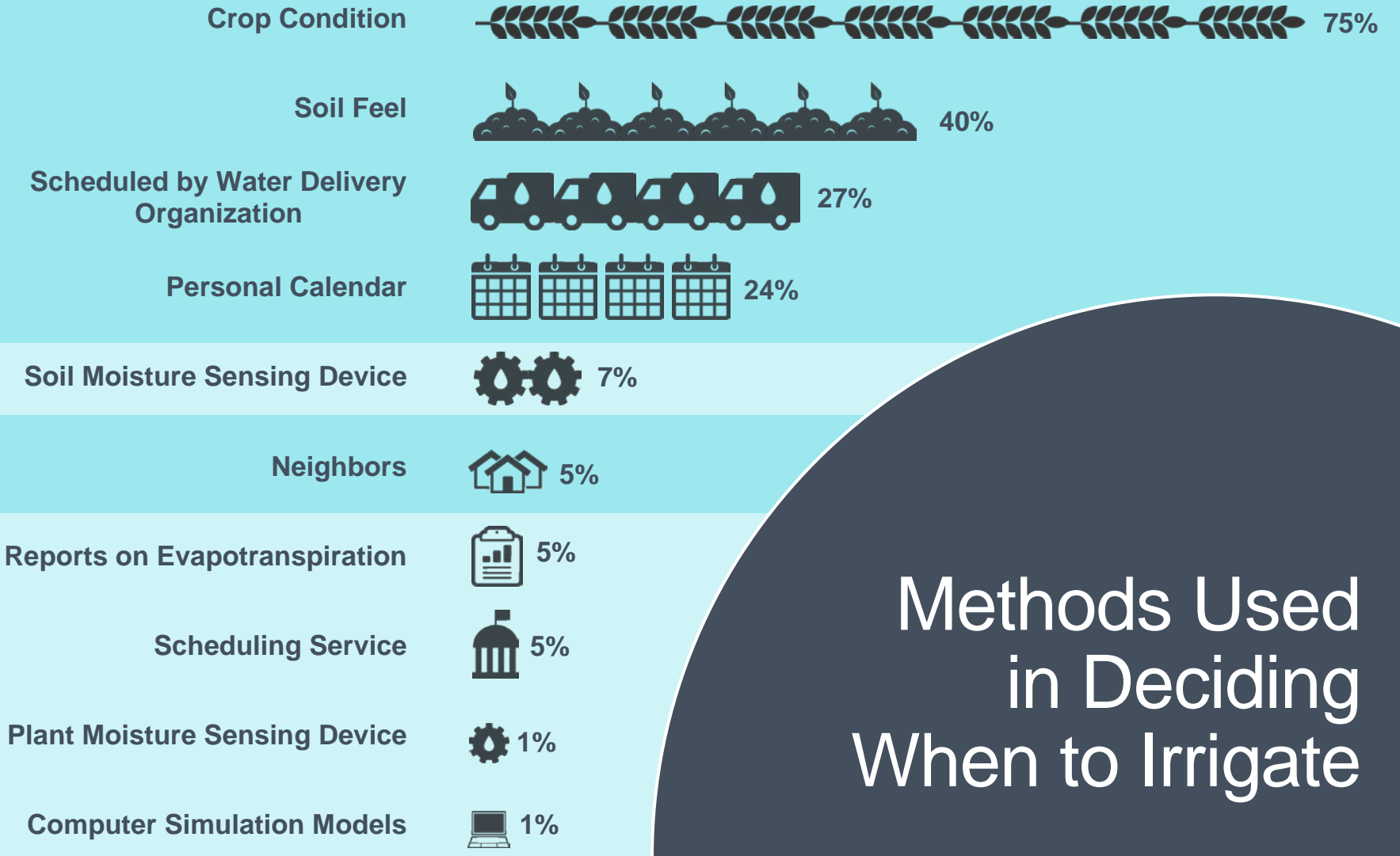
There is a steady
increase in real
time soil moisture
monitoring happening.





Growers are installing weather stations on their farm to track micro climates.





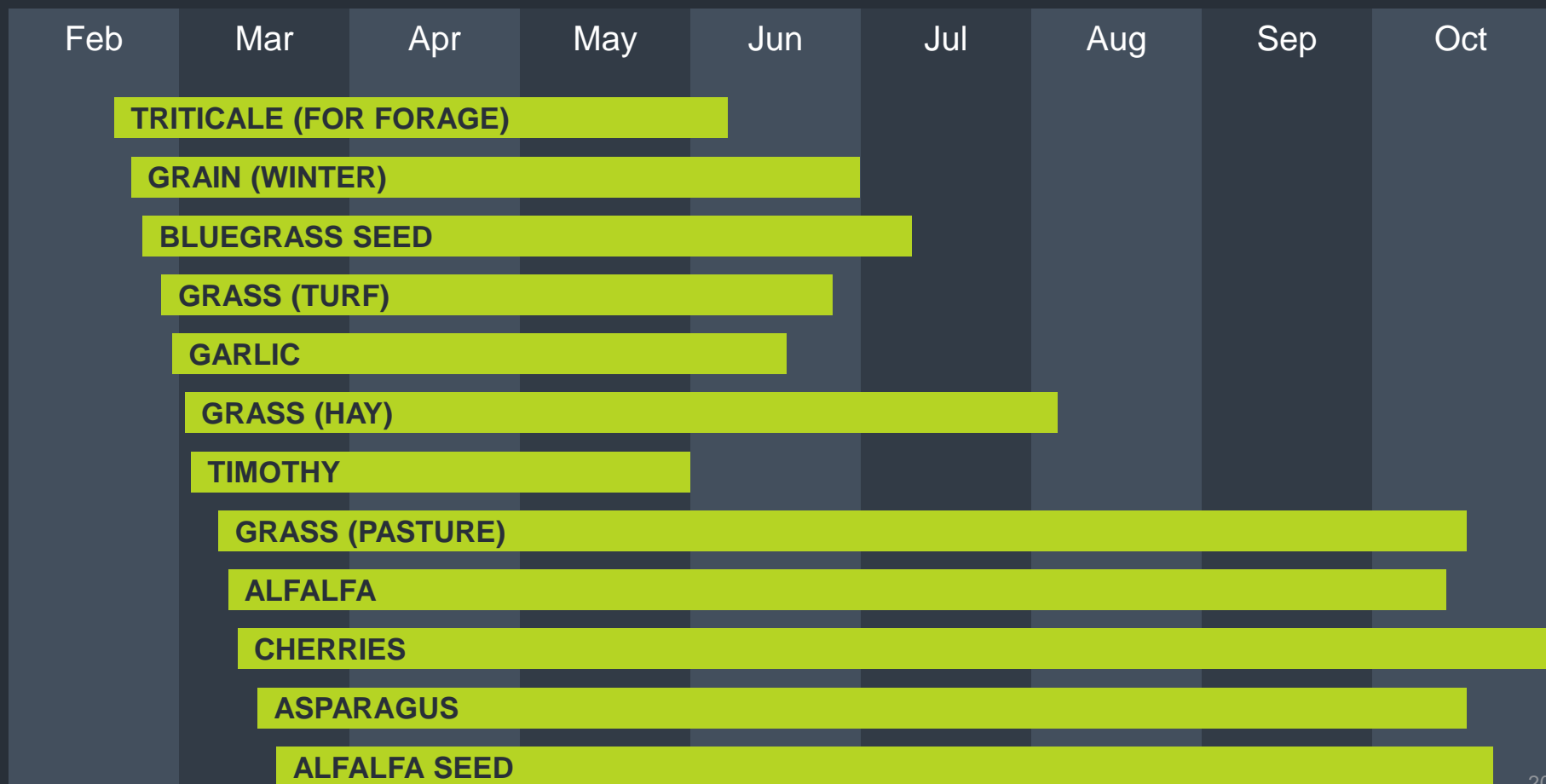
Methods Used in Deciding When to Irrigate

An illustration of a red tractor pulling a red trailer. The tractor is on the right, and the trailer is on the left. The trailer has contact information for Carrie Cobb. The background features stylized blue flowers and a light blue sky.

Carrie Cobb
clcobb@bpa.gov
503.230.4985

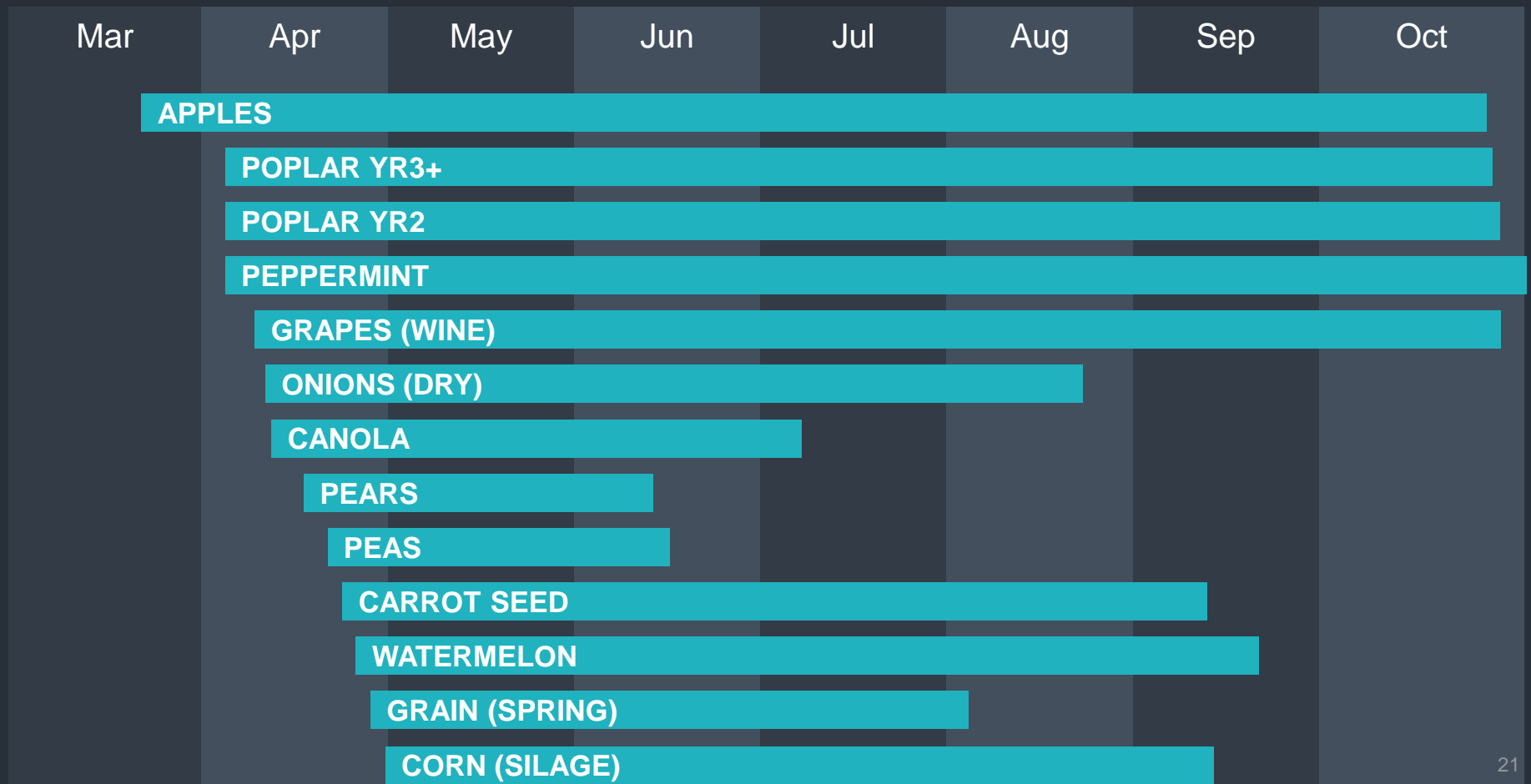
Average Growing Seasons Observed in 2016 Metering Study

Bar starts at average emergence date,
ends at average end of growing season date.



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