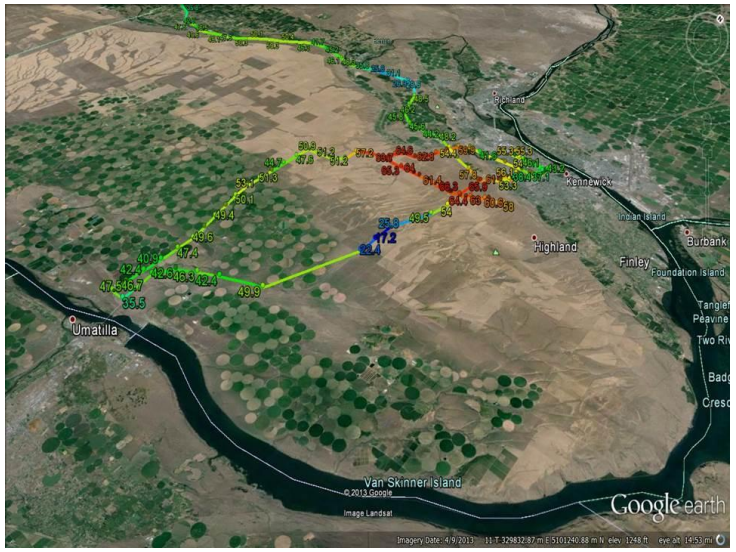
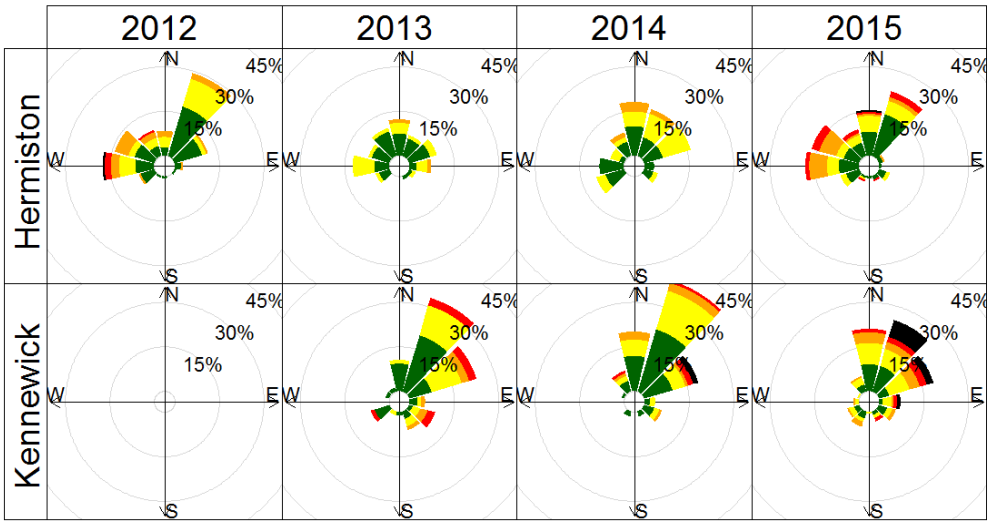
Tri-Cities Ozone Precursor Study (T-COPS)
And more sleuthing south ‘o the border

Investigating elevated ozone in Kennewick and Hermiston

Ranil Dhammapala (WA Dept of Ecology)
Phil Allen (Oregon Dept of Env. Quality)
June 2016





Background

- Airpact-4 alerted us about O_3 hotspot in Kennewick

- Monitoring in Kennewick since Aug 2013, data to EPA in 2015

	Kennewick	Hermiston	Enumclaw
2013 4th high, ppb	-	62	57
2014 4th high, ppb	67	64	67
2015 4th high, ppb	75	65	74
Latest DV, ppb*	N/A	64	66

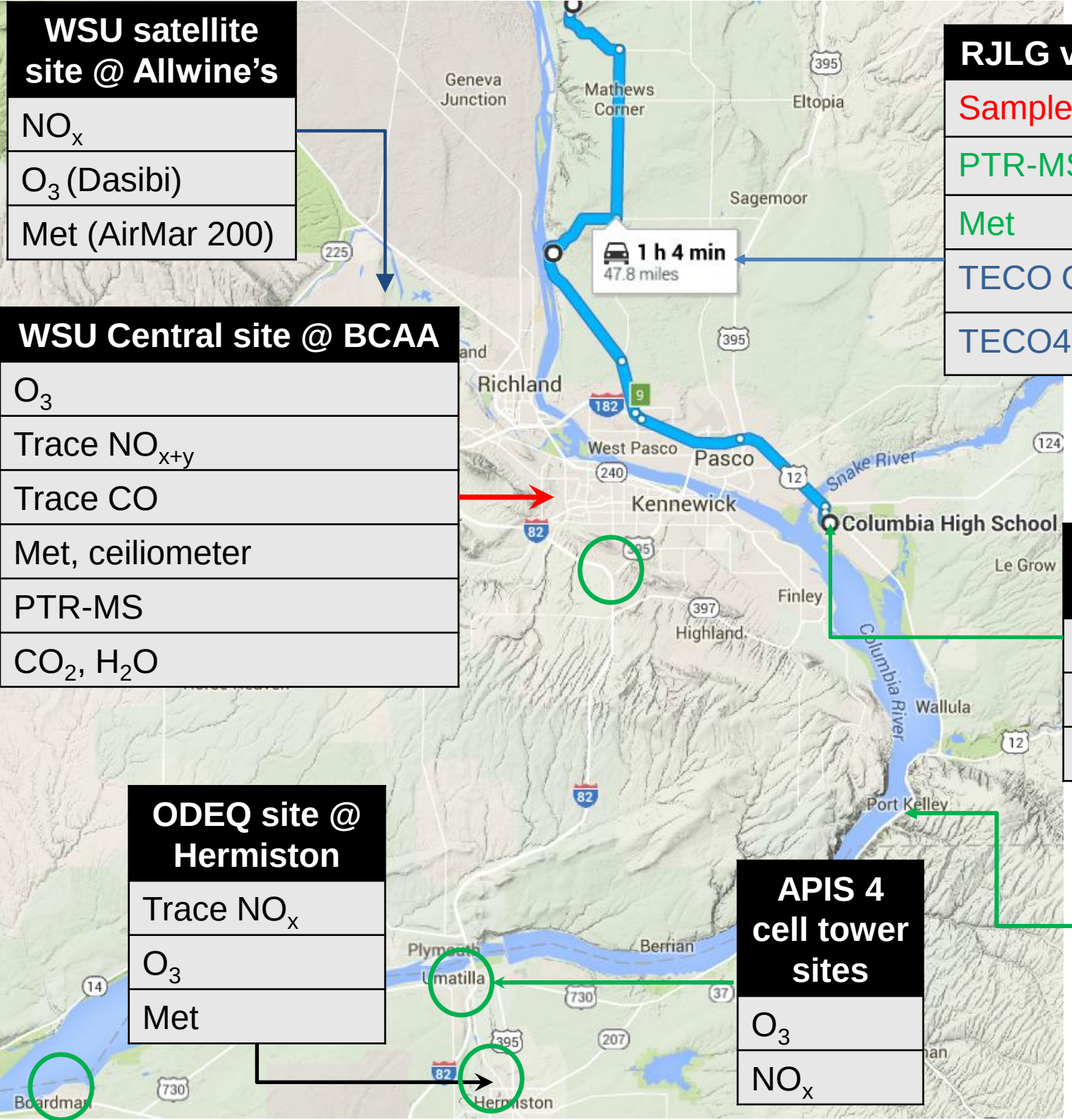
* Wildfire smoke affected data not excluded

- Temporary monitor in Mesa and mobile monitoring confirm localized hotspot

- O_3 buildup during NNE winds (+WNW @ Hermiston)

The plan

- Ecology contracted with WSU and RJ Lee Group Inc. to monitor VOCs, NO_x and O_3 at several area sites
- RJLG van will move between two satellite sites, and sample around suspected sources en route
- ODEQ is teaming up with Ecotech/ APIS, the Umatilla Tribe and pdx.edu to monitor NO_x and O_3
- Monitoring for 3 weeks, stating 27 July 2016, final report by June 2017
- Data can also be used for Airpact-5 evaluation



WSU satellite site @ Allwine's
NO_x
O_3 (Dasibi)
Met (AirMar 200)

RJLG van (Burbank ↔ Mesa)	
Sampler	Who provides
PTR-MS, HCHO	RJLG
Met	
TECO O_3	WSU
TECO42 NO_x	

WSU Central site @ BCAA
O_3
Trace NO_{x+y}
Trace CO
Met, ceiliometer
PTR-MS
CO_2, H_2O

Mesa satellite site at irrigation district office

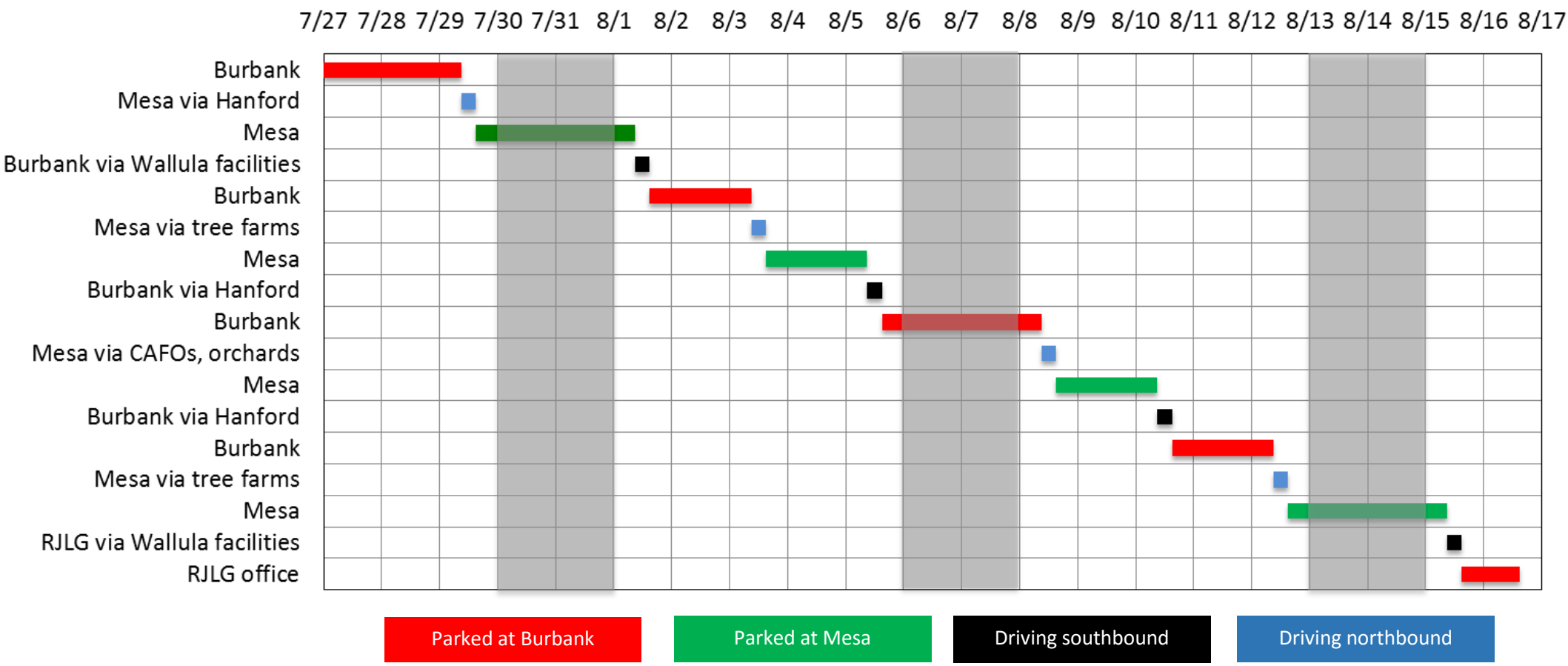
Satellite site @ Columbia SD
O_3
Trace NO_x
Trace CO

ODEQ site @ Hermiston
Trace NO_x
O_3
Met

APIS 4 cell tower sites
O_3
NO_x

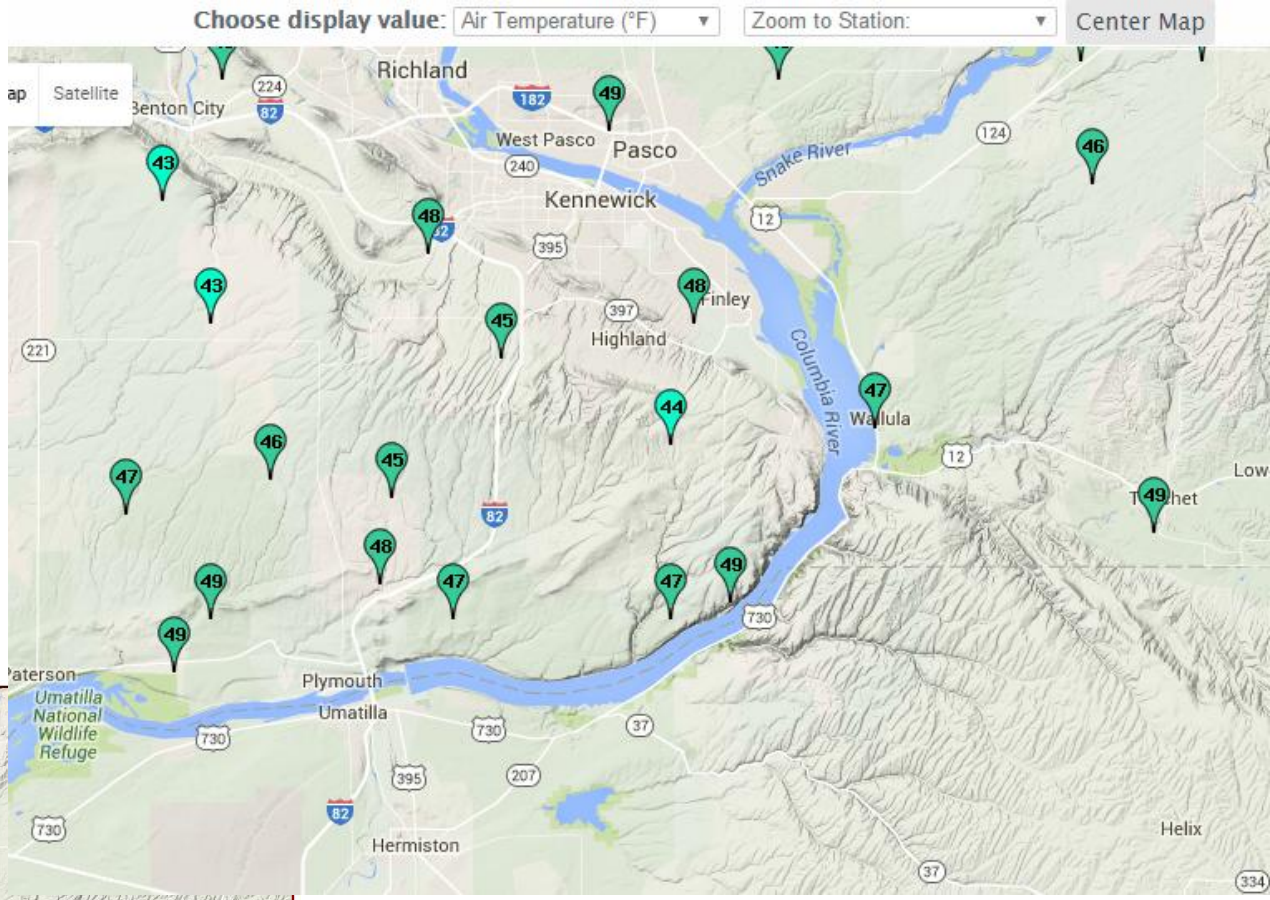
ODEQ @ Port Kelley. Also at Plymouth
O_3

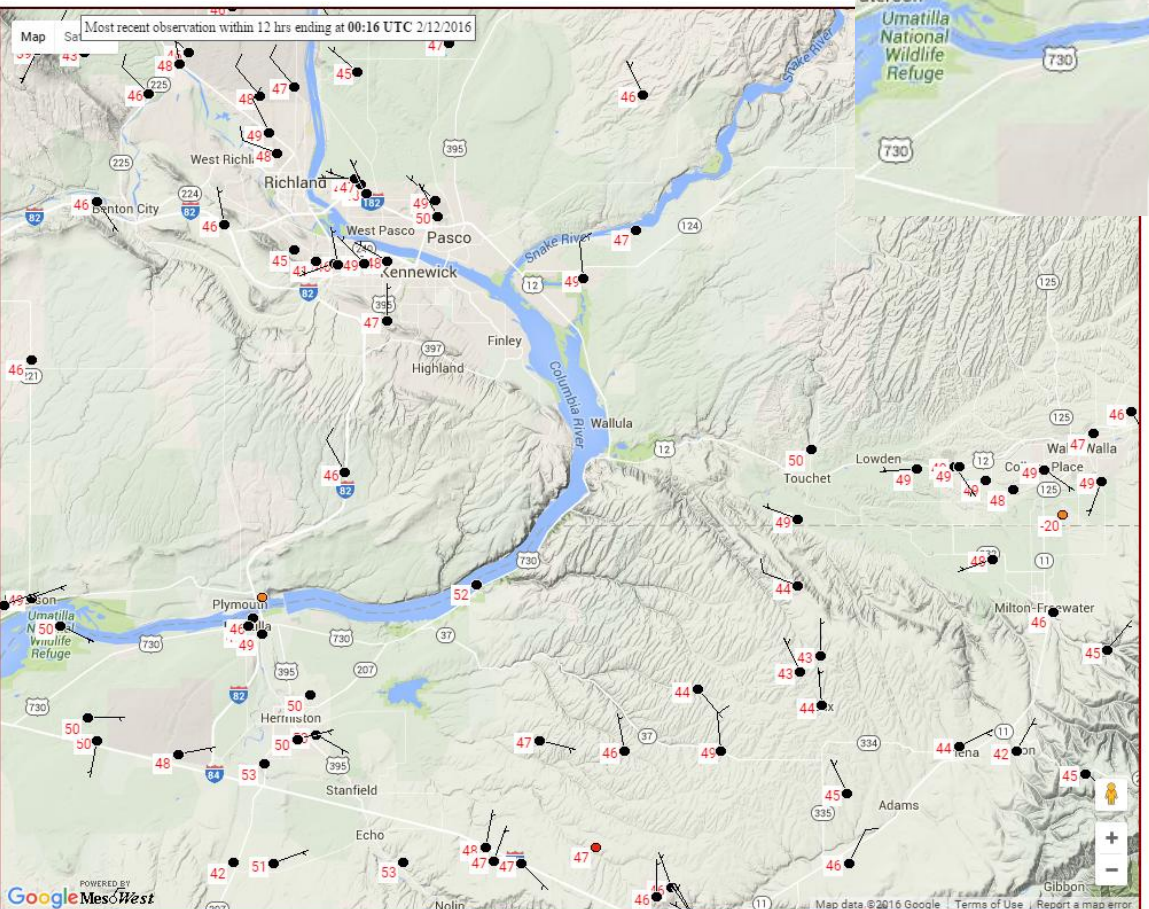
Proposed RJLG van schedule



- Van moving times flexible, dependent on O_3 episodes.

Between Mesowest and WSU's Agweather network, there are enough meteorological measurements in the area





Will ask UW for 4km and 1.33km back trajectories into Kennewick & Hermiston