



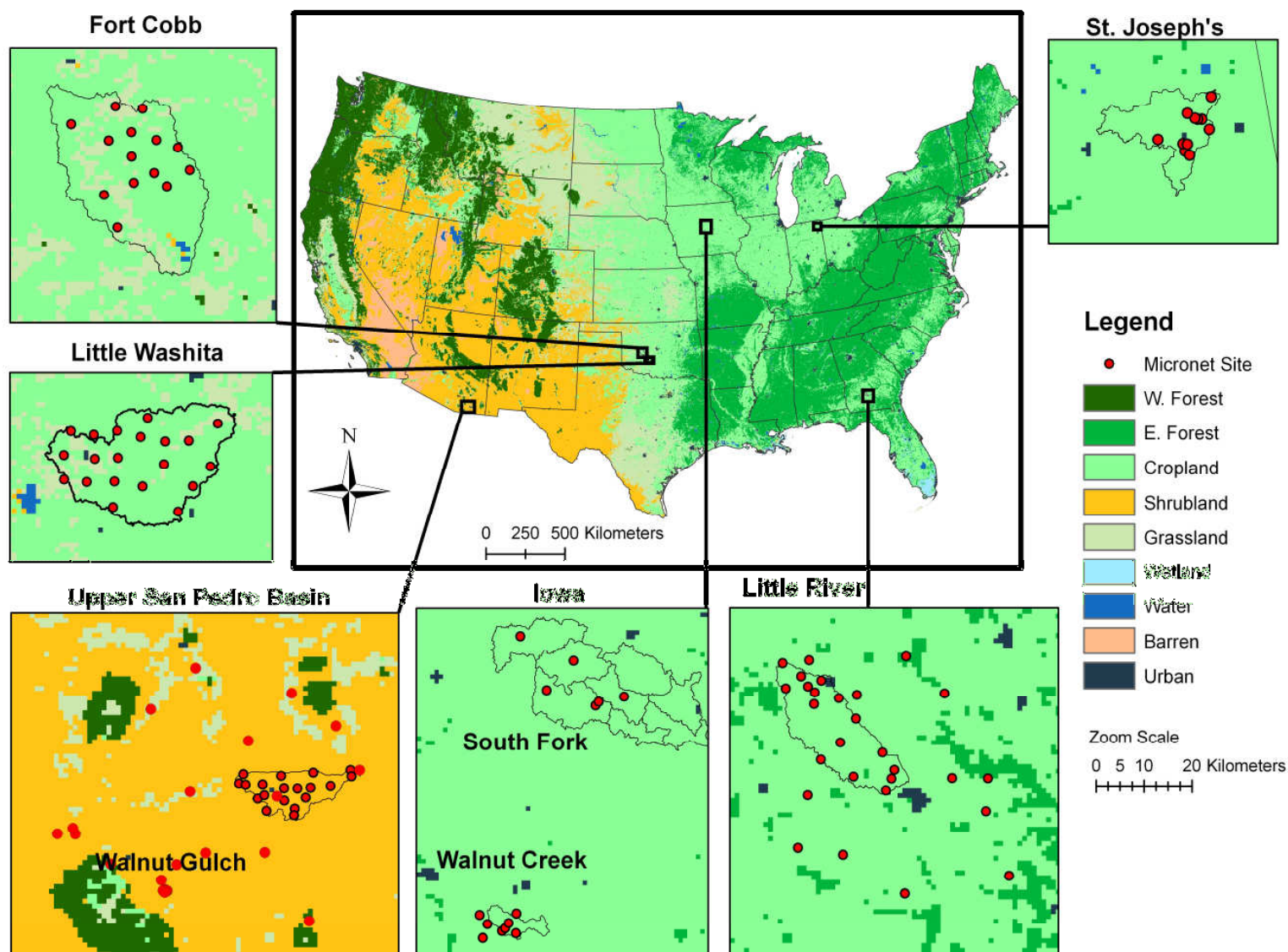
USDA-Agricultural Research Service Watershed Networks for the Calibration/Validation of SMAP



Mike Cosh (USDA)

May 5, 2011

HRSL-SWRC-SEWRL-NLAE-NSERL-GRL-NWRC



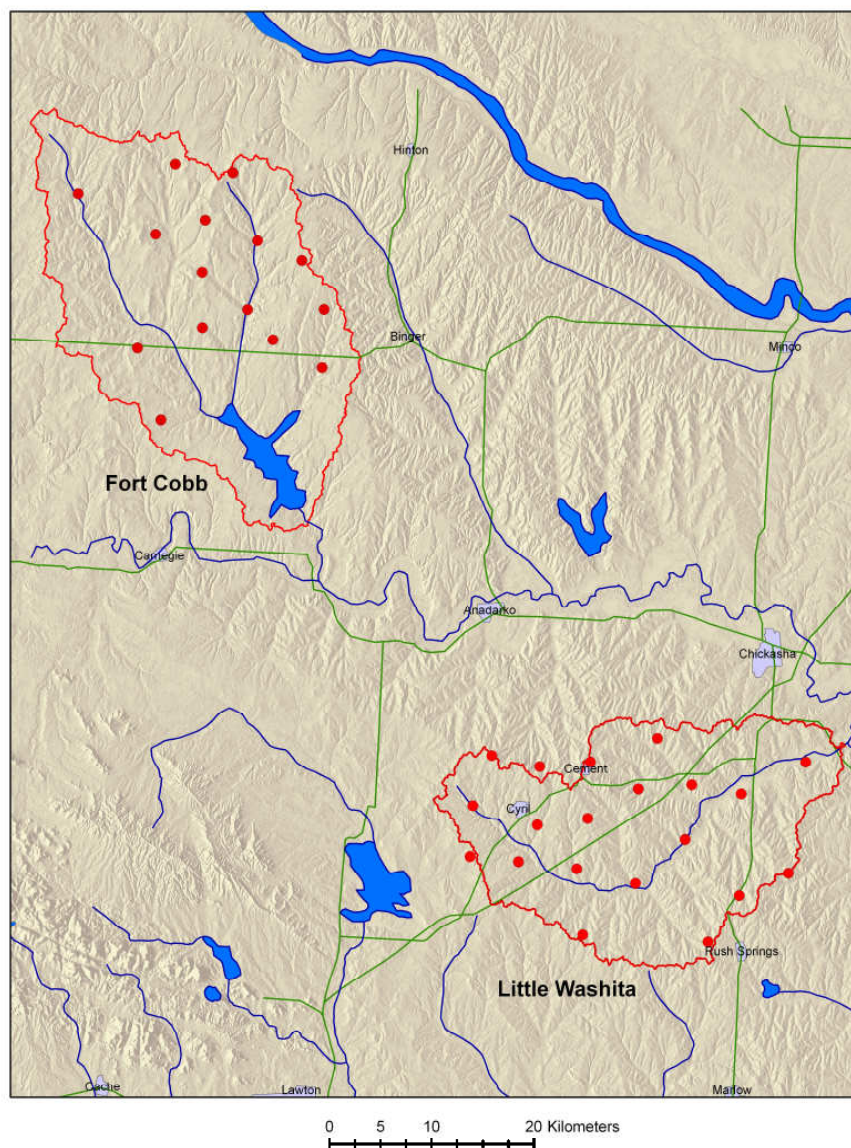


USDA-Agricultural Research Service Watershed Networks for the Calibration/Validation of SMAP



Watershed	Size km ²	# of Sites	Climate	Annual Precip in mm	Landscape	Topography	Latency	Met Data Available	Soil Moisture Soil Temperature Depths in cm	Large Scale Accuracy in m ³ /m ³
Little Washita, OK	610	20	Sub humid	750	Range/wheat	Rolling	Daily	Rainfall	5, 25, 45	0.010
Walnut Gulch/Upper San Pedro, AZ	148/2700	21	Semiarid	320	Range	Rolling	Monthly	Rainfall	5, 15, 30	0.010
Little River, GA	334	33	Humid	1200	Row crop/forest	Flat	Monthly	Rainfall	5, 15, 30	N/A
Fort Cobb, OK	813	15	Sub-humid	816	Row Crop/Range	Rolling	Daily	Rainfall	5, 25, 45	0.027*
Walnut Creek/South Fork, IA	1800	9 & 6	Humid	835	Row Crop	Flat	Monthly	Rainfall/Flux	5	N/A
St. Joseph's, IN	300	9+	Humid	1010	Row Crop	Flat	Weekly	Rainfall	5, 20, 40, 60	N/A
Reynolds Creek, ID	238	19	Semiarid	500	Rangeland	Mountainous	> Monthly	Rainfall	5	N/A

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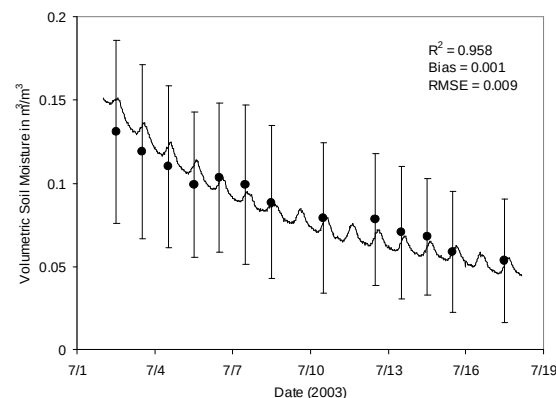
Little Washita, OK -

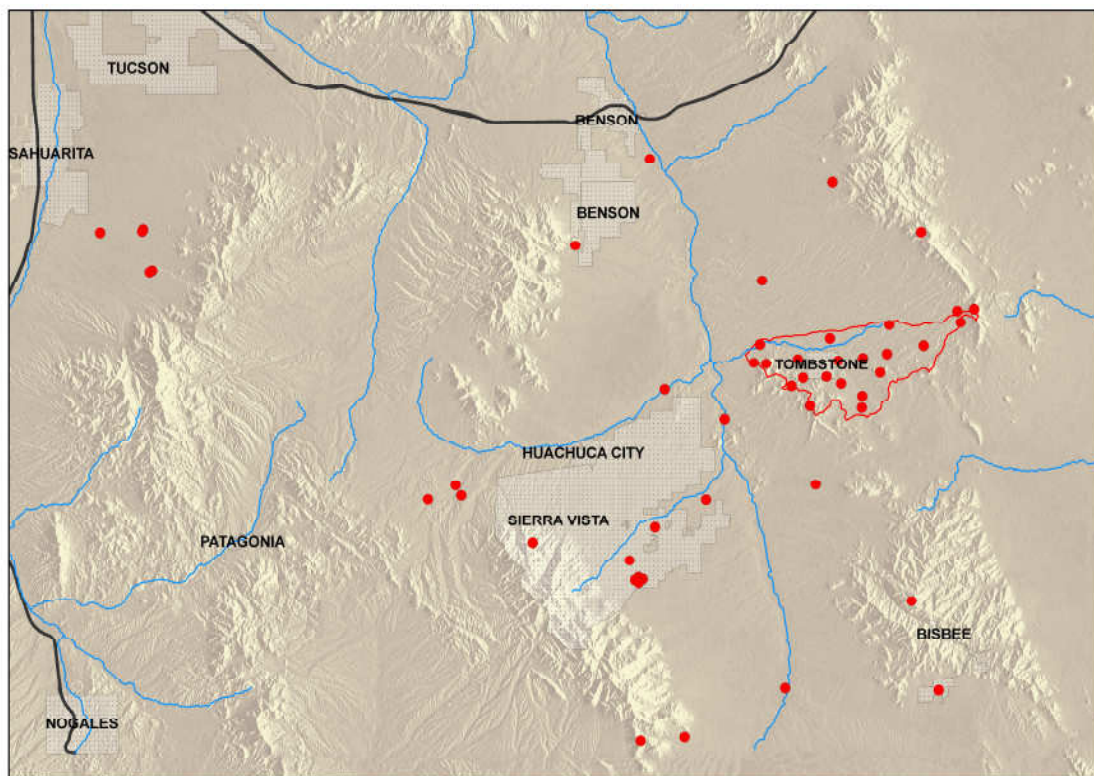
20 Stations @ 5, 25, 45 cm

Fort Cobb, OK –

15 Stations @ 5, 25, 45 cm

Lead Scientist: Pat Starks, GRL





Walnut Gulch, AZ -

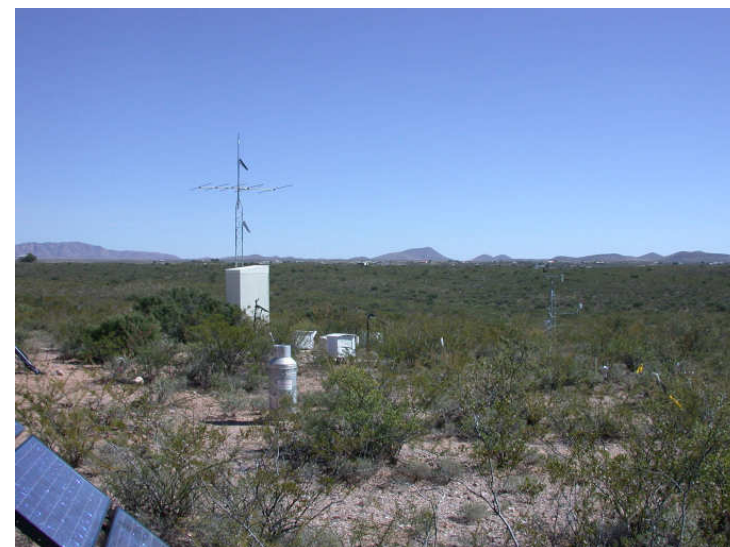
19 Stations @ 5, 15, 30 cm

Upper San Pedro, AZ –

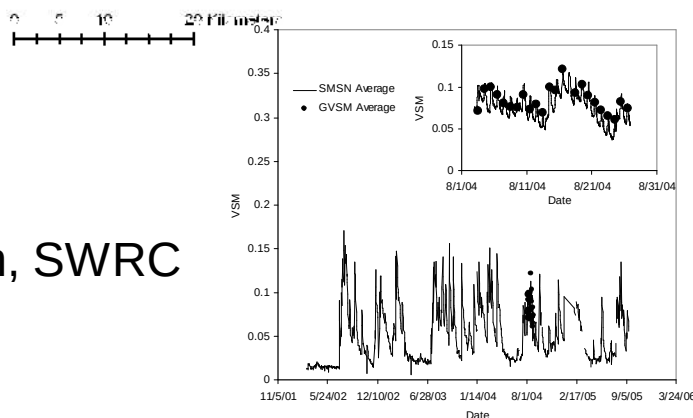
31 Stations @ 5, 15, 30 cm

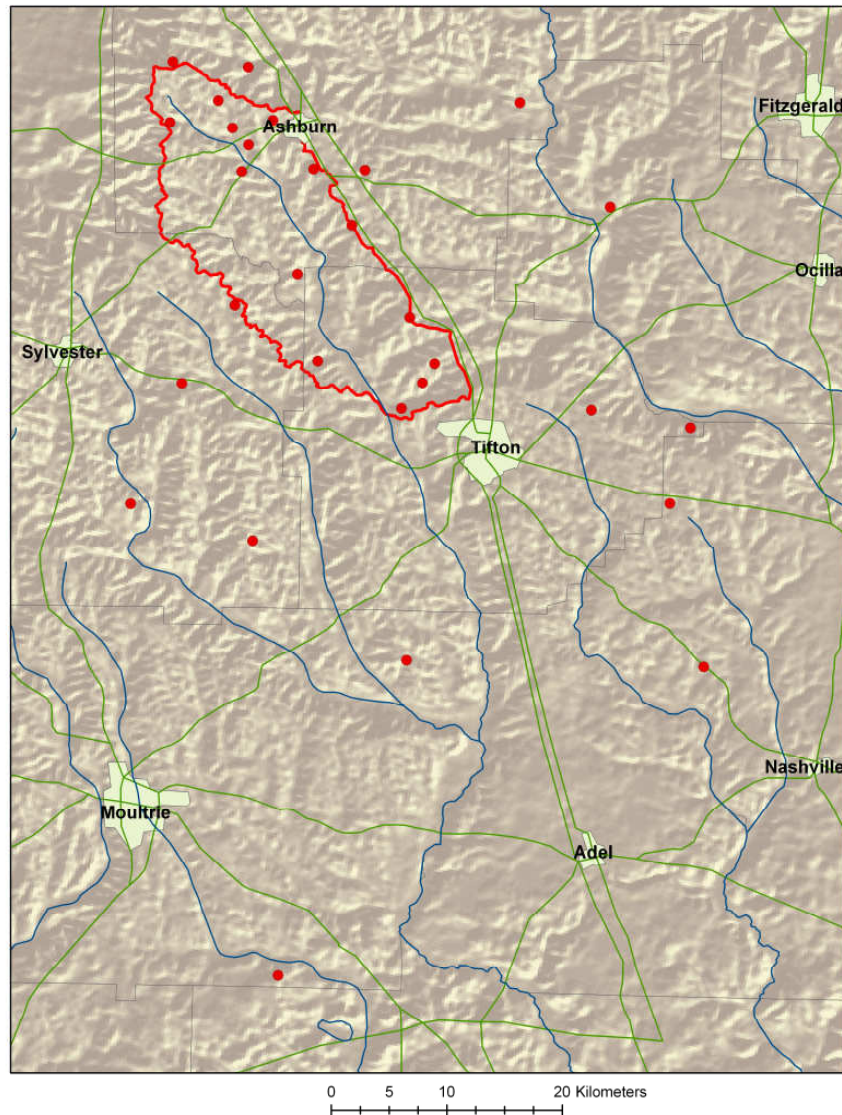
148 & 2700 km² domain

Rangeland & Shrub



Lead Scientists:
Susan Moran
and Dave Goodrich, SWRC





Little River, GA –
33 Stations @ 5, 15, 30 cm

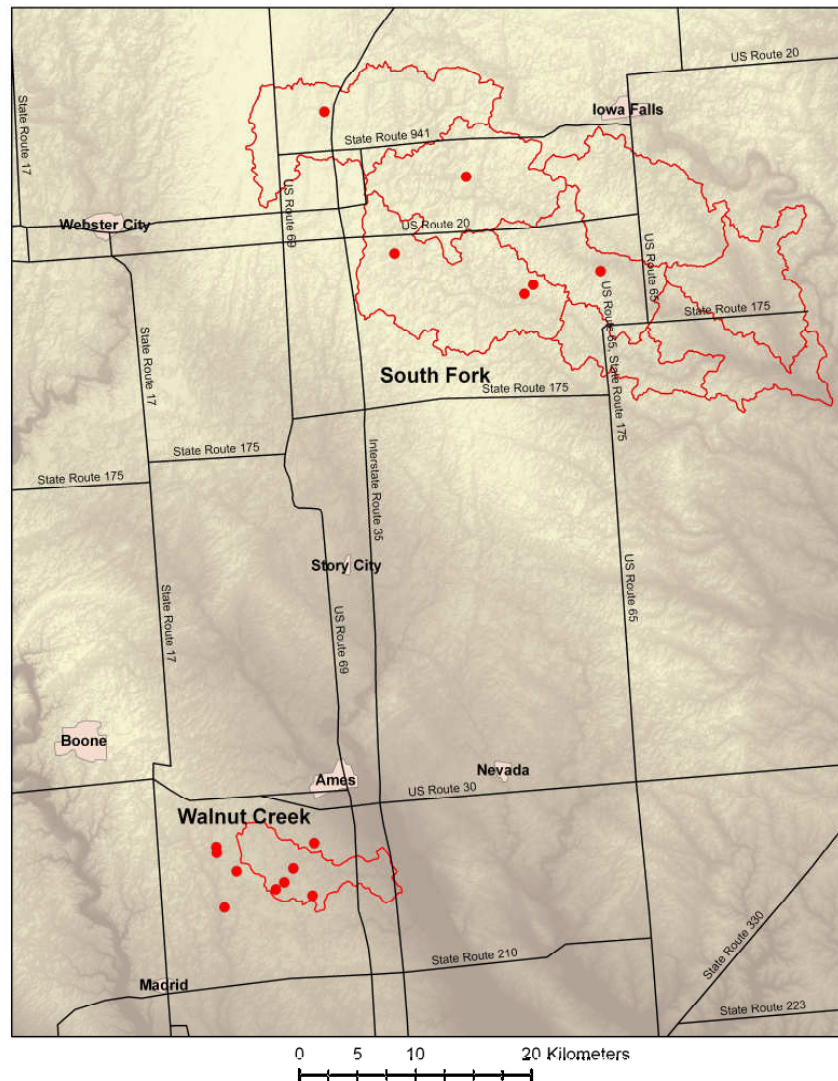
334 km² domain

Agricultural Row Crop & Forest

Low Topography

Lead Scientists: David Bosch, SEWRL





Walnut Creek, IA –

9 Temporary Sites @ 5 cm

South Fork, IA –

6 Stations @ 5, 50 cm

Row Crop: Corn & Soybean

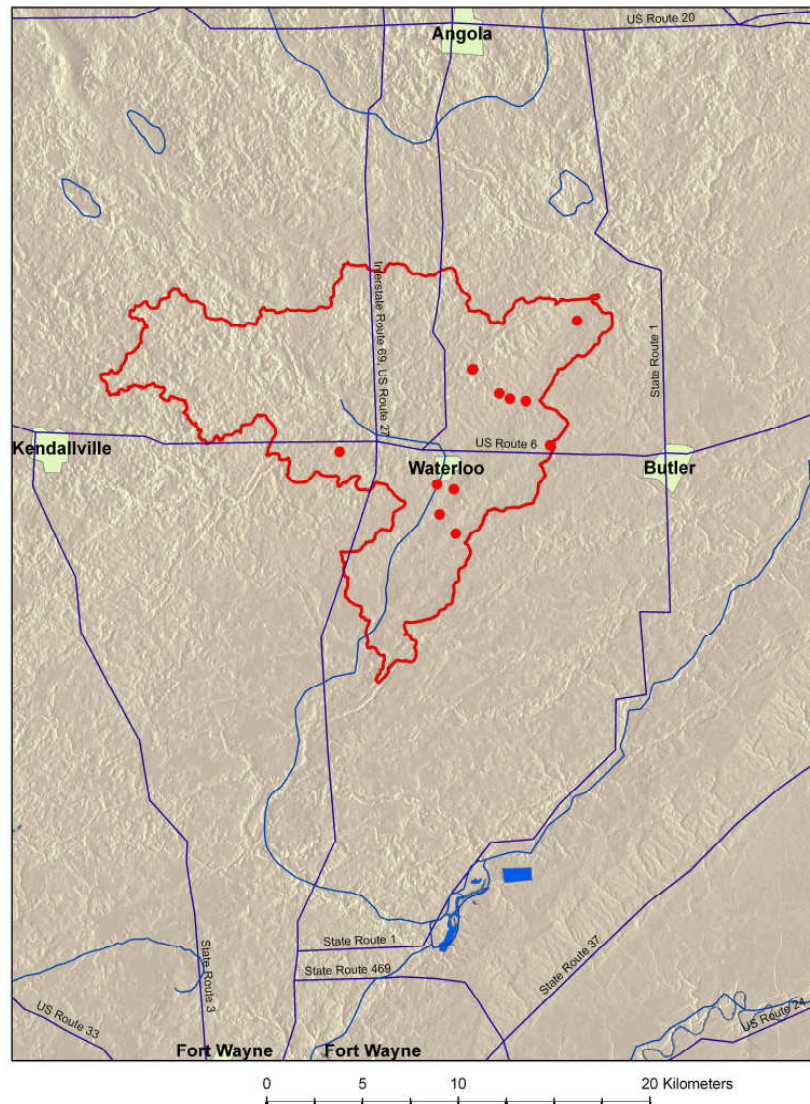
Low Topography

~150 & 700 km² domains



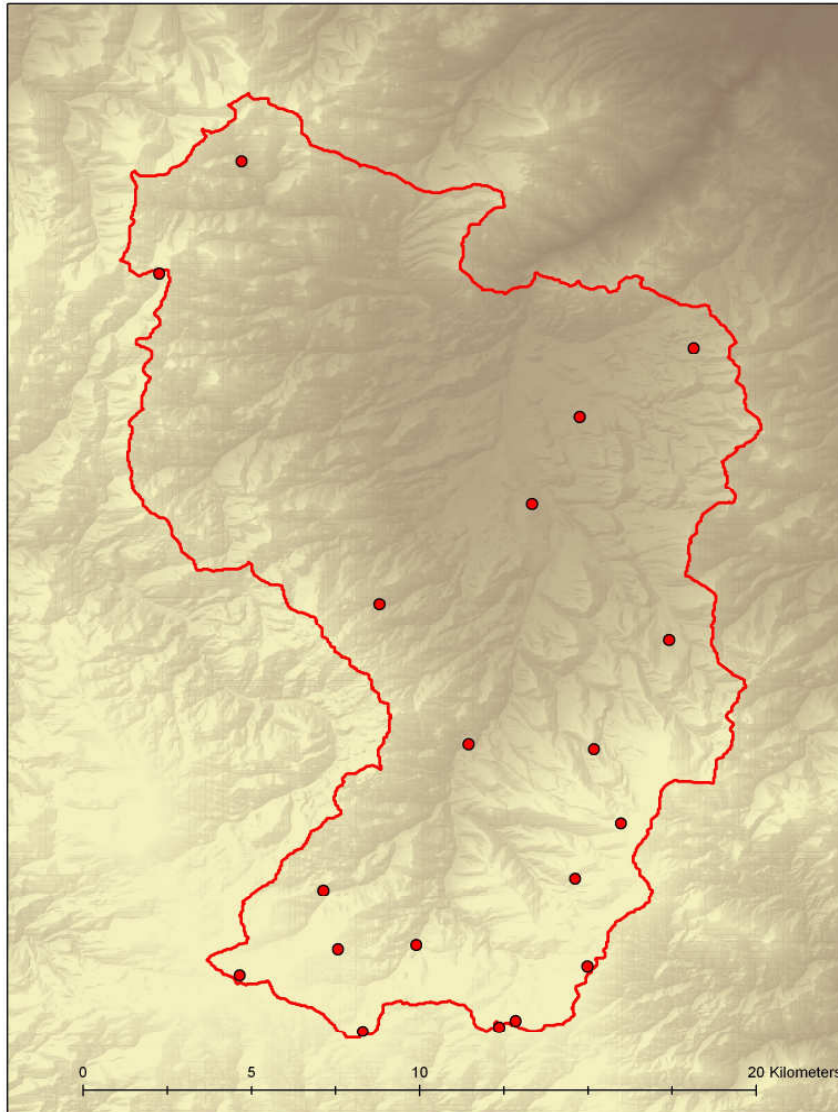
Lead Scientists: John Prueger, NLAE
& Mike Cosh, HRSL

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St. Joseph's River, IN –
 9 Stations @ 5, 20, 45, 60 cm
 Agricultural Row Crop
 ~300 km² domain
 Low Topography
 Lead Scientist:
 Gary Heathman, NSERL
 & Mike Cosh, HRSL





Reynolds Creek, ID –

19 Stations @ 5, 20, 45, 60 cm

Mountainous rangeland

~238 km² domain

High Topography

Lead Scientist:

Mark Seyfried, NWRC

