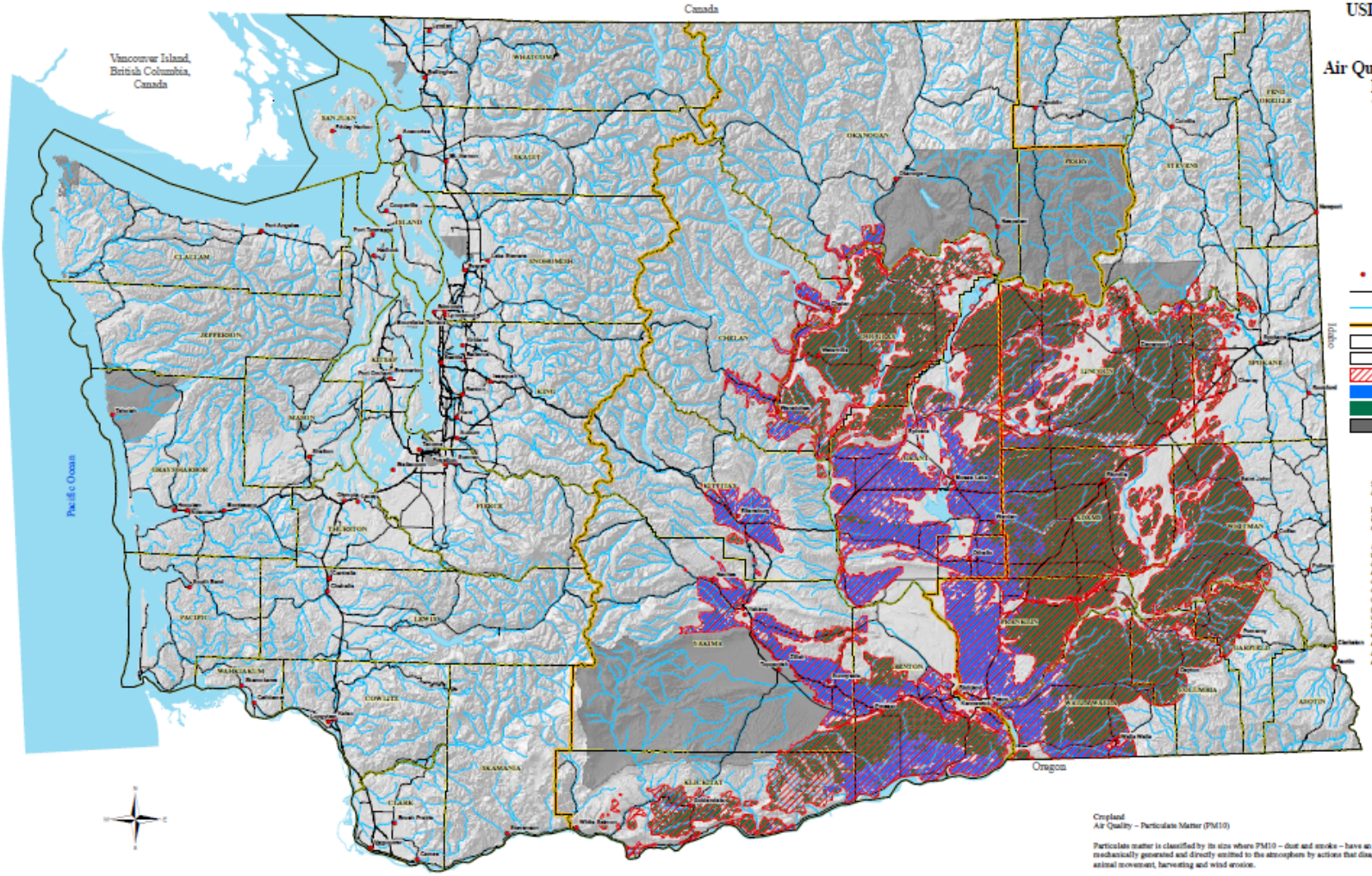
USDA NRCS 2017 State Resource Assessment (SRA)

Air Quality - Particulate Matter (PM10) Resource Concern Priority Treatment Areas (Revised)

Cropland



Legend

- Cities
- State Routes
- Rivers
- NRCS Area Boundaries
- State Boundary
- County Boundaries
- Cropland: Particulate Matter (PM10) Priority Treatment Areas
- Irrigated Cropland
- Non-irrigated Cropland
- On and Off-reservation Tribal Lands

SOURCE: The Washington State Department of Agriculture (WSDA) Crop database, 2016.

Provides a land use pattern for Washington agriculture. Intended to be used internally by the WSDA or its partners to provide data on crop locations for risk analysis. This data is archived and published annually.

Agricultural land use data includes crop type classification, crop group, total field acres, irrigation types, rotation crops, date of entry, last survey date, organic, and notes. Polygons represent actual agricultural field borders and typically represent one crop growing on that location. Acreage is a calculated value. Attributes are updated by WSDA staff via ground surveys or by using outside sources such as USDA's NASS Cropland Data Layer. Outside resources are used whenever possible, such as obtaining data from producers, enlisting resources from Conservation Districts, etc. This land use data is published annually but due to limited resources, the entire state is not updated each year. WSDA strives to maintain a minimum 4 year refresh schedule, with a target goal of every 2 or 3 years, especially in the irrigated agricultural basins. WSDA partners with USDA NASS and provides mapping data for the Cropland Data Layer satellite project, especially in areas not well served by USDA FSA data.

Cropland
Air Quality – Particulate Matter (PM10)

Particulate matter is classified by its size where PM10 – dust and smoke – have an aerodynamic diameter less than 10 micrometers. Much of PM10 is mechanically generated and directly emitted to the atmosphere by actions that disaggregate the soil such as tillage operations, road and field travel, animal movement, harvesting and wind erosion.

Treatment Area Map:
Washington State Department of Agriculture (WSDA) Croplands: all cropland. NRCS Statewide Soil Survey derivative: Wind Erodibility Index of 56 and above. NRCS Climatic C Factor isobars – index of climatic erosivity, specifically wind speed and soil moisture. Used the C factor of 10 and greater. NRCS Water and Climate Center PRISM-average annual precipitation of 16 inches or less within the CFactor area. Added an additional 5 mile buffer to account for precipitation variance.

Maps used, justification:
Included acreage applies to cropland with a high susceptibility to wind erosion.

SCALE
0 25 50 75 100
Miles

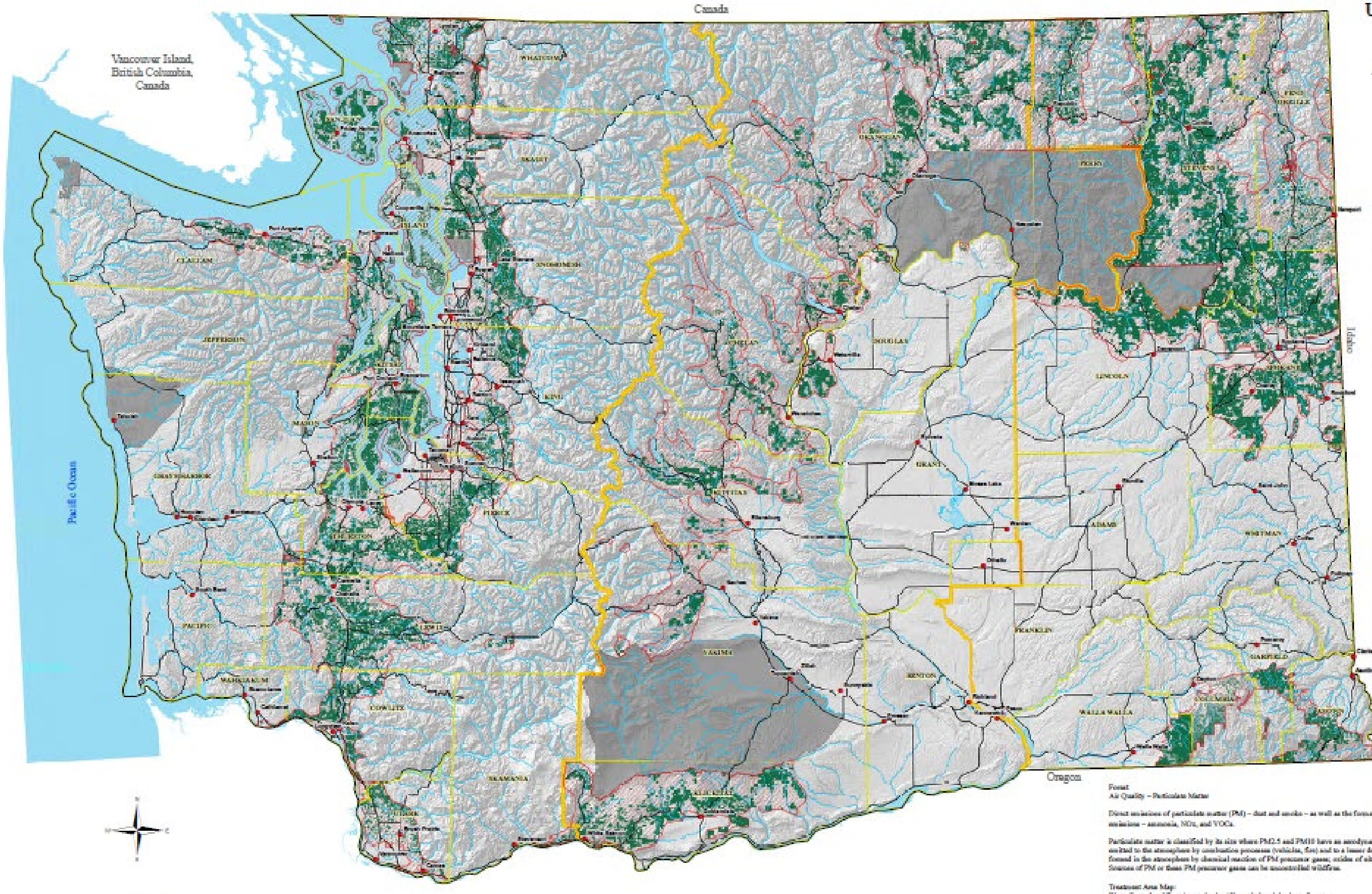
Coordinate System: NAD83 StatePlane Washington South
Units: Feet, Datum: NAD 1983

USDA Natural Resources Conservation Service
Washington State Office, Spokane
September 22, 2017

USDA NRCS 2017 State Resource Assessment (SRA)

Air Quality - Particulate Matter Resource Concern Priority Treatment Areas

Private Forestland



Legend

- Cities
- State Routes
- Rivers
- NRCS Area Boundaries
- State Boundary
- County Boundaries
- Forest: Particulate Matter Priority Treatment Areas
- UW/RTI - Private Forestland
- On and Off-reservation Tribal Lands

SOURCE: The 2007 Washington State Forestland Database, University of Washington, College of Forest Resources, March 24, 2009.

Forestland database categories used: Non-Industrial Private Forest (NIPF), Tribal (excluding Tribal Industrial), and Designated Forest Land (DFL).

NIPF: A parcel that meets NIPF definition, "total individual land ownerships of less than 5000 acres and not directly associated with wood processing or handling facilities", and does not have a corporate or government owner.

DFL: Whether or not each parcel is enrolled in the Designated Forestland Tax Program. This is determined by its land use code. A land use code value of 87 or 88 indicates that the parcel is participating in the program.

Data locations are based on county Assessor parcels. Nine counties (Adams, Asotin, Ferry, Garfield, Island, Pend Oreille, Skamania, Wahkiakum and Whitman) did not have digital parcel boundaries. The location of these boundaries are based on pseudo-parcels developed by the University of Washington. The locations of the Private Forestlands in these nine counties is approximate. Columbia County did not participate.

Additional information about the Washington State Forestland Database can be found at the following website: http://www.ruraltech.org/projects/wrl/fldb/.

SOURCE: US Geological Survey, Gap Analysis Program (GAP). February 2010. National Land Cover, Version 1.

Because Columbia County did not participate in the UW/RTI Forestland project, the Private Forestland in Columbia County was derived from the GAP landuse database.

Forest
Air Quality – Particulate Matter

Direct emissions of particulate matter (PM) – dust and smoke – as well as the formation of fine particulate matter in the atmosphere from other agricultural emissions – ammonia, NOx, and VOCs.

Particulate matter is classified by its size where PM2.5 and PM10 have an aerodynamic diameter less than 2.5 and 10 micrometers, respectively. PM2.5 is directly emitted to the atmosphere by combustion processes (vehicles, fire) and to a lesser degree by mechanical means such as dust from roads or tillage. PM2.5 is also formed in the atmosphere by chemical reaction of PM precursor gases; oxides of nitrogen (NOx), volatile organic compounds (VOCs) and ammonia (NH3). Sources of PM or these PM precursor gases can be uncontrolled wildfires.

Treatment Area Map:
West, Central and East Area criteria: All non-industrial private forest.

Resource Concern Indicator(s):
US Forest Service (USFS) Fire Regime Condition Class (LANDFIRE)-landscape scale fire, ecosystem, and fuel assessment. USDA NRCS Water and Climate Center PRISM – Average Annual Precipitation less than 60 inches per year. Washington State Department of Natural Resources (WDNR) - Wildland Urban Interface (WUI) areas. Washington State Department of Natural Resources (WDNR)-Washington Natural Heritage Program (WNHP) Existing Grasslands and Oak Woodlands 2005 (making sure grasslands is excluded as much as possible, grassland isn't appropriate for the forest land use).

Maps used, justification:
Private forest lands represent the eligible forest land for NRCS cost share assistance and the subset of USFS, precipitation, WDNR maps identify the higher risk areas for wildland fire.

SCALE
0 25 50 75 100
Miles

Coordinate System: HARN StatePlane Washington South
Units: Feet, Datum: NAD 1983

USDA

USDA Natural Resources Conservation Service
Washington State Office, Spokane
August 1, 2017