



Research Problem Statement

ODOT Research Section
555 13th Street NE; Ste 2
Salem OR 97301-5192

Phone (503) 986-2700
Fax (503) 986-2844

I. TITLE

17-060 NOAA Atlas 14 for the Pacific Northwest

II. PROBLEM

In 2008 ODOT Research completed a collection of modern precipitation maps for Oregon to address a need for up to date precipitation information for the design of stormwater, culvert and bridge facilities. At that time the need was identified for additional precipitation parameters to also be modernized and mapped, but the need exceeded the budget. A consortium is being organized to complete NOAA Atlas 14 to include the Pacific Northwest, which would produce the missing modern maps.

III. PROPOSED RESEARCH, DEVELOPMENT, OR TECHNICAL TRANSFER ACTIVITY

It is proposed that ODOT either participate in the consortium in some fashion or that we undertake some addition portion of the work to complete NOAA Atlas 14, at a minimum for the State or Oregon.

IV. POTENTIAL BENEFITS

The primary benefit would be accurate and adequate design of hydraulic facilities that are part of ODOT's highway system. This would also address climate change adaptation because the methodology looks at the data for evidences that the precipitation statistics are non-stationary. As ODOT continues with the renovation or replacement of culverts and bridges that have reached the ends of their design lives, this information would help assure that they are designed to handle what the next 50 to 100 years hold as well as the previous structures have. Also, as ODOT continues to invest in stormwater facilities to protect drinking water and habitat, this information would help assure that the facilities perform as desired in the future.

V. IMPLEMENTATION

The key to implementation of this research would be incorporating the resulting data and maps into ODOT's various design manuals.

VI. LIST OF REFERENCES *(optional)*

VII. CONTACT INFORMATION

Your name: Matthew Mabey
Affiliation: ODOT Research
Telephone: 503-986-2847
Email: matthew.mabey@odot.state.or.us

Person Responsible for Implementation: Susan Haupt
Affiliation: ODOT GeoEnvironmental
Telephone: 503-986-3508
Email: susan.haupt@odot.state.or.us