1. **Data Set Title**: Stream Network for the Willamette Water 2100 Project

2. **Abstract**: Attributed line network for hydrology of the Willamette River Basin in western Oregon, USA. The stream network was developed for use in Willamette Envision, a computer model developed to explore future water supply and demand under different trajectories of climate change, demographic change and water management. Willamette Envision is based on Envision, a modeling tool for planning and environmental assessments that was developed at Oregon State University (J. Bolte, http://envision.bee.oregonstate.edu). Variable attributes are calculated during model runs and may not have meaningful values in this dataset, which represents initial conditions.

3. **Recommended data citation**: Willamette Water 2100 Project Team. Stream Network for the Willamette Water 2100 Project. Oregon Hydrologic Information Server.

4. **Data Contact person:** David Conklin, Oregon Freshwater Simulations, david.conklin@FreshwaterSim.com, http://www.freshwatersim.com/ ; Anne Nolin, Oregon State University, nolina@oregonstate.edu

5. **Related publications**: http://inr.oregonstate.edu/ww2100/publications

6. **Methods**: The stream network and associated catchments were taken from the National Hydrography Dataset version 2 (NHD+V2) found at http://www.horizon-systems.com/NHDPlus/NHDPlusV2_home.php . Only the main flowpath, as defined by the NHD+V2 dataset, was used. The main flowpath does not diverge in the downstream direction, an assumption that is built into the routing model used by the project. It is a subset of the full NHD+V2 stream network (featureclass NHDFlowline) which was derived from the stream network following directions provided by the NHD+V2 user's manual. The topological relationships between stream segments were defined using the ToNode and FromNode attributes of the NHD+V2 Value Added Attributes (VAA) table. Shapefile includes some attributes which were not used in Willamette Envision code version 331.

7. **Location:** Hydrologic Unit Code: 170900

8. **File format** SHP, DBF and related files

9. **Related Documentation**:
   Streams_DataDictionary.xlsx

10. **Sponsorship**: Generation of this data set was supported by the National Science Foundation under Grants No. 1039192 (OSU), 1038925 (PSU) and 1038899 (UO).

11. **Overview of project and disclaimer**: The Willamette Water 2100 project was a six year collaborative research effort by Oregon State University, Portland State University and the University of Oregon to evaluate how climate change, population growth, and economic growth will alter the availability and the use of water in the Willamette River Basin on a decadal to centennial timescale. The project team developed a computer model, called Willamette Envision, that integrates aspects of hydrology, ecology, and human systems, and allows scientists and stakeholders to explore the interaction between land and water management policies, economics, climate, and ecology. The project was supported by grants from the National Science Foundation and was carried out between 2010 and 2016. Any opinions, findings, and conclusions or recommendations expressed by this work are those of the authors and do not necessarily reflect the views of the National Science Foundation.

12. **Keywords**: Envision, Water Sustainability and Climate, water scarcity, Willamette River Basin

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