



# Supplement of

# Hydrologic landscape classification evaluates streamflow vulnerability to climate change in Oregon, USA

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2000) temperature and precipitation normals were used to calculate initial climate and seasonality indices. Future Fig. S1. Components of the Wigington et al. (2013) hydrologic landscape (HL) classification. Historic (1971-HL maps were derived by substituting projected 2041-2070 normals for the climate and seasonality indices.



Figure S2. Detail of hydrologic landscape map along the High Cascade Mountains (deep blue) in northern Oregon, illustrating individual assessment units and coding.

## 1971-2000 OREGON HLs



Figure S3. Oregon hydrologic landscape base map, using 1971-2000 temperature and precipitation normals to calculate climate and seasonality indices.



Figure S4. Change in monthly precipitation (mm) for the ECHAM\_A2 realization.



Figure S5. Change in monthly precipitation (mm) for the ECHAM\_A1b realization.



Figure S6. Change in monthly precipitation (mm) for the ECHAM\_B1 realization.



Figure S7. Change in monthly precipitation (mm) for the PCM\_A2 realization.



Figure S8. Change in monthly precipitation (mm) for the PCM\_A1b realization.



Figure S9. Change in monthly precipitation (mm) for the PCM\_B1 realization.



Figure S10. Change in monthly temperature (°C) for the ECHAM\_A2 realization.



Figure S11. Change in monthly temperature (°C) for the ECHAM\_A1b realization.



Figure S12. Change in monthly temperature (°C) for the ECHAM\_B1 realization.



Figure S13. Change in monthly temperature (°C) for the PCM\_A2 realization.



Figure S14. Change in monthly temperature (°C) for the PCM\_A1b realization.



Figure S15. Change in monthly temperature (°C) for the PCM\_B1 realization.

#### ECHAM A2 2041-2070 OREGON HLs



Figure S16. Predicted Oregon hydrologic landscape map, using 2041-2070 temperature and precipitation normals from the ECHAM\_A2 realization to calculate climate and seasonality indices.

ECHAM A1b 2041-2070 OREGON HLs



Figure S17. Predicted Oregon hydrologic landscape map, using 2041-2070 temperature and precipitation normals from the ECHAM\_A1b realization to calculate climate and seasonality indices.

# ECHAM B1 2041-2070 OREGON HLs



Figure S18. Predicted Oregon hydrologic landscape map, using 2041-2070 temperature and precipitation normals from the ECHAM\_B1 realization to calculate climate and seasonality indices.

## PCM A2 2041-2070 OREGON HLs



Figure S19. Predicted Oregon hydrologic landscape map, using 2041-2070 temperature and precipitation normals from the PCM\_A2 realization to calculate climate and seasonality indices.

## PCM A1b 2041-2070 OREGON HLs



Figure S20. Predicted Oregon hydrologic landscape map, using 2041-2070 temperature and precipitation normals from the PCM\_A1b realization to calculate climate and seasonality indices.

# PCM B1 2041-2070 OREGON HLs



Figure S21. Predicted Oregon hydrologic landscape map, using 2041-2070 temperature and precipitation normals from the PCM\_B1 realization to calculate climate and seasonality indices.



Figure S22. Change in monthly available water ( $\Delta$ S', in mm) for the ECHAM\_A2 realization.



Figure S23. Change in monthly available water ( $\Delta$ S', in mm) for the ECHAM\_B1 realization.



Figure S24. Change in monthly available water ( $\Delta S'$ , in mm) for the PCM\_A2 realization.



Figure S25. Change in monthly available water ( $\Delta$ S', in mm) for the PCM\_A1b realization.



Figure S26. Change in monthly available water ( $\Delta$ S', in mm) for the PCM\_B1 realization.

