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**SCIENCE AND POLICY INTEGRATION ISSUES FOR STREAM AND  
WETLAND JURISDICTIONAL DETERMINATIONS IN THE SEMI-ARID WESTERN U.S.**

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**ABSTRACT:** In the semi-arid western U.S., rivers and streams are becoming increasingly stressed and degraded, and wetlands lost, due to human development and associated management policies and actions that are generally ineffective for aquatic resources protection and restoration. There is often a significant disconnect between policy and management with science that leads to continued degradation of surface waters. Recent Supreme Court decisions and subsequent U.S. Army Corps of Engineers and Environmental Protection Agency guidance regarding determination of jurisdiction as 'waters of the US' that can be protected under Clean Water Act Section 404 (permitting discharge of dredged and fill materials into wetlands and other waters) is an example of this gap. This study identifies and evaluates key science and policy integration issues for stream and wetland jurisdictional determinations (JDs) in a semi-arid region of the western U.S., including much of the Rocky Mountains, Great Plains and Colorado Plateau. Issues discussed include identification and evaluation of navigable waters, hydrologic permanence/flow duration of perennial and intermittent/ephemeral streams, stream order, significant nexus, aggregation of waters and effects, human impacts and changes, resource inventories and tools, and JD outcomes. Recommendations are also presented to help address the identified issues for more effective management.

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