

Declining Native Fish Composition in the Middle Snake River and the Importance of Spring Habitats

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Fish community composition and relative abundance has been monitored in the Snake River from American Falls Dam (RM 715) to Hells Canyon Dam (RM 247) at 5 year intervals from 1990 – 2010. During that 20 year period, significant declining trends for native fish species and significant increasing trends for non-native fish species have occurred throughout the Snake River with the exception of the those sections of the Snake River strongly influenced by a high volume of spring discharge from the Snake River aquifer near Hagerman, Idaho. During this same time interval, flow volumes in the Snake River basin have been significantly declining as has the volume of spring discharge into the Snake River. Temperature has not demonstrated significant trends in the Snake River, with the exception of the river associated with spring discharge, where a significant increasing trend is occurring, possibly related to declining spring flows. Trends in fish abundance suggest that the spring influenced reaches of the Snake River are important areas for maintaining native fish assemblages in the Snake River. This emphasizes the need to protect spring habitats and the Snake River aquifer in the face of uncertainty related to climate change and increasing pressure on the use of water in the Snake River basin.