

# Hydrology Part I

## Snake River and Hydro Generation Overview

### Summary

- The Snake River Basin is an ever-changing interrelated system. Idaho Power hydro generation is directly impacted by these complex interactions.
- In a normal year, the largest fuel source for hydro generation comes from the Eastern Snake Plain Aquifer spring discharge in the Hagerman area.
- Water management and policy has the largest impact on future hydro generation for Idaho Power's system.

### Key Terms

- **Water Management:** The control and movement of water resources to minimize damage to life and property and to maximize efficient beneficial use.
- **Hydrograph:** Graph showing the rate of water flowing versus time at a specific location.
- **Natural Flow:** Calculated flow that represents what would occur in the river if the impacts from reservoirs and consumptive use were removed.
- **Regulated Flow:** Observed flow in the river at any given time. This has been impacted by reservoir operations and diversions.
- **Hydropower:** The use of falling or fast-running water to produce electricity.

### Importance

- Idaho Power has almost 1,800 megawatts (MW) of hydropower generation capacity.
- Hydropower is Idaho Power's largest energy resource.
- Hydropower is an inexpensive fuel source and is a key factor in Idaho Power's ability to keep rates low for our customers.
- Hydropower is a highly flexible resource that supports reliability of the system and integration of renewables.

### Snake River Basin Teacup Diagram

