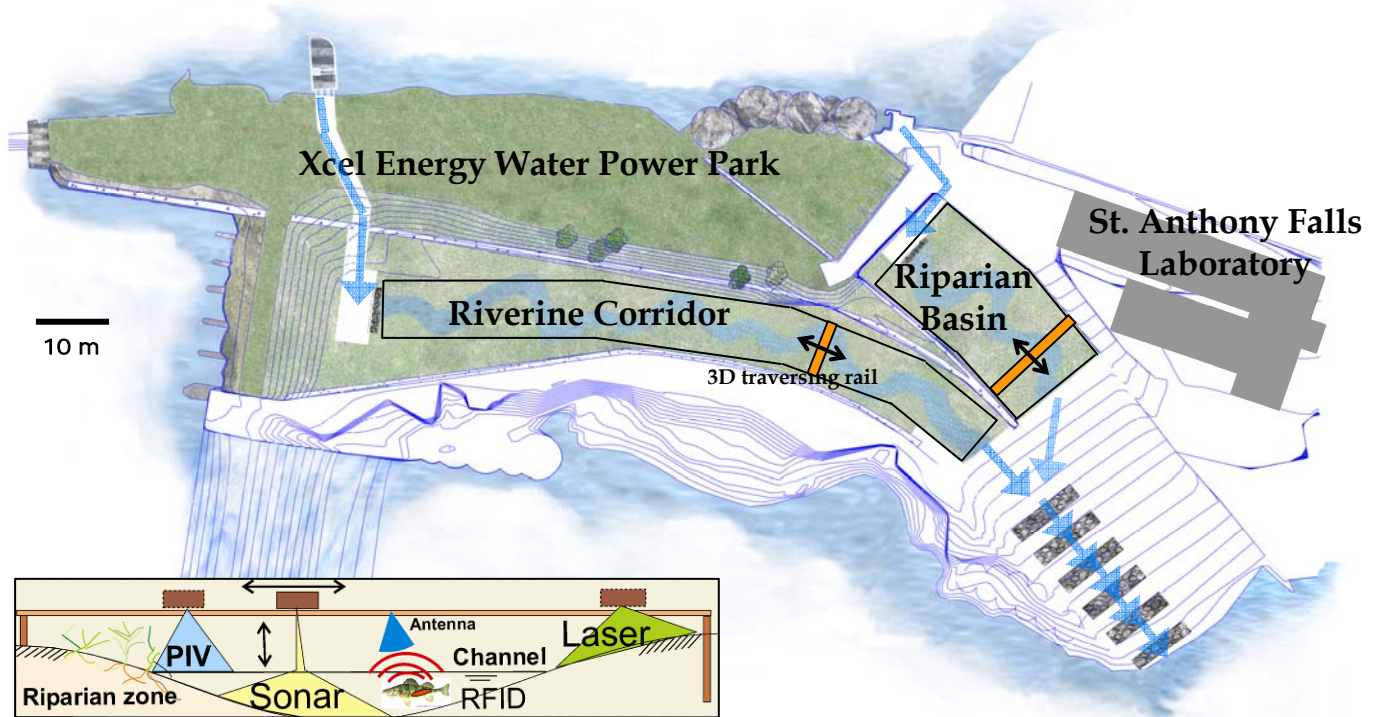




Outdoor StreamLab Specifications



The Outdoor StreamLab allows full control of discharge, velocity, water surface elevations, bed and floodplain substrate, initial channel morphology, in-stream structures, and floodplain vegetation.

	Riverine Corridor	Riparian Basin
Length	430 ft (120 m)	130 ft (40 m)
Width	36 ft (11 m)	60 ft (18 m)
Maximum discharge	300 cfs (8.5 m ³ /s)	85 cfs (2.4 m ³ /s)
Maximum depth	5 ft (1.5 m)	5 ft (1.5 m)
Maximum slope	0.5%	2%
Maximum velocity	20 ft/s (6 m/s)	15 ft/s (4.5 m/s)

Planned instrumentation includes:

ADV and LDV velocity probes; surface PIV; digital SLR cameras; laser and sonar scanners for bed topography and surface elevation; water quality sondes; autosamplers; water elevation loggers; RFID system; piezometers; sediment feed; sediment recirculation; bedload and suspended load samplers; 3-D instrument positioning system; and computer-controlled downstream weir.

The Outdoor StreamLab is uniquely equipped to:

- Quantify physical, chemical, and biological processes from microscopic to basin scales
- Conduct hydrological and ecological field-scale experiments under controlled conditions
- Impose and repeat steady and unsteady inlet hydrographs, including artificial floods
- Provide verification for advanced computational models
- Enable highly visible formal and informal education

The St. Anthony Falls Laboratory is a research unit of the University of Minnesota's Institute of Technology in the Department of Civil Engineering. The laboratory is also closely affiliated with the Department of Geology and Geophysics, and the Department of Ecology, Evolution, and Behavior.