

The Impact of Impoundments

A balance must be struck between the benefits and costs of dams. Where energy production is small, the overall balance sheet must be carefully examined. Dams block the natural flow of the river and create unnatural water "impoundments" or reservoirs of backed-up water. They alter the volume and velocity of river flows, increase water temperature and decrease natural oxygenation, impede the migration of fish and cause shoreline erosion from unnaturally high water levels.



Gambo Dam on the Presumpscot River.



Silt deposit on the river bottom.

The net impact of constrained water flow involves far reaching consequences. Silt accumulation buries fish spawning habitat and contains heavy metals and other pollutants. Larvae from insects that are the food for cold water species, such as trout, need rocky river bottoms to reproduce and thrive. Without this neither the insects nor the cold-water fish which feed on them can survive.

Restoring the river flow to its natural way of being can allow nature to heal, and re-create the conditions whereby native species can be re-established. Sheltered pools and back eddies created by water freely flowing over a rocky, cobbled bottom, provide resting places and spawning habitat for fish. The faster, free-flowing river re-aerates the water, improving dissolved oxygen levels and decreasing the temperature. From beneath the silt, the true river bottom can emerge to support a free-flowing river again.



Clean river bottom in the tailwaters.