

# Wetland Alteration

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## Benefits

A watercourse or wetland alteration is any temporary or permanent change made at, near or to a watercourse or wetland or to water flow in a watercourse or wetland. The primary reason for altering wetlands is to support human infrastructure in the form of roads, houses, and industry. Cities are increasingly overpopulated, requiring additional land to be converted to human uses. Natural water courses can meander over vast areas, making it impractical for them to be left in their natural state given the demands for human purposes. Modifying wetlands provides more land and/or means of accessing more land (bridges) quickly and efficiently.

## Problems

Watercourse or wetland alteration activities often affect our water resources. Changes made to, or near, a watercourse or wetland may result in damage to the environment, water quality, infrastructure and property. These activities if not carried out properly may place our fish and wildlife resources at risk, and could diminish the quality of our water.

Improperly designed or constructed structures (e.g., dams, bridges, culverts) or changes made to the bed or banks of a watercourse may cause unstable channel conditions causing erosion, meandering and increased potential for flooding. These impacts could result in property and watercourse or wetland damages downstream or, in the case of failed dams, even the loss of life.

## Solutions

Land use practices, including agriculture, highway construction and maintenance, and forest harvesting have improved in recent years, yet most of our watercourses and wetlands suffer from years of accumulated sedimentation. Effective mitigation measures can improve site management and reduce the potential of watercourse or wetland impacts. A site risk assessment should be undertaken for all sites to determine the potential for problems and identify solutions which can include best management practices. Once completed, the design must incorporate these issues in order to have them addressed. All stages of construction should include effective water control measures, erosion control measures and sediment control measures.

If basic principles for prevention of surface erosion and sedimentation are considered at the design stage of the project, potential problems will be minimized. These principles include limiting the size of the disturbed area, limiting the time the disturbed area is exposed, planning construction to coincide with the low flow period from June 1st to September 30th of every year, and retaining existing vegetation wherever feasible (erosion is minimized on a surface covered with natural vegetation).