
B. BRIDGE PLANNING

Purpose

Site, design, and maintain bridge structures so that sensitive and valuable aquatic ecosystems and areas providing important water quality benefits are protected from adverse effects.

Applicability

This management measure is intended to be applied by States to new, relocated, and rehabilitated bridge structures in order to control erosion, streambed scouring, and surface runoff from such activities.

Practices

1. Coordinate design with FHWA, USCG, COE, and other State and Federal agencies as appropriate.
2. Review National Environmental Policy Act requirements to ensure that environmental concerns are met.
3. Avoid highway locations requiring numerous river crossings.
4. Direct pollutant loadings away from bridge decks by diverting runoff waters to land for treatment.

Bridge decks should be designed to keep runoff velocities low and control pollutant loadings. Runoff waters should be conveyed away from contact with the watercourse and directed to a stable storm drainage, wetland, or detention pond. Conveyance systems should be designed to withstand the velocities of projected peak discharge.

5. Restrict the use of scupper drains on bridges less than 400 feet in length and on bridges crossing very sensitive ecosystems.

Scupper drains allow direct discharge of runoff into surface waters below the bridge deck. Such discharges can be of concern where the waterbody is highly susceptible to degradation or is an outstanding resource such as a spawning area or shellfish bed. Other sensitive waters include water supply sources, recreational waters, and irrigation systems. Care should be taken to protect these areas from contaminated runoff.

6. Site and design new bridges to avoid sensitive ecosystems.

Pristine waters and sensitive ecosystems should be protected from degradation as much as possible. Bridge structures should be located in alternative areas where only minimal environmental damage would result.

7. On bridges with scupper drains, provide equivalent urban runoff treatment in terms of pollutant load reduction elsewhere on the project to compensate for the loading discharged off the bridge.