

GUIDELINES FOR CULVERTS LOCATED IN MANATEE-ACCESSIBLE CERP PROJECTS

The following guidelines are developed to prevent manatee entrapment within culverts and to exclude manatees from unsuitable habitat. The guidance below applies only to free-flowing culverts that are within areas regularly accessible to manatees. Structures with water control features (e.g., gates, flaps, etc.) and culverts that exceed the specifications below will require FWC and Service review.

NEW AND EXISTING CULVERTS

1. Size requirements: All culverts 8 inches to 8 feet in diameter must be grated to prevent manatee entrapment. Grates must be spaced a maximum of 8 inches apart to effectively prevent manatee access. Diagonal, horizontal or vertical grates may be installed. Grates must be a permanent fixture and not part of a water control structure.

Culverts less than 8 inches in diameter are exempt from this requirement, whereas, culverts greater than 8 inches may be subject to a case-by-case review, if necessary.

2. Length requirements: Based on documented manatee movement by FWC, the maximum recommended culvert length is 200 feet. Proposed culverts greater than 200 feet in length require consultation with the Service and FWC.
3. Case-by-Case Review: In consultation with the Service and FWC, all culverts may be reviewed. The decision to exclude manatees will be based on culvert length, water level, available habitat and other risk factors. If a decision is made to exclude manatees from access to culverts, the culvert should be grated, as described above.

The benefit of access to important habitat (forage resources, calving sites, freshwater, travel corridors, warm-water refugia, refuge from watercraft or other forms of harassment) will be weighed against the potential risk of injury or death to manatees if the culvert were to remain accessible.

4. Additional Guidance:
 - Box culverts are preferred by the Service and FWC over round culverts. Bridges are the most preferred by the Service and FWC.
 - Manatees can become stranded in culverts during periods of low tide. Therefore, when planning for new culverts in tidal waters, a minimum 3-foot depth of water in the culvert at low tide stage is recommended.