Table 12. Summary of direct and indirect impacts for alternative project plans considered.

Environmental Factor	Alternative Considered			
	No Action Alternative (GDM Design)	18.5 Ft Alternative Split Discharges; 20.0 –Ft NGVD Weir Crest; S-257 Discharge to 18.5-Ft NGVD	Isolated Wetlands Alternative Split Discharges; 19.0 -Ft NGVD Weir Crest; S-257 Discharge to 17.5Ft NGVD	Preferred Alternative Split Discharges; 20..0 –Ft NGVD Weir Crest; S-257 Discharge to 19.0-Ft NGVD
Flood Control	Discharges from Structures S-96B and S-96C to meet flood control schedules for upstream project areas must be staggered.	Both S96-C and S-96B can discharge simultaneously to meet flood control schedules.	Both S96-C and S-96B can discharge simultaneously to meet flood control schedules.	Both S96-C and S-96B can discharge simultaneously to meet flood control schedules. Increased flood protection in C-1.
Vegetation	Loss of some herbaceous wetland vegetation in SJMCA due to overdrainage of upstream reaches. Continued discharge of higher nutrient waters will cause degradation of plant communities in the SJMCA and TFMCA. Conversion of downstream and middle reaches of TFMCA to open water habitat including loss of sawgrass habitat. Remainder of middle reaches of TFMCA converted to herbaceous wetlands dominated by cattail and woody shrubs. Upstream reaches of TFMCA converted to short hydroperiod wetlands, with woody shrubs as a dominant feature. Overall, 5,383 acres of wetlands and 6,157 aces of deep-water habitat created. Hydrilla may proliferate in deep-water areas. Peripheral pasture habitats will be maintained as pasture (2,469 acres).	Preservation of existing wetland vegetation community in SJMCA. SJMCA protected from adverse impacts of continued discharge of high nutrient waters. Conversion of downstream and middle reaches of TFMCA to open water habitat including loss of sawgrass habitat. Approximately 1,800 acres of sawgrass will be lost. Upper reaches of TFMCA converted to herbaceous wetlands dominated initially by cattail, primrose willow and Carolina willow. Overall, 5,987 acres of wetlands and 7,047 acres of deep- water habitat created. Approximately 1,850 acres of peripheral pasture habitats will be converted to wetlands. Reduction in nutrients discharged to wetlands in both TFMCA and SJMCA may allow long-term recovery to historic community types. Hydrilla may proliferate in deep-water areas.	Preservation of existing wetland vegetation community in SJMCA. SJMCA protected from adverse impacts of continued discharge of high nutrient waters. Preservation of downstream wetlands of TFMCA, including sawgrass / maidencane habitat. Small portion of downstream wetlands converted to open water habitat. Upper and middle reaches of TFMCA converted to herbaceous and shrub wetlands dominated by cattail, primrose willow and Carolina willow. Overall, 12,526 acres of wetlands and 1,183 acres of deep water habitat created. The 2,469 acres of peripheral pasture habitats converted to wetlands. Continued discharge of water from the SJWMA will encourage proliferation of cattail in the TFMCA and lessen community diversity. Lower possibility of plant community shifts toward historic community types.	Preservation of existing wetland vegetation community in SJMCA. SJMCA protected from adverse impacts of continued discharge of high nutrient waters. Conversion of downstream and middle reaches of TFMCA to open water habitat including loss of sawgrass habitat. Approximately 1,480 acres of sawgrass will be lost. Upper reaches of TFMCA converted to herbaceous wetlands dominated initially by cattail, primrose willow and Carolina willow. Overall, 5,119 acres of wetlands and 7,743 acres of deep- water habitat created. Approximately 1,850 acres of peripheral pasture habitats will be converted to wetlands. Reduction in nutrients discharged to wetlands in both TFMCA and SJMCA may allow long-term recovery to historic community types. Hydrilla may proliferate in deep-water areas.
Impacts to the Indian River Lagoon	Increased probability of stormwater discharges to Indian River Lagoon as a results of the adverse tailwater conditions below S-96B.that were not predicted in the GDM./	Meets GDM targets for probability of stormwater discharges to Indian River Lagoon.	Meets GDM targets for probability of stormwater discharges to Indian River Lagoon.	Meets GDM targets for probability of stormwater discharges to Indian River Lagoon.. Exceeds other alternatives in ensuring reduced discharges to the Indian River Lagoon

Table 12 continued.

Environmental Factor	Alternative Considered			
	No Action Alternative (GDM Design)	18.5 Ft Alternative Split Discharges; 20.0 –Ft NGVD weir crest; S-257 Discharge to 18.5-Ft NGVD	Isolated Wetlands Alternative Split Discharges; 19.0 -Ft NGVD weir crest; S-257 Discharge to 17.5Ft NGVD	Preferred Alternative Split Discharges; 20..0 –Ft NGVD weir crest; S-257 Discharge to 19.0-Ft NGVD
Fish And Wildlife Resources	Increased habitat for wading birds, waterfowl and other wetland dependant species. Deep -water areas of the TFMCA will support development of sport fisheries. Extreme low-water events may cause frequent fish kills. Decline in habitat value of overdrained areas of the SJMCA. Loss of terrestrial habitats for species such as deer. Hydrologic connectivity will enhance habitat value.	Increased habitat for wading birds, waterfowl and other wetland dependant species. Deep-water areas of the TFMCA will support development of sport fisheries however increased possibility of fish kills during the dry season. Loss of terrestrial habitats for species such as whitetail deer. Hydrologic connectivity will enhance habitat value.	Habitat values of the SJMCA will be maintained. Increased habitat in TFMCA for wading birds, waterfowl and other wetland dependant species. Sport fisheries not supported due to small area of deep -water habitat. Retention of some terrestrial habitats for species such as deer. Less hydrologic connectivity reduces habitat value.	Increased habitat for wading birds, waterfowl and other wetland dependant species. Deep-water areas of the TFMCA will support development of sport fisheries. Lowest risk of extreme drying events that may cause fish kills. Loss of terrestrial habitats for species such as whitetail deer. Hydrologic connectivity will enhance habitat value.
Protected Species	Enhanced habitat for wood storks, limpkins, other wading birds, waterfowl and snail kites. Potential loss of crested *Cara cara* habitat.	Enhanced habitat for wood storks, limpkins, other wading birds, waterfowl and snail kites. Potential loss of crested *Cara cara* habitat.	Enhanced habitat for wood storks, limpkins, other wading birds, waterfowl and snail kites. Potential loss of crested *Cara cara* habitat.	Enhanced habitat for wood storks, limpkins, other wading birds, waterfowl and snail kites. Potential loss of crested *Cara cara* habitat.
Water Quality	Potential for some improvement of quality of waters discharged from SJWMA. Overdrainage of SJMCA may cause significant nutrient release from oxidized soils. Soil oxidation may degrade water quality in TFMCA. High potential for extreme dissolved oxygen sags during periods of low water in the TFMCA. Dissolved oxygen in SJMCA may also be adversely impacted by pulsed discharges through the C-40 Canal. Decrease in chlorides discharged from the basin to Lake Washington.	Improvement of water quality discharged from SJWMA. Improved quality of water discharged downstream to Lake Washington. Reduced acres subject to soil oxidation in TFMCA. Greater surface area for mixing reduces severity of dissolved oxygen sags in TFMCA. Dissolved oxygen levels may reach critically low levels during drought years. Decrease in chlorides discharged from the basin to Lake Washington. Deeper water habitat provides for increased nutrient retention and protects wetlands in TFMCA.	Potential for improvement of quality of waters discharged from SJWMA. Nutrient levels in SJWMA discharge sufficient to degrade wetlands in TFMCA. Soil oxidation may degrade water quality in TFMCA. High potential for extreme dissolved oxygen sags during periods of low water in the TFMCA. Decrease in chlorides discharged from the basin to Lake Washington.	Improvement of water quality discharged from SJWMA. Improved quality of water discharged downstream to Lake Washington Fewest acres subject to soil oxidation in TFMCA. Less chance of dissolved oxygen sags in the dry season as compared to the 18.5 ft Alternative. Greater surface area for mixing reduces severity of dissolved oxygen sags in TFMCA. Decrease in chlorides discharged from the basin to Lake Washington. Deeper water habitat provides for increased nutrient retention and protects wetlands in TFMCA.
Historic Properties	Deep flooding of Elder Mound.	Deep flooding of Platt Mound & Elder Mound.	Deep flooding of Platt Mound & Elder Mound.	Deep flooding of Platt Mound & Elder Mound.

Table 12 continued.

Environmental Factor	Alternative Considered			
	No Action Alternative (GDM Design)	18.5 Ft Alternative Split Discharges; 20.0 –ft NGVD weir crest; S-257 Discharge to 18.5-Ft NGVD	Isolated Wetlands Alternative Split Discharges; 19.0 -ft NGVD weir crest; S-257 Discharge to 17.5ft NGVD	Preferred Alternative Split Discharges; 20..0 –ft NGVD weir crest; S-257 Discharge to 19.0-Ft NGVD
Economics	When compared to the Preferred Alternative would require less cost for levee construction. Inaccessibility to levee gaps and canal plugs would make maintenance costly. Exotic plant control costs may be significant. Economic loss of tourism due to fish kills. Economic loss due to increased discharges of fresh water to the Indian River Lagoon	Additional levee costs to separate S-96 B and C discharges and construct getaway channel. One of the lowest maintenance alternative considered. Exotic plant control costs may be significant.	Additional levee costs to separate S-96 B and C discharges and construct getaway channel. Most costly alternative considered. When compared to the Preferred Alternative would require construction of over 4.5 miles of additional levees. Additional costs for primary and back-up pumps to maintain appropriate hydroperiods in the isolated area. Annual allocations for pumping would be required. Exotic plant control costs may be significant.	Additional levee costs to separate S-96 B and C discharges and construct getaway channel. Additional cost to build levee separating the TFMCA form the C-1. One of the lowest maintenance alternative considered. Exotic plant control costs may be significant.