

APPENDIX G

Fort Stewart Total Maximum Daily Loads [TMDLs] Plan

The Fort Stewart [FS] Municipal Separate Storm Sewer System [MS4] discharges stormwater into the following surface waters: Mill Creek, Taylors Creek (which discharges into a tributary of Canoochee Creek and ultimately into the Canoochee River); and Goshen and Melvin Swamps (which drain into Peacock Creek).

Peacock Creek, Taylors Creek, and Canoochee Creek are 2008 303(d) listed streams (*Georgia Environmental Protection Division's "Total Maximum Daily Loads" Web Page*). The 303(d) list includes all surface waters in the State for which beneficial uses of the water, such as drinking, recreation, aquatic habitat, and industrial use, are impaired by pollutants.

It does not appear as though stormwater discharges from the FS MS4 contribute directly or indirectly to a 303(d) listed (impaired) water bodies. Canoochee Creek (at Taylors Creek and the Canoochee River and a tributary of Taylors Creek from Hinesville Waste Water Treatment Plant) was on the 303(d) list during the 2008 cycles for dissolved oxygen. Peacock Creek (at Highway 144 to the North Newport River) was also on the 303(d) list during the 2008 cycles for dissolved oxygen (DO) and fecal coliform (FC). Total Maximum Daily Loads [TMDLs] were developed and approved for Taylors Creek, Canoochee Creek, and Peacock Creek.

The Stormwater Management Plan [SWMP] applies to the FS MS4 Urbanized Areas, which includes hundreds of linear miles of roadways and stormwater sewer utilities, and several stormwater discharge areas. The storm sewer system draining the Urbanized Area is considered an MS4. Information on the FS MS4, including pipes, ditches, swales, outfalls, and drainage areas [illustrated on the enclosed map titled FS-MS4 Appendix G-TMDLs Sampling Locations Map].

The majority of the FS MS4 outfalls discharge into stream segments or wetlands which discharge into a 303(d) listed impaired water body. There are some outfalls which discharge directly into the impaired stream of Taylors Creek tributary in the central portion of the FS MS4 [illustrated on the enclosed map titled 2008 303(d) Listed Streams-FS Discharge Outfalls]. The western portion of the FS MS4 drains into Mill Creek, which flows north toward Taylors Creek. The central and northeastern portions of the MS4 areas drain into Taylors Creek. The western, northeastern and central portions that discharge into Mill Creek and Taylors Creek ultimately discharge to Canoochee Creek and then into the Canoochee River. The eastern portion of the FS MS4 includes the Southern Oaks residential housing, the GA Army National Guard Training areas, and Wright Army Airfield (WAAF), which drains into Melvin and Goshen Swamps, respectively. Evans Army Airfield simulation training area and Land Application System [off GA Hwy 144E] drains southwestward into Big Swamp which ultimately drains into Goshen Swamp. Goshen and Melvin Swamp's ultimately discharge into Peacock Creek. The Tac-X Non-Commissioned Officer Academy and wastewater treatment lagoons area drains into wetlands and an unnamed tributary of the Canoochee River.

Fort Stewart performs Industrial Activity Stormwater inspections quarterly and annually. Hazardous materials are stored under cover and/or are indoors, and spill prevention and clean up measures have been implemented for any accidental spills. Inclusive of these inspections sanitary and industrial wastewater treatment facilities, lift stations, land application systems, and septic tank systems which are inspected daily by the Directorate of Public Works [DPW] Services Division Operators and inspected quarterly and annually by DPW Environmental Division program media personnel. Additionally, weekly Erosion & Sedimentation compliance construction inspections are performed by DPW Environmental Stormwater personnel, to ensure Erosion & Sedimentation Pollution Control Plans best management practices have been implemented and are functioning as designed at construction sites.

Water Quality in stream grab samples are collected once annually during non-rain events from the stream segments and streams which discharge into the 303(d) listed impaired water bodies; these grab samples are collected utilizing automatic samplers [illustrated on the enclosed map with triangles, titled FS-MS4 Appendix G-TMDLs Sampling Locations Map]. The annual quantitative samples are collected and analyzed for Five-Day Carbonaceous Biochemical Oxygen Demand (CBOD5) and Ammonia (NH3) with calculations IAW Part III.C.1.b.1 of the National Pollutant Discharge Elimination System [NPDES] Industrial Stormwater Permit and results must be under the applicable benchmark value of Ultimate Oxygen Demand (UOD) of 125.0 mg/l to maintain compliance with the NPDES Permit. This annual in stream non-rain event grab sampling (2006-2009) of the stream segments which discharge into the listed impaired waters, documents FS MS4 does not exceed the TMDLs. The FS DPW Environmental Division will continue to monitor the FS MS4 outfalls and the stream segments which discharge into the 303(d) listed waters, and make required adjustments if conditions change or the TMDLs are exceeded. Enclosed is documentation of the parameters and results from 2009 sampling.

Fort Stewart implemented a compliance evaluation outfall screening program for Phase I Industrial Activities and outfalls for non-stormwater discharges (NSWDs) as part of Phase I Industrial Stormwater Permit requirements.

Additionally, the stream segments of the FS MS4 which discharge into the listed impaired waters are visually monitored during and after each rain event for the presence of stormwater parameters (color, odor, turbidity, floating solids, settled solids, suspended solids, foam, and oil sheen). There are visual grab samples collected on the stream segments which discharge into these listed impaired water bodies which are photo documented with date/time stamp and placed in the Industrial Master Stormwater Pollution Prevention Plan.

Sampling of the Phase II MS4 303(d) listed impaired water bodies for dissolved oxygen and fecal coliform will be performed once annually for the TMDL compliance requirements. Dissolved oxygen will be sampled by utilizing a sampling probe, and documented on a field inspection report with date, time, and the individual performing the sampling, instrument calibration, sample results, and a certification statement on the form. Samples for fecal coliform will be collected, handled and stored properly for submittal to a state certified lab, once annually for analyses. Documentation for these sampling events will be kept with the MS4 Stormwater Management Plan and submitted to the state during the annual reporting cycle.