LAKE MODEL RESULTS

CHLOROPHYLL A

TOTAL PHOSPHORUS (P)

TOTAL NITROGEN (N)

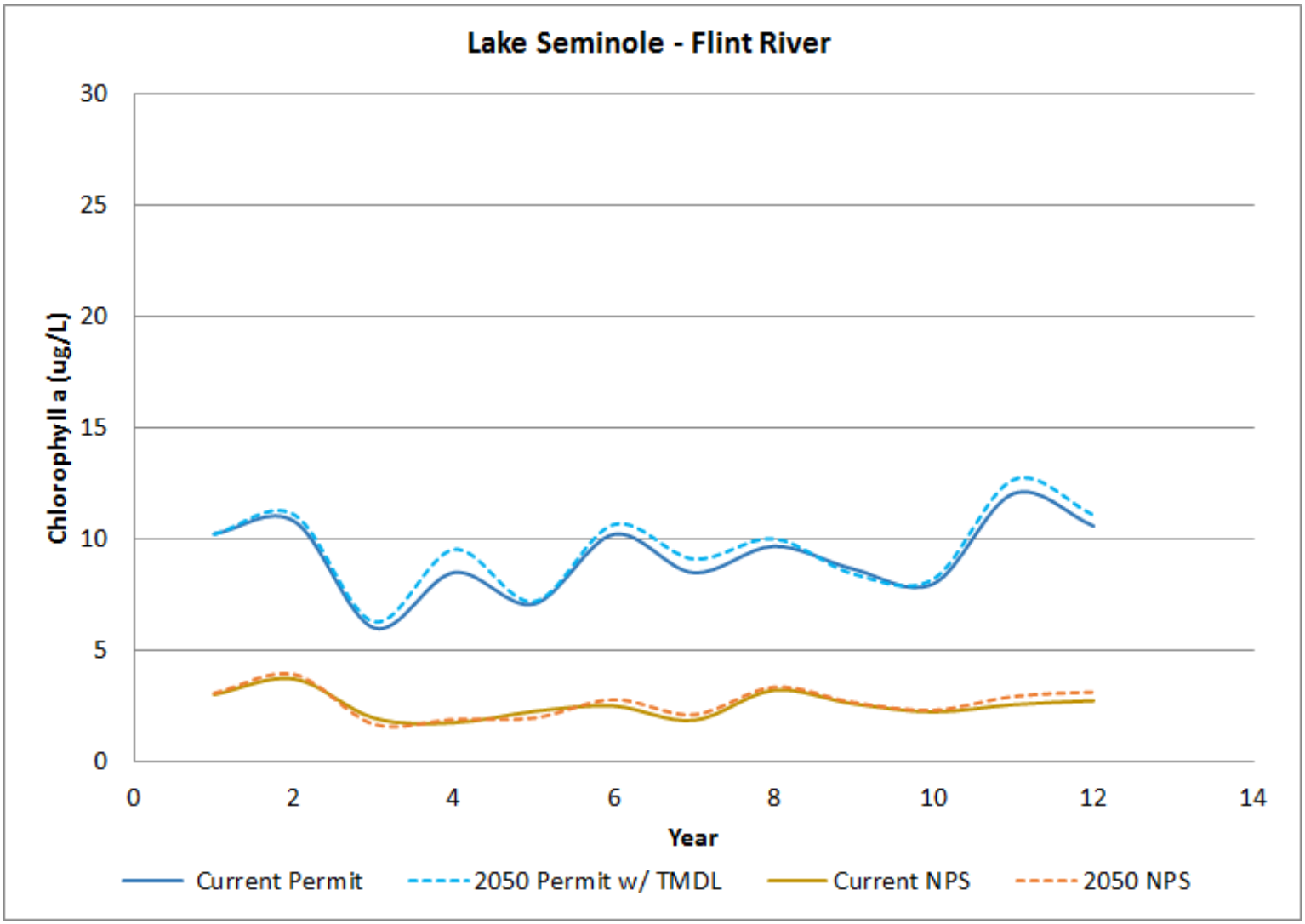
CURRENT & FUTURE CONDITIONS

LAKE SEMINOLE

LSPC is a watershed model that estimates the amount (or loading) of nutrients (total nitrogen and total phosphorus) that enter the lakes in the basin.

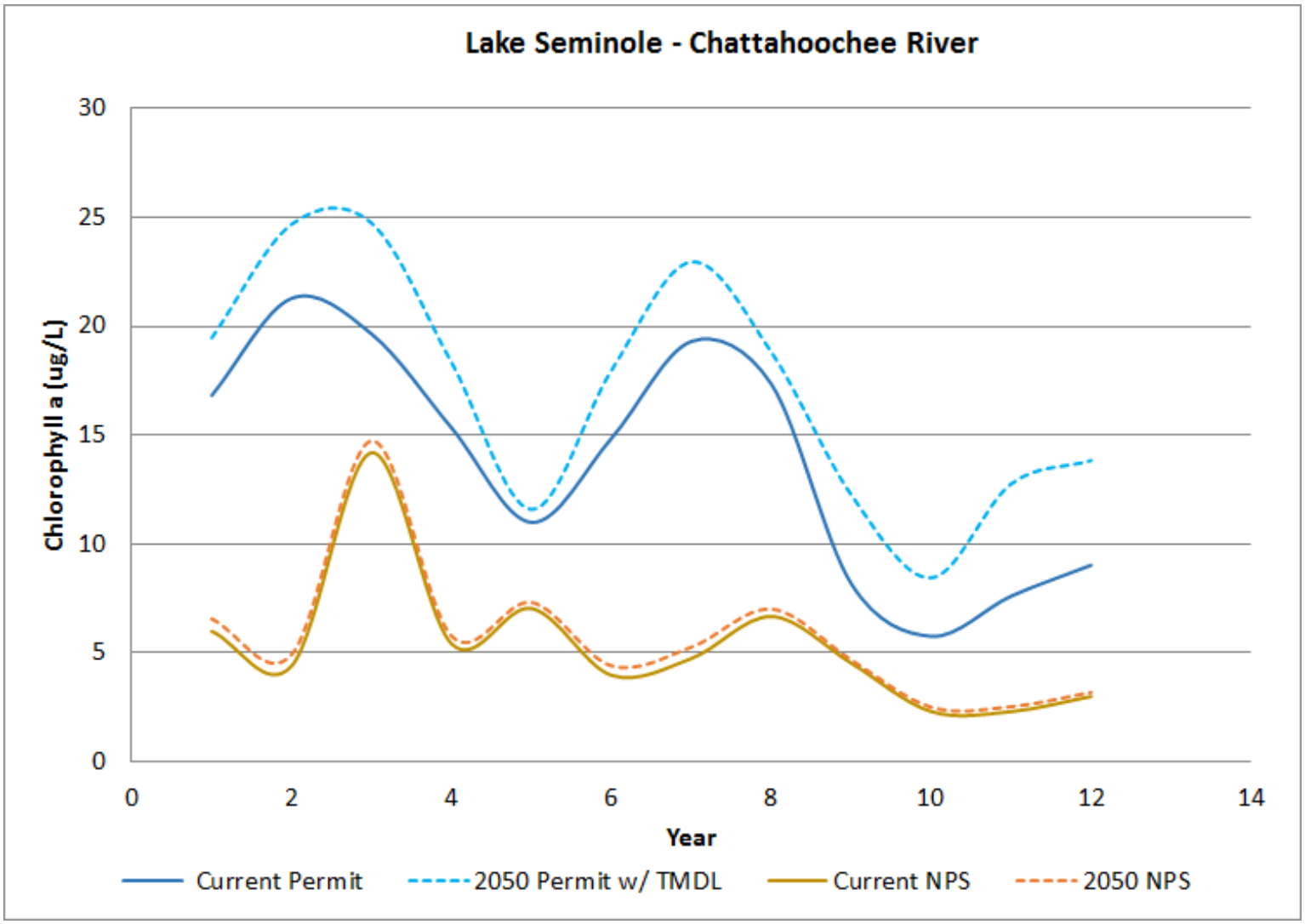
EFDC is a 3-dimensional hydrodynamic water quality model that estimates the response to the nutrients delivered to a lake, specifically the effect of nutrients on lake chlorophyll *a* levels. This model receives inputs from the LSPC models.

CURRENT AND FUTURE LAKE SEMINOLE CHLOROPHYLL *a* LEVELS FROM POINT & NONPOINT SOURCES



The blue lines above show the chlorophyll *a* levels that result from modeling the loads from wastewater discharge permits and nonpoint source pollution. The orange lines show the levels attributed just to nonpoint source pollution (NPS). For both, the solid lines show current levels and the dotted lines show levels projected for 2050.

CURRENT AND FUTURE LAKE SEMINOLE CHLOROPHYLL *a* LEVELS FROM POINT & NONPOINT SOURCES



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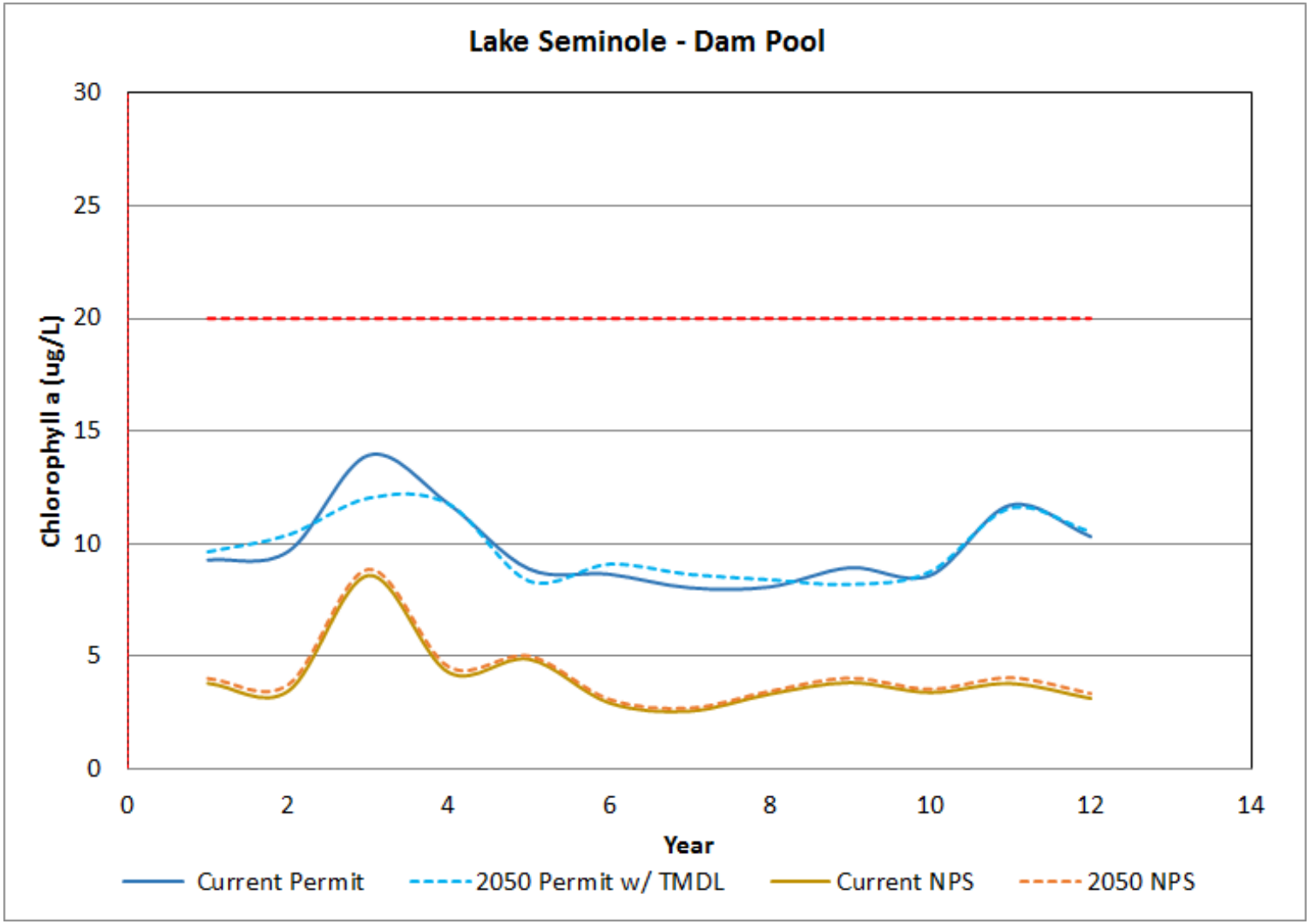

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GROWING SEASON AVERAGE TOTAL NITROGEN AND TOTAL PHOSPHORUS LEVELS (CURRENT AND FUTURE CONDITIONS)

	Scenario	Lake Chehaw/Worth	Lake Seminole
Total N (mg/L)	Current NPS	1.08	0.82
	Current PS + NPS	2.05	1.42
	2050 NPS	1.10	0.89
	2050 PS +NPS	2.20	2.21
Total P (mg/L)	Current NPS	0.058	0.046
	Current PS + NPS	0.173	0.079
	2050 NPS	0.060	0.048
	2050 PS + NPS	0.195	0.088

Growing Season: April - October

- ❖ No numeric nutrient criteria for Lakes Blackshear, Chehaw/Worth, and Seminole, but lake standards will be developed in the future
- ❖ Lake Blackshear Max Total N (under Current and Future Permit conditions) did not exceed 4 mg/L
- ❖ Lake Chehaw/Worth Max Total N (under Current Permit conditions) 4.6 mg/L
- ❖ Florida Lake Seminole Criteria - 1.27-2.23 mg/L Total N and 0.05-0.16 mg/L Total P
  - Max Total N at Dam Pool current conditions 1.06 mg/L , future conditions 2.80 mg/L
  - Max Total P at Dam Pool current conditions 0.126 mg/L, future conditions 0.111 mg/L