Instructions: Write a wetland management plan for the Prisock Moist-soil Management Complex at Noxubee National Wildlife Refuge. The plan should have two major sections: (A) Introduction to the Refuge and Complex and (B) Management Prescriptions. Your prescriptions should be based on the existing infrastructure, data collected during field reconnaissance, target DEDs for the Complex, available resources, and reflections on discussions with USFWS biologists and lectures delivered at UT. Minimum expectations of the management prescriptions are provided below. You are encouraged to develop maps, tables and/or flow charts to accompany the text that explains your management prescriptions. This assignment is due by 5:00 pm on Thursday, 6 December, and is 35% of your final grade.

Without consideration of a budget,

For one annual cycle (Mar 2019 – Feb 2020) and given the existing plant species, state of succession, and the hydrological infrastructure at the Prisock Moist-soil Management Complex, please provide the following information for each impoundment (total = 8) and the forested region (GTR) of impoundment 9:

1) Estimated DED / ha (given field reconnaissance, n = 8 plots per imp),
2) Given (1) make conclusions on the stage of succession,
3) Given (1) and (2), make recommendations on the date and timing of drawdown and flooding,
4) Given (2) and (3), make decisions on necessary mechanical manipulations, including contingency plans if undesirable plants establish or if the responding vegetation becomes so dense by autumn waterfowl use may be precluded,
5) Given (3), identify the wildlife communities (waterfowl [breeding and migratory], shorebirds or amphibians) that will be targeted, and provide an explanation how the hydrological manipulations will help meet annual life cycle needs of the targeted communities,

For the entire Prisock Complex,

6) Estimate total DEDs for the entire complex and determine whether there are sufficient energetic resources to meet targeted daily waterfowl use demands provided by USFWS (200,000 DEDs total = 1820 ducks per day for 110 days).
7) Now suppose that the daily waterfowl use demands increase by 10X, how many ha of rice (unharvested) vs. Japanese millet would need to be planted to meet those needs (Note: use Table 4.1 in Gray et al. 2013). Given (1) and (2), where would you do these plantings?
8) Suppose that refuge regulations change and waterfowl hunting will be allowed in the Prisock Complex, provide recommendations on weekly and impoundment access strategies that will minimize hunter-hunter conflicts and help maintain waterfowl abundance during the hunting season. Recommendations cannot violate MDWFP waterfowl hunting regulations (https://www.mdwfp.com/).

Reflecting on the realistic budget provided by USFWS,

9) Estimate the total management costs to meet the needs of 200,000 DEDs total. If the cost is beyond the available budget, what adjustments would you make?
Grading Criteria: 200 pts total

(A) Introduction (10%, 20 points)

(B) Management Prescriptions (80%, 160 points)
   1) DEDs per impoundment = 8%
   2) Stage of Succession = 2%
   3) Water manipulations = 15%
   4) Mechanical manipulations = 15%
   5) Wildlife Communities = 10%
   6) Total DEDs = 5%
   7) Increasing DEDs = 5%
   8) Hunting = 10%
   9) Budget = 10%

(C) Peer grading (10%, 20 points)

NOTE: If a student receives 0 points from ALL other team members, the student will receive 0 points on the entire management plan.

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¹List names of your team members excluding yourself.
²Grade (0–20 pts) each of your team members with respect to their contribution to the management plan.
³Your peer-evaluation score will be based on the average of your team members’ assessment of your contributions.