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**Subject:** Review Requested - San Bernardino NWR Draft Pond Water Budget Analysis  
**Date:** Thursday, July 9, 2020 8:27:36 AM  
**Attachments:** [2020709 SBR Draft Pond Water Budget Methodology](#) (b) (5)  
[20200709 SBR Pond Water Budget Analysis Calculations.xlsx](#)

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Hi Everyone,

I've attached for your review the draft document summarizing the methodology I propose to use to complete the pond water budget analysis for San Bernardino NWR. This analysis will be used to estimate the amount of water the refuge needs from a biological perspective to:

1. manage all existing ponds optimally for the benefit of the aquatic species within them, and
2. maintain outflows from ponds into Black Draw and its tributaries for the species located there.

I've applied the proposed approach to Brasher Pond, one of twenty ponds on the refuge. Brasher Pond is also one of the five Hackberry ponds. I've attached the associated spreadsheet so that you can see my calculations.

(b) (5)

[Redacted content]

Please review the draft document and send me any questions or concerns. Once I've received feedback and addressed any issues, I'll proceed to apply the approach to the remaining ponds. Thanks.

Peter

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