ENGINEERING

Refuge Manager, Tewaukon Refuge,
Cayuga, North Dakota

March 7, 1966

EH-R Tewaukon
WMP

Regional Supervisor,
Division of Wildlife Refuges

Computing Refuge Inflow (your memo 3-2-66)

Your proposal to compute refuge inflow to the three pools, nos. 1, 2, and 5, is more than satisfactory to Engineering. Actually Mr. Umberger in his February 4, 1966, memorandum of comment on the 1966 Annual Water Program was suggesting only to compute the gross inflow from the entire refuge to Lake Tewaukon.

Stephan
3-7-66

However, if you can adapt the inflow-outflow computation procedure to the individual Tewaukon Refuge stream sources, we will be in just that much better a position to verify water use.

Umberger
3-7

The method of computing outflow at the Tewaukon structure was attached to Mr. Umberger's memorandum as an example on how to arrive at the monthly Tewaukon outflow which can be recorded in the column provided on the monthly gauge report form.

Carpenter
3-8

Forrest A. Carpenter

CWStephan:rj 3/7/66

EH
3-17

OPTIONAL FORM NO. 10
5010-104

UNITED STATES GOVERNMENT

Memorandum

MAR 4 1966
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TO : Regional Director, BSF&W, Mpls. 8, Minn. DATE: March 2, 1966

FROM : Refuge Manager, Tewaukon Refuge
Cayuga, North Dakota

SUBJECT: Computing refuge inflow

The example of computing refuge inflow given at the Regional Conference (Slade Refuge) shows the inflow for each pool. The inflow data is derived from acre-feet of gain + the outflow for each pool. At this time we can determine outflow on only three structures. The Lake Tewaukon structure, from which we will be able to compute gross inflow from all sources; the structure on pool 5 from which we should be able to determine inflow in the Clouds Lake drainage and the Cutlers Marsh structure which, by subtracting outflow recorded there from Lake Tewaukon outflow, should give us the contribution of the intermittent stream at the east end of the lake.

As additional water control structures are constructed we should be able to further refine our inflow data so that we can determine the contributions of each of the four intermittent streams and the Wild Rice River that supply water for our management program.

Please advise if this will satisfy engineering's needs.

James F. Gillett

Looks good to me
ETD

Corl: let Jim know if satisfactory with you. ETD