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1988 OCT 21 PH 2:38

MARY E. WELTY RECORDER MADISON COUNTY, INWA ASEMENT Fee \$25.00 paid For one dollar (\$1.00) and other valuable consideration received, 50072 Robert P. Hibbs Earlham, Iowa (Name) (Address) (Address) (Name) Grantor, does hereby grant to Fred R. Hunter Trust FBO Margaret Hunter Schafer East Fifth and Locust Hawkeye Bank & Trustee Des Moines 50307 East Fifth and Locust Streets Des Moines, Iowa (Name) 50307 (Address) Grantee, a perpetual easement as described below, upon those parts of the following described land located Bulger Creek Madison in the Watershed in the County of . SW\ SE\ of Section 10, T. 77N, R. 28 W Madison County, Iowa

The grantor covenants that he/she is the owner in fee simple of the above-described land and that the lands are free and clear of all encumbrances and liens except the following:

NONE

The easement granted is perpetual, shall run with the land and shall be binding upon the successors or assigns of both the Grantor and the Grantee. The easement includes the following terms: (1) The Grantee is granted a right to survey, plan, construct, operate, maintain, and inspect the works of improvement and soil conservation measures as shown on the land rights work map dated  $\frac{1}{280}$  July attached, and hereby incorporated by reference. The structure has been numbered n/a The parties understand that the land rights work map is not a certified survey, that it is attached sold that the jurpose of describing the intended project and not as an engineering or land surveying documents and if the things in the project may be made at the time of construction. Material deviations from the land rights work map shill require the approval of both Grantor and Grantee as evidenced by a recorded amendment. (2) The Grantor shall permit flowage on the land described above of water in, over, upon, through, or below such structures and the Grantee shall be permitted access to the land described above to maintain such flowage.

(3) The Grantee shall have a perpetual right to permanently or temporarily inundate the land described above with waters impounded by or released from the structures as shown by the attached land rights work map.

(4) The rights granted by this easement shall terminate at any time when mutually agreed upon by the Grantor and Grantee; or when Grantee notifies the Grantor that it no longer intends to exercise any rights under this

Bulger Creek easement; or if construction operations in the Watershed do not 19\_89 September 1

(5) For the purposes stated in this easement, Grantee or its authorized agents shall have the right of ingress and egress at any time and at locations as determined by the Grantee upon the above described land.

(6) The Grantor reserves the right to use said land or any part thereof, provided such use does not interfere with

the enjoyment by the Grantee of the easement herein conveyed.

(7) The Grantor shall not alter or permit alteration of any improvement installed under the terms of this easement without prior approval of the Grantee. The Grantor shall restore to the original specifications any improvement which the Grantor, without the approval of the Grantee, has altered or permitted to be altered.

(8) The Grantor shall be responsible for written notification to any present tenant or subsequent tenant of the

existence of this easement and where a copy of the same may be located.

(9) The Grantee shall give at least ten days' written notice to the Grantor of the date when invitations for bids for construction will be released. The Grantor may salvage crops, fences, bridges, culverts or other items until the end of this ten-day period, but no later unless special arrangements are made to extend the ten-day period and such special arrangements are included in the invitation for bids.

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(10) The Grantee shall remove and of necessary for construction operations. If such salvage must be completed at the exp special arrangements are made, as provisalvaged by the Grantor within the time made, may be salvaged by the Grantee's proceeds from their sale.  (11) The Grantor shall construct tem from livestock and provide adequate prot area of construction operations until pla completely installed or constructed; or in (12) The Grantee shall, as far as pract to the condition before operations began.  (13) The Grantor may re-establish or necessary after planned improvements re-established or constructed shall not in The Grantee shall have authority under the Grantor for th	ense of the Grantor before the date of the dude under (9) above. Any item to be reprovided in (9) above, and for which contractor. The Grantor shall have not construct a provided in the Grantor shall have not construct a provided improvements, including estable any manner hinder construction operable, restore the ingress-egress routed construct permanent fences or other have been installed. However, such perfere with the proper functioning of the construction of the provided provided in fences are present to prohibit grazing which is provided to put in fences are construct to provent significant to prove the provided in fences are constructed to provide the proper functioning of the provided provided to the p	the release of invitations to bid, unless emoved for construction which is no no special arrangements have been rights to such salvaged items or that the area of construction operation uny fences upon, across or through the lishment of grass stands, have been rations.  The works of improvement to be the works of improvement installed the total construction operation that the works of improvement installed the works of improvement in				
(14) The Grantee is authorized to employ private contractors who shall enjoy the same privileges and rights under this easement as the Grantee. In accordance with an agreement between the United States and the Grantee, the						
United States shall enjoy all of the rights	United States shall enjoy all of the rights and privileges of the Grantee under this easement.  Words used in this easement including the acknowledgment below shall be read as plural or singular and as					
masculine, feminine or neuter as require	d by the context.	De read as prorat of singular and a				
Signed this21s+		James a ser en la segui				
Signed this	day of OCTO	ober, 19 $occ$				
	x Cobe	V ( Hills				
		(Signature of Grantor)				
		(Signature of Grantor)				
STATE OF IOWA	ss.					
COUNTY OF MADISON	<b>)</b> 555.					
<u></u>		00				
On this 21 day of OCTOR		88, A.D. before me a Notary Public				
personally appeared ROBEICT P		, to me known to be the person name				
in and who executed the foregoing instrum						
the same as HIMSELF	voluntary act and	deed.				
KENNETH C. WILSON	Kemith (	3/11/ Jun				
MY COMMISSION EXPIRES	- Jemon N	JOHN Public in the State of Iowa				
7041 0 - 1	My Commissio	on expires $6-7$ , $19.1$				
STATE OF IOWA		# Marion ab				
COUNTY OF	SS.	The state of the s				
On this day of	. 19	, A.D. before me, a Notary Public, i				
and for said county, personally appeared		to me personally known				
who being by me duly sworn did say that	is					
On this day of and for said county, personally appeared who being by me duly sworn did say that said corporation, that the seal affixed to	said instrument is the seal of said co	orporation and that said instrumer				
was signed and seated on bendit of	ne saia corporation by authority	of its ovara of airectors and in				
said deed of said corporation by it voluntarily	<ul> <li>acknowledged the execution of said i executed.</li> </ul>	nstrument to be the voluntary act an				
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	N	lotary Public in the State of Iowa				
Peg Schafer  CPESSOR BOY 306, Earlh	My Commission	on expires, 19				
mail Boy 306, barth	em	*				

#### FLOOD PLAIN PROJECT SUMMARY REPORT

D. N. R.

Project: Andy Schafer - Erosion control structure, FP 88-172 = Permit No

Prepared By: Eldon Strange/Jeff Simmons

Date: October 10, 1988

## PROJECT DESCRIPTION

Andy Schafer has submitted plans and an application for approval to construct and maintain an erosion control structure across an unnamed watercourse in the SW 1/4 of the SE 1/4 of Section 10, T77N, R28W, Madison County, Iowa. The proposed dam will inundate 3.4 acres and permanently store approximately 25 acre-feet of water.

#### DEPARTMENT JURISDICTION

The dam will provide more than eighteen acre-feet of water in permanent storage. Therefore, approval from the Department of Natural Resources is required as specified in 567--71.3(1)"b"(455B), Iowa Administrative Code (IAC). The structure also requires a water storage permit because the permanent storage of the dam is greater than eighteen acre-feet.

#### PROJECT REVIEW

The review consisted of evaluating the design plans and hydrologic and hydraulic data to ensure that the design meets the criteria of the Department. The review was based on a low hazard classification, which was verified from examining a U.S.G.S. topographic map. The drainage area and time of concentration were determined with the use of a topographic map. Flood hydrographs used in the review include the principal spillway storm (10 year 24-hour) and the freeboard storm (50 year 24-hour). The rainfalls for the hydrograph development were obtained from the Department of Agriculture publication "Climatology of Iowa Series #2". The hydrographs were routed through the dam using the SCS "Dams 2" computer program. The results of the routing plus additional pertinent information can be found on the attached data summary sheet.

The proposed project meets all applicable criteria for low hazard dams as outlined in 567--72.3(455B), IAC and Department Bulletin No. 16, "Design Criteria and Guidelines for Iowa Dams."

### RECOMMENDATIONS

The proposed dam meets all relevant approval criteria in the administrative rules and the applicable statutory criteria in Iowa Code Sections 455B.262, .264, .275 and .277. It is recommended that the project be approved with all applicable general conditions.

JDR: JS: pla/EARL

Reviewed By: E. Strange Approved By: J. Simmons

# SUMMARY OF ENGINEERING DATA (Dams and Impounding Structures)

Applicant: Andy Schafer

Address: R.R. #1, Earlham, Iowa 50072 Location and Stream: SW 1/4 of the SE 1/4 of Section 10, T77N, R28W,

Madison County - Unnamed

Name of Dam: Schafer

Type and Purpose of Dam: Rolled Earth - Erosion Control Principal Spwy. Size, 18" CMP with hood inlet

Type and Inlet

Hazard Class: Low Major Structure: No

Drainage Area: 110 Acres (0.17 mi<sup>2</sup>)

Time of Concentration: 0.32 hours

Storage:

Permanent Storage (acre-feet) 25.0 Total Storage to Emer. Spwy. (acre-feet) 38.8 Total Storage to Top of Dam (acre-feet) 53.5 Impoundment Area (acres) 3.4

Details of Embankment:

Volume of Dam (cu. yds.) Length (feet) Emer. Spwy. Width (feet) 350 10 Low-Level Outlet None

Elevation Data: Principal Spillway Crest\*

52.0 Emergency Spillway Crest\* 55.5 Top of Dam\* 57.6 Downstream Toe of Dam\* 27.3

#### Design Flood Hydrograph Routings:

<u>Principal</u>	Spillway	Hydrograph	Freeboard Hydrograph
	1 day	10 day	
rainfall (inches)	4.75		6.15
RCN	78		78
runoff (inches)	2.50		3.71
peak runoff rates (cfs)	253		380
maximum pool elevation*	55.5		56.5
peak spillway discharge (cfs)	23.3		48.0
peak emer. spwy. discharge (cfs)			24.3
emer. spwy. velocity (ft./sec.)			4.1

Type of Inspection: Topographic Map

Inspection Requirements: Inspect as time and staffing allow.

\*(ft., plan datum)

JDR:JS:pla/EARL

