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**IOWA DEPARTMENT OF NATURAL RESOURCES  
FLOOD PLAIN DEVELOPMENT PERMIT**

FILED NO. 001571

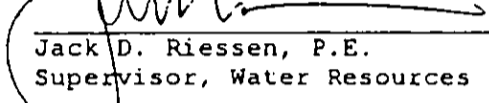
BOOK 46 PAGE 5

1999 OCT 18 PM 3:15

PERMIT NUMBER: FP 99-251

PERMIT ISSUED TO: Robert Trausch  
720 Northwestern Avenue  
Audubon, IA 50025

NICHELLE UTSLER  
RECORDER  
POLK COUNTY, IOWA

PERMIT ISSUED BY:  DATE: 10/12/99  
Jack D. Riessen, P.E.  
Supervisor, Water Resources Section

PROJECT LOCATION: SE1/4, NW1/4 Section 25, T77N, R26W, Madison County, Iowa

**PERMITTED ACTIVITY:** In accordance with the approved engineering plans and subject to the following permit conditions, permittee is authorized to construct and maintain a rolled earth dam across an unnamed tributary to Badger Creek at the above-described location.

**BASIS FOR ISSUANCE:** The decision to issue this permit was based on a staff review of the project with respect to relevant approval criteria contained in Chapter 72 of the Department's administrative rules (Agency 567, Iowa Administrative Code) and applicable provisions of Iowa Code Sections 455B.262, .264, .275 and .277.

**PERMIT CONDITIONS:**

- Disclaimer.** No legal or financial responsibility arising from the construction, operation or maintenance of the approved works shall attach to the state of Iowa or the Department due to issuance of this permit.
- Maintenance.** The permittee and any successor in real estate on which the permitted activity is located shall be responsible for proper maintenance. Such maintenance shall include keeping the embankment well vegetated, clear of trees and brush, and free of surface erosion; keeping the spillways clear of obstructions; and periodically inspecting the dam.
- Other Permits, Licenses and Regulations.** The permittee shall be responsible for complying with all other local, state and federal statutes, ordinances, rules and permit requirements applicable to the construction, operation and maintenance of the approved works.
- Revocation.** This permit may be revoked by the Department if construction is not completed within three years of the date of issue.
- Change in Plans.** This permit only authorizes construction in accordance with the approved engineering plans. No changes shall be made without prior authorization from the Department.

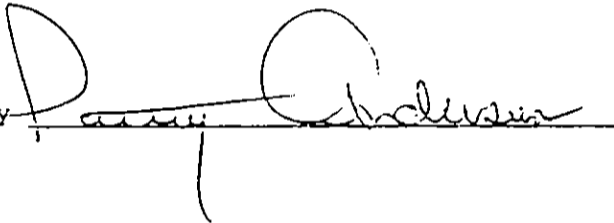
STATE OF IOWA  
COUNTY OF POLK  
I HEREBY CERTIFY I AM THE OFFICIAL AND LAWFUL CUSTODIAN  
OF THE PUBLIC RECORDS MAINTAINED BY THE IOWA DEPARTMENT  
OF NATURAL RESOURCES AND THE FOREGOING DOCUMENT IS  
A TRUE AND ACCURATE PHOTOCOPY OF THE RECORD COPY  
MAINTAINED IN MY CUSTODY AS A PUBLIC RECORD OF THE  
DEPARTMENT IN THE ORDINARY COURSE OF ITS BUSINESS.  
EXECUTED AT DES MOINES, IOWA

*N. Utsler* OCT 14 '99

- 6. Lands, Easements and Rights-of-Way. The permittee shall be responsible for obtaining all lands, easements or rights-of-way necessary for the construction and maintenance of the approved works.
- 7. Development Around the Impoundment. A flood plain permit from this department is required for the construction of any house or building and associated fill adjacent to the impoundment below the top of dam elevation 911.4 feet, plan datum.

**CERTIFICATION OF MAILING**

I hereby certify that I have this 14<sup>th</sup> day of October, 1999 mailed Flood Plain Development Permit No. FP 99-251 to the permittee.

By 

Reviewed By: \_\_\_\_\_  
 Approved By: \_\_\_\_\_

**SUMMARY OF ENGINEERING DATA**  
 (Dams and Impounding Structures)

Applicant: Robert Trausch  
 Address: 720 Northwestern Ave., Audubon, IA 50025  
 Location: SE1/4, NW1/4, Section 25, T77N, R26W, Madison County, Iowa  
 Stream: Tr- Badger Creek Basin No.: 46  
 Name of Dam:  
 Type and Purpose of Dam: Rolled Earth – Residential Development & Erosion Control  
 Principal Spillway: 24-inch diameter CMP with hooded inlet and cantilevered outlet  
 Hazard Class: Low Structure Class: Non-major  
 Nearest Downstream City: Carlisle Miles to City: 23  
 Drainage Area: 183 acres  
 Time of Concentration: 0.31 hours  
 Designer: J. Russell Hochstetler  
 Water Storage Permit No.: FP Permit No.: 99-251

Storage:

Permanent Storage (acre-feet)	52.0
Total Storage to Emergency Spillway (acre-feet)	N/A
Total Storage to Top of Dam (acre-feet)	102.1
Impoundment Area (acres)	7.5

Elevation Data:

Principal Spillway Crest*	906.0
Emergency Spillway Crest*	**None
Top of Dam*	911.4
Downstream Toe of Dam*	880.0

Other Information:

Volume of Embankment (cu. yds.)	54,300
Length of Embankment (feet)	722.
Emergency Spillway Width (feet)	N/A
Low-Level Outlet Details	None

Design Flood Hydrograph Routings:

		<u>Principal Spillway Hydrograph</u>	<u>Freeboard Hydrograph</u>
		24-hour	6-hour
Rainfall	(inches)	4.8	6.2
RCN		73.	73.
Runoff	(inches)	1.92	3.05
Peak Runoff Rate	(cfs)	292.	465.
Maximum Pool Elevation*		908.4	909.4
Peak Total Discharge	(cfs)	14.4	33.8
Peak Emer. Spwy. Discharge	(cfs)		**N/A
Emergency Spillway Velocity	(ft./sec.)		N/A

Type of Inspection: Field Inspection

Inspection Requirements: Departmental inspection as time and staffing allow.

\*(ft., plan datum)

\*\* An 18-inch diameter CMP at elevation 909.4 is provided as a token emergency spillway. It was ignored during the flood routings.