

# IOWA DEPARTMENT OF NATURAL RESOURCES FLOOD PLAIN DEVELOPMENT PERMIT

STATE OF IOWA COUNTY OF POLK

PERMIT NUMBER: FP 2003-286

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.

DATE: 11-13-03

PERMIT ISSUED TO: Forrest Ridgway

1010 Badger Creek Road EXECUTED AT DES MOINES ON

Van Meter, IA 50261

Casian Meson 100 1903

PERMIT ISSUED BY:

Kelly M. Stone, P.E.

Supervisor, Water Resources Section

PROJECT LOCATION: SW1/4, SE1/4 Section 36, T78N, R27W, Dallas 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 the Raccoon River 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 lowa or the Department due to issuance of this permit.
- Other Permits, Licenses and Regulations The permittee shall be responsible for 2. 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.
- This permit may be revoked by the Department if construction is not 3. Revocation. completed within three years of the date of issue.
- This permit only authorizes construction in accordance with the 4. Change in Plans. No changes shall be made without prior authorization from the approved plans. Department.
- 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.

- 6. <u>Construction Inspection</u>. Construction shall be inspected by a professional engineer registered in the State of lowa or by a trained inspector under the supervision of the engineer. Upon completion of construction the engineer shall prepare and certify as-built plans (record drawings) and a construction inspection report detailing any changes in design and any unusual circumstances encountered during construction. Those items should be submitted to the department; Attention: Water Resources Section.
- 7. Acceptance Inspection. Upon completion of construction the permittee shall notify the Water Resources Section' of this department so that an acceptance inspection can be made to determine whether the observable features of the project are consistent with the approved plans. The impoundment shall not be allowed to fill until the acceptance inspection has been made and the department has issued a letter of acceptance.
- 8. Owner Inspection and Maintenance. The permittee shall be responsible for periodically inspecting the dam and submitting an annual inspection report to the Water Resources Section of this department. The report should include a description of maintenance work done since the last reporting period. Routine maintenance should include keeping the embankment well vegetated, clear of trees and brush, and free of surface erosion; and keeping the spillways clear of obstructions.
- 9. <u>Departmental Access for Inspection</u>. The permittee shall allow Department staff access to the dam for the purpose of making periodic dam safety inspections.
- 10. <u>Development around Impoundment</u>. A flood plain permit from this department is required for the construction of any house or building and for the placement of associated fill adjacent to the impoundment below the top of dam elevation, 942.0 feet, NGVD.

## **CERTIFICATION OF MAILING**

I hereby certify that I have this 18th day of Nonber, 203 mailed Flood Plain Development Permit No. FP 2003- 286 to the permittee.

By Holly Huddlaston

Reviewed By: Approved By:

## SUMMARY OF ENGINEERING DATA

(Dams and Impounding Structures)

Applicant: Forrest Ridgway

Address: 1010 Badger Creek Road, Van Meter, IA 50261

Phone: 515/996-2112

Location: SW1/4, SE1/4 Section 36, T78N, R27W, Dallas County

Stream: Tr- Raccoon River Basin No.: 40

Name of Dam: Ridgway Lake Dam

Type and Purpose of Dam: Rolled Earth - Recreational and Residential Development

Principal Spillway: 36-inch diameter RCP with drop inlet

Hazard Class: High Structure Class: Major Downstream City: West Des Moines Miles to City: 7

Nearest Downstream City: West Des Moines
Drainage Area: 289 acres

Time of Concentration: 0.89 hours

Designer: Steven/K. Venard – Bishop Engineering Co.

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(acre-feet) 162.2 Permanent Storage Storage: Total Storage to Emergency Spillway (acre-feet) 236.8 (acre-feet) 371.5 Total Storage to Top of Dam Impoundment Area 17.0 (acres) Principal Spillway Crest\* Elevation Data: 932.0 936.0 Emergency Spillway Crest\* Top of Dam\* 942.0 893.0 Downstream Toe of Dam\* (cu. yds.) Unknown

Other Information: Volume of Embankment (cu. yds.) Unknown
Length of Embankment (feet) 750.

Emergency Spillway Width (feet) 50.

Low-Level Outlet Details Gated 12" PVC @ elev. 919.5

Low-Level Outlet Details Gated 12" PVC @ elev Embankment Core – Type and Position Earth – Homogeneous

Foundation Material Soil and Rock

### Design Flood Hydrograph Routings:

		Principal Spillway Hydrograph 1-day/ 10-day		Freeboard Hydrograph 6-hour
Rainfall	(inches)	6.8	11.6	26.2
RCN		75.	58.	75.
Runoff	(inches)	3.97	5.93	22.58
Peak Runoff Rate	(cfs)	313.		3584.
Maximum Pool Elevation*		934.3		941.3
Peak Total Discharge	(cfs)	162.		2321.
Peak Emer. Spwy. Discharge	(cfs)	The second second		2141.
Emer. Spillway Velocity	(ft./sec.)			14.4

Type of Inspection: Field inspection.

<u>Inspection Requirements</u>: Departmental inspection upon completion of construction and at least once every two years thereafter.

\*(ft., NGVD)



STATE OF IOWA

THOMAS J. VILSACK, GOVERNOR SALLY J. PEDERSON, LT. GOVERNOR

DEPARTMENT OF NATURAL RESOURCES

JEFFREY R. VONK, DIRECTOR

November 19, 2003

Michelle Utsler Madison County Recorder P.O. Box 152 Winterset, IA 50273

SUBJECT:

Flood Plain Construction Permit FP 2003-286

Dear Ms. Utsler:

Enclosed is a copy of the above-mentioned Flood Plain Construction Permit. This permit represents formal action taken by the lowa Department of Natural Resources which in some way may affect future owners of property located in the N1/2, NE1/4 Section 1, T77N, R27W, Madison County, Iowa.

We hereby request that this document (Flood Plain Construction Permit FP 2003-286) or a copy thereof be filed with your records concerning the previously described property, thereby notifying all future owners of this property of the restrictions imposed by this permit by which they will be bound.

Please return a "Filed" stamped copy of the permit with a bill for the requested services to me at the address listed below.

If you have any questions concerning this matter, feel free to contact me at 515/281-6930.

Sincerely,

Dave Allen

Water Resources Section

Enc. FP 2003-286