

Adams County Inspection - Operation - Maintenance (I.O.M.) Plan for County-Owned Dams

INTRODUCTION:

An Inspection, Operation, and Maintenance Plan (I.O.M.) as discussed in Chapter NR335 of Wisconsin Administrative Code is a document prepared for existing and proposed dams in the State of Wisconsin. The purpose of the Adams County-Owned Dams Plan I.O.M. is to provide specific guidance and responsibilities to primarily reduce the likelihood of a dam failure event and secondarily to safeguard the lives of the general public along County creeks, river, and streams.

The Wisconsin Department of Natural Resources (WDNR) and Adams County Land and Water Conservation Department have a joint responsibility to see that the Adams County owned dams are adequately operated and maintained in the interest of public rights in navigable waters to promote safety and protect life, health, and property. The WDNR's role is one of regulatory control whereas the dam owner, Adams County, has the sole financial burden of costs related to building or repairing their dams. In order for Adams County to fulfill their responsibility the WDNR requires the LWCD to prepare, maintain, and utilize an I.O.M.

The remainder of this document is divided into six sections as listed below:

- ❑ **General Dams Information:** General information on each County-Owned Dam.
 - ❑ **Inspection:** Inspections are divided into weekly, monthly, and yearly activities for routine inspection, operation, and maintenance.
 - ❑ **Emergency:** When identified storm-events or other dam-related emergencies occur, Adams County's Emergency Action Plans (E. A. P.s) shall be followed.
 - ❑ **Water Levels/Hydrology:** Water-levels will be recorded during inspections with the exception of unscheduled storm-events. Water levels will be recorded in the appropriate dam binder.
 - ❑ **Contact Information:** General contacts for regular operation
 - ❑ **Maps:** Appropriate maps indicating location, orientation, and relative size of each dam in relation to the respective impoundment.
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GENERAL DAM INFORMATION

Arrowhead: Arrowhead Dam was constructed in 1972 for recreational/development purposes. The dam consists of a morning glory overtopping spillway and a submerged inlet control through a slush gate. The morning glory acts as an emergency spillway. Arrowhead Dam impounds approximately 300 acres with an average depth of 8 feet.

Camelot (Kingsway): Camelot Dam was constructed in 1972 with recreational/development purposes. The dam consists of a submerged inlet with gated control for drawdown and an overflow pipe for normal stream flows. NOTE: THIS DAM IS NOT USED FOR LAKE ADJUSTMENTS. ALL ADJUSTMENTS ARE MADE THROUGH LOWER CAMELOT. Kingsway Dam impounds approximately 191 acres with an average depth of 8 feet.

Camelot (Lower): Camelot Dam was constructed in 1972 for recreational/development purposes. The dam consists of a morning glory overtopping spillway and a submerged inlet control through a slush gate. The morning glory acts as an emergency spillway. Camelot Dam impounds approximately 260 acres with an average depth of 8 feet.

Cottonville: Cottonville Dam was constructed in 1926 for power generation purposes. The dam consists of two large tainter gates and a power house with two generators. The emergency spillway is a grassed waterway on adjacent landowner property. Cottonville Dam impounds approximately 205 acres with an average depth of 9 feet.

Easton: Easton Dam was constructed in 1855 for grist mill purposes. It was intentionally breached for safety concerns in 2008. Reconstruction began in 2009. The principal control structure is a 14' by 20' concrete riser box with 34 feet of weir length and a spillway consisting of twin box culverts through the embankment and a lined plunge pool. Easton dam impounds approximately 24 acres with an average depth of 5.5 feet.

Fawn: Fawn Dam was constructed in 1971 for recreational purposes. The principal control structure is a pipe and riser system. This system utilizes a combination stop-log for lake level and slush gate for water outlet. The emergency spillway is an overland spillway through the County-owned parking lot. Fawn Dam impounds approximately 29 acres with an average depth of 5 feet.

McGinnis: McGinnis Dam was constructed in 1966 for recreational purposes. The principal control structure is a pipe and riser system. This system utilizes stop-logs both for water level maintenance and primary water outlet. The emergency spillway consists of an earthen grassed waterway. McGinnis Dam impounds approximately 33 acres with an average depth of 9 feet.

Peppermill: Peppermill Dam was constructed in 1967 for recreational purposes. The principal control structure is a pipe and riser system. This system utilizes stop-logs both for water level maintenance and primary water outlet. The emergency spillway consists of an earthen grassed waterway. Peppermill Dam impounds approximately 100 acres with an average depth of 7 feet.

Sherwood: Sherwood Dam was constructed in 1972 for recreational/development purposes. The dam consists of a morning glory overtopping spillway and a submerged inlet control through a slush gate. The morning glory acts as an emergency spillway. Camelot Dam impounds approximately 243 acres with an average depth of 8 feet.

INSPECTION

Responsibilities:

Adams County: Inspection/Operation/Maintenance on “southern” dams, Inspection/Maintenance on Cottonville, and Inspection/Operation/Maintenance on Tri-Lakes Dams.

Charles Pfeiffer: Operation of Cottonville.

Inspection Procedures:

Rainfall Events (1 inch or less in 24-hour period/non-emergency)

1. Call watershed contacts listed in EAP and document watershed conditions. If needed adjust flow control structure prior to rising water thereby creating a proactive approach to watershed runoff. Call Downstream Contacts. If downstream contacts can not be made by phone, one should make direct contact at residence.

Weekly (Monday-Wednesday-Friday)

1. Provide a weekly printout documenting predicted forecasts from NOAA.gov website. Maintain printout in log clipboard until following week.
2. Monitor and record lake water levels based on the USGS markers if applicable. Record in feet/tenths. Adjust water flow control structure to meet WDNR mandated water levels and 25% Low Flow.
3. Check inlet and outlet to assure free flowing conditions. Remove trash and debris from inlet and outlet as needed.
4. Check required signs to maintain readability and proper placement. Report missing or damaged signs to supervisor.
5. Look for wildlife damage and repair as needed with Land and Water Conservation Staff Recommendations. If significant damage has occurred, report it to supervisor immediately.
6. Inspect dam and dam structures for settlements, sinkholes, seeps, turbid discharge, structural cracking, foundation movement, erosion, depressions, boils, fence damage, and vandalism, if any of these are found, report them to supervisor immediately.
7. Pick up litter and dispose in garbage container.
8. Monitor and record all monitoring well/piezometer water depths on all applicable dams.
9. Easton/Arrowhead/Kingway Camelot Only. Monitor and log all visible pavement separation joints (cracks). All cracks will be measured and logged.

10. Record and report all violations of Adams County Dam Owned Property Ordinance to appropriate law officials. Documentation required.
11. Identify all needed repairs (non-emergency).
12. After snowfall, remove snow and maintain access to all required points of the dam necessary for inspection, operation, and maintenance.
13. During ice-cover, measure and record average ice thickness. Caution shall be used. Individuals will not measure ice thickness if alone.

Monthly

1. Mow and trim grass in May, July, and September, or as needed. If mowing contract exists, abide by documented schedule.
2. Operate water flow control structure to insure working condition.
3. Eliminate woody plants, noxious weeds, and invasive plants growing on dam by means of chainsaw, Herbicides, or other Department approved methods.

Yearly

1. Update and review any existing dam related contracts, ordinances, I.O.M. EAP, inspection reports, or other maintenance related documents.
2. Conduct a comprehensive walkover using WDNR standards and sound engineering principles.

EMERGENCY

All emergencies shall follow the procedures set forth in the applicable Emergency Action Plan (E.A.P.) for each dam. For all dams that do not have an E.A.P., The Procedure shall be as follows:

1. Identify Problem and immediate corrective action.
2. Contact direct supervisor.
3. Contact County Board Chair Person.
4. Proceed with repair if possible.

WATER LEVELS/HYDROLOGY

Updated 7/06/2011

Note: Vertical control documents in Exhibit Section

FAWN LAKE: Maximum: 863.21
Minimum: 858.21
Benchmark: 864.09 ft. See Exhibits for Benchmark Location
Hydrology Q7(2)

PEPPERMILL LAKE: Maximum: 911.31
Minimum: 910.31
Benchmark: 102 ft. top of log stop structure.
Hydrology Q7(2)

McGINNIS LAKE: Maximum: 954.7
Minimum: 953.79
Benchmark: 99.31 ft. top of west channel iron.
Hydrology Q7(2)

EASTON LAKE: Maximum: 904.0 National Geodetic Vertical Datum (NGVD)
Minimum:
Normal Level: 903.6 NGVD
Benchmark: 909.24 1/4" rod in concrete monument near intersection of 11th Dr and Ember Dr.
Hydrology Q7(2)

COTTONVILLE: Maximum: 949.4 Local Datum
Minimum: 948.6 Local Datum
Benchmark: 952.4 ft. – 1/4" B.M. monument located 2' south of post w/sign (~ 35' SSW of SW corner of boat ramp)
Hydrology Q7(2)

CAMELOT: Maximum: 1011.59 ft. NAVD88 datum (per 10/01/2010 map)
Minimum: 1010.59 ft. NAVD88 datum (per 10/01/2010 map)
Morning Glory elevation: 1011.2 ft.
Benchmark: 1017.92 ft – 1/4" B.M located at South edge of mowed area 12' NW of elec box "SP775"
Hydrology Q7(2)

SHERWOOD: Maximum: 992.73 ft. NAVD88 datum per (10/01/2010 map)
Minimum: 991.73 ft. NAVD88 datum (per 10/01/2010 map)
Morning Glory elevation: 992.1 ft.
Benchmark: 999.73 ft. 1/4" B.M. located 48" South of elec box "SP10392"
Hydrology Q7(2)

ARROWHEAD: Maximum: 963.39 ft. NAVD88 datum (per 10/01/2010 map)
Minimum: 962.84 ft. NAVD88 datum (per 10/01/2010 map)
Morning Glory elevation: 963.2 ft.
Benchmark: 971.28 ft. 1/4" B.M. rod set 2' East of the North end of the East guardrail post
Hydrology Q7(2)

CONTACTS

Ayers and Associates

Pete Haug: 715-271-1829

Rome Police

Adam Grosz: 715-325-8020

Adams County Sheriff Department

Sam Wollin: 608-339-4243

Highway (Adams County Highway Department)

Pat Kotlowski: 608-339-3355; 608-547-1762

Highway (Town of Rome): 715-325-8013

Parks Department (Adams County Parks Department)

Fred Nickel: 608-339-4277

Emergency Management (Adams County)

Jane Gervais: 608-339-4248

Complete Control (Electrical)

Mark Hamus: 715-887-4400 or 800-936-5595.

Steve's Plumbing

Steve Lewallen: 715-421-1800

Brennan Construction (Diving)

Tim Kosobud: 605-547-7229

Dorner Company (Actuators)

Everett Russell: 414-339-7219

Adams Columbia Electrical Cooperative

Patrick Gatterman: 608-339-5426; 608-547-5164

WDNR

Joe Behlen: 715-421-9940