

ODSO 2001 Best Maintained Dam Nomination Form

Categories (check one): Industrial Private Property Owner Association
 Municipal State Conservancy District

Name of Dam: _____ ODNR File No. (if known) _____

Owner: _____

Address: _____

Telephone No.: _____

Nominator (optional): _____

Address: _____

Telephone No.: _____

Return Service Requested

Ohio Dam Safety Organization
 Water Resources Foundation of Ohio
 247 Agricultural Engineering Building
 590 Woody Hayes Drive
 Columbus, Ohio 43210-1057
 614/292-1851

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another Dam newsletter

Ohio Dam Safety Organization, Spring 2001

About ODSO by Dan Hill

The Ohio Dam Safety Organization (ODSO) was organized in 1995. The mission of ODSO is to promote dam safety in Ohio by establishing a partnership between dam owners, engineers, and regulators. ODSO provides a forum for discussion of dam safety issues and a voice for all those concerned about formation and implementation of dam safety policy in the State of Ohio. The organization also provides a link to dam safety issues at the national level; ODSO is the first State Chapter affiliated with the Association of State Dam Safety Officials (ASDSO) and is developing a strong partnership with ASDSO.

Membership in ODSO is open to any member of the Water Management Association of Ohio (WMAO). WMAO was organized over 25 years ago to promote the comprehensive understanding, conservation, and multifaceted use of Ohio's water resources. ODSO is the Dam Safety Division of WMAO; there are no additional dues required to be a member of ODSO. Visit the WMAO website at www.ohiowater.org/wmao or call WMAO at 614-292-1851 to find out more about WMAO and obtain a membership application. While at the WMAO website, click on dam safety to access the ODSO site for further information about ODSO.

ODSO Elections by Kurt Rinehart

Members elected to the Executive Board at the Annual Meeting this past November were Lynn Kelly of the City of Columbus, representing municipal owners; and Mark Bowers of the University of Cincinnati, representing academia. Officers subsequently established by the Board are Kurt Rinehart of the Miami Conservancy District as Chairman, Mark Bowers as Vice-Chairman, Bernie Rasmussen of American Electric Power as Treasurer, and Dan Hill of Burgess & Niple as Secretary.

ODSO Nominations by Mark Bowers

Board positions representing Conservancy Districts, Industrial Owners, Contractors/Suppliers, and Consultants are to be filled at the November 2001 Annual Meeting. Please submit nominations to Mark Bowers, Chair of the nominating committee, by July 12. Mark may be contacted at

mbowers@uceng.uc.edu or at the Department of Civil and Environmental Engineering, P. O. Box 210071, Cincinnati, Ohio 45221-0071.

Correcting Ohio's Critically Deficient Dams by Pete George

Unsafe dams in Ohio place many of our citizens and their property in direct physical hazard should a dam failure occur. Hundreds of people and millions of dollars worth of private and public property are located downstream of substandard dams. Failure of these dams would result in loss of life, destruction of property, and financial and economic hardship for many families and communities. Economic hardship would result from the loss of impounded reservoirs for water supply, recreation, and environmental storage.

The Dam Safety Engineering Program has taken an aggressive approach to correct critically deficient dams in Ohio. A recent grant will help pursue enforcement actions on critically deficient dams, as determined through the periodic inspection program. The approach for pursuing enforcement actions will be to develop criteria for selecting the dams for enforcement action, and then begin working with those owners and the court system through existing statutes for dam safety regulatory enforcement. Effective regulatory enforcement will directly result in the improvement of many of these substandard dams.

Ohio Dam Safety Loan Program by Steve Mack

The Dam Safety Loan Program/Dam Safety Linked Deposit Program has been quietly going about its business. The only project to date, the Lake Seneca Dam near Bridgewater Center in Williams County, is nearing completion and is scheduled for a dedication ceremony this spring. The Lake Seneca Property Owners Association obtained a \$1.8 million linked deposit loan through a local bank for this dam reconstruction project. Although no other loans or linked deposit arrangements have been approved as of yet, the Ohio Department of Natural Resources has been active in working with prospective clients and the Ohio Water Development Authority has averaged two to three requests for information per month since last fall. Both state agencies are encouraged by this interest and expect formal applications as remediation plans are approved at other sites.

(Continued)

For further information on the program, please contact Steve Mack, OWDA's Chief Engineer at 614-466-0257, or smack@owda.org.

Watershed Dams Rehabilitation by Art Brate

The "Small Watershed Rehabilitation Amendments of 2000," Public Law 106-472, was signed into law by President Clinton on November 9, 2000. This act authorizes the USDA, Natural Resources Conservation Service (NRCS) to assist local watershed sponsors with rehabilitation of aging water dams. The act did not appropriate the necessary funds, but it is anticipated that Congress will appropriate funding in the fiscal year 2002 budget.

Eligible projects are dams built under PL-566 or the original USDA Pilot Watershed Program. In Ohio, NRCS assisted sponsors in constructing 78 of these dams and estimates that as many as 53 may need rehabilitation to repair aging infrastructure components, or have been reclassified to a higher hazard classification and must be upgraded to meet the State's dam safety regulations.

NRCS was funded in both 2000 and 2001 to develop a pilot rehabilitation program in Ohio. Currently, the planning has been completed and designs are being developed on three structures: Chippewa Creek Watershed, Structure 3A, Medina County; Rushcreek Watershed, Structure 7C, Fairfield County; and Upper Hocking Watershed, Structure 8, Fairfield County. Construction is planned for this construction season.

Also, NRCS is reviewing requests from sponsors and expects to select 3 or 4 more dams for rehabilitation. The planning and design process will begin soon with construction planned for the 2002 construction season.

Dam Safety Tip: Problems with Metal Materials by Pete George

Corrosion is a common problem for spillway conduits and other metal appurtenances. Corrosion is the deterioration or breakdown of metal because of a reaction with its environment. Exposure to moisture, acidic conditions, or salt will accelerate the corrosion process. Acid runoff from strip-mined areas will cause rapid corrosion of metal conduits. In these areas, conduits made of less corrosion-resistant materials such as concrete or plastic should be used. Soil types also factor into the amount of corrosion. Clayey soils can be more corrosive than sandy soils since they are poorly drained and poorly aerated. Silts are somewhere in between clays and sands. Some examples of metal conduits include ductile iron, smooth steel, and corrugated metal. Corrugated metal pipe is not recommended

for use in dams since the service life for corrugated metal is only 25 to 30 years, whereas the life expectancy for dams should be much longer. In areas of acidic water, the service life can be much less. Therefore, corrugated metal spillway conduits typically need to be repaired or replaced early in the dam's design life, which can be very expensive.

Conduit coating is an effective way of controlling corrosion of metal conduits if used properly. It is relatively inexpensive and extends the life of the conduit. Some examples of coatings include cement-mortar, epoxy, aluminum, or polyethylene film. Asphalt (bituminous) coatings are not recommended since their service life is usually only 1 or 2 years. Coatings must be applied to the conduit prior to installation and protected to ensure that the coating is not scratched off. Coatings applied to conduits in service are generally not very effective because of the difficulty in establishing an adequate bond.

If corrosion is allowed to continue, metal conduits will rust out. The spillway must be repaired before water flows through the rusted out portion of the conduit and erodes the fill material of the embankment. Continued erosion can lead to failure of the dam. Sliplining can be an economical and effective method of permanently restoring deteriorated metal pipe spillways.

Regular inspection and monitoring is essential to detect any problems with metal materials. Coatings on metal pipes should be inspected for scratched and worn areas. The inspector should also look for corrosion inside the spillway conduit. Proper ventilation and confined space precautions must be considered when entering the spillway conduit system. It is important to keep written records of the amount of surface rust, pitting, and corrosion on any metal surface. Areas of thin metal should be monitored more frequently and repaired or replaced if they rust out. Photographs provide invaluable records of changing conditions. All records should be kept in the operation, maintenance, and inspection manual for the dam. A rapidly changing condition may indicate a very serious problem, and the ODNR Dam Safety Engineering Program should be contacted immediately.

Small Impoundments Guidelines by Susan Coyle

ODSO has assembled a brochure about building small dams for a variety of purposes including irrigation, recreation, and fire protection. The purpose of the brochure is to give farmers or other landowners a broad overview of the process. The brochure addresses site selection, dam permits, and dam construction. It also has a list of additional sources of information. If you are interested in a copy of this brochure, please contact your local Natural Resources Conservation Service

field office or your County Soil and Water Conservation District office.

Consultant/Contractor Resources by Dan Hill

As a service to dam owners needing assistance to make necessary remedial measures to their dams or to develop and carry out appropriate operation and maintenance activities, a list of ODSO consultant and contractor members with Ohio office locations follows:

BBC&M Engineering

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| Columbus | 614-743-2226 |
| Cleveland | 216-585-9995 |
| Cincinnati | 513-771-8471 |

Bowser Morner

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| Dayton | 937-236-8805 |
| Toledo | 419-255-8200 |

Burgess & Niple

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| Columbus | 614-459-2050 |
| Akron | 330-376-5778 |
| Cincinnati | 513-579-0042 |
| Painesville | 440-354-9700 |

Collector Wells

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| Columbus | 614-888-6263 |
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Contech Construction Products

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| Dayton | 937-771-0030 |
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DLZ Corporation

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| Columbus | 614-848-4141 |
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EMH&T, Inc.

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| Columbus | 614-471-5150 |
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Fuller Mossbarger Scott & May

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| Cincinnati | 513-860-1070 |
| Columbus | 614-846-1400 |

GEM Consulting

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| Columbus | 740-927-5245 |
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Hartman Engineering

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| Delaware | 740-548-4702 |
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H. C. Nutting

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| Cincinnati | 513-321-5816 |
| Columbus | 614-863-3113 |

Hydrosphere Engineering

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| Strongsville | 440-234-8966 |
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J&L Engineering

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| Medina | 330-725-8977 |
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Ohio Ready Mix Concrete Association

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| Columbus | 614-888-0210 |
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Paul C. Rizzo Associates

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| Columbus | 614-868-5011 |
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R. D. Zande

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| Columbus | 800-340-2743 |
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Ronald Shields, PE

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| Columbus | 614-239-7093 |
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Wilbur Smith Associates

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| Columbus | 614-888-9440 |
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Woolpert

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| Dayton | 937-461-5660 |
| Cincinnati | 513-272-8300 |
| Columbus | 614-469-1311 |

Best Maintained Dam Awards by Dan Hill

Congratulations to the winners of the third annual ODSO Dam Safety Awards for best maintained dam. The 2000 winners (followed by the ownership category) as recognized at the Annual Meeting last November are:

Harrison Lake Dam, Fulton County, ODNR Harrison Lake State Park (State)

Lake Dorothy Dam, Barberton, PPG Industries, (Industrial)

Pine Tree Lake Dam, Wooster, Mr. & Mrs. Robert Dush, Wayne County (Private)

Nominations for the 2001 awards are now being sought. Larger awards are planned for this year. Eligibility is based on two simple requirements: (1) the dam must be at least 5 years old; and (2) it must be in compliance with all of the Department of Natural Resources' dam safety regulations.

This year's awards will be presented in conjunction with the Ohio Dam Safety Organization / Water Management Association of Ohio annual conference in November. To make a nomination for this year's awards, fill out the form in this newsletter and return it by August 1, 2001 to:

George M. Rowe, Chair
ODSO Awards Committee
Route 1, Box 36
Hide-A-Ways Hills, Ohio 43107-0091