

Dam Parameter Definitions

(modified from March 4, 2021 U.S. Army Corps of Engineers NID Data Dictionary)

Condition Assessment

Assessment that best describes the condition of the dam based on available information.

Satisfactory;
Fair;
Poor;
Unsatisfactory
Not Rated.

A dam safety deficiency is defined as a load capacity limit or other issue that can result in a failure of the dam or appurtenant structure. It is a characteristic or condition that does not meet the applicable minimum regulatory criteria. Normal operations are defined as loading on the dam resulting from day-to-day pool operations to achieve authorized purposes in accordance with minimum state or federal criteria.

Condition Assessment definitions are as follows:

SATISFACTORY

No existing or potential dam safety deficiencies are recognized. Acceptable performance is expected under all loading conditions (static, hydrologic, seismic) in accordance with the minimum applicable state or federal regulatory criteria or tolerable risk guidelines.

Typical Circumstances:

- No existing deficiencies or potentially unsafe conditions are recognized, with the exception of minor operational and maintenance items that require attention.
- Safe performance is expected under all loading conditions including the design earthquake and design flood.
- Permanent risk reduction measures (reservoir restrictions, spillway modifications, operating procedures, etc.) have been implemented to eliminate identified deficiencies.

FAIR

No existing dam safety deficiencies are recognized for normal operating conditions. Rare or extreme hydrologic and/or seismic events may result in a dam safety deficiency. Risk may be in the range to take further action. Note: Rare or extreme event is defined by the regulatory agency based on their minimum applicable state criteria.

Other Circumstances:

- Lack of maintenance requires attention to prevent developing safety concerns.
- Maintenance conditions may exist that require remedial action greater than routine work and/or secondary studies or investigations.
- Interim or permanent risk reduction measures may be under consideration.

POOR

A dam safety deficiency is recognized for normal operating conditions which may realistically occur. Remedial action is necessary. This rating may also be used when uncertainties exist for critical analysis parameters used to identify a potential dam safety deficiency. Investigations and studies are necessary.

Other Circumstances:

- Dam has multiple deficiencies or a significant deficiency that requires remedial work.
- Lack of maintenance (erosion, sinkholes, settlement, cracking, unwanted vegetation, animal burrows, inoperable outlet gates) has affected the integrity or the operation of the dam under normal operational conditions and requires remedial action to resolve.
- Critical design information is needed to evaluate the potential performance of the dam. For example, a field observation or a review of the dam's performance history has identified a question that can only be answered by review of the design and construction

history for the dam. Uncertainty arises when there is no design and/or construction documentation available for review and additional analysis is needed to better understand the risk associated with operation under normal operational conditions.

- Interim or permanent risk reduction measures may be under consideration.

UNSATISFACTORY

A dam safety deficiency is recognized that requires immediate or emergency remedial action for problem resolution.

Typical Circumstances:

- A critical component of the dam has deteriorated to unacceptable condition or failed.
- A safety inspection indicates major structural distress (excessive uncontrolled seepage, cracks, slides, sinkholes, severe deterioration, etc.), advanced deterioration, or operational deficiencies which could lead to failure of the dam or its appurtenant structures under normal operating conditions.
- Reservoir restrictions or other interim risk reduction measures are required.
- A partial or complete reservoir drawdown may be mandated by the state or federal regulatory agency.

NOT RATED

The dam has not been inspected, is not under state or federal jurisdiction, or has been inspected but, for whatever reason, has not been rated.

Condition Assessment Date

Date of the most recent condition assessment of the dam.

Core

Code to indicate the position, type of watertight member, and certainty (for example, HEK for a known homogeneous earthen dam),

Position: F for upstream facing;
H for homogeneous dam;
I for core;
X for unlisted/unknown;

Type: A for bituminous concrete;
C for concrete;
E for earth;
M for metal;
P for plastic;
X for unlisted/unknown;

Certainty: K for known;
Z for estimated;

County

The predominant Florida county name in which the dam is located.

Current EAP Date (mm/dd/yyyy)

The original date of the Emergency Action Plan or the date of the most recent revision.

Dam

Any artificial or natural barrier, with appurtenant works, raised to obstruct or impound, or which does obstruct or impound, any of the surface waters of the state.

Dam Designer

Name of the principal firm(s) or agency accomplishing design of dam and major appurtenant operating features, and major modifications. Original designer is listed first, then modification designers (if applicable). If an Architect-Engineer Firm designed the dam under a state or federal government contract, the state or federal agency name is listed first; then the company name.

Dam Name

The official name of the dam. No abbreviations unless the abbreviation is a part of the official name. For dams that do not have an official name, the popular name is used.

Dam Former Name

Previous reservoir or dam name(s), if changed or combined into one dam feature.

Dam Length (Feet)

Length of the dam, in feet, which is defined as the length along the top of the dam. This also includes the spillway, powerplant, navigation lock, fish pass, etc., where these form part of the length of the dam. If detached from the dam, these structures should not be included.

Dam Height (Feet)

Height of the dam, in feet to the nearest foot, which is defined as the difference between the lowest elevation on the crest of the dam and the lowest elevation in the original streambed; or if not present, the lowest elevation of the downstream toe of the embankment.

Dam Owner Name

Name(s) of the dam owner(s). If multiple owners, duplicate and complete this section for all other owners.

Dam Type

Codes, in order of importance, to indicate the type of dam (for example, REPG is an earthen gravity dam):

- RE for Earth;
- ER for Rockfill;
- PG for Gravity;
- CB for Buttress;
- VA for Arch;
- MV for Multi-Arch;
- RC for Roller-Compacted Concrete;
- CN for Concrete;
- MS for Masonry;
- ST for Stone;
- TC for Timber Crib;
- OT for Other.

Date of Last Revision of Emergency Action Plan

Date of the most recent revision of the Emergency Action Plan.

Distance to Nearest City/Town (miles)

Distance from the dam to the nearest affected downstream city/town/village to the nearest mile (and tenth, if appropriate).

Downstream Hazard Potential

Code to indicate the potential hazard to the downstream area resulting from failure or misoperation of the dam or facilities:

- L for Low;
- S for Significant;
- H for High;
- U for Undetermined.

Downstream Hazard Potential definitions are as follows:

LOW HAZARD POTENTIAL

Dams assigned the low hazard potential classification are those where failure or mis-operation results in no probable loss of human life and low economic and/or environmental losses. Losses are principally limited to the owner's property.

SIGNIFICANT HAZARD POTENTIAL

Dams assigned the significant hazard potential classification are those dams where failure or mis-operation results in no probable loss of human life but can cause economic loss, environment damage, disruption of lifeline facilities, or impact other concerns. Significant hazard potential classification dams are often located in predominantly rural or agricultural areas but could be located in areas with population and significant infrastructure.

HIGH HAZARD POTENTIAL

Dams assigned the high hazard potential classification are those where failure or mis-operation will probably cause loss of human life.

Hazard Potential Classification	Loss of Human Life	Economic, Environmental, Lifeline Losses
Low	None expected	Low and generally limited to owner
Significant	None expected	Yes
High	Probable. One or more expected	Yes (but not necessary for this classification)

UNDETERMINED HAZARD POTENTIAL

Dams for which a downstream hazard potential, as defined above, has not been designated or is not provided.

Drainage Area (square miles)

Drainage area of the dam, in square miles, which is defined as the area that drains to the dam reservoir(s).

Emergency Action Plan

Code indicating whether the dam owner has an Emergency Action Plan (EAP). An EAP is defined as a plan of action to be taken to reduce the potential for property damage and loss of life in an area affected by a dam failure or large flood due to mis-operation of the dam.

- Y for Yes;
- N for No; or
- NR for Not Required because the dam is a Low or Undetermined Hazard Potential dam.

If an EAP was developed, it will be listed Y for Yes. If an EAP is required and does not have one, it will be listed N for No. If there is not an EAP and one is not required because it is a Low Hazard Potential dam, it will be listed NR for Not Required.

Federal Agency Involvement in Construction

Name(s) of federal agency involved in the construction of the dam.

Federal Agency Involvement in Design

Name(s) of federal agency that was involved in the design of the dam.

Federal Agency Involvement in Funding

Name(s) of federal agency that was involved in funding the dam.

Federal Agency Involvement in Inspection

Name(s) of federal agency that is involved in the inspection of the dam.

Federal Agency Involvement in Operation

Name(s) of federal agency that is involved in the operation of the dam.

Federal Agency Involvement – Other

Name(s) of federal agency that is involved in other aspects of the dam.

Federal Agency Involvement in Regulatory

Name(s) of federal agency that is involved in the regulation of the dam.

Federal Agency Owner

Name(s) of federal agency that partly or wholly owns the dam.

Foundation

Code for the type of native material on which the dam is constructed, and certainty (for example, RSZ for estimated rock and soil foundation):

Foundation:	R for rock; RS for rock and soil; S for soil; U for unlisted/unknown.
Certainty:	K for known; Z for estimated.

Hydraulic Height (feet)

Hydraulic height of the dam, in feet to the nearest foot, which is defined as the vertical difference between the maximum design water level and the lowest point in the original streambed or if not present, the lowest elevation of the downstream toe of the embankment.

Inspection Date (mm/dd/yyyy)

Date of the most recent inspection of the dam.

Inspection Frequency (years)

The scheduled frequency interval for periodic inspections.

Landowner Name(s)

Name(s) of the owner(s) of the land where the dam is located, if different than the dam owner. If multiple owners, duplicate and complete this section for all other owners.

Latitude

Latitude at dam centerline as a single value in decimal degrees, as measured by the North American Datum of 1983 (NAD83).

Length of Locks (feet)

Length of the primary navigation lock to the nearest foot.

Levee

An embankment whose primary purpose is to furnish flood protection from seasonal high water and which is therefore subject to water loading for periods of only a few days or weeks a year. Levees may be classified as urban levees that provide protection from flooding in communities, including their industrial, commercial, and residential facilities or as agricultural levees that provide protection from flooding in lands used for agricultural purposes. The primary purpose of a levee is to exclude flood waters from a portion of the floodplain, and may consist of embankments, floodwalls, pipes and associated drainage features, closures, pumping stations, floodways, and designed channels.

Levee System

A system composed of one or more levee segments and associated structures, and may include stormwater treatment areas, flow equalization basins that are less than 4 feet in water depth, and levees that bound water conservation and wildlife refuge areas. These are designed in accordance with USACE EM 1110-2-1913, Engineering and Design, Design and Construction of Levees, and constructed and operated in accordance with sound engineering practices.

Lock Width (feet)

Width of the primary navigation lock to the nearest foot.

Longitude

Longitude at dam centerline as a single value in decimal degrees, as measured by the North American Datum of 1983 (NAD83).

Maximum Discharge (cubic feet/second)

Spillway discharge rate when the reservoir is at its maximum designed water level.

Maximum Storage (acre-feet)

Maximum storage is defined as the total storage space in a reservoir below the maximum attainable water level, including any surcharge storage (storage between the emergency spillway crest and top of dam). Maximum storage shall be calculated by using one of these two methods that is most representative of the actual storage volume:

- Using the Average End Area Method (volume (acre-feet) = length (feet) x (A1 + A2 (end areas (acre)) / 2)), or;
- Multiplying the maximum depth of the waterbody times the surface area of the waterbody times four tenths (impoundment storage (acre-feet) = depth (feet) x surface area (acre) x 0.4) (United States Department of Agriculture Soil Conservation Survey)

The dam height may be used as a surrogate for maximum depth, if the depth is unknown.

Nearest Downstream City/Town (name)

Name of the nearest downstream city, town, or village that is most likely to be affected by floods resulting from the failure of the dam.

NID Height (feet)

Maximum value of either the dam height, structural height, or hydraulic height. Accepted as the general height of the dam.

NID ID (alphanumeric)

The official National Inventory of Dams (NID) identification (ID) number for the dam, e.g., FL00001. If the dam meets the NID criteria and it does not already have a NID ID, it will be assigned one by the State Dam Safety Officer. This field is used as the unique identifier for each NID dam.

NID Storage (acre-feet)

Maximum value of normal storage and maximum storage. Accepted as the general storage of the dam.

Non-Federal Dam On Federal Property (Y or N)

Code indicating whether this dam is a non-federal dam located on federal property:

Normal Storage (acre-feet)

Normal storage is defined as the total storage space in a reservoir below the normal retention level, including dead and inactive storage and excluding any flood control or surcharge storage. For normally dry flood control dams, the normal storage will be a zero value. If unknown, enter "UNK" and not zero.

Number of Locks

The total number of locks controlling the pool depths in the dam system.

Number of Separate Structures

Number of separate structures associated with this dam project. Include saddle dams as a subsidiary dam of any type constructed across a saddle or low point on the perimeter of a reservoir. Do not count the number of appurtenant works which include, but are not limited to, such structures as spillways, either in the dam or separate there from; the reservoir and its rim; low level outlet works; and water conduits such as tunnels, pipelines or penstocks, either through the dam or its abutments.

Outlet Gates

Code(s) that describe the type of (1) spillway and (2) controlled outlet gates (for example, T3 for three Tainter gates):

- X for None;
- U for Uncontrolled;
- T for Tainter (radial);
- L for Vertical Lift;
- R for Roller;
- B for Bascule;
- D for Drum;
- N for Needle;
- F for Flap;
- S for Slide (sluice gate);
- V for Valve;
- O for Other controlled.

List outlet gates in decreasing size order, followed by number of gates.

Other Dam Names

Common names (for example, reservoir, lake, or pond name), other than the official name of the dam.

Other Structure ID

The identification number (S001, S002, etc.) for the saddle dam or dike associated with the larger dam project. This field only applies to saddle dams.

Owner Type

Code to indicate the type of owner (for example, PU for two dam owners: private entity and public utility):

- F for Federal;
- S for State;
- L for Local Government (defined as have taxing authority or is supported by taxes);
- U for Public Utility;
- P for Private
- X for Not Listed.

Some examples of owner types. Local Government should have taxing authority or is supported by taxes. A Lake District is supported by taxes and considered Local Government. A lake association is supported by association dues and would not be a Local Government owner type, but rather Private owner type.

Permitting Authority

Y for Yes if the dam is not federally owned. Otherwise N for No.

Purposes

Code(s) to indicate the current purpose(s) for which the reservoir is used (for example, SCR indicates Water Supply, Flood Control and Storm Water Management, and Recreation, in decreasing importance of the purposes):

- I for Irrigation;
- H for Hydroelectric;
- C for Flood Control and Storm Water Management;
- N for Navigation;
- S for Water Supply;
- R for Recreation;
- P for Fire Protection, Stock, Or Small Farm Pond;
- F for Fish and Wildlife Pond;
- D for Debris Control;
- T for Tailings;
- G for Grade Stabilization;
- O for Other.

River or Stream

The official name of the river or stream on which the dam is built. If the stream is unnamed, identify it as a tributary to a named river, e.g., *Snake-TR*. If the dam is located offstream, enter the name of the river or stream plus "-OS", e.g., *Snake-OS*.

Section, Township, Range Location

This information provides the dam location identified in the Public Land Survey System, such as, *S05 T01S R01E*.

Spillway Type

Code that describes the type of spillway:

- C for Controlled;

U for Uncontrolled;
N for None.

Spillway Width (feet)

The width of the spillway, to the nearest foot, available for discharge when the reservoir is at its maximum designed water level. Typically for an open channel spillway, this is the bottom width. For pipe spillways or drop inlets that have diameters, use the diameter of the pipe.

State Agency/Permit Number

Name of State permitting agency and permit number, if permitted.

State Regulatory Agency

Name of the primary state agency with regulatory or approval authority over the dam. In most cases, this is the Water Management District where the dam is located.

Structural Height (feet)

Structural height of the dam, in feet to the nearest foot, which is defined as the vertical distance from the lowest point of the excavated foundation to the top of the dam. Top of dam refers to the parapet wall and not the crest.

Surface Area (acres)

Surface area, in acres, of the impoundment at its normal water level.

Volume of Dam (cubic yards)

Total number of cubic yards occupied by the materials used in the dam structure. Portions of powerhouse, locks, and spillways are included only if they are an integral part of the dam and required for structural stability.

Year Completed

Year (four digits) when the original main dam structure was completed. If unknown, and a reasonable estimate is unavailable, "0000" is used.

Year Modified

Year (four digits) when major modifications or rehabilitation of dam or major control structures were completed. Major modifications are defined as a structural, foundation, or mechanical construction activity which significantly restores the project to original condition; changes the project's operation; capacity or structural characteristics (for example, spillway rehabilitation); or increases the longevity, stability, or safety of the dam and appurtenant structures. Entries should be followed by *one of more of the following codes* indicating type of modification (for example, 2020S means a structural component was modified in the year 2020):

S for structural;
F for foundation;
M for mechanical;
E for seismic;
H for hydraulic;
for other.