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POLICY FOR OPERATIONAL CONDITION ASSESSMENTS OF USACE ASSETS

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Chapter 1
Introduction

1-1. Purpose. The purpose of this policy document is to describe a consistent methodology to produce operational condition data for all U.S. Army Corps of Engineers (USACE) assets that meets the goals of USACE Asset Management (AM) as defined in the Program Management Plan (PgMP) for Civil Works Asset Management.

1-2. Applicability. This document is applicable to all USACE Major Subordinate Commands (MSCs) having Civil Works responsibilities. Specific procedures for each Business Line are included in the appendices.

1-3. Distribution Statement. Approved for public release; distribution is unlimited.

1-4. References.

a. Executive Order 13327 (4 February 2004): Federal Real Property Asset Management. (https://www.govinfo.gov/content/pkg/FR-2004-02-06/pdf/04-2773.pdf)

b. Program Management Plan for Civil Works Asset Management (December 2014). (https://cops.usace.army.mil/sites/AM/Shared%20Documents/AM%20PGMP%20Dec%202014%20rev0.pdf)

c. U.S. Army Corps of Engineers Civil Works Direct Program Development Policy Guidance for the current fiscal year (Engineering Circular [EC 11-2-216]). (https://www.publications.usace.army.mil/Portals/76/Publications/EngineerCirculars/EC_11-2-216.pdf?ver=2018-08-20-084953-930)

d. Dam Safety Engineering Regulation 1110-2-1156. (https://www.publications.usace.army.mil/Portals/76/Publications/EngineerRegulations/ER_1110-2-1156.pdf)

e. OCA Condition Rating General Guidelines for Corrosion, 14 APR 2016.(https://cops.usace.army.mil/sites/AM/OCA/Shared%20Documents/OCA%20Reference%20Documents/Corrosion%20OCA_General%20Quidelines_4-14-2016.pdf)

f. DoD Memorandum, SUBJECT: “Standardizing Facility Condition Assessments”, 10 SEP 2013. (https://cops.usace.army.mil/sites/AM/Shared%20Documents/AM%20General%20Docs/SMS%20-%20BUILDER%20Guidance%20Memo%20130910.pdf)

g. 2016 Guidance for Federal Real Property Inventory Reporting, Federal Real Property Council, 16 MAY 2016.
(https://www.gsa.gov/cdnstatic/FY_2016_FRPP_Data_Dictionary_May_16__2016.pdf)

h. Department of Defense Instruction [DoDI] 4165.14 Incorporating Change 1, November 4, 2017. SUBJECT: Real Property Inventory (RPI) and Forecasting
(https://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodi/416514p.pdf?ver=2018-12-18-095339-407)

1-5. Records Management (Record Keeping) Requirements. Records management requirements for all record numbers, associated forms and reports required by this regulation are included in the Army's Records Retention Schedule – Army (RRS-A). Detailed information for all record numbers, forms, and reports associated with this regulation are located in the RRS-A at https://www.arims.army.mil.

1-6. Overview.

a. USACE Asset Management realizes that the requirements for managing a very large and diverse Civil Works infrastructure will most likely continue to exceed the available resources. Therefore, the establishment of the current asset condition and functional reliability along with the consequences of the asset's poor performance or failure under current and reasonably foreseeable future conditions is critical to a successful asset management strategy. At the time of issuance of this EC, the Operational Condition Assessment (OCA) is a "snapshot in time." Future iterations of the supporting tool will incorporate statistically significant trends in hydrologic forcing (e.g., discharge, stage, sea level change effects) where these are known.

b. Assessment of the operational condition of each asset is a crucial fundamental step to creating an effective risk-informed budget.

(1) The objective of the OCA process is to obtain nationally consistent operational condition data of the highest possible quality in order to identify all current and reasonably foreseeable future condition states.

(2) "Operational condition" refers specifically to the following properties of a component:

(a) Condition state, specifically, the degree of severity of an observed and/or documented deficiency.

(b) The level or degree to which a deficiency degrades the component's performance, alters operational procedures, and/or increases its maintenance requirements.

(c) Note: Normal wear (within a tolerable range) and age are not indicative of a component's inability to perform its intended function.

(3) "Assessment" refers to the use of existing data, as much as possible, to accurately determine the asset's operability and readiness. While onsite observations may take place during an OCA, it is not a comprehensive inspection of all assets at a project.

c. OCA data will be analyzed and combined with consequence data to develop a standard process for risk-informed analysis. This output can then be used to assist in developing a life-cycle strategy for operations, maintenance, design, and capital investment decision-making practices through informed budget development and prioritized maintenance execution using a systematic approach, including weighing benefits and opportunities against asset life-cycle costs.

Chapter 2
Operational Condition Assessment Ratings

2-1. Purpose. This chapter introduces and defines OCA ratings and explains the standard OCA rating scale.

2-2. Guidance.

a. An OCA rating is assigned to each asset's individual component and/or system following an assessment of its operational condition under normal operating circumstances (not extremely rare events).

b. The OCA rating is based on a scale that reflects the degree of severity of an observed and/or documented deficiency and its influence on the component's performance, operational procedures, and/or maintenance requirements.

(1) A component and/or system "deficiency" is a physical characteristic, such as deterioration, damage, or other irregular flaw. Safety and legal mandates are tracked separately, using their definitions within the U.S. Army Corps of Engineers Civil Works Direct Program Development Policy Guidance for the current fiscal year (Engineering Circular [EC]); they are not to be combined into a single rating representing condition, safety, and legal mandates.

(2) Component age and obsolescence are not to be considered deficiencies for determination of OCA ratings. They should not exclusively justify a lowered OCA rating. Many components in the USACE inventory have outlived their design life but are still in good operational condition. If components are still fulfilling their design requirements, it is likely more prudent to focus repair efforts elsewhere. (Note, that while component age should not be considered when determining the OCA rating, the age based on the placed-in-service date will be captured in the OCA database. From a broader Asset Management perspective, the placed-in-service date is critical for a better understanding of the assets at specific projects and to better inform life-cycle portfolio decisions.)

c. When the operational condition of a component is evaluated and rated, the following elements must be taken into consideration:

(1) The magnitude and progression of the deficiency.

(2) The level or degree to which the deficiency degrades the component's performance, alters operational procedures, and/or increases its maintenance requirements.

d. A standard OCA rating scale is used to assign a performance-based OCA rating to each component.

(1) Specific condition assessment rating procedures for various asset classes are described in the appropriate appendix of this document.

(2) The standard OCA rating scale is A (Excellent), B (Good), C (Fair), D (Poor), F (Failing), and CF (Completely Failed). These ratings are defined in Table 1.

(3) A component's condition will also be evaluated to determine if it lies near the transitional boundary between one OCA rating and the next lower rating by adding a "-" (minus) to the condition rating (Table 1). A "-" rating increment may be assigned when an assessor determines that the component meets the definition of a particular OCA rating but may be showing initial signs of the next lower OCA rating. The assessor may believe the component is at the point where it will soon worsen to a lower condition rating.

(4) While the school-style letter grade scale (A–F) is the standard OCA rating scale, each of the ten standard OCA ratings may also be described by a qualitative descriptor (such as "Excellent" [A] or "Failing" [F]) or an index value (9 [A]–0 [CF]) (Table 1). These can assist with ordering results and offer an alternate view of ratings outside the school-style letter grade scale.

e. OCA ratings below a B (i.e., B-, C, C-, D, D-, F, and CF) will be verified by observation, consultation with technical experts, testimony of project staff (decreased level of performance, increased operations/maintenance requirements), and/or documentation.

(1) At the time of release of this EC, the OCA currently assumes an OCA rating of B if that rating cannot be verified by any of the methods listed above. However, this could overstate the condition of some components. Therefore, further iterations of the supporting tool will be improved to account for components that cannot be rated. The first improvement will be to add a rating measure for components that could not be rated, for whatever reason. Further instructions will be released when this is accomplished. Until then, a descriptive comment should be added if component is unable to be rated.

(2) OCAs are assessments, not inspections. In other words, OCAs rely on data gathered by other inspections, systems, or methods to justify their ratings as well as the OCA site walk-around and project personnel interviews. The burden of proof to justify a rating below a B is on the District performing the OCA. The District will conduct inspections and/or investigations to gather data on components for use in justifying OCA ratings.

f. OCA ratings below a B will also be supported by written comments documenting the component's condition and describing any deficiencies present.

(1) OCA rating comments will include details describing the condition of the component and will provide specifics regarding any effects of the deficiency on project operations, maintenance requirements, and component performance. The comment will use wording from the condition rating definitions (Table 1) along with further description noting the specific condition of the component.

(2) OCA rating comments will also specify the source of information (e.g., assessor observation, staff testimony, inspection report, or other documentation).

(3) Additional comments will be supplied to support the rationale for assigning a "-" increment.

(4) Components rated A, A-, or B are not required to have justification comments.

g. In addition to the required OCA rating comments, OCA ratings will be supported, where practical, with appropriate Rating Support Data. Rating Support Data can include digital imagery (photographs); audio; video; Global Position System (GPS) coordinates; references to maintenance work orders; and performance data (from Lock Performance Monitoring System (LPMS)—Navigation Business Line), Operations and Maintenance Business Information (OMBIL) Link—Hydropower and other Business Lines), and/or other sources, where practical.

h. If an OCA rating is disputed, the Major Subordinate Command (MSC) Regional Asset Manager (RAM) or his/her designee will be consulted to resolve the issue.

Table 1
OCA Rating Scale and Definitions

OCA Rating Scale and Definitions				
Rating		**Descriptor**	**Definition**	**Notes**
A	9	Excellent	Component was recently put into service and shows no signs of wear.	Ratings DO NOT require comments.
A-	8			
B	7	Good	Component performs its intended function. Any deficiencies are normal wear and not actively progressing at a greater rate than normal wear.	
B-	6			
C	5	Fair	Component has a deficiency that is beginning[1] to affect its performance, operational procedures, and/or maintenance requirements. *AND/OR* Component is beginning to show a greater rate of change in degradation that has the potential to cause a functional failure.	Ratings DO require justification comments and will be verified during the assessment.
C-	4			
D	3	Poor	Component has a deficiency that increasingly[2] or moderately[3] affects its performance, operational procedures, and/or maintenance requirements. *AND/OR* Component has a clear mode of failure due to an advanced state of degradation likely with an accelerating trend.	
D-	2			
F	1	Failing	Component has a deficiency that substantially[4] affects its performance, operational procedures, and/or maintenance requirements and is approaching complete failure. *AND/OR* Component is clearly in the final stages of degradation trending toward complete failure (imminent failure).	
CF	0	Completely Failed	Component is completely failed and does not perform its intended function. *AND/OR* Component is red-tagged.	

Minus OCA Rating Definition

The minus OCA ratings (A-, B-, C-, and D-) are for components that meet the definition of a particular OCA rating but may be showing initial signs of the next lower OCA rating.

*See [Table 2] for commentary and key definitions associated with this rating scale. Further iterations of the supporting tool will include a rating of "U" for unknown.

Table 2
Commentary and Key Definitions for OCA Rating Scale

Commentary on OCA Rating Definitions
1. In the C rating definition, "**is beginning**" refers to a deficiency that is in the early stages of affecting performance, operations, and/or maintenance. The effects typically won't be large or significant, and there may be signs that they'll increase in the future if not addressed.
2. In the D rating definition, "**increasingly**" refers to a deficiency that has worsening effects on performance, operations, and/or maintenance. The effects may be occurring more often or be of increasing severity.
3. In the D rating definition, "**moderately**" refers to a deficiency that has significant effects on performance, operations, and/or maintenance. The effects are larger or more advanced.
4. In the F rating definition, "**substantially**" refers to a deficiency that has severe effects on performance, operations, and/or maintenance requirements that, in the best judgment of the assessor, has a high probability of failure (imminent failure).
Key Definitions
Performance: The ability of a component to perform its intended function and provide the required level of performance to fulfill its mission. This can be measured in terms of reliability, availability, capacity, and meeting customer demands/needs. Condition deterioration is a cause of failure — the effect of failure is poor performance.
Operational Procedures: Standard operation procedure of a component to meet its intended function and desired level of performance for the Project's mission (e.g., deficiency increases operations time, labor, and/or costs, which would justify a lower OCA rating).
Maintenance Requirements: Maintenance actions performed on a component to keep it functioning at the desired level of performance for the mission (e.g., deficiency increases frequency and magnitude of maintenance, which would justify a lower OCA rating).

* At the time of release of this EC, the component may not be assigned an OCA rating lower than B if that rating cannot be verified by any of the methods listed above. However, this could overstate the condition of some components; therefore, further iterations of the supporting tool will include an entry of "U" for unrated which flags the asset with enough detail to determine what future action should be taken.

Chapter 3
Operational Condition Assessment Process

3-1. Purpose. This chapter identifies and explains the steps required to complete an OCA.

3-2 Guidance.

a. An Operational Condition Assessment is the process of determining an OCA rating for the components and/or systems being assessed at a project by qualified, trained assessors.

b. There are two types of OCAs:

(1) Full OCA—An onsite assessment of all of the project's components, which is completed by the OCA Team. The documentation review will be performed before the site visit.

Note: The operational aspect of OCAs should always be kept in mind—disruption to the project and/or project staff and the size of the OCA Team should be kept to the necessary minimums. In most cases, once the project build and document review are complete, it should take no more than 1–2 days to thoroughly assess the project's assets and finish the OCA.

(2) Update OCA—An assessment of a subset of a project's components performed to update the OCA ratings as conditions change or new information is discovered. Update OCAs can be done either virtually (with adequate Supporting Documentation) or onsite, and they will be completed by the OCA Team. Update OCAs are also referred to as Partial OCAs in the online tools.

c. Assembly of an OCA Team. A Full OCA is conducted by an OCA Team consisting of Team Members and a designated Team Leader. The RAM or his/her designee is responsible for organizing a qualified OCA Team. (See Chapter 6, "Roles and Responsibilities," for additional team requirements.)

(1) All OCA Team Members and the Team Leader must be qualified and trained.

(2) The OCA team must incorporate a regional aspect in one or more of the following ways:

(a) Include Team Members from multiple Districts.

(b) Include a Team Leader or at least one Team Member from another District.

(c) Seek additional OCA Quality Control (QC) by another District before submitting the OCA for Quality Assurance (QA) review at the MSC level.

(d) Perform QA using a multi-District team representing the MSC.

(e) Coordinate with another MSC for QA.

(f) Submit other methods of incorporating a regional aspect to Headquarters Asset Management (HQ AM) for approval.

(3) If qualified Subject Matter Experts (SMEs) are not available within the MSC when needed, an option is to seek expertise from other MSCs.

d. Initial Project Model Build or verification of an existing Project Model—An OCA is conducted using a Project Model, which is a representation of the project.

(1) The Project Model must be built using the Business Line-specific component list (as defined in the appropriate appendix of this document).

(2) It is recommended that each MSC use a limited number of qualified, trained, and knowledgeable individuals to build/update Project Models to increase consistency and accuracy within the MSC and throughout USACE.

(3) The initial Project Model must be built prior to the project's first OCA.

(4) For subsequent OCAs, the Project Model must be updated as needed to represent the current project. For example, an update may be necessitated by newly installed components, removed components, or corrections.

e. Collection and review of Supporting Documentation. Prior to conducting the OCA, Team Members should review relevant Supporting Documentation.

(1) The Supporting Documentation should be collected and distributed prior to the OCA. It should be current and relevant to the condition of the project's components.

(2) Examples of commonly used Supporting Documentation include the following:

(a) Periodic Inspections

(b) Underwater Inspection Reports.

(c) Facilities and Equipment Maintenance (FEM) historical data.

(d) Specialty Inspection Reports, such as Hydraulic Steel Structure and Bridge inspections.

f. Discussions with project staff. The OCA Team will have face-to-face conversations with project personnel to discuss project issues that may affect component condition, operations, maintenance, safety, or legal mandates relevant to OCA ratings.

(1) Project staff should be encouraged to participate in the discussion process. OCA Team Members should incorporate staff testimony, where applicable, into their comments to justify OCA ratings.

(2) Project personnel are encouraged to answer questions from assessors and provide testimony as to the condition, performance, operation, and maintenance of components. However, only the OCA Team Members are allowed to perform the rating process. Those who are not part of the OCA Team are discouraged from attempting to influence the OCA ratings in a way that is not consistent with the OCA rating process through circumvention of the rating flowchart or other rating aids designed to reduce bias, inconsistency, and subjectivity.

g. On-site observation. The OCA Team conducts an onsite project walk-around to gather information about component conditions. (A site visit is always required for a Full OCA; a site visit may be conducted for an Update OCA, if necessary, but it is not required.)

(1) OCA Team Members review known suspect component conditions with the project staff and look for any unknown issues.

(2) OCA Team Members verify all operational conditions that the project staff identifies as concerns.

(3) While onsite observations are not detailed inspections of the operation of the equipment and structures, they must be thorough enough to identify conditions that currently affect their operation. It is the responsibility of OCA Team Members to observe and appropriately document operational conditions (such as noises, movements, and speeds) that could be indicators of a deficiency.

h. OCA rating assignment. OCA Team Members will assign an OCA rating to each component in the Project Model by following the standard Business Line procedure (as defined in the appropriate appendix of this document) in line with the guidance provided in Chapter 2, “Operational Condition Assessment Ratings.”

i. QC is performed on the data. See Chapter 5, “Operational Condition Assessment Quality Control and Quality Assurance,” for complete details.

j. QA is performed on the data. See Chapter 5, “Operational Condition Assessment Quality Control and Quality Assurance,” for complete details.

k. OCA approval is finalized. An OCA is determined to be final *only* after QC and QA have been performed and all OCA ratings have been approved.

l. Out-briefing—The final OCA will be downloaded by the RAM or his/her designee through the OCA tools and forwarded to the appropriate parties at the District level (Operations Project Manager [OPM], Chief of Operations, and/or others). The final ratings will reside in the OCA database. Links to the OCA database can be found on the Asset Management SharePoint site at the following location: https://cops.usace.army.mil/sites/AM/OCA/Lists/Links/AllItems.aspx

Chapter 4
Operational Condition Assessment Scheduling and Funding

4-1. Purpose. This chapter identifies the scheduling and funding for OCAs.

4-2. Guidance.

a. Scheduling of OCAs.

(1) Full OCA.

(a) A Full OCA is scheduled at the following times:

(I) When a new construction project is turned over to USACE Operations.

(II) When a District begins performing OCAs on a new asset.

(III) A maximum of every 5 years while the asset is owned, operated, and/or maintained by USACE.

(b) A site visit is always required for a Full OCA.

(2) Update OCA.

(a) An Update OCA is performed at the following times:

(I) Annually, to be finalized in sufficient time for the refreshed data to be used in annual budget preparation.

(II) When requested by project personnel or others as changes in condition are noted (either a degradation or a repair/ replacement).

(b) A site visit may be conducted for an Update OCA, if necessary, but it is not required.

(3) The OCA schedule will be coordinated among the following parties: The RAM or his/her designee, District staff (such as OPMs or other resource managers), OCA Team Members, and others as required.

(4) OCAs will be conducted, when possible and where applicable, with the levee safety, Dam Safety Periodic Inspections/Assessments, annual inspections and other types of inspections. (See USACE, Headquarters, Joint Memorandum, 16 October 2009, “Interim Guidance—Operational Condition Assessments for Inland Navigation.”)

b. Funding of OCAs—OCAs are funded by the District’s Operations and Maintenance (O&M) project funds. In all cases the OCA Team will strive to minimize

the cost of the OCA as much as possible while maintaining the required integrity, accuracy, and value of the resulting data.

Chapter 5
Operational Condition Assessment Quality Control and Quality Assurance

5-1. Purpose. This chapter describes QC and QA reviews to help ensure that OCA data are of the highest quality possible and that MSC Asset Management (AM) processes meet AM tenets. (See the PgMP for Civil Works Asset Management.)

5-2. Guidance.

a. Quality Control

(1) All OCAs will have Quality Control performed by the OCA Team and representatives from the appropriate District's Operations Division in order to validate the following:

(a) Components are accurately represented in the Project Models.

(b) OCA ratings and comments are complete, accurate, and justified with proper written comments and appropriate Rating Support Data (such as photographs and report references), if required.

b. Quality Assurance.

(1) All OCAs will have Quality Assurance performed by the RAM or his/her designee at the MSC level in order to validate the following:

(a) Components are accurately represented in the Project Models.

(b) OCA ratings and comments are complete, accurate, and justified with proper written comments and appropriate Rating Support Data (such as photographs and report references), if required.

c. National Quality Assurance consistency review.

(1) A national Quality Assurance review is conducted within each Business Line to evaluate and improve the consistency of OCA data (such as ratings and comment justifications) across all MSCs.

(2) The national Quality Assurance effort seeks to determine if improvements should be made to the QC and QA processes at the MSC level to obtain the desired data quality.

Chapter 6
Roles and Responsibilities

6-1. Purpose. This chapter identifies the requirements for a trained, knowledgeable, consistent, and unbiased Operational Condition Assessment (OCA) Team.

6-2. Guidance.

a. OCA Team Composition

(1) It is recommended that major functional leads, such as the Chiefs of Engineering and Operations, support the RAM through the provision of their staff, as necessary, to serve as OCA Team Members and to support the completion of the OCAs.

(2) An OCA Team consists of a Team Leader and the appropriate Team Members, depending upon the required disciplines.

(a) An Engineering or Operations staff member serves as the Team Leader.

(b) Each Team Member represents his/her specific Engineering or Operations discipline.

(c) OCA Teams are composed of experienced and multidisciplinary staff.

b. OCA Team Development.

(1) Participation of new members is encouraged by MSC and District staff in the OCA process.

(2) Rotation of Team Members promotes additional opportunities for other personnel and helps provide supplemental capability and expertise that may be required in the future.

(3) Annual workshops and After Action Report activities should be encouraged to gather information from OCA Team Members and to improve the process where necessary.

c. Roles.

(1) Regional Asset Manager (RAM).

(a) The RAM is responsible for overseeing the OCA Program within his/her MSC, establishing AM guidelines and procedures for his/her MSC consistent with HQUSACE and ensuring that a qualified OCA Team is assembled.

(b) See the PgMP for Civil Works Asset Management (AM) for a full description of the RAM's duties.

(2) OCA Regional Coordinator.

(a) The OCA Regional Coordinator role is fulfilled at the MSC level or distributed among individual Districts at the discretion of the Operations Chiefs and the RAM.

(b) The OCA Regional Coordinator helps ensure the quality of the OCA Program and communicates the status of the OCA process to the RAM.

(c) The OCA Regional Coordinator coordinates and tracks the status of the MSC's OCAs.

(3) OCA Team Leader.

(a) The OCA Team Leader leads the flow of all OCA activities as well as all briefing activities with the participating Project and District staff.

(b) The OCA Team Leader is the technical Point of Contact (POC) for all ensuing requests for reconsideration of the OCA ratings during the QA phase.

(c) The Team Leader must have performed at least three OCAs and be approved by the RAM or his/her designee.

(d) It is preferable that the OCA Team Leader be from a District other than the District in which the project resides.

(4) OCA Team Members

(a) OCA Team Members are selected by a combination of qualifications and availability from a pool of trained/experienced individuals.

(b) OCA Team Members should have at least 5 years' experience within their discipline (Engineering/Operations). Experience may include participation in other inspections, such as Dam Safety Periodic Inspections or other operational or facility inspections.

(c) OCA Team Members must be familiar with and trained in the OCA process prior to conducting an OCA. It is encouraged that new OCA Team Members shadow on at least two OCAs.

(5) Project Managers, Operations Managers, and Program Representatives are key to ensuring that current project conditions are reviewed, so they should be included in specific OCA discussions when agreed to by the OCA Team Leader.

(6) Facility Managers, Maintenance Leads, Area Managers, and Project Staff are key to ensuring that current project conditions are reviewed, so they should be included in specific OCA discussions when agreed to by the OCA Team Leader.

(a) These individuals are essential participants in the successful implementation of the Asset Management Program. Their role is to provide known condition information to the team, participate during the onsite walk-around, and provide maintenance data.

(b) Project staff must maintain continual awareness of the current Project Models and OCA ratings for all components at their project, and they should help ensure that all critical project components have been addressed and assigned an OCA rating.

(c) Project staff should note any OCA ratings that may not accurately reflect current conditions and bring these to the attention of the District Business Line Managers, District Asset Manager, or OCA Coordinator.

(7) Each District's Chief of Operations endorses the District's OCA ratings to the RAMs by March 1 annually to verify that they are current. This endorsement will consist of a list of projects and all associated asset ratings as an attachment. These documents can be downloaded from the OCA tools at the following location:

https://assetmanagement.usace.army.mil/OCA/ReportsTest/AMA/Viewer

THOMAS P. SMITH, P.E.
Chief, Operations and Regulatory Division Civil Works

Appendix A
Policy and Process for Operational Condition Assessments of Flood Risk Management (FRM) and Navigation (NAV) Assets

A-1. Scope.

a. The general USACE OCA policy is defined in the main body of this document. This appendix refines the policy and process specifically as it relates to the performance of consistent OCAs of USACE assets within the FRM and NAV Business Lines.

b. The Flood Risk Management and Inland Navigation OCA process has been developed specifically to provide a means to track components and their conditions through the use of hierarchical component lists for USACE assets at FRM operating projects and NAV locks and dams.

A-2. Step 1: Assemble a Qualified Team for FRM and NAV OCAs (Table A1).

Table A1
Required OCA Team Composition for a Full Onsite OCA

Discipline	FRM	NAV
Structural Engineer	X	X
Mechanical Engineer	X	X
Electrical Engineer	X	X
Operations/Maintenance Personnel	X	X
*Geotechnical Engineer	X	Optional
*Hydrology or Other	Optional	Optional

*Project-dependent

a. Team Leader Qualifications. The Team Leader will have performed at least three OCAs and be approved by the RAM.

b. Team Member Qualifications. Team Members will be knowledgeable of the specific project type they are assessing. (In other words, knowledge in FRM projects does not automatically equate to being qualified to perform NAV OCAs and vice versa.)

A-3. Step 2—Build/update the Project Model.

a. OCA models must be built according to the FRM/NAV model build standards.

(1) This includes the standards for location, orientation, component type, and component function.

(a) All structures that have flow are to be referenced looking downstream.

(b) The numbering system starts on the right side and progresses to the left.

(c) Gates that are at different elevations or are in line with each other are to be referenced from highest to lowest elevation.

(2) The ID number field should be populated according to model build standards and not local numbering systems.

(3) The Other Name field should be used to identify the local name and number of the component.

b. If a component at a project site cannot be identified in the OCA component list, the RAM or the OCA Coordinator should be consulted to determine whether the component is in another location in the component list or under another name.

(1) If a component is not in the component list, the assessor will fill out the component list submission form located on the OCA Community of Practice (CoP) SharePoint site (https://cops.usace.army.mil/sites/AM/OCA/Shared%20Documents/Forms/AllItems.aspx).

(2) Needed updates to OCA components in the project build must be brought to the attention of the AM IT Governance Board to be acted upon.

c. If a component cannot be found while performing component changes in the field during an OCA, use the “force fit” function to add the component in the OCA tool, and consult the RAM or OCA Coordinator later.

(1) “Force fitting” allows the component to be entered into the OCA tool even if it is not available in the component list, and it indicates that the component may need to be added to the component list hierarchy.

(2) Instructions for using the “force fit” function can be found on the OCA CoP SharePoint site (https://cops.usace.army.mil/sites/AM/OCA/default.aspx) under “OCA Help Documentation.”

(3) When using the “force fit” function, select as similar a component as possible within the component list hierarchy that has a similar consequence of failure. For example, if a project lighting component at an access road cannot be found, select a

similar project lighting component, such as “Project Lighting System, Parking Areas,” to use with the “force fit” function.

A-4. Step 3—Collect and review supporting documentation (Figure A1).

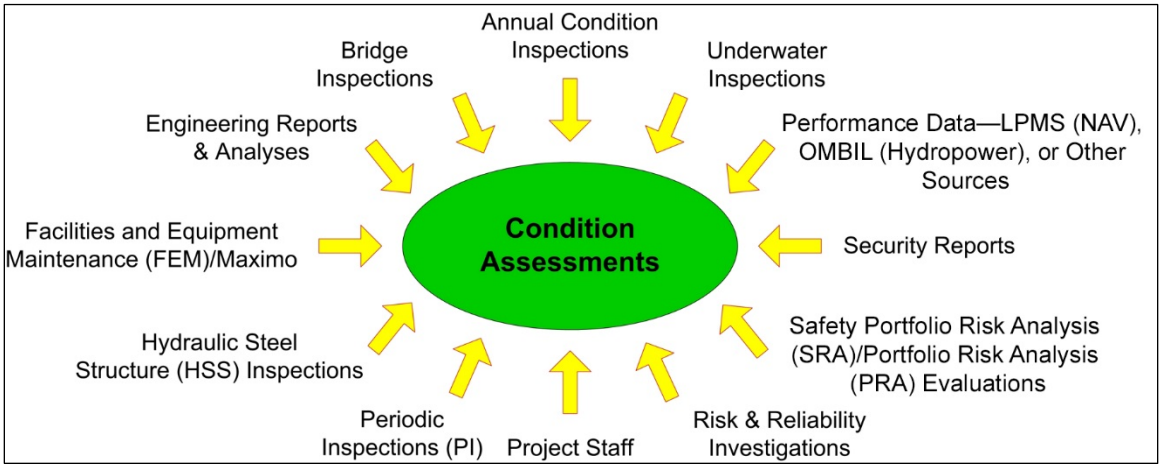


Figure A1. FRM/NAV Operational Conditional Assessment Supporting Documentation

a. Relevant documentation and existing reports.

(1) Prior to the start of the OCA, the District’s POC will collect all Supporting Documentation.

(2) Each MSC will develop a standard repository to aid in the collection of Supporting Documentation.

(3) Supporting Documentation should be current and relevant to the condition of the subject project’s components.

(4) The OCA Coordinator and/or the OCA Team Leader will coordinate through the District POC to secure all available Supporting Documentation to be used for the OCA.

(5) Examples of commonly used Supporting Documentation include, but are not limited to, the sources shown in Figure A1.

(6) Due to local practices regarding inspections and record-keeping, the level of available Supporting Documentation will vary by MSC and District. Should documentation be limited in some cases, the OCA Team must be prepared to rely more

heavily on face-to-face interactions with project staff and field observation of operating conditions.

b. Discussions with project staff.

(1) The OCA Team will have face-to-face conversations with project staff to discuss project issues that may affect component condition, performance, operations, and maintenance relevant to OCA ratings, safety, and legal mandates.

(2) During these face-to-face interactions, it is essential for OCA Team Members to encourage the project staff to identify all operational concerns.

(3) The OCA Team will educate project staff about the OCA process so they can make informed recommendations about when a component's condition needs to be reviewed by qualified OCA personnel to ensure accurate OCA ratings.

(4) The OCA Team will reinforce to the project staff that the purpose of the condition ratings is to inform decisions related to strategic investments for maintenance and capital investment needs.

(5) These discussions are important to better understand and document the effects of component conditions on project operations, maintenance, safety, legal mandates, and component performance.

(6) The project staff will be encouraged to participate in the discussion process, and Team Members should incorporate staff testimony, where applicable, into their comments to justify OCA ratings.

c. Onsite observation of a project.

(1) The OCA Team will conduct an onsite project walk-around to gather information about component conditions. (A site visit is always required for a Full OCA; a site visit may be conducted for an Update OCA, if necessary, but it is not required.)

(2) OCA Team Members will review known suspect component conditions with the project staff and look for any unknown issues.

(3) OCA Team Members will attempt to verify all operational conditions that the project staff identifies as concerns.

(4) Onsite observations are not detailed inspections of the operation of the equipment and structures; however, they must be thorough enough to identify conditions that currently affect their operation. It is the responsibility of OCA Team

Members to observe and appropriately document operational conditions (such as noises, movements, and speeds) that could be indicators of a deficiency.

(5) OCA Team Members will document the component's condition with supporting data (such as digital imagery, audio, video, GPS coordinates, and/or references to maintenance work orders or other project documentation) where practical. These data are especially important when component deficiencies drive an OCA rating below a B. Rating Support Data (media files) may be attached to the appropriate component through the OCA tool to help justify the OCA ratings.

A-5. Step 4—Assign a condition assessment rating to each component following the policy and procedures laid out in this document.

a. A component and/or system "deficiency" is a physical characteristic, such as deterioration, damage, or other irregular flaw. Safety and legal mandates are tracked separately, using their definitions within the U.S. Army Corps of Engineers Civil Works Direct Program Development Policy Guidance for the current fiscal year (Engineering Circular [EC]); they are not to be combined into a single rating representing condition safety and legal mandates.

b. Component age and obsolescence will not to be considered deficiencies for determination of OCA ratings. They will not exclusively justify a lowered OCA rating. Many components in the USACE inventory have outlived their design life but are still in good operational condition. If components are still fulfilling their design requirements, it is likely more prudent to focus repair efforts elsewhere.

c. The assessment of each component's operational condition will be guided by a standardized rating flowchart (Figure A2) that leads to a rating that reflects the degree of severity of an observed, documented, and/or project-identified physical "deficiency

and its influence on the component's operational condition, performance, or maintenance requirements. (The flowchart logic is discussed in Table A2.)

(1) The flowchart provides the OCA Team with a graphical means of establishing a rating for each component by following a series of Yes/No logical suppositions and definitions that aid in qualifying deficiencies into accurate ratings.

(2) The OCA Team will focus on the component's condition—not the consequences of its failure—while conducting assessments.

(3) All legal mandates and safety issues will be tracked by noting the appropriate violation or No Legal/Safety Impact, as applicable.

(a) Originally, legal mandates and safety issues were part of the OCA A-F, CF ratings system. However, they are now documented separately from the A-F, CF ratings to better align with the definitions for legal mandates and safety in the USACE Budget Engineering Circular (EC). The risk analysis based on OCA ratings produces more accurate results when it uses only the physical condition of components without inclusion of legal and safety issues.

(b) Comments for legal mandates and safety will discuss the condition that qualifies as an issue from a legal or safety perspective and the consequence of non-compliance with these policies.

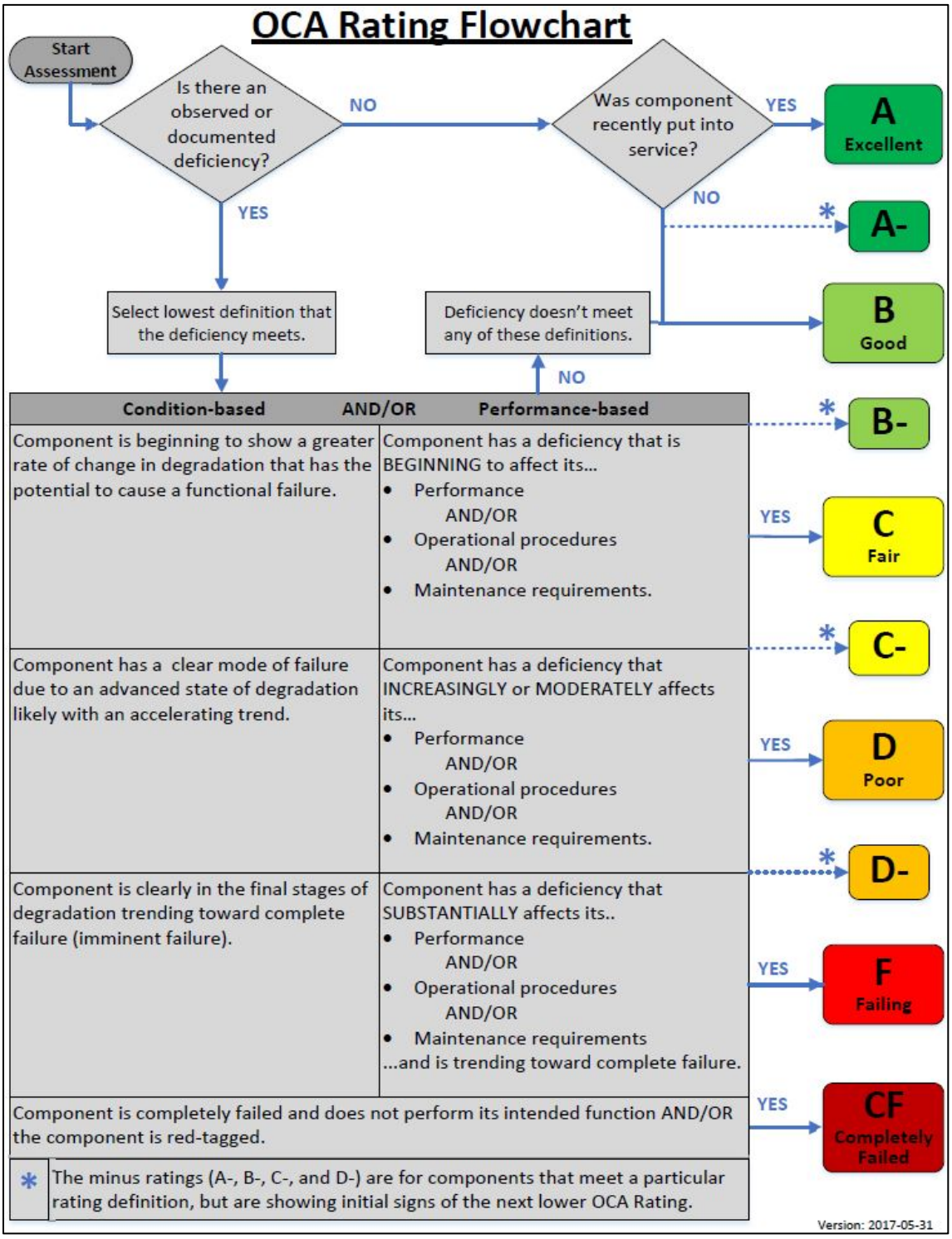
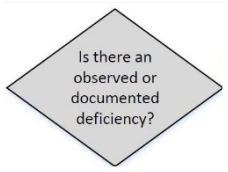
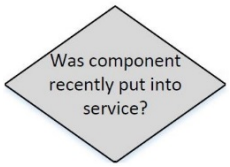


Figure A2. Condition Rating Flowchart

Table A2
Condition Rating Flowchart Logic

<table>
<tr><th colspan="2">Step</th><th>Purpose</th></tr>
<tr><td>1</td><td> 
</td><td>In this step, the assessor must determine from the documentation, interviews, and observations whether a deficiency exists, recalling that a component deficiency is always defined as a physical characteristic, such as deterioration, damage, or other irregular flaw.

The component’s age and obsolescence are not considered characteristics of a deficiency. If there is no deficiency consistent with this definition, the component may be given only an A, A-, or B rating.</td></tr>
<tr><td>2</td><td> 
</td><td>This step allows the assessor to separate those components that are in A condition from those in B condition. Newly installed or replaced components without wear or any other defects are considered A condition.

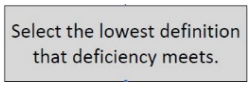
B condition components perform their intended function. Any deficiencies are normal wear and not actively progressing at a greater rate than normal wear.</td></tr>
<tr><td>3</td><td> 
</td><td>By this step, the assessor has determined that a deficiency exists. The subsequent steps qualify the component's condition-based and/or performance-based issues as a B-, C, C-, D, D-, F, or CF OCA rating. The lowest definition that best qualifies the deficiency will be the rating selected.</td></tr>
<tr><td>4</td><td colspan="2"><table>
<tr><th>Condition-based</th><th>AND/OR</th><th>Performance-based</th></tr>
<tr><td>Component is beginning to show a greater rate of change in degradation that has the potential to cause a functional failure.</td><td></td><td>Component has a deficiency that is BEGINNING to affect its…
• Performance
AND/OR
• Operational procedures
AND/OR
• Maintenance requirements.</td></tr>
</table>
If the deficiency meets one of the above definitions, it is a C rating or lower.</td></tr>
</table>

Table A2. (continued)

<table>
<tr><td rowspan="2">5</td><td><table><tr><td>Component has a clear mode of failure due to an advanced state of degradation likely with an accelerating trend.</td><td>Component has a deficiency that INCREASINGLY or MODERATELY affects its…
• Performance
AND/OR
• Operational procedures
AND/OR
• Maintenance requirements.</td></tr></table></td></tr>
<tr><td>If the deficiency meets one of the above definitions, it is a D rating or lower.</td></tr>
<tr><td rowspan="2">6</td><td><table><tr><td>Component is clearly in the final stages of degradation trending toward complete failure (imminent failure).</td><td>Component has a deficiency that SUBSTANTIALLY affects its..
• Performance
AND/OR
• Operational procedures
AND/OR
• Maintenance requirements
...and is trending toward complete failure.</td></tr></table></td></tr>
<tr><td>If the deficiency meets one of the above definitions, it is an F rating or lower.</td></tr>
<tr><td rowspan="2">7</td><td>Component is completely failed and does not perform its intended function AND/OR the component is red-tagged.</td></tr>
<tr><td>If the deficiency meets one of the above definitions, it is a CF rating.</td></tr>
<tr><td>8</td><td>Deficiency doesn't meet any of these definitions.</td><td>If the deficiency does NOT meet any of the definitions for C, C-, D, D-, F, or CF ratings then it can be rated only a B or B-. *Note: If you feel this is in error, contact your Division's Regional Asset Manager to discuss the rating.</td></tr>
</table>

d All component deficiencies, regardless of their rating, will be documented for tracking and monitoring.

e All components rated below a B will have their observed or documented deficiencies noted for reference in future assessments and for tracking negative condition trends.

f. All components rated below a B will have a justification that is based on observation, valid testimony, and/or the appropriate Supporting Documentation (such as photos and/or report references).

g. The following elements must be considered in the evaluation and rating of a component's operational condition:

(1) The magnitude and progression of the deficiency.

(2) The level or degree to which the deficiency degrades the component's performance, alters operational procedures, and/or increases its maintenance requirements.

h. A component's condition will also be evaluated to determine if it lies near the transitional boundary between one OCA rating and the next lower rating through the use of "-" (minus) increments to the condition rating.

(1) A "-" rating increment may be assigned when an assessor determines that the component meets the definition of a particular OCA rating but may be showing initial signs of the next lower OCA rating. The assessor may believe the component is at the point where it will soon worsen to a lower condition rating.

(2) For each component assigned a "-" increment, Team Members will include additional expanded notes in the Comments to support their rationale for assigning the increment.

i. All ratings below a B must be properly supported by the following:

(1) Identifying at least one rating source and documenting it in the comment to support the rating. Relevant excerpts from the appropriate reports or other documents may also be entered

(2) Example: For Periodic Inspection (PI) references, the PI year and the actual relevant text should be included

(3) Where practical, providing photographs, audio files, videos, GPS coordinates, and/or other supporting digital media that justifies the rating

j. As more assessments are completed at each project, a historical record of condition ratings will be available to witness trends in component performance. However, new ratings must not be assigned on the basis of any past rating and are to be used only as reference.

k. After the onsite physical assessment has been completed, but before leaving the site, the OCA Team Leader is responsible for holding a face-to-face out brief with all

OCA Team Members and applicable project staff to discuss the conditions and ratings and to resolve any discrepancies.

A-6. Step 5—Perform Quality Control (QC) on the data.

a. All OCAs will have QC performed by the OCA Team and representatives from the appropriate District's Engineering and Operations Divisions.

b. QC includes reviewing the model, verifying that project assets are accurately represented, and ensuring that the ratings are complete, accurate, and justified.

c. The OCA Team Leader is ultimately responsible for ensuring the completeness and accuracy of the OCA before sending it to QA.

A-7. Step 6—Perform Quality Assurance (QA) on the data.

a. All OCAs will have QA performed by the RAM, or his/her designee, at the MSC level.

b. Additional QA will be performed selectively at the HQUSACE level.

c. QA includes verifying that project assets are accurately represented and that OCA ratings and comments are complete and accurate.

d. A national Quality Assurance review will be conducted by HQUSACE to evaluate and improve the accuracy/consistency of OCA data.

A-8. Step 7—Finalize OCA approval.

An OCA is determined to be complete only after QC is completed at the local level and QA has been completed within the OCA process (and tools) at the MSC level.

A-9. Additional OCA Procedure Resources.

a. OCA tool

(1) Links to the OCA viewer and the OCA web tools are available at the AM website: https://assetmanagement.erdc.dren.mil/tools/.

(2) Those who are *only* performing assessments or *only* performing project builds do not need to request permission for an OCA. Those who are *not* performing QA ratings or scheduling new assessments *do not* need to request permission for an

OCA. Registering requires entering only name, District, Division, and phone number. Registrants are added to the available list of assessors in the scheduling tool. From there, the scheduling coordinator will add assessors to a particular assessment.

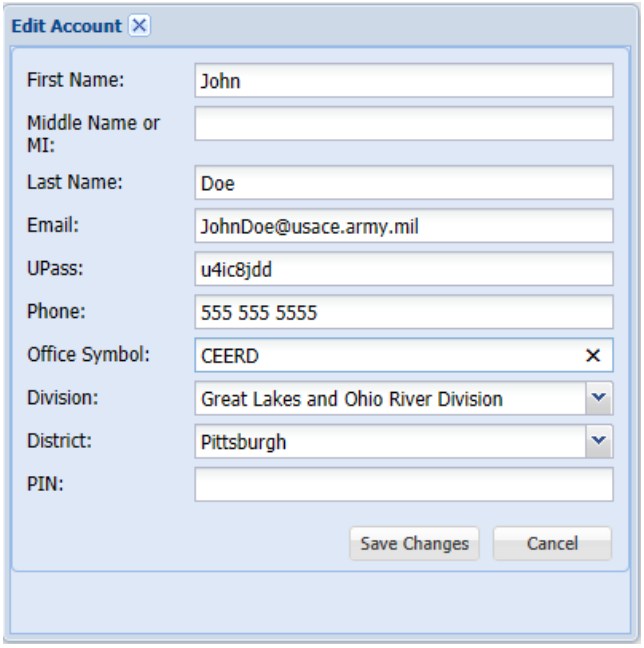


Figure A3. OCA Scheduling Tool Edit Account Screen

(3) If the Edit Account screen (Figure A3) does not appear upon registering, AM OCA registration has already been completed and no further action needs to be taken to be included in the list of available assessors for assignment to an assessment in the OCA scheduler tool.

Appendix B
Policy and Process for Operational Condition Assessments (OCAs) of USACE Recreation (REC) Assets

B-1. Scope.

a. The overarching USACE OCA policy is defined in the main body of this policy document. This appendix refines the policy and process specifically as it relates to the performance of consistent OCAs of USACE assets within the REC Business Line.

b. The REC OCA process has been developed specifically to accomplish the following:

(1) Provide a means to track components and their conditions (asset visibility) through the use of hierarchical component lists for USACE REC assets.

(2) Provide a common, consistent, and repeatable OCA process. The OCA process is repeatable both in terms of the process itself and the generated outcomes.

c. This document provides specific policy for the REC OCA process. A REC OCA training and procedural field manual will be available to supplement this policy and give specific detail into the assessment process.

B-2. REC Asset Rating and Inventory.

a. REC asset inventory is housed in OMBIL, the database of record. Information for that database will be collected in the annual RecAsssement update. Operating projects (projects) must correctly list the presence and numbers of each recreation facility in the database. This inventory is crucial to the proper assignment and demonstration of need in the USACE O&M budgeting process.

b. The FEM program will house the maintenance data of the associated assets.

c. From 2006 to 2017, the condition of recreation assets was captured using the Facility Condition Index (FCI) 0-7 scale that was a feature of the Recreation Budget Evaluation System (RecBEST) program. RecBEST was officially retired as a budget tool in 2017 replaced by the RecCWIFD module, and the REC OCA using an A-F/CF scale took its place of RecBEST FCI. (Note: Complete Failure [CF] is rarely used as a rating for REC assets as those components are usually removed but may be applicable only if the asset is in place but out of service.)

d. The USACE Recreation Program will use the OCA rating scale to evaluate asset condition in conjunction with project site area level consequences to help establish the associated relative risk assessment for use in CWIFD and the budgeting process. A risk assessment involves identifying conditions for sources of potential failures, assessing the likelihood or confidence level that they will occur and the consequences if it does occur. Any ratings below a B must be supported by written comments documenting the component's condition and describing any deficiencies present. See the REC budget guidance or Program Development Manual for specifics on risk assessment and categorization.

e. With the inclusion of USACE in the Federal Lands Transportation Program (FLTP) in 2012, USACE joins the other Federal Land Management Agencies, which are required to report condition and inventory of federally operated roads and parking infrastructure. USACE has partnered with the Federal Highway Administration to develop a rating process that is consistent with FLTP requirements for federally owned/operated public roads, while meeting the intention of the USACE Asset Management philosophy (see Table B4).

f. Generally, the OCA process should capture condition information on recreation consistent with Table B1. The National Recreation OCA PDT has verified through the Recreation Leadership Advisory Team that the following recreation assets are considered the core assets and components for the REC program:

Table B1
Minimum Recreation Assets Assessment

Project Site Area (PSA)	**Asset**	**Asset Component**	**Minimum Assessment**
PSA Subtypes 1. Campgrounds 2. Day Use Area 3. Multipurpose Area 4. Water Access 5. Land Access 6. Visitor Center 7. Scenic View Area	Roads and Parking	Roads (Public and Recreation Service)	Sample Each Segment
		Parking (Public)	Sample Each Parking Lot
	Boat Ramps	Launch Lanes	Each Ramp
		Courtesy Docks	Each dock
	Buildings and Structures	Restrooms/Shower Houses	Each Building

Table B1 (continued).

Project Site Area (PSA)	Asset	Asset Component	Minimum Assessment
PSA Subtypes 1. Campgrounds 2. Day Use Area 3. Multipurpose Area 4. Water Access 5. Land Access 6. Visitor Center 7. Scenic View Area	Buildings and Structures (cont.)	Gatehouses	Each Building
		Utility, Storage and Other Recreation Buildings	Each Building/structure
		Fish Cleaning Stations	Each Building/structure
		Fishing Pier/Jetty/Dock	Each Structure
		Amphitheaters	Each Structure
		Shelters	Each Structure
	Sites	Play Areas/Grounds/Fields/Courses	Sampling
		Beaches	Each Swim Area
		Camp Sites	Sampling (Minimum of 3 Sites)
		Picnic Sites	Sampling (Minimum of 3 Sites)
	Utilities	Water	Overall System
		Sewer/Septic/Treatment	Overall System
		Electrical	Overall System
		Dump Station	Each Asset
	Grounds	Erosion Control – Retaining Walls, Sea Walls, Gabions, Bulkheads	Overall System of Erosion Control
		Trails (All)	Overall System

B-3. Operational Condition Assessments Overview. There are 396 USACE lakes authorized to include recreation as a project purpose, with the majority having some amount of USACE owned/operated infrastructure developed specifically for that mission purpose. USACE sponsored OCAs will only focus on infrastructure that is owned or operated by USACE, and will not assess out granted areas where we have no financial liability or responsibility for maintenance. Real estate inspections are the appropriate means to identify major deficiencies and violations of leased areas. With a national scope of this breadth, it is appropriate to split the OCAs into three basic types based on value or benefits delivered:

a. Comprehensive OCA – A full onsite assessment of the project's REC components, completed by the designated OCA team. Projects with National Economic Development (NED) benefits >$2M should be given consideration for an in-person assessment (see Table B2 for procedural detail).

b. Condensed OCA – An assessment of the project's REC components is performed by local staff using the same tools (see Para. B-7. below) and procedures and reviewed virtually or "tabletop" by the regional OCA team. The team reviews all supporting documentation to include photos of any deficiency rated B-or lower. Projects with <$2M in NED benefits should be included in this grouping (see Table B3 for procedural detail).

c. Update OCA – A cursory assessment of REC components is performed annually through a review of the NRM-Assessment data update. NRM-Assessment OCA data will be reviewed by project personnel to ensure no changes have occurred since the last official OCA. Requested changes during the Update OCA will be coordinated through the District Business Line Manager (BLM) to the Division BLM in coordination with the RAM as appropriate to address regional and national processes. Requested changes will be validated and verified with proper documentation before the changes can be made in the OCA tools.

B-4. Step 1: Assemble a Qualified Team.

a. Team Composition. An OCA Team consists of a Team Leader and appropriate Team Members, depending upon the physical and geographical size of the recreation program. A larger project may require additional members to expedite the assessment process. OCA Teams are composed of experienced and multidisciplinary staff. The makeup of a REC OCA Team is designed to promote a regional aspect with membership from other districts. Regional teams provide the best opportunity for achieving more objectivity throughout the REC OCA process and for sharing knowledge throughout the Division. The REC OCA Team will be assembled from the list of qualified REC OCA Team Members that meet the requirements for a project's REC OCA. The MSC Business Line Manager should coordinate with the RAM to ensure that a qualified REC OCA Team is assembled. The team should consist of the following:

(1) A Team Leader.

(2) At least one other member from elsewhere in the district, division, or national program must be part of the team.

(3) Local personnel may participate in an advisory or informational capacity or act as a “guide” but no more than two members from the host project should be considered as OCA team members.

(4) Visitation Estimation and Reporting System (VERS) subject matter experts (SME) or Coach Assist and Train Team (CATT) members should be included whenever possible.

(5) There is potential to incorporate the REC OCA as part of a larger project-level OCA in conjunction with other applicable business lines. A trained REC OCA member should be present to ensure the REC OCA portion incorporates the procedures provided in this document.

b. Team Leader Qualifications.

(1) The Team Leader should have performed at least three OCAs and must be approved by the RAM.

(2) The Team Leader must have received the National REC OCA training.

(3) A Natural Resources Management (NRM) team member from the home district should serve as Team Leader.

c. Team Member Qualifications.

(1) Team Members should have appropriate experience within the Recreation or Natural Resources Management discipline and be trained in the OCA process.

(2) Team Members must complete the appropriate training material to obtain access to REC MICA OCA Tool.

(3) Team Members must be knowledgeable of the specific project type they are assessing.

(4) It is recommended that REC OCA Team Members shadow on one OCA before performing the duties for their discipline on a REC OCA Team.

(5) The OCA team members should be knowledgeable and familiar with standard recreation infrastructure.

(6) Where possible, it would benefit the project to select a team member that may possess diverse specialties such as civil, mechanical, or electrical backgrounds.

d. Training and List of Qualified Personnel List.

(1) The National REC OCA team will compile training materials and conduct virtually and onsite trainings. Completion will be certified and documented. Training records will be housed on the REC OCA SharePoint site.

(2) Trainings will consist of webinars, videos, manuals and field guides, and a bi-annual onsite Train-the-Trainer session. After successful completion of training, personnel will be issued passwords to access REC MICA OCA Tool.

(3) Each MSC will ensure an appropriate number of personnel have received the REC OCA training to be able to accomplish goals according to schedule.

(4) Each MSC will maintain a list of qualified REC OCA Team Members who are trained in performing OCAs.

(5) The list of REC OCA Team Members for the Division should include several reserve members.

B-5. Step 2: Collect and Review Project Data. The Team Leader will assign Team Members responsibilities to review and assess the particular components of which they have the most knowledge.

a. Collect relevant documentation and existing reports.

(1) Prior to the start of the OCA, the District's REC OCA POC will collect all pertinent support documentation.

(2) Each MSC will ensure the data will be uploaded to the national repository to aid in the collection of support documentation (SharePoint site to be determined).

b. Examples of commonly used support documentation include, but are not limited to, the following:

(1) NRM-Assessment (formerly RecBEST) current condition data to include the following:

(a) Facility Condition Index (legacy).

(b) Recreation Unit Day Availability.

(c) Unit Day Value.

(2) Project Site Area (PSA) Analysis Tool or OMBIL/EDW reports on asset inventory.

(3) FEM reports, maintenance logs or work orders.

c. Pre-assessment brief: Once documentation has been collected and reviewed, the team will gather to discuss their findings.

(1) Teams should meet virtually to discuss pre-assessment findings and highlight outliers in condition and performance.

(2) The project management should be in-briefed (virtually or onsite) on findings of pre-review data.

B-6. Step 3: On-site assessment and observation.

a. Discussions with project staff.

(1) The OCA Team should have onsite interaction and conversation with project personnel to discuss project issues that may affect component condition, operations, maintenance, or other issues relevant to OCA Ratings.

(2) During these interactions, it is essential that OCA Team Members encourage the project staff to identify all operational concerns, especially those that cannot be readily seen or identified without special equipment (e.g., utilities such as electric, sewage, or septic systems).

(3) The OCA Team must ensure that project personnel firmly understand that the purpose of the condition ratings is to inform decisions related to strategic investments for maintenance needs and help them get the funding needed to make the required repairs or obtain the required replacements.

b. Minimally, the OCA Team will verify all operational conditions of concern (OCA ratings of B- or below) as identified by previous reviews, maintenance records, project staff, or baseline assessments from the legacy RecBEST FCI scores.

c. Assessments should take into consideration each PSA identified in the PSA analysis tool and validate inventory identified in Table B1. There may be instances where, due to size and scope of a project, an abbreviated assessment must occur. In this case, it is required to accomplish the minimum identified above in 3.4.a.

d. While onsite observations are not intended to be detailed inspections of the equipment and structures, they must be thorough enough to identify conditions that currently affect their operation. It is the responsibility of OCA Team Members to observe and appropriately document operational conditions, which could be indicators of a deficiency.

e. OCA Team Members will document the component's condition with supporting data such as digital imagery, audio, video, GPS coordinates, and/or references to maintenance work orders or other project documentation, where practical. These data are especially important when component deficiencies drive a rating lower than B-, which may warrant budget package development.

f. A component "deficiency" is a physical characteristic such as deterioration, damage, or other irregular flaw that may impact operations or increase maintenance.

g. For the purpose of OCA ratings, component age and obsolescence are not considered characteristics of a deficiency.

h. All components rated B- or lower must have a justification that is based on observation, valid testimony, and/or appropriate supporting documentation such as photos and/or report references.

i. The following elements must be considered in the evaluation and rating of a component's operational condition:

(1) The magnitude of the deficiency.

(2) The level or degree to which the deficiency degrades the component's performance, alters operational procedures, and/or increases its maintenance requirements.

(3) The OCA rating scale. OCA Team Members must be mindful of the definitions and specific requirements that characterize the OCA ratings to accurately document and assess components.

B-7. Step 4: Perform Quality Control (QC) and Quality Assurance (QA) on the REC OCA data.

a. All REC OCAs will have QC and QA review to help ensure that REC OCA data is of the highest quality possible and consistently applied throughout the review consistent with Chapter 5.

b. The REC OCA Team Leader is ultimately responsible for ensuring the completeness and accuracy of the REC OCA before sending it to the MSC BLM and RAM. A memorandum for record should be developed to document that QC has been completed.

c. Additional consistency review will be provided on an annual basis before the budget submission by the national REC OCA PDT.

B-8. Step 5: Finalize OCA approval.

a. An OCA is determined to be complete only after QC is completed by the OCA team and QA has been completed at the district level. It should then be submitted to the MSC BLM, RAM, and/or OCA coordinator.

b. A report of findings and major deficiencies should be provided to the project and compiled for budget package submittal when necessary. These findings will be addressed in the project's facilities maintenance plan.

B-9. Collection and Tools.

a. A REC OCA is conducted using Mobile Information Collection Application (MICA), which is an ERDC-developed software application using smartphones or other mobile devices providing a fast, efficient way of collecting and managing field data. This same technology is being used to collect data in several USACE mission areas including Emergency Management and has won the USACE innovation of year award (2012).

b. OCA data will be collected using the REC MICA tool and transmitted to the national OCA data set that houses information from all USACE business areas. From that national dataset, the REC OCA data will upload to the NRM-Assessment tool to be reviewed annually by the field. After review, the NRM-Assessment data will then be uploaded annually to the Civil Works Integrated Funding Database (CWIFD) for use in the budgeting process.

c. Geospatial and digital data are collected real-time and sent immediately to the system server. If internet or 3G access is not available, all data is stored locally on the phone until access is regained and it uploads to the server.

B-10. OCA Scheduling and Funding.

a. Scheduling of OCAs.

(1) An OCA will occur a minimum of once every 5 years. OCA schedule will be coordinated among the following parties:

(a) Regional Asset Manager (RAM).

(b) MSC Business Line Managers (BLM).

(c) District Staff (NRM).

(d) Project Staff (OPM).

(2) More frequent OCAs may be conducted if known changes in condition have occurred but must be coordinated through District, MSC, and RAM.

(3) A draft schedule will be developed by the National REC OCA Team and coordinated with the MSC Business Line Manager to ensure program continuity and can be budgeted accordingly. The MSC will provide the RAM and/or OCA Coordinator a copy of this schedule.

b. Funding of OCAs.

(1) OCAs are funded at the project level through the O&M appropriation. The OCA team should strive to minimize costs of the OCA while maintaining consistency, integrity, accuracy, and value.

(2) These assessments should be considered periodic, commonly performed specific work and should be funded as part of the project’s common O&M.

B-11 Comprehensive REC OCA Process Tables

Table B2.
Comprehensive REC OCA Process

#	Step	Location	Process
1	Scheduling	Off Site	Projects are scheduled for Comprehensive OCA consistent with B-3.a. above. Comprehensive reviews will be funded according to the schedule through budget packages submitted in Specific Work in the O&M budget process.
2	Assemble Team	Off Site	The OCA Team is selected consistent with Paragraph B-4 of this appendix.
3	Training Verification	Off Site	The OCA Coordinator or OCA Team Leader verifies that the OCA Team has completed the latest REC OCA training material and possesses all available support rating aides, then requests access for team members into REC MICA.
4	Gather Maintenance Records and Documentation	Off Site	The OCA Team Leader will contact the project management and other appropriate District chains of command regarding the scheduled OCA and begins to secure the available maintenance documentation (e.g., FEM reports, work orders, and NRM-Assessment data).
5	Obtain Funding	Off Site	The OCA Team members submit MIPR requests for travel and labor to conduct the OCA to the appropriate funding elements, providing OCA Team Member financial information.
6	Pre-assessment Meeting	Off Site	OCA Team Members meet virtually through a web meeting/phone call to review the available support documentation and discuss logistics and schedule for completing the assessment.
7	Staff Pre-brief and Discussions	On Site	The OCA Team arrives at the site and conducts introductions, providing a brief overview of the OCA process, its purpose, and the agenda for the OCA. The project staff provides a synopsis of all operational concerns and provides any additional documentation/records that support these concerns.

Table B2 (continued).

#	Step	Location	Process
8	Onsite assessment and observations	On Site	The project staff guides the OCA Team through the USACE managed PSAs identifying all concerns and operates equipment, as necessary, to demonstrate any issues. The OCA Team documents all observed issues in the form of field notes and collects digital media to document or clarify conditions in the OCA report.
9	Rating of PSA assets and components	On Site	The OCA Team rates the components using the REC MICA tool. Completed ratings and associated digital media will be transmitted to the national OCA database when an internet connection is available.
10	Post Assessment Out-brief	On Site	Before their departure, the OCA Team provides the project management with feedback from observations in the field. The team will identify patterns in component deficiencies and potential gained operational efficiencies.
11	QA/QC of Assessment Data	Off Site	The OCA Team Leader issues a document to the MSC, RAM, or OCA Coordinator requesting that the MSC review the assessment for consistency with the issues discussed and observed and the final ratings assigned. The OCA Team Leader or the OCA Team Member in charge of completing the OCA field assessment report sends the OCA to QA in the OCA tool. The person in charge of conducting the QA reviews the OCA and provides comments to the OCA Team Leader, as necessary, to resolve any outstanding issues.
12	Finalize Report	Off Site	The OCA Team Leader generates a Memorandum for Record stating that the review is complete. A report of findings and major deficiencies should be provided to the project and compiled for budget package submittal when necessary. These findings will be addressed in the project's facilities maintenance plan.

Table B3.
Condensed REC OCA Process

#	Step	Location	Process
1	Scheduling	Off Site	Projects are scheduled for Condensed OCA consistent with B-3.b. above. Condensed reviews require little or no travel and will be funded according to the schedule through the common O&M budget submittal.
2	Assemble Team	Off Site	The OCA Team is selected consistent with Paragraph B-4 of this appendix. Condensed REC OCA team members will include local project staff that collects the data onsite and a similar regional mix that performs the review offsite or tabletop.
3	Training Verification	Off Site	The OCA Coordinator or OCA Team Leader verifies that the OCA Team (both local staff and regional team) has completed the latest REC OCA training material and possesses all available support rating aides.
4	Gather Maintenance Records and Documentation	Off Site	The OCA Team Leader will contact the project management and other appropriate District chain of commands regarding the scheduled OCA and begins to secure the available maintenance documentation (e.g., FEM reports, work orders and NRM-Assessment data).
5	Pre-assessment meeting	Off Site	OCA Team Members meet virtually through a web meeting/phone call to review the available support documentation and discuss logistics and schedule for completing the assessment.
6	Staff Pre-brief and Discussions	Off Site	The OCA Team arranges a call with local staff, providing a brief overview of the OCA process, its purpose, and the agenda for the OCA. The project staff provides a synopsis of all operational concerns and provides any additional documentation/records that support these concerns.

Table B3 (continued).

#	Step	Location	Process
7	Onsite rating of PSA assets and components	On Site	The local REC OCA Team (project staff) performs the assessment in USACE managed PSAs identifying all concerns or issues. The local REC OCA Team documents all observed issues in the form of field notes and collects digital media to document or clarify conditions in the OCA report. The Local REC OCA Team rates the components using the REC MICA tool. Completed ratings and associated digital media will be transmitted to the national OCA database when an internet connection is available.
8	Post Assessment Out-brief	Off Site	The Regional REC OCA Team holds a web call with the local REC OCA Team and provides the project management with feedback from observations of the data that was collected in the field. The team will identify patterns in component deficiencies and potential gained operational efficiencies.
9	QA/QC of Assessment Data	Off Site	The OCA Team Leader or the OCA Team Member in charge of completing the OCA field assessment report sends the OCA to QA in the OCA tool. The person in charge of conducting the QA reviews the OCA and provides comments to the OCA Team Leader, as necessary, to resolve any outstanding issues.
10	Finalize Report	Off Site	The OCA Team Leader generates a Memorandum for Record stating that the review is complete. A report of findings and major deficiencies should be provided to the project and compiled for budget package submittal when necessary. These findings will be addressed in the project's facilities maintenance plan.

Table B4.
Crosswalk Comparison of Rating Scales

FCI (RecBEST)		OCA (Asset Mgmt)		PCR (FHWA Asphalt Rating)		PASER (FHWA Gravel Rating)	
7	Excellent	A	Excellent	100	Do Nothing	5	Excellent - Little or no maintenance required
6	Excellent - Good	A-	Very Good (Transitioning)	97	Prevent Maint		
5	Good	B	Good	90	Prevent Maint/ Light Treatment	4	Good – Routine Maintenance may be required
4	Good – Fair	B-	Good – Fair (Transitioning)				
3	Fair	C	Fair	73	Heavy treatment	3	Fair – Regrading and Drainage Improvement, Gravel Application
2	Fair – Poor	C-	Fair – Poor (Transitioning)	53	Heavy Treatment		
1	Very Poor/ Failing	D	Very Poor	30	Reconstruction	2	Poor – More gravel and major drainage improvements
0	Failing/ Failed	F/CF	Failing - Completely Failed	0	Reconstruction	1	Failed –needs total reconstruction

Appendix C
Policy and Process for Condition Assessments of Hydropower Assets

C-1. Scope.

The hydroAMP (Hydropower Asset Management Partnership) is a condition assessment tool for critical hydroelectric generation equipment that is used by numerous public and private entities within the hydropower community. Information on the hydroAMP web application, the hydroAMP Guide and the Field Guides can be reached at https://cops.usace.army.mil/sites/HP/HydroAMP/ by clicking "Site Contents" in the left column, then the "Shared Documents" icon.

(1) The hydroAMP provides a structured two-tiered framework designed to streamline and improve the assessment and documentation of hydroelectric equipment condition and to enhance asset management and investment decision-making within and between facilities. Technical teams comprised of experts from the Bureau of Reclamation, Hydro-Québec, the Army Corps of Engineers, and the Bonneville Power Administration collaborated to develop this framework for assessing the condition of hydroelectric equipment and facilities.

(2)The hydroAMP database is real-time and web-accessible and provides centralized data entry, storage, and retrieval for hydroAMP assessments. HydroAMP was selected as the primary tool for assessing hydroelectric equipment to establish a level playing field for prioritizing critical needs and provide information to make sound business decisions.

C-2. Step 1: Identify and Assemble Qualified Teams for hydroAMP Assessments.
Below are suggested criteria for assembling teams at three levels, team compositions, team member qualifications, and associated responsibilities.

a. Onsite Assessment Team.

(1) Recommended Team Composition (local to the project) - Operator, Electrician, Mechanic, Project Engineer, and Plant Manager/Tech Chief. The team will assemble and identify a Team Lead internally. The Team Lead will ensure that all equipment assessments are entered into hydroAMP by an agreed-upon completion date.

(2) Team Member Qualifications – Team will be knowledgeable of the specific equipment type it is assessing. (Options may include: Attended hydroAMP Webinar for

the specific piece of equipment; participated in similar inspections for Power Reviews, OCAs, etc.; shadowed other experienced team members previously.)

(3) Responsibilities.

(a) Complete hydroAMP equipment assessments.

(b) Update hydroAMP scoring in the hydroAMP web application.

b. First Level Review Team.

(1) Recommended Team Composition (either local to the project or regional) - Electrical Engineer, Mechanical Engineer and/or Plant Engineer. The team will assemble and identify a Team Lead internally. The Team Lead will ensure that all equipment assessments are entered into hydroAMP by an agreed-upon completion date.

(2) Team Member Qualifications – Members will be Subject Matter Experts (SME) for their respective disciplines.

(3) Responsibilities – Ensure accuracy of data. Validate measurements and completeness of scoring based on Field Guides.

c. Second Level Review Team.

(1) Recommended Team Composition (regional) - BLM and/or RAM and/or a composite of qualified individuals approved by the BLM and/or RAM.

(2) Team Member Qualifications –Members will have a comprehensive working knowledge of the systems they are reviewing.

(3) Responsibilities - Establish the Quality Assurance Process. Develop a process for data entry. Provide a holistic review of the data to ensure quality, objectivity across projects, and accuracy from a regional perspective.

C-3. Step 2: Collect and review Supporting Documentation (Onsite Assessment Team)

a. Compile documentation and existing reports.

b. Review the existing hydroAMP values for the Project Equipment.

c. Utilize FEM as a repository to aid in the collection of Supporting Documentation.

d. Update support documentation and verify that it accurately reflects the condition of the equipment.

C-4. Step 3: Perform the onsite assessment (Onsite Assessment Team).

a. Utilize the most recent hydroAMP Guide to perform assessments. Field Guides are available to help with the Tier 1 assessments.

b. Conduct onsite equipment assessments based on team members' areas of expertise and knowledge

c. Review known suspect equipment conditions with the project staff and look for any unknown issues.

d. Assign a scoring to each component

e. Team Lead notifies First Level Review Team that assessments are complete and ready for review.

C-5. Step 4: Perform First Level Review of the data (First Level Review Team).

a. Review prior year hydroAMP scorings for each assessment.

b. Review supporting documentation provided by the Onsite Assessment Team.

c. Review updated hydroAMP scoring. Correspond with Onsite Assessment Team Lead for clarification or questions about scoring.

(1) If there are no scoring changes required – Notify Second Level Review Team Lead that assessments are complete and ready for Second Level Review Team.

(2) If there are scoring changes required – Coordinate changes with Onsite Assessment Team Lead prior to finalizing a component scoring. Provide finalized scoring to Second Level Team Lead.

C-6. Step 5: Perform Second Level Review of the data (Second Level Review Team).

a. Review scorings across project sites within a region for accuracy and quality. Ensure scoring consistency.

b. Review hydroAMP component scorings. Correspond with First Level Review Team Lead for clarification or questions about scorings.

(1) If there are no scoring changes required – Finalize Assessment.

(2) If there are scoring changes required – Coordinate changes with Onsite Assessment Team Lead and First Level Review Team Lead prior to finalizing a component scoring.

Appendix D
Builder and OCA Alignment and Use

D-1. Background.

a. The use of BUILDER has been mandated as a standard process for all Department of Defense facility condition assessments for all Defense Components per DOD Memorandum “Standardizing Facility Condition Assessments,” 10 SEP 2013; however, Civil Works is explicitly exempted from this DoD mandate.

b. Civil Works recognizes that there are instances where the use of BUILDER can improve Civil Works information and also that Civil Works buildings exist that are similar to DoD buildings, such as USACE Logistics Activity (ULA) managed buildings. This appendix provides practical guidance for the coordinated understanding, alignment, and use of BUILDER and OCA in order to obtain improved facility information for all Civil Works facility-like assets in a consistent, efficient, and useful fashion.

c. DoD facilities are generally accepted to be considered vertically constructed structures and buildings: offices, warehouses, hangars, and similar structures consistent with the Federal Real Property Profile (FRPP) definitions of Real Property Type 35 [Building]. The vast majority of Civil Works real property assets do not fall into these categories; less than 1% of the Civil Works real property building inventory consists of buildings over 1,000 square feet in size. The majority of Civil Works real property assets align with the FRPP definition for Real Property Type 40 [Structure].

d. For the purposes of this guidance, the term “facilities” will refer to those assets similar to the DoD consideration as vertically constructed structures and buildings consistent with the FRPP definition of Real Property Type 35 [Building]. Civil Works assets meeting that criteria can be considered “DoD facility-like” assets for the purposes of this guidance.

e. USACE Military Programs manages a USACE Asset Management effort through the Installation Support office, which manages the use of all Sustainment Management System (SMS) tools for military construction and DoD facilities. USACE Real Estate is also managed under Military Programs, which maintains a distinct asset management effort focused on real property inventory and actions for both Military Programs and Civil Works.

f. USACE Civil Works manages a separate Asset Management effort that manages all the Maintenance Management, Operational Condition Assessment, Operational Risk Assessment, and Investment Prioritization tools and processes for Civil Works assets, including facilities.

D-2. Description of BUILDER.

a. BUILDER is a tool in the SMS suite of tools, and is a web-based software application developed by the ERDC Construction Engineering Research Laboratory to help civil engineers, technicians and managers decide when, where, and how to best maintain buildings infrastructure.

(1) The process starts with the automated download of real property data, and then more detailed system inventory is modeled and/or collected that identifies components and their key life-cycle attributes such as the age and material. From this inventory, Condition Index (CI) measures for each component are predicted based on its expected stage in the life cycle.

(2) Objective and repeatable inspections can then be performed on various components to verify their condition with respect to the expected life-cycle deterioration. This provides a comprehensive picture of the overall performance of building assets and their key components and enables managers to identify the optimum life-cycle point for investment.

b. The three primary differences between BUILDER and the OCA process are the following:

(1) The OCA is meant to be a rapid monitoring effort to quickly inform management strategies, budget requirements, and life-cycle planning.

(2) Because of (1), OCA is deliberately an assessment (i.e., a review of all available information) and not an inspection (testing/validation to create available information).

(3) OCA results are explicitly linked to Operational Risk Assessments and through that to budget prioritization analytics, by translating the resultant condition ratings into probabilities of failure using a Weibull function.

c. ULA-managed buildings and other buildings not covered by an OCA require some means of assessing condition in order to better inform life-cycle investment strategies. The BUILDER tool is most advantageous for these types of assets because of the following:

(1) ULA has specific management, reporting, and investment requirements for facilities that BUILDER helps meet.

(2) Those CW buildings not covered by OCA and not managed by ULA currently have no condition assessment process and would be better represented when treated similarly to ULA-managed buildings, as opposed to being treated as authorized CW project assets and using OCA.

d. In contrast, the use of an OCA makes sense for facilities that have a more direct relationship to the delivery of an authorized Civil Works mission because the condition assessment rating is used with the project performance measures to determine risk, which in turn is used to help prioritize investment choices.

D-3. Applicability of BUILDER to Civil Works OCA.

a. In the interest of reducing duplication and burdens on Civil Works personnel, only one type of condition rating process (BUILDER or OCA) should be used on any particular facility or structure that meets the FRPP definition of Real Property Type 35 [Building].

b. OCAs should be used for buildings meeting the FRPP definition of Real Property Type 35 [Building] (offices, warehouses, visitor's centers, shops, storage structures, etc.) that are part of an authorized Civil Works project, have a direct link to delivering the authorized mission, and are funded through that project's budget as a result of that direct linkage to the project's mission.

c. BUILDER may be used by project personnel for all other buildings requiring condition assessment, including those managed by ULA, but is not required.

d. Each project should clearly indicate which type of condition rating process should be used on which structures; for instance, a lock control house would most likely be rated using an OCA while an onsite warehouse used to support the facility would most likely best be rated using BUILDER.

e. Specific additional required information needed for ULA purposes from BUILDER-rated buildings should be included in the requirements implemented as part of the Maintenance Management Improvement Plan (MMIP) and captured in the FEM system. These requirements are not considered as part of the OCA process and are therefore more appropriately considered under the MMIP.

Glossary
Terms and Abbreviations

Assessment. The use of existing data, as much as possible, to accurately rate the condition of an asset. This is not a detailed inspection but rather a determination of the asset's operability and readiness.

Asset. Any resource, facility, area, structure, installation, or piece of equipment for which USACE has the maintenance responsibility to identify needs, prioritize work, perform maintenance, and/or track results.

Asset Management (AM) (General). The systematic and coordinated activities and practices through which an organization optimally and sustainably manages its assets and asset systems along with their associated performance, risks, and expenditures over their life cycles for the purpose of achieving its organizational strategic plan.

Asset Management (AM) (USACE-Specific). A persistent catalyst for holistically integrating and enhancing the initiation, sustainment, restoration, modernization, and disposition of USACE water resources for continuous service to the nation.

Asset Management (AM) Governance Board. USACE group responsible for developing and implementing technology and governed processes—including planning, budgeting, and execution processes—that support life-cycle asset management. The objective of Asset Management Information Technology (AM-IT) is to assist AM and thus enable USACE by providing seamless data exchange, unified inventories, consistent analysis, and reliable communication across USACE.

Asset Visibility. A broad term meaning the ability to know, with a high degree of certainty, the quantity, condition, cost, spares, criticality, classification, system, life cycle, and other attributes pertaining to assets. Examples of asset visibility are OCAs associating operating condition with each asset; Phases 1-5 of the MMIP, which yield the quantity of critical and non-critical assets; maintenance tracking of assets through the use of work orders; ideal level of maintenance on USACE assets; and improved efficiency in the acquisition of assets/components.

Availability. The percentage of time an asset is in an operable state; usually measured as Uptime/Total Time (where Total Time = Uptime + Downtime).

Bias. Prejudice in favor of or against one thing, person, or group compared with another, usually in a way considered to be unfair. Bias can affect OCAs in many ways, such as the following:

a. The project staff may have become accustomed to a change in operational procedures, due to an asset's deficiency, which they no longer view as a deficiency but rather their de facto normal operating procedures.

b. An OCA Team may be experienced only with projects in their District, without a broader view of projects throughout their MSC or other MSCs, which leads to a tendency for OCA ratings on the worst assets in their District to be lower because they are the worst the team has seen.

c. Components are intentionally rated lower to exploit the budget system.

Business Line. USACE mission or function assigned to a project or facility and with a dedicated funding stream.

Component. A defined part or feature of a USACE asset that is maintained, repaired, and/or replaced. For example, gate-operating machinery, hinges, and quoin blocks are components of lock gates.

Component Hierarchy. A Business-Line list of assets organized in hierarchical format. Top-level assets should be broken down to an appropriate level of detail for tracking component maintenance and failure.

Deficiency. A physical characteristic, such as deterioration, damage, or other irregular flaw, and/or a violation of regulations. For the purpose of OCA ratings, component age and obsolescence are not considered characteristics of a deficiency, and safety and regulation issues are tracked separately from condition deficiencies.

Maintenance Requirements. Maintenance actions performed on a component to keep it functioning at the desired level of performance for the mission. (i.e., deficiency increases frequency and magnitude of maintenance, which would justify a lower OCA rating)

Mission. A function that a USACE Business Line provides. For example, the missions of Inland Navigation (INAV) Locks & Dams include passing traffic and maintaining minimum pool.

Operational Condition. A component's ability to meet its feature mission requirements. Normal wear, within a tolerable range, and age are not indicative of a component's inability to perform its intended function.

Operational Procedures. Standard operating procedure of a component to meet its intended function and desired level of performance for the Project's mission. (i.e.,

deficiency increases operations time, labor and/or costs, which would justify a lower OCA rating)

Performance. The ability of a component to perform its intended function and provide the required level of performance to fulfill its mission. This can be measured in terms of

reliability, availability, capacity, and meeting customer demands/ needs. Condition deterioration is a cause of failure — the effect of failure is poor performance.

Project. Generally, one or more assets that function either collectively or independently and are specifically authorized by Congress and named in legislation. In some cases, a project may consist of more than one "site" with assets having similar functionality. In these cases, a "site name" may be assigned for financial management and identification purposes.

Project Model. The list of a project site's assets built from a Business Line-specific component hierarchy for the purpose of performing an OCA on those assets.

Project Site. The physical or geospatial location where assets are directly managed or maintenance work is performed. Remote locations, such as a recreation area, may be included in a single project site despite the distance to that location. Project sites may have individual Program Codes, but they may also be grouped together under a single Program Code for funding purposes and/or be grouped together for management purposes.

Refer to site definitions E2.1.22, E2.1.22.1, E2.1.22.2, and E2.1.22.3 in Department of Defense Instruction [DoDI] 4165.14: "Physical (geographic) location that is or was owned by, leased to, or otherwise possessed by a DOD Component. Each site is assigned to a single installation." A site may exist in the form of land only; facility or facilities only; or both land and all the facilities on it, where the land consists of either a single land parcel or two or more contiguous land parcels.

Quality Assurance (QA). Any systematic process of checking whether a product or service in development meets specified requirements. QA is a secondary check performed by an independent party that did not perform the work and is not part of the organization that performed the work.

OCA QA is performed at a level higher than the District responsible for the OCA (for example, by an MSC, HQUSACE, or multi-USACE District QA team) and/or by a team outside the responsible District to help ensure that all Project Model components are accurately represented and that the OCA ratings are complete, accurate, and justified with proper comments and appropriate Rating Support Data (such as photographs and report references).

Quality Control (QC). A process through which an organization seeks to help ensure that product quality is maintained or improved and that errors are reduced or eliminated. QC is a first-line verification performed by the team and/or organization that performed the work. OCA QC is performed by the OCA Team and District responsible for the OCA to help ensure that all Project Model components are accurately represented and that the OCA ratings are complete, accurate, and justified with proper comments and appropriate Rating Support Data (such as photographs and report references).

Reliability. The ability of a product, service, part, or system to perform its intended function under a prescribed set of circumstances; usually measured as either Mean Time Between Failures (MTBF; Uptime/Number of Failures) or Failure Rate (Number of Failures/Uptime).

Risk. The measure of the probability and severity of undesirable consequences; the relationship between the consequences resulting from an adverse event and its probability of occurrence; measured as (Probability of an Event) x (Probability of Adverse Response to the Event) x (Consequences of the Event).

Risk Assessment. A broad term that encompasses a variety of analytic techniques that are used in different situations, depending upon the nature of the risk, the available data, and the needs of decision makers. A risk assessment is a systematic evidence-based approach for quantifying and describing the nature, likelihood, and magnitude of risk associated with the current condition and the same values resulting from a changed condition due to some action. Risk assessment includes explicit acknowledgment in the uncertainties of the risk.

Risk-Based Decision Making. Decision-making that has as a main input the results of risk assessment.

Shadow. A new OCA Team recruit who learns the OCA process by learning how to perform the role (for example, Electrical/Geotechnical/Mechanical/Structural Engineer or Operations) of his/her discipline on an OCA Team.