

Before You Begin

Training Objective

Introduction

Legal Requirements

Next

Assessment Schedule

Assessment Scenarios

www.ecamp-online.net

User Tips – Navigating

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"Next" advances to the next slide
"Home" returns to the first slide



Before You Begin

- First complete the General Assessor Training module
- Download these slides to your computer

 Print a copy of the handout; you might find it useful while navigating through the presentation

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Printing Checklists

Next

- Print the relevant checklist for your assessment area from <u>www.ecamp-</u> <u>online.net</u>
 - Click View/Print Checklists under Misc on the Home Page or
 - Click Assessment Preparation from the menu on the left after you have logged in

Assessor Training Objective



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Training Objective



- Primary purpose prepare personnel assigned to highly enforceable protocols on external compliance assessments
- Secondary purpose prepare personnel to participate on internal compliance assessments



Assessment Emphasis

- External compliance assessments emphasize state and federal requirements
- Links to state requirements will be available on the Assessment Preparation web page on www.ecamp-online.net
- Your Major Command (MAJCOM) Environmental, Safety, and Occupational Health Compliance Assessment and Management Program representative will give you information to access this site before the assessment



Next





Topics in This Module

Legal Requirements Assessor Assignments Protocol Elements Schedule • Priorities Approach Scenarios Summary



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Legal Requirements

 Clean Water Act (CWA) and state regulations implemented under CWA authority

 Air Force bases must also comply with U.S. Department of Defense and Air Force Instructions (AFIs) and policies on wastewater management

Assessor Assignments

- Assessors are assigned to review protocol elements based on their interest and experience
- They must take responsibility for the completeness and consistency of the assessment of their assigned areas

Next

 They must coordinate with one another at the end of each day to ensure that all elements of wastewater management have been reviewed

Protocol Elements

Next



- Point source wastewater discharge permit
- Point source storm water discharge permit
- Nonpoint source storm water discharge permit for construction activities

Home

Oil/water separator (OWS) requirements

Protocol Elements (cont.)

• Other wastewater permit programs

- Groundwater discharge permits (in some states)
- Permit for indirect point source discharge through a publicly owned treatment works (POTW)
- Compliance agreements or letters of administration

Next

Biosolids disposal through land application

Protocol Elements (cont.)

- Typical permit requirements
 - Effluent monitoring records
 - Discharge monitoring reports (DMRs) and maintenance records
 - Laboratory state certification
 - Permit applications and renewals
 - State or POTW notifications



Protocol Elements (cont.)



- Proper operation and maintenance
- Sewage lift station design
- Excessive infiltration/inflow
- State notification of system design changes

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 Wastewater treatment system requirements

Next

- Operator certification records and logs
- Operation and maintenance manual



Training Focus

This training focuses on the review of wastewater effluent analyses, records, reports, notifications, and facility design and operations



Assessment Schedule

 Specific assessment schedule varies by MAJCOM

- Before assessment begins
 - Coordinate with your partner on splitting assessment responsibilities
 - Assign sites to visit (examples are shown on the following slides)



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Assessment Day 1

Next

- Interview Environmental Flight personnel responsible for the wastewater management program
- Examine base data, including permits, DMRs, and other records and recordkeeping and reporting procedures



Assessment Day 2

 Interview Civil Engineering (CE) design personnel

 Review Storm Water Pollution Prevention Plan (SWPPP)

Home

- Visit construction sites
- Visit outfalls



Next

Assessment Day 3



- CE Utilities and Water Shop
- Wastewater lift stations

Next

- Wastewater Treatment Plant (WWTP)

Home

- OWSs



- Enforceable federal and state legal requirements
 - Not keeping these priorities in mind is the most common mistake external compliance assessors make
 - Remember

Next

Assessment Priorities

- Your state rules only apply in your state
- Your procedures only apply to your base

Assessment Approach

Next



 Therefore assessors must examine a base's point sources of wastewater such as pipes or manmade ditches



Assessment Approach (cont.)

- Become familiar with applicable definitions
- Review permits and plans

Next

- Visit areas of wastewater management and treatment such as WWTP, lift stations, and OWSs
- Visit construction sites to evaluate storm water management



Definitions



 Familiarity with the following definitions is essential to identify wastewater findings

Home

- Pollutants
- Point source
- Waters of the United States
- Waters of the state

Next



Pollutants



Pollutants are defined as dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal, and agricultural waste discharged into water (33 United States Code 1362)



Point Sources





Next

Waters of the United States

Next

Waters of the United States are defined as all waters that are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters that are subject to the ebb and flow of the tide; all interstate waters, including interstate "wetlands"; all other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters that are or could be used by interstate or foreign travelers for recreational or other purposes (40 CFR 122.2)



Waters of the State



 Some states, especially in the west, define groundwater as waters of the state and require a discharge permit to discharge to the groundwater



Next

Permit Review



- Expiration date
- Renewal application (if applicable)
- Compare wastewater effluent analytical results with permit levels

Home

- Review DMRs for completeness and verify that they are kept the required amount of time
- Verify timely submittal of DMRs

Next



Permit Review (cont.)

- Review municipal industrial waste discharge ordinance
- Review industrial waste discharge permit to POTW
 - Expiration date
 - Renewal application (if applicable)
 - Verify compliance with permit conditions



Next

Review Industrial Activity SWPPP

- Verify that the plan addresses all common requirements for SWPPP
 - Identifying major sources

Next

- Training
- Inspections
- Reporting
- Spill logs, etc.
- Refer to the assessment checklist for specific provisions



Plan Review



Review site-specific construction SWPPP to

- Identify construction projects both planned and ongoing
- Verify that each construction activity is covered by an NPDES permit by filing a Notice of Intent (NOI) for coverage of that site
- Verify that best management practices (BMPs) have been identified for construction projects

 Verify that BMPs have been implemented at construction sites



Next

Review Small MS4

 Verify that the plan addresses public participation and public education

 Verify Small Municipal Separate Storm Sewer System (MS4) assessment checklist requirements are met

Wastewater System Review

- Wastewater plans and specifications
 - State approval of wastewater system
 - State notifications of system changes







- Wastewater collection system
 - Sewage lift stations
 - Treatment plant
 - Infiltration/inflow records
 - Outfalls







Next

Wastewater System Review (cont.)

OWSs

 Review OWS studies
 Evaluate functionality

Next


Assessment Scenarios



- Assessment scenarios that follow this slide are organized around
 - Organizations to interview
 - Activities to visit
- Interviews with individual organizations may address several wastewater issues
- Activities are specific to the management of a specific wastewater source



Assessment Scenarios (cont.)

- Each scenario has a slide like the one on the right to give you an opportunity to pause
- Draw your conclusions before proceeding to an explanation

Next



Environmental Flight Interview

Next



Environmental Flight Interview

Next

Determine who is responsible for the wastewater management program
 Determine who maintains the required wastewater records

(Environmental Flight, Water shop, Utilities, etc.)



Interview (cont.)



- NPDES domestic or industrial waste point source discharge
- Industrial wastewater pretreatment permit
- Groundwater discharge permit
- Biosolids land application permit
- NPDES storm water general, multi-sector, or individual permit

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- Small MS4 general permit

Selected Records to Review

- All permits and their requirements
- Analytical results of effluent water quality monitoring
- State/U.S. Environmental Protection Agency (EPA) routine periodic reports

Home

- State/EPA special (nonroutine) reports
- Infiltration/inflow studies

- SWPPP inspections and BMPs
- DMR submittal date and records

What If You Discover?

- No record of DMRs being postmarked by the 15th of the month after monitoring
- Incomplete DMR records

Next

- DMR records not signed by an authorized representative
- Significant industrial user (SIU) not reporting

Do You Have A Finding?

Next

Is lack of documentation on monthly DMRs sent to the state a finding

 If yes, why?
 If no, why not?



Late DMR Submittal

Next

40 CFR 122.41(I)(4) requires DMRs to be submitted on time to the regulatory agency
The state-issued NPDES permit requires that the state receive DMRs by the 15th of the month following the month the results are received

Late DMR Submittal (cont.)

- Refer to TEAM Guide Reference Number WW.2.5.1 or state requirement
- Document this finding as late submittal of the DMR

Next

Double-click on the icon to view an example finding

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Late DMR Submittal (cont.)

- Why is late submittal a finding? The DMRs may have been sent even though documentation of it is not available
- This is a finding because of the uncertainty of whether they were received on time



Do You Have A Finding?

 Is submitting the NPDES permit renewal application to EPA by certified mail return receipt a full 3 months before its expiration a finding

Home

– If yes, why?

– If no, why not?



Late Application Submittal



Home



Late Submittal of Renewal

- Refer to TEAM Guide WW.2.1.3 or state requirement
- Document as renewal application not submitted on time
- Double-click on the icon to view an example finding m

Home

Do You Have A Finding?

Next

 Is lack of recording minor details, such as name of sampler and time of sampling, a finding - If yes, why? - If no, why not? Is missing DMRs a finding - If yes, why? - If no, why not?

Incomplete DMR Records



- 40 CFR 122.41(j)(3) requires the following information to be part of the records retained
 - Date, exact place, methods, and time of sampling

Home

- Individuals taking the samples
- Dates analysis were performed
- Individuals who performed the analysis
- Analytical techniques and methods used
- Results of the analysis

Incomplete DMR Records (cont.)

- Refer to TEAM Guide Reference Number WW.2.6.2
- Document this finding as incomplete DMR records
- Double-click on the icon to view an example finding

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Home



Do You Have A Finding?

Next

If the DMR lacks an authorized signature If yes, why? If no, why not?



Improper DMR Signature

 40 CFR 122.22(b) requires all reports to be signed by the principal executive officer or a duly authorized representative of that person (authorization must be made in writing)



Next

Improper DMR Signature (cont.)

- Refer to TEAM Guide Reference Number WW.2.5.6
- Document this finding as an unauthorized signature
- Double-click on the icon to view an example finding

Microsoft Word Document

Next

Discharge to POTW

The local POTW defines an SIU as one that discharges 5 percent of the POTW's total flow or 25,000 gallons/day of industrial wastewater The base discharges an average of 700,000 gallons/day of wastewater to this POTW, of which 25 percent is from industrial sources

Do You Have A Finding?

 If the only interaction the base has with the POTW is paying the monthly bill, and the base submits no information about its discharge to the POTW

Home

- If yes, why?
- If no, why not?



SIU Not Reporting

Next

• 40 CFR 403.12(h) requires industrial users that are not required to meet a categorical pretreatment standard (EPA-promulgated pollutant discharge limits) but are significant noncategorical industrial users to submit every 6 months to the control authority (i.e., the local POTW in this case) a description of the nature, concentration, and flow of pollutants

SIU Not Reporting (cont.)

 The vast majority of POTW industrial waste ordinances also require SIUs to obtain a discharge permit; therefore, additional requirements may also not be met

SIU Not Reporting (cont.)

- Refer to TEAM Guide Reference Number WW.3.4.6 or state regulation
- Document this finding as SIU not reporting
- Double-click on the icon to view an example finding

Next

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CE Operations Flight Interview

Next



CE Operations Interview



- Determine who is responsible for wastewater system operations
- Determine who performs the required maintenance of wastewater system components (CE Utilities, contractor, etc.)

CE Operations Interview (cont.)

 Identify wastewater collection system components and associated responsibilities

- OWSs
- Lift stations
- Septic tanks

Next

 Identify wastewater system issues and concerns

Selected Records to Review

- Wastewater operator certifications
- Wastewater system deficiency studies
 - Lift stations
 - Treatment works
 - Infiltration and inflow

Next

State inspection records

 Reports on wastewater collection system studies

Selected Records to Review

- Sewer line maintenance and cleaning reports
- Wastewater system operator logs
- Biosolids treatment and disposal records

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Wastewater System Visits

- Lift stations
- Monitoring stations
- OWSs
- Wastewater outfalls
- Construction sites to review storm water BMPs

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What If You Discover?

- Lift station deficiencies
- Missing NPDES permit for construction activity
- SWPPP deficiencies

 Inadequate vector attraction reduction for biosolids (sewage sludge) stabilization

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Lift Station Observations

Next



Do You Have A Finding?

Are these lift station deficiencies a finding

 If yes, why?

Home

– If no, why not?



Lift Station Requirements

Next

 AFI 32-7041, paragraph 2.5, requires lift stations to continue to operate during power failures and have redundant pumps to provide adequate pumping capacity for handling the maximum wastewater flow when one pump is out of service

Lift Station Requirements (cont.)

 AFI 32-7041, paragraph 2.5.1, requires major lift stations to be provided standby power generators, portable power generators, or two independent power sources at each station

 AFI 32-7041, paragraph 2.5.2, requires smaller lift stations located in remote areas to be provided a connection for a portable generator
Lift Station Requirements (cont.)

- AFI 32-7041, paragraph 2.5.3, requires audible and visual alarms at each pump station to alert maintenance staff of pump failures, equipment to transmit alarm signals to a central monitoring point (if possible), and backup batteries or other emergency power sources to retain alarm data during power failures
- AFI 32-7041, paragraph 2.5.4, requires failed pumps to be repaired or replaced immediately to maintain redundancy

Lift Station Requirements (cont.)

 Note that state regulations may exist for similar and/or additional lift station requirements

 Also, wastewater overflows at the lift stations may be findings for unpermitted discharges or wastewater system not properly operated as previously discussed (in these cases use the state or federal citation not the AFI)

Lift Station Finding

 Refer to TEAM Guide Reference Number WW.2.2.3 for AFI citation or state requirement

 Document this finding as lift station deficiencies

Double-click on the icon to view an example finding

Document

Next

What if You Discover?

Next

An NOI has not been filed for two construction sites visited (1 acre or more in size) and these sites are not otherwise covered in an NPDES permit
 An SWPPP for controlling sediment and erosion has not been developed



Do You Have A Finding?

 Is the lack of filing an NOI and preparation of an SWPPP a finding

 If yes, why?
 If no, why not?

Home



No NOI



• 40 CFR 122.26(b)(14)(x) and 40 CFR 122.21(c)(1) require that a permit application for storm water discharges associated with construction activities (including clearing, grading, and excavation activities) be submitted at least 90 days before the date on which construction commences

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No NOI (cont.)



- Refer to TEAM Guide Reference Number WW.4.1.2
- Document this finding as missing NPDES permits for construction activities
- Double-click on the icon to view an example finding

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Next

No SWPPP



Final NPDES General Permit for Storm Water Discharges Associated with Industrial Activity, Section 1.3.1.2, requires a SWPPP to be prepared to obtain authorization under the General **Storm Water Permit; Section 4** establishes requirements for the content of a SWPPP

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What If You Discover?



Next



Do You Have A Finding?

Are these SWPPP deficiencies a finding If yes, why? If no, why not?

Home



Missing SWPPP Training and Inspections

 Final NPDES General Permit for Storm Water Discharges Associated with Industrial Activity, Section 4.2.7.2.1.6, requires employee training to inform personnel of the components and goals of the SWPPP

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Missing SWPPP Training and Inspections (cont.)

Final NPDES General Permit for **Storm Water Discharges Associated** with Industrial Activity, Section 4.2.7.2.1.5, requires that, in addition to or as part of the comprehensive site evaluation required in the permit, qualified facility personnel be identified to inspect designated equipment and areas of the facility

Missing SWPPP Training and Inspections (cont.)

- Certain basic requirements for an SWPPP (such as training and inspections) are required whether the base is covered under a general permit, multi-sector permit, or individual permit
 - Appropriate intervals for inspections must be specified
 - A set of tracking or follow-up procedures must be identified to ensure that appropriate actions are taken in response to the inspections
 - Records of inspection must be maintained

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Missing SWPPP Training and Inspections (cont.)

- Refer to TEAM Guide Reference Numbers WW.4.2.3 and WW.4.2.14 (one finding for training and one for inspections)
- Document these findings as missing SWPPP training and inspections

Home

Double-click on the icons to view example findings

What If You Discover?

- The base's wastewater sludge processing operations use pH adjustment through lime addition to meet vector attraction reduction requirements
- The operating records indicate that, when the pH drops below 12 during the first 2 hours of treatment, additional lime is added to ensure that the pH is maintained above that level

Do You Have A Finding?

 Is addition of more lime within the 2 hours after initial pH adjustment a finding

Home

- If yes, why?
- If no, why not?



Inadequate Vector Attraction Reduction

If the pH method is used for attaining vector attraction reduction, 40 CFR 503.15(c)(1) and 503.33(a)(1) referencing 503.33(b)(6) requires that the pH of the sludge be raised to 12 or higher by alkali addition and, without further addition, remain at 12 or higher for 2 hours and then at 11.5 or higher for an additional 22 hours (i.e., no further addition of alkali can occur during the initial 2 hours of treatment)



Inadequate Vector Attraction Reduction (cont.)

- Refer to TEAM Guide Reference Number WW.8.2.2.2
- Document this finding as vector attraction reduction not attained

Next

 Double-click on the icon to view an example finding

Site Visits





Site Visits



 Visit selected shops to determine management of industrial wastewater

- Visit shops with OWSs and determine point of discharge (base WWTP, ditch, local POTW, etc.)
- Review maintenance activities of OWS
- Review lift stations

Next

 Review operation and condition of lift stations

What If You Discover?

Next

 An industrial shop on-base washes the shop floors periodically with a detergent; the contaminated wash water flows through an OWS and into a nearby ditch and then flows to the local creek



Do You Have A Finding?

 Is allowing the contaminated floor wash water to enter a local creek a finding

– If yes, why?

- If no, why not?



Next

Unpermitted Discharge

Next

 40 CFR 122.1(b)(1) requires a permit for the discharge of pollutants from any point source into waters of the United States



Unpermitted Discharge (cont.)

- Refer to TEAM Guide Reference Number WW.2.1.1
- Document this finding as unpermitted discharge of pollutants (this is among the most common of all findings in the wastewater protocol)

Home

 Double-click on the icon to view an example finding

What If You Discover?

 Sewage solids are evident on the ground near several lift stations that are located near a streambed

 Further investigation reveals that the sewer lines in the area have frequent blockages due to grease discharged from the kitchen at the dining facility, and as a result, the sewer lines overflow

Do You Have A Finding?

 Is allowing sewage to overflow onto the ground and potentially enter a stream or creek a finding

Home

– If yes, why?

- If no, why not?



System Malfunction

 40 CFR 122.41(e) requires that all wastewater facilities and systems of treatment and control be properly operated and maintained

 40 CFR 122.1(b)(1) requires permits for the discharge of pollutants from any point source into waters of the United States

System Malfunction Finding

- Refer to TEAM Guide Reference Number WW.2.2.1
- Document this finding as wastewater system not properly maintained (this could also be a finding for an unpermitted discharge of pollutants, as shown previously)
- Double-click on the icon to view an example





Next

What If You Discover?

Next

 After visiting several industrial shops that use OWSs for handling wastewater, you determine that none of the OWSs are inspected regularly and that they are rarely pumped, cleaned, or otherwise maintained



Do You Have A Finding?

Is the lack of inspection and maintenance of OWSs a finding
If yes, why?
If no, why not?



Next

No Inspections



AFI 32-7041, paragraph 2.10, requires regular inspection and maintenance of all OWSs

Next

No Inspections (cont.)

Next



- Document this finding as OWS not inspected and maintained
- Double-click on the icon to view an example finding

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Wastewater Discharges

Next



Findings To Watch Out For

Unpermitted discharges – Photographs of industrial/construction

discharges that need to be monitored and permitted













Findings Summary

- The scenarios resulted in the following findings
 - Late DMR submittal
 - Late submittal of renewal
 - Incomplete DMR records
 - Improper DMR signature
 - SIU not reporting
 - Lift station deficiencies

Next

- No NOI
- Missing SWPPP training and inspections

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Inadequate vector attraction reduction
Findings Summary (cont.)

- The scenarios resulted in the following findings (cont.)
 - Unpermitted discharge of pollutants
 - Wastewater system not properly maintained

Home

OWSs not inspected

Next

 These are some of the common and uncommon wastewater findings found during external assessments

Identifying These Findings

You identified these deficiencies by

- Examining permits and records relative to recordkeeping and reporting requirements
- Reviewing base construction activities for permit compliance
- Reviewing base activities and handling of industrial wastewater

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