Lesson 3: Implementing Your Plan

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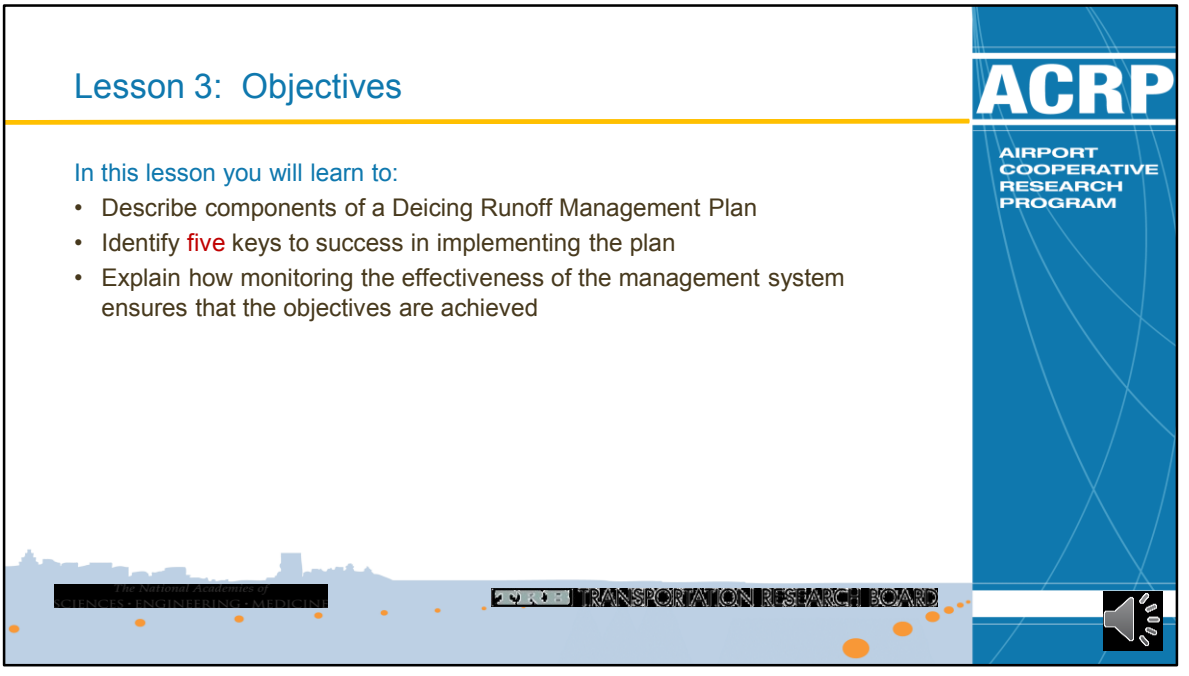
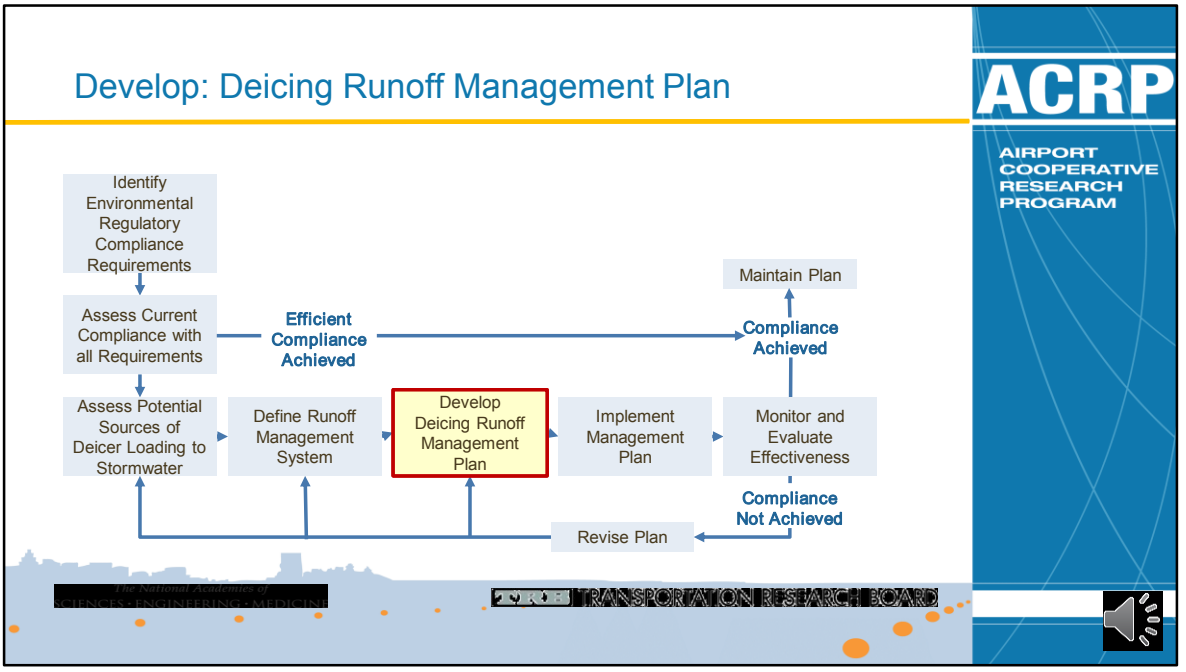


In this lesson you will learn to:
[Click] Describe components of a Deicing Runoff Management Plan
[Click] Identify five keys to success in implementing the plan
[Click] and Explain how monitoring the effectiveness of the management system ensures that the objectives are achieved

- **[Click to proceed to next slide]**



Say: Once the preferred system has been identified and refined, its time to put it all together in developing the Deicing Runoff Management Plan.
[Click to proceed to next slide]

Purpose: Deicing Runoff Management Plan

Purpose: To serve as instruction manual for implementation and operation of the system

An effective plan will describe the…

- Who?
- What?
- When?
- Where?
- Why?
- How an airport's deicing runoff management system operates

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Say: The purpose of the **[Click]** Deicing Runoff Management Plan is to serve as the instruction manual for implementation and operation of the system. An effective plan will describe the Who, What, Where, When, Why, and **[Click]** How an airport's deicing runoff management program operates.

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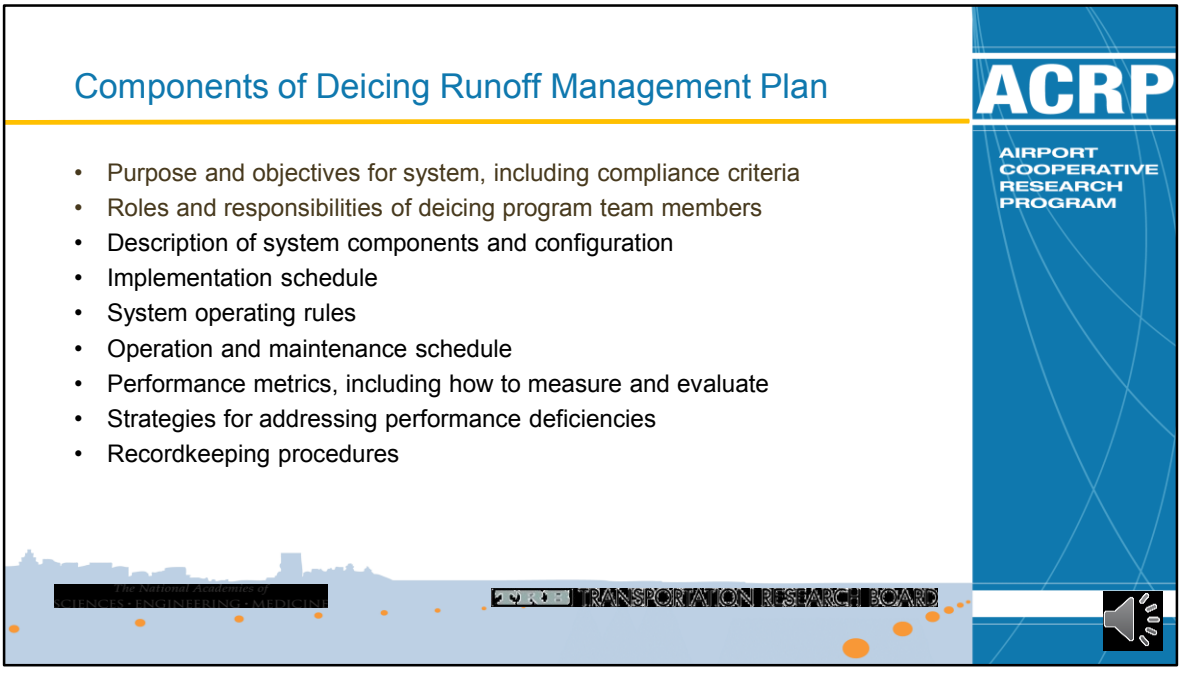

Say: The deicing runoff management plan is developed around the selected system design, and describes all of the important aspects of its configuration and operation.
- Topics will include:
[Click] Purpose and objectives for the system, including compliance criteria.
[Click] Roles and responsibilities of deicing program team members
[Click] Description of the runoff control system components and their configuration
[Click] The implementation schedule
[Click] System operating rules
[Click] Operation and Maintenance schedule
[Click] Performance metrics, including how to measure and evaluate
[Click] Strategies for addressing performance deficiencies
[Click] Recordkeeping procedures
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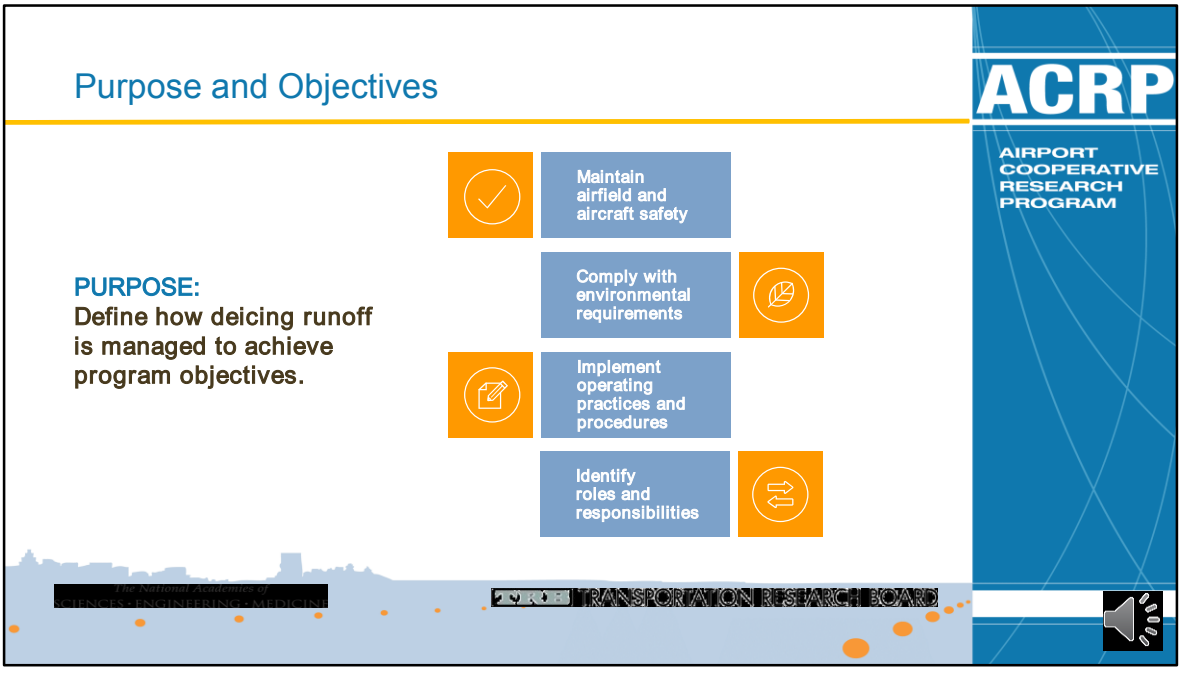

Say: **[Click]** The Purpose and Objectives section defines how runoff from deicing operations is managed to achieve the airport's program objectives.
The objectives of a deicing runoff management program typically include:
[Click] Maintain airfield and aircraft safety under winter weather conditions.
[Click] Comply with environmental requirements
[Click] Implement operating procedures and practices associated with deicing, and
[Click] Identify the roles and responsibilities of all participants in the program.

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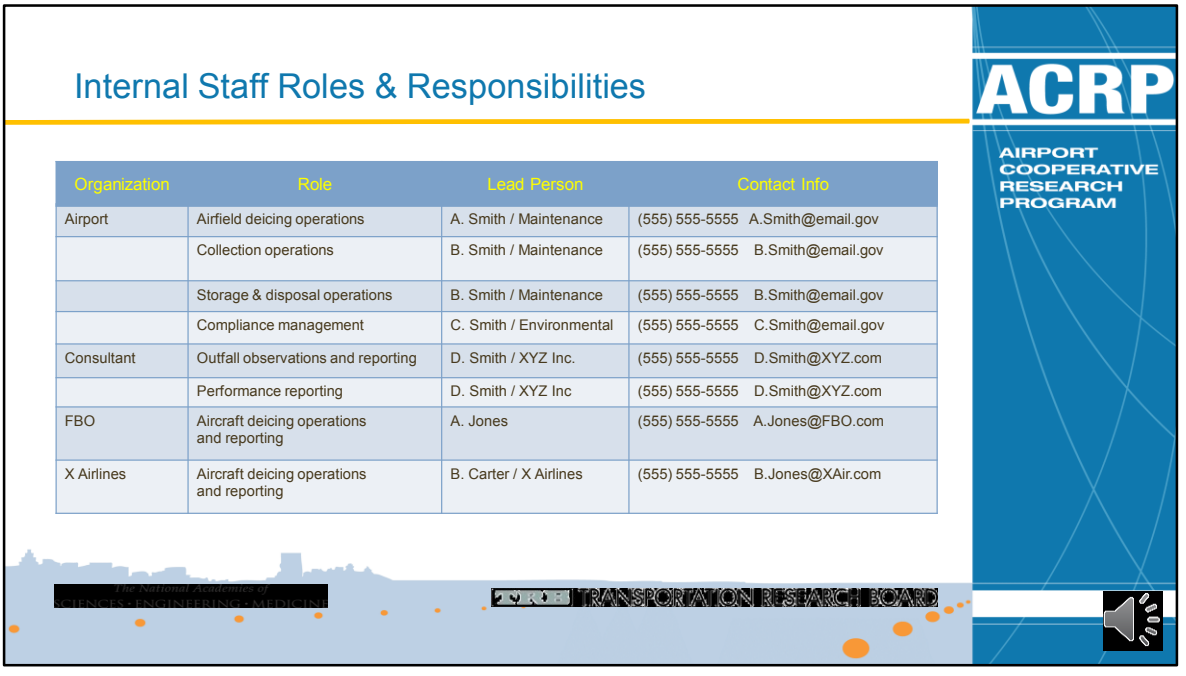

Say: Roles and responsibilities can be summarized in a simple table, like this example. Text accompanying the table provides more detail on the specifics of each responsibility.

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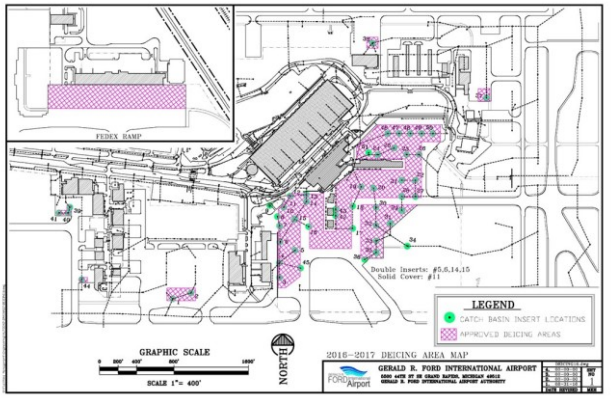
System Components and Configuration



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Say: Maps of the airport are used to show where components of the deicing program are located.
For example, this map shows where designated aircraft deicing areas are located, along with the placement of drain inserts that are used to facilitate collection of runoff by Glycol Recovery Vehicles.
Other maps may be used to show the locations of storage and treatment facilities, sanitary discharge inlets, and transfer stations.
An implementation schedule may be appropriate if some components in the plan have not been brought online yet.

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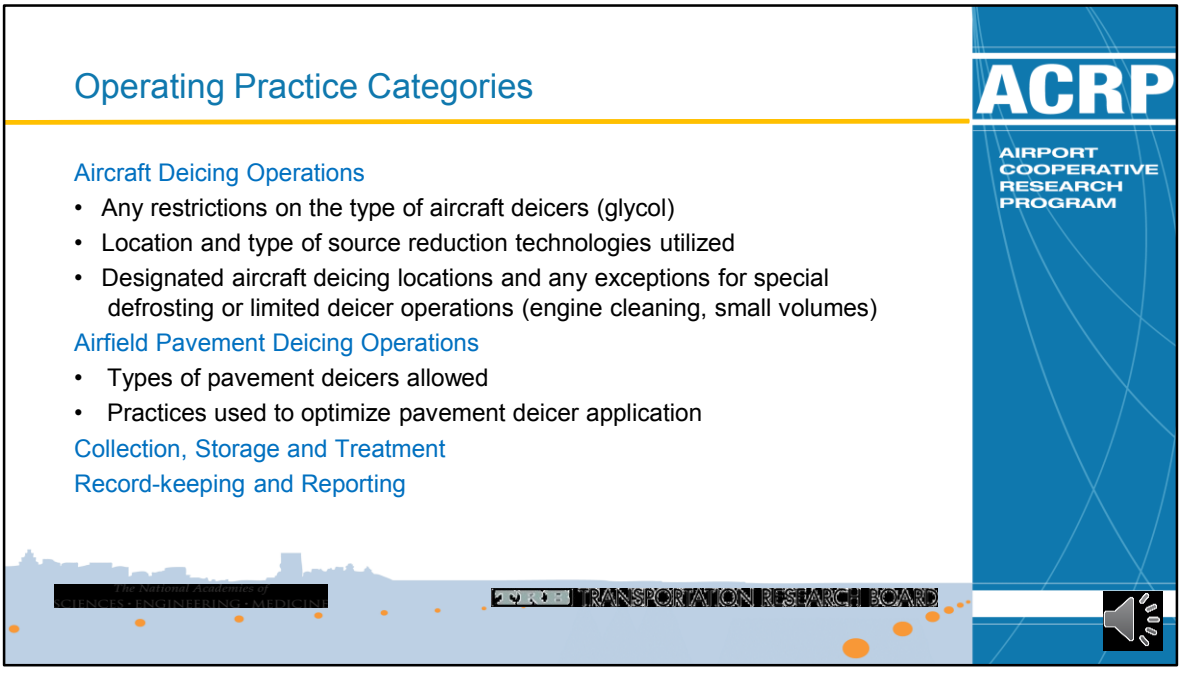

Say: A very important part of the plan is the description of the operating practices that is followed to achieve the program objectives.
These practices fall into the following categories:
[Click] Aircraft deicing operations, including
[Click] Any restrictions on the type of aircraft deicers (glycol)
[Click] Location and type of source reduction technologies utilized
[Click] Designated aircraft deicing locations and any exceptions for special defrosting or limited deicer operations **such as** engine clearing or other operations involving the use of small volumes of deicers.
[Click] Airfield pavement deicing operations, including
[Click] The types of pavement deicers allowed.
[Click] Practices used to optimize pavement deicer application
[Click] Runoff collection, storage and treatment operations.
[Click] And finally, recordkeeping and reporting procedures required of each of these operations.

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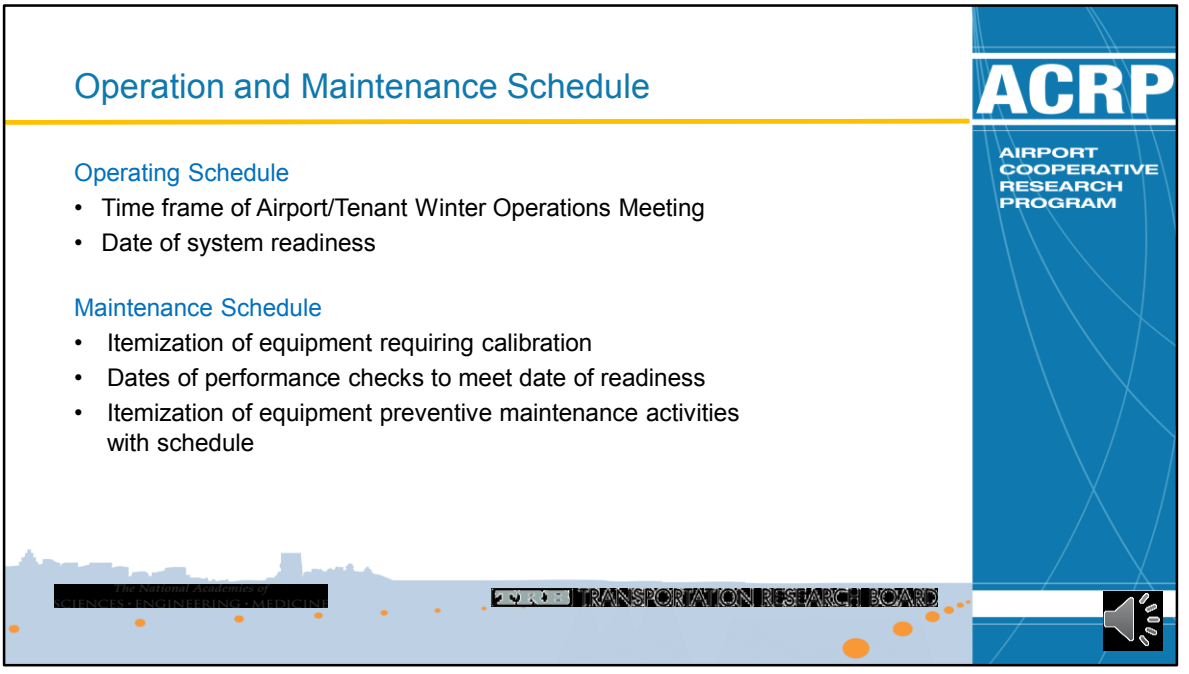

Say: Preparing the deicing runoff management system is critical to ensuring that the airport is ready for the deicing season.

[Click] Before the deicing season starts, the Airport should be prepared to host a meeting with the tenants and FBOs conducting deicing operations at the airport to review operating procedures as well as rules and regulations associated with deicing operations

[Click] The management system should be evaluated to ensure that it is ready and available to be placed into operation by a specific date.

[Click] To ensure system readiness, a maintenance schedule should be developed which

[Click] Identifies equipment requiring calibration and ensures that the equipment is calibrated prior to first use

[Click] Itemizes required equipment performance checks

[Click] and defines equipment maintenance activities such that the system is set to receive stormwater prior to the first flake of snow.

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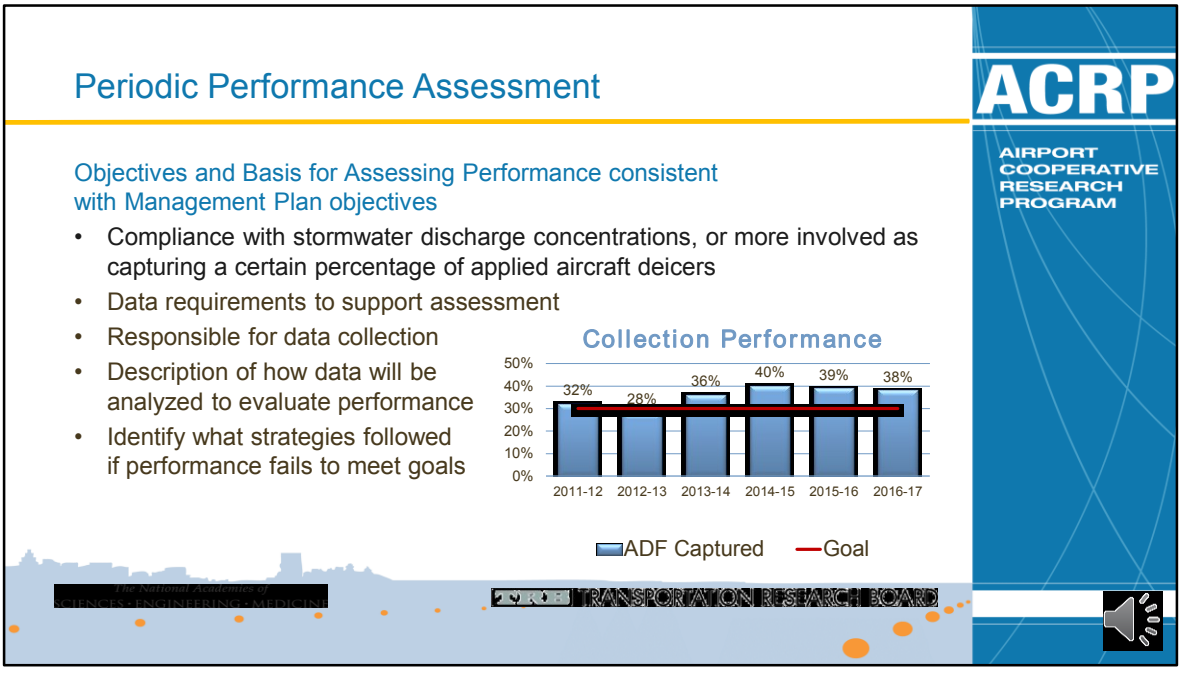

Say: Periodic performance assessment is key to the adaptive management approach. This section of the plan describes the methods that are used to determine how well the plan is working. Topics covered include:
[Click] The objectives and basis for assessing performance
[Click] This should be consistent with management plan objectives
[Click] This can be as simple as compliance with stormwater discharge concentrations, or more involved such as capturing a certain percentage of applied aircraft deicers. .
[Click] The data requirements to support the assessment, and
[Click] identification of who is responsible for collecting and providing the data.
[Click] A description of how the data will be analyzed to evaluate performance.
[Click] And identify what strategies will be followed if performance fails to meet the goals.
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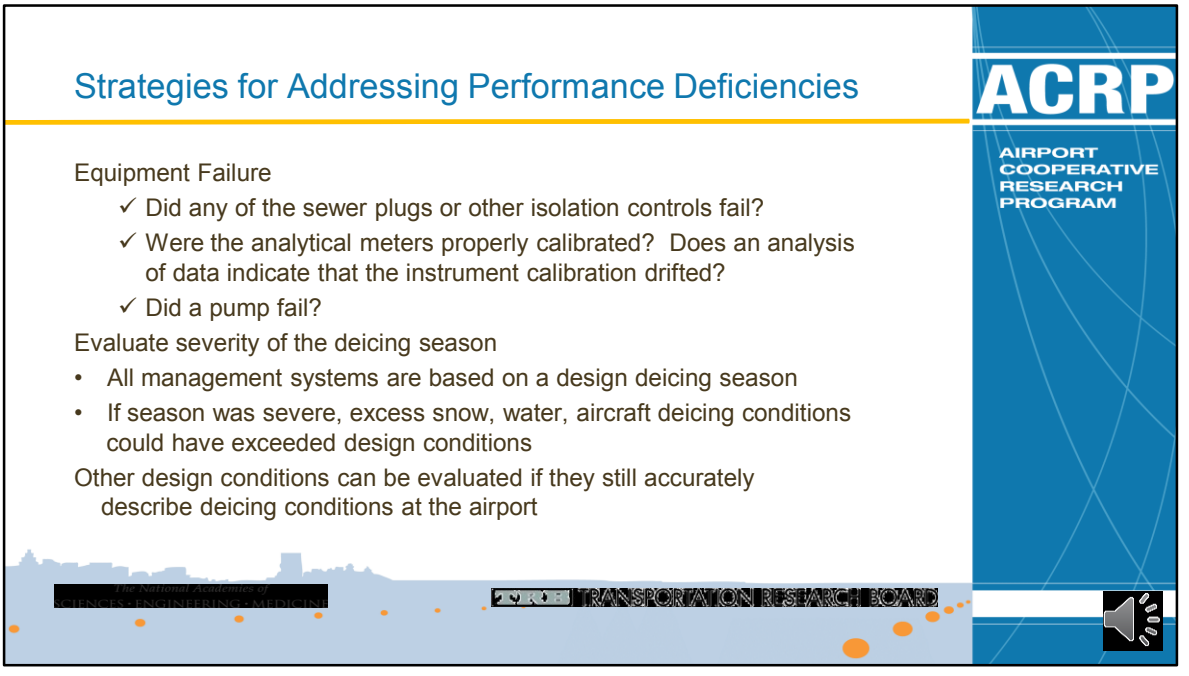

Say: If the performance of the system does not meet system objectives, an analysis of the operating conditions should be conducted to determine how and where the systems failed. Some potential causes to consider include

[Click] Equipment Failure

[Click] Did any of the sewer plugs or other isolation controls fail?

[Click] Were the analytical meters properly calibrated? Does an analysis of data indicate that the instrument calibration drifted?

[Click] Did a pump fail?

[Click] You can also evaluate the severity of the deicing season.

[Click] All management systems are based on a design deicing season.

[Click] If the season was severe, the excess snow, runoff, or deicing operations could have exceeded design conditions.

[Click] Other design conditions can be evaluated to determine if they still accurately describe deicing conditions at the airport.

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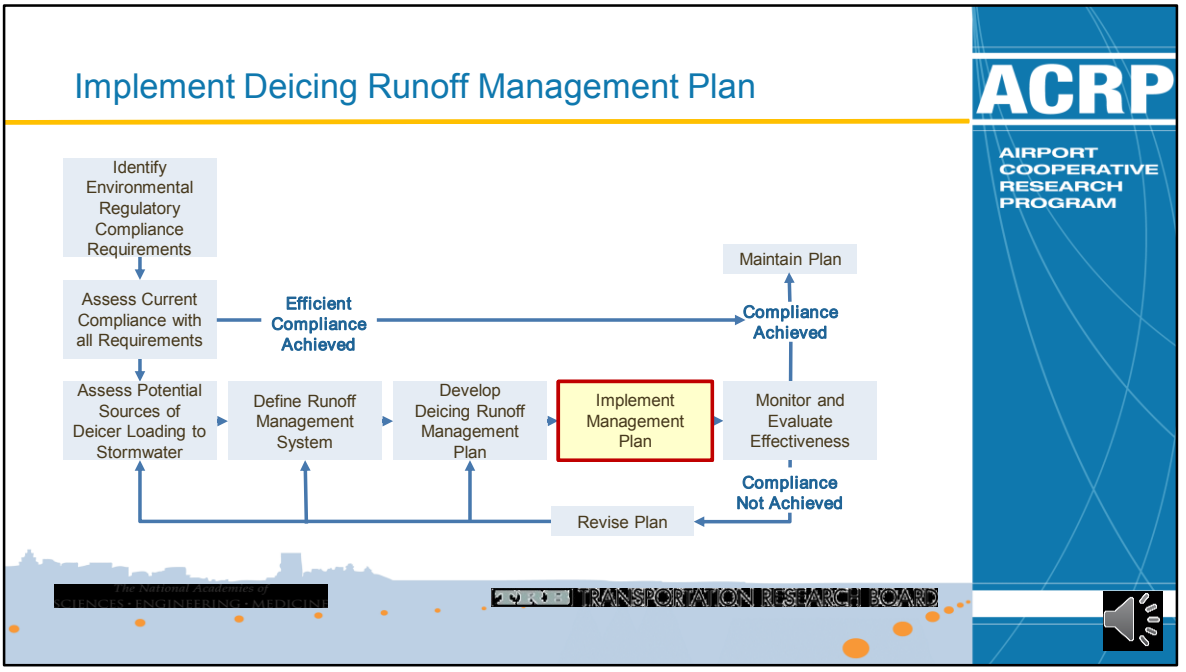
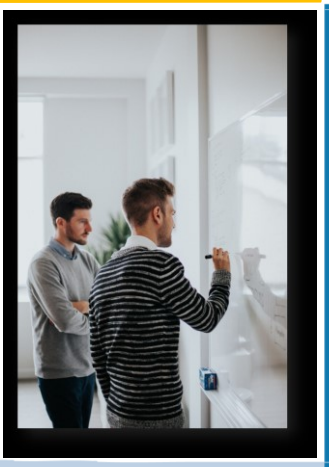


Say: Now its time to discuss how to implement your Deicing Runoff Management Plan.
[Click to proceed to next slide]

Keys to Success

- Communicate roles and responsibilities to all participants
- Establish accountability
- Verify the plan is being followed
- Take corrective actions early
- Consider the implications of operational, environmental, and regulatory changes



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The keys to success include:

[Click] Communicate roles and responsibilities to all participants so that everyone knows what's expected of them and how their role is important to achieving program objectives.

[Click] Establish accountability to keep the participants engaged in their roles and responsibilities.

[Click] Verify the plan is being followed so assessment of performance is based on the program being operated as intended.

[Click] Take corrective actions early to keep the program on a path to achieving the program objectives.

[Click] Consider the implications of operational, environmental and regulatory changes that present conditions that the deicer management system was not designed for. In these cases, the plan may need to be significantly revised to reflect the new conditions.

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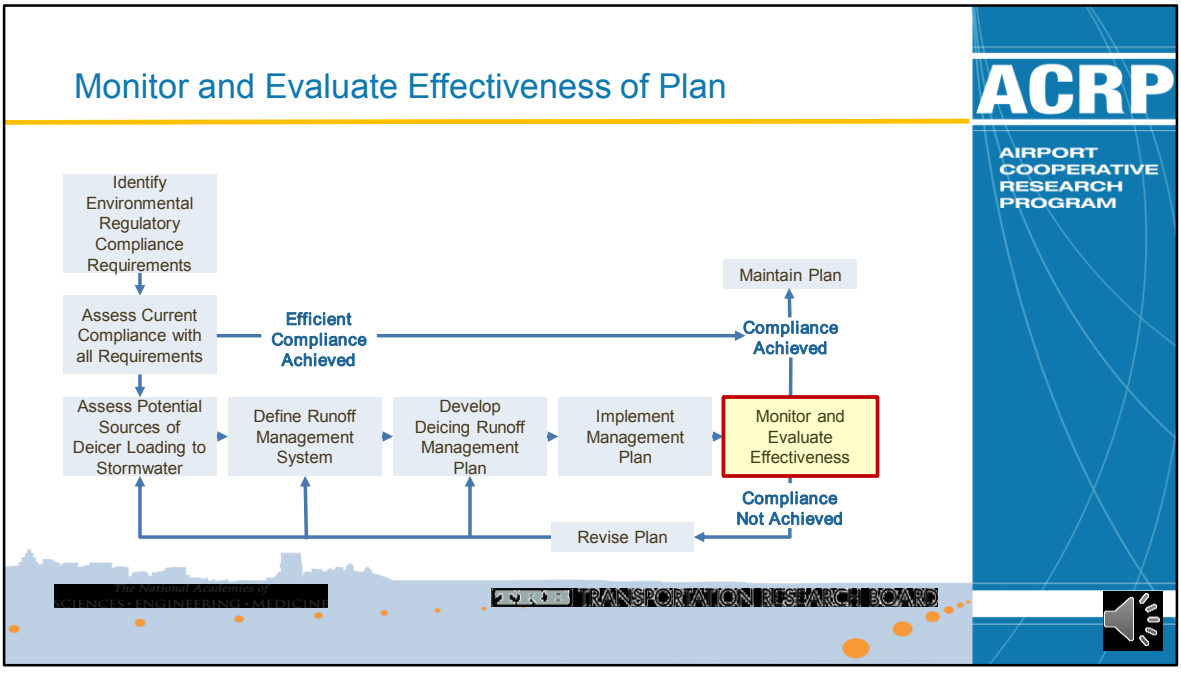

Say: Periodically, the effectiveness of the implemented plan should be assessed to confirm that its accomplishing the objectives, especially compliance with all regulatory requirements.
- The details of performance assessment and corrective strategies in your Deicing Runoff Management Plan will define how effectiveness is evaluated, and how the plan will be revised in response to compliance not being achieved.
[Click to proceed to next slide]

It is important to keep in mind that there is no single "best" approach to managing deicing runoff at all airports. The combination of source controls, collection/containment, and treatment/recycling/ disposal that works well at one facility may not work at another. - Just as you wouldn't grab a crowbar from your toolbox to work on your computer, you need to match the right deicing runoff management tools to the specifics at your airport. [click] The approach described in this course and in ACRP Report 14 will help you find the right set of tools for your airport's unique situation.

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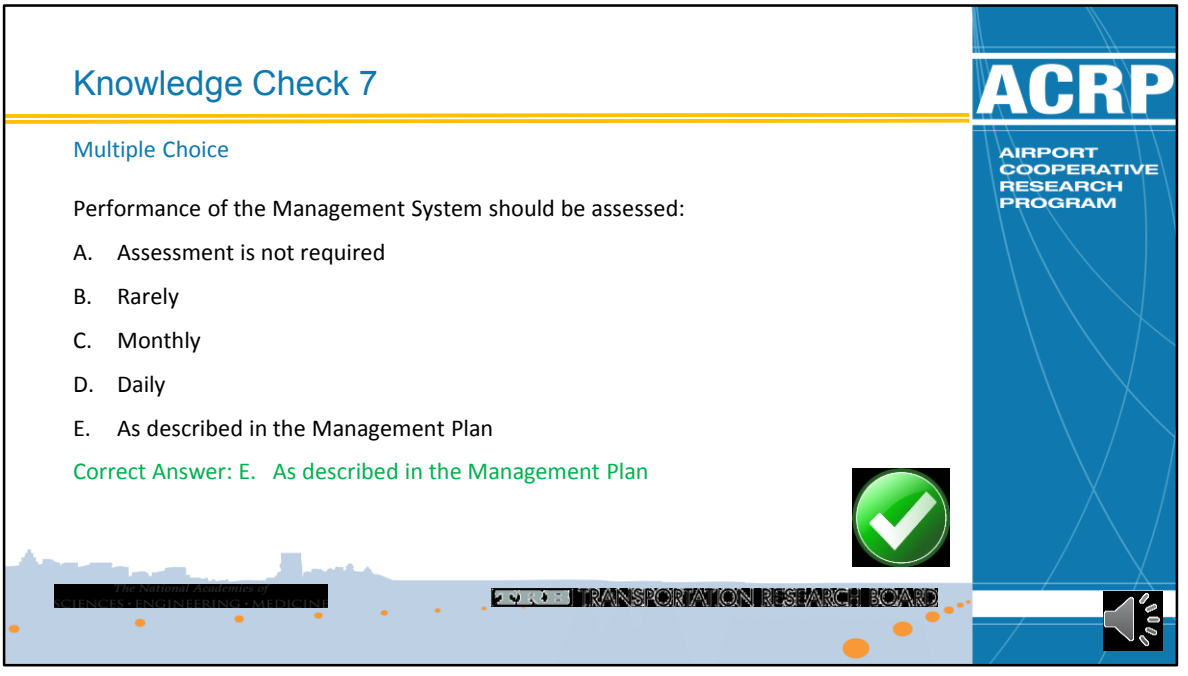
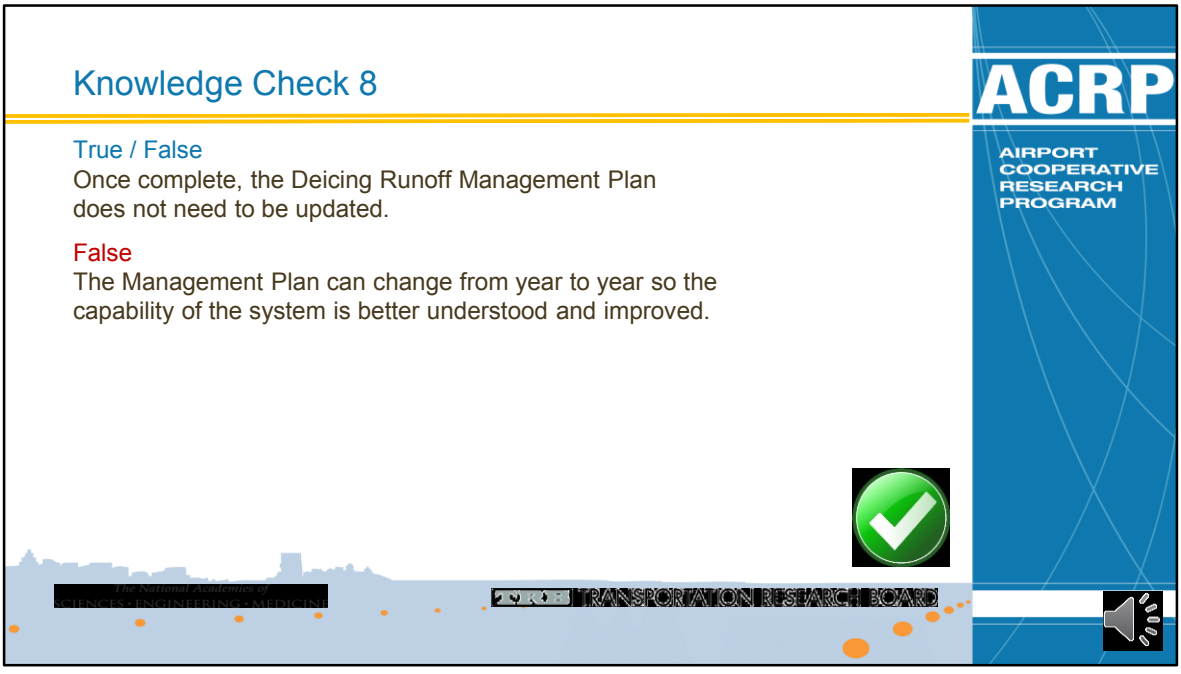


Performance of the Management System should be assessed:

A. Assessment is not required
B. Rarely
C. Monthly
D. Daily
E. As described in the Management Plan

The Correct Answer: E. As described in the Management Plan



Is this statement True / False

Once complete, the Deicing Runoff Management Plan does not need to be updated.

[Click to reveal correct answer]

Correct Answer: False

The Management Plan can change from year to year so the capability of the system is better understood and improved.

[Click to proceed to next slide]

Activity

> Click to Download the Report 14 document

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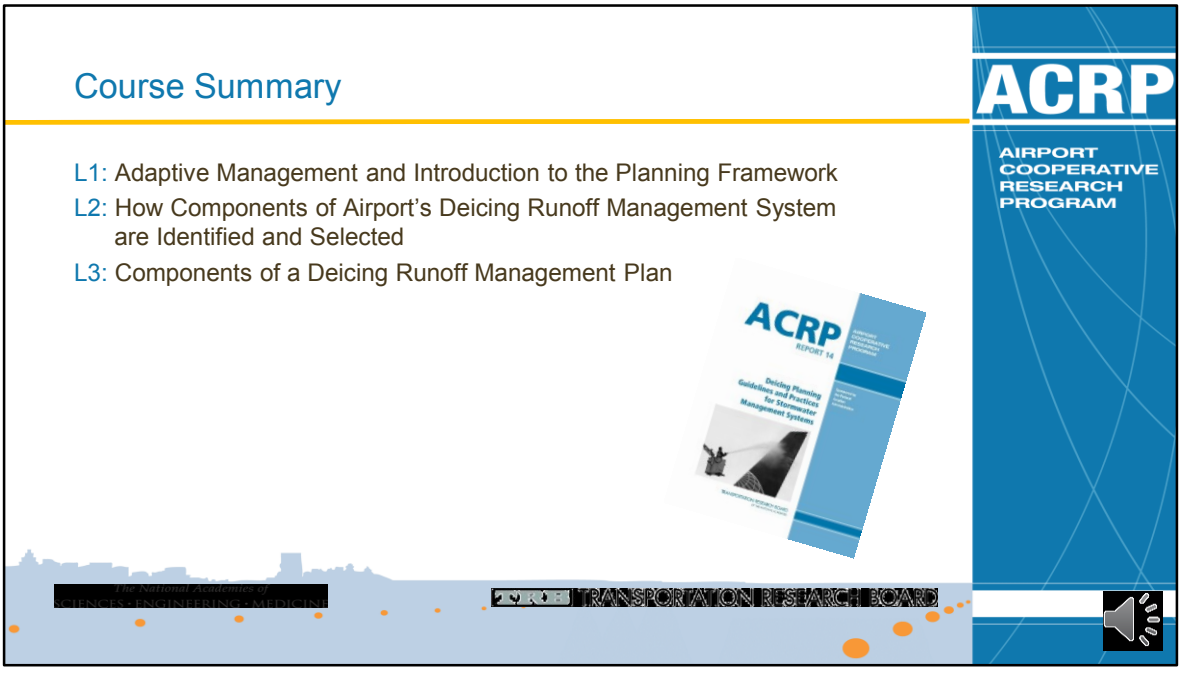
https://crp.trb.org/acrp0261/deicing-planning-guidelines-and-practices-for-stormwater-management-systems/



In summary, the Advanced Deicing Runoff Management course contained three lessons.

[Click] lesson 1 explained the concept of adaptive management and introduces the Planning Framework that this course is built upon. You learned how to assess regulatory compliance status and needs, identify deicers used at your airport, and quantify their contributions to stormwater discharges.
[Click] lesson 2 explained how components of an airport's deicing runoff management system are identified and selected. And
[Click] lesson 3 described the components of a Deicing Runoff Management Plan, identifies keys to successful implementation of the plan, and explains how monitoring ensures that objectives are achieved. - The materials in these lessons are based on ACRP Report 14 Deicing Planning Guidelines and Practices for Stormwater Management Systems, which provides a handy reference for all aspects of deicing runoff management planning.

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Congratulations, you have completed this course and earned your certificate of completion. Click the link below this lesson labeled Video 3 Lesson Supplement. A new PowerPoint file will open. Click to enter your name and date into the fields and then print the certificate.