

**AIRCRAFT DEICING AND WASHING PROGRAM
BARNSTABLE MUNICIPAL AIRPORT
480 BARNSTABLE ROAD
HYANNIS, MASSACHUSETTS**

1.0 INTRODUCTION

This Aircraft Deicing and Washing Program has been prepared for the Barnstable Municipal Airport (the Airport), 480 Barnstable Road, Hyannis, Massachusetts. The purpose of the Program is to establish procedures for Airport tenants to follow during aircraft deicing and washing at the Airport’s South Ramp Deicing Pad. The Program is intended to protect groundwater and surface water resources at the Airport, and maintain compliance with local, state, and federal regulations.

Aircraft deicing activities at the Barnstable Municipal Airport (Airport) currently occur on a regular basis during the winter months at three designated deicing locations (Figure 1):

- South Ramp Deicing Area;
- Rectrix Aerodrome Facility Deicing Area; and
- East Ramp General Aviation Deicing Area.

Due to construction completion of the new South Ramp Deicing Pad in October 2015, the Rectrix Aerodrome and East Ramp General Aviation deicing areas will be removed from active operations. The paved apron in the South Ramp Deicing Pad drains to a single, centrally located catch basin that discharges to the Barnstable Water Pollution Control Facility (WPCF) during aircraft deicing or washing. During all other times, this same catch basin discharges to the Airport’s stormwater conveyance system that ultimately discharges to Upper Gate Pond. The discharge system is controlled through a series of manual gate valves that are operated by Airport Operations personnel. **Notification of Airport Operations prior to deicing or washing is required, to confirm that the system is discharging to the WPCF.**



Photo 1: Stormwater gate valve and operating position indicators.

PLEASE NOTE:

The South Ramp Deicing Pad is located within a “Secured Area.” This Secured Area is regulated under TSAR 1542, and any embarking and deplaning of passengers in this area during deicing operations is **strictly prohibited**.

The South Ramp Deicing and Washing Pad was constructed by the Airport to provide tenants and aircraft operators with a central location to complete these activities, and reduce the potential for environmental impacts. The Massachusetts Department of Environmental Protection (DEP), Cape Cod Commission (CCC), Barnstable Department of Public Works (DPW), and Barnstable WPCF have reviewed the construction plans and may conduct further review and/or inspection of the operations and record keeping procedures. Compliance with the procedures and requirements established in this Program is necessary to avoid increased oversight or potential penalties from these agencies.

2.0 TENANT AND OPERATOR TRAINING

It will be the responsibility of the Airport tenants to notify Airport Operations of their intent to deice or wash aircraft. Prior to using the South Ramp pad for deicing or washing aircraft, aircraft operators or tenants must attend a brief training session with Airport Operations to familiarize themselves with the system components and procedures.

3.0 DEICING FLUID AND DETERGENT FORMULATION AND MONITORING

Due to the decreased environmental impacts over alternative formulations, the Airport currently requires all tenants to utilize Type I propylene glycol based deicing fluids. The use of Type IV deicing fluids is currently being reviewed by the WPCF. Tenants will be notified if Type IV deicing fluids are approved for use. Types II and III deicing fluids are not commonly supplied for use by civilian air transportation airlines, and are prohibited from use at the Airport. Tenants are required to maintain Material Safety Data Sheets (MSDS), purchase orders, invoices, or other similar documentation sufficient to determine the classification of deicing fluid formulations in use, and provide copies of these records to the Airport Managers office prior to their use at the Airport.

In accordance with Barnstable WPCF requirements and the Airport’s Stormwater Pollution Prevention Plan (SWPPP), each aircraft owner / tenant agent must maintain a record of the cumulative amount of deicing fluid used each day. The cumulative record should be stored with the deicing fluid equipment or at the hangar office. The volume of deicing fluid used during each calendar month shall be reported to the Airport Manager’s office at the end of each month, or at any time Airport Management requests this information. A monthly log sheet is attached.

The Barnstable WPCF has designated the following detergents to be utilized during aircraft washing. **No other detergent products are permitted for use at this time**. An owner / tenant can submit an alternative detergent for review by the WPCF. Please contact Airport

Management for more information on the WPCF approval process. Each aircraft owner / tenant will be responsible for purchasing the approved detergent(s) for their own use. Detergents are to be applied in accordance with the manufacturer's recommendations and only at the specified dilution.

WPCF APPROVED DETERGENTS:

- SIMPLE GREEN™ AIRCRAFT AND PRECISION CLEANER

The South Ramp deicing and washing pad features an oil water separator (O/WS) and pump station with an integrated Mission pump monitoring system. During aircraft deicing or washing (when the pump station is in operation), the Mission pump monitoring system will notify the Barnstable WPCF. The Mission pump monitoring system and Airport Operations notification procedures described in Sections 4.0 and 5.0 are intended to provide a record log of activity for the deicing / washing pad. In the event that any issues are noted at the WPCF, the record log will be reviewed by Airport Management to identify potentially responsible parties. The Airport will not be held liable for any tenant activities, including any that may result from unauthorized use of the deicing pad, use of deicing or detergent products other than those specified here, or activities that are inconsistent with this Program. Unauthorized use of the deicing pad could result in harmful discharges to Upper Gate Pond or the Barnstable WPCF, and any responsible parties may be subject to penalties or enforcement actions from DEP, DPW, and/or the Barnstable WPCF.

4.0 AIRCRAFT DEICING PROCEDURES

The following procedures shall be followed by all aircraft owners and have been established to minimize potential impacts associated with deicing activities at the Airport and maintain compliance with Barnstable WPCF requirements.

- **Prior to any aircraft entering the South Ramp deicing pad, the designated aircraft operator or tenant agent must notify Airport Operations.** Airport Operations will record the request in the daily log, noting the aircraft operator / tenant agent, aircraft call sign / registration number, date, and time of request. The operator must wait for confirmation from Airport Operations that the pad is open for deicing.
- The aircraft owner must immediately notify Airport Operations if an aircraft is disabled in the South Ramp Deicing Area. It is the aircraft owner's responsibility to ensure prompt arrangements are made with Airport Operations or through their own resources to have the disabled aircraft removed from the Secure Area.
- After acknowledgement from Airport Operations, the aircraft operator shall park and adequately secure the aircraft within the demarcated area.
- Prior to any application of deicing fluid Airport Operations will close the manual gate valve labeled "Stormwater Discharge", and open the valve labeled "Deicing / Wash Discharge." Each of the gate valves features a visual indicator on the pavement surface to confirm proper orientation.

- The aircraft operator may then proceed with the application of deicing fluid on the aircraft. Deicing fluids shall be limited to those products that have received prior approval by Airport Management.
- Excessive use of deicing fluid is prohibited.
- After the aircraft has been deiced or washed, the aircraft operator / tenant agent shall notify Airport Operations that operations are complete. Airport Operations will log the notification.
- After the gate valves have been positioned to discharge to the airfield stormwater conveyance system, Airport Operations will log the operation.

5.0 AIRCRAFT WASHING PROCEDURES

The following procedures shall be followed by all aircraft owners and have been established to minimize potential impacts associated with aircraft washing activities at the Airport and maintain compliance with Barnstable WPCF requirements. Washing of aircraft is only permitted within tenant hangars that have permitted floor drains discharging to the Barnstable WPCF and/or at the South Ramp deicing / washing pad.

- **Prior to any aircraft entering the South Ramp washing pad, the designated aircraft operator or tenant agent must notify Airport Operations.** Airport Operations will record the request in the daily log, noting the aircraft operator / tenant agent, aircraft call sign / registration number, date, and time of request. The operator must wait for confirmation from Airport Operations that the pad is open for washing.
- The aircraft owner must immediately notify Airport Operations if an aircraft is disabled in the South Ramp Deicing Area. It is the aircraft owner's responsibility to ensure prompt arrangements are made with Airport Operations or through their own resources to have the disabled aircraft removed from the Secure Area.
- After acknowledgement from Airport Operations, the aircraft operator shall park and secure the aircraft within the demarcated area.
- Prior to any rinsing or application of detergent fluid, Airport Operations will close the manual gate valve labeled "Stormwater Discharge", and open the valve labeled "Deicing / Wash Discharge". Each of the gate valves features a visual indicator on the pavement surface to confirm proper orientation.
- The aircraft operator or tenant agent may then proceed with rinsing / washing the aircraft. Detergents shall be limited to those products that have received prior approval by Airport Management and the Barnstable WPCF.
- Washing of engine bays is prohibited.
- Upon completion, the aircraft operator / tenant agent shall notify Airport Operations. Airport Operations will log the notification.
- After the gate valves have been positioned to discharge to the airfield stormwater conveyance system, Airport Operations will log the operation.

The construction of the South Ramp Deicing and Washing Pad was completed by the Airport to provide tenants with a centralized location to conduct these activities, while reducing the potential environmental impact. Tenant compliance with the procedures and requirements established in this Program is necessary to avoid increased oversight or potential penalties from state and local regulatory agencies. Should you have any questions regarding any of these matters, please contact the Airport Manager's office.

**AIRCRAFT DEICING PROGRAM
MONTHLY DEICING FLUID REPORTING FORM**

Operator: _____

Deicing Product Name: _____

Reporting Month: _____

Day:	Number of Planes Deiced:	Approximate Volume of Deicing Fluid Used (Daily):	Initials:
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			
31			
Total Deicing Fluid Used This Month:			

***At the end of each calendar month, please forward a copy of the completed deicing fluid reporting form to the Airport manager's office, and retain original. Days when no deicing occurred should be left blank.**