Attachment: Stormwater

A-1: Standard #1: Provide computations of the projected stormwater discharge from the Extended Detention Basins # 1 and # 2 emergency spillways for the 2-year, 10-year & 100-year 24-hour storms. If the computations indicate that the discharge will cause scour, erosion, and deposition to the receiving wetlands, propose measures to prevent such impacts.

A-2: Standard #2: Revise the computations for peak rate attenuation to reflect the Runoff Curve Numbers of the actual soils that will be present at grade level after excavation, addition of fill, or soil compaction. As such, a soil evaluation must be completed for this project based on field analysis (rather than the NRCS soil survey) and a Hydrologic Soil Group Map based on that field analysis prepared to provide a basis for calculation for both Stormwater Standards 2 and 3. Depth to seasonal high groundwater or bedrock must be described in the geotechnical report.

A-3. Standard #3:

- The August 2008 plan revision removed the Environmentally Sensitive Site Design (ESSD) and Low Impact Design (LID) measures that had been incorporated into the July 2008 plan. Submit an alternatives analysis documenting the feasibility of implementing Environmentally Sensitive Site Design (ESSD) and Low Impact Design (LID) measures, including use of porous pavements for the South Mountain Road relocation and runway surface (that meet FAA criteria).
- Revise the computations for the Required Recharge Volume and demonstrate that the Required Recharge Volume will be infiltrated. The computations must be revised to reflect the actual Hydrologic Soil Group conditions that will exist after excavation, fill, and compaction. The recharge calculations must identify which of the three methods (static, dynamic field, and simple dynamic) are used to determine the size of the infiltration BMPs. Computations must be provided to demonstrate the proposed recharge practices will infiltrate within 72-hours. Develop an acceptable geotechnical engineering solution to characterize the expected infiltration rate through the compacted fill beneath the proposed infiltration trenches.

A-4: Standard #4: The discussion that was put forth that although the Airport is a Land Use with Higher Potential Pollutant Loads (LUHPPL) that the proposed project does not constitute such a land use because the stormwater runoff would not come into contact with the terminal apron where fueling and maintenance occur is incorrect. Please address the following:

- The stormwater collection and treatment system must be redesigned to treat the 1-inch Water Quality Volume.
- Revise the TSS calculation sheets for Treatment Trains # 1 to # 5. It is not permissible to take credit twice for the vegetated filter strips in each BMP train.
- For the proposed street sweeping, either remove the sweeping from the TSS removal calculations or revise the street sweeping schedule to qualify for the discretionary 10% TSS

removal credit (see schedule in Stormwater Handbook specified in Volume II, Chapter 1, pages 7 to 11).

- The proposed grassed channel and small basin are not BMP treatment structures for which a TSS removal rate is available and thus the calculations must be revised.
- The information submitted for treatment train #4 indicates that a TSS removal rate of 50% was selected for the proposed use of grassed channels for subcatchments 30S & 38S tributary to Point of Interest #3. The handbook, Volume II, Chapter 2 only allows a 50% TSS removal rate if the grassed channel has pretreatment such as a sediment forebay. The proposed use of the check dams does not qualify as a BMP pre-treatment measure.
- Information contained in the revised stormwater report provides calculations for the three proposed sediment forebays which will be constructed at Extended Dry Detention Basin #1 and #2. This information provides a volume in cubic feet of storage and a proposed depth for each basin, yet does not show any aerial dimension for the structure to enable construction crews in the field to understand how large to construct each forebay. In addition, the construction specification depicted on Plan Sheet 5 for this structure specifies that 3,600 cubic feet of storage needs to be provided in each structure per acre of area drained. The plan and calculations should be clarified to allow for clear understanding as to the size, dimensions, and depth, volume for each structure in conformance with the removal rate required in the Handbook, Volume II, for sediment forebays.

A-5: Standard #5: Please address the following:

- The vegetated filter strips, water quality swales, and Extended Detention Basins must be lined and sealed unless at least 44% TSS removal has been accommodated. 44% TSS removal pretreatment is required prior to directing runoff to the proposed infiltration trenches.
- Submit a revised version of the Long Term Pollution Prevention Plan to address use of de-icer and anti-icing agents on aircraft, and measures proposed to be adopted to prevent or minimize those agents from coming into contact with stormwater runoff.
- The airport is subject to the EPA NPDES requirements coverage under the Multi-Sector General Permit (MSGP). Please submit a copy of the EPA NOI requesting coverage under the 2008 MSGP and required Stormwater Pollution Prevention Plan (SWPPP).

A-6. Standard #7: Please address the following:

- Computations must be provided to demonstrate that the Stormwater Standards are met for the proposed stormwater discharge from Drainage Manhole #11 and new storm drain system proposed to be outleted to the Wild Acres Brook through the proposed 8 x 8 foot RCP Box Culvert. The MassDEP recognizes that some if not all of this runoff may be from previously developed portions of the site. If so, please confirm that, and demonstrate that the Stormwater Standards will be met to the Maximum Extent Practicable for the new storm drain outlet proposed.
- Provide information and computations demonstrating that the Stormwater Standards will be met for the relocated South Mountain Road. The proposed relocated South Mountain Road is in an entirely new location, so MassDEP anticipates that the Stormwater Standards should be fully met.

A-7: Standard #8: The Erosion & Sedimentation Control Plan (E&S Plan) must be revised to reflect site specific soils and groundwater conditions and also include construction period pollution prevention measures to prevent runoff from contaminating wetlands. The present E&S Plan does not describe how the large amount of fine sediment will be controlled and the Geotechnical Report does not address the expected groundwater conditions in the soil/rock borrow area. During construction, emergent groundwater springs, or artesian conditions in combination with the large volume of fines soil material can create unworkable field conditions. A contingency plan will be required for construction de-watering and an evaluation of future groundwater elevations in wetland replication areas is required.

A-8. Standard #10: The revised information does not contain any information documenting that the project as complied with Standard #10. Please submit the required "Illicit Discharge Compliance Statement" and accompanying map for the site.