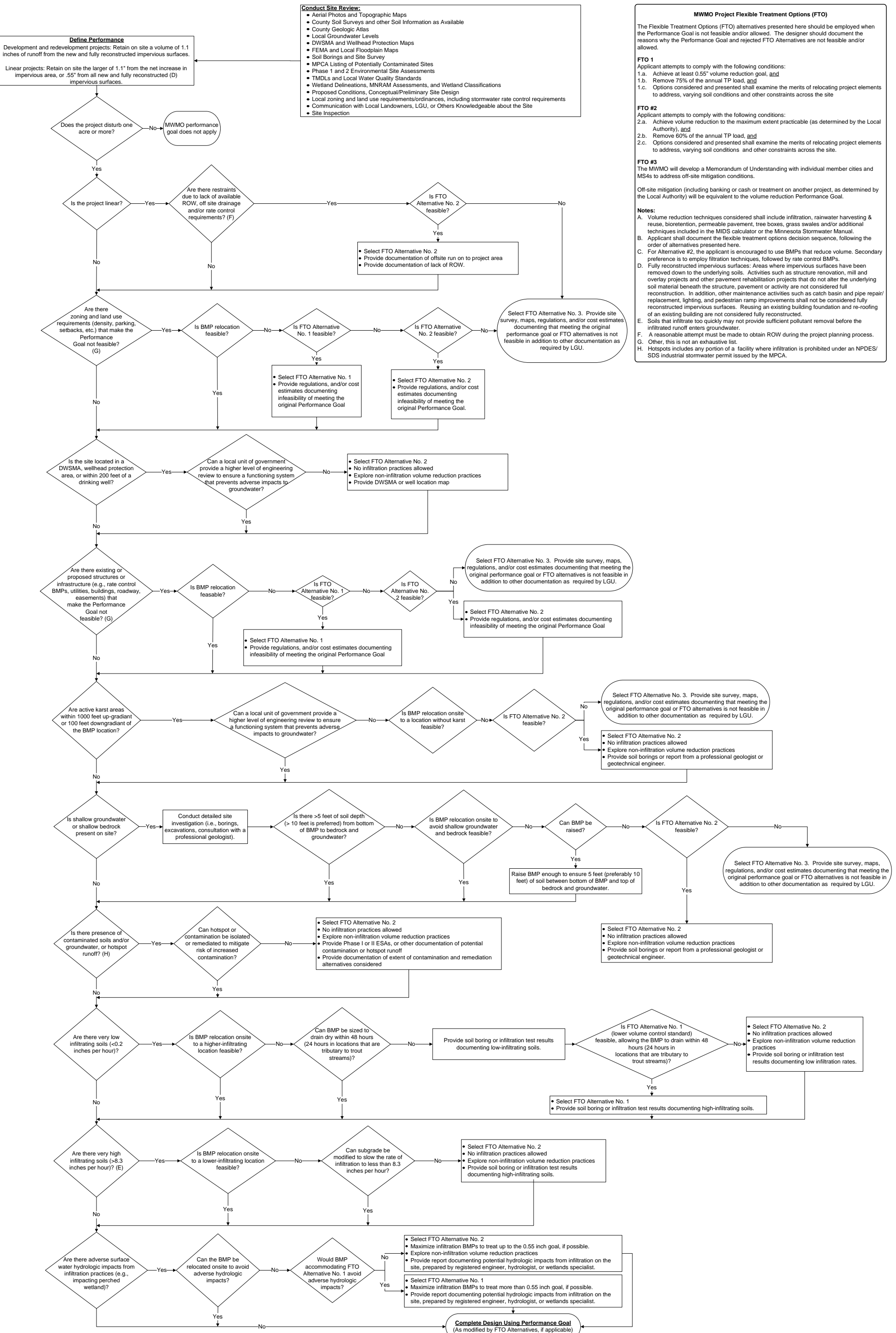


**MWMO DESIGN SEQUENCE FLOW CHART**



- Conduct Site Review:**
- Aerial Photos and Topographic Maps
  - County Soil Surveys and other Soil Information as Available
  - County Geologic Atlas
  - Local Groundwater Levels
  - DWSMA and Wellhead Protection Maps
  - FEMA and Local Floodplain Maps
  - Soil Borings and Site Survey
  - MPCA Listing of Potentially Contaminated Sites
  - Phase 1 and 2 Environmental Site Assessments
  - TMDLs and Local Water Quality Standards
  - Wetland Delineations, MNRAM Assessments, and Wetland Classifications
  - Proposed Conditions, Conceptual/Preliminary Site Design
  - Local zoning and land use requirements/ordinances, including stormwater rate control requirements
  - Communication with Local Landowners, LGU, or Others Knowledgeable about the Site
  - Site Inspection

**MWMO Project Flexible Treatment Options (FTO)**

The Flexible Treatment Options (FTO) alternatives presented here should be employed when the Performance Goal is not feasible and/or allowed. The designer should document the reasons why the Performance Goal and rejected FTO Alternatives are not feasible and/or allowed.

**FTO #1**  
 Applicant attempts to comply with the following conditions:  
 1.a. Achieve at least 0.55" volume reduction goal, and  
 1.b. Remove 75% of the annual TP load, and  
 1.c. Options considered and presented shall examine the merits of relocating project elements to address, varying soil conditions and other constraints across the site

**FTO #2**  
 Applicant attempts to comply with the following conditions:  
 2.a. Achieve volume reduction to the maximum extent practicable (as determined by the Local Authority), and  
 2.b. Remove 60% of the annual TP load, and  
 2.c. Options considered and presented shall examine the merits of relocating project elements to address, varying soil conditions and other constraints across the site.

**FTO #3**  
 The MWMO will develop a Memorandum of Understanding with individual member cities and MSAs to address off-site mitigation conditions.

Off-site mitigation (including banking or cash or treatment on another project, as determined by the Local Authority) will be equivalent to the volume reduction Performance Goal.

**Notes:**

A. Volume reduction techniques considered shall include infiltration, rainwater harvesting & reuse, bioretention, permeable pavement, tree boxes, grass swales and/or additional techniques included in the MIDS calculator or the Minnesota Stormwater Manual.  
 B. Applicant shall document the flexible treatment options decision sequence, following the order of alternatives presented here.  
 C. For Alternative #2, the applicant is encouraged to use BMPs that reduce volume. Secondary preference is to employ filtration techniques, followed by rate control BMPs.  
 D. Fully reconstructed impervious surfaces: Areas where impervious surfaces have been removed down to the underlying soils. Activities such as structure renovation, mill and overlay projects and other pavement rehabilitation projects that do not alter the underlying soil material beneath the structure, pavement or activity are not considered full reconstruction. In addition, other maintenance activities such as catch basin and pipe repair/replacement, lighting, and pedestrian ramp improvements shall not be considered fully reconstructed impervious surfaces. Reusing an existing building foundation and re-roofing of an existing building are not considered fully reconstructed.  
 E. Soils that infiltrate too quickly may not provide sufficient pollutant removal before the infiltrated runoff enters groundwater.  
 F. A reasonable attempt must be made to obtain ROW during the project planning process.  
 G. Other, this is not an exhaustive list.  
 H. Hotspots includes any portion of a facility where infiltration is prohibited under an NPDES/SDS industrial stormwater permit issued by the MPCA.