Annexure – MNT1

Software Maintenance plan guidelines

The purpose of this annex is to provide a template to guide the preparation of a software maintenance plan based on this standard.

The maintenance plan (MP) should contain the content as described in A.1 through A.8. The user of this annex may adopt any format and numbering system for the MP. The MP section numbers listed in this annex are provided to assist in the readability of this annex and are not mandatory for the user.

1. Introduction

2. References

3. Definitions

4. Software Maintenance Overview

4.1 Organization

4.2 Scheduling Priorities

4.3 Resource Summary

4.4 Responsibilities

4.5 Tools, Techniques, and Methods

5. Software Maintenance Process

5.1 Problem/ modification identification/classification, and prioritization

5.2 Analysis

5.3 Design

5.4 Implementation

5.5 System Testing

5.6 Acceptance Testing

5.7 Delivery

6. Software Maintenance Reporting Requirements

7. Software Maintenance Administrative Requirements

7.1 Anomaly Resolutions and Reporting

7.2 Deviation Policy

7.3 Control Procedures

7.4 Standards, Practices, and Conventions

7.5 Performance Tracking

7.6 Quality Control of Plan

8. Software Maintenance Documentation Requirements

## A.1 (MP Section 1) Introduction

A.1.1. Purpose

The Software Maintenance Manual describes the procedures for installation and maintenance of the software application developed for TWRIS(Telangana Water Resources Information system Dashboard)

A.1.2. Goals

This manual should describe the software at a sufficient level of detail so that a programmer familiar with the node environment with React & Express framework, but not initially familiar with the software, can maintain it properly. It should include:

         Detailed written descriptions of all software systems and sub-systems.

         Listings of all software

### A.2 (MP Section 2) References

The MP should identify the documents placing constraints on the maintenance effort, documents referenced by the MP, and any supporting documents supplementing or implementing the MP including other plans or task descriptions that elaborate details of this plan.

**A.3 (MP Section 3) Definitions**

The MP should define or reference all terms required understanding the MP. All abbreviations and notations used in the MP should be described.

**A.4 (MP Section 4) Software maintenance overview**

The MP should describe organization, scheduling priorities, resources, responsibilities, tools, techniques, and methods necessary to perform the software maintenance process.

**A.4.1 (MP Section 4.1) Organization**

The MP should describe the organization of the software maintenance effort. The MP should describe the lines of communication with the software maintenance effort including external organizations, the authority for resolving issues raised in the software maintenance effort, and the authority for approving software maintenance products.

**A.4.2 (MP Section 4.2) Scheduling priorities**

The MP should describe how the maintenance activity will be grouped into work packages, the factors that determine the organizational maintenance priorities and the process for assigning a priority to a work package and how the resources are assigned to prioritized work packages. The schedule estimating method should be described.

**A.4.3 (MP Section 4.3) Resource summary**

The MP should summarize the software maintenance resources, including staffing, facilities, tools, finances, and special procedural requirements (e.g., security, access rights, and documentation control). The cost estimating method should be described.

**A.4.4 (MP Section 4.4) Responsibilities**

The MP should identify an overview of the organizational element(s) and responsibilities for maintenance activities.

**A.4.5 (MP Section 4.5) Tools, techniques, and methods**

The MP should describe the special documents, software maintenance tools, techniques, methods, and operating and test environment to be used in the maintenance process. Acquisition, training, support, and qualification information for each tool, technology, and methodology should be included. The MP should document the measurements and metrics to be used by the maintenance process and should describe how these measurements and metrics support the maintenance process.

**A.5 (MP Section 5) Software maintenance process**

The MP should identify actions to be performed for each of the software maintenance phases described in Clause 4, and should document those actions. The MP should contain an overview of the maintenance phases.

**A.5.1 (MP Sections 5.1 through 5.7) Software maintenance process**

The MP should include sections 5.1 through 5.7 for software maintenance phases as shown in the MP outline (see Figure A.1).

The MP shall address the following topics for each software maintenance phase:

a) *Phase input:*  What is needed to perform the phase.

b) *Phase output:*  What results when the phase is performed.

c) *Phase process:* The details of what a phase is expected to do.

d) *Phase controls:* What is to be performed to control the results of the phase.

**A.6 (MP Section 6) Software maintenance reporting requirements**

The MP should describe how information will be collected and provided for each reporting period, including: work packages completed, work packages in-work, work packages received, and backlog. Also, risks should be identified along with their mitigation approach.

**A.7 (MP Section 7) Software maintenance control requirements**

The MP should describe the anomaly resolution and reporting; deviation policy; control procedures; and standards, practices, and conventions.

**A.7.1 (MP Section 7.1) Anomaly resolution and reporting**

The MP should describe the method of reporting and resolving anomalies, including the criteria for reporting an anomaly, the anomaly distribution list, and authority for resolving anomalies.

**A.7.2 (MP Section 7.2) Deviation policy**

The MP should describe the procedures and forms used to deviate from the plan. The MP should identify the authorities responsible for approving deviations.

**A.7.3 (MP Section 7.3) Control procedures**

The MP should identify control procedures applied during the maintenance effort. These procedures should describe how software products and maintenance results should be configured, protected, and stored.

**A.7.4 (MP Section 7.4) Standards, practices, and conventions**

The MP should identify the standards, practices, and conventions that govern the performance of maintenance actions including internal organizational standards, practices, and policies.

**A.7.5 (MP Section 7.5) Performance tracking**

The MP should describe the procedures for tracking performance through all software maintenance phases for each work item.

**A.7.6 (MP Section 7.6) Quality control of plan**

The MP should describe how the plan is reviewed, updated, and approved to ensure plan correctness and currency.

**A.8 (MP Section 8) Software maintenance documentation requirements**

The MP should describe the procedures to be followed in recording and presenting the outputs of the maintenance process.