Here's a suggested content flow for your project proposal on the "Digital Water Supply Management in Dharan":

1. Introduction

Provide an overview of Dharan, focusing on the water crisis. Explain the importance of efficient water management, especially in urban settings. Introduce the concept of digital water management systems and how technology can aid in optimizing water distribution to meet demand in the face of supply deficits.

2. Problem Statement

Clearly define the water supply challenge in Dharan. Highlight the daily water demand (30 MLD) versus the available supply (20 MLD), creating a deficit. Discuss how the current manual or traditional methods of water distribution are inefficient and cannot adequately address this gap, leading to inequitable distribution among the wards.

3. Objectives

Outline the main goals of the project:

- **Monitor** real-time water levels in reservoirs.
- **Develop** a web application to schedule and distribute the available water efficiently among the wards.
- **Provide** data-driven decision-making support to local authorities.
- **Minimize** water wastage and optimize the use of available water resources.

4. Methodology

a. Requirement Identification

i. Study of Existing System / Literature Review

- Review current water supply management practices in Dharan.
- Examine existing digital water management solutions globally and their applicability to Dharan.
- Conduct a literature review on water distribution algorithms, real-time monitoring, and IoT integration in water management.

ii. Requirement Analysis

- Identify functional and non-functional requirements for the web app.
- Determine the hardware and software needed for real-time water level monitoring.
- Analyze user requirements, including city authorities, ward administrators, and the general public.

b. Feasibility Study

i. Technical

- Assess the technical feasibility of deploying sensors and IoT devices in reservoirs.
- Evaluate the web development platforms and tools required for building the application.

ii. Operational

- Analyze the operational feasibility, including training for city officials and maintenance of the system.
- Consider integration with existing water management practices in Dharan.

iii. Economic

- Estimate the cost of implementing the system, including hardware, software, and ongoing maintenance.
- Conduct a cost-benefit analysis, comparing the costs of the system with the potential savings from optimized water distribution.

iv. Schedule (Gantt chart showing the project timeline)

- Prepare a Gantt chart to outline the project timeline, showing key milestones such as requirement gathering, system design, implementation, testing, and deployment.

c. High-Level Design of System

- **Methodology of the Proposed System**: Describe how the system will function, including the data flow from water level sensors to the web app.
- **Flow Charts/Working Mechanism**: Provide flow charts or diagrams showing the data flow and decision-making process in the system.
- **Description of Algorithms**: Detail the algorithms used for water distribution scheduling, including any optimization techniques to allocate water based on demand and supply.

5. Expected Outcome

Detail the expected results, including:

- A fully functional web app that monitors water levels and schedules water distribution.
- Improved water distribution efficiency across the wards of Dharan.
- Reduced water wastage and better management of the water supply deficit.

6. References

List the references for the research papers, technical documents, software tools, and other resources used in preparing the proposal and developing the project. Include citations for any algorithms or methodologies adopted from existing literature.