

**Upper Oconee Basin Water Authority
Bear Creek Reservoir and Water Treatment Facilities
Asset Master Plan Update**

PROJECT UNDERSTANDING

The Upper Oconee Basin Water Authority (UOBWA) owns and operates a river intake pump station, drinking water supply reservoir, dam, reservoir pump station, water treatment plant, high service pump station and related facilities in Jackson County, Georgia. The UOBWA approved an Asset Management Policy for the facilities that requires an annual review of the Asset Master Plan and its related Capital Asset Reserve and Replacement Fund (CARRF).

This scope of services is to provide update to the Asset Master Plan including asset inventory and related asset data required to complete the analysis of the CARRF requirements. Nelsnick Enterprises Inc. (NE) will provide the final financial allocation, requirements and analysis for the CARRF under a separate agreement with the UOBWA.

SCOPE OF SERVICES

Task 1 Project Initiation and Planning

Project Initiation

One project kickoff meeting will be held with UOBWA representatives in their offices to review and clarify the Scope Of Services, requirements, key expectations and goals for the project.

At this meeting, coordination with NE will be reviewed along with the project schedule. Any additional data that may be required for completion of the project will also be provided.

Project management services will be provided for the duration of the project and include regular project team meetings, preparation of a project specific project execution plan, as well as management of the proposed scope, schedule, budget, staffing and deliverables for the project.

Asset Management Planning

Inventory Collection Standards and Forms will be developed for use by the data collection team. These documents will establish the criteria for inclusion of assets in the inventory and provide a hierarchy to facilitate grouping and analysis.

Asset Data Standards and Forms will be developed for use by the data collection team. These documents will establish the minimum data requirements for the various types of assets in order for reliable replacement cost estimates to be determined.

Task 2 Asset Inventory and Data Collection

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Asset Inventory

The team will identify assets at the various locations of the Bear Creek Facilities including the following:

- River Intake Pump Station
- Bear Creek Reservoir
- Bear Creek Dam
- Reservoir Raw Water Pump Station
- Water Treatment Facilities
- High Service Pump Station
- Administration & Laboratory Building
- Maintenance Building

Assets will initially be identified using the existing Computerized Maintenance Management System (CMMS) data and the original facility construction documents.

The inventory shall then be confirmed in the field. Additional assets, identified during this field verification, will be added to the inventory.

The types of assets to be included in the inventory may include the following:

- Plant Machinery and Equipment
- Building Systems
- Vehicles
- Heavy Equipment Vehicles
- Land Improvements
- Dam
- Reservoir
- Office Machinery and Equipment
- Computer Equipment
- Furniture and Fixtures

Collect Asset Data

Asset information will be recorded including a clear description, location, type and size of the asset. The primary sources of this information will be the CMMS system and the construction documents. This data will be confirmed in field.

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Additional detailed data will also be recorded if readily available. This data may include manufacturer, model, serial number, etc.

Additional field data collection will be provided for assets that do not have sufficient known data to facilitate estimating replacement cost.

Condition Assessment

Asset condition shall be recorded using a scale developed during asset management planning. The condition data may be used as a basis to adjust the estimate of remaining useful life for the asset.

No detailed risk or cost of failure analysis will be provided.

Asset Age

The age of the inventoried assets will be estimated using available records. The primary source for existing age data shall be the CMMS and the original construction documents. Equipment purchase history that has not been recorded in the CMMS will also be utilized to determine the age of assets.

Expected Useful Life (years)

An expected useful life will be assigned to each asset in the inventory. This expected useful life will be based upon published data established during asset management planning.

These values may be adjusted using readily available data from manufacturers, warranty information or condition assessment data.

Remaining Useful Life (years)

The remaining useful life of the assets will be calculated using the expected useful life and asset age data. This data will then be used to estimate the calendar year or years that each asset will need to be replaced during the entire analysis period.

Task 3 Estimate Replacement Cost

Estimated Replacement Cost

For each asset identified, an estimated replacement cost will be determined. This replacement cost estimate will be based upon readily available data from manufacturers, contractors,

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professional publications and operations staff knowledge. The estimated replacement cost will be based upon current value for a new asset.

One meeting is planned with the UOBWA Engineering Committee at the NEGRC offices to review the Asset Inventory and Data collected. The committee will review to confirm sufficient data is provided and may elect to reclassify, regroup or exclude asset inventory data from further analysis.

As an outcome of this meeting, the asset inventory and data may be updated prior to submission to NE for their use.

Task 4 Technical Memorandum Support

Technical Memorandum

Jacobs will coordinate with NE to produce a final Technical Memorandum (TM) to the UOBWA for this effort.

NE will be the primary author and owner of the TM, and Jacobs will provide asset data in support of this effort.

One meeting is planned with the UOBWA Board Of Directors at the NEGRC offices to review the final Technical Memorandum.

Assumptions and Exclusions

1. Only items with an anticipated useful life greater than 1 calendar year are included in this assessment.
2. Only items with a replacement cost greater than \$25,000 are included in this assessment.
3. The analysis period for this assessment is through calendar year 2048. It is assumed that all facility assets will be updated or replaced at that time.
4. Items that will require replacement multiple times during the analysis period defined above shall be identified for replacement each time until the analysis period ends.
5. The replacement costs are estimated to AACEI Class 3 for the purpose of developing a cost projection for the CARRF. AACEI defines the accuracy of Class 3 estimates to fall within the range of -10% to -20% on the low side to +10% to +30% on the high side.

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6. Replacement costs are current estimated cost of replacement, and do not reflect the actual cost that may be incurred at a future date when the asset is replaced.
7. Expected useful life for items is based upon published asset management data standards, the life span defined in the UOBWA Asset Management Policy, or professional experience and judgement of the Jacobs staff, in that order of priority.
8. A salvage value of \$0.00 is assumed for all assets at the end of their estimated useful life.

SCHEDULE

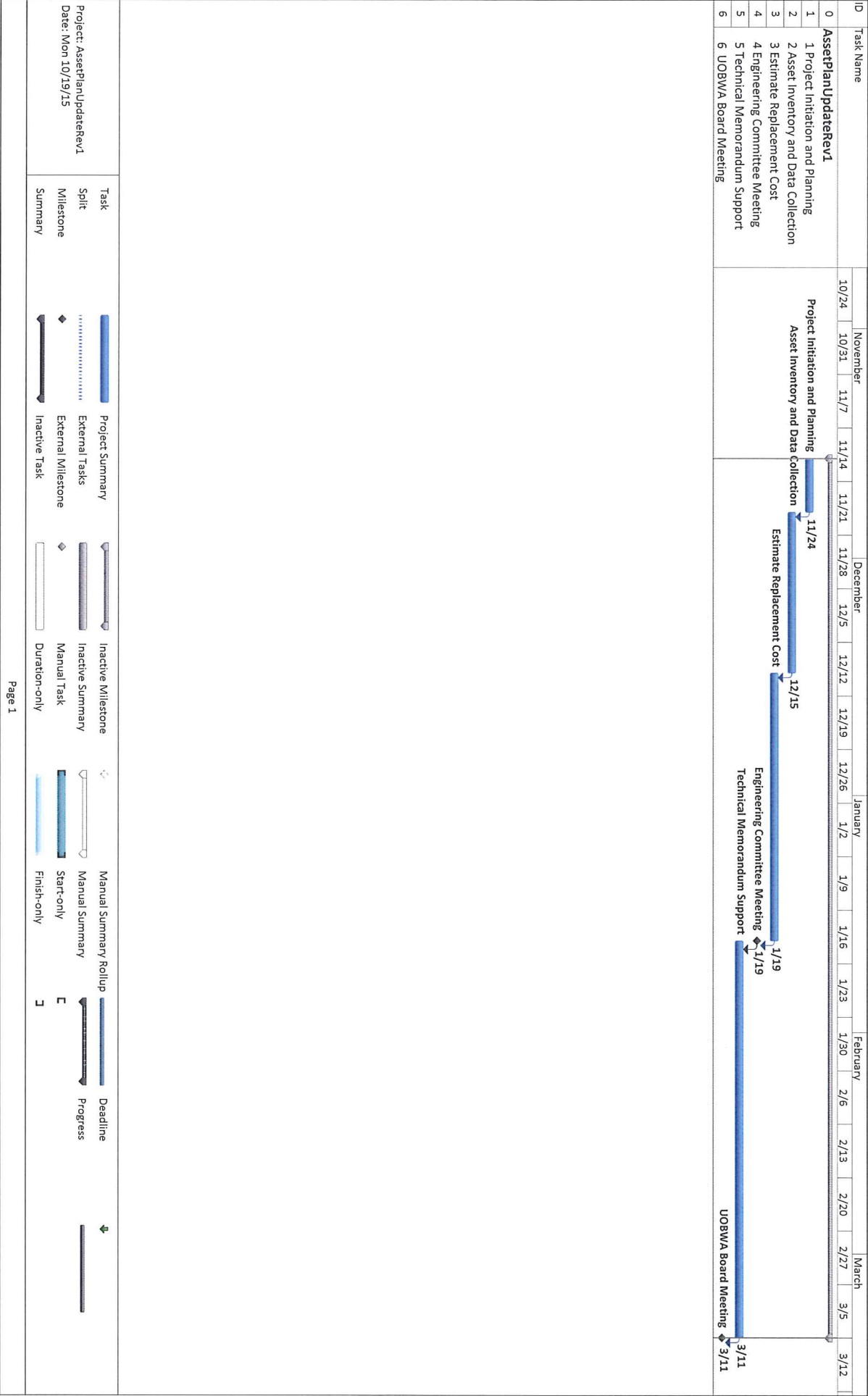
It is anticipated that this Scope Of Services will be approved at the November 18, 2015 meeting of the UOBWA Board Of Directors, and the Notice To Proceed will be issued within the following week.

Task 1 – 3 will be completed and the results provided prior to a review meeting with the UOBWA Engineering Committee scheduled in January of 2016.

It is anticipated that Task 5 will be completed and submitted for final approval prior to the UOBWA Board Of Directors meeting in March 2016.

COMPENSATION

The fee for performing the Scope Of Services described above is a Not To Exceed amount of \$38,000.



**Upper Oconee Basin Water Authority
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Hours Work Breakdown Structure**

		Budgeted Staff Hours						Project Budget			
Staff/Category	Brad Lanning	Diana Jackson	Sam Roberts	Elias Mageas	Jude Abella	Cristy Gallo	Total Hours	Labor	Direct Costs	Not To Exceed Total	
Tasks											
Project Management	15	0	0	0	0	0	15	\$2,700.00	\$300.00	\$3,000.00	
Project Initiation & Planning	15	1	2	5	2	10	25	\$4,500.00		\$4,500.00	
Asset Inventory	25			5	10	10	50	\$8,500.00		\$8,500.00	
Estimate Replacement Cost	2			8	45	45	100	\$18,000.00		\$18,000.00	
Technical Memo Support	20	1	2	2			25	\$4,000.00		\$4,000.00	
Totals	77	2	4	20	57	55	215	\$37,700.00	\$300.00	\$38,000.00	