

# **Procedure 1**

## **Engineering Manual User's Guide**

### **PART 1: ECUA Background**

The Emerald Coast Utilities Authority (ECUA) was originally created under the name Escambia County Utilities Authority in 1981 by an Act of the Florida Legislature to own, manage, finance, promote, improve and expand the water and wastewater systems of Escambia County and the City of Pensacola. ECUA's name was officially changed to the Emerald Coast Utilities Authority on June 29, 2004.

ECUA is a local government body, existing under the laws of the State of Florida, separate and distinct from the City of Pensacola, Escambia County, and the State of Florida. The powers of the ECUA are exercised by a five-member Board. Each member of the Board is elected in one of the five County electoral districts. ECUA is a 100% rate-driven utility and does not receive any of its revenue from local taxes.

Chapter 11 of the ECUA Code formally adopts this Engineering Manual (the Manual) in order to establish the engineering procedures, design standards, and technical specifications for the design and construction of ECUA water and wastewater systems.

### **PART 2: Permitting Authority**

Beginning on September 15, 1992, ECUA was granted permitting authority from the Department of Environmental Protection (FDEP) for water distribution mains 12" or less in diameter, gravity sewage collection systems 12" or less in diameter, sewage force mains 12" or less in diameter, and associated pump stations which will be connected to water and sewerage plants owned by ECUA. In 2014, the FDEP also granted ECUA permitting authority for low pressure sewer systems.

Division 6, Supporting Documents, contains a file containing documents related to ECUA's self-permitting authority.

### **PART 3: Manual Stewardship**

The ECUA Engineering Department is entrusted with the stewardship of the Manual with respect to organization, updates, and content. The Engineering Department strives to solicit input from all affected Manual users including but not limited to the consulting engineering community, the utility contracting industry, the utility suppliers industry, fellow regulatory agencies, multiple ECUA departments, and ECUA Engineering staff. While input is solicited and welcome, it is the Engineering Department's responsibility for the organization, updates, and final content of the Manual.

**PART 4: Manual Availability**

This Manual is available online at ECUA’s website: <http://www.ecua.fl.gov/>. It is not available from ECUA in printed format. Users are encouraged to print the Manual from the ECUA website if desired. Modifications to any section of the Manual are strictly prohibited unless otherwise approved by ECUA’s Director of Engineering. ECUA does not maintain a registry of Manual users. Users are advised to periodically review the Manual online in order to stay current with updates and/or other information.

**PART 5: Manual Updates**

Chapter 11 of the ECUA Code cites the Board adoption of the Manual, as amended. The Board has subsequently authorized the Executive Director to allow the ECUA Director of Engineering to amend the Manual periodically with minor updates, with the Board retaining the authority to approve major updates. Should a question arise as to an update being classified as minor or major, the Executive Director shall consult with the Board in order to make the appropriate determination.

The following table helps explain minor and major updates:

Update Type	Examples	Authority to Approve Updates	Update Intervals
Minor	Re-formatting, re-titling, additions or deletions, and/or content change of documents; product/material changes; code changes; new construction details; etc.	ECUA Director of Engineering	Periodic, with the intent to group updates as much as practical into quarterly, semi-annual, or annual updates
Major	Any updates that are considered to have major policy or cost implications	ECUA Board	Typically annually or greater, or on an as needed basis

Additional Notes:

- A document containing a listing of recent updates is maintained on the Manual website.
- This listing of updates will serve as public notification of changes to the Manual. Individual notifications of minor updates will not be made. Notifications of major updates will be made via mass contact, website notifications, and/or public notices.
- Submittal of design plans for Capital Improvement Projects, System Extensions, and Single Service Connections shall comply with the current Manual at time of submission as well as any Manual updates made prior to the design plans being approved by ECUA.

**PART 6: Manual Contents**

The Manual has six sections: Procedures, Design Standards, Technical Specifications, Detail Drawings, Forms, and Supporting Documents. The six sections are described as follows:

6.1 *Engineering Procedures* - Procedures are intended to assist commercial customers, developers, engineers, contractors and builders on their various interactions with the ECUA

Engineering Department. The procedures identify what information is required to be provided to the Engineering Department, how the Engineering Department will process the information, and the responses to be issued by the Engineering Department.

- 6.2 *Design Standards* - Standards are intended for use by engineers and others when designing plans for submittal to and review by the ECUA Engineering Department.
- 6.3 *Technical Specifications* - Specifications are supplied for use in construction of all water and wastewater improvements which will become the property and responsibility of the ECUA. The engineer's design shall conform to these specifications and the contractor shall construct the improvements according to these specifications.
- 6.4 *Detail Drawings* - Details are drawings depicting industry/ECUA accepted standards related to the construction of typical water and sewer infrastructure. These details are intended to match the content of the technical specifications and are considered a supplement to the technical specifications.
- 6.5 *Forms* - Forms are documents that are to be used by an array of parties that do business with ECUA.
- 6.6 *Supporting Documents* - Supporting documents are listed in this section for reference purposes only.

## **PART 7: Commonly Used Terms**

- 7.1 *Applicant* – the Owner (or Developer) desiring to connect new services to ECUA's system (i.e. SSC) or desiring to extend ECUA's water or sewer system (Extension) to serve the Applicant's property or project.
- 7.2 *Commercial* – any type of Applicant other than the owner of a single family home requesting service to said home.
- 7.3 *ECUA Engineering Manual (Manual)* – document used by ECUA to provide procedural, design, and construction requirements for work involving ECUA water and sewer infrastructure.
- 7.4 *Engineer of Record (EOR)* – Applicant's engineer tasked with the responsibility to design and submit reports and plans to and coordinate with ECUA on the approval of the Applicant's SSC or Extension request; shall be Professional Engineer licensed as such in the State of Florida.
- 7.5 *Force main* - a pressurized pipe used to transport sewer flow; typically connected to lift stations.
- 7.6 *Formal Submittal for Extension Projects* – **mandatory** submittal of a Formal Engineering Report, Engineering plans, etc that address the issues and design needs as determined from the Preliminary Submittal meeting; review time clock is started with complete submission.
- 7.7 *Lift station* – an underground storage tank (wetwell) equipped with pumps and other electrical equipment that acts as a receiving point where sewer flow is collected and then pumped into a force main that is connected to the sewer collection system.
- 7.8 *Mains* – water distribution piping, sewer collection piping, or sewer transmission piping; sometimes referred to as water and sewer lines.

- 7.9 *Preliminary Submittal for Extension Projects* – **mandatory** submittal of a Preliminary Engineering Report that highlights the project's background and water/sewer needs.
- 7.10 *Preliminary Submittal Meeting for Extension Projects* – **mandatory** meeting following the Preliminary Submittal for Extension Projects; meeting shall focus on the project's needs along with information regarding ECUA's water and sewer systems and applicable ECUA policies.
- 7.11 *Right-of-way (ROW)* – a publicly owned corridor that contains public streets, drainage, and utilities.
- 7.12 *Service* – typically smaller diameter water service lines that connect an ECUA water main to a water meter, fire service lines that connect an ECUA water main to a private fire line on private property, irrigation service lines that connect an ECUA water main to an irrigation meter, and sewer lines that connect an ECUA sewer main to a private sewer line on private property.

All service lines shall be located in the public ROW and shall be owned and maintained by ECUA with the exception of gravity sewer laterals (see ECUA Code for sewer lateral ownership and maintenance responsibilities) or as determined by ECUA.

- 7.13 *Single Service Connection (SSC)* – ECUA term used to describe a proposed single service connection to ECUA's water and/or sewer mains, with service lines being installed in a public ROW from the Applicant's property line to the ECUA main(s). Examples include 4" gravity sewer lateral, 6" fire line, 2" water service and meter, 1" irrigation service and meter.

All water and sewer installed on private property shall be privately owned and shall be reviewed, approved, and inspected by either City of Pensacola's or Escambia County's Building Inspections Department.

- 7.14 *SSC Application* – application with sketch and/or plans showing the requested service connections to ECUA's water and/or sewer systems.
- 7.15 *System* – a utility's assemblage of water mains and/or sewer mains as a whole.
- 7.16 *System Extension (Extension)* – ECUA term used to describe any project that requires new ECUA water mains (typically 4" and larger) and/or gravity sewer mains (typically 8" and larger) and/or sewer force mains (typically 4" and larger) and/or low pressure sewer force mains (typically 2" and 3") to be constructed in public ROW or in dedicated ECUA easement in order to serve the proposed project. Examples include:
- 7.16.1 Residential subdivisions (water and sewer systems shall be designed to ECUA standards and shall be accepted by ECUA for ownership and maintenance; private systems in residential subdivisions are not allowed).
- 7.16.2 Commercial subdivisions.
- 7.16.3 Project, which due to property location and lack of existing available ECUA infrastructure, can only be served with Applicant's financing and construction or required extensions to ECUA water/sewer mains.
- 7.16.4 Low-pressure sewer systems, typically designed for residential subdivisions.
- 7.16.5 Private lift stations for commercial customers, regardless of how connection to ECUA system is proposed.