

## Terri Daly

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**From:** Willie Whittlesey  
**Sent:** Thursday, June 6, 2019 1:17 PM  
**To:** jmaupin@nywd.org  
**Cc:** Curt Aikens; Terri Daly  
**Subject:** DRAFT SCOPE OF WORK for Forbestown Ditch to Pipeline Replacement Project

Jeff,

We've reviewed the "DRAFT SCOPE OF WORK for Forbestown Ditch to Pipeline Replacement Project" document you provided last Friday and have included our recommendations below. At this point we are hoping you can now schedule a two-part meeting. The first part should include NYWD, NorthStar Engineering, Gannett-Fleming (formerly SAGE), Curt and me where we will review the latest design, cost estimate and project description. The second part of the meeting can simply include you, Curt and me where we can discuss funding needs for the Project and the best way to move forward to obtain funding. I can work with you on Curt and my availability for this meeting and I'm hoping you can coordinate with NorthStar and Gannett-Flemming.

### Recommendations for the "DRAFT SCOPE OF WORK for Forbestown Ditch to Pipeline Replacement Project" document:

#### Section 1 – Purpose and Scope:

- Summarize how many treated and raw water customers are currently served by the existing conveyance system.
- Summarize the number of treated and raw water customers that are anticipated at final build-out of all parcels served (total future anticipated customers). Purpose of this is to demonstrate the need for the 24cfs demand design criteria. A summary of design demand for each type of service (raw water vs. treated) would also be beneficial.
- Add a description of the dis-advantaged communities that are served by the conveyance system.

#### Section 2 – Background

- Add a description of the long-term source of water (ie. the contract with SFWP).
- Add an explanation of the sources of bacteria and aluminum. (We assume bacteria is from failed septic systems, but aluminum is an odd contaminant and leads the reader to question the source. A brief explanation or even speculation would be beneficial).
- Add a summary of the need for 24cfs capacity. (ie. "a capacity of 24cfs is needed to serve xx raw water and xx treated water customers in 20xx at total build out of the parcels served by this conveyance system")
- Add a description of all of the alternatives considered. Later portions of the report include descriptions of the geotech alternatives, pipe material alternatives and construction method alternatives, but an overall summary of alternatives for the project should be added and address the following: No action alternative, relining the existing canal with shotcrete or similar material, installing a smaller diameter pipeline, and any other alternatives considered. A summary of why these alternatives would not meet the purpose of the project should be included with each alternative described. The intent here is to show that a range of alternatives were considered and that the chosen alternative is in-fact the best option.

#### Section 3 – Preliminary Basis of Design

- Clarify that two pipe sizes are proposed for installation (36 and 42 inch pipes) and the reasons why different pipe sizes are installed in different locations. (later on in the report both 36 and 42 inch pipes are described, but

it is not clear where and why different pipe sizes are proposed). As may be needed, revise the 36 and 42 inch pipe discrepancy in the remainder of the report.

#### Section 4.2.3 – Recommendation

- Under the Flammability section – Add a summary of the cost to benefit analysis of installing a non-flammable pipe (we assume concrete) vs. the HDPE pipe material.

#### Section 4.3.1 - Upland Tributary Drainage

- Clarify the difference between “tributary drainage” described in section 4.3 and “upland tributary drainage” described in 4.3.1. Are these the same thing? The difference between the two is not clear to the reader.

Please let me know if you have any questions and feel free to call me anytime.

Thanks,

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