Whitney Laboratory for Marine Bioscience

Stormwater Management Report

February 2023

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I. Introduction

The Whitney Laboratory is a University of Florida owned research center in the Town of Marineland in between the Matanzas river and the Atlantic Ocean. The site location is shown in **Attachment A: Project Location Map**. The research facility currently consists of an office building 2 laboratory buildings, the Center for Marine Science, and several cottages for staff and researchers. This project proposes to remove the existing building on the north side of the site and replace it with a new laboratory and sea turtle research facility.

This project is located within a FEMA Flood Zone AE with a designated base flood elevation of 6'. The Finished Floor is required to be a minimum of 1' above the base flood elevation. A finished floor of 8.33 is proposed for this project. The FEMA flood map is included in this report as **Attachment B: Fema FIRMette Map.**

II. Drainage Design Criteria

A. St. Johns Water Management District

Stormwater Quality: The stormwater management system must provide Water Quality Treatment Volume (WQTV) for the first one half-inch of stormwater runoff or 1.25 inches of runoff from the impervious area, whichever is greater. Due to the discharge into an outstanding Florida waterbody, an additional 50% of the total treatment volume shall be required. The WQTV must be recovered within 72 hours following the design storm event.

There are wetlands surrounding the site. The SJRWMD requires that a minimum 15' and average 25' buffer is maintained around the site. These buffers shall remain under the permitted design, unless additional measures are needed for protection of wetlands used by bald eagles for nesting, or listed species for nesting, denning, or critically important feeding habitat. The wetland limits and buffers are provided on the survey and in the plans for reference.

B. Town of Marineland

The Town of Marineland is the local authority having jurisdiction over the Whitney Laboratory site. The stormwater management regulations of the town of marineland are put forth in section 3.06.00 of their land development code and summarized below.

A. The applicant shall demonstrate compliance with the rules of the St Johns River Water Management District governing the discharge of stormwater from the site.
B. Additionally, the applicant shall demonstrate that the post-development load for total nitrogen and total phosphorus discharged from the project area will not exceed the undeveloped natural load for total nitrogen and total phosphorus discharged from the project area.

C. If compliance with this requirement cannot be met through compliance with the rules of the SJRWMD, then the applicant shall provide additional stormwater treatment.
D. In providing any additional stormwater treatment necessary, the applicant shall utilize low impact development practices and technologies, including but not limited to rain gardens, green roofs, exfiltration systems, bioretention swales, cisterns, and pervious pavement, which may be interconnected in treatment trains flowing from one low impact development practice or technology into the next to increase nutrient removal efficiencies.
E. If low impact development practices and technologies are inadequate or infeasible, the applicant may meet this requirement by increasing capacity in the centralized stormwater treatment system.
F. The Town of Marineland requires a 50' wetland buffer with some uses as defined in the comprehensive plan, allowable within a 25' buffer.

C. National Pollutant Discharge Elimination System (NPDES)

Chapter 62-621.300(4) FAC requires that a Stormwater Pollution Prevention Plan (SWPPP) must be developed for issuance of a Generic Permit for Stormwater Discharge from Large and Small Construction Activities in order to be in conformance with the Florida Department of Environmental Protection (FDEP) regulation of point source discharges of stormwater from construction sites, as defined by the NPDES.

As outlined under the above mentioned rule, FDEP requires construction Activities spanning one (1) acre or more to comply with the regulations that limit point source discharge of stormwater runoff from the construction site. A Notice of Intent (NOI) must be submitted to FDEP prior to construction. The SWPPP must be included within the plan set to demonstrate the means by which the guidelines of the NPDES will be met. The project drawing set includes an SWPPP for the project, and the contractor will file for the NOI prior to beginning construction activities.

III. Design Methodology

Determination of the stormwater runoff conditions for both pre and post-development conditions utilizes the NRCS curve number method. This method calculates runoff curve numbers based on the soil characteristics and the land use cover conditions for the contributing drainage area. Rainfall hydrographs are generated based on accepted rainfall volumes for the local area, rainfall volume over time, and storm event distributions accepted by the local regulatory agencies.

JBPro utilizes the stormwater modeling program ICPR (version 3) to perform the stormwater basin flood routings. The program uses the runoff conditions and the basin design parameters to route the required storm events. The program is used to determine the peak flood stages and compare pre- and post-development conditions to determine the critical storm event. The critical storm event is the controlling storm event which dictates the final basin design. In addition, the PercPak feature of ICPR is used to analyze groundwater mounding and soil infiltration effects for each of the design storms in order to determine the drawdown times for

both water quantity and quality calculations. ICPR is an accepted analysis program by the regulatory agencies having jurisdiction.

Nutrient removal efficiencies were estimated using BMP Trains V8.7, which is a downloadable software model based off the Best Management Practice (BMP) studies conducted in recent years within the state of Florida. First, the desired removal efficiency is specified for both Nitrogen and Phosphorus comparing pre and post development conditions. Next, details of the provided design are input into the model spreadsheet. These details vary from project to project but can include items such as LID treatment volume, retention treatment volume, LID and retention watershed characteristics, predevelopment site characteristics, and the configuration of each watershed's BMP. Once all the necessary information is entered into BMPTRAINS a performance summary can be viewed to see if treatment goals are obtained.

IV. Geotechnical Investigation

Universal Engineering Services (UES). conducted a geotechnical engineering investigation for the proposed stormwater management system on 06/03/2022. A copy of this report is provided in **Attachment C**. Soil borings taken throughout the site generally encountered loose to medium dense fine sand (SP) and fine sand with silt (SP-SM) extending to 4.5 to 7.25 feet and underlain by very loose to loose clayey fine sand (SC) extending to 8.5 to 11.5 feet. Loose to medium dense fine sand (SP), fine sand with silt (SP-SM) and fine sand with clay (SP-SC) with varying amounts of shell fragments was then encountered extending to the maximum termination depth of 40 feet below the existing grade.

The groundwater level at the boring locations was found to be between depths of 2.6 to 5.4 feet below existing grade. For the purposes of the stormwater model used, an average groundwater depth of 4.5 feet below existing grade was used.

V. Pre-Development Drainage Design

A. Existing Conditions

The existing UF – Marineland Campus has undergone several projects and renovations over the past 50 years. The original lab building and seawater pond in the center of the site was designed and constructed in 1972. Since then, the seawater pond has been expanded and several other buildings have been permitted and constructed.

The Center for Marine Sciences was permitted under ERP Permit 95980 – 1 in 2005 to construct a new parking facility, water quality treatment pond, and building on the west side of the UF-Marineland campus. An additional project was permitted under ERP Permit 152448 – 1 and 152448 – 2 in 2018. These permits allowed for the construction of new cottage style homes for graduate students and professors working on the campus as well as additional water quality

treatment ponds. Each portion of the UF-Marineland campus has designated a separate disconnected drainage area and treatment pond.

The existing laboratory, portable units, and several sheds and concrete pads on the north side of the campus will be demolished as a part of this project. There are not currently any stormwater treatment ponds that serve this existing building. All stormwater either discharges directly into the Matanzas River or towards A1A.

The existing laboratory buildings in the center of the site and on the north side of the site utilize a sea-water pond which will be impacted as a part of this project. The marine research facilities pump water from the Atlantic Ocean to an existing tank on the site. The seawater is then distributed to the laboratory buildings, and then discharged into the seawater pond. The elevation of this seawater pond is controlled by an existing PVC discharge structure which discharges to the Matanzas river. This project will impact the orientation of the pond, however will not impact the overflow structure, and will minimally impact the west edge of the pond.

VI. Post-Development Drainage Design

A. Stormwater Management Design

The proposed project will propose a total of 0.81 acres of impervious area across a drainage area of 1.29 acres. This project will construct 2 proposed treatment ponds and split the proposed drainage area accordingly. All roof-drains for the proposed building, as well as the northern portion of the roadway will drain towards Treatment Pond #1. The southern portion of the site will drain towards Treatment Pond #2. This is shown in **Attachment D – Drainage Area Map.** The stage storage of the two treatment ponds is shown in **Attachment E – Drainage Design Calculations** and summarized in Tables 1 and 2 below.

Table 1: Treatment Pond #1 Stage - Storage

Stage	Surface Area (SF)	Surface Area (AC)	Volume (CF)	Volume (AC-FT)
4.5	1,233	0.028	0	0.000
5.0	1,653	0.038	722	0.017
6.0	2,505	0.058	2,801	0.064
6.5	2,957	0.058	4,053	0.093

Table 2: Treatment Pond #2 Stage - Storage

Stage	Surface Area (SF)	Surface Area (AC)	Voluame (CF)	Volume (AC-FT)
3.0	734	0.017	0	0.000
4.0	1,504	0.035	1,119	0.026
4.5	1,811	0.042	1,948	0.045

B. Water Quality Treatment Volume

In accordance with SJRWMD review precedent, the water quality treatment volume was routed using ICPR as a slug load to determine the WQTV recovery time. The full routing of the water quality treatment volume is provided in **Attachment F: WQTV Inputs and Results**. A summary of the water quality treatment volume calculations is shown in Table 2 below.

Table 3: Water Quality Treatment Calculations

Drainage Area (SF) =	31,394	24,803
Impervious Area (SF) =	25,878	9,506
0.5" Drainage Area Runoff (CF) =	1,308	1,033
1.25" Impervious Area Runoff (CF) =	2,696	990
WQTV Required (Add'l 50%)	4,043	1,550
WQTV Provided	4,053	1,948
Stage of WQTV	6.49	4.24
Basin 1 Recovery Time (Hrs)	49.42	16.01

C. Seawater Pond

As previously mentioned, there is an existing seawater pond on site in front of the proposed building to be demolished. Due to the desire to shift the proposed building footprint further from the wetland boundary, the existing seawater pond will be altered. In an effort to preserve natural conditions to the best extent, the west edge of the pond will generally remain unaffected. The other boundaries of the pond will be altered to ensure that the pond remains with the same capacity. The discharge structure will not be altered as a part of this project. Several of the existing seawater discharges from the labs will be removed and replaced as a part of the re-shaping of the seawater pond. This pond is not designed to take any runoff from the site and is not used to treat stormwater.

D. Conclusion

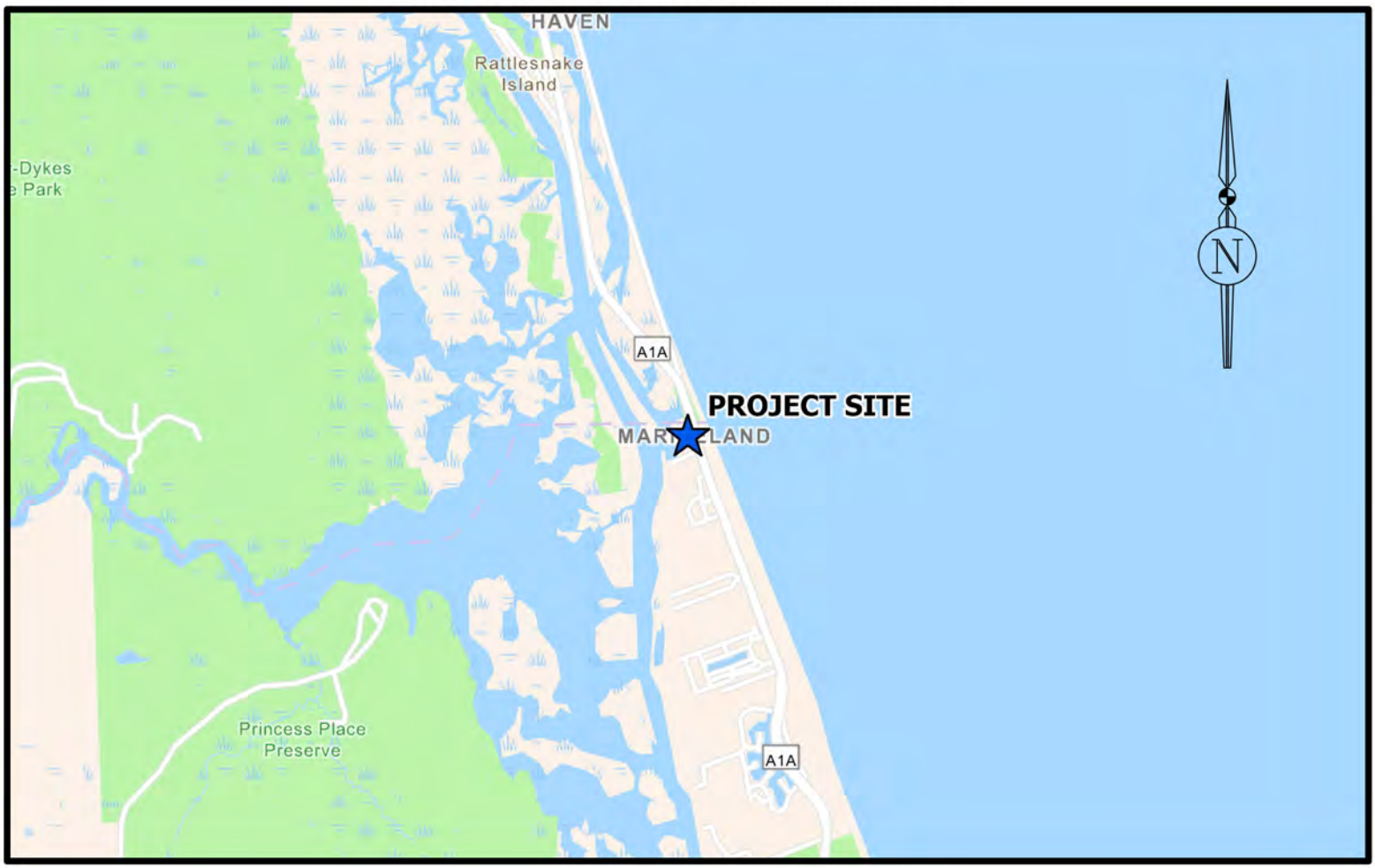
Based on the data provided in this report, the Whitney Laboratory for Marine Sciences project has been designed to meet all standards of the SJRWMD and the Town of Marineland.

Attachment A

Site Location Map

(Exhibit on Next Page)

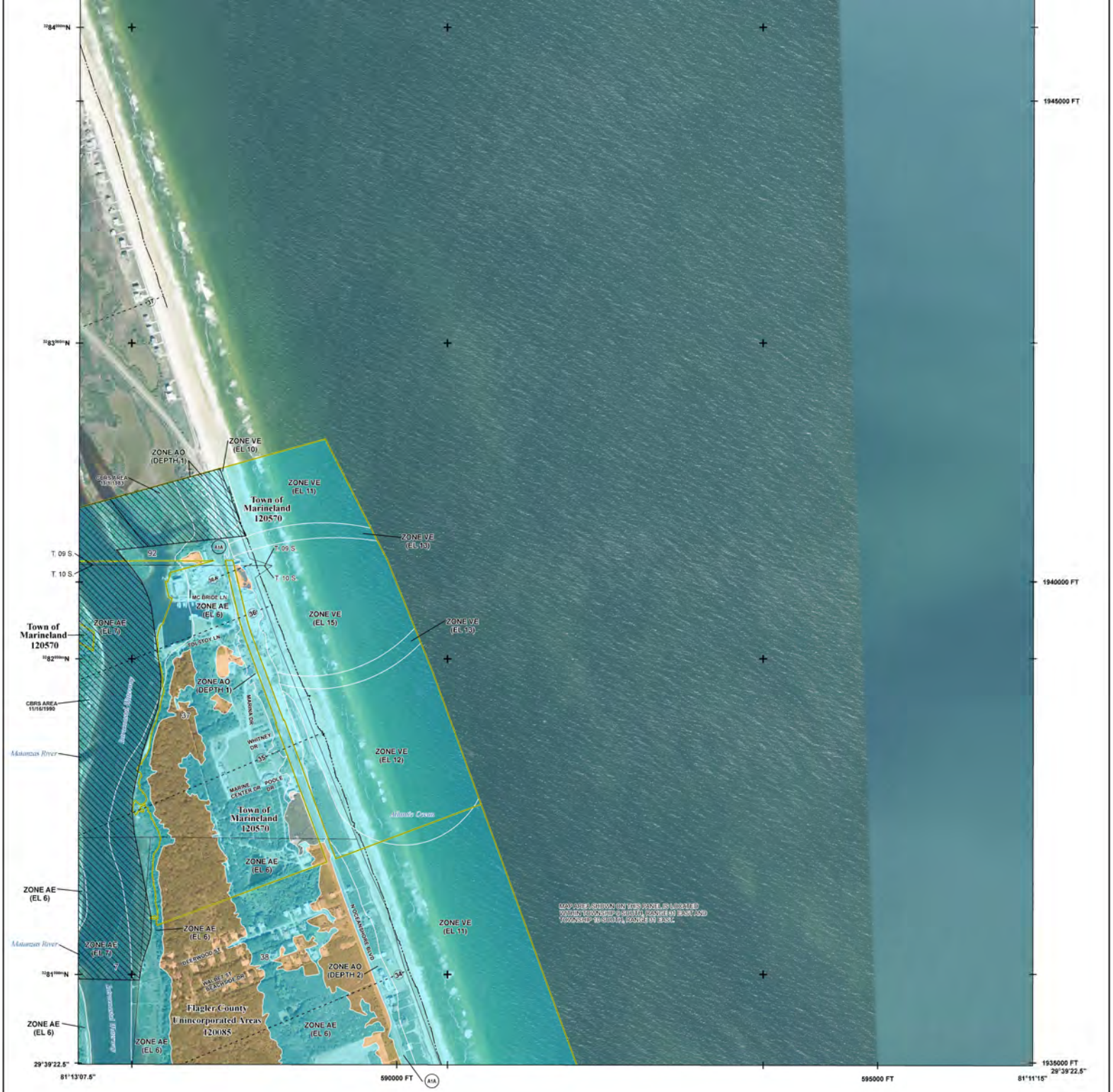
LOCATION MAP



Attachment B

FEMA Floodplain Map

(Exhibit on Next Page)



FLOOD HAZARD INFORMATION

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

THE INFORMATION DEPICTED ON THIS MAP AND SUPPORTING DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT

HTTP://MSC.FEMA.GOV

SPECIAL FLOOD HAZARD AREAS	Without Base Flood Elevation (BFE) *Zone A, V, A99*
	With BFE or Depth *Zone AE, AO, AH, VE, AR*
	Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD	0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
	Future Conditions 1% Annual Chance Flood Hazard *Zone X*
	Area with Reduced Flood Risk due to Levee See Notes *Zone X*
	NO SCREEN Area of Minimal Flood Hazard *Zone X*
OTHER AREAS	Area of Undetermined Flood Hazard *Zone D*
GENERAL STRUCTURES	Channel, Culvert, or Storm Sewer
	Levee, Dike, or Floodwall
	E 18.2 / 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation

NOTES TO USERS

For information and questions about this Flood Insurance Rate Map (FIRM), available products associated with this FIRM, including historic versions, the current map date for each FIRM panel, how to order products, or the National Flood Insurance Program (NFIP) in general, please call the FEMA Map Information eXchange at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA Flood Map Service Center website at http://msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website.

Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM index. These may be ordered directly from the Flood Map Service Center at the number listed above.

For community and countywide map dates refer to the Flood Insurance Study Report for this jurisdiction.

To determine if flood insurance is available in this community, contact your Insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

Base map information shown on this FIRM was provided in digital format by the Flagler County GIS Department, dated 2015; the U.S. Census Bureau, dated 2015; the U.S. Fish and Wildlife Service, dated 2015; the Florida Resources and Environmental Analysis Center, dated 2003; the U.S. Department of Agriculture Farm Service Agency, dated 2013; and FEMA, dated 2006.

COASTAL BARRIER RESOURCES SYSTEM (CBRS)

This map includes approximate boundaries of the CBRS for informational purposes only. Flood insurance is not available within CBRS areas for structures that are newly built or substantially improved on or after the date(s) indicated on the map. For more information see http://www.fws.gov/cbra, the FIS Report, or call the U.S. Fish and Wildlife Service Customer Service Center at 1-800-344-WILD.

CBRS Area

Otherwise Protected Area

SCALE

N

Map Projection:
State Plane Transverse Mercator, Florida East Zone 0901;
North American Datum 1983; Western Hemisphere; Vertical Datum: NAVD 88

1 inch = 500 feet 1:6,000

0 250 500 750 1,000 2,000 feet

0 125 250 500 meters

PANEL LOCATOR

FEMA

National Flood Insurance Program

NATIONAL FLOOD INSURANCE PROGRAM

FLOOD INSURANCE RATE MAP

FLAGLER COUNTY, FLORIDA

and Incorporated Areas

PANEL 37 OF 345

FEMA

Panel Contains:

COMMUNITY	NUMBER	PANEL	SUFFIX
FLAGLER COUNTY	120085	0037	E
MARINELAND, TOWN OF	120570	0037	E

Attachment C

Geotechnical Report

(Exhibit on Next Page)

UNIVERSAL
ENGINEERING SCIENCES

REPORT OF A
GEOTECHNICAL EXPLORATION

Whitney Lab Research Village
Proposed Research Lab

Marineland, Florida

June 3, 2022

PROJECT NO. 0930.2200087.0000
REPORT NO. 1957355

Prepared for:

University of Florida
232 Stadium Drive
P.O. Box 115050
Gainesville, Florida 32611

Prepared by:

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June 3, 2022

University of Florida
232 Stadium Drive
P.O. Box 115050
Gainesville, Florida 32611

Attention: Mr. David Wood,

Reference: **REPORT OF A GEOTECHNICAL EXPLORATION**
Whitney Lab Research Village - Proposed Research Lab
Marineland, Florida
UES Project No. 0930.2200087.0000 and Report No. 1957355

Dear Mr. Wood:

Universal Engineering Sciences, Inc. has completed a subsurface exploration at the site of the proposed project located in Jacksonville, Florida. These services were provided in general accordance with our Proposal No. 1945216, dated April 3, 2022. This report contains the results of our exploration, an engineering evaluation with respect to the project characteristics described to us, and recommendations for groundwater considerations, foundation design, fill suitability and site preparation. A summary of our findings is as follows:

- The borings generally encountered loose to medium dense fine sand (SP) and fine sand with silt (SP-SM) extending to 4.5 to 7.25 feet and underlain by very loose to loose clayey fine sand (SC) extending to 8.5 to 11.5 feet. Loose to medium dense fine sand (SP), fine sand with silt (SP-SM) and fine sand with clay (SP-SC) with varying amounts of shell fragments was then encountered extending to the maximum termination depth of 40 feet below the existing grade. As an exception clayey sand (SC) was encountered at boring B-1 at depths of 32.5 to 37.5 feet below the existing grade.

- We measured the groundwater level at the initial boring locations between depths of 2.6 to 5.4 feet below existing grade. We anticipate the seasonal high groundwater levels will be encountered approximately 1.5 feet above the measured levels.

- Assuming the building area will be constructed in accordance with our Site Preparation Recommendations, in order to support the structure on shallow foundations, specialized site preparation techniques, such as vibro-replacement (i.e. stone columns) are recommended beneath the foundation areas to reduce anticipated total and differential settlements to tolerable magnitudes (i.e., less than 1 inch). Vibro-replacement is a method of soil improvement which results in reinforcement of the soil mass such that the

structure can be supported on shallow foundations. Typically, the use of vibro-replacement can result in allowable foundation bearing pressures on the order of 4,000 to 6,000 psf. Generally, the specialty contractor provides a foundation design that includes foundation bearing pressure and layout of stone column elements. This design should then be reviewed by Universal Engineering to verify conformance to our recommendations.

- **We have anticipated that some areas of the site may require up to 2 to 3 feet of fill to achieve the proposed finish floor elevations for portions of the site. If more than two feet of fill are placed on the site this could result in excessive settlements of the very loose to loose clayey sands encountered. Thus, if fill depths exceed 2 feet, we recommend a waiting period of three weeks such that estimated post-construction slab settlements will be within tolerable magnitudes (i.e. one inch or less) after completion of structural fill placement.**

- We recommend only normal, good practice site preparation techniques to prepare the existing subgrade to support the proposed structure. These procedures include demolition and removal of existing pavements, utilities, stripping the site of any vegetation and topsoil, compacting the subgrade, and placing necessary fill or backfill to grade with engineered fill, a waiting period if warranted, soil improvement using a vibro-replacement or similar technique as warranted.

We trust this report meets yours needs and addresses the geotechnical issues associated with the proposed construction. We appreciate the opportunity to have worked with you on this project and look forward to a continued association. Please do not hesitate to contact us if you should have any questions, or if we may further assist you as your plans proceed.

Respectfully submitted,

UNIVERSAL ENGINEERING SCIENCES, INC.
Certificate of Authorization No. 549

Stephen R. Weaver, P.E.
Geotechnical Services Manager
FL P.E. Number 37389

Jake D. Cochran, P.E.
Senior Geotechnical Engineer
FL P.E. Number 90493

TABLE OF CONTENTS

1.0 INTRODUCTION

In this report, we present the results of the subsurface exploration of the site for the proposed project located in Marineland, Florida. We have divided this report into the following sections:

- SCOPE OF SERVICES - Defines what we did
- FINDINGS - Describes what we encountered
- RECOMMENDATIONS - Describes what we encourage you to do
- LIMITATIONS - Describes the restrictions inherent in this report
- APPENDICES - Presents support materials referenced in this report

2.0 SCOPE OF SERVICES

2.1 PROJECT DESCRIPTION

Project information was provided to us in recent correspondence with you. We were provided with aerial photos of the site showing the requested boring locations and existing site features.

We understand that the proposed construction will consist of a new two to three-story research lab facility. Existing construction at the site will be demolished. We understand a post and beam/slab system is anticipated to implemented for the proposed structure and maximum column loads will be on the order of 900 kips. Detailed grading information has not been provided; however, we understand the finished floor elevation will be +7.5 feet and we have assumed the maximum elevating fill heights will not exceed 2 to 3 feet.

We note that since the applicability of geotechnical recommendations is very dependent upon project characteristics, most specifically: improvement locations, grade alterations, and actual structural loads applied, UES must review the preliminary and final site and grading plans, and structural design loads to validate all recommendations rendered herein. Without such review our recommendations should not be relied upon for final design or construction of any site improvements.

2.2 PURPOSE

The purposes of this exploration were:

- to explore the general subsurface conditions at the site for the proposed construction;
- to interpret and evaluate the subsurface conditions with respect to the proposed construction; and
- to provide geotechnical engineering recommendations for groundwater considerations, foundation design, and site preparation.

This report presents an evaluation of site conditions on the basis of traditional geotechnical procedures for site characterization. The recovered samples were not examined, either visually or analytically, for chemical composition or environmental hazards. Universal Engineering Sciences would be pleased to perform these services, if you desire.

Our exploration was confined to the zone of soil likely to be stressed by the proposed construction. Our work did not address the potential for surface expression of deep geological conditions. This evaluation requires a more extensive range of field services than performed in this study. We will be pleased to conduct an investigation to evaluate the probable effect of the regional geology upon the proposed construction, if you desire.

2.3 FIELD EXPLORATION

The field exploration was performed on May 2, 2022. The approximate boring locations are shown on the attached Boring Location Plan in Appendix A. The approximate boring locations were determined in the field by our personnel using a hand-held GPS unit, and should be considered accurate only to the degree implied by the method of measurement used. Samples of the soils encountered will be held in our laboratory for your inspection for 60 days unless we are notified otherwise.

2.3.1 SPT Borings

To explore the subsurface conditions within the area of the proposed building, we located and drilled three (3) Standard Penetration test borings to depths of 40 feet in general accordance with the methodology outlined in ASTM D 1586. A summary of this field procedure is included in Appendix A. Split-spoon soil samples recovered during performance of the boring were visually classified in the field and representative portions of the samples were transported to our laboratory for further evaluation.

2.4 LABORATORY TESTING

Representative soil samples obtained during our field exploration were returned to our office and classified by a geotechnical engineer. The samples were visually classified in general accordance with ASTM D 2488 (Unified Soil Classification System).

Five (5) fines content tests, five (5) moisture content tests and one (1) Atterberg limits tests were conducted in the laboratory on representative soil samples obtained from the borings. These tests were performed to aid in classifying the soils and to help quantify and correlate engineering properties. The results of these tests are presented on the Boring Logs in Appendix A. A brief description of the laboratory procedures used is also provided in Appendix A. The consolidation test results are presented in Appendix A.

3.0 FINDINGS

3.1 SOIL SURVEY

Based on the Soil Survey data for Flagler and St. Johns County, Florida, as prepared by the US Department of Agriculture Soil Conservation Service, the predominant predevelopment soil types at the site are identified as Pomello (15), Pellicer (24) and Satellite (29). A summary of characteristics of these soil series were obtained from the Soil Survey and is included in Table 1.

TABLE 1
Summary of Soil Survey Information

Soil Type	Constituents		Hydrologic Group	Natural Drainage	Soil Permeability (Inches/Hr)		Seasonal High Water Table (ft)
Pomello (15)	0-80"	Fine sand	A	Moderately Well Drained	0-41" 41-66" 66-80"	> 20 2.0 – 6.0 6.0 – 20	2.0 – 3.5
Pellicer (24)	0-10" 10-70" 70-80"	Silty clay loam Sandy clay, clay loam, clay Fine sand, loamy fine sand, fine sandy loam	D	Very Poorly Drained	0-10" 10-70" 70-80"	0.06 – 0.2 <0.06 6.0 - 20	0 – 0.5
Satellite (29)	0-6" 6-80"	Fine sand Coarse sand, sand, fine sand	A	Somewhat Poorly Drained	0-6" 6-80"	>20 >20	1.0 – 3.5

3.2 SURFACE CONDITIONS

The site of the proposed construction is located at the Whitney Research Facility in Marineland, Florida. The site is developed with existing buildings, associated pavement areas, and landscape areas with maintained grass. Visually, the site is relatively level with a slight slope down to the north and west toward the marsh for the Intercostal waterway which is located to the west of the site. There is an existing pond located on the site south of the existing building.

3.3 SUBSURFACE CONDITIONS

3.3.1 Soil Conditions

The boring locations and detailed subsurface conditions are illustrated in Appendix A: Boring Location Plan, Soil Profiles, and Boring Logs. It should be noted that soil conditions will vary away from and between boring locations. The classifications and descriptions shown on the logs are generally based upon visual characterizations of the recovered soil samples and a limited number of laboratory tests. Also, see Appendix A: Key to Boring Logs, for further explanation of the symbols and placement of data on the Boring Logs. Table 2: General Soil Profile, summarizes the soil conditions encountered.

TABLE 2
General Soil Profile

Typical depth (ft)		Soil Descriptions
From	To	
0	4.5 to 7.25	Loose to medium dense fine sand (SP) and fine sand with silt (SP-SM)
4.5 to 7.25	8.5 to 11.5	Very loose to loose clayey fine sand (SC)
8.5 to 11.5	40*	Loose to medium dense fine sand (SP), fine sand with silt (SP-SM) and fine sand with clay (SP-SC) with varying amounts of shell fragments

* Termination Depth of Deepest Borings
( ) Indicates Unified Soil Classification

As an exception clayey sand (SC) was encountered at boring B-1 at depths of 32.5 to 37.5 feet below the existing grade.

We measured the groundwater level at the initial boring locations between depths of 2.6 to 5.4 feet below existing grade. The variation in groundwater depth is likely due in part to topography differences and other factors. It should be anticipated the groundwater level will fluctuate due to topography, seasonal climatic variations, surface water runoff patterns, construction operations, and other interrelated factors.

4.0 RECOMMENDATIONS

4.1 GENERAL

In this section of the report, we present our detailed recommendations for groundwater control, building foundation, site preparation, and construction related services. The following recommendations are made based upon a review of the attached soil test data, our understanding of the proposed construction, and experience with similar projects and subsurface conditions. We recommend that we be provided the opportunity to review the project plans and specifications to confirm that our recommendations have been properly interpreted and implemented. If the structural loadings or the building locations change significantly from those discussed previously, we request the opportunity to review and possibly amend our recommendations with respect to those changes. The discovery of any subsurface conditions during construction which deviate from those encountered in the borings should be reported to us immediately for observation, evaluation and recommendations.

In order to provide shallow foundation support for the proposed structure, specialized site preparation techniques, such as vibro-replacement (i.e., stone columns) beneath foundation areas, would be necessary in order to reduce anticipated total and differential settlements to tolerable magnitudes. With vibro-replacement, allowable shallow foundation bearing capacities in the order of 4,000 to 6,000 psf could be anticipated. Typically, the specialty contractor will provide a foundation design and specifications, which should be reviewed by Universal Engineering for

evaluation. **Due to the vibrations that could results from the vibro-replacement technique which could potentially impact nearby structures, the specialty contractor should determine the distance from existing structures to any vibro-replacement installation.**

The following recommendations are based upon the assumption that the site preparation techniques discussed in this report will be fully implemented and that shallow foundations will be used to support the proposed structure. These recommendations should be considered preliminary in nature and are subject to review and revision pending the completion of supplemental subsurface exploration and laboratory testing.

4.2 GROUNDWATER CONSIDERATIONS

The groundwater table will fluctuate seasonally depending upon local rainfall. The rainy season in Northeast Florida is normally between June and September. Based upon our review of U.S.G.S. data, Flagler and St. Johns County Soils Survey's, and regional hydrogeology, it is our opinion the seasonal high groundwater at the site will generally be approximately 1.5 feet above the measured levels.

Note, it is possible the estimated seasonal high groundwater levels will temporarily exceed these estimated levels during any given year in the future. Should impediments to surface water drainage exist on the site, or should rainfall intensity and duration, or total rainfall quantities exceed the normally anticipated rainfall quantities, groundwater levels may exceed our seasonal high estimates. We recommend positive drainage be established and maintained on the site during construction. We further recommend permanent measures be constructed to maintain positive drainage from the site throughout the life of the project. We recommend all foundation and pavement grade designs be based on the seasonal high groundwater conditions.

4.3 SHALLOW FOUNDATIONS

Based on the results of our exploration, we consider the subsurface conditions at the site adaptable for support of the proposed structure when constructed on a properly designed conventional shallow foundation system. **In order to support the structure on shallow foundations, specialized site preparation techniques such as vibro-replacement (i.e., stone columns) are recommended.** Provided the site preparation and earthwork construction recommendations outlined in Section 4.4 of this report are performed, the following parameters may be used for foundation design.

4.3.1 Bearing Pressure

The use of vibro-replacement can often result in increased allowable soil bearing pressures, typically in the order of 4,000 to 6,000 psf. The specialty contractor will typically provide a foundation design and specifications using these procedures. It is recommended the design and specifications be reviewed by Universal to confirm that they comply with our recommendations.

4.3.2 Foundation Size

The minimum widths recommended for any isolated column footings and continuous wall footings are 24 inches and 18 inches, respectively. Even though the maximum allowable soil bearing pressure may not be achieved, these width recommendations should control the minimum size of the foundations.

4.3.3 Bearing Depth

The exterior foundations should bear at a depth of at least 18 inches below the finished exterior grades and the interior foundations should bear at a depth of at least 12 inches below the finish floor elevation to provide confinement to the bearing level soils. It is recommended that stormwater be diverted away from the building exteriors to reduce the possibility of erosion beneath the exterior footings.

4.3.4 Bearing Material

The foundations may bear in either the compacted suitable natural soils or compacted structural fill. The bearing level soils, after compaction, should exhibit densities equivalent to at least 95 percent of the Modified Proctor maximum dry density (ASTM D 1557) to a depth of at least two feet below the foundation bearing level.

4.3.5 Settlement Estimates

Post-construction settlements of the structure will be influenced by several interrelated factors, such as (1) subsurface stratification and strength/compressibility characteristics; (2) footing size, bearing level, applied loads, and resulting bearing pressures beneath the foundations; and (3) site preparation and earthwork construction techniques used by the contractor. Our settlement estimates for the structure are based on the use of site preparation/earthwork construction techniques as recommended in Section 4.4 of this report including soil improvement using vibro-replacement procedures. Any deviation from these recommendations could result in an increase in the estimated post-construction settlements of the structure.

Using the recommended maximum bearing pressure, the assumed maximum structural loads, the field data which we have correlated to geotechnical strength and compressibility characteristics of the subsurface soils, and based on performing deep soil improvements using stone columns or rigid inclusions, we estimate that total settlements of the structure could be on the order of one inch or less.

Differential settlements result from differences in applied bearing pressures and variations in the compressibility characteristics of the subsurface soils. Based on the recommended site preparation and earthwork construction techniques outlined in Section 4.5, we anticipate that differential settlements of the structure should be within tolerable magnitudes (½ inch or less).

4.3.6 Floor Slabs

The floor slab can be constructed as a slab-on-grade member using a modulus of subgrade reaction (K) of 100 pci provided the subgrade materials are compacted as outlined in Section 4.5 and, if fill depths exceed 2 feet, a waiting period of three weeks be performed prior to slab construction such that estimated post-construction slab settlements will be within tolerable magnitudes (i.e. one inch or less) after completion of structural fill placement. The floor slabs can be isolated structurally from the adjacent foundations and be designed as a slab on grade member without the need for stone columns. It is recommended the floor slab bearing soils be covered with an impervious membrane to reduce moisture entry and floor dampness in accordance with the most recent version of the Florida Building Code requirements. A 10-mil thick plastic membrane is commonly used for this purpose. Care should be exercised not to tear the membrane during placement of reinforcing steel and concrete.

4.4 SITE PREPARATION

We recommend normal, good practice site preparation procedures. These procedures include: stripping the site of any vegetation and topsoil, removal of existing construction and associated foundations and utilities, soil improvement using a vibro-replacement or similar technique as warranted, compacting the subgrade, and placing necessary fill or backfill to grade with engineered fill. A more detailed synopsis of this work is as follows:

1. Prior to construction, the location of any existing underground utility lines within the construction area should be established. Provisions should then be made to relocate interfering utilities to appropriate locations. It should be noted that if underground pipes are not properly removed or plugged, they may serve as conduits for subsurface erosion which may subsequently lead to excessive settlement of overlying structure(s).

2. The groundwater level should be maintained at least 1 foot below any excavations and 2 feet below the surface of any vibratory compaction procedures. We anticipate that surface water management could be needed if the construction occurs during a relatively wet climatic period.

3. Any required surface stripping and root raking and removal of existing construction and foundations should be performed within and 5 feet beyond the perimeter of the proposed building areas. Expect typical stripping at this site to a depth of 12 inches more or less.

4. Compact the subgrade from the surface with a vibratory roller (a 3- to 4-ton roller, static weight and 2- to 3-foot drum diameter) operating until you obtain a minimum density of at least 95 percent of the Modified Proctor maximum dry density (ASTM D-1557), to a depth of two feet below the compacted surface. A minimum of eight (8) complete coverages (in perpendicular directions) should be made in the structure construction area with the roller to improve the uniformity and increase the density of the underlying sandy soils.

Should the bearing level soils experience pumping and soil strength loss during the compaction operations, compaction work should be immediately terminated and (1) the disturbed soils removed and backfilled with dry structural fill soils which are then compacted, or (2) the excess pore pressures within the disturbed soils allowed to dissipate before recompaction.

5. To avoid pumping of the underlaying clayey soils, we recommend self propelled vibrating equipment remain a minimum of 2 feet above the clayey soils. The sandy soils within 2 feet of the clayey soils could be compacted with a vibratory roller operating in the static mode or with a track-mounted dozer to avoid disturbing the clayey soils. We further recommend a minimum of 18 inches of sand overlying the clayey soils prior to operation of construction equipment. Excess disturbance of the clayey soils will degrade the strength characteristics of the soil and may result in an unsuitable soil which will require over-excavation and subsequent backfilling with clean fine sand fill material.

6. Care should be exercised to avoid damaging any nearby structures while the compaction operation and vibro-replacement installation is underway. Prior to commencing compaction, occupants of adjacent structures should be notified and the existing conditions of the structures be documented with photographs and survey (if deemed necessary). Compaction should cease if deemed detrimental to adjacent structures. Universal Engineering Sciences can provide vibration monitoring services to help document and evaluate the effects of the surface compaction operation on existing structures. In the absence of vibration monitoring it is recommended the vibratory roller remain a minimum of 50 feet from existing structures. Within this zone, use of a bulldozer or a vibratory roller operating in the static mode is recommended.

7. Place fill material, as required. The fill should consist of "clean," fine sand with less than 5 percent soil fines. You may use fill materials with soil fines between 5 and 12 percent, but strict moisture control may be required. Typically, the soils should exhibit moisture contents within ± 2 percent of the Modified Proctor optimum moisture content during compaction. Place fill in uniform 10- to 12-inch loose lifts and compact each lift to a minimum density of 95 percent of the Modified Proctor maximum dry density.

8. Perform compliance tests within the fill/backfill at a frequency of not less than one test per 2,500 square feet per lift in the building areas, or at a minimum of three tests, whichever is greater.

9. Test all footing cuts for compaction to a depth of 2 feet. We recommend you conduct density testing in every column footing, and every 100 linear feet in wall footings. Recompaction of the foundation excavation bearing level soils, if loosened by the excavation process, can probably be achieved by making several coverages with a light weight walk-behind vibratory sled or roller.

4.5 VIBRO-REPLACEMENT

In order to minimize the potential for differential and total settlement and increase the allowable soil bearing capacity for shallow foundations, the underlying soils may be improved within the building area using a deep soil improvement technique.

The vibro-replacement method essentially involves compaction and reinforcement of the in-situ soil by inserting a large diameter vibrating, cylindrical probe rod in to the ground. Once the probe is advanced to the desired depth, the probe is withdrawn. As the probe is withdrawn, the portion of the annular space is backfilled with crushed stone and the crushed stone backfill/soil matrix is then compacted by the weight and vibratory action of the probe. This procedure is repeated until a dense column of compacted crushed stone is created extending from the design depth to the ground surface.

The resulting stone-column allows for an increase in the allowable bearing capacity of the soils and reduces the potential for settlement by providing reinforcement of the soil mass. Typically, allowable foundation bearing capacities on the order of 4, 000 to 6,000 psf can be attained using this method. Typically, a specialty contractor (we recommend one with a minimum of three years of experience using this method) provides a foundation design, layout pattern for the stone columns, and installation guidelines. We recommend the proposed design be reviewed by UES to confirm conformance to the intent of our recommendations.

4.6 CONSTRUCTION RELATED SERVICES

We recommend the owner retain Universal Engineering Sciences to perform construction materials tests and observations on this project. Field tests and observations include verification of foundation and pavement subgrades by performing quality assurance tests on the placement of compacted structural fill and pavement courses. We can also provide concrete testing, pavement section testing, structural steel testing, and general construction observation services.

The geotechnical engineering design does not end with the advertisement of the construction documents. The design is an on-going process throughout construction. Because of our familiarity with the site conditions and the intent of the engineering design, we are most qualified to address problems that might arise during construction in a timely and cost-effective manner.

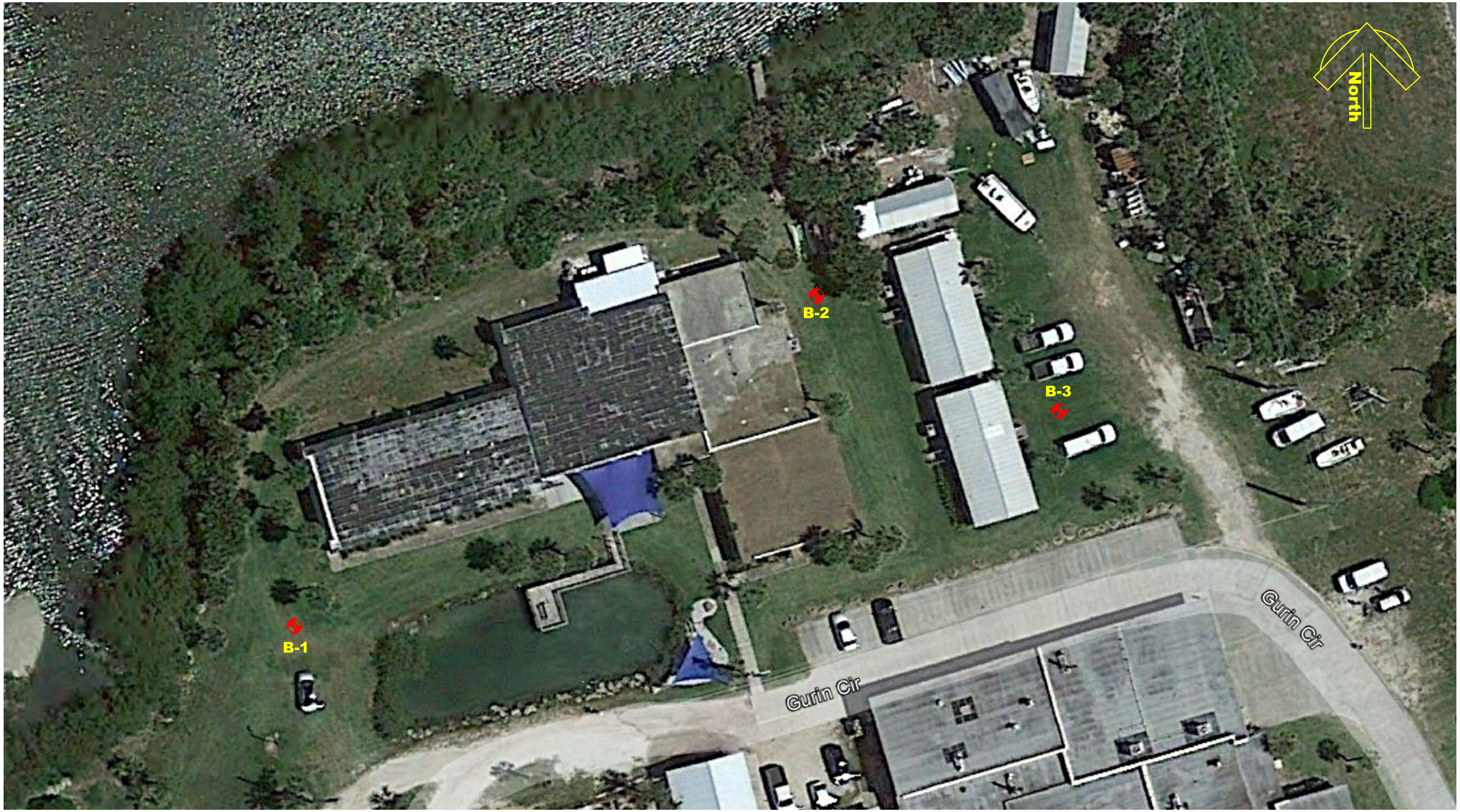
5.0 LIMITATIONS

During the early stages of most construction projects, geotechnical issues not addressed in this report may arise. Because of the natural limitations inherent in working with the subsurface, it is not possible for a geotechnical engineer to predict and address all possible problems. A Geotechnical Business Council (GBC) publication, "Important Information About This Geotechnical Engineering Report" appears in Appendix B, and will help explain the nature of geotechnical issues.

Further, we present documents in Appendix B: Constraints and Restrictions, to bring to your attention the potential concerns and the basic limitations of a typical geotechnical report.

APPENDIX A

BORING LOCATION PLAN
SOIL PROFILES
BORING LOGS
KEY TO BORING LOGS
CONSOLIDATION TEST RESULTS
FIELD EXPLORATION PROCEDURES
LABORATORY TESTING PROCEDURES



GRAPHIC SCALE

40' 0 20' 40' 80'

(IN FEET)

LEGEND

SPT BORING LOCATION

CLIENT: UNIVERSITY OF FLORIDA

DRAWN BY: TW DATE: 5/12/22

CHECKED BY: JC DATE: 5/12/22

SCALE: 1"= 40'

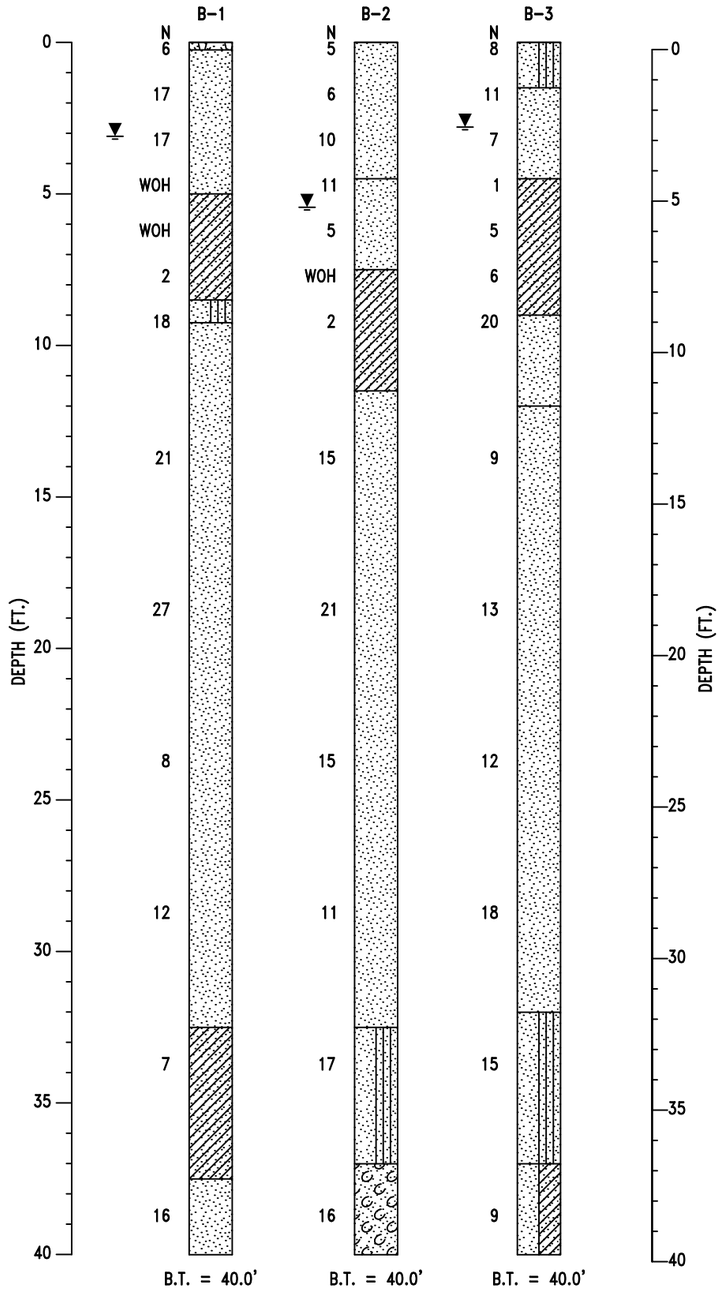
PROJECT NO: 0730.2200087.0000 REPORT NO: 1957355

GEOTECHNICAL EXPLORATION
WHITNEY LAB RESEARCH VILLAGE - PROPOSED RESEARCH LAB
MARINELAND, FLORIDA

BORING LOCATION PLAN

UNIVERSAL
ENGINEERING SCIENCES

PAGE NO: FIGURE A-1



LEGEND

- Topsoil
- Sand (SP)
- Clayey Sand (SC)
- Sand with Clay (SP–SC)
- Sand with Silt (SP–SM)
- Shell with Sand (SP)
- Groundwater Table
- BT Boring Termination Depth
- N SPT Blow Count
- WOH Weight of Hammer

CLIENT: UNIVERSITY OF FLORIDA

DRAWN BY: TW | DATE: 5/12/22

CHECKED BY: JC | DATE: 5/12/22

SCALE: AS SHOWN

PROJECT NO: 0730.2200087.0000 | REPORT NO: 1957355

GEOTECHNICAL EXPLORATION
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SOIL BORING PROFILES

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PAGE NO:
FIGURE A–2

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	0930.2200087.0000
REPORT NO.:	1957355
PAGE:	A-3

PROJECT: GEOTECHNICAL EXPLORATION
WHITNEY LAB RESEARCH VILLAGE - PROPOSED RESEARCH LAB
MARINELAND, FLORIDA

BORING DESIGNATION: **B-1** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:

CLIENT: UNIVERSITY OF FLORIDA

LOCATION: SEE BORING LOCATION PLAN

REMARKS:

G.S. ELEVATION (ft):
WATER TABLE (ft): 3.1
DATE OF READING: 5/3/22
EST. W.S.W.T. (ft):

DATE STARTED: 5/2/22
DATE FINISHED: 5/2/22
DRILLED BY: DB/BT
TYPE OF SAMPLING: ASTM D 1586

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG. CONT. (%)
0						TOPSOIL						
		1-2-4	6			Loose to medium dense brown to gray fine SAND with trace to some Shell fragments (SP)						
		5-8-9	17	▼								
		5-8-9	17									
5		1/12"-WOH	WOH			Very loose gray Clayey fine SAND (SC)	30.9	38.8	35	19		
		WOH	WOH									
		WOH-2	2			Loose gray fine SAND with Silt (SP-SM)						
10		4-7-11	18			Loose to medium dense gray fine SAND with some to many Shell fragments (SP)						
15		7-10-11	21									
20		8-12-15	27									
25		4-4-4	8									
30		8-7-5	12									
						Loose gray Clayey fine SAND with many Shell fragments (SC)						
35		4-4-3	7									
						Medium dense light gray fine SAND with some Shell fragments (SP)						
40		2-8-8	16									

BORING_LOG 0730.2200087.0000-WHITNEY LAB RESEARCH VILLAGE.GPJ UNIENGSC.GDT 5/31/22

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	0930.2200087.0000
REPORT NO.:	1957355
PAGE:	A-4

PROJECT: GEOTECHNICAL EXPLORATION
WHITNEY LAB RESEARCH VILLAGE - PROPOSED RESEARCH LAB
MARINELAND, FLORIDA

BORING DESIGNATION: **B-2** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:

CLIENT: UNIVERSITY OF FLORIDA
LOCATION: SEE BORING LOCATION PLAN
REMARKS:

G.S. ELEVATION (ft):
WATER TABLE (ft): 5.4
DATE OF READING: 5/3/22
EST. W.S.W.T. (ft):

DATE STARTED: 5/2/22
DATE FINISHED: 5/2/22
DRILLED BY: DB/BT
TYPE OF SAMPLING: ASTM D 1586

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG. CONT. (%)
0												
		1-2-3	5			Loose brown fine SAND with trace Shell fragments (SP)						
		3-2-4	6				2.2	3.5				
		4-4-6	10									
5				▼		Loose to medium dense gray fine SAND with some Shell fragments and some lenses of Clayey Sand (SP)						
		4-4-7	11									
		5-4-1	5			Very loose gray Clayey fine SAND (SC)						
		WOH	WOH									
10		WOH-1-1	2									
						Medium dense gray SHELL with Clay (SP)						
15		8-8-7	15				2.1	20.0				
20		6-9-12	21									
25		5-8-7	15									
30		3-5-6	11									
						Medium dense gray fine SAND with Silt (SP-SM)						
35		5-7-10	17									
						Medium dense gray SHELL with some cemented Shell (SP)						
40		7-7-9	16									

BORING_LOG 0730.2200087.0000-WHITNEY LAB RESEARCH VILLAGE.GPJ UNIENGSC.GDT 5/31/22

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	0930.2200087.0000
REPORT NO.:	1957355
PAGE:	A-5

PROJECT: GEOTECHNICAL EXPLORATION
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MARINELAND, FLORIDA

BORING DESIGNATION: **B-3** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:

CLIENT: UNIVERSITY OF FLORIDA

LOCATION: SEE BORING LOCATION PLAN

REMARKS:

G.S. ELEVATION (ft):
WATER TABLE (ft): 2.6
DATE OF READING: 5/3/22
EST. W.S.W.T. (ft):

DATE STARTED: 5/2/22
DATE FINISHED: 5/2/22
DRILLED BY: DB/BT
TYPE OF SAMPLING: ASTM D 1586

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG. CONT. (%)
0												
		2-4-4	8			Loose gray fine SAND with Silt with trace Shell fragments (SP-SM)						
		3-5-6	11	▼		Loose to medium dense red-brown SHELL with fine Sand (SP)						
		3-5-2	7									
5		WOH-1	1			Very loose to loose gray Clayey fine SAND with lenses of Sand (SC)	16.4	28.9				
		2-4-1	5									
		1-2-4	6									
10		5-8-12	20			Medium dense gray fine SAND (SP)						
						Loose to medium dense gray SHELL with fine Sand (SP)						
15		5-4-5	9									
20		5--7	13									
25		5-6-6	12									
30		7-10-8	18									
						Medium dense light brown fine SAND with Silt (SP-SM)						
35		7-7-8	15									
						Loose gray fine SAND with Clay with many Shell fragments (SC)						
40		1-5-4	9				11.2	29.9				

BORING_LOG 0730.2200087.0000-WHITNEY LAB RESEARCH VILLAGE.GPJ UNIENGSC.GDT 5/31/22

UNIVERSAL
ENGINEERING SCIENCES

KEY TO BORING LOGS

SYMBOLS AND ABBREVIATIONS

SYMBOL	DESCRIPTION
N-Value	No. of Blows of a 140-lb. Weight Falling 30 Inches Required to Drive a Standard Spoon 1 Foot
WOR	Weight of Drill Rods
WOH	Weight of Drill Rods and Hammer
	Sample from Auger Cuttings
	Standard Penetration Test Sample
	Thin-wall Shelby Tube Sample (Undisturbed Sampler Used)
% REC	Percent Core Recovery from Rock Core Drilling
RQD	Rock Quality Designation
	Stabilized Groundwater Level
	Seasonal High Groundwater Level (also referred to as the W.S.W.T.)
NE	Not Encountered
GNE	Groundwater Not Encountered
BT	Boring Terminated
-200 (%)	Fines Content or % Passing No. 200 Sieve
MC (%)	Moisture Content
LL	Liquid Limit (Atterberg Limits Test)
PI	Plasticity Index (Atterberg Limits Test)
K	Coefficient of Permeability
Org. Cont.	Organic Content
G.S. Elevation	Ground Surface Elevation

UNIFIED SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS			GROUP SYMBOLS	TYPICAL NAMES
COARSE GRAINED SOILS More than 50% retained on the No. 200 sieve*	GRAVELS 50% or more of coarse fraction retained on No. 4 sieve	CLEAN GRAVELS	GW	Well-graded gravels and gravel-sand mixtures, little or no fines
			GP	Poorly graded gravels and gravel-sand mixtures, little or no fines
		GRAVELS WITH FINES	GM	Silty gravels and gravel-sand-silt mixtures
			GC	Clayey gravels and gravel-sand-clay mixtures
	SANDS More than 50% of coarse fraction passes No. 4 sieve	CLEAN SANDS 5% or less passing No. 200 sieve	SW**	Well-graded sands and gravelly sands, little or no fines
			SP**	Poorly graded sands and gravelly sands, little or no fines
		SANDS with 12% or more passing No. 200 sieve	SM**	Silty sands, sand-silt mixtures
			SC**	Clayey sands, sand-clay mixtures
FINE-GRAINED SIOLS 50% or more passes the No. 200 sieve*	SILTS AND CLAYS Liquid limit 50% or less		ML	Inorganic silts, very fine sands, rock flour, silty or clayey fine sands
			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, lean clays
			OL	Organic silts and organic silty clays of low plasticity
	SILTS AND CLAYS Liquid limit greater than 50%		MH	Inorganic silts, micaceous or diamicaceous fine sands or silts, elastic silts
			CH	Inorganic clays or clays of high plasticity, fat clays
			OH	Organic clays of medium to high plasticity
			PT	Peat, muck and other highly organic soils

*Based on the material passing the 3-inch (75 mm) sieve
** Use dual symbol (such as SP-SM and SP-SC) for soils with more than 5% but less than 12% passing the No. 200 sieve

RELATIVE DENSITY
(Sands and Gravels)
Very loose – Less than 4 Blow/Foot
Loose – 4 to 10 Blows/Foot
Medium Dense – 11 to 30 Blows/Foot
Dense – 31 to 50 Blows/Foot
Very Dense – More than 50 Blows/Foot

CONSISTENCY
(Silts and Clays)
Very Soft – Less than 2 Blows/Foot
Soft – 2 to 4 Blows/Foot
Firm – 5 to 8 Blows/Foot
Stiff – 9 to 15 Blows/Foot
Very Stiff – 16 to 30 Blows/Foot
Hard – More than 30 Blows/Foot

RELATIVE HARDNESS
(Limestone)
Soft – 100 Blows for more than 2 Inches
Hard – 100 Blows for less than 2 Inches

MODIFIERS

These modifiers Provide Our Estimate of the Amount of Minor Constituents (Silt or Clay Size Particles) in the Soil Sample
Trace – 5% or less
With Silt or With Clay – 6% to 11%
Silty or Clayey – 12% to 30%
Very Silty or Very Clayey – 31% to 50%

These Modifiers Provide Our Estimate of the Amount of Organic Components in the Soil Sample
Trace – Less than 3%
Few – 3% to 4%
Some – 5% to 8%
Many – Greater than 8%

These Modifiers Provide Our Estimate of the Amount of Other Components (Shell, Gravel, Etc.) in the Soil Sample
Trace – 5% or less
Few – 6% to 12%
Some – 13% to 30%
Many – 31% to 50%

FIELD EXPLORATION PROCEDURES

Standard Penetration Test Boring

The penetration boring was made in general accordance with the latest revision of ASTM D 1586, "Penetration Test and Split-Barrel Sampling of Soils". The boring was advanced by rotary drilling techniques using a circulating bentonite fluid for borehole flushing and stability. At 2 ½ to 5 foot intervals, the drilling tools were removed from the borehole and a split-barrel sampler inserted to the borehole bottom and driven 18 inches into the soil using a 140-pound hammer falling on the average 30 inches per hammer blow. The number of blows for the final 12 inches of penetration is termed the "penetration resistance, blow count, or N-value". This value is an index to several in-place geotechnical properties of the material tested, such as relative density and Young's Modulus.

After driving the sampler 18 inches (or less if in hard rock-like material), the sampler was retrieved from the borehole and representative samples of the material within the split-barrel were placed in glass jars and sealed. After completing the drilling operations, the samples for each boring were transported to our laboratory where they were examined by our engineer in order to verify the driller's field classification.

LABORATORY TESTING PROCEDURES

Natural Moisture Content

The water content of the sample tested was determined in general accordance with the latest revision of ASTM D 2216. The water content is defined as the ratio of "pore" or "free" water in a given mass of material to the mass of solid material particles.

Percent Fines Content

The percent fines or material passing the No. 200 mesh sieve of the sample tested was determined in general accordance with the latest revision of ASTM D 1140. The percent fines are the soil particles in the silt and clay size range.

Atterberg Limits

The Atterberg Limits consist of the Liquid Limit (LL) and the Plastic Limit (PL). The LL and PL were determined in general accordance with the latest revision of ASTM D 4318. The LL is the water content of the material denoting the boundary between the liquid and plastic states. The PL is the water content denoting the boundary between the plastic and semi-solid states. The Plasticity Index (PI) is the range of water content over which a soil behaves plastically and is denoted numerically by as the difference between the LL and the PL. The water content of the sample tested was determined in general accordance with the latest revision of ASTM D 2216. The water content is defined as the ratio of "pore" or "free" water in a given mass of material to the mass of solid material particles.

APPENDIX B

IMPORTANT INFORMATION ABOUT THIS GEOTECHNICAL ENGINEERING REPORT

CONSTRAINTS AND RESTRICTIONS

Important Information about This

Geotechnical-Engineering Report

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.

While you cannot eliminate all such risks, you can manage them. The following information is provided to help.

The Geoprofessional Business Association (GBA) has prepared this advisory to help you – assumedly a client representative – interpret and apply this geotechnical-engineering report as effectively as possible. In that way, you can benefit from a lowered exposure to problems associated with subsurface conditions at project sites and development of them that, for decades, have been a principal cause of construction delays, cost overruns, claims, and disputes. If you have questions or want more information about any of the issues discussed herein, contact your GBA-member geotechnical engineer. Active engagement in GBA exposes geotechnical engineers to a wide array of risk-confrontation techniques that can be of genuine benefit for everyone involved with a construction project.

Understand the Geotechnical-Engineering Services Provided for this Report

Geotechnical-engineering services typically include the planning, collection, interpretation, and analysis of exploratory data from widely spaced borings and/or test pits. Field data are combined with results from laboratory tests of soil and rock samples obtained from field exploration (if applicable), observations made during site reconnaissance, and historical information to form one or more models of the expected subsurface conditions beneath the site. Local geology and alterations of the site surface and subsurface by previous and proposed construction are also important considerations. Geotechnical engineers apply their engineering training, experience, and judgment to adapt the requirements of the prospective project to the subsurface model(s). Estimates are made of the subsurface conditions that will likely be exposed during construction as well as the expected performance of foundations and other structures being planned and/or affected by construction activities.

The culmination of these geotechnical-engineering services is typically a geotechnical-engineering report providing the data obtained, a discussion of the subsurface model(s), the engineering and geologic engineering assessments and analyses made, and the recommendations developed to satisfy the given requirements of the project. These reports may be titled investigations, explorations, studies, assessments, or evaluations. Regardless of the title used, the geotechnical-engineering report is an engineering interpretation of the subsurface conditions within the context of the project and does not represent a close examination, systematic inquiry, or thorough investigation of all site and subsurface conditions.

Geotechnical-Engineering Services are Performed for Specific Purposes, Persons, and Projects, and At Specific imes

Geotechnical engineers structure their services to meet the specific needs, goals, and risk management preferences of their clients. A geotechnical-engineering study conducted for a given civil engineer will not likely meet the needs of a civil-works constructor or even a different civil engineer. Because each geotechnical-engineering study is unique, each geotechnical-engineering report is unique, prepared *solely* for the client.

Likewise, geotechnical-engineering services are performed for a specific project and purpose. For example, it is unlikely that a geotechnical-engineering study for a refrigerated warehouse will be the same as one prepared for a parking garage; and a few borings drilled during a preliminary study to evaluate site feasibility will not be adequate to develop geotechnical design recommendations for the project.

Do not rely on this report if your geotechnical engineer prepared it:

- for a different client;
- for a different project or purpose;
- for a different site (that may or may not include all or a portion of the original site); or
- before important events occurred at the site or adjacent to it; e.g., man-made events like construction or environmental remediation, or natural events like floods, droughts, earthquakes, or groundwater fluctuations.

Note, too, the reliability of a geotechnical-engineering report can be affected by the passage of time, because of factors like changed subsurface conditions; new or modified codes, standards, or regulations; or new techniques or tools. *If you are the least bit uncertain* about the continued reliability of this report, contact your geotechnical engineer before applying the recommendations in it. A minor amount of additional testing or analysis after the passage of time – if any is required at all – could prevent major problems.

Read this Report in Full

Costly problems have occurred because those relying on a geotechnical-engineering report did not read the report in its entirety. Do not rely on an executive summary. Do not read selective elements only. *Read and refer to the report in full.*

You Need to Inform Your Geotechnical Engineer About Change

Your geotechnical engineer considered unique, project-specific factors when developing the scope of study behind this report and developing the confirmation-dependent recommendations the report conveys. Typical changes that could erode the reliability of this report include those that affect:

- the site's size or shape;
- the elevation, configuration, location, orientation, function or weight of the proposed structure and the desired performance criteria;
- the composition of the design team; or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project or site changes – even minor ones – and request an assessment of their impact. *The geotechnical engineer who prepared this report cannot accept*

responsibility or liability for problems that arise because the geotechnical engineer was not informed about developments the engineer otherwise would have considered.

Most of the "Findings" Related in This Report Are Professional Opinions

Before construction begins, geotechnical engineers explore a site's subsurface using various sampling and testing procedures. *Geotechnical engineers can observe actual subsurface conditions only at those specific locations where sampling and testing is performed.* The data derived from that sampling and testing were reviewed by your geotechnical engineer, who then applied professional judgement to form opinions about subsurface conditions throughout the site. Actual sitewide-subsurface conditions may differ – maybe significantly – from those indicated in this report. Confront that risk by retaining your geotechnical engineer to serve on the design team through project completion to obtain informed guidance quickly, whenever needed.

This Report's Recommendations Are Confirmation-Dependen

The recommendations included in this report – including any options or alternatives – are confirmation-dependent. In other words, they are not final, because the geotechnical engineer who developed them relied heavily on judgement and opinion to do so. Your geotechnical engineer can finalize the recommendations *only after observing actual subsurface conditions* exposed during construction. If through observation your geotechnical engineer confirms that the conditions assumed to exist actually do exist, the recommendations can be relied upon, assuming no other changes have occurred. *The geotechnical engineer who prepared this report cannot assume responsibility or liability for confirmation-dependent recommendations if you fail to retain that engineer to perform construction observation.*

This Report Could Be Misinterpreted

Other design professionals' misinterpretation of geotechnical-engineering reports has resulted in costly problems. Confront that risk by having your geotechnical engineer serve as a continuing member of the design team, to:

- confer with other design-team members;
- help develop specifications;
- review pertinent elements of other design professionals' plans and specifications; and
- be available whenever geotechnical-engineering guidance is needed.

You should also confront the risk of constructors misinterpreting this report. Do so by retaining your geotechnical engineer to participate in prebid and preconstruction conferences and to perform construction-phase observations.

Give Constructors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can shift unanticipated-subsurface-conditions liability to constructors by limiting the information they provide for bid preparation. To help prevent the costly, contentious problems this practice has caused, include the complete geotechnical-engineering report, along with any attachments or appendices, with your contract documents, *but be certain to note conspicuously that you've included the material for information purposes only.* To avoid misunderstanding, you may also want to note that "informational purposes" means constructors have no right to rely on the interpretations, opinions, conclusions, or recommendations in the report. Be certain that constructors know they may learn about specific project requirements, including options selected from the report, *only* from the design drawings and specifications. Remind constructors that they may perform their own studies if they want to, and *be sure to allow enough time* to permit them to do so. Only then might you be in a position to give constructors the information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions. Conducting prebid and preconstruction conferences can also be valuable in this respect.

Read Responsibility Provisions Closely

Some client representatives, design professionals, and constructors do not realize that geotechnical engineering is far less exact than other engineering disciplines. This happens in part because soil and rock on project sites are typically heterogeneous and not manufactured materials with well-defined engineering properties like steel and concrete. That lack of understanding has nurtured unrealistic expectations that have resulted in disappointments, delays, cost overruns, claims, and disputes. To confront that risk, geotechnical engineers commonly include explanatory provisions in their reports. Sometimes labeled "limitations," many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely.* Ask questions. Your geotechnical engineer should respond fully and frankly.

Geoenvironmental Concerns Are Not Covered

The personnel, equipment, and techniques used to perform an environmental study – e.g., a "phase-one" or "phase-two" environmental site assessment – differ significantly from those used to perform a geotechnical-engineering study. For that reason, a geotechnical-engineering report does not usually provide environmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated subsurface environmental problems have led to project failures.* If you have not obtained your own environmental information about the project site, ask your geotechnical consultant for a recommendation on how to find environmental risk-management guidance.

Obtain Professional Assistance to Deal with Moisture Infiltration and Mol

While your geotechnical engineer may have addressed groundwater, water infiltration, or similar issues in this report, the engineer's services were not designed, conducted, or intended to prevent migration of moisture – including water vapor – from the soil through building slabs and walls and into the building interior, where it can cause mold growth and material-performance deficiencies. Accordingly, ***proper implementation of the geotechnical engineer's recommendations will not of itself be sufficient to prevent moisture infiltration. Confront the risk of moisture infiltration*** by including building-envelope or mold specialists on the design team. ***Geotechnical engineers are not building-envelope or mold specialists.***

GEOPROFESSIONAL BUSINESS ASSOCIATION

Telephone: 301/565-2733
e-mail: info@geoprofessional.org www.geoprofessional.org

CONSTRAINTS & RESTRICTIONS

The intent of this document is to bring to your attention the potential concerns and the basic limitations of a typical geotechnical report.

WARRANTY

Universal Engineering Sciences has prepared this report for our client for his exclusive use, in accordance with generally accepted soil and foundation engineering practices, and makes no other warranty either expressed or implied as to the professional advice provided in the report.

UNANTICIPATED SOIL CONDITIONS

The analysis and recommendations submitted in this report are based upon the data obtained from soil borings performed at the locations indicated on the Boring Location Plan. This report does not reflect any variations which may occur between these borings.

The nature and extent of variations between borings may not become known until excavation begins. If variations appear, we may have to re-evaluate our recommendations after performing on-site observations and noting the characteristics of any variations.

CHANGED CONDITIONS

We recommend that the specifications for the project require that the contractor immediately notify Universal Engineering Sciences, as well as the owner, when subsurface conditions are encountered that are different from those present in this report.

No claim by the contractor for any conditions differing from those anticipated in the plans, specifications, and those found in this report, should be allowed unless the contractor notifies the owner and Universal Engineering Sciences of such changed conditions. Further, we recommend that all foundation work and site improvements be observed by a representative of Universal Engineering Sciences to monitor field conditions and changes, to verify design assumptions and to evaluate and recommend any appropriate modifications to this report.

MISINTERPRETATION OF SOIL ENGINEERING REPORT

Universal Engineering Sciences is responsible for the conclusions and opinions contained within this report based upon the data relating only to the specific project and location discussed herein. If the conclusions or recommendations based upon the data presented are made by others, those conclusions or recommendations are not the responsibility of Universal Engineering Sciences.

CHANGED STRUCTURE OR LOCATION

This report was prepared in order to aid in the evaluation of this project and to assist the architect or engineer in the design of this project. If any changes in the design or location of the structure as outlined in this report are planned, or if any structures are included or added that are not discussed in the report, the conclusions and recommendations contained in this report shall not be considered valid unless the changes are reviewed and the conclusions modified or approved by Universal Engineering Sciences.

USE OF REPORT BY BIDDERS

Bidders who are examining the report prior to submission of a bid are cautioned that this report was prepared as an aid to the designers of the project and it may affect actual construction operations.

Bidders are urged to make their own soil borings, test pits, test caissons or other investigations to determine those conditions that may affect construction operations. Universal Engineering Sciences cannot be responsible for any interpretations made from this report or the attached boring logs with regard to their adequacy in reflecting subsurface conditions which will affect construction operations.

STRATA CHANGES

Strata changes are indicated by a definite line on the boring logs which accompany this report. However, the actual change in the ground may be more gradual. Where changes occur between soil samples, the location of the change must necessarily be estimated using all available information and may not be shown at the exact depth.

OBSERVATIONS DURING DRILLING

Attempts are made to detect and/or identify occurrences during drilling and sampling, such as: water level, boulders, zones of lost circulation, relative ease or resistance to drilling progress, unusual sample recovery, variation of driving resistance, obstructions, etc.; however, lack of mention does not preclude their presence.

WATER LEVELS

Water level readings have been made in the drill holes during drilling and they indicate normally occurring conditions. Water levels may not have been stabilized at the last reading. This data has been reviewed and interpretations made in this report. However, it must be noted that fluctuations in the level of the groundwater may occur due to variations in rainfall, temperature, tides, and other factors not evident at the time measurements were made and reported. Since the probability of such variations is anticipated, design drawings and specifications should accommodate such possibilities and construction planning should be based upon such assumptions of variations.

LOCATION OF BURIED OBJECTS

All users of this report are cautioned that there was no requirement for Universal Engineering Sciences to attempt to locate any man-made buried objects during the course of this exploration and that no attempt was made by Universal Engineering Sciences to locate any such buried objects. Universal Engineering Sciences cannot be responsible for any buried man-made objects which are subsequently encountered during construction that are not discussed within the text of this report.

TIME

This report reflects the soil conditions at the time of exploration. If the report is not used in a reasonable amount of time, significant changes to the site may occur and additional reviews may be required.

UNIVERSAL
ENGINEERING SCIENCES

Attachment D

Drainage Area Map

(Exhibit on Next Page)

JBPro
CIVIL ENGINEERING | LAND PLANNING
SURVEYING | CONSTRUCTION SERVICES
3530 NW 43rd Street | Gainesville, Florida 32606
4420 US-1 S, Suite 1 | St. Augustine, Florida 32086
Gainesville: (352) 375-8999 | St. Augustine: (904) 789-8999
Toll Free: (844) Go-JBPro | E-mail: contact@jbpro.com

REVISION:

SHEET TITLE
DRAINAGE AREA MAP

SCALE (U.N.O.)
As indicated

JOB NAME
University of Florida
Marine Research Institute Building

LOCATION
N Ocean Shore Blvd
St. Augustine, FL 32080

KEY PLAN

PROJECT NORTH

SEAL

PRELIMINARY
NOT FOR CONSTRUCTION

THIS DOCUMENT IS ISSUED FOR THE PURPOSE OF REVIEW ONLY AND IS NOT INTENDED FOR FINAL PERMITTING, BIDDING, OR CONSTRUCTION PURPOSES.

ISSUE DATE
02/22/2023

JOB NO.
11546-00

DWG. NO.

NOT FOR CONSTRUCTION

Attachment E

Drainage Design Calculations

(Exhibit on Next Page)

Required Water Quality Treatment Volume (WQTV):

Greater of 0.5" of runoff over DA or 1.25" of runoff from impervious area
Additional 50% of applicable treatment volume
Offline System

Drainage Area (SF) =	31,394
Impervious Area (SF) =	25,878
0.5" Drainage Area Runoff (CF) =	1,308
1.25" Impervious Area Runoff (CF) =	2,696
WQTV Required (Add'l 50%)	**4,043**
WQTV Provided	**4,166**
Stage of WQTV	**6.5**
Basin 1 Recovery Time (Hrs)	**49.42**

Treatment Pond #1

Stage	Surface Area (SF)	Surface Area (AC)	Volume (CF)	Volume (AC-FT)
4.5	1,233	0.028	0	0.000
5.0	1,653	0.038	722	0.017
6.0	2,505	0.058	2,801	0.064
6.5	2,957	0.068	4,166	0.096

Perimeter	75' Offset	375' Offset
306	776	2,648

Drainage Area (SF) =	24,803
Impervious Area (SF) =	9,506
0.5" Drainage Area Runoff (CF) =	1,033
1.25" Impervious Area Runoff (CF) =	990
WQTV Required (Add'l 50%)	**1,550**
WQTV Provided	**1,948**
Stage of WQTV	**4.24**
Basin 1 Recovery Time (Hrs)	**16.01**

Treatment Pond #2

Stage	Surface Area (SF)	Surface Area (AC)	Volume (CF)	Volume (AC-FT)
3.0	734	0.017	0	0.000
4.0	1,504	0.035	1,119	0.026
4.5	1,811	0.042	1,948	0.045

Perimeter	75' Offset	375' Offset
159	630	2,523

Attachment F

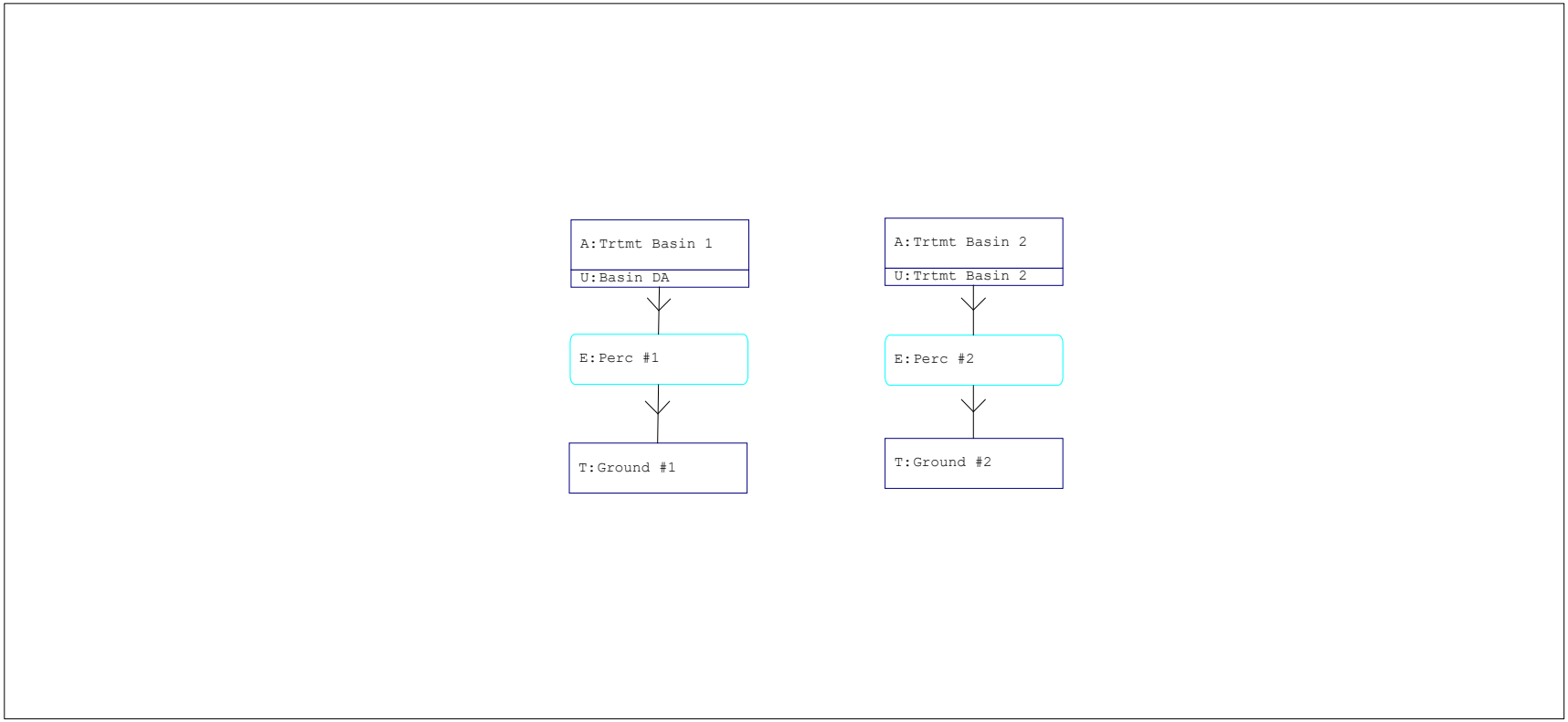
ICPR Inputs and Results

(Exhibit on Next Page)

Nodes
A Stage/Area
V Stage/Volume
T Time/Stage
M Manhole

Basins
O Overland Flow
U SCS Unit CN
S SBUH CN
Y SCS Unit GA
Z SBUH GA

Links
P Pipe
W Weir
C Channel
D Drop Structure
B Bridge
R Rating Curve
H Breach
E Percolation
F Filter
X Exfil Trench



```
================================================================================
==== Basins ====================================================================
================================================================================

         Name: Basin DA                Node: Trtmt Basin 1          Status: Onsite
        Group: BASE                    Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh484                  Peaking Factor: 484.0
          Rainfall File:                  Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000              Time of Conc(min): 10.00
             Area(ac): 0.720                  Time Shift(hrs): 0.00
         Curve Number: 90.00             Max Allowable Q(cfs): 999999.000
              DCIA(%): 0.00


--------------------------------------------------------------------------------------------------
         Name: Trtmt Basin 2           Node: Trtmt Basin 2          Status: Onsite
        Group: BASE                    Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh323                  Peaking Factor: 323.0
          Rainfall File:                  Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000              Time of Conc(min): 10.00
             Area(ac): 0.570                  Time Shift(hrs): 0.00
         Curve Number: 90.00             Max Allowable Q(cfs): 999999.000
              DCIA(%): 0.00


================================================================================
==== Nodes =====================================================================
================================================================================

      Name: Ground #1          Base Flow(cfs): 0.000          Init Stage(ft): 0.000
     Group: BASE                                             Warn Stage(ft): 2.000
      Type: Time/Stage


      Time(hrs)       Stage(ft)
--------------- ---------------
           0.00           2.000
         999.00           2.000

--------------------------------------------------------------------------------------------------
      Name: Ground #2          Base Flow(cfs): 0.000          Init Stage(ft): 0.000
     Group: BASE                                             Warn Stage(ft): 0.000
      Type: Time/Stage


      Time(hrs)       Stage(ft)
--------------- ---------------
           0.00           0.000
         999.00           0.000

--------------------------------------------------------------------------------------------------
      Name: Trtmt Basin 1      Base Flow(cfs): 0.000          Init Stage(ft): 6.500
     Group: BASE                                             Warn Stage(ft): 6.000
      Type: Stage/Area


      Stage(ft)        Area(ac)
--------------- ---------------
           4.500          0.0280
           5.000          0.0370
           6.000          0.0570
           6.500          0.0680

--------------------------------------------------------------------------------------------------
      Name: Trtmt Basin 2      Base Flow(cfs): 0.000          Init Stage(ft): 4.240
     Group: BASE                                             Warn Stage(ft): 4.500
      Type: Stage/Area


      Stage(ft)        Area(ac)
--------------- ---------------
           3.000          0.0170
           4.000          0.0350
           4.500          0.0420

================================================================================
==== Percolation Links =========================================================
================================================================================
```

```
         Name: Perc #1             From Node: Trtmt Basin 1           Flow: Both
        Group: BASE                  To Node: Ground #1              Count: 1

         Surface Area Option: Use 1st Point in Stage/Area Table
   Vertical Flow Termination: Horizontal Flow Algorithm
       Aquifer Base Elev(ft): 2.800                        Perimeter 1(ft): 306.000
        Water Table Elev(ft): 2.800                        Perimeter 2(ft): 776.000
  Ann Recharge Rate(in/year): 0.000                        Perimeter 3(ft): 2648.000
  Horiz Conductivity(ft/day): 24.500                   Distance 1 to 2(ft): 75.000
   Vert Conductivity(ft/day): 16.200                   Distance 2 to 3(ft): 300.000
     Effective Porosity(dec): 0.250                       Num Cells 1 to 2: 15
            Suction Head(in): 4.170                       Num Cells 2 to 3: 30
         Layer Thickness(ft): 1.700



-------------------------------------------------------------------------------------------------
         Name: Perc #2             From Node: Trtmt Basin 2           Flow: Both
        Group: BASE                  To Node: Ground #2              Count: 1

         Surface Area Option: Use 1st Point in Stage/Area Table
   Vertical Flow Termination: Horizontal Flow Algorithm
       Aquifer Base Elev(ft): 1.000                        Perimeter 1(ft): 159.000
        Water Table Elev(ft): 1.000                        Perimeter 2(ft): 630.000
  Ann Recharge Rate(in/year): 0.000                        Perimeter 3(ft): 2523.000
  Horiz Conductivity(ft/day): 24.500                   Distance 1 to 2(ft): 75.000
   Vert Conductivity(ft/day): 16.200                   Distance 2 to 3(ft): 300.000
     Effective Porosity(dec): 0.250                       Num Cells 1 to 2: 15
            Suction Head(in): 4.170                       Num Cells 2 to 3: 30
         Layer Thickness(ft): 1.500



=================================================================================================
==== Hydrology Simulations ======================================================================
=================================================================================================

         Name: WQTV
     Filename: C:\Users\Survey1\OneDrive - JBPro\JBPro Shared Project Files\503-21-01 - UF-606 - Whitney Laboratory for Marine B

      Override Defaults: Yes
    Storm Duration(hrs): 72.00
          Rainfall File: Fdot-72
    Rainfall Amount(in): 0.00

Time(hrs)       Print Inc(min)
--------------- ---------------
100.000         5.00

=================================================================================================
==== Routing Simulations ========================================================================
=================================================================================================

         Name: WQTV                Hydrology Sim: WQTV
     Filename: C:\Users\Survey1\OneDrive - JBPro\JBPro Shared Project Files\503-21-01 - UF-606 - Whitney Laboratory for Marine B

      Execute: Yes         Restart: No            Patch: No
  Alternative: No

        Max Delta Z(ft): 1.00                    Delta Z Factor: 0.00500
    Time Step Optimizer: 10.000
        Start Time(hrs): 0.000                    End Time(hrs): 100.00
     Min Calc Time(sec): 0.5000              Max Calc Time(sec): 100.0000
        Boundary Stages:                         Boundary Flows:


Time(hrs)       Print Inc(min)
--------------- ---------------
100.000         5.000

Group           Run
--------------- -----
BASE            Yes
```

Simulation	Node	Group	Time	Stage	Warning Stage	Surface Area	Total Inflow	Total Outflow	Total Vol In	Total Vol Out
			hrs	ft	ft	ft2	cfs	cfs	af	af
WQTV	Trtmt Basin 1	BASE	0.00	6.50	6.00	2526	0.00	0.00	0.0	0.0
WQTV	Trtmt Basin 1	BASE	0.08	6.36	6.00	2526	0.00	0.66	0.0	0.0
WQTV	Trtmt Basin 1	BASE	0.17	6.29	6.00	2526	0.00	0.42	0.0	0.0
WQTV	Trtmt Basin 1	BASE	0.25	6.24	6.00	2526	0.00	0.37	0.0	0.0
WQTV	Trtmt Basin 1	BASE	0.34	6.20	6.00	2526	0.00	0.33	0.0	0.0
WQTV	Trtmt Basin 1	BASE	0.42	6.16	6.00	2526	0.00	0.30	0.0	0.0
WQTV	Trtmt Basin 1	BASE	0.50	6.13	6.00	2526	0.00	0.27	0.0	0.0
WQTV	Trtmt Basin 1	BASE	0.59	6.10	6.00	2526	0.00	0.24	0.0	0.0
WQTV	Trtmt Basin 1	BASE	0.67	6.07	6.00	2526	0.00	0.22	0.0	0.0
WQTV	Trtmt Basin 1	BASE	0.75	6.05	6.00	2526	0.00	0.20	0.0	0.0
WQTV	Trtmt Basin 1	BASE	0.84	6.02	6.00	2526	0.00	0.18	0.0	0.0
WQTV	Trtmt Basin 1	BASE	0.92	6.00	6.00	2526	0.00	0.17	0.0	0.0
WQTV	Trtmt Basin 1	BASE	1.00	5.98	6.00	2513	0.00	0.16	0.0	0.0
WQTV	Trtmt Basin 1	BASE	1.09	5.96	6.00	2496	0.00	0.15	0.0	0.0
WQTV	Trtmt Basin 1	BASE	1.18	5.95	6.00	2480	0.00	0.14	0.0	0.0
WQTV	Trtmt Basin 1	BASE	1.26	5.93	6.00	2466	0.00	0.13	0.0	0.0
WQTV	Trtmt Basin 1	BASE	1.34	5.92	6.00	2453	0.00	0.12	0.0	0.0
WQTV	Trtmt Basin 1	BASE	1.43	5.90	6.00	2440	0.00	0.11	0.0	0.0
WQTV	Trtmt Basin 1	BASE	1.50	5.89	6.00	2430	0.00	0.11	0.0	0.0
WQTV	Trtmt Basin 1	BASE	1.59	5.88	6.00	2418	0.00	0.10	0.0	0.0
WQTV	Trtmt Basin 1	BASE	1.68	5.86	6.00	2406	0.00	0.10	0.0	0.0
WQTV	Trtmt Basin 1	BASE	1.76	5.85	6.00	2395	0.00	0.09	0.0	0.0
WQTV	Trtmt Basin 1	BASE	1.85	5.84	6.00	2385	0.00	0.09	0.0	0.0
WQTV	Trtmt Basin 1	BASE	1.92	5.83	6.00	2377	0.00	0.09	0.0	0.0
WQTV	Trtmt Basin 1	BASE	2.01	5.82	6.00	2367	0.00	0.08	0.0	0.0
WQTV	Trtmt Basin 1	BASE	2.09	5.81	6.00	2357	0.00	0.08	0.0	0.0
WQTV	Trtmt Basin 1	BASE	2.18	5.80	6.00	2348	0.00	0.08	0.0	0.0
WQTV	Trtmt Basin 1	BASE	2.27	5.78	6.00	2339	0.00	0.08	0.0	0.0
WQTV	Trtmt Basin 1	BASE	2.33	5.78	6.00	2332	0.00	0.07	0.0	0.0
WQTV	Trtmt Basin 1	BASE	2.42	5.77	6.00	2324	0.00	0.07	0.0	0.0
WQTV	Trtmt Basin 1	BASE	2.51	5.76	6.00	2316	0.00	0.07	0.0	0.0
WQTV	Trtmt Basin 1	BASE	2.61	5.75	6.00	2306	0.00	0.07	0.0	0.0
WQTV	Trtmt Basin 1	BASE	2.69	5.74	6.00	2299	0.00	0.07	0.0	0.0
WQTV	Trtmt Basin 1	BASE	2.77	5.73	6.00	2292	0.00	0.06	0.0	0.0
WQTV	Trtmt Basin 1	BASE	2.85	5.72	6.00	2285	0.00	0.06	0.0	0.0
WQTV	Trtmt Basin 1	BASE	2.93	5.71	6.00	2278	0.00	0.06	0.0	0.0
WQTV	Trtmt Basin 1	BASE	3.02	5.71	6.00	2271	0.00	0.06	0.0	0.0
WQTV	Trtmt Basin 1	BASE	3.10	5.70	6.00	2264	0.00	0.06	0.0	0.0
WQTV	Trtmt Basin 1	BASE	3.18	5.69	6.00	2258	0.00	0.06	0.0	0.0
WQTV	Trtmt Basin 1	BASE	3.26	5.68	6.00	2251	0.00	0.06	0.0	0.0
WQTV	Trtmt Basin 1	BASE	3.34	5.68	6.00	2245	0.00	0.05	0.0	0.0
WQTV	Trtmt Basin 1	BASE	3.42	5.67	6.00	2238	0.00	0.05	0.0	0.0
WQTV	Trtmt Basin 1	BASE	3.51	5.66	6.00	2232	0.00	0.05	0.0	0.0
WQTV	Trtmt Basin 1	BASE	3.59	5.66	6.00	2226	0.00	0.05	0.0	0.0
WQTV	Trtmt Basin 1	BASE	3.67	5.65	6.00	2220	0.00	0.05	0.0	0.0
WQTV	Trtmt Basin 1	BASE	3.76	5.64	6.00	2214	0.00	0.05	0.0	0.0
WQTV	Trtmt Basin 1	BASE	3.84	5.63	6.00	2208	0.00	0.05	0.0	0.0
WQTV	Trtmt Basin 1	BASE	3.92	5.63	6.00	2203	0.00	0.05	0.0	0.0
WQTV	Trtmt Basin 1	BASE	4.01	5.62	6.00	2197	0.00	0.05	0.0	0.0
WQTV	Trtmt Basin 1	BASE	4.09	5.62	6.00	2191	0.00	0.05	0.0	0.0
WQTV	Trtmt Basin 1	BASE	4.17	5.61	6.00	2186	0.00	0.05	0.0	0.0
WQTV	Trtmt Basin 1	BASE	4.26	5.60	6.00	2180	0.00	0.05	0.0	0.0
WQTV	Trtmt Basin 1	BASE	4.34	5.60	6.00	2175	0.00	0.04	0.0	0.0
WQTV	Trtmt Basin 1	BASE	4.42	5.59	6.00	2170	0.00	0.04	0.0	0.0
WQTV	Trtmt Basin 1	BASE	4.51	5.58	6.00	2164	0.00	0.04	0.0	0.0
WQTV	Trtmt Basin 1	BASE	4.59	5.58	6.00	2159	0.00	0.04	0.0	0.0
WQTV	Trtmt Basin 1	BASE	4.67	5.57	6.00	2154	0.00	0.04	0.0	0.0
WQTV	Trtmt Basin 1	BASE	4.76	5.57	6.00	2149	0.00	0.04	0.0	0.0
WQTV	Trtmt Basin 1	BASE	4.84	5.56	6.00	2144	0.00	0.04	0.0	0.0
WQTV	Trtmt Basin 1	BASE	4.92	5.56	6.00	2139	0.00	0.04	0.0	0.0
WQTV	Trtmt Basin 1	BASE	5.01	5.55	6.00	2134	0.00	0.04	0.0	0.0
WQTV	Trtmt Basin 1	BASE	5.09	5.54	6.00	2130	0.00	0.04	0.0	0.0
WQTV	Trtmt Basin 1	BASE	5.17	5.54	6.00	2125	0.00	0.04	0.0	0.0
WQTV	Trtmt Basin 1	BASE	5.26	5.53	6.00	2120	0.00	0.04	0.0	0.0
WQTV	Trtmt Basin 1	BASE	5.34	5.53	6.00	2115	0.00	0.04	0.0	0.0
WQTV	Trtmt Basin 1	BASE	5.42	5.52	6.00	2111	0.00	0.04	0.0	0.0
WQTV	Trtmt Basin 1	BASE	5.51	5.52	6.00	2106	0.00	0.04	0.0	0.0
WQTV	Trtmt Basin 1	BASE	5.59	5.51	6.00	2102	0.00	0.04	0.0	0.0
WQTV	Trtmt Basin 1	BASE	5.67	5.51	6.00	2097	0.00	0.04	0.0	0.0
WQTV	Trtmt Basin 1	BASE	5.76	5.50	6.00	2093	0.00	0.04	0.0	0.0
WQTV	Trtmt Basin 1	BASE	5.84	5.50	6.00	2089	0.00	0.03	0.0	0.0
WQTV	Trtmt Basin 1	BASE	5.92	5.49	6.00	2084	0.00	0.03	0.0	0.0
WQTV	Trtmt Basin 1	BASE	6.01	5.49	6.00	2080	0.00	0.03	0.0	0.0
WQTV	Trtmt Basin 1	BASE	6.09	5.48	6.00	2076	0.00	0.03	0.0	0.1
WQTV	Trtmt Basin 1	BASE	6.17	5.48	6.00	2072	0.00	0.03	0.0	0.1
WQTV	Trtmt Basin 1	BASE	6.26	5.47	6.00	2068	0.00	0.03	0.0	0.1
WQTV	Trtmt Basin 1	BASE	6.34	5.47	6.00	2063	0.00	0.03	0.0	0.1
WQTV	Trtmt Basin 1	BASE	6.42	5.46	6.00	2059	0.00	0.03	0.0	0.1
WQTV	Trtmt Basin 1	BASE	6.51	5.46	6.00	2055	0.00	0.03	0.0	0.1
WQTV	Trtmt Basin 1	BASE	6.59	5.45	6.00	2051	0.00	0.03	0.0	0.1
WQTV	Trtmt Basin 1	BASE	6.67	5.45	6.00	2047	0.00	0.03	0.0	0.1
WQTV	Trtmt Basin 1	BASE	6.76	5.45	6.00	2043	0.00	0.03	0.0	0.1
WQTV	Trtmt Basin 1	BASE	6.84	5.44	6.00	2039	0.00	0.03	0.0	0.1
WQTV	Trtmt Basin 1	BASE	6.92	5.44	6.00	2036	0.00	0.03	0.0	0.1
WQTV	Trtmt Basin 1	BASE	7.01	5.43	6.00	2032	0.00	0.03	0.0	0.1

Simulation	Node	Group	Time	Stage	Warning Stage	Surface Area	Total Inflow	Total Outflow	Total Vol In	Total Vol Out
			hrs	ft	ft	ft2	cfs	cfs	af	af
WQTV	Trtmt Basin 1	BASE	7.09	5.43	6.00	2028	0.00	0.03	0.0	0.1
WQTV	Trtmt Basin 1	BASE	7.17	5.42	6.00	2024	0.00	0.03	0.0	0.1
WQTV	Trtmt Basin 1	BASE	7.26	5.42	6.00	2020	0.00	0.03	0.0	0.1
WQTV	Trtmt Basin 1	BASE	7.34	5.41	6.00	2017	0.00	0.03	0.0	0.1
WQTV	Trtmt Basin 1	BASE	7.42	5.41	6.00	2013	0.00	0.03	0.0	0.1
WQTV	Trtmt Basin 1	BASE	7.51	5.41	6.00	2009	0.00	0.03	0.0	0.1
WQTV	Trtmt Basin 1	BASE	7.59	5.40	6.00	2006	0.00	0.03	0.0	0.1
WQTV	Trtmt Basin 1	BASE	7.67	5.40	6.00	2002	0.00	0.03	0.0	0.1
WQTV	Trtmt Basin 1	BASE	7.76	5.39	6.00	1999	0.00	0.03	0.0	0.1
WQTV	Trtmt Basin 1	BASE	7.84	5.39	6.00	1995	0.00	0.03	0.0	0.1
WQTV	Trtmt Basin 1	BASE	7.92	5.39	6.00	1992	0.00	0.03	0.0	0.1
WQTV	Trtmt Basin 1	BASE	8.01	5.38	6.00	1988	0.00	0.03	0.0	0.1
WQTV	Trtmt Basin 1	BASE	8.09	5.38	6.00	1985	0.00	0.03	0.0	0.1
WQTV	Trtmt Basin 1	BASE	8.17	5.37	6.00	1981	0.00	0.03	0.0	0.1
WQTV	Trtmt Basin 1	BASE	8.26	5.37	6.00	1978	0.00	0.03	0.0	0.1
WQTV	Trtmt Basin 1	BASE	8.34	5.37	6.00	1974	0.00	0.03	0.0	0.1
WQTV	Trtmt Basin 1	BASE	8.42	5.36	6.00	1971	0.00	0.03	0.0	0.1
WQTV	Trtmt Basin 1	BASE	8.51	5.36	6.00	1968	0.00	0.03	0.0	0.1
WQTV	Trtmt Basin 1	BASE	8.59	5.35	6.00	1964	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	8.67	5.35	6.00	1961	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	8.76	5.35	6.00	1958	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	8.84	5.34	6.00	1954	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	8.92	5.34	6.00	1951	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	9.01	5.34	6.00	1948	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	9.09	5.33	6.00	1945	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	9.17	5.33	6.00	1942	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	9.26	5.33	6.00	1938	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	9.34	5.32	6.00	1935	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	9.42	5.32	6.00	1932	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	9.51	5.31	6.00	1929	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	9.59	5.31	6.00	1926	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	9.67	5.31	6.00	1923	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	9.76	5.30	6.00	1920	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	9.84	5.30	6.00	1917	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	9.92	5.30	6.00	1914	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	10.01	5.29	6.00	1911	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	10.09	5.29	6.00	1908	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	10.17	5.29	6.00	1905	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	10.26	5.28	6.00	1902	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	10.34	5.28	6.00	1899	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	10.42	5.28	6.00	1896	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	10.51	5.27	6.00	1893	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	10.59	5.27	6.00	1891	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	10.67	5.27	6.00	1888	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	10.76	5.26	6.00	1885	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	10.84	5.26	6.00	1882	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	10.92	5.26	6.00	1879	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	11.01	5.25	6.00	1877	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	11.09	5.25	6.00	1874	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	11.17	5.25	6.00	1871	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	11.26	5.24	6.00	1868	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	11.34	5.24	6.00	1866	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	11.42	5.24	6.00	1863	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	11.51	5.24	6.00	1860	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	11.59	5.23	6.00	1857	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	11.67	5.23	6.00	1855	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	11.76	5.23	6.00	1852	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	11.84	5.22	6.00	1850	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	11.92	5.22	6.00	1847	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	12.01	5.22	6.00	1844	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	12.09	5.21	6.00	1842	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	12.17	5.21	6.00	1839	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	12.26	5.21	6.00	1837	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	12.34	5.21	6.00	1834	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	12.42	5.20	6.00	1831	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	12.51	5.20	6.00	1829	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	12.59	5.20	6.00	1826	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	12.67	5.19	6.00	1824	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	12.76	5.19	6.00	1821	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	12.84	5.19	6.00	1819	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	12.92	5.18	6.00	1816	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	13.01	5.18	6.00	1814	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	13.09	5.18	6.00	1811	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	13.17	5.18	6.00	1809	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	13.26	5.17	6.00	1807	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	13.34	5.17	6.00	1804	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	13.42	5.17	6.00	1802	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	13.51	5.17	6.00	1799	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	13.59	5.16	6.00	1797	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	13.67	5.16	6.00	1795	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	13.76	5.16	6.00	1792	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	13.84	5.15	6.00	1790	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	13.92	5.15	6.00	1788	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	14.01	5.15	6.00	1785	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	14.09	5.15	6.00	1783	0.00	0.02	0.0	0.1

Simulation	Node	Group	Time	Stage	Warning Stage	Surface Area	Total Inflow	Total Outflow	Total Vol In	Total Vol Out
			hrs	ft	ft	ft2	cfs	cfs	af	af
WQTV	Trtmt Basin 1	BASE	14.17	5.14	6.00	1781	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	14.26	5.14	6.00	1778	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	14.34	5.14	6.00	1776	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	14.42	5.14	6.00	1774	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	14.51	5.13	6.00	1771	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	14.59	5.13	6.00	1769	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	14.67	5.13	6.00	1767	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	14.76	5.13	6.00	1765	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	14.84	5.12	6.00	1762	0.00	0.02	0.0	0.1
WQTV	Trtmt Basin 1	BASE	14.92	5.12	6.00	1760	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	15.01	5.12	6.00	1758	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	15.09	5.12	6.00	1756	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	15.17	5.11	6.00	1754	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	15.26	5.11	6.00	1751	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	15.34	5.11	6.00	1749	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	15.42	5.11	6.00	1747	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	15.51	5.10	6.00	1745	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	15.59	5.10	6.00	1743	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	15.67	5.10	6.00	1741	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	15.76	5.10	6.00	1739	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	15.84	5.09	6.00	1736	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	15.92	5.09	6.00	1734	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	16.01	5.09	6.00	1732	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	16.09	5.09	6.00	1730	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	16.17	5.08	6.00	1728	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	16.26	5.08	6.00	1726	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	16.34	5.08	6.00	1724	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	16.42	5.08	6.00	1722	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	16.51	5.07	6.00	1720	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	16.59	5.07	6.00	1718	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	16.67	5.07	6.00	1716	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	16.76	5.07	6.00	1714	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	16.84	5.06	6.00	1711	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	16.92	5.06	6.00	1709	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	17.01	5.06	6.00	1707	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	17.09	5.06	6.00	1705	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	17.17	5.06	6.00	1703	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	17.26	5.05	6.00	1701	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	17.34	5.05	6.00	1699	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	17.42	5.05	6.00	1697	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	17.51	5.05	6.00	1696	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	17.59	5.04	6.00	1694	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	17.67	5.04	6.00	1692	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	17.76	5.04	6.00	1690	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	17.84	5.04	6.00	1688	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	17.92	5.04	6.00	1686	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	18.01	5.03	6.00	1684	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	18.09	5.03	6.00	1682	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	18.17	5.03	6.00	1680	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	18.26	5.03	6.00	1678	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	18.34	5.02	6.00	1676	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	18.42	5.02	6.00	1674	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	18.51	5.02	6.00	1672	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	18.59	5.02	6.00	1671	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	18.67	5.02	6.00	1669	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	18.76	5.01	6.00	1667	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	18.84	5.01	6.00	1665	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	18.92	5.01	6.00	1663	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	19.01	5.01	6.00	1661	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	19.09	5.00	6.00	1659	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	19.17	5.00	6.00	1658	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	19.26	5.00	6.00	1656	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	19.34	5.00	6.00	1654	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	19.42	5.00	6.00	1652	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	19.51	4.99	6.00	1650	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	19.59	4.99	6.00	1648	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	19.67	4.99	6.00	1647	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	19.76	4.99	6.00	1645	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	19.84	4.99	6.00	1643	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	19.92	4.98	6.00	1641	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	20.01	4.98	6.00	1640	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	20.09	4.98	6.00	1638	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	20.17	4.98	6.00	1636	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	20.26	4.98	6.00	1634	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	20.34	4.97	6.00	1632	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	20.42	4.97	6.00	1631	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	20.51	4.97	6.00	1629	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	20.59	4.97	6.00	1627	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	20.67	4.97	6.00	1625	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	20.76	4.96	6.00	1624	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	20.84	4.96	6.00	1622	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	20.92	4.96	6.00	1620	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	21.01	4.96	6.00	1619	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	21.09	4.96	6.00	1617	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	21.17	4.95	6.00	1615	0.00	0.01	0.0	0.1

Simulation	Node	Group	Time	Stage	Warning Stage	Surface Area	Total Inflow	Total Outflow	Total Vol In	Total Vol Out
			hrs	ft	ft	ft2	cfs	cfs	af	af
WQTV	Trtmt Basin 1	BASE	21.26	4.95	6.00	1614	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	21.34	4.95	6.00	1612	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	21.42	4.95	6.00	1610	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	21.51	4.95	6.00	1608	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	21.59	4.94	6.00	1607	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	21.67	4.94	6.00	1605	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	21.76	4.94	6.00	1603	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	21.84	4.94	6.00	1602	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	21.92	4.94	6.00	1600	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	22.01	4.93	6.00	1599	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	22.09	4.93	6.00	1597	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	22.17	4.93	6.00	1595	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	22.26	4.93	6.00	1594	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	22.34	4.93	6.00	1592	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	22.42	4.93	6.00	1590	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	22.51	4.92	6.00	1589	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	22.59	4.92	6.00	1587	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	22.67	4.92	6.00	1586	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	22.76	4.92	6.00	1584	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	22.84	4.92	6.00	1582	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	22.92	4.91	6.00	1581	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	23.01	4.91	6.00	1579	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	23.09	4.91	6.00	1578	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	23.17	4.91	6.00	1576	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	23.26	4.91	6.00	1574	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	23.34	4.91	6.00	1573	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	23.42	4.90	6.00	1571	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	23.51	4.90	6.00	1570	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	23.59	4.90	6.00	1568	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	23.67	4.90	6.00	1567	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	23.76	4.90	6.00	1565	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	23.84	4.89	6.00	1563	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	23.92	4.89	6.00	1562	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	24.01	4.89	6.00	1560	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	24.09	4.89	6.00	1559	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	24.17	4.89	6.00	1557	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	24.26	4.89	6.00	1556	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	24.34	4.88	6.00	1554	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	24.42	4.88	6.00	1553	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	24.51	4.88	6.00	1551	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	24.59	4.88	6.00	1550	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	24.67	4.88	6.00	1548	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	24.76	4.88	6.00	1547	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	24.84	4.87	6.00	1545	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	24.92	4.87	6.00	1544	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	25.01	4.87	6.00	1542	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	25.09	4.87	6.00	1541	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	25.17	4.87	6.00	1539	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	25.26	4.87	6.00	1538	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	25.34	4.86	6.00	1536	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	25.42	4.86	6.00	1535	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	25.51	4.86	6.00	1533	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	25.59	4.86	6.00	1532	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	25.67	4.86	6.00	1531	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	25.76	4.86	6.00	1529	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	25.84	4.85	6.00	1528	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	25.92	4.85	6.00	1526	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	26.01	4.85	6.00	1525	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	26.09	4.85	6.00	1523	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	26.17	4.85	6.00	1522	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	26.26	4.85	6.00	1520	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	26.34	4.84	6.00	1519	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	26.42	4.84	6.00	1518	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	26.51	4.84	6.00	1516	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	26.59	4.84	6.00	1515	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	26.67	4.84	6.00	1513	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	26.76	4.84	6.00	1512	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	26.84	4.83	6.00	1511	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	26.92	4.83	6.00	1509	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	27.01	4.83	6.00	1508	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	27.09	4.83	6.00	1506	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	27.17	4.83	6.00	1505	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	27.26	4.83	6.00	1504	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	27.34	4.82	6.00	1502	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	27.42	4.82	6.00	1501	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	27.51	4.82	6.00	1499	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	27.59	4.82	6.00	1498	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	27.67	4.82	6.00	1497	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	27.76	4.82	6.00	1495	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	27.84	4.81	6.00	1494	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	27.92	4.81	6.00	1493	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	28.01	4.81	6.00	1491	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	28.09	4.81	6.00	1490	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	28.17	4.81	6.00	1489	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	28.26	4.81	6.00	1487	0.00	0.01	0.0	0.1

Simulation	Node	Group	Time	Stage	Warning Stage	Surface Area	Total Inflow	Total Outflow	Total Vol In	Total Vol Out
			hrs	ft	ft	ft2	cfs	cfs	af	af
WQTV	Trtmt Basin 1	BASE	28.34	4.81	6.00	1486	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	28.42	4.80	6.00	1485	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	28.51	4.80	6.00	1483	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	28.59	4.80	6.00	1482	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	28.67	4.80	6.00	1481	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	28.76	4.80	6.00	1479	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	28.84	4.80	6.00	1478	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	28.92	4.79	6.00	1477	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	29.01	4.79	6.00	1475	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	29.09	4.79	6.00	1474	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	29.17	4.79	6.00	1473	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	29.26	4.79	6.00	1471	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	29.34	4.79	6.00	1470	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	29.42	4.79	6.00	1469	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	29.51	4.78	6.00	1468	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	29.59	4.78	6.00	1466	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	29.67	4.78	6.00	1465	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	29.76	4.78	6.00	1464	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	29.84	4.78	6.00	1462	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	29.92	4.78	6.00	1461	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	30.01	4.78	6.00	1460	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	30.09	4.77	6.00	1459	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	30.17	4.77	6.00	1457	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	30.26	4.77	6.00	1456	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	30.34	4.77	6.00	1455	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	30.42	4.77	6.00	1453	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	30.51	4.77	6.00	1452	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	30.59	4.77	6.00	1451	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	30.67	4.76	6.00	1450	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	30.76	4.76	6.00	1448	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	30.84	4.76	6.00	1447	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	30.92	4.76	6.00	1446	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	31.01	4.76	6.00	1445	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	31.09	4.76	6.00	1443	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	31.17	4.76	6.00	1442	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	31.26	4.75	6.00	1441	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	31.34	4.75	6.00	1440	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	31.42	4.75	6.00	1439	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	31.51	4.75	6.00	1437	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	31.59	4.75	6.00	1436	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	31.67	4.75	6.00	1435	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	31.76	4.75	6.00	1434	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	31.84	4.74	6.00	1432	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	31.92	4.74	6.00	1431	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	32.01	4.74	6.00	1430	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	32.09	4.74	6.00	1429	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	32.17	4.74	6.00	1428	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	32.26	4.74	6.00	1426	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	32.34	4.74	6.00	1425	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	32.42	4.73	6.00	1424	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	32.51	4.73	6.00	1423	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	32.59	4.73	6.00	1422	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	32.67	4.73	6.00	1420	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	32.76	4.73	6.00	1419	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	32.84	4.73	6.00	1418	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	32.92	4.73	6.00	1417	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	33.01	4.73	6.00	1416	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	33.09	4.72	6.00	1415	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	33.17	4.72	6.00	1413	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	33.26	4.72	6.00	1412	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	33.34	4.72	6.00	1411	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	33.42	4.72	6.00	1410	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	33.51	4.72	6.00	1409	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	33.59	4.72	6.00	1408	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	33.67	4.71	6.00	1406	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	33.76	4.71	6.00	1405	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	33.84	4.71	6.00	1404	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	33.92	4.71	6.00	1403	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	34.01	4.71	6.00	1402	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	34.09	4.71	6.00	1401	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	34.17	4.71	6.00	1400	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	34.26	4.71	6.00	1398	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	34.34	4.70	6.00	1397	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	34.42	4.70	6.00	1396	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	34.51	4.70	6.00	1395	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	34.59	4.70	6.00	1394	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	34.67	4.70	6.00	1393	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	34.76	4.70	6.00	1392	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	34.84	4.70	6.00	1390	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	34.92	4.69	6.00	1389	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	35.01	4.69	6.00	1388	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	35.09	4.69	6.00	1387	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	35.17	4.69	6.00	1386	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	35.26	4.69	6.00	1385	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	35.34	4.69	6.00	1384	0.00	0.01	0.0	0.1

Simulation	Node	Group	Time	Stage	Warning Stage	Surface Area	Total Inflow	Total Outflow	Total Vol In	Total Vol Out
			hrs	ft	ft	ft2	cfs	cfs	af	af
WQTV	Trtmt Basin 1	BASE	35.42	4.69	6.00	1383	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	35.51	4.69	6.00	1382	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	35.59	4.68	6.00	1380	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	35.67	4.68	6.00	1379	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	35.76	4.68	6.00	1378	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	35.84	4.68	6.00	1377	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	35.92	4.68	6.00	1376	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	36.01	4.68	6.00	1375	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	36.09	4.68	6.00	1374	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	36.17	4.68	6.00	1373	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	36.26	4.67	6.00	1372	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	36.34	4.67	6.00	1371	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	36.42	4.67	6.00	1370	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	36.51	4.67	6.00	1369	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	36.59	4.67	6.00	1367	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	36.67	4.67	6.00	1366	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	36.76	4.67	6.00	1365	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	36.84	4.67	6.00	1364	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	36.92	4.66	6.00	1363	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	37.01	4.66	6.00	1362	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	37.09	4.66	6.00	1361	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	37.17	4.66	6.00	1360	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	37.26	4.66	6.00	1359	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	37.34	4.66	6.00	1358	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	37.42	4.66	6.00	1357	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	37.51	4.66	6.00	1356	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	37.59	4.66	6.00	1355	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	37.67	4.65	6.00	1354	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	37.76	4.65	6.00	1353	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	37.84	4.65	6.00	1352	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	37.92	4.65	6.00	1351	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	38.01	4.65	6.00	1350	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	38.09	4.65	6.00	1348	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	38.17	4.65	6.00	1347	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	38.26	4.65	6.00	1346	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	38.34	4.64	6.00	1345	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	38.42	4.64	6.00	1344	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	38.51	4.64	6.00	1343	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	38.59	4.64	6.00	1342	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	38.67	4.64	6.00	1341	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	38.76	4.64	6.00	1340	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	38.84	4.64	6.00	1339	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	38.92	4.64	6.00	1338	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	39.01	4.63	6.00	1337	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	39.09	4.63	6.00	1336	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	39.17	4.63	6.00	1335	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	39.26	4.63	6.00	1334	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	39.34	4.63	6.00	1333	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	39.42	4.63	6.00	1332	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	39.51	4.63	6.00	1331	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	39.59	4.63	6.00	1330	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	39.67	4.63	6.00	1329	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	39.76	4.62	6.00	1328	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	39.84	4.62	6.00	1327	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	39.92	4.62	6.00	1326	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	40.01	4.62	6.00	1325	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	40.09	4.62	6.00	1324	0.00	0.01	0.0	0.1
WQTV	Trtmt Basin 1	BASE	40.17	4.62	6.00	1323	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	40.26	4.62	6.00	1322	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	40.34	4.62	6.00	1321	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	40.42	4.62	6.00	1320	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	40.51	4.61	6.00	1319	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	40.59	4.61	6.00	1318	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	40.67	4.61	6.00	1317	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	40.76	4.61	6.00	1316	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	40.84	4.61	6.00	1315	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	40.92	4.61	6.00	1314	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	41.01	4.61	6.00	1313	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	41.09	4.61	6.00	1312	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	41.17	4.61	6.00	1312	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	41.26	4.60	6.00	1311	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	41.34	4.60	6.00	1310	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	41.42	4.60	6.00	1309	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	41.51	4.60	6.00	1308	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	41.59	4.60	6.00	1307	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	41.67	4.60	6.00	1306	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	41.76	4.60	6.00	1305	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	41.84	4.60	6.00	1304	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	41.92	4.60	6.00	1303	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	42.01	4.59	6.00	1302	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	42.09	4.59	6.00	1301	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	42.17	4.59	6.00	1300	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	42.26	4.59	6.00	1299	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	42.34	4.59	6.00	1298	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	42.42	4.59	6.00	1297	0.00	0.00	0.0	0.1

Simulation	Node	Group	Time	Stage	Warning Stage	Surface Area	Total Inflow	Total Outflow	Total Vol In	Total Vol Out
			hrs	ft	ft	ft2	cfs	cfs	af	af
WQTV	Trtmt Basin 1	BASE	42.51	4.59	6.00	1296	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	42.59	4.59	6.00	1295	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	42.67	4.59	6.00	1294	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	42.76	4.58	6.00	1293	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	42.84	4.58	6.00	1293	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	42.92	4.58	6.00	1292	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	43.01	4.58	6.00	1291	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	43.09	4.58	6.00	1290	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	43.17	4.58	6.00	1289	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	43.26	4.58	6.00	1288	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	43.34	4.58	6.00	1287	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	43.42	4.58	6.00	1286	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	43.51	4.58	6.00	1285	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	43.59	4.57	6.00	1284	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	43.67	4.57	6.00	1283	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	43.76	4.57	6.00	1282	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	43.84	4.57	6.00	1282	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	43.92	4.57	6.00	1281	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	44.01	4.57	6.00	1280	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	44.09	4.57	6.00	1279	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	44.17	4.57	6.00	1278	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	44.26	4.57	6.00	1277	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	44.34	4.56	6.00	1276	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	44.42	4.56	6.00	1275	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	44.51	4.56	6.00	1274	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	44.59	4.56	6.00	1273	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	44.67	4.56	6.00	1272	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	44.76	4.56	6.00	1272	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	44.84	4.56	6.00	1271	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	44.92	4.56	6.00	1270	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	45.01	4.56	6.00	1269	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	45.09	4.56	6.00	1268	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	45.17	4.55	6.00	1267	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	45.26	4.55	6.00	1266	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	45.34	4.55	6.00	1265	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	45.42	4.55	6.00	1264	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	45.51	4.55	6.00	1264	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	45.59	4.55	6.00	1263	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	45.67	4.55	6.00	1262	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	45.76	4.55	6.00	1261	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	45.84	4.55	6.00	1260	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	45.92	4.55	6.00	1259	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	46.01	4.54	6.00	1258	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	46.09	4.54	6.00	1258	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	46.17	4.54	6.00	1257	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	46.26	4.54	6.00	1256	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	46.34	4.54	6.00	1255	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	46.42	4.54	6.00	1254	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	46.51	4.54	6.00	1253	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	46.59	4.54	6.00	1252	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	46.67	4.54	6.00	1251	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	46.76	4.54	6.00	1251	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	46.84	4.53	6.00	1250	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	46.92	4.53	6.00	1249	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	47.01	4.53	6.00	1248	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	47.09	4.53	6.00	1247	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	47.17	4.53	6.00	1246	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	47.26	4.53	6.00	1245	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	47.34	4.53	6.00	1245	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	47.42	4.53	6.00	1244	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	47.51	4.53	6.00	1243	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	47.59	4.53	6.00	1242	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	47.67	4.52	6.00	1241	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	47.76	4.52	6.00	1240	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	47.84	4.52	6.00	1240	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	47.92	4.52	6.00	1239	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	48.01	4.52	6.00	1238	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	48.09	4.52	6.00	1237	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	48.17	4.52	6.00	1236	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	48.26	4.52	6.00	1235	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	48.34	4.52	6.00	1235	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	48.42	4.52	6.00	1234	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	48.51	4.52	6.00	1233	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	48.59	4.51	6.00	1232	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	48.67	4.51	6.00	1231	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	48.76	4.51	6.00	1230	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	48.84	4.51	6.00	1230	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	48.92	4.51	6.00	1229	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	49.01	4.51	6.00	1228	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	49.09	4.51	6.00	1227	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	49.17	4.51	6.00	1226	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	49.26	4.51	6.00	1226	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	49.34	4.51	6.00	1225	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	49.42	4.50	6.00	1224	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	49.51	4.50	6.00	1223	0.00	0.00	0.0	0.1

Simulation	Node	Group	Time	Stage	Warning Stage	Surface Area	Total Inflow	Total Outflow	Total Vol In	Total Vol Out
			hrs	ft	ft	ft2	cfs	cfs	af	af
WQTV	Trtmt Basin 1	BASE	99.17	4.50	6.00	1220	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	99.26	4.50	6.00	1220	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	99.34	4.50	6.00	1220	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	99.42	4.50	6.00	1220	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	99.51	4.50	6.00	1220	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	99.59	4.50	6.00	1220	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	99.67	4.50	6.00	1220	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	99.76	4.50	6.00	1220	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	99.84	4.50	6.00	1220	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	99.92	4.50	6.00	1220	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	100.01	4.50	6.00	1220	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 1	BASE	100.02	4.50	6.00	1220	0.00	0.00	0.0	0.1
WQTV	Trtmt Basin 2	BASE	0.00	4.24	4.50	1671	0.00	0.00	0.0	0.0
WQTV	Trtmt Basin 2	BASE	0.08	4.13	4.50	1602	0.00	0.35	0.0	0.0
WQTV	Trtmt Basin 2	BASE	0.17	4.07	4.50	1567	0.00	0.27	0.0	0.0
WQTV	Trtmt Basin 2	BASE	0.25	4.04	4.50	1547	0.00	0.15	0.0	0.0
WQTV	Trtmt Basin 2	BASE	0.34	4.01	4.50	1530	0.00	0.14	0.0	0.0
WQTV	Trtmt Basin 2	BASE	0.42	3.98	4.50	1510	0.00	0.13	0.0	0.0
WQTV	Trtmt Basin 2	BASE	0.50	3.96	4.50	1490	0.00	0.12	0.0	0.0
WQTV	Trtmt Basin 2	BASE	0.59	3.93	4.50	1472	0.00	0.11	0.0	0.0
WQTV	Trtmt Basin 2	BASE	0.67	3.91	4.50	1456	0.00	0.10	0.0	0.0
WQTV	Trtmt Basin 2	BASE	0.75	3.89	4.50	1441	0.00	0.09	0.0	0.0
WQTV	Trtmt Basin 2	BASE	0.84	3.87	4.50	1426	0.00	0.08	0.0	0.0
WQTV	Trtmt Basin 2	BASE	0.92	3.86	4.50	1413	0.00	0.08	0.0	0.0
WQTV	Trtmt Basin 2	BASE	1.00	3.84	4.50	1401	0.00	0.07	0.0	0.0
WQTV	Trtmt Basin 2	BASE	1.09	3.83	4.50	1388	0.00	0.07	0.0	0.0
WQTV	Trtmt Basin 2	BASE	1.18	3.81	4.50	1376	0.00	0.06	0.0	0.0
WQTV	Trtmt Basin 2	BASE	1.26	3.80	4.50	1366	0.00	0.06	0.0	0.0
WQTV	Trtmt Basin 2	BASE	1.34	3.78	4.50	1355	0.00	0.06	0.0	0.0
WQTV	Trtmt Basin 2	BASE	1.43	3.77	4.50	1346	0.00	0.05	0.0	0.0
WQTV	Trtmt Basin 2	BASE	1.50	3.76	4.50	1338	0.00	0.05	0.0	0.0
WQTV	Trtmt Basin 2	BASE	1.59	3.75	4.50	1328	0.00	0.05	0.0	0.0
WQTV	Trtmt Basin 2	BASE	1.68	3.74	4.50	1320	0.00	0.05	0.0	0.0
WQTV	Trtmt Basin 2	BASE	1.76	3.73	4.50	1311	0.00	0.04	0.0	0.0
WQTV	Trtmt Basin 2	BASE	1.85	3.72	4.50	1303	0.00	0.04	0.0	0.0
WQTV	Trtmt Basin 2	BASE	1.92	3.71	4.50	1296	0.00	0.04	0.0	0.0
WQTV	Trtmt Basin 2	BASE	2.01	3.70	4.50	1289	0.00	0.04	0.0	0.0
WQTV	Trtmt Basin 2	BASE	2.09	3.69	4.50	1281	0.00	0.04	0.0	0.0
WQTV	Trtmt Basin 2	BASE	2.18	3.68	4.50	1274	0.00	0.04	0.0	0.0
WQTV	Trtmt Basin 2	BASE	2.27	3.67	4.50	1267	0.00	0.04	0.0	0.0
WQTV	Trtmt Basin 2	BASE	2.33	3.66	4.50	1262	0.00	0.03	0.0	0.0
WQTV	Trtmt Basin 2	BASE	2.42	3.66	4.50	1255	0.00	0.03	0.0	0.0
WQTV	Trtmt Basin 2	BASE	2.51	3.65	4.50	1248	0.00	0.03	0.0	0.0
WQTV	Trtmt Basin 2	BASE	2.61	3.64	4.50	1241	0.00	0.03	0.0	0.0
WQTV	Trtmt Basin 2	BASE	2.69	3.63	4.50	1235	0.00	0.03	0.0	0.0
WQTV	Trtmt Basin 2	BASE	2.77	3.62	4.50	1230	0.00	0.03	0.0	0.0
WQTV	Trtmt Basin 2	BASE	2.85	3.62	4.50	1224	0.00	0.03	0.0	0.0
WQTV	Trtmt Basin 2	BASE	2.93	3.61	4.50	1218	0.00	0.03	0.0	0.0
WQTV	Trtmt Basin 2	BASE	3.02	3.60	4.50	1213	0.00	0.03	0.0	0.0
WQTV	Trtmt Basin 2	BASE	3.10	3.60	4.50	1208	0.00	0.03	0.0	0.0
WQTV	Trtmt Basin 2	BASE	3.18	3.59	4.50	1202	0.00	0.03	0.0	0.0
WQTV	Trtmt Basin 2	BASE	3.26	3.58	4.50	1197	0.00	0.03	0.0	0.0
WQTV	Trtmt Basin 2	BASE	3.34	3.58	4.50	1192	0.00	0.03	0.0	0.0
WQTV	Trtmt Basin 2	BASE	3.42	3.57	4.50	1187	0.00	0.03	0.0	0.0
WQTV	Trtmt Basin 2	BASE	3.51	3.56	4.50	1182	0.00	0.03	0.0	0.0
WQTV	Trtmt Basin 2	BASE	3.59	3.56	4.50	1177	0.00	0.02	0.0	0.0
WQTV	Trtmt Basin 2	BASE	3.67	3.55	4.50	1172	0.00	0.02	0.0	0.0
WQTV	Trtmt Basin 2	BASE	3.76	3.54	4.50	1167	0.00	0.02	0.0	0.0
WQTV	Trtmt Basin 2	BASE	3.84	3.54	4.50	1163	0.00	0.02	0.0	0.0
WQTV	Trtmt Basin 2	BASE	3.92	3.53	4.50	1158	0.00	0.02	0.0	0.0
WQTV	Trtmt Basin 2	BASE	4.01	3.53	4.50	1153	0.00	0.02	0.0	0.0
WQTV	Trtmt Basin 2	BASE	4.09	3.52	4.50	1149	0.00	0.02	0.0	0.0
WQTV	Trtmt Basin 2	BASE	4.17	3.51	4.50	1144	0.00	0.02	0.0	0.0
WQTV	Trtmt Basin 2	BASE	4.26	3.51	4.50	1140	0.00	0.02	0.0	0.0
WQTV	Trtmt Basin 2	BASE	4.34	3.50	4.50	1135	0.00	0.02	0.0	0.0
WQTV	Trtmt Basin 2	BASE	4.42	3.50	4.50	1131	0.00	0.02	0.0	0.0
WQTV	Trtmt Basin 2	BASE	4.51	3.49	4.50	1127	0.00	0.02	0.0	0.0
WQTV	Trtmt Basin 2	BASE	4.59	3.49	4.50	1122	0.00	0.02	0.0	0.0
WQTV	Trtmt Basin 2	BASE	4.67	3.48	4.50	1118	0.00	0.02	0.0	0.0
WQTV	Trtmt Basin 2	BASE	4.76	3.48	4.50	1114	0.00	0.02	0.0	0.0
WQTV	Trtmt Basin 2	BASE	4.84	3.47	4.50	1110	0.00	0.02	0.0	0.0
WQTV	Trtmt Basin 2	BASE	4.92	3.47	4.50	1106	0.00	0.02	0.0	0.0
WQTV	Trtmt Basin 2	BASE	5.01	3.46	4.50	1102	0.00	0.02	0.0	0.0
WQTV	Trtmt Basin 2	BASE	5.09	3.46	4.50	1098	0.00	0.02	0.0	0.0
WQTV	Trtmt Basin 2	BASE	5.17	3.45	4.50	1094	0.00	0.02	0.0	0.0
WQTV	Trtmt Basin 2	BASE	5.26	3.45	4.50	1090	0.00	0.02	0.0	0.0
WQTV	Trtmt Basin 2	BASE	5.34	3.44	4.50	1086	0.00	0.02	0.0	0.0
WQTV	Trtmt Basin 2	BASE	5.42	3.44	4.50	1082	0.00	0.02	0.0	0.0
WQTV	Trtmt Basin 2	BASE	5.51	3.43	4.50	1078	0.00	0.02	0.0	0.0
WQTV	Trtmt Basin 2	BASE	5.59	3.43	4.50	1075	0.00	0.02	0.0	0.0
WQTV	Trtmt Basin 2	BASE	5.67	3.42	4.50	1071	0.00	0.02	0.0	0.0
WQTV	Trtmt Basin 2	BASE	5.76	3.42	4.50	1067	0.00	0.02	0.0	0.0
WQTV	Trtmt Basin 2	BASE	5.84	3.41	4.50	1063	0.00	0.02	0.0	0.0
WQTV	Trtmt Basin 2	BASE	5.92	3.41	4.50	1060	0.00	0.02	0.0	0.0

Simulation	Node	Group	Time	Stage	Warning Stage	Surface Area	Total Inflow	Total Outflow	Total Vol In	Total Vol Out
			hrs	ft	ft	ft2	cfs	cfs	af	af
WQTV	Trtmt Basin 2	BASE	6.01	3.40	4.50	1056	0.00	0.02	0.0	0.0
WQTV	Trtmt Basin 2	BASE	6.09	3.40	4.50	1053	0.00	0.02	0.0	0.0
WQTV	Trtmt Basin 2	BASE	6.17	3.39	4.50	1049	0.00	0.02	0.0	0.0
WQTV	Trtmt Basin 2	BASE	6.26	3.39	4.50	1046	0.00	0.02	0.0	0.0
WQTV	Trtmt Basin 2	BASE	6.34	3.38	4.50	1042	0.00	0.02	0.0	0.0
WQTV	Trtmt Basin 2	BASE	6.42	3.38	4.50	1039	0.00	0.02	0.0	0.0
WQTV	Trtmt Basin 2	BASE	6.51	3.38	4.50	1035	0.00	0.02	0.0	0.0
WQTV	Trtmt Basin 2	BASE	6.59	3.37	4.50	1032	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	6.67	3.37	4.50	1028	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	6.76	3.36	4.50	1025	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	6.84	3.36	4.50	1022	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	6.92	3.35	4.50	1018	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	7.01	3.35	4.50	1015	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	7.09	3.35	4.50	1012	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	7.17	3.34	4.50	1008	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	7.26	3.34	4.50	1005	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	7.34	3.33	4.50	1002	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	7.42	3.33	4.50	999	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	7.51	3.33	4.50	996	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	7.59	3.32	4.50	993	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	7.67	3.32	4.50	989	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	7.76	3.31	4.50	986	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	7.84	3.31	4.50	983	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	7.92	3.31	4.50	980	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	8.01	3.30	4.50	977	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	8.09	3.30	4.50	974	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	8.17	3.29	4.50	971	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	8.26	3.29	4.50	968	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	8.34	3.29	4.50	965	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	8.42	3.28	4.50	962	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	8.51	3.28	4.50	959	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	8.59	3.28	4.50	956	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	8.67	3.27	4.50	953	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	8.76	3.27	4.50	951	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	8.84	3.26	4.50	948	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	8.92	3.26	4.50	945	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	9.01	3.26	4.50	942	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	9.09	3.25	4.50	939	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	9.17	3.25	4.50	936	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	9.26	3.25	4.50	934	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	9.34	3.24	4.50	931	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	9.42	3.24	4.50	928	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	9.51	3.24	4.50	925	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	9.59	3.23	4.50	923	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	9.67	3.23	4.50	920	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	9.76	3.23	4.50	917	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	9.84	3.22	4.50	914	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	9.92	3.22	4.50	912	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	10.01	3.21	4.50	909	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	10.09	3.21	4.50	906	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	10.17	3.21	4.50	904	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	10.26	3.20	4.50	901	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	10.34	3.20	4.50	898	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	10.42	3.20	4.50	896	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	10.51	3.19	4.50	893	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	10.59	3.19	4.50	891	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	10.67	3.19	4.50	888	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	10.76	3.19	4.50	886	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	10.84	3.18	4.50	883	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	10.92	3.18	4.50	881	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	11.01	3.18	4.50	878	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	11.09	3.17	4.50	875	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	11.17	3.17	4.50	873	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	11.26	3.17	4.50	870	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	11.34	3.16	4.50	868	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	11.42	3.16	4.50	866	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	11.51	3.16	4.50	863	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	11.59	3.15	4.50	861	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	11.67	3.15	4.50	858	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	11.76	3.15	4.50	856	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	11.84	3.14	4.50	853	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	11.92	3.14	4.50	851	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	12.01	3.14	4.50	849	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	12.09	3.13	4.50	846	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	12.17	3.13	4.50	844	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	12.26	3.13	4.50	841	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	12.34	3.13	4.50	839	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	12.42	3.12	4.50	837	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	12.51	3.12	4.50	834	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	12.59	3.12	4.50	832	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	12.67	3.11	4.50	830	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	12.76	3.11	4.50	827	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	12.84	3.11	4.50	825	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	12.92	3.11	4.50	823	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	13.01	3.10	4.50	821	0.00	0.01	0.0	0.0

Simulation	Node	Group	Time	Stage	Warning Stage	Surface Area	Total Inflow	Total Outflow	Total Vol In	Total Vol Out
			hrs	ft	ft	ft2	cfs	cfs	af	af
WQTV	Trtmt Basin 2	BASE	13.09	3.10	4.50	818	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	13.17	3.10	4.50	816	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	13.26	3.09	4.50	814	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	13.34	3.09	4.50	812	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	13.42	3.09	4.50	809	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	13.51	3.08	4.50	807	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	13.59	3.08	4.50	805	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	13.67	3.08	4.50	803	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	13.76	3.08	4.50	800	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	13.84	3.07	4.50	798	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	13.92	3.07	4.50	796	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	14.01	3.07	4.50	794	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	14.09	3.07	4.50	792	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	14.17	3.06	4.50	789	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	14.26	3.06	4.50	787	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	14.34	3.06	4.50	785	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	14.42	3.05	4.50	783	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	14.51	3.05	4.50	781	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	14.59	3.05	4.50	779	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	14.67	3.05	4.50	777	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	14.76	3.04	4.50	774	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	14.84	3.04	4.50	772	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	14.92	3.04	4.50	770	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	15.01	3.04	4.50	768	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	15.09	3.03	4.50	766	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	15.17	3.03	4.50	764	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	15.26	3.03	4.50	762	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	15.34	3.02	4.50	760	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	15.42	3.02	4.50	758	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	15.51	3.02	4.50	756	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	15.59	3.02	4.50	754	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	15.67	3.01	4.50	752	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	15.76	3.01	4.50	750	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	15.84	3.01	4.50	748	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	15.92	3.01	4.50	746	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	16.01	3.00	4.50	744	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	16.09	3.00	4.50	742	0.00	0.01	0.0	0.0
WQTV	Trtmt Basin 2	BASE	16.17	3.00	4.50	741	0.00	0.00	0.0	0.0
WQTV	Trtmt Basin 2	BASE	16.26	3.00	4.50	741	0.00	0.00	0.0	0.0
WQTV	Trtmt Basin 2	BASE	16.34	3.00	4.50	741	0.00	0.00	0.0	0.0
WQTV	Trtmt Basin 2	BASE	16.42	3.00	4.50	741	0.00	0.00	0.0	0.0
WQTV	Trtmt Basin 2	BASE	16.51	3.00	4.50	741	0.00	0.00	0.0	0.0
WQTV	Trtmt Basin 2	BASE	16.59	3.00	4.50	741	0.00	0.00	0.0	0.0
WQTV	Trtmt Basin 2	BASE	16.67	3.00	4.50	741	0.00	0.00	0.0	0.0
WQTV	Trtmt Basin 2	BASE	16.76	3.00	4.50	741	0.00	0.00	0.0	0.0
WQTV	Trtmt Basin 2	BASE	16.84	3.00	4.50	741	0.00	0.00	0.0	0.0
WQTV	Trtmt Basin 2	BASE	16.92	3.00	4.50	741	0.00	0.00	0.0	0.0
WQTV	Trtmt Basin 2	BASE	17.01	3.00	4.50	741	0.00	0.00	0.0	0.0
WQTV	Trtmt Basin 2	BASE	17.09	3.00	4.50	741	0.00	0.00	0.0	0.0
WQTV	Trtmt Basin 2	BASE	17.17	3.00	4.50	741	0.00	0.00	0.0	0.0
WQTV	Trtmt Basin 2	BASE	17.26	3.00	4.50	741	0.00	0.00	0.0	0.0
WQTV	Trtmt Basin 2	BASE	17.34	3.00	4.50	741	0.00	0.00	0.0	0.0
WQTV	Trtmt Basin 2	BASE	17.42	3.00	4.50	741	0.00	0.00	0.0	0.0
WQTV	Trtmt Basin 2	BASE	17.51	3.00	4.50	741	0.00	0.00	0.0	0.0
WQTV	Trtmt Basin 2	BASE	17.59	3.00	4.50	741	0.00	0.00	0.0	0.0
WQTV	Trtmt Basin 2	BASE	17.67	3.00	4.50	741	0.00	0.00	0.0	0.0
WQTV	Trtmt Basin 2	BASE	17.76	3.00	4.50	741	0.00	0.00	0.0	0.0
WQTV	Trtmt Basin 2	BASE	17.84	3.00	4.50	741	0.00	0.00	0.0	0.0
WQTV	Trtmt Basin 2	BASE	17.92	3.00	4.50	741	0.00	0.00	0.0	0.0
WQTV	Trtmt Basin 2	BASE	18.01	3.00	4.50	741	0.00	0.00	0.0	0.0
WQTV	Trtmt Basin 2	BASE	18.09	3.00	4.50	741	0.00	0.00	0.0	0.0
WQTV	Trtmt Basin 2	BASE	18.17	3.00	4.50	741	0.00	0.00	0.0	0.0
WQTV	Trtmt Basin 2	BASE	18.26	3.00	4.50	741	0.00	0.00	0.0	0.0
WQTV	Trtmt Basin 2	BASE	18.34	3.00	4.50	741	0.00	0.00	0.0	0.0
WQTV	Trtmt Basin 2	BASE	18.42	3.00	4.50	741	0.00	0.00	0.0	0.0
WQTV	Trtmt Basin 2	BASE	18.51	3.00	4.50	741	0.00	0.00	0.0	0.0
WQTV	Trtmt Basin 2	BASE	18.59	3.00	4.50	741	0.00	0.00	0.0	0.0
WQTV	Trtmt Basin 2	BASE	18.67	3.00	4.50	741	0.00	0.00	0.0	0.0
WQTV	Trtmt Basin 2	BASE	18.76	3.00	4.50	741	0.00	0.00	0.0	0.0
WQTV	Trtmt Basin 2	BASE	18.84	3.00	4.50	741	0.00	0.00	0.0	0.0
WQTV	Trtmt Basin 2	BASE	18.92	3.00	4.50	741	0.00	0.00	0.0	0.0
WQTV	Trtmt Basin 2	BASE	19.01	3.00	4.50	741	0.00	0.00	0.0	0.0
WQTV	Trtmt Basin 2	BASE	19.09	3.00	4.50	741	0.00	0.00	0.0	0.0
WQTV	Trtmt Basin 2	BASE	19.17	3.00	4.50	741	0.00	0.00	0.0	0.0
WQTV	Trtmt Basin 2	BASE	19.26	3.00	4.50	741	0.00	0.00	0.0	0.0
WQTV	Trtmt Basin 2	BASE	19.34	3.00	4.50	741	0.00	0.00	0.0	0.0
WQTV	Trtmt Basin 2	BASE	19.42	3.00	4.50	741	0.00	0.00	0.0	0.0
WQTV	Trtmt Basin 2	BASE	19.51	3.00	4.50	741	0.00	0.00	0.0	0.0
WQTV	Trtmt Basin 2	BASE	19.59	3.00	4.50	741	0.00	0.00	0.0	0.0
WQTV	Trtmt Basin 2	BASE	19.67	3.00	4.50	741	0.00	0.00	0.0	0.0
WQTV	Trtmt Basin 2	BASE	19.76	3.00	4.50	741	0.00	0.00	0.0	0.0
WQTV	Trtmt Basin 2	BASE	19.84	3.00	4.50	741	0.00	0.00	0.0	0.0
WQTV	Trtmt Basin 2	BASE	19.92	3.00	4.50	741	0.00	0.00	0.0	0.0
WQTV	Trtmt Basin 2	BASE	20.01	3.00	4.50	741	0.00	0.00	0.0	0.0
WQTV	Trtmt Basin 2	BASE	20.09	3.00	4.50	741	0.00	0.00	0.0	0.0