Lakewood-Pirateland Swash Drainage Study

February 29, 2012

Horry County, South Carolina

THOMAS & HUTTON
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DRAINAGE STUDY

FOR:

LAKEWOOD – PIRATELAND SWASH

HORRY COUNTY, SC

PREPARED FOR:

HORRY COUNTY STORMWATER DEPARTMENT

FEBRUARY 29, 2012

J-23453.404

Prepared by:

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Savannah, GA | Charleston, SC | Myrtle Beach, SC | Brunswick, GA | Wilmington, NC

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BACKGROUND AND INTRODUCTION

Horry County is experiencing rapid growth and in certain places, the pace of development continues to outgrow the capacity of the existing drainage system. Flooding concerns have been voiced by many of the businesses and residents in the Lakewood-Pirateland Swash Basin (Exhibit 1). Structural flooding of several business and/or homes has been recorded on at least two occasions in the past.

The Lakewood-Pirateland Basin drains 1,560 acres including the Lakewood and Pirateland Campgrounds, Long Bay Estates, and portions of the Myrtle Beach State Park, all east of US Highway 17 Business. West of US Highway 17 Business, the basin provides drainage for the Prestwick Subdivision and Country Club, Crystal Lakes Mobile Home Park, Seagate Village (formerly part of Myrtle Beach Air Force Base), and commercial properties along the highway. Drainage is conveyed through a swash to the Atlantic Ocean.

The purpose of this report is to document the development of the Phase 1 Hydrologic and Hydraulic Model for the Lakewood-Pirateland Swash Drainage Basin Project. The hydrologic and hydraulic model is intended to be capable of simulating the existing conditions within the study area and to serve as the basis for the analysis alternatives conceptual design of future improvements.

The Horry County Stormwater Department intends to implement a three phases approach to improving drainage in the basin – including (1) the development of a hydrology and hydraulic model, (2) alternatives analysis and recommendations, and (3) implementation of the recommended improvements.

Phase 1 of the Lakewood-Pirateland Swash Drainage Project included six tasks as follows:

- Task 1 – Data Collection
- Task 2 – Field Reconnaissance
- Task 3 – Surveying
- Task 4 – Existing Conditions Model Development
- Task 5 – Model Calibration
- Task 6 – Phase 1 Study Findings and Report

PHASE 1- HYDROLOGIC AND HYDRAULIC MODEL DEVELOPMENT

Data Collection

Thomas and Hutton has collected various data to build and calibrate a hydrologic and hydraulic model to simulate existing conditions in the Lakewood-Pirateland Swash Drainage Basin. The data collected generally falls within four broad categories:

- Geographic Information System (GIS) Data
- Construction Plans / As-built Plans / Design Reports
- Rainfall Data

Horry County GIS Data – The Horry County Stormwater Department supplied T&H with GIS data as part of the project, and T&H utilized data previously obtained from Horry County for the project. These data include a drainage system inventory (catch basins, discharge points, inlets, junction boxes, drainage line – open and closed, ponds and other hydrographic features), impervious areas, roads, property parcels, LiDAR topography, and land use / land cover.

City of Myrtle Beach GIS Data – T&H had previously obtained GIS data from the City of Myrtle Beach that was used for this project. This included a drainage system inventory (junctions, nodes, outfalls, structures, ditch lines, pipe lines, etc.

Other GIS Data – T&H utilized its extensive GIS data library as part of the project. Additional data used included aerial photography (historic and recent) and soils mapping (SSURGO) data.

Construction Plans / As-built Plans/ Design Reports – T&H collected various plans and reports for infrastructure built within the basin. This included partial plans for the initial phase of the Prestwick development, as-built plans for certain later phases of the Prestwick development, as-built plans and reports for recent developments in the Ocean Lakes Camper Storage and Village, and as-built plans for Bermuda Gardens. In addition to this, T&H accessed the SCDOT on-line plans library and downloaded plans for roads in the basin including US Hwy 17 Business, School Road (now Prestwick Club Drive, Lakeview Drive and Hwy 396) and Catherin Drive.

Rainfall Data - Daily and hourly rainfall data were collected from available rain gauges for the Hurricane Floyd (September 14-16, 1999) event and the September 26-30, 2010 storm event for calibration purpose. A location map for the local rainfall gauges with available data is included as Figure 1. Table 1 summarizes the daily total rainfall amounts for both events and Figure 2 compares the daily rainfall amounts for the five gages with available September 2010 rainfall data. Hourly rainfall data was used for input in the H&H model. The hourly data used for the Hurricane Floyd event calibration was taken from the Grand Strand Airport in North Myrtle Beach, SC and the hourly data for the September 2010 event was taken from the USGS Gage 02110729 (Hwy 707) in Socastee, SC. Figures 4 and 5 illustrate the hourly rainfall data for the Hurricane Floyd and September 2010 events, respectively.

Field Reconnaissance

Using the collected GIS data, the basin and sub-basins were delineated, flow patterns were determined and major drainage features were identified. Exhibit 1 illustrates the basin and sub-basins developed for this study. The basin was divided into 49 sub-basins based on the digital elevation model (DEM) and drainage infrastructure.

Field reconnaissance was conducted on various dates to confirm the basin and sub-basin delineation, document drainage infrastructure, assess reported flooding locations, and coordinate with stakeholders. Field reconnaissance was conducted October 27, 2011 (pre-project preparation), December 13, 2011 (in coordination with Dave Zabeck, Prestwick HOA contact; Paul Kaufman, Prestwick GC Superintendent; Dave Fuss, Horry County SW; and Eric Hasara, Horry County SW), December 21, 2011 and finally on February 9, 2012. During the field reconnaissance geo-referenced photography was taken to document the drainage infrastructure. Exhibit 2 illustrates the locations of the photo documentation and includes a selection of photographs.

The field reconnaissance findings were used to refine the basin, sub-basins and ICPR model link-node connectivity. Additionally, photographs and measurements within the basin were used to determine high water mark elevations of Hurricane Floyd and September 2010 events. A local business, Camper Country, located at 5500 S Kings Highway allowed measurements to be taken for flood levels that occurred during Hurricane Floyd. Flooding occurred 13 inches above the finished floor elevation of their Sales Service building as confirmed by water stains. Additionally, the business provided photographs that revealed the high water mark for the September 2010 storm event. This information was used to determine needed survey data.

Surveying

Based on the basin / sub-basin delineation and the identification of the major drainage system, surveying was conducted to gather detailed information for input in the H&H model. Surveying was conducted on two separate occasions December 15-16, 2011 and February 16, 2012. Approximately thirty-five channel cross section and 15 structures (culvert, bridge, or outfall) were surveyed. In addition, the finished floor elevations of critical structures and a high water mark where surveyed. This data was used in building and calibrating the H&H model.

Existing Conditions Model Development

The data collected during Tasks 1, through 3 where used to develop the input for an H&H model of major sub-basins and major drainage system for the Lakewood-Pirateland Swash Drainage Basin. The Interconnected Channel and Pond Routing (ICPR) Model by Streamline Technologies was used to develop the H&H model. Exhibit 3 is a node-link schematic ICPR model developed.

The ICPR program is capable of modeling rainfall and stormwater runoff and to perform hydraulic routing through the storm drainage system. The ICPR program is a FEMA approved model that has the ability to analyze complex interconnected drainage systems dynamically over extended time periods.

The hydrologic input for ICPR consists of information for each drainage sub-basin within the project. Input variables include runoff curve number, rainfall distribution pattern, hydrograph peaking factor, contributing area, and time of concentration. The ICPR program generates runoff hydrographs for each sub-basin based on these user-specified variables. Hydrographs are generated by ICPR using the SCS Unit Hydrograph Method.

Hydrologic inputs for each sub-basin include the contributing area, composite curve number and the time of concentration. The following paragraphs summarize the calculation of the hydrologic input.

Composite Curve Number – Composite curve numbers (CNs) were calculated using the land use/land cover grid (LULC) obtained from Horry County. This LULC grid if 4-feet by 4-feet and is comprised of approximately 20 different LULCs. Hydrologic soils group (HSG) data available from the USDA SSURGO GIS soils coverage for Horry County was overlain the 4-foot by 4-foot grid and a single HSG (A, A/D, B, B/D, C, and D) was assigned to each cell base on the majority of cell coverage.

A LULC-HSG matrix was developed for the project. The matrix was developed for each potential LULC-HSG combination, and is based on literature values (i.e. TR-55), past experience and professional judgment. The LULC-HSG Matrix developed for this study is included as Table 2. Based on the LULC-HSG matrix and the unique LULC-HSG in the grid, a single CN value was assigned to each cell. The CNs of the cells falling within each sub-basin where averaged, to produce an area weighted composite CN for each sub-basin.

Time of Concentration – A time of concentration (Tc) value was estimated for each sub-basin. The Tc was calculated based on the NRCS, three part travel time method documented in TR-55. The three equations used are summarized below:

Sheet Flow: (hr)

$$t_1 = \frac{0.007(nL)^{0.8}}{{P_2}^{0.05} \times S^{0.4}}$$

Symbol	Dimension	Units
n	Manning's n	--
L	Length of flow	ft
P_2	2 yr event rainfall	in
S	Slope	ft/ft

Shallow Concentrated Flow: (hr)

$$t_2 = \frac{L}{3600 \times V}$$

Symbol	Dimension	Units
L	Length of flow	ft
V*	Velocity	ft/s

*Based on TR-55 velocity-slope relationship

Pipe Flow: (hr)

$$t_3 = \frac{L}{3600 \times V}$$

Symbol	Dimension	Units
L	Length of flow	ft
V*	Velocity	ft/s

*Assumed to be 2 ft/s

Time of Concentration: (hr)

$$t_c = t_1 + t_2 + t_3$$

The longest flow path for each sub-basin was estimated by visually inspecting the available topographic and drainage system GIS data. The longest flow paths were digitized in GIS and split into three segments representing sheet flow, shallow concentrated flow, and pipe flow. The Slope of each line segment was determined using the available elevation data. The Tc calculations are summarized in Table 3.

Additional hydrologic data input in the ICPR model includes the following:

- SCS Unit Hydrograph Method
- SCS Type III Statistical Rainfall Distribution
- 256 Peaking Factor
- Design Storm Rainfall Amounts
  - 2-year, 24-hour = 4.5 inches
  - 10-year, 24-hour = 6.7 inches
  - 25-year, 24-hour = 7.6 inches
  - 50-year, 24-hour = 8.6 inches
  - 100-year, 24-hour = 9.7 inches

The ICPR model also consists of input data for a system of nodes and links (i.e. hydraulic data). Nodes represent locations where flows enter or exit the system, pipe or channel characteristics change, or where stage/storage/time relationships are provided. Links represent traditional types of hydraulic conveyance such as pipes, channels, drop structures, weirs, etc. The sizes, inverts, lengths, and Manning n values for all links are model input. In addition to pipe information, pond and other area's (i.e. wetlands) stage-storage information and the respective outfall structure information is input into the ICPR model.

Input data for the hydraulic portion of the H&H model was developed from a variety of sources including GIS, survey, and as-built data. Where applicable the data source is noted in the model as a comment for the particular input. Nodes we located at strategic locations to simulate the hydraulics of the basin's drainage system. Surveyed cross section data was merged with LiDAR topography data to produce "full-valley" cross sections for model input. Major lake, ponds and other storage areas are simulated as stage-area nodes to properly account for the detention of hydrographs in the system. Road overtopping and overland flow paths were simulated as weirs in the model for the accurate simulation of flooding conditions. Exhibit 4 is the ICPR link-node schematic for the developed model, and graphically illustrates the location and alignment of various model input.

The ICPR model was executed for the 2, 10, 25, 50, and 100-year storm events to initially evaluate the validity of the model results. During this evaluation, model adjustments and additional inputs were made to produce reasonable results.

Model Calibration

Following the development and assessment of the existing conditions H&H model, the model results were assessed under two known flooding events – Hurricane Floyd (in September 1999) and an extreme rainfall event in September 2010. Refer to Table X for a summary of recorded daily rainfall totals for the two events. Figures X and X illustrate the hourly rainfall pattern for the Hurricane Floyd and September 2010 events, respectively.

Hurricane Floyd

The Hurricane Floyd event produced approximately 13.56 inches of rain over a 32 hour period according to the rain gauge at the Grand Strand Airport in North Myrtle Beach. This is the only available rain gauge for the Hurricane Floyd event. The gauge is relatively distant from the Lakewood-Pirateland Swash Basin, however, the widespread rainfall associated with the hurricane allows for the use of the rainfall data as representative for the Lakewood-Pirateland Swash Basin.

ICPR model input was developed to simulate the rainfall of the Hurricane Floyd event as measured at the Grand Strand Airport. The model was then executed for a 72 hour simulation. The resulting maximum water surface elevations (WSEs) were extracted from the ICPR results and mapped at the appropriate node locations in the GIS system. Figure 5 illustrates the resulting maximum WSE in the lower portion of the basin near US HWY 17 Business, where flooding was reported during the actual Hurricane Floyd event.

The simulated maximum WSEs where compared to the known flooding conditions during the event to determine if the model was re-producing the flooding conditions. Structural flooding was report during the event at Camper County's showroom, 1284 Strathmill Ct. and 1288 Strathmill Ct. As summarized in Figure 5, the model reproduces the reported/measured flooding conditions during the event. The simulated flooding of the Camper County's showroom building

compares favorably with the measured high water mark measured there. In addition, the simulation reproduced finished floor flooding of 1284 Strathmill Ct. and 1288 Strathmill Ct., which is consistent with flooding reported by the owners. Other structures in the area (Camper Country repair building and Port of Siam) were not simulated as flooding, which is consistent with the reports that they did not flood during the event.

September 2010

The September 2010 event produced from 8.27 to 13.14 inches of rain over a 5 day period. Gauges closest to the watershed had some of the largest rainfall amounts recorded (See Table X and Figure X). The event appears to be two successive periods of heavy rainfall amounts generally on September 27, 2010 and September 29, 2010. For this purposes of this study the USGS gage at Hwy 707 was used for hourly rainfall data.

ICPR model input was developed to simulate the rainfall of the September 2010 event as measured at the USGS rain gauge. Two models were developed to simulate the event. The first period of rainfall produced 8.27 inches of rain in 72 hours, which was simulated in the model first. The second period produced 4.87 inches of rain in 48 hours, which was simulated second. The results from the first period were used to define the initial conditions for the second event. Also, the curve numbers of the second periods simulation were adjusted to reflect an Antecedent Moisture Condition (AMC) III condition, accounting for the saturated soil conditions for the second event.

The resulting maximum water surface elevations (WSEs) of the second simulation were extracted from the ICPR results and mapped at the appropriate node locations in the GIS system. Figure 6 illustrates the resulting maximum WSE in the lower portion of the basin near US HWY 17 Business, where flooding was reported during the actual September 2010 event.

The simulated maximum WSEs where compared to the known flooding conditions during the event to determine if the model was re-producing the flooding conditions. High water was reported at Camper County's showroom (but no structural flooding) and garage flooding was reported at 1284 Strathmill Ct. As summarized in Figure 6, the model reproduces the reported/measured flooding conditions during the event. The simulated flooding of the Camper County's site compares favorably with the measured high water mark measured there. In addition, the simulation garage flooding at 1284 Strathmill Ct. is consistent with flooding reported by the owners.

Based on the results of the above simulations, it appears as if the ICPR model constructed is capable of reproducing conditions in the basin (particularity in the area of Hwy 17 Business), and no significant adjustment of model input was needed. Refer to Appendix X for a full listing of the maximum WSEs simulated for both flood events.

FINDINGS AND RECOMMENDATIONS

Thomas and Hutton have developed a hydrologic and hydraulic model of the Lakewood-Pirateland Swash Basin and has confirmed the validity of model results with two historical flood events. The model results for the 2-, 10-, 25-, 50-, and 100-year design events are summarized in Appendix B. A print out of the model input is included in Appendix C, and the ICPR model and associated GIS files are included on Data Cd in Appendix D. The work documented in this report and the attached deliverables completes Phase I of the drainage study.

The upcoming Phase 2 - Alternatives Analysis and Improvement Recommendations will include screening, selecting, and evaluating potential alternatives to improve drainage conditions in the basin. These alternatives may include additional stormwater storage, culvert and channel improvements to reduce flooding. A cost benefits analysis will be required to evaluate alternatives. Thomas & Hutton is prepared to immediately continue to work with Horry County Stormwater Department on Phase 2. Below is our proposed approach.

Phase 2 – Alternatives Analysis and Improvement Recommendations

The second phase of the Lakewood-Pirateland Swash Basin Drainage Study will be to screen, select and evaluate potential alternatives to improve drainage conditions in the basin. Phase 2 will include the following tasks:

- Task 1 – Alternative Projects Screening
- Task 2 – Alternative Projects Evaluation
- Task 3 – Alternative Post-Improvement Conditions Model Development
- Task 4 – Opinion of Probable Cost and Benefit Analysis
- Task 5 – Phase 2 Study Findings and Report

The second phase of the study will be the selection and evaluation of alternatives such as additional stormwater storage, or culvert and channel improvements to reduce flooding. A cost benefit analysis will be required to evaluate the alternatives. Two meetings with County staff and two meetings with regulatory agencies are anticipated.

Task 1 - Alternative Projects Screening

Alternative improvement projects will be developed that will address the issues identified. The improvement projects may be independent (a specific project to address a single issue), cumulative (multiple projects may need to address a single issue), or multi-purpose (a single project may address multiple issues).

A preliminary improvement map showing the location of each potential project will be generated. T&H will discuss each potential project with the County in a workshop meeting and based on the input from the County and other factors, a preferred set of proposed projects will be selected for further assessment.

Task 2 – Post-Improvement Conditions Model Development

The preferred projects will be assessed further by incorporating the proposed improvements in a post-improvement conditions ICPR model. The model will be based on the existing conditions model and included the proposed improvements. The ICPR model input will be such that the cumulative impact of the phased projects can be assessed. The proposed improvements will be optimized and sizing and configurations will be documented. The ICPR model will be executed for the 2-, 10-, 25-, 50- and 100-year storm events.

Task 3 – Projects Evaluation

Utilizing available mapping data (aerials, contours, utilities, etc.), each proposed project selected for further evaluation will be conceptually illustrated in plan view to further assess the feasibility and constructability of the project. Various factors such as land, right-of-way, or easement requirements, potential utility conflicts and relocations, and road impacts will be determined.

A preliminary phased implementation plan will be developed. The phasing plan will accounting for various factors including relative cost, impact on reducing drainage/flooding issues, land acquisition needs, permitting requirements, etc. Initial coordination will be conducted with resource and permitting agencies at this time to confirm permittability and potential permit requirements.

Tasks 2 and 3 may be conducted concurrently and iteratively as modeling may prove one project more (or less) effective than anticipated and the project evaluation may determine that a project is infeasible or must be adjusted due to a constraint.

Task 4 – Opinion of Probable Cost and Benefit Analysis

Based on the refined concept plan for each proposed project, and individual opinion of probable construction cost will be developed. The costs will be based on recent bids and contracts for similar work as provided by the County and as found in T&H's records for recent projects in the area. Other costs (such as addition maintenance costs, if any) will also be incorporated in the costs of the project.

A benefit analysis of the proposed projects will be conducted. The benefit analysis will attempt to quantify the prevented damage costs, loss of business revenue, and other tangible benefits over the life of the proposed projects. Intangible benefits, such as providing emergency or evacuation access, elimination of nuisance flooding, and improve to water quality (if any) will also be accounted for. The costs will be compared to the benefits and the selected projects and/or the project phasing may be adjusted accordingly.

Task 5 – Phase 2 Study Findings and Report

The tasks and findings of Phase 2 will be documented in a report. The report will include the details of each project and the phasing plan for future reference by the County as implementation funds may become available or partnering opportunities are presented.

A draft of the report will be provided to the County for review and comment. A final report addressing the County's comments will be produced at the conclusion of the project.

Table 1
Weather Station Daily Rainfall Data Comparison

Hurricane Floyd (1999)								
Station	Location	City	Daily Rainfall (in) 9/14	9/15	9/16	-	-	Total Rainfall (in) Sept. 14-16, 1999
KCRE	Grand Strand Airport	N Myrtle Beach, SC	0.46	10.91	2.19	-	-	13.56
September Event (2010)								
Station	Location	City	Daily Rainfall (in) 9/26	9/27	9/28	9/29	9/30	Total Rainfall (in) Sept. 26-30, 2010
KSCURFS4	Oceanside Village	Garden City, SC	1.06	2.01	1.77	3.46	1.06	9.36
KSCMYRTL17	J L Schwartz WWTF	Myrtle Beach, SC	2.12	3.59	0.80	2.92	0.97	10.40
KCRE	Grand Strand Airport	N Myrtle Beach, SC	0.60	2.72	0.86	2.04	2.05	8.27
USGS 02110729	HWY 707	Socastee, SC	1.91	4.97	1.43	4.78	0.05	13.14
DHEC Surfside	HWY 544	Myrtle Beach, SC	1.39	3.36	2.15	5.07	0.75	12.72
Average	-	-	1.42	3.33	1.40	3.65	0.98	10.78

Table 2
Curve Number Matrix

Land Use	Curve Number						
	HSG A	HSG A/D	HSG B	HSG B/D	HSG C	HSG D	Water
Bare Land	39	39	61	61	74	80	100
Beach	50	50	50	50	50	50	100
Cropland	74	74	83	83	88	90	100
Deciduous Forested Wetland	30	77	55	77	70	77	100
Evergreen Forested Wetland	30	77	55	77	70	77	100
Golf Course	39	39	61	61	74	80	100
Grass	39	39	61	61	74	80	100
Impervious	98	98	98	98	98	98	100
Mixed Forested Wetland	30	77	55	77	70	77	100
Other Palustrine Wetland	30	77	55	77	70	77	100
Paved Road	98	98	98	98	98	98	100
Shrub	30	73	48	73	65	73	100
Structure	98	98	98	98	98	98	100
Unpaved Road	77	77	94	94	91	94	100
Upland Deciduous Forest	30	77	55	77	70	77	100
Upland Evergreen Forest	30	77	55	77	70	77	100
Upland Mixed Forest	30	77	55	77	70	77	100
Water	100	100	100	100	100	100	100

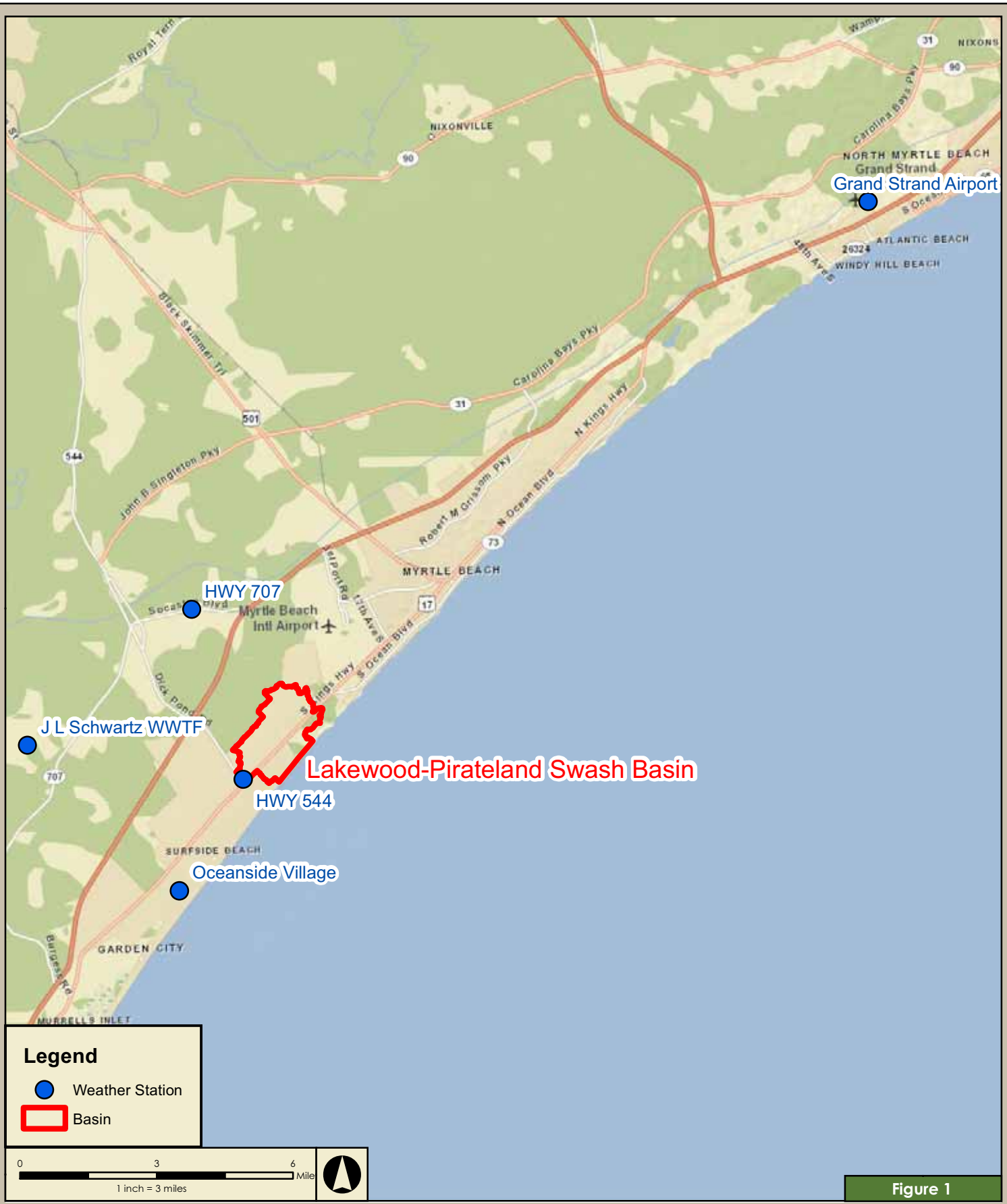

Figure 1

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Thomas & Hutton compiled the map information from the following sources:

Data	Source	Date
Basin	T&H	2011
Weather Station	Weather Underground	2012
Aerial	Bing Maps	2011

Lakewood - Pirateland Swash Drainage Study

Horry County, South Carolina

Weather Station Location Map

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Figure 2
Weather Station Daily Rainfall Data Comparison
September 26-30,2010

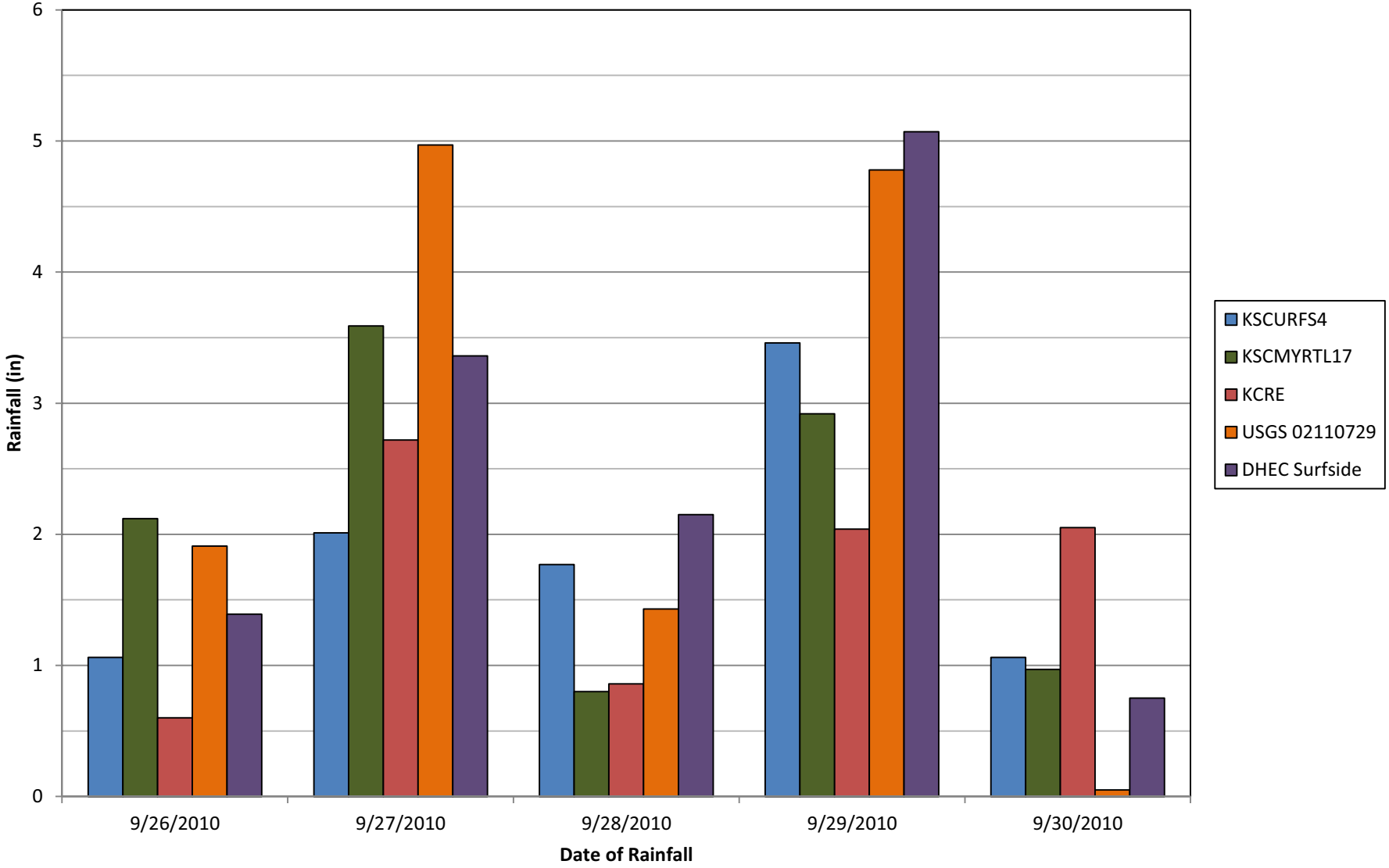


Figure 3
Hourly Rainfall, Grand Strand Airport
Hurricane Floyd, September 14-16, 1999

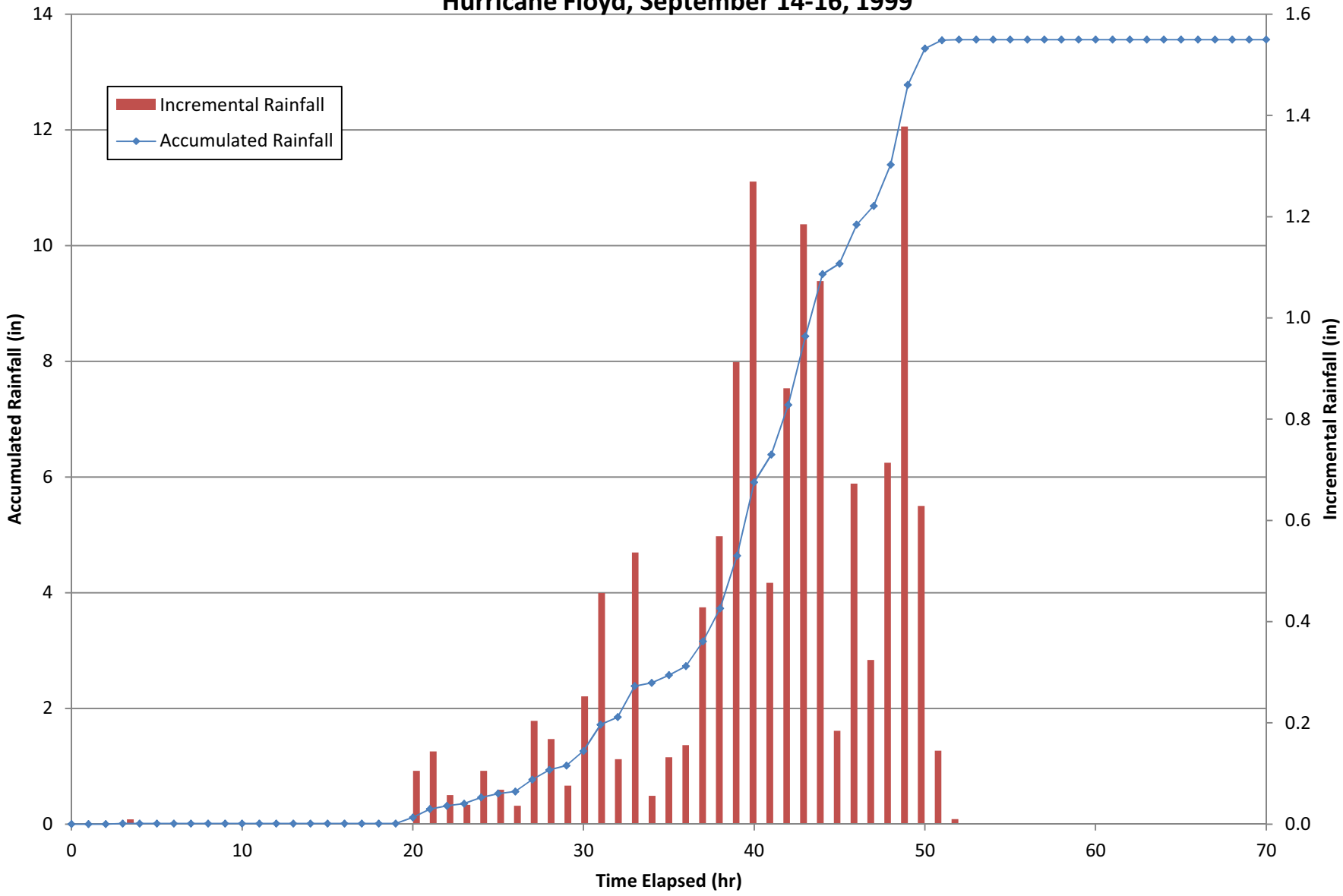
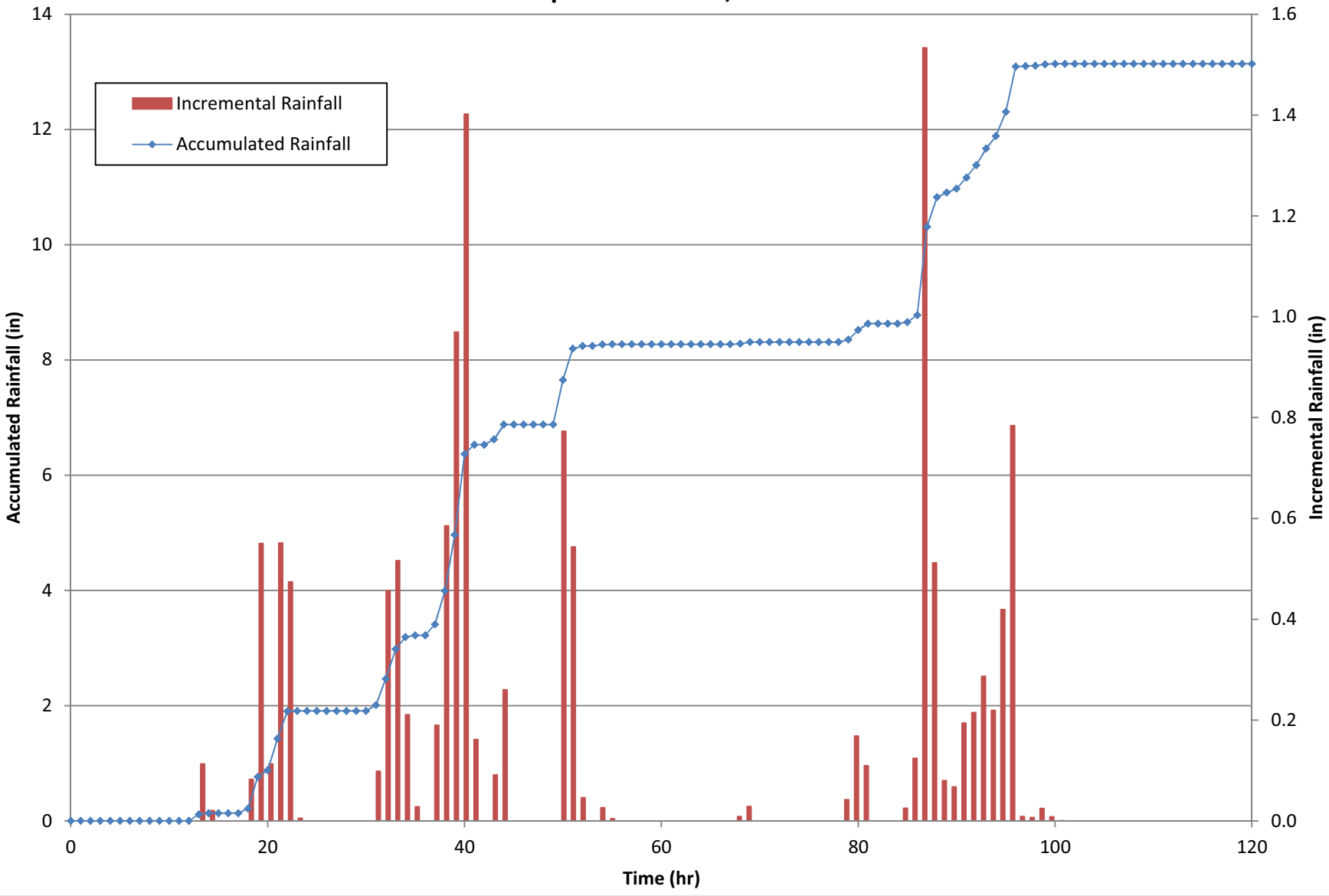


Figure 4
Hourly Rainfall, HWY 707
September 26-30, 2010



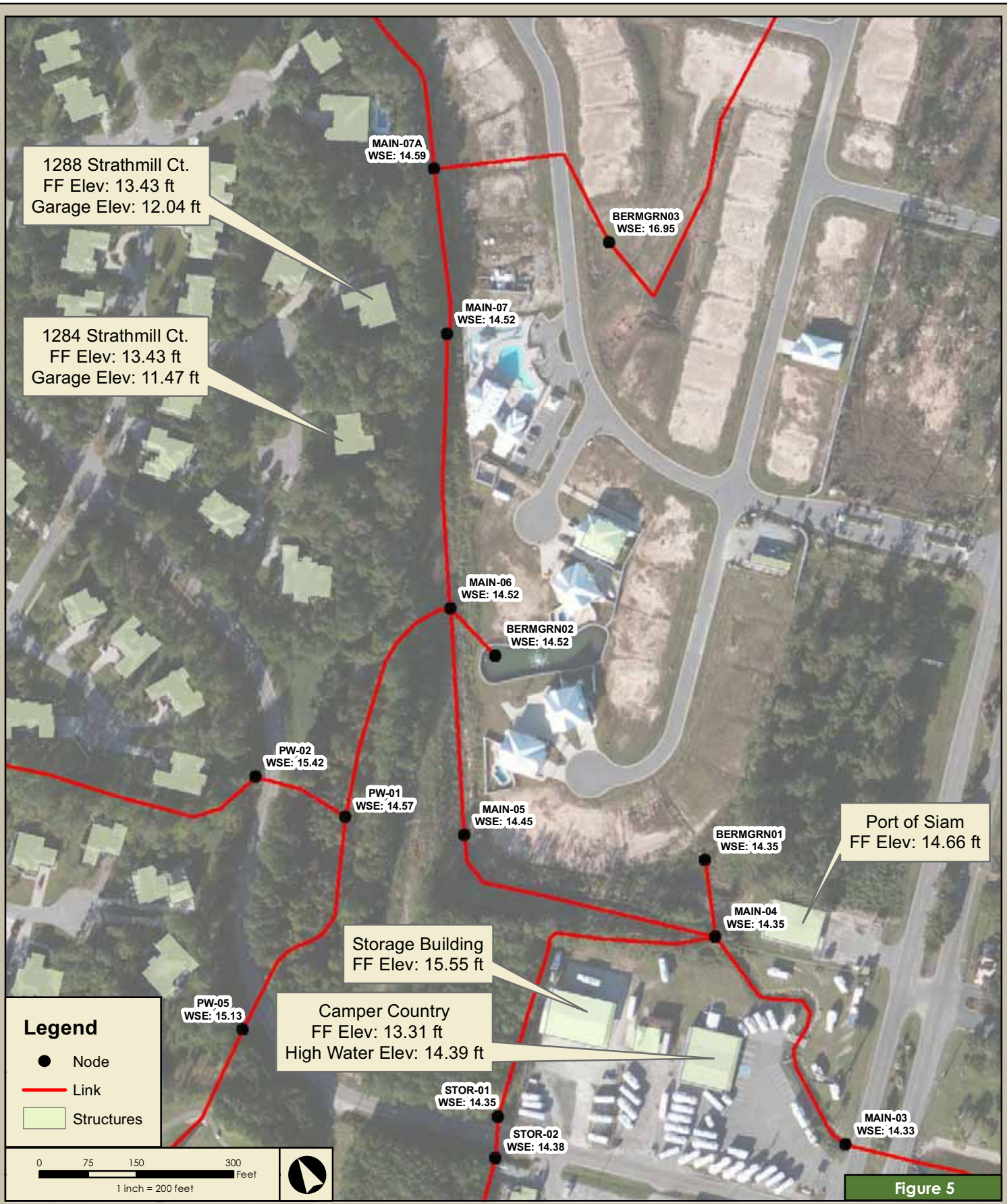


Figure 5

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Thomas & Hutton compiled the map information from the following sources:

Data	Source	Date
Links, Nodes	T&H	2011
Aerial	Bing Maps	2011

Lakewood - Pirateland Swash Drainage Study

Horry County, South Carolina

ICPR Model Calibration
Hurricane Floyd

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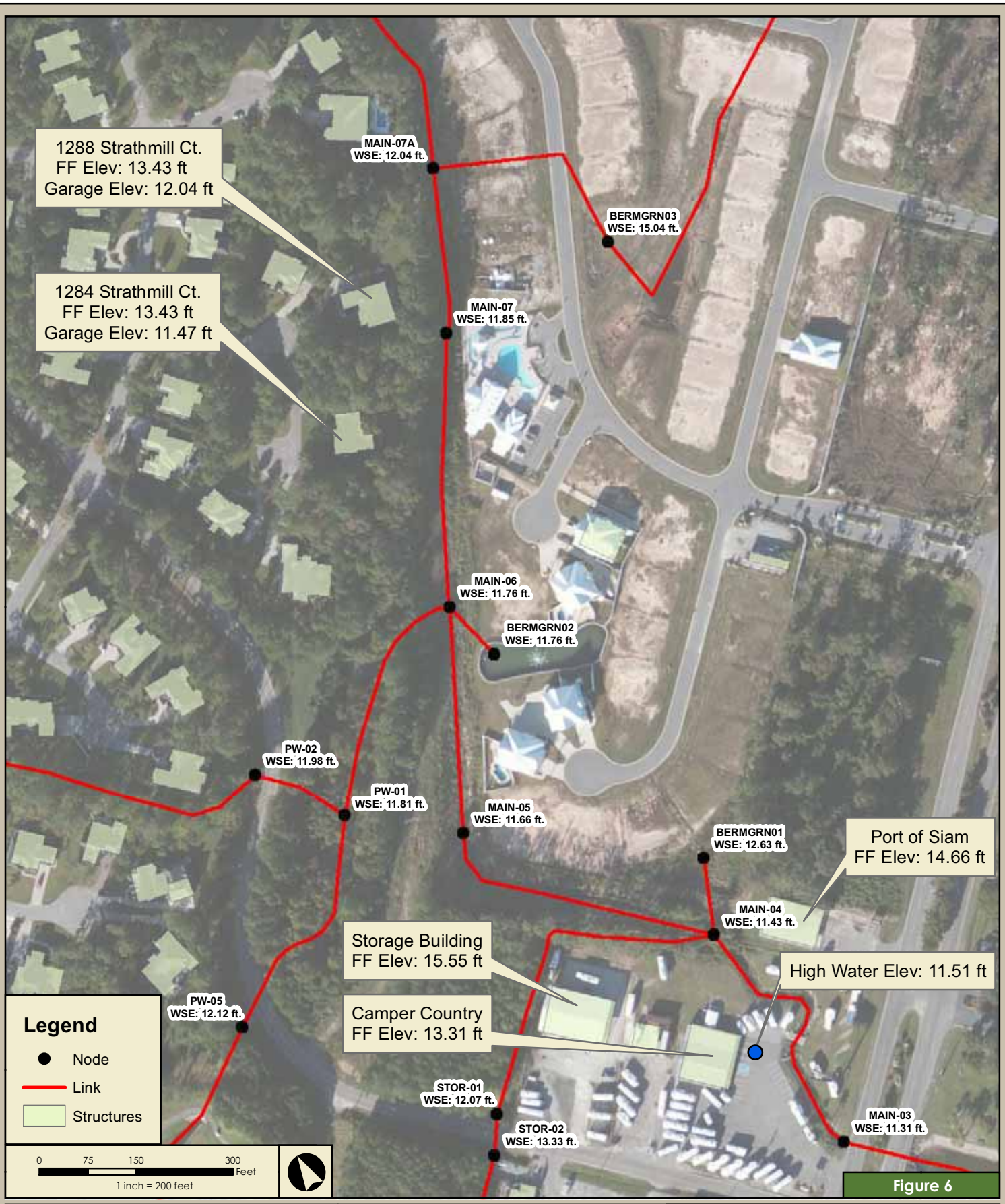

Figure 6

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Thomas & Hutton compiled the map information from the following sources:

Data	Source	Date
Links, Nodes	T&H	2011
Aerial	Bing Maps	2011

Lakewood - Pirateland Swash Drainage Study

Horry County, South Carolina

ICPR Model Calibration
September 2010

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Appendix A
Time of Concentration Variables and Results

Basin Name	Sheet Flow Variables					Shallow Concetrated Flow Variables					Pipe Flow Variables			Time of Concentration (min)
	Length (ft)	P2 (in)	Slope (ft/ft)	Manning's n	T sheet (min)	Length (ft)	Slope (ft/ft)	Land Cover	TR-55 Vel. (ft/s)	T shallow (min)	Length (ft)	Vel. (ft/s)	T pipe (min)	
AF-02	117.1	4.6	0.0	0.240	41.0	515.2	0.0	unpaved	0.7	13.2	2499.9	2.0	20.8	75.0
AF-03	131.9	4.6	0.0	0.240	33.4	342.4	0.0	unpaved	0.7	7.8	1148.9	2.0	9.6	50.8
AF-04	223.3	4.6	0.0	0.240	159.4	962.6	0.0	paved	0.3	48.9	1308.8	2.0	10.9	219.2
AF-06	128.8	4.6	0.0	0.240	22.5	920.0	0.0	unpaved	0.6	25.6	1163.4	2.0	9.7	57.8
AF-07	146.9	4.6	0.0	0.240	41.4	1520.5	0.0	unpaved	0.6	44.3	315.3	2.0	2.6	88.3
BERMGRN01	135.1	4.6	0.0	0.011	3.4	490.9	0.0	unpaved	1.0	8.5	--	--	--	15.0
BERMGRN02	135.6	4.6	0.0	0.011	2.9	410.4	0.0	paved	0.8	8.2	--	--	--	15.0
BERMGRN03	76.5	4.6	0.0	0.240	31.4	442.6	0.0	unpaved	0.3	24.6	--	--	--	56.0
BERMGRN04	209.6	4.6	0.0	0.240	61.9	649.9	0.0	unpaved	0.9	12.4	--	--	--	74.3
BERMGRN05	156.3	4.6	0.0	0.240	31.2	500.7	0.0	unpaved	0.8	10.5	--	--	--	41.8
CL-02	215.4	4.6	0.0	0.240	47.8	1067.5	0.0	unpaved	0.8	22.8	--	--	--	70.7
CRYSTAL_LAKE	114.4	4.6	0.0	0.240	56.3	1135.4	0.0	paved	0.6	34.1	--	--	--	90.4
LKWDPOND01	254.6	4.6	0.0	0.240	34.9	979.0	0.0	unpaved	0.9	17.4	--	--	--	52.3
LKWDPOND02	184.2	4.6	0.0	0.240	36.0	973.9	0.0	unpaved	0.5	34.7	--	--	--	70.7
MAIN-01	151.8	4.6	0.0	0.011	2.1	1800.3	0.0	paved	0.7	43.9	--	--	--	46.1
MAIN-03	93.1	4.6	0.0	0.240	26.1	955.6	0.0	unpaved	1.1	14.1	--	--	--	40.2
MAIN-06	107.7	4.6	0.0	0.240	27.3	332.7	0.0	unpaved	1.0	5.8	--	--	--	33.1
MAIN-11	91.5	4.6	0.0	0.011	2.5	571.6	0.0	unpaved	0.9	10.7	--	--	--	15.0
MAIN-14	234.8	4.6	0.0	0.240	142.6	1052.4	0.0	unpaved	0.9	19.8	--	--	--	162.4
MAIN-15	179.5	4.6	0.0	0.240	35.3	684.8	0.0	unpaved	1.2	9.8	--	--	--	45.1
MAIN-17A	184.8	4.6	0.0	0.011	2.6	1272.2	0.0	paved	1.0	20.5	--	--	--	23.2
MAIN-17B	165.0	4.6	0.0	0.011	2.0	2286.0	0.0	unpaved	0.5	71.7	--	--	--	73.7
MAIN-21	224.9	4.6	0.0	0.240	77.2	1204.1	0.0	unpaved	0.3	63.2	--	--	--	140.4
MAIN-23	253.3	4.6	0.0	0.240	39.5	534.1	0.0	paved	0.6	15.0	1095.6	2.0	9.1	63.6
MAIN-25	146.7	4.6	0.0	0.011	3.7	1614.8	0.0	unpaved	0.2	125.1	1253.7	2.0	10.4	139.2
PIRLNDPOND01	282.1	4.6	0.0	0.240	67.1	3543.9	0.0	unpaved	0.4	147.9	--	--	--	215.0
PIRLNDPOND02	142.9	4.6	0.0	0.011	3.5	1290.0	0.0	paved	0.8	27.5	--	--	--	31.0
PIRLNDPOND03	164.4	4.6	0.0	0.011	2.8	632.6	0.0	unpaved	1.0	10.5	--	--	--	15.0
PW-01	216.4	4.6	0.0	0.240	92.3	2437.5	0.0	unpaved	0.8	51.6	--	--	--	143.9
PW-02	191.7	4.6	0.0	0.240	131.7	3142.0	0.0	unpaved	0.6	82.0	--	--	--	213.7
PW-03	286.3	4.6	0.0	0.240	91.3	1403.5	0.0	unpaved	1.0	24.5	--	--	--	115.8
PW-05	103.6	4.6	0.0	0.240	48.1	361.6	0.0	unpaved	1.5	4.0	--	--	--	52.1
PW-06A	133.7	4.6	0.0	0.240	125.0	279.4	0.0	unpaved	1.3	3.6	--	--	--	128.6
PW-06B	72.7	4.6	0.0	0.240	13.5	301.5	0.0	unpaved	1.0	5.3	--	--	--	18.8
PW-07	65.2	4.6	0.0	0.011	1.3	444.5	0.0	unpaved	1.0	7.4	--	--	--	15.0
PW-08	61.8	4.6	0.0	0.240	14.5	266.7	0.0	paved	1.5	2.9	--	--	--	17.4
PW-09	231.8	4.6	0.0	0.240	47.3	1087.4	0.0	paved	1.1	15.8	--	--	--	63.1
PW-13	185.4	4.6	0.0	0.240	54.5	944.7	0.0	unpaved	1.0	15.7	--	--	--	70.2
PW-14	86.6	4.6	0.0	0.240	10.0	246.6	0.0	unpaved	0.0	82.6	--	--	--	92.7
PW-16	214.1	4.6	0.0	0.240	61.5	625.7	0.0	unpaved	1.1	9.9	--	--	--	71.4
PW-17	94.0	4.6	0.0	0.011	1.6	357.2	0.0	paved	1.3	4.5	--	--	--	15.0
PWPOND01	221.2	4.6	0.0	0.240	25.6	2819.3	0.0	paved	0.6	80.6	--	--	--	106.2
PWPOND02	193.8	4.6	0.0	0.240	34.9	4462.1	0.0	unpaved	0.4	167.7	--	--	--	202.6
PWPOND03	210.8	4.6	0.0	0.240	40.0	1598.7	0.0	unpaved	0.4	69.0	--	--	--	108.9
PWPOND04	107.8	4.6	0.0	0.011	2.3	337.4	0.0	paved	1.0	5.9	--	--	--	15.0
STOR-03	164.0	4.6	0.0	0.240	43.1	1141.3	0.0	unpaved	0.8	23.0	--	--	--	66.1
STOR-04	273.6	4.6	0.0	0.240	143.7	3429.7	0.0	unpaved	0.4	143.7	--	--	--	287.4
STOR-05	280.9	4.6	0.0	0.011	3.6	1598.9	0.0	unpaved	0.5	56.2	--	--	--	59.7
STOR-07	192.2	4.6	0.0	0.011	3.9	2010.7	0.0	unpaved	0.5	73.4	--	--	--	77.4

Appendix B
Maximum Water Surface Elevations
Design Storms and Historical Event Calibration

Node Name	Maximum WSE for Design Storm (ft)					Max. WSE Sept. 2010 (ft)	Max. WSE Floyd Event (ft)
	2-year	10-year	25-year	50-year	100-year		
AF-01	13.72	15.44	16.14	16.77	17.36	15.50	15.38
AF-02	14.08	15.72	16.50	17.03	17.82	15.59	15.78
AF-03	14.13	15.73	16.50	17.05	17.84	15.61	15.83
AF-04	14.60	15.85	16.56	17.08	17.85	15.73	16.04
AF-05	14.14	15.82	16.61	17.00	17.71	15.58	15.84
AF-06	14.38	16.69	16.88	17.11	17.93	16.57	16.87
AF-07	14.61	16.70	16.89	17.12	17.93	16.58	16.89
BERMGRN01	12.37	12.72	12.85	13.40	13.97	12.63	14.35
BERMGRN02	9.81	11.95	12.74	13.62	14.16	11.76	14.52
BERMGRN03	14.43	15.04	15.33	15.64	16.09	15.04	16.95
BERMGRN04	15.69	16.08	16.24	16.48	16.83	15.99	17.43
BERMGRN05	14.72	15.21	15.41	15.62	15.88	14.97	15.05
BNDY	2.05	2.05	2.05	2.05	2.05	2.05	2.05
CL-01	13.26	15.04	15.88	16.21	17.12	14.86	15.10
CL-02	13.28	15.10	15.99	16.20	17.29	14.85	15.13
CL-03	13.28	15.08	15.95	16.23	17.21	14.86	15.13
CRYSTAL LAKE	14.87	15.25	15.41	15.59	15.80	15.54	16.52
LKWDPOND01	5.31	6.16	6.29	6.41	6.48	6.14	6.65
LKWDPOND02	6.31	6.59	6.76	7.04	7.37	6.67	7.92
MAIN-01	2.76	4.25	4.65	5.01	5.25	4.17	5.94
MAIN-02	3.75	4.84	5.10	5.37	5.56	4.78	6.09
MAIN-03	9.08	11.52	12.40	13.37	13.95	11.31	14.33
MAIN-04	9.28	11.63	12.47	13.40	13.97	11.43	14.35
MAIN-05	9.63	11.85	12.65	13.54	14.09	11.66	14.45
MAIN-06	9.81	11.95	12.74	13.62	14.16	11.76	14.52
MAIN-07	10.28	12.02	12.77	13.63	14.17	11.85	14.52
MAIN-07A	10.71	12.21	12.91	13.74	14.26	12.04	14.59
MAIN-08	11.04	12.34	13.00	13.78	14.29	12.18	14.61
MAIN-08A	11.99	12.87	13.38	14.06	14.46	12.76	14.73
MAIN-09	12.19	13.16	13.71	14.12	14.86	12.84	14.82
MAIN-10	12.09	13.05	13.57	15.06	14.67	13.62	14.88
MAIN-11	12.86	14.32	15.02	14.72	16.24	13.14	14.88
MAIN-12	12.76	14.17	14.84	15.52	15.92	14.30	14.93
MAIN-13	13.20	14.95	15.79	15.02	17.02	14.04	14.98
MAIN-14	12.90	14.38	15.08	16.08	16.15	14.77	14.99
MAIN-15	13.32	15.19	16.09	16.00	17.40	14.70	15.10
MAIN-16	13.12	14.89	15.88	16.92	17.01	15.43	15.13
MAIN-17	13.74	15.64	16.40	16.59	17.65	15.33	15.36
MAIN-18	13.75	15.58	16.33	16.78	17.58	15.50	15.41
MAIN-19	13.81	15.62	16.39	16.78	17.66	15.51	15.45
MAIN-20	15.19	16.20	16.91	17.46	18.27	16.07	16.86
MAIN-21	15.43	16.35	17.01	17.53	18.31	16.23	17.01
MAIN-22	15.59	16.48	17.10	17.61	18.35	16.35	17.13
MAIN-23	15.96	16.91	17.78	18.55	19.33	16.75	18.10
MAIN-24	16.09	16.98	17.82	18.58	19.34	16.81	18.14
MAIN-25	17.05	19.39	19.68	19.82	19.93	18.96	19.75
PIRLNDPOND01	3.30	4.63	5.16	5.65	5.88	5.35	6.14
PIRLNDPOND02	5.28	6.15	6.28	6.39	6.47	6.13	6.63
PIRLNDPOND03	5.35	6.54	6.84	7.19	7.41	6.49	7.60
PW POND-01	19.17	19.50	19.80	20.25	20.79	19.62	22.21
PW POND-02	16.71	17.81	18.23	18.42	18.56	17.89	18.63
PW POND-03	11.16	12.63	13.34	13.93	14.30	12.47	14.62
PW POND-04	16.50	16.71	16.79	16.87	16.98	16.42	16.42
PW-01	9.95	11.99	12.78	13.66	14.20	11.81	14.57
PW-02	10.11	12.15	13.00	14.07	14.77	11.98	15.42
PW-03	10.47	12.20	13.03	14.09	14.79	12.03	15.43
PW-05	10.04	12.29	13.15	14.11	14.66	12.12	15.13
PW-06A	14.17	14.60	15.18	16.49	17.06	14.62	18.11
PW-06B	14.25	14.71	15.26	16.54	17.10	14.73	18.15
PW-07	16.25	17.63	17.96	18.18	18.74	17.82	20.08
PW-08	16.53	18.78	19.38	19.85	20.40	19.03	21.85
PW-09	16.58	18.80	19.40	19.87	20.42	19.05	21.87
PW-13	18.58	19.35	19.72	20.14	20.59	19.66	22.02
PW-14	21.52	21.96	22.12	22.29	22.45	21.96	22.30
PW-15	21.74	22.07	22.21	22.36	22.51	22.06	22.35
PW-16	23.53	23.97	24.11	24.26	24.39	23.91	24.09
PW-17	23.78	24.33	24.57	24.84	25.17	24.12	24.23
STOR-01	11.70	12.13	12.72	13.47	13.99	12.07	14.35
STOR-02	12.48	13.45	13.85	14.19	14.30	13.33	14.38
STOR-03	12.70	13.59	13.96	14.28	14.39	13.48	14.49
STOR-04	14.82	15.18	15.35	15.60	15.78	15.24	15.96
STOR-05	16.69	19.00	19.76	20.46	21.46	19.38	23.33
STOR-06	16.65	19.23	20.09	21.01	21.18	19.32	23.39
STOR-07	18.07	19.25	20.07	20.89	21.82	19.50	23.40

Appendix C

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==== Basins ====================================================================
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        Name: AF-02                   Node: AF-02                 Status: Onsite
       Group: BASE                    Type: SCS Unit Hydrograph CN

       Unit Hydrograph: Uh256                  Peaking Factor: 256.0
         Rainfall File:                 Storm Duration(hrs): 0.00
   Rainfall Amount(in): 0.000             Time of Conc(min): 75.00
           Area(ac): 69.680                 Time Shift(hrs): 0.00
       Curve Number: 75.47              Max Allowable Q(cfs): 999999.000
            DCIA(%): 0.00


--------------------------------------------------------------------------------
        Name: AF-03                   Node: AF-03                 Status: Onsite
       Group: BASE                    Type: SCS Unit Hydrograph CN

       Unit Hydrograph: Uh256                  Peaking Factor: 256.0
         Rainfall File:                 Storm Duration(hrs): 0.00
   Rainfall Amount(in): 0.000             Time of Conc(min): 51.00
           Area(ac): 17.810                 Time Shift(hrs): 0.00
       Curve Number: 77.75              Max Allowable Q(cfs): 999999.000
            DCIA(%): 0.00


--------------------------------------------------------------------------------
        Name: AF-04                   Node: AF-04                 Status: Onsite
       Group: BASE                    Type: SCS Unit Hydrograph CN

       Unit Hydrograph: Uh256                  Peaking Factor: 256.0
         Rainfall File:                 Storm Duration(hrs): 0.00
   Rainfall Amount(in): 0.000             Time of Conc(min): 219.00
           Area(ac): 58.000                 Time Shift(hrs): 0.00
       Curve Number: 77.59              Max Allowable Q(cfs): 999999.000
            DCIA(%): 0.00


--------------------------------------------------------------------------------
        Name: AF-06                   Node: AF-06                 Status: Onsite
       Group: BASE                    Type: SCS Unit Hydrograph CN

       Unit Hydrograph: Uh256                  Peaking Factor: 256.0
         Rainfall File:                 Storm Duration(hrs): 0.00
   Rainfall Amount(in): 0.000             Time of Conc(min): 58.00
           Area(ac): 39.190                 Time Shift(hrs): 0.00
       Curve Number: 70.36              Max Allowable Q(cfs): 999999.000
            DCIA(%): 0.00


--------------------------------------------------------------------------------
        Name: AF-07                   Node: AF-07                 Status: Onsite
       Group: BASE                    Type: SCS Unit Hydrograph CN

       Unit Hydrograph: Uh256                  Peaking Factor: 256.0
         Rainfall File:                 Storm Duration(hrs): 0.00
   Rainfall Amount(in): 0.000             Time of Conc(min): 88.00
           Area(ac): 31.950                 Time Shift(hrs): 0.00
       Curve Number: 65.69              Max Allowable Q(cfs): 999999.000
            DCIA(%): 0.00


--------------------------------------------------------------------------------
        Name: BERMGRN01               Node: BERMGRN01             Status: Onsite
       Group: BASE                    Type: SCS Unit Hydrograph CN

       Unit Hydrograph: Uh256                  Peaking Factor: 256.0
         Rainfall File:                 Storm Duration(hrs): 0.00
   Rainfall Amount(in): 0.000             Time of Conc(min): 15.00
           Area(ac): 3.450                  Time Shift(hrs): 0.00
       Curve Number: 80.36              Max Allowable Q(cfs): 999999.000
            DCIA(%): 0.00


--------------------------------------------------------------------------------
        Name: BERMGRN02               Node: BERMGRN02             Status: Onsite
       Group: BASE                    Type: SCS Unit Hydrograph CN

       Unit Hydrograph: Uh256                  Peaking Factor: 256.0
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          Rainfall File:                     Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000                 Time of Conc(min): 15.00
              Area(ac): 3.100                    Time Shift(hrs): 0.00
          Curve Number: 79.36              Max Allowable Q(cfs): 999999.000
               DCIA(%): 0.00


-------------------------------------------------------------------------------------------------
         Name: BERMGRN03                Node: BERMGRN03              Status: Onsite
        Group: BASE                     Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh256                  Peaking Factor: 256.0
          Rainfall File:                     Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000                 Time of Conc(min): 56.00
              Area(ac): 12.410                   Time Shift(hrs): 0.00
          Curve Number: 78.54              Max Allowable Q(cfs): 999999.000
               DCIA(%): 0.00


-------------------------------------------------------------------------------------------------
         Name: BERMGRN04                Node: BERMGRN04              Status: Onsite
        Group: BASE                     Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh256                  Peaking Factor: 256.0
          Rainfall File:                     Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000                 Time of Conc(min): 74.00
              Area(ac): 11.790                   Time Shift(hrs): 0.00
          Curve Number: 77.39              Max Allowable Q(cfs): 999999.000
               DCIA(%): 0.00


-------------------------------------------------------------------------------------------------
         Name: BERMGRN05                Node: BERMGRN05              Status: Onsite
        Group: BASE                     Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh256                  Peaking Factor: 256.0
          Rainfall File:                     Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000                 Time of Conc(min): 42.00
              Area(ac): 5.770                    Time Shift(hrs): 0.00
          Curve Number: 84.03              Max Allowable Q(cfs): 999999.000
               DCIA(%): 0.00


-------------------------------------------------------------------------------------------------
         Name: CL-02                    Node: CL-02                  Status: Onsite
        Group: BASE                     Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh256                  Peaking Factor: 256.0
          Rainfall File:                     Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000                 Time of Conc(min): 71.00
              Area(ac): 11.340                   Time Shift(hrs): 0.00
          Curve Number: 55.40              Max Allowable Q(cfs): 999999.000
               DCIA(%): 0.00


-------------------------------------------------------------------------------------------------
         Name: CRYSTAL_LAKE             Node: CRYSTAL LAKE           Status: Onsite
        Group: BASE                     Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh256                  Peaking Factor: 256.0
          Rainfall File:                     Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000                 Time of Conc(min): 90.00
              Area(ac): 92.700                   Time Shift(hrs): 0.00
          Curve Number: 79.64              Max Allowable Q(cfs): 999999.000
               DCIA(%): 0.00


-------------------------------------------------------------------------------------------------
         Name: LKWDPOND01               Node: LKWDPOND01             Status: Onsite
        Group: BASE                     Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh256                  Peaking Factor: 256.0
          Rainfall File:                     Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000                 Time of Conc(min): 52.00
              Area(ac): 45.110                   Time Shift(hrs): 0.00
          Curve Number: 75.22              Max Allowable Q(cfs): 999999.000
               DCIA(%): 0.00


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         Name: LKWDPOND02              Node: LKWDPOND02            Status: Onsite
        Group: BASE                    Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh256                  Peaking Factor: 256.0
          Rainfall File:                 Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000             Time of Conc(min): 71.00
              Area(ac): 46.270               Time Shift(hrs): 0.00
         Curve Number: 64.23            Max Allowable Q(cfs): 999999.000
              DCIA(%): 0.00


-------------------------------------------------------------------------------------------------
         Name: MAIN-01                 Node: MAIN-01               Status: Onsite
        Group: BASE                    Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh256                  Peaking Factor: 256.0
          Rainfall File:                 Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000             Time of Conc(min): 46.00
              Area(ac): 24.790               Time Shift(hrs): 0.00
         Curve Number: 53.22            Max Allowable Q(cfs): 999999.000
              DCIA(%): 0.00


-------------------------------------------------------------------------------------------------
         Name: MAIN-03                 Node: MAIN-03               Status: Onsite
        Group: BASE                    Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh256                  Peaking Factor: 256.0
          Rainfall File:                 Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000             Time of Conc(min): 40.00
              Area(ac): 14.600               Time Shift(hrs): 0.00
         Curve Number: 69.00            Max Allowable Q(cfs): 999999.000
              DCIA(%): 0.00


-------------------------------------------------------------------------------------------------
         Name: MAIN-06                 Node: MAIN-06               Status: Onsite
        Group: BASE                    Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh256                  Peaking Factor: 256.0
          Rainfall File:                 Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000             Time of Conc(min): 33.00
              Area(ac): 11.370               Time Shift(hrs): 0.00
         Curve Number: 78.83            Max Allowable Q(cfs): 999999.000
              DCIA(%): 0.00


-------------------------------------------------------------------------------------------------
         Name: MAIN-11                 Node: MAIN-11               Status: Onsite
        Group: BASE                    Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh256                  Peaking Factor: 256.0
          Rainfall File:                 Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000             Time of Conc(min): 15.00
              Area(ac): 5.630                Time Shift(hrs): 0.00
         Curve Number: 82.52            Max Allowable Q(cfs): 999999.000
              DCIA(%): 0.00


-------------------------------------------------------------------------------------------------
         Name: MAIN-14                 Node: MAIN-14               Status: Onsite
        Group: BASE                    Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh256                  Peaking Factor: 256.0
          Rainfall File:                 Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000             Time of Conc(min): 162.00
              Area(ac): 5.160                Time Shift(hrs): 0.00
         Curve Number: 71.92            Max Allowable Q(cfs): 999999.000
              DCIA(%): 0.00


-------------------------------------------------------------------------------------------------
         Name: MAIN-15                 Node: MAIN-15               Status: Onsite
        Group: BASE                    Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh256                  Peaking Factor: 256.0
          Rainfall File:                 Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000             Time of Conc(min): 45.00
              Area(ac): 5.870                Time Shift(hrs): 0.00
         Curve Number: 67.28            Max Allowable Q(cfs): 999999.000
              DCIA(%): 0.00
```

Name: MAIN-17A Node: MAIN-17 Status: Onsite
Group: BASE Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh256 Peaking Factor: 256.0
Rainfall File: Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 23.00
Area(ac): 8.840 Time Shift(hrs): 0.00
Curve Number: 68.77 Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00

Name: MAIN-17B Node: MAIN-17 Status: Onsite
Group: BASE Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh256 Peaking Factor: 256.0
Rainfall File: Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 74.00
Area(ac): 15.310 Time Shift(hrs): 0.00
Curve Number: 64.16 Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00

Name: MAIN-21 Node: MAIN-21 Status: Onsite
Group: BASE Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh256 Peaking Factor: 256.0
Rainfall File: Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 140.00
Area(ac): 16.440 Time Shift(hrs): 0.00
Curve Number: 67.03 Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00

Name: MAIN-23 Node: MAIN-23 Status: Onsite
Group: BASE Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh256 Peaking Factor: 256.0
Rainfall File: Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 64.00
Area(ac): 38.170 Time Shift(hrs): 0.00
Curve Number: 75.40 Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00

Name: MAIN-25 Node: MAIN-25 Status: Onsite
Group: BASE Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh256 Peaking Factor: 256.0
Rainfall File: Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 139.00
Area(ac): 47.050 Time Shift(hrs): 0.00
Curve Number: 76.63 Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00

Name: PIRLNDPOND01 Node: PIRLNDPOND01 Status: Onsite
Group: BASE Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh256 Peaking Factor: 256.0
Rainfall File: Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 215.00
Area(ac): 299.240 Time Shift(hrs): 0.00
Curve Number: 59.79 Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00

Name: PIRLNDPOND02 Node: PIRLNDPOND02 Status: Onsite
Group: BASE Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh256 Peaking Factor: 256.0
Rainfall File: Storm Duration(hrs): 0.00

```
    Rainfall Amount(in): 0.000                Time of Conc(min): 31.00
                Area(ac): 40.230                  Time Shift(hrs): 0.00
           Curve Number: 74.20              Max Allowable Q(cfs): 999999.000
                DCIA(%): 0.00


--------------------------------------------------------------------------------------------------
         Name: PIRLNDPOND03             Node: PIRLNDPOND03           Status: Onsite
        Group: BASE                     Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh256                  Peaking Factor: 256.0
          Rainfall File:                  Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000              Time of Conc(min): 15.00
                Area(ac): 30.300                Time Shift(hrs): 0.00
           Curve Number: 70.66              Max Allowable Q(cfs): 999999.000
                DCIA(%): 0.00


--------------------------------------------------------------------------------------------------
         Name: PW-01                    Node: PW-01                  Status: Onsite
        Group: BASE                     Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh256                  Peaking Factor: 256.0
          Rainfall File:                  Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000              Time of Conc(min): 144.00
                Area(ac): 29.050                Time Shift(hrs): 0.00
           Curve Number: 68.81              Max Allowable Q(cfs): 999999.000
                DCIA(%): 0.00


--------------------------------------------------------------------------------------------------
         Name: PW-02                    Node: PW-02                  Status: Onsite
        Group: BASE                     Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh256                  Peaking Factor: 256.0
          Rainfall File:                  Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000              Time of Conc(min): 214.00
                Area(ac): 11.120                Time Shift(hrs): 0.00
           Curve Number: 61.64              Max Allowable Q(cfs): 999999.000
                DCIA(%): 0.00


--------------------------------------------------------------------------------------------------
         Name: PW-03                    Node: PW-03                  Status: Onsite
        Group: BASE                     Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh256                  Peaking Factor: 256.0
          Rainfall File:                  Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000              Time of Conc(min): 116.00
                Area(ac): 23.190                Time Shift(hrs): 0.00
           Curve Number: 74.54              Max Allowable Q(cfs): 999999.000
                DCIA(%): 0.00


--------------------------------------------------------------------------------------------------
         Name: PW-05                    Node: PW-05                  Status: Onsite
        Group: BASE                     Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh256                  Peaking Factor: 256.0
          Rainfall File:                  Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000              Time of Conc(min): 52.00
                Area(ac): 2.300                 Time Shift(hrs): 0.00
           Curve Number: 72.23              Max Allowable Q(cfs): 999999.000
                DCIA(%): 0.00


--------------------------------------------------------------------------------------------------
         Name: PW-06A                   Node: PW-06A                 Status: Onsite
        Group: BASE                     Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh256                  Peaking Factor: 256.0
          Rainfall File:                  Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000              Time of Conc(min): 129.00
                Area(ac): 4.410                 Time Shift(hrs): 0.00
           Curve Number: 80.09              Max Allowable Q(cfs): 999999.000
                DCIA(%): 0.00


--------------------------------------------------------------------------------------------------
         Name: PW-06B                   Node: PW-06B                 Status: Onsite
```

```
        Group: BASE                    Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh256                  Peaking Factor: 256.0
          Rainfall File:                 Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000             Time of Conc(min): 19.00
              Area(ac): 3.840                Time Shift(hrs): 0.00
          Curve Number: 76.71            Max Allowable Q(cfs): 999999.000
               DCIA(%): 0.00


--------------------------------------------------------------------------------------------------
         Name: PW-07                   Node: PW-07                 Status: Onsite
        Group: BASE                    Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh256                  Peaking Factor: 256.0
          Rainfall File:                 Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000             Time of Conc(min): 15.00
              Area(ac): 13.900               Time Shift(hrs): 0.00
          Curve Number: 80.35            Max Allowable Q(cfs): 999999.000
               DCIA(%): 0.00


--------------------------------------------------------------------------------------------------
         Name: PW-08                   Node: PW-08                 Status: Onsite
        Group: BASE                    Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh256                  Peaking Factor: 256.0
          Rainfall File:                 Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000             Time of Conc(min): 17.00
              Area(ac): 5.920                Time Shift(hrs): 0.00
          Curve Number: 75.06            Max Allowable Q(cfs): 999999.000
               DCIA(%): 0.00


--------------------------------------------------------------------------------------------------
         Name: PW-09                   Node: PW-09                 Status: Onsite
        Group: BASE                    Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh256                  Peaking Factor: 256.0
          Rainfall File:                 Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000             Time of Conc(min): 63.00
              Area(ac): 23.490               Time Shift(hrs): 0.00
          Curve Number: 73.51            Max Allowable Q(cfs): 999999.000
               DCIA(%): 0.00


--------------------------------------------------------------------------------------------------
         Name: PW-13                   Node: PW-13                 Status: Onsite
        Group: BASE                    Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh256                  Peaking Factor: 256.0
          Rainfall File:                 Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000             Time of Conc(min): 70.00
              Area(ac): 15.980               Time Shift(hrs): 0.00
          Curve Number: 50.07            Max Allowable Q(cfs): 999999.000
               DCIA(%): 0.00


--------------------------------------------------------------------------------------------------
         Name: PW-14                   Node: PW-14                 Status: Onsite
        Group: BASE                    Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh256                  Peaking Factor: 256.0
          Rainfall File:                 Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000             Time of Conc(min): 93.00
              Area(ac): 1.690                Time Shift(hrs): 0.00
          Curve Number: 38.12            Max Allowable Q(cfs): 999999.000
               DCIA(%): 0.00


--------------------------------------------------------------------------------------------------
         Name: PW-16                   Node: PW-16                 Status: Onsite
        Group: BASE                    Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh256                  Peaking Factor: 256.0
          Rainfall File:                 Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000             Time of Conc(min): 71.00
              Area(ac): 4.840                Time Shift(hrs): 0.00
          Curve Number: 38.60            Max Allowable Q(cfs): 999999.000
               DCIA(%): 0.00
```

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---------------------------------------------------------------------------------------------------
        Name: PW-17                  Node: PW-17                  Status: Onsite
       Group: BASE                   Type: SCS Unit Hydrograph CN

       Unit Hydrograph: Uh256                  Peaking Factor: 256.0
         Rainfall File:                  Storm Duration(hrs): 0.00
   Rainfall Amount(in): 0.000              Time of Conc(min): 15.00
           Area(ac): 4.130                 Time Shift(hrs): 0.00
       Curve Number: 68.87             Max Allowable Q(cfs): 999999.000
            DCIA(%): 0.00


---------------------------------------------------------------------------------------------------
        Name: PWPOND01               Node: PW POND-01             Status: Onsite
       Group: BASE                   Type: SCS Unit Hydrograph CN

       Unit Hydrograph: Uh256                  Peaking Factor: 256.0
         Rainfall File:                  Storm Duration(hrs): 0.00
   Rainfall Amount(in): 0.000              Time of Conc(min): 106.00
           Area(ac): 98.030                Time Shift(hrs): 0.00
       Curve Number: 61.72             Max Allowable Q(cfs): 999999.000
            DCIA(%): 0.00


---------------------------------------------------------------------------------------------------
        Name: PWPOND02               Node: PW POND-02             Status: Onsite
       Group: BASE                   Type: SCS Unit Hydrograph CN

       Unit Hydrograph: Uh256                  Peaking Factor: 256.0
         Rainfall File:                  Storm Duration(hrs): 0.00
   Rainfall Amount(in): 0.000              Time of Conc(min): 203.00
           Area(ac): 139.650               Time Shift(hrs): 0.00
       Curve Number: 65.08             Max Allowable Q(cfs): 999999.000
            DCIA(%): 0.00


---------------------------------------------------------------------------------------------------
        Name: PWPOND03               Node: PW POND-03             Status: Onsite
       Group: BASE                   Type: SCS Unit Hydrograph CN

       Unit Hydrograph: Uh256                  Peaking Factor: 256.0
         Rainfall File:                  Storm Duration(hrs): 0.00
   Rainfall Amount(in): 0.000              Time of Conc(min): 109.00
           Area(ac): 18.690                Time Shift(hrs): 0.00
       Curve Number: 80.71             Max Allowable Q(cfs): 999999.000
            DCIA(%): 0.00


---------------------------------------------------------------------------------------------------
        Name: PWPOND04               Node: PW POND-04             Status: Onsite
       Group: BASE                   Type: SCS Unit Hydrograph CN

       Unit Hydrograph: Uh256                  Peaking Factor: 256.0
         Rainfall File:                  Storm Duration(hrs): 0.00
   Rainfall Amount(in): 0.000              Time of Conc(min): 15.00
           Area(ac): 10.750                Time Shift(hrs): 0.00
       Curve Number: 86.90             Max Allowable Q(cfs): 999999.000
            DCIA(%): 0.00


---------------------------------------------------------------------------------------------------
        Name: STOR-03                Node: STOR-03                Status: Onsite
       Group: BASE                   Type: SCS Unit Hydrograph CN

       Unit Hydrograph: Uh256                  Peaking Factor: 256.0
         Rainfall File:                  Storm Duration(hrs): 0.00
   Rainfall Amount(in): 0.000              Time of Conc(min): 66.00
           Area(ac): 31.190                Time Shift(hrs): 0.00
       Curve Number: 82.04             Max Allowable Q(cfs): 999999.000
            DCIA(%): 0.00


---------------------------------------------------------------------------------------------------
        Name: STOR-04                Node: STOR-04                Status: Onsite
       Group: BASE                   Type: SCS Unit Hydrograph CN

       Unit Hydrograph: Uh256                  Peaking Factor: 256.0
         Rainfall File:                  Storm Duration(hrs): 0.00
   Rainfall Amount(in): 0.000              Time of Conc(min): 287.00
```

Area(ac): 52.770 Time Shift(hrs): 0.00
Curve Number: 67.06 Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00

Name: STOR-05 Node: STOR-05 Status: Onsite
Group: BASE Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh256 Peaking Factor: 256.0
Rainfall File: Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 60.00
Area(ac): 25.300 Time Shift(hrs): 0.00
Curve Number: 68.62 Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00

Name: STOR-07 Node: STOR-07 Status: Onsite
Group: BASE Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh256 Peaking Factor: 256.0
Rainfall File: Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 77.00
Area(ac): 29.510 Time Shift(hrs): 0.00
Curve Number: 70.51 Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00

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

Name: AF-01 Base Flow(cfs): 0.000 Init Stage(ft): 9.920
Group: AF Warn Stage(ft): 17.000
Type: Stage/Area

Stage(ft)	Area(ac)

Name: AF-02 Base Flow(cfs): 0.000 Init Stage(ft): 11.270
Group: AF Warn Stage(ft): 17.000
Type: Stage/Area

Stage(ft)	Area(ac)

Name: AF-03 Base Flow(cfs): 0.000 Init Stage(ft): 11.100
Group: AF Warn Stage(ft): 16.500
Type: Stage/Area

Stage(ft)	Area(ac)

Name: AF-04 Base Flow(cfs): 0.000 Init Stage(ft): 13.090
Group: AF Warn Stage(ft): 19.000
Type: Stage/Area

Stage(ft)	Area(ac)

Name: AF-05 Base Flow(cfs): 0.000 Init Stage(ft): 11.940
Group: AF Warn Stage(ft): 16.500
Type: Stage/Area

Stage(ft)	Area(ac)

Name: AF-06 Base Flow(cfs): 0.000 Init Stage(ft): 12.000

Group: AF Warn Stage(ft): 16.500
Type: Stage/Area

Stage(ft)	Area(ac)

Name: AF-07 Base Flow(cfs): 0.000 Init Stage(ft): 13.660
Group: AF Warn Stage(ft): 17.500
Type: Stage/Area

Stage(ft)	Area(ac)

Name: BERMGRN01 Base Flow(cfs): 0.000 Init Stage(ft): 11.800
Group: BERMGRN Warn Stage(ft): 16.000
Type: Stage/Area

Data from as-built

Stage(ft)	Area(ac)
11.800	0.5700
17.000	0.5700

Name: BERMGRN02 Base Flow(cfs): 0.000 Init Stage(ft): 8.650
Group: BERMGRN Warn Stage(ft): 16.250
Type: Stage/Area

Data from as-built

Stage(ft)	Area(ac)
8.650	0.3900
17.000	0.3900

Name: BERMGRN03 Base Flow(cfs): 0.000 Init Stage(ft): 13.400
Group: BERMGRN Warn Stage(ft): 18.000
Type: Stage/Area

Data from as-built

Stage(ft)	Area(ac)
13.000	2.3100
20.000	2.3100

Name: BERMGRN04 Base Flow(cfs): 0.000 Init Stage(ft): 14.760
Group: BERMGRN Warn Stage(ft): 16.500
Type: Stage/Area

Invert Data from as-built, Area from LiDAR

Stage(ft)	Area(ac)
14.650	0.0100
15.000	0.1200
16.000	1.7800
17.000	2.0900

Name: BERMGRN05 Base Flow(cfs): 0.000 Init Stage(ft): 13.700
Group: BERMGRN Warn Stage(ft): 18.000
Type: Stage/Area

Stage(ft)	Area(ac)
13.700	0.3500
20.000	0.3500

Name: BNDY Base Flow(cfs): 0.000 Init Stage(ft): 2.050
Group: MAIN Warn Stage(ft): 4.000
Type: Time/Stage

Time(hrs)	Stage(ft)
0.00	2.050
72.00	2.050

Name: CL-01 Base Flow(cfs): 0.000 Init Stage(ft): 10.730
Group: CL Warn Stage(ft): 18.000
Type: Stage/Area

Stage(ft)	Area(ac)

Name: CL-02 Base Flow(cfs): 0.000 Init Stage(ft): 12.620
Group: CL Warn Stage(ft): 18.000
Type: Stage/Area

Stage(ft)	Area(ac)

Name: CL-03 Base Flow(cfs): 0.000 Init Stage(ft): 12.620
Group: CL Warn Stage(ft): 20.000
Type: Stage/Area

Stage(ft)	Area(ac)

Name: CRYSTAL LAKE Base Flow(cfs): 0.000 Init Stage(ft): 14.390
Group: CL Warn Stage(ft): 20.000
Type: Stage/Area

Stage(ft)	Area(ac)
14.390	39.4600
17.000	39.4600
20.000	41.7500

Name: LKWDPOND01 Base Flow(cfs): 0.000 Init Stage(ft): 3.000
Group: CAMP Warn Stage(ft): 5.500
Type: Stage/Area

Stage(ft)	Area(ac)
0.000	2.5400
4.000	2.5400
5.000	2.6000
6.000	3.1500
10.000	3.1500

Name: LKWDPOND02 Base Flow(cfs): 0.000 Init Stage(ft): 6.000
Group: CAMP Warn Stage(ft): 9.000
Type: Stage/Area

Stage(ft)	Area(ac)
0.000	5.6100
10.000	5.6100

Name: MAIN-01 Base Flow(cfs): 0.000 Init Stage(ft): 2.050
Group: MAIN Warn Stage(ft): 5.100
Type: Stage/Area

Stage(ft)	Area(ac)
0.000	0.0100
10.000	0.0100

Name: MAIN-02 Base Flow(cfs): 0.000 Init Stage(ft): 2.050
Group: MAIN Warn Stage(ft): 5.500
Type: Stage/Area

Stage(ft)	Area(ac)
0.000	0.0100
10.000	0.0100

Name: MAIN-03 Base Flow(cfs): 0.000 Init Stage(ft): 4.130
Group: MAIN Warn Stage(ft): 9.000
Type: Stage/Area

Stage(ft)	Area(ac)
0.000	0.0100
20.000	0.0100

Name: MAIN-04 Base Flow(cfs): 0.000 Init Stage(ft): 4.130
Group: MAIN Warn Stage(ft): 11.000
Type: Stage/Area

Stage(ft)	Area(ac)
4.000	0.0100
20.000	0.0100

Name: MAIN-05 Base Flow(cfs): 0.000 Init Stage(ft): 4.340
Group: MAIN Warn Stage(ft): 19.000
Type: Stage/Area

Stage(ft)	Area(ac)

Name: MAIN-06 Base Flow(cfs): 0.000 Init Stage(ft): 6.460
Group: MAIN Warn Stage(ft): 13.000
Type: Stage/Area

Stage(ft)	Area(ac)

Name: MAIN-07 Base Flow(cfs): 0.000 Init Stage(ft): 8.110
Group: MAIN Warn Stage(ft): 14.000
Type: Stage/Area

Stage(ft)	Area(ac)

Name: MAIN-07A Base Flow(cfs): 0.000 Init Stage(ft): 8.110
Group: MAIN Warn Stage(ft): 13.000
Type: Stage/Area

Stage(ft)	Area(ac)

Name: MAIN-08 Base Flow(cfs): 0.000 Init Stage(ft): 8.220
Group: MAIN Warn Stage(ft): 13.250
Type: Stage/Area

Stage(ft)	Area(ac)

Name: MAIN-08A Base Flow(cfs): 0.000 Init Stage(ft): 9.480
Group: MAIN Warn Stage(ft): 16.000
Type: Stage/Area

Stage(ft)	Area(ac)

Name: MAIN-09 Base Flow(cfs): 0.000 Init Stage(ft): 9.480
Group: MAIN Warn Stage(ft): 17.000
Type: Stage/Area

Stage(ft)	Area(ac)

Name: MAIN-10 Base Flow(cfs): 0.000 Init Stage(ft): 9.480
Group: MAIN Warn Stage(ft): 17.000
Type: Stage/Area

Stage(ft)	Area(ac)

Name: MAIN-11 Base Flow(cfs): 0.000 Init Stage(ft): 9.480
Group: MAIN Warn Stage(ft): 17.000
Type: Stage/Area

Stage(ft)	Area(ac)

Name: MAIN-12 Base Flow(cfs): 0.000 Init Stage(ft): 9.480
Group: MAIN Warn Stage(ft): 17.000
Type: Stage/Area

Stage(ft)	Area(ac)

Name: MAIN-13 Base Flow(cfs): 0.000 Init Stage(ft): 9.480
Group: MAIN Warn Stage(ft): 18.000
Type: Stage/Area

Stage(ft)	Area(ac)

Name: MAIN-14 Base Flow(cfs): 0.000 Init Stage(ft): 9.480
Group: MAIN Warn Stage(ft): 18.000
Type: Stage/Area

Stage(ft)	Area(ac)

Name: MAIN-15 Base Flow(cfs): 0.000 Init Stage(ft): 9.480
Group: MAIN Warn Stage(ft): 17.000
Type: Stage/Area

Stage(ft)	Area(ac)

Name: MAIN-16 Base Flow(cfs): 0.000 Init Stage(ft): 9.480
Group: MAIN Warn Stage(ft): 17.000
Type: Stage/Area

Stage(ft)	Area(ac)

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Name: MAIN-17 Base Flow(cfs): 0.000 Init Stage(ft): 9.480
Group: MAIN Warn Stage(ft): 17.000
Type: Stage/Area

Stage(ft) Area(ac)
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Name: MAIN-18 Base Flow(cfs): 0.000 Init Stage(ft): 10.200
Group: MAIN Warn Stage(ft): 18.000
Type: Stage/Area

Stage(ft) Area(ac)
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Name: MAIN-19 Base Flow(cfs): 0.000 Init Stage(ft): 11.500
Group: MAIN Warn Stage(ft): 20.000
Type: Stage/Area

Stage(ft) Area(ac)
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Name: MAIN-20 Base Flow(cfs): 0.000 Init Stage(ft): 12.380
Group: MAIN Warn Stage(ft): 22.000
Type: Stage/Area

Stage(ft) Area(ac)
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Name: MAIN-21 Base Flow(cfs): 0.000 Init Stage(ft): 13.060
Group: MAIN Warn Stage(ft): 21.000
Type: Stage/Area

Stage(ft) Area(ac)
--------------- ---------------

Name: MAIN-22 Base Flow(cfs): 0.000 Init Stage(ft): 13.190
Group: MAIN Warn Stage(ft): 20.000
Type: Stage/Area

Stage(ft) Area(ac)
--------------- ---------------

Name: MAIN-23 Base Flow(cfs): 0.000 Init Stage(ft): 14.240
Group: MAIN Warn Stage(ft): 17.500
Type: Stage/Area

Storage simulates street flooding, estiamted from LiDAR data

Stage(ft)	Area(ac)
14.240	0.0100
17.000	0.1000
18.000	0.2800
19.000	1.9500

Name: MAIN-24 Base Flow(cfs): 0.000 Init Stage(ft): 14.380
Group: MAIN Warn Stage(ft): 19.000
Type: Stage/Area

Stage(ft) Area(ac)
--------------- ---------------

Name: MAIN-25 Base Flow(cfs): 0.000 Init Stage(ft): 14.600
Group: MAIN Warn Stage(ft): 19.000
Type: Stage/Area

Storage simulates upstream channel storage

Stage(ft)	Area(ac)
14.600	0.0100
17.000	0.1000
18.000	0.3400
19.000	0.5600

Name: PIRLNDPOND01 Base Flow(cfs): 0.000 Init Stage(ft): 2.050
Group: CAMP Warn Stage(ft): 5.000
Type: Stage/Area

Stage(ft)	Area(ac)
2.000	20.5200
5.000	24.6000
6.000	39.1200

Name: PIRLNDPOND02 Base Flow(cfs): 0.000 Init Stage(ft): 2.050
Group: MAIN Warn Stage(ft): 5.000
Type: Stage/Area

Stage(ft)	Area(ac)
0.000	11.1200
2.050	11.1200
5.000	12.8500
6.000	16.7500
10.000	16.7500

Name: PIRLNDPOND03 Base Flow(cfs): 0.000 Init Stage(ft): 2.050
Group: MAIN Warn Stage(ft): 6.000
Type: Stage/Area

Stage(ft)	Area(ac)
0.000	2.0900
2.050	2.0900
5.000	2.4000
6.000	2.7000
7.000	3.7200
10.000	3.7200

Name: PW POND-01 Base Flow(cfs): 0.000 Init Stage(ft): 18.500
Group: PW Warn Stage(ft): 21.000
Type: Stage/Area

Stage(ft)	Area(ac)
18.000	9.0200
19.000	9.9800
20.000	11.1500
21.000	13.8200

Name: PW POND-02 Base Flow(cfs): 0.000 Init Stage(ft): 16.300
Group: PW Warn Stage(ft): 19.000
Type: Stage/Area

Estimated from LiDAR data
Includes Golf Course flooding to the west

Stage(ft)	Area(ac)
16.300	1.3500
17.000	1.5400
18.000	4.2000
19.000	4.2000

Name: PW POND-03 Base Flow(cfs): 0.000 Init Stage(ft): 9.410
Group: PW Warn Stage(ft): 13.500
Type: Stage/Area

Estimated from LiDAR

Stage(ft)	Area(ac)
9.410	0.1000
10.000	0.1000
11.000	0.1500
12.000	0.2000
13.000	0.2500
14.000	0.6500

Name: PW POND-04 Base Flow(cfs): 0.000 Init Stage(ft): 16.000
Group: PW Warn Stage(ft): 18.500
Type: Stage/Area

Stage(ft)	Area(ac)
15.000	0.6100
20.000	0.6100

Name: PW-01 Base Flow(cfs): 0.000 Init Stage(ft): 6.400
Group: PW Warn Stage(ft): 10.000
Type: Stage/Area

Stage(ft)	Area(ac)
6.000	0.3500
7.000	0.7000
8.000	1.1000
9.000	1.2600
10.000	1.4300
11.000	1.6100

Name: PW-02 Base Flow(cfs): 0.000 Init Stage(ft): 7.680
Group: PW Warn Stage(ft): 12.000
Type: Stage/Area

Stage(ft)	Area(ac)
5.000	0.0100
15.000	0.0100

Name: PW-03 Base Flow(cfs): 0.000 Init Stage(ft): 8.880
Group: PW Warn Stage(ft): 14.000
Type: Stage/Area

Stage(ft)	Area(ac)
10.000	0.0100
20.000	0.0100

Name: PW-05 Base Flow(cfs): 0.000 Init Stage(ft): 6.470
Group: PW Warn Stage(ft): 15.000
Type: Stage/Area

Stage(ft)	Area(ac)

Name: PW-06A Base Flow(cfs): 0.000 Init Stage(ft): 12.000
Group: PW Warn Stage(ft): 18.000
Type: Stage/Area

Stage(ft)	Area(ac)

12.000	0.2100
20.000	0.2100

Name: PW-06B Base Flow(cfs): 0.000 Init Stage(ft): 13.200
Group: PW Warn Stage(ft): 20.000
Type: Stage/Area

Stage(ft)	Area(ac)
13.000	0.2600
16.000	0.2600
20.000	1.0500
21.000	1.0500

Name: PW-07 Base Flow(cfs): 0.000 Init Stage(ft): 14.000
Group: PW Warn Stage(ft): 18.000
Type: Stage/Area

Stage(ft)	Area(ac)
14.000	0.5100
20.000	0.5100

Name: PW-08 Base Flow(cfs): 0.000 Init Stage(ft): 14.000
Group: PW Warn Stage(ft): 18.000
Type: Stage/Area

Stage(ft)	Area(ac)
14.000	0.4400
16.000	0.4400
18.000	1.8500

Name: PW-09 Base Flow(cfs): 0.000 Init Stage(ft): 15.000
Group: PW Warn Stage(ft): 20.000
Type: Stage/Area

Stage(ft)	Area(ac)
15.000	0.4000
16.000	0.4000
18.000	0.7600
19.000	2.1600
20.000	4.0000

Name: PW-13 Base Flow(cfs): 0.000 Init Stage(ft): 18.000
Group: PW Warn Stage(ft): 22.000
Type: Stage/Area

Stage(ft)	Area(ac)
18.000	0.4600
19.000	0.4600
22.000	1.3900

Name: PW-14 Base Flow(cfs): 0.000 Init Stage(ft): 21.000
Group: PW Warn Stage(ft): 26.000
Type: Stage/Area

Stage(ft)	Area(ac)
21.000	0.0100
26.000	0.0100

Name: PW-15 Base Flow(cfs): 0.000 Init Stage(ft): 21.500
Group: PW Warn Stage(ft): 26.000
Type: Stage/Area

Stage(ft)	Area(ac)
20.000	0.0100
27.000	0.0100

Name: PW-16 Base Flow(cfs): 0.000 Init Stage(ft): 23.000
Group: PW Warn Stage(ft): 28.000
Type: Stage/Area

Stage(ft)	Area(ac)
20.000	0.0100
30.000	0.0100

Name: PW-17 Base Flow(cfs): 0.000 Init Stage(ft): 23.000
Group: PW Warn Stage(ft): 28.000
Type: Stage/Area

Stage(ft)	Area(ac)
23.000	0.2000
28.000	0.2000

Name: STOR-01 Base Flow(cfs): 0.000 Init Stage(ft): 10.300
Group: STOR Warn Stage(ft): 14.500
Type: Stage/Area

estimated data

Stage(ft)	Area(ac)

Name: STOR-02 Base Flow(cfs): 0.000 Init Stage(ft): 10.500
Group: STOR Warn Stage(ft): 13.000
Type: Stage/Area

Stage(ft)	Area(ac)
10.000	0.0100
15.000	0.0100

Name: STOR-03 Base Flow(cfs): 0.000 Init Stage(ft): 11.000
Group: STOR Warn Stage(ft): 13.500
Type: Stage/Area

Stage(ft)	Area(ac)
10.000	0.5600
20.000	0.5600

Name: STOR-04 Base Flow(cfs): 0.000 Init Stage(ft): 14.000
Group: STOR Warn Stage(ft): 17.000
Type: Stage/Area

Stage(ft)	Area(ac)
14.000	1.6200
20.000	1.6200

Name: STOR-05 Base Flow(cfs): 0.000 Init Stage(ft): 15.000
Group: STOR Warn Stage(ft): 18.000
Type: Stage/Area

Stage(ft)	Area(ac)
10.000	0.0100

20.000	0.0100

Name: STOR-06 Base Flow(cfs): 0.000 Init Stage(ft): 15.000
Group: STOR Warn Stage(ft): 20.000
Type: Stage/Area

Stage(ft)	Area(ac)
10.000	0.0100
20.000	0.0100

Name: STOR-07 Base Flow(cfs): 0.000 Init Stage(ft): 16.500
Group: STOR Warn Stage(ft): 20.000
Type: Stage/Area

Stage(ft)	Area(ac)
15.000	1.3500
16.000	1.5600
20.000	2.0500

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==== Cross Sections ====
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Name: AF LINK-01 DS Group: BASE
Encroachment: No

LiDAR data only

Station(ft)	Elevation(ft)	Manning's N
0.000	17.570	0.060000
2.970	17.690	0.060000
5.940	17.790	0.060000
8.910	17.810	0.060000
11.880	17.830	0.060000
14.850	17.880	0.060000
17.820	17.900	0.060000
20.790	17.900	0.060000
23.760	17.900	0.060000
26.730	17.820	0.060000
29.700	17.730	0.060000
32.670	17.390	0.060000
35.630	16.560	0.060000
38.600	15.570	0.060000
41.570	14.550	0.060000
44.540	13.690	0.060000
47.510	13.050	0.035000
50.480	12.370	0.035000
53.450	11.710	0.035000
56.420	11.050	0.035000
59.390	10.310	0.035000
62.360	9.780	0.035000
65.330	9.440	0.035000
68.300	9.390	0.035000
71.270	9.440	0.035000
74.240	10.280	0.035000
77.210	11.350	0.035000
80.180	12.160	0.035000
83.150	12.620	0.035000
86.120	13.050	0.035000
89.090	13.460	0.060000
92.060	13.900	0.060000
95.030	14.470	0.060000
98.000	14.850	0.060000
100.970	15.280	0.060000
103.940	15.680	0.060000
106.900	16.050	0.060000
109.870	16.380	0.060000
112.840	16.730	0.060000
115.810	17.060	0.060000
118.780	17.340	0.060000
121.750	17.600	0.060000
124.720	17.750	0.060000

Name: AF LINK-01 US Group: BASE
Encroachment: No

LiDAR data only

Station(ft)	Elevation(ft)	Manning's N
0.000	17.630	0.060000
2.960	17.540	0.060000
5.920	17.450	0.060000
8.890	17.370	0.060000
11.850	17.310	0.060000
14.810	17.170	0.060000
17.770	17.040	0.060000
20.730	16.900	0.060000
23.700	16.730	0.060000
26.660	16.350	0.060000
29.620	15.740	0.060000
32.580	13.910	0.060000
35.540	12.630	0.060000
38.510	11.330	0.035000
41.470	10.710	0.035000
44.430	10.530	0.035000
47.390	10.390	0.035000
50.350	10.260	0.035000
53.320	10.050	0.035000
56.280	9.910	0.035000
59.240	9.820	0.035000
62.200	10.010	0.035000
65.160	10.110	0.035000
68.130	9.940	0.035000
71.090	10.050	0.035000
74.050	10.150	0.035000
77.010	11.070	0.035000
79.970	12.110	0.035000
82.940	13.500	0.060000
85.900	15.050	0.060000
88.860	16.230	0.060000
91.820	16.720	0.060000
94.790	17.070	0.060000
97.750	17.340	0.060000
100.710	17.620	0.060000
103.670	17.810	0.060000
106.630	17.840	0.060000
109.600	17.910	0.060000

Name: AF LINK-03 DS Group: BASE
Encroachment: No

LiDAR data only

Station(ft)	Elevation(ft)	Manning's N
0.000	17.660	0.060000
2.950	17.740	0.060000
5.900	17.830	0.060000
8.850	17.830	0.060000
11.800	17.780	0.060000
14.760	17.720	0.060000
17.710	17.720	0.060000
20.660	17.750	0.060000
23.610	17.790	0.060000
26.560	17.770	0.060000
29.510	17.690	0.060000
32.460	17.540	0.060000
35.410	17.270	0.060000
38.370	16.930	0.060000
41.320	16.470	0.060000
44.270	15.500	0.060000
47.220	13.890	0.060000
50.170	12.420	0.060000
53.120	11.430	0.035000
56.070	11.070	0.035000
59.020	11.020	0.035000
61.980	11.000	0.035000
64.930	11.010	0.035000
67.880	10.950	0.035000
70.830	10.890	0.035000
73.780	10.950	0.035000
76.730	10.950	0.035000
79.680	11.000	0.035000
82.630	10.970	0.035000
85.590	10.980	0.035000
88.540	11.380	0.035000
91.490	12.220	0.035000
94.440	13.320	0.060000
97.390	14.430	0.060000
100.340	15.420	0.060000
103.290	16.230	0.060000
106.240	16.690	0.060000

109.190	17.030	0.060000
112.150	17.350	0.060000
115.100	17.520	0.060000
118.050	17.600	0.060000
121.000	17.730	0.060000
123.950	17.850	0.060000
126.900	17.970	0.060000
129.850	18.050	0.060000
132.800	18.110	0.060000
135.760	18.170	0.060000
138.710	18.230	0.060000

Name: AF LINK-03 US Group: BASE
Encroachment: No

AF LINK-03 US

Station(ft)	Elevation(ft)	Manning's N
0.000	17.680	0.060000
2.980	17.580	0.060000
5.960	17.520	0.060000
8.940	17.460	0.060000
11.920	17.390	0.060000
14.890	17.300	0.060000
17.870	17.190	0.060000
20.850	17.070	0.060000
23.830	16.950	0.060000
26.810	16.790	0.060000
29.790	16.610	0.060000
32.770	16.390	0.060000
35.750	16.050	0.060000
38.720	15.440	0.060000
41.700	14.530	0.060000
44.680	13.290	0.035000
47.660	12.270	0.035000
50.640	11.550	0.035000
53.620	11.210	0.035000
56.600	11.100	0.035000
59.580	11.270	0.035000
62.560	11.840	0.035000
65.530	12.620	0.035000
68.510	13.600	0.035000
71.490	14.270	0.060000
74.470	14.690	0.060000
77.450	15.080	0.060000
80.430	15.610	0.060000
83.410	16.210	0.060000
86.390	16.750	0.060000
89.360	17.190	0.060000
92.340	17.560	0.060000
95.320	17.830	0.060000
98.300	18.000	0.060000
101.280	18.110	0.060000
104.260	18.220	0.060000
107.240	18.310	0.060000
110.220	18.330	0.060000

Name: AF LINK-04 DS Group: BASE
Encroachment: No

LiDAR data only

Station(ft)	Elevation(ft)	Manning's N
0.000	17.210	0.060000
2.990	17.200	0.060000
5.980	17.160	0.060000
8.960	17.100	0.060000
11.950	17.010	0.060000
14.940	16.900	0.060000
17.930	16.760	0.060000
20.910	16.590	0.060000
23.900	16.380	0.060000
26.890	15.990	0.060000
29.880	15.420	0.060000
32.870	14.640	0.060000
35.850	13.540	0.035000
38.840	12.500	0.035000
41.830	11.810	0.035000
44.820	11.680	0.035000
47.800	11.950	0.035000
50.790	12.470	0.035000
53.780	13.100	0.035000
56.770	13.850	0.035000

59.760	14.540	0.035000
62.740	15.080	0.060000
65.730	15.720	0.060000
68.720	16.300	0.060000
71.710	16.800	0.060000
74.690	17.270	0.060000
77.680	17.670	0.060000
80.670	17.930	0.060000
83.660	18.050	0.060000
86.640	18.090	0.060000
89.630	18.080	0.060000
92.620	18.120	0.060000
95.610	18.120	0.060000
98.600	18.190	0.060000
101.580	18.210	0.060000
104.570	18.190	0.060000
107.560	18.150	0.060000
110.550	18.200	0.060000

Name: AF LINK-04 US Group: BASE
Encroachment: No

LiDAR data only

Station(ft)	Elevation(ft)	Manning's N
0.000	19.430	0.060000
2.990	19.420	0.060000
5.980	19.400	0.060000
8.970	19.320	0.060000
11.960	19.260	0.060000
14.950	19.200	0.060000
17.940	19.060	0.060000
20.930	18.930	0.060000
23.920	18.860	0.060000
26.910	18.840	0.060000
29.900	18.790	0.060000
32.900	18.700	0.060000
35.890	18.640	0.060000
38.880	18.610	0.060000
41.870	18.600	0.060000
44.860	18.540	0.060000
47.850	18.540	0.060000
50.840	18.530	0.060000
53.830	18.460	0.060000
56.820	18.350	0.060000
59.810	18.120	0.060000
62.800	17.810	0.060000
65.790	17.410	0.060000
68.780	16.970	0.060000
71.770	16.450	0.060000
74.760	15.940	0.060000
77.750	15.380	0.035000
80.740	14.480	0.035000
83.730	13.450	0.035000
86.720	13.090	0.035000
89.710	13.440	0.035000
92.700	14.120	0.035000
95.690	15.320	0.035000
98.690	16.210	0.035000
101.680	16.800	0.060000
104.670	17.270	0.060000
107.660	17.540	0.060000
110.650	17.710	0.060000
113.640	17.840	0.060000
116.630	17.930	0.060000
119.620	18.070	0.060000
122.610	18.240	0.060000
125.600	18.280	0.060000
128.590	18.400	0.060000
131.580	18.550	0.060000
134.570	18.690	0.060000
137.560	18.770	0.060000
140.550	18.820	0.060000
143.540	18.780	0.060000
146.530	18.730	0.060000
149.520	18.700	0.060000
152.510	18.720	0.060000
155.500	18.780	0.060000
158.490	18.840	0.060000
161.480	18.970	0.060000
164.480	19.100	0.060000
167.470	19.220	0.060000
170.460	19.400	0.060000
173.450	19.550	0.060000
176.440	19.580	0.060000

179.430	19.560	0.060000
182.420	19.550	0.060000
185.410	19.530	0.060000

Name: AF LINK-05 DS Group: BASE
Encroachment: No

LiDAR data only

Station(ft)	Elevation(ft)	Manning's N
0.000	18.190	0.060000
2.990	18.110	0.060000
5.990	18.040	0.060000
8.980	17.940	0.060000
11.980	17.750	0.060000
14.970	17.530	0.060000
17.970	17.420	0.060000
20.960	17.330	0.060000
23.960	17.300	0.060000
26.950	17.190	0.060000
29.950	17.030	0.060000
32.940	16.940	0.060000
35.940	16.830	0.060000
38.930	16.470	0.060000
41.920	15.690	0.060000
44.920	14.260	0.035000
47.910	12.890	0.035000
50.910	12.170	0.035000
53.900	11.790	0.035000
56.900	11.630	0.035000
59.890	11.690	0.035000
62.890	12.360	0.035000
65.880	13.060	0.035000
68.880	14.000	0.035000
71.870	15.050	0.035000
74.860	15.570	0.060000
77.860	15.980	0.060000
80.850	16.280	0.060000
83.850	16.620	0.060000
86.840	16.820	0.060000
89.840	16.890	0.060000
92.830	16.940	0.060000
95.830	16.980	0.060000
98.820	16.940	0.060000
101.820	17.030	0.060000
104.810	17.110	0.060000
107.810	17.150	0.060000
110.800	17.170	0.060000
113.790	17.170	0.060000
116.790	17.140	0.060000

Name: AF LINK-05 US Group: BASE
Encroachment: No

LiDAR data only

Station(ft)	Elevation(ft)	Manning's N
0.000	17.090	0.060000
2.970	17.150	0.060000
5.950	17.180	0.060000
8.920	17.180	0.060000
11.890	17.210	0.060000
14.870	17.130	0.060000
17.840	17.040	0.060000
20.820	16.950	0.060000
23.790	16.730	0.060000
26.760	16.330	0.060000
29.740	15.360	0.060000
32.710	14.060	0.035000
35.680	12.790	0.035000
38.660	12.080	0.035000
41.630	11.940	0.035000
44.600	12.030	0.035000
47.580	12.330	0.035000
50.550	12.890	0.035000
53.530	13.710	0.035000
56.500	14.650	0.035000
59.470	15.610	0.035000
62.450	16.200	0.060000
65.420	16.530	0.060000
68.390	16.690	0.060000
71.370	16.770	0.060000

74.340	16.790	0.060000
77.310	16.870	0.060000
80.290	16.780	0.060000
83.260	16.730	0.060000
86.240	16.720	0.060000
89.210	16.710	0.060000
92.180	16.710	0.060000
95.160	16.670	0.060000
98.130	16.730	0.060000
101.100	16.750	0.060000
104.080	16.740	0.060000
107.050	16.760	0.060000
110.020	16.770	0.060000
113.000	16.890	0.060000
115.970	17.160	0.060000
118.940	17.290	0.060000
121.920	17.270	0.060000
124.890	17.250	0.060000
127.870	17.240	0.060000
130.840	17.240	0.060000
133.810	17.240	0.060000
136.790	17.240	0.060000
139.760	17.260	0.060000

Name: AF LINK-07 DS Group: BASE
Encroachment: No

LiDAR data only

Station(ft)	Elevation(ft)	Manning's N
0.000	17.850	0.060000
2.990	17.730	0.060000
5.970	17.550	0.060000
8.960	17.440	0.060000
11.950	17.380	0.060000
14.930	17.330	0.060000
17.920	17.220	0.060000
20.910	17.120	0.060000
23.890	17.150	0.060000
26.880	17.100	0.060000
29.870	17.020	0.060000
32.850	16.980	0.060000
35.840	16.900	0.060000
38.830	16.900	0.060000
41.810	16.950	0.060000
44.800	16.960	0.060000
47.790	16.930	0.060000
50.770	16.920	0.060000
53.760	17.000	0.060000
56.750	17.080	0.060000
59.730	17.120	0.060000
62.720	17.180	0.060000
65.710	17.210	0.060000
68.690	17.220	0.060000
71.680	17.230	0.060000
74.670	17.220	0.060000
77.650	17.200	0.060000
80.640	17.160	0.060000
83.630	17.090	0.060000
86.610	17.040	0.060000
89.600	17.000	0.060000
92.590	16.940	0.060000
95.570	16.930	0.060000
98.560	16.910	0.060000
101.550	16.840	0.060000
104.530	16.690	0.060000
107.520	16.480	0.060000
110.510	16.280	0.060000
113.490	16.040	0.060000
116.480	15.650	0.060000
119.470	14.990	0.035000
122.450	14.160	0.035000
125.440	13.540	0.035000
128.430	13.080	0.035000
131.410	12.710	0.035000
134.400	12.570	0.035000
137.390	12.830	0.035000
140.370	13.350	0.035000
143.360	14.010	0.035000
146.350	14.580	0.035000
149.330	15.030	0.035000
152.320	15.370	0.035000
155.310	15.660	0.035000
158.290	15.860	0.035000
161.280	15.920	0.060000

164.270	16.040	0.060000
167.250	16.170	0.060000
170.240	16.220	0.060000
173.230	16.320	0.060000
176.210	16.410	0.060000
179.200	16.490	0.060000
182.190	16.560	0.060000
185.170	16.770	0.060000
188.160	16.960	0.060000
191.150	17.060	0.060000
194.130	17.070	0.060000
197.120	17.050	0.060000
200.110	17.020	0.060000
203.090	16.990	0.060000
206.080	17.010	0.060000
209.070	17.020	0.060000
212.050	17.040	0.060000
215.040	17.050	0.060000
218.030	17.070	0.060000
221.010	17.080	0.060000
224.000	17.090	0.060000
226.990	17.080	0.060000
229.970	17.080	0.060000
232.960	17.090	0.060000
235.950	17.100	0.060000
238.930	17.120	0.060000
241.920	17.170	0.060000
244.900	17.210	0.060000
247.890	17.240	0.060000
250.880	17.260	0.060000
253.860	17.270	0.060000
256.850	17.290	0.060000
259.840	17.310	0.060000
262.820	17.340	0.060000
265.810	17.390	0.060000
268.800	17.410	0.060000
271.780	17.270	0.060000
274.770	17.160	0.060000
277.760	17.030	0.060000
280.740	17.160	0.060000
283.730	17.510	0.060000
286.720	17.740	0.060000
289.700	18.020	0.060000
292.690	18.230	0.060000
295.680	18.370	0.060000
298.660	18.450	0.060000
301.650	18.490	0.060000
304.640	18.510	0.060000
307.620	18.520	0.060000

Name: AF LINK-07 US Group: BASE
Encroachment: No

LiDAR data only

Station(ft)	Elevation(ft)	Manning's N
0.000	20.000	0.060000
2.970	19.870	0.060000
5.940	19.740	0.060000
8.910	19.670	0.060000
11.870	19.600	0.060000
14.840	19.520	0.060000
17.810	19.440	0.060000
20.780	19.360	0.060000
23.750	19.280	0.060000
26.720	19.200	0.060000
29.690	19.070	0.060000
32.660	18.990	0.060000
35.620	18.880	0.060000
38.590	18.800	0.060000
41.560	18.840	0.060000
44.530	18.850	0.060000
47.500	18.830	0.060000
50.470	18.800	0.060000
53.440	18.710	0.060000
56.410	18.550	0.060000
59.370	18.470	0.060000
62.340	18.490	0.060000
65.310	18.420	0.060000
68.280	18.390	0.060000
71.250	18.340	0.060000
74.220	18.250	0.060000
77.190	18.050	0.060000
80.160	17.790	0.060000

83.120	17.390	0.060000
86.090	16.850	0.035000
89.060	16.190	0.035000
92.030	15.330	0.035000
95.000	14.510	0.035000
97.970	14.030	0.035000
100.940	13.740	0.035000
103.910	13.660	0.035000
106.870	13.670	0.035000
109.840	14.050	0.035000
112.810	14.930	0.035000
115.780	15.840	0.035000
118.750	16.520	0.035000
121.720	17.150	0.035000
124.690	17.480	0.035000
127.660	17.690	0.060000
130.620	17.850	0.060000
133.590	18.060	0.060000
136.560	18.120	0.060000
139.530	18.140	0.060000
142.500	18.180	0.060000
145.470	18.230	0.060000
148.440	18.290	0.060000
151.410	18.330	0.060000
154.370	18.350	0.060000
157.340	18.240	0.060000
160.310	18.240	0.060000
163.280	18.280	0.060000

Name: CATH_OV Group: STOR
Encroachment: No

Data from LiDAR

Station(ft)	Elevation(ft)	Manning's N
0.000	14.790	0.000000
2.990	14.800	0.000000
5.980	14.770	0.000000
8.970	14.790	0.000000
11.960	14.810	0.000000
14.950	14.750	0.000000
17.940	14.730	0.000000
20.940	14.710	0.000000
23.930	14.710	0.000000
26.920	14.670	0.000000
29.910	14.680	0.000000
32.900	14.680	0.000000
35.890	14.650	0.000000
38.880	14.630	0.000000
41.870	14.640	0.000000
44.860	14.560	0.000000
47.850	14.580	0.000000
50.840	14.580	0.000000
53.830	14.530	0.000000
56.830	14.530	0.000000
59.820	14.520	0.000000
62.810	14.480	0.000000
65.800	14.440	0.000000
68.790	14.450	0.000000
71.780	14.430	0.000000
74.770	14.360	0.000000
77.760	14.340	0.000000
80.750	14.320	0.000000
83.740	14.310	0.000000
86.730	14.220	0.000000
89.720	14.140	0.000000
92.710	14.130	0.000000
95.710	14.140	0.000000
98.700	14.130	0.000000
101.690	14.090	0.000000
104.680	14.090	0.000000
107.670	14.070	0.000000
110.660	14.030	0.000000
113.650	14.040	0.000000
116.640	14.070	0.000000
119.630	14.060	0.000000
122.620	14.050	0.000000
125.610	14.060	0.000000
128.600	14.100	0.000000
131.600	14.050	0.000000
134.590	14.060	0.000000
137.580	14.060	0.000000
140.570	14.010	0.000000
143.560	14.010	0.000000
146.550	14.010	0.000000

149.540	14.010	0.000000
152.530	14.020	0.000000
155.520	14.040	0.000000
158.510	14.050	0.000000
161.500	14.000	0.000000
164.490	14.030	0.000000
167.480	14.080	0.000000
170.480	14.070	0.000000
173.470	14.070	0.000000
176.460	14.090	0.000000
179.450	14.130	0.000000
182.440	14.150	0.000000
185.430	14.180	0.000000
188.420	14.190	0.000000
191.410	14.180	0.000000
194.400	14.150	0.000000
197.390	14.130	0.000000
200.380	14.150	0.000000
203.370	14.170	0.000000
206.370	14.190	0.000000
209.360	14.210	0.000000
212.350	14.230	0.000000
215.340	14.240	0.000000
218.330	14.230	0.000000
221.320	14.270	0.000000
224.310	14.290	0.000000
227.300	14.330	0.000000
230.290	14.350	0.000000
233.280	14.370	0.000000
236.270	14.370	0.000000
239.260	14.360	0.000000
242.250	14.400	0.000000
245.250	14.460	0.000000
248.240	14.490	0.000000
251.230	14.490	0.000000
254.220	14.480	0.000000
257.210	14.510	0.000000
260.200	14.510	0.000000
263.190	14.540	0.000000
266.180	14.580	0.000000
269.170	14.590	0.000000
272.160	14.590	0.000000
275.150	14.590	0.000000
278.140	14.600	0.000000
281.140	14.620	0.000000
284.130	14.620	0.000000
287.120	14.620	0.000000
290.110	14.650	0.000000
293.100	14.660	0.000000
296.090	14.660	0.000000
299.080	14.690	0.000000

Name: Channel-01 DS Group: BASE
Encroachment: No

Cross section derived from LiDAR data

Station(ft)	Elevation(ft)	Manning's N
0.000	5.260	0.030000
2.950	5.220	0.030000
5.890	5.190	0.030000
8.840	5.180	0.030000
11.780	5.120	0.030000
14.730	5.100	0.030000
17.670	5.050	0.030000
20.620	5.050	0.030000
23.560	4.990	0.030000
26.510	4.920	0.030000
29.450	4.800	0.030000
32.400	4.770	0.030000
35.340	4.690	0.030000
38.290	4.510	0.030000
41.230	4.240	0.030000
44.180	3.890	0.030000
47.120	3.600	0.030000
50.070	3.240	0.030000
53.010	2.690	0.030000
55.960	2.050	0.030000
58.900	1.100	0.030000
61.850	0.260	0.030000
64.790	0.020	0.030000
67.740	0.110	0.030000
70.680	0.220	0.030000
73.630	0.380	0.030000
76.570	1.200	0.030000

79.520	2.020	0.030000
82.460	2.840	0.030000
85.410	3.500	0.030000
88.350	3.770	0.030000
91.300	3.900	0.030000
94.240	3.980	0.030000
97.190	3.980	0.030000
100.140	4.070	0.030000
103.080	4.200	0.030000
106.030	4.270	0.030000
108.970	4.360	0.030000
111.920	4.490	0.030000
114.860	4.560	0.030000
117.810	4.690	0.030000
120.750	4.720	0.030000
123.700	4.780	0.030000
126.640	4.920	0.030000
129.590	4.960	0.030000
132.530	5.000	0.030000
135.480	5.050	0.030000
138.420	5.050	0.030000
141.370	5.160	0.030000
144.310	5.310	0.030000
147.260	5.470	0.030000
150.200	5.600	0.030000
153.150	5.700	0.030000
156.090	5.840	0.030000

Name: Channel-01 US Group: BASE
Encroachment: No

Cross section derived from LiDAR data, wetted section supplemented by survey data

Station(ft)	Elevation(ft)	Manning's N
0.000	12.210	0.035000
3.000	12.060	0.035000
6.000	11.900	0.035000
9.000	11.770	0.035000
12.000	11.820	0.035000
15.000	11.930	0.035000
17.990	12.070	0.035000
20.990	12.360	0.035000
23.990	12.000	0.035000
26.990	11.150	0.035000
29.990	10.670	0.035000
32.990	10.520	0.035000
35.990	10.340	0.035000
38.990	10.070	0.035000
41.990	9.260	0.035000
44.990	8.640	0.035000
47.980	8.270	0.035000
50.980	8.140	0.035000
53.980	8.160	0.035000
56.980	8.070	0.035000
59.980	7.850	0.035000
62.980	7.610	0.035000
65.980	7.300	0.035000
68.980	6.940	0.035000
71.980	6.190	0.035000
74.980	4.850	0.035000
77.980	3.180	0.035000
80.970	1.800	0.030000
83.970	1.070	0.030000
86.970	0.600	0.030000
89.970	0.420	0.030000
92.970	0.300	0.030000
95.970	0.180	0.030000
98.970	0.160	0.030000
101.970	0.130	0.030000
104.970	0.570	0.030000
107.970	1.070	0.030000
110.960	1.600	0.030000
113.960	2.170	0.030000
116.960	2.790	0.035000
119.960	3.400	0.035000
122.960	3.500	0.035000
125.960	3.770	0.035000
128.960	4.020	0.035000
131.960	4.250	0.035000
134.960	4.650	0.035000
137.960	4.970	0.035000
140.960	5.190	0.035000
143.950	5.780	0.035000
146.950	6.440	0.035000
149.950	6.820	0.035000

152.950	7.020	0.035000
155.950	7.430	0.035000
158.950	8.090	0.035000
161.950	9.000	0.035000
164.950	10.010	0.035000
167.950	10.920	0.035000
170.950	11.230	0.035000
173.950	11.380	0.035000
176.940	11.470	0.035000
179.940	11.460	0.035000
182.940	11.450	0.035000
185.940	11.420	0.035000
188.940	11.320	0.035000
191.940	11.090	0.035000
194.940	11.290	0.035000

Name: Channel-02 DS Group: BASE
Encroachment: No

Cross section derived from LiDAR data, wetted section supplemented by survey data

Station(ft)	Elevation(ft)	Manning's N
8.990	8.150	0.030000
590.220	6.710	0.030000
593.210	6.680	0.030000
596.190	6.670	0.030000
599.180	6.650	0.030000
602.170	6.600	0.030000
605.160	6.620	0.030000
608.150	6.630	0.030000
611.130	6.630	0.030000
614.120	6.580	0.030000
617.110	6.600	0.030000
620.100	6.570	0.030000
623.080	6.520	0.030000
626.070	6.510	0.030000
629.060	6.570	0.030000
632.050	6.540	0.030000
635.040	6.560	0.030000
638.020	6.630	0.030000
641.010	6.680	0.030000
644.000	6.680	0.030000
646.990	6.740	0.030000
649.980	6.860	0.030000
652.960	6.970	0.030000
655.950	7.090	0.030000
658.940	7.100	0.030000
661.930	7.090	0.030000
664.910	7.070	0.030000
667.900	7.040	0.030000
670.890	7.030	0.030000
673.880	7.030	0.030000
676.870	7.090	0.030000
679.850	7.150	0.030000
682.840	7.180	0.030000
685.830	7.180	0.030000
688.820	7.220	0.030000
691.810	7.240	0.030000
694.790	7.360	0.030000
697.780	7.280	0.030000
700.770	7.120	0.030000
703.760	7.040	0.030000
706.740	7.120	0.030000
709.730	7.090	0.030000
712.700	6.790	0.030000
715.660	6.490	0.030000
718.620	6.430	0.030000
721.580	6.410	0.030000
724.550	6.280	0.030000
727.510	5.950	0.030000
728.200	6.210	0.035000
740.950	0.930	0.035000
764.410	0.550	0.035000
776.800	5.100	0.035000
777.870	5.470	0.035000
780.840	5.210	0.035000
783.800	4.820	0.030000
786.760	4.630	0.030000
789.720	4.450	0.030000
792.690	4.290	0.030000
795.650	4.320	0.030000
798.610	4.500	0.030000
801.580	4.710	0.030000
804.540	4.810	0.030000
807.500	4.890	0.030000

810.460	4.970	0.030000
813.430	5.000	0.030000
816.390	5.020	0.030000
819.350	5.020	0.030000
822.310	5.010	0.030000
825.280	5.020	0.030000
828.240	5.070	0.030000
831.200	5.130	0.030000
834.200	5.220	0.030000
837.200	5.260	0.030000
840.200	5.340	0.030000
843.200	5.410	0.030000
846.200	5.460	0.030000
849.200	5.510	0.030000
852.200	5.520	0.030000
855.200	5.560	0.030000
858.200	5.600	0.030000
861.200	5.590	0.030000
864.200	5.610	0.030000
867.200	5.740	0.030000
870.200	5.710	0.030000
873.200	5.640	0.030000
876.200	5.570	0.030000
879.200	5.500	0.030000
882.200	5.450	0.030000
885.200	5.460	0.030000
888.200	5.330	0.030000
891.200	5.160	0.030000
894.200	5.140	0.030000
897.200	5.100	0.030000
900.200	5.130	0.030000
903.190	5.260	0.030000
906.190	5.460	0.030000
909.190	5.660	0.030000
912.190	5.810	0.030000
915.190	6.000	0.030000
918.190	6.150	0.030000
921.190	6.300	0.030000
924.190	6.450	0.030000
927.190	6.510	0.030000
930.190	6.530	0.030000
933.190	6.570	0.030000
936.190	6.580	0.030000
939.190	6.590	0.030000
942.190	6.610	0.030000
945.190	6.590	0.030000
948.190	6.560	0.030000
951.190	6.510	0.030000
954.190	6.500	0.030000
957.190	6.520	0.030000
960.190	6.600	0.030000
963.190	6.650	0.030000
966.190	6.610	0.030000
969.190	6.610	0.030000
972.190	6.640	0.030000
975.190	6.590	0.030000
978.190	6.520	0.030000
981.190	6.520	0.030000
984.190	6.510	0.030000
987.190	6.460	0.030000
990.190	6.390	0.030000
993.190	6.330	0.030000
996.190	6.300	0.030000
999.180	6.340	0.030000
1002.180	6.330	0.030000
1005.180	6.300	0.030000
1008.180	6.210	0.030000
1011.180	6.070	0.030000
1014.180	6.040	0.030000
1017.180	5.980	0.030000
1020.180	5.880	0.030000
1023.180	5.720	0.030000
1026.180	5.610	0.030000
1029.180	5.640	0.030000
1032.180	5.700	0.030000
1035.180	5.780	0.030000
1038.180	5.890	0.030000
1041.180	5.940	0.030000
1044.180	5.990	0.030000
1047.180	6.050	0.030000
1050.180	6.200	0.030000
1053.180	6.270	0.030000
1056.180	6.310	0.030000
1059.180	6.410	0.030000
1062.180	6.480	0.030000
1065.180	6.510	0.030000
1068.180	6.470	0.030000

1071.180	6.380	0.030000
1074.180	6.310	0.030000
1077.180	6.330	0.030000
1080.180	6.370	0.030000
1083.180	6.400	0.030000
1086.180	6.440	0.030000
1089.180	6.460	0.030000
1092.180	6.440	0.030000
1095.180	6.410	0.030000
1098.170	6.380	0.030000
1101.170	6.320	0.030000
1104.170	6.410	0.030000
1107.170	6.540	0.030000
1110.170	6.570	0.030000
1113.170	6.590	0.030000
1116.170	6.650	0.030000
1119.170	6.700	0.030000
1122.170	6.680	0.030000
1125.170	6.620	0.030000
1128.170	6.550	0.030000
1131.170	6.520	0.030000
1134.170	6.520	0.030000
1137.170	6.500	0.030000
1140.170	6.480	0.030000
1143.170	6.480	0.030000
1146.170	6.380	0.030000
1149.170	6.350	0.030000
1152.170	6.330	0.030000
1155.170	6.300	0.030000
1158.170	6.240	0.030000
1161.170	6.140	0.030000
1164.170	6.060	0.030000
1167.170	6.000	0.030000
1170.170	5.920	0.030000
1173.170	5.930	0.030000
1176.170	6.060	0.030000
1179.170	6.200	0.030000
1182.170	6.380	0.030000
1185.170	6.380	0.030000
1188.170	6.300	0.030000
1191.170	6.220	0.030000
1194.160	6.220	0.030000
1197.160	6.190	0.030000
1200.160	6.160	0.030000
1203.160	6.240	0.030000
1206.160	6.360	0.030000
1209.160	6.480	0.030000
1212.160	6.570	0.030000
1215.160	6.650	0.030000
1218.160	6.820	0.030000
1221.160	6.960	0.030000
1224.160	6.900	0.030000
1227.160	6.780	0.030000
1230.160	6.750	0.030000
1233.160	6.640	0.030000
1236.160	6.620	0.030000
1239.160	6.630	0.030000
1242.160	6.640	0.030000
1245.160	6.660	0.030000
1248.160	6.680	0.030000
1251.160	6.710	0.030000
1254.160	6.750	0.030000
1257.160	6.700	0.030000
1260.160	6.710	0.030000
1263.160	6.710	0.030000
1266.160	6.680	0.030000
1269.160	6.650	0.030000
1272.160	6.590	0.030000
1275.160	6.590	0.030000
1278.160	6.640	0.030000
1281.160	6.610	0.030000
1284.160	6.570	0.030000
1287.160	6.680	0.030000
1290.160	6.730	0.030000
1293.150	6.660	0.030000
1296.150	6.590	0.030000
1299.150	6.330	0.030000
1302.150	6.130	0.030000
1305.150	6.040	0.030000
1308.150	5.970	0.030000
1311.150	6.010	0.030000
1314.150	6.130	0.030000
1317.150	6.290	0.030000
1320.150	6.380	0.030000
1323.150	6.420	0.030000
1326.150	6.470	0.030000
1329.150	6.530	0.030000

1332.150	6.630	0.030000
1335.150	6.760	0.030000
1338.150	6.860	0.030000
1341.150	6.910	0.030000
1344.150	6.950	0.030000
1347.150	6.980	0.030000
1350.150	6.970	0.030000
1353.150	6.960	0.030000
1356.150	6.980	0.030000
1359.150	7.080	0.030000
1362.150	7.170	0.030000
1365.150	7.200	0.030000
1368.150	7.240	0.030000
1371.150	7.320	0.030000
1374.150	7.350	0.030000
1377.150	7.270	0.030000
1380.150	7.230	0.030000
1383.150	7.260	0.030000
1386.150	7.260	0.030000
1389.140	7.170	0.030000
1392.140	7.190	0.030000
1395.140	7.250	0.030000
1398.140	7.240	0.030000
1401.140	7.200	0.030000
1404.140	7.200	0.030000
1407.140	7.190	0.030000
1410.140	7.130	0.030000
1413.140	7.070	0.030000
1416.140	7.050	0.030000
1419.140	6.980	0.030000
1422.140	6.930	0.030000
1425.140	7.050	0.030000
1428.140	7.050	0.030000
1431.140	6.990	0.030000
1434.140	6.870	0.030000
1437.140	6.730	0.030000
1440.140	6.620	0.030000
1443.140	6.540	0.030000
1446.140	6.520	0.030000
1449.140	6.550	0.030000
1452.140	6.590	0.030000
1455.140	6.680	0.030000
1458.140	6.840	0.030000
1461.140	7.000	0.030000
1464.140	7.140	0.030000
1467.140	7.310	0.030000
1470.140	7.310	0.030000
1473.140	7.400	0.030000
1476.140	7.540	0.030000
1479.140	7.680	0.030000
1482.140	7.820	0.030000
1485.140	7.900	0.030000
1488.130	7.930	0.030000
1491.130	7.930	0.030000
1494.130	7.920	0.030000
1497.130	7.900	0.030000
1500.130	7.890	0.030000
1503.130	7.870	0.030000
1506.130	7.870	0.030000
1509.130	7.910	0.030000
1512.130	7.940	0.030000
1515.130	7.970	0.030000
1518.130	8.000	0.030000
1521.130	8.020	0.030000
1524.130	8.020	0.030000
1527.130	8.070	0.030000
1530.130	8.050	0.030000
1533.130	8.040	0.030000
1536.130	8.080	0.030000
1539.130	8.070	0.030000
1542.130	8.000	0.030000
1545.130	7.940	0.030000
1548.130	7.930	0.030000
1551.130	7.890	0.030000
1554.130	7.830	0.030000
1557.130	7.810	0.030000
1560.130	7.780	0.030000
1563.130	7.780	0.030000
1566.130	7.730	0.030000
1569.130	7.680	0.030000
1572.130	7.670	0.030000
1575.130	7.660	0.030000
1578.130	7.630	0.030000
1581.130	7.590	0.030000
1584.120	7.510	0.030000
1587.120	7.440	0.030000
1590.120	7.520	0.030000

1593.120	7.580	0.030000
1596.120	7.690	0.030000
1599.120	7.750	0.030000
1602.120	7.790	0.030000
1605.120	7.860	0.030000
1608.120	7.910	0.030000
1611.120	8.000	0.030000
1614.120	8.020	0.030000
1617.120	7.980	0.030000
1620.120	8.000	0.030000
1623.120	8.090	0.030000
1626.120	8.120	0.030000
1629.120	8.090	0.030000
1632.120	8.090	0.030000
1635.120	8.120	0.030000
1638.120	8.140	0.030000
1641.120	8.120	0.030000
1644.120	8.180	0.030000
1647.120	8.310	0.030000
1650.120	8.310	0.030000
1653.120	8.380	0.030000
1656.120	8.370	0.030000
1659.120	8.390	0.030000
1662.120	8.340	0.030000
1665.120	8.350	0.030000
1668.120	8.380	0.030000
1671.120	8.360	0.030000
1674.120	8.270	0.030000
1677.120	8.190	0.030000
1680.120	8.170	0.030000
1683.110	8.210	0.030000
1686.110	8.210	0.030000
1689.110	8.140	0.030000
1692.110	8.090	0.030000
1695.110	8.060	0.030000
1698.110	8.150	0.030000
1701.110	8.240	0.030000
1704.110	8.310	0.030000
1707.110	8.350	0.030000
1710.110	8.330	0.030000
1713.110	8.310	0.030000
1716.110	8.300	0.030000
1719.110	8.270	0.030000
1722.110	8.260	0.030000
1725.110	8.290	0.030000
1728.110	8.360	0.030000
1731.110	8.440	0.030000
1734.110	8.470	0.030000
1737.110	8.490	0.030000
1740.110	8.490	0.030000
1743.110	8.570	0.030000
1746.110	8.610	0.030000
1749.110	8.620	0.030000
1752.110	8.620	0.030000
1755.110	8.580	0.030000
1758.110	8.550	0.030000
1761.110	8.670	0.030000
1764.110	8.770	0.030000
1767.110	8.830	0.030000
1770.110	8.900	0.030000
1773.110	8.980	0.030000
1776.110	9.050	0.030000
1779.100	9.190	0.030000
1782.100	9.310	0.030000
1785.100	9.380	0.030000
1788.100	9.430	0.030000
1791.100	9.400	0.030000
1794.100	9.510	0.030000

Name: Channel-02 US Group: BASE
Encroachment: No

Cross section derived from LiDAR data, wetted section supplemented by survey data

Station(ft)	Elevation(ft)	Manning's N
0.000	6.980	0.025000
2.990	7.020	0.025000
5.980	6.970	0.025000
8.970	6.950	0.025000
11.960	6.970	0.025000
14.950	6.980	0.025000
17.940	6.900	0.025000
20.930	6.680	0.025000
23.920	6.450	0.025000
26.910	6.290	0.025000

29.900	6.270	0.025000
32.890	6.190	0.025000
35.880	6.140	0.025000
38.870	6.040	0.025000
41.870	6.080	0.025000
44.860	6.140	0.025000
47.850	6.180	0.025000
50.840	6.190	0.025000
53.830	6.140	0.025000
56.820	6.100	0.025000
59.810	6.110	0.025000
62.800	6.050	0.025000
65.790	6.060	0.025000
68.780	5.990	0.025000
71.770	5.970	0.025000
74.760	6.010	0.025000
77.750	6.030	0.025000
80.740	5.990	0.025000
83.730	5.940	0.025000
86.720	5.970	0.025000
89.710	6.000	0.025000
92.700	6.010	0.025000
95.690	6.020	0.025000
98.680	6.030	0.025000
101.670	6.010	0.025000
104.660	5.960	0.025000
107.650	5.910	0.025000
110.640	5.890	0.025000
113.630	5.910	0.025000
116.620	6.010	0.025000
119.610	5.850	0.025000
122.610	5.840	0.025000
125.600	5.830	0.025000
128.590	5.820	0.025000
131.580	5.810	0.025000
134.570	5.760	0.025000
137.560	5.720	0.025000
140.550	5.710	0.025000
143.540	5.700	0.025000
146.530	5.690	0.025000
149.520	5.670	0.025000
152.510	5.600	0.025000
155.500	5.600	0.025000
158.490	5.580	0.025000
161.480	5.530	0.025000
164.470	5.510	0.025000
167.460	5.470	0.025000
170.450	5.480	0.025000
173.440	5.460	0.025000
176.430	5.370	0.025000
179.420	5.290	0.025000
182.410	5.250	0.025000
185.400	5.170	0.025000
188.390	5.170	0.025000
191.380	5.190	0.025000
194.370	5.180	0.025000
197.360	5.190	0.025000
200.360	5.200	0.025000
203.350	5.140	0.025000
206.340	5.200	0.025000
209.330	5.270	0.025000
212.320	5.220	0.025000
215.310	5.220	0.025000
218.300	5.240	0.025000
221.290	5.280	0.025000
224.280	5.300	0.025000
227.270	5.290	0.025000
230.260	5.310	0.025000
233.250	5.370	0.025000
236.240	5.440	0.025000
239.230	5.550	0.025000
242.220	5.630	0.025000
245.210	5.730	0.025000
248.200	5.800	0.025000
251.190	5.820	0.025000
254.180	5.760	0.025000
257.170	5.720	0.025000
260.160	5.690	0.025000
263.150	5.650	0.025000
266.140	5.620	0.025000
269.130	5.620	0.025000
272.120	5.630	0.025000
275.110	5.620	0.025000
278.100	5.610	0.025000
281.100	5.560	0.025000
284.090	5.530	0.025000
287.080	5.480	0.025000

290.070	5.470	0.025000
293.060	5.460	0.025000
296.050	5.430	0.025000
299.040	5.400	0.025000
302.030	5.410	0.025000
305.020	5.420	0.025000
308.010	5.450	0.025000
311.000	5.460	0.025000
313.990	5.400	0.025000
316.980	5.360	0.025000
319.970	5.330	0.025000
322.960	5.320	0.025000
325.950	5.300	0.025000
328.940	5.330	0.025000
331.930	5.360	0.025000
334.920	5.330	0.025000
337.910	5.330	0.025000
340.900	5.350	0.025000
343.890	5.330	0.025000
346.880	5.370	0.025000
349.870	5.400	0.025000
352.860	5.420	0.025000
355.850	5.410	0.025000
358.840	5.340	0.025000
361.840	5.320	0.025000
364.830	5.330	0.025000
367.820	5.340	0.025000
370.810	5.380	0.025000
373.800	5.390	0.025000
376.790	5.360	0.025000
379.780	5.330	0.025000
382.770	5.360	0.025000
385.760	5.440	0.025000
388.750	5.550	0.025000
391.740	5.610	0.025000
394.730	5.600	0.025000
397.720	5.610	0.025000
400.710	5.620	0.025000
403.700	5.630	0.025000
406.690	5.630	0.025000
409.680	5.640	0.025000
412.670	5.660	0.025000
415.660	5.670	0.025000
418.650	5.690	0.025000
421.640	5.710	0.025000
424.630	5.680	0.025000
427.620	5.560	0.025000
430.610	5.440	0.025000
433.600	5.420	0.025000
436.590	5.420	0.025000
439.580	5.420	0.025000
442.580	5.410	0.025000
445.570	5.410	0.025000
448.560	5.400	0.025000
451.550	5.420	0.025000
454.540	5.490	0.025000
457.530	5.590	0.025000
460.520	5.660	0.025000
463.510	5.690	0.025000
466.500	5.720	0.025000
469.490	5.730	0.025000
472.480	5.760	0.025000
475.470	5.690	0.025000
478.460	5.820	0.025000
481.450	5.910	0.025000
484.440	5.980	0.025000
487.430	6.050	0.025000
490.420	6.040	0.025000
493.410	6.030	0.025000
496.400	5.990	0.025000
499.390	5.870	0.025000
502.380	5.800	0.025000
505.370	5.730	0.025000
508.360	5.600	0.025000
511.350	5.440	0.025000
514.340	5.400	0.025000
517.330	5.440	0.025000
520.330	5.520	0.025000
523.320	5.580	0.025000
526.310	5.560	0.025000
529.300	5.530	0.025000
532.290	5.470	0.025000
535.280	5.400	0.025000
538.270	5.450	0.025000
541.260	5.470	0.025000
544.250	5.510	0.025000
547.240	5.480	0.025000

550.230	5.430	0.025000
553.220	5.520	0.025000
556.210	5.560	0.025000
559.200	5.560	0.025000
562.190	5.540	0.025000
565.180	5.610	0.025000
568.170	5.640	0.025000
571.160	5.650	0.025000
574.150	5.680	0.025000
577.140	5.750	0.025000
580.130	5.810	0.025000
583.120	5.880	0.025000
586.110	5.950	0.025000
589.100	5.950	0.025000
592.090	5.210	0.035000
609.040	4.850	0.035000
612.500	0.780	0.035000
635.650	1.140	0.035000
643.960	4.670	0.035000
656.990	5.730	0.035000
660.950	5.570	0.025000
663.950	5.620	0.025000
666.940	5.690	0.025000
669.930	5.740	0.025000
672.930	5.780	0.025000
675.920	5.780	0.025000
678.910	5.770	0.025000
681.910	5.770	0.025000
684.900	5.770	0.025000
687.900	5.810	0.025000
690.890	5.820	0.025000
693.880	5.810	0.025000
696.880	5.770	0.025000
699.870	5.710	0.025000
702.860	5.720	0.025000
705.860	5.750	0.025000
708.850	5.780	0.025000
711.850	5.810	0.025000
714.840	5.820	0.025000
717.830	5.810	0.025000
720.830	5.750	0.025000
723.820	5.620	0.025000
726.820	5.610	0.025000
729.810	5.590	0.025000
732.800	5.610	0.025000
735.800	5.650	0.025000
738.790	5.730	0.025000
741.780	5.720	0.025000
744.780	5.770	0.025000
747.770	5.840	0.025000
750.770	5.870	0.025000
753.760	5.960	0.025000
756.750	5.980	0.025000
759.750	5.950	0.025000
762.740	5.930	0.025000
765.730	5.930	0.025000
768.730	5.930	0.025000
771.720	5.930	0.025000
774.720	5.940	0.025000
777.710	5.860	0.025000
780.700	5.890	0.025000
783.700	5.930	0.025000
786.690	5.950	0.025000
789.690	5.910	0.025000
792.680	5.850	0.025000
795.670	5.860	0.025000
798.670	5.730	0.025000
801.660	5.590	0.025000
804.650	5.560	0.025000
807.650	5.520	0.025000
810.640	5.520	0.025000
813.640	5.470	0.025000
816.630	5.440	0.025000
819.620	5.460	0.025000
822.620	5.470	0.025000
825.610	5.520	0.025000
828.600	5.550	0.025000
831.600	5.460	0.025000
834.590	5.500	0.025000
837.590	5.540	0.025000
840.580	5.580	0.025000
843.570	5.650	0.025000
846.570	5.700	0.025000
849.560	5.760	0.025000
852.560	5.840	0.025000
855.550	5.840	0.025000
858.540	5.860	0.025000

861.540	5.890	0.025000
864.530	5.930	0.025000
867.520	5.930	0.025000
870.520	5.960	0.025000
873.510	6.040	0.025000
876.510	6.030	0.025000
879.500	6.010	0.025000
882.490	6.070	0.025000
885.490	6.130	0.025000
888.480	6.160	0.025000
891.470	6.220	0.025000
894.470	6.240	0.025000
897.460	6.300	0.025000
900.460	6.360	0.025000
903.450	6.380	0.025000
906.440	6.350	0.025000
909.440	6.340	0.025000
912.430	6.220	0.025000
915.420	6.210	0.025000
918.420	6.220	0.025000
921.410	6.140	0.025000
924.410	6.130	0.025000
927.400	6.020	0.025000
930.390	5.950	0.025000
933.390	5.900	0.025000
936.380	5.830	0.025000
939.380	5.760	0.025000
942.370	5.710	0.025000
945.360	5.690	0.025000
948.360	5.730	0.025000
951.350	5.830	0.025000
954.340	5.910	0.025000
957.340	5.990	0.025000
960.330	6.100	0.025000
963.330	6.160	0.025000
966.320	6.270	0.025000
969.310	6.220	0.025000
972.310	6.180	0.025000
975.300	6.250	0.025000
978.290	6.290	0.025000
981.290	6.320	0.025000
984.280	6.300	0.025000
987.280	6.300	0.025000
990.270	6.360	0.025000
993.260	6.370	0.025000
996.260	6.370	0.025000
999.250	6.420	0.025000
1002.250	6.510	0.025000
1005.240	6.470	0.025000
1008.230	6.430	0.025000
1011.230	6.420	0.025000
1014.220	6.410	0.025000
1017.210	6.430	0.025000
1020.210	6.380	0.025000
1023.200	6.400	0.025000
1026.200	6.470	0.025000
1029.190	6.510	0.025000
1032.180	6.540	0.025000
1035.180	6.620	0.025000
1038.170	6.610	0.025000
1041.160	6.540	0.025000
1044.160	6.500	0.025000
1047.150	6.440	0.025000
1050.150	6.420	0.025000
1053.140	6.410	0.025000
1056.130	6.300	0.025000
1059.130	6.210	0.025000
1062.120	6.050	0.025000
1065.120	5.950	0.025000
1068.110	5.960	0.025000
1071.100	5.910	0.025000
1074.100	5.950	0.025000
1077.090	6.060	0.025000
1080.080	6.130	0.025000
1083.080	6.160	0.025000
1086.070	6.240	0.025000
1089.070	6.300	0.025000
1092.060	6.400	0.025000
1095.050	6.450	0.025000
1098.050	6.510	0.025000
1101.040	6.550	0.025000
1104.030	6.580	0.025000
1107.030	6.540	0.025000
1110.020	6.590	0.025000
1113.020	6.660	0.025000
1116.010	6.650	0.025000
1119.000	6.660	0.025000

1122.000	6.720	0.025000
1124.990	6.760	0.025000
1127.990	6.780	0.025000
1130.980	6.750	0.025000
1133.970	6.750	0.025000
1136.970	6.740	0.025000
1139.960	6.710	0.025000
1142.950	6.660	0.025000
1145.950	6.650	0.025000
1148.940	6.640	0.025000
1151.940	6.600	0.025000
1154.930	6.560	0.025000
1157.920	6.580	0.025000
1160.920	6.600	0.025000
1163.910	6.540	0.025000
1166.900	6.480	0.025000
1169.900	6.410	0.025000
1172.890	6.380	0.025000
1175.890	6.340	0.025000
1178.880	6.280	0.025000
1181.870	6.200	0.025000
1184.870	6.160	0.025000
1187.860	6.150	0.025000
1190.850	6.010	0.025000
1193.850	5.880	0.025000
1196.840	5.760	0.025000
1199.840	5.720	0.025000
1202.830	5.790	0.025000
1205.820	5.890	0.025000
1208.820	6.010	0.025000
1211.810	6.160	0.025000
1214.810	6.330	0.025000
1217.800	6.450	0.025000
1220.790	6.500	0.025000
1223.790	6.560	0.025000
1226.780	6.630	0.025000
1229.770	6.730	0.025000
1232.770	6.780	0.025000
1235.760	6.800	0.025000
1238.760	6.850	0.025000
1241.750	6.860	0.025000
1244.740	6.890	0.025000
1247.740	6.890	0.025000
1250.730	6.900	0.025000
1253.720	6.980	0.025000
1256.720	7.070	0.025000
1259.710	7.080	0.025000
1262.710	7.060	0.025000
1265.700	7.040	0.025000
1268.690	7.020	0.025000

Name: Channel-04 DS Group: BASE
Encroachment: No

Cross section derived from LiDAR data, wetted section supplemented by survey data

Station(ft)	Elevation(ft)	Manning's N
0.000	16.920	0.040000
3.000	16.910	0.040000
6.000	16.660	0.040000
9.000	16.370	0.040000
12.000	16.090	0.040000
15.000	15.900	0.040000
18.000	15.710	0.040000
21.000	15.490	0.040000
24.000	15.290	0.040000
26.990	14.890	0.040000
29.990	14.510	0.040000
32.990	14.400	0.040000
35.990	14.660	0.040000
38.990	14.850	0.040000
41.990	14.830	0.040000
44.990	14.830	0.040000
47.990	14.930	0.040000
50.990	14.790	0.040000
53.990	14.760	0.040000
56.990	14.520	0.040000
59.990	14.050	0.040000
62.990	13.800	0.040000
65.990	13.740	0.040000
68.990	13.740	0.040000
71.990	13.610	0.040000
74.980	13.490	0.040000
77.980	13.530	0.040000
80.980	13.550	0.040000

83.980	13.590	0.040000
86.980	13.640	0.040000
89.980	13.640	0.040000
92.980	13.610	0.040000
95.980	13.590	0.040000
98.980	13.590	0.040000
101.980	13.570	0.040000
104.980	13.560	0.040000
107.980	13.540	0.040000
110.980	13.450	0.040000
113.980	13.390	0.040000
116.980	13.350	0.040000
119.980	13.270	0.040000
122.980	13.230	0.040000
125.970	13.100	0.040000
128.970	12.980	0.040000
131.970	12.930	0.040000
134.970	12.980	0.040000
137.970	12.960	0.040000
140.970	12.850	0.040000
143.970	12.720	0.040000
146.970	12.540	0.040000
149.970	12.280	0.040000
152.970	12.020	0.040000
155.970	11.940	0.040000
158.970	11.870	0.040000
161.970	11.840	0.040000
164.970	11.880	0.040000
167.970	11.810	0.040000
170.970	11.670	0.040000
173.970	11.600	0.040000
176.960	11.580	0.040000
179.960	11.530	0.040000
182.960	11.490	0.040000
185.960	11.410	0.040000
188.960	11.350	0.040000
191.960	11.320	0.040000
194.960	11.270	0.040000
197.960	11.200	0.040000
200.960	11.130	0.040000
203.960	11.070	0.040000
206.960	11.040	0.040000
209.960	11.040	0.040000
212.960	11.040	0.040000
215.960	11.020	0.040000
218.960	10.930	0.040000
221.960	10.840	0.040000
224.950	10.810	0.040000
227.950	10.820	0.040000
230.950	10.770	0.040000
233.950	10.700	0.040000
236.950	10.720	0.040000
239.950	10.710	0.040000
242.950	10.660	0.040000
245.950	10.620	0.040000
248.950	10.590	0.040000
251.950	10.590	0.040000
254.950	10.530	0.040000
257.950	10.480	0.040000
260.950	10.410	0.040000
263.950	10.370	0.040000
266.950	10.320	0.040000
269.950	10.250	0.040000
272.950	10.190	0.040000
275.940	10.130	0.040000
278.940	10.090	0.040000
281.940	10.050	0.040000
284.940	9.990	0.040000
287.940	10.020	0.040000
290.940	10.070	0.040000
293.940	10.080	0.040000
296.940	10.040	0.040000
299.940	10.000	0.040000
302.940	9.950	0.040000
305.940	9.940	0.040000
308.940	9.900	0.040000
311.940	9.850	0.040000
314.940	9.830	0.040000
317.940	9.880	0.040000
320.940	9.880	0.040000
323.940	9.830	0.040000
326.930	9.780	0.040000
329.930	9.740	0.040000
332.930	9.780	0.040000
335.930	9.810	0.040000
338.930	9.760	0.040000
341.930	9.770	0.040000

344.930	9.780	0.040000
347.930	9.780	0.040000
350.930	9.820	0.040000
353.930	9.830	0.040000
356.930	9.780	0.040000
359.930	9.730	0.040000
362.930	9.600	0.040000
365.930	9.450	0.040000
368.930	9.330	0.040000
371.930	9.290	0.040000
374.920	9.340	0.040000
377.920	9.090	0.040000
380.920	8.560	0.040000
383.920	7.850	0.040000
386.920	6.620	0.040000
389.920	5.460	0.040000
393.920	3.490	0.040000
398.200	3.580	0.040000
401.920	5.010	0.040000
404.920	5.620	0.040000
407.920	6.800	0.040000
410.920	8.520	0.040000
413.920	9.930	0.040000
416.920	10.780	0.040000
419.920	11.410	0.040000
422.920	11.700	0.040000
425.910	11.830	0.040000
428.910	11.850	0.040000
428.910	11.850	0.040000
431.910	11.850	0.040000
431.910	11.850	0.040000
434.910	11.820	0.040000
434.910	11.820	0.040000
437.910	11.900	0.040000
437.910	11.900	0.040000
440.910	11.970	0.040000
440.910	11.970	0.040000
443.910	12.000	0.040000
443.910	12.000	0.040000
446.910	12.050	0.040000
446.910	12.050	0.040000
449.910	12.070	0.040000
449.910	12.070	0.040000
452.910	12.050	0.040000
452.910	12.050	0.040000
455.910	12.180	0.040000
455.910	12.180	0.040000
458.910	12.240	0.040000
458.910	12.240	0.040000
461.910	12.310	0.040000
461.910	12.310	0.040000
464.910	12.420	0.040000
464.910	12.420	0.040000
467.910	12.490	0.040000
467.910	12.490	0.040000
470.910	12.580	0.040000
470.910	12.580	0.040000
473.910	12.650	0.040000
473.910	12.650	0.040000
476.900	12.670	0.040000
476.900	12.670	0.040000
479.900	12.730	0.040000
479.900	12.730	0.040000
482.900	12.810	0.040000
482.900	12.810	0.040000
485.900	12.890	0.040000
485.900	12.890	0.040000
488.900	12.990	0.040000
488.900	12.990	0.040000
491.900	13.090	0.040000
491.900	13.090	0.040000
494.900	13.300	0.040000
494.900	13.300	0.040000
497.900	13.450	0.040000
497.900	13.450	0.040000
500.900	13.590	0.040000
500.900	13.590	0.040000
503.900	13.740	0.040000
503.900	13.740	0.040000
506.900	13.790	0.040000
506.900	13.790	0.040000
509.900	13.910	0.040000
509.900	13.910	0.040000
512.900	14.080	0.040000
512.900	14.080	0.040000
515.900	14.300	0.040000
515.900	14.300	0.040000

518.900	14.490	0.040000
518.900	14.490	0.040000
521.900	14.550	0.040000
521.900	14.550	0.040000
524.890	14.640	0.040000
524.890	14.640	0.040000
527.890	14.730	0.040000
527.890	14.730	0.040000
530.890	14.770	0.040000
530.890	14.770	0.040000
533.890	14.840	0.040000
533.890	14.840	0.040000
536.890	14.860	0.040000
536.890	14.860	0.040000
539.890	14.880	0.040000
539.890	14.880	0.040000
542.890	14.910	0.040000
542.890	14.910	0.040000
545.890	14.920	0.040000
545.890	14.920	0.040000
548.890	14.940	0.040000
548.890	14.940	0.040000
551.890	14.960	0.040000
551.890	14.960	0.040000
554.890	14.980	0.040000
554.890	14.980	0.040000
557.890	15.060	0.040000
557.890	15.060	0.040000
560.890	15.120	0.040000
560.890	15.120	0.040000
563.890	15.170	0.040000
563.890	15.170	0.040000
566.890	15.200	0.040000
566.890	15.200	0.040000
569.890	15.250	0.040000
569.890	15.250	0.040000
572.890	15.280	0.040000
572.890	15.280	0.040000
575.880	15.320	0.040000
575.880	15.320	0.040000
578.880	15.350	0.040000
578.880	15.350	0.040000
581.880	15.420	0.040000
581.880	15.420	0.040000
584.880	15.480	0.040000
584.880	15.480	0.040000
587.880	15.490	0.040000
587.880	15.490	0.040000
590.880	15.540	0.040000
590.880	15.540	0.040000
593.880	15.570	0.040000
593.880	15.570	0.040000
596.880	15.610	0.040000
596.880	15.610	0.040000
599.880	15.630	0.040000
599.880	15.630	0.040000
602.880	15.640	0.040000
602.880	15.640	0.040000
605.880	15.630	0.040000
605.880	15.630	0.040000
608.880	15.670	0.040000
608.880	15.670	0.040000
611.880	15.750	0.040000
611.880	15.750	0.040000
614.880	15.780	0.040000
614.880	15.780	0.040000
617.880	15.840	0.040000
617.880	15.840	0.040000
620.880	15.870	0.040000
620.880	15.870	0.040000
623.870	15.860	0.040000
623.870	15.860	0.040000
626.870	15.910	0.040000
626.870	15.910	0.040000
629.870	15.940	0.040000
629.870	15.940	0.040000
632.870	15.970	0.040000
632.870	15.970	0.040000
635.870	16.010	0.040000
635.870	16.010	0.040000
638.870	16.070	0.040000
638.870	16.070	0.040000
641.870	16.130	0.040000
641.870	16.130	0.040000
644.870	16.130	0.040000
644.870	16.130	0.040000
647.870	16.160	0.040000

647.870	16.160	0.040000
650.870	16.160	0.040000
650.870	16.160	0.040000
653.870	16.170	0.040000
653.870	16.170	0.040000
656.870	16.260	0.040000
656.870	16.260	0.040000
659.870	16.250	0.040000
659.870	16.250	0.040000
662.870	16.250	0.040000
662.870	16.250	0.040000
665.870	16.250	0.040000
665.870	16.250	0.040000
668.870	16.260	0.040000
668.870	16.260	0.040000
671.870	16.270	0.040000
671.870	16.270	0.040000
674.860	16.220	0.040000
674.860	16.220	0.040000
677.860	16.280	0.040000
677.860	16.280	0.040000
680.860	16.360	0.040000
680.860	16.360	0.040000
683.860	16.360	0.040000
683.860	16.360	0.040000
686.860	16.450	0.040000
686.860	16.450	0.040000
689.860	16.470	0.040000
689.860	16.470	0.040000
692.860	16.500	0.040000
692.860	16.500	0.040000
695.860	16.540	0.040000
695.860	16.540	0.040000
698.860	16.630	0.040000
698.860	16.630	0.040000
701.860	16.720	0.040000
701.860	16.720	0.040000
704.860	16.820	0.040000
704.860	16.820	0.040000
707.860	16.840	0.040000
707.860	16.840	0.040000
710.860	16.940	0.040000
710.860	16.940	0.040000
713.860	17.010	0.040000
713.860	17.010	0.040000
716.860	17.090	0.040000
716.860	17.090	0.040000
719.860	17.180	0.040000
719.860	17.180	0.040000
722.860	17.250	0.040000
722.860	17.250	0.040000
725.850	17.330	0.040000
725.850	17.330	0.040000
728.850	17.410	0.040000
728.850	17.410	0.040000
731.850	17.440	0.040000
731.850	17.440	0.040000
734.850	17.460	0.040000
734.850	17.460	0.040000
737.850	17.500	0.040000
737.850	17.500	0.040000
740.850	17.580	0.040000
740.850	17.580	0.040000
743.850	17.640	0.040000
743.850	17.640	0.040000
746.850	17.590	0.040000
746.850	17.590	0.040000
749.850	17.600	0.040000
749.850	17.600	0.040000
752.850	17.650	0.040000
752.850	17.650	0.040000
755.850	17.680	0.040000
755.850	17.680	0.040000
758.850	17.730	0.040000
758.850	17.730	0.040000
761.850	17.770	0.040000
761.850	17.770	0.040000
764.850	17.780	0.040000
764.850	17.780	0.040000
767.850	17.860	0.040000
767.850	17.860	0.040000
770.850	17.870	0.040000
770.850	17.870	0.040000
773.840	17.890	0.040000
773.840	17.890	0.040000
776.840	17.980	0.040000
776.840	17.980	0.040000

779.840	18.000	0.040000
779.840	18.000	0.040000
782.840	18.030	0.040000
782.840	18.030	0.040000
785.840	18.080	0.040000
785.840	18.080	0.040000
788.840	18.120	0.040000
788.840	18.120	0.040000
791.840	18.140	0.040000
791.840	18.140	0.040000
794.840	18.210	0.040000
794.840	18.210	0.040000
797.840	18.280	0.040000
797.840	18.280	0.040000
800.840	18.300	0.040000

Name: Channel-04 US Group: BASE
Encroachment: No

Cross section derived from LiDAR data, wetted section supplemented by survey data

Station(ft)	Elevation(ft)	Manning's N
0.000	16.650	0.050000
3.000	16.590	0.050000
6.000	16.520	0.050000
8.990	16.390	0.050000
11.990	16.330	0.050000
14.990	16.210	0.050000
17.990	16.130	0.050000
20.990	16.000	0.050000
23.980	15.880	0.050000
26.980	15.760	0.050000
29.980	15.480	0.050000
32.980	14.950	0.050000
35.980	14.490	0.050000
38.980	14.170	0.050000
41.970	14.130	0.050000
44.970	13.940	0.050000
47.970	13.830	0.050000
50.970	13.700	0.050000
53.970	13.580	0.050000
56.960	13.480	0.050000
59.960	13.330	0.050000
62.960	13.130	0.050000
65.960	12.990	0.050000
68.960	12.920	0.050000
71.950	12.850	0.050000
74.950	12.750	0.050000
77.950	12.660	0.050000
80.950	12.580	0.050000
83.950	12.510	0.050000
86.940	12.350	0.050000
89.940	12.160	0.050000
92.940	12.030	0.050000
95.940	11.830	0.050000
98.940	11.600	0.050000
101.940	11.410	0.050000
104.930	11.250	0.050000
107.930	11.160	0.050000
110.930	11.210	0.050000
113.930	11.230	0.050000
116.930	11.210	0.050000
119.920	10.870	0.050000
122.920	10.030	0.050000
125.920	9.190	0.050000
128.920	8.310	0.050000
131.920	7.370	0.050000
134.910	6.910	0.050000
137.910	6.430	0.050000
141.890	4.120	0.050000
146.780	3.610	0.050000
151.750	4.080	0.050000
155.900	6.160	0.050000
158.900	6.530	0.050000
161.900	6.960	0.050000
164.900	7.740	0.050000
167.890	8.580	0.050000
170.890	9.390	0.050000
173.890	10.120	0.050000
176.890	10.480	0.050000
179.890	10.610	0.050000
182.880	10.780	0.050000
185.880	11.010	0.050000
188.880	11.240	0.050000
191.880	11.400	0.050000

194.880	11.520	0.050000
197.870	11.610	0.050000
200.870	11.600	0.050000
203.870	11.570	0.050000
206.870	11.570	0.050000
209.870	11.650	0.050000
212.860	11.690	0.050000
215.860	11.700	0.050000
218.860	11.750	0.050000
221.860	11.800	0.050000
224.860	11.850	0.050000
227.860	11.890	0.050000
230.850	11.940	0.050000
233.850	11.950	0.050000
236.850	12.000	0.050000
239.850	12.040	0.050000
242.850	12.040	0.050000
245.840	12.120	0.050000
248.840	12.210	0.050000
251.840	12.210	0.050000
254.840	12.220	0.050000
257.840	12.260	0.050000
260.830	12.340	0.050000
263.830	12.410	0.050000
266.830	12.520	0.050000
269.830	12.600	0.050000
272.830	12.720	0.050000
275.820	12.810	0.050000
278.820	12.890	0.050000
281.820	12.980	0.050000
284.820	13.060	0.050000
287.820	13.140	0.050000
290.820	13.240	0.050000
293.810	13.300	0.050000
296.810	13.340	0.050000
299.810	13.370	0.050000
302.810	13.380	0.050000
305.810	13.370	0.050000
308.800	13.430	0.050000
311.800	13.570	0.050000
314.800	13.680	0.050000
317.800	13.720	0.050000
320.800	13.720	0.050000
323.790	13.740	0.050000
326.790	13.800	0.050000
329.790	13.860	0.050000
332.790	13.930	0.050000
335.790	13.870	0.050000
338.780	13.840	0.050000
341.780	13.820	0.050000
344.780	13.790	0.050000
347.780	13.770	0.050000
350.780	13.770	0.050000
353.780	13.870	0.050000
356.770	13.960	0.050000
359.770	14.070	0.050000
362.770	14.210	0.050000
365.770	14.300	0.050000
368.770	14.400	0.050000
371.760	14.530	0.050000
374.760	14.670	0.050000
377.760	14.760	0.050000
380.760	14.890	0.050000
383.760	14.970	0.050000
386.750	14.970	0.050000
389.750	14.980	0.050000
392.750	15.000	0.050000
395.750	14.950	0.050000
398.750	14.910	0.050000
401.740	14.860	0.050000
404.740	14.800	0.050000
407.740	14.730	0.050000
410.740	14.620	0.050000
413.740	14.510	0.050000
416.740	14.460	0.050000
419.730	14.400	0.050000
422.730	14.340	0.050000
425.730	14.350	0.050000
428.730	14.360	0.050000
431.730	14.340	0.050000
434.720	14.400	0.050000
437.720	14.450	0.050000
440.720	14.490	0.050000
443.720	14.560	0.050000
446.720	14.580	0.050000
449.710	14.550	0.050000
452.710	14.540	0.050000

455.710	14.500	0.050000
458.710	14.500	0.050000
461.710	14.560	0.050000
464.700	14.550	0.050000
467.700	14.520	0.050000
470.700	14.560	0.050000
473.700	14.580	0.050000
476.700	14.550	0.050000
479.700	14.570	0.050000
482.690	14.590	0.050000
485.690	14.570	0.050000
488.690	14.590	0.050000
491.690	14.600	0.050000
494.690	14.610	0.050000
497.680	14.650	0.050000
500.680	14.690	0.050000
503.680	14.690	0.050000
506.680	14.620	0.050000
509.680	14.530	0.050000
512.670	14.440	0.050000
515.670	14.340	0.050000
518.670	14.290	0.050000
521.670	14.350	0.050000
524.670	14.400	0.050000
527.660	14.400	0.050000
530.660	14.350	0.050000
533.660	14.330	0.050000
536.660	14.310	0.050000
539.660	14.300	0.050000
542.660	14.360	0.050000
545.650	14.400	0.050000
548.650	14.440	0.050000
551.650	14.480	0.050000
554.650	14.580	0.050000
557.650	14.620	0.050000
560.640	14.690	0.050000
563.640	14.750	0.050000
566.640	14.800	0.050000
569.640	15.000	0.050000
572.640	15.200	0.050000
575.630	15.420	0.050000
578.630	15.650	0.050000
581.630	15.810	0.050000
584.630	15.990	0.050000
587.630	16.120	0.050000
590.620	16.210	0.050000

Name: Channel-05 US Group: BASE
Encroachment: No

Survey data only

Station(ft)	Elevation(ft)	Manning's N
0.000	19.250	0.050000
31.970	17.700	0.050000
55.670	11.220	0.050000
66.570	4.340	0.050000
69.280	5.170	0.050000
74.860	5.090	0.050000
77.430	7.510	0.050000
101.430	17.280	0.050000
111.100	16.850	0.050000

Name: Channel-06 US Group: BASE
Encroachment: No

LiDAR only

Station(ft)	Elevation(ft)	Manning's N
0.000	17.170	0.060000
3.000	17.120	0.060000
5.990	17.050	0.060000
8.990	16.980	0.060000
11.990	16.880	0.060000
14.980	16.760	0.060000
17.980	16.710	0.060000
20.980	16.680	0.060000
23.970	16.670	0.060000
26.970	16.720	0.060000
29.960	16.800	0.060000
32.960	16.770	0.060000

35.960	16.770	0.060000
38.950	16.730	0.060000
41.950	16.700	0.060000
44.950	16.630	0.060000
47.940	16.570	0.060000
50.940	16.600	0.060000
53.940	16.500	0.060000
56.930	16.490	0.060000
59.930	16.450	0.060000
62.930	16.390	0.060000
65.920	16.290	0.060000
68.920	16.190	0.060000
71.920	16.140	0.060000
74.910	16.090	0.060000
77.910	15.990	0.060000
80.910	15.890	0.060000
83.900	15.810	0.060000
86.900	15.700	0.060000
89.890	15.610	0.060000
92.890	15.550	0.060000
95.890	15.480	0.060000
98.880	15.370	0.060000
101.880	15.280	0.060000
104.880	15.210	0.060000
107.870	15.100	0.060000
110.870	15.000	0.060000
113.870	14.930	0.060000
116.860	14.930	0.060000
119.860	14.860	0.050000
122.860	14.560	0.050000
125.850	14.160	0.050000
128.850	13.680	0.050000
131.850	13.140	0.050000
134.840	12.510	0.050000
137.840	11.790	0.050000
140.840	11.100	0.050000
143.830	10.480	0.050000
146.830	9.780	0.050000
149.820	8.930	0.050000
152.820	8.160	0.050000
155.820	7.520	0.050000
158.810	6.970	0.050000
161.810	6.600	0.050000
164.810	6.620	0.050000
167.800	6.770	0.050000
170.800	6.810	0.050000
173.800	6.700	0.050000
176.790	6.600	0.050000
179.790	6.500	0.050000
182.790	6.460	0.050000
185.780	6.480	0.050000
188.780	6.500	0.050000
191.780	6.510	0.050000
194.770	6.530	0.050000
197.770	6.550	0.050000
200.760	6.710	0.050000
203.760	6.950	0.050000
206.760	7.160	0.050000
209.750	7.360	0.050000
212.750	7.560	0.050000
215.750	7.760	0.050000
218.740	7.960	0.050000
221.740	8.140	0.050000
224.740	8.280	0.050000
227.730	8.480	0.050000
230.730	8.730	0.050000
233.730	8.980	0.050000
236.720	9.250	0.050000
239.720	9.610	0.050000
242.720	9.770	0.050000
245.710	9.730	0.060000
248.710	9.400	0.060000
251.710	9.030	0.060000
254.700	9.100	0.060000
257.700	9.300	0.060000
260.690	9.520	0.060000
263.690	9.770	0.060000
266.690	10.040	0.060000
269.680	10.210	0.060000
272.680	10.310	0.060000
275.680	10.430	0.060000
278.670	10.530	0.060000
281.670	10.720	0.060000
284.670	11.020	0.060000
287.660	11.330	0.060000
290.660	11.630	0.060000
293.660	11.930	0.060000

296.650	12.160	0.060000
299.650	12.420	0.060000
302.650	12.670	0.060000
305.640	12.760	0.060000
308.640	12.790	0.060000
311.640	12.810	0.060000
314.630	12.990	0.060000
317.630	13.250	0.060000
320.620	13.490	0.060000
323.620	13.520	0.060000
326.620	13.520	0.060000
329.610	13.610	0.060000
332.610	13.710	0.060000
335.610	13.990	0.060000
338.600	14.260	0.060000
341.600	14.360	0.060000
344.600	14.460	0.060000
347.590	14.600	0.060000
350.590	14.590	0.060000
353.590	14.640	0.060000
356.580	14.650	0.060000
359.580	14.730	0.060000
362.580	14.910	0.060000

Name: Channel-07 US Group: BASE
Encroachment: No

LiDAR only

Station(ft)	Elevation(ft)	Manning's N
0.000	18.680	0.050000
3.000	18.670	0.050000
5.990	18.680	0.050000
8.990	18.690	0.050000
11.990	18.660	0.050000
14.980	18.630	0.050000
17.980	18.650	0.050000
20.980	18.650	0.050000
23.970	18.560	0.040000
26.970	17.700	0.040000
29.970	16.300	0.040000
32.960	14.630	0.040000
35.960	12.910	0.040000
38.960	11.420	0.040000
41.960	9.870	0.040000
44.950	8.510	0.040000
47.950	8.120	0.040000
50.950	8.110	0.040000
53.940	8.280	0.040000
56.940	8.310	0.040000
59.940	8.460	0.040000
62.930	8.860	0.040000
65.930	9.380	0.040000
68.930	9.920	0.040000
71.920	10.410	0.040000
74.920	10.830	0.040000
77.920	11.190	0.040000
80.910	11.550	0.040000
83.910	11.900	0.040000
86.910	12.170	0.040000
89.900	12.340	0.040000
92.900	12.450	0.060000
95.900	12.510	0.060000
98.890	12.550	0.060000
101.890	12.630	0.060000
104.890	12.710	0.060000
107.880	12.770	0.060000
110.880	12.840	0.060000
113.880	12.950	0.060000
116.870	13.060	0.060000
119.870	13.100	0.060000
122.870	12.960	0.060000
125.870	12.640	0.060000
128.860	12.440	0.060000
131.860	12.390	0.060000
134.860	12.400	0.060000
137.850	12.450	0.060000
140.850	12.520	0.060000
143.850	12.490	0.060000
146.840	12.430	0.060000
149.840	12.460	0.060000
152.840	12.280	0.060000
155.830	12.110	0.060000
158.830	11.920	0.060000
161.830	11.830	0.060000

164.820	11.730	0.060000
167.820	11.630	0.060000
170.820	11.580	0.060000
173.810	11.390	0.060000
176.810	11.250	0.060000
179.810	11.210	0.060000
182.800	11.170	0.060000
185.800	11.140	0.060000
188.800	11.130	0.060000
191.790	11.190	0.060000
194.790	11.290	0.060000
197.790	11.310	0.060000
200.780	11.110	0.060000
203.780	10.760	0.060000
206.780	10.580	0.060000
209.780	10.580	0.060000
212.770	10.620	0.060000
215.770	10.660	0.060000
218.770	10.630	0.060000
221.760	10.760	0.060000
224.760	10.830	0.060000
227.760	11.000	0.060000
230.750	11.010	0.060000
233.750	10.900	0.060000
236.750	10.860	0.060000
239.740	10.890	0.060000
242.740	11.080	0.060000
245.740	11.260	0.060000
248.730	11.230	0.060000
251.730	11.350	0.060000
254.730	11.560	0.060000
257.720	11.620	0.060000
260.720	11.590	0.060000
263.720	11.440	0.060000
266.710	11.390	0.060000
269.710	11.580	0.060000
272.710	11.740	0.060000
275.700	11.810	0.060000
278.700	11.770	0.060000
281.700	11.610	0.060000
284.690	11.650	0.060000
287.690	11.820	0.060000
290.690	12.070	0.060000
293.690	12.240	0.060000
296.680	12.290	0.060000
299.680	12.350	0.060000
302.680	12.430	0.060000
305.670	12.510	0.060000
308.670	12.580	0.060000
311.670	12.570	0.060000
314.660	12.620	0.060000
317.660	12.660	0.060000
320.660	12.720	0.060000
323.650	12.760	0.060000
326.650	12.820	0.060000
329.650	12.850	0.060000
332.640	12.880	0.060000
335.640	12.890	0.060000
338.640	12.870	0.060000
341.630	12.870	0.060000
344.630	12.860	0.060000
347.630	12.930	0.060000
350.620	13.020	0.060000
353.620	13.160	0.060000
356.620	13.190	0.060000
359.610	13.260	0.060000
362.610	13.320	0.060000
365.610	13.350	0.060000
368.600	13.380	0.060000
371.600	13.430	0.060000
374.600	13.500	0.060000
377.600	13.570	0.060000
380.590	13.680	0.060000
383.590	13.740	0.060000
386.590	13.770	0.060000
389.580	13.840	0.060000
392.580	13.880	0.060000
395.580	13.920	0.060000
398.570	13.940	0.060000
401.570	13.970	0.060000
404.570	14.000	0.060000
407.560	14.050	0.060000
410.560	14.080	0.060000
413.560	14.160	0.060000
416.550	14.180	0.060000
419.550	14.240	0.060000
422.550	14.340	0.060000

425.540	14.430	0.060000
428.540	14.520	0.060000
431.540	14.630	0.060000
434.530	14.720	0.060000
437.530	14.800	0.060000
440.530	14.880	0.060000

Name: Channel-08A US Group: BASE
Encroachment: No

Cross section derived from LiDAR data, wetted section supplemented by survey data

Station(ft)	Elevation(ft)	Manning's N
0.000	17.040	0.030000
3.000	17.110	0.030000
5.990	17.090	0.030000
8.990	17.060	0.030000
11.980	17.020	0.030000
14.980	17.010	0.030000
17.970	17.050	0.030000
20.970	17.020	0.030000
23.970	17.020	0.030000
26.960	17.040	0.030000
29.960	17.060	0.030000
32.950	17.060	0.030000
35.950	17.060	0.030000
38.940	17.030	0.030000
41.940	17.050	0.030000
44.940	16.990	0.030000
47.930	16.950	0.030000
50.930	16.900	0.030000
53.920	16.850	0.030000
67.420	17.160	0.030000
103.460	12.000	0.030000
112.670	5.440	0.035000
116.270	5.300	0.035000
120.060	5.530	0.035000
124.730	8.490	0.035000
133.240	8.320	0.035000
141.600	13.410	0.035000
143.760	13.670	0.035000
151.070	10.140	0.060000
157.920	11.200	0.060000
158.770	10.940	0.060000
161.770	10.940	0.060000
164.770	11.110	0.060000
167.760	11.270	0.060000
170.760	11.460	0.060000
173.750	11.570	0.060000
176.750	11.690	0.060000
179.740	11.810	0.060000
182.740	11.900	0.060000
185.740	12.000	0.060000
188.730	12.020	0.060000
191.730	12.070	0.060000
194.720	12.150	0.060000
197.720	12.190	0.060000
200.710	12.170	0.060000
203.710	12.130	0.060000
206.710	12.100	0.060000
209.700	12.120	0.060000
212.700	12.150	0.060000
215.690	12.230	0.060000
218.690	12.450	0.060000
221.680	12.600	0.060000
224.680	12.630	0.060000
227.680	12.740	0.060000
230.670	12.730	0.060000
233.670	12.650	0.060000
236.660	12.640	0.060000
239.660	12.610	0.060000
242.650	12.620	0.060000
245.650	12.650	0.060000
248.650	12.670	0.060000
251.640	12.610	0.060000
254.640	12.530	0.060000
257.630	12.520	0.060000
260.630	12.490	0.060000
263.620	12.420	0.060000
266.620	12.440	0.060000
269.620	12.490	0.060000
272.610	12.510	0.060000
275.610	12.510	0.060000
278.600	12.500	0.060000
281.600	12.520	0.060000

284.590	12.570	0.060000
287.590	12.610	0.060000
290.590	12.590	0.060000
293.580	12.460	0.060000
296.580	12.320	0.060000
299.570	12.280	0.060000
302.570	12.290	0.060000
305.560	12.350	0.060000
308.560	12.420	0.060000
311.560	12.420	0.060000
314.550	12.390	0.060000
317.550	12.420	0.060000
320.540	12.440	0.060000
323.540	12.450	0.060000
326.530	12.440	0.060000
329.530	12.370	0.060000
332.530	12.230	0.060000
335.520	12.080	0.060000
338.520	11.960	0.060000
341.510	11.970	0.060000
344.510	12.040	0.060000
347.500	11.970	0.060000
350.500	11.900	0.060000
353.500	11.910	0.060000
356.490	11.970	0.060000
359.490	12.090	0.060000
362.480	12.140	0.060000
365.480	12.160	0.060000
368.470	12.190	0.060000
371.470	12.240	0.060000
374.470	12.270	0.060000
377.460	12.320	0.060000
380.460	12.450	0.060000
383.450	12.720	0.060000
386.450	12.900	0.060000
389.440	13.080	0.060000
392.440	13.320	0.060000
395.440	13.560	0.060000
398.430	13.670	0.060000
401.430	13.780	0.060000
404.420	13.920	0.060000
407.420	14.080	0.060000
410.410	14.330	0.060000
413.410	14.590	0.060000
416.410	14.770	0.060000
419.400	14.920	0.060000
422.400	15.100	0.060000
425.390	15.270	0.060000
428.390	15.340	0.060000
431.390	15.400	0.060000
434.380	15.450	0.060000
437.380	15.510	0.060000
440.370	15.570	0.060000
443.370	15.630	0.060000
446.360	15.680	0.060000
449.360	15.740	0.060000
452.360	15.800	0.060000
455.350	15.850	0.060000
458.350	15.910	0.060000
461.340	15.970	0.060000
464.340	16.030	0.060000
467.330	16.080	0.060000

Name: Channel-08B US Group: BASE
Encroachment: No

LiDAR only

Station(ft)	Elevation(ft)	Manning's N
0.000	17.540	0.030000
2.990	17.610	0.030000
5.990	17.640	0.030000
8.980	17.650	0.030000
11.980	17.690	0.030000
14.970	17.710	0.030000
17.970	17.730	0.030000
20.960	17.710	0.030000
23.960	17.700	0.030000
26.950	17.700	0.030000
29.940	17.690	0.030000
32.940	17.620	0.030000
35.930	17.500	0.030000
38.930	17.350	0.030000
41.920	17.200	0.030000
44.920	16.950	0.030000

47.910	16.550	0.030000
50.900	16.170	0.030000
53.900	15.760	0.030000
56.890	15.560	0.030000
59.890	15.450	0.030000
62.880	15.440	0.030000
65.880	15.520	0.030000
68.870	15.610	0.030000
71.870	15.630	0.030000
74.860	15.510	0.030000
77.850	15.260	0.030000
80.850	15.100	0.030000
83.840	15.150	0.035000
86.840	14.700	0.035000
89.830	13.480	0.035000
92.830	11.790	0.035000
95.820	10.340	0.035000
98.820	8.930	0.035000
101.810	8.220	0.035000
104.800	8.560	0.035000
107.800	9.140	0.035000
110.790	9.620	0.035000
113.790	10.010	0.035000
116.780	10.600	0.035000
119.780	11.150	0.035000
122.770	11.890	0.035000
125.760	12.850	0.035000
128.760	13.770	0.035000
131.750	14.580	0.035000
134.750	14.800	0.035000
137.740	14.730	0.060000
140.740	14.510	0.060000
143.730	14.300	0.060000
146.730	14.040	0.060000
149.720	13.640	0.060000
320.400	14.570	0.060000
323.390	14.890	0.060000
326.390	14.950	0.060000
329.380	14.880	0.060000
332.380	14.820	0.060000
335.370	14.890	0.060000
338.370	15.010	0.060000
341.360	15.150	0.060000
344.360	15.240	0.060000
347.350	15.210	0.060000
350.340	15.190	0.060000
353.340	15.320	0.060000
356.330	15.470	0.060000
359.330	15.570	0.060000
362.320	15.700	0.060000
365.320	15.780	0.060000
368.310	15.820	0.060000
371.310	15.900	0.060000
374.300	16.000	0.060000
377.290	16.040	0.060000
380.290	16.070	0.060000
383.280	16.140	0.060000
386.280	16.250	0.060000
389.270	16.360	0.060000
392.270	16.470	0.060000
395.260	16.550	0.060000
398.250	16.690	0.060000
401.250	16.760	0.060000
404.240	16.850	0.060000
407.240	17.010	0.060000

Name: Channel-09A US Group: BASE
Encroachment: No

LiDAR only

Station(ft)	Elevation(ft)	Manning's N
0.000	17.780	0.060000
2.970	17.830	0.060000
5.950	17.810	0.060000
8.920	17.750	0.060000
11.890	17.670	0.060000
14.860	17.570	0.060000
17.840	17.570	0.060000
20.810	17.700	0.060000
23.780	17.870	0.060000
26.750	17.790	0.060000
29.730	17.660	0.060000
32.700	17.530	0.060000

35.670	17.450	0.060000
38.640	17.420	0.060000
41.620	17.460	0.060000
44.590	17.580	0.060000
47.560	17.790	0.060000
50.530	17.910	0.060000
53.510	17.970	0.060000
56.480	17.840	0.060000
59.450	17.560	0.060000
62.420	17.580	0.050000
65.400	17.480	0.050000
68.370	16.920	0.050000
71.340	15.520	0.050000
74.310	13.570	0.050000
77.290	11.620	0.035000
80.260	10.170	0.035000
83.230	9.580	0.035000
86.200	9.480	0.035000
89.180	9.710	0.035000
92.150	10.190	0.035000
95.120	10.670	0.035000
98.090	11.180	0.035000
101.070	12.020	0.035000
104.040	13.420	0.050000
107.010	14.680	0.050000
109.980	15.320	0.050000
112.960	16.360	0.050000
115.930	17.130	0.050000
118.900	17.160	0.060000
121.880	17.120	0.060000
124.850	17.230	0.060000
127.820	17.360	0.060000
130.790	17.540	0.060000
133.770	17.640	0.060000
136.740	17.680	0.060000
139.710	17.730	0.060000
142.680	17.770	0.060000
145.660	17.770	0.060000
148.630	17.750	0.060000
151.600	17.730	0.060000
154.570	17.730	0.060000
157.550	17.700	0.060000
160.520	17.690	0.060000
163.490	17.630	0.060000
166.460	17.590	0.060000
169.440	17.570	0.060000
172.410	17.540	0.060000
175.380	17.510	0.060000
178.350	17.530	0.060000
181.330	17.570	0.060000
184.300	17.590	0.060000

Name: Channel-09B US Group: BASE
Encroachment: No

Survey data

Station(ft)	Elevation(ft)	Manning's N
0.000	18.200	0.060000
11.000	17.250	0.060000
83.900	17.320	0.060000
96.440	17.840	0.060000
106.500	6.450	0.035000
114.930	7.050	0.035000
121.620	6.010	0.035000
123.600	8.170	0.035000
137.310	18.820	0.035000
137.310	18.820	0.060000
170.360	19.000	0.060000
197.210	19.470	0.060000

Name: Channel-10 US Group: BASE
Encroachment: No

Cross section derived from LiDAR data, wetted section supplemented by survey data

Station(ft)	Elevation(ft)	Manning's N
0.000	18.680	0.060000
42.390	17.280	0.060000
47.490	17.290	0.060000
61.710	17.090	0.060000
67.110	14.390	0.035000
72.650	11.610	0.035000

77.200	7.750	0.035000
82.640	7.310	0.035000
86.910	7.610	0.035000
87.590	8.600	0.035000
91.520	9.320	0.035000
91.520	9.320	0.035000
97.080	12.560	0.035000
102.270	16.720	0.035000
121.540	17.110	0.060000
124.500	16.970	0.060000
127.470	16.900	0.060000
130.430	16.970	0.060000
133.400	17.000	0.060000
136.360	16.950	0.060000
139.330	16.890	0.060000
142.290	16.850	0.060000
145.260	16.850	0.060000
148.220	16.890	0.060000
151.180	16.910	0.060000
154.150	16.870	0.060000
157.110	16.810	0.060000
160.080	16.770	0.060000
163.040	16.710	0.060000
166.010	16.620	0.060000
168.970	16.520	0.060000
171.930	16.370	0.060000
174.900	16.200	0.060000
177.860	16.080	0.060000
180.830	15.920	0.060000
183.790	16.070	0.060000
186.760	16.150	0.060000
189.720	16.270	0.060000
192.690	16.530	0.060000
195.650	16.740	0.060000
198.610	16.920	0.060000
201.580	17.120	0.060000
204.540	17.320	0.060000
207.510	17.490	0.060000
210.470	17.500	0.060000
213.440	17.530	0.060000

Name: Channel-11 DS Group: BASE
Encroachment: No

Cross section derived from LiDAR data, wetted section supplemented by survey data

Station(ft)	Elevation(ft)	Manning's N
0.000	17.830	0.060000
58.480	17.320	0.060000
66.920	17.230	0.060000
81.810	16.640	0.060000
86.640	14.750	0.035000
91.180	10.330	0.035000
96.390	7.610	0.035000
100.990	6.730	0.035000
106.050	6.920	0.035000
111.750	9.490	0.035000
116.040	12.500	0.035000
119.640	15.700	0.035000
119.640	15.700	0.035000
122.060	16.660	0.035000
137.830	17.700	0.060000
140.830	17.590	0.060000
143.830	17.520	0.060000
146.820	17.450	0.060000
149.820	17.440	0.060000
152.810	17.460	0.060000
155.810	17.550	0.060000
158.810	17.610	0.060000
161.800	17.700	0.060000
164.800	17.780	0.060000
167.800	17.860	0.060000
170.790	17.940	0.060000
173.790	18.020	0.060000
176.790	18.100	0.060000
179.780	18.080	0.060000
182.780	18.040	0.060000
185.770	17.990	0.060000
188.770	17.960	0.060000
191.770	17.970	0.060000
194.760	17.980	0.060000
197.760	17.980	0.060000
200.760	18.050	0.060000
203.750	18.160	0.060000
206.750	18.180	0.060000

209.750	18.220	0.060000
212.740	18.310	0.060000
215.740	18.440	0.060000
218.740	18.450	0.060000

Name: Channel-11 US Group: BASE
Encroachment: No

Cross section derived from LiDAR data, wetted section supplemented by survey data

Station(ft)	Elevation(ft)	Manning's N
17.920	18.050	0.060000
71.130	16.230	0.060000
83.990	7.910	0.035000
86.910	6.880	0.035000
90.460	6.340	0.035000
95.840	9.700	0.035000
106.230	11.760	0.035000
114.910	17.160	0.035000
126.290	18.180	0.035000
164.310	18.290	0.060000

Name: Channel-12 US Group: BASE
Encroachment: No

Survey only

Station(ft)	Elevation(ft)	Manning's N
94.270	20.490	0.060000
127.540	20.270	0.060000
131.970	17.710	0.035000
138.550	14.150	0.035000
146.900	8.610	0.035000
156.650	7.800	0.035000
158.800	10.530	0.035000
171.390	11.690	0.035000
187.750	19.790	0.035000

Name: Channel-13 DS Group: BASE
Encroachment: No

Survey only

Station(ft)	Elevation(ft)	Manning's N
0.000	20.050	0.060000
37.990	20.440	0.060000
153.350	18.870	0.060000
169.310	8.800	0.035000
173.050	8.430	0.035000
176.000	10.200	0.035000
188.870	10.420	0.035000
197.030	15.640	0.035000
206.160	18.610	0.035000
214.100	20.230	0.035000

Name: Channel-13 US Group: BASE
Encroachment: No

Survey only

Station(ft)	Elevation(ft)	Manning's N
0.000	17.730	0.060000
95.550	17.550	0.060000
111.830	17.180	0.060000
119.040	11.580	0.035000
128.820	8.640	0.035000
134.230	8.390	0.035000
139.180	7.650	0.035000
151.890	18.280	0.035000
178.890	19.770	0.060000

Name: Channel-14 DS Group: BASE
Encroachment: No

LiDAR data only

Station(ft)	Elevation(ft)	Manning's N

0.000	17.210	0.060000
2.910	17.430	0.060000
5.820	17.660	0.060000
8.730	17.890	0.060000
11.640	18.070	0.060000
14.550	18.010	0.060000
17.460	17.720	0.060000
20.370	17.490	0.060000
23.290	16.780	0.060000
26.200	15.770	0.060000
29.110	14.660	0.035000
32.020	13.300	0.035000
34.930	11.970	0.035000
37.840	11.160	0.035000
40.750	10.740	0.035000
43.660	10.410	0.035000
46.570	10.050	0.035000
49.480	9.640	0.035000
52.390	9.400	0.035000
55.300	9.400	0.035000
58.210	9.680	0.035000
61.120	10.340	0.035000
64.030	11.350	0.035000
66.950	12.630	0.035000
69.860	13.880	0.035000
72.770	14.960	0.035000
75.680	15.800	0.060000
78.590	16.440	0.060000
81.500	16.970	0.060000
84.410	17.430	0.060000
87.320	17.640	0.060000
90.230	17.840	0.060000
93.140	18.030	0.060000

Name: Channel-14 US Group: BASE
Encroachment: No

Survey data only

Station(ft)	Elevation(ft)	Manning's N
20.890	17.980	0.060000
40.810	16.590	0.060000
57.970	8.690	0.035000
63.980	8.660	0.035000
69.850	8.610	0.035000
82.910	15.720	0.035000
94.610	16.940	0.060000

Name: Channel-15 DS Group: BASE
Encroachment: No

LiDAR data only

Station(ft)	Elevation(ft)	Manning's N
0.000	18.330	0.060000
2.970	18.230	0.060000
5.940	18.140	0.060000
8.910	18.010	0.060000
11.880	17.810	0.060000
14.850	17.730	0.060000
17.820	17.560	0.060000
20.790	17.420	0.060000
23.760	17.320	0.060000
26.720	17.200	0.060000
29.690	16.980	0.060000
32.660	16.650	0.060000
35.630	15.870	0.035000
38.600	14.860	0.035000
41.570	13.820	0.035000
44.540	12.830	0.035000
47.510	11.850	0.035000
50.480	10.900	0.035000
53.450	10.210	0.035000
56.420	10.430	0.035000
59.390	11.350	0.035000
62.360	12.850	0.035000
65.330	14.750	0.035000
68.300	16.390	0.035000
71.270	17.330	0.060000
74.230	17.680	0.060000
77.200	17.870	0.060000

80.170	18.020	0.060000
83.140	18.180	0.060000
86.110	18.340	0.060000
89.080	18.330	0.060000

Name: Channel-15 US Group: BASE
Encroachment: No

Survey Data only

Station(ft)	Elevation(ft)	Manning's N
0.000	19.250	0.060000
15.590	19.200	0.060000
75.880	18.640	0.060000
97.750	17.500	0.060000
114.870	12.090	0.035000
124.960	10.200	0.035000
127.720	11.440	0.035000
134.330	13.560	0.035000
145.180	19.730	0.035000
152.060	20.430	0.060000
161.680	20.570	0.060000

Name: Channel-16 US Group: BASE
Encroachment: No

Survey Data only

Station(ft)	Elevation(ft)	Manning's N
0.000	22.080	0.060000
33.240	20.980	0.060000
55.000	19.580	0.060000
70.310	12.280	0.035000
80.660	11.500	0.035000
87.840	12.210	0.035000
104.070	21.110	0.035000
114.130	22.410	0.060000
119.150	22.520	0.060000
124.050	22.680	0.060000

Name: Channel-17 DS Group: BASE
Encroachment: No

Survey Data only

Station(ft)	Elevation(ft)	Manning's N
0.000	23.140	0.060000
17.600	22.740	0.060000
41.580	21.490	0.060000
57.560	17.830	0.035000
70.180	13.600	0.035000
75.590	12.690	0.035000
77.970	12.130	0.035000
80.670	12.370	0.035000
87.150	13.840	0.035000
106.600	21.630	0.035000
108.900	22.340	0.060000
114.690	22.520	0.060000
118.750	22.650	0.060000

Name: Channel-17 US Group: BASE
Encroachment: No

Survey Data only

Station(ft)	Elevation(ft)	Manning's N
28.910	24.990	0.060000
35.930	24.800	0.060000
52.830	23.690	0.060000
74.890	19.250	0.060000
87.940	14.050	0.035000
87.960	14.050	0.035000
88.000	14.040	0.035000
90.180	14.660	0.035000
90.430	14.820	0.035000
91.980	13.060	0.035000
95.630	13.370	0.035000
100.640	14.860	0.035000

112.640	21.990	0.035000
120.160	23.220	0.060000
129.920	23.440	0.060000
135.980	24.610	0.060000
138.940	25.670	0.060000
141.900	26.350	0.060000

Name: Channel-18 US Group: BASE
Encroachment: No

Survey Data only

Station(ft)	Elevation(ft)	Manning's N
0.000	21.890	0.060000
20.520	21.830	0.060000
56.830	21.650	0.060000
86.630	20.610	0.060000
99.180	14.990	0.035000
104.790	13.190	0.035000
110.860	13.370	0.035000
116.270	13.360	0.035000
130.700	19.740	0.035000
149.040	20.460	0.060000

Name: Channel-19 DS Group: BASE
Encroachment: No

Survey Data only

Station(ft)	Elevation(ft)	Manning's N
20.930	21.520	0.060000
69.160	20.290	0.060000
92.020	13.830	0.035000
99.250	13.320	0.035000
106.220	13.920	0.035000
113.260	18.060	0.035000
123.960	19.830	0.035000
141.710	20.320	0.060000
167.450	20.650	0.060000

Name: Channel-19 US Group: BASE
Encroachment: No

LiDAR data only

Station(ft)	Elevation(ft)	Manning's N
0.000	20.490	0.060000
2.970	20.430	0.060000
5.950	20.370	0.060000
8.920	20.340	0.060000
11.900	20.280	0.060000
14.870	20.250	0.060000
17.850	20.280	0.060000
20.820	20.290	0.060000
23.800	20.290	0.060000
26.770	20.370	0.060000
29.750	20.380	0.060000
32.720	20.420	0.060000
35.700	20.330	0.060000
38.670	20.250	0.060000
41.650	20.110	0.060000
44.620	19.820	0.060000
47.600	19.410	0.060000
50.570	18.640	0.035000
53.540	17.790	0.035000
56.520	16.710	0.035000
59.490	15.460	0.035000
62.470	14.880	0.035000
65.440	14.680	0.035000
68.420	14.510	0.035000
71.390	14.380	0.035000
74.370	15.640	0.035000
77.340	17.680	0.035000
80.320	18.780	0.035000
83.290	19.260	0.060000
86.270	19.500	0.060000
89.240	19.710	0.060000
92.220	19.870	0.060000
95.190	20.040	0.060000

98.170	20.160	0.060000
101.140	20.340	0.060000
104.110	20.550	0.060000
107.090	20.790	0.060000
110.060	20.870	0.060000
113.040	20.790	0.060000
116.010	20.740	0.060000
118.990	20.690	0.060000
121.960	20.640	0.060000
124.940	20.600	0.060000
127.910	20.580	0.060000
130.890	20.610	0.060000
133.860	20.620	0.060000
136.840	20.590	0.060000
139.810	20.580	0.060000
142.790	20.590	0.060000
145.760	20.590	0.060000
148.740	20.610	0.060000
151.710	20.640	0.060000
154.680	20.650	0.060000
157.660	20.660	0.060000

Name: CL LINK-01 DS Group: BASE
Encroachment: No

Survey Data Only

Station(ft)	Elevation(ft)	Manning's N
17.490	18.510	0.060000
29.380	15.940	0.060000
48.570	11.330	0.035000
56.660	9.470	0.035000
62.010	10.360	0.035000
79.100	19.450	0.035000
85.680	19.950	0.060000

Name: CL LINK-01 US Group: BASE
Encroachment: No

Survey Data Only

Station(ft)	Elevation(ft)	Manning's N
0.000	18.200	0.060000
51.940	17.740	0.060000
74.930	12.370	0.035000
78.220	10.910	0.035000
82.500	11.050	0.035000
98.050	10.730	0.035000
109.050	17.490	0.035000
126.170	19.080	0.060000

Name: CL LINK-03 DS Group: BASE
Encroachment: No

Survey Data only

Station(ft)	Elevation(ft)	Manning's N
0.000	19.320	0.060000
3.810	19.290	0.060000
21.410	19.310	0.060000
51.440	14.090	0.035000
60.240	12.470	0.035000
66.430	12.320	0.035000
73.760	12.930	0.035000
84.730	14.360	0.035000
106.440	18.130	0.035000
108.740	18.310	0.060000
128.220	18.290	0.060000
140.680	19.020	0.060000

Name: CL LINK-03 US Group: BASE
Encroachment: No

Survey Data only

Station(ft)	Elevation(ft)	Manning's N
0.000	21.060	0.060000
14.900	21.030	0.060000

32.450	20.630	0.060000
74.570	13.520	0.035000
76.810	12.760	0.035000
82.020	11.990	0.035000
85.280	12.600	0.035000
113.600	16.840	0.035000
127.150	20.430	0.035000
128.970	20.470	0.060000
147.450	20.730	0.060000

Name: HWY17_OV Group: BASE
Encroachment: No

Data from LiDAR

Station(ft)	Elevation(ft)	Manning's N
0.000	15.200	0.000000
2.990	15.180	0.000000
5.980	15.180	0.000000
8.970	15.170	0.000000
11.960	15.150	0.000000
14.950	15.140	0.000000
17.940	15.100	0.000000
20.930	15.060	0.000000
23.920	15.060	0.000000
26.910	15.030	0.000000
29.900	15.010	0.000000
32.890	15.010	0.000000
35.880	14.970	0.000000
38.860	14.950	0.000000
41.850	14.960	0.000000
44.840	14.920	0.000000
47.830	14.910	0.000000
50.820	14.950	0.000000
53.810	14.920	0.000000
56.800	14.910	0.000000
59.790	14.900	0.000000
62.780	14.940	0.000000
65.770	14.930	0.000000
68.760	14.900	0.000000
71.750	14.920	0.000000
74.740	14.890	0.000000
77.730	14.880	0.000000
80.720	14.850	0.000000
83.710	14.820	0.000000
86.700	14.800	0.000000
89.690	14.800	0.000000
92.680	14.750	0.000000
95.670	14.700	0.000000
98.660	14.690	0.000000
101.650	14.640	0.000000
104.640	14.710	0.000000
107.630	14.730	0.000000
110.620	14.690	0.000000
113.600	14.660	0.000000
116.590	14.630	0.000000
119.580	14.610	0.000000
122.570	14.660	0.000000
125.560	14.640	0.000000
128.550	14.600	0.000000
131.540	14.590	0.000000
134.530	14.600	0.000000
137.520	14.630	0.000000
140.510	14.630	0.000000
143.500	14.610	0.000000
146.490	14.610	0.000000
149.480	14.600	0.000000
152.470	14.600	0.000000
155.460	14.610	0.000000
158.450	14.640	0.000000
161.440	14.620	0.000000
164.430	14.590	0.000000
167.420	14.660	0.000000
170.410	14.650	0.000000
173.400	14.640	0.000000
176.390	14.620	0.000000
179.380	14.530	0.000000
182.370	14.490	0.000000
185.360	14.480	0.000000
188.340	14.470	0.000000
191.330	14.540	0.000000
194.320	14.570	0.000000
197.310	14.500	0.000000
200.300	14.510	0.000000
203.290	14.510	0.000000

206.280	14.500	0.000000
209.270	14.480	0.000000
212.260	14.490	0.000000
215.250	14.480	0.000000
218.240	14.500	0.000000
221.230	14.500	0.000000
224.220	14.470	0.000000
227.210	14.450	0.000000
230.200	14.500	0.000000
233.190	14.460	0.000000
236.180	14.430	0.000000
239.170	14.390	0.000000
242.160	14.410	0.000000
245.150	14.460	0.000000
248.140	14.510	0.000000
251.130	14.460	0.000000
254.120	14.500	0.000000
257.110	14.490	0.000000
260.090	14.470	0.000000
263.080	14.510	0.000000
266.070	14.520	0.000000
269.060	14.550	0.000000
272.050	14.600	0.000000
275.040	14.630	0.000000
278.030	14.660	0.000000
281.020	14.640	0.000000
284.010	14.570	0.000000
287.000	14.600	0.000000
289.990	14.600	0.000000
292.980	14.590	0.000000
295.970	14.650	0.000000
298.960	14.600	0.000000
301.950	14.590	0.000000
304.940	14.610	0.000000
307.930	14.620	0.000000
310.920	14.640	0.000000
313.910	14.630	0.000000
316.900	14.600	0.000000
319.890	14.650	0.000000
322.880	14.710	0.000000
325.870	14.720	0.000000
328.860	14.730	0.000000
331.850	14.840	0.000000
334.830	14.830	0.000000
337.820	14.810	0.000000
340.810	14.760	0.000000
343.800	14.750	0.000000
346.790	14.770	0.000000
349.780	14.800	0.000000
352.770	14.860	0.000000
355.760	14.920	0.000000
358.750	14.930	0.000000
361.740	14.990	0.000000
364.730	15.030	0.000000
367.720	15.060	0.000000
370.710	15.120	0.000000
373.700	15.130	0.000000
376.690	15.150	0.000000
379.680	15.220	0.000000
382.670	15.310	0.000000
385.660	15.410	0.000000
388.650	15.430	0.000000
391.640	15.470	0.000000

Name: LKWDPOND01_OV Group: BASE
Encroachment: No

Data from LiDAR

Station(ft)	Elevation(ft)	Manning's N
0.000	6.270	0.000000
2.610	6.260	0.000000
5.230	6.250	0.000000
7.840	6.230	0.000000
10.460	6.270	0.000000
13.070	6.290	0.000000
15.680	6.250	0.000000
18.300	6.160	0.000000
21.140	6.100	0.000000
23.970	6.110	0.000000
26.810	6.120	0.000000
29.650	6.110	0.000000
32.490	6.070	0.000000
35.330	6.020	0.000000
38.290	5.970	0.000000

41.260	6.030	0.000000
44.230	5.960	0.000000
47.190	5.950	0.000000
50.160	5.920	0.000000
53.130	5.860	0.000000
56.090	5.860	0.000000
59.060	5.820	0.000000
61.900	5.800	0.000000
64.740	5.780	0.000000
67.580	5.770	0.000000
70.420	5.710	0.000000
73.260	5.630	0.000000
76.100	5.620	0.000000
78.940	5.630	0.000000
81.780	5.590	0.000000
84.620	5.530	0.000000
87.450	5.550	0.000000
90.290	5.580	0.000000
93.130	5.530	0.000000
96.050	5.520	0.000000
98.970	5.530	0.000000
101.890	5.560	0.000000
104.810	5.650	0.000000
107.730	5.720	0.000000
110.640	5.670	0.000000
113.560	5.690	0.000000
116.480	5.780	0.000000
119.400	5.890	0.000000
122.320	5.980	0.000000
125.270	6.030	0.000000
128.220	6.100	0.000000
131.170	6.130	0.000000
134.120	6.250	0.000000
137.080	6.300	0.000000
140.030	6.350	0.000000
142.640	6.380	0.000000
145.260	6.420	0.000000
147.870	6.490	0.000000
150.480	6.550	0.000000
153.100	6.580	0.000000
155.710	6.610	0.000000
158.260	6.690	0.000000
160.800	6.680	0.000000
163.350	6.730	0.000000
165.890	6.790	0.000000
168.440	6.840	0.000000
170.980	6.870	0.000000

Name: LKWDPOND02_OV Group: BASE
Encroachment: No

Data from LiDAR

Station(ft)	Elevation(ft)	Manning's N
0.000	9.080	0.000000
2.860	9.090	0.000000
5.710	9.100	0.000000
8.570	9.100	0.000000
11.420	9.070	0.000000
13.760	8.880	0.000000
16.090	8.820	0.000000
18.420	8.830	0.000000
21.250	8.820	0.000000
24.070	8.750	0.000000
26.420	8.740	0.000000
28.760	8.800	0.000000
30.980	8.850	0.000000
33.190	8.870	0.000000
35.410	8.870	0.000000
37.640	8.900	0.000000
39.870	8.930	0.000000
42.160	8.950	0.000000
44.460	9.020	0.000000
46.750	9.070	0.000000
49.430	9.090	0.000000
52.110	9.070	0.000000
53.820	9.050	0.000000
55.540	9.030	0.000000
57.770	8.990	0.000000
60.000	9.000	0.000000
62.240	9.050	0.000000
64.020	9.080	0.000000
65.810	9.070	0.000000
68.520	9.110	0.000000
71.410	9.170	0.000000

74.290	9.230	0.000000
76.870	9.280	0.000000
79.450	9.260	0.000000
82.030	9.270	0.000000

Name: MOCKINGBIRD_OV Group: AF
Encroachment: No

Station(ft)	Elevation(ft)	Manning's N
0.000	17.160	0.000000
2.910	17.180	0.000000
5.810	17.160	0.000000
8.720	17.110	0.000000
11.630	17.090	0.000000
14.540	17.090	0.000000
17.440	17.090	0.000000
20.350	17.080	0.000000
23.260	17.030	0.000000
26.160	16.970	0.000000
29.070	16.970	0.000000
31.980	17.010	0.000000
34.920	17.010	0.000000
37.860	16.990	0.000000
40.800	17.030	0.000000
43.740	17.020	0.000000
46.680	16.980	0.000000
49.620	16.960	0.000000
52.550	16.960	0.000000
55.490	16.950	0.000000
58.430	16.950	0.000000
61.370	16.900	0.000000
64.310	16.940	0.000000
67.250	16.850	0.000000
70.190	16.840	0.000000
73.130	16.840	0.000000
76.070	16.820	0.000000
79.010	16.830	0.000000
81.950	16.840	0.000000
84.890	16.820	0.000000
87.830	16.770	0.000000
90.770	16.730	0.000000
93.730	16.730	0.000000
96.680	16.710	0.000000
99.640	16.730	0.000000
102.600	16.740	0.000000
105.560	16.730	0.000000
108.520	16.700	0.000000
111.480	16.660	0.000000
114.430	16.680	0.000000
117.390	16.680	0.000000
120.350	16.690	0.000000
123.310	16.740	0.000000
126.270	16.730	0.000000
129.230	16.730	0.000000
132.190	16.760	0.000000
135.140	16.740	0.000000
138.100	16.690	0.000000
141.060	16.700	0.000000
143.800	16.730	0.000000
146.550	16.710	0.000000
149.290	16.710	0.000000
152.030	16.760	0.000000
154.780	16.720	0.000000
157.520	16.710	0.000000
160.260	16.660	0.000000
163.010	16.620	0.000000
165.750	16.610	0.000000
168.490	16.620	0.000000
171.240	16.640	0.000000
174.180	16.680	0.000000
177.120	16.670	0.000000
180.070	16.630	0.000000
183.010	16.630	0.000000
185.950	16.640	0.000000
188.900	16.650	0.000000
191.840	16.650	0.000000
194.780	16.700	0.000000
197.730	16.710	0.000000
200.670	16.710	0.000000
203.610	16.720	0.000000
206.550	16.720	0.000000
209.500	16.720	0.000000
212.440	16.720	0.000000

215.380	16.710	0.000000
218.330	16.760	0.000000
221.270	16.750	0.000000
224.210	16.760	0.000000
226.930	16.770	0.000000
229.650	16.700	0.000000
232.370	16.670	0.000000
235.090	16.700	0.000000
237.810	16.750	0.000000
240.530	16.720	0.000000
243.240	16.740	0.000000
245.960	16.760	0.000000
248.680	16.780	0.000000
251.400	16.770	0.000000
254.260	16.790	0.000000
257.110	16.790	0.000000
259.970	16.770	0.000000
262.830	16.770	0.000000
265.680	16.780	0.000000
268.540	16.810	0.000000
271.400	16.800	0.000000
274.250	16.790	0.000000
277.110	16.810	0.000000
279.970	16.820	0.000000
282.820	16.840	0.000000
285.680	16.840	0.000000
288.540	16.840	0.000000
291.390	16.840	0.000000
294.250	16.860	0.000000
297.100	16.860	0.000000
299.960	16.870	0.000000
302.870	16.870	0.000000
305.780	16.820	0.000000
308.680	16.890	0.000000
311.590	16.880	0.000000
314.500	16.880	0.000000
317.410	16.890	0.000000
320.320	16.860	0.000000
323.220	16.880	0.000000
326.130	16.920	0.000000
329.040	16.900	0.000000
331.950	16.940	0.000000
334.850	16.920	0.000000
337.760	16.870	0.000000
340.670	16.910	0.000000
343.580	16.920	0.000000
346.490	16.900	0.000000
349.390	16.950	0.000000
352.300	16.960	0.000000
355.210	16.960	0.000000
358.090	16.980	0.000000
360.960	16.990	0.000000
363.840	16.990	0.000000
366.720	17.010	0.000000
369.600	17.000	0.000000
372.470	17.050	0.000000
375.350	17.070	0.000000
378.230	17.030	0.000000
381.100	17.030	0.000000
383.980	17.030	0.000000
386.860	17.050	0.000000
389.740	17.060	0.000000
392.610	17.080	0.000000
395.490	17.100	0.000000
398.370	17.140	0.000000
401.250	17.140	0.000000

Name: PIRLNDPOND01_OV Group: BASE
Encroachment: No

Data from LiDAR

Station(ft)	Elevation(ft)	Manning's N
0.000	6.840	0.000000
2.990	6.880	0.000000
5.990	6.880	0.000000
8.980	6.810	0.000000
11.970	6.850	0.000000
14.970	6.810	0.000000
17.960	6.820	0.000000
20.960	6.720	0.000000
23.950	6.630	0.000000
26.940	6.600	0.000000
29.940	6.600	0.000000
32.930	6.520	0.000000

35.920	6.410	0.000000
38.920	6.390	0.000000
41.910	6.400	0.000000
44.900	6.360	0.000000
47.900	6.320	0.000000
50.890	6.250	0.000000
53.880	6.150	0.000000
56.880	6.150	0.000000
59.870	6.110	0.000000
62.870	6.040	0.000000
65.860	6.070	0.000000
68.850	6.090	0.000000
71.850	6.030	0.000000
74.840	6.020	0.000000
77.830	6.070	0.000000
80.830	6.100	0.000000
83.820	6.070	0.000000
86.810	6.010	0.000000
89.810	5.990	0.000000
92.800	5.950	0.000000
95.800	5.970	0.000000
98.790	5.970	0.000000
101.780	5.950	0.000000
104.780	5.900	0.000000
107.770	5.880	0.000000
110.760	5.860	0.000000
113.760	5.880	0.000000
116.750	5.810	0.000000
119.740	5.820	0.000000
122.740	5.780	0.000000
125.730	5.680	0.000000
128.730	5.690	0.000000
131.720	5.720	0.000000
134.710	5.750	0.000000
137.710	5.710	0.000000
140.700	5.660	0.000000
143.690	5.630	0.000000
146.690	5.680	0.000000
149.680	5.640	0.000000
152.670	5.630	0.000000
155.670	5.620	0.000000
158.660	5.640	0.000000
161.650	5.610	0.000000
164.650	5.610	0.000000
167.640	5.610	0.000000
170.640	5.590	0.000000
173.630	5.580	0.000000
176.620	5.620	0.000000
179.620	5.600	0.000000
182.610	5.630	0.000000
185.600	5.680	0.000000
188.600	5.680	0.000000
191.590	5.670	0.000000
194.580	5.680	0.000000
197.580	5.700	0.000000
200.570	5.710	0.000000
203.570	5.730	0.000000
206.560	5.760	0.000000
209.550	5.760	0.000000
212.550	5.720	0.000000
215.540	5.740	0.000000
218.530	5.730	0.000000
221.530	5.730	0.000000
224.520	5.750	0.000000
227.510	5.750	0.000000
230.510	5.770	0.000000
233.500	5.790	0.000000
236.490	5.820	0.000000
239.490	5.800	0.000000
242.480	5.800	0.000000
245.480	5.800	0.000000
248.470	5.780	0.000000
251.460	5.780	0.000000
254.460	5.770	0.000000
257.450	5.770	0.000000
260.440	5.810	0.000000
263.440	5.830	0.000000
266.430	5.820	0.000000
269.420	5.820	0.000000
272.420	5.810	0.000000
275.410	5.850	0.000000
278.410	5.840	0.000000
281.400	5.870	0.000000
284.390	5.900	0.000000
287.390	5.880	0.000000
290.380	5.880	0.000000
293.370	5.870	0.000000

296.370	5.870	0.000000
299.360	5.870	0.000000
302.350	5.920	0.000000
305.350	5.890	0.000000
308.340	5.920	0.000000
311.340	5.840	0.000000
314.330	5.830	0.000000
317.320	5.860	0.000000
320.320	5.860	0.000000
323.310	5.860	0.000000
326.300	5.870	0.000000
329.300	5.810	0.000000
332.290	5.790	0.000000
335.280	5.760	0.000000
338.280	5.750	0.000000
341.270	5.730	0.000000
344.260	5.700	0.000000
347.260	5.720	0.000000
350.250	5.720	0.000000
353.250	5.730	0.000000
356.240	5.750	0.000000
359.230	5.730	0.000000
362.230	5.700	0.000000
365.220	5.680	0.000000
368.210	5.650	0.000000
371.210	5.720	0.000000
374.200	5.650	0.000000
377.190	5.670	0.000000
380.190	5.670	0.000000
383.180	5.660	0.000000
386.180	5.680	0.000000
389.170	5.760	0.000000
392.160	5.730	0.000000
395.160	5.790	0.000000
398.150	5.850	0.000000
401.140	5.820	0.000000
404.140	5.860	0.000000
407.130	5.900	0.000000
410.120	5.880	0.000000
413.120	5.870	0.000000
416.110	5.890	0.000000
419.100	5.910	0.000000
422.100	5.910	0.000000
425.090	5.950	0.000000
428.090	5.940	0.000000
431.080	5.910	0.000000
434.070	5.880	0.000000
437.070	5.880	0.000000
440.060	5.920	0.000000
443.050	5.960	0.000000
446.050	6.010	0.000000
449.040	6.020	0.000000
452.030	6.020	0.000000
455.030	6.040	0.000000
458.020	6.050	0.000000
461.020	6.100	0.000000
464.010	6.040	0.000000
467.000	6.060	0.000000
470.000	5.990	0.000000
472.990	6.000	0.000000
475.980	6.010	0.000000
478.980	6.020	0.000000
481.970	6.100	0.000000
484.960	6.130	0.000000
487.960	6.120	0.000000
490.900	6.140	0.000000
493.850	6.150	0.000000
496.800	6.170	0.000000
499.740	6.170	0.000000
502.690	6.180	0.000000
505.640	6.160	0.000000
508.580	6.110	0.000000
511.530	6.100	0.000000
514.480	6.090	0.000000
517.430	6.110	0.000000
520.370	6.150	0.000000
523.320	6.100	0.000000
526.270	6.070	0.000000
529.210	6.070	0.000000
532.160	6.080	0.000000
535.110	6.080	0.000000
538.050	6.120	0.000000
541.000	6.130	0.000000
543.950	6.150	0.000000
546.940	6.130	0.000000
549.930	6.100	0.000000
552.930	6.110	0.000000

555.920	6.100	0.000000
558.920	6.200	0.000000
561.910	6.060	0.000000
564.900	5.970	0.000000
567.900	6.030	0.000000
570.890	6.040	0.000000
573.880	6.050	0.000000
576.880	6.080	0.000000
579.880	6.130	0.000000
582.880	6.100	0.000000
585.880	6.140	0.000000
588.880	6.140	0.000000
591.870	6.160	0.000000
594.870	6.150	0.000000
597.870	6.110	0.000000
600.870	6.120	0.000000
603.870	6.210	0.000000
606.870	6.210	0.000000
609.870	6.240	0.000000
612.670	6.240	0.000000
615.470	6.290	0.000000
618.270	6.260	0.000000
621.070	6.250	0.000000
623.870	6.310	0.000000
626.680	6.330	0.000000
629.480	6.340	0.000000
632.280	6.350	0.000000
635.080	6.390	0.000000
637.880	6.360	0.000000
640.680	6.380	0.000000
643.480	6.450	0.000000
646.280	6.480	0.000000

Name: PIRLNDPOND02_OV Group: MAIN
Encroachment: No

Data from LiDAR

Station(ft)	Elevation(ft)	Manning's N
0.000	6.270	0.000000
2.890	6.330	0.000000
5.770	6.380	0.000000
8.660	6.490	0.000000
11.550	6.710	0.000000
14.430	6.710	0.000000
17.320	6.710	0.000000
20.210	6.710	0.000000
23.090	6.710	0.000000
25.980	6.710	0.000000
28.860	6.710	0.000000
31.750	6.710	0.000000
34.640	6.710	0.000000
37.520	6.710	0.000000
40.410	6.710	0.000000
43.300	6.710	0.000000
46.180	6.710	0.000000
49.070	6.710	0.000000
51.960	6.780	0.000000
54.840	6.700	0.000000
57.730	6.650	0.000000
60.620	6.850	0.000000
63.500	6.800	0.000000
66.260	6.640	0.000000
69.020	6.490	0.000000
71.780	6.370	0.000000
74.540	6.330	0.000000
77.300	6.290	0.000000
80.060	6.210	0.000000
82.810	6.130	0.000000
85.570	6.080	0.000000
88.450	5.990	0.000000
91.320	5.930	0.000000
94.200	5.860	0.000000
97.070	5.810	0.000000
99.950	5.850	0.000000
102.820	5.830	0.000000
105.750	5.800	0.000000
108.680	5.770	0.000000
111.610	5.740	0.000000
114.530	5.750	0.000000
117.460	5.800	0.000000
120.390	5.790	0.000000
123.320	5.780	0.000000
126.250	5.820	0.000000
129.170	5.840	0.000000

132.100	5.800	0.000000
135.030	5.760	0.000000
137.960	5.780	0.000000
140.890	5.800	0.000000
143.810	5.820	0.000000
146.740	5.850	0.000000
149.620	5.870	0.000000
152.500	5.890	0.000000
155.380	5.890	0.000000
158.260	5.850	0.000000
161.140	5.870	0.000000
164.020	5.910	0.000000
166.900	5.910	0.000000
169.780	5.900	0.000000
172.660	5.880	0.000000
175.540	5.850	0.000000
178.420	5.820	0.000000
181.290	5.840	0.000000
184.170	5.840	0.000000
187.050	5.760	0.000000
189.930	5.740	0.000000
192.810	5.750	0.000000
195.690	5.790	0.000000
198.570	5.770	0.000000
201.430	5.740	0.000000
204.300	5.750	0.000000
207.160	5.720	0.000000
210.020	5.700	0.000000
212.890	5.690	0.000000
215.750	5.670	0.000000
218.610	5.660	0.000000
221.480	5.650	0.000000
224.340	5.670	0.000000
227.200	5.700	0.000000
230.070	5.700	0.000000
232.930	5.700	0.000000
235.790	5.670	0.000000
238.740	5.620	0.000000
241.700	5.630	0.000000
244.650	5.900	0.000000
247.600	6.010	0.000000
250.550	6.120	0.000000
253.500	6.170	0.000000
256.450	6.150	0.000000
259.400	6.250	0.000000
262.230	6.350	0.000000
265.060	6.360	0.000000
267.890	6.380	0.000000
270.720	6.400	0.000000
273.550	6.390	0.000000
276.380	6.360	0.000000
279.210	6.330	0.000000
282.040	6.300	0.000000
284.870	6.270	0.000000
287.700	6.240	0.000000
290.530	6.200	0.000000
293.360	6.150	0.000000
296.180	6.090	0.000000
299.010	6.060	0.000000
301.840	6.060	0.000000
304.670	6.050	0.000000
307.500	6.050	0.000000
310.170	6.010	0.000000
312.840	5.970	0.000000
315.520	5.940	0.000000
318.190	5.940	0.000000
320.860	5.890	0.000000
323.530	5.820	0.000000
326.200	5.800	0.000000
328.880	5.830	0.000000
331.570	5.820	0.000000
334.250	5.880	0.000000
336.940	5.850	0.000000
339.620	5.830	0.000000
342.300	5.840	0.000000
344.990	5.850	0.000000
347.670	5.850	0.000000
350.360	5.850	0.000000
353.250	5.860	0.000000
356.140	5.890	0.000000
359.040	5.940	0.000000
361.930	5.980	0.000000
364.820	6.010	0.000000
367.720	6.010	0.000000
370.640	6.040	0.000000
373.560	6.050	0.000000
376.480	6.030	0.000000

379.400	5.990	0.000000
382.310	5.990	0.000000
385.230	6.100	0.000000
388.150	6.210	0.000000

Name: PIRLNDPOND03_OV Group: BASE
Encroachment: No

Data from LiDAR

Station(ft)	Elevation(ft)	Manning's N
0.000	8.250	0.000000
2.930	8.220	0.000000
5.860	8.100	0.000000
8.790	8.110	0.000000
11.720	8.090	0.000000
14.650	8.110	0.000000
17.580	8.190	0.000000
20.510	8.260	0.000000
23.440	8.260	0.000000
26.370	8.260	0.000000
29.300	8.300	0.000000
32.220	8.250	0.000000
35.150	8.220	0.000000
38.080	8.210	0.000000
41.010	8.150	0.000000
43.940	8.030	0.000000
46.870	7.940	0.000000
49.800	7.860	0.000000
52.730	7.820	0.000000
55.660	7.780	0.000000
58.590	7.680	0.000000
61.520	7.570	0.000000
64.450	7.430	0.000000
67.380	7.320	0.000000
70.160	7.230	0.000000
72.940	7.220	0.000000
75.720	7.270	0.000000
78.500	7.370	0.000000
81.280	7.430	0.000000
84.060	7.400	0.000000
86.850	7.360	0.000000
89.630	7.360	0.000000
92.410	7.360	0.000000
95.190	7.280	0.000000
97.980	7.300	0.000000
100.760	7.350	0.000000
103.550	7.240	0.000000
106.340	7.170	0.000000
109.130	7.220	0.000000
111.910	7.250	0.000000
114.700	7.170	0.000000
117.490	7.100	0.000000
120.280	7.170	0.000000
123.070	7.230	0.000000
125.850	7.230	0.000000
128.640	7.200	0.000000
131.450	7.270	0.000000
134.250	7.420	0.000000
137.060	7.440	0.000000
139.860	7.520	0.000000
142.670	7.660	0.000000
145.470	7.820	0.000000
148.280	7.910	0.000000
151.080	7.980	0.000000
153.890	8.020	0.000000
156.690	8.070	0.000000
159.500	8.240	0.000000
162.300	8.290	0.000000
165.110	8.330	0.000000
167.910	8.390	0.000000
170.720	8.450	0.000000
173.550	8.540	0.000000
176.380	8.600	0.000000
179.210	8.730	0.000000
182.040	8.840	0.000000
184.880	8.890	0.000000
187.710	8.910	0.000000
190.540	8.940	0.000000
193.370	8.910	0.000000
196.200	8.890	0.000000
199.040	8.910	0.000000
201.870	8.930	0.000000
204.700	8.990	0.000000
207.530	9.110	0.000000

210.360	9.180	0.000000

Name: PW LINK-01 Group: BASE
Encroachment: No

Data from LiDAR

Station(ft)	Elevation(ft)	Manning's N
0.000	11.670	0.000000
2.770	11.640	0.000000
5.540	11.640	0.000000
8.310	11.540	0.000000
11.090	11.390	0.000000
13.860	11.140	0.000000
16.630	10.880	0.000000
19.400	10.620	0.000000
22.170	10.120	0.000000
24.940	9.890	0.000000
27.710	9.740	0.000000
30.490	9.560	0.000000
32.990	9.390	0.000000
35.490	7.500	0.000000
38.000	7.500	0.000000
40.550	7.500	0.000000
43.110	9.320	0.000000
45.670	9.390	0.000000
48.450	9.470	0.000000
51.230	9.490	0.000000
53.790	9.400	0.000000
56.350	9.470	0.000000
58.910	9.690	0.000000
60.510	9.720	0.000000
62.110	9.730	0.000000
64.920	9.630	0.000000
67.730	9.480	0.000000
70.540	9.400	0.000000
73.350	9.410	0.000000
75.710	9.500	0.000000
78.070	9.880	0.000000
80.430	10.350	0.000000
82.580	10.710	0.000000
84.730	10.860	0.000000
87.070	11.010	0.000000
89.420	11.160	0.000000
91.760	11.320	0.000000
93.850	11.460	0.000000
95.930	11.580	0.000000
98.020	11.680	0.000000

Name: PW POND-02_OV Group: BASE
Encroachment: No

Station(ft)	Elevation(ft)	Manning's N
0.000	20.010	0.000000
2.930	19.930	0.000000
5.860	19.930	0.000000
8.790	19.930	0.000000
11.720	19.960	0.000000
14.660	19.930	0.000000
17.590	19.840	0.000000
20.520	19.830	0.000000
23.450	19.820	0.000000
26.380	19.810	0.000000
29.310	19.760	0.000000
32.240	19.760	0.000000
35.170	19.780	0.000000
38.110	19.700	0.000000
41.040	19.760	0.000000
43.970	19.740	0.000000
46.900	19.720	0.000000
49.830	19.670	0.000000
52.760	19.690	0.000000
55.690	19.700	0.000000
58.620	19.700	0.000000
61.550	19.690	0.000000
64.490	19.660	0.000000
67.420	19.650	0.000000
70.350	19.670	0.000000
73.280	19.670	0.000000
76.210	19.660	0.000000
79.140	19.630	0.000000

82.070	19.620	0.000000
84.920	19.610	0.000000
87.770	19.560	0.000000
90.620	19.550	0.000000
93.470	19.530	0.000000
96.310	19.520	0.000000
99.160	19.480	0.000000
102.010	19.430	0.000000
104.860	19.420	0.000000
107.710	19.390	0.000000
110.550	19.340	0.000000
113.400	19.320	0.000000
116.250	19.300	0.000000
119.020	19.260	0.000000
121.790	19.310	0.000000
124.560	19.280	0.000000
127.330	19.260	0.000000
130.110	19.230	0.000000
132.880	19.210	0.000000
135.650	19.210	0.000000
138.420	19.210	0.000000
141.190	19.180	0.000000
143.960	19.170	0.000000
146.730	19.180	0.000000
149.680	19.120	0.000000
152.640	19.050	0.000000
155.590	18.980	0.000000
158.540	18.900	0.000000
161.490	18.890	0.000000
164.440	18.910	0.000000
167.050	18.890	0.000000
169.660	18.820	0.000000
172.270	18.810	0.000000
174.890	18.800	0.000000
177.500	18.700	0.000000
180.110	18.530	0.000000
182.720	18.380	0.000000
185.650	18.250	0.000000
188.580	18.180	0.000000
191.510	18.150	0.000000
194.440	18.220	0.000000
197.160	18.270	0.000000
199.890	18.220	0.000000
202.620	18.180	0.000000
205.350	18.110	0.000000
208.080	18.060	0.000000
210.810	18.040	0.000000
213.530	18.020	0.000000
216.260	18.050	0.000000
219.200	18.070	0.000000
222.150	18.090	0.000000
225.090	18.090	0.000000
228.030	18.080	0.000000
230.970	18.120	0.000000
233.910	18.110	0.000000
236.850	18.160	0.000000
239.720	18.210	0.000000
242.590	18.270	0.000000
245.460	18.360	0.000000
248.330	18.460	0.000000
251.200	18.500	0.000000
254.070	18.510	0.000000
256.940	18.530	0.000000
259.810	18.530	0.000000
262.680	18.570	0.000000
265.550	18.650	0.000000
268.420	18.670	0.000000
271.290	18.760	0.000000
274.160	18.810	0.000000
277.030	18.890	0.000000
279.900	18.880	0.000000
282.750	18.830	0.000000
285.610	18.850	0.000000
288.470	18.810	0.000000
291.320	18.850	0.000000
294.180	18.940	0.000000
297.030	19.000	0.000000
299.890	19.110	0.000000
302.740	19.190	0.000000
305.600	19.170	0.000000
308.460	19.210	0.000000
311.260	19.190	0.000000
314.070	19.180	0.000000
316.880	19.210	0.000000
319.690	19.220	0.000000
322.500	19.180	0.000000
325.310	19.180	0.000000

328.120	19.230	0.000000
330.930	19.290	0.000000
333.740	19.310	0.000000
336.350	19.370	0.000000
338.970	19.430	0.000000
341.590	19.490	0.000000
344.210	19.570	0.000000
346.820	19.670	0.000000
349.590	19.660	0.000000
352.360	19.640	0.000000
355.130	19.530	0.000000
357.900	19.560	0.000000
360.670	19.580	0.000000
363.440	19.610	0.000000
366.220	19.610	0.000000
368.990	19.590	0.000000
371.760	19.560	0.000000
374.530	19.510	0.000000
377.300	19.470	0.000000
380.070	19.510	0.000000
382.840	19.490	0.000000

Name: PW POND-03_OV Group: BASE
Encroachment: No

Data from LiDAR

Station(ft)	Elevation(ft)	Manning's N
0.000	15.230	0.000000
2.480	15.080	0.000000
4.950	14.860	0.000000
7.430	14.670	0.000000
9.900	14.420	0.000000
12.380	14.170	0.000000
15.050	13.980	0.000000
17.720	13.780	0.000000
20.390	13.790	0.000000
23.060	13.860	0.000000
25.730	13.760	0.000000
28.400	13.650	0.000000
31.070	13.680	0.000000
33.740	13.730	0.000000
36.500	13.800	0.000000
39.270	13.880	0.000000
42.030	14.020	0.000000
44.790	13.960	0.000000
47.550	13.840	0.000000
50.320	13.870	0.000000
53.120	13.860	0.000000
55.930	13.830	0.000000
58.730	13.820	0.000000
61.070	13.800	0.000000
63.400	13.830	0.000000
65.740	13.850	0.000000
68.540	13.910	0.000000
71.350	13.910	0.000000
74.150	13.920	0.000000
76.810	14.000	0.000000
79.470	14.040	0.000000
82.120	14.070	0.000000
84.780	14.090	0.000000
87.440	14.110	0.000000
90.090	14.150	0.000000
92.750	14.190	0.000000
95.410	14.220	0.000000

Name: PW POND-04_OV Group: BASE
Encroachment: No

Data from LiDAR

Station(ft)	Elevation(ft)	Manning's N
0.000	18.920	0.000000
2.940	18.880	0.000000
5.880	18.850	0.000000
8.820	18.660	0.000000
11.760	18.500	0.000000
14.700	18.410	0.000000
17.640	18.350	0.000000
20.580	18.290	0.000000
23.520	18.220	0.000000
26.460	18.170	0.000000
29.400	18.110	0.000000

32.340	18.140	0.000000
35.280	18.290	0.000000
38.220	18.340	0.000000
41.160	18.200	0.000000
44.100	17.970	0.000000
47.040	17.740	0.000000
49.980	17.520	0.000000
52.920	17.490	0.000000
55.860	17.450	0.000000
58.800	17.430	0.000000
61.730	17.450	0.000000
64.670	17.490	0.000000
67.610	17.570	0.000000
70.550	17.620	0.000000
73.490	17.590	0.000000
76.430	17.650	0.000000
79.370	17.600	0.000000
82.310	17.550	0.000000
85.250	17.510	0.000000
88.190	17.620	0.000000
91.130	17.830	0.000000
94.070	17.930	0.000000
97.010	17.990	0.000000
99.950	18.080	0.000000
102.890	18.010	0.000000
105.830	17.920	0.000000
108.770	17.970	0.000000
111.710	18.050	0.000000
114.650	18.120	0.000000
117.590	18.140	0.000000
120.530	18.170	0.000000
123.470	18.180	0.000000

Name: WALNUT_OV Group: MAIN
Encroachment: No

Station(ft)	Elevation(ft)	Manning's N
0.000	21.240	0.000000
2.940	21.220	0.000000
5.890	21.170	0.000000
8.830	21.080	0.000000
11.770	21.030	0.000000
14.710	21.010	0.000000
17.660	20.910	0.000000
20.600	20.800	0.000000
23.540	20.650	0.000000
26.490	20.460	0.000000
29.430	20.190	0.000000
32.380	19.940	0.000000
35.320	19.770	0.000000
38.270	19.670	0.000000
41.220	19.510	0.000000
44.160	19.430	0.000000
47.110	19.400	0.000000
50.060	19.280	0.000000
53.000	19.240	0.000000
55.950	19.260	0.000000
58.900	19.320	0.000000
61.840	19.320	0.000000
64.790	19.360	0.000000
67.740	19.430	0.000000
70.690	19.520	0.000000
73.630	19.600	0.000000
76.580	19.660	0.000000
79.430	19.720	0.000000
82.280	19.730	0.000000
85.120	19.710	0.000000
87.970	19.750	0.000000
90.820	19.790	0.000000
93.670	19.820	0.000000
96.520	19.840	0.000000
99.370	19.880	0.000000
102.220	19.940	0.000000
105.060	19.980	0.000000
107.910	20.000	0.000000
110.760	20.060	0.000000
113.610	20.130	0.000000
116.460	20.270	0.000000
119.310	20.310	0.000000
122.220	20.390	0.000000
125.140	20.440	0.000000
128.060	20.470	0.000000
130.970	20.580	0.000000

133.890	20.700	0.000000
136.810	20.810	0.000000
139.720	20.860	0.000000
142.640	20.870	0.000000
145.560	20.860	0.000000
148.470	20.850	0.000000
151.390	20.840	0.000000
154.300	20.840	0.000000
157.220	20.840	0.000000
160.140	20.830	0.000000
163.050	20.820	0.000000
165.970	20.810	0.000000
168.890	20.790	0.000000
171.800	20.790	0.000000
174.720	20.810	0.000000
177.640	20.810	0.000000
180.550	20.820	0.000000
183.470	20.820	0.000000
186.390	20.820	0.000000
189.300	20.830	0.000000
192.220	20.840	0.000000
195.130	20.850	0.000000
198.080	20.850	0.000000
201.030	20.860	0.000000
203.980	20.870	0.000000
206.930	20.870	0.000000
209.870	20.830	0.000000
212.820	20.830	0.000000
215.770	20.830	0.000000
218.720	20.840	0.000000
221.660	20.840	0.000000
224.610	20.830	0.000000
227.560	20.850	0.000000
230.510	20.880	0.000000
233.460	20.890	0.000000
236.400	20.890	0.000000
239.350	20.870	0.000000
242.300	20.830	0.000000
245.250	20.820	0.000000
248.190	20.820	0.000000
251.140	20.780	0.000000
254.090	20.940	0.000000
257.040	21.030	0.000000
259.990	21.100	0.000000
262.930	21.180	0.000000
265.880	21.200	0.000000

==========
==== Operating Tables ====
==========

Name: Group: BASE
Type: Rating Curve
Function: US Stage vs. Discharge

US Stage(ft)	Discharge(cfs)

==========
==== Pipes ====
==========

Name: AF LINK-02 From Node: AF-02 Length(ft): 72.00
Group: AF To Node: AF-01 Count: 3
Friction Equation: Automatic

	UPSTREAM	DOWNSTREAM		
Geometry:	Horz Ellipse	Horz Ellipse	Solution Algorithm:	Most Restrictive
Span(in):	68.00	68.00	Flow:	Both
Rise(in):	43.00	43.00	Entrance Loss Coef:	0.50
Invert(ft):	11.270	10.780	Exit Loss Coef:	0.50
Manning's N:	0.130000	0.013000	Bend Loss Coef:	0.00
Top Clip(in):	0.000	0.000	Outlet Ctrl Spec:	Use dc or tw
Bot Clip(in):	0.000	0.000	Inlet Ctrl Spec:	Use dc
			Stabilizer Option:	None

Upstream FHWA Inlet Edge Description:
Horizontal Ellipse Concrete: Square edge with headwall

Downstream FHWA Inlet Edge Description:
Horizontal Ellipse Concrete: Square edge with headwall

Data from Survey

```
         Name: AF LINK-06          From Node: AF-06             Length(ft): 70.00
        Group: AF                    To Node: AF-05                  Count: 2
                                                          Friction Equation: Automatic
               UPSTREAM       DOWNSTREAM                Solution Algorithm: Most Restrictive
     Geometry: Circular       Circular                            Flow: Both
     Span(in): 24.00          24.00                     Entrance Loss Coef: 0.50
     Rise(in): 24.00          24.00                         Exit Loss Coef: 0.50
   Invert(ft): 12.000         11.800                        Bend Loss Coef: 0.00
  Manning's N: 0.013000       0.013000                    Outlet Ctrl Spec: Use dc or tw
 Top Clip(in): 0.000          0.000                         Inlet Ctrl Spec: Use dc
 Bot Clip(in): 0.000          0.000                      Stabilizer Option: None
```

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Estimated Data

```
         Name: BG_OUT01            From Node: BERMGRN01         Length(ft): 31.00
        Group: BERMGRN               To Node: MAIN-04                Count: 1
                                                          Friction Equation: Automatic
               UPSTREAM       DOWNSTREAM                Solution Algorithm: Most Restrictive
     Geometry: Circular       Circular                            Flow: Both
     Span(in): 24.00          24.00                     Entrance Loss Coef: 0.50
     Rise(in): 24.00          24.00                         Exit Loss Coef: 0.00
   Invert(ft): 11.800         11.750                        Bend Loss Coef: 0.00
  Manning's N: 0.013000       0.013000                    Outlet Ctrl Spec: Use dc or tw
 Top Clip(in): 0.000          0.000                         Inlet Ctrl Spec: Use dc
 Bot Clip(in): 0.000          0.000                      Stabilizer Option: None
```

Upstream FHWA Inlet Edge Description:
Circular Concrete: Groove end projecting

Downstream FHWA Inlet Edge Description:
Circular Concrete: Groove end projecting

data from as-built

```
         Name: BG_OUT02            From Node: BERMGRN02         Length(ft): 31.00
        Group: BERMGRN               To Node: MAIN-06                Count: 1
                                                          Friction Equation: Automatic
               UPSTREAM       DOWNSTREAM                Solution Algorithm: Most Restrictive
     Geometry: Circular       Circular                            Flow: Both
     Span(in): 18.00          18.00                     Entrance Loss Coef: 0.20
     Rise(in): 18.00          18.00                         Exit Loss Coef: 0.00
   Invert(ft): 8.650          8.550                         Bend Loss Coef: 0.00
  Manning's N: 0.013000       0.013000                    Outlet Ctrl Spec: Use dc or tw
 Top Clip(in): 0.000          0.000                         Inlet Ctrl Spec: Use dc
 Bot Clip(in): 0.000          0.000                      Stabilizer Option: None
```

Upstream FHWA Inlet Edge Description:
Circular Concrete: Groove end projecting

Downstream FHWA Inlet Edge Description:
Circular Concrete: Groove end projecting

Data from as built

```
         Name: BG_OUT03            From Node: BERMGRN03         Length(ft): 290.00
        Group: BERMGRN               To Node: MAIN-07A               Count: 1
                                                          Friction Equation: Automatic
               UPSTREAM       DOWNSTREAM                Solution Algorithm: Most Restrictive
     Geometry: Circular       Circular                            Flow: Both
     Span(in): 18.00          18.00                     Entrance Loss Coef: 0.50
     Rise(in): 18.00          18.00                         Exit Loss Coef: 0.00
   Invert(ft): 13.400         12.020                        Bend Loss Coef: 0.00
  Manning's N: 0.013000       0.013000                    Outlet Ctrl Spec: Use dc or tw
 Top Clip(in): 0.000          0.000                         Inlet Ctrl Spec: Use dc
 Bot Clip(in): 0.000          0.000                      Stabilizer Option: None
```

Upstream FHWA Inlet Edge Description:
Circular Concrete: Groove end projecting

Downstream FHWA Inlet Edge Description:

Circular Concrete: Groove end projecting

Data from as built

Name:	BG_OUT04	From Node:	BERMGRN04
Group:	BERMGRN	To Node:	BERMGRN03
	UPSTREAM	DOWNSTREAM	
Geometry:	Circular	Circular	
Span(in):	18.00	18.00	
Rise(in):	18.00	18.00	
Invert(ft):	14.670	13.260	
Manning's N:	0.013000	0.013000	
Top Clip(in):	0.000	0.000	
Bot Clip(in):	0.000	0.000	

Length(ft):	208.00
Count:	1
Friction Equation:	Automatic
Solution Algorithm:	Most Restrictive
Flow:	Both
Entrance Loss Coef:	0.50
Exit Loss Coef:	1.00
Bend Loss Coef:	0.00
Outlet Ctrl Spec:	Use dc or tw
Inlet Ctrl Spec:	Use dc
Stabilizer Option:	None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Data from as-built

Name:	BG_OUT05	From Node:	BERMGRN05
Group:	BERMGRN	To Node:	MAIN-08A
	UPSTREAM	DOWNSTREAM	
Geometry:	Circular	Circular	
Span(in):	18.00	18.00	
Rise(in):	18.00	18.00	
Invert(ft):	13.700	13.400	
Manning's N:	0.013000	0.013000	
Top Clip(in):	0.000	0.000	
Bot Clip(in):	0.000	0.000	

Length(ft):	53.00
Count:	1
Friction Equation:	Automatic
Solution Algorithm:	Most Restrictive
Flow:	Both
Entrance Loss Coef:	0.50
Exit Loss Coef:	0.00
Bend Loss Coef:	0.00
Outlet Ctrl Spec:	Use dc or tw
Inlet Ctrl Spec:	Use dc
Stabilizer Option:	None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Groove end projecting

Downstream FHWA Inlet Edge Description:
Circular Concrete: Groove end projecting

Data from as built

Name:	CAMP LINK-01a	From Node:	LKWDPOND01
Group:	CAMP	To Node:	PIRLNDPOND02
	UPSTREAM	DOWNSTREAM	
Geometry:	Circular	Circular	
Span(in):	18.00	18.00	
Rise(in):	18.00	18.00	
Invert(ft):	3.000	2.600	
Manning's N:	0.013000	0.013000	
Top Clip(in):	0.000	0.000	
Bot Clip(in):	0.000	0.000	

Length(ft):	40.00
Count:	1
Friction Equation:	Automatic
Solution Algorithm:	Most Restrictive
Flow:	Both
Entrance Loss Coef:	0.50
Exit Loss Coef:	1.00
Bend Loss Coef:	0.00
Outlet Ctrl Spec:	Use dc or tw
Inlet Ctrl Spec:	Use dc
Stabilizer Option:	None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Groove end projecting

Downstream FHWA Inlet Edge Description:
Circular Concrete: Groove end projecting

Name:	CAMP LINK-03	From Node:	PIRLNDPOND01
Group:	CAMP	To Node:	MAIN-02
	UPSTREAM	DOWNSTREAM	
Geometry:	Circular	Circular	
Span(in):	30.00	30.00	
Rise(in):	30.00	30.00	
Invert(ft):	1.800	1.700	
Manning's N:	0.027000	0.027000	
Top Clip(in):	0.000	0.000	
Bot Clip(in):	0.000	0.000	

Length(ft):	55.00
Count:	1
Friction Equation:	Automatic
Solution Algorithm:	Most Restrictive
Flow:	Both
Entrance Loss Coef:	0.90
Exit Loss Coef:	1.00
Bend Loss Coef:	0.00
Outlet Ctrl Spec:	Use dc or tw
Inlet Ctrl Spec:	Use dc
Stabilizer Option:	None

Upstream FHWA Inlet Edge Description:
Circular CMP: Projecting

Downstream FHWA Inlet Edge Description:
Circular CMP: Projecting

Pipe input estimated

Name:	CL LINK-02	From Node: CL-02	Length(ft): 98.00
Group:	CL	To Node: CL-01	Count: 1
			Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM	Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular	Flow: Both
Span(in):	36.00	36.00	Entrance Loss Coef: 0.50
Rise(in):	36.00	36.00	Exit Loss Coef: 0.50
Invert(ft):	12.620	11.120	Bend Loss Coef: 0.00
Manning's N:	0.013000	0.013000	Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000	Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000	Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Groove end projecting

Downstream FHWA Inlet Edge Description:
Circular Concrete: Groove end projecting

Name:	CULVERT-01	From Node: PIRLNDPOND03	Length(ft): 57.00
Group:	MAIN	To Node: PIRLNDPOND02	Count: 4
			Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM	Solution Algorithm: Most Restrictive
Geometry:	Rectangular	Rectangular	Flow: Both
Span(in):	60.00	60.00	Entrance Loss Coef: 0.50
Rise(in):	48.00	48.00	Exit Loss Coef: 1.00
Invert(ft):	-1.140	-1.170	Bend Loss Coef: 0.00
Manning's N:	0.013000	0.013000	Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000	Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000	Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Rectangular Box: 90° headwall w/ 3/4" chamfers

Downstream FHWA Inlet Edge Description:
Rectangular Box: 90° headwall w/ 3/4" chamfers

Culvert data from survey

Name:	CULVERT-02	From Node: MAIN-03	Length(ft): 105.00
Group:	MAIN	To Node: PIRLNDPOND03	Count: 1
			Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM	Solution Algorithm: Most Restrictive
Geometry:	Rectangular	Rectangular	Flow: Both
Span(in):	84.00	84.00	Entrance Loss Coef: 0.50
Rise(in):	84.00	84.00	Exit Loss Coef: 1.00
Invert(ft):	4.130	3.830	Bend Loss Coef: 0.00
Manning's N:	0.013000	0.013000	Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000	Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000	Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Rectangular Box: 30° to 75° wingwall flares

Downstream FHWA Inlet Edge Description:
Rectangular Box: 30° to 75° wingwall flares

culvert data from survey

Name:	CULVERT-03	From Node: MAIN-17	Length(ft): 18.00
Group:	MAIN	To Node: MAIN-16	Count: 2
			Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM	Solution Algorithm: Most Restrictive
Geometry:	Rectangular	Rectangular	Flow: Both
Span(in):	96.00	96.00	Entrance Loss Coef: 0.50
Rise(in):	96.00	96.00	Exit Loss Coef: 0.00

Invert(ft):	8.300	8.350	Bend Loss Coef: 0.00
Manning's N:	0.130000	0.130000	Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000	Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000	Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Rectangular Box: 0° wingwall flares

Downstream FHWA Inlet Edge Description:
Rectangular Box: 0° wingwall flares

Name:	CULVERT-04	From Node: MAIN-20	Length(ft): 81.00
Group:	MAIN	To Node: MAIN-19	Count: 1
			Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM	Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular	Flow: Both
Span(in):	60.00	60.00	Entrance Loss Coef: 0.50
Rise(in):	60.00	60.00	Exit Loss Coef: 1.00
Invert(ft):	12.080	12.380	Bend Loss Coef: 0.00
Manning's N:	0.027000	0.027000	Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000	Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000	Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular CMP: Headwall

Downstream FHWA Inlet Edge Description:
Circular CMP: Headwall

Data from Survey

Name:	LINK-01	From Node: MAIN-23	Length(ft): 189.00
Group:	MAIN	To Node: MAIN-22	Count: 3
			Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM	Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular	Flow: Both
Span(in):	36.00	36.00	Entrance Loss Coef: 0.50
Rise(in):	36.00	36.00	Exit Loss Coef: 1.00
Invert(ft):	14.240	13.600	Bend Loss Coef: 0.00
Manning's N:	0.025000	0.025000	Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000	Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000	Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular CMP: Headwall

Downstream FHWA Inlet Edge Description:
Circular CMP: Headwall

Name:	LINK-02	From Node: MAIN-25	Length(ft): 94.00
Group:	MAIN	To Node: MAIN-24	Count: 1
			Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM	Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular	Flow: Both
Span(in):	24.00	24.00	Entrance Loss Coef: 0.50
Rise(in):	24.00	24.00	Exit Loss Coef: 0.50
Invert(ft):	14.600	14.500	Bend Loss Coef: 0.00
Manning's N:	0.013000	0.013000	Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000	Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000	Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Estimated Data

Name:	POND02 OUT	From Node: PIRLNDPOND02	Length(ft): 18.00
Group:	MAIN	To Node: MAIN-02	Count: 1

			Friction Equation:	Automatic
	UPSTREAM	DOWNSTREAM	Solution Algorithm:	Most Restrictive
Geometry:	Circular	Circular	Flow:	Both
Span(in):	24.00	24.00	Entrance Loss Coef:	0.70
Rise(in):	24.00	24.00	Exit Loss Coef:	1.00
Invert(ft):	1.300	0.900	Bend Loss Coef:	0.00
Manning's N:	0.027000	0.027000	Outlet Ctrl Spec:	Use dc or tw
Top Clip(in):	0.000	0.000	Inlet Ctrl Spec:	Use dc
Bot Clip(in):	0.000	0.000	Stabilizer Option:	None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Pipe input from survey

Name:	PW LINK-02	From Node:	PW-02
Group:	PW	To Node:	PW-01

Length(ft):	70.00			
Count:	1			
Friction Equation:	Automatic			
Solution Algorithm:	Most Restrictive			
Flow:	Both			
Entrance Loss Coef:	0.50			
Exit Loss Coef:	1.00			
Bend Loss Coef:	0.00			
Outlet Ctrl Spec:	Use dc or tw			
Inlet Ctrl Spec:	Use dc			
Stabilizer Option:	None			

	UPSTREAM	DOWNSTREAM
Geometry:	Circular	Circular
Span(in):	60.00	60.00
Rise(in):	60.00	60.00
Invert(ft):	7.680	7.370
Manning's N:	0.013000	0.013000
Top Clip(in):	0.000	0.000
Bot Clip(in):	0.000	0.000

Upstream FHWA Inlet Edge Description:
Circular Concrete: Groove end projecting

Downstream FHWA Inlet Edge Description:
Circular Concrete: Groove end projecting

Data from survey

Name:	PW LINK-05	From Node:	PW-05
Group:	PW	To Node:	PW-01

Length(ft):	105.00			
Count:	1			
Friction Equation:	Automatic			
Solution Algorithm:	Most Restrictive			
Flow:	Both			
Entrance Loss Coef:	0.50			
Exit Loss Coef:	1.00			
Bend Loss Coef:	0.00			
Outlet Ctrl Spec:	Use dc or tw			
Inlet Ctrl Spec:	Use dc			
Stabilizer Option:	None			

	UPSTREAM	DOWNSTREAM
Geometry:	Circular	Circular
Span(in):	48.00	48.00
Rise(in):	48.00	48.00
Invert(ft):	6.470	6.320
Manning's N:	0.013000	0.013000
Top Clip(in):	0.000	0.000
Bot Clip(in):	0.000	0.000

Upstream FHWA Inlet Edge Description:
Circular CMP: Projecting

Downstream FHWA Inlet Edge Description:
Circular CMP: Projecting

Data from survey

Name:	PW LINK-07	From Node:	PW-07
Group:	PW	To Node:	PW-06B

Length(ft):	160.00			
Count:	1			
Friction Equation:	Automatic			
Solution Algorithm:	Most Restrictive			
Flow:	Both			
Entrance Loss Coef:	0.50			
Exit Loss Coef:	1.00			
Bend Loss Coef:	0.00			
Outlet Ctrl Spec:	Use dc or tw			
Inlet Ctrl Spec:	Use dc			
Stabilizer Option:	None			

	UPSTREAM	DOWNSTREAM
Geometry:	Circular	Circular
Span(in):	36.00	36.00
Rise(in):	36.00	36.00
Invert(ft):	14.000	13.500
Manning's N:	0.013000	0.013000
Top Clip(in):	0.000	0.000
Bot Clip(in):	0.000	0.000

Upstream FHWA Inlet Edge Description:
Circular Concrete: Groove end projecting

Downstream FHWA Inlet Edge Description:
Circular Concrete: Groove end projecting

Estimated data

Name: PW LINK-08	From Node: PW-08	Length(ft): 194.00	
Group: PW	To Node: PW-07	Count: 1	
		Friction Equation: Automatic	
	UPSTREAM	DOWNSTREAM	Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular	Flow: Both
Span(in):	36.00	36.00	Entrance Loss Coef: 0.50
Rise(in):	36.00	36.00	Exit Loss Coef: 1.00
Invert(ft):	12.500	12.000	Bend Loss Coef: 0.00
Manning's N:	0.013000	0.013000	Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000	Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000	Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Groove end projecting

Downstream FHWA Inlet Edge Description:
Circular Concrete: Groove end projecting

Estimated data

Name: PW LINK-15	From Node: PW-14	Length(ft): 123.00	
Group: PW	To Node: PW-13	Count: 1	
		Friction Equation: Automatic	
	UPSTREAM	DOWNSTREAM	Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular	Flow: Both
Span(in):	30.00	30.00	Entrance Loss Coef: 0.50
Rise(in):	30.00	30.00	Exit Loss Coef: 1.00
Invert(ft):	21.000	19.000	Bend Loss Coef: 0.00
Manning's N:	0.013000	0.013000	Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000	Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000	Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Groove end projecting

Downstream FHWA Inlet Edge Description:
Circular Concrete: Groove end projecting

Name: PW LINK-17	From Node: PW-16	Length(ft): 50.00	
Group: PW	To Node: PW-15	Count: 1	
		Friction Equation: Automatic	
	UPSTREAM	DOWNSTREAM	Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular	Flow: Both
Span(in):	36.00	36.00	Entrance Loss Coef: 0.50
Rise(in):	36.00	36.00	Exit Loss Coef: 1.00
Invert(ft):	23.000	22.000	Bend Loss Coef: 0.00
Manning's N:	0.013000	0.013000	Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000	Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000	Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Groove end projecting

Downstream FHWA Inlet Edge Description:
Circular Concrete: Groove end projecting

Name: PW LINK-18	From Node: PW-17	Length(ft): 40.00	
Group: PW	To Node: PW-16	Count: 1	
		Friction Equation: Automatic	
	UPSTREAM	DOWNSTREAM	Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular	Flow: Both
Span(in):	18.00	18.00	Entrance Loss Coef: 0.00
Rise(in):	18.00	18.00	Exit Loss Coef: 1.00
Invert(ft):	23.000	22.000	Bend Loss Coef: 0.00
Manning's N:	0.013000	0.013000	Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000	Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000	Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	PW LINK-19	From Node:	PW POND-03	Length(ft): 41.00
Group:	PW	To Node:	MAIN-08	Count: 1
				Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular		Flow: Both
Span(in):	24.00	24.00		Entrance Loss Coef: 0.50
Rise(in):	24.00	24.00		Exit Loss Coef: 1.00
Invert(ft):	9.410	8.080		Bend Loss Coef: 0.00
Manning's N:	0.013000	0.013000		Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	STOR LINK-02	From Node:	STOR-02	Length(ft): 48.00
Group:	STOR	To Node:	STOR-01	Count: 1
				Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular		Flow: Both
Span(in):	30.00	30.00		Entrance Loss Coef: 0.50
Rise(in):	30.00	30.00		Exit Loss Coef: 0.00
Invert(ft):	10.500	10.300		Bend Loss Coef: 0.00
Manning's N:	0.013000	0.013000		Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Groove end projecting

Downstream FHWA Inlet Edge Description:
Circular Concrete: Groove end projecting

estimated data

Name:	STOR LINK-05	From Node:	STOR-05	Length(ft): 183.00
Group:	STOR	To Node:	PW-09	Count: 1
				Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular		Flow: Both
Span(in):	36.00	36.00		Entrance Loss Coef: 0.50
Rise(in):	36.00	36.00		Exit Loss Coef: 1.00
Invert(ft):	13.870	12.000		Bend Loss Coef: 0.00
Manning's N:	0.025000	0.025000		Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular CMP: Projecting

Downstream FHWA Inlet Edge Description:
Circular CMP: Projecting

Name:	STOR LINK-06	From Node:	STOR-06	Length(ft): 168.00
Group:	STOR	To Node:	STOR-05	Count: 1
				Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular		Flow: Both
Span(in):	48.00	48.00		Entrance Loss Coef: 0.50
Rise(in):	48.00	48.00		Exit Loss Coef: 0.00
Invert(ft):	14.300	14.000		Bend Loss Coef: 0.00

```
  Manning's N: 0.013000       0.013000                  Outlet Ctrl Spec: Use dc or tw
 Top Clip(in): 0.000          0.000                      Inlet Ctrl Spec: Use dc
 Bot Clip(in): 0.000          0.000                    Stabilizer Option: None


Upstream FHWA Inlet Edge Description:
Circular Concrete: Groove end projecting

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

data from DDC plan dated 1/27/2011

================================================================================
==== Channels ==================================================================
================================================================================

          Name: AF LINK-01          From Node: AF-01             Length(ft): 272.00
         Group: AF                    To Node: MAIN-17                Count: 1

                UPSTREAM       DOWNSTREAM                Friction Equation: Automatic
      Geometry: Irregular      Irregular                Solution Algorithm: Automatic
    Invert(ft): 9.920          9.390                                Flow: Both
 TClpInitZ(ft): 9999.000       9999.000                  Contraction Coef: 0.100
   Manning's N:                                           Expansion Coef: 0.300
  Top Clip(ft):                                        Entrance Loss Coef: 0.000
  Bot Clip(ft):                                            Exit Loss Coef: 0.000
     Main XSec: AF LINK-01 DS  AF LINK-01 US            Outlet Ctrl Spec: Use dc or tw
  AuxElev1(ft): 0.000          0.000                     Inlet Ctrl Spec: Use dc
     Aux XSec1:                                         Stabilizer Option: None
  AuxElev2(ft): 0.000          0.000
     Aux XSec2:
 Top Width(ft):
     Depth(ft):
 Bot Width(ft):
  LtSdSlp(h/v):
  RtSdSlp(h/v):



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          Name: AF LINK-03          From Node: AF-03             Length(ft): 924.00
         Group: AF                    To Node: AF-02                  Count: 1

                UPSTREAM       DOWNSTREAM                Friction Equation: Automatic
      Geometry: Irregular      Irregular                Solution Algorithm: Automatic
    Invert(ft): 11.100         10.890                               Flow: Both
 TClpInitZ(ft): 9999.000       9999.000                  Contraction Coef: 0.100
   Manning's N:                                           Expansion Coef: 0.300
  Top Clip(ft):                                        Entrance Loss Coef: 0.000
  Bot Clip(ft):                                            Exit Loss Coef: 0.000
     Main XSec: AF LINK-03 US  AF LINK-03 DS            Outlet Ctrl Spec: Use dc or tw
  AuxElev1(ft): 0.000          0.000                     Inlet Ctrl Spec: Use dc
     Aux XSec1:                                         Stabilizer Option: None
  AuxElev2(ft): 0.000          0.000
     Aux XSec2:
 Top Width(ft):
     Depth(ft):
 Bot Width(ft):
  LtSdSlp(h/v):
  RtSdSlp(h/v):



--------------------------------------------------------------------------------------------------------
          Name: AF LINK-04          From Node: AF-04             Length(ft): 1293.00
         Group: AF                    To Node: AF-03                  Count: 1

                UPSTREAM       DOWNSTREAM                Friction Equation: Automatic
      Geometry: Irregular      Irregular                Solution Algorithm: Automatic
    Invert(ft): 13.090         11.680                               Flow: Both
 TClpInitZ(ft): 9999.000       9999.000                  Contraction Coef: 0.100
   Manning's N:                                           Expansion Coef: 0.300
  Top Clip(ft):                                        Entrance Loss Coef: 0.000
  Bot Clip(ft):                                            Exit Loss Coef: 0.000
     Main XSec: AF LINK-04 US  AF LINK-04 DS            Outlet Ctrl Spec: Use dc or tw
  AuxElev1(ft): 0.000          0.000                     Inlet Ctrl Spec: Use dc
     Aux XSec1:                                         Stabilizer Option: None
  AuxElev2(ft): 0.000          0.000
     Aux XSec2:
 Top Width(ft):
     Depth(ft):
 Bot Width(ft):
  LtSdSlp(h/v):
  RtSdSlp(h/v):
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          Name: AF LINK-05          From Node: AF-05              Length(ft): 156.00
         Group: AF                    To Node: AF-03                   Count: 1

                UPSTREAM       DOWNSTREAM                 Friction Equation: Automatic
      Geometry: Irregular      Irregular                 Solution Algorithm: Automatic
    Invert(ft): 11.940         11.630                               Flow: Both
 TClpInitZ(ft): 9999.000       9999.000                   Contraction Coef: 0.100
   Manning's N:                                            Expansion Coef: 0.300
  Top Clip(ft):                                         Entrance Loss Coef: 0.000
  Bot Clip(ft):                                             Exit Loss Coef: 0.000
     Main XSec: AF LINK-05 US  AF LINK-05 DS             Outlet Ctrl Spec: Use dc or tw
  AuxElev1(ft): 0.000          0.000                      Inlet Ctrl Spec: Use dc
     Aux XSec1:                                          Stabilizer Option: None
  AuxElev2(ft): 0.000          0.000
     Aux XSec2:
 Top Width(ft):
     Depth(ft):
 Bot Width(ft):
  LtSdSlp(h/v):
  RtSdSlp(h/v):



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          Name: AF LINK-07          From Node: AF-07              Length(ft): 1325.00
         Group: AF                    To Node: AF-06                   Count: 1

                UPSTREAM       DOWNSTREAM                 Friction Equation: Automatic
      Geometry: Irregular      Irregular                 Solution Algorithm: Automatic
    Invert(ft): 13.660         12.570                               Flow: Both
 TClpInitZ(ft): 9999.000       9999.000                   Contraction Coef: 0.100
   Manning's N:                                            Expansion Coef: 0.300
  Top Clip(ft):                                         Entrance Loss Coef: 0.000
  Bot Clip(ft):                                             Exit Loss Coef: 0.000
     Main XSec: AF LINK-07 US  AF LINK-07 DS             Outlet Ctrl Spec: Use dc or tw
  AuxElev1(ft): 0.000          0.000                      Inlet Ctrl Spec: Use dc
     Aux XSec1:                                          Stabilizer Option: None
  AuxElev2(ft): 0.000          0.000
     Aux XSec2:
 Top Width(ft):
     Depth(ft):
 Bot Width(ft):
  LtSdSlp(h/v):
  RtSdSlp(h/v):



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          Name: BRIDGE-01           From Node: MAIN-11            Length(ft): 58.00
         Group: MAIN                  To Node: MAIN-10                 Count: 1

                UPSTREAM       DOWNSTREAM                 Friction Equation: Automatic
      Geometry: Trapezoidal    Trapezoidal               Solution Algorithm: Automatic
    Invert(ft): 7.600          7.500                                Flow: Both
 TClpInitZ(ft): 9999.000       9999.000                   Contraction Coef: 0.100
   Manning's N: 0.035000       0.035000                   Expansion Coef: 0.300
  Top Clip(ft): 0.000          0.000                     Entrance Loss Coef: 0.000
  Bot Clip(ft): 0.000          0.000                         Exit Loss Coef: 0.000
     Main XSec:                                          Outlet Ctrl Spec: Use dc or tw
  AuxElev1(ft):                                          Inlet Ctrl Spec: Use dc
     Aux XSec1:                                          Stabilizer Option: None
  AuxElev2(ft):
     Aux XSec2:
 Top Width(ft):
     Depth(ft):
 Bot Width(ft): 12.000         12.000
  LtSdSlp(h/v): 1.67           1.67
  RtSdSlp(h/v): 1.67           1.67

Estimated from Survey Data

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          Name: BRIDGE-02           From Node: MAIN-14            Length(ft): 55.00
         Group: MAIN                  To Node: MAIN-13                 Count: 1

                UPSTREAM       DOWNSTREAM                 Friction Equation: Automatic
      Geometry: Trapezoidal    Trapezoidal               Solution Algorithm: Automatic
    Invert(ft): 8.300          8.000                                Flow: Both
 TClpInitZ(ft): 9999.000       9999.000                   Contraction Coef: 0.100
   Manning's N: 0.050000       0.050000                   Expansion Coef: 0.300
  Top Clip(ft): 0.000          0.000                     Entrance Loss Coef: 0.000
  Bot Clip(ft): 0.000          0.000                         Exit Loss Coef: 0.000
     Main XSec:                                          Outlet Ctrl Spec: Use dc or tw
  AuxElev1(ft):                                          Inlet Ctrl Spec: Use dc
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     Aux XSec1:                                          Stabilizer Option: None
  AuxElev2(ft):
     Aux XSec2:
 Top Width(ft):
     Depth(ft):
 Bot Width(ft): 20.000         20.000
  LtSdSlp(h/v): 1.67           1.67
  RtSdSlp(h/v): 1.67           1.67


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          Name: CHANNEL-01          From Node: MAIN-01            Length(ft): 201.00
         Group: MAIN                  To Node: BNDY                 Count: 1

                UPSTREAM       DOWNSTREAM                Friction Equation: Automatic
      Geometry: Irregular      Irregular                 Solution Algorithm: Automatic
    Invert(ft): 0.130          0.020                              Flow: Both
 TClpInitZ(ft): 9999.000       9999.000                 Contraction Coef: 0.100
   Manning's N:                                             Expansion Coef: 0.300
  Top Clip(ft):                                         Entrance Loss Coef: 0.000
  Bot Clip(ft):                                            Exit Loss Coef: 1.000
     Main XSec: Channel-01 US  Channel-01 DS            Outlet Ctrl Spec: Use dc or tw
  AuxElev1(ft): 0.000          0.000                     Inlet Ctrl Spec: Use dc
     Aux XSec1:                                         Stabilizer Option: None
  AuxElev2(ft): 0.000          0.000
     Aux XSec2:
 Top Width(ft):
     Depth(ft):
 Bot Width(ft):
  LtSdSlp(h/v):
  RtSdSlp(h/v):


-------------------------------------------------------------------------------------------------
          Name: CHANNEL-02          From Node: MAIN-02            Length(ft): 643.00
         Group: MAIN                  To Node: MAIN-01              Count: 1

                UPSTREAM       DOWNSTREAM                Friction Equation: Automatic
      Geometry: Irregular      Irregular                 Solution Algorithm: Automatic
    Invert(ft): 0.940          1.480                              Flow: Both
 TClpInitZ(ft): 9999.000       9999.000                 Contraction Coef: 0.100
   Manning's N:                                             Expansion Coef: 0.300
  Top Clip(ft):                                         Entrance Loss Coef: 0.000
  Bot Clip(ft):                                            Exit Loss Coef: 0.000
     Main XSec: Channel-02 DS  Channel-02 US            Outlet Ctrl Spec: Use dc or tw
  AuxElev1(ft): 0.000          0.000                     Inlet Ctrl Spec: Use dc
     Aux XSec1:                                         Stabilizer Option: None
  AuxElev2(ft): 0.000          0.000
     Aux XSec2:
 Top Width(ft):
     Depth(ft):
 Bot Width(ft):
  LtSdSlp(h/v):
  RtSdSlp(h/v):


-------------------------------------------------------------------------------------------------
          Name: CHANNEL-04          From Node: MAIN-04            Length(ft): 439.00
         Group: MAIN                  To Node: MAIN-03              Count: 1

                UPSTREAM       DOWNSTREAM                Friction Equation: Automatic
      Geometry: Irregular      Irregular                 Solution Algorithm: Automatic
    Invert(ft): 3.610          3.490                              Flow: Both
 TClpInitZ(ft): 9999.000       9999.000                 Contraction Coef: 0.100
   Manning's N:                                             Expansion Coef: 0.300
  Top Clip(ft):                                         Entrance Loss Coef: 0.000
  Bot Clip(ft):                                            Exit Loss Coef: 0.000
     Main XSec: Channel-04 DS  Channel-04 US            Outlet Ctrl Spec: Use dc or tw
  AuxElev1(ft): 0.000          0.000                     Inlet Ctrl Spec: Use dc
     Aux XSec1:                                         Stabilizer Option: None
  AuxElev2(ft): 0.000          0.000
     Aux XSec2:
 Top Width(ft):
     Depth(ft):
 Bot Width(ft):
  LtSdSlp(h/v):
  RtSdSlp(h/v):


-------------------------------------------------------------------------------------------------
          Name: CHANNEL-05          From Node: MAIN-05            Length(ft): 451.00
         Group: MAIN                  To Node: MAIN-04              Count: 1
```

	UPSTREAM	DOWNSTREAM		
Geometry:	Irregular	Irregular	Friction Equation:	Automatic
Invert(ft):	4.340	3.610	Solution Algorithm:	Automatic
TClpInitZ(ft):	9999.000	9999.000	Flow:	Both
Manning's N:			Contraction Coef:	0.100
Top Clip(ft):			Expansion Coef:	0.300
Bot Clip(ft):			Entrance Loss Coef:	0.000
Main XSec:	Channel-05 US	Channel-04 US	Exit Loss Coef:	0.000
AuxElev1(ft):	0.000	0.000	Outlet Ctrl Spec:	Use dc or tw
Aux XSec1:			Inlet Ctrl Spec:	Use dc
AuxElev2(ft):	0.000	0.000	Stabilizer Option:	None
Aux XSec2:				
Top Width(ft):				
Depth(ft):				
Bot Width(ft):				
LtSdSlp(h/v):				
RtSdSlp(h/v):				

Name:	CHANNEL-06	From Node:	MAIN-06	Length(ft):	351.00
Group:	MAIN	To Node:	MAIN-05	Count:	1

	UPSTREAM	DOWNSTREAM		
Geometry:	Irregular	Irregular	Friction Equation:	Automatic
Invert(ft):	6.460	4.340	Solution Algorithm:	Automatic
TClpInitZ(ft):	9999.000	9999.000	Flow:	Both
Manning's N:			Contraction Coef:	0.100
Top Clip(ft):			Expansion Coef:	0.300
Bot Clip(ft):			Entrance Loss Coef:	0.000
Main XSec:	Channel-06 US	Channel-05 US	Exit Loss Coef:	0.000
AuxElev1(ft):	0.000	0.000	Outlet Ctrl Spec:	Use dc or tw
Aux XSec1:			Inlet Ctrl Spec:	Use dc
AuxElev2(ft):	0.000	0.000	Stabilizer Option:	None
Aux XSec2:				
Top Width(ft):				
Depth(ft):				
Bot Width(ft):				
LtSdSlp(h/v):				
RtSdSlp(h/v):				

Name:	CHANNEL-07	From Node:	MAIN-07	Length(ft):	425.00
Group:	MAIN	To Node:	MAIN-06	Count:	1

	UPSTREAM	DOWNSTREAM		
Geometry:	Irregular	Irregular	Friction Equation:	Automatic
Invert(ft):	8.110	6.460	Solution Algorithm:	Automatic
TClpInitZ(ft):	9999.000	9999.000	Flow:	Both
Manning's N:			Contraction Coef:	0.100
Top Clip(ft):			Expansion Coef:	0.300
Bot Clip(ft):			Entrance Loss Coef:	0.000
Main XSec:	Channel-07 US	Channel-06 US	Exit Loss Coef:	0.000
AuxElev1(ft):	0.000	0.000	Outlet Ctrl Spec:	Use dc or tw
Aux XSec1:			Inlet Ctrl Spec:	Use dc
AuxElev2(ft):	0.000	0.000	Stabilizer Option:	None
Aux XSec2:				
Top Width(ft):				
Depth(ft):				
Bot Width(ft):				
LtSdSlp(h/v):				
RtSdSlp(h/v):				

Name:	CHANNEL-08A	From Node:	MAIN-07A	Length(ft):	256.00
Group:	MAIN	To Node:	MAIN-07	Count:	1

	UPSTREAM	DOWNSTREAM		
Geometry:	Irregular	Irregular	Friction Equation:	Automatic
Invert(ft):	5.300	8.110	Solution Algorithm:	Automatic
TClpInitZ(ft):	9999.000	9999.000	Flow:	Both
Manning's N:			Contraction Coef:	0.100
Top Clip(ft):			Expansion Coef:	0.300
Bot Clip(ft):			Entrance Loss Coef:	0.000
Main XSec:	Channel-07 US	Channel-08A US	Exit Loss Coef:	0.000
AuxElev1(ft):	0.000	0.000	Outlet Ctrl Spec:	Use dc or tw
Aux XSec1:			Inlet Ctrl Spec:	Use dc
AuxElev2(ft):	0.000	0.000	Stabilizer Option:	None
Aux XSec2:				
Top Width(ft):				
Depth(ft):				
Bot Width(ft):				

```
  LtSdSlp(h/v):
  RtSdSlp(h/v):



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          Name: CHANNEL-08B         From Node: MAIN-08            Length(ft): 313.00
         Group: MAIN                  To Node: MAIN-07A               Count: 1

                UPSTREAM       DOWNSTREAM                 Friction Equation: Automatic
      Geometry: Irregular      Irregular                 Solution Algorithm: Automatic
    Invert(ft): 8.220          5.300                                Flow: Both
 TClpInitZ(ft): 9999.000       9999.000                   Contraction Coef: 0.100
   Manning's N:                                             Expansion Coef: 0.300
  Top Clip(ft):                                          Entrance Loss Coef: 0.000
  Bot Clip(ft):                                              Exit Loss Coef: 0.000
     Main XSec: Channel-08B US Channel-08A US             Outlet Ctrl Spec: Use dc or tw
 AuxElev1(ft): 0.000           0.000                       Inlet Ctrl Spec: Use dc
    Aux XSec1:                                           Stabilizer Option: None
 AuxElev2(ft): 0.000           0.000
    Aux XSec2:
 Top Width(ft):
    Depth(ft):
 Bot Width(ft):
  LtSdSlp(h/v):
  RtSdSlp(h/v):



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          Name: CHANNEL-09A         From Node: MAIN-08A           Length(ft): 462.00
         Group: MAIN                  To Node: MAIN-08                Count: 1

                UPSTREAM       DOWNSTREAM                 Friction Equation: Automatic
      Geometry: Irregular      Irregular                 Solution Algorithm: Automatic
    Invert(ft): 9.480          8.220                                Flow: Both
 TClpInitZ(ft): 9999.000       9999.000                   Contraction Coef: 0.100
   Manning's N:                                             Expansion Coef: 0.300
  Top Clip(ft):                                          Entrance Loss Coef: 0.000
  Bot Clip(ft):                                              Exit Loss Coef: 0.000
     Main XSec: Channel-09A US Channel-08B US             Outlet Ctrl Spec: Use dc or tw
 AuxElev1(ft): 0.000           0.000                       Inlet Ctrl Spec: Use dc
    Aux XSec1:                                           Stabilizer Option: None
 AuxElev2(ft): 0.000           0.000
    Aux XSec2:
 Top Width(ft):
    Depth(ft):
 Bot Width(ft):
  LtSdSlp(h/v):
  RtSdSlp(h/v):



-------------------------------------------------------------------------------------------------
          Name: CHANNEL-09B         From Node: MAIN-09            Length(ft): 200.00
         Group: MAIN                  To Node: MAIN-08A               Count: 1

                UPSTREAM       DOWNSTREAM                 Friction Equation: Automatic
      Geometry: Irregular      Irregular                 Solution Algorithm: Automatic
    Invert(ft): 6.010          9.480                                Flow: Both
 TClpInitZ(ft): 9999.000       9999.000                   Contraction Coef: 0.100
   Manning's N:                                             Expansion Coef: 0.300
  Top Clip(ft):                                          Entrance Loss Coef: 0.000
  Bot Clip(ft):                                              Exit Loss Coef: 0.000
     Main XSec: Channel-09B US Channel-09A US             Outlet Ctrl Spec: Use dc or tw
 AuxElev1(ft): 0.000           0.000                       Inlet Ctrl Spec: Use dc
    Aux XSec1:                                           Stabilizer Option: None
 AuxElev2(ft): 0.000           0.000
    Aux XSec2:
 Top Width(ft):
    Depth(ft):
 Bot Width(ft):
  LtSdSlp(h/v):
  RtSdSlp(h/v):



-------------------------------------------------------------------------------------------------
          Name: CHANNEL-10          From Node: MAIN-10            Length(ft): 259.00
         Group: MAIN                  To Node: MAIN-09                Count: 1

                UPSTREAM       DOWNSTREAM                 Friction Equation: Automatic
      Geometry: Irregular      Irregular                 Solution Algorithm: Automatic
    Invert(ft): 6.010          7.310                                Flow: Both
 TClpInitZ(ft): 9999.000       9999.000                   Contraction Coef: 0.100
   Manning's N:                                             Expansion Coef: 0.300
  Top Clip(ft):                                          Entrance Loss Coef: 0.000
```

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  Bot Clip(ft):                                            Exit Loss Coef: 0.000
     Main XSec: Channel-10 US  Channel-09B US             Outlet Ctrl Spec: Use dc or tw
  AuxElev1(ft): 0.000          0.000                      Inlet Ctrl Spec: Use dc
     Aux XSec1:                                          Stabilizer Option: None
  AuxElev2(ft): 0.000          0.000
     Aux XSec2:
 Top Width(ft):
     Depth(ft):
 Bot Width(ft):
  LtSdSlp(h/v):
  RtSdSlp(h/v):



-------------------------------------------------------------------------------------------------
          Name: CHANNEL-11          From Node: MAIN-12           Length(ft): 204.00
         Group: MAIN                  To Node: MAIN-11                Count: 1

                UPSTREAM       DOWNSTREAM                Friction Equation: Automatic
      Geometry: Irregular      Irregular                Solution Algorithm: Automatic
    Invert(ft): 6.340          6.730                               Flow: Both
 TClpInitZ(ft): 9999.000       9999.000                 Contraction Coef: 0.100
   Manning's N:                                            Expansion Coef: 0.300
  Top Clip(ft):                                        Entrance Loss Coef: 0.000
  Bot Clip(ft):                                            Exit Loss Coef: 0.000
     Main XSec: Channel-11 DS  Channel-11 US             Outlet Ctrl Spec: Use dc or tw
  AuxElev1(ft): 0.000          0.000                      Inlet Ctrl Spec: Use dc
     Aux XSec1:                                          Stabilizer Option: None
  AuxElev2(ft): 0.000          0.000
     Aux XSec2:
 Top Width(ft):
     Depth(ft):
 Bot Width(ft):
  LtSdSlp(h/v):
  RtSdSlp(h/v):



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          Name: CHANNEL-12          From Node: MAIN-13           Length(ft): 303.00
         Group: MAIN                  To Node: MAIN-12                Count: 1

                UPSTREAM       DOWNSTREAM                Friction Equation: Automatic
      Geometry: Irregular      Irregular                Solution Algorithm: Automatic
    Invert(ft): 7.800          6.340                               Flow: Both
 TClpInitZ(ft): 9999.000       9999.000                 Contraction Coef: 0.100
   Manning's N:                                            Expansion Coef: 0.300
  Top Clip(ft):                                        Entrance Loss Coef: 0.000
  Bot Clip(ft):                                            Exit Loss Coef: 0.000
     Main XSec: Channel-12 US  Channel-11 US             Outlet Ctrl Spec: Use dc or tw
  AuxElev1(ft): 0.000          0.000                      Inlet Ctrl Spec: Use dc
     Aux XSec1:                                          Stabilizer Option: None
  AuxElev2(ft): 0.000          0.000
     Aux XSec2:
 Top Width(ft):
     Depth(ft):
 Bot Width(ft):
  LtSdSlp(h/v):
  RtSdSlp(h/v):



-------------------------------------------------------------------------------------------------
          Name: CHANNEL-13          From Node: MAIN-15           Length(ft): 372.00
         Group: MAIN                  To Node: MAIN-14                Count: 1

                UPSTREAM       DOWNSTREAM                Friction Equation: Automatic
      Geometry: Irregular      Irregular                Solution Algorithm: Automatic
    Invert(ft): 7.650          8.430                               Flow: Both
 TClpInitZ(ft): 9999.000       9999.000                 Contraction Coef: 0.100
   Manning's N:                                            Expansion Coef: 0.300
  Top Clip(ft):                                        Entrance Loss Coef: 0.000
  Bot Clip(ft):                                            Exit Loss Coef: 0.000
     Main XSec: Channel-13 DS  Channel-13 US             Outlet Ctrl Spec: Use dc or tw
  AuxElev1(ft): 0.000          0.000                      Inlet Ctrl Spec: Use dc
     Aux XSec1:                                          Stabilizer Option: None
  AuxElev2(ft): 0.000          0.000
     Aux XSec2:
 Top Width(ft):
     Depth(ft):
 Bot Width(ft):
  LtSdSlp(h/v):
  RtSdSlp(h/v):



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          Name: CHANNEL-14          From Node: MAIN-16           Length(ft): 132.00
         Group: MAIN                  To Node: MAIN-15                Count: 1

                UPSTREAM       DOWNSTREAM                 Friction Equation: Automatic
      Geometry: Irregular      Irregular                 Solution Algorithm: Automatic
    Invert(ft): 8.610          9.400                                 Flow: Both
 TClpInitZ(ft): 9999.000       9999.000                   Contraction Coef: 0.100
   Manning's N:                                            Expansion Coef: 0.300
  Top Clip(ft):                                         Entrance Loss Coef: 0.000
  Bot Clip(ft):                                             Exit Loss Coef: 0.000
     Main XSec: Channel-14 US  Channel-14 DS              Outlet Ctrl Spec: Use dc or tw
  AuxElev1(ft): 0.000          0.000                      Inlet Ctrl Spec: Use dc
     Aux XSec1:                                          Stabilizer Option: None
  AuxElev2(ft): 0.000          0.000
     Aux XSec2:
 Top Width(ft):
     Depth(ft):
 Bot Width(ft):
  LtSdSlp(h/v):
  RtSdSlp(h/v):


--------------------------------------------------------------------------------------------------
          Name: CHANNEL-15          From Node: MAIN-18           Length(ft): 426.00
         Group: MAIN                  To Node: MAIN-17                Count: 1

                UPSTREAM       DOWNSTREAM                 Friction Equation: Automatic
      Geometry: Irregular      Irregular                 Solution Algorithm: Automatic
    Invert(ft): 10.200         10.210                                Flow: Both
 TClpInitZ(ft): 9999.000       9999.000                   Contraction Coef: 0.100
   Manning's N:                                            Expansion Coef: 0.300
  Top Clip(ft):                                         Entrance Loss Coef: 0.000
  Bot Clip(ft):                                             Exit Loss Coef: 0.000
     Main XSec: Channel-15 US  Channel-15 DS              Outlet Ctrl Spec: Use dc or tw
  AuxElev1(ft): 0.000          0.000                      Inlet Ctrl Spec: Use dc
     Aux XSec1:                                          Stabilizer Option: None
  AuxElev2(ft): 0.000          0.000
     Aux XSec2:
 Top Width(ft):
     Depth(ft):
 Bot Width(ft):
  LtSdSlp(h/v):
  RtSdSlp(h/v):


--------------------------------------------------------------------------------------------------
          Name: CHANNEL-16          From Node: MAIN-19           Length(ft): 492.00
         Group: MAIN                  To Node: MAIN-18                Count: 1

                UPSTREAM       DOWNSTREAM                 Friction Equation: Automatic
      Geometry: Irregular      Irregular                 Solution Algorithm: Automatic
    Invert(ft): 11.500         10.200                                Flow: Both
 TClpInitZ(ft): 9999.000       9999.000                   Contraction Coef: 0.100
   Manning's N:                                            Expansion Coef: 0.300
  Top Clip(ft):                                         Entrance Loss Coef: 0.000
  Bot Clip(ft):                                             Exit Loss Coef: 0.000
     Main XSec: Channel-16 US  Channel-15 US              Outlet Ctrl Spec: Use dc or tw
  AuxElev1(ft): 0.000          0.000                      Inlet Ctrl Spec: Use dc
     Aux XSec1:                                          Stabilizer Option: None
  AuxElev2(ft): 0.000          0.000
     Aux XSec2:
 Top Width(ft):
     Depth(ft):
 Bot Width(ft):
  LtSdSlp(h/v):
  RtSdSlp(h/v):


--------------------------------------------------------------------------------------------------
          Name: CHANNEL-17          From Node: MAIN-21           Length(ft): 668.00
         Group: MAIN                  To Node: MAIN-20                Count: 1

                UPSTREAM       DOWNSTREAM                 Friction Equation: Automatic
      Geometry: Irregular      Irregular                 Solution Algorithm: Automatic
    Invert(ft): 13.060         12.130                                Flow: Both
 TClpInitZ(ft): 9999.000       9999.000                   Contraction Coef: 0.100
   Manning's N:                                            Expansion Coef: 0.300
  Top Clip(ft):                                         Entrance Loss Coef: 0.000
  Bot Clip(ft):                                             Exit Loss Coef: 0.000
     Main XSec: Channel-17 US  Channel-17 DS              Outlet Ctrl Spec: Use dc or tw
  AuxElev1(ft): 0.000          0.000                      Inlet Ctrl Spec: Use dc
     Aux XSec1:                                          Stabilizer Option: None
  AuxElev2(ft): 0.000          0.000
     Aux XSec2:
```

```
 Top Width(ft):
    Depth(ft):
 Bot Width(ft):
  LtSdSlp(h/v):
  RtSdSlp(h/v):



-------------------------------------------------------------------------------------------------
         Name: CHANNEL-18          From Node: MAIN-22           Length(ft): 786.00
        Group: MAIN                  To Node: MAIN-21                Count: 1

               UPSTREAM       DOWNSTREAM                 Friction Equation: Automatic
     Geometry: Irregular      Irregular                Solution Algorithm: Automatic
   Invert(ft): 13.190         13.060                              Flow: Both
 TClpInitZ(ft): 9999.000      9999.000                  Contraction Coef: 0.100
  Manning's N:                                            Expansion Coef: 0.300
 Top Clip(ft):                                         Entrance Loss Coef: 0.000
 Bot Clip(ft):                                             Exit Loss Coef: 0.000
    Main XSec: Channel-18 US  Channel-17 US             Outlet Ctrl Spec: Use dc or tw
 AuxElev1(ft): 0.000          0.000                     Inlet Ctrl Spec: Use dc
    Aux XSec1:                                          Stabilizer Option: None
 AuxElev2(ft): 0.000          0.000
    Aux XSec2:
 Top Width(ft):
    Depth(ft):
 Bot Width(ft):
  LtSdSlp(h/v):
  RtSdSlp(h/v):



-------------------------------------------------------------------------------------------------
         Name: CHANNEL-19          From Node: MAIN-24           Length(ft): 1011.00
        Group: MAIN                  To Node: MAIN-23                Count: 1

               UPSTREAM       DOWNSTREAM                 Friction Equation: Automatic
     Geometry: Irregular      Irregular                Solution Algorithm: Automatic
   Invert(ft): 14.380         13.320                              Flow: Both
 TClpInitZ(ft): 9999.000      9999.000                  Contraction Coef: 0.100
  Manning's N:                                            Expansion Coef: 0.300
 Top Clip(ft):                                         Entrance Loss Coef: 0.000
 Bot Clip(ft):                                             Exit Loss Coef: 0.000
    Main XSec: Channel-19 US  Channel-19 DS             Outlet Ctrl Spec: Use dc or tw
 AuxElev1(ft): 0.000          0.000                     Inlet Ctrl Spec: Use dc
    Aux XSec1:                                          Stabilizer Option: None
 AuxElev2(ft): 0.000          0.000
    Aux XSec2:
 Top Width(ft):
    Depth(ft):
 Bot Width(ft):
  LtSdSlp(h/v):
  RtSdSlp(h/v):



-------------------------------------------------------------------------------------------------
         Name: CL LINK-01          From Node: CL-01             Length(ft): 368.00
        Group: CL                    To Node: MAIN-15                Count: 1

               UPSTREAM       DOWNSTREAM                 Friction Equation: Automatic
     Geometry: Irregular      Irregular                Solution Algorithm: Automatic
   Invert(ft): 10.730         9.470                               Flow: Both
 TClpInitZ(ft): 9999.000      9999.000                  Contraction Coef: 0.100
  Manning's N:                                            Expansion Coef: 0.300
 Top Clip(ft):                                         Entrance Loss Coef: 0.000
 Bot Clip(ft):                                             Exit Loss Coef: 0.000
    Main XSec: CL LINK-01 US  CL LINK-01 DS             Outlet Ctrl Spec: Use dc or tw
 AuxElev1(ft): 0.000          0.000                     Inlet Ctrl Spec: Use dc
    Aux XSec1:                                          Stabilizer Option: None
 AuxElev2(ft): 0.000          0.000
    Aux XSec2:
 Top Width(ft):
    Depth(ft):
 Bot Width(ft):
  LtSdSlp(h/v):
  RtSdSlp(h/v):



-------------------------------------------------------------------------------------------------
         Name: CL LINK-03          From Node: CL-03             Length(ft): 254.00
        Group: CL                    To Node: CL-02                  Count: 1

               UPSTREAM       DOWNSTREAM                 Friction Equation: Automatic
     Geometry: Irregular      Irregular                Solution Algorithm: Automatic
   Invert(ft): 11.990         12.320                              Flow: Both
```

TClpInitZ(ft):	9999.000	9999.000	Contraction Coef:	0.100
Manning's N:			Expansion Coef:	0.300
Top Clip(ft):			Entrance Loss Coef:	0.000
Bot Clip(ft):			Exit Loss Coef:	0.000
Main XSec:	CL LINK-03 US	CL LINK-03 DS	Outlet Ctrl Spec:	Use dc or tw
AuxElev1(ft):	0.000	0.000	Inlet Ctrl Spec:	Use dc
Aux XSec1:			Stabilizer Option:	None
AuxElev2(ft):	0.000	0.000		
Aux XSec2:				
Top Width(ft):				
Depth(ft):				
Bot Width(ft):				
LtSdSlp(h/v):				
RtSdSlp(h/v):				

Name:	PW LINK-03	From Node: PW-03	Length(ft):	454.00
Group:	PW	To Node: PW-02	Count:	1
	UPSTREAM	DOWNSTREAM	Friction Equation:	Automatic
Geometry:	Trapezoidal	Trapezoidal	Solution Algorithm:	Automatic
Invert(ft):	8.880	8.000	Flow:	Both
TClpInitZ(ft):	9999.000	9999.000	Contraction Coef:	0.100
Manning's N:	0.040000	0.040000	Expansion Coef:	0.300
Top Clip(ft):	0.000	0.000	Entrance Loss Coef:	0.000
Bot Clip(ft):	0.000	0.000	Exit Loss Coef:	0.000
Main XSec:			Outlet Ctrl Spec:	Use dc or tw
AuxElev1(ft):			Inlet Ctrl Spec:	Use dc
Aux XSec1:			Stabilizer Option:	None
AuxElev2(ft):				
Aux XSec2:				
Top Width(ft):				
Depth(ft):				
Bot Width(ft):	5.000	5.000		
LtSdSlp(h/v):	4.00	4.00		
RtSdSlp(h/v):	4.00	4.00		

Name:	PW LINK-16	From Node: PW-15	Length(ft):	536.00
Group:	PW	To Node: PW-14	Count:	1
	UPSTREAM	DOWNSTREAM	Friction Equation:	Automatic
Geometry:	Trapezoidal	Trapezoidal	Solution Algorithm:	Automatic
Invert(ft):	21.500	21.000	Flow:	Both
TClpInitZ(ft):	9999.000	9999.000	Contraction Coef:	0.100
Manning's N:	0.035000	0.035000	Expansion Coef:	0.300
Top Clip(ft):	0.000	0.000	Entrance Loss Coef:	0.000
Bot Clip(ft):	0.000	0.000	Exit Loss Coef:	0.000
Main XSec:			Outlet Ctrl Spec:	Use dc or tw
AuxElev1(ft):			Inlet Ctrl Spec:	Use dc
Aux XSec1:			Stabilizer Option:	None
AuxElev2(ft):				
Aux XSec2:				
Top Width(ft):				
Depth(ft):				
Bot Width(ft):	15.000	15.000		
LtSdSlp(h/v):	3.00	3.00		
RtSdSlp(h/v):	3.00	3.00		

Name:	STOR LINK-01	From Node: STOR-01	Length(ft):	549.00
Group:	STOR	To Node: MAIN-04	Count:	1
	UPSTREAM	DOWNSTREAM	Friction Equation:	Automatic
Geometry:	Trapezoidal	Trapezoidal	Solution Algorithm:	Automatic
Invert(ft):	10.300	8.000	Flow:	Both
TClpInitZ(ft):	9999.000	9999.000	Contraction Coef:	0.100
Manning's N:	0.050000	0.050000	Expansion Coef:	0.300
Top Clip(ft):	0.000	0.000	Entrance Loss Coef:	0.000
Bot Clip(ft):	0.000	0.000	Exit Loss Coef:	0.000
Main XSec:			Outlet Ctrl Spec:	Use dc or tw
AuxElev1(ft):			Inlet Ctrl Spec:	Use dc
Aux XSec1:			Stabilizer Option:	None
AuxElev2(ft):				
Aux XSec2:				
Top Width(ft):				
Depth(ft):				
Bot Width(ft):	5.000	5.000		
LtSdSlp(h/v):	2.00	2.00		
RtSdSlp(h/v):	2.00	2.00		

estimated data

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          Name: STOR LINK-03        From Node: STOR-03            Length(ft): 229.00
         Group: STOR                  To Node: STOR-02                 Count: 1

                UPSTREAM       DOWNSTREAM                 Friction Equation: Automatic
      Geometry: Trapezoidal    Trapezoidal               Solution Algorithm: Automatic
    Invert(ft): 11.000         10.500                               Flow: Both
 TClpInitZ(ft): 9999.000       9999.000                   Contraction Coef: 0.100
   Manning's N: 0.050000       0.050000                     Expansion Coef: 0.300
  Top Clip(ft): 0.000          0.000                     Entrance Loss Coef: 0.000
  Bot Clip(ft): 0.000          0.000                         Exit Loss Coef: 0.000
     Main XSec:                                           Outlet Ctrl Spec: Use dc or tw
  AuxElev1(ft):                                            Inlet Ctrl Spec: Use dc
     Aux XSec1:                                          Stabilizer Option: None
  AuxElev2(ft):
     Aux XSec2:
 Top Width(ft):
     Depth(ft):
 Bot Width(ft): 5.000          5.000
  LtSdSlp(h/v): 2.00           2.00
  RtSdSlp(h/v): 2.00           2.00
```

estimated data

```
-------------------------------------------------------------------------------------------------
          Name: STOR LINK-04        From Node: STOR-04            Length(ft): 1100.00
         Group: STOR                  To Node: STOR-03                 Count: 1

                UPSTREAM       DOWNSTREAM                 Friction Equation: Automatic
      Geometry: Trapezoidal    Trapezoidal               Solution Algorithm: Automatic
    Invert(ft): 14.000         11.500                               Flow: Both
 TClpInitZ(ft): 9999.000       9999.000                   Contraction Coef: 0.100
   Manning's N: 0.050000       0.050000                     Expansion Coef: 0.300
  Top Clip(ft): 0.000          0.000                     Entrance Loss Coef: 0.000
  Bot Clip(ft): 0.000          0.000                         Exit Loss Coef: 0.000
     Main XSec:                                           Outlet Ctrl Spec: Use dc or tw
  AuxElev1(ft):                                            Inlet Ctrl Spec: Use dc
     Aux XSec1:                                          Stabilizer Option: None
  AuxElev2(ft):
     Aux XSec2:
 Top Width(ft):
     Depth(ft):
 Bot Width(ft): 5.000          5.000
  LtSdSlp(h/v): 2.00           2.00
  RtSdSlp(h/v): 2.00           2.00
```

estimated data

```
=================================================================================================
==== Drop Structures ============================================================================
=================================================================================================

          Name: CAMP LINK-01        From Node: LKWDPOND01         Length(ft): 45.00
         Group: CAMP                  To Node: PIRLNDPOND02            Count: 2

                UPSTREAM       DOWNSTREAM                 Friction Equation: Automatic
      Geometry: Circular       Circular                  Solution Algorithm: Most Restrictive
      Span(in): 36.00          36.00                                Flow: Both
      Rise(in): 36.00          36.00                     Entrance Loss Coef: 0.500
    Invert(ft): 0.500          0.400                         Exit Loss Coef: 1.000
  Manning's N: 0.013000        0.013000                    Outlet Ctrl Spec: Use dc or tw
 Top Clip(in): 0.000           0.000                        Inlet Ctrl Spec: Use dc
 Bot Clip(in): 0.000           0.000                           Solution Incs: 10

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall



*** Weir 1 of 2 for Drop Structure CAMP LINK-01 ***
                                                                                        TABLE
                  Count: 1                        Bottom Clip(in): 0.000
                   Type: Vertical: Mavis             Top Clip(in): 0.000
                   Flow: Both                     Weir Disc Coef: 3.200
               Geometry: Rectangular           Orifice Disc Coef: 0.600

               Span(in): 96.00                        Invert(ft): 3.000
               Rise(in): 36.00                  Control Elev(ft): 3.000

*** Weir 2 of 2 for Drop Structure CAMP LINK-01 ***
                                                                                        TABLE
                  Count: 1                        Bottom Clip(in): 0.000
```

```
                  Type: Horizontal               Top Clip(in): 0.000
                  Flow: Both                  Weir Disc Coef: 3.200
            Geometry: Rectangular          Orifice Disc Coef: 0.600

            Span(in): 48.00                      Invert(ft): 6.000
            Rise(in): 96.00                Control Elev(ft): 6.000


-------------------------------------------------------------------------------------------------
        Name: CAMP LINK-02        From Node: LKWDPOND02        Length(ft): 57.00
       Group: CAMP                  To Node: LKWDPOND01             Count: 1

             UPSTREAM       DOWNSTREAM                Friction Equation: Automatic
    Geometry: Circular      Circular                 Solution Algorithm: Most Restrictive
    Span(in): 36.00         36.00                                Flow: Both
    Rise(in): 36.00         36.00                    Entrance Loss Coef: 0.500
  Invert(ft): 3.000         2.900                        Exit Loss Coef: 1.000
 Manning's N: 0.027000      0.027000                   Outlet Ctrl Spec: Use dc or tw
Top Clip(in): 0.000         0.000                        Inlet Ctrl Spec: Use dc
Bot Clip(in): 0.000         0.000                          Solution Incs: 10

Upstream FHWA Inlet Edge Description:
Circular CMP: Headwall

Downstream FHWA Inlet Edge Description:
Circular CMP: Projecting

Stucture data estimated

*** Weir 1 of 1 for Drop Structure CAMP LINK-02 ***
                                                                                    TABLE
                  Count: 1                     Bottom Clip(in): 0.000
                  Type: Horizontal               Top Clip(in): 0.000
                  Flow: Both                  Weir Disc Coef: 3.200
            Geometry: Rectangular          Orifice Disc Coef: 0.600

            Span(in): 48.00                      Invert(ft): 6.000
            Rise(in): 18.00                Control Elev(ft): 6.000


-------------------------------------------------------------------------------------------------
        Name: CL LINK-04          From Node: CRYSTAL LAKE       Length(ft): 60.00
       Group: CL                    To Node: CL-03                  Count: 1

             UPSTREAM       DOWNSTREAM                Friction Equation: Automatic
    Geometry: Circular      Circular                 Solution Algorithm: Most Restrictive
    Span(in): 30.00         30.00                                Flow: Both
    Rise(in): 30.00         30.00                    Entrance Loss Coef: 0.500
  Invert(ft): 13.500        13.200                       Exit Loss Coef: 1.000
 Manning's N: 0.013000      0.013000                   Outlet Ctrl Spec: Use dc or tw
Top Clip(in): 0.000         0.000                        Inlet Ctrl Spec: Use dc
Bot Clip(in): 0.000         0.000                          Solution Incs: 10

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Groove end projecting


*** Weir 1 of 1 for Drop Structure CL LINK-04 ***
                                                                                    TABLE
                  Count: 1                     Bottom Clip(in): 0.000
                  Type: Vertical: Mavis          Top Clip(in): 0.000
                  Flow: Both                  Weir Disc Coef: 3.200
            Geometry: Rectangular          Orifice Disc Coef: 0.600

            Span(in): 48.00                      Invert(ft): 17.090
            Rise(in): 6.00                 Control Elev(ft): 17.090


-------------------------------------------------------------------------------------------------
        Name: PW LINK-04          From Node: PW POND-02         Length(ft): 516.00
       Group: PW                    To Node: PW-03                  Count: 1

             UPSTREAM       DOWNSTREAM                Friction Equation: Automatic
    Geometry: Circular      Circular                 Solution Algorithm: Most Restrictive
    Span(in): 48.00         48.00                                Flow: Both
    Rise(in): 48.00         48.00                    Entrance Loss Coef: 0.500
  Invert(ft): 13.280        8.880                        Exit Loss Coef: 0.000
 Manning's N: 0.013000      0.013000                   Outlet Ctrl Spec: Use dc or tw
Top Clip(in): 0.000         0.000                        Inlet Ctrl Spec: Use dc
Bot Clip(in): 0.000         0.000                          Solution Incs: 10

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall
```

Downstream FHWA Inlet Edge Description:
Circular Concrete: Groove end projecting

Pipe Data from DDC as builts dated 11/19/99
Weir data estiamted from field investigation

*** Weir 1 of 1 for Drop Structure PW LINK-04 ***

			TABLE
Count:	1	Bottom Clip(in):	0.000
Type:	Horizontal	Top Clip(in):	0.000
Flow:	Both	Weir Disc Coef:	3.200
Geometry:	Rectangular	Orifice Disc Coef:	0.600
Span(in):	144.00	Invert(ft):	16.300
Rise(in):	6.00	Control Elev(ft):	16.300

Name:	PW LINK-09	From Node:	PW POND-01	Length(ft):	663.00
Group:	PW	To Node:	PW-08	Count:	1

	UPSTREAM	DOWNSTREAM		
			Friction Equation:	Automatic
Geometry:	Circular	Circular	Solution Algorithm:	Most Restrictive
Span(in):	42.00	42.00	Flow:	Both
Rise(in):	42.00	42.00	Entrance Loss Coef:	0.500
Invert(ft):	15.000	10.000	Exit Loss Coef:	1.000
Manning's N:	0.013000	0.013000	Outlet Ctrl Spec:	Use dc or tw
Top Clip(in):	0.000	0.000	Inlet Ctrl Spec:	Use dc
Bot Clip(in):	0.000	0.000	Solution Incs:	10

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Groove end projecting

*** Weir 1 of 2 for Drop Structure PW LINK-09 ***

			TABLE
Count:	1	Bottom Clip(in):	0.000
Type:	Horizontal	Top Clip(in):	0.000
Flow:	Both	Weir Disc Coef:	3.200
Geometry:	Rectangular	Orifice Disc Coef:	0.600
Span(in):	4.00	Invert(ft):	18.500
Rise(in):	6.00	Control Elev(ft):	18.500

*** Weir 2 of 2 for Drop Structure PW LINK-09 ***

			TABLE
Count:	1	Bottom Clip(in):	0.000
Type:	Horizontal	Top Clip(in):	0.000
Flow:	Both	Weir Disc Coef:	3.200
Geometry:	Rectangular	Orifice Disc Coef:	0.600
Span(in):	48.00	Invert(ft):	19.000
Rise(in):	48.00	Control Elev(ft):	19.000

Name:	PW LINK-20	From Node:	PW POND-04	Length(ft):	162.00
Group:	PW	To Node:	MAIN-12	Count:	1

	UPSTREAM	DOWNSTREAM		
			Friction Equation:	Automatic
Geometry:	Circular	Circular	Solution Algorithm:	Most Restrictive
Span(in):	36.00	36.00	Flow:	Both
Rise(in):	36.00	36.00	Entrance Loss Coef:	0.500
Invert(ft):	12.000	11.500	Exit Loss Coef:	1.000
Manning's N:	0.013000	0.013000	Outlet Ctrl Spec:	Use dc or tw
Top Clip(in):	0.000	0.000	Inlet Ctrl Spec:	Use dc
Bot Clip(in):	0.000	0.000	Solution Incs:	10

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Groove end projecting

Estimated data

*** Weir 1 of 1 for Drop Structure PW LINK-20 ***

			TABLE
Count:	1	Bottom Clip(in):	0.000
Type:	Horizontal	Top Clip(in):	0.000
Flow:	Both	Weir Disc Coef:	3.200
Geometry:	Rectangular	Orifice Disc Coef:	0.600

```
              Span(in): 48.00                      Invert(ft): 16.000
              Rise(in): 48.00                 Control Elev(ft): 16.000


-------------------------------------------------------------------------------------------------
         Name: PW LINK06A          From Node: PW-06A            Length(ft): 138.00
        Group: PW                    To Node: PW-05                 Count: 1

              UPSTREAM       DOWNSTREAM                 Friction Equation: Automatic
     Geometry: Circular       Circular                 Solution Algorithm: Most Restrictive
     Span(in): 36.00          36.00                              Flow: Both
     Rise(in): 36.00          36.00                    Entrance Loss Coef: 0.500
   Invert(ft): 9.000          8.460                        Exit Loss Coef: 1.000
  Manning's N: 0.013000       0.013000                   Outlet Ctrl Spec: Use dc or tw
 Top Clip(in): 0.000          0.000                       Inlet Ctrl Spec: Use dc
 Bot Clip(in): 0.000          0.000                         Solution Incs: 10

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Groove end projecting

Estimated data

*** Weir 1 of 2 for Drop Structure PW LINK06A ***
                                                                                    TABLE
                 Count: 1                      Bottom Clip(in): 0.000
                  Type: Vertical: Mavis           Top Clip(in): 0.000
                  Flow: Both                   Weir Disc Coef: 3.200
              Geometry: Rectangular           Orifice Disc Coef: 0.600

              Span(in): 24.00                      Invert(ft): 12.000
              Rise(in): 24.00                 Control Elev(ft): 12.000

*** Weir 2 of 2 for Drop Structure PW LINK06A ***
                                                                                    TABLE
                 Count: 1                      Bottom Clip(in): 0.000
                  Type: Horizontal               Top Clip(in): 0.000
                  Flow: Both                   Weir Disc Coef: 3.200
              Geometry: Rectangular           Orifice Disc Coef: 0.600

              Span(in): 48.00                      Invert(ft): 14.000
              Rise(in): 24.00                 Control Elev(ft): 14.000


-------------------------------------------------------------------------------------------------
         Name: STOR LINK-07        From Node: STOR-07           Length(ft): 80.00
        Group: STOR                  To Node: STOR-06               Count: 1

              UPSTREAM       DOWNSTREAM                 Friction Equation: Automatic
     Geometry: Circular       Circular                 Solution Algorithm: Most Restrictive
     Span(in): 36.00          36.00                              Flow: Both
     Rise(in): 36.00          36.00                    Entrance Loss Coef: 0.500
   Invert(ft): 15.500         15.300                       Exit Loss Coef: 0.000
  Manning's N: 0.013000       0.013000                   Outlet Ctrl Spec: Use dc or tw
 Top Clip(in): 0.000          0.000                       Inlet Ctrl Spec: Use dc
 Bot Clip(in): 0.000          0.000                         Solution Incs: 10

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Groove end projecting

Data from DDC plans dates 1/27/2011

*** Weir 1 of 4 for Drop Structure STOR LINK-07 ***
                                                                                    TABLE
                 Count: 1                      Bottom Clip(in): 0.000
                  Type: Vertical: Mavis           Top Clip(in): 0.000
                  Flow: Both                   Weir Disc Coef: 3.200
              Geometry: Circular              Orifice Disc Coef: 0.600

              Span(in): 4.00                       Invert(ft): 16.500
              Rise(in): 4.00                  Control Elev(ft): 16.500

*** Weir 2 of 4 for Drop Structure STOR LINK-07 ***
                                                                                    TABLE
                 Count: 1                      Bottom Clip(in): 0.000
                  Type: Vertical: Mavis           Top Clip(in): 0.000
                  Flow: Both                   Weir Disc Coef: 3.200
              Geometry: Rectangular           Orifice Disc Coef: 0.600

              Span(in): 18.00                      Invert(ft): 17.500
              Rise(in): 6.00                  Control Elev(ft): 17.500
```

```
*** Weir 3 of 4 for Drop Structure STOR LINK-07 ***
                                                                                TABLE
                Count: 1                      Bottom Clip(in): 0.000
                 Type: Vertical: Mavis           Top Clip(in): 0.000
                 Flow: Both                    Weir Disc Coef: 3.200
            Geometry: Rectangular           Orifice Disc Coef: 0.600

            Span(in): 36.00                       Invert(ft): 18.000
            Rise(in): 12.00                  Control Elev(ft): 18.000

*** Weir 4 of 4 for Drop Structure STOR LINK-07 ***
                                                                                TABLE
                Count: 1                      Bottom Clip(in): 0.000
                 Type: Horizontal               Top Clip(in): 0.000
                 Flow: Both                    Weir Disc Coef: 3.200
            Geometry: Rectangular           Orifice Disc Coef: 0.600

            Span(in): 60.00                       Invert(ft): 19.000
            Rise(in): 60.00                  Control Elev(ft): 19.000


================================================================================================
==== Weirs =====================================================================================
================================================================================================

         Name: BG_OUT01_W          From Node: BERMGRN01
        Group: BERMGRN               To Node: MAIN-04
         Flow: Both                    Count: 1
         Type: Vertical: Fread      Geometry: Trapezoidal

            Bottom Width(ft): 10.00
       Left Side Slope(h/v): 10.00
      Right Side Slope(h/v): 10.00
                 Invert(ft): 15.150
      Control Elevation(ft): 15.150
     Struct Opening Dim(ft): 9999.00
                                          TABLE
            Bottom Clip(ft): 0.000
               Top Clip(ft): 0.000
        Weir Discharge Coef: 2.000
     Orifice Discharge Coef: 0.600

data from as-built

------------------------------------------------------------------------------------------------
         Name: BG_OUT02_W          From Node: BERMGRN02
        Group: BERMGRN               To Node: MAIN-06
         Flow: Both                    Count: 1
         Type: Vertical: Fread      Geometry: Trapezoidal

            Bottom Width(ft): 10.00
       Left Side Slope(h/v): 10.00
      Right Side Slope(h/v): 10.00
                 Invert(ft): 11.550
      Control Elevation(ft): 11.550
     Struct Opening Dim(ft): 9999.00
                                          TABLE
            Bottom Clip(ft): 0.000
               Top Clip(ft): 0.000
        Weir Discharge Coef: 2.000
     Orifice Discharge Coef: 0.600

Data from as-built

------------------------------------------------------------------------------------------------
         Name: CATH_OV             From Node: STOR-02
        Group: STOR                  To Node: MAIN-03
         Flow: Both                    Count: 1
         Type: Vertical: Paved      Geometry: Irregular

                        XSec: CATH_OV
                 Invert(ft): 14.000
      Control Elevation(ft): 14.000
     Struct Opening Dim(ft): 9999.00
                                          TABLE
            Bottom Clip(ft): 0.000
               Top Clip(ft): 0.000
        Weir Discharge Coef: 2.000
     Orifice Discharge Coef: 0.600



------------------------------------------------------------------------------------------------
         Name: HWY17_OV            From Node: MAIN-03
        Group: MAIN                  To Node: PIRLNDPOND03
         Flow: Both                    Count: 1
```

```
         Type: Vertical: Paved      Geometry: Irregular

                        XSec: HWY17_OV
                  Invert(ft): 14.390
       Control Elevation(ft): 14.390
      Struct Opening Dim(ft): 9999.00
                                          TABLE
             Bottom Clip(ft): 0.000
                Top Clip(ft): 0.000
        Weir Discharge Coef: 2.000
      Orifice Discharge Coef: 0.600



-------------------------------------------------------------------------------------------------
         Name: LKWDPOND01_OV       From Node: LKWDPOND01
        Group: CAMP                  To Node: PIRLNDPOND02
         Flow: Both                    Count: 1
         Type: Vertical: Fread      Geometry: Irregular

                        XSec: LKWDPOND01_OV
                  Invert(ft): 5.520
       Control Elevation(ft): 5.520
      Struct Opening Dim(ft): 9999.00
                                          TABLE
             Bottom Clip(ft): 0.000
                Top Clip(ft): 0.000
        Weir Discharge Coef: 2.000
      Orifice Discharge Coef: 0.600



-------------------------------------------------------------------------------------------------
         Name: LKWDPOND02_OV       From Node: LKWDPOND02
        Group: CAMP                  To Node: LKWDPOND01
         Flow: Both                    Count: 1
         Type: Vertical: Fread      Geometry: Irregular

                        XSec: LKWDPOND02_OV
                  Invert(ft): 8.740
       Control Elevation(ft): 8.740
      Struct Opening Dim(ft): 9999.00
                                          TABLE
             Bottom Clip(ft): 0.000
                Top Clip(ft): 0.000
        Weir Discharge Coef: 2.000
      Orifice Discharge Coef: 0.600



-------------------------------------------------------------------------------------------------
         Name: MOCKINGBIRD_OV      From Node: AF-06
        Group: MAIN                  To Node: AF-05
         Flow: Both                    Count: 1
         Type: Vertical: Fread      Geometry: Irregular

                        XSec: MOCKINGBIRD_OV
                  Invert(ft): 16.610
       Control Elevation(ft): 16.610
      Struct Opening Dim(ft): 9999.00
                                          TABLE
             Bottom Clip(ft): 0.000
                Top Clip(ft): 0.000
        Weir Discharge Coef: 2.000
      Orifice Discharge Coef: 0.600



-------------------------------------------------------------------------------------------------
         Name: PIRLNDPOND01_OV     From Node: PIRLNDPOND01
        Group: CAMP                  To Node: MAIN-01
         Flow: Both                    Count: 1
         Type: Vertical: Fread      Geometry: Irregular

                        XSec: PIRLNDPOND01_OV
                  Invert(ft): 5.580
       Control Elevation(ft): 5.580
      Struct Opening Dim(ft): 9999.00
                                          TABLE
             Bottom Clip(ft): 0.000
                Top Clip(ft): 0.000
        Weir Discharge Coef: 2.000
      Orifice Discharge Coef: 0.600



-------------------------------------------------------------------------------------------------
```

```
         Name: PIRLNDPOND02_OV     From Node: PIRLNDPOND02
        Group: MAIN                  To Node: MAIN-01
         Flow: Both                    Count: 1
         Type: Vertical: Fread      Geometry: Irregular

                      XSec: PIRLNDPOND02_OV
                Invert(ft): 5.620
       Control Elevation(ft): 5.620
      Struct Opening Dim(ft): 9999.00
                                        TABLE
            Bottom Clip(ft): 0.000
               Top Clip(ft): 0.000
      Weir Discharge Coef: 2.000
     Orifice Discharge Coef: 0.600



-------------------------------------------------------------------------------------------------
         Name: PIRLNDPOND02_W1     From Node: PIRLNDPOND02
        Group: MAIN                  To Node: MAIN-02
         Flow: Both                    Count: 1
         Type: Vertical: Fread      Geometry: Rectangular

                  Span(in): 144.00
                  Rise(in): 36.00
                Invert(ft): 3.400
       Control Elevation(ft): 3.400
                                        TABLE
            Bottom Clip(in): 0.000
               Top Clip(in): 0.000
      Weir Discharge Coef: 2.600
     Orifice Discharge Coef: 0.600



-------------------------------------------------------------------------------------------------
         Name: PIRLNDPOND02_W2     From Node: PIRLNDPOND02
        Group: MAIN                  To Node: MAIN-02
         Flow: Both                    Count: 1
         Type: Vertical: Mavis      Geometry: Rectangular

                  Span(in): 120.00
                  Rise(in): 36.00
                Invert(ft): 3.900
       Control Elevation(ft): 3.900
                                        TABLE
            Bottom Clip(in): 0.000
               Top Clip(in): 0.000
      Weir Discharge Coef: 2.600
     Orifice Discharge Coef: 0.600



-------------------------------------------------------------------------------------------------
         Name: PIRLNDPOND03_OV     From Node: PIRLNDPOND03
        Group: MAIN                  To Node: PIRLNDPOND02
         Flow: Both                    Count: 1
         Type: Vertical: Fread      Geometry: Irregular

                      XSec: PIRLNDPOND03_OV
                Invert(ft): 7.100
       Control Elevation(ft): 7.100
      Struct Opening Dim(ft): 9999.00
                                        TABLE
            Bottom Clip(ft): 0.000
               Top Clip(ft): 0.000
      Weir Discharge Coef: 2.000
     Orifice Discharge Coef: 0.600



-------------------------------------------------------------------------------------------------
         Name: PW LINK-01          From Node: PW-01
        Group: PW                    To Node: MAIN-06
         Flow: Both                    Count: 1
         Type: Vertical: Fread      Geometry: Irregular

                      XSec: PW LINK-01
                Invert(ft): 7.500
       Control Elevation(ft): 7.500
      Struct Opening Dim(ft): 9999.00
                                        TABLE
            Bottom Clip(ft): 0.000
               Top Clip(ft): 0.000
      Weir Discharge Coef: 2.000
     Orifice Discharge Coef: 0.600
```

```
------------------------------------------------------------------------------------------------------
         Name: PW LINK-06B         From Node: PW-06B
        Group: PW                    To Node: PW-06A
         Flow: Both                    Count: 1
         Type: Vertical: Fread      Geometry: Trapezoidal

            Bottom Width(ft): 15.00
       Left Side Slope(h/v): 3.00
      Right Side Slope(h/v): 3.00
                Invert(ft): 13.200
       Control Elevation(ft): 13.200
     Struct Opening Dim(ft): 9999.00
                                          TABLE
             Bottom Clip(ft): 0.000
                Top Clip(ft): 0.000
          Weir Discharge Coef: 2.000
     Orifice Discharge Coef: 0.600

Estimated data

------------------------------------------------------------------------------------------------------
         Name: PW LINK-10          From Node: PW-09
        Group: PW                    To Node: PW-08
         Flow: Both                    Count: 1
         Type: Vertical: Fread      Geometry: Trapezoidal

            Bottom Width(ft): 10.00
       Left Side Slope(h/v): 3.00
      Right Side Slope(h/v): 3.00
                Invert(ft): 15.000
       Control Elevation(ft): 15.000
     Struct Opening Dim(ft): 9999.00
                                          TABLE
             Bottom Clip(ft): 0.000
                Top Clip(ft): 0.000
          Weir Discharge Coef: 2.000
     Orifice Discharge Coef: 0.600

Estiamted Data


------------------------------------------------------------------------------------------------------
         Name: PW LINK-14          From Node: PW-13
        Group: PW                    To Node: PW-09
         Flow: Both                    Count: 1
         Type: Vertical: Mavis      Geometry: Rectangular

                   Span(in): 15.00
                   Rise(in): 9999.00
                Invert(ft): 18.000
       Control Elevation(ft): 18.000
                                          TABLE
             Bottom Clip(in): 0.000
                Top Clip(in): 0.000
          Weir Discharge Coef: 3.200
     Orifice Discharge Coef: 0.600

Estimaed Data


------------------------------------------------------------------------------------------------------
         Name: PW POND-02_OV       From Node: PW POND-02
        Group: PW                    To Node: PW-03
         Flow: Both                    Count: 1
         Type: Vertical: Fread      Geometry: Irregular

                        XSec: PW POND-02_OV
                Invert(ft): 18.020
       Control Elevation(ft): 18.030
     Struct Opening Dim(ft): 9999.00
                                          TABLE
             Bottom Clip(ft): 0.000
                Top Clip(ft): 0.000
          Weir Discharge Coef: 2.000
     Orifice Discharge Coef: 0.600



------------------------------------------------------------------------------------------------------
         Name: PW POND-03_OV       From Node: PW POND-03
        Group: PW                    To Node: MAIN-08
         Flow: Both                    Count: 1
         Type: Vertical: Fread      Geometry: Irregular

                        XSec: PW POND-03_OV
```

```
                Invert(ft): 13.650
       Control Elevation(ft): 13.650
      Struct Opening Dim(ft): 9999.00
                                        TABLE
             Bottom Clip(ft): 0.000
                Top Clip(ft): 0.000
        Weir Discharge Coef: 2.000
      Orifice Discharge Coef: 0.600



-------------------------------------------------------------------------------------------------------
         Name: PW POND-04_OV       From Node: PW POND-04
        Group: PW                    To Node: MAIN-10
         Flow: Both                    Count: 1
         Type: Vertical: Fread      Geometry: Irregular

                      XSec: PW POND-04_OV
                Invert(ft): 17.430
       Control Elevation(ft): 17.430
      Struct Opening Dim(ft): 9999.00
                                        TABLE
             Bottom Clip(ft): 0.000
                Top Clip(ft): 0.000
        Weir Discharge Coef: 2.000
      Orifice Discharge Coef: 0.600



-------------------------------------------------------------------------------------------------------
         Name: STOR-07_OV          From Node: STOR-07
        Group: STOR                  To Node: STOR-06
         Flow: Both                    Count: 1
         Type: Vertical: Fread      Geometry: Trapezoidal

            Bottom Width(ft): 10.00
       Left Side Slope(h/v): 2.00
      Right Side Slope(h/v): 2.00
                Invert(ft): 19.500
       Control Elevation(ft): 19.500
      Struct Opening Dim(ft): 9999.00
                                        TABLE
             Bottom Clip(ft): 0.000
                Top Clip(ft): 0.000
        Weir Discharge Coef: 2.000
      Orifice Discharge Coef: 0.600



-------------------------------------------------------------------------------------------------------
         Name: WALNUT_OV           From Node: MAIN-25
        Group: MAIN                  To Node: MAIN-24
         Flow: Both                    Count: 1
         Type: Vertical: Fread      Geometry: Irregular

                      XSec: WALNUT_OV
                Invert(ft): 19.240
       Control Elevation(ft): 19.240
      Struct Opening Dim(ft): 9999.00
                                        TABLE
             Bottom Clip(ft): 0.000
                Top Clip(ft): 0.000
        Weir Discharge Coef: 2.000
      Orifice Discharge Coef: 0.600



===============================================================================================
==== Rating Curves ============================================================================
===============================================================================================

         Name:                     From Node:                          Count: 1
        Group: BASE                  To Node:                           Flow: Both

              TABLE           ELEV ON(ft)     ELEV OFF(ft)
           #1:                0.000           0.000
           #2:                0.000           0.000
           #3:                0.000           0.000
           #4:                0.000           0.000



===============================================================================================
==== Percolation Links ========================================================================
===============================================================================================

         Name:                     From Node:                           Flow: Both
```

```
        Group: BASE                To Node:                        Count: 1

         Surface Area Option: Use 1st Point in Stage/Area Table
   Vertical Flow Termination: Horizontal Flow Algorithm
       Aquifer Base Elev(ft): 0.000                        Perimeter 1(ft): 0.000
        Water Table Elev(ft): 0.000                        Perimeter 2(ft): 0.000
 ****************************0.000                        Perimeter 3(ft): 0.000
  Horiz Conductivity(ft/day): 0.000                   Distance 1 to 2(ft): 0.000
   Vert Conductivity(ft/day): 0.000                   Distance 2 to 3(ft): 0.000
     Effective Porosity(dec): 0.000                      Num Cells 1 to 2: 0
           Suction Head(in): 0.000                       Num Cells 2 to 3: 0
        Layer Thickness(ft): 0.000
```

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

```
         Name: 002
     Filename: N:\23453\dsgn\ICPR\002.R32

      Override Defaults: Yes
    Storm Duration(hrs): 24.00
          Rainfall File: Scsiii
    Rainfall Amount(in): 4.50

Time(hrs)       Print Inc(min)
--------------- ---------------
10.000          15.00
24.000          5.00
72.000          15.00
```

```
         Name: 010
     Filename: N:\23453\DSGN\ICPR\010.R32

      Override Defaults: Yes
    Storm Duration(hrs): 24.00
          Rainfall File: Scsiii
    Rainfall Amount(in): 6.70

Time(hrs)       Print Inc(min)
--------------- ---------------
10.000          15.00
24.000          5.00
72.000          15.00
```

```
         Name: 025
     Filename: N:\23453\DSGN\ICPR\025.R32

      Override Defaults: Yes
    Storm Duration(hrs): 24.00
          Rainfall File: Scsiii
    Rainfall Amount(in): 7.60

Time(hrs)       Print Inc(min)
--------------- ---------------
10.000          15.00
24.000          5.00
72.000          15.00
```

```
         Name: 050
     Filename: N:\23453\DSGN\ICPR\050.R32

      Override Defaults: Yes
    Storm Duration(hrs): 24.00
          Rainfall File: Scsiii
    Rainfall Amount(in): 8.60

Time(hrs)       Print Inc(min)
--------------- ---------------
10.000          15.00
24.000          5.00
72.000          15.00
```

```
         Name: 100
     Filename: N:\23453\DSGN\ICPR\100.R32

      Override Defaults: Yes
    Storm Duration(hrs): 24.00
          Rainfall File: Scsiii
    Rainfall Amount(in): 9.70
```

Time(hrs)	Print Inc(min)
10.000	15.00
24.000	5.00
72.000	15.00

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

Name: 002 Hydrology Sim: 002
Filename: N:\23453\dsgn\ICPR\002.I32

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): 48.00
Min Calc Time(sec): 5.0000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
999.000	15.000

Group	Run
AF	Yes
BASE	Yes
BERMGRN	Yes
CAMP	Yes
CL	Yes
MAIN	Yes
PW	Yes
STOR	Yes

Name: 010 Hydrology Sim: 010
Filename: N:\23453\dsgn\ICPR\010.I32

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): 48.00
Min Calc Time(sec): 5.0000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
999.000	15.000

Group	Run
AF	Yes
BASE	Yes
BERMGRN	Yes
CAMP	Yes
CL	Yes
MAIN	Yes
PW	Yes
STOR	Yes

Name: 025 Hydrology Sim: 025
Filename: N:\23453\dsgn\ICPR\025.I32

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): 48.00
Min Calc Time(sec): 5.0000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
999.000	15.000

Group	Run
AF	Yes
BASE	Yes
BERMGRN	Yes
CAMP	Yes
CL	Yes
MAIN	Yes
PW	Yes
STOR	Yes

Name: 050 Hydrology Sim: 050
Filename: N:\23453\dsgn\ICPR\050.I32

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): 48.00
Min Calc Time(sec): 5.0000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
999.000	15.000

Group	Run
AF	Yes
BASE	Yes
BERMGRN	Yes
CAMP	Yes
CL	Yes
MAIN	Yes
PW	Yes
STOR	Yes

Name: 100 Hydrology Sim: 100
Filename: N:\23453\dsgn\ICPR\100.I32

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): 48.00
Min Calc Time(sec): 5.0000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
999.000	15.000

Group	Run
AF	Yes
BASE	Yes
BERMGRN	Yes
CAMP	Yes
CL	Yes
MAIN	Yes
PW	Yes
STOR	Yes