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# Kizell Lands – Fernbank 5618 Hazeldean Road

## Concept Servicing Report

Assessment of Adequacy of Public Services and  
Stormwater Site Management

**CONCEPT SERVICING REPORT  
ASSESSMENT OF ADEQUACY OF PUBLIC SERVICES  
AND STORMWATER SITE MANAGEMENT**

**KIZELL LANDS - FERNBANK  
5618 HAZELDEAN ROAD**

Prepared By:

**NOVATECH**

Suite 200, 240 Michael Cowpland Drive  
Ottawa, Ontario  
K2M 1P6

November 9, 2016

Novatech File: 108195  
Ref: R-2016-159

November 9, 2016

City of Ottawa  
Planning and Growth Management Department  
110 Laurier Avenue West, 4<sup>th</sup> Floor  
Ottawa, ON K1P 1J1

**Attention: Ms. Kathy Rygus**

Dear Ms. Rygus:

**Reference: Concept Servicing Report  
Kizell Lands - Fernbank  
Our File No.: 108195**

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Enclosed are six (6) copies of the Concept Servicing Report for the Kizell Lands within the Fernbank Community. The report addresses development servicing for the subject property.

If you have any questions or comments, please do not hesitate to contact us.

Sincerely,

**NOVATECH**



Mark Bissett, P.Eng.  
Project Manager

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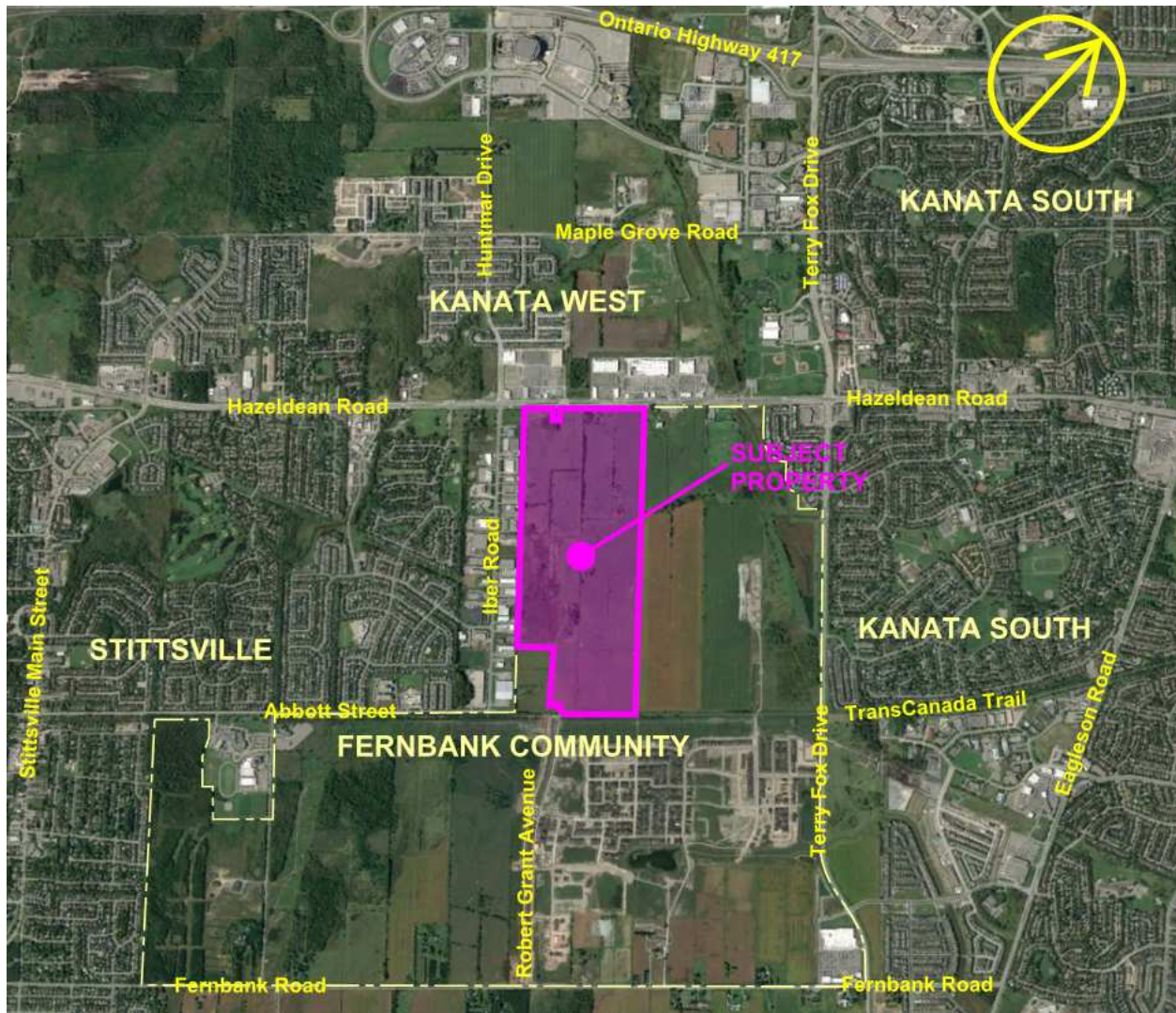
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- Appendix B: Stormwater Documentation
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## 1.0 INTRODUCTION

### 1.1 Background

The Kizell Lands are located within the Fernbank Community between the Abbott Street extension and Hazeldean Road, east of Iber Road. **Figure 1** shows the location of the Fernbank Community and the Kizell Lands. The lands will be developed with a mix of residential products (low, medium and high-density), accompanied by commercial, institutional and recreational land uses.



**Figure 1: Key Plan**

The proposed subdivision is approximately 88.67ha and will be bordered by existing industrial lands to the west (Iber Road), the Trans-Canada Trail to the south, future residential lands to the east (Richcraft), and commercial lands to the north (Hazeldean Road).

The subdivision will be comprised of low, medium, and high-density residential dwellings with a planned total of 327 singles, 274 townhouses, and 225 stacked townhouses. Approximately 646 units are proposed within the medium-density blocks (9.92ha), that will be located adjacent the

proposed extension to Robert Grant Avenue. An additional 372 apartment units within the high-density block (5.33ha) will be located in proximity to the proposed Robert Grant Way. Mixed-Use blocks (9.94ha) are proposed along the existing Hazeldean Road and proposed Robert Grant Avenue, with a Commercial block (0.55ha) located west of the proposed Robert Grant Avenue. A school (3.0ha) will front onto the proposed minor collector along the east boundary of the site. A Park n' Ride facility (1.83ha) is proposed at the corner of the proposed Robert Grant Avenue and Hazeldean Road. The remainder of the site is comprised of Parkland (4.81ha), Open Space (1.67ha), Hydro Corridor (2.70ha), and a SWM Facility (4.32ha). The proposed Land Use Plan is shown in **Figure 2**.

This Concept Servicing Report provides information on the considerations and approach by which Novatech has analyzed the existing site information for the Kizell Lands, and details how the development lands can be adequately serviced while meeting the City requirements and all other pertinent regulations. This study builds upon works completed for the Fernbank Community Design Plan **[1]** prepared by Walker, Nott, Dragicevic Associates Limited, the Fernbank Master Servicing Study **[2]** prepared by Novatech, and the Fernbank Environmental Management Plan also prepared by Novatech **[3]**.

There is ongoing coordination with the landowners to the east who are seeking Draft Plan approval (Richcraft and Metric), and finalizing detail design (Mattamy). Kizell will cost share local infrastructure with Richcraft and Mattamy as part of a private agreement; this may include sewer oversizing, stormwater ponds, roadways, etc.

Major landowners within the Fernbank Community have executed a cost sharing agreement that deals with construction of Robert Grant Avenue, Abbott Street extension, the Fernbank Trunk, and Parkland development; and Kizell is a party to this agreement.



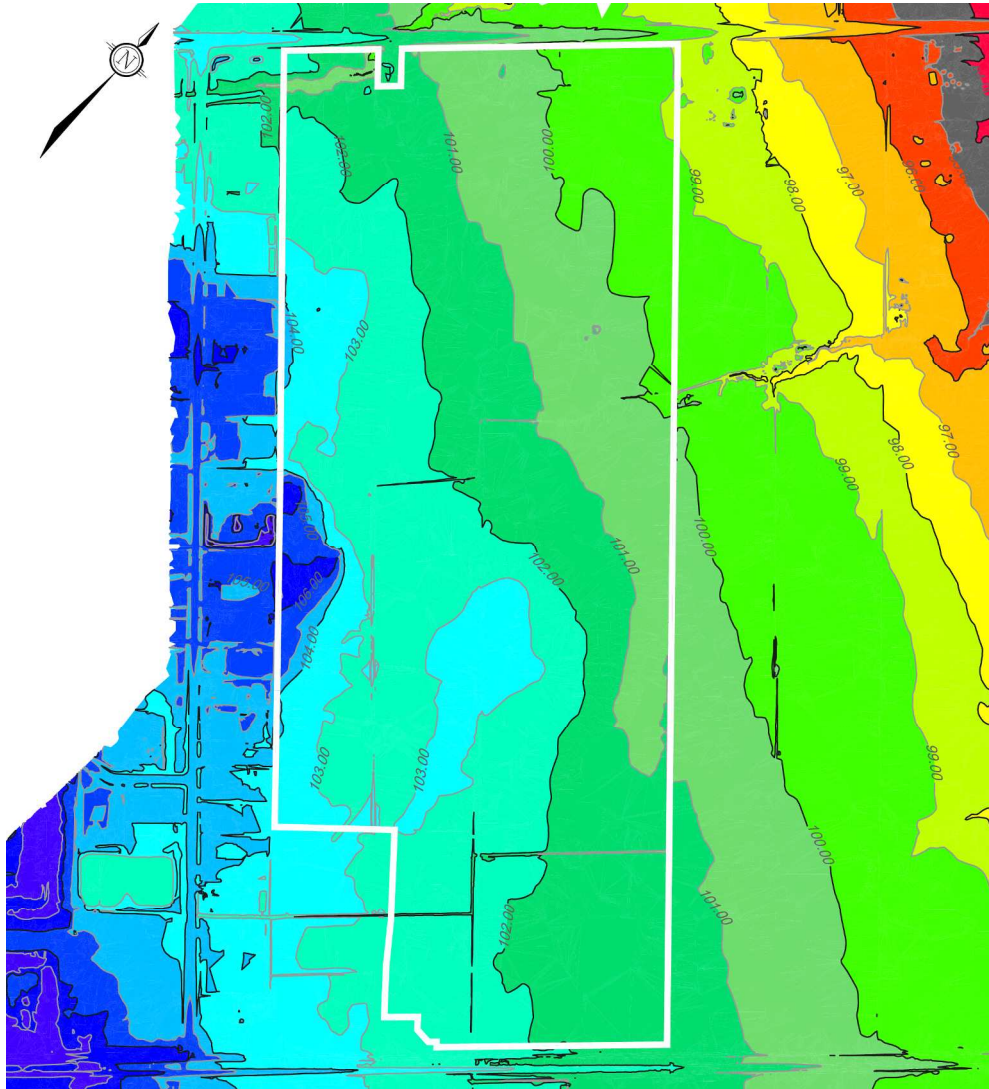
Figure 2: Land Use Plan



## 2.0 TOPOGRAPHY AND GRADING

### 2.1 Existing Conditions

Based on the topographical survey shown below in **Figure 3**, the site generally slopes to the northeast at approximately 0.6%. Steeper grades of up to 15% are locally found near the high-point along the west property boundary. The maximum grade of approximately 107.0 metres on the west property boundary, and a minimum elevation of approximately 99.0 metres in the northeast corner give a total elevation differential of approximately 8.0 metres across the entire site.



**Figure 3: Existing Topography**

Geotechnical investigations were carried out by Houle Chevrier Engineering [4], and bedrock was encountered in a localized area along the west part of the site, characterized by exposed bedrock and/or bedrock at shallow depth.

## 2.2 Proposed Conditions

The proposed grading for the Kizell Lands will closely follow the Grading Plan contained in the Fernbank Master Servicing Study [1]. Grade raise constraints are shown in **Figure 4** and are described as Area 1, 2, and 3. There is no grade raise restrictions within Area 1. The depth of fill material in the vicinity of structures and in garages should be limited to within 1.5 to 2.0 metres for Area 2, and 1.2 to 1.5 metres for Area 3. Additional geotechnical investigations may refine the grade raise limits and boundaries.

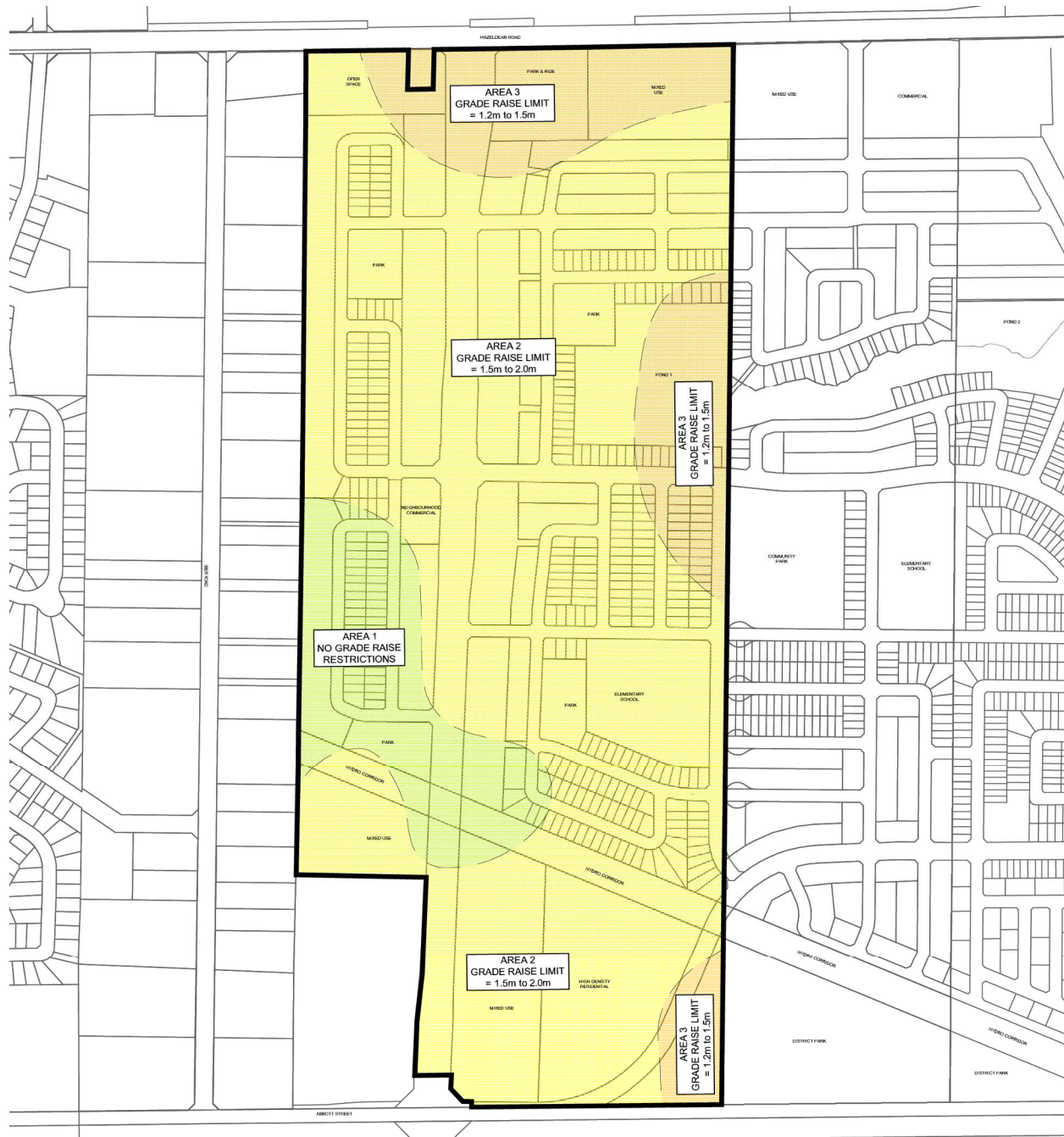


Figure 4: Grade Raise Constraints

Existing elevations will be met along Hazeldean Road, the west property boundary (Iber Road), and the Trans Canada Trail. Grading will be coordinated with the proposed development to the east (Richcraft). A high-level grading plan is shown in **Appendix B**.

### **2.3 Offsite Requirements**

Grading will be coordinated with adjacent land owners (Richcraft) to ensure compliance with grade raise restrictions and proper functioning of the major system flow paths.

### **2.4 Changes from Fernbank Community Design Plan**

No significant changes are anticipated to the Grading Plan, as outlined in the approved Fernbank Master Servicing Study.

## **3.0 ROADWAYS**

### **3.1 Existing Conditions**

Currently there is roadway access to the Kizell Lands via Robert Grant Avenue and Hazeldean Road. The 2013 City of Ottawa Transportation Master Plan **[6]** classifies Robert Grant Avenue as a 2-lane Arterial Road, while Terry Fox Drive is classified therein as a 4-lane Arterial Road.

### **3.2 Proposed Conditions**

The Fernbank Transportation Master Plan **[6]** prepared by Delcan, specifies that a North-South Arterial Road is required to serve the Fernbank Community. The existing Arterial Road (Robert Grant Avenue) is to be extended through the development from Abbott Street to Hazeldean Road.

Robert Grant Avenue has been constructed as a 2-lane arterial road between Fernbank Road and Abbott Street, and will continue with the same configuration to Hazeldean Road. It is planned that Robert Grant Avenue will be upgraded to include two vehicle-lanes in both directions with transit lanes in the centre median.

Two east-west major collectors (26m ROW) are planned that will connect to Robert Grant Avenue; these include the Abbott Street Extension and Street 2. The major collectors generally follow the approved alignment from the Fernbank Transportation Master Plan.

There are two minor collectors (22m ROW) planned. The first connects the two major collectors along a north-south axis near the east property line, while the second connects Robert Grant Avenue and Hazeldean Road through the Richcraft property.

All other roads to be constructed are either local roads (18m ROW) or private. Typical cross-sections are contained within the Fernbank Community Design Plan **[1]** and the City of Ottawa Standard Detail Drawings.

Refer to the Transportation Study **[7]**, prepared by Novatech for more detailed analysis of the proposed road network.

### **3.3 Offsite Requirements**

Offsite roadwork may be required at the intersection of Robert Grant and Hazeldean Road.

### 3.4 Changes from Fernbank Community Design Plan

The roadway network generally follows the Fernbank Transportation Master Plan [6], with the exception of a portion of the north-south minor collector that was omitted east of Pond 1.

## 4.0 SANITARY SEWERS

### 4.1 Existing Conditions

Currently, there is no sanitary infrastructure within the Kizell Lands.

The Stittsville Trunk runs parallel to the Trans Canada Trail south of the Kizell Lands, and is a 750mm diameter trunk sewer that flows easterly to the Hazeldean Pump Station.

The Fernbank Trunk is located south of the Kizell Lands within the Hydro One easement corridor, and flows easterly to the Hazeldean Pump Station.

The City of Ottawa recently completed an upgrade to the Hazeldean Pump Station to improve system capacity, reliability, and emergency overflow conditions. The Fernbank Trunk is now connected to the Hazeldean Pump Station.

### 4.2 Proposed Conditions

Unit and population densities are taken from the Fernbank Community Design Plan [1]. All other design parameters are specified in the City of Ottawa Sewer Design Guidelines [8]. The peak design flow parameters in **Table 4.1** have been used in the sewer capacity analysis.

The majority of the sanitary flow from the Kizell Lands will connect into the proposed Stittsville Diversion Trunk, located within Robert Grant Avenue, and will ultimately outlet to the Kanata West Pump Station. The remainder of the sanitary flow is proposed to connect into downstream sewer systems at five different nodes through the adjacent Richcraft Lands. Flow from these five nodes is routed to the Hazeldean Pump Station via the existing Fernbank Trunk. The trunk sewer layout is shown on the Sanitary Drainage Area Plan located in **Appendix B**.

The Stittsville Diversion Trunk is expected to convey approximately 570.8L/s at node SA114 near Hazeldean Road. This is comprised of 493.4L/s diverted from the Stittsville Trunk, and 77.4L/s generated from within the Kizell Lands (approx. 65.3ha).

Five localized areas will drain easterly through the Richcraft Lands to the Hazeldean Pump Station. These are identified as Outlets 2-6 on the Sanitary Drainage Area Plan and have peak design flows of 31.7L/s, 1.8L/s, 1.0L/s, 1.4L/s and 8.3L/s respectively. The sanitary sewer design is being coordinated with the adjacent landowners.



**Table 4.1: Sanitary Sewer Design Parameters**

Parameter	Design Parameter
Single Unit Population	3.4 people/unit
Townhome/Stacked Townhome Unit Population	2.7 people/unit
Stacked Townhome Unit Density	49 Units/net ha
Medium Density/High Density/Mixed Use Unit Population	1.8 people/unit
Medium Density Residential Unit Density	65 Units/net ha
High Density Residential/Mixed Use Unit Density	85 Units/net ha
Residential Flow Rate, Average Daily	350 L/cap/day
Residential Peaking Factor	Harmon Equation (min=2.0, max=4.0)
Commercial & Institutional Flow Rate	50,000 L/day/ha
ICI Peaking Factor	1.5
Infiltration Rate	0.28 L/s/ha
Minimum Pipe Size	250 mm (ICI), 200mm (Res)
Minimum Velocity	0.6 m/s
Maximum Velocity	3.0 m/s

### 4.3 Offsite Requirements

The Stittsville Diversion Trunk is a city-initiated wastewater project that will route flow from the Stittsville Trunk to the Kanata West Pump Station. The planned sewer alignment runs through the Kizell Lands within the Robert Grant Avenue ROW to Hazeldean Road, then continues through the Kanata West Lands to the Kanata West Pump Station. The Stittsville Diversion Trunk and KWPS must be operational before tributary lands owned by Kizell can be developed.

### 4.4 Changes from Fernbank Community Design Plan

The Stittsville Diversion Trunk is new infrastructure that was not contemplated at the time of the Fernbank CDP.

## 5.0 WATER DISTRIBUTION

### 5.1 Existing Conditions

Figure 5.1 from the Fernbank Environmental Management Plan [3] identifies potential well locations within the Fernbank Community. All water wells shall be properly abandoned in accordance with the Ontario Water Resources Act, R.R.O. 1990, Regulation 903, as amended.

A 400mm watermain is located south of the Kizell Lands in an unopened road allowance. To the north, 600mm and 900mm watermains are located in Hazeldean Road, that connect to the Glen Cairn Water Reservoir and Pump Station. A 300mm watermain is located in Iber Road, and connects the above infrastructure. The existing plant is shown on the Water Distribution Plan included in **Appendix B**.

## 5.2 Proposed Conditions

A planning-level assessment of the water distribution system was completed in Section 8 of the Fernbank Master Servicing Study [2].

The Kizell Lands will be connected to the existing watermain network by way of separate feed points. Two connections are proposed to the existing 400mm diameter main south of the site; one within the intersection of Robert Grant Avenue and Abbott Street, and the other approximately 230m east within the planned extension of Abbott Street. A third watermain connection is proposed to the 900mm diameter watermain within Hazeldean Road at the Robert Grant Avenue intersection. Additional connections will be made through the neighboring lands to the east (Richcraft) that in turn connect to the existing 900mm main in Hazeldean Road, the existing 400mm main in Terry Fox Drive and the existing 400mm main adjacent the Trans Canada Trail. These watermain connections are being coordinated with the adjacent landowners.

In accordance with the Fernbank Master Servicing Study [2], a 300mm watermain is proposed to link the existing off-site distribution system from Hazeldean Road to Abbott Street, and connect with the planned development infrastructure to the east. These larger 300mm pipes serve as the primary conduit to supply the subdivision, and ensure adequate conveyance of domestic water and fire protection. A layout for the 300mm piping system is presented on the Water Distribution Plan, and is attached in **Appendix C**.

We have not shown the network of smaller 150mm and 200mm watermain that is required to supply individual lots and/or blocks. This system of local water infrastructure will be established at detail design of the subdivision, and serves to reinforce the overall supply (network looping).

The watermain boundary conditions below were obtained from the City of Ottawa and has been included in **Appendix A**:

Boundary Condition Hazeldean Connection (900mm feedermain):

Max Day + FF of 167 L/s = 155.6m  
Max Day + FF of 217 L/s = 155.6m  
Minimum Pressure during Peak Hour = 155.5m  
Max Pressure Check = 162.4m

Boundary Condition Abbott Connection (400mm watermain):

Max Day + FF of 167 L/s = 154.5m  
Max Day + FF of 217 L/s = 153.6m  
Minimum Pressure during Peak Hour = 154.5m  
Max Pressure Check = 162.1m

City of Ottawa watermain design criteria and Fernbank Community Design Parameters are outlined in **Table 5.1**.

**Table 5.1: Watermain Design Criteria**

Design Parameter	Design Criteria
Single Family Home Population	3.4 people/unit
Townhouse/Stacked Townhouse Population	2.7 people/unit
Medium Density/High Density/Mixed Use Population	1.8 people/unit
Stacked Townhouse Density	49 units/ha
Medium Residential Density	65 units/ha
High Residential Density/Mixed Use Density	85 units/ha
Residential Demand	350 L/c/d
Institutional/Commercial Demand	28,000 L/gross ha/day
Maximum Day Demand	2.5 x Average Day
Peak Hour Demand	2.2 x Maximum Day
Institutional/Commercial Max Day	1.5 x Average Day
Institutional/Commercial Peak Hour	1.8 x Maximum Day
Fire Demand (Residential Areas)	167 L/s
Fire Demand (Institutional and Commercial Areas)	217 L/s
Maximum Pressure	690 kPa (100psi) unoccupied areas
Maximum Pressure	552 kPa (80psi) occupied areas outside of ROW
Minimum Pressure	275 kPa (40 psi) except during fire flow
Minimum Pressure (Fire)	140 kPa (20 psi)

In accordance with the City of Ottawa’s Technical Bulletin, a fire flow of 167L/s was used for all residential dwelling types, while a fire flow of 217L/s was used for the industrial, commercial, and institutional areas as referenced in the Fernbank Master Servicing Study [2].

The proposed watermain was modeled using EPANET 2. The EPANET model layout is shown in drawing 108195-WTR.

A summary of the model results is shown below in **Table 5.2**, **Table 5.3** and **Table 5.4**. Full model results are included in **Appendix A**.

**Table 5.2: Summary of Hydraulic Model Results - Maximum Day + Fire Flow**

Operating Condition	Minimum Pressure
223.77 L/s at N6	421.44 kPa (N6)

**Table 5.3: Summary of Hydraulic Model Results - Peak Hour Demand**

Operating Condition	Maximum Pressure	Minimum Pressure
152.70 L/s through system	577.02 (N9)	487.36 kPa (N1)

**Table 5.4: Summary of Hydraulic Model Results – Maximum Pressure Check**

Operating Condition	Maximum Pressure	Minimum Pressure
30.18 L/s through system	644.71 kPa (N9)	564.86 kPa (MU1)

Water modelling shows the planned network will meet minimum system pressure requirements during both the fire flow and peak hour design conditions. The maximum pressure check shows modelled system pressures are above 552 kPa (80 psi) throughout the subdivision, therefore pressure reducing valves will be required on all dwellings.

### 5.3 Offsite Requirements

As specified in the Fernbank Master Servicing Study [2], additional firm pumping capacity at the Glen Cairn Pumping Station and one of the Zone 2W pumping stations might be required to meet additional demands associated with the Fernbank Community. The timing of these upgrades is related to the overall rate of growth in the entire Zone 3W (Kanata and Stittsville area). Growth within the Abbott-Fernbank Lands plays only a small part in determining when these upgrades are required; the City of Ottawa will determine when these water supply upgrades occur. No direct costs associated with the offsite upgrades are attributable to the developer.

### 5.4 Changes from Fernbank Community Design Plan

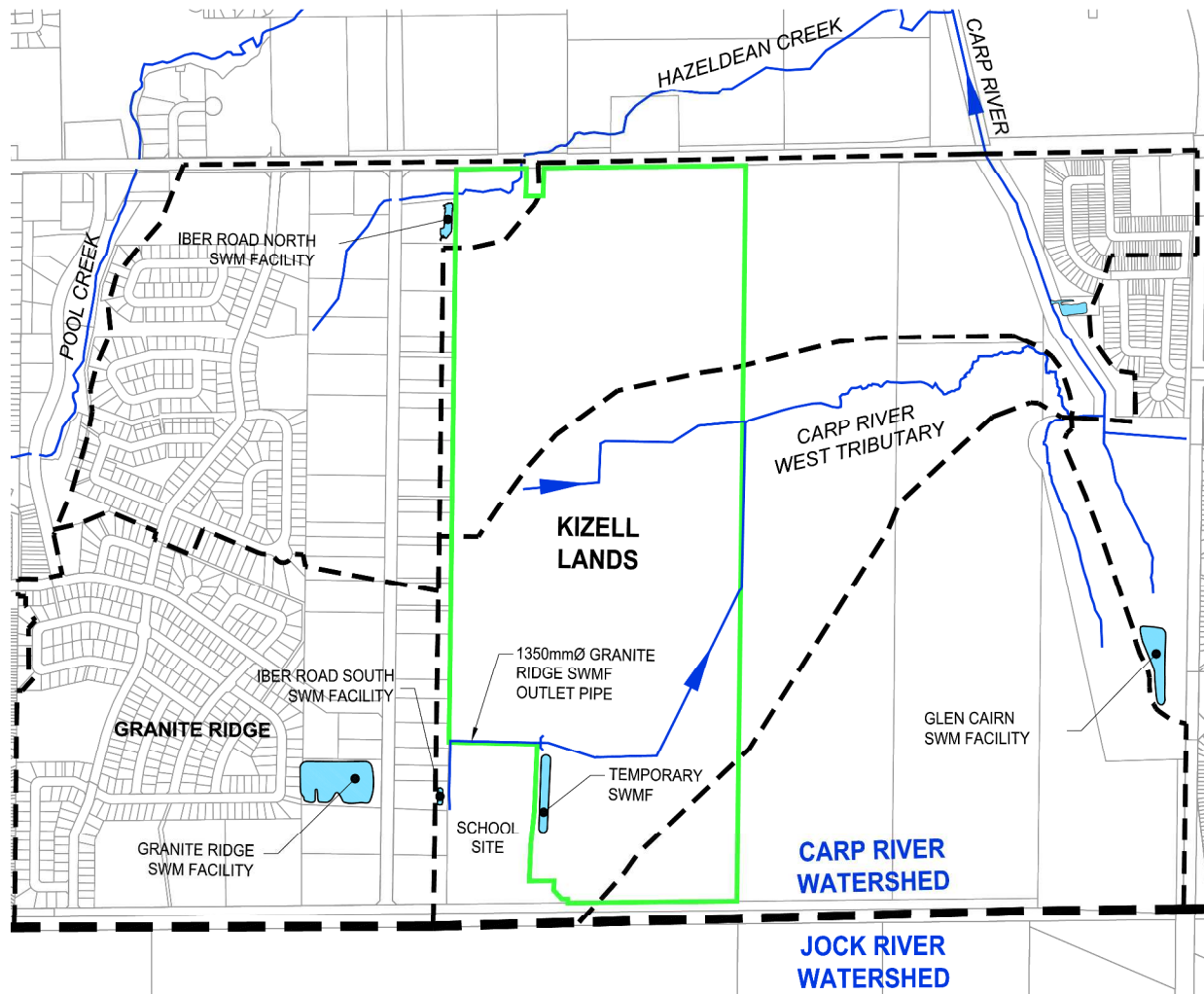
Changes in the proposed water system are defined as *minor* on page 83 of the Fernbank Master Servicing Study [1] and do not require an amendment to the Environmental Assessment since the results do not appreciably change the expected net impacts associated with the project. These changes include:

- Two connections to the existing 400mm diameter watermain running east/west on the south side of the Kizell Lands will be made at the intersection of Robert Grant Avenue and Abbott Street and the other connection 230 metres east. The water distribution links are required for reasons of supply and redundancy; however, there is flexibility in the precise location of the link.
- The 300mm diameter trunk system has been slightly realigned to follow the proposed road network.

## 6.0 STORMWATER MANAGEMENT

### 6.1 Existing Drainage Conditions

The Kizell Lands are located at the headwaters of the Carp River West Tributary (part of the Carp River Watershed). There is currently no storm sewer infrastructure servicing the Kizell Lands. Site drainage primarily occurs via overland flow to agricultural ditches. **Figure 5** shows the location of the Kizell Lands and the existing watershed boundaries.



**Figure 5: Existing Watershed Boundaries**

#### 6.1.1 Kizell Lands

Under existing conditions, storm runoff from the southern portion of the Kizell Lands is conveyed by overland flow and open channels to the Carp River West Tributary, which flows east to a confluence with the Carp River just north of the Glen Cairn SWM Facility. As specified in the Fernbank Environmental Management Plan, the Carp River West Tributary has been classified as a tolerant warm water fish community that provides permanent fish habitat.

The Kizell Lands north of the Carp River West Tributary generally slope to the east, towards the Carp River with no defined watercourse.

The Northwest corner of the site is tributary to Hazeldean Creek, which flows east to a confluence with the Carp River approximately 250m north of Hazeldean Road.

Additional information on the existing conditions can be found in the Fernbank Environmental Management Plan [3].

### **6.1.2 Granite Ridge SWM Facility**

The Granite Ridge SWM Facility is located on the west side of Iber Road in Stittsville. This facility provides water quality and quantity control for the Granite Ridge Subdivision, which is south west of the proposed Kizell Lands development.

Under existing conditions, outflows from the Granite Ridge SWM facility are directed through a culvert under Iber Road into an open channel, and into a 1350mm storm sewer running along the north side of the high school site on Abbott Street. This storm sewer discharges into a temporary outlet ditch at the northeast corner of the high school site, which flows northeast to a confluence with the Carp River West Tributary at the eastern limit of the Kizell Lands.

### **6.1.3 Iber Road**

There are two small SWM facilities which provide water quality and quantity control for the Iber Road Business Park in Stittsville. The North SWM Facility outlets to Hazeldean Creek. The South SWM Facility connects to the Granite Ridge outlet just east of Iber Road.

### **6.1.4 High School Site**

Drainage works were recently completed in support of a new high school development that involved redirecting outflow from the Granite Ridge SWM Facility around the school site. A temporary SWM facility was constructed to provide water quality and quantity control. Once the Kizell Lands are developed, the temporary pond will be decommissioned and storm runoff from the high school site will be directed to the proposed storm sewers servicing the Kizell lands, with water quality treatment provided by the proposed SWM Facility (Fernbank Pond 1).

## **6.2 Stormwater Management Criteria**

The Kizell Lands are located within the Carp River Subwatershed, and are tributary to the Carp River, which falls under the jurisdiction of the Mississippi Valley Conservation Authority (MVCA). The following stormwater management criteria have been developed based on the criteria in the Fernbank EMP, and requirements of the MVCA and the City of Ottawa Sewer Design Guidelines (October 2012) and Technical Bulletin PIEDTB-2016-01 (September 2016).

### **6.2.1 Minor System (Storm Sewers)**

- Storm sewers are to be designed using the Rational Method as follows:
  - 1:2 year return period for local streets;
  - 1:5 year return period for collector roads;
  - 1:10 year return period for arterial roads;

- Inlet control devices (ICDs) are to be installed in road and rearyard catchbasins to control inflows to the storm sewers;
- Ensure that the 100-year hydraulic grade line in the storm sewer is at least 0.3 m below the underside of footing (USF) elevations for the proposed development.

### **6.2.2 Major System (Overland Flow)**

- Overland flows are to be confined within the right-of-ways and/or defined drainage easements for all storms up to and including the 1:100 year event;
- Maximum depth of flow (static + dynamic) on local and collector streets shall not exceed 0.35 m and shall be confined to the road right-of-way, as well as not touch any part of the building envelope and must remain below the lowest building opening during the stress test event;
- Maximum depth of flow on arterial roads shall not overtop the barrier curb and shall leave one lane free of water in each direction.
- Runoff that exceeds the available storage in the right-of-ways will be conveyed overland along defined major system flow routes towards the proposed major system outlet to the SWM Facility.
- Major system storage in backyards is not to be included/ accounted for in design computations;
- The product of the 100-year flow depth (m) on street and flow velocity (m/s) shall not exceed 0.60;

### **6.2.3 Water Quality & Quantity Control**

- Provide a *Normal* (70% TSS removal) level of quality control;
- Implement lot level and conveyance Best Management Practices to promote infiltration and treatment of storm runoff;
- Post-development peak flows are not to exceed pre-development peak flows for all storms up to and including the 100-year event.

## **6.3 Storm Servicing Design**

Storm servicing for the subject development will be provided using a dual drainage system: Runoff from frequent events will be conveyed by storm sewers (minor system), while flows from large storm events which exceed the capacity of the minor system will be conveyed overland along defined overland flow routes (major system).

The minor system servicing the Kizell lands is divided into two main trunks with a north and a south inlet to the stormwater management facility. The proposed SWM facility (Pond 1) will serve as the outlet for both the major and minor systems.

### **6.3.1 Minor System Design**

A summary of the Design Criteria for the proposed Kizell Lands Storm Sewer system is provided below. Design Sheets are located in **Appendix A**. The Storm Drainage Area Plan is located in **Appendix C**.

The trunk storm sewers comprising the minor system have been designed in accordance with Technical Bulletin PIEDTB-2016-01 (September 2016). The criteria used to design the storm sewers are summarized in **Table 6.1** and **Table 6.2**.

**Table 6.1: Storm Sewer Design Parameters**

Parameter	Design Criteria
Local Roads	2 Year Return Period
Collector Roads	5 Year Return Period
Arterial Road	10 Year Return Period
Storm Sewer Design	Rational Method / PCSWMM
IDF Rainfall Data	Ottawa Sewer Design Guidelines
Initial Time of Concentration ( $T_c$ )	15 min
Minimum Velocity	0.8 m/s
Maximum Velocity	3.0 m/s
Minimum Diameter	300 mm

**Table 6.2: Runoff Coefficients**

Land Use	Runoff Coefficient
Mixed Use	0.80
Park N' Ride	0.80
Arterial Roads	0.90
Schools	0.60
Medium Density / High Density Residential	0.80
Low Density Residential	0.65
Parks	0.40
Hydro Corridor	0.20

Inlet control devices (ICDs) are to be installed in all catchbasins to limit inflows to the minor system capacity (1:2yr local / 1:5yr collector / 1:10yr arterial). ICDs sizes and catchbasin locations will be determined during the detailed design stage.

### **6.3.2 Major System Design**

The major system design will conform to the design standards outlined in Technical Bulletin PIEDTB-2016-01 (September 2016). During detailed design, the right-of-ways will be graded to provide sufficient storage to contain the major system runoff from storm events exceeding the minor system capacity for all storms up to and including the 100-year design event. The site will be graded to provide an engineered overland flow route for large, infrequent storms or in the event that the storm sewer system becomes obstructed, with all major system flows routed to Pond 1.



Cross-Street Flow

No cross-street flow is permitted for the minor (2-year) storm event, and there is to be only minimal ponding within the roadways. Major system flow from local streets can be conveyed to other local or collector roads, or to a Stormwater Management Facility or watercourse.

Major System Flow Depths

For events exceeding the minor system design storm and up to the 100-year design storm, flow depths in the right of way are to be limited to the maximum water depths outlined in **Table 6.3**.

**Table 6.3: Major System Flow Depths**

Road Classification	Maximum Water Depth
Local	350mm at edge of pavement
Collector	350mm at edge of pavement
Arterial	No barrier curb overtopping/Flow spread must leave at least one lane free of water in each direction.

**6.3.3 Groundwater Infiltration and Water Balance**

As discussed in the Fernbank Environmental Management Plan [3], the hydrogeologic conditions of the Kizell Lands will be altered by the increase in hard surfaces and the increased efficiency of stormwater conveyance. The net result will be a reduction in groundwater infiltration, which can potentially result in a reduction in the groundwater table, reduction of baseflow in watercourses, reduced well capacities and consolidation of the overburden, among other impacts.

The recommended infiltration target is to match pre-development infiltration rates. The water balance analysis in the Fernbank Environmental Management Plan [3] indicates that maintaining annual pre-development infiltration should be achievable through the use of infiltration best management practices; the types, locations, and suitability of infiltration BMPs will be dependant on site specific details and land use.

Infiltration Best Management Practices

Infiltration of surface runoff will be accomplished using lot level and conveyance controls. The most suitable practices for groundwater infiltration include:

- Infiltration of runoff captured by rear yard catchbasins;
- Direct roof leaders to rear yard areas;
- Infiltration trenches underlying drainage swales in park areas;
- The use of fine sandy loam topsoil in parks and on residential lawns.

By implementing infiltration Best Management Practices as part of the storm drainage design for the Kizell lands, the impacts of development on the hydrologic cycle can be considerably reduced. Infiltration of clean runoff will also have additional benefits for stormwater management; by reducing the volume of “clean” water conveyed to Pond 1, the performance of Pond 1 will be increased.

### 6.3.4 SWM Facility – Pond 1

Water quantity control and water quality treatment will be provided by an end-of pipe stormwater management pond, 'Pond 1'. Pond 1 has been sized to control and treat runoff from the Kizell Lands development, including flows from the Granite Ridge SWM facility, and a portion of Iber Road.

## 6.4 Hydrologic & Hydraulic Modeling

The *City of Ottawa Sewer Design Guidelines* (October 2012) requires hydrologic modeling for all dual drainage systems. The performance of the proposed storm drainage system for the Kizell Lands was evaluated using the PCSWMM hydrologic/hydraulic model.

A semi-lumped model of the proposed subdivision storm sewers and Pond 1 was developed using PCSWMM, and has been imported into the Carp River PCSWMM model to evaluate the impact of the proposed development on water levels in the Carp River. Additional details on the Carp River PCSWMM model are provided in **Section 6.4.4**.

Modeling files are provided on the enclosed CD.

### 6.4.1 Design Storms

The hydrologic analysis was completed using the following synthetic design storms and historical storms. The IDF parameters used to generate the design storms were taken from the *Ottawa Design Guidelines - Sewer* (November 2004).

#### 3 Hour Chicago Distribution:

25mm Event (Water Quality)  
2-year Event  
5-year Event  
10-year Event  
100-year Event

#### 12 Hour SCS Type II Distribution:

2-year Event  
5-year Event  
10-year Event  
100-year Event

The 3-hour Chicago distribution generated the highest peak flows, however the 12-hour SCS storm generated higher HGL elevations. Thus, both storm distributions were used for the design of the storm drainage system.

### 6.4.2 Model Development

The PCSWMM model is a semi-lumped model that represents both the minor and major system flows from the development. The results of the analysis were used to:

- Simulate major and minor system runoff from the site;
- Determine the storm sewer hydraulic grade line for the 100-year storm event;
- Ensure the stormwater management facility is sufficiently sized to control runoff from the proposed development and the upstream drainage areas.

#### Storm Drainage Areas

The site has been divided into subcatchments based on the proposed land use and roadway design. The catchment areas shown on the Storm Drainage Area Plan **108195-STM (Appendix C)** correspond to the areas used in the Storm Sewer Design Sheet (**Appendix A**).

**Model Parameters**

Since the major system has not yet been designed, the subcatchment areas are not based on a detailed grading plan. Major system storage is represented in the PCSWMM model using storage nodes. The major system storage requirements have been estimated based on controlling the inflows to the storm sewer system as follows:

- 2-year flows captured on local streets;
- 5-year flows captured on collector roads;
- 10-year flows captured on arterial roads.

The hydrologic parameters for each subcatchment were developed based on the Land Use Plan (**Figure 2**) and the Storm Drainage Area Plan (**108195-STM**). An overview of the modeling parameters is provided in **Table 6.4**.

**Table 6.4: PCSWMM Model Parameters**

Area ID	Area (ha)	Runoff Coeff. (C)	Percent Impervious (%)	No Depression Storage (%)	Curve Number (CN)	Equivalent Width (m)	Average Slope (%)
<b>Kizell Lands</b>							
P1-01-02	2.32	0.82	89%	0%	80.5	25	0.50
P1-03a	6.01	0.60	57%	30%	80.5	150	0.50
P1-03b	2.62	0.66	66%	30%	80.5	75	0.50
P1-04a	2.59	0.81	87%	30%	80.5	70	0.50
P1-04b	2.24	0.81	87%	30%	80.5	75	0.50
P1-05	1.61	0.50	43%	0%	80.5	30	0.50
P1-06	3.49	0.62	60%	30%	80.5	94	0.50
P1-07	1.65	0.90	100%	0%	80.5	25	0.50
P1-08	9.53	0.69	70%	50%	80.5	150	0.50
P1-09	1.66	0.84	91%	0%	80.5	25	0.50
P1-10	1.89	0.70	71%	50%	80.5	79	0.50
P1-11	4.70	0.70	71%	50%	80.5	109	0.50
P1-12	2.28	0.65	64%	50%	80.5	46	0.50
P1-13	7.98	0.65	64%	50%	80.5	100	0.50
P1-14	3.25	0.60	57%	50%	80.5	86	0.50
P1-15	2.41	0.65	64%	10%	80.5	33	0.50
P1-16	5.79	0.66	66%	50%	80.5	145	0.50
P1-17	2.41	0.88	97%	0%	80.5	25	0.50
P1-18	3.01	0.78	83%	10%	80.5	64	0.50
P1-19	1.44	0.65	64%	50%	80.5	40	0.50
P1-20	4.76	0.65	64%	50%	80.5	87	0.50
P1-25_POND1	4.29	0.76	80%	0%	80.5	86	0.50
<b>TOTAL:</b>	<b>77.93</b>						

Area ID	Area (ha)	Runoff Coeff. (C)	Percent Impervious (%)	No Depression Storage (%)	Curve Number (CN)	Equivalent Width (m)	Average Slope (%)
<b>Off-Site Areas</b>							
GR_SUBDV	60.70	0.58	54%	5%	85.0	500	0.50
IBER_IND	6.60	0.59	55%	50%	87.0	250	0.50
IBER_RD_E	2.22	0.83	90%	0%	87.0	25	0.50
<b>TOTAL (EXT)</b>							

#### Runoff Coefficient/ Impervious Values

Impervious (%IMP) values for each subcatchment area were calculated based on the Runoff Coefficients (see **Table 6.2**) noted on the Storm Drainage Area Plan (**108195-STM**) using the equation:

$$\%IMP = \frac{(C - 0.2)}{0.7}$$

#### Depression Storage

The default values for depression storage in the City of Ottawa were used for all catchments.

- Depression Storage (pervious areas): 4.67 mm
- Depression Storage (impervious areas): 1.57 mm

Residential rooftops are assumed to provide no depression storage and all rainfall is converted to runoff. The percentage of rooftop area to total impervious area is represented by the 'no depression storage' column in **Table 6.4**.

#### Curve Number

The Carp River Watershed PCSWMM model uses an SCS Curve Number of 80.5. Thus, all subcatchments within the Kizell Lands have been given a curve number value of 80.5, to remain consistent with the Carp River Watershed model.

#### Equivalent Width

'Equivalent Width' refers to the width of the sub-catchment flow path. This parameter is calculated as described in the *Sewer Design Guidelines, October 2012, Section 5.4.5.6*.

### Upstream Areas

The proposed Kizell Lands development must maintain a storm outlet for the Granite Ridge SWM facility. The existing 1350mm storm sewer north of the high school site at Abbott Street will connect to the proposed storm sewer system, and will serve as the outlet for the Granite Ridge SWM facility, as well as the Iber Road South SWM facility.

The outflows from the upstream SWM facilities will have already been treated, but will be routed through the Kizell storm sewers to Pond 1. For SWM facilities in series, the MOE recommends that the downstream pond (Pond 1) be designed to provide 80 m<sup>3</sup>/ha extended detention storage, double the standard 40 m<sup>3</sup>/ha required for a single facility.

### Fernbank Pond 1

Refer to **Section 7.0** for additional details on the design of Fernbank Pond 1, including the stage-storage-discharge curves used in the PCSWMM model.

### Modeling Files / Schematic

The PCSWMM model schematics and 100-year model output data are provided in **Appendix B**. Digital copies of the modeling files and model output for all storm events are provided on the enclosed CD.

#### **6.4.3 Model Results**

The results of the PCSWMM model are summarized in the following sections.

### Peak Flows

The proposed SWM facility has been designed to control post-development peak flows in the Carp River West Tributary to Pre-Development levels. The Pre-development peak flows for the 12-hour SCS distribution are taken from Table 8-2 of the Fernbank EMP. A comparison of pre vs. post development peak flows is provided in **Table 6.5**.

**Table 6.5: Pre vs. Post-Development Peak Flows to Carp River West Tributary (m<sup>3</sup>/s)**

<b>Storm Distribution-&gt;</b>	<b>12hr SCS Distribution</b>			
<b>Return Period-&gt;</b>	2yr	5yr	10yr	100yr
<b>Pre-Development</b>	1.71	2.67	3.32	5.43
<b>Post-Development</b>	1.26	1.90	2.37	4.85

### Hydraulic Grade Line

The PCSWMM model was used to evaluate the 100-year hydraulic grade line (HGL) elevations within the proposed storm sewers. As the design is only at the draft plan stage, underside of footing (USF) elevations have not yet been determined. The HGL analysis will need to be revised at the detailed design stage to reflect the controlled inflows at each inlet to the storm sewers.

The PCSWMM model indicates that there will be some surcharging of the sewers during the 100-year event. While the 3-hour Chicago Distribution generates higher peak flows, the 12-hour SCS distribution generates larger runoff volumes. Consequently, the 12-hour SCS distribution also generates the highest HGL elevations due to backwater from the 100-year water level in the proposed SWM facility.

The storm sewer sizes and elevations have been adjusted as required to maintain a 100-year HGL within approximately 0.30 m above the pipe obvert. HGL elevations greater than 0.30m above the pipe obvert are highlighted in red in **Table 6.6**.

**Table 6.6: 100-year HGL Elevations (12hour SCS Type II Distribution)**

Manhole ID	MH Invert Elevation (m)	T/G Elevation (m)	D/S Pipe Obvert (m)	HGL Elevation (m)	WL Above Obvert (m)
P1-101 (STM)	97.65	100.80	99.17	99.39	0.22
P1-101a (STM)	97.59	100.80	99.48	99.22	-0.26
P1-103 (STM)	97.70	100.83	99.51	99.53	0.02
P1-105 (STM)	97.78	101.51	99.58	99.63	0.05
P1-107 (STM)	98.35	101.67	99.72	99.69	-0.03
P1-109 (STM)	98.46	101.84	99.83	99.73	-0.10
P1-111 (STM)	98.79	102.06	100.01	99.76	-0.25
P1-113 (STM)	99.17	102.30	100.24	99.83	-0.41
P1-147 (STM)	97.98	101.82	99.71	99.83	0.12
P1-153 (STM)	98.10	102.12	99.83	100.04	0.21
P1-165 (STM)	98.23	102.43	99.96	100.22	0.26
P1-169 (STM)	98.31	102.61	100.04	100.36	0.32
P1-171 (STM)	98.44	102.51	100.26	100.51	0.25
P1-173 (STM)	99.43	103.07	100.50	100.59	0.09
P1-203 (STM)	98.67	103.15	100.50	100.79	0.29
P1-205 (STM)	98.91	103.66	100.74	101.03	0.29
P1-207 (STM)	99.16	103.17	100.99	101.28	0.29
P1-209 (STM)	100.43	103.50	101.19	101.37	0.18
P1-215 (STM)	99.59	102.78	101.27	101.57	0.30
P1-215a (STM)	101.06	103.39	101.52	101.60	0.08
P1-217 (STM)	99.89	103.31	101.84	101.95	0.11
P1-219 (STM)	100.64	103.45	101.86	102.11	0.25
P1-219A (STM)	101.19	102.84	101.95	102.13	0.18
P1-221 (STM)	100.69	102.42	101.45	101.78	0.33
P1-221a(STM)	99.72	102.75	101.40	101.76	0.36
P1-301 (STM)	97.70	101.25	99.04	99.23	0.19
P1-301a (STM)	97.70	101.25	99.04	99.24	0.20
P1-303 (STM)	97.73	101.29	99.07	99.23	0.16
P1-305 (STM)	97.79	101.36	99.13	99.23	0.10
P1-307 (STM)	98.48	101.56	99.32	99.25	-0.07
P1-317 (STM)	97.91	101.44	99.28	99.22	-0.06
P1-319 (STM)	98.12	101.57	99.49	99.24	-0.25
P1-321 (STM)	98.22	101.65	99.59	99.29	-0.30
P1-323 (STM)	98.89	101.72	99.73	99.46	-0.27
P1-327 (STM)	98.82	102.05	99.89	99.57	-0.32
P1-337 (STM)	99.34	102.84	100.18	99.93	-0.25

Manhole ID	MH Invert Elevation (m)	T/G Elevation (m)	D/S Pipe Obvert (m)	HGL Elevation (m)	WL Above Obvert (m)
P1-349 (STM)	101.62	103.80	102.23	102.52	0.29
P1-351 (STM)	101.35	103.76	102.13	102.40	0.27
P1-EX. 501 (STM)	101.18	104.04	102.55	103.07	0.52
P1-EX. 502 (STM)	101.12	103.98	102.49	102.89	0.40
P1-EX. 503 (STM)	100.87	103.75	102.24	102.53	0.29
P1-EX. 504 (STM)	100.63	103.49	102.00	102.21	0.21

#### 6.4.4 Carp River Watershed PCSWMM Model

The City has developed a PCSWMM model of the Carp River subwatershed and indicated that all new development within the watershed is to be represented in this model to confirm that the cumulative impacts of development are accounted for and that the proposed stormwater management strategies will have no adverse impact on water levels in the Carp River.

To determine what effect the proposed Kizell Lands development will have on the downstream Carp River, the Kizell Lands PCSWMM model was merged with the Carp River Watershed PCSWMM model provided by the City.

It was determined that the proposed development will not have an adverse effect on the downstream watercourses as the outflows from Pond 1 are to be controlled to match existing flows into the Carp River West Tributary. Refer to technical memorandum in **Appendix B**.

## 7.0 STORMWATER MANAGEMENT FACILITY

The proposed SWM facility has been sized to provide water quality and quantity control for a total tributary drainage area of 77.9 ha from the Kizell Lands, plus an additional 69.5 ha from the upstream Granite Ridge SWM Facility and Iber Road. The design of the SWM facility is shown on Drawing **108195-SWMF**.

### 7.1 Design Criteria

The proposed SWM facility has been design to meet the following criteria:

- Provide a *Normal* level of water quality control (70% long-term TSS removal);
- Provide quantity control storage to limit post-development flows into the Carp River West Tributary to 5.3 m<sup>3</sup>/s for all storms up to and including the 100-year event;
- The SWM facility will have side slopes of 3:1 (H:V) or shallower;
- The forebays have been sized to provide sufficient storage for 10-years of sediment accumulation;
- A sediment storage area for each forebay (two in total) have been provided within the SWM block to allow for storage and drying of material removed during maintenance/cleanout;

- Guardrails conforming to City standards are to be installed at the inlet and outlet structures of the SWM facility;
- Infiltration tests are to be performed on the native material to determine whether a liner will be required.

## 7.2 Pathways/ SWM Facility Access

Access to the inlet and outlet structures and the sediment storage area will be provided by the proposed service road / pathway that runs around the perimeter of the pond. Two accesses to the pond block will be provided as shown on Drawing **108195-SWMF**.

## 7.3 Geotechnical (Pond Liner)

It is recommended that the base and the sidewalls of the SWM facility be inspected by a geotechnical consultant to confirm the requirement for a geotechnical liner. The thickness of the pond liner (if required) would be designed to be outside the limits of the design grades of the SWM facility and would have no impact on the storage volume of the pond.

## 7.4 Inlet Structures

The north and south inlets to the SWM facility have been designed with flow splitters consisting of a low-flow pipe to direct runoff from smaller storm events into the forebays, and a high flow pipe to direct peak flows from larger storm events directly into the main cell of the pond. The low-flow and high-flow pipes are to be separated by a weir structure within the connecting manhole.

The SWM Facility inlet structures will consist of the following:

- North Inlet:
  - 975 mm pipe outletting to the north forebay, sized for the flows from the 25mm water quality event;
  - 1340 x 2100 mm pipe outletting to the main cell of the pond.
  - Flow splitter weir (crest elevation = 98.44 m)
- South Inlet:
  - 1500 mm pipe outletting to the north forebay, sized for the flows from the 25mm water quality event;
  - 1800 mm pipe outletting to the main cell of the pond.
  - Flow splitter weir (crest elevation = 98.76 m)

A plunge pool will be placed at each inlet to prevent scour and erosion. The plunge pool and the banks of the forebay in the vicinity of the inlet will be lined with riprap as per City of Ottawa standards.



## 7.5 Sediment Forebays/ Permanent Pool

The sediment forebays have been designed in accordance with the *MOE SWM Planning and Design Manual* (March 2003). The north forebay will have a length of approximately 75 m, and the south forebay will have a length of approximately 85 m. Submerged riprap berms set 0.10 m below the normal water level will separate the forebays from the main cell of the pond.

The upstream drainage area from the Kizell Lands to the SWM facility (approximately 77.93 ha) has an average imperviousness of 71%. For a *Normal* level of protection (70% long-term TSS removal), the required permanent pool volume is approximately 6,700 m<sup>3</sup>. The proposed SWM facility will have a permanent pool volume of approximately 21,800 m<sup>3</sup>.

Annual sediment loading to the SWM facility from the upstream drainage area has been estimate at approximately 145.2 m<sup>3</sup>/year (see design calculations in **Appendix B**). Each forebay has been designed to allow for a minimum of 10 years of sediment accumulation:

- The north forebay will have an estimated sediment loading rate of approximately 34 m<sup>3</sup>/year. This corresponds to a sediment volume of 340 m<sup>3</sup> over a period of 10 years. The north forebay provides a sediment storage volume of approximately 1,160 m<sup>3</sup> at the top of the submerged berm separating the forebay and the main cell.
- The south forebay will have an estimated sediment loading rate of approximately 111 m<sup>3</sup>/year. This corresponds to a sediment volume of 1,110 m<sup>3</sup> over a period of 10 years. The south forebay provides a sediment storage volume of approximately 3,500 m<sup>3</sup> at the top of the submerged berm separating the forebay and the main cell.

## 7.6 SWM Facility Outlet Structure

Outflows from the SWM facility will be routed through an outlet control structure before discharging to a 1950 mm storm sewer which will outlet to the Carp River West Tributary.

### 7.6.1 Extended Detention

Extended detention will be provided for the first 6,290m<sup>3</sup> (6,234m<sup>3</sup> required) of active storage to allow for settling of suspended sediment in the pond. Extended detention outflows will be conveyed to the outlet structure via a 450mm reverse slope pipe with an invert of 96.25m at the bottom of the SWM facility and an invert of 97.75m (normal water level) at the connection to the outlet structure. The extended detention volume will be released over a period of approximately 40 hours through a 220mm slide-in orifice plate installed in the weir within the outlet structure.

### 7.6.2 Quantity Control

Flows that exceed the extended detention storage volume will outlet through a multi-stage weir within the outlet structure.

### 7.6.3 Overflow Spillway

The proposed SWM facility has been sized to provide sufficient storage for storms up to and including the 100-year event. An overflow spillway has been provided in case the outlet storm sewer is obstructed or an extreme event (greater than the 100-year event) generates runoff

exceeding the maximum available storage in the SWM facility. The overflow spillway will have a crest elevation of 99.80m and will direct overflows into the Carp River West Tributary.

## 7.7 Stage-Storage-Discharge Table

Based on the proposed SWM facility design, the stage-storage-discharge table is as follows:

**Table 7.1: Pond 1 Stage-Storage-Discharge Table**

Service Level	Elevation (m)	Stage (m)	Total Volume (m <sup>3</sup> )	Active Volume (m <sup>3</sup> )	Discharge (m <sup>3</sup> /s)
<b>Bottom</b>	96.25	-	0		
<b>NWL</b>	97.75	0.00	21504	0	0
	97.85	0.10	23254	1750	0
	97.95	0.20	25037	3533	31
	98.05	0.30	26863	5359	45
<b>Ex. Det.</b>	98.10	0.35	27794	6290	50
	98.15	0.40	28736	7232	81
	98.25	0.50	30663	9159	195
	98.35	0.60	32637	11133	348
	98.45	0.70	34658	13154	528
	98.55	0.80	36736	15232	730
<b>2-year</b>	98.65	0.90	38863	17359	1033
	98.75	1.00	41057	19553	1417
	98.85	1.10	43332	21828	1852
<b>5-year</b>	98.95	1.20	45619	24115	2326
	99.05	1.30	47933	26429	2829
	99.15	1.40	50287	28783	3356
	99.25	1.50	52672	31168	3901
	99.35	1.60	55070	33566	4461
	99.45	1.70	57507	36003	5032
<b>100-year</b>	99.50	1.75	58737	37233	5320
<b>Overflow</b>	99.80	2.05	66025	44521	9501

## 7.8 Carp River West Tributary

The SWM facility will outlet to the existing Carp River West Tributary at the northern end of the site. As per the Fernbank EMP, the first 100m of the tributary is not considered a “naturalized” channel, and will be re-graded to accommodate the proposed SWM facility outlet. The re-graded section of the Carp River West Tributary will be reinstated with plantings and may incorporate other natural channel features (to be determined at the detailed design stage).

## 8.0 EROSION AND SEDIMENT CONTROL

Erosion and sediment control measures will be implemented during construction in accordance with the "Guidelines on Erosion and Sediment Control for Urban Construction Sites" (Government of Ontario, May 1987). Detailed plans will be provided at the detailed design stage.

Typical erosion and sediment control measures recommended include, but are not limited to, the use of silt fences around perimeter of site (OPSD 219.110), filter fabric or inserts under catch basin/maintenance hole lids, heavy duty silt fence barrier (OPSD 219.130), straw bale check dams (OPSD 219.180), rock check dams (219.210 or OPSD 219.211), turbidity curtain (OPSD 219.260), dewatering trap (OPSD 219.240), temporary water passage system (OPSD 221.030), riprap (OPSS 511), mud mats, silt bags for dewatering operations, topsoil and sod to disturbed areas and natural grassed waterways. Dewatering and sediment control techniques will be developed for the individual situations based on the above guidelines and utilizing typical measures to ensure erosion and sediment control is controlled in an acceptable manner and there is no negative impact to adjacent lands, water bodies or water treatment/conveyance facilities.

It will be the responsibility of the Contractor to submit a detailed construction schedule and appropriate staging, dewatering and erosion and sediment control plans to the Contract Administrator for review and approval prior to the commencement of work.

All erosion and sediment control measures are to be installed to the satisfaction of the engineer, the municipality and the conservation authority prior to undertaking any site alterations (filling, grading, removal of vegetation, etc.) and remain present during all phases of site preparation and construction.

- A qualified inspector should conduct daily visits during construction to ensure that the contractor is working in accord with the design drawings and that mitigation measures are being implemented as specified.
  - A light duty silt fence barrier is to be installed in the locations shown on the Erosion and Sediment Control Plan.
  - Straw bale barriers are to be installed in drainage ditches
  - Inserts are to be placed under the grates of all proposed and existing catchbasins and structures.
  - After complete build-out, all sewers are to be inspected and cleaned and all sediment and construction fencing is to be removed.
- The contractor shall ensure that proper dust control is provided with the application of water (and if required, calcium chloride) during dry periods.
- The contractor shall immediately report to the engineer or inspector any accidental discharges of sediment material into any ditch or sewer system. Appropriate response measures shall be carried out by the contractor without delay.
- The contractor acknowledges that failure to implement erosion and sediment control measures may result in penalties imposed by any applicable regulatory agency.

## 9.0 NOISE

The City of Ottawa is concerned with noise from aircraft, roads, railways and Transitways as expressed in Section 4.8.8 of the Official Plan. These policies are supported by the Environmental Noise Control Guidelines [10] which is a technical document that outlines the specific sound level criteria.

The proposed Arterial Road, Hazeldean Road, Abbott Street and the Major/Minor Collectors are all classified as potential noise sources that will have to be analyzed at the detailed design stage. The Plan of Subdivision has been configured to mitigate noise levels to the extent practical using planning-based strategies. Dwellings adjacent the Arterial Road will likely have an architectural and acoustic façade facing the high-traffic roadway, and an outdoor amenity area shielded behind the super-structure of each apartment block.

Despite the preceding land use measures, a detailed noise study will be undertaken in conjunction with the Plan of Subdivision and Site Plan applications. Specific noise mitigation measures will be analyzed and submitted at that time, including such measures as noise attenuation barriers, acoustic residential glazing, etc.

## 10.0 UTILITIES

The development will be serviced by Hydro Ottawa, Bell Canada, Enbridge Gas and Rogers Cablevision (as required); services will be constructed as per the City and Utility standards.

Discussions with the various utility companies have confirmed that there is adequate infrastructure in the vicinity to supply the Fernbank Community as it grows. Ongoing coordination during the development approvals process will be required to ensure that utilities are in place when development proceeds.

As stated in the Fernbank Master Servicing Study, the utility firms have requested they are kept apprised throughout the development process, but no additional investigation or analysis is warranted until detail design is initiated.

## 11.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the preceding, the report conclusions are summarized below:

- 1) The servicing design generally conforms to the conclusions and recommendations outlined in the Fernbank Master Servicing Study and the Fernbank Environmental Management Plan both of which were approved by Council on June 24, 2009.
- 2) There is adequate capacity in the existing and planned infrastructure (sanitary, storm and water) to accommodate servicing from the Kizell Lands.
- 3) The proposed grading design generally follows the existing topographic contours. Grading will be coordinated with neighbouring land owners.
- 4) The Stittsville Diversion Trunk and Kanata West Pump Station (sanitary) must be operational for servicing of the Kizell Lands.
- 5) The Glen Cairn Pumping Station will be upgraded by the City of Ottawa as-and-when required based on overall growth rates within in the entire Zone 3W Area.
- 6) Pond 1 is required to provide quality and quantity control of stormwater runoff. Ponds 2 & 3 will be constructed by others, and will service a portion of the Kizell Lands.
- 7) A Noise Study is required in conjunction with the detail design of the development.
- 8) Hydro, Gas, Bell and Cablevision have infrastructure nearby to service the proposed development.

This report is respectfully submitted for review and approval. Please contact the undersigned should you have questions or require additional information.

Prepared By:

Prepared By:

**NOVATECH**



Michael Petepiece, P.Eng.  
Project Manager



Mark Bissett, P.Eng.  
Project Manager

## References

- 1 “Fernbank Community Design Plan, Walker, Nott, Dragicevic Associates Ltd. [June 24, 2009]
- 2 “Fernbank Master Servicing Study”, Novatech Engineering Consultants Ltd. [June 24, 2009]
- 3 “Fernbank Environmental Management Plan”, Novatech Engineering Consultants Ltd. [June 24, 2009]
- 4 “Preliminary Geotechnical Assessment Kizell Lands, 5618 Hazeldean Road, Ottawa, Ontario”, Houle Chevrier Engineering [August 25, 2016]
- 5 “Transportation Master Plan”, City of Ottawa [November 2013]
- 6 “Fernbank Transportation Master Plan”, Delcan [June 24, 2009]
- 7 “Kizell Lands - Community Transportation Study / Transportation Impact Study”, Novatech [Report No. 2016-161, November 2016]
- 8 “Sewer Design Guidelines”, Department of Public Works and Services, City of Ottawa [October 2012]
- 9 “Standard Tender Documents, Material Specifications and Standard Detail Drawings” City of Ottawa, Department of Infrastructure Services and Community Sustainability [March, 2014]
- 10 “City of Ottawa Environmental Noise Control Guidelines, Planning and Growth Management Department” City of Ottawa [January, 2016]

## **Appendix A: Sewer Design Sheets and Water Modelling**

Storm Sewer Design Sheet (Rational Method)

Sanitary Sewer Design Sheets

Watermain Boundary Conditions

Watermain Modelling

Fernbank Community - Kizell Lands: Storm Sewer Design Sheet ( Rational Method )

LOCATION			AREA										FLOW						Total Peak Flow (Q) (L/s)	PROPOSED SEWER												
Location	From Node	To Node	Park N' Ride	Arterial Road ROW	Abbott Street ROW	Mixed Use	High Density / Medium Block	Low Density	Schools	Park	Hydro Corridor	Total Area (ha)	Weighted Runoff Coefficient	Indivi 2.78 AR	Accum 2.78 AR	Time of Concentration	Rain Intensity (mm/hr)			Peak Flow (L/s)	Pipe Type	Pipe Size (mm)	Grade (%)	Length (m)	Capacity (l/s)	Full Flow Velocity (m/s)	Time of Flow (min.)	Q/Qfull (%)				
																	2yr	5yr											10yr			
<b>POND 1 North Inlet</b>			0.80	0.90	0.76	0.80	0.80	0.65	0.60	0.40	0.20																					
P1-16	337	327					1.66	3.30			0.80	5.76	0.66	10.54	10.54	15.00	61.77			651.3	CONC	825	0.30	97.0	820.2	1.49	1.09	79.4%				
												0.00		0.00	0.00	15.00			0.0													
P1-17	327	321						0.20				0.00	0.65	0.00	10.54	16.09	59.31			625.4	CONC	1050	0.25	120.0	1424.4	1.59	1.26	82.2%				
				2.20								0.20	0.90	0.36	0.36	16.09		80.2	29.0													
												2.20	0.90	5.50	5.50	16.09		93.9	516.9													
P1-18	323	321	1.82				0.70	0.50				3.02	0.78	6.51	6.51	15.00	61.77			402.0	CONC	825	0.20	71.2	669.7	1.21	0.98	60.0%				
												0.00		0.00	0.00	15.00			0.0													
P1-19	321	317										0.00	0.65	0.00	17.05	17.34	56.74			967.6	CONC	1350	0.15	161.8	2156.5	1.46	1.85	78.6%				
								1.49				1.49	0.65	0.00	5.50	17.34		89.8	494.1													
												0.00		0.00	17.05	19.19	53.37			910.1	CONC	1350	0.15	81.5	2156.5	1.46	0.93	73.9%				
												0.00		0.00	5.50	19.19		84.4	464.3													
P1-20	307	305					1.48	2.41			0.81	4.70	0.65	8.55	8.55	15.00	61.77			527.9	CONC	825	0.20	81.7	669.7	1.21	1.12	78.8%				
												0.00		0.00	0.00	15.00			0.0													
												0.00		0.00	25.60	20.12	51.84			1327.0	CONC	1650	0.10	76.4	3006.9	1.36	0.93	66.2%				
												0.00		0.00	3.05	20.12		70.0	213.7													
												0.00		0.00	5.50	20.12		81.9	450.8													
<b>TOTAL</b>			<b>1.82</b>	<b>2.20</b>	<b>0.00</b>	<b>0.00</b>	<b>3.84</b>	<b>7.90</b>	<b>0.00</b>	<b>1.61</b>	<b>0.00</b>	<b>17.37</b>	<b>0.71</b>		<b>34.16</b>	<b>21.06</b>				<b>114.7</b>	<b>L/s/ha</b>											

Q = 2.78 AIR      WHERE : Q = PEAK FLOW IN LITRES PER SECOND (L/s)  
 A = AREA IN HECTARES (ha)  
 I = RAINFALL INTENSITY IN MILLIMETERS PER HOUR (mm/hr)  
 R = WEIGHTED RUNOFF COEFFICIENT

$Q = (1/n) A R^{(2/3)} S_o^{(1/2)}$       WHERE :  
 Q = CAPACITY (L/s)  
 n = MANNING COEFFICIENT OF ROUGHNESS (0.013)  
 A = FLOW AREA (m<sup>2</sup>)

Project: Kizell Lands (108195)  
 Designed: LRW  
 Checked: MAB  
 Date: November 9 2016



Fernbank Community - Kizell Lands: Storm Sewer Design Sheet ( Rational Method )

LOCATION			AREA										FLOW						Total Peak Flow (Q) (L/s)	PROPOSED SEWER														
Location	From Node	To Node	Park N' Ride	Arterial Road ROW	Abbott Street ROW	Mixed Use	High Density / Medium Block	Low Density	Schools	Park	Hydro Corridor	Total Area	Weighted Runoff Coefficient	Indivi 2.78 AR	Accum 2.78 AR	Time of Concentration	Rain Intensity (mm/hr)			Peak Flow	Pipe Type	Size (mm)	Grade (%)	Length (m)	Capacity (l/s)	Full Flow Velocity (m/s)	Time of Flow (min.)	Q/Qfull (%)						
																	2yr	5yr											10yr	(L/s)				
<b>POND 1 South Outlet</b>			0.80	0.90	0.76	0.80	0.80	0.65	0.60	0.40	0.20	(ha)																						
P1-1	Abbott	351			0.70							0.00	0.70	0.76	0.00	0.00	15.00				0.0					258.2	CONC	600	0.20	121.9	286.5	0.98	2.07	90.1%
				0.55								0.55	0.90		1.38	1.38	15.00				97.85													
P1-2	351	219										0.00	0.00		0.00	0.00	17.07								345.8	CONC	750	0.25	104.1	580.7	1.27	1.36	59.5%	
				0.47								0.47	0.90		1.18	2.55	17.07				90.63													
P1-3	219	217				2.63			6.01			8.64	0.66		15.87	15.87	18.43	54.70							1325.9	CONC	1200	0.25	120.0	2033.7	1.74	1.15	65.2%	
				0.59								0.59	0.90		1.48	4.03	18.43				86.49													
Granite Ridge/Industrial Park																									1931.0									
P1-4	217	215				4.45						4.45	0.80		9.90	25.77	19.58	52.72								3807.5	CONC	1650	0.25	120.0	4754.3	2.15	0.93	80.1%
				0.37								0.00			0.00	1.48	19.58				83.3													
P1-5	215	207										0.93	0.20		0.52	26.29	20.51	51.23							3918.4	CONC	1650	0.25	112.9	4754.3	2.15	0.87	82.4%	
				0.68								0.00			0.00	1.48	20.51				80.92													
P1-6	209	207					0.57	2.11		0.81		3.49	0.62		5.98	5.98	15.00	61.77							369.4	CONC	750	0.30	74.1	636.1	1.39	0.89	58.1%	
												0.00			0.00	0.00	15.00																	
P1-7	207	171										0.00			0.00	32.27	21.38	49.91							4490.9	CONC	1800	0.20	246.7	5362.9	2.04	2.01	83.7%	
				1.65								0.00			0.00	1.48	21.38				67.4													
												1.65	0.90		4.13	10.78	21.38				78.81													
P1-8	173	171				0.55	2.07	6.93				9.55	0.69		18.35	18.35	15.00	61.77							1133.4	CONC	1050	0.30	79.8	1560.3	1.75	0.76	72.6%	
												0.00			0.00	0.00	15.00																	
P1-9	171	165						0.37				0.00	0.00		0.00	50.62	23.40	47.14						2386.1	CONC	2100	0.15	132.9	7005.7	1.96	1.13	78.4%		
				1.29								0.37	0.65		0.67	2.15	23.40				63.6				136.5									
												1.29	0.90		3.23	14.01	23.40				74.4				1042.1									
P1-10	165	153					0.64	0.66				1.30	0.72		2.62	53.23	24.53	45.73							5574.0	CONC	2100	0.15	88.8	7005.7	1.96	0.76	79.6%	
												0.59	0.65		1.07	3.21	24.53				61.7				198.2									
												0.00			0.00	14.01	24.53				72.12				1010.5									
P1-11	153	147					1.30	2.94				4.24	0.70		8.20	61.44	25.28	44.84							5920.9	CONC	2100	0.15	82.0	7005.7	1.96	0.70	84.5%	
												0.46	0.65		0.83	4.04	25.28				60.4				244.5									
												0.00			0.00	14.01	25.28				70.70				990.6									
P1-12	147	105						1.73				1.73	0.65		3.13	64.56	25.98	44.05							2844.0	CONC	2100	0.15	87.1	7005.7	1.96	0.74	86.3%	
												0.55	0.65		0.99	5.04	25.98				59.4				299.2									
												0.00			0.00	14.01	25.98				69.44				972.9									
P1-13	113	111					1.51	4.72		0.80		7.03	0.65		12.78	12.78	15.00	61.77							932.6	CONC	1050	0.20	116.7	1274.0	1.43	1.36	73.2%	
												0.95	0.65		1.72	1.72	15.00				83.56				143.4									
												0.00			0.00	0.00	15.00								0.0									
P1-14	111	109							3.01			3.01	0.60		5.02	17.80	16.36	58.72							1215.9	CONC	1200	0.15	120.1	1575.3	1.35	1.48	77.2%	
												0.24	0.65		0.43	2.15	16.36				79.39				170.7									
												0.00	0.00		0.00	0.00	16.36								0.0									
P1-15	109	105						1.22				1.22	0.65		2.20	20.00	17.85	55.77							1438.3	CONC	1350	0.10	233.3	1760.8	1.19	3.26	81.7%	
												1.18	0.65		2.13	4.28	17.85				75.36				322.7									
												0.00	0.00		0.00	0.00	17.85								0.0									
Pond 1	105	101										0.00			0.00	84.57	26.72	43.25							7086.2	CONC	1800x3000	0.10	80.8	9301.6	1.81	0.75	76.2%	
												0.00			0.00	9.32	26.72				58.3				543.3									
												0.00			0.00	14.01	26.72				68.2				954.9									
<b>TOTAL</b>			0.00	5.60	0.70	7.63	6.09	24.65	9.02	1.61	0.93	56.23	0.69		107.90	27.47									126.0	L/s/ha								

Q = 2.78 AIR WHERE : Q = PEAK FLOW IN LITRES PER SECOND (L/s) A = AREA IN HECTARES (ha) I = RAINFALL INTENSITY IN MILLIMETERS PER HOUR (mm/hr) R = WEIGHTED RUNOFF COEFFICIENT

Q = (1/n) A R^(2/3)So^(1/2) WHERE :

Q = CAPACITY (L/s) n = MANNING COEFFICIENT OF ROUGHNESS (0.013) A = FLOW AREA (m<sup>2</sup>)

Project: Kizell Lands (108195) Designed: LRW Checked: MAB Date: November 9 2016

Fernbank Community - Kizell Lands: Storm Sewer Design Sheet ( Rational Method )

LOCATION			AREA											FLOW						Total Peak Flow (Q) (L/s)	PROPOSED SEWER								
Location	From Node	To Node	Park N' Ride	Arterial Road ROW	Abbott Street ROW	Mixed Use	High Density / Medium Block	Low Density	Schools	Park	Hydro Corridor	Total Area (ha)	Weighted Runoff Coefficient	Indivi 2.78 AR	Accum 2.78 AR	Time of Concentration	Rain Intensity (mm/hr)				Peak Flow (L/s)	Pipe Type	Pipe Size (mm)	Grade (%)	Length (m)	Capacity (l/s)	Full Flow Velocity (m/s)	Time of Flow (min.)	Q/Qfull (%)
																	2yr	5yr	10yr										
<b>POND 2</b>			0.80	0.90	0.76	0.80	0.80	0.65	0.60	0.40	0.20	(ha)																	
P2-21	401	R219				2.86		1.93				4.79	0.74	9.85	9.85	15.00	61.77			608.3	CONC	825	0.40	107.1	947.1	1.72	1.04	64.2%	
												0.00		0.00	0.00	15.00			0.0										
												0.00		0.00	0.00	15.00			0.0										
P2-22	503	501						0.76				0.76	0.65	1.37	1.37	15.00	83.56			114.8	PVC	375	1.00	88.2	182.9	1.60	0.92	62.7%	
												0.00		0.00	0.00	15.00			0.0										
												0.00		0.00	0.00	15.00			0.0										
P2-23	603	601						0.71				0.71	0.65	1.28	1.28	15.00	61.77			79.2	PVC	375	1.00	86.7	182.9	1.60	0.90	43.3%	
												0.00		0.00	0.00	15.00			0.0										
												0.00		0.00	0.00	15.00			0.0										
<b>POND 3</b>																													
P3-24	703	R355					5.33			1.59	1.77	8.69	0.60	14.61	14.61	15.00	61.77			902.2	CONC	1200	0.15	106.7	1575.3	1.35	1.32	74.5%	
												1.54	0.76	3.25	3.25	15.00	83.6			271.9									
												0.00		0.00	0.00	15.00			0.0										

Q = 2.78 AIR      WHERE : Q = PEAK FLOW IN LITRES PER SECOND (L/s)  
 A = AREA IN HECTARES (ha)  
 I = RAINFALL INTENSITY IN MILLIMETERS PER HOUR (mm/hr)  
 R = WEIGHTED RUNOFF COEFFICIENT

$Q = (1/n) A R^{(2/3)} S_o^{(1/2)}$       WHERE :  
 Q = CAPACITY (L/s)  
 n = MANNING COEFFICIENT OF ROUGHNESS (0.013)  
 A = FLOW AREA (m<sup>2</sup>)

Project: Kizell Lands (108195)  
 Designed: LRW  
 Checked: MAB  
 Date: November 9 2016



## Lucas Wilson

---

**From:** Surprenant, Eric <Eric.Surprenant@ottawa.ca>  
**Sent:** September-29-16 8:30 AM  
**To:** Lucas Wilson  
**Subject:** FW: Fernbank Community - Kizell Lands: WM Boundary Conditions

Lucas,

Here are the requested boundary conditions:

Hazeldean Connection (900mm feedermain):

PKHR = 155.5m

MAX HGL = 162.4m

MXDY+Fire (167 L/s) = 155.6m

MXDY+Fire (217 L/s) = 155.6m

Abbott Street Connection (400mm watermain):

PKHR = 154.5m

MAX HGL = 162.1m

MXDY+Fire (167 L/s) = 154.5m

MXDY+Fire (217 L/s) = 153.6m

*Disclaimer: The boundary condition information is based on current operation of the city water distribution system. The computer model simulation is based on the best information available at the time. The operation of the water distribution system can change on a regular basis, resulting in a variation in boundary conditions. The physical properties of watermains deteriorate over time, as such must be assumed in the absence of actual field test data. The variation in physical watermain properties can therefore alter the results of the computer model simulation. Fire Flow analysis is a reflection of available flow in the watermain; there may be additional restrictions that occur between the watermain and the hydrant that the model cannot take into account.*

---

**From:** Lucas Wilson [<mailto:l.wilson@novatech-eng.com>]  
**Sent:** September 26, 2016 1:44 PM  
**To:** Surprenant, Eric  
**Subject:** Fernbank Community - Kizell Lands: WM Boundary Conditions

Eric,

Not sure who will be assigned to this project but I thought I'd start with you. I'm looking for boundary conditions to complete a hydraulic analysis in support of Draft Plan Submission.

The site is located north of Fernbank Crossing, between Abbott Street and Hazeldean. I've included a drawing which highlights the connections at Hazeldean and Abbott Street within the extended Robert Grant ROW. I've also attached the projected water demand for the Concept Site. Please let me know if you require additional information.

Thanks,

**Lucas Wilson** | P.Eng.

Project Engineer

**NOVATECH**

**Engineers, Planners & Landscape Architects** | 200-240 Michael Cowpland Drive, Ottawa, ON K2M 1P6

**Office** 613.254.9643 x282 | **Fax** 613.254.5867 | **Email** [l.wilson@novatech-eng.com](mailto:l.wilson@novatech-eng.com)

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**Kizell Lands  
Water Demand**

	Area (ha)	Units	Population	Average Day Demand (L/s)	Maximum Day Demand (L/s)	Peak Hour Demand (L/s)
<b>Singles</b>	N/A	327	1112	4.504	11.260	24.771
<b>Towns</b>	N/A	274	740	2.997	7.492	16.483
<b>Stacked Towns</b>	4.60	225	609	2.465	6.163	13.559
<b>Medium Density Residential</b>	9.94	646	1163	4.711	11.778	25.911
<b>High Density Residential</b>	N/A	372	670	2.713	6.781	14.919
<b>Mixed Use Residential</b>	5.47	465	837	3.390	8.476	18.646
<b>Mixed Use Commercial</b>	4.48	N.A	N/A	1.452	2.178	3.920
<b>Commercial</b>	0.55	N.A	N/A	0.178	0.267	0.481
<b>Schools</b>	3.01	N/A	N/A	0.975	1.463	2.634
<b>Park</b>	4.82	N/A	N/A	1.562	2.343	4.218
<b>Park N' Ride</b>	1.83	N/A	N/A	0.593	0.890	1.601
<b>Total</b>	<b>34.70</b>	<b>2309</b>	<b>5130</b>	<b>25.541</b>	<b>59.091</b>	<b>127.143</b>

**Water Demand Parameters**

Singles	3.4	ppl/unit		
Towns	2.7	ppl/unit		
Stacked Towns	2.7	ppl/unit	49	units/net ha
Medium Density Residential	1.8	ppl/unit	65	units/net ha
Mixed Use Residential	1.8	ppl/unit	85	units/net ha
Residential Demand	350	L/c/day		
Institutional/Commercial Demand	28000	L/gross ha/day		
Residential Max Day	2.5	x Avg Day		
Residential Peak Hour	2.2	x Max Day		
Institutional/Commercial Max Day	1.5	x Avg Day		
Institutional/Commercial Peak Hour	1.8	x Max Day		
Residential Fire Flow	167	L/s		
Institutional/Commercial Fire Flow	217	L/s		

Fernbank Community - Kizell Lands: Watermain Demand

Node	Singles	Towns	Stacked Towns (ha)	Medium Density Area (ha)	High Density	Mixed Use Area (ha)	Institutional/Commercial Area (ha)	Total Population	Total IC Area (ha)	Average Day Residential Demand (L/s)	Average Day IC Demand (L/s)	Total Average Day Demand (L/s)	Maximum Day Residential Demand (L/s)	Maximum Day IC Demand (L/s)	Total Maximum Day Demand (L/s)	Peak Hour Residential Demand (L/s)	Peak Hour IC Demand (L/s)	Total Peak Hour Demand (L/s)	Fire Flow (L/s)
HD1					372			670	0.00	2.713	0.000	2.713	6.781	0.000	6.781	14.919	0.000	14.919	217
MU1						4.70	2.12	396	4.47	1.602	1.447	3.049	4.005	2.170	6.176	8.812	3.907	12.719	217
MU2						2.38	1.07	200	2.26	0.811	0.733	1.544	2.028	1.099	3.127	4.462	1.978	6.441	217
N1	46		1.75	1.31			1.36	541	1.36	2.192	0.441	2.633	5.481	0.661	6.142	12.058	1.190	13.248	167
N2	16		1.27	1.56			0.80	405	0.80	1.640	0.259	1.900	4.101	0.389	4.490	9.022	0.700	9.722	167
N3	29	172		1.74		2.86	2.10	1007	3.53	4.080	1.144	5.224	10.201	1.716	11.917	22.442	3.089	25.530	217
N4	120	82		2.37				907	0.00	3.673	0.000	3.673	9.182	0.000	9.182	20.201	0.000	20.201	167
N5								0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	N/A
N6	75	20		1.51			3.81	486	3.81	1.967	1.235	3.202	4.919	1.852	6.771	10.821	3.334	14.155	217
N7								0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	167
N8								0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	167
N9								0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	N/A
N10								0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	N/A
P1							1.60	0	1.60	0.000	0.519	0.519	0.000	0.778	0.778	0.000	1.400	1.400	217
PR1							1.83	0	1.83	0.000	0.593	0.593	0.000	0.890	0.890	0.000	1.601	1.601	167
T1								0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	N/A
T2	41		1.58	1.45				518	0.00	2.099	0.000	2.099	5.247	0.000	5.247	11.543	0.000	11.543	167
<b>Total</b>	<b>327</b>	<b>274</b>	<b>4.6</b>	<b>9.94</b>	<b>372</b>	<b>9.94</b>	<b>14.69</b>	<b>5129</b>	<b>19.66</b>	<b>20.778</b>	<b>6.370</b>	<b>27.148</b>	<b>51.945</b>	<b>9.555</b>	<b>61.500</b>	<b>114.279</b>	<b>17.199</b>	<b>131.478</b>	

Water Demand Parameters

Singles	3.4	ppl/unit	Residential Max Day	2.5	x Avg Day
Towns	2.7	ppl/unit	Residential Peak Hour	2.2	x Max Day
Stacked Towns	132.3	ppl/net ha			
Medium Density Area	117	ppl/net ha	Institutional/Commercial Max Day	1.5	x Avg Day
Mixed Use Residential	153	ppl/net ha	Institutional/Commercial Peak Hour	1.8	x Max Day
High Density Residential	1.8	ppl/unit			
Residential Demand	350	L/c/day	Residential Fire Flow	167	L/s
Institutional/Commercial Demand	28000	L/gross ha/day	Institutional/Commercial Fire Flow	217	L/s

# Fernbank Community - Kizell Lands: Watermain Analysis

Network Table - Nodes - (Peak Hour)

Node ID	Elevation m	Demand LPS	Head m	Pressure m	Pressure kPa	Pressure psi
Junc HD1	103.2	14.92	154.34	51.14	501.68	72.76
Junc MU1	104.52	12.72	154.37	49.85	489.03	70.93
Junc MU2	104.15	6.44	154.31	50.16	492.07	71.37
Junc N1	104.5	13.25	154.27	49.77	488.24	70.81
Junc N2	103.44	9.72	154.74	51.3	503.25	72.99
Junc N3	101.79	25.53	155.02	53.23	522.19	75.74
Junc N4	102.48	20.2	154.21	51.73	507.47	73.60
Junc N5	101.94	0	154.25	52.31	513.16	74.43
Junc N6	102.39	14.15	154.21	51.82	508.35	73.73
Junc N7	101.47	0	154.21	52.74	517.38	75.04
Junc N8	100.7	0	155.19	54.49	534.55	77.53
Junc N9	96.68	0	155.5	58.82	577.02	83.69
Junc N10	102.7	0	154.46	51.76	507.77	73.65
Junc P1	102.73	1.4	154.29	51.56	505.80	73.36
Junc PR1	102	1.6	155.41	53.41	523.95	75.99
Junc T1	102.94	0	155.02	52.08	510.90	74.10
Junc T2	103.73	11.54	154.28	50.55	495.90	71.92
Resvr 1	155.5	-70.66	155.5	0	0.00	0.00
Resvr 2	154.5	-60.82	154.5	0	0.00	0.00

Network Table - Links - (Peak Hour)

Link ID	Length m	Diameter mm	Roughness	Flow LPS	Velocity m/s	Headloss m/km	Friction Factor
Pipe 1	178	297	120	28.10	0.41	0.75	0.026
Pipe 2	240	297	120	15.38	0.22	0.24	0.029
Pipe 3	399	297	120	8.94	0.13	0.09	0.031
Pipe 4	216	297	120	4.31	0.06	0.02	0.035
Pipe 5	443	297	120	33.80	0.49	1.05	0.026
Pipe 6	164	297	120	43.53	0.63	1.68	0.025
Pipe 7	242	297	120	-42.82	0.62	1.63	0.025
Pipe 8	52	297	120	-44.42	0.64	1.74	0.025
Pipe 9	576	900	120	-26.24	0.04	0.00	0.031
Pipe 10	260	297	120	-26.24	0.38	0.66	0.027
Pipe 11	139	297	120	-0.71	0.01	0.00	0.045
Pipe 12	216	297	120	17.95	0.26	0.33	0.028
Pipe 13	246	297	120	-2.25	0.03	0.01	0.038
Pipe 14	469	297	120	-2.25	0.03	0.01	0.038
Pipe 15	160	297	120	17.80	0.26	0.32	0.028
Pipe 16	123	297	120	32.72	0.47	0.99	0.026
Pipe 17	173	400	120	-32.72	0.26	0.23	0.027
Pipe 18	472	297	120	-26.24	0.38	0.66	0.027
Pipe 19	147	297	120	-16.40	0.24	0.28	0.029
Pipe 20	123	297	120	-16.40	0.24	0.28	0.029



# Fernbank Community - Kizell Lands: Watermain Analysis

Network Table - Nodes - (Max Pressure Check)

Node ID	Elevation m	Demand LPS	Head m	Pressure m	Pressure kPa	Pressure psi
Junc HD1	103.2	2.71	162.1	58.9	577.81	83.80
Junc MU1	104.52	3.05	162.1	57.58	564.86	81.93
Junc MU2	104.15	1.54	162.1	57.95	568.49	82.45
Junc N1	104.5	2.63	162.12	57.62	565.25	81.98
Junc N2	103.44	1.9	162.27	58.83	577.12	83.70
Junc N3	101.79	5.22	162.33	60.54	593.90	86.14
Junc N4	102.48	3.67	162.11	59.63	584.97	84.84
Junc N5	101.94	0	162.1	60.16	590.17	85.60
Junc N6	102.39	3.2	162.1	59.71	585.76	84.96
Junc N7	101.47	0	162.11	60.64	594.88	86.28
Junc N8	100.7	0	162.36	61.66	604.88	87.73
Junc N9	96.68	0	162.4	65.72	644.71	93.51
Junc N10	102.7	0	162.1	59.4	582.71	84.52
Junc P1	102.73	0.52	162.1	59.37	582.42	84.47
Junc PR1	102	0.59	162.39	60.39	592.43	85.92
Junc T1	102.94	0	162.33	59.39	582.62	84.50
Junc T2	103.73	2.1	162.13	58.4	572.90	83.09
Resvr 1	162.4	-25.18	162.4	0	0.00	0.00
Resvr 2	162.1	-1.97	162.1	0	0.00	0.00

Network Table - Links - (Max Pressure Check)

Link ID	Length m	Diameter mm	Roughness	Flow LPS	Velocity m/s	Headloss m/km	Friction Factor
Pipe 1	178	297	120	-0.34	0.00	0.00	0.052
Pipe 2	240	297	120	-3.38	0.05	0.01	0.036
Pipe 3	399	297	120	-4.93	0.07	0.03	0.034
Pipe 4	216	297	120	7.56	0.11	0.07	0.032
Pipe 5	443	297	120	17.47	0.25	0.31	0.028
Pipe 6	164	297	120	19.37	0.28	0.37	0.028
Pipe 7	242	297	120	-15.37	0.22	0.24	0.029
Pipe 8	52	297	120	-15.96	0.23	0.26	0.029
Pipe 9	576	900	120	-9.22	0.01	0.00	0.035
Pipe 10	260	297	120	-9.22	0.13	0.09	0.031
Pipe 11	139	297	120	-4.00	0.06	0.02	0.035
Pipe 12	216	297	120	7.81	0.11	0.07	0.032
Pipe 13	246	297	120	4.13	0.06	0.02	0.035
Pipe 14	469	297	120	4.13	0.06	0.02	0.035
Pipe 15	160	297	120	-0.41	0.01	0.00	0.058
Pipe 16	123	297	120	2.30	0.03	0.01	0.038
Pipe 17	173	400	120	-2.30	0.02	0.00	0.040
Pipe 18	472	297	120	-9.22	0.13	0.09	0.031
Pipe 19	147	297	120	0.93	0.01	0.00	0.045
Pipe 20	123	297	120	0.93	0.01	0.00	0.044

# Fernbank Community - Kizell Lands: Watermain Analysis

Network Table - Nodes - (Fire Flow Summary)

Fire Flow		Minimum Pressure		
Node	Flow (L/s)	Pressure (kPa)	Pressure (PSI)	Node
HD1	217	458.23	66.46	HD1
MU1	217	447.04	64.84	MU1
MU2	217	429.19	62.25	MU2
N1	167	450.77	65.38	N1
N2	167	476.67	69.13	N2
N3	217	475.29	68.94	N1
N4	167	464.11	67.31	N4
N6	217	423.60	61.44	N6
N7	167	466.96	67.73	N7
N8	167	487.16	70.66	N1
P1	217	441.84	64.08	P1
PR1	167	489.91	71.06	N1
T2	167	464.31	67.34	N1

# Fernbank Community - Kizell Lands: Watermain Analysis

Network Table - Nodes (Max Day + FF 'N1')

Node ID	Elevation m	Demand LPS	Head m	Pressure m	Pressure kPa	Pressure psi
Junc HD1	103.2	6.78	154.09	50.89	499.23	72.41
Junc MU1	104.52	6.18	153.48	48.96	480.30	69.66
Junc MU2	104.15	3.13	152.29	48.14	472.25	68.49
Junc N1	104.5	173.14	150.45	45.95	450.77	65.38
Junc N2	103.44	4.49	154.01	50.57	496.09	71.95
Junc N3	101.79	11.92	154.86	53.07	520.62	75.51
Junc N4	102.48	9.18	152.27	49.79	488.44	70.84
Junc N5	101.94	0	153.55	51.61	506.29	73.43
Junc N6	102.39	6.77	153.27	50.88	499.13	72.39
Junc N7	101.47	0	152.61	51.14	501.68	72.76
Junc N8	100.7	0	155.12	54.42	533.86	77.43
Junc N9	96.68	0	155.6	58.92	578.01	83.83
Junc N10	102.7	0	154.4	51.7	507.18	73.56
Junc P1	102.73	0.78	153.78	51.05	500.80	72.63
Junc PR1	102	0.89	155.46	53.46	524.44	76.06
Junc T1	102.94	0	154.8	51.86	508.75	73.79
Junc T2	103.73	5.25	152.08	48.35	474.31	68.79
Resvr 1	155.6	-90.16	155.6	0	0.00	0.00
Resvr 2	154.5	-138.34	154.5	0	0.00	0.00

Network Table - Links (Max Day + FF 'N1')

Link ID	Length m	Diameter mm	Roughness	Flow LPS	Velocity m/s	Headloss m/km	Friction Factor
Pipe 1	178	297	120	84.45	1.22	5.72	0.022
Pipe 2	240	297	120	78.27	1.13	4.97	0.023
Pipe 3	399	297	120	75.14	1.08	4.61	0.023
Pipe 4	216	297	120	98.00	1.41	7.54	0.022
Pipe 5	443	297	120	72.86	1.05	4.35	0.023
Pipe 6	164	297	120	77.35	1.12	4.86	0.023
Pipe 7	242	297	120	-56.32	0.81	2.70	0.024
Pipe 8	52	297	120	-57.21	0.83	2.78	0.024
Pipe 9	576	900	120	-32.95	0.05	0.00	0.030
Pipe 10	260	297	120	-32.95	0.48	1.00	0.026
Pipe 11	139	297	120	-21.03	0.30	0.44	0.028
Pipe 12	216	297	120	-30.38	0.44	0.86	0.026
Pipe 13	246	297	120	-39.57	0.57	1.41	0.025
Pipe 14	469	297	120	-39.57	0.57	1.41	0.025
Pipe 15	160	297	120	47.12	0.68	1.94	0.024
Pipe 16	123	297	120	53.90	0.78	2.49	0.024
Pipe 17	173	400	120	-53.90	0.43	0.58	0.025
Pipe 18	472	297	120	-32.95	0.48	1.00	0.026
Pipe 19	147	297	120	-46.34	0.67	1.88	0.025
Pipe 20	123	297	120	-46.34	0.67	1.88	0.025

# Fernbank Community - Kizell Lands: Watermain Analysis

Network Table - Nodes (Max Day + FF 'N2')

Node ID	Elevation m	Demand LPS	Head m	Pressure m	Pressure kPa	Pressure psi
Junc HD1	103.2	6.78	154.21	51.01	500.41	72.58
Junc MU1	104.52	6.18	154.13	49.61	486.67	70.59
Junc MU2	104.15	3.13	153.75	49.6	486.58	70.57
Junc N1	104.5	6.14	153.19	48.69	477.65	69.28
Junc N2	103.44	171.49	152.03	48.59	476.67	69.13
Junc N3	101.79	11.92	154.06	52.27	512.77	74.37
Junc N4	102.48	9.18	153.06	50.58	496.19	71.97
Junc N5	101.94	0	153.85	51.91	509.24	73.86
Junc N6	102.39	6.77	153.67	51.28	503.06	72.96
Junc N7	101.47	0	153.27	51.8	508.16	73.70
Junc N8	100.7	0	154.61	53.91	528.86	76.70
Junc N9	96.68	0	155.59	58.91	577.91	83.82
Junc N10	102.7	0	154.43	51.73	507.47	73.60
Junc P1	102.73	0.78	154.01	51.28	503.06	72.96
Junc PR1	102	0.89	155.29	53.29	522.77	75.82
Junc T1	102.94	0	153.89	50.95	499.82	72.49
Junc T2	103.73	5.25	152.96	49.23	482.95	70.05
Resvr 1	155.6	-135.09	155.6	0	0.00	0.00
Resvr 2	154.5	-93.41	154.5	0	0.00	0.00

Network Table - Links (Max Day + FF 'N2')

Link ID	Length m	Diameter mm	Roughness	Flow LPS	Velocity m/s	Headloss m/km	Friction Factor
Pipe 1	178	297	120	48.82	0.70	2.07	0.024
Pipe 2	240	297	120	42.64	0.62	1.61	0.025
Pipe 3	399	297	120	39.51	0.57	1.40	0.025
Pipe 4	216	297	120	-33.37	0.48	1.03	0.026
Pipe 5	443	297	120	-49.20	0.71	2.10	0.024
Pipe 6	164	297	120	122.29	1.77	11.36	0.021
Pipe 7	242	297	120	-85.16	1.23	5.81	0.022
Pipe 8	52	297	120	-86.05	1.24	5.93	0.022
Pipe 9	576	900	120	-49.04	0.08	0.01	0.028
Pipe 10	260	297	120	-49.04	0.71	2.09	0.024
Pipe 11	139	297	120	-37.12	0.54	1.25	0.025
Pipe 12	216	297	120	-21.08	0.30	0.44	0.028
Pipe 13	246	297	120	-30.26	0.44	0.86	0.026
Pipe 14	469	297	120	-30.26	0.44	0.86	0.026
Pipe 15	160	297	120	37.81	0.55	1.29	0.025
Pipe 16	123	297	120	44.59	0.64	1.75	0.025
Pipe 17	173	400	120	-44.59	0.35	0.41	0.026
Pipe 18	472	297	120	-49.04	0.71	2.09	0.024
Pipe 19	147	297	120	-37.03	0.53	1.24	0.025
Pipe 20	123	297	120	-37.03	0.53	1.24	0.025

# Fernbank Community - Kizell Lands: Watermain Analysis

Network Table - Nodes (Max Day + FF 'N4')

Node ID	Elevation m	Demand LPS	Head m	Pressure m	Pressure kPa	Pressure psi
Junc HD1	103.2	6.78	153.74	50.54	495.80	71.91
Junc MU1	104.52	6.18	153.94	49.42	484.81	70.32
Junc MU2	104.15	3.13	153.31	49.16	482.26	69.95
Junc N1	104.5	6.14	152.38	47.88	469.70	68.12
Junc N2	103.44	4.49	153.97	50.53	495.70	71.90
Junc N3	101.79	11.92	154.85	53.06	520.52	75.49
Junc N4	102.48	176.18	149.79	47.31	464.11	67.31
Junc N5	101.94	0	152.63	50.69	497.27	72.12
Junc N6	102.39	6.77	152.06	49.67	487.26	70.67
Junc N7	101.47	0	150.57	49.1	481.67	69.86
Junc N8	100.7	0	155.11	54.41	533.76	77.42
Junc N9	96.68	0	155.6	58.92	578.01	83.83
Junc N10	102.7	0	154.31	51.61	506.29	73.43
Junc P1	102.73	0.78	153.11	50.38	494.23	71.68
Junc PR1	102	0.89	155.45	53.45	524.34	76.05
Junc T1	102.94	0	154.78	51.84	508.55	73.76
Junc T2	103.73	5.25	151.98	48.25	473.33	68.65
Resvr 1	155.6	-91.36	155.6	0	0.00	0.00
Resvr 2	154.5	-137.14	154.5	0	0.00	0.00

Network Table - Links (Max Day + FF 'N4')

Link ID	Length m	Diameter mm	Roughness	Flow LPS	Velocity m/s	Headloss m/km	Friction Factor
Pipe 1	178	297	120	61.39	0.89	3.17	0.024
Pipe 2	240	297	120	55.21	0.80	2.61	0.024
Pipe 3	399	297	120	52.09	0.75	2.34	0.024
Pipe 4	216	297	120	-45.94	0.66	1.85	0.025
Pipe 5	443	297	120	74.06	1.07	4.49	0.023
Pipe 6	164	297	120	78.55	1.13	5.00	0.023
Pipe 7	242	297	120	-57.09	0.82	2.77	0.024
Pipe 8	52	297	120	-57.98	0.84	2.85	0.024
Pipe 9	576	900	120	-33.38	0.05	0.00	0.030
Pipe 10	260	297	120	-33.38	0.48	1.03	0.026
Pipe 11	139	297	120	-21.46	0.31	0.45	0.028
Pipe 12	216	297	120	114.76	1.66	10.10	0.021
Pipe 13	246	297	120	-61.42	0.89	3.17	0.024
Pipe 14	469	297	120	-61.42	0.89	3.17	0.024
Pipe 15	160	297	120	68.97	1.00	3.93	0.023
Pipe 16	123	297	120	75.75	1.09	4.68	0.023
Pipe 17	173	400	120	-75.75	0.60	1.10	0.024
Pipe 18	472	297	120	-33.38	0.48	1.03	0.026
Pipe 19	147	297	120	-68.20	0.98	3.85	0.023
Pipe 20	123	297	120	-68.20	0.98	3.85	0.023

# Fernbank Community - Kizell Lands: Watermain Analysis

Network Table - Nodes (Max Day + FF 'N7')

Node ID	Elevation m	Demand LPS	Head m	Pressure m	Pressure kPa	Pressure psi
Junc HD1	103.2	6.78	153.48	50.28	493.25	71.54
Junc MU1	104.52	6.18	154.04	49.52	485.79	70.46
Junc MU2	104.15	3.13	153.54	49.39	484.52	70.27
Junc N1	104.5	6.14	152.81	48.31	473.92	68.74
Junc N2	103.44	4.49	154.19	50.75	497.86	72.21
Junc N3	101.79	11.92	154.94	53.15	521.40	75.62
Junc N4	102.48	9.18	150.75	48.27	473.53	68.68
Junc N5	101.94	0	151.97	50.03	490.79	71.18
Junc N6	102.39	6.77	151.19	48.8	478.73	69.43
Junc N7	101.47	167	149.07	47.6	466.96	67.73
Junc N8	100.7	0	155.17	54.47	534.35	77.50
Junc N9	96.68	0	155.6	58.92	578.01	83.83
Junc N10	102.7	0	154.25	51.55	505.71	73.35
Junc P1	102.73	0.78	152.62	49.89	489.42	70.98
Junc PR1	102	0.89	155.47	53.47	524.54	76.08
Junc T1	102.94	0	154.89	51.95	509.63	73.92
Junc T2	103.73	5.25	152.51	48.78	478.53	69.41
Resvr 1	155.6	-84.99	155.6	0	0.00	0.00
Resvr 2	154.5	-143.51	154.5	0	0.00	0.00

Network Table - Links (Max Day + FF 'N7')

Link ID	Length m	Diameter mm	Roughness	Flow LPS	Velocity m/s	Headloss m/km	Friction Factor
Pipe 1	178	297	120	55.01	0.79	2.59	0.024
Pipe 2	240	297	120	48.83	0.70	2.08	0.024
Pipe 3	399	297	120	45.70	0.66	1.84	0.025
Pipe 4	216	297	120	-39.56	0.57	1.41	0.025
Pipe 5	443	297	120	67.69	0.98	3.80	0.023
Pipe 6	164	297	120	72.18	1.04	4.28	0.023
Pipe 7	242	297	120	-53.00	0.77	2.42	0.024
Pipe 8	52	297	120	-53.89	0.78	2.49	0.024
Pipe 9	576	900	120	-31.10	0.05	0.00	0.030
Pipe 10	260	297	120	-31.10	0.45	0.90	0.026
Pipe 11	139	297	120	-19.18	0.28	0.37	0.028
Pipe 12	216	297	120	102.00	1.47	8.12	0.022
Pipe 13	246	297	120	92.82	1.34	6.82	0.022
Pipe 14	469	297	120	-74.18	1.07	4.50	0.023
Pipe 15	160	297	120	81.73	1.18	5.39	0.023
Pipe 16	123	297	120	88.51	1.28	6.24	0.022
Pipe 17	173	400	120	-88.51	0.70	1.46	0.023
Pipe 18	472	297	120	-31.10	0.45	0.90	0.026
Pipe 19	147	297	120	-80.95	1.17	5.29	0.023
Pipe 20	123	297	120	-80.95	1.17	5.29	0.023

# Fernbank Community - Kizell Lands: Watermain Analysis

Network Table - Nodes (Max Day + FF 'N8')

Node ID	Elevation m	Demand LPS	Head m	Pressure m	Pressure kPa	Pressure psi
Junc HD1	103.2	6.78	154.39	51.19	502.17	72.83
Junc MU1	104.52	6.18	154.38	49.86	489.13	70.94
Junc MU2	104.15	3.13	154.28	50.13	491.78	71.33
Junc N1	104.5	6.14	154.16	49.66	487.16	70.66
Junc N2	103.44	4.49	154.09	50.65	496.88	72.07
Junc N3	101.79	11.92	153.31	51.52	505.41	73.30
Junc N4	102.48	9.18	154.13	51.65	506.69	73.49
Junc N5	101.94	0	154.29	52.35	513.55	74.48
Junc N6	102.39	6.77	154.24	51.85	508.65	73.77
Junc N7	101.47	0	154.17	52.7	516.99	74.98
Junc N8	100.7	167	152.21	51.51	505.31	73.29
Junc N9	96.68	0	155.58	58.9	577.81	83.80
Junc N10	102.7	0	154.47	51.77	507.86	73.66
Junc P1	102.73	0.78	154.33	51.6	506.20	73.42
Junc PR1	102	0.89	155.33	53.33	523.17	75.88
Junc T1	102.94	0	154.09	51.15	501.78	72.78
Junc T2	103.73	5.25	154.13	50.4	494.42	71.71
Resvr 1	155.6	-175.72	155.6	0	0.00	0.00
Resvr 2	154.5	-52.78	154.5	0	0.00	0.00

Network Table - Links (Max Day + FF 'N8')

Link ID	Length m	Diameter mm	Roughness	Flow LPS	Velocity m/s	Headloss m/km	Friction Factor
Pipe 1	178	297	120	26.63	0.38	0.67	0.027
Pipe 2	240	297	120	20.45	0.30	0.41	0.028
Pipe 3	399	297	120	17.32	0.25	0.30	0.028
Pipe 4	216	297	120	-11.18	0.16	0.14	0.030
Pipe 5	443	297	120	-8.58	0.12	0.08	0.031
Pipe 6	164	297	120	-4.09	0.06	0.02	0.035
Pipe 7	242	297	120	-79.62	1.15	5.13	0.023
Pipe 8	52	297	120	-80.51	1.16	5.24	0.023
Pipe 9	576	900	120	-95.21	0.15	0.03	0.025
Pipe 10	260	297	120	71.79	1.04	4.24	0.023
Pipe 11	139	297	120	83.71	1.21	5.63	0.022
Pipe 12	216	297	120	-2.64	0.04	0.01	0.038
Pipe 13	246	297	120	-11.82	0.17	0.15	0.030
Pipe 14	469	297	120	-11.82	0.17	0.15	0.030
Pipe 15	160	297	120	19.37	0.28	0.37	0.028
Pipe 16	123	297	120	26.15	0.38	0.65	0.027
Pipe 17	173	400	120	-26.15	0.21	0.15	0.028
Pipe 18	472	297	120	-95.21	1.37	7.15	0.022
Pipe 19	147	297	120	-18.59	0.27	0.35	0.028
Pipe 20	123	297	120	-18.59	0.27	0.35	0.028

# Fernbank Community - Kizell Lands: Watermain Analysis

Network Table - Nodes (Max Day + FF 'PR1')

Node ID	Elevation m	Demand LPS	Head m	Pressure m	Pressure kPa	Pressure psi
Junc HD1	103.2	6.78	154.46	51.26	502.86	72.93
Junc MU1	104.52	6.18	154.47	49.95	490.01	71.07
Junc MU2	104.15	3.13	154.45	50.3	493.44	71.57
Junc N1	104.5	6.14	154.44	49.94	489.91	71.06
Junc N2	103.44	4.49	154.55	51.11	501.39	72.72
Junc N3	101.79	11.92	154.7	52.91	519.05	75.28
Junc N4	102.48	9.18	154.43	51.95	509.63	73.92
Junc N5	101.94	0	154.44	52.5	515.03	74.70
Junc N6	102.39	6.77	154.43	52.04	510.51	74.04
Junc N7	101.47	0	154.43	52.96	519.54	75.35
Junc N8	100.7	0	155.02	54.32	532.88	77.29
Junc N9	96.68	0	155.6	58.92	578.01	83.83
Junc N10	102.7	0	154.49	51.79	508.06	73.69
Junc P1	102.73	0.78	154.45	51.72	507.37	73.59
Junc PR1	102	167.89	154.6	52.6	516.01	74.84
Junc T1	102.94	0	154.61	51.67	506.88	73.52
Junc T2	103.73	5.25	154.44	50.71	497.47	72.15
Resvr 1	155.6	-199.56	155.6	0	0.00	0.00
Resvr 2	154.5	-28.94	154.5	0	0.00	0.00

Network Table - Links (Max Day + FF 'PR1')

Link ID	Length m	Diameter mm	Roughness	Flow LPS	Velocity m/s	Headloss m/km	Friction Factor
Pipe 1	178	297	120	13.55	0.20	0.19	0.029
Pipe 2	240	297	120	7.38	0.11	0.06	0.032
Pipe 3	399	297	120	4.25	0.06	0.02	0.035
Pipe 4	216	297	120	1.89	0.03	0.01	0.039
Pipe 5	443	297	120	15.26	0.22	0.24	0.029
Pipe 6	164	297	120	19.75	0.29	0.39	0.028
Pipe 7	242	297	120	5.17	0.07	0.03	0.034
Pipe 8	52	297	120	-162.72	2.35	19.28	0.020
Pipe 9	576	900	120	-36.84	0.06	0.01	0.029
Pipe 10	260	297	120	-36.84	0.53	1.23	0.025
Pipe 11	139	297	120	-24.92	0.36	0.60	0.027
Pipe 12	216	297	120	8.12	0.12	0.07	0.032
Pipe 13	246	297	120	-1.06	0.02	0.00	0.043
Pipe 14	469	297	120	-1.06	0.02	0.00	0.043
Pipe 15	160	297	120	8.61	0.12	0.08	0.031
Pipe 16	123	297	120	15.39	0.22	0.24	0.029
Pipe 17	173	400	120	-15.39	0.12	0.06	0.030
Pipe 18	472	297	120	-36.84	0.53	1.23	0.025
Pipe 19	147	297	120	-7.83	0.11	0.07	0.032
Pipe 20	123	297	120	-7.83	0.11	0.07	0.032



# Fernbank Community - Kizell Lands: Watermain Analysis

Network Table - Nodes (Max Day + FF 'T2')

Node ID	Elevation m	Demand LPS	Head m	Pressure m	Pressure kPa	Pressure psi
Junc HD1	103.2	6.78	153.99	50.79	498.25	72.27
Junc MU1	104.52	6.18	153.81	49.29	483.53	70.13
Junc MU2	104.15	3.13	153.02	48.87	479.41	69.53
Junc N1	104.5	6.14	151.83	47.33	464.31	67.34
Junc N2	103.44	4.49	153.68	50.24	492.85	71.48
Junc N3	101.79	11.92	154.73	52.94	519.34	75.32
Junc N4	102.48	9.18	151.57	49.09	481.57	69.85
Junc N5	101.94	0	153.29	51.35	503.74	73.06
Junc N6	102.39	6.77	152.93	50.54	495.80	71.91
Junc N7	101.47	0	152.04	50.57	496.09	71.95
Junc N8	100.7	0	155.04	54.34	533.08	77.32
Junc N9	96.68	0	155.6	58.92	578.01	83.83
Junc N10	102.7	0	154.37	51.67	506.88	73.52
Junc P1	102.73	0.78	153.59	50.86	498.94	72.36
Junc PR1	102	0.89	155.43	53.43	524.15	76.02
Junc T1	102.94	0	154.65	51.71	507.28	73.57
Junc T2	103.73	172.25	151.3	47.57	466.66	67.68
Resvr 1	155.6	-98.93	155.6	0	0.00	0.00
Resvr 2	154.5	-129.57	154.5	0	0.00	0.00

Network Table - Links (Max Day + FF 'T2')

Link ID	Length m	Diameter mm	Roughness	Flow LPS	Velocity m/s	Headloss m/km	Friction Factor
Pipe 1	178	297	120	68.73	0.99	3.91	0.023
Pipe 2	240	297	120	62.55	0.90	3.28	0.023
Pipe 3	399	297	120	59.43	0.86	2.99	0.024
Pipe 4	216	297	120	-53.28	0.77	2.44	0.024
Pipe 5	443	297	120	81.64	1.18	5.38	0.023
Pipe 6	164	297	120	86.13	1.24	5.94	0.022
Pipe 7	242	297	120	-61.95	0.89	3.22	0.024
Pipe 8	52	297	120	-62.84	0.91	3.31	0.023
Pipe 9	576	900	120	-36.10	0.06	0.01	0.029
Pipe 10	260	297	120	-36.10	0.52	1.19	0.025
Pipe 11	139	297	120	-24.18	0.35	0.56	0.027
Pipe 12	216	297	120	-37.33	0.54	1.26	0.025
Pipe 13	246	297	120	-46.51	0.67	1.90	0.025
Pipe 14	469	297	120	-46.51	0.67	1.90	0.025
Pipe 15	160	297	120	54.06	0.78	2.51	0.024
Pipe 16	123	297	120	60.84	0.88	3.12	0.024
Pipe 17	173	400	120	-60.84	0.48	0.73	0.024
Pipe 18	472	297	120	-36.10	0.52	1.19	0.025
Pipe 19	147	297	120	-53.28	0.77	2.44	0.024
Pipe 20	123	297	120	-53.28	0.77	2.44	0.024

# Fernbank Community - Kizell Lands: Watermain Analysis

Network Table - Nodes (Max Day + FF 'HD1')

Node ID	Elevation m	Demand LPS	Head m	Pressure m	Pressure kPa	Pressure psi
Junc HD1	103.2	223.78	149.91	46.71	458.23	66.46
Junc MU1	104.52	6.18	153.48	48.96	480.30	69.66
Junc MU2	104.15	3.13	153.39	49.24	483.04	70.06
Junc N1	104.5	6.14	153.28	48.78	478.53	69.41
Junc N2	103.44	4.49	154.5	51.06	500.90	72.65
Junc N3	101.79	11.92	155.07	53.28	522.68	75.81
Junc N4	102.48	9.18	152.53	50.05	490.99	71.21
Junc N5	101.94	0	150.45	48.51	475.88	69.02
Junc N6	102.39	6.77	150.74	48.35	474.31	68.79
Junc N7	101.47	0	151.91	50.44	494.82	71.77
Junc N8	100.7	0	155.26	54.56	535.23	77.63
Junc N9	96.68	0	155.6	58.92	578.01	83.83
Junc N10	102.7	0	152.68	49.98	490.30	71.11
Junc P1	102.73	0.78	150.21	47.48	465.78	67.56
Junc PR1	102	0.89	155.5	53.5	524.84	76.12
Junc T1	102.94	0	155.04	52.1	511.10	74.13
Junc T2	103.73	5.25	153.25	49.52	485.79	70.46
Resvr 1	155.6	-75.1	155.6	0	0.00	0.00
Resvr 2	153.6	-203.4	153.6	0	0.00	0.00

Network Table - Links (Max Day + FF 'HD1')

Link ID	Length m	Diameter mm	Roughness	Flow LPS	Velocity m/s	Headloss m/km	Friction Factor
Pipe 1	178	297	120	26.06	0.38	0.65	0.027
Pipe 2	240	297	120	19.89	0.29	0.39	0.028
Pipe 3	399	297	120	16.76	0.24	0.29	0.029
Pipe 4	216	297	120	-10.62	0.15	0.12	0.031
Pipe 5	443	297	120	57.80	0.83	2.84	0.024
Pipe 6	164	297	120	62.29	0.90	3.26	0.023
Pipe 7	242	297	120	-46.67	0.67	1.91	0.025
Pipe 8	52	297	120	-47.56	0.69	1.98	0.024
Pipe 9	576	900	120	-27.54	0.04	0.00	0.031
Pipe 10	260	297	120	-27.54	0.40	0.72	0.027
Pipe 11	139	297	120	-15.63	0.23	0.25	0.029
Pipe 12	216	297	120	63.17	0.91	3.34	0.023
Pipe 13	246	297	120	53.99	0.78	2.50	0.024
Pipe 14	469	297	120	53.99	0.78	2.50	0.024
Pipe 15	160	297	120	-46.44	0.67	1.89	0.025
Pipe 16	123	297	120	177.34	2.56	22.61	0.020
Pipe 17	173	400	120	-177.34	1.41	5.30	0.021
Pipe 18	472	297	120	-27.54	0.40	0.72	0.027
Pipe 19	147	297	120	47.22	0.68	1.95	0.024
Pipe 20	123	297	120	47.22	0.68	1.95	0.024

# Fernbank Community - Kizell Lands: Watermain Analysis

Network Table - Nodes (Max Day + FF 'N3')

Node ID	Elevation m	Demand LPS	Head m	Pressure m	Pressure kPa	Pressure psi
Junc HD1	103.2	6.78	153.43	50.23	492.76	71.47
Junc MU1	104.52	6.18	153.4	48.88	479.51	69.55
Junc MU2	104.15	3.13	153.21	49.06	481.28	69.80
Junc N1	104.5	6.14	152.95	48.45	475.29	68.94
Junc N2	103.44	4.49	152.61	49.17	482.36	69.96
Junc N3	101.79	228.92	150.62	48.83	479.02	69.48
Junc N4	102.48	9.18	152.89	50.41	494.52	71.72
Junc N5	101.94	0	153.25	51.31	503.35	73.00
Junc N6	102.39	6.77	153.15	50.76	497.96	72.22
Junc N7	101.47	0	152.98	51.51	505.31	73.29
Junc N8	100.7	0	152.38	51.68	506.98	73.53
Junc N9	96.68	0	155.58	58.9	577.81	83.80
Junc N10	102.7	0	153.56	50.86	498.94	72.36
Junc P1	102.73	0.78	153.32	50.59	496.29	71.98
Junc PR1	102	0.89	155.06	53.06	520.52	75.49
Junc T1	102.94	0	152.55	49.61	486.67	70.59
Junc T2	103.73	5.25	152.87	49.14	482.06	69.92
Resvr 1	155.6	-209.88	155.6	0	0.00	0.00
Resvr 2	153.6	-68.62	153.6	0	0.00	0.00

Network Table - Links (Max Day + FF 'N3')

Link ID	Length m	Diameter mm	Roughness	Flow LPS	Velocity m/s	Headloss m/km	Friction Factor
Pipe 1	178	297	120	35.22	0.51	1.13	0.026
Pipe 2	240	297	120	29.05	0.42	0.79	0.026
Pipe 3	399	297	120	25.92	0.37	0.64	0.027
Pipe 4	216	297	120	-19.78	0.29	0.39	0.028
Pipe 5	443	297	120	-24.42	0.35	0.57	0.027
Pipe 6	164	297	120	-19.93	0.29	0.39	0.028
Pipe 7	242	297	120	-116.48	1.68	10.38	0.021
Pipe 8	52	297	120	-117.37	1.69	10.53	0.021
Pipe 9	576	900	120	-92.51	0.15	0.03	0.026
Pipe 10	260	297	120	-92.51	1.34	6.78	0.022
Pipe 11	139	297	120	136.40	1.97	13.91	0.021
Pipe 12	216	297	120	-9.88	0.14	0.11	0.031
Pipe 13	246	297	120	-19.07	0.28	0.36	0.028
Pipe 14	469	297	120	-19.07	0.28	0.36	0.028
Pipe 15	160	297	120	26.62	0.38	0.67	0.027
Pipe 16	123	297	120	33.40	0.48	1.03	0.026
Pipe 17	173	400	120	-33.40	0.27	0.24	0.027
Pipe 18	472	297	120	-92.51	1.34	6.78	0.022
Pipe 19	147	297	120	-25.84	0.37	0.64	0.027
Pipe 20	123	297	120	-25.84	0.37	0.64	0.027

# Fernbank Community - Kizell Lands: Watermain Analysis

Network Table - Nodes (Max Day + FF 'N6')

Node ID	Elevation m	Demand LPS	Head m	Pressure m	Pressure kPa	Pressure psi
Junc HD1	103.2	6.78	151.23	48.03	471.17	68.34
Junc MU1	104.52	6.18	153.23	48.71	477.85	69.31
Junc MU2	104.15	3.13	152.85	48.7	477.75	69.29
Junc N1	104.5	6.14	152.29	47.79	468.82	68.00
Junc N2	103.44	4.49	154	50.56	495.99	71.94
Junc N3	101.79	11.92	154.86	53.07	520.62	75.51
Junc N4	102.48	9.18	150.35	47.87	469.60	68.11
Junc N5	101.94	0	147.5	45.56	446.94	64.82
Junc N6	102.39	223.77	145.57	43.18	423.60	61.44
Junc N7	101.47	0	148.71	47.24	463.42	67.21
Junc N8	100.7	0	155.12	54.42	533.86	77.43
Junc N9	96.68	0	155.6	58.92	578.01	83.83
Junc N10	102.7	0	153.01	50.31	493.54	71.58
Junc P1	102.73	0.78	149.12	46.39	455.09	66.00
Junc PR1	102	0.89	155.46	53.46	524.44	76.06
Junc T1	102.94	0	154.8	51.86	508.75	73.79
Junc T2	103.73	5.25	152.07	48.34	474.22	68.78
Resvr 1	155.6	-90.26	155.6	0	0.00	0.00
Resvr 2	153.6	-188.24	153.6	0	0.00	0.00

Network Table - Links (Max Day + FF 'N6')

Link ID	Length m	Diameter mm	Roughness	Flow LPS	Velocity m/s	Headloss m/km	Friction Factor
Pipe 1	178	297	120	48.69	0.70	2.06	0.024
Pipe 2	240	297	120	42.51	0.61	1.61	0.025
Pipe 3	399	297	120	39.39	0.57	1.39	0.025
Pipe 4	216	297	120	-33.25	0.48	1.02	0.026
Pipe 5	443	297	120	72.97	1.05	4.37	0.023
Pipe 6	164	297	120	77.46	1.12	4.88	0.023
Pipe 7	242	297	120	-56.38	0.81	2.71	0.024
Pipe 8	52	297	120	-57.27	0.83	2.79	0.024
Pipe 9	576	900	120	-32.99	0.05	0.00	0.030
Pipe 10	260	297	120	-32.99	0.48	1.00	0.026
Pipe 11	139	297	120	-21.07	0.30	0.44	0.028
Pipe 12	216	297	120	100.96	1.46	7.97	0.022
Pipe 13	246	297	120	91.78	1.32	6.68	0.022
Pipe 14	469	297	120	91.78	1.32	6.68	0.022
Pipe 15	160	297	120	132.77	1.92	13.23	0.021
Pipe 16	123	297	120	139.55	2.01	14.51	0.021
Pipe 17	173	400	120	-139.55	1.11	3.40	0.022
Pipe 18	472	297	120	-32.99	0.48	1.00	0.026
Pipe 19	147	297	120	-131.99	1.91	13.09	0.021
Pipe 20	123	297	120	-131.99	1.91	13.09	0.021

# Fernbank Community - Kizell Lands: Watermain Analysis

Network Table - Nodes (Max Day + FF 'MU1')

Node ID	Elevation m	Demand LPS	Head m	Pressure m	Pressure kPa	Pressure psi
Junc HD1	103.2	6.78	153.43	50.23	492.76	71.47
Junc MU1	104.52	223.18	150.09	45.57	447.04	64.84
Junc MU2	104.15	3.13	150.78	46.63	457.44	66.35
Junc N1	104.5	6.14	152.05	47.55	466.47	67.66
Junc N2	103.44	4.49	154.34	50.9	499.33	72.42
Junc N3	101.79	11.92	155	53.21	521.99	75.71
Junc N4	102.48	9.18	152.89	50.41	494.52	71.72
Junc N5	101.94	0	153.25	51.31	503.35	73.00
Junc N6	102.39	6.77	153.15	50.76	497.96	72.22
Junc N7	101.47	0	152.98	51.51	505.31	73.29
Junc N8	100.7	0	155.21	54.51	534.74	77.56
Junc N9	96.68	0	155.6	58.92	578.01	83.83
Junc N10	102.7	0	153.56	50.86	498.94	72.36
Junc P1	102.73	0.78	153.33	50.6	496.39	71.99
Junc PR1	102	0.89	155.48	53.48	524.64	76.09
Junc T1	102.94	0	154.96	52.02	510.32	74.02
Junc T2	103.73	5.25	152.87	49.14	482.06	69.92
Resvr 1	155.6	-80.3	155.6	0	0.00	0.00
Resvr 2	153.6	-198.2	153.6	0	0.00	0.00

Network Table - Links (Max Day + FF 'MU1')

Link ID	Length m	Diameter mm	Roughness	Flow LPS	Velocity m/s	Headloss m/km	Friction Factor
Pipe 1	178	297	120	164.85	2.38	19.75	0.020
Pipe 2	240	297	120	-58.33	0.84	2.88	0.024
Pipe 3	399	297	120	-61.45	0.89	3.18	0.024
Pipe 4	216	297	120	67.59	0.98	3.79	0.023
Pipe 5	443	297	120	63.00	0.91	3.33	0.023
Pipe 6	164	297	120	67.49	0.97	3.78	0.023
Pipe 7	242	297	120	-50.00	0.72	2.17	0.024
Pipe 8	52	297	120	-50.89	0.73	2.24	0.024
Pipe 9	576	900	120	-29.41	0.05	0.00	0.030
Pipe 10	260	297	120	-29.41	0.42	0.81	0.026
Pipe 11	139	297	120	-17.49	0.25	0.31	0.028
Pipe 12	216	297	120	-9.84	0.14	0.11	0.031
Pipe 13	246	297	120	-19.02	0.27	0.36	0.028
Pipe 14	469	297	120	-19.02	0.27	0.36	0.028
Pipe 15	160	297	120	26.57	0.38	0.67	0.027
Pipe 16	123	297	120	33.35	0.48	1.02	0.026
Pipe 17	173	400	120	-33.35	0.27	0.24	0.027
Pipe 18	472	297	120	-29.41	0.42	0.81	0.026
Pipe 19	147	297	120	-25.79	0.37	0.64	0.027
Pipe 20	123	297	120	-25.79	0.37	0.64	0.027

# Fernbank Community - Kizell Lands: Watermain Analysis

Network Table - Nodes (Max Day + FF 'MU2')

Node ID	Elevation m	Demand LPS	Head m	Pressure m	Pressure kPa	Pressure psi
Junc HD1	103.2	6.78	153.28	50.08	491.28	71.25
Junc MU1	104.52	6.18	151.06	46.54	456.56	66.22
Junc MU2	104.15	220.13	147.9	43.75	429.19	62.25
Junc N1	104.5	6.14	150.35	45.85	449.79	65.24
Junc N2	103.44	4.49	153.91	50.47	495.11	71.81
Junc N3	101.79	11.92	154.82	53.03	520.22	75.45
Junc N4	102.48	9.18	151.97	49.49	485.50	70.42
Junc N5	101.94	0	152.88	50.94	499.72	72.48
Junc N6	102.39	6.77	152.67	50.28	493.25	71.54
Junc N7	101.47	0	152.21	50.74	497.76	72.19
Junc N8	100.7	0	155.1	54.4	533.66	77.40
Junc N9	96.68	0	155.6	58.92	578.01	83.83
Junc N10	102.7	0	153.52	50.82	498.54	72.31
Junc P1	102.73	0.78	153.05	50.32	493.64	71.60
Junc PR1	102	0.89	155.45	53.45	524.34	76.05
Junc T1	102.94	0	154.76	51.82	508.35	73.73
Junc T2	103.73	5.25	151.85	48.12	472.06	68.47
Resvr 1	155.6	-92.84	155.6	0	0.00	0.00
Resvr 2	153.6	-185.67	153.6	0	0.00	0.00

Network Table - Links (Max Day + FF 'MU2')

Link ID	Length m	Diameter mm	Roughness	Flow LPS	Velocity m/s	Headloss m/km	Friction Factor
Pipe 1	178	297	120	138.64	2.00	14.33	0.021
Pipe 2	240	297	120	132.46	1.91	13.17	0.021
Pipe 3	399	297	120	-87.67	1.27	6.13	0.022
Pipe 4	216	297	120	93.81	1.35	6.95	0.022
Pipe 5	443	297	120	75.54	1.09	4.66	0.023
Pipe 6	164	297	120	80.03	1.16	5.18	0.023
Pipe 7	242	297	120	-58.03	0.84	2.86	0.024
Pipe 8	52	297	120	-58.92	0.85	2.94	0.024
Pipe 9	576	900	120	-33.91	0.05	0.00	0.030
Pipe 10	260	297	120	-33.91	0.49	1.06	0.026
Pipe 11	139	297	120	-21.99	0.32	0.47	0.027
Pipe 12	216	297	120	-23.52	0.34	0.54	0.027
Pipe 13	246	297	120	-32.70	0.47	0.99	0.026
Pipe 14	469	297	120	-32.70	0.47	0.99	0.026
Pipe 15	160	297	120	40.25	0.58	1.45	0.025
Pipe 16	123	297	120	47.03	0.68	1.94	0.024
Pipe 17	173	400	120	-47.03	0.37	0.45	0.025
Pipe 18	472	297	120	-33.91	0.49	1.06	0.026
Pipe 19	147	297	120	-39.47	0.57	1.40	0.025
Pipe 20	123	297	120	-39.47	0.57	1.40	0.025

# Fernbank Community - Kizell Lands: Watermain Analysis

Network Table - Nodes (Max Day + FF 'P1')

Node ID	Elevation m	Demand LPS	Head m	Pressure m	Pressure kPa	Pressure psi
Junc HD1	103.2	6.78	150.54	47.34	464.41	67.36
Junc MU1	104.52	6.18	153.38	48.86	479.32	69.52
Junc MU2	104.15	3.13	153.17	49.02	480.89	69.75
Junc N1	104.5	6.14	152.89	48.39	474.71	68.85
Junc N2	103.44	4.49	154.31	50.87	499.03	72.38
Junc N3	101.79	11.92	154.99	53.2	521.89	75.69
Junc N4	102.48	9.18	151.67	49.19	482.55	69.99
Junc N5	101.94	0	148.19	46.25	453.71	65.81
Junc N6	102.39	6.77	148.7	46.31	454.30	65.89
Junc N7	101.47	0	150.65	49.18	482.46	69.97
Junc N8	100.7	0	155.21	54.51	534.74	77.56
Junc N9	96.68	0	155.6	58.92	578.01	83.83
Junc N10	102.7	0	152.84	50.14	491.87	71.34
Junc P1	102.73	217.78	147.77	45.04	441.84	64.08
Junc PR1	102	0.89	155.48	53.48	524.64	76.09
Junc T1	102.94	0	154.94	52	510.12	73.99
Junc T2	103.73	5.25	152.79	49.06	481.28	69.80
Resvr 1	155.6	-81.37	155.6	0	0.00	0.00
Resvr 2	153.6	-197.13	153.6	0	0.00	0.00

Network Table - Links (Max Day + FF 'P1')

Link ID	Length m	Diameter mm	Roughness	Flow LPS	Velocity m/s	Headloss m/km	Friction Factor
Pipe 1	178	297	120	36.79	0.53	1.23	0.025
Pipe 2	240	297	120	30.61	0.44	0.87	0.026
Pipe 3	399	297	120	27.49	0.40	0.72	0.027
Pipe 4	216	297	120	-21.35	0.31	0.45	0.028
Pipe 5	443	297	120	64.07	0.92	3.43	0.023
Pipe 6	164	297	120	68.56	0.99	3.89	0.023
Pipe 7	242	297	120	-50.68	0.73	2.22	0.024
Pipe 8	52	297	120	-51.57	0.74	2.30	0.024
Pipe 9	576	900	120	-29.80	0.05	0.00	0.030
Pipe 10	260	297	120	-29.80	0.43	0.83	0.026
Pipe 11	139	297	120	-17.88	0.26	0.32	0.028
Pipe 12	216	297	120	80.17	1.16	5.20	0.023
Pipe 13	246	297	120	70.99	1.02	4.15	0.023
Pipe 14	469	297	120	70.99	1.02	4.15	0.023
Pipe 15	160	297	120	153.56	2.22	17.32	0.021
Pipe 16	123	297	120	160.34	2.31	18.76	0.020
Pipe 17	173	400	120	-160.34	1.28	4.40	0.021
Pipe 18	472	297	120	-29.80	0.43	0.83	0.026
Pipe 19	147	297	120	64.22	0.93	3.45	0.023
Pipe 20	123	297	120	64.22	0.93	3.45	0.023

## **Appendix B: Stormwater Documentation**

Technical Memorandum – Carp River PCSWMM Model  
PCSWMM Model Schematic  
Pond 1 Design Sheet  
Chicago Design Storms  
SCS Design Storms  
100-year Model Output – Kizell Lands only  
100-year Model Output – Carp River model – future conditions  
100-year Model Output – Carp River model – interim conditions



# MEMORANDUM

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**DATE:** NOVEMBER 9, 2016  
**TO:** MIKE PETEPIECE, P.ENG.  
**FROM:** KALLIE AULD, P.ENG., CONRAD STANG, M.A.SC., P.ENG.  
**RE:** KIZELL LANDS AND FERNBANK POND 1:  
INTEGRATION WITH CARP RIVER PCSWMM MODEL  
**CC:** MARK BISSETT, P.ENG.

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The City has developed a PCSWMM model of the Carp River subwatershed and indicated that all new development within the watershed is to be represented in this model to confirm that the cumulative impacts of development are accounted for and that the proposed stormwater management strategies will have no adverse impact on water levels in the Carp River.

This technical memorandum provides an overview of integrating the stand alone PCSWMM model for the Kizell Lands and Fernbank Pond 1 with the City of Ottawa Carp River PCSWMM model (March, 2016).

All model updates have been completed in accordance with the protocol outlined the *City of Ottawa Carp River PCSWMM Model Documentation*.

The PCSWMM models are provided on the attached CD as a part of the *Kizell Lands – Fernbank Concept Servicing Report*.

### Interim Conditions

The PCSWMM model created for the Kizell Lands and Fernbank Pond 1 has been incorporated into the “Interim” Conditions Carp River PCSWMM Model (March 2016) to reflect the preliminary design for the Kizell Lands and Pond 1 and the latest development plans within the Pond 1 drainage area including the upstream Granite Ridge subdivision and Iber Road industrial area.

### Future (Ultimate) Conditions

The Future Conditions PCSWMM model has been updated to reflect ultimate development of the Fernbank Lands tributary to the Carp River including Fernbank Ponds 1, 2, and 3. The Future Conditions Carp River PCSWMM model includes the stand alone PCSWMM model for Pond 1 and the latest development plans within the Pond 1 drainage area.

## **1.1 Fernbank Pond 1**

The following provides an overview of how Fernbank Pond 1 has been integrated into the PCSWMM models. The pond layout is shown on **Drawing 108195-SWMF**. Refer to **Section 7.0** in the Concept Servicing Report for additional information on the preliminary design of Pond 1.

### Storm Drainage Areas

Fernbank Pond 1 will provide stormwater quality and quantity control for a drainage area of 77.93 ha, and receives drainage from the Granite Ridge SWM Facility, a small SWM facility at Iber Road, as well as a portion of the Iber Road industrial area – refer to **Drawing 108195-STM**.

A PCSWMM model of the Kizell Lands tributary to Pond 1 was developed by Novatech. This model includes the Kizell Lands as well as the inflows from Granite Ridge and the Iber Road industrial area. The model was imported into the updated Carp River PCSWMM models prepared by Novatech.

The subcatchment parameters for the lands tributary to Pond 1 are provided as **Table 6.4** in **Section 6.4** of the Concept Servicing Report.

### Storm Major / Minor Systems

The nodes, links, and storage curves used to represent the major and minor drainage system network for the Kizell Lands development have been designed in accordance with City of Ottawa Technical Bulletin PIEDTB-2016-01 (September 2016). Additional details on the design of the subdivision are available in the Concept Servicing Report.

### Pond 1 Design

The nodes, links and storage curves used to represent Pond 1 in the PCSWMM models were developed by Novatech. The stage-storage discharge Table for Pond 1 is provided in **Section 7.7**. Details of the outlet structure are provided in **Section 7.6** of the Concept Servicing Report.

## **1.2 Model Results**

**Table 1** (Future Conditions) and **Table 2** (Interim Conditions) provide a comparison of the 100-year water levels and flows along the main Branch of the Carp River between the updated Carp River Models and the original March 2016 models provided by the City.

**Table 1: 100-year Flows and Water Levels in Carp River (Future Conditions)**

Location on Carp River	PCSWMM Node	Original March 2016		With Fernbank Ponds 1	
		Flow (m <sup>3</sup> /s)	Water Level (m)	Flow (m <sup>3</sup> /s)	Water Level (m)
West Tributary at Richcraft Lands	CJ254	4.74	98.51	4.90	98.54
West Tributary at Mattamy Lands	CJ251	8.57	94.44	8.70	94.47
Existing West Tributary	CJ201	14.63	94.40	14.76	94.41
Near Pond 2/3 Outfall	CJ200	14.92	94.32	15.04	94.32
Hazeldean Road	CJ199	14.22	94.31	14.33	94.31
Maple Grove Road	CJ172	16.63	94.19	16.04	94.19
Palladium Drive	CJ150	55.11	94.15	53.91	94.15
Highway 417	CJ120	32.51	93.98	32.46	93.98
Feedmill Creek	CJ106	44.68	93.69	44.92	93.70

**Table 2: 100-year Flows and Water Levels in Carp River (Interim Conditions)**

Location on Carp River	PCSWMM Node	Original March 2016		With Fernbank Pond 1	
		Flow (m <sup>3</sup> /s)	Water Level (m)	Flow (m <sup>3</sup> /s)	Water Level (m)
West Tributary at Richcraft Lands*	CJ252	4.18	102.83	4.90	98.64
West Tributary at Mattamy Lands	CJ251	5.78	95.84	6.821	95.91
Existing West Tributary	CJ201	12.48	94.51	14.00	94.54
Near Pond 2/3 Outfall	CJ200	12.55	94.50	13.10	94.52
Hazeldean Road	CJ199	11.41	94.49	12.85	94.51
Maple Grove Road	CJ172	11.22	94.44	11.70	94.46
Palladium Drive	CJ150	28.56	94.33	29.13	94.34
Highway 417	CJ120	29.09	94.24	30.36	94.25
Feedmill Creek	CJ106	30.03	94.00	30.36	94.01

\*The location an invert/ obvert of node CJ252 was changed from the original model to the model including the Kizell Lands and Pond 1, hence the change in HGL.

The model results indicate a slight increase in peak flow in the Carp River, as the 100-year release rates for Pond 1 have increased from the March 2016 model. The release rates are generally consistent with the release rates from the SWMHYMO model prepared as part of the Fernbank EMP.

The model results indicate that there will be no substantial change to the modeled 100-year water levels in the Carp River under interim or future development conditions. The PCSWMM model output has been reviewed and any increases in water level are generally less than 0.03m, with one location having an increase of 0.07m under interim conditions.







**Pond 1**

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**Pond Inflow Summary**

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**Drainage Areas**

Drainage Area to North Forebay	16.58	ha	
Drainage Area Imperviousness	72.5	%	
Drainage Area to South Forebay	55.73	ha	
Drainage Area Imperviousness	70.6	%	
Total Pond Drainage Area	77.93	ha	<i>Refer to Drawing 108195-STM for drainage area delineation</i>
Total Area Imperviousness	66.87	%	

**Minor System Inflows**

<b>Table 1: Minor System Inflow Summary</b>	
Design Storm	Inflow (m <sup>3</sup> /s)
15mm	-
25mm	3.435
2-year	4.780
5-year	6.492
10-year	7.205
100-year	9.086

*Flows determined from the PCSWMM model*

**Major and Minor System Inflows**

<b>Table 2: Minor+Major System Inflow Summary</b>	
Design Storm	Inflow (m <sup>3</sup> /s)
25mm	3.044
2-year	4.362
5-year	6.934
100-year	12.047

*Flows determined from the SWMHYMO model*



**Kizell Lands - Fernbank Community**  
**Wet Pond Design Sheet**  
 Project Number: 108195



**Pond 1**

**North Forebay Design**

Design Storm	Inflow (m <sup>3</sup> /s)
15mm	
25mm	0.840
2-year	1.064
5-year	1.232
10-year	1.308
100-year	1.426

*Flows determined from the PCSWMM model*

Settling Calculation:  $Dist = \sqrt{\frac{rQ_p}{V_s}}$

*Equation 4.5 of the SWM Planning and Design Manual (MOE, 2003)*

Length to width ratio (r): 3.5 :1

Settling Velocity (V<sub>s</sub>): 0.000593 m/s

*Per Table 5*

Peak Water Quality Flow (Q<sub>p</sub>): 0.840 m<sup>3</sup>/s

*Per Section 3.5 of the SWMP Planning and Design Manual (MOE 1994)*

Dist (Forebay Length): 70 m

Dispersion/Resuspension Calculation:  $Dist = \frac{8Q}{dV_f}$

*Equation 4.6 of the SWM Planning and Design Manual (MOE, 2003)*

Forebay Velocity, V: 0.5 m/s

*Per Section 4.6.2 of the SWM Planning and Design Manual (MOE, 2003)*

Forebay Depth, D: 1.5 m

*Forebay Depth - Sediment Accumulation*

Effective Depth, d: 1.06 m

Inlet Flow Rate, Q: 1.426 m<sup>3</sup>/s

Dist (Forebay Length): 15.21099 m

Forebay Length based on d: 21 m

Characteristic	Minimum	Provided
Length (m)	70	75
Bottom Width (m)	1.9	6.0
Top Width (m)	20	15
L:W Ratio (H:1V)	2	5.0
Minimum Depth (m)	1.5	1.5
Approx. Flow Area (m <sup>2</sup> )	-	16
Average Velocity (m/s)	-	0.09
Approx. Volume (m <sup>3</sup> )	-	1181

*Trapezoidal cross-section assumed*

*Must be less than 0.15m/s*

**Kizell Lands - Fernbank Community**  
**Wet Pond Design Sheet**  
 Project Number: 108195



**Pond 1**

**South Forebay Design**

Design Storm	Inflow (m <sup>3</sup> /s)
15mm	
25mm	2.458
2-year	3.076
5-year	3.711
10-year	3.974
100-year	4.586

*Flows determined from the PCSWMM model*

Settling Calculation:  $Dist = \sqrt{\frac{rQ_p}{V_s}}$

*Equation 4.5 of the SWM Planning and Design Manual (MOE, 2003)*

Length to width ratio (r): 4.5 :1

Settling Velocity (V<sub>s</sub>): 0.000593 m/s

*Per Table 5*

Peak Water Quality Flow (Q<sub>p</sub>): 2.458 m<sup>3</sup>/s

*Per Section 3.5 of the SWMP Planning and Design Manual (MOE 1994)*

Dist (Forebay Length): 137 m

Dispersion/Resuspension Calculation:  $Dist = \frac{8Q}{dV_f}$

*Equation 4.6 of the SWM Planning and Design Manual (MOE, 2003)*

Forebay Velocity, V: 0.5 m/s

*Per Section 4.6.2 of the SWM Planning and Design Manual (MOE, 2003)*

Forebay Depth, D: 1.5 m

*Forebay Depth - Sediment Accumulation*

Effective Depth, d: 1.06 m

Inlet Flow Rate, Q: 3.974 m<sup>3</sup>/s

Dist (Forebay Length): 42.39211 m

Effective d Forebay Length: 60 m

Characteristic	Minimum	Provided
Length (m)	137	135
Bottom Width (m)	5.3	14.0
Top Width (m)	30	23
L:W Ratio (H:1V)	2	5.9
Minimum Depth (m)	1.5	1.5
Approx. Flow Area (m <sup>2</sup> )	-	28
Average Velocity (m/s)	-	0.14
Approx. Volume (m <sup>3</sup> )	-	3746

*Trapezoidal cross-section assumed*

*Must be less than 0.15m/s*



**Pond 1**

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**Outlet Design**

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**Extended Detention**

Drawdown Time:  $t = \frac{2A_p}{CA_o(2g)^{0.5}} (h_1^{0.5} - h_2^{0.5})$  *Equation 4.10 of the SWM Planning and Design Manual (MOE, 2003)*

Pond Surface Area ( $A_p$ ):	12553	m <sup>2</sup>	
Orifice Diameter:	220	mm	
Orifice Flow Area ( $A_o$ ):	0.0380	m <sup>2</sup>	
Orifice Coefficient (C):	0.61		<i>Per Section 8.3.8.1 of the OSDG.</i>
Extended Detention Depth (h):	0.35	m	
Drawdown Time (t):	40.2	hours	

**Pond 1**

**Quantity Control**

Table 8: Quantity Control Summary								
Service Level	Elevation (m)	Stage (m)	Outflow (L/s)					
			ED	Struct. 1	Struct. 2	Struct. 3	Total	Target
NWL	97.75	0	0	0	0	0	0	0
Ex. Det	98.10	0.35	50	0	0	0	50	50
2-year	98.65	0.9	91	856	86	0	1033	1500
5-year	98.95	1.2	107	1557	661	0	2326	2500
100-year	99.50	1.75	132	2957	2232	0	5320	5300
Overflow	99.80		143	3711	3214	2432	9501	

**Extended Detention Orifice**

C            0.61  
 Diameter    220 mm  
 Area        0.0380 m<sup>2</sup>  
 Invert      97.75 m  
 C/L         97.86 m  
 $Q_{\text{orifice}} = C \times A \times (2 \times g \times H)^{0.5}$

**Structure 1 (Rectangular Weir)**

Weir Coefficient (C)            1.84  
 Bottom Width                    1.25 m  
 Bottom of Weir Elevation      98.10 m  
 $Q \text{ (m}^3\text{/s)} = C \times (L - 0.2H) \times H^{(3/2)}$

**Structure 2 (Rectangular Weir)**

Weir Coefficient (C)            1.84  
 Bottom Width                    1.50 m  
 Bottom of Weir Elevation      98.55 m  
 $Q \text{ (m}^3\text{/s)} = C \times (L - 0.2H) \times H^{(3/2)}$

**Structure 3 (Broad-Crested Weir)**

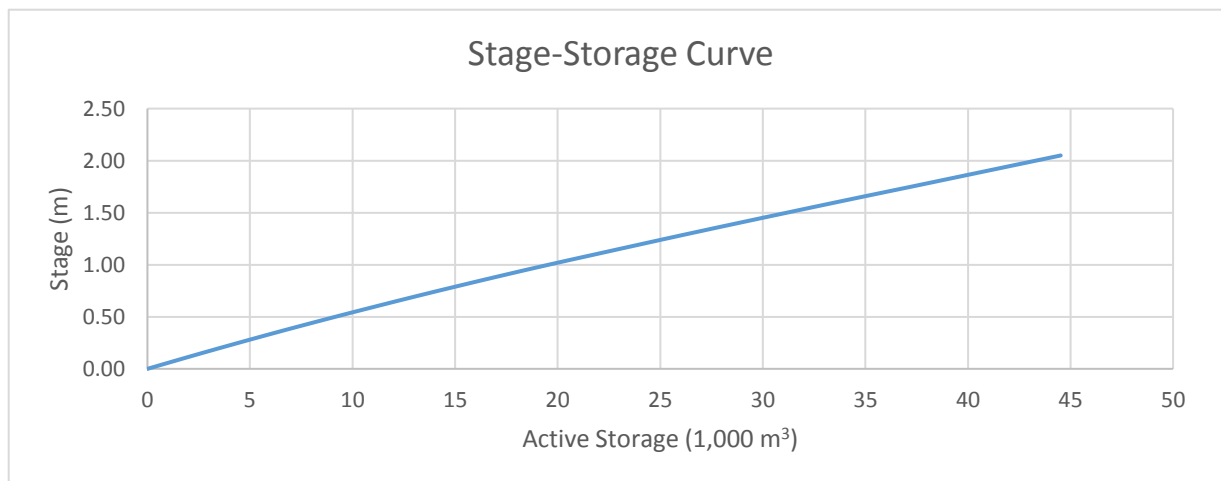
Weir Coefficient (C)            1.48  
 Bottom Width                    10.0 m  
 Bottom of Weir Elevation      99.50 m  
 $Q \text{ (m}^3\text{/s)} = C \times L \times H^{(3/2)}$

**Pond 1**

**Pond Design Summary**

**Stage-Storage-Discharge Table**

Table 9: Stage-Storage-Discharge					
Service Level	Elevation (m)	Stage (m)	Total Volume (m <sup>3</sup> )	Active Volume (m <sup>3</sup> )	Discharge (m <sup>3</sup> /s)
Bottom	96.25	-	0		
NWL	97.75	0.00	21504	0	0
	97.85	0.10	23254	1750	0
	97.95	0.20	25037	3533	31
	98.05	0.30	26863	5359	45
Ex. Det.	98.10	0.35	27794	6290	50
	98.15	0.40	28736	7232	81
	98.25	0.50	30663	9159	195
	98.35	0.60	32637	11133	348
	98.45	0.70	34658	13154	528
	98.55	0.80	36736	15232	730
2-year	98.65	0.90	38863	17359	1033
	98.75	1.00	41057	19553	1417
	98.85	1.10	43332	21828	1852
5-year	98.95	1.20	45619	24115	2326
	99.05	1.30	47933	26429	2829
	99.15	1.40	50287	28783	3356
	99.25	1.50	52672	31168	3901
	99.35	1.60	55070	33566	4461
	99.45	1.70	57507	36003	5032
100-year	99.50	1.75	58737	37233	5320
Overflow	99.80	2.05	66025	44521	9501



**Kizell Lands - Fernbank 5618 Hazeldean Road**  
**Design Storm Time Series Data**  
**Chicago Design Storms**



C25mm-3.stm		C2-3.stm		C5-3.stm	
Duration	Intensity	Duration	Intensity	Duration	Intensity
min	mm/hr	min	mm/hr	min	mm/hr
0:00	0	0:00	0	0:00	0
0:10	2.21	0:10	2.81	0:10	3.68
0:20	2.75	0:20	3.5	0:20	4.58
0:30	3.68	0:30	4.69	0:30	6.15
0:40	5.73	0:40	7.3	0:40	9.61
0:50	14.29	0:50	18.21	0:50	24.17
1:00	60.28	1:00	76.81	1:00	104.19
1:10	18.9	1:10	24.08	1:10	32.04
1:20	9.7	1:20	12.36	1:20	16.34
1:30	6.53	1:30	8.32	1:30	10.96
1:40	4.94	1:40	6.3	1:40	8.29
1:50	3.99	1:50	5.09	1:50	6.69
2:00	3.37	2:00	4.29	2:00	5.63
2:10	2.92	2:10	3.72	2:10	4.87
2:20	2.58	2:20	3.29	2:20	4.3
2:30	2.32	2:30	2.95	2:30	3.86
2:40	2.1	2:40	2.68	2:40	3.51
2:50	1.93	2:50	2.46	2:50	3.22
3:00	1.79	3:00	2.28	3:00	2.98

C10-3.stm		C100-3.stm	
Duration	Intensity	Duration	Intensity
min	mm/hr	min	mm/hr
0:00	0	0:00	0
0:10	4.25	0:10	6.05
0:20	5.29	0:20	7.54
0:30	7.11	0:30	10.16
0:40	11.13	0:40	15.97
0:50	28.1	0:50	40.65
1:00	122.14	1:00	178.56
1:10	37.28	1:10	54.05
1:20	18.95	1:20	27.32
1:30	12.7	1:30	18.24
1:40	9.59	1:40	13.74
1:50	7.73	1:50	11.06
2:00	6.5	2:00	9.29
2:10	5.63	2:10	8.02
2:20	4.97	2:20	7.08
2:30	4.46	2:30	6.35
2:40	4.05	2:40	5.76
2:50	3.71	2:50	5.28
3:00	3.43	3:00	4.88

**Kizell Lands - Fernbank 5618 Hazeldean Road**  
**Design Storm Time Series Data**  
**SCS Design Storms**



S2-12.stm		S5-12.stm	
Duration	Intensity	Duration	Intensity
min	mm/hr	min	mm/hr
0:00	0.00	0:00	0
0:30	1.27	0:30	1.69
1:00	0.59	1:00	0.79
1:30	1.10	1:30	1.46
2:00	1.10	2:00	1.46
2:30	1.44	2:30	1.91
3:00	1.27	3:00	1.69
3:30	1.69	3:30	2.25
4:00	1.69	4:00	2.25
4:30	2.29	4:30	3.03
5:00	2.88	5:00	3.82
5:30	4.57	5:30	6.07
6:00	36.24	6:00	48.08
6:30	9.23	6:30	12.25
7:00	4.06	7:00	5.39
7:30	2.71	7:30	3.59
8:00	2.37	8:00	3.15
8:30	1.86	8:30	2.47
9:00	1.95	9:00	2.58
9:30	1.27	9:30	1.69
10:00	1.02	10:00	1.35
10:30	1.44	10:30	1.91
11:00	0.93	11:00	1.24
11:30	0.85	11:30	1.12
12:00	0.85	12:00	1.12

**Kizell Lands - Fernbank 5618 Hazeldean Road**  
**Design Storm Time Series Data**  
**SCS Design Storms**



S10-12.stm		S100-12.stm	
Duration	Intensity	Duration	Intensity
min	mm/hr	min	mm/hr
0:00	0	0:00	0
0:30	1.96	0:30	2.82
1:00	0.91	1:00	1.31
1:30	1.7	1:30	2.44
2:00	1.7	2:00	2.44
2:30	2.22	2:30	3.19
3:00	1.96	3:00	2.82
3:30	2.61	3:30	3.76
4:00	2.61	4:00	3.76
4:30	3.52	4:30	5.07
5:00	4.43	5:00	6.39
5:30	7.04	5:30	10.14
6:00	55.83	6:00	80.38
6:30	14.22	6:30	20.47
7:00	6.26	7:00	9.01
7:30	4.17	7:30	6.01
8:00	3.65	8:00	5.26
8:30	2.87	8:30	4.13
9:00	3	9:00	4.32
9:30	1.96	9:30	2.82
10:00	1.57	10:00	2.25
10:30	2.22	10:30	3.19
11:00	1.43	11:00	2.07
11:30	1.3	11:30	1.88
12:00	1.3	12:00	1.88

# Kizell Lands - Fernbank 5618 Hazeldean Road PCSWMM Model Output SCS100-year 12-hour



EPA STORM WATER MANAGEMENT MODEL - VERSION 5.0 (Build 5.0.022)

M:\2008\108195\Subdivision\CAD\Design\108195-GP.dwg

NOTE: The summary statistics displayed in this report are based on results found at every computational time step, not just on results from each reporting time step.

\*\*\*\*\*  
 Analysis Options  
 \*\*\*\*\*  
 Flow Units ..... LPS  
 Process Models:  
 Rainfall/Runoff ..... YES  
 Snowmelt ..... NO  
 Groundwater ..... NO  
 Flow Routing ..... YES  
 Ponding Allowed ..... YES  
 Water Quality ..... NO  
 Infiltration Method ..... CURVE\_NUMBER  
 Flow Routing Method ..... DYNWAVE  
 Starting Date ..... SEP-20-2016 00:00:00  
 Ending Date ..... SEP-21-2016 00:00:00  
 Antecedent Dry Days ..... 0.0  
 Report Time Step ..... 00:01:00  
 Wet Time Step ..... 00:01:00  
 Dry Time Step ..... 00:01:00  
 Routing Time Step ..... 5.00 sec

\*\*\*\*\*  
 Element Count  
 \*\*\*\*\*  
 Number of rain gages ..... 1  
 Number of subcatchments ... 25  
 Number of nodes ..... 73  
 Number of links ..... 74  
 Number of pollutants ..... 0  
 Number of land uses ..... 0

\*\*\*\*\*  
 Raingage Summary  
 \*\*\*\*\*  

Name	Data Source	Data Type	Recording Interval
RAIN	SCS100-12	INTENSITY	30 min.

\*\*\*\*\*  
 Subcatchment Summary  
 \*\*\*\*\*  

Name	Area	Width	%Imperv	%Slope	Rain Gage	Outlet
GR SUBDV	60.70	500.00	56.00	0.5000	RAIN	GR_SWMF
IBER IND	6.60	250.00	55.00	0.5000	RAIN	IBER_IND_SWMF
IBER_RD E	2.22	25.00	90.00	0.5000	RAIN	P1-
EX. 501 (STM)						
P1-01-02	2.32	25.00	89.00	0.5000	RAIN	P1-01-02S
P1-03a	6.01	150.00	57.00	0.5000	RAIN	P1-03aS
P1-03b	2.62	75.00	66.00	0.5000	RAIN	P1-03bS
P1-04a	2.59	70.00	75.00	0.5000	RAIN	P1-04aS
P1-04b	2.24	75.00	75.00	0.5000	RAIN	P1-04bS
P1-05	1.61	30.00	43.00	0.5000	RAIN	P1-05S
P1-06	3.49	94.00	60.00	0.5000	RAIN	P1-06S
P1-07	1.65	25.00	100.00	0.5000	RAIN	P1-07S
P1-08	9.53	150.00	70.00	0.5000	RAIN	P1-08S
P1-09	1.66	25.00	91.00	0.5000	RAIN	P1-09S
P1-10	1.89	79.00	71.00	0.5000	RAIN	P1-10S
P1-11	4.70	109.00	71.00	0.5000	RAIN	P1-11S
P1-12	2.28	46.00	64.00	0.5000	RAIN	P1-12S
P1-13	7.98	100.00	64.00	0.5000	RAIN	P1-13S
P1-14	3.25	86.00	57.00	0.5000	RAIN	P1-14S
P1-15	2.41	33.00	64.00	0.5000	RAIN	P1-15S
P1-16	5.79	145.00	66.00	0.5000	RAIN	P1-16S
P1-17	2.41	25.00	97.00	0.5000	RAIN	P1-17S
P1-18	3.01	64.00	83.00	0.5000	RAIN	P1-18S
P1-19	1.44	40.00	64.00	0.5000	RAIN	P1-19S
P1-20	4.76	87.00	64.00	0.5000	RAIN	P1-20S

P1-25\_POND 4.29 86.00 80.00 0.5000 RAIN POND

\*\*\*\*\*  
 Node Summary  
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Name	Type	Invert Elev.	Max. Depth	Ponded Area	External Inflow
P1-101 (STM)	JUNCTION	97.65	3.15	0.0	
P1-101a (STM)	JUNCTION	97.59	3.21	0.0	
P1-103 (STM)	JUNCTION	97.70	3.13	0.0	
P1-105 (STM)	JUNCTION	97.78	3.73	0.0	
P1-107 (STM)	JUNCTION	98.35	3.32	0.0	
P1-109 (STM)	JUNCTION	98.46	3.38	0.0	
P1-111 (STM)	JUNCTION	98.79	3.27	0.0	
P1-113 (STM)	JUNCTION	99.17	3.13	0.0	
P1-147 (STM)	JUNCTION	97.98	3.84	0.0	
P1-153 (STM)	JUNCTION	98.10	4.02	0.0	
P1-165 (STM)	JUNCTION	98.23	4.20	0.0	
P1-169 (STM)	JUNCTION	98.31	4.30	0.0	
P1-171 (STM)	JUNCTION	98.44	4.07	0.0	
P1-173 (STM)	JUNCTION	99.43	3.64	0.0	
P1-203 (STM)	JUNCTION	98.67	4.48	0.0	
P1-205 (STM)	JUNCTION	98.91	4.75	0.0	
P1-207 (STM)	JUNCTION	99.16	4.01	0.0	
P1-209 (STM)	JUNCTION	100.43	3.07	0.0	
P1-215 (STM)	JUNCTION	99.59	3.19	0.0	
P1-215a (STM)	JUNCTION	101.06	2.33	0.0	
P1-217 (STM)	JUNCTION	99.89	3.42	0.0	
P1-219 (STM)	JUNCTION	100.64	2.81	0.0	
P1-219a (STM)	JUNCTION	101.19	1.65	0.0	
P1-221 (STM)	JUNCTION	100.69	1.73	0.0	
P1-221a (STM)	JUNCTION	99.72	3.03	0.0	
P1-301 (STM)	JUNCTION	97.70	3.55	0.0	
P1-301a (STM)	JUNCTION	97.70	3.55	0.0	
P1-303 (STM)	JUNCTION	97.73	3.56	0.0	
P1-305 (STM)	JUNCTION	97.79	3.57	0.0	
P1-307 (STM)	JUNCTION	98.48	3.08	0.0	
P1-309 (STM)	JUNCTION	98.64	3.13	0.0	
P1-311 (STM)	JUNCTION	99.43	2.34	0.0	
P1-317 (STM)	JUNCTION	97.91	3.53	0.0	
P1-319 (STM)	JUNCTION	98.12	3.45	0.0	
P1-321 (STM)	JUNCTION	98.22	3.43	0.0	
P1-323 (STM)	JUNCTION	98.99	2.83	0.0	
P1-327 (STM)	JUNCTION	98.82	3.23	0.0	
P1-329 (STM)	JUNCTION	99.38	4.46	0.0	
P1-331 (STM)	JUNCTION	99.89	3.95	0.0	
P1-333 (STM)	JUNCTION	99.71	4.26	0.0	
P1-335 (STM)	JUNCTION	99.89	3.28	0.0	
P1-337 (STM)	JUNCTION	99.34	3.50	0.0	
P1-349 (STM)	JUNCTION	101.62	2.18	0.0	
P1-351 (STM)	JUNCTION	101.35	2.41	0.0	
P1-EX. 501 (STM)	JUNCTION	101.18	2.86	0.0	
P1-EX. 502 (STM)	JUNCTION	101.12	2.86	0.0	
P1-EX. 503 (STM)	JUNCTION	100.87	2.88	0.0	
P1-EX. 504 (STM)	JUNCTION	100.63	2.86	0.0	
Pond1-OUT	OUTFALL	97.50	1.50	0.0	
GR_SWMF	STORAGE	102.55	1.60	0.0	
IBER_IND_SWMF	STORAGE	102.50	1.05	0.0	
P1-01-02S	STORAGE	102.35	1.75	0.0	
P1-03aS	STORAGE	100.91	2.09	0.0	
P1-03bS	STORAGE	102.35	1.75	0.0	
P1-04aS	STORAGE	101.05	1.75	0.0	
P1-04bS	STORAGE	101.45	1.75	0.0	
P1-05S	STORAGE	102.00	1.75	0.0	
P1-06S	STORAGE	102.05	1.75	0.0	
P1-07S	STORAGE	101.70	1.75	0.0	
P1-08S	STORAGE	101.65	1.75	0.0	
P1-09S	STORAGE	101.75	1.75	0.0	
P1-10S	STORAGE	101.00	1.75	0.0	
P1-11S	STORAGE	100.70	1.75	0.0	
P1-12S	STORAGE	100.40	1.75	0.0	
P1-13S	STORAGE	100.85	1.75	0.0	
P1-14S	STORAGE	100.40	1.75	0.0	
P1-15S	STORAGE	100.25	1.75	0.0	
P1-16S	STORAGE	101.40	1.75	0.0	
P1-17S	STORAGE	100.60	1.75	0.0	
P1-18S	STORAGE	100.30	1.75	0.0	
P1-19S	STORAGE	100.00	1.75	0.0	
P1-20S	STORAGE	100.35	1.75	0.0	
POND	STORAGE	96.25	3.55	0.0	

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# Kizell Lands - Fernbank 5618 Hazeldean Road PCSWMM Model Output SCS100-year 12-hour



Link Summary

Name	From Node	To Node	Type	Length	%Slope	Roughness
(STM).P1 101-PONDPI-101 (STM)	POND	CONDUIT	13.9	0.0719	0.0130	
(STM).P1 105-103PI-105 (STM)	P1-103 (STM)	CONDUIT	49.8	0.1004	0.0130	
(STM).P1 107-105PI-107 (STM)	P1-105 (STM)	CONDUIT	120.0	0.1000	0.0130	
(STM).P1 109-107PI-109 (STM)	P1-107 (STM)	CONDUIT	113.2	0.0971	0.0130	
(STM).P1 111-109PI-111 (STM)	P1-109 (STM)	CONDUIT	120.1	0.1498	0.0130	
(STM).P1 113-111PI-113 (STM)	P1-111 (STM)	CONDUIT	116.8	0.1970	0.0130	
(STM).P1 147-105PI-147 (STM)	P1-105 (STM)	CONDUIT	83.4	0.1558	0.0130	
(STM).P1 153-147PI-153 (STM)	P1-147 (STM)	CONDUIT	81.5	0.1472	0.0130	
(STM).P1 165-153PI-165 (STM)	P1-153 (STM)	CONDUIT	85.8	0.1515	0.0130	
(STM).P1 169-165PI-169 (STM)	P1-165 (STM)	CONDUIT	50.2	0.1395	0.0130	
(STM).P1 171-169PI-171 (STM)	P1-169 (STM)	CONDUIT	82.7	0.1451	0.0130	
(STM).P1 173-171PI-173 (STM)	P1-171 (STM)	CONDUIT	79.8	0.3009	0.0130	
(STM).P1 203-171PI-203 (STM)	P1-171 (STM)	CONDUIT	116.6	0.1972	0.0130	
(STM).P1 205-203PI-205 (STM)	P1-203 (STM)	CONDUIT	120.0	0.2001	0.0130	
(STM).P1 207-205PI-207 (STM)	P1-205 (STM)	CONDUIT	126.7	0.1973	0.0130	
(STM).P1 209-207PI-209 (STM)	P1-207 (STM)	CONDUIT	74.1	0.2968	0.0130	
(STM).P1 215-207PI-215 (STM)	P1-207 (STM)	CONDUIT	112.9	0.2481	0.0130	
(STM).P1 217-215PI-217 (STM)	P1-221a (STM)	CONDUIT	67.0	0.2537	0.0130	
(STM).P1 219A-219PI-219A (STM)	P1-219 (STM)	CONDUIT	41.2	0.2427	0.0130	
(STM).P1 221-221aPI-221 (STM)	P1-221a (STM)	CONDUIT	26.5	0.2642	0.0130	
(STM).P1 301-PONDPI-301 (STM)	POND	CONDUIT	10.5	0.0952	0.0150	
(STM).P1 305-303PI-305 (STM)	P1-303 (STM)	CONDUIT	44.5	0.0899	0.0130	
(STM).P1 307-305PI-307 (STM)	P1-305 (STM)	CONDUIT	81.7	0.1958	0.0130	
(STM).P1 309-307PI-309 (STM)	P1-307 (STM)	CONDUIT	81.7	0.1958	0.0130	
(STM).P1 311-309PI-311 (STM)	P1-309 (STM)	CONDUIT	64.9	0.4008	0.0130	
(STM).P1 317-305PI-317 (STM)	P1-305 (STM)	CONDUIT	81.5	0.1472	0.0130	
(STM).P1 319-317PI-319 (STM)	P1-317 (STM)	CONDUIT	97.2	0.1543	0.0130	
(STM).P1 321-319PI-321 (STM)	P1-319 (STM)	CONDUIT	64.6	0.1547	0.0130	
(STM).P1 323-321PI-323 (STM)	P1-321 (STM)	CONDUIT	72.1	0.2080	0.0130	
(STM).P1 327-321PI-327 (STM)	P1-321 (STM)	CONDUIT	120.0	0.2500	0.0130	
(STM).P1 331-329PI-331 (STM)	P1-329 (STM)	CONDUIT	90.6	0.3973	0.0130	
(STM).P1 333-327PI-333 (STM)	P1-327 (STM)	CONDUIT	116.8	0.5051	0.0130	
(STM).P1 337-327PI-337 (STM)	P1-327 (STM)	CONDUIT	97.0	0.3092	0.0130	
(STM).P1 349-351PI-349 (STM)	P1-351 (STM)	CONDUIT	58.4	0.1714	0.0130	
(STM).P1 501-502PI-EX. 501 (STM)	P1-EX. 502 (STM)	CONDUIT	31.8	0.1889	0.0130	
(STM).P1 502-503PI-EX. 502 (STM)	P1-EX. 503 (STM)	CONDUIT	112.2	0.1996	0.0130	
(STM).P1 503-504PI-EX. 503 (STM)	P1-EX. 504 (STM)	CONDUIT	120.0	0.2000	0.0130	
P1 101a-POND	P1-101a (STM)	POND	11.4	0.0881	0.0150	
P1 103-101	P1-103 (STM)	P1-101 (STM)	58.6	0.1024	0.0150	
P1 215a-215	P1-215a (STM)	P1-215 (STM)	26.0	1.0389	0.0130	
P1 219-217	P1-219 (STM)	P1-217 (STM)	120.7	0.2485	0.0130	
P1 221a-215	P1-221a (STM)	P1-215 (STM)	53.0	0.2453	0.0130	
P1 301a-POND	P1-301a (STM)	POND	10.0	0.1000	0.0150	
P1 303-301	P1-303 (STM)	P1-301 (STM)	25.1	0.1194	0.0150	
P1 329-327	P1-329 (STM)	P1-327 (STM)	65.8	0.3952	0.0130	
P1 335-171	P1-335 (STM)	P1-171 (STM)	120.0	0.3917	0.0130	
P1 351-219	P1-351 (STM)	P1-219 (STM)	104.1	0.2498	0.0130	
P1 EX504-217	P1-EX. 504 (STM)	P1-217 (STM)	80.1	0.1999	0.0130	
OCB01-02	P1-01-02S	P1-349 (STM)	ORIFICE			
OCB03b	P1-03bs	P1-351 (STM)	ORIFICE			
OCB04a	P1-04as	P1-221 (STM)	ORIFICE			
OCB04b	P1-04bs	P1-219A (STM)	ORIFICE			
OCB05	P1-05S	P1-215a (STM)	ORIFICE			
OCB06	P1-06S	P1-209 (STM)	ORIFICE			
OCB07	P1-07S	P1-203 (STM)	ORIFICE			
OCB08	P1-08S	P1-173 (STM)	ORIFICE			
OCB09	P1-09S	P1-335 (STM)	ORIFICE			
OCB10	P1-10S	P1-165 (STM)	ORIFICE			
OCB11	P1-11S	P1-153 (STM)	ORIFICE			
OCB12	P1-12S	P1-147 (STM)	ORIFICE			
OCB13	P1-13S	P1-113 (STM)	ORIFICE			
OCB14	P1-14S	P1-109 (STM)	ORIFICE			
OCB15	P1-15S	P1-107 (STM)	ORIFICE			
OCB16	P1-16S	P1-337 (STM)	ORIFICE			
OCB17	P1-17S	P1-327 (STM)	ORIFICE			
OCB18	P1-18S	P1-323 (STM)	ORIFICE			
OCB19	P1-19S	P1-317 (STM)	ORIFICE			
OCB20	P1-20S	P1-309 (STM)	ORIFICE			
P1 391-219-SCHOOLP1-03aS	P1-219 (STM)	ORIFICE				
North-OVF	P1-301 (STM)	P1-301a (STM)	WEIR			
South-OVF	P1-101 (STM)	P1-101a (STM)	WEIR			
GR_SWMF_OUT	GR_SWMF	P1-EX. 501 (STM)	OUTLET			
Outlet-02	IBER_IND_SWMF	P1-EX. 501 (STM)	OUTLET			
Outlet-03	POND	Pond1-OUT	OUTLET			

Cross Section Summary

Conduit	Shape	Full Depth	Full Area	Hyd. Rad.	Max. Width	No. of Barrels	Full Flow
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(STM).P1 101-POND CIRCULAR	1.52	1.82	0.38	1.52	1	1978.12
(STM).P1 105-103 RECT_CLOSED	1.80	5.40	0.56	3.00	1	8968.29
(STM).P1 107-105 CIRCULAR	1.37	1.48	0.34	1.37	1	1762.48
(STM).P1 109-107 CIRCULAR	1.37	1.48	0.34	1.37	1	1736.96
(STM).P1 111-109 CIRCULAR	1.22	1.17	0.30	1.22	1	1573.79
(STM).P1 113-111 CIRCULAR	1.07	0.89	0.27	1.07	1	1265.07
(STM).P1 147-105 HORIZ_ELLIPSE	1.73	3.79	0.53	2.69	1	7515.38
(STM).P1 153-147 HORIZ_ELLIPSE	1.73	3.79	0.53	2.69	1	7303.70
(STM).P1 165-153 HORIZ_ELLIPSE	1.73	3.79	0.53	2.69	1	7411.41
(STM).P1 149-165 HORIZ_ELLIPSE	1.73	3.79	0.53	2.69	1	7111.94
(STM).P1 171-169 HORIZ_ELLIPSE	1.73	3.79	0.53	2.69	1	7253.13
(STM).P1 173-171 CIRCULAR	1.07	0.89	0.27	1.07	1	1563.48
(STM).P1 203-171 CIRCULAR	1.83	2.63	0.46	1.83	1	5327.36
(STM).P1 205-203 CIRCULAR	1.83	2.63	0.46	1.83	1	5365.47
(STM).P1 207-205 CIRCULAR	1.83	2.63	0.46	1.83	1	5329.06
(STM).P1 209-207 CIRCULAR	0.76	0.46	0.19	0.76	1	632.79
(STM).P1 215-207 CIRCULAR	1.68	2.21	0.42	1.68	1	4732.98
(STM).P1 217-215 CIRCULAR	1.68	2.21	0.42	1.68	1	4786.86
(STM).P1 219A-219 CIRCULAR	0.76	0.46	0.19	0.76	1	572.22
(STM).P1 221-221a CIRCULAR	0.76	0.46	0.19	0.76	1	596.95
(STM).P1 301-POND CIRCULAR	0.99	0.77	0.25	0.99	1	626.02
(STM).P1 305-303 HORIZ_ELLIPSE	1.34	2.28	0.41	2.10	1	2902.02
(STM).P1 307-305 CIRCULAR	0.84	0.55	0.21	0.84	1	662.24
(STM).P1 309-307 CIRCULAR	0.84	0.55	0.21	0.84	1	662.24
(STM).P1 311-309 CIRCULAR	0.30	0.07	0.08	0.30	1	63.99
(STM).P1 317-305 CIRCULAR	1.37	1.48	0.34	1.37	1	2137.95
(STM).P1 319-317 CIRCULAR	1.37	1.48	0.34	1.37	1	2189.12
(STM).P1 321-319 CIRCULAR	1.37	1.48	0.34	1.37	1	2191.84
(STM).P1 323-321 CIRCULAR	0.84	0.55	0.21	0.84	1	682.55
(STM).P1 327-321 CIRCULAR	1.07	0.89	0.27	1.07	1	1425.20
(STM).P1 331-329 CIRCULAR	0.61	0.29	0.15	0.61	1	404.47
(STM).P1 333-327 CIRCULAR	0.76	0.46	0.19	0.76	1	825.49
(STM).P1 337-327 CIRCULAR	0.84	0.55	0.21	0.84	1	832.24
(STM).P1 349-351 CIRCULAR	0.61	0.29	0.15	0.61	1	265.66
(STM).P1 501-502 CIRCULAR	1.37	1.48	0.34	1.37	1	2422.18
(STM).P1 502-503 CIRCULAR	1.37	1.48	0.34	1.37	1	2489.59
(STM).P1 503-504 CIRCULAR	1.37	1.48	0.34	1.37	1	2492.16
P1 101a-POND CIRCULAR	1.83	2.63	0.46	1.83	1	3085.96
P1 103-101 RECT_CLOSED	1.80	5.40	0.56	3.00	1	7851.36
P1 215a-215 CIRCULAR	0.46	0.16	0.11	0.46	1	302.83
P1 219-217 CIRCULAR	1.22	1.17	0.30	1.22	1	2026.65
P1 221a-215 CIRCULAR	1.68	2.21	0.42	1.68	1	4706.50
P1 301a-POND HORIZ_ELLIPSE	1.34	2.28	0.41	2.10	1	2652.49
P1 303-301 HORIZ_ELLIPSE	1.34	2.28	0.41	2.10	1	2898.71
P1 329-327 CIRCULAR	0.76	0.46	0.19	0.76	1	730.17
P1 335-171 CIRCULAR	0.84	0.55	0.21	0.84	1	936.65
P1 351-219 CIRCULAR	0.76	0.46	0.19	0.76	1	580.46
P1 EX504-217 CIRCULAR	1.37	1.48	0.34	1.37	1	2491.32

Control Actions Taken

Runoff Quantity Continuity	Volume hectare-m	Depth mm
Total Precipitation	13.847	93.910
Evaporation Loss	0.000	0.000
Infiltration Loss	1.927	13.069
Surface Runoff	11.379	77.169
Final Surface Storage	0.542	3.675
Continuity Error (%)	-0.004	

Flow Routing Continuity	Volume hectare-m	Volume 10^6 ltr
Dry Weather Inflow	0.000	0.000
Wet Weather Inflow	11.378	113.783
Groundwater Inflow	0.000	0.000
RDI Inflow	0.000	0.000
External Inflow	0.000	0.000
External Outflow	10.604	106.037
Internal Outflow	0.000	0.000
Storage Losses	0.000	0.000
Initial Stored Volume	2.180	21.804
Final Stored Volume	2.954	29.538
Continuity Error (%)	0.010	



# Kizell Lands - Fernbank 5618 Hazeldean Road

## PCSWMM Model Output SCS100-year 12-hour

Highest Continuity Errors  
 \*\*\*\*\*  
 Node P1-301a (STM) (-2.82%)  
 Node P1-329 (STM) (1.99%)

\*\*\*\*\*  
 Time-Step Critical Elements  
 \*\*\*\*\*  
 Link {STM}.P1 101-POND (61.39%)  
 Link {STM}.P1 301-POND (18.38%)  
 Link P1 101a-POND (5.22%)  
 Link P1 301a-POND (1.31%)

\*\*\*\*\*  
 Highest Flow Instability Indexes  
 \*\*\*\*\*  
 Link North-OVF (38)  
 Link P1 301a-POND (35)  
 Link {STM}.P1 301-POND (32)  
 Link P1 303-301 (30)  
 Link {STM}.P1 305-303 (14)

\*\*\*\*\*  
 Routing Time Step Summary  
 \*\*\*\*\*  
 Minimum Time Step : 0.50 sec  
 Average Time Step : 2.77 sec  
 Maximum Time Step : 5.00 sec  
 Percent in Steady State : 0.00  
 Average Iterations per Step : 3.70

\*\*\*\*\*  
 Subcatchment Runoff Summary  
 \*\*\*\*\*

Runoff	Total Precip	Total Runon	Total Evap	Total Infil	Total Runoff	Total Runoff	Peak Runoff
Coeff	mm	mm	mm	mm	mm	10 <sup>6</sup> ltr	LPS
Subcatchment							
GR_SUBDV	93.91	0.00	0.00	14.34	74.10	44.98	6625.50
0.789							
IBER_IND	93.91	0.00	0.00	12.97	78.34	5.17	986.12
0.834							
IBER_RD_E	93.91	0.00	0.00	2.88	88.86	1.97	367.31
0.946							
P1-01-02	93.91	0.00	0.00	4.46	87.34	2.03	372.65
0.930							
P1-03a	93.91	0.00	0.00	17.44	73.47	4.42	807.99
0.782							
P1-03b	93.91	0.00	0.00	13.79	77.94	2.04	405.99
0.830							
P1-04a	93.91	0.00	0.00	10.14	81.96	2.12	443.55
0.873							
P1-04b	93.91	0.00	0.00	10.14	82.06	1.84	393.59
0.874							
P1-05	93.91	0.00	0.00	23.12	66.09	1.06	163.63
0.704							
P1-06	93.91	0.00	0.00	16.23	75.14	2.62	495.03
0.800							
P1-07	93.91	0.00	0.00	0.00	92.12	1.52	311.56
0.981							
P1-08	93.91	0.00	0.00	12.17	79.48	7.57	1413.97
0.846							
P1-09	93.91	0.00	0.00	3.65	88.37	1.47	297.36
0.941							
P1-10	93.91	0.00	0.00	11.76	80.50	1.52	325.01
0.857							
P1-11	93.91	0.00	0.00	11.76	80.29	3.77	753.23
0.855							
P1-12	93.91	0.00	0.00	14.60	76.91	1.75	328.30
0.819							
P1-13	93.91	0.00	0.00	14.60	76.20	6.08	1052.22
0.811							
P1-14	93.91	0.00	0.00	17.44	73.92	2.40	440.45
0.787							

P1-15	93.91	0.00	0.00	14.60	75.93	1.83	323.86
0.808							
P1-16	93.91	0.00	0.00	13.79	77.73	4.50	881.95
0.828							
P1-17	93.91	0.00	0.00	1.22	90.76	2.19	403.21
0.966							
P1-18	93.91	0.00	0.00	6.90	85.15	2.56	540.20
0.907							
P1-19	93.91	0.00	0.00	14.60	77.21	1.11	216.65
0.822							
P1-20	93.91	0.00	0.00	14.60	76.79	3.66	674.79
0.818							
P1-25_POND	93.91	0.00	0.00	8.11	83.67	3.59	740.28
0.891							

\*\*\*\*\*  
 Node Depth Summary  
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Node	Type	Average Depth Meters	Maximum Depth Meters	Maximum HGL Meters	Time of Max Occurrence days hr:min
P1-101 (STM)	JUNCTION	1.02	1.74	99.39	0 07:05
P1-101a (STM)	JUNCTION	0.99	1.63	99.22	0 07:45
P1-103 (STM)	JUNCTION	1.00	1.83	99.53	0 07:04
P1-105 (STM)	JUNCTION	0.95	1.85	99.63	0 07:03
P1-107 (STM)	JUNCTION	0.52	1.34	99.69	0 07:04
P1-109 (STM)	JUNCTION	0.45	1.27	99.73	0 07:04
P1-111 (STM)	JUNCTION	0.29	0.97	99.76	0 07:04
P1-113 (STM)	JUNCTION	0.21	0.66	99.83	0 07:05
P1-147 (STM)	JUNCTION	0.83	1.85	99.83	0 06:54
P1-153 (STM)	JUNCTION	0.79	1.94	100.04	0 06:46
P1-165 (STM)	JUNCTION	0.75	1.99	100.22	0 06:46
P1-169 (STM)	JUNCTION	0.75	2.05	100.36	0 06:46
P1-171 (STM)	JUNCTION	0.71	2.07	100.51	0 06:46
P1-173 (STM)	JUNCTION	0.25	1.16	100.59	0 06:46
P1-203 (STM)	JUNCTION	0.72	2.12	100.79	0 06:46
P1-205 (STM)	JUNCTION	0.70	2.12	101.03	0 06:42
P1-207 (STM)	JUNCTION	0.69	2.12	101.28	0 06:42
P1-209 (STM)	JUNCTION	0.16	0.94	101.37	0 06:42
P1-215 (STM)	JUNCTION	0.64	1.98	101.57	0 06:42
P1-215a (STM)	JUNCTION	0.09	0.54	101.60	0 06:42
P1-217 (STM)	JUNCTION	0.68	2.06	101.95	0 06:42
P1-219 (STM)	JUNCTION	0.29	1.47	102.11	0 06:42
P1-219a (STM)	JUNCTION	0.14	0.95	102.14	0 06:42
P1-221 (STM)	JUNCTION	0.17	1.09	101.78	0 06:42
P1-221a (STM)	JUNCTION	0.68	2.04	101.76	0 06:42
P1-301 (STM)	JUNCTION	0.89	1.55	99.25	0 07:57
P1-301a (STM)	JUNCTION	0.86	1.55	99.25	0 07:50
P1-303 (STM)	JUNCTION	0.87	1.53	99.26	0 07:57
P1-305 (STM)	JUNCTION	0.82	1.46	99.25	0 07:54
P1-307 (STM)	JUNCTION	0.31	0.77	99.25	0 07:22
P1-309 (STM)	JUNCTION	0.24	0.67	99.31	0 07:12
P1-311 (STM)	JUNCTION	0.00	0.00	99.43	0 00:00
P1-317 (STM)	JUNCTION	0.73	1.32	99.23	0 07:53
P1-319 (STM)	JUNCTION	0.56	1.12	99.24	0 07:10
P1-321 (STM)	JUNCTION	0.50	1.07	99.29	0 06:35
P1-323 (STM)	JUNCTION	0.15	0.57	99.46	0 06:35
P1-327 (STM)	JUNCTION	0.20	0.75	99.57	0 06:31
P1-329 (STM)	JUNCTION	0.01	0.19	99.57	0 06:31
P1-331 (STM)	JUNCTION	0.00	0.00	99.89	0 00:00
P1-333 (STM)	JUNCTION	0.00	0.00	99.71	0 00:00
P1-335 (STM)	JUNCTION	0.10	0.66	100.55	0 06:44
P1-337 (STM)	JUNCTION	0.16	0.59	99.93	0 06:35
P1-349 (STM)	JUNCTION	0.16	0.92	102.54	0 06:42
P1-351 (STM)	JUNCTION	0.19	1.05	102.40	0 06:42
P1-EX. 501 (STM)	JUNCTION	0.72	1.89	103.07	0 07:00
P1-EX. 502 (STM)	JUNCTION	0.67	1.77	102.89	0 07:00
P1-EX. 503 (STM)	JUNCTION	0.64	1.66	102.53	0 07:00
P1-EX. 504 (STM)	JUNCTION	0.63	1.58	102.21	0 07:00
Pond1-OUT	OUTFALL	0.00	0.00	97.50	0 00:00
GR_SWMF	STORAGE	0.64	1.36	103.91	0 07:32
IBER_IND_SWMF	STORAGE	0.29	0.85	103.35	0 07:06
P1-01-02S	STORAGE	0.22	1.53	103.88	0 06:40
P1-03as	STORAGE	0.25	1.80	102.71	0 06:30
P1-03bs	STORAGE	0.24	1.63	103.98	0 06:36
P1-04as	STORAGE	0.28	1.63	102.68	0 06:43
P1-04bs	STORAGE	0.23	1.57	103.02	0 06:37
P1-05S	STORAGE	0.14	1.32	103.32	0 06:30
P1-06S	STORAGE	0.24	1.64	103.69	0 06:35
P1-07S	STORAGE	0.17	1.49	103.19	0 06:35
P1-08S	STORAGE	0.38	1.68	103.33	0 06:47

# Kizell Lands - Fernbank 5618 Hazeldean Road PCSWMM Model Output SCS100-year 12-hour



P1-09S	STORAGE	0.17	1.50	103.25	0	06:34
P1-10S	STORAGE	0.19	1.58	102.58	0	06:33
P1-11S	STORAGE	0.28	1.62	102.32	0	06:39
P1-12S	STORAGE	0.27	1.51	101.91	0	06:40
P1-13S	STORAGE	0.39	1.65	102.50	0	06:50
P1-14S	STORAGE	0.24	1.53	101.93	0	06:35
P1-15S	STORAGE	0.23	1.58	101.83	0	06:38
P1-16S	STORAGE	0.27	1.65	103.05	0	06:36
P1-17S	STORAGE	0.15	1.30	101.90	0	06:30
P1-18S	STORAGE	0.18	1.56	101.86	0	06:33
P1-19S	STORAGE	0.14	1.46	101.46	0	06:31
P1-20S	STORAGE	0.31	1.65	102.00	0	06:40
POND	STORAGE	2.32	2.95	99.20	0	07:47

P1-09S	STORAGE	297.35	297.35	0	06:30	1.467	1.467
P1-10S	STORAGE	325.00	325.00	0	06:30	1.522	1.522
P1-11S	STORAGE	753.21	753.21	0	06:30	3.774	3.774
P1-12S	STORAGE	328.29	328.29	0	06:30	1.754	1.753
P1-13S	STORAGE	1052.18	1052.18	0	06:30	6.081	6.081
P1-14S	STORAGE	440.44	440.44	0	06:30	2.402	2.402
P1-15S	STORAGE	323.84	323.84	0	06:30	1.830	1.830
P1-16S	STORAGE	881.93	881.93	0	06:30	4.501	4.501
P1-17S	STORAGE	403.19	403.19	0	06:30	2.187	2.187
P1-18S	STORAGE	540.19	540.19	0	06:30	2.563	2.563
P1-19S	STORAGE	216.65	216.65	0	06:30	1.112	1.112
P1-20S	STORAGE	674.77	674.77	0	06:30	3.655	3.655
POND	STORAGE	740.26	8839.45	0	06:36	3.590	133.265

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Node Inflow Summary  
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Node	Type	Maximum Lateral Inflow LPS	Maximum Total Inflow LPS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10 <sup>6</sup> ltr	Total Inflow Volume 10 <sup>6</sup> ltr
P1-101 (STM)	JUNCTION	0.00	6798.03	0 06:46	0.000	93.918
P1-101a (STM)	JUNCTION	0.00	2260.32	0 06:55	0.000	19.774
P1-103 (STM)	JUNCTION	0.00	6812.88	0 06:46	0.000	93.956
P1-105 (STM)	JUNCTION	0.00	6819.54	0 06:45	0.000	93.947
P1-107 (STM)	JUNCTION	0.00	996.35	0 06:50	0.000	10.310
P1-109 (STM)	JUNCTION	0.00	791.71	0 07:06	0.000	8.472
P1-111 (STM)	JUNCTION	0.00	536.79	0 07:08	0.000	6.064
P1-113 (STM)	JUNCTION	0.00	506.14	0 06:50	0.000	6.080
P1-147 (STM)	JUNCTION	0.00	5869.38	0 06:44	0.000	83.675
P1-153 (STM)	JUNCTION	0.00	5687.52	0 06:44	0.000	81.930
P1-165 (STM)	JUNCTION	0.00	5251.72	0 06:44	0.000	78.163
P1-169 (STM)	JUNCTION	0.00	5027.95	0 06:44	0.000	76.643
P1-171 (STM)	JUNCTION	0.00	5028.68	0 06:44	0.000	76.633
P1-173 (STM)	JUNCTION	0.00	700.27	0 06:47	0.000	7.573
P1-203 (STM)	JUNCTION	0.00	4108.45	0 06:43	0.000	67.624
P1-205 (STM)	JUNCTION	0.00	3897.54	0 06:55	0.000	66.113
P1-207 (STM)	JUNCTION	0.00	3898.89	0 06:55	0.000	66.120
P1-209 (STM)	JUNCTION	0.00	325.96	0 06:35	0.000	2.622
P1-215 (STM)	JUNCTION	0.00	3646.92	0 07:04	0.000	63.507
P1-215a (STM)	JUNCTION	0.00	163.28	0 06:30	0.000	1.064
P1-217 (STM)	JUNCTION	0.00	3314.12	0 07:00	0.000	60.309
P1-219 (STM)	JUNCTION	0.00	1543.70	0 06:27	0.000	10.311
P1-219a (STM)	JUNCTION	0.00	242.46	0 06:23	0.000	1.838
P1-221 (STM)	JUNCTION	0.00	261.28	0 06:28	0.000	2.123
P1-221a (STM)	JUNCTION	0.00	3585.82	0 07:04	0.000	62.446
P1-301 (STM)	JUNCTION	0.00	1874.90	0 06:33	0.000	14.864
P1-301a (STM)	JUNCTION	0.00	918.86	0 07:50	0.000	4.634
P1-303 (STM)	JUNCTION	0.00	1883.38	0 06:33	0.000	13.987
P1-305 (STM)	JUNCTION	0.00	1898.30	0 06:33	0.000	13.992
P1-307 (STM)	JUNCTION	0.00	382.12	0 06:38	0.000	3.655
P1-309 (STM)	JUNCTION	0.00	382.58	0 06:40	0.000	3.655
P1-311 (STM)	JUNCTION	0.00	0.00	0 00:00	0.000	0.000
P1-317 (STM)	JUNCTION	0.00	1533.79	0 06:32	0.000	10.349
P1-319 (STM)	JUNCTION	0.00	1346.69	0 06:32	0.000	9.243
P1-321 (STM)	JUNCTION	0.00	1357.35	0 06:31	0.000	9.212
P1-323 (STM)	JUNCTION	0.00	427.87	0 06:33	0.000	2.563
P1-327 (STM)	JUNCTION	0.00	948.03	0 06:30	0.000	6.687
P1-329 (STM)	JUNCTION	0.00	7.94	0 06:12	0.000	0.004
P1-331 (STM)	JUNCTION	0.00	0.00	0 00:00	0.000	0.000
P1-333 (STM)	JUNCTION	0.00	0.00	0 00:00	0.000	0.000
P1-335 (STM)	JUNCTION	0.00	241.19	0 06:34	0.000	1.467
P1-337 (STM)	JUNCTION	0.00	550.55	0 06:36	0.000	4.500
P1-349 (STM)	JUNCTION	0.00	263.66	0 06:40	0.000	2.026
P1-351 (STM)	JUNCTION	0.00	523.88	0 06:38	0.000	4.069
P1-EX. 501 (STM)	JUNCTION	367.30	2312.24	0 07:03	1.973	50.019
P1-EX. 502 (STM)	JUNCTION	0.00	2312.30	0 07:03	0.000	50.018
P1-EX. 503 (STM)	JUNCTION	0.00	2312.49	0 07:03	0.000	50.009
P1-EX. 504 (STM)	JUNCTION	0.00	2313.51	0 07:04	0.000	50.010
Pond1-OUT	OUTFALL	0.00	4848.41	0 07:47	0.000	106.036
GR_SWMF	STORAGE	6625.18	6625.18	0 06:30	44.980	44.978
IBER_IND_SWMF	STORAGE	986.09	986.09	0 06:30	5.171	5.171
P1-01-02S	STORAGE	372.63	372.63	0 06:30	2.026	2.026
P1-03as	STORAGE	807.97	807.97	0 06:30	4.416	4.416
P1-03bs	STORAGE	405.98	405.98	0 06:30	2.042	2.042
P1-04as	STORAGE	443.53	443.53	0 06:30	2.123	2.123
P1-04bs	STORAGE	393.58	393.58	0 06:30	1.838	1.838
P1-05S	STORAGE	163.63	163.63	0 06:30	1.064	1.064
P1-06S	STORAGE	495.01	495.01	0 06:30	2.623	2.623
P1-07S	STORAGE	311.55	311.55	0 06:30	1.520	1.520
P1-08S	STORAGE	1413.92	1413.92	0 06:30	7.575	7.574

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Node Surcharge Summary  
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Surcharging occurs when water rises above the top of the highest conduit.

Node	Type	Hours Surcharged	Max. Height Above Crown Meters	Min. Depth Below Rim Meters
P1-105 (STM)	JUNCTION	0.37	0.030	1.878
P1-147 (STM)	JUNCTION	0.77	0.125	1.988
P1-153 (STM)	JUNCTION	0.84	0.212	2.081
P1-165 (STM)	JUNCTION	0.83	0.253	2.210
P1-169 (STM)	JUNCTION	0.88	0.315	2.248
P1-171 (STM)	JUNCTION	0.72	0.239	2.002
P1-173 (STM)	JUNCTION	0.42	0.097	2.476
P1-203 (STM)	JUNCTION	0.71	0.293	2.358
P1-205 (STM)	JUNCTION	0.64	0.288	2.633
P1-207 (STM)	JUNCTION	0.58	0.287	1.894
P1-209 (STM)	JUNCTION	0.40	0.174	2.134
P1-215 (STM)	JUNCTION	0.56	0.301	1.213
P1-215a (STM)	JUNCTION	0.32	0.085	1.788
P1-217 (STM)	JUNCTION	0.37	0.113	1.355
P1-219 (STM)	JUNCTION	0.46	0.254	1.337
P1-219a (STM)	JUNCTION	0.41	0.186	0.702
P1-221 (STM)	JUNCTION	0.59	0.333	0.635
P1-221a (STM)	JUNCTION	0.61	0.367	0.987
P1-303 (STM)	JUNCTION	1.76	0.171	2.029
P1-305 (STM)	JUNCTION	1.11	0.089	2.109
P1-349 (STM)	JUNCTION	0.44	0.309	1.261
P1-351 (STM)	JUNCTION	0.43	0.273	1.357
P1-EX. 501 (STM)	JUNCTION	1.60	0.513	0.975
P1-EX. 502 (STM)	JUNCTION	0.64	0.396	1.092
P1-EX. 503 (STM)	JUNCTION	0.48	0.267	1.215
P1-EX. 504 (STM)	JUNCTION	0.45	0.204	1.284
GR_SWMF	STORAGE	24.00	1.358	0.242
IBER_IND_SWMF	STORAGE	24.00	0.853	0.197
P1-01-02S	STORAGE	1.49	1.203	0.222
P1-03as	STORAGE	1.18	1.204	0.286
P1-03bs	STORAGE	1.43	1.316	0.119
P1-04as	STORAGE	1.41	1.307	0.123
P1-04bs	STORAGE	1.25	1.252	0.183
P1-05S	STORAGE	1.03	1.052	0.433
P1-06S	STORAGE	1.35	1.288	0.107
P1-07S	STORAGE	1.20	1.176	0.259
P1-08S	STORAGE	1.69	1.152	0.073
P1-09S	STORAGE	1.19	1.189	0.249
P1-10S	STORAGE	1.18	1.284	0.168
P1-11S	STORAGE	1.32	1.203	0.132
P1-12S	STORAGE	1.74	1.243	0.237
P1-13S	STORAGE	1.83	1.209	0.096
P1-14S	STORAGE	1.47	1.192	0.223
P1-15S	STORAGE	1.55	1.291	0.169
P1-16S	STORAGE	1.18	1.188	0.097
P1-17S	STORAGE	0.91	0.876	0.449
P1-18S	STORAGE	1.02	1.145	0.190
P1-19S	STORAGE	1.06	1.179	0.289
P1-20S	STORAGE	1.53	1.267	0.098

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Node Flooding Summary  
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No nodes were flooded.

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Storage Volume Summary  
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# Kizell Lands - Fernbank 5618 Hazeldean Road

## PCSWMM Model Output SCS100-year 12-hour



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Storage Unit	Average Volume 1000 m3	Avg Pcnt Full	E&I Pcnt Loss	Maximum Volume 1000 m3	Max Pcnt Full	Time of Max Occurrence days hr:min	Maximum Outflow LPS
GR SWMF	7.201	37	0	15.813	82	0 07:32	1826.00
I&ER IND SWMF	0.507	23	0	1.657	76	0 07:06	325.00
P1-01-02S	0.003	1	0	0.082	13	0 06:40	263.66
P1-03aS	0.000	0	0	0.004	1	0 06:30	792.76
P1-03bS	0.007	2	0	0.153	44	0 06:36	257.36
P1-04aS	0.015	3	0	0.203	42	0 06:43	261.28
P1-04bS	0.009	1	0	0.153	23	0 06:37	242.46
P1-05S	0.000	0	0	0.000	0	0 06:30	163.28
P1-06S	0.007	2	0	0.169	48	0 06:35	325.96
P1-07S	0.001	0	0	0.038	7	0 06:35	244.81
P1-08S	0.082	6	0	0.875	62	0 06:47	700.27
P1-09S	0.001	0	0	0.030	8	0 06:34	241.19
P1-10S	0.003	1	0	0.096	27	0 06:33	227.16
P1-11S	0.020	2	0	0.339	39	0 06:39	436.97
P1-12S	0.010	1	0	0.157	11	0 06:40	182.86
P1-13S	0.070	5	0	0.690	53	0 06:50	506.14
P1-14S	0.007	1	0	0.161	13	0 06:35	279.54
P1-15S	0.004	1	0	0.094	27	0 06:38	215.29
P1-16S	0.017	3	0	0.343	52	0 06:36	550.55
P1-17S	0.000	0	0	0.000	0	0 06:30	402.66
P1-18S	0.002	1	0	0.073	21	0 06:33	427.87
P1-19S	0.000	0	0	0.010	3	0 06:31	195.21
P1-20S	0.021	3	0	0.318	52	0 06:40	382.58
POND	38.780	56	0	53.416	77	0 07:47	4908.97

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Outfall Loading Summary  
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Outfall Node	Flow Freq. Pcnt.	Avg. Flow LPS	Max. Flow LPS	Total Volume 10 <sup>6</sup> ltr
Pond1-OUT	96.99	1972.62	4848.41	106.036
System	96.99	1972.62	4848.41	106.036

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Link Flow Summary  
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Link	Type	Maximum  Flow  LPS	Time of Max Occurrence days hr:min	Maximum  Veloc  m/sec	Max/ Full Flow	Max/ Full Depth
{STM}.P1 101-POND	CONDUIT	4575.78	0 06:42	2.73	2.31	1.00
{STM}.P1 105-103	CONDUIT	6812.88	0 06:46	1.28	0.76	1.00
{STM}.P1 107-105	CONDUIT	995.65	0 06:50	1.12	0.56	0.99
{STM}.P1 109-107	CONDUIT	839.58	0 07:06	0.91	0.48	0.95
{STM}.P1 111-109	CONDUIT	611.20	0 07:07	0.99	0.39	0.85
{STM}.P1 113-111	CONDUIT	536.79	0 07:08	1.37	0.42	0.69
{STM}.P1 147-105	CONDUIT	5868.40	0 06:44	1.55	0.78	1.00
{STM}.P1 153-147	CONDUIT	5686.61	0 06:44	1.50	0.78	1.00
{STM}.P1 165-153	CONDUIT	5251.22	0 06:44	1.39	0.71	1.00
{STM}.P1 169-165	CONDUIT	5027.67	0 06:44	1.33	0.71	1.00
{STM}.P1 171-169	CONDUIT	5027.95	0 06:44	1.33	0.69	1.00
{STM}.P1 173-171	CONDUIT	713.19	0 07:18	1.57	0.46	1.00
{STM}.P1 203-171	CONDUIT	4108.64	0 06:43	1.56	0.77	1.00
{STM}.P1 205-203	CONDUIT	3897.85	0 06:55	1.48	0.73	1.00
{STM}.P1 207-205	CONDUIT	3897.54	0 06:55	1.57	0.73	1.00
{STM}.P1 209-207	CONDUIT	332.92	0 06:39	1.36	0.53	1.00
{STM}.P1 215-207	CONDUIT	3650.10	0 07:04	1.79	0.77	1.00
{STM}.P1 217-215	CONDUIT	3367.06	0 07:04	1.53	0.70	1.00
{STM}.P1 219A-219	CONDUIT	244.05	0 06:32	1.18	0.43	1.00
{STM}.P1 221-221a	CONDUIT	256.69	0 06:28	1.22	0.43	1.00
{STM}.P1 301-POND	CONDUIT	1290.03	0 06:20	1.91	2.06	1.00
{STM}.P1 305-303	CONDUIT	1883.38	0 06:33	0.94	0.65	1.00
{STM}.P1 307-305	CONDUIT	382.13	0 06:49	1.28	0.58	0.96
{STM}.P1 309-307	CONDUIT	382.12	0 06:38	1.10	0.58	0.86
{STM}.P1 311-309	CONDUIT	0.00	0 00:00	0.00	0.00	0.23
{STM}.P1 317-305	CONDUIT	1523.53	0 06:33	1.18	0.71	0.98
{STM}.P1 319-317	CONDUIT	1338.93	0 06:32	1.09	0.61	0.86
{STM}.P1 321-319	CONDUIT	1346.69	0 06:32	1.14	0.61	0.79
{STM}.P1 323-321	CONDUIT	427.63	0 06:34	1.33	0.63	0.67

{STM}.P1 327-321	CONDUIT	931.75	0 06:31	1.53	0.65	0.71
{STM}.P1 333-329	CONDUIT	0.00	0 00:00	0.00	0.00	0.04
{STM}.P1 333-327	CONDUIT	0.00	0 00:00	0.00	0.00	0.29
{STM}.P1 337-327	CONDUIT	550.63	0 06:38	1.55	0.66	0.67
{STM}.P1 349-351	CONDUIT	266.73	0 06:38	1.02	1.00	1.00
{STM}.P1 501-502	CONDUIT	2312.30	0 07:03	1.56	0.95	1.00
{STM}.P1 502-503	CONDUIT	2312.49	0 07:03	1.56	0.93	1.00
{STM}.P1 503-504	CONDUIT	2313.51	0 07:04	1.62	0.93	1.00
P1 101A-POND	CONDUIT	2258.58	0 06:55	1.28	0.73	0.86
P1 103-101	CONDUIT	6798.03	0 06:46	1.32	0.87	0.98
P1 215a-215	CONDUIT	163.09	0 06:30	1.66	0.54	1.00
P1 219-217	CONDUIT	1525.72	0 06:28	1.80	0.75	1.00
P1 221a-215	CONDUIT	3587.92	0 07:04	1.63	0.76	1.00
P1 301a-POND	CONDUIT	746.02	0 06:47	0.39	0.28	1.00
P1 303-301	CONDUIT	1874.90	0 06:33	0.94	0.65	1.00
P1 329-327	CONDUIT	7.94	0 06:12	0.11	0.01	0.42
P1 335-171	CONDUIT	244.89	0 06:44	1.30	0.26	0.90
P1 351-219	CONDUIT	526.83	0 06:39	1.45	0.91	1.00
P1 EX504-217	CONDUIT	2328.53	0 07:09	1.99	0.93	1.00
OCB01-02	ORIFICE	263.66	0 06:40			1.00
OCB03b	ORIFICE	257.36	0 06:36			1.00
OCB04a	ORIFICE	261.28	0 06:28			1.00
OCB04b	ORIFICE	242.46	0 06:23			1.00
OCB05	ORIFICE	163.28	0 06:30			1.00
OCB06	ORIFICE	325.96	0 06:35			1.00
OCB07	ORIFICE	244.81	0 06:35			1.00
OCB08	ORIFICE	700.27	0 06:47			1.00
OCB09	ORIFICE	241.19	0 06:34			1.00
OCB10	ORIFICE	227.16	0 06:33			1.00
OCB11	ORIFICE	436.97	0 06:39			1.00
OCB12	ORIFICE	182.86	0 06:40			1.00
OCB13	ORIFICE	506.14	0 06:50			1.00
OCB14	ORIFICE	279.54	0 06:35			1.00
OCB15	ORIFICE	215.29	0 06:38			1.00
OCB16	ORIFICE	550.55	0 06:36			1.00
OCB17	ORIFICE	402.66	0 06:30			1.00
OCB18	ORIFICE	427.87	0 06:33			1.00
OCB19	ORIFICE	195.21	0 06:31			1.00
OCB20	ORIFICE	382.58	0 06:40			1.00
P1 391-219-SCHOOL	ORIFICE	792.76	0 06:27			1.00
North-OVF	WEIR	918.86	0 07:50			0.49
South-OVF	WEIR	2260.32	0 06:55			0.64
GR SWMF OUT	DUMMY	1826.00	0 07:03			
Outlet-02	DUMMY	325.00	0 06:33			
Outlet-03	DUMMY	4848.41	0 07:47			

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Flow Classification Summary  
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Conduit	Adjusted /Actual Length	--- Dry	Fraction of Time Up Dry	Down Dry	Sub Crit	Sup Crit	Class Up Crit	Down Crit	Avg. Froude Number	Avg. Flow Change
{STM}.P1 101-POND	1.00	0.00	0.00	0.00	0.83	0.00	0.00	0.17	0.29	0.0001
{STM}.P1 105-103	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	0.16	0.0000
{STM}.P1 107-105	1.00	0.01	0.00	0.00	0.69	0.00	0.00	0.30	0.24	0.0000
{STM}.P1 109-107	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.20	0.0000
{STM}.P1 111-109	1.00	0.01	0.00	0.00	0.54	0.00	0.00	0.45	0.42	0.0000
{STM}.P1 113-111	1.00	0.01	0.00	0.00	0.30	0.00	0.00	0.69	0.66	0.0000
{STM}.P1 147-105	1.00	0.01	0.00	0.00	0.92	0.00	0.00	0.07	0.27	0.0001
{STM}.P1 153-147	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.31	0.0001
{STM}.P1 165-153	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.34	0.0000
{STM}.P1 169-165	1.00	0.01	0.00	0.00	0.98	0.00	0.00	0.00	0.37	0.0000
{STM}.P1 171-169	1.00	0.01	0.00	0.00	0.98	0.00	0.00	0.01	0.40	0.0000
{STM}.P1 173-171	1.00	0.01	0.00	0.00	0.30	0.00	0.00	0.69	0.73	0.0000
{STM}.P1 203-171	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.54	0.0001
{STM}.P1 205-203	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.54	0.0000
{STM}.P1 207-205	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.56	0.0000
{STM}.P1 209-207	1.00	0.01	0.00	0.00	0.14	0.00	0.00	0.85	0.77	0.0000
{STM}.P1 215-207	1.00	0.01	0.00	0.00	0.41	0.00	0.00	0.58	0.72	0.0001
{STM}.P1 217-215	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.55	0.0000
{STM}.P1 219A-219	1.00	0.01	0.00	0.00	0.13	0.00	0.00	0.86	0.68	0.0000
{STM}.P1 221-221a	1.00	0.01	0.00	0.00	0.25	0.00	0.00	0.74	0.67	0.0000
{STM}.P1 301-POND	1.00	0.00	0.00	0.00	0.94	0.00	0.00	0.06	0.11	0.0019
{STM}.P1 305-303	1.00	0.01	0.00	0.00	0.98	0.00	0.00	0.01	0.08	0.0002
{STM}.P1 307-305	1.00	0.01	0.00	0.00	0.65	0.00	0.00	0.34	0.33	0.0001
{STM}.P1 309-307	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.33	0.0001
{STM}.P1 311-309	1.00	0.84	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
{STM}.P1 317-305	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.11	0.0001
{STM}.P1 319-317	1.00	0.01	0.00	0.00	0.88	0.00	0.00	0.10	0.16	0.0001
{STM}.P1 321-319	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.20	0.0001
{STM}.P1 323-321	1.00	0.01	0.00	0.00	0.44	0.00	0.00	0.55	0.53	0.0000

# Kizell Lands - Fernbank 5618 Hazeldean Road

## PCSWMM Model Output SCS100-year 12-hour

{STM}.P1 327-321	1.00	0.01	0.00	0.00	0.57	0.00	0.00	0.42	0.56	0.0000
{STM}.P1 331-329	1.00	0.98	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
{STM}.P1 333-327	1.00	0.75	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
{STM}.P1 337-327	1.00	0.01	0.00	0.00	0.05	0.00	0.00	0.94	0.86	0.0000
{STM}.P1 349-351	1.00	0.03	0.00	0.00	0.10	0.00	0.00	0.88	0.59	0.0001
{STM}.P1 501-502	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.45	0.0001
{STM}.P1 502-503	1.00	0.01	0.00	0.00	0.86	0.00	0.00	0.12	0.56	0.0001
{STM}.P1 503-504	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.53	0.0001
P1 101a-POND	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.07	0.0001
P1 103-101	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.14	0.0001
P1 215a-215	1.00	0.03	0.00	0.00	0.09	0.01	0.00	0.87	1.15	0.0000
P1 219-217	1.00	0.01	0.00	0.00	0.48	0.00	0.00	0.51	0.61	0.0001
P1 221a-215	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.59	0.0001
P1 301a-POND	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.01	0.0026
P1 303-301	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.06	0.0004
P1 329-327	1.00	0.75	0.01	0.00	0.24	0.00	0.00	0.00	0.00	0.0000
P1 335-171	1.00	0.03	0.00	0.00	0.25	0.00	0.00	0.73	0.78	0.0000
P1 351-219	1.00	0.01	0.00	0.00	0.10	0.00	0.00	0.88	0.75	0.0001
P1 EX504-217	1.00	0.01	0.00	0.00	0.12	0.00	0.00	0.87	0.68	0.0001

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 Conduit Surcharge Summary  
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Conduit	Hours Full			Hours	
	Both Ends	Upstream	Dnstream	Above Full Normal Flow	Hours Capacity Limited
{STM}.P1 101-POND	0.80	0.80	0.80	3.33	0.80
{STM}.P1 147-105	0.58	0.58	0.58	0.01	0.58
{STM}.P1 153-147	0.77	0.77	0.77	0.01	0.77
{STM}.P1 165-153	0.84	0.84	0.84	0.01	0.80
{STM}.P1 169-165	0.83	0.83	0.83	0.01	0.83
{STM}.P1 171-169	0.86	0.86	0.86	0.01	0.67
{STM}.P1 173-171	0.42	0.42	0.42	0.01	0.01
{STM}.P1 203-171	0.71	0.71	0.71	0.01	0.69
{STM}.P1 205-203	0.64	0.64	0.64	0.01	0.01
{STM}.P1 207-205	0.58	0.58	0.58	0.01	0.01
{STM}.P1 209-207	0.40	0.40	0.41	0.01	0.01
{STM}.P1 215-207	0.56	0.56	0.57	0.01	0.44
{STM}.P1 217-215	0.61	0.61	0.61	0.01	0.54
{STM}.P1 219a-219	0.41	0.41	0.41	0.01	0.01
{STM}.P1 221-221a	0.59	0.59	0.59	0.01	0.01
{STM}.P1 301-POND	7.05	7.05	7.05	0.85	1.84
{STM}.P1 305-303	1.45	1.45	1.45	0.01	0.01
{STM}.P1 349-351	0.43	0.43	0.43	0.01	0.43
{STM}.P1 501-502	0.64	0.64	0.64	0.01	0.64
{STM}.P1 502-503	0.48	0.48	0.48	0.01	0.48
{STM}.P1 503-504	0.45	0.45	0.45	0.01	0.45
P1 215a-215	0.32	0.32	0.32	0.01	0.01
P1 219-217	0.46	0.46	0.46	0.01	0.01
P1 221a-215	0.56	0.56	0.57	0.01	0.56
P1 301a-POND	1.79	1.79	1.81	0.01	0.45
P1 303-301	1.90	1.90	1.90	0.01	0.01
P1 351-219	0.44	0.44	0.44	0.01	0.43
P1 EX504-217	0.37	0.37	0.37	0.01	0.37

Analysis begun on: Tue Nov 08 09:52:44 2016  
 Analysis ended on: Tue Nov 08 09:52:49 2016  
 Total elapsed time: 00:00:05

# Kizell Lands - Fernbank 5618 Hazeldean Road

## PCSWMM Model Output SCS100-year 12-hour Carp River Ultimate

EPA STORM WATER MANAGEMENT MODEL - VERSION 5.0 (Build 5.0.022)

\*\*\*\*\*  
NOTE: The summary statistics displayed in this report are based on results found at every computational time step, not just on results from each reporting time step.  
\*\*\*\*\*

\*\*\*\*\*  
Analysis Options  
\*\*\*\*\*  
Flow Units ..... CMS  
Process Models:  
Rainfall/Runoff ..... YES  
Snowmelt ..... NO  
Groundwater ..... NO  
Flow Routing ..... YES  
Ponding Allowed ..... YES  
Water Quality ..... NO  
Infiltration Method ..... CURVE\_NUMBER  
Flow Routing Method ..... DYNWAVE  
Starting Date ..... JUL-23-2009 00:00:00  
Ending Date ..... JUL-25-2009 00:00:00  
Antecedent Dry Days ..... 0.0  
Report Time Step ..... 00:05:00  
Wet Time Step ..... 00:05:00  
Dry Time Step ..... 01:00:00  
Routing Time Step ..... 2.00 sec

WARNING 04: minimum elevation drop used for Conduit CC028  
WARNING 04: minimum elevation drop used for Conduit CC040  
WARNING 04: minimum elevation drop used for Conduit CC050\_2  
WARNING 04: minimum elevation drop used for Conduit CC060  
WARNING 04: minimum elevation drop used for Conduit CC076  
WARNING 04: minimum elevation drop used for Conduit CC079  
WARNING 04: minimum elevation drop used for Conduit CC083  
WARNING 04: minimum elevation drop used for Conduit CC089  
WARNING 04: minimum elevation drop used for Conduit CC104  
WARNING 04: minimum elevation drop used for Conduit CC106  
WARNING 04: minimum elevation drop used for Conduit CC109  
WARNING 04: minimum elevation drop used for Conduit CC115  
WARNING 04: minimum elevation drop used for Conduit CC117\_2  
WARNING 04: minimum elevation drop used for Conduit CC131  
WARNING 04: minimum elevation drop used for Conduit CC137  
WARNING 04: minimum elevation drop used for Conduit CC143  
WARNING 04: minimum elevation drop used for Conduit CC150\_2  
WARNING 04: minimum elevation drop used for Conduit CC153  
WARNING 04: minimum elevation drop used for Conduit CC160  
WARNING 04: minimum elevation drop used for Conduit CC164  
WARNING 04: minimum elevation drop used for Conduit CC167  
WARNING 04: minimum elevation drop used for Conduit CC170  
WARNING 04: minimum elevation drop used for Conduit CC171  
WARNING 04: minimum elevation drop used for Conduit CC172  
WARNING 04: minimum elevation drop used for Conduit CC172\_2  
WARNING 04: minimum elevation drop used for Conduit CC180

WARNING 04: minimum elevation drop used for Conduit CC192  
WARNING 04: minimum elevation drop used for Conduit CC195  
WARNING 04: minimum elevation drop used for Conduit CC197\_2  
WARNING 04: minimum elevation drop used for Conduit CC199\_2  
WARNING 04: minimum elevation drop used for Conduit CC287  
WARNING 03: negative offset ignored for Link FC011  
WARNING 03: negative offset ignored for Link FC012  
WARNING 03: negative offset ignored for Link FC014  
WARNING 03: negative offset ignored for Link FC015  
WARNING 03: negative offset ignored for Link FC042  
WARNING 03: negative offset ignored for Link FC043  
WARNING 04: minimum elevation drop used for Conduit FC071\_1  
WARNING 03: negative offset ignored for Link FC079  
WARNING 03: negative offset ignored for Link FC080  
WARNING 03: negative offset ignored for Link FC080  
WARNING 03: negative offset ignored for Link FC081  
WARNING 04: minimum elevation drop used for Conduit FC086\_1  
WARNING 04: minimum elevation drop used for Conduit FC088\_2  
WARNING 04: minimum elevation drop used for Conduit FC101  
WARNING 04: minimum elevation drop used for Conduit PC046\_2  
WARNING 04: minimum elevation drop used for Conduit PC093\_1  
WARNING 03: negative offset ignored for Link CP205  
WARNING 03: negative offset ignored for Link FP053  
WARNING 03: negative offset ignored for Link FP105  
WARNING 02: maximum depth increased for Node CJ002  
WARNING 02: maximum depth increased for Node CJ003  
WARNING 02: maximum depth increased for Node CJ005  
WARNING 02: maximum depth increased for Node CJ006  
WARNING 02: maximum depth increased for Node CJ008  
WARNING 02: maximum depth increased for Node CJ011  
WARNING 02: maximum depth increased for Node CJ012  
WARNING 02: maximum depth increased for Node CJ013  
WARNING 02: maximum depth increased for Node CJ015  
WARNING 02: maximum depth increased for Node CJ018  
WARNING 02: maximum depth increased for Node CJ020  
WARNING 02: maximum depth increased for Node CJ021  
WARNING 02: maximum depth increased for Node CJ022  
WARNING 02: maximum depth increased for Node CJ024  
WARNING 02: maximum depth increased for Node CJ025  
WARNING 02: maximum depth increased for Node CJ026  
WARNING 02: maximum depth increased for Node CJ027  
WARNING 02: maximum depth increased for Node CJ029  
WARNING 02: maximum depth increased for Node CJ031









# Kizell Lands - Fernbank 5618 Hazeldean Road

## PCSWMM Model Output SCS100-year 12-hour Carp River Ultimate

WARNING 02: maximum depth increased for Node PJ075  
 WARNING 02: maximum depth increased for Node PJ076  
 WARNING 02: maximum depth increased for Node PJ085  
 WARNING 02: maximum depth increased for Node PJ086  
 WARNING 02: maximum depth increased for Node PJ087  
 WARNING 02: maximum depth increased for Node PJ088  
 WARNING 02: maximum depth increased for Node PJ089  
 WARNING 02: maximum depth increased for Node PJ090  
 WARNING 02: maximum depth increased for Node PJ091  
 WARNING 02: maximum depth increased for Node PJ092  
 WARNING 02: maximum depth increased for Node PJ095  
 WARNING 02: maximum depth increased for Node PJ096  
 WARNING 02: maximum depth increased for Node PJ097  
 WARNING 02: maximum depth increased for Node PJ098  
 WARNING 02: maximum depth increased for Node PJ099  
 WARNING 02: maximum depth increased for Node PJ102  
 WARNING 02: maximum depth increased for Node PJ104  
 WARNING 02: maximum depth increased for Node PJ105  
 WARNING 02: maximum depth increased for Node PJ112  
 WARNING 02: maximum depth increased for Node PJ113  
 WARNING 02: maximum depth increased for Node PJ114  
 WARNING 02: maximum depth increased for Node PJ115  
 WARNING 02: maximum depth increased for Node PJ117  
 WARNING 02: maximum depth increased for Node PJ118  
 WARNING 02: maximum depth increased for Node PJ119  
 WARNING 02: maximum depth increased for Node PJ120  
 WARNING 02: maximum depth increased for Node PJ121  
 WARNING 02: maximum depth increased for Node PJ123  
 WARNING 02: maximum depth increased for Node PJ125  
 WARNING 02: maximum depth increased for Node PJ126  
 WARNING 02: maximum depth increased for Node PJ127  
 WARNING 02: maximum depth increased for Node PJ128  
 WARNING 02: maximum depth increased for Node PJ129  
 WARNING 02: maximum depth increased for Node PJ130  
 WARNING 02: maximum depth increased for Node PJ131  
 WARNING 02: maximum depth increased for Node PJ133  
 WARNING 02: maximum depth increased for Node PJ134  
 WARNING 02: maximum depth increased for Node PJ135  
 WARNING 02: maximum depth increased for Node PJ136  
 WARNING 02: maximum depth increased for Node PJ137  
 WARNING 02: maximum depth increased for Node PJ138  
 WARNING 02: maximum depth increased for Node PJ139

WARNING 02: maximum depth increased for Node PJ140  
 WARNING 02: maximum depth increased for Node PJ146  
 WARNING 02: maximum depth increased for Node PJ147  
 WARNING 02: maximum depth increased for Node PJ148  
 WARNING 02: maximum depth increased for Node PJ149  
 WARNING 02: maximum depth increased for Node PJ156  
 WARNING 02: maximum depth increased for Node PJ159  
 WARNING 02: maximum depth increased for Node PJ253  
 WARNING 02: maximum depth increased for Node PJ254

```
*****
Volume      Depth
Runoff Quantity Continuity  hectare-m  mm
*****
Total Precipitation ..... 1342.790  96.000
Evaporation Loss ..... 0.000  0.000
Infiltration Loss ..... 428.773  30.654
Surface Runoff ..... 711.286  50.852
Final Surface Storage .... 203.400  14.542
Continuity Error (%) ..... -0.050
```

```
*****
Volume      Volume
Flow Routing Continuity  hectare-m  10^6 ltr
*****
Dry Weather Inflow ..... 0.000  0.000
Wet Weather Inflow ..... 710.977  7109.840
Groundwater Inflow ..... 0.000  0.000
RDII Inflow ..... 0.000  0.000
External Inflow ..... 20.993  209.932
External Outflow ..... 697.754  6977.609
Internal Outflow ..... 0.000  0.000
Storage Losses ..... 0.000  0.000
Initial Stored Volume .... 266.785  2667.878
Final Stored Volume ..... 306.154  3061.570
Continuity Error (%) ..... -0.516
```

```
*****
Highest Continuity Errors
*****
Node CJ290 (16.25%)
Node FJ203 (-6.41%)
Node PJ151 (3.29%)
Node PJ171 (3.24%)
Node FSto103 (2.98%)
```

```
*****
Time-Step Critical Elements
*****
Link CC131 (26.17%)
Link CC108 (22.31%)
Link CC160 (18.22%)
Link CC005_1 (7.10%)
Link FC234 (6.32%)
```

```
*****
Highest Flow Instability Indexes
*****
Link CC153 (47)
Link CC154 (46)
Link CC150_1 (42)
Link CC155 (38)
Link Out_FCDP2 (37)
```

```
*****
Routing Time Step Summary
*****
Minimum Time Step : 0.50 sec
Average Time Step : 1.00 sec
Maximum Time Step : 2.00 sec
Percent in Steady State : 0.00
Average Iterations per Step : 4.92
```

# Kizell Lands - Fernbank 5618 Hazeldean Road

## PCSWMM Model Output SCS100-year 12-hour Carp River Ultimate

\*\*\*\*\*  
Subcatchment Runoff Summary  
\*\*\*\*\*

Runoff Coeff Subcatchment	Total Precip mm	Total Runon mm	Total Evap mm	Total Infil mm	Total Runoff mm	Total Runoff 10^6 ltr	Peak Runoff CMS
CS005_1	96.00	0.00	0.00	36.91	55.38	43.72	6.16
0.577							
CS005_2	96.00	0.00	0.00	22.44	60.43	123.31	3.16
0.629							
CS007	96.00	0.00	0.00	26.64	59.49	68.85	2.88
0.620							
CS013_1	96.00	0.00	0.00	27.31	61.46	50.82	1.80
0.640							
CS013_2	96.00	0.00	0.00	27.31	47.99	277.93	6.34
0.500							
CS014	96.00	0.00	0.00	22.44	56.52	213.55	4.97
0.589							
CS019	96.00	0.00	0.00	27.59	54.23	134.30	2.50
0.565							
CS028	96.00	0.00	0.00	22.67	58.91	128.54	2.45
0.614							
CS030	96.00	0.00	0.00	27.59	58.80	40.22	0.96
0.613							
CS034	96.00	0.00	0.00	22.67	59.53	108.17	2.12
0.620							
CS036	96.00	0.00	0.00	22.44	63.01	41.67	1.20
0.656							
CS038	96.00	0.00	0.00	20.46	74.61	21.55	7.15
0.777							
CS040	96.00	0.00	0.00	32.60	56.67	57.49	1.69
0.590							
CS045	96.00	0.00	0.00	24.58	68.93	10.86	1.77
0.718							
CS052	96.00	0.00	0.00	32.57	55.20	42.88	1.07
0.575							
CS063_1	96.00	0.00	0.00	27.87	60.51	56.17	1.64
0.630							
CS063_2	96.00	0.00	0.00	56.62	38.17	11.74	1.21
0.398							
CS073	96.00	0.00	0.00	39.35	55.43	2.97	0.22
0.577							
CS077_2	96.00	0.00	0.00	6.58	88.42	10.87	3.64
0.921							
CS082_1	96.00	0.00	0.00	9.62	84.17	31.08	7.42
0.877							
CS082_2	96.00	0.00	0.00	10.85	84.12	7.43	2.14
0.876							
CS085	96.00	0.00	0.00	27.03	48.03	257.94	7.57
0.500							
CS086	96.00	0.00	0.00	27.03	48.73	577.34	16.95
0.508							
CS087	96.00	0.00	0.00	30.03	48.81	196.91	3.32
0.508							
CS088_1	96.00	0.00	0.00	34.48	30.87	808.72	21.61
0.322							
CS088_2	96.00	0.00	0.00	36.46	43.68	285.51	9.21
0.455							
CS092	96.00	0.00	0.00	33.09	61.83	13.20	3.12
0.644							
CS098	96.00	0.00	0.00	39.89	54.96	49.72	10.67
0.572							
CS113	96.00	0.00	0.00	3.79	91.13	16.52	4.38
0.949							
CS115	96.00	0.00	0.00	35.48	58.65	10.12	1.55
0.611							
CS116	96.00	0.00	0.00	13.74	79.65	6.04	1.34
0.830							
CS125	96.00	0.00	0.00	25.42	69.48	43.41	9.82
0.724							
CS127	96.00	0.00	0.00	41.42	53.42	0.53	0.13
0.556							
CS129	96.00	0.00	0.00	2.20	92.76	18.29	5.39
0.966							
CS141	96.00	0.00	0.00	39.56	36.34	477.09	7.95
0.379							
CS158	96.00	0.00	0.00	32.72	62.07	0.91	0.12
0.647							

CS159	96.00	0.00	0.00	19.54	75.40	21.32	5.60
0.785							
CS177	96.00	0.00	0.00	32.77	58.12	7.24	0.28
0.605							
CS196	96.00	0.00	0.00	9.42	85.54	3.09	0.90
0.891							
CS200_1	96.00	0.00	0.00	32.47	60.84	2.96	0.21
0.634							
CS204	96.00	0.00	0.00	75.82	18.98	1.93	0.13
0.198							
CS206	96.00	0.00	0.00	17.11	77.31	21.98	5.13
0.805							
CS207	96.00	0.00	0.00	22.99	71.91	6.44	1.41
0.749							
CS208	96.00	0.00	0.00	18.02	76.54	18.23	4.33
0.797							
CS209	96.00	0.00	0.00	35.70	58.68	3.57	0.32
0.611							
CS211	96.00	0.00	0.00	13.02	82.00	7.59	2.31
0.854							
CS213	96.00	0.00	0.00	31.13	62.98	5.57	0.63
0.656							
CS214	96.00	0.00	0.00	16.25	78.45	25.54	6.43
0.817							
CS216	96.00	0.00	0.00	2.21	92.72	18.22	4.97
0.966							
CS246	96.00	0.00	0.00	43.40	51.45	21.64	3.59
0.536							
CS246_2	96.00	0.00	0.00	6.27	88.33	13.55	4.27
0.920							
CS247	96.00	0.00	0.00	16.97	77.89	13.21	3.41
0.811							
CS248_2	96.00	0.00	0.00	26.36	68.49	40.97	8.16
0.713							
CS250	96.00	0.00	0.00	14.85	80.13	10.29	2.93
0.835							
CS251_1	96.00	0.00	0.00	47.97	46.79	5.96	0.29
0.487							
CS251_2	96.00	0.00	0.00	48.37	46.39	3.13	0.14
0.483							
CS255	96.00	0.00	0.00	20.68	74.28	8.08	2.04
0.774							
CS256_1	96.00	0.00	0.00	23.37	69.91	50.34	8.86
0.728							
CS256_2	96.00	0.00	0.00	63.29	31.53	0.37	0.08
0.328							
CS257	96.00	0.00	0.00	18.29	76.64	18.62	4.83
0.798							
CS258	96.00	0.00	0.00	19.98	74.86	72.09	14.03
0.780							
CS259	96.00	0.00	0.00	20.45	74.15	21.19	4.79
0.772							
CS261	96.00	0.00	0.00	11.21	83.80	11.78	3.58
0.873							
CS262	96.00	0.00	0.00	19.32	75.65	5.26	1.37
0.788							
CS263_1	96.00	0.00	0.00	20.25	73.67	17.73	3.60
0.767							
CS263_2	96.00	0.00	0.00	27.62	67.24	1.34	0.34
0.700							
CS264_1	96.00	0.00	0.00	5.93	89.07	4.27	1.35
0.928							
CS264_2	96.00	0.00	0.00	13.77	81.25	2.37	0.73
0.846							
CS265_1	96.00	0.00	0.00	23.19	70.82	104.19	17.83
0.738							
CS265_2	96.00	0.00	0.00	68.79	25.96	24.75	0.67
0.270							
CS267_1	96.00	0.00	0.00	18.16	76.79	9.05	2.55
0.800							
CS267_2	96.00	0.00	0.00	16.16	78.76	8.93	2.41
0.820							
CS267_3	96.00	0.00	0.00	15.39	79.49	5.33	1.28
0.828							
CS267_4	96.00	0.00	0.00	15.43	79.44	1.49	0.35
0.827							
CS267_5	96.00	0.00	0.00	15.19	79.73	1.39	0.36
0.830							
CS267_7	96.00	0.00	0.00	16.52	78.35	33.19	7.89
0.816							
CS268	96.00	0.00	0.00	10.03	84.78	25.35	5.78
0.883							
CS269	96.00	0.00	0.00	19.56	75.38	32.38	8.73
0.785							

**Kizell Lands - Fernbank 5618 Hazeldean Road**  
**PCSWMM Model Output SCS100-year 12-hour Carp River Ultimate**

CS270	96.00	0.00	0.00	11.76	83.05	50.84	11.82	FS200_1	96.00	0.00	0.00	21.19	73.87	3.25	1.05
0.865								0.769							
CS271	96.00	0.00	0.00	6.72	88.27	21.46	6.63	FS200_2	96.00	0.00	0.00	3.16	91.90	5.05	1.74
0.920								0.957							
CS282	96.00	0.00	0.00	12.45	82.56	10.77	3.24	FS201_1	96.00	0.00	0.00	19.85	75.20	2.11	0.68
0.860								0.783							
CS293	96.00	0.00	0.00	9.21	85.85	3.33	1.12	FS201_2	96.00	0.00	0.00	20.92	74.04	9.70	2.73
0.894								0.771							
CS294	96.00	0.00	0.00	51.46	41.35	10.83	0.31	FS202_1	96.00	0.00	0.00	21.23	73.82	3.60	1.15
0.431								0.769							
CS295	96.00	0.00	0.00	15.44	79.48	7.95	2.06	FS202_2	96.00	0.00	0.00	23.71	71.22	9.47	2.44
0.828								0.742							
CS296	96.00	0.00	0.00	17.15	77.74	22.63	5.43	FS203a	96.00	0.00	0.00	22.28	72.65	3.42	0.89
0.810								0.757							
FS010	96.00	0.00	0.00	32.77	60.36	5.89	0.38	FS203b	96.00	0.00	0.00	2.27	92.72	8.34	2.56
0.629								0.966							
FS019	96.00	0.00	0.00	22.14	72.90	3.01	0.97	FS203c	96.00	0.00	0.00	22.28	72.65	1.28	0.33
0.759								0.757							
FS020	96.00	0.00	0.00	25.34	69.60	5.07	1.87	FS204	96.00	0.00	0.00	22.03	72.91	4.75	1.29
0.725								0.759							
FS022	96.00	0.00	0.00	2.19	92.82	21.74	6.98	FS206_1	96.00	0.00	0.00	21.09	73.98	1.26	0.42
0.967								0.771							
FS031	96.00	0.00	0.00	35.17	59.72	4.86	1.08	FS206_2	96.00	0.00	0.00	22.06	72.88	6.41	1.73
0.622								0.759							
FS043	96.00	0.00	0.00	37.61	57.24	4.80	0.84	GR_SUBDV	96.00	0.00	0.00	16.54	77.33	46.94	8.75
0.596								0.906							
FS050_1	96.00	0.00	0.00	39.68	53.87	29.81	2.17	IBER_IND	96.00	0.00	0.00	14.61	80.59	5.32	1.41
0.561								0.839							
FS050_3	96.00	0.00	0.00	29.89	62.40	30.56	2.67	IBER_RD_E	96.00	0.00	0.00	3.24	91.28	2.03	0.48
0.650								0.951							
FS052	96.00	0.00	0.00	18.96	76.03	4.47	1.31	P1-01-02	96.00	0.00	0.00	4.78	89.74	2.08	0.49
0.792								0.935							
FS053	96.00	0.00	0.00	30.63	64.25	59.18	10.59	P1-03a	96.00	0.00	0.00	19.14	75.67	4.55	1.17
0.669								0.788							
FS058	96.00	0.00	0.00	35.64	57.32	8.96	0.85	P1-03b	96.00	0.00	0.00	14.87	80.15	2.10	0.59
0.597								0.835							
FS061	96.00	0.00	0.00	42.57	52.25	50.70	6.21	P1-04a	96.00	0.00	0.00	10.83	84.21	2.18	0.64
0.544								0.877							
FS065_1	96.00	0.00	0.00	33.20	61.76	9.95	2.79	P1-04b	96.00	0.00	0.00	10.75	84.32	1.89	0.57
0.643								0.878							
FS065_2	96.00	0.00	0.00	56.16	38.62	11.01	1.25	P1-05	96.00	0.00	0.00	26.29	68.43	1.10	0.24
0.402								0.713							
FS066	96.00	0.00	0.00	31.67	63.25	44.53	11.63	P1-06	96.00	0.00	0.00	17.67	77.33	2.70	0.72
0.659								0.806							
FS067	96.00	0.00	0.00	64.78	30.04	15.94	1.95	P1-07	96.00	0.00	0.00	0.00	94.53	1.56	0.42
0.313								0.985							
FS070	96.00	0.00	0.00	56.60	38.17	2.88	0.30	P1-08	96.00	0.00	0.00	13.43	81.76	7.79	1.95
0.398								0.852							
FS075	96.00	0.00	0.00	35.76	59.12	41.34	9.61	P1-09	96.00	0.00	0.00	3.85	90.72	1.51	0.40
0.616								0.945							
FS081_1	96.00	0.00	0.00	67.33	27.43	5.18	0.26	P1-10	96.00	0.00	0.00	12.44	82.75	1.56	0.48
0.286								0.862							
FS081_2	96.00	0.00	0.00	21.04	73.94	4.14	1.19	P1-11	96.00	0.00	0.00	12.71	82.53	3.88	1.07
0.770								0.860							
FS089_1	96.00	0.00	0.00	44.67	50.10	1.35	0.14	P1-12	96.00	0.00	0.00	16.05	79.13	1.80	0.47
0.522								0.824							
FS089a	96.00	0.00	0.00	37.58	53.19	3.81	0.12	P1-13	96.00	0.00	0.00	16.52	78.60	6.27	1.43
0.554								0.819							
FS089b	96.00	0.00	0.00	37.58	53.19	3.79	0.12	P1-14	96.00	0.00	0.00	19.08	76.09	2.47	0.64
0.554								0.793							
FS101	96.00	0.00	0.00	11.01	82.86	10.97	3.10	P1-15	96.00	0.00	0.00	16.43	78.31	1.89	0.44
0.863								0.816							
FS103_1	96.00	0.00	0.00	40.21	54.68	2.62	0.67	FS-16	96.00	0.00	0.00	14.96	79.95	4.63	1.27
0.570								0.833							
FS103_2	96.00	0.00	0.00	26.48	68.46	11.67	3.10	P1-17	96.00	0.00	0.00	1.26	93.21	2.25	0.52
0.713								0.971							
FS103_3	96.00	0.00	0.00	17.17	76.12	33.85	6.66	P1-18	96.00	0.00	0.00	7.33	87.44	2.63	0.76
0.793								0.911							
FS104_1	96.00	0.00	0.00	58.66	36.12	17.66	0.94	P1-19	96.00	0.00	0.00	15.80	79.41	1.14	0.31
0.376								0.827							
FS104_2	96.00	0.00	0.00	35.59	59.27	58.10	12.89	P1-20	96.00	0.00	0.00	16.14	79.03	3.76	0.95
0.617								0.823							
FS105	96.00	0.00	0.00	32.62	61.82	42.15	4.80	P1-25_POND	96.00	0.00	0.00	8.69	85.95	3.69	1.03
0.644								0.895							
FS106	96.00	0.00	0.00	36.25	58.54	1.40	0.19	PS003	96.00	0.00	0.00	32.11	61.89	2.30	0.22
0.610								0.645							
FS106_1	96.00	0.00	0.00	23.06	71.95	4.65	1.39	PS014	96.00	0.00	0.00	42.05	52.72	4.60	0.38
0.749								0.549							
FS107	96.00	0.00	0.00	6.54	88.40	30.53	8.68	PS030	96.00	0.00	0.00	38.86	55.96	7.06	0.80
0.921								0.583							
FS109	96.00	0.00	0.00	3.04	91.82	45.27	10.60	FS043	96.00	0.00	0.00	10.03	83.77	8.81	2.33
0.956								0.873							
FS111	96.00	0.00	0.00	3.48	91.37	38.89	9.05	PS055	96.00	0.00	0.00	30.77	64.10	13.31	2.30
0.952								0.668							

# Kizell Lands - Fernbank 5618 Hazeldean Road

## PCSWMM Model Output SCS100-year 12-hour Carp River Ultimate

PS056	96.00	0.00	0.00	12.43	80.99	9.66	2.27
0.844							
PS057	96.00	0.00	0.00	9.24	84.05	15.85	3.74
0.875							
PS060_1	96.00	0.00	0.00	50.84	43.95	9.00	1.04
0.458							
PS060_2	96.00	0.00	0.00	23.52	71.41	5.67	1.26
0.744							
PS061_1	96.00	0.00	0.00	13.95	79.97	4.52	1.16
0.833							
PS061_2	96.00	0.00	0.00	19.25	74.55	10.92	2.27
0.777							
PS061_3	96.00	0.00	0.00	17.16	77.12	14.16	3.38
0.803							
PS062_1	96.00	0.00	0.00	11.70	83.46	0.41	0.15
0.869							
PS062_2	96.00	0.00	0.00	25.56	66.98	20.02	2.83
0.698							
PS062_3	96.00	0.00	0.00	15.99	79.06	1.89	0.60
0.824							
PS067	96.00	0.00	0.00	13.71	80.26	6.46	1.62
0.836							
PS070_1	96.00	0.00	0.00	11.41	82.65	1.26	0.40
0.861							
PS070_2	96.00	0.00	0.00	8.79	84.62	5.33	1.38
0.881							
PS071	96.00	0.00	0.00	18.07	76.75	3.06	0.85
0.799							
PS072	96.00	0.00	0.00	11.86	81.74	1.29	0.35
0.851							
PS073	96.00	0.00	0.00	26.76	68.18	7.90	1.78
0.710							
PS084	96.00	0.00	0.00	7.28	86.73	0.77	0.27
0.903							
PS090	96.00	0.00	0.00	15.88	78.74	6.44	1.83
0.820							
PS091	96.00	0.00	0.00	4.13	90.16	0.33	0.12
0.939							
PS092_1	96.00	0.00	0.00	9.37	84.46	7.62	2.15
0.880							
PS092_2	96.00	0.00	0.00	11.49	81.72	13.06	2.91
0.851							
PS093	96.00	0.00	0.00	26.46	67.93	16.21	2.77
0.708							
PS099	96.00	0.00	0.00	16.18	76.17	31.72	5.48
0.793							
PS101_1	96.00	0.00	0.00	20.34	73.89	5.26	1.19
0.770							
PS101_2	96.00	0.00	0.00	26.68	66.32	16.08	1.87
0.691							
PS101_3	96.00	0.00	0.00	20.16	72.71	46.62	8.27
0.757							
PS110	96.00	0.00	0.00	10.33	83.05	21.42	5.17
0.865							
PS114	96.00	0.00	0.00	13.51	79.62	43.79	9.23
0.829							
PS115	96.00	0.00	0.00	16.76	76.86	13.21	2.86
0.801							
PS117_1	96.00	0.00	0.00	11.93	81.53	34.91	7.98
0.849							
PS117_2	96.00	0.00	0.00	11.41	82.21	5.10	1.31
0.856							
PS122	96.00	0.00	0.00	15.14	79.87	9.22	2.71
0.832							
PS123_1	96.00	0.00	0.00	28.38	66.49	6.19	1.69
0.693							
PS123_2	96.00	0.00	0.00	12.24	81.14	2.95	0.73
0.845							
PS124	96.00	0.00	0.00	15.49	77.55	27.69	5.51
0.808							
PS128	96.00	0.00	0.00	12.24	80.16	23.25	4.40
0.835							
PS134	96.00	0.00	0.00	18.34	76.34	1.58	0.46
0.795							
PS135	96.00	0.00	0.00	47.90	46.86	20.07	1.34
0.488							
PS138	96.00	0.00	0.00	23.74	69.48	11.70	1.70
0.724							
PS143_1	96.00	0.00	0.00	43.84	50.97	21.96	4.34
0.531							
PS143_2	96.00	0.00	0.00	39.25	53.27	7.33	0.30
0.555							
PS145	96.00	0.00	0.00	30.84	62.48	52.93	4.54
0.651							

PS150	96.00	0.00	0.00	46.25	48.53	18.76	1.63
0.505							
PS151	96.00	0.00	0.00	43.84	50.96	6.44	1.27
0.531							
PS152	96.00	0.00	0.00	50.54	44.24	27.55	1.79
0.461							
PS153	96.00	0.00	0.00	46.46	48.30	4.83	0.34
0.503							
PS156	96.00	0.00	0.00	44.79	50.06	2.13	0.45
0.521							
PS157	96.00	0.00	0.00	42.13	52.72	30.20	4.64
0.549							
PS158	96.00	0.00	0.00	47.87	45.90	126.40	16.18
0.478							
PS161	96.00	0.00	0.00	41.37	52.84	22.43	1.17
0.550							
PS164	96.00	0.00	0.00	50.97	43.78	24.09	0.89
0.456							
PS165	96.00	0.00	0.00	41.76	53.01	52.44	3.78
0.552							
PS166	96.00	0.00	0.00	48.11	46.67	40.71	2.73
0.486							
PS201	96.00	0.00	0.00	4.40	90.71	2.94	1.04
0.945							
PS202	96.00	0.00	0.00	9.49	84.86	90.16	19.36
0.884							
PS207	96.00	0.00	0.00	5.81	89.18	18.23	5.55
0.929							
PS212	96.00	0.00	0.00	15.99	78.98	19.90	5.57
0.823							
PS223	96.00	0.00	0.00	16.59	78.47	3.03	0.98
0.817							
PS230	96.00	0.00	0.00	12.67	82.31	21.48	6.23
0.857							
PS236	96.00	0.00	0.00	29.80	65.12	1.09	0.24
0.678							
PS241_1	96.00	0.00	0.00	17.45	77.54	14.38	4.17
0.808							
PS241_2	96.00	0.00	0.00	25.87	69.06	20.23	5.00
0.719							
PS246	96.00	0.00	0.00	30.22	64.69	3.27	0.67
0.674							
PS249	96.00	0.00	0.00	30.22	64.69	2.19	0.45
0.674							
PS252	96.00	0.00	0.00	25.25	69.67	12.09	2.79
0.726							
PS256	96.00	0.00	0.00	20.17	74.88	3.70	1.17
0.780							
PS259	96.00	0.00	0.00	16.80	78.27	3.16	1.05
0.815							
PS260	96.00	0.00	0.00	18.62	76.42	4.36	1.36
0.796							
PS263	96.00	0.00	0.00	30.11	64.79	2.60	0.54
0.675							

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Node Depth Summary  
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Node	Type	Average Depth Meters	Maximum Depth Meters	Maximum HGL Meters	Time of Max Occurrence days hr:min
CJ002	JUNCTION	3.61	3.61	92.50	0 06:00
CJ003	JUNCTION	3.69	3.69	92.51	0 16:45
CJ004	JUNCTION	3.76	3.77	92.52	0 17:05
CJ005	JUNCTION	3.77	3.79	92.53	0 17:09
CJ006	JUNCTION	3.69	3.71	92.54	0 17:19
CJ007	JUNCTION	3.62	3.65	92.55	0 17:21
CJ008	JUNCTION	3.22	3.24	92.55	0 17:24
CJ009	JUNCTION	2.97	3.00	92.56	0 17:25
CJ010	JUNCTION	3.09	3.13	92.57	0 17:27
CJ011	JUNCTION	3.24	3.28	92.58	0 17:29
CJ012	JUNCTION	3.39	3.44	92.60	0 17:30
CJ013	JUNCTION	3.41	3.47	92.62	0 17:31
CJ014	JUNCTION	4.03	4.10	92.64	0 17:34
CJ015	JUNCTION	3.90	3.97	92.65	0 17:36
CJ016	JUNCTION	3.80	3.89	92.67	0 17:38
CJ017	JUNCTION	3.72	3.81	92.68	0 17:39
CJ018	JUNCTION	3.63	3.74	92.71	0 17:40
CJ019	JUNCTION	3.56	3.68	92.74	0 17:40
CJ020	JUNCTION	3.45	3.59	92.78	0 17:41
CJ021	JUNCTION	3.38	3.53	92.80	0 17:41

**Kizell Lands - Fernbank 5618 Hazeldean Road**  
**PCSWMM Model Output SCS100-year 12-hour Carp River Ultimate**



CJ022	JUNCTION	3.61	3.78	92.83	0	17:40	CJ115	JUNCTION	1.85	2.41	93.81	0	12:21
CJ023	JUNCTION	3.61	3.78	92.84	0	17:38	CJ117	JUNCTION	1.80	2.40	93.91	0	12:06
CJ024	JUNCTION	3.61	3.78	92.85	0	17:37	CJ118	JUNCTION	1.85	2.41	93.81	0	12:21
CJ025	JUNCTION	3.60	3.78	92.86	0	17:36	CJ119	JUNCTION	1.83	2.43	93.92	0	12:06
CJ026	JUNCTION	3.59	3.77	92.86	0	17:35	CJ120	JUNCTION	1.84	2.47	93.98	0	11:57
CJ027	JUNCTION	3.59	3.77	92.87	0	17:33	CJ121	JUNCTION	1.83	2.39	93.81	0	12:21
CJ028	JUNCTION	3.59	3.77	92.87	0	17:32	CJ123	JUNCTION	1.82	2.39	93.82	0	12:20
CJ029	JUNCTION	3.35	3.54	92.88	0	17:30	CJ124	JUNCTION	1.82	2.38	93.82	0	12:20
CJ030	JUNCTION	3.22	3.40	92.88	0	17:27	CJ125	JUNCTION	1.82	2.38	93.82	0	12:20
CJ031	JUNCTION	3.04	3.23	92.89	0	17:24	CJ126	JUNCTION	2.23	2.86	94.06	0	11:43
CJ032	JUNCTION	3.14	3.44	93.11	0	16:29	CJ127	JUNCTION	1.81	2.38	93.82	0	12:20
CJ033	JUNCTION	3.13	3.43	93.11	0	16:29	CJ128	JUNCTION	2.35	3.14	94.32	0	06:22
CJ034	JUNCTION	2.94	3.25	93.12	0	16:28	CJ129	JUNCTION	1.81	2.37	93.82	0	12:20
CJ035	JUNCTION	2.81	3.12	93.13	0	16:27	CJ130	JUNCTION	1.84	2.41	93.83	0	12:20
CJ036	JUNCTION	2.79	3.10	93.13	0	16:26	CJ131	JUNCTION	1.84	2.41	93.83	0	12:20
CJ037	JUNCTION	2.67	2.98	93.14	0	16:22	CJ132	JUNCTION	1.80	2.36	93.83	0	12:19
CJ038	JUNCTION	2.73	3.04	93.15	0	16:20	CJ133	JUNCTION	1.79	2.35	93.83	0	12:18
CJ039	JUNCTION	2.77	3.08	93.15	0	16:19	CJ134	JUNCTION	1.79	2.35	93.83	0	12:18
CJ040	JUNCTION	2.77	3.08	93.15	0	16:19	CJ135	JUNCTION	1.79	2.36	93.85	0	12:16
CJ041	JUNCTION	2.57	2.89	93.16	0	16:17	CJ136	JUNCTION	1.79	2.36	93.85	0	12:16
CJ042	JUNCTION	2.47	2.79	93.16	0	16:15	CJ137	JUNCTION	1.80	2.40	93.91	0	12:06
CJ043	JUNCTION	2.38	2.69	93.16	0	16:14	CJ139	JUNCTION	1.85	2.49	93.99	0	11:57
CJ044	JUNCTION	2.28	2.59	93.17	0	16:12	CJ140	JUNCTION	1.84	2.47	93.99	0	11:57
CJ045	JUNCTION	2.21	2.53	93.19	0	16:00	CJ141	JUNCTION	0.63	0.90	112.40	0	10:22
CJ046	JUNCTION	2.22	2.53	93.24	0	15:21	CJ142	JUNCTION	1.79	2.43	94.03	0	11:51
CJ047	JUNCTION	2.20	2.52	93.26	0	15:07	CJ143	JUNCTION	1.80	2.43	94.03	0	11:51
CJ048	JUNCTION	2.18	2.51	93.28	0	14:55	CJ144	JUNCTION	0.90	1.53	94.03	0	11:51
CJ049	JUNCTION	2.18	2.51	93.28	0	14:54	CJ145	JUNCTION	0.85	1.48	94.04	0	11:51
CJ050	JUNCTION	2.26	2.70	93.47	0	13:32	CJ146	JUNCTION	1.73	2.36	94.06	0	11:43
CJ051	JUNCTION	2.15	2.59	93.47	0	13:32	CJ147	JUNCTION	1.72	2.35	94.06	0	11:43
CJ052	JUNCTION	2.17	2.61	93.48	0	13:32	CJ148	JUNCTION	1.72	2.34	94.07	0	11:42
CJ053	JUNCTION	2.22	2.66	93.48	0	13:32	CJ149	JUNCTION	1.71	2.33	94.07	0	11:42
CJ054	JUNCTION	2.14	2.58	93.48	0	13:32	CJ150	JUNCTION	1.71	2.35	94.15	0	11:26
CJ055	JUNCTION	2.13	2.57	93.48	0	13:32	CJ151	JUNCTION	1.70	2.32	94.07	0	11:42
CJ056	JUNCTION	2.16	2.60	93.48	0	13:32	CJ152	JUNCTION	1.62	2.23	94.08	0	11:41
CJ057	JUNCTION	2.11	2.55	93.48	0	13:32	CJ153	JUNCTION	1.71	2.35	94.15	0	11:26
CJ058	JUNCTION	2.12	2.57	93.49	0	13:31	CJ154	JUNCTION	1.61	2.25	94.15	0	11:26
CJ059	JUNCTION	2.13	2.58	93.49	0	13:31	CJ155	JUNCTION	1.61	2.24	94.15	0	11:26
CJ060	JUNCTION	2.14	2.58	93.49	0	13:31	CJ156	JUNCTION	1.62	2.25	94.15	0	11:22
CJ061	JUNCTION	2.16	2.60	93.49	0	13:31	CJ157	JUNCTION	1.62	2.25	94.15	0	11:22
CJ062	JUNCTION	2.05	2.50	93.50	0	13:30	CJ158	JUNCTION	1.61	2.24	94.15	0	11:26
CJ063	JUNCTION	2.12	2.57	93.51	0	13:29	CJ159	JUNCTION	1.60	2.24	94.16	0	11:26
CJ064	JUNCTION	2.12	2.57	93.52	0	13:27	CJ160	JUNCTION	1.60	2.24	94.16	0	11:26
CJ065	JUNCTION	2.07	2.52	93.52	0	13:27	CJ161	JUNCTION	1.57	2.20	94.16	0	11:25
CJ066	JUNCTION	2.05	2.50	93.52	0	13:27	CJ162	JUNCTION	1.56	2.19	94.16	0	11:25
CJ067	JUNCTION	1.99	2.44	93.52	0	13:27	CJ163	JUNCTION	1.53	2.16	94.16	0	11:23
CJ068	JUNCTION	2.02	2.47	93.53	0	13:26	CJ164	JUNCTION	1.53	2.18	94.18	0	11:24
CJ069	JUNCTION	2.01	2.47	93.53	0	13:26	CJ165	JUNCTION	1.54	2.19	94.18	0	11:24
CJ070	JUNCTION	1.97	2.43	93.53	0	13:26	CJ166	JUNCTION	1.53	2.18	94.18	0	11:25
CJ071	JUNCTION	1.93	2.38	93.53	0	13:25	CJ167	JUNCTION	1.54	2.18	94.18	0	11:25
CJ072	JUNCTION	1.94	2.39	93.53	0	13:25	CJ168	JUNCTION	1.54	2.17	94.18	0	11:25
CJ073	JUNCTION	1.90	2.36	93.54	0	13:24	CJ169	JUNCTION	1.54	2.17	94.18	0	11:20
CJ074	JUNCTION	1.88	2.34	93.54	0	13:23	CJ170	JUNCTION	1.54	2.17	94.18	0	11:25
CJ075	JUNCTION	1.87	2.33	93.54	0	13:23	CJ171	JUNCTION	1.54	2.18	94.19	0	11:20
CJ076	JUNCTION	1.88	2.33	93.54	0	13:22	CJ172	JUNCTION	1.54	2.18	94.19	0	11:20
CJ077	JUNCTION	1.95	3.95	95.18	0	06:01	CJ173	JUNCTION	1.55	2.19	94.19	0	11:20
CJ078	JUNCTION	1.87	2.33	93.55	0	13:22	CJ174	JUNCTION	1.54	2.18	94.19	0	11:20
CJ079	JUNCTION	1.87	2.33	93.55	0	13:20	CJ175	JUNCTION	1.64	2.27	94.20	0	11:26
CJ080	JUNCTION	1.87	2.33	93.55	0	13:20	CJ176	JUNCTION	1.68	2.31	94.21	0	11:27
CJ081	JUNCTION	1.85	2.31	93.55	0	13:19	CJ177	JUNCTION	1.43	2.07	94.22	0	11:27
CJ082	JUNCTION	0.91	6.00	98.27	0	05:59	CJ178	JUNCTION	1.43	2.07	94.22	0	11:28
CJ083	JUNCTION	1.86	2.32	93.56	0	13:19	CJ179	JUNCTION	1.41	2.05	94.22	0	11:37
CJ084	JUNCTION	1.85	2.31	93.56	0	13:19	CJ180	JUNCTION	1.42	2.05	94.22	0	11:36
CJ085	JUNCTION	2.01	2.01	92.51	0	06:00	CJ181	JUNCTION	1.39	2.02	94.22	0	11:35
CJ086	JUNCTION	0.68	1.06	115.06	0	06:07	CJ182	JUNCTION	1.38	2.01	94.22	0	11:36
CJ087	JUNCTION	2.47	2.79	93.15	0	16:21	CJ183	JUNCTION	1.38	2.01	94.22	0	11:36
CJ088	JUNCTION	1.03	1.36	117.36	0	12:00	CJ184	JUNCTION	1.38	2.01	94.23	0	11:36
CJ089	JUNCTION	1.87	2.33	93.58	0	13:13	CJ185	JUNCTION	1.38	2.01	94.23	0	11:36
CJ094	JUNCTION	0.63	0.90	93.64	0	12:22	CJ186	JUNCTION	1.38	2.01	94.23	0	11:36
CJ095	JUNCTION	0.52	0.80	93.66	0	12:14	CJ187	JUNCTION	1.40	2.03	94.23	0	11:30
CJ096	JUNCTION	0.27	0.48	93.63	0	12:02	CJ188	JUNCTION	1.36	1.99	94.23	0	11:30
CJ098	JUNCTION	1.02	1.78	95.18	0	10:05	CJ189	JUNCTION	1.29	1.92	94.23	0	11:30
CJ100	JUNCTION	1.83	2.29	93.59	0	13:11	CJ190	JUNCTION	1.28	1.91	94.23	0	11:30
CJ101	JUNCTION	1.85	2.35	93.67	0	12:49	CJ191	JUNCTION	1.27	1.90	94.23	0	11:30
CJ103	JUNCTION	1.88	2.44	93.80	0	12:25	CJ192	JUNCTION	1.27	1.90	94.23	0	11:34
CJ104	JUNCTION	1.85	2.35	93.67	0	12:49	CJ193	JUNCTION	1.26	1.89	94.23	0	11:34
CJ105	JUNCTION	1.84	2.35	93.70	0	12:44	CJ194	JUNCTION	1.25	1.88	94.23	0	11:34
CJ106	JUNCTION	1.84	2.35	93.70	0	12:44	CJ195	JUNCTION	1.25	1.88	94.23	0	11:38
CJ107	JUNCTION	1.88	2.43	93.80	0	12:25	CJ196	JUNCTION	1.22	1.85	94.23	0	11:38
CJ108	JUNCTION	1.88	2.44	93.80	0	12:25	CJ197	JUNCTION	1.21	1.84	94.23	0	11:38
CJ109	JUNCTION	1.88	2.44	93.80	0	12:25	CJ197_1	JUNCTION	1.20	1.83	94.23	0	11:31
CJ110	JUNCTION	1.86	2.42	93.80	0	12:25	CJ197_2	JUNCTION	1.20	1.83	94.23	0	11:32
CJ112	JUNCTION	1.86	2.42	93.80	0	12:25	CJ197_3	JUNCTION	1.19	1.82	94.23	0	11:32
CJ113	JUNCTION	1.86	2.42	93.80	0	12:25	CJ197_4	JUNCTION	1.17	1.80	94.23	0	11:32
CJ114	JUNCTION	1.85	2.41	93.81	0	12:21	CJ197_5	JUNCTION	1.17	1.80	94.24	0	11:32

**Kizell Lands - Fernbank 5618 Hazeldean Road**  
**PCSWMM Model Output SCS100-year 12-hour Carp River Ultimate**

CJ197_6	JUNCTION	1.17	1.80	94.24	0	11:32	FJ033	JUNCTION	1.55	2.80	99.91	0	07:37
CJ198	JUNCTION	1.17	1.79	94.24	0	11:32	FJ034	JUNCTION	1.46	3.10	100.42	0	07:36
CJ199	JUNCTION	1.54	2.20	94.31	0	11:18	FJ035	JUNCTION	1.22	2.77	100.43	0	07:36
CJ200	JUNCTION	1.23	1.89	94.32	0	11:19	FJ036	JUNCTION	0.94	2.23	100.45	0	07:36
CJ201	JUNCTION	1.34	2.03	94.41	0	09:11	FJ037	JUNCTION	1.11	2.24	100.47	0	07:36
CJ202	JUNCTION	1.12	1.79	94.42	0	09:12	FJ038	JUNCTION	1.04	2.65	101.30	0	07:28
CJ203	JUNCTION	1.01	1.68	94.43	0	09:12	FJ039	JUNCTION	1.14	2.71	101.30	0	07:28
CJ205	JUNCTION	1.03	2.39	95.75	0	06:37	FJ040	JUNCTION	0.98	1.92	101.37	0	07:27
CJ206	JUNCTION	0.94	2.39	95.85	0	06:37	FJ040_1	JUNCTION	0.80	1.42	101.57	0	07:22
CJ207	JUNCTION	0.78	2.30	95.95	0	06:35	FJ041	JUNCTION	0.76	1.30	102.35	0	08:42
CJ208	JUNCTION	0.75	2.29	95.99	0	06:35	FJ042	JUNCTION	0.86	1.37	102.85	0	08:40
CJ209	JUNCTION	0.23	1.75	96.45	0	06:25	FJ043	JUNCTION	0.70	1.08	103.10	0	08:39
CJ210	JUNCTION	0.26	1.47	98.33	0	06:17	FJ044	JUNCTION	1.04	1.77	103.79	0	10:54
CJ211	JUNCTION	0.43	2.28	100.28	0	06:14	FJ045	JUNCTION	0.96	1.55	103.81	0	10:54
CJ212	JUNCTION	0.23	2.15	100.52	0	06:14	FJ046	JUNCTION	0.82	1.27	103.88	0	10:53
CJ213	JUNCTION	0.37	1.32	101.09	0	06:10	FJ047	JUNCTION	1.00	1.40	103.89	0	10:52
CJ214	JUNCTION	0.12	2.25	105.41	0	06:01	FJ048	JUNCTION	2.19	4.56	102.56	0	07:14
CJ215	JUNCTION	2.34	3.13	94.32	0	06:21	FJ050	JUNCTION	0.26	0.75	106.03	0	06:53
CJ242	JUNCTION	1.00	1.62	94.07	0	11:53	FJ051	JUNCTION	0.10	0.48	106.03	0	06:53
CJ243	JUNCTION	0.83	1.45	94.08	0	11:48	FJ054	JUNCTION	0.62	0.98	104.42	0	08:34
CJ246	JUNCTION	0.23	1.54	101.26	0	06:00	FJ055	JUNCTION	1.00	1.48	104.91	0	08:32
CJ247	JUNCTION	0.21	1.52	102.20	0	06:00	FJ056	JUNCTION	0.77	1.17	104.93	0	08:31
CJ248_1	JUNCTION	0.16	1.03	103.03	0	06:02	FJ057	JUNCTION	0.62	0.94	105.18	0	08:29
CJ248_2	JUNCTION	0.20	0.91	94.71	0	06:12	FJ058	JUNCTION	0.82	1.55	105.91	0	09:39
CJ249	JUNCTION	1.04	1.69	94.32	0	11:18	FJ059	JUNCTION	0.10	0.54	116.79	0	06:09
CJ250	JUNCTION	0.61	1.22	94.32	0	11:16	FJ060	JUNCTION	0.12	0.89	120.57	0	06:01
CJ251	JUNCTION	0.76	1.47	94.47	0	08:59	FJ061	JUNCTION	0.16	0.89	124.78	0	06:00
CJ254	JUNCTION	0.31	0.82	98.52	0	07:27	FJ062	JUNCTION	1.10	1.67	105.93	0	09:40
CJ255	JUNCTION	0.59	1.78	95.35	0	08:22	FJ063	JUNCTION	1.61	2.29	106.11	0	09:45
CJ256	JUNCTION	0.83	2.03	95.03	0	15:10	FJ064	JUNCTION	0.30	0.49	106.11	0	09:44
CJ257	JUNCTION	0.29	0.73	94.58	0	06:51	FJ065	JUNCTION	0.12	0.53	124.95	0	06:03
CJ259	JUNCTION	0.19	4.30	102.39	0	06:02	FJ067	JUNCTION	0.50	0.65	106.21	0	09:24
CJ260	JUNCTION	0.14	0.92	97.47	0	06:34	FJ068	JUNCTION	0.53	0.68	106.45	0	08:41
CJ261	JUNCTION	0.12	3.78	102.84	0	06:01	FJ069	JUNCTION	0.91	1.17	106.71	0	08:44
CJ262	JUNCTION	0.33	1.31	102.44	0	06:08	FJ070	JUNCTION	0.64	0.94	106.86	0	08:42
CJ263	JUNCTION	0.25	1.04	103.04	0	06:07	FJ071	JUNCTION	0.38	0.58	106.86	0	08:42
CJ264	JUNCTION	0.35	1.49	106.49	0	06:04	FJ072	JUNCTION	1.19	1.51	107.31	0	08:45
CJ265	JUNCTION	0.33	2.92	108.69	0	06:00	FJ073	JUNCTION	1.11	1.43	107.32	0	08:45
CJ266	JUNCTION	0.78	1.23	93.53	0	13:25	FJ074	JUNCTION	0.70	1.01	107.32	0	08:45
CJ267	JUNCTION	0.44	0.92	94.32	0	11:11	FJ075	JUNCTION	0.52	0.78	107.70	0	08:29
CJ282	JUNCTION	0.11	2.48	111.48	0	06:01	FJ076	JUNCTION	0.94	1.10	108.22	0	08:29
CJ283	JUNCTION	0.87	1.43	93.43	0	06:02	FJ077	JUNCTION	0.76	1.07	108.59	0	08:28
CJ284	JUNCTION	0.79	1.66	93.74	0	06:04	FJ078	JUNCTION	0.95	1.19	108.72	0	08:27
CJ285	JUNCTION	0.38	0.92	94.22	0	11:37	FJ079	JUNCTION	0.90	1.24	108.99	0	08:25
CJ286	JUNCTION	0.01	0.11	94.56	0	06:05	FJ080	JUNCTION	0.79	1.14	109.17	0	08:21
CJ287	JUNCTION	0.38	1.74	95.18	0	07:42	FJ081	JUNCTION	0.74	1.10	109.51	0	08:18
CJ289	JUNCTION	3.25	4.46	95.68	0	06:00	FJ082	JUNCTION	0.54	0.80	110.01	0	15:21
CJ290	JUNCTION	2.59	4.63	96.51	0	09:13	FJ083	JUNCTION	0.85	1.21	110.58	0	15:18
CJ291	JUNCTION	1.30	2.79	95.96	0	06:01	FJ084	JUNCTION	0.93	1.38	110.86	0	15:16
CJ292	JUNCTION	0.11	0.88	96.34	0	06:01	FJ085	JUNCTION	1.01	1.47	110.88	0	15:15
CJ293	JUNCTION	0.05	0.96	98.08	0	06:00	FJ086	JUNCTION	0.95	1.45	110.98	0	15:14
CJ294	JUNCTION	0.11	0.73	97.63	0	05:47	FJ087	JUNCTION	0.90	1.39	110.99	0	15:14
CJ295	JUNCTION	0.65	1.20	93.80	0	12:25	FJ090	JUNCTION	0.00	0.00	111.29	0	13:10
CJ296	JUNCTION	0.96	2.35	95.86	0	05:48	FJ091	JUNCTION	0.66	0.89	112.83	0	13:10
CJ297	JUNCTION	0.32	1.32	96.32	0	06:13	FJ092	JUNCTION	0.54	0.75	112.85	0	13:08
FJ002	JUNCTION	1.35	1.91	93.80	0	12:05	FJ093	JUNCTION	0.27	0.40	112.88	0	13:03
FJ003	JUNCTION	0.75	1.30	93.80	0	12:25	FJ094	JUNCTION	0.52	0.98	113.80	0	12:46
FJ004	JUNCTION	1.18	2.20	94.83	0	07:21	FJ095	JUNCTION	0.46	0.71	114.24	0	07:30
FJ005	JUNCTION	1.91	2.96	95.05	0	08:03	FJ096	JUNCTION	0.44	0.56	114.63	0	10:16
FJ006	JUNCTION	1.41	2.45	95.05	0	08:03	FJ097	JUNCTION	0.39	0.57	115.08	0	10:10
FJ007	JUNCTION	1.22	2.23	95.21	0	07:40	FJ098	JUNCTION	0.57	0.93	116.29	0	10:04
FJ008	JUNCTION	1.74	2.82	95.40	0	07:39	FJ099	JUNCTION	0.53	0.85	116.45	0	10:03
FJ009	JUNCTION	1.15	2.25	95.44	0	07:39	FJ100	JUNCTION	0.27	0.44	117.27	0	10:01
FJ010	JUNCTION	1.58	2.82	96.06	0	07:36	FJ101	JUNCTION	0.80	1.29	110.99	0	15:14
FJ011	JUNCTION	1.55	2.78	96.30	0	07:35	FJ102	JUNCTION	1.29	2.90	120.80	0	10:30
FJ012	JUNCTION	1.01	2.03	96.33	0	07:35	FJ104	JUNCTION	0.35	1.03	128.16	0	06:05
FJ013	JUNCTION	0.89	1.75	96.39	0	07:34	FJ105	JUNCTION	0.85	1.29	118.09	0	10:01
FJ014	JUNCTION	0.96	1.70	96.69	0	07:29	FJ108	JUNCTION	0.98	2.23	98.13	0	06:36
FJ015	JUNCTION	1.37	2.16	96.96	0	07:27	FJ200	JUNCTION	0.09	1.43	112.21	0	06:00
FJ016	JUNCTION	1.29	2.10	97.08	0	07:27	FJ201	JUNCTION	0.53	2.71	112.79	0	06:00
FJ017	JUNCTION	1.40	2.23	97.30	0	07:22	FJ202	JUNCTION	0.71	4.24	114.11	0	06:00
FJ018	JUNCTION	1.11	1.94	97.32	0	07:22	FJ203	JUNCTION	0.00	0.01	118.01	0	06:00
FJ019	JUNCTION	0.95	2.18	97.97	0	07:21	FJ204	JUNCTION	0.00	0.11	114.59	0	06:01
FJ020	JUNCTION	0.14	0.43	98.59	0	06:00	FJ205	JUNCTION	0.06	0.37	112.37	0	06:01
FJ021	JUNCTION	0.28	1.12	99.72	0	08:07	FJ206	JUNCTION	0.00	0.15	116.15	0	06:00
FJ023	JUNCTION	1.49	2.63	98.01	0	07:21	FJ208	JUNCTION	0.10	0.57	102.17	0	06:10
FJ024	JUNCTION	1.60	2.68	98.05	0	07:20	FJ209	JUNCTION	0.17	1.25	103.45	0	06:10
FJ025	JUNCTION	1.04	2.09	98.11	0	07:25	FJ216	JUNCTION	0.29	0.72	111.10	0	07:26
FJ026	JUNCTION	1.14	2.05	98.23	0	08:12	FJ217	JUNCTION	0.74	1.20	111.01	0	06:14
FJ027	JUNCTION	0.94	1.89	98.29	0	08:22	FJ218	JUNCTION	0.63	1.11	111.04	0	06:13
FJ028	JUNCTION	0.79	1.71	98.79	0	08:15	FJ219	JUNCTION	0.67	1.12	111.00	0	17:45
FJ029	JUNCTION	1.15	1.90	99.09	0	07:40	FJ220	JUNCTION	0.00	0.00	115.95	0	00:00
FJ030	JUNCTION	1.26	2.06	99.29	0	07:37	FJ221	JUNCTION	0.87	1.33	111.00	0	07:28
FJ031	JUNCTION	1.61	2.43	99.34	0	07:36	FJ222	JUNCTION	0.00	0.00	112.66	0	00:00
FJ032	JUNCTION	1.57	2.81	99.89	0	07:37	FJ223	JUNCTION	0.00	0.00	116.10	0	00:00

**Kizell Lands - Fernbank 5618 Hazeldean Road**  
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FJ224	JUNCTION	0.00	0.00	117.04	0	00:00	PJ029	JUNCTION	1.26	1.79	96.12	0	10:05
FJ225	JUNCTION	0.00	0.00	113.23	0	00:00	PJ030	JUNCTION	0.79	1.19	96.40	0	06:08
FJ226	JUNCTION	0.54	1.03	111.07	0	06:13	PJ031	JUNCTION	0.69	1.06	97.77	0	06:07
FJ227	JUNCTION	0.16	0.45	111.73	0	06:00	PJ032	JUNCTION	1.17	1.64	98.54	0	06:06
FJ228	JUNCTION	0.17	0.44	111.50	0	06:01	PJ033	JUNCTION	0.72	1.14	98.76	0	06:05
FJ229	JUNCTION	1.84	2.30	111.00	0	07:15	PJ034	JUNCTION	0.60	0.91	99.33	0	06:04
FJ230	JUNCTION	1.95	2.50	111.08	0	17:26	PJ035	JUNCTION	0.74	0.98	99.65	0	06:03
FJ231	JUNCTION	2.04	2.58	111.07	0	17:47	PJ036	JUNCTION	0.68	0.93	99.81	0	06:02
FJ232	JUNCTION	2.13	2.71	111.11	0	17:48	PJ037	JUNCTION	0.79	1.09	100.12	0	06:01
FJ233	JUNCTION	1.75	2.21	111.00	0	07:29	PJ038	JUNCTION	1.42	1.79	100.28	0	09:52
FJ234	JUNCTION	0.88	1.34	111.00	0	07:29	PJ039	JUNCTION	0.56	0.90	101.80	0	09:51
FJ235	JUNCTION	0.77	1.23	111.01	0	07:30	PJ040	JUNCTION	0.85	1.30	102.77	0	09:50
FJ236	JUNCTION	0.26	0.59	111.04	0	07:30	PJ041	JUNCTION	1.24	1.70	102.93	0	09:50
P1-101 (STM)	JUNCTION	0.67	1.72	99.37	0	06:57	PJ042	JUNCTION	0.69	1.06	103.35	0	09:49
P1-101a (STM)	JUNCTION	0.72	1.69	99.28	0	07:16	PJ043	JUNCTION	1.15	1.64	104.33	0	09:48
P1-103 (STM)	JUNCTION	0.64	1.77	99.47	0	06:46	PJ044	JUNCTION	0.69	1.10	104.64	0	09:48
P1-105 (STM)	JUNCTION	0.57	1.79	99.57	0	06:44	PJ045	JUNCTION	0.93	1.33	105.02	0	09:47
P1-107 (STM)	JUNCTION	0.22	1.28	99.63	0	06:45	PJ046	JUNCTION	1.01	1.61	105.33	0	09:47
P1-109 (STM)	JUNCTION	0.20	1.20	99.66	0	06:45	PJ047	JUNCTION	1.25	1.81	106.10	0	09:46
P1-111 (STM)	JUNCTION	0.11	0.90	99.69	0	06:46	PJ048	JUNCTION	1.88	2.88	107.76	0	09:46
P1-113 (STM)	JUNCTION	0.08	0.58	99.75	0	06:47	PJ049	JUNCTION	1.06	1.91	107.85	0	09:45
P1-147 (STM)	JUNCTION	0.43	1.80	99.78	0	06:29	PJ050	JUNCTION	0.99	1.54	108.44	0	09:44
P1-153 (STM)	JUNCTION	0.41	1.90	100.00	0	06:28	PJ051	JUNCTION	1.14	1.72	109.08	0	09:43
P1-165 (STM)	JUNCTION	0.39	1.96	100.19	0	06:28	PJ052	JUNCTION	1.48	1.97	109.17	0	09:41
P1-169 (STM)	JUNCTION	0.38	2.03	100.34	0	06:28	PJ053	JUNCTION	1.44	1.93	109.19	0	09:41
P1-171 (STM)	JUNCTION	0.36	2.05	100.49	0	06:28	PJ054	JUNCTION	1.80	2.30	109.21	0	09:40
P1-173 (STM)	JUNCTION	0.08	1.20	100.63	0	06:18	PJ055	JUNCTION	1.73	2.40	109.45	0	09:32
P1-203 (STM)	JUNCTION	0.39	2.12	100.79	0	06:28	PJ056	JUNCTION	1.50	2.18	109.45	0	09:32
P1-205 (STM)	JUNCTION	0.37	2.13	101.04	0	06:16	PJ057	JUNCTION	1.01	1.45	109.61	0	09:27
P1-207 (STM)	JUNCTION	0.37	2.14	101.30	0	06:16	PJ058	JUNCTION	1.31	1.72	109.69	0	09:23
P1-209 (STM)	JUNCTION	0.05	1.48	101.91	0	06:09	PJ059	JUNCTION	1.41	1.85	109.81	0	09:16
P1-215 (STM)	JUNCTION	0.32	2.03	101.62	0	06:16	PJ060	JUNCTION	0.70	1.10	110.14	0	09:02
P1-215a (STM)	JUNCTION	0.03	0.79	101.85	0	06:17	PJ067	JUNCTION	0.71	1.10	110.56	0	09:05
P1-217 (STM)	JUNCTION	0.36	2.23	102.12	0	06:16	PJ068	JUNCTION	0.94	1.42	111.32	0	09:05
P1-219 (STM)	JUNCTION	0.10	1.59	102.23	0	06:16	PJ069	JUNCTION	1.07	1.58	111.53	0	09:05
P1-219a (STM)	JUNCTION	0.04	1.07	102.26	0	06:16	PJ070	JUNCTION	1.25	1.94	111.81	0	09:04
P1-221 (STM)	JUNCTION	0.04	1.17	101.86	0	06:16	PJ072	JUNCTION	0.69	1.37	111.82	0	09:09
P1-221a (STM)	JUNCTION	0.36	2.13	101.85	0	06:16	PJ073	JUNCTION	1.41	1.94	111.83	0	09:02
P1-301 (STM)	JUNCTION	0.61	1.59	99.29	0	07:25	PJ074	JUNCTION	1.47	2.00	111.83	0	09:03
P1-301a (STM)	JUNCTION	0.61	1.60	99.30	0	07:33	PJ075	JUNCTION	1.54	1.86	112.02	0	08:24
P1-303 (STM)	JUNCTION	0.59	1.57	99.30	0	07:25	PJ076	JUNCTION	1.61	1.93	112.02	0	08:24
P1-305 (STM)	JUNCTION	0.53	1.53	99.32	0	07:25	PJ077	JUNCTION	0.71	1.02	112.03	0	08:23
P1-307 (STM)	JUNCTION	0.15	0.84	99.32	0	07:01	PJ078	JUNCTION	0.58	0.90	112.03	0	08:23
P1-309 (STM)	JUNCTION	0.11	0.73	99.37	0	07:00	PJ079	JUNCTION	0.27	0.48	112.12	0	06:59
P1-311 (STM)	JUNCTION	0.00	0.00	99.43	0	00:00	PJ080	JUNCTION	0.28	0.41	112.93	0	07:02
P1-317 (STM)	JUNCTION	0.42	1.36	99.27	0	07:25	PJ081	JUNCTION	0.39	0.56	113.46	0	06:52
P1-319 (STM)	JUNCTION	0.29	1.17	99.29	0	06:49	PJ082	JUNCTION	0.36	0.56	113.79	0	06:56
P1-321 (STM)	JUNCTION	0.25	1.09	99.31	0	06:49	PJ083	JUNCTION	0.36	0.59	114.18	0	06:50
P1-323 (STM)	JUNCTION	0.05	0.49	99.38	0	06:11	PJ085	JUNCTION	0.81	1.15	115.26	0	06:45
P1-327 (STM)	JUNCTION	0.08	0.66	99.48	0	06:10	PJ086	JUNCTION	0.79	1.16	115.45	0	06:44
P1-329 (STM)	JUNCTION	0.00	0.10	99.48	0	06:10	PJ087	JUNCTION	1.00	1.45	115.84	0	06:41
P1-331 (STM)	JUNCTION	0.00	0.00	99.89	0	00:00	PJ088	JUNCTION	0.94	1.43	115.96	0	06:40
P1-333 (STM)	JUNCTION	0.00	0.00	99.71	0	00:00	PJ089	JUNCTION	1.07	1.57	116.16	0	06:38
P1-335 (STM)	JUNCTION	0.03	0.64	100.53	0	06:28	PJ090	JUNCTION	0.91	1.41	116.21	0	06:38
P1-337 (STM)	JUNCTION	0.06	0.47	99.81	0	06:17	PJ091	JUNCTION	0.87	1.37	116.30	0	06:37
P1-349 (STM)	JUNCTION	0.05	1.03	102.65	0	06:16	PJ092	JUNCTION	1.12	1.64	116.55	0	06:34
P1-351 (STM)	JUNCTION	0.06	1.39	102.74	0	06:07	PJ093	JUNCTION	1.15	1.78	116.69	0	06:36
P1-EX. 501 (STM)	JUNCTION	0.40	2.73	103.91	0	06:11	PJ094	JUNCTION	0.99	1.51	116.81	0	06:37
P1-EX. 502 (STM)	JUNCTION	0.37	2.34	103.46	0	06:10	PJ095	JUNCTION	1.02	1.48	117.00	0	06:36
P1-EX. 503 (STM)	JUNCTION	0.35	2.28	103.15	0	06:09	PJ096	JUNCTION	1.24	1.71	117.18	0	06:33
P1-EX. 504 (STM)	JUNCTION	0.25	1.93	102.56	0	06:09	PJ097	JUNCTION	1.03	1.51	117.24	0	06:31
FJ002	JUNCTION	1.51	2.14	94.21	0	11:25	PJ098	JUNCTION	1.18	1.71	117.47	0	06:13
FJ003	JUNCTION	1.82	2.45	94.34	0	10:57	PJ099	JUNCTION	1.25	1.81	117.53	0	06:11
FJ004	JUNCTION	0.94	1.56	94.36	0	10:58	PJ102	JUNCTION	1.58	1.89	112.02	0	08:24
FJ005	JUNCTION	2.09	2.75	94.55	0	10:42	PJ103	JUNCTION	0.80	1.11	112.09	0	08:18
FJ006	JUNCTION	0.87	1.50	94.56	0	10:41	PJ104	JUNCTION	1.37	1.66	112.12	0	08:15
FJ007	JUNCTION	1.64	2.10	94.54	0	10:38	PJ105	JUNCTION	1.32	1.62	112.12	0	08:15
FJ008	JUNCTION	1.94	2.48	94.66	0	10:35	PJ106	JUNCTION	0.39	0.68	112.12	0	08:15
FJ009	JUNCTION	0.98	1.51	94.68	0	10:35	PJ107	JUNCTION	0.13	0.85	112.77	0	06:08
FJ010	JUNCTION	0.81	1.29	94.75	0	10:33	PJ108	JUNCTION	0.08	0.49	113.23	0	06:04
FJ011	JUNCTION	2.19	2.57	95.12	0	10:24	PJ109	JUNCTION	0.62	2.93	115.20	0	05:59
FJ012	JUNCTION	1.15	1.54	95.13	0	10:24	PJ110	JUNCTION	0.08	0.75	114.75	0	06:02
FJ013	JUNCTION	1.24	1.64	95.16	0	10:23	PJ111	JUNCTION	0.21	0.47	112.12	0	08:13
FJ014	JUNCTION	1.82	2.24	95.26	0	10:21	PJ112	JUNCTION	1.28	1.74	117.57	0	06:10
FJ015	JUNCTION	1.81	2.24	95.26	0	10:21	PJ113	JUNCTION	1.28	1.71	117.87	0	06:07
FJ018	JUNCTION	1.06	1.49	95.27	0	10:21	PJ114	JUNCTION	1.42	1.90	118.06	0	06:06
FJ019	JUNCTION	1.05	1.46	95.49	0	10:15	PJ115	JUNCTION	1.69	2.18	118.07	0	06:05
FJ021	JUNCTION	1.09	1.49	95.61	0	10:13	PJ116	JUNCTION	1.30	1.60	112.12	0	08:15
FJ022	JUNCTION	1.94	2.41	95.90	0	10:09	PJ117	JUNCTION	0.85	1.14	112.43	0	08:02
FJ023	JUNCTION	1.35	1.83	95.93	0	10:09	PJ118	JUNCTION	0.88	1.19	112.62	0	08:03
FJ024	JUNCTION	1.39	1.88	96.00	0	10:08	PJ119	JUNCTION	0.83	1.12	112.66	0	08:01
FJ025	JUNCTION	1.30	1.79	96.02	0	10:08	PJ120	JUNCTION	1.01	1.28	112.84	0	07:46
FJ026	JUNCTION	1.38	1.88	96.06	0	10:07	PJ121	JUNCTION	0.93	1.21	112.85	0	07:45
FJ027	JUNCTION	1.63	2.13	96.07	0	10:06	PJ123	JUNCTION	1.19	1.65	118.06	0	06:06
FJ028	JUNCTION	1.58	2.11	96.11	0	10:05	PJ125	JUNCTION	0.90	1.23	113.18	0	07:06

**Kizell Lands - Fernbank 5618 Hazeldean Road**  
**PCSWMM Model Output SCS100-year 12-hour Carp River Ultimate**



PJ126	JUNCTION	0.65	0.83	113.36	0	06:57	PJ250	JUNCTION	0.15	2.42	101.33	0	06:00
PJ127	JUNCTION	0.59	0.79	113.85	0	06:51	PJ253	JUNCTION	0.53	2.27	100.98	0	06:00
PJ128	JUNCTION	0.71	0.92	114.03	0	06:48	PJ254	JUNCTION	0.82	1.26	100.26	0	06:01
PJ129	JUNCTION	0.81	1.04	118.18	0	15:56	PJ255	JUNCTION	0.32	5.10	103.52	0	05:59
PJ130	JUNCTION	1.05	1.29	118.73	0	16:21	PJ256	JUNCTION	0.16	4.32	103.43	0	05:59
PJ131	JUNCTION	0.66	0.85	119.16	0	16:08	PJ257	JUNCTION	0.12	3.79	103.35	0	06:00
PJ132	JUNCTION	0.92	1.17	119.69	0	16:05	PJ258	JUNCTION	0.09	3.24	103.38	0	05:49
PJ133	JUNCTION	0.71	0.87	119.99	0	15:59	PJ259	JUNCTION	0.09	3.07	103.42	0	05:49
PJ134	JUNCTION	1.05	1.23	120.07	0	15:58	PJ260	JUNCTION	0.06	2.27	103.09	0	06:00
PJ135	JUNCTION	1.08	1.27	120.08	0	15:58	PJ261	JUNCTION	0.01	1.15	102.58	0	06:00
PJ136	JUNCTION	0.45	0.59	120.42	0	16:08	PJ262	JUNCTION	0.32	2.02	101.73	0	06:00
PJ137	JUNCTION	0.40	0.47	120.56	0	15:49	PJ263	JUNCTION	0.39	2.89	101.69	0	06:00
PJ138	JUNCTION	0.44	0.52	120.81	0	15:39	CO001	OUTFALL	3.70	3.70	92.50	0	00:00
PJ139	JUNCTION	0.47	0.55	121.12	0	15:45	CSto092	STORAGE	0.37	1.09	94.59	0	06:07
PJ140	JUNCTION	0.31	0.36	121.14	0	15:43	CSto097	STORAGE	1.20	1.98	95.18	0	10:05
PJ143	JUNCTION	0.20	0.28	125.33	0	10:22	CSto127	STORAGE	1.03	1.82	94.32	0	06:21
PJ144	JUNCTION	0.23	0.39	126.48	0	10:09	CSto129	STORAGE	2.20	3.04	94.37	0	06:13
PJ145	JUNCTION	0.16	0.38	132.61	0	07:17	CSto204	STORAGE	1.00	2.31	95.35	0	08:23
PJ146	JUNCTION	0.48	0.57	121.52	0	15:29	CSto205	STORAGE	0.82	1.58	94.58	0	15:06
PJ147	JUNCTION	0.39	0.46	121.90	0	15:28	CSto216	STORAGE	2.04	3.05	94.55	0	06:15
PJ148	JUNCTION	0.59	0.73	122.64	0	15:22	CSto257	STORAGE	0.57	1.77	95.17	0	06:24
PJ149	JUNCTION	0.75	0.89	122.65	0	15:22	CSto258	STORAGE	0.65	1.63	95.53	0	06:49
PJ151	JUNCTION	0.20	0.38	125.78	0	12:45	CSto267	STORAGE	0.64	1.26	93.96	0	06:08
PJ153	JUNCTION	0.55	0.66	122.74	0	15:20	CSto268_1	STORAGE	0.82	1.32	93.82	0	12:20
PJ154	JUNCTION	0.45	0.56	123.07	0	15:14	CSto268_2	STORAGE	0.01	0.17	94.37	0	06:00
PJ155	JUNCTION	0.39	0.50	123.75	0	15:10	CSto269	STORAGE	0.54	1.38	93.83	0	06:04
PJ156	JUNCTION	0.66	0.76	124.88	0	15:02	CSto270	STORAGE	1.01	1.56	95.00	0	06:05
PJ158	JUNCTION	0.15	0.41	126.22	0	06:26	CSto271	STORAGE	0.19	4.76	103.26	0	06:01
PJ159	JUNCTION	0.74	0.91	125.14	0	15:25	CSto272	STORAGE	0.53	1.23	94.13	0	06:20
PJ160	JUNCTION	0.86	1.04	125.14	0	15:24	CSto273	STORAGE	0.14	0.82	96.32	0	06:14
PJ161	JUNCTION	0.73	0.91	125.15	0	15:23	FJ049	STORAGE	4.13	5.08	103.08	0	07:04
PJ163	JUNCTION	0.56	0.74	125.16	0	15:22	FJ088	STORAGE	1.18	1.60	111.20	0	14:29
PJ165	JUNCTION	0.09	0.19	131.89	0	07:53	FSto022	STORAGE	0.68	1.81	100.41	0	08:02
PJ166	JUNCTION	0.14	0.23	125.15	0	15:18	FSto053	STORAGE	3.99	4.67	86.05	0	16:55
PJ168	JUNCTION	0.12	0.26	123.37	0	07:37	FSto066	STORAGE	0.59	1.99	129.47	0	08:35
PJ169	JUNCTION	0.17	0.36	125.92	0	07:35	FSto101	STORAGE	2.81	3.78	119.28	0	10:01
PJ170	JUNCTION	0.57	0.67	124.88	0	15:00	FSto103	STORAGE	4.36	5.46	121.46	0	10:35
PJ171	JUNCTION	0.22	0.29	125.22	0	12:50	FSto105	STORAGE	2.74	3.26	112.32	0	19:00
PJ172	JUNCTION	0.35	0.52	125.16	0	15:22	FSto106_1	STORAGE	0.82	1.29	110.99	0	15:17
PJ173	JUNCTION	0.04	0.53	114.71	0	06:00	FSto108	STORAGE	4.22	5.47	98.47	0	06:23
PJ174	JUNCTION	0.30	0.71	119.02	0	07:42	FSto200	STORAGE	0.03	0.81	114.88	0	06:22
PJ200	JUNCTION	0.94	1.56	94.16	0	11:22	FSto201	STORAGE	0.03	0.77	116.28	0	06:14
PJ203	JUNCTION	2.18	3.10	95.04	0	06:11	FSto202	STORAGE	0.02	0.72	112.87	0	06:10
PJ204	JUNCTION	2.12	3.42	95.43	0	05:57	FSto203	STORAGE	0.25	1.72	129.05	0	06:13
PJ205	JUNCTION	1.92	3.75	95.97	0	05:57	FSto204	STORAGE	0.12	2.09	123.79	0	06:21
PJ206	JUNCTION	1.72	3.98	96.40	0	05:57	FSto205	STORAGE	0.49	2.70	110.90	0	07:12
PJ207	JUNCTION	1.37	4.45	97.23	0	05:57	FSto206	STORAGE	0.11	1.20	111.00	0	06:40
PJ208	JUNCTION	0.71	4.18	97.64	0	05:57	FSto210	STORAGE	0.24	1.43	103.63	0	06:10
PJ209	JUNCTION	0.27	4.19	98.19	0	05:57	FSto212	STORAGE	0.00	0.00	116.50	0	00:00
PJ210	JUNCTION	0.24	4.43	98.79	0	05:57	FSto213	STORAGE	0.00	0.00	114.80	0	00:00
PJ211	JUNCTION	0.12	3.46	98.91	0	05:57	FSto214	STORAGE	0.23	0.71	119.21	0	08:00
PJ212	JUNCTION	0.13	4.15	99.78	0	05:57	GR SWMF	STORAGE	0.39	1.43	103.98	0	07:01
PJ213	JUNCTION	0.05	4.19	100.22	0	05:58	IBER_IND SWMF	STORAGE	0.13	0.93	103.43	0	06:36
PJ214	JUNCTION	0.05	4.37	100.90	0	05:57	P1-01-02S	STORAGE	0.08	1.58	103.93	0	06:16
PJ215	JUNCTION	0.05	4.07	100.99	0	05:57	P1-03aS	STORAGE	0.10	1.91	102.82	0	06:03
PJ216	JUNCTION	0.05	3.94	100.99	0	05:58	P1-03bS	STORAGE	0.09	1.69	104.04	0	06:09
PJ217	JUNCTION	0.05	4.14	101.34	0	05:57	P1-04aS	STORAGE	0.09	1.68	102.73	0	06:16
PJ218	JUNCTION	0.05	4.30	101.70	0	05:57	P1-04bS	STORAGE	0.08	1.61	103.06	0	06:13
PJ219	JUNCTION	0.05	5.00	102.91	0	05:58	P1-05S	STORAGE	0.06	1.49	103.49	0	06:03
PJ220	JUNCTION	0.04	3.05	101.46	0	05:59	P1-06S	STORAGE	0.09	1.71	103.76	0	06:08
PJ221	JUNCTION	0.05	1.32	100.07	0	05:59	P1-07S	STORAGE	0.07	1.55	103.25	0	06:09
PJ222	JUNCTION	0.10	0.84	99.59	0	05:59	P1-08S	STORAGE	0.14	1.71	103.36	0	06:19
PJ223	JUNCTION	0.06	1.28	100.22	0	05:59	P1-09S	STORAGE	0.06	1.57	103.32	0	06:08
PJ224	JUNCTION	0.16	0.54	96.12	0	10:07	P1-10S	STORAGE	0.07	1.64	102.64	0	06:06
PJ225	JUNCTION	0.16	1.29	96.87	0	05:59	P1-11S	STORAGE	0.10	1.66	102.36	0	06:12
PJ226	JUNCTION	0.00	0.67	99.41	0	05:59	P1-12S	STORAGE	0.10	1.54	101.94	0	06:13
PJ227	JUNCTION	0.22	3.44	98.71	0	05:57	P1-13S	STORAGE	0.15	1.69	102.54	0	06:23
PJ228	JUNCTION	0.22	3.03	98.63	0	06:00	P1-14S	STORAGE	0.09	1.56	101.96	0	06:09
PJ229	JUNCTION	0.24	1.76	99.01	0	06:00	P1-15S	STORAGE	0.09	1.64	101.89	0	06:11
PJ230	JUNCTION	0.22	1.79	99.16	0	06:00	P1-16S	STORAGE	0.10	1.71	103.11	0	06:09
PJ231	JUNCTION	0.20	1.61	99.19	0	06:00	P1-17S	STORAGE	0.06	1.55	102.15	0	06:03
PJ232	JUNCTION	0.19	1.41	99.24	0	06:01	P1-18S	STORAGE	0.07	1.65	101.95	0	06:07
PJ233	JUNCTION	0.19	1.36	99.25	0	06:01	P1-19S	STORAGE	0.06	1.55	101.55	0	06:04
PJ234	JUNCTION	0.19	1.32	99.28	0	06:01	P1-20S	STORAGE	0.11	1.70	102.05	0	06:13
PJ235	JUNCTION	0.19	1.26	99.30	0	06:01	POND	STORAGE	2.06	3.00	99.25	0	07:23
PJ236	JUNCTION	0.19	1.18	99.36	0	06:00	PSto061	STORAGE	0.63	2.25	111.75	0	07:20
PJ237	JUNCTION	0.19	1.14	99.40	0	06:00	PSto062	STORAGE	0.04	0.31	112.05	0	06:04
PJ238	JUNCTION	0.19	1.13	99.46	0	06:00	PSto071	STORAGE	0.02	0.10	112.78	0	06:01
PJ239	JUNCTION	0.37	5.21	103.54	0	05:59	PSto084	STORAGE	0.66	0.88	114.54	0	06:48
PJ240	JUNCTION	0.30	5.24	103.82	0	05:59	PSto100	STORAGE	0.66	2.02	120.63	0	07:39
PJ241	JUNCTION	0.28	5.43	104.11	0	06:00	PSto101	STORAGE	0.33	0.92	120.66	0	08:48
PJ242	JUNCTION	0.42	1.26	99.26	0	06:01	PSto122	STORAGE	0.27	0.53	112.85	0	07:45
PJ243	JUNCTION	0.49	1.28	99.28	0	06:01	PSto124	STORAGE	2.31	3.66	119.41	0	06:31
PJ244	JUNCTION	0.44	1.18	99.35	0	06:01	PSto201	STORAGE	0.91	1.50	94.70	0	06:29
PJ248	JUNCTION	0.48	3.03	101.49	0	06:01	PSto202	STORAGE	1.87	3.19	95.45	0	06:17



# Kizell Lands - Fernbank 5618 Hazeldean Road PCSWMM Model Output SCS100-year 12-hour Carp River Ultimate



PSto245	STORAGE	0.60	3.31	101.41	0	06:01
PSto246	STORAGE	0.50	3.17	101.45	0	06:01
PSto247	STORAGE	0.49	3.09	101.48	0	06:00
PSto249	STORAGE	0.19	2.58	101.40	0	06:01
PSto251	STORAGE	0.44	2.60	101.25	0	06:00
PSto252	STORAGE	0.44	2.26	101.04	0	06:00

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Node Inflow Summary  
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Node	Type	Maximum Lateral Inflow CMS	Maximum Total Inflow CMS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10 <sup>6</sup> ltr	Total Inflow Volume 10 <sup>6</sup> ltr
CJ002	JUNCTION	0.000	72.667	0 16:46	0.000	6977.578
CJ003	JUNCTION	0.000	72.667	0 16:46	0.000	6977.590
CJ004	JUNCTION	0.000	65.069	0 17:31	0.000	6146.338
CJ005	JUNCTION	9.325	65.067	0 17:30	166.979	6146.379
CJ006	JUNCTION	0.000	63.813	0 17:41	0.000	5979.513
CJ007	JUNCTION	2.875	63.806	0 17:39	68.834	5979.658
CJ008	JUNCTION	0.000	63.271	0 17:42	0.000	5910.987
CJ009	JUNCTION	0.000	63.265	0 17:40	0.000	5911.122
CJ010	JUNCTION	0.000	63.260	0 17:38	0.000	5911.278
CJ011	JUNCTION	0.000	63.257	0 17:35	0.000	5911.478
CJ012	JUNCTION	0.000	63.255	0 17:34	0.000	5911.600
CJ013	JUNCTION	8.144	63.254	0 17:32	328.525	5911.726
CJ014	JUNCTION	4.971	60.448	0 17:46	213.420	5583.581
CJ015	JUNCTION	0.000	58.598	0 17:54	0.000	5370.517
CJ016	JUNCTION	0.000	58.587	0 17:51	0.000	5370.811
CJ017	JUNCTION	0.000	58.580	0 17:47	0.000	5371.111
CJ018	JUNCTION	0.000	58.577	0 17:43	0.000	5371.409
CJ019	JUNCTION	2.496	58.578	0 17:36	134.233	5371.850
CJ020	JUNCTION	0.000	57.394	0 17:38	0.000	5238.187
CJ021	JUNCTION	0.000	57.404	0 17:30	0.000	5238.806
CJ022	JUNCTION	0.000	57.444	0 17:17	0.000	5240.037
CJ023	JUNCTION	0.000	57.517	0 17:03	0.000	5241.443
CJ024	JUNCTION	0.000	57.607	0 16:51	0.000	5242.714
CJ025	JUNCTION	0.000	57.725	0 16:38	0.000	5244.086
CJ026	JUNCTION	0.000	57.873	0 16:26	0.000	5245.514
CJ027	JUNCTION	0.000	58.052	0 16:13	0.000	5246.973
CJ028	JUNCTION	2.453	58.352	0 15:55	128.473	5248.963
CJ029	JUNCTION	0.000	57.373	0 15:47	0.000	5122.407
CJ030	JUNCTION	0.960	57.713	0 15:31	40.206	5124.011
CJ031	JUNCTION	0.000	57.494	0 15:27	0.000	5084.729
CJ032	JUNCTION	0.000	58.105	0 13:48	0.000	5084.781
CJ033	JUNCTION	0.000	57.778	0 15:09	0.000	5086.231
CJ034	JUNCTION	2.120	58.384	0 14:41	108.115	5088.701
CJ035	JUNCTION	0.000	57.450	0 14:37	0.000	4981.816
CJ036	JUNCTION	1.200	58.056	0 14:17	41.656	4983.737
CJ037	JUNCTION	0.000	58.706	0 14:03	0.000	4945.670
CJ038	JUNCTION	7.154	40.891	0 14:15	21.549	3182.501
CJ039	JUNCTION	0.000	41.310	0 14:00	0.000	3162.241
CJ040	JUNCTION	1.693	41.783	0 14:00	57.480	3163.531
CJ041	JUNCTION	0.000	41.499	0 13:56	0.000	3085.129
CJ042	JUNCTION	0.000	41.988	0 13:50	0.000	3086.438
CJ043	JUNCTION	0.000	42.423	0 13:50	0.000	3087.903
CJ044	JUNCTION	0.000	42.670	0 13:46	0.000	3038.221
CJ045	JUNCTION	1.774	43.276	0 13:43	10.860	3039.177
CJ046	JUNCTION	0.000	43.589	0 13:42	0.000	3029.075
CJ047	JUNCTION	0.000	43.854	0 13:37	0.000	3029.879
CJ048	JUNCTION	0.000	43.985	0 13:32	0.000	3030.475
CJ049	JUNCTION	0.000	43.996	0 13:32	0.000	3030.549
CJ050	JUNCTION	0.000	43.996	0 13:31	0.000	3030.636
CJ051	JUNCTION	1.070	43.998	0 13:28	42.877	3030.881
CJ052	JUNCTION	0.000	43.392	0 13:29	0.000	2988.320
CJ053	JUNCTION	0.000	43.408	0 13:20	0.000	2989.090
CJ054	JUNCTION	0.000	43.464	0 13:12	0.000	2990.188
CJ055	JUNCTION	0.430	43.519	0 13:05	74.297	2990.904
CJ056	JUNCTION	0.000	43.144	0 12:57	0.000	2917.211
CJ057	JUNCTION	0.000	43.236	0 12:53	0.000	2917.894
CJ058	JUNCTION	0.000	43.305	0 12:45	0.000	2918.278
CJ059	JUNCTION	0.000	43.420	0 12:39	0.000	2918.944
CJ060	JUNCTION	0.000	43.548	0 12:32	0.000	2919.632
CJ061	JUNCTION	0.000	43.678	0 12:22	0.000	2920.398
CJ062	JUNCTION	0.000	44.053	0 12:08	0.000	2921.864
CJ063	JUNCTION	0.000	44.366	0 12:02	0.000	2922.927
CJ064	JUNCTION	0.000	44.299	0 12:01	0.000	2910.091
CJ065	JUNCTION	2.547	44.322	0 12:00	67.897	2910.257
CJ066	JUNCTION	0.000	43.165	0 12:07	0.000	2842.692
CJ067	JUNCTION	0.000	43.402	0 12:05	0.000	2844.057
CJ068	JUNCTION	0.000	43.624	0 11:21	0.000	2845.230

CJ069	JUNCTION	0.000	43.659	0 11:21	0.000	2845.338
CJ070	JUNCTION	0.000	43.749	0 11:16	0.000	2845.674
CJ071	JUNCTION	0.000	43.842	0 11:14	0.000	2846.026
CJ072	JUNCTION	0.000	44.064	0 11:10	0.000	2846.627
CJ073	JUNCTION	0.000	43.817	0 11:09	0.000	2789.746
CJ074	JUNCTION	0.000	43.125	0 11:09	0.000	2745.518
CJ075	JUNCTION	0.000	43.295	0 11:07	0.000	2746.074
CJ076	JUNCTION	0.000	43.506	0 11:04	0.000	2746.741
CJ077	JUNCTION	3.637	14.343	0 05:59	10.871	49.202
CJ078	JUNCTION	0.000	43.952	0 11:00	0.000	2747.838
CJ079	JUNCTION	0.000	44.360	0 10:55	0.000	2748.798
CJ080	JUNCTION	0.000	44.445	0 10:55	0.000	2748.948
CJ081	JUNCTION	0.000	44.564	0 10:51	0.000	2749.072
CJ082	JUNCTION	9.563	9.563	0 06:00	38.510	38.509
CJ083	JUNCTION	0.219	44.645	0 10:50	2.975	2749.066
CJ084	JUNCTION	0.000	44.642	0 10:50	0.000	2746.123
CJ085	JUNCTION	7.572	15.467	0 06:00	257.734	831.271
CJ086	JUNCTION	16.949	16.949	0 06:00	576.884	576.882
CJ087	JUNCTION	3.320	21.994	0 10:16	1769.779	1769.669
CJ088	JUNCTION	30.813	30.813	0 06:00	1092.998	1092.995
CJ089	JUNCTION	0.000	44.874	0 10:48	0.000	2747.026
CJ094	JUNCTION	0.000	0.838	0 10:05	0.000	44.720
CJ095	JUNCTION	0.000	0.839	0 10:05	0.000	44.732
CJ096	JUNCTION	0.000	0.839	0 10:05	0.000	44.733
CJ098	JUNCTION	10.673	10.673	0 06:00	49.718	49.717
CJ100	JUNCTION	0.000	44.647	0 10:48	0.000	2699.051
CJ101	JUNCTION	0.000	44.657	0 10:48	0.000	2699.095
CJ103	JUNCTION	0.000	44.929	0 10:45	0.000	2700.085
CJ104	JUNCTION	0.000	44.726	0 10:47	0.000	2699.282
CJ105	JUNCTION	0.000	44.851	0 10:46	0.000	2699.736
CJ106	JUNCTION	0.000	44.919	0 10:45	0.000	2700.051
CJ107	JUNCTION	0.000	44.937	0 10:43	0.000	2700.116
CJ108	JUNCTION	0.000	44.997	0 10:43	0.000	2700.268
CJ109	JUNCTION	0.000	32.816	0 11:29	0.000	2097.241
CJ110	JUNCTION	0.000	32.827	0 11:29	0.000	2097.362
CJ112	JUNCTION	0.000	32.717	0 11:29	0.000	2081.084
CJ113	JUNCTION	0.000	32.728	0 11:29	0.000	2081.298
CJ114	JUNCTION	0.000	32.740	0 11:29	0.000	2081.515
CJ115	JUNCTION	0.000	32.744	0 11:29	0.000	2081.568
CJ117	JUNCTION	0.000	32.450	0 11:27	0.000	2042.732
CJ118	JUNCTION	0.000	32.757	0 11:29	0.000	2081.773
CJ119	JUNCTION	0.000	32.459	0 11:27	0.000	2042.790
CJ120	JUNCTION	0.000	32.460	0 11:27	0.000	2042.810
CJ121	JUNCTION	0.000	32.774	0 11:28	0.000	2082.040
CJ123	JUNCTION	0.000	32.784	0 11:28	0.000	2082.156
CJ124	JUNCTION	0.000	32.791	0 11:28	0.000	2082.182
CJ125	JUNCTION	0.000	32.798	0 11:28	0.000	2082.204
CJ126	JUNCTION	0.000	0.076	0 06:14	0.000	2.871
CJ127	JUNCTION	0.000	32.803	0 11:28	0.000	2082.235
CJ128	JUNCTION	0.000	3.256	0 06:03	0.000	34.666
CJ129	JUNCTION	0.000	32.811	0 11:28	0.000	2082.375
CJ130	JUNCTION	0.000	32.621	0 11:28	0.000	2058.320
CJ131	JUNCTION	0.000	32.631	0 11:28	0.000	2058.459
CJ132	JUNCTION	0.000	32.645	0 11:28	0.000	2058.662
CJ133	JUNCTION	0.000	32.653	0 11:28	0.000	2058.774
CJ134	JUNCTION	1.551	32.657	0 11:28	10.123	2058.814
CJ135	JUNCTION	0.000	32.505	0 11:28	0.000	2048.714
CJ136	JUNCTION	1.337	32.508	0 11:27	6.037	2048.740
CJ137	JUNCTION	0.000	32.454	0 11:27	0.000	2042.758
CJ139	JUNCTION	0.000	32.467	0 11:27	0.000	2042.927
CJ140	JUNCTION	0.000	32.513	0 11:26	0.000	2043.363
CJ141	JUNCTION	7.948	7.948	0 06:00	476.684	476.683
CJ142	JUNCTION	0.000	32.534	0 11:26	0.000	2043.526
CJ143	JUNCTION	0.000	32.596	0 11:25	0.000	2043.956
CJ144	JUNCTION	0.000	2.277	0 06:21	0.000	29.557
CJ145	JUNCTION	0.000	2.003	0 06:22	0.000	29.552
CJ146	JUNCTION	0.000	32.226	0 11:24	0.000	2014.586
CJ147	JUNCTION	9.822	32.298	0 11:24	43.410	2015.978
CJ148	JUNCTION	0.000	32.022	0 10:59	0.000	1980.143
CJ149	JUNCTION	0.000	32.048	0 10:59	0.000	1968.267
CJ150	JUNCTION	0.000	53.910	0 07:18	0.000	1934.298
CJ151	JUNCTION	0.000	32.287	0 10:46	0.000	1967.389
CJ152	JUNCTION	0.200	32.538	0 10:45	34.557	1967.049
CJ153	JUNCTION	0.000	50.047	0 07:18	0.000	1951.242
CJ154	JUNCTION	0.000	36.765	0 06:44	0.000	1949.524
CJ155	JUNCTION	0.000	33.283	0 10:26	0.000	1935.362
CJ156	JUNCTION	0.000	33.458	0 10:26	0.000	1935.592
CJ157	JUNCTION	0.000	33.808	0 10:26	0.000	1936.382
CJ158	JUNCTION	0.000	33.544	0 10:26	0.000	1938.733
CJ159	JUNCTION	0.000	30.388	0 11:04	0.000	1752.018
CJ160	JUNCTION	0.000	31.273	0 11:01	0.000	1751.781
CJ161	JUNCTION	0.000	31.692	0 11:21	0.000	1752.030
CJ162	JUNCTION	0.122	31.681	0 10:44	0.913	1752.885
CJ163	JUNCTION	5.599	37.046	0 10:25	21.325	1752.284
CJ164	JUNCTION	0.000	33.312	0 11:25	0.000	1732.369

**Kizell Lands - Fernbank 5618 Hazeldean Road**  
**PCSWMM Model Output SCS100-year 12-hour Carp River Ultimate**



CJ165	JUNCTION	0.000	35.226	0	10:18	0.000	1732.815	CJ290	JUNCTION	0.000	3.890	0	06:02	0.000	42.615
CJ166	JUNCTION	0.000	35.481	0	10:48	0.000	1732.743	CJ291	JUNCTION	0.000	3.050	0	06:01	0.000	25.379
CJ167	JUNCTION	0.000	31.251	0	11:09	0.000	1733.203	CJ292	JUNCTION	0.000	3.062	0	06:00	0.000	22.268
CJ168	JUNCTION	0.000	33.092	0	11:21	0.000	1733.306	CJ293	JUNCTION	1.122	1.122	0	06:00	3.331	3.331
CJ169	JUNCTION	0.000	17.515	0	14:43	0.000	728.817	CJ294	JUNCTION	0.000	2.000	0	05:46	0.000	18.937
CJ170	JUNCTION	0.000	17.286	0	13:08	0.000	728.848	CJ295	JUNCTION	0.000	1.746	0	06:21	0.000	16.374
CJ171	JUNCTION	0.000	16.491	0	13:29	0.000	729.111	CJ296	JUNCTION	0.899	0.899	0	06:00	3.089	6.103
CJ172	JUNCTION	0.000	16.040	0	13:08	0.000	729.202	CJ297	JUNCTION	0.000	3.962	0	06:14	0.000	22.523
CJ173	JUNCTION	0.000	16.424	0	13:29	0.000	729.293	FJ002	JUNCTION	0.000	15.343	0	07:40	0.000	603.435
CJ174	JUNCTION	0.000	13.563	0	13:01	0.000	729.476	FJ003	JUNCTION	0.000	15.808	0	07:36	0.000	604.024
CJ175	JUNCTION	0.000	13.444	0	13:01	0.000	729.705	FJ004	JUNCTION	0.000	15.243	0	07:39	0.000	603.400
CJ176	JUNCTION	0.000	13.351	0	12:23	0.000	730.611	FJ005	JUNCTION	0.000	15.244	0	07:39	0.000	603.551
CJ177	JUNCTION	0.000	17.695	0	07:03	0.000	733.657	FJ006	JUNCTION	0.000	15.263	0	07:40	0.000	603.721
CJ178	JUNCTION	0.000	20.903	0	07:03	0.000	738.825	FJ007	JUNCTION	0.000	15.264	0	07:39	0.000	603.666
CJ179	JUNCTION	0.000	19.248	0	07:04	0.000	736.122	FJ008	JUNCTION	0.000	15.266	0	07:37	0.000	603.692
CJ180	JUNCTION	0.000	36.329	0	07:03	0.000	754.538	FJ009	JUNCTION	0.000	15.267	0	07:37	0.000	603.790
CJ181	JUNCTION	0.279	14.163	0	07:04	7.237	679.126	FJ010	JUNCTION	0.382	15.272	0	07:33	5.885	603.534
CJ182	JUNCTION	0.000	13.061	0	09:29	0.000	663.306	FJ011	JUNCTION	0.000	15.004	0	07:31	0.000	597.677
CJ183	JUNCTION	0.000	13.213	0	09:18	0.000	662.966	FJ012	JUNCTION	0.000	15.013	0	07:29	0.000	597.690
CJ184	JUNCTION	0.000	13.345	0	09:20	0.000	663.048	FJ013	JUNCTION	0.000	15.022	0	07:28	0.000	597.730
CJ185	JUNCTION	0.000	13.336	0	09:20	0.000	662.194	FJ014	JUNCTION	0.000	15.025	0	07:26	0.000	597.751
CJ186	JUNCTION	0.000	13.424	0	09:14	0.000	672.351	FJ015	JUNCTION	0.000	15.028	0	07:23	0.000	597.790
CJ187	JUNCTION	0.000	12.741	0	09:19	0.000	632.394	FJ016	JUNCTION	0.000	15.038	0	07:22	0.000	597.854
CJ188	JUNCTION	0.000	12.920	0	09:15	0.000	628.451	FJ017	JUNCTION	0.000	15.043	0	07:20	0.000	604.594
CJ189	JUNCTION	0.000	14.239	0	09:25	0.000	624.546	FJ018	JUNCTION	0.000	15.044	0	07:20	0.000	604.644
CJ190	JUNCTION	0.000	14.050	0	09:21	0.000	622.336	FJ019	JUNCTION	0.971	15.262	0	06:49	3.007	598.235
CJ191	JUNCTION	0.000	14.227	0	09:21	0.000	621.636	FJ020	JUNCTION	1.865	2.203	0	06:00	5.069	26.593
CJ192	JUNCTION	0.000	13.332	0	09:19	0.000	620.905	FJ021	JUNCTION	0.000	0.390	0	06:13	0.000	21.525
CJ193	JUNCTION	0.000	13.482	0	09:15	0.000	629.045	FJ023	JUNCTION	0.000	14.762	0	06:49	0.000	568.521
CJ194	JUNCTION	0.000	12.674	0	09:23	0.000	594.992	FJ024	JUNCTION	0.000	13.265	0	08:12	0.000	524.586
CJ195	JUNCTION	0.000	12.812	0	09:16	0.000	593.162	FJ025	JUNCTION	0.000	14.649	0	08:23	0.000	520.182
CJ196	JUNCTION	0.000	12.896	0	09:17	0.000	591.114	FJ026	JUNCTION	0.000	16.940	0	09:51	0.000	519.092
CJ197	JUNCTION	0.000	13.058	0	09:15	0.000	588.335	FJ027	JUNCTION	0.000	13.798	0	08:25	0.000	513.642
CJ197_1	JUNCTION	0.000	13.203	0	09:04	0.000	584.633	FJ028	JUNCTION	0.000	12.411	0	07:39	0.000	513.399
CJ197_2	JUNCTION	0.000	13.466	0	09:04	0.000	582.237	FJ029	JUNCTION	0.000	12.398	0	07:36	0.000	513.423
CJ197_3	JUNCTION	0.000	13.615	0	08:59	0.000	582.158	FJ030	JUNCTION	0.000	12.398	0	07:36	0.000	513.461
CJ197_4	JUNCTION	0.000	13.712	0	08:59	0.000	582.365	FJ031	JUNCTION	1.082	12.399	0	07:35	4.855	513.505
CJ197_5	JUNCTION	0.000	13.810	0	08:58	0.000	582.411	FJ032	JUNCTION	0.000	12.218	0	07:37	0.000	508.670
CJ197_6	JUNCTION	0.000	13.934	0	08:49	0.000	582.466	FJ033	JUNCTION	0.000	12.218	0	07:36	0.000	508.689
CJ198	JUNCTION	0.000	13.996	0	08:50	0.000	582.517	FJ034	JUNCTION	0.000	12.219	0	07:35	0.000	508.701
CJ199	JUNCTION	0.000	14.331	0	08:40	0.000	583.140	FJ035	JUNCTION	0.000	12.233	0	07:29	0.000	508.735
CJ200	JUNCTION	0.211	15.043	0	08:09	2.958	584.229	FJ036	JUNCTION	0.000	12.298	0	07:18	0.000	508.758
CJ201	JUNCTION	0.000	14.765	0	08:04	0.000	552.794	FJ037	JUNCTION	0.000	12.369	0	07:11	0.000	508.790
CJ202	JUNCTION	0.000	8.049	0	07:58	0.000	360.218	FJ038	JUNCTION	0.000	12.392	0	07:09	0.000	508.808
CJ203	JUNCTION	0.085	8.177	0	07:41	14.687	360.229	FJ039	JUNCTION	0.000	12.658	0	06:54	0.000	508.700
CJ205	JUNCTION	0.000	25.664	0	06:29	0.000	290.746	FJ040	JUNCTION	0.000	8.541	0	06:54	0.000	410.876
CJ206	JUNCTION	5.133	23.159	0	06:26	21.978	257.960	FJ040_1	JUNCTION	0.000	8.551	0	06:57	0.000	410.866
CJ207	JUNCTION	1.406	22.327	0	06:25	6.438	235.974	FJ041	JUNCTION	0.000	7.286	0	08:41	0.000	380.534
CJ208	JUNCTION	4.328	25.268	0	06:17	18.232	230.973	FJ042	JUNCTION	0.000	7.286	0	08:39	0.000	380.571
CJ209	JUNCTION	0.318	24.320	0	06:17	3.565	210.839	FJ043	JUNCTION	0.843	7.286	0	08:38	4.800	380.555
CJ210	JUNCTION	0.000	24.254	0	06:15	0.000	207.138	FJ044	JUNCTION	0.000	7.161	0	08:40	0.000	375.837
CJ211	JUNCTION	2.311	24.270	0	06:13	7.590	207.148	FJ045	JUNCTION	0.000	7.162	0	08:38	0.000	375.837
CJ212	JUNCTION	0.000	24.175	0	06:10	0.000	199.632	FJ046	JUNCTION	0.000	7.164	0	08:36	0.000	375.832
CJ213	JUNCTION	0.625	24.385	0	06:08	5.570	199.580	FJ047	JUNCTION	0.000	7.166	0	08:34	0.000	375.930
CJ214	JUNCTION	6.427	6.427	0	06:00	25.545	25.544	FJ048	JUNCTION	0.000	4.651	0	06:35	0.000	97.877
CJ215	JUNCTION	0.000	2.341	0	06:06	0.000	27.459	FJ050	JUNCTION	2.673	2.725	0	06:00	30.557	35.047
CJ242	JUNCTION	0.000	2.007	0	06:21	0.000	20.376	FJ051	JUNCTION	1.307	1.307	0	06:00	4.465	4.482
CJ243	JUNCTION	0.000	2.007	0	06:21	0.000	20.409	FJ054	JUNCTION	0.000	7.167	0	08:32	0.000	375.957
CJ246	JUNCTION	7.860	10.945	0	06:00	35.185	48.394	FJ055	JUNCTION	0.000	7.168	0	08:29	0.000	376.003
CJ247	JUNCTION	3.413	3.413	0	06:00	13.207	13.207	FJ056	JUNCTION	0.000	7.171	0	08:29	0.000	376.017
CJ248_1	JUNCTION	8.156	8.156	0	06:00	40.975	40.974	FJ057	JUNCTION	0.000	7.172	0	08:29	0.000	376.006
CJ248_2	JUNCTION	0.000	6.878	0	06:05	0.000	41.373	FJ058	JUNCTION	0.847	8.089	0	06:10	8.958	376.839
CJ249	JUNCTION	0.000	2.920	0	06:00	0.000	11.295	FJ059	JUNCTION	0.000	5.914	0	06:02	0.000	51.066
CJ250	JUNCTION	2.932	2.932	0	06:00	10.289	10.289	FJ060	JUNCTION	0.000	6.157	0	06:00	0.000	50.701
CJ251	JUNCTION	0.425	8.704	0	06:52	9.086	193.211	FJ061	JUNCTION	6.206	6.206	0	06:00	50.698	50.697
CJ254	JUNCTION	0.000	4.895	0	07:23	0.000	113.635	FJ062	JUNCTION	0.000	5.628	0	11:01	0.000	316.811
CJ255	JUNCTION	2.039	2.039	0	06:00	8.079	8.078	FJ063	JUNCTION	0.000	5.659	0	06:05	0.000	318.556
CJ256	JUNCTION	0.000	1.014	0	18:34	0.000	20.711	FJ064	JUNCTION	0.000	5.859	0	08:09	0.000	319.458
CJ257	JUNCTION	0.000	3.510	0	06:49	0.000	69.856	FJ065	JUNCTION	4.041	4.866	0	06:00	20.959	65.486
CJ259	JUNCTION	4.786	4.786	0	06:00	21.187	21.186	FJ067	JUNCTION	1.952	4.392	0	08:40	15.944	254.135
CJ260	JUNCTION	0.000	3.100	0	05:47	0.000	30.098	FJ068	JUNCTION	0.000	3.957	0	08:44	0.000	238.300
CJ261	JUNCTION	3.583	3.583	0	06:00	11.776	11.776	FJ069	JUNCTION	0.000	3.958	0	08:41	0.000	238.414
CJ262	JUNCTION	1.371	21.208	0	06:07	5.258	170.548	FJ070	JUNCTION	0.300	3.958	0	08:40	2.879	238.396
CJ263	JUNCTION	3.938	21.156	0	06:03	19.074	165.279	FJ071	JUNCTION	0.000	3.861	0	08:44	0.000	235.521
CJ264	JUNCTION	2.079	23.314	0	06:00	6.633	146.352	FJ072	JUNCTION	0.000	3.862	0	08:41	0.000	235.785
CJ265	JUNCTION	18.490	18.490	0	06:00	128.946	128.944	FJ073	JUNCTION	0.000	3.865	0	08:34	0.000	236.261
CJ266	JUNCTION	0.000	8.892	0	06:08	0.000	57.692	FJ074	JUNCTION	0.000	3.869	0	08:29	0.000	236.289
CJ267	JUNCTION	0.000	1.459	0	06:24	0.000	18.378	FJ075	JUNCTION	0.000	3.869	0	08:29	0.000	236.265
CJ282	JUNCTION	3.235	3.235	0	06:00	10.766	10.766	FJ076	JUNCTION	0.000	2.619	0	08:28	0.000	195.008
CJ283	JUNCTION	2.286	7.734	0	06:02	18.781	50.986	FJ077	JUNCTION	0.000	2.620	0	08:26	0.000	195.027
CJ284	JUNCTION	0.000	5.984	0</											

# Kizell Lands - Fernbank 5618 Hazeldean Road

## PCSWMM Model Output SCS100-year 12-hour Carp River Ultimate



FJ083	JUNCTION	0.000	2.502	0	15:14	0.000	185.971	P1-321 (STM)	JUNCTION	0.000	1.429	0	06:07	0.000	9.507
FJ084	JUNCTION	0.000	2.502	0	15:11	0.000	186.003	P1-323 (STM)	JUNCTION	0.000	0.443	0	06:07	0.000	2.631
FJ085	JUNCTION	0.000	2.502	0	15:11	0.000	186.007	P1-327 (STM)	JUNCTION	0.000	1.006	0	06:04	0.000	6.878
FJ086	JUNCTION	0.000	2.502	0	15:11	0.000	186.012	P1-329 (STM)	JUNCTION	0.000	0.006	0	06:01	0.000	0.004
FJ087	JUNCTION	0.000	2.502	0	15:04	0.000	186.034	P1-331 (STM)	JUNCTION	0.000	0.000	0	00:00	0.000	0.000
FJ090	JUNCTION	0.000	2.224	0	13:10	0.000	124.566	P1-333 (STM)	JUNCTION	0.000	0.000	0	00:00	0.000	0.000
FJ091	JUNCTION	0.000	2.224	0	13:01	0.000	124.679	P1-335 (STM)	JUNCTION	0.000	0.248	0	06:08	0.000	1.506
FJ092	JUNCTION	0.000	2.225	0	12:52	0.000	124.908	P1-337 (STM)	JUNCTION	0.000	0.562	0	06:09	0.000	4.628
FJ093	JUNCTION	0.000	2.226	0	12:46	0.000	124.815	P1-349 (STM)	JUNCTION	0.000	0.269	0	06:17	0.000	2.081
FJ094	JUNCTION	0.000	2.482	0	07:53	0.000	124.927	P1-351 (STM)	JUNCTION	0.000	0.532	0	06:07	0.000	4.181
FJ095	JUNCTION	0.124	2.321	0	08:53	3.812	123.264	P1-EX. 501 (STM)	JUNCTION	0.480	2.363	0	06:22	2.027	53.826
FJ096	JUNCTION	0.000	2.223	0	10:11	0.000	119.479	P1-EX. 502 (STM)	JUNCTION	0.000	2.363	0	06:22	0.000	53.814
FJ097	JUNCTION	0.000	2.223	0	10:06	0.000	119.492	P1-EX. 503 (STM)	JUNCTION	0.000	2.363	0	06:22	0.000	53.803
FJ098	JUNCTION	0.000	2.223	0	10:03	0.000	119.507	P1-EX. 504 (STM)	JUNCTION	0.000	2.363	0	06:22	0.000	53.797
FJ099	JUNCTION	0.000	2.223	0	10:01	0.000	119.522	PJ002	JUNCTION	0.000	17.051	0	10:27	0.000	1004.444
FJ100	JUNCTION	0.000	2.223	0	10:01	0.000	119.525	PJ003	JUNCTION	0.223	17.078	0	10:28	2.302	1004.777
FJ101	JUNCTION	0.000	1.778	0	07:35	0.000	53.154	PJ004	JUNCTION	0.000	17.047	0	10:32	0.000	1002.572
FJ102	JUNCTION	0.000	2.097	0	10:46	0.000	108.840	PJ005	JUNCTION	0.000	17.066	0	10:29	0.000	1002.878
FJ104	JUNCTION	0.942	6.138	0	06:00	17.658	84.991	PJ006	JUNCTION	0.000	17.074	0	10:27	0.000	1002.953
FJ105	JUNCTION	0.000	2.223	0	10:01	0.000	119.526	PJ007	JUNCTION	0.000	17.076	0	10:27	0.000	1002.964
FJ108	JUNCTION	0.000	5.100	0	06:12	0.000	44.013	PJ008	JUNCTION	0.000	17.078	0	10:27	0.000	1002.982
FJ200	JUNCTION	1.054	1.054	0	06:00	3.250	3.493	PJ009	JUNCTION	0.000	17.088	0	10:25	0.000	1003.076
FJ201	JUNCTION	2.725	2.725	0	06:00	9.700	9.737	PJ010	JUNCTION	0.000	17.100	0	10:23	0.000	1003.183
FJ202	JUNCTION	2.445	2.445	0	06:00	9.472	9.477	PJ011	JUNCTION	0.000	17.102	0	10:21	0.000	1004.211
FJ203	JUNCTION	0.334	0.574	0	06:00	1.285	12.877	PJ012	JUNCTION	0.000	17.106	0	10:19	0.000	1004.967
FJ204	JUNCTION	1.288	1.289	0	06:00	4.754	4.756	PJ013	JUNCTION	0.000	17.112	0	10:18	0.000	1005.452
FJ205	JUNCTION	0.000	0.610	0	05:43	0.000	6.337	PJ014	JUNCTION	0.380	17.121	0	10:14	4.602	1006.944
FJ206	JUNCTION	2.152	2.152	0	06:00	7.672	7.672	PJ015	JUNCTION	0.000	0.034	0	06:19	0.000	0.081
FJ208	JUNCTION	0.000	4.500	0	06:10	0.000	30.384	PJ018	JUNCTION	0.000	17.032	0	10:12	0.000	1003.124
FJ209	JUNCTION	0.000	4.500	0	06:10	0.000	30.384	PJ019	JUNCTION	0.000	17.037	0	10:10	0.000	1003.199
FJ216	JUNCTION	0.000	0.308	0	05:42	0.000	3.081	PJ021	JUNCTION	0.000	17.041	0	10:08	0.000	1003.405
FJ217	JUNCTION	0.000	1.316	0	06:08	0.000	10.958	PJ022	JUNCTION	0.000	17.044	0	10:06	0.000	1003.692
FJ218	JUNCTION	0.000	1.325	0	06:10	0.000	10.947	PJ023	JUNCTION	0.000	17.047	0	10:04	0.000	1003.954
FJ219	JUNCTION	0.000	0.917	0	05:45	0.000	8.537	PJ024	JUNCTION	0.000	17.049	0	10:03	0.000	1004.149
FJ220	JUNCTION	0.000	0.000	0	00:00	0.000	0.000	PJ025	JUNCTION	0.000	17.054	0	10:03	0.000	1004.365
FJ221	JUNCTION	0.000	2.239	0	06:08	0.000	19.376	PJ026	JUNCTION	0.000	18.130	0	06:09	0.000	1004.557
FJ222	JUNCTION	0.000	0.000	0	00:00	0.000	0.000	PJ027	JUNCTION	0.000	18.371	0	06:09	0.000	1004.645
FJ223	JUNCTION	0.000	0.000	0	00:00	0.000	0.000	PJ028	JUNCTION	0.000	18.737	0	06:08	0.000	1004.724
FJ224	JUNCTION	0.000	0.000	0	00:00	0.000	0.000	PJ029	JUNCTION	0.000	19.678	0	06:08	0.000	1004.964
FJ225	JUNCTION	0.000	0.000	0	00:00	0.000	0.000	PJ030	JUNCTION	0.798	19.903	0	06:06	7.064	1004.657
FJ226	JUNCTION	0.000	1.330	0	06:01	0.000	10.916	PJ031	JUNCTION	0.000	17.442	0	06:06	0.000	995.170
FJ227	JUNCTION	0.000	0.573	0	06:00	0.000	13.700	PJ032	JUNCTION	0.000	17.633	0	06:05	0.000	995.321
FJ228	JUNCTION	0.000	0.571	0	06:00	0.000	13.643	PJ033	JUNCTION	0.000	17.854	0	06:04	0.000	995.361
FJ229	JUNCTION	0.000	4.149	0	06:02	0.000	48.475	PJ034	JUNCTION	0.000	17.960	0	06:03	0.000	995.399
FJ230	JUNCTION	0.000	4.427	0	06:04	0.000	51.067	PJ035	JUNCTION	0.000	18.008	0	06:02	0.000	995.466
FJ231	JUNCTION	0.000	4.425	0	06:04	0.000	50.832	PJ036	JUNCTION	0.000	18.144	0	06:01	0.000	995.567
FJ232	JUNCTION	0.000	4.784	0	06:05	0.000	54.312	PJ037	JUNCTION	0.000	18.248	0	06:00	0.000	995.693
FJ233	JUNCTION	0.000	3.261	0	06:02	0.000	40.132	PJ038	JUNCTION	0.000	16.904	0	09:51	0.000	985.196
FJ234	JUNCTION	0.000	1.095	0	06:02	0.000	20.794	PJ039	JUNCTION	0.000	16.904	0	09:50	0.000	985.225
FJ235	JUNCTION	0.000	1.108	0	06:01	0.000	20.834	PJ040	JUNCTION	0.000	16.904	0	09:50	0.000	985.252
FJ236	JUNCTION	0.000	0.378	0	06:22	0.000	5.102	PJ041	JUNCTION	0.000	16.905	0	09:49	0.000	985.332
P1-101 (STM)	JUNCTION	0.000	6.981	0	06:17	0.000	100.932	PJ042	JUNCTION	0.000	16.905	0	09:48	0.000	985.378
P1-101a (STM)	JUNCTION	0.000	3.236	0	06:18	0.000	39.261	PJ043	JUNCTION	2.331	16.905	0	09:47	8.811	985.456
P1-103 (STM)	JUNCTION	0.000	7.018	0	06:17	0.000	99.081	PJ044	JUNCTION	0.000	16.784	0	09:47	0.000	976.674
P1-105 (STM)	JUNCTION	0.000	7.046	0	06:17	0.000	99.107	PJ045	JUNCTION	0.000	16.723	0	09:47	0.000	972.043
P1-107 (STM)	JUNCTION	0.000	1.006	0	06:33	0.000	10.633	PJ046	JUNCTION	0.000	16.723	0	09:47	0.000	972.100
P1-109 (STM)	JUNCTION	0.000	0.804	0	06:47	0.000	8.745	PJ047	JUNCTION	0.000	16.723	0	09:46	0.000	972.195
P1-111 (STM)	JUNCTION	0.000	0.544	0	06:49	0.000	6.272	PJ048	JUNCTION	0.000	16.724	0	09:45	0.000	972.325
P1-113 (STM)	JUNCTION	0.000	0.512	0	06:23	0.000	6.272	PJ049	JUNCTION	0.000	16.724	0	09:44	0.000	972.411
P1-147 (STM)	JUNCTION	0.000	6.161	0	06:13	0.000	88.473	PJ050	JUNCTION	0.000	16.725	0	09:43	0.000	972.497
P1-153 (STM)	JUNCTION	0.000	5.978	0	06:13	0.000	86.671	PJ051	JUNCTION	0.000	16.731	0	09:38	0.000	972.903
P1-165 (STM)	JUNCTION	0.000	5.938	0	06:13	0.000	82.796	PJ052	JUNCTION	0.000	16.761	0	09:31	0.000	973.382
P1-169 (STM)	JUNCTION	0.000	5.300	0	06:04	0.000	81.234	PJ053	JUNCTION	0.000	16.817	0	09:24	0.000	973.808
P1-171 (STM)	JUNCTION	0.000	5.335	0	06:10	0.000	81.236	PJ054	JUNCTION	0.000	16.843	0	09:21	0.000	973.905
P1-173 (STM)	JUNCTION	0.000	0.710	0	06:19	0.000	7.791	PJ055	JUNCTION	2.302	16.869	0	09:18	13.312	974.098
P1-203 (STM)	JUNCTION	0.000	4.448	0	06:10	0.000	71.944	PJ056	JUNCTION	2.268	16.615	0	09:16	9.656	961.086
P1-205 (STM)	JUNCTION	0.000	4.181	0	06:10	0.000	70.388	PJ057	JUNCTION	3.742	16.526	0	09:09	15.853	951.491
P1-207 (STM)	JUNCTION	0.000	4.176	0	06:10	0.000	70.392	PJ058	JUNCTION	0.000	16.311	0	09:05	0.000	935.956
P1-209 (STM)	JUNCTION	0.000	0.333	0	06:08	0.000	2.698	PJ059	JUNCTION	0.000	16.336	0	09:02	0.000	936.227
P1-215 (STM)	JUNCTION	0.000	3.842	0	06:10	0.000	67.696	PJ060	JUNCTION	2.304	16.336	0	09:01	14.663	936.264
P1-215a (STM)	JUNCTION	0.000	0.175	0	06:03	0.000	1.102	PJ067	JUNCTION	1.616	14.379	0	09:04	6.460	869.874
P1-217 (STM)	JUNCTION	0.000	3.473	0	06:17	0.000	64.418	PJ068	JUNCTION	0.000	14.291	0	09:04	0.000	863.519
P1-219 (STM)	JUNCTION	0.000	1.644	0	05:54	0.000	10.616	PJ069	JUNCTION	0.000	14.365	0	09:04	0.000	863.587
P1-219a (STM)	JUNCTION	0.000	0.252	0	06:00	0.000	1.888	PJ070	JUNCTION	1.778	39.166	0	10:37	6.587	899.465
P1-221 (STM)	JUNCTION	0.000	0.266	0	06:01	0.000	2.181	PJ072	JUNCTION	0.352	30.160	0	10:39	1.286	890.175
P1-221a (STM)	JUNCTION	0.000	3.680	0	06:17	0.000	66.596	PJ073	JUNCTION	1.775	15.289	0	08:49	7.897	854.172
P1-301 (STM)	JUNCTION	0.000	2.113	0	06:49	0.000	17.336	PJ074	JUNCTION	0.000	14.753	0	08:25	0.000	846.900
P1-301a (STM)	JUNCTION	0.000	2.197	0	06:49	0.000	9.129	PJ075	JUNCTION	0.000	14.766	0	08:19	0.000	847.312
P1-303 (STM)	JUNCTION	0.000	1.942	0	06:08	0.000	14.418	PJ076	JUNCTION	0.000	14.928	0	08:05	0.000	847.934
P1-305 (STM)	JUNCTION	0.000	1.966	0	06:08	0.000	14.424	PJ077	JUNCTION	0.000	5.670	0	07:00	0.000	213.698
P1-3															

# Kizell Lands - Fernbank 5618 Hazeldean Road

## PCSWMM Model Output SCS100-year 12-hour Carp River Ultimate

PJ083	JUNCTION	0.000	5.811	0	06:48	0.000	220.559	PJ208	JUNCTION	0.000	16.910	0	06:00	0.000	100.569
PJ085	JUNCTION	0.000	14.425	0	06:43	0.000	759.239	PJ209	JUNCTION	0.000	16.910	0	06:00	0.000	100.668
PJ086	JUNCTION	0.000	14.441	0	06:41	0.000	759.389	PJ210	JUNCTION	0.000	16.910	0	06:00	0.000	100.661
PJ087	JUNCTION	0.000	14.451	0	06:39	0.000	759.514	PJ211	JUNCTION	0.000	5.949	0	06:00	0.000	22.603
PJ088	JUNCTION	0.000	14.475	0	06:37	0.000	759.630	PJ212	JUNCTION	5.568	5.949	0	06:00	19.904	22.603
PJ089	JUNCTION	0.000	14.525	0	06:33	0.000	759.783	PJ213	JUNCTION	0.000	1.150	0	06:05	0.000	2.699
PJ090	JUNCTION	1.827	14.572	0	06:32	6.439	759.862	PJ214	JUNCTION	0.000	1.001	0	06:05	0.000	2.700
PJ091	JUNCTION	0.123	14.148	0	06:32	0.330	753.492	PJ215	JUNCTION	0.000	0.974	0	06:04	0.000	2.699
PJ092	JUNCTION	5.060	14.155	0	06:31	20.683	753.219	PJ216	JUNCTION	0.000	0.945	0	06:04	0.000	2.699
PJ093	JUNCTION	2.773	12.878	0	06:36	16.205	732.568	PJ217	JUNCTION	0.000	0.880	0	06:04	0.000	2.698
PJ094	JUNCTION	0.000	11.866	0	06:34	0.000	716.540	PJ218	JUNCTION	0.000	0.808	0	06:03	0.000	2.693
PJ095	JUNCTION	0.000	12.045	0	06:20	0.000	716.680	PJ219	JUNCTION	0.000	0.655	0	06:02	0.000	2.694
PJ096	JUNCTION	0.000	12.365	0	06:14	0.000	717.038	PJ220	JUNCTION	0.000	0.624	0	05:58	0.000	2.696
PJ097	JUNCTION	0.000	13.098	0	06:08	0.000	717.372	PJ221	JUNCTION	0.000	0.595	0	05:59	0.000	2.697
PJ098	JUNCTION	0.000	13.374	0	06:07	0.000	717.459	PJ222	JUNCTION	0.000	0.984	0	06:00	0.000	3.029
PJ099	JUNCTION	5.476	13.957	0	06:03	31.722	717.696	PJ223	JUNCTION	0.984	0.984	0	06:00	3.029	3.029
PJ102	JUNCTION	0.000	9.485	0	07:52	0.000	634.590	PJ224	JUNCTION	0.000	0.627	0	05:59	0.000	0.387
PJ103	JUNCTION	0.000	9.549	0	07:51	0.000	634.634	PJ225	JUNCTION	0.000	0.636	0	05:59	0.000	0.341
PJ104	JUNCTION	0.000	9.660	0	07:48	0.000	635.048	PJ226	JUNCTION	0.000	0.625	0	05:59	0.000	0.333
PJ105	JUNCTION	0.000	10.032	0	08:04	0.000	639.966	PJ227	JUNCTION	0.000	11.514	0	06:01	0.000	78.053
PJ106	JUNCTION	0.000	1.538	0	06:56	0.000	36.675	PJ228	JUNCTION	0.000	11.246	0	06:01	0.000	78.071
PJ107	JUNCTION	0.000	4.248	0	06:04	0.000	21.424	PJ229	JUNCTION	0.000	11.149	0	06:00	0.000	78.065
PJ108	JUNCTION	0.000	4.290	0	06:02	0.000	21.420	PJ230	JUNCTION	6.230	11.303	0	06:00	21.483	78.076
PJ109	JUNCTION	0.000	5.002	0	05:59	0.000	21.487	PJ231	JUNCTION	0.000	5.466	0	06:03	0.000	56.586
PJ110	JUNCTION	5.172	5.172	0	06:00	21.416	21.415	PJ232	JUNCTION	0.000	5.332	0	06:03	0.000	56.587
PJ111	JUNCTION	0.000	1.579	0	06:57	0.000	36.879	PJ233	JUNCTION	0.000	5.257	0	06:03	0.000	56.588
PJ112	JUNCTION	0.000	9.215	0	06:07	0.000	618.089	PJ234	JUNCTION	0.000	3.263	0	06:00	0.000	36.997
PJ113	JUNCTION	0.000	9.239	0	06:06	0.000	618.175	PJ235	JUNCTION	0.000	3.313	0	06:00	0.000	36.991
PJ114	JUNCTION	9.233	12.025	0	06:00	43.790	619.405	PJ236	JUNCTION	0.237	3.346	0	06:00	1.093	36.991
PJ115	JUNCTION	2.856	2.856	0	06:00	13.213	13.214	PJ237	JUNCTION	0.000	3.136	0	06:00	0.000	35.898
PJ116	JUNCTION	0.000	10.066	0	08:02	0.000	608.086	PJ238	JUNCTION	0.000	3.144	0	05:59	0.000	35.898
PJ117	JUNCTION	9.290	10.100	0	07:58	40.013	608.711	PJ239	JUNCTION	0.000	9.171	0	06:00	0.000	41.459
PJ118	JUNCTION	0.000	9.030	0	07:55	0.000	569.155	PJ240	JUNCTION	0.000	9.170	0	06:00	0.000	34.612
PJ119	JUNCTION	0.000	9.221	0	07:40	0.000	569.219	PJ241	JUNCTION	9.171	9.171	0	06:00	34.612	34.611
PJ120	JUNCTION	0.000	9.414	0	07:31	0.000	570.112	PJ242	JUNCTION	0.000	2.036	0	06:01	0.000	19.597
PJ121	JUNCTION	0.000	10.068	0	07:13	0.000	571.265	PJ243	JUNCTION	0.000	2.049	0	05:56	0.000	19.598
PJ123	JUNCTION	2.423	6.288	0	15:28	9.149	562.934	PJ244	JUNCTION	0.000	2.045	0	06:00	0.000	19.595
PJ125	JUNCTION	0.000	9.986	0	06:57	0.000	562.152	PJ248	JUNCTION	0.000	10.083	0	06:01	0.000	23.185
PJ126	JUNCTION	0.000	10.039	0	06:51	0.000	562.123	PJ250	JUNCTION	0.000	9.104	0	06:01	0.000	16.149
PJ127	JUNCTION	0.000	10.059	0	06:47	0.000	562.233	PJ253	JUNCTION	0.000	11.578	0	06:00	0.000	10.656
PJ128	JUNCTION	4.400	10.091	0	06:43	23.248	562.266	PJ254	JUNCTION	0.000	11.576	0	06:00	0.000	10.639
PJ129	JUNCTION	0.000	5.985	0	16:11	0.000	521.075	PJ255	JUNCTION	0.000	6.027	0	06:00	0.000	12.378
PJ130	JUNCTION	0.000	5.985	0	16:08	0.000	521.106	PJ256	JUNCTION	1.167	7.194	0	06:00	3.701	13.796
PJ131	JUNCTION	0.000	5.985	0	16:06	0.000	521.240	PJ257	JUNCTION	0.000	7.195	0	06:00	0.000	11.391
PJ132	JUNCTION	0.000	5.986	0	15:59	0.000	521.472	PJ258	JUNCTION	0.000	7.196	0	06:00	0.000	11.163
PJ133	JUNCTION	0.000	5.986	0	15:56	0.000	521.569	PJ259	JUNCTION	1.048	8.244	0	06:00	3.165	12.417
PJ134	JUNCTION	0.462	5.986	0	15:56	1.584	521.619	PJ260	JUNCTION	1.363	9.604	0	06:00	4.364	12.450
PJ135	JUNCTION	1.342	5.987	0	15:43	20.070	520.753	PJ261	JUNCTION	0.000	9.598	0	06:00	0.000	9.953
PJ136	JUNCTION	0.000	5.885	0	15:49	0.000	501.080	PJ262	JUNCTION	0.000	9.578	0	06:00	0.000	9.951
PJ137	JUNCTION	0.000	5.886	0	15:41	0.000	501.588	PJ263	JUNCTION	0.539	10.129	0	06:00	2.605	12.521
PJ138	JUNCTION	1.697	5.886	0	15:34	11.697	501.744	CO001	OUTFALL	0.000	72.667	0	16:46	0.000	6977.578
PJ139	JUNCTION	0.000	5.850	0	15:38	0.000	490.604	CSto092	STORAGE	3.116	3.116	0	06:00	13.204	13.204
PJ140	JUNCTION	0.000	5.850	0	15:35	0.000	490.715	CSto097	STORAGE	0.000	10.676	0	06:00	0.000	49.862
PJ143	JUNCTION	1.526	4.513	0	09:52	13.772	264.053	CSto127	STORAGE	0.134	2.377	0	05:47	0.534	21.458
PJ144	JUNCTION	0.000	3.329	0	08:11	0.000	75.834	CSto129	STORAGE	5.391	5.391	0	06:00	18.295	18.295
PJ145	JUNCTION	4.665	4.665	0	06:00	74.527	74.527	CSto204	STORAGE	0.128	26.098	0	06:43	1.929	346.121
PJ146	JUNCTION	0.000	5.850	0	15:28	0.000	491.501	CSto205	STORAGE	8.945	8.945	0	06:00	50.717	50.716
PJ147	JUNCTION	0.000	5.850	0	15:23	0.000	491.785	CSto216	STORAGE	4.965	4.965	0	06:00	18.220	18.219
PJ148	JUNCTION	0.000	5.850	0	15:19	0.000	491.963	CSto257	STORAGE	4.828	4.828	0	06:00	18.623	18.677
PJ149	JUNCTION	0.000	5.864	0	14:45	0.000	496.993	CSto258	STORAGE	14.029	14.029	0	06:00	72.091	72.144
PJ151	JUNCTION	0.125	5.800	0	07:25	21.598	181.358	CSto267	STORAGE	14.846	14.846	0	06:00	59.388	59.404
PJ153	JUNCTION	0.000	5.701	0	15:14	0.000	477.649	CSto268_1	STORAGE	0.000	5.786	0	06:00	0.000	25.384
PJ154	JUNCTION	0.000	5.701	0	15:10	0.000	477.844	CSto268_2	STORAGE	5.783	5.783	0	06:00	25.350	25.349
PJ155	JUNCTION	0.000	5.701	0	15:06	0.000	477.986	CSto269	STORAGE	8.725	8.725	0	06:00	32.386	32.594
PJ156	JUNCTION	0.455	5.702	0	14:54	2.135	480.825	CSto270	STORAGE	0.000	13.295	0	06:00	0.000	75.124
PJ158	JUNCTION	16.177	16.177	0	06:00	126.401	126.399	CSto271	STORAGE	6.628	6.628	0	06:00	21.464	21.463
PJ159	JUNCTION	0.000	5.530	0	15:15	0.000	451.048	CSto272	STORAGE	4.378	4.378	0	06:00	16.522	16.523
PJ160	JUNCTION	0.000	5.535	0	14:55	0.000	451.991	CSto273	STORAGE	5.426	5.426	0	06:00	22.628	22.628
PJ161	JUNCTION	1.170	5.622	0	13:31	22.433	457.478	FJ049	STORAGE	11.217	12.054	0	06:00	68.708	122.506
PJ163	JUNCTION	0.000	5.732	0	11:04	0.000	382.355	FJ088	STORAGE	0.247	4.327	0	06:00	5.148	132.990
PJ165	JUNCTION	3.906	3.906	0	06:30	74.042	74.042	FSto022	STORAGE	6.985	6.985	0	06:00	21.741	21.743
PJ166	JUNCTION	2.856	2.856	0	06:00	62.310	62.309	FSto053	STORAGE	10.585	10.585	0	06:00	59.181	64.304
PJ168	JUNCTION	1.626	1.626	0	06:00	18.765	18.765	FSto066	STORAGE	11.635	11.635	0	06:00	44.533	44.532
PJ169	JUNCTION	1.787	1.787	0	06:00	27.547	27.547	FSto101	STORAGE	3.099	3.099	0	06:00	10.974	120.008
PJ170	JUNCTION	4.643	4.643	0	06:00	30.202	30.202	FSto103	STORAGE	7.332	12.027	0	06:00	36.478	134.278
PJ171	JUNCTION	0.888	3.337	0	07:50	24.088	99.519	FSto105	STORAGE	4.797	4.797	0	06:00	42.151	42.151
PJ172	JUNCTION	4.339	4.896	0	06:00	21.960	286.499	FSto106_1	STORAGE	0.187	4.940	0	06:04	1.405	55.687
PJ173	JUNCTION	1.391	1.391	0	06:00	4.647	4.646	FSto108	STORAGE	10.602	10.602	0	06:00	45.267	56.867
PJ174	JUNCTION	0.000	1.784	0	07:39	0.000	67.902	FSto200	STORAGE	1.740	1.740	0	06:00	5.055	5.055
PJ200	JUNCTION	0.000	16.754	0	06:29	0.000	187.900	FSto201	STORAGE	0.680	0.680	0	06:00	2.106	2.106
PJ203	JUNCTION	0.000	22.303	0	06:00										

# Kizell Lands - Fernbank 5618 Hazeldean Road

## PCSWMM Model Output SCS100-year 12-hour Carp River Ultimate

FSto210	STORAGE	8.679	8.679	0	06:00	30.534	30.536
FSto212	STORAGE	0.000	0.000	0	00:00	0.000	0.000
FSto213	STORAGE	0.000	0.000	0	00:00	0.000	0.000
FSto214	STORAGE	3.446	3.446	0	06:00	11.776	11.776
GR_SWMF	STORAGE	8.746	8.746	0	06:00	46.940	46.939
IBER_IND_SWMF	STORAGE	1.409	1.409	0	06:00	5.319	5.319
P1-01-02S	STORAGE	0.487	0.487	0	06:00	2.082	2.082
P1-03aS	STORAGE	1.170	1.170	0	06:00	4.548	4.548
P1-03bS	STORAGE	0.589	0.589	0	06:00	2.100	2.100
P1-04aS	STORAGE	0.637	0.637	0	06:00	2.181	2.181
P1-04bS	STORAGE	0.573	0.573	0	06:00	1.889	1.889
P1-05S	STORAGE	0.236	0.236	0	06:00	1.102	1.102
P1-06S	STORAGE	0.718	0.718	0	06:00	2.699	2.699
P1-07S	STORAGE	0.418	0.418	0	06:00	1.560	1.560
P1-08S	STORAGE	1.952	1.952	0	06:00	7.792	7.792
P1-09S	STORAGE	0.400	0.400	0	06:00	1.506	1.506
P1-10S	STORAGE	0.479	0.479	0	06:00	1.564	1.564
P1-11S	STORAGE	1.073	1.073	0	06:00	3.879	3.879
P1-12S	STORAGE	0.466	0.466	0	06:00	1.804	1.804
P1-13S	STORAGE	1.434	1.434	0	06:00	6.273	6.273
P1-14S	STORAGE	0.639	0.639	0	06:00	2.473	2.473
P1-15S	STORAGE	0.445	0.445	0	06:00	1.887	1.887
P1-16S	STORAGE	1.269	1.269	0	06:00	4.629	4.629
P1-17S	STORAGE	0.522	0.522	0	06:00	2.247	2.246
P1-18S	STORAGE	0.756	0.756	0	06:00	2.632	2.632
P1-19S	STORAGE	0.314	0.314	0	06:00	1.144	1.144
P1-20S	STORAGE	0.950	0.950	0	06:00	3.762	3.762
POND	STORAGE	1.033	9.205	0	06:13	3.688	142.550
PSto061	STORAGE	9.633	9.933	0	06:00	49.619	51.913
PSto062	STORAGE	0.752	0.752	0	06:00	2.297	2.297
PSto071	STORAGE	0.845	0.845	0	06:00	3.057	3.057
PSto084	STORAGE	0.266	14.451	0	06:45	0.769	759.813
PSto100	STORAGE	8.265	9.010	0	06:00	46.625	68.801
PSto101	STORAGE	3.050	3.050	0	06:00	21.346	22.210
PSto122	STORAGE	2.715	2.715	0	06:00	9.219	9.307
PSto124	STORAGE	5.834	5.834	0	06:00	32.514	33.998
PSto201	STORAGE	1.041	30.997	0	06:00	2.937	211.363
PSto202	STORAGE	19.356	19.356	0	06:00	90.161	90.159
PSto245	STORAGE	0.000	2.521	0	05:51	0.000	19.595
PSto246	STORAGE	0.668	3.655	0	05:51	3.273	19.586
PSto247	STORAGE	0.000	3.443	0	05:51	0.000	16.297
PSto249	STORAGE	0.447	9.044	0	06:01	2.187	17.944
PSto251	STORAGE	0.000	9.104	0	06:01	0.000	16.050
PSto252	STORAGE	2.794	11.585	0	06:00	12.093	19.421

P1-219A (STM)	JUNCTION	0.49	0.303	0.585
P1-221 (STM)	JUNCTION	0.69	0.410	0.558
P1-221a (STM)	JUNCTION	0.71	0.453	0.901
P1-303 (STM)	JUNCTION	2.15	0.230	1.990
P1-305 (STM)	JUNCTION	1.51	0.158	2.040
P1-349 (STM)	JUNCTION	0.62	0.423	1.147
P1-351 (STM)	JUNCTION	0.59	0.623	1.025
P1-EX. 501 (STM)	JUNCTION	0.89	1.353	0.135
P1-EX. 502 (STM)	JUNCTION	0.68	1.970	0.518
P1-EX. 503 (STM)	JUNCTION	0.61	0.912	0.596
P1-EX. 504 (STM)	JUNCTION	0.58	0.556	0.932
PJ109	JUNCTION	0.22	1.187	2.069
PJ158	JUNCTION	0.42	0.039	2.091
PJ203	JUNCTION	2.67	0.546	1.731
PJ204	JUNCTION	2.34	0.872	1.337
PJ205	JUNCTION	1.34	1.173	0.747
PJ206	JUNCTION	0.90	1.430	0.867
PJ207	JUNCTION	0.30	1.602	1.573
PJ208	JUNCTION	0.21	1.522	1.723
PJ209	JUNCTION	0.20	1.793	1.557
PJ210	JUNCTION	0.11	1.537	2.293
PJ211	JUNCTION	0.19	2.114	2.286
PJ212	JUNCTION	0.27	2.798	1.372
PJ213	JUNCTION	0.18	2.836	0.774
PJ214	JUNCTION	0.14	3.130	0.090
PJ215	JUNCTION	0.13	3.126	0.000
PJ216	JUNCTION	0.12	3.040	0.000
PJ217	JUNCTION	0.12	3.294	0.021
PJ218	JUNCTION	0.10	3.446	0.000
PJ219	JUNCTION	0.05	4.112	0.000
PJ220	JUNCTION	0.03	2.225	0.000
PJ221	JUNCTION	0.02	0.617	1.547
PJ223	JUNCTION	0.24	0.602	2.087
PJ227	JUNCTION	0.10	1.149	2.811
PJ239	JUNCTION	1.42	2.892	4.178
PJ240	JUNCTION	1.40	3.140	3.697
PJ241	JUNCTION	1.36	3.331	3.358
PJ248	JUNCTION	0.14	0.316	2.777
PJ250	JUNCTION	0.02	0.023	2.771
PJ255	JUNCTION	1.38	2.804	3.945
PJ256	JUNCTION	1.02	2.052	6.558
PJ257	JUNCTION	0.72	1.538	8.206
PJ258	JUNCTION	0.32	0.994	8.756
PJ259	JUNCTION	0.25	0.801	8.668
CSto127	STORAGE	12.977	0.621	0.129
CSto129	STORAGE	0.53	0.039	0.461
CSto216	STORAGE	0.46	0.050	0.450
CSto269	STORAGE	0.18	0.079	0.121
CSto273	STORAGE	48.00	0.819	0.181
FSto053	STORAGE	48.00	4.667	0.333
FSto105	STORAGE	48.00	3.264	1.736
FSto200	STORAGE	48.00	0.806	0.194
FSto201	STORAGE	48.00	0.772	0.228
FSto202	STORAGE	48.00	0.717	0.283
FSto203	STORAGE	0.52	0.224	3.276
FSto204	STORAGE	1.33	0.894	2.906
FSto205	STORAGE	5.48	1.498	2.302
FSto206	STORAGE	0.16	0.003	3.797
FSto210	STORAGE	0.19	0.033	0.367
GR_SWMF	STORAGE	48.00	1.429	0.171
IBER_IND_SWMF	STORAGE	48.00	0.927	0.123
P1-01-02S	STORAGE	1.42	1.254	0.171
P1-03aS	STORAGE	1.15	1.307	0.183
P1-03bS	STORAGE	1.34	1.374	0.061
P1-04aS	STORAGE	1.52	1.357	0.073
P1-04bS	STORAGE	1.36	1.297	0.138
P1-05S	STORAGE	0.94	1.228	0.257
P1-06S	STORAGE	1.28	1.356	0.039
P1-07S	STORAGE	1.12	1.232	0.203
P1-08S	STORAGE	1.80	1.190	0.035
P1-09S	STORAGE	1.11	1.260	0.178
P1-10S	STORAGE	1.13	1.346	0.106
P1-11S	STORAGE	1.38	1.247	0.088
P1-12S	STORAGE	1.70	1.265	0.215
P1-13S	STORAGE	1.96	1.242	0.063
P1-14S	STORAGE	1.39	1.225	0.190
P1-15S	STORAGE	1.50	1.347	0.113
P1-16S	STORAGE	1.24	1.248	0.037
P1-17S	STORAGE	0.81	1.122	0.203
P1-18S	STORAGE	0.93	1.238	0.097
P1-19S	STORAGE	0.99	1.272	0.196
P1-20S	STORAGE	1.48	1.315	0.050
POND	STORAGE	16.94	1.166	0.555
PSto061	STORAGE	5.42	0.741	0.746
PSto202	STORAGE	1.89	0.688	1.302

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Node Surcharge Summary  
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Surcharging occurs when water rises above the top of the highest conduit.

Node	Type	Hours Surcharged	Max. Height Above Crown Meters	Min. Depth Below Rim Meters
CJ082	JUNCTION	0.17	3.754	0.000
CJ098	JUNCTION	5.92	0.128	1.222
CJ128	JUNCTION	0.75	0.119	0.181
CJ256	JUNCTION	0.01	0.034	0.766
CJ284	JUNCTION	0.43	0.359	0.341
CJ287	JUNCTION	8.79	1.216	0.819
CJ290	JUNCTION	38.09	2.384	0.000
CJ293	JUNCTION	0.02	0.062	2.918
CJ296	JUNCTION	1.09	0.853	3.627
FJ002	JUNCTION	14.69	0.447	0.599
FJ005	JUNCTION	3.97	0.176	1.042
FJ063	JUNCTION	4.26	0.154	1.341
FJ230	JUNCTION	2.68	0.104	0.976
FJ231	JUNCTION	9.83	0.172	1.068
FJ232	JUNCTION	14.25	0.280	1.340
P1-147 (STM)	JUNCTION	0.61	0.075	2.038
P1-153 (STM)	JUNCTION	0.77	0.174	2.119
P1-165 (STM)	JUNCTION	0.80	0.233	2.240
P1-169 (STM)	JUNCTION	0.87	0.302	2.271
P1-171 (STM)	JUNCTION	0.67	0.224	2.017
P1-173 (STM)	JUNCTION	0.26	0.138	2.435
P1-203 (STM)	JUNCTION	0.70	0.292	2.359
P1-205 (STM)	JUNCTION	0.66	0.302	2.619
P1-207 (STM)	JUNCTION	0.60	0.312	1.869
P1-209 (STM)	JUNCTION	0.46	0.717	1.591
P1-215 (STM)	JUNCTION	0.63	0.356	1.158
P1-215a (STM)	JUNCTION	0.37	0.329	1.544
P1-217 (STM)	JUNCTION	0.72	0.557	1.187
P1-219 (STM)	JUNCTION	0.54	0.371	1.220

# Kizell Lands - Fernbank 5618 Hazeldean Road

## PCSWMM Model Output SCS100-year 12-hour Carp River Ultimate

PSto245	STORAGE	0.93	1.287	2.987
PSto246	STORAGE	0.85	1.224	2.890
PSto247	STORAGE	0.69	1.131	2.810
PSto249	STORAGE	0.11	0.149	2.688

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Node Flooding Summary  
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Flooding refers to all water that overflows a node, whether it ponds or not.

Node	Hours Flooded	Maximum Rate CMS	Time of Max Occurrence days hr:min	Total Flood Volume 10 <sup>6</sup> ltr	Maximum Ponded Depth Meters
CJ082	0.07	1.439	0 05:59	0.080	6.00
CJ290	1.59	2.671	0 09:13	2.983	4.63
PJ216	0.01	0.053	0 05:57	0.000	3.94
PJ218	0.01	0.353	0 05:57	0.000	4.30
PJ219	0.01	0.328	0 05:58	0.001	5.00

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Storage Volume Summary  
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Storage Unit	Average Volume 1000 m3	Avg Pcnt Full	E&I Pcnt Loss	Maximum Volume 1000 m3	Max Pcnt Full	Time of Max Occurrence days hr:min	Maximum Outflow CMS
CSto092	1.117	19	0	3.841	65	0 06:07	1.342
CSto097	16.418	29	0	28.830	51	0 10:05	0.839
CSto127	4.494	49	0	8.428	92	0 06:21	1.265
CSto129	0.048	1	0	1.672	42	0 06:13	3.256
CSto204	22.106	14	0	73.684	48	0 08:23	8.092
CSto205	19.069	28	0	37.292	54	0 15:06	1.209
CSto216	0.055	1	0	2.413	43	0 06:15	2.341
CSto257	2.231	7	0	7.651	23	0 06:24	1.459
CSto258	11.579	32	0	31.477	86	0 06:49	3.510
CSto267	9.726	25	0	19.892	50	0 06:08	8.892
CSto268_1	3.883	14	0	6.503	23	0 12:20	4.158
CSto268_2	0.162	13	0	1.206	100	0 05:51	5.786
CSto269	2.433	32	0	6.909	91	0 06:04	5.984
CSto270	11.889	46	0	19.640	75	0 06:05	11.918
CSto271	0.015	2	0	0.751	80	0 06:01	5.900
CSto272	2.757	22	0	6.793	55	0 06:20	1.746
CSto273	0.266	5	0	3.912	68	0 06:14	3.962
FJ049	29.085	32	0	42.692	47	0 07:04	4.651
FJ088	4.198	35	0	10.148	84	0 14:29	2.249
FSto022	5.221	34	0	14.375	94	0 08:02	0.390
FSto053	48.411	77	0	57.562	92	0 16:55	0.126
FSto066	5.902	12	0	19.881	40	0 08:35	0.825
FSto101	3.227	44	0	6.413	87	0 10:01	2.223
FSto103	30.895	50	0	50.090	81	0 10:35	2.097
FSto105	31.500	50	0	37.967	61	0 19:00	0.056
FSto106_1	13.133	13	0	21.249	22	0 15:17	1.778
FSto108	16.145	41	0	25.209	65	0 06:23	5.100
FSto200	0.051	3	0	1.409	81	0 06:22	0.378
FSto201	0.016	3	0	0.490	77	0 06:14	0.185
FSto202	0.016	2	0	0.671	72	0 06:10	0.365
FSto203	1.242	5	0	8.621	34	0 06:13	5.140
FSto204	0.117	2	0	2.094	42	0 06:21	0.850
FSto205	2.450	10	0	13.492	54	0 07:12	1.250
FSto206	0.109	2	0	1.203	24	0 06:40	0.210
FSto210	1.193	11	0	8.109	78	0 06:10	4.500
FSto212	0.000	0	0	0.000	0	0 00:00	0.000
FSto213	0.000	0	0	0.000	0	0 00:00	0.000
FSto214	2.256	23	0	7.059	71	0 08:00	0.240
GR_SWMF	4.326	22	0	16.804	87	0 07:01	1.826
IBER_IND_SWMF	0.217	10	0	1.850	84	0 06:36	0.325
P1-01-02S	0.002	0	0	0.160	26	0 06:16	0.269
P1-03aS	0.001	0	0	0.116	15	0 06:03	0.895
P1-03bS	0.003	1	0	0.239	68	0 06:09	0.262
P1-04aS	0.006	1	0	0.302	63	0 06:16	0.266
P1-04bS	0.004	1	0	0.245	37	0 06:13	0.252
P1-05S	0.000	0	0	0.025	7	0 06:03	0.175
P1-06S	0.004	1	0	0.276	79	0 06:08	0.333
P1-07S	0.001	0	0	0.099	18	0 06:09	0.250
P1-08S	0.027	2	0	1.131	81	0 06:19	0.710
P1-09S	0.001	0	0	0.085	24	0 06:08	0.248
P1-10S	0.002	1	0	0.171	49	0 06:06	0.232
P1-11S	0.008	1	0	0.490	56	0 06:12	0.444

P1-12S	0.004	0	0	0.223	15	0 06:13	0.184
P1-13S	0.023	2	0	0.881	67	0 06:23	0.512
P1-14S	0.004	0	0	0.258	21	0 06:09	0.283
P1-15S	0.002	1	0	0.161	46	0 06:11	0.219
P1-16S	0.008	1	0	0.525	80	0 06:09	0.562
P1-17S	0.000	0	0	0.021	18	0 06:03	0.446
P1-18S	0.002	0	0	0.184	53	0 06:07	0.443
P1-19S	0.000	0	0	0.059	20	0 06:04	0.202
P1-20S	0.008	1	0	0.450	73	0 06:13	0.389
POND	35.367	50	0	56.871	80	0 07:23	4.895
PSto061	3.408	12	0	15.538	57	0 07:20	1.844
PSto062	0.036	0	0	0.584	2	0 06:04	0.342
PSto071	0.005	0	0	0.053	0	0 06:01	0.756
PSto084	0.731	36	0	2.020	100	0 06:17	14.429
PSto100	2.439	6	0	9.342	22	0 07:39	2.214
PSto101	2.273	1	0	10.553	3	0 08:48	0.860
PSto122	0.617	3	0	1.301	7	0 07:45	2.557
PSto124	4.948	24	0	10.107	50	0 06:31	1.967
PSto201	39.018	44	0	68.363	78	0 06:29	16.754
PSto202	0.297	3	0	10.658	100	0 06:16	10.435
PSto245	0.003	10	0	0.015	53	0 06:01	2.045
PSto246	0.004	8	0	0.022	52	0 06:01	2.521
PSto247	0.003	8	0	0.022	52	0 06:00	3.145
PSto249	0.002	4	0	0.022	49	0 06:01	9.104
PSto251	0.004	8	0	0.022	48	0 06:00	9.092
PSto252	0.004	8	0	0.020	43	0 06:00	11.578

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Outfall Loading Summary  
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Outfall Node	Flow Freq. Pcnt.	Avg. Flow CMS	Max. Flow CMS	Total Volume 10 <sup>6</sup> ltr
CO001	100.00	47.272	72.667	6977.578
System	100.00	47.272	72.667	6977.578

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Link Flow Summary  
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Link	Type	Maximum  Flow  CMS	Time of Max Occurrence days hr:min	Maximum  Veloc  m/sec	Max/ Full Flow	Max/ Full Depth
{STM}.P1 101-POND	CONDUIT	3.715	0 06:17	2.09	0.16	1.00
{STM}.P1 105-103	CONDUIT	7.018	0 06:17	1.49	0.62	0.99
{STM}.P1 107-105	CONDUIT	1.005	0 06:33	1.06	0.26	0.97
{STM}.P1 109-107	CONDUIT	0.840	0 06:47	1.29	0.48	0.91
{STM}.P1 111-109	CONDUIT	0.614	0 06:48	0.97	0.29	0.86
{STM}.P1 113-111	CONDUIT	0.544	0 06:49	1.48	0.33	0.69
{STM}.P1 147-105	CONDUIT	6.130	0 06:13	1.66	0.66	1.00
{STM}.P1 153-147	CONDUIT	5.977	0 06:13	1.59	0.82	1.00
{STM}.P1 165-153	CONDUIT	5.534	0 06:13	1.46	0.75	1.00
{STM}.P1 169-165	CONDUIT	5.299	0 06:13	1.40	0.70	1.00
{STM}.P1 171-169	CONDUIT	5.300	0 06:13	1.40	0.70	1.00
{STM}.P1 173-171	CONDUIT	0.737	0 06:36	1.18	0.23	1.00
{STM}.P1 203-171	CONDUIT	4.449	0 06:10	1.69	0.84	1.00
{STM}.P1 205-203	CONDUIT	4.198	0 06:10	1.60	0.78	1.00
{STM}.P1 207-205	CONDUIT	4.181	0 06:10	1.61	0.78	1.00
{STM}.P1 209-207	CONDUIT	0.340	0 06:10	1.02	0.22	1.00
{STM}.P1 215-207	CONDUIT	3.844	0 06:09	1.77	0.66	1.00
{STM}.P1 217-215	CONDUIT	3.474	0 06:17	1.57	0.73	1.00
{STM}.P1 219A-219	CONDUIT	0.257	0 06:49	1.17	0.19	1.00
{STM}.P1 221-221A	CONDUIT	0.262	0 06:56	0.86	0.12	1.00
{STM}.P1 301-POND	CONDUIT	0.737	0 05:55	1.03	0.10	1.00
{STM}.P1 305-303	CONDUIT	1.942	0 06:08	1.07	0.55	1.00
{STM}.P1 307-305	CONDUIT	0.392	0 06:30	1.02	0.29	1.00
{STM}.P1 309-307	CONDUIT	0.388	0 06:31	1.53	0.59	0.94
{STM}.P1 311-309	CONDUIT	0.000	0 00:00	0.00	0.00	0.50
{STM}.P1 317-305	CONDUIT	1.595	0 06:08	1.34	0.75	0.99
{STM}.P1 319-317	CONDUIT	1.409	0 06:08	1.16	0.54	0.92
{STM}.P1 321-319	CONDUIT	1.420	0 06:07	1.23	0.65	0.82
{STM}.P1 323-321	CONDUIT	0.444	0 06:11	1.05	0.31	0.79
{STM}.P1 327-321	CONDUIT	0.989	0 06:07	1.38	0.49	0.81
{STM}.P1 331-329	CONDUIT	0.000	0 00:00	0.00	0.00	0.08
{STM}.P1 333-327	CONDUIT	0.000	0 00:00	0.00	0.00	0.43
{STM}.P1 337-327	CONDUIT	0.562	0 06:09	1.75	0.51	0.67
{STM}.P1 349-351	CONDUIT	0.279	0 06:47	1.31	0.64	1.00

**Kizell Lands - Fernbank 5618 Hazeldean Road**  
**PCSWMM Model Output SCS100-year 12-hour Carp River Ultimate**



{STM}.P1 501-502	CONDUIT	2.363	0	06:22	1.60	0.98	1.00	CC074	CHANNEL	43.008	0	11:10	0.17	0.03	0.32
{STM}.P1 502-503	CONDUIT	2.363	0	06:22	1.66	0.90	1.00	CC075	CHANNEL	43.125	0	11:09	0.21	0.02	0.30
{STM}.P1 503-504	CONDUIT	2.363	0	06:22	2.05	0.95	1.00	CC076	CHANNEL	43.295	0	11:07	0.14	0.61	0.49
1	CONDUIT	5.786	0	06:00	3.23	0.05	0.18	CC077	CHANNEL	11.735	0	06:01	1.76	0.35	0.36
104A05.1.1	CONDUIT	2.049	0	05:56	2.12	0.71	0.52	CC078	CHANNEL	43.506	0	11:04	0.17	0.07	0.49
CC002	CHANNEL	72.667	0	16:46	0.24	0.02	0.72	CC079	CHANNEL	43.952	0	11:00	0.15	0.82	0.49
CC003	CHANNEL	72.667	0	16:46	0.25	0.11	0.71	CC080	CONDUIT	10.716	0	05:59	2.69	1.02	1.00
CC004	CHANNEL	65.070	0	17:31	0.25	0.10	0.71	CC081	CHANNEL	44.360	0	10:55	0.20	0.04	0.49
CC005_1	CONDUIT	65.069	0	17:31	0.82	0.84	0.95	CC082	CHANNEL	44.445	0	10:55	0.36	0.04	0.49
CC005_2	CHANNEL	0.000	0	00:00	0.00	0.00	0.00	CC083	CHANNEL	44.564	0	10:51	0.98	0.24	0.43
CC006	CHANNEL	63.820	0	17:42	0.16	0.05	0.60	CC084	CHANNEL	44.588	0	10:50	0.73	0.03	0.43
CC007	CHANNEL	63.813	0	17:41	0.12	0.04	0.52	CC085	CONDUIT	16.929	0	06:02	0.64	0.09	0.84
CC008	CHANNEL	63.279	0	17:44	0.12	0.03	0.59	CC086	CONDUIT	9.547	0	06:07	0.95	0.24	0.77
CC009	CHANNEL	63.271	0	17:42	0.13	0.02	0.53	CC087	CONDUIT	20.704	0	12:01	0.70	0.08	0.72
CC010	CHANNEL	63.265	0	17:40	0.16	0.04	0.54	CC088	CONDUIT	12.596	0	12:00	1.06	0.41	0.84
CC011	CHANNEL	63.260	0	17:38	0.18	0.04	0.59	CC089	CHANNEL	44.642	0	10:50	1.22	0.72	0.49
CC012	CHANNEL	63.257	0	17:35	0.20	0.05	0.61	CC094	CHANNEL	0.837	0	10:06	0.69	0.02	0.14
CC013_1	CONDUIT	8.713	0	17:33	0.96	0.93	0.81	CC095	CONDUIT	0.838	0	10:05	1.04	0.46	0.70
CC013_2	CONDUIT	46.995	0	17:34	1.43	1.35	0.82	CC096	CONDUIT	0.839	0	10:05	1.43	0.28	0.53
CC013_3	CONDUIT	7.547	0	17:33	0.88	0.77	0.76	CC098	CONDUIT	10.676	0	06:00	5.04	1.66	1.00
CC013_4	CHANNEL	0.000	0	00:00	0.00	0.00	0.00	CC100	CHANNEL	44.444	0	10:50	0.24	0.13	0.49
CC014	CHANNEL	60.461	0	17:50	0.21	0.02	0.51	CC101	CONDUIT	44.647	0	10:48	1.43	0.14	0.52
CC015	CHANNEL	58.616	0	17:59	0.17	0.04	0.55	CC102	CONDUIT	44.919	0	10:45	1.44	0.47	0.65
CC016	CHANNEL	58.598	0	17:54	0.20	0.04	0.54	CC104	CHANNEL	44.657	0	10:48	0.23	0.34	0.50
CC017	CHANNEL	58.587	0	17:51	0.22	0.04	0.54	CC105	CHANNEL	44.726	0	10:47	0.46	0.19	0.50
CC018	CHANNEL	58.580	0	17:47	0.26	0.04	0.54	CC106	CHANNEL	44.851	0	10:46	0.18	0.73	0.51
CC019	CHANNEL	58.577	0	17:43	0.31	0.04	0.53	CC107	CHANNEL	44.929	0	10:45	0.28	0.13	0.53
CC020	CHANNEL	57.395	0	17:46	0.26	0.04	0.53	CC108	CHANNEL	44.937	0	10:43	0.28	0.06	0.52
CC021	CHANNEL	57.394	0	17:38	0.23	0.04	0.53	CC109	CHANNEL	32.803	0	11:29	0.22	0.62	0.53
CC022	CHANNEL	57.404	0	17:30	0.20	0.08	0.74	CC110	CHANNEL	32.816	0	11:29	0.18	0.03	0.53
CC023	CHANNEL	57.444	0	17:17	0.15	0.38	0.77	CC112	CHANNEL	32.708	0	11:29	0.17	0.10	0.52
CC024	CHANNEL	57.517	0	17:03	0.13	0.29	0.77	CC113	CHANNEL	32.717	0	11:29	0.26	0.13	0.52
CC025	CHANNEL	57.607	0	16:51	0.12	0.25	0.74	CC114	CHANNEL	32.728	0	11:29	0.22	0.13	0.52
CC026	CHANNEL	57.725	0	16:38	0.11	0.21	0.70	CC115	CHANNEL	32.740	0	11:29	0.36	0.50	0.52
CC027	CHANNEL	57.873	0	16:26	0.11	0.17	0.67	CC117_1	CONDUIT	32.448	0	11:27	1.09	0.36	0.66
CC028	CHANNEL	58.052	0	16:13	0.10	0.82	0.64	CC117_2	CHANNEL	0.000	0	00:00	0.00	0.00	0.00
CC029	CHANNEL	57.043	0	16:05	0.10	0.07	0.78	CC118	CHANNEL	32.744	0	11:29	0.20	0.11	0.52
CC030	CHANNEL	57.373	0	15:47	0.11	0.08	0.77	CC119	CHANNEL	32.454	0	11:27	0.76	0.20	0.69
CC031	CHANNEL	57.296	0	15:35	0.12	0.08	0.76	CC120_1	CONDUIT	32.459	0	11:27	1.09	0.43	0.72
CC032_1	CONDUIT	18.391	0	15:27	2.02	1.79	1.00	CC120_2	CHANNEL	0.000	0	00:00	0.00	0.00	0.00
CC032_2	CONDUIT	21.829	0	15:27	2.03	2.04	1.00	CC121	CHANNEL	32.757	0	11:29	0.20	0.10	0.52
CC032_3	CONDUIT	17.273	0	15:27	2.01	4.80	1.00	CC123	CHANNEL	32.774	0	11:28	0.26	0.13	0.52
CC032_4	CHANNEL	0.000	0	00:00	0.00	0.00	0.00	CC124	CHANNEL	32.784	0	11:28	0.39	0.10	0.52
CC033	CHANNEL	58.105	0	13:48	0.11	0.07	0.80	CC125	CHANNEL	32.791	0	11:28	0.62	0.09	0.52
CC034	CHANNEL	57.778	0	15:09	0.11	0.09	0.81	CC126	CONDUIT	0.070	0	06:09	0.04	0.00	0.32
CC035	CHANNEL	57.130	0	14:49	0.12	0.10	0.80	CC127	CONDUIT	0.076	0	06:14	1.55	1.11	1.00
CC036	CHANNEL	57.450	0	14:37	0.14	0.09	0.78	CC127_1	CHANNEL	32.798	0	11:28	0.49	0.12	0.52
CC037	CHANNEL	57.556	0	14:17	0.16	0.15	0.79	CC128_1	CONDUIT	1.549	0	06:02	1.37	0.21	1.00
CC038	CHANNEL	40.063	0	14:35	0.10	0.13	0.77	CC129	CHANNEL	32.803	0	11:28	0.21	0.10	0.52
CC039	CHANNEL	40.882	0	14:15	0.09	0.11	0.78	CC129_1	CONDUIT	2.373	0	05:48	2.10	1.15	1.00
CC040	CHANNEL	41.310	0	14:00	0.09	0.21	0.78	CC129_2	CONDUIT	1.158	0	06:04	0.77	1.07	1.00
CC041	CHANNEL	40.880	0	13:59	0.10	0.04	0.67	CC130	CHANNEL	32.613	0	11:28	0.20	0.10	0.67
CC042	CHANNEL	41.499	0	13:56	0.12	0.03	0.61	CC131	CHANNEL	32.621	0	11:28	0.19	0.38	0.67
CC043	CHANNEL	41.988	0	13:50	0.11	0.02	0.59	CC132	CHANNEL	32.631	0	11:28	0.22	0.08	0.67
CC044	CHANNEL	42.148	0	13:50	0.14	0.02	0.49	CC133	CHANNEL	32.645	0	11:28	0.26	0.25	0.67
CC045	CHANNEL	42.670	0	13:46	0.23	0.03	0.45	CC134	CHANNEL	32.653	0	11:28	0.37	0.39	0.67
CC046	CHANNEL	43.210	0	13:43	0.31	0.07	0.48	CC135	CHANNEL	32.502	0	11:28	0.88	0.33	0.67
CC047	CHANNEL	43.589	0	13:42	0.29	0.08	0.46	CC136	CHANNEL	32.505	0	11:28	0.74	0.13	0.67
CC048	CHANNEL	43.854	0	13:37	0.24	0.31	0.76	CC137	CHANNEL	32.450	0	11:27	0.68	1.09	0.69
CC049	CHANNEL	43.985	0	13:32	0.24	0.32	0.75	CC139	CHANNEL	32.460	0	11:27	0.75	0.14	0.71
CC050	CHANNEL	43.996	0	13:31	0.16	0.02	0.51	CC140	CHANNEL	32.467	0	11:27	0.29	0.18	0.62
CC050_1	CONDUIT	43.996	0	13:32	1.91	1.49	0.97	CC141	CONDUIT	6.264	0	13:22	0.68	0.17	0.72
CC050_2	CHANNEL	0.000	0	00:00	0.00	0.00	0.00	CC142	CHANNEL	32.513	0	11:26	0.34	0.28	0.68
CC052	CHANNEL	43.391	0	13:33	0.18	0.09	0.51	CC143	CHANNEL	32.534	0	11:26	0.39	1.37	0.72
CC053	CHANNEL	43.392	0	13:29	0.12	0.03	0.51	CC144	CHANNEL	2.044	0	06:19	1.10	0.01	0.28
CC054	CHANNEL	43.408	0	13:20	0.10	0.03	0.51	CC145	CONDUIT	2.277	0	06:21	4.00	1.57	1.00
CC055	CHANNEL	43.464	0	13:12	0.09	0.06	0.51	CC146	CHANNEL	32.204	0	11:25	0.43	0.12	0.63
CC056	CHANNEL	43.089	0	13:05	0.10	0.03	0.51	CC147	CHANNEL	32.226	0	11:24	0.36	0.07	0.62
CC057	CHANNEL	43.144	0	12:57	0.09	0.02	0.51	CC148	CHANNEL	31.818	0	11:24	0.26	0.18	0.62
CC058	CHANNEL	43.236	0	12:53	0.13	0.07	0.50	CC149	CHANNEL	32.022	0	10:59	0.28	0.08	0.55
CC059	CHANNEL	43.305	0	12:45	0.14	0.03	0.51	CC150_1	CONDUIT	32.338	0	10:45	1.26	0.19	0.57
CC060	CHANNEL	43.420	0	12:39	0.12	0.54	0.51	CC150_2	CHANNEL	0.000	0	00:00	0.00	0.00	0.00
CC061	CHANNEL	43.548	0	12:32	0.12	0.03	0.51	CC151	CHANNEL	32.048	0	10:59	0.20	0.10	0.62
CC062	CHANNEL	43.678	0	12:22	0.15	0.04	0.50	CC152	CHANNEL	32.287	0	10:46	0.26	0.09	0.62
CC063	CHANNEL	44.053	0	12:08	0.18	0.05	0.47	CC153	CHANNEL	53.910	0	07:18	0.69	0.62	0.69
CC064	CHANNEL	44.220	0	12:06	0.29	0.12	0.47	CC154	CHANNEL	50.047	0	07:18	1.98	0.01	0.56
CC065	CHANNEL	44.293	0	12:01	0.18	0.02	0.46	CC155	CHANNEL	32.898	0	10:26	0.88	0.09	0.55
CC066	CHANNEL	43.111	0	12:08	0.14	0.03	0.50	CC156	CHANNEL	33.283	0	10:26	0.26	0.09	0.55
CC067	CHANNEL	43.165	0	12:07	0.14	0.03	0.44	CC157	CHANNEL	33.458	0	10:26	0.19	0.13	0.55
CC068	CHANNEL	43.402	0	12:05	0.13	0.11	0.50	CC158	CHANNEL	33.808	0	10:26	0.15	0.17	0.55
CC069	CHANNEL	43.624	0	11:51	0.16	0.09	0.50	CC159	CHANNEL	30.695	0	10:26	0.33	0.09	0.55
CC070	CHANNEL	43.659	0	11:21	0.27	0.02	0.39	CC160	CHANNEL	30.388	0	10:44	0.13	0.23	0.55
CC071	CHANNEL	43.749	0	11:16	0.15	0.04	0.50	CC161	CHANNEL	31.273	0	11:21	0.13	0.06	0.55
CC072	CHANNEL	43.842	0	11:14	0.17	0.03	0.38	CC162	CHANNEL	31.692	0	11:21	0.13	0.12	0.62
CC073	CHANNEL	43.524	0	11:14	0.20	0.09	0.49	CC163	CHANNEL						

**Kizell Lands - Fernbank 5618 Hazeldean Road**  
**PCSWMM Model Output SCS100-year 12-hour Carp River Ultimate**

CC164	CHANNEL	36.804	0	10:25	0.20	1.25	0.66	CC263	CONDUIT	20.562	0	06:07	2.53	0.39	0.60
CC165	CHANNEL	33.312	0	11:25	0.17	0.13	0.66	CC264	CHANNEL	18.626	0	06:05	2.28	0.14	0.45
CC166	CHANNEL	35.226	0	10:18	0.18	0.19	0.73	CC265_1	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
CC167	CHANNEL	35.481	0	10:48	0.21	0.61	0.73	CC265_2	CONDUIT	18.407	0	06:00	4.02	2.17	0.95
CC168	CHANNEL	31.251	0	11:09	0.57	0.52	0.89	CC266	CONDUIT	8.882	0	06:08	1.87	0.46	1.00
CC169	CHANNEL	17.205	0	13:08	0.26	0.08	0.54	CC267	CHANNEL	1.457	0	06:25	0.72	0.02	0.21
CC170	CHANNEL	17.515	0	14:43	0.23	0.18	0.54	CC271_1	CONDUIT	2.000	0	05:46	2.27	0.34	0.69
CC171	CHANNEL	17.286	0	13:08	0.16	0.40	0.62	CC271_2	CHANNEL	3.900	0	06:01	1.69	0.04	0.26
CC172	CHANNEL	16.491	0	13:29	0.16	0.21	0.62	CC282_1	CONDUIT	1.814	0	06:01	0.16	0.01	0.54
CC172_1	CONDUIT	13.444	0	13:01	0.54	0.13	0.59	CC282_2	CONDUIT	1.100	0	05:46	1.97	0.74	1.00
CC172_2	CHANNEL	0.000	0	00:00	0.00	0.00	0.00	CC283	CHANNEL	7.731	0	06:02	1.77	0.06	0.28
CC173	CHANNEL	16.040	0	13:08	0.14	0.06	0.55	CC284	CONDUIT	5.948	0	06:05	2.75	1.95	1.00
CC174	CHANNEL	16.424	0	13:29	0.19	0.05	0.55	CC285	CONDUIT	24.476	0	07:02	0.89	0.03	0.79
CC175	CHANNEL	13.563	0	13:01	0.38	0.15	0.72	CC286	CONDUIT	11.882	0	06:05	3.24	0.01	0.29
CC177	CHANNEL	13.351	0	12:23	0.28	0.04	0.57	CC287	CONDUIT	0.130	0	07:19	0.79	15.38	1.00
CC178	CHANNEL	17.695	0	07:03	0.64	0.05	0.48	CC289_1	CONDUIT	13.295	0	06:00	3.87	0.52	0.85
CC179	CHANNEL	20.903	0	07:03	0.38	0.09	0.54	CC289_2	CHANNEL	2.278	0	06:00	1.93	0.02	0.18
CC180	CHANNEL	14.904	0	08:44	0.37	0.25	0.54	CC290	CONDUIT	3.890	0	06:02	0.98	0.34	1.00
CC181	CHANNEL	13.461	0	07:13	0.24	0.05	0.54	CC291	CONDUIT	3.194	0	06:03	1.25	0.51	1.00
CC182	CHANNEL	12.793	0	09:21	0.28	0.28	0.88	CC292	CONDUIT	3.050	0	06:01	2.28	0.48	0.65
CC183	CHANNEL	13.061	0	09:29	0.29	0.16	0.72	CC293	CONDUIT	1.062	0	06:00	1.86	1.17	0.84
CC184	CHANNEL	13.213	0	09:18	0.31	0.16	0.72	CC294	CONDUIT	2.011	0	05:48	2.20	0.35	0.39
CC185	CHANNEL	13.345	0	09:20	0.28	0.20	0.72	CC296	CONDUIT	0.899	0	06:00	0.51	0.17	1.00
CC186	CHANNEL	13.336	0	09:20	0.28	0.15	0.72	CF239	CONDUIT	0.000	0	00:00	0.00	0.00	0.05
CC187	CHANNEL	12.533	0	09:22	0.20	0.03	0.47	FC002	CHANNEL	15.327	0	07:40	0.20	0.12	1.00
CC188	CHANNEL	12.741	0	09:19	0.09	0.02	0.47	FC003	CHANNEL	15.343	0	07:40	0.16	0.08	0.98
CC189	CHANNEL	12.920	0	09:15	0.07	0.02	0.47	FC004	CHANNEL	15.808	0	07:36	0.95	0.48	0.72
CC190	CHANNEL	14.239	0	09:25	0.08	0.03	0.46	FC005	CHANNEL	15.243	0	07:39	0.79	0.47	0.96
CC191	CHANNEL	14.050	0	09:21	0.08	0.03	0.52	FC006	CHANNEL	15.244	0	07:39	0.37	0.05	0.94
CC192	CHANNEL	14.227	0	09:21	0.11	0.26	0.52	FC007	CHANNEL	15.263	0	07:40	0.80	0.28	0.87
CC193	CHANNEL	13.332	0	09:19	0.08	0.07	0.52	FC008	CHANNEL	15.264	0	07:39	0.68	0.08	0.60
CC194	CHANNEL	12.701	0	09:23	0.16	0.06	0.52	FC009	CHANNEL	15.266	0	07:37	0.60	0.03	0.64
CC195	CHANNEL	12.674	0	09:23	0.16	0.18	0.52	FC010	CHANNEL	15.267	0	07:37	0.60	0.32	0.54
CC196	CHANNEL	12.812	0	09:16	0.37	0.04	0.52	FC011	CHANNEL	14.996	0	07:35	0.55	0.13	0.62
CC197	CHANNEL	12.896	0	09:17	0.07	0.06	0.51	FC012	CHANNEL	15.004	0	07:31	0.73	0.07	0.68
CC197_1	CHANNEL	13.058	0	09:15	0.08	0.04	0.40	FC013	CHANNEL	15.013	0	07:29	0.99	0.05	0.52
CC197_2	CHANNEL	13.203	0	09:04	0.08	0.53	0.51	FC014	CHANNEL	15.022	0	07:28	0.81	0.02	0.28
CC197_3	CHANNEL	13.466	0	09:04	0.09	0.04	0.40	FC015	CHANNEL	15.025	0	07:26	0.59	0.35	0.58
CC197_4	CHANNEL	13.615	0	08:59	0.09	0.02	0.40	FC016	CHANNEL	15.028	0	07:23	0.55	0.15	0.53
CC197_5	CHANNEL	13.712	0	08:59	0.58	0.04	0.39	FC017	CHANNEL	15.038	0	07:22	0.55	0.16	0.48
CC197_6	CHANNEL	13.810	0	08:58	0.61	0.05	0.39	FC018	CHANNEL	15.043	0	07:20	1.24	0.02	0.41
CC198	CHANNEL	13.934	0	08:49	0.58	0.06	0.39	FC019	CONDUIT	15.044	0	07:20	2.87	0.83	1.00
CC199_1	CONDUIT	13.996	0	08:50	1.34	0.07	0.34	FC020	CHANNEL	2.057	0	06:00	0.19	0.00	0.16
CC199_2	CHANNEL	0.000	0	00:00	0.00	0.00	0.00	FC021	CONDUIT	0.374	0	06:05	1.78	0.07	0.44
CC200	CHANNEL	14.331	0	08:40	0.29	0.02	0.42	FC023	CHANNEL	14.584	0	07:07	1.02	0.02	0.49
CC201	CHANNEL	14.235	0	08:30	0.64	0.05	0.43	FC024	CHANNEL	12.904	0	08:13	0.45	0.29	0.54
CC202	CHANNEL	7.910	0	09:23	0.32	0.02	0.50	FC025	CHANNEL	13.265	0	08:12	0.56	0.07	0.53
CC203	CHANNEL	8.049	0	07:58	0.26	0.03	0.57	FC026	CHANNEL	14.649	0	08:23	0.70	0.11	0.45
CC204_1	CONDUIT	4.051	0	07:41	3.58	1.25	1.00	FC027	CONDUIT	16.940	0	09:51	2.30	1.14	0.86
CC204_2	CONDUIT	4.041	0	07:41	3.57	1.98	1.00	FC028	CHANNEL	13.798	0	08:25	1.25	0.06	0.38
CC205	CHANNEL	25.407	0	06:44	1.43	0.09	0.33	FC029	CHANNEL	12.411	0	07:39	1.10	0.13	0.41
CC206_1	CONDUIT	22.576	0	06:30	1.31	0.53	0.80	FC030	CHANNEL	12.398	0	07:36	0.77	0.14	0.39
CC206_2	CONDUIT	0.000	0	00:00	0.00	0.00	0.00	FC031	CHANNEL	12.398	0	07:36	0.46	0.07	0.48
CC207	CHANNEL	21.587	0	06:28	0.79	0.27	0.63	FC032	CONDUIT	12.218	0	07:37	2.55	1.24	1.00
CC208	CHANNEL	21.887	0	06:25	0.83	0.30	0.61	FC033	CHANNEL	12.218	0	07:37	0.54	0.03	0.38
CC209_1	CONDUIT	0.000	0	00:00	0.00	0.00	0.00	FC034	CONDUIT	12.218	0	07:36	2.55	1.04	1.00
CC209_2	CONDUIT	23.674	0	06:17	2.62	0.67	0.92	FC035	CHANNEL	12.219	0	07:35	0.66	0.02	0.32
CC210	CHANNEL	24.090	0	06:17	1.77	0.12	0.36	FC036	CHANNEL	12.233	0	07:29	1.02	0.01	0.29
CC211	CHANNEL	24.254	0	06:15	1.91	0.33	0.53	FC037	CHANNEL	12.298	0	07:18	0.57	0.01	0.21
CC212_1	CONDUIT	0.000	0	00:00	0.00	0.00	0.00	FC038	CONDUIT	12.369	0	07:11	2.58	1.14	1.00
CC212_2	CONDUIT	23.516	0	06:14	1.73	0.53	1.00	FC039	CHANNEL	12.392	0	07:09	0.80	0.04	0.54
CC213	CHANNEL	24.175	0	06:10	1.62	0.05	0.38	FC040	CHANNEL	8.267	0	07:05	0.74	0.06	0.50
CC214_1	CONDUIT	2.892	0	06:02	2.892	0.02	0.55	FC041_1	CHANNEL	7.286	0	08:42	1.77	0.02	0.30
CC214_2	CONDUIT	2.760	0	05:47	3.10	0.42	0.94	FC041_2	CHANNEL	8.541	0	06:54	0.95	0.02	0.37
CC215	CONDUIT	0.951	0	06:15	1.01	1.19	0.87	FC042	CHANNEL	7.286	0	08:41	1.01	0.07	0.39
CC215_1	CONDUIT	0.945	0	05:46	1.09	0.17	1.00	FC043	CHANNEL	7.286	0	08:39	0.88	0.11	0.49
CC216_1	CONDUIT	1.739	0	05:46	2.73	0.71	1.00	FC044	CHANNEL	7.160	0	08:41	0.60	0.60	0.52
CC242	CHANNEL	2.001	0	06:20	1.07	0.01	0.28	FC045	CHANNEL	7.161	0	08:40	0.73	0.09	0.70
CC243	CONDUIT	2.007	0	06:21	3.73	0.97	1.00	FC046	CHANNEL	7.162	0	08:38	0.75	0.12	0.68
CC246	CHANNEL	10.368	0	06:01	3.01	0.06	0.22	FC047	CHANNEL	7.164	0	08:36	0.31	0.10	0.60
CC247	CHANNEL	3.137	0	06:00	0.86	0.06	0.22	FC048	CONDUIT	4.621	0	06:35	2.61	1.99	1.00
CC248_1	CHANNEL	6.878	0	06:05	1.27	0.15	0.55	FC050	CONDUIT	1.536	0	06:53	0.79	0.02	0.18
CC248_2	CHANNEL	5.900	0	06:12	0.99	0.13	0.63	FC051	CONDUIT	0.291	0	05:52	0.06	0.01	0.21
CC249	CHANNEL	2.899	0	06:00	1.27	0.05	0.26	FC054	CHANNEL	7.166	0	08:34	0.57	0.23	0.74
CC250	CHANNEL	2.920	0	06:00	1.23	0.03	0.21	FC055	CHANNEL	7.167	0	08:32	0.59	0.94	0.57
CC251	CHANNEL	7.161	0	06:49	0.37	0.26	0.93	FC056	CHANNEL	7.168	0	08:29	0.62	0.13	0.78
CC254	CHANNEL	4.893	0	07:27	0.81	0.10	0.67	FC057	CHANNEL	7.171	0	08:29	0.86	0.01	0.38
CC255	CONDUIT	2.034	0	06:00	2.58	0.16	0.94	FC058	CHANNEL	7.172	0	08:29	1.18	0.14	0.61
CC257	CHANNEL	3.506	0	06:51	0.59	0.08	0.62	FC059	CONDUIT	4.381	0	06:09	0.65	0.07	0.46
CC259_1	CONDUIT	1.956	0	06:02	0.17	0.01	0.54	FC060	CONDUIT	5.914	0	06:02	1.13	0.12	0.34
CC259_2	CONDUIT	1.900	0	05:47	2.03	0.55	0.78	FC061	CONDUIT	6.157	0	06:00	4.65	0.40	0.44
CC260	CONDUIT	3.100	0	06:27	3.04	0.79	0.84	FC062	CHANNEL	5.650	0	11:03	1.11	0.42	1.00
CC261_1	CONDUIT	1.200	0	05:45	2.35	0.57	0.97	FC063	CONDUIT	5.628	0	11:01	1.39	0.55	0.96
CC261_2	CONDUIT	1.971	0	06:01	0.19	0.01	0.54	FC064	CHANNEL	5.659	0	06:05	0.05	0.01	0.61
CC262	CHANNEL	21.146	0	06:08	1.46										



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FC066	CONDUIT	0.825	0	05:11	1.24	0.00	0.57	FOut08	CONDUIT	0.917	0	05:45	1.76	0.38	1.00
FC067	CHANNEL	4.387	0	08:47	0.26	0.01	0.23	FOut09	CONDUIT	0.931	0	05:46	1.30	0.39	1.00
FC068	CHANNEL	3.958	0	08:46	0.26	0.59	0.85	L108	CONDUIT	0.984	0	06:00	2.77	2.34	1.00
FC069	CHANNEL	3.957	0	08:44	0.43	0.04	0.29	L109C	CONDUIT	0.595	0	05:59	1.76	1.42	1.00
FC070	CHANNEL	3.958	0	08:41	0.38	0.02	0.28	L113Ci	CONDUIT	0.636	0	05:59	4.00	2.23	1.00
FC071_1	CHANNEL	3.842	0	08:49	>50.00	0.01	0.12	L114	CONDUIT	0.598	0	05:59	1.85	1.30	1.00
FC071_2	CONDUIT	0.138	1	02:08	1.05	0.22	0.98	L124C	CONDUIT	0.655	0	06:02	1.87	0.70	1.00
FC072	CHANNEL	3.861	0	08:44	0.46	0.02	0.29	L170	CONDUIT	0.808	0	06:03	1.84	0.89	1.00
FC073	CHANNEL	3.862	0	08:41	0.10	0.03	0.37	L171	CONDUIT	0.880	0	06:04	1.92	0.96	1.00
FC074	CHANNEL	3.865	0	08:34	0.13	0.02	0.51	L171A	CONDUIT	0.945	0	06:04	2.13	1.04	1.00
FC075	CHANNEL	3.869	0	08:29	0.85	0.01	0.33	L172	CONDUIT	0.974	0	06:04	2.03	0.85	1.00
FC076_1	CHANNEL	2.040	0	08:29	0.54	0.01	0.14	L172A	CONDUIT	1.001	0	06:05	2.05	0.87	1.00
FC076_2	CONDUIT	0.643	0	22:40	2.27	1.03	1.00	L172B	CONDUIT	1.150	0	06:05	1.46	0.46	1.00
FC077	CHANNEL	2.619	0	08:28	0.64	0.05	0.42	L173	CONDUIT	1.203	0	06:06	0.86	0.36	1.00
FC078_1	CHANNEL	2.293	0	08:27	3.80	0.04	0.28	L174	CONDUIT	5.949	0	06:00	4.16	2.16	1.00
FC078_2	CONDUIT	0.606	0	06:08	2.07	4.73	1.00	L174C	CONDUIT	5.949	0	06:00	4.16	2.08	1.00
FC079	CHANNEL	2.620	0	08:25	0.38	0.10	0.67	L175	CONDUIT	5.466	0	06:03	2.34	0.53	0.67
FC080	CHANNEL	2.620	0	08:21	0.48	0.03	0.47	L176	CONDUIT	5.667	0	06:03	2.29	0.56	0.74
FC081	CHANNEL	2.621	0	08:18	0.57	0.02	0.38	L176A	CONDUIT	11.149	0	06:00	3.46	1.06	0.79
FC082	CHANNEL	2.502	0	15:21	0.57	0.01	0.37	L177	CONDUIT	11.246	0	06:01	3.70	0.94	0.77
FC083	CHANNEL	2.502	0	15:18	0.73	0.16	0.58	L178	CONDUIT	11.514	0	06:01	3.40	1.00	1.00
FC084	CHANNEL	2.502	0	15:14	0.50	0.32	0.71	L179	CONDUIT	11.516	0	06:01	3.34	1.00	1.00
FC085	CHANNEL	2.502	0	15:11	0.43	0.12	0.78	L180	CONDUIT	16.910	0	06:00	3.74	1.21	1.00
FC086_1	CHANNEL	0.000	0	00:00	0.00	0.00	0.00	L181	CONDUIT	16.910	0	06:00	3.74	1.25	1.00
FC086_2	CONDUIT	2.502	0	15:11	1.36	0.45	0.94	L208i	CONDUIT	0.563	0	06:00	1.48	0.30	0.43
FC087	CHANNEL	2.502	0	15:11	0.23	0.08	0.83	LDout_1	CONDUIT	11.578	0	06:00	2.03	0.87	0.79
FC088_1	CONDUIT	1.244	0	19:52	1.92	3.19	1.00	Link792	CONDUIT	2.036	0	06:01	2.14	0.46	0.62
FC088_2	CHANNEL	1.204	0	14:29	1.29	0.43	0.24	Link793	CONDUIT	2.050	0	06:02	2.12	0.46	0.67
FC090	DUMY	2.224	0	13:10				Link795	CONDUIT	3.443	0	05:51	1.65	1.19	1.00
FC091	CHANNEL	2.224	0	13:10	0.20	0.01	0.17	Link796	CONDUIT	3.145	0	05:51	1.49	1.09	1.00
FC092	CHANNEL	2.224	0	13:01	0.13	0.01	0.31	Link797	CONDUIT	2.521	0	05:51	1.18	0.88	1.00
FC093	CHANNEL	2.225	0	12:52	0.10	0.01	0.20	IMG101b	CONDUIT	9.170	0	06:00	2.65	1.67	1.00
FC094	CONDUIT	2.226	0	12:46	1.78	0.43	0.58	IMG102b	CONDUIT	9.171	0	06:00	2.65	1.67	1.00
FC095	CHANNEL	2.482	0	07:53	0.51	0.04	0.51	IMG103ob	CONDUIT	3.136	0	06:00	1.69	0.48	0.50
FC096	CHANNEL	2.223	0	10:16	0.19	0.03	0.33	IMG104b	CONDUIT	3.109	0	06:00	1.69	0.47	0.51
FC097	CHANNEL	2.223	0	10:11	0.16	0.02	0.25	IMG105b	CONDUIT	3.313	0	06:00	1.76	0.48	0.54
FC098	CHANNEL	2.223	0	10:06	0.56	0.01	0.24	IMG106	CONDUIT	3.263	0	06:00	1.72	0.47	0.57
FC099	CHANNEL	2.223	0	10:03	0.35	0.02	0.25	IMG106ob	CONDUIT	3.326	0	06:04	1.67	0.48	0.59
FC100	CHANNEL	2.223	0	10:01	0.48	0.01	0.23	IMG107	CONDUIT	5.332	0	06:03	2.42	0.50	0.61
FC101	CONDUIT	0.731	0	10:01	5.82	62.65	1.00	LMH111	CONDUIT	9.578	0	06:00	4.77	0.51	0.51
FC102	CONDUIT	2.097	0	10:47	2.42	2.76	1.00	LMH113	CONDUIT	9.635	0	06:00	3.77	0.55	0.88
FC103_2	CONDUIT	1.774	0	07:35	0.30	0.03	0.67	LMH120	CONDUIT	10.083	0	06:01	2.54	0.88	1.00
FC104	CONDUIT	6.400	0	06:07	0.98	0.65	0.92	LMH121	CONDUIT	8.645	0	06:01	1.91	1.11	1.00
FC108	CONDUIT	5.095	0	06:12	3.56	1.56	1.00	LMH122	CONDUIT	9.598	0	06:00	3.02	0.57	0.75
FC200	CHANNEL	1.504	0	06:00	2.15	0.01	0.13	LMH215	CONDUIT	11.591	0	06:00	2.93	0.06	0.28
FC201	CHANNEL	0.743	0	06:00	1.67	0.00	0.10	LMH215b	CONDUIT	9.092	0	06:01	2.15	1.16	0.89
FC202	CHANNEL	1.760	0	06:00	1.14	0.01	0.40	LMH216	CONDUIT	9.104	0	06:01	2.03	1.16	0.98
FC203	CHANNEL	0.001	0	06:00	0.18	0.00	0.06	LMH217	CONDUIT	9.104	0	06:01	2.01	1.16	1.00
FC204	CHANNEL	1.488	0	06:00	1.41	0.01	0.40	LN4C21B	CONDUIT	10.435	0	06:18	2.50	0.63	0.80
FC205	CONDUIT	0.610	0	06:01	1.49	0.29	0.68	LT182	CONDUIT	16.911	0	06:00	3.74	1.25	1.00
FC206	CONDUIT	0.210	0	05:39	1.81	0.00	0.56	LT183	CONDUIT	22.300	0	06:00	4.37	1.40	1.00
FC208	CHANNEL	0.450	0	06:01	0.35	0.00	0.40	LT184	CONDUIT	22.301	0	06:00	4.37	1.40	1.00
FC209	CONDUIT	1.095	0	06:02	0.83	0.38	0.78	LT185	CONDUIT	22.302	0	06:00	4.37	1.40	1.00
FC210	CONDUIT	0.393	0	06:18	1.27	0.47	0.58	LT186	CONDUIT	22.303	0	06:00	4.37	2.74	1.00
FC211	CONDUIT	1.078	0	06:02	0.60	0.37	0.85	LT187	CONDUIT	22.323	0	06:00	5.57	0.51	0.79
FC212	CONDUIT	3.236	0	06:02	0.75	0.40	0.94	LW19	CONDUIT	8.243	0	06:00	2.07	0.48	1.00
FC213	CONDUIT	4.120	0	06:04	0.94	0.55	0.98	LW27	CONDUIT	7.198	0	06:00	2.14	0.42	1.00
FC214	CONDUIT	4.425	0	06:04	0.99	0.62	1.00	LW28	CONDUIT	7.195	0	06:00	1.81	0.42	1.00
FC215	CONDUIT	2.210	0	06:05	0.49	0.28	1.00	LW43	CONDUIT	6.029	0	06:00	1.52	0.35	1.00
FC216	CONDUIT	4.763	0	06:04	1.55	0.29	0.77	LW53	CONDUIT	7.196	0	06:00	2.02	0.42	1.00
FC217	CONDUIT	0.565	0	06:01	1.52	0.24	0.31	LW54	CONDUIT	6.027	0	06:00	1.52	0.91	1.00
FC218	CONDUIT	0.571	0	06:00	1.39	0.24	0.33	OUT_P4	CHANNEL	16.754	0	06:29	1.31	0.06	0.58
FC219	CONDUIT	0.000	0	00:00	0.00	0.00	0.00	P1 101a-POND	CONDUIT	3.233	0	06:18	1.00	0.09	0.96
FC220	CONDUIT	0.000	0	00:00	0.00	0.00	0.00	P1 103-101	CONDUIT	6.981	0	06:17	1.70	0.97	0.97
FC221	CONDUIT	0.000	0	00:00	0.00	0.00	0.00	P1 215a-215	CONDUIT	0.174	0	06:02	1.45	0.25	1.00
FC222	CONDUIT	0.000	0	00:00	0.00	0.00	0.00	P1 219-217	CONDUIT	1.616	0	05:53	1.65	0.50	1.00
FC223	CONDUIT	0.000	0	00:00	0.00	0.00	0.00	P1 221a-215	CONDUIT	3.679	0	06:15	1.74	0.78	1.00
FC224	CONDUIT	0.000	0	00:00	0.00	0.00	0.00	P1 301a-POND	CONDUIT	1.270	0	06:11	0.60	0.04	1.00
FC225	CONDUIT	1.308	0	06:08	0.83	0.44	0.76	P1 303-301	CONDUIT	1.926	0	06:08	1.17	0.66	1.00
FC226	CONDUIT	0.945	0	06:19	1.18	0.47	0.86	P1 329-327	CONDUIT	0.023	0	06:11	0.11	0.02	0.50
FC227	CONDUIT	2.231	0	06:08	1.29	0.50	0.84	P1 335-171	CONDUIT	0.265	0	06:17	0.67	0.16	0.88
FC228	CONDUIT	1.316	0	06:08	0.95	0.45	0.70	P1 351-219	CONDUIT	0.534	0	06:07	1.53	0.56	1.00
FC229	CONDUIT	1.325	0	06:10	1.12	0.48	0.65	P1 EX504-217	CONDUIT	2.365	0	06:50	1.99	0.44	1.00
FC230	CONDUIT	0.312	0	06:17	2.81	0.58	1.00	PC002	CHANNEL	17.282	0	10:45	0.46	0.50	1.00
FC231	CONDUIT	2.210	0	06:05	0.49	0.28	1.00	PC003	CHANNEL	17.051	0	10:27	0.72	0.21	0.72
FC232	CHANNEL	4.500	0	06:10	1.08	0.02	0.32	PC004	CHANNEL	17.034	0	10:28	0.34	0.04	0.57
FC233	CONDUIT	4.500	0	06:10	4.00	1.25	0.61	PC005	CHANNEL	17.047	0	10:32	0.76	0.02	0.42
FC234	CONDUIT	2.223	0	10:01	4.42	2.38	1.00	PC006	CHANNEL	17.066	0	10:29	0.34	0.03	0.56
FC234_1	CONDUIT	1.250	0	05:37	2.82	0.02	0.61	PC007	CHANNEL	17.074	0	10:27	1.48	0.04	0.46
FC235	CONDUIT	0.850	0	05:43	2.57	0.01	0.60	PC008_1	CONDUIT	17.076	0	10:27	1.36	0.28	0.92
FC236	CONDUIT	5.140	0	05:51	1.51	0.23	0.64	PC008_2	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
FC238	CONDUIT	0.000	0	00:00	0.00	0.00	0.07	PC009	CHANNEL	17.078	0	10:27	0.61	0.04	0.42
FC239	CONDUIT	0.240	0	05:46	5.73	0.06	0.35	PC010	CHANNEL	17.088	0	10:25	0.54	0.07	0.38
FC295	CONDUIT	1.719	0	06:21	0.27	0.05	1.00	PC011	CHANNEL	17.100	0	10:23	0.73	0.03	0.37
FOut07	CONDUIT	0.308	0	0											

**Kizell Lands - Fernbank 5618 Hazeldean Road**  
**PCSWMM Model Output SCS100-year 12-hour Carp River Ultimate**



PC013	CHANNEL	17.106	0	10:19	0.31	0.06	0.29	PC092	CHANNEL	14.132	0	06:32	0.57	0.36	0.47
PC014	CHANNEL	17.112	0	10:18	0.48	0.02	0.32	PC093_1	CONDUIT	12.897	0	06:40	1.41	12.96	1.00
PC015	CHANNEL	0.034	0	06:19	0.01	0.00	0.33	PC093_2	CHANNEL	0.000	0	00:00	0.00	0.00	0.00
PC018	CHANNEL	17.018	0	10:15	0.19	0.01	0.28	PC094	CHANNEL	11.872	0	06:40	0.54	0.16	0.62
PC019	CHANNEL	17.032	0	10:12	0.69	0.03	0.23	PC095	CHANNEL	11.866	0	06:34	0.47	0.20	0.56
PC021	CHANNEL	17.037	0	10:10	0.49	0.05	0.22	PC096	CHANNEL	12.045	0	06:20	0.45	0.25	0.48
PC022	CHANNEL	17.041	0	10:08	0.74	0.02	0.28	PC097	CHANNEL	12.365	0	06:14	0.27	0.16	0.61
PC023	CHANNEL	17.044	0	10:06	0.35	0.01	0.24	PC098	CHANNEL	13.098	0	06:08	0.63	0.18	0.40
PC024	CHANNEL	17.047	0	10:04	0.59	0.09	0.27	PC099	CHANNEL	13.374	0	06:07	0.52	0.10	0.42
PC025	CHANNEL	17.049	0	10:03	0.52	0.02	0.25	PC101	CONDUIT	0.860	0	12:59	0.58	1.24	0.96
PC026	CHANNEL	17.054	0	10:03	0.50	0.04	0.23	PC102	CHANNEL	9.382	0	07:53	0.07	0.00	0.54
PC027	CHANNEL	18.130	0	06:09	0.69	0.02	0.24	PC103	CHANNEL	9.485	0	07:52	0.98	0.02	0.43
PC028_1	CONDUIT	9.963	0	06:08	1.08	0.30	0.65	PC104	CHANNEL	9.549	0	07:51	0.73	0.02	0.38
PC028_2	CONDUIT	8.417	0	06:09	1.25	0.18	0.59	PC105	CHANNEL	9.660	0	07:48	0.07	0.02	0.62
PC029	CHANNEL	18.737	0	06:08	0.46	0.01	0.23	PC106_1	CHANNEL	1.464	0	06:56	0.04	0.00	0.32
PC030	CHANNEL	19.678	0	06:08	0.79	0.02	0.21	PC106_2	CHANNEL	1.538	0	06:56	0.29	0.01	0.35
PC031	CHANNEL	17.231	0	06:07	1.20	0.02	0.17	PC107	CHANNEL	3.374	0	06:09	0.34	0.07	0.33
PC032	CHANNEL	17.442	0	06:06	0.83	0.09	0.27	PC108	CHANNEL	4.248	0	06:04	0.26	0.08	0.48
PC033	CHANNEL	17.633	0	06:05	0.97	0.04	0.26	PC109	CONDUIT	4.290	0	06:02	3.46	0.83	0.66
PC034	CHANNEL	17.854	0	06:04	1.11	0.04	0.21	PC110	CHANNEL	5.002	0	05:59	0.25	0.09	0.71
PC035	CHANNEL	17.960	0	06:03	0.92	0.03	0.20	PC111	CHANNEL	1.579	0	06:57	0.42	0.04	0.25
PC036	CHANNEL	18.008	0	06:02	0.57	0.03	0.21	PC112	CHANNEL	9.125	0	06:09	0.57	0.03	0.44
PC037	CHANNEL	18.144	0	06:01	0.73	0.05	0.23	PC113_1	CONDUIT	3.625	0	06:07	1.60	0.46	0.79
PC038	CHANNEL	16.904	0	09:52	0.67	0.03	0.29	PC113_2	CONDUIT	3.625	0	06:07	1.60	0.46	0.79
PC039	CHANNEL	16.904	0	09:51	1.08	0.03	0.34	PC113_3	CHANNEL	1.964	0	06:07	0.73	0.01	0.14
PC040	CHANNEL	16.904	0	09:50	1.70	0.06	0.33	PC114	CHANNEL	9.239	0	06:06	0.43	0.07	0.46
PC041	CHANNEL	16.904	0	09:50	0.64	0.15	0.52	PC115	CONDUIT	2.800	0	06:00	0.67	0.20	0.81
PC042	CHANNEL	16.905	0	09:49	0.82	0.10	0.52	PC116	CHANNEL	10.032	0	08:04	0.09	0.03	0.61
PC043	CHANNEL	16.905	0	09:48	1.13	0.55	0.65	PC117	CHANNEL	10.066	0	08:02	0.43	0.25	0.47
PC044	CHANNEL	16.784	0	09:48	0.96	0.17	0.62	PC118	CHANNEL	9.000	0	08:03	0.28	0.03	0.22
PC045	CHANNEL	16.723	0	09:47	1.95	0.09	0.48	PC119	CHANNEL	9.030	0	07:55	0.21	0.02	0.22
PC046_1	CONDUIT	16.723	0	09:47	1.85	1.38	0.80	PC120	CHANNEL	9.221	0	07:40	0.37	0.06	0.24
PC046_2	CHANNEL	0.000	0	00:00	0.00	0.00	0.00	PC121	CHANNEL	9.414	0	07:31	0.07	0.02	0.30
PC047	CHANNEL	16.723	0	09:47	1.13	0.41	0.52	PC122	CHANNEL	2.557	0	06:00	0.26	0.00	0.17
PC048_1	CONDUIT	1.362	0	09:04	3.75	2.76	1.00	PC123	CHANNEL	6.290	0	15:37	0.13	0.02	0.44
PC048_2	CONDUIT	3.028	0	07:31	4.20	1.44	1.00	PC124_1	CONDUIT	1.469	0	06:32	1.33	0.02	1.10
PC048_3	CONDUIT	2.209	0	09:46	3.13	2.11	0.94	PC124_2	CONDUIT	0.538	0	09:29	2.48	1.75	1.00
PC048_4	CONDUIT	3.028	0	07:31	4.20	1.28	1.00	PC125	CHANNEL	10.005	0	07:12	0.50	0.01	0.25
PC048_5	CONDUIT	0.795	0	09:46	3.04	2.38	0.97	PC126	CHANNEL	9.986	0	06:57	0.48	0.01	0.23
PC048_6	CHANNEL	6.443	0	09:46	0.81	0.14	0.26	PC127	CHANNEL	10.039	0	06:51	0.42	0.01	0.11
PC049	CHANNEL	16.724	0	09:45	0.70	0.11	0.65	PC128	CHANNEL	10.059	0	06:47	0.38	0.06	0.22
PC050	CHANNEL	16.724	0	09:44	1.42	0.15	0.52	PC129	CHANNEL	5.986	0	16:17	0.49	0.02	0.29
PC051	CHANNEL	16.725	0	09:43	1.10	0.14	0.50	PC130	CHANNEL	5.985	0	16:11	0.51	0.02	0.26
PC052	CHANNEL	16.731	0	09:38	0.30	0.08	0.55	PC131	CHANNEL	5.985	0	16:08	0.36	0.01	0.27
PC053	CHANNEL	16.761	0	09:31	0.16	0.44	0.85	PC132	CHANNEL	5.985	0	16:06	0.46	0.08	0.41
PC054	CHANNEL	16.817	0	09:24	0.22	0.41	0.96	PC133	CHANNEL	5.986	0	15:59	0.41	0.03	0.35
PC055_1	CONDUIT	4.210	0	09:21	1.71	1.52	1.00	PC134	CHANNEL	5.986	0	15:56	0.41	0.01	0.18
PC055_2	CONDUIT	4.210	0	09:21	1.71	2.49	1.00	PC135_1	CONDUIT	3.277	0	15:56	0.46	0.20	0.83
PC055_3	CONDUIT	4.210	0	09:21	1.71	1.55	1.00	PC135_2	CONDUIT	2.708	0	15:56	0.42	0.22	0.76
PC055_4	CONDUIT	4.210	0	09:21	1.71	1.31	1.00	PC135_3	CHANNEL	0.000	0	00:00	0.00	0.00	0.00
PC055_5	CHANNEL	0.003	0	09:32	0.06	0.00	0.01	PC136	CHANNEL	5.882	0	16:08	0.10	0.00	0.18
PC056	CHANNEL	16.578	0	09:20	0.12	0.06	0.54	PC137	CHANNEL	5.885	0	15:49	0.14	0.00	0.10
PC057	CHANNEL	16.451	0	09:17	0.80	0.04	0.32	PC138	CHANNEL	5.886	0	15:41	0.17	0.00	0.10
PC058	CHANNEL	16.256	0	09:10	0.48	0.03	0.41	PC139	CHANNEL	5.850	0	15:43	0.19	0.00	0.12
PC059	CHANNEL	16.311	0	09:05	0.48	0.04	0.39	PC140	CHANNEL	5.850	0	15:38	0.13	0.04	0.48
PC060	CHANNEL	16.336	0	09:02	0.64	0.04	0.38	PC143_1	CHANNEL	4.482	0	10:22	0.39	0.06	0.59
PC061	CONDUIT	1.844	0	07:18	2.22	2.16	1.00	PC144	CHANNEL	1.613	0	10:11	0.12	0.11	0.41
PC062	CONDUIT	0.342	0	06:04	0.86	0.19	0.65	PC145	CHANNEL	3.329	0	08:11	0.24	0.11	0.41
PC067	CHANNEL	14.377	0	09:05	1.27	0.07	0.30	PC146	CHANNEL	5.850	0	15:35	0.21	0.00	0.11
PC068	CHANNEL	14.270	0	09:05	1.20	0.12	0.33	PC147	CHANNEL	5.850	0	15:28	0.14	0.00	0.14
PC069	CHANNEL	14.291	0	09:04	0.68	0.23	0.50	PC148	CHANNEL	5.850	0	15:23	0.34	0.02	0.26
PC070_1	CONDUIT	14.365	0	09:04	1.97	1.07	1.00	PC149	CHANNEL	5.850	0	15:19	0.10	0.00	0.24
PC070_2	CHANNEL	0.000	0	00:00	0.00	0.00	0.05	PC150	CHANNEL	0.943	0	07:37	0.06	0.04	0.51
PC071	CHANNEL	0.756	0	06:01	0.36	0.04	0.59	PC151	CHANNEL	2.594	0	07:35	0.09	1.00	1.00
PC072	CHANNEL	39.069	0	10:37	0.51	0.02	0.52	PC152	CHANNEL	1.230	0	08:28	0.06	0.16	0.59
PC073	CHANNEL	15.149	0	09:00	1.24	0.05	0.46	PC153	CHANNEL	5.701	0	15:20	0.18	0.02	0.33
PC074	CHANNEL	15.125	0	08:49	0.06	0.02	0.65	PC154	CHANNEL	5.701	0	15:14	0.26	0.03	0.31
PC075	CHANNEL	14.753	0	08:25	1.90	0.01	0.31	PC155	CHANNEL	5.701	0	15:10	0.33	0.02	0.26
PC076	CHANNEL	14.766	0	08:19	0.10	0.01	0.54	PC156	CHANNEL	5.701	0	15:06	0.49	0.01	0.21
PC077	CHANNEL	5.570	0	08:09	0.19	0.04	0.54	PC157	CHANNEL	1.775	0	06:08	0.07	0.05	0.37
PC078	CHANNEL	5.670	0	07:00	0.30	0.01	0.34	PC158	CHANNEL	4.935	0	06:44	0.10	0.53	0.81
PC079	CHANNEL	5.771	0	06:59	0.64	0.02	0.25	PC159	CHANNEL	5.529	0	15:25	0.32	0.06	0.27
PC080	CHANNEL	5.801	0	07:02	0.27	0.04	0.35	PC160	CHANNEL	5.530	0	15:15	0.06	0.10	0.70
PC081	CHANNEL	5.815	0	06:58	0.22	0.10	0.46	PC161	CHANNEL	5.535	0	14:55	0.06	0.07	0.71
PC082	CHANNEL	5.798	0	06:56	0.22	0.02	0.20	PC162	CHANNEL	4.970	0	14:47	0.12	0.03	0.48
PC083	CHANNEL	5.811	0	06:52	0.27	0.03	0.22	PC164	CHANNEL	1.845	0	10:30	0.04	0.33	0.87
PC084_1	CHANNEL	5.811	0	06:48	0.26	0.03	0.22	PC165	CHANNEL	2.490	0	07:53	0.15	0.43	0.84
PC084_2	CHANNEL	8.618	0	06:48	0.44	0.01	0.19	PC166	CHANNEL	1.704	0	07:51	0.04	0.16	0.76
PC085	CHANNEL	14.422	0	06:45	0.43	0.05	0.29	PC172	CHANNEL	4.191	0	08:02	0.32	0.06	0.89
PC086	CHANNEL	14.425	0	06:43	0.46	0.07	0.30	PC173	CONDUIT	1.302	0	06:00	3.31	0.66	0.59
PC087	CHANNEL	14.441	0	06:41	0.52	0.05	0.21	PC174	CONDUIT	1.784	0	07:42	1.15	0.39	0.52
PC088	CHANNEL	14.451	0	06:39	0.61	0.02	0.22	PC273	CHANNEL	2.588	0	06:13	1.25	0.03	0.15
PC089	CHANNEL	14.475	0	06:37	0.42	0.08	0.30	CP205	PUMP	0.195	0	15:06	1.00		
PC090	CHANNEL	14.525	0	06:33	0.33	0.05	0.39	FP053	PUMP	0.126	0	05:36	1.00		
PC091	CHANNEL	14.114	0	06:34	0.51	0.08	0.38	FP105	PUMP	0.056	0	04:00	1.00		

# Kizell Lands - Fernbank 5618 Hazeldean Road

## PCSWMM Model Output SCS100-year 12-hour Carp River Ultimate



CC256	ORIFICE	0.749	0	18:27	1.00
COR092_1	ORIFICE	0.048	0	06:07	1.00
COR097_1	ORIFICE	0.398	0	10:05	1.00
COR097_2	ORIFICE	0.026	0	09:34	1.00
COR205	ORIFICE	0.057	1	05:10	1.00
COR258_1	ORIFICE	0.162	0	06:31	1.00
COR258_2	ORIFICE	1.686	0	06:49	1.00
COR267	ORIFICE	0.423	0	06:03	1.00
COR269	ORIFICE	0.046	0	06:03	1.00
COR269	ORIFICE	0.293	0	05:42	1.00
COR270	ORIFICE	0.036	0	06:05	1.00
COR272	ORIFICE	0.262	0	06:21	1.00
FOR022_1	ORIFICE	0.072	0	06:13	1.00
FOR022_2	ORIFICE	0.318	0	06:13	1.00
FOR049	ORIFICE	0.058	0	06:13	1.00
FOR103_1	ORIFICE	0.061	1	10:33	1.00
FOR106_1	ORIFICE	0.579	0	07:21	1.00
FOR108	ORIFICE	0.045	0	05:52	1.00
FOR210	ORIFICE	0.080	0	06:10	1.00
OCB01-02	ORIFICE	0.269	0	06:17	1.00
OCB03b	ORIFICE	0.262	0	06:09	1.00
OCB04a	ORIFICE	0.266	0	06:01	1.00
OCB04b	ORIFICE	0.252	0	06:00	1.00
OCB05	ORIFICE	0.175	0	06:03	1.00
OCB06	ORIFICE	0.333	0	06:08	1.00
OCB07	ORIFICE	0.250	0	06:09	1.00
OCB08	ORIFICE	0.710	0	06:19	1.00
OCB09	ORIFICE	0.248	0	06:08	1.00
OCB10	ORIFICE	0.232	0	06:06	1.00
OCB11	ORIFICE	0.444	0	06:12	1.00
OCB12	ORIFICE	0.184	0	06:13	1.00
OCB13	ORIFICE	0.512	0	06:23	1.00
OCB14	ORIFICE	0.283	0	06:09	1.00
OCB15	ORIFICE	0.219	0	06:11	1.00
OCB16	ORIFICE	0.562	0	06:09	1.00
OCB17	ORIFICE	0.446	0	06:03	1.00
OCB18	ORIFICE	0.443	0	06:07	1.00
OCB19	ORIFICE	0.202	0	06:04	1.00
OCB20	ORIFICE	0.389	0	06:13	1.00
P1_391-219-SCHOOL	ORIFICE	0.895	0	05:52	1.00
POR100	ORIFICE	1.654	0	07:38	1.00
POE103	ORIFICE	3.144	0	05:59	1.00
POE208	ORIFICE	0.627	0	05:59	1.00
PARTAN-MIN.1	ORIFICE	2.045	0	06:00	1.00
CW092_2	WEIR	1.294	0	06:07	0.29
CW097_3	WEIR	0.415	0	10:05	0.45
CW128_2	WEIR	2.003	0	06:22	1.00
CW205	WEIR	0.974	0	18:34	0.72
CW215_2	WEIR	2.007	0	06:21	1.00
CW257	WEIR	0.778	0	06:24	0.17
CW258_1	WEIR	0.821	0	06:49	0.13
CW258_2	WEIR	0.849	0	06:49	0.03
CW267	WEIR	8.480	0	06:08	0.13
CW268_1	WEIR	1.577	0	06:06	0.92
CW268_2	WEIR	2.535	0	06:06	0.27
CW270	WEIR	11.882	0	06:05	0.25
CW272	WEIR	1.484	0	06:21	0.33
FW022	WEIR	0.065	0	08:02	0.11
FW049	WEIR	4.607	0	06:36	0.56
FW101	WEIR	1.492	0	10:01	0.88
FW103_2	WEIR	2.059	0	10:46	1.00
FW106_1	WEIR	1.201	0	07:37	0.87
FW108_1	WEIR	4.807	0	06:05	1.00
FW108_2	WEIR	0.760	0	06:23	0.10
FW210	WEIR	4.420	0	06:10	1.00
North-OVF	WEIR	2.197	0	06:49	0.96
PW100	WEIR	0.130	0	07:39	0.13
South-OVF	WEIR	3.236	0	06:18	1.00
W109C	WEIR	0.625	0	05:59	0.88
W208	WEIR	0.000	0	00:00	0.00
W215	WEIR	11.576	0	06:00	0.15
WW269	WEIR	5.870	0	06:06	1.00
CO002	DUMMY	3.962	0	06:14	1.00
FOut01	DUMMY	0.378	0	06:22	1.00
FOut02	DUMMY	0.573	0	06:00	1.00
FOut03	DUMMY	0.720	0	05:48	1.00
FOut04	DUMMY	0.610	0	05:43	1.00
FOut05	DUMMY	0.365	0	06:10	1.00
FOut06	DUMMY	0.185	0	06:14	1.00
GR_SWMF_OUT	DUMMY	1.826	0	06:22	1.00
Out_FCDP2	DUMMY	0.681	0	06:24	1.00
OutLet-02	DUMMY	0.325	0	06:01	1.00
OUTP4	DUMMY	16.754	0	06:29	1.00
Pond_Outlet	DUMMY	4.895	0	07:23	1.00

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Flow Classification Summary  
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Conduit	Adjusted /Actual Length	--- Fraction of Time in Flow ---			Class	---- Avg. Froude Number		Avg. Flow Change	
		Up Dry	Down Dry	Sub Sup Crit		Up Down Crit			
{STM}.P1 101-POND	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.06	0.0000
{STM}.P1 105-103	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.10	0.0000
{STM}.P1 107-105	1.00	0.00	0.00	0.00	0.99	0.01	0.00	0.08	0.0000
{STM}.P1 109-107	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.29	0.0000
{STM}.P1 111-109	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.31	0.0000
{STM}.P1 113-111	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.64	0.0000
{STM}.P1 147-105	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.24	0.0000
{STM}.P1 153-147	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.42	0.0000
{STM}.P1 165-153	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.42	0.0000
{STM}.P1 169-165	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.45	0.0000
{STM}.P1 171-169	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.47	0.0000
{STM}.P1 173-171	1.00	0.00	0.00	0.00	0.99	0.01	0.00	0.12	0.0000
{STM}.P1 203-171	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.66	0.0000
{STM}.P1 205-203	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.60	0.0000
{STM}.P1 207-205	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.63	0.0000
{STM}.P1 209-207	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.06	0.0000
{STM}.P1 215-207	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.75	0.0000
{STM}.P1 217-215	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.65	0.0000
{STM}.P1 219A-219	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.27	0.0000
{STM}.P1 221-221a	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.05	0.0000
{STM}.P1 301-POND	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.01	0.0000
{STM}.P1 305-303	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.04	0.0000
{STM}.P1 307-305	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.06	0.0000
{STM}.P1 309-307	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.40	0.0000
{STM}.P1 311-309	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.0000
{STM}.P1 317-305	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.05	0.0000
{STM}.P1 319-317	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.07	0.0000
{STM}.P1 321-319	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.26	0.0000
{STM}.P1 323-321	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.17	0.0000
{STM}.P1 327-321	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.35	0.0000
{STM}.P1 331-329	1.00	0.93	0.07	0.00	0.00	0.00	0.00	0.00	0.0000
{STM}.P1 333-327	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.0000
{STM}.P1 337-327	1.00	0.00	0.00	0.00	0.98	0.02	0.00	0.63	0.0000
{STM}.P1 349-351	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.67	0.0000
{STM}.P1 501-502	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.58	0.0001
{STM}.P1 502-503	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.62	0.0000
{STM}.P1 503-504	1.00	0.00	0.00	0.00	0.98	0.02	0.00	0.85	0.0000
104A05.1.1	1.00	0.00	0.00	0.00	0.00	0.00	1.00	1.57	0.0000
CC002	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.04	0.0000
CC003	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.05	0.0000
CC004	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.04	0.0000
CC005_1	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.10	0.0000
CC005_2	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
CC006	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.03	0.0000
CC007	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.02	0.0000
CC008	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.02	0.0000
CC009	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.02	0.0000
CC010	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.03	0.0000
CC011	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.04	0.0000
CC012	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.04	0.0000
CC013_1	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.16	0.0000
CC013_2	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.16	0.0000
CC013_3	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.15	0.0000
CC013_4	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
CC014	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.04	0.0000
CC015	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.03	0.0000
CC016	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.04	0.0000
CC017	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.05	0.0000
CC018	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.05	0.0000
CC019	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.07	0.0000
CC020	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.06	0.0000
CC021	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.05	0.0000
CC022	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.05	0.0000
CC023	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.03	0.0000
CC024	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.03	0.0000
CC025	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.03	0.0000
CC026	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.02	0.0000
CC027	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.02	0.0000
CC028	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.02	0.0000
CC029	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.02	0.0000
CC030	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.02	0.0000



**Kizell Lands - Fernbank 5618 Hazeldean Road**  
**PCSWMM Model Output SCS100-year 12-hour Carp River Ultimate**



CC198	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.10	0.0000	FC019	1.00	0.00	0.00	0.00	0.98	0.02	0.00	0.00	0.30	0.0002
CC199_1	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.14	0.0000	FC020	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.03	0.0000
CC199_2	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	FC021	1.00	0.00	0.00	0.00	0.54	0.46	0.00	0.00	0.91	0.0000
CC200	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.03	0.0000	FC023	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.37	0.0000
CC201	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.11	0.0000	FC024	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.17	0.0000
CC202	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.07	0.0000	FC025	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.15	0.0000
CC203	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.06	0.0000	FC026	1.00	0.00	0.00	0.00	0.89	0.00	0.00	0.11	0.29	0.0001
CC204_1	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	0.32	0.0000	FC027	1.00	0.00	0.00	0.00	0.99	0.00	0.00	0.01	0.26	0.0009
CC204_2	1.00	0.00	0.00	0.00	0.92	0.00	0.00	0.08	0.32	0.0000	FC028	1.00	0.00	0.00	0.00	0.96	0.00	0.00	0.04	0.38	0.0001
CC205	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.23	0.0000	FC029	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.34	0.0000
CC206_1	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.07	0.0000	FC030	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.24	0.0000
CC206_2	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	FC031	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.10	0.0000
CC207	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.08	0.0000	FC032	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.09	0.0000
CC208	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.11	0.0000	FC033	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.13	0.0000
CC209_1	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	FC034	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.12	0.0000
CC209_2	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.16	0.0000	FC035	1.00	0.00	0.00	0.00	0.77	0.00	0.23	0.00	0.26	0.0000
CC210	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.44	0.0000	FC036	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.29	0.0000
CC211	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.47	0.0000	FC037	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.22	0.0000
CC212_1	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	FC038	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.33	0.0000
CC212_2	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.19	0.0000	FC039	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.28	0.0000
CC213	1.00	0.00	0.00	0.00	0.28	0.72	0.00	0.00	1.20	0.0000	FC040	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.21	0.0000
CC214_1	1.00	0.00	0.99	0.00	0.01	0.00	0.00	0.00	0.00	0.0000	FC041_1	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.40	0.0000
CC214_2	1.00	0.00	0.00	0.00	0.99	0.01	0.00	0.00	0.19	0.0000	FC041_2	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.31	0.0000
CC215	1.00	0.96	0.00	0.00	0.01	0.00	0.00	0.03	0.02	0.0000	FC042	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.31	0.0000
CC215_1	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.01	0.0000	FC043	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.23	0.0000
CC216_1	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.0000	FC044	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.21	0.0000
CC242	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.02	0.0000	FC045	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.15	0.0000
CC243	1.00	0.00	0.05	0.00	0.93	0.02	0.00	0.00	0.04	0.0001	FC046	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.19	0.0000
CC246	1.00	0.00	0.00	0.00	0.99	0.00	0.00	0.01	0.09	0.0000	FC047	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.13	0.0000
CC247	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.24	0.0000	FC048	1.00	0.00	0.00	0.00	0.66	0.00	0.00	0.34	0.37	0.0000
CC248_1	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.33	0.0000	FC050	1.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.31	0.0000
CC248_2	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.04	0.0000	FC051	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.01	0.0000
CC249	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.02	0.0000	FC054	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.19	0.0000
CC250	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.04	0.0000	FC055	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.24	0.0000
CC251	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.05	0.0000	FC056	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.17	0.0000
CC254	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.16	0.0000	FC057	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.29	0.0000
CC255	1.00	0.00	0.00	0.00	0.99	0.01	0.00	0.00	0.05	0.0000	FC058	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.29	0.0000
CC257	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.12	0.0000	FC059	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.04	0.0000
CC259_1	1.00	0.00	0.99	0.00	0.01	0.00	0.00	0.00	0.00	0.0000	FC060	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.28	0.0000
CC259_2	1.00	0.00	0.00	0.00	0.02	0.00	0.00	0.98	0.87	0.0000	FC061	1.00	0.00	0.00	0.00	0.29	0.71	0.00	0.00	1.52	0.0000
CC260	1.00	0.00	0.00	0.00	0.93	0.01	0.00	0.06	0.15	0.0000	FC062	1.00	0.00	0.00	0.00	0.52	0.00	0.48	0.00	0.42	0.0002
CC261_1	1.00	0.00	0.00	0.00	0.98	0.02	0.00	0.00	0.48	0.0000	FC063	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.18	0.0000
CC261_2	1.00	0.00	0.98	0.00	0.02	0.00	0.00	0.00	0.00	0.0000	FC064	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.01	0.0000
CC262	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.44	0.0000	FC065	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.18	0.0000
CC263	1.00	0.00	0.00	0.00	0.60	0.00	0.00	0.40	0.71	0.0000	FC066	1.00	0.00	0.00	0.00	0.96	0.04	0.00	0.00	0.26	0.0000
CC264	1.00	0.00	0.00	0.00	0.89	0.11	0.00	0.00	0.59	0.0000	FC067	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.16	0.0000
CC265_1	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	FC068	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.18	0.0000
CC265_2	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.61	0.0000	FC069	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.14	0.0000
CC266	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.04	0.0000	FC070	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.14	0.0000
CC267	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.03	0.0000	FC071_1	1.00	0.00	0.00	0.00	0.65	0.00	0.00	0.35	0.22	0.0000
CC271_1	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.71	0.0000	FC071_2	1.00	0.00	0.00	0.00	0.99	0.01	0.00	0.00	0.22	0.0002
CC271_2	1.00	0.99	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.0000	FC072	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.20	0.0000
CC282_1	1.00	0.00	0.99	0.00	0.01	0.00	0.00	0.00	0.00	0.0000	FC073	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.02	0.0000
CC282_2	1.00	0.00	0.00	0.00	0.98	0.02	0.00	0.00	0.12	0.0000	FC074	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.04	0.0000
CC283	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.03	0.0000	FC075	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.29	0.0000
CC284	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.04	0.0000	FC076_1	1.00	0.22	0.00	0.00	0.00	0.00	0.00	0.78	0.34	0.0000
CC285	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.01	0.0000	FC076_2	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.37	0.0002
CC286	1.00	0.00	0.70	0.00	0.28	0.03	0.00	0.00	0.08	0.0000	FC077	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.20	0.0000
CC287	1.00	0.00	0.00	0.00	0.51	0.00	0.00	0.49	0.25	0.0107	FC078_1	1.00	0.31	0.00	0						

**Kizell Lands - Fernbank 5618 Hazeldean Road**  
**PCSWMM Model Output SCS100-year 12-hour Carp River Ultimate**



FC104	1.00	0.00	0.00	0.00	0.93	0.00	0.00	0.07	0.09	0.0000	LMH121	1.00	0.00	0.00	0.00	0.66	0.00	0.00	0.34	0.34	0.0000
FC108	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.03	0.0000	LMH122	1.00	0.73	0.23	0.00	0.04	0.00	0.00	0.00	0.01	0.0000
FC200	1.00	0.99	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.0000	LMH215	1.00	0.00	0.03	0.00	0.96	0.00	0.00	0.00	0.01	0.0000
FC201	1.00	0.99	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.0000	LMH215b	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.37	0.0000
FC202	1.00	0.29	0.69	0.00	0.01	0.00	0.00	0.00	0.01	0.0000	LMH216	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.36	0.0000
FC203	1.00	0.06	0.01	0.00	0.50	0.43	0.00	0.00	3.66	0.0000	LMH217	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.31	0.0000
FC204	1.00	0.16	0.26	0.00	0.45	0.00	0.00	0.12	0.09	0.0000	LM4C21B	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.05	0.0000
FC205	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.18	0.0000	LT182	1.00	0.00	0.00	0.00	0.95	0.00	0.00	0.05	0.14	0.0000
FC206	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	1.36	0.0000	LT183	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.04	0.0000
FC208	1.00	0.19	0.29	0.00	0.43	0.00	0.00	0.09	0.04	0.0000	LT184	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.03	0.0000
FC209	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.07	0.0000	LT185	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.02	0.0000
FC210	1.00	0.00	0.00	0.00	0.62	0.00	0.00	0.38	0.15	0.0000	LT186	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.01	0.0000
FC211	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.05	0.0000	LT187	1.00	0.00	0.00	0.00	0.99	0.01	0.00	0.00	0.06	0.0000
FC212	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.01	0.0001	LMW19	1.00	0.00	0.00	0.00	0.04	0.33	0.00	0.63	0.79	0.0000
FC213	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.02	0.0001	LMW27	1.00	0.00	0.00	0.00	0.68	0.32	0.00	0.00	0.77	0.0000
FC214	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.01	0.0002	LMW28	1.00	0.00	0.00	0.00	0.07	0.21	0.00	0.72	0.80	0.0000
FC215	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.0001	LMW43	1.00	0.00	0.00	0.00	0.40	0.01	0.00	0.59	0.50	0.0000
FC216	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.04	0.0000	LMW53	1.00	0.00	0.01	0.00	0.70	0.29	0.00	0.00	0.68	0.0000
FC217	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.85	0.0000	LMW54	1.00	0.00	0.00	0.00	0.50	0.00	0.00	0.50	0.15	0.0000
FC218	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.66	0.0000	OUT_P4	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.03	0.0000
FC219	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	P1 101a-POND	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.03	0.0000
FC220	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	P1 103-101	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.09	0.0000
FC221	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	P1 215a-215	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	0.08	0.0000
FC222	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	P1 219-217	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.11	0.0000
FC223	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	P1 221a-215	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.75	0.0000
FC224	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	P1 301a-POND	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.0001
FC225	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.05	0.0000	P1 303-301	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.04	0.0001
FC226	1.00	0.00	0.00	0.00	0.95	0.00	0.00	0.05	0.06	0.0001	P1 329-327	1.00	0.00	0.93	0.00	0.07	0.00	0.00	0.00	0.00	0.0000
FC227	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.05	0.0001	P1 335-171	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	0.03	0.0000
FC228	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.05	0.0000	P1 351-219	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.66	0.0000
FC229	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.09	0.0000	P1 EX504-217	1.00	0.00	0.00	0.00	0.40	0.60	0.00	0.00	0.93	0.0000
FC230	1.00	0.00	0.00	0.00	0.71	0.00	0.00	0.29	0.24	0.0017	PC002	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.17	0.0001
FC231	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.0001	PC003	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.23	0.0000
FC232	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.06	0.0000	PC004	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.12	0.0000
FC233	1.00	0.00	0.00	0.00	0.55	0.45	0.00	0.00	0.97	0.0000	PC005	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.21	0.0000
FC234	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.74	0.0000	PC006	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.11	0.0000
FC234_1	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	1.43	0.0000	PC007	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.62	0.0000
FC235	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	1.56	0.0000	PC008_1	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.18	0.0000
FC236	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.23	0.0000	PC008_2	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
FC238	1.00	0.43	0.57	0.00	1.00	0.00	0.00	0.00	0.00	0.0000	PC009	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.26	0.0000
FC239	1.00	0.00	0.00	0.00	0.21	0.79	0.00	0.00	3.66	0.0000	PC010	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.25	0.0000
FC295	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.01	0.0000	PC011	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.34	0.0000
FOut07	1.00	0.00	0.01	0.00	0.92	0.06	0.00	0.00	0.23	0.0003	PC012	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.05	0.0000
FOut08	1.00	0.00	0.00	0.00	0.97	0.03	0.00	0.00	0.08	0.0000	PC013	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.09	0.0000
FOut09	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.04	0.0000	PC014	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.14	0.0000
L108	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.55	0.0000	PC015	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.0000
L109C	1.00	0.00	0.00	0.00	0.02	0.00	0.00	0.98	0.59	0.0000	PC018	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.04	0.0000
L113Ci	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.02	0.0000	PC019	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.23	0.0000
L114	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.59	0.0000	PC021	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.20	0.0000
L124C	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.68	0.0000	PC022	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.26	0.0000
L170	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.66	0.0000	PC023	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.09	0.0000
L171	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.67	0.0000	PC024	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.13	0.0000
L171A	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.67	0.0000	PC025	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.13	0.0000
L172	1.00	0.00	0.00	0.00	0.01	0.00	0.00	0.99	0.67	0.0000	PC026	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.10	0.0000
L172A	1.00	0.00	0.00	0.00	0.01	0.00	0.00	0.99	0.68	0.0000	PC027	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.11	0.0000
L172B	1.00	0.00	0.00	0.00	0.01	0.00	0.00	0.99	0.67	0.0000	PC028_1	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.13	0.0000
L173	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.10	0.0000	PC028_2	1.00	0.00	0.02	0.00	0.98	0.00	0.00	0.00	0.19	0.0000
L174	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.59	0.0000	PC029	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.11	0.0000
L174C	1.00	0.00	0.00	0.00	0.01	0.00	0.00	0.99	0.79	0.0000	PC030	1.00	0.00	0.00	0						



# Kizell Lands - Fernbank 5618 Hazeldean Road

## PCSWMM Model Output SCS100-year 12-hour Carp River Ultimate

CC145	15.90	15.90	15.90	1.08	0.14
CC164	0.01	0.01	0.01	2.22	0.01
CC204_1	10.40	10.40	10.40	5.47	9.54
CC204_2	9.90	9.90	9.90	9.90	9.90
CC206_1	0.01	0.01	0.01	1.07	0.01
CC209_2	0.01	0.01	0.01	0.56	0.01
CC212_2	0.56	0.56	0.56	0.21	0.01
CC215	0.01	0.01	0.01	0.45	0.01
CC215_1	16.11	16.11	16.11	0.01	0.01
CC216_1	36.31	36.31	36.31	0.01	0.01
CC243	15.52	15.52	15.52	0.01	0.01
CC265_2	0.01	0.01	0.01	0.63	0.01
CC266	10.92	10.92	10.92	0.01	0.01
CC282_2	0.74	0.74	0.74	0.01	0.72
CC284	0.45	0.45	0.45	0.62	0.45
CC287	8.67	8.67	8.68	45.10	6.15
CC290	38.09	38.09	38.30	0.01	1.72
CC291	1.31	1.31	1.31	0.01	0.01
CC293	0.01	0.01	0.01	0.15	0.01
CC296	1.09	1.09	1.10	0.01	0.01
FC002	14.69	14.69	14.69	0.01	0.01
FC019	4.21	4.21	4.21	0.01	4.15
FC027	0.01	0.01	0.01	0.72	0.01
FC032	9.82	9.82	9.82	4.07	7.97
FC034	8.53	8.53	8.53	1.78	7.08
FC038	2.81	2.81	2.81	2.79	2.81
FC048	4.33	4.33	4.33	4.32	4.07
FC062	3.01	3.01	3.01	0.01	0.01
FC076_2	16.60	16.60	16.60	2.64	16.60
FC078_2	25.42	25.42	25.42	44.00	25.42
FC088_1	8.89	8.89	8.89	23.18	8.89
FC090	48.00	48.00	48.00	48.00	0.01
FC101	21.10	21.10	21.16	48.00	21.10
FC102	12.92	12.92	12.92	13.89	12.92
FC108	8.72	8.72	8.72	0.87	0.82
FC214	2.67	2.67	2.71	0.01	0.07
FC215	10.87	10.87	10.87	0.01	0.01
FC230	11.83	11.83	11.89	0.01	0.01
FC231	10.87	10.87	10.87	0.01	0.01
FC233	0.01	0.01	0.01	0.53	0.01
FC234	8.07	8.07	8.12	13.60	8.07
FC295	8.64	8.64	8.64	0.01	0.01
FOut08	0.38	0.38	0.38	0.01	0.38
FOut09	13.78	13.78	13.78	0.01	0.48
L108	0.02	0.02	0.02	0.33	0.02
L109C	0.02	0.02	0.02	0.27	0.02
L113Ci	0.02	0.02	0.02	0.16	0.02
L114	0.03	0.03	0.03	0.22	0.01
L124C	0.03	0.03	0.03	0.01	0.01
L170	0.07	0.07	0.07	0.01	0.01
L171	0.11	0.11	0.11	0.01	0.01
L171A	0.12	0.12	0.12	0.01	0.01
L172	0.12	0.12	0.12	0.01	0.01
L172A	0.14	0.14	0.14	0.01	0.01
L172B	0.15	0.15	0.15	0.01	0.01
L173	0.18	0.18	0.18	0.01	0.01
L174	0.19	0.19	0.19	0.38	0.19
L174C	0.19	0.19	0.19	0.37	0.19
L176A	0.01	0.01	0.01	0.10	0.01
L178	0.09	0.09	0.09	0.01	0.03
L179	0.10	0.10	0.10	0.01	0.04
L180	0.19	0.19	0.19	0.18	0.17
L181	0.20	0.20	0.20	0.20	0.18
Link795	0.49	0.49	0.49	0.02	0.02
Link796	0.71	0.71	0.71	0.01	0.01
Link797	0.86	0.86	0.86	0.01	0.03
LMG101b	1.36	1.36	1.36	0.26	0.27
LMG102b	1.40	1.40	1.40	0.26	0.27
LMH120	0.14	0.14	0.14	0.01	0.01
LMH121	0.11	0.11	0.11	0.08	0.01
LMH215b	0.01	0.01	0.01	0.11	0.01
LMH216	0.01	0.01	0.01	0.11	0.01
LMH217	0.02	0.02	0.02	0.11	0.01
LT182	0.28	0.28	0.28	0.20	0.20
LT183	0.54	0.54	0.54	0.26	0.26
LT184	0.90	0.90	0.90	0.26	0.26
LT185	1.45	1.45	1.46	0.26	0.26
LT186	2.28	2.28	2.29	0.80	0.74
LW19	0.02	0.02	0.02	0.01	0.01
LW27	0.25	0.25	0.25	0.01	0.01
LW28	0.72	0.72	0.72	0.01	0.01
LW43	1.03	1.03	1.03	0.01	0.01
LW53	0.32	0.32	0.32	0.01	0.01
LW54	1.40	1.40	1.40	0.01	0.10
P1 215a-215	0.37	0.37	0.37	0.01	0.01

P1 219-217	0.54	0.54	0.54	0.01	0.01
P1 221a-215	0.63	0.63	0.63	0.01	0.63
P1 301a-POND	2.25	2.25	2.30	0.01	0.01
P1 303-301	2.14	2.14	2.14	0.01	0.11
P1 351-219	0.59	0.59	0.59	0.01	0.01
P1 EX504-217	0.58	0.58	0.58	0.01	0.01
PC002	9.03	9.03	9.04	0.01	0.01
PC046_1	0.01	0.01	0.01	4.92	0.01
PC048_1	3.63	3.63	3.63	26.54	3.63
PC048_2	13.95	13.95	13.95	13.95	13.95
PC048_3	0.01	0.01	0.01	20.67	0.01
PC048_4	20.49	20.49	20.49	18.09	20.49
PC048_5	0.01	0.01	0.01	23.26	0.01
PC055_1	7.12	7.12	7.12	5.99	0.01
PC055_2	8.62	8.62	8.62	15.43	8.62
PC055_3	11.24	11.24	11.24	6.36	11.24
PC055_4	11.93	11.93	11.93	4.35	8.32
PC061	1.20	1.20	1.20	7.47	1.20
PC070_1	2.64	2.64	2.64	1.69	0.01
PC093_1	1.86	1.86	1.86	45.39	1.86
PC101	0.01	0.01	0.01	4.21	0.01
PC124_2	29.26	29.26	29.26	9.72	10.22
PC151	13.16	13.16	13.16	11.79	11.79

\*\*\*\*\*  
Pumping Summary  
\*\*\*\*\*

Time Off	Percent Utilized	Number of Start-Ups	Min Flow CMS	Avg Flow CMS	Max Flow CMS	Total Volume 10^6 ltr	Power Usage Kw-hr	% Pump
CP205	99.99	1	0.00	0.18	0.20	30.056	19.34	0.0
42.0								
FP053	88.31	1	0.00	0.13	0.13	19.227	379.03	0.0
0.0								
FP105	100.00	1	0.00	0.06	0.06	9.355	399.60	0.0
0.0								

Analysis begun on: Wed Nov 09 11:39:53 2016  
Analysis ended on: Wed Nov 09 11:45:07 2016  
Total elapsed time: 00:05:14



# Kizell Lands - Fernbank 5618 Hazeldean Road PCSWMM Model Output SCS100-year 12-hour Carp River Interim

EPA STORM WATER MANAGEMENT MODEL - VERSION 5.0 (Build 5.0.022)

\*\*\*\*\*  
NOTE: The summary statistics displayed in this report are based on results found at every computational time step, not just on results from each reporting time step.  
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\*\*\*\*\*  
Analysis Options  
\*\*\*\*\*  
Flow Units ..... CMS  
Process Models:  
Rainfall/Runoff ..... YES  
Snowmelt ..... NO  
Groundwater ..... NO  
Flow Routing ..... YES  
Ponding Allowed ..... YES  
Water Quality ..... NO  
Infiltration Method ..... CURVE\_NUMBER  
Flow Routing Method ..... DYNWAVE  
Starting Date ..... JUL-23-2009 00:00:00  
Ending Date ..... JUL-25-2009 00:00:00  
Antecedent Dry Days ..... 0.0  
Report Time Step ..... 00:05:00  
Wet Time Step ..... 00:05:00  
Dry Time Step ..... 01:00:00  
Routing Time Step ..... 2.00 sec

WARNING 04: minimum elevation drop used for Conduit CC028  
WARNING 04: minimum elevation drop used for Conduit CC040  
WARNING 04: minimum elevation drop used for Conduit CC050\_2  
WARNING 04: minimum elevation drop used for Conduit CC060  
WARNING 04: minimum elevation drop used for Conduit CC076  
WARNING 04: minimum elevation drop used for Conduit CC079  
WARNING 04: minimum elevation drop used for Conduit CC083  
WARNING 04: minimum elevation drop used for Conduit CC089  
WARNING 04: minimum elevation drop used for Conduit CC104  
WARNING 04: minimum elevation drop used for Conduit CC106  
WARNING 04: minimum elevation drop used for Conduit CC109  
WARNING 04: minimum elevation drop used for Conduit CC115  
WARNING 04: minimum elevation drop used for Conduit CC117\_2  
WARNING 04: minimum elevation drop used for Conduit CC131  
WARNING 04: minimum elevation drop used for Conduit CC137  
WARNING 04: minimum elevation drop used for Conduit CC143  
WARNING 04: minimum elevation drop used for Conduit CC150\_2  
WARNING 04: minimum elevation drop used for Conduit CC153  
WARNING 04: minimum elevation drop used for Conduit CC160  
WARNING 04: minimum elevation drop used for Conduit CC164  
WARNING 04: minimum elevation drop used for Conduit CC167  
WARNING 04: minimum elevation drop used for Conduit CC170  
WARNING 04: minimum elevation drop used for Conduit CC171  
WARNING 04: minimum elevation drop used for Conduit CC172  
WARNING 04: minimum elevation drop used for Conduit CC172\_2  
WARNING 04: minimum elevation drop used for Conduit CC180

WARNING 04: minimum elevation drop used for Conduit CC192  
WARNING 04: minimum elevation drop used for Conduit CC195  
WARNING 04: minimum elevation drop used for Conduit CC197\_2  
WARNING 04: minimum elevation drop used for Conduit CC199\_2  
WARNING 04: minimum elevation drop used for Conduit CC287  
WARNING 03: negative offset ignored for Link FC011  
WARNING 03: negative offset ignored for Link FC012  
WARNING 03: negative offset ignored for Link FC014  
WARNING 03: negative offset ignored for Link FC015  
WARNING 03: negative offset ignored for Link FC042  
WARNING 03: negative offset ignored for Link FC043  
WARNING 04: minimum elevation drop used for Conduit FC071\_1  
WARNING 03: negative offset ignored for Link FC079  
WARNING 03: negative offset ignored for Link FC080  
WARNING 03: negative offset ignored for Link FC080  
WARNING 03: negative offset ignored for Link FC081  
WARNING 04: minimum elevation drop used for Conduit FC086\_1  
WARNING 04: minimum elevation drop used for Conduit FC088\_2  
WARNING 04: minimum elevation drop used for Conduit FC101  
WARNING 04: minimum elevation drop used for Conduit PC046\_2  
WARNING 04: minimum elevation drop used for Conduit PC093\_1  
WARNING 03: negative offset ignored for Link CP205  
WARNING 03: negative offset ignored for Link FP053  
WARNING 03: negative offset ignored for Link FP105  
WARNING 02: maximum depth increased for Node CJ002  
WARNING 02: maximum depth increased for Node CJ003  
WARNING 02: maximum depth increased for Node CJ005  
WARNING 02: maximum depth increased for Node CJ006  
WARNING 02: maximum depth increased for Node CJ008  
WARNING 02: maximum depth increased for Node CJ011  
WARNING 02: maximum depth increased for Node CJ012  
WARNING 02: maximum depth increased for Node CJ013  
WARNING 02: maximum depth increased for Node CJ015  
WARNING 02: maximum depth increased for Node CJ018  
WARNING 02: maximum depth increased for Node CJ020  
WARNING 02: maximum depth increased for Node CJ021  
WARNING 02: maximum depth increased for Node CJ022  
WARNING 02: maximum depth increased for Node CJ024  
WARNING 02: maximum depth increased for Node CJ025  
WARNING 02: maximum depth increased for Node CJ026  
WARNING 02: maximum depth increased for Node CJ027  
WARNING 02: maximum depth increased for Node CJ029  
WARNING 02: maximum depth increased for Node CJ031







# Kizell Lands - Fernbank 5618 Hazeldean Road

## PCSWMM Model Output SCS100-year 12-hour Carp River Interim

WARNING 02: maximum depth increased for Node PJ075  
 WARNING 02: maximum depth increased for Node PJ076  
 WARNING 02: maximum depth increased for Node PJ085  
 WARNING 02: maximum depth increased for Node PJ086  
 WARNING 02: maximum depth increased for Node PJ087  
 WARNING 02: maximum depth increased for Node PJ088  
 WARNING 02: maximum depth increased for Node PJ089  
 WARNING 02: maximum depth increased for Node PJ090  
 WARNING 02: maximum depth increased for Node PJ091  
 WARNING 02: maximum depth increased for Node PJ092  
 WARNING 02: maximum depth increased for Node PJ095  
 WARNING 02: maximum depth increased for Node PJ096  
 WARNING 02: maximum depth increased for Node PJ097  
 WARNING 02: maximum depth increased for Node PJ098  
 WARNING 02: maximum depth increased for Node PJ099  
 WARNING 02: maximum depth increased for Node PJ102  
 WARNING 02: maximum depth increased for Node PJ104  
 WARNING 02: maximum depth increased for Node PJ105  
 WARNING 02: maximum depth increased for Node PJ112  
 WARNING 02: maximum depth increased for Node PJ113  
 WARNING 02: maximum depth increased for Node PJ114  
 WARNING 02: maximum depth increased for Node PJ115  
 WARNING 02: maximum depth increased for Node PJ117  
 WARNING 02: maximum depth increased for Node PJ118  
 WARNING 02: maximum depth increased for Node PJ119  
 WARNING 02: maximum depth increased for Node PJ120  
 WARNING 02: maximum depth increased for Node PJ121  
 WARNING 02: maximum depth increased for Node PJ123  
 WARNING 02: maximum depth increased for Node PJ125  
 WARNING 02: maximum depth increased for Node PJ126  
 WARNING 02: maximum depth increased for Node PJ127  
 WARNING 02: maximum depth increased for Node PJ128  
 WARNING 02: maximum depth increased for Node PJ129  
 WARNING 02: maximum depth increased for Node PJ130  
 WARNING 02: maximum depth increased for Node PJ131  
 WARNING 02: maximum depth increased for Node PJ133  
 WARNING 02: maximum depth increased for Node PJ134  
 WARNING 02: maximum depth increased for Node PJ135  
 WARNING 02: maximum depth increased for Node PJ136  
 WARNING 02: maximum depth increased for Node PJ137  
 WARNING 02: maximum depth increased for Node PJ138  
 WARNING 02: maximum depth increased for Node PJ139

WARNING 02: maximum depth increased for Node PJ140  
 WARNING 02: maximum depth increased for Node PJ146  
 WARNING 02: maximum depth increased for Node PJ147  
 WARNING 02: maximum depth increased for Node PJ148  
 WARNING 02: maximum depth increased for Node PJ149  
 WARNING 02: maximum depth increased for Node PJ156  
 WARNING 02: maximum depth increased for Node PJ159  
 WARNING 02: maximum depth increased for Node PJ253  
 WARNING 02: maximum depth increased for Node PJ254

	Volume hectare-m	Depth mm
Runoff Quantity Continuity		
Total Precipitation	1342.790	96.000
Evaporation Loss	0.000	0.000
Infiltration Loss	428.773	30.654
Surface Runoff	711.286	50.852
Final Surface Storage	203.400	14.542
Continuity Error (%)	-0.050	

	Volume hectare-m	Volume 10 <sup>6</sup> ltr
Flow Routing Continuity		
Dry Weather Inflow	0.000	0.000
Wet Weather Inflow	710.977	7109.840
Groundwater Inflow	0.000	0.000
RDII Inflow	0.000	0.000
External Inflow	20.993	209.932
External Outflow	697.754	6977.609
Internal Outflow	0.000	0.000
Storage Losses	0.000	0.000
Initial Stored Volume	266.785	2667.878
Final Stored Volume	306.154	3061.570
Continuity Error (%)	-0.516	

Highest Continuity Errors

- Node CJ290 (16.25%)
- Node FJ203 (-6.41%)
- Node PJ151 (3.29%)
- Node PJ171 (3.24%)
- Node FSto103 (2.98%)

Time-Step Critical Elements

- Link CC131 (26.17%)
- Link CC108 (22.31%)
- Link CC160 (18.22%)
- Link CC005\_1 (7.10%)
- Link FC234 (6.32%)

Highest Flow Instability Indexes

- Link CC153 (47)
- Link CC154 (46)
- Link CC150\_1 (42)
- Link CC155 (38)
- Link Out\_FCDP2 (37)

Routing Time Step Summary

Minimum Time Step	: 0.50 sec
Average Time Step	: 1.00 sec
Maximum Time Step	: 2.00 sec
Percent in Steady State	: 0.00
Average Iterations per Step	: 4.92

# Kizell Lands - Fernbank 5618 Hazeldean Road PCSWMM Model Output SCS100-year 12-hour Carp River Interim

\*\*\*\*\*  
Subcatchment Runoff Summary  
\*\*\*\*\*

Runoff Coeff Subcatchment	Total Precip mm	Total Runon mm	Total Evap mm	Total Infil mm	Total Runoff mm	Total Runoff 10^6 ltr	Peak Runoff CMS
CS005_1	96.00	0.00	0.00	36.91	55.38	43.72	6.16
0.577							
CS005_2	96.00	0.00	0.00	22.44	60.43	123.31	3.16
0.629							
CS007	96.00	0.00	0.00	26.64	59.49	68.85	2.88
0.620							
CS013_1	96.00	0.00	0.00	27.31	61.46	50.82	1.80
0.640							
CS013_2	96.00	0.00	0.00	27.31	47.99	277.93	6.34
0.500							
CS014	96.00	0.00	0.00	22.44	56.52	213.55	4.97
0.589							
CS019	96.00	0.00	0.00	27.59	54.23	134.30	2.50
0.565							
CS028	96.00	0.00	0.00	22.67	58.91	128.54	2.45
0.614							
CS030	96.00	0.00	0.00	27.59	58.80	40.22	0.96
0.613							
CS034	96.00	0.00	0.00	22.67	59.53	108.17	2.12
0.620							
CS036	96.00	0.00	0.00	22.44	63.01	41.67	1.20
0.656							
CS038	96.00	0.00	0.00	20.46	74.61	21.55	7.15
0.777							
CS040	96.00	0.00	0.00	32.60	56.67	57.49	1.69
0.590							
CS045	96.00	0.00	0.00	24.58	68.93	10.86	1.77
0.718							
CS052	96.00	0.00	0.00	32.57	55.20	42.88	1.07
0.575							
CS063_1	96.00	0.00	0.00	27.87	60.51	56.17	1.64
0.630							
CS063_2	96.00	0.00	0.00	56.62	38.17	11.74	1.21
0.398							
CS073	96.00	0.00	0.00	39.35	55.43	2.97	0.22
0.577							
CS077_2	96.00	0.00	0.00	6.58	88.42	10.87	3.64
0.921							
CS082_1	96.00	0.00	0.00	9.62	84.17	31.08	7.42
0.877							
CS082_2	96.00	0.00	0.00	10.85	84.12	7.43	2.14
0.876							
CS085	96.00	0.00	0.00	27.03	48.03	257.94	7.57
0.500							
CS086	96.00	0.00	0.00	27.03	48.73	577.34	16.95
0.508							
CS087	96.00	0.00	0.00	30.03	48.81	196.91	3.32
0.508							
CS088_1	96.00	0.00	0.00	34.48	30.87	808.72	21.61
0.322							
CS088_2	96.00	0.00	0.00	36.46	43.68	285.51	9.21
0.455							
CS092	96.00	0.00	0.00	33.09	61.83	13.20	3.12
0.644							
CS098	96.00	0.00	0.00	39.89	54.96	49.72	10.67
0.572							
CS113	96.00	0.00	0.00	3.79	91.13	16.52	4.38
0.949							
CS115	96.00	0.00	0.00	35.48	58.65	10.12	1.55
0.611							
CS116	96.00	0.00	0.00	13.74	79.65	6.04	1.34
0.830							
CS125	96.00	0.00	0.00	25.42	69.48	43.41	9.82
0.724							
CS127	96.00	0.00	0.00	41.42	53.42	0.53	0.13
0.556							
CS129	96.00	0.00	0.00	2.20	92.76	18.29	5.39
0.966							
CS141	96.00	0.00	0.00	39.56	36.34	477.09	7.95
0.379							
CS158	96.00	0.00	0.00	32.72	62.07	0.91	0.12
0.647							

CS159	96.00	0.00	0.00	19.54	75.40	21.32	5.60
0.785							
CS177	96.00	0.00	0.00	32.77	58.12	7.24	0.28
0.605							
CS196	96.00	0.00	0.00	9.42	85.54	3.09	0.90
0.891							
CS200_1	96.00	0.00	0.00	32.47	60.84	2.96	0.21
0.634							
CS204	96.00	0.00	0.00	75.82	18.98	1.93	0.13
0.198							
CS206	96.00	0.00	0.00	17.11	77.31	21.98	5.13
0.805							
CS207	96.00	0.00	0.00	22.99	71.91	6.44	1.41
0.749							
CS208	96.00	0.00	0.00	18.02	76.54	18.23	4.33
0.797							
CS209	96.00	0.00	0.00	35.70	58.68	3.57	0.32
0.611							
CS211	96.00	0.00	0.00	13.02	82.00	7.59	2.31
0.854							
CS213	96.00	0.00	0.00	31.13	62.98	5.57	0.63
0.656							
CS214	96.00	0.00	0.00	16.25	78.45	25.54	6.43
0.817							
CS216	96.00	0.00	0.00	2.21	92.72	18.22	4.97
0.966							
CS246	96.00	0.00	0.00	43.40	51.45	21.64	3.59
0.536							
CS246_2	96.00	0.00	0.00	6.27	88.33	13.55	4.27
0.920							
CS247	96.00	0.00	0.00	16.97	77.89	13.21	3.41
0.811							
CS248_2	96.00	0.00	0.00	26.36	68.49	40.97	8.16
0.713							
CS250	96.00	0.00	0.00	14.85	80.13	10.29	2.93
0.835							
CS251_1	96.00	0.00	0.00	47.97	46.79	5.96	0.29
0.487							
CS251_2	96.00	0.00	0.00	48.37	46.39	3.13	0.14
0.483							
CS255	96.00	0.00	0.00	20.68	74.28	8.08	2.04
0.774							
CS256_1	96.00	0.00	0.00	23.37	69.91	50.34	8.86
0.728							
CS256_2	96.00	0.00	0.00	63.29	31.53	0.37	0.08
0.328							
CS257	96.00	0.00	0.00	18.29	76.64	18.62	4.83
0.798							
CS258	96.00	0.00	0.00	19.98	74.86	72.09	14.03
0.780							
CS259	96.00	0.00	0.00	20.45	74.15	21.19	4.79
0.772							
CS261	96.00	0.00	0.00	11.21	83.80	11.78	3.58
0.873							
CS262	96.00	0.00	0.00	19.32	75.65	5.26	1.37
0.788							
CS263_1	96.00	0.00	0.00	20.25	73.67	17.73	3.60
0.767							
CS263_2	96.00	0.00	0.00	27.62	67.24	1.34	0.34
0.700							
CS264_1	96.00	0.00	0.00	5.93	89.07	4.27	1.35
0.928							
CS264_2	96.00	0.00	0.00	13.77	81.25	2.37	0.73
0.846							
CS265_1	96.00	0.00	0.00	23.19	70.82	104.19	17.83
0.738							
CS265_2	96.00	0.00	0.00	68.79	25.96	24.75	0.67
0.270							
CS267_1	96.00	0.00	0.00	18.16	76.79	9.05	2.55
0.800							
CS267_2	96.00	0.00	0.00	16.16	78.76	8.93	2.41
0.820							
CS267_3	96.00	0.00	0.00	15.39	79.49	5.33	1.28
0.828							
CS267_4	96.00	0.00	0.00	15.43	79.44	1.49	0.35
0.827							
CS267_5	96.00	0.00	0.00	15.19	79.73	1.39	0.36
0.830							
CS267_7	96.00	0.00	0.00	16.52	78.35	33.19	7.89
0.816							
CS268	96.00	0.00	0.00	10.03	84.78	25.35	5.78
0.883							
CS269	96.00	0.00	0.00	19.56	75.38	32.38	8.73
0.785							

**Kizell Lands - Fernbank 5618 Hazeldean Road**  
**PCSWMM Model Output SCS100-year 12-hour Carp River Interim**

CS270	96.00	0.00	0.00	11.76	83.05	50.84	11.82	FS200_1	96.00	0.00	0.00	21.19	73.87	3.25	1.05
0.865								0.769							
CS271	96.00	0.00	0.00	6.72	88.27	21.46	6.63	FS200_2	96.00	0.00	0.00	3.16	91.90	5.05	1.74
0.920								0.957							
CS282	96.00	0.00	0.00	12.45	82.56	10.77	3.24	FS201_1	96.00	0.00	0.00	19.85	75.20	2.11	0.68
0.860								0.783							
CS293	96.00	0.00	0.00	9.21	85.85	3.33	1.12	FS201_2	96.00	0.00	0.00	20.92	74.04	9.70	2.73
0.894								0.771							
CS294	96.00	0.00	0.00	51.46	41.35	10.83	0.31	FS202_1	96.00	0.00	0.00	21.23	73.82	3.60	1.15
0.431								0.769							
CS295	96.00	0.00	0.00	15.44	79.48	7.95	2.06	FS202_2	96.00	0.00	0.00	23.71	71.22	9.47	2.44
0.828								0.742							
CS296	96.00	0.00	0.00	17.15	77.74	22.63	5.43	FS203a	96.00	0.00	0.00	22.28	72.65	3.42	0.89
0.810								0.757							
FS010	96.00	0.00	0.00	32.77	60.36	5.89	0.38	FS203b	96.00	0.00	0.00	2.27	92.72	8.34	2.56
0.629								0.966							
FS019	96.00	0.00	0.00	22.14	72.90	3.01	0.97	FS203c	96.00	0.00	0.00	22.28	72.65	1.28	0.33
0.759								0.757							
FS020	96.00	0.00	0.00	25.34	69.60	5.07	1.87	FS204	96.00	0.00	0.00	22.03	72.91	4.75	1.29
0.725								0.759							
FS022	96.00	0.00	0.00	2.19	92.82	21.74	6.98	FS206_1	96.00	0.00	0.00	21.09	73.98	1.26	0.42
0.967								0.771							
FS031	96.00	0.00	0.00	35.17	59.72	4.86	1.08	FS206_2	96.00	0.00	0.00	22.06	72.88	6.41	1.73
0.622								0.759							
FS043	96.00	0.00	0.00	37.61	57.24	4.80	0.84	GR_SUBDV	96.00	0.00	0.00	16.54	77.33	46.94	8.75
0.596								0.906							
FS050_1	96.00	0.00	0.00	39.68	53.87	29.81	2.17	IBER_IND	96.00	0.00	0.00	14.61	80.59	5.32	1.41
0.561								0.839							
FS050_3	96.00	0.00	0.00	29.89	62.40	30.56	2.67	IBER_RD_E	96.00	0.00	0.00	3.24	91.28	2.03	0.48
0.650								0.951							
FS052	96.00	0.00	0.00	18.96	76.03	4.47	1.31	P1-01-02	96.00	0.00	0.00	4.78	89.74	2.08	0.49
0.792								0.935							
FS053	96.00	0.00	0.00	30.63	64.25	59.18	10.59	P1-03a	96.00	0.00	0.00	19.14	75.67	4.55	1.17
0.669								0.788							
FS058	96.00	0.00	0.00	35.64	57.32	8.96	0.85	P1-03b	96.00	0.00	0.00	14.87	80.15	2.10	0.59
0.597								0.835							
FS061	96.00	0.00	0.00	42.57	52.25	50.70	6.21	P1-04a	96.00	0.00	0.00	10.83	84.21	2.18	0.64
0.544								0.877							
FS065_1	96.00	0.00	0.00	33.20	61.76	9.95	2.79	P1-04b	96.00	0.00	0.00	10.75	84.32	1.89	0.57
0.643								0.878							
FS065_2	96.00	0.00	0.00	56.16	38.62	11.01	1.25	P1-05	96.00	0.00	0.00	26.29	68.43	1.10	0.24
0.402								0.713							
FS066	96.00	0.00	0.00	31.67	63.25	44.53	11.63	P1-06	96.00	0.00	0.00	17.67	77.33	2.70	0.72
0.659								0.806							
FS067	96.00	0.00	0.00	64.78	30.04	15.94	1.95	P1-07	96.00	0.00	0.00	0.00	94.53	1.56	0.42
0.313								0.985							
FS070	96.00	0.00	0.00	56.60	38.17	2.88	0.30	P1-08	96.00	0.00	0.00	13.43	81.76	7.79	1.95
0.398								0.852							
FS075	96.00	0.00	0.00	35.76	59.12	41.34	9.61	P1-09	96.00	0.00	0.00	3.85	90.72	1.51	0.40
0.616								0.945							
FS081_1	96.00	0.00	0.00	67.33	27.43	5.18	0.26	P1-10	96.00	0.00	0.00	12.44	82.75	1.56	0.48
0.286								0.862							
FS081_2	96.00	0.00	0.00	21.04	73.94	4.14	1.19	P1-11	96.00	0.00	0.00	12.71	82.53	3.88	1.07
0.770								0.860							
FS089_1	96.00	0.00	0.00	44.67	50.10	1.35	0.14	P1-12	96.00	0.00	0.00	16.05	79.13	1.80	0.47
0.522								0.824							
FS089a	96.00	0.00	0.00	37.58	53.19	3.81	0.12	P1-13	96.00	0.00	0.00	16.52	78.60	6.27	1.43
0.554								0.819							
FS089b	96.00	0.00	0.00	37.58	53.19	3.79	0.12	P1-14	96.00	0.00	0.00	19.08	76.09	2.47	0.64
0.554								0.793							
FS101	96.00	0.00	0.00	11.01	82.86	10.97	3.10	P1-15	96.00	0.00	0.00	16.43	78.31	1.89	0.44
0.863								0.816							
FS103_1	96.00	0.00	0.00	40.21	54.68	2.62	0.67	FS-16	96.00	0.00	0.00	14.96	79.95	4.63	1.27
0.570								0.833							
FS103_2	96.00	0.00	0.00	26.48	68.46	11.67	3.10	P1-17	96.00	0.00	0.00	1.26	93.21	2.25	0.52
0.713								0.971							
FS103_3	96.00	0.00	0.00	17.17	76.12	33.85	6.66	P1-18	96.00	0.00	0.00	7.33	87.44	2.63	0.76
0.793								0.911							
FS104_1	96.00	0.00	0.00	58.66	36.12	17.66	0.94	P1-19	96.00	0.00	0.00	15.80	79.41	1.14	0.31
0.376								0.827							
FS104_2	96.00	0.00	0.00	35.59	59.27	58.10	12.89	P1-20	96.00	0.00	0.00	16.14	79.03	3.76	0.95
0.617								0.823							
FS105	96.00	0.00	0.00	32.62	61.82	42.15	4.80	P1-25_POND	96.00	0.00	0.00	8.69	85.95	3.69	1.03
0.644								0.895							
FS106	96.00	0.00	0.00	36.25	58.54	1.40	0.19	PS003	96.00	0.00	0.00	32.11	61.89	2.30	0.22
0.610								0.645							
FS106_1	96.00	0.00	0.00	23.06	71.95	4.65	1.39	PS014	96.00	0.00	0.00	42.05	52.72	4.60	0.38
0.749								0.549							
FS107	96.00	0.00	0.00	6.54	88.40	30.53	8.68	PS030	96.00	0.00	0.00	38.86	55.96	7.06	0.80
0.921								0.583							
FS109	96.00	0.00	0.00	3.04	91.82	45.27	10.60	FS043	96.00	0.00	0.00	10.03	83.77	8.81	2.33
0.956								0.873							
FS111	96.00	0.00	0.00	3.48	91.37	38.89	9.05	PS055	96.00	0.00	0.00	30.77	64.10	13.31	2.30
0.952								0.668							

# Kizell Lands - Fernbank 5618 Hazeldean Road

## PCSWMM Model Output SCS100-year 12-hour Carp River Interim



PS056	96.00	0.00	0.00	12.43	80.99	9.66	2.27
0.844							
PS057	96.00	0.00	0.00	9.24	84.05	15.85	3.74
0.875							
PS060_1	96.00	0.00	0.00	50.84	43.95	9.00	1.04
0.458							
PS060_2	96.00	0.00	0.00	23.52	71.41	5.67	1.26
0.744							
PS061_1	96.00	0.00	0.00	13.95	79.97	4.52	1.16
0.833							
PS061_2	96.00	0.00	0.00	19.25	74.55	10.92	2.27
0.777							
PS061_3	96.00	0.00	0.00	17.16	77.12	14.16	3.38
0.803							
PS062_1	96.00	0.00	0.00	11.70	83.46	0.41	0.15
0.869							
PS062_2	96.00	0.00	0.00	25.56	66.98	20.02	2.83
0.698							
PS062_3	96.00	0.00	0.00	15.99	79.06	1.89	0.60
0.824							
PS067	96.00	0.00	0.00	13.71	80.26	6.46	1.62
0.836							
PS070_1	96.00	0.00	0.00	11.41	82.65	1.26	0.40
0.861							
PS070_2	96.00	0.00	0.00	8.79	84.62	5.33	1.38
0.881							
PS071	96.00	0.00	0.00	18.07	76.75	3.06	0.85
0.799							
PS072	96.00	0.00	0.00	11.86	81.74	1.29	0.35
0.851							
PS073	96.00	0.00	0.00	26.76	68.18	7.90	1.78
0.710							
PS084	96.00	0.00	0.00	7.28	86.73	0.77	0.27
0.903							
PS090	96.00	0.00	0.00	15.88	78.74	6.44	1.83
0.820							
PS091	96.00	0.00	0.00	4.13	90.16	0.33	0.12
0.939							
PS092_1	96.00	0.00	0.00	9.37	84.46	7.62	2.15
0.880							
PS092_2	96.00	0.00	0.00	11.49	81.72	13.06	2.91
0.851							
PS093	96.00	0.00	0.00	26.46	67.93	16.21	2.77
0.708							
PS099	96.00	0.00	0.00	16.18	76.17	31.72	5.48
0.793							
PS101_1	96.00	0.00	0.00	20.34	73.89	5.26	1.19
0.770							
PS101_2	96.00	0.00	0.00	26.68	66.32	16.08	1.87
0.691							
PS101_3	96.00	0.00	0.00	20.16	72.71	46.62	8.27
0.757							
PS110	96.00	0.00	0.00	10.33	83.05	21.42	5.17
0.865							
PS114	96.00	0.00	0.00	13.51	79.62	43.79	9.23
0.829							
PS115	96.00	0.00	0.00	16.76	76.86	13.21	2.86
0.801							
PS117_1	96.00	0.00	0.00	11.93	81.53	34.91	7.98
0.849							
PS117_2	96.00	0.00	0.00	11.41	82.21	5.10	1.31
0.856							
PS122	96.00	0.00	0.00	15.14	79.87	9.22	2.71
0.832							
PS123_1	96.00	0.00	0.00	28.38	66.49	6.19	1.69
0.693							
PS123_2	96.00	0.00	0.00	12.24	81.14	2.95	0.73
0.845							
PS124	96.00	0.00	0.00	15.49	77.55	27.69	5.51
0.808							
PS128	96.00	0.00	0.00	12.24	80.16	23.25	4.40
0.835							
PS134	96.00	0.00	0.00	18.34	76.34	1.58	0.46
0.795							
PS135	96.00	0.00	0.00	47.90	46.86	20.07	1.34
0.488							
PS138	96.00	0.00	0.00	23.74	69.48	11.70	1.70
0.724							
PS143_1	96.00	0.00	0.00	43.84	50.97	21.96	4.34
0.531							
PS143_2	96.00	0.00	0.00	39.25	53.27	7.33	0.30
0.555							
PS145	96.00	0.00	0.00	30.84	62.48	52.93	4.54
0.651							

PS150	96.00	0.00	0.00	46.25	48.53	18.76	1.63
0.505							
PS151	96.00	0.00	0.00	43.84	50.96	6.44	1.27
0.531							
PS152	96.00	0.00	0.00	50.54	44.24	27.55	1.79
0.461							
PS153	96.00	0.00	0.00	46.46	48.30	4.83	0.34
0.503							
PS156	96.00	0.00	0.00	44.79	50.06	2.13	0.45
0.521							
PS157	96.00	0.00	0.00	42.13	52.72	30.20	4.64
0.549							
PS158	96.00	0.00	0.00	47.87	45.90	126.40	16.18
0.478							
PS161	96.00	0.00	0.00	41.37	52.84	22.43	1.17
0.550							
PS164	96.00	0.00	0.00	50.97	43.78	24.09	0.89
0.456							
PS165	96.00	0.00	0.00	41.76	53.01	52.44	3.78
0.552							
PS166	96.00	0.00	0.00	48.11	46.67	40.71	2.73
0.486							
PS201	96.00	0.00	0.00	4.40	90.71	2.94	1.04
0.945							
PS202	96.00	0.00	0.00	9.49	84.86	90.16	19.36
0.884							
PS207	96.00	0.00	0.00	5.81	89.18	18.23	5.55
0.929							
PS212	96.00	0.00	0.00	15.99	78.98	19.90	5.57
0.823							
PS223	96.00	0.00	0.00	16.59	78.47	3.03	0.98
0.817							
PS230	96.00	0.00	0.00	12.67	82.31	21.48	6.23
0.857							
PS236	96.00	0.00	0.00	29.80	65.12	1.09	0.24
0.678							
PS241_1	96.00	0.00	0.00	17.45	77.54	14.38	4.17
0.808							
PS241_2	96.00	0.00	0.00	25.87	69.06	20.23	5.00
0.719							
PS246	96.00	0.00	0.00	30.22	64.69	3.27	0.67
0.674							
PS249	96.00	0.00	0.00	30.22	64.69	2.19	0.45
0.674							
PS252	96.00	0.00	0.00	25.25	69.67	12.09	2.79
0.726							
PS256	96.00	0.00	0.00	20.17	74.88	3.70	1.17
0.780							
PS259	96.00	0.00	0.00	16.80	78.27	3.16	1.05
0.815							
PS260	96.00	0.00	0.00	18.62	76.42	4.36	1.36
0.796							
PS263	96.00	0.00	0.00	30.11	64.79	2.60	0.54
0.675							

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Node Depth Summary  
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Node	Type	Average Depth Meters	Maximum Depth Meters	Maximum HGL Meters	Time of Max Occurrence days hr:min
CJ002	JUNCTION	3.61	3.61	92.50	0 06:00
CJ003	JUNCTION	3.69	3.69	92.51	0 16:45
CJ004	JUNCTION	3.76	3.77	92.52	0 17:05
CJ005	JUNCTION	3.77	3.79	92.53	0 17:09
CJ006	JUNCTION	3.69	3.71	92.54	0 17:19
CJ007	JUNCTION	3.62	3.65	92.55	0 17:21
CJ008	JUNCTION	3.22	3.24	92.55	0 17:24
CJ009	JUNCTION	2.97	3.00	92.56	0 17:25
CJ010	JUNCTION	3.09	3.13	92.57	0 17:27
CJ011	JUNCTION	3.24	3.28	92.58	0 17:29
CJ012	JUNCTION	3.39	3.44	92.60	0 17:30
CJ013	JUNCTION	3.41	3.47	92.62	0 17:31
CJ014	JUNCTION	4.03	4.10	92.64	0 17:34
CJ015	JUNCTION	3.90	3.97	92.65	0 17:36
CJ016	JUNCTION	3.80	3.89	92.67	0 17:38
CJ017	JUNCTION	3.72	3.81	92.68	0 17:39
CJ018	JUNCTION	3.63	3.74	92.71	0 17:40
CJ019	JUNCTION	3.56	3.68	92.74	0 17:40
CJ020	JUNCTION	3.45	3.59	92.78	0 17:41
CJ021	JUNCTION	3.38	3.53	92.80	0 17:41



**Kizell Lands - Fernbank 5618 Hazeldean Road**  
**PCSWMM Model Output SCS100-year 12-hour Carp River Interim**

CJ022	JUNCTION	3.61	3.78	92.83	0	17:40	CJ115	JUNCTION	1.85	2.41	93.81	0	12:21
CJ023	JUNCTION	3.61	3.78	92.84	0	17:38	CJ117	JUNCTION	1.80	2.40	93.91	0	12:06
CJ024	JUNCTION	3.61	3.78	92.85	0	17:37	CJ118	JUNCTION	1.85	2.41	93.81	0	12:21
CJ025	JUNCTION	3.60	3.78	92.86	0	17:36	CJ119	JUNCTION	1.83	2.43	93.92	0	12:06
CJ026	JUNCTION	3.59	3.77	92.86	0	17:35	CJ120	JUNCTION	1.84	2.47	93.98	0	11:57
CJ027	JUNCTION	3.59	3.77	92.87	0	17:33	CJ121	JUNCTION	1.83	2.39	93.81	0	12:21
CJ028	JUNCTION	3.59	3.77	92.87	0	17:32	CJ123	JUNCTION	1.82	2.39	93.82	0	12:20
CJ029	JUNCTION	3.35	3.54	92.88	0	17:30	CJ124	JUNCTION	1.82	2.38	93.82	0	12:20
CJ030	JUNCTION	3.22	3.40	92.88	0	17:27	CJ125	JUNCTION	1.82	2.38	93.82	0	12:20
CJ031	JUNCTION	3.04	3.23	92.89	0	17:24	CJ126	JUNCTION	2.23	2.86	94.06	0	11:43
CJ032	JUNCTION	3.14	3.44	93.11	0	16:29	CJ127	JUNCTION	1.81	2.38	93.82	0	12:20
CJ033	JUNCTION	3.13	3.43	93.11	0	16:29	CJ128	JUNCTION	2.35	3.14	94.32	0	06:22
CJ034	JUNCTION	2.94	3.25	93.12	0	16:28	CJ129	JUNCTION	1.81	2.37	93.82	0	12:20
CJ035	JUNCTION	2.81	3.12	93.13	0	16:27	CJ130	JUNCTION	1.84	2.41	93.83	0	12:20
CJ036	JUNCTION	2.79	3.10	93.13	0	16:26	CJ131	JUNCTION	1.84	2.41	93.83	0	12:20
CJ037	JUNCTION	2.67	2.98	93.14	0	16:22	CJ132	JUNCTION	1.80	2.36	93.83	0	12:19
CJ038	JUNCTION	2.73	3.04	93.15	0	16:20	CJ133	JUNCTION	1.79	2.35	93.83	0	12:18
CJ039	JUNCTION	2.77	3.08	93.15	0	16:19	CJ134	JUNCTION	1.79	2.35	93.83	0	12:18
CJ040	JUNCTION	2.77	3.08	93.15	0	16:19	CJ135	JUNCTION	1.79	2.36	93.85	0	12:16
CJ041	JUNCTION	2.57	2.89	93.16	0	16:17	CJ136	JUNCTION	1.79	2.36	93.85	0	12:16
CJ042	JUNCTION	2.47	2.79	93.16	0	16:15	CJ137	JUNCTION	1.80	2.40	93.91	0	12:06
CJ043	JUNCTION	2.38	2.69	93.16	0	16:14	CJ139	JUNCTION	1.85	2.49	93.99	0	11:57
CJ044	JUNCTION	2.28	2.59	93.17	0	16:12	CJ140	JUNCTION	1.84	2.47	93.99	0	11:57
CJ045	JUNCTION	2.21	2.53	93.19	0	16:00	CJ141	JUNCTION	0.63	0.90	112.40	0	10:22
CJ046	JUNCTION	2.22	2.53	93.24	0	15:21	CJ142	JUNCTION	1.79	2.43	94.03	0	11:51
CJ047	JUNCTION	2.20	2.52	93.26	0	15:07	CJ143	JUNCTION	1.80	2.43	94.03	0	11:51
CJ048	JUNCTION	2.18	2.51	93.28	0	14:55	CJ144	JUNCTION	0.90	1.53	94.03	0	11:51
CJ049	JUNCTION	2.18	2.51	93.28	0	14:54	CJ145	JUNCTION	0.85	1.48	94.04	0	11:51
CJ050	JUNCTION	2.26	2.70	93.47	0	13:32	CJ146	JUNCTION	1.73	2.36	94.06	0	11:43
CJ051	JUNCTION	2.15	2.59	93.47	0	13:32	CJ147	JUNCTION	1.72	2.35	94.06	0	11:43
CJ052	JUNCTION	2.17	2.61	93.48	0	13:32	CJ148	JUNCTION	1.72	2.34	94.07	0	11:42
CJ053	JUNCTION	2.22	2.66	93.48	0	13:32	CJ149	JUNCTION	1.71	2.33	94.07	0	11:42
CJ054	JUNCTION	2.14	2.58	93.48	0	13:32	CJ150	JUNCTION	1.71	2.35	94.15	0	11:26
CJ055	JUNCTION	2.13	2.57	93.48	0	13:32	CJ151	JUNCTION	1.70	2.32	94.07	0	11:42
CJ056	JUNCTION	2.16	2.60	93.48	0	13:32	CJ152	JUNCTION	1.62	2.23	94.08	0	11:41
CJ057	JUNCTION	2.11	2.55	93.48	0	13:32	CJ153	JUNCTION	1.71	2.35	94.15	0	11:26
CJ058	JUNCTION	2.12	2.57	93.49	0	13:31	CJ154	JUNCTION	1.61	2.25	94.15	0	11:26
CJ059	JUNCTION	2.13	2.58	93.49	0	13:31	CJ155	JUNCTION	1.61	2.24	94.15	0	11:26
CJ060	JUNCTION	2.14	2.58	93.49	0	13:31	CJ156	JUNCTION	1.62	2.25	94.15	0	11:22
CJ061	JUNCTION	2.16	2.60	93.49	0	13:31	CJ157	JUNCTION	1.62	2.25	94.15	0	11:22
CJ062	JUNCTION	2.05	2.50	93.50	0	13:30	CJ158	JUNCTION	1.61	2.24	94.15	0	11:26
CJ063	JUNCTION	2.12	2.57	93.51	0	13:29	CJ159	JUNCTION	1.60	2.24	94.16	0	11:26
CJ064	JUNCTION	2.12	2.57	93.52	0	13:27	CJ160	JUNCTION	1.60	2.24	94.16	0	11:26
CJ065	JUNCTION	2.07	2.52	93.52	0	13:27	CJ161	JUNCTION	1.57	2.20	94.16	0	11:25
CJ066	JUNCTION	2.05	2.50	93.52	0	13:27	CJ162	JUNCTION	1.56	2.19	94.16	0	11:25
CJ067	JUNCTION	1.99	2.44	93.52	0	13:27	CJ163	JUNCTION	1.53	2.16	94.16	0	11:23
CJ068	JUNCTION	2.02	2.47	93.53	0	13:26	CJ164	JUNCTION	1.53	2.18	94.18	0	11:24
CJ069	JUNCTION	2.01	2.47	93.53	0	13:26	CJ165	JUNCTION	1.54	2.19	94.18	0	11:24
CJ070	JUNCTION	1.97	2.43	93.53	0	13:26	CJ166	JUNCTION	1.53	2.18	94.18	0	11:25
CJ071	JUNCTION	1.93	2.38	93.53	0	13:25	CJ167	JUNCTION	1.54	2.18	94.18	0	11:25
CJ072	JUNCTION	1.94	2.39	93.53	0	13:25	CJ168	JUNCTION	1.54	2.17	94.18	0	11:25
CJ073	JUNCTION	1.90	2.36	93.54	0	13:24	CJ169	JUNCTION	1.54	2.17	94.18	0	11:20
CJ074	JUNCTION	1.88	2.34	93.54	0	13:23	CJ170	JUNCTION	1.54	2.17	94.18	0	11:25
CJ075	JUNCTION	1.87	2.33	93.54	0	13:23	CJ171	JUNCTION	1.54	2.18	94.19	0	11:20
CJ076	JUNCTION	1.88	2.33	93.54	0	13:22	CJ172	JUNCTION	1.54	2.18	94.19	0	11:20
CJ077	JUNCTION	1.95	3.95	95.18	0	06:01	CJ173	JUNCTION	1.55	2.19	94.19	0	11:20
CJ078	JUNCTION	1.87	2.33	93.55	0	13:22	CJ174	JUNCTION	1.54	2.18	94.19	0	11:20
CJ079	JUNCTION	1.87	2.33	93.55	0	13:20	CJ175	JUNCTION	1.64	2.27	94.20	0	11:26
CJ080	JUNCTION	1.87	2.33	93.55	0	13:20	CJ176	JUNCTION	1.68	2.31	94.21	0	11:27
CJ081	JUNCTION	1.85	2.31	93.55	0	13:19	CJ177	JUNCTION	1.43	2.07	94.22	0	11:27
CJ082	JUNCTION	0.91	6.00	98.27	0	05:59	CJ178	JUNCTION	1.43	2.07	94.22	0	11:28
CJ083	JUNCTION	1.86	2.32	93.56	0	13:19	CJ179	JUNCTION	1.41	2.05	94.22	0	11:37
CJ084	JUNCTION	1.85	2.31	93.56	0	13:19	CJ180	JUNCTION	1.42	2.05	94.22	0	11:36
CJ085	JUNCTION	2.01	2.01	92.51	0	06:00	CJ181	JUNCTION	1.39	2.02	94.22	0	11:35
CJ086	JUNCTION	0.68	1.06	115.06	0	06:07	CJ182	JUNCTION	1.38	2.01	94.22	0	11:36
CJ087	JUNCTION	2.47	2.79	93.15	0	16:21	CJ183	JUNCTION	1.38	2.01	94.22	0	11:36
CJ088	JUNCTION	1.03	1.36	117.36	0	12:00	CJ184	JUNCTION	1.38	2.01	94.23	0	11:36
CJ089	JUNCTION	1.87	2.33	93.58	0	13:13	CJ185	JUNCTION	1.38	2.01	94.23	0	11:36
CJ094	JUNCTION	0.63	0.90	93.64	0	12:22	CJ186	JUNCTION	1.38	2.01	94.23	0	11:36
CJ095	JUNCTION	0.52	0.80	93.66	0	12:14	CJ187	JUNCTION	1.40	2.03	94.23	0	11:30
CJ096	JUNCTION	0.27	0.48	93.63	0	12:02	CJ188	JUNCTION	1.36	1.99	94.23	0	11:30
CJ098	JUNCTION	1.02	1.78	95.18	0	10:05	CJ189	JUNCTION	1.29	1.92	94.23	0	11:30
CJ100	JUNCTION	1.83	2.29	93.59	0	13:11	CJ190	JUNCTION	1.28	1.91	94.23	0	11:30
CJ101	JUNCTION	1.85	2.35	93.67	0	12:49	CJ191	JUNCTION	1.27	1.90	94.23	0	11:30
CJ103	JUNCTION	1.88	2.44	93.80	0	12:25	CJ192	JUNCTION	1.27	1.90	94.23	0	11:34
CJ104	JUNCTION	1.85	2.35	93.67	0	12:49	CJ193	JUNCTION	1.26	1.89	94.23	0	11:34
CJ105	JUNCTION	1.84	2.35	93.70	0	12:44	CJ194	JUNCTION	1.25	1.88	94.23	0	11:34
CJ106	JUNCTION	1.84	2.35	93.70	0	12:44	CJ195	JUNCTION	1.25	1.88	94.23	0	11:38
CJ107	JUNCTION	1.88	2.43	93.80	0	12:25	CJ196	JUNCTION	1.22	1.85	94.23	0	11:38
CJ108	JUNCTION	1.88	2.44	93.80	0	12:25	CJ197	JUNCTION	1.21	1.84	94.23	0	11:38
CJ109	JUNCTION	1.88	2.44	93.80	0	12:25	CJ197_1	JUNCTION	1.20	1.83	94.23	0	11:31
CJ110	JUNCTION	1.86	2.42	93.80	0	12:25	CJ197_2	JUNCTION	1.20	1.83	94.23	0	11:32
CJ112	JUNCTION	1.86	2.42	93.80	0	12:25	CJ197_3	JUNCTION	1.19	1.82	94.23	0	11:32
CJ113	JUNCTION	1.86	2.42	93.80	0	12:25	CJ197_4	JUNCTION	1.17	1.80	94.23	0	11:32
CJ114	JUNCTION	1.85	2.41	93.81	0	12:21	CJ197_5	JUNCTION	1.17	1.80	94.24	0	11:32

**Kizell Lands - Fernbank 5618 Hazeldean Road**  
**PCSWMM Model Output SCS100-year 12-hour Carp River Interim**

CJ197_6	JUNCTION	1.17	1.80	94.24	0	11:32	FJ033	JUNCTION	1.55	2.80	99.91	0	07:37
CJ198	JUNCTION	1.17	1.79	94.24	0	11:32	FJ034	JUNCTION	1.46	3.10	100.42	0	07:36
CJ199	JUNCTION	1.54	2.20	94.31	0	11:18	FJ035	JUNCTION	1.22	2.77	100.43	0	07:36
CJ200	JUNCTION	1.23	1.89	94.32	0	11:19	FJ036	JUNCTION	0.94	2.23	100.45	0	07:36
CJ201	JUNCTION	1.34	2.03	94.41	0	09:11	FJ037	JUNCTION	1.11	2.24	100.47	0	07:36
CJ202	JUNCTION	1.12	1.79	94.42	0	09:12	FJ038	JUNCTION	1.04	2.65	101.30	0	07:28
CJ203	JUNCTION	1.01	1.68	94.43	0	09:12	FJ039	JUNCTION	1.14	2.71	101.30	0	07:28
CJ205	JUNCTION	1.03	2.39	95.75	0	06:37	FJ040	JUNCTION	0.98	1.92	101.37	0	07:27
CJ206	JUNCTION	0.94	2.39	95.85	0	06:37	FJ040_1	JUNCTION	0.80	1.42	101.57	0	07:22
CJ207	JUNCTION	0.78	2.30	95.95	0	06:35	FJ041	JUNCTION	0.76	1.30	102.35	0	08:42
CJ208	JUNCTION	0.75	2.29	95.99	0	06:35	FJ042	JUNCTION	0.86	1.37	102.85	0	08:40
CJ209	JUNCTION	0.23	1.75	96.45	0	06:25	FJ043	JUNCTION	0.70	1.08	103.10	0	08:39
CJ210	JUNCTION	0.26	1.47	98.33	0	06:17	FJ044	JUNCTION	1.04	1.77	103.79	0	10:54
CJ211	JUNCTION	0.43	2.28	100.28	0	06:14	FJ045	JUNCTION	0.96	1.55	103.81	0	10:54
CJ212	JUNCTION	0.23	2.15	100.52	0	06:14	FJ046	JUNCTION	0.82	1.27	103.88	0	10:53
CJ213	JUNCTION	0.37	1.32	101.09	0	06:10	FJ047	JUNCTION	1.00	1.40	103.89	0	10:52
CJ214	JUNCTION	0.12	2.25	105.41	0	06:01	FJ048	JUNCTION	2.19	4.56	102.56	0	07:14
CJ215	JUNCTION	2.34	3.13	94.32	0	06:21	FJ050	JUNCTION	0.26	0.75	106.03	0	06:53
CJ242	JUNCTION	1.00	1.62	94.07	0	11:53	FJ051	JUNCTION	0.10	0.48	106.03	0	06:53
CJ243	JUNCTION	0.83	1.45	94.08	0	11:48	FJ054	JUNCTION	0.62	0.98	104.42	0	08:34
CJ246	JUNCTION	0.23	1.54	101.26	0	06:00	FJ055	JUNCTION	1.00	1.48	104.91	0	08:32
CJ247	JUNCTION	0.21	1.52	102.20	0	06:00	FJ056	JUNCTION	0.77	1.17	104.93	0	08:31
CJ248_1	JUNCTION	0.16	1.03	103.03	0	06:02	FJ057	JUNCTION	0.62	0.94	105.18	0	08:29
CJ248_2	JUNCTION	0.20	0.91	94.71	0	06:12	FJ058	JUNCTION	0.82	1.55	105.91	0	09:39
CJ249	JUNCTION	1.04	1.69	94.32	0	11:18	FJ059	JUNCTION	0.10	0.54	116.79	0	06:09
CJ250	JUNCTION	0.61	1.22	94.32	0	11:16	FJ060	JUNCTION	0.12	0.89	120.57	0	06:01
CJ251	JUNCTION	0.76	1.47	94.47	0	08:59	FJ061	JUNCTION	0.16	0.89	124.78	0	06:00
CJ254	JUNCTION	0.31	0.82	98.52	0	07:27	FJ062	JUNCTION	1.10	1.67	105.93	0	09:40
CJ255	JUNCTION	0.59	1.78	95.35	0	08:22	FJ063	JUNCTION	1.61	2.29	106.11	0	09:45
CJ256	JUNCTION	0.83	2.03	95.03	0	15:10	FJ064	JUNCTION	0.30	0.49	106.11	0	09:44
CJ257	JUNCTION	0.29	0.73	94.58	0	06:51	FJ065	JUNCTION	0.12	0.53	124.95	0	06:03
CJ259	JUNCTION	0.19	4.30	102.39	0	06:02	FJ067	JUNCTION	0.50	0.65	106.21	0	09:24
CJ260	JUNCTION	0.14	0.92	97.47	0	06:34	FJ068	JUNCTION	0.53	0.68	106.45	0	08:41
CJ261	JUNCTION	0.12	3.78	102.84	0	06:01	FJ069	JUNCTION	0.91	1.17	106.71	0	08:44
CJ262	JUNCTION	0.33	1.31	102.44	0	06:08	FJ070	JUNCTION	0.64	0.94	106.86	0	08:42
CJ263	JUNCTION	0.25	1.04	103.04	0	06:07	FJ071	JUNCTION	0.38	0.58	106.86	0	08:42
CJ264	JUNCTION	0.35	1.49	106.49	0	06:04	FJ072	JUNCTION	1.19	1.51	107.31	0	08:45
CJ265	JUNCTION	0.33	2.92	108.69	0	06:00	FJ073	JUNCTION	1.11	1.43	107.32	0	08:45
CJ266	JUNCTION	0.78	1.23	93.53	0	13:25	FJ074	JUNCTION	0.70	1.01	107.32	0	08:45
CJ267	JUNCTION	0.44	0.92	94.32	0	11:11	FJ075	JUNCTION	0.52	0.78	107.70	0	08:29
CJ282	JUNCTION	0.11	2.48	111.48	0	06:01	FJ076	JUNCTION	0.94	1.10	108.22	0	08:29
CJ283	JUNCTION	0.87	1.43	93.43	0	06:02	FJ077	JUNCTION	0.76	1.07	108.59	0	08:28
CJ284	JUNCTION	0.79	1.66	93.74	0	06:04	FJ078	JUNCTION	0.95	1.19	108.72	0	08:27
CJ285	JUNCTION	0.38	0.92	94.22	0	11:37	FJ079	JUNCTION	0.90	1.24	108.99	0	08:25
CJ286	JUNCTION	0.01	0.11	94.56	0	06:05	FJ080	JUNCTION	0.79	1.14	109.17	0	08:21
CJ287	JUNCTION	0.38	1.74	95.18	0	07:42	FJ081	JUNCTION	0.74	1.10	109.51	0	08:18
CJ289	JUNCTION	3.25	4.46	95.68	0	06:00	FJ082	JUNCTION	0.54	0.80	110.01	0	15:21
CJ290	JUNCTION	2.59	4.63	96.51	0	09:13	FJ083	JUNCTION	0.85	1.21	110.58	0	15:18
CJ291	JUNCTION	1.30	2.79	95.96	0	06:01	FJ084	JUNCTION	0.93	1.38	110.86	0	15:16
CJ292	JUNCTION	0.11	0.88	96.34	0	06:01	FJ085	JUNCTION	1.01	1.47	110.88	0	15:15
CJ293	JUNCTION	0.05	0.96	98.08	0	06:00	FJ086	JUNCTION	0.95	1.45	110.98	0	15:14
CJ294	JUNCTION	0.11	0.73	97.63	0	05:47	FJ087	JUNCTION	0.90	1.39	110.99	0	15:14
CJ295	JUNCTION	0.65	1.20	93.80	0	12:25	FJ090	JUNCTION	0.00	0.00	111.29	0	13:10
CJ296	JUNCTION	0.96	2.35	95.86	0	05:48	FJ091	JUNCTION	0.66	0.89	112.83	0	13:10
CJ297	JUNCTION	0.32	1.32	96.32	0	06:13	FJ092	JUNCTION	0.54	0.75	112.85	0	13:08
FJ002	JUNCTION	1.35	1.91	93.80	0	12:05	FJ093	JUNCTION	0.27	0.40	112.88	0	13:03
FJ003	JUNCTION	0.75	1.30	93.80	0	12:25	FJ094	JUNCTION	0.52	0.98	113.80	0	12:46
FJ004	JUNCTION	1.18	2.20	94.83	0	07:21	FJ095	JUNCTION	0.46	0.71	114.24	0	07:30
FJ005	JUNCTION	1.91	2.96	95.05	0	08:03	FJ096	JUNCTION	0.44	0.56	114.63	0	10:16
FJ006	JUNCTION	1.41	2.45	95.05	0	08:03	FJ097	JUNCTION	0.39	0.57	115.08	0	10:10
FJ007	JUNCTION	1.22	2.23	95.21	0	07:40	FJ098	JUNCTION	0.57	0.93	116.29	0	10:04
FJ008	JUNCTION	1.74	2.82	95.40	0	07:39	FJ099	JUNCTION	0.53	0.85	116.45	0	10:03
FJ009	JUNCTION	1.15	2.25	95.44	0	07:39	FJ100	JUNCTION	0.27	0.44	117.27	0	10:01
FJ010	JUNCTION	1.58	2.82	96.06	0	07:36	FJ101	JUNCTION	0.80	1.29	110.99	0	15:14
FJ011	JUNCTION	1.55	2.78	96.30	0	07:35	FJ102	JUNCTION	1.29	2.90	120.80	0	10:30
FJ012	JUNCTION	1.01	2.03	96.33	0	07:35	FJ104	JUNCTION	0.35	1.03	128.16	0	06:05
FJ013	JUNCTION	0.89	1.75	96.39	0	07:34	FJ105	JUNCTION	0.85	1.29	118.09	0	10:01
FJ014	JUNCTION	0.96	1.70	96.69	0	07:29	FJ108	JUNCTION	0.98	2.23	98.13	0	06:36
FJ015	JUNCTION	1.37	2.16	96.96	0	07:27	FJ200	JUNCTION	0.09	1.43	112.21	0	06:00
FJ016	JUNCTION	1.29	2.10	97.08	0	07:27	FJ201	JUNCTION	0.53	2.71	112.79	0	06:00
FJ017	JUNCTION	1.40	2.23	97.30	0	07:22	FJ202	JUNCTION	0.71	4.24	114.11	0	06:00
FJ018	JUNCTION	1.11	1.94	97.32	0	07:22	FJ203	JUNCTION	0.00	0.01	118.01	0	06:00
FJ019	JUNCTION	0.95	2.18	97.97	0	07:21	FJ204	JUNCTION	0.00	0.11	114.59	0	06:01
FJ020	JUNCTION	0.14	0.43	98.59	0	06:00	FJ205	JUNCTION	0.06	0.37	112.37	0	06:01
FJ021	JUNCTION	0.28	1.12	99.72	0	08:07	FJ206	JUNCTION	0.00	0.15	116.15	0	06:00
FJ023	JUNCTION	1.49	2.63	98.01	0	07:21	FJ208	JUNCTION	0.10	0.57	102.17	0	06:10
FJ024	JUNCTION	1.60	2.68	98.05	0	07:20	FJ209	JUNCTION	0.17	1.25	103.45	0	06:10
FJ025	JUNCTION	1.04	2.09	98.11	0	07:25	FJ216	JUNCTION	0.29	0.72	111.10	0	07:26
FJ026	JUNCTION	1.14	2.05	98.23	0	08:12	FJ217	JUNCTION	0.74	1.20	111.01	0	06:14
FJ027	JUNCTION	0.94	1.89	98.29	0	08:22	FJ218	JUNCTION	0.63	1.11	111.04	0	06:13
FJ028	JUNCTION	0.79	1.71	98.79	0	08:15	FJ219	JUNCTION	0.67	1.12	111.00	0	06:15
FJ029	JUNCTION	1.15	1.90	99.09	0	07:40	FJ220	JUNCTION	0.00	0.00	115.95	0	00:00
FJ030	JUNCTION	1.26	2.06	99.29	0	07:37	FJ221	JUNCTION	0.87	1.33	111.00	0	07:28
FJ031	JUNCTION	1.61	2.43	99.34	0	07:36	FJ222	JUNCTION	0.00	0.00	112.66	0	00:00
FJ032	JUNCTION	1.57	2.81	99.89	0	07:37	FJ223	JUNCTION	0.00	0.00	116.10	0	00:00

**Kizell Lands - Fernbank 5618 Hazeldean Road**  
**PCSWMM Model Output SCS100-year 12-hour Carp River Interim**



FJ224	JUNCTION	0.00	0.00	117.04	0	00:00	PJ029	JUNCTION	1.26	1.79	96.12	0	10:05
FJ225	JUNCTION	0.00	0.00	113.23	0	00:00	PJ030	JUNCTION	0.79	1.19	96.40	0	06:08
FJ226	JUNCTION	0.54	1.03	111.07	0	06:13	PJ031	JUNCTION	0.69	1.06	97.77	0	06:07
FJ227	JUNCTION	0.16	0.45	111.73	0	06:00	PJ032	JUNCTION	1.17	1.64	98.54	0	06:06
FJ228	JUNCTION	0.17	0.44	111.50	0	06:01	PJ033	JUNCTION	0.72	1.14	98.76	0	06:05
FJ229	JUNCTION	1.84	2.30	111.00	0	07:15	PJ034	JUNCTION	0.60	0.91	99.33	0	06:04
FJ230	JUNCTION	1.95	2.50	111.08	0	17:26	PJ035	JUNCTION	0.74	0.98	99.65	0	06:03
FJ231	JUNCTION	2.04	2.58	111.07	0	17:47	PJ036	JUNCTION	0.68	0.93	99.81	0	06:02
FJ232	JUNCTION	2.13	2.71	111.11	0	17:48	PJ037	JUNCTION	0.79	1.09	100.12	0	06:01
FJ233	JUNCTION	1.75	2.21	111.00	0	07:29	PJ038	JUNCTION	1.42	1.79	100.28	0	09:52
FJ234	JUNCTION	0.88	1.34	111.00	0	07:29	PJ039	JUNCTION	0.56	0.90	101.80	0	09:51
FJ235	JUNCTION	0.77	1.23	111.01	0	07:30	PJ040	JUNCTION	0.85	1.30	102.77	0	09:50
FJ236	JUNCTION	0.26	0.59	111.04	0	07:30	PJ041	JUNCTION	1.24	1.70	102.93	0	09:50
P1-101 (STM)	JUNCTION	0.67	1.72	99.37	0	06:57	PJ042	JUNCTION	0.69	1.06	103.35	0	09:49
P1-101a (STM)	JUNCTION	0.72	1.69	99.28	0	07:16	PJ043	JUNCTION	1.15	1.64	104.33	0	09:48
P1-103 (STM)	JUNCTION	0.64	1.77	99.47	0	06:46	PJ044	JUNCTION	0.69	1.10	104.64	0	09:48
P1-105 (STM)	JUNCTION	0.57	1.79	99.57	0	06:44	PJ045	JUNCTION	0.93	1.33	105.02	0	09:47
P1-107 (STM)	JUNCTION	0.22	1.28	99.63	0	06:45	PJ046	JUNCTION	1.01	1.61	105.33	0	09:47
P1-109 (STM)	JUNCTION	0.20	1.20	99.66	0	06:45	PJ047	JUNCTION	1.25	1.81	106.10	0	09:46
P1-111 (STM)	JUNCTION	0.11	0.90	99.69	0	06:46	PJ048	JUNCTION	1.88	2.88	107.76	0	09:46
P1-113 (STM)	JUNCTION	0.08	0.58	99.75	0	06:47	PJ049	JUNCTION	1.06	1.91	107.85	0	09:45
P1-147 (STM)	JUNCTION	0.43	1.80	99.78	0	06:29	PJ050	JUNCTION	0.99	1.54	108.44	0	09:44
P1-153 (STM)	JUNCTION	0.41	1.90	100.00	0	06:28	PJ051	JUNCTION	1.14	1.72	109.08	0	09:43
P1-165 (STM)	JUNCTION	0.39	1.96	100.19	0	06:28	PJ052	JUNCTION	1.48	1.97	109.17	0	09:41
P1-169 (STM)	JUNCTION	0.38	2.03	100.34	0	06:28	PJ053	JUNCTION	1.44	1.93	109.19	0	09:41
P1-171 (STM)	JUNCTION	0.36	2.05	100.49	0	06:28	PJ054	JUNCTION	1.80	2.30	109.21	0	09:40
P1-173 (STM)	JUNCTION	0.08	1.20	100.63	0	06:18	PJ055	JUNCTION	1.73	2.40	109.45	0	09:32
P1-203 (STM)	JUNCTION	0.39	2.12	100.79	0	06:28	PJ056	JUNCTION	1.50	2.18	109.45	0	09:32
P1-205 (STM)	JUNCTION	0.37	2.13	101.04	0	06:16	PJ057	JUNCTION	1.01	1.45	109.61	0	09:27
P1-207 (STM)	JUNCTION	0.37	2.14	101.30	0	06:16	PJ058	JUNCTION	1.31	1.72	109.69	0	09:23
P1-209 (STM)	JUNCTION	0.05	1.48	101.91	0	06:09	PJ059	JUNCTION	1.41	1.85	109.81	0	09:16
P1-215 (STM)	JUNCTION	0.32	2.03	101.62	0	06:16	PJ060	JUNCTION	0.70	1.10	110.14	0	09:02
P1-215a (STM)	JUNCTION	0.03	0.79	101.85	0	06:17	PJ067	JUNCTION	0.71	1.10	110.56	0	09:05
P1-217 (STM)	JUNCTION	0.36	2.23	102.12	0	06:16	PJ068	JUNCTION	0.94	1.42	111.32	0	09:05
P1-219 (STM)	JUNCTION	0.10	1.59	102.23	0	06:16	PJ069	JUNCTION	1.07	1.58	111.53	0	09:05
P1-219a (STM)	JUNCTION	0.04	1.07	102.26	0	06:16	PJ070	JUNCTION	1.25	1.94	111.81	0	09:04
P1-221 (STM)	JUNCTION	0.04	1.17	101.86	0	06:16	PJ072	JUNCTION	0.69	1.37	111.82	0	09:09
P1-221a (STM)	JUNCTION	0.36	2.13	101.85	0	06:16	PJ073	JUNCTION	1.41	1.94	111.83	0	09:02
P1-301 (STM)	JUNCTION	0.61	1.59	99.29	0	07:25	PJ074	JUNCTION	1.47	2.00	111.83	0	09:03
P1-301a (STM)	JUNCTION	0.61	1.60	99.30	0	07:33	PJ075	JUNCTION	1.54	1.86	112.02	0	08:24
P1-303 (STM)	JUNCTION	0.59	1.57	99.30	0	07:25	PJ076	JUNCTION	1.61	1.93	112.02	0	08:24
P1-305 (STM)	JUNCTION	0.53	1.53	99.32	0	07:25	PJ077	JUNCTION	0.71	1.02	112.03	0	08:23
P1-307 (STM)	JUNCTION	0.15	0.84	99.32	0	07:01	PJ078	JUNCTION	0.58	0.90	112.03	0	08:23
P1-309 (STM)	JUNCTION	0.11	0.73	99.37	0	07:00	PJ079	JUNCTION	0.27	0.48	112.12	0	06:59
P1-311 (STM)	JUNCTION	0.00	0.00	99.43	0	00:00	PJ080	JUNCTION	0.28	0.41	112.93	0	07:02
P1-317 (STM)	JUNCTION	0.42	1.36	99.27	0	07:25	PJ081	JUNCTION	0.39	0.56	113.46	0	06:52
P1-319 (STM)	JUNCTION	0.29	1.17	99.29	0	06:49	PJ082	JUNCTION	0.36	0.56	113.79	0	06:56
P1-321 (STM)	JUNCTION	0.25	1.09	99.31	0	06:49	PJ083	JUNCTION	0.36	0.59	114.18	0	06:50
P1-323 (STM)	JUNCTION	0.05	0.49	99.38	0	06:11	PJ085	JUNCTION	0.81	1.15	115.26	0	06:45
P1-327 (STM)	JUNCTION	0.08	0.66	99.48	0	06:10	PJ086	JUNCTION	0.79	1.16	115.45	0	06:44
P1-329 (STM)	JUNCTION	0.00	0.10	99.48	0	06:10	PJ087	JUNCTION	1.00	1.45	115.84	0	06:41
P1-331 (STM)	JUNCTION	0.00	0.00	99.89	0	00:00	PJ088	JUNCTION	0.94	1.43	115.96	0	06:40
P1-333 (STM)	JUNCTION	0.00	0.00	99.71	0	00:00	PJ089	JUNCTION	1.07	1.57	116.16	0	06:38
P1-335 (STM)	JUNCTION	0.03	0.64	100.53	0	06:28	PJ090	JUNCTION	0.91	1.41	116.21	0	06:38
P1-337 (STM)	JUNCTION	0.06	0.47	99.81	0	06:17	PJ091	JUNCTION	0.87	1.37	116.30	0	06:37
P1-349 (STM)	JUNCTION	0.05	1.03	102.65	0	06:16	PJ092	JUNCTION	1.12	1.64	116.55	0	06:34
P1-351 (STM)	JUNCTION	0.06	1.39	102.74	0	06:07	PJ093	JUNCTION	1.15	1.78	116.69	0	06:36
P1-EX. 501 (STM)	JUNCTION	0.40	2.73	103.91	0	06:11	PJ094	JUNCTION	0.99	1.51	116.81	0	06:37
P1-EX. 502 (STM)	JUNCTION	0.37	2.34	103.46	0	06:10	PJ095	JUNCTION	1.02	1.48	117.00	0	06:36
P1-EX. 503 (STM)	JUNCTION	0.35	2.28	103.15	0	06:09	PJ096	JUNCTION	1.24	1.71	117.18	0	06:33
P1-EX. 504 (STM)	JUNCTION	0.25	1.93	102.56	0	06:09	PJ097	JUNCTION	1.03	1.51	117.24	0	06:31
PJ002	JUNCTION	1.51	2.14	94.21	0	11:25	PJ098	JUNCTION	1.18	1.71	117.47	0	06:13
FJ003	JUNCTION	1.82	2.45	94.34	0	10:47	PJ099	JUNCTION	1.25	1.81	117.53	0	06:11
FJ004	JUNCTION	0.94	1.56	94.36	0	10:58	PJ102	JUNCTION	1.58	1.89	112.02	0	08:24
PJ005	JUNCTION	2.09	2.75	94.55	0	10:42	PJ103	JUNCTION	0.80	1.11	112.09	0	08:18
PJ006	JUNCTION	0.87	1.50	94.56	0	10:41	PJ104	JUNCTION	1.37	1.66	112.12	0	08:15
PJ007	JUNCTION	1.64	2.10	94.54	0	10:38	PJ105	JUNCTION	1.32	1.62	112.12	0	08:15
FJ008	JUNCTION	1.94	2.48	94.66	0	10:35	PJ106	JUNCTION	0.39	0.68	112.12	0	08:15
FJ009	JUNCTION	0.98	1.51	94.68	0	10:35	PJ107	JUNCTION	0.13	0.85	112.77	0	06:08
FJ010	JUNCTION	0.81	1.29	94.75	0	10:33	PJ108	JUNCTION	0.08	0.49	113.23	0	06:04
FJ011	JUNCTION	2.19	2.57	95.12	0	10:24	PJ109	JUNCTION	0.62	2.93	115.20	0	05:59
FJ012	JUNCTION	1.15	1.54	95.13	0	10:24	PJ110	JUNCTION	0.08	0.75	114.75	0	06:02
FJ013	JUNCTION	1.24	1.64	95.16	0	10:23	PJ111	JUNCTION	0.21	0.47	112.12	0	08:13
FJ014	JUNCTION	1.82	2.24	95.26	0	10:21	PJ112	JUNCTION	1.28	1.74	117.57	0	06:10
FJ015	JUNCTION	1.81	2.24	95.26	0	10:21	PJ113	JUNCTION	1.28	1.71	117.87	0	06:07
FJ018	JUNCTION	1.06	1.49	95.27	0	10:21	PJ114	JUNCTION	1.42	1.90	118.06	0	06:06
FJ019	JUNCTION	1.05	1.46	95.49	0	10:15	PJ115	JUNCTION	1.69	2.18	118.07	0	06:05
FJ021	JUNCTION	1.09	1.49	95.61	0	10:13	PJ116	JUNCTION	1.30	1.60	112.12	0	08:15
FJ022	JUNCTION	1.94	2.41	95.90	0	10:09	PJ117	JUNCTION	0.85	1.14	112.43	0	08:02
FJ023	JUNCTION	1.35	1.83	95.93	0	10:09	PJ118	JUNCTION	0.88	1.19	112.62	0	08:03
FJ024	JUNCTION	1.39	1.88	96.00	0	10:08	PJ119	JUNCTION	0.83	1.12	112.66	0	08:01
FJ025	JUNCTION	1.30	1.79	96.02	0	10:08	PJ120	JUNCTION	1.01	1.28	112.84	0	07:46
FJ026	JUNCTION	1.38	1.88	96.06	0	10:07	PJ121	JUNCTION	0.93	1.21	112.85	0	07:45
FJ027	JUNCTION	1.63	2.13	96.07	0	10:06	PJ123	JUNCTION	1.19	1.65	118.06	0	06:06
FJ028	JUNCTION	1.58	2.11	96.11	0	10:05	PJ125	JUNCTION	0.90	1.23	113.18	0	07:06

**Kizell Lands - Fernbank 5618 Hazeldean Road**  
**PCSWMM Model Output SCS100-year 12-hour Carp River Interim**

PJ126	JUNCTION	0.65	0.83	113.36	0	06:57	PJ250	JUNCTION	0.15	2.42	101.33	0	06:00
PJ127	JUNCTION	0.59	0.79	113.85	0	06:51	PJ253	JUNCTION	0.53	2.27	100.98	0	06:00
PJ128	JUNCTION	0.71	0.92	114.03	0	06:48	PJ254	JUNCTION	0.82	1.26	100.26	0	06:01
PJ129	JUNCTION	0.81	1.04	118.18	0	15:56	PJ255	JUNCTION	0.32	5.10	103.52	0	05:59
PJ130	JUNCTION	1.05	1.29	118.73	0	16:21	PJ256	JUNCTION	0.16	4.32	103.43	0	05:59
PJ131	JUNCTION	0.66	0.85	119.16	0	16:08	PJ257	JUNCTION	0.12	3.79	103.35	0	06:00
PJ132	JUNCTION	0.92	1.17	119.69	0	16:05	PJ258	JUNCTION	0.09	3.24	103.38	0	05:49
PJ133	JUNCTION	0.71	0.87	119.99	0	15:59	PJ259	JUNCTION	0.09	3.07	103.42	0	05:49
PJ134	JUNCTION	1.05	1.23	120.07	0	15:58	PJ260	JUNCTION	0.06	2.27	103.09	0	06:00
PJ135	JUNCTION	1.08	1.27	120.08	0	15:58	PJ261	JUNCTION	0.01	1.15	102.58	0	06:00
PJ136	JUNCTION	0.45	0.59	120.42	0	16:08	PJ262	JUNCTION	0.32	2.02	101.73	0	06:00
PJ137	JUNCTION	0.40	0.47	120.56	0	15:49	PJ263	JUNCTION	0.39	2.89	101.69	0	06:00
PJ138	JUNCTION	0.44	0.52	120.81	0	15:39	CO001	OUTFALL	3.70	3.70	92.50	0	00:00
PJ139	JUNCTION	0.47	0.55	121.12	0	15:45	CSto092	STORAGE	0.37	1.09	94.59	0	06:07
PJ140	JUNCTION	0.31	0.36	121.14	0	15:43	CSto097	STORAGE	1.20	1.98	95.18	0	10:05
PJ143	JUNCTION	0.20	0.28	125.33	0	10:22	CSto127	STORAGE	1.03	1.82	94.32	0	06:21
PJ144	JUNCTION	0.23	0.39	126.48	0	10:09	CSto129	STORAGE	2.20	3.04	94.37	0	06:13
PJ145	JUNCTION	0.16	0.38	132.61	0	07:17	CSto204	STORAGE	1.00	2.31	95.35	0	08:23
PJ146	JUNCTION	0.48	0.57	121.52	0	15:29	CSto205	STORAGE	0.82	1.58	94.58	0	15:06
PJ147	JUNCTION	0.39	0.46	121.90	0	15:28	CSto216	STORAGE	2.04	3.05	94.55	0	06:15
PJ148	JUNCTION	0.59	0.73	122.64	0	15:22	CSto257	STORAGE	0.57	1.77	95.17	0	06:24
PJ149	JUNCTION	0.75	0.89	122.65	0	15:22	CSto258	STORAGE	0.65	1.63	95.53	0	06:49
PJ151	JUNCTION	0.20	0.38	125.78	0	12:45	CSto267	STORAGE	0.64	1.26	93.96	0	06:08
PJ153	JUNCTION	0.55	0.66	122.74	0	15:20	CSto268_1	STORAGE	0.82	1.32	93.82	0	12:20
PJ154	JUNCTION	0.45	0.56	123.07	0	15:14	CSto268_2	STORAGE	0.01	0.17	94.37	0	06:00
PJ155	JUNCTION	0.39	0.50	123.75	0	15:10	CSto269	STORAGE	0.54	1.38	93.83	0	06:04
PJ156	JUNCTION	0.66	0.76	124.88	0	15:02	CSto270	STORAGE	1.01	1.56	95.00	0	06:05
PJ158	JUNCTION	0.15	0.41	126.22	0	06:26	CSto271	STORAGE	0.19	4.76	103.26	0	06:01
PJ159	JUNCTION	0.74	0.91	125.14	0	15:25	CSto272	STORAGE	0.53	1.23	94.13	0	06:20
PJ160	JUNCTION	0.86	1.04	125.14	0	15:24	CSto273	STORAGE	0.14	0.82	96.32	0	06:14
PJ161	JUNCTION	0.73	0.91	125.15	0	15:23	FJ049	STORAGE	4.13	5.08	103.08	0	07:04
PJ163	JUNCTION	0.56	0.74	125.16	0	15:22	FJ088	STORAGE	1.18	1.60	111.20	0	14:29
PJ165	JUNCTION	0.09	0.19	131.89	0	07:53	FSto022	STORAGE	0.68	1.81	100.41	0	08:02
PJ166	JUNCTION	0.14	0.23	125.15	0	15:18	FSto053	STORAGE	3.99	4.67	86.05	0	16:55
PJ168	JUNCTION	0.12	0.26	123.37	0	07:37	FSto066	STORAGE	0.59	1.99	129.47	0	08:35
PJ169	JUNCTION	0.17	0.36	125.92	0	07:35	FSto101	STORAGE	2.81	3.78	119.28	0	10:01
PJ170	JUNCTION	0.57	0.67	124.88	0	15:00	FSto103	STORAGE	4.36	5.46	121.46	0	10:35
PJ171	JUNCTION	0.22	0.29	125.22	0	12:50	FSto105	STORAGE	2.74	3.26	112.32	0	19:00
PJ172	JUNCTION	0.35	0.52	125.16	0	15:22	FSto106_1	STORAGE	0.82	1.29	110.99	0	15:17
PJ173	JUNCTION	0.04	0.53	114.71	0	06:00	FSto108	STORAGE	4.22	5.47	98.47	0	06:23
PJ174	JUNCTION	0.30	0.71	119.02	0	07:42	FSto200	STORAGE	0.03	0.81	114.88	0	06:22
PJ200	JUNCTION	0.94	1.56	94.16	0	06:11	FSto201	STORAGE	0.03	0.77	116.28	0	06:14
PJ203	JUNCTION	2.18	3.10	95.04	0	06:11	FSto202	STORAGE	0.02	0.72	112.87	0	06:10
PJ204	JUNCTION	2.12	3.42	95.43	0	05:57	FSto203	STORAGE	0.25	1.72	129.05	0	06:13
PJ205	JUNCTION	1.92	3.75	95.97	0	05:57	FSto204	STORAGE	0.12	2.09	123.79	0	06:21
PJ206	JUNCTION	1.72	3.98	96.40	0	05:57	FSto205	STORAGE	0.49	2.70	110.90	0	07:12
PJ207	JUNCTION	1.37	4.45	97.23	0	05:57	FSto206	STORAGE	0.11	1.20	111.00	0	06:40
PJ208	JUNCTION	0.71	4.18	97.64	0	05:57	FSto210	STORAGE	0.24	1.43	103.63	0	06:10
PJ209	JUNCTION	0.27	4.19	98.19	0	05:57	FSto212	STORAGE	0.00	0.00	116.50	0	00:00
PJ210	JUNCTION	0.24	4.43	98.79	0	05:57	FSto213	STORAGE	0.00	0.00	114.80	0	00:00
PJ211	JUNCTION	0.12	3.46	98.91	0	05:57	FSto214	STORAGE	0.23	0.71	119.21	0	08:00
PJ212	JUNCTION	0.13	4.15	99.78	0	05:57	GR SWMF	STORAGE	0.39	1.43	103.98	0	07:01
PJ213	JUNCTION	0.05	4.19	100.22	0	05:58	IBER_IND SWMF	STORAGE	0.13	0.93	103.43	0	06:36
PJ214	JUNCTION	0.05	4.37	100.90	0	05:57	P1-01-02S	STORAGE	0.08	1.58	103.93	0	06:16
PJ215	JUNCTION	0.05	4.07	100.99	0	05:57	P1-03aS	STORAGE	0.10	1.91	102.82	0	06:03
PJ216	JUNCTION	0.05	3.94	100.99	0	05:58	P1-03bS	STORAGE	0.09	1.69	104.04	0	06:09
PJ217	JUNCTION	0.05	4.14	101.34	0	05:57	P1-04aS	STORAGE	0.09	1.68	102.73	0	06:16
PJ218	JUNCTION	0.05	4.30	101.70	0	05:57	P1-04bS	STORAGE	0.08	1.61	103.06	0	06:13
PJ219	JUNCTION	0.05	5.00	102.91	0	05:58	P1-05S	STORAGE	0.06	1.49	103.49	0	06:03
PJ220	JUNCTION	0.04	3.05	101.46	0	05:59	P1-06S	STORAGE	0.09	1.71	103.76	0	06:08
PJ221	JUNCTION	0.05	1.32	100.07	0	05:59	P1-07S	STORAGE	0.07	1.55	103.25	0	06:09
PJ222	JUNCTION	0.10	0.84	99.59	0	05:59	P1-08S	STORAGE	0.14	1.71	103.36	0	06:19
PJ223	JUNCTION	0.06	1.28	100.22	0	05:59	P1-09S	STORAGE	0.06	1.57	103.32	0	06:08
PJ224	JUNCTION	0.16	0.54	96.12	0	10:07	P1-10S	STORAGE	0.07	1.64	102.64	0	06:06
PJ225	JUNCTION	0.16	1.29	96.87	0	05:59	P1-11S	STORAGE	0.10	1.66	102.36	0	06:12
PJ226	JUNCTION	0.00	0.67	99.41	0	05:59	P1-12S	STORAGE	0.10	1.54	101.94	0	06:13
PJ227	JUNCTION	0.22	3.44	98.71	0	05:57	P1-13S	STORAGE	0.15	1.69	102.54	0	06:23
PJ228	JUNCTION	0.22	3.03	98.63	0	06:00	P1-14S	STORAGE	0.09	1.56	101.96	0	06:09
PJ229	JUNCTION	0.24	1.76	99.01	0	06:00	P1-15S	STORAGE	0.09	1.64	101.89	0	06:11
PJ230	JUNCTION	0.22	1.79	99.16	0	06:00	P1-16S	STORAGE	0.10	1.71	103.11	0	06:09
PJ231	JUNCTION	0.20	1.61	99.19	0	06:00	P1-17S	STORAGE	0.06	1.55	102.15	0	06:03
PJ232	JUNCTION	0.19	1.41	99.24	0	06:01	P1-18S	STORAGE	0.07	1.65	101.95	0	06:07
PJ233	JUNCTION	0.19	1.36	99.25	0	06:01	P1-19S	STORAGE	0.06	1.55	101.55	0	06:04
PJ234	JUNCTION	0.19	1.32	99.28	0	06:01	P1-20S	STORAGE	0.11	1.70	102.05	0	06:13
PJ235	JUNCTION	0.19	1.26	99.30	0	06:01	POND	STORAGE	2.06	3.00	99.25	0	07:23
PJ236	JUNCTION	0.19	1.18	99.36	0	06:00	PSto061	STORAGE	0.63	2.25	111.75	0	07:20
PJ237	JUNCTION	0.19	1.14	99.40	0	06:00	PSto062	STORAGE	0.04	0.31	112.05	0	06:04
PJ238	JUNCTION	0.19	1.13	99.46	0	06:00	PSto071	STORAGE	0.02	0.10	112.78	0	06:01
PJ239	JUNCTION	0.37	5.21	103.54	0	05:59	PSto084	STORAGE	0.66	0.88	114.54	0	06:48
PJ240	JUNCTION	0.30	5.24	103.82	0	05:59	PSto100	STORAGE	0.66	2.02	120.63	0	07:39
PJ241	JUNCTION	0.28	5.43	104.11	0	06:00	PSto101	STORAGE	0.33	0.92	120.66	0	08:48
PJ242	JUNCTION	0.42	1.26	99.26	0	06:01	PSto122	STORAGE	0.27	0.53	112.85	0	07:45
PJ243	JUNCTION	0.49	1.28	99.28	0	06:01	PSto124	STORAGE	2.31	3.66	119.41	0	06:31
PJ244	JUNCTION	0.44	1.18	99.35	0	06:01	PSto201	STORAGE	0.91	1.50	94.70	0	06:29
PJ248	JUNCTION	0.48	3.03	101.49	0	06:01	PSto202	STORAGE	1.87	3.19	95.45	0	06:17

# Kizell Lands - Fernbank 5618 Hazeldean Road PCSWMM Model Output SCS100-year 12-hour Carp River Interim



PSto245	STORAGE	0.60	3.31	101.41	0	06:01
PSto246	STORAGE	0.50	3.17	101.45	0	06:01
PSto247	STORAGE	0.49	3.09	101.48	0	06:00
PSto249	STORAGE	0.19	2.58	101.40	0	06:01
PSto251	STORAGE	0.44	2.60	101.25	0	06:00
PSto252	STORAGE	0.44	2.26	101.04	0	06:00

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Node Inflow Summary  
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Node	Type	Maximum		Time of Max Occurrence days hr:min	Lateral		Total	
		Lateral Inflow CMS	Total Inflow CMS		Volume 10 <sup>6</sup> ltr	Volume 10 <sup>6</sup> ltr		
CJ002	JUNCTION	0.000	72.667	0 16:46	0.000	6977.578		
CJ003	JUNCTION	0.000	72.667	0 16:46	0.000	6977.590		
CJ004	JUNCTION	0.000	65.069	0 17:31	0.000	6146.338		
CJ005	JUNCTION	9.325	65.067	0 17:30	166.979	6146.379		
CJ006	JUNCTION	0.000	63.813	0 17:41	0.000	5979.513		
CJ007	JUNCTION	2.875	63.806	0 17:39	68.834	5979.658		
CJ008	JUNCTION	0.000	63.271	0 17:42	0.000	5910.987		
CJ009	JUNCTION	0.000	63.265	0 17:40	0.000	5911.122		
CJ010	JUNCTION	0.000	63.260	0 17:38	0.000	5911.278		
CJ011	JUNCTION	0.000	63.257	0 17:35	0.000	5911.478		
CJ012	JUNCTION	0.000	63.255	0 17:34	0.000	5911.600		
CJ013	JUNCTION	8.144	63.254	0 17:32	328.525	5911.726		
CJ014	JUNCTION	4.971	60.448	0 17:46	213.420	5583.581		
CJ015	JUNCTION	0.000	58.598	0 17:54	0.000	5370.517		
CJ016	JUNCTION	0.000	58.587	0 17:51	0.000	5370.811		
CJ017	JUNCTION	0.000	58.580	0 17:47	0.000	5371.111		
CJ018	JUNCTION	0.000	58.577	0 17:43	0.000	5371.409		
CJ019	JUNCTION	2.496	58.578	0 17:36	134.233	5371.850		
CJ020	JUNCTION	0.000	57.394	0 17:38	0.000	5238.187		
CJ021	JUNCTION	0.000	57.404	0 17:30	0.000	5238.806		
CJ022	JUNCTION	0.000	57.444	0 17:17	0.000	5240.037		
CJ023	JUNCTION	0.000	57.517	0 17:03	0.000	5241.443		
CJ024	JUNCTION	0.000	57.607	0 16:51	0.000	5242.714		
CJ025	JUNCTION	0.000	57.725	0 16:38	0.000	5244.086		
CJ026	JUNCTION	0.000	57.873	0 16:26	0.000	5245.514		
CJ027	JUNCTION	0.000	58.052	0 16:13	0.000	5246.973		
CJ028	JUNCTION	2.453	58.352	0 15:55	128.473	5248.963		
CJ029	JUNCTION	0.000	57.373	0 15:47	0.000	5122.407		
CJ030	JUNCTION	0.960	57.713	0 15:31	40.206	5124.011		
CJ031	JUNCTION	0.000	57.494	0 15:27	0.000	5084.729		
CJ032	JUNCTION	0.000	58.105	0 13:48	0.000	5084.781		
CJ033	JUNCTION	0.000	57.778	0 15:09	0.000	5086.231		
CJ034	JUNCTION	2.120	58.384	0 14:41	108.115	5088.701		
CJ035	JUNCTION	0.000	57.450	0 14:37	0.000	4981.816		
CJ036	JUNCTION	1.200	58.056	0 14:17	41.656	4983.737		
CJ037	JUNCTION	0.000	58.706	0 14:03	0.000	4945.670		
CJ038	JUNCTION	7.154	40.891	0 14:15	21.549	3182.501		
CJ039	JUNCTION	0.000	41.310	0 14:00	0.000	3162.241		
CJ040	JUNCTION	1.693	41.783	0 14:00	57.480	3163.531		
CJ041	JUNCTION	0.000	41.499	0 13:56	0.000	3085.129		
CJ042	JUNCTION	0.000	41.988	0 13:50	0.000	3086.438		
CJ043	JUNCTION	0.000	42.423	0 13:50	0.000	3087.903		
CJ044	JUNCTION	0.000	42.670	0 13:46	0.000	3038.221		
CJ045	JUNCTION	1.774	43.276	0 13:43	10.860	3039.177		
CJ046	JUNCTION	0.000	43.589	0 13:42	0.000	3029.075		
CJ047	JUNCTION	0.000	43.854	0 13:37	0.000	3029.879		
CJ048	JUNCTION	0.000	43.985	0 13:32	0.000	3030.475		
CJ049	JUNCTION	0.000	43.996	0 13:32	0.000	3030.549		
CJ050	JUNCTION	0.000	43.996	0 13:31	0.000	3030.636		
CJ051	JUNCTION	1.070	43.998	0 13:28	42.877	3030.881		
CJ052	JUNCTION	0.000	43.392	0 13:29	0.000	2988.320		
CJ053	JUNCTION	0.000	43.408	0 13:20	0.000	2989.090		
CJ054	JUNCTION	0.000	43.464	0 13:12	0.000	2990.188		
CJ055	JUNCTION	0.430	43.519	0 13:05	74.297	2990.904		
CJ056	JUNCTION	0.000	43.144	0 12:57	0.000	2917.211		
CJ057	JUNCTION	0.000	43.236	0 12:53	0.000	2917.894		
CJ058	JUNCTION	0.000	43.305	0 12:45	0.000	2918.278		
CJ059	JUNCTION	0.000	43.420	0 12:39	0.000	2918.944		
CJ060	JUNCTION	0.000	43.548	0 12:32	0.000	2919.632		
CJ061	JUNCTION	0.000	43.678	0 12:22	0.000	2920.398		
CJ062	JUNCTION	0.000	44.053	0 12:08	0.000	2921.864		
CJ063	JUNCTION	0.000	44.366	0 12:02	0.000	2922.927		
CJ064	JUNCTION	0.000	44.293	0 12:01	0.000	2910.091		
CJ065	JUNCTION	2.547	44.322	0 12:00	67.897	2910.257		
CJ066	JUNCTION	0.000	43.165	0 12:07	0.000	2842.692		
CJ067	JUNCTION	0.000	43.402	0 12:05	0.000	2844.057		
CJ068	JUNCTION	0.000	43.624	0 11:21	0.000	2845.230		

CJ069	JUNCTION	0.000	43.659	0 11:21	0.000	2845.338		
CJ070	JUNCTION	0.000	43.749	0 11:16	0.000	2845.674		
CJ071	JUNCTION	0.000	43.842	0 11:14	0.000	2846.026		
CJ072	JUNCTION	0.000	44.064	0 11:10	0.000	2846.627		
CJ073	JUNCTION	0.000	43.817	0 11:09	0.000	2789.746		
CJ074	JUNCTION	0.000	43.125	0 11:09	0.000	2745.518		
CJ075	JUNCTION	0.000	43.295	0 11:07	0.000	2746.074		
CJ076	JUNCTION	0.000	43.506	0 11:04	0.000	2746.741		
CJ077	JUNCTION	3.637	14.343	0 05:59	10.871	49.202		
CJ078	JUNCTION	0.000	43.952	0 11:00	0.000	2747.838		
CJ079	JUNCTION	0.000	44.360	0 10:55	0.000	2748.798		
CJ080	JUNCTION	0.000	44.445	0 10:55	0.000	2748.948		
CJ081	JUNCTION	0.000	44.564	0 10:51	0.000	2749.072		
CJ082	JUNCTION	9.563	9.563	0 06:00	38.510	38.509		
CJ083	JUNCTION	0.219	44.645	0 10:50	2.975	2749.066		
CJ084	JUNCTION	0.000	44.642	0 10:50	0.000	2746.123		
CJ085	JUNCTION	7.572	15.467	0 06:00	257.734	831.271		
CJ086	JUNCTION	16.949	16.949	0 06:00	576.884	576.882		
CJ087	JUNCTION	3.320	21.994	0 10:16	1769.779	1769.669		
CJ088	JUNCTION	30.813	30.813	0 06:00	1092.998	1092.995		
CJ089	JUNCTION	0.000	44.874	0 10:48	0.000	2747.026		
CJ094	JUNCTION	0.000	0.838	0 10:05	0.000	44.720		
CJ095	JUNCTION	0.000	0.839	0 10:05	0.000	44.732		
CJ096	JUNCTION	0.000	0.839	0 10:05	0.000	44.733		
CJ098	JUNCTION	10.673	10.673	0 06:00	49.718	49.717		
CJ100	JUNCTION	0.000	44.647	0 10:48	0.000	2699.051		
CJ101	JUNCTION	0.000	44.657	0 10:48	0.000	2699.095		
CJ103	JUNCTION	0.000	44.929	0 10:45	0.000	2700.085		
CJ104	JUNCTION	0.000	44.726	0 10:47	0.000	2699.282		
CJ105	JUNCTION	0.000	44.851	0 10:46	0.000	2699.736		
CJ106	JUNCTION	0.000	44.919	0 10:45	0.000	2700.051		
CJ107	JUNCTION	0.000	44.937	0 10:43	0.000	2700.116		
CJ108	JUNCTION	0.000	44.997	0 10:43	0.000	2700.268		
CJ109	JUNCTION	0.000	32.816	0 11:29	0.000	2097.241		
CJ110	JUNCTION	0.000	32.827	0 11:29	0.000	2097.362		
CJ112	JUNCTION	0.000	32.717	0 11:29	0.000	2081.084		
CJ113	JUNCTION	0.000	32.728	0 11:29	0.000	2081.298		
CJ114	JUNCTION	0.000	32.740	0 11:29	0.000	2081.515		
CJ115	JUNCTION	0.000	32.744	0 11:29	0.000	2081.568		
CJ117	JUNCTION	0.000	32.450	0 11:27	0.000	2042.732		
CJ118	JUNCTION	0.000	32.757	0 11:29	0.000	2081.773		
CJ119	JUNCTION	0.000	32.459	0 11:27	0.000	2042.790		
CJ120	JUNCTION	0.000	32.460	0 11:27	0.000	2042.810		
CJ121	JUNCTION	0.000	32.774	0 11:28	0.000	2082.040		
CJ123	JUNCTION	0.000	32.784	0 11:28	0.000	2082.156		
CJ124	JUNCTION	0.000	32.791	0 11:28	0.000	2082.182		
CJ125	JUNCTION	0.000	32.798	0 11:28	0.000	2082.204		
CJ126	JUNCTION	0.000	0.076	0 06:14	0.000	2.871		
CJ127	JUNCTION	0.000	32.803	0 11:28	0.000	2082.235		
CJ128	JUNCTION	0.000	3.256	0 06:03	0.000	34.666		
CJ129	JUNCTION	0.000	32.811	0 11:28	0.000	2082.375		
CJ130	JUNCTION	0.000	32.621	0 11:28	0.000	2058.320		
CJ131	JUNCTION	0.000	32.631	0 11:28	0.000	2058.459		
CJ132	JUNCTION	0.000	32.645	0 11:28	0.000	2058.662		
CJ133	JUNCTION	0.000	32.653	0 11:28	0.000	2058.774		
CJ134	JUNCTION	1.551	32.657	0 11:28	10.123	2058.814		
CJ135	JUNCTION	0.000	32.505	0 11:28	0.000	2048.714		
CJ136	JUNCTION	1.337	32.508	0 11:27	6.037	2048.740		
CJ137	JUNCTION	0.000	32.454	0 11:27	0.000	2042.758		
CJ139	JUNCTION	0.000	32.467	0 11:27	0.000	2042.927		
CJ140	JUNCTION	0.000	32.513	0 11:26	0.000	2043.363		
CJ141	JUNCTION	7.948	7.948	0 06:00	476.684	476.683		
CJ142	JUNCTION	0.000	32.534	0 11:25	0.000	2043.366		
CJ143	JUNCTION	0.000	32.596	0 11:25	0.000	2043.956		
CJ144	JUNCTION	0.000	2.277	0 06:21	0.000	29.557		
CJ145	JUNCTION	0.000	2.003	0 06:22	0.000	29.552		
CJ146	JUNCTION	0.000	32.226	0 11:24	0.000	2014.586		
CJ147	JUNCTION	9.822	32.298	0 11:24	43.410	2015.978		
CJ148	JUNCTION	0.000	32.022	0 10:59	0.000	1980.143		
CJ149	JUNCTION	0.000	32.048	0 10:59	0.000	1968.267		
CJ150</								

**Kizell Lands - Fernbank 5618 Hazeldean Road**  
**PCSWMM Model Output SCS100-year 12-hour Carp River Interim**



CJ165	JUNCTION	0.000	35.226	0	10:18	0.000	1732.815	CJ290	JUNCTION	0.000	3.890	0	06:02	0.000	42.615
CJ166	JUNCTION	0.000	35.481	0	10:48	0.000	1732.743	CJ291	JUNCTION	0.000	3.050	0	06:01	0.000	25.379
CJ167	JUNCTION	0.000	31.251	0	11:09	0.000	1733.203	CJ292	JUNCTION	0.000	3.062	0	06:00	0.000	22.268
CJ168	JUNCTION	0.000	33.092	0	11:21	0.000	1733.306	CJ293	JUNCTION	1.122	1.122	0	06:00	3.331	3.331
CJ169	JUNCTION	0.000	17.515	0	14:43	0.000	728.817	CJ294	JUNCTION	0.000	2.000	0	05:46	0.000	18.937
CJ170	JUNCTION	0.000	17.286	0	13:08	0.000	728.848	CJ295	JUNCTION	0.000	1.746	0	06:21	0.000	16.374
CJ171	JUNCTION	0.000	16.491	0	13:29	0.000	729.111	CJ296	JUNCTION	0.899	0.899	0	06:00	3.089	6.103
CJ172	JUNCTION	0.000	16.040	0	13:08	0.000	729.202	CJ297	JUNCTION	0.000	3.962	0	06:14	0.000	22.523
CJ173	JUNCTION	0.000	16.424	0	13:29	0.000	729.293	FJ002	JUNCTION	0.000	15.343	0	07:40	0.000	603.435
CJ174	JUNCTION	0.000	13.563	0	13:01	0.000	729.476	FJ003	JUNCTION	0.000	15.808	0	07:36	0.000	604.024
CJ175	JUNCTION	0.000	13.444	0	13:01	0.000	729.705	FJ004	JUNCTION	0.000	15.243	0	07:39	0.000	603.400
CJ176	JUNCTION	0.000	13.351	0	12:23	0.000	730.611	FJ005	JUNCTION	0.000	15.244	0	07:39	0.000	603.551
CJ177	JUNCTION	0.000	17.695	0	07:03	0.000	733.657	FJ006	JUNCTION	0.000	15.263	0	07:40	0.000	603.721
CJ178	JUNCTION	0.000	20.903	0	07:03	0.000	738.825	FJ007	JUNCTION	0.000	15.264	0	07:39	0.000	603.666
CJ179	JUNCTION	0.000	19.248	0	07:04	0.000	736.122	FJ008	JUNCTION	0.000	15.266	0	07:37	0.000	603.692
CJ180	JUNCTION	0.000	36.329	0	07:03	0.000	754.538	FJ009	JUNCTION	0.000	15.267	0	07:37	0.000	603.790
CJ181	JUNCTION	0.279	14.163	0	07:04	7.237	679.126	FJ010	JUNCTION	0.382	15.272	0	07:33	5.885	603.534
CJ182	JUNCTION	0.000	13.061	0	09:29	0.000	663.306	FJ011	JUNCTION	0.000	15.004	0	07:31	0.000	597.677
CJ183	JUNCTION	0.000	13.213	0	09:18	0.000	662.966	FJ012	JUNCTION	0.000	15.013	0	07:29	0.000	597.690
CJ184	JUNCTION	0.000	13.345	0	09:20	0.000	663.048	FJ013	JUNCTION	0.000	15.022	0	07:28	0.000	597.730
CJ185	JUNCTION	0.000	13.336	0	09:20	0.000	662.194	FJ014	JUNCTION	0.000	15.025	0	07:26	0.000	597.751
CJ186	JUNCTION	0.000	13.424	0	09:14	0.000	672.351	FJ015	JUNCTION	0.000	15.028	0	07:23	0.000	597.790
CJ187	JUNCTION	0.000	12.741	0	09:19	0.000	632.394	FJ016	JUNCTION	0.000	15.038	0	07:22	0.000	597.854
CJ188	JUNCTION	0.000	12.920	0	09:15	0.000	628.451	FJ017	JUNCTION	0.000	15.043	0	07:20	0.000	604.594
CJ189	JUNCTION	0.000	14.239	0	09:25	0.000	624.546	FJ018	JUNCTION	0.000	15.044	0	07:20	0.000	604.644
CJ190	JUNCTION	0.000	14.050	0	09:21	0.000	622.336	FJ019	JUNCTION	0.971	15.262	0	06:49	3.007	598.235
CJ191	JUNCTION	0.000	14.227	0	09:21	0.000	621.636	FJ020	JUNCTION	1.865	2.203	0	06:00	5.069	26.593
CJ192	JUNCTION	0.000	13.332	0	09:19	0.000	620.905	FJ021	JUNCTION	0.000	0.390	0	06:13	0.000	21.525
CJ193	JUNCTION	0.000	13.482	0	09:15	0.000	629.045	FJ023	JUNCTION	0.000	14.762	0	06:49	0.000	568.521
CJ194	JUNCTION	0.000	12.674	0	09:23	0.000	594.992	FJ024	JUNCTION	0.000	13.265	0	08:12	0.000	524.586
CJ195	JUNCTION	0.000	12.812	0	09:16	0.000	593.162	FJ025	JUNCTION	0.000	14.649	0	08:23	0.000	520.182
CJ196	JUNCTION	0.000	12.896	0	09:17	0.000	591.114	FJ026	JUNCTION	0.000	16.940	0	09:51	0.000	519.092
CJ197	JUNCTION	0.000	13.058	0	09:15	0.000	588.335	FJ027	JUNCTION	0.000	13.798	0	08:25	0.000	513.642
CJ197_1	JUNCTION	0.000	13.203	0	09:04	0.000	584.633	FJ028	JUNCTION	0.000	12.411	0	07:39	0.000	513.399
CJ197_2	JUNCTION	0.000	13.466	0	09:04	0.000	582.237	FJ029	JUNCTION	0.000	12.398	0	07:36	0.000	513.423
CJ197_3	JUNCTION	0.000	13.615	0	08:59	0.000	582.158	FJ030	JUNCTION	0.000	12.398	0	07:36	0.000	513.461
CJ197_4	JUNCTION	0.000	13.712	0	08:59	0.000	582.365	FJ031	JUNCTION	1.082	12.399	0	07:35	4.855	513.505
CJ197_5	JUNCTION	0.000	13.810	0	08:58	0.000	582.411	FJ032	JUNCTION	0.000	12.218	0	07:37	0.000	508.670
CJ197_6	JUNCTION	0.000	13.934	0	08:49	0.000	582.466	FJ033	JUNCTION	0.000	12.218	0	07:36	0.000	508.689
CJ198	JUNCTION	0.000	13.996	0	08:50	0.000	582.517	FJ034	JUNCTION	0.000	12.219	0	07:35	0.000	508.701
CJ199	JUNCTION	0.000	14.331	0	08:40	0.000	583.140	FJ035	JUNCTION	0.000	12.233	0	07:29	0.000	508.735
CJ200	JUNCTION	0.211	15.043	0	08:09	2.958	584.229	FJ036	JUNCTION	0.000	12.298	0	07:18	0.000	508.758
CJ201	JUNCTION	0.000	14.765	0	08:04	0.000	552.794	FJ037	JUNCTION	0.000	12.369	0	07:11	0.000	508.790
CJ202	JUNCTION	0.000	8.049	0	07:58	0.000	360.218	FJ038	JUNCTION	0.000	12.392	0	07:09	0.000	508.808
CJ203	JUNCTION	0.085	8.177	0	07:41	14.687	360.229	FJ039	JUNCTION	0.000	12.658	0	06:54	0.000	508.700
CJ205	JUNCTION	0.000	25.664	0	06:29	0.000	290.746	FJ040	JUNCTION	0.000	8.541	0	06:54	0.000	410.876
CJ206	JUNCTION	5.133	23.159	0	06:26	21.978	257.960	FJ040_1	JUNCTION	0.000	8.551	0	06:57	0.000	410.866
CJ207	JUNCTION	1.406	22.327	0	06:25	6.438	235.974	FJ041	JUNCTION	0.000	7.286	0	08:41	0.000	380.534
CJ208	JUNCTION	4.328	25.268	0	06:17	18.232	230.973	FJ042	JUNCTION	0.000	7.286	0	08:39	0.000	380.571
CJ209	JUNCTION	0.318	24.320	0	06:17	3.565	210.839	FJ043	JUNCTION	0.843	7.286	0	08:38	4.800	380.555
CJ210	JUNCTION	0.000	24.254	0	06:15	0.000	207.138	FJ044	JUNCTION	0.000	7.161	0	08:40	0.000	375.837
CJ211	JUNCTION	2.311	24.270	0	06:13	7.590	207.148	FJ045	JUNCTION	0.000	7.162	0	08:38	0.000	375.837
CJ212	JUNCTION	0.000	24.175	0	06:10	0.000	199.632	FJ046	JUNCTION	0.000	7.164	0	08:36	0.000	375.832
CJ213	JUNCTION	0.625	24.385	0	06:08	5.570	199.580	FJ047	JUNCTION	0.000	7.166	0	08:34	0.000	375.930
CJ214	JUNCTION	6.427	6.427	0	06:00	25.545	25.544	FJ048	JUNCTION	0.000	4.651	0	06:35	0.000	97.877
CJ215	JUNCTION	0.000	2.341	0	06:06	0.000	27.459	FJ050	JUNCTION	2.673	2.725	0	06:00	30.557	35.047
CJ242	JUNCTION	0.000	2.007	0	06:21	0.000	20.376	FJ051	JUNCTION	1.307	1.307	0	06:00	4.465	4.482
CJ243	JUNCTION	0.000	2.007	0	06:21	0.000	20.409	FJ054	JUNCTION	0.000	7.167	0	08:32	0.000	375.957
CJ246	JUNCTION	7.860	10.945	0	06:00	35.185	48.394	FJ055	JUNCTION	0.000	7.168	0	08:29	0.000	376.003
CJ247	JUNCTION	3.413	3.413	0	06:00	13.207	13.207	FJ056	JUNCTION	0.000	7.171	0	08:29	0.000	376.017
CJ248_1	JUNCTION	8.156	8.156	0	06:00	40.975	40.974	FJ057	JUNCTION	0.000	7.172	0	08:29	0.000	376.006
CJ248_2	JUNCTION	0.000	6.878	0	06:05	0.000	41.373	FJ058	JUNCTION	0.847	8.089	0	06:10	8.958	376.839
CJ249	JUNCTION	0.000	2.920	0	06:00	0.000	11.295	FJ059	JUNCTION	0.000	5.914	0	06:02	0.000	51.766
CJ250	JUNCTION	2.932	2.932	0	06:00	10.289	10.289	FJ060	JUNCTION	0.000	6.157	0	06:00	0.000	50.701
CJ251	JUNCTION	0.425	8.704	0	06:52	9.086	193.211	FJ061	JUNCTION	6.206	6.206	0	06:00	50.698	50.697
CJ254	JUNCTION	0.000	4.895	0	07:23	0.000	113.635	FJ062	JUNCTION	0.000	5.628	0	11:01	0.000	316.811
CJ255	JUNCTION	2.039	2.039	0	06:00	8.079	8.078	FJ063	JUNCTION	0.000	5.659	0	06:05	0.000	318.556
CJ256	JUNCTION	0.000	1.014	0	18:34	0.000	20.711	FJ064	JUNCTION	0.000	5.859	0	08:09	0.000	319.458
CJ257	JUNCTION	0.000	3.510	0	06:49	0.000	69.856	FJ065	JUNCTION	4.041	4.866	0	06:00	20.959	65.486
CJ259	JUNCTION	4.786	4.786	0	06:00	21.187	21.186	FJ067	JUNCTION	1.952	4.392	0	08:40	15.944	254.135
CJ260	JUNCTION	0.000	3.100	0	05:47	0.000	30.098	FJ068	JUNCTION	0.000	3.957	0	08:44	0.000	238.300
CJ261	JUNCTION	3.583	3.583	0	06:00	11.776	11.776	FJ069	JUNCTION	0.000	3.958	0	08:41	0.000	238.414
CJ262	JUNCTION	1.371	21.208	0	06:07	5.258	170.548	FJ070	JUNCTION	0.300	3.958	0	08:40	2.879	238.396
CJ263	JUNCTION	3.938	21.156	0	06:03	19.074	165.279	FJ071	JUNCTION	0.000	3.861	0	08:44	0.000	235.521
CJ264	JUNCTION	2.079	23.314	0	06:00	6.633	146.352	FJ072	JUNCTION	0.000	3.862	0	08:41	0.000	235.785
CJ265	JUNCTION	18.490	18.490	0	06:00	128.946	128.944	FJ073	JUNCTION	0.000	3.865	0	08:34	0.000	236.261
CJ266	JUNCTION	0.000	8.892	0	06:08	0.000	57.692	FJ074	JUNCTION	0.000	3.869	0	08:29	0.000	236.289
CJ267	JUNCTION	0.000	1.459	0	06:24	0.000	18.378	FJ075	JUNCTION	0.000	3.869	0	08:29	0.000	236.265
CJ282	JUNCTION	3.235	3.235	0	06:00	10.766	10.766	FJ076	JUNCTION	0.000	2.619	0	08:28	0.000	195.008
CJ283	JUNCTION	2.286	7.734	0	06:02	18.781	50.986	FJ077	JUNCTION	0.000	2.620	0	08:26	0.000	195.027
CJ284	JUNCTION	0.000	5.984	0											

**Kizell Lands - Fernbank 5618 Hazeldean Road**  
**PCSWMM Model Output SCS100-year 12-hour Carp River Interim**



FJ083	JUNCTION	0.000	2.502	0	15:14	0.000	185.971	P1-321 (STM)	JUNCTION	0.000	1.429	0	06:07	0.000	9.507
FJ084	JUNCTION	0.000	2.502	0	15:11	0.000	186.003	P1-323 (STM)	JUNCTION	0.000	0.443	0	06:07	0.000	2.631
FJ085	JUNCTION	0.000	2.502	0	15:11	0.000	186.000	P1-327 (STM)	JUNCTION	0.000	1.006	0	06:04	0.000	6.878
FJ086	JUNCTION	0.000	2.502	0	15:11	0.000	186.012	P1-329 (STM)	JUNCTION	0.000	0.006	0	06:01	0.000	0.004
FJ087	JUNCTION	0.000	2.502	0	15:04	0.000	186.034	P1-331 (STM)	JUNCTION	0.000	0.000	0	00:00	0.000	0.000
FJ090	JUNCTION	0.000	2.224	0	13:10	0.000	124.566	P1-333 (STM)	JUNCTION	0.000	0.000	0	00:00	0.000	0.000
FJ091	JUNCTION	0.000	2.224	0	13:01	0.000	124.679	P1-335 (STM)	JUNCTION	0.000	0.248	0	06:08	0.000	1.506
FJ092	JUNCTION	0.000	2.225	0	12:52	0.000	124.908	P1-337 (STM)	JUNCTION	0.000	0.562	0	06:09	0.000	4.628
FJ093	JUNCTION	0.000	2.226	0	12:46	0.000	124.815	P1-349 (STM)	JUNCTION	0.000	0.269	0	06:17	0.000	2.081
FJ094	JUNCTION	0.000	2.482	0	07:53	0.000	124.927	P1-351 (STM)	JUNCTION	0.000	0.532	0	06:07	0.000	4.181
FJ095	JUNCTION	0.124	2.321	0	08:53	3.812	123.264	P1-EX. 501 (STM)	JUNCTION	0.480	2.363	0	06:22	2.027	53.826
FJ096	JUNCTION	0.000	2.223	0	10:11	0.000	119.479	P1-EX. 502 (STM)	JUNCTION	0.000	2.363	0	06:22	0.000	53.814
FJ097	JUNCTION	0.000	2.223	0	10:06	0.000	119.492	P1-EX. 503 (STM)	JUNCTION	0.000	2.363	0	06:22	0.000	53.803
FJ098	JUNCTION	0.000	2.223	0	10:03	0.000	119.507	P1-EX. 504 (STM)	JUNCTION	0.000	2.363	0	06:22	0.000	53.797
FJ099	JUNCTION	0.000	2.223	0	10:01	0.000	119.522	PJ002	JUNCTION	0.000	17.051	0	10:27	0.000	1004.444
FJ100	JUNCTION	0.000	2.223	0	10:01	0.000	119.525	PJ003	JUNCTION	0.223	17.078	0	10:28	2.302	1004.777
FJ101	JUNCTION	0.000	1.778	0	07:35	0.000	53.154	PJ004	JUNCTION	0.000	17.047	0	10:32	0.000	1002.572
FJ102	JUNCTION	0.000	2.097	0	10:46	0.000	108.840	PJ005	JUNCTION	0.000	17.066	0	10:29	0.000	1002.878
FJ104	JUNCTION	0.942	6.138	0	06:00	17.658	84.991	PJ006	JUNCTION	0.000	17.074	0	10:27	0.000	1002.953
FJ105	JUNCTION	0.000	2.223	0	10:01	0.000	119.526	PJ007	JUNCTION	0.000	17.076	0	10:27	0.000	1002.964
FJ108	JUNCTION	0.000	5.100	0	06:12	0.000	44.013	PJ008	JUNCTION	0.000	17.078	0	10:27	0.000	1002.982
FJ200	JUNCTION	1.054	1.054	0	06:00	3.250	3.493	PJ009	JUNCTION	0.000	17.088	0	10:25	0.000	1003.076
FJ201	JUNCTION	2.725	2.725	0	06:00	9.700	9.737	PJ010	JUNCTION	0.000	17.100	0	10:23	0.000	1003.183
FJ202	JUNCTION	2.445	2.445	0	06:00	9.472	9.477	PJ011	JUNCTION	0.000	17.102	0	10:21	0.000	1004.211
FJ203	JUNCTION	0.334	0.574	0	06:00	1.285	12.877	PJ012	JUNCTION	0.000	17.106	0	10:19	0.000	1004.967
FJ204	JUNCTION	1.288	1.289	0	06:00	4.754	4.756	PJ013	JUNCTION	0.000	17.112	0	10:18	0.000	1005.452
FJ205	JUNCTION	0.000	0.610	0	05:43	0.000	6.337	PJ014	JUNCTION	0.380	17.121	0	10:14	4.602	1006.444
FJ206	JUNCTION	2.152	2.152	0	06:00	7.672	7.672	PJ015	JUNCTION	0.000	0.034	0	06:19	0.000	0.081
FJ208	JUNCTION	0.000	4.500	0	06:10	0.000	30.384	PJ018	JUNCTION	0.000	17.032	0	10:12	0.000	1003.124
FJ209	JUNCTION	0.000	4.500	0	06:10	0.000	30.384	PJ019	JUNCTION	0.000	17.037	0	10:10	0.000	1003.199
FJ216	JUNCTION	0.000	0.308	0	05:42	0.000	3.081	PJ021	JUNCTION	0.000	17.041	0	10:08	0.000	1003.405
FJ217	JUNCTION	0.000	1.316	0	06:08	0.000	10.958	PJ022	JUNCTION	0.000	17.044	0	10:06	0.000	1003.692
FJ218	JUNCTION	0.000	1.325	0	06:10	0.000	10.947	PJ023	JUNCTION	0.000	17.047	0	10:04	0.000	1003.954
FJ219	JUNCTION	0.000	0.917	0	05:45	0.000	8.537	PJ024	JUNCTION	0.000	17.049	0	10:03	0.000	1004.149
FJ220	JUNCTION	0.000	0.000	0	00:00	0.000	0.000	PJ025	JUNCTION	0.000	17.054	0	10:03	0.000	1004.365
FJ221	JUNCTION	0.000	2.239	0	06:08	0.000	19.376	PJ026	JUNCTION	0.000	18.130	0	06:09	0.000	1004.557
FJ222	JUNCTION	0.000	0.000	0	00:00	0.000	0.000	PJ027	JUNCTION	0.000	18.371	0	06:09	0.000	1004.645
FJ223	JUNCTION	0.000	0.000	0	00:00	0.000	0.000	PJ028	JUNCTION	0.000	18.737	0	06:08	0.000	1004.724
FJ224	JUNCTION	0.000	0.000	0	00:00	0.000	0.000	PJ029	JUNCTION	0.000	19.678	0	06:08	0.000	1004.964
FJ225	JUNCTION	0.000	0.000	0	00:00	0.000	0.000	PJ030	JUNCTION	0.798	19.903	0	06:06	7.064	1004.657
FJ226	JUNCTION	0.000	1.330	0	06:01	0.000	10.916	PJ031	JUNCTION	0.000	17.442	0	06:06	0.000	995.170
FJ227	JUNCTION	0.000	0.573	0	06:00	0.000	13.700	PJ032	JUNCTION	0.000	17.633	0	06:05	0.000	995.321
FJ228	JUNCTION	0.000	0.571	0	06:00	0.000	13.643	PJ033	JUNCTION	0.000	17.854	0	06:04	0.000	995.361
FJ229	JUNCTION	0.000	4.149	0	06:02	0.000	48.475	PJ034	JUNCTION	0.000	17.960	0	06:03	0.000	995.399
FJ230	JUNCTION	0.000	4.427	0	06:04	0.000	51.067	PJ035	JUNCTION	0.000	18.008	0	06:02	0.000	995.466
FJ231	JUNCTION	0.000	4.425	0	06:04	0.000	50.832	PJ036	JUNCTION	0.000	18.144	0	06:01	0.000	995.567
FJ232	JUNCTION	0.000	4.784	0	06:05	0.000	54.312	PJ037	JUNCTION	0.000	18.248	0	06:00	0.000	995.693
FJ233	JUNCTION	0.000	3.261	0	06:02	0.000	40.132	PJ038	JUNCTION	0.000	16.904	0	09:51	0.000	985.196
FJ234	JUNCTION	0.000	1.095	0	06:02	0.000	20.794	PJ039	JUNCTION	0.000	16.904	0	09:50	0.000	985.225
FJ235	JUNCTION	0.000	1.108	0	06:01	0.000	20.834	PJ040	JUNCTION	0.000	16.904	0	09:50	0.000	985.252
FJ236	JUNCTION	0.000	0.378	0	06:22	0.000	5.102	PJ041	JUNCTION	0.000	16.905	0	09:49	0.000	985.332
P1-101 (STM)	JUNCTION	0.000	6.981	0	06:17	0.000	100.932	PJ042	JUNCTION	0.000	16.905	0	09:48	0.000	985.378
P1-101a (STM)	JUNCTION	0.000	3.236	0	06:18	0.000	39.261	PJ043	JUNCTION	2.331	16.905	0	09:47	8.811	985.456
P1-103 (STM)	JUNCTION	0.000	7.018	0	06:17	0.000	99.081	PJ044	JUNCTION	0.000	16.784	0	09:47	0.000	976.674
P1-105 (STM)	JUNCTION	0.000	7.046	0	06:17	0.000	99.107	PJ045	JUNCTION	0.000	16.723	0	09:47	0.000	972.043
P1-107 (STM)	JUNCTION	0.000	1.006	0	06:33	0.000	10.633	PJ046	JUNCTION	0.000	16.723	0	09:47	0.000	972.100
P1-109 (STM)	JUNCTION	0.000	0.804	0	06:47	0.000	8.745	PJ047	JUNCTION	0.000	16.723	0	09:46	0.000	972.195
P1-111 (STM)	JUNCTION	0.000	0.544	0	06:49	0.000	6.272	PJ048	JUNCTION	0.000	16.724	0	09:45	0.000	972.325
P1-113 (STM)	JUNCTION	0.000	0.512	0	06:23	0.000	6.272	PJ049	JUNCTION	0.000	16.724	0	09:44	0.000	972.411
P1-147 (STM)	JUNCTION	0.000	6.161	0	06:13	0.000	88.473	PJ050	JUNCTION	0.000	16.725	0	09:43	0.000	972.497
P1-153 (STM)	JUNCTION	0.000	5.978	0	06:13	0.000	86.671	PJ051	JUNCTION	0.000	16.731	0	09:38	0.000	972.903
P1-165 (STM)	JUNCTION	0.000	5.938	0	06:13	0.000	82.796	PJ052	JUNCTION	0.000	16.761	0	09:31	0.000	973.382
P1-169 (STM)	JUNCTION	0.000	5.300	0	06:04	0.000	81.234	PJ053	JUNCTION	0.000	16.817	0	09:24	0.000	973.803
P1-171 (STM)	JUNCTION	0.000	5.335	0	06:10	0.000	81.236	PJ054	JUNCTION	0.000	16.843	0	09:21	0.000	973.905
P1-173 (STM)	JUNCTION	0.000	0.710	0	06:19	0.000	7.791	PJ055	JUNCTION	2.302	16.869	0	09:18	13.312	974.098
P1-203 (STM)	JUNCTION	0.000	4.448	0	06:10	0.000	71.944	PJ056	JUNCTION	2.268	16.615	0	09:16	9.656	961.086
P1-205 (STM)	JUNCTION	0.000	4.181	0	06:10	0.000	70.388	PJ057	JUNCTION	3.742	16.526	0	09:09	15.853	951.491
P1-207 (STM)	JUNCTION	0.000	4.176	0	06:10	0.000	70.392	PJ058	JUNCTION	0.000	16.311	0	09:05	0.000	935.956
P1-209 (STM)	JUNCTION	0.000	0.333	0	06:08	0.000	2.698	PJ059	JUNCTION	0.000	16.336	0	09:02	0.000	936.227
P1-215 (STM)	JUNCTION	0.000	3.842	0	06:10	0.000	67.696	PJ060	JUNCTION	2.304	16.336	0	09:01	14.663	936.264
P1-215a (STM)	JUNCTION	0.000	0.175	0	06:03	0.000	1.102	PJ067	JUNCTION	1.616	14.379	0	09:04	6.460	869.874
P1-217 (STM)	JUNCTION	0.000	3.473	0	06:17	0.000	64.418	PJ068	JUNCTION	0.000	14.291	0	09:04	0.000	863.519
P1-219 (STM)	JUNCTION	0.000	1.644	0	05:54	0.000	10.616	PJ069	JUNCTION	0.000	14.365	0	09:04	0.000	863.587
P1-219a (STM)	JUNCTION	0.000	0.252	0	06:00	0.000	1.888	PJ070	JUNCTION	1.778	39.166	0	10:37	6.587	899.465
P1-221 (STM)	JUNCTION	0.000	0.266	0	06:01	0.000	2.181	PJ072	JUNCTION	0.352	30.160	0	10:39	1.286	890.175
P1-221a (STM)	JUNCTION	0.000	3.680	0	06:17	0.000	66.596	PJ073	JUNCTION	1.775	15.289	0	08:49	7.897	854.172
P1-301 (STM)	JUNCTION	0.000	2.113	0	06:49	0.000	17.336	PJ074	JUNCTION	0.000	14.753	0	08:25	0.000	846.900
P1-301a (STM)	JUNCTION	0.000	2.197	0	06:49	0.000	9.129	PJ075	JUNCTION	0.000	14.766	0	08:19	0.000	847.312
P1-303 (STM)	JUNCTION	0.000	1.942	0	06:08	0.000	14.418	PJ076	JUNCTION	0.000	14.928	0	08:05	0.000	847.934
P1-305 (STM)	JUNCTION	0.000	1.966	0	06:08	0.000	14.424	PJ077	JUNCTION	0.000	5.670	0	07:00	0.000	213.698

# Kizell Lands - Fernbank 5618 Hazeldean Road

## PCSWMM Model Output SCS100-year 12-hour Carp River Interim



PJ083	JUNCTION	0.000	5.811	0	06:48	0.000	220.559	PJ208	JUNCTION	0.000	16.910	0	06:00	0.000	100.569
PJ085	JUNCTION	0.000	14.425	0	06:43	0.000	759.239	PJ209	JUNCTION	0.000	16.910	0	06:00	0.000	100.668
PJ086	JUNCTION	0.000	14.441	0	06:41	0.000	759.389	PJ210	JUNCTION	0.000	16.910	0	06:00	0.000	100.661
PJ087	JUNCTION	0.000	14.451	0	06:39	0.000	759.514	PJ211	JUNCTION	0.000	5.949	0	06:00	0.000	22.603
PJ088	JUNCTION	0.000	14.475	0	06:37	0.000	759.630	PJ212	JUNCTION	5.568	5.949	0	06:00	19.904	22.603
PJ089	JUNCTION	0.000	14.525	0	06:33	0.000	759.783	PJ213	JUNCTION	0.000	1.150	0	06:05	0.000	2.699
PJ090	JUNCTION	1.827	14.572	0	06:32	6.439	759.862	PJ214	JUNCTION	0.000	1.001	0	06:05	0.000	2.700
PJ091	JUNCTION	0.123	14.148	0	06:32	0.330	753.492	PJ215	JUNCTION	0.000	0.974	0	06:04	0.000	2.699
PJ092	JUNCTION	5.060	14.155	0	06:31	20.683	753.219	PJ216	JUNCTION	0.000	0.945	0	06:04	0.000	2.699
PJ093	JUNCTION	2.773	12.878	0	06:36	16.205	732.568	PJ217	JUNCTION	0.000	0.880	0	06:04	0.000	2.698
PJ094	JUNCTION	0.000	11.866	0	06:34	0.000	716.540	PJ218	JUNCTION	0.000	0.808	0	06:03	0.000	2.693
PJ095	JUNCTION	0.000	12.045	0	06:20	0.000	716.680	PJ219	JUNCTION	0.000	0.655	0	06:02	0.000	2.694
PJ096	JUNCTION	0.000	12.365	0	06:14	0.000	717.038	PJ220	JUNCTION	0.000	0.624	0	05:58	0.000	2.696
PJ097	JUNCTION	0.000	13.098	0	06:08	0.000	717.372	PJ221	JUNCTION	0.000	0.595	0	05:59	0.000	2.697
PJ098	JUNCTION	0.000	13.374	0	06:07	0.000	717.459	PJ222	JUNCTION	0.000	0.984	0	06:00	0.000	3.029
PJ099	JUNCTION	5.476	13.957	0	06:03	31.722	717.696	PJ223	JUNCTION	0.984	0.984	0	06:00	3.029	3.029
PJ102	JUNCTION	0.000	9.485	0	07:52	0.000	634.590	PJ224	JUNCTION	0.000	0.627	0	05:59	0.000	0.387
PJ103	JUNCTION	0.000	9.549	0	07:51	0.000	634.634	PJ225	JUNCTION	0.000	0.636	0	05:59	0.000	0.341
PJ104	JUNCTION	0.000	9.660	0	07:48	0.000	635.048	PJ226	JUNCTION	0.000	0.625	0	05:59	0.000	0.333
PJ105	JUNCTION	0.000	10.032	0	08:04	0.000	639.966	PJ227	JUNCTION	0.000	11.514	0	06:01	0.000	78.053
PJ106	JUNCTION	0.000	1.538	0	06:56	0.000	36.675	PJ228	JUNCTION	0.000	11.246	0	06:01	0.000	78.071
PJ107	JUNCTION	0.000	4.248	0	06:04	0.000	21.424	PJ229	JUNCTION	0.000	11.149	0	06:00	0.000	78.065
PJ108	JUNCTION	0.000	4.290	0	06:02	0.000	21.420	PJ230	JUNCTION	6.230	11.303	0	06:00	21.483	78.076
PJ109	JUNCTION	0.000	5.002	0	05:59	0.000	21.487	PJ231	JUNCTION	0.000	5.466	0	06:03	0.000	56.586
PJ110	JUNCTION	5.172	5.172	0	06:00	21.416	21.415	PJ232	JUNCTION	0.000	5.332	0	06:03	0.000	56.587
PJ111	JUNCTION	0.000	1.579	0	06:57	0.000	36.879	PJ233	JUNCTION	0.000	5.257	0	06:03	0.000	56.588
PJ112	JUNCTION	0.000	9.215	0	06:07	0.000	618.089	PJ234	JUNCTION	0.000	3.263	0	06:00	0.000	36.997
PJ113	JUNCTION	0.000	9.239	0	06:06	0.000	618.175	PJ235	JUNCTION	0.000	3.313	0	06:00	0.000	36.991
PJ114	JUNCTION	9.233	12.025	0	06:00	43.790	619.405	PJ236	JUNCTION	0.237	3.346	0	06:00	1.093	36.991
PJ115	JUNCTION	2.856	2.856	0	06:00	13.213	13.214	PJ237	JUNCTION	0.000	3.136	0	06:00	0.000	35.898
PJ116	JUNCTION	0.000	10.066	0	08:02	0.000	608.086	PJ238	JUNCTION	0.000	3.144	0	05:59	0.000	35.898
PJ117	JUNCTION	9.290	10.100	0	07:58	40.013	608.711	PJ239	JUNCTION	0.000	9.171	0	06:00	0.000	41.459
PJ118	JUNCTION	0.000	9.030	0	07:55	0.000	569.155	PJ240	JUNCTION	0.000	9.170	0	06:00	0.000	34.612
PJ119	JUNCTION	0.000	9.221	0	07:40	0.000	569.219	PJ241	JUNCTION	9.171	9.171	0	06:00	34.612	34.611
PJ120	JUNCTION	0.000	9.414	0	07:31	0.000	570.112	PJ242	JUNCTION	0.000	2.036	0	06:01	0.000	19.597
PJ121	JUNCTION	0.000	10.068	0	07:13	0.000	571.265	PJ243	JUNCTION	0.000	2.049	0	05:56	0.000	19.598
PJ123	JUNCTION	2.423	6.288	0	15:28	9.149	562.934	PJ244	JUNCTION	0.000	2.045	0	06:00	0.000	19.595
PJ125	JUNCTION	0.000	9.986	0	06:57	0.000	562.152	PJ248	JUNCTION	0.000	10.083	0	06:01	0.000	23.185
PJ126	JUNCTION	0.000	10.039	0	06:51	0.000	562.123	PJ250	JUNCTION	0.000	9.104	0	06:01	0.000	16.149
PJ127	JUNCTION	0.000	10.059	0	06:47	0.000	562.233	PJ253	JUNCTION	0.000	11.578	0	06:00	0.000	10.656
PJ128	JUNCTION	4.400	10.091	0	06:43	23.248	562.266	PJ254	JUNCTION	0.000	11.576	0	06:00	0.000	10.639
PJ129	JUNCTION	0.000	5.985	0	16:11	0.000	521.075	PJ255	JUNCTION	0.000	6.027	0	06:00	0.000	12.378
PJ130	JUNCTION	0.000	5.985	0	16:08	0.000	521.106	PJ256	JUNCTION	1.167	7.194	0	06:00	3.701	13.796
PJ131	JUNCTION	0.000	5.985	0	16:06	0.000	521.240	PJ257	JUNCTION	0.000	7.195	0	06:00	0.000	11.391
PJ132	JUNCTION	0.000	5.986	0	15:59	0.000	521.472	PJ258	JUNCTION	0.000	7.196	0	06:00	0.000	11.163
PJ133	JUNCTION	0.000	5.986	0	15:56	0.000	521.569	PJ259	JUNCTION	1.048	8.244	0	06:00	3.165	12.417
PJ134	JUNCTION	0.462	5.986	0	15:56	1.584	521.619	PJ260	JUNCTION	1.363	9.604	0	06:00	4.364	12.450
PJ135	JUNCTION	1.342	5.987	0	15:43	20.070	520.753	PJ261	JUNCTION	0.000	9.598	0	06:00	0.000	9.953
PJ136	JUNCTION	0.000	5.885	0	15:49	0.000	501.080	PJ262	JUNCTION	0.000	9.578	0	06:00	0.000	9.951
PJ137	JUNCTION	0.000	5.886	0	15:41	0.000	501.588	PJ263	JUNCTION	0.539	10.129	0	06:00	2.605	12.521
PJ138	JUNCTION	1.697	5.886	0	15:34	11.697	501.744	CO001	OUTFALL	0.000	72.667	0	16:46	0.000	6977.578
PJ139	JUNCTION	0.000	5.850	0	15:38	0.000	490.604	CSto092	STORAGE	3.116	3.116	0	06:00	13.204	13.204
PJ140	JUNCTION	0.000	5.850	0	15:35	0.000	490.715	CSto097	STORAGE	0.000	10.676	0	06:00	0.000	49.862
PJ143	JUNCTION	1.526	4.513	0	09:52	13.772	264.053	CSto127	STORAGE	0.134	2.377	0	05:47	0.534	21.458
PJ144	JUNCTION	0.000	3.329	0	08:11	0.000	75.834	CSto129	STORAGE	5.391	5.391	0	06:00	18.295	18.295
PJ145	JUNCTION	4.665	4.665	0	06:00	74.527	74.527	CSto204	STORAGE	0.128	26.098	0	06:43	1.929	346.121
PJ146	JUNCTION	0.000	5.850	0	15:28	0.000	491.501	CSto205	STORAGE	8.945	8.945	0	06:00	50.717	50.716
PJ147	JUNCTION	0.000	5.850	0	15:23	0.000	491.785	CSto216	STORAGE	4.965	4.965	0	06:00	18.220	18.219
PJ148	JUNCTION	0.000	5.850	0	15:19	0.000	491.963	CSto257	STORAGE	4.828	4.828	0	06:00	18.623	18.677
PJ149	JUNCTION	0.000	5.864	0	14:45	0.000	496.993	CSto258	STORAGE	14.029	14.029	0	06:00	72.091	72.144
PJ151	JUNCTION	0.125	5.800	0	07:25	21.598	181.358	CSto267	STORAGE	14.846	14.846	0	06:00	59.388	59.404
PJ153	JUNCTION	0.000	5.701	0	15:14	0.000	477.649	CSto268_1	STORAGE	0.000	5.786	0	06:00	0.000	25.384
PJ154	JUNCTION	0.000	5.701	0	15:10	0.000	477.844	CSto268_2	STORAGE	5.783	5.783	0	06:00	25.350	25.399
PJ155	JUNCTION	0.000	5.701	0	15:06	0.000	477.986	CSto269	STORAGE	8.725	8.725	0	06:00	32.386	32.594
PJ156	JUNCTION	0.455	5.702	0	14:54	2.135	480.825	CSto270	STORAGE	0.000	13.295	0	06:00	0.000	75.124
PJ158	JUNCTION	16.177	16.177	0	06:00	126.401	126.399	CSto271	STORAGE	6.628	6.628	0	06:00	21.464	21.463
PJ159	JUNCTION	0.000	5.530	0	15:15	0.000	451.048	CSto272	STORAGE	4.378	4.378	0	06:00	16.522	16.523
PJ160	JUNCTION	0.000	5.535	0	14:55	0.000	451.991	CSto273	STORAGE	5.426	5.426	0	06:00	22.628	22.628
PJ161	JUNCTION	1.170	5.622	0	13:31	22.433	457.478	FJ049	STORAGE	11.217	12.054	0	06:00	68.708	122.506
PJ163	JUNCTION	0.000	5.732	0	11:04	0.000	382.355	FJ088	STORAGE	0.247	4.327	0	06:00	5.148	132.990
PJ165	JUNCTION	3.906	3.906	0	06:30	74.042	74.042	FSto022	STORAGE	6.985	6.985	0	06:00	21.741	21.743
PJ166	JUNCTION	2.856	2.856	0	06:00	62.310	62.309	FSto053	STORAGE	10.585	10.585	0	06:00	59.181	64.304
PJ168	JUNCTION	1.626	1.626	0	06:00	18.765	18.765	FSto066	STORAGE	11.635	11.635	0	06:00	44.533	44.532
PJ169	JUNCTION	1.787	1.787	0	06:00	27.547	27.547	FSto101	STORAGE	3.099	3.099	0	06:00	10.974	120.008
PJ170	JUNCTION	4.643	4.643	0	06:00	30.202	30.202	FSto103	STORAGE	7.332	12.027	0	06:00	36.478	134.278
PJ171	JUNCTION	0.888	3.337	0	07:50	24.088	99.519	FSto105	STORAGE	4.797	4.797	0	06:00	42.151	42.151
PJ172	JUNCTION	4.339	4.896	0	06:00	21.960	286.499	FSto106_1	STORAGE	0.187	4.940	0	06:04	1.405	55.687
PJ173	JUNCTION	1.391	1.391	0	06:00	4.647	4.646	FSto106_2	STORAGE	10.602	10.602	0	06:00	45.267	56.867
PJ174	JUNCTION	0.000	1.784	0	07:39	0.000	67.902	FSto200	STORAGE	1.740	1.740	0	06:00	5.055	5.055
PJ200	JUNCTION	0.000	16.754	0	06:29	0.000	187.900	FSto201	STORAGE	0.680	0.680	0	06:00	2.106	2.106
PJ203	JUNCTION	0.000	22.303	0	06:00	0.000	118.451								



# Kizell Lands - Fernbank 5618 Hazeldean Road PCSWMM Model Output SCS100-year 12-hour Carp River Interim



FSto210	STORAGE	8.679	8.679	0	06:00	30.534	30.536
FSto212	STORAGE	0.000	0.000	0	00:00	0.000	0.000
FSto213	STORAGE	0.000	0.000	0	00:00	0.000	0.000
FSto214	STORAGE	3.446	3.446	0	06:00	11.776	11.776
GR_SWMF	STORAGE	8.746	8.746	0	06:00	46.940	46.939
IBER_IND_SWMF	STORAGE	1.409	1.409	0	06:00	5.319	5.319
P1-01-02S	STORAGE	0.487	0.487	0	06:00	2.082	2.082
P1-03aS	STORAGE	1.170	1.170	0	06:00	4.548	4.548
P1-03bS	STORAGE	0.589	0.589	0	06:00	2.100	2.100
P1-04aS	STORAGE	0.637	0.637	0	06:00	2.181	2.181
P1-04bS	STORAGE	0.573	0.573	0	06:00	1.889	1.889
P1-05S	STORAGE	0.236	0.236	0	06:00	1.102	1.102
P1-06S	STORAGE	0.718	0.718	0	06:00	2.699	2.699
P1-07S	STORAGE	0.418	0.418	0	06:00	1.560	1.560
P1-08S	STORAGE	1.952	1.952	0	06:00	7.792	7.792
P1-09S	STORAGE	0.400	0.400	0	06:00	1.506	1.506
P1-10S	STORAGE	0.479	0.479	0	06:00	1.564	1.564
P1-11S	STORAGE	1.073	1.073	0	06:00	3.879	3.879
P1-12S	STORAGE	0.466	0.466	0	06:00	1.804	1.804
P1-13S	STORAGE	1.434	1.434	0	06:00	6.273	6.273
P1-14S	STORAGE	0.639	0.639	0	06:00	2.473	2.473
P1-15S	STORAGE	0.445	0.445	0	06:00	1.887	1.887
P1-16S	STORAGE	1.269	1.269	0	06:00	4.629	4.629
P1-17S	STORAGE	0.522	0.522	0	06:00	2.247	2.246
P1-18S	STORAGE	0.756	0.756	0	06:00	2.632	2.632
P1-19S	STORAGE	0.314	0.314	0	06:00	1.144	1.144
P1-20S	STORAGE	0.950	0.950	0	06:00	3.762	3.762
POND	STORAGE	1.033	9.205	0	06:13	3.688	142.550
PSto061	STORAGE	9.633	9.933	0	06:00	49.619	51.913
PSto062	STORAGE	0.752	0.752	0	06:00	2.297	2.297
PSto071	STORAGE	0.845	0.845	0	06:00	3.057	3.057
PSto084	STORAGE	0.266	14.451	0	06:45	0.769	759.813
PSto100	STORAGE	8.265	9.010	0	06:00	46.625	68.801
PSto101	STORAGE	3.050	3.050	0	06:00	21.346	22.210
PSto122	STORAGE	2.715	2.715	0	06:00	9.219	9.307
PSto124	STORAGE	5.834	5.834	0	06:00	32.514	33.998
PSto201	STORAGE	1.041	30.997	0	06:00	2.937	211.363
PSto202	STORAGE	19.356	19.356	0	06:00	90.161	90.159
PSto245	STORAGE	0.000	2.521	0	05:51	0.000	19.595
PSto246	STORAGE	0.668	3.655	0	05:51	3.273	19.586
PSto247	STORAGE	0.000	3.443	0	05:51	0.000	16.297
PSto249	STORAGE	0.447	9.044	0	06:01	2.187	17.944
PSto251	STORAGE	0.000	9.104	0	06:01	0.000	16.050
PSto252	STORAGE	2.794	11.585	0	06:00	12.093	19.421

P1-219A (STM)	JUNCTION	0.49	0.303	0.585
P1-221 (STM)	JUNCTION	0.69	0.410	0.558
P1-221a (STM)	JUNCTION	0.71	0.453	0.901
P1-303 (STM)	JUNCTION	2.15	0.230	1.990
P1-305 (STM)	JUNCTION	1.51	0.158	2.040
P1-349 (STM)	JUNCTION	0.62	0.423	1.147
P1-351 (STM)	JUNCTION	0.59	0.623	1.025
P1-EX. 501 (STM)	JUNCTION	0.89	1.353	0.135
P1-EX. 502 (STM)	JUNCTION	0.68	1.970	0.658
P1-EX. 503 (STM)	JUNCTION	0.61	0.912	0.596
P1-EX. 504 (STM)	JUNCTION	0.58	0.556	0.932
PJ109	JUNCTION	0.22	1.187	2.069
PJ158	JUNCTION	0.42	0.039	2.091
PJ203	JUNCTION	2.67	0.546	1.731
PJ204	JUNCTION	2.34	0.872	1.337
PJ205	JUNCTION	1.34	1.173	0.747
PJ206	JUNCTION	0.90	1.430	0.867
PJ207	JUNCTION	0.30	1.602	1.573
PJ208	JUNCTION	0.21	1.522	1.723
PJ209	JUNCTION	0.20	1.793	1.557
PJ210	JUNCTION	0.11	1.537	2.293
PJ211	JUNCTION	0.19	2.114	2.286
PJ212	JUNCTION	0.27	2.798	1.372
PJ213	JUNCTION	0.18	2.836	0.774
PJ214	JUNCTION	0.14	3.130	0.090
PJ215	JUNCTION	0.13	3.126	0.000
PJ216	JUNCTION	0.12	3.040	0.000
PJ217	JUNCTION	0.12	3.294	0.021
PJ218	JUNCTION	0.10	3.446	0.000
PJ219	JUNCTION	0.05	4.112	0.000
PJ220	JUNCTION	0.03	2.225	0.000
PJ221	JUNCTION	0.02	0.617	1.547
PJ223	JUNCTION	0.24	0.602	2.087
PJ227	JUNCTION	0.10	1.149	2.811
PJ239	JUNCTION	1.42	2.892	4.178
PJ240	JUNCTION	1.40	3.140	3.697
PJ241	JUNCTION	1.36	3.331	3.358
PJ248	JUNCTION	0.14	0.316	2.777
PJ250	JUNCTION	0.02	0.023	2.771
PJ255	JUNCTION	1.38	2.804	3.945
PJ256	JUNCTION	1.02	2.052	6.558
PJ257	JUNCTION	0.72	1.538	8.206
PJ258	JUNCTION	0.32	0.994	8.756
PJ259	JUNCTION	0.25	0.801	8.668
CSto127	STORAGE	12.977	0.621	0.129
CSto129	STORAGE	0.53	0.039	0.461
CSto216	STORAGE	0.46	0.050	0.450
CSto269	STORAGE	0.18	0.079	0.121
CSto273	STORAGE	48.00	0.819	0.181
FSto053	STORAGE	48.00	4.667	0.333
FSto105	STORAGE	48.00	3.264	1.736
FSto200	STORAGE	48.00	0.806	0.194
FSto201	STORAGE	48.00	0.772	0.228
FSto202	STORAGE	48.00	0.717	0.283
FSto203	STORAGE	0.52	0.224	3.276
FSto204	STORAGE	1.33	0.894	2.906
FSto205	STORAGE	5.48	1.498	2.302
FSto206	STORAGE	0.16	0.003	3.797
FSto210	STORAGE	0.19	0.033	0.367
GR_SWMF	STORAGE	48.00	1.429	0.171
IBER_IND_SWMF	STORAGE	48.00	0.927	0.123
P1-01-02S	STORAGE	1.42	1.254	0.171
P1-03aS	STORAGE	1.15	1.307	0.183
P1-03bS	STORAGE	1.34	1.374	0.061
P1-04aS	STORAGE	1.52	1.357	0.073
P1-04bS	STORAGE	1.36	1.297	0.138
P1-05S	STORAGE	0.94	1.228	0.257
P1-06S	STORAGE	1.28	1.356	0.039
P1-07S	STORAGE	1.12	1.232	0.203
P1-08S	STORAGE	1.80	1.190	0.035
P1-09S	STORAGE	1.11	1.260	0.178
P1-10S	STORAGE	1.13	1.346	0.106
P1-11S	STORAGE	1.38	1.247	0.088
P1-12S	STORAGE	1.70	1.265	0.215
P1-13S	STORAGE	1.96	1.242	0.063
P1-14S	STORAGE	1.39	1.225	0.190
P1-15S	STORAGE	1.50	1.347	0.113
P1-16S	STORAGE	1.24	1.248	0.037
P1-17S	STORAGE	0.81	1.122	0.203
P1-18S	STORAGE	0.93	1.238	0.097
P1-19S	STORAGE	0.99	1.272	0.196
P1-20S	STORAGE	1.48	1.315	0.050
POND	STORAGE	16.94	1.166	0.555
PSto061	STORAGE	5.42	0.741	0.746
PSto202	STORAGE	1.89	0.688	1.302

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Node Surcharge Summary  
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Surcharging occurs when water rises above the top of the highest conduit.

Node	Type	Hours Surcharged	Max. Height Above Crown Meters	Min. Depth Below Rim Meters
CJ082	JUNCTION	0.17	3.754	0.000
CJ098	JUNCTION	5.92	0.128	1.222
CJ128	JUNCTION	0.75	0.119	0.181
CJ256	JUNCTION	0.01	0.034	0.766
CJ284	JUNCTION	0.43	0.359	0.341
CJ287	JUNCTION	8.79	1.216	0.819
CJ290	JUNCTION	38.09	2.384	0.000
CJ293	JUNCTION	0.02	0.062	2.918
CJ296	JUNCTION	1.09	0.853	3.627
FJ002	JUNCTION	14.69	0.447	0.599
FJ005	JUNCTION	3.97	0.176	1.042
FJ063	JUNCTION	4.26	0.154	1.341
FJ230	JUNCTION	2.68	0.104	0.976
FJ231	JUNCTION	9.83	0.172	1.068
FJ232	JUNCTION	14.25	0.280	1.340
P1-147 (STM)	JUNCTION	0.61	0.075	2.038
P1-153 (STM)	JUNCTION	0.77	0.174	2.119
P1-165 (STM)	JUNCTION	0.80	0.233	2.240
P1-169 (STM)	JUNCTION	0.87	0.302	2.271
P1-171 (STM)	JUNCTION	0.67	0.224	2.017
P1-173 (STM)	JUNCTION	0.26	0.138	2.435
P1-203 (STM)	JUNCTION	0.70	0.292	2.359
P1-205 (STM)	JUNCTION	0.66	0.302	2.619
P1-207 (STM)	JUNCTION	0.60	0.312	1.869
P1-209 (STM)	JUNCTION	0.46	0.717	1.591
P1-215 (STM)	JUNCTION	0.63	0.356	1.158
P1-215a (STM)	JUNCTION	0.37	0.329	1.544
P1-217 (STM)	JUNCTION	0.72	0.557	1.187
P1-219 (STM)	JUNCTION	0.54	0.371	1.220

# Kizell Lands - Fernbank 5618 Hazeldean Road

## PCSWMM Model Output SCS100-year 12-hour Carp River Interim



PSto245	STORAGE	0.93	1.287	2.987
PSto246	STORAGE	0.85	1.224	2.890
PSto247	STORAGE	0.69	1.131	2.810
PSto249	STORAGE	0.11	0.149	2.688

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Node Flooding Summary  
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Flooding refers to all water that overflows a node, whether it ponds or not.

Node	Hours Flooded	Maximum Rate CMS	Time of Max Occurrence days hr:min	Total Flood Volume 10 <sup>6</sup> ltr	Maximum Ponded Depth Meters
CJ082	0.07	1.439	0 05:59	0.080	6.00
CJ290	1.59	2.671	0 09:13	2.983	4.63
PJ216	0.01	0.053	0 05:57	0.000	3.94
PJ218	0.01	0.353	0 05:57	0.000	4.30
PJ219	0.01	0.328	0 05:58	0.001	5.00

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Storage Volume Summary  
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Storage Unit	Average Volume 1000 m3	Avg Pcnt Full	E&I Pcnt Loss	Maximum Volume 1000 m3	Max Pcnt Full	Time of Max Occurrence days hr:min	Maximum Outflow CMS
CSto092	1.117	19	0	3.841	65	0 06:07	1.342
CSto097	16.418	29	0	28.830	51	0 10:05	0.839
CSto127	4.494	49	0	8.428	92	0 06:21	1.265
CSto129	0.048	1	0	1.672	42	0 06:13	3.256
CSto204	22.106	14	0	73.684	48	0 08:23	8.092
CSto205	19.069	28	0	37.292	54	0 15:06	1.209
CSto216	0.055	1	0	2.413	43	0 06:15	2.341
CSto257	2.231	7	0	7.651	23	0 06:24	1.459
CSto258	11.579	32	0	31.477	86	0 06:49	3.510
CSto267	9.726	25	0	19.892	50	0 06:08	8.892
CSto268_1	3.883	14	0	6.503	23	0 12:20	4.158
CSto268_2	0.162	13	0	1.206	100	0 05:51	5.786
CSto269	2.433	32	0	6.909	91	0 06:04	5.984
CSto270	11.889	46	0	19.640	75	0 06:05	11.918
CSto271	0.015	2	0	0.751	80	0 06:01	5.900
CSto272	2.757	22	0	6.793	55	0 06:20	1.746
CSto273	0.266	5	0	3.912	68	0 06:14	3.962
FJ049	29.085	32	0	42.692	47	0 07:04	4.651
FJ088	4.198	35	0	10.148	84	0 14:29	2.249
FSto022	5.221	34	0	14.375	94	0 08:02	0.390
FSto053	48.411	77	0	57.562	92	0 16:55	0.126
FSto066	5.902	12	0	19.881	40	0 08:35	0.825
FSto101	3.227	44	0	6.413	87	0 10:01	2.223
FSto103	30.895	50	0	50.090	81	0 10:35	2.097
FSto105	31.500	50	0	37.967	61	0 19:00	0.056
FSto106_1	13.133	13	0	21.249	22	0 15:17	1.778
FSto108	16.145	41	0	25.209	65	0 06:23	5.100
FSto200	0.051	3	0	1.409	81	0 06:22	0.378
FSto201	0.016	3	0	0.490	77	0 06:14	0.185
FSto202	0.016	2	0	0.671	72	0 06:10	0.365
FSto203	1.242	5	0	8.621	34	0 06:13	5.140
FSto204	0.117	2	0	2.094	42	0 06:21	0.850
FSto205	2.450	10	0	13.492	54	0 07:12	1.250
FSto206	0.109	2	0	1.203	24	0 06:40	0.210
FSto210	1.193	11	0	8.109	78	0 06:10	4.500
FSto212	0.000	0	0	0.000	0	0 00:00	0.000
FSto213	0.000	0	0	0.000	0	0 00:00	0.000
FSto214	2.256	23	0	7.059	71	0 08:00	0.240
GR_SWMF	4.326	22	0	16.804	87	0 07:01	1.826
IBER_IND_SWMF	0.217	10	0	1.850	84	0 06:36	0.325
P1-01-02S	0.002	0	0	0.160	26	0 06:16	0.269
P1-03aS	0.001	0	0	0.116	15	0 06:03	0.895
P1-03bS	0.003	1	0	0.239	68	0 06:09	0.262
P1-04aS	0.006	1	0	0.302	63	0 06:16	0.266
P1-04bS	0.004	1	0	0.245	37	0 06:13	0.252
P1-05S	0.000	0	0	0.025	7	0 06:03	0.175
P1-06S	0.004	1	0	0.276	79	0 06:08	0.333
P1-07S	0.001	0	0	0.099	18	0 06:09	0.250
P1-08S	0.027	2	0	1.131	81	0 06:19	0.710
P1-09S	0.001	0	0	0.085	24	0 06:08	0.248
P1-10S	0.002	1	0	0.171	49	0 06:06	0.232
P1-11S	0.008	1	0	0.490	56	0 06:12	0.444

P1-12S	0.004	0	0	0.223	15	0 06:13	0.184
P1-13S	0.023	2	0	0.881	67	0 06:23	0.512
P1-14S	0.004	0	0	0.258	21	0 06:09	0.283
P1-15S	0.002	1	0	0.161	46	0 06:11	0.219
P1-16S	0.008	1	0	0.525	80	0 06:09	0.562
P1-17S	0.000	0	0	0.021	18	0 06:03	0.446
P1-18S	0.002	0	0	0.184	53	0 06:07	0.443
P1-19S	0.000	0	0	0.059	20	0 06:04	0.202
P1-20S	0.008	1	0	0.450	73	0 06:13	0.389
POND	35.367	50	0	56.871	80	0 07:23	4.895
PSto061	3.408	12	0	15.538	57	0 07:20	1.844
PSto062	0.036	0	0	0.584	2	0 06:04	0.342
PSto071	0.005	0	0	0.053	0	0 06:01	0.756
PSto084	0.731	36	0	2.020	100	0 06:17	14.429
PSto100	2.439	6	0	9.342	22	0 07:39	2.214
PSto101	2.273	1	0	10.553	3	0 08:48	0.860
PSto122	0.617	3	0	1.301	7	0 07:45	2.557
PSto124	4.948	24	0	10.107	50	0 06:31	1.967
PSto201	39.018	44	0	68.363	78	0 06:29	16.754
PSto202	0.297	3	0	10.658	100	0 06:16	10.435
PSto245	0.003	10	0	0.015	53	0 06:01	2.045
PSto246	0.004	8	0	0.022	52	0 06:01	2.521
PSto247	0.003	8	0	0.022	52	0 06:00	3.145
PSto249	0.002	4	0	0.022	49	0 06:01	9.104
PSto251	0.004	8	0	0.022	48	0 06:00	9.092
PSto252	0.004	8	0	0.020	43	0 06:00	11.578

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Outfall Loading Summary  
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Outfall Node	Flow Freq. Pcnt.	Avg. Flow CMS	Max. Flow CMS	Total Volume 10 <sup>6</sup> ltr
CO001	100.00	47.272	72.667	6977.578
System	100.00	47.272	72.667	6977.578

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Link Flow Summary  
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Link	Type	Maximum  Flow  CMS	Time of Max Occurrence days hr:min	Maximum  Veloc  m/sec	Max/ Full Flow	Max/ Full Depth
{STM}.P1 101-POND	CONDUIT	3.715	0 06:17	2.09	0.16	1.00
{STM}.P1 105-103	CONDUIT	7.018	0 06:17	1.49	0.62	0.99
{STM}.P1 107-105	CONDUIT	1.005	0 06:33	1.06	0.26	0.97
{STM}.P1 109-107	CONDUIT	0.840	0 06:47	1.29	0.48	0.91
{STM}.P1 111-109	CONDUIT	0.614	0 06:48	0.97	0.29	0.86
{STM}.P1 113-111	CONDUIT	0.544	0 06:49	1.48	0.33	0.69
{STM}.P1 147-105	CONDUIT	6.130	0 06:13	1.66	0.66	1.00
{STM}.P1 153-147	CONDUIT	5.977	0 06:13	1.59	0.82	1.00
{STM}.P1 165-153	CONDUIT	5.534	0 06:13	1.46	0.75	1.00
{STM}.P1 169-165	CONDUIT	5.299	0 06:13	1.40	0.70	1.00
{STM}.P1 171-169	CONDUIT	5.300	0 06:13	1.40	0.70	1.00
{STM}.P1 173-171	CONDUIT	0.737	0 06:36	1.18	0.23	1.00
{STM}.P1 203-171	CONDUIT	4.449	0 06:10	1.69	0.84	1.00
{STM}.P1 205-203	CONDUIT	4.198	0 06:10	1.60	0.78	1.00
{STM}.P1 207-205	CONDUIT	4.181	0 06:10	1.61	0.78	1.00
{STM}.P1 209-207	CONDUIT	0.340	0 06:10	1.02	0.22	1.00
{STM}.P1 215-207	CONDUIT	3.844	0 06:09	1.77	0.66	1.00
{STM}.P1 217-215	CONDUIT	3.474	0 06:17	1.57	0.73	1.00
{STM}.P1 219A-219	CONDUIT	0.257	0 06:49	1.17	0.19	1.00
{STM}.P1 221-221A	CONDUIT	0.262	0 06:56	0.86	0.12	1.00
{STM}.P1 301-POND	CONDUIT	0.737	0 05:55	1.03	0.10	1.00
{STM}.P1 305-303	CONDUIT	1.942	0 06:08	1.07	0.55	1.00
{STM}.P1 307-305	CONDUIT	0.392	0 06:30	1.02	0.29	1.00
{STM}.P1 309-307	CONDUIT	0.388	0 06:31	1.53	0.59	0.94
{STM}.P1 311-309	CONDUIT	0.000	0 00:00	0.00	0.00	0.50
{STM}.P1 317-305	CONDUIT	1.595	0 06:08	1.34	0.75	0.99
{STM}.P1 319-317	CONDUIT	1.409	0 06:08	1.16	0.54	0.92
{STM}.P1 321-319	CONDUIT	1.420	0 06:07	1.23	0.65	0.82
{STM}.P1 323-321	CONDUIT	0.444	0 06:11	1.05	0.31	0.79
{STM}.P1 327-321	CONDUIT	0.989	0 06:07	1.38	0.49	0.81
{STM}.P1 331-329	CONDUIT	0.000	0 00:00	0.00	0.00	0.08
{STM}.P1 333-327	CONDUIT	0.000	0 00:00	0.00	0.00	0.43
{STM}.P1 337-327	CONDUIT	0.562	0 06:09	1.75	0.51	0.67
{STM}.P1 349-351	CONDUIT	0.279	0 06:47	1.31	0.64	1.00

**Kizell Lands - Fernbank 5618 Hazeldean Road**  
**PCSWMM Model Output SCS100-year 12-hour Carp River Interim**



{STM}.P1 501-502	CONDUIT	2.363	0	06:22	1.60	0.98	1.00	CC074	CHANNEL	43.008	0	11:10	0.17	0.03	0.32
{STM}.P1 502-503	CONDUIT	2.363	0	06:22	1.66	0.90	1.00	CC075	CHANNEL	43.125	0	11:09	0.21	0.02	0.30
{STM}.P1 503-504	CONDUIT	2.363	0	06:22	2.05	0.95	1.00	CC076	CHANNEL	43.295	0	11:07	0.14	0.61	0.49
1	CONDUIT	5.786	0	06:00	3.23	0.05	0.18	CC077	CHANNEL	11.735	0	06:01	1.76	0.35	0.36
104A05.1.1	CONDUIT	2.049	0	05:56	2.12	0.71	0.52	CC078	CHANNEL	43.506	0	11:04	0.17	0.07	0.49
CC002	CHANNEL	72.667	0	16:46	0.24	0.02	0.72	CC079	CHANNEL	43.952	0	11:00	0.15	0.82	0.49
CC003	CHANNEL	72.667	0	16:46	0.25	0.11	0.71	CC080	CONDUIT	10.716	0	05:59	2.69	1.02	1.00
CC004	CHANNEL	65.070	0	17:31	0.25	0.10	0.71	CC081	CHANNEL	44.360	0	10:55	0.20	0.04	0.49
CC005_1	CONDUIT	65.069	0	17:31	0.82	0.84	0.95	CC082	CHANNEL	44.445	0	10:55	0.36	0.04	0.49
CC005_2	CHANNEL	0.000	0	00:00	0.00	0.00	0.00	CC083	CHANNEL	44.564	0	10:51	0.98	0.24	0.43
CC006	CHANNEL	63.820	0	17:42	0.16	0.05	0.60	CC084	CHANNEL	44.588	0	10:50	0.73	0.03	0.43
CC007	CHANNEL	63.813	0	17:41	0.12	0.04	0.52	CC085	CONDUIT	16.929	0	06:02	0.64	0.09	0.84
CC008	CHANNEL	63.279	0	17:44	0.12	0.03	0.59	CC086	CONDUIT	9.547	0	06:07	0.95	0.24	0.77
CC009	CHANNEL	63.271	0	17:42	0.13	0.02	0.53	CC087	CONDUIT	20.704	0	12:01	0.70	0.08	0.72
CC010	CHANNEL	63.265	0	17:40	0.16	0.04	0.54	CC088	CONDUIT	12.596	0	12:00	1.06	0.41	0.84
CC011	CHANNEL	63.260	0	17:38	0.18	0.04	0.59	CC089	CHANNEL	44.642	0	10:50	1.22	0.72	0.49
CC012	CHANNEL	63.257	0	17:35	0.20	0.05	0.61	CC094	CHANNEL	0.837	0	10:06	0.69	0.02	0.14
CC013_1	CONDUIT	8.713	0	17:33	0.96	0.93	0.81	CC095	CONDUIT	0.838	0	10:05	1.04	0.46	0.70
CC013_2	CONDUIT	46.995	0	17:34	1.43	1.35	0.82	CC096	CONDUIT	0.839	0	10:05	1.43	0.28	0.53
CC013_3	CONDUIT	7.547	0	17:33	0.88	0.77	0.76	CC098	CONDUIT	10.676	0	06:00	5.04	1.66	1.00
CC013_4	CHANNEL	0.000	0	00:00	0.00	0.00	0.00	CC100	CHANNEL	44.444	0	10:50	0.24	0.13	0.49
CC014	CHANNEL	60.461	0	17:50	0.21	0.02	0.51	CC101	CONDUIT	44.647	0	10:48	1.43	0.14	0.52
CC015	CHANNEL	58.616	0	17:59	0.17	0.04	0.55	CC102	CONDUIT	44.919	0	10:45	1.44	0.47	0.65
CC016	CHANNEL	58.598	0	17:54	0.20	0.04	0.54	CC104	CHANNEL	44.657	0	10:48	0.23	0.34	0.50
CC017	CHANNEL	58.587	0	17:51	0.22	0.04	0.54	CC105	CHANNEL	44.726	0	10:47	0.46	0.19	0.50
CC018	CHANNEL	58.580	0	17:47	0.26	0.04	0.54	CC106	CHANNEL	44.851	0	10:46	0.18	0.73	0.51
CC019	CHANNEL	58.577	0	17:43	0.31	0.04	0.53	CC107	CHANNEL	44.929	0	10:45	0.28	0.13	0.53
CC020	CHANNEL	57.395	0	17:46	0.26	0.04	0.53	CC108	CHANNEL	44.937	0	10:43	0.28	0.06	0.52
CC021	CHANNEL	57.394	0	17:38	0.23	0.04	0.53	CC109	CHANNEL	32.803	0	11:29	0.22	0.62	0.53
CC022	CHANNEL	57.404	0	17:30	0.20	0.08	0.74	CC110	CHANNEL	32.816	0	11:29	0.18	0.03	0.53
CC023	CHANNEL	57.444	0	17:17	0.15	0.38	0.77	CC112	CHANNEL	32.708	0	11:29	0.17	0.10	0.52
CC024	CHANNEL	57.517	0	17:03	0.13	0.29	0.77	CC113	CHANNEL	32.717	0	11:29	0.26	0.13	0.52
CC025	CHANNEL	57.607	0	16:51	0.12	0.25	0.74	CC114	CHANNEL	32.728	0	11:29	0.22	0.13	0.52
CC026	CHANNEL	57.725	0	16:38	0.11	0.21	0.70	CC115	CHANNEL	32.740	0	11:29	0.36	0.50	0.52
CC027	CHANNEL	57.873	0	16:26	0.11	0.17	0.67	CC117_1	CONDUIT	32.448	0	11:27	1.09	0.36	0.66
CC028	CHANNEL	58.052	0	16:13	0.10	0.82	0.64	CC117_2	CHANNEL	0.000	0	00:00	0.00	0.00	0.00
CC029	CHANNEL	57.043	0	16:05	0.10	0.07	0.78	CC118	CHANNEL	32.744	0	11:29	0.20	0.11	0.52
CC030	CHANNEL	57.373	0	15:47	0.11	0.08	0.77	CC119	CHANNEL	32.454	0	11:27	0.76	0.20	0.69
CC031	CHANNEL	57.296	0	15:35	0.12	0.08	0.76	CC120_1	CONDUIT	32.459	0	11:27	1.09	0.43	0.72
CC032_1	CONDUIT	18.391	0	15:27	2.02	1.79	1.00	CC120_2	CHANNEL	0.000	0	00:00	0.00	0.00	0.00
CC032_2	CONDUIT	21.829	0	15:27	2.03	2.04	1.00	CC121	CHANNEL	32.757	0	11:29	0.20	0.10	0.52
CC032_3	CONDUIT	17.273	0	15:27	2.01	4.80	1.00	CC123	CHANNEL	32.774	0	11:28	0.26	0.13	0.52
CC032_4	CHANNEL	0.000	0	00:00	0.00	0.00	0.00	CC124	CHANNEL	32.784	0	11:28	0.39	0.10	0.52
CC033	CHANNEL	58.105	0	13:48	0.11	0.07	0.80	CC125	CHANNEL	32.791	0	11:28	0.62	0.09	0.52
CC034	CHANNEL	57.778	0	15:09	0.11	0.09	0.81	CC126	CONDUIT	0.070	0	06:09	0.04	0.00	0.32
CC035	CHANNEL	57.130	0	14:49	0.12	0.10	0.80	CC127	CONDUIT	0.076	0	06:14	1.55	1.11	1.00
CC036	CHANNEL	57.450	0	14:37	0.14	0.09	0.78	CC127_1	CHANNEL	32.798	0	11:28	0.49	0.12	0.52
CC037	CHANNEL	57.556	0	14:17	0.16	0.15	0.79	CC128_1	CONDUIT	1.549	0	06:02	1.37	0.21	1.00
CC038	CHANNEL	40.063	0	14:35	0.10	0.13	0.77	CC129	CHANNEL	32.803	0	11:28	0.21	0.10	0.52
CC039	CHANNEL	40.882	0	14:15	0.09	0.11	0.78	CC129_1	CONDUIT	2.373	0	05:48	2.10	1.15	1.00
CC040	CHANNEL	41.310	0	14:00	0.09	0.21	0.78	CC129_2	CONDUIT	1.158	0	06:04	0.77	1.07	1.00
CC041	CHANNEL	40.880	0	13:59	0.10	0.04	0.67	CC130	CHANNEL	32.613	0	11:28	0.20	0.10	0.67
CC042	CHANNEL	41.499	0	13:56	0.12	0.03	0.61	CC131	CHANNEL	32.621	0	11:28	0.19	0.38	0.67
CC043	CHANNEL	41.988	0	13:50	0.11	0.02	0.59	CC132	CHANNEL	32.631	0	11:28	0.22	0.08	0.67
CC044	CHANNEL	42.148	0	13:50	0.14	0.02	0.49	CC133	CHANNEL	32.645	0	11:28	0.26	0.25	0.67
CC045	CHANNEL	42.670	0	13:46	0.23	0.03	0.45	CC134	CHANNEL	32.653	0	11:28	0.37	0.39	0.67
CC046	CHANNEL	43.210	0	13:43	0.31	0.07	0.48	CC135	CHANNEL	32.502	0	11:28	0.88	0.33	0.67
CC047	CHANNEL	43.589	0	13:42	0.29	0.08	0.46	CC136	CHANNEL	32.505	0	11:28	0.74	0.13	0.67
CC048	CHANNEL	43.854	0	13:37	0.24	0.31	0.76	CC137	CHANNEL	32.450	0	11:27	0.68	1.09	0.69
CC049	CHANNEL	43.985	0	13:32	0.24	0.32	0.75	CC139	CHANNEL	32.460	0	11:27	0.75	0.14	0.71
CC050	CHANNEL	43.996	0	13:31	0.16	0.02	0.51	CC140	CHANNEL	32.467	0	11:27	0.29	0.18	0.62
CC050_1	CONDUIT	43.996	0	13:32	1.91	1.49	0.97	CC141	CONDUIT	6.264	0	13:22	0.68	0.17	0.72
CC050_2	CHANNEL	0.000	0	00:00	0.00	0.00	0.00	CC142	CHANNEL	32.513	0	11:26	0.34	0.28	0.68
CC052	CHANNEL	43.391	0	13:33	0.18	0.09	0.51	CC143	CHANNEL	32.534	0	11:26	0.39	1.37	0.72
CC053	CHANNEL	43.392	0	13:29	0.12	0.03	0.51	CC144	CHANNEL	2.044	0	06:19	1.10	0.01	0.28
CC054	CHANNEL	43.408	0	13:20	0.10	0.03	0.51	CC145	CONDUIT	2.277	0	06:21	4.00	1.57	1.00
CC055	CHANNEL	43.464	0	13:12	0.09	0.06	0.51	CC146	CHANNEL	32.204	0	11:25	0.43	0.12	0.63
CC056	CHANNEL	43.089	0	13:05	0.10	0.03	0.51	CC147	CHANNEL	32.226	0	11:24	0.36	0.07	0.62
CC057	CHANNEL	43.144	0	12:57	0.09	0.02	0.51	CC148	CHANNEL	31.818	0	11:24	0.26	0.18	0.62
CC058	CHANNEL	43.236	0	12:53	0.13	0.07	0.50	CC149	CHANNEL	32.022	0	10:59	0.28	0.08	0.55
CC059	CHANNEL	43.305	0	12:45	0.14	0.03	0.51	CC150_1	CONDUIT	32.338	0	10:45	1.26	0.19	0.57
CC060	CHANNEL	43.420	0	12:39	0.12	0.54	0.51	CC150_2	CHANNEL	0.000	0	00:00	0.00	0.00	0.00
CC061	CHANNEL	43.548	0	12:32	0.12	0.03	0.51	CC151	CHANNEL	32.048	0	10:59	0.20	0.10	0.62
CC062	CHANNEL	43.678	0	12:22	0.15	0.04	0.50	CC152	CHANNEL	32.287	0	10:46	0.26	0.09	0.62
CC063	CHANNEL	44.053	0	12:08	0.18	0.05	0.47	CC153	CHANNEL	53.910	0	07:18	0.69	0.62	0.69
CC064	CHANNEL	44.220	0	12:06	0.29	0.12	0.47	CC154	CHANNEL	50.047	0	07:18	1.98	0.01	0.56
CC065	CHANNEL	44.293	0	12:01	0.18	0.02	0.46	CC155	CHANNEL	32.898	0	10:26	0.88	0.09	0.55
CC066	CHANNEL	43.111	0	12:08	0.14	0.03	0.50	CC156	CHANNEL	33.283	0	10:26	0.26	0.09	0.55
CC067	CHANNEL	43.165	0	12:07	0.14	0.03	0.44	CC157	CHANNEL	33.458	0	10:26	0.19	0.13	0.55
CC068	CHANNEL	43.402	0	12:05	0.13	0.11	0.50	CC158	CHANNEL	33.808	0	10:26	0.15	0.17	0.55
CC069	CHANNEL	43.624	0	11:51	0.16	0.09	0.50	CC159	CHANNEL	30.695	0	10:26	0.33	0.09	0.55
CC070	CHANNEL	43.659	0	11:21	0.27	0.02	0.39	CC160	CHANNEL	30.388	0	10:44	0.13	0.23	0.55
CC071	CHANNEL	43.749	0	11:16	0.15	0.04	0.50	CC161	CHANNEL	31.273	0	11:21	0.13	0.06	0.55
CC072	CHANNEL	43.842	0	11:14	0.17	0.03	0.38	CC162	CHANNEL	31.692	0	11:21	0.13	0.12	0.62
CC073	CHANNEL	43.524	0	11:14	0.20	0.09	0.49	CC163	CHANNEL</						

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CC164	CHANNEL	36.804	0	10:25	0.20	1.25	0.66	CC263	CONDUIT	20.562	0	06:07	2.53	0.39	0.60
CC165	CHANNEL	33.312	0	11:25	0.17	0.13	0.66	CC264	CHANNEL	18.626	0	06:05	2.28	0.14	0.45
CC166	CHANNEL	35.226	0	10:18	0.18	0.19	0.73	CC265_1	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
CC167	CHANNEL	35.481	0	10:48	0.21	0.61	0.73	CC265_2	CONDUIT	18.407	0	06:00	4.02	2.17	0.95
CC168	CHANNEL	31.251	0	11:09	0.57	0.52	0.89	CC266	CONDUIT	8.882	0	06:08	1.87	0.46	1.00
CC169	CHANNEL	17.205	0	13:08	0.26	0.08	0.54	CC267	CHANNEL	1.457	0	06:25	0.72	0.02	0.21
CC170	CHANNEL	17.515	0	14:43	0.23	0.18	0.54	CC271_1	CONDUIT	2.000	0	05:46	2.27	0.34	0.69
CC171	CHANNEL	17.286	0	13:08	0.16	0.40	0.62	CC271_2	CHANNEL	3.900	0	06:01	1.69	0.04	0.26
CC172	CHANNEL	16.491	0	13:29	0.16	0.21	0.62	CC282_1	CONDUIT	1.814	0	06:01	0.16	0.01	0.54
CC172_1	CONDUIT	13.444	0	13:01	0.54	0.13	0.59	CC282_2	CONDUIT	1.100	0	05:46	1.97	0.74	1.00
CC172_2	CHANNEL	0.000	0	00:00	0.00	0.00	0.00	CC283	CHANNEL	7.731	0	06:02	1.77	0.06	0.28
CC173	CHANNEL	16.040	0	13:08	0.14	0.06	0.55	CC284	CONDUIT	5.948	0	06:05	2.75	1.95	1.00
CC174	CHANNEL	16.424	0	13:29	0.19	0.05	0.55	CC285	CONDUIT	24.476	0	07:02	0.89	0.03	0.79
CC175	CHANNEL	13.563	0	13:01	0.38	0.15	0.72	CC286	CONDUIT	11.882	0	06:05	3.24	0.01	0.29
CC177	CHANNEL	13.351	0	12:23	0.28	0.04	0.57	CC287	CONDUIT	0.130	0	07:19	0.79	15.38	1.00
CC178	CHANNEL	17.695	0	07:03	0.64	0.05	0.48	CC289_1	CONDUIT	13.295	0	06:00	3.87	0.52	0.85
CC179	CHANNEL	20.903	0	07:03	0.38	0.09	0.54	CC289_2	CHANNEL	2.278	0	06:00	1.93	0.02	0.18
CC180	CHANNEL	14.904	0	08:44	0.37	0.25	0.54	CC290	CONDUIT	3.890	0	06:02	0.98	0.34	1.00
CC181	CHANNEL	13.461	0	07:13	0.24	0.05	0.54	CC291	CONDUIT	3.194	0	06:03	1.25	0.51	1.00
CC182	CHANNEL	12.793	0	09:21	0.28	0.28	0.88	CC292	CONDUIT	3.050	0	06:01	2.28	0.48	0.65
CC183	CHANNEL	13.061	0	09:29	0.29	0.16	0.72	CC293	CONDUIT	1.062	0	06:00	1.86	1.17	0.84
CC184	CHANNEL	13.213	0	09:18	0.31	0.16	0.72	CC294	CONDUIT	2.011	0	05:48	2.20	0.35	0.39
CC185	CHANNEL	13.345	0	09:20	0.28	0.20	0.72	CC296	CONDUIT	0.899	0	06:00	0.51	0.17	1.00
CC186	CHANNEL	13.336	0	09:20	0.28	0.15	0.72	CF239	CONDUIT	0.000	0	00:00	0.00	0.00	0.05
CC187	CHANNEL	12.533	0	09:22	0.20	0.03	0.47	FC002	CHANNEL	15.327	0	07:40	0.20	0.12	1.00
CC188	CHANNEL	12.741	0	09:19	0.09	0.02	0.47	FC003	CHANNEL	15.343	0	07:40	0.16	0.08	0.98
CC189	CHANNEL	12.920	0	09:15	0.07	0.02	0.47	FC004	CHANNEL	15.808	0	07:36	0.95	0.48	0.72
CC190	CHANNEL	14.239	0	09:25	0.08	0.03	0.46	FC005	CHANNEL	15.243	0	07:39	0.79	0.47	0.96
CC191	CHANNEL	14.050	0	09:21	0.08	0.03	0.52	FC006	CHANNEL	15.244	0	07:39	0.37	0.05	0.94
CC192	CHANNEL	14.227	0	09:21	0.11	0.26	0.52	FC007	CHANNEL	15.263	0	07:40	0.80	0.28	0.87
CC193	CHANNEL	13.332	0	09:19	0.08	0.07	0.52	FC008	CHANNEL	15.264	0	07:39	0.68	0.08	0.60
CC194	CHANNEL	12.701	0	09:23	0.16	0.06	0.52	FC009	CHANNEL	15.266	0	07:37	0.60	0.03	0.64
CC195	CHANNEL	12.674	0	09:23	0.16	0.18	0.52	FC010	CHANNEL	15.267	0	07:37	0.60	0.32	0.54
CC196	CHANNEL	12.812	0	09:16	0.37	0.04	0.52	FC011	CHANNEL	14.996	0	07:35	0.55	0.13	0.62
CC197	CHANNEL	12.896	0	09:17	0.07	0.06	0.51	FC012	CHANNEL	15.004	0	07:31	0.73	0.07	0.68
CC197_1	CHANNEL	13.058	0	09:15	0.08	0.04	0.40	FC013	CHANNEL	15.013	0	07:29	0.99	0.05	0.52
CC197_2	CHANNEL	13.203	0	09:04	0.08	0.53	0.51	FC014	CHANNEL	15.022	0	07:28	0.81	0.02	0.28
CC197_3	CHANNEL	13.466	0	09:04	0.09	0.04	0.40	FC015	CHANNEL	15.025	0	07:26	0.59	0.35	0.58
CC197_4	CHANNEL	13.615	0	08:59	0.09	0.02	0.40	FC016	CHANNEL	15.028	0	07:23	0.55	0.15	0.53
CC197_5	CHANNEL	13.712	0	08:59	0.58	0.04	0.39	FC017	CHANNEL	15.038	0	07:22	0.55	0.16	0.48
CC197_6	CHANNEL	13.810	0	08:58	0.61	0.05	0.39	FC018	CHANNEL	15.043	0	07:20	1.24	0.02	0.41
CC198	CHANNEL	13.934	0	08:49	0.58	0.06	0.39	FC019	CONDUIT	15.044	0	07:20	2.87	0.83	1.00
CC199_1	CONDUIT	13.996	0	08:50	1.34	0.07	0.34	FC020	CHANNEL	2.057	0	06:00	0.19	0.00	0.16
CC199_2	CHANNEL	0.000	0	00:00	0.00	0.00	0.00	FC021	CONDUIT	0.374	0	06:05	1.78	0.07	0.44
CC200	CHANNEL	14.331	0	08:40	0.29	0.02	0.42	FC023	CHANNEL	14.584	0	07:07	1.02	0.02	0.49
CC201	CHANNEL	14.235	0	08:30	0.64	0.05	0.43	FC024	CHANNEL	12.904	0	08:13	0.45	0.29	0.54
CC202	CHANNEL	7.910	0	09:23	0.32	0.02	0.50	FC025	CHANNEL	13.265	0	08:12	0.56	0.07	0.53
CC203	CHANNEL	8.049	0	07:58	0.26	0.03	0.57	FC026	CHANNEL	14.649	0	08:23	0.70	0.11	0.45
CC204_1	CONDUIT	4.051	0	07:41	3.58	1.25	1.00	FC027	CONDUIT	16.940	0	09:51	2.30	1.14	0.86
CC204_2	CONDUIT	4.041	0	07:41	3.57	1.98	1.00	FC028	CHANNEL	13.798	0	08:25	1.25	0.06	0.38
CC205	CHANNEL	25.407	0	06:44	1.43	0.09	0.33	FC029	CHANNEL	12.411	0	07:39	1.10	0.13	0.41
CC206_1	CONDUIT	22.576	0	06:30	1.31	0.53	0.80	FC030	CHANNEL	12.398	0	07:36	0.77	0.14	0.39
CC206_2	CONDUIT	0.000	0	00:00	0.00	0.00	0.00	FC031	CHANNEL	12.398	0	07:36	0.46	0.07	0.48
CC207	CHANNEL	21.587	0	06:28	0.79	0.27	0.63	FC032	CONDUIT	12.218	0	07:37	2.55	1.24	1.00
CC208	CHANNEL	21.887	0	06:25	0.83	0.30	0.61	FC033	CHANNEL	12.218	0	07:37	0.54	0.03	0.38
CC209_1	CONDUIT	0.000	0	00:00	0.00	0.00	0.00	FC034	CONDUIT	12.218	0	07:36	2.55	1.04	1.00
CC209_2	CONDUIT	23.674	0	06:17	2.62	0.67	0.92	FC035	CHANNEL	12.219	0	07:35	0.66	0.02	0.32
CC210	CHANNEL	24.090	0	06:17	1.77	0.12	0.36	FC036	CHANNEL	12.233	0	07:29	1.02	0.01	0.29
CC211	CHANNEL	24.254	0	06:15	1.91	0.33	0.53	FC037	CHANNEL	12.298	0	07:18	0.57	0.01	0.21
CC212_1	CONDUIT	0.000	0	00:00	0.00	0.00	0.00	FC038	CONDUIT	12.369	0	07:11	2.58	1.14	1.00
CC212_2	CONDUIT	23.516	0	06:14	1.73	0.53	1.00	FC039	CHANNEL	12.392	0	07:09	0.80	0.04	0.54
CC213	CHANNEL	24.175	0	06:10	1.62	0.05	0.38	FC040	CHANNEL	8.267	0	07:05	0.74	0.06	0.50
CC214_1	CONDUIT	2.892	0	06:02	2.892	0.02	0.55	FC041_1	CHANNEL	7.286	0	08:42	1.77	0.02	0.30
CC214_2	CONDUIT	2.760	0	05:47	3.10	0.42	0.94	FC041_2	CHANNEL	8.541	0	06:54	0.95	0.02	0.37
CC215	CONDUIT	0.951	0	06:15	1.01	1.19	0.87	FC042	CHANNEL	7.286	0	08:41	1.01	0.07	0.39
CC215_1	CONDUIT	0.945	0	05:46	1.09	0.17	1.00	FC043	CHANNEL	7.286	0	08:39	0.88	0.11	0.49
CC216_1	CONDUIT	1.739	0	05:46	2.73	0.71	1.00	FC044	CHANNEL	7.160	0	08:41	0.60	0.60	0.52
CC242	CHANNEL	2.001	0	06:20	1.07	0.01	0.28	FC045	CHANNEL	7.161	0	08:40	0.73	0.09	0.70
CC243	CONDUIT	2.007	0	06:21	3.73	0.97	1.00	FC046	CHANNEL	7.162	0	08:38	0.75	0.12	0.68
CC246	CHANNEL	10.368	0	06:01	3.01	0.06	0.22	FC047	CHANNEL	7.164	0	08:36	0.31	0.10	0.60
CC247	CHANNEL	3.137	0	06:00	0.86	0.06	0.22	FC048	CONDUIT	4.621	0	06:35	2.61	1.99	1.00
CC248_1	CHANNEL	6.878	0	06:05	1.27	0.15	0.55	FC050	CONDUIT	1.536	0	06:53	0.79	0.02	0.18
CC248_2	CHANNEL	5.900	0	06:12	0.99	0.13	0.63	FC051	CONDUIT	0.291	0	05:52	0.06	0.01	0.21
CC249	CHANNEL	2.899	0	06:00	1.27	0.05	0.26	FC054	CHANNEL	7.166	0	08:34	0.57	0.23	0.74
CC250	CHANNEL	2.920	0	06:00	1.23	0.03	0.21	FC055	CHANNEL	7.167	0	08:32	0.59	0.94	0.57
CC251	CHANNEL	7.161	0	06:49	0.37	0.26	0.93	FC056	CHANNEL	7.168	0	08:29	0.62	0.13	0.78
CC254	CHANNEL	4.893	0	07:27	0.81	0.10	0.67	FC057	CHANNEL	7.171	0	08:29	0.86	0.01	0.38
CC255	CONDUIT	2.034	0	06:00	2.58	0.16	0.94	FC058	CHANNEL	7.172	0	08:29	1.18	0.14	0.61
CC257	CHANNEL	3.506	0	06:51	0.59	0.08	0.62	FC059	CONDUIT	4.381	0	06:09	0.65	0.07	0.46
CC259_1	CONDUIT	1.956	0	06:02	0.17	0.01	0.54	FC060	CONDUIT	5.914	0	06:02	1.13	0.12	0.34
CC259_2	CONDUIT	1.900	0	05:47	2.03	0.55	0.78	FC061	CONDUIT	6.157	0	06:00	4.64	0.40	0.44
CC260	CONDUIT	3.100	0	06:27	3.04	0.79	0.84	FC062	CHANNEL	5.650	0	11:03	1.11	0.42	1.00
CC261_1	CONDUIT	1.200	0	05:45	2.35	0.57	0.97	FC063	CONDUIT	5.628	0	11:01	1.39	0.55	0.96
CC261_2	CONDUIT	1.971	0	06:01	0.19	0.01	0.54	FC064	CHANNEL	5.659	0	06:05	0.05	0.01	0.61
CC262	CHANNEL	21.146	0	06:08	1.46	0.05	0.29	FC065							

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FC066	CONDUIT	0.825	0	05:11	1.24	0.00	0.57	FOut08	CONDUIT	0.917	0	05:45	1.76	0.38	1.00
FC067	CHANNEL	4.387	0	08:47	0.26	0.01	0.23	FOut09	CONDUIT	0.931	0	05:46	1.30	0.39	1.00
FC068	CHANNEL	3.958	0	08:46	0.26	0.59	0.85	L108	CONDUIT	0.984	0	06:00	2.77	2.34	1.00
FC069	CHANNEL	3.957	0	08:44	0.43	0.04	0.29	L109C	CONDUIT	0.595	0	05:59	1.76	1.42	1.00
FC070	CHANNEL	3.958	0	08:41	0.38	0.02	0.28	L113Ci	CONDUIT	0.636	0	05:59	4.00	2.23	1.00
FC071_1	CHANNEL	3.842	0	08:49	>50.00	0.01	0.12	L114	CONDUIT	0.598	0	05:59	1.85	1.30	1.00
FC071_2	CONDUIT	0.138	1	02:08	1.05	0.22	0.98	L124C	CONDUIT	0.655	0	06:02	1.87	0.70	1.00
FC072	CHANNEL	3.861	0	08:44	0.46	0.02	0.29	L170	CONDUIT	0.808	0	06:03	1.84	0.99	1.00
FC073	CHANNEL	3.862	0	08:41	0.10	0.03	0.37	L171	CONDUIT	0.880	0	06:04	1.92	0.96	1.00
FC074	CHANNEL	3.865	0	08:34	0.13	0.02	0.51	L171A	CONDUIT	0.945	0	06:04	2.13	1.04	1.00
FC075	CHANNEL	3.869	0	08:29	0.85	0.01	0.33	L172	CONDUIT	0.974	0	06:04	2.03	0.85	1.00
FC076_1	CHANNEL	2.040	0	08:29	0.54	0.01	0.14	L172A	CONDUIT	1.001	0	06:05	2.05	0.87	1.00
FC076_2	CONDUIT	0.643	0	22:40	2.27	1.03	1.00	L172B	CONDUIT	1.150	0	06:05	1.46	0.46	1.00
FC077	CHANNEL	2.619	0	08:28	0.64	0.05	0.42	L173	CONDUIT	1.203	0	06:06	0.86	0.36	1.00
FC078_1	CHANNEL	2.293	0	08:27	3.80	0.04	0.28	L174	CONDUIT	5.949	0	06:00	4.16	2.16	1.00
FC078_2	CONDUIT	0.606	0	06:08	2.07	4.73	1.00	L174C	CONDUIT	5.949	0	06:00	4.16	2.08	1.00
FC079	CHANNEL	2.620	0	08:25	0.38	0.10	0.67	L175	CONDUIT	5.466	0	06:03	2.34	0.53	0.67
FC080	CHANNEL	2.620	0	08:21	0.48	0.03	0.47	L176	CONDUIT	5.667	0	06:03	2.29	0.56	0.74
FC081	CHANNEL	2.621	0	08:18	0.57	0.02	0.38	L176A	CONDUIT	11.149	0	06:00	3.46	1.06	0.79
FC082	CHANNEL	2.502	0	15:21	0.57	0.01	0.37	L177	CONDUIT	11.246	0	06:01	3.70	0.94	0.77
FC083	CHANNEL	2.502	0	15:18	0.73	0.16	0.58	L178	CONDUIT	11.514	0	06:01	3.40	1.00	1.00
FC084	CHANNEL	2.502	0	15:14	0.50	0.32	0.71	L179	CONDUIT	11.516	0	06:01	3.34	1.00	1.00
FC085	CHANNEL	2.502	0	15:11	0.43	0.12	0.78	L180	CONDUIT	16.910	0	06:00	3.74	1.21	1.00
FC086_1	CHANNEL	0.000	0	00:00	0.00	0.00	0.00	L181	CONDUIT	16.910	0	06:00	3.74	1.25	1.00
FC086_2	CONDUIT	2.502	0	15:11	1.36	0.45	0.94	L208i	CONDUIT	0.563	0	06:00	1.48	0.30	0.43
FC087	CHANNEL	2.502	0	15:11	0.23	0.08	0.83	LDout_1	CONDUIT	11.578	0	06:00	2.03	0.87	0.79
FC088_1	CONDUIT	1.244	0	19:52	1.92	3.19	1.00	Link792	CONDUIT	2.036	0	06:01	2.14	0.46	0.62
FC088_2	CHANNEL	1.204	0	14:29	1.29	0.43	0.24	Link793	CONDUIT	2.050	0	06:02	2.12	0.46	0.67
FC090	DUMY	2.224	0	13:10				Link795	CONDUIT	3.443	0	05:51	1.65	1.19	1.00
FC091	CHANNEL	2.224	0	13:10	0.20	0.01	0.17	Link796	CONDUIT	3.145	0	05:51	1.49	1.09	1.00
FC092	CHANNEL	2.224	0	13:01	0.13	0.01	0.31	Link797	CONDUIT	2.521	0	05:51	1.18	0.88	1.00
FC093	CHANNEL	2.225	0	12:52	0.10	0.01	0.20	IMG101b	CONDUIT	9.170	0	06:00	2.65	1.67	1.00
FC094	CONDUIT	2.226	0	12:46	1.78	0.43	0.58	IMG102b	CONDUIT	9.171	0	06:00	2.65	1.67	1.00
FC095	CHANNEL	2.482	0	07:53	0.51	0.04	0.51	IMG103ob	CONDUIT	3.136	0	06:00	1.69	0.48	0.50
FC096	CHANNEL	2.223	0	10:16	0.19	0.03	0.33	IMG104b	CONDUIT	3.109	0	06:00	1.69	0.47	0.51
FC097	CHANNEL	2.223	0	10:11	0.16	0.02	0.25	IMG105b	CONDUIT	3.313	0	06:00	1.76	0.48	0.54
FC098	CHANNEL	2.223	0	10:06	0.56	0.01	0.24	IMG106	CONDUIT	3.263	0	06:00	1.72	0.47	0.57
FC099	CHANNEL	2.223	0	10:03	0.35	0.02	0.25	IMG106ob	CONDUIT	3.326	0	06:04	1.67	0.48	0.59
FC100	CHANNEL	2.223	0	10:01	0.48	0.01	0.23	IMG107	CONDUIT	5.332	0	06:03	2.42	0.50	0.61
FC101	CONDUIT	0.731	0	10:01	5.82	62.65	1.00	LMH111	CONDUIT	9.578	0	06:00	4.77	0.51	0.51
FC102	CONDUIT	2.097	0	10:47	2.42	2.76	1.00	LMH113	CONDUIT	9.635	0	06:00	3.77	0.55	0.88
FC103_2	CONDUIT	1.774	0	07:35	0.30	0.03	0.67	LMH120	CONDUIT	10.083	0	06:01	2.54	0.88	1.00
FC104	CONDUIT	6.400	0	06:07	0.98	0.65	0.92	LMH121	CONDUIT	8.645	0	06:01	1.91	1.11	1.00
FC108	CONDUIT	5.095	0	06:12	3.56	1.56	1.00	LMH122	CONDUIT	9.598	0	06:00	3.02	0.57	0.75
FC200	CHANNEL	1.504	0	06:00	2.15	0.01	0.13	LMH215	CONDUIT	11.591	0	06:00	2.93	0.06	0.28
FC201	CHANNEL	0.743	0	06:00	1.67	0.00	0.10	LMH215b	CONDUIT	9.092	0	06:01	2.15	1.16	0.89
FC202	CHANNEL	1.760	0	06:00	1.14	0.01	0.40	LMH216	CONDUIT	9.104	0	06:01	2.03	1.16	0.98
FC203	CHANNEL	0.001	0	06:00	0.18	0.00	0.06	LMH217	CONDUIT	9.104	0	06:01	2.01	1.16	1.00
FC204	CHANNEL	1.488	0	06:00	1.41	0.01	0.40	LN4C21B	CONDUIT	10.435	0	06:18	2.50	0.63	0.80
FC205	CONDUIT	0.610	0	06:01	1.49	0.29	0.68	LT182	CONDUIT	16.911	0	06:00	3.74	1.25	1.00
FC206	CONDUIT	0.210	0	05:39	1.81	0.00	0.56	LT183	CONDUIT	22.300	0	06:00	4.37	1.40	1.00
FC208	CHANNEL	0.450	0	06:01	0.35	0.00	0.40	LT184	CONDUIT	22.301	0	06:00	4.37	1.40	1.00
FC209	CONDUIT	1.095	0	06:02	0.83	0.38	0.78	LT185	CONDUIT	22.302	0	06:00	4.37	1.40	1.00
FC210	CONDUIT	0.393	0	06:18	1.27	0.47	0.58	LT186	CONDUIT	22.303	0	06:00	4.37	2.74	1.00
FC211	CONDUIT	1.078	0	06:02	0.60	0.37	0.85	LT187	CONDUIT	22.323	0	06:00	5.57	0.51	0.79
FC212	CONDUIT	3.236	0	06:02	0.75	0.40	0.94	LW19	CONDUIT	8.243	0	06:00	2.07	0.48	1.00
FC213	CONDUIT	4.120	0	06:04	0.94	0.55	0.98	LW27	CONDUIT	7.198	0	06:00	2.14	0.42	1.00
FC214	CONDUIT	4.425	0	06:04	0.99	0.62	1.00	LW28	CONDUIT	7.195	0	06:00	1.81	0.42	1.00
FC215	CONDUIT	2.210	0	06:05	0.49	0.28	1.00	LW43	CONDUIT	6.029	0	06:00	1.52	0.35	1.00
FC216	CONDUIT	4.763	0	06:04	1.55	0.29	0.77	LW53	CONDUIT	7.196	0	06:00	2.02	0.42	1.00
FC217	CONDUIT	0.565	0	06:01	1.52	0.24	0.31	LW54	CONDUIT	6.027	0	06:00	1.52	0.91	1.00
FC218	CONDUIT	0.571	0	06:00	1.39	0.24	0.33	OUT_P4	CHANNEL	16.754	0	06:29	1.31	0.06	0.58
FC219	CONDUIT	0.000	0	00:00	0.00	0.00	0.00	P1 101a-POND	CONDUIT	3.233	0	06:18	0.09	0.99	0.96
FC220	CONDUIT	0.000	0	00:00	0.00	0.00	0.00	P1 103-101	CONDUIT	6.981	0	06:17	1.70	0.97	0.97
FC221	CONDUIT	0.000	0	00:00	0.00	0.00	0.00	P1 215a-215	CONDUIT	0.174	0	06:02	1.45	0.25	1.00
FC222	CONDUIT	0.000	0	00:00	0.00	0.00	0.00	P1 219-217	CONDUIT	1.616	0	05:53	1.65	0.50	1.00
FC223	CONDUIT	0.000	0	00:00	0.00	0.00	0.00	P1 221a-215	CONDUIT	3.679	0	06:15	1.74	0.78	1.00
FC224	CONDUIT	0.000	0	00:00	0.00	0.00	0.00	P1 301a-POND	CONDUIT	1.270	0	06:11	0.60	0.04	1.00
FC225	CONDUIT	1.308	0	06:08	0.83	0.44	0.76	P1 303-301	CONDUIT	1.926	0	06:08	1.17	0.66	1.00
FC226	CONDUIT	0.945	0	06:19	1.18	0.47	0.86	P1 329-327	CONDUIT	0.023	0	06:11	0.11	0.02	0.50
FC227	CONDUIT	2.231	0	06:08	1.29	0.50	0.84	P1 335-171	CONDUIT	0.265	0	06:17	0.67	0.16	0.88
FC228	CONDUIT	1.316	0	06:08	0.95	0.45	0.70	P1 351-219	CONDUIT	0.534	0	06:07	1.53	0.56	1.00
FC229	CONDUIT	1.325	0	06:10	1.12	0.48	0.65	P1 EX504-217	CONDUIT	2.365	0	06:50	1.99	0.44	1.00
FC230	CONDUIT	0.312	0	06:17	2.81	0.58	1.00	PC002	CHANNEL	17.282	0	10:45	0.46	0.50	1.00
FC231	CONDUIT	2.210	0	06:05	0.49	0.28	1.00	PC003	CHANNEL	17.051	0	10:27	0.72	0.21	0.72
FC232	CHANNEL	4.500	0	06:10	1.08	0.02	0.32	PC004	CHANNEL	17.034	0	10:28	0.34	0.04	0.57
FC233	CONDUIT	4.500	0	06:10	4.00	1.25	0.61	PC005	CHANNEL	17.047	0	10:32	0.76	0.02	0.42
FC234	CONDUIT	2.223	0	10:01	4.42	2.38	1.00	PC006	CHANNEL	17.066	0	10:29	0.34	0.03	0.56
FC234_1	CONDUIT	1.250	0	05:37	2.82	0.02	0.61	PC007	CHANNEL	17.074	0	10:27	1.48	0.04	0.46
FC235	CONDUIT	0.850	0	05:43	2.57	0.01	0.60	PC008_1	CONDUIT	17.076	0	10:27	1.36	0.28	0.92
FC236	CONDUIT	5.140	0	05:51	1.51	0.23	0.64	PC008_2	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
FC238	CONDUIT	0.000	0	00:00	0.00	0.00	0.07	PC009	CHANNEL	17.078	0	10:27	0.61	0.04	0.42
FC239	CONDUIT	0.240	0	05:46	5.73	0.06	0.35	PC010	CHANNEL	17.088	0	10:25	0.54	0.07	0.38
FC295	CONDUIT	1.719	0	06:21	0.27	0.05	1.00	PC011	CHANNEL	17.100	0	10:23	0.73	0.03	0.37
FOut07	CONDUIT	0.308													

**Kizell Lands - Fernbank 5618 Hazeldean Road**  
**PCSWMM Model Output SCS100-year 12-hour Carp River Interim**



PC013	CHANNEL	17.106	0	10:19	0.31	0.06	0.29	PC092	CHANNEL	14.132	0	06:32	0.57	0.36	0.47
PC014	CHANNEL	17.112	0	10:18	0.48	0.02	0.32	PC093_1	CONDUIT	12.897	0	06:40	1.41	12.96	1.00
PC015	CHANNEL	0.034	0	06:19	0.01	0.00	0.33	PC093_2	CHANNEL	0.000	0	00:00	0.00	0.00	0.00
PC018	CHANNEL	17.018	0	10:15	0.19	0.01	0.28	PC094	CHANNEL	11.872	0	06:40	0.54	0.16	0.62
PC019	CHANNEL	17.032	0	10:12	0.69	0.03	0.23	PC095	CHANNEL	11.866	0	06:34	0.47	0.20	0.56
PC021	CHANNEL	17.037	0	10:10	0.49	0.05	0.22	PC096	CHANNEL	12.045	0	06:20	0.45	0.25	0.48
PC022	CHANNEL	17.041	0	10:08	0.74	0.02	0.28	PC097	CHANNEL	12.365	0	06:14	0.27	0.16	0.61
PC023	CHANNEL	17.044	0	10:06	0.35	0.01	0.24	PC098	CHANNEL	13.098	0	06:08	0.63	0.18	0.40
PC024	CHANNEL	17.047	0	10:04	0.59	0.09	0.27	PC099	CHANNEL	13.374	0	06:07	0.52	0.10	0.42
PC025	CHANNEL	17.049	0	10:03	0.52	0.02	0.25	PC101	CONDUIT	0.860	0	12:59	0.58	1.24	0.96
PC026	CHANNEL	17.054	0	10:03	0.50	0.04	0.23	PC102	CHANNEL	9.382	0	07:53	0.07	0.00	0.54
PC027	CHANNEL	18.130	0	06:09	0.69	0.02	0.24	PC103	CHANNEL	9.485	0	07:52	0.98	0.02	0.43
PC028_1	CONDUIT	9.963	0	06:08	1.08	0.30	0.65	PC104	CHANNEL	9.549	0	07:51	0.73	0.02	0.38
PC028_2	CONDUIT	8.417	0	06:09	1.25	0.18	0.59	PC105	CHANNEL	9.660	0	07:48	0.07	0.02	0.62
PC029	CHANNEL	18.737	0	06:08	0.46	0.01	0.23	PC106_1	CHANNEL	1.464	0	06:56	0.04	0.00	0.32
PC030	CHANNEL	19.678	0	06:08	0.79	0.02	0.21	PC106_2	CHANNEL	1.538	0	06:56	0.29	0.01	0.35
PC031	CHANNEL	17.231	0	06:07	1.20	0.02	0.17	PC107	CHANNEL	3.374	0	06:09	0.34	0.07	0.33
PC032	CHANNEL	17.442	0	06:06	0.83	0.09	0.27	PC108	CHANNEL	4.248	0	06:04	0.26	0.08	0.48
PC033	CHANNEL	17.633	0	06:05	0.97	0.04	0.26	PC109	CONDUIT	4.290	0	06:02	3.46	0.83	0.66
PC034	CHANNEL	17.854	0	06:04	1.11	0.04	0.21	PC110	CHANNEL	5.002	0	05:59	0.25	0.09	0.71
PC035	CHANNEL	17.960	0	06:03	0.92	0.03	0.20	PC111	CHANNEL	1.579	0	06:57	0.42	0.04	0.25
PC036	CHANNEL	18.008	0	06:02	0.57	0.03	0.21	PC112	CHANNEL	9.125	0	06:09	0.57	0.03	0.44
PC037	CHANNEL	18.144	0	06:01	0.73	0.05	0.23	PC113_1	CONDUIT	3.625	0	06:07	1.60	0.46	0.79
PC038	CHANNEL	16.904	0	09:52	0.67	0.03	0.29	PC113_2	CONDUIT	3.625	0	06:07	1.60	0.46	0.79
PC039	CHANNEL	16.904	0	09:51	1.08	0.03	0.34	PC113_3	CHANNEL	1.964	0	06:07	0.73	0.01	0.46
PC040	CHANNEL	16.904	0	09:50	1.70	0.06	0.33	PC114	CHANNEL	9.239	0	06:06	0.43	0.07	0.46
PC041	CHANNEL	16.904	0	09:50	0.64	0.15	0.52	PC115	CONDUIT	2.800	0	06:00	0.67	0.20	0.81
PC042	CHANNEL	16.905	0	09:49	0.82	0.10	0.52	PC116	CHANNEL	10.032	0	08:04	0.09	0.03	0.61
PC043	CHANNEL	16.905	0	09:48	1.13	0.55	0.65	PC117	CHANNEL	10.066	0	08:02	0.43	0.25	0.47
PC044	CHANNEL	16.784	0	09:48	0.96	0.17	0.62	PC118	CHANNEL	9.000	0	08:03	0.28	0.03	0.22
PC045	CHANNEL	16.723	0	09:47	1.95	0.09	0.48	PC119	CHANNEL	9.030	0	07:55	0.21	0.02	0.22
PC046_1	CONDUIT	16.723	0	09:47	1.85	1.38	0.80	PC120	CHANNEL	9.221	0	07:40	0.37	0.06	0.24
PC046_2	CHANNEL	0.000	0	00:00	0.00	0.00	0.00	PC121	CHANNEL	9.414	0	07:31	0.07	0.02	0.30
PC047	CHANNEL	16.723	0	09:47	1.13	0.41	0.52	PC122	CHANNEL	2.557	0	06:00	0.26	0.00	0.17
PC048_1	CONDUIT	1.362	0	09:04	3.75	2.76	1.00	PC123	CHANNEL	6.290	0	15:37	0.13	0.02	0.44
PC048_2	CONDUIT	3.028	0	07:31	4.20	1.44	1.00	PC124_1	CONDUIT	1.469	0	06:32	1.33	0.02	1.10
PC048_3	CONDUIT	2.209	0	09:46	3.13	2.11	0.94	PC124_2	CONDUIT	0.538	0	09:29	2.48	1.75	1.00
PC048_4	CONDUIT	3.028	0	07:31	4.20	1.28	1.00	PC125	CHANNEL	10.005	0	07:12	0.50	0.01	0.25
PC048_5	CONDUIT	0.795	0	09:46	3.04	2.38	0.97	PC126	CHANNEL	9.986	0	06:57	0.48	0.01	0.23
PC048_6	CHANNEL	6.443	0	09:46	0.81	0.14	0.26	PC127	CHANNEL	10.039	0	06:51	0.42	0.01	0.11
PC049	CHANNEL	16.724	0	09:45	0.70	0.11	0.65	PC128	CHANNEL	10.059	0	06:47	0.38	0.06	0.22
PC050	CHANNEL	16.724	0	09:44	1.42	0.15	0.52	PC129	CHANNEL	5.986	0	16:17	0.49	0.02	0.29
PC051	CHANNEL	16.725	0	09:43	1.10	0.14	0.50	PC130	CHANNEL	5.985	0	16:11	0.51	0.02	0.26
PC052	CHANNEL	16.731	0	09:38	0.30	0.08	0.55	PC131	CHANNEL	5.985	0	16:08	0.36	0.01	0.27
PC053	CHANNEL	16.761	0	09:31	0.16	0.44	0.85	PC132	CHANNEL	5.985	0	16:06	0.46	0.08	0.41
PC054	CHANNEL	16.817	0	09:24	0.22	0.41	0.96	PC133	CHANNEL	5.986	0	15:59	0.41	0.03	0.35
PC055_1	CONDUIT	4.210	0	09:21	1.71	1.52	1.00	PC134	CHANNEL	5.986	0	15:56	0.41	0.01	0.18
PC055_2	CONDUIT	4.210	0	09:21	1.71	2.49	1.00	PC135_1	CONDUIT	3.277	0	15:56	0.46	0.20	0.83
PC055_3	CONDUIT	4.210	0	09:21	1.71	1.55	1.00	PC135_2	CONDUIT	2.708	0	15:56	0.42	0.22	0.76
PC055_4	CONDUIT	4.210	0	09:21	1.71	1.31	1.00	PC135_3	CHANNEL	0.000	0	00:00	0.00	0.00	0.00
PC055_5	CHANNEL	0.003	0	09:32	0.06	0.00	0.01	PC136	CHANNEL	5.882	0	16:08	0.10	0.00	0.18
PC056	CHANNEL	16.578	0	09:20	0.12	0.06	0.54	PC137	CHANNEL	5.885	0	15:49	0.14	0.00	0.10
PC057	CHANNEL	16.451	0	09:17	0.80	0.04	0.32	PC138	CHANNEL	5.886	0	15:41	0.17	0.00	0.10
PC058	CHANNEL	16.256	0	09:10	0.48	0.03	0.41	PC139	CHANNEL	5.850	0	15:43	0.19	0.00	0.12
PC059	CHANNEL	16.311	0	09:05	0.48	0.04	0.39	PC140	CHANNEL	5.850	0	15:38	0.13	0.04	0.48
PC060	CHANNEL	16.336	0	09:02	0.64	0.04	0.38	PC143_1	CHANNEL	4.482	0	10:22	0.39	0.06	0.59
PC061	CONDUIT	1.844	0	07:18	2.22	2.16	1.00	PC144	CHANNEL	1.613	0	10:11	0.12	0.11	0.41
PC062	CONDUIT	0.342	0	06:04	0.86	0.19	0.65	PC145	CHANNEL	3.329	0	08:11	0.24	0.11	0.41
PC067	CHANNEL	14.377	0	09:05	1.27	0.07	0.30	PC146	CHANNEL	5.850	0	15:35	0.21	0.00	0.11
PC068	CHANNEL	14.270	0	09:05	1.20	0.12	0.33	PC147	CHANNEL	5.850	0	15:28	0.14	0.00	0.14
PC069	CHANNEL	14.291	0	09:04	0.68	0.23	0.50	PC148	CHANNEL	5.850	0	15:23	0.34	0.02	0.26
PC070_1	CONDUIT	14.365	0	09:04	1.97	1.07	1.00	PC149	CHANNEL	5.850	0	15:19	0.10	0.00	0.24
PC070_2	CHANNEL	0.000	0	00:00	0.00	0.00	0.05	PC150	CHANNEL	0.943	0	07:37	0.06	0.04	0.51
PC071	CHANNEL	0.756	0	06:01	0.36	0.04	0.59	PC151	CHANNEL	2.594	0	07:35	0.09	1.00	1.00
PC072	CHANNEL	39.069	0	10:37	0.51	0.02	0.52	PC152	CHANNEL	1.230	0	08:28	0.06	0.16	0.59
PC073	CHANNEL	15.149	0	09:00	1.24	0.05	0.46	PC153	CHANNEL	5.701	0	15:20	0.18	0.02	0.33
PC074	CHANNEL	15.125	0	08:49	0.06	0.02	0.65	PC154	CHANNEL	5.701	0	15:14	0.26	0.03	0.31
PC075	CHANNEL	14.753	0	08:25	1.90	0.01	0.31	PC155	CHANNEL	5.701	0	15:10	0.33	0.02	0.26
PC076	CHANNEL	14.766	0	08:19	0.10	0.01	0.54	PC156	CHANNEL	5.701	0	15:06	0.49	0.01	0.21
PC077	CHANNEL	5.570	0	08:09	0.19	0.04	0.54	PC157	CHANNEL	1.775	0	06:08	0.07	0.05	0.37
PC078	CHANNEL	5.670	0	07:00	0.30	0.01	0.34	PC158	CHANNEL	4.935	0	06:44	0.10	0.53	0.81
PC079	CHANNEL	5.771	0	06:59	0.64	0.02	0.25	PC159	CHANNEL	5.529	0	15:25	0.32	0.06	0.27
PC080	CHANNEL	5.801	0	07:02	0.27	0.04	0.35	PC160	CHANNEL	5.530	0	15:15	0.06	0.10	0.70
PC081	CHANNEL	5.815	0	06:58	0.22	0.10	0.46	PC161	CHANNEL	5.535	0	14:55	0.06	0.07	0.71
PC082	CHANNEL	5.798	0	06:56	0.22	0.02	0.20	PC162	CHANNEL	4.970	0	14:47	0.12	0.03	0.48
PC083	CHANNEL	5.811	0	06:52	0.27	0.03	0.22	PC164	CHANNEL	1.845	0	10:30	0.04	0.33	0.87
PC084_1	CHANNEL	5.811	0	06:48	0.26	0.03	0.22	PC165	CHANNEL	2.490	0	07:53	0.15	0.43	0.84
PC084_2	CHANNEL	8.618	0	06:48	0.44	0.01	0.19	PC166	CHANNEL	1.704	0	07:51	0.04	0.16	0.76
PC085	CHANNEL	14.422	0	06:45	0.43	0.05	0.29	PC172	CHANNEL	4.191	0	08:02	0.32	0.06	0.89
PC086	CHANNEL	14.425	0	06:43	0.46	0.07	0.30	PC173	CONDUIT	1.302	0	06:00	3.31	0.66	0.59
PC087	CHANNEL	14.441	0	06:41	0.52	0.05	0.21	PC174	CONDUIT	1.784	0	07:42	1.15	0.39	0.52
PC088	CHANNEL	14.451	0	06:39	0.61	0.02	0.22	PC273	CHANNEL	2.588	0	06:13	1.25	0.03	0.15
PC089	CHANNEL	14.475	0	06:37	0.42	0.08	0.30	CP205	PUMP	0.195	0	15:06	1.00		
PC090	CHANNEL	14.525	0	06:33	0.33	0.05	0.39	FP053	PUMP	0.126	0	05:36	1.00		
PC091	CHANNEL	14.114	0	06:34	0.51	0.08	0.38	FP105	PUMP	0.056	0	04:00	1.00		

# Kizell Lands - Fernbank 5618 Hazeldean Road

## PCSWMM Model Output SCS100-year 12-hour Carp River Interim



CC256	ORIFICE	0.749	0	18:27	1.00
COR092_1	ORIFICE	0.048	0	06:07	1.00
COR097_1	ORIFICE	0.398	0	10:05	1.00
COR097_2	ORIFICE	0.026	0	09:34	1.00
COR205	ORIFICE	0.057	1	05:10	1.00
COR258_1	ORIFICE	0.162	0	06:31	1.00
COR258_2	ORIFICE	1.686	0	06:49	1.00
COR267	ORIFICE	0.423	0	06:03	1.00
COR269	ORIFICE	0.046	0	06:03	1.00
COR269	ORIFICE	0.293	0	05:42	1.00
COR270	ORIFICE	0.036	0	06:05	1.00
COR272	ORIFICE	0.262	0	06:21	1.00
FOR022_1	ORIFICE	0.072	0	06:13	1.00
FOR022_2	ORIFICE	0.318	0	06:13	1.00
FOR049	ORIFICE	0.058	0	06:13	1.00
FOR103_1	ORIFICE	0.061	1	10:33	1.00
FOR106_1	ORIFICE	0.579	0	07:21	1.00
FOR108	ORIFICE	0.045	0	05:52	1.00
FOR210	ORIFICE	0.080	0	06:10	1.00
OCB01-02	ORIFICE	0.269	0	06:17	1.00
OCB03b	ORIFICE	0.262	0	06:09	1.00
OCB04a	ORIFICE	0.266	0	06:01	1.00
OCB04b	ORIFICE	0.252	0	06:00	1.00
OCB05	ORIFICE	0.175	0	06:03	1.00
OCB06	ORIFICE	0.333	0	06:08	1.00
OCB07	ORIFICE	0.250	0	06:09	1.00
OCB08	ORIFICE	0.710	0	06:19	1.00
OCB09	ORIFICE	0.248	0	06:08	1.00
OCB10	ORIFICE	0.232	0	06:06	1.00
OCB11	ORIFICE	0.444	0	06:12	1.00
OCB12	ORIFICE	0.184	0	06:13	1.00
OCB13	ORIFICE	0.512	0	06:23	1.00
OCB14	ORIFICE	0.283	0	06:09	1.00
OCB15	ORIFICE	0.219	0	06:11	1.00
OCB16	ORIFICE	0.562	0	06:09	1.00
OCB17	ORIFICE	0.446	0	06:03	1.00
OCB18	ORIFICE	0.443	0	06:07	1.00
OCB19	ORIFICE	0.202	0	06:04	1.00
OCB20	ORIFICE	0.389	0	06:13	1.00
P1_391-219-SCHOOL	ORIFICE	0.895	0	05:52	1.00
POR100	ORIFICE	1.654	0	07:38	1.00
POE103	ORIFICE	3.144	0	05:59	1.00
POE208	ORIFICE	0.627	0	05:59	1.00
PARTMAN-MIN.1	ORIFICE	2.045	0	06:00	1.00
CW092_2	WEIR	1.294	0	06:07	0.29
CW097_3	WEIR	0.415	0	10:05	0.45
CW128_2	WEIR	2.003	0	06:22	1.00
CW205	WEIR	0.974	0	18:34	0.72
CW215_2	WEIR	2.007	0	06:21	1.00
CW257	WEIR	0.778	0	06:24	0.17
CW258_1	WEIR	0.821	0	06:49	0.13
CW258_2	WEIR	0.849	0	06:49	0.03
CW267	WEIR	8.480	0	06:08	0.13
CW268_1	WEIR	1.577	0	06:06	0.92
CW268_2	WEIR	2.535	0	06:06	0.27
CW270	WEIR	11.882	0	06:05	0.25
CW272	WEIR	1.484	0	06:21	0.33
FW022	WEIR	0.065	0	08:02	0.11
FW049	WEIR	4.607	0	06:36	0.56
FW101	WEIR	1.492	0	10:01	0.88
FW103_2	WEIR	2.059	0	10:46	1.00
FW106_1	WEIR	1.201	0	07:37	0.87
FW108_1	WEIR	4.807	0	06:05	1.00
FW108_2	WEIR	0.760	0	06:23	0.10
FW210	WEIR	4.420	0	06:10	1.00
North-OVF	WEIR	2.197	0	06:49	0.96
PW100	WEIR	0.130	0	07:39	0.13
South-OVF	WEIR	3.236	0	06:18	1.00
W109C	WEIR	0.625	0	05:59	0.88
W208	WEIR	0.000	0	00:00	0.00
W215	WEIR	11.576	0	06:00	0.15
WW269	WEIR	5.870	0	06:06	1.00
CO002	DUMMY	3.962	0	06:14	1.00
FOut01	DUMMY	0.378	0	06:22	1.00
FOut02	DUMMY	0.573	0	06:00	1.00
FOut03	DUMMY	0.720	0	05:48	1.00
FOut04	DUMMY	0.610	0	05:43	1.00
FOut05	DUMMY	0.365	0	06:10	1.00
FOut06	DUMMY	0.185	0	06:14	1.00
GR_SWMF_OUT	DUMMY	1.826	0	06:22	1.00
Out_FCDP2	DUMMY	0.681	0	06:24	1.00
OutLet-02	DUMMY	0.325	0	06:01	1.00
OUTP4	DUMMY	16.754	0	06:29	1.00
Pond_Outlet	DUMMY	4.895	0	07:23	1.00

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Flow Classification Summary  
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Conduit	Adjusted /Actual Length	--- Fraction of		Time in Flow		Class	----		Avg. Froude Number	Avg. Flow Change
		Dry	Dry	Sub Crit	Sup Crit		Up	Down		
{STM}.P1 101-POND	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.06	0.0000
{STM}.P1 105-103	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.10	0.0000
{STM}.P1 107-105	1.00	0.00	0.00	0.00	0.99	0.01	0.00	0.00	0.08	0.0000
{STM}.P1 109-107	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.29	0.0000
{STM}.P1 111-109	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.31	0.0000
{STM}.P1 113-111	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.64	0.0000
{STM}.P1 147-105	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.24	0.0000
{STM}.P1 153-147	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.42	0.0000
{STM}.P1 165-153	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.42	0.0000
{STM}.P1 169-165	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.45	0.0000
{STM}.P1 171-169	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.47	0.0000
{STM}.P1 173-171	1.00	0.00	0.00	0.00	0.99	0.01	0.00	0.00	0.12	0.0000
{STM}.P1 203-171	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.66	0.0000
{STM}.P1 205-203	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.60	0.0000
{STM}.P1 207-205	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.63	0.0000
{STM}.P1 209-207	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.06	0.0000
{STM}.P1 215-207	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.75	0.0000
{STM}.P1 217-215	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.65	0.0000
{STM}.P1 219A-219	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.27	0.0000
{STM}.P1 221-221a	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.05	0.0000
{STM}.P1 301-POND	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.01	0.0000
{STM}.P1 305-303	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.04	0.0000
{STM}.P1 307-305	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.06	0.0000
{STM}.P1 309-307	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.40	0.0000
{STM}.P1 311-309	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
{STM}.P1 317-305	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.05	0.0000
{STM}.P1 319-317	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.07	0.0000
{STM}.P1 321-319	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.26	0.0000
{STM}.P1 323-321	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.17	0.0000
{STM}.P1 327-321	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.35	0.0000
{STM}.P1 331-329	1.00	0.93	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
{STM}.P1 333-327	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
{STM}.P1 337-327	1.00	0.00	0.00	0.00	0.98	0.02	0.00	0.00	0.63	0.0000
{STM}.P1 349-351	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.67	0.0000
{STM}.P1 501-502	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.58	0.0001
{STM}.P1 502-503	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.62	0.0000
{STM}.P1 503-504	1.00	0.00	0.00	0.00	0.98	0.02	0.00	0.00	0.85	0.0000
1	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	1.57	0.0000
104A05.1.1	1.00	0.00	0.00	0.00	0.01	0.00	0.00	0.99	0.60	0.0000
CC002	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.04	0.0000
CC003	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.05	0.0000
CC004	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.04	0.0000
CC005_1	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.10	0.0000
CC005_2	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
CC006	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.03	0.0000
CC007	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.02	0.0000
CC008	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.02	0.0000
CC009	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.02	0.0000
CC010	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.03	0.0000
CC011	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.04	0.0000
CC012	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.04	0.0000
CC013_1	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.16	0.0000
CC013_2	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.16	0.0000
CC013_3	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.15	0.0000
CC013_4	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
CC014	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.04	0.0000
CC015	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.03	0.0000
CC016	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.04	0.0000
CC017	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.05	0.0000
CC018	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.05	0.0000
CC019	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.07	0.0000
CC020	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.06	0.0000
CC021	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.05	0.0000
CC022	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.05	0.0000
CC023	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.0		





**Kizell Lands - Fernbank 5618 Hazeldean Road**  
**PCSWMM Model Output SCS100-year 12-hour Carp River Interim**



CC198	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.10	0.0000
CC199_1	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.14	0.0000
CC199_2	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
CC200	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.03	0.0000
CC201	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.11	0.0000
CC202	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.07	0.0000
CC203	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.06	0.0000
CC204_1	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	0.32	0.0000
CC204_2	1.00	0.00	0.00	0.00	0.92	0.00	0.00	0.08	0.32	0.0000
CC205	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.23	0.0000
CC206_1	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.07	0.0000
CC206_2	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
CC207	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.08	0.0000
CC208	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.11	0.0000
CC209_1	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
CC209_2	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.16	0.0000
CC210	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.44	0.0000
CC211	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.47	0.0000
CC212_1	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
CC212_2	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.19	0.0000
CC213	1.00	0.00	0.00	0.00	0.28	0.72	0.00	0.00	1.20	0.0000
CC214_1	1.00	0.00	0.99	0.00	0.01	0.00	0.00	0.00	0.00	0.0000
CC214_2	1.00	0.00	0.00	0.00	0.99	0.01	0.00	0.00	0.19	0.0000
CC215	1.00	0.96	0.00	0.00	0.01	0.00	0.00	0.03	0.02	0.0000
CC215_1	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.01	0.0000
CC216_1	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.0000
CC242	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.02	0.0000
CC243	1.00	0.00	0.05	0.00	0.93	0.02	0.00	0.00	0.04	0.0001
CC246	1.00	0.00	0.00	0.00	0.99	0.00	0.00	0.01	0.09	0.0000
CC247	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.24	0.0000
CC248_1	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.33	0.0000
CC248_2	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.04	0.0000
CC249	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.02	0.0000
CC250	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.04	0.0000
CC251	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.05	0.0000
CC254	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.16	0.0000
CC255	1.00	0.00	0.00	0.00	0.99	0.01	0.00	0.00	0.05	0.0000
CC257	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.12	0.0000
CC259_1	1.00	0.00	0.99	0.00	0.01	0.00	0.00	0.00	0.00	0.0000
CC259_2	1.00	0.00	0.00	0.00	0.02	0.00	0.00	0.98	0.87	0.0000
CC260	1.00	0.00	0.00	0.00	0.93	0.01	0.00	0.06	0.15	0.0000
CC261_1	1.00	0.00	0.00	0.00	0.98	0.02	0.00	0.00	0.48	0.0000
CC261_2	1.00	0.00	0.98	0.00	0.02	0.00	0.00	0.00	0.00	0.0000
CC262	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.44	0.0000
CC263	1.00	0.00	0.00	0.00	0.60	0.00	0.00	0.40	0.71	0.0000
CC264	1.00	0.00	0.00	0.00	0.89	0.11	0.00	0.00	0.59	0.0000
CC265_1	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
CC265_2	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.61	0.0000
CC266	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.04	0.0000
CC267	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.03	0.0000
CC271_1	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.71	0.0000
CC271_2	1.00	0.99	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.0000
CC282_1	1.00	0.00	0.99	0.00	0.01	0.00	0.00	0.00	0.00	0.0000
CC282_2	1.00	0.00	0.00	0.00	0.98	0.02	0.00	0.00	0.12	0.0000
CC283	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.03	0.0000
CC284	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.04	0.0000
CC285	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.01	0.0000
CC286	1.00	0.00	0.70	0.00	0.28	0.03	0.00	0.00	0.08	0.0000
CC287	1.00	0.00	0.00	0.00	0.51	0.00	0.00	0.49	0.25	0.0107
CC289_1	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.04	0.0001
CC289_2	1.00	0.99	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.0000
CC290	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.0021
CC291	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.0018
CC292	1.00	0.00	0.00	0.00	0.11	0.01	0.00	0.89	0.75	0.0000
CC293	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.58	0.0000
CC294	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.71	0.0000
CC296	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.01	0.0014
CF239	1.00	0.48	0.52	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
FC002	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.03	0.0000
FC003	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.04	0.0000
FC004	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.31	0.0000
FC005	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.27	0.0000
FC006	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.07	0.0000
FC007	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.20	0.0000
FC008	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.20	0.0000
FC009	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.16	0.0000
FC010	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.19	0.0000
FC011	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.15	0.0000
FC012	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.22	0.0000
FC013	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.32	0.0000
FC014	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.33	0.0000
FC015	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.16	0.0000
FC016	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.21	0.0000
FC017	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.20	0.0000
FC018	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.19	0.0001

FC019	1.00	0.00	0.00	0.00	0.98	0.02	0.00	0.00	0.30	0.0002
FC020	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.03	0.0000
FC021	1.00	0.00	0.00	0.00	0.54	0.46	0.00	0.00	0.91	0.0000
FC023	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.37	0.0000
FC024	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.17	0.0000
FC025	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.15	0.0000
FC026	1.00	0.00	0.00	0.00	0.89	0.00	0.00	0.11	0.29	0.0001
FC027	1.00	0.00	0.00	0.00	0.99	0.00	0.00	0.01	0.26	0.0000
FC028	1.00	0.00	0.00	0.00	0.96	0.00	0.00	0.04	0.38	0.0001
FC029	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.34	0.0000
FC030	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.24	0.0000
FC031	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.10	0.0000
FC032	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.09	0.0000
FC033	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.13	0.0000
FC034	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.12	0.0000
FC035	1.00	0.00	0.00	0.00	0.77	0.00	0.23	0.00	0.26	0.0000
FC036	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.29	0.0000
FC037	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.22	0.0000
FC038	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.33	0.0000
FC039	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.28	0.0000
FC040	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.21	0.0000
FC041_1	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.40	0.0000
FC041_2	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.31	0.0000
FC042	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.31	0.0000
FC043	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.23	0.0000
FC044	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.21	0.0000
FC045	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.15	0.0000
FC046	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.19	0.0000
FC047	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.13	0.0000
FC048	1.00	0.0								

**Kizell Lands - Fernbank 5618 Hazeldean Road**  
**PCSWMM Model Output SCS100-year 12-hour Carp River Interim**



FC104	1.00	0.00	0.00	0.00	0.93	0.00	0.00	0.07	0.09	0.0000
FC108	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.03	0.0000
FC200	1.00	0.99	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.0000
FC201	1.00	0.99	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.0000
FC202	1.00	0.29	0.69	0.00	0.01	0.00	0.00	0.00	0.01	0.0000
FC203	1.00	0.06	0.01	0.00	0.50	0.43	0.00	0.00	3.66	0.0000
FC204	1.00	0.16	0.26	0.00	0.45	0.00	0.00	0.12	0.09	0.0000
FC205	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.18	0.0000
FC206	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	1.36	0.0000
FC208	1.00	0.19	0.29	0.00	0.43	0.00	0.00	0.09	0.04	0.0000
FC209	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.07	0.0000
FC210	1.00	0.00	0.00	0.00	0.62	0.00	0.00	0.38	0.15	0.0000
FC211	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.05	0.0000
FC212	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.01	0.0001
FC213	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.02	0.0001
FC214	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.01	0.0002
FC215	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.0001
FC216	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.04	0.0000
FC217	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.85	0.0000
FC218	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.66	0.0000
FC219	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
FC220	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
FC221	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
FC222	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
FC223	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
FC224	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
FC225	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.05	0.0000
FC226	1.00	0.00	0.00	0.00	0.95	0.00	0.00	0.05	0.06	0.0001
FC227	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.05	0.0001
FC228	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.05	0.0000
FC229	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.09	0.0000
FC230	1.00	0.00	0.00	0.00	0.71	0.00	0.00	0.29	0.24	0.0017
FC231	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.0001
FC232	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.06	0.0000
FC233	1.00	0.00	0.00	0.00	0.55	0.45	0.00	0.00	0.97	0.0000
FC234	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.74	0.0000
FC234_1	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	1.43	0.0000
FC235	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	1.56	0.0000
FC236	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.23	0.0000
FC238	1.00	0.43	0.57	0.00	1.00	0.00	0.00	0.00	0.00	0.0000
FC239	1.00	0.00	0.00	0.00	0.21	0.79	0.00	0.00	3.66	0.0000
FC295	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.01	0.0000
FOut07	1.00	0.00	0.01	0.00	0.92	0.06	0.00	0.00	0.23	0.0003
FOut08	1.00	0.00	0.00	0.00	0.97	0.03	0.00	0.00	0.08	0.0000
FOut09	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.04	0.0000
L108	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.55	0.0000
L109C	1.00	0.00	0.00	0.00	0.02	0.00	0.00	0.98	0.59	0.0000
L113Ci	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.02	0.0000
L114	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.59	0.0000
L124C	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.68	0.0000
L170	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.66	0.0000
L171	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.67	0.0000
L171A	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.67	0.0000
L172	1.00	0.00	0.00	0.00	0.01	0.00	0.00	0.99	0.67	0.0000
L172A	1.00	0.00	0.00	0.00	0.01	0.00	0.00	0.99	0.68	0.0000
L172B	1.00	0.00	0.00	0.00	0.01	0.00	0.00	0.99	0.67	0.0000
L173	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.10	0.0000
L174	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.59	0.0000
L174C	1.00	0.00	0.00	0.00	0.01	0.00	0.00	0.99	0.79	0.0000
L175	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.58	0.0000
L176	1.00	0.00	0.00	0.00	0.34	0.00	0.00	0.66	0.72	0.0000
L176A	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.79	0.0000
L177	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.85	0.0000
L178	1.00	0.00	0.00	0.00	0.01	0.00	0.00	0.99	0.83	0.0000
L179	1.00	0.00	0.00	0.00	0.01	0.00	0.00	0.99	0.83	0.0000
L180	1.00	0.00	0.00	0.00	0.84	0.16	0.00	0.00	0.58	0.0000
L181	1.00	0.00	0.00	0.00	0.93	0.00	0.00	0.07	0.29	0.0000
L208i	1.00	0.35	0.04	0.00	0.59	0.00	0.00	0.01	0.01	0.0000
LDout_1	1.00	0.00	0.39	0.00	0.61	0.00	0.00	0.00	0.00	0.0000
Link792	1.00	0.00	0.00	0.00	0.71	0.11	0.00	0.18	0.71	0.0000
Link793	1.00	0.00	0.00	0.00	0.03	0.01	0.00	0.96	0.86	0.0000
Link795	1.00	0.00	0.00	0.00	0.69	0.00	0.00	0.31	0.39	0.0000
Link796	1.00	0.00	0.00	0.00	0.67	0.00	0.00	0.33	0.36	0.0000
Link797	1.00	0.00	0.00	0.00	0.70	0.00	0.00	0.30	0.34	0.0000
IMG101b	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.29	0.0000
IMG102b	1.00	0.00	0.00	0.00	0.32	0.00	0.00	0.68	0.39	0.0000
IMG1030b	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.37	0.0000
IMG104b	1.00	0.00	0.00	0.00	0.60	0.00	0.00	0.40	0.45	0.0000
IMG105b	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.43	0.0000
IMG106	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.40	0.0000
IMG1060b	1.00	0.00	0.00	0.00	0.64	0.00	0.00	0.36	0.47	0.0000
IMG107	1.00	0.00	0.00	0.00	0.66	0.00	0.00	0.34	0.71	0.0000
LMH111	1.00	0.96	0.00	0.00	0.00	0.00	0.00	0.04	0.05	0.0000
LMH113	1.00	0.95	0.00	0.00	0.04	0.00	0.00	0.00	0.01	0.0000
LMH120	1.00	0.00	0.00	0.00	0.47	0.00	0.00	0.53	0.33	0.0000

LMH121	1.00	0.00	0.00	0.00	0.66	0.00	0.00	0.00	0.34	0.0000
LMH122	1.00	0.73	0.23	0.00	0.04	0.00	0.00	0.00	0.01	0.0000
LMH215	1.00	0.00	0.03	0.00	0.96	0.00	0.00	0.00	0.01	0.0000
LMH215b	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.37	0.0000
LMH216	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.36	0.0000
LMH217	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.31	0.0000
LM4C21B	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.05	0.0000
LT182	1.00	0.00	0.00	0.00	0.95	0.00	0.00	0.05	0.14	0.0000
LT183	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.04	0.0000
LT184	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.03	0.0000
LT185	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.02	0.0000
LT186	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.01	0.0000
LT187	1.00	0.00	0.00	0.00	0.99	0.01	0.00	0.00	0.06	0.0000
LMW19	1.00	0.00	0.00	0.00	0.04	0.33	0.00	0.63	0.79	0.0000
LMW27	1.00	0.00	0.00	0.00	0.68	0.32	0.00	0.00	0.77	0.0000
LMW28	1.00	0.00	0.00	0.00	0.07	0.21	0.00	0.72	0.80	0.0000
LMW43	1.00	0.00	0.00	0.00	0.40	0.01	0.00	0.59	0.50	0.0000
LMW53	1.00	0.00	0.01	0.00	0.70	0.29	0.00	0.00	0.68	0.0000
LMW54	1.00	0.00	0.00	0.00	0.50	0.00	0.00	0.50	0.15	0.0000
OUT_P4	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.03	0.0000
P1 101a-POND	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.03	0.0000
P1 103-101	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.09	0.0000
P1 215a-215	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	0.08	0.0000
P1 219-217	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.11	0.0000
P1 221a-215	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.75	0.0000
P1 301a-POND	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.0001
P1 303-301	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.04	0.0001
P1 329-327	1.00	0.00	0.93	0.00	0.07	0.00	0.00	0.00	0.00	0.0000
P1 335-171	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	0.03	0.0000
P1 351-219	1.00	0.00								



# Kizell Lands - Fernbank 5618 Hazeldean Road

## PCSWMM Model Output SCS100-year 12-hour Carp River Interim



CC145	15.90	15.90	15.90	1.08	0.14
CC164	0.01	0.01	0.01	2.22	0.01
CC204_1	10.40	10.40	10.40	5.47	9.54
CC204_2	9.90	9.90	9.90	9.90	9.90
CC206_1	0.01	0.01	0.01	1.07	0.01
CC209_2	0.01	0.01	0.01	0.56	0.01
CC212_2	0.56	0.56	0.56	0.21	0.01
CC215	0.01	0.01	0.01	0.45	0.01
CC215_1	16.11	16.11	16.11	0.01	0.01
CC216_1	36.31	36.31	36.31	0.01	0.01
CC243	15.52	15.52	15.52	0.01	0.01
CC265_2	0.01	0.01	0.01	0.63	0.01
CC266	10.92	10.92	10.92	0.01	0.01
CC282_2	0.74	0.74	0.74	0.01	0.72
CC284	0.45	0.45	0.45	0.62	0.45
CC287	8.67	8.67	8.68	45.10	6.15
CC290	38.09	38.09	38.30	0.01	1.72
CC291	1.31	1.31	1.31	0.01	0.01
CC293	0.01	0.01	0.01	0.15	0.01
CC296	1.09	1.09	1.10	0.01	0.01
FC002	14.69	14.69	14.69	0.01	0.01
FC019	4.21	4.21	4.21	0.01	4.15
FC027	0.01	0.01	0.01	0.72	0.01
FC032	9.82	9.82	9.82	4.07	7.97
FC034	8.53	8.53	8.53	1.78	7.08
FC038	2.81	2.81	2.81	2.79	2.81
FC048	4.33	4.33	4.33	4.32	4.07
FC062	3.01	3.01	3.01	0.01	0.01
FC076_2	16.60	16.60	16.60	2.64	16.60
FC078_2	25.42	25.42	25.42	44.00	25.42
FC088_1	8.89	8.89	8.89	23.18	8.89
FC090	48.00	48.00	48.00	48.00	0.01
FC101	21.10	21.10	21.16	48.00	21.10
FC102	12.92	12.92	12.92	13.89	12.92
FC108	8.72	8.72	8.72	0.87	0.82
FC214	2.67	2.67	2.71	0.01	0.07
FC215	10.87	10.87	10.87	0.01	0.01
FC230	11.83	11.83	11.89	0.01	0.01
FC231	10.87	10.87	10.87	0.01	0.01
FC233	0.01	0.01	0.01	0.53	0.01
FC234	8.07	8.07	8.12	13.60	8.07
FC295	8.64	8.64	8.64	0.01	0.01
FOut08	0.38	0.38	0.38	0.01	0.38
FOut09	13.78	13.78	13.78	0.01	0.48
L108	0.02	0.02	0.02	0.33	0.02
L109C	0.02	0.02	0.02	0.27	0.02
L113Ci	0.02	0.02	0.02	0.16	0.02
L114	0.03	0.03	0.03	0.22	0.01
L124C	0.03	0.03	0.03	0.01	0.01
L170	0.07	0.07	0.07	0.01	0.01
L171	0.11	0.11	0.11	0.01	0.01
L171A	0.12	0.12	0.12	0.01	0.01
L172	0.12	0.12	0.12	0.01	0.01
L172A	0.14	0.14	0.14	0.01	0.01
L172B	0.15	0.15	0.15	0.01	0.01
L173	0.18	0.18	0.18	0.01	0.01
L174	0.19	0.19	0.19	0.38	0.19
L174C	0.19	0.19	0.19	0.37	0.19
L176A	0.01	0.01	0.01	0.10	0.01
L178	0.09	0.09	0.09	0.01	0.03
L179	0.10	0.10	0.10	0.01	0.04
L180	0.19	0.19	0.19	0.18	0.17
L181	0.20	0.20	0.20	0.20	0.18
Link795	0.49	0.49	0.49	0.02	0.02
Link796	0.71	0.71	0.71	0.01	0.01
Link797	0.86	0.86	0.86	0.01	0.03
LMG101b	1.36	1.36	1.36	0.26	0.27
LMG102b	1.40	1.40	1.40	0.26	0.27
LMH120	0.14	0.14	0.14	0.01	0.01
LMH121	0.11	0.11	0.11	0.08	0.01
LMH215b	0.01	0.01	0.01	0.11	0.01
LMH216	0.01	0.01	0.01	0.11	0.01
LMH217	0.02	0.02	0.02	0.11	0.01
LT182	0.28	0.28	0.28	0.20	0.20
LT183	0.54	0.54	0.54	0.26	0.26
LT184	0.90	0.90	0.90	0.26	0.26
LT185	1.45	1.45	1.46	0.26	0.26
LT186	2.28	2.28	2.29	0.80	0.74
LW19	0.02	0.02	0.02	0.01	0.01
LW27	0.25	0.25	0.25	0.01	0.01
LW28	0.72	0.72	0.72	0.01	0.01
LW43	1.03	1.03	1.03	0.01	0.01
LW53	0.32	0.32	0.32	0.01	0.01
LW54	1.40	1.40	1.40	0.01	0.10
P1 215a-215	0.37	0.37	0.37	0.01	0.01

P1 219-217	0.54	0.54	0.54	0.01	0.01
P1 221a-215	0.63	0.63	0.63	0.01	0.63
P1 301a-POND	2.25	2.25	2.30	0.01	0.01
P1 303-301	2.14	2.14	2.14	0.01	0.11
P1 351-219	0.59	0.59	0.59	0.01	0.01
P1 EX504-217	0.58	0.58	0.58	0.01	0.01
PC002	9.03	9.03	9.04	0.01	0.01
PC046_1	0.01	0.01	0.01	4.92	0.01
PC048_1	3.63	3.63	3.63	26.54	3.63
PC048_2	13.95	13.95	13.95	13.95	13.95
PC048_3	0.01	0.01	0.01	20.67	0.01
PC048_4	20.49	20.49	20.49	18.09	20.49
PC048_5	0.01	0.01	0.01	23.26	0.01
PC055_1	7.12	7.12	7.12	5.99	0.01
PC055_2	8.62	8.62	8.62	15.43	8.62
PC055_3	11.24	11.24	11.24	6.36	11.24
PC055_4	11.93	11.93	11.93	4.35	8.32
PC061	1.20	1.20	1.20	7.47	1.20
PC070_1	2.64	2.64	2.64	1.69	0.01
PC093_1	1.86	1.86	1.86	45.39	1.86
PC101	0.01	0.01	0.01	4.21	0.01
PC124_2	29.26	29.26	29.26	9.72	10.22
PC151	13.16	13.16	13.16	11.79	11.79

\*\*\*\*\*  
Pumping Summary  
\*\*\*\*\*

Time Off	Percent Utilized	Number of Start-Ups	Min Flow CMS	Avg Flow CMS	Max Flow CMS	Total Volume 10^6 ltr	Power Usage Kw-hr	% Pump
CP205	99.99	1	0.00	0.18	0.20	30.056	19.34	0.0
42.0								
FP053	88.31	1	0.00	0.13	0.13	19.227	379.03	0.0
0.0								
FP105	100.00	1	0.00	0.06	0.06	9.355	399.60	0.0
0.0								

Analysis begun on: Wed Nov 09 11:39:53 2016  
Analysis ended on: Wed Nov 09 11:45:07 2016  
Total elapsed time: 00:05:14

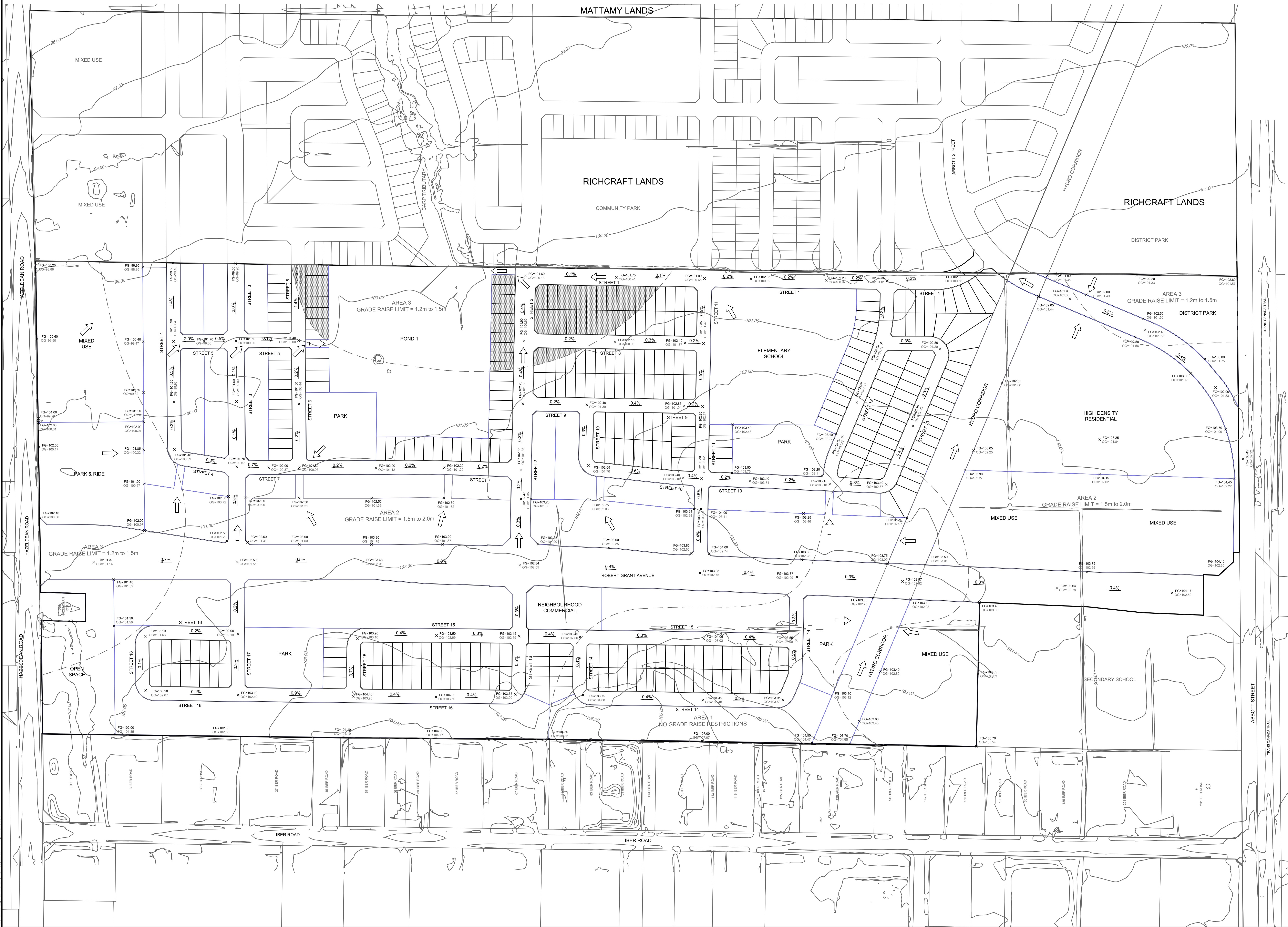
## **Appendix C: Drawings**

Master Grading Plan	108195-GR
Water Distribution Plan	108195-WTR
Sanitary Drainage Area Plan	108195-SAN
Storm Drainage Area Plan	108195-STM
Pond 1 - Layout Plan	108195-SWM



**LEGEND**

- ORIGINAL GROUND CONTOUR AND ELEVATION
- FINISHED GROUND ELEVATION
- SLOPE AND DIRECTION OF FLOW
- MAJOR OVERLAND FLOW DIRECTION
- GRADE RAISE LIMIT BOUNDARY
- APPROXIMATE AREA EXCEEDING PERMISSIBLE GRADE RAISE



**NOTE:**  
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No.	REVISION	DATE	BY
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DESIGN	LRW	FOR REVIEW ONLY
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OWN	DTD	
CHECKED	MAB	
APPROVED	JGR	

**SCALE**

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**NOVATECH**

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 Ottawa, Ontario, Canada K2M 1P6

Telephone: (613) 254-9643  
 Facsimile: (613) 254-5867  
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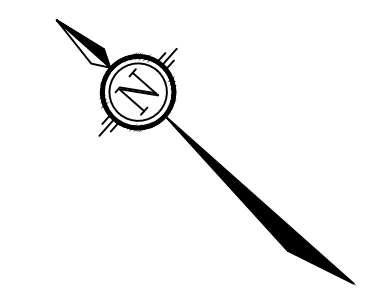
CITY OF OTTAWA  
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**MASTER GRADING PLAN**

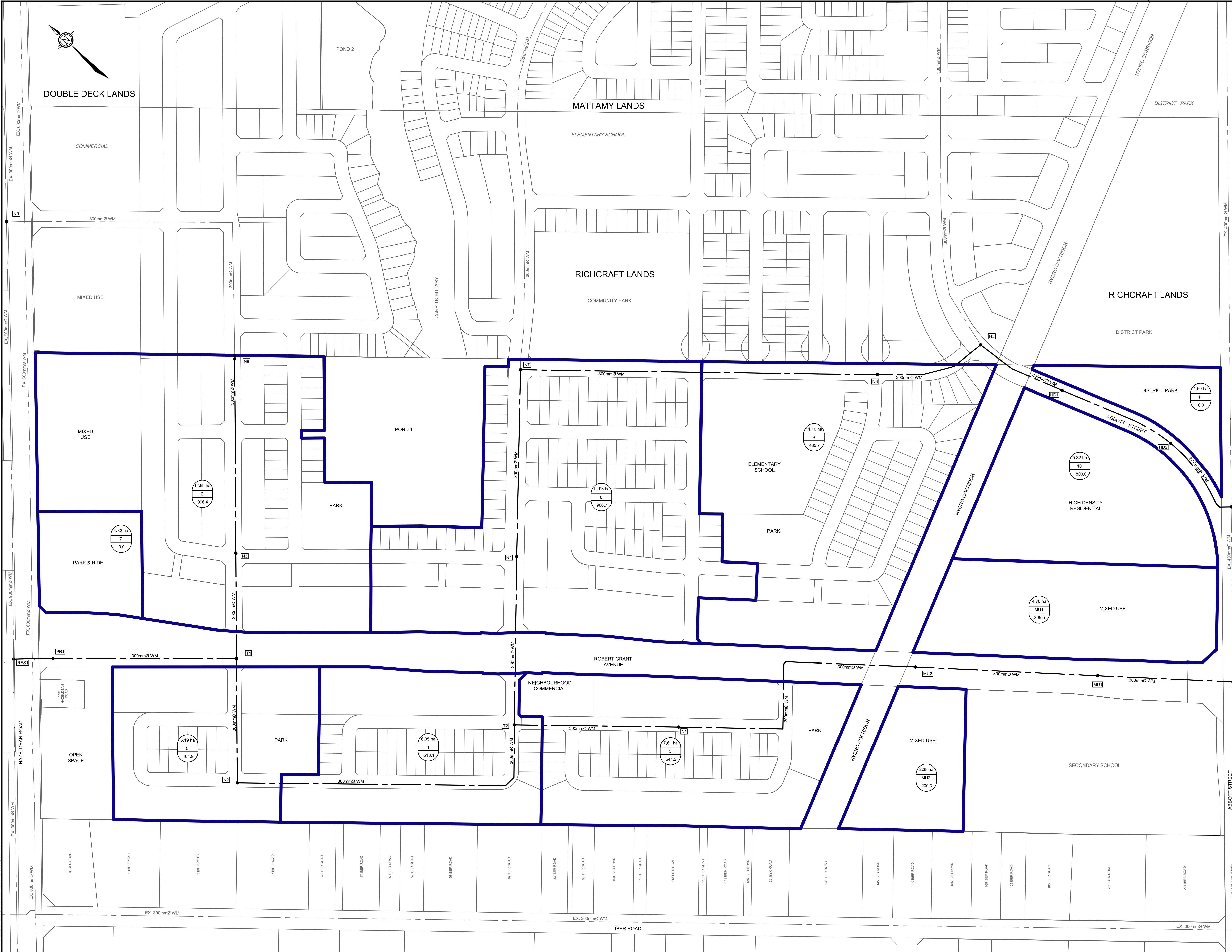
PROJECT NO: 108195  
 REV: #1  
 DRAWING NO: 108195-GRD

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DOUBLE DECK LANDS



**LEGEND**

- 0.25 — AREA IN HECTARES
- A1-1 — AREA ID
- 6.0 — POPULATION EQUIVALENT
- 1500 WM — PROPOSED WATERMAIN AND SIZE
- 3000 WM — EXISTING / PROPOSED (BY OTHERS) WATERMAIN AND SIZE
- WATER SERVICE BOUNDARY
- N1 — PIPE NODE AND ID#

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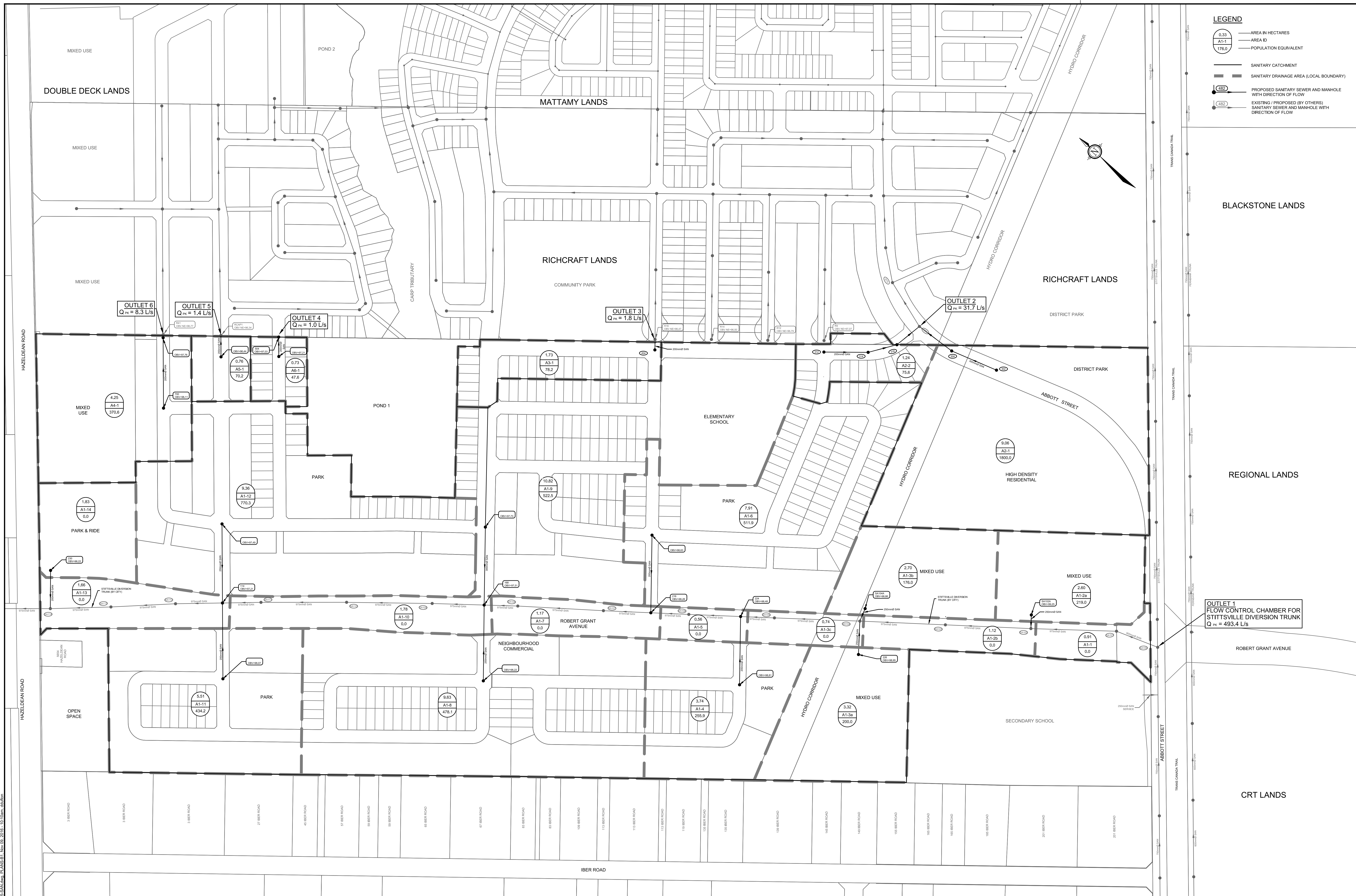
**WATER DISTRIBUTION PLAN**

PROJECT No.	108195
REV	REV # 1
DRAWING No.	108195-WTR



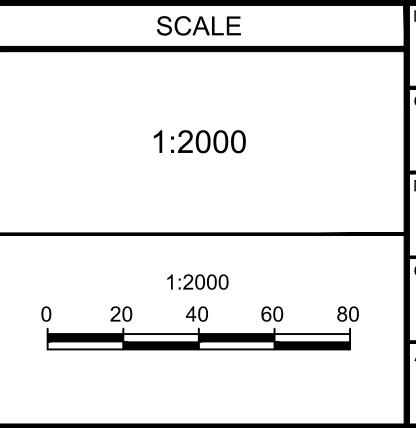
**LEGEND**

- AREA IN HECTARES
- AREA ID
- POPULATION EQUIVALENT
- SANITARY CATCHMENT
- SANITARY DRAINAGE AREA (LOCAL BOUNDARY)
- PROPOSED SANITARY SEWER AND MANHOLE WITH DIRECTION OF FLOW
- EXISTING / PROPOSED (BY OTHERS) SANITARY SEWER AND MANHOLE WITH DIRECTION OF FLOW



**NOTE:**  
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 CHECKED: MAB  
 APPROVED: JGR

PROFESSOR OF ENGINEERING  
 L. R. WILSON  
 10160965  
 PROVINCE OF ONTARIO

PROFESSOR OF ENGINEERING  
 M.A. BISSETT  
 PROVINCE OF ONTARIO

**NOVATECH**  
 Engineers, Planners & Landscape Architects  
 Suite 200, 240 Michael Copland Drive  
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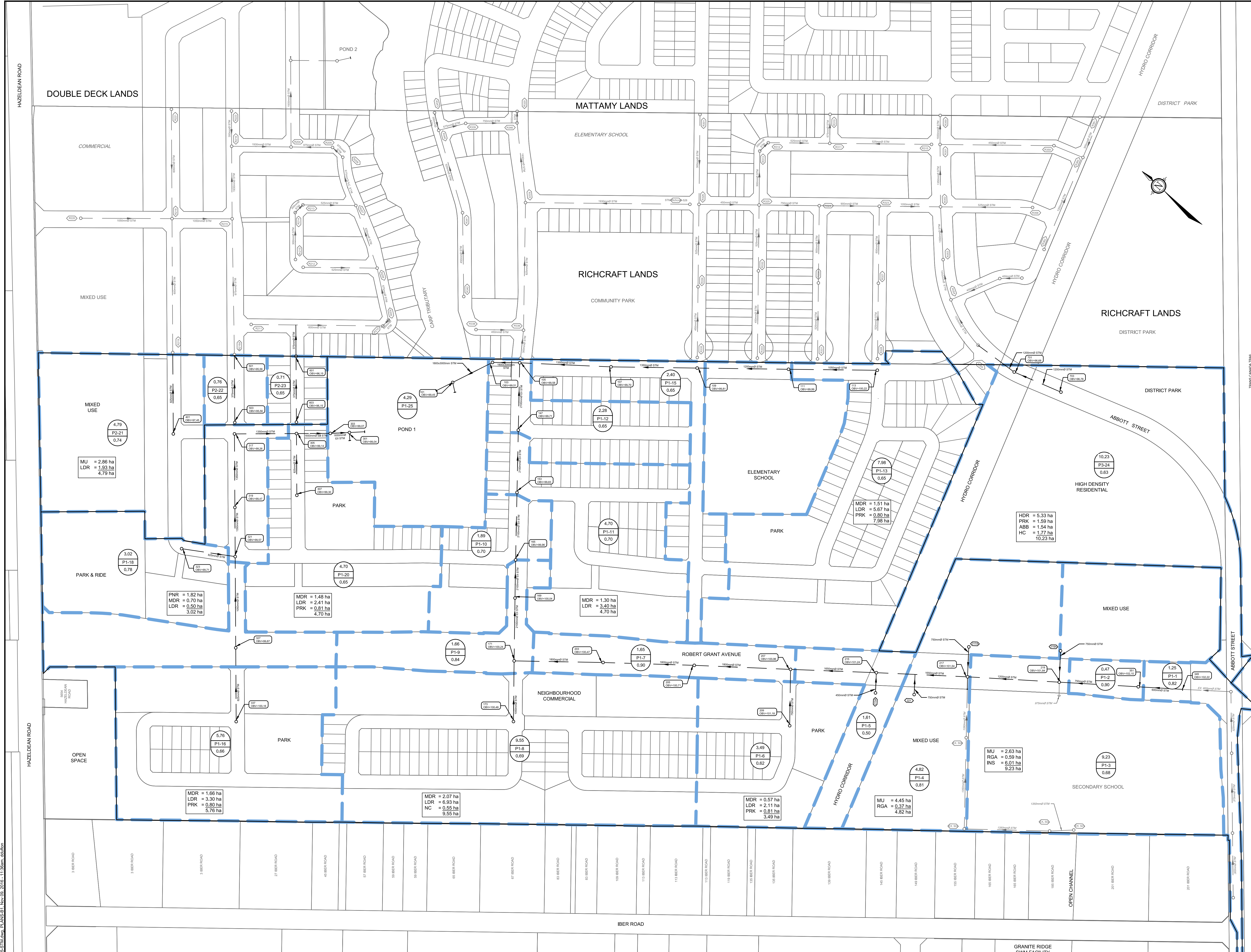
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**SANITARY DRAINAGE AREA PLAN**

PROJECT No: 108195  
 REV: 1  
 REV # 1  
 DRAWING No: 108195-SAN

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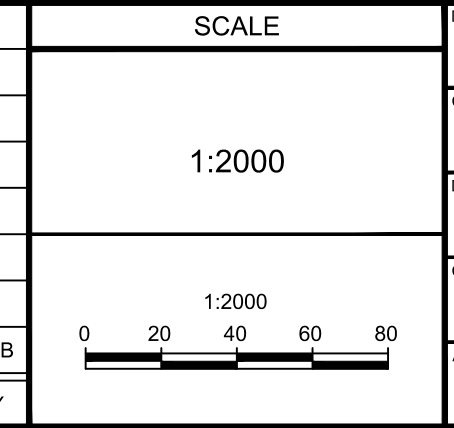


- LEGEND**
- 0.24 ha — AREA (hectares)
  - 88a — AREA ID
  - 0.65 — RUN-OFF COEFFICIENT
  - STORM CATCHMENT
  - STORM DRAINAGE AREA (LOCAL BOUNDARY)
  - PROPOSED STORM MANHOLE & SEWER WITH DIRECTION OF FLOW
  - FUTURE / EXISTING STORM MANHOLE & SEWER WITH DIRECTION OF FLOW
- LAND USE ABBREVIATIONS:**
- LDR = LOW DENSITY RESIDENTIAL
  - MDR = MEDIUM DENSITY RESIDENTIAL
  - HDR = HIGH DENSITY RESIDENTIAL
  - MU = MIXED USE
  - PRK = PARK
  - HC = HYDRO CORRIDOR
  - NC = NEIGHBOURHOOD COMMERCIAL
  - INS = INSTITUTIONAL
  - PNR = PARK N RIDE
  - RGA = ROBERT GRANT AVENUE
  - ABB = ABBOTT STREET

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JGR	



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GRANITE RIDGE SWIM FACILITY

PROFESSOR OF ENGINEERING

L.R. WILSON 10160065

PROFESSOR OF ENGINEERING

M.A. BISSETT

PROFESSOR OF ENGINEERING

**NOVATECH**

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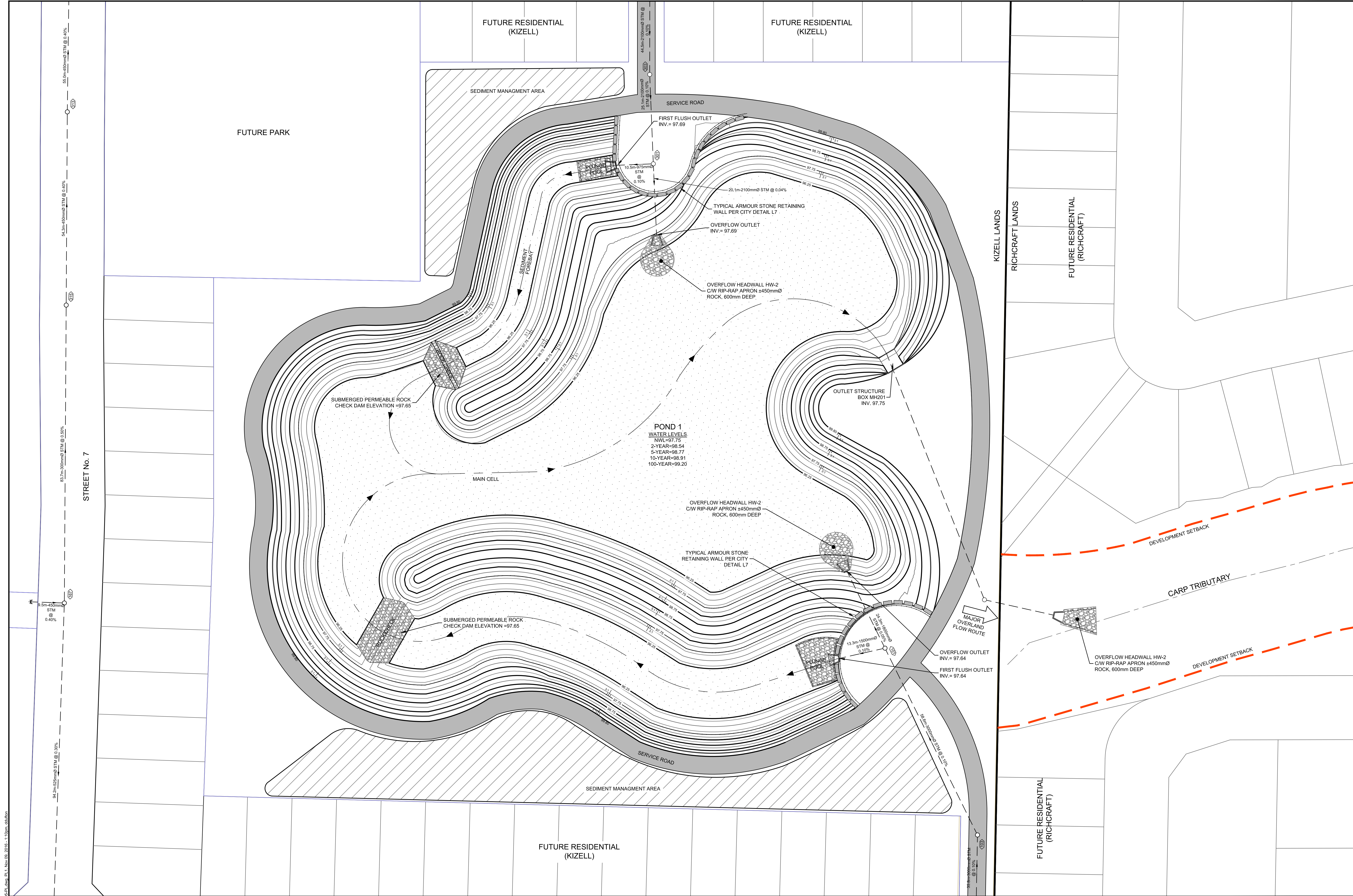
Telephone: (613) 254-9643  
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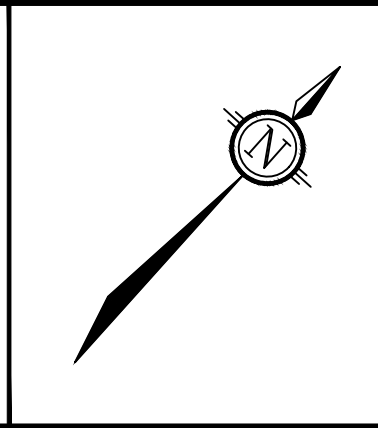
**STORM DRAINAGE AREA PLAN**

PROJECT NO: 108195  
 REV: 1  
 DRAWING NO: 108195-STM

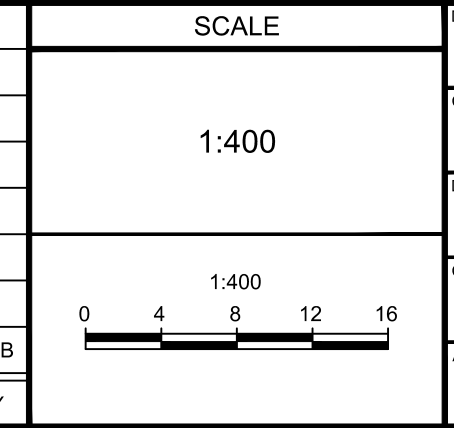




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 DRAWN: RCH  
 CHECKED: MAB  
 APPROVED: JGR

REGISTERED PROFESSIONAL ENGINEER  
 L.L. PETEPIEC  
 100079354  
 PROVINCE OF ONTARIO

REGISTERED PROFESSIONAL ENGINEER  
 M.A. BISSETT  
 PROVINCE OF ONTARIO

**NOVATECH**  
 Engineers, Planners & Landscape Architects  
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**STORMWATER MANAGEMENT  
 POND LAYOUT**

PROJECT No. 108195  
 REV. REV # 1  
 DRAWING No. 108195-SWM

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