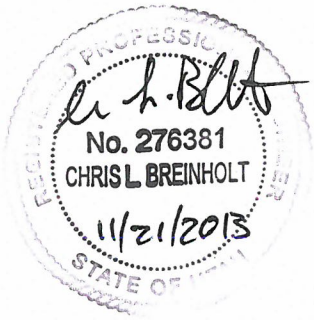
STORM DRAIN SYSTEM
CAPITAL FACILITIES PLAN
&
IMPACT FEE FACILITIES PLAN

for

TREMONTON CITY CORPORATION



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1.0 INTRODUCTION

1.1 Background

Tremonton, Utah is located in the Bear River Valley in eastern Box Elder County. The 2010 census places the city's population at 7,647. Interstate 15 and 84 split into individual freeways within the city limits with I-15 continuing to the Idaho state line near Malad, ID. I-84 continues northeast to the Idaho state line near Snowville, UT. Tremonton has been a popular location in recent years for food processing companies to construct new facilities. Easy access to the freeway system has contributed this trend. Jones and Associates Engineering has served as the contracted City Engineers for Tremonton since 2002.

This document is the city's first master planning document for the storm drain system. It is not an update to any previous study. The first part of this plan includes the results of the storm drain model that was prepared for the existing storm drain system and a Capital Facilities Plan for the future storm drain system. The last section of this plan is called an Impact Fee Facilities Plan (IFFP), which is a short term (6-10 year) look at the city's needs in relation to land development. The IFFP is required by Utah State Code (Title 11 Chapter 36a) for any city that wishes to charge an Impact Fee. A separate Impact Fee Analysis is being prepared by Zions Bank which will be based on the results of this plan.

1.2 Capital Facilities Plan Overview

A comprehensive storm drainage plan has never been prepared for Tremonton City. This plan is a first design of the storm drain system for undeveloped areas in the city. It lays out the backbone of the future storm drainage system in developed and undeveloped areas. There is no attempt to show exact locations of improvements or pipe networks where future growth will dictate the design location as development happens. Some areas addressed by the plan are existing developed land and the plan is more precise in providing exact locations of improvements or pipe networks these areas.

1.3 Study Area

Tremonton City's Annexation Declaration shows land that the City will likely annex into incorporated limits in the future and was used to determine potential growth area north of I-84 and west of State Road 13 . It may be worth noting that there is no overlap between Tremonton City's Annexation declaration and neighboring Garland City and Town of Elwood. Areas south of I-84 and east of State Road 13 were not considered as it is anticipated that these areas of the City will not be developed in the time frame used for this study. The study area can be seen in Figures 7 & 8. A build-out situation was modeled for the study area. The potential Equivalent Residential Unit (ERU) growth is summarized in Section 2. The Impact Fees calculated in this plan are given for the service area as defined. No other zones or divisions are considered for separate fee structures in this plan.

2.0 POPULATION AND ERU ESTIMATES

2.1 Introduction

Storm drain impact and the cost to construct the system needs to be fairly divided among all the users of the system. The basic unit to do this in most capital facility planning is an Equivalent Residential Unit or ERU. An ERU quantifies the typical impact of one single family detached residential unit within the system. This is the most common type of development within the City. Once an ERU is defined, it can be used to compare multifamily, commercial, and industrial sites.

2.2 ERU Definition

Runoff from a residential lot and streets is directed toward detention ponds where it is then released at a rate that is determined by the size of the overall development and the allowed release rate per acre. (0.1 cfs per acre for the Malad River drainage and 0.05 cfs per acre for the Salt Creek and Mill Ditch drainage. These drainage areas are defined later in this plan) Multifamily, commercial, and industrial developments are required to detain the same size storm and release at the same rate per developed acre as single family detached developments. As such the impact of multifamily, industrial, or commercial property is nearly the same on the overall storm drain system as a single family residential development. Single family detached residential lots across the City were analyzed and it was determined that the average lot size (including the streets) is 0.34 acres. The storm drain impact fee should be applied for multifamily, commercial, and industrial development as shown below. An average single family detached residential lot is considered to be 1 ERU and the lot size is not individually calculated.

1 ERU = 0.34 developed acres (including ½ of the street ROW)

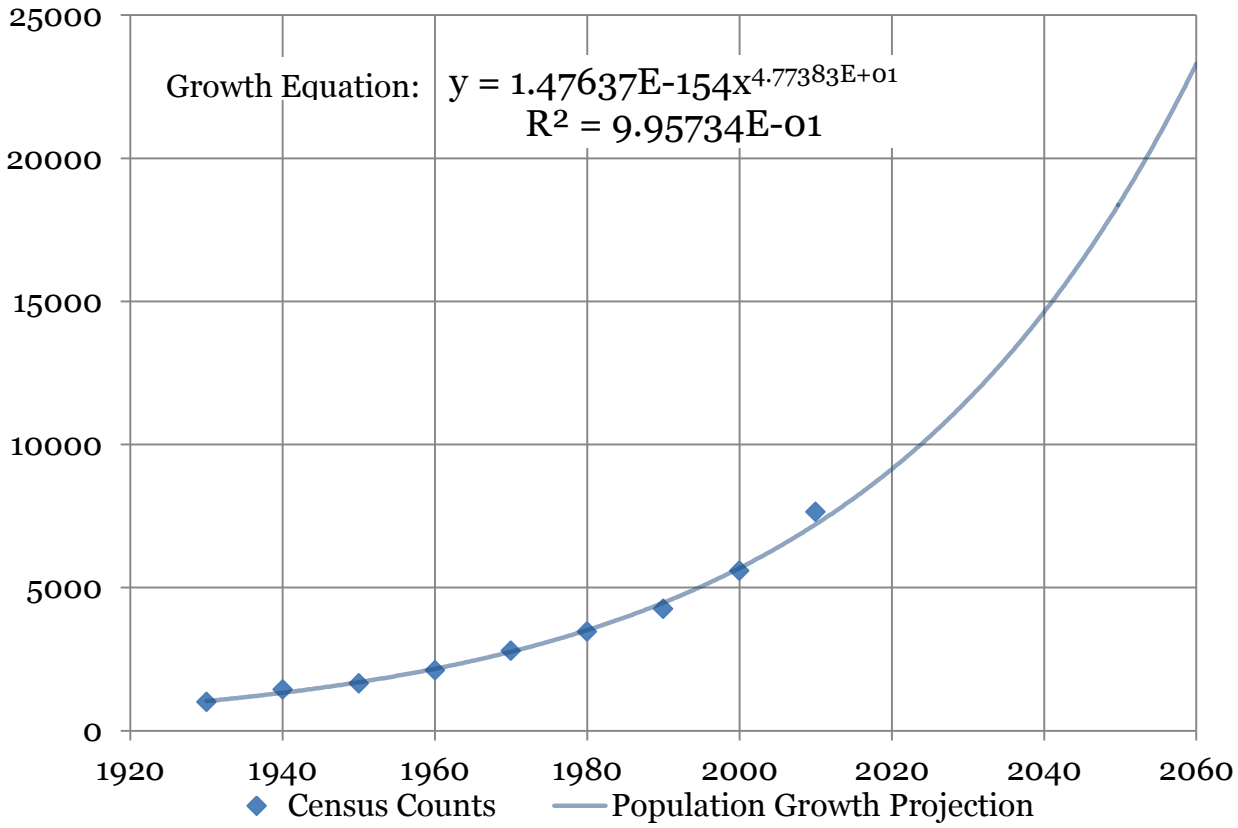
2.3 Population Estimates

In order to estimate the future population, census counts were obtained for the City for every decade since Tremonton was settled. The census counts where charted starting in 1930 and a line was mathematically estimated along those points. An equation for this growth trendline is shown in Figure 2.3.1. The growth trendline was found to be fairly accurate with an R2 value of 0.996. A value of 1.0 represents a perfect fit. It was decided that this growth equation could be used sufficiently to project future growth for the purposes of this plan. Using the equation, the growth rate is approximately 2.45% annually.

As shown in Figure 2.3.1 the census count in 2010 is higher than the growth equation predicts. A booming housing market in the 2000's would account for the extra growth during that decade, and the recent housing market crash and accompanying slow growth suggests that a correction is taking place. For this plan it is assumed that the historical growth trend will continue and that the population will be near the predicted population by the next census in 2020.

Figure 2.3.1 below shows the historical census counts since 1930 and the projected growth based on the equation shown on the chart. This data is also summarized in tabular format in Table 2.4.1 found in Section 2.4

Figure 2.3.1 - Population Projection



2.4 ERU Growth Estimates

The existing population and development was evaluated in 2000 to estimate the current number of ERU's served by the storm drain system. The ERU's were calculated based on the estimated impact of various types of developments as shown on the General Plan's Future Land Use Map (Figure 3.3.2) and using the definition of an ERU from Section 2.2. It should be noted that the Future Land Use Map covers land that extends beyond the scope of this plan. This information can be used to calculate a relationship between population and ERU's. The calculation shows that there are **0.3022 ERU's per person**.

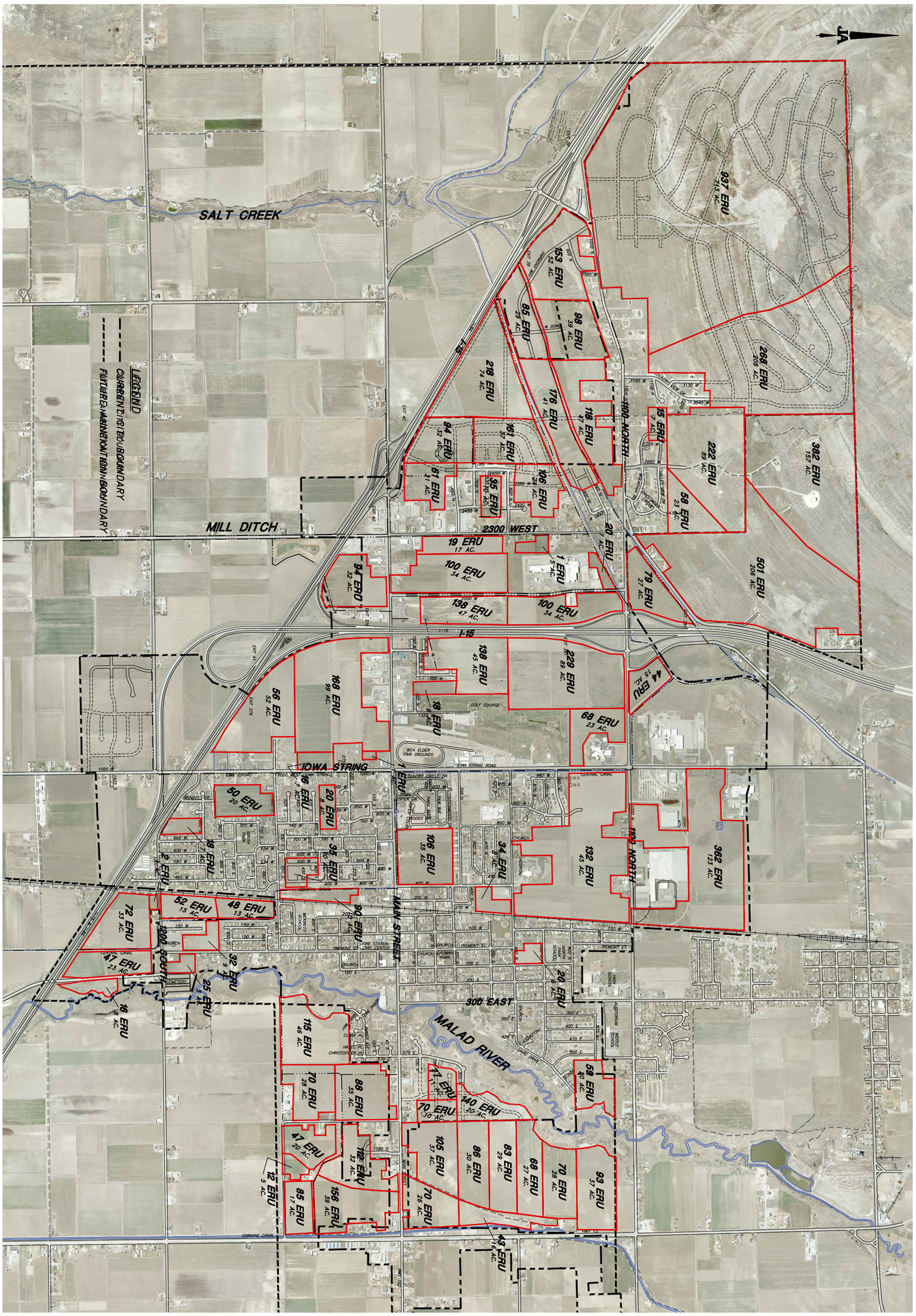
It is realized that land use may change as the City develops and the ERU values will need periodic review and updating. Our recommendation is that this review should occur every five years.

Table 2.4.1 in this section shows the existing and projected population and ERU values for the studied undeveloped areas within the City. There are a total of 7,783 additional undeveloped ERU's estimated in the study area at this time.

Table 2.4.1 - ERU & Population Projections

Year	Census Counts	Projected Population (equation)	ERU's
1930	1,009	1,038	
1940	1,443	1,328	
1950	1,662	1,698	
1960	2,115	2,167	
1970	2,794	2,763	
1980	3,464	3,519	
1990	4,264	4,475	
2000	5,592	5,685	
2010	7,647	7,214	2,180
2020		9,142	2,763
2030		11,573	3,497
2040		14,632	4,422
2050		18,480	5,585
2060		23,312	7,045
2070		29,375	8,877
2080		36,974	11,174

Figure 2.4.2 on the following page shows the projected development areas with their ERU's. The overall area analyzed in the study included in the City's Annexation Declaration. The growth used in the storm drain system analysis is based on the growth shown on this map.



PAGE 5	SCALE: 24"x36" 1" = 1000' / 11"x17" 1" = 2000'	DDA DESIGNED / DDA DRAWN / CLB CHECKED	DATE	DESCRIPTION

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CAPITAL FACILITIES PLAN

FUTURE ERU MAP
FIGURE 2.4.2

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3.0 HYDROLOGY

3.1 Introduction

A vital part of a storm drainage capital facilities plan requires the determination of runoff generated under predetermined parameters. To aid in this determination, WMS (Watershed Modeling System), a storm water modeling software, was utilized to simulate rainfall events over the entire study area. This modeling software allows the user to select from a list of commonly used modeling methods (i.e. HEC-1, HEC-HMS, TR-20, TR-55, NFF, Rational, MODRAT, OC Rational, OC Hydrograph, and HSPF), change parameters and evaluate runoff impacts. The method selected for modeling this plan was HEC-1 and a list of the input parameters can be found in this section. This section provides an overview of the parameters used for modeling and it is assumed that the reader has an understanding of storm water modeling in general and with HEC-1 specifically.

3.2 Soil Conditions

One major factor in estimating runoff quantity for storm water is the way in which varying soil types affect initial infiltration and the resulting runoff. Porous soils, such as sands and gravels tend to absorb precipitation, while the heavier clay and silt soils do not absorb precipitation at a rapid rate and create more runoff. The soils in the study area have been classified into four general hydrologic groups. These groupings were originally developed by the Soil Conservation Service (SCS) and are described as follows:

Type A Soils:
These have the lowest runoff potential and consist chiefly of deep well to excessively drained sands and gravels.

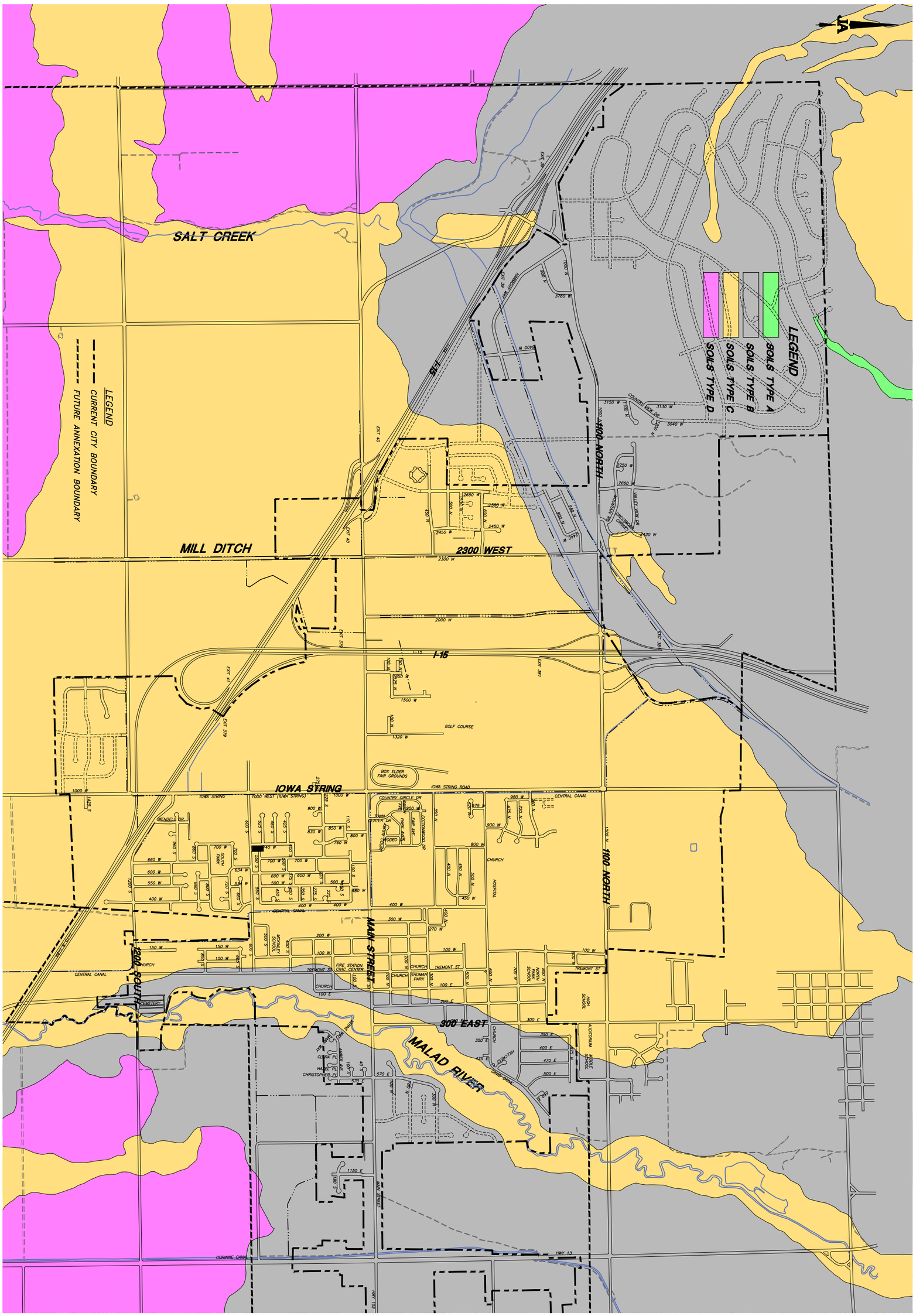
Type B Soils:
These have a moderate rate of transmission or infiltration consisting primarily of moderately deep to deep, moderately well to well drained soils of moderately fine to moderately coarse textures.

Type C Soils:
These soils have a lower rate of infiltration and consist mainly of soils with an impervious layer which impedes the downward movement of water or soil with moderately-fine to fine texture.

Type D Soils:
These soils have the lowest infiltration rate. They are comprised primarily of clay soils with a high swelling potential, soils of permanently high water tables, soils with a clay pan or clay layer at of near the surface, and shallow soils that overlay nearly impervious material.

The software used in this plan (WMS - Watershed Modeling System) allows all the varying soil types to be defined and simulated into the model in order to calculate a composite SCS curve number for each drainage basin. Soil mapping for this area was downloaded from the Natural Resources Conservation Service (NRCS). The information is from the SSURGO database. It was determined that a section of soils in the center of the City that are classified as type D soils would be modeled as type C soils. The import of topsoils and the older nature of the yards in

this area has likely improved the infiltration rate of these soils. The different soil types in the study area are shown in Figure 3.2.1 on the following page.



PAGE 8	SCALE: 24"x36" 1" = 1000' 11"x17" 1" = 2000'	DDA DESIGNED DDA DRAWN CLB CHECKED		DATE	DESCRIPTION	TREMONTON CITY CORPORATION CAPITAL FACILITIES PLAN **SOIL TYPES MAP** **FIGURE 3.2.1**

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3.3 Loss Method

Projected land use in the study area is another major factor in determining the future urban surface runoff prior to detention. The Tremonton City General Plan's Future Land Use Map was used to estimate the future land use parameters. This map can be found in this document as Figure 3.3.2. The following table outlines the land use categories used in the study along with their respective SCS curve numbers and impervious area.

The SCS Curve Number (CN) is a function of hydrologic soil group and land use. WMS calculates a composite CN as a major parameter is computing storm water runoff. Table 3.3.1 lists the curve numbers as they are associated with a particular land use and a particular soil group. SCS curve numbers for each hydrologic soil group are based on the USDA TR-55 manual with some modifications as shown in Table 3.3.1. Residential and commercial areas use curve numbers for "Open Space - Good Condition" and a percent impervious value being used for each category. This approach assumes that most of the rainfall in these areas falls on lawns or draining directly to the collection system through directly connected impervious areas. This approach allows the model to account better for the impervious area runoff than with a composite curve number. The impervious percentage used in the model is taken from a study of representative properties in the area and not from the standard values in the TR-55 manual.

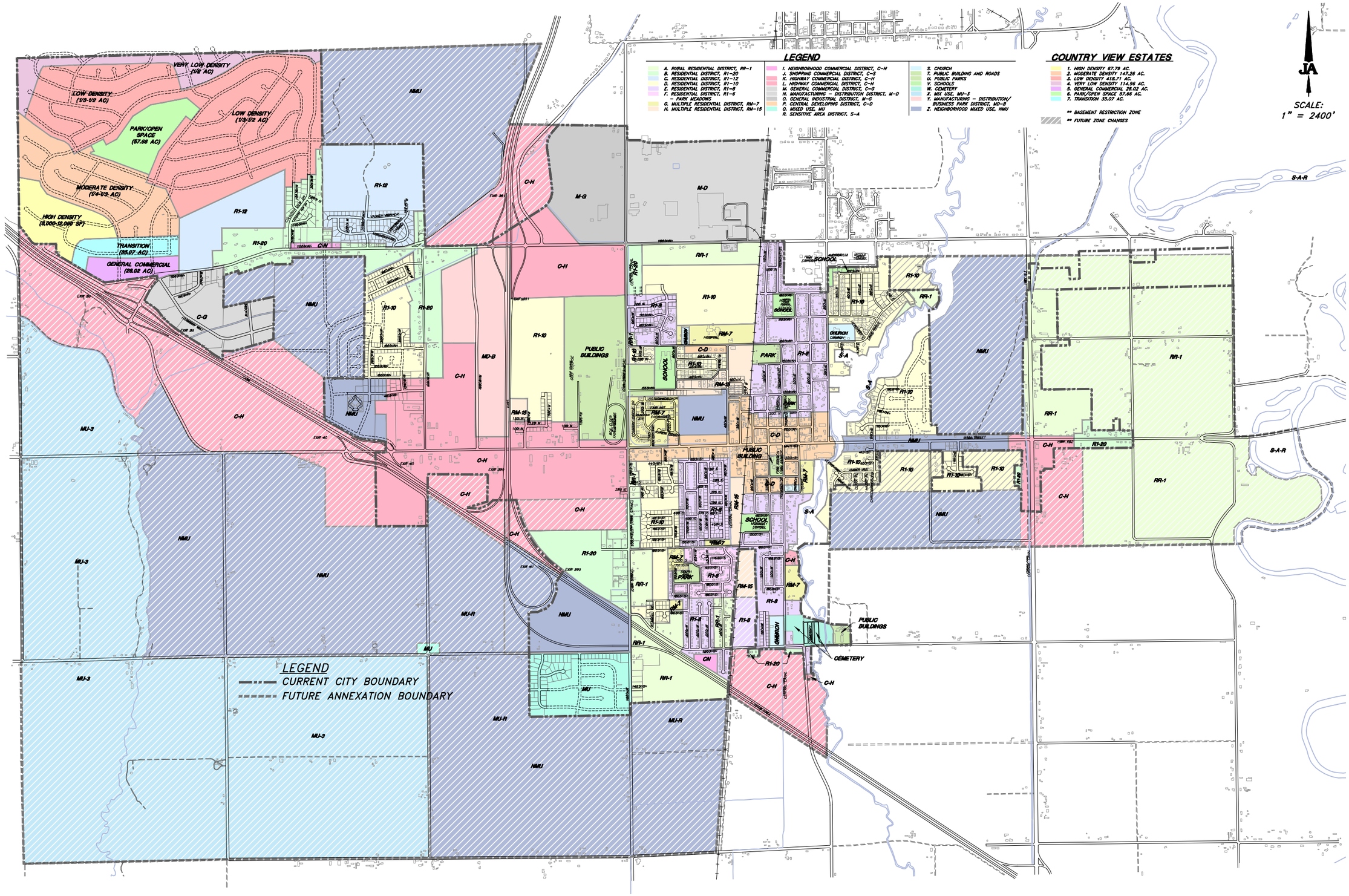
Table 3.3.1 - Land Use and SCS Curve Numbers

Land Use	Soil Type "A" CN	Soil Type "B" CN	Soil Type "C" CN	Soil Type "D" CN	Impervious % (RTIMP)[1]
Residential 1/8 acre or less (town houses)	39	61	74	80	52
Residential 1/4 acre or less	39	61	74	80	30
Residential 1/3 acre or less	39	61	74	80	24
Residential 1/2 acre or less	39	61	74	80	20
Residential 1 acre or less	39	61	74	80	16
Residential 2 acres or less	39	61	74	80	10
Commercial and Business	39	61	74	80	68
Industrial	39	61	74	80	57
Paved (directly connected)	98	98	98	98	0
Streets (open ditches including right-of-way)	83	89	92	93	0

Land Use	Soil Type "A" CN	Soil Type "B" CN	Soil Type "C" CN	Soil Type "D" CN	Impervious % (RTIMP)[1]
Open space - poor condition (grass cover <50%)	68	79	86	89	0
Open space - fair condition (grass cover 50% to 75%)	49	69	79	84	0
Open space - good condition (grass cover >75%)	39	61	74	80	0
Bear River Bottoms	68	71	81	89	0

Note 1: RTIMP is a HEC-1 input variable representing storm drain run-off areas directly connected to the storm drainage system by directly connected impervious area in percent

Precipitation falling on low density and open space land use areas will produce a limited amount of surface runoff. Multifamily, commercial, and industrial areas generally require large areas of hard surfacing and roof top areas. These improvements cover the ground surface and prevent absorption of precipitation. Development of these high density commercial and industrial sites presents the greatest problem in management of urban storm water.



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CAPITAL FACILITIES PLAN

FUTURE LAND USE MAP
FIGURE 3.3.2

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SCALE: 24"x36" 1" = 1200' 11"x17" 1" = 2400'

3.4 Rainfall Data

Critical runoff events from urban areas in this region are typified by cloudburst type storms which are characterized by short periods of high intensity rainfall. Farmer and Fletcher (1971) examined rainfall gage records and classified storms in the Wasatch Front area and developed a synthetic storm distribution. The Farmer and Fletcher (1971) rainfall pattern data was chosen for this plan. This same storm pattern has been adopted in the City's Land Use Code, Title III as one of the storm patterns that can be used for development storm water modeling.

The rainfall pattern shown below is for a 1" unit storm and must be modified for storms of other magnitudes. The rainfall pattern is expressed in inches of rainfall for the given time unit (minutes). The Farmer Fletcher distribution was used for a 60 minute storm. The table below represents the rainfall pattern distribution suggested by Farmer & Fletcher. It should be noted that only 3% of the storm occurs in the first 12 minutes and 80% of the storm occurs within the first 35 minutes.

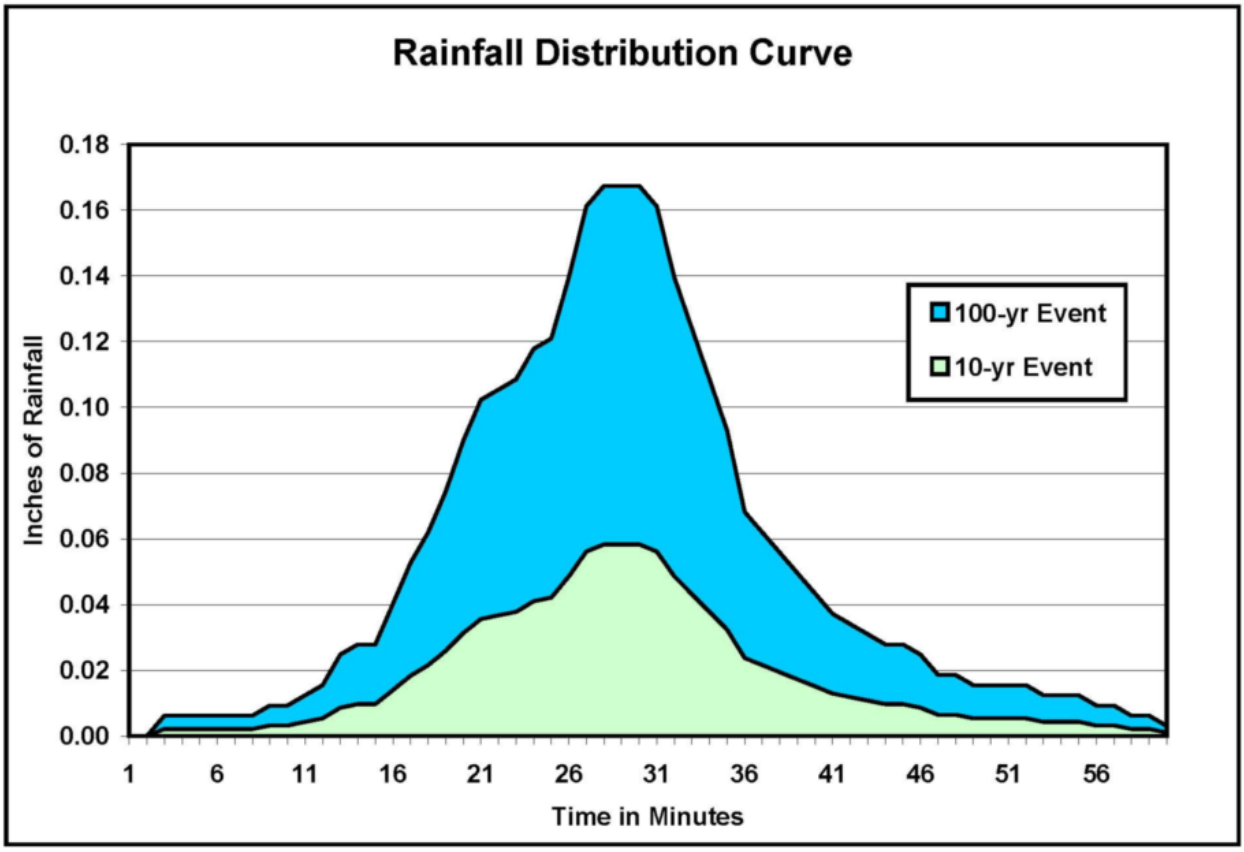
Table 3.4.1 – Rainfall Pattern

time[1]	inches	time	inches	time	inches	time	inches	time	inches	time	inches
1	0.000	11	0.004	21	0.033	31	0.052	41	0.012	51	0.005
2	0.000	12	0.005	22	0.034	32	0.045	42	0.011	52	0.005
3	0.002	13	0.008	23	0.035	33	0.040	43	0.010	53	0.004
4	0.002	14	0.009	24	0.038	34	0.035	44	0.009	54	0.004
5	0.002	15	0.009	25	0.039	35	0.030	45	0.009	55	0.004
6	0.002	16	0.013	26	0.045	36	0.022	46	0.008	56	0.003
7	0.002	17	0.017	27	0.052	37	0.020	47	0.006	57	0.003
8	0.002	18	0.020	28	0.054	38	0.018	48	0.006	58	0.002
9	0.003	19	0.024	29	0.054	39	0.016	49	0.005	59	0.002
10	0.003	20	0.029	30	0.054	40	0.014	50	0.005	60	0.001

Note 1: Time is measured in minutes.

For the use of the above rainfall pattern, a rainfall total from the National Oceanic and Atmospheric Administration (NOAA) Atlas for the site must be used. For Tremonton City the following rainfall totals are given: 10 year - 0.81 inches and 100 year - 1.57 inches

Figure 3.4.2 – Rainfall Pattern



3.5 Snow Melt

This plan does not account for any snow melt conditions.

3.6 Outflow Hydrograph and Lag Time

The unit hydrograph used is the SCS dimensionless unit hydrograph. The lag time for developed areas was calculated using the USGS Nationwide Urban Method. This method requires the calculation of a "basin development factor". Using the parameters outlined in the FHA Urban Drainage Design Manual (HEC 22) a score of 12 was given for all fully urbanized drainage basins. A score of 12 assumes that all streets will have curb and gutter with catch basins and piping. Areas that did not have fully developed roadways and drainage systems were scored as per the HEC22 manual.

For farmlands and open areas the SCS method was used to calculate lag time.

3.7 Hydrology Acronym Definitions (in order of appearance)

WMS — Watershed Modeling System. The software used to set up and perform the storm water model in this plan.

HEC-1 — HEC stands for Hydrologic Engineering Center which is an office within the US Army Corps of Engineers. HEC-1 is software that was developed by

	theHydrologic Engineering Center to estimate river flows as a result of rainfall. HEC-1 is the engine that WMS uses to calculate runoff.
USGS	The United States Geological Survey (USGS) is a scientific agency of the United States government. The scientists of the USGS study the landscape of the United States, its natural resources, and the natural hazards that threaten it. The organization has four major science disciplines, concerning biology, geography, geology, and hydrology. The USGS is a fact-finding research organization with no regulatory responsibility
SCS	Soil Conservation Service, the former name of the U.S. Natural Resources Conservation Service
SSURGO	Soil Survey Geographic (SSURGO) database refers to digital soils data produced and distributed by the Natural Resources Conservation Service (NRCS) - National Cartography and Geospatial Center (NCGC).
USDA	The United States Department of Agriculture (informally the Agriculture Department or USDA) is the United States federal executive department responsible for developing and executing U.S. federal government policy on farming, agriculture, and food. It aims to meet the needs of farmers and ranchers, promote agricultural trade and production, work to assure food safety, protect natural resources, foster rural communities and end hunger in the United States and abroad.
TR-55	USDA Technical Release 55 (TR-55) presents simplified procedures to calculate storm runoff volume, peak rate of discharge, hydrographs, and storage volumes required for floodwater reservoirs. These procedures are applicable in small watersheds, especially urbanizing watersheds, in the United States.
RTIMP	A HEC-1 input variable representing storm drain run-off areas directly connected to the storm drainage system by directly connected impervious area in percent.
NOAA	The National Oceanic and Atmospheric Administration (NOAA), is a scientific agency within the United States Department of Commerce focused on the conditions of the oceans and the atmosphere
FHA	Federal Highway Administration

4.0 STORM DRAIN SYSTEM

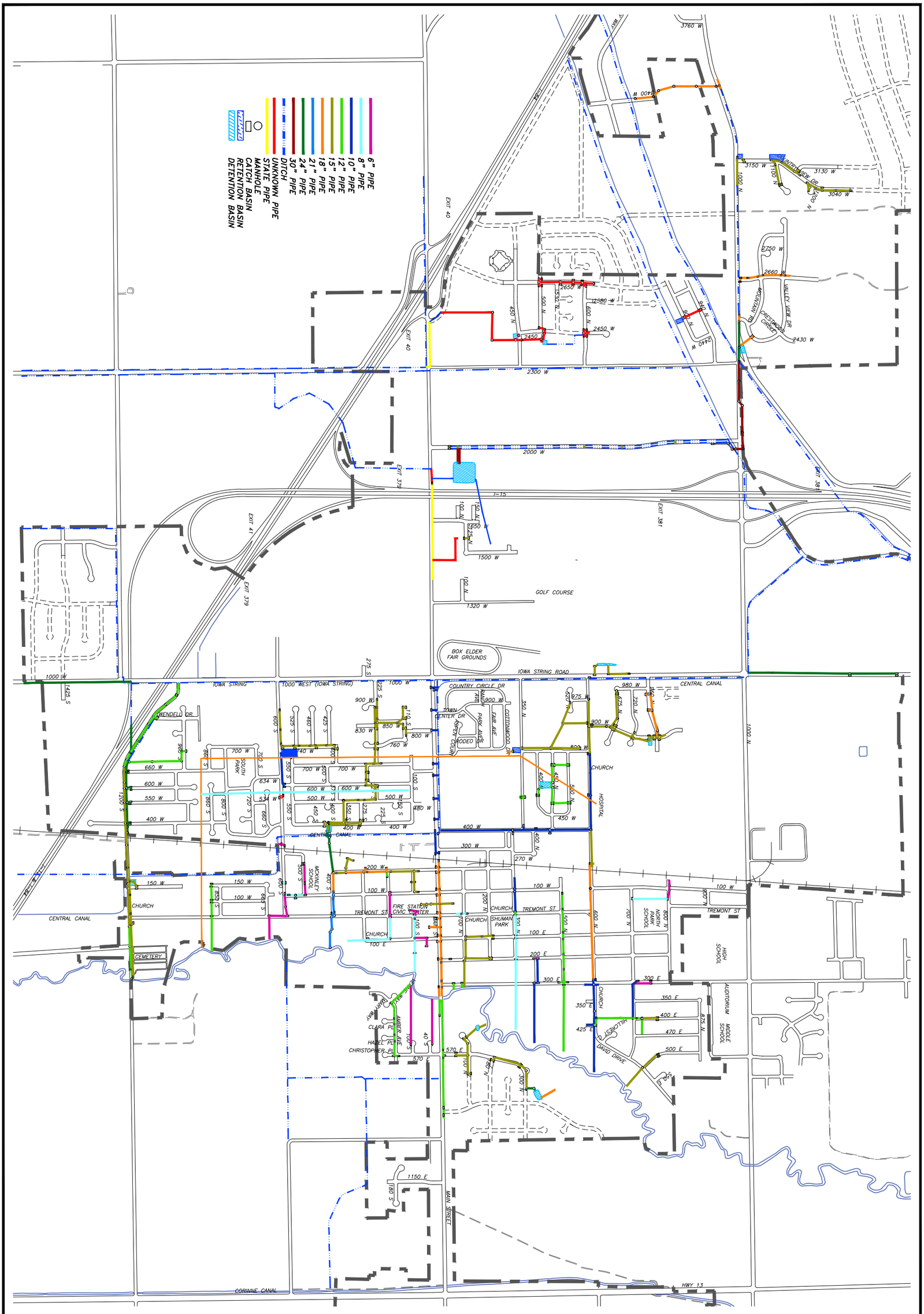
4.1 Existing Storm Drain System

The main drainage outfalls are the Malad River on the east, an irrigation tail water ditch, called the Mill Ditch, in the central part of the City, and the Salt Creek at the far western part of the City. Much of the outfall drainage in the developing areas uses irrigation tailwater ditches that lead to the Malad or the Mill Ditch. Irrigation tail water ditches can be used for storm water drainage where the ditch has replaced the natural drainage channel or paths that existed before the farming or development activity takes place.

The existing storm drainage system mostly serves the central part of the City and drains mostly to the Malad River. A few parts of the system have been constructed with development outside of this area and mostly drain to retention ponds or existing irrigation tail water ditches. Figure 4.1.2 shows the existing storm drainage network comprised of pipes, clean out manholes, and catch basins. For the purpose of impact fee analysis, the City has classified curb and gutter to be part of the road system and not the storm drain system. Existing quantities of pipes, manholes, catch basins, and detention/retention basins are shown in Table 4.1.1 below.

Table 4.1.1 – Existing System Value

Item	Description	Quantity	Unit
1	6" storm drain pipe	4,852	lf
2	8" storm drain pipe	9,035	lf
3	10" storm drain pipe	10,468	lf
4	12" storm drain pipe	13,227	lf
5	15" storm drain pipe	25,606	lf
6	18" storm drain pipe	9,180	lf
7	21" storm drain pipe	760	lf
8	24" storm drain pipe	8,138	lf
9	30" storm drain pipe	2,096	lf
10	Storm drain cleanout manholes	123	ea
12	Storm drain catch basins	362	ea
13	Detention/retention basins	6.0	acres



PAGE 16	SCALE: 24"x36" 1" = 750' / 11"x17" 1" = 1500'	DDA DESIGNED / DDA DRAWN / CLB CHECKED		DATE / DESCRIPTION	TREMONTON CITY CORPORATION CAPITAL FACILITIES PLAN **EXISTING STORM DRAIN SYSTEM MAP** **FIGURE 4.1.2**	JA JONES & ASSOCIATES CONSULTING ENGINEERS 1716 East 5600 South South Ogden, Utah 84403 ph – (801) 476–9767 fx – (801)476–9768

4.2 Sizing Standards

The storm drain system consists of two separate components, an initial system and a major system. The initial system includes those parts of the system that provides protection against regularly recurring damage from storm runoff. Initial drainage systems include the curb and gutter, storm drain piping, and local detention basins. These systems should be designed to safely convey the 10 year storm event. The major storm drainage system includes those systems which provide protection against larger, typically rare storms. Included in the major storm drainage system are major channels, swales, culverts, streets, and regional detention facilities. This part of the system should generally be designed for the 100 year event with the objective to eliminate major damage to structures and to prevent loss of life.

4.3 Multi-Use of Storm Water Detention Basins

The City desires to combine storm water detention basins with parks and recreation facilities. This multipurpose use of facilities allows the City to be more economical in their approach to developing and maintaining parks and storm water systems. City subdivision standards require that developers retain storm water onsite in detention basins. Due to the relative small scale of subdivisions and their associated detention requirements, the resulting detention basins are generally small (0.5 to 1 acre in size). Small, grass covered detention basins located throughout the City are costly to maintain and have diminished park and open space value when compared to larger tracts of land. The City will therefore develop regional storm water detention basins that are at a minimum 5 acres in size, which could be used for storm water management as well as City-wide parks. Shared facilities for parks and storm water reduce the costs associated with maintenance of separate facilities. It should be recognized that due to various factors beyond the control of the City such as the timing of the development and location there will be storm drain basins constructed in the future that are less the 5 acres in size. The objective of the City is to limit the instances where these smaller storm drain basins occur.

4.4 Capital Facilities Plan (Future Storm Drain System)

The Capital Facilities Plan outlines the planned improvement projects needed for the City's future. This plan is a first design of the storm drain system for undeveloped areas and developed areas where the storm drain system is deficient. The plan lays out the backbone of the future storm drainage system in these areas. There is no attempt to show exact locations of improvements or pipe networks as future growth will dictate the design location as development happens. Some areas addressed by the plan are existing developed land and the plan is more precise in providing exact locations of improvements or pipe networks these areas

This plan does not attempt to identify the storm drain lines that will be in need of replacement in the future due to the life expectancy of the pipe. It is expected that depreciation costs, which are budgeted and set aside, will be sufficient for these problems.

Figure 4.4.2, Capital Projects Map, shows the location of the projects associated with the overall Capital Facilities Plan. Figures 4.4.3 (Salt Creek and Mill Ditch Drainage) and 4.4.4 (Malad River Drainage) give further detail of the projects. A summarized list of the projects from Figure 4.4.2 is shown in Table 4.4.1 below. Itemized descriptions for each of the capital improvements are included in Appendix A. The table below divides the project costs between developer costs,

capital improvement projects, and current deficiencies. The "Current Deficiency" column represents deficiencies in the current system that will be corrected during the construction of a capital improvement project. The "Developer Participation" column represents the parts of capital improvement projects that will paid for by developers to facilitate their development and are the parts of the improvements that will serve only their development. The "System Improvements" column represents the parts of the capital improvement projects that will provide services for the community as a whole or over sizing capacity for future development areas. This is the column that will be used in the Impact Fee Analysis (IFA).

Table 4.4.1 – Summary of Capital Improvement Projects

#	Project Description	Current Deficiency or Upgrade	Developer Participation	System Improvements	*Total*
1	Country View development area detention basins	$0.00	$1,937,000.00	$0.00	***$1,937,000.00***
2	900 N. 4000 W.: Piping and Detention Basin at Industrial/Commercial Site	$0.00	$530,595.00	$19,019.00	***$549,614.00***
3	650 N. 3760 W.: Piping, Regional Detention Basin, and Outfall Project	$0.00	$109,135.00	$875,485.00	***$984,620.00***
4	1100 N. 3150 W.: Piping and Detention at Country View Development	$0.00	$682,344.00	$0.00	***$682,344.00***
5	1400 N. 2660 W. : Development Detention Basin	$0.00	$353,600.00	$0.00	***$353,600.00***
6	1200 N. 2660 W: Piping and Development Detention Basin	$0.00	$315,900.00	$0.00	***$315,900.00***
7	1000 N. 2300 W : Expand Existing Detention Basin by Developer	$0.00	$52,650.00	$0.00	***$52,650.00***
8	1200 N. 2100 W: Piping and Development Detention Basin	$0.00	$598,975.00	$0.00	***$598,975.00***
9	1050 N. 2000 W: Piping and Commercial Site Detention	$0.00	$425,152.00	$0.00	***$425,152.00***
10	450 N. 3050 W: Industrial/Commercial Detention Basin	$0.00	$548,600.00	$0.00	***$548,600.00***
11	350 N. 2700 W: Piping and Regional Detention Basin	$0.00	$209,170.00	$720,018.00	***$929,188.00***
12	350 N. 2650 W: Piping and River Valley Detention Basin	$0.00	$281,840.00	$401,914.50	***$683,754.50***
13	900 N. 2500 W: Piping and Expand Existing Detention Basin	$0.00	$122,564.00	$0.00	***$122,564.00***
14	2300 W: Outfall Piping	$0.00	$381,192.50	$97,792.50	***$478,985.00***
15	600 N. 2000 W: Commercial Site Detention Basin By Developer	$0.00	$443,300.00	$0.00	***$443,300.00***
16	100 N. 2100 W: Commercial Site Detention Basin By Developer	$0.00	$427,596.00	$0.00	***$427,596.00***
17	150 N. 1950 W: Commercial Site Detention Basin By Developer	$0.00	$352,040.00	$0.00	***$352,040.00***
18	1000 N. 1600 W: Commercial Site Detention	$0.00	$287,300.00	$0.00	***$287,300.00***

#	Project Description	Current Deficiency or Upgrade	Developer Participation	System Improvements	*Total*
	Basin By Developer				
19	150 N. 1700 W: Regional Detention Basin and Piping	$0.00	$281,385.00	$686,296.00	***$967,681.00***
20	300 S. 1600 W: Regional Detention Basin and Piping	$0.00	$117,130.00	$365,716.00	***$482,846.00***
21	800 N. Iowa String Road: Commercial Detention Basin and Piping	$0.00	$406,120.00	$0.00	***$406,120.00***
22	Iowa String Road and Main Street: Iowa String and Main Street Oufall Piping	$1,056,146	$0.00	$0.00	***$1,056,146.00***
23	Near I-15 & West of Iowa String Road: Regional Detention Basin and Piping	$0.00	$116,220.00	$188,864.00	***$305,084.00***
24	Near I-15 & East of Iowa String Road: Piping and Regional Detention Basin	$0.00	$0.00	$745,160.00	***$745,160.00***
25	1200 S. 200 W: Piping and Detention Basin by Developer	$0.00	$303,355.00	$126,685.00	***$430,040.00***
26	1200 S. 150 W: Piping and Detention Basin by Developer	$0.00	$270,790.00	$196,690.00	***$467,480.00***
27	1200 S. 200 W: Regional Detention Basin and Piping	$0.00	$250,867.50	$626,112.50	***$876,980.00***
28	550 S. 740 W: Convert Retention Basin to Detention and Connect Piping	$6,500.00	$0.00	$0.00	***$6,500.00***
29	550 S. 400 W: Piping and Detention Basin by Developer	$0.00	$292,032.00	$0.00	***$292,032.00***
30	400 S. 300 W: Piping and Detention Basin by Developer	$0.00	$302,997.50	$23,328.50	***$326,326.00***
31	300 N. 450 W: Regional Detention Basin and Piping	$0.00	$123,890.00	$806,598.00	***$930,488.00***
32	1000 N. 100 W: Regional Detention Basin and Piping	$0.00	$420,160.00	$1,148,680.00	***$1,568,840.00***
33	800 N. 700 E: Piping and Detention Basin by Developer	$0.00	$155,025.00	$0.00	***$155,025.00***
34	800 N. 1100 E: Regional Detention Basin and Piping	$0.00	$80,210.00	$314,080.00	***$394,290.00***
35	500 N. 700 E: Regional Detention Basin and Piping	$0.00	$119,860.00	$610,350.00	***$730,210.00***
36	Main Street 700 E: Regional Detention Basin and Piping	$0.00	$213,135.00	$545,285.00	***$758,420.00***
37	600 S. 400 E: Regional Detention Basin and Piping	$0.00	$331,955.00	$1,215,929.00	***$1,547,884.00***
	Totals	**$6,500.00**	**$11,844,085.50**	**$10,770,149.00**	**$22,620,734.50**

PROJECT 1
PROJECT 2
PROJECT 3
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PROJECT 36
PROJECT 37

1100 NORTH
2300 WEST
I-15
MALAD RIVER
MAIN STREET
1200 SOUTH
SALT CREEK
MILL DITCH
IOWA STRING

LEGEND
CURRENT CITY BOUNDARY
FUTURE ANNEXATION BOUNDARY
FUTURE STORM DRAIN
EXISITNG STORM DRAIN

JA JONES & ASSOCIATES CONSULTING ENGINEERS
1716 East 5600 South
South Ogden, Utah 84403
ph – (801) 476-9767 fx – (801)476-9768

TREMONTON CITY CORPORATION

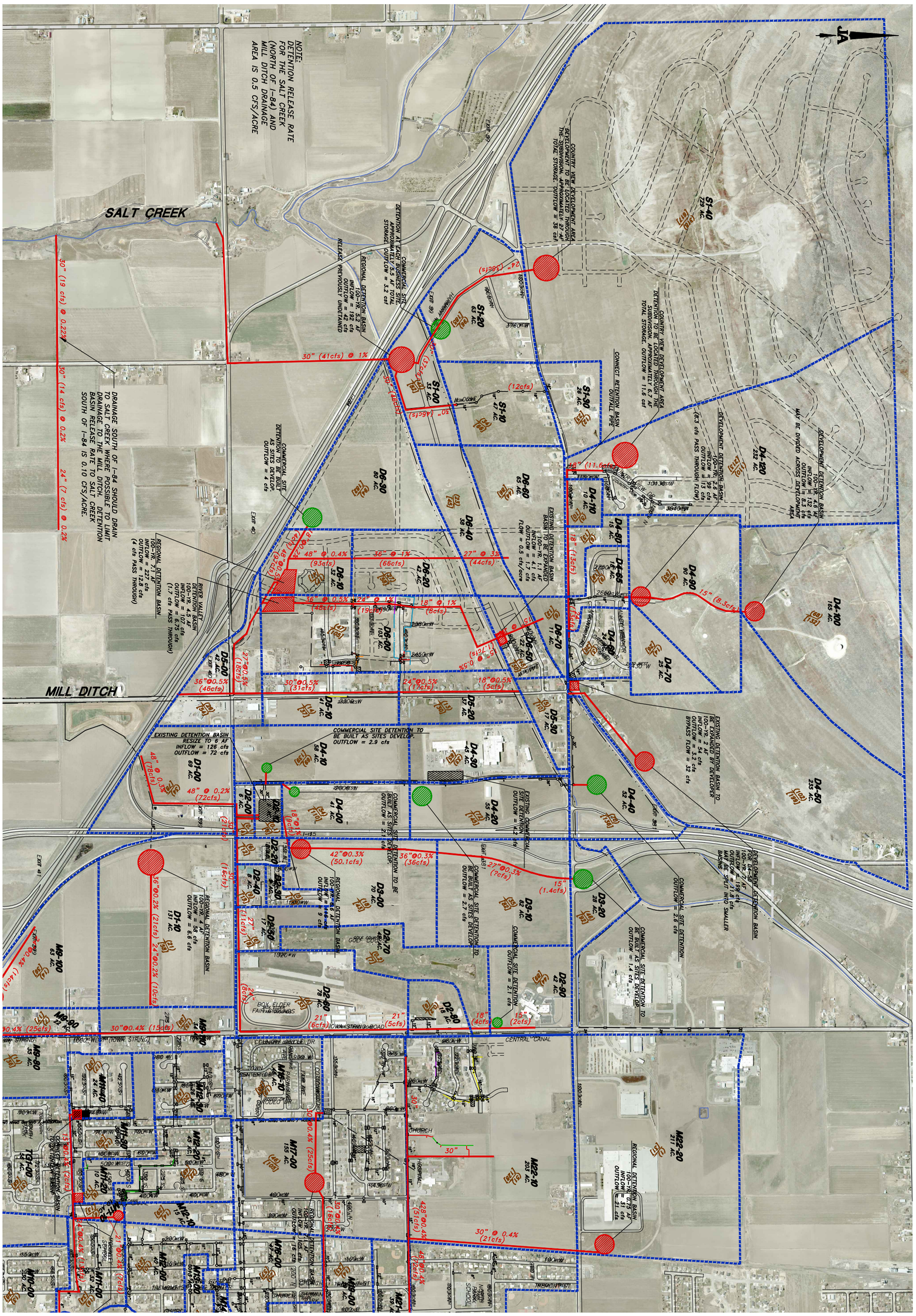
CAPITAL FACILITIES PLAN

CAPITAL PROJECTS MAP
FIGURE 4.4.2

DATE	DESCRIPTION

DDA DESIGNED
DDA DRAWN
CLB CHECKED

SCALE:
24"x36" 1" = 1000'
11"x17" 1" = 2000'



PAGE 21	SCALE: 24"x36" 1" = 700' / 11"x17" 1" = 1400'	DDA DESIGNED / DDA DRAWN / CLB CHECKED	DATE	DESCRIPTION

TREMONTON CITY CORPORATION

CAPITAL FACILITIES PLAN

SALT CREEK AND MILL DITCH DRAINAGE
FIGURE 4.4.3

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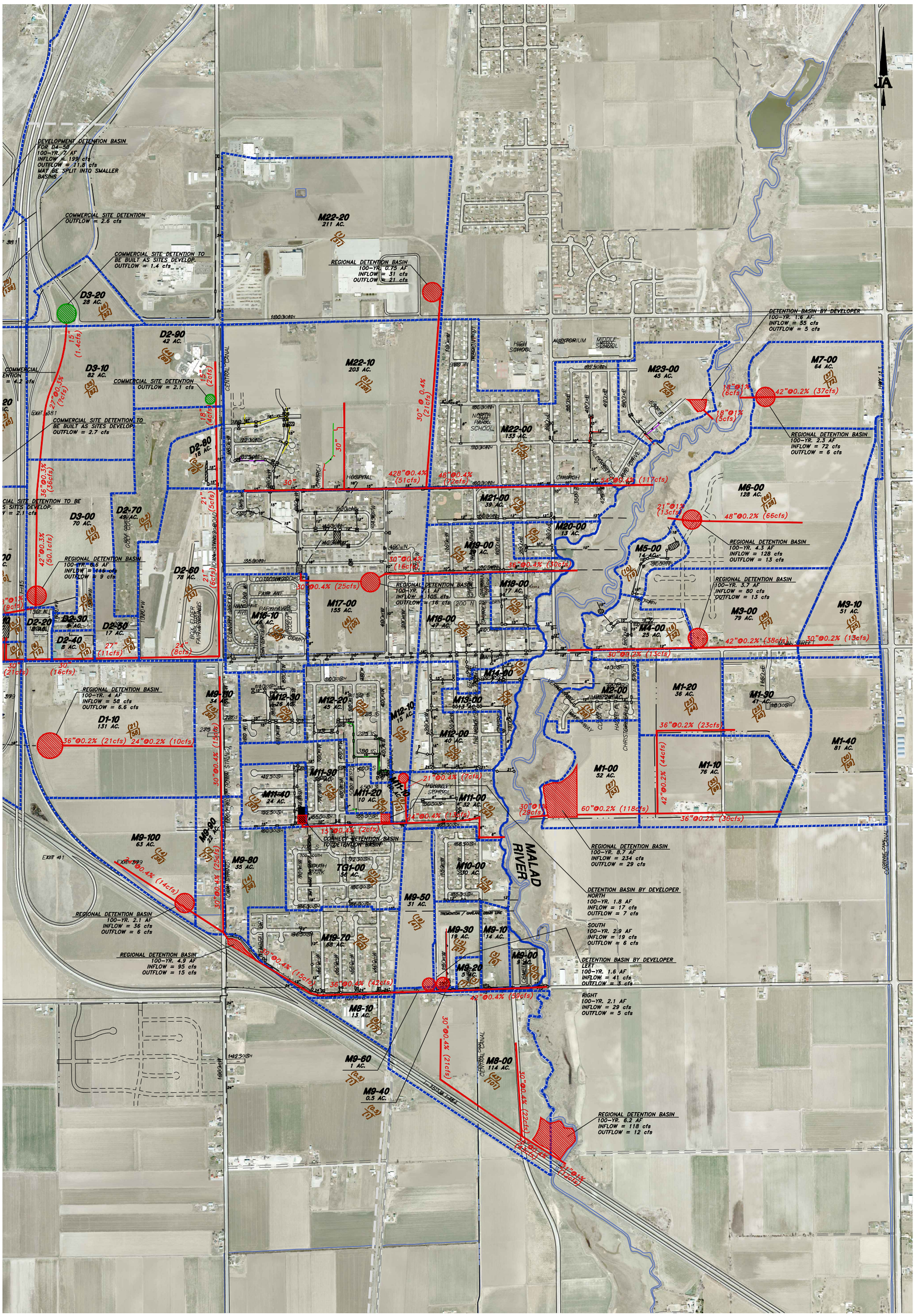

PAGE 22

SCALE:
24"x36" 1" = 700'
11"x17" 1" = 1400'

DDA DESIGNED
DDA DRAWN
CLB CHECKED

DATE	DESCRIPTION

TREMONTON CITY CORPORATION
CAPITAL FACILITIES PLAN

MALAD RIVER DRAINAGE
FIGURE 4.4.4

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South Ogden, Utah 84403
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5.0 IMPACT FEE FACILITIES PLAN

5.1 Introduction

The Storm Drain System Impact Fee will be enacted as a means for new development to pay for their impact on the existing storm drain system. Utah state law requires that an Impact Fee Facilities Plan (IFFP) be prepared before an Impact Fee can be implemented. The law requires that the IFFP only contain the costs for short term (6-10 year) growth, and it must also not raise the existing level of service. This section will summarize information from Sections 1-4 of this report (Capital Facilities Plan) as it pertains to the enactment of the impact fee.

Title 11-36a, Section 300, of the Utah State Code outlines the requirements of the Impact Fee Analysis (IFA) which is also required to be prepared before an Impact Fee can be implemented. The IFFP is a subset of the data contained in the Capital Facilities Plan and that information will be summarized in this section. The IFA will be prepared by Zions Bank and is contained in a separate document.

5.2 Growth Projections

Section 2.3 of this plan discusses the long term growth projections for Tremonton City. This section will focus on the growth during the next decade which is the duration of the IFFP, which is the duration of the IFFP.

2013 to 2020

The growth rate in the 2000's far exceeded the historical growth rate as outlined in Section 2.3 of this plan. As a result, the census population in 2010 was much higher than the population growth equation predicted. Over the past few years, with the nationwide housing market crash, the City has seen a much slower rate than the previous decade. It is expected that the population growth will correct itself and continue to follow the historical curve of the growth trendline.

For the 2013 to 2020 period the plan uses the actual census count from 2010 and an exponential growth rate to meet the population estimate from Section 2.3 in 2020. The ERU growth is then projected at the same growth rate.

2021 to 2023

After 2020 the projected growth rate will follow the equation given in Section 2.3, which is the historical growth rate estimated by the growth equation given in that same section.

Table 5.2.1 – Population and ERU Projections (IFFP)

	Population	ERU's
2010 (census)	7647	2,180
2011	7785	2353
2012	7925	2395
2013	8068	2438

	Population	ERU's
2014	8213	2482
2015	8361	2527
2016	8512	2572
2017	8665	2619
2018	8821	2666
2019	8980	2714
2020	9142	2763
2021	9361	2829
2022	9584	2897
2023	9813	2966

5.3 Level of Service

Tremonton City's Storm Drain policy states that the piping system shall control the 10 year storm, and the streets and detention basins shall control the 100 year storm. The detention basins are allowed to release storm water into the storm drain system (where possible) at a rate of 0.1 cfs per acre for the Malad River drainage and 0.05 cfs per acre for the Salt Creek and Mill Ditch drainage. The existing storm drainage system was analyzed using these parameters. Further discussion of the methodology for this analysis is found in Section 3.

Any part of the existing storm drainage system that is not able to handle the flow under these parameters is considered a deficiency. The table in Section 4.3 summarizes all of the capital facilities project's estimated costs. If a project, or portion of a project, corrects an existing deficiency; the costs associated with that correction are shown in the column labeled "Current Deficiency or Upgrade". Any other costs that are not associated with growth, such as system upgrades, are also shown in that column. These costs shall not be considered in the calculation of the Impact Fee.

5.4 Future Development Needs

With so much ground that remains undeveloped, it is nearly impossible to predict where growth will happen over the next 10 years. The most active areas over the past few years are the developments next to the Malad River on the east side of the City, the River Valley Subdivision area between 450 North to 600 North and west of 2300 West, and the hillside on the northwest side of the City. Projects will be chosen, however, to serve the need where the development arises. Figure 4.3.2 in Section 4 shows the planned project locations.

Table 5.4.1 below shows the projects most likely to be constructed in the next 10 years. The column labeled The "Developer Participation" column represents the parts of capital improvement projects that will paid for by developers to facilitate their development and are the parts of the improvements that will serve only their development (i.e. Project Improvements as defined UCA 11-36a-102). The column labeled "Impact Fee Improvements" are the portions of

the projects that should be paid for thorough Impact Fees (i.e. System Improvements as defined in UCA 11-36a-102). Not all of these projects will be built over the next 10 years. These are simply the most likely projects to be built.

Table 5.4.1 – Most Likely Capital Improvement Projects

Proj.	Project Description	New ERU's Served	Current Deficiency	Developer Participation	Impact Fee Improvements	% Impact Fee Qual.	*Total*
4	1100 N. 3150 W.: Piping and Detention at Country View Development	268	$0.00	$682,344.00	$0.00	0%	***$682,344.00***
6	1200 N. 2660 W: Piping and Development Detention Basin	222	$0.00	$315,900.00	$0.00	0%	***$315,900.00***
12	350 N. 2650 W: Piping and River Valley Detention Basin	202	$0.00	$281,840.00	$401,914.50	59%	***$683,754.50***
20	300 S. 1600 W: Regional Detention Basin and Piping	168	$0.00	$117,130.00	$365,716.00	76%	***$482,846.00***
36	Main Street 700 E: Regional Detention Basin and Piping	218	$0.00	$213,135.00	$545,285.00	72%	***$758,420.00***
	Totals		**$0.00**	**$1,610,349.00**	**$1,312,915.50**	***45%***	***$2,923,264.50***

5.5 Certification

The following certification is required in the Utah State Code Section 11-36a-306.

"I certify that the attached impact fee facilities plan:

1. includes only the costs of public facilities that are:
    a. allowed under the Impact Fees Act; and
    b. actually incurred; or
    c. projected to be incurred or encumbered within six years after the day on which each impact fee is paid;
2. does not include:
    a. costs of operation and maintenance of public facilities;
    b. costs for qualifying public facilities that will raise the level of service for the facilities, through impact fees, above the level of service that is supported by existing residents; or
    c. an expense for overhead, unless the expense is calculated pursuant to a methodology that is consistent with generally accepted cost accounting practices and the methodological standards set forth by the federal Office of Management and Budget for federal grant reimbursement; and
3. complies in each and every relevant respect with the Impact Fees Act."

_____

Chris L. Breinholt, P.E. – City Engineer

Table 5.4.1 – Most Likely Capital Improvement Projects

Proj.	Project Description	New ERU's Served	Current Deficiency	Developer Participation	Impact Fee Improvements	% Impact Fee Qual.	*Total*
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6	1200 N. 2660 W: Piping and Development Detention Basin	222	$0.00	$315,900.00	$0.00	0%	***$315,900.00***
12	350 N. 2650 W: Piping and River Valley Detention Basin	202	$0.00	$281,840.00	$401,914.50	59%	***$683,754.50***
20	300 S. 1600 W: Regional Detention Basin and Piping	168	$0.00	$117,130.00	$365,716.00	76%	***$482,846.00***
36	Main Street 700 E: Regional Detention Basin and Piping	218	$0.00	$213,135.00	$545,285.00	72%	***$758,420.00***
	Totals		**$0.00**	**$1,610,349.00**	**$1,312,915.50**	***45%***	***$2,923,264.50***

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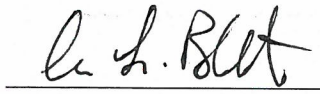
   c. projected to be incurred or encumbered within six years after the day on which each impact fee is paid;
2. does not include:
   a. costs of operation and maintenance of public facilities;
   b. costs for qualifying public facilities that will raise the level of service for the facilities, through impact fees, above the level of service that is supported by existing residents; or
   c. an expense for overhead, unless the expense is calculated pursuant to a methodology that is consistent with generally accepted cost accounting practices and the methodological standards set forth by the federal Office of Management and Budget for federal grant reimbursement; and
3. complies in each and every relevant respect with the Impact Fees Act."



11/21/2013

Chris L. Breinholt, P.E. – City Engineer

Appendix A – Project Cost Estimates

Tremonton City Corporation

2013 Capital Facilities Plan

Project Cost Estimates Summary

STORM DRAINAGE

May 2013

Project #	Current Deficiency	Developer Participation	Capital Improvements**	Total Project Cost
1	$0.00	$1,937,000.00	$0.00	$1,937,000.00
2	$0.00	$530,595.00	$19,019.00	$549,614.00
3	$0.00	$109,135.00	$875,485.00	$984,620.00
4	$0.00	$682,344.00	$0.00	$682,344.00
5	$0.00	$353,600.00	$0.00	$353,600.00
6	$0.00	$315,900.00	$0.00	$315,900.00
7	$0.00	$52,650.00	$0.00	$52,650.00
8	$0.00	$598,975.00	$0.00	$598,975.00
9	$0.00	$425,152.00	$0.00	$425,152.00
10	$0.00	$548,600.00	$0.00	$548,600.00
11	$0.00	$209,170.00	$720,018.00	$929,188.00
12	$0.00	$281,840.00	$401,914.50	$683,754.50
13	$0.00	$122,564.00	$0.00	$122,564.00
14	$0.00	$381,192.50	$97,792.50	$478,985.00
15	$0.00	$443,300.00	$0.00	$443,300.00
16	$0.00	$427,596.00	$0.00	$427,596.00
17	$0.00	$352,040.00	$0.00	$352,040.00
18	$0.00	$287,300.00	$0.00	$287,300.00
19	$0.00	$281,385.00	$686,296.00	$967,681.00
20	$0.00	$117,130.00	$365,716.00	$482,846.00
21	$0.00	$406,120.00	$0.00	$406,120.00
22	$1,056,146.00	$0.00	$0.00	$1,056,146.00
23	$0.00	$116,220.00	$188,864.00	$305,084.00
24	$0.00	$0.00	$745,160.00	$745,160.00
25	$0.00	$303,355.00	$126,685.00	$430,040.00
26	$0.00	$270,790.00	$196,690.00	$467,480.00
27	$0.00	$250,867.50	$626,112.50	$876,980.00
28	$6,500.00	$0.00	$0.00	$6,500.00
29	$0.00	$292,032.00	$0.00	$292,032.00
30	$0.00	$302,997.50	$23,328.50	$326,326.00
31	$0.00	$123,890.00	$806,598.00	$930,488.00
32	$0.00	$420,160.00	$1,148,680.00	$1,568,840.00
33	$0.00	$155,025.00	$0.00	$155,025.00
34	$0.00	$80,210.00	$314,080.00	$394,290.00
35	$0.00	$119,860.00	$610,350.00	$730,210.00
36	$0.00	$213,135.00	$545,285.00	$758,420.00
37	$0.00	$331,955.00	$1,215,929.00	$1,547,884.00
Totals	**$1,062,646.00**	**$11,844,085.50**	**$9,714,003.00**	**$22,620,734.50**

** These projects should be funded or reimbursed through the collection of Impact Fees to support new development

Tremonton City Corporation

2013 Capital Facilities Plan

Storm Drainage

Preliminary Estimate of Probable Costs

Project No. : 1

Location : 1000 N. 4000 W. (Country View Development Area)

Description : Detention Basin

Item	Description	Quantity	Unit	Unit Price	Total Amount
1	Construct Detention Basin	27	Aft	$30,000.00	$810,000.00
2	Property Acquisition	11	Ac	$60,000.00	$660,000.00
3	Construct Inlet/Outlet Structure	2	Ea	$10,000.00	$20,000.00

SUBTOTAL	**$1,490,000.00**
30%± Contingency & Engineering	**$447,000.00**
TOTAL	**$1,937,000.00**

DEVELOPER'S ESTIMATED COST

1	Construct Detention Basin	27	Aft	$30,000.00	$810,000.00
2	Property Acquisition	11	Ac	$60,000.00	$660,000.00
3	Construct Inlet/Outlet Structure	2	Ea	$10,000.00	$20,000.00

SUBTOTAL	**$1,490,000.00**
30%± Contingency & Engineering	**$447,000.00**
TOTAL DEVELOPER'S COST	**$1,937,000.00**
TOTAL CITY PORTION	**$0.00**

Tremonton City Corporation

2013 Capital Facilities Plan

Storm Drainage

Preliminary Estimate of Probable Costs

Project No.: 2

Location : 900 N. 4000 W.

Description : Piping and Detention Basin at Industrial/Commercial Site

Item	Description	Quantity	Unit	Unit Price	Total Amount
1	Furnish & Install 24" R.C.P.	2,090	l.f.	$42.00	$87,780.00
2	Manhole/Cleanout	6	ea.	$3,000.00	$18,000.00
3	Construct Detention Basin	5.5	Aft	$30,000.00	$165,000.00
4	Property Acquisition	2.2	Ac	$60,000.00	$132,000.00
5	Construct Inlet/Outlet Structure	2	Ea	$10,000.00	$20,000.00
				SUBTOTAL	**$422,780.00**
				30%± Contingency & Engineering	**$126,834.00**
				TOTAL	**$549,614.00**

DEVELOPER'S ESTIMATED COST

1	Furnish & Install 18" R.C.P.	2,090	l.f.	$35.00	$73,150.00
2	Manhole/Cleanout	6	ea.	$3,000.00	$18,000.00
3	Construct Detention Basin	5.5	Aft	$30,000.00	$165,000.00
4	Property Acquisition	2.2	Ac	$60,000.00	$132,000.00
5	Construct Inlet/Outlet Structure	2	Ea	$10,000.00	$20,000.00
				SUBTOTAL	**$408,150.00**
				30%± Contingency & Engineering	**$122,445.00**
				TOTAL DEVELOPER'S COST	**$530,595.00**
				TOTAL CITY PORTION	**$19,019.00**

Tremonton City Corporation

2013 Capital Facilities Plan

Storm Drainage

Preliminary Estimate of Probable Costs

Project No.: 3

Location : 650 N. 3760 W.

Description : Piping, Regional Detention Basin, and Outfall Project

Item	Description	Quantity	Unit	Unit Price	Total Amount
1	Furnish & Install 30" R.C.P.	6,740	l.f.	$60.00	$404,400.00
2	Manhole/Cleanout	17	ea.	$3,000.00	$51,000.00
3	Construct Detention Basin	5.2	Aft	$30,000.00	$156,000.00
4	Property Acquisition	2.1	Ac	$60,000.00	$126,000.00
5	Construct Inlet/Outlet Structure	2	Ea	$10,000.00	$20,000.00
				SUBTOTAL	**$757,400.00**
				30%± Contingency & Engineering	**$227,220.00**
				TOTAL	**$984,620.00**

DEVELOPER'S ESTIMATED COST

1	Furnish & Install 18" R.C.P.	1,970	l.f.	$35.00	$68,950.00
2	Manhole/Cleanout	5	ea.	$3,000.00	$15,000.00
				SUBTOTAL	**$83,950.00**
				30%± Contingency & Engineering	**$25,185.00**
				TOTAL DEVELOPER'S COST	**$109,135.00**
				TOTAL CITY PORTION	**$875,485.00**

Tremonton City Corporation

2013 Capital Facilities Plan Update

Storm Drainage

Preliminary Estimate of Probable Costs

Project No.: 4

Location : 1100 N. 3150 W.

Description : Piping and Detention at Country View Development

Item	Description	Quantity	Unit	Unit Price	Total Amount
1	Furnish & Install 18" R.C.P.	2,600	l.f.	$35.00	$91,000.00
2	Furnish & Install 24" R.C.P.	640	l.f.	$42.00	$26,880.00
3	Manhole/Cleanout	8	ea.	$3,000.00	$24,000.00
4	Construct Detention Basin	6.7	Aft	$30,000.00	$201,000.00
5	Property Acquisition	2.7	Ac	$60,000.00	$162,000.00
6	Construct Inlet/Outlet Structure	2	Ea	$10,000.00	$20,000.00

SUBTOTAL	**$524,880.00**
30%± Contingency & Engineering	**$157,464.00**
TOTAL	**$682,344.00**

DEVELOPER'S ESTIMATED COST

1	Furnish & Install 18" R.C.P.	2,600	l.f.	$35.00	$91,000.00
2	Furnish & Install 24" R.C.P.	640	l.f.	$42.00	$26,880.00
3	Manhole/Cleanout	8	ea.	$3,000.00	$24,000.00
4	Construct Detention Basin	6.7	Aft	$30,000.00	$201,000.00
5	Property Acquisition	2.7	Ac	$60,000.00	$162,000.00
6	Construct Inlet/Outlet Structure	2	Ea	$10,000.00	$20,000.00

SUBTOTAL	**$524,880.00**
30%± Contingency & Engineering	**$157,464.00**
TOTAL DEVELOPER'S COST	**$682,344.00**
TOTAL CITY PORTION	**$0.00**

Tremonton City Corporation

2013 Capital Facilities Plan

Storm Drainage

Preliminary Estimate of Probable Costs

Project No.: 5

Location : 1400 N. 2660 W.

Description : Development Detention Basin

Item	Description	Quantity	Unit	Unit Price	Total Amount
1	Construct Detention Basin	4.6	Aft	$30,000.00	$138,000.00
2	Property Acquisition	1.9	Ac	$60,000.00	$114,000.00
3	Construct Inlet/Outlet Structure	2	Ea	$10,000.00	$20,000.00
				SUBTOTAL	**$272,000.00**
				30%± Contingency & Engineering	**$81,600.00**
				TOTAL	**$353,600.00**

DEVELOPER'S ESTIMATED COST

1	Construct Detention Basin	4.6	Aft	$30,000.00	$138,000.00
2	Property Acquisition	1.9	Ac	$60,000.00	$114,000.00
3	Construct Inlet/Outlet Structure	2	Ea	$10,000.00	$20,000.00
				SUBTOTAL	**$272,000.00**
				30%± Contingency & Engineering	**$81,600.00**
				TOTAL DEVELOPER'S COST	**$353,600.00**
				TOTAL CITY PORTION	**$0.00**

Tremonton City Corporation

2013 Capital Facilities Plan

Storm Drainage

Preliminary Estimate of Probable Costs

Project No.: 6

Location : 1200 N. 2660 W.

Description : Piping and Development Detention Basin

Item	Description	Quantity	Unit	Unit Price	Total Amount
1	Furnish & Install 15" R.C.P.	2,000	l.f.	$32.00	$64,000.00
2	Manhole/Cleanout	5	ea.	$3,000.00	$15,000.00
3	Construct Detention Basin	2.6	Aft	$30,000.00	$78,000.00
4	Property Acquisition	1.1	Ac	$60,000.00	$66,000.00
5	Construct Inlet/Outlet Structure	2	Ea	$10,000.00	$20,000.00
				SUBTOTAL	**$243,000.00**
				30%± Contingency & Engineering	**$72,900.00**
				TOTAL	**$315,900.00**

DEVELOPER'S ESTIMATED COST

1	Furnish & Install 15" R.C.P.	2,000	l.f.	$32.00	$64,000.00
2	Manhole/Cleanout	5	ea.	$3,000.00	$15,000.00
3	Construct Detention Basin	2.6	Aft	$30,000.00	$78,000.00
4	Property Acquisition	1.1	Ac	$60,000.00	$66,000.00
5	Construct Inlet/Outlet Structure	2	Ea	$10,000.00	$20,000.00
				SUBTOTAL	**$243,000.00**
				30%± Contingency & Engineering	**$72,900.00**
				TOTAL DEVELOPER'S COST	**$315,900.00**
				TOTAL CITY PORTION	**$0.00**

Tremonton City Corporation

2013 Capital Facilities Plan Update

Storm Drainage

Preliminary Estimate of Probable Costs

Project No. : 7

Location : 1000 N. 2300 W.

Description : Expand Existing Detention Basin by Developer

Item	Description	Quantity	Unit	Unit Price	Total Amount
1	Construct Detention Basin	0.75	Aft	$30,000.00	$22,500.00
2	Property Acquisition	0.30	Ac	$60,000.00	$18,000.00
				SUBTOTAL	**$40,500.00**
				30%± Contingency & Engineering	**$12,150.00**
				TOTAL	**$52,650.00**

DEVELOPER'S ESTIMATED COST

1	Construct Detention Basin	0.75	Aft	$30,000.00	$22,500.00
2	Property Acquisition	0.30	Ac	$60,000.00	$18,000.00
				SUBTOTAL	**$40,500.00**
				30%± Contingency & Engineering	**$12,150.00**
				TOTAL DEVELOPER'S COST	**$52,650.00**
				TOTAL CITY PORTION	**$0.00**

Tremonton City Corporation

2013 Capital Facilities Plan Update

Storm Drainage

Preliminary Estimate of Probable Costs

Project No.: 8

Location : 1200 N. 2100 W.

Description : Piping and Development Detention Basin

Item	Description	Quantity	Unit	Unit Price	Total Amount
1	Furnish & Install 18" R.C.P.	1,450	l.f.	$35.00	$50,750.00
2	Manhole/Cleanout	4	ea.	$3,000.00	$12,000.00
3	Construct Detention Basin	7.0	Aft	$30,000.00	$210,000.00
4	Property Acquisition	2.8	Ac	$60,000.00	$168,000.00
5	Construct Inlet/Outlet Structure	2	Ea	$10,000.00	$20,000.00
				SUBTOTAL	**$460,750.00**
				30%± Contingency & Engineering	**$138,225.00**
				TOTAL	**$598,975.00**

DEVELOPER'S ESTIMATED COST

1	Furnish & Install 18" R.C.P.	1,450	l.f.	$35.00	$50,750.00
2	Manhole/Cleanout	4	ea.	$3,000.00	$12,000.00
3	Construct Detention Basin	7.0	Aft	$30,000.00	$210,000.00
4	Property Acquisition	2.8	Ac	$60,000.00	$168,000.00
5	Construct Inlet/Outlet Structure	2	Ea	$10,000.00	$20,000.00
				SUBTOTAL	**$460,750.00**
				30%± Contingency & Engineering	**$138,225.00**
				TOTAL DEVELOPER'S COST	**$598,975.00**
				TOTAL CITY PORTION	**$0.00**

* Pipe size estimated and to be confirmed before construction

Tremonton City Corporation

2013 Capital Facilities Plan Update

Storm Drainage

Preliminary Estimate of Probable Costs

Project No.: 9

Location : 1050 N. 2000 W.

Description : Piping and Commercial Site Detention

Item	Description	Quantity	Unit	Unit Price	Total Amount
1	Furnish & Install 15" R.C.P.	220	l.f.	$32.00	$7,040.00
2	Manhole/Cleanout	1	ea.	$3,000.00	$3,000.00
3	Construct Detention Basin	5.5	Aft	$30,000.00	$165,000.00
4	Property Acquisition	2.2	Ac	$60,000.00	$132,000.00
5	Construct Inlet/Outlet Structure	2	Ea	$10,000.00	$20,000.00

SUBTOTAL	**$327,040.00**
30%± Contingency & Engineering	**$98,112.00**
TOTAL	**$425,152.00**

DEVELOPER'S ESTIMATED COST

1	Furnish & Install 15" R.C.P.	220	l.f.	$32.00	$7,040.00
2	Manhole/Cleanout	1	ea.	$3,000.00	$3,000.00
3	Construct Detention Basin	5.5	Aft	$30,000.00	$165,000.00
4	Property Acquisition	2.2	Ac	$60,000.00	$132,000.00
5	Construct Inlet/Outlet Structure	2	Ea	$10,000.00	$20,000.00

SUBTOTAL	**$327,040.00**
30%± Contingency & Engineering	**$98,112.00**
TOTAL DEVELOPER'S COST	**$425,152.00**
TOTAL CITY PORTION	**$0.00**

* Pipe size and detention volume estimated and to be confirmed before construction

Tremonton City Corporation

2013 Capital Facilities Plan Update

Storm Drainage

Preliminary Estimate of Probable Costs

Project No.: 10

Location : 450 N. 3050 W.

Description : Industrial/Commercial Detention Basin

Item	Description	Quantity	Unit	Unit Price	Total Amount
1	Construct Detention Basin	7.4	Aft	$30,000.00	$222,000.00
2	Property Acquisition	3.0	Ac	$60,000.00	$180,000.00
3	Construct Inlet/Outlet Structure	2	Ea	$10,000.00	$20,000.00
				SUBTOTAL	**$422,000.00**
				30%± Contingency & Engineering	**$126,600.00**
				TOTAL	**$548,600.00**

DEVELOPER'S ESTIMATED COST

1	Construct Detention Basin	7.4	Aft	$30,000.00	$222,000.00
2	Property Acquisition	3.0	Ac	$60,000.00	$180,000.00
3	Construct Inlet/Outlet Structure	2	Ea	$10,000.00	$20,000.00
				SUBTOTAL	**$422,000.00**
				30%± Contingency & Engineering	**$126,600.00**
				TOTAL DEVELOPER'S COST	**$548,600.00**
				TOTAL CITY PORTION	**$0.00**

* Detention volume estimated and to be confirmed before construction

Tremonton City Corporation

2013 Capital Facilities Plan Update

Storm Drainage

Preliminary Estimate of Probable Costs

Project No.: 11

Location : 350 N. 2700 W.

Description : Piping and Regional Detention Basin

Item	Description	Quantity	Unit	Unit Price	Total Amount
1	Furnish & Install 18" R.C.P.	600	l.f.	$35.00	$21,000.00
2	Furnish & Install 27" R.C.P.	740	l.f.	$52.00	$38,480.00
3	Furnish & Install 36" R.C.P.	1,740	l.f.	$72.00	$125,280.00
4	Furnish & Install 48" R.C.P.	660	l.f.	$150.00	$99,000.00
5	Manhole/Cleanout	10	ea.	$3,000.00	$30,000.00
6	Construct Detention Basin	7.1	Aft	$30,000.00	$213,000.00
7	Property Acquisition	2.8	Ac	$60,000.00	$168,000.00
8	Construct Inlet/Outlet Structure	2	Ea	$10,000.00	$20,000.00
				SUBTOTAL	**$714,760.00**
				30%± Contingency & Engineering	**$214,428.00**
				TOTAL	**$929,188.00**

DEVELOPER'S ESTIMATED COST

1	Furnish & Install 18" R.C.P.	3,740	l.f.	$35.00	$130,900.00
2	Manhole/Cleanout	10	ea.	$3,000.00	$30,000.00
				SUBTOTAL	**$160,900.00**
				30%± Contingency & Engineering	**$48,270.00**
				TOTAL DEVELOPER'S COST	**$209,170.00**
				TOTAL CITY PORTION	**$720,018.00**

Tremonton City Corporation

2013 Capital Facilities Plan Update

Storm Drainage

Preliminary Estimate of Probable Costs

Project No.: 12

Location : 350 N. 2650 W.

Description : Piping and River Valley Detention Basin

Item	Description	Quantity	Unit	Unit Price	Total Amount
1	Furnish & Install 15" R.C.P.	1,020	l.f.	$32.00	$32,640.00
2	Furnish & Install 18" R.C.P.	1,035	l.f.	$35.00	$36,225.00
3	Furnish & Install 24" R.C.P.	2,090	l.f.	$42.00	$87,780.00
4	Furnish & Install 36" R.C.P.	935	l.f.	$72.00	$67,320.00
5	Manhole/Cleanout	13	ea.	$3,000.00	$39,000.00
6	Construct Detention Basin	4.5	Aft	$30,000.00	$135,000.00
7	Property Acquisition	1.8	Ac	$60,000.00	$108,000.00
8	Construct Inlet/Outlet Structure	2	Ea	$10,000.00	$20,000.00
				SUBTOTAL	**$525,965.00**
				30%± Contingency & Engineering	**$157,789.50**
				TOTAL	**$683,754.50**

DEVELOPER'S ESTIMATED COST

1	Furnish & Install 18" R.C.P.	5,080	l.f.	$35.00	$177,800.00
2	Manhole/Cleanout	13	ea.	$3,000.00	$39,000.00
				SUBTOTAL	**$216,800.00**
				30%± Contingency & Engineering	**$65,040.00**
				TOTAL DEVELOPER'S COST	**$281,840.00**
				TOTAL CITY PORTION	**$401,914.50**

Tremonton City Corporation

2013 Capital Facilities Plan Update

Storm Drainage

Preliminary Estimate of Probable Costs

Project No.: 13

Location : 900 N. 2500 W.

Description : Piping and Expand Existing Detention Basin

Item	Description	Quantity	Unit	Unit Price	Total Amount
1	Furnish & Install 15" R.C.P.	790	l.f.	$32.00	$25,280.00
2	Manhole/Cleanout	2	ea.	$3,000.00	$6,000.00
3	Construct Detention Basin	1.1	Aft	$30,000.00	$33,000.00
4	Property Acquisition	0.5	Ac	$60,000.00	$30,000.00
				SUBTOTAL	**$94,280.00**
				30%± Contingency & Engineering	**$28,284.00**
				TOTAL	**$122,564.00**

DEVELOPER'S ESTIMATED COST

1	Furnish & Install 15" R.C.P.	790	l.f.	$32.00	$25,280.00
2	Manhole/Cleanout	2	ea.	$3,000.00	$6,000.00
3	Construct Detention Basin	1.1	Aft	$30,000.00	$33,000.00
4	Property Acquisition	0.5	Ac	$60,000.00	$30,000.00
				SUBTOTAL	**$94,280.00**
				30%± Contingency & Engineering	**$28,284.00**
				TOTAL DEVELOPER'S COST	**$122,564.00**
				TOTAL CITY PORTION	**$0.00**

Tremonton City Corporation

2013 Capital Facilities Plan Update

Storm Drainage

Preliminary Estimate of Probable Costs

Project No.: 14

Location : 2300 W.

Description : 2300 W. Outfall Piping

Item	Description	Quantity	Unit	Unit Price	Total Amount
1	Furnish & Install 18" R.C.P.	950	l.f.	$35.00	$33,250.00
2	Furnish & Install 24" R.C.P.	950	l.f.	$42.00	$39,900.00
3	Furnish & Install 27" R.C.P.	1,435	l.f.	$52.00	$74,620.00
4	Furnish & Install 30" R.C.P.	2,610	l.f.	$60.00	$156,600.00
5	Furnish & Install 36" R.C.P.	890	l.f.	$72.00	$64,080.00
				SUBTOTAL	**$368,450.00**
				30%± Contingency & Engineering	**$110,535.00**
				TOTAL	**$478,985.00**

DEVELOPER'S ESTIMATED COST

1	Furnish & Install 18" R.C.P.	6,835	l.f.	$35.00	$239,225.00
2	Manhole/Cleanout	18	ea.	$3,000.00	$54,000.00
				SUBTOTAL	**$293,225.00**
				30%± Contingency & Engineering	**$87,967.50**
				TOTAL DEVELOPER'S COST	**$381,192.50**
				TOTAL CITY PORTION	**$97,792.50**

Tremonton City Corporation

2013 Capital Facilities Plan Update

Storm Drainage

Preliminary Estimate of Probable Costs

Project No.: 15

Location : 600 N. 2000 W.

Description : Commercial Site Detention Basin By Developer

Item	Description	Quantity	Unit	Unit Price	Total Amount
1	Construct Detention Basin	5.9	Aft	$30,000.00	$177,000.00
2	Property Acquisition	2.4	Ac	$60,000.00	$144,000.00
3	Construct Inlet/Outlet Structure	2	Ea	$10,000.00	$20,000.00
				SUBTOTAL	**$341,000.00**
				30%± Contingency & Engineering	**$102,300.00**
				TOTAL	**$443,300.00**

DEVELOPER'S ESTIMATED COST

1	Construct Detention Basin	5.9	Aft	$30,000.00	$177,000.00
2	Property Acquisition	2.4	Ac	$60,000.00	$144,000.00
3	Construct Inlet/Outlet Structure	2	Ea	$10,000.00	$20,000.00
				SUBTOTAL	**$341,000.00**
				30%± Contingency & Engineering	**$102,300.00**
				TOTAL DEVELOPER'S COST	**$443,300.00**
				TOTAL CITY PORTION	**$0.00**

* Detention volume estimated and to be confirmed before construction

Tremonton City Corporation

2013 Capital Facilities Plan Update

Storm Drainage

Preliminary Estimate of Probable Costs

Project No.: 16

Location : 100 N. 2100 W.

Description : Commercial Site Detention Basin By Developer

Item	Description	Quantity	Unit	Unit Price	Total Amount
1	Furnish & Install 15" R.C.P.	185	l.f.	$32.00	$5,920.00
2	Manhole/Cleanout	1	ea.	$3,000.00	$3,000.00
3	Construct Detention Basin	5.6	Aft	$30,000.00	$168,000.00
4	Property Acquisition	2.2	Ac	$60,000.00	$132,000.00
5	Construct Inlet/Outlet Structure	2	Ea	$10,000.00	$20,000.00
				SUBTOTAL	**$328,920.00**
				30%± Contingency & Engineering	**$98,676.00**
				TOTAL	**$427,596.00**

DEVELOPER'S ESTIMATED COST

1	Furnish & Install 15" R.C.P.	185	l.f.	$32.00	$5,920.00
2	Manhole/Cleanout	1	ea.	$3,000.00	$3,000.00
3	Construct Detention Basin	5.6	Aft	$30,000.00	$168,000.00
4	Property Acquisition	2.2	Ac	$60,000.00	$132,000.00
5	Construct Inlet/Outlet Structure	2	Ea	$10,000.00	$20,000.00
				SUBTOTAL	**$328,920.00**
				30%± Contingency & Engineering	**$98,676.00**
				TOTAL DEVELOPER'S COST	**$427,596.00**
				TOTAL CITY PORTION	**$0.00**

* Detention volume estimated and to be confirmed before construction

Tremonton City Corporation

2013 Capital Facilities Plan Update

Storm Drainage

Preliminary Estimate of Probable Costs

Project No.: 17

Location : 150 N. 1950 W.

Description : Commercial Site Detention Basin By Developer

Item	Description	Quantity	Unit	Unit Price	Total Amount
1	Furnish & Install 15" R.C.P.	150	l.f.	$32.00	$4,800.00
2	Manhole/Cleanout	1	ea.	$3,000.00	$3,000.00
3	Construct Detention Basin	4.5	Aft	$30,000.00	$135,000.00
4	Property Acquisition	1.8	Ac	$60,000.00	$108,000.00
5	Construct Inlet/Outlet Structure	2	Ea	$10,000.00	$20,000.00
				SUBTOTAL	**$270,800.00**
				30%± Contingency & Engineering	**$81,240.00**
				TOTAL	**$352,040.00**

DEVELOPER'S ESTIMATED COST

1	Furnish & Install 15" R.C.P.	150	l.f.	$32.00	$4,800.00
2	Manhole/Cleanout	1	ea.	$3,000.00	$3,000.00
3	Construct Detention Basin	4.5	Aft	$30,000.00	$135,000.00
4	Property Acquisition	1.8	Ac	$60,000.00	$108,000.00
5	Construct Inlet/Outlet Structure	2	Ea	$10,000.00	$20,000.00
				SUBTOTAL	**$270,800.00**
				30%± Contingency & Engineering	**$81,240.00**
				TOTAL DEVELOPER'S COST	**$352,040.00**
				TOTAL CITY PORTION	**$0.00**

* Detention volume estimated and to be confirmed before construction

Tremonton City Corporation

2013 Capital Facilities Plan Update

Storm Drainage

Preliminary Estimate of Probable Costs

Project No.: 18

Location : 1000 N. 1600 W.

Description : Commercial Site Detention Basin By Developer

Item	Description	Quantity	Unit	Unit Price	Total Amount
1	Construct Detention Basin	3.7	Aft	$30,000.00	$111,000.00
2	Property Acquisition	1.5	Ac	$60,000.00	$90,000.00
3	Construct Inlet/Outlet Structure	2	Ea	$10,000.00	$20,000.00
				SUBTOTAL	**$221,000.00**
				30%± Contingency & Engineering	**$66,300.00**
				TOTAL	**$287,300.00**

DEVELOPER'S ESTIMATED COST

1	Construct Detention Basin	3.7	Aft	$30,000.00	$111,000.00
2	Property Acquisition	1.5	Ac	$60,000.00	$90,000.00
3	Construct Inlet/Outlet Structure	2	Ea	$10,000.00	$20,000.00
				SUBTOTAL	**$221,000.00**
				30%± Contingency & Engineering	**$66,300.00**
				TOTAL DEVELOPER'S COST	**$287,300.00**
				TOTAL CITY PORTION	**$0.00**

* Detention volume estimated and to be confirmed before construction

Tremonton City Corporation

2013 Capital Facilities Plan Update

Storm Drainage

Preliminary Estimate of Probable Costs

Project No.: 19

Location : 150 N. 1700 W.

Description : Regional Detention Basin and Piping

Item	Description	Quantity	Unit	Unit Price	Total Amount
1	Furnish & Install 15" R.C.P.	740	l.f.	$32.00	$23,680.00
2	Furnish & Install 18" R.C.P.	710	l.f.	$35.00	$24,850.00
3	Furnish & Install 27" R.C.P.	1,470	l.f.	$52.00	$76,440.00
4	Furnish & Install 36" R.C.P.	1,075	l.f.	$72.00	$77,400.00
5	Furnish & Install 42" R.C.P.	1,075	l.f.	$120.00	$129,000.00
6	Manhole/Cleanout	13	ea.	$3,000.00	$39,000.00
7	Construct Detention Basin	6.6	Aft	$30,000.00	$198,000.00
8	Property Acquisition	2.6	Ac	$60,000.00	$156,000.00
9	Construct Inlet/Outlet Structure	2	Ea	$10,000.00	$20,000.00
				SUBTOTAL	**$744,370.00**
				30%± Contingency & Engineering	**$223,311.00**
				TOTAL	**$967,681.00**

DEVELOPER'S ESTIMATED COST

1	Furnish & Install 18" R.C.P.	5,070	l.f.	$35.00	$177,450.00
2	Manhole/Cleanout	13	ea.	$3,000.00	$39,000.00
				SUBTOTAL	**$216,450.00**
				30%± Contingency & Engineering	**$64,935.00**
				TOTAL DEVELOPER'S COST	**$281,385.00**
				TOTAL CITY PORTION	**$686,296.00**

Tremonton City Corporation

2013 Capital Facilities Plan Update

Storm Drainage

Preliminary Estimate of Probable Costs

Project No.: 20

Location : 300 S. 1600 W.

Description : Regional Detention Basin and Piping

Item	Description	Quantity	Unit	Unit Price	Total Amount
1	Furnish & Install 24" R.C.P.	1,030	l.f.	$42.00	$43,260.00
2	Furnish & Install 36" R.C.P.	1,030	l.f.	$72.00	$74,160.00
3	Manhole/Cleanout	6	ea.	$3,000.00	$18,000.00
4	Construct Detention Basin	4.0	Aft	$30,000.00	$120,000.00
5	Property Acquisition	1.6	Ac	$60,000.00	$96,000.00
6	Construct Inlet/Outlet Structure	2	Ea	$10,000.00	$20,000.00
				SUBTOTAL	**$371,420.00**
				30%± Contingency & Engineering	**$111,426.00**
				TOTAL	**$482,846.00**

DEVELOPER'S ESTIMATED COST

1	Furnish & Install 18" R.C.P.	2,060	l.f.	$35.00	$72,100.00
2	Manhole/Cleanout	6	ea.	$3,000.00	$18,000.00
				SUBTOTAL	**$90,100.00**
				30%± Contingency & Engineering	**$27,030.00**
				TOTAL DEVELOPER'S COST	**$117,130.00**
				TOTAL CITY PORTION	**$365,716.00**

Tremonton City Corporation

2013 Capital Facilities Plan Update

Storm Drainage

Preliminary Estimate of Probable Costs

Project No.: 21

Location : 800 N. Iowa String Road

Description : Commercial Detention Basin and Piping

Item	Description	Quantity	Unit	Unit Price	Total Amount
1	Furnish & Install 15" R.C.P.	700	l.f.	$32.00	$22,400.00
2	Manhole/Cleanout	2	ea.	$3,000.00	$6,000.00
3	Construct Detention Basin	3.6	Aft	$30,000.00	$108,000.00
4	Property Acquisition	2.6	Ac	$60,000.00	$156,000.00
5	Construct Inlet/Outlet Structure	2	Ea	$10,000.00	$20,000.00
				SUBTOTAL	**$312,400.00**
				30%± Contingency & Engineering	**$93,720.00**
				TOTAL	**$406,120.00**

DEVELOPER'S ESTIMATED COST

1	Furnish & Install 15" R.C.P.	700	l.f.	$32.00	$22,400.00
2	Manhole/Cleanout	2	ea.	$3,000.00	$6,000.00
3	Construct Detention Basin	3.6	Aft	$30,000.00	$108,000.00
4	Property Acquisition	2.6	Ac	$60,000.00	$156,000.00
5	Construct Inlet/Outlet Structure	2	Ea	$10,000.00	$20,000.00
				SUBTOTAL	**$312,400.00**
				30%± Contingency & Engineering	**$93,720.00**
				TOTAL DEVELOPER'S COST	**$406,120.00**
				TOTAL CITY PORTION	**$0.00**

* Pipe size and detention volume estimated and to be confirmed before construction

Tremonton City Corporation

2013 Capital Facilities Plan Update

Storm Drainage

Preliminary Estimate of Probable Costs

Project No.: 22

Location : Iowa String Road and Main Street

Description : Iowa String and Main Street Oufall Piping

Item	Description	Quantity	Unit	Unit Price	Total Amount
1	Furnish & Install 18" R.C.P.	1,300	l.f.	$35.00	$45,500.00
2	Furnish & Install 21" R.C.P.	2,645	l.f.	$40.00	$105,800.00
3	Furnish & Install 24" R.C.P.	1,260	l.f.	$42.00	$52,920.00
4	Furnish & Install 27" R.C.P.	700	l.f.	$52.00	$36,400.00
5	Furnish & Install 30" R.C.P.	1,730	l.f.	$60.00	$103,800.00
6	Furnish & Install 48" R.C.P.	2,600	l.f.	$150.00	$390,000.00
7	Manhole/Cleanout	26	ea.	$3,000.00	$78,000.00

SUBTOTAL	**$812,420.00**
30%± Contingency & Engineering	**$243,726.00**
TOTAL	**$1,056,146.00**

* No Developer Participation - All City Cost

Tremonton City Corporation

2013 Capital Facilities Plan Update

Storm Drainage

Preliminary Estimate of Probable Costs

Project No.: 23

Location : Near I-15 & West of Iowa String Road

Description : Regional Detention Basin and Piping

Item	Description	Quantity	Unit	Unit Price	Total Amount
1	Furnish & Install 24" R.C.P.	2,040	l.f.	$42.00	$85,680.00
2	Manhole/Cleanout	6	ea.	$3,000.00	$18,000.00
3	Construct Detention Basin	2.1	Aft	$30,000.00	$63,000.00
4	Property Acquisition	0.8	Ac	$60,000.00	$48,000.00
5	Construct Inlet/Outlet Structure	2	Ea	$10,000.00	$20,000.00
				SUBTOTAL	**$234,680.00**
				30%± Contingency & Engineering	**$70,404.00**
				TOTAL	**$305,084.00**

DEVELOPER'S ESTIMATED COST

1	Furnish & Install 18" R.C.P.	2,040	l.f.	$35.00	$71,400.00
2	Manhole/Cleanout	6	ea.	$3,000.00	$18,000.00
				SUBTOTAL	**$89,400.00**
				30%± Contingency & Engineering	**$26,820.00**
				TOTAL DEVELOPER'S COST	**$116,220.00**
				TOTAL CITY PORTION	**$188,864.00**

Tremonton City Corporation

2013 Capital Facilities Plan Update

Storm Drainage

Preliminary Estimate of Probable Costs

Project No.: 24

Location : Near I-15 & East of Iowa String Road

Description : Piping and Regional Detention Basin

Item	Description	Quantity	Unit	Unit Price	Total Amount
1	Furnish & Install 30" R.C.P.	4,040	l.f.	$60.00	$242,400.00
2	Furnish & Install 36" R.C.P.	150	l.f.	$72.00	$10,800.00
3	Manhole/Cleanout	11	ea.	$3,000.00	$33,000.00
4	Construct Detention Basin	4.9	Aft	$30,000.00	$147,000.00
5	Property Acquisition	2.0	Ac	$60,000.00	$120,000.00
6	Construct Inlet/Outlet Structure	2	Ea	$10,000.00	$20,000.00
				SUBTOTAL	**$573,200.00**
				30%± Contingency & Engineering	**$171,960.00**
				TOTAL	**$745,160.00**

* No Developer Participation - All City Cost

Tremonton City Corporation

2013 Capital Facilities Plan Update

Storm Drainage

Preliminary Estimate of Probable Costs

Project No.: 25

Location : 1200 S. 200 W.

Description : Piping and Detention Basin by Developer

Item	Description	Quantity	Unit	Unit Price	Total Amount
1	Furnish & Install 30" R.C.P.	1,160	l.f.	$60.00	$69,600.00
2	Furnish & Install 36" R.C.P.	1,850	l.f.	$72.00	$133,200.00
3	Manhole/Cleanout	8	ea.	$3,000.00	$24,000.00
4	Construct Detention Basin	1.6	Aft	$30,000.00	$48,000.00
5	Property Acquisition	0.6	Ac	$60,000.00	$36,000.00
6	Construct Inlet/Outlet Structure	2	Ea	$10,000.00	$20,000.00
				SUBTOTAL	**$330,800.00**
				30%± Contingency & Engineering	**$99,240.00**
				TOTAL	**$430,040.00**

DEVELOPER'S ESTIMATED COST

1	Furnish & Install 18" R.C.P.	3,010	l.f.	$35.00	$105,350.00
2	Manhole/Cleanout	8	ea.	$3,000.00	$24,000.00
3	Construct Detention Basin	1.6	Aft	$30,000.00	$48,000.00
4	Property Acquisition	0.6	Ac	$60,000.00	$36,000.00
5	Construct Inlet/Outlet Structure	2	Ea	$10,000.00	$20,000.00
				SUBTOTAL	**$233,350.00**
				30%± Contingency & Engineering	**$70,005.00**
				TOTAL DEVELOPER'S COST	**$303,355.00**
				TOTAL CITY PORTION	**$126,685.00**

Tremonton City Corporation

2013 Capital Facilities Plan Update

Storm Drainage

Preliminary Estimate of Probable Costs

Project No.: 26

Location : 1200 S. 150 W.

Description : Piping and Detention Basin by Developer

Item	Description	Quantity	Unit	Unit Price	Total Amount
1	Furnish & Install 42" R.C.P.	1,780	l.f.	$120.00	$213,600.00
2	Manhole/Cleanout	5	ea.	$3,000.00	$15,000.00
3	Construct Detention Basin	2.1	Aft	$30,000.00	$63,000.00
4	Property Acquisition	0.8	Ac	$60,000.00	$48,000.00
5	Construct Inlet/Outlet Structure	2	Ea	$10,000.00	$20,000.00
				SUBTOTAL	**$359,600.00**
				30%± Contingency & Engineering	**$107,880.00**
				TOTAL	**$467,480.00**

DEVELOPER'S ESTIMATED COST

1	Furnish & Install 18" R.C.P.	1,780	l.f.	$35.00	$62,300.00
2	Manhole/Cleanout	5	ea.	$3,000.00	$15,000.00
3	Construct Detention Basin	2.1	Aft	$30,000.00	$63,000.00
4	Property Acquisition	0.8	Ac	$60,000.00	$48,000.00
5	Construct Inlet/Outlet Structure	2	Ea	$10,000.00	$20,000.00
				SUBTOTAL	**$208,300.00**
				30%± Contingency & Engineering	**$62,490.00**
				TOTAL DEVELOPER'S COST	**$270,790.00**
				TOTAL CITY PORTION	**$196,690.00**

Tremonton City Corporation

2013 Capital Facilities Plan Update

Storm Drainage

Preliminary Estimate of Probable Costs

Project No.: 27

Location : 1200 S. 200 W.

Description : Regional Detention Basin and Piping

Item	Description	Quantity	Unit	Unit Price	Total Amount
1	Furnish & Install 21" R.C.P.	75	l.f.	$40.00	$3,000.00
2	Furnish & Install 30" R.C.P.	2,910	l.f.	$60.00	$174,600.00
3	Furnish & Install 36" R.C.P.	1,500	l.f.	$72.00	$108,000.00
4	Manhole/Cleanout	12	ea.	$3,000.00	$36,000.00
5	Construct Detention Basin	6.2	Aft	$30,000.00	$186,000.00
6	Property Acquisition	2.5	Ac	$60,000.00	$150,000.00
7	Construct Inlet/Outlet Structure	2	Ea	$10,000.00	$20,000.00
				SUBTOTAL	**$674,600.00**
				30%± Contingency & Engineering	**$202,380.00**
				TOTAL	**$876,980.00**

DEVELOPER'S ESTIMATED COST

1	Furnish & Install 18" R.C.P.	4,485	l.f.	$35.00	$156,975.00
2	Manhole/Cleanout	12	ea.	$3,000.00	$36,000.00
				SUBTOTAL	**$192,975.00**
				30%± Contingency & Engineering	**$57,892.50**
				TOTAL DEVELOPER'S COST	**$250,867.50**
				TOTAL CITY PORTION	**$626,112.50**

Tremonton City Corporation

2013 Capital Facilities Plan Update

Storm Drainage

Preliminary Estimate of Probable Costs

Project No.: 28

Location : 550 S. 740 W.

Description : Convert Retention Basin to Detention and Connect Piping

Item	Description	Quantity	Unit	Unit Price	Total Amount
1	Convert Retention basin to Detention and Connect Piping	1	l.s.	$5,000.00	$5,000.00
				SUBTOTAL	**$5,000.00**
				30%± Contingency & Engineering	**$1,500.00**
				TOTAL	**$6,500.00**

*All City Cost - Existing System Deficiency

Tremonton City Corporation

2013 Capital Facilities Plan Update

Storm Drainage

Preliminary Estimate of Probable Costs

Project No.: 29

Location : 550 S. 400 W.

Description : Piping and Detention Basin by Developer

Item	Description	Quantity	Unit	Unit Price	Total Amount
1	Furnish & Install 15" R.C.P.	1,145	l.f.	$32.00	$36,640.00
2	Manhole/Cleanout	3	ea.	$3,000.00	$9,000.00
3	Construct Detention Basin	2.9	Aft	$30,000.00	$87,000.00
4	Property Acquisition	1.2	Ac	$60,000.00	$72,000.00
5	Construct Inlet/Outlet Structure	2	Ea	$10,000.00	$20,000.00
				SUBTOTAL	**$224,640.00**
				30%± Contingency & Engineering	**$67,392.00**
				TOTAL	**$292,032.00**

DEVELOPER'S ESTIMATED COST

1	Furnish & Install 15" R.C.P.	1,145	l.f.	$32.00	$36,640.00
2	Manhole/Cleanout	3	ea.	$3,000.00	$9,000.00
3	Construct Detention Basin	2.9	Aft	$30,000.00	$87,000.00
4	Property Acquisition	1.2	Ac	$60,000.00	$72,000.00
5	Construct Inlet/Outlet Structure	2	Ea	$10,000.00	$20,000.00
				SUBTOTAL	**$224,640.00**
				30%± Contingency & Engineering	**$67,392.00**
				TOTAL DEVELOPER'S COST	**$292,032.00**
				TOTAL CITY PORTION	**$0.00**

Tremonton City Corporation

2013 Capital Facilities Plan Update

Storm Drainage

Preliminary Estimate of Probable Costs

Project No.: 30

Location : 400 S. 300 W.

Description : Piping and Detention Basin by Developer

Item	Description	Quantity	Unit	Unit Price	Total Amount
1	Furnish & Install 21" R.C.P.	635	l.f.	$40.00	$25,400.00
2	Furnish & Install 24" R.C.P.	2,110	l.f.	$42.00	$88,620.00
3	Manhole/Cleanout	7	ea.	$3,000.00	$21,000.00
4	Construct Detention Basin	1.8	Aft	$30,000.00	$54,000.00
5	Property Acquisition	0.7	Ac	$60,000.00	$42,000.00
6	Construct Inlet/Outlet Structure	2	Ea	$10,000.00	$20,000.00
				SUBTOTAL	**$251,020.00**
				30%± Contingency & Engineering	**$75,306.00**
				TOTAL	**$326,326.00**

DEVELOPER'S ESTIMATED COST

1	Furnish & Install 18" R.C.P.	2,745	l.f.	$35.00	$96,075.00
2	Manhole/Cleanout	7	ea.	$3,000.00	$21,000.00
3	Construct Detention Basin	1.8	Aft	$30,000.00	$54,000.00
4	Property Acquisition	0.7	Ac	$60,000.00	$42,000.00
5	Construct Inlet/Outlet Structure	2	Ea	$10,000.00	$20,000.00
				SUBTOTAL	**$233,075.00**
				30%± Contingency & Engineering	**$69,922.50**
				TOTAL DEVELOPER'S COST	**$302,997.50**
				TOTAL CITY PORTION	**$23,328.50**

Tremonton City Corporation

2013 Capital Facilities Plan Update

Storm Drainage

Preliminary Estimate of Probable Costs

Project No.: 31

Location : 300 N. 450 W.

Description : Regional Detention Basin and Piping

Item	Description	Quantity	Unit	Unit Price	Total Amount
1	Furnish & Install 30" R.C.P.	1,780	l.f.	$60.00	$106,800.00
2	Furnish & Install 36" R.C.P.	2,430	l.f.	$72.00	$174,960.00
3	Manhole/Cleanout	11	ea.	$3,000.00	$33,000.00
4	Construct Detention Basin	7.1	Aft	$30,000.00	$213,000.00
5	Property Acquisition	2.8	Ac	$60,000.00	$168,000.00
6	Construct Inlet/Outlet Structure	2	Ea	$10,000.00	$20,000.00
				SUBTOTAL	**$715,760.00**
				30%± Contingency & Engineering	**$214,728.00**
				TOTAL	**$930,488.00**

DEVELOPER'S ESTIMATED COST

1	Furnish & Install 18" R.C.P.	1,780	l.f.	$35.00	$62,300.00
2	Manhole/Cleanout	11	ea.	$3,000.00	$33,000.00
				SUBTOTAL	**$95,300.00**
				30%± Contingency & Engineering	**$28,590.00**
				TOTAL DEVELOPER'S COST	**$123,890.00**
				TOTAL CITY PORTION	**$806,598.00**

Tremonton City Corporation

2013 Capital Facilities Plan Update

Storm Drainage

Preliminary Estimate of Probable Costs

Project No.: 32

Location : 1000 N. 100 W.

Description : Regional Detention Basin and Piping

Item	Description	Quantity	Unit	Unit Price	Total Amount
1	Furnish & Install 30" R.C.P.	5,630	l.f.	$60.00	$337,800.00
2	Furnish & Install 42" R.C.P.	1,290	l.f.	$120.00	$154,800.00
3	Furnish & Install 48" R.C.P.	2,390	l.f.	$150.00	$358,500.00
4	Furnish & Install 54" R.C.P.	1,190	l.f.	$180.00	$214,200.00
5	Manhole/Cleanout	27	ea.	$3,000.00	$81,000.00
6	Construct Detention Basin	0.75	Aft	$30,000.00	$22,500.00
7	Property Acquisition	0.3	Ac	$60,000.00	$18,000.00
8	Construct Inlet/Outlet Structure	2	Ea	$10,000.00	$20,000.00
				SUBTOTAL	**$1,206,800.00**
				30%± Contingency & Engineering	**$362,040.00**
				TOTAL	**$1,568,840.00**

DEVELOPER'S ESTIMATED COST

1	Furnish & Install 18" R.C.P.	6,920	l.f.	$35.00	$242,200.00
2	Manhole/Cleanout	27	ea.	$3,000.00	$81,000.00
				SUBTOTAL	**$323,200.00**
				30%± Contingency & Engineering	**$96,960.00**
				TOTAL DEVELOPER'S COST	**$420,160.00**
				TOTAL CITY PORTION	**$1,148,680.00**

Tremonton City Corporation

2013 Capital Facilities Plan Update

Storm Drainage

Preliminary Estimate of Probable Costs

Project No.: 33

Location : 800 N. 700 E.

Description : Piping and Detention Basin by Developer

Item	Description	Quantity	Unit	Unit Price	Total Amount
1	Furnish & Install 18" R.C.P.	350	l.f.	$35.00	$12,250.00
2	Manhole/Cleanout	1	ea.	$3,000.00	$3,000.00
3	Construct Detention Basin	1.6	Aft	$30,000.00	$48,000.00
4	Property Acquisition	0.6	Ac	$60,000.00	$36,000.00
5	Construct Inlet/Outlet Structure	2	Ea	$10,000.00	$20,000.00
				SUBTOTAL	**$119,250.00**
				30%± Contingency & Engineering	**$35,775.00**
				TOTAL	**$155,025.00**

DEVELOPER'S ESTIMATED COST

1	Furnish & Install 18" R.C.P.	350	l.f.	$35.00	$12,250.00
2	Manhole/Cleanout	1	ea.	$3,000.00	$3,000.00
3	Construct Detention Basin	1.6	Aft	$30,000.00	$48,000.00
4	Property Acquisition	0.6	Ac	$60,000.00	$36,000.00
5	Construct Inlet/Outlet Structure	2	Ea	$10,000.00	$20,000.00
				SUBTOTAL	**$119,250.00**
				30%± Contingency & Engineering	**$35,775.00**
				TOTAL DEVELOPER'S COST	**$155,025.00**
				TOTAL CITY PORTION	**$0.00**

Tremonton City Corporation

2013 Capital Facilities Plan Update

Storm Drainage

Preliminary Estimate of Probable Costs

Project No.: 34

Location : 800 N. 1100 E.

Description : Regional Detention Basin and Piping

Item	Description	Quantity	Unit	Unit Price	Total Amount
1	Furnish & Install 18" R.C.P.	260	l.f.	$35.00	$9,100.00
2	Furnish & Install 42" R.C.P.	1,160	l.f.	$120.00	$139,200.00
3	Manhole/Cleanout	4	ea.	$3,000.00	$12,000.00
4	Construct Detention Basin	2.3	Aft	$30,000.00	$69,000.00
5	Property Acquisition	0.9	Ac	$60,000.00	$54,000.00
6	Construct Inlet/Outlet Structure	2	Ea	$10,000.00	$20,000.00
				SUBTOTAL	**$303,300.00**
				30%± Contingency & Engineering	**$90,990.00**
				TOTAL	**$394,290.00**

DEVELOPER'S ESTIMATED COST

1	Furnish & Install 18" R.C.P.	1,420	l.f.	$35.00	$49,700.00
2	Manhole/Cleanout	4	ea.	$3,000.00	$12,000.00
				SUBTOTAL	**$61,700.00**
				30%± Contingency & Engineering	**$18,510.00**
				TOTAL DEVELOPER'S COST	**$80,210.00**
				TOTAL CITY PORTION	**$314,080.00**

Tremonton City Corporation

2013 Capital Facilities Plan Update

Storm Drainage

Preliminary Estimate of Probable Costs

Project No.: 35

Location : 500 N. 700 E.

Description : Regional Detention Basin and Piping

Item	Description	Quantity	Unit	Unit Price	Total Amount
1	Furnish & Install 21" R.C.P.	230	l.f.	$40.00	$9,200.00
2	Furnish & Install 48" R.C.P.	1,890	l.f.	$150.00	$283,500.00
3	Manhole/Cleanout	6	ea.	$3,000.00	$18,000.00
4	Construct Detention Basin	4.3	Aft	$30,000.00	$129,000.00
5	Property Acquisition	1.7	Ac	$60,000.00	$102,000.00
6	Construct Inlet/Outlet Structure	2	Ea	$10,000.00	$20,000.00
				SUBTOTAL	**$561,700.00**
				30%± Contingency & Engineering	**$168,510.00**
				TOTAL	**$730,210.00**

DEVELOPER'S ESTIMATED COST

1	Furnish & Install 18" R.C.P.	2,120	l.f.	$35.00	$74,200.00
2	Manhole/Cleanout	6	ea.	$3,000.00	$18,000.00
				SUBTOTAL	**$92,200.00**
				30%± Contingency & Engineering	**$27,660.00**
				TOTAL DEVELOPER'S COST	**$119,860.00**
				TOTAL CITY PORTION	**$610,350.00**

Tremonton City Corporation

2013 Capital Facilities Plan Update

Storm Drainage

Preliminary Estimate of Probable Costs

Project No.: 36

Location : Main Street 700 E.

Description : Regional Detention Basin and Piping

Item	Description	Quantity	Unit	Unit Price	Total Amount
1	Furnish & Install 30" R.C.P.	2,600	l.f.	$60.00	$156,000.00
2	Furnish & Install 42" R.C.P.	1,570	l.f.	$120.00	$188,400.00
3	Manhole/Cleanout	6	ea.	$3,000.00	$18,000.00
4	Construct Detention Basin	3.7	Aft	$30,000.00	$111,000.00
5	Property Acquisition	1.5	Ac	$60,000.00	$90,000.00
6	Construct Inlet/Outlet Structure	2	Ea	$10,000.00	$20,000.00
				SUBTOTAL	**$583,400.00**
				30%± Contingency & Engineering	**$175,020.00**
				TOTAL	**$758,420.00**

DEVELOPER'S ESTIMATED COST

1	Furnish & Install 18" R.C.P.	4,170	l.f.	$35.00	$145,950.00
2	Manhole/Cleanout	6	ea.	$3,000.00	$18,000.00
				SUBTOTAL	**$163,950.00**
				30%± Contingency & Engineering	**$49,185.00**
				TOTAL DEVELOPER'S COST	**$213,135.00**
				TOTAL CITY PORTION	**$545,285.00**

Tremonton City Corporation

2013 Capital Facilities Plan Update

Storm Drainage

Preliminary Estimate of Probable Costs

Project No.: 37

Location : 600 S. 400 E.

Description : Regional Detention Basin and Piping

Item	Description	Quantity	Unit	Unit Price	Total Amount
1	Furnish & Install 30" R.C.P.	250	l.f.	$60.00	$15,000.00
2	Furnish & Install 36" R.C.P.	3,190	l.f.	$72.00	$229,680.00
3	Furnish & Install 42" R.C.P.	1,300	l.f.	$120.00	$156,000.00
4	Furnish & Install 60" R.C.P.	1,270	l.f.	$200.00	$254,000.00
5	Manhole/Cleanout	15	ea.	$3,000.00	$45,000.00
6	Construct Detention Basin	8.7	Aft	$30,000.00	$261,000.00
7	Property Acquisition	3.5	Ac	$60,000.00	$210,000.00
8	Construct Inlet/Outlet Structure	2	Ea	$10,000.00	$20,000.00
				SUBTOTAL	**$1,190,680.00**
				30%± Contingency & Engineering	**$357,204.00**
				TOTAL	**$1,547,884.00**

DEVELOPER'S ESTIMATED COST

1	Furnish & Install 18" R.C.P.	6,010	l.f.	$35.00	$210,350.00
2	Manhole/Cleanout	15	ea.	$3,000.00	$45,000.00
				SUBTOTAL	**$255,350.00**
				30%± Contingency & Engineering	**$76,605.00**
				TOTAL DEVELOPER'S COST	**$331,955.00**
				TOTAL CITY PORTION	**$1,215,929.00**

Appendix B – HEC-1 Input Files

10 Year - 60 Minute Storm

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IDHEC-1 Analysis using WMS
ID
ID
*DIAGRAM
IT     1 01JAN94       0     800
IO     0
KK  255B
KO     0       0     0.0       1      22
BA 0.018
PB  0.81
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    61.0    20.0
UD0.0298
KK   90R   CNAME     90C
KO     0       0     0.0       0      22
RK1054.1 0.02004   0.013            CIRC     1.5     0.0
KK  256B
KO     0       0     0.0       1      22
BA 0.034
PB  0.81
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    61.0    30.0
UD0.0734
KK   89C   CNAME     89R
KO     0       0     0.0       0      22
HC     2
KK    V2
* RESERVOIR STORAGE
KO     0       0     0.0       0      22
RS     1    FLOW     0.0     0.0
* 89C Volume
SV   0.0    0.09    0.18    0.28    0.37    0.46    0.55    0.64    0.73    0.83
SV  0.92    1.01     1.1    1.19    1.28    1.38    1.47    1.56    1.65    1.74
* 89C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
* 89C Discharge
SQ   0.0     1.1     1.1     1.2     1.2     1.3     1.4     1.4     1.5     1.5
SQ   1.6     1.6     1.7     3.4     6.8    13.6    13.6    13.6    13.6    13.6
* 89C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
KK   89R   CNAME     89C
KO     0       0     0.0       0      22
RK4204.5 0.00509   0.013            CIRC     2.5     0.0
KK  585B
KO     0       0     0.0       1      22
BA  0.16
PB  0.81
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0   72.48    30.0
UD0.2701
KK    3C   CNAME      3R
KO     0       0     0.0       0      22
HC     2
KK    V3
* RESERVOIR STORAGE
KO     0       0     0.0       0      22
RS     1    FLOW     0.0     0.0
* 3C Volume
SV   0.0    0.38    0.75    1.13     1.5    1.88    2.25    2.63     3.0    3.38
SV  3.75    4.13     4.5    4.88    5.25    5.63     6.0    6.38    6.75    7.13
* 3C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
* 3C Discharge
SQ   0.0     4.3     4.5     4.8     5.0     5.2     5.4     5.7     5.9     6.1
SQ   6.3     6.6     6.8    13.6    27.2    54.4    54.4    54.4    54.4    54.4
* 3C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
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KK    3R   CNAME      3C
KO     0       0     0.0       0      22
RK2688.2 0.00212   0.013            CIRC     3.0     0.0
KK  251B
KO     0       0     0.0       1      22
BA 0.027
PB  0.81
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    61.0    20.0
UD0.2582
KK   88R   CNAME     88C
KO     0       0     0.0       0      22
RK1925.1  0.0069   0.013            CIRC     2.0     0.0
KK  252B
KO     0       0     0.0       1      22
BA 0.058
PB  0.81
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0   70.97    20.0
UD0.2093
KK   87C   CNAME     87R
KO     0       0     0.0       0      22
HC     2
KK   87R   CNAME     87C
KO     0       0     0.0       0      22
RK2156.3 0.00533   0.013            CIRC     2.0     0.0
KK  250B
KO     0       0     0.0       1      22
BA 0.064
PB  0.81
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    74.0    20.0
UD0.2088
KK   20C   CNAME     20R
KO     0       0     0.0       0      22
HC     2
KK   20R   CNAME     20C
KO     0       0     0.0       0      22
RK1389.5 0.00264   0.013            CIRC     3.0     0.0
KK  175B
KO     0       0     0.0       1      22
BA 0.101
PB  0.81
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    61.0    30.0
UD0.0896
KK   69R   CNAME     69C
KO     0       0     0.0       0      22
RK665.15 0.03311   0.013            CIRC     1.5     0.0
KK  176B
KO     0       0     0.0       1      22
BA  0.06
PB  0.81
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    61.0    30.0
UD0.1442
KK   68C   CNAME     68R
KO     0       0     0.0       0      22
HC     2
KK   68R   CNAME     68C
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KO     0       0     0.0       0      22
RK1555.7 0.00883   0.013            CIRC    1.25     0.0
KK  581B
KO     0       0     0.0       1      22
BA 0.066
PB  0.81
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0   71.28    30.0
UD0.1168
KK   67C   CNAME     67R
KO     0       0     0.0       0      22
HC     2
KK   67R   CNAME     67C
KO     0       0     0.0       0      22
RK1872.4 0.00341   0.013            CIRC     2.0     0.0
KK  580B
KO     0       0     0.0       1      22
BA 0.125
PB  0.81
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0   63.63    68.0
UD0.2115
KK    V1
* RESERVOIR STORAGE
KO     0       0     0.0       0      22
RS     1    FLOW     0.0     0.0
* 65C Volume
SV   0.0    0.58    1.17    1.75    2.33    2.92     3.5    4.08    4.67    5.25
SV  5.83    6.42     7.0    7.58    8.17    8.75    9.33    9.92    10.5   11.08
* 65C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
* 65C Discharge
SQ   0.0     2.5     2.7     2.8     2.9     3.1     3.2     3.3     3.5     3.6
SQ   3.7     3.9     4.0     8.0    16.0    32.0    32.0    32.0    32.0    32.0
* 65C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
KK   65R   CNAME     65C
KO     0       0     0.0       0      22
RK1005.7 0.00205   0.013            CIRC     2.0     0.0
KK  578B
KO     0       0     0.0       1      22
BA  0.05
PB  0.81
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    74.0    30.0
UD0.1876
KK   64C   CNAME     64R
KO     0       0     0.0       0      22
HC     3
KK   V64
* RESERVOIR STORAGE
KO     0       0     0.0       0      22
RS     1    FLOW     0.0     0.0
* 64C Volume
SV   0.0    0.59    1.18    1.78    2.37    2.96    3.55    4.14    4.73    5.33
SV  5.92    6.51     7.1    7.69    8.28    8.88    9.47   10.06   10.65   11.24
* 64C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
* 64C Discharge
SQ   0.0     8.1     8.5     9.0     9.4     9.8    10.2    10.7    11.1    11.5
SQ  11.9    12.4    12.8    25.6    51.2   102.4   102.4   102.4   102.4   102.4
* 64C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
KK   64R   CNAME     64C
KO     0       0     0.0       0      22
RK2868.5 0.00224   0.013            CIRC     2.5     0.0
KK  579B
KO     0       0     0.0       1      22
BA 0.066
PB  0.81
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IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    79.0     0.0
UD0.2702
KK   19C   CNAME     19R
KO     0       0     0.0       0      22
HC     4
KK   19R   CNAME     19C
KO     0       0     0.0       0      22
RN   19R
KK  534B
KO     0       0     0.0       1      22
BA  0.04
PB  0.81
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    61.0    20.0
UD0.0759
KK  125R   CNAME    125C
KO     0       0     0.0       0      22
RK1624.3 0.06438   0.013            CIRC     2.0     0.0
KK  178B
KO     0       0     0.0       1      22
BA 0.074
PB  0.81
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    61.0    30.0
UD0.0668
KK   70C   CNAME     70R
KO     0       0     0.0       0      22
HC     2
KK   70R   CNAME     70C
KO     0       0     0.0       0      22
RK1693.8 0.01192   0.013            CIRC    1.75     0.0
KK  527B
KO     0       0     0.0       1      22
BA  1.14
PB  0.81
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0   61.37    24.0
UD0.1869
KK   V72
* RESERVOIR STORAGE
KO     0       0     0.0       0      22
RS     1    FLOW     0.0     0.0
* 72C Volume
SV   0.0    2.25     4.5    6.75     9.0   11.25    13.5   15.75    18.0   20.25
SV  22.5   24.75    27.0   29.25    31.5   33.75    36.0   38.25    40.5   42.75
* 72C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
* 72C Discharge
SQ   0.0    23.1    24.3    25.5    26.7    27.9    29.1    30.3    31.5    32.8
SQ  34.0    35.2    36.4    72.8   145.6   291.2   291.2   291.2   291.2   291.2
* 72C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
KK   72R   CNAME     72C
KO     0       0     0.0       0      22
RK1990.6 0.05438   0.013            CIRC     3.0     1.0
KK  183B
KO     0       0     0.0       1      22
BA 0.099
PB  0.81
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
```

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PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    61.0    68.0
UD0.1017
KK   71C   CNAME     71R
KO     0       0     0.0       0      22
HC     2
KK   71R   CNAME     71C
KO     0       0     0.0       0      22
RK2509.3 0.00834   0.013            CIRC     3.0     2.0
KK  181B
KO     0       0     0.0       1      22
BA 0.051
PB  0.81
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    61.0    68.0
UD0.1653
KK   18C   CNAME     18R
KO     0       0     0.0       0      22
HC     3
KK   V18
* RESERVOIR STORAGE
KO     0       0     0.0       0      22
RS     1    FLOW     0.0     0.0
* 18C Volume
SV   0.0    0.43    0.87     1.3    1.73    2.17     2.6    3.03    3.47     3.9
SV  4.33    4.77     5.2    5.63    6.07     6.5    6.93    7.37     7.8    8.23
* 18C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
* 18C Discharge
SQ   0.0    26.5    27.9    29.3    30.7    32.0    33.4    34.8    36.2    37.6
SQ  39.0    40.4    41.8    83.6   167.2   334.4   334.4   334.4   334.4   334.4
* 18C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
KK   18R   CNAME     18C
KO     0       0     0.0       0      22
RN   18R
KK  147B
KO     0       0     0.0       1      22
BA 0.205
PB  0.81
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    74.0    20.0
UD 0.686
KK   V55
* RESERVOIR STORAGE
KO     0       0     0.0       0      22
RS     1    FLOW     0.0     0.0
* 55C Volume
SV   0.0    0.33    0.67     1.0    1.33    1.67     2.0    2.33    2.67     3.0
SV  3.33    3.67     4.0    4.33    4.67     5.0    5.33    5.67     6.0    6.33
* 55C Elevation
SE 100.0   100.5   101.0   101.5   102.0   102.5   103.0   103.5   104.0   104.5
SE 105.0   105.5   106.0   106.5   107.0   107.5   108.0   108.5   109.0   109.5
* 55C Discharge
SQ   0.0     4.2     4.4     4.6     4.8     5.1     5.3     5.5     5.7     5.9
SQ   6.2     6.4     6.6    13.2    26.4    52.8    52.8    52.8    52.8    52.8
* 55C Elevation
SE 100.0   100.5   101.0   101.5   102.0   102.5   103.0   103.5   104.0   104.5
SE 105.0   105.5   106.0   106.5   107.0   107.5   108.0   108.5   109.0   109.5
KK   55R   CNAME     55C
KO     0       0     0.0       0      22
RK1305.5 0.01621   0.013            CIRC     2.5     0.0
KK  163B
KO     0       0     0.0       1      22
BA 0.043
PB  0.81
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    74.0    68.0
UD0.0561
KK   V63
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* RESERVOIR STORAGE
KO      0       0     0.0       0      22
RS      1    FLOW     0.0     0.0
* 63C Volume
SV   0.0    0.21    0.42    0.63    0.83    1.04    1.25    1.46    1.67    1.88
SV  2.08    2.29     2.5    2.71    2.92    3.13    3.33    3.54    3.75    3.96
* 63C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
* 63C Discharge
SQ   0.0     0.9     0.9     1.0     1.0     1.1     1.1     1.2     1.2     1.3
SQ   1.3     1.4     1.4     2.8     5.6    11.2    11.2    11.2    11.2    11.2
* 63C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
KK   63R   CNAME     63C
KO      0       0     0.0       0      22
RK2120.9 0.00459   0.013            CIRC     1.5     0.0
KK  528B
KO      0       0     0.0       1      22
BA 0.128
PB  0.81
IN      1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    74.0    30.0
UD0.3071
KK   62C   CNAME     62R
KO      0       0     0.0       0      22
HC      2
KK   62R   CNAME     62C
KO      0       0     0.0       0      22
RK2690.6   0.002   0.013            CIRC     2.0     0.0
KK  731B
KO      0       0     0.0       1      22
BA 0.109
PB  0.81
IN      1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    74.0    30.0
UD0.6449
KK    8C   CNAME      8R
KO      0       0     0.0       0      22
HC      2
KK    V8
* RESERVOIR STORAGE
KO      0       0     0.0       0      22
RS      1    FLOW     0.0     0.0
* 8C Volume
SV   0.0    0.55     1.1    1.65     2.2    2.75     3.3    3.85     4.4    4.95
SV   5.5    6.05     6.6    7.15     7.7    8.25     8.8    9.35     9.9   10.45
* 8C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
* 8C Discharge
SQ   0.0     5.7     6.0     6.3     6.6     6.9     7.2     7.5     7.8     8.1
SQ   8.4     8.7     9.0    18.0    36.0    72.0    72.0    72.0    72.0    72.0
* 8C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
KK    8R   CNAME      8C
KO      0       0     0.0       0      22
RK 747.4 0.02745   0.013            CIRC     2.0     0.0
KK  665B
KO      0       0     0.0       1      22
BA 0.363
PB  0.81
IN      1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0   62.05    24.0
UD0.1824
KK V10-1
* RESERVOIR STORAGE
KO      0       0     0.0       0      22
RS      1    FLOW     0.0     0.0
* 10C Volume
SV   0.0    0.58    1.17    1.75    2.33    2.92     3.5    4.08    4.67    5.25
SV  5.83    6.42     7.0    7.58    8.17    8.75    9.33    9.92    10.5   11.08
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* 10C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
* 10C Discharge
SQ   0.0     7.5     7.9     8.3     8.7     9.0     9.4     9.8    10.2    10.6
SQ  11.0    11.4    11.8    23.6    47.2    94.4    94.4    94.4    94.4    94.4
* 10C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
KK   10R   CNAME     10C
KO     0       0     0.0       0      22
RK204.31 0.02572   0.013            CIRC     2.5     0.0
KK  267B
KO     0       0     0.0       1      22
BA 0.362
PB  0.81
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0   60.89    24.0
UD0.1502
KK   V97
* RESERVOIR STORAGE
KO     0       0     0.0       0      22
RS     1    FLOW     0.0     0.0
* 97C Volume
SV   0.0    0.56    1.12    1.68    2.23    2.79    3.35    3.91    4.47    5.03
SV  5.58    6.14     6.7    7.26    7.82    8.38    8.93    9.49   10.05   10.61
* 97C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
* 97C Discharge
SQ   0.0     7.3     7.7     8.1     8.5     8.9     9.3     9.7    10.1    10.4
SQ  10.8    11.2    11.6    23.2    46.4    92.8    92.8    92.8    92.8    92.8
* 97C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
KK   97R   CNAME     97C
KO     0       0     0.0       0      22
RK 743.8  0.0182   0.013            CIRC     2.0     0.0
KK  268B
KO     0       0     0.0       1      22
BA 0.016
PB  0.81
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    61.0    20.0
UD0.0654
KK   95C   CNAME     95R
KO     0       0     0.0       0      22
HC     2
KK   95R   CNAME     95C
KO     0       0     0.0       0      22
RK1108.8 0.02153   0.013            CIRC     2.0     0.0
KK  622B
KO     0       0     0.0       1      22
BA 0.022
PB  0.81
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    61.0    20.0
UD 0.087
KK  128C   CNAME    128R
KO     0       0     0.0       0      22
HC     2
KK  128R   CNAME    128C
KO     0       0     0.0       0      22
RK1581.3 0.04064   0.013            CIRC     2.0     0.0
KK  271B
KO     0       0     0.0       1      22
BA 0.252
PB  0.81
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
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PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    61.0    24.0
UD0.2015
KK   V99
* RESERVOIR STORAGE
KO     0       0     0.0       0      22
RS     1    FLOW     0.0     0.0
* 99C Volume
SV   0.0    0.38    0.77    1.15    1.53    1.92     2.3    2.68    3.07    3.45
SV  3.83    4.22     4.6    4.98    5.37    5.75    6.13    6.52     6.9    7.28
* 99C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
* 99C Discharge
SQ   0.0     5.3     5.5     5.8     6.1     6.4     6.6     6.9     7.2     7.5
SQ   7.7     8.0     8.3    16.6    33.2    66.4    66.4    66.4    66.4    66.4
* 99C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
KK   99R   CNAME     99C
KO     0       0     0.0       0      22
RK1851.3  0.0655   0.013            CIRC    1.25     0.0
KK  272B
KO     0       0     0.0       1      22
BA 0.139
PB  0.81
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    61.0    24.0
UD0.0954
KK   98C   CNAME     98R
KO     0       0     0.0       0      22
HC     2
KK   V98
* RESERVOIR STORAGE
KO     0       0     0.0       0      22
RS     1    FLOW     0.0     0.0
* 98C Volume
SV   0.0    0.22    0.43    0.65    0.87    1.08     1.3    1.52    1.73    1.95
SV  2.17    2.38     2.6    2.82    3.03    3.25    3.47    3.68     3.9    4.12
* 98C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
* 98C Discharge
SQ   0.0     8.1     8.5     9.0     9.4     9.8    10.2    10.7    11.1    11.5
SQ  11.9    12.4    12.8    25.6    51.2   102.4   102.4   102.4   102.4   102.4
* 98C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
KK   98R   CNAME     98C
KO     0       0     0.0       0      22
RK1446.1 0.04082   0.013            CIRC    1.25     0.0
KK  669B
KO     0       0     0.0       1      22
BA 0.026
PB  0.81
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    61.0    24.0
UD0.0843
KK   12C   CNAME     12R
KO     0       0     0.0       0      22
HC     2
KK   12R   CNAME     12C
KO     0       0     0.0       0      22
RK782.25 0.04576   0.013            CIRC     2.0     0.0
KK  484B
KO     0       0     0.0       1      22
BA 0.038
PB  0.81
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0   61.95    24.0
UD0.0786
KK  132R   CNAME    132C
KO     0       0     0.0       0      22
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RK953.22 0.06506   0.013            CIRC     1.5     0.0
KK  670B
KO     0       0     0.0       1      22
BA 0.037
PB  0.81
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0   62.18    24.0
UD0.0737
KK   11C   CNAME     11R
KO     0       0     0.0       0      22
HC     3
KK V11-1
* RESERVOIR STORAGE
KO     0       0     0.0       0      22
RS     1    FLOW     0.0     0.0
* 11C Volume
SV   0.0    0.17    0.33     0.5    0.67    0.83     1.0    1.17    1.33     1.5
SV  1.67    1.83     2.0    2.17    2.33     2.5    2.67    2.83     3.0    3.17
* 11C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
* 11C Discharge
SQ   0.0    10.1    10.7    11.2    11.7    12.3    12.8    13.3    13.9    14.4
SQ  14.9    15.5    16.0    32.0    64.0   128.0   128.0   128.0   128.0   128.0
* 11C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
KK   11R   CNAME     11C
KO     0       0     0.0       0      22
RK294.73 0.02882   0.013            CIRC     2.5     0.0
KK  668B
KO     0       0     0.0       1      22
BA 0.003
PB  0.81
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    61.0     0.0
UD 0.201
KK   94C   CNAME     94R
KO     0       0     0.0       0      22
HC     4
KK   94R   CNAME     94C
KO     0       0     0.0       0      22
RK1392.2 0.01303   0.013            CIRC     2.5     0.0
KK  264B
KO     0       0     0.0       1      22
BA 0.081
PB  0.81
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    63.08    68.0
UD0.1489
KK   93C   CNAME     93R
KO     0       0     0.0       0      22
HC     2
KK   V93
* RESERVOIR STORAGE
KO     0       0     0.0       0      22
RS     1    FLOW     0.0     0.0
* 93C Volume
SV   0.0    0.39    0.78    1.18    1.57    1.96    2.35    2.74    3.13    3.53
SV  3.92    4.31     4.7    5.09    5.48    5.88    6.27    6.66    7.05    7.44
* 93C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
* 93C Discharge
SQ   0.0    27.6    29.1    30.5    32.0    33.4    34.9    36.3    37.8    39.2
SQ  40.7    42.1    43.6    87.2   174.4   348.8   348.8   348.8   348.8   348.8
* 93C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
KK   93R   CNAME     93C
KO     0       0     0.0       0      22
RK5316.5 0.00551   0.013            CIRC     2.5     1.0
KK  259B
KO     0       0     0.0       1      22
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BA 0.071
PB  0.81
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0   71.64    68.0
UD0.4809
KK   V92
* RESERVOIR STORAGE
KO     0       0     0.0       0      22
RS     1    FLOW     0.0     0.0
* 92C Volume
SV   0.0    0.38    0.77    1.15    1.53    1.92     2.3    2.68    3.07    3.45
SV  3.83    4.22     4.6    4.98    5.37    5.75    6.13    6.52     6.9    7.28
* 92C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
* 92C Discharge
SQ   0.0     2.9     3.0     3.2     3.3     3.5     3.6     3.8     3.9     4.1
SQ   4.2     4.4     4.5     9.0    18.0    36.0    36.0    36.0    36.0    36.0
* 92C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
KK   92R   CNAME     92C
KO     0       0     0.0       0      22
RK2448.7 0.00507   0.013            CIRC     2.5     1.0
KK  462B
KO     0       0     0.0       1      22
BA  0.09
PB  0.81
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    74.0    68.0
UD0.2001
KK  120C   CNAME    120R
KO     0       0     0.0       0      22
HC     2
KK  V120
* RESERVOIR STORAGE
KO     0       0     0.0       0      22
RS     1    FLOW     0.0     0.0
* 120C Volume
SV   0.0    0.52    1.03    1.55    2.07    2.58     3.1    3.62    4.13    4.65
SV  5.17    5.68     6.2    6.72    7.23    7.75    8.27    8.78     9.3    9.82
* 120C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
* 120C Discharge
SQ   0.0     1.8     1.9     2.0     2.1     2.2     2.3     2.4     2.5     2.6
SQ   2.7     2.8     2.9     5.8    11.6    23.2    23.2    23.2    23.2    23.2
* 120C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
KK  120R   CNAME    120C
KO     0       0     0.0       0      22
RK479.82 0.00053   0.013            CIRC     2.5     0.0
KK  262B
KO     0       0     0.0       1      22
BA 0.086
PB  0.81
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0   73.69    68.0
UD0.1592
KK   V91
* RESERVOIR STORAGE
KO     0       0     0.0       0      22
RS     1    FLOW     0.0     0.0
* 91C Volume
SV   0.0    0.42    0.83    1.25    1.67    2.08     2.5    2.92    3.33    3.75
SV  4.17    4.58     5.0    5.42    5.83    6.25    6.67    7.08     7.5    7.92
* 91C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
* 91C Discharge
SQ   0.0     1.7     1.8     1.9     2.0     2.1     2.2     2.3     2.3     2.4
SQ   2.5     2.6     2.7     5.4    10.8    21.6    21.6    21.6    21.6    21.6
* 91C Elevation
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SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
KK   91R   CNAME     91C
KO     0       0     0.0       0      22
RK2816.4 0.00439   0.013            CIRC     2.5     1.0
KK  703B
KO     0       0     0.0       1      22
BA 0.065
PB  0.81
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    74.0    68.0
UD0.1611
KK  V122
* RESERVOIR STORAGE
KO     0       0     0.0       0      22
RS     1    FLOW     0.0     0.0
* 122C Volume
SV   0.0    0.33    0.67     1.0    1.33    1.67     2.0    2.33    2.67     3.0
SV  3.33    3.67     4.0    4.33    4.67     5.0    5.33    5.67     6.0    6.33
* 122C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
* 122C Discharge
SQ   0.0     1.3     1.4     1.5     1.5     1.6     1.7     1.8     1.8     1.9
SQ   2.0     2.0     2.1     4.2     8.4    16.8    16.8    16.8    16.8    16.8
* 122C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
KK  122R   CNAME    122C
KO     0       0     0.0       0      22
RK821.88 0.00233   0.013            CIRC     2.5     0.0
KK  718B
KO     0       0     0.0       1      22
BA 0.002
PB  0.81
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    98.0     0.0
UD0.1679
KK    2R   CNAME      2C
KO     0       0     0.0       0      22
RK1301.8 0.00283   0.013            CIRC    1.25     0.0
KK  529B
KO     0       0     0.0       1      22
BA 0.061
PB  0.81
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    74.0    68.0
UD0.2348
KK  V119
* RESERVOIR STORAGE
KO     0       0     0.0       0      22
RS     1    FLOW     0.0     0.0
* 119C Volume
SV   0.0     0.3     0.6     0.9     1.2     1.5     1.8     2.1     2.4     2.7
SV   3.0     3.3     3.6     3.9     4.2     4.5     4.8     5.1     5.4     5.7
* 119C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
* 119C Discharge
SQ   0.0     1.3     1.4     1.5     1.5     1.6     1.7     1.8     1.8     1.9
SQ   2.0     2.0     2.1     4.2     8.4    16.8    16.8    16.8    16.8    16.8
* 119C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
KK  119R   CNAME    119C
KO     0       0     0.0       0      22
RK1327.8 0.00087   0.013            CIRC     1.5     0.0
KK  719B
KO     0       0     0.0       1      22
BA 0.002
PB  0.81
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
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PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    98.0     0.0
UD0.2154
KK    4C   CNAME      4R
KO     0       0     0.0       0      22
HC     3
KK    4R   CNAME      4C
KO     0       0     0.0       0      22
RK1341.9 0.00346   0.013            CIRC     1.5     0.0
KK  721B
KO     0       0     0.0       1      22
BA 0.002
PB  0.81
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    98.0     0.0
UD 0.151
KK    6C   CNAME      6R
KO     0       0     0.0       0      22
HC     2
KK    6R   CNAME      6C
KO     0       0     0.0       0      22
RK1346.8 0.00196   0.013            CIRC     2.0     0.0
KK  723B
KO     0       0     0.0       1      22
BA 0.003
PB  0.81
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    98.0     0.0
UD0.1777
KK    7C   CNAME      7R
KO     0       0     0.0       0      22
HC     2
KK    7R   CNAME      7C
KO     0       0     0.0       0      22
RK1243.3 0.00189   0.013            CIRC     2.5     0.0
KK  459B
KO     0       0     0.0       1      22
BA 0.024
PB  0.81
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    76.1     0.0
UD0.3523
KK  117R   CNAME    117C
KO     0       0     0.0       0      22
RK3168.6 0.00281   0.013            CIRC     2.0     0.0
KK  157B
KO     0       0     0.0       1      22
BA 0.075
PB  0.81
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    74.4     0.0
UD0.9149
KK   60R   CNAME     60C
KO     0       0     0.0       0      22
RK753.17 0.00283   0.013            CIRC     3.0     3.0
KK  724B
KO     0       0     0.0       1      22
BA 0.111
PB  0.81
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
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PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0   85.36     0.0
UD0.7937
KK   59C   CNAME     59R
KO     0       0     0.0       0      22
HC     4
KK   59R   CNAME     59C
KO     0       0     0.0       0      22
RK698.59  0.0007   0.013            CIRC     3.0     0.0
KK  156B
KO     0       0     0.0       1      22
BA 0.026
PB  0.81
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    74.0    10.0
UD 0.378
KK   58C   CNAME     58R
KO     0       0     0.0       0      22
HC     2
KK   58R   CNAME     58C
KO     0       0     0.0       0      22
RK676.63 0.00034   0.013            CIRC     3.0     0.0
KK  455B
KO     0       0     0.0       1      22
BA 0.014
PB  0.81
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    74.0    30.0
UD 0.211
KK    V6
* RESERVOIR STORAGE
KO     0       0     0.0       0      22
RS     1    FLOW     0.0     0.0
* 115C Volume
SV   0.0    0.05     0.1    0.15     0.2    0.25     0.3    0.35     0.4    0.45
SV   0.5    0.55     0.6    0.65     0.7    0.75     0.8    0.85     0.9    0.95
* 115C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
* 115C Discharge
SQ   0.0     0.6     0.6     0.6     0.7     0.7     0.7     0.8     0.8     0.8
SQ   0.8     0.9     0.9     1.8     3.6     7.2     7.2     7.2     7.2     7.2
* 115C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
KK  115R   CNAME    115C
KO     0       0     0.0       0      22
RK1463.9 0.00094   0.013            CIRC     1.5     0.0
KK  457B
KO     0       0     0.0       1      22
BA 0.012
PB  0.81
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    74.0    68.0
UD0.2258
KK  116C   CNAME    116R
KO     0       0     0.0       0      22
HC     3
KK  116R   CNAME    116C
KO     0       0     0.0       0      22
RK416.09   0.002   0.013            CIRC     3.0     0.0
KK  458B
KO     0       0     0.0       1      22
BA 0.013
PB  0.81
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
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PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    74.0    52.0
UD0.3679
KK   57C   CNAME     57R
KO     0       0     0.0       0      22
HC     2
KK   57R   CNAME     57C
KO     0       0     0.0       0      22
RK758.92 0.03295   0.013            CIRC     2.5     0.0
KK  733B
KO     0       0     0.0       1      22
BA 0.013
PB  0.81
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    74.0     0.0
UD   0.0
KK  123C   CNAME    123R
KO     0       0     0.0       0      22
HC     7
KK  V123
* RESERVOIR STORAGE
KO     0       0     0.0       0      22
RS     1    FLOW     0.0     0.0
* 123C Volume
SV   0.0     0.5     1.0     1.5     2.0     2.5     3.0     3.5     4.0     4.5
SV   5.0     5.5     6.0     6.5     7.0     7.5     8.0     8.5     9.0     9.5
* 123C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
* 123C Discharge
SQ   0.0    45.6    48.0    50.4    52.8    55.2    57.6    60.0    62.4    64.8
SQ  67.2    69.6    72.0   144.0   288.0   576.0   576.0   576.0   576.0   576.0
* 123C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
KK  123R   CNAME    123C
KO     0       0     0.0       0      22
RK307.97   0.003   0.013            CIRC     4.0     0.0
KK  732B
KO     0       0     0.0       1      22
BA 0.009
PB  0.81
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    74.0     0.0
UD   0.0
KK   56C   CNAME     56R
KO     0       0     0.0       0      22
HC     2
KK   56R   CNAME     56C
KO     0       0     0.0       0      22
RK2012.0   0.002   0.013            CIRC     3.0     0.0
KK  624B
KO     0       0     0.0       1      22
BA 0.108
PB  0.81
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    74.0     0.0
UD0.4611
KK    9C   CNAME      9R
KO     0       0     0.0       0      22
HC     3
KK    9R   CNAME      9C
KO     0       0     0.0       0      22
RN    9R
ZZ
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100 Year - 60 minute storm

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IDHEC-1 Analysis using WMS
ID
ID
*DIAGRAM
IT     1 01JAN94       0     800
IO     0
KK  255B
KO     0       0     0.0       1      22
BA 0.018
PB  1.57
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    61.0    20.0
UD0.0298
KK   90R   CNAME     90C
KO     0       0     0.0       0      22
RK1054.1 0.02004   0.013             CIRC     1.5     0.0
KK  256B
KO     0       0     0.0       1      22
BA 0.034
PB  1.57
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    61.0    30.0
UD0.0734
KK   89C   CNAME     89R
KO     0       0     0.0       0      22
HC     2
KK    V2
* RESERVOIR STORAGE
KO     0       0     0.0       0      22
RS     1    FLOW     0.0     0.0
* 89C Volume
SV   0.0    0.09    0.18    0.28    0.37    0.46    0.55    0.64    0.73    0.83
SV  0.92    1.01     1.1    1.19    1.28    1.38    1.47    1.56    1.65    1.74
* 89C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
* 89C Discharge
SQ   0.0     1.1     1.1     1.2     1.2     1.3     1.4     1.4     1.5     1.5
SQ   1.6     1.6     1.7     3.4     6.8    13.6    13.6    13.6    13.6    13.6
* 89C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
KK   89R   CNAME     89C
KO     0       0     0.0       0      22
RK4204.5 0.00509   0.013             CIRC     2.5     0.0
KK  585B
KO     0       0     0.0       1      22
BA  0.16
PB  1.57
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0   72.48    30.0
UD0.2701
KK    3C   CNAME      3R
KO     0       0     0.0       0      22
HC     2
KK    V3
* RESERVOIR STORAGE
KO     0       0     0.0       0      22
RS     1    FLOW     0.0     0.0
* 3C Volume
SV   0.0    0.38    0.75    1.13     1.5    1.88    2.25    2.63     3.0    3.38
SV  3.75    4.13     4.5    4.88    5.25    5.63     6.0    6.38    6.75    7.13
* 3C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
* 3C Discharge
SQ   0.0     4.3     4.5     4.8     5.0     5.2     5.4     5.7     5.9     6.1
SQ   6.3     6.6     6.8    13.6    27.2    54.4    54.4    54.4    54.4    54.4
* 3C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
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SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
KK    3R   CNAME      3C
KO     0       0     0.0       0      22
RK2688.2 0.00212   0.013            CIRC     3.0     0.0
KK  251B
KO     0       0     0.0       1      22
BA 0.027
PB  1.57
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    61.0    20.0
UD0.2582
KK   88R   CNAME     88C
KO     0       0     0.0       0      22
RK1925.1  0.0069   0.013            CIRC     2.0     0.0
KK  252B
KO     0       0     0.0       1      22
BA 0.058
PB  1.57
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0   70.97    20.0
UD0.2093
KK   87C   CNAME     87R
KO     0       0     0.0       0      22
HC     2
KK   87R   CNAME     87C
KO     0       0     0.0       0      22
RK2156.3 0.00533   0.013            CIRC     2.0     0.0
KK  250B
KO     0       0     0.0       1      22
BA 0.064
PB  1.57
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    74.0    20.0
UD0.2088
KK   20C   CNAME     20R
KO     0       0     0.0       0      22
HC     2
KK   20R   CNAME     20C
KO     0       0     0.0       0      22
RK1389.5 0.00264   0.013            CIRC     3.0     0.0
KK  175B
KO     0       0     0.0       1      22
BA 0.101
PB  1.57
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    61.0    30.0
UD0.0896
KK   69R   CNAME     69C
KO     0       0     0.0       0      22
RK665.15 0.03311   0.013            CIRC     1.5     0.0
KK  176B
KO     0       0     0.0       1      22
BA  0.06
PB  1.57
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    61.0    30.0
UD0.1442
KK   68C   CNAME     68R
KO     0       0     0.0       0      22
HC     2
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KK   68R   CNAME     68C
KO     0       0     0.0       0      22
RK1555.7 0.00883   0.013            CIRC    1.25     0.0
KK  581B
KO     0       0     0.0       1      22
BA 0.066
PB  1.57
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0   71.28    30.0
UD0.1168
KK   67C   CNAME     67R
KO     0       0     0.0       0      22
HC     2
KK   67R   CNAME     67C
KO     0       0     0.0       0      22
RK1872.4 0.00341   0.013            CIRC     2.0     0.0
KK  580B
KO     0       0     0.0       1      22
BA 0.125
PB  1.57
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0   63.63    68.0
UD0.2115
KK    V1
* RESERVOIR STORAGE
KO     0       0     0.0       0      22
RS     1    FLOW     0.0     0.0
* 65C Volume
SV   0.0    0.58    1.17    1.75    2.33    2.92     3.5    4.08    4.67    5.25
SV  5.83    6.42     7.0    7.58    8.17    8.75    9.33    9.92    10.5   11.08
* 65C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
* 65C Discharge
SQ   0.0     2.5     2.7     2.8     2.9     3.1     3.2     3.3     3.5     3.6
SQ   3.7     3.9     4.0     8.0    16.0    32.0    32.0    32.0    32.0    32.0
* 65C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
KK   65R   CNAME     65C
KO     0       0     0.0       0      22
RK1005.7 0.00205   0.013            CIRC     2.0     0.0
KK  578B
KO     0       0     0.0       1      22
BA  0.05
PB  1.57
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    74.0    30.0
UD0.1876
KK   64C   CNAME     64R
KO     0       0     0.0       0      22
HC     3
KK   V64
* RESERVOIR STORAGE
KO     0       0     0.0       0      22
RS     1    FLOW     0.0     0.0
* 64C Volume
SV   0.0    0.59    1.18    1.78    2.37    2.96    3.55    4.14    4.73    5.33
SV  5.92    6.51     7.1    7.69    8.28    8.88    9.47   10.06   10.65   11.24
* 64C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
* 64C Discharge
SQ   0.0     8.1     8.5     9.0     9.4     9.8    10.2    10.7    11.1    11.5
SQ  11.9    12.4    12.8    25.6    51.2   102.4   102.4   102.4   102.4   102.4
* 64C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
KK   64R   CNAME     64C
KO     0       0     0.0       0      22
RK2868.5 0.00224   0.013            CIRC     2.5     0.0
KK  579B
KO     0       0     0.0       1      22
BA 0.066
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PB  1.57
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    79.0     0.0
UD0.2702
KK   19C   CNAME     19R
KO     0       0     0.0       0      22
HC     4
KK   19R   CNAME     19C
KO     0       0     0.0       0      22
RN   19R
KK  534B
KO     0       0     0.0       1      22
BA  0.04
PB  1.57
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    61.0    20.0
UD0.0759
KK  125R   CNAME    125C
KO     0       0     0.0       0      22
RK1624.3 0.06438   0.013            CIRC     2.0     0.0
KK  178B
KO     0       0     0.0       1      22
BA 0.074
PB  1.57
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    61.0    30.0
UD0.0668
KK   70C   CNAME     70R
KO     0       0     0.0       0      22
HC     2
KK   70R   CNAME     70C
KO     0       0     0.0       0      22
RK1693.8 0.01192   0.013            CIRC    1.75     0.0
KK  527B
KO     0       0     0.0       1      22
BA  1.14
PB  1.57
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0   61.37    24.0
UD0.1869
KK   V72
* RESERVOIR STORAGE
KO     0       0     0.0       0      22
RS     1    FLOW     0.0     0.0
* 72C Volume
SV   0.0    2.25     4.5    6.75     9.0   11.25    13.5   15.75    18.0   20.25
SV  22.5   24.75    27.0   29.25    31.5   33.75    36.0   38.25    40.5   42.75
* 72C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
* 72C Discharge
SQ   0.0    23.1    24.3    25.5    26.7    27.9    29.1    30.3    31.5    32.8
SQ  34.0    35.2    36.4    72.8   145.6   291.2   291.2   291.2   291.2   291.2
* 72C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
KK   72R   CNAME     72C
KO     0       0     0.0       0      22
RK1990.6 0.05438   0.013            CIRC     3.0     1.0
KK  183B
KO     0       0     0.0       1      22
BA 0.099
PB  1.57
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
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PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    61.0    68.0
UD0.1017
KK   71C   CNAME     71R
KO     0       0     0.0       0      22
HC     2
KK   71R   CNAME     71C
KO     0       0     0.0       0      22
RK2509.3 0.00834   0.013            CIRC     3.0     2.0
KK  181B
KO     0       0     0.0       1      22
BA 0.051
PB  1.57
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    61.0    68.0
UD0.1653
KK   18C   CNAME     18R
KO     0       0     0.0       0      22
HC     3
KK   V18
* RESERVOIR STORAGE
KO     0       0     0.0       0      22
RS     1    FLOW     0.0     0.0
* 18C Volume
SV   0.0    0.43    0.87     1.3    1.73    2.17     2.6    3.03    3.47     3.9
SV  4.33    4.77     5.2    5.63    6.07     6.5    6.93    7.37     7.8    8.23
* 18C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
* 18C Discharge
SQ   0.0    26.5    27.9    29.3    30.7    32.0    33.4    34.8    36.2    37.6
SQ  39.0    40.4    41.8    83.6   167.2   334.4   334.4   334.4   334.4   334.4
* 18C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
KK   18R   CNAME     18C
KO     0       0     0.0       0      22
RN   18R
KK  147B
KO     0       0     0.0       1      22
BA 0.205
PB  1.57
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    74.0    20.0
UD 0.686
KK   V55
* RESERVOIR STORAGE
KO     0       0     0.0       0      22
RS     1    FLOW     0.0     0.0
* 55C Volume
SV   0.0    0.33    0.67     1.0    1.33    1.67     2.0    2.33    2.67     3.0
SV  3.33    3.67     4.0    4.33    4.67     5.0    5.33    5.67     6.0    6.33
* 55C Elevation
SE 100.0   100.5   101.0   101.5   102.0   102.5   103.0   103.5   104.0   104.5
SE 105.0   105.5   106.0   106.5   107.0   107.5   108.0   108.5   109.0   109.5
* 55C Discharge
SQ   0.0     4.2     4.4     4.6     4.8     5.1     5.3     5.5     5.7     5.9
SQ   6.2     6.4     6.6    13.2    26.4    52.8    52.8    52.8    52.8    52.8
* 55C Elevation
SE 100.0   100.5   101.0   101.5   102.0   102.5   103.0   103.5   104.0   104.5
SE 105.0   105.5   106.0   106.5   107.0   107.5   108.0   108.5   109.0   109.5
KK   55R   CNAME     55C
KO     0       0     0.0       0      22
RK1305.5 0.01621   0.013            CIRC     2.5     0.0
KK  163B
KO     0       0     0.0       1      22
BA 0.043
PB  1.57
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    74.0    68.0
UD0.0561
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KK   V63
* RESERVOIR STORAGE
KO      0       0     0.0       0      22
RS      1    FLOW     0.0     0.0
* 63C Volume
SV   0.0    0.21    0.42    0.63    0.83    1.04    1.25    1.46    1.67    1.88
SV  2.08    2.29     2.5    2.71    2.92    3.13    3.33    3.54    3.75    3.96
* 63C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
* 63C Discharge
SQ   0.0     0.9     0.9     1.0     1.0     1.1     1.1     1.2     1.2     1.3
SQ   1.3     1.4     1.4     2.8     5.6    11.2    11.2    11.2    11.2    11.2
* 63C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
KK   63R   CNAME     63C
KO      0       0     0.0       0      22
RK2120.9 0.00459   0.013            CIRC     1.5     0.0
KK  528B
KO      0       0     0.0       1      22
BA 0.128
PB  1.57
IN      1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    74.0    30.0
UD0.3071
KK   62C   CNAME     62R
KO      0       0     0.0       0      22
HC      2
KK   62R   CNAME     62C
KO      0       0     0.0       0      22
RK2690.6   0.002   0.013            CIRC     2.0     0.0
KK  731B
KO      0       0     0.0       1      22
BA 0.109
PB  1.57
IN      1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    74.0    30.0
UD0.6449
KK    8C   CNAME      8R
KO      0       0     0.0       0      22
HC      2
KK    V8
* RESERVOIR STORAGE
KO      0       0     0.0       0      22
RS      1    FLOW     0.0     0.0
* 8C Volume
SV   0.0    0.55     1.1    1.65     2.2    2.75     3.3    3.85     4.4    4.95
SV   5.5    6.05     6.6    7.15     7.7    8.25     8.8    9.35     9.9   10.45
* 8C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
* 8C Discharge
SQ   0.0     5.7     6.0     6.3     6.6     6.9     7.2     7.5     7.8     8.1
SQ   8.4     8.7     9.0    18.0    36.0    72.0    72.0    72.0    72.0    72.0
* 8C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
KK    8R   CNAME      8C
KO      0       0     0.0       0      22
RK 747.4 0.02745   0.013            CIRC     2.0     0.0
KK  665B
KO      0       0     0.0       1      22
BA 0.363
PB  1.57
IN      1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0   62.05    24.0
UD0.1824
KK V10-1
* RESERVOIR STORAGE
KO      0       0     0.0       0      22
RS      1    FLOW     0.0     0.0
* 10C Volume
SV   0.0    0.58    1.17    1.75    2.33    2.92     3.5    4.08    4.67    5.25
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SV  5.83    6.42     7.0    7.58    8.17    8.75    9.33    9.92    10.5   11.08
* 10C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
* 10C Discharge
SQ   0.0     7.5     7.9     8.3     8.7     9.0     9.4     9.8    10.2    10.6
SQ  11.0    11.4    11.8    23.6    47.2    94.4    94.4    94.4    94.4    94.4
* 10C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
KK   10R   CNAME     10C
KO     0       0     0.0       0      22
RK204.31 0.02572   0.013            CIRC     2.5     0.0
KK  267B
KO     0       0     0.0       1      22
BA 0.362
PB  1.57
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0   60.89    24.0
UD0.1502
KK   V97
* RESERVOIR STORAGE
KO     0       0     0.0       0      22
RS     1    FLOW     0.0     0.0
* 97C Volume
SV   0.0    0.56    1.12    1.68    2.23    2.79    3.35    3.91    4.47    5.03
SV  5.58    6.14     6.7    7.26    7.82    8.38    8.93    9.49   10.05   10.61
* 97C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
* 97C Discharge
SQ   0.0     7.3     7.7     8.1     8.5     8.9     9.3     9.7    10.1    10.4
SQ  10.8    11.2    11.6    23.2    46.4    92.8    92.8    92.8    92.8    92.8
* 97C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
KK   97R   CNAME     97C
KO     0       0     0.0       0      22
RK 743.8  0.0182   0.013            CIRC     2.0     0.0
KK  268B
KO     0       0     0.0       1      22
BA 0.016
PB  1.57
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    61.0    20.0
UD0.0654
KK   95C   CNAME     95R
KO     0       0     0.0       0      22
HC     2
KK   95R   CNAME     95C
KO     0       0     0.0       0      22
RK1108.8 0.02153   0.013            CIRC     2.0     0.0
KK  622B
KO     0       0     0.0       1      22
BA 0.022
PB  1.57
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    61.0    20.0
UD 0.087
KK  128C   CNAME    128R
KO     0       0     0.0       0      22
HC     2
KK  128R   CNAME    128C
KO     0       0     0.0       0      22
RK1581.3 0.04064   0.013            CIRC     2.0     0.0
KK  271B
KO     0       0     0.0       1      22
BA 0.252
PB  1.57
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
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PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    61.0    24.0
UD0.2015
KK   V99
* RESERVOIR STORAGE
KO     0       0     0.0       0      22
RS     1    FLOW     0.0     0.0
* 99C Volume
SV   0.0    0.38    0.77    1.15    1.53    1.92     2.3    2.68    3.07    3.45
SV  3.83    4.22     4.6    4.98    5.37    5.75    6.13    6.52     6.9    7.28
* 99C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
* 99C Discharge
SQ   0.0     5.3     5.5     5.8     6.1     6.4     6.6     6.9     7.2     7.5
SQ   7.7     8.0     8.3    16.6    33.2    66.4    66.4    66.4    66.4    66.4
* 99C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
KK   99R   CNAME     99C
KO     0       0     0.0       0      22
RK1851.3  0.0655   0.013            CIRC    1.25     0.0
KK  272B
KO     0       0     0.0       1      22
BA 0.139
PB  1.57
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    61.0    24.0
UD0.0954
KK   98C   CNAME     98R
KO     0       0     0.0       0      22
HC     2
KK   V98
* RESERVOIR STORAGE
KO     0       0     0.0       0      22
RS     1    FLOW     0.0     0.0
* 98C Volume
SV   0.0    0.22    0.43    0.65    0.87    1.08     1.3    1.52    1.73    1.95
SV  2.17    2.38     2.6    2.82    3.03    3.25    3.47    3.68     3.9    4.12
* 98C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
* 98C Discharge
SQ   0.0     8.1     8.5     9.0     9.4     9.8    10.2    10.7    11.1    11.5
SQ  11.9    12.4    12.8    25.6    51.2   102.4   102.4   102.4   102.4   102.4
* 98C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
KK   98R   CNAME     98C
KO     0       0     0.0       0      22
RK1446.1 0.04082   0.013            CIRC    1.25     0.0
KK  669B
KO     0       0     0.0       1      22
BA 0.026
PB  1.57
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    61.0    24.0
UD0.0843
KK   12C   CNAME     12R
KO     0       0     0.0       0      22
HC     2
KK   12R   CNAME     12C
KO     0       0     0.0       0      22
RK782.25 0.04576   0.013            CIRC     2.0     0.0
KK  484B
KO     0       0     0.0       1      22
BA 0.038
PB  1.57
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0   61.95    24.0
UD0.0786
KK  132R   CNAME    132C
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KO     0       0     0.0       0      22
RK953.22 0.06506   0.013            CIRC     1.5     0.0
KK  670B
KO     0       0     0.0       1      22
BA 0.037
PB  1.57
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0   62.18    24.0
UD0.0737
KK   11C   CNAME     11R
KO     0       0     0.0       0      22
HC     3
KK V11-1
* RESERVOIR STORAGE
KO     0       0     0.0       0      22
RS     1    FLOW     0.0     0.0
* 11C Volume
SV   0.0    0.17    0.33     0.5    0.67    0.83     1.0    1.17    1.33     1.5
SV  1.67    1.83     2.0    2.17    2.33     2.5    2.67    2.83     3.0    3.17
* 11C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
* 11C Discharge
SQ   0.0    10.1    10.7    11.2    11.7    12.3    12.8    13.3    13.9    14.4
SQ  14.9    15.5    16.0    32.0    64.0   128.0   128.0   128.0   128.0   128.0
* 11C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
KK   11R   CNAME     11C
KO     0       0     0.0       0      22
RK294.73 0.02882   0.013            CIRC     2.5     0.0
KK  668B
KO     0       0     0.0       1      22
BA 0.003
PB  1.57
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    61.0     0.0
UD 0.201
KK   94C   CNAME     94R
KO     0       0     0.0       0      22
HC     4
KK   94R   CNAME     94C
KO     0       0     0.0       0      22
RK1392.2 0.01303   0.013            CIRC     2.5     0.0
KK  264B
KO     0       0     0.0       1      22
BA 0.081
PB  1.57
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0   63.08    68.0
UD0.1489
KK   93C   CNAME     93R
KO     0       0     0.0       0      22
HC     2
KK   V93
* RESERVOIR STORAGE
KO     0       0     0.0       0      22
RS     1    FLOW     0.0     0.0
* 93C Volume
SV   0.0    0.39    0.78    1.18    1.57    1.96    2.35    2.74    3.13    3.53
SV  3.92    4.31     4.7    5.09    5.48    5.88    6.27    6.66    7.05    7.44
* 93C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
* 93C Discharge
SQ   0.0    27.6    29.1    30.5    32.0    33.4    34.9    36.3    37.8    39.2
SQ  40.7    42.1    43.6    87.2   174.4   348.8   348.8   348.8   348.8   348.8
* 93C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
KK   93R   CNAME     93C
KO     0       0     0.0       0      22
RK5316.5 0.00551   0.013            CIRC     2.5     1.0
KK  259B
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KO     0       0     0.0       1      22
BA 0.071
PB  1.57
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0   71.64    68.0
UD0.4809
KK   V92
* RESERVOIR STORAGE
KO     0       0     0.0       0      22
RS     1    FLOW     0.0     0.0
* 92C Volume
SV   0.0    0.38    0.77    1.15    1.53    1.92     2.3    2.68    3.07    3.45
SV  3.83    4.22     4.6    4.98    5.37    5.75    6.13    6.52     6.9    7.28
* 92C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
* 92C Discharge
SQ   0.0     2.9     3.0     3.2     3.3     3.5     3.6     3.8     3.9     4.1
SQ   4.2     4.4     4.5     9.0    18.0    36.0    36.0    36.0    36.0    36.0
* 92C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
KK   92R   CNAME     92C
KO     0       0     0.0       0      22
RK2448.7 0.00507   0.013            CIRC     2.5     1.0
KK  462B
KO     0       0     0.0       1      22
BA  0.09
PB  1.57
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    74.0    68.0
UD0.2001
KK  120C   CNAME    120R
KO     0       0     0.0       0      22
HC     2
KK  V120
* RESERVOIR STORAGE
KO     0       0     0.0       0      22
RS     1    FLOW     0.0     0.0
* 120C Volume
SV   0.0    0.52    1.03    1.55    2.07    2.58     3.1    3.62    4.13    4.65
SV  5.17    5.68     6.2    6.72    7.23    7.75    8.27    8.78     9.3    9.82
* 120C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
* 120C Discharge
SQ   0.0     1.8     1.9     2.0     2.1     2.2     2.3     2.4     2.5     2.6
SQ   2.7     2.8     2.9     5.8    11.6    23.2    23.2    23.2    23.2    23.2
* 120C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
KK  120R   CNAME    120C
KO     0       0     0.0       0      22
RK479.82 0.00053   0.013            CIRC     2.5     0.0
KK  262B
KO     0       0     0.0       1      22
BA 0.086
PB  1.57
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0   73.69    68.0
UD0.1592
KK   V91
* RESERVOIR STORAGE
KO     0       0     0.0       0      22
RS     1    FLOW     0.0     0.0
* 91C Volume
SV   0.0    0.42    0.83    1.25    1.67    2.08     2.5    2.92    3.33    3.75
SV  4.17    4.58     5.0    5.42    5.83    6.25    6.67    7.08     7.5    7.92
* 91C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
* 91C Discharge
SQ   0.0     1.7     1.8     1.9     2.0     2.1     2.2     2.3     2.3     2.4
SQ   2.5     2.6     2.7     5.4    10.8    21.6    21.6    21.6    21.6    21.6
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* 91C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
KK   91R   CNAME     91C
KO     0       0     0.0       0      22
RK2816.4 0.00439   0.013            CIRC     2.5     1.0
KK  703B
KO     0       0     0.0       1      22
BA 0.065
PB  1.57
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    74.0    68.0
UD0.1611
KK  V122
* RESERVOIR STORAGE
KO     0       0     0.0       0      22
RS     1    FLOW     0.0     0.0
* 122C Volume
SV   0.0    0.33    0.67     1.0    1.33    1.67     2.0    2.33    2.67     3.0
SV  3.33    3.67     4.0    4.33    4.67     5.0    5.33    5.67     6.0    6.33
* 122C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
* 122C Discharge
SQ   0.0     1.3     1.4     1.5     1.5     1.6     1.7     1.8     1.8     1.9
SQ   2.0     2.0     2.1     4.2     8.4    16.8    16.8    16.8    16.8    16.8
* 122C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
KK  122R   CNAME    122C
KO     0       0     0.0       0      22
RK821.88 0.00233   0.013            CIRC     2.5     0.0
KK  718B
KO     0       0     0.0       1      22
BA 0.002
PB  1.57
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    98.0     0.0
UD0.1679
KK    2R   CNAME      2C
KO     0       0     0.0       0      22
RK1301.8 0.00283   0.013            CIRC    1.25     0.0
KK  529B
KO     0       0     0.0       1      22
BA 0.061
PB  1.57
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    74.0    68.0
UD0.2348
KK  V119
* RESERVOIR STORAGE
KO     0       0     0.0       0      22
RS     1    FLOW     0.0     0.0
* 119C Volume
SV   0.0     0.3     0.6     0.9     1.2     1.5     1.8     2.1     2.4     2.7
SV   3.0     3.3     3.6     3.9     4.2     4.5     4.8     5.1     5.4     5.7
* 119C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
* 119C Discharge
SQ   0.0     1.3     1.4     1.5     1.5     1.6     1.7     1.8     1.8     1.9
SQ   2.0     2.0     2.1     4.2     8.4    16.8    16.8    16.8    16.8    16.8
* 119C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
KK  119R   CNAME    119C
KO     0       0     0.0       0      22
RK1327.8 0.00087   0.013            CIRC     1.5     0.0
KK  719B
KO     0       0     0.0       1      22
BA 0.002
PB  1.57
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
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PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    98.0     0.0
UD0.2154
KK    4C   CNAME      4R
KO     0       0     0.0       0      22
HC     3
KK    4R   CNAME      4C
KO     0       0     0.0       0      22
RK1341.9 0.00346   0.013             CIRC     1.5     0.0
KK  721B
KO     0       0     0.0       1      22
BA 0.002
PB  1.57
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    98.0     0.0
UD 0.151
KK    6C   CNAME      6R
KO     0       0     0.0       0      22
HC     2
KK    6R   CNAME      6C
KO     0       0     0.0       0      22
RK1346.8 0.00196   0.013             CIRC     2.0     0.0
KK  723B
KO     0       0     0.0       1      22
BA 0.003
PB  1.57
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    98.0     0.0
UD0.1777
KK    7C   CNAME      7R
KO     0       0     0.0       0      22
HC     2
KK    7R   CNAME      7C
KO     0       0     0.0       0      22
RK1243.3 0.00189   0.013             CIRC     2.5     0.0
KK  459B
KO     0       0     0.0       1      22
BA 0.024
PB  1.57
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    76.1     0.0
UD0.3523
KK  117R   CNAME    117C
KO     0       0     0.0       0      22
RK3168.6 0.00281   0.013             CIRC     2.0     0.0
KK  157B
KO     0       0     0.0       1      22
BA 0.075
PB  1.57
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    74.4     0.0
UD0.9149
KK   60R   CNAME     60C
KO     0       0     0.0       0      22
RK753.17 0.00283   0.013             CIRC     3.0     3.0
KK  724B
KO     0       0     0.0       1      22
BA 0.111
PB  1.57
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
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PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0   85.36     0.0
UD0.7937
KK   59C   CNAME     59R
KO     0       0     0.0       0      22
HC     4
KK   59R   CNAME     59C
KO     0       0     0.0       0      22
RK698.59  0.0007   0.013            CIRC     3.0     0.0
KK  156B
KO     0       0     0.0       1      22
BA 0.026
PB  1.57
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    74.0    10.0
UD 0.378
KK   58C   CNAME     58R
KO     0       0     0.0       0      22
HC     2
KK   58R   CNAME     58C
KO     0       0     0.0       0      22
RK676.63 0.00034   0.013            CIRC     3.0     0.0
KK  455B
KO     0       0     0.0       1      22
BA 0.014
PB  1.57
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    74.0    30.0
UD 0.211
KK    V6
* RESERVOIR STORAGE
KO     0       0     0.0       0      22
RS     1    FLOW     0.0     0.0
* 115C Volume
SV   0.0    0.05     0.1    0.15     0.2    0.25     0.3    0.35     0.4    0.45
SV   0.5    0.55     0.6    0.65     0.7    0.75     0.8    0.85     0.9    0.95
* 115C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
* 115C Discharge
SQ   0.0     0.6     0.6     0.6     0.7     0.7     0.7     0.8     0.8     0.8
SQ   0.8     0.9     0.9     1.8     3.6     7.2     7.2     7.2     7.2     7.2
* 115C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
KK  115R   CNAME    115C
KO     0       0     0.0       0      22
RK1463.9 0.00094   0.013            CIRC     1.5     0.0
KK  457B
KO     0       0     0.0       1      22
BA 0.012
PB  1.57
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    74.0    68.0
UD0.2258
KK  116C   CNAME    116R
KO     0       0     0.0       0      22
HC     3
KK  116R   CNAME    116C
KO     0       0     0.0       0      22
RK416.09   0.002   0.013            CIRC     3.0     0.0
KK  458B
KO     0       0     0.0       1      22
BA 0.013
PB  1.57
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
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PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    74.0    52.0
UD0.3679
KK   57C   CNAME     57R
KO     0       0     0.0       0      22
HC     2
KK   57R   CNAME     57C
KO     0       0     0.0       0      22
RK758.92 0.03295   0.013            CIRC     2.5     0.0
KK  733B
KO     0       0     0.0       1      22
BA 0.013
PB  1.57
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    74.0     0.0
UD   0.0
KK  123C   CNAME    123R
KO     0       0     0.0       0      22
HC     7
KK  V123
* RESERVOIR STORAGE
KO     0       0     0.0       0      22
RS     1    FLOW     0.0     0.0
* 123C Volume
SV   0.0     0.5     1.0     1.5     2.0     2.5     3.0     3.5     4.0     4.5
SV   5.0     5.5     6.0     6.5     7.0     7.5     8.0     8.5     9.0     9.5
* 123C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
* 123C Discharge
SQ   0.0    45.6    48.0    50.4    52.8    55.2    57.6    60.0    62.4    64.8
SQ  67.2    69.6    72.0   144.0   288.0   576.0   576.0   576.0   576.0   576.0
* 123C Elevation
SE 100.0  100.25   100.5  100.75   101.0  101.25   101.5  101.75   102.0  102.25
SE 102.5  102.75   103.0  103.25   103.5  103.75   104.0  104.25   104.5  104.75
KK  123R   CNAME    123C
KO     0       0     0.0       0      22
RK307.97   0.003   0.013            CIRC     4.0     0.0
KK  732B
KO     0       0     0.0       1      22
BA 0.009
PB  1.57
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    74.0     0.0
UD   0.0
KK   56C   CNAME     56R
KO     0       0     0.0       0      22
HC     2
KK   56R   CNAME     56C
KO     0       0     0.0       0      22
RK2012.0   0.002   0.013            CIRC     3.0     0.0
KK  624B
KO     0       0     0.0       1      22
BA 0.108
PB  1.57
IN     1 01JAN94       1
* Farmer Fletcher 60 min Storm (curve 105)
PI   0.0     0.0   0.002   0.002   0.002   0.002   0.002   0.002   0.003   0.003
PI 0.004   0.005   0.008   0.009   0.009   0.013   0.017    0.02   0.024   0.029
PI 0.033   0.034   0.035   0.038   0.039   0.045   0.052   0.054   0.054   0.054
PI 0.052   0.045    0.04   0.035    0.03   0.022    0.02   0.018   0.016   0.014
PI 0.012   0.011    0.01   0.009   0.009   0.008   0.006   0.006   0.005   0.005
PI 0.005   0.005   0.004   0.004   0.004   0.003   0.003   0.002   0.002   0.001
LS   0.0    74.0     0.0
UD0.4611
KK    9C   CNAME      9R
KO     0       0     0.0       0      22
HC     3
KK    9R   CNAME      9C
KO     0       0     0.0       0      22
RN    9R
ZZ
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