DRAFT REPORT

Maryvale ADMS Hydrologic Analyses FCD #93-29

Prepared for

Flood Control District of Maricopa County

AUGUST 1996

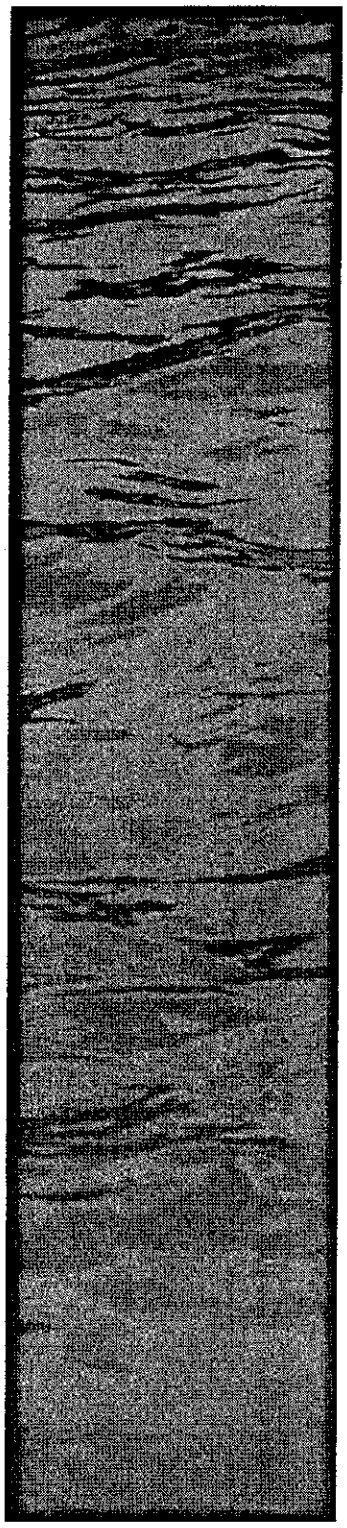
Prepared by

CH2M HILL

In partnership with

Wood, Patel & Associates

DRAFT REPORT



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August 26, 1996

Russ Miracle, P.E.
Flood Control District
of Maricopa County
2801 West Durango Street
Phoenix, AZ 85009

Re: **Maryvale ADMS**
Hydrologic Analyses
FCD #93-29
WP #95154

Dear Mr. Miracle:

Enclosed please find two (2) sets of Draft Reports on the **Maryvale ADMS, Hydrologic Analyses.**

This submittal, prepared by the Wood/Patel - CH2M Hill team, covers hydrologic analyses for the entire watershed within the ADMS. The HEC-1 model incorporated comments and suggestions from the first phase submittal as well.

Chronology

February 28, 1996 — Pilot HEC-1 study submitted to address technical issues such as flow splits, routing, and modeling of detention basins.

June 26, 1996 — First phase of the hydrologic analyses submitted which covered the drainage area east of Grand Avenue and the area near Maryvale Sports Facility.

July 30, 1996 — Response to review comments on the phase one hydrologic analyses were submitted.

August 26, 1996 — With this letter we are submitting a complete hydrologic model for the entire ADMS area. This model incorporates all technical study guidelines set during the previous submittals. Please note, the ponding area results are not complete at this time and are being evaluated.

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Your comments from this submittal will be incorporated into the Final Hydrologic Analyses Report.

Should you require further clarification, please do not hesitate to call.

Sincerely,

WOOD, PATEL & ASSOCIATES, INC.

Ashok C. Patel, P.E., R.L.S.
Principal

ACP/djp

Enclosures

cc: Steve Walker, P.E., CH2M Hill
David Dust, P.E., CH2M Hill

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1. Introduction

1.1 Scope

For the initial phase of the Maryvale Area Drainage Master Study (ADMS), Wood, Patel and Associates and CH2M HILL have been contracted by the Flood Control District of Maricopa County (District) to prepare hydrologic analyses for the approximately 100-square-mile Maryvale ADMS study area.

The primary purposes of this report are to:

- Document the methodologies and procedures used to develop the HEC-1 models for the Maryvale ADMS study area, under existing conditions.
- Document the results of the hydrologic analyses.

1.2 Objectives

The primary objectives of the hydrologic modeling component of the Maryvale ADMS project were to develop HEC-1 models that:

- Provide runoff computations for a primarily urban drainage area, where sub-basin drainage boundaries are not well defined and flow paths are very complex.
- Evaluate 10-year, 6-hour; 100-year, 6-hour; and 100-year, 24-hour rainfall events.
- Allow efficient evaluation of both existing and future storm drain systems.
- Provide a cost-effective planning and analysis tool.
- Allow for efficient updating.

The HEC-1 modeling approach documented in this report meets these objectives and the criteria specified in the project's scope of work. It is anticipated that the HEC-1 model created for the Maryvale ADMS will be a useful and cost-effective planning tool.

1.3 Study Area Description

The study area for the Maryvale ADMS is approximately 100 square miles in size and encompasses portions of the City of Peoria, the City of Glendale, the City of Avondale, the City of Tolleson, the City of Phoenix, and un-incorporated Maricopa County. As indicated in Figure 1-1, the study area is bounded on the north by the Arizona Canal Diversion Channel (ACDC) and Skunk Creek, on the east by I-17, on the south by I-10, and on the west by the Agua Fria River and the Agua Fria Freeway. The study area can be characterized as follows.

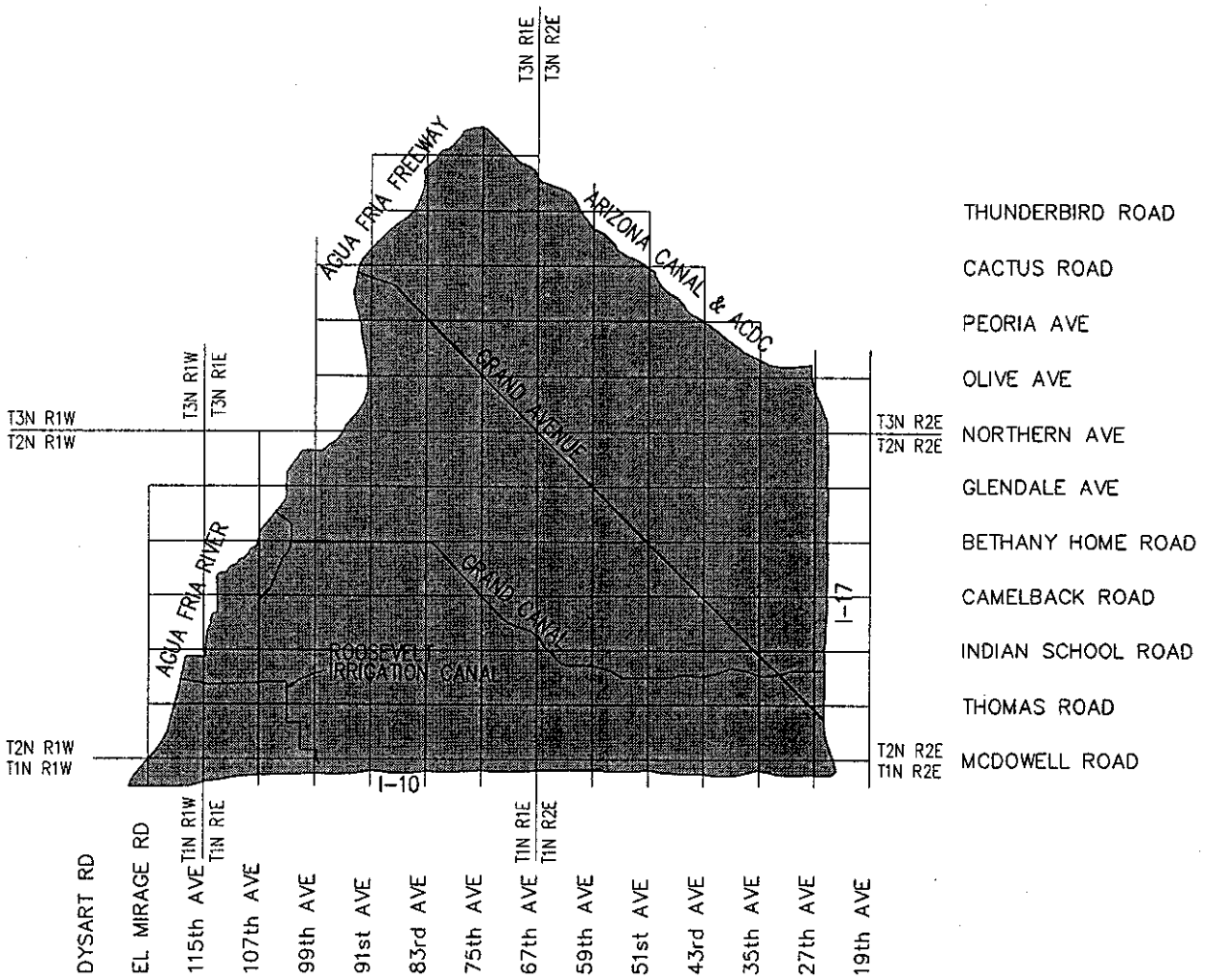

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Figure 1-1: STUDY AREA MAP

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- **Slope.** The slope of the land is generally from the northeast to the southwest at approximately 0.4 percent.

- **Land Uses.** Most of the study area has been urbanized; the primary land use is single family residential. However, essentially all of the study area had been agricultural land at some point in the past.

- **Primary Flooding Locations.** During significant rainfall events, stormwater ponds at several locations along the upstream side of the Roosevelt Canal, the Grand Canal, and Grand Avenue and/or the adjacent railroad embankment.

- **Existing Channel Systems.** The ACDC and Skunk Creek define the northern boundary of the study area. The ACDC and Skunk Creek are regional flood control facilities, with design capacities greater than the 100-year event. Within the study area, two major flood control channel systems were built and are maintained by the Arizona Department of Transportation (ADOT), as illustrated in Figure 1-2. These channel systems extend along the east side of the Agua Fria Freeway and along the north side of I-10. The existing ADOT channel system along the east side of the Agua Fria Freeway extends from approximately Greenway Road to Glendale Avenue, outfalls at several locations into the New River, and collects both surface and storm drain flow. The ADOT channel system along the north side of I-10 outfalls into the Agua Fria River and collects both surface and storm drain flow.

- **Existing Storm Drain Systems (Peoria and Glendale).** There are three major storm drain systems in the northern portion of the study area, as shown schematically in Figure 1-2. The Cactus Road storm drain system currently extends from approximately 67th Avenue west to 83rd Avenue. The Cactus Road storm drain system will be extended to the ADOT channel system along the east side of the Agua Fria Freeway, with an expected completion date of July 1997. The Olive Avenue storm drain system extends from approximately 51st Avenue west to the ADOT channel system along the east side of the Agua Fria Freeway. The Olive Avenue storm drain system has two surge basins located at approximately 71st Avenue and 83rd Avenue. The Olive Avenue storm drain system has a 10-year event design capacity The Peoria Avenue storm drain system extends from approximately Grand Avenue to the Agua Fria Freeway channel system.

- **Existing Storm Drain Systems (Phoenix).** As shown in Figure 1-2, the City of Phoenix has a complex system of storm drains that convey stormwater from as far north as Northern Avenue south to the Salt River. Primary components of this system include storm drains along 27th, 35th, 39th, 43rd, 51st, 67th, 75th, 83rd, and 91st Avenues. The design capacities for these storm drain systems have been estimated to be between the 2- and 10-year event.

- **Future Storm Drain Systems.** Several future storm drain systems were included in the HEC-1 model for "existing conditions." These future systems include storm drains along Butler Drive, Northern Avenue, and Orangewood/Glendale Avenues, as indicated in Figure 1-2. In addition, the Cactus Road storm drain system was assumed to be complete and, therefore, extend to the Agua Fria Freeway channel.

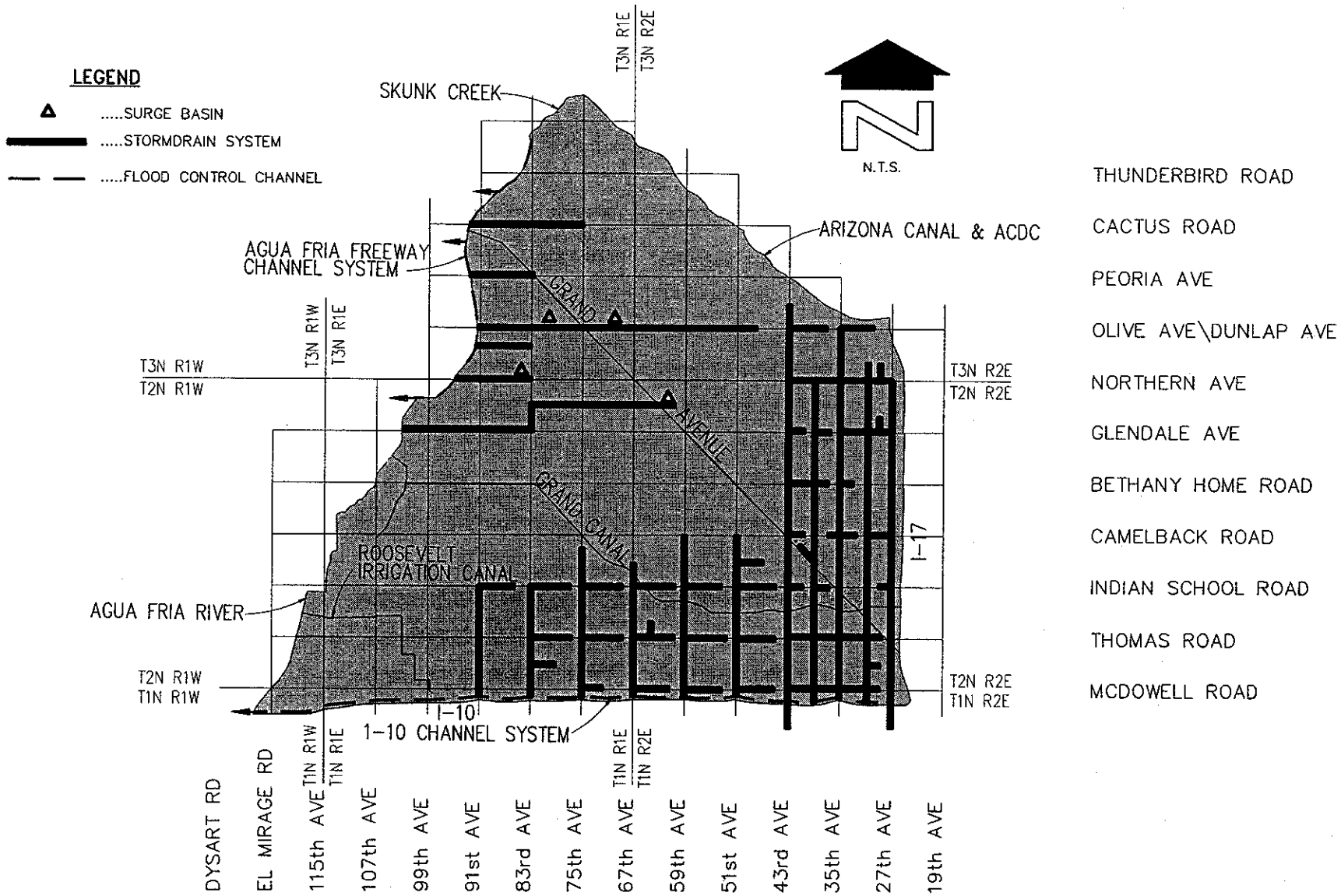

Figure 1-2: SCHEMATIC OF STORMDRAIN SYSTEMS

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2. Previous Studies and Reports

2.1 A Brief Chronology

Even as late as the 1960s, agriculture was the primary land use within the Maryvale ADMS study area (FCDMC, 1962). However, reports of flooding and canal overtopping date back into the 1940s. In the 1960s, the U.S. Army Corps of Engineers documented in detail the storm and flood event of August 16, 1963.

Also in the early 1960s, the District prepared a "Flood Control Survey Report"(FCDMC, 1962) and a "Comprehensive Flood Control Program Report"(FCDMC, 1963). These studies identified and documented the flood hazards along Grand Avenue and the canal systems. The latter of these two studies documents plans for several regional flood control facilities, including the ACDC, the New River Dam, and Adobe Dam. Many of the regional flood control facilities identified in the 1963 study were designed and built in the 1970s, 1980s, and the early 1990s.

In the 1980s, the Arizona Department of Transportation evaluated flood hazards and drainage requirements for the future Outer Loop Highway (WLB, 1987), and future highway improvements along Grand Avenue (Tudor, 1989). Also in the 1980s, the District prepared the "Glendale-Peoria Area Drainage Master Plan"(Camp Dresser and McKee et. al., 1987). This study evaluated flooding hazards and flood control alternatives for an area located within the study area for the Maryvale ADMS. The flood control alternatives evaluated in this study primarily involved networks of storm drain systems.

In the early 1990s, the District sponsored studies that evaluated various storm drain alternatives along Cactus Road, Butler Drive, Northern Avenue, and Orangewood/Glendale Avenue (SFC, 1992) and (WPA, 1995). In 1995, the District had flooding hazards and flood control alternatives evaluated for the flooding area along the Grand Canal, between approximately 35th and 67th Avenues (CVL, 1995). This study evaluated storm drain and retention basin alternatives for relieving flooding along the north side of the canal.

3. Hydrologic Analyses

3.1 HEC-1 Modeling Approach

To meet the primary objectives of the hydrologic modeling component of the Maryvale ADMS project, it was essential to develop a HEC-1 modeling approach that is adaptable. The HEC-1 modeling approach used in this study was developed by first evaluating the drainage patterns within a 3.8-square-mile pilot study area.

The pilot study area selected appeared to be reasonably representative of the highly urbanized portion of the total 100-square-mile study area. Detailed evaluation of the detailed topographic mapping and site conditions for the pilot study area indicated that:

- Arterial streets are very important conveyors of storm water; however, the capacity of the arterial streets will typically be exceeded during the 10 -year event. Stormwater flows will exit typical arterial streets as weir flow down side streets.
- Since the arterial streets are the primary conveyors of stormwater, it is logical to consider the approximately 1-square-mile area bounded by arterial streets as a sub-basin. However, it is important to recognize that stormwater can cross all four sides of the essentially square sub-basin and that the sub-basin does not have a single concentration point. Instead, each sub-basin has a concentration line that extends along the arterial streets along the downstream sides of the essentially square sub-basin.
- The flow patterns within a typical 1-square-mile sub-basin are very complex and can vary significantly during the course of a rainfall event. However, the flow patterns within the sub-basin are primarily controlled by residential and collector street patterns.

Figure 3-1 is a HEC-1 schematic diagram for a typical sub-basin and illustrates the key elements and structure of the HEC-1 modeling approach used in this study. As indicated in Figure 3-1, the computations for a typical sub-basin include the arterial street routes and street capacity diversions corresponding to the arterial streets along the downstream side of the sub-basin. The HEC-1 model for a typical sub-basin includes the following standard elements:

- Hydrograph computations for the sub-basins per the District's methodologies.
- Normal depth channel routings for the arterial streets.
- Normal depth composite-channel routings for flow passing through a sub-basin along multiple streets.
- In some cases, reservoir routings for ponding areas and regional retention basin systems within a sub-basin.
- Hydrograph combines along streets and within sub-basins.

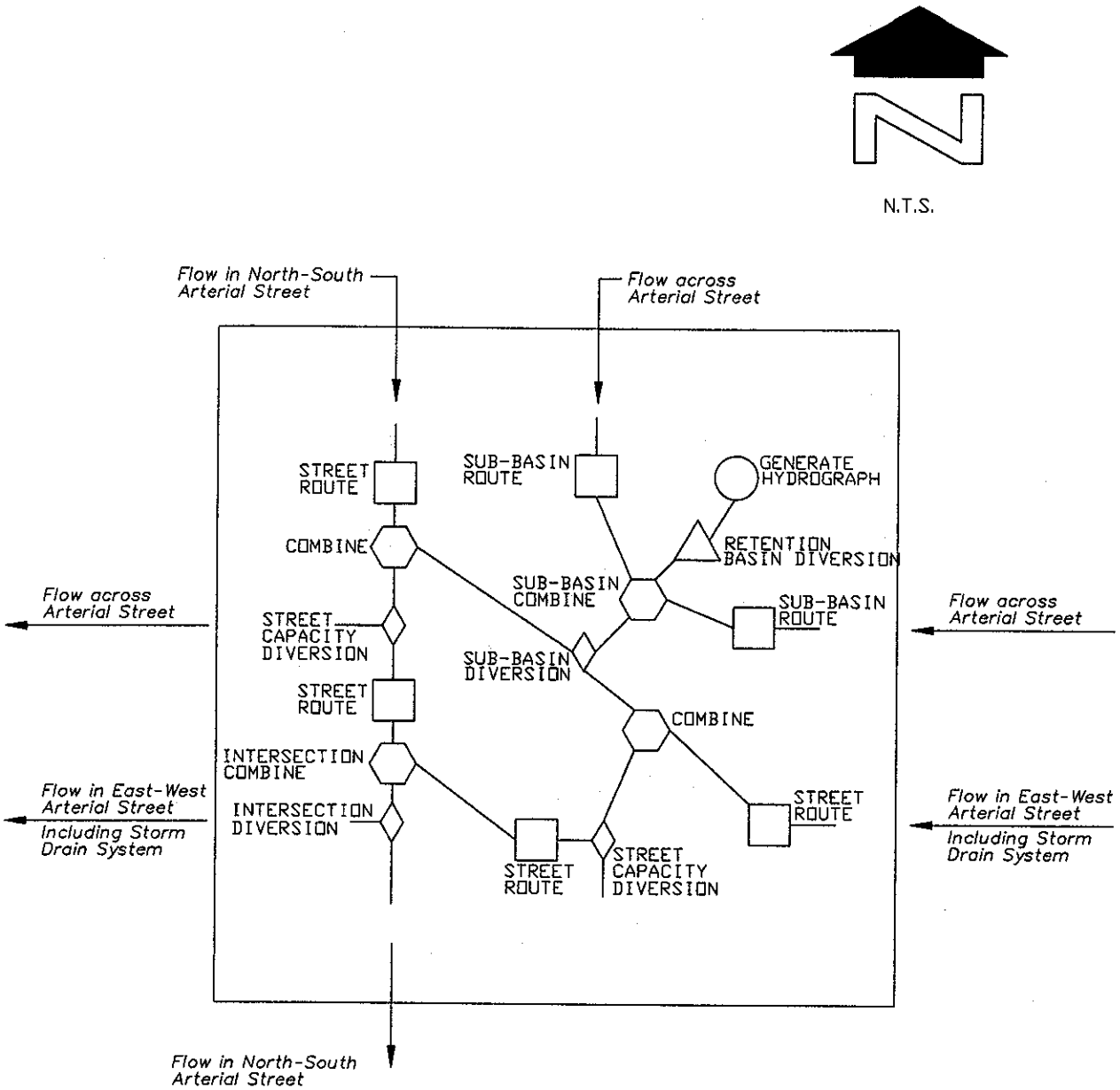

Figure 3-1: HEC-1 SCHEMATIC FOR A ONE SQUARE MILE SUB-BASIN

However, the uniqueness of the proposed HEC-1 modeling approach lies in its structure and the use of various categories of flow diversions. The ability to model flow diversions flexibly was the key for developing a modeling approach for the study area that meets the project objectives. Flow diversions are used in five distinctly different ways:

1. **Street Capacity Diversions.** Street capacity diversions are used to compute the flow being conveyed by a major/arterial street and the flow that exits the arterial street and enters the adjacent sub-basin via both residential and collector streets.

2. **Street Intersection Diversions.** Street intersection diversions are used to distribute the flow passing through an intersection. Intersection diversion rating curves for arterial streets are based on relative street capacities and the capacity of existing or future storm drain systems.

3. **Sub-basin Diversions.** Sub-basin diversions are used to identify the southerly and westerly components of runoff generated within a sub-basin and flow entering a sub-basin from adjacent arterial streets. Rating curves for these diversions are primarily based on easily measured areas; however, some judgment is required.

4. **Retention Basin Diversions.** In cases where a portion of a sub-basin drains to a retention basin or system of retention basins, flow diversions are used to divert the volume of water corresponding to the measured capacities of the retention basins. The percentage of the flow rate that can be diverted (i.e., the DQ record information) corresponds to the percentage of the sub-basin area that drains to the retention basin(s).

5. **Surge Basin Diversions.** The Olive Avenue, Northern Avenue, and Orangewood/Glendale Avenue storm drain systems have surge basins, as indicated in Figure 1-2. Flow diversions are used to simulate the diversion of flow from a storm drain system into a surge basin.

The structure of the HEC-1 model approach is unique in that :

- Flow is routed into and out of a typical 1-square-mile sub-basin across essentially all four sides of the sub-basin.
- Flow is also routed along all four sides of a sub-basin.
- Street intersection and street capacity diversions can be modified to reflect future or existing storm drain systems.

The schematic for the Maryvale ADMS HEC-1 models is shown in Exhibit 1. The computational sequence of the HEC-1 model has been set up to minimize the number of hanging hydrographs and emphasize the east-west streets. Emphasizing or following east-west streets simplifies the task of modifying the model to reflect storm drain alternatives that may extend along the east-west streets. Yet, the structure of the model is such that the computational path for the north-south streets is relatively easy to identify and follow.

As indicated in Exhibit 1, the HEC-1 element names are based on section numbers and street names. A detailed description of the element name nomenclature is provided in Appendix B.

3.2 HEC-1 Input Data Development

3.2.1 General

The input parameters for the Maryvale ADMS HEC-1 models have been measured from or are primarily based on the following sources of data:

- Detailed topographic mapping (i.e., 1"=200' with a contour interval of 1 or 2 feet) prepared by Kenney Aerial Mapping, based on photography flown on March 28, 1994.
- 1990/1991 land use data provided in GIS format by the District.
- Soil type data, based on the *Soil Survey of Maricopa County, Arizona: Central Part* (SCS, 1977), as provided in GIS format by the District.
- NOAA Atlas II precipitation data as documented in *Drainage Design Manual for Maricopa County: Volume I: Hydrology* (FCDMC, Jan. 1995).

The following sections of this report describe the specific sources of data and the techniques used to develop the HEC-1 input data. However; detailed documentation and computation sheets for the various components of the HEC-1 model are provided in the appendix as follows:

Appendix A:	Precipitation Data and Cumulative Area Computations
Appendix B:	Sub-basin Parameters
Appendix C:	Sub-basin Diversions
Appendix D:	Arterial and Composite Street Routes
Appendix E:	Retention Basin and Ponding Area Data
Appendix F:	Street Capacity Diversions
Appendix G:	Street Intersection Diversions
Appendix H:	Storm Drain and Surge Basin Data
Appendix I:	HEC-1 Element Nomenclature, HEC-1 Output and Input Files

3.2.2 Rainfall Event Parameters

3.2.2.1 Precipitation Data

Adjusted point rainfall depths for the 10-year, 6-hour; 100-year, 6-hour; and the 100-year, 24-hour events were computed for the study area. The point rainfall values were computed using the District's DDMS/PREFRE software package and the isopluvial maps, as documented in the *Drainage Design Manual for Maricopa County: Volume I Hydrology* (FCDMC, 1995). The point rainfall depth computations are documented in Appendix A.

3.2.2.2 Rainfall Distributions

Rainfall events with 6- and 24-hour rainfall distributions were evaluated for the study area.

- **6-Hour Rainfall Distributions.** The dimensionless storm patterns documented in the *Drainage Design Manual for Maricopa County: Volume I Hydrology* (FCDMC, 1995), were used in this study.

- **24-Hour Rainfall Distribution.** The SCS Type II distribution was used in this study to model the 100-year, 24-hour event.

3.2.2.3 Multiple versus Single Storm Event

The District's DDMS software allows computation of sub-basin parameters (i.e. Clark Unit Hydrograph Parameters "Tc" and "R") for either "multiple" or "single" storm events. When the single storm option is used, the HEC-1 model has a single point rainfall value and a single rainfall distribution, that corresponds to a specified drainage area. Whereas, the "multiple storm" HEC-1 model uses point rainfall values and rainfall distributions, from the multiple point rainfall values and distributions listed in the HEC-1 data set, based on the drainage area specified for each sub-basin.

The multiple storm option has been used to model the general "existing conditions." However, there may be applications of the basic Maryvale ADMS HEC-1 Model, where the single storm option may be more appropriate. Therefore, the DDMS data for the study area is given on diskette in Appendix I.

3.2.2.4 Cumulative Area Computations

When hydrographs generated from diverts are combined, HEC-1 requires a drainage area specified on the HC record. This area is used to compute an interpolated hydrograph for the "combined hydrograph," based on the data given in the JD records (HEC,1990).

For this study, areas have been computed for each combine node based on the total area of all the sub-basins located upstream of the combine node. These "Cumulative Area Computations" , given in Appendix A, list the areas and names for all of the upstream sub-basins for each combine node.

The drainage area specified for each of the combine nodes represents the maximum drainage area that may contribute flow to the combine node. It is recognized that a combine node may only receive a small fraction or none of the runoff hydrograph for some of the upstream sub-basins, depending upon the magnitude of the rainfall event being modeled, street capacities, storm drain capacities, and other minor factors.

3.2.3 Sub-basin Parameters

3.2.3.1 Sub-basin Boundaries

As indicated in Figure 1-1, the study area encompasses approximately 100 square miles. As shown in Exhibits 1 and 2, the study area has been delineated into 141 sub-basins in a manner consistent with the HEC-1 modeling approach described in Section 3.1 of this report. The sub-basin parameter data collected for the study area is documented in detail in Appendix B and provided on diskette (DDMS format) in Appendix I.

3.2.3.2 Land Use and Soil Data

The District provided land use and soil map data in GIS format. GIS software was used to compute the sub-basin areas, the area of each soil unit in each sub-basin, and the area of each land use category in each sub-basin. This information was used as input data for the DDMS software. The various parameters assigned to each land use type are as given in

Table 3-1. The percent impervious specified for each land use (i.e. RTIMP) was assumed to be 100% effective.

3.2.3.3 Unit Hydrograph

The Clark Unit Hydrograph option in HEC-1 was used for all sub-basins. The HEC-1 input parameters (UA and UC records) were generated using the District's DDMS software. The DDMS sub-basin parameter data for the study area are given in Appendix B

3.2.3.4 Precipitation Losses

The Green-Ampt precipitation loss option was used for all sub-basins. Green-Ampt parameters for each sub-basin were computed using the DDMS software, based on the land use and soil data.

3.2.3.5 Time of Concentration Flow Paths

Time of concentration flow path data was determined for each sub-basin using the detailed topographic mapping. The time of concentration flow paths for each sub-basin are shown in Exhibit 2.

TABLE 3-1
Land Use Parameters

Land Use Type	DTHETA Condition	% Veg. Cover	RTIMP Percent	IA Inches	Kn	Kb Roughness Type
Desert	Dry	25	0	0.350	0.030	Low
Open	Dry	10	0	0.200	0.020	Min
VLDR	Normal	30	5	0.300	0.050	Hi
LDR	Normal	50	15	0.300	0.050	Hi
MDR	Normal	50	30	0.250	0.050	Hi
MFR	Normal	50	45	0.250	0.050	Hi
Ind	Normal	60	55	0.150	0.030	Min
Comm	Normal	75	50	0.100	0.020	Min
Park	Normal	90	10	0.200	0.100	Hi
Rowcrop	Normal	85	0	0.500	0.100	Hi
School1	Normal	80	45	0.290	0.050	Hi

3.2.4 Sub-basin Diversions

Within the study area, the slope of the land is generally from the northeast to the southwest at approximately 0.4 percent. Hence, stormwater flowing within a typical sub-basin is directed and conveyed to the arterial streets along the west and south sides of the sub-basin, by residential and collector streets. That is, some of the stormwater is conveyed west to the

north-south arterial street, by residential and collector streets, while the remainder of the stormwater is conveyed south to the east-west arterial street by residential and collector streets.

Sub-basin diversions are used to separate the hydrograph, for the stormwater within a sub-basin, into a southerly and a westerly component. The hydrograph for the stormwater within a sub-basin includes runoff generated within a sub-basin and typically the flow entering a sub-basin from the adjacent arterial streets.

Sub-basin diversion data have been computed based on the drainage patterns within each of the sub-basins. The drainage patterns within the sub-basins have been evaluated using the topographic mapping for the study area and site observations. The sub-basin diversion data computations are documented in Appendix C.

3.2.5 Arterial and Sub-basin Street Routes

3.2.5.1 Arterial Street Routes

The Normal-Depth Channel Routing option in HEC-1 is used for arterial street routes. The input data for arterial street routes are based on a typical arterial street section and measured street slopes and reach lengths. Detailed documentation for each arterial street route is provided in Appendix D.

3.2.5.2 Sub-basin Street Routes

The Normal-Depth Channel Routing option in HEC-1 is used for sub-basin street routes. The input data for sub-basin street routes was based on a composite section and measured street slopes and reach lengths. Detailed documentation for each sub-basin street route is provided in Appendix D.

3.2.6 Retention Basin and Ponding Area Data

3.2.6.1 Retention Basin Data

In cases where a portion of a sub-basin drains to a retention basin or system of retention basins, flow diversions are used to divert the volume of water corresponding to the measured capacities of the retention basins. The percentage of the flow rate that can be diverted (i.e., the DQ record information) corresponds to the percentage of the sub-basin area that drains to the retention basin(s). The retention basin computation sheets for each sub-basin are given in Appendix E.

3.2.6.2 Ponding Area Data

During significant rainfall events, stormwater ponds at several locations along the upstream side of the Roosevelt Canal, the Grand Canal, and Grand Avenue and/or the adjacent railroad embankment. Storage volume, ponding elevation, and outfall data were computed based on the detailed topographic mapping and supplemental surveyed spot elevations. The ponding area computation sheets are given in Appendix E.

3.2.6.3 Maryvale Mitigation Area

Within the Maryvale Mitigation Area study limits, the ponding areas have been modeled based primarily on the data documented by CVL (1995) ; however, this data has been

revised to reflect preliminary analyses of the conveyance capacity along the north side of the Grand Canal and additional storm drain capacity computations. The data used to develop the HEC-1 input data for the ponding areas and corresponding diversions are provided Appendix E and Appendix H.

3.2.7 Street Capacity Diversions

Street capacity diversions are used to compute the flow being conveyed by arterial street and the flow that exits the arterial street and enters the adjacent sub-basin via both residential and collector streets. Two general cases of street capacity diversions have been evaluated. The typical case (Case "1") is when flow exits the arterial street as weir flow into the side streets. Along most arterial streets, the side streets have been designed with a high point or grade break near the intersection. This prevents stormwater flowing in the gutter of the arterial from being directly conveyed into the side street. However, a special case, that occurs at several locations, is when stormwater can exit the arterial street directly into the side street. In this case, normal depth calculations are use to develop rating data for both the arterial and side street(s). As indicated in the detailed documentation given in Appendix F, spreadsheets have been used to compute the rating curves for the street capacity diversions based on easily measured physical parameters and future/existing storm drain system capacities.

3.2.8 Street Intersection Diversions

Street intersection diversions are used to distribute the flow passing through an intersection. Intersection diversion rating curves for arterial streets are based on relative street capacities and the capacity of existing or future storm drain systems. Two general types of street intersections have been evaluated. *Type A--Arterial Street Intersections* are the typical type of arterial street intersections within the study area. The characteristics of a Type A intersection are as follows:

- Continuous pavement crowns in both directions; that is, valley gutters are **not** used to direct stormwater through the intersection.
- Street slopes in the vicinity of the intersection are relatively mild (i.e., less than 1%).
- Intersection is subject to low velocity inundation.

The special case or *Type B--Arterial Street Intersections* refers to the condition where the pavement crown is continuous in only one direction through the intersection. In this case, the intersection diversion is based on normal depth and weir flow computations. The intersection diversion data collected for the study area are documented in detail in Appendix G.

3.2.9 Storm Drain Systems

3.2.9.1 Existing Storm Drain Systems within the Cities of Peoria and Glendale

There are three major storm drain systems in the northern portion of the study area, as shown schematically in Figure 1-2. The Cactus Road storm drain system currently extends from approximately 67th Avenue west to 83rd Avenue. The Cactus Road storm drain system will be extended to the ADOT channel system along the east side of the Agua Fria Freeway, with an expected completion date of July 1997. The Olive Avenue storm drain

system extends from approximately 51st Avenue west to the ADOT channel system along the east side of the Agua Fria Freeway. The Olive Avenue storm drain system has two surge basins located at approximately 71st Avenue and 83rd Avenue. The Olive Avenue storm drain system has a 10-year event design capacity The Peoria Avenue storm drain system extends from approximately Grand Avenue to the Agua Fria Freeway channel system.

The Peoria Avenue, Cactus Road, and Olive Avenue storm drain systems have been incorporated into the HEC-1 model, by modification of the appropriate street intersection and street capacity diversion rating curves. The Cactus Road storm drain system has been modeled assuming the system is complete and outfalls to the Agua Fria Freeway Channel. Storm drain capacity data for these systems are based on the capacities given in the design reports for these storm drain systems. The storm drain capacity data and detailed documentation describing how the storm drain systems are reflected in the HEC-1 model are provided in Appendix H.

3.2.9.2 Existing Storm Drain Systems within the City of Phoenix

As shown schematically in Figure 1-2, the City of Phoenix has a complex system of storm drains that convey stormwater from as far north as Northern Avenue south to the Salt River. Primary components of this system include storm drains along 27th, 35th, 39th, 43rd, 51st, 67th, 75th, 83rd, and 91st Avenues. The design capacities for these storm drain systems have been estimated to be between the 2- and 10-year event.

The capacities of the storm drain systems located within the City of Phoenix have been estimated based on pipe slopes and diameters, assuming pipe full conditions. The capacity computations for these storm drain systems are given in Appendix H.

3.2.9.3 Future Storm Drain Systems

Several future storm drain systems were included in the HEC-1 model for "existing conditions." These future systems include storm drains along Butler Drive, Northern Avenue, and Orangewood/Glendale Avenues, as indicated in Figure 1-2. The storm drain capacity data for these storm drain systems are given in Appendix H.

4. Study Results and Conclusions

4.1 Computed Peak Discharges

The computed peak discharges for the 10-year, 6-hour event are summarized in Exhibit 5. As indicated in Exhibit 5, the structure of the HEC-1 model results in the computed runoff being distributed amongst the arterial streets , the residential/collector streets, and storm drain systems. It is important to note that the HEC-1 model does not concentrate extremely large flows in the arterial streets. Based on site observations and the topographic mapping, the distribution of the runoff amongst the HEC-1 flow paths appears to be consistent with the anticipated flooding patterns.

(To be completed as the study proceeds.)

4.2 Ponding Areas

(To be completed as the study proceeds.)

4.3 Comparison to Previous Studies

(To be completed as the study proceeds.)

5. References

Camp Dresser and McKee Inc. and James M. Montgomery Consulting Engineers, Inc. "Glendale-Peoria Area Drainage Master Plan," Prepared for the Flood Control District Of Maricopa County, May 1987.

Coe and Van Loo Consultants, Inc., "Maryvale Area, Flooding Mitigation Project, Phase I, FCD 93-34, Pre-Design Report," Prepared for the Flood Control District Of Maricopa County, January 1996.

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Lee L. L., Note from L. L. Lee to Mr. H. J. Lawson Regarding the "Desert Flood Of August 3, 1943," August 28, 1943.

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Tudor Engineering Company, "Project Hydrology Report, Volume 1, Existing Conditions, Grand Avenue From New River to 7th Ave and Van Buren," Prepared for the Arizona Department of Transportation, February 1989.

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WLB Group, Inc., "Offsite Drainage Concept Study, Part A - Offsite Hydrology, Outer Loop Freeway (Buckeye Road To Northern Avenue," Prepared for the Arizona Department of Transportation, Revised December 1987.

Yost and Gardner Engineers, "Flood Control Survey Report for Northeastern Maricopa County, Area III," Prepared for the Flood Control District of Maricopa County, 1963.

Appendix A: Precipitation Data and Cumulative Area Computations

*** O U T P U T D A T A ***

REVISED JUNE 1988 TO UPDATE COMPUTATION OF SHORT-DURATION VALUES

PRECIPITATION FREQUENCY VALUES FOR Maryvale ADMS,

PRIMARY ZONE NUMBER= 7

SHORT-DURATION ZONE NUMBER= 8

OPTION NUMBER 2 --- INPUT OF 12 PRECIP VALUES

ELEVATION 1200 FEET

POINT VALUES

RETURN PERIOD

DURATION	2-YR	5-YR	10-YR	25-YR	50-YR	100-YR	500-YR	
5-MIN	.35	.44	.50	.59	.66	.72	.88	5-MIN
10-MIN	.52	.66	.76	.90	1.00	1.11	1.36	10-MIN
15-MIN	.64	.83	.96	1.14	1.28	1.42	1.75	15-MIN
30-MIN	.84	1.11	1.29	1.54	1.73	1.93	2.38	30-MIN
1-HR	1.03	1.37	1.59	1.92	2.16	2.41	2.98	1-HR
2-HR	1.10	1.47	1.73	2.08	2.36	2.63	3.27	2-HR
3-HR	1.14	1.55	1.82	2.20	2.49	2.78	3.45	3-HR
6-HR	1.23	1.68	1.99	2.41	2.73	3.06	3.81	6-HR
12-HR	1.30	1.82	2.16	2.64	3.01	3.37	4.22	12-HR
24-HR	1.37	1.95	2.34	2.87	3.28	3.69	4.63	24-HR

* IF YOUR SITE IS IN ARIZONA OR NEW MEXICO, PLEASE CONSULT THE FOLLOWING PAPER FOR REVISED DEPTH-AREA VALUES:

DEPTH-AREA RATIOS IN THE SEMI-ARID SOUTHWEST UNITED STATES

NOAA TECHNICAL MEMORANDUM NWS HYDRO-40

ZEHR AND MYERS

AUGUST 1984

INPUT DATA

PROJECT NAME=Maryvale ADMS,

ZONE= 7 SHORT-DURATION ZONE= 8

LATITUDE= .00 LONGITUDE= 100.00 ELEVATION= 1200

12-VALUE PRECIPITATION OPTION

PRECIPITATION VALUE:

1.20	1.70
2.00	2.40
2.80	3.00
1.40	2.00
2.30	2.80
3.20	3.80

SUBJECT Maryvale ADMS

BY DWD DATE 1/96

SHEET NO. 1 OF 1

PROJECT NO. 132586

Point Rainfall Values from Isopluvials, NOAA ATLAS 2, Vol VIII as reproduced in the Maricopa Co's Manual

	6 hr	24 hr
2yr	1.20" ✓	1.40" ✓
5yr	1.70" ✓	2.00" ✓
10yr	2.00" ✓	2.30" ✓
25yr	2.40" ✓	2.80" ✓
50yr	2.80" ✓	3.20" ✓
100yr	3.00" ✓	3.80" ✓

FORM 3B

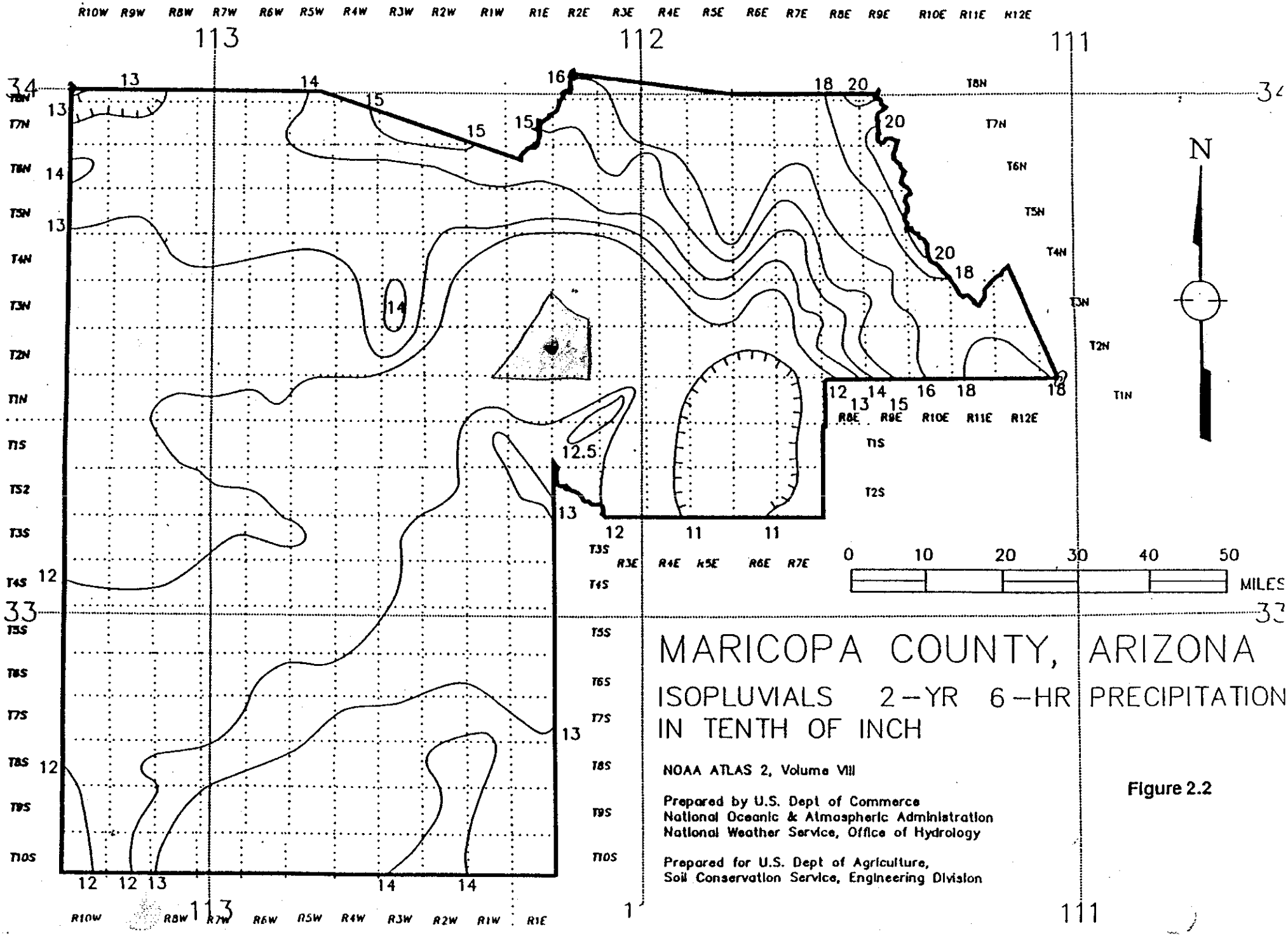
MARICOPA COUNTY, ARIZONA
ISOPLUVIALS 2-YR 6-HR PRECIPITATION
IN TENTH OF INCH
NOAA ATLAS 2, Volume VIII
Prepared by U.S. Dept of Commerce
National Oceanic & Atmospheric Administration
National Weather Service, Office of Hydrology
Prepared for U.S. Dept of Agriculture,
Soil Conservation Service, Engineering Division
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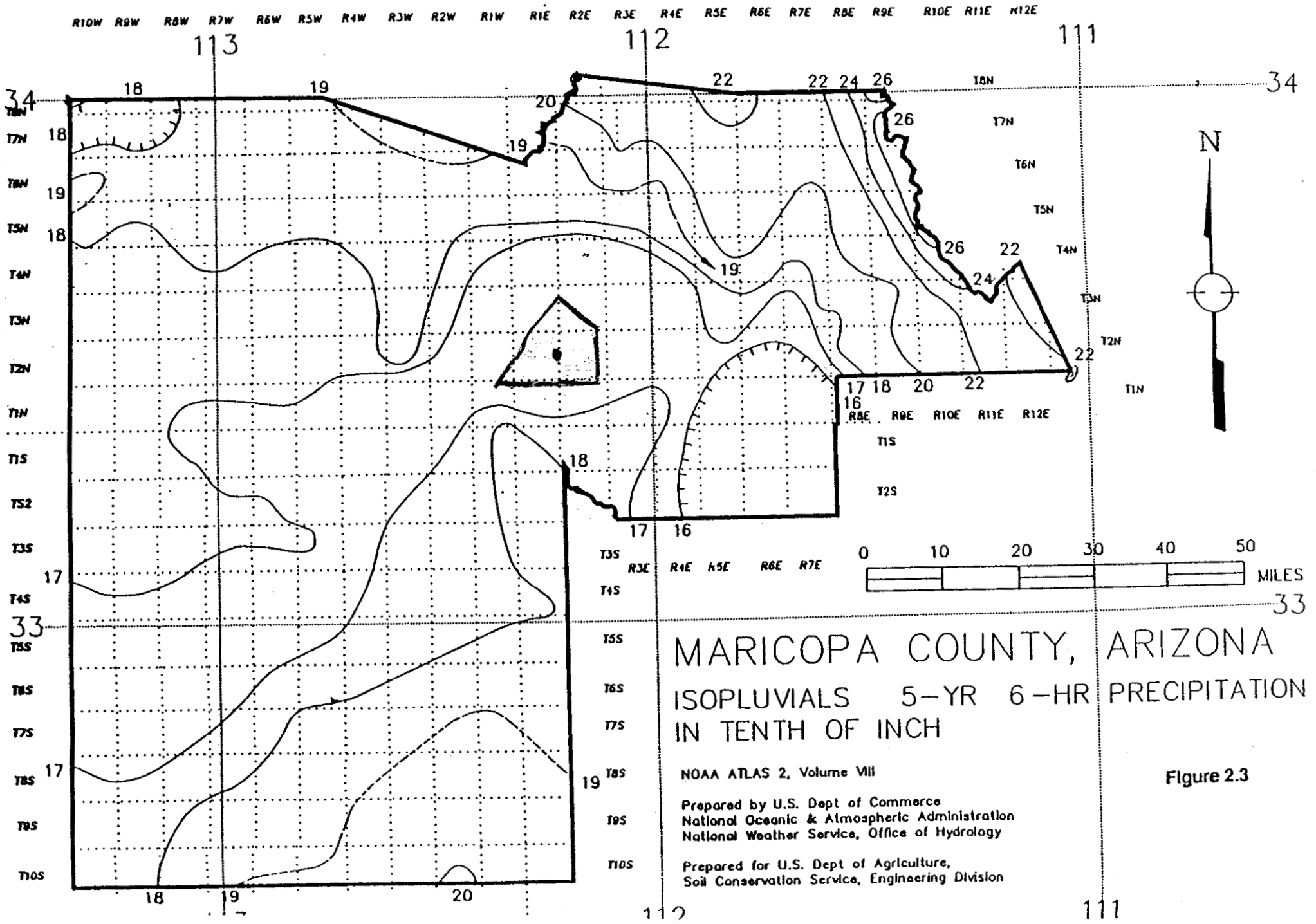
Figure 2.2



MARICOPA COUNTY, ARIZONA

ISOPLUVIALS 5-YR 6-HR PRECIPITATION IN TENTH OF INCH

NOAA ATLAS 2, Volume VIII

Prepared by U.S. Dept of Commerce
National Oceanic & Atmospheric Administration
National Weather Service, Office of Hydrology

Prepared for U.S. Dept of Agriculture,
Soil Conservation Service, Engineering Division

Figure 2.3

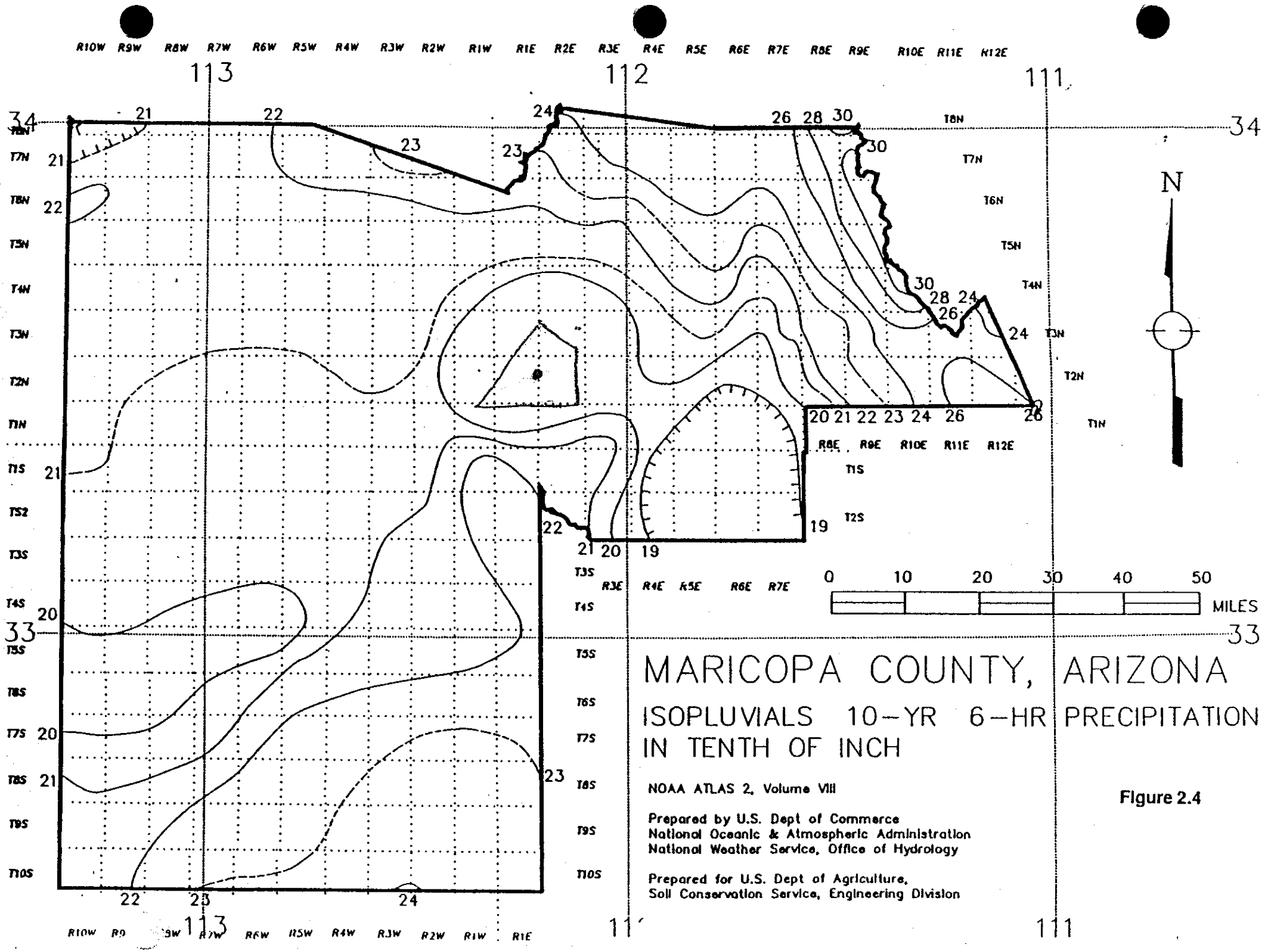

MARICOPA COUNTY, ARIZONA
ISOPLUVIALS 10-YR 6-HR PRECIPITATION
IN TENTH OF INCH
NOAA ATLAS 2, Volume VIII
Prepared by U.S. Dept of Commerce
National Oceanic & Atmospheric Administration
National Weather Service, Office of Hydrology
Prepared for U.S. Dept of Agriculture,
Soil Conservation Service, Engineering Division
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Figure 2.4

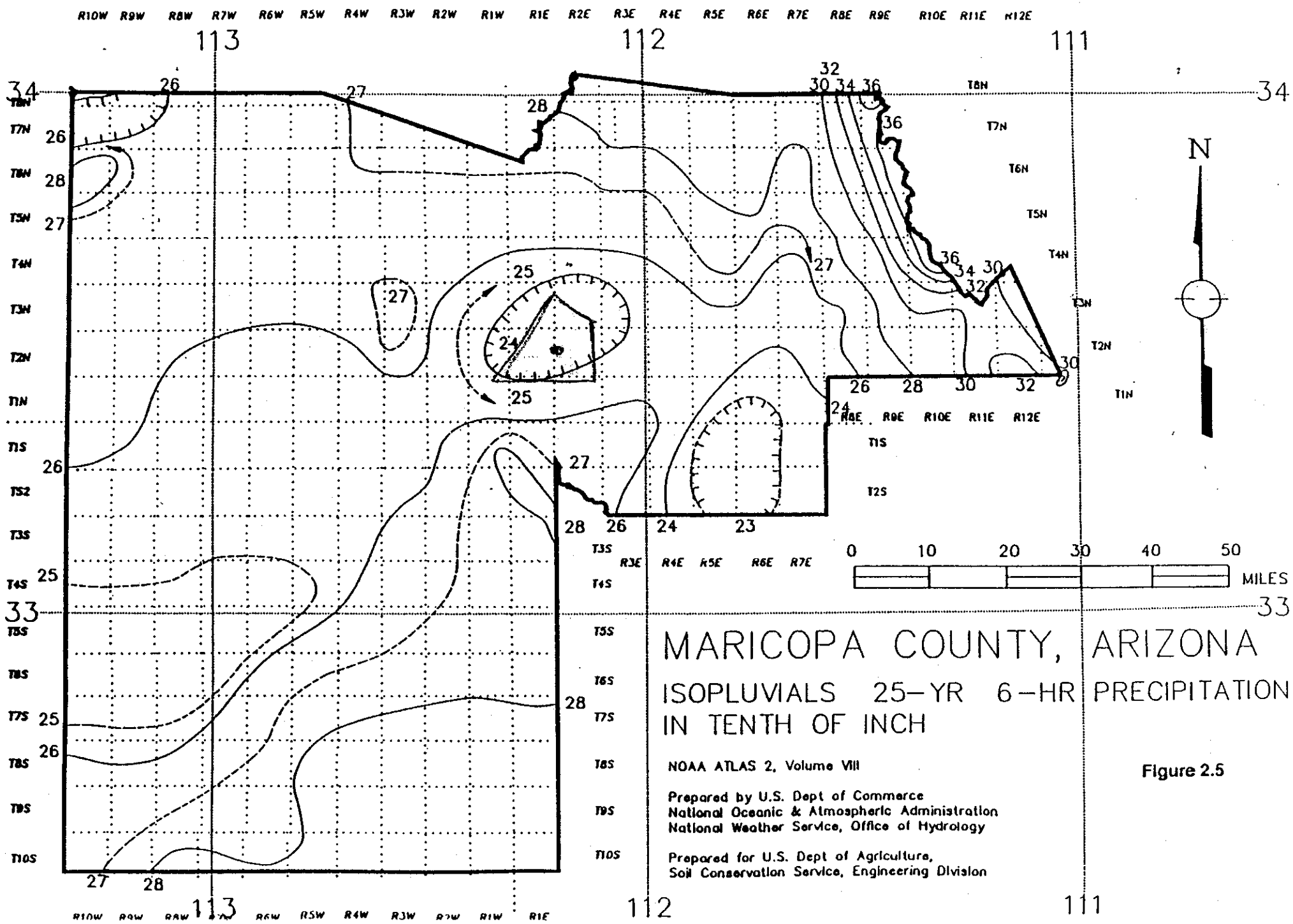
MARICOPA COUNTY, ARIZONA
ISOPLUVIALS 25-YR 6-HR PRECIPITATION
IN TENTH OF INCH
NOAA ATLAS 2, Volume VIII
Prepared by U.S. Dept of Commerce
National Oceanic & Atmospheric Administration
National Weather Service, Office of Hydrology
Prepared for U.S. Dept of Agriculture,
Soil Conservation Service, Engineering Division
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Figure 2.5

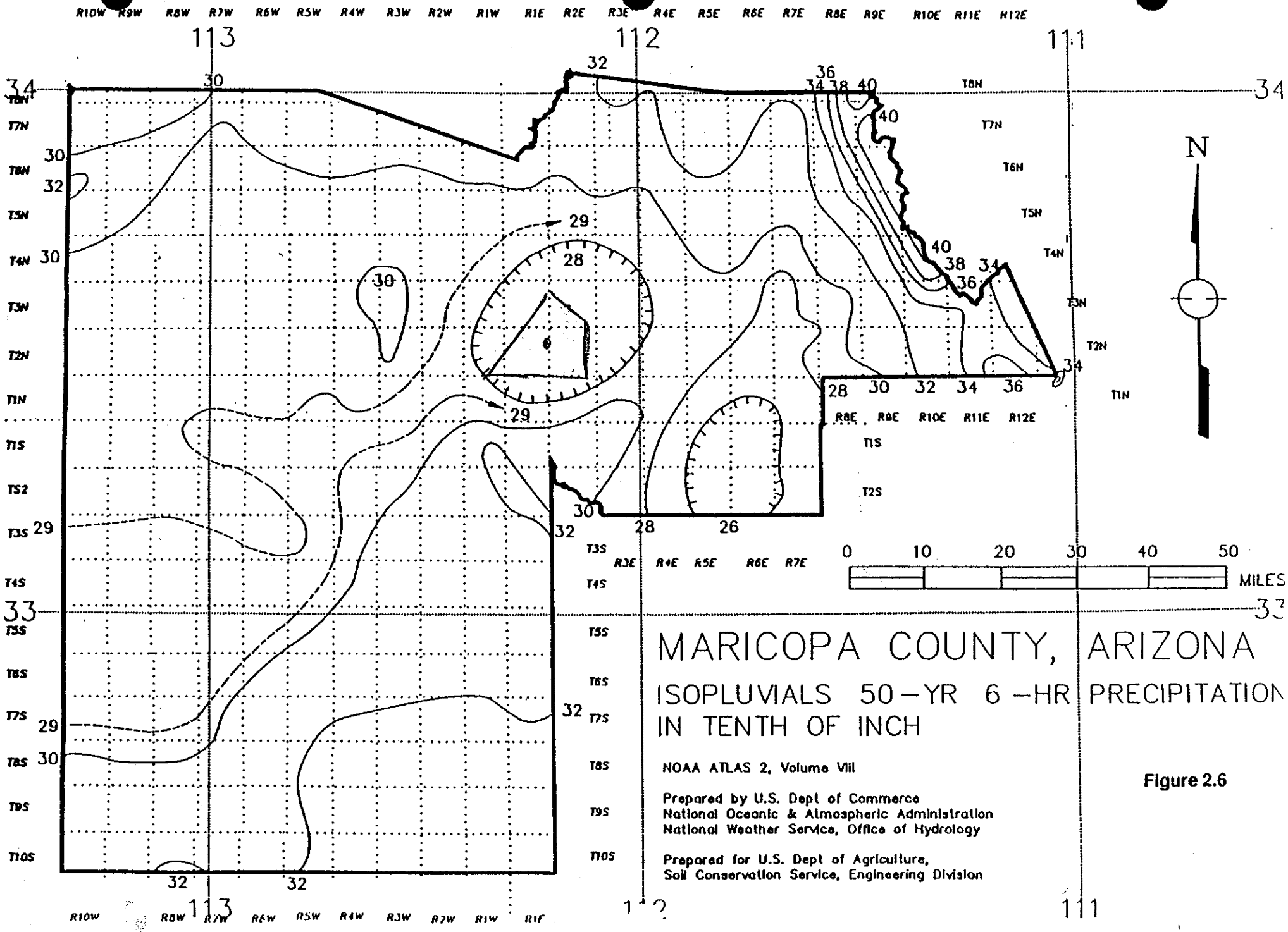
MARICOPA COUNTY, ARIZONA
ISOPLUVIALS 50-YR 6-HR PRECIPITATION
IN TENTH OF INCH
NOAA ATLAS 2, Volume VIII
Prepared by U.S. Dept of Commerce
National Oceanic & Atmospheric Administration
National Weather Service, Office of Hydrology
Prepared for U.S. Dept of Agriculture,
Soil Conservation Service, Engineering Division
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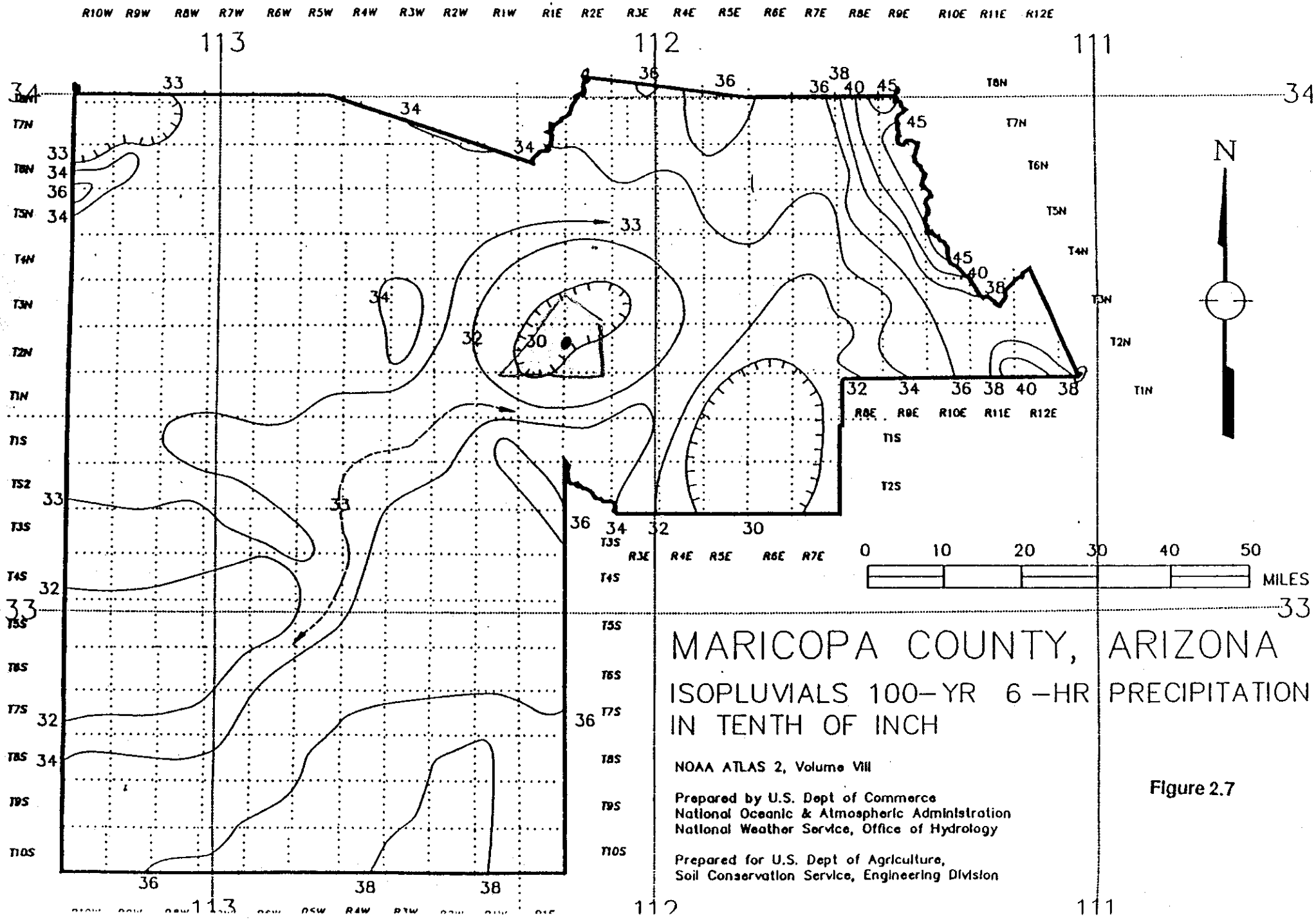
Figure 2.6



MARICOPA COUNTY, ARIZONA

ISOPLUVIALS 100-YR 6-HR PRECIPITATION IN TENTH OF INCH

NOAA ATLAS 2, Volume VIII

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National Oceanic & Atmospheric Administration
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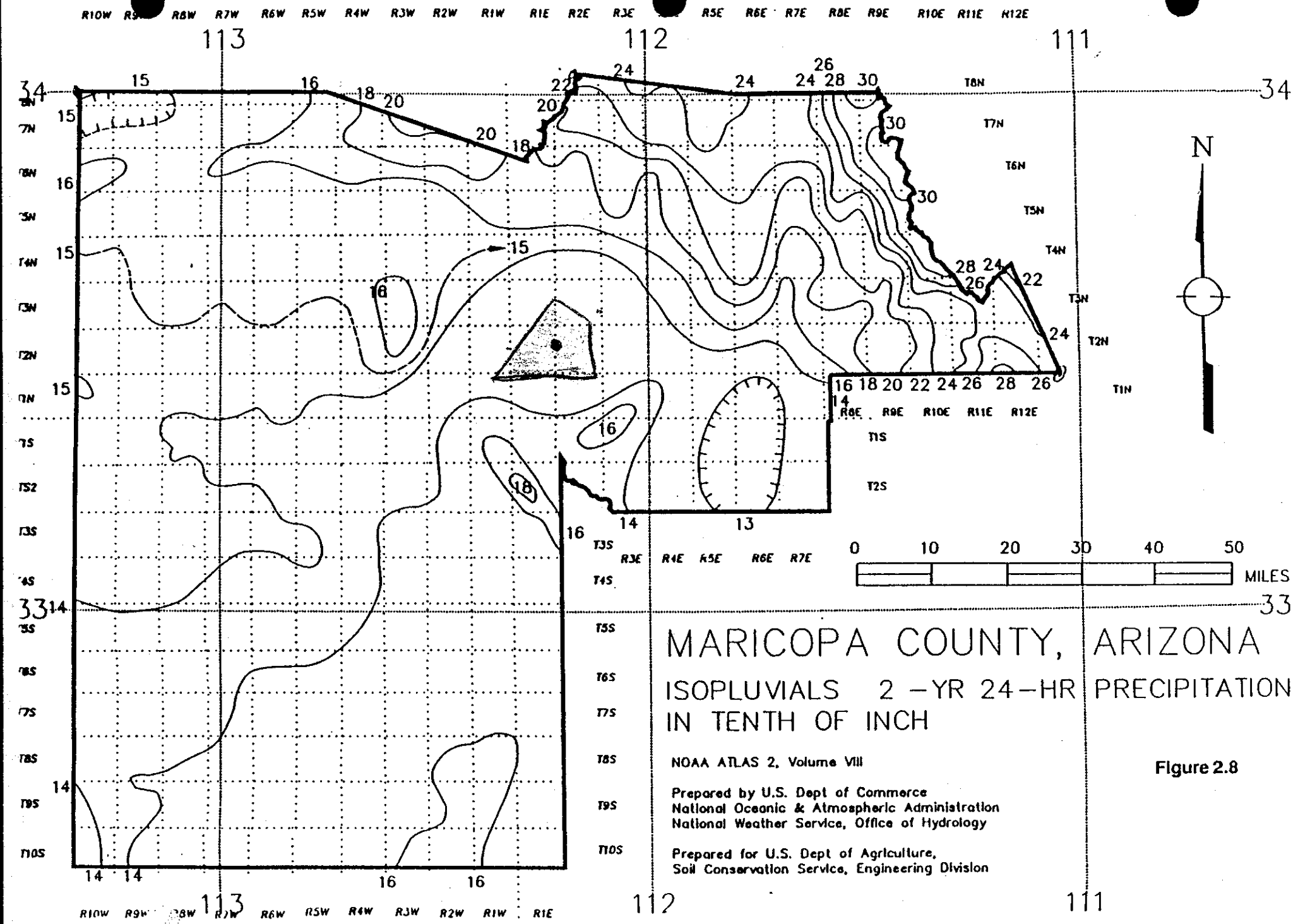
Figure 2.7


MARICOPA COUNTY, ARIZONA
ISOPLUVIALS 2 -YR 24-HR PRECIPITATION
IN TENTH OF INCH
NOAA ATLAS 2, Volume VIII
Prepared by U.S. Dept of Commerce
National Oceanic & Atmospheric Administration
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Prepared for U.S. Dept of Agriculture,
Soil Conservation Service, Engineering Division
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Figure 2.8

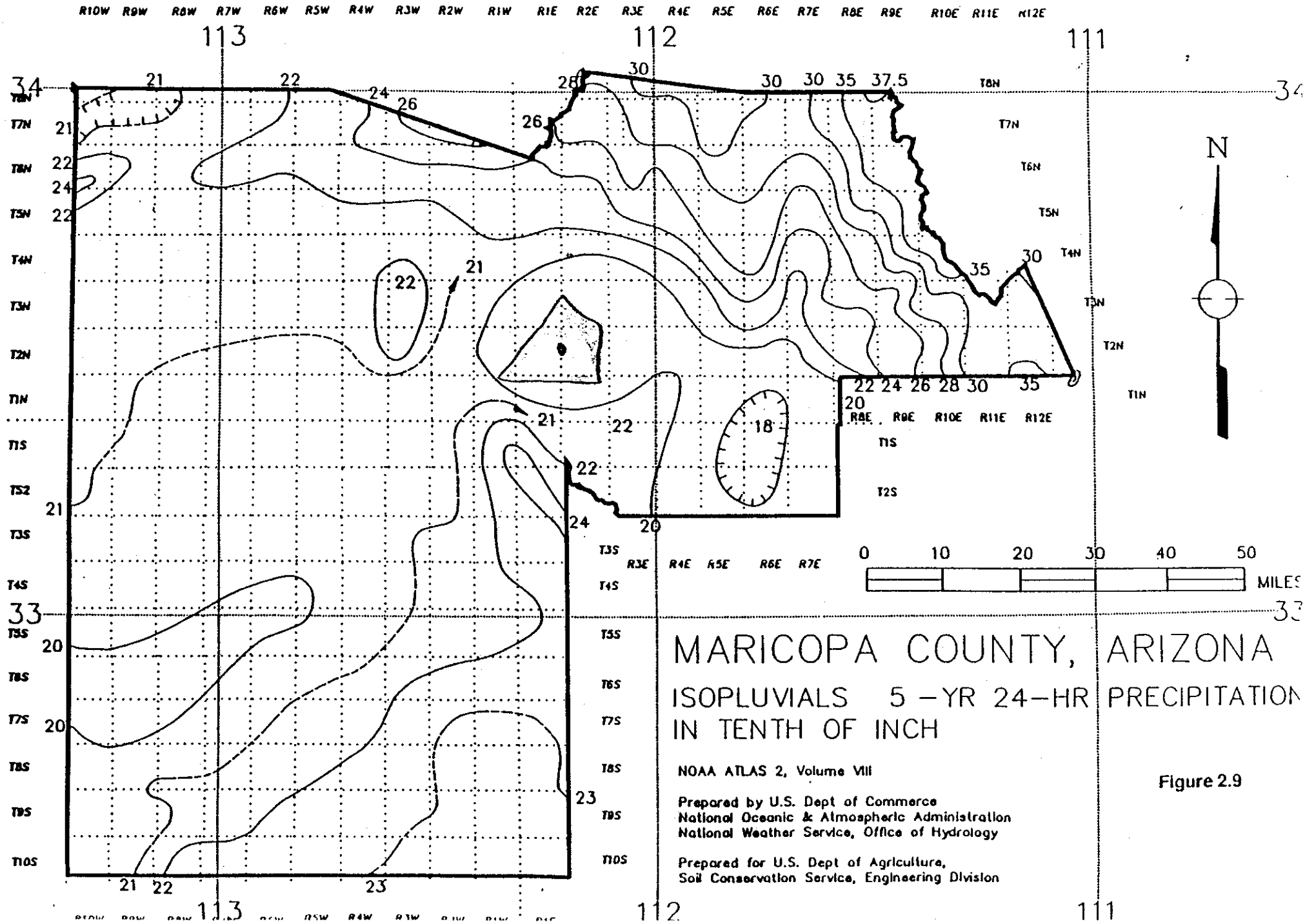
MARICOPA COUNTY, ARIZONA
ISOPLUVIALS 5 -YR 24-HR PRECIPITATION
IN TENTH OF INCH
NOAA ATLAS 2, Volume VIII
Prepared by U.S. Dept of Commerce
National Oceanic & Atmospheric Administration
National Weather Service, Office of Hydrology
Prepared for U.S. Dept of Agriculture,
Soil Conservation Service, Engineering Division
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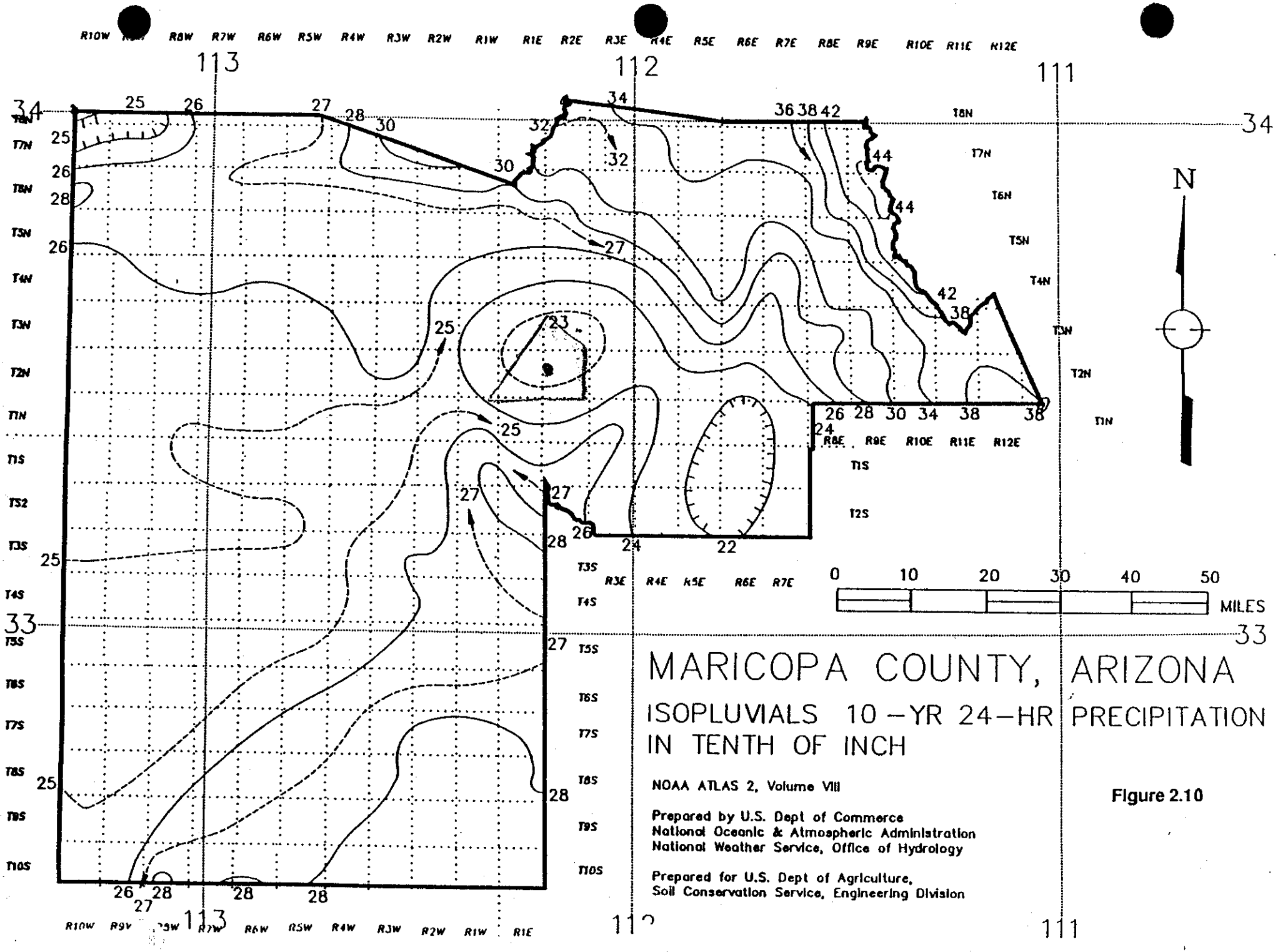
Figure 2.9



MARICOPA COUNTY, ARIZONA

ISOPLUVIALS 10-YR 24-HR PRECIPITATION IN TENTH OF INCH

NOAA ATLAS 2, Volume VIII

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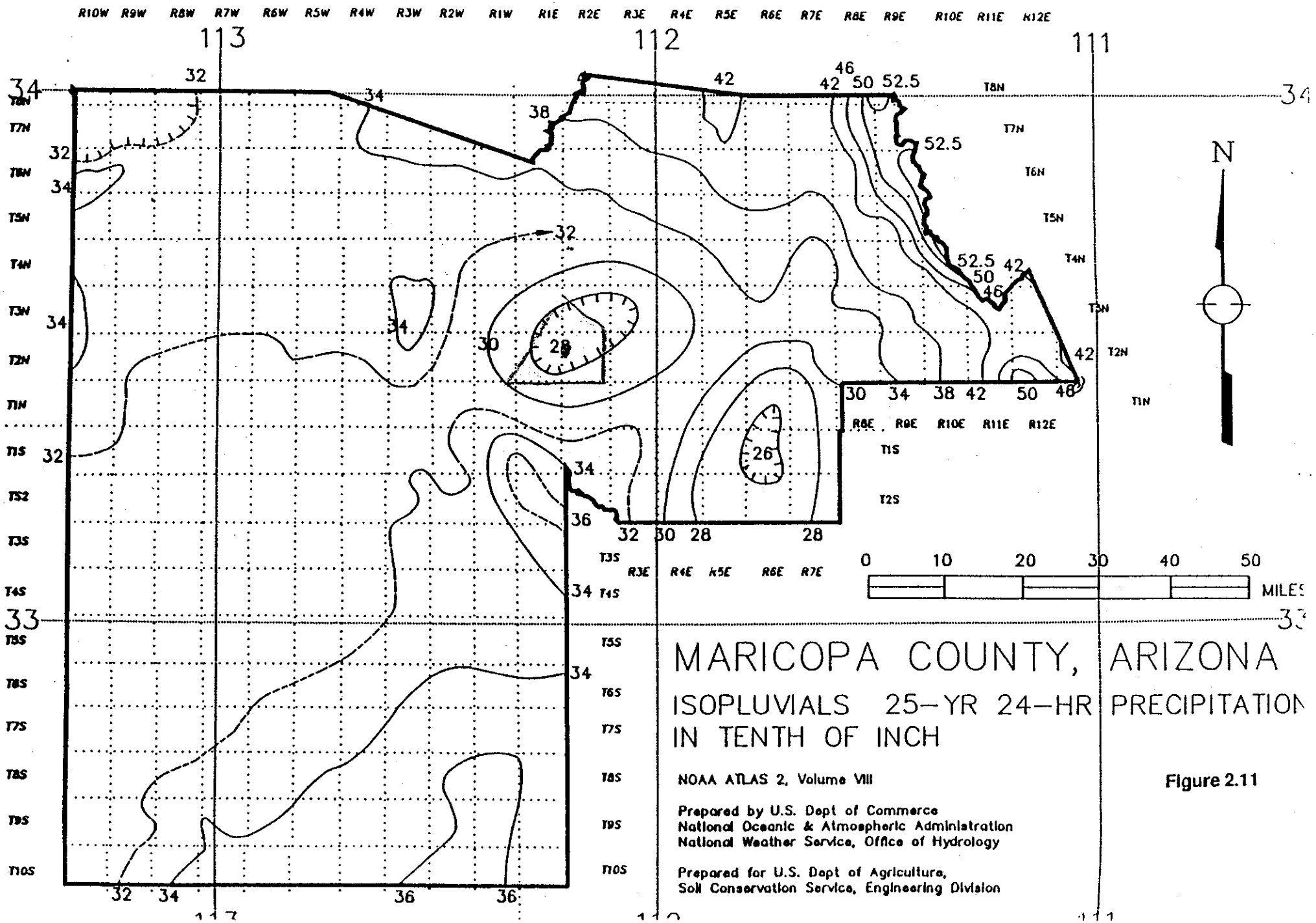
National Oceanic & Atmospheric Administration
National Weather Service, Office of Hydrology

Prepared for U.S. Dept of Agriculture,
Soil Conservation Service, Engineering Division

Figure 2.10


MARICOPA COUNTY, ARIZONA
ISOPLUVIALS 25-YR 24-HR PRECIPITATION
IN TENTH OF INCH
NOAA ATLAS 2, Volume VIII
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Prepared for U.S. Dept of Agriculture,
Soil Conservation Service, Engineering Division
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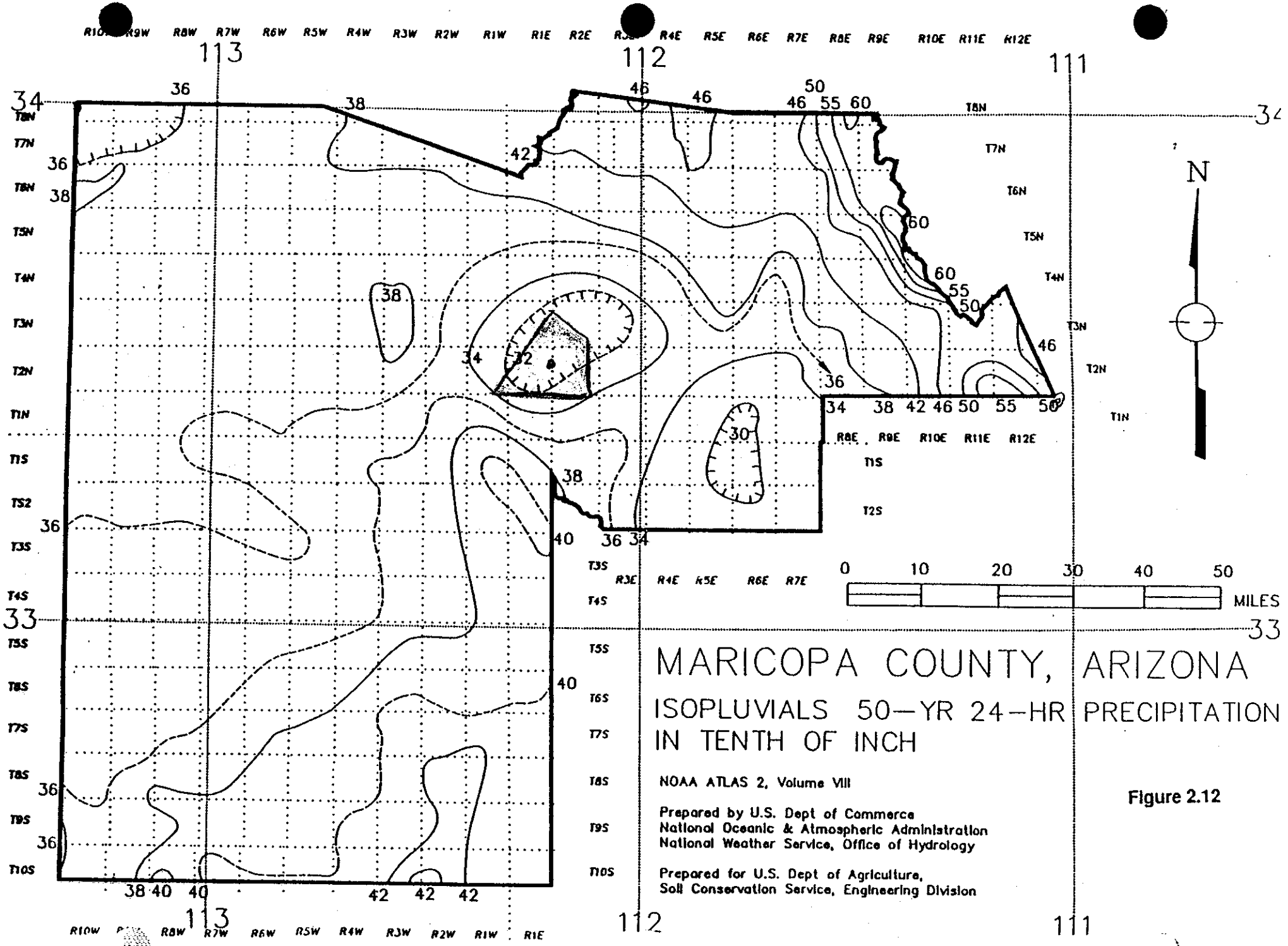
Figure 2.11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IN TENTH OF INCH
NOAA ATLAS 2, Volume VIII
Prepared by U.S. Dept of Commerce
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Prepared for U.S. Dept of Agriculture,
Soil Conservation Service, Engineering Division
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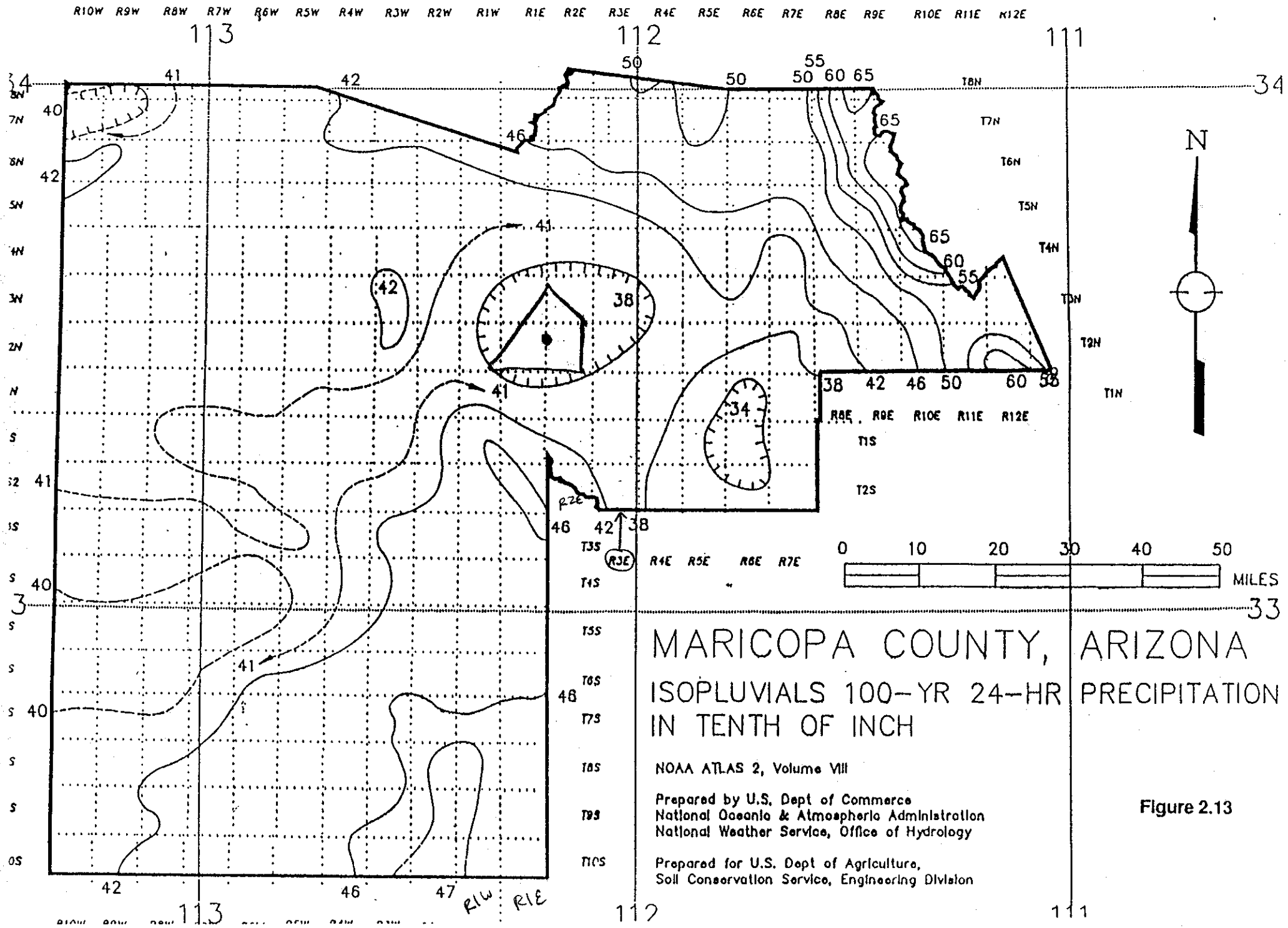
Figure 2.12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MARICOPA COUNTY, ARIZONA
ISOPLUVIALS 100-YR 24-HR PRECIPITATION
IN TENTH OF INCH
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Prepared for U.S. Dept of Agriculture,
Soil Conservation Service, Engineering Division

Figure 2.13

Cumulative Area Computations

Cumulative Area Computations

Computational Methodology

Background: When hydrographs generated from diverts are combined, HEC-1 requires a drainage area specified on the HC record. This area is used to compute an interpolated hydrograph for the "combined hydrograph," based on the data given in the JD records (HEC,1990).

Premise: For this study, drainage areas have been computed for each combine node based on the total area of all the sub-basins located upstream of the combine node

Procedure:. The cumulative area spreadsheet was used to specify the upstream sub-basins and compute the total upstream drainage area.

Input Parameters: Sub-basin areas as computed using GIS software.

Main Assumptions:

- The drainage area specified for each of the combine nodes represents the maximum drainage area that may contribute flow to the combine node. It is recognized that a combine node may only receive a small fraction or none of the runoff hydrograph for some of the upstream sub-basins, depending upon the magnitude of the rainfall event being modeled, street capacities, storm drain capacities, and other minor factors.

CH2M HILL

Subject: **Maryvale ADMS: Area Tabulations for HEC-1 Combines**

By: **J. Geisbush**
Checked: **D. Dust**
Project No.: **132586**

THUNDERBIRD RD

Sub-Basin ID	Sub-Basin Area (mi^2)	HEC-1 Combine Node IDs											
			CTB1		CTB75		CTB2		CTB-83		C11-31		CADOT1
2-31	0.2878					1	0.288	1	0.288	1	0.288	1	0.288
10-31	0.1140											1	0.114
11-31	0.9972					1	0.997	1	0.997	1	0.997	1	0.997
12-31	1.0197	1	1.020	1	1.020	1	1.020	1	1.020	1	1.020	1	1.020
13-31	1.0029												
7-32	0.2495	1	0.249	1	0.249	1	0.249	1	0.249	1	0.249	1	0.249
17-32	0.2844												
18-32	0.9053												
Total Contributing Area(mi^2)			1.269		1.269		2.554		2.554		2.554		2.668

CH2M HILL

Subject: **Maryvale ADMS: Area Tabulations for HEC-1 Combines**

By: **J. Geisbush**
Checked: **D. Dust**
Project No.: **132586**

CACTUS RD

Sub-Basin ID	Sub-Basin Area (mi²)	HEC-1 Combine Node IDs																					
		CCR1		CCR67		C67A		CCR2		C13-31		C75A		CCR75		CCR3		C14-31		C83A		CCR83	
2-31	0.2878															1	0.288	1	0.288	1	0.288	1	0.288
10-31	0.1140																						
11-31	0.9972															1	0.997	1	0.997	1	0.997	1	0.997
12-31	1.0197							1	1.020	1	1.020	1	1.020	1	1.020	1	1.020	1	1.020	1	1.020	1	1.020
13-31	1.0029							1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003
14-31	1.0078															1	1.008	1	1.008	1	1.008	1	1.008
7-32	0.2495	1	0.249	1	0.249	1	0.249	1	0.249	1	0.249	1	0.249	1	0.249	1	0.249	1	0.249	1	0.249	1	0.249
17-32	0.2844	1	0.284	1	0.284	1	0.284	1	0.284	1	0.284	1	0.284	1	0.284	1	0.284	1	0.284	1	0.284	1	0.284
18-32	0.9053	1	0.905	1	0.905	1	0.905	1	0.905	1	0.905	1	0.905	1	0.905	1	0.905	1	0.905	1	0.905	1	0.905
Total Contributing Area(mi²)			1.439		1.439		1.439		3.462		3.462		3.462		3.462		5.755		5.755		5.755		5.755

CH2M HILL

Subject: **Maryvale ADMS: Area Tabulations for HEC-1 Combines**

By: **J. Geisbush**
Checked: **D. Dust**
Project No.: **132586**

CACTUS RD

Sub-Basin ID	Sub-Basin Area (mi^2)		HEC-1 Combine Node IDs																												
			C15-31		CCR4		CADOT3		CADOT2																						
2-31	0.2878	1	0.288	1	0.288	1	0.288	1	0.288																						
10-31	0.1140							1	0.114																						
11-31	0.9972	1	0.997	1	0.997	1	0.997	1	0.997																						
12-31	1.0197	1	1.020	1	1.020	1	1.020	1	1.020																						
13-31	1.0029	1	1.003	1	1.003	1	1.003	1	1.003																						
14-31	1.0078	1	1.008	1	1.008	1	1.008	1	1.008																						
15-31	0.9555	1	0.955	1	0.955	1	0.955	1	0.955																						
7-32	0.2495	1	0.249	1	0.249	1	0.249	1	0.249																						
17-32	0.2844	1	0.284	1	0.284	1	0.284	1	0.284																						
18-32	0.9053	1	0.905	1	0.905	1	0.905	1	0.905																						
19-32	0.9616					1	0.962																								
20-32	0.9882					1	0.988																								
21-32	0.3982					1	0.398																								
22-31E	0.5123					1	0.512																								
23-31	1.0057					1	1.006																								
24-31	1.0075					1	1.007																								
Total Contributing Area(mi^2)			6.710		6.710		11.583		6.824		0.000		0.000		0.000		0.000		0.000		0.000		0.000		0.000		0.000		0.000		0.000

CH2M HILL

Subject: **Maryvale ADMS: Area Tabulations for HEC-1 Combines**

By: **J. Geisbush**
Checked: **D. Dust**
Project No.: **132586**

PEORIA AVE

Sub-Basin ID	Sub-Basin Area (mi²)	HEC-1 Combine Node IDs																									
		CPA51		CPA1		C20-32		C59A		CPA59		CPA2		C19-32		C67B		CPA67		CPA3		C24-31			
12-31	1.0197																			1	1.020	1	1.020		
13-31	1.0029																			1	1.003	1	1.003		
7-32	0.2495															1	0.249	1	0.249	1	0.249	1	0.249		
17-32	0.2844							1	0.284	1	0.284	1	0.284	1	0.284	1	0.284	1	0.284	1	0.284	1	0.284		
18-32	0.9053											1	0.905	1	0.905	1	0.905	1	0.905	1	0.905	1	0.905		
19-32	0.9616											1	0.962	1	0.962	1	0.962	1	0.962	1	0.962	1	0.962		
20-32	0.9882			1	0.988	1	0.988	1	0.988	1	0.988	1	0.988	1	0.988	1	0.988	1	0.988	1	0.988	1	0.988		
21-32	0.3982	1	0.398	1	0.398	1	0.398	1	0.398	1	0.398	1	0.398	1	0.398	1	0.398	1	0.398	1	0.398	1	0.398		
Total Contributing Area(mi²)			0.398		1.386		1.386		1.671		1.671		3.538		3.538		3.787		3.787		5.810		5.810		0.000

CH2M HILL

Subject: **Maryvale ADMS: Area Tabulations for HEC-1 Combines**

By: **J. Geisbush**
Checked: **D. Dust**
Project No.: **132586**

PEORIA AVE

Sub-Basin ID	Sub-Basin Area (mi²)	HEC-1 Combine Node IDs																							
		CPA75		C75B		CPA4		C23-31		CPA83		C83B		C2231E		C2231N		C2231W		CPA91					
2-31	0.2878					1	0.288	1	0.288	1	0.288	1	0.288	1	0.288	1	0.288	1	0.288	1	0.288				
11-31	0.9972					1	0.997	1	0.997	1	0.997	1	0.997	1	0.997	1	0.997	1	0.997	1	0.997				
12-31	1.0197	1	1.020	1	1.020	1	1.020	1	1.020	1	1.020	1	1.020	1	1.020	1	1.020	1	1.020	1	1.020				
13-31	1.0029	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003				
14-31	1.0078					1	1.008	1	1.008	1	1.008	1	1.008	1	1.008	1	1.008	1	1.008	1	1.008				
15-31	0.9555													1	0.955	1	0.955	1	0.955	1	0.955				
7-32	0.2495	1	0.249	1	0.249	1	0.249	1	0.249	1	0.249	1	0.249	1	0.249	1	0.249	1	0.249	1	0.249				
17-32	0.2844	1	0.284	1	0.284	1	0.284	1	0.284	1	0.284	1	0.284	1	0.284	1	0.284	1	0.284	1	0.284				
18-32	0.9053	1	0.905	1	0.905	1	0.905	1	0.905	1	0.905	1	0.905	1	0.905	1	0.905	1	0.905	1	0.905				
19-32	0.9616	1	0.962	1	0.962	1	0.962	1	0.962	1	0.962	1	0.962	1	0.962			1	0.962	1	0.962				
20-32	0.9882	1	0.988	1	0.988	1	0.988	1	0.988	1	0.988	1	0.988	1	0.988			1	0.988	1	0.988				
21-32	0.3982	1	0.398	1	0.398	1	0.398	1	0.398	1	0.398	1	0.398	1	0.398			1	0.398	1	0.398				
22-31E	0.5123													1	0.512	1	0.512	1	0.512	1	0.512				
22-31W	0.7658																	1	0.766	1	0.766				
23-31	1.0057													1	1.006			1	1.006	1	1.006				
24-31	1.0075													1	1.007			1	1.007	1	1.007				
Total Contributing Area(mi²)			5.810		5.810		8.102		8.102		8.102		8.102		11.583		7.222		12.349		12.349		0.000		0.000

CH2M HILL

Subject: **Maryvale ADMS: Area Tabulations for HEC-1 Combines**

By: **J. Geisbush**
Checked: **D. Dust**
Project No.: **132586**

OLIVE AVE

Sub-Basin ID	Sub-Basin Area (mi²)	HEC-1 Combine Node IDs																							
		COA1		COA43		COA2		C28-32		C51A		COA51		COA3		C29-32		COA59		C59B					
17-32	0.2844																	1	0.284	1	0.284				
20-32	0.9882													1	0.988	1	0.988	1	0.988	1	0.988				
21-32	0.3982					1	0.398	1	0.398	1	0.398	1	0.398	1	0.398	1	0.398	1	0.398	1	0.398				
26-32W	0.0866	1	0.087	1	0.087	1	0.087	1	0.087	1	0.087	1	0.087	1	0.087	1	0.087	1	0.087	1	0.087				
27-32	0.6122	1	0.612	1	0.612	1	0.612	1	0.612	1	0.612	1	0.612	1	0.612	1	0.612	1	0.612	1	0.612				
28-32	0.9937					1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994				
29-32	0.9910													1	0.991	1	0.991	1	0.991	1	0.991				
Total Contributing Area(mi²)			0.699		0.699		2.091		2.091		2.091		2.091		4.070		4.070		4.354		4.354		0.000		0.000

CH2M HILL

Subject: **Maryvale ADMS: Area Tabulations for HEC-1 Combines**

By: **J. Geisbush**
Checked: **D. Dust**
Project No.: **132586**

OLIVE AVE

Sub-Basin ID	Sub-Basin Area (mi²)	HEC-1 Combine Node IDs																							
		COA4		C30-32		COA67		C67C		COA5		C25-31		COA75		C75C		C2631S		C2631E		C2631N			
2-31	0.2878																	1	0.288	1	0.288	1	0.288		
11-31	0.9972																	1	0.997	1	0.997	1	0.997		
12-31	1.0197									1	1.020	1	1.020	1	1.020	1	1.020	1	1.020	1	1.020	1	1.020		
13-31	1.0029									1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003		
14-31	1.0078																	1	1.008	1	1.008	1	1.008		
7-32	0.2495					1	0.249	1	0.249	1	0.249	1	0.249	1	0.249	1	0.249	1	0.249	1	0.249	1	0.249		
17-32	0.2844	1	0.284	1	0.284	1	0.284	1	0.284	1	0.284	1	0.284	1	0.284	1	0.284	1	0.284	1	0.284	1	0.284		
18-32	0.9053	1	0.905	1	0.905	1	0.905	1	0.905	1	0.905	1	0.905	1	0.905	1	0.905	1	0.905	1	0.905	1	0.905		
19-32	0.9616	1	0.962	1	0.962	1	0.962	1	0.962	1	0.962	1	0.962	1	0.962	1	0.962	1	0.962	1	0.962	1	0.962		
20-32	0.9882	1	0.988	1	0.988	1	0.988	1	0.988	1	0.988	1	0.988	1	0.988	1	0.988	1	0.988	1	0.988	1	0.988		
21-32	0.3982	1	0.398	1	0.398	1	0.398	1	0.398	1	0.398	1	0.398	1	0.398	1	0.398	1	0.398	1	0.398	1	0.398		
23-31	1.0057																	1	1.006	1	1.006	1	1.006		
24-31	1.0075									1	1.007	1	1.007	1	1.007	1	1.007	1	1.007	1	1.007	1	1.007		
25-31	1.0030									1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003		
26-31E	0.4615																	1	0.462	1	0.462	1	0.462		
26-32W	0.0866	1	0.087	1	0.087	1	0.087	1	0.087	1	0.087	1	0.087	1	0.087	1	0.087	1	0.087	1	0.087	1	0.087		
27-32	0.6122	1	0.612	1	0.612	1	0.612	1	0.612	1	0.612	1	0.612	1	0.612	1	0.612	1	0.612	1	0.612	1	0.612		
28-32	0.9937	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994		
29-32	0.9910	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991		
30-32	0.9588	1	0.959	1	0.959	1	0.959	1	0.959	1	0.959	1	0.959	1	0.959	1	0.959	1	0.959	1	0.959	1	0.959		
Total Contributing Area(mi²)			7.180		7.180		7.429		7.429		11.463		11.463		11.463		11.463		15.223		15.223		15.223		0.000

CH2M HILL

Subject: **Maryvale ADMS: Area Tabulations for HEC-1 Combines**

By: **J. Geisbush**
Checked: **D. Dust**
Project No.: **132586**

OLIVE AVE

Sub-Basin ID	Sub-Basin Area (mi²)	HEC-1 Combine Node IDs																									
		COA6		C2631W		COA83		COA7		C27-31		COA91		C91A		C28-31											
2-31	0.2878	1	0.288	1	0.288	1	0.288	1	0.288	1	0.288	1	0.288	1	0.288	1	0.288										
11-31	0.9972	1	0.997	1	0.997	1	0.997	1	0.997	1	0.997	1	0.997	1	0.997	1	0.997										
12-31	1.0197	1	1.020	1	1.020	1	1.020	1	1.020	1	1.020	1	1.020	1	1.020	1	1.020										
13-31	1.0029	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003										
14-31	1.0078	1	1.008	1	1.008	1	1.008	1	1.008	1	1.008	1	1.008	1	1.008	1	1.008										
7-32	0.2495	1	0.249	1	0.249	1	0.249	1	0.249	1	0.249	1	0.249	1	0.249	1	0.249										
17-32	0.2844	1	0.284	1	0.284	1	0.284	1	0.284	1	0.284	1	0.284	1	0.284	1	0.284										
18-32	0.9053	1	0.905	1	0.905	1	0.905	1	0.905	1	0.905	1	0.905	1	0.905	1	0.905										
19-32	0.9616	1	0.962	1	0.962	1	0.962	1	0.962	1	0.962	1	0.962	1	0.962	1	0.962										
20-32	0.9882	1	0.988	1	0.988	1	0.988	1	0.988	1	0.988	1	0.988	1	0.988	1	0.988										
21-32	0.3982	1	0.398	1	0.398	1	0.398	1	0.398	1	0.398	1	0.398	1	0.398	1	0.398										
22-31E	0.5123							1	0.512	1	0.512	1	0.512	1	0.512	1	0.512										
22-31W	0.7658							1	0.766	1	0.766	1	0.766	1	0.766	1	0.766										
23-31	1.0057	1	1.006	1	1.006	1	1.006	1	1.006	1	1.006	1	1.006	1	1.006	1	1.006										
24-31	1.0075	1	1.007	1	1.007	1	1.007	1	1.007	1	1.007	1	1.007	1	1.007	1	1.007										
25-31	1.0030	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003										
26-31E	0.4615	1	0.462	1	0.462	1	0.462	1	0.462	1	0.462	1	0.462	1	0.462	1	0.462										
26-31W	0.5403	1	0.540	1	0.540	1	0.540	1	0.540	1	0.540	1	0.540	1	0.540	1	0.540										
27-31	1.0125							1	1.013	1	1.013	1	1.013	1	1.013	1	1.013										
28-31	0.1406															1	0.141										
26-32W	0.0866	1	0.087	1	0.087	1	0.087	1	0.087	1	0.087	1	0.087	1	0.087	1	0.087										
27-32	0.6122	1	0.612	1	0.612	1	0.612	1	0.612	1	0.612	1	0.612	1	0.612	1	0.612										
28-32	0.9937	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994										
29-32	0.9910	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991										
30-32	0.9588	1	0.959	1	0.959	1	0.959	1	0.959	1	0.959	1	0.959	1	0.959	1	0.959										
Total Contributing Area(mi²)			15.763		15.763		15.763		18.053		18.053		18.053		18.053		18.194		0.000		0.000		0.000		0.000		

CH2M HILL

Subject: **Maryvale ADMS: Area Tabulations for HEC-1 Combines**

By: **J. Geisbush**
Checked: **D. Dust**
Project No.: **132586**

NORTHERN AVE

Sub-Basin ID	Sub-Basin Area (mi²)	HEC-1 Combine Node IDs																									
			C35-32		CNA35		C35A		CNA1		C34-32		CNA43		C43B		CNA2		C33-32		CNA51		C51B				
21-32	0.3982															1	0.398	1	0.398	1	0.398	1	0.398				
26-32E	0.1068	1	0.107																								
26-32W	0.0866			1	0.087	1	0.087	1	0.087	1	0.087	1	0.087	1	0.087	1	0.087	1	0.087	1	0.087	1	0.087				
27-32	0.6122							1	0.612	1	0.612	1	0.612	1	0.612	1	0.612	1	0.612	1	0.612	1	0.612				
28-32	0.9937															1	0.994	1	0.994	1	0.994	1	0.994				
33-32	0.9926															1	0.993	1	0.993	1	0.993	1	0.993				
34-32	0.9938							1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994				
35-32	0.9873	1	0.987	1	0.987	1	0.987	1	0.987	1	0.987	1	0.987	1	0.987	1	0.987	1	0.987	1	0.987	1	0.987				
36-32	0.1135																										
Total Contributing Area(mi²)			1.094		1.074		1.074		2.680		2.680		2.680		2.680		5.064		5.064		5.064		5.064		0.000		

CH2M HILL

Subject: **Maryvale ADMS: Area Tabulations for HEC-1 Combines**

By: **J. Geisbush**
Checked: **D. Dust**
Project No.: **132586**

NORTHERN AVE

Sub-Basin ID	Sub-Basin Area (mi²)	HEC-1 Combine Node IDs																							
			CNA3		C32-32		CNA59		C59C		CNA4		C31-32		CNA67		C67D		C3631E		CNA5		C3631W		CNA75
2-31	0.2878																	1	0.288	1	0.288	1	0.288	1	0.288
11-31	0.9972																	1	0.997	1	0.997	1	0.997	1	0.997
12-31	1.0197																	1	1.020	1	1.020	1	1.020	1	1.020
13-31	1.0029																	1	1.003	1	1.003	1	1.003	1	1.003
14-31	1.0078																	1	1.008	1	1.008	1	1.008	1	1.008
7-32	0.2495													1	0.249	1	0.249	1	0.249	1	0.249	1	0.249	1	0.249
17-32	0.2844					1	0.284	1	0.284	1	0.284	1	0.284	1	0.284	1	0.284	1	0.284	1	0.284	1	0.284	1	0.284
18-32	0.9053									1	0.905	1	0.905	1	0.905	1	0.905	1	0.905	1	0.905	1	0.905	1	0.905
19-32	0.9616									1	0.962	1	0.962	1	0.962	1	0.962	1	0.962	1	0.962	1	0.962	1	0.962
20-32	0.9882	1	0.988	1	0.988	1	0.988	1	0.988	1	0.988	1	0.988	1	0.988	1	0.988	1	0.988	1	0.988	1	0.988	1	0.988
21-32	0.3982	1	0.398	1	0.398	1	0.398	1	0.398	1	0.398	1	0.398	1	0.398	1	0.398	1	0.398	1	0.398	1	0.398	1	0.398
23-31	1.0057																	1	1.006	1	1.006	1	1.006	1	1.006
24-31	1.0075																	1	1.007	1	1.007	1	1.007	1	1.007
25-31	1.0030																	1	1.003	1	1.003	1	1.003	1	1.003
26-31E	0.4615																	1	0.462	1	0.462	1	0.462	1	0.462
36-31E	0.4952																	1	0.495	1	0.495	1	0.495	1	0.495
36-31W	0.5046																			1	0.505	1	0.505	1	0.505
26-32W	0.0866	1	0.087	1	0.087	1	0.087	1	0.087	1	0.087	1	0.087	1	0.087	1	0.087	1	0.087	1	0.087	1	0.087	1	0.087
27-32	0.6122	1	0.612	1	0.612	1	0.612	1	0.612	1	0.612	1	0.612	1	0.612	1	0.612	1	0.612	1	0.612	1	0.612	1	0.612
28-32	0.9937	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994
29-32	0.9910	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991
30-32	0.9588									1	0.959	1	0.959	1	0.959	1	0.959	1	0.959	1	0.959	1	0.959	1	0.959
31-32	0.9533									1	0.953	1	0.953	1	0.953	1	0.953	1	0.953	1	0.953	1	0.953	1	0.953
32-32	0.9908	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991
33-32	0.9926	1	0.993	1	0.993	1	0.993	1	0.993	1	0.993	1	0.993	1	0.993	1	0.993	1	0.993	1	0.993	1	0.993	1	0.993
34-32	0.9938	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994
35-32	0.9873	1	0.987	1	0.987	1	0.987	1	0.987	1	0.987	1	0.987	1	0.987	1	0.987	1	0.987	1	0.987	1	0.987	1	0.987
Total Contributing Area(mi²)			8.034		8.034		8.319		8.319		12.098		12.098		12.347		12.347		20.636		21.140		21.140		21.140

CH2M HILL

Subject: **Maryvale ADMS: Area Tabulations for HEC-1 Combines**

By: **J. Geisbush**
Checked: **D. Dust**
Project No.: **132586**

NORTHERN AVE

Sub-Basin ID	Sub-Basin Area (mi²)		HEC-1 Combine Node IDs																											
			CNA6		C35-31		CNA83		C83C		CNA7		C34-31		CNA91		C91B		C33-31											
2-31	0.2878	1	0.288	1	0.288	1	0.288	1	0.288	1	0.288	1	0.288	1	0.288	1	0.288	1	0.288											
11-31	0.9972	1	0.997	1	0.997	1	0.997	1	0.997	1	0.997	1	0.997	1	0.997	1	0.997	1	0.997											
12-31	1.0197	1	1.020	1	1.020	1	1.020	1	1.020	1	1.020	1	1.020	1	1.020	1	1.020	1	1.020											
13-31	1.0029	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003											
14-31	1.0078	1	1.008	1	1.008	1	1.008	1	1.008	1	1.008	1	1.008	1	1.008	1	1.008	1	1.008											
7-32	0.2495	1	0.249	1	0.249	1	0.249	1	0.249	1	0.249	1	0.249	1	0.249	1	0.249	1	0.249											
17-32	0.2844	1	0.284	1	0.284	1	0.284	1	0.284	1	0.284	1	0.284	1	0.284	1	0.284	1	0.284											
18-32	0.9053	1	0.905	1	0.905	1	0.905	1	0.905	1	0.905	1	0.905	1	0.905	1	0.905	1	0.905											
19-32	0.9616	1	0.962	1	0.962	1	0.962	1	0.962	1	0.962	1	0.962	1	0.962	1	0.962	1	0.962											
20-32	0.9882	1	0.988	1	0.988	1	0.988	1	0.988	1	0.988	1	0.988	1	0.988	1	0.988	1	0.988											
21-32	0.3982	1	0.398	1	0.398	1	0.398	1	0.398	1	0.398	1	0.398	1	0.398	1	0.398	1	0.398											
22-31E	0.5123									1	0.512	1	0.512	1	0.512	1	0.512	1	0.512											
22-31W	0.7658									1	0.766	1	0.766	1	0.766	1	0.766	1	0.766											
23-31	1.0057	1	1.006	1	1.006	1	1.006	1	1.006	1	1.006	1	1.006	1	1.006	1	1.006	1	1.006											
24-31	1.0075	1	1.007	1	1.007	1	1.007	1	1.007	1	1.007	1	1.007	1	1.007	1	1.007	1	1.007											
25-31	1.0030	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003											
26-31E	0.4615	1	0.462	1	0.462	1	0.462	1	0.462	1	0.462	1	0.462	1	0.462	1	0.462	1	0.462											
26-31W	0.5403	1	0.540	1	0.540	1	0.540	1	0.540	1	0.540	1	0.540	1	0.540	1	0.540	1	0.540											
27-31	1.0125									1	1.013	1	1.013	1	1.013	1	1.013	1	1.013											
28-31	0.1406																	1	0.141											
33-31	0.2570																	1	0.257											
34-31	0.9947									1	0.995	1	0.995	1	0.995	1	0.995	1	0.995											
35-31	1.0054	1	1.005	1	1.005	1	1.005	1	1.005	1	1.005	1	1.005	1	1.005	1	1.005	1	1.005											
36-31E	0.4952	1	0.495	1	0.495	1	0.495	1	0.495	1	0.495	1	0.495	1	0.495	1	0.495	1	0.495											
36-31W	0.5046	1	0.505	1	0.505	1	0.505	1	0.505	1	0.505	1	0.505	1	0.505	1	0.505	1	0.505											
26-32W	0.0866	1	0.087	1	0.087	1	0.087	1	0.087	1	0.087	1	0.087	1	0.087	1	0.087	1	0.087											
27-32	0.6122	1	0.612	1	0.612	1	0.612	1	0.612	1	0.612	1	0.612	1	0.612	1	0.612	1	0.612											
28-32	0.9937	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994											
29-32	0.9910	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991											
30-32	0.9588	1	0.959	1	0.959	1	0.959	1	0.959	1	0.959	1	0.959	1	0.959	1	0.959	1	0.959											
31-32	0.9533	1	0.953	1	0.953	1	0.953	1	0.953	1	0.953	1	0.953	1	0.953	1	0.953	1	0.953											
32-32	0.9908	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991											
33-32	0.9926	1	0.993	1	0.993	1	0.993	1	0.993	1	0.993	1	0.993	1	0.993	1	0.993	1	0.993											
34-32	0.9938	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994											
35-32	0.9873	1	0.987	1	0.987	1	0.987	1	0.987	1	0.987	1	0.987	1	0.987	1	0.987	1	0.987											
Total Contributing Area(mi²)			22.686		22.686		22.686		22.686		25.971		25.971		25.971		25.971		26.369		0.000		0.000		0.000					

CH2M HILL

Subject: Maryvale ADMS: Area Tabulations for HEC-I Combines

By: J. Geisbush
Checked: D. Dust
Project No.: 132586

GLENDALE AVE

Sub-Basin ID	Sub-Basin Area (mi²)	HEC-I Combine Node IDs																					
		CGA27		C27A		CGA1		C2-22		CGA35		C35B		CGA2		C3-22		CGA43		C43C			
1-22	0.2432	1	0.243	1	0.243	1	0.243	1	0.243														
2-22	1.0042					1	1.004	1	1.004	1	1.004	1	1.004	1	1.004	1	1.004	1	1.004	1	1.004		
3-22	0.9979													1	0.998	1	0.998	1	0.998	1	0.998		
26-32E	0.1068					1	0.107	1	0.107														
26-32W	0.0866					1	0.087			1	0.087	1	0.087	1	0.087	1	0.087	1	0.087	1	0.087		
27-32	0.6122													1	0.612	1	0.612	1	0.612	1	0.612		
34-32	0.9938													1	0.994	1	0.994	1	0.994	1	0.994		
35-32	0.9873					1	0.987	1	0.987	1	0.987	1	0.987	1	0.987	1	0.987	1	0.987	1	0.987		
36-32	0.1135	1	0.113	1	0.113	1	0.113	1	0.113														
Total Contributing Area(mi²)			0.357		0.357		2.542		2.455		2.078		2.078		4.682		4.682		4.682		4.682		0.000		0.000

Note: Will be 11"x17" in Final

CH2M HILL

Subject: Maryvale ADMS: Area Tabulations for HEC-1 Combines

By: J. Geisbush
Checked: D. Dust
Project No.: 132586

GLENDALE AVE

Sub-Basin ID	Sub-Basin Area (mi²)	HEC-1 Combine Node IDs																					
		CGA3		C4-22		CGA51		C51C		CGA4		C5-22		CGA59		C59D		C6-22E		C622EA			
2-22	1.0042	1.004	1.004	1.004	1.004	1.004	1.004	1.004	1.004	1.004	1.004	1.004	1.004	1.004	1.004	1.004	1.004	1.004	1.004	1.004	1.004		
3-22	0.9979	0.998	0.998	0.998	0.998	0.998	0.998	0.998	0.998	0.998	0.998	0.998	0.998	0.998	0.998	0.998	0.998	0.998	0.998	0.998	0.998		
4-22	1.0034	1.003	1.003	1.003	1.003	1.003	1.003	1.003	1.003	1.003	1.003	1.003	1.003	1.003	1.003	1.003	1.003	1.003	1.003	1.003	1.003		
5-22	1.0152									1.015	1.015	1.015	1.015	1.015	1.015	1.015	1.015	1.015	1.015	1.015	1.015		
6-22E	0.4982																	0.498	0.498	0.498	0.498		
8-22E	0.5225																			0.522	0.522		
7-32	0.2495																	0.249	0.249	0.249	0.249		
17-32	0.2844													0.284	0.284	0.284	0.284	0.284	0.284	0.284	0.284		
18-32	0.9053																	0.905	0.905	0.905	0.905		
19-32	0.9616																	0.962	0.962	0.962	0.962		
20-32	0.9882									0.988	0.988	0.988	0.988	0.988	0.988	0.988	0.988	0.988	0.988	0.988	0.988		
21-32	0.3982	0.398	0.398	0.398	0.398	0.398	0.398	0.398	0.398	0.398	0.398	0.398	0.398	0.398	0.398	0.398	0.398	0.398	0.398	0.398	0.398		
26-32W	0.0866	0.087	0.087	0.087	0.087	0.087	0.087	0.087	0.087	0.087	0.087	0.087	0.087	0.087	0.087	0.087	0.087	0.087	0.087	0.087	0.087		
27-32	0.6122	0.612	0.612	0.612	0.612	0.612	0.612	0.612	0.612	0.612	0.612	0.612	0.612	0.612	0.612	0.612	0.612	0.612	0.612	0.612	0.612		
28-32	0.9937	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994		
29-32	0.9910									0.991	0.991	0.991	0.991	0.991	0.991	0.991	0.991	0.991	0.991	0.991	0.991		
30-32	0.9588																	0.959	0.959	0.959	0.959		
31-32	0.9533																	0.953	0.953	0.953	0.953		
32-32	0.9908									0.991	0.991	0.991	0.991	0.991	0.991	0.991	0.991	0.991	0.991	0.991	0.991		
33-32	0.9926	0.993	0.993	0.993	0.993	0.993	0.993	0.993	0.993	0.993	0.993	0.993	0.993	0.993	0.993	0.993	0.993	0.993	0.993	0.993	0.993		
34-32	0.9938	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994		
35-32	0.9873	0.987	0.987	0.987	0.987	0.987	0.987	0.987	0.987	0.987	0.987	0.987	0.987	0.987	0.987	0.987	0.987	0.987	0.987	0.987	0.987		
Total Contributing Area(mi²)		8.070		8.070		8.070		8.070		12.055		12.055		12.340		12.340		16.866		17.389		0.000	0.000

CH2M HILL

Subject: Maryvale ADMS: Area Tabulations for HEC-1 Combines

By: J. Geisbush
Checked: D. Dust
Project No.: 132586

GLENDALE AVE

Sub-Basin ID	Sub-Basin Area (mi²)	HEC-1 Combine Node IDs																											
		CGA5		C6-22W		CGA67		CGA6		C1-21		CGA75		C75D		CGA7		C2-21		CGA83		C83D							
1-21	0.9994							0.9994		0.9994		0.9994		0.9994		0.999		0.999		0.999		0.999							
2-21	0.9947															0.995		0.995		0.995		0.995							
2-22	1.0042	1.004		1.004		1.004		1.0042		1.0042		1.0042		1.0042		1.004		1.004		1.004		1.004							
3-22	0.9979	0.998		0.998		0.998		0.9979		0.9979		0.9979		0.9979		0.998		0.998		0.998		0.998							
4-22	1.0034	1.003		1.003		1.003		1.0034		1.0034		1.0034		1.0034		1.003		1.003		1.003		1.003							
5-22	1.0152	1.015		1.015		1.015		1.0152		1.0152		1.0152		1.0152		1.015		1.015		1.015		1.015							
6-22E	0.4982	0.498		0.498		0.498		0.4982		0.4982		0.4982		0.4982		0.498		0.498		0.498		0.498							
6-22W	0.4742	0.474		0.474		0.474		0.4742		0.4742		0.4742		0.4742		0.474		0.474		0.474		0.474							
8-22E	0.5225	0.522		0.522		0.522		0.5225		0.5225		0.5225		0.5225		0.522		0.522		0.522		0.522							
2-31	0.2878							0.2878		0.2878		0.2878		0.2878		0.288		0.288		0.288		0.288							
11-31	0.9972							0.9972		0.9972		0.9972		0.9972		0.997		0.997		0.997		0.997							
12-31	1.0197							1.0197		1.0197		1.0197		1.0197		1.020		1.020		1.020		1.020							
13-31	1.0029							1.0029		1.0029		1.0029		1.0029		1.003		1.003		1.003		1.003							
14-31	1.0078							1.0078		1.0078		1.0078		1.0078		1.008		1.008		1.008		1.008							
7-32	0.2495	0.249		0.249		0.249		0.2495		0.2495		0.2495		0.2495		0.249		0.249		0.249		0.249							
17-32	0.2844	0.284		0.284		0.284		0.2844		0.2844		0.2844		0.2844		0.284		0.284		0.284		0.284							
18-32	0.9053	0.905		0.905		0.905		0.9053		0.9053		0.9053		0.9053		0.905		0.905		0.905		0.905							
19-32	0.9616	0.962		0.962		0.962		0.9616		0.9616		0.9616		0.9616		0.962		0.962		0.962		0.962							
20-32	0.9882	0.988		0.988		0.988		0.9882		0.9882		0.9882		0.9882		0.988		0.988		0.988		0.988							
21-32	0.3982	0.398		0.398		0.398		0.3982		0.3982		0.3982		0.3982		0.398		0.398		0.398		0.398							
23-31	1.0057							1.0057		1.0057		1.0057		1.0057		1.006		1.006		1.006		1.006							
24-31	1.0075							1.0075		1.0075		1.0075		1.0075		1.007		1.007		1.007		1.007							
25-31	1.0030							1.003		1.003		1.003		1.003		1.003		1.003		1.003		1.003							
26-31E	0.4615							0.4615		0.4615		0.4615		0.4615		0.462		0.462		0.462		0.462							
26-31W	0.5403															0.540		0.540		0.540		0.540							
35-31	1.0054															1.005		1.005		1.005		1.005							
36-31E	0.4952							0.4952		0.4952		0.4952		0.4952		0.495		0.495		0.495		0.495							
36-31W	0.5046							0.5046		0.5046		0.5046		0.5046		0.505		0.505		0.505		0.505							
26-32W	0.0866	0.087		0.087		0.087		0.0866		0.0866		0.0866		0.0866		0.087		0.087		0.087		0.087							
27-32	0.6122	0.612		0.612		0.612		0.6122		0.6122		0.6122		0.6122		0.612		0.612		0.612		0.612							
28-32	0.9937	0.994		0.994		0.994		0.9937		0.9937		0.9937		0.9937		0.994		0.994		0.994		0.994							
29-32	0.9910	0.991		0.991		0.991		0.991		0.991		0.991		0.991		0.991		0.991		0.991		0.991							
30-32	0.9588	0.959		0.959		0.959		0.9588		0.9588		0.9588		0.9588		0.959		0.959		0.959		0.959							
31-32	0.9533	0.953		0.953		0.953		0.9533		0.9533		0.9533		0.9533		0.953		0.953		0.953		0.953							
32-32	0.9908	0.991		0.991		0.991		0.9908		0.9908		0.9908		0.9908		0.991		0.991		0.991		0.991							
33-32	0.9926	0.993		0.993		0.993		0.9926		0.9926		0.9926		0.9926		0.993		0.993		0.993		0.993							
34-32	0.9938	0.994		0.994		0.994		0.9938		0.9938		0.9938		0.9938		0.994		0.994		0.994		0.994							
35-32	0.9873	0.987		0.987		0.987		0.9873		0.9873		0.9873		0.9873		0.987		0.987		0.987		0.987							
Total Contributing Area(mi²)		17.863		17.863		17.863		27.655		27.655		27.655		27.655		30.196		30.196		30.196		30.196		0.000					

CH2M HILL

Subject: **Maryvale ADMS: Area Tabulations for HEC-1 Combines**

By: J. Geisbush
Checked: D. Dust
Project No.: 132586

GLENDALE AVE

Sub-Basin ID	Sub-Basin Area (mi²)	HEC-1 Combine Node IDs																											
		CGA8		C3-21		CGA91		C91C		CGA9		C4-21		CGA99		C5-21													
1-21	0.9994	0.999		0.999		0.999		0.999		0.999		0.999		0.999		0.999													
2-21	0.9947	0.995		0.995		0.995		0.995		0.995		0.995		0.995		0.995													
3-21	0.9808	0.981		0.981		0.981		0.981		0.981		0.981		0.981		0.981													
4-21	0.8740									0.874		0.874		0.874		0.874													
5-21	0.3455															0.345													
2-22	1.0042	1.004		1.004		1.004		1.004		1.004		1.004		1.004		1.004													
3-22	0.9979	0.998		0.998		0.998		0.998		0.998		0.998		0.998		0.998													
4-22	1.0034	1.003		1.003		1.003		1.003		1.003		1.003		1.003		1.003													
5-22	1.0152	1.015		1.015		1.015		1.015		1.015		1.015		1.015		1.015													
6-22E	0.4982	0.498		0.498		0.498		0.498		0.498		0.498		0.498		0.498													
6-22W	0.4742	0.474		0.474		0.474		0.474		0.474		0.474		0.474		0.474													
8-22E	0.5225	0.522		0.522		0.522		0.522		0.522		0.522		0.522		0.522													
2-31	0.2878	0.288		0.288		0.288		0.288		0.288		0.288		0.288		0.288													
11-31	0.9972	0.997		0.997		0.997		0.997		0.997		0.997		0.997		0.997													
12-31	1.0197	1.020		1.020		1.020		1.020		1.020		1.020		1.020		1.020													
13-31	1.0029	1.003		1.003		1.003		1.003		1.003		1.003		1.003		1.003													
14-31	1.0078	1.008		1.008		1.008		1.008		1.008		1.008		1.008		1.008													
7-32	0.2495	0.249		0.249		0.249		0.249		0.249		0.249		0.249		0.249													
17-32	0.2844	0.284		0.284		0.284		0.284		0.284		0.284		0.284		0.284													
18-32	0.9053	0.905		0.905		0.905		0.905		0.905		0.905		0.905		0.905													
19-32	0.9616	0.962		0.962		0.962		0.962		0.962		0.962		0.962		0.962													
20-32	0.9882	0.988		0.988		0.988		0.988		0.988		0.988		0.988		0.988													
21-32	0.3982	0.398		0.398		0.398		0.398		0.398		0.398		0.398		0.398													
22-31E	0.5123	0.512		0.512		0.512		0.512		0.512		0.512		0.512		0.512													
22-31W	0.7658	0.766		0.766		0.766		0.766		0.766		0.766		0.766		0.766													
23-31	1.0057	1.006		1.006		1.006		1.006		1.006		1.006		1.006		1.006													
24-31	1.0075	1.007		1.007		1.007		1.007		1.007		1.007		1.007		1.007													
25-31	1.0030	1.003		1.003		1.003		1.003		1.003		1.003		1.003		1.003													
26-31E	0.4615	0.462		0.462		0.462		0.462		0.462		0.462		0.462		0.462													
26-31W	0.5403	0.540		0.540		0.540		0.540		0.540		0.540		0.540		0.540													
27-31	1.0125	1.013		1.013		1.013		1.013		1.013		1.013		1.013		1.013													
34-31	0.9947	0.995		0.995		0.995		0.995		0.995		0.995		0.995		0.995													
35-31	1.0054	1.005		1.005		1.005		1.005		1.005		1.005		1.005		1.005													
36-31E	0.4952	0.495		0.495		0.495		0.495		0.495		0.495		0.495		0.495													
36-31W	0.5046	0.505		0.505		0.505		0.505		0.505		0.505		0.505		0.505													
26-32W	0.0866	0.087		0.087		0.087		0.087		0.087		0.087		0.087		0.087													
27-32	0.6122	0.612		0.612		0.612		0.612		0.612		0.612		0.612		0.612													
28-32	0.9937	0.994		0.994		0.994		0.994		0.994		0.994		0.994		0.994													
29-32	0.9910	0.991		0.991		0.991		0.991		0.991		0.991		0.991		0.991													
30-32	0.9588	0.959		0.959		0.959		0.959		0.959		0.959		0.959		0.959													
31-32	0.9533	0.953		0.953		0.953		0.953		0.953		0.953		0.953		0.953													
32-32	0.9908	0.991		0.991		0.991		0.991		0.991		0.991		0.991		0.991													
33-32	0.9926	0.993		0.993		0.993		0.993		0.993		0.993		0.993		0.993													
34-32	0.9938	0.994		0.994		0.994		0.994		0.994		0.994		0.994		0.994													
35-32	0.9873	0.987		0.987		0.987		0.987		0.987		0.987		0.987		0.987													
Total Contributing Area(mi²)		34.462		34.462		34.462		34.462		35.336		35.336		35.336		35.681		0.000		0.000		0.000		0.000					

CH2M HILL

Subject: Maryvale ADMS: Area Tabulations for HEC-1 Combines

By: J. Geisbush
Checked: D. Dust
Project No.: 132586

BETHANY HOME

Sub-Basin ID	Sub-Basin Area (mi²)	HEC-1 Combine Node IDs																							
		CBH27		C11-22		C35C		CBH35		C10-22		CBH43		C43D		CBH1		C9-22		CBH51		C51D			
1-22	0.2432	1	0.243	1	0.243			1	0.243																
2-22	1.0042	1	1.004	1	1.004	1	1.004	1	1.004	1	1.004	1	1.004	1	1.004	1	1.004	1	1.004	1	1.004	1	1.004		
3-22	0.9979							1	0.998	1	0.998	1	0.998	1	0.998	1	0.998	1	0.998	1	0.998	1	0.998		
4-22	1.0034															1	1.003	1	1.003	1	1.003	1	1.003		
9-22	0.9903															1	0.990	1	0.990	1	0.990	1	0.990		
10-22	0.9911							1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991		
11-22	1.0055	1	1.006	1	1.006	1	1.006	1	1.006																
12-22	0.2447	1	0.245																						
21-32	0.3982															1	0.398	1	0.398	1	0.398	1	0.398		
26-32E	0.1068	1	0.107	1	0.107			1	0.107																
26-32W	0.0866	1	0.087	1	0.087	1	0.087	1	0.087	1	0.087	1	0.087	1	0.087	1	0.087	1	0.087	1	0.087	1	0.087		
27-32	0.6122							1	0.612	1	0.612	1	0.612	1	0.612	1	0.612	1	0.612	1	0.612	1	0.612		
28-32	0.9937															1	0.994	1	0.994	1	0.994	1	0.994		
32-32	0.9908															1	0.991	1	0.991	1	0.991	1	0.991		
34-32	0.9938							1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994		
35-32	0.9873	1	0.987	1	0.987	1	0.987	1	0.987	1	0.987	1	0.987	1	0.987	1	0.987	1	0.987	1	0.987	1	0.987		
36-32	0.1135	1	0.113	1	0.113			1	0.113																
Total Contributing Area(mi²)			3.792		3.547		3.084		7.142		5.673		5.673		5.673		10.050		10.050		10.050		10.050		0.000

CH2M HILL

Subject: Maryvale ADMS: Area Tabulations for HEC-1 Combines

By: J. Geisbush
Checked: D. Dust
Project No.: 132586

BETHANY HOME

Sub-Basin ID	Sub-Basin Area (mi²)	HEC-1 Combine Node IDs																											
		C8-22E		C822E1		C8-22W		CBH59		C7-22		C67E		CBH2		CBH67		CBH3		C12-21		CBH75		C75E	
12-21	1.0030																			1.003		1.003		1.003		1.003		1.003	
1-22	0.2432																			0.2432		0.2432		0.2432		0.2432		0.2432	
2-22	1.0042		1.004		1.004		1.004		1.004		1.0042		1.0042		1.0042		1.0042		1.0042		1.0042		1.0042		1.0042		1.0042		1.0042
3-22	0.9979		0.998		0.998		0.998		0.998		0.9979		0.9979		0.9979		0.9979		0.9979		0.9979		0.9979		0.9979		0.9979		0.9979
4-22	1.0034		1.003		1.003		1.003		1.003		1.0034		1.0034		1.0034		1.0034		1.0034		1.0034		1.0034		1.0034		1.0034		1.0034
5-22	1.0152		1.015		1.015		1.015		1.015		1.0152		1.0152		1.0152		1.0152		1.0152		1.0152		1.0152		1.0152		1.0152		1.0152
6-22E	0.4982										0.4982		0.4982		0.4982		0.4982		0.4982		0.4982		0.4982		0.4982		0.4982		0.4982
6-22W	0.4742										0.4742		0.4742		0.4742		0.4742		0.4742		0.4742		0.4742		0.4742		0.4742		0.4742
7-22	0.9699										0.9699		0.9699		0.9699		0.9699		0.9699		0.9699		0.9699		0.9699		0.9699		0.9699
8-22E	0.5225		0.522		0.522		0.522		0.522		0.5225		0.5225		0.5225		0.5225		0.5225		0.5225		0.5225		0.5225		0.5225		0.5225
8-22W	0.4936						0.494		0.494		0.4936		0.4936		0.4936		0.4936		0.4936		0.4936		0.4936		0.4936		0.4936		0.4936
9-22	0.9903				0.990		0.990		0.990						0.9903		0.9903		0.9903		0.9903		0.9903		0.9903		0.9903		0.9903
10-22	0.9911				0.991		0.991		0.991						0.9911		0.9911		0.9911		0.9911		0.9911		0.9911		0.9911		0.9911
2-31	0.2878																		0.2878		0.2878		0.2878		0.2878		0.2878		0.2878
11-31	0.9972																		0.9972		0.9972		0.9972		0.9972		0.9972		0.9972
12-31	1.0197																		1.0197		1.0197		1.0197		1.0197		1.0197		1.0197
13-31	1.0029																		1.0029		1.0029		1.0029		1.0029		1.0029		1.0029
14-31	1.0078																		1.0078		1.0078		1.0078		1.0078		1.0078		1.0078
7-32	0.2495										0.2495		0.2495		0.2495		0.2495		0.2495		0.2495		0.2495		0.2495		0.2495		0.2495
17-32	0.2844										0.2844		0.2844		0.2844		0.2844		0.2844		0.2844		0.2844		0.2844		0.2844		0.2844
18-32	0.9053										0.9053		0.9053		0.9053		0.9053		0.9053		0.9053		0.9053		0.9053		0.9053		0.9053
19-32	0.9616										0.9616		0.9616		0.9616		0.9616		0.9616		0.9616		0.9616		0.9616		0.9616		0.9616
20-32	0.9882		0.988		0.988		0.988		0.988		0.9882		0.9882		0.9882		0.9882		0.9882		0.9882		0.9882		0.9882		0.9882		0.9882
21-32	0.3982		0.398		0.398		0.398		0.398		0.3982		0.3982		0.3982		0.3982		0.3982		0.3982		0.3982		0.3982		0.3982		0.3982
23-31	1.0057																		1.0057		1.0057		1.0057		1.0057		1.0057		1.0057
24-31	1.0075																		1.0075		1.0075		1.0075		1.0075		1.0075		1.0075
25-31	1.0030																		1.003		1.003		1.003		1.003		1.003		1.003
26-31E	0.4615																		0.4615		0.4615		0.4615		0.4615		0.4615		0.4615
36-31E	0.4952																		0.4952		0.4952		0.4952		0.4952		0.4952		0.4952
36-31W	0.5046																		0.5046		0.5046		0.5046		0.5046		0.5046		0.5046
26-32W	0.0866		0.087		0.087		0.087		0.087		0.0866		0.0866		0.0866		0.0866		0.0866		0.0866		0.0866		0.0866		0.0866		0.0866
27-32	0.6122		0.612		0.612		0.612		0.612		0.6122		0.6122		0.6122		0.6122		0.6122		0.6122		0.6122		0.6122		0.6122		0.6122
28-32	0.9937		0.994		0.994		0.994		0.994		0.9937		0.9937		0.9937		0.9937		0.9937		0.9937		0.9937		0.9937		0.9937		0.9937
29-32	0.9910		0.991		0.991		0.991		0.991		0.991		0.991		0.991		0.991		0.991		0.991		0.991		0.991		0.991		0.991
30-32	0.9588										0.9588		0.9588		0.9588		0.9588		0.9588		0.9588		0.9588		0.9588		0.9588		0.9588
31-32	0.9533										0.9533		0.9533		0.9533		0.9533		0.9533		0.9533		0.9533		0.9533		0.9533		0.9533
32-32	0.9908		0.991		0.991		0.991		0.991		0.9908		0.9908		0.9908		0.9908		0.9908		0.9908		0.9908		0.9908		0.9908		0.9908
33-32	0.9926		0.993		0.993		0.993		0.993		0.9926		0.9926		0.9926		0.9926		0.9926		0.9926		0.9926		0.9926		0.9926		0.9926
34-32	0.9938		0.994		0.994		0.994		0.994		0.9938		0.9938		0.9938		0.9938		0.9938		0.9938		0.9938		0.9938		0.9938		0.9938
35-32	0.9873		0.987		0.987		0.987		0.987		0.9873		0.9873		0.9873		0.9873		0.9873		0.9873		0.9873		0.9873		0.9873		0.9873
Total Contributing Area(mi²)			12.578		14.559		15.053		15.053		19.326		19.326		21.308		21.308		31.347		31.347		31.347		31.347				

CH2M HILL

Subject: Maryvale ADMS: Area Tabulations for HEC-1 Combines

By: J. Geisbush

Checked: D. Dust

Project No.: 132586

BETHANY HOME

Sub-Basin ID	Sub-Basin Area (mi²)	HEC-1 Combine Node IDs																							
		CBH4		C11-21		CBH83		C83E		CBH5		C10-21		C91D		CBH6		C9-21		C99A		CBH7		C8-21E	
2-21	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947
3-21	0.9808									1	0.9808	1	0.9808	1	0.9808	1	0.9808	1	0.9808	1	0.9808	1	0.9808	1	0.9808
4-21	0.8740															1	0.874	1	0.874	1	0.874	1	0.874	1	0.874
5-21	0.3455																					1	0.3455	1	0.3455
8-21E	0.5087																					1	0.5087	1	0.5087
9-21	0.9671															1	0.9671	1	0.9671	1	0.9671	1	0.9671	1	0.9671
10-21	0.9801									1	0.9801	1	0.9801	1	0.9801	1	0.9801	1	0.9801	1	0.9801	1	0.9801	1	0.9801
11-21	0.9831	1	0.9831	1	0.9831	1	0.9831	1	0.9831	1	0.9831	1	0.9831	1	0.9831	1	0.9831	1	0.9831	1	0.9831	1	0.9831	1	0.9831
12-21	1.0030	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003
1-22	0.2432	1	0.2432	1	0.2432	1	0.2432	1	0.2432	1	0.2432	1	0.2432	1	0.2432	1	0.2432	1	0.2432	1	0.2432	1	0.2432	1	0.2432
2-22	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042
3-22	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979
4-22	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034
5-22	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152
6-22E	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982
6-22W	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742
7-22	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699
8-22E	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225
8-22W	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936
9-22	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903
10-22	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911
11-22	1.0055									1	1.0055	1	1.0055	1	1.0055	1	1.0055	1	1.0055	1	1.0055	1	1.0055	1	1.0055
12-22	0.2447									1	0.2447	1	0.2447	1	0.2447	1	0.2447	1	0.2447	1	0.2447	1	0.2447	1	0.2447
2-31	0.2878	1	0.2878	1	0.2878	1	0.2878	1	0.2878	1	0.2878	1	0.2878	1	0.2878	1	0.2878	1	0.2878	1	0.2878	1	0.2878	1	0.2878
11-31	0.9972	1	0.9972	1	0.9972	1	0.9972	1	0.9972	1	0.9972	1	0.9972	1	0.9972	1	0.9972	1	0.9972	1	0.9972	1	0.9972	1	0.9972
12-31	1.0197	1	1.0197	1	1.0197	1	1.0197	1	1.0197	1	1.0197	1	1.0197	1	1.0197	1	1.0197	1	1.0197	1	1.0197	1	1.0197	1	1.0197
13-31	1.0029	1	1.0029	1	1.0029	1	1.0029	1	1.0029	1	1.0029	1	1.0029	1	1.0029	1	1.0029	1	1.0029	1	1.0029	1	1.0029	1	1.0029
14-31	1.0078	1	1.0078	1	1.0078	1	1.0078	1	1.0078	1	1.0078	1	1.0078	1	1.0078	1	1.0078	1	1.0078	1	1.0078	1	1.0078	1	1.0078
15-31	0.9555									1	0.9555	1	0.9555	1	0.9555	1	0.9555	1	0.9555	1	0.9555	1	0.9555	1	0.9555
22-31E	0.5123									1	0.5123	1	0.5123	1	0.5123	1	0.5123	1	0.5123	1	0.5123	1	0.5123	1	0.5123
22-31W	0.7658									1	0.7658	1	0.7658	1	0.7658	1	0.7658	1	0.7658	1	0.7658	1	0.7658	1	0.7658
27-31	1.0125									1	1.0125	1	1.0125	1	1.0125	1	1.0125	1	1.0125	1	1.0125	1	1.0125	1	1.0125
34-31	0.9947									1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947
7-32	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495
17-32	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844
18-32	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053
19-32	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616
20-32	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882
21-32	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982
23-31	1.0057	1	1.0057	1	1.0057	1	1.0057	1	1.0057	1	1.0057	1	1.0057	1	1.0057	1	1.0057	1	1.0057	1	1.0057	1	1.0057	1	1.0057
24-31	1.0075	1	1.0075	1	1.0075	1	1.0075	1	1.0075	1	1.0075	1	1.0075	1	1.0075	1	1.0075	1	1.0075	1	1.0075	1	1.0075	1	1.0075
25-31	1.0030	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003
26-31E	0.4615	1	0.4615	1	0.4615	1	0.4615	1	0.4615	1	0.4615	1	0.4615	1	0.4615	1	0.4615	1	0.4615	1	0.4615	1	0.4615	1	0.4615
26-31W	0.5403	1	0.5403	1	0.5403	1	0.5403	1	0.5403	1	0.5403	1	0.5403	1	0.5403	1	0.5403	1	0.5403	1	0.5403	1	0.5403	1	0.5403
34-31	0.9947									1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947
35-31	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054
36-31E	0.4952	1	0.4952	1	0.4952	1	0.4952	1	0.4952	1	0.4952	1	0.4952	1	0.4952	1	0.4952	1	0.4952	1	0.4952	1	0.4952	1	0.4952
36-31W	0.5046	1	0.5046	1	0.5046	1	0.5046	1	0.5046	1	0.5046	1	0.5046	1	0.5046	1	0.5046	1	0.5046	1	0.5046	1	0.5046	1	0.5046
26-32W	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866
27-32	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122
28-32	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937
29-32	0.9910	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991
30-32	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588
31-32	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533
32-32	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908
33-32	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926
34-32	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938
35-32	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873
Total Contributing Area(mi²)			34.871		34.871		34.871		34.871		43.317		43.317		43.317		45.158		45.158		45.158		46.012		46.012

CH2M HILL

Subject: Maryvale ADMS: Area Tabulations for HEC-1 Combines

By: J. Geisbush
Checked: D. Dust
Project No.: 132586

BETHANY HOME

Sub-Basin ID	Sub-Basin Area (mi²)		HEC-1 Combine Node IDs C8-21A																	
2-21	0.9947	1	0.9947																	
3-21	0.9808	1	0.9808																	
4-21	0.8740	1	0.874																	
5-21	0.3455	1	0.3455																	
8-21E	0.5087	1	0.5087																	
9-21	0.9671	1	0.9671																	
10-21	0.9801	1	0.9801																	
11-21	0.9831	1	0.9831																	
12-21	1.0030	1	1.003																	
1-22	0.2432	1	0.2432																	
2-22	1.0042	1	1.0042																	
3-22	0.9979	1	0.9979																	
4-22	1.0034	1	1.0034																	
5-22	1.0152	1	1.0152																	
6-22E	0.4982	1	0.4982																	
6-22W	0.4742	1	0.4742																	
7-22	0.9699	1	0.9699																	
8-22E	0.5225	1	0.5225																	
8-22W	0.4936	1	0.4936																	
9-22	0.9903	1	0.9903																	
10-22	0.9911	1	0.9911																	
11-22	1.0055	1	1.0055																	
12-22	0.2447	1	0.2447																	
2-31	0.2878	1	0.2878																	
11-31	0.9972	1	0.9972																	
12-31	1.0197	1	1.0197																	
13-31	1.0029	1	1.0029																	
14-31	1.0078	1	1.0078																	
15-31	0.9555	1	0.9555																	
22-31E	0.5123	1	0.5123																	
22-31W	0.7658	1	0.7658																	
27-31	1.0125	1	1.0125																	
34-31	0.9947	1	0.9947																	
7-32	0.2495	1	0.2495																	
17-32	0.2844	1	0.2844																	
18-32	0.9053	1	0.9053																	
19-32	0.9616	1	0.9616																	
20-32	0.9882	1	0.9882																	
21-32	0.3982	1	0.3982																	
23-31	1.0057	1	1.0057																	
24-31	1.0075	1	1.0075																	
25-31	1.0030	1	1.003																	
26-31E	0.4615	1	0.4615																	
26-31W	0.5403	1	0.5403																	
34-31	0.9947	1	0.9947																	
35-31	1.0054	1	1.0054																	
36-31E	0.4952	1	0.4952																	
36-31W	0.5046	1	0.5046																	
26-32W	0.0866	1	0.0866																	
27-32	0.6122	1	0.6122																	
28-32	0.9937	1	0.9937																	
29-32	0.9910	1	0.991																	
30-32	0.9588	1	0.9588																	
31-32	0.9533	1	0.9533																	
32-32	0.9908	1	0.9908																	
33-32	0.9926	1	0.9926																	
34-32	0.9938	1	0.9938																	
35-32	0.9873	1	0.9873																	
Total Contributing Area(mi²)			46.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

CH2M HILL

Subject: Maryvale ADMS: Area Tabulations for HEC-1 Combines

By: J. Geisbush
Checked: D. Dust
Project No.: 132586

CAMELBACK

Sub-Basin ID	Sub-Basin Area (mi²)	HEC-1 Combine Node IDs																							
		CCB27		CCB35		C43E		CCB43		C1622E		CCB1		CCB51		CCB2		C17-22		CCB59		C59E			
1-22	0.2432	1	0.243	1	0.243																				
2-22	1.0042	1	1.004	1	1.004	1	1.004	1	1.004	1	1.004	1	1.004	1	1.004	1	1.004	1	1.004	1	1.004	1	1.004		
3-22	0.9979			1	0.998	1	0.998	1	0.998	1	0.998	1	0.998	1	0.998	1	0.998	1	0.998	1	0.998	1	0.998		
4-22	1.0034							1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003		
5-22	1.0152															1	1.015	1	1.015	1	1.015	1	1.015		
8-22E	0.5225															1	0.522	1	0.522	1	0.522	1	0.522		
8-22W	0.4936															1	0.494	1	0.494	1	0.494	1	0.494		
9-22	0.9903							1	0.990	1	0.990	1	0.990	1	0.990	1	0.990	1	0.990	1	0.990	1	0.990		
10-22	0.9911			1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991		
11-22	1.0055	1	1.006	1	1.006																				
12-22	0.2447	1	0.245																						
13-22	0.2464	1	0.246																						
14-22	1.0000	1	1.000	1	1.000																				
15-22	0.9982			1	0.998	1	0.998	1	0.998	1	0.998	1	0.998	1	0.998	1	0.998			1	0.998				
16-22E	0.5130							1	0.513	1	0.513	1	0.513	1	0.513	1	0.513			1	0.513				
16-22W	0.4788											1	0.479	1	0.479	1	0.479			1	0.479				
17-22	1.0154															1	1.015	1	1.015	1	1.015	1	1.015		
20-32	0.9882															1	0.988	1	0.988	1	0.988	1	0.988		
21-32	0.3982							1	0.398	1	0.398	1	0.398	1	0.398	1	0.398	1	0.398	1	0.398	1	0.398		
26-32E	0.1068	1	0.107	1	0.107																				
26-32W	0.0866	1	0.087	1	0.087	1	0.087	1	0.087	1	0.087	1	0.087	1	0.087	1	0.087	1	0.087	1	0.087	1	0.087		
27-32	0.6122			1	0.612	1	0.612	1	0.612	1	0.612	1	0.612	1	0.612	1	0.612	1	0.612	1	0.612	1	0.612		
28-32	0.9937							1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994		
29-32	0.9910															1	0.991	1	0.991	1	0.991	1	0.991		
32-32	0.9908															1	0.991	1	0.991	1	0.991	1	0.991		
33-32	0.9926							1	0.993	1	0.993	1	0.993	1	0.993	1	0.993	1	0.993	1	0.993	1	0.993		
34-32	0.9938			1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994		
35-32	0.9873	1	0.987	1	0.987	1	0.987	1	0.987	1	0.987	1	0.987	1	0.987	1	0.987	1	0.987	1	0.987	1	0.987		
36-32	0.1135	1	0.113	1	0.113																				
Total Contributing Area(mi²)			5.038		9.140		6.671		11.563		11.563		12.041		12.041		18.058		16.068		18.058		16.068		0.000

CH2M HILL

Subject: Maryvale ADMS: Area Tabulations for HEC-I Combines

By: J. Geisbush
Checked: D. Dust
Project No.: 132586

CAMELBACK

Sub-Basin ID	Sub-Basin Area (mi²)	HEC-I Combine Node IDs																											
		C18-22		C67F		CCB3		CCB67		CCB4		C13-21		CCB75		C75F		C1421E		CCB5		CCB83		C83F	
1-21	0.9994									0.9994		0.9994		0.9994		0.9994		0.9994		0.9994		0.9994		0.9994	
2-21	0.9947																	0.9947		0.9947		0.9947		0.9947	
11-21	0.9831																	0.9831		0.9831		0.9831		0.9831	
12-21	1.0030									1.003		1.003		1.003		1.003		1.003		1.003		1.003		1.003	
13-21	1.0003									1.0003		1.0003		1.0003		1.0003		1.0003		1.0003		1.0003		1.0003	
14-21E	0.4317																	0.4317		0.4317		0.4317		0.4317	
14-21W	0.5615																			0.5615		0.5615		0.5615	
2-22	1.0042		1.0042		1.0042		1.0042		1.0042		1.0042		1.0042		1.0042		1.0042		1.0042		1.0042		1.0042		1.0042
3-22	0.9979		0.9979		0.9979		0.9979		0.9979		0.9979		0.9979		0.9979		0.9979		0.9979		0.9979		0.9979		0.9979
4-22	1.0034		1.0034		1.0034		1.0034		1.0034		1.0034		1.0034		1.0034		1.0034		1.0034		1.0034		1.0034		1.0034
5-22	1.0152		1.0152		1.0152		1.0152		1.0152		1.0152		1.0152		1.0152		1.0152		1.0152		1.0152		1.0152		1.0152
6-22E	0.4982		0.4982		0.4982		0.4982		0.4982		0.4982		0.4982		0.4982		0.4982		0.4982		0.4982		0.4982		0.4982
6-22W	0.4742		0.4742		0.4742		0.4742		0.4742		0.4742		0.4742		0.4742		0.4742		0.4742		0.4742		0.4742		0.4742
7-22	0.9699		0.9699		0.9699		0.9699		0.9699		0.9699		0.9699		0.9699		0.9699		0.9699		0.9699		0.9699		0.9699
8-22E	0.5225		0.5225		0.5225		0.5225		0.5225		0.5225		0.5225		0.5225		0.5225		0.5225		0.5225		0.5225		0.5225
8-22W	0.4936		0.4936		0.4936		0.4936		0.4936		0.4936		0.4936		0.4936		0.4936		0.4936		0.4936		0.4936		0.4936
9-22	0.9903		0.9903		0.9903		0.9903		0.9903		0.9903		0.9903		0.9903		0.9903		0.9903		0.9903		0.9903		0.9903
10-22	0.9911		0.9911		0.9911		0.9911		0.9911		0.9911		0.9911		0.9911		0.9911		0.9911		0.9911		0.9911		0.9911
15-22	0.9982						0.9982		0.9982		0.9982		0.9982		0.9982		0.9982		0.9982		0.9982		0.9982		0.9982
16-22E	0.5130						0.513		0.513		0.513		0.513		0.513		0.513		0.513		0.513		0.513		0.513
16-22W	0.4788		0.4788		0.4788		0.4788		0.4788		0.4788		0.4788		0.4788		0.4788		0.4788		0.4788		0.4788		0.4788
17-22	1.0154		1.0154		1.0154		1.0154		1.0154		1.0154		1.0154		1.0154		1.0154		1.0154		1.0154		1.0154		1.0154
18-22	0.9688		0.9688		0.9688		0.9688		0.9688		0.9688		0.9688		0.9688		0.9688		0.9688		0.9688		0.9688		0.9688
2-31	0.2878									0.2878		0.2878		0.2878		0.2878		0.2878		0.2878		0.2878		0.2878	
11-31	0.9972									0.9972		0.9972		0.9972		0.9972		0.9972		0.9972		0.9972		0.9972	
12-31	1.0197									1.0197		1.0197		1.0197		1.0197		1.0197		1.0197		1.0197		1.0197	
13-31	1.0029									1.0029		1.0029		1.0029		1.0029		1.0029		1.0029		1.0029		1.0029	
14-31	1.0078									1.0078		1.0078		1.0078		1.0078		1.0078		1.0078		1.0078		1.0078	
7-32	0.2495		0.2495		0.2495		0.2495		0.2495		0.2495		0.2495		0.2495		0.2495		0.2495		0.2495		0.2495		0.2495
17-32	0.2844		0.2844		0.2844		0.2844		0.2844		0.2844		0.2844		0.2844		0.2844		0.2844		0.2844		0.2844		0.2844
18-32	0.9053		0.9053		0.9053		0.9053		0.9053		0.9053		0.9053		0.9053		0.9053		0.9053		0.9053		0.9053		0.9053
19-32	0.9616		0.9616		0.9616		0.9616		0.9616		0.9616		0.9616		0.9616		0.9616		0.9616		0.9616		0.9616		0.9616
20-32	0.9882		0.9882		0.9882		0.9882		0.9882		0.9882		0.9882		0.9882		0.9882		0.9882		0.9882		0.9882		0.9882
21-32	0.3982		0.3982		0.3982		0.3982		0.3982		0.3982		0.3982		0.3982		0.3982		0.3982		0.3982		0.3982		0.3982
23-31	1.0057									1.0057		1.0057		1.0057		1.0057		1.0057		1.0057		1.0057		1.0057	
24-31	1.0075									1.0075		1.0075		1.0075		1.0075		1.0075		1.0075		1.0075		1.0075	
25-31	1.0030									1.003		1.003		1.003		1.003		1.003		1.003		1.003		1.003	
26-31E	0.4615									0.4615		0.4615		0.4615		0.4615		0.4615		0.4615		0.4615		0.4615	
26-31W	0.5403																	0.5403		0.5403		0.5403		0.5403	
35-31	1.0054																	1.0054		1.0054		1.0054		1.0054	
36-31E	0.4952									0.4952		0.4952		0.4952		0.4952		0.4952		0.4952		0.4952		0.4952	
36-31W	0.5046									0.5046		0.5046		0.5046		0.5046		0.5046		0.5046		0.5046		0.5046	
26-32W	0.0866		0.0866		0.0866		0.0866		0.0866		0.0866		0.0866		0.0866		0.0866		0.0866		0.0866		0.0866		0.0866
27-32	0.6122		0.6122		0.6122		0.6122		0.6122		0.6122		0.6122		0.6122		0.6122		0.6122		0.6122		0.6122		0.6122
28-32	0.9937		0.9937		0.9937		0.9937		0.9937		0.9937		0.9937		0.9937		0.9937		0.9937		0.9937		0.9937		0.9937
29-32	0.9910		0.991		0.991		0.991		0.991		0.991		0.991		0.991		0.991		0.991		0.991		0.991		0.991
30-32	0.9588		0.9588		0.9588		0.9588		0.9588		0.9588		0.9588		0.9588		0.9588		0.9588		0.9588		0.9588		0.9588
31-32	0.9533		0.9533		0.9533		0.9533		0.9533		0.9533		0.9533		0.9533		0.9533		0.9533		0.9533		0.9533		0.9533
32-32	0.9908		0.9908		0.9908		0.9908		0.9908		0.9908		0.9908		0.9908		0.9908		0.9908		0.9908		0.9908		0.9908
33-32	0.9926		0.9926		0.9926		0.9926		0.9926		0.9926		0.9926		0.9926		0.9926		0.9926		0.9926		0.9926		0.9926
34-32	0.9938		0.9938		0.9938		0.9938		0.9938		0.9938		0.9938		0.9938		0.9938		0.9938		0.9938		0.9938		0.9938
35-32	0.9873		0.9873		0.9873		0.9873		0.9873		0.9873		0.9873		0.9873		0.9873		0.9873		0.9873		0.9873		0.9873
			30		30		32		32		46		46		46		46		51		52		52		52
Total Contributing Area(mi²)			23.771		23.771		25.282		25.282		37.078		37.078		37.078		37.078		41.033		41.594		41.594		41.594

CH2M HILL

Subject: **Maryvale ADMS: Area Tabulations for HEC-1 Combines**

By: **J. Geisbush**
Checked: **D. Dust**
Project No.: **132586**

CAMELBACK

Sub-Basin ID	Sub-Basin Area (mi^2)	HEC-1 Combine Node IDs																							
			C15-21		C91E		C16-21		C99B		C17-21E		CCB6		CCB91		CCB7		CCB99		CCB8		CCB107		C18-21
1-21	0.9994	1	0.9994	1	0.9994	1	0.9994	1	0.9994	1	0.9994	1	0.9994	1	0.9994	1	0.9994	1	0.9994	1	0.9994	1	0.9994	1	0.9994
2-21	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947
3-21	0.9808	1	0.9808	1	0.9808	1	0.9808	1	0.9808	1	0.9808	1	0.9808	1	0.9808	1	0.9808	1	0.9808	1	0.9808	1	0.9808	1	0.9808
4-21	0.8740					1	0.874	1	0.874	1	0.874					1	0.874	1	0.874	1	0.874	1	0.874	1	0.874
9-21	0.9671					1	0.9671	1	0.9671	1	0.9671					1	0.9671	1	0.9671	1	0.9671	1	0.9671	1	0.9671
10-21	0.9801	1	0.9801	1	0.9801	1	0.9801	1	0.9801	1	0.9801	1	0.9801	1	0.9801	1	0.9801	1	0.9801	1	0.9801	1	0.9801	1	0.9801
11-21	0.9831	1	0.9831	1	0.9831	1	0.9831	1	0.9831	1	0.9831	1	0.9831	1	0.9831	1	0.9831	1	0.9831	1	0.9831	1	0.9831	1	0.9831
12-21	1.0030	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003
13-21	1.0003	1	1.0003	1	1.0003	1	1.0003	1	1.0003	1	1.0003	1	1.0003	1	1.0003	1	1.0003	1	1.0003	1	1.0003	1	1.0003	1	1.0003
14-21E	0.4317	1	0.4317	1	0.4317	1	0.4317	1	0.4317	1	0.4317	1	0.4317	1	0.4317	1	0.4317	1	0.4317	1	0.4317	1	0.4317	1	0.4317
14-21W	0.5615	1	0.5615	1	0.5615	1	0.5615	1	0.5615	1	0.5615	1	0.5615	1	0.5615	1	0.5615	1	0.5615	1	0.5615	1	0.5615	1	0.5615
15-21	1.0114	1	1.0114	1	1.0114	1	1.0114	1	1.0114	1	1.0114	1	1.0114	1	1.0114	1	1.0114	1	1.0114	1	1.0114	1	1.0114	1	1.0114
17-21E	0.6990									1	0.699									1	0.699	1	0.699	1	0.699
17-21W	0.3063																					1	0.3063	1	0.3063
18-21	0.5426																							1	0.5426
2-22	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042
3-22	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979
4-22	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034
5-22	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152
6-22E	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982
6-22W	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742
7-22	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699
8-22E	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225
8-22W	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936
9-22	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903
10-22	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911
15-22	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982
16-22E	0.5130	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513
16-22W	0.4788	1	0.4788	1	0.4788	1	0.4788	1	0.4788	1	0.4788	1	0.4788	1	0.4788	1	0.4788	1	0.4788	1	0.4788	1	0.4788	1	0.4788
17-22	1.0154	1	1.0154	1	1.0154	1	1.0154	1	1.0154	1	1.0154	1	1.0154	1	1.0154	1	1.0154	1	1.0154	1	1.0154	1	1.0154	1	1.0154
18-22	0.9688	1	0.9688	1	0.9688	1	0.9688	1	0.9688	1	0.9688	1	0.9688	1	0.9688	1	0.9688	1	0.9688	1	0.9688	1	0.9688	1	0.9688
2-31	0.2878	1	0.2878	1	0.2878	1	0.2878	1	0.2878	1	0.2878	1	0.2878	1	0.2878	1	0.2878	1	0.2878	1	0.2878	1	0.2878	1	0.2878
11-31	0.9972	1	0.9972	1	0.9972	1	0.9972	1	0.9972	1	0.9972	1	0.9972	1	0.9972	1	0.9972	1	0.9972	1	0.9972	1	0.9972	1	0.9972
12-31	1.0197	1	1.0197	1	1.0197	1	1.0197	1	1.0197	1	1.0197	1	1.0197	1	1.0197	1	1.0197	1	1.0197	1	1.0197	1	1.0197	1	1.0197
13-31	1.0029	1	1.0029	1	1.0029	1	1.0029	1	1.0029	1	1.0029	1	1.0029	1	1.0029	1	1.0029	1	1.0029	1	1.0029	1	1.0029	1	1.0029
14-31	1.0078	1	1.0078	1	1.0078	1	1.0078	1	1.0078	1	1.0078	1	1.0078	1	1.0078	1	1.0078	1	1.0078	1	1.0078	1	1.0078	1	1.0078
15-31	0.9555	1	0.9555	1	0.9555	1	0.9555	1	0.9555	1	0.9555	1	0.9555	1	0.9555	1	0.9555	1	0.9555	1	0.9555	1	0.9555	1	0.9555
7-32	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495
17-32	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844
18-32	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053
19-32	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616
20-32	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882
21-32	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982
22-31E	0.5123	1	0.5123	1	0.5123	1	0.5123	1	0.5123	1	0.5123	1	0.5123	1	0.5123	1	0.5123	1	0.5123	1	0.5123	1	0.5123	1	0.5123
22-31W	0.7658	1	0.7658	1	0.7658	1	0.7658	1	0.7658	1	0.7658	1	0.7658	1	0.7658	1	0.7658	1	0.7658	1	0.7658	1	0.7658	1	0.7658
23-31	1.0057	1	1.0057	1	1.0057	1	1.0057	1	1.0057	1	1.0057	1	1.0057	1	1.0057	1	1.0057	1	1.0057	1	1.0057	1	1.0057	1	1.0057
24-31	1.0075	1	1.0075	1	1.0075	1	1.0075	1	1.0075	1	1.0075	1	1.0075	1	1.0075	1	1.0075	1	1.0075	1	1.0075	1	1.0075	1	1.0075
25-31	1.0030	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003
26-31E	0.4615	1	0.4615	1	0.4615	1	0.4615	1	0.4615	1	0.4615	1	0.4615	1	0.4615	1	0.4615	1	0.4615	1	0.4615	1	0.4615	1	0.4615
26-31W	0.5403	1	0.5403	1	0.5403	1	0.5403	1	0.5403	1	0.5403	1	0.5403	1	0.5403	1	0.5403	1	0.5403	1	0.5403	1	0.5403	1	0.5403
27-21	1.0046	1	1.0046	1	1.0046	1	1.0046	1	1.0046	1	1.0046	1	1.0046	1	1.0046	1	1.0046	1	1.0046	1	1.0046	1	1.0046	1	1.0046
34-31	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947
35-31	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054
36-31E	0.4952	1	0.4952	1	0.4952	1	0.4952	1	0.4952	1	0.4952	1	0.4952	1	0.4952	1	0.4952	1	0.4952	1	0.4952	1	0.4952	1	0.4952
36-31W	0.5046	1	0.5046	1	0.5046	1	0.5046	1	0.5046	1	0.5046	1	0.5046	1	0.5046	1	0.5046	1	0.5046	1	0.5046	1	0.5046	1	0.5046
26-32W	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866
27-32	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122
28-32	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937
29-32	0.9910	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991
30-32	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588
31-32	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533
32-32	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908
33-32	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926
34-32	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938
35-32	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873
			60		60		62		62		63		60		60		62		62		63		64		65
Total Contributing Area(mi^2)			48.800		48.800		50.641		50.641		51.340		48.800		48.800		50.641		50.641		51.340		51.646		52.189

CH2M HILL

Subject: Maryvale ADMS: Area Tabulations for HEC-1 Combines

By: J. Geisbush

Checked: D. Dust

Project No.: 132586

INDIAN SCHOOL

Sub-Basin ID	Sub-Basin Area (mi²)	HEC-1 Combine Node IDs																									
		CIS27		C35D		CIS35		CIS35A		C22-22E		C2222W		CIS43		CIS1		C21-22		CIS51		C51E					
1-22	0.2432	1	0.243	1	0.243	1	0.243	1	0.243			1	0.243	1	0.243	1	0.243			1	0.243						
2-22	1.0042	1	1.004	1	1.004	1	1.004	1	1.004	1	1.004	1	1.004	1	1.004	1	1.004	1	1.004	1	1.004	1	1.004				
3-22	0.9979			1	0.998	1	0.998	1	0.998	1	0.998	1	0.998	1	0.998	1	0.998	1	0.998	1	0.998	1	0.998				
4-22	1.0034							1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003				
9-22	0.9903							1	0.990	1	0.990	1	0.990	1	0.990	1	0.990	1	0.990	1	0.990	1	0.990				
10-22	0.9911			1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991				
11-22	1.0055	1	1.006	1	1.006	1	1.006	1	1.006			1	1.006	1	1.006	1	1.006			1	1.006						
12-22	0.2447	1	0.245																								
13-22	0.2464	1	0.246																								
14-22	1.0000	1	1.000	1	1.000	1	1.000	1	1.000			1	1.000	1	1.000	1	1.000			1	1.000						
15-22	0.9982			1	0.998	1	0.998	1	0.998	1	0.998	1	0.998	1	0.998	1	0.998	1	0.998	1	0.998	1	0.998				
16-22E	0.5130							1	0.513	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513				
16-22W	0.4788															1	0.479	1	0.479	1	0.479	1	0.479				
21-22	0.9937															1	0.994	1	0.994	1	0.994	1	0.994				
22-22E	0.5325							1	0.533	1	0.533	1	0.533	1	0.533	1	0.533			1	0.533						
22-22W	0.4671											1	0.467	1	0.467	1	0.467	1	0.467	1	0.467	1	0.467				
23-22	0.9895	1	0.989	1	0.989	1	0.989	1	0.989			1	0.989	1	0.989	1	0.989			1	0.989						
24-22	0.2249	1	0.225																								
21-32	0.3982							1	0.398	1	0.398	1	0.398	1	0.398	1	0.398	1	0.398	1	0.398	1	0.398				
26-32E	0.1068	1	0.107	1	0.107	1	0.107	1	0.107			1	0.107	1	0.107	1	0.107			1	0.107						
26-32W	0.0866	1	0.087	1	0.087	1	0.087	1	0.087	1	0.087	1	0.087'	1	0.087	1	0.087	1	0.087	1	0.087	1	0.087				
27-32	0.6122			1	0.612	1	0.612	1	0.612	1	0.612	1	0.612	1	0.612	1	0.612	1	0.612	1	0.612	1	0.612				
28-32	0.9937							1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994				
33-32	0.9926							1	0.993	1	0.993	1	0.993	1	0.993	1	0.993	1	0.993	1	0.993	1	0.993				
34-32	0.9938			1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994				
35-32	0.9873	1	0.987	1	0.987	1	0.987	1	0.987	1	0.987	1	0.987	1	0.987	1	0.987	1	0.987	1	0.987	1	0.987				
36-32	0.1135	1	0.113	1	0.113	1	0.113	1	0.113			1	0.113	1	0.113	1	0.113			1	0.113						
			12		14		14		21		15		22		22		24		17		24		17				
Total Contributing Area(mi²)			6.253		10.130		10.130		15.554		12.095		16.021		16.021		17.493		13.502		17.493		13.502		0.000		

CH2M HILL

Subject: Maryvale ADMS: Area Tabulations for HEC-1 Combines

By: J. Geisbush
Checked: D. Dust
Project No.: 132586

INDIAN SCHOOL

Sub-Basin ID	Sub-Basin Area (mi²)	HEC-1 Combine Node IDs																													
		CIS2		CIS59		C20-22		C59F		CIS3		C19-22		C67G		CIS67		CIS4		C2421N		C2421S		CIS5	
1-21	0.9994																	0.9994		0.9994		0.9994		0.9994	
12-21	1.0030																	1.003		1.003		1.003		1.003	
13-21	1.0003																	1.0003		1.0003		1.0003		1.0003	
24-21N	0.4133																	0.4133		0.4133		0.4133		0.4133	
24-21S	0.6123																					0.6123		0.6123	
1-22	0.2432	0.2432		0.2432						0.2432															
2-22	1.0042	1.0042		1.0042		1.0042		1.0042		1.0042		1.0042		1.0042		1.0042		1.0042		1.0042		1.0042		1.0042	
3-22	0.9979	0.9979		0.9979		0.9979		0.9979		0.9979		0.9979		0.9979		0.9979		0.9979		0.9979		0.9979		0.9979	
4-22	1.0034	1.0034		1.0034		1.0034		1.0034		1.0034		1.0034		1.0034		1.0034		1.0034		1.0034		1.0034		1.0034	
5-22	1.0152	1.0152		1.0152		1.0152		1.0152		1.0152		1.0152		1.0152		1.0152		1.0152		1.0152		1.0152		1.0152	
6-22E	0.4982									0.4982		0.4982		0.4982		0.4982		0.4982		0.4982		0.4982		0.4982	
6-22W	0.4742									0.4742		0.4742		0.4742		0.4742		0.4742		0.4742		0.4742		0.4742	
7-22	0.9699									0.9699		0.9699		0.9699		0.9699		0.9699		0.9699		0.9699		0.9699	
8-22E	0.5225	0.5225		0.5225		0.5225		0.5225		0.5225		0.5225		0.5225		0.5225		0.5225		0.5225		0.5225		0.5225	
8-22W	0.4936	0.4936		0.4936		0.4936		0.4936		0.4936		0.4936		0.4936		0.4936		0.4936		0.4936		0.4936		0.4936	
9-22	0.9903	0.9903		0.9903		0.9903		0.9903		0.9903		0.9903		0.9903		0.9903		0.9903		0.9903		0.9903		0.9903	
10-22	0.9911	0.9911		0.9911		0.9911		0.9911		0.9911		0.9911		0.9911		0.9911		0.9911		0.9911		0.9911		0.9911	
11-22	1.0055	1.0055		1.0055						1.0055															
14-22	1.0000	1.0000		1.0000						1.0000															
15-22	0.9982	0.9982		0.9982		0.9982		0.9982		0.9982		0.9982		0.9982		0.9982		0.9982		0.9982		0.9982		0.9982	
16-22E	0.5130	0.513		0.513		0.513		0.513		0.513		0.513		0.513		0.513		0.513		0.513		0.513		0.513	
16-22W	0.4788	0.4788		0.4788		0.4788		0.4788		0.4788		0.4788		0.4788		0.4788		0.4788		0.4788		0.4788		0.4788	
17-22	1.0154	1.0154		1.0154		1.0154		1.0154		1.0154		1.0154		1.0154		1.0154		1.0154		1.0154		1.0154		1.0154	
18-22	0.9688									0.9688		0.9688		0.9688		0.9688		0.9688		0.9688		0.9688		0.9688	
19-22	0.9380									0.938		0.938		0.938		0.938		0.938		0.938		0.938		0.938	
20-22	1.0139	1.0139		1.0139		1.0139		1.0139		1.0139		1.0139		1.0139		1.0139		1.0139		1.0139		1.0139		1.0139	
21-22	0.9937	0.9937		0.9937		0.9937		0.9937		0.9937		0.9937		0.9937		0.9937		0.9937		0.9937		0.9937		0.9937	
22-22E	0.5325	0.5325		0.5325						0.5325															
22-22W	0.4671	0.4671		0.4671		0.4671		0.4671		0.4671		0.4671		0.4671		0.4671		0.4671		0.4671		0.4671		0.4671	
23-22	0.9895	0.9895		0.9895						0.9895															
2-31	0.2878																	0.2878		0.2878		0.2878		0.2878	
11-31	0.9972																	0.9972		0.9972		0.9972		0.9972	
12-31	1.0197																	1.0197		1.0197		1.0197		1.0197	
13-31	1.0029																	1.0029		1.0029		1.0029		1.0029	
14-31	1.0078																	1.0078		1.0078		1.0078		1.0078	
7-32	0.2495									0.2495		0.2495		0.2495		0.2495		0.2495		0.2495		0.2495		0.2495	
17-32	0.2844									0.2844		0.2844		0.2844		0.2844		0.2844		0.2844		0.2844		0.2844	
18-32	0.9053									0.9053		0.9053		0.9053		0.9053		0.9053		0.9053		0.9053		0.9053	
19-32	0.9616									0.9616		0.9616		0.9616		0.9616		0.9616		0.9616		0.9616		0.9616	
20-32	0.9882	0.9882		0.9882		0.9882		0.9882		0.9882		0.9882		0.9882		0.9882		0.9882		0.9882		0.9882		0.9882	
21-32	0.3982	0.3982		0.3982		0.3982		0.3982		0.3982		0.3982		0.3982		0.3982		0.3982		0.3982		0.3982		0.3982	
23-31	1.0057																	1.0057		1.0057		1.0057		1.0057	
24-31	1.0075																	1.0075		1.0075		1.0075		1.0075	
25-31	1.0030																	1.003		1.003		1.003		1.003	
26-31E	0.4615																	0.4615		0.4615		0.4615		0.4615	
36-31E	0.4952																	0.4952		0.4952		0.4952		0.4952	
36-31W	0.5046																	0.5046		0.5046		0.5046		0.5046	
26-32E	0.1068	0.1068		0.1068						0.1068															
26-32W	0.0866	0.0866		0.0866		0.0866		0.0866		0.0866		0.0866		0.0866		0.0866		0.0866		0.0866		0.0866		0.0866	
27-32	0.6122	0.6122		0.6122		0.6122		0.6122		0.6122		0.6122		0.6122		0.6122		0.6122		0.6122		0.6122		0.6122	
28-32	0.9937	0.9937		0.9937		0.9937		0.9937		0.9937		0.9937		0.9937		0.9937		0.9937		0.9937		0.9937		0.9937	
29-32	0.9910	0.991		0.991		0.991		0.991		0.991		0.991		0.991		0.991		0.991		0.991		0.991		0.991	
30-32	0.9588									0.9588		0.9588		0.9588		0.9588		0.9588		0.9588		0.9588		0.9588	
31-32	0.9533									0.9533		0.9533		0.9533		0.9533		0.9533		0.9533		0.9533		0.9533	
32-32	0.9908	0.9908		0.9908		0.9908		0.9908		0.9908		0.9908		0.9908		0.9908		0.9908		0.9908		0.9908		0.9908	
33-32	0.9926	0.9926		0.9926		0.9926		0.9926		0.9926		0.9926		0.9926		0.9926		0.9926		0.9926		0.9926		0.9926	
34-32	0.9938	0.9938		0.9938		0.9938		0.9938		0.9938		0.9938		0.9938		0.9938		0.9938		0.9938		0.9938		0.9938	
35-32	0.9873	0.9873		0.9873		0.9873		0.9873		0.9873		0.9873		0.9873		0.9873		0.9873		0.9873		0.9873		0.9873	
36-32	0.1135	0.1135		0.1135						0.1135															
		32		32		25		25		43		36		36		36		51		51		52		52	
Total Contributing Area(mi²)		24.524		24.524		20.533		20.533		32.686		28.695		28.695		28.695		40.904		40.904		41.516		41.516	

CH2M HILL

Subject: Maryvale ADMS: Area Tabulations for HEC-1 Combines

By: J. Geisbush
Checked: D. Dust
Project No.: 132586

INDIAN SCHOOL

HEC-1 Combine Node IDs

Sub-Basin ID	Sub-Basin Area (mi²)		CIS6		C23-21		CIS83		C83G		CIS7		C22-21		CIS91		C91F		CIS8		C21-21		CIS99		C99C
1-21	0.9994	1	0.9994	1	0.9994	1	0.9994	1	0.9994	1	0.9994	1	0.9994	1	0.9994	1	0.9994	1	0.9994	1	0.9994	1	0.9994	1	0.9994
2-21	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947
3-21	0.9808									1	0.9808	1	0.9808	1	0.9808	1	0.9808	1	0.9808	1	0.9808	1	0.9808	1	0.9808
4-21	0.8740																	1	0.874	1	0.874	1	0.874	1	0.874
9-21	0.9671																	1	0.9671	1	0.9671	1	0.9671	1	0.9671
10-21	0.9801									1	0.9801	1	0.9801	1	0.9801	1	0.9801	1	0.9801	1	0.9801	1	0.9801	1	0.9801
11-21	0.9831	1	0.9831	1	0.9831	1	0.9831	1	0.9831	1	0.9831	1	0.9831	1	0.9831	1	0.9831	1	0.9831	1	0.9831	1	0.9831	1	0.9831
12-21	1.0030	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003
13-21	1.0003	1	1.0003	1	1.0003	1	1.0003	1	1.0003	1	1.0003	1	1.0003	1	1.0003	1	1.0003	1	1.0003	1	1.0003	1	1.0003	1	1.0003
14-21E	0.4317	1	0.4317	1	0.4317	1	0.4317	1	0.4317	1	0.4317	1	0.4317	1	0.4317	1	0.4317	1	0.4317	1	0.4317	1	0.4317	1	0.4317
14-21W	0.5615	1	0.5615	1	0.5615	1	0.5615	1	0.5615	1	0.5615	1	0.5615	1	0.5615	1	0.5615	1	0.5615	1	0.5615	1	0.5615	1	0.5615
15-21	1.0114									1	1.0114	1	1.0114	1	1.0114	1	1.0114	1	1.0114	1	1.0114	1	1.0114	1	1.0114
16-21	1.0214																	1	1.0214	1	1.0214	1	1.0214	1	1.0214
21-21	1.0076																	1	1.0076	1	1.0076	1	1.0076	1	1.0076
22-21	1.0020									1	1.002	1	1.002	1	1.002	1	1.002	1	1.002	1	1.002	1	1.002	1	1.002
23-21	0.9869	1	0.9869	1	0.9869	1	0.9869	1	0.9869	1	0.9869	1	0.9869	1	0.9869	1	0.9869	1	0.9869	1	0.9869	1	0.9869	1	0.9869
24-21N	0.4133	1	0.4133	1	0.4133	1	0.4133	1	0.4133	1	0.4133	1	0.4133	1	0.4133	1	0.4133	1	0.4133	1	0.4133	1	0.4133	1	0.4133
24-21S	0.6123	1	0.6123	1	0.6123	1	0.6123	1	0.6123	1	0.6123	1	0.6123	1	0.6123	1	0.6123	1	0.6123	1	0.6123	1	0.6123	1	0.6123
2-22	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042
3-22	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979
4-22	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034
5-22	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152
6-22E	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982
6-22W	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742
7-22	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699
8-22E	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225
8-22W	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936
9-22	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903
10-22	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911
15-22	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982
16-22E	0.5130	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513
16-22W	0.4788	1	0.4788	1	0.4788	1	0.4788	1	0.4788	1	0.4788	1	0.4788	1	0.4788	1	0.4788	1	0.4788	1	0.4788	1	0.4788	1	0.4788
17-22	1.0154	1	1.0154	1	1.0154	1	1.0154	1	1.0154	1	1.0154	1	1.0154	1	1.0154	1	1.0154	1	1.0154	1	1.0154	1	1.0154	1	1.0154
18-22	0.9688	1	0.9688	1	0.9688	1	0.9688	1	0.9688	1	0.9688	1	0.9688	1	0.9688	1	0.9688	1	0.9688	1	0.9688	1	0.9688	1	0.9688
19-22	0.9380	1	0.938	1	0.938	1	0.938	1	0.938	1	0.938	1	0.938	1	0.938	1	0.938	1	0.938	1	0.938	1	0.938	1	0.938
20-22	1.0139	1	1.0139	1	1.0139	1	1.0139	1	1.0139	1	1.0139	1	1.0139	1	1.0139	1	1.0139	1	1.0139	1	1.0139	1	1.0139	1	1.0139
21-22	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937
22-22W	0.4671	1	0.4671	1	0.4671	1	0.4671	1	0.4671	1	0.4671	1	0.4671	1	0.4671	1	0.4671	1	0.4671	1	0.4671	1	0.4671	1	0.4671
2-31	0.2878	1	0.2878	1	0.2878	1	0.2878	1	0.2878	1	0.2878	1	0.2878	1	0.2878	1	0.2878	1	0.2878	1	0.2878	1	0.2878	1	0.2878
11-31	0.9972	1	0.9972	1	0.9972	1	0.9972	1	0.9972	1	0.9972	1	0.9972	1	0.9972	1	0.9972	1	0.9972	1	0.9972	1	0.9972	1	0.9972
12-31	1.0197	1	1.0197	1	1.0197	1	1.0197	1	1.0197	1	1.0197	1	1.0197	1	1.0197	1	1.0197	1	1.0197	1	1.0197	1	1.0197	1	1.0197
13-31	1.0029	1	1.0029	1	1.0029	1	1.0029	1	1.0029	1	1.0029	1	1.0029	1	1.0029	1	1.0029	1	1.0029	1	1.0029	1	1.0029	1	1.0029
14-31	1.0078	1	1.0078	1	1.0078	1	1.0078	1	1.0078	1	1.0078	1	1.0078	1	1.0078	1	1.0078	1	1.0078	1	1.0078	1	1.0078	1	1.0078
15-31	0.9555									1	0.9555	1	0.9555	1	0.9555	1	0.9555	1	0.9555	1	0.9555	1	0.9555	1	0.9555
7-32	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495
17-32	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844
18-32	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053
19-32	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616
20-32	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882
21-32	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982
22-31E	0.5123									1	0.5123	1	0.5123	1	0.5123	1	0.5123	1	0.5123	1	0.5123	1	0.5123	1	0.5123
22-31W	0.7658									1	0.7658	1	0.7658	1	0.7658	1	0.7658	1	0.7658	1	0.7658	1	0.7658	1	0.7658
23-31	1.0057	1	1.0057	1	1.0057	1	1.0057	1	1.0057	1	1.0057	1	1.0057	1	1.0057	1	1.0057	1	1.0057	1	1.0057	1	1.0057	1	1.0057
24-31	1.0075	1	1.0075	1	1.0075	1	1.0075	1	1.0075	1	1.0075	1	1.0075	1	1.0075	1	1.0075	1	1.0075	1	1.0075	1	1.0075	1	1.0075
25-31	1.0030	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003
26-31E	0.4615	1	0.4615	1	0.4615	1	0.4615	1	0.4615	1	0.4615	1	0.4615	1	0.4615	1	0.4615	1	0.4615	1	0.4615	1	0.4615	1	0.4615
26-31W	0.5403	1	0.5403	1	0.5403	1	0.5403	1	0.5403	1	0.5403	1	0.5403	1	0.5403	1	0.5403	1	0.5403	1	0.5403	1	0.5403	1	0.5403
27-31	1.0125									1	1.0125	1	1.0125	1	1.0125	1	1.0125	1	1.0125	1	1.0125	1	1.0125	1	1.0125
34-31	0.9947									1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947
35-31	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054
36-31E	0.4952	1	0.4952	1	0.4952	1	0.4952	1	0.4952	1	0.4952	1	0.4952	1	0.4952	1	0.4952	1	0.4952	1	0.4952	1	0.4952	1	0.4952
36-31W	0.5046	1	0.5046	1	0.5046	1	0.5046	1	0.5046	1	0.5046	1	0.5046	1	0.5046	1	0.5046	1	0.5046	1	0.5046	1	0.5046	1	0.5046
26-32W	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866
27-32	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122
28-32	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937
29-32	0.9910	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991
30-32	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588
31-32	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533
32-32	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908
33-32	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926
34-32	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938
35-32	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873
		59		59		59		59		68		68		68		68		72		72		72		72	
Total Contributing Area(mi²)			47.020		47.020		47.020		47.020		55.235		55.235		55.235		55.235		59.105		59.105		59.105		59.105

CH2M HILL

Subject: Maryvale ADMS: Area Tabulations for HEC-1 Combines

By: J. Geisbush
Checked: D. Dust
Project No.: 132586

INDIAN SCHOOL

Sub-Basin ID	Sub-Basin Area (mi²)	HEC-1 Combine Node IDs																	
			CIS9		C20-21		CIS107		C107A		CIS10		C19-21						
1-21	0.9994	1	0.9994	1	0.9994	1	0.9994	1	0.9994	1	0.9994	1	0.9994						
2-21	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947						
3-21	0.9808	1	0.9808	1	0.9808	1	0.9808	1	0.9808	1	0.9808	1	0.9808						
4-21	0.8740	1	0.874	1	0.874	1	0.874	1	0.874	1	0.874	1	0.874						
9-21	0.9671	1	0.9671	1	0.9671	1	0.9671	1	0.9671	1	0.9671	1	0.9671						
10-21	0.9801	1	0.9801	1	0.9801	1	0.9801	1	0.9801	1	0.9801	1	0.9801						
11-21	0.9831	1	0.9831	1	0.9831	1	0.9831	1	0.9831	1	0.9831	1	0.9831						
12-21	1.0030	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003						
13-21	1.0003	1	1.0003	1	1.0003	1	1.0003	1	1.0003	1	1.0003	1	1.0003						
14-21E	0.4317	1	0.4317	1	0.4317	1	0.4317	1	0.4317	1	0.4317	1	0.4317						
14-21W	0.5615	1	0.5615	1	0.5615	1	0.5615	1	0.5615	1	0.5615	1	0.5615						
15-21	1.0114	1	1.0114	1	1.0114	1	1.0114	1	1.0114	1	1.0114	1	1.0114						
16-21	1.0214	1	1.0214	1	1.0214	1	1.0214	1	1.0214	1	1.0214	1	1.0214						
17-21E	0.6990	1	0.699	1	0.699	1	0.699	1	0.699	1	0.699	1	0.699						
19-21	0.8727									1	0.8727	1	0.8727						
20-21	1.0230	1	1.023	1	1.023	1	1.023	1	1.023	1	1.023	1	1.023						
21-21	1.0076	1	1.0076	1	1.0076	1	1.0076	1	1.0076	1	1.0076	1	1.0076						
22-21	1.0020	1	1.002	1	1.002	1	1.002	1	1.002	1	1.002	1	1.002						
23-21	0.9869	1	0.9869	1	0.9869	1	0.9869	1	0.9869	1	0.9869	1	0.9869						
24-21N	0.4133	1	0.4133	1	0.4133	1	0.4133	1	0.4133	1	0.4133	1	0.4133						
24-21S	0.6123	1	0.6123	1	0.6123	1	0.6123	1	0.6123	1	0.6123	1	0.6123						
2-22	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042						
3-22	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979						
4-22	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034						
5-22	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152						
6-22E	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982						
6-22W	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742						
7-22	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699						
8-22E	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225						
8-22W	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936						
9-22	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903						
10-22	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911						
15-22	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982						
16-22E	0.5130	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513						
16-22W	0.4788	1	0.4788	1	0.4788	1	0.4788	1	0.4788	1	0.4788	1	0.4788						
17-22	1.0154	1	1.0154	1	1.0154	1	1.0154	1	1.0154	1	1.0154	1	1.0154						
18-22	0.9688	1	0.9688	1	0.9688	1	0.9688	1	0.9688	1	0.9688	1	0.9688						
19-22	0.9380	1	0.938	1	0.938	1	0.938	1	0.938	1	0.938	1	0.938						
20-22	1.0139	1	1.0139	1	1.0139	1	1.0139	1	1.0139	1	1.0139	1	1.0139						
21-22	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937						
22-22W	0.4671	1	0.4671	1	0.4671	1	0.4671	1	0.4671	1	0.4671	1	0.4671						
2-31	0.2878	1	0.2878	1	0.2878	1	0.2878	1	0.2878	1	0.2878	1	0.2878						
11-31	0.9972	1	0.9972	1	0.9972	1	0.9972	1	0.9972	1	0.9972	1	0.9972						
12-31	1.0197	1	1.0197	1	1.0197	1	1.0197	1	1.0197	1	1.0197	1	1.0197						
13-31	1.0029	1	1.0029	1	1.0029	1	1.0029	1	1.0029	1	1.0029	1	1.0029						
14-31	1.0078	1	1.0078	1	1.0078	1	1.0078	1	1.0078	1	1.0078	1	1.0078						
15-31	0.9555	1	0.9555	1	0.9555	1	0.9555	1	0.9555	1	0.9555	1	0.9555						
7-32	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495						
17-32	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844						
18-32	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053						
19-32	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616						
20-32	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882						
21-32	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982						
22-31E	0.5123	1	0.5123	1	0.5123	1	0.5123	1	0.5123	1	0.5123	1	0.5123						
22-31W	0.7658	1	0.7658	1	0.7658	1	0.7658	1	0.7658	1	0.7658	1	0.7658						
23-31	1.0057	1	1.0057	1	1.0057	1	1.0057	1	1.0057	1	1.0057	1	1.0057						
24-31	1.0075	1	1.0075	1	1.0075	1	1.0075	1	1.0075	1	1.0075	1	1.0075						
25-31	1.0030	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003						
26-31E	0.4615	1	0.4615	1	0.4615	1	0.4615	1	0.4615	1	0.4615	1	0.4615						
26-31W	0.5403	1	0.5403	1	0.5403	1	0.5403	1	0.5403	1	0.5403	1	0.5403						
27-31	1.0125	1	1.0125	1	1.0125	1	1.0125	1	1.0125	1	1.0125	1	1.0125						
34-31	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947						
35-31	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054						
36-31E	0.4952	1	0.4952	1	0.4952	1	0.4952	1	0.4952	1	0.4952	1	0.4952						
36-31W	0.5046	1	0.5046	1	0.5046	1	0.5046	1	0.5046	1	0.5046	1	0.5046						
26-32W	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866						
27-32	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122						
28-32	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937						
29-32	0.9910	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991						
30-32	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588						
31-32	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533						
32-32	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908						
33-32	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926						
34-32	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938						
35-32	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873						
Total Contributing Area(mi²)			60.827		60.827		60.827		60.827		61.700		61.700	0.000	0.000	0.000	0.000	0.000	0.000

CH2M HILL

Subject: **Maryvale ADMS: Area Tabulations for HEC-1 Combines**

By: J. Geisbush
Checked: D. Dust
Project No.: 132586

THOMAS RD

Sub-Basin ID	Sub-Basin Area (mi²)	HEC-1 Combine Node IDs																											
		C2622N		C2722N		C2722A		C2822A		C2822N		C2822B		C2822C		C2922N		C2922A		C2922B		C3022N							
1-22	0.2432	1	0.243	1	0.243	1	0.243	1	0.243	1	0.243	1	0.243	1	0.2432	1	0.243	1	0.243	1	0.243	1	0.243						
2-22	1.0042	1	1.004	1	1.004	1	1.004	1	1.004	1	1.004	1	1.004	1	1.0042	1	1.004	1	1.004	1	1.004	1	1.004						
3-22	0.9979	1	0.998	1	0.998	1	0.998	1	0.998	1	0.998	1	0.998	1	0.9979	1	0.998	1	0.998	1	0.998	1	0.998						
4-22	1.0034	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.0034	1	1.003	1	1.003	1	1.003	1	1.003						
5-22	1.0152															1	1.015	1	1.015	1	1.015	1	1.015						
6-22E	0.4982																					1	0.498						
6-22W	0.4742																					1	0.474						
7-22	0.9699																					1	0.970						
8-22E	0.5225															1	0.522	1	0.522	1	0.522	1	0.522						
8-22W	0.4936															1	0.494	1	0.494	1	0.494	1	0.494						
9-22	0.9903	1	0.990	1	0.990	1	0.990	1	0.990	1	0.990	1	0.990	1	0.9903	1	0.990	1	0.990	1	0.990	1	0.990						
10-22	0.9911	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.9911	1	0.991	1	0.991	1	0.991	1	0.991						
11-22	1.0055	1	1.006	1	1.006	1	1.006	1	1.006	1	1.006	1	1.006	1	1.0055	1	1.006	1	1.006	1	1.006	1	1.006						
12-22	0.2447	1	0.245																										
13-22	0.2464	1	0.246																										
14-22	1.0000	1	1.000	1	1.000	1	1.000	1	1.000	1	1.000	1	1.000	1	1	1	1.000	1	1.000	1	1.000	1	1.000						
15-22	0.9982	1	0.998	1	0.998	1	0.998	1	0.998	1	0.998	1	0.998	1	0.9982	1	0.998	1	0.998	1	0.998	1	0.998						
16-22E	0.5130	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513						
16-22W	0.4788							1	0.479	1	0.479	1	0.479	1	0.4788	1	0.479	1	0.479	1	0.479	1	0.479						
17-22	1.0154															1	1.015	1	1.015	1	1.015	1	1.015						
18-22	0.9688																					1	0.969						
19-22	0.9380																					1	0.938						
20-22	1.0139															1	1.014	1	1.014	1	1.014	1	1.014						
21-22	0.9937							1	0.994	1	0.994	1	0.994	1	0.9937	1	0.994	1	0.994	1	0.994	1	0.994						
22-22E	0.5325	1	0.533	1	0.533	1	0.533	1	0.533	1	0.533	1	0.533	1	0.5325	1	0.533	1	0.533	1	0.533	1	0.533						
22-22W	0.4671			1	0.467	1	0.467	1	0.467	1	0.467	1	0.467	1	0.4671	1	0.467	1	0.467	1	0.467	1	0.467						
23-22	0.9895	1	0.989	1	0.989	1	0.989	1	0.989	1	0.989	1	0.989	1	0.9895	1	0.989	1	0.989	1	0.989	1	0.989						
24-22	0.2249	1	0.225																										
26-22N	0.3798	1	0.380																										
27-22N	0.3715			1	0.371	1	0.371	1	0.371	1	0.371	1	0.371	1	0.3715			1	0.371	1	0.371	1	0.371						
28-22N	0.4518							1	0.452	1	0.452	1	0.452	1	0.4518			1	0.452	1	0.452	1	0.452						
29-22N	0.4138															1	0.414	1	0.414	1	0.414	1	0.414						
30-22N	0.1610																					1	0.161						
7-32	0.2495																					1	0.249						
17-32	0.2844																					1	0.284						
18-32	0.9053																					1	0.905						
19-32	0.9616																					1	0.962						
20-32	0.9882															1	0.988	1	0.988	1	0.988	1	0.988						
21-32	0.3982	1	0.398	1	0.398	1	0.398	1	0.398	1	0.398	1	0.398	1	0.3982	1	0.398	1	0.398	1	0.398	1	0.398						
26-32E	0.1068	1	0.107	1	0.107	1	0.107	1	0.107	1	0.107	1	0.107	1	0.1068	1	0.107	1	0.107	1	0.107	1	0.107						
26-32W	0.0866	1	0.087	1	0.087	1	0.087	1	0.087	1	0.087	1	0.087	1	0.0866	1	0.087	1	0.087	1	0.087	1	0.087						
27-32	0.6122	1	0.612	1	0.612	1	0.612	1	0.612	1	0.612	1	0.612	1	0.6122	1	0.612	1	0.612	1	0.612	1	0.612						
28-32	0.9937	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.9937	1	0.994	1	0.994	1	0.994	1	0.994						
29-32	0.9910															1	0.991	1	0.991	1	0.991	1	0.991						
30-32	0.9588																					1	0.959						
31-32	0.9533																					1	0.953						
32-32	0.9908															1	0.991	1	0.991	1	0.991	1	0.991						
33-32	0.9926	1	0.993	1	0.993	1	0.993	1	0.993	1	0.993	1	0.993	1	0.9926	1	0.993	1	0.993	1	0.993	1	0.993						
34-32	0.9938	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.994	1	0.9938	1	0.994	1	0.994	1	0.994	1	0.994						
35-32	0.9873	1	0.987	1	0.987	1	0.987	1	0.987	1	0.987	1	0.987	1	0.9873	1	0.987	1	0.987	1	0.987	1	0.987						
36-32	0.1135	1	0.113	1	0.113	1	0.113	1	0.113	1	0.113	1	0.113	1	0.1135	1	0.113	1	0.113	1	0.113	1	0.113						
			25		23		23		26		26		26		26		33		35		35		47						
Total Contributing Area(mi²)			16.649		16.392		16.392		18.316		18.316		18.316		18.316		24.938		25.761		25.761		34.084		0.000				

CH2M HILL

Subject: Maryvale ADMS: Area Tabulations for HEC-1 Combines

By: J. Geisbush
Checked: D. Dust
Project No.: 132586

THOMAS RD

Sub-Basin ID	Sub-Basin Area (mi²)	HEC-1 Combine Node IDs																							
		C2622E		C2622S		CTR35		C35E		CTR1		C2722S		CTR43		C43F		CTR2		C2822S		CTR51			
1-22	0.2432	1	0.2432															1	0.2432	1	0.2432	1	0.2432		
2-22	1.0042	1	1.0042							1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042		
3-22	0.9979	1	0.9979							1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979		
4-22	1.0034																	1	1.0034	1	1.0034	1	1.0034		
9-22	0.9903																	1	0.9903	1	0.9903	1	0.9903		
10-22	0.9911	1	0.9911							1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911		
11-22	1.0055	1	1.0055							1	1.0055	1	1.0055	1	1.0055	1	1.0055	1	1.0055	1	1.0055	1	1.0055		
12-22	0.2447	1	0.2447																						
13-22	0.2464	1	0.2464																						
14-22	1.0000	1	1.0000							1	1.0000	1	1.0000	1	1.0000	1	1.0000	1	1.0000	1	1.0000	1	1.0000		
15-22	0.9982	1	0.9982							1	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982		
16-22E	0.5130																	1	0.513	1	0.513	1	0.513		
16-22W	0.4788																	1	0.4788	1	0.4788	1	0.4788		
21-22	0.9937																	1	0.9937	1	0.9937	1	0.9937		
22-22E	0.5325	1	0.5325							1	0.5325	1	0.5325	1	0.5325	1	0.5325	1	0.5325	1	0.5325	1	0.5325		
22-22W	0.4671									1	0.4671	1	0.4671	1	0.4671	1	0.4671	1	0.4671	1	0.4671	1	0.4671		
23-22	0.9895	1	0.9895							1	0.9895	1	0.9895	1	0.9895	1	0.9895	1	0.9895	1	0.9895	1	0.9895		
24-22	0.2249	1	0.2249																						
26-22N	0.3798	1	0.3798																						
26-22E	0.3827	1	0.3827																						
26-22W	0.0782					1	0.0782	1	0.0782	1	0.0782	1	0.0782	1	0.0782	1	0.0782	1	0.0782			1	0.0782		
26-22S	0.3924			1	0.3924	1	0.3924	1	0.3924	1	0.3924	1	0.3924	1	0.3924	1	0.3924	1	0.3924			1	0.3924		
27-22N	0.3715									1	0.3715	1	0.3715	1	0.3715	1	0.3715	1	0.3715	1	0.3715	1	0.3715		
27-22S	0.6311									1	0.6311	1	0.6311	1	0.6311	1	0.6311	1	0.6311			1	0.6311		
28-22N	0.4518																	1	0.4518	1	0.4518	1	0.4518		
28-22S	0.5429																	1	0.5429	1	0.5429	1	0.5429		
21-32	0.3982																	1	0.3982	1	0.3982	1	0.3982		
26-32E	0.1068	1	0.1068															1	0.1068	1	0.1068	1	0.1068		
26-32W	0.0866	1	0.0866							1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866		
27-32	0.6122	1	0.6122							1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122		
28-32	0.9937																	1	0.9937	1	0.9937	1	0.9937		
33-32	0.9926																	1	0.9926	1	0.9926	1	0.9926		
34-32	0.9938	1	0.9938							1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938		
35-32	0.9873	1	0.9873							1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873		
36-32	0.1135	1	0.1135															1	0.1135	1	0.1135	1	0.1135		
			20		1		2		2		17		17		17		17		30		27		30		
Total Contributing Area(mi²)			12.141		0.392		0.471		0.471		12.139		12.139		12.139		12.139		19.961		18.859		19.961		0.000

CH2M HILL

Subject: Maryvale ADMS: Area Tabulations for HEC-1 Combines

By: J. Geisbush

Checked: D. Dust

Project No.: 132586

THOMAS RD

Sub-Basin ID	Sub-Basin Area (mi²)	HEC-1 Combine Node IDs																											
		CTR3		CTR59		C2922S		C59G		CTR4		C3022S		CTR67		CTR5		CTR75		C25-21		C75G		C67G1	
24-21S	0.6123															0.6123		0.6123		0.6123		0.6123			
25-21	1.0002															1.0002		1.0002		1.0002		1.0002			
1-22	0.2432		0.2432		0.2432		0.2432		0.2432		0.2432		0.2432		0.2432		0.2432		0.2432		0.2432		0.2432		0.2432
2-22	1.0042		1.0042		1.0042		1.0042		1.0042		1.0042		1.0042		1.0042		1.0042		1.0042		1.0042		1.0042		1.0042
3-22	0.9979		0.9979		0.9979		0.9979		0.9979		0.9979		0.9979		0.9979		0.9979		0.9979		0.9979		0.9979		0.9979
4-22	1.0034		1.0034		1.0034		1.0034		1.0034		1.0034		1.0034		1.0034		1.0034		1.0034		1.0034		1.0034		1.0034
5-22	1.0152		1.0152		1.0152		1.0152		1.0152		1.0152		1.0152		1.0152		1.0152		1.0152		1.0152		1.0152		1.0152
6-22E	0.4982										0.4982		0.4982		0.4982		0.4982		0.4982		0.4982		0.4982		0.4982
6-22W	0.4742										0.4742		0.4742		0.4742		0.4742		0.4742		0.4742		0.4742		0.4742
7-22	0.9699										0.9699		0.9699		0.9699		0.9699		0.9699		0.9699		0.9699		0.9699
8-22E	0.5225		0.5225		0.5225		0.5225		0.5225		0.5225		0.5225		0.5225		0.5225		0.5225		0.5225		0.5225		0.5225
8-22W	0.4936		0.4936		0.4936		0.4936		0.4936		0.4936		0.4936		0.4936		0.4936		0.4936		0.4936		0.4936		0.4936
9-22	0.9903		0.9903		0.9903		0.9903		0.9903		0.9903		0.9903		0.9903		0.9903		0.9903		0.9903		0.9903		0.9903
10-22	0.9911		0.9911		0.9911		0.9911		0.9911		0.9911		0.9911		0.9911		0.9911		0.9911		0.9911		0.9911		0.9911
11-22	1.0055		1.0055		1.0055		1.0055		1.0055		1.0055		1.0055		1.0055		1.0055		1.0055		1.0055		1.0055		1.0055
14-22	1.0000		1.0000		1.0000		1.0000		1.0000		1.0000		1.0000		1.0000		1.0000		1.0000		1.0000		1.0000		1.0000
15-22	0.9982		0.9982		0.9982		0.9982		0.9982		0.9982		0.9982		0.9982		0.9982		0.9982		0.9982		0.9982		0.9982
16-22E	0.5130		0.513		0.513		0.513		0.513		0.513		0.513		0.513		0.513		0.513		0.513		0.513		0.513
16-22W	0.4788		0.4788		0.4788		0.4788		0.4788		0.4788		0.4788		0.4788		0.4788		0.4788		0.4788		0.4788		0.4788
17-22	1.0154		1.0154		1.0154		1.0154		1.0154		1.0154		1.0154		1.0154		1.0154		1.0154		1.0154		1.0154		1.0154
18-22	0.9688										0.9688		0.9688		0.9688		0.9688		0.9688		0.9688		0.9688		0.9688
19-22	0.9380										0.938		0.938		0.938		0.938		0.938		0.938		0.938		0.938
20-22	1.0139		1.0139		1.0139		1.0139		1.0139		1.0139		1.0139		1.0139		1.0139		1.0139		1.0139		1.0139		1.0139
21-22	0.9937		0.9937		0.9937		0.9937		0.9937		0.9937		0.9937		0.9937		0.9937		0.9937		0.9937		0.9937		0.9937
22-22E	0.5325		0.5325		0.5325		0.5325		0.5325		0.5325		0.5325		0.5325		0.5325		0.5325		0.5325		0.5325		0.5325
22-22W	0.4671		0.4671		0.4671		0.4671		0.4671		0.4671		0.4671		0.4671		0.4671		0.4671		0.4671		0.4671		0.4671
23-22	0.9895		0.9895		0.9895		0.9895		0.9895		0.9895		0.9895		0.9895		0.9895		0.9895		0.9895		0.9895		0.9895
26-22W	0.0782		0.0782		0.0782						0.0782				0.0782		0.0782		0.0782						
26-22S	0.3924		0.3924		0.3924						0.3924				0.3924		0.3924		0.3924						
27-22N	0.3715		0.3715		0.3715		0.3715		0.3715		0.3715		0.3715		0.3715		0.3715		0.3715		0.3715		0.3715		0.3715
27-22S	0.6311		0.6311		0.6311						0.6311				0.6311		0.6311		0.6311						
28-22N	0.4518		0.4518		0.4518		0.4518		0.4518		0.4518		0.4518		0.4518		0.4518		0.4518		0.4518		0.4518		0.4518
28-22S	0.5429		0.5429		0.5429		0.5429		0.5429		0.5429		0.5429		0.5429		0.5429		0.5429		0.5429		0.5429		0.5429
29-22N	0.4138		0.4138		0.4138		0.4138		0.4138		0.4138		0.4138		0.4138		0.4138		0.4138		0.4138		0.4138		0.4138
29-22S	0.5937		0.5937		0.5937		0.5937		0.5937		0.5937		0.5937		0.5937		0.5937		0.5937		0.5937		0.5937		0.5937
30-22N	0.1610										0.161		0.161		0.161		0.161		0.161		0.161		0.161		0.161
30-22S	0.8109										0.8109		0.8109		0.8109		0.8109		0.8109		0.8109		0.8109		0.8109
7-32	0.2495										0.2495		0.2495		0.2495		0.2495		0.2495		0.2495		0.2495		0.2495
17-32	0.2844										0.2844		0.2844		0.2844		0.2844		0.2844		0.2844		0.2844		0.2844
18-32	0.9053										0.9053		0.9053		0.9053		0.9053		0.9053		0.9053		0.9053		0.9053
19-32	0.9616										0.9616		0.9616		0.9616		0.9616		0.9616		0.9616		0.9616		0.9616
20-32	0.9882		0.9882		0.9882		0.9882		0.9882		0.9882		0.9882		0.9882		0.9882		0.9882		0.9882		0.9882		0.9882
21-32	0.3982		0.3982		0.3982		0.3982		0.3982		0.3982		0.3982		0.3982		0.3982		0.3982		0.3982		0.3982		0.3982
26-32E	0.1068		0.1068		0.1068		0.1068		0.1068		0.1068		0.1068		0.1068		0.1068		0.1068		0.1068		0.1068		0.1068
26-32W	0.0866		0.0866		0.0866		0.0866		0.0866		0.0866		0.0866		0.0866		0.0866		0.0866		0.0866		0.0866		0.0866
27-32	0.6122		0.6122		0.6122		0.6122		0.6122		0.6122		0.6122		0.6122		0.6122		0.6122		0.6122		0.6122		0.6122
28-32	0.9937		0.9937		0.9937		0.9937		0.9937		0.9937		0.9937		0.9937		0.9937		0.9937		0.9937		0.9937		0.9937
29-32	0.9910		0.991		0.991		0.991		0.991		0.991		0.991		0.991		0.991		0.991		0.991		0.991		0.991
30-32	0.9588										0.9588		0.9588		0.9588		0.9588		0.9588		0.9588		0.9588		0.9588
31-32	0.9533										0.9533		0.9533		0.9533		0.9533		0.9533		0.9533		0.9533		0.9533
32-32	0.9908		0.9908		0.9908		0.9908		0.9908		0.9908		0.9908		0.9908		0.9908		0.9908		0.9908		0.9908		0.9908
33-32	0.9926		0.9926		0.9926		0.9926		0.9926		0.9926		0.9926		0.9926		0.9926		0.9926		0.9926		0.9926		0.9926
34-32	0.9938		0.9938		0.9938		0.9938		0.9938		0.9938		0.9938		0.9938		0.9938		0.9938		0.9938		0.9938		0.9938
35-32	0.9873		0.9873		0.9873		0.9873		0.9873		0.9873		0.9873		0.9873		0.9873		0.9873		0.9873		0.9873		0.9873
36-32	0.1135		0.1135		0.1135		0.1135		0.1135		0.1135		0.1135		0.1135		0.1135		0.1135		0.1135		0.1135		0.1135
			40		40		37		37		53		50		53		55		55		52		52		50
Total Contributing Area(mi²)			27.999		27.999		26.898		26.898		37.133		36.031		37.133		38.746		38.746		37.644		37.644		36.031

CH2M HILL

Subject: Maryvale ADMS: Area Tabulations for HEC-1 Combines

By: J. Geisbush
Checked: D. Dust
Project No.: 132586

THOMAS RD

Sub-Basin ID	Sub-Basin Area (mi^2)	HEC-1 Combine Node IDs																							
		CTR6		CTR83		C26-21		C83H		CTR7		CTR91		C27-21		C91G		CTR8		CTR99		C28-21		C99D	
1-21	0.9994			1	0.9994			1	0.9994	1	0.9994	1	0.9994	1	0.9994	1	0.9994	1	0.9994	1	0.9994	1	0.9994	1	0.9994
2-21	0.9947			1	0.9947			1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947
3-21	0.9808									1	0.9808	1	0.9808	1	0.9808	1	0.9808	1	0.9808	1	0.9808	1	0.9808	1	0.9808
4-21	0.8740																	1	0.874	1	0.874	1	0.874	1	0.874
9-21	0.9671																	1	0.9671	1	0.9671	1	0.9671	1	0.9671
10-21	0.9801									1	0.9801	1	0.9801	1	0.9801	1	0.9801	1	0.9801	1	0.9801	1	0.9801	1	0.9801
11-21	0.9831			1	0.9831			1	0.9831	1	0.9831	1	0.9831	1	0.9831	1	0.9831	1	0.9831	1	0.9831	1	0.9831	1	0.9831
12-21	1.0030			1	1.003			1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003
13-21	1.0003			1	1.0003			1	1.0003	1	1.0003	1	1.0003	1	1.0003	1	1.0003	1	1.0003	1	1.0003	1	1.0003	1	1.0003
14-21E	0.4317			1	0.4317			1	0.4317	1	0.4317	1	0.4317	1	0.4317	1	0.4317	1	0.4317	1	0.4317	1	0.4317	1	0.4317
14-21W	0.5615	1	0.5615	1	0.5615	1	0.5615	1	0.5615	1	0.5615	1	0.5615	1	0.5615	1	0.5615	1	0.5615	1	0.5615	1	0.5615	1	0.5615
15-21	1.0114									1	1.0114	1	1.0114	1	1.0114	1	1.0114	1	1.0114	1	1.0114	1	1.0114	1	1.0114
16-21	1.0214																	1	1.0214	1	1.0214	1	1.0214	1	1.0214
21-21	1.0076																	1	1.0076	1	1.0076	1	1.0076	1	1.0076
22-21	1.0020									1	1.002	1	1.002	1	1.002	1	1.002	1	1.002	1	1.002	1	1.002	1	1.002
23-21	0.9869	1	0.9869	1	0.9869	1	0.9869	1	0.9869	1	0.9869	1	0.9869	1	0.9869	1	0.9869	1	0.9869	1	0.9869	1	0.9869	1	0.9869
24-21N	0.4133			1	0.4133					1	0.4133	1	0.4133	1	0.4133	1	0.4133	1	0.4133	1	0.4133	1	0.4133	1	0.4133
24-21S	0.6123	1	0.6123	1	0.6123	1	0.6123	1	0.6123	1	0.6123	1	0.6123	1	0.6123	1	0.6123	1	0.6123	1	0.6123	1	0.6123	1	0.6123
25-21	1.0002	1	1.0002	1	1.0002	1	1.0002	1	1.0002	1	1.0002	1	1.0002	1	1.0002	1	1.0002	1	1.0002	1	1.0002	1	1.0002	1	1.0002
26-21	0.9902	1	0.9902	1	0.9902	1	0.9902	1	0.9902	1	0.9902	1	0.9902	1	0.9902	1	0.9902	1	0.9902	1	0.9902	1	0.9902	1	0.9902
27-21	1.0046									1	1.0046	1	1.0046	1	1.0046	1	1.0046	1	1.0046	1	1.0046	1	1.0046	1	1.0046
28-21	0.9995																	1	0.9995	1	0.9995	1	0.9995	1	0.9995
1-22	0.2432	1	0.2432	1	0.2432	1	0.2432	1	0.2432	1	0.2432	1	0.2432	1	0.2432	1	0.2432	1	0.2432	1	0.2432	1	0.2432	1	0.2432
2-22	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042
3-22	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979
4-22	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034
5-22	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152
6-22E	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982
6-22W	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742
7-22	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699
8-22E	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225
8-22W	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936
9-22	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903
10-22	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911
11-22	1.0055	1	1.0055	1	1.0055	1	1.0055	1	1.0055	1	1.0055	1	1.0055	1	1.0055	1	1.0055	1	1.0055	1	1.0055	1	1.0055	1	1.0055
14-22	1.0000	1	1.0000	1	1.0000	1	1.0000	1	1.0000	1	1.0000	1	1.0000	1	1.0000	1	1.0000	1	1.0000	1	1.0000	1	1.0000	1	1.0000
15-22	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982
16-22E	0.5130	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513
16-22W	0.4788	1	0.4788	1	0.4788	1	0.4788	1	0.4788	1	0.4788	1	0.4788	1	0.4788	1	0.4788	1	0.4788	1	0.4788	1	0.4788	1	0.4788
17-22	1.0154	1	1.0154	1	1.0154	1	1.0154	1	1.0154	1	1.0154	1	1.0154	1	1.0154	1	1.0154	1	1.0154	1	1.0154	1	1.0154	1	1.0154
18-22	0.9688	1	0.9688	1	0.9688	1	0.9688	1	0.9688	1	0.9688	1	0.9688	1	0.9688	1	0.9688	1	0.9688	1	0.9688	1	0.9688	1	0.9688
19-22	0.9380	1	0.938	1	0.938	1	0.938	1	0.938	1	0.938	1	0.938	1	0.938	1	0.938	1	0.938	1	0.938	1	0.938	1	0.938
20-22	1.0139	1	1.0139	1	1.0139	1	1.0139	1	1.0139	1	1.0139	1	1.0139	1	1.0139	1	1.0139	1	1.0139	1	1.0139	1	1.0139	1	1.0139
21-22	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937
22-22E	0.5325	1	0.5325	1	0.5325	1	0.5325	1	0.5325	1	0.5325	1	0.5325	1	0.5325	1	0.5325	1	0.5325	1	0.5325	1	0.5325	1	0.5325
22-22W	0.4671	1	0.4671	1	0.4671	1	0.4671	1	0.4671	1	0.4671	1	0.4671	1	0.4671	1	0.4671	1	0.4671	1	0.4671	1	0.4671	1	0.4671
23-22	0.9895	1	0.9895	1	0.9895	1	0.9895	1	0.9895	1	0.9895	1	0.9895	1	0.9895	1	0.9895	1	0.9895	1	0.9895	1	0.9895	1	0.9895
26-22W	0.0782	1	0.0782			1	0.0782	1	0.0782	1	0.0782	1	0.0782												
26-22S	0.3924	1	0.3924			1	0.3924	1	0.3924	1	0.3924	1	0.3924												
27-22N	0.3715	1	0.3715	1	0.3715	1	0.3715	1	0.3715	1	0.3715	1	0.3715	1	0.3715	1	0.3715	1	0.3715	1	0.3715	1	0.3715	1	0.3715
27-22S	0.6311	1	0.6311			1	0.6311	1	0.6311	1	0.6311	1	0.6311												
28-22N	0.4518	1	0.4518	1	0.4518	1	0.4518	1	0.4518	1	0.4518	1	0.4518	1	0.4518	1	0.4518	1	0.4518	1	0.4518	1	0.4518	1	0.4518
28-22S	0.5429	1	0.5429	1	0.5429	1	0.5429	1	0.5429	1	0.5429	1	0.5429	1	0.5429	1	0.5429	1	0.5429	1	0.5429	1	0.5429	1	0.5429
29-22N	0.4138	1	0.4138	1	0.4138	1	0.4138	1	0.4138	1	0.4138	1	0.4138	1	0.4138	1	0.4138	1	0.4138	1	0.4138	1	0.4138	1	0.4138
29-22S	0.5937	1	0.5937	1	0.5937	1	0.5937	1	0.5937	1	0.5937	1	0.5937	1	0.5937	1	0.5937	1	0.5937	1	0.5937	1	0.5937	1	0.5937
30-22N	0.1610	1	0.161	1	0.161	1	0.161	1	0.161	1	0.161	1	0.161	1	0.161	1	0.161	1	0.161	1	0.161	1	0.161	1	0.161
30-22S	0.8109	1	0.8109	1	0.8109	1	0.8109	1	0.8109	1	0.8109	1	0.8109	1	0.8109	1	0.8109	1	0.8109	1	0.8109	1	0.8109	1	0.8109
2-31	0.2878			1	0.2878			1	0.2878	1	0.2878	1	0.2878	1	0.2878	1	0.2878	1	0.2878	1	0.2878	1	0.2878	1	0.2878
11-31	0.9972			1	0.9972			1	0.9972	1	0.9972	1	0.9972	1	0.9972	1	0.9972	1	0.9972	1	0.9972	1	0.9972	1	0.9972
12-31	1.0197			1	1.0197			1	1.0197	1	1.0197	1	1.0197	1	1.0197	1	1.0197	1	1.0197	1	1.0197	1	1.0197	1	1.0197
13-31	1.0029			1	1.0029			1	1.0029	1	1.0029	1	1.0029	1	1.0029	1	1.0029	1	1.0029	1	1.0029	1	1.0029	1	1.0029
14-31	1.0078			1	1.0078			1	1.0078	1	1.0078	1	1.0078	1	1.0078	1	1.0078	1	1.0078	1	1.0078	1	1.0078	1	1.0078
15-31	0.9555									1	0.9555	1	0.9555	1	0.9555	1	0.9555	1	0.9555	1	0.9555	1	0.9555	1	0.9555
7-32	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495
17-32	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844
18-32	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053
19-32	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616
20-32	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882
22-31E	0.5123									1	0.5123	1	0.5123	1	0.5123	1	0.5123	1	0.5123	1	0.5123	1	0.5123	1	0.5123
22-31W	0.7658									1	0.7658	1	0.7658	1	0.7658	1	0.7658	1	0.7658	1	0.7658	1	0.7658	1	0.7658
23-31	1.0057			1	1.0057			1	1.0057	1	1.0057	1	1.0057	1	1.0057	1	1.0057	1	1.0057	1	1.0057	1	1.0057	1	1.0057
24-31	1.0075			1	1.0075			1	1.0075	1	1.0075	1	1.0075	1	1.0075	1	1.0075	1	1.0075	1	1.0075	1	1.0075	1	1.0075
25-31	1.0030			1	1.003			1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003
26-31E	0.4615			1	0.4615			1	0.4615	1	0.4615	1	0.4615	1	0.4615	1	0.4615	1	0.4615	1	0.4615	1	0.4615	1	0.4615
26-31W	0.5403			1	0.5403			1	0.5403	1	0.5403	1	0.5403	1	0.5403	1	0.5403	1	0.5403	1	0.5403	1	0.5403	1	0.5403
27-31	1.0125									1	1.0125	1	1.0125	1	1.0125	1	1.0125	1	1.0125	1	1.0125	1	1.0125	1	1.0125
34-31	0.9947									1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947
35-31	1.0054			1	1.0054			1	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054
36-31E	0.4952			1	0.4952			1	0.4952	1	0.4952	1	0.4952	1	0.4952	1	0.4952	1	0.4952	1	0.4952	1	0.4952	1	0.4952
36-31W	0.5046			1	0.5046			1	0.5046	1	0.5046	1	0.5046	1	0.5046	1	0.5046	1	0.5046	1	0.5046	1	0.5046	1	0.5046
21-32	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982
26-32E	0.1068	1	0.1068	1	0.1068	1	0.1068	1	0.1068	1	0.1068	1	0.1068	1	0.1068	1	0.1068	1	0.1068	1	0.1068	1	0.1068	1	0.1068
26-32W	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866
27-32	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122
28-32	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937
29-32	0.9910	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991
30-32	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588
31-32	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533
32-32	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908
33-32	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926
34-32	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938
35-32	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873
36-32	0.1135	1	0.1135	1	0.1135	1	0.1135	1	0.1135	1	0.1135	1	0.1135	1	0.1135	1	0.1135	1	0.1135	1	0.1135	1	0.1135	1	0.1135
			58		75		58		77		88		88		85		85		90		90		90		90
Total Contributing Area(mi^2)			41.284		56.347		41.284		57.035		66.668		66.668		65.566		65.566		70.436		70.436		70.436		70.436

CH2M HILL

Subject: Maryvale ADMS: Area Tabulations for HEC-1 Combines

By: J. Geisbush
Checked: D. Dust
Project No.: 132586

THOMAS RD

Sub-Basin ID	Sub-Basin Area (mi²)	HEC-1 Combine Node IDs											
		CTR9	C2921N	C107B	C107C	C3021S	C3021N						
1-21	0.9994	1 0.9994	1 0.9994	1 0.9994	1 0.9994	1 0.9994	1 0.9994						
2-21	0.9947	1 0.9947	1 0.9947	1 0.9947	1 0.9947	1 0.9947	1 0.9947						
3-21	0.9808	1 0.9808	1 0.9808	1 0.9808	1 0.9808	1 0.9808	1 0.9808						
4-21	0.8740	1 0.874	1 0.874	1 0.874	1 0.874	1 0.874	1 0.874						
9-21	0.9671	1 0.9671	1 0.9671	1 0.9671	1 0.9671	1 0.9671	1 0.9671						
10-21	0.9801	1 0.9801	1 0.9801	1 0.9801	1 0.9801	1 0.9801	1 0.9801						
11-21	0.9831	1 0.9831	1 0.9831	1 0.9831	1 0.9831	1 0.9831	1 0.9831						
12-21	1.0030	1 1.003	1 1.003	1 1.003	1 1.003	1 1.003	1 1.003						
13-21	1.0003	1 1.0003	1 1.0003	1 1.0003	1 1.0003	1 1.0003	1 1.0003						
14-21E	0.4317	1 0.4317	1 0.4317	1 0.4317	1 0.4317	1 0.4317	1 0.4317						
14-21W	0.5615	1 0.5615	1 0.5615	1 0.5615	1 0.5615	1 0.5615	1 0.5615						
15-21	1.0114	1 1.0114	1 1.0114	1 1.0114	1 1.0114	1 1.0114	1 1.0114						
16-21	1.0214	1 1.0214	1 1.0214	1 1.0214	1 1.0214	1 1.0214	1 1.0214						
17-21E	0.6990	1 0.699	1 0.699	1 0.699	1 0.699	1 0.699	1 0.699						
20-21	1.0230	1 1.023	1 1.023	1 1.023	1 1.023	1 1.023	1 1.023						
21-21	1.0076	1 1.0076	1 1.0076	1 1.0076	1 1.0076	1 1.0076	1 1.0076						
22-21	1.0020	1 1.002	1 1.002	1 1.002	1 1.002	1 1.002	1 1.002						
23-21	0.9869	1 0.9869	1 0.9869	1 0.9869	1 0.9869	1 0.9869	1 0.9869						
24-21N	0.4133	1 0.4133	1 0.4133	1 0.4133	1 0.4133	1 0.4133	1 0.4133						
24-21S	0.6123	1 0.6123	1 0.6123	1 0.6123	1 0.6123	1 0.6123	1 0.6123						
25-21	1.0002	1 1.0002	1 1.0002	1 1.0002	1 1.0002	1 1.0002	1 1.0002						
26-21	0.9902	1 0.9902	1 0.9902	1 0.9902	1 0.9902	1 0.9902	1 0.9902						
27-21	1.0046	1 1.0046	1 1.0046	1 1.0046	1 1.0046	1 1.0046	1 1.0046						
28-21	0.9995	1 0.9995	1 0.9995	1 0.9995	1 0.9995	1 0.9995	1 0.9995						
29-21N	0.7612	1 0.7612	1 0.7612	1 0.7612	1 0.7612	1 0.7612	1 0.7612						
29-21S	0.2625				1 0.2625	1 0.2625							
30-21N	0.6672						1 0.6672						
30-21S	0.7496					1 0.7496							
1-22	0.2432	1 0.2432	1 0.2432	1 0.2432	1 0.2432	1 0.2432	1 0.2432						
2-22	1.0042	1 1.0042	1 1.0042	1 1.0042	1 1.0042	1 1.0042	1 1.0042						
3-22	0.9979	1 0.9979	1 0.9979	1 0.9979	1 0.9979	1 0.9979	1 0.9979						
4-22	1.0034	1 1.0034	1 1.0034	1 1.0034	1 1.0034	1 1.0034	1 1.0034						
5-22	1.0152	1 1.0152	1 1.0152	1 1.0152	1 1.0152	1 1.0152	1 1.0152						
6-22E	0.4982	1 0.4982	1 0.4982	1 0.4982	1 0.4982	1 0.4982	1 0.4982						
6-22W	0.4742	1 0.4742	1 0.4742	1 0.4742	1 0.4742	1 0.4742	1 0.4742						
7-22	0.9699	1 0.9699	1 0.9699	1 0.9699	1 0.9699	1 0.9699	1 0.9699						
8-22E	0.5225	1 0.5225	1 0.5225	1 0.5225	1 0.5225	1 0.5225	1 0.5225						
8-22W	0.4936	1 0.4936	1 0.4936	1 0.4936	1 0.4936	1 0.4936	1 0.4936						
9-22	0.9903	1 0.9903	1 0.9903	1 0.9903	1 0.9903	1 0.9903	1 0.9903						
10-22	0.9911	1 0.9911	1 0.9911	1 0.9911	1 0.9911	1 0.9911	1 0.9911						
11-22	1.0055	1 1.0055	1 1.0055	1 1.0055	1 1.0055	1 1.0055	1 1.0055						
14-22	1.0000	1 1.0000	1 1.0000	1 1.0000	1 1.0000	1 1.0000	1 1.0000						
15-22	0.9982	1 0.9982	1 0.9982	1 0.9982	1 0.9982	1 0.9982	1 0.9982						
16-22E	0.5130	1 0.513	1 0.513	1 0.513	1 0.513	1 0.513	1 0.513						
16-22W	0.4788	1 0.4788	1 0.4788	1 0.4788	1 0.4788	1 0.4788	1 0.4788						
17-22	1.0154	1 1.0154	1 1.0154	1 1.0154	1 1.0154	1 1.0154	1 1.0154						
18-22	0.9688	1 0.9688	1 0.9688	1 0.9688	1 0.9688	1 0.9688	1 0.9688						
19-22	0.9380	1 0.938	1 0.938	1 0.938	1 0.938	1 0.938	1 0.938						
20-22	1.0139	1 1.0139	1 1.0139	1 1.0139	1 1.0139	1 1.0139	1 1.0139						
21-22	0.9937	1 0.9937	1 0.9937	1 0.9937	1 0.9937	1 0.9937	1 0.9937						
22-22E	0.5325	1 0.5325	1 0.5325	1 0.5325	1 0.5325	1 0.5325	1 0.5325						
22-22W	0.4671	1 0.4671	1 0.4671	1 0.4671	1 0.4671	1 0.4671	1 0.4671						
23-22	0.9895	1 0.9895	1 0.9895	1 0.9895	1 0.9895	1 0.9895	1 0.9895						
26-22W	0.0782	1 0.0782			1 0.0782	1 0.0782							
26-22S	0.3924	1 0.3924			1 0.3924	1 0.3924							
27-22N	0.3715	1 0.3715	1 0.3715	1 0.3715	1 0.3715	1 0.3715	1 0.3715						
27-22S	0.6311	1 0.6311			1 0.6311	1 0.6311							
28-22N	0.4518	1 0.4518	1 0.4518	1 0.4518	1 0.4518	1 0.4518	1 0.4518						
28-22S	0.5429	1 0.5429	1 0.5429	1 0.5429	1 0.5429	1 0.5429	1 0.5429						
29-22N	0.4138	1 0.4138	1 0.4138	1 0.4138	1 0.4138	1 0.4138	1 0.4138						
29-22S	0.5937	1 0.5937	1 0.5937	1 0.5937	1 0.5937	1 0.5937	1 0.5937						
30-22N	0.1610	1 0.161	1 0.161	1 0.161	1 0.161	1 0.161	1 0.161						
30-22S	0.8109	1 0.8109	1 0.8109	1 0.8109	1 0.8109	1 0.8109	1 0.8109						
2-31	0.2878	1 0.2878	1 0.2878	1 0.2878	1 0.2878	1 0.2878	1 0.2878						
11-31	0.9972	1 0.9972	1 0.9972	1 0.9972	1 0.9972	1 0.9972	1 0.9972						
12-31	1.0197	1 1.0197	1 1.0197	1 1.0197	1 1.0197	1 1.0197	1 1.0197						
13-31	1.0029	1 1.0029	1 1.0029	1 1.0029	1 1.0029	1 1.0029	1 1.0029						
14-31	1.0078	1 1.0078	1 1.0078	1 1.0078	1 1.0078	1 1.0078	1 1.0078						
15-31	0.9555	1 0.9555	1 0.9555	1 0.9555	1 0.9555	1 0.9555	1 0.9555						
7-32	0.2495	1 0.2495	1 0.2495	1 0.2495	1 0.2495	1 0.2495	1 0.2495						
17-32	0.2844	1 0.2844	1 0.2844	1 0.2844	1 0.2844	1 0.2844	1 0.2844						
18-32	0.9053	1 0.9053	1 0.9053	1 0.9053	1 0.9053	1 0.9053	1 0.9053						
19-32	0.9616	1 0.9616	1 0.9616	1 0.9616	1 0.9616	1 0.9616	1 0.9616						
20-32	0.9882	1 0.9882	1 0.9882	1 0.9882	1 0.9882	1 0.9882	1 0.9882						
22-31E	0.5123	1 0.5123	1 0.5123	1 0.5123	1 0.5123	1 0.5123	1 0.5123						
22-31W	0.7658	1 0.7658	1 0.7658	1 0.7658	1 0.7658	1 0.7658	1 0.7658						
23-31	1.0057	1 1.0057	1 1.0057	1 1.0057	1 1.0057	1 1.0057	1 1.0057						
24-31	1.0075	1 1.0075	1 1.0075	1 1.0075	1 1.0075	1 1.0075	1 1.0075						
25-31	1.0030	1 1.003	1 1.003	1 1.003	1 1.003	1 1.003	1 1.003						
26-31E	0.4615	1 0.4615	1 0.4615	1 0.4615	1 0.4615	1 0.4615	1 0.4615						
26-31W	0.5403	1 0.5403	1 0.5403	1 0.5403	1 0.5403	1 0.5403	1 0.5403						
27-31	1.0125	1 1.0125	1 1.0125	1 1.0125	1 1.0125	1 1.0125	1 1.0125						
34-31	0.9947	1 0.9947	1 0.9947	1 0.9947	1 0.9947	1 0.9947	1 0.9947						
35-31	1.0054	1 1.0054	1 1.0054	1 1.0054	1 1.0054	1 1.0054	1 1.0054						
36-31E	0.4952	1 0.4952	1 0.4952	1 0.4952	1 0.4952	1 0.4952	1 0.4952						
36-31W	0.5046	1 0.5046	1 0.5046	1 0.5046	1 0.5046	1 0.5046	1 0.5046						
21-32	0.3982	1 0.3982	1 0.3982	1 0.3982	1 0.3982	1 0.3982	1 0.3982						
26-32E	0.1068	1 0.1068	1 0.1068	1 0.1068	1 0.1068	1 0.1068	1 0.1068						
26-32W	0.0866	1 0.0866	1 0.0866	1 0.0866	1 0.0866	1 0.0866	1 0.0866						
27-32	0.6122	1 0.6122	1 0.6122	1 0.6122	1 0.6122	1 0.6122	1 0.6122						
28-32	0.9937	1 0.9937	1 0.9937	1 0.9937	1 0.9937	1 0.9937	1 0.9937						
29-32	0.9910	1 0.991	1 0.991	1 0.991	1 0.991	1 0.991	1 0.991						
30-32	0.9588	1 0.9588	1 0.9588	1 0.9588	1 0.9588	1 0.9588	1 0.9588						
31-32	0.9533	1 0.9533	1 0.9533	1 0.9533	1 0.9533	1 0.9533	1 0.9533						
32-32	0.9908	1 0.9908	1 0.9908	1 0.9908	1 0.9908	1 0.9908	1 0.9908						
33-32	0.9926	1 0.9926	1 0.9926	1 0.9926	1 0.9926	1 0.9926	1 0.9926						
34-32	0.9938	1 0.9938	1 0.9938	1 0.9938	1 0.9938	1 0.9938	1 0.9938						
35-32	0.9873	1 0.9873	1 0.9873	1 0.9873	1 0.9873	1 0.9873	1 0.9873						
36-32	0.1135	1 0.1135	1 0.1135	1 0.1135	1 0.1135	1 0.1135	1 0.1135						
		96	93	93	97	98	94						
Total Contributing Area(mi²)		74.021	72.919	72.919	74.284	75.033	73.587	0.000	0.000	0.000	0.000	0.000	0.000

CH2M HILL

Subject: Maryvale ADMS: Area Tabulations for HEC-1 Combines

By: J. Geisbush
Checked: D. Dust
Project No.: 132586

MCDOWELL RD & I-10

Sub-Basin ID	Sub-Basin Area (mi²)	HEC-1 Combine Node IDs																											
		C27B		CMD27		C1-12		CMD1		CMD35		C35F		C35-22		C2-12		CMD2		CMD43		C34-22		C43G	
1-12	0.0987						0.0987										0.0987												
2-12	0.2290																0.229												
1-22	0.2432		0.2432		0.2432		0.2432		0.2432		0.2432		0.2432		0.2432		0.2432		0.2432		0.2432		0.2432		0.2432
2-22	1.0042		1.0042		1.0042		1.0042		1.0042		1.0042		1.0042		1.0042		1.0042		1.0042		1.0042		1.0042		1.0042
3-22	0.9979		0.9979		0.9979		0.9979		0.9979		0.9979		0.9979		0.9979		0.9979		0.9979		0.9979		0.9979		0.9979
4-22	1.0034		1.0034		1.0034		1.0034		1.0034		1.0034		1.0034		1.0034		1.0034		1.0034		1.0034		1.0034		1.0034
9-22	0.9903		0.9903		0.9903		0.9903		0.9903		0.9903		0.9903		0.9903		0.9903		0.9903		0.9903		0.9903		0.9903
10-22	0.9911		0.9911		0.9911		0.9911		0.9911		0.9911		0.9911		0.9911		0.9911		0.9911		0.9911		0.9911		0.9911
11-22	1.0055		1.0055		1.0055		1.0055		1.0055		1.0055		1.0055		1.0055		1.0055		1.0055		1.0055		1.0055		1.0055
12-22	0.2447		0.2447		0.2447		0.2447		0.2447		0.2447		0.2447		0.2447		0.2447		0.2447		0.2447		0.2447		0.2447
13-22	0.2464		0.2464		0.2464		0.2464		0.2464		0.2464		0.2464		0.2464		0.2464		0.2464		0.2464		0.2464		0.2464
14-22	1.0000		1.0000		1.0000		1.0000		1.0000		1.0000		1.0000		1.0000		1.0000		1.0000		1.0000		1.0000		1.0000
15-22	0.9982		0.9982		0.9982		0.9982		0.9982		0.9982		0.9982		0.9982		0.9982		0.9982		0.9982		0.9982		0.9982
16-22E	0.5130		0.513		0.513		0.513		0.513		0.513		0.513		0.513		0.513		0.513		0.513		0.513		0.513
22-22E	0.5325		0.5325		0.5325		0.5325		0.5325		0.5325		0.5325		0.5325		0.5325		0.5325		0.5325		0.5325		0.5325
22-22W	0.4671																		0.4671		0.4671		0.4671		0.4671
23-22	0.9895		0.9895		0.9895		0.9895		0.9895		0.9895		0.9895		0.9895		0.9895		0.9895		0.9895		0.9895		0.9895
24-22	0.2249		0.2249		0.2249		0.2249		0.2249		0.2249		0.2249		0.2249		0.2249		0.2249		0.2249		0.2249		0.2249
26-22N	0.3798		0.3798		0.3798		0.3798		0.3798		0.3798		0.3798		0.3798		0.3798		0.3798		0.3798		0.3798		0.3798
26-22E	0.3827		0.3827		0.3827		0.3827		0.3827		0.3827		0.3827		0.3827		0.3827		0.3827		0.3827		0.3827		0.3827
26-22W	0.0782										0.0782		0.0782				0.0782		0.0782		0.0782		0.0782		0.0782
26-22S	0.3924								0.3924		0.3924		0.3924		0.3924		0.3924		0.3924		0.3924		0.3924		0.3924
27-22N	0.3715																		0.3715		0.3715		0.3715		0.3715
27-22S	0.6311																		0.6311		0.6311		0.6311		0.6311
34-22	1.0001																		1.0001		1.0001		1.0001		1.0001
35-22	0.9989								0.9989		0.9989		0.9989		0.9989		0.9989		0.9989		0.9989		0.9989		0.9989
36-22	0.2270		0.227		0.227		0.227		0.227		0.227		0.227		0.227		0.227		0.227		0.227		0.227		0.227
21-32	0.3982		0.3982		0.3982		0.3982		0.3982		0.3982		0.3982		0.3982		0.3982		0.3982		0.3982		0.3982		0.3982
26-32E	0.1068		0.1068		0.1068		0.1068		0.1068		0.1068		0.1068		0.1068		0.1068		0.1068		0.1068		0.1068		0.1068
26-32W	0.0866		0.0866		0.0866		0.0866		0.0866		0.0866		0.0866		0.0866		0.0866		0.0866		0.0866		0.0866		0.0866
27-32	0.6122		0.6122		0.6122		0.6122		0.6122		0.6122		0.6122		0.6122		0.6122		0.6122		0.6122		0.6122		0.6122
28-32	0.9937		0.9937		0.9937		0.9937		0.9937		0.9937		0.9937		0.9937		0.9937		0.9937		0.9937		0.9937		0.9937
33-32	0.9926		0.9926		0.9926		0.9926		0.9926		0.9926		0.9926		0.9926		0.9926		0.9926		0.9926		0.9926		0.9926
34-32	0.9938		0.9938		0.9938		0.9938		0.9938		0.9938		0.9938		0.9938		0.9938		0.9938		0.9938		0.9938		0.9938
35-32	0.9873		0.9873		0.9873		0.9873		0.9873		0.9873		0.9873		0.9873		0.9873		0.9873		0.9873		0.9873		0.9873
36-32	0.1135		0.1135		0.1135		0.1135		0.1135		0.1135		0.1135		0.1135		0.1135		0.1135		0.1135		0.1135		0.1135
			27		27		28		29		30		30		29		32		34		34		34		34
Total Contributing Area(mi²)			17.259		17.259		17.358		18.650		18.729		18.729		18.650		19.056		21.198		21.198		21.198		21.198

CH2M HILL

Subject: Maryvale ADMS: Area Tabulations for HEC-1 Combines

By: J. Geisbush
Checked: D. Dust
Project No.: 132586

MCDOWELL RD & I-10

Sub-Basin ID	Sub-Basin Area (mi²)	HEC-1 Combine Node IDs																											
		C3-12		CMD3		C33-22		CMD51		C51F		C3322N		C4-12		C11051		CMD4		C32-22		CMD59		C59H	
1-12	0.0987	0.0987														0.0987									
2-12	0.2290	0.229														0.229									
3-12	0.2413	0.2413														0.2413									
4-12	0.2164															0.2164									
1-22	0.2432	0.2432		0.2432		0.2432		0.2432		0.2432		0.2432		0.2432		0.2432		0.2432		0.2432		0.2432		0.2432	
2-22	1.0042	1.0042		1.0042		1.0042		1.0042		1.0042		1.0042		1.0042		1.0042		1.0042		1.0042		1.0042		1.0042	
3-22	0.9979	0.9979		0.9979		0.9979		0.9979		0.9979		0.9979		0.9979		0.9979		0.9979		0.9979		0.9979		0.9979	
4-22	1.0034	1.0034		1.0034		1.0034		1.0034		1.0034		1.0034		1.0034		1.0034		1.0034		1.0034		1.0034		1.0034	
5-22	1.0152																	1.0152		1.0152		1.0152		1.0152	
8-22E	0.5225																	0.5225		0.5225		0.5225		0.5225	
8-22W	0.4936																	0.4936		0.4936		0.4936		0.4936	
9-22	0.9903	0.9903		0.9903		0.9903		0.9903		0.9903		0.9903		0.9903		0.9903		0.9903		0.9903		0.9903		0.9903	
10-22	0.9911	0.9911		0.9911		0.9911		0.9911		0.9911		0.9911		0.9911		0.9911		0.9911		0.9911		0.9911		0.9911	
11-22	1.0055	1.0055		1.0055		1.0055		1.0055		1.0055		1.0055		1.0055		1.0055		1.0055		1.0055		1.0055		1.0055	
12-22	0.2447	0.2447		0.2447		0.2447		0.2447		0.2447		0.2447		0.2447		0.2447		0.2447		0.2447		0.2447		0.2447	
13-22	0.2464	0.2464		0.2464		0.2464		0.2464		0.2464		0.2464		0.2464		0.2464		0.2464		0.2464		0.2464		0.2464	
14-22	1.0000	1.0000		1.0000		1.0000		1.0000		1.0000		1.0000		1.0000		1.0000		1.0000		1.0000		1.0000		1.0000	
15-22	0.9982	0.9982		0.9982		0.9982		0.9982		0.9982		0.9982		0.9982		0.9982		0.9982		0.9982		0.9982		0.9982	
16-22E	0.5130	0.513		0.513		0.513		0.513		0.513		0.513		0.513		0.513		0.513		0.513		0.513		0.513	
16-22W	0.4788			0.4788		0.4788		0.4788		0.4788		0.4788		0.4788		0.4788		0.4788		0.4788		0.4788		0.4788	
17-22	1.0154																	1.0154		1.0154		1.0154		1.0154	
20-22	1.0139																	1.0139		1.0139		1.0139		1.0139	
21-22	0.9937			0.9937		0.9937		0.9937		0.9937		0.9937		0.9937		0.9937		0.9937		0.9937		0.9937		0.9937	
22-22E	0.5325	0.5325		0.5325		0.5325		0.5325		0.5325		0.5325		0.5325		0.5325		0.5325		0.5325		0.5325		0.5325	
22-22W	0.4671	0.4671		0.4671		0.4671		0.4671		0.4671		0.4671		0.4671		0.4671		0.4671		0.4671		0.4671		0.4671	
23-22	0.9895	0.9895		0.9895		0.9895		0.9895		0.9895		0.9895		0.9895		0.9895		0.9895		0.9895		0.9895		0.9895	
24-22	0.2249	0.2249		0.2249		0.2249		0.2249		0.2249		0.2249		0.2249		0.2249		0.2249		0.2249		0.2249		0.2249	
26-22N	0.3798	0.3798		0.3798		0.3798		0.3798		0.3798		0.3798		0.3798		0.3798		0.3798		0.3798		0.3798		0.3798	
26-22E	0.3827	0.3827		0.3827		0.3827		0.3827		0.3827		0.3827		0.3827		0.3827		0.3827		0.3827		0.3827		0.3827	
26-22W	0.0782	0.0782		0.0782		0.0782		0.0782		0.0782		0.0782		0.0782		0.0782		0.0782		0.0782		0.0782		0.0782	
26-22S	0.3924	0.3924		0.3924		0.3924		0.3924		0.3924		0.3924		0.3924		0.3924		0.3924		0.3924		0.3924		0.3924	
27-22N	0.3715	0.3715		0.3715		0.3715		0.3715		0.3715		0.3715		0.3715		0.3715		0.3715		0.3715		0.3715		0.3715	
27-22S	0.6311	0.6311		0.6311		0.6311		0.6311		0.6311		0.6311		0.6311		0.6311		0.6311		0.6311		0.6311		0.6311	
28-22N	0.4518			0.4518		0.4518		0.4518		0.4518		0.4518		0.4518		0.4518		0.4518		0.4518		0.4518		0.4518	
28-22S	0.5429			0.5429		0.5429		0.5429		0.5429		0.5429		0.5429		0.5429		0.5429		0.5429		0.5429		0.5429	
29-22N	0.4138																	0.4138		0.4138		0.4138		0.4138	
29-22S	0.5937																	0.5937		0.5937		0.5937		0.5937	
32-22	1.0040																	1.004		1.004		1.004		1.004	
33-22	1.0006			1.0006		1.0006		1.0006		1.0006				1.0006		1.0006		1.0006		1.0006		1.0006		1.0006	
34-22	1.0001	1.0001		1.0001		1.0001		1.0001		1.0001		1.0001		1.0001		1.0001		1.0001		1.0001		1.0001		1.0001	
35-22	0.9989	0.9989		0.9989		0.9989		0.9989		0.9989		0.9989		0.9989		0.9989		0.9989		0.9989		0.9989		0.9989	
36-22	0.2270	0.227		0.227		0.227		0.227		0.227		0.227		0.227		0.227		0.227		0.227		0.227		0.227	
20-32	0.9882																	0.9882		0.9882		0.9882		0.9882	
21-32	0.3982	0.3982		0.3982		0.3982		0.3982		0.3982		0.3982		0.3982		0.3982		0.3982		0.3982		0.3982		0.3982	
26-32E	0.1068	0.1068		0.1068		0.1068		0.1068		0.1068		0.1068		0.1068		0.1068		0.1068		0.1068		0.1068		0.1068	
26-32W	0.0866	0.0866		0.0866		0.0866		0.0866		0.0866		0.0866		0.0866		0.0866		0.0866		0.0866		0.0866		0.0866	
27-32	0.6122	0.6122		0.6122		0.6122		0.6122		0.6122		0.6122		0.6122		0.6122		0.6122		0.6122		0.6122		0.6122	
28-32	0.9937	0.9937		0.9937		0.9937		0.9937		0.9937		0.9937		0.9937		0.9937		0.9937		0.9937		0.9937		0.9937	
29-32	0.9910																	0.991		0.991		0.991		0.991	
32-32	0.9908																	0.9908		0.9908		0.9908		0.9908	
33-32	0.9926	0.9926		0.9926		0.9926		0.9926		0.9926		0.9926		0.9926		0.9926		0.9926		0.9926		0.9926		0.9926	
34-32	0.9938	0.9938		0.9938		0.9938		0.9938		0.9938		0.9938		0.9938		0.9938		0.9938		0.9938		0.9938		0.9938	
35-32	0.9873	0.9873		0.9873		0.9873		0.9873		0.9873		0.9873		0.9873		0.9873		0.9873		0.9873		0.9873		0.9873	
36-32	0.1135	0.1135		0.1135		0.1135		0.1135		0.1135		0.1135		0.1135		0.1135		0.1135		0.1135		0.1135		0.1135	
		37		39		39		39		39		38		39		43		50		50		50		50	
Total Contributing Area(mi²)		21.767		24.666		24.666		24.666		24.666		23.666		24.666		25.452		33.708		33.708		33.708		33.708	

CH2M HILL

Subject: Maryvale ADMS: Area Tabulations for HEC-1 Combines

By: J. Geisbush
Checked: D. Dust
Project No.: 132586

MCDOWELL RD & I-10

Sub-Basin ID	Sub-Basin Area (mi²)	HEC-1 Combine Node IDs																						
		C5-12		CMD5		C31-22		CMD67		C67H		C6-12		CMD6		C36-21		CMD75		C75H		C1-11		
1-11	0.1821																					1	0.1821	
1-12	0.0987	1	0.0987									1	0.0987									1	0.0987	
2-12	0.2290	1	0.229									1	0.229									1	0.229	
3-12	0.2413	1	0.2413									1	0.2413									1	0.2413	
4-12	0.2164	1	0.2164									1	0.2164									1	0.2164	
5-12	0.1848	1	0.1848									1	0.1848									1	0.1848	
6-12	0.1796											1	0.1796									1	0.1796	
24-21S	0.6123													1	0.6123	1	0.6123	1	0.6123	1	0.6123	1	0.6123	
25-21	1.0002													1	1.0002	1	1.0002	1	1.0002	1	1.0002	1	1.0002	
36-21	1.0013													1	1.0013	1	1.0013	1	1.0013	1	1.0013	1	1.0013	
1-22	0.2432	1	0.2432	1	0.2432	1	0.2432	1	0.2432	1	0.2432	1	0.2432	1	0.2432	1	0.2432	1	0.2432	1	0.2432	1	0.2432	
2-22	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	
3-22	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	
4-22	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	
5-22	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	
6-22E	0.4982			1	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982	
6-22W	0.4742			1	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742	
7-22	0.9699			1	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699	
8-22E	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	
8-22W	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	
9-22	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	
10-22	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	
11-22	1.0055	1	1.0055	1	1.0055	1	1.0055	1	1.0055	1	1.0055	1	1.0055	1	1.0055	1	1.0055	1	1.0055	1	1.0055	1	1.0055	
12-22	0.2447	1	0.2447	1	0.2447	1	0.2447	1	0.2447	1	0.2447	1	0.2447	1	0.2447	1	0.2447	1	0.2447	1	0.2447	1	0.2447	
13-22	0.2464	1	0.2464	1	0.2464	1	0.2464	1	0.2464	1	0.2464	1	0.2464	1	0.2464	1	0.2464	1	0.2464	1	0.2464	1	0.2464	
14-22	1.0000	1	1.0000	1	1.0000	1	1.0000	1	1.0000	1	1.0000	1	1.0000	1	1.0000	1	1.0000	1	1.0000	1	1.0000	1	1.0000	
15-22	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982	
16-22E	0.5130	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513	
16-22W	0.4788	1	0.4788	1	0.4788	1	0.4788	1	0.4788	1	0.4788	1	0.4788	1	0.4788	1	0.4788	1	0.4788	1	0.4788	1	0.4788	
17-22	1.0154	1	1.0154	1	1.0154	1	1.0154	1	1.0154	1	1.0154	1	1.0154	1	1.0154	1	1.0154	1	1.0154	1	1.0154	1	1.0154	
18-22	0.9688			1	0.9688	1	0.9688	1	0.9688	1	0.9688	1	0.9688	1	0.9688	1	0.9688	1	0.9688	1	0.9688	1	0.9688	
19-22	0.9380			1	0.938	1	0.938	1	0.938	1	0.938	1	0.938	1	0.938	1	0.938	1	0.938	1	0.938	1	0.938	
20-22	1.0139	1	1.0139	1	1.0139	1	1.0139	1	1.0139	1	1.0139	1	1.0139	1	1.0139	1	1.0139	1	1.0139	1	1.0139	1	1.0139	
21-22	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	
22-22E	0.5325	1	0.5325	1	0.5325	1	0.5325	1	0.5325	1	0.5325	1	0.5325	1	0.5325	1	0.5325	1	0.5325	1	0.5325	1	0.5325	
22-22W	0.4671	1	0.4671	1	0.4671	1	0.4671	1	0.4671	1	0.4671	1	0.4671	1	0.4671	1	0.4671	1	0.4671	1	0.4671	1	0.4671	
23-22	0.9895	1	0.9895	1	0.9895	1	0.9895	1	0.9895	1	0.9895	1	0.9895	1	0.9895	1	0.9895	1	0.9895	1	0.9895	1	0.9895	
24-22	0.2249	1	0.2249	1	0.2249	1	0.2249	1	0.2249	1	0.2249	1	0.2249	1	0.2249	1	0.2249	1	0.2249	1	0.2249	1	0.2249	
26-22N	0.3798	1	0.3798	1	0.3798	1	0.3798	1	0.3798	1	0.3798	1	0.3798	1	0.3798	1	0.3798	1	0.3798	1	0.3798	1	0.3798	
26-22E	0.3827	1	0.3827	1	0.3827	1	0.3827	1	0.3827	1	0.3827	1	0.3827	1	0.3827	1	0.3827	1	0.3827	1	0.3827	1	0.3827	
26-22W	0.0782	1	0.0782	1	0.0782	1	0.0782	1	0.0782	1	0.0782	1	0.0782	1	0.0782	1	0.0782	1	0.0782	1	0.0782	1	0.0782	
26-22S	0.3924	1	0.3924	1	0.3924	1	0.3924	1	0.3924	1	0.3924	1	0.3924	1	0.3924	1	0.3924	1	0.3924	1	0.3924	1	0.3924	
27-22N	0.3715	1	0.3715	1	0.3715	1	0.3715	1	0.3715	1	0.3715	1	0.3715	1	0.3715	1	0.3715	1	0.3715	1	0.3715	1	0.3715	
27-22S	0.6311	1	0.6311	1	0.6311	1	0.6311	1	0.6311	1	0.6311	1	0.6311	1	0.6311	1	0.6311	1	0.6311	1	0.6311	1	0.6311	
28-22N	0.4518	1	0.4518	1	0.4518	1	0.4518	1	0.4518	1	0.4518	1	0.4518	1	0.4518	1	0.4518	1	0.4518	1	0.4518	1	0.4518	
28-22S	0.5429	1	0.5429	1	0.5429	1	0.5429	1	0.5429	1	0.5429	1	0.5429	1	0.5429	1	0.5429	1	0.5429	1	0.5429	1	0.5429	
29-22N	0.4138	1	0.4138	1	0.4138	1	0.4138	1	0.4138	1	0.4138	1	0.4138	1	0.4138	1	0.4138	1	0.4138	1	0.4138	1	0.4138	
29-22S	0.5937	1	0.5937	1	0.5937	1	0.5937	1	0.5937	1	0.5937	1	0.5937	1	0.5937	1	0.5937	1	0.5937	1	0.5937	1	0.5937	
30-22N	0.1610			1	0.161	1	0.161	1	0.161	1	0.161	1	0.161	1	0.161	1	0.161	1	0.161	1	0.161	1	0.161	
30-22S	0.8109			1	0.8109	1	0.8109	1	0.8109	1	0.8109	1	0.8109	1	0.8109	1	0.8109	1	0.8109	1	0.8109	1	0.8109	
31-22	0.9776			1	0.9776	1	0.9776	1	0.9776	1	0.9776	1	0.9776	1	0.9776	1	0.9776	1	0.9776	1	0.9776	1	0.9776	
32-22	1.0040	1	1.004	1	1.004	1	1.004	1	1.004	1	1.004	1	1.004	1	1.004	1	1.004	1	1.004	1	1.004	1	1.004	
33-22	1.0006	1	1.0006	1	1.0006	1	1.0006	1	1.0006	1	1.0006	1	1.0006	1	1.0006	1	1.0006	1	1.0006	1	1.0006	1	1.0006	
34-22	1.0001	1	1.0001	1	1.0001	1	1.0001	1	1.0001	1	1.0001	1	1.0001	1	1.0001	1	1.0001	1	1.0001	1	1.0001	1	1.0001	
35-22	0.9989	1	0.9989	1	0.9989	1	0.9989	1	0.9989	1	0.9989	1	0.9989	1	0.9989	1	0.9989	1	0.9989	1	0.9989	1	0.9989	
36-22	0.2270	1	0.227	1	0.227	1	0.227	1	0.227	1	0.227	1	0.227	1	0.227	1	0.227	1	0.227	1	0.227	1	0.227	
7-32	0.2495			1	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495	
17-32	0.2844			1	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844	
18-32	0.9053			1	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053	
19-32	0.9616			1	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616	
20-32	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	
21-32	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	
26-32E	0.1068	1	0.1068	1	0.1068	1	0.1068	1	0.1068	1	0.1068	1	0.1068	1	0.1068	1	0.1068	1	0.1068	1	0.1068	1	0.1068	
26-32W	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	
27-32	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	
28-32	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	
29-32	0.9910	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	
30-32	0.9588			1	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588	
31-32	0.9533			1	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533	
32-32	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	
33-32	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	
34-32	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	
35-32	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	
36-32	0.1135	1	0.1135	1	0.1135	1	0.1135	1	0.1135	1	0.1135	1	0.1135	1	0.1135	1	0.1135	1	0.1135	1	0.1135	1	0.1135	
			55		64		64		64		64		70		67		67		67		67		74	0
Total Contributing Area(mi²)			34.679		43.820		43.820		43.820		43.820		44.970		46.434		46.434		46.434		46.434		47.765	0.000

CH2M HILL

Subject: Maryvale ADMS: Area Tabulations for HEC-1 Combines

By: J. Geisbush
Checked: D. Dust
Project No.: 132586

MCDOWELL RD & I-10

HEC-1 Combine Node IDs

Sub-Basin ID	Sub-Basin Area (mi^2)		CMD7		C35-21		CMD83		C831		C2-11		CMD8		C34-21		CMD91		C9111		C3-11
1-11	0.1821									1	0.1821									1	0.1821
2-11	0.1778									1	0.1778									1	0.1778
3-11	0.1676																			1	0.1676
1-12	0.0987									1	0.0987									1	0.0987
2-12	0.2290									1	0.229									1	0.229
3-12	0.2413									1	0.2413									1	0.2413
4-12	0.2164									1	0.2164									1	0.2164
5-12	0.1848									1	0.1848									1	0.1848
6-12	0.1796									1	0.1796									1	0.1796
1-21	0.9994	1	0.9994	1	0.9994	1	0.9994	1	0.9994	1	0.9994	1	0.9994	1	0.9994	1	0.9994	1	0.9994	1	0.9994
2-21	0.9947					1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947
3-21	0.9808											1	0.9808	1	0.9808	1	0.9808	1	0.9808	1	0.9808
10-21	0.9801											1	0.9801	1	0.9801	1	0.9801	1	0.9801	1	0.9801
11-21	0.9831					1	0.9831	1	0.9831	1	0.9831	1	0.9831	1	0.9831	1	0.9831	1	0.9831	1	0.9831
12-21	1.0030	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003
13-21	1.0003	1	1.0003	1	1.0003	1	1.0003	1	1.0003	1	1.0003	1	1.0003	1	1.0003	1	1.0003	1	1.0003	1	1.0003
14-21E	0.4317					1	0.4317	1	0.4317	1	0.4317	1	0.4317	1	0.4317	1	0.4317	1	0.4317	1	0.4317
14-21W	0.5615	1	0.5615	1	0.5615	1	0.5615	1	0.5615	1	0.5615	1	0.5615	1	0.5615	1	0.5615	1	0.5615	1	0.5615
15-21	1.0114											1	1.0114	1	1.0114	1	1.0114	1	1.0114	1	1.0114
22-21	1.0020											1	1.002	1	1.002	1	1.002	1	1.002	1	1.002
23-21	0.9869	1	0.9869	1	0.9869	1	0.9869	1	0.9869	1	0.9869	1	0.9869	1	0.9869	1	0.9869	1	0.9869	1	0.9869
24-21N	0.4133	1	0.4133	1	0.4133	1	0.4133	1	0.4133	1	0.4133	1	0.4133	1	0.4133	1	0.4133	1	0.4133	1	0.4133
24-21S	0.6123	1	0.6123	1	0.6123	1	0.6123	1	0.6123	1	0.6123	1	0.6123	1	0.6123	1	0.6123	1	0.6123	1	0.6123
25-21	1.0002	1	1.0002	1	1.0002	1	1.0002	1	1.0002	1	1.0002	1	1.0002	1	1.0002	1	1.0002	1	1.0002	1	1.0002
26-21	0.9902	1	0.9902	1	0.9902	1	0.9902	1	0.9902	1	0.9902	1	0.9902	1	0.9902	1	0.9902	1	0.9902	1	0.9902
27-21	1.0046											1	1.0046	1	1.0046	1	1.0046	1	1.0046	1	1.0046
34-21	1.0054											1	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054
35-21	0.9907	1	0.9907	1	0.9907	1	0.9907	1	0.9907	1	0.9907	1	0.9907	1	0.9907	1	0.9907	1	0.9907	1	0.9907
36-21	1.0013	1	1.0013	1	1.0013	1	1.0013	1	1.0013	1	1.0013	1	1.0013	1	1.0013	1	1.0013	1	1.0013	1	1.0013
1-22	0.2432	1	0.2432	1	0.2432	1	0.2432	1	0.2432	1	0.2432	1	0.2432	1	0.2432	1	0.2432	1	0.2432	1	0.2432
2-22	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042
3-22	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979
4-22	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034
5-22	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152
6-22E	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982
6-22W	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742
7-22	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699
8-22E	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225
8-22W	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936
9-22	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903
10-22	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911
11-22	1.0055	1	1.0055	1	1.0055	1	1.0055	1	1.0055	1	1.0055	1	1.0055	1	1.0055	1	1.0055	1	1.0055	1	1.0055
12-22	0.2447	1	0.2447	1	0.2447	1	0.2447	1	0.2447	1	0.2447	1	0.2447	1	0.2447	1	0.2447	1	0.2447	1	0.2447
13-22	0.2464	1	0.2464	1	0.2464	1	0.2464	1	0.2464	1	0.2464	1	0.2464	1	0.2464	1	0.2464	1	0.2464	1	0.2464
14-22	1.0000	1	1.0000	1	1.0000	1	1.0000	1	1.0000	1	1.0000	1	1.0000	1	1.0000	1	1.0000	1	1.0000	1	1.0000
15-22	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982
16-22E	0.5130	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513
16-22W	0.4788	1	0.4788	1	0.4788	1	0.4788	1	0.4788	1	0.4788	1	0.4788	1	0.4788	1	0.4788	1	0.4788	1	0.4788
17-22	1.0154	1	1.0154	1	1.0154	1	1.0154	1	1.0154	1	1.0154	1	1.0154	1	1.0154	1	1.0154	1	1.0154	1	1.0154
18-22	0.9688	1	0.9688	1	0.9688	1	0.9688	1	0.9688	1	0.9688	1	0.9688	1	0.9688	1	0.9688	1	0.9688	1	0.9688
19-22	0.9380	1	0.938	1	0.938	1	0.938	1	0.938	1	0.938	1	0.938	1	0.938	1	0.938	1	0.938	1	0.938
20-22	1.0139	1	1.0139	1	1.0139	1	1.0139	1	1.0139	1	1.0139	1	1.0139	1	1.0139	1	1.0139	1	1.0139	1	1.0139
21-22	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937
22-22E	0.5325	1	0.5325	1	0.5325	1	0.5325	1	0.5325	1	0.5325	1	0.5325	1	0.5325	1	0.5325	1	0.5325	1	0.5325
22-22W	0.4671	1	0.4671	1	0.4671	1	0.4671	1	0.4671	1	0.4671	1	0.4671	1	0.4671	1	0.4671	1	0.4671	1	0.4671
23-22	0.9895	1	0.9895	1	0.9895	1	0.9895	1	0.9895	1	0.9895	1	0.9895	1	0.9895	1	0.9895	1	0.9895	1	0.9895
24-22	0.2249	1	0.2249	1	0.2249	1	0.2249	1	0.2249	1	0.2249	1	0.2249	1	0.2249	1	0.2249	1	0.2249	1	0.2249
26-22N	0.3798	1	0.3798	1	0.3798	1	0.3798	1	0.3798	1	0.3798	1	0.3798	1	0.3798	1	0.3798	1	0.3798	1	0.3798
26-22E	0.3827	1	0.3827	1	0.3827	1	0.3827	1	0.3827	1	0.3827	1	0.3827	1	0.3827	1	0.3827	1	0.3827	1	0.3827
26-22W	0.0782	1	0.0782	1	0.0782	1	0.0782	1	0.0782	1	0.0782	1	0.0782	1	0.0782	1	0.0782	1	0.0782	1	0.0782
26-22S	0.3924	1	0.3924	1	0.3924	1	0.3924	1	0.3924	1	0.3924	1	0.3924	1	0.3924	1	0.3924	1	0.3924	1	0.3924
27-22N	0.3715	1	0.3715	1	0.3715	1	0.3715	1	0.3715	1	0.3715	1	0.3715	1	0.3715	1	0.3715	1	0.3715	1	0.3715
27-22S	0.6311	1	0.6311	1	0.6311	1	0.6311	1	0.6311	1	0.6311	1	0.6311	1	0.6311	1	0.6311	1	0.6311	1	0.6311
28-22N	0.4518	1	0.4518	1	0.4518	1	0.4518	1	0.4518	1	0.4518	1	0.4518	1	0.4518	1	0.4518	1	0.4518	1	0.4518
28-22S	0.5429	1	0.5429	1	0.5429	1	0.5429	1	0.5429	1	0.5429	1	0.5429	1	0.5429	1	0.5429	1	0.5429	1	0.5429
29-22N	0.4138	1	0.4138	1	0.4138	1	0.4138	1	0.4138	1	0.4138	1	0.4138	1	0.4138	1	0.4138	1	0.4138	1	0.4138
29-22S	0.5937	1	0.5937	1	0.5937	1	0.5937	1	0.5937	1	0.5937	1	0.5937	1	0.5937	1	0.5937	1	0.5937	1	0.5937
30-22N	0.1610	1	0.161	1	0.161	1	0.161	1	0.161	1	0.161	1	0.161	1	0.161	1	0.161	1	0.161	1	0.161
30-22S	0.8109	1	0.8109	1	0.8109	1	0.8109	1	0.8109	1	0.8109	1	0.8109	1	0.8109	1	0.8109	1	0.8109	1	0.8109
31-22	0.9776	1	0.9776	1	0.9776	1	0.9776	1	0.9776	1	0.9776	1	0.9776	1	0.9776	1	0.9776	1	0.9776	1	0.9776
32-22	1.0040	1	1.004	1	1.004	1	1.004	1	1.004	1	1.004	1	1.004	1	1.004	1	1.004	1	1.004	1	1.004
33-22	1.0006	1	1.0006	1	1.0006	1	1.0006	1	1.0006	1	1.0006	1	1.0006	1	1.0006	1	1.0006	1	1.0006	1	1.0006
34-22	1.0001	1	1.0001	1	1.0001	1	1.0001	1	1.0001	1	1.0001	1	1.0001	1	1.0001	1	1.0001	1	1.0001	1	1.0001
35-22	0.9989	1	0.9989	1	0.9989	1	0.9989	1	0.9989	1	0.9989	1	0.9989	1	0.9989	1	0.9989	1	0.9989	1	0.9989
36-22	0.2270	1	0.227	1	0.227	1	0.227	1	0.227	1	0.227	1	0.227	1	0.227	1	0.227	1	0.227	1	0.227
2-31	0.2878					1	0.2878	1	0.2878	1	0.2878	1	0.2878	1	0.2878	1	0.2878	1	0.2878	1	0.2878
11-31	0.9972					1	0.9972	1	0.9972	1	0.9972	1	0.9972	1	0.9972	1	0.9972	1	0.9972	1	0.9972
12-31	1.0197	1	1.0197	1	1.0197	1	1.0197	1	1.0197	1	1.0197	1	1.0197	1	1.0197	1	1.0197	1	1.0197	1	1.0197
13-31	1.0029	1	1.0029	1	1.0029	1	1.0029	1	1.0029	1	1.0029	1	1.0029	1	1.0029	1	1.0029	1	1.0029	1	1.0029
14-31	1.0078					1	1.0078	1	1.0078	1	1.0078	1	1.0078	1	1.0078	1	1.0078	1	1.0078	1	1.0078
7-32	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495
17-32	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844
18-32	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053
19-32	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616
20-32	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882
22-31E	0.5123											1	0.5123	1	0.5123	1	0.5123	1	0.5123	1	0.5123
22-31W	0.7658											1	0.7658	1	0.7658	1	0.7658	1	0.7658	1	0.7658
23-31	1.0057					1	1.0057	1	1.0057	1	1.0057	1	1.0057	1	1.0057	1	1.0057	1	1.0057	1	1.0057
24-31	1.0075	1	1.0075	1	1.0075	1	1.0075	1	1.0075	1	1.0075	1	1.0075	1	1.0075	1	1.0075	1	1.0075	1	1.0075
25-31	1.0030	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003
26-31E	0.4615					1	0.4615	1	0.4615	1	0.4615	1	0.4615	1	0.4615	1	0.4615	1	0.4615	1	0.4615
26-31W	0.5403					1	0.5403	1	0.5403	1	0.5403	1	0.5403	1	0.5403	1	0.5403	1	0.5403	1	0.5403
27-31	1.0125											1	1.0125	1	1.0125	1	1.0125	1	1.0125	1	1.0125
34-31	0.9947											1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947
35-31	1.0054					1	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054
36-31E	0.4952	1	0.4952	1	0.4952	1	0.4952	1	0.4952	1	0.4952	1	0.4952	1	0.4952	1	0.4952	1	0.4952	1	0.4952
36-31W	0.5046	1	0.5046	1	0.5046	1	0.5046	1	0.5046	1	0.5046	1	0.5046	1	0.5046	1	0.5046	1	0.5046	1	0.5046
21-32	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982
26-32E	0.1068	1	0.1068	1	0.1068	1	0.1068	1	0.1068	1	0.1068	1	0.1068	1	0.1068	1	0.1068	1	0.1068	1	0.1068
26-32W	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866
27-32	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122
28-32	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937

CH2M HILL

Subject: Maryvale ADMS: Area Tabulations for HEC-1 Combines

By: J. Geisbush

Checked: D. Dust

Project No.: 132586

29-32	0.9910	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991							
30-32	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588							
31-32	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533							
32-32	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908							
33-32	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926							
34-32	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938							
35-32	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873							
36-32	0.1135	1	0.1135	1	0.1135	1	0.1135	1	0.1135	1	0.1135	1	0.1135	1	0.1135	1	0.1135	1	0.1135	1	0.1135							
			81		81		91		91		99		101		101		101		101		110		0		0			
Total Contributing Area(mi²)			58.412		58.412		66.127		66.127		67.637		75.397		75.397		75.397		75.397		77.074		0.000		0.000			

CH2M HILL

Subject: **Maryvale ADMS: Area Tabulations for HEC-1 Combines**

By: **J. Geisbush**
Checked: **D. Dust**
Project No.: **132586**

MCDOWELL RD & I-10

Sub-Basin ID	Sub-Basin Area (mi^2)	HEC-1 Combine Node IDs																					
		CMD9		C33-21		CMD99		C99E		C4-11		C3221E		CMD10		C3221W		CMD107		C107D		C5-11	
1-11	0.1821									1	0.1821											1	0.1821
2-11	0.1778									1	0.1778											1	0.1778
3-11	0.1676									1	0.1676											1	0.1676
4-11	0.1757									1	0.1757											1	0.1757
5-11	0.1824																					1	0.1824
1-12	0.0987									1	0.0987											1	0.0987
2-12	0.2290									1	0.229											1	0.229
3-12	0.2413									1	0.2413											1	0.2413
4-12	0.2164									1	0.2164											1	0.2164
5-12	0.1848									1	0.1848											1	0.1848
6-12	0.1796									1	0.1796											1	0.1796
1-21	0.9994	1	0.9994	1	0.9994	1	0.9994	1	0.9994	1	0.9994	1	0.9994	1	0.9994	1	0.9994	1	0.9994	1	0.9994	1	0.9994
2-21	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947
3-21	0.9808	1	0.9808	1	0.9808	1	0.9808	1	0.9808	1	0.9808	1	0.9808	1	0.9808	1	0.9808	1	0.9808	1	0.9808	1	0.9808
4-21	0.8740	1	0.874	1	0.874	1	0.874	1	0.874	1	0.874	1	0.874	1	0.874	1	0.874	1	0.874	1	0.874	1	0.874
9-21	0.9671	1	0.9671	1	0.9671	1	0.9671	1	0.9671	1	0.9671	1	0.9671	1	0.9671	1	0.9671	1	0.9671	1	0.9671	1	0.9671
10-21	0.9801	1	0.9801	1	0.9801	1	0.9801	1	0.9801	1	0.9801	1	0.9801	1	0.9801	1	0.9801	1	0.9801	1	0.9801	1	0.9801
11-21	0.9831	1	0.9831	1	0.9831	1	0.9831	1	0.9831	1	0.9831	1	0.9831	1	0.9831	1	0.9831	1	0.9831	1	0.9831	1	0.9831
12-21	1.0030	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003
13-21	1.0003	1	1.0003	1	1.0003	1	1.0003	1	1.0003	1	1.0003	1	1.0003	1	1.0003	1	1.0003	1	1.0003	1	1.0003	1	1.0003
14-21E	0.4317	1	0.4317	1	0.4317	1	0.4317	1	0.4317	1	0.4317	1	0.4317	1	0.4317	1	0.4317	1	0.4317	1	0.4317	1	0.4317
14-21W	0.5615	1	0.5615	1	0.5615	1	0.5615	1	0.5615	1	0.5615	1	0.5615	1	0.5615	1	0.5615	1	0.5615	1	0.5615	1	0.5615
15-21	1.0114	1	1.0114	1	1.0114	1	1.0114	1	1.0114	1	1.0114	1	1.0114	1	1.0114	1	1.0114	1	1.0114	1	1.0114	1	1.0114
16-21	1.0214	1	1.0214	1	1.0214	1	1.0214	1	1.0214	1	1.0214	1	1.0214	1	1.0214	1	1.0214	1	1.0214	1	1.0214	1	1.0214
17-21E	0.6990																	1	0.699	1	0.699	1	0.699
20-21	1.0230																	1	1.023	1	1.023	1	1.023
21-21	1.0076	1	1.0076	1	1.0076	1	1.0076	1	1.0076	1	1.0076	1	1.0076	1	1.0076	1	1.0076	1	1.0076	1	1.0076	1	1.0076
22-21	1.0020	1	1.002	1	1.002	1	1.002	1	1.002	1	1.002	1	1.002	1	1.002	1	1.002	1	1.002	1	1.002	1	1.002
23-21	0.9869	1	0.9869	1	0.9869	1	0.9869	1	0.9869	1	0.9869	1	0.9869	1	0.9869	1	0.9869	1	0.9869	1	0.9869	1	0.9869
24-21N	0.4133	1	0.4133	1	0.4133	1	0.4133	1	0.4133	1	0.4133	1	0.4133	1	0.4133	1	0.4133	1	0.4133	1	0.4133	1	0.4133
24-21S	0.6123	1	0.6123	1	0.6123	1	0.6123	1	0.6123	1	0.6123	1	0.6123	1	0.6123	1	0.6123	1	0.6123	1	0.6123	1	0.6123
25-21	1.0002	1	1.0002	1	1.0002	1	1.0002	1	1.0002	1	1.0002	1	1.0002	1	1.0002	1	1.0002	1	1.0002	1	1.0002	1	1.0002
26-21	0.9902	1	0.9902	1	0.9902	1	0.9902	1	0.9902	1	0.9902	1	0.9902	1	0.9902	1	0.9902	1	0.9902	1	0.9902	1	0.9902
27-21	1.0046	1	1.0046	1	1.0046	1	1.0046	1	1.0046	1	1.0046	1	1.0046	1	1.0046	1	1.0046	1	1.0046	1	1.0046	1	1.0046
28-21	0.9995	1	0.9995	1	0.9995	1	0.9995	1	0.9995	1	0.9995	1	0.9995	1	0.9995	1	0.9995	1	0.9995	1	0.9995	1	0.9995
29-21N	0.7612																	1	0.7612	1	0.7612	1	0.7612
29-21S	0.2625																	1	0.2625	1	0.2625	1	0.2625
32-21E	0.2431											1	0.2431	1	0.2431	1	0.2431	1	0.2431	1	0.2431	1	0.2431
32-21W	0.7717													1	0.7717	1	0.7717	1	0.7717	1	0.7717	1	0.7717
33-21	0.9898	1	0.9898	1	0.9898	1	0.9898	1	0.9898	1	0.9898	1	0.9898	1	0.9898	1	0.9898	1	0.9898	1	0.9898	1	0.9898
34-21	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054
35-21	0.9907	1	0.9907	1	0.9907	1	0.9907	1	0.9907	1	0.9907	1	0.9907	1	0.9907	1	0.9907	1	0.9907	1	0.9907	1	0.9907
36-21	1.0013	1	1.0013	1	1.0013	1	1.0013	1	1.0013	1	1.0013	1	1.0013	1	1.0013	1	1.0013	1	1.0013	1	1.0013	1	1.0013
1-22	0.2432	1	0.2432	1	0.2432	1	0.2432	1	0.2432	1	0.2432	1	0.2432	1	0.2432	1	0.2432	1	0.2432	1	0.2432	1	0.2432
2-22	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042
3-22	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979
4-22	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034
5-22	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152
6-22E	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982
6-22W	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742
7-22	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699
8-22E	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225
8-22W	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936
9-22	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903
10-22	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911
11-22	1.0055	1	1.0055	1	1.0055	1	1.0055	1	1.0055	1	1.0055	1	1.0055	1	1.0055	1	1.0055	1	1.0055	1	1.0055	1	1.0055
12-22	0.2447	1	0.2447	1	0.2447	1	0.2447	1	0.2447	1	0.2447	1	0.2447	1	0.2447	1	0.2447	1	0.2447	1	0.2447	1	0.2447
13-22	0.2464	1	0.2464	1	0.2464	1	0.2464	1	0.2464	1	0.2464	1	0.2464	1	0.2464	1	0.2464	1	0.2464	1	0.2464	1	0.2464
14-22	1.0000	1	1.0000	1	1.0000	1	1.0000	1	1.0000	1	1.0000	1	1.0000	1	1.0000	1	1.0000	1	1.0000	1	1.0000	1	1.0000
15-22	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982
16-22E	0.5130	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513
16-22W	0.4788	1	0.4788	1	0.4788	1	0.4788	1	0.4788	1	0.4788	1	0.4788	1	0.4788	1	0.4788	1	0.4788	1	0.4788	1	0.4788
17-22	1.0154	1	1.0154	1	1.0154	1	1.0154	1	1.0154	1	1.0154	1	1.0154	1	1.0154	1	1.0154	1	1.0154	1	1.0154	1	1.0154
18-22	0.9688	1	0.9688	1	0.9688	1	0.9688	1	0.9688	1	0.9688	1	0.9688	1	0.9688	1	0.9688	1	0.9688	1	0.9688	1	0.9688
19-22	0.9380	1	0.938	1	0.938	1	0.938	1	0.938	1	0.938	1	0.938	1	0.938	1	0.938	1	0.938	1	0.938	1	0.938
20-22	1.0139	1	1.0139	1	1.0139	1	1.0139	1	1.0139	1	1.0139	1	1.0139	1	1.0139	1	1.0139	1	1.0139	1	1.0139	1	1.0139
21-22	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937
22-22E	0.5325	1	0.5325	1	0.5325	1	0.5325	1	0.5325	1	0.5325	1	0.5325	1	0.5325	1	0.5325	1	0.5325	1	0.5325	1	0.5325
22-22W	0.4671	1	0.4671	1	0.4671	1	0.4671	1	0.4671	1	0.4671	1	0.4671	1	0.4671	1	0.4671	1	0.4671	1	0.4671	1	0.4671
23-22	0.9895	1	0.9895	1	0.9895	1	0.9895	1	0.9895	1	0.9895	1	0.9895	1	0.9895	1	0.9895	1	0.9895	1	0.9895	1	0.9895
24-22	0.2249	1	0.2249	1	0.2249	1	0.2249	1	0.2249	1	0.2249	1	0.2249	1	0.2249	1	0.2249	1	0.2249	1	0.2249	1	0.2249
26-22N	0.3798	1	0.3798	1	0.3798	1	0.3798	1	0.3798	1	0.3798	1	0.3798	1	0.3798	1	0.3798	1	0.3798	1	0.3798	1	0.3798
26-22E	0.3827	1	0.3827	1	0.3827	1	0.3827	1	0.3827	1	0.3827	1	0.3827	1	0.3827	1	0.3827	1	0.3827	1	0.3827	1	0.3827
26-22W	0.0782	1	0.0782	1	0.0782	1	0.0782	1	0.0782	1	0.0782	1	0.0782	1	0.0782	1	0.0782	1	0.0782	1	0.0782	1	0.0782
26-22S	0.3924	1	0.3924	1	0.3924	1	0.3924	1	0.3924	1	0.3924	1	0.3924	1	0.3924	1	0.3924	1	0.3924	1	0.3924	1	0.3924
27-22N	0.3715	1	0.3715	1	0.3715	1	0.3715	1	0.3715	1	0.3715	1	0.3715	1	0.3715	1	0.3715	1	0.3715	1	0.3715	1	0.3715
27-22S	0.6311	1	0.6311	1	0.6311	1	0.6311	1	0.6311	1	0.6311	1	0.6311	1	0.6311	1	0.6311	1	0.6311	1	0.6311	1	0.6311
28-22N	0.4518	1	0.4518	1	0.4518	1	0.4518	1	0.4518	1	0.4518	1	0.4518	1	0.4518	1	0.4518	1	0.4518	1	0.4518	1	0.4518
28-22S	0.5429	1	0.5429	1	0.5429	1	0.5429	1	0.5429	1	0.5429	1	0.5429	1	0.5429	1	0.5429	1	0.5429	1	0.5429	1	0.5429
29-22N	0.4138	1	0.4138	1	0.4138	1	0.4138	1	0.4138	1	0.4138	1	0.4138	1	0.4138	1	0.4138	1	0.4138	1	0.4138	1	0.4138
29-22S	0.5937	1	0.5937	1	0.5937	1	0.5937	1	0.5937	1	0.5937	1	0.5937	1	0.5937	1	0.5937	1	0.5937	1	0.5937	1	0.5937
30-22N	0.1610	1	0.161	1	0.161	1	0.161	1	0.161	1	0.161	1	0.161	1	0.161	1	0.161	1	0.161	1	0.161	1	0.161
30-22S	0.8109	1	0.8109	1	0.8109	1	0.8109	1	0.8109	1	0.8109	1	0.8109	1	0.8109	1	0.8109	1	0.8109	1	0.8109	1	0.8109
31-22	0.9776	1	0.9776	1	0.9776	1	0.9776	1	0.9776	1	0.9776	1	0.9776	1	0.9776	1	0.9776	1	0.9776	1	0.9776	1	0.9776
32-22	1.0040	1	1.004	1	1.004	1	1.004	1	1.004	1	1.004	1	1.004	1	1.004	1	1.004	1	1.004	1	1.004	1	1.004
33-22	1.0006	1	1.0006	1	1.0006	1	1.0006	1	1.0006	1	1.0006	1	1.0006	1	1.0006	1	1.0006	1	1.0006	1	1.0006	1	1.0006
34-22	1.0001	1	1.0001	1	1.0001	1	1.0001	1	1.0001	1	1.0001	1	1.0001	1	1.0001	1	1.0001	1	1.0001	1	1.0001	1	1.0001
35-22	0.9989	1	0.9989	1	0.9989	1	0.9989	1	0.9989	1	0.9989	1	0.9989	1	0.9989	1	0.9989	1	0.9989	1	0.9989	1	0.9989
36-22	0.2270	1	0.227	1	0.227	1	0.227	1	0.227	1	0.227	1	0.227	1	0.227	1	0.227	1	0.227	1	0.227	1	0.227
2-31	0.2878	1	0.2878	1	0.2878	1	0.2878	1	0.2878	1	0.2878	1	0.2878	1	0.2878	1	0.2878	1	0.2878	1	0.2878	1	0.2878
11-31	0.9972	1	0.9972	1	0.9972	1	0.9972	1	0.9972	1	0.9972	1	0.9972	1	0.9972	1	0.9972	1	0.9972	1	0.9972	1	0.9972
12-31	1.0197	1	1.0197	1	1.0197	1	1.0197	1	1.0197	1	1.0197	1	1.0197	1	1.0197	1	1.0197	1	1.0197	1	1.0197	1	1.0197
13-31	1.0029	1	1.0029	1	1.0029	1	1.0029	1	1.0029	1	1.0029	1	1.0029	1	1.0029	1	1.0029	1	1.0029	1	1.0029	1	1.0029
14-31	1.0078	1	1.0078	1	1.0078	1	1.0078	1	1.0078	1	1.0078	1	1.0078	1	1.0078	1	1.0078	1	1.0078	1	1.0078	1	1.0078
7-32	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495
17-32	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844
18-32	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053
19-32	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616
20-32	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882
22-31E	0.5123	1	0.5123	1	0.5123	1	0.5123	1	0.5123	1	0.5123	1	0.5123	1	0.5123	1	0.5123	1	0.5123	1	0.5123	1	0.5123
22-31W	0.7658	1	0.7658	1	0.7658	1	0.7658	1	0.7658	1	0.7658	1	0.7658	1	0.7658	1	0.7658	1	0.7658	1	0.7658	1	0.7658
23-31	1.0057	1	1.0057	1	1.0057	1	1.0057	1	1.0057	1	1.0057	1	1.0057	1	1.0057	1	1.0057	1	1.0057	1	1.0057	1	1.0057

CH2M HILL

Subject: Maryvale ADMS: Area Tabulations for HEC-1 Combines

By: J. Geisbush

Checked: D. Dust

Project No.: 132586

24-31	1.0075	1	1.0075	1	1.0075	1	1.0075	1	1.0075	1	1.0075	1	1.0075	1	1.0075	1	1.0075	1	1.0075	1	1.0075	1	1.0075	1	1.0075	1	1.0075	1	1.0075	1	1.0075	1			
25-31	1.0030	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1			
26-31E	0.4615	1	0.4615	1	0.4615	1	0.4615	1	0.4615	1	0.4615	1	0.4615	1	0.4615	1	0.4615	1	0.4615	1	0.4615	1	0.4615	1	0.4615	1	0.4615	1	0.4615	1	0.4615	1			
26-31W	0.5403	1	0.5403	1	0.5403	1	0.5403	1	0.5403	1	0.5403	1	0.5403	1	0.5403	1	0.5403	1	0.5403	1	0.5403	1	0.5403	1	0.5403	1	0.5403	1	0.5403	1	0.5403	1			
27-31	1.0125	1	1.0125	1	1.0125	1	1.0125	1	1.0125	1	1.0125	1	1.0125	1	1.0125	1	1.0125	1	1.0125	1	1.0125	1	1.0125	1	1.0125	1	1.0125	1	1.0125	1	1.0125	1			
34-31	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1			
35-31	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054	1			
36-31E	0.4952	1	0.4952	1	0.4952	1	0.4952	1	0.4952	1	0.4952	1	0.4952	1	0.4952	1	0.4952	1	0.4952	1	0.4952	1	0.4952	1	0.4952	1	0.4952	1	0.4952	1	0.4952	1			
36-31W	0.5046	1	0.5046	1	0.5046	1	0.5046	1	0.5046	1	0.5046	1	0.5046	1	0.5046	1	0.5046	1	0.5046	1	0.5046	1	0.5046	1	0.5046	1	0.5046	1	0.5046	1	0.5046	1			
21-32	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	1	0.3982	1			
26-32E	0.1068	1	0.1068	1	0.1068	1	0.1068	1	0.1068	1	0.1068	1	0.1068	1	0.1068	1	0.1068	1	0.1068	1	0.1068	1	0.1068	1	0.1068	1	0.1068	1	0.1068	1	0.1068	1			
26-32W	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1	0.0866	1			
27-32	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1	0.6122	1			
28-32	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1			
29-32	0.9910	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1	0.991	1			
30-32	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588	1	0.9588	1			
31-32	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533	1	0.9533	1			
32-32	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	1	0.9908	1			
33-32	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	1	0.9926	1			
34-32	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1	0.9938	1			
35-32	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1	0.9873	1			
36-32	0.1135	1	0.1135	1	0.1135	1	0.1135	1	0.1135	1	0.1135	1	0.1135	1	0.1135	1	0.1135	1	0.1135	1	0.1135	1	0.1135	1	0.1135	1	0.1135	1	0.1135	1	0.1135	1			
			107		107		107		107		117		108		109		109		113		113		124												
Total Contributing Area(mi²)			81.256		81.256		81.256		81.256		83.109		81.499		82.271		82.271		85.017		85.017		87.052		0.000										

CH2M HILL

Subject: **Maryvale ADMS: Area Tabulations for HEC-1 Combines**

By: **J. Geisbush**
Checked: **D. Dust**
Project No.: **132586**

MCDOWELL RD & I-10

Sub-Basin ID	Sub-Basin Area (mi^2)	HEC-1 Combine Node IDs																	
			CMD11		C31-21		CMD115		C115A		C6-11		CMD12		C36W21		C1-W11		C2-W11
1-11	0.1821									1	0.1821					1	0.1821	1	0.1821
2-11	0.1778									1	0.1778					1	0.1778	1	0.1778
3-11	0.1676									1	0.1676					1	0.1676	1	0.1676
4-11	0.1757									1	0.1757					1	0.1757	1	0.1757
5-11	0.1824									1	0.1824					1	0.1824	1	0.1824
6-11	0.2206									1	0.2206					1	0.2206	1	0.2206
1-12	0.0987									1	0.0987					1	0.0987	1	0.0987
2-12	0.2290									1	0.229					1	0.229	1	0.229
3-12	0.2413									1	0.2413					1	0.2413	1	0.2413
4-12	0.2164									1	0.2164					1	0.2164	1	0.2164
5-12	0.1848									1	0.1848					1	0.1848	1	0.1848
6-12	0.1796									1	0.1796					1	0.1796	1	0.1796
1-21	0.9994	1	0.9994	1	0.9994	1	0.9994	1	0.9994	1	0.9994	1	0.9994	1	0.9994	1	0.9994	1	0.9994
2-21	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947	1	0.9947
3-21	0.9808	1	0.9808	1	0.9808	1	0.9808	1	0.9808	1	0.9808	1	0.9808	1	0.9808	1	0.9808	1	0.9808
4-21	0.8740	1	0.874	1	0.874	1	0.874	1	0.874	1	0.874	1	0.874	1	0.874	1	0.874	1	0.874
9-21	0.9671	1	0.9671	1	0.9671	1	0.9671	1	0.9671	1	0.9671	1	0.9671	1	0.9671	1	0.9671	1	0.9671
10-21	0.9801	1	0.9801	1	0.9801	1	0.9801	1	0.9801	1	0.9801	1	0.9801	1	0.9801	1	0.9801	1	0.9801
11-21	0.9831	1	0.9831	1	0.9831	1	0.9831	1	0.9831	1	0.9831	1	0.9831	1	0.9831	1	0.9831	1	0.9831
12-21	1.0030	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003	1	1.003
13-21	1.0003	1	1.0003	1	1.0003	1	1.0003	1	1.0003	1	1.0003	1	1.0003	1	1.0003	1	1.0003	1	1.0003
14-21E	0.4317	1	0.4317	1	0.4317	1	0.4317	1	0.4317	1	0.4317	1	0.4317	1	0.4317	1	0.4317	1	0.4317
14-21W	0.5615	1	0.5615	1	0.5615	1	0.5615	1	0.5615	1	0.5615	1	0.5615	1	0.5615	1	0.5615	1	0.5615
15-21	1.0114	1	1.0114	1	1.0114	1	1.0114	1	1.0114	1	1.0114	1	1.0114	1	1.0114	1	1.0114	1	1.0114
16-21	1.0214	1	1.0214	1	1.0214	1	1.0214	1	1.0214	1	1.0214	1	1.0214	1	1.0214	1	1.0214	1	1.0214
17-21E	0.6990	1	0.699	1	0.699	1	0.699	1	0.699	1	0.699	1	0.699	1	0.699	1	0.699	1	0.699
20-21	1.0230	1	1.023	1	1.023	1	1.023	1	1.023	1	1.023	1	1.023	1	1.023	1	1.023	1	1.023
21-21	1.0076	1	1.0076	1	1.0076	1	1.0076	1	1.0076	1	1.0076	1	1.0076	1	1.0076	1	1.0076	1	1.0076
22-21	1.0020	1	1.002	1	1.002	1	1.002	1	1.002	1	1.002	1	1.002	1	1.002	1	1.002	1	1.002
23-21	0.9869	1	0.9869	1	0.9869	1	0.9869	1	0.9869	1	0.9869	1	0.9869	1	0.9869	1	0.9869	1	0.9869
24-21N	0.4133	1	0.4133	1	0.4133	1	0.4133	1	0.4133	1	0.4133	1	0.4133	1	0.4133	1	0.4133	1	0.4133
24-21S	0.6123	1	0.6123	1	0.6123	1	0.6123	1	0.6123	1	0.6123	1	0.6123	1	0.6123	1	0.6123	1	0.6123
25-21	1.0002	1	1.0002	1	1.0002	1	1.0002	1	1.0002	1	1.0002	1	1.0002	1	1.0002	1	1.0002	1	1.0002
26-21	0.9902	1	0.9902	1	0.9902	1	0.9902	1	0.9902	1	0.9902	1	0.9902	1	0.9902	1	0.9902	1	0.9902
27-21	1.0046	1	1.0046	1	1.0046	1	1.0046	1	1.0046	1	1.0046	1	1.0046	1	1.0046	1	1.0046	1	1.0046
28-21	0.9995	1	0.9995	1	0.9995	1	0.9995	1	0.9995	1	0.9995	1	0.9995	1	0.9995	1	0.9995	1	0.9995
29-21N	0.7612	1	0.7612	1	0.7612	1	0.7612	1	0.7612	1	0.7612	1	0.7612	1	0.7612	1	0.7612	1	0.7612
29-21S	0.2625	1	0.2625	1	0.2625	1	0.2625	1	0.2625	1	0.2625	1	0.2625	1	0.2625	1	0.2625	1	0.2625
30-21S	0.7496	1	0.7496	1	0.7496	1	0.7496	1	0.7496	1	0.7496	1	0.7496	1	0.7496	1	0.7496	1	0.7496
31-21	0.9643	1	0.9643	1	0.9643	1	0.9643	1	0.9643	1	0.9643	1	0.9643	1	0.9643	1	0.9643	1	0.9643
32-21E	0.2431	1	0.2431	1	0.2431	1	0.2431	1	0.2431	1	0.2431	1	0.2431	1	0.2431	1	0.2431	1	0.2431
32-21W	0.7717	1	0.7717	1	0.7717	1	0.7717	1	0.7717	1	0.7717	1	0.7717	1	0.7717	1	0.7717	1	0.7717
33-21	0.9898	1	0.9898	1	0.9898	1	0.9898	1	0.9898	1	0.9898	1	0.9898	1	0.9898	1	0.9898	1	0.9898
34-21	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054	1	1.0054
35-21	0.9907	1	0.9907	1	0.9907	1	0.9907	1	0.9907	1	0.9907	1	0.9907	1	0.9907	1	0.9907	1	0.9907
36-21	1.0013	1	1.0013	1	1.0013	1	1.0013	1	1.0013	1	1.0013	1	1.0013	1	1.0013	1	1.0013	1	1.0013
1-22	0.2432	1	0.2432	1	0.2432	1	0.2432	1	0.2432	1	0.2432	1	0.2432	1	0.2432	1	0.2432	1	0.2432
2-22	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042	1	1.0042
3-22	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979	1	0.9979
4-22	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034	1	1.0034
5-22	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152	1	1.0152
6-22E	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982	1	0.4982
6-22W	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742	1	0.4742
7-22	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699	1	0.9699
8-22E	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225	1	0.5225
8-22W	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936	1	0.4936
9-22	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903	1	0.9903
10-22	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911	1	0.9911
11-22	1.0055	1	1.0055	1	1.0055	1	1.0055	1	1.0055	1	1.0055	1	1.0055	1	1.0055	1	1.0055	1	1.0055
12-22	0.2447	1	0.2447	1	0.2447	1	0.2447	1	0.2447	1	0.2447	1	0.2447	1	0.2447	1	0.2447	1	0.2447
13-22	0.2464	1	0.2464	1	0.2464	1	0.2464	1	0.2464	1	0.2464	1	0.2464	1	0.2464	1	0.2464	1	0.2464
14-22	1.0000	1	1.0000	1	1.0000	1	1.0000	1	1.0000	1	1.0000	1	1.0000	1	1.0000	1	1.0000	1	1.0000
15-22	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982	1	0.9982
16-22E	0.5130	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513	1	0.513
16-22W	0.4788	1	0.4788	1	0.4788	1	0.4788	1	0.4788	1	0.4788	1	0.4788	1	0.4788	1	0.4788	1	0.4788
17-22	1.0154	1	1.0154	1	1.0154	1	1.0154	1	1.0154	1	1.0154	1	1.0154	1	1.0154	1	1.0154	1	1.0154
18-22	0.9688	1	0.9688	1	0.9688	1	0.9688	1	0.9688	1	0.9688	1	0.9688	1	0.9688	1	0.9688	1	0.9688
19-22	0.9380	1	0.938	1	0.938	1	0.938	1	0.938	1	0.938	1	0.938	1	0.938	1	0.938	1	0.938
20-22	1.0139	1	1.0139	1	1.0139	1	1.0139	1	1.0139	1	1.0139	1	1.0139	1	1.0139	1	1.0139	1	1.0139
21-22	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937	1	0.9937
22-22E	0.5325	1	0.5325	1	0.5325	1	0.5325	1	0.5325	1	0.5325	1	0.5325	1	0.5325	1	0.5325	1	0.5325
22-22W	0.4671	1	0.4671	1	0.4671	1	0.4671	1	0.4671	1	0.4671	1	0.4671	1	0.4671	1	0.4671	1	0.4671
23-22	0.9895	1	0.9895	1	0.9895	1	0.9895	1	0.9895	1	0.9895	1	0.9895	1	0.9895	1	0.9895	1	0.9895
24-22	0.2249	1	0.2249	1	0.2249	1	0.2249	1	0.2249	1	0.2249	1	0.2249	1	0.2249	1	0.2249	1	0.2249
26-22N	0.3798	1	0.3798	1	0.3798	1	0.3798	1	0.3798	1	0.3798	1	0.3798	1	0.3798	1	0.3798	1	0.3798
26-22E	0.3827	1	0.3827	1	0.3827	1	0.3827	1	0.3827	1	0.3827	1	0.3827	1	0.3827	1	0.3827	1	0.3827
26-22W	0.0782	1	0.0782	1	0.0782	1	0.0782	1	0.0782	1	0.0782	1	0.0782	1	0.0782	1	0.0782	1	0.0782
26-22S	0.3924	1	0.3924	1	0.3924	1	0.3924	1	0.3924	1	0.3924	1	0.3924	1	0.3924	1	0.3924	1	0.3924
27-22N	0.3715	1	0.3715	1	0.3715	1	0.3715	1	0.3715	1	0.3715	1	0.3715	1	0.3715	1	0.3715	1	0.3715
27-22S	0.6311	1	0.6311	1	0.6311	1	0.6311	1	0.6311	1	0.6311	1	0.6311	1	0.6311	1	0.6311	1	0.6311
28-22N	0.4518	1	0.4518	1	0.4518	1	0.4518	1	0.4518	1	0.4518	1	0.4518	1	0.4518	1	0.4518	1	0.4518
28-22S	0.5429	1	0.5429	1	0.5429	1	0.5429	1	0.5429	1	0.5429	1	0.5429	1	0.5429	1	0.5429	1	0.5429
29-22N	0.4138	1	0.4138	1	0.4138	1	0.4138	1	0.4138	1	0.4138	1	0.4138	1	0.4138	1	0.4138	1	0.4138
29-22S	0.5937	1	0.5937	1	0.5937	1	0.5937	1	0.5937	1	0.5937	1	0.5937	1	0.5937	1	0.5937	1	0.5937
30-22N	0.1610	1	0.161	1	0.161	1	0.161	1	0.161	1	0.161	1	0.161	1	0.161	1	0.161	1	0.161
30-22S	0.8109	1	0.8109	1	0.8109	1	0.8109	1	0.8109	1	0.8109	1	0.8109	1	0.8109	1	0.8109	1	0.8109
31-22	0.9776	1	0.9776	1	0.9776	1	0.9776	1	0.9776	1	0.9776	1	0.9776	1	0.9776	1	0.9776	1	0.9776
32-22	1.0040	1	1.004	1	1.004	1	1.004	1	1.004	1	1.004	1	1.004	1	1.004	1	1.004	1	1.004
33-22	1.0006	1	1.0006	1	1.0006	1	1.0006	1	1.0006	1	1.0006	1	1.0006	1	1.0006	1	1.0006	1	1.0006
34-22	1.0001	1	1.0001	1	1.0001	1	1.0001	1	1.0001	1	1.0001	1	1.0001	1	1.0001	1	1.0001	1	1.0001
35-22	0.9989	1	0.9989	1	0.9989	1	0.9989	1	0.9989	1	0.9989	1	0.9989	1	0.9989	1	0.9989	1	0.9989
36-22	0.2270	1	0.227	1	0.227	1	0.227	1	0.227	1	0.227	1	0.227	1	0.227	1	0.227	1	0.227
2-31	0.2878	1	0.2878	1	0.2878	1	0.2878	1	0.2878	1	0.2878	1	0.2878	1	0.2878	1	0.2878	1	0.2878
11-31	0.9972	1	0.9972	1	0.9972	1	0.9972	1	0.9972	1	0.9972	1	0.9972	1	0.9972	1	0.9972	1	0.9972
12-31	1.0197	1	1.0197	1	1.0197	1	1.0197	1	1.0197	1	1.0197	1	1.0197	1	1.0197	1	1.0197	1	1.0197
13-31	1.0029	1	1.0029	1	1.0029	1	1.0029	1	1.0029	1	1.0029	1	1.0029	1	1.0029	1	1.0029	1	1.0029
14-31	1.0078	1	1.0078	1	1.0078	1	1.0078	1	1.0078	1	1.0078	1	1.0078	1	1.0078	1	1.0078	1	1.0078
7-32	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495	1	0.2495
17-32	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844	1	0.2844
18-32	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053	1	0.9053
19-32	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616	1	0.9616
20-32	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882	1	0.9882

CH2M HILL

Subject: Maryvale ADMS: Area Tabulations for HEC-1 Combines

By: J. Geisbush

Checked: D. Dust

Project No.: 132586

22-31E	0.5123	+	0.5123	+	0.5123	+	0.5123	+	0.5123	+	0.5123	+	0.5123	+	0.5123	+	0.5123	+	0.5123									
22-31W	0.7658	+	0.7658	+	0.7658	+	0.7658	+	0.7658	+	0.7658	+	0.7658	+	0.7658	+	0.7658	+	0.7658									
23-31	1.0057	+	1.0057	+	1.0057	+	1.0057	+	1.0057	+	1.0057	+	1.0057	+	1.0057	+	1.0057	+	1.0057									
24-31	1.0075	+	1.0075	+	1.0075	+	1.0075	+	1.0075	+	1.0075	+	1.0075	+	1.0075	+	1.0075	+	1.0075									
25-31	1.0030	+	1.003	+	1.003	+	1.003	+	1.003	+	1.003	+	1.003	+	1.003	+	1.003	+	1.003									
26-31E	0.4615	+	0.4615	+	0.4615	+	0.4615	+	0.4615	+	0.4615	+	0.4615	+	0.4615	+	0.4615	+	0.4615									
26-31W	0.5403	+	0.5403	+	0.5403	+	0.5403	+	0.5403	+	0.5403	+	0.5403	+	0.5403	+	0.5403	+	0.5403									
27-31	1.0125	+	1.0125	+	1.0125	+	1.0125	+	1.0125	+	1.0125	+	1.0125	+	1.0125	+	1.0125	+	1.0125									
34-31	0.9947	+	0.9947	+	0.9947	+	0.9947	+	0.9947	+	0.9947	+	0.9947	+	0.9947	+	0.9947	+	0.9947									
35-31	1.0054	+	1.0054	+	1.0054	+	1.0054	+	1.0054	+	1.0054	+	1.0054	+	1.0054	+	1.0054	+	1.0054									
36-31E	0.4952	+	0.4952	+	0.4952	+	0.4952	+	0.4952	+	0.4952	+	0.4952	+	0.4952	+	0.4952	+	0.4952									
36-31W	0.5046	+	0.5046	+	0.5046	+	0.5046	+	0.5046	+	0.5046	+	0.5046	+	0.5046	+	0.5046	+	0.5046									
21-32	0.3982	+	0.3982	+	0.3982	+	0.3982	+	0.3982	+	0.3982	+	0.3982	+	0.3982	+	0.3982	+	0.3982									
26-32E	0.1068	+	0.1068	+	0.1068	+	0.1068	+	0.1068	+	0.1068	+	0.1068	+	0.1068	+	0.1068	+	0.1068									
26-32W	0.0866	+	0.0866	+	0.0866	+	0.0866	+	0.0866	+	0.0866	+	0.0866	+	0.0866	+	0.0866	+	0.0866									
27-32	0.6122	+	0.6122	+	0.6122	+	0.6122	+	0.6122	+	0.6122	+	0.6122	+	0.6122	+	0.6122	+	0.6122									
28-32	0.9937	+	0.9937	+	0.9937	+	0.9937	+	0.9937	+	0.9937	+	0.9937	+	0.9937	+	0.9937	+	0.9937									
29-32	0.9910	+	0.991	+	0.991	+	0.991	+	0.991	+	0.991	+	0.991	+	0.991	+	0.991	+	0.991									
30-32	0.9588	+	0.9588	+	0.9588	+	0.9588	+	0.9588	+	0.9588	+	0.9588	+	0.9588	+	0.9588	+	0.9588									
31-32	0.9533	+	0.9533	+	0.9533	+	0.9533	+	0.9533	+	0.9533	+	0.9533	+	0.9533	+	0.9533	+	0.9533									
32-32	0.9908	+	0.9908	+	0.9908	+	0.9908	+	0.9908	+	0.9908	+	0.9908	+	0.9908	+	0.9908	+	0.9908									
33-32	0.9926	+	0.9926	+	0.9926	+	0.9926	+	0.9926	+	0.9926	+	0.9926	+	0.9926	+	0.9926	+	0.9926									
34-32	0.9938	+	0.9938	+	0.9938	+	0.9938	+	0.9938	+	0.9938	+	0.9938	+	0.9938	+	0.9938	+	0.9938									
35-32	0.9873	+	0.9873	+	0.9873	+	0.9873	+	0.9873	+	0.9873	+	0.9873	+	0.9873	+	0.9873	+	0.9873									
36-32	0.1135	+	0.1135	+	0.1135	+	0.1135	+	0.1135	+	0.1135	+	0.1135	+	0.1135	+	0.1135	+	0.1135									
1-W11	0.3719															+	0.3719	+	0.3719									
2-W11	0.0843																	+	0.0843									
36-W21	0.8369											+	0.8369	+	0.8369	+	0.8369	+	0.8369									
			115		115		115		115		127		116		116		129		130		0		0		0			
Total Contributing Area(mi²)			86.731		86.731		86.731		86.731		88.987		87.567		87.567		90.195		90.280		0.000		0.000		0.000			

Appendix B: HEC-1 Sub-basin Parameters

Maryvale ADMS

HEC-1 Element Nomenclature

○ **SUB-BASIN HYDROGRAPH GENERATION:**

Format: (section no.) - (township no.) (range no.)(optional alphanumeric)

Example: **17-32N**

Generate hydrograph for the northern portion of Section 17, T3N, R2E.

◇ **SUB-BASIN DIVERSION:**

Format: D(section no.)(W, S, E, or N)

Example: **D17S**

Southerly component of flow diversion of Section 17.

□ **SUB-BASIN ROUTE:**

Format: R(section no.)(township no.) (range no.)(W, S, E, or N)

Example: **R1732S**

Southerly component of flow route through Section 17, T3N, R2E.

△ **SUB-BASIN RESERVOIR ROUTE: Regional Retention Basins & Ponding Areas**

Format: RES(section no.)

Example: **RES17**

Reservoir route in Section 17.

△ **SUB-BASIN RETENTION BASIN DIVERSION: Subdivision Retention Basins**

Format: RET(section no.)

Example: **RET19**

Retention basin diversion in Section 19.

STREET ROUTE:

Format: **R**(street ID, up to 3 characters per street code)(sequential alphanumeric)

Example: **RPA1**

First route for Peoria Avenue.

Example: **R67C**

Third route for 67th Avenue.

STREET CAPACITY DIVERSION:

Format: **S**(street ID, up to 3 characters) (sequential alphanumeric) (**W, S, E,** or **N**)

Example: **SPA1S**

First diversion from Peoria Avenue to the south.

Example: **S67CW**

Third diversion from 67th Avenue to the west.

STREET INTERSECTION DIVERSION:

Format: **D**(street ID, up to 3 characters) (street ID, up to 3 characters)

Example: **DPA67**

Flow component in Peoria Avenue from diversion at Peoria & 67th Avenues.

Example: **D67PA**

Flow component in 67th Avenue from diversion at Peoria & 67th Avenues.

STREET INTERSECTION COMBINE:

Format: **C**(street ID, up to 3 characters) (street ID, up to 3 characters)

Example: **CPA67**

Flow combine at the intersection of Peoria & 67th Avenues.

STREET COMBINE:

Format: **C**(street ID, up to 3 characters) (sequential alphanumeric character)

Example: **CPA2**

Second flow combine along Peoria Avenue.

SUB-BASIN COMBINE:

Format: C(section no.) - (township no.) (range no.)(optional alphanumeric)

Example: **C17-32**

Hydrograph combine in Section 17, T3N, R2E.

Alternate formats C1732N, C1732A, C1732B, & ETC ... ...

These formats are used when there are multiple combines within a sub-basin and/or when the section is sub-divided into multiple sub-basins.

STREET NAME CODES FOR NAMED STREETS

Street Name	Code
Thunderbird Road	TB
Cactus Road	CR
Peoria Avenue	PA
Olive Avenue	OA
Northern Avenue	NA
Glendale Avenue	GA
Bethany Home Road	BH
Camelback Road	CB
Indian School Road	IS
Thomas Road	TR
McDowell Road	MD

Note: The codes for numbered streets simply corresponds to the street number. For example the code for 51st Avenue is "51." The study area extends west from 27th Avenue to approximately 120th Avenue.

SUBJECT: Maryvale ADMS

BY _____ DATE _____

SHEET NO. ____ OF ____

PROJECT NO. _____

Parameter Estimation for:

Land Use Category - Schools

Characteristics:

- From review of Landis Aerial Photos of study area it is estimated that 55% of the school area is impervious (ie, roofs parking lots etc...), with an effective impervious area of approximately 45%.

∴ IA: Per Table 4.1 (MCFCD, 1992):

IA impervious area ≅ 0.11"

IA Turf Areas ≅ 0.50"

$$\therefore IA \cong 0.55(0.11) + 0.45(0.50) = 0.29$$

- RTIMP ≅ 45%

- Percent Veg. Cover = 80%

FORM 3B

Table 4.2a IA, RTIMP, and Percent Vegetation Cover for Representative Land Uses in Maricopa County

Land Use Category	IA (inches)	RTIMP ** (percent)	Percent ** Veg. Cover	Gilbert Zoning Unit	Description	Chandler Zoning Unit	Description	Mesa Zoning Unit	Description	Tempe Zoning Unit	Description	County Zoning Unit	Description	Phoenix Zoning Unit	Description
Agriculture	0.5*	0*	85*	AG	Agriculture	AG-1	Agriculture	AG	Agriculture	AG	Agriculture				
Very Low Density Residential	0.3*	5*	30*					R1-90	Single Residence			RURAL-190	190,000 sq. ft./dwelling unit	S-1	Ranch or Farm Residential, > 1 acre
								SR	Suburban Ranch			RURAL-70	70,000 sq. ft./dwelling unit	S-2	Ranch or Farm Commercial
				R1-43	Rural							RURAL-43	one acre/dwelling unit	RE-43	Single Family, 1 acre minimum
Low Density Residential	0.3*	15*	50*	R1-35	Rural Residential	SF-33	Single Family	R1-35	Single Residence			R1-35	Single Family Residential, 35,000 sq. ft./dwelling unit	RE-35	SF, 35,000 sq.ft min.
				R1-20	SF, Residential	SF-18	Single Family							RE-24	SF, 24,000 sq.ft min.
				R1-15	" "							R1-18	SFR, 18,000 sq. ft./unit	R1-18	SF, 18,000 sq.ft min.
Medium Density Residential	0.25*	30*	50*	R1-10	" "	SF-10	Single Family	R1-15	Single Residence	R1-15	One Family Residential			R1-14	SF, 14,000 sq.ft min.
				R1-8	" "			R1-9	Single Residence	R1-10	One Family Residential	R1-10	SFR, 10,000 sq. ft./unit	R1-10	SF, 10,000 sq.ft min.
				R1-7	" "	SF-7	Single Family			R1-8	One Family Residential	R1-8	SFR, 8,000 sq. ft./unit	R1-8	SF, 8,000 sq.ft min.
								R1-7	Single Residence	R1-7	One Family Residential				
								R1-6	Single Residence	R1-6	One Family Residential	R1-6	SFR, 6,000 sq. ft./unit	R1-6	SF, 6,000 sq.ft min.
								TCR-1	Town Center, Single Family	RO	Residence/Office			R-O	Res. Office
Multiple Family Residential	0.25*	45*	50*	R-2	Duplex	MF-1	Medium Density	R-2	Restricted Multiple Resid.	R-2	Multi-Family Residential	R-2	2 Family Residence	R-2	MF, 4,000 sq.ft./unit
				R-3	Multi-Family, Apartments	MF-2	Multi-Family	R-3	Limited Multiple Resid.	R-3R	Multi-Family Restricted	R-3	Multiple Family, Residential	R-3	MF, 3,000 sq.ft./unit
				R-4	Multi-Family, General	MF-3	High Density	R-4	General Multiple Resid.	R-3	Multi-Family Limited	R-4	Multiple Family, Residential	R-4	MF, 1,500 sq.ft./unit
				R-5	Townhouse Residential					R-4	Multi-Family General	R-5	Multiple Family, Residential	R-4A	MF, 1,000 sq.ft./unit
										R-Th	Townhouse			R-5	MF, 1,000 sq.ft./unit
				MH	Mobile Home	MH-1	Mobile Homes	TCR-2	TC, Restricted Multi-Res.	RMH	Mobile Home Residence	MHR	Manufactured Housing, Resid.	CP/BP	Business Park
				CTP	Commercial Trailer Park			TCR-3	TC, General Res.	MHS	Manufactured Housing Subd.			R-H	Resort District
										TP	Trailer Park				
Industrial	0.15*	55*	60*	I-1	Garden Type Industrial			M-1	Limited Industrial	I-1	Light Industrial			IND PARK	Industrial Park
				I-2	Light Industrial	I-1	Light Industrial			I-2	General Industrial	I-2	Light Industrial	A-1	Light Industrial
				I-3	General Industrial	I-2	General Industrial	M-2	General Industrial	I-3	Heavy Industrial	I-3	Heavy Industrial	A-2	Heavy Industrial
Commercial	0.1*	80*	75*	C-1	Light Commercial	C-1	Neighborhood Commercial	C-1	Neighborhood Comm.	CCR	Convenience Commercial	C-1	Neighborhood Commercial	C-1	Neighborhood Commercial
				C-2	General Commercial	C-2	Community Commercial	C-2	Limited Comm.	C-1	Neighborhood Commercial	C-2	Intermediate Commercial	C-2	Intermediate Commercial
				C-3	Central Commercial	C-3	Regional Commercial	C-3	General Comm.	C-2	General Commercial	C-3	General Commercial	C-3	General Commercial
				RS	Residential Services			OS	Office-Services	CCD	Central Comm. District	C-O	Commercial Office	C-O	Commercial Office
				RCC	Residential Conveniences			TCC	TC,High Intensity Mixed Use					HR	High Rise District
								TCB-1	TC, Limited Comm./General Manufacturing						
								TCB-2	TC, General Comm./ Light Manufacturing						
				MISCELLANEOUS CATEGORIES: These zoning units should be evaluated on a case by case basis.											
				PAD	Planned Area Development	PAD	Planned Area Development			S	Private School	PD	Planned Development Overlay	PAD	Planned Area Development
				PSC-1	Planned Neighborhood Shopping										
				PSC-2	Planned Shopping Center							CS	Planned Shopping Center	PSC	Planned Shopping Center
				IB	Industrial Buffer										
						PCO	Planned C Offices	PEP	Planned Employment Park						
								PF	Public Facilities						
												SU	Special Uses		
												SC	Senior Citizen Overlay	PCD	Planned Community Development
												NUP	Neighborhood Plan of Development		
												RUP	Residential Plan of Development		
												IUP	Industrial Plan of Development		
														R.O.W.	Right of Way
														P-1	Parking, Open
														P-2	Parking, Structures
														D.G	Dwelling Group

NOTES

* These values have been selected to fit many typical settings in Maricopa County. However, the engineer/hydrologist should ALWAYS evaluate the specific circumstances in any particular watershed for hydrological variations from these typical values.

** RTIMP = Percent Effective Impervious Area, Including R.O.W.

** Percent Veg. Cover = Percent vegetation cover for pervious area only

January 1, 1995

PRELIMINARY

Note: will be 11"X17" in Finals

CH2M HILL

SUBJECT Maryvale ADMS
Update of Landuses

BY DWD DATE 8/96
SHEET NO. ___ OF ___
PROJECT NO. 132586.01

The following Sub-basin Data has been revised from GIS (1990/1991) to Reflect the 1995 Topographic Mapping

Sub-basin 34-21 : A = 1.005 mi^2

Land Use	Area Per GIS (mi^2)	Estimated per Mapping (mi^2)	
Open	0.511	0.25	(-)
MDR	0.183	0.556	(+)
MFR	0.025	0.025	
Comm	0.048	0.048	
Row Crop	0.237	0.125	(-)

Sub-basin 14-31 : A = 1.008 mi^2

Landuse			
Open	0.141	0	(-)
MDR	0.558	0.737	(+)
MFR	0.032	0.032	
Row Crop	0.226	0.188	(-)
Comm	0.019	0.019	

Sub-basin 13-31 : A = 1.003 mi^2

Open	0.09	0.06	(-)
LDR	0.257	0.257	
MDR	0.359	0.449	(+)
MFR	0.016	0.016	
Comm	0.033	0.033	
Row Crop	0.249	0.189	(-)

FORM 3B

LOSS PARAMETERS FOR SUBBASIN: 7-32

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
LCA	0.003	1.2	0.25	0
LE	0.009	3.6	0.04	0
MR	0.150	60.2	0.05	0
TW	0.051	20.5	0.05	0
VF	0.036	14.5	0.01	0

TOTAL = 0.249 Sq.Miles XKSAT = 0.04 %Rock = 0

DTHETA

Dry = 0.25 PSIF = 9.70
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
	Desert		DRY	25	0	0.35	0.03	Low	
0.085	OPEN	34.0	DRY	10	0	0.20	0.02	Min	0.03
	V.L.D.R		NORMAL	30	5	0.30	0.05	Hi	
0.027	L.D.R.	10.8	NORMAL	50	15	0.30	0.05	Hi	0.12
0.065	M.D.R.	26.0	NORMAL	50	30	0.25	0.05	Hi	0.11
	M.F.R.		NORMAL	50	45	0.25	0.05	Hi	
	Ind		NORMAL	60	55	0.15	0.03	Min	
	Comm		NORMAL	75	80	0.10	0.02	Min	
0.040	Park	16.0	NORMAL	90	10	0.20	0.10	Hi	0.11
0.006	RowCrop	2.4	NORMAL	85	0	0.50	0.10	Hi	0.14
	SCHOOL1		NORMAL	80	45	0.29	0.05	Hi	
0.027	WATER	10.8	WET	0	10	0.00	0.00	Min	0.03

0.250 = Total Area Avg. = 41 22% 0.210

PERCENT OF SUBBASIN DRY = 34.0 %
NORMAL = 55.0 %
WET = 11.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.17

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.05

IMPERVIOUS AREA: URBAN @ 100 % effective = 22
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 22

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
7-32	0.249	0.770	0.064	17.0	0.21	0.17	9.70	0.05	22

LOSS PARAMETERS FOR SUBBASIN: 12-31

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
GXA	0.004	0.4	0.23	0
LCA	0.405	39.7	0.25	0
MP	0.070	6.9	0.25	0
MR	0.505	49.6	0.05	0
TD	0.002	0.2	1.20	0
TW	0.016	1.6	0.05	0
VF	0.017	1.7	0.01	0

TOTAL = 1.019 Sq.Miles XKSAT = 0.10 %Rock = 0

DTHETA

Dry = 0.35 PSIF = 7.00
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
	Desert		DRY	25	0	0.35	0.03	Low	
0.106	OPEN	10.4	DRY	10	0	0.20	0.02	Min	0.03
	V.L.D.R		NORMAL	30	5	0.30	0.05	Hi	
0.533	L.D.R.	52.3	NORMAL	50	15	0.30	0.05	Hi	0.09
0.142	M.D.R.	13.9	NORMAL	50	30	0.25	0.05	Hi	0.10
	M.F.R.		NORMAL	50	45	0.25	0.05	Hi	
	Ind		NORMAL	60	55	0.15	0.03	Min	
0.003	Comm	0.3	NORMAL	75	80	0.10	0.02	Min	0.04
	Park		NORMAL	90	10	0.20	0.10	Hi	
0.181	RowCrop	17.8	NORMAL	85	0	0.50	0.10	Hi	0.10
0.021	SCHOOL1	2.1	NORMAL	80	45	0.29	0.05	Hi	0.12
0.033	WATER	3.2	WET	0	10	0.00	0.00	Min	0.03

1.019 = Total Area Avg. = 53 16% 0.310

PERCENT OF SUBBASIN DRY = 10.0 %
NORMAL = 86.0 %
WET = 3.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.16

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.15

IMPERVIOUS AREA: URBAN @ 100 % effective = 16
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 16

INPUT VALUES FOR MCUHP1 PROGRAM

K&J 4PRINT

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
12-31	1.019	1.050	0.072	17.0	0.31	0.16	7.00	0.15	16

LOSS PARAMETERS FOR SUBBASIN: 2-31

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
ABA	0.009	3.1	0.38	0
GGA	0.113	39.4	0.25	0
GXA	0.062	21.6	0.23	0
LCA	0.074	25.8	0.25	0
MA	0.009	3.1	0.40	0
MP	0.000	0.0	0.25	0
MR	0.001	0.3	0.05	0
RBA	0.016	5.6	0.26	0
TD	0.003	1.0	1.20	0

TOTAL = 0.287 Sq.Miles XKSAT = 0.26 %Rock = 0

DTHETA

Dry = 0.35 PSIF = 4.70
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
	Desert		DRY	25	0	0.35	0.03	Low	
0.040	OPEN	13.9	DRY	10	0	0.20	0.02	Min	0.03
	V.L.D.R		NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
	M.D.R.		NORMAL	50	30	0.25	0.05	Hi	
	M.F.R.		NORMAL	50	45	0.25	0.05	Hi	
	Ind		NORMAL	60	55	0.15	0.03	Min	
	Comm		NORMAL	75	80	0.10	0.02	Min	
	Park		NORMAL	90	10	0.20	0.10	Hi	
0.228	RowCrop	79.2	NORMAL	85	0	0.50	0.10	Hi	0.10
	SCHOOL1		NORMAL	80	45	0.29	0.05	Hi	
0.020	WATER	6.9	WET	0	10	0.00	0.00	Min	0.03

0.288 = Total Area Avg. = 74 7% 0.420

PERCENT OF SUBBASIN DRY = 14.0 %
NORMAL = 79.0 %
WET = 7.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.25

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.44

IMPERVIOUS AREA: URBAN @ 100 % effective = 7
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 7

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
2-31	0.287	1.000	0.079	26.0	0.42	0.25	4.70	0.44	7

LOSS PARAMETERS FOR SUBBASIN: 11-31

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.003	0.3	0.26	0
GGA	0.056	5.6	0.25	0
GXA	0.024	2.4	0.23	0
LCA	0.483	48.4	0.25	0
MR	0.381	38.2	0.05	0
RBA	0.000	0.0	0.26	0
TD	0.002	0.2	1.20	0
TW	0.035	3.5	0.05	0
VF	0.009	0.9	0.01	0
VH	0.005	0.5	0.27	0

TOTAL = 0.998 Sq.Miles XKSAT = 0.12 %Rock = 0

DTHETA

Dry = 0.37 PSIF = 6.60
Normal = 0.19
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
	Desert		DRY	25	0	0.35	0.03	Low	
0.083	OPEN	8.3	DRY	10	0	0.20	0.02	Min	0.03
	V.L.D.R		NORMAL	30	5	0.30	0.05	Hi	
0.344	L.D.R.	34.5	NORMAL	50	15	0.30	0.05	Hi	0.09
0.078	M.D.R.	7.8	NORMAL	50	30	0.25	0.05	Hi	0.11
0.011	M.F.R.	1.1	NORMAL	50	45	0.25	0.05	Hi	0.13
	Ind		NORMAL	60	55	0.15	0.03	Min	
	Comm		NORMAL	75	80	0.10	0.02	Min	
	Park		NORMAL	90	10	0.20	0.10	Hi	
0.419	RowCrop	42.0	NORMAL	85	0	0.50	0.10	Hi	0.09
0.062	SCHOOL1	6.2	NORMAL	80	45	0.29	0.05	Hi	0.11
	WATER		WET	0	10	0.00	0.00	Min	

0.997 = Total Area Avg. = 64 11% 0.370

PERCENT OF SUBBASIN DRY = 8.0 %
NORMAL = 92.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.20

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.19

IMPERVIOUS AREA: URBAN @ 100 % effective = 11
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 11

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
11-31	0.998	1.380	0.075	17.0	0.37	0.20	6.60	0.19	11

LOSS PARAMETERS FOR SUBBASIN: 10-31

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.006	5.3	0.26	0
LCA	0.016	14.0	0.25	0
MR	0.089	78.1	0.05	0
TD	0.002	1.8	1.20	0
VH	0.001	0.9	0.27	0

TOTAL = 0.114 Sq.Miles XKSAT = 0.07 %Rock = 0

DTHETA

Dry = 0.30 PSIF = 8.00
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
	Desert		DRY	25	0	0.35	0.03	Low	
	OPEN		DRY	10	0	0.20	0.02	Min	
	V.L.D.R		NORMAL	30	5	0.30	0.05	Hi	
	L.D.R.		NORMAL	50	15	0.30	0.05	Hi	
	M.D.R.		NORMAL	50	30	0.25	0.05	Hi	
	M.F.R.		NORMAL	50	45	0.25	0.05	Hi	
0.013	Ind	11.4	NORMAL	60	55	0.15	0.03	Min	0.03
0.018	Comm	15.8	NORMAL	75	80	0.10	0.02	Min	0.03
	Park		NORMAL	90	10	0.20	0.10	Hi	
0.083	RowCrop	72.8	NORMAL	85	0	0.50	0.10	Hi	0.11
	SCHOOL1		NORMAL	80	45	0.29	0.05	Hi	
	WATER		WET	0	10	0.00	0.00	Min	
0.114 = Total Area			Avg. =	83	19%	0.400			

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 100. %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.15

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.13

IMPERVIOUS AREA: URBAN @ 100 % effective = 19
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 19

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
10-31	0.114	0.860	0.083	20.0	0.40	0.15	8.00	0.13	19

LOSS PARAMETERS FOR SUBBASIN: 17-32

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
LCA	0.045	15.8	0.25	0
LE	0.046	16.1	0.04	0
MR	0.148	51.9	0.05	0
RBA	0.001	0.4	0.26	0
TG	0.020	7.0	0.04	0
VF	0.025	8.8	0.01	0

TOTAL = 0.285 Sq.Miles XKSAT = 0.05 %Rock = 0

DTHETA

Dry = 0.27 PSIF = 8.80
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.000	OPEN	0.0	DRY	10	0	0.20	0.02	Min	
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.087	M.D.R.	30.6	NORMAL	50	30	0.25	0.05	Hi	0.11
0.000	M.F.R.	0.0	NORMAL	50	45	0.25	0.05	Hi	
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.006	Comm	2.1	NORMAL	75	80	0.10	0.02	Min	0.04
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.159	RowCrop	56.0	NORMAL	85	0	0.50	0.10	Hi	0.10
0.015	SCHOOL1	5.3	NORMAL	80	45	0.29	0.05	Hi	0.13
0.017	WATER	6.0	WET	0	10	0.00	0.00	Min	0.03

0.284 = Total Area Avg. = 75 19% 0.370

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 94.0 %
WET = 6.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.14

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.09

IMPERVIOUS AREA: URBAN @ 100 % effective = 19
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 19

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
17-32	0.285	0.880	0.088	14.0	0.37	0.14	8.80	0.09	19

LOSS PARAMETERS FOR SUBBASIN: 18-32

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
GXA	0.019	2.1	0.23	0
LCA	0.250	27.6	0.25	0
LE	0.126	13.9	0.04	0
MP	0.028	3.1	0.25	0
MR	0.309	34.1	0.05	0
RBA	0.051	5.6	0.26	0
TA	0.003	0.3	0.25	0
TH	0.009	1.0	0.04	0
TW	0.088	9.7	0.05	0
VF	0.023	2.5	0.01	0

TOTAL = 0.906 Sq.Miles XKSAT = 0.09 %Rock = 0

DTHETA

Dry = 0.33 PSIF = 7.30
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.001	OPEN	0.1	DRY	10	0	0.20	0.02	Min	0.04
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.152	L.D.R.	16.8	NORMAL	50	15	0.30	0.05	Hi	0.10
0.408	M.D.R.	45.1	NORMAL	50	30	0.25	0.05	Hi	0.09
0.014	M.F.R.	1.5	NORMAL	50	45	0.25	0.05	Hi	0.13
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.025	Comm	2.8	NORMAL	75	80	0.10	0.02	Min	0.03
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.216	RowCrop	23.9	NORMAL	85	0	0.50	0.10	Hi	0.10
0.080	SCHOOL1	8.8	NORMAL	80	45	0.29	0.05	Hi	0.11
0.009	WATER	1.0	WET	0	10	0.00	0.00	Min	0.04

0.905 = Total Area Avg. = 63 24% 0.310

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 99.0 %
WET = 1.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.15

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.14

IMPERVIOUS AREA: URBAN @ 100 % effective = 24
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 24

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
18-32	0.906	1.200	0.079	16.0	0.31	0.15	7.30	0.14	24

LOSS PARAMETERS FOR SUBBASIN: 13-31

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
GT	0.022	2.2	0.04	0
LCA	0.179	17.9	0.25	0
MP	0.011	1.1	0.25	0
MR	0.401	40.0	0.05	0
MS	0.067	6.7	0.01	0
TW	0.121	12.1	0.05	0
VF	0.202	20.1	0.01	0

TOTAL = 1.003 Sq.Miles XKSAT = 0.04 %Rock = 0

DTHETA

Dry = 0.25 PSIF = 9.70
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.060	OPEN	6.0	DRY	10	0	0.20	0.02	Min	0.03

0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.257	L.D.R.	25.6	NORMAL	50	15	0.30	0.05	Hi	0.09
0.449	M.D.R.	44.7	NORMAL	50	30	0.25	0.05	Hi	0.09
0.016	M.F.R.	1.6	NORMAL	50	45	0.25	0.05	Hi	0.12
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.033	Comm	3.3	NORMAL	75	80	0.10	0.02	Min	0.03
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.189	RowCrop	18.8	NORMAL	85	0	0.50	0.10	Hi	0.10
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

1.004 = Total Area Avg. = 56 21% 0.300

PERCENT OF SUBBASIN DRY = 6.0 %
NORMAL = 94.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.16

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.06

IMPERVIOUS AREA: URBAN @ 100 % effective = 21
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 21

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
13-31	1.003	1.370	0.075	17.0	0.30	0.16	9.70	0.06	21

LOSS PARAMETERS FOR SUBBASIN: 14-31

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
LCA	0.240	23.8	0.25	0
LE	0.047	4.7	0.04	0
MR	0.443	44.0	0.05	0
MS	0.016	1.6	0.01	0
PEA	0.034	3.4	0.37	0
RBA	0.011	1.1	0.26	0
TW	0.008	0.8	0.05	0
VF	0.209	20.7	0.01	0

TOTAL = 1.008 Sq.Miles XKSAT = 0.06 %Rock = 0

DTHETA

Dry = 0.29 PSIF = 8.40
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.000	OPEN	0.0	DRY	10	0	0.20	0.02	Min	
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.737	M.D.R.	73.1	NORMAL	50	30	0.25	0.05	Hi	0.08
0.032	M.F.R.	3.2	NORMAL	50	45	0.25	0.05	Hi	0.12
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.019	Comm	1.9	NORMAL	75	80	0.10	0.02	Min	0.03
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.188	RowCrop	18.6	NORMAL	85	0	0.50	0.10	Hi	0.10
0.032	SCHOOL1	3.2	NORMAL	80	45	0.29	0.05	Hi	0.12
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

1.008 = Total Area Avg. = 60 26% 0.290

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 100. %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.15

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.09

IMPERVIOUS AREA: URBAN @ 100 % effective = 26
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 26

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
14-31	1.008	1.320	0.079	18.0	0.29	0.15	8.40	0.09	26

LOSS PARAMETERS FOR SUBBASIN: 15-31

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.031	3.7	0.26	0
ABA	0.007	0.8	0.38	0
ES	0.006	0.7	0.25	0
GGA	0.059	7.0	0.25	0
LCA	0.281	33.3	0.25	0
LE	0.186	22.0	0.04	0
MR	0.207	24.5	0.05	0
RBA	0.000	0.0	0.26	0
TD	0.000	0.0	1.20	0
TG	0.011	1.3	0.04	0
TW	0.006	0.7	0.05	0
VF	0.050	5.9	0.01	0

TOTAL = 0.844 Sq.Miles XKSAT = 0.09 %Rock = 0

DTHETA
========
Dry = 0.33 PSIF = 7.30
Normal = 0.15
Wet = 0.00

LAND USE
========

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.111	OPEN	13.2	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.019	L.D.R.	2.3	NORMAL	50	15	0.30	0.05	Hi	0.12
0.215	M.D.R.	25.6	NORMAL	50	30	0.25	0.05	Hi	0.10
0.000	M.F.R.	0.0	NORMAL	50	45	0.25	0.05	Hi	
0.027	Ind	3.2	NORMAL	60	55	0.15	0.03	Min	0.03
0.020	Comm	2.4	NORMAL	75	80	0.10	0.02	Min	0.03
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.449	RowCrop	53.4	NORMAL	85	0	0.50	0.10	Hi	0.09
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

0.841 = Total Area Avg. = 65 12% 0.370

PERCENT OF SUBBASIN DRY = 13.0 %
NORMAL = 87.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.17

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.14

IMPERVIOUS AREA: URBAN @ 100 % effective = 12
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 12

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
15-31	0.844	1.430	0.071	18.0	0.37	0.17	7.30	0.14	12

LOSS PARAMETERS FOR SUBBASIN: 21-32
==========

Soil Survey Used Central County

XKSAT
=======

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AO	0.013	3.3	0.04	0
GGA	0.006	1.5	0.25	0
LCA	0.009	2.3	0.25	0
LE	0.015	3.8	0.04	0
MP	0.004	1.0	0.25	0
MR	0.226	56.6	0.05	0
TT	0.010	2.5	0.04	0
TW	0.078	19.5	0.05	0
VF	0.038	9.5	0.01	0

TOTAL = 0.399 Sq.Miles XKSAT = 0.05 %Rock = 0

DTHETA
========
Dry = 0.27 PSIF = 8.80
Normal = 0.15
Wet = 0.00

LAND USE
========

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.000	OPEN	0.0	DRY	10	0	0.20	0.02	Min	
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.053	L.D.R.	13.4	NORMAL	50	15	0.30	0.05	Hi	0.11
0.266	M.D.R.	67.0	NORMAL	50	30	0.25	0.05	Hi	0.09
0.010	M.F.R.	2.5	NORMAL	50	45	0.25	0.05	Hi	0.13
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.047	Comm	11.8	NORMAL	75	80	0.10	0.02	Min	0.03
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.011	RowCrop	2.8	NORMAL	85	0	0.50	0.10	Hi	0.13
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.010	WATER	2.5	WET	0	10	0.00	0.00	Min	0.03

0.397 = Total Area Avg. = 52 35% 0.240

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 98.0 %
WET = 2.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.15

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.07

IMPERVIOUS AREA: URBAN @ 100 % effective = 35
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 35

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
21-32	0.399	0.820	0.080	13.0	0.24	0.15	8.80	0.07	35

LOSS PARAMETERS FOR SUBBASIN: 20-32
==========

Soil Survey Used Central County

XKSAT
=======

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop

BT	0.003	0.3	0.25	0
GT	0.050	5.1	0.04	0
GXA	0.001	0.1	0.23	0
LCA	0.037	3.8	0.25	0
LE	0.248	25.2	0.04	0
MR	0.430	43.7	0.05	0
PEA	0.007	0.7	0.37	0
TG	0.007	0.7	0.04	0
TH	0.002	0.2	0.04	0
TW	0.168	17.1	0.05	0
VF	0.032	3.2	0.01	0

TOTAL = 0.985 Sq.Miles XKSAT = 0.05 %Rock = 0

DTHETA
========

Dry = 0.27 PSIF = 8.80
Normal = 0.15
Wet = 0.00

LAND USE
========

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.066	OPEN	6.7	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.112	L.D.R.	11.4	NORMAL	50	15	0.30	0.05	Hi	0.10
0.636	M.D.R.	64.4	NORMAL	50	30	0.25	0.05	Hi	0.08
0.016	M.F.R.	1.6	NORMAL	50	45	0.25	0.05	Hi	0.12
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.093	Comm	9.4	NORMAL	75	80	0.10	0.02	Min	0.03
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.026	RowCrop	2.6	NORMAL	85	0	0.50	0.10	Hi	0.12
0.037	SCHOOL1	3.7	NORMAL	80	45	0.29	0.05	Hi	0.12
0.001	WATER	0.1	WET	0	10	0.00	0.00	Min	0.04

0.987 = Total Area Avg. = 49 31% 0.250

PERCENT OF SUBBASIN DRY = 7.0 %
NORMAL = 93.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.16

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.07

IMPERVIOUS AREA: URBAN @ 100 % effective = 31
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 31

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
20-32	0.985	1.350	0.071	17.0	0.25	0.16	8.80	0.07	31

LOSS PARAMETERS FOR SUBBASIN: 19-32

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Soil Survey Used Central County

XKSAT
=======

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
GT	0.010	1.0	0.04	0
GXA	0.019	2.0	0.23	0
LCA	0.283	29.5	0.25	0
LE	0.123	12.8	0.04	0
MR	0.348	36.2	0.05	0
RBA	0.043	4.5	0.26	0
TG	0.018	1.9	0.04	0
TH	0.002	0.2	0.04	0
TW	0.078	8.1	0.05	0
VF	0.037	3.8	0.01	0

TOTAL = 0.961 Sq.Miles XKSAT = 0.08 %Rock = 0

DTHETA
========

Dry = 0.32 PSIF = 7.60
Normal = 0.15
Wet = 0.00

LAND USE
========

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.098	OPEN	10.2	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.060	L.D.R.	6.2	NORMAL	50	15	0.30	0.05	Hi	0.11
0.591	M.D.R.	61.4	NORMAL	50	30	0.25	0.05	Hi	0.09
0.057	M.F.R.	5.9	NORMAL	50	45	0.25	0.05	Hi	0.11
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.025	Comm	2.6	NORMAL	75	80	0.10	0.02	Min	0.03
0.030	Park	3.1	NORMAL	90	10	0.20	0.10	Hi	0.12
0.075	RowCrop	7.8	NORMAL	85	0	0.50	0.10	Hi	0.11
0.027	SCHOOL1	2.8	NORMAL	80	45	0.29	0.05	Hi	0.12
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

0.963 = Total Area Avg. = 51 26% 0.260

PERCENT OF SUBBASIN DRY = 10.0 %
NORMAL = 90.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.17

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.12

IMPERVIOUS AREA: URBAN @ 100 % effective = 26
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 26

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %

19-32	0.961	1.400	0.073	18.0	0.26	0.17	7.60	0.12	26

LOSS PARAMETERS FOR SUBBASIN: 24-31

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
GT	0.028	2.8	0.04	0
GXA	0.013	1.3	0.23	0
LCA	0.225	22.3	0.25	0
LE	0.069	6.9	0.04	0
MP	0.004	0.4	0.25	0
MR	0.310	30.8	0.05	0
MS	0.042	4.2	0.01	0
RBA	0.092	9.1	0.26	0
TE	0.016	1.6	0.25	0
TU	0.014	1.4	0.25	0
TW	0.038	3.8	0.05	0
VF	0.156	15.5	0.01	0

TOTAL = 1.007 Sq.Miles XKSAT = 0.06 %Rock = 0

DTHETA

Dry = 0.29 PSIF = 8.40
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.066	OPEN	6.5	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.806	M.D.R.	79.9	NORMAL	50	30	0.25	0.05	Hi	0.08
0.009	M.F.R.	0.9	NORMAL	50	45	0.25	0.05	Hi	0.13
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.054	Comm	5.4	NORMAL	75	80	0.10	0.02	Min	0.03
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.049	RowCrop	4.9	NORMAL	85	0	0.50	0.10	Hi	0.11
0.025	SCHOOL1	2.5	NORMAL	80	45	0.29	0.05	Hi	0.12
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	
1.009 = Total Area			Avg. =	50	30%	0.250			

PERCENT OF SUBBASIN DRY = 6.0 %
NORMAL = 94.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.16

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.09

IMPERVIOUS AREA: URBAN @ 100 % effective = 30
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 30

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
24-31	1.007	1.330	0.073	3.0	0.25	0.16	8.40	0.09	30

LOSS PARAMETERS FOR SUBBASIN: 23-31

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
LCA	0.009	0.9	0.25	0
LE	0.145	14.4	0.04	0
MP	0.009	0.9	0.25	0
MR	0.376	37.4	0.05	0
MS	0.242	24.1	0.01	0
RBA	0.077	7.7	0.26	0
TE	0.002	0.2	0.25	0
TG	0.010	1.0	0.04	0
TW	0.011	1.1	0.05	0
VF	0.125	12.4	0.01	0

TOTAL = 1.006 Sq.Miles XKSAT = 0.03 %Rock = 0

DTHETA

Dry = 0.22 PSIF = 10.10
Normal = 0.13
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.222	OPEN	22.0	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.641	M.D.R.	63.7	NORMAL	50	30	0.25	0.05	Hi	0.08
0.012	M.F.R.	1.2	NORMAL	50	45	0.25	0.05	Hi	0.13
0.001	Ind	0.1	NORMAL	60	55	0.15	0.03	Min	0.04
0.092	Comm	9.1	NORMAL	75	80	0.10	0.02	Min	0.03
0.020	Park	2.0	NORMAL	90	10	0.20	0.10	Hi	0.12
0.000	RowCrop	0.0	NORMAL	85	0	0.50	0.10	Hi	
0.019	SCHOOL1	1.9	NORMAL	80	45	0.29	0.05	Hi	0.12
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	
1.007 = Total Area			Avg. =	40	28%	0.230			

PERCENT OF SUBBASIN DRY = 22.0 %
NORMAL = 78.0 %

WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.15

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.04

IMPERVIOUS AREA: URBAN @ 100 % effective = 28
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 28

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
23-31	1.006	1.410	0.062	17.0	0.23	0.15	10.10	0.04	28

LOSS PARAMETERS FOR SUBBASIN: 22-31E

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.017	3.3	0.26	0
CB	0.000	0.0	0.40	0
GGA	0.012	2.3	0.25	0
LE	0.115	22.5	0.04	0
MR	0.093	18.2	0.05	0
MS	0.149	29.1	0.01	0
RBA	0.011	2.1	0.26	0
TG	0.015	2.9	0.04	0
TW	0.036	7.0	0.05	0
VF	0.064	12.5	0.01	0

TOTAL = 0.512 Sq.Miles XKSAT = 0.03 %Rock = 0

DTHETA

Dry = 0.22 PSIF = 10.10
Normal = 0.13
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.001	OPEN	0.2	DRY	10	0	0.20	0.02	Min	0.04
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.026	M.D.R.	5.1	NORMAL	50	30	0.25	0.05	Hi	0.12
0.000	M.F.R.	0.0	NORMAL	50	45	0.25	0.05	Hi	
0.045	Ind	8.8	NORMAL	60	55	0.15	0.03	Min	0.03
0.051	Comm	10.0	NORMAL	75	80	0.10	0.02	Min	0.03
	Park		NORMAL	90	10	0.20	0.10	Hi	
0.335	RowCrop	65.4	NORMAL	85	0	0.50	0.10	Hi	0.09
0.054	SCHOOL1	10.6	NORMAL	80	45	0.29	0.05	Hi	0.11
	WATER		WET	0	10	0.00	0.00	Min	

0.512 = Total Area Avg. = 81 19% 0.390

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 100. %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.13

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.05

IMPERVIOUS AREA: URBAN @ 100 % effective = 19
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 19

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
22-31E	0.512	1.180	0.075	15.0	0.39	0.13	10.10	0.05	19

LOSS PARAMETERS FOR SUBBASIN: 22-31W

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.051	6.7	0.26	0
AN	0.025	3.3	0.05	0
AO	0.069	9.0	0.04	0
BS	0.005	0.7	0.39	0
CB	0.000	0.0	0.40	0
GE	0.014	1.8	0.26	0
GGA	0.077	10.1	0.25	0
GT	0.007	0.9	0.04	0
GXA	0.057	7.5	0.23	0
LE	0.114	14.9	0.04	0
MA	0.004	0.5	0.40	0
MR	0.095	12.4	0.05	0
MS	0.073	9.6	0.01	0
RBA	0.018	2.4	0.26	0
TG	0.007	0.9	0.04	0
TH	0.003	0.4	0.04	0
TW	0.057	7.5	0.05	0
VF	0.088	11.5	0.01	0

TOTAL = 0.764 Sq.Miles XKSAT = 0.05 %Rock = 0

DTHETA

Dry = 0.27 PSIF = 8.80
Normal = 0.15
Wet = 0.00

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LAND USE
========

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.030	OPEN	3.9	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.001	L.D.R.	0.1	NORMAL	50	15	0.30	0.05	Hi	0.15
0.327	M.D.R.	42.6	NORMAL	50	30	0.25	0.05	Hi	0.09
0.058	M.F.R.	7.6	NORMAL	50	45	0.25	0.05	Hi	0.11
0.060	Ind	7.8	NORMAL	60	55	0.15	0.03	Min	0.03
0.139	Comm	18.1	NORMAL	75	80	0.10	0.02	Min	0.03
0.005	Park	0.7	NORMAL	90	10	0.20	0.10	Hi	0.14
0.148	RowCrop	19.3	NORMAL	85	0	0.50	0.10	Hi	0.10
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	
0.768 = Total Area			Avg. =	60	35%	0.260			

PERCENT OF SUBBASIN
DRY = 4.0 %
NORMAL = 96.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.15

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.08

IMPERVIOUS AREA:
URBAN @ 100 % effective = 35
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 35

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
22-31W	0.764	0.990	0.065	18.0	0.26	0.15	8.80	0.08	35

LOSS PARAMETERS FOR SUBBASIN: 26-32W

Soil Survey Used Central County

XKSAT
=======

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AO	0.000	0.0	0.04	0
GGA	0.086	100.	0.25	0

TOTAL = 0.086 Sq.Miles XKSAT = 0.25 %Rock = 0

DTHETA
========
Dry = 0.35 PSIF = 4.80
Normal = 0.25
Wet = 0.00

LAND USE
========

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.000	OPEN	0.0	DRY	10	0	0.20	0.02	Min	
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.002	M.D.R.	2.3	NORMAL	50	30	0.25	0.05	Hi	0.15
0.000	M.F.R.	0.0	NORMAL	50	45	0.25	0.05	Hi	
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.021	Comm	24.4	NORMAL	75	80	0.10	0.02	Min	0.03
0.053	Park	61.6	NORMAL	90	10	0.20	0.10	Hi	0.11
0.000	RowCrop	0.0	NORMAL	85	0	0.50	0.10	Hi	
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.010	WATER	11.6	WET	0	10	0.00	0.00	Min	0.03
0.086 = Total Area			Avg. =	88	38%	0.150			

PERCENT OF SUBBASIN
DRY = 0.0 %
NORMAL = 88.0 %
WET = 12.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.22

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.47

IMPERVIOUS AREA:
URBAN @ 100 % effective = 38
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 38

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
26-32W	0.086	0.480	0.078	16.0	0.15	0.22	4.80	0.47	38

LOSS PARAMETERS FOR SUBBASIN: 27-32

Soil Survey Used Central County

XKSAT
=======

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.047	7.7	0.26	0
AO	0.093	15.1	0.04	0
BS	0.021	3.4	0.39	0
ES	0.012	2.0	0.25	0
GGA	0.436	71.0	0.25	0
VH	0.005	0.8	0.27	0

TOTAL = 0.614 Sq.Miles XKSAT = 0.19 %Rock = 0

DTHETA
========
Dry = 0.38 PSIF = 5.40
Normal = 0.25

Wet = 0.00

LAND USE
========

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.000	OPEN	0.0	DRY	10	0	0.20	0.02	Min	
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.524	M.D.R.	85.8	NORMAL	50	30	0.25	0.05	Hi	0.09
0.027	M.F.R.	4.4	NORMAL	50	45	0.25	0.05	Hi	0.12
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.029	Comm	4.7	NORMAL	75	80	0.10	0.02	Min	0.03
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.000	RowCrop	0.0	NORMAL	85	0	0.50	0.10	Hi	
0.020	SCHOOL1	3.3	NORMAL	80	45	0.29	0.05	Hi	0.12
0.011	WATER	1.8	WET	0	10	0.00	0.00	Min	0.03

0.611 = Total Area Avg. = 51 35% 0.240

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 98.0 %
WET = 2.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.25

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.28

IMPERVIOUS AREA: URBAN @ 100 % effective = 35
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 35

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
27-32	0.614	0.620	0.081	18.0	0.24	0.25	5.40	0.28	35

LOSS PARAMETERS FOR SUBBASIN: 28-32

Soil Survey Used Central County

XKSAT
=======

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AO	0.362	36.4	0.04	0
GGA	0.395	39.7	0.25	0
LE	0.020	2.0	0.04	0
MR	0.189	19.0	0.05	0
TT	0.011	1.1	0.04	0
VH	0.002	0.2	0.27	0
VK	0.016	1.6	0.26	0

TOTAL = 0.995 Sq.Miles XKSAT = 0.09 %Rock = 0

DTHETA
========

Dry = 0.33 PSIF = 7.30
Normal = 0.15
Wet = 0.00

LAND USE
========

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.000	OPEN	0.0	DRY	10	0	0.20	0.02	Min	
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.687	M.D.R.	69.1	NORMAL	50	30	0.25	0.05	Hi	0.08
0.107	M.F.R.	10.8	NORMAL	50	45	0.25	0.05	Hi	0.10
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.090	Comm	9.1	NORMAL	75	80	0.10	0.02	Min	0.03
0.015	Park	1.5	NORMAL	90	10	0.20	0.10	Hi	0.13
0.062	RowCrop	6.2	NORMAL	85	0	0.50	0.10	Hi	0.11
0.033	SCHOOL1	3.3	NORMAL	80	45	0.29	0.05	Hi	0.12
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

0.994 = Total Area Avg. = 56 34% 0.250

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 100. %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.15

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.14

IMPERVIOUS AREA: URBAN @ 100 % effective = 34
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 34

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
28-32	0.995	1.290	0.075	14.0	0.25	0.15	7.30	0.14	34

LOSS PARAMETERS FOR SUBBASIN: 29-32

Soil Survey Used Central County

XKSAT
=======

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AO	0.038	3.8	0.04	0
GGA	0.017	1.7	0.25	0
GT	0.003	0.3	0.04	0
LCA	0.012	1.2	0.25	0
LE	0.217	21.9	0.04	0
MR	0.490	49.3	0.05	0

RBA	0.024	2.4	0.26	0
TW	0.178	17.9	0.05	0
VF	0.014	1.4	0.01	0

TOTAL = 0.993 Sq.Miles XKSAT = 0.05 %Rock = 0

DTHETA
========
Dry = 0.27 PSIF = 8.80
Normal = 0.15
Wet = 0.00

LAND USE
========

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.020	OPEN	2.0	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.030	L.D.R.	3.0	NORMAL	50	15	0.30	0.05	Hi	0.12
0.737	M.D.R.	74.3	NORMAL	50	30	0.25	0.05	Hi	0.08
0.069	M.F.R.	7.0	NORMAL	50	45	0.25	0.05	Hi	0.11
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.033	Comm	3.3	NORMAL	75	80	0.10	0.02	Min	0.03
0.018	Park	1.8	NORMAL	90	10	0.20	0.10	Hi	0.12
0.060	RowCrop	6.0	NORMAL	85	0	0.50	0.10	Hi	0.11
0.025	SCHOOL1	2.5	NORMAL	80	45	0.29	0.05	Hi	0.12
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

0.992 = Total Area Avg. = 54 30% 0.260

PERCENT OF SUBBASIN DRY = 2.0 %
NORMAL = 98.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.15

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.07

IMPERVIOUS AREA: URBAN @ 100 % effective = 30
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 30

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
29-32	0.993	1.330	0.077	17.0	0.26	0.15	8.80	0.07	30

LOSS PARAMETERS FOR SUBBASIN: 30-32

Soil Survey Used Central County

XKSAT
=======

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
ABA	0.005	0.5	0.38	0
GGA	0.025	2.6	0.25	0
GT	0.025	2.6	0.04	0
GV	0.023	2.4	0.01	0
LCA	0.123	12.8	0.25	0
LE	0.322	33.5	0.04	0
MR	0.259	27.0	0.05	0
MS	0.002	0.2	0.01	0
PEA	0.030	3.1	0.37	0
RBA	0.006	0.6	0.26	0
TG	0.015	1.6	0.04	0
TW	0.125	13.0	0.05	0

TOTAL = 0.960 Sq.Miles XKSAT = 0.06 %Rock = 0

DTHETA
========
Dry = 0.29 PSIF = 8.40
Normal = 0.15
Wet = 0.00

LAND USE
========

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.038	OPEN	4.0	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.466	M.D.R.	48.6	NORMAL	50	30	0.25	0.05	Hi	0.09
0.009	M.F.R.	0.9	NORMAL	50	45	0.25	0.05	Hi	0.13
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.051	Comm	5.3	NORMAL	75	80	0.10	0.02	Min	0.03
0.132	Park	13.8	NORMAL	90	10	0.20	0.10	Hi	0.10
0.000	RowCrop	0.0	NORMAL	85	0	0.50	0.10	Hi	
0.262	SCHOOL1	27.4	NORMAL	80	45	0.29	0.05	Hi	0.09
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

0.958 = Total Area Avg. = 62 33% 0.240

PERCENT OF SUBBASIN DRY = 4.0 %
NORMAL = 96.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.16

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.09

IMPERVIOUS AREA: URBAN @ 100 % effective = 33
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 33

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
30-32	0.960	1.150	0.075	16.0	0.24	0.16	8.40	0.09	33

LOSS PARAMETERS FOR SUBBASIN: 25-31

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Soil Survey Used Central County

XKSAT
=======

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AO	0.008	0.8	0.04	0
GT	0.008	0.8	0.04	0
GXA	0.004	0.4	0.23	0
LCA	0.042	4.2	0.25	0
LE	0.149	14.8	0.04	0
MR	0.436	43.4	0.05	0
MS	0.097	9.7	0.01	0
RBA	0.009	0.9	0.26	0
TU	0.005	0.5	0.25	0
TW	0.242	24.1	0.05	0
VF	0.005	0.5	0.01	0

TOTAL = 1.005 Sq.Miles XKSAT = 0.04 %Rock = 0

DTHETA
========

Dry = 0.25 PSIF = 9.70
Normal = 0.15
Wet = 0.00

LAND USE
========

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.155	OPEN	15.4	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.702	M.D.R.	70.0	NORMAL	50	30	0.25	0.05	Hi	0.08
0.026	M.F.R.	2.6	NORMAL	50	45	0.25	0.05	Hi	0.12
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.074	Comm	7.4	NORMAL	75	80	0.10	0.02	Min	0.03
0.010	Park	1.0	NORMAL	90	10	0.20	0.10	Hi	0.13
0.018	RowCrop	1.8	NORMAL	85	0	0.50	0.10	Hi	0.12
0.018	SCHOOL1	1.8	NORMAL	80	45	0.29	0.05	Hi	0.12
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

1.003 = Total Area Avg. = 44 29% 0.240

PERCENT OF SUBBASIN DRY = 15.0 %
NORMAL = 85.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.17

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.06

IMPERVIOUS AREA: URBAN @ 100 % effective = 29
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 29

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT	RTIMP adj.	%
25-31	1.005	1.420	0.067	19.0	0.24	0.17	9.70	0.06		29

LOSS PARAMETERS FOR SUBBASIN: 26-31E
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Soil Survey Used Central County

XKSAT
=======

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
GXA	0.009	2.0	0.23	0
LE	0.167	36.2	0.04	0
MR	0.126	27.3	0.05	0
MS	0.092	20.0	0.01	0
TW	0.004	0.9	0.05	0
VF	0.063	13.7	0.01	0

TOTAL = 0.461 Sq.Miles XKSAT = 0.03 %Rock = 0

DTHETA
========

Dry = 0.22 PSIF = 10.10
Normal = 0.13
Wet = 0.00

LAND USE
========

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.255	OPEN	55.3	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.090	M.D.R.	19.5	NORMAL	50	30	0.25	0.05	Hi	0.11
0.000	M.F.R.	0.0	NORMAL	50	45	0.25	0.05	Hi	
0.002	Ind	0.4	NORMAL	60	55	0.15	0.03	Min	0.04
0.087	Comm	18.9	NORMAL	75	80	0.10	0.02	Min	0.03
0.003	Park	0.7	NORMAL	90	10	0.20	0.10	Hi	0.14
0.024	RowCrop	5.2	NORMAL	85	0	0.50	0.10	Hi	0.12
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

0.461 = Total Area Avg. = 26 21% 0.210

PERCENT OF SUBBASIN DRY = 55.0 %
NORMAL = 45.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.18

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.04

IMPERVIOUS AREA: URBAN @ 100 % effective = 21
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 21

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
26-31E	0.461	0.770	0.041	24.0	0.21	0.18	10.10	0.04	21

LOSS PARAMETERS FOR SUBBASIN: 26-31W

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
LCA	0.000	0.0	0.25	0
LE	0.265	49.0	0.04	0
MR	0.063	11.6	0.05	0
MS	0.141	26.1	0.01	0
TA	0.004	0.7	0.25	0
TG	0.003	0.6	0.04	0
TW	0.045	8.3	0.05	0
VF	0.020	3.7	0.01	0

TOTAL = 0.541 Sq.Miles XKSAT = 0.03 %Rock = 0

DTHETA

Dry = 0.22 PSIF = 10.10
Normal = 0.13
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.019	OPEN	3.5	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.044	L.D.R.	8.1	NORMAL	50	15	0.30	0.05	Hi	0.11
0.012	M.D.R.	2.2	NORMAL	50	30	0.25	0.05	Hi	0.13
0.000	M.F.R.	0.0	NORMAL	50	45	0.25	0.05	Hi	
0.056	Ind	10.4	NORMAL	60	55	0.15	0.03	Min	0.03
0.029	Comm	5.4	NORMAL	75	80	0.10	0.02	Min	0.03
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.380	RowCrop	70.4	NORMAL	85	0	0.50	0.10	Hi	0.09
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	
0.540 = Total Area			Avg. =	77	12%	0.410			

PERCENT OF SUBBASIN DRY = 4.0 %
NORMAL = 96.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.13

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.05

IMPERVIOUS AREA: URBAN @ 100 % effective = 12

ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 12

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
26-31W	0.541	0.510	0.075	14.0	0.41	0.13	10.10	0.05	12

LOSS PARAMETERS FOR SUBBASIN: 27-31

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
GXA	0.029	2.9	0.23	0
LCA	0.069	6.8	0.25	0
LE	0.258	25.5	0.04	0
MR	0.302	29.8	0.05	0
MS	0.109	10.8	0.01	0
RBA	0.039	3.8	0.26	0
TG	0.010	1.0	0.04	0
TW	0.116	11.4	0.05	0
VF	0.081	8.0	0.01	0

TOTAL = 1.013 Sq.Miles XKSAT = 0.04 %Rock = 0

DTHETA

Dry = 0.25 PSIF = 9.70
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.072	OPEN	7.1	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.102	L.D.R.	10.1	NORMAL	50	15	0.30	0.05	Hi	0.10
0.351	M.D.R.	34.7	NORMAL	50	30	0.25	0.05	Hi	0.09
0.039	M.F.R.	3.9	NORMAL	50	45	0.25	0.05	Hi	0.12
0.004	Ind	0.4	NORMAL	60	55	0.15	0.03	Min	0.04
0.054	Comm	5.3	NORMAL	75	80	0.10	0.02	Min	0.03
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.359	RowCrop	35.5	NORMAL	85	0	0.50	0.10	Hi	0.09
0.031	SCHOOL1	3.1	NORMAL	80	45	0.29	0.05	Hi	0.12
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	
1.012 = Total Area			Avg. =	63	20%	0.330			

PERCENT OF SUBBASIN DRY = 7.0 %
NORMAL = 93.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.16

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.06

IMPERVIOUS AREA: URBAN @ 100 % effective = 20
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 20

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
27-31	1.013	1.420	0.072	16.0	0.33	0.16	9.70	0.06	20

LOSS PARAMETERS FOR SUBBASIN: 28-31

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
GT	0.016	11.4	0.04	0
GXA	0.015	10.6	0.23	0
LCA	0.003	2.1	0.25	0
LE	0.005	3.5	0.04	0
MR	0.058	41.1	0.05	0
RBA	0.003	2.1	0.26	0
TW	0.017	12.1	0.05	0
VF	0.024	17.0	0.01	0

TOTAL = 0.141 Sq.Miles XKSAT = 0.05 %Rock = 0

DTHETA

Dry = 0.27 PSIF = 8.80
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.000	OPEN	0.0	DRY	10	0	0.20	0.02	Min	
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.001	M.D.R.	0.7	NORMAL	50	30	0.25	0.05	Hi	0.15
0.000	M.F.R.	0.0	NORMAL	50	45	0.25	0.05	Hi	
0.012	Ind	8.6	NORMAL	60	55	0.15	0.03	Min	0.03
0.000	Comm	0.0	NORMAL	75	80	0.10	0.02	Min	
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.127	RowCrop	90.7	NORMAL	85	0	0.50	0.10	Hi	0.10
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

0.140 = Total Area Avg. = 84 5% 0.470

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 100. %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.15

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.09

IMPERVIOUS AREA: URBAN @ 100 % effective = 5
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 5

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
28-31	0.141	0.970	0.095	25.0	0.47	0.15	8.80	0.09	5

LOSS PARAMETERS FOR SUBBASIN: 26-32E

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AO	0.029	27.1	0.04	0
GGA	0.078	72.9	0.25	0

TOTAL = 0.107 Sq.Miles XKSAT = 0.15 %Rock = 0

DTHETA

Dry = 0.40 PSIF = 6.00
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.000	OPEN	0.0	DRY	10	0	0.20	0.02	Min	
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.000	M.D.R.	0.0	NORMAL	50	30	0.25	0.05	Hi	
0.000	M.F.R.	0.0	NORMAL	50	45	0.25	0.05	Hi	
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.087	Comm	81.3	NORMAL	75	80	0.10	0.02	Min	0.03
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.000	RowCrop	0.0	NORMAL	85	0	0.50	0.10	Hi	
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.020	WATER	18.7	WET	0	10	0.00	0.00	Min	0.03

0.107 = Total Area Avg. = 75 84% 0.080

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 81.0 %
WET = 19.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.20

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.26

IMPERVIOUS AREA: URBAN @ 100 % effective = 84
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 84

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
26-32E	0.107	0.610	0.029	20.0	0.08	0.20	6.00	0.26	84

LOSS PARAMETERS FOR SUBBASIN: 35-32

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.073	7.4	0.26	0
AN	0.084	8.5	0.05	0
AO	0.137	13.9	0.04	0
BT	0.001	0.1	0.25	0
GGA	0.651	65.8	0.25	0
TT	0.043	4.3	0.04	0

TOTAL = 0.989 Sq.Miles XKSAT = 0.16 %Rock = 0

DTHETA

Dry = 0.39 PSIF = 5.80
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.000	OPEN	0.0	DRY	10	0	0.20	0.02	Min	
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.608	M.D.R.	61.6	NORMAL	50	30	0.25	0.05	Hi	0.09
0.228	M.F.R.	23.1	NORMAL	50	45	0.25	0.05	Hi	0.10
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.076	Comm	7.7	NORMAL	75	80	0.10	0.02	Min	0.03
0.001	Park	0.1	NORMAL	90	10	0.20	0.10	Hi	0.15
0.000	RowCrop	0.0	NORMAL	85	0	0.50	0.10	Hi	
0.074	SCHOOL1	7.5	NORMAL	80	45	0.29	0.05	Hi	0.11
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

0.987 = Total Area Avg. = 53 38% 0.240

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 100. %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.25

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.24

IMPERVIOUS AREA: URBAN @ 100 % effective = 38
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 38

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
35-32	0.989	1.150	0.075	22.0	0.24	0.25	5.80	0.24	38

LOSS PARAMETERS FOR SUBBASIN: 34-32

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.075	7.6	0.26	0
AO	0.359	36.2	0.04	0
GGA	0.520	52.4	0.25	0
VK	0.039	3.9	0.26	0
AA			0.26	0
AA			0.26	0
AA			0.26	0

TOTAL = 0.993 Sq.Miles XKSAT = 0.13 %Rock = 0

DTHETA

Dry = 0.38 PSIF = 6.40
Normal = 0.21
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.000	OPEN	0.0	DRY	10	0	0.20	0.02	Min	
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.842	M.D.R.	84.6	NORMAL	50	30	0.25	0.05	Hi	0.08
0.015	M.F.R.	1.5	NORMAL	50	45	0.25	0.05	Hi	0.13
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	

0.090	Comm	9.0	NORMAL	75	80	0.10	0.02	Min	0.03
0.020	Park	2.0	NORMAL	90	10	0.20	0.10	Hi	0.12
0.000	RowCrop	0.0	NORMAL	85	0	0.50	0.10	Hi	
0.028	SCHOOL1	2.8	NORMAL	80	45	0.29	0.05	Hi	0.12
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

0.995 = Total Area Avg. = 53 35% 0.240

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 100. %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.21

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.19

IMPERVIOUS AREA: URBAN @ 100 % effective = 35
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 35

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
34-32	0.993	1.210	0.075	19.0	0.24	0.21	6.40	0.19	35

LOSS PARAMETERS FOR SUBBASIN: 33-32

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.226	22.8	0.26	0
AN	0.020	2.0	0.05	0
AO	0.248	25.0	0.04	0
BS	0.048	4.8	0.39	0
BT	0.008	0.8	0.25	0
ES	0.015	1.5	0.25	0
GE	0.034	3.4	0.26	0
GGA	0.270	27.2	0.25	0
TT	0.020	2.0	0.04	0
VH	0.031	3.1	0.27	0
VK	0.073	7.4	0.26	0

TOTAL = 0.993 Sq.Miles XKSAT = 0.15 %Rock = 0

DTHETA

Dry = 0.40 PSIF = 6.00
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.000	OPEN	0.0	DRY	10	0	0.20	0.02	Min	
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.563	M.D.R.	56.8	NORMAL	50	30	0.25	0.05	Hi	0.09
0.152	M.F.R.	15.3	NORMAL	50	45	0.25	0.05	Hi	0.10
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.112	Comm	11.3	NORMAL	75	80	0.10	0.02	Min	0.03
0.018	Park	1.8	NORMAL	90	10	0.20	0.10	Hi	0.12
0.026	RowCrop	2.6	NORMAL	85	0	0.50	0.10	Hi	0.12
0.120	SCHOOL1	12.1	NORMAL	80	45	0.29	0.05	Hi	0.10
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

0.991 = Total Area Avg. = 57 39% 0.240

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 100. %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.25

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.23

IMPERVIOUS AREA: URBAN @ 100 % effective = 39
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 39

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
33-32	0.993	1.380	0.073	15.0	0.24	0.25	6.00	0.23	39

LOSS PARAMETERS FOR SUBBASIN: 32-32

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.038	3.8	0.26	0
AO	0.145	14.6	0.04	0
BS	0.014	1.4	0.39	0
ES	0.048	4.8	0.25	0
GE	0.044	4.4	0.26	0
GGA	0.184	18.5	0.25	0
GT	0.023	2.3	0.04	0
LCA	0.025	2.5	0.25	0
LE	0.038	3.8	0.04	0
MR	0.117	11.8	0.05	0
TE	0.007	0.7	0.25	0
TT	0.300	30.2	0.04	0
TW	0.005	0.5	0.05	0
VH	0.005	0.5	0.27	0

TOTAL = 0.993 Sq.Miles XKSAT = 0.08 %Rock = 0

DTHETA
========
Dry = 0.32 PSIF = 7.60
Normal = 0.15
Wet = 0.00

LAND USE
========

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.006	OPEN	0.6	DRY	10	0	0.20	0.02	Min	0.04
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.028	L.D.R.	2.8	NORMAL	50	15	0.30	0.05	Hi	0.12
0.516	M.D.R.	52.1	NORMAL	50	30	0.25	0.05	Hi	0.09
0.085	M.F.R.	8.6	NORMAL	50	45	0.25	0.05	Hi	0.11
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.009	Comm	0.9	NORMAL	75	80	0.10	0.02	Min	0.04
0.094	Park	9.5	NORMAL	90	10	0.20	0.10	Hi	0.11
0.231	RowCrop	23.3	NORMAL	85	0	0.50	0.10	Hi	0.10
0.022	SCHOOL1	2.2	NORMAL	80	45	0.29	0.05	Hi	0.12
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

0.991 = Total Area Avg. = 65 23% 0.300

PERCENT OF SUBBASIN DRY = 1.0 %
NORMAL = 99.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.15

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.13

IMPERVIOUS AREA: URBAN @ 100 % effective = 23
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 23

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
32-32	0.993	1.380	0.079	15.0	0.30	0.15	7.60	0.13	23

LOSS PARAMETERS FOR SUBBASIN: 31-32

Soil Survey Used Central County

XKSAT
=======

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
ABA	0.000	0.0	0.38	0
AO	0.035	3.7	0.04	0
ES	0.000	0.0	0.25	0
LCA	0.045	4.7	0.25	0
LE	0.175	18.4	0.04	0
MR	0.287	30.1	0.05	0
TT	0.172	18.0	0.04	0
TW	0.239	25.1	0.05	0

TOTAL = 0.953 Sq.Miles XKSAT = 0.05 %Rock = 0

DTHETA
========
Dry = 0.27 PSIF = 8.80
Normal = 0.15
Wet = 0.00

LAND USE
========

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.090	OPEN	9.5	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.001	L.D.R.	0.1	NORMAL	50	15	0.30	0.05	Hi	0.15
0.163	M.D.R.	17.1	NORMAL	50	30	0.25	0.05	Hi	0.10
0.285	M.F.R.	30.0	NORMAL	50	45	0.25	0.05	Hi	0.09
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.076	Comm	8.0	NORMAL	75	80	0.10	0.02	Min	0.03
0.074	Park	7.8	NORMAL	90	10	0.20	0.10	Hi	0.11
0.253	RowCrop	26.6	NORMAL	85	0	0.50	0.10	Hi	0.09
0.009	SCHOOL1	0.9	NORMAL	80	45	0.29	0.05	Hi	0.13
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

0.951 = Total Area Avg. = 62 26% 0.300

PERCENT OF SUBBASIN DRY = 10.0 %
NORMAL = 90.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.16

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.08

IMPERVIOUS AREA: URBAN @ 100 % effective = 26
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 26

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
31-32	0.953	1.330	0.071	17.0	0.30	0.16	8.80	0.08	26

LOSS PARAMETERS FOR SUBBASIN: 36-31E

Soil Survey Used Central County

XKSAT
=======

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop

LCA	0.021	4.2	0.25	0
LE	0.099	20.0	0.04	0
MR	0.240	48.5	0.05	0
MS	0.019	3.8	0.01	0
TW	0.116	23.4	0.05	0

TOTAL = 0.495 Sq.Miles XKSAT = 0.05 %Rock = 0

DTHETA
========

Dry = 0.27 PSIF = 8.80
Normal = 0.15
Wet = 0.00

LAND USE
========

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.021	OPEN	4.2	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.067	M.D.R.	13.5	NORMAL	50	30	0.25	0.05	Hi	0.11
0.071	M.F.R.	14.3	NORMAL	50	45	0.25	0.05	Hi	0.11
0.027	Ind	5.5	NORMAL	60	55	0.15	0.03	Min	0.03
0.075	Comm	15.1	NORMAL	75	80	0.10	0.02	Min	0.03
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.234	RowCrop	47.3	NORMAL	85	0	0.50	0.10	Hi	0.10
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

0.495 = Total Area Avg. = 71 26% 0.340

PERCENT OF SUBBASIN DRY = 4.0 %
NORMAL = 96.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.15

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.08

IMPERVIOUS AREA: URBAN @ 100 % effective = 26
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 26

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
36-31E	0.495	0.810	0.072	18.0	0.34	0.15	8.80	0.08	26

LOSS PARAMETERS FOR SUBBASIN: 36-31W

Soil Survey Used Central County

XKSAT
=======

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock	Outcrop
GXA	0.019	3.8	0.23	0	
LB	0.002	0.4	0.40	0	
LCA	0.077	15.2	0.25	0	
LE	0.055	10.9	0.04	0	
MR	0.204	40.3	0.05	0	
MS	0.011	2.2	0.01	0	
TT	0.052	10.3	0.04	0	
TW	0.086	17.0	0.05	0	

TOTAL = 0.506 Sq.Miles XKSAT = 0.06 %Rock = 0

DTHETA
========

Dry = 0.29 PSIF = 8.40
Normal = 0.15
Wet = 0.00

LAND USE
========

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.002	OPEN	0.4	DRY	10	0	0.20	0.02	Min	0.04
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.003	L.D.R.	0.6	NORMAL	50	15	0.30	0.05	Hi	0.14
0.000	M.D.R.	0.0	NORMAL	50	30	0.25	0.05	Hi	
0.000	M.F.R.	0.0	NORMAL	50	45	0.25	0.05	Hi	
0.066	Ind	13.1	NORMAL	60	55	0.15	0.03	Min	0.03
0.229	Comm	45.4	NORMAL	75	80	0.10	0.02	Min	0.03
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.204	RowCrop	40.5	NORMAL	85	0	0.50	0.10	Hi	0.10
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

0.504 = Total Area Avg. = 80 44% 0.270

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 100. %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.15

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.11

IMPERVIOUS AREA: URBAN @ 100 % effective = 44
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 44

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
36-31W	0.506	0.660	0.050	13.0	0.27	0.15	8.40	0.11	44

LOSS PARAMETERS FOR SUBBASIN: 35-31

Soil Survey Used Central County

XKSAT
=======

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
GGA	0.012	1.2	0.25	0
GT	0.168	16.7	0.04	0
GXA	0.010	1.0	0.23	0
LB	0.013	1.3	0.40	0
LCA	0.006	0.6	0.25	0
LE	0.278	27.7	0.04	0
MR	0.224	22.3	0.05	0
MS	0.054	5.4	0.01	0
RBA	0.026	2.6	0.26	0
TA	0.017	1.7	0.25	0
TW	0.197	19.6	0.05	0

TOTAL = 1.005 Sq.Miles XKSAT = 0.05 %Rock = 0

DTHETA
========

Dry = 0.27 PSIF = 8.80
Normal = 0.15
Wet = 0.00

LAND USE
========

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.086	OPEN	8.5	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.018	L.D.R.	1.8	NORMAL	50	15	0.30	0.05	Hi	0.12
0.000	M.D.R.	0.0	NORMAL	50	30	0.25	0.05	Hi	
0.000	M.F.R.	0.0	NORMAL	50	45	0.25	0.05	Hi	
0.010	Ind	1.0	NORMAL	60	55	0.15	0.03	Min	0.03
0.149	Comm	14.8	NORMAL	75	80	0.10	0.02	Min	0.03
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.743	RowCrop	73.9	NORMAL	85	0	0.50	0.10	Hi	0.08
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

1.006 = Total Area Avg. = 77 13% 0.410

PERCENT OF SUBBASIN DRY = 8.0 %
NORMAL = 92.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.16

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.09

IMPERVIOUS AREA: URBAN @ 100 % effective = 13
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 13

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
35-31	1.005	1.330	0.066	16.0	0.41	0.16	8.80	0.09	13

LOSS PARAMETERS FOR SUBBASIN: 34-31

Soil Survey Used Central County

XKSAT
=======

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
BT	0.005	0.5	0.25	0
CB	0.002	0.2	0.40	0
GT	0.049	4.9	0.04	0
GXA	0.027	2.7	0.23	0
LB	0.007	0.7	0.40	0
LCA	0.193	19.4	0.25	0
LE	0.012	1.2	0.04	0
MR	0.582	58.4	0.05	0
MS	0.028	2.8	0.01	0
PEA	0.018	1.8	0.37	0
RBA	0.004	0.4	0.26	0
TFA	0.014	1.4	0.37	0
TG	0.008	0.8	0.04	0
TW	0.036	3.6	0.05	0
VF	0.011	1.1	0.01	0

TOTAL = 0.996 Sq.Miles XKSAT = 0.07 %Rock = 0

DTHETA
========

Dry = 0.30 PSIF = 8.00
Normal = 0.15
Wet = 0.00

LAND USE
========

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.052	OPEN	5.2	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.002	L.D.R.	0.2	NORMAL	50	15	0.30	0.05	Hi	0.15
0.385	M.D.R.	38.7	NORMAL	50	30	0.25	0.05	Hi	0.09
0.030	M.F.R.	3.0	NORMAL	50	45	0.25	0.05	Hi	0.12
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.032	Comm	3.2	NORMAL	75	80	0.10	0.02	Min	0.03
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.493	RowCrop	49.6	NORMAL	85	0	0.50	0.10	Hi	0.09
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

0.994 = Total Area Avg. = 68 16% 0.370

PERCENT OF SUBBASIN DRY = 5.0 %
NORMAL = 95.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.16

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.12

IMPERVIOUS AREA: URBAN @ 100 % effective = 16
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 16

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
34-31	0.996	1.350	0.075	14.0	0.37	0.16	8.00	0.12	16

LOSS PARAMETERS FOR SUBBASIN: 33-31

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
LB	0.044	17.0	0.40	0
LCA	0.065	25.1	0.25	0
MR	0.100	38.6	0.05	0
RBA	0.010	3.9	0.26	0
TW	0.009	3.5	0.05	0
VF	0.031	12.0	0.01	0

TOTAL = 0.259 Sq.Miles XKSAT = 0.09 %Rock = 0

DTHETA

Dry = 0.33 PSIF = 7.30
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.000	OPEN	0.0	DRY	10	0	0.20	0.02	Min	
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.000	M.D.R.	0.0	NORMAL	50	30	0.25	0.05	Hi	
0.000	M.F.R.	0.0	NORMAL	50	45	0.25	0.05	Hi	
0.018	Ind	7.0	NORMAL	60	55	0.15	0.03	Min	0.03
0.000	Comm	0.0	NORMAL	75	80	0.10	0.02	Min	
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.239	RowCrop	93.0	NORMAL	85	0	0.50	0.10	Hi	0.10
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	
0.257 = Total Area			Avg. =	84	4%	0.480			

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 100. %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.15

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.16

IMPERVIOUS AREA: URBAN @ 100 % effective = 4
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 4

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
33-31	0.259	1.080	0.090	31.0	0.48	0.15	7.30	0.16	4

LOSS PARAMETERS FOR SUBBASIN: 36-32

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AO	0.005	4.4	0.04	0
GGA	0.001	0.9	0.25	0
MR	0.025	21.9	0.05	0
TC	0.005	4.4	0.40	0
TT	0.078	68.4	0.04	0

TOTAL = 0.114 Sq.Miles XKSAT = 0.05 %Rock = 0

DTHETA

Dry = 0.27 PSIF = 8.80
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.000	OPEN	0.0	DRY	10	0	0.20	0.02	Min	
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.001	M.D.R.	0.9	NORMAL	50	30	0.25	0.05	Hi	0.15
0.046	M.F.R.	40.3	NORMAL	50	45	0.25	0.05	Hi	0.11
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.040	Comm	35.1	NORMAL	75	80	0.10	0.02	Min	0.03
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.000	RowCrop	0.0	NORMAL	85	0	0.50	0.10	Hi	
0.027	SCHOOL1	23.7	NORMAL	80	45	0.29	0.05	Hi	0.12
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	
0.114 = Total Area			Avg. =	63	57%	0.210			

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 100. %

WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.15

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.08

IMPERVIOUS AREA: URBAN @ 100 % effective = 57
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 57

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
36-32	0.114	0.570	0.077	25.0	0.21	0.15	8.80	0.08	57

LOSS PARAMETERS FOR SUBBASIN: 1-22

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
ES	0.034	13.9	0.25	0
MP	0.087	35.7	0.25	0
MR	0.113	46.3	0.05	0
TC	0.000	0.0	0.40	0
TT	0.010	4.1	0.04	0

TOTAL = 0.244 Sq.Miles XKSAT = 0.11 %Rock = 0

DTHETA

Dry = 0.36 PSIF = 6.80
Normal = 0.17
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.020	OPEN	8.3	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.200	M.D.R.	82.6	NORMAL	50	30	0.25	0.05	Hi	0.10
0.000	M.F.R.	0.0	NORMAL	50	45	0.25	0.05	Hi	
0.004	Ind	1.7	NORMAL	60	55	0.15	0.03	Min	0.04
0.018	Comm	7.4	NORMAL	75	80	0.10	0.02	Min	0.03
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.000	RowCrop	0.0	NORMAL	85	0	0.50	0.10	Hi	
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	
0.242 = Total Area			Avg. =	46	32%	0.230			

PERCENT OF SUBBASIN DRY = 8.0 %
NORMAL = 92.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.19

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.15

IMPERVIOUS AREA: URBAN @ 100 % effective = 32
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 32

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
1-22	0.244	0.700	0.083	15.0	0.23	0.19	6.80	0.15	32

LOSS PARAMETERS FOR SUBBASIN: 2-22

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.075	7.5	0.26	0
AN	0.025	2.5	0.05	0
AO	0.144	14.3	0.04	0
BT	0.011	1.1	0.25	0
ES	0.074	7.4	0.25	0
GGA	0.483	48.1	0.25	0
LE	0.015	1.5	0.04	0
MP	0.001	0.1	0.25	0
MR	0.071	7.1	0.05	0
TT	0.105	10.5	0.04	0

TOTAL = 1.004 Sq.Miles XKSAT = 0.13 %Rock = 0

DTHETA

Dry = 0.38 PSIF = 6.40
Normal = 0.21
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.057	OPEN	5.7	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.414	L.D.R.	41.2	NORMAL	50	15	0.30	0.05	Hi	0.09
0.377	M.D.R.	37.5	NORMAL	50	30	0.25	0.05	Hi	0.09
0.031	M.F.R.	3.1	NORMAL	50	45	0.25	0.05	Hi	0.12
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.091	Comm	9.1	NORMAL	75	80	0.10	0.02	Min	0.03

0.035	Park	3.5	NORMAL	90	10	0.20	0.10	Hi	0.12
0.000	RowCrop	0.0	NORMAL	85	0	0.50	0.10	Hi	
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

1.005 = Total Area Avg. = 49 26% 0.250

PERCENT OF SUBBASIN DRY = 6.0 %
NORMAL = 94.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.22

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.19

IMPERVIOUS AREA: URBAN @ 100 % effective = 26
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 26

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
2-22	1.004	1.420	0.072	14.0	0.25	0.22	6.40	0.19	26

LOSS PARAMETERS FOR SUBBASIN: 3-22

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AO	0.543	54.3	0.04	0
GGA	0.456	45.7	0.25	0

TOTAL = 0.999 Sq.Miles XKSAT = 0.09 %Rock = 0

DTHETA

Dry = 0.33 PSIF = 7.30
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.036	OPEN	3.6	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.009	L.D.R.	0.9	NORMAL	50	15	0.30	0.05	Hi	0.13
0.812	M.D.R.	81.4	NORMAL	50	30	0.25	0.05	Hi	0.08
0.013	M.F.R.	1.3	NORMAL	50	45	0.25	0.05	Hi	0.13
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.094	Comm	9.4	NORMAL	75	80	0.10	0.02	Min	0.03
0.002	Park	0.2	NORMAL	90	10	0.20	0.10	Hi	0.15
0.000	RowCrop	0.0	NORMAL	85	0	0.50	0.10	Hi	
0.032	SCHOOL1	3.2	NORMAL	80	45	0.29	0.05	Hi	0.12
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

0.998 = Total Area Avg. = 49 34% 0.240

PERCENT OF SUBBASIN DRY = 4.0 %
NORMAL = 96.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.16

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.13

IMPERVIOUS AREA: URBAN @ 100 % effective = 34
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 34

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
3-22	0.999	1.220	0.073	15.0	0.24	0.16	7.30	0.13	34

LOSS PARAMETERS FOR SUBBASIN: 4-22

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.052	5.2	0.26	0
AN	0.016	1.6	0.05	0
AO	0.166	16.5	0.04	0
BS	0.001	0.1	0.39	0
BT	0.006	0.6	0.25	0
GGA	0.674	67.1	0.25	0
MA	0.023	2.3	0.40	0
VK	0.066	6.6	0.26	0

TOTAL = 1.004 Sq.Miles XKSAT = 0.18 %Rock = 0

DTHETA

Dry = 0.38 PSIF = 5.60
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.059	OPEN	5.9	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.076	L.D.R.	7.6	NORMAL	50	15	0.30	0.05	Hi	0.11

0.556	M.D.R.	55.4	NORMAL	50	30	0.25	0.05	Hi	0.09
0.133	M.F.R.	13.3	NORMAL	50	45	0.25	0.05	Hi	0.10
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.134	Comm	13.4	NORMAL	75	80	0.10	0.02	Min	0.03
0.007	Park	0.7	NORMAL	90	10	0.20	0.10	Hi	0.13
0.013	RowCrop	1.3	NORMAL	85	0	0.50	0.10	Hi	0.13
0.025	SCHOOL1	2.5	NORMAL	80	45	0.29	0.05	Hi	0.12
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

1.003 = Total Area Avg. = 49 36% 0.230

PERCENT OF SUBBASIN DRY = 6.0 %
NORMAL = 94.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.26

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.26

IMPERVIOUS AREA: URBAN @ 100 % effective = 36
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 36

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
4-22	1.004	1.460	0.069	15.0	0.23	0.26	5.60	0.26	36

LOSS PARAMETERS FOR SUBBASIN: 5-22

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.132	13.0	0.26	0
AO	0.078	7.7	0.04	0
ES	0.025	2.5	0.25	0
GGA	0.761	75.1	0.25	0
GT	0.006	0.6	0.04	0
TT	0.012	1.2	0.04	0

TOTAL = 1.014 Sq.Miles XKSAT = 0.21 %Rock = 0

DTHETA

Dry = 0.37 PSIF = 5.20
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.023	OPEN	2.3	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.001	L.D.R.	0.1	NORMAL	50	15	0.30	0.05	Hi	0.15
0.406	M.D.R.	40.0	NORMAL	50	30	0.25	0.05	Hi	0.09
0.027	M.F.R.	2.7	NORMAL	50	45	0.25	0.05	Hi	0.12
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.274	Comm	27.0	NORMAL	75	80	0.10	0.02	Min	0.03
0.005	Park	0.5	NORMAL	90	10	0.20	0.10	Hi	0.14
0.250	RowCrop	24.6	NORMAL	85	0	0.50	0.10	Hi	0.09
0.029	SCHOOL1	2.9	NORMAL	80	45	0.29	0.05	Hi	0.12
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

1.015 = Total Area Avg. = 65 36% 0.270

PERCENT OF SUBBASIN DRY = 2.0 %
NORMAL = 98.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.25

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.34

IMPERVIOUS AREA: URBAN @ 100 % effective = 36
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 36

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
5-22	1.014	1.270	0.063	20.0	0.27	0.25	5.20	0.34	36

LOSS PARAMETERS FOR SUBBASIN: 6-22E

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AO	0.002	0.4	0.04	0
ES	0.007	1.4	0.25	0
GGA	0.178	35.7	0.25	0
GT	0.015	3.0	0.04	0
LE	0.032	6.4	0.04	0
MR	0.087	17.5	0.05	0
TT	0.177	35.5	0.04	0

TOTAL = 0.498 Sq.Miles XKSAT = 0.08 %Rock = 0

DTHETA

Dry = 0.32 PSIF = 7.60
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.000	OPEN	0.0	DRY	10	0	0.20	0.02	Min	
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.285	M.D.R.	57.3	NORMAL	50	30	0.25	0.05	Hi	0.09
0.016	M.F.R.	3.2	NORMAL	50	45	0.25	0.05	Hi	0.12
0.017	Ind	3.4	NORMAL	60	55	0.15	0.03	Min	0.03
0.077	Comm	15.5	NORMAL	75	80	0.10	0.02	Min	0.03
0.043	Park	8.7	NORMAL	90	10	0.20	0.10	Hi	0.11
0.059	RowCrop	11.9	NORMAL	85	0	0.50	0.10	Hi	0.11
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

0.497 = Total Area Avg. = 62 34% 0.250

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 100. %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.15

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.13

IMPERVIOUS AREA: URBAN @ 100 % effective = 34
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 34

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
6-22E	0.498	0.910	0.075	16.0	0.25	0.15	7.60	0.13	34

LOSS PARAMETERS FOR SUBBASIN: 6-22W

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
ES	0.104	21.9	0.25	0
GGA	0.226	47.7	0.25	0
LE	0.004	0.8	0.04	0
MR	0.053	11.2	0.05	0
TT	0.087	18.4	0.04	0

TOTAL = 0.474 Sq.Miles XKSAT = 0.15 %Rock = 0

DTHETA

Dry = 0.40 PSIF = 6.00
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.000	OPEN	0.0	DRY	10	0	0.20	0.02	Min	
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.144	M.D.R.	30.4	NORMAL	50	30	0.25	0.05	Hi	0.10
0.017	M.F.R.	3.6	NORMAL	50	45	0.25	0.05	Hi	0.12
0.026	Ind	5.5	NORMAL	60	55	0.15	0.03	Min	0.03
0.193	Comm	40.7	NORMAL	75	80	0.10	0.02	Min	0.03
0.015	Park	3.2	NORMAL	90	10	0.20	0.10	Hi	0.13
0.032	RowCrop	6.8	NORMAL	85	0	0.50	0.10	Hi	0.12
0.047	SCHOOL1	9.9	NORMAL	80	45	0.29	0.05	Hi	0.11
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

0.474 = Total Area Avg. = 65 51% 0.200

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 100. %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.25

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.24

IMPERVIOUS AREA: URBAN @ 100 % effective = 51
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 51

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
6-22W	0.474	0.700	0.058	19.0	0.20	0.25	6.00	0.24	51

LOSS PARAMETERS FOR SUBBASIN: 1-21

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
GGA	0.001	0.1	0.25	0
LCA	0.011	1.1	0.25	0
LE	0.152	15.2	0.04	0
MR	0.403	40.3	0.05	0
TT	0.365	36.5	0.04	0
TU	0.011	1.1	0.25	0
TW	0.056	5.6	0.05	0

TOTAL = 0.999 Sq.Miles XKSAT = 0.05 %Rock = 0

DTHETA

Dry = 0.27 PSIF = 8.80
Normal = 0.15
Wet = 0.00

LAND USE
========

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.040	OPEN	4.0	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.210	L.D.R.	21.0	NORMAL	50	15	0.30	0.05	Hi	0.10
0.086	M.D.R.	8.6	NORMAL	50	30	0.25	0.05	Hi	0.11
0.035	M.F.R.	3.5	NORMAL	50	45	0.25	0.05	Hi	0.12
0.026	Ind	2.6	NORMAL	60	55	0.15	0.03	Min	0.03
0.099	Comm	9.9	NORMAL	75	80	0.10	0.02	Min	0.03
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.504	RowCrop	50.4	NORMAL	85	0	0.50	0.10	Hi	0.09
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	
1.000 = Total Area			Avg. =	70	17%	0.370			

PERCENT OF SUBBASIN DRY = 4.0 %
NORMAL = 96.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.15

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.08

IMPERVIOUS AREA: URBAN @ 100 % effective = 17
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 17

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
1-21	0.999	1.430	0.071	36.0	0.37	0.15	8.80	0.08	17

LOSS PARAMETERS FOR SUBBASIN: 2-21

Soil Survey Used Central County

XKSAT
=======

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
GT	0.005	0.5	0.04	0
LCA	0.270	27.1	0.25	0
LE	0.084	8.4	0.04	0
MR	0.584	58.6	0.05	0
RBA	0.015	1.5	0.26	0
TU	0.000	0.0	0.25	0
TW	0.038	3.8	0.05	0

TOTAL = 0.996 Sq.Miles XKSAT = 0.08 %Rock = 0

DTHETA
========
Dry = 0.32 PSIF = 7.60
Normal = 0.15
Wet = 0.00

LAND USE
========

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.078	OPEN	7.8	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.263	L.D.R.	26.4	NORMAL	50	15	0.30	0.05	Hi	0.09
0.070	M.D.R.	7.0	NORMAL	50	30	0.25	0.05	Hi	0.11
0.037	M.F.R.	3.7	NORMAL	50	45	0.25	0.05	Hi	0.12
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.011	Comm	1.1	NORMAL	75	80	0.10	0.02	Min	0.03
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.536	RowCrop	53.9	NORMAL	85	0	0.50	0.10	Hi	0.09
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	
0.995 = Total Area			Avg. =	67	9%	0.390			

PERCENT OF SUBBASIN DRY = 8.0 %
NORMAL = 92.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.16

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.13

IMPERVIOUS AREA: URBAN @ 100 % effective = 9
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 9

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
2-21	0.996	1.150	0.075	16.0	0.39	0.16	7.60	0.13	9

LOSS PARAMETERS FOR SUBBASIN: 3-21

Soil Survey Used Central County

XKSAT
=======

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.046	4.7	0.26	0
BS	0.044	4.5	0.39	0
BT	0.006	0.6	0.25	0
CB	0.013	1.3	0.40	0

GE	0.009	0.9	0.26	0
GGA	0.025	2.5	0.25	0
GT	0.107	10.9	0.04	0
GXA	0.012	1.2	0.23	0
LB	0.029	3.0	0.40	0
LCA	0.265	27.0	0.25	0
LE	0.166	16.9	0.04	0
MR	0.195	19.9	0.05	0
RBA	0.011	1.1	0.26	0
TFA	0.005	0.5	0.37	0
TG	0.017	1.7	0.04	0
TH	0.011	1.1	0.04	0
TW	0.020	2.0	0.05	0

TOTAL = 0.981 Sq.Miles XKSAT = 0.11 %Rock = 0

DTHETA
========
Dry = 0.36 PSIF = 6.80
Normal = 0.17
Wet = 0.00

LAND USE
========

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.000	OPEN	0.0	DRY	10	0	0.20	0.02	Min	
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.061	L.D.R.	6.2	NORMAL	50	15	0.30	0.05	Hi	0.11
0.000	M.D.R.	0.0	NORMAL	50	30	0.25	0.05	Hi	
0.000	M.F.R.	0.0	NORMAL	50	45	0.25	0.05	Hi	
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.004	Comm	0.4	NORMAL	75	80	0.10	0.02	Min	0.04
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.916	RowCrop	93.4	NORMAL	85	0	0.50	0.10	Hi	0.08
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

0.981 = Total Area Avg. = 83 1% 0.490

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 100. %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.17

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.20

IMPERVIOUS AREA: URBAN @ 100 % effective = 1
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 1

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
3-21	0.981	1.420	0.080	8.0	0.49	0.17	6.80	0.20	1

LOSS PARAMETERS FOR SUBBASIN: 4-21

Soil Survey Used Central County

XKSAT
=======

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.022	2.5	0.26	0
BS	0.004	0.5	0.39	0
CB	0.006	0.7	0.40	0
CP	0.004	0.5	0.40	0
GGA	0.070	8.0	0.25	0
GR	0.012	1.4	0.23	0
GT	0.044	5.0	0.04	0
LCA	0.334	38.2	0.25	0
LE	0.008	0.9	0.04	0
MR	0.203	23.2	0.05	0
RBA	0.012	1.4	0.26	0
TW	0.156	17.8	0.05	0

TOTAL = 0.875 Sq.Miles XKSAT = 0.12 %Rock = 0

DTHETA
========
Dry = 0.37 PSIF = 6.60
Normal = 0.19
Wet = 0.00

LAND USE
========

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.000	OPEN	0.0	DRY	10	0	0.20	0.02	Min	
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.000	M.D.R.	0.0	NORMAL	50	30	0.25	0.05	Hi	
0.000	M.F.R.	0.0	NORMAL	50	45	0.25	0.05	Hi	
0.026	Ind	3.0	NORMAL	60	55	0.15	0.03	Min	0.03
0.000	Comm	0.0	NORMAL	75	80	0.10	0.02	Min	
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.848	RowCrop	97.0	NORMAL	85	0	0.50	0.10	Hi	0.08
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

0.874 = Total Area Avg. = 85 2% 0.490

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 100. %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.19

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.22

IMPERVIOUS AREA: URBAN @ 100 % effective = 2
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 2

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
4-21	0.875	1.350	0.080	13.0	0.49	0.19	6.60	0.22	2

LOSS PARAMETERS FOR SUBBASIN: 5-21

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.027	7.8	0.26	0
AO	0.041	11.8	0.04	0
BR	0.016	4.6	1.05	0
BS	0.024	6.9	0.39	0
CP	0.030	8.6	0.40	0
GGA	0.014	4.0	0.25	0
GR	0.043	12.4	0.23	0
GT	0.053	15.2	0.04	0
LCA	0.014	4.0	0.25	0
MR	0.043	12.4	0.05	0
PEA	0.017	4.9	0.37	0
RBA	0.015	4.3	0.26	0
VF	0.011	3.2	0.01	0

TOTAL = 0.348 Sq.Miles XKSAT = 0.13 %Rock = 0

DTHETA

Dry = 0.38 PSIF = 6.40
Normal = 0.21
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.128	OPEN	37.0	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.000	M.D.R.	0.0	NORMAL	50	30	0.25	0.05	Hi	
0.000	M.F.R.	0.0	NORMAL	50	45	0.25	0.05	Hi	
0.072	Ind	20.8	NORMAL	60	55	0.15	0.03	Min	0.03
0.000	Comm	0.0	NORMAL	75	80	0.10	0.02	Min	
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.146	RowCrop	42.2	NORMAL	85	0	0.50	0.10	Hi	0.10
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

0.346 = Total Area Avg. = 51 11% 0.320

PERCENT OF SUBBASIN DRY = 37.0 %
NORMAL = 63.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.27

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.19

IMPERVIOUS AREA: URBAN @ 100 % effective = 11
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 11

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
5-21	0.348	0.740	0.053	16.0	0.32	0.27	6.40	0.19	11

LOSS PARAMETERS FOR SUBBASIN: 12-22

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
ES	0.032	13.1	0.25	0
GGA	0.028	11.4	0.25	0
MP	0.185	75.5	0.25	0

TOTAL = 0.245 Sq.Miles XKSAT = 0.25 %Rock = 0

DTHETA

Dry = 0.35 PSIF = 4.80
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.028	OPEN	11.5	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.000	M.D.R.	0.0	NORMAL	50	30	0.25	0.05	Hi	
0.152	M.F.R.	62.3	NORMAL	50	45	0.25	0.05	Hi	0.10
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.064	Comm	26.2	NORMAL	75	80	0.10	0.02	Min	0.03
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.000	RowCrop	0.0	NORMAL	85	0	0.50	0.10	Hi	
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

0.244 = Total Area Avg. = 44 49% 0.200

PERCENT OF SUBBASIN DRY = 12.0 %
NORMAL = 88.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.26

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.34

IMPERVIOUS AREA: URBAN @ 100 % effective = 49
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 49

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
12-22	0.245	0.680	0.069	15.0	0.20	0.26	4.80	0.34	49

LOSS PARAMETERS FOR SUBBASIN: 11-22

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.052	5.2	0.26	0
AO	0.091	9.0	0.04	0
ES	0.166	16.5	0.25	0
GGA	0.602	59.8	0.25	0
MP	0.076	7.6	0.25	0
MR	0.012	1.2	0.05	0
TT	0.007	0.7	0.04	0

TOTAL = 1.006 Sq.Miles XKSAT = 0.21 %Rock = 0

DTHETA

Dry = 0.37 PSIF = 5.20
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.094	OPEN	9.3	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.019	L.D.R.	1.9	NORMAL	50	15	0.30	0.05	Hi	0.12
0.596	M.D.R.	59.2	NORMAL	50	30	0.25	0.05	Hi	0.09
0.082	M.F.R.	8.2	NORMAL	50	45	0.25	0.05	Hi	0.11
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.189	Comm	18.8	NORMAL	75	80	0.10	0.02	Min	0.03
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.000	RowCrop	0.0	NORMAL	85	0	0.50	0.10	Hi	
0.026	SCHOOL1	2.6	NORMAL	80	45	0.29	0.05	Hi	0.12
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	
1.006 = Total Area			Avg. =	46	38%	0.220			

PERCENT OF SUBBASIN DRY = 9.0 %

NORMAL = 91.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.26

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.29

IMPERVIOUS AREA: URBAN @ 100 % effective = 38
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 38

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
11-22	1.006	1.480	0.064	14.0	0.22	0.26	5.20	0.29	38

LOSS PARAMETERS FOR SUBBASIN: 10-22

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AO	0.108	10.9	0.04	0
BT	0.004	0.4	0.25	0
GGA	0.879	88.7	0.25	0

TOTAL = 0.991 Sq.Miles XKSAT = 0.20 %Rock = 0

DTHETA

Dry = 0.37 PSIF = 5.30
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.000	OPEN	0.0	DRY	10	0	0.20	0.02	Min	
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.760	M.D.R.	76.7	NORMAL	50	30	0.25	0.05	Hi	0.08
0.059	M.F.R.	6.0	NORMAL	50	45	0.25	0.05	Hi	0.11
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.055	Comm	5.6	NORMAL	75	80	0.10	0.02	Min	0.03
0.078	Park	7.9	NORMAL	90	10	0.20	0.10	Hi	0.11
0.000	RowCrop	0.0	NORMAL	85	0	0.50	0.10	Hi	
0.039	SCHOOL1	3.9	NORMAL	80	45	0.29	0.05	Hi	0.12
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	
0.991 = Total Area			Avg. =	56	33%	0.240			

PERCENT OF SUBBASIN DRY = 0.0 %

NORMAL = 100. %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.25

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.30

IMPERVIOUS AREA: URBAN @ 100 % effective = 33
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 33

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
10-22	0.991	1.350	0.077	15.0	0.24	0.25	5.30	0.30	33

LOSS PARAMETERS FOR SUBBASIN: 9-22

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.022	2.2	0.26	0
AO	0.300	30.3	0.04	0
BT	0.001	0.1	0.25	0
GGA	0.667	67.4	0.25	0

TOTAL = 0.990 Sq.Miles XKSAT = 0.14 %Rock = 0

DTHETA

Dry = 0.39 PSIF = 6.20
Normal = 0.23
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.024	OPEN	2.4	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.012	L.D.R.	1.2	NORMAL	50	15	0.30	0.05	Hi	0.13
0.434	M.D.R.	43.8	NORMAL	50	30	0.25	0.05	Hi	0.09
0.265	M.F.R.	26.8	NORMAL	50	45	0.25	0.05	Hi	0.09
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.175	Comm	17.7	NORMAL	75	80	0.10	0.02	Min	0.03
0.029	Park	2.9	NORMAL	90	10	0.20	0.10	Hi	0.12
0.000	RowCrop	0.0	NORMAL	85	0	0.50	0.10	Hi	
0.051	SCHOOL1	5.2	NORMAL	80	45	0.29	0.05	Hi	0.11
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	
0.990 = Total Area			Avg. =	53	42%	0.220			

PERCENT OF SUBBASIN DRY = 2.0 %
NORMAL = 98.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.23

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.21

IMPERVIOUS AREA: URBAN @ 100 % effective = 42
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 42

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
9-22	0.990	1.360	0.069	13.0	0.22	0.23	6.20	0.21	42

LOSS PARAMETERS FOR SUBBASIN: 8-22E

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.013	2.5	0.26	0
GGA	0.507	97.1	0.25	0
VK	0.002	0.4	0.26	0

TOTAL = 0.522 Sq.Miles XKSAT = 0.25 %Rock = 0

DTHETA

Dry = 0.35 PSIF = 4.80
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.017	OPEN	3.2	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.001	L.D.R.	0.2	NORMAL	50	15	0.30	0.05	Hi	0.15
0.145	M.D.R.	27.7	NORMAL	50	30	0.25	0.05	Hi	0.10
0.000	M.F.R.	0.0	NORMAL	50	45	0.25	0.05	Hi	
0.012	Ind	2.3	NORMAL	60	55	0.15	0.03	Min	0.03
0.326	Comm	62.3	NORMAL	75	80	0.10	0.02	Min	0.03
0.005	Park	1.0	NORMAL	90	10	0.20	0.10	Hi	0.14
0.000	RowCrop	0.0	NORMAL	85	0	0.50	0.10	Hi	
0.017	SCHOOL1	3.2	NORMAL	80	45	0.29	0.05	Hi	0.12
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	
0.523 = Total Area			Avg. =	57	61%	0.150			

PERCENT OF SUBBASIN DRY = 3.0 %
NORMAL = 97.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.25

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.38

IMPERVIOUS AREA: URBAN @ 100 % effective = 61
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 61

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
8-22E	0.522	0.880	0.044	15.0	0.15	0.25	4.80	0.38	61

LOSS PARAMETERS FOR SUBBASIN: 8-22W

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.018	3.6	0.26	0
AN	0.001	0.2	0.05	0
AO	0.033	6.7	0.04	0
CB	0.012	2.4	0.40	0
GGA	0.403	81.6	0.25	0
VG	0.001	0.2	0.91	0
VK	0.026	5.3	0.26	0

TOTAL = 0.494 Sq.Miles XKSAT = 0.22 %Rock = 0

DTHETA

Dry = 0.36 PSIF = 5.10
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.044	OPEN	8.9	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.044	M.D.R.	8.9	NORMAL	50	30	0.25	0.05	Hi	0.11
0.009	M.F.R.	1.8	NORMAL	50	45	0.25	0.05	Hi	0.13
0.032	Ind	6.5	NORMAL	60	55	0.15	0.03	Min	0.03
0.305	Comm	61.9	NORMAL	75	80	0.10	0.02	Min	0.03
0.014	Park	2.8	NORMAL	90	10	0.20	0.10	Hi	0.13
0.045	RowCrop	9.1	NORMAL	85	0	0.50	0.10	Hi	0.11
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

0.493 = Total Area Avg. = 59 57% 0.170

PERCENT OF SUBBASIN DRY = 9.0 %
NORMAL = 91.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.26

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.34

IMPERVIOUS AREA: URBAN @ 100 % effective = 57
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 57

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
8-22W	0.494	0.510	0.039	13.0	0.17	0.26	5.10	0.34	57

LOSS PARAMETERS FOR SUBBASIN: 7-22

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.004	0.4	0.26	0
AO	0.070	7.2	0.04	0
ES	0.010	1.0	0.25	0
GGA	0.766	79.0	0.25	0
GT	0.072	7.4	0.04	0
MR	0.032	3.3	0.05	0
TT	0.016	1.6	0.04	0
VH	0.000	0.0	0.27	0

TOTAL = 0.970 Sq.Miles XKSAT = 0.18 %Rock = 0

DTHETA

Dry = 0.38 PSIF = 5.60
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.066	OPEN	6.8	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.590	M.D.R.	60.8	NORMAL	50	30	0.25	0.05	Hi	0.09
0.110	M.F.R.	11.3	NORMAL	50	45	0.25	0.05	Hi	0.10

0.002	Ind	0.2	NORMAL	60	55	0.15	0.03	Min	0.04
0.164	Comm	16.9	NORMAL	75	80	0.10	0.02	Min	0.03
0.007	Park	0.7	NORMAL	90	10	0.20	0.10	Hi	0.13
0.000	RowCrop	0.0	NORMAL	85	0	0.50	0.10	Hi	
0.032	SCHOOL1	3.3	NORMAL	80	45	0.29	0.05	Hi	0.12
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

0.971 = Total Area Avg. = 48 39% 0.220

PERCENT OF SUBBASIN DRY = 7.0 %
NORMAL = 93.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.26

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.26

IMPERVIOUS AREA: URBAN @ 100 % effective = 39
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 39

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
7-22	0.970	1.470	0.067	14.0	0.22	0.26	5.60	0.26	39

LOSS PARAMETERS FOR SUBBASIN: 12-21

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AO	0.035	3.5	0.04	0
GGA	0.025	2.5	0.25	0
GT	0.436	43.4	0.04	0
LCA	0.005	0.5	0.25	0
LE	0.061	6.1	0.04	0
MR	0.177	17.6	0.05	0
MS	0.015	1.5	0.01	0
TT	0.250	24.9	0.04	0

TOTAL = 1.004 Sq.Miles XKSAT = 0.04 %Rock = 0

DTHETA

Dry = 0.25 PSIF = 9.70
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.025	OPEN	2.5	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.035	L.D.R.	3.5	NORMAL	50	15	0.30	0.05	Hi	0.12
0.298	M.D.R.	29.7	NORMAL	50	30	0.25	0.05	Hi	0.09
0.053	M.F.R.	5.3	NORMAL	50	45	0.25	0.05	Hi	0.11
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.063	Comm	6.3	NORMAL	75	80	0.10	0.02	Min	0.03
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.528	RowCrop	52.7	NORMAL	85	0	0.50	0.10	Hi	0.09
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

1.002 = Total Area Avg. = 71 17% 0.370

PERCENT OF SUBBASIN DRY = 2.0 %
NORMAL = 98.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.15

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.07

IMPERVIOUS AREA: URBAN @ 100 % effective = 17
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 17

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
12-21	1.004	1.290	0.074	16.0	0.37	0.15	9.70	0.07	17

LOSS PARAMETERS FOR SUBBASIN: 11-21

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
GGA	0.005	0.5	0.25	0
GT	0.186	18.9	0.04	0
LCA	0.340	34.5	0.25	0
LE	0.402	40.8	0.04	0
MR	0.012	1.2	0.05	0
MS	0.003	0.3	0.01	0
RBA	0.002	0.2	0.26	0
TT	0.035	3.6	0.04	0

TOTAL = 0.985 Sq.Miles XKSAT = 0.08 %Rock = 0

DTHETA

Dry = 0.32 PSIF = 7.60
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.018	OPEN	1.8	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.067	L.D.R.	6.8	NORMAL	50	15	0.30	0.05	Hi	0.11
0.211	M.D.R.	21.5	NORMAL	50	30	0.25	0.05	Hi	0.10
0.029	M.F.R.	3.0	NORMAL	50	45	0.25	0.05	Hi	0.12
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.000	Comm	0.0	NORMAL	75	80	0.10	0.02	Min	
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.586	RowCrop	59.7	NORMAL	85	0	0.50	0.10	Hi	0.09
0.071	SCHOOL1	7.2	NORMAL	80	45	0.29	0.05	Hi	0.11
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	
0.982 = Total Area			Avg. =	74	12%	0.400			

PERCENT OF SUBBASIN
DRY = 2.0 %
NORMAL = 98.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.15

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.14

IMPERVIOUS AREA:
URBAN @ 100 % effective = 12
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 12

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
11-21	0.985	1.250	0.079	17.0	0.40	0.15	7.60	0.14	12

LOSS PARAMETERS FOR SUBBASIN: 10-21

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
LCA	0.282	28.8	0.25	0
LE	0.110	11.2	0.04	0
MR	0.488	49.8	0.05	0
RBA	0.024	2.5	0.26	0
TG	0.006	0.6	0.04	0
TT	0.028	2.9	0.04	0
TW	0.041	4.2	0.05	0
TOTAL =	0.979 Sq.Miles		XKSAT = 0.08	%Rock = 0

DTHETA
Dry = 0.32 PSIF = 7.60
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.325	OPEN	33.2	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.122	L.D.R.	12.4	NORMAL	50	15	0.30	0.05	Hi	0.10
0.128	M.D.R.	13.1	NORMAL	50	30	0.25	0.05	Hi	0.10
0.000	M.F.R.	0.0	NORMAL	50	45	0.25	0.05	Hi	
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.004	Comm	0.4	NORMAL	75	80	0.10	0.02	Min	0.04
0.019	Park	1.9	NORMAL	90	10	0.20	0.10	Hi	0.12
0.368	RowCrop	37.5	NORMAL	85	0	0.50	0.10	Hi	0.09
0.013	SCHOOL1	1.3	NORMAL	80	45	0.29	0.05	Hi	0.13
0.001	WATER	0.1	WET	0	10	0.00	0.00	Min	0.04
0.980 = Total Area			Avg. =	51	7%	0.330			

PERCENT OF SUBBASIN
DRY = 33.0 %
NORMAL = 67.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.21

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.12

IMPERVIOUS AREA:
URBAN @ 100 % effective = 7
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 7

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
10-21	0.979	1.420	0.061	17.0	0.33	0.21	7.60	0.12	7

LOSS PARAMETERS FOR SUBBASIN: 9-21

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
CB	0.000	0.0	0.40	0
CP	0.048	5.0	0.40	0
GGA	0.083	8.6	0.25	0
GT	0.060	6.2	0.04	0
LB	0.096	9.9	0.40	0
LCA	0.129	13.3	0.25	0
LE	0.032	3.3	0.04	0
MR	0.476	49.2	0.05	0
TW	0.043	4.4	0.05	0

TOTAL = 0.967 Sq.Miles XKSAT = 0.10 %Rock = 0

DTHETA
========
Dry = 0.35 PSIF = 7.00
Normal = 0.15
Wet = 0.00

LAND USE
========

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.002	OPEN	0.2	DRY	10	0	0.20	0.02	Min	0.04
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.000	M.D.R.	0.0	NORMAL	50	30	0.25	0.05	Hi	
0.000	M.F.R.	0.0	NORMAL	50	45	0.25	0.05	Hi	
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.000	Comm	0.0	NORMAL	75	80	0.10	0.02	Min	
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.965	RowCrop	99.8	NORMAL	85	0	0.50	0.10	Hi	0.08
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

0.967 = Total Area Avg. = 85 0% 0.500

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 100. %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.15

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.18

IMPERVIOUS AREA: URBAN @ 100 % effective = 0
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 0

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
9-21	0.967	1.300	0.080	12.0	0.50	0.15	7.00	0.18	0

LOSS PARAMETERS FOR SUBBASIN: 8-21E

Soil Survey Used Central County

XKSAT
=======

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.012	2.4	0.26	0
ABA	0.031	6.1	0.38	0
AO	0.045	8.9	0.04	0
BR	0.014	2.8	1.05	0
BS	0.016	3.2	0.39	0
CB	0.044	8.7	0.40	0
GGA	0.077	15.2	0.25	0
GT	0.098	19.3	0.04	0
LB	0.010	2.0	0.40	0
LCA	0.054	10.6	0.25	0
MR	0.073	14.4	0.05	0
RAB	0.006	1.2	0.39	0
RBA	0.025	4.9	0.26	0
VA	0.003	0.6	0.39	0

TOTAL = 0.508 Sq.Miles XKSAT = 0.14 %Rock = 0

DTHETA
========
Dry = 0.39 PSIF = 6.20
Normal = 0.23
Wet = 0.00

LAND USE
========

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.016	OPEN	3.2	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.000	M.D.R.	0.0	NORMAL	50	30	0.25	0.05	Hi	
0.000	M.F.R.	0.0	NORMAL	50	45	0.25	0.05	Hi	
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.000	Comm	0.0	NORMAL	75	80	0.10	0.02	Min	
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.482	RowCrop	94.9	NORMAL	85	0	0.50	0.10	Hi	0.09
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.010	WATER	2.0	WET	0	10	0.00	0.00	Min	0.03

0.508 = Total Area Avg. = 83 2% 0.480

PERCENT OF SUBBASIN DRY = 3.0 %
NORMAL = 95.0 %
WET = 2.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.23

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.25

IMPERVIOUS AREA: URBAN @ 100 % effective = 2
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 2

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
8-21E	0.508	0.960	0.085	14.0	0.48	0.23	6.20	0.25	2

LOSS PARAMETERS FOR SUBBASIN: 8-21W

Soil Survey Used Central County

XKSAT
=======

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
BR	0.007	2.6	1.05	0
BS	0.028	10.2	0.39	0
GGA	0.080	29.2	0.25	0
GT	0.114	41.6	0.04	0
RAB	0.035	12.8	0.39	0
TD	0.010	3.7	1.20	0

TOTAL = 0.274 Sq.Miles XKSAT = 0.14 %Rock = 0

DTHETA
========

Dry = 0.39 PSIF = 6.20
Normal = 0.23
Wet = 0.00

LAND USE
========

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.026	OPEN	9.5	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.000	M.D.R.	0.0	NORMAL	50	30	0.25	0.05	Hi	
0.000	M.F.R.	0.0	NORMAL	50	45	0.25	0.05	Hi	
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.000	Comm	0.0	NORMAL	75	80	0.10	0.02	Min	
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.224	RowCrop	82.1	NORMAL	85	0	0.50	0.10	Hi	0.10
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.023	WATER	8.4	WET	0	10	0.00	0.00	Min	0.03

0.273 = Total Area Avg. = 77 8% 0.430

PERCENT OF SUBBASIN DRY = 10.0 %
NORMAL = 82.0 %
WET = 8.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.23

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.24

IMPERVIOUS AREA: URBAN @ 100 % effective = 8
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 8

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
8-21W	0.274	0.700	0.081	16.0	0.43	0.23	6.20	0.24	8

LOSS PARAMETERS FOR SUBBASIN: 13-22

Soil Survey Used Central County

XKSAT
=======

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
GGA	0.228	92.7	0.25	0
LE	0.018	7.3	0.04	0

TOTAL = 0.246 Sq.Miles XKSAT = 0.22 %Rock = 0

DTHETA
========

Dry = 0.36 PSIF = 5.10
Normal = 0.25
Wet = 0.00

LAND USE
========

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.000	OPEN	0.0	DRY	10	0	0.20	0.02	Min	
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.104	M.D.R.	42.1	NORMAL	50	30	0.25	0.05	Hi	0.10
0.005	M.F.R.	2.0	NORMAL	50	45	0.25	0.05	Hi	0.14
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.123	Comm	49.8	NORMAL	75	80	0.10	0.02	Min	0.03
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.000	RowCrop	0.0	NORMAL	85	0	0.50	0.10	Hi	
0.015	SCHOOL1	6.1	NORMAL	80	45	0.29	0.05	Hi	0.13
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

0.247 = Total Area Avg. = 58 56% 0.180

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 100. %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.25

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.34

IMPERVIOUS AREA: URBAN @ 100 % effective = 56
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 56

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
13-22	0.246	1.000	0.061	18.0	0.18	0.25	5.10	0.34	56

LOSS PARAMETERS FOR SUBBASIN: 14-22

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.244	24.4	0.26	0
AO	0.047	4.7	0.04	0
GGA	0.707	70.7	0.25	0
LE	0.002	0.2	0.04	0

TOTAL = 1.000 Sq.Miles XKSAT = 0.23 %Rock = 0

DTHETA

Dry = 0.36 PSIF = 5.00
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.032	OPEN	3.2	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.009	L.D.R.	0.9	NORMAL	50	15	0.30	0.05	Hi	0.13
0.563	M.D.R.	56.3	NORMAL	50	30	0.25	0.05	Hi	0.09
0.080	M.F.R.	8.0	NORMAL	50	45	0.25	0.05	Hi	0.11
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.098	Comm	9.8	NORMAL	75	80	0.10	0.02	Min	0.03
0.065	Park	6.5	NORMAL	90	10	0.20	0.10	Hi	0.11
0.000	RowCrop	0.0	NORMAL	85	0	0.50	0.10	Hi	
0.153	SCHOOL1	15.3	NORMAL	80	45	0.29	0.05	Hi	0.10
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	
1.000 = Total Area			Avg. =	56	36%	0.240			

PERCENT OF SUBBASIN DRY = 3.0 %
NORMAL = 97.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.25

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.35

IMPERVIOUS AREA: URBAN @ 100 % effective = 36
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 36

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
14-22	1.000	1.320	0.073	13.0	0.24	0.25	5.00	0.35	36

LOSS PARAMETERS FOR SUBBASIN: 15-22

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.321	32.2	0.26	0
BT	0.000	0.0	0.25	0
GGA	0.677	67.8	0.25	0

TOTAL = 0.998 Sq.Miles XKSAT = 0.25 %Rock = 0

DTHETA

Dry = 0.35 PSIF = 4.80
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.087	OPEN	8.7	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.641	M.D.R.	64.2	NORMAL	50	30	0.25	0.05	Hi	0.08
0.174	M.F.R.	17.4	NORMAL	50	45	0.25	0.05	Hi	0.10
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.061	Comm	6.1	NORMAL	75	80	0.10	0.02	Min	0.03
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.000	RowCrop	0.0	NORMAL	85	0	0.50	0.10	Hi	
0.035	SCHOOL1	3.5	NORMAL	80	45	0.29	0.05	Hi	0.12
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	
0.998 = Total Area			Avg. =	46	34%	0.240			

PERCENT OF SUBBASIN DRY = 9.0 %
NORMAL = 91.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.26

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.35

IMPERVIOUS AREA: URBAN @ 100 % effective = 34
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 34

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
15-22	0.998	1.540	0.072	15.0	0.24	0.26	4.80	0.35	34

LOSS PARAMETERS FOR SUBBASIN: 16-22E

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.118	23.0	0.26	0
AO	0.018	3.5	0.04	0
BT	0.002	0.4	0.25	0
GGA	0.360	70.2	0.25	0
VK	0.015	2.9	0.26	0

TOTAL = 0.513 Sq.Miles XKSAT = 0.24 %Rock = 0

DTHETA

Dry = 0.35 PSIF = 4.90
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.046	OPEN	9.0	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.245	M.D.R.	48.0	NORMAL	50	30	0.25	0.05	Hi	0.10
0.080	M.F.R.	15.7	NORMAL	50	45	0.25	0.05	Hi	0.11
0.017	Ind	3.3	NORMAL	60	55	0.15	0.03	Min	0.03
0.118	Comm	23.1	NORMAL	75	80	0.10	0.02	Min	0.03
0.005	Park	1.0	NORMAL	90	10	0.20	0.10	Hi	0.14
0.000	RowCrop	0.0	NORMAL	85	0	0.50	0.10	Hi	
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

0.511 = Total Area Avg. = 47 42% 0.210

PERCENT OF SUBBASIN DRY = 9.0 %
NORMAL = 91.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.26

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.34

IMPERVIOUS AREA: URBAN @ 100 % effective = 42
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 42

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
16-22E	0.513	1.140	0.065	12.0	0.21	0.26	4.90	0.34	42

LOSS PARAMETERS FOR SUBBASIN: 16-22W

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.064	13.4	0.26	0
AO	0.023	4.8	0.04	0
GGA	0.392	81.8	0.25	0

TOTAL = 0.479 Sq.Miles XKSAT = 0.23 %Rock = 0

DTHETA

Dry = 0.36 PSIF = 5.00
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.001	OPEN	0.2	DRY	10	0	0.20	0.02	Min	0.04
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.000	M.D.R.	0.0	NORMAL	50	30	0.25	0.05	Hi	
0.000	M.F.R.	0.0	NORMAL	50	45	0.25	0.05	Hi	
0.476	Ind	99.6	NORMAL	60	55	0.15	0.03	Min	0.02
0.001	Comm	0.2	NORMAL	75	80	0.10	0.02	Min	0.04
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.000	RowCrop	0.0	NORMAL	85	0	0.50	0.10	Hi	
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

0.478 = Total Area Avg. = 60 55% 0.150

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 100. %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.25

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.36

IMPERVIOUS AREA: URBAN @ 100 % effective = 55
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 55

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
16-22W	0.479	0.830	0.024	14.0	0.15	0.25	5.00	0.36	55

LOSS PARAMETERS FOR SUBBASIN: 17-22

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.006	0.6	0.26	0
AN	0.035	3.4	0.05	0
AO	0.059	5.8	0.04	0
GGA	0.886	87.2	0.25	0
GT	0.008	0.8	0.04	0
VG	0.022	2.2	0.91	0

TOTAL = 1.016 Sq.Miles XKSAT = 0.22 %Rock = 0

DTHETA

Dry = 0.36 PSIF = 5.10
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.113	OPEN	11.1	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.112	M.D.R.	11.0	NORMAL	50	30	0.25	0.05	Hi	0.10
0.071	M.F.R.	7.0	NORMAL	50	45	0.25	0.05	Hi	0.11
0.350	Ind	34.5	NORMAL	60	55	0.15	0.03	Min	0.03
0.254	Comm	25.0	NORMAL	75	80	0.10	0.02	Min	0.03
0.016	Park	1.6	NORMAL	90	10	0.20	0.10	Hi	0.12
0.099	RowCrop	9.8	NORMAL	85	0	0.50	0.10	Hi	0.10
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	
1.015 = Total Area			Avg. =	54	46%	0.200			

PERCENT OF SUBBASIN DRY = 11.0 %
NORMAL = 89.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.26

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.33

IMPERVIOUS AREA: URBAN @ 100 % effective = 46
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 46

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
17-22	1.016	1.320	0.039	19.0	0.20	0.26	5.10	0.33	46

LOSS PARAMETERS FOR SUBBASIN: 18-22

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.031	3.2	0.26	0
AN	0.075	7.7	0.05	0
AO	0.568	58.6	0.04	0
BT	0.014	1.4	0.25	0
GGA	0.210	21.7	0.25	0
GT	0.001	0.1	0.04	0
MA	0.018	1.9	0.40	0
VH	0.052	5.4	0.27	0

TOTAL = 0.969 Sq.Miles XKSAT = 0.08 %Rock = 0

DTHETA

Dry = 0.32 PSIF = 7.60
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.023	OPEN	2.4	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.681	M.D.R.	70.3	NORMAL	50	30	0.25	0.05	Hi	0.08
0.128	M.F.R.	13.2	NORMAL	50	45	0.25	0.05	Hi	0.10
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.061	Comm	6.3	NORMAL	75	80	0.10	0.02	Min	0.03
0.049	Park	5.1	NORMAL	90	10	0.20	0.10	Hi	0.11
0.001	RowCrop	0.1	NORMAL	85	0	0.50	0.10	Hi	0.15
0.026	SCHOOL1	2.7	NORMAL	80	45	0.29	0.05	Hi	0.12
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	
0.969 = Total Area			Avg. =	53	34%	0.240			

PERCENT OF SUBBASIN DRY = 2.0 %
NORMAL = 98.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.15

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.12

IMPERVIOUS AREA: URBAN @ 100 % effective = 34
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 34

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
18-22	0.969	1.400	0.076	15.0	0.24	0.15	7.60	0.12	34

LOSS PARAMETERS FOR SUBBASIN: 13-21

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.030	3.0	0.26	0
ABA	0.041	4.1	0.38	0
AN	0.026	2.6	0.05	0
AO	0.325	32.4	0.04	0
BS	0.020	2.0	0.39	0
GE	0.061	6.1	0.26	0
GGA	0.083	8.3	0.25	0
GT	0.219	21.8	0.04	0
LCA	0.016	1.6	0.25	0
MA	0.046	4.6	0.40	0
MR	0.000	0.0	0.05	0
MS	0.003	0.3	0.01	0
TT	0.027	2.7	0.04	0
VG	0.032	3.2	0.91	0
VH	0.074	7.4	0.27	0

TOTAL = 1.003 Sq.Miles XKSAT = 0.09 %Rock = 0

DTHETA

Dry = 0.33 PSIF = 7.30
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.087	OPEN	8.7	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.037	L.D.R.	3.7	NORMAL	50	15	0.30	0.05	Hi	0.12
0.663	M.D.R.	66.4	NORMAL	50	30	0.25	0.05	Hi	0.08
0.018	M.F.R.	1.8	NORMAL	50	45	0.25	0.05	Hi	0.12
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.030	Comm	3.0	NORMAL	75	80	0.10	0.02	Min	0.03
0.008	Park	0.8	NORMAL	90	10	0.20	0.10	Hi	0.13
0.117	RowCrop	11.7	NORMAL	85	0	0.50	0.10	Hi	0.10
0.039	SCHOOL1	3.9	NORMAL	80	45	0.29	0.05	Hi	0.12
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

0.999 = Total Area Avg. = 52 26% 0.270

PERCENT OF SUBBASIN DRY = 9.0 %
NORMAL = 91.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.17

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.13

IMPERVIOUS AREA: URBAN @ 100 % effective = 26
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 26

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
13-21	1.003	1.320	0.073	18.0	0.27	0.17	7.30	0.13	26

LOSS PARAMETERS FOR SUBBASIN: 14-21E

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.012	2.8	0.26	0
AO	0.050	11.6	0.04	0
GGA	0.057	13.2	0.25	0
GT	0.212	49.1	0.04	0
LE	0.036	8.3	0.04	0
MR	0.006	1.4	0.05	0
MS	0.001	0.2	0.01	0
TT	0.058	13.4	0.04	0

TOTAL = 0.432 Sq.Miles XKSAT = 0.05 %Rock = 0

DTHETA

Dry = 0.27 PSIF = 8.80
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.101	OPEN	23.4	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.003	L.D.R.	0.7	NORMAL	50	15	0.30	0.05	Hi	0.14
0.051	M.D.R.	11.8	NORMAL	50	30	0.25	0.05	Hi	0.11
0.000	M.F.R.	0.0	NORMAL	50	45	0.25	0.05	Hi	
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.000	Comm	0.0	NORMAL	75	80	0.10	0.02	Min	
0.001	Park	0.2	NORMAL	90	10	0.20	0.10	Hi	0.15
0.264	RowCrop	61.1	NORMAL	85	0	0.50	0.10	Hi	0.09
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	

0.012	WATER	2.8	WET	0	10	0.00	0.00	Min	0.03

0.432 = Total Area Avg. = 63 6% 0.380

PERCENT OF SUBBASIN
DRY = 23.0 %
NORMAL = 74.0 %
WET = 3.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.17

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.08

IMPERVIOUS AREA:
URBAN @ 100 % effective = 6
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 6

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
14-21E	0.432	0.990	0.072	18.0	0.38	0.17	8.80	0.08	6

LOSS PARAMETERS FOR SUBBASIN: 14-21W

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.004	0.7	0.26	0
AN	0.041	7.3	0.05	0
AO	0.111	19.8	0.04	0
BS	0.007	1.2	0.39	0
ES	0.046	8.2	0.25	0
GGA	0.068	12.1	0.25	0
GT	0.131	23.3	0.04	0
LE	0.085	15.1	0.04	0
MA	0.010	1.8	0.40	0
MR	0.002	0.4	0.05	0
TT	0.057	10.1	0.04	0

TOTAL = 0.562 Sq.Miles XKSAT = 0.06 %Rock = 0

DTHETA
Dry = 0.29 PSIF = 8.40
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.086	OPEN	15.3	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.133	L.D.R.	23.7	NORMAL	50	15	0.30	0.05	Hi	0.10
0.155	M.D.R.	27.6	NORMAL	50	30	0.25	0.05	Hi	0.10
0.000	M.F.R.	0.0	NORMAL	50	45	0.25	0.05	Hi	
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.032	Comm	5.7	NORMAL	75	80	0.10	0.02	Min	0.03
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.150	RowCrop	26.7	NORMAL	85	0	0.50	0.10	Hi	0.10
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.006	WATER	1.1	WET	0	10	0.00	0.00	Min	0.04

0.562 = Total Area Avg. = 54 17% 0.310

PERCENT OF SUBBASIN
DRY = 15.0 %
NORMAL = 84.0 %
WET = 1.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.17

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.09

IMPERVIOUS AREA:
URBAN @ 100 % effective = 17
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 17

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
14-21W	0.562	0.530	0.073	7.0	0.31	0.17	8.40	0.09	17

LOSS PARAMETERS FOR SUBBASIN: 15-21

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
GT	0.152	15.0	0.04	0
LCA	0.016	1.6	0.25	0
LE	0.031	3.1	0.04	0
MR	0.374	37.0	0.05	0
TT	0.432	42.7	0.04	0
TW	0.006	0.6	0.05	0

TOTAL = 1.011 Sq.Miles XKSAT = 0.04 %Rock = 0

DTHETA
Dry = 0.25 PSIF = 9.70
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb

0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.148	OPEN	14.6	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.001	L.D.R.	0.1	NORMAL	50	15	0.30	0.05	Hi	0.15
0.125	M.D.R.	12.4	NORMAL	50	30	0.25	0.05	Hi	0.10
0.001	M.F.R.	0.1	NORMAL	50	45	0.25	0.05	Hi	0.15
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.000	Comm	0.0	NORMAL	75	80	0.10	0.02	Min	
0.006	Park	0.6	NORMAL	90	10	0.20	0.10	Hi	0.14
0.709	RowCrop	70.1	NORMAL	85	0	0.50	0.10	Hi	0.08
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.022	WATER	2.2	WET	0	10	0.00	0.00	Min	0.03

1.012 = Total Area Avg. = 70 6% 0.410

PERCENT OF SUBBASIN DRY = 15.0 %
NORMAL = 83.0 %
WET = 2.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.16

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.07

IMPERVIOUS AREA: URBAN @ 100 % effective = 6
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 6

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
15-21	1.011	1.480	0.071	15.0	0.41	0.16	9.70	0.07	6

LOSS PARAMETERS FOR SUBBASIN: 16-21

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
GT	0.035	3.4	0.04	0
LB	0.018	1.8	0.40	0
LCA	0.075	7.3	0.25	0
LE	0.055	5.4	0.04	0
MR	0.599	58.6	0.05	0
TT	0.240	23.5	0.04	0

TOTAL = 1.022 Sq.Miles XKSAT = 0.05 %Rock = 0

DTHETA

Dry = 0.27 PSIF = 8.80
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.004	OPEN	0.4	DRY	10	0	0.20	0.02	Min	0.04
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.121	L.D.R.	11.8	NORMAL	50	15	0.30	0.05	Hi	0.10
0.000	M.D.R.	0.0	NORMAL	50	30	0.25	0.05	Hi	
0.000	M.F.R.	0.0	NORMAL	50	45	0.25	0.05	Hi	
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.000	Comm	0.0	NORMAL	75	80	0.10	0.02	Min	
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.871	RowCrop	85.2	NORMAL	85	0	0.50	0.10	Hi	0.08
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.026	WATER	2.5	WET	0	10	0.00	0.00	Min	0.03

1.022 = Total Area Avg. = 81 4% 0.460

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 97.0 %
WET = 2.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.15

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.09

IMPERVIOUS AREA: URBAN @ 100 % effective = 4
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 4

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
16-21	1.022	1.350	0.078	12.0	0.46	0.15	8.80	0.09	4

LOSS PARAMETERS FOR SUBBASIN: 17-21E

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
ABA	0.011	1.6	0.38	0
ABB	0.020	2.9	0.39	0
GGA	0.007	1.0	0.25	0
LCA	0.226	32.3	0.25	0
LE	0.009	1.3	0.04	0
MP	0.005	0.7	0.25	0
MR	0.389	55.7	0.05	0
RAB	0.000	0.0	0.39	0
TT	0.031	4.4	0.04	0
VA	0.001	0.1	0.39	0

TOTAL = 0.699 Sq.Miles XKSAT = 0.09 %Rock = 0

DTHETA

========
Dry = 0.33 PSIF = 7.30
Normal = 0.15
Wet = 0.00

LAND USE
========

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.044	OPEN	6.3	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.001	L.D.R.	0.1	NORMAL	50	15	0.30	0.05	Hi	0.15
0.042	M.D.R.	6.0	NORMAL	50	30	0.25	0.05	Hi	0.11
0.001	M.F.R.	0.1	NORMAL	50	45	0.25	0.05	Hi	0.15
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.000	Comm	0.0	NORMAL	75	80	0.10	0.02	Min	
0.011	Park	1.6	NORMAL	90	10	0.20	0.10	Hi	0.13
0.592	RowCrop	84.6	NORMAL	85	0	0.50	0.10	Hi	0.09
0.001	SCHOOL1	0.1	NORMAL	80	45	0.29	0.05	Hi	0.15
0.008	WATER	1.1	WET	0	10	0.00	0.00	Min	0.04

0.700 = Total Area Avg. = 79 3% 0.450

PERCENT OF SUBBASIN DRY = 6.0 %
NORMAL = 92.0 %
WET = 1.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.16

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.16

IMPERVIOUS AREA: URBAN @ 100 % effective = 3
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 3

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
17-21E	0.699	1.680	0.079	12.0	0.45	0.16	7.30	0.16	3

LOSS PARAMETERS FOR SUBBASIN: 17-21W

Soil Survey Used Central County

XKSAT
=======

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
ABA	0.041	13.4	0.38	0
BS	0.029	9.5	0.39	0
GGA	0.041	13.4	0.25	0
GT	0.112	36.6	0.04	0
GXA	0.000	0.0	0.23	0
MR	0.000	0.0	0.05	0
RAB	0.083	27.1	0.39	0

TOTAL = 0.306 Sq.Miles XKSAT = 0.16 %Rock = 0

DTHETA
========
Dry = 0.39 PSIF = 5.80
Normal = 0.25
Wet = 0.00

LAND USE
========

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.000	OPEN	0.0	DRY	10	0	0.20	0.02	Min	
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.092	L.D.R.	30.0	NORMAL	50	15	0.30	0.05	Hi	0.11
0.000	M.D.R.	0.0	NORMAL	50	30	0.25	0.05	Hi	
0.000	M.F.R.	0.0	NORMAL	50	45	0.25	0.05	Hi	
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.000	Comm	0.0	NORMAL	75	80	0.10	0.02	Min	
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.215	RowCrop	70.0	NORMAL	85	0	0.50	0.10	Hi	0.10
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

0.307 = Total Area Avg. = 76 4% 0.440

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 100. %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.25

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.28

IMPERVIOUS AREA: URBAN @ 100 % effective = 4
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 4

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
17-21W	0.306	1.110	0.093	15.0	0.44	0.25	5.80	0.28	4

LOSS PARAMETERS FOR SUBBASIN: 18-21

Soil Survey Used Central County

XKSAT
=======

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.130	24.0	0.26	0
ABA	0.011	2.0	0.38	0
AN	0.012	2.2	0.05	0

AO	0.076	14.0	0.04	0
BR	0.034	6.3	1.05	0
BS	0.004	0.7	0.39	0
GGA	0.202	37.3	0.25	0
GT	0.048	8.9	0.04	0
GXA	0.007	1.3	0.23	0
RAB	0.000	0.0	0.39	0
TD	0.001	0.2	1.20	0
VH	0.017	3.1	0.27	0

TOTAL = 0.542 Sq.Miles XKSAT = 0.18 %Rock = 0

DTHETA
========
Dry = 0.38 PSIF = 5.60
Normal = 0.25
Wet = 0.00

LAND USE
========

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.024	OPEN	4.4	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.004	L.D.R.	0.7	NORMAL	50	15	0.30	0.05	Hi	0.14
0.000	M.D.R.	0.0	NORMAL	50	30	0.25	0.05	Hi	
0.000	M.F.R.	0.0	NORMAL	50	45	0.25	0.05	Hi	
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.000	Comm	0.0	NORMAL	75	80	0.10	0.02	Min	
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.511	RowCrop	94.1	NORMAL	85	0	0.50	0.10	Hi	0.09
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.004	WATER	0.7	WET	0	10	0.00	0.00	Min	0.04

0.543 = Total Area Avg. = 81 1% 0.480

PERCENT OF SUBBASIN DRY = 4.0 %
NORMAL = 95.0 %
WET = 1.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.25

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.32

IMPERVIOUS AREA: URBAN @ 100 % effective = 1
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 1

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
18-21	0.542	1.220	0.083	10.0	0.48	0.25	5.60	0.32	1

LOSS PARAMETERS FOR SUBBASIN: 24-22

Soil Survey Used Central County

XKSAT
=======

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
GGA	0.059	26.2	0.25	0
LCA	0.031	13.8	0.25	0
LE	0.135	60.0	0.04	0

TOTAL = 0.225 Sq.Miles XKSAT = 0.08 %Rock = 0

DTHETA
========
Dry = 0.32 PSIF = 7.60
Normal = 0.15
Wet = 0.00

LAND USE
========

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.014	OPEN	6.2	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.002	M.D.R.	0.9	NORMAL	50	30	0.25	0.05	Hi	0.15
0.064	M.F.R.	28.4	NORMAL	50	45	0.25	0.05	Hi	0.11
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.145	Comm	64.4	NORMAL	75	80	0.10	0.02	Min	0.03
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.000	RowCrop	0.0	NORMAL	85	0	0.50	0.10	Hi	
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

0.225 = Total Area Avg. = 52 65% 0.150

PERCENT OF SUBBASIN DRY = 6.0 %
NORMAL = 94.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.16

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.12

IMPERVIOUS AREA: URBAN @ 100 % effective = 65
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 65

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
24-22	0.225	1.000	0.047	18.0	0.15	0.16	7.60	0.12	65

LOSS PARAMETERS FOR SUBBASIN: 23-22

Soil Survey Used Central County

XKSAT
=======

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AN	0.008	0.8	0.05	0
AO	0.553	55.9	0.04	0
BS	0.002	0.2	0.39	0
GGA	0.300	30.3	0.25	0
LE	0.054	5.5	0.04	0
MA	0.024	2.4	0.40	0
VH	0.048	4.9	0.27	0

TOTAL = 0.989 Sq.Miles XKSAT = 0.08 %Rock = 0

DTHETA
========

Dry = 0.32 PSIF = 7.60
Normal = 0.15
Wet = 0.00

LAND USE
========

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.007	OPEN	0.7	DRY	10	0	0.20	0.02	Min	0.04
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.742	M.D.R.	74.9	NORMAL	50	30	0.25	0.05	Hi	0.08
0.023	M.F.R.	2.3	NORMAL	50	45	0.25	0.05	Hi	0.12
0.008	Ind	0.8	NORMAL	60	55	0.15	0.03	Min	0.04
0.048	Comm	4.8	NORMAL	75	80	0.10	0.02	Min	0.03
0.077	Park	7.8	NORMAL	90	10	0.20	0.10	Hi	0.11
0.004	RowCrop	0.4	NORMAL	85	0	0.50	0.10	Hi	0.14
0.081	SCHOOL1	8.2	NORMAL	80	45	0.29	0.05	Hi	0.11
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

0.990 = Total Area Avg. = 56 32% 0.240

PERCENT OF SUBBASIN DRY = 1.0 %
NORMAL = 99.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.15

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.12

IMPERVIOUS AREA: URBAN @ 100 % effective = 32
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 32

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
23-22	0.989	1.410	0.076	13.0	0.24	0.15	7.60	0.12	32

LOSS PARAMETERS FOR SUBBASIN: 22-22E
==========

Soil Survey Used Central County

XKSAT
=======

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.082	15.4	0.26	0
GGA	0.450	84.6	0.25	0
MA	0.000	0.0	0.40	0

TOTAL = 0.532 Sq.Miles XKSAT = 0.25 %Rock = 0

DTHETA
========

Dry = 0.35 PSIF = 4.80
Normal = 0.25
Wet = 0.00

LAND USE
========

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.045	OPEN	8.5	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.192	M.D.R.	36.1	NORMAL	50	30	0.25	0.05	Hi	0.10
0.088	M.F.R.	16.5	NORMAL	50	45	0.25	0.05	Hi	0.11
0.038	Ind	7.1	NORMAL	60	55	0.15	0.03	Min	0.03
0.094	Comm	17.7	NORMAL	75	80	0.10	0.02	Min	0.03
0.001	Park	0.2	NORMAL	90	10	0.20	0.10	Hi	0.15
0.000	RowCrop	0.0	NORMAL	85	0	0.50	0.10	Hi	
0.074	SCHOOL1	13.9	NORMAL	80	45	0.29	0.05	Hi	0.11
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

0.532 = Total Area Avg. = 50 43% 0.220

PERCENT OF SUBBASIN DRY = 8.0 %
NORMAL = 92.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.26

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.36

IMPERVIOUS AREA: URBAN @ 100 % effective = 43
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 43

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
22-22E	0.532	1.050	0.065	20.0	0.22	0.26	4.80	0.36	43

LOSS PARAMETERS FOR SUBBASIN: 22-22W

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.032	6.9	0.26	0
GGA	0.435	93.2	0.25	0

TOTAL = 0.467 Sq.Miles XKSAT = 0.25 %Rock = 0

DTHETA

Dry = 0.35 PSIF = 4.80
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.020	OPEN	4.3	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.000	M.D.R.	0.0	NORMAL	50	30	0.25	0.05	Hi	
0.000	M.F.R.	0.0	NORMAL	50	45	0.25	0.05	Hi	
0.373	Ind	79.7	NORMAL	60	55	0.15	0.03	Min	0.03
0.075	Comm	16.0	NORMAL	75	80	0.10	0.02	Min	0.03
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.000	RowCrop	0.0	NORMAL	85	0	0.50	0.10	Hi	
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

0.468 = Total Area Avg. = 56 57% 0.140

PERCENT OF SUBBASIN DRY = 4.0 %
NORMAL = 96.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.25

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.38

IMPERVIOUS AREA: URBAN @ 100 % effective = 57
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 57

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
22-22W	0.467	0.960	0.025	26.0	0.14	0.25	4.80	0.38	57

LOSS PARAMETERS FOR SUBBASIN: 21-22

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.200	20.1	0.26	0
AN	0.007	0.7	0.05	0
AO	0.048	4.8	0.04	0
GGA	0.740	74.4	0.25	0

TOTAL = 0.995 Sq.Miles XKSAT = 0.23 %Rock = 0

DTHETA

Dry = 0.36 PSIF = 5.00
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.356	OPEN	35.8	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.398	M.D.R.	40.1	NORMAL	50	30	0.25	0.05	Hi	0.09
0.000	M.F.R.	0.0	NORMAL	50	45	0.25	0.05	Hi	
0.002	Ind	0.2	NORMAL	60	55	0.15	0.03	Min	0.04
0.211	Comm	21.2	NORMAL	75	80	0.10	0.02	Min	0.03
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.000	RowCrop	0.0	NORMAL	85	0	0.50	0.10	Hi	
0.026	SCHOOL1	2.6	NORMAL	80	45	0.29	0.05	Hi	0.12
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

0.993 = Total Area Avg. = 32 30% 0.200

PERCENT OF SUBBASIN DRY = 36.0 %
NORMAL = 64.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.29

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.29

IMPERVIOUS AREA: URBAN @ 100 % effective = 30
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 30

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
21-22	0.995	1.450	0.047	17.0	0.20	0.29	5.00	0.29	30

LOSS PARAMETERS FOR SUBBASIN: 20-22

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.005	0.5	0.26	0
AO	0.077	7.6	0.04	0
GGA	0.881	86.9	0.25	0
GT	0.051	5.0	0.04	0

TOTAL = 1.014 Sq.Miles XKSAT = 0.20 %Rock = 0

DTHETA

Dry = 0.37 PSIF = 5.30
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.002	OPEN	0.2	DRY	10	0	0.20	0.02	Min	0.04
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.689	M.D.R.	67.9	NORMAL	50	30	0.25	0.05	Hi	0.08
0.070	M.F.R.	6.9	NORMAL	50	45	0.25	0.05	Hi	0.11
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.190	Comm	18.7	NORMAL	75	80	0.10	0.02	Min	0.03
0.025	Park	2.5	NORMAL	90	10	0.20	0.10	Hi	0.12
0.000	RowCrop	0.0	NORMAL	85	0	0.50	0.10	Hi	
0.038	SCHOOL1	3.7	NORMAL	80	45	0.29	0.05	Hi	0.12
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	
1.014 = Total Area			Avg. =	54	40%	0.220			

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 100. %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.25

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.30

IMPERVIOUS AREA: URBAN @ 100 % effective = 40
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 40

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
20-22	1.014	1.420	0.069	12.0	0.22	0.25	5.30	0.30	40

LOSS PARAMETERS FOR SUBBASIN: 19-22

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AN	0.026	2.8	0.05	0
AO	0.402	42.8	0.04	0
BT	0.007	0.7	0.25	0
GGA	0.386	41.1	0.25	0
GT	0.118	12.6	0.04	0

TOTAL = 0.939 Sq.Miles XKSAT = 0.09 %Rock = 0

DTHETA

Dry = 0.33 PSIF = 7.30
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.038	OPEN	4.1	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.585	M.D.R.	62.4	NORMAL	50	30	0.25	0.05	Hi	0.09
0.014	M.F.R.	1.5	NORMAL	50	45	0.25	0.05	Hi	0.13
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.039	Comm	4.2	NORMAL	75	80	0.10	0.02	Min	0.03
0.216	Park	23.0	NORMAL	90	10	0.20	0.10	Hi	0.10
0.000	RowCrop	0.0	NORMAL	85	0	0.50	0.10	Hi	
0.046	SCHOOL1	4.9	NORMAL	80	45	0.29	0.05	Hi	0.11
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	
0.938 = Total Area			Avg. =	61	27%	0.230			

PERCENT OF SUBBASIN DRY = 4.0 %
NORMAL = 96.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.16

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.14

IMPERVIOUS AREA: URBAN @ 100 % effective = 27
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 27

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
19-22	0.939	1.310	0.076	17.0	0.23	0.16	7.30	0.14	27

LOSS PARAMETERS FOR SUBBASIN: 24-21N

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.014	3.4	0.26	0
AN	0.005	1.2	0.05	0
AO	0.213	51.6	0.04	0
BS	0.002	0.5	0.39	0
GE	0.030	7.3	0.26	0
GGA	0.067	16.2	0.25	0
GT	0.064	15.5	0.04	0
MA	0.002	0.5	0.40	0
VH	0.016	3.9	0.27	0

TOTAL = 0.413 Sq.Miles XKSAT = 0.07 %Rock = 0

DTHETA

Dry = 0.30 PSIF = 8.00
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.016	OPEN	3.9	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.339	M.D.R.	81.9	NORMAL	50	30	0.25	0.05	Hi	0.09
0.025	M.F.R.	6.0	NORMAL	50	45	0.25	0.05	Hi	0.12
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.012	Comm	2.9	NORMAL	75	80	0.10	0.02	Min	0.03
0.012	Park	2.9	NORMAL	90	10	0.20	0.10	Hi	0.13
0.000	RowCrop	0.0	NORMAL	85	0	0.50	0.10	Hi	
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.010	WATER	2.4	WET	0	10	0.00	0.00	Min	0.03

0.414 = Total Area Avg. = 49 32% 0.240

PERCENT OF SUBBASIN DRY = 4.0 %
NORMAL = 94.0 %
WET = 2.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.15

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.10

IMPERVIOUS AREA: URBAN @ 100 % effective = 32
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 32

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
24-21N	0.413	0.760	0.084	20.0	0.24	0.15	8.00	0.10	32

LOSS PARAMETERS FOR SUBBASIN: 24-21S

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.015	2.5	0.26	0
AO	0.147	24.0	0.04	0
BT	0.000	0.0	0.25	0
GE	0.027	4.4	0.26	0
GGA	0.089	14.5	0.25	0
GT	0.244	39.9	0.04	0
MA	0.027	4.4	0.40	0
VH	0.038	6.2	0.27	0
VK	0.025	4.1	0.26	0

TOTAL = 0.612 Sq.Miles XKSAT = 0.08 %Rock = 0

DTHETA

Dry = 0.32 PSIF = 7.60
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.053	OPEN	8.7	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.023	L.D.R.	3.8	NORMAL	50	15	0.30	0.05	Hi	0.12
0.315	M.D.R.	51.5	NORMAL	50	30	0.25	0.05	Hi	0.09
0.065	M.F.R.	10.6	NORMAL	50	45	0.25	0.05	Hi	0.11
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.088	Comm	14.4	NORMAL	75	80	0.10	0.02	Min	0.03
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.012	RowCrop	2.0	NORMAL	85	0	0.50	0.10	Hi	0.13
0.026	SCHOOL1	4.2	NORMAL	80	45	0.29	0.05	Hi	0.12
0.030	WATER	4.9	WET	0	10	0.00	0.00	Min	0.03

0.612 = Total Area Avg. = 48 39% 0.220

PERCENT OF SUBBASIN DRY = 9.0 %
NORMAL = 86.0 %
WET = 5.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.16

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.11

IMPERVIOUS AREA: URBAN @ 100 % effective = 39

ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 39

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
24-21S	0.612	0.530	0.068	12.0	0.22	0.16	7.60	0.11	39

LOSS PARAMETERS FOR SUBBASIN: 23-21

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.077	7.8	0.26	0
AN	0.040	4.1	0.05	0
AO	0.306	31.0	0.04	0
BT	0.041	4.2	0.25	0
ES	0.019	1.9	0.25	0
GGA	0.378	38.3	0.25	0
GT	0.104	10.6	0.04	0
LE	0.005	0.5	0.04	0
TT	0.010	1.0	0.04	0
VH	0.006	0.6	0.27	0
VK	0.000	0.0	0.26	0

TOTAL = 0.986 Sq.Miles XKSAT = 0.11 %Rock = 0

DTHETA

Dry = 0.36 PSIF = 6.80
Normal = 0.17
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.041	OPEN	4.2	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.006	L.D.R.	0.6	NORMAL	50	15	0.30	0.05	Hi	0.14
0.823	M.D.R.	83.3	NORMAL	50	30	0.25	0.05	Hi	0.08
0.015	M.F.R.	1.5	NORMAL	50	45	0.25	0.05	Hi	0.13
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.072	Comm	7.3	NORMAL	75	80	0.10	0.02	Min	0.03
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.005	RowCrop	0.5	NORMAL	85	0	0.50	0.10	Hi	0.14
0.024	SCHOOL1	2.4	NORMAL	80	45	0.29	0.05	Hi	0.12
0.002	WATER	0.2	WET	0	10	0.00	0.00	Min	0.04

0.988 = Total Area Avg. = 49 33% 0.240

PERCENT OF SUBBASIN DRY = 4.0 %

NORMAL = 96.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.18

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.16

IMPERVIOUS AREA: URBAN @ 100 % effective = 33
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 33

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
23-21	0.986	1.260	0.073	18.0	0.24	0.18	6.80	0.16	33

LOSS PARAMETERS FOR SUBBASIN: 22-21

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AO	0.024	2.4	0.04	0
ES	0.003	0.3	0.25	0
GGA	0.000	0.0	0.25	0
GT	0.427	42.7	0.04	0
LE	0.134	13.4	0.04	0
MR	0.082	8.2	0.05	0
TT	0.322	32.2	0.04	0
TW	0.009	0.9	0.05	0

TOTAL = 1.001 Sq.Miles XKSAT = 0.04 %Rock = 0

DTHETA

Dry = 0.25 PSIF = 9.70
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.054	OPEN	5.4	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.560	M.D.R.	55.9	NORMAL	50	30	0.25	0.05	Hi	0.09
0.037	M.F.R.	3.7	NORMAL	50	45	0.25	0.05	Hi	0.12
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.054	Comm	5.4	NORMAL	75	80	0.10	0.02	Min	0.03
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.273	RowCrop	27.2	NORMAL	85	0	0.50	0.10	Hi	0.09
0.024	SCHOOL1	2.4	NORMAL	80	45	0.29	0.05	Hi	0.12

0.000	WATER	0.0	WET	0	10	0.00	0.00	Min

1.002 = Total Area Avg. = 61 24% 0.310

PERCENT OF SUBBASIN
DRY = 5.0 %
NORMAL = 95.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.16

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.06

IMPERVIOUS AREA:
URBAN @ 100 % effective = 24
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 24

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
22-21	1.001	1.420	0.073	16.0	0.31	0.16	9.70	0.06	24

LOSS PARAMETERS FOR SUBBASIN: 21-21

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
GT	0.232	23.0	0.04	0
LE	0.342	34.0	0.04	0
MR	0.240	23.8	0.05	0
TT	0.193	19.2	0.04	0

TOTAL = 1.007 Sq.Miles XKSAT = 0.04 %Rock = 0

DTHETA
Dry = 0.25 PSIF = 9.70
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.004	OPEN	0.4	DRY	10	0	0.20	0.02	Min	0.04
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.000	M.D.R.	0.0	NORMAL	50	30	0.25	0.05	Hi	
0.000	M.F.R.	0.0	NORMAL	50	45	0.25	0.05	Hi	
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.001	Comm	0.1	NORMAL	75	80	0.10	0.02	Min	0.04
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
1.002	RowCrop	99.5	NORMAL	85	0	0.50	0.10	Hi	0.08

0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min

1.007 = Total Area Avg. = 85 0% 0.500

PERCENT OF SUBBASIN
DRY = 0.0 %
NORMAL = 100. %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.15

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.07

IMPERVIOUS AREA:
URBAN @ 100 % effective = 0
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 0

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
21-21	1.007	1.240	0.079	14.0	0.50	0.15	9.70	0.07	0

LOSS PARAMETERS FOR SUBBASIN: 20-21

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
GGA	0.004	0.4	0.25	0
GT	0.057	5.6	0.04	0
LCA	0.037	3.6	0.25	0
LE	0.106	10.4	0.04	0
MP	0.167	16.3	0.25	0
MR	0.408	39.9	0.05	0
TT	0.215	21.0	0.04	0
TU	0.023	2.2	0.25	0
TW	0.005	0.5	0.05	0

TOTAL = 1.022 Sq.Miles XKSAT = 0.07 %Rock = 0

DTHETA
Dry = 0.30 PSIF = 8.00
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.108	OPEN	10.6	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	

0.353	M.D.R.	34.5	NORMAL	50	30	0.25	0.05	Hi	0.09
0.119	M.F.R.	11.6	NORMAL	50	45	0.25	0.05	Hi	0.10
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.060	Comm	5.9	NORMAL	75	80	0.10	0.02	Min	0.03
0.180	Park	17.6	NORMAL	90	10	0.20	0.10	Hi	0.10
0.171	RowCrop	16.7	NORMAL	85	0	0.50	0.10	Hi	0.10
0.020	SCHOOL1	2.0	NORMAL	80	45	0.29	0.05	Hi	0.12
0.011	WATER	1.1	WET	0	10	0.00	0.00	Min	0.03
1.022 = Total Area			Avg. =	61	24%	0.270			

PERCENT OF SUBBASIN DRY = 11.0 %
NORMAL = 88.0 %
WET = 1.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.17

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.11

IMPERVIOUS AREA: URBAN @ 100 % effective = 24
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 24

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
20-21	1.022	1.590	0.070	9.0	0.27	0.17	8.00	0.11	24

LOSS PARAMETERS FOR SUBBASIN: 19-21

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.066	7.6	0.26	0
ABA	0.112	12.8	0.38	0
AO	0.082	9.4	0.04	0
BR	0.000	0.0	1.05	0
GE	0.039	4.5	0.26	0
GGA	0.333	38.2	0.25	0
GT	0.006	0.7	0.04	0
LB	0.016	1.8	0.40	0
LCA	0.066	7.6	0.25	0
LE	0.005	0.6	0.04	0
MA	0.029	3.3	0.40	0
MP	0.003	0.3	0.25	0
MR	0.020	2.3	0.05	0
VG	0.000	0.0	0.91	0
VH	0.084	9.6	0.27	0
VK	0.011	1.3	0.26	0
TOTAL =	0.872 Sq.Miles	XKSAT = 0.22	%Rock = 0	

DTHETA

Dry = 0.36 PSIF = 5.10
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.134	OPEN	15.3	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.149	M.D.R.	17.0	NORMAL	50	30	0.25	0.05	Hi	0.10
0.000	M.F.R.	0.0	NORMAL	50	45	0.25	0.05	Hi	
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.022	Comm	2.5	NORMAL	75	80	0.10	0.02	Min	0.03
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.548	RowCrop	62.7	NORMAL	85	0	0.50	0.10	Hi	0.09
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.021	WATER	2.4	WET	0	10	0.00	0.00	Min	0.03
0.874 = Total Area			Avg. =	68	10%	0.390			

PERCENT OF SUBBASIN DRY = 15.0 %
NORMAL = 82.0 %
WET = 2.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.26

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.36

IMPERVIOUS AREA: URBAN @ 100 % effective = 10
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 10

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
19-21	0.872	1.330	0.070	26.0	0.39	0.26	5.10	0.36	10

LOSS PARAMETERS FOR SUBBASIN: 26-22N

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AN	0.029	7.6	0.05	0
AO	0.013	3.4	0.04	0
BS	0.006	1.6	0.39	0
GGA	0.244	64.2	0.25	0
LCA	0.011	2.9	0.25	0
MA	0.034	8.9	0.40	0
VH	0.043	11.3	0.27	0

TOTAL = 0.380 Sq.Miles XKSAT = 0.22 %Rock = 0

DTHETA
========
Dry = 0.36 PSIF = 5.10
Normal = 0.25
Wet = 0.00

LAND USE
========

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.000	OPEN	0.0	DRY	10	0	0.20	0.02	Min	
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.027	M.D.R.	7.1	NORMAL	50	30	0.25	0.05	Hi	0.12
0.000	M.F.R.	0.0	NORMAL	50	45	0.25	0.05	Hi	
0.296	Ind	77.9	NORMAL	60	55	0.15	0.03	Min	0.03
0.046	Comm	12.1	NORMAL	75	80	0.10	0.02	Min	0.03
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.000	RowCrop	0.0	NORMAL	85	0	0.50	0.10	Hi	
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.011	WATER	2.9	WET	0	10	0.00	0.00	Min	0.03

0.380 = Total Area Avg. = 60 58% 0.150

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 97.0 %
WET = 3.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.24

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.34

IMPERVIOUS AREA: URBAN @ 100 % effective = 58
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 58

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
26-22N	0.380	0.570	0.030	15.0	0.15	0.24	5.10	0.34	58

LOSS PARAMETERS FOR SUBBASIN: 26-22W

Soil Survey Used Central County

XKSAT
=======

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AO	0.001	1.3	0.04	0
BS	0.013	16.5	0.39	0
GE	0.003	3.8	0.26	0
GGA	0.018	22.8	0.25	0
MA	0.044	55.7	0.40	0

TOTAL = 0.079 Sq.Miles XKSAT = 0.34 %Rock = 0

DTHETA
========
Dry = 0.35 PSIF = 4.30
Normal = 0.25
Wet = 0.00

LAND USE
========

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.000	OPEN	0.0	DRY	10	0	0.20	0.02	Min	
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.000	M.D.R.	0.0	NORMAL	50	30	0.25	0.05	Hi	
0.000	M.F.R.	0.0	NORMAL	50	45	0.25	0.05	Hi	
0.075	Ind	96.2	NORMAL	60	55	0.15	0.03	Min	0.03
0.000	Comm	0.0	NORMAL	75	80	0.10	0.02	Min	
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.000	RowCrop	0.0	NORMAL	85	0	0.50	0.10	Hi	
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.003	WATER	3.8	WET	0	10	0.00	0.00	Min	0.04

0.078 = Total Area Avg. = 60 57% 0.140

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 96.0 %
WET = 4.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.24

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.53

IMPERVIOUS AREA: URBAN @ 100 % effective = 57
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 57

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
26-22W	0.079	0.430	0.029	13.0	0.14	0.24	4.30	0.53	57

LOSS PARAMETERS FOR SUBBASIN: 27-22N

Soil Survey Used Central County

XKSAT
=======

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AO	0.076	20.4	0.04	0
GE	0.014	3.8	0.26	0

GGA	0.238	64.0	0.25	0
GT	0.005	1.3	0.04	0
MA	0.017	4.6	0.40	0
TT	0.022	5.9	0.04	0

TOTAL = 0.372 Sq.Miles XKSAT = 0.15 %Rock = 0

DTHETA
========
Dry = 0.40 PSIF = 6.00
Normal = 0.25
Wet = 0.00

LAND USE
========

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.000	OPEN	0.0	DRY	10	0	0.20	0.02	Min	
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.000	M.D.R.	0.0	NORMAL	50	30	0.25	0.05	Hi	
0.000	M.F.R.	0.0	NORMAL	50	45	0.25	0.05	Hi	
0.135	Ind	36.3	NORMAL	60	55	0.15	0.03	Min	0.03
0.232	Comm	62.4	NORMAL	75	80	0.10	0.02	Min	0.03
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.000	RowCrop	0.0	NORMAL	85	0	0.50	0.10	Hi	
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.005	WATER	1.3	WET	0	10	0.00	0.00	Min	0.04

0.372 = Total Area Avg. = 66 71% 0.120

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 99.0 %
WET = 1.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.25

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.24

IMPERVIOUS AREA: URBAN @ 100 % effective = 71
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 71

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
27-22N	0.372	1.150	0.025	10.0	0.12	0.25	6.00	0.24	71

LOSS PARAMETERS FOR SUBBASIN: 28-22N

Soil Survey Used Central County

XKSAT
=======

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.010	2.2	0.26	0
AO	0.026	5.8	0.04	0
GGA	0.416	92.0	0.25	0

TOTAL = 0.452 Sq.Miles XKSAT = 0.22 %Rock = 0

DTHETA
========
Dry = 0.36 PSIF = 5.10
Normal = 0.25
Wet = 0.00

LAND USE
========

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.000	OPEN	0.0	DRY	10	0	0.20	0.02	Min	
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.335	M.D.R.	74.3	NORMAL	50	30	0.25	0.05	Hi	0.09
0.021	M.F.R.	4.7	NORMAL	50	45	0.25	0.05	Hi	0.12
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.065	Comm	14.4	NORMAL	75	80	0.10	0.02	Min	0.03
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.000	RowCrop	0.0	NORMAL	85	0	0.50	0.10	Hi	
0.012	SCHOOL1	2.7	NORMAL	80	45	0.29	0.05	Hi	0.13
0.018	WATER	4.0	WET	0	10	0.00	0.00	Min	0.03

0.451 = Total Area Avg. = 52 41% 0.220

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 96.0 %
WET = 4.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.24

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.32

IMPERVIOUS AREA: URBAN @ 100 % effective = 41
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 41

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
28-22N	0.452	0.710	0.077	14.0	0.22	0.24	5.10	0.32	41

LOSS PARAMETERS FOR SUBBASIN: 29-22N

Soil Survey Used Central County

XKSAT
=======

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop

AA	0.009	2.2	0.26	0
AO	0.126	30.4	0.04	0
GGA	0.279	67.4	0.25	0

TOTAL = 0.414 Sq.Miles XKSAT = 0.14 %Rock = 0

DTHETA
========
Dry = 0.39 PSIF = 6.20
Normal = 0.23
Wet = 0.00

LAND USE
========

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.137	OPEN	33.0	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.158	M.D.R.	38.1	NORMAL	50	30	0.25	0.05	Hi	0.10
0.024	M.F.R.	5.8	NORMAL	50	45	0.25	0.05	Hi	0.12
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.061	Comm	14.7	NORMAL	75	80	0.10	0.02	Min	0.03
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.000	RowCrop	0.0	NORMAL	85	0	0.50	0.10	Hi	
0.029	SCHOOL1	7.0	NORMAL	80	45	0.29	0.05	Hi	0.12
0.006	WATER	1.4	WET	0	10	0.00	0.00	Min	0.04

0.415 = Total Area Avg. = 34 30% 0.210

PERCENT OF SUBBASIN DRY = 33.0 %
NORMAL = 66.0 %
WET = 1.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.28

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.18

IMPERVIOUS AREA: URBAN @ 100 % effective = 30
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 30

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
29-22N	0.414	0.650	0.058	17.0	0.21	0.28	6.20	0.18	30

LOSS PARAMETERS FOR SUBBASIN: 30-22N

Soil Survey Used Central County

XKSAT
=======

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop

AO	0.070	43.2	0.04	0
GGA	0.084	51.8	0.25	0
GT	0.008	4.9	0.04	0

TOTAL = 0.162 Sq.Miles XKSAT = 0.10 %Rock = 0

DTHETA
========
Dry = 0.35 PSIF = 7.00
Normal = 0.15
Wet = 0.00

LAND USE
========

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.000	OPEN	0.0	DRY	10	0	0.20	0.02	Min	
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.130	M.D.R.	81.2	NORMAL	50	30	0.25	0.05	Hi	0.10
0.002	M.F.R.	1.2	NORMAL	50	45	0.25	0.05	Hi	0.15
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.017	Comm	10.6	NORMAL	75	80	0.10	0.02	Min	0.03
0.011	Park	6.9	NORMAL	90	10	0.20	0.10	Hi	0.13
0.000	RowCrop	0.0	NORMAL	85	0	0.50	0.10	Hi	
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

0.160 = Total Area Avg. = 55 34% 0.230

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 100. %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.15

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.15

IMPERVIOUS AREA: URBAN @ 100 % effective = 34
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 34

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
30-22N	0.162	0.820	0.092	14.0	0.23	0.15	7.00	0.15	34

LOSS PARAMETERS FOR SUBBASIN: 26-22E

Soil Survey Used Central County

XKSAT
=======

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop

AN	0.006	1.6	0.05	0
AO	0.265	69.0	0.04	0
GGA	0.090	23.4	0.25	0
LE	0.023	6.0	0.04	0

TOTAL = 0.384 Sq.Miles XKSAT = 0.06 %Rock = 0

DTHETA
========
Dry = 0.29 PSIF = 8.40
Normal = 0.15
Wet = 0.00

LAND USE
========

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.009	OPEN	2.3	DRY	10	0	0.20	0.02	Min	0.04
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.087	M.D.R.	22.7	NORMAL	50	30	0.25	0.05	Hi	0.11
0.000	M.F.R.	0.0	NORMAL	50	45	0.25	0.05	Hi	
0.216	Ind	56.2	NORMAL	60	55	0.15	0.03	Min	0.03
0.065	Comm	16.9	NORMAL	75	80	0.10	0.02	Min	0.03
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.000	RowCrop	0.0	NORMAL	85	0	0.50	0.10	Hi	
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.007	WATER	1.8	WET	0	10	0.00	0.00	Min	0.04

0.384 = Total Area Avg. = 55 53% 0.160

PERCENT OF SUBBASIN DRY = 2.0 %
NORMAL = 96.0 %
WET = 2.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.15

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.09

IMPERVIOUS AREA: URBAN @ 100 % effective = 53
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 53

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
26-22E	0.384	0.840	0.040	19.0	0.16	0.15	8.40	0.09	53

LOSS PARAMETERS FOR SUBBASIN: 26-22S

Soil Survey Used Central County

XKSAT
========

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock	Outcrop
AA	0.011	2.8	0.26	0	
AN	0.023	5.9	0.05	0	
AO	0.162	41.2	0.04	0	
GGA	0.118	30.0	0.25	0	
GT	0.070	17.8	0.04	0	
GV	0.006	1.5	0.01	0	
MA	0.003	0.8	0.40	0	

TOTAL = 0.393 Sq.Miles XKSAT = 0.07 %Rock = 0

DTHETA
========
Dry = 0.30 PSIF = 8.00
Normal = 0.15
Wet = 0.00

LAND USE
========

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.000	OPEN	0.0	DRY	10	0	0.20	0.02	Min	
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.002	M.D.R.	0.5	NORMAL	50	30	0.25	0.05	Hi	0.15
0.000	M.F.R.	0.0	NORMAL	50	45	0.25	0.05	Hi	
0.371	Ind	94.6	NORMAL	60	55	0.15	0.03	Min	0.03
0.014	Comm	3.6	NORMAL	75	80	0.10	0.02	Min	0.03
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.000	RowCrop	0.0	NORMAL	85	0	0.50	0.10	Hi	
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.005	WATER	1.3	WET	0	10	0.00	0.00	Min	0.04

0.392 = Total Area Avg. = 60 56% 0.150

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 99.0 %
WET = 1.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.15

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.11

IMPERVIOUS AREA: URBAN @ 100 % effective = 56
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 56

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
26-22S	0.393	0.480	0.026	22.0	0.15	0.15	8.00	0.11	56

LOSS PARAMETERS FOR SUBBASIN: 27-22S

Soil Survey Used Central County

XKSAT
=======

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AO	0.040	6.3	0.04	0
GE	0.036	5.7	0.26	0
GGA	0.056	8.9	0.25	0
GT	0.326	51.7	0.04	0
GV	0.011	1.7	0.01	0
TT	0.162	25.7	0.04	0

TOTAL = 0.631 Sq.Miles XKSAT = 0.05 %Rock = 0

DTHETA
========

Dry = 0.27 PSIF = 8.80
Normal = 0.15
Wet = 0.00

LAND USE
========

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.032	OPEN	5.1	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.424	M.D.R.	67.2	NORMAL	50	30	0.25	0.05	Hi	0.09
0.059	M.F.R.	9.4	NORMAL	50	45	0.25	0.05	Hi	0.11
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.086	Comm	13.6	NORMAL	75	80	0.10	0.02	Min	0.03
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.000	RowCrop	0.0	NORMAL	85	0	0.50	0.10	Hi	
0.013	SCHOOL1	2.1	NORMAL	80	45	0.29	0.05	Hi	0.13
0.017	WATER	2.7	WET	0	10	0.00	0.00	Min	0.03

0.631 = Total Area Avg. = 48 39% 0.220

PERCENT OF SUBBASIN DRY = 5.0 %
NORMAL = 92.0 %
WET = 3.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.15

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.07

IMPERVIOUS AREA: URBAN @ 100 % effective = 39
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 39

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
27-22S	0.631	0.940	0.072	14.0	0.22	0.15	8.80	0.07	39

LOSS PARAMETERS FOR SUBBASIN: 28-22S

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Soil Survey Used Central County

XKSAT
=======

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.023	4.2	0.26	0
AN	0.001	0.2	0.05	0
AO	0.085	15.6	0.04	0
GGA	0.307	56.5	0.25	0
GT	0.095	17.5	0.04	0
TT	0.032	5.9	0.04	0

TOTAL = 0.543 Sq.Miles XKSAT = 0.12 %Rock = 0

DTHETA
========

Dry = 0.37 PSIF = 6.60
Normal = 0.19
Wet = 0.00

LAND USE
========

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.000	OPEN	0.0	DRY	10	0	0.20	0.02	Min	
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.470	M.D.R.	86.7	NORMAL	50	30	0.25	0.05	Hi	0.09
0.001	M.F.R.	0.2	NORMAL	50	45	0.25	0.05	Hi	0.15
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.032	Comm	5.9	NORMAL	75	80	0.10	0.02	Min	0.03
0.014	Park	2.6	NORMAL	90	10	0.20	0.10	Hi	0.13
0.000	RowCrop	0.0	NORMAL	85	0	0.50	0.10	Hi	
0.022	SCHOOL1	4.1	NORMAL	80	45	0.29	0.05	Hi	0.12
0.003	WATER	0.6	WET	0	10	0.00	0.00	Min	0.04

0.542 = Total Area Avg. = 53 33% 0.240

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 100. %
WET = 1.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.19

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.18

IMPERVIOUS AREA: URBAN @ 100 % effective = 33
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 33

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
28-22S	0.543	0.690	0.083	15.0	0.24	0.19	6.60	0.18	33

LOSS PARAMETERS FOR SUBBASIN: 29-22S

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.002	0.3	0.26	0
AN	0.005	0.8	0.05	0
AO	0.236	39.7	0.04	0
GGA	0.351	59.1	0.25	0

TOTAL = 0.594 Sq.Miles XKSAT = 0.12 %Rock = 0

DTHETA

Dry = 0.37 PSIF = 6.60
Normal = 0.19
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.004	OPEN	0.7	DRY	10	0	0.20	0.02	Min	0.04
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.386	M.D.R.	65.0	NORMAL	50	30	0.25	0.05	Hi	0.09
0.006	M.F.R.	1.0	NORMAL	50	45	0.25	0.05	Hi	0.14
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.041	Comm	6.9	NORMAL	75	80	0.10	0.02	Min	0.03
0.054	Park	9.1	NORMAL	90	10	0.20	0.10	Hi	0.11
0.000	RowCrop	0.0	NORMAL	85	0	0.50	0.10	Hi	
0.082	SCHOOL1	13.8	NORMAL	80	45	0.29	0.05	Hi	0.11
0.021	WATER	3.5	WET	0	10	0.00	0.00	Min	0.03

0.594 = Total Area Avg. = 59 36% 0.230

PERCENT OF SUBBASIN
DRY = 1.0 %
NORMAL = 96.0 %
WET = 4.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.19

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.19

IMPERVIOUS AREA:
URBAN @ 100 % effective = 36
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 36

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
29-22S	0.594	0.790	0.079	16.0	0.23	0.19	6.60	0.19	36

LOSS PARAMETERS FOR SUBBASIN: 30-22S

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AO	0.568	70.0	0.04	0
GGA	0.223	27.5	0.25	0
GT	0.020	2.5	0.04	0

TOTAL = 0.811 Sq.Miles XKSAT = 0.07 %Rock = 0

DTHETA

Dry = 0.30 PSIF = 8.00
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.037	OPEN	4.6	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.649	M.D.R.	80.0	NORMAL	50	30	0.25	0.05	Hi	0.08
0.020	M.F.R.	2.5	NORMAL	50	45	0.25	0.05	Hi	0.12
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.057	Comm	7.0	NORMAL	75	80	0.10	0.02	Min	0.03
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.000	RowCrop	0.0	NORMAL	85	0	0.50	0.10	Hi	
0.028	SCHOOL1	3.5	NORMAL	80	45	0.29	0.05	Hi	0.12
0.020	WATER	2.5	WET	0	10	0.00	0.00	Min	0.03

0.811 = Total Area Avg. = 49 35% 0.230

PERCENT OF SUBBASIN
DRY = 5.0 %
NORMAL = 93.0 %
WET = 2.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.15

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.10

IMPERVIOUS AREA:
URBAN @ 100 % effective = 35
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 35

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
30-22S	0.811	1.190	0.074	16.0	0.23	0.15	8.00	0.10	35

LOSS PARAMETERS FOR SUBBASIN: 25-21

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.000	0.0	0.26	0
AO	0.691	69.0	0.04	0
BT	0.006	0.6	0.25	0
GGA	0.007	0.7	0.25	0
GT	0.297	29.7	0.04	0

TOTAL = 1.001 Sq.Miles XKSAT = 0.04 %Rock = 0

DTHETA

Dry = 0.25 PSIF = 9.70
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.155	OPEN	15.5	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.372	M.D.R.	37.2	NORMAL	50	30	0.25	0.05	Hi	0.09
0.201	M.F.R.	20.1	NORMAL	50	45	0.25	0.05	Hi	0.10
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.109	Comm	10.9	NORMAL	75	80	0.10	0.02	Min	0.03
0.117	Park	11.7	NORMAL	90	10	0.20	0.10	Hi	0.10
0.000	RowCrop	0.0	NORMAL	85	0	0.50	0.10	Hi	
0.046	SCHOOL1	4.6	NORMAL	80	45	0.29	0.05	Hi	0.11
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	
1.000 = Total Area			Avg. =	49	32%	0.220			

PERCENT OF SUBBASIN DRY = 16.0 %
NORMAL = 84.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.17

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.06

IMPERVIOUS AREA: URBAN @ 100 % effective = 32
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 32

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
25-21	1.001	1.380	0.065	14.0	0.22	0.17	9.70	0.06	32

LOSS PARAMETERS FOR SUBBASIN: 26-21

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.129	13.0	0.26	0
AN	0.048	4.8	0.05	0
AO	0.406	41.0	0.04	0
BT	0.044	4.4	0.25	0
GGA	0.303	30.6	0.25	0
GT	0.060	6.1	0.04	0

TOTAL = 0.990 Sq.Miles XKSAT = 0.10 %Rock = 0

DTHETA

Dry = 0.35 PSIF = 7.00
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.031	OPEN	3.1	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.846	M.D.R.	85.4	NORMAL	50	30	0.25	0.05	Hi	0.08
0.000	M.F.R.	0.0	NORMAL	50	45	0.25	0.05	Hi	
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.071	Comm	7.2	NORMAL	75	80	0.10	0.02	Min	0.03
0.015	Park	1.5	NORMAL	90	10	0.20	0.10	Hi	0.13
0.002	RowCrop	0.2	NORMAL	85	0	0.50	0.10	Hi	0.15
0.025	SCHOOL1	2.5	NORMAL	80	45	0.29	0.05	Hi	0.12
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	
0.990 = Total Area			Avg. =	50	33%	0.240			

PERCENT OF SUBBASIN DRY = 3.0 %
NORMAL = 97.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.16

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.14

IMPERVIOUS AREA: URBAN @ 100 % effective = 33
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 33

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
26-21	0.990	1.400	0.074	15.0	0.24	0.16	7.00	0.14	33

LOSS PARAMETERS FOR SUBBASIN: 27-21

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.051	5.1	0.26	0
AN	0.213	21.2	0.05	0
AO	0.198	19.7	0.04	0
BT	0.014	1.4	0.25	0
GGA	0.276	27.5	0.25	0
GT	0.212	21.1	0.04	0
LE	0.000	0.0	0.04	0
MR	0.007	0.7	0.05	0
TT	0.007	0.7	0.04	0
VK	0.027	2.7	0.26	0

TOTAL = 1.005 Sq.Miles XKSAT = 0.08 %Rock = 0

DTHETA

Dry = 0.32 PSIF = 7.60
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.088	OPEN	8.8	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.019	L.D.R.	1.9	NORMAL	50	15	0.30	0.05	Hi	0.12
0.630	M.D.R.	62.8	NORMAL	50	30	0.25	0.05	Hi	0.08
0.020	M.F.R.	2.0	NORMAL	50	45	0.25	0.05	Hi	0.12
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.019	Comm	1.9	NORMAL	75	80	0.10	0.02	Min	0.03
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.196	RowCrop	19.5	NORMAL	85	0	0.50	0.10	Hi	0.10
0.032	SCHOOL1	3.2	NORMAL	80	45	0.29	0.05	Hi	0.12
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

1.004 = Total Area Avg. = 55 23% 0.290

PERCENT OF SUBBASIN DRY = 9.0 %
NORMAL = 91.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.17

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.12

IMPERVIOUS AREA: URBAN @ 100 % effective = 23

ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 23

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
27-21	1.005	1.340	0.073	13.0	0.29	0.17	7.60	0.12	23

LOSS PARAMETERS FOR SUBBASIN: 28-21

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AO	0.064	6.4	0.04	0
GGA	0.018	1.8	0.25	0
GT	0.347	34.7	0.04	0
LE	0.101	10.1	0.04	0
MR	0.312	31.2	0.05	0
TT	0.066	6.6	0.04	0
TW	0.091	9.1	0.05	0

TOTAL = 0.999 Sq.Miles XKSAT = 0.05 %Rock = 0

DTHETA

Dry = 0.27 PSIF = 8.80
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.000	OPEN	0.0	DRY	10	0	0.20	0.02	Min	
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.007	L.D.R.	0.7	NORMAL	50	15	0.30	0.05	Hi	0.13
0.000	M.D.R.	0.0	NORMAL	50	30	0.25	0.05	Hi	
0.000	M.F.R.	0.0	NORMAL	50	45	0.25	0.05	Hi	
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.004	Comm	0.4	NORMAL	75	80	0.10	0.02	Min	0.04
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.954	RowCrop	95.4	NORMAL	85	0	0.50	0.10	Hi	0.08
0.035	SCHOOL1	3.5	NORMAL	80	45	0.29	0.05	Hi	0.12
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

1.000 = Total Area Avg. = 85 2% 0.490

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 100. %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.15

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.09

IMPERVIOUS AREA: URBAN @ 100 % effective = 2
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 2

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
28-21	0.999	1.110	0.080	11.0	0.49	0.15	8.80	0.09	2

LOSS PARAMETERS FOR SUBBASIN: 29-21N

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
GT	0.115	15.1	0.04	0
LE	0.017	2.2	0.04	0
MR	0.309	40.6	0.05	0
TT	0.266	35.0	0.04	0
TW	0.054	7.1	0.05	0

TOTAL = 0.761 Sq.Miles XKSAT = 0.04 %Rock = 0

DTHETA

Dry = 0.25 PSIF = 9.70
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.001	OPEN	0.1	DRY	10	0	0.20	0.02	Min	0.04
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.000	M.D.R.	0.0	NORMAL	50	30	0.25	0.05	Hi	
0.000	M.F.R.	0.0	NORMAL	50	45	0.25	0.05	Hi	
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.000	Comm	0.0	NORMAL	75	80	0.10	0.02	Min	
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.744	RowCrop	97.8	NORMAL	85	0	0.50	0.10	Hi	0.08
0.001	SCHOOL1	0.1	NORMAL	80	45	0.29	0.05	Hi	0.15
0.015	WATER	2.0	WET	0	10	0.00	0.00	Min	0.03
0.761 = Total Area			Avg. =	85	2%	0.490			

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 98.0 %
WET = 2.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.15

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.07

IMPERVIOUS AREA: URBAN @ 100 % effective = 2
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 2

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
29-21N	0.761	1.410	0.082	9.0	0.49	0.15	9.70	0.07	2

LOSS PARAMETERS FOR SUBBASIN: 29-21S

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
GT	0.109	41.6	0.04	0
LE	0.010	3.8	0.04	0
MR	0.005	1.9	0.05	0
TT	0.138	52.7	0.04	0

TOTAL = 0.262 Sq.Miles XKSAT = 0.04 %Rock = 0

DTHETA

Dry = 0.25 PSIF = 9.70
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.016	OPEN	6.1	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.230	L.D.R.	87.8	NORMAL	50	15	0.30	0.05	Hi	0.10
0.000	M.D.R.	0.0	NORMAL	50	30	0.25	0.05	Hi	
0.000	M.F.R.	0.0	NORMAL	50	45	0.25	0.05	Hi	
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.000	Comm	0.0	NORMAL	75	80	0.10	0.02	Min	
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.000	RowCrop	0.0	NORMAL	85	0	0.50	0.10	Hi	
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.016	WATER	6.1	WET	0	10	0.00	0.00	Min	0.03
0.262 = Total Area			Avg. =	47	19%	0.280			

PERCENT OF SUBBASIN DRY = 6.0 %
NORMAL = 88.0 %

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WET = 6.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.15

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.06

IMPERVIOUS AREA: URBAN @ 100 % effective = 19
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 19

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
29-21S	0.262	0.880	0.086	9.0	0.28	0.15	9.70	0.06	19

LOSS PARAMETERS FOR SUBBASIN: 30-21N

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.024	3.6	0.26	0
AO	0.000	0.0	0.04	0
BR	0.009	1.3	1.05	0
BS	0.042	6.3	0.39	0
GE	0.044	6.6	0.26	0
GGA	0.086	12.9	0.25	0
GT	0.139	20.8	0.04	0
LE	0.003	0.4	0.04	0
MA	0.012	1.8	0.40	0
MR	0.083	12.4	0.05	0
TA	0.013	1.9	0.25	0
TD	0.009	1.3	1.20	0
TT	0.120	18.0	0.04	0
VG	0.017	2.5	0.91	0
VH	0.066	9.9	0.27	0

TOTAL = 0.667 Sq.Miles XKSAT = 0.11 %Rock = 0

DTHETA

Dry = 0.36 PSIF = 6.80
Normal = 0.17
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.358	OPEN	53.7	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.190	M.D.R.	28.5	NORMAL	50	30	0.25	0.05	Hi	0.10
0.000	M.F.R.	0.0	NORMAL	50	45	0.25	0.05	Hi	
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.002	Comm	0.3	NORMAL	75	80	0.10	0.02	Min	0.04
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.000	RowCrop	0.0	NORMAL	85	0	0.50	0.10	Hi	
0.068	SCHOOL1	10.2	NORMAL	80	45	0.29	0.05	Hi	0.11
0.049	WATER	7.3	WET	0	10	0.00	0.00	Min	0.03

0.667 = Total Area Avg. = 25 21% 0.210

PERCENT OF SUBBASIN DRY = 54.0 %
NORMAL = 39.0 %
WET = 7.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.26

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.13

IMPERVIOUS AREA: URBAN @ 100 % effective = 21
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 21

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
30-21N	0.667	0.710	0.047	15.0	0.21	0.26	6.80	0.13	21

LOSS PARAMETERS FOR SUBBASIN: 30-21S

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
BR	0.023	3.1	1.05	0
BS	0.018	2.4	0.39	0
CB	0.036	4.8	0.40	0
GE	0.075	10.0	0.26	0
GGA	0.128	17.1	0.25	0
GT	0.148	19.8	0.04	0
LE	0.038	5.1	0.04	0
MA	0.047	6.3	0.40	0
MR	0.019	2.5	0.05	0
TA	0.001	0.1	0.25	0
TT	0.198	26.5	0.04	0
VG	0.011	1.5	0.91	0
VH	0.006	0.8	0.27	0

TOTAL = 0.748 Sq.Miles XKSAT = 0.11 %Rock = 0

DTHETA

Dry = 0.36 PSIF = 6.80
Normal = 0.17
Wet = 0.00

LAND USE
========

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.538	OPEN	71.7	DRY	10	0	0.20	0.02	Min	0.02
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.122	M.D.R.	16.3	NORMAL	50	30	0.25	0.05	Hi	0.10
0.000	M.F.R.	0.0	NORMAL	50	45	0.25	0.05	Hi	
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.000	Comm	0.0	NORMAL	75	80	0.10	0.02	Min	
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.038	RowCrop	5.1	NORMAL	85	0	0.50	0.10	Hi	0.12
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.052	WATER	6.9	WET	0	10	0.00	0.00	Min	0.03
0.750 = Total Area			Avg. =	19	12%	0.210			

PERCENT OF SUBBASIN
DRY = 72.0 %
NORMAL = 21.0 %
WET = 7.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.29

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.12

IMPERVIOUS AREA:
URBAN @ 100 % effective = 12
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 12

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
30-21S	0.748	0.790	0.036	12.0	0.21	0.29	6.80	0.12	12

LOSS PARAMETERS FOR SUBBASIN: 36-22

Soil Survey Used Central County

XKSAT
=======

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AN	0.012	5.3	0.05	0
AO	0.043	18.9	0.04	0
GGA	0.067	29.5	0.25	0
GT	0.020	8.8	0.04	0
LE	0.085	37.4	0.04	0
TOTAL =	0.227 Sq.Miles		XKSAT = 0.07	%Rock = 0

DTHETA
========
Dry = 0.30 PSIF = 8.00
Normal = 0.15
Wet = 0.00

LAND USE
========

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.000	OPEN	0.0	DRY	10	0	0.20	0.02	Min	
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.000	M.D.R.	0.0	NORMAL	50	30	0.25	0.05	Hi	
0.000	M.F.R.	0.0	NORMAL	50	45	0.25	0.05	Hi	
0.227	Ind	100.	NORMAL	60	55	0.15	0.03	Min	0.03
0.000	Comm	0.0	NORMAL	75	80	0.10	0.02	Min	
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.000	RowCrop	0.0	NORMAL	85	0	0.50	0.10	Hi	
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	
0.227 = Total Area			Avg. =	60	55%	0.150			

PERCENT OF SUBBASIN
DRY = 0.0 %
NORMAL = 100. %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.15

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.11

IMPERVIOUS AREA:
URBAN @ 100 % effective = 55
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 55

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
36-22	0.227	0.880	0.026	11.0	0.15	0.15	8.00	0.11	55

LOSS PARAMETERS FOR SUBBASIN: 35-22

Soil Survey Used Central County

XKSAT
=======

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.002	0.2	0.26	0
AN	0.008	0.8	0.05	0
AO	0.282	28.3	0.04	0
GGA	0.009	0.9	0.25	0
GR	0.008	0.8	0.23	0
GT	0.505	50.6	0.04	0
GV	0.172	17.2	0.01	0
TC	0.012	1.2	0.40	0
TOTAL =	0.998 Sq.Miles		XKSAT = 0.03	%Rock = 0

DTHETA
========
Dry = 0.22 PSIF = 10.10
Normal = 0.13
Wet = 0.00

LAND USE
========

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.000	OPEN	0.0	DRY	10	0	0.20	0.02	Min	
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.372	M.D.R.	37.3	NORMAL	50	30	0.25	0.05	Hi	0.09
0.000	M.F.R.	0.0	NORMAL	50	45	0.25	0.05	Hi	
0.581	Ind	58.2	NORMAL	60	55	0.15	0.03	Min	0.02
0.015	Comm	1.5	NORMAL	75	80	0.10	0.02	Min	0.03
0.018	Park	1.8	NORMAL	90	10	0.20	0.10	Hi	0.12
0.000	RowCrop	0.0	NORMAL	85	0	0.50	0.10	Hi	
0.012	SCHOOL1	1.2	NORMAL	80	45	0.29	0.05	Hi	0.13
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

0.998 = Total Area Avg. = 56 45% 0.190

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 100. %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.13

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.05

IMPERVIOUS AREA: URBAN @ 100 % effective = 45
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 45

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
35-22	0.998	1.500	0.045	11.0	0.19	0.13	10.10	0.05	45

LOSS PARAMETERS FOR SUBBASIN: 34-22

Soil Survey Used Central County

XKSAT
=======

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AO	0.031	3.1	0.04	0
CRB	0.012	1.2	0.40	0
GT	0.515	51.5	0.04	0
GV	0.140	14.0	0.01	0
MR	0.021	2.1	0.05	0
TG	0.019	1.9	0.04	0
TT	0.262	26.2	0.04	0

TOTAL = 1.000 Sq.Miles XKSAT = 0.03 %Rock = 0

DTHETA
========
Dry = 0.22 PSIF = 10.10
Normal = 0.13
Wet = 0.00

LAND USE
========

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.063	OPEN	6.3	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.684	M.D.R.	68.3	NORMAL	50	30	0.25	0.05	Hi	0.08
0.078	M.F.R.	7.8	NORMAL	50	45	0.25	0.05	Hi	0.11
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.133	Comm	13.3	NORMAL	75	80	0.10	0.02	Min	0.03
0.026	Park	2.6	NORMAL	90	10	0.20	0.10	Hi	0.12
0.000	RowCrop	0.0	NORMAL	85	0	0.50	0.10	Hi	
0.017	SCHOOL1	1.7	NORMAL	80	45	0.29	0.05	Hi	0.12
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

1.001 = Total Area Avg. = 49 36% 0.230

PERCENT OF SUBBASIN DRY = 6.0 %
NORMAL = 94.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.14

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.04

IMPERVIOUS AREA: URBAN @ 100 % effective = 36
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 36

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
34-22	1.000	1.370	0.068	15.0	0.23	0.14	10.10	0.04	36

LOSS PARAMETERS FOR SUBBASIN: 33-22

Soil Survey Used Central County

XKSAT
=======

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.022	2.2	0.26	0

AO	0.387	38.6	0.04	0
GGA	0.152	15.2	0.25	0
GT	0.331	33.0	0.04	0
TT	0.110	11.0	0.04	0

TOTAL = 1.002 Sq.Miles XKSAT = 0.06 %Rock = 0

DTHETA
========
Dry = 0.29 PSIF = 8.40
Normal = 0.15
Wet = 0.00

LAND USE
========

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.008	OPEN	0.8	DRY	10	0	0.20	0.02	Min	0.04
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.655	M.D.R.	65.5	NORMAL	50	30	0.25	0.05	Hi	0.08
0.177	M.F.R.	17.7	NORMAL	50	45	0.25	0.05	Hi	0.10
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.068	Comm	6.8	NORMAL	75	80	0.10	0.02	Min	0.03
0.081	Park	8.1	NORMAL	90	10	0.20	0.10	Hi	0.11
0.000	RowCrop	0.0	NORMAL	85	0	0.50	0.10	Hi	
0.011	SCHOOL1	1.1	NORMAL	80	45	0.29	0.05	Hi	0.13
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

1.000 = Total Area Avg. = 55 34% 0.240

PERCENT OF SUBBASIN DRY = 1.0 %
NORMAL = 99.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.15

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.09

IMPERVIOUS AREA: URBAN @ 100 % effective = 34
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 34

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
33-22	1.002	1.210	0.076	16.0	0.24	0.15	8.40	0.09	34

LOSS PARAMETERS FOR SUBBASIN: 32-22

Soil Survey Used Central County

XKSAT
=======

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.026	2.6	0.26	0
AN	0.079	7.9	0.05	0
AO	0.216	21.5	0.04	0
GGA	0.335	33.3	0.25	0
GT	0.235	23.4	0.04	0
MR	0.069	6.9	0.05	0
TT	0.045	4.5	0.04	0

TOTAL = 1.005 Sq.Miles XKSAT = 0.08 %Rock = 0

DTHETA
========
Dry = 0.32 PSIF = 7.60
Normal = 0.15
Wet = 0.00

LAND USE
========

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.008	OPEN	0.8	DRY	10	0	0.20	0.02	Min	0.04
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.864	M.D.R.	86.1	NORMAL	50	30	0.25	0.05	Hi	0.08
0.033	M.F.R.	3.3	NORMAL	50	45	0.25	0.05	Hi	0.12
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.045	Comm	4.5	NORMAL	75	80	0.10	0.02	Min	0.03
0.030	Park	3.0	NORMAL	90	10	0.20	0.10	Hi	0.12
0.000	RowCrop	0.0	NORMAL	85	0	0.50	0.10	Hi	
0.024	SCHOOL1	2.4	NORMAL	80	45	0.29	0.05	Hi	0.12
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

1.004 = Total Area Avg. = 52 32% 0.240

PERCENT OF SUBBASIN DRY = 1.0 %
NORMAL = 99.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.15

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.12

IMPERVIOUS AREA: URBAN @ 100 % effective = 32
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 32

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
32-22	1.005	1.340	0.077	15.0	0.24	0.15	7.60	0.12	32

LOSS PARAMETERS FOR SUBBASIN: 31-22

Soil Survey Used Central County

XKSAT
=======

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AO	0.463	47.3	0.04	0
GGA	0.169	17.3	0.25	0
GT	0.312	31.9	0.04	0
MR	0.028	2.9	0.05	0
TT	0.006	0.6	0.04	0

TOTAL = 0.978 Sq.Miles XKSAT = 0.06 %Rock = 0

DTHETA
========

Dry = 0.29 PSIF = 8.40
Normal = 0.15
Wet = 0.00

LAND USE
========

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.138	OPEN	14.1	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.019	L.D.R.	1.9	NORMAL	50	15	0.30	0.05	Hi	0.12
0.608	M.D.R.	62.0	NORMAL	50	30	0.25	0.05	Hi	0.09
0.028	M.F.R.	2.9	NORMAL	50	45	0.25	0.05	Hi	0.12
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.037	Comm	3.8	NORMAL	75	80	0.10	0.02	Min	0.03
0.082	Park	8.4	NORMAL	90	10	0.20	0.10	Hi	0.11
0.046	RowCrop	4.7	NORMAL	85	0	0.50	0.10	Hi	0.11
0.022	SCHOOL1	2.2	NORMAL	80	45	0.29	0.05	Hi	0.12
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	
0.980 = Total Area			Avg. =	49	25%	0.250			

PERCENT OF SUBBASIN DRY = 14.0 %
NORMAL = 86.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.17

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.09

IMPERVIOUS AREA: URBAN @ 100 % effective = 25
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 25

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
31-22	0.978	1.280	0.069	16.0	0.25	0.17	8.40	0.09	25

LOSS PARAMETERS FOR SUBBASIN: 36-21

Soil Survey Used Central County

XKSAT
=======

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.019	1.9	0.26	0
AN	0.035	3.5	0.05	0
AO	0.447	44.6	0.04	0
BT	0.015	1.5	0.25	0
ES	0.001	0.1	0.25	0
GE	0.011	1.1	0.26	0
GGA	0.301	30.0	0.25	0
GT	0.151	15.1	0.04	0
VH	0.023	2.3	0.27	0

TOTAL = 1.003 Sq.Miles XKSAT = 0.08 %Rock = 0

DTHETA
========

Dry = 0.32 PSIF = 7.60
Normal = 0.15
Wet = 0.00

LAND USE
========

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.054	OPEN	5.4	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.005	L.D.R.	0.5	NORMAL	50	15	0.30	0.05	Hi	0.14
0.745	M.D.R.	74.3	NORMAL	50	30	0.25	0.05	Hi	0.08
0.000	M.F.R.	0.0	NORMAL	50	45	0.25	0.05	Hi	
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.066	Comm	6.6	NORMAL	75	80	0.10	0.02	Min	0.03
0.021	Park	2.1	NORMAL	90	10	0.20	0.10	Hi	0.12
0.101	RowCrop	10.1	NORMAL	85	0	0.50	0.10	Hi	0.10
0.010	SCHOOL1	1.0	NORMAL	80	45	0.29	0.05	Hi	0.13
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	
1.002 = Total Area			Avg. =	54	28%	0.260			

PERCENT OF SUBBASIN DRY = 5.0 %
NORMAL = 95.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.16

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.12

IMPERVIOUS AREA: URBAN @ 100 % effective = 28
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 28

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
36-21	1.003	1.360	0.073	16.0	0.26	0.16	7.60	0.12	28

LOSS PARAMETERS FOR SUBBASIN: 35-21

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.023	2.3	0.26	0
AN	0.017	1.7	0.05	0
AO	0.212	21.4	0.04	0
GGA	0.062	6.3	0.25	0
GT	0.677	68.3	0.04	0

TOTAL = 0.991 Sq.Miles XKSAT = 0.05 %Rock = 0

DTHETA

Dry = 0.27 PSIF = 8.80
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.121	OPEN	12.2	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.000	M.D.R.	0.0	NORMAL	50	30	0.25	0.05	Hi	
0.020	M.F.R.	2.0	NORMAL	50	45	0.25	0.05	Hi	0.12
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.142	Comm	14.3	NORMAL	75	80	0.10	0.02	Min	0.03
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.707	RowCrop	71.4	NORMAL	85	0	0.50	0.10	Hi	0.08
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	
0.990 = Total Area			Avg. =	74	12%	0.400			

PERCENT OF SUBBASIN DRY = 12.0 %
NORMAL = 88.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.16

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.09

IMPERVIOUS AREA: URBAN @ 100 % effective = 12
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 12

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
35-21	0.991	1.040	0.065	14.0	0.40	0.16	8.80	0.09	12

LOSS PARAMETERS FOR SUBBASIN: 34-21

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AO	0.279	27.7	0.04	0
GGA	0.069	6.9	0.25	0
GT	0.658	65.4	0.04	0

TOTAL = 1.006 Sq.Miles XKSAT = 0.05 %Rock = 0

DTHETA

Dry = 0.27 PSIF = 8.80
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.250	OPEN	24.9	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.556	M.D.R.	55.3	NORMAL	50	30	0.25	0.05	Hi	0.09
0.025	M.F.R.	2.5	NORMAL	50	45	0.25	0.05	Hi	0.12
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.048	Comm	4.8	NORMAL	75	80	0.10	0.02	Min	0.03
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.125	RowCrop	12.4	NORMAL	85	0	0.50	0.10	Hi	0.10
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.001	WATER	0.1	WET	0	10	0.00	0.00	Min	0.04
1.005 = Total Area			Avg. =	43	22%	0.260			

PERCENT OF SUBBASIN DRY = 25.0 %
NORMAL = 75.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.18

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.07

IMPERVIOUS AREA: URBAN @ 100 % effective = 22
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 22

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %

34-21	1.006	1.480	0.062	14.0	0.26	0.18	8.80	0.07	22

LOSS PARAMETERS FOR SUBBASIN: 33-21

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AO	0.025	2.5	0.04	0
GGA	0.013	1.3	0.25	0
GT	0.798	80.5	0.04	0
LCA	0.001	0.1	0.25	0
LE	0.089	9.0	0.04	0
TT	0.065	6.6	0.04	0

TOTAL = 0.991 Sq.Miles XKSAT = 0.04 %Rock = 0

DTHETA

Dry = 0.25 PSIF = 9.70
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.002	OPEN	0.2	DRY	10	0	0.20	0.02	Min	0.04
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.000	M.D.R.	0.0	NORMAL	50	30	0.25	0.05	Hi	
0.000	M.F.R.	0.0	NORMAL	50	45	0.25	0.05	Hi	
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.005	Comm	0.5	NORMAL	75	80	0.10	0.02	Min	0.04
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.945	RowCrop	95.4	NORMAL	85	0	0.50	0.10	Hi	0.08
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.038	WATER	3.8	WET	0	10	0.00	0.00	Min	0.03

0.990 = Total Area Avg. = 85 4% 0.480

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 96.0 %
WET = 4.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.14

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.07

IMPERVIOUS AREA: URBAN @ 100 % effective = 4
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 4

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
33-21	0.991	1.320	0.077	7.0	0.48	0.14	9.70	0.07	4

LOSS PARAMETERS FOR SUBBASIN: 32-21E

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
GT	0.016	6.6	0.04	0
LE	0.193	79.4	0.04	0
MR	0.019	7.8	0.05	0
TT	0.015	6.2	0.04	0

TOTAL = 0.243 Sq.Miles XKSAT = 0.04 %Rock = 0

DTHETA

Dry = 0.25 PSIF = 9.70
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.000	OPEN	0.0	DRY	10	0	0.20	0.02	Min	
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.000	M.D.R.	0.0	NORMAL	50	30	0.25	0.05	Hi	
0.000	M.F.R.	0.0	NORMAL	50	45	0.25	0.05	Hi	
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.000	Comm	0.0	NORMAL	75	80	0.10	0.02	Min	
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.217	RowCrop	89.7	NORMAL	85	0	0.50	0.10	Hi	0.10
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.025	WATER	10.3	WET	0	10	0.00	0.00	Min	0.03

0.242 = Total Area Avg. = 85 10% 0.450

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 90.0 %
WET = 10.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.14

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.07

IMPERVIOUS AREA: URBAN @ 100 % effective = 10
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 10

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
32-21E	0.243	0.490	0.088	10.0	0.45	0.14	9.70	0.07	10

LOSS PARAMETERS FOR SUBBASIN: 32-21W

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
GT	0.014	1.8	0.04	0
LCA	0.032	4.1	0.25	0
LE	0.578	74.9	0.04	0
MR	0.075	9.7	0.05	0
TU	0.059	7.6	0.25	0
TW	0.014	1.8	0.05	0

TOTAL = 0.772 Sq.Miles XKSAT = 0.05 %Rock = 0

DTHETA

Dry = 0.27 PSIF = 8.80
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.010	OPEN	1.3	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.038	L.D.R.	4.9	NORMAL	50	15	0.30	0.05	Hi	0.12
0.000	M.D.R.	0.0	NORMAL	50	30	0.25	0.05	Hi	
0.000	M.F.R.	0.0	NORMAL	50	45	0.25	0.05	Hi	
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.000	Comm	0.0	NORMAL	75	80	0.10	0.02	Min	
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.694	RowCrop	90.0	NORMAL	85	0	0.50	0.10	Hi	0.08
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.029	WATER	3.8	WET	0	10	0.00	0.00	Min	0.03

0.771 = Total Area Avg. = 82 5% 0.470

PERCENT OF SUBBASIN
DRY = 1.0 %
NORMAL = 95.0 %
WET = 4.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.15

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.09

IMPERVIOUS AREA:
URBAN @ 100 % effective = 5
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 5

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
32-21W	0.772	0.900	0.079	1.0	0.47	0.15	8.80	0.09	5

LOSS PARAMETERS FOR SUBBASIN: 31-21

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
GT	0.188	19.5	0.04	0
LB	0.022	2.3	0.40	0
LCA	0.282	29.2	0.25	0
LE	0.356	36.9	0.04	0
MR	0.029	3.0	0.05	0
TT	0.065	6.7	0.04	0
TU	0.010	1.0	0.25	0
TW	0.013	1.3	0.05	0

TOTAL = 0.965 Sq.Miles XKSAT = 0.07 %Rock = 0

DTHETA

Dry = 0.30 PSIF = 8.00
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.004	OPEN	0.4	DRY	10	0	0.20	0.02	Min	0.04
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.000	M.D.R.	0.0	NORMAL	50	30	0.25	0.05	Hi	
0.000	M.F.R.	0.0	NORMAL	50	45	0.25	0.05	Hi	
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.000	Comm	0.0	NORMAL	75	80	0.10	0.02	Min	
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.960	RowCrop	99.6	NORMAL	85	0	0.50	0.10	Hi	0.08
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

0.964 = Total Area Avg. = 85 0% 0.500

PERCENT OF SUBBASIN
DRY = 0.0 %
NORMAL = 100. %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.15

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.13

IMPERVIOUS AREA: URBAN @ 100 % effective = 0
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 0

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
31-21	0.965	1.200	0.080	9.0	0.50	0.15	8.00	0.13	0

LOSS PARAMETERS FOR SUBBASIN: 36-W21

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
BR	0.085	10.2	1.05	0
BS	0.001	0.1	0.39	0
GE	0.003	0.4	0.26	0
GGA	0.064	7.6	0.25	0
GT	0.040	4.8	0.04	0
GV	0.021	2.5	0.01	0
GXA	0.007	0.8	0.23	0
LB	0.017	2.0	0.40	0
LCA	0.144	17.2	0.25	0
LCB	0.032	3.8	0.25	0
LE	0.018	2.2	0.04	0
MA	0.033	3.9	0.40	0
MR	0.105	12.5	0.05	0
PEA	0.004	0.5	0.37	0
TD	0.126	15.1	1.20	0
TT	0.123	14.7	0.04	0
VH	0.014	1.7	0.27	0

TOTAL = 0.837 Sq.Miles XKSAT = 0.19 %Rock = 0

DTHETA

Dry = 0.38 PSIF = 5.40
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.016	OPEN	1.9	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.008	M.D.R.	1.0	NORMAL	50	30	0.25	0.05	Hi	0.13
0.000	M.F.R.	0.0	NORMAL	50	45	0.25	0.05	Hi	
0.000	Ind	0.0	NORMAL	60	55	0.15	0.03	Min	
0.000	Comm	0.0	NORMAL	75	80	0.10	0.02	Min	
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.652	RowCrop	77.9	NORMAL	85	0	0.50	0.10	Hi	0.08
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.161	WATER	19.2	WET	0	10	0.00	0.00	Min	0.03

0.837 = Total Area Avg. = 83 20% 0.400

PERCENT OF SUBBASIN DRY = 2.0 %
NORMAL = 79.0 %
WET = 19.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.21

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.34

IMPERVIOUS AREA: URBAN @ 100 % effective = 20
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 20

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
36-W21	0.837	0.920	0.070	27.0	0.40	0.21	5.40	0.34	20

LOSS PARAMETERS FOR SUBBASIN: 1-12

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AO	0.018	18.2	0.04	0
GGA	0.081	81.8	0.25	0

TOTAL = 0.099 Sq.Miles XKSAT = 0.18 %Rock = 0

DTHETA

Dry = 0.38 PSIF = 5.60
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.008	OPEN	8.2	DRY	10	0	0.20	0.02	Min	0.04
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.000	M.D.R.	0.0	NORMAL	50	30	0.25	0.05	Hi	
0.000	M.F.R.	0.0	NORMAL	50	45	0.25	0.05	Hi	
0.009	Ind	9.2	NORMAL	60	55	0.15	0.03	Min	0.04
0.081	Comm	82.7	NORMAL	75	80	0.10	0.02	Min	0.03
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	

0.000	RowCrop	0.0	NORMAL	85	0	0.50	0.10	Hi
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min

0.098 = Total Area Avg. = 54 71% 0.110

PERCENT OF SUBBASIN DRY = 8.0 %
NORMAL = 92.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.26

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.27

IMPERVIOUS AREA: URBAN @ 100 % effective = 71
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 71

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
1-12	0.099	0.450	0.029	18.0	0.11	0.26	5.60	0.27	71

LOSS PARAMETERS FOR SUBBASIN: 2-12

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AO	0.044	19.2	0.04	0
GT	0.147	64.2	0.04	0
GV	0.038	16.6	0.01	0

TOTAL = 0.229 Sq.Miles XKSAT = 0.03 %Rock = 0

DTHETA

Dry = 0.22 PSIF = 10.10
Normal = 0.13
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.028	OPEN	12.2	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.077	M.D.R.	33.5	NORMAL	50	30	0.25	0.05	Hi	0.11
0.000	M.F.R.	0.0	NORMAL	50	45	0.25	0.05	Hi	
0.003	Ind	1.3	NORMAL	60	55	0.15	0.03	Min	0.04
0.122	Comm	53.0	NORMAL	75	80	0.10	0.02	Min	0.03
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	

0.000	RowCrop	0.0	NORMAL	85	0	0.50	0.10	Hi
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min

0.230 = Total Area Avg. = 45 53% 0.160

PERCENT OF SUBBASIN DRY = 12.0 %
NORMAL = 88.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.14

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.04

IMPERVIOUS AREA: URBAN @ 100 % effective = 53
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 53

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
2-12	0.229	0.700	0.050	14.0	0.16	0.14	10.10	0.04	53

LOSS PARAMETERS FOR SUBBASIN: 3-12

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AO	0.022	9.1	0.04	0
GGA	0.010	4.1	0.25	0
GT	0.153	63.5	0.04	0
GV	0.028	11.6	0.01	0
MR	0.028	11.6	0.05	0

TOTAL = 0.241 Sq.Miles XKSAT = 0.04 %Rock = 0

DTHETA

Dry = 0.25 PSIF = 9.70
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.000	OPEN	0.0	DRY	10	0	0.20	0.02	Min	
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.131	M.D.R.	54.4	NORMAL	50	30	0.25	0.05	Hi	0.10
0.060	M.F.R.	24.9	NORMAL	50	45	0.25	0.05	Hi	0.11
0.004	Ind	1.7	NORMAL	60	55	0.15	0.03	Min	0.04

0.046	Comm	19.1	NORMAL	75	80	0.10	0.02	Min	0.03
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.000	RowCrop	0.0	NORMAL	85	0	0.50	0.10	Hi	
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

0.241 = Total Area Avg. = 52 44% 0.220

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 100. %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.15

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.06

IMPERVIOUS AREA: URBAN @ 100 % effective = 44
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 44

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
3-12	0.241	0.720	0.081	7.0	0.22	0.15	9.70	0.06	44

LOSS PARAMETERS FOR SUBBASIN: 4-12

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AO	0.059	27.3	0.04	0
GGA	0.010	4.6	0.25	0
GT	0.147	68.1	0.04	0

TOTAL = 0.216 Sq.Miles XKSAT = 0.04 %Rock = 0

DTHETA

Dry = 0.25 PSIF = 9.70
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.208	OPEN	96.3	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.000	M.D.R.	0.0	NORMAL	50	30	0.25	0.05	Hi	
0.000	M.F.R.	0.0	NORMAL	50	45	0.25	0.05	Hi	
0.003	Ind	1.4	NORMAL	60	55	0.15	0.03	Min	0.04

0.001	Comm	0.5	NORMAL	75	80	0.10	0.02	Min	0.04
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.004	RowCrop	1.9	NORMAL	85	0	0.50	0.10	Hi	0.14
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

0.216 = Total Area Avg. = 12 1% 0.200

PERCENT OF SUBBASIN DRY = 96.0 %
NORMAL = 4.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.25

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.04

IMPERVIOUS AREA: URBAN @ 100 % effective = 1
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 1

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
4-12	0.216	0.710	0.028	9.0	0.20	0.25	9.70	0.04	1

LOSS PARAMETERS FOR SUBBASIN: 5-12

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AN	0.004	2.2	0.05	0
AO	0.054	29.4	0.04	0
GT	0.125	67.9	0.04	0
MR	0.001	0.5	0.05	0

TOTAL = 0.184 Sq.Miles XKSAT = 0.04 %Rock = 0

DTHETA

Dry = 0.25 PSIF = 9.70
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.093	OPEN	50.3	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.041	M.D.R.	22.2	NORMAL	50	30	0.25	0.05	Hi	0.11
0.041	M.F.R.	22.2	NORMAL	50	45	0.25	0.05	Hi	0.11

0.001	Ind	0.5	NORMAL	60	55	0.15	0.03	Min	0.04
0.009	Comm	4.9	NORMAL	75	80	0.10	0.02	Min	0.04
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.000	RowCrop	0.0	NORMAL	85	0	0.50	0.10	Hi	
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

0.185 = Total Area Avg. = 25 21% 0.220

PERCENT OF SUBBASIN DRY = 50.0 %
NORMAL = 50.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.20

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.05

IMPERVIOUS AREA: URBAN @ 100 % effective = 21
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 21

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
5-12	0.184	0.900	0.059	14.0	0.22	0.20	9.70	0.05	21

LOSS PARAMETERS FOR SUBBASIN: 6-12

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AN	0.006	3.3	0.05	0
AO	0.048	26.7	0.04	0
GT	0.107	59.4	0.04	0
MR	0.019	10.6	0.05	0

TOTAL = 0.180 Sq.Miles XKSAT = 0.04 %Rock = 0

DTHETA

Dry = 0.25 PSIF = 9.70
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.122	OPEN	67.8	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.007	L.D.R.	3.9	NORMAL	50	15	0.30	0.05	Hi	0.13
0.001	M.D.R.	0.6	NORMAL	50	30	0.25	0.05	Hi	0.15
0.033	M.F.R.	18.3	NORMAL	50	45	0.25	0.05	Hi	0.12
0.001	Ind	0.6	NORMAL	60	55	0.15	0.03	Min	0.04
0.015	Comm	8.3	NORMAL	75	80	0.10	0.02	Min	0.03
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.001	RowCrop	0.6	NORMAL	85	0	0.50	0.10	Hi	0.15
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

0.180 = Total Area Avg. = 18 16% 0.210

PERCENT OF SUBBASIN DRY = 68.0 %
NORMAL = 32.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.22

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.04

IMPERVIOUS AREA: URBAN @ 100 % effective = 16
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 16

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
6-12	0.180	0.930	0.044	10.0	0.21	0.22	9.70	0.04	16

LOSS PARAMETERS FOR SUBBASIN: 1-11

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.011	6.0	0.26	0
AO	0.014	7.7	0.04	0
ES	0.016	8.8	0.25	0
GGA	0.063	34.6	0.25	0
GT	0.058	31.9	0.04	0
VH	0.020	11.0	0.27	0

TOTAL = 0.182 Sq.Miles XKSAT = 0.12 %Rock = 0

DTHETA

Dry = 0.37 PSIF = 6.60
Normal = 0.19
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.082	OPEN	44.8	DRY	10	0	0.20	0.02	Min	0.03

0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.002	M.D.R.	1.1	NORMAL	50	30	0.25	0.05	Hi	0.15
0.033	M.F.R.	18.0	NORMAL	50	45	0.25	0.05	Hi	0.12
0.001	Ind	0.5	NORMAL	60	55	0.15	0.03	Min	0.04
0.000	Comm	0.0	NORMAL	75	80	0.10	0.02	Min	
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.065	RowCrop	35.5	NORMAL	85	0	0.50	0.10	Hi	0.11
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

0.183 = Total Area Avg. = 44 9% 0.320

PERCENT OF SUBBASIN DRY = 45.0 %
NORMAL = 55.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.27

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.17

IMPERVIOUS AREA: URBAN @ 100 % effective = 9
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 9

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
1-11	0.182	0.920	0.066	13.0	0.32	0.27	6.60	0.17	9

LOSS PARAMETERS FOR SUBBASIN: 2-11

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AO	0.085	47.8	0.04	0
GGA	0.080	44.9	0.25	0
GT	0.013	7.3	0.04	0

TOTAL = 0.178 Sq.Miles XKSAT = 0.09 %Rock = 0

DTHETA

Dry = 0.33 PSIF = 7.30
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.000	OPEN	0.0	DRY	10	0	0.20	0.02	Min	
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.000	M.D.R.	0.0	NORMAL	50	30	0.25	0.05	Hi	
0.000	M.F.R.	0.0	NORMAL	50	45	0.25	0.05	Hi	
0.002	Ind	1.1	NORMAL	60	55	0.15	0.03	Min	0.04
0.000	Comm	0.0	NORMAL	75	80	0.10	0.02	Min	
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.176	RowCrop	98.9	NORMAL	85	0	0.50	0.10	Hi	0.10
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

0.178 = Total Area Avg. = 85 1% 0.500

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 100. %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.15

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.17

IMPERVIOUS AREA: URBAN @ 100 % effective = 1
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 1

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
2-11	0.178	0.980	0.098	15.0	0.50	0.15	7.30	0.17	1

LOSS PARAMETERS FOR SUBBASIN: 3-11

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
GT	0.168	100.	0.04	0

TOTAL = 0.168 Sq.Miles XKSAT = 0.04 %Rock = 0

DTHETA

Dry = 0.25 PSIF = 9.70
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.120	OPEN	72.3	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	

0.000	M.D.R.	0.0	NORMAL	50	30	0.25	0.05	Hi	
0.000	M.F.R.	0.0	NORMAL	50	45	0.25	0.05	Hi	
0.007	Ind	4.2	NORMAL	60	55	0.15	0.03	Min	0.04
0.036	Comm	21.7	NORMAL	75	80	0.10	0.02	Min	0.03
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.000	RowCrop	0.0	NORMAL	85	0	0.50	0.10	Hi	
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.003	WATER	1.8	WET	0	10	0.00	0.00	Min	0.04

0.166 = Total Area Avg. = 15 21% 0.170

PERCENT OF SUBBASIN DRY = 72.0 %
NORMAL = 26.0 %
WET = 2.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.22

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.04

IMPERVIOUS AREA: URBAN @ 100 % effective = 21
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 21

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
3-11	0.168	1.000	0.027	12.0	0.17	0.22	9.70	0.04	21

LOSS PARAMETERS FOR SUBBASIN: 4-11

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
GT	0.130	73.9	0.04	0
LCA	0.030	17.0	0.25	0
LE	0.016	9.1	0.04	0

TOTAL = 0.176 Sq.Miles XKSAT = 0.05 %Rock = 0

DTHETA

Dry = 0.27 PSIF = 8.80
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.000	OPEN	0.0	DRY	10	0	0.20	0.02	Min	
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	

0.000	M.D.R.	0.0	NORMAL	50	30	0.25	0.05	Hi	
0.000	M.F.R.	0.0	NORMAL	50	45	0.25	0.05	Hi	
0.012	Ind	6.8	NORMAL	60	55	0.15	0.03	Min	0.03
0.000	Comm	0.0	NORMAL	75	80	0.10	0.02	Min	
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.164	RowCrop	93.2	NORMAL	85	0	0.50	0.10	Hi	0.10
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

0.176 = Total Area Avg. = 84 4% 0.480

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 100. %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.15

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.09

IMPERVIOUS AREA: URBAN @ 100 % effective = 4
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 4

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
4-11	0.176	0.870	0.093	10.0	0.48	0.15	8.80	0.09	4

LOSS PARAMETERS FOR SUBBASIN: 5-11

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
LCA	0.004	2.2	0.25	0
LE	0.139	76.0	0.04	0
MR	0.002	1.1	0.05	0
TW	0.038	20.8	0.05	0

TOTAL = 0.183 Sq.Miles XKSAT = 0.04 %Rock = 0

DTHETA

Dry = 0.25 PSIF = 9.70
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.000	OPEN	0.0	DRY	10	0	0.20	0.02	Min	
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	

0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.000	M.D.R.	0.0	NORMAL	50	30	0.25	0.05	Hi	
0.000	M.F.R.	0.0	NORMAL	50	45	0.25	0.05	Hi	
0.001	Ind	0.5	NORMAL	60	55	0.15	0.03	Min	0.04
0.000	Comm	0.0	NORMAL	75	80	0.10	0.02	Min	
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.182	RowCrop	99.4	NORMAL	85	0	0.50	0.10	Hi	0.10
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

0.183 = Total Area Avg. = 85 0% 0.500

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 100. %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.15

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.07

IMPERVIOUS AREA: URBAN @ 100 % effective = 0
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 0

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
5-11	0.183	0.860	0.098	9.0	0.50	0.15	9.70	0.07	0

LOSS PARAMETERS FOR SUBBASIN: 6-11

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
GT	0.001	0.5	0.04	0
LCA	0.056	25.3	0.25	0
LE	0.153	69.2	0.04	0
TU	0.011	5.0	0.25	0

TOTAL = 0.221 Sq.Miles XKSAT = 0.07 %Rock = 0

DTHETA

Dry = 0.30 PSIF = 8.00
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.000	OPEN	0.0	DRY	10	0	0.20	0.02	Min	
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.000	M.D.R.	0.0	NORMAL	50	30	0.25	0.05	Hi	
0.000	M.F.R.	0.0	NORMAL	50	45	0.25	0.05	Hi	
0.005	Ind	2.3	NORMAL	60	55	0.15	0.03	Min	0.04
0.000	Comm	0.0	NORMAL	75	80	0.10	0.02	Min	
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.216	RowCrop	97.7	NORMAL	85	0	0.50	0.10	Hi	0.10
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

0.221 = Total Area Avg. = 85 1% 0.490

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 100. %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.15

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.13

IMPERVIOUS AREA: URBAN @ 100 % effective = 1
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 1

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
6-11	0.221	0.950	0.094	13.0	0.49	0.15	8.00	0.13	1

LOSS PARAMETERS FOR SUBBASIN: 1-W11

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.001	0.3	0.26	0
ABA	0.003	0.8	0.38	0
ABB	0.006	1.6	0.39	0
BR	0.010	2.7	1.05	0
BS	0.002	0.5	0.39	0
GE	0.069	18.5	0.26	0
GGA	0.029	7.8	0.25	0
GT	0.076	20.3	0.04	0
GV	0.024	6.4	0.01	0
LB	0.006	1.6	0.40	0
LCA	0.039	10.4	0.25	0
MA	0.020	5.3	0.40	0
MR	0.002	0.5	0.05	0
PSA	0.003	0.8	0.25	0
RBA	0.006	1.6	0.26	0
TD	0.004	1.1	1.20	0
TT	0.059	15.8	0.04	0
VH	0.015	4.0	0.27	0

TOTAL = 0.374 Sq.Miles XKSAT = 0.12 %Rock = 0

DTHETA
========
Dry = 0.37 PSIF = 6.60
Normal = 0.19
Wet = 0.00

LAND USE
========

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.125	OPEN	33.6	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.231	M.D.R.	62.1	NORMAL	50	30	0.25	0.05	Hi	0.10
0.000	M.F.R.	0.0	NORMAL	50	45	0.25	0.05	Hi	
0.002	Ind	0.5	NORMAL	60	55	0.15	0.03	Min	0.04
0.000	Comm	0.0	NORMAL	75	80	0.10	0.02	Min	
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.000	RowCrop	0.0	NORMAL	85	0	0.50	0.10	Hi	
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.014	WATER	3.8	WET	0	10	0.00	0.00	Min	0.03

0.372 = Total Area Avg. = 33 23% 0.220

PERCENT OF SUBBASIN DRY = 34.0 %
NORMAL = 63.0 %
WET = 4.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.25

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.15

IMPERVIOUS AREA: URBAN @ 100 % effective = 23
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 23

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
1-W11	0.374	1.430	0.065	16.0	0.22	0.25	6.60	0.15	23

LOSS PARAMETERS FOR SUBBASIN: 2-W11

Soil Survey Used Central County

XKSAT
=======

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
ABB	0.007	8.2	0.39	0
GE	0.039	45.9	0.26	0
GGA	0.027	31.8	0.25	0
GT	0.006	7.1	0.04	0
LCA	0.006	7.1	0.25	0
PSA	0.000	0.0	0.25	0
RBA	0.000	0.0	0.26	0

TOTAL = 0.085 Sq.Miles XKSAT = 0.23 %Rock = 0

DTHETA
========
Dry = 0.36 PSIF = 5.00
Normal = 0.25
Wet = 0.00

LAND USE
========

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Desert	0.0	DRY	25	0	0.35	0.03	Low	
0.071	OPEN	83.5	DRY	10	0	0.20	0.02	Min	0.03
0.000	V.L.D.R	0.0	NORMAL	30	5	0.30	0.05	Hi	
0.000	L.D.R.	0.0	NORMAL	50	15	0.30	0.05	Hi	
0.011	M.D.R.	12.9	NORMAL	50	30	0.25	0.05	Hi	0.13
0.000	M.F.R.	0.0	NORMAL	50	45	0.25	0.05	Hi	
0.003	Ind	3.5	NORMAL	60	55	0.15	0.03	Min	0.04
0.000	Comm	0.0	NORMAL	75	80	0.10	0.02	Min	
0.000	Park	0.0	NORMAL	90	10	0.20	0.10	Hi	
0.000	RowCrop	0.0	NORMAL	85	0	0.50	0.10	Hi	
0.000	SCHOOL1	0.0	NORMAL	80	45	0.29	0.05	Hi	
0.000	WATER	0.0	WET	0	10	0.00	0.00	Min	

0.085 = Total Area Avg. = 15 6% 0.200

PERCENT OF SUBBASIN DRY = 84.0 %
NORMAL = 16.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.34

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.24

IMPERVIOUS AREA: URBAN @ 100 % effective = 6
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 6

INPUT VALUES FOR MCUHP1 PROGRAM

SUBBASIN	Area sq.mi.	Length mi.	Kb	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %
2-W11	0.085	0.860	0.039	19.0	0.20	0.34	5.00	0.24	6

Appendix C: Sub-basin Diversions

Sub-basin Diversions

Computational Methodology

Background: Within the study area, the slope of the land is generally from the northeast to the southwest at approximately 0.4 percent. Hence, stormwater flowing within a typical sub-basin is directed and conveyed to the arterial streets along the west and south sides of the sub-basin, by residential and collector streets. That is, some of the stormwater is conveyed west to the north-south arterial street, by residential and collector streets; while, the remainder of the stormwater is conveyed south to the east-west arterial street, by residential and collector streets.

Sub-basin diversions are used to separate the hydrograph, for the stormwater within a bu-basin, into a southerly and a westerly component. The hydrograph for the storm water within a sub-basin includes runoff generated within a sub-basin and , typically,the flow entering a sub-basin from the adjacent arterial streets.

Premise: Stormwater generated within a sub-basin and stormwater entering a sub-basin from adjacent sub-basins are directed to the downstream arterial streets based on drainage patterns within the sub-basin.

Procedure: Compute the percentage of the stormwater being directed into each of the downstream arterial streets that border the sub-basin based on street patterns and topography.

Input Parameters: Drainage areas for those portions of the sub-basin that drain directly to adjacent arterial streets and an estimated percentage for the flow split that may occur along the collector streets.

Main Assumptions:

- Street patterns and topography determine the percentage of the stormwater that is directed to each of the downstream arterial streets.
- The drainage patterns, within a sub-basin, have an equal influence on both the stormwater generated within the sub-basin and the stormwater entering a sub-basin from adjacent sub-basins.

CH2M HILL

Subject Maryvale ADMS
Sub-Basin Diversions

By: J. Geisbush
Checked: D. Dust
Project No. 132586

PARAMETERS

Sub-basin I.D.: Thunderbird Rd.	2-31	7-32	12-31	11-31	10-31								
Total Area (Sq. Mi.)	0.288	N/D	1.020	0.997	N/D								
Area that Drains Directly West (sq. mi.) = Aw													
N. of E-W 1/2 mi. street:	0.000		0.360	0.251									
S. of E-W 1/2 mi. street:	0.223		0.217	0.250									
Total, Aw:	0.223		0.577	0.501									
Area, S. of E-W 1/2 mi. St., that Drains Directly South (sq. mi.) = As	0.065		0.283	0.250									
Remaining Area North of E-W 1/2 mi. Street (sq. mi.) = An	0.000		0.160	0.246									
Percentage of An Directed to the West (%)	0.00		0.50	0.80									
Percentage of An Directed to the South (%)	1.00		0.50	0.20									
Ratio of Total Sub-basin Directed to the West(%)	**0.77**		**0.64**	**0.70**									
Ratio of Total Sub-basin Directed to the South(%)	**0.23**		**0.36**	**0.30**									
Area Check	**0.2878**	**0.2495**	**1.0197**	**0.9972**	**0.1140**								

CH2M HILL

Subject Maryvale ADMS
Sub-Basin Diversions

By: J. Geisbush
Checked: D. Dust
Project No. 132586

PARAMETERS

Sub-basin I.D.: Cactus Rd.	18-32	17-32	13-31	14-31	15-31
Total Area (Sq. Mi.)	0.906	N/D	1.003	1.008	0.956
Area that Drains Directly West (sq. mi.) = Aw					
N. of E-W 1/2 mi. street:	0.080		0.127	0.171	0.108
S. of E-W 1/2 mi. street:	0.177		0.109	0.090	N/A
Total, Aw:	0.257		0.236	0.261	0.108
Area, S. of E-W 1/2 mi. St., that Drains Directly South (sq. mi.) = As	0.299		0.394	0.427	0.628
Remaining Area North of E-W 1/2 mi. Street (sq. mi.) = An	0.350		0.373	0.320	0.220
Percentage of An Directed to the West (%)	0.52		0.70	0.70	0.50
Percentage of An Directed to the South (%)	0.48		0.30	0.30	0.50
Ratio of Total Sub-basin Directed to the West(%)	**0.48**		**0.50**	**0.48**	**0.23**
Ratio of Total Sub-basin Directed to the South(%)	**0.52**		**0.50**	**0.52**	**0.77**
Area Check	**0.9053**	**0.2844**	**1.0029**	**1.0078**	**0.9555**

CH2M HILL

Subject Maryvale ADMS
Sub-Basin Diversions

By: J. Geisbush
Checked: D. Dust
Project No. 132586

PARAMETERS

Sub-basin I.D.: Peoria Ave.	21-32	20-32	19-32	24-31	23-31	22-31E	22-31W					
Total Area (Sq. Mi.)	0.384	0.989	0.964	1.008	1.006	0.512	0.766					
Area that Drains Directly West (sq. mi.) = Aw												
N. of E-W 1/2 mi. street:	0.036	0.000	0.164	0.102	0.123	0.185	0.258					
S. of E-W 1/2 mi. street:	0.080	0.151	0.084	0.093	0.100	N/A	N/A					
Total, Aw:	0.116	0.151	0.248	0.195	0.223	0.185	0.258					
Area, S. of E-W 1/2 mi. St., that Drains Directly South (sq. mi.) = As	0.234	0.344	0.398	0.415	0.406	0.327	0.508					
Remaining Area North of E-W 1/2 mi. Street (sq. mi.) = An	0.035	0.494	0.318	0.398	0.377	0.000	0.000					
Percentage of An Directed to the West (%)	0.00	0.25	0.50	0.70	0.70	0.00	0.00					
Percentage of An Directed to the South (%)	1.00	0.75	0.50	0.30	0.30	1.00	1.00					
Ratio of Total Sub-basin Directed to the West(%)	**0.30**	**0.28**	**0.42**	**0.47**	**0.48**	**0.36**	**0.34**					
Ratio of Total Sub-basin Directed to the South(%)	**0.70**	**0.72**	**0.58**	**0.53**	**0.52**	**0.64**	**0.66**					
Area Check	**0.3982**	**0.9882**	**0.9616**	**1.0075**	**1.0057**	**0.5123**	**0.7658**					

CH2M HILL

Subject Maryvale ADMS
Sub-Basin Diversions

By: J. Geisbush
Checked: D. Dust
Project No. 132586

PARAMETERS

Sub-basin I.D.: Olive Ave.	26-32E	26-32W	27-32	28-32	29-32	30-32	25-31	26-31E	26-31W	27-31	28-31	
Total Area (Sq. Mi.)	N/D	N/D	0.612	0.994	0.991	0.959	1.003	0.462	0.540	1.013	N/D	
Area that Drains Directly West (sq. mi.) = Aw												
N. of E-W 1/2 mi. street:			N/A	0.125	0.127	0.107	0.124	0.164	0.133	0.119		
S. of E-W 1/2 mi. street:			0.287	0.106	0.111	0.219	0.115	N/A	0.159	0.110		
Total, Aw:			0.287	0.231	0.238	0.326	0.239	0.164	0.292	0.229		
Area, S. of E-W 1/2 mi. St., that Drains Directly South (sq. mi.) = As			0.325	0.397	0.382	0.258	0.381	0.298	0.248	0.380		
			n/a					n/a	n/a			
Remaining Area North of E-W 1/2 mi. Street (sq. mi.) = An			0.000	0.366	0.371	0.375	0.383	0.000	0.000	0.404		
Percentage of An Directed to the West (%)			0.00	0.30	0.30	0.20	0.60	0.00	0.00	0.30		
Percentage of An Directed to the South (%)			1.00	0.70	0.70	0.80	0.40	1.00	1.00	0.70		
Ratio of Total Sub-basin Directed to the West(%)			**0.47**	**0.34**	**0.35**	**0.42**	**0.47**	**0.35**	**0.54**	**0.35**		
Ratio of Total Sub-basin Directed to the South(%)			**0.53**	**0.66**	**0.65**	**0.58**	**0.53**	**0.65**	**0.46**	**0.65**		
Area Check	**0.1068**	**0.0866**	**0.6122**	**0.9937**	**0.9910**	**0.9588**	**1.0030**	**0.4615**	**0.5403**	**1.0125**	**0.1406**	

CH2M HILL

Subject Maryvale ADMS
Sub-Basin Diversions

By: J. Geisbush
Checked: D. Dust
Project No. 132586

PARAMETERS

Sub-basin I.D.: Northern Ave.	36-32	35-32	34-32	33-32	32-32	31-32	36-31E	36-31W	35-31	34-31 (1)	33-31		
Total Area (Sq. Mi.)	N/D	0.987	0.994	0.993	0.991	0.953	N/D	0.505	1.005	0.995	N/D		
Area that Drains Directly West (sq. mi.) = Aw													
N. of E-W 1/2 mi. street:		0.107	0.245	0.134	0.231	0.164		0.112	0.184	0.110			
S. of E-W 1/2 mi. street:		0.217	0.130	0.101	0.121	0.101		0.287	0.224	0.119			
Total, Aw:		0.324	0.375	0.235	0.352	0.265		0.399	0.408	0.229			
Area, S. of E-W 1/2 mi. St., that Drains Directly South (sq. mi.) = As		0.275	0.369	0.380	0.392	0.381		0.106	0.301	0.382			
								n/a					
Remaining Area North of E-W 1/2 mi. Street (sq. mi.) = An		0.388	0.250	0.378	0.247	0.307		0.000	0.296	0.384			
Percentage of An Directed to the West (%)		0.00	0.00	0.10	0.00	0.05		0.00	0.30	0.30			
Percentage of An Directed to the South (%)		1.00	1.00	0.90	1.00	0.95		1.00	0.70	0.70			
Ratio of Total Sub-basin Directed to the West(%)		**0.33**	**0.38**	**0.27**	**0.36**	**0.29**		**0.79**	**0.49**	**0.35**			
Ratio of Total Sub-basin Directed to the South(%)		**0.67**	**0.62**	**0.73**	**0.64**	**0.71**		**0.21**	**0.51**	**0.65**			
Area Check	**0.1135**	**0.9873**	**0.9938**	**0.9926**	**0.9908**	**0.9533**	**0.4952**	**0.5046**	**1.0054**	**0.9947**	**0.2570**		

NOTES:

(1) Butler Drive storm drain system (FCD 94-12) directs 78cfs west @ D3431W

CH2M HILL

Subject Maryvale ADMS
Sub-Basin Diversions

By: J. Geisbush
Checked: D. Dust
Project No. 132586

PARAMETERS

Sub-basin I.D.: Glendale Ave.	1-22	2-22	3-22 (4)	4-22	5-22	6-22E	6-22W (1)	1-21 (2)	2-21 (3)	3-21	4-21	5-21
Total Area (Sq. Mi.)	0.243	1.004	0.998	1.003	1.015	N/D	0.474	0.999	0.995	0.981	0.874	N/D
Area that Drains Directly West (sq. mi.) = Aw												
N. of E-W 1/2 mi. street:	0.196	0.095	0.198	0.208	0.211		0.110	0.098	0.252	0.112	0.112	
S. of E-W 1/2 mi. street:	0.000	0.000	0.167	0.186	0.215		0.063	0.119	0.089	0.117	0.111	
Total, Aw:	0.196	0.095	0.365	0.394	0.426		0.173	0.217	0.341	0.229	0.223	
Area, S. of E-W 1/2 mi. St., that Drains Directly South (sq. mi.) = As	0.047	0.489	0.313	0.327	0.302		0.301	0.390	0.416	0.388	0.365	
							n/a					
Remaining Area North of E-W 1/2 mi. Street (sq. mi.) = An	0.000	0.420	0.320	0.282	0.287		0.000	0.392	0.238	0.364	0.286	
Percentage of An Directed to the West (%)	0.00	0.00	0.20	0.10	0.20		0.00	0.30	0.60	0.20	0.50	
Percentage of An Directed to the South (%)	1.00	1.00	0.80	0.90	0.80		1.00	0.70	0.40	0.80	0.50	
Ratio of Total Sub-basin Directed to the West(%)	**0.81**	**0.09**	**0.43**	**0.42**	**0.48**		**0.36**	**0.33**	**0.49**	**0.31**	**0.42**	
Ratio of Total Sub-basin Directed to the South(%)	**0.19**	**0.91**	**0.57**	**0.58**	**0.52**		**0.64**	**0.67**	**0.51**	**0.69**	**0.58**	
Area Check	**0.2432**	**1.0042**	**0.9979**	**1.0034**	**1.0152**	**0.4982**	**0.4742**	**0.9994**	**0.9947**	**0.9808**	**0.8740**	**0.3455**

NOTES:

(1) Orangewood storm drain system (FCD 94-12) directs 235cfs west @ D622WW
(2) Orangewood storm drain system (FCD 94-12) directs 83cfs west @ D121W
(3) Orangewood storm drain system (FCD 94-12) directs 159cfs west @ D221W
(4) 39TH Avenue storm drain system directs 150cfs south @ D322W

CH2M HILL

Subject Maryvale ADMS
Sub-Basin Diversions

By: J. Geisbush
Checked: D. Dust
Project No. 132586

PARAMETERS

Sub-basin I.D.: Bethany Home Rd.	12-22	11-22	10-22	9-22	8-22E	8-22W	7-22	12-21	11-21	10-21	9-21	8-21E	8-21W
Total Area (Sq. Mi.)	N/D	1.006	0.991	0.990	0.523	0.494	0.970	1.003	0.983	0.980	0.967	0.509	N/D
Area that Drains Directly West (sq. mi.) = Aw													
N. of E-W 1/2 mi. street:		0.065	0.370	0.109	0.119	0.086	0.134	0.166	0.117	0.188	0.342	0.168	
S. of E-W 1/2 mi. street:		0.100	0.211	0.117	0.000	0.015	0.159	0.149	0.121	0.144	0.033	0.117	
Total, Aw:		0.165	0.581	0.226	0.119	0.101	0.293	0.315	0.238	0.332	0.375	0.285	
Area, S. of E-W 1/2 mi. St., that Drains Directly South (sq. mi.) = As		0.412	0.300	0.391	0.114	0.367	0.396	0.373	0.442	0.360	0.466	0.107	
Remaining Area North of E-W 1/2 mi. Street (sq. mi.) = An		0.429	0.110	0.373	0.290	0.026	0.281	0.315	0.303	0.288	0.126	0.117	
Percentage of An Directed to the West (%)		0.10	0.00	0.30	0.50	0.10	0.20	0.20	0.20	0.30	0.00	0.00	
Percentage of An Directed to the South (%)		0.90	1.00	0.70	0.50	0.90	0.80	0.80	0.80	0.70	1.00	1.00	
Ratio of Total Sub-basin Directed to the West(%)		**0.21**	**0.59**	**0.34**	**0.50**	**0.21**	**0.36**	**0.38**	**0.30**	**0.43**	**0.39**	**0.56**	
Ratio of Total Sub-basin Directed to the South(%)		**0.79**	**0.41**	**0.66**	**0.50**	**0.79**	**0.64**	**0.62**	**0.70**	**0.57**	**0.61**	**0.44**	
Area Check	**0.2447**	**1.0055**	**0.9911**	**0.9903**	**0.5225**	**0.4936**	**0.9699**	**1.0030**	**0.9831**	**0.9801**	**0.9671**	**0.5087**	**0.2733**

CH2M HILL

Subject Maryvale ADMS
Sub-Basin Diversions

By: J. Geisbush
Checked: D. Dust
Project No. 132586

PARAMETERS

Sub-basin I.D.: Camel Back Rd.	13-22	14-22	15-22	16-22E	16-22W	17-22	18-22	13-21	14-21E	14-21W	15-21	16-21	17-21E
Total Area (Sq. Mi.)	N/D	1.000	0.998	N/D	0.479	1.015	0.969	1.000	N/D	0.562	1.011	1.021	0.699
Area that Drains Directly West (sq. mi.) = Aw													
N. of E-W 1/2 mi. street:		0.252	0.238		0.087	0.124	0.103	0.121		0.159	0.238	0.245	N/A
S. of E-W 1/2 mi. street:		0.224	0.248		0.255	0.058	0.138	0.117		0.121	0.120	0.114	0.144
Total, Aw:		0.476	0.486		0.342	0.182	0.241	0.238		0.280	0.358	0.359	0.144
Area, S. of E-W 1/2 mi. St., that Drains Directly South (sq. mi.) = As		0.267	0.262		0.137	0.458	0.355	0.375		0.282	0.174	0.406	0.247
										n/a			
Remaining Area North of E-W 1/2 mi. Street (sq. mi.) = An		0.257	0.250		0.000	0.375	0.373	0.387		0.000	0.479	0.256	0.308
Percentage of An Directed to the West (%)		0.00	0.00		0.00	0.30	0.50	0.30		0.00	0.00	0.20	0.00
Percentage of An Directed to the South (%)		1.00	1.00		1.00	0.70	0.50	0.70		1.00	1.00	0.80	1.00
Ratio of Total Sub-basin Directed to the West(%)		**0.48**	**0.49**		**0.71**	**0.29**	**0.44**	**0.35**		**0.50**	**0.35**	**0.40**	**0.21**
Ratio of Total Sub-basin Directed to the South(%)		**0.52**	**0.51**		**0.29**	**0.71**	**0.56**	**0.65**		**0.50**	**0.65**	**0.60**	**0.79**
Area Check	**0.2464**	**1.0000**	**0.9982**	**0.5130**	**0.4788**	**1.0154**	**0.9688**	**1.0003**	**0.4317**	**0.5615**	**1.0114**	**1.0214**	**0.6990**

PARAMETERS

Sub-basin I.D.: Camel Back Rd.	17-21W	18-21											
Total Area (Sq. Mi.)	0.306	N/D											
Area that Drains Directly West (sq. mi.) = Aw													
N. of E-W 1/2 mi. street:	0.159												
S. of E-W 1/2 mi. street:	0.088												
Total, Aw:	0.247												
Area, S. of E-W 1/2 mi. St., that Drains Directly South (sq. mi.) = As	0.059												
	n/a												
Remaining Area North of E-W 1/2 mi. Street (sq. mi.) = An	0.000												
Percentage of An Directed to the West (%)	0.10												
Percentage of An Directed to the South (%)	0.90												
Ratio of Total Sub-basin Directed to the West(%)	**0.81**												
Ratio of Total Sub-basin Directed to the South(%)	**0.19**												
Area Check	**0.3063**	**0.5426**											

CH2M HILL

Subject Maryvale ADMS
Sub-Basin Diversions

By: J. Geisbush
Checked: D. Dust
Project No. 132586

PARAMETERS

Sub-basin I.D.: Indian School Rd.	24-22	23-22	22-22E	22-22W	21-22	20-22	19-22	24-21N	24-21S	23-21	22-21	21-21	20-21	19-21
Total Area (Sq. Mi.)	N/D	0.990	N/D	0.467	0.994	1.014	0.938	0.413	0.612	0.987	1.002	1.008	1.023	0.873
Area that Drains Directly West (sq. mi.) = Aw														
N. of E-W 1/2 mi. street:		0.328		0.065	0.077	0.109	0.124	0.229	0.068	0.157	0.140	0.410	0.157	0.361
S. of E-W 1/2 mi. street:		0.261		N/A	0.037	0.177	0.154	N/A	0.050	0.142	0.246	0.119	0.085	0.271
Total, Aw:		0.589		0.065	0.114	0.286	0.278	0.229	0.118	0.299	0.386	0.529	0.242	0.632
Area, S. of E-W 1/2 mi. St., that Drains Directly South (sq. mi.) = As		0.224		0.402	0.460	0.377	0.328	0.063	0.450	0.368	0.243	0.397	0.477	0.241
Remaining Area North of E-W 1/2 mi. Street (sq. mi.) = An		0.177		0.000	0.420	0.351	0.332	0.121	0.044	0.320	0.373	0.082	0.304	0.000
Percentage of An Directed to the West (%)		0.00		0.00	0.40	0.30	0.40	0.40	0.30	0.40	0.50	0.10	0.10	1.00
Percentage of An Directed to the South (%)		1.00		1.00	0.60	0.70	0.60	0.60	0.70	0.60	0.50	0.90	0.90	0.00
Ratio of Total Sub-basin Directed to the West(%)		**0.59**		**0.14**	**0.28**	**0.39**	**0.44**	**0.67**	**0.21**	**0.43**	**0.57**	**0.53**	**0.27**	**0.72**
Ratio of Total Sub-basin Directed to the South(%)		**0.41**		**0.86**	**0.72**	**0.61**	**0.56**	**0.33**	**0.79**	**0.57**	**0.43**	**0.47**	**0.73**	**0.28**
Area Check	**0.2249**	**0.9895**	**0.5325**	**0.4671**	**0.9937**	**1.0139**	**0.9380**	**0.4133**	**0.6123**	**0.9869**	**1.0020**	**1.0076**	**1.0230**	**0.8727**

CH2M HILL

Subject Maryvale ADMS
Sub-Basin Diversions

By: J. Geisbush
Checked: D. Dust
Project No. 132586

PARAMETERS

Sub-basin I.D.: Thomas Rd.	25-22	26-22N	26-22E	26-22S	26-22W	27-22N	27-22S (1)	28-22N	28-22S	29-22N	30-22N	30-22S	25-21
Total Area (Sq. Mi.)	N/D	N/D	N/D	0.392	0.078	0.448	0.631	0.452	0.543	0.414	N/D	0.811	1.000
Area that Drains Directly West (sq. mi.) = Aw													
N. of E-W 1/2 mi. street:				0.033	0.000	0.045	0.001	0.220	0.003	0.178		0.072	0.147
S. of E-W 1/2 mi. street:				0.063	N/A	N/A	0.050	N/A	0.007	N/A		0.069	0.095
Total, Aw:				0.096	0.000	0.045	0.051	0.220	0.010	0.178		0.141	0.242
Area, S. of E-W 1/2 mi. St., that Drains Directly South (sq. mi.) = As				0.296	N/A	N/A	0.460	N/A	0.474	N/A		0.419	0.389
Remaining Area North of E-W 1/2 mi. Street (sq. mi.) = An				0.000	0.078	0.403	0.120	0.232	0.059	0.236		0.251	0.369
Percentage of An Directed to the West (%)				0.00	0.00	0.10	0.00	0.50	0.00	0.20		0.20	0.00
Percentage of An Directed to the South (%)				1.00	1.00	0.90	1.00	0.50	1.00	0.80		0.80	1.00
Ratio of Total Sub-basin Directed to the West(%)				0.24	0.00	0.19	0.08	0.74	0.02	0.54		0.24	0.24
Ratio of Total Sub-basin Directed to the South(%)				0.76	1.00	0.81	0.92	0.26	0.98	0.46		0.76	0.76
Area Check	#N/A	0.3798	0.3827	0.3924	0.0782	0.3715	0.6311	0.4518	0.5429	0.4138	0.1610	0.8109	1.0002

NOTE: (1) 39TH AVENUE STORM DRAIN 286 CFS SOUTH

PARAMETERS

Sub-basin I.D.: Thomas Rd.	26-21	27-21	28-21	29-21N	29-21S	30-21N	30-21S	29-22S
Total Area (Sq. Mi.)	0.990	1.005	1.000	0.761	0.234	0.667	0.750	0.594
Area that Drains Directly West (sq. mi.) = Aw								
N. of E-W 1/2 mi. street:	0.114	0.176	0.381	0.248	N/A	0.143	N/A	0.044
S. of E-W 1/2 mi. street:	0.109	0.059	0.246	N/A	0.234	N/A	0.136	0.114
Total, Aw:	0.223	0.235	0.627	0.248	0.234	0.143	0.136	0.158
Area, S. of E-W 1/2 mi. St., that Drains Directly South (sq. mi.) = As	0.379	0.443	0.248	0.270	N/A	N/A	0.614	0.436
Remaining Area North of E-W 1/2 mi. Street (sq. mi.) = An	0.388	0.327	0.125	0.243	0.000	0.524	0.000	0.000
Percentage of An Directed to the West (%)	0.10	0.20	0.00	0.00	0.00	0.00	0.00	0.00
Percentage of An Directed to the South (%)	0.90	0.80	1.00	1.00	1.00	1.00	1.00	1.00
Ratio of Total Sub-basin Directed to the West(%)	0.26	0.30	0.63	0.33	1.00	0.21	0.18	0.27
Ratio of Total Sub-basin Directed to the South(%)	0.74	0.70	0.37	0.67	0.00	0.79	0.82	0.73
Area Check	0.9902	1.0046	0.9995	0.7612	0.2625	0.6672	0.7496	0.5937

CH2M HILL

Subject Maryvale ADMS
Sub-Basin Diversions

By: J. Geisbush
Checked: D. Dust
Project No. 132586

PARAMETERS

Sub-basin I.D.: McDowell Rd.	36-22	35-22 (1)	34-22 (2)	33-22	33-22E	32-22	31-22	36-21	35-21	34-21	33-21	32-21E	32-21W
Total Area (Sq. Mi.)	0.227	0.999	1.000	0.720	0.281	1.004	0.978	1.001	0.991	1.005	0.990	0.243	0.772
Area that Drains Directly West (sq. mi.) = Aw													
N. of E-W 1/2 mi. street:	0.067	0.188	0.125	0.120	N/A	0.045	0.221	0.115	0.240	0.243	0.497	0.116	0.250
S. of E-W 1/2 mi. street:	0.079	0.058	0.121	0.099	0.000	0.366	0.234	0.074	0.156	0.263	0.121	N/A	0.434
Total, Aw:	0.146	0.246	0.246	0.219	0.000	0.411	0.455	0.189	0.396	0.506	0.618	0.116	0.684
Area, S. of E-W 1/2 mi. St., that Drains Directly South (sq. mi.) = As	0.081	0.440	0.373	0.246	0.156	0.064	0.249	0.436	0.539	0.249	0.372	0.057	0.000
Remaining Area North of E-W 1/2 mi. Street (sq. mi.) = An	0.000	0.313	0.381	0.255	0.125	0.529	0.274	0.376	0.056	0.250	0.000	0.070	0.088
Percentage of An Directed to the West (%)	1.00	0.05	0.30	0.00	0.00	0.30	0.20	0.30	0.40	0.20	0.00	0.10	0.50
Percentage of An Directed to the South (%)	0.00	0.95	0.70	1.00	1.00	0.70	0.80	0.70	0.60	0.80	1.00	0.90	0.50
Ratio of Total Sub-basin Directed to the West(%)	**0.64**	**0.26**	**0.36**	**0.30**	**0.00**	**0.57**	**0.52**	**0.30**	**0.42**	**0.55**	**0.62**	**0.51**	**0.94**
Ratio of Total Sub-basin Directed to the South(%)	**0.36**	**0.74**	**0.64**	**0.70**	**1.00**	**0.43**	**0.48**	**0.70**	**0.58**	**0.45**	**0.38**	**0.49**	**0.06**
Area Check	**0.2270**	**0.9989**	**1.0001**	**1.0006**	**1.0010**	**1.0040**	**0.9776**	**1.0013**	**0.9907**	**1.0054**	**0.9898**	**0.2431**	**0.7717**

NOTES:
(1) 31SR AVE. STORM DRAIN SYSTEM 182CFS SOUTH
(2) 39TH AVE STORM DRAIN 319CFS SOUTH

PARAMETERS

Sub-basin I.D.: McDowell Rd.	31-21	36-W21											
Total Area (Sq. Mi.)	0.964	0.837											
Area that Drains Directly West (sq. mi.) = Aw													
N. of E-W 1/2 mi. street:	0.218	0.317											
S. of E-W 1/2 mi. street:	0.228	0.238											
Total, Aw:	0.446	0.555											
Area, S. of E-W 1/2 mi. St., that Drains Directly South (sq. mi.) = As	0.256	0.282											
Remaining Area North of E-W 1/2 mi. Street (sq. mi.) = An	0.262	0.000											
Percentage of An Directed to the West (%)	0.50												
Percentage of An Directed to the South (%)	0.50	1.00											
Ratio of Total Sub-basin Directed to the West(%)	**0.60**	**0.66**											
Ratio of Total Sub-basin Directed to the South(%)	**0.40**	**0.34**											
Area Check	**0.9643**	**0.8369**											

Appendix D: Arterial and Composite Street Routes

Sub-basin Routes

Computational Methodology

Premise: Use the normal depth routing option to route flow through a sub-basin using a "composite" street cross section. The composite street cross section is used to represent a combination of collector and residential streets.

Procedure: Count the number and types of street that convey flow from an arterial street through the sub-basin to the next arterial street.

Input Parameters: The x-y points specified on the RX & RY cards correspond to the total right-of-way and pavement widths for streets being represented by the composite section.

Main Assumptions:

- The flow depths, slopes, and flow path lengths along the streets, being represented by the composite section, are approximately equal.

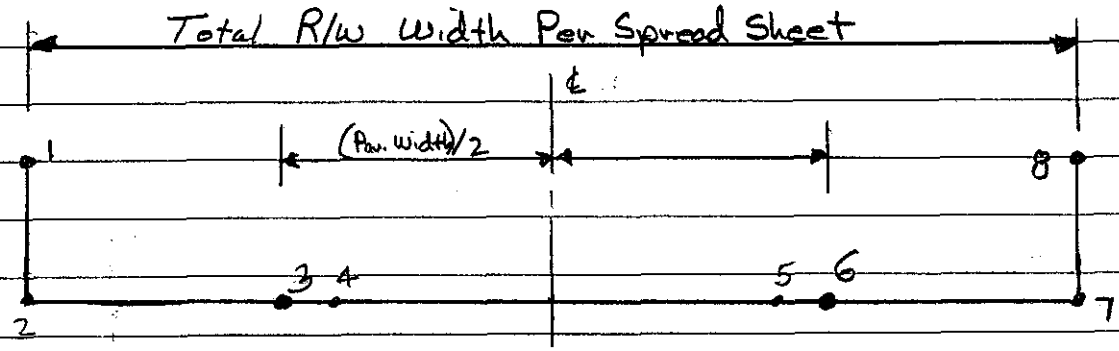
SUBJECT Marysvale ADMS

BY DWD DATE 2/96

SHEET NO. 1 OF 1

PROJECT NO. 132586

Typical Sub-basin Route: Composite Section



For R/W width = 270

Pt	1	2	3	4	5	6	7	8
Rx	0	0.1	43.5	53.5	216.5	226.5	270.	270.1
Ry	4	0.3	0.0	0.0	0.0	0.0	0.3	4

$$Rx(3) = \frac{(R/W - Pav)}{2}$$

$$Rx(6) = R/W - \frac{(R/W - Pav)}{2}$$

$$Rx(4) = Rx(3) + 10'$$

$$Rx(5) = Rx(6) - 10'$$

FORM 3B

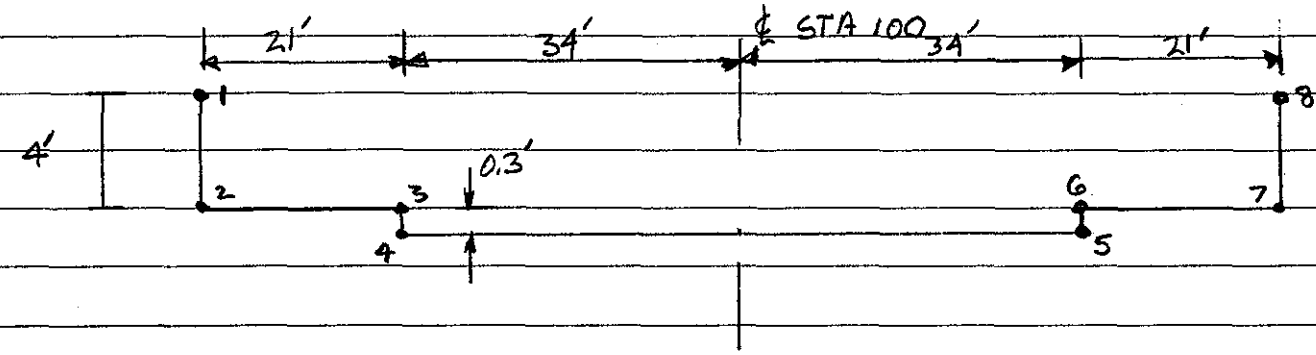
SUBJECT Manyvale ADMS

BY DWD DATE 2/96

SHEET NO. 1 OF 1

PROJECT NO. 132586

Routing Parameters for An Arterial Street



Typical 8 pt. Section

Pt	1	2	3	4	5	6	7	8
Rx	44.9	45	66	66.1	134	134.1	155	155.1
Ry	4.3	0.3	0.3	0.0	0.0	0.3	0.3	4.3

FORM 3B

CH2M HILL

Subject **Maryvale ADMS**
Routings Using Normal Depth

By: J. GEISBUSH
Checked: D. DUST
Project No. 132586

S = Street Route, B = Basin Route
R/W = Right of Way, PW = pavement width

Street Widths (a = arterial (1 mi.), c = collector (½ mi.), r = residential):

	R/W, ft.	PW, ft.
a	110	68
c	70	43
r	50	35

NMIN = 5 minutes

Streets

TB = Thunderbird Road	BH = Bethany Home Road
CR = Cactus Road	CB = Camelback Road
PA = Peoria Avenue	IS = Indian School Road
OA = Olive Avenue	TR = Thomas Road
NA = Northern Avenue	MD = McDowell Road
GA = Glendale Avenue	GR = Grand Avenue

Route ID	Route Type	Top of Slope Elev., ft	Bottom of Slope Elev., ft.	Slope Length, ft.	Ave. Slope, ft/ft	Reach Length, ft.	Ave. Vel., ft/s	NSTPS	Number of Streets Art.'s	Coll.'s	Resid.'s	Total PW, ft.	Total R/W, ft.
R27A	S	1201.00	1190.10	2620	0.0042	2620	3.7	2	1	0	0	68	110
R27B	S	1190.10	1179.50	2630	0.0040	2630	3.6	2	1	0	0	68	110
R27C	S	1179.50	1159.20	5270	0.0039	5270	3.6	5	1	0	0	68	110
R27D	S	1159.20	1140.80	5280	0.0035	5280	3.4	5	1	0	0	68	110
R27E	S	1140.80	1119.70	5250	0.0040	5250	3.6	5	1	0	0	68	110
R27F	S	1119.70	1115.00	1740	0.0027	1740	3.0	2	1	0	0	68	110
R27G	S	1098.10	1087.20	2620	0.0042	2620	3.7	2	1	0	0	68	110
R27H	S	1087.20	1080.90	2700	0.0023	2700	2.7	3	1	0	0	68	110
R35A	S	1220.40	1209.40	2600	0.0042	2600	3.7	2	1	0	0	68	110
R35B	S	1209.40	1201.20	2600	0.0032	2600	3.2	3	1	0	0	68	110
R35C	S	1201.20	1192.40	2620	0.0034	2620	3.3	3	1	0	0	68	110
R35D	S	1192.40	1184.30	2640	0.0031	2640	3.2	3	1	0	0	68	110
R35E	S	1184.30	1170.10	2620	0.0054	2620	4.3	2	1	0	0	68	110
R35F	S	1170.10	1159.10	2630	0.0042	2630	3.7	2	1	0	0	68	110
R35G	S	1159.10	1137.10	5260	0.0042	5260	3.7	5	1	0	0	68	110
R35H	S	1137.10	1125.00	2580	0.0047	2580	3.9	2	1	0	0	68	110
R35I	S	1125.00	1117.50	2690	0.0028	2690	3.0	3	1	0	0	68	110
R35J	S	1108.30	1095.30	2640	0.0049	2640	4.0	2	1	0	0	68	110
R35K	S	1095.30	1084.10	2690	0.0042	2690	3.7	2	1	0	0	68	110
R35L	S	1084.10	1076.20	2630	0.0030	2630	3.1	3	1	0	0	68	110
R43A	S	1212.70	1208.80	2600	0.0015	2600	2.2	4	1	0	0	68	110
R43B	S	1208.80	1200.30	2590	0.0033	2590	3.3	3	1	0	0	68	110
R43C	S	1200.30	1190.00	2600	0.0040	2600	3.6	2	1	0	0	68	110
R43D	S	1190.00	1179.80	2660	0.0038	2660	3.5	3	1	0	0	68	110
R43E	S	1179.80	1171.80	2620	0.0031	2620	3.2	3	1	0	0	68	110
R43F	S	1171.80	1165.30	2610	0.0025	2610	2.9	3	1	0	0	68	110
R43G	S	1165.30	1157.30	2620	0.0031	2620	3.2	3	1	0	0	68	110
R43H	S	1157.30	1147.60	2620	0.0037	2620	3.5	3	1	0	0	68	110
R43I	S	1147.60	1140.40	2600	0.0028	2600	3.0	3	1	0	0	68	110
R43J	S	1130.00	1115.00	3750	0.0040	3750	3.6	3	1	0	0	68	110
R43K	S	1115.00	1107.00	2120	0.0038	2120	3.5	2	1	0	0	68	110
R43L	S				Not Used								
R43M	S	1103.60	1093.40	2640	0.0039	2640	3.6	2	1	0	0	68	110
R43N	S	1093.40	1082.30	2650	0.0042	2650	3.7	2	1	0	0	68	110
R43O	S	1082.30	1073.70	2600	0.0033	2600	3.3	3	1	0	0	68	110
R51A	S	1211.80	1205.40	2635	0.0024	2635	2.8	3	1	0	0	68	110
R51B	S	1205.40	1198.10	2600	0.0028	2600	3.0	3	1	0	0	68	110
R51C	S	1198.10	1190.80	2590	0.0028	2590	3.0	3	1	0	0	68	110
R51D	S	1190.80	1184.70	2670	0.0023	2670	2.7	3	1	0	0	68	110
R51E	S	1184.70	1180.40	2610	0.0016	2610	2.3	4	1	0	0	68	110
R51F	S	1180.40	1171.20	2630	0.0035	2630	3.4	3	1	0	0	68	110
R51G	S	1171.20	1165.70	2640	0.0021	2640	2.6	3	1	0	0	68	110
R51H	S	1165.70	1154.90	2600	0.0042	2600	3.7	2	1	0	0	68	110
R51I	S	1154.90	1149.40	2630	0.0021	2630	2.6	3	1	0	0	68	110
R51J	S	1140.10	1133.30	2680	0.0025	2680	2.9	3	1	0	0	68	110

Route ID	Route Type	Top of Slope Elev., ft	Bottom of Slope Elev., ft.	Slope Length, ft.	Ave. Slope, ft/ft	Reach Length, ft.	Ave. Vel., ft/s	NSTPS	Number of Streets Art.'s	Number of Streets Coll.'s	Number of Streets Resid.'s	Total PW, ft.	Total R/W, ft.
R51K	S	1133.30	1122.20	2650	0.0042	2650	3.7	2	1	0	0	68	110
R51L	S	1122.20	1113.70	2650	0.0032	2650	3.2	3	1	0	0	68	110
R51M	S	1113.70	1104.20	2500	0.0038	2500	3.5	2	1	0	0	68	110
R51N	S	1101.60	1091.30	2570	0.0040	2570	3.6	2	1	0	0	68	110
R51O	S	1091.30	1081.60	2630	0.0037	2630	3.5	3	1	0	0	68	110
R51P	S	1081.60	1073.10	2670	0.0032	2670	3.2	3	1	0	0	68	110
R59A	S	1203.59	1194.00	2610	0.0037	2610	3.5	3	1	0	0	68	110
R59B	S	1194.00	1183.90	2600	0.0039	2600	3.6	2	1	0	0	68	110
R59C	S	1183.90	1177.90	2600	0.0023	2600	2.7	3	1	0	0	68	110
R59D	S	1177.90	1172.80	2600	0.0020	2600	2.6	3	1	0	0	68	110
R59E	S	1172.80	1164.40	2760	0.0030	2760	3.1	3	1	0	0	68	110
R59F	S	1164.40	1159.10	2420	0.0022	2420	2.7	3	1	0	0	68	110
R59G	S	1159.10	1154.60	2620	0.0017	2620	2.4	4	1	0	0	68	110
R59H	S	1154.60	1149.70	2620	0.0019	2620	2.5	4	1	0	0	68	110
R59I	S	1143.10	1137.50	2690	0.0021	2690	2.6	3	1	0	0	68	110
R59J	S	1137.50	1128.40	2660	0.0034	2660	3.3	3	1	0	0	68	110
R59K	S	1128.40	1121.40	2670	0.0026	2670	2.9	3	1	0	0	68	110
R59L	S	1121.40	1112.90	2660	0.0032	2660	3.2	3	1	0	0	68	110
R59M	S	1112.90	1105.50	2630	0.0028	2630	3.0	3	1	0	0	68	110
R59N	S	1100.00	1094.00	1130	0.0053	1130	4.2	1	1	0	0	68	110
R59O	S	1094.00	1084.10	2620	0.0038	2620	3.5	2	1	0	0	68	110
R59P	S	1084.10	1073.80	2670	0.0039	2670	3.6	2	1	0	0	68	110
R59Q	S	1073.80	1065.50	2660	0.0031	2660	3.2	3	1	0	0	68	110
R67A	S	1200.80	1191.40	2600	0.0036	2600	3.4	3	1	0	0	68	110
R67B	S	1191.40	1182.97	2600	0.0032	2600	3.2	3	1	0	0	68	110
R67C	S	1182.97	1176.50	2635	0.0025	2635	2.9	3	1	0	0	68	110
R67D	S	1176.50	1170.30	2635	0.0024	2635	2.8	3	1	0	0	68	110
R67E	S	1170.30	1161.80	2620	0.0032	2620	3.2	3	1	0	0	68	110
R67F	S	1161.80	1154.30	2620	0.0029	2620	3.1	3	1	0	0	68	110
R67G	S	1154.30	1146.60	2590	0.0030	2590	3.1	3	1	0	0	68	110
R67I	S	1146.60	1143.30	2660	0.0012	2660	2.0	4	1	0	0	68	110
R67J	S	1143.30	1126.40	2660	0.0064	2660	5.0	2	1	0	0	68	110
R67K	S	1126.40	1122.30	2640	0.0016	2640	2.3	4	1	0	0	68	110
R67L	S	1122.30	1115.70	2650	0.0025	2650	2.9	3	1	0	0	68	110
R67M	S	1115.70	1108.40	2660	0.0027	2660	3.0	3	1	0	0	68	110
R67N	S	1108.40	1098.70	2680	0.0036	2680	3.4	3	1	0	0	68	110
R67O	S	1084.70	1076.80	2630	0.0030	2630	3.1	3	1	0	0	68	110
R67P	S	1076.80	1066.90	2650	0.0037	2650	3.5	3	1	0	0	68	110
R67Q	S	1066.90	1057.60	2640	0.0035	2640	3.4	3	1	0	0	68	110
R75A	S	1195.00	1186.00	2620	0.0034	2620	3.3	3	1	0	0	68	110
R75B	S	1186.00	1174.10	2620	0.0045	2620	3.8	2	1	0	0	68	110
R75C	S	1174.10	1167.30	2660	0.0026	2660	2.9	3	1	0	0	68	110
R75D	S	1167.30	1160.90	2600	0.0025	2600	2.9	3	1	0	0	68	110
R75E	S	1160.90	1151.80	2630	0.0035	2630	3.4	3	1	0	0	68	110
R75F	S	1151.80	1141.60	2620	0.0039	2620	3.6	2	1	0	0	68	110
R75G	S	1141.60	1136.00	2280	0.0025	2280	2.9	3	1	0	0	68	110
R75H	S	1129.00	1127.80	2630	0.0005	2630	1.3	7	1	0	0	68	110
R75I	S	1127.80	1121.30	2650	0.0025	2650	2.9	3	1	0	0	68	110
R74J	S	1121.30	1112.60	2640	0.0033	2640	3.3	3	1	0	0	68	110
R75K	S	1112.60	1107.10	2620	0.0021	2620	2.6	3	1	0	0	68	110
R75L	S	1107.10	1102.20	2640	0.0019	2640	2.5	4	1	0	0	68	110
R75M	S	1102.20	1098.90	2620	0.0013	2620	2.1	4	1	0	0	68	110
R75N	S	1098.90	1095.30	2650	0.0014	2650	2.1	4	1	0	0	68	110
R75O	S	1087.70	1078.40	2610	0.0036	2610	3.4	3	1	0	0	68	110
R75P	S	1078.40	1070.30	2670	0.0030	2670	3.1	3	1	0	0	68	110
R75Q	S	1070.30	1064.40	2660	0.0022	2660	2.7	3	1	0	0	68	110
R75R	S	1064.40	1057.10	2660	0.0027	2660	3.0	3	1	0	0	68	110
R75S	S	1057.10	1049.60	2650	0.0028	2650	3.0	3	1	0	0	68	110
R83A	S	1175.00	1167.60	2620	0.0028	2620	3.0	3	1	0	0	68	110
R83B	S	1167.60	1160.50	2620	0.0027	2620	3.0	3	1	0	0	68	110
R83C	S	1160.50	1152.20	2600	0.0032	2600	3.2	3	1	0	0	68	110
R83D	S	1152.20	1139.90	5470	0.0022	5470	2.7	7	1	0	0	68	110

Route ID	Route Type	Top of Slope Elev., ft	Bottom of Slope Elev., ft.	Slope Length, ft.	Ave. Slope, ft/ft	Reach Length, ft.	Ave. Vel., ft/s	NSTPS	Number of Streets Art.'s	Number of Streets Coll.'s	Number of Streets Resid.'s	Total PW, ft.	Total R/W, ft.
R83E	S	1130.20	1123.60	2640	0.0025	2640	2.9	3	1	0	0	68	110
R83F	S	1123.60	1112.40	2610	0.0043	2610	3.7	2	1	0	0	68	110
R83G	S	1112.40	1103.00	2620	0.0036	2620	3.4	3	1	0	0	68	110
R83H	S	1102.50	1105.90	2530		Special Case							
R83I	S	1105.90	1095.30	2630	0.0040	2630	3.6	2	1	0	0	68	110
R83J	S	1095.30	1088.80	2590	0.0025	2590	2.9	3	1	0	0	68	110
R83K	S	1088.80	1084.20	2580	0.0018	2580	2.4	4	1	0	0	68	110
R83L	S	1084.20	1080.10	2730	0.0015	2730	2.2	4	1	0	0	68	110
R83M	S	1080.10	1075.50	2630	0.0017	2630	2.4	4	1	0	0	68	110
R83N	S	1075.50	1069.80	2650	0.0022	2650	2.7	3	1	0	0	68	110
R83O	S	1069.80	1063.10	2680	0.0025	2680	2.9	3	1	0	0	68	110
R83P	S	1063.10	1057.60	2630	0.0021	2630	2.6	3	1	0	0	68	110
R83Q	S	1057.60	1051.20	2630	0.0024	2630	2.8	3	1	0	0	68	110
R83R	S	1051.20	1042.80	2640	0.0032	2640	3.2	3	1	0	0	68	110
R83S	S	1042.80	1036.10	2640	0.0025	2640	2.9	3	1	0	0	68	110
R91A	S	1120.30	1113.70	2600	0.0025	2600	2.9	3	1	0	0	68	110
R91B	S	1113.70	1110.10	2640	0.0014	2640	2.1	4	1	0	0	68	110
R91C	S	1110.10	1102.80	2640	0.0028	2640	3.0	3	1	0	0	68	110
R91D	S	1102.80	1095.10	2640	0.0029	2640	3.1	3	1	0	0	68	110
R91E	S	1095.10	1086.60	2570	0.0033	2570	3.3	3	1	0	0	68	110
R91F	S	1086.60	1078.20	2610	0.0032	2610	3.2	3	1	0	0	68	110
R91G	S	1078.20	1071.90	2600	0.0024	2600	2.8	3	1	0	0	68	110
R91H	S	1071.90	1068.10	2580	0.0015	2580	2.2	4	1	0	0	68	110
R91I*	S	1068.10	1059.00	2600	0.0035	2600	3.4	3	1	0	0	68	110
R91J	S	1059.00	1056.40	2640	0.0010	2640	1.8	5	1	0	0	68	110
R91K	S	1056.40	1050.50	2680	0.0022	2680	2.7	3	1	0	0	68	110
R91L	S	1050.50	1047.20	2640	0.0012	2640	2.0	4	1	0	0	68	110
R91M	S	1047.20	1043.10	2630	0.0016	2630	2.3	4	1	0	0	68	110
R91N	S	1043.10	1036.60	2650	0.0025	2650	2.9	3	1	0	0	68	110
R91O	S	1036.60	1030.40	2650	0.0023	2650	2.7	3	1	0	0	68	110
R91P	S	1030.40	1025.00	2700	0.0020	2700	2.6	4	1	0	0	68	110
R99A	S	1073.40	1066.70	2610	0.0026	2610	2.9	3	1	0	0	68	110
R99B	S	1066.70	1059.00	2580	0.0030	2580	3.1	3	1	0	0	68	110
R99C	S	1059.00	1056.00	2220	0.0014	2220	2.1	3	1	0	0	68	110
R99D*	S	1059.80	1048.70	2590	0.0043	2590	3.7	2	1	0	0	68	110
R99E	S	1048.70	1041.80	2620	0.0026	2620	2.9	3	1	0	0	68	110
R99F	S	1041.80	1036.80	2660	0.0019	2660	2.5	4	1	0	0	68	110
R99G	S	1036.80	1031.70	2680	0.0019	2680	2.5	4	1	0	0	68	110
R99H	S	1031.70	1029.20	2650	0.0009	2650	1.7	5	1	0	0	68	110
R99I	S	1029.20	1026.70	2660	0.0009	2660	1.7	5	1	0	0	68	110
R99J	S	1026.70	1025.90	2690	0.0003	2690	1.0	9	1	0	0	68	110
R99K	S	1025.90	1021.70	2640	0.0016	2640	2.3	4	1	0	0	68	110
R107A	S	1034.50	1025.60	2660	0.0033	2660	3.3	3	1	0	0	68	110
R107B	S	1025.60	1020.30	2640	0.0020	2640	2.6	3	1	0	0	68	110
R107C	S	1020.30	1018.00	2490	0.0009	2490	1.7	5	1	0	0	68	110
R107D	S	CHNL	1010.50	2640	0.0024	2640	2.4	3	1	0	0	5 Bottom Width, 5 Depth, 1:1 Side Slopes	
R115A	S	1008.40	1002.90	2650	0.0021	2650	2.6	3	1	0	0	68	110
R115B	S	1002.90	998.90	2630	0.0015	2630	2.2	4	1	0	0	68	110
RADOT1	S	CHNL	1192.80	1185.10	3450	0.0043	3430	10.6	1.1	0	0	30 Bottom Width, 10 Depth, 2:1 Side Slopes	
RADOT2	S	CHNL	1182.20	1176.80	3180	0.0035	3180	9.8	1.2	0	0	30 Bottom Width, 10 Depth, 2:1 Side Slopes	
RTB1	S	1200.00	1192.00	2740	0.0029	2650	3.1	3	1	0	0	68	110
RTB2	S	1192.00	1186.00	2560	0.0023	2650	2.7	3	1	0	0	68	110
RTB3	S	1186.00	1177.00	2830	0.0032	2700	3.2	3	1	0	0	68	110
RTB4	S	1177.00	1167.60	2500	0.0038	2630	3.5	2	1	0	0	68	110
RCR1	S	1203.59	1182.97	5090	0.0041	2545	3.7	2	1	0	0	68	110
RCR2	S	1203.59	1182.97	5090	0.0041	2545	3.7	2	1	0	0	68	110
RCR3	S	1182.97	1176.40	2660	0.0025	2660	2.9	3	1	0	0	68	110
RCR4	S	1176.40	1167.30	2670	0.0034	2670	3.3	3	1	0	0	68	110
RCR5	S	1167.30	1159.00	2670	0.0031	2670	3.2	3	1	0	0	68	110

Route ID	Route Type	Top of Slope Elev., ft	Bottom of Slope Elev., ft.	Slope Length, ft.	Ave. Slope, ft/ft	Reach Length, ft.	Ave. Vel., ft/s	NSTPS	Number of Streets Art.'s	Number of Streets Coll.'s	Number of Streets Resid.'s	Total PW, ft.	Total R/W, ft.
RCR6	S	1159.00	1152.20	2660	0.0026	2660	2.9	3	1	0	0	68	110
RCR7	S	1152.20	1144.20	2640	0.0030	2640	3.1	3	1	0	0	68	110
RCR8	S	1144.20	1138.40	2400	0.0024	2620	2.8	3	1	0	0	68	110
RPA1	S	1214.37	1205.40	2635	0.0034	2635	3.3	3	1	0	0	68	110
RPA2	S	1205.40	1183.90	5260	0.0041	2630	3.7	2	1	0	0	68	110
RPA3	S	1205.40	1183.90	5260	0.0041	2630	3.7	2	1	0	0	68	110
RPA4	S	1183.90	1170.30	5080	0.0027	2540	3.0	3	1	0	0	68	110
RPA5	S	1183.90	1170.30	5080	0.0027	2540	3.0	3	1	0	0	68	110
RPA6	S	1170.30	1157.50	2650	0.0048	2650	4.0	2	1	0	0	68	110
RPA7	S	1157.50	1151.80	2650	0.0022	2650	2.7	3	1	0	0	68	110
RPA8	S	1151.80	1145.00	2650	0.0026	2650	2.9	3	1	0	0	68	110
RPA9	S	1145.00	1139.90	2660	0.0019	2660	2.5	4	1	0	0	68	110
RPA10	S	1126.60	1120.30	2680	0.0024	2680	2.8	3	1	0	0	68	110
ROA1	S	1220.40	1215.90	2650	0.0017	2650	2.4	4	1	0	0	68	110
ROA2	S	1215.90	1208.80	2650	0.0027	2650	3.0	3	1	0	0	68	110
ROA3	S	1208.80	1198.50	2640	0.0039	2640	3.6	2	1	0	0	68	110
ROA4	S	1198.50	1190.80	2640	0.0029	2640	3.1	3	1	0	0	68	110
ROA5	S	1190.80	1180.70	2620	0.0039	2620	3.6	2	1	0	0	68	110
ROA6	S	1180.70	1172.80	2630	0.0030	2630	3.1	3	1	0	0	68	110
ROA7	S	1172.80	1162.30	2630	0.0040	2630	3.6	2	1	0	0	68	110
ROA8	S	1162.30	1154.30	2430	0.0033	2430	3.3	2	1	0	0	68	110
ROA9	S	1154.30	1144.40	2640	0.0037	2640	3.5	3	1	0	0	68	110
ROA10	S	1144.40	1137.60	2640	0.0026	2640	2.9	3	1	0	0	68	110
ROA11	S	1127.90	1123.60	2660	0.0016	2660	2.3	4	1	0	0	68	110
ROA12	S	1123.60	1117.70	2660	0.0022	2660	2.7	3	1	0	0	68	110
ROA13	S	1117.70	1110.10	2650	0.0029	2650	3.1	3	1	0	0	68	110
RNA1	S	1201.20	1195.40	2640	0.0022	2640	2.7	3	1	0	0	68	110
RNA2	S	1195.40	1190.00	2630	0.0021	2630	2.6	3	1	0	0	68	110
RNA3	S	1190.00	1186.80	2630	0.0012	2630	2.0	4	1	0	0	68	110
RNA4	S	1186.80	1180.40	2630	0.0024	2630	2.8	3	1	0	0	68	110
RNA5	S	1180.40	1168.70	2640	0.0044	2640	3.8	2	1	0	0	68	110
RNA6	S	1168.70	1159.10	2640	0.0036	2640	3.4	3	1	0	0	68	110
RNA7	S	1159.10	1149.00	2670	0.0038	2670	3.5	3	1	0	0	68	110
RNA8	S	1149.00	1143.30	2420	0.0024	2420	2.8	3	1	0	0	68	110
RNA9	S	1134.90	1127.80	2690	0.0026	2690	2.9	3	1	0	0	68	110
RNA10	S	1127.80	1113.20	2660	0.0055	2660	4.3	2	1	0	0	68	110
RNA11	S	1113.20	1103.00	2690	0.0038	2690	3.5	3	1	0	0	68	110
RNA12	S	1102.50	1097.10	2620	0.0021	2620	2.6	3	1	0	0	68	110
RNA13	S	1097.10	1095.10	2640	0.0008	2640	1.6	5	1	0	0	68	110
RNA14	S	1095.10	1088.50	2680	0.0025	2680	2.9	3	1	0	0	68	110
RGA1 ✓	S	1184.30	1178.70	2590	0.0022	2590	2.7	3	1	0	0	68	110
RGA2	S	1178.70	1171.80	2630	0.0026	2630	2.9	3	1	0	0	68	110
RGA3	S	1171.80	1167.90	2630	0.0015	2630	2.2	4	1	0	0	68	110
RGA4	S	1167.90	1165.70	2600	0.0008	2600	1.6	5	1	0	0	68	110
RGA5	S	1165.70	1159.70	2300	0.0026	2300	2.9	3	1	0	0	68	110
RGA6	S	1159.70	1149.70	3040	0.0033	3040	3.3	3	1	0	0	68	110
RGA7	S	1140.00	1129.70	2500	0.0041	2500	3.7	2	1	0	0	68	110
RGA8	S	1129.70	1120.30	2680	0.0035	2680	3.4	3	1	0	0	68	110
RGA9	S	1120.30	1112.60	2660	0.0029	2660	3.1	3	1	0	0	68	110
RGA10	S	1112.60	1106.00	2610	0.0025	2610	2.9	3	1	0	0	68	110
RGA11	S	1106.00	1095.30	2630	0.0041	2630	3.7	2	1	0	0	68	110
RGA12	S	1095.30	1089.90	2690	0.0020	2690	2.6	4	1	0	0	68	110
RGA13	S	1089.90	1078.20	2650	0.0044	2650	3.8	2	1	0	0	68	110
RGA14	S	1078.20	1068.00	2580	0.0040	2580	3.6	2	1	0	0	68	110
RGA15	S	1068.00	1066.70	2690	0.0005	2690	1.3	7	1	0	0	68	110
RBH1	S	1162.20	1159.20	2630	0.0011	2630	1.9	5	1	0	0	68	110
RBH2	S	1162.20	1159.10	2650	0.0012	2650	2.0	4	1	0	0	68	110
RBH3	S	1157.30	1153.30	2610	0.0015	2610	2.2	4	1	0	0	68	110
RBH4	S	1153.30	1149.40	2590	0.0015	2590	2.2	4	1	0	0	68	110
RBH5	S	1143.20	1137.50	2740	0.0021	2740	2.6	3	1	0	0	68	110
RBH6	S	1137.50	1128.80	2690	0.0032	2690	3.2	3	1	0	0	68	110

Route ID	Route Type	Top of Slope Elev., ft	Bottom of Slope Elev., ft.	Slope Length, ft.	Ave. Slope, ft/ft	Reach Length, ft.	Ave. Vel., ft/s	NSTPS	Number of Streets Art.'s	Number of Streets Coll.'s	Number of Streets Resid.'s	Total PW, ft.	Total R/W, ft.
RBH7	S	1128.80	1122.30	2510	0.0026	2510	2.9	3	1	0	0	68	110
RBH8	S	1122.30	1112.60	2650	0.0037	2650	3.5	3	1	0	0	68	110
RBH9	S	1112.60	1102.20	2680	0.0039	2680	3.6	3	1	0	0	68	110
RBH10	S	1102.20	1093.20	2590	0.0035	2590	3.4	3	1	0	0	68	110
RBH11	S	1093.20	1084.20	2620	0.0034	2620	3.3	3	1	0	0	68	110
RBH12	B	1084.20	1068.00	5220	0.0031	5220	3.2	5	0	0	2	70	100
RBH13	B	1068.00	1056.00	5290	0.0023	5290	2.7	6	0	0	2	70	100
RBH14	B	1056.00	1054.00	2270	0.0009	2270	1.7	4	0	0	2	70	100
RCB1	S	1137.00	1133.30	3540	0.0010	3540	1.8	7	1	0	0	68	110
RCB2	S	1133.30	1127.10	2430	0.0026	2710	2.9	3	1	0	0	68	110
RCB3	S	1127.10	1121.40	2980	0.0019	2710	2.5	4	1	0	0	68	110
RCB4	S	1121.40	1113.80	2640	0.0029	2640	3.1	3	1	0	0	68	110
RCB5	S	1113.80	1108.40	2520	0.0021	2520	2.6	3	1	0	0	68	110
RCB6	S	1108.40	1101.20	2470	0.0029	2470	3.1	3	1	0	0	68	110
RCB7	S	1101.20	1095.30	2810	0.0021	2810	2.6	4	1	0	0	68	110
RCB8	S	1095.30	1084.70	2510	0.0042	2510	3.7	2	1	0	0	68	110
RCB9	S	1084.70	1075.50	2770	0.0033	2770	3.3	3	1	0	0	68	110
RCB10	S	1075.50	1063.70	2650	0.0045	2650	3.8	2	1	0	0	68	110
RCB11	S	1063.70	1056.40	2650	0.0028	2650	3.0	3	1	0	0	68	110
RCB12	S	1056.40	1047.90	2730	0.0031	2730	3.2	3	1	0	0	68	110
RCB13	S	1047.90	1041.80	2640	0.0023	2640	2.7	3	1	0	0	68	110
RCB14	S	1041.80	1037.50	2640	0.0016	2640	2.3	4	1	0	0	68	110
RCB15	S	1037.50	1034.50	2630	0.0011	2630	1.9	5	1	0	0	68	110
RJS1	S	1116.00	1115.00	1400	0.0007	1400	1.5	3	1	0	0	68	110
RJS2	S	1115.50	1113.70	2650	0.0007	2650	1.5	6	1	0	0	68	110
RJS3	S	1113.70	1109.80	2710	0.0014	2710	2.1	4	1	0	0	68	110
RJS4	S	1109.80	1105.50	2710	0.0016	2710	2.3	4	1	0	0	68	110
RJS5	S	1105.50	1100.40	2680	0.0019	2680	2.5	4	1	0	0	68	110
RJS6	S	1100.40	1092.00	1420	0.0059	1420	4.6	1	1	0	0	68	110
RJS7	S	1091.40	1084.70	2650	0.0025	2650	2.9	3	1	0	0	68	110
RJS8	S	1084.70	1078.40	2650	0.0024	2650	2.8	3	1	0	0	68	110
RJS9	S	1078.40	1071.50	2520	0.0027	2520	3.0	3	1	0	0	68	110
RJS10	S	1071.50	1063.10	2760	0.0030	2760	3.1	3	1	0	0	68	110
RJS11	S	1063.10	1055.20	2670	0.0030	2670	3.1	3	1	0	0	68	110
RJS12	S	1055.20	1047.20	2640	0.0030	2640	3.1	3	1	0	0	68	110
RJS13	S	1047.20	1038.00	2670	0.0034	2670	3.3	3	1	0	0	68	110
RJS14	S	1038.00	1031.70	2620	0.0024	2620	2.8	3	1	0	0	68	110
RJS15	S	1031.70	1025.40	2640	0.0024	2640	2.8	3	1	0	0	68	110
RJS16	S	1025.40	1020.30	2800	0.0018	2800	2.4	4	1	0	0	68	110
RJS17	S	1020.30	1016.60	2560	0.0014	2560	2.1	4	1	0	0	68	110
RJS18	S	1016.60	1013.80	2500	0.0011	2500	1.9	4	1	0	0	68	110
RTR1	S	1096.80	1095.30	2640	0.0006	2640	1.4	6	1	0	0	68	110
RTR2	S	1095.30	1093.70	2640	0.0006	2640	1.4	6	1	0	0	68	110
RTR3	S	1093.70	1093.40	2660	0.0001	2660	0.6	16	1	0	0	68	110
RTR4	S	1093.80	1091.30	2820	0.0009	2820	1.7	5	1	0	0	68	110
RTR5	S	1091.30	1087.50	2720	0.0014	2720	2.1	4	1	0	0	68	110
RTR6	S	1087.50	1084.10	2600	0.0013	2600	2.1	4	1	0	0	68	110
RTR7	S	1084.10	1080.20	2630	0.0015	2630	2.2	4	1	0	0	68	110
RTR8	S	1080.20	1076.80	2520	0.0013	2520	2.1	4	1	0	0	68	110
RTR9	S	1076.80	1071.10	2630	0.0022	2630	2.7	3	1	0	0	68	110
RTR10	S	1071.10	1064.40	2670	0.0025	2670	2.9	3	1	0	0	68	110
RTR11	S	1064.40	1056.80	2600	0.0029	2600	3.1	3	1	0	0	68	110
RTR12	S	1056.80	1051.20	2620	0.0021	2620	2.6	3	1	0	0	68	110
RTR13	S	1051.20	1044.90	2640	0.0024	2640	2.8	3	1	0	0	68	110
RTR14	S	1044.90	1036.60	2650	0.0031	2650	3.2	3	1	0	0	68	110
RTR15	S	1036.60	1031.90	2650	0.0018	2650	2.4	4	1	0	0	68	110
RTR16	S	1031.90	1026.70	2640	0.0020	2640	2.6	3	1	0	0	68	110
RTR17	S	1026.70	1022.00	2530	0.0019	2530	2.5	3	1	0	0	68	110
RTR18	S	1015.20	1010.00	3130	0.0017	2390	2.4	3	1	0	0	68	110
RTR19	S	1010.00	1008.40	2060	0.0008	2800	1.6	6	1	0	0	68	110
RMD1 √	S	1080.90	1079.60	2630	0.0005	2630	1.3	7	1	0	0	68	110
RMD2	S	1079.60	1076.20	2670	0.0013	2670	2.1	4	1	0	0	68	110

Route ID	Route Type	Top of Slope Elev., ft	Bottom of Slope Elev., ft.	Slope Length, ft.	Ave. Slope, ft/ft	Reach Length, ft.	Ave. Vel., ft/s	NSTPS	Number of Streets: Art.'s	Number of Streets: Coll.'s	Number of Streets: Resid.'s	Total PW, ft.	Total R/W, ft.
RMD3	S	1076.20	1075.70	2620	0.0002	2620	0.8	11	1	0	0	68	110
RMD4	S	1075.70	1073.70	2670	0.0007	2670	1.5	6	1	0	0	68	110
RMD5	S	1073.70	1073.10	2780	0.0002	2780	0.8	11	1	0	0	68	110
RMD6	S	1073.10	1070.60	2630	0.0010	2630	1.8	5	1	0	0	68	110
RMD7	S	1070.60	1065.50	2660	0.0019	2660	2.5	4	1	0	0	68	110
RMD8	S	1065.50	1060.00	2620	0.0021	2620	2.6	3	1	0	0	68	110
RMD9	S	1060.00	1057.60	2530	0.0009	2530	1.7	5	1	0	0	68	110
RMD10	S	1057.60	1054.10	2630	0.0013	2630	2.1	4	1	0	0	68	110
RMD11	S	1054.10	1049.60	2640	0.0017	2640	2.4	4	1	0	0	68	110
RMD12	S	1049.60	1042.70	2630	0.0026	2630	2.9	3	1	0	0	68	110
RMD13	S	1042.70	1036.10	2680	0.0025	2680	2.9	3	1	0	0	68	110
RMD14	S	1036.10	1028.70	2620	0.0028	2620	3.0	3	1	0	0	68	110
RMD15	S	1028.70	1025.00	2560	0.0014	2560	2.1	4	1	0	0	68	110
RMD16	S	1025.00	1021.70	5320	0.0006	2660	1.4	6	1	0	0	68	110
RMD16A	S	1025.00	1021.70	5320	0.0006	2660	1.4	6	1	0	0	68	110
RMD17	S	1021.70	1016.90	2660	0.0018	2660	2.4	4	1	0	0	68	110
RMD18	S	1016.90	1010.90	2620	0.0023	2620	2.7	3	1	0	0	68	110
RMD19	S	1010.90	1005.60	2650	0.0020	2650	2.6	3	1	0	0	68	110
RMD20	S	1005.60	998.90	2450	0.0027	2450	3.0	3	1	0	0	68	110
RMD21	S	998.90	994.00	2650	0.0018	2650	2.4	4	1	0	0	68	110
RMD22	S	994.00	974.00	4840	0.0041	4840	3.7	4	1	0	0	68	110
RGR1	S		Not Used										
RGR2	S		Not Used										
RGR3	S	1152.80	1149.70	3760	0.0008	3760	1.6	8		Special Case		88	93
RGR4	S	1149.70	1146.10	3690	0.0010	3690	1.8	7		Special Case		88	93
RGR5	S	1146.10	1140.40	3620	0.0016	3620	2.3	5		Special Case		88	93
RGR6	S	1140.40	1129.00	3760	0.0030	3760	3.1	4		Special Case		88	93
RGR7	S	1129.00	1117.40	3690	0.0031	3690	3.2	4		Special Case		88	93
RGR8	S	1117.40	1112.60	4000	0.0012	4000	2.0	7		Special Case		88	93
R1W11S	B	994.00	974.00	5840	0.0034	5840	3.3	6	0	0	1	35	50
R1W11W	CHNL	981.00	978.00	5140	0.0008	5140	1.0	2					
R1W11A	CHNL	991.00	985.30	2040	0.0028	2040	6.4	2					
R111S	B	1054.00	1048.00	3220	0.0019	3220	2.5	4	0	0	3	105	150
R111W	CHNL	1054.00	1024.00	5000	0.0020	5000	5.2	2					
R211S	B	1042.70	1034.00	3250	0.0027	3250	3.0	4	0	0	1	35	50
R211W	CHNL	1022.00	1010.00	5130	0.0010	5130	0.8	2					
R311S	B	1028.70	1026.00	2790	0.0010	2790	1.8	5	0	0	1	35	50
R311W	CHNL	1024.00	1022.00	3170	0.0006	3170	0.6	2					
R411S	B	1021.20	1018.00	3170	0.0010	3170	1.8	6	0	0	1	35	50
R411W	CHNL	1004.00	1000.00	5220	0.0008	5220	1.2	2					
R511S	B	1016.90	1010.00	2800	0.0025	2800	2.9	3	0	0	2	70	100
R511W	CHNL	1000.00	991.00	3290	0.0028	3290	6.8	2					
R611S	B	1005.60	996.00	2930	0.0033	2930	3.3	3	0	0	1	35	50
R611W	CHNL	991.00	981.00	5130	0.0019	5130	7.2	2					
R212S	B	1079.60	1070.00	3590	0.0027	3590	3.0	4	0	1	4	183	270
R212W	B	1076.00	1074.00	5300	0.0004	5300	1.1	15	0	0	1	35	50
R312S	B	1075.70	1070.00	3840	0.0015	3840	2.2	6	0	1	3	148	220
R312W	B	1074.00	1070.00	5430	0.0007	5430	1.5	12	0	0	2	70	100
R412S	B	1074.00	1070.00	3390	0.0012	3390	2.0	6	0	3	0	129	210
R412W	CHNL	1065.00	1021.00	5180	0.0022	5180	8.6	2					
R512S	B	1070.00	1064.00	3210	0.0019	3210	2.5	4	0	0	1	35	50
R512W	CHNL	1051.00	1042.00	5130	0.0018	5130	6.8	2					
R612S	B	1060.00	1055.30	2620	0.0018	2620	2.4	4	0	1	0	43	70

Route ID	Route Type	Top of Slope Elev., ft	Bottom of Slope Elev., ft.	Slope Length, ft.	Ave. Slope, ft/ft	Reach Length, ft.	Ave. Vel., ft/s	NSTPS	Number of Streets Art.'s	Number of Streets Coll.'s	Number of Streets Resid.'s	Total PW, ft.	Total R/W, ft.
R412W	CHNL	1104.00	1084.00	5060	0.0040	5060	5.2	3					
R121S	B	1134.90	1120.30	5310	0.0027	5310	3.0	6	0	1	0	43	70
R121W	B	1134.50	1121.30	5290	0.0025	5290	2.9	6	0	1	2	113	170
R221S	B	1113.20	1106.00	5270	0.0014	5270	2.1	8	0	0	1	35	50
R221W	B	1121.30	1105.90	5300	0.0029	5300	3.1	6	0	1	0	43	70
R321S	B	1097.10	1089.90	5280	0.0014	5280	2.1	8	0	0	1	35	50
R321W	B	1104.00	1086.60	5310	0.0033	5310	3.3	5	0	0	1	35	50
R421S	B	1086.00	1076.00	2410	0.0041	2410	3.7	2	0	0	1	35	50
R421W	B	1086.60	1076.00	4830	0.0022	4830	2.7	6	0	0	1	35	50
R821EW	B	1059.00	1051.10	3300	0.0024	3300	2.8	4	0	1	0	43	70
R921S	B	1068.00	1060.80	5160	0.0014	5160	2.1	8	0	0	1	35	50
R921W	B	1071.90	1059.00	5280	0.0024	5280	2.8	6	0	1	0	43	70
R1021S	B	1089.90	1072.00	5140	0.0035	5140	3.4	5	0	0	1	35	50
R1021W	B	1088.80	1071.90	5260	0.0032	5260	3.2	5	0	1	1	78	120
R1121S	B	1106.00	1093.20	5300	0.0024	5960	2.8	7	0	1	0	43	70
R1121W	B	1107.10	1088.80	5240	0.0035	5240	3.4	5	0	0	1	35	50
R1221S	B	1120.30	1112.60	5220	0.0015	5220	2.2	8	0	1	0	43	70
R1221W	B	1126.40	1107.10	5330	0.0036	5330	3.4	5	0	1	1	78	120
R1321S	B	1112.60	1101.20	5630	0.0020	5630	2.6	7	0	1	3	148	220
R1321W	B	1115.70	1098.90	5320	0.0032	5320	3.2	5	0	1	4	183	270
R1421S	B	1093.20	1084.80	3400	0.0025	3400	2.9	4	0	0	1	35	50
R1421W	B	1098.90	1084.80	5360	0.0026	5360	2.9	6	0	0	1	35	50
R1521S	B	1074.40	1063.70	5220	0.0020	5220	2.6	7	0	0	1	35	50
R1521W	B	1080.10	1059.00	5280	0.0040	5280	3.6	5	0	1	0	43	70
R1621S	B	1060.80	1047.90	5260	0.0025	5260	2.9	6	0	0	1	35	50
R1621W	B	1060.10	1048.70	5300	0.0022	5300	2.7	7	0	1	2	113	170
R1721W	B	1048.70	1033.20	6515	0.0024	6515	2.8	8	0	0	1	35	50
R1821W	B	1050.00	1026.00	8950	0.0027	8950	3.0	10	0	0	2	70	100
R1921W	B	1025.60	1015.30	2640	0.0039	2640	3.6	2	0	1	1	78	120
R2021S	B	1037.50	1025.40	5800	0.0021	5800	2.6	7	0	1	1	78	120
R2021W	B	1036.80	1024.70	6000	0.0020	6000	2.6	8	0	1	1	78	120
R2121S	B	1047.90	1038.00	5310	0.0019	5310	2.5	7	0	0	2	70	100
R2121W	B	1050.50	1036.80	5050	0.0027	5050	3.0	6	0	0	3	105	150
R2221S	B	1063.70	1055.20	5290	0.0016	5290	2.3	8	0	1	1	78	120
R2221W	B	1069.80	1050.50	5260	0.0037	5260	3.5	5	0	1	0	43	70
R2321S	B	1084.70	1069.80	5010	0.0030	5010	3.1	5	0	1	3	148	220
R2321W	B	1087.70	1071.50	5030	0.0032	5030	3.2	5	0	1	8	323	470
R2421S	B	1101.20	1094.20	3800	0.0018	3800	2.4	5	0	1	0	43	70
R2421W	B	1098.70	1094.20	5790	0.0008	5790	1.6	12	0	1	6	253	370
R2521S	B	1084.70	1071.10	5300	0.0026	5300	2.9	6	0	1	1	78	120
R2521W	B	1084.70	1070.30	5390	0.0027	5390	3.0	6	0	1	3	148	220
R2621S	B	1072.00	1056.80	5250	0.0029	5700	3.1	6	0	1	6	253	370
R2621W	B	1070.30	1057.60	5280	0.0024	5280	2.8	6	0	1	4	183	270

Route ID	Type	Top of Slope Elev., ft	Bottom of Slope Elev., ft.	Slope Length, ft.	Ave. Slope, ft/ft	Reach Length, ft.	Ave. Vel., ft/s	NSTPS	Number of Streets Art.'s	Coll.'s	Resid.'s	Total PW, ft.	Total R/W, ft.
R2721S	B	1055.20	1044.90	5300	0.0019	5700	2.5	8	0	1	3	148	220
R2721W	B	1057.60	1043.10	5280	0.0027	5280	3.0	6	0	1	3	148	220
R2821S	B	1038.00	1031.90	5340	0.0011	5700	1.9	10	0	0	1	35	50
R2821W	B	1043.10	1029.20	5300	0.0026	5300	2.9	6	0	0	1	35	50
R2921S	B	1025.40	1019.90	2680	0.0021	5700	2.6	7	0	0	1	35	50
R2921W	B	1029.20	1019.90	2640	0.0035	2640	3.4	3	0	0	1	35	50
R2921A	B	1017.00	1015.00	2610	0.0008	2610	1.6	5	0	0	3	105	150
R3021W	B	1018.00	1010.00	3540	0.0023	3540	2.7	4	0	1	0	43	70
R3021R	CHNL	1010.00	1004.00	2030	0.0030	2030	3.5	2.5	10 Bottom Width 2 Sides			75	75
R3121S	B	1010.00	1005.60	5240	0.0008	5240	1.6	11	0	0	1	35	50
R3321S	B	1031.90	1022.00	5160	0.0019	5160	2.5	7	0	0	1	35	50
R3321W	B	1030.40	1025.90	5300	0.0008	5300	1.6	11	0	0	1	35	50
R3421S	B	1044.90	1028.70	6140	0.0026	6140	2.9	7	0	1	2	113	170
R3421W	B	1042.80	1030.40	5460	0.0023	5460	2.7	7	0	1	1	78	120
R3521S	B	1056.80	1042.70	5150	0.0027	5150	3.0	6	0	0	1	35	50
R3521W	B	1057.10	1042.80	5220	0.0027	5220	3.0	6	0	0	1	35	50
R3621S	B	1071.10	1054.10	5290	0.0032	5290	3.2	5	0	1	2	113	170
R3621W	B	1066.90	1057.10	5330	0.0018	5330	2.4	7	0	1	7	288	420
R3621A	B	1002.90	980.30	3400	0.0066	3400	5.2	2	0	1	0	43	70
R0222S	B	1202.00	1180.90	5240	0.0040	5240	3.6	5	0	1	2	113	170
R0222W*	B	1190.00	1178.00	4100	0.0029	4100	3.1	4	0	0	2	70	100
R0322S	B	1195.40	1178.70	5260	0.0032	5260	3.2	5	0	1	2	113	170
R0322W	B	1192.40	1179.80	5210	0.0024	5210	2.8	6	0	1	4	183	270
R0422S	B	1186.80	1167.90	5260	0.0036	5260	3.4	5	0	1	2	113	170
R0422W	B	1179.80	1171.20	5240	0.0016	5240	2.3	8	0	1	2	113	170
R0522S	B	1168.70	1159.30	5300	0.0018	5300	2.4	7	0	1	2	113	170
R0522W	B	1171.20	1154.60	5360	0.0031	5360	3.2	6	0	1	2	113	170
R622ES	B	1154.50	1142.00	6250	0.0020	6250	2.6	8	0	1	2	113	170
R622EW	B	1154.60	1142.00	5300	0.0024	5300	2.8	6	0	1	2	113	170
R622WW	B	1142.00	1134.60	2200	0.0034	2200	3.3	2	0	0	2	70	100
R722S	B	1140.20	1128.80	5240	0.0022	5240	2.7	7	0	1	5	218	320
R722W	B	1143.10	1122.40	5200	0.0040	5200	3.6	5	0	1	3	148	220
R822ES	B	1159.30	1152.80	2620	0.0025	2620	2.9	3	0	1	6	253	370
R822EW	B	1154.90	1152.80	2630	0.0008	2630	1.6	5	0	1	2	113	170
R822WW	B	1150.00	1143.20	3090	0.0022	3090	2.7	4	1	0	0	68	110
R0922S	B	1168.00	1153.30	5230	0.0028	5230	3.0	6	0	1	2	113	170
R0922W	B	1165.30	1154.90	5240	0.0020	5240	2.6	7	0	1	4	183	270
R1022S	B	1178.70	1160.80	5260	0.0034	5260	3.3	5	0	1	0	43	70
R1122S	B	1180.90	1162.20	5250	0.0036	5250	3.4	5	0	1	1	78	120
R1622S	B	1153.30	1145.00	2650	0.0031	2650	3.2	3	0	1	1	78	120
R1622W	B	1148.00	1145.00	2550	0.0012	2550	2.0	4	0	1	1	78	120
R1722S	B	1143.20	1126.50	5370	0.0031	5370	3.2	6	0	1	1	78	120
R1722W	B	1140.20	1128.40	5380	0.0022	5380	2.7	7	0	1	1	78	120

Route ID	Route Type	Top of Slope Elev., ft	Bottom of Slope Elev., ft.	Slope Length, ft.	Ave. Slope, ft/ft	Reach Length, ft.	Ave. Vel., ft/s	NSTPS	Number of Streets Art.'s	Number of Streets Coll.'s	Number of Streets Resid.'s	Total PW, ft.	Total R/W, ft.
R1822S	B	1128.30	1113.80	5440	0.0027	5440	3.0	6	0	1	1	78	120
R1822W	B	1128.40	1115.70	5200	0.0024	5200	2.8	6	0	1	1	78	120
R1922S	B	1113.80	1100.40	5320	0.0025	5320	2.9	6	0	1	4	183	270
R1922W	B	1112.90	1098.70	5170	0.0027	5170	3.0	6	0	1	3	148	220
R2022S	B	1126.60	1109.80	5340	0.0031	5340	3.2	6	0	1	3	148	220
R2022W	B	1122.20	1112.90	5400	0.0017	5400	2.4	8	0	1	1	78	120
R2122S	B	1136.30	1115.20	5330	0.0040	5330	3.6	5	0	2	0	86	140
R2122W	B	1130.50	1113.00	4980	0.0035	4980	3.4	5	0	0	1	35	50
R2622S	B	1112.80	1097.10	3710	0.0042	3710	3.7	3	0	0	3	105	150
R2722S	B	1114.90	1106.00	3060	0.0029	3060	3.1	3	0	1	2	113	170
R2722W	B	1113.00	1106.00	4660	0.0015	4660	2.2	7	0	0	1	35	50
R2722A	B	1108.00	1093.70	3550	0.0040	3550	3.6	3	0	1	3	148	220
R2722B	B	1108.30	1103.60	5300	0.0009	5300	1.7	10	0	1	1	78	120
R2822S	B	1115.30	1105.00	2250	0.0046	2250	3.9	2	0	1	4	183	270
R2822W	B	1107.00	1105.00	2640	0.0008	2640	1.6	5	0	0	3	105	150
R2822A	B	1102.00	1093.80	2760	0.0030	2760	3.1	3	0	1	3	148	220
R2822B	B	1103.60	1091.30	7290	0.0017	7290	2.4	10	0	1	3	148	220
R2922S	B	1109.80	1101.00	2040	0.0043	2040	3.7	2	0	1	4	183	270
R2922A	B	1102.00	1087.50	2890	0.0050	2890	4.0	2	0	1	4	183	270
R2922B	B	1100.00	1094.00	5300	0.0011	5300	1.9	9	0	1	4	183	270
R3022S	B	1100.40	1092.00	2250	0.0037	2250	3.5	2	0	0	2	70	100
R3022A	B	1096.00	1080.20	4000	0.0039	4000	3.6	4	0	1	2	113	170
R3022B	B	1094.00	1084.70	5080	0.0018	5080	2.4	7	0	1	6	253	370
R3122S	B	1080.20	1059.90	5280	0.0038	5280	3.5	5	0	1	2	113	170
R3122W	B	1073.80	1066.90	5200	0.0013	5200	2.1	8	0	1	7	288	420
R3222S	B	1087.50	1070.60	5260	0.0032	5260	3.2	5	0	1	2	113	170
R3222W	B	1081.60	1073.80	5270	0.0015	5270	2.2	8	0	1	4	183	270
R3322S	B	1093.80	1073.70	5340	0.0038	5340	3.5	5	0	1	4	183	270
R3422S	B	1093.70	1075.70	5310	0.0034	5310	3.3	5	0	1	4	183	270
R3422W	B	1084.10	1082.30	5290	0.0003	5290	1.0	18	0	1	7	288	420
R3522S	B	1096.80	1079.60	5400	0.0032	5400	3.2	6	0	1	4	183	270
R3522W	B	1087.20	1084.10	5310	0.0006	5310	1.4	13	0	1	2	113	170
R1131S	B	1190.00	1176.50	5200	0.0026	5350	2.9	6	0	0	1	35	50
R1131W	B	1194.00	1175.10	5290	0.0036	5290	3.4	5	0	1	4	183	270
R1331S	B	1192.80	1166.50	5240	0.0050	5240	4.0	4	0	1	3	148	220
R1331W	B	1191.40	1174.10	5310	0.0033	5310	3.3	5	0	1	5	218	320
R1431S	B	1176.50	1159.00	5220	0.0034	5220	3.3	5	0	1	3	148	220
R1431W	B	1174.10	1160.50	5340	0.0025	5340	2.9	6	0	1	1	78	120
R1531W	B	1160.80	1152.00	2630	0.0033	4450	3.3	5	0	1	5	218	320
R2231E	B	1140.00	1130.80	4350	0.0021	4350	2.6	6	0	0	2	70	100
R2231W	B	1138.50	1124.30	3160	0.0045	3160	3.8	3	0	0	2	70	100
R2231S	B	1138.90	1120.30	4200	0.0044	4200	3.8	4	1	0	2	138	210
R2231N	B	1152.00	1124.50	6150	0.0045	6150	3.8	5	0	0	2	70	100
R2331S	B	1166.80	1145.00	5220	0.0042	5220	3.7	5	0	1	2	113	170
R2331W	B	1160.90	1142.40	5310	0.0035	5310	3.4	5	0	1	3	148	220
R2431S	B	1176.40	1157.50	5230	0.0036	5230	3.4	5	0	1	2	113	170

Route ID	Route Type	Top of Slope Elev., ft	Bottom of Slope Elev., ft.	Slope Length, ft.	Ave. Slope, ft/ft	Reach Length, ft.	Ave. Vel., ft/s	NSTPS	Number of Streets Art.'s	Number of Streets Coll.'s	Number of Streets Resid.'s	Total PW, ft.	Total R/W, ft.
R2431W	B	1176.50	1160.90	5310	0.0029	5310	3.1	6	0	1	4	183	270
R2531S	B	1157.50	1144.40	5220	0.0025	5220	2.9	6	0	1	3	148	220
R2531W	B	1161.80	1141.60	5290	0.0038	5290	3.5	5	0	1	4	183	270
R2631W	B	1141.50	1130.20	2310	0.0049	2310	4.0	2	0	0	2	70	100
R2731S	B	1126.60	1117.70	5240	0.0017	5240	2.4	7	0	1	2	113	170
R2731W	B	1130.20	1113.70	5280	0.0031	5280	3.2	6	0	1	2	113	170
R2831	B	1113.70	1092.40	2790	0.0076	2790	6.5	1	0	0	1	35	50
R3331W	B	1102.80	1088.50	3920	0.0036	3920	3.4	4	0	0	1	35	50
R3431S	B	1117.70	1097.10	5240	0.0039	5240	3.6	5	0	1	2	113	170
R3431W	B	1111.70	1102.80	5210	0.0017	5210	2.4	7	0	1	2	113	170
R3531S	B	1127.90	1113.20	5220	0.0028	5220	3.0	6	0	1	2	113	170
R3531W	B	1127.00	1112.40	5310	0.0027	5310	3.0	6	0	1	0	43	70
R3631W	B	1146.60	1135.10	6200	0.0019	6200	2.5	8	0	1	1	78	120
R3631	B	1137.00	1129.00	2290	0.0035	2290	3.4	2	0	0	1	35	50
R1932S	B	1193.54	1177.10	5225	0.0031	5225	3.2	5	0	1	2	113	170
R1932W	B	1194.00	1176.50	5085	0.0034	5100	3.3	5	0	1	3	148	220
R2032W	B	1211.80	1194.00	5270	0.0034	5270	3.3	5	0	1	4	183	270
R2832S	B	1214.40	1198.50	5190	0.0031	5190	3.2	5	0	1	3	148	220
R2832W	B	1212.70	1198.10	5280	0.0028	5280	3.0	6	0	1	4	183	270
R2932S	B	1196.60	1180.70	5220	0.0030	5220	3.1	6	0	1	4	183	270
R2932W	B	1198.10	1177.90	5260	0.0038	5260	3.5	5	0	1	5	218	320
R3032S	B	1177.10	1162.30	5220	0.0028	5220	3.0	6	0	1	3	148	220
R3032W	B	1177.90	1161.80	5070	0.0032	5070	3.2	5	0	0	1	35	50
R3132S	B	1162.30	1149.00	5190	0.0026	5190	2.9	6	0	1	2	113	170
R3132W	B	1163.80	1146.70	5100	0.0034	5100	3.3	5	0	0	2	70	100
R3132S	B	1080.20	1059.90	5300	0.0038	5300	3.5	5	0	1	3	148	220
R3132W	B	1073.80	1066.90	5180	0.0013	5180	2.1	8	0	1	9	358	520
R3232S	B	1087.50	1070.60	5300	0.0032	5300	3.2	5	0	1	2	113	170
R3232W	B	1081.60	1073.80	5290	0.0015	5290	2.2	8	0	1	4	183	270
R3232S	B	1180.70	1168.70	5200	0.0023	5200	2.7	6	0	1	2	113	170
R3232W	B	1184.70	1164.40	5420	0.0037	5420	3.5	5	0	1	3	148	220
R3332S	B	1198.50	1186.80	5200	0.0023	5200	2.7	6	0	1	3	148	220
R3332W	B	1200.30	1184.70	5270	0.0030	5270	3.1	6	0	1	5	218	320
R3432S	B	1215.90	1195.40	5200	0.0039	5200	3.6	5	0	1	3	148	220
R3432W	B	1209.40	1200.30	5280	0.0017	5280	2.4	7	0	0	9	315	450
R3532S	B	1222.80	1202.00	5220	0.0040	5220	3.6	5	0	1	3	148	220

* Not Used

CH2M HILL

MARYVALE ADMS

BY

SHEET NO. ____ of ____ DATE

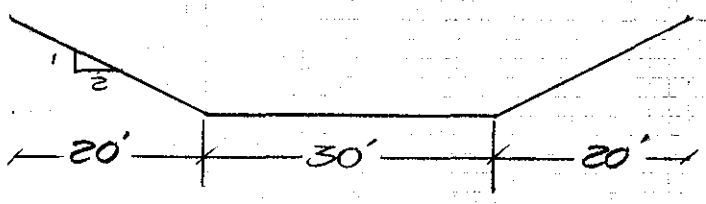
PROJECT NO.

RADOT2

ASSUMED CHANNEL CONFIGURATION

70' TOP WIDTH — 2:1 SIDE SLOPES

30' BOTTOM WIDTH — 10' DEEP



HEC-1 CHANNEL ROUTE

RX	Ø	1Ø	15	2Ø	5Ø	55	6Ø	7Ø
RY	1Ø	5	2.5	Ø	Ø	2.5	5	1Ø

$$\text{SLOPE} \approx \frac{87.9 - 76.8}{3{,}180} \sim .0035$$

REACH LENGTH ~ 5,780'

ASSUME AVG FLOW DEPTH OF 2'

VEL ~ 9.8 FT/SEC

SEE ATTACHED "FLOWMASTER WORKSHEET"

NSTPS = 2

THE SAME CHANNEL GEOMETRY WAS ASSUMED FOR RADOT1, HOWEVER A SLOPE OF 0.0043 FT/FT WAS USED.

VEL ~ 10.9 FT/SEC

R107D Channel Route
Worksheet for Trapezoidal Channel

Project Description	
Project File	untitled.fm2
Worksheet	R107D
Flow Element	Trapezoidal Channel
Method	Manning's Formula
Solve For	Discharge

Input Data		
Mannings Coefficient	0.035	
Channel Slope	0.002300	ft/ft
Depth	2.00	ft
Left Side Slope	1.000000	H : V
Right Side Slope	1.000000	H : V
Bottom Width	4.00	ft

Results		
Discharge	28.24	cfs
Flow Area	12.00	ft^2
Wetted Perimeter	9.66	ft
Top Width	8.00	ft
Critical Depth	1.05	ft
Critical Slope	0.022325	ft/ft
Velocity	2.35	ft/s
Velocity Head	0.09	ft
Specific Energy	2.09	ft
Froude Number	0.34	
Flow is subcritical.		

RADOT2 Channel Route
Worksheet for Trapezoidal Channel

Project Description	
Project File	untitled.fm2
Worksheet	RADOT2
Flow Element	Trapezoidal Channel
Method	Manning's Formula
Solve For	Discharge

Input Data		
Mannings Coefficient	0.013	
Channel Slope	0.003500	ft/ft
Depth	2.00	ft
Left Side Slope	2.000000	H : V
Right Side Slope	2.000000	H : V
Bottom Width	30.00	ft

Results		
Discharge	666.76	cfs
Flow Area	68.00	ft^2
Wetted Perimeter	38.94	ft
Top Width	38.00	ft
Critical Depth	2.35	ft
Critical Slope	0.002005	ft/ft
Velocity	9.81	ft/s
Velocity Head	1.49	ft
Specific Energy	3.49	ft
Froude Number	1.29	
Flow is supercritical.		

RADOT1 Channel Route
Worksheet for Trapezoidal Channel

Project Description	
Project File	p:\sww\132586\hyd\channel1.fm2
Worksheet	RADOT2
Flow Element	Trapezoidal Channel
Method	Manning's Formula
Solve For	Discharge

Input Data		
Mannings Coefficient	0.013	
Channel Slope	0.004300	ft/ft
Depth	2.00	ft
Left Side Slope	2.000000	H : V
Right Side Slope	2.000000	H : V
Bottom Width	30.00	ft

Results		
Discharge	739.05	cfs
Flow Area	68.00	ft^2
Wetted Perimeter	38.94	ft
Top Width	38.00	ft
Critical Depth	2.51	ft
Critical Slope	0.001970	ft/ft
Velocity	10.87	ft/s
Velocity Head	1.84	ft
Specific Energy	3.84	ft
Froude Number	1.43	
Flow is supercritical.		

R612W
Worksheet for Trapezoidal Channel

Project Description	
Project File	untitled.fm2
Worksheet	I-10
Flow Element	Trapezoidal Channel
Method	Manning's Formula
Solve For	Discharge

Input Data		
Mannings Coefficient	0.013	
Channel Slope	0.001200	ft/ft
Depth	2.00	ft
Left Side Slope	2.000000	H : V
Right Side Slope	2.000000	H : V
Bottom Width	30.00	ft

Results		
Discharge	390.42	cfs
Flow Area	68.00	ft^2
Wetted Perimeter	38.94	ft
Top Width	38.00	ft
Critical Depth	1.67	ft
Critical Slope	0.002203	ft/ft
Velocity	5.74	ft/s
Velocity Head	0.51	ft
Specific Energy	2.51	ft
Froude Number	0.76	
Flow is subcritical.		

R3021R Channel Route
Worksheet for Trapezoidal Channel

Project Description	
Project File	untitled.fm2
Worksheet	R3021A Channel Route
Flow Element	Trapezoidal Channel
Method	Manning's Formula
Solve For	Discharge

Input Data		
Mannings Coefficient	0.030	
Channel Slope	0.003000	ft/ft
Depth	2.00	ft
Left Side Slope	2.000000	H : V
Right Side Slope	2.000000	H : V
Bottom Width	10.00	ft

Results		
Discharge	98.56	cfs
Flow Area	28.00	ft^2
Wetted Perimeter	18.94	ft
Top Width	18.00	ft
Critical Depth	1.32	ft
Critical Slope	0.013440	ft/ft
Velocity	3.52	ft/s
Velocity Head	0.19	ft
Specific Energy	2.19	ft
Froude Number	0.50	
Flow is subcritical.		

```
KK R211W
KM I-10 CHANNEL ROUTE
KM WEST
KM BOTTOM WIDTH = 30'
KM [illegible] WIDTH = 100'
KM [illegible]TH = 18'
KM SIDE SLOPES = 2:1
RS      7    FLOW     -1.
RC   0.02   0.016    0.02   5130.  0.0016
RX      0     0.1    18.0    36.0    66.0    84.0   102.0   102.1
RY   18.0   17.05     9.0     0.0     0.0     9.0   17.05    18.0
```

Arterial Q vs. slope for d=1.0 ft.
Rating Table for Irregular Channel

Note:

- Rating Table information used to estimate the average velocity needed to estimate "NSTPS" on the RC-Card

$$V = \frac{Q_{cfs}}{32.95\ ft^2} = \frac{Q}{A}$$

- Assumed a gutter depth of 1' to represent an average condition.
- A = Flow area for half street (32.95 sf)

Project Description	
Project File	p:\sww\132586\hyd\streetq.fm2
Worksheet	MARYVALE ADMS: Art. Capacity
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Discharge

Constant Data	
Water Surface Elevation	101.00 ft

Input Data			
	Minimum	Maximum	Increment
Channel Slope	0.000100	0.005000	0.000100 ft/ft

Rating Table

Channel Slope (ft/ft)	Wtd. Mannings Coefficient	Discharge (cfs)
0.000100	0.018	18.81
0.000200	0.018	26.60
0.000300	0.018	32.58
0.000400	0.018	37.62
0.000500	0.018	42.06
0.000600	0.018	46.07
0.000700	0.018	49.76
0.000800	0.018	53.20
0.000900	0.018	56.43
0.001000	0.018	59.48
0.001100	0.018	62.38
0.001200	0.018	65.16
0.001300	0.018	67.82
0.001400	0.018	70.38
0.001500	0.018	72.85
0.001600	0.018	75.24
0.001700	0.018	77.55
0.001800	0.018	79.80
0.001900	0.018	81.99
0.002000	0.018	84.12
0.002100	0.018	86.19
0.002200	0.018	88.22
0.002300	0.018	90.21
0.002400	0.018	92.15
0.002500	0.018	94.05
0.002600	0.018	95.91

Arterial Q vs. slope for d=1.0 ft.
Rating Table for Irregular Channel

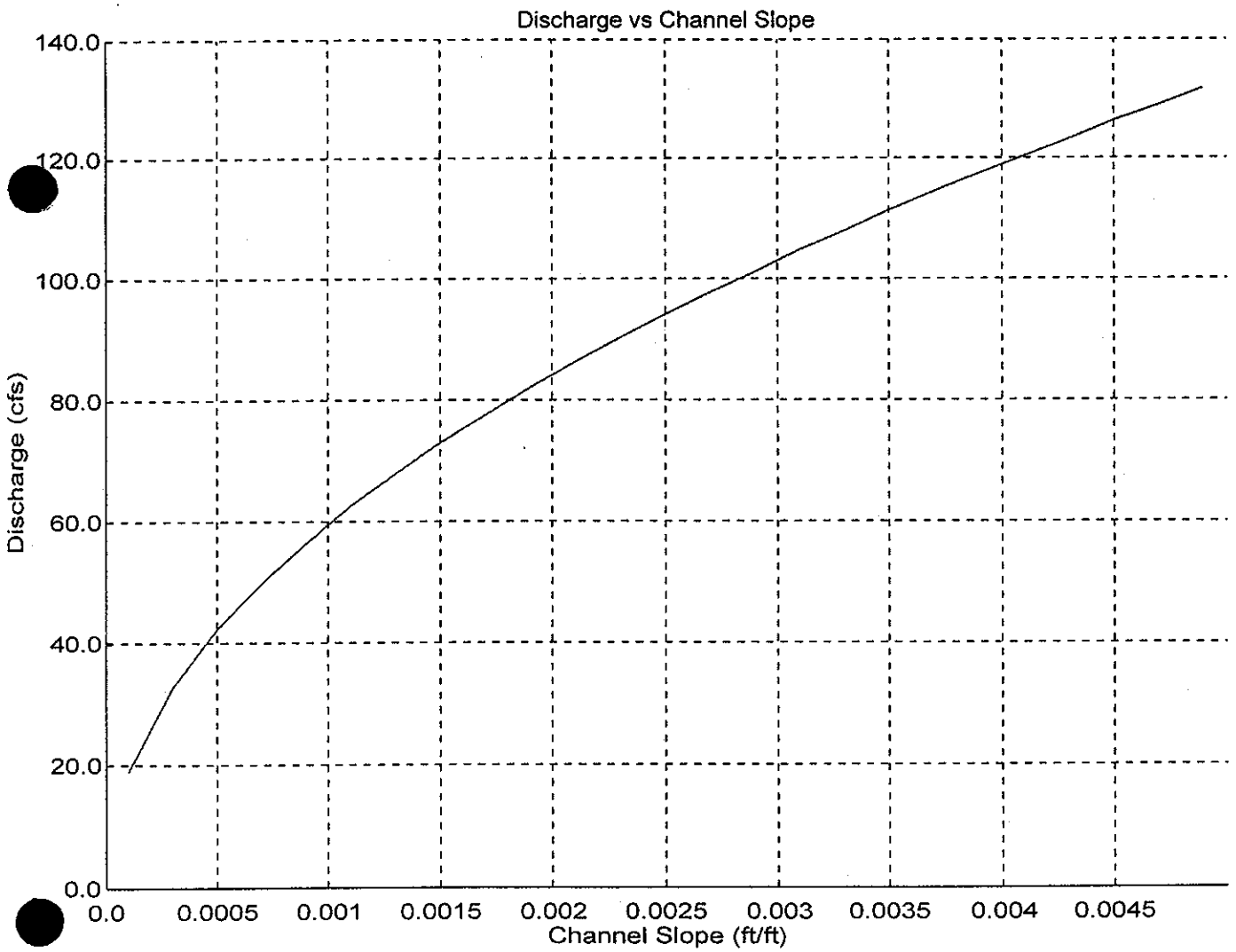
Rating Table		
Channel Slope (ft/ft)	Wtd. Mannings Coefficient	Discharge (cfs)
0.002700	0.018	97.74
0.002800	0.018	99.53
0.002900	0.018	101.29
0.003000	0.018	103.02
0.003100	0.018	104.73
0.003200	0.018	106.40
0.003300	0.018	108.05
0.003400	0.018	109.68
0.003500	0.018	111.28
0.003600	0.018	112.86
0.003700	0.018	114.41
0.003800	0.018	115.95
0.003900	0.018	117.46
0.004000	0.018	118.96
0.004100	0.018	120.44
0.004200	0.018	121.90
0.004300	0.018	123.34
0.004400	0.018	124.77
0.004500	0.018	126.18
0.004600	0.018	127.57
0.004700	0.018	128.95
0.004800	0.018	130.31
0.004900	0.018	131.66
0.005000	0.018	133.00

Arterial Q vs. slope for d=1.0 ft.
Plotted Curves for Irregular Channel

Project Description	
Project File	p:\sww\132586\hyd\streetq.fm2
Worksheet	MARYVALE ADMS: Art. Capacity
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Discharge

Constant Data	
Water Surface Elevation	101.00 ft

Input Data			
	Minimum	Maximum	Increment
Channel Slope	0.000100	0.005000	0.000200 ft/ft



Arterial Q for d=1.0 ft.
Worksheet for Irregular Channel

Project Description	
Project File	p:\sww\132586\hyd\streetq.fm2
Worksheet	MARYVALE ADMS: Art. Capacity
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Discharge

Input Data		
Channel Slope	0.000750	ft/ft
Water Surface Elevation	101.00	ft

Elevation range: 100.00 ft to 100.68 ft.

Station (ft)	Elevation (ft)	Start Station	End Station	Roughness
0.00	100.50	0.00	21.00	0.030
21.00	100.50	21.00	55.00	0.016
21.10	100.00			
55.00	100.68			

Results		
Wtd. Mannings Coefficient	0.018	
Discharge	51.51	cfs
Flow Area	32.95	ft²
Wetted Perimeter	56.24	ft
Top Width	55.00	ft
Height	1.00	ft
Critical Depth	100.70	ft
Critical Slope	0.006321	ft/ft
Velocity	1.56	ft/s
Velocity Head	0.04	ft
Specific Energy	101.04	ft
Froude Number	0.36	

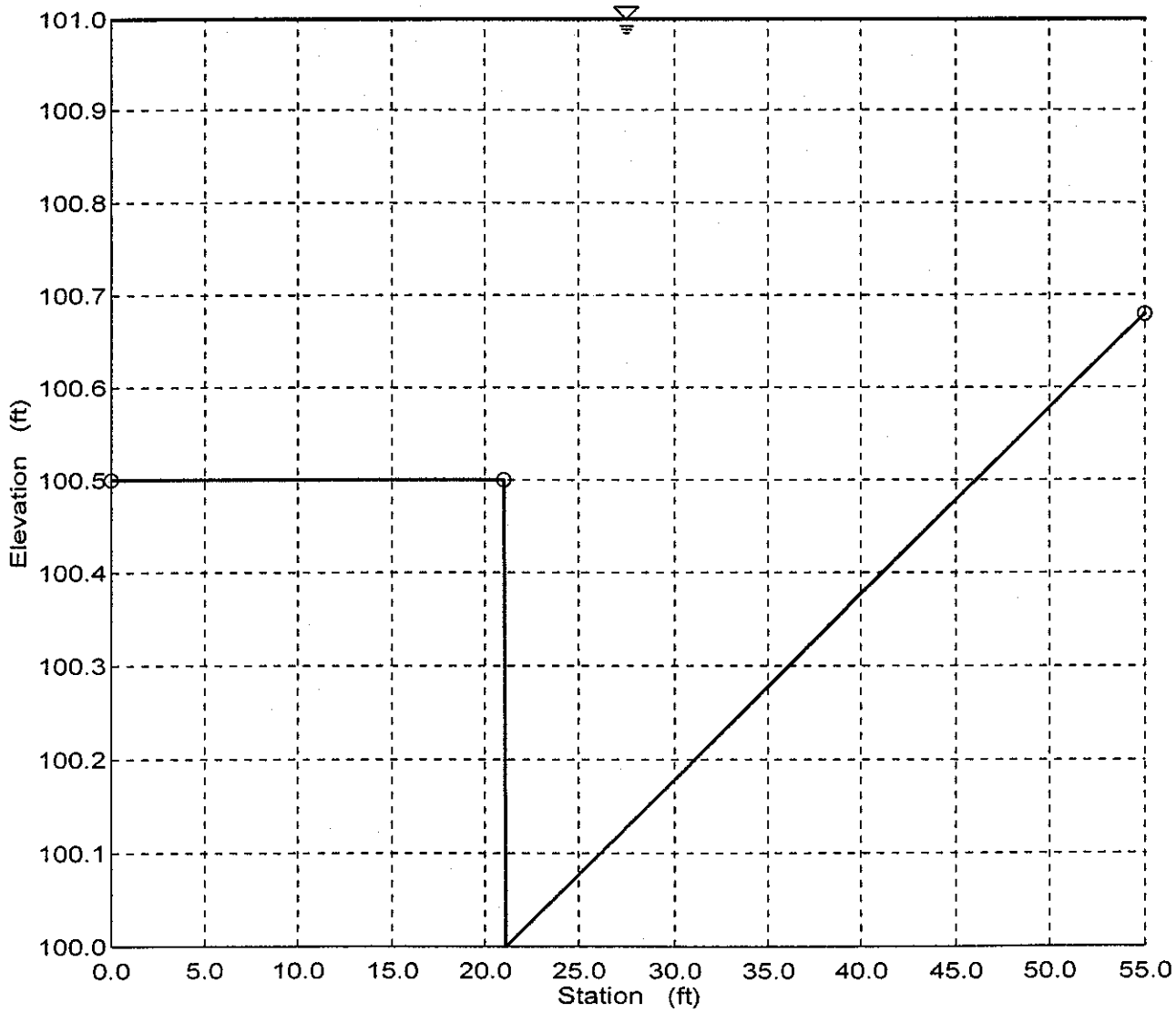
Flow is subcritical.

Water elevation exceeds lowest end station by 0.50 ft.

Arterial Q for d=1.0 ft.
Cross Section for Irregular Channel

Project Description	
Project File	p:\sww\132586\hyd\streetq.fm2
Worksheet	MARYVALE ADMS: Art. Capacity
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Discharge

Section Data		
Wtd. Mannings Coefficient	0.018	
Channel Slope	0.000750	ft/ft
Water Surface Elevation	101.00	ft
Discharge	51.51	cfs



Appendix E: Retention Basin and Ponding Area Data

Sub-basin Retention Basin Diversions

Computational Methodology

Premise: In cases where a portion of a sub-basin drains to a retention basin or system of retention basins, flow diversions are used to divert out the volume of water corresponding to the measured capacities of the retention basins. The percentage of the flow rate that can be diverted (i.e., the DQ record information) corresponds to the percentage of the sub-basin area that drains to the retention basin(s).

Procedure: Measure the capacity of the retention basin(s) within a sub-basin and the percentage of the sub-basin area that drains to the retention basin(s), using the detailed topographic mapping.

Input Parameters: On the DT-Card, specify that the maximum volume of water to be diverted as the measured capacity of the retention basin(s). The percentage of the flow rate that can be diverted (i.e., the DQ record information) corresponds to the percentage of the sub-basin area that drains to the retention basin(s).

Main Assumptions:

- This procedure is only appropriate for relatively small subdivision retention basins and should not be used for regional retention/detention basins or ponding areas.
- Only a portion of the sub-basin drains to the retention basin(s).

CH2M HILL

Subject: Maryvale ADMS
Composite Storage Volume Computations
Retention Basins

By: J. Geisbush
Checked: D.Dust
Project No.: 132586

Sub-basin ID: 2-11 Total Sub-basin Area (square miles): 0.178

Retention Basin ID: RET211

MAP SHT 208	Input Data					Composite Basin Data				
Parameters	Basin No. 1	Basin No. 2	Basin No. 3	Basin No. 4	Basin No. 5	COMPOSITE BASIN	Stage (ft)	Incremental Vol. (acft)	Cumulative Vol. (acft)	Comments
Stage(ft)	0					0				
Area(ac)	0.00					0.00	0.00	0.00	0.00	
Stage(ft)	1					1				
Area(ac)	0.28					0.28	1.00	0.14	0.14	
Stage(ft)	3					3				
Area(ac)	0.42					0.42	3.00	0.70	0.83	
Stage(ft)	5					5				
Area(ac)	0.61					0.61	5.00	1.03	**1.87**	
Drainage Area (ac)	7.0					7				
Total Area (Acres)						114				
Percent of Total						**6%**				

NOTES: Retention Basin No.1 located in N.E. Quarter of Sub-basin

CH2M HILL

Subject: Maryvale ADMS
Composite Storage Volume Computations
Retention Basins

By: J. Geisbush
Checked: D.Dust
Project No.: 132586

Sub-basin ID: 1-21 **Total Sub-basin Area (square miles):** 0.999

Retention Basin ID: RET1

MAP SHT 65	Input Data					Composite Basin Data				
Parameters	Basin No. 1	Basin No. 2	Basin No. 3	Basin No. 4	Basin No. 5	COMPOSITE BASIN	Stage (ft)	Incremental Vol. (acft)	Cumulative Vol. (acft)	Comments
Stage(ft)	0					0				
Area(ac)	0.09					0.09	0.00	0.00	0.00	
Stage(ft)	2					2				
Area(ac)	1.06					1.06	2.00	1.15	1.15	
Stage(ft)	4					4				
Area(ac)	1.45					1.45	4.00	2.51	3.66	
Stage(ft)										
Area(ac)										
Drainage Area (ac)	41.6					42				
Total Area (Acres)						640				
Percent of Total						7%				

NOTES: Retention Basin No. 1 located in S.E. Quarter of Sub-basin

CH2M HILL

Subject: **Maryvale ADMS**
Composite Storage Volume Computations
Retention Basins

By: **J. Geisbush**
Checked: **D.Dust**
Project No.: **132586**

Sub-basin ID: 4-21 **Total Sub-basin Area (square miles): 0.874**

Retention Basin ID: RET4

MAP SHT 62	Input Data					Composite Basin Data				
Parameters	Basin No. 1	Basin No. 2	Basin No. 3	Basin No. 4	Basin No. 5	COMPOSITE BASIN	Stage (ft)	Incremental Vol. (acft)	Cumulative Vol. (acft)	Comments
Stage(ft)	0					0				
Area(ac)	0.1					0.12	0.00	0.00	0.00	
Stage(ft)	2					2				
Area(ac)	1.8					1.85	2.00	1.96	1.96	
Stage(ft)	4					4				
Area(ac)	2.1					2.12	4.00	3.97	**5.94**	
Stage(ft)										
Area(ac)										
Drainage Area (ac)	71.0					71				
Total Area (Acres)						559				
Percent of Total						**13%**				

NOTES: Basin No. located at end of Agua Fria EXPW. Does not appear to be associated with a residential development
Drainage Area = .111 Mi^2

Retention Basin No. 1 located in S.W. Quarter of Sub-basin

CH2M HILL

Subject: **Maryvale ADMS**
Composite Storage Volume Computations
Retention Basins

By: **J. Geisbush**
Checked: **D.Dust**
Project No.: **132586**

Sub-basin ID: 10-21 **Total Sub-basin Area (square miles): 0.980**

Retention Basin ID: RET10

MAP SHT 76 & 89	Input Data					Composite Basin Data				
Parameters	Basin No. 1	Basin No. 2	Basin No. 3	Basin No. 4	Basin No. 5	COMPOSITE BASIN	Stage (ft)	Incremental Vol. (acft)	Cumulative Vol. (acft)	Comments
Stage(ft)	0	0	0	0		0				
Area(ac)	0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00	
Stage(ft)	1	1	1	1		1				
Area(ac)	1.29	1.38	0.74	1.11		4.51	1.00	2.26	2.26	
Stage(ft)	3	3	3	3		3				
Area(ac)	2.05	2.26	2.20	1.49		8.00	3.00	12.52	**14.77**	
Stage(ft)										
Area(ac)										
Drainage Area (ac)	70.4	52.6	26.4	33.9		183				
Total Area (Acres)						627				
Percent of Total						**29%**				

NOTES: Apparent basin at 91st Ave and Grand Canal is a "Regional Retention Basin" and is input as a Ponding Area.

Retention Basin No.1 located in N.E. Quarter of Sub-basin
Retention Basin No.2 located in N.W. Quarter of Sub-basin
Retention Basin No.3 located in S.W. Quarter of Sub-basin
Retention Basin No.4 located in S.W. Quarter of Sub-basin

CH2M HILL

Subject: **Maryvale ADMS**
Composite Storage Volume Computations
Retention Basins

By: **J. Geisbush**
Checked: **D.Dust**
Project No.: **132586**

Sub-basin ID: 11-21 **Total Sub-basin Area (square miles): 0.983**

Retention Basin ID: RET11

MAP SHT 77 & 90	Input Data					Composite Basin Data				
Parameters	Basin No. 1	Basin No. 2	Basin No. 3	Basin No. 4	Basin No. 5	COMPOSITE BASIN	Stage (ft)	Incremental Vol. (acft)	Cumulative Vol. (acft)	Comments
Stage(ft)	0	0	0	0		0				
Area(ac)	0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00	
Stage(ft)	1	1	1	1		1				
Area(ac)	1.07	1.04	1.36	0.25		3.72	1.00	1.86	1.86	
Stage(ft)	3	3	3	3		3				
Area(ac)	1.12	1.61	1.83	0.34		4.90	3.00	8.62	10.48	
Stage(ft)				4		4				
Area(ac)				0.4		0.40	4.00	2.65	13.13	
Drainage Area (ac)	62.2	38.0	38.1	13.1		151				
Total Area (Acres)						629				
Percent of Total						24%				

NOTES:
Retention Basin No.1 located in N.W. Quarter of Sub-basin
Retention Basin No.2 located in N.E. Quarter of Sub-basin
Retention Basin No.3 located in N.E. Quarter of Sub-basin
Retention Basin No.4 located in S.E. Quarter of Sub-basin

CH2M HILL

Subject: **Maryvale ADMS**
Composite Storage Volume Computations
Retention Basins

By: **J. Geisbush**
Checked: **D.Dust**
Project No.: **132586**

Sub-basin ID: 12-21 **Total Sub-basin Area (square miles): 1.003**

Retention Basin ID: RET12

MAP SHT 78	Input Data					Composite Basin Data				
Parameters	Basin No. 1	Basin No. 2	Basin No. 3	Basin No. 4	Basin No. 5	COMPOSITE BASIN	Stage (ft)	Incremental Vol. (acft)	Cumulative Vol. (acft)	Comments
Stage(ft)	0					0				
Area(ac)	0.00					0.00	0.00	0.00	0.00	
Stage(ft)	1					1				
Area(ac)	0.70					0.70	1.00	0.35	0.35	
Stage(ft)	3					3				
Area(ac)	0.96					0.96	3.00	1.66	2.01	
Stage(ft)	5					5				
Area(ac)	1.21					1.21	5.00	2.17	**4.18**	
Drainage Area (ac)	37.9					38				
Total Area (Acres)						642				
Percent of Total						**6%**				

NOTES: Retention Basin No.1 located in N.E. Quarter of Sub-basin

CH2M HILL

Subject: Maryvale ADMS
Composite Storage Volume Computations
Retention Basins

By: J. Geisbush
Checked: D.Dust
Project No.: 132586

Sub-basin ID: 14-21E Total Sub-basin Area (square miles): 0.432

Retention Basin ID: RET14E

MAP SHT 103	Input Data					Composite Basin Data				
Parameters	Basin No. 1	Basin No. 2	Basin No. 3	Basin No. 4	Basin No. 5	COMPOSITE BASIN	Stage (ft)	Incremental Vol. (acft)	Cumulative Vol. (acft)	Comments
Stage(ft)	0	0				0				
Area(ac)	0.10	0.00				0.10	0.00	0.00	0.00	
Stage(ft)	2	2				2				
Area(ac)	0.61	0.74				1.35	2.00	1.45	1.45	
Stage(ft)	3	3				3				
Area(ac)	0.86	0.93				1.79	3.00	1.57	**3.02**	
Stage(ft)		4								
Area(ac)		1.11								
Drainage Area (ac)	33.6	55.2				89				
Total Area (Acres)						276				
Percent of Total						**32%**				

NOTES: Retention Basin No.1 located in N.E. Quarter of Sub-basin
Retention Basin No.2 located in N.E. Quarter of Sub-basin

CH2M HILL

Subject: **Maryvale ADMS**
Composite Storage Volume Computations
Retention Basins

By: **J. Geisbush**
Checked: **D.Dust**
Project No.: **132586**

Sub-basin ID: 14-21W **Total Sub-basin Area (square miles): 0.562**

Retention Basin ID: RET14W

MAP SHT 116	Input Data					Composite Basin Data				
Parameters	Basin No. 1	Basin No. 2	Basin No. 3	Basin No. 4	Basin No. 5	COMPOSITE BASIN	Stage (ft)	Incremental Vol. (acft)	Cumulative Vol. (acft)	Comments
Stage(ft)	0	0				0				
Area(ac)	0.00	0.00				0.00	0.00	0.00	0.00	
Stage(ft)	1	1				1				
Area(ac)	0.23	0.37				0.60	1.00	0.30	0.30	
Stage(ft)	3	3				3				
Area(ac)	0.41	0.69				1.10	3.00	1.70	2.00	
Stage(ft)	5					5				
Area(ac)	0.597					0.60	5.00	1.70	**3.70**	
Drainage Area (ac)	76.1	66.4				143				
Total Area (Acres)						359				
Percent of Total						**40%**				

NOTES: Retention Basin No.1 located in S.W. Quarter of Sub-basin
Retention Basin No.2 located in S.E. Quarter of Sub-basin

CH2M HILL

Subject: **Maryvale ADMS**
Composite Storage Volume Computations
Retention Basins

By: **J. Geisbush**
Checked: **D.Dust**
Project No.: **132586**

Sub-basin ID: 20-21 **Total Sub-basin Area (square miles): 1.023**

Retention Basin ID: RET20

MAP SHT 126	Input Data					Composite Basin Data				
Parameters	Basin No. 1	Basin No. 2	Basin No. 3	Basin No. 4	Basin No. 5	COMPOSITE BASIN	Stage (ft)	Incremental Vol. (acft)	Cumulative Vol. (acft)	Comments
Stage(ft)	0	0				0				
Area(ac)	0.00	8.30				8.30	0.00	0.00	0.00	
Stage(ft)	2	2				2				
Area(ac)	0.40	8.30				8.70	2.00	17.00	17.00	
Stage(ft)	3	3				3				
Area(ac)	0.54	8.30				8.84	3.00	8.77	25.77	
Stage(ft)	4					4				
Area(ac)	0.67					0.67	4.00	4.76	**30.53**	
Drainage Area (ac)	26.1	404.0				430				
Total Area (Acres)						655				
Percent of Total						**66%**				

NOTES: Retention Basin No.1 located in N.E. Quarter of Sub-basin
Retention Basin No. 2 represents a composite of the low lying areas and lakes located at various locations within the golf course.
Based on the topography within the golf cousre, a maximum ponding depth of 2' was assumed for the lakes and low lying areas.

CH2M HILL

Subject: **Maryvale ADMS**
Composite Storage Volume Computations
Retention Basins

By: **J. Geisbush**
Checked: **D.Dust**
Project No.: **132586**

Sub-basin ID: 25-21 **Total Sub-basin Area (square miles): 1.000**

Retention Basin ID: RET25

MAP SHT 169	Input Data					Composite Basin Data				
Parameters	Basin No. 1	Basin No. 2	Basin No. 3	Basin No. 4	Basin No. 5	COMPOSITE BASIN	Stage (ft)	Incremental Vol. (acft)	Cumulative Vol. (acft)	Comments
Stage(ft)	0					0				
Area(ac)	0.00					0.00	0.00	0.00	0.00	
Stage(ft)	2					2				
Area(ac)	4.98					4.98	2.00	4.98	4.98	
Stage(ft)	4					4				
Area(ac)	5.52					5.52	4.00	10.50	**15.49**	
Stage(ft)										
Area(ac)										
Drainage Area (ac)	10.0					10				
Total Area (Acres)						640				
Percent of Total						**2%**				

NOTES: May not be a retention basin

Retention Basin No.1 located in S.W. Quarter of Sub-basin

CH2M HILL

Subject: **Maryvale ADMS**
Composite Storage Volume Computations
Retention Basins

By: **J. Geisbush**
Checked: **D.Dust**
Project No.: **132586**

Sub-basin ID: 27-21 **Total Sub-basin Area (square miles): 1.005**

Retention Basin ID: RET27

MAP SHT 154	Input Data					Composite Basin Data				
Parameters	Basin No. 1	Basin No. 2	Basin No. 3	Basin No. 4	Basin No. 5	COMPOSITE BASIN	Stage (ft)	Incremental Vol. (acft)	Cumulative Vol. (acft)	Comments
Stage(ft)	0					0				
Area(ac)	0.00					0.00	0.00	0.00	0.00	
Stage(ft)	1					1				
Area(ac)	0.87					0.87	1.00	0.43	0.43	
Stage(ft)	3					3				
Area(ac)	1.06					1.06	3.00	1.92	2.36	
Stage(ft)										
Area(ac)										
Drainage Area (ac)	31.6					32				
Total Area (Acres)						643				
Percent of Total						5%				

NOTES: Retention Basin No.1 located in N.W. Quarter of Sub-basin

CH2M HILL

Subject: **Maryvale ADMS**
Composite Storage Volume Computations
Retention Basins

By: **J. Geisbush**
Checked: **D.Dust**
Project No.: **132586**

Sub-basin ID: 30-21N **Total Sub-basin Area (square miles): 0.667**

Retention Basin ID: RET30N

MAP SHT 151	Input Data					Composite Basin Data				
Parameters	Basin No. 1	Basin No. 2	Basin No. 3	Basin No. 4	Lake	COMPOSITE BASIN	Stage (ft)	Incremental Vol. (acft)	Cumulative Vol. (acft)	Comments
Stage(ft)	0	0	0	0	0	0				
Area(ac)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Stage(ft)	0.5	0.5	0.5	0.5	0.5	0.5				
Area(ac)	0.00	0.00	0.00	0.00	22.25	22.25	0.50	5.56	5.56	
Stage(ft)	2	2	2	2		2				
Area(ac)	1.38	0.96	1.38	1.34		5.06	2.00	20.48	26.05	
Stage(ft)	3					3				
Area(ac)	1.59					1.59	3.00	3.33	**29.37**	
Drainage Area (ac)						351				
Total Area (Acres)						427				
Percent of Total						**82%**				

NOTES:
Retention Basin No.1 located in N.W. Quarter of Sub-basin
Retention Basin No.2 located in S.W. Quarter of Sub-basin
Retention Basin No.3 located in N.W. Quarter of Sub-basin
Retention Basin No.4 located in S.W. Quarter of Sub-basin
Lake located in the center of Sub-basin

CH2M HILL

Subject: **Maryvale ADMS**
Composite Storage Volume Computations
Retention Basins

By: **J. Geisbush**
Checked: **D.Dust**
Project No.: **132586**

Sub-basin ID: 30-21S **Total Sub-basin Area (square miles): 0.750**

Retention Basin ID: RET30S

MAP SHT 164	Input Data						Composite Basin Data				
Parameters	Basin No. 1	Basin No. 2	Basin No. 3	Basin No. 4	Basin No. 5	Lake	COMP. BASIN	Stage (ft)	Incremental Vol. (acft)	Cumulative Vol. (acft)	Comments
Stage(ft)	0	0	0	0	0	0	0				
Area(ac)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Stage(ft)	0.5	0.5	0.5	0.5	0.5	0.5	0.5				
Area(ac)	0.00	0.00	0.00	0.00	0.00	23.72	23.72	0.50	5.93	5.93	
Stage(ft)	1	1	1	1	1		1				
Area(ac)	0.23	0.49	0.63	0.19	0.24		1.78	1.00	6.38	12.31	
Stage(ft)	2	2	2	2	2		2				
Area(ac)	0.47	0.7	0.78	0.37	0.48		2.80	2.00	2.29	14.60	
Stage(ft)	3	3	3	3	3		3				
Area(ac)	0.579	0.909	0.918	0.545	0.627		3.58	3.00	3.19	**17.78**	
Drainage Area (ac)							390				
Total Area (Acres)							480				
Percent of Total							**81%**				

NOTES:
Retention Basin No.1 located in N.W. Quarter of Sub-basin
Retention Basin No.2 located in S.W. Quarter of Sub-basin
Retention Basin No.3 located in S.W. Quarter of Sub-basin
Retention Basin No.4 located in S.W. Quarter of Sub-basin
Retention Basin No.5 located in S.W. Quarter of Sub-basin
Lake located in the center of Sub-basin

CH2M HILL

Subject: Maryvale ADMS
Composite Storage Volume Computations
Retention Basins

By: J. Geisbush
Checked: D.Dust
Project No.: 132586

Sub-basin ID: 35-21 Total Sub-basin Area (square miles): 0.991

Retention Basin ID: RET35

MAP SHT 181	Input Data					Composite Basin Data				
Parameters	Basin No. 1	Basin No. 2	Basin No. 3	Basin No. 4	Basin No. 5	COMPOSITE BASIN	Stage (ft)	Incremental Vol. (acft)	Cumulative Vol. (acft)	Comments
Stage(ft)	0	0				0				
Area(ac)	0.00	0.00				0.00	0.00	0.00	0.00	
Stage(ft)	1	1				1				
Area(ac)	0.66	2.84				3.50	1.00	1.75	1.75	
Stage(ft)	3	3				3				
Area(ac)	2.98	8.50				11.48	3.00	14.98	16.73	
Stage(ft)	5					5				
Area(ac)	3.861					3.86	5.00	15.34	**32.06**	
Drainage Area (ac)	121.6	57.6				179				
Total Area (Acres)						634				
Percent of Total						**28%**				

NOTES:

3	4
0	0
0.00	0.00
1	1
0.88	0.19
3	3
1.34	0.60

Data saved

Retention Basin No.1 located in N.E. Quarter of Sub-basin
Retention Basin No.2 located in S.W. Quarter of Sub-basin

CH2M HILL

Subject: **Maryvale ADMS**
Composite Storage Volume Computations
Retention Basins

By: **J. Geisbush**
Checked: **D.Dust**
Project No.: **132586**

Sub-basin ID: 14-31 Total Sub-basin Area (square miles): **1.008**

Retention Basin ID: RET14

MAP SHT 2	Input Data					Composite Basin Data				
Parameters	Basin No. 1	Basin No. 2	Basin No. 3	Basin No. 4	Basin No. 5	COMPOSITE BASIN	Stage (ft)	Incremental Vol. (acft)	Cumulative Vol. (acft)	Comments
Stage(ft)	0					0				
Area(ac)	0.0					0.00	0.00	0.00	0.00	
Stage(ft)	1					1				
Area(ac)	1.5					1.50	1.00	0.75	0.75	
Stage(ft)	3					3				
Area(ac)	2.7					2.70	3.00	4.20	4.95	
Stage(ft)										
Area(ac)										
Drainage Area (ac)	58.4					58				
Total Area (Acres)						645				
Percent of Total						9%				

NOTES: Retention Basin No.1 located in N.W. Quarter of Sub-basin

CH2M HILL

Subject: **Maryvale ADMS**
Composite Storage Volume Computations
Retention Basins

By: **J. Geisbush**
Checked: **D.Dust**
Project No.: **132586**

Sub-basin ID: 23-31 **Total Sub-basin Area (square miles): 1.006**

Retention Basin ID: RET23

MAP SHT 10 & 15	Input Data					Composite Basin Data				
Parameters	Basin No. 1	Basin No. 2	Basin No. 3	Basin No. 4	Basin No. 5	COMPOSITE BASIN	Stage (ft)	Incremental Vol. (acft)	Cumulative Vol. (acft)	Comments
Stage(ft)	0	0	0			0				
Area(ac)	0.1	0.50	0.20			0.80	0.00	0.00	0.00	
Stage(ft)	2	2	2			2				
Area(ac)	0.4	0.80	0.40			1.60	2.00	2.40	2.40	
Stage(ft)	3		3			3				
Area(ac)	0.6		0.30			0.90	3.00	1.25	**3.65**	
Stage(ft)										
Area(ac)										
Drainage Area (ac)	26.9	18.0	34.3			79.2				
Total Area (Acres)						644				
Percent of Total						**12%**				

NOTES: Retention Basin No.1 located in N.W. Quarter of Sub-basin
Retention Basin No.2 located in N.E. Quarter of Sub-basin
Retention Basin No.3 located in S.W. Quarter of Sub-basin

CH2M HILL

Subject: **Maryvale ADMS**
Composite Storage Volume Computations
Retention Basins

By: **J. Geisbush**
Checked: **D.Dust**
Project No.: **132586**

Sub-basin ID: 24-31 **Total Sub-basin Area (square miles): 1.007**

Retention Basin ID: RET24

MAP SHT 16	Input Data					Composite Basin Data				
Parameters	Basin No. 1	Basin No. 2	Basin No. 3	Basin No. 4	Basin No. 5	COMPOSITE BASIN	Stage (ft)	Incremental Vol. (acft)	Cumulative Vol. (acft)	Comments
Stage(ft)	0					0				
Area(ac)	0.1					0.10	0.00	0.00	0.00	
Stage(ft)	2					2				
Area(ac)	0.2					0.20	2.00	0.30	**0.30**	
Stage(ft)										
Area(ac)										
Stage(ft)										
Area(ac)										
Drainage Area (ac)	6.9					6.9				
Total Area (Acres)						645				
Percent of Total						**1%**				

NOTES: Retention Basin No.1 located in S.W. Quarter of Sub-basin

CH2M HILL

Subject: **Maryvale ADMS**
Composite Storage Volume Computations
Retention Basins

By: **J. Geisbush**
Checked: **D.Dust**
Project No.: **132586**

Sub-basin ID: 25-31 **Total Sub-basin Area (square miles): 1.003**

Retention Basin ID: RET25

MAP SHT 27	Input Data					Composite Basin Data				
Parameters	Basin No. 1	Basin No. 2	Basin No. 3	Basin No. 4	Basin No. 5	COMPOSITE BASIN	Stage (ft)	Incremental Vol. (acft)	Cumulative Vol. (acft)	Comments
Stage(ft)	0	0	0			0				
Area(ac)	0.3	0.20	10.70			11.20	0.00	0.00	0.00	
Stage(ft)	2	2	2			2				
Area(ac)	0.7	0.40	11.10			12.20	2.00	23.40	23.40	
Stage(ft)	3	3	3			3				
Area(ac)	0.9	0.60	11.50			13.00	3.00	12.60	36.00	
Stage(ft)			4			4				
Area(ac)			11.8			11.80	4.00	12.40	48.40	
Stage(ft)			6			6				
Area(ac)			12.6			12.6	6.00	24.4	**72.80**	
Drainage Area (ac)	17.1	20.6	35.6			73.3				
Total Area (Acres)						641.92				
Percent of Total						**11%**				

NOTES: Retention Basin No.1 located in S.W. Quarter of Sub-basin
Retention Basin No.2 located in S.E. Quarter of Sub-basin
Retention Basin No.3 located in N.W. Quarter of Sub-basin

CH2M HILL

Subject: **Maryvale ADMS**
Composite Storage Volume Computations
Retention Basins

By: **J. Geisbush**
Checked: **D.Dust**
Project No.: **132586**

Sub-basin ID: 26-31E **Total Sub-basin Area (square miles): 0.462**

Retention Basin ID: RET26

MAP SHT 20	Input Data					Composite Basin Data				
Parameters	Basin No. 1	Basin No. 2	Basin No. 3	Basin No. 4	Basin No. 5	COMPOSITE BASIN	Stage (ft)	Incremental Vol. (acft)	Cumulative Vol. (acft)	Comments
Stage(ft)	0	0	0			0				
Area(ac)	0.6	0.60	0.40			1.60	0.00	0.00	0.00	
Stage(ft)	2	2	2			2				
Area(ac)	0.8	0.90	0.50			2.20	2.00	3.80	3.80	
Stage(ft)	3					3				
Area(ac)	1.0					1.00	3.00	1.60	**5.40**	
Stage(ft)										
Area(ac)										
Drainage Area (ac)	52.2	24.4	10.1			86.7				
Total Area (Acres)						295				
Percent of Total						**29%**				

NOTES: Retention Basin No.1 located in N.E. Quarter of Sub-basin
Retention Basin No.2 located in N.E. Quarter of Sub-basin
Retention Basin No.3 located in N.E. Quarter of Sub-basin

CH2M HILL

Subject: **Maryvale ADMS**
Composite Storage Volume Computations
Retention Basins

By: **J. Geisbush**
Checked: **D.Dust**
Project No.: **132586**

Sub-basin ID: 34-31 **Total Sub-basin Area (square miles): 0.995**

Retention Basin ID: RET34

MAP SHT 10A	Input Data					Composite Basin Data				
Parameters	Basin No. 1	Basin No. 2	Basin No. 3	Basin No. 4	Basin No. 5	COMPOSITE BASIN	Stage (ft)	Incremental Vol. (acft)	Cumulative Vol. (acft)	Comments
Stage(ft)	0					0				
Area(ac)	0.0					0.00	0.00	0.00	0.00	
Stage(ft)	1					1				
Area(ac)	0.4					0.43	1.00	0.21	0.21	
Stage(ft)	3					3				
Area(ac)	3.1					3.13	3.00	3.56	3.77	
Stage(ft)	5					5				
Area(ac)	5.01					5.01	5.00	8.14	**11.91**	
Drainage Area (ac)	35.9					36				
Total Area (Acres)						637				
Percent of Total						**6%**				

NOTES: Retention Basin No.1 located in S.W. Quarter of Sub-basin

CH2M HILL

Subject: **Maryvale ADMS**
Composite Storage Volume Computations
Retention Basins

By: **J. Geisbush**
Checked: **D.Dust**
Project No.: **132586**

Sub-basin ID: 7-32 **Total Sub-basin Area (square miles): 0.249**

Retention Basin ID: RET7

MAP SHT 1	Input Data					Composite Basin Data				
Parameters	Basin No. 1	Basin No. 2	Basin No. 3	Basin No. 4	Basin No. 5	COMPOSITE BASIN	Stage (ft)	Incremental Vol. (acft)	Cumulative Vol. (acft)	Comments
Stage(ft)	0					0				
Area(ac)	0.00					0.00	0.00	0.00	0.00	
Stage(ft)	1					1				
Area(ac)	0.34					0.34	1.00	0.17	0.17	
Stage(ft)	3					3				
Area(ac)	0.93					0.93	3.00	1.27	1.44	
Stage(ft)						0				
Area(ac)						0.00	0.00	0.00	**1.44**	
Drainage Area (ac)	47.0					47				
Total Area (Acres)						160				
Percent of Total						**29%**				

NOTES: Retention Basin No.1 located in N.W. Quarter of Sub-basin

CH2M HILL

Subject: Maryvale ADMS
Composite Storage Volume Computations
Retention Basins

By: J. Geisbush
Checked: D.Dust
Project No.: 132586

Sub-basin ID: 17-32 Total Sub-basin Area (square miles): 0.284

Retention Basin ID: RET17

MAP SHT 9	Input Data					Composite Basin Data				
Parameters	Basin No. 1	Basin No. 2	Basin No. 3	Basin No. 4	Basin No. 5	COMPOSITE BASIN	Stage (ft)	Incremental Vol. (acft)	Cumulative Vol. (acft)	Comments
Stage(ft)	0	0	0	0	0	0				
Area(ac)	0.07	0.52	0.00	0.00	0.00	0.59	0.00	0.00	0.00	
Stage(ft)	1	1	1	1	1	1				
Area(ac)	0.21	0.55	0.23	0.37	0.10	1.45	1.00	1.02	1.02	
Stage(ft)	3	3	3	3	3	3				
Area(ac)	0.55	0.57	0.43	0.55	0.21	2.31	3.00	3.76	4.78	
Stage(ft)						0				
Area(ac)						0.00	0.00	0.00	4.78	
Drainage Area (ac)						63				
Total Area (Acres)						182				
Percent of Total						35%				

NOTES:
Retention Basin No.1 located in S.W. Quarter of Sub-basin
Retention Basin No.2 located in S.W. Quarter of Sub-basin
Retention Basin No.3 located in S.W. Quarter of Sub-basin
Retention Basin No.4 located in S.E. Quarter of Sub-basin
Retention Basin No.5 located in S.E. Quarter of Sub-basin

CH2M HILL

Subject: **Maryvale ADMS**
Composite Storage Volume Computations
Retention Basins

By: **J. Geisbush**
Checked: **D.Dust**
Project No.: **132586**

Sub-basin ID: 19-32 **Total Sub-basin Area (square miles): 0.962**

Retention Basin ID: RET19

MAP SHT 17	Input Data					Composite Basin Data				
Parameters	Basin No. 1	Basin No. 2	Basin No. 3	Basin No. 4	Basin No. 5	COMPOSITE BASIN	Stage (ft)	Incremental Vol. (acft)	Cumulative Vol. (acft)	Comments
Stage(ft)	0					0				
Area(ac)	0.46					0.46	0.00	0.00	0.00	
Stage(ft)	2					2				
Area(ac)	2.72					2.72	2.00	3.18	3.18	
Stage(ft)	4					4				
Area(ac)	4.16					4.16	4.00	6.88	10.06	
Stage(ft)						0				
Area(ac)						0.00	0.00	0.00	**10.06**	
Drainage Area (ac)	61.0					61				
Total Area (Acres)						615				
Percent of Total						**10%**				

NOTES: Retention Basin No.1 located in S.W. Quarter of Sub-basin

CH2M HILL

Subject: **Maryvale ADMS**
Composite Storage Volume Computations
Retention Basins

By: **J. Geisbush**
Checked: **D.Dust**
Project No.: **132586**

Sub-basin ID: 20-32 **Total Sub-basin Area (square miles): 0.988**

Retention Basin ID: RET20

MAP SHT 18	Input Data					Composite Basin Data				
Parameters	Basin No. 1	Basin No. 2	Basin No. 3	Basin No. 4	Basin No. 5	COMPOSITE BASIN	Stage (ft)	Incremental Vol. (acft)	Cumulative Vol. (acft)	Comments
Stage(ft)	0	0				0				
Area(ac)	1.40	0.00				1.40	0.00	0.00	0.00	
Stage(ft)	1	1				1				
Area(ac)	2.81	0.66				3.47	1.00	2.44	2.44	
Stage(ft)	3	3				3				
Area(ac)		0.68				0.68	3.00	4.15	6.59	
Stage(ft)		5				5				
Area(ac)		1.66				1.66	0.00	-3.51	**3.08**	
Drainage Area (ac)	63.0	39.0				102				
Total Area (Acres)						632				
Percent of Total						**16%**				

NOTES: Retention Basin No.1 located in N.E. Quarter of Sub-basin
Retention Basin No.2 located in S.W. Quarter of Sub-basin

CH2M HILL

Subject: **Maryvale ADMS**
Composite Storage Volume Computations
Retention Basins

By: **J. Geisbush**
Checked: **D.Dust**
Project No.: **132586**

Sub-basin ID: 28-32 **Total Sub-basin Area (square miles): 0.994**

Retention Basin ID: RET28

MAP SHT 24	Input Data					Composite Basin Data				
Parameters	Basin No. 1	Basin No. 2	Basin No. 3	Basin No. 4	Basin No. 5	COMPOSITE BASIN	Stage (ft)	Incremental Vol. (acft)	Cumulative Vol. (acft)	Comments
Stage(ft)	0					0				
Area(ac)	0.1					0.10	0.00	0.00	0.00	
Stage(ft)	2					2				
Area(ac)	1.7					1.70	2.00	1.80	1.80	
Stage(ft)	3					3				
Area(ac)	3.7					3.70	3.00	2.70	**4.50**	
Stage(ft)										
Area(ac)										
Drainage Area (ac)	23.2					23.2				
Total Area (Acres)						636				
Percent of Total						**4%**				

NOTES: Retention Basin No.1 located in N.E. Quarter of Sub-basin

CH2M HILL

Subject: **Maryvale ADMS**
Composite Storage Volume Computations
Retention Basins

By: **J. Geisbush**
Checked: **D.Dust**
Project No.: **132586**

Sub-basin ID: 29-32 **Total Sub-basin Area (square miles): 0.991**

Retention Basin ID: RET29

MAP SHT 23	Input Data					Composite Basin Data				
Parameters	Basin No. 1	Basin No. 2	Basin No. 3	Basin No. 4	Basin No. 5	COMPOSITE BASIN	Stage (ft)	Incremental Vol. (acft)	Cumulative Vol. (acft)	Comments
Stage(ft)	0					0				
Area(ac)	0.0					0.00	0.00	0.00	0.00	
Stage(ft)	1					1				
Area(ac)	1.8					1.80	1.00	0.90	0.90	
Stage(ft)	3					3				
Area(ac)	2.4					2.40	3.00	4.20	**5.10**	
Stage(ft)										
Area(ac)										
Drainage Area (ac)	65.4					65.4				
Total Area (Acres)						634				
Percent of Total						**10%**				

NOTES: Retention Basin No.1 located in N.W. Quarter of Sub-basin

CH2M HILL

Subject: **Maryvale ADMS**
Composite Storage Volume Computations
Retention Basins

By: **J. Geisbush**
Checked: **D.Dust**
Project No.: **132586**

Sub-basin ID: 30-32 **Total Sub-basin Area (square miles): 0.959**

Retention Basin ID: RET30

MAP SHT 22	Input Data					Composite Basin Data				
Parameters	Basin No. 1	Basin No. 2	Basin No. 3	Basin No. 4	Basin No. 5	COMPOSITE BASIN	Stage (ft)	Incremental Vol. (acft)	Cumulative Vol. (acft)	Comments
Stage(ft)	0	0				0				
Area(ac)	2.1	0.14				2.24	0.00	0.00	0.00	
Stage(ft)	2	2				2				
Area(ac)	2.9	0.90				3.80	2.00	6.04	6.04	
Stage(ft)	4	4				4				
Area(ac)	7.0	1.20				8.20	4.00	12.00	18.04	
Stage(ft)		6				6				
Area(ac)		1.7				1.70	6.00	9.90	**27.94**	
Drainage Area (ac)	34.1	13.8				48				
Total Area (Acres)						614				
Percent of Total						**8%**				

NOTES: Retention Basin No.1 located in N.E. Quarter of Sub-basin

CH2M HILL

Subject: Maryvale ADMS
Composite Storage Volume Computations
Retention Basins

By: J. Geisbush
Checked: D.Dust
Project No.: 132586

Sub-basin ID: 32-32 **Total Sub-basin Area (square miles):** 0.991

Retention Basin ID: RET32

MAP SHT 37 & 45	Input Data					Composite Basin Data				
Parameters	Basin No. 1	Basin No. 2	Basin No. 3	Basin No. 4	Basin No. 5	COMPOSITE BASIN	Stage (ft)	Incremental Vol. (acft)	Cumulative Vol. (acft)	Comments
Stage(ft)	0	0				0				
Area(ac)	0.5	0.17				0.67	0.00	0.00	0.00	
Stage(ft)	2	2				2				
Area(ac)	1.0	0.20				1.20	2.00	1.87	1.87	
Stage(ft)										
Area(ac)										
Stage(ft)										
Area(ac)										
Drainage Area (ac)	51.2	7.6				58.8				
Total Area (Acres)						634				
Percent of Total						9%				

NOTES: Retention Basin No.1 located in N.W. Quarter of Sub-basin
Retention Basin No.1 located in S.E. Quarter of Sub-basin

CH2M HILL

Subject: Maryvale ADMS
Composite Storage Volume Computations
Retention Basins

By: J. Geisbush
Checked: D.Dust
Project No.: 132586

Sub-basin ID: 15-21 Total Sub-basin Area (square miles): 1.011

Retention Basin ID: RET15

MAP SHT 37 & 45	Input Data					Composite Basin Data				
Parameters	Basin No. 1	Basin No. 2	Basin No. 3	Basin No. 4	Basin No. 5	COMPOSITE BASIN	Stage (ft)	Incremental Vol. (acft)	Cumulative Vol. (acft)	Comments
Stage(ft)	0					0				
Area(ac)	0.5					0.50	0.00	0.00	0.00	
Stage(ft)	1					1				
Area(ac)	2.1					2.10	1.00	1.30	1.30	
Stage(ft)	3					3				
Area(ac)	2.5					2.50	3.00	4.60	**5.90**	
Stage(ft)										
Area(ac)										
Drainage Area (ac)	80.0					80.0				
Total Area (Acres)						647				
Percent of Total						**12%**				

NOTES: Retention Basin No.1 located in S.W. corner of the S.E. Quarter of Sub-basin

CH2M HILL

Subject: **Maryvale ADMS**
Composite Storage Volume Computations
Ponding Areas

By: **J. Geisbush**
Checked: **D. Dust**
Project No.: **132586**

Ponding Location **8-21E** *MAP SHT* **74 & 87** Weir Coeff = 2.7

Ponding/Reservior I.D. **RES8N** Min Weir Crest Elevation = 1053

Storage Data					Outflow Data					
Contour Elevation [ft] SE	Contour Area [ac]	Avg Area [ac]	Incremental Vol [acft]	Cumulative Vol [acft] SV	Surcharge Capacity of Canal [cfs]	XXTH Ave. Storm Drain Capacity [cfs]	Weir Length [ft]	Weir Coeff "C"	Weir Flow Rate(1) [cfs]	Total Outflow [cfs] SQ
1050	0.0	--	--	--			0	--	0	0
1052	15.0	7.50	15.00	15.00			0	--	0	0
1053	24.4	19.70	19.70	34.70			1,600	2.7	0	0
1054	33.7	29.05	29.05	63.75			1,800	2.7	4,536	4,536
1055	54.0	43.85	43.85	107.60			2,000	2.7	13,441	13,441

NOTES: Ponding due to Grand Canal

(1) See following weir flow computation sheet.

Project MARYVALE ADMS
Project No. 132586
Sheet No. 1 of 1
Calculated by JG Date 8/7

WEIR FLOW COMPUTATIONS

LOCATION/DESCRIPTION:

PONDING AREA 8-21E
RES8N

CROSS SECTION PARAMETERS: FILENAME: res8n.SEC

No. of Cross Section Points: 6 Bed Slope:0.00500 Max Elev.:1055.00
Bank Stations.....Left: 0.0 Right....: 2000.0 Min Elev.:1053.00
Encroachment Stations..Left: Right....: Weir Coef: 2.700

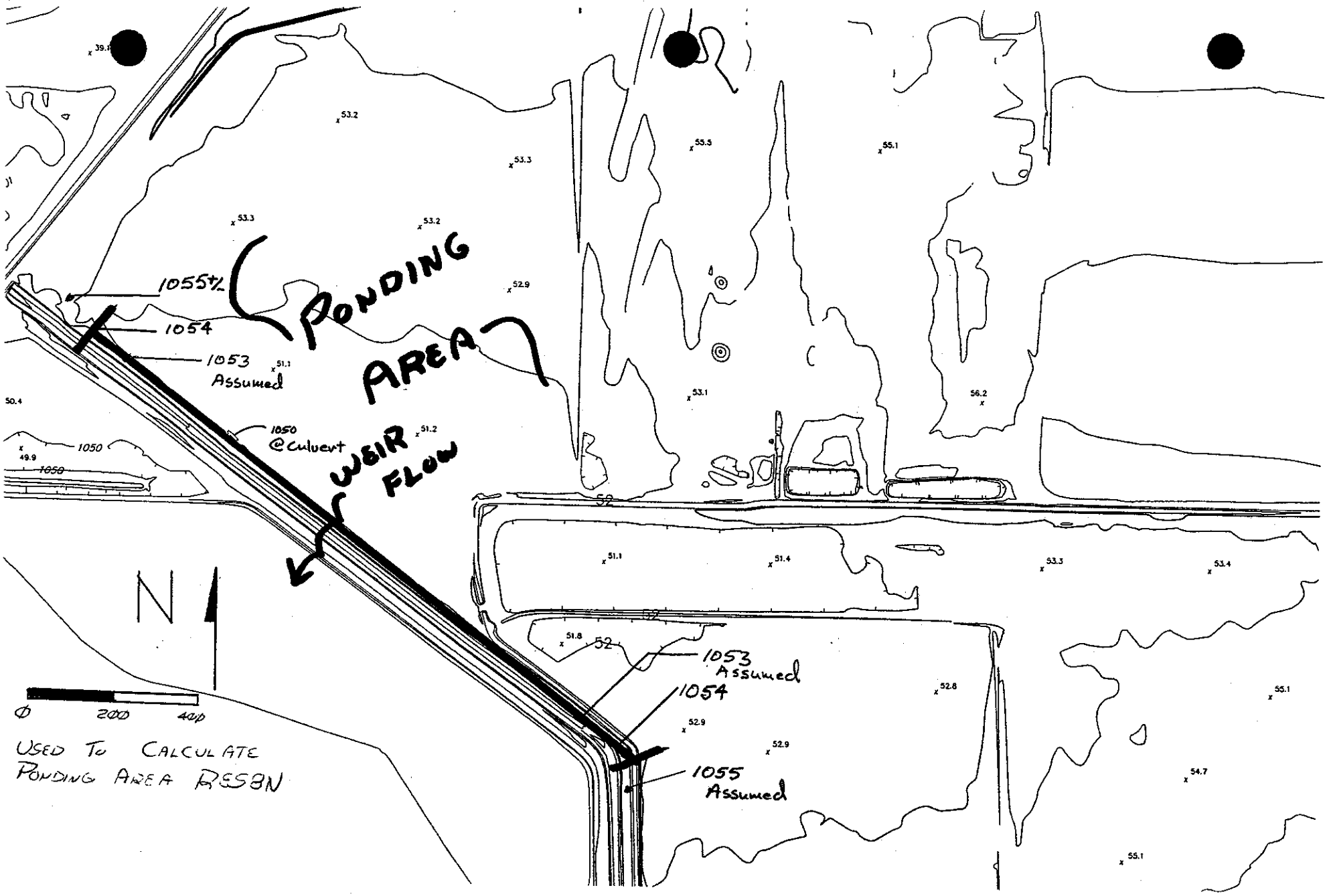
CROSS SECTION POINTS - Elevations & Stations in feet:

No.	Elev.	Sta.	No.	Elev.	Sta.	No.	Elev.	Sta.
1)	1055.00	0.00	2)	1054.00	100.00	3)	1053.00	200.00
4)	1053.00	1800.00	5)	1054.00	1900.00	6)	1055.00	2000.00

COMPUTED PARAMETERS:

WSEL(ft)	Q(cfs)	H:max(ft)	H:ave(ft)	TW(ft)	A(sf)
1053.50	1565.5	0.50	0.49	1700.0	825.0
1054.00	4536.0	1.00	0.94	1800.0	1700.0
1055.00	13440.7	2.00	1.80	2000.0	3600.0

NOTES:



USED TO CALCULATE
PONDING AREA RESBN

CH2M HILL

Subject: **Maryvale ADMS**
Composite Storage Volume Computations
Ponding Areas

By: **J. Geisbush**
Checked: **D. Dust**
Project No.: **132586**

Ponding Location **8-21E** *MAP SHT* **74 & 87** Weir Coeff = 2.7

Ponding/Reservior I.D. **RES8S** Min Weir Crest Elevation = 1055

Storage Data					Outflow Data					
Contour Elevation [ft] SE	Contour Area [ac]	Avg Area [ac]	Incremental Vol [acft]	Cumulative Vol [acft] SV	Surcharge Capacity of Canal [cfs]	XXTH Ave. Storm Drain Capacity [cfs]	Weir Length [ft]	Weir Coeff "C"	Weir Flow Rate(1) [cfs]	Total Outflow [cfs] SQ
1052	0.1	--	--	--			0	--	0	0
1054	17.9	9.01	18.02	18.02			0	--	0	0
1055	35.5	26.70	26.70	44.72			720	2.7	0	0
1056	53.1	44.30	44.30	89.02			1,300	2.7	2,160	2,160

NOTES: (1) See following weir flow computation sheet.

Ponding due to Grand Canal

Project MARYVALE ADMS
Project No. 132586
Sheet No. 1 of 1
Calculated by JG Date 8/7

WEIR FLOW COMPUTATIONS

LOCATION/DESCRIPTION:

PONDING AREA 8-21E
RES8S

CROSS SECTION PARAMETERS: FILENAME: res8s.SEC

No. of Cross Section Points: 5 Bed Slope:0.00500 Max Elev.:1056.00
Bank Stations.....Left: 0.0 Right....: 1300.0 Min Elev.:1055.00
Encroachment Stations..Left: Right....: Weir Coef: 2.700

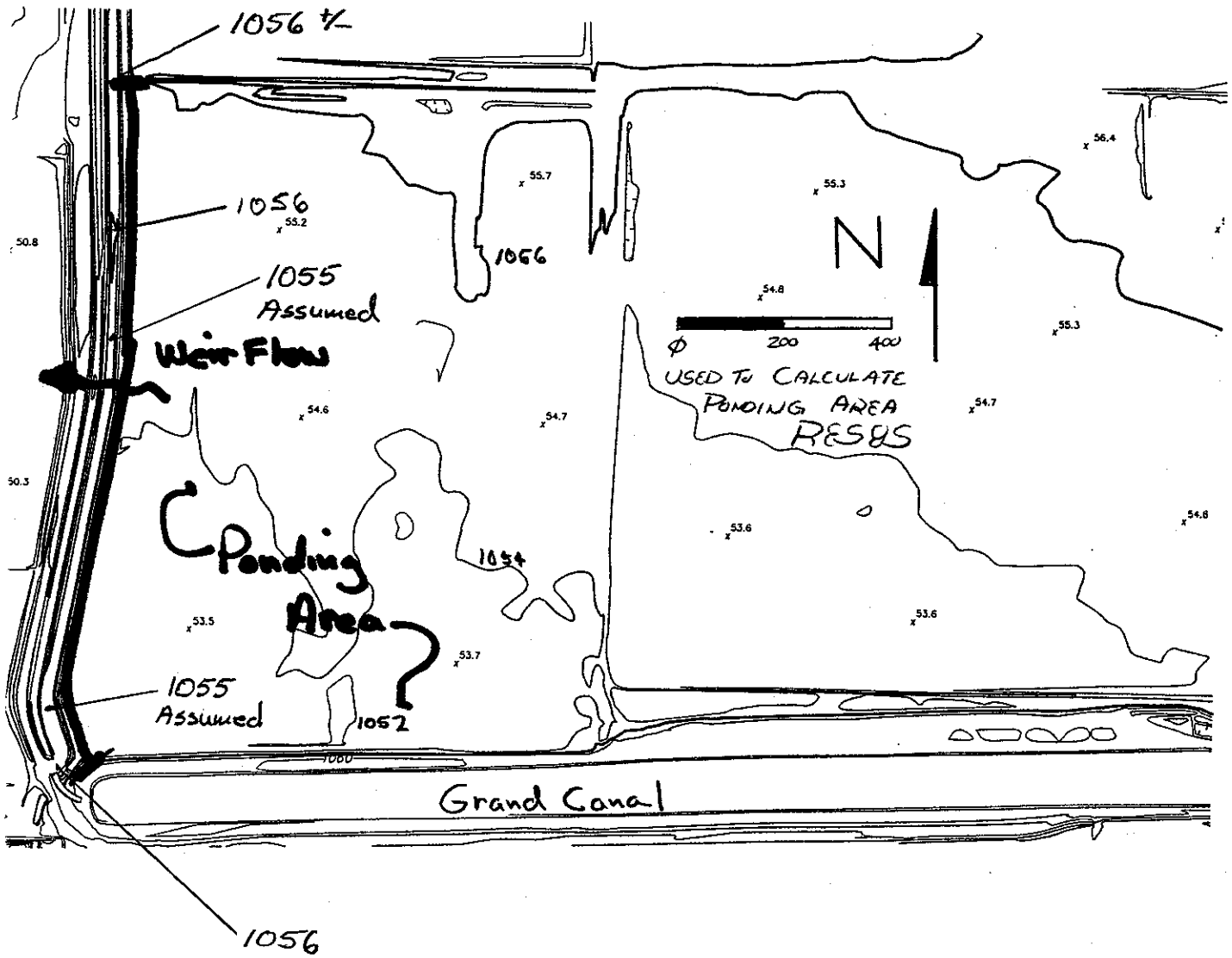
CROSS SECTION POINTS - Elevations & Stations in feet:

No.	Elev.	Sta.	No.	Elev.	Sta.	No.	Elev.	Sta.
1)	1056.00	0.00	2)	1055.00	100.00	3)	1055.00	820.00
4)	1056.00	920.00	5)	1056.00	1300.00			

COMPUTED PARAMETERS:

WSEL(ft)	Q(cfs)	H:max(ft)	H:ave(ft)	TW(ft)	A(sf)
1055.50	725.5	0.50	0.47	820.0	385.0
1056.00	2160.0	1.00	0.89	920.0	820.0
1056.50	4491.1	1.50	1.13	1300.0	1470.0
1057.00	7530.3	2.00	1.63	1300.0	2120.0

NOTES:


1056 +/-
1056
1055
Assumed
Weir Flow
1056
1055
Assumed
1056
N
0
200
400
USED TO CALCULATE
PONDING AREA
RESES
Ponding
Area
?
1054
1052
Grand Canal
55.7
55.2
55.3
56.4
54.8
55.3
54.6
54.7
54.7
53.6
54.8
53.5
53.7
53.6
50.8
50.3

CH2M HILL

Subject: **Maryvale ADMS**
Composite Storage Volume Computations
Ponding Areas

By: **J. Geisbush**
Checked: **D. Dust** ✓
Project No.: **132586**

Ponding Location **9-21** *MAP SHT* 75 & 88 Weir Coeff = 2.7

Ponding/Reservior I.D. **RES9** Min Weir Crest Elevation = 1058

Storage Data					Outflow Data					
Contour Elevation [ft] SE	Contour Area [ac]	Avg Area [ac]	Incremental Vol [acft]	Cumulative Vol [acft] SV	Surcharge Capacity of Canal [cfs]	XXTH Ave. Storm Drain Capacity [cfs]	Weir Length [ft]	Weir Coeff "C"	Weir Flow Rate(1) [cfs]	Total Outflow [cfs] SQ
1056	2.4	--	--	--			0	--	0	0
1058	14.1	8.25	16.50	16.50			450	2.7	0	0
1059	29.5	21.80	21.80	38.30			650	2.7	1,755	1,755
1060	44.8	37.15	37.15	75.45			1,600	2.7	6,437	6,437
1061	85.1	64.95	64.95	140.40			3,800	2.7	16,856	16,856
1062	125.4	105.25	105.25	245.65			5,300	2.7	37,621	37,621

NOTES: Weir Lengths are for both the west and south boundaries

	South	West	Total
58	0	450	450
59	0	650	650
60	200	1400	1600
61	2100	1700	3800
62	3500	1800	5300

(1) See following weir flow computation sheet.

Ponding due to Grand Canal

Project MARYVALE ADMS
Project No. 132586
Sheet No. 1 of 2
Calculated by JG Date 8/5

WEIR FLOW COMPUTATIONS

LOCATION/DESCRIPTION:

PONDING AREA 9-21
RES9 ⇒ WEIR FLOW WEST
& SBH8 Data

CROSS SECTION PARAMETERS: FILENAME: res9.SEC

No. of Cross Section Points: 11 Bed Slope:0.00500 Max Elev.:1062.00
Bank Stations.....Left: 0.0 Right....: 5300.0 Min Elev.:1058.00
Encroachment Stations..Left: 0.0 Right....: 1800.0 Weir Coef: 2.700

CROSS SECTION POINTS - Elevations & Stations in feet:

No.	Elev.	Sta.	No.	Elev.	Sta.	No.	Elev.	Sta.
1)	1062.00	0.00	2)	1061.00	100.00	3)	1060.00	400.00
4)	1059.00	700.00	5)	1058.00	1000.00	6)	1058.00	1450.00
7)	1059.00	1650.00	8)	1060.00	1800.00	9)	1060.00	2000.00
10)	1061.00	3900.00	11)	1062.00	5300.00			

COMPUTED PARAMETERS:

WSEL(ft)	Q(cfs)	H:max(ft)	H:ave(ft)	TW(ft)	A(sf)
[illegible]9.00	1755.0	1.00	0.74	950.0	700.0
1060.00	6437.2	2.00	1.34	1400.0	1875.0
1061.00	14263.6	3.00	2.01	1700.0	3425.0
1062.00	25025.8	4.00	2.88	1800.0	5175.0

NOTES:

SECTION IS TAKEN LEFT TO RIGHT
LOOKING UPSTREAM

Project MARYVALE ADMS
Project No. 132586
Sheet No. 2 of 2
Calculated by JG Date 8/5

WEIR FLOW COMPUTATIONS

LOCATION/DESCRIPTION:

PONDING AREA 9-21
RES9 => WEIR FLOW SOUTH

CROSS SECTION PARAMETERS: FILENAME: res9.SEC

No. of Cross Section Points: 11 Bed Slope:0.00500 Max Elev.:1062.00
Bank Stations.....Left: 0.0 Right....: 5300.0 Min Elev.:1060.00
Encroachment Stations..Left: 1800.0 Right....: 5300.0 Weir Coef: 2.700

CROSS SECTION POINTS - Elevations & Stations in feet:

No.	Elev.	Sta.	No.	Elev.	Sta.	No.	Elev.	Sta.
1)	1062.00	0.00	2)	1061.00	100.00	3)	1060.00	400.00
4)	1059.00	700.00	5)	1058.00	1000.00	6)	1058.00	1450.00
7)	1059.00	1650.00	8)	1060.00	1800.00	9)	1060.00	2000.00
10)	1061.00	3900.00	11)	1062.00	5300.00			

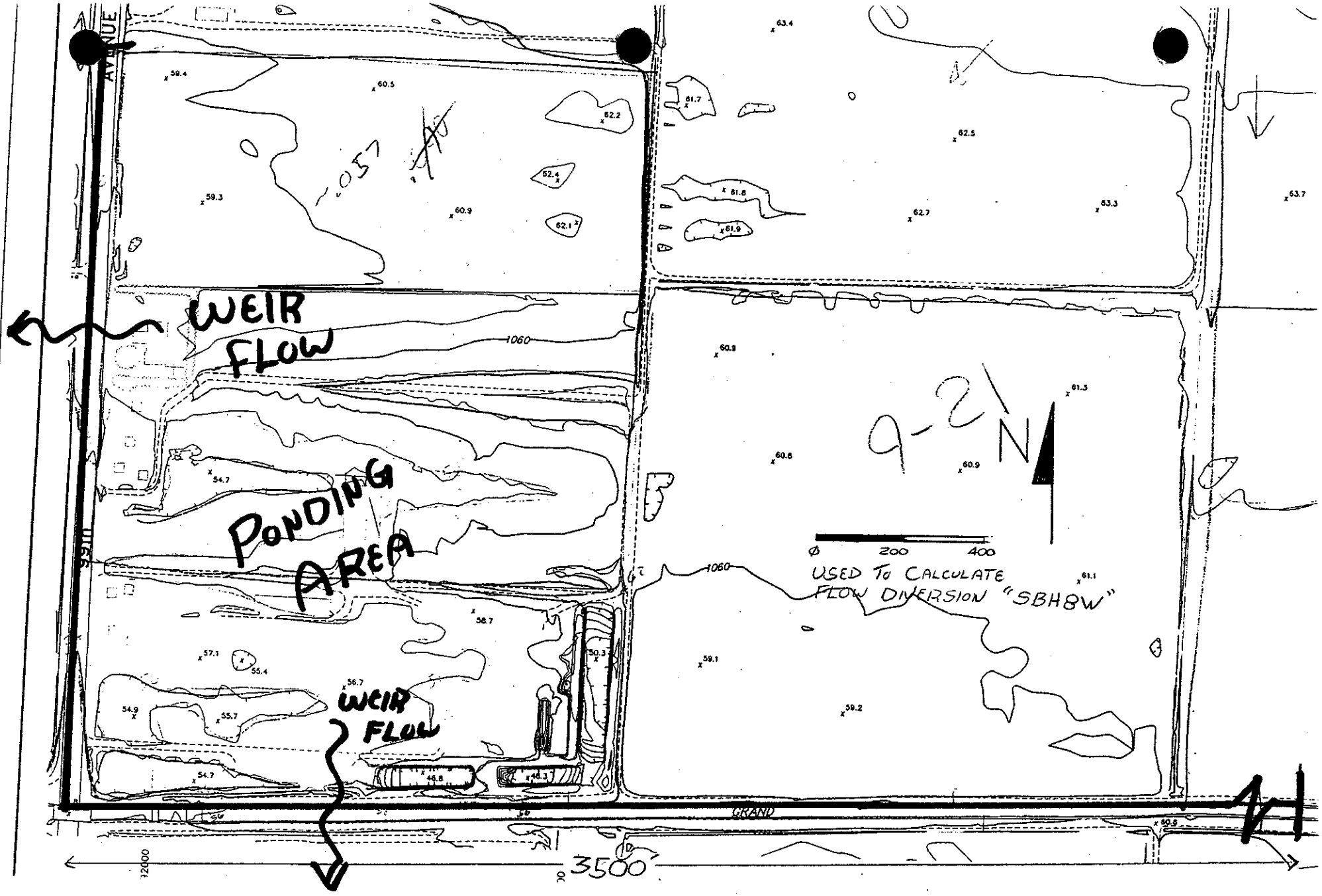
COMPUTED PARAMETERS:

WSEL(ft)	Q(cfs)	H:max(ft)	H:ave(ft)	TW(ft)	A(sf)
[illegible]1.00	2592.0	1.00	0.55	2100.0	1150.0
1062.00	12595.2	2.00	1.13	3500.0	3950.0

	WEST		SOUTH		TOTAL	
ELEV	WEIR LENGTH (ft)	Q (cfs)	WEIR LENGTH (ft)	Q (cfs)	WEIR LENGTH (ft)	Q (cfs)
1059	650	1,755	Ø	—	650	1,755
1060	1400	6,437	200	—	1600	6,437
1061	1700	14,264	2100	2592	3800	16,856
1062	1800	25,026	3500	12595	5300	37,621

NOTES:

SECTION IS TAKEN LEFT TO RIGHT
LOOKING UPSTREAM


WEIR FLOW
PONDING AREA
WEIR FLOW
1060
1060
GRAND
3500
12000
9-2
N
0 200 400
USED TO CALCULATE FLOW DIVERSION "SBH8W"

CH2M HILL

Subject: **Maryvale ADMS**
Composite Storage Volume Computations
Ponding Areas

By: **J. Geisbush**
Checked: **D. Dust** ✓
Project No.: **132586**

Ponding Location **10-21** *MAP SHT* 76 & 89 Weir Coeff = 2.7

Ponding/Reservior I.D. **RES10** Min Weir Crest Elevation = 1068

Storage Data					Outflow Data					
Contour Elevation [ft] SE	Contour Area [ac]	Avg Area [ac]	Incremental Vol [acft]	Cumulative Vol [acft] SV	Surcharge Capacity of Canal [cfs]	XXTH Ave. Storm Drain Capacity [cfs]	Weir Length [ft]	Weir Coeff "C"	Weir Flow Rate(1) [cfs]	Total Outflow [cfs] SQ
1064	7.9	--	--	--				--	0	0
1066	8.8	8.35	16.69	16.69				--	0	0
1068	14.6	11.72	23.43	40.12			350	2.7	0	0
1069	15.7	15.16	15.16	55.28			750	2.7	1,377	1,377
1070	16.9	16.32	16.32	71.60			1,050	2.7	5,008	5,008

NOTES: This is actually a "Regional Retention Basin"

Ponding due to Grand Canal

(1) See following weir flow computation sheet.

Weir Lengths are for both the west and south boundaries

	South	West	Total
68	350	0	350
69	350	400	750
70	350	700	1050

Project MARYVALE ADMS
Project No. 132586
Sheet No. 1 of 2
Calculated by JG Date 9/5

WEIR FLOW COMPUTATIONS

LOCATION/DESCRIPTION:

PONDING AREA 10-21
RES10 => WEIR FLOW WEST
& SBH7 Data

CROSS SECTION PARAMETERS: FILENAME: res10-w.SEC

No. of Cross Section Points: 6 Bed Slope:0.00500 Max Elev.:1070.00
Bank Stations.....Left: 0.0 Right....: 1050.0 Min Elev.:1068.00
Encroachment Stations..Left: 0.0 Right....: 350.0 Weir Coef: 2.700

CROSS SECTION POINTS - Elevations & Stations in feet:

No.	Elev.	Sta.	No.	Elev.	Sta.	No.	Elev.	Sta.
1)	1070.00	0.00	2)	1069.00	0.10	3)	1068.00	0.20
4)	1068.00	350.00	5)	1069.00	750.00	6)	1070.00	1050.00

COMPUTED PARAMETERS:

WSEL(ft)	Q(cfs)	H:max(ft)	H:ave(ft)	TW(ft)	A(sf)
1069.00	944.6	1.00	1.00	349.9	349.8
1070.00	2671.9	2.00	2.00	350.0	699.8

NOTES:

SECTION IS TAKEN LEFT TO RIGHT
LOOKING UPSTREAM

Project MARYVALE ADMS
Project No. 132586
Sheet No. 2 of 2
Calculated by JG Date 8/5

WEIR FLOW COMPUTATIONS

LOCATION/DESCRIPTION:

PONDING AREA 10-21
RES10 => WEIR FLOW SOUTH

CROSS SECTION PARAMETERS: FILENAME: res10-s.SEC

No. of Cross Section Points: 6 Bed Slope:0.00500 Max Elev.:1070.00
Bank Stations.....Left: 0.0 Right....: 1050.0 Min Elev.:1068.00
Encroachment Stations..Left: 350.0 Right....: 1050.0 Weir Coef: 2.700

CROSS SECTION POINTS - Elevations & Stations in feet:

No.	Elev.	Sta.	No.	Elev.	Sta.	No.	Elev.	Sta.
1)	1070.00	0.00	2)	1069.00	0.10	3)	1068.00	0.20
4)	1068.00	350.00	5)	1069.00	750.00	6)	1070.00	1050.00

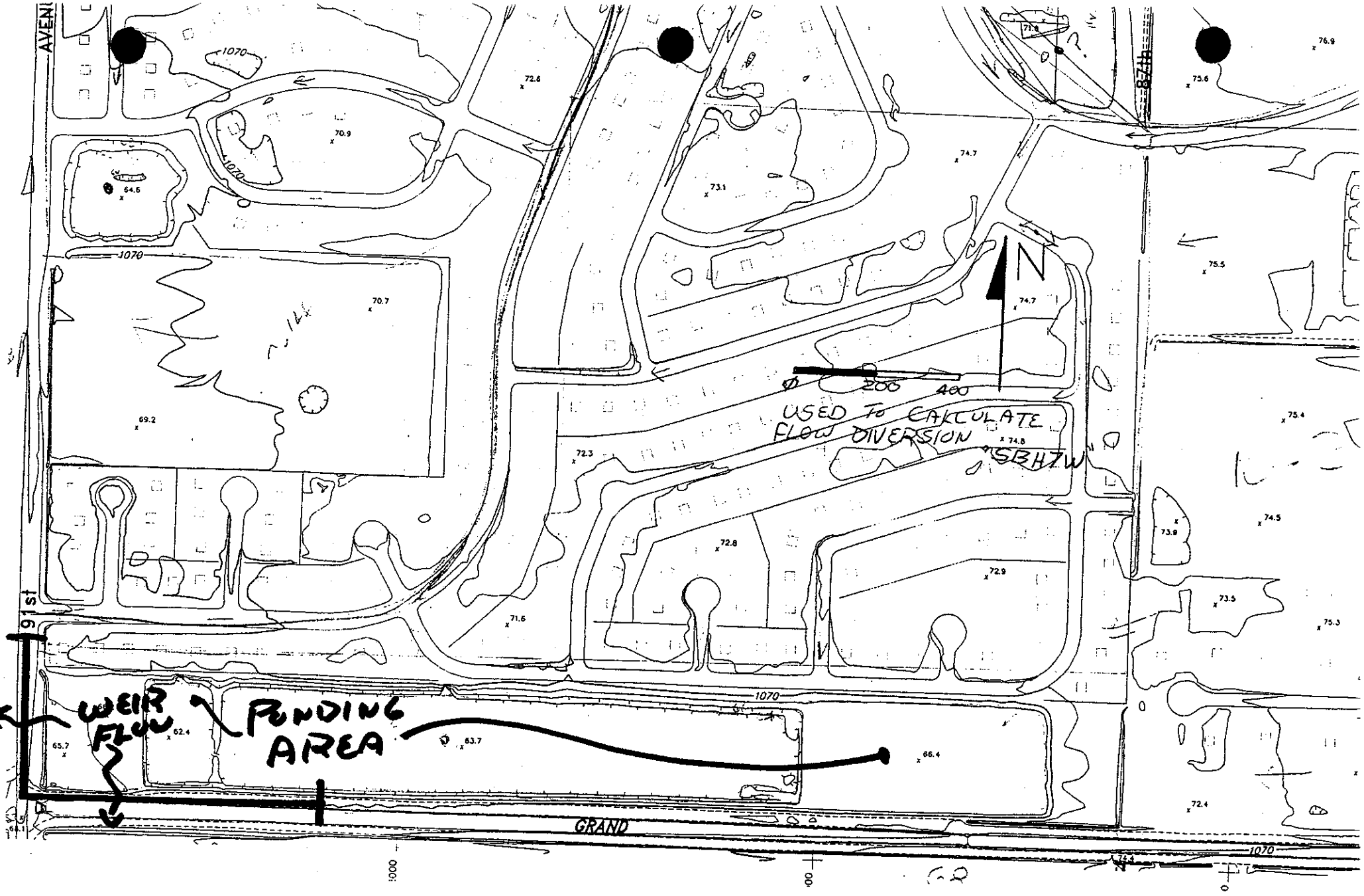
COMPUTED PARAMETERS:

WSEL(ft)	Q(cfs)	H:max(ft)	H:ave(ft)	TW(ft)	A(sf)
1069.00	432.0	1.00	0.50	400.0	200.0
1070.00	2335.8	2.00	1.07	700.0	750.0

NOTES:

ELEV	Q_{WEST}	Q_{SOUTH}	Q_{TOTAL}
1069	945	432	1,377
1070	2,672	2,336	5,008

SECTION IS TAKEN LEFT TO RIGHT
LOOKING UPSTREAM


AVENI
91st
GRAND
1070
72.6
70.9
64.6
70.7
69.2
73.1
74.7
75.6
76.9
75.5
74.7
75.4
74.8
72.3
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72.9
73.9
74.5
73.5
75.3
71.6
65.7
62.4
63.7
66.4
72.4
N
0 200 400
USED TO CALCULATE
FLOW DIVERSION
"SBHZW"
WEIR
FLOW
PONDING
AREA

CH2M HILL

Subject: **Maryvale ADMS**
Composite Storage Volume Computations
Ponding Areas

By: **J. Geisbush**
Checked: **D. Dust** ✓
Project No.: **132586**

Ponding Location **14-21E** *MAP SHT* 103 & 116 Weir Coeff = 2.7

Ponding/Reservior I.D. **RES14E** Min Weir Crest Elevation = 1087.5

Storage Data					Outflow Data					
Contour Elevation [ft] SE	Contour Area [ac]	Avg Area [ac]	Incremental Vol [acft]	Cumulative Vol [acft] SV	Surcharge Capacity of Canal [cfs]	XXTH Ave. Storm Drain Capacity [cfs]	Weir Length [ft]	Weir Coeff "C"	Weir Flow Rate(1) [cfs]	Total Outflow [cfs] SQ
1086	7.0	--	--	--			0	--	0	0
1087	15.1	11.05	11.05	11.05			0	--	0	0
1087.5	19.2	17.13	8.56	19.61			100	2.7	0	0
1088	23.2	21.17	10.59	30.20			1,300	2.7	553	553
1089	32.9	28.05	28.05	58.24			2,400	2.7	6,234	6,234
1090	42.5	37.70	37.70	95.94			3,100	2.7	18,306	18,306

NOTES: (1) See following weir flow computation sheet.

Ponding due to Grand Canal

Project MARYVALE ADMS
Project No. 132586
Sheet No. 7 of
Calculated by JG Date 8/3

WEIR FLOW COMPUTATIONS

LOCATION/DESCRIPTION:

PONDING AREA 14-21E
RES14E

CROSS SECTION PARAMETERS: FILENAME: res14e.SEC

No. of Cross Section Points: 8 Bed Slope:0.00500 Max Elev.:1090.00
Bank Stations.....Left: 0.0 Right....: 3100.0 Min Elev.:1087.50
Encroachment Stations..Left: Right....: Weir Coef: 2.700

CROSS SECTION POINTS - Elevations & Stations in feet:

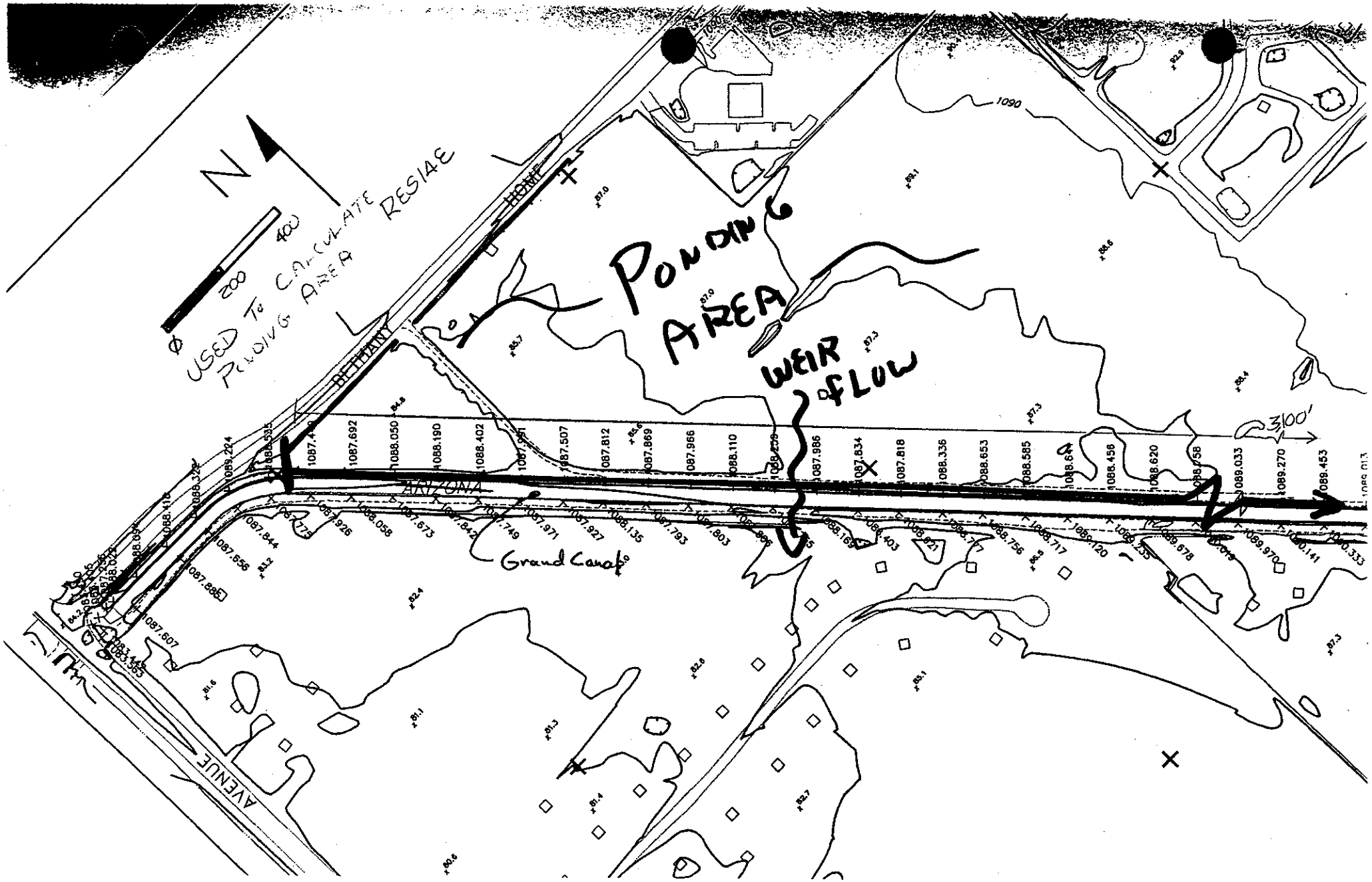
No.	Elev.	Sta.	No.	Elev.	Sta.	No.	Elev.	Sta.
1)	1090.00	0.00	2)	1089.00	0.10	3)	1088.00	0.20
4)	1087.50	0.30	5)	1087.50	100.00	6)	1088.00	1300.00
7)	1089.00	2400.00	8)	1090.00	3100.00			

COMPUTED PARAMETERS:

WSEL(ft)	Q(cfs)	H:max(ft)	H:ave(ft)	TW(ft)	A(sf)
1088.00	553.4	0.50	0.27	1299.8	349.9
1089.00	6233.7	1.50	0.92	2399.9	2199.7
1090.00	18305.8	2.50	1.60	3100.0	4949.7

NOTES:

SECTION IS TAKEN LEFT TO
RIGHT LOOKING UPSTREAM


N
0
200
400
USED TO CALCULATE PONDING AREA RESIAE
PONDING AREA
WEIR FLOW
3100'
ARIZONA
Grand Canal
AVENUE
1090

CH2M HILL

Subject: **Maryvale ADMS**
Composite Storage Volume Computations
Ponding Areas

By: **J. Geisbush**
Checked: **D. Dust**
Project No.: **132586**

Ponding Location **24-21N** *MAP SHT* 130 & 143 Weir Coeff = 2.7

Ponding/Reservior I.D. **RES24N** Min Weir Crest Elevation = 1097

Storage Data					Outflow Data					
Contour Elevation [ft] SE	Contour Area [ac]	Avg Area [ac]	Incremental Vol [acft]	Cumulative Vol [acft] SV	Surcharge Capacity of Canal [cfs]	XXTH Ave. Storm Drain Capacity [cfs]	Weir Length [ft]	Weir Coeff "C"	Weir Flow Rate(1) [cfs]	Total Outflow [cfs] SQ
1092	0.8	--	--	--			0	--	0	0
1094	13.4	7.12	14.23	14.23			0	--	0	0
1096	56.2	34.81	69.61	83.84			0	--	0	0
1097	72.2	64.20	64.20	148.04			100	2.7	0	0
1097.5	80.2	76.21	38.10	186.14			680	2.7	317	317
1098	88.2	84.21	42.11	228.25			2,400	2.7	1,958	1,958

NOTES: (1) See following weir flow computation sheet.

Ponding due to Grand Canal

Project MARYVALE ADMS
Project No. 132586
Sheet No. 6 of
Calculated by JG Date 8/3

WEIR FLOW COMPUTATIONS

LOCATION/DESCRIPTION:

PONDING AREA 24-21N
RES 24N

CROSS SECTION PARAMETERS: FILENAME: res24n.SEC

No. of Cross Section Points: 6 Bed Slope:0.00500 Max Elev.:1098.00
Bank Stations.....Left: 0.0 Right....: 2400.0 Min Elev.:1097.00
Encroachment Stations..Left: Right....: Weir Coef: 2.700

CROSS SECTION POINTS - Elevations & Stations in feet:

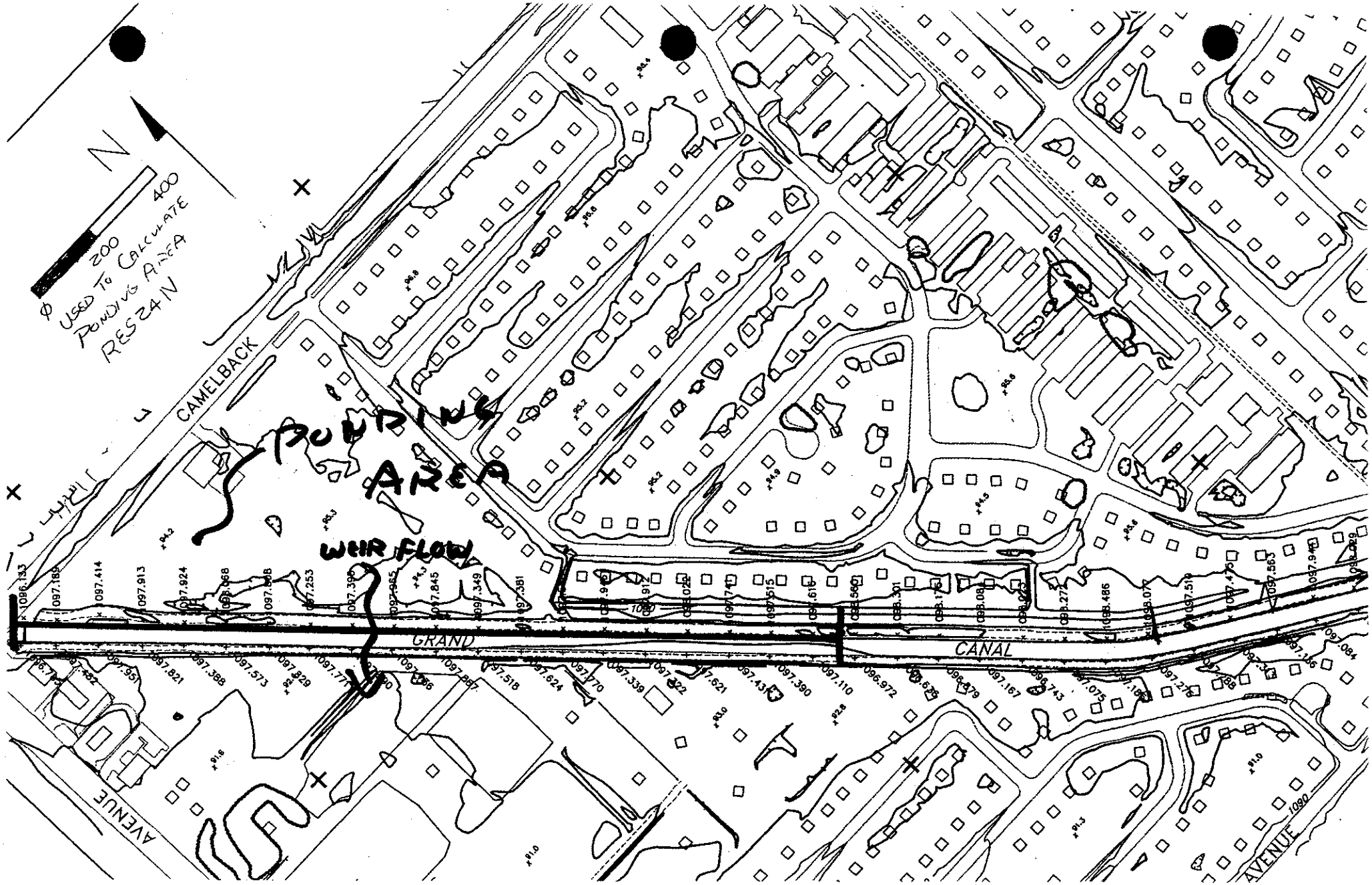
No.	Elev.	Sta.	No.	Elev.	Sta.	No.	Elev.	Sta.
1)	1098.00	0.00	2)	1097.50	1000.00	3)	1097.00	1300.00
4)	1097.00	1400.00	5)	1097.50	1680.00	6)	1098.00	2400.00

COMPUTED PARAMETERS:

WSEL(ft)	Q(cfs)	H:max(ft)	H:ave(ft)	TW(ft)	A(sf)
1097.50	316.9	0.50	0.29	680.0	195.0
1098.00	1958.1	1.00	0.40	2400.0	965.0

NOTES:

SECTION IS TAKEN LEFT TO RIGHT LOOKING UPSTREAM


N
0
200
400
USED TO CALCULATE
PONDING AREA
RES24N
CAMELBACK
AVENUE
PONDING
AREA
WEIR FLOW
GRAND
CANAL
AVENUE

CH2M HILL

Subject: **Maryvale ADMS**
Composite Storage Volume Computations
Ponding Areas

By: **J. Geisbush**
Checked: **D. Dust**
Project No.: **132586**

Ponding Location **29-21N** *MAP SHT* 152 & 165 Weir Coeff = 2.7

Ponding/Reservior I.D. **RES29W** Min Weir Crest Elevation = 1018

Storage Data					Outflow Data					
Contour Elevation [ft] SE	Contour Area [ac]	Avg Area [ac]	Incremental Vol [acft]	Cumulative Vol [acft] SV	Surcharge Capacity of Canal [cfs]	XXTH Ave. Storm Drain Capacity [cfs]	Weir Length [ft]	Weir Coeff "C"	Weir Flow Rate(1) [cfs]	Total Outflow [cfs] SQ
1016	4.1	--	--	--			0	--	0	0
1018	44.8	24.45	48.90	48.90			0	2.7	0	0
1018.5	58.3	51.55	25.78	74.68			968	2.7	771	771
1019.3	80.4	69.35	55.48	130.15			1,397	2.7	3,920	3,920
1020	99.6	90.00	63.00	193.16			2,560	2.7	9,112	9,112

NOTES: (1) See following weir flow computation sheet.

Ponding due to Roosevelt Irrigation Canal

Project Mamyvale
Project No. 132586
Sheet No. 1 of 2
Calculated by DWD Date 8/96

WEIR FLOW COMPUTATIONS

LOCATION/DESCRIPTION:

Flow Diversion D2921B

Flow West Over 107th Ave

CROSS SECTION PARAMETERS: FILENAME: D2921W.SEC

No. of Cross Section Points: 8 Bed Slope:0.00500 Max Elev.:1020.00
Bank Stations.....Left: 2250.0 Right....: 4000.0 Min Elev.:1018.00
Encroachment Stations..Left: 2250.0 Right....: 4000.0 Weir Coef: 2.700

CROSS SECTION POINTS - Elevations & Stations in feet:

No.	Elev.	Sta.	No.	Elev.	Sta.	No.	Elev.	Sta.
1)	1021.10	1000.00	2)	1020.20	1200.00	3)	1019.70	1800.00
4)	1019.30	2100.00	5)	1019.74	2250.00	6)	1018.00	2400.00
7)	1018.00	3100.00	8)	1020.00	4000.00			

COMPUTED PARAMETERS:

WSEL(ft)	Q(cfs)	H:max(ft)	H:ave(ft)	TW(ft)	A(sf)
1018.50	770.6	0.50	0.43	968.1	417.0
1019.30	3917.2	1.30	0.98	1397.1	1363.1
1020.00	8618.4	2.00	1.41	1750.0	2469.5
1021.00	18196.1	3.00	2.41	1750.0	4219.5

NOTES: Composite Rating Curve

Elev	West (cfs)	South (cfs)	Total (cfs)	Total Weir Length (ft)
1018	0	0	0	0
1018.5	771	0	771	968
1019.3	3920	0	3920	1397
1020	8618	494	9112	2560
1021	18196	4115	22,311	—

Project Marysvale ADMS
Project No. 132586
Sheet No. 2 of 2
Calculated by DWD Date

WEIR FLOW COMPUTATIONS

LOCATION/DESCRIPTION:

Flow Diversion D2921

Flow South Over RID

CROSS SECTION PARAMETERS: FILENAME: D2921S.SEC

No. of Cross Section Points: 8 Bed Slope:0.00500 Max Elev.:1021.10
Bank Stations.....Left: 1000.0 Right....: 2250.0 Min Elev.:1019.30
Encroachment Stations..Left: 1000.0 Right....: 2250.0 Weir Coef: 2.700

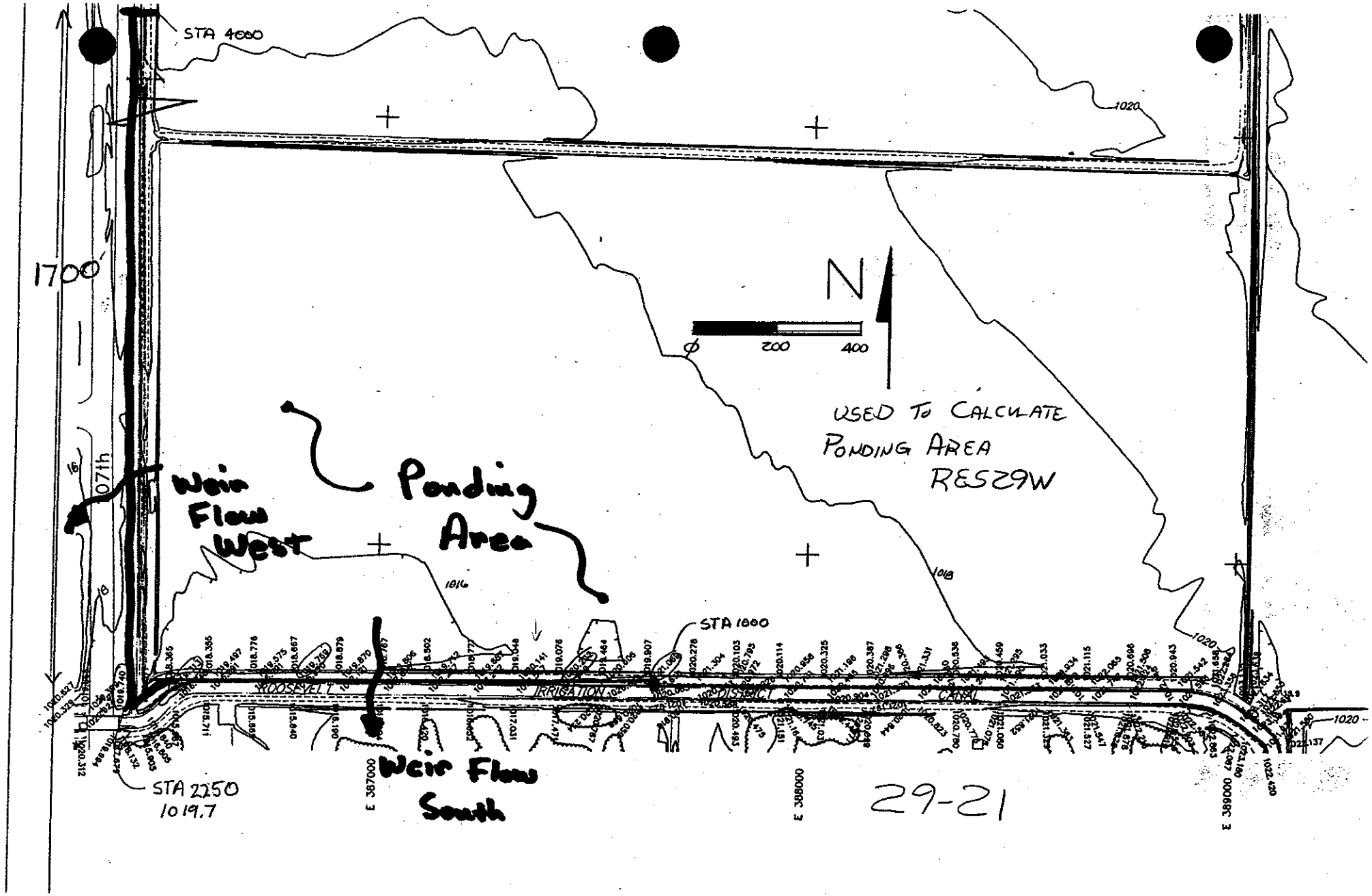
CROSS SECTION POINTS - Elevations & Stations in feet:

No.	Elev.	Sta.	No.	Elev.	Sta.	No.	Elev.	Sta.
1)	1021.10	1000.00	2)	1020.20	1200.00	3)	1019.70	1800.00
4)	1019.30	2100.00	5)	1019.74	2250.00	6)	1018.00	2400.00
7)	1018.00	3100.00	8)	1020.00	4000.00			

COMPUTED PARAMETERS:

WSEL(ft)	Q(cfs)	H:max(ft)	H:ave(ft)	TW(ft)	A(sf)
20.00	494.3	0.70	0.34	810.0	276.0
21.00	4115.3	1.70	1.12	1227.8	1373.1

NOTES:


STA 4000
1700'
07th
Weir Flow West
Ponding Area
1016
1018
1020
STA 1000
ROOSEVELT IRRIGATION DISTRICT CANAL
STA 2250
1019.7
E 387000
Weir Flow South
E 388000
E 389000
N
0 200 400
USED TO CALCULATE PONDING AREA
R6S29W
29-21

CH2M HILL

Subject: **Maryvale ADMS**
Composite Storage Volume Computations
Ponding Areas

By: **J. Geisbush**
Checked: **D. Dust**
Project No.: **132586**

Ponding Location **29-21N** *MAP SHT* 152 & 165 Weir Coeff = 2.7

Ponding/Reservior I.D. **RES29S** Min Weir Crest Elevation = 1021.4

Storage Data					Outflow Data					
Contour Elevation [ft] SE	Contour Area [ac]	Avg Area [ac]	Incremental Vol [acft]	Cumulative Vol [acft] SV	Surcharge Capacity of Canal [cfs]	XXTH Ave. Storm Drain Capacity [cfs]	Weir Length [ft]	Weir Coeff "C"	Weir Flow Rate(1) [cfs]	Total Outflow [cfs] SQ
1019	10.9	--	--	--			0	--	0	0
1020	21.9	16.40	16.40	16.40			0	--	0	0
1021	46.7	34.30	34.30	50.70			0	--	0	0
1021.4	56.6	51.65	20.66	71.36			700	2.7	0	0
1021.5	59.1	57.85	5.79	77.15			1,760	2.7	96	96
1022	71.4	65.25	32.63	109.77			2,350	2.7	1,160	1,160

NOTES: (1) See following weir flow computation sheet.

Ponding due to Roosevelt Irrigation Canal

Project Manyuole
Project No. 132586
Sheet No. 1 of 1
Calculated by DWD Date 8/96

WEIR FLOW COMPUTATIONS

LOCATION/DESCRIPTION:

RES29S

Weir Flow West

CROSS SECTION PARAMETERS: FILENAME: RES29S.SEC

No. of Cross Section Points: 8 Bed Slope:0.00500 Max Elev.:1022.10
Bank Stations.....Left: 2199.9 Right....: 4750.0 Min Elev.:1021.40
Encroachment Stations..Left: 2199.9 Right....: 4750.0 Weir Coef: 2.700

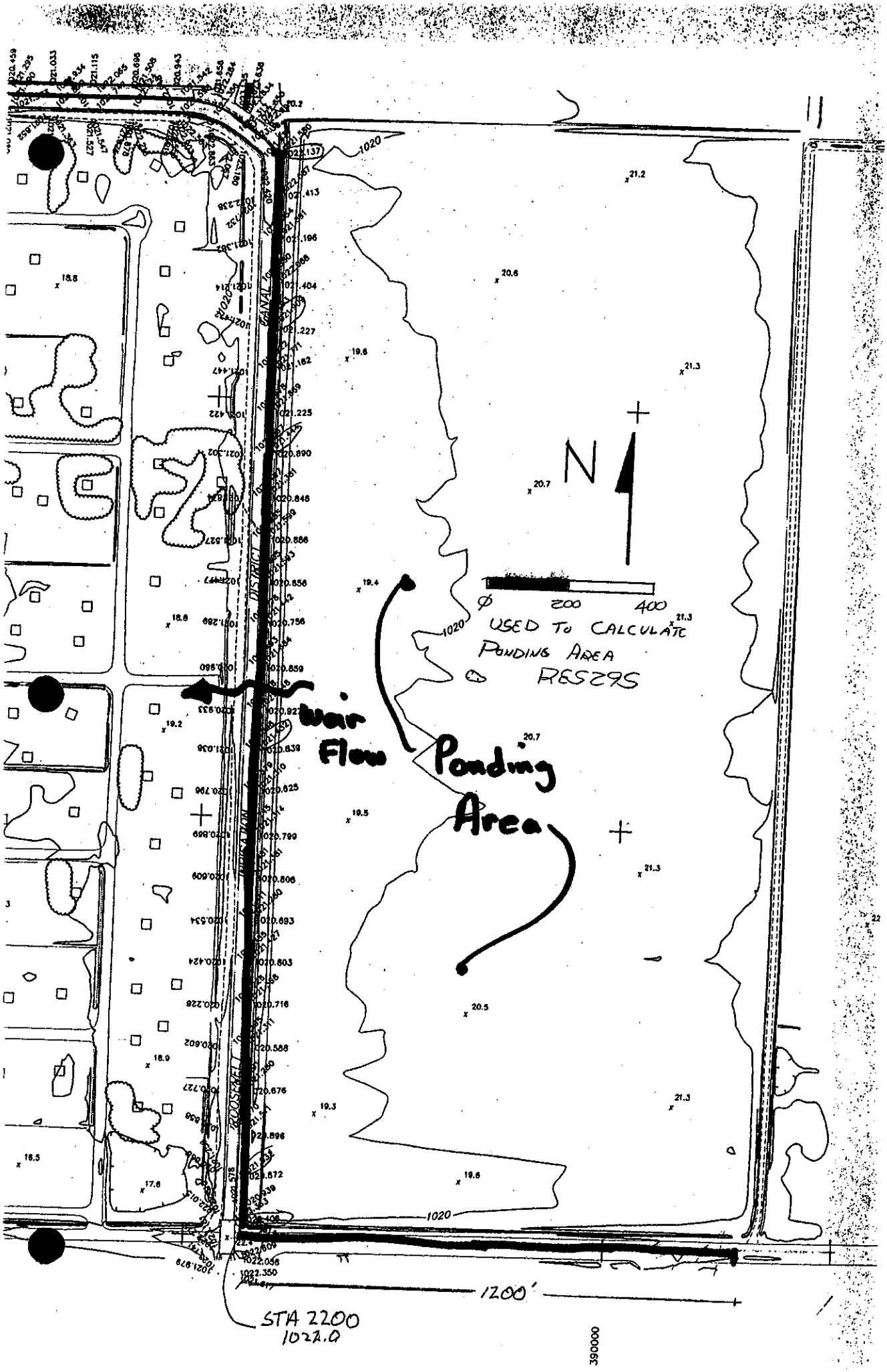
CROSS SECTION POINTS - Elevations & Stations in feet:

No.	Elev.	Sta.	No.	Elev.	Sta.	No.	Elev.	Sta.
1)	1022.00	1000.00	2)	1022.00	2199.90	3)	1021.50	2200.00
4)	1021.50	2350.00	5)	1021.40	3350.00	6)	1021.40	4050.00
7)	1021.90	4350.00	8)	1022.10	4750.00			

COMPUTED PARAMETERS:

WSEL(ft)	Q(cfs)	H:max(ft)	H:ave(ft)	TW(ft)	A(sf)
1021.50	95.9	0.10	0.07	1760.0	123.0
1022.00	2309.4	0.60	0.49	2350.1	1160.0

NOTES:


N
0 200 400
USED TO CALCULATE
PONDING AREA
RES295
Weir
Flow
Ponding
Area
1020
1200'
STA 2200
1022.0
390000

CH2M HILL

Subject: **Maryvale ADMS**
Composite Storage Volume Computations
Ponding Areas

By: **J. Geisbush**
Checked: **D. Dust** ✓
Project No.: **132586**

Ponding Location **32-21E** *MAP SHT* 178 & 191 Weir Coeff = 2.7

Ponding/Reservior I.D. **RES32E** Min Weir Crest Elevation = 1021

Storage Data					Outflow Data					
Contour Elevation [ft] SE	Contour Area [ac]	Avg Area [ac]	Incremental Vol [acft]	Cumulative Vol [acft] SV	Surcharge Capacity of Canal [cfs]	XXTH Ave. Storm Drain Capacity [cfs]	Weir Length [ft]	Weir Coeff "C"	Weir Flow Rate(1) [cfs]	Total Outflow [cfs] SQ
1020	13.8	--	--	--			0	--	0	0
1021	17.7	15.73	15.73	15.73			1,100	2.7	0	0
1021.5	19.7	18.69	9.34	25.07			1,150	2.7	1,069	1,069
1022	21.6	20.63	10.32	35.38			1,200	2.7	3,077	3,077
1023	78.8	50.20	50.20	85.58			3,300	2.7	11,170	11,170
1024	126.1	102.45	102.45	188.03			4,900	2.7	28,792	28,792

NOTES: (1) See following weir flow computation sheet.

Ponding due to Roosevelt Irrigation Canal

Project MARYVALE ADMS
Project No. 132586
Sheet No. 3 of
Calculated by JG Date 8/3

WEIR FLOW COMPUTATIONS

LOCATION/DESCRIPTION:

PONDING AREA 32-21E
RES 32E

CROSS SECTION PARAMETERS: FILENAME: res32e.SEC

No. of Cross Section Points: 10 Bed Slope:0.00500 Max Elev.:1024.00
Bank Stations.....Left: 0.0 Right....: 4900.0 Min Elev.:1021.00
Encroachment Stations..Left: Right....: Weir Coef: 2.700

CROSS SECTION POINTS - Elevations & Stations in feet:

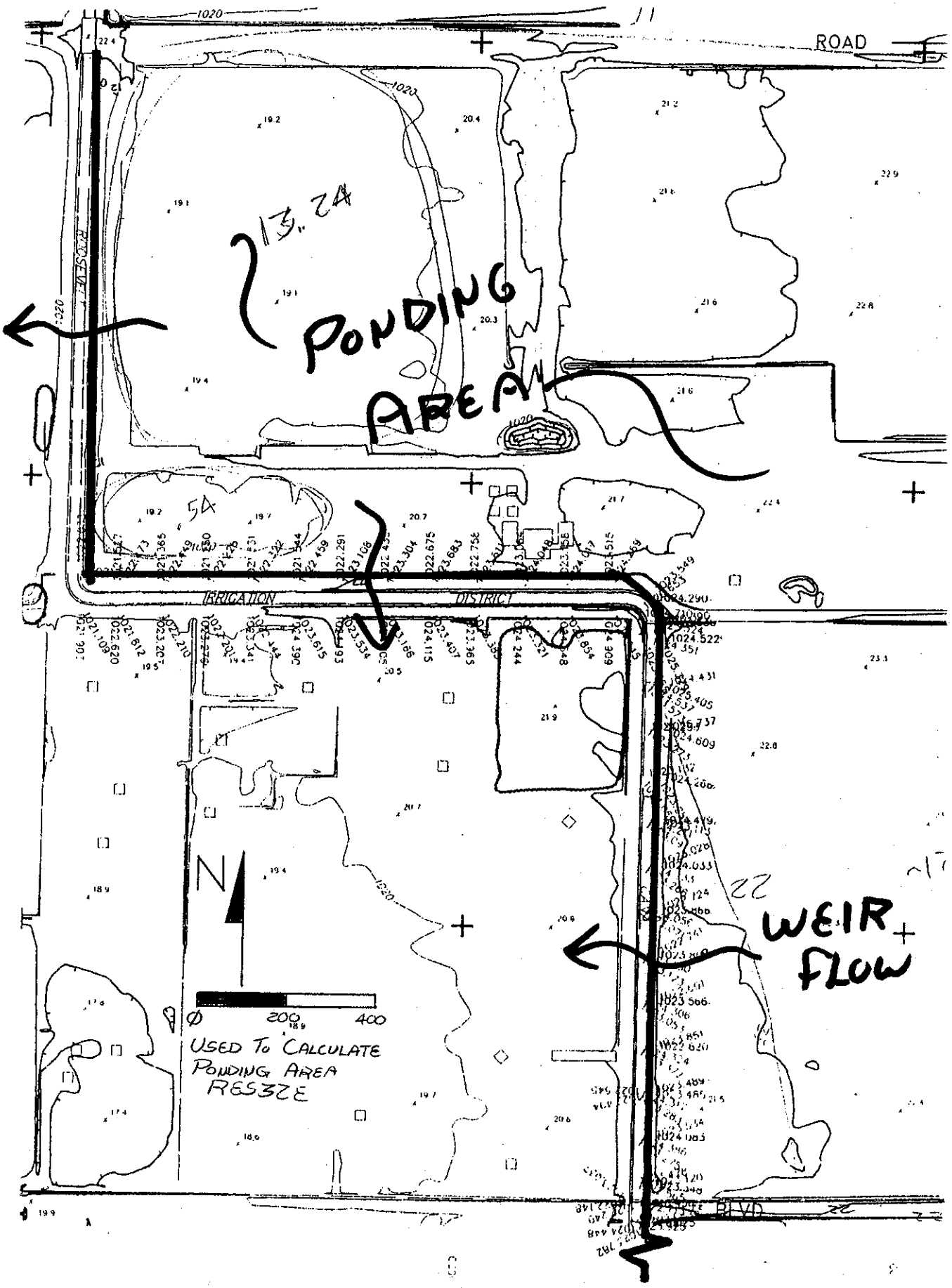
No.	Elev.	Sta.	No.	Elev.	Sta.	No.	Elev.	Sta.
1)	1024.00	0.00	2)	1023.00	0.10	3)	1022.00	0.20
4)	1021.50	0.25	5)	1021.00	0.30	6)	1021.00	1100.00
7)	1021.50	1150.00	8)	1022.00	1200.00	9)	1023.00	3300.00
10)	1024.00	4900.00						

COMPUTED PARAMETERS:

WSEL(ft)	Q(cfs)	H:max(ft)	H:ave(ft)	TW(ft)	A(sf)
1021.50	1068.9	0.50	0.49	1149.8	562.4
1022.00	3077.3	1.00	0.96	1199.8	1149.8
1023.00	11169.7	2.00	1.03	3299.9	3399.6
1024.00	28792.4	3.00	1.53	4900.0	7499.5

NOTES:

SECTION IS TAKEN LEFT TO RIGHT
LOOKING UPSTREAM


ROAD
IRRIGATION
DISTRICT
BLVD
PONDING AREA
WEIR FLOW
N
0 200 400
USED TO CALCULATE PONDING AREA RESIZE

CH2M HILL

Subject: **Maryvale ADMS**
Composite Storage Volume Computations
Ponding Areas

By: **J. Geisbush**
Checked: **D. Dust**
Project No.: **132586**

Ponding Location **33-21** *MAP SHT* 179 & 192 Weir Coeff = 2.7

Ponding/Reservior I.D. **RES33** Min Weir Crest Elevation = 1123

Storage Data					Outflow Data					
Contour Elevation [ft] SE	Contour Area [ac]	Avg Area [ac]	Incremental Vol [acft]	Cumulative Vol [acft] SV	Surcharge Capacity of Canal [cfs]	XXTH Ave. Storm Drain Capacity [cfs]	Weir Length [ft]	Weir Coeff "C"	Weir Flow Rate(1) [cfs]	Total Outflow [cfs] SQ
1122	46.5	--	--	--			0	--	0	0
1123	82.9	64.70	64.70	64.70			0	2.7	0	0
1124	143.1	112.98	112.98	177.68			600	2.7	1,355	1,355
1124.5	173.2	158.11	79.05	256.73			3,800	2.7	7,107	7,107
1125	203.3	188.21	94.11	350.83			6,200	2.7	31,884	31,884

NOTES: (1) See following weir flow computation sheet.

Ponding due to Roosevelt Irrigation Canal

Project MARYVALE ADMS
Project No. 132586
Sheet No. 4 of
Calculated by JG Date 8/3

WEIR FLOW COMPUTATIONS

LOCATION/DESCRIPTION:

PONDING AREA 33-21
RES33

CROSS SECTION PARAMETERS: FILENAME: res33.SEC

No. of Cross Section Points: 18 Bed Slope:0.00500 Max Elev.:1025.00
Bank Stations.....Left: 0.0 Right....: 6200.0 Min Elev.:1024.00
Encroachment Stations..Left: Right....: Weir Coef: 2.700

CROSS SECTION POINTS - Elevations & Stations in feet:

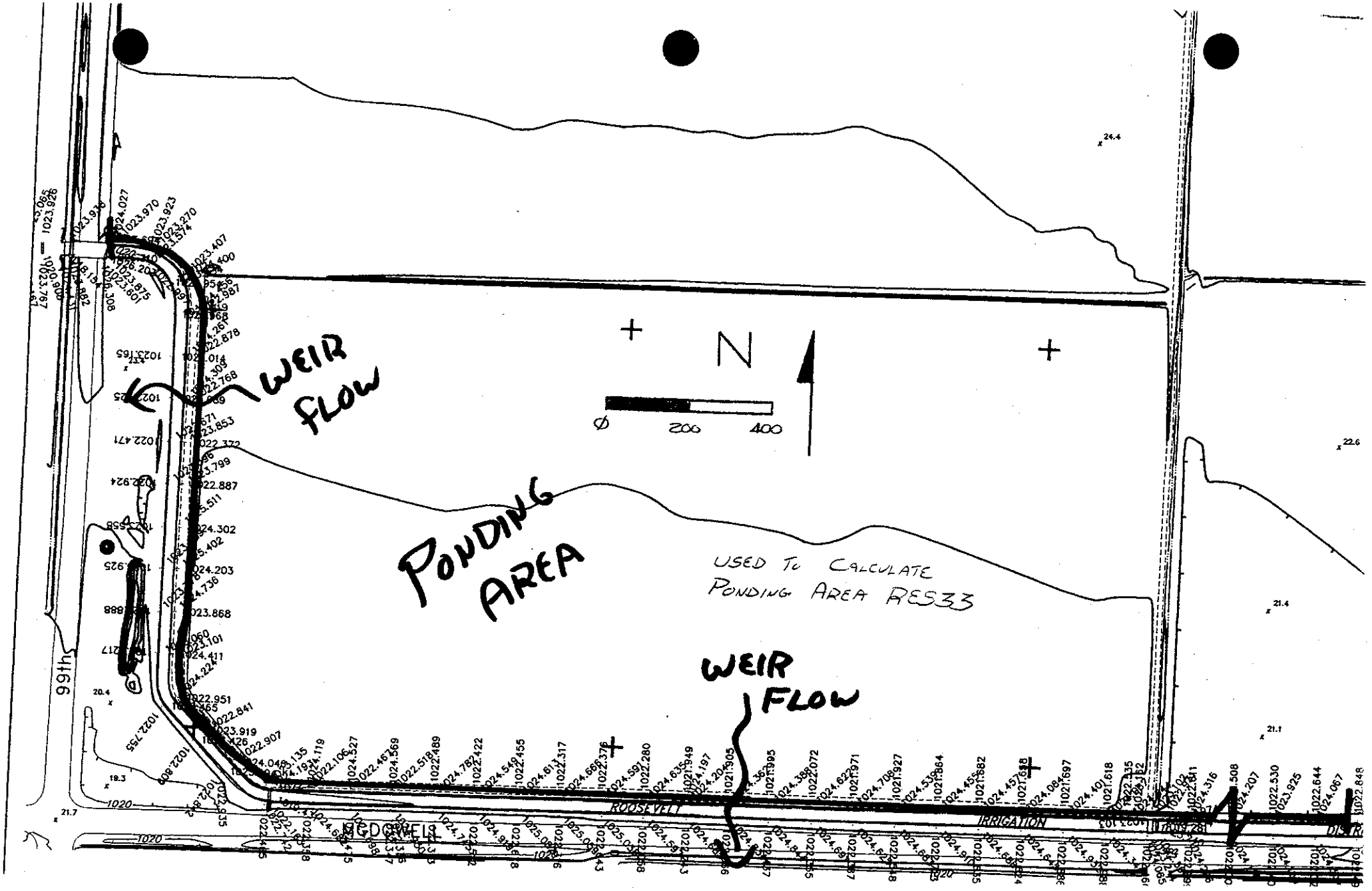
No.	Elev.	Sta.	No.	Elev.	Sta.	No.	Elev.	Sta.
1)	1025.00	0.00	2)	1024.50	1000.00	3)	1024.00	1500.00
4)	1024.00	1750.00	5)	1024.50	1800.00	6)	1024.00	2200.00
7)	1024.00	2400.00	8)	1024.50	2650.00	9)	1025.00	2700.00
10)	1024.50	3500.00	11)	1024.50	3750.00	12)	1025.00	3800.00
13)	1024.50	4000.00	14)	1024.00	4800.00	15)	1024.00	4950.00
16)	1024.50	5000.00	17)	1024.50	5600.00	18)	1025.00	6200.00

COMPUTED PARAMETERS:

EL(ft)	Q(cfs)	H:max(ft)	H:ave(ft)	TW(ft)	A(sf)
1024.50	1355.5	0.50	0.31	2650.0	812.5
1025.00	7107.6	1.00	0.52	6200.0	3237.5
1026.00	31883.8	2.00	1.52	6200.0	9437.5

NOTES:

SECTION IS TAKEN LEFT TO
RIGHT LOOKING UPSTREAM


WEIR FLOW
PONDING AREA
USED TO CALCULATE PONDING AREA RES33
WEIR FLOW
N
0 200 400
99th
ROOSEVELT
IRRIGATION
MCDOWELL

CH2M HILL

Subject: **Maryvale ADMS**
Composite Storage Volume Computations
Ponding Areas

By: **J. Geisbush**
Checked: **D. Dust**
Project No.: **132586**

Ponding Location **6-22E** *MAP SHT* 55 & 66 Weir Coeff = 2.8

Ponding/Reservior I.D. **RES6** Min Weir Crest Elevation = 1144

Storage Data					Outflow Data					
Contour Elevation [ft] SE	Contour Area [ac]	Avg Area [ac]	Incremental Vol [acft]	Cumulative Vol [acft] SV (2)	Surcharge Capacity of Canal [cfs]	Culvert/Storm Drain Capacity [cfs] (3)	Weir Length [ft]	Weir Coeff "C"	Weir Flow Rate(1) [cfs]	Total Outflow [cfs] SQ
1141	0.4	--	--	147.0		108	0	--	0	108
1142	6.1	3.25	3.25	150.3		108	0	--	0	108
1143	18.3	12.20	12.20	162.5		108	0	--	0	108
1144	37.6	27.95	27.95	190.4		108	0	2.8	0	108
1145	51.5	44.55	44.55	235.0		108	160	2.8	0	108
1146	65.3	58.40	58.40	293.4		108	1,460	2.8	2,190	2,298
1147	78.1	71.70	71.70	365.1		108	2110	2.8	9,030	9,138
1148	91.0	84.55	84.55	449.6		108	2110	2.8	20,390	20,498

NOTES: (1) See following weir flow computation sheet.
(2) Starting cumulative volume corresponds to the capacity of the "East Basin" of the Orangewood storm drain system (FCD 94-12) per the data given in Appendix H.
(3) The capacity of the storm drain corresponds to the capacity of the Orangewood storm drain system - Pipe # 10 (FCD 94-12) per the data given in Appendix H.
Ponding due to railroad embankment adjacent to Grand Avenue.

Project MARYVALE ADMS
Project No. 132546
Sheet No. 6 of
Calculated by JG Date 5/31

WEIR FLOW COMPUTATIONS

LOCATION/DESCRIPTION:

PONDING AREA 6-22E
(RES6)

CROSS SECTION PARAMETERS: FILENAME: RES6.SEC

No. of Cross Section Points: 12 Bed Slope:0.00500 Max Elev.:1148.00
Bank Stations.....Left: 0.0 Right....: 2110.1 Min Elev.:1145.00
Encroachment Stations..Left: Right....: Weir Coef: 2.800

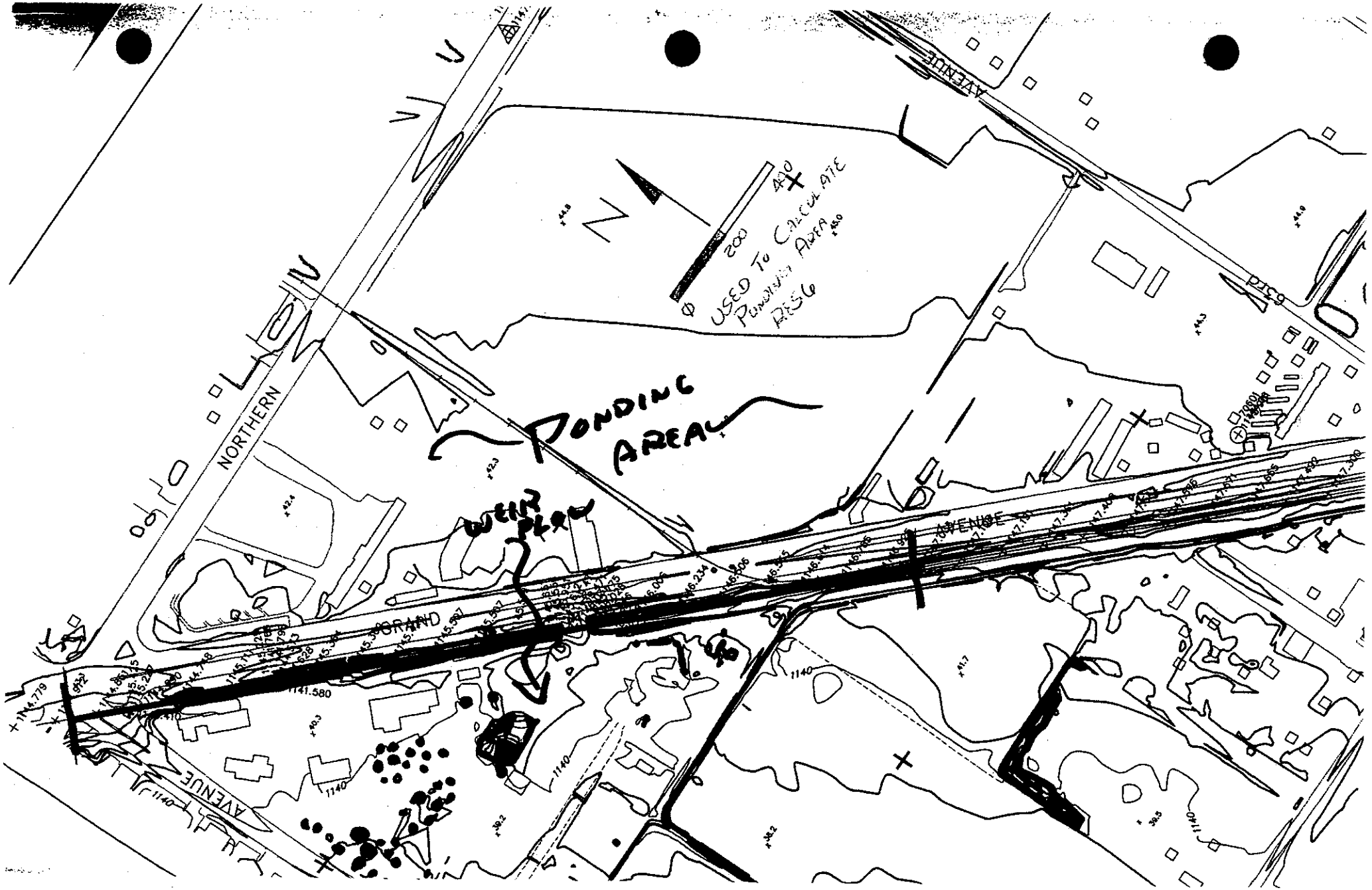
CROSS SECTION POINTS - Elevations & Stations in feet:

No.	Elev.	Sta.	No.	Elev.	Sta.	No.	Elev.	Sta.
1)	1148.00	0.00	2)	1147.00	0.10	3)	1146.50	0.20
4)	1146.00	0.30	5)	1145.50	0.35	6)	1145.00	0.40
7)	1145.00	160.00	8)	1145.50	1010.00	9)	1146.00	1460.00
10)	1146.50	1610.00	11)	1147.00	2110.00	12)	1148.00	2110.10

COMPUTED PARAMETERS:

WSEL(ft)	Q(cfs)	H:max(ft)	H:ave(ft)	TW(ft)	A(sf)
[illegible]6.00	2192.6	1.00	0.62	1459.7	909.7
1146.50	5053.3	1.50	1.04	1609.8	1677.0
1147.00	9032.9	2.00	1.24	2109.9	2606.9
1148.00	20389.5	3.00	2.24	2110.1	4717.0
1149.00	34910.4	4.00	3.24	2110.1	6827.0
1150.00	51956.8	5.00	4.24	2110.1	8937.2

NOTES:


NORTHERN
AVENUE
GRAND
AVENUE
AVENUE
PONDING AREA
WEIR PLAN
USED TO CALCULATE PONDING AREA
200
1141.580
1140

CH2M HILL

Subject: **Maryvale ADMS**
Composite Storage Volume Computations
Ponding Areas

By: **J. Geisbush**
Checked: **D. Dust**
Project No.: **132586**

Ponding Location **8-22** *MAP SHT* 80 & 93 Weir Coeff = 2.8

Ponding/Reservior I.D. **RES8** Min Weir Crest Elevation = 1150

Storage Data					Outflow Data					
Contour Elevation [ft] SE	Contour Area [ac]	Avg Area [ac]	Incremental Vol [acft]	Cumulative Vol [acft] SV	Surcharge Capacity of Canal [cfs]	Culvert/Storm Drain Capacity [cfs]	Weir Length [ft]	Weir Coeff "C"	Weir Flow Rate(1) [cfs]	Total Outflow [cfs] SQ
1148	3.0	--	--	--			0	--	0	0
1149	26.9	14.95	14.95	14.95			0	--	0	0
1150	44.5	35.70	35.70	50.65			250	2.8	0	0
1150.5	66.1	55.30	27.65	78.30			400	2.8	310	310
1151	87.8	76.95	38.48	116.78			670	2.8	1,070	1,070
1152	119.5	103.65	103.65	220.43			820	2.8	4,090	4,090

NOTES: Includes part of Section 9-22
(1) See attached weir flow computation sheets.

Ponding due to railroad embankment adjacent to Grand Avenue

Project MARYVALE ADMS
Project No. 132586
Sheet No. 7 of
Calculated by JG Date 6/3

WEIR FLOW COMPUTATIONS

LOCATION/DESCRIPTION:

PONDING AREA 8-22
(RES8)

CROSS SECTION PARAMETERS: FILENAME: RES8.SEC

No. of Cross Section Points: 8 Bed Slope:0.00500 Max Elev.:1152.00
Bank Stations.....Left: 0.0 Right....: 820.3 Min Elev.:1150.00
Encroachment Stations..Left: Right....: Weir Coef: 2.700

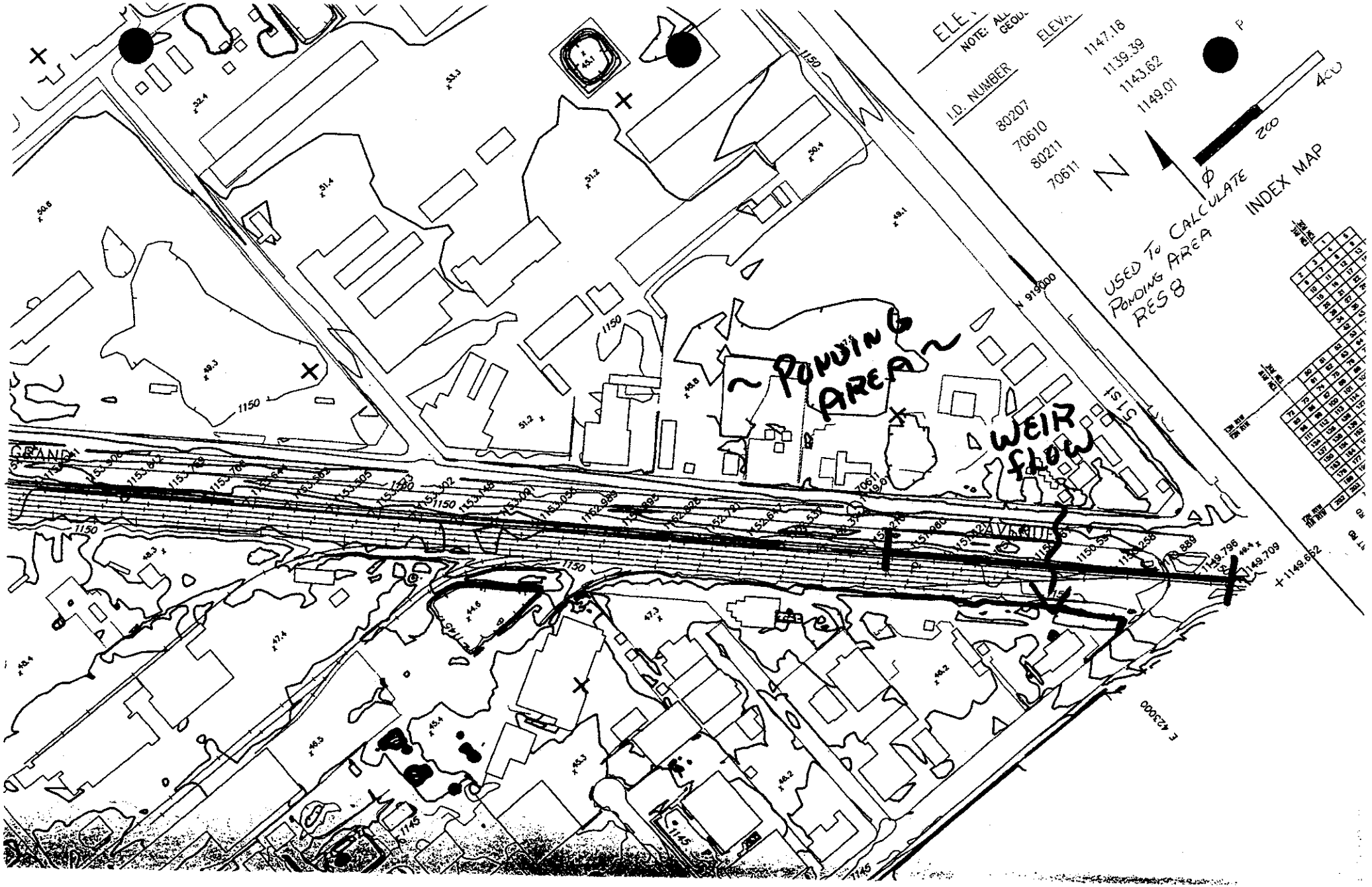
CROSS SECTION POINTS - Elevations & Stations in feet:

No.	Elev.	Sta.	No.	Elev.	Sta.	No.	Elev.	Sta.
1)	1152.00	0.00	2)	1151.00	140.00	3)	1150.50	420.00
4)	1150.00	550.00	5)	1150.00	820.00	6)	1150.50	820.10
7)	1151.00	820.20	8)	1152.00	820.30			

COMPUTED PARAMETERS:

WSEL(ft)	Q(cfs)	H:max(ft)	H:ave(ft)	TW(ft)	A(sf)
50.50	307.4	0.50	0.42	400.1	167.5
51.00	1067.3	1.00	0.64	680.2	437.6
1152.00	4090.7	2.00	1.45	820.3	1187.8
1153.00	8652.5	3.00	2.45	820.3	2008.1

NOTES:


ELE
NOTE: AL
GEOD
I.D. NUMBER
ELEVA
80207
70610
80211
70611
1147.18
1139.39
1143.62
1149.01
N
0
200
400
INDEX MAP
USED TO CALCULATE
PONDING AREA
RES 8
~ PONDING AREA ~
WEIR FLOW
51ST
GRAND
AVENUE
1150
1145
N 91000
E 42000
1149.796
1149.709
1149.652

CH2M HILL

Subject: **Maryvale ADMS**
Composite Storage Volume Computations
Ponding Areas

By: **J. Geisbush**
Checked: **D. Dust**
Project No.: **132586**

Ponding Location **26-22N** *MAP SHT* 161 Weir Coeff = 2.7

Ponding/Reservior I.D. **RES26T** Min Weir Crest Elevation = 1012

Storage Data					Outflow Data					
Contour Elevation [ft] SE	Contour Area [ac]	Avg Area [ac]	Incremental Vol [acft]	Cumulative Vol [acft] SV	Surcharge Capacity of Canal [cfs]	27TH Ave. Storm Drain Capacity [cfs]	Weir Length [ft]	Weir Coeff "C"	Weir Flow Rate(1) [cfs]	Total Outflow [cfs] SQ
1011	0.0	--	--	--		160	0	--	0	160
1012	0.0	0.00	0.00	0.00		160	400	2.7	0	160
1012.5	9.4	4.70	2.35	2.35		160	650	2.7	480	640
1013	18.7	14.05	7.03	9.38		160	900	2.7	1,620	1,780
1014	30.3	24.50	24.50	33.88		160	2,860	2.7	9,936	10,096
1015	42.6	36.45	36.45	70.33		160	3,130	2.7	24,740	24,900

NOTES: Includes part of Section 25-22
(1) See following weir flow computation sheet.

Ponding due to Grand Canal

Project MARYVALE ADMS
Project No. 132586
Sheet No. 8 of
Calculated by JAR Date 6/3

WEIR FLOW COMPUTATIONS

LOCATION/DESCRIPTION:

PONDING AREA 26-22N
(RES 26T)

CROSS SECTION PARAMETERS: FILENAME: RES26N.SEC

No. of Cross Section Points: 12 Bed Slope:0.00500 Max Elev.:1116.00
Bank Stations.....Left: 0.0 Right....: 3130.1 Min Elev.:1112.00
Encroachment Stations..Left: Right....: Weir Coef: 2.700

CROSS SECTION POINTS - Elevations & Stations in feet:

No.	Elev.	Sta.	No.	Elev.	Sta.	No.	Elev.	Sta.
1)	1116.00	0.00	2)	1115.00	0.10	3)	1114.00	0.20
4)	1113.00	0.30	5)	1112.00	0.40	6)	1112.00	400.00
7)	1113.00	900.00	8)	1113.00	1550.00	9)	1113.00	2290.00
10)	1114.00	2860.00	11)	1115.00	3130.00	12)	1116.00	3130.10

COMPUTED PARAMETERS:

WSEL(ft)	Q(cfs)	H:max(ft)	H:ave(ft)	TW(ft)	A(sf)
2.50	476.9	0.50	0.40	649.7	262.3
1113.00	1619.0	1.00	0.72	899.7	649.7
1114.00	9935.6	2.00	1.13	2859.8	3224.4
1115.00	24744.4	3.00	1.99	3129.9	6219.3
1116.00	44470.2	4.00	2.99	3130.1	9349.3
1117.00	67999.0	5.00	3.99	3130.1	12479.4

NOTES:

PONDING AREA
WEIR FLOW
USED TO CALCULATE PONDING AREA
200
400
N
RESEET
CANAL
OSBORN
70700
1115.74
80242
112.61
70702
1112.79

CH2M HILL

Subject: Maryvale ADMS
Composite Storage Volume Computations
Ponding Areas

By: J. Geisbush
Checked: D. Dust
Project No.: 132586

Ponding Location **26-22E** *MAP SHT* 174 & 175 Weir Coeff = 2.7

Ponding/Reservior I.D. **RES26E** Min Weir Crest Elevation = 1097

Storage Data					Outflow Data					
Contour Elevation [ft] SE	Contour Area [ac]	Avg Area [ac]	Incremental Vol [acft]	Cumulative Vol [acft] SV	Surcharge Capacity of Canal [cfs]	27TH Ave. Storm Drain Capacity [cfs]	Weir Length [ft]	Weir Coeff "C"	Weir Flow Rate(1) [cfs]	Total Outflow [cfs] SQ
1096	0.3	--	--	--		160	0	--	0	160
1097	26.2	13.23	13.23	13.23		160	0	2.7	0	160
1098	39.2	32.70	32.70	45.92		160	80	2.7	216	376
1099	51.1	45.17	45.17	91.09		160	710	2.7	896	1,056
1100	65.6	58.39	58.39	149.48		160	2,690	2.7	5,918	6,078

NOTES: (1) See following weir flow computation sheet.

Ponding due to railroad embankment adjacent to Grand Avenue

Project MARYVALE ADMS
Project No. 132586
Sheet No. 5 of
Calculated by JG Date 8/3

WEIR FLOW COMPUTATIONS

LOCATION/DESCRIPTION:

PONDING AREA 26-22E
RES 26E

CROSS SECTION PARAMETERS: FILENAME: RES26E.SEC

No. of Cross Section Points: 6 Bed Slope:0.00500 Max Elev.:1100.00
Bank Stations.....Left: 0.0 Right....: 2690.0 Min Elev.:1098.00
Encroachment Stations..Left: Right....: Weir Coef: 2.700

CROSS SECTION POINTS - Elevations & Stations in feet:

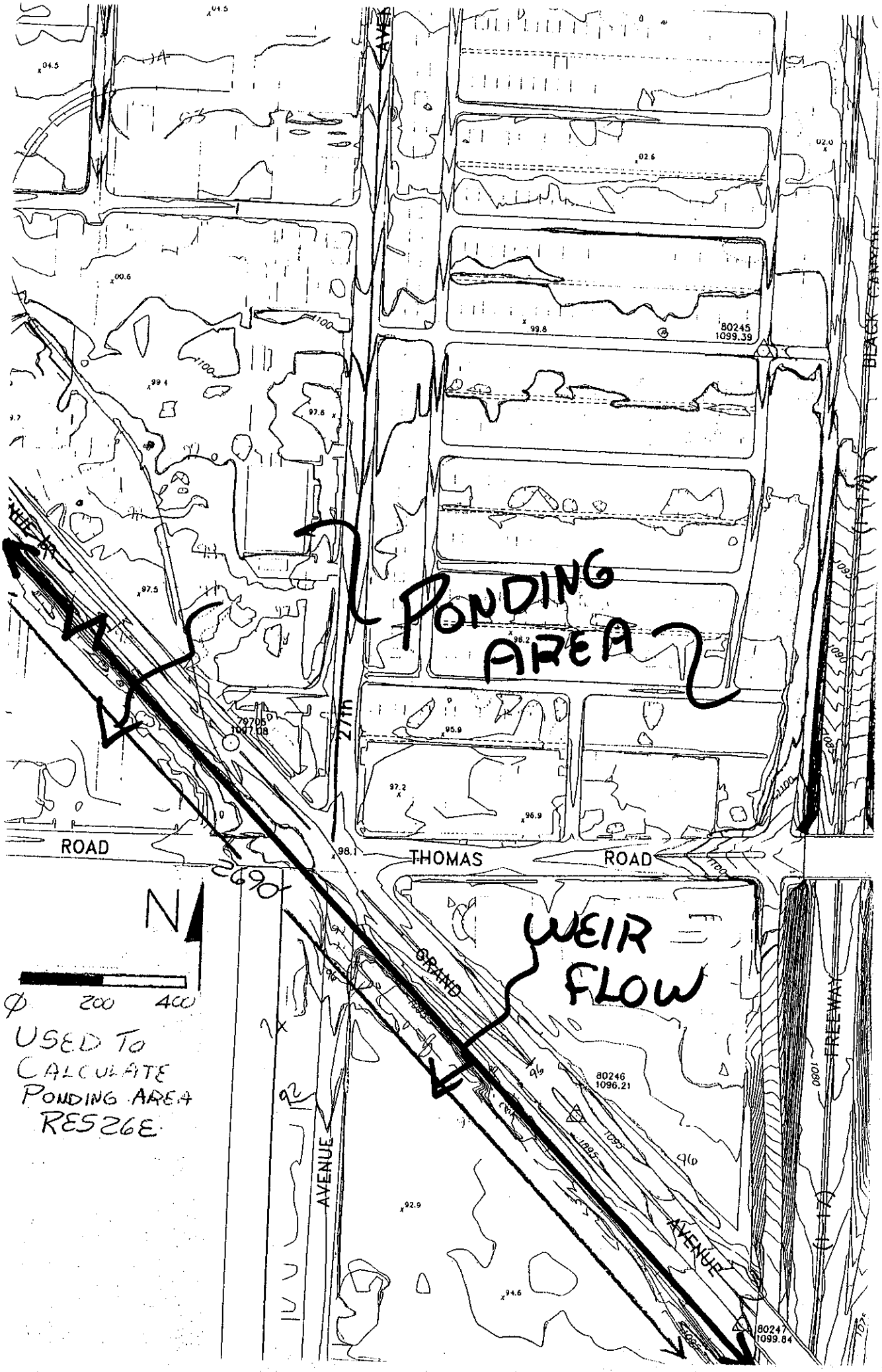
No.	Elev.	Sta.	No.	Elev.	Sta.	No.	Elev.	Sta.
1)	1100.00	0.00	2)	1099.00	1000.00	3)	1098.00	1500.00
4)	1098.00	1580.00	5)	1099.00	1710.00	6)	1100.00	2690.00

COMPUTED PARAMETERS:

WSEL(ft)	Q(cfs)	H:max(ft)	H:ave(ft)	TW(ft)	A(sf)
1099.00	896.4	1.00	0.56	710.0	395.0
1100.00	5917.9	2.00	0.78	2690.0	2095.0

NOTES:

SECTION IS TAKEN LEFT TO
RIGHT LOOKING UPSTREAM


PONDING AREA
WEIR FLOW
THOMAS ROAD
ROAD
GRAND
AVENUE
AVENUE
FREEWAY
BLACK CANYON
27th
2690'
N
0 200 400
USED TO CALCULATE PONDING AREA RES26E
80245 1099.39
79705 1097.08
80246 1096.21
80247 1099.84

CH2M HILL

Subject: **Maryvale ADMS**
Composite Storage Volume Computations
Ponding Areas

By: **J. Geisbush**
Checked: **D. Dust**
Project No.: **132586**

Ponding Location **22-31E** *MAP SHT* 11 Weir Coeff = 2.8

Ponding/Reservior I.D. **RES22** Min Weir Crest Elevation = 1136.5

Storage Data					Outflow Data					
Contour Elevation [ft] SE	Contour Area [ac]	Avg Area [ac]	Incremental Vol [acft]	Cumulative Vol [acft] SV	Surcharge Capacity of Canal [cfs]	Culvert/Storm Drain Capacity [cfs]	Weir Length [ft]	Weir Coeff "C"	Weir Flow Rate(1) [cfs]	Total Outflow [cfs] SQ
1134	0.1	--	--	--			0	--	--	0
1136	5.3	2.70	5.40	5.40			0	--	0	0
1136.5	11.5	8.40	4.20	9.60			1,183	2.8	970	970
1138	28.7	20.10	30.15	39.75			2,210	2.8	10,990	10,990
1140	64.5	46.60	93.20	132.95			2,230	2.8	39,090	39,090

NOTES: Structure 28+21/179.51: Assumed ineffective since it does not positively drain. Grand Avenue (Top of Curb, North) is 2.0 to 2.5 ft above the invert of the bridge opening.
(1) See attached weir flow computations

Ponding due to railroad embankment and Grand Avenue

Project MARYVALE ADMS
Project No. 132596
Sheet No. 1 of
Calculated by JG Date 5/31

WEIR FLOW COMPUTATIONS

LOCATION/DESCRIPTION:

PONDING AREA 22-31E (RES22)

CROSS SECTION PARAMETERS: FILENAME: RES22.SEC

No. of Cross Section Points: 6 Bed Slope:0.00500 Max Elev.:1140.00
Bank Stations.....Left: 0.0 Right....: 2230.1 Min Elev.:1136.00
Encroachment Stations..Left: Right....: Weir Coef: 2.800

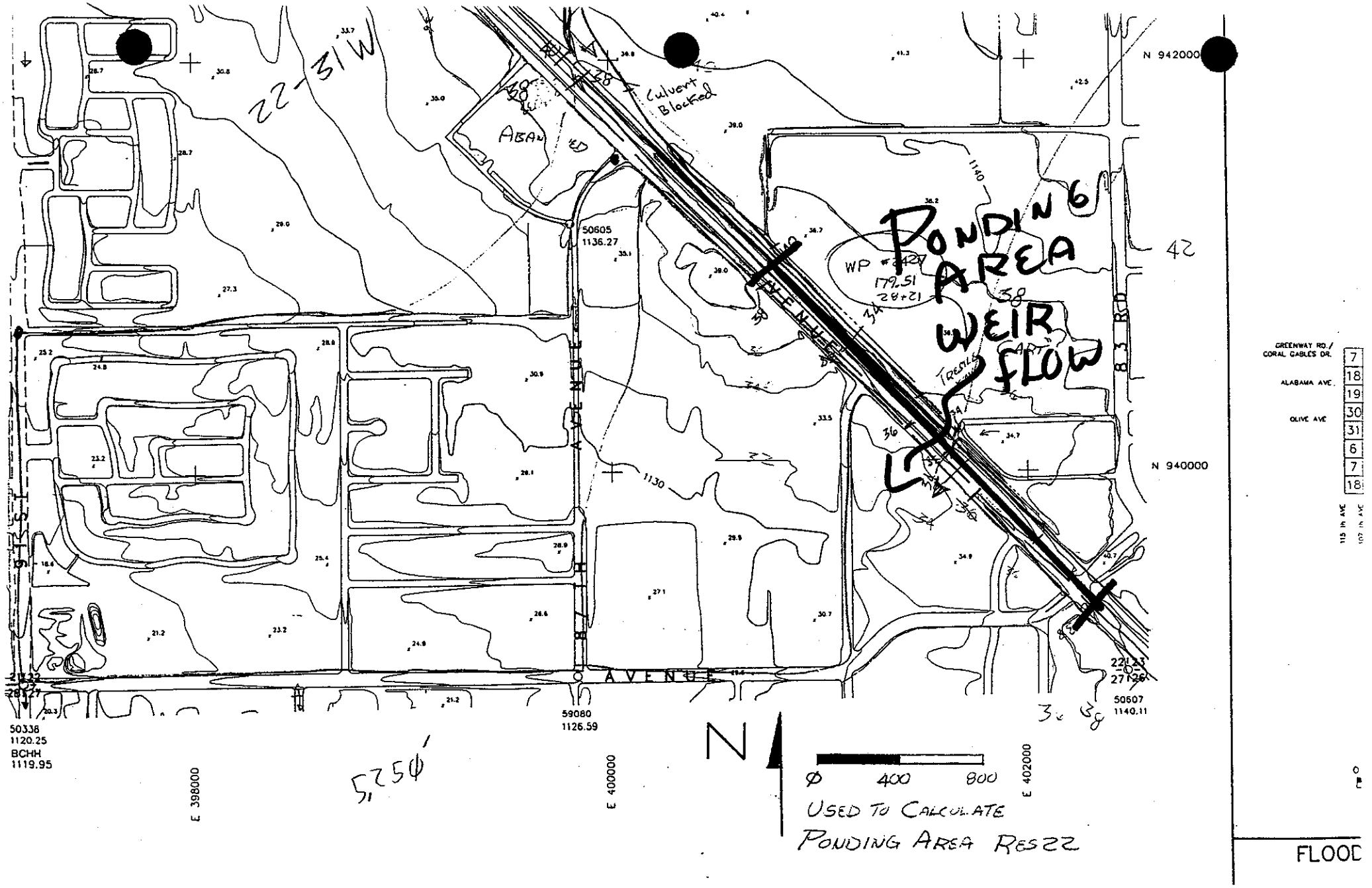
CROSS SECTION POINTS - Elevations & Stations in feet:

No.	Elev.	Sta.	No.	Elev.	Sta.	No.	Elev.	Sta.
1)	1140.00	0.00	2)	1138.00	20.00	3)	1136.00	980.00
4)	1136.00	1820.00	5)	1138.00	2230.00	6)	1140.00	2230.10

COMPUTED PARAMETERS:

WSEL(ft)	Q(cfs)	H:max(ft)	H:ave(ft)	TW(ft)	A(sf)
1136.50	967.2	0.50	0.43	1182.5	505.6
1137.00	3119.2	1.00	0.78	1525.0	1182.5
1138.00	10992.4	2.00	1.38	2210.0	3050.0
1139.00	23424.9	3.00	2.37	2220.1	5265.0
1140.00	39090.1	4.00	3.36	2230.1	7490.1
1141.00	57388.7	5.00	4.36	2230.1	9720.2

NOTES:


22-31W
ABAN ED
Culvert Blocked
PONDING AREA
WEIR FLOW
WP #3429
179.51
12+82
50605
1136.27
59080
1126.59
50338
1120.25
BCHH
1119.95
50607
1140.11
N 942000
N 940000
E 398000
E 400000
E 402000
5,250'
N
0 400 800
USED TO CALCULATE
PONDING AREA RES22
GREENWAY RD./
CORAL GABLES DR.
ALABAMA AVE.
OLIVE AVE
115 th AVE
FLOOD

CH2M HILL

Subject: **Maryvale ADMS**
Composite Storage Volume Computations
Ponding Areas

By: **J. Geisbush**
Checked: **D. Dust**
Project No.: **132586**

Ponding Location **26-31 (SE)** *MAP SHT* 26 Weir Coeff = 2.8

Ponding/Reservior I.D. **RES26S** Min Weir Crest Elevation = 1138

Storage Data					Outflow Data					
Contour Elevation [ft] SE	Contour Area [ac]	Avg Area [ac]	Incremental Vol [acft]	Cumulative Vol [acft] SV	Weir Flow South Over Olive Ave.(1) [cfs]	Culvert/Storm Drain Capacity [cfs]	Weir Length [ft]	Weir Coeff "C"	Weir Flow Rate Over RR (1) [cfs]	Total Outflow [cfs] SQ
1132	1.5	--	--	--			0	--	0	0
1134	1.9	1.70	3.40	3.40			0	--	0	0
1136	22.3	12.10	24.20	27.60			0	--	0	0
1137	36.1	29.20	29.20	56.80	0		0	--	0	0
1138	49.9	43.00	43.00	99.80	2170		100	2.8	0	2,170
1138.5	67.4	58.65	29.33	129.13	4160		1,500	2.8	650	4,810
1140	84.8	76.10	114.15	243.28	40250		1,950	2.8	10,820	51,070

NOTES: Includes part of Section 25-31
(1) See following weir flow computation sheets.

Ponding due to railroad embankment adjacent to Grand Avenue.

Project MARYVALE ADMS
Project No. 132586
Sheet No. 2 of
Calculated by JG Date 5/31

WEIR FLOW COMPUTATIONS

LOCATION/DESCRIPTION:

PONDING AREA 26-31 (SE)
(RES26S)

CROSS SECTION PARAMETERS: FILENAME: RES26SE.SEC

No. of Cross Section Points: 6 Bed Slope:0.00500 Max Elev.:1140.00
Bank Stations.....Left: 0.0 Right....: 1950.1 Min Elev.:1138.00
Encroachment Stations..Left: Right....: Weir Coef: 2.800

CROSS SECTION POINTS - Elevations & Stations in feet:

No.	Elev.	Sta.	No.	Elev.	Sta.	No.	Elev.	Sta.
1)	1140.00	0.00	2)	1138.50	450.00	3)	1138.00	750.00
4)	1138.00	850.00	5)	1138.50	1950.00	6)	1140.00	1950.10

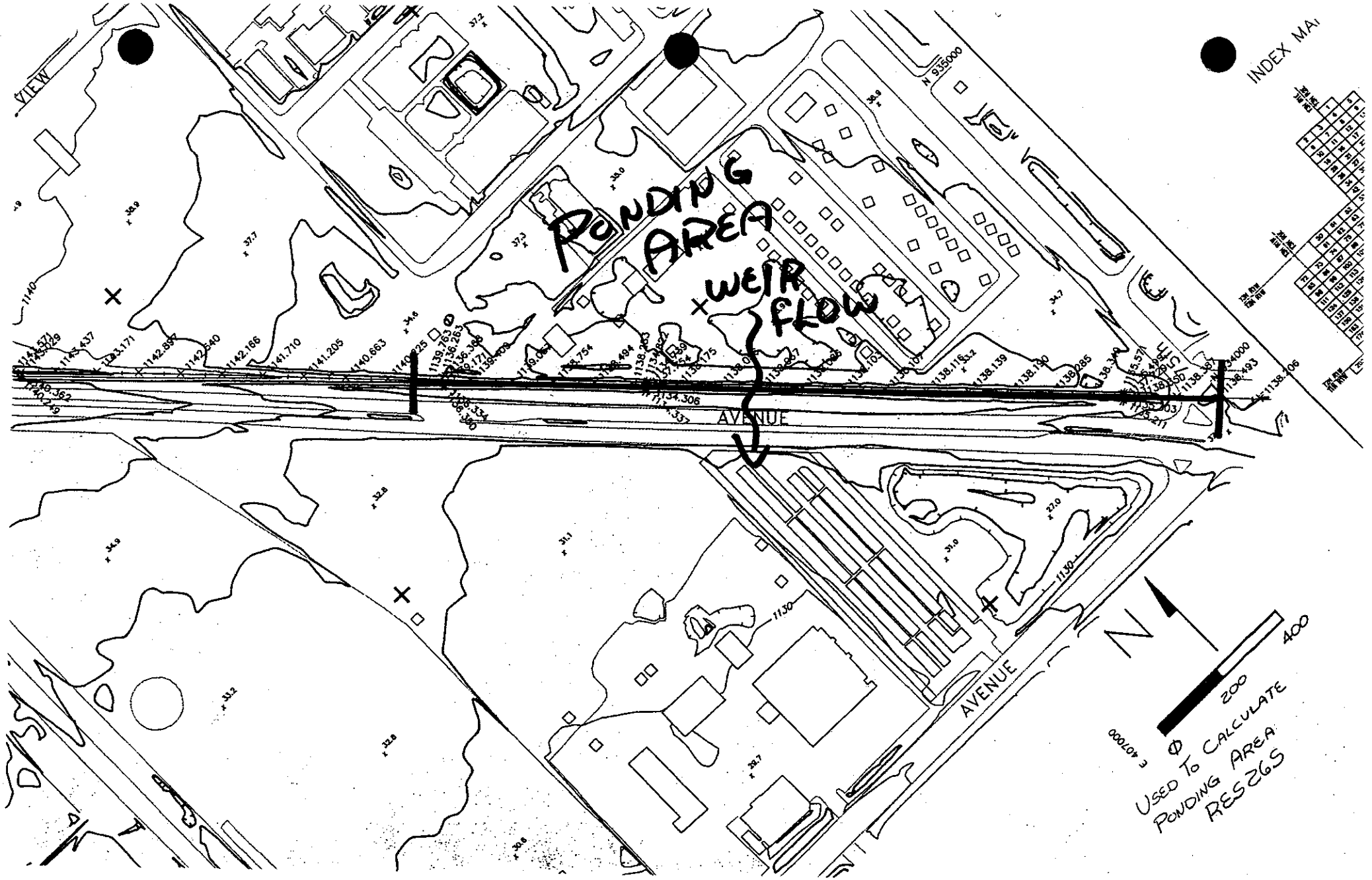
COMPUTED PARAMETERS:

WSEL(ft)	Q(cfs)	H:max(ft)	H:ave(ft)	TW(ft)	A(sf)
1138.50	653.4	0.50	0.27	1500.0	400.0
[illegible]9.00	2921.0	1.00	0.72	1650.0	1187.5
[illegible]0.00	10816.2	2.00	1.53	1950.1	2987.6
1141.00	22335.1	3.00	2.53	1950.1	4937.7
1142.00	36523.2	4.00	3.53	1950.1	6887.8

NOTES:

Rating Data for
D26AW

West	0	0	650
south	0	2170	4160
Total	0	2170	4810


PONDING AREA
WEIR FLOW
AVENUE
AVENUE
N 935000
E 407000
INDEX MA
VIEW
200
400
USED TO CALCULATE PONDING AREA RES26S

CH2M HILL

Subject: Maryvale ADMS
Composite Storage Volume Computations
Ponding Areas

By: J. Geisbush
Checked: D. Dust
Project No.: 132586

Ponding Location **26-31 (NW)** *MAP SHT* 20 & 26 Weir Coeff = 2.8

Ponding/Reservior I.D. **RES26N** Min Weir Crest Elevation = 1141.3

Storage Data					Outflow Data					
Contour Elevation [ft] SE	Contour Area [ac]	Avg Area [ac]	Incremental Vol [acft]	Cumulative Vol [acft] SV	Surcharge Capacity of Canal [cfs]	Culvert/Storm Drain Capacity [cfs]	Weir Length [ft]	Weir Coeff "C"	Weir Flow Rate [cfs]	Total Outflow [cfs] SQ
1136	0.0	--	--	--			0	--	--	0
1138	2.8	1.41	2.81	2.81			0	--	0	0
1140	29.5	16.15	32.30	35.11			0	--	0	0
1141	44.5	37.00	37.00	72.11			0	--	0	0
1141.3	49.0	46.75	14.02	86.13			0	2.8	0	0
1141.5	52.0	50.50	10.10	96.24			400	2.8	100	100
1141.7	55.0	53.50	10.70	106.94			980	2.8	160	160
1142	59.6	57.30	17.19	124.13			1,850	2.8	970	970

NOTES: (1) See following weir flow computation sheets

Ponding due to railroad embankment adjacent to Grand Avenue.

Project MARYVALE ADMS
Project No. 132596
Sheet No. 4 of
Calculated by JG Date 5/31

WEIR FLOW COMPUTATIONS

LOCATION/DESCRIPTION:

PONDING AREA 26-31 NW
(RES 26 N.)

CROSS SECTION PARAMETERS: FILENAME: RES26NW.SEC

No. of Cross Section Points: 4 Bed Slope:0.00500 Max Elev.:1142.00
Bank Stations.....Left: 0.0 Right....: 1850.0 Min Elev.:1141.50
Encroachment Stations..Left: Right....: Weir Coef: 2.800

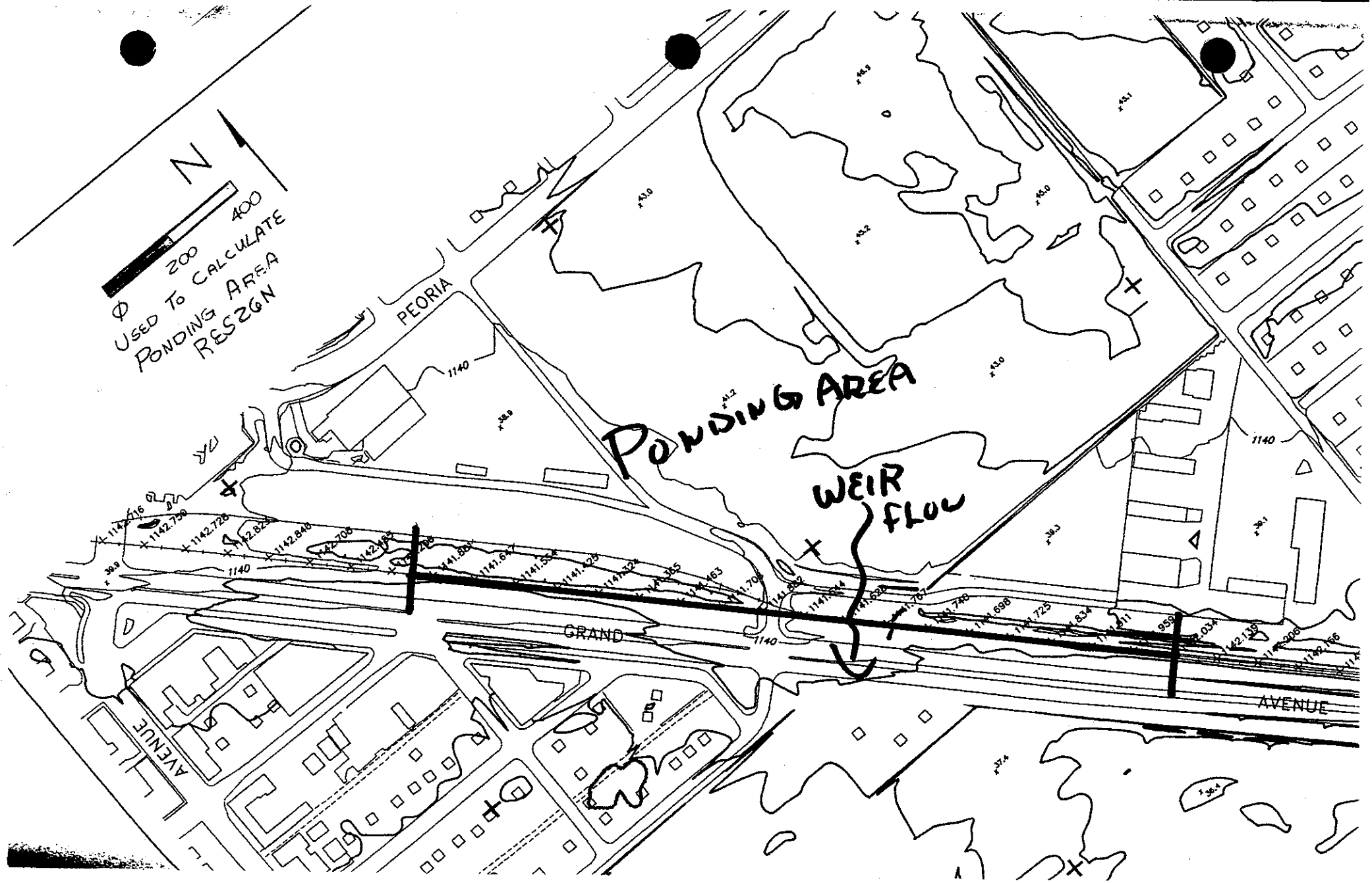
CROSS SECTION POINTS - Elevations & Stations in feet:

No.	Elev.	Sta.	No.	Elev.	Sta.	No.	Elev.	Sta.
1)	1142.00	0.00	2)	1141.50	250.00	3)	1141.50	650.00
4)	1142.00	1850.00						

COMPUTED PARAMETERS:

WSEL(ft)	Q(cfs)	H:max(ft)	H:ave(ft)	TW(ft)	A(sf)
1141.70	158.2	0.20	0.14	979.9	138.0
[illegible]2.00	970.2	0.50	0.30	1850.0	562.5
[illegible].00	7760.0	1.50	1.30	1850.0	2412.5

NOTES:


N
0 200 400
USED TO CALCULATE
PONDING AREA
RESIGN
PEORIA
PONDING AREA
WEIR
FLOW
GRAND
AVENUE
AVENUE
1140
1140
1140
1140

CH2M HILL

Subject: **Maryvale ADMS**
Composite Storage Volume Computations
Ponding Areas

By: **J. Geisbush**
Checked: **D. Dust**
Project No.: **132586**

Ponding Location **36-31E** *MAP SHT* 35 Weir Coeff = 2.8

Ponding/Reservior I.D. **RES36** Min Weir Crest Elevation = 1137

Storage Data					Outflow Data					
Contour Elevation [ft] SE	Contour Area [ac]	Avg Area [ac]	Incremental Vol [acft]	Cumulative Vol [acft] SV	Surcharge Capacity of Canal [cfs]	Culvert/Storm Drain Capacity [cfs]	Weir Length [ft]	Weir Coeff "C"	Weir Flow Rate(1) [cfs]	Total Outflow [cfs] SQ
1132	0	--	--	--			0	--	0	0
1134	3	1.55	3.10	3.10			0	--	0	0
1136	13.1	8.05	16.10	19.20			0	--	0	0
1137	19.0	16.05	16.05	35.25			440	2.8	0	0
1138	24.9	21.95	21.95	57.20			650	2.8	1,470	1,470
1140	47.9	36.40	72.80	130.00			750	2.8	9,050	9,050
1141	74.7	61.30	61.30	191.30			2,550	2.8	16,540	16,540

NOTES: (1) See following weir flow computation sheet.

Ponding due to railroad embankment and Grand Avenue.

Project MARYVALE ADMS
Project No. 132586
Sheet No. 5 of
Calculated by JG Date 5/31

WEIR FLOW COMPUTATIONS

LOCATION/DESCRIPTION:

PONDING AREA 36-31E
(RES 36)

CROSS SECTION PARAMETERS: FILENAME: RES36.SEC

No. of Cross Section Points: 10 Bed Slope:0.00500 Max Elev.:1142.00
Bank Stations.....Left: 0.0 Right....: 3250.0 Min Elev.:1137.00
Encroachment Stations..Left: Right....: Weir Coef: 2.800

CROSS SECTION POINTS - Elevations & Stations in feet:

No.	Elev.	Sta.	No.	Elev.	Sta.	No.	Elev.	Sta.
1)	1142.00	0.00	2)	1140.00	0.10	3)	1140.00	0.20
4)	1138.00	0.30	5)	1137.00	130.00	6)	1137.00	570.00
7)	1138.00	650.00	8)	1140.00	750.00	9)	1141.00	2550.00
10)	1142.00	3250.00						

COMPUTED PARAMETERS:

WSEL(ft)	Q(cfs)	H:max(ft)	H:ave(ft)	TW(ft)	A(sf)
38.00	1466.9	1.00	0.84	649.7	544.8
1139.00	4634.4	2.00	1.74	699.8	1219.6
1140.00	9051.3	3.00	2.59	749.8	1944.3
1141.00	16544.6	4.00	1.41	2549.9	3594.3
1142.00	31037.8	5.00	2.00	3250.0	6494.3
1143.00	51623.2	6.00	3.00	3250.0	9744.3

NOTES:

Project MARYVALE ADMS
Project No. 132586
Sheet No. 3 of
Calculated by JG Date 5/31

WEIR FLOW COMPUTATIONS

LOCATION/DESCRIPTION:

PONDING AREAS 26-31(SE) & 36-31 E ALONG OLIVE AVE

CROSS SECTION PARAMETERS: FILENAME: OLIVE.SEC

No. of Cross Section Points: 8 Bed Slope:0.00500 Max Elev.:1142.00
Bank Stations.....Left: 0.0 Right....: 2220.0 Min Elev.:1137.00
Encroachment Stations..Left: Right....: Weir Coef: 2.800

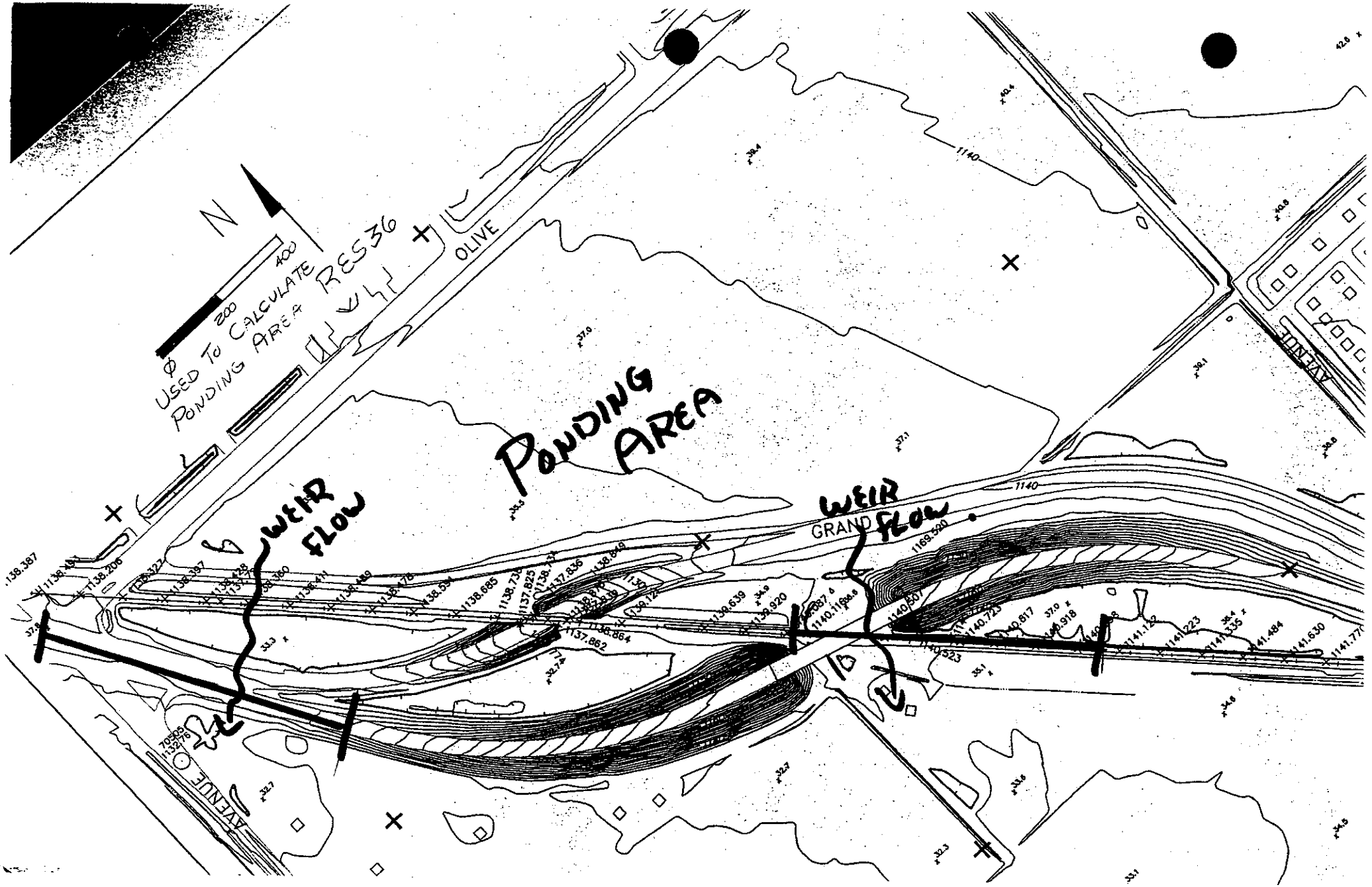
CROSS SECTION POINTS - Elevations & Stations in feet:

No.	Elev.	Sta.	No.	Elev.	Sta.	No.	Elev.	Sta.
1)	1142.00	0.00	2)	1140.00	0.10	3)	1138.00	180.00
4)	1137.00	220.00	5)	1137.00	950.00	6)	1138.00	1020.00
7)	1140.00	1710.00	8)	1142.00	2220.00			

COMPUTED PARAMETERS:

WSEL(ft)	Q(cfs)	H:max(ft)	H:ave(ft)	TW(ft)	A(sf)
138.00	2167.2	1.00	0.93	840.0	785.0
138.50	4158.9	1.50	1.19	1057.5	1259.4
1139.00	6842.2	2.00	1.45	1274.9	1842.5
1140.00	14600.2	3.00	1.95	1709.9	3334.9
1141.00	25766.2	4.00	2.63	1964.9	5172.3
1142.00	40246.1	5.00	3.27	2220.0	7264.8

NOTES:


N
0
200
400
USED TO CALCULATE
PONDING AREA
RES36
OLIVE
PONDING
AREA
WEIR
FLOW
WEIR
FLOW
GRAND
AVENUE
AVENUE
1140
1138.387
1138.206
1138.322
1138.397
1138.685
1138.825
1137.836
1137.862
1138.864
1139.920
1140.523
1140.723
1140.817
1141.223
1141.335
1141.484
1141.630
1141.770
1169.500

Maryvale Mitigation Area

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SUBJECT Maryvale Mitigation Area

BY D. Dust DATE 6/96

SHEET NO. ___ OF ___

PROJECT NO. ___

Canal Capacity & Storm Drain Data
Per WPA's Prelim. Analyses

ID "D39"
Canal Capacity = 600 cfs
Storm Drain Capacity = 286 cfs (39th Avenue)

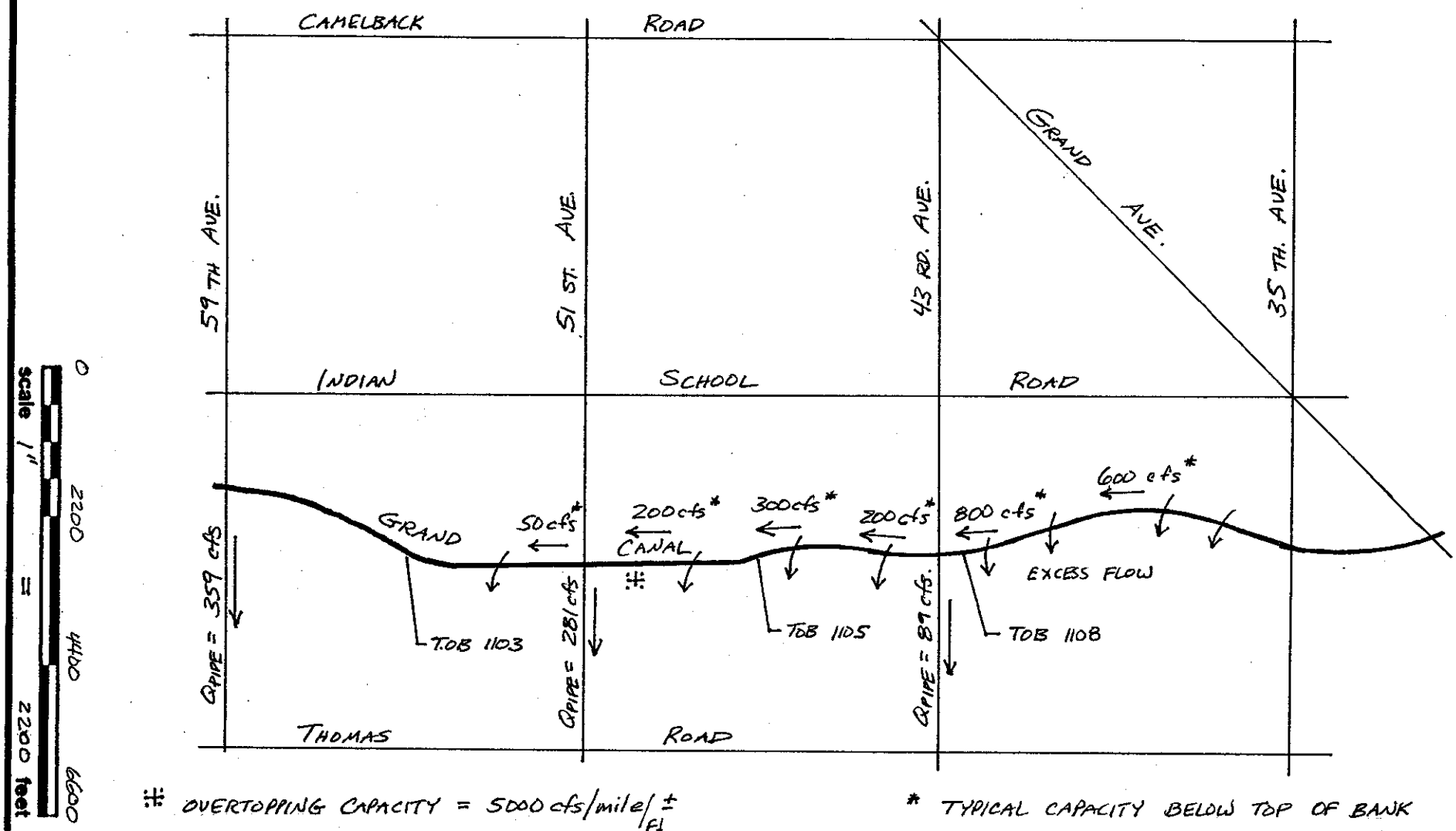
ID PA 43/D43
D/S Canal Capacity = 200 cfs
Storm Drain Capacity @ 43RD Ave = 89 cfs
Top of Canal Bank Elev = 1108

ID PA47/D47
D/S Canal Capacity = 300 cfs
Storm Drain Cap. (South) = 0
Storm Drain Cap. (west) = 105 cfs per CVL
Top of Canal Bank Elev. = 1105

ID PA51/D51
D/S Canal Capacity = 50 cfs
Storm Drain Cap. (South) = 281 cfs
Top of Canal Bank Elev. = 1105.5

ID PA55/D55
D/S Canal Capacity = 50 cfs +/-
Storm Drain Capacity = 220 cfs (west)
Top of Canal Bank Elev 1103

FORM 38



‡ OVERTOPPING CAPACITY = 5000 cfs/mile/ft ±

* TYPICAL CAPACITY BELOW TOP OF BANK

WOOD/PATEL ASSOCIATES Civil Engineers Hydrologists Land Surveyors (602) 234-1344	Scale	Design ACP	MARYVALE ADMS PRELIMINARY HEC-2 RESULTS
	Date 8/27/96	Drawn AJR	
	Job # 94154	Chk.	

MARYVALE FLOODING MITIGATION PROJECT
STORAGE VOLUME COMPUTATION

FCD 93-34
Location: 39th Ave

Prepared by: PH
Date: 6/19/95

Contour Elev. (ft) SE	Contour Area (Ac)	Average Area (Ac)	Inc. Vol (Acre-ft)	Cum Vol (Acre-ft) SV	Storm Drain			Road Weir	Canal Weir	Total	Diversion South
					Size (")	Storm Slope	Outflow (cfs)	Outflow (cfs)	Outflow (cfs)	Outflow (cfs) SQ, DI	Outflow (cfs) DQ
110'	.23				78	0.005%	84				84
1109	14.75										84

Remarks:

72" crosses Grand Ave. - Slope = 0.005 FT/FT, Q = 348 cfs
78" capacity = 432 cfs Excess capacity = 84 cfs

MARYVALE FLOODING MITIGATION PROJECT
STORAGE VOLUME COMPUTATION

FCD 93-34
Location: 43rd Ave

Prepared by: PH
Date: 6/16/95

Contour Elev. (ft) SE	Contour Area (Ac)	Average Area (Ac)	Inc. Vol (Acre-ft)	Cum Vol (Acre-ft) SV	Storm Drain			Road Weir	Canal Weir	Total	Diversion South
					Size (")	Storm Slope	Outflow (cfs)	Outflow (cfs)	Outflow (cfs)	Outflow (cfs) SQ, DI	Outflow (cfs) DQ
1104	0				63	.004%	27.89	0	0	27	27
1105	.05	.025	.025	0				0	0	27	27
1106	1.19	.62	.62	.645				0	0	27	27
1106.8	9.11*	5.15	4.12	4.77				0	0	27	27
1107	11.09	10.10	2.02	6.79				27	0	54	27
1107.2								149	0	176	27
1107.4								394	0	421	27
1108	34.84	22.97	22.97	29.76				1788	0	1815	27

Remarks:

* By linear interpolation.
60" crosses Grand Ave. - Slope = 0.004 FT/FT , Q = 191 cfs
63" capacity = 218 cfs Excess capacity = 27 cfs

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Coe & Van Loo Consultants, Inc.

MARYVALE FLOODING MITIGATION PROJECT
STORAGE VOLUME COMPUTATION

FCD 93-34
Location: 47TH Ave.

Prepared by: PH
Date: 6/19/95

Contour Elev. (ft) SE	Contour Area (Ac)	Average Area (Ac)	Inc. Vol (Acre-ft)	Cum Vol (Acre-ft) SV	Storm Drain			Road Weir	Canal Weir	Total	Diversion South
					Size (")	Storm Slope	Outflow (cfs)	Outflow (cfs)	Outflow (cfs)	Outflow (cfs) SQ, DI	Outflow (cfs) DQ
1104	0	0	0	0	48	0.004%	105	0	0	105	0
1104.8	10.10*	5.05	4.04	4.04	48	0.004%	105	10	0	115	0
1105	12.62	11.36	2.27	6.31	48	0.004%	105	55	22	182	22
1106	32.24	22.43	22.43	28.74	48	0.004%	105	1058	825	1988	825

Remarks:

* Linear interpolation

MARYVALE FLOODING MITIGATION PROJECT
STORAGE VOLUME COMPUTATION

FCD 93-34
Location: 51ST Ave.

Prepared by: PH
Date: 6/19/95

Contour Elev. (ft) SE	Contour Area (Ac)	Average Area (Ac)	Inc. Vol (Acre-ft)	Cum Vol (Acre-ft) SV	Storm Drain			Road Weir	Canal Weir	Total	Diversion South
					Size (")	Storm Slope	Outflow (cfs)	Outflow (cfs)	Outflow (cfs)	Outflow (cfs) SQ, DI	Outflow (cfs) DQ
1103	0.18				72	0.004%	312	0	0	312	312
1104	9.44	4.81	4.81	4.81	72	0.004%	312	4	0	316	316
1105	27.54	18.49	18.49	23.30	72	0.004%	312	337	567	1216	879
1106	41.31	34.43	34.43	57.73	72	0.004%	312	1870	1900	4082	2212

Remarks:

Q:\950024\ADMIN\24-013TB.WP5

Coe & Van Loo Consultants, Inc.

MARYVALE FLOODING MITIGATION PROJECT
STORAGE VOLUME COMPUTATION

FCD 93-34
Location: 55TH Ave.

Prepared by: PH
Date: 6/19/95

Contour Elev. (ft) SE	Contour Area (Ac)	Average Area (Ac)	Inc. Vol (Acre-ft)	Cum Vol (Acre-ft) SV	Storm Drain			Road Weir	Canal Weir	Total	Diversion South
					Size (")	Storm Slope	Outflow (cfs)	Outflow (cfs)	Outflow (cfs)	Outflow (cfs) SQ, DI	Outflow (cfs) DQ
1100	0				42	0.004%	74	0	0	74	0
1100.7	0.10 *	0.05	0.04	0.04	42	0.004%	74	3	0	77	0
1101	0.14	0.12	0.04	0.08	42	0.004%	74	39	0	113	0
1102	10.82	5.48	5.48	5.56	42	0.004%	74	1101	0	1175	0
1102.5	15.23 *	13.03	6.52	12.08	42	0.004%	74	2268	134	2476	134
1103	19.64	17.44	8.72	20.80	42	0.004%	74	3868	505	4447	505

Remarks:

* Linear interpolation

MARYVALE FLOODING MITIGATION PROJECT
STORAGE VOLUME COMPUTATION

FCD 93-34
Location: 59TH Ave.

Prepared by: PH
Date: 6/19/95

Contour Elev. (ft) SE	Contour Area (Ac)	Average Area (Ac)	Inc. Vol (Acre-ft)	Cum Vol (Acre-ft) SV	Storm Drain			Road Weir	Canal Weir	Total	Diversion South
					Size (")	Storm Slope	Outflow (cfs)	Outflow (cfs)	Outflow (cfs)	Outflow (cfs) SO, DI	Outflow (cfs) DO
99	0				72	0.003%	220**	0	0	220	272
1100	4.62	2.31	2.31	2.31	72	0.003%	220	0	0	220	272
1100.8	17.14*	10.88	7.62	9.93	72	0.003%	220	47	0	267	272
1101	22.50	19.82	5.95	15.88	72	0.003%	220	158	0	378	272
1102	38.63	30.57	30.57	46.45	72	0.003%	220	1659	810	2689	1030

Remarks:

* Linear interpolation

** The flow capacity of the 72" pipe exiting at 59TH Ave. is 272 cfs. The 42" pipe from the west has a flow capacity of 52 cfs. The flow diversion is then 220 cfs.

MARYVALE FLOODING MITIGATION PROJECT
STORAGE VOLUME COMPUTATION

FCD 93-34
Location: Indian School & Grand Canal

Prepared by: PH
Date: 6/19/95

Contour Elev. (ft) SE	Contour Area (Ac)	Average Area (Ac)	Inc. Vol (Acre-ft)	Cum Vol (Acre-ft) SV	Storm Drain			Road Weir	Canal Weir	Total	Diversion South
					Size (")	Storm Slope	Outflow (cfs)	Outflow (cfs)	Outflow (cfs)	Outflow (cfs) SD, DI	Outflow (cfs) DQ
97	5.38				42	0.002%	52**	0	1220	1272	1220
97.2	7.29*	6.34	1.27	1.27	42	0.002%	52**	0	1573	1625	1573
97.5	10.15*	8.72	2.62	3.89	42	0.002%	52**	0	2154	2206	2154
98	14.92	12.54	6.27	10.16	42	0.002%	52**	0	3248	3300	3248
99	34.17	24.55	24.55	34.71	42	0.002%	52**	0	5846	5898	5846

Remarks:

* Linear interpolation

** There are two 42" storm drains exiting this subbasin, one to the west and the other to the east and then south. The flow capacity of each is 52 cfs.

Appendix F: Street Capacity Diversions

Street Capacity Diversions

Arterial Streets

Arterial street characteristics:

- Continuous pavement crown; that is, valley gutters are **not** used to direct stormwater across the street.
- Street slopes are relatively uniform.
- Side streets (collectors and residential), along the arterial street, have grade breaks that prevent stormwater from directly flowing down the side street.

Computational Methodology

Premise: Stormwater exits the arterial street as weir flow down the side streets.

Procedure: Compute rating tables for down street flow, based on normal depth computations. Compute rating tables for flow down side streets based on broad-crested weir flow computations.

Input Parameters: Arterial street slope and the number and widths of the side streets that lead away from the arterial street (excluding other arterial streets).

Main Assumptions:

- Normal depth conditions are dominant along the street.
- Flow exits the street as broad-crested weir flow.
- Street widths and slopes are relatively uniform between the one mile intersections.

Changing Street Capacity Diversions to Reflect Storm Drain Systems

Computational Methodology

Premise: Modify the inflow and outflow data to reflect an existing or future storm drain system.

Procedure: Enter the capacity of the future or existing storm drain system in the appropriate column in the Street Capacity Diversion spreadsheet. The spreadsheet generates the appropriate diversion data as indicated in the attached sample spreadsheet and the sample HEC-1 input data provided below.

Input Parameters: The storm drain system's design capacity.

Main Assumptions:

- There is a sufficient number of inlets to allow the storm drain system to capture flow up to its design capacity.
- Extra capacity, due to surcharge, is insignificant and not taken into account.

Example: Street Capacity Diversion for "Long Avenue" (LA).

HEC-1 Input : No Storm Drain:

```
-  KK  SLA1W
-  KM  STREET CAPACITY DIVERSION
-  KM  LONG AVENUE(LA)
-  KM  DIVERSION TO SOUTH
-  DT  SLA1S
-  DI      0     46.    115.  1185.  2018.
-  DQ      0     0.1     49.   818.  1389.
```

HEC-1 Input: Storm Drain Along Long Avenue- Capacity = 80 cfs:

```
-  KK  SLA1W
-  KM  STREET CAPACITY DIVERSION
-  KM  LONG AVENUE(LA)
-  KM  DIVERSION TO SOUTH
-  KM  FUTURE STORM DRAIN ALONG LONG AVENUE
-  KM  CAPACITY = 80 CFS WEST
-  DT  SLA1S
-  DI      0    126.    195.  1265.  2098.
   (Note: These values have been increased by  80cfs.)
-  DQ      0     0.1     49.   818.  1389.
```

CH2M HILL

Subject	Maryvale ADMS: City of Glendale	By:	J. GEISBUSH
	Street Capacity Diversions	Checked:	D. DUST
	Case 1: Weir Flow Into Side Streets	Project No.	132586

City of Glendale Street Widths (a = arterial (1 mi.), c = collector (½ mi.), r = residential):

	R/W, ft.	PW, ft.
a	110	68
c	70	43
r	50	35

Curb height = 0.5 ft.

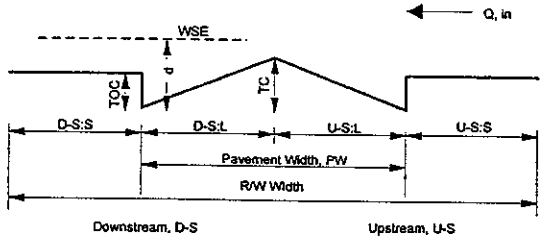
Capacity, $Q = (1.49/n)*(A^{1.67}/P^{0.67})*S^{0.5}$

Q = discharge, cfs
n = Manning's roughness
A = flow area, sq. ft.
P = wetted perimeter, ft.
S = longitudinal slope, ft/ft

Weir Flow down side streets, $Q=CLh^{1.5}$

C = 2.9
L = weir length, ft.
h = flow depth, ft.

Streets
TB = Thunderbird Road
CR = Cactus Road
PA = Peoria Avenue
OA = Olive Avenue
NA = Northern Avenue
GA = Glendale Avenue
BH = Bethany Home Road
CB = Camelback Road
IS = Indian School Road
TR = Thomas Road
MD = McDowell Road



Node	Street Type (a, c, r)	Top of Slope Elev., ft	Bottom of Slope Elev., ft.	Slope Length, ft.	Ave. Long. Slope, ft/ft	Cross Slope, Sx, ft/ft	Top of Crown ft.	DOWN-STREET FLOW & STORM DRAIN FLOW: Storm Drain Capacity, cfs	Qcap before overtop curb: D-S cfs	U-S cfs	Total, cfs	Top of Crown, TC, cfs	1.0 ft over crown, cfs	1.5 ft over crown, cfs	WEIR FLOW & STORM DRAIN FLOW (flowing out of main street and into side streets) (DQ): Storm Drain Capacity, cfs	# Coll. streets	Coll. street R/W, ft.	# Res. Streets	Res. street R/W, ft.	Total R/W, ft.	Weir Q at TOC, cfs	Weir Q at at TC, cfs	Weir Q at TC+1.0, cfs	Weir Q at TC+1.5, cfs	INFLOW CAPACITY (DI): Total at TOC, cfs	Total at TC, cfs	Total TC+1.0, cfs	Total TC+1.5, cfs
S51A	a	1214.00	1205.40	3825	0.0022	0.02	0.68		10.8	26.9	38	53.9	598.2	1026.0		1	70	4	200	270	0.0	59.8	1003.7	1705.0	38	113.7	1601.9	2731.0
S51B	a	1205.40	1190.80	5190	0.0028	0.02	0.68		12.1	30.1	42	60.3	669.1	1147.6		1	70	6	300	370	0.0	81.9	1375.4	2336.5	42	142.2	2044.5	3484.1
S51C	a	1190.80	1180.40	5280	0.0020	0.02	0.68		10.1	25.2	35	50.4	559.9	960.3		1	70	3	150	220	0.0	48.7	817.8	1389.3	35	99.1	1377.7	2349.6
S51D	a	1180.40	1165.70	5270	0.0028	0.02	0.68		12.0	30.0	42	60.0	666.3	1142.8		1	70	4	200	270	0.0	59.8	1003.7	1705.0	42	119.8	1669.9	2847.8
S51E	a	1165.70	1149.40	5230	0.0031	0.02	0.68		12.7	31.7	44	63.4	704.3	1208.0		1	70	5	250	320	0.0	70.9	1189.5	2020.7	44	134.3	1893.8	3228.7
S51F	a	1149.40	1133.30	5280	0.0030	0.02	0.68		12.6	31.4	44	62.7	696.6	1194.8		1	70	2	100	170	0.0	37.6	631.9	1073.5	44	100.4	1328.6	2268.3
S59A	a	1203.59	1183.90	5210	0.0038	0.02	0.68		14.0	34.9	49	69.8	775.6	1330.2		1	70	3	150	220	0.0	48.7	817.8	1389.3	49	118.6	1593.4	2719.4
S59B	a	1183.90	1172.80	5200	0.0021	0.02	0.68		10.5	26.2	37	52.5	582.9	999.7		1	70	1	50	120	0.0	26.6	446.1	757.8	37	79.1	1028.9	1757.5
S59C	a	1172.80	1159.10	5180	0.0026	0.02	0.68		11.7	29.2	41	58.4	648.8	1112.8		0	0	5	250	250	0.0	55.4	929.3	1578.7	41	113.8	1578.1	2691.5
S59D	a	1159.10	1149.70	5240	0.0018	0.02	0.68		9.7	24.1	34	48.1	534.3	916.4		1	70	6	300	370	0.0	81.9	1375.4	2336.5	34	130.1	1909.7	3252.9
S59E	a	1149.70	1137.50	5290	0.0023	0.02	0.68		10.9	27.3	38	54.6	605.8	1039.1		1	70	2	100	170	0.0	37.6	631.9	1073.5	38	92.2	1237.8	2112.6
S59F	a	1137.50	1121.40	5300	0.0030	0.02	0.68		12.6	31.3	44	62.6	695.3	1192.6		1	70	4	200	270	0.0	59.8	1003.7	1705.0	44	122.4	1699.0	2897.6
S67A	a	1200.80	1182.97	5200	0.0034	0.02	0.68		13.3	33.3	47	66.5	738.7	1267.0		1	70	5	250	320	0.0	70.9	1189.5	2020.7	47	137.4	1928.2	3287.8
S67B	a	1182.97	1170.30	5270	0.0024	0.02	0.68		11.2	27.8	39	55.7	618.6	1060.9		1	70	5	250	320	0.0	70.9	1189.5	2020.7	39	126.6	1808.1	3081.7
S67C	a	1170.30	1154.30	5240	0.0031	0.02	0.68		12.6	31.4	44	62.8	697.1	1195.6		1	70	3	150	220	0.0	48.7	817.8	1389.3	44	111.5	1514.9	2584.9
S67D	a	1154.30	1143.30	5160	0.0021	0.02	0.68		10.5	26.2	37	52.4	582.5	999.0		0	0	1	50	50	0.0	11.1	185.9	315.7	37	63.5	768.3	1314.8
S67E	a	1143.30	1129.70	5280	0.0026	0.02	0.68		11.6	28.8	40	57.7	640.3	1098.1	235.0	1	70	0	0	70	235.0	250.5	495.2	677.0	275	308.2	1135.5	1775.2
S67F	a	1129.70	1122.30	5290	0.0014	0.02	0.68		8.5	21.2	30	42.5	471.8	809.3		1	70	1	50	120	0.0	26.6	446.1	757.8	30	69.1	917.9	1567.1
S67G	a	1122.30	1108.40	5290	0.0026	0.02	0.68		11.7	29.1	41	58.2	646.7	1109.1		1	70	4	200	270	0.0	59.8	1003.7	1705.0	41	118.0	1650.3	2814.1
S67H	a	1108.40	1098.00	3150	0.0033	0.02	0.68		13.1	32.6	46	65.3	724.9	1243.3		1	70	4	200	270	0.0	59.8	1003.7	1705.0	46	125.1	1728.5	2948.3
S75F	a	1127.80	1112.60	5290	0.0029	0.02	0.68		12.2	30.4	43	60.9	676.2	1159.8	124.0	1	70	2	100	170	124.0	161.6	755.9	1197.5	167	222.5	1432.2	2357.4
S75G	a	1112.60	1102.20	5260	0.0020	0.02	0.68		10.1	25.3	35	50.5	561.0	962.1		1	70	0	0	70	0.0	15.5	260.2	442.0	35	66.0	821.2	1404.2
S75H	a	1102.20	1095.30	5270	SPECIAL CASE 100% WEST																							
S83E	a	1102.50	1095.30	5160	0.0014	0.02	0.68	220.0	8.5	21.2	250	262.4	691.3	1028.3		0	0	1	50	50	0.0	11.1	185.9	315.7	250	273.5	877.1	1344.0
S83F	a	1095.30	1084.20	5370	0.0021	0.02	0.68		10.4	17.3	28	34.6	573.6	983.7		1	70	0	0	70	0.0	15.5	260.2	442.0	28	50.1	833.8	1425.8
S83G	a	1084.20	1075.50	5360	0.0016	0.02	0.68		9.2	15.3	25	30.6	508.3	871.7		1	70	0	0	70	0.0	15.5	260.2	442.0	25	46.1	768.5	1313.8
S91B	a	1110.10	1095.10	5280	0.0028	0.02	0.68		12.1	30.3	42	60.5	672.4	1153.3	78.0	0	0	1	50	50	78.0	89.1	263.9	393.7	120	149.6	936.3	1547.0

Note: will be 11"x17" in final

CH2M HILL

Subject	Maryvale ADMS: City of Glendale	By:	J. GEISBUSH
	Street Capacity Diversions	Checked:	D. DUST
	Case 1: Weir Flow Into Side Streets	Project No.	132586

City of Glendale Street Widths (a = arterial (1 mi.), c = collector (½ mi.), r = residential):

	R/W, ft.	PW, ft.
a	110	68
c	70	43
r	50	35

Curb height = 0.5 ft.

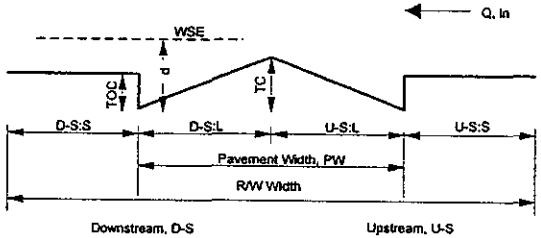
Capacity, $Q = (1.49/n)*(A^{1.67}/P^{0.67})*S^{0.5}$

Q = discharge, cfs
n = Manning's roughness
A = flow area, sq. ft.
P = wetted perimeter, ft.
S = longitudinal slope, ft/ft

Weir Flow down side streets, $Q=CLh^{1.5}$

C = 2.9
L = weir length, ft.
h = flow depth, ft.

Streets
TB = Thunderbird Road
CR = Cactus Road
PA = Peoria Avenue
OA = Olive Avenue
NA = Northern Avenue
GA = Glendale Avenue
BH = Bethany Home Road
CB = Camelback Road
IS = Indian School Road
TR = Thomas Road
MD = McDowell Road



Node	Street Type (a, c, r)	Top of Slope Elev., ft	Bottom of Slope Elev., ft.	Slope Length, ft.	Ave. Long. Slope, ft/ft	Cross Slope, Sx, ft/ft	Top of Crown ft.	DOWN-STREET FLOW & STORM DRAIN FLOW: Storm Drain Capacity, cfs	Qcap before overtop curb: D-S cfs	U-S cfs	Total, cfs	Top of Crown, TC, cfs	1.0 ft over crown, cfs	1.5 ft over crown, cfs	WEIR FLOW & STORM DRAIN FLOW (flowing out of main street and into side streets) (DQ): Storm Drain Capacity, cfs	# Coll. streets	Coll. street R/W, ft.	# Res. Streets	Res. street R/W, ft.	Total R/W, ft.	Weir Q at TOC, cfs	Weir Q at at TC, cfs	Weir Q at TC+1.0, cfs	Weir Q at TC+1.5, cfs	INFLOW CAPACITY (DI): Total at TOC, cfs	Total at TC, cfs	Total TC+1.0, cfs	Total TC+1.5, cfs
S91C	a	1095.20	1078.20	5180	0.0033	0.02	0.68		13.1	32.5	46	65.1	722.7	1239.6		0	0	1	50	50	0.0	11.1	185.9	315.7	46	76.2	908.6	1555.3
S91D	a	1070.20	1068.10	5380	0.0004	0.02	0.68		4.5	7.5	12	15.0	249.2	427.5		0	0	1	50	50	0.0	11.1	185.9	315.7	12	26.1	435.1	743.2
S99A	a	SPECIAL CASE 100% WEST																										
S99B	a	1059.80	1041.80	5210	0.0035	0.02	0.68		13.4	22.4	36	44.7	741.5	1271.8		1	70	0	0	70	0.0	15.5	260.2	442.0	36	60.2	1001.7	1713.9
SCR1	a	1203.60	1183.00	5090	0.0040	0.02	0.68		14.5	36.1	51	72.3	802.6	1376.5		1	70	2	100	170	0.0	37.6	631.9	1073.5	51	109.9	1434.5	2450.0
SPA1	a	1220.00	1205.40	4320	0.0034	0.02	0.68		13.2	33.0	46	66.0	733.4	1257.9		1	70	3	150	220	0.0	48.7	817.8	1389.3	46	114.8	1551.2	2647.2
SPA2	a	1205.40	1183.90	5260	0.0041	0.02	0.68		14.6	36.3	51	72.6	806.6	1383.4		1	70	3	150	220	0.0	48.7	817.8	1389.3	51	121.3	1624.4	2772.6
SPA3	a	1183.90	1170.30	5080	0.0027	0.02	0.68		11.8	29.4	41	58.8	652.8	1119.6		1	70	4	200	270	0.0	59.8	1003.7	1705.0	41	118.6	1656.4	2824.6
SOA2	a	1208.80	1190.80	5280	0.0034	0.02	0.68		13.3	33.2	46	66.3	736.6	1263.4		1	70	2	100	170	0.0	37.6	631.9	1073.5	46	104.0	1368.5	2336.9
SOA3	a	1190.80	1172.80	5250	0.0034	0.02	0.68	380.0	13.3	33.3	427	446.5	1118.7	1647.0		1	70	4	200	270	0.0	59.8	1003.7	1705.0	427	506.3	2122.4	3352.0
SOA4	a	1172.80	1154.30	5060	0.0037	0.02	0.68	520.0	13.8	34.3	568	588.7	1282.8	1828.3		1	70	2	100	170	0.0	37.6	631.9	1073.5	568	626.3	1914.7	2901.9
SNA3	a	1190.00	1180.40	5260	0.0018	0.02	0.68		9.7	24.3	34	48.5	539.0	924.4		1	70	3	150	220	0.0	48.7	817.8	1389.3	34	97.3	1356.7	2313.6
SNA4	a	SPECIAL CASE																										
SNA5	a	1159.10	1143.30	5090	0.0031	0.02	0.68		12.7	31.6	44	63.3	702.9	1205.5		1	70	2	100	170	0.0	37.6	631.9	1073.5	44	100.9	1334.8	2279.1
SNA6	a	1144.00	1127.80	5010	0.0032	0.02	0.68		13.0	32.3	45	64.6	717.4	1230.4		1	70	1	50	120	0.0	26.6	446.1	757.8	45	91.2	1163.4	1988.2
SNA7	a	1127.80	1103.00	5350	0.0046	0.02	0.68		15.5	38.7	54	77.3	858.9	1473.2		1	70	0	0	70	0.0	15.5	260.2	442.0	54	92.8	1119.1	1915.2
SNA8	a	1102.50	1095.10	5260	0.0014	0.02	0.68	33.0	8.5	21.3	63	75.6	506.2	844.6		0	0	2	100	100	0.0	22.1	371.7	631.5	63	97.8	877.9	1476.1
SGA5	a	1149.70	1129.70	5210	0.0038	0.02	0.68		14.1	35.2	49	70.4	781.6	1340.6		1	70	5	250	320	0.0	70.9	1189.5	2020.7	49	141.3	1971.2	3361.4
SGA6	a	1129.70	1112.60	5340	0.0032	0.02	0.68		12.9	32.1	45	64.3	713.9	1224.4		1	70	0	0	70	0.0	15.5	260.2	442.0	45	79.8	974.1	1666.5
SGA7	a	1112.60	1095.30	5240	0.0033	0.02	0.68		13.1	32.6	46	65.3	724.9	1243.3		1	70	2	100	170	0.0	37.6	631.9	1073.5	46	102.9	1356.8	2316.8
SGA8	a	1095.30	1078.20	5340	0.0032	0.02	0.68	455.0	12.9	32.1	500	519.3	1168.9	1679.4		0	0	1	50	50	0.0	11.1	185.9	315.7	500	530.4	1354.8	1995.2
SGA9	a	1078.20	1066.70	5270	0.0022	0.02	0.68	487.0	10.6	26.5	524	540.1	1076.3	1497.8		0	0	1	50	50	0.0	11.1	185.9	315.7	524	551.1	1262.2	1813.5
SBH3	a	1150.30	1137.50	5260	0.0024	0.02	0.68		11.2	28.0	39	56.0	622.3	1067.4		1	70	1	50	120	0.0	26.6	446.1	757.8	39	82.6	1068.4	1825.2
SBH4	a	1137.50	1122.30	5170	0.0029	0.02	0.68		12.4	30.8	43	61.6	684.0	1173.2		1	70	7	350	420	0.0	93.0	1561.2	2652.2	43	154.6	2245.3	3825.5
SBH5	a	1122.30	1102.20	5330	0.0038	0.02	0.68		14.0	23.4	37	46.7	774.7	1328.7		1	70	1	50	120	0.0	26.6	446.1	757.8	37	73.3	1220.8	2086.5

CH2M HILL

Subject	Maryvale ADMS: City of Glendale	By:	J. GEISBUSH
	Street Capacity Diversions	Checked:	D. DUST
	Case 1: Weir Flow Into Side Streets	Project No.	132586

City of Glendale Street Widths (a = arterial (1 mi.), c = collector (½ mi.), r = residential):

	R/W, ft.	PW, ft.
a	110	68
c	70	43
r	50	35

Curb height = 0.5 ft.

Capacity, $Q = (1.49/n)*(A^{1.67}/P^{0.67})*S^{0.5}$

Q = discharge, cfs
n = Manning's roughness
A = flow area, sq. ft.
P = wetted perimeter, ft.
S = longitudinal slope, ft/ft

Weir Flow down side streets, $Q=CLh^{1.5}$

C = 2.9
L = weir length, ft.
h = flow depth, ft.

Streets
TB = Thunderbird Road
CR = Cactus Road
PA = Peoria Avenue
OA = Olive Avenue
NA = Northern Avenue
GA = Glendale Avenue
BH = Bethany Home Road
CB = Camelback Road
IS = Indian School Road
TR = Thomas Road
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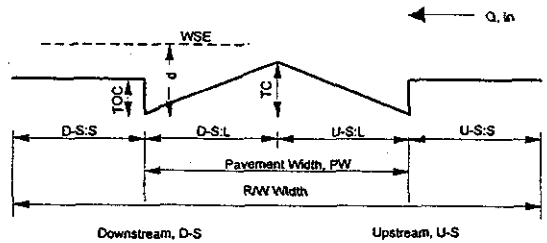

								DOWN-STREET FLOW & STORM DRAIN FLOW							WEIR FLOW & STORM DRAIN FLOW (flowing out of main street and into side streets) (DQ)									INFLOW CAPACITY (DI)			
									Qcap before overtop curb																		
Node	Street Type (a, c, r)	Top of Slope Elev., ft	Bottom of Slope Elev., ft.	Slope Length, ft.	Ave. Long. Slope, ft/ft	Cross Slope, Sx, ft/ft	Top of Crown ft.	Storm Drain Capacity, cfs	D-S cfs	U-S cfs	Total, cfs	Top of Crown, TC, cfs	1.0 ft over crown, cfs	1.5 ft over crown, cfs	Storm Drain Capacity, cfs	# Coll. streets	Coll. street R/W, ft.	# Res. Streets	Res. street R/W, ft.	Total R/W, ft.	Weir Q at TOC, cfs	Weir Q at at TC, cfs	Weir Q at TC+1.0, cfs	Weir Q at TC+1.5, cfs	Total at TOC, cfs	Total at TC, cfs	Total TC+1.0, cfs	Total TC+1.5, cfs
SBH6	a	1102.20	1084.20	5210	0.0035	0.02	0.68		13.4	22.4	36	44.7	741.5	1271.8		0	0	1	50	50	0.0	11.1	185.9	315.7	36	55.8	927.4	1587.6
SBH7	a	See Note (1) Below																										
SBH8	a	See Note (1) Below																										
SCB3	a	1121.40	1108.40	5160	0.0025	0.02	0.68		11.4	19.1	31	38.2	633.2	1086.1		1	70	3	150	220	0.0	48.7	817.8	1389.3	31	86.9	1451.0	2475.3
SCB4	a	1108.40	1095.30	5280	0.0025	0.02	0.68		11.3	18.9	30	37.9	628.4	1077.8		1	70	3	150	220	0.0	48.7	817.8	1389.3	30	86.6	1446.2	2467.0
SCB8	a	1041.80	1034.50	5270	0.0014	0.02	0.68		8.5	14.2	23	28.3	469.5	805.3		1	70	0	0	70	0.0	15.5	260.2	442.0	23	43.8	729.7	1247.3

Notes
(1) Bethany Home Road does not extend west past 83rd Avenue; however, SBH7 & SBH8 are flow diversions used to model weir flow over the Grand Canal and flow along north side of canal.

CH2M HILL

Subject	Maryvale ADMS: City of Phoenix	By:	J. GEISBUSH
	Street Capacity Diversions	Checked:	D. DUST
	Case 1: Weir Flow Into Side Streets	Project No.	132586

City of Phoenix Street Widths (a = arterial (1 mi.), c = collector (½ mi.), r = residential):

	R/W, ft.	PW, ft.
a	80	64
c	60	40
r	50	36

Curb height = 0.5 ft.

Capacity, $Q = (1.49/n)*(A^{1.67}/P^{0.67})*S^{0.5}$

Q = discharge, cfs
n = Manning's roughness
A = flow area, sq. ft.
P = wetted perimeter, ft.
S = longitudinal slope, ft/ft

Weir Flow down side streets, $Q=CLh^{1.5}$

C = 2.9
L = weir length, ft.
h = flow depth, ft.

Streets
TB = Thunderbird Road
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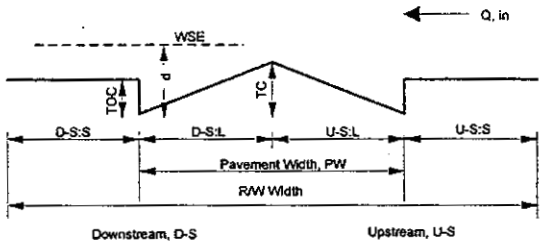

Node	Street Type (a, c, r)	Top of Slope Elev., ft	Bottom of Slope Elev., ft.	Slope Length, ft.	Ave. Long. Slope, ft/ft	Cross Slope, Sx, ft/ft	Top of Crown ft.	DOWN-STREET FLOW & STORM DRAIN FLOW: Storm Drain Capacity, cfs	Qcap before overtop curb: D-S cfs	U-S cfs	Total, cfs	Top of Crown, TC, cfs	1.0 ft over crown, cfs	1.5 ft over crown, cfs	WEIR FLOW & STORM DRAIN FLOW (flowing out of main street and into side streets) (DQ): Storm Drain Capacity, cfs	# Coll. streets	Coll. street R/W, ft.	# Res. Streets	Res. street R/W, ft.	Total R/W, ft.	Weir Q at TOC, cfs	Weir Q at at TC, cfs	Weir Q at TC+1.0, cfs	Weir Q at TC+1.5, cfs	INFLOW CAPACITY (DI): Total at TOC, cfs	Total at TC, cfs	Total TC+1.0, cfs	Total TC+1.5, cfs
S27A	a	1201.00	1179.50	5250	0.0041	0.02	0.64	120.0	14.6	24.3	159	168.7	773.7	1234.5		1	60	3	150	210	0.0	31.9	741.3	1279.0	159	200.6	1514.9	2513.6
S27B	a	1098.10	1080.90	5320	0.0032	0.02	0.64		13.0	21.6	35	43.2	580.8	990.3		1	60	2	100	160	0.0	24.3	564.8	974.5	35	67.6	1145.6	1964.8
S35A	a	1220.40	1201.20	5200	0.0037	0.02	0.64	81.0	13.8	23.1	118	127.2	701.7	1139.3		1	60	9	450	510	0.0	77.5	1800.2	3106.2	118	204.7	2501.9	4245.5
S35B	a	1201.20	1184.30	5260	0.0032	0.02	0.64	70.0	12.9	21.6	104	113.1	649.0	1057.2		1	60	4	200	260	0.0	39.5	917.8	1583.6	104	152.6	1566.7	2640.8
S35C	a	SPECIAL CASE 33% DIVERTED												0.0														
S35D	a	1108.80	1095.30	3060	0.0044	0.02	0.64	63.0	15.1	25.3	103	113.5	741.5	1219.8		1	60	2	100	160	0.0	24.3	564.8	974.5	103	137.8	1306.2	2194.3
S35E	a	1095.30	1076.20	5320	0.0036	0.02	0.64	53.0	13.7	22.8	89	98.6	665.0	1096.5		1	60	7	350	410	0.0	62.3	1447.2	2497.2	89	160.9	2112.3	3593.7
S43A	a	1225.90	1208.80	5210	0.0033	0.02	0.64		13.1	21.8	35	43.6	585.2	997.8		1	60	4	200	260	0.0	39.5	917.8	1583.6	35	83.1	1503.0	2581.3
S43B	a	1208.80	1190.00	5190	0.0036	0.02	0.64	115.0	13.7	22.9	152	160.8	729.8	1163.2		1	60	5	250	310	0.0	47.1	1094.3	1888.1	152	207.9	1824.0	3051.3
S43C	a	1190.00	1171.80	5280	0.0034	0.02	0.64	100.0	13.4	22.3	136	144.7	699.7	1122.5		1	60	2	100	160	0.0	24.3	564.8	974.5	136	169.0	1264.5	2097.0
S43D	a	1171.80	1157.30	5230	0.0028	0.02	0.64	100.0	12.0	20.0	132	140.0	637.8	1017.0		1	60	3	150	210	0.0	31.9	741.3	1279.0	132	172.0	1379.1	2296.1
S43E	a	1157.30	1140.40	5210	0.0032	0.02	0.64	165.0	13.0	21.7	200	208.3	746.8	1156.9		1	60	2	100	160	0.0	24.3	564.8	974.5	200	232.6	1311.5	2131.4
S43F	a	1140.40	1115.00	5310	0.0048	0.02	0.64	89.0	15.8	26.3	131	141.6	795.5	1293.5		0	0	1	50	50	0.0	7.6	176.5	304.5	131	149.2	972.0	1598.1
S43G	a	50/50 SPLIT EAST/WEST						89.0																				
S43H	a	1107.90	1093.40	2970	0.0049	0.02	0.64	89.0	15.9	26.6	131	142.1	802.7	1305.9		1	60	8	400	460	0.0	69.9	1623.7	2801.7	131	212.0	2426.4	4107.6
S43I	a	1093.40	1073.70	5250		100% South		207.0																				
S51G	a	1133.30	1113.70	5300	0.0037	0.02	0.64	38.0	13.9	23.1	75	84.3	659.2	1097.1		2	120	1	50	170	0.0	25.8	600.1	1035.4	75	110.1	1259.2	2132.5
S51H		50/50 SPLIT EAST/WEST						207.0																				
S51I	a	1102.00	1091.30	2620	0.0041	0.02	0.64	281.0	14.6	24.3	320	329.6	933.8	1394.0		1	60	4	200	260	0.0	39.5	917.8	1583.6	320	369.1	1851.5	2977.6
S51J	a	1091.30	1073.10	5300	0.0034	0.02	0.64	286.0	13.4	22.3	322	330.6	884.6	1306.6		1	60	4	200	260	0.0	39.5	917.8	1583.6	322	370.1	1802.3	2890.2
S59G	a	1121.40	1105.50	5250	0.0030	0.02	0.64	60.0	12.5	20.9	93	101.9	622.1	1018.4		1	60	4	200	260	0.0	39.5	917.8	1583,6	93	141.4	1539.9	2602.0
S59H		50/50 SPLIT EAST/WEST						359.0																				
S59I	a	1100.00	1084.10	3750	0.0042	0.02	0.64	389.0	14.8	24.8	429	438.5	1054.1	1523.1		1	60	7	350	410	0.0	62.3	1447.2	2497.2	429	500.8	2501.4	4020.2
S59J	a	1084.10	1065.50	5330	0.0035	0.02	0.64	448.0	13.5	22.5	484	492.9	1051.4	1476.8		1	60	9	450	510	0.0	77.5	1800.2	3106.2	484	570.4	2851.6	4583.1
S67I	a	1091.40	1076.80	5260	0.0028	0.02	0.64	240.0	12.0	20.0	272	280.1	778.2	1157.6		1	60	3	150	210	0.0	31.9	741.3	1279.0	272	312.0	1519.4	2436.6
S67J	a	1076.80	1057.60	5290	0.0036	0.02	0.64	532.0	13.7	22.9	569	577.8	1147.4	1581.2		1	60	8	400	460	0.0	69.9	1623.7	2801.7	569	647.7	2771.1	4382.9

CH2M HILL

Subject	Maryvale ADMS: City of Phoenix	By:	J. GEISBUSH
	Street Capacity Diversions	Checked:	D. DUST
	Case 1: Weir Flow Into Side Streets	Project No.	132586

City of Phoenix Street Widths (a = arterial (1 mi.), c = collector (½ mi.), r = residential):

	R/W, ft.	PW, ft.
a	80	64
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r	50	36

Curb height = 0.5 ft.

Capacity, $Q = (1.49/n)*(A^{1.67}/P^{0.67})*S^{0.5}$

Q = discharge, cfs
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A = flow area, sq. ft.
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Weir Flow down side streets, $Q=CLh^{1.5}$

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Streets
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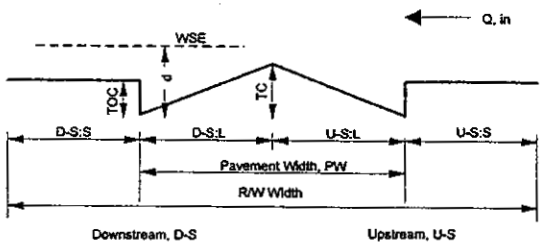

Node	Street Type (a, c, r)	Top of Slope Elev., ft	Bottom of Slope Elev., ft	Slope Length, ft	Ave. Long. Slope, ft/ft	Cross Slope, Sx, ft/ft	Top of Crown ft.	DOWN-STREET FLOW & STORM DRAIN FLOW: Storm Drain Capacity, cfs	Qcap before overtop curb: D-S cfs	U-S cfs	Total, cfs	Top of Crown, TC, cfs	1.0 ft over crown, cfs	1.5 ft over crown, cfs	WEIR FLOW & STORM DRAIN FLOW (flowing out of main street and into side streets) (DQ): Storm Drain Capacity, cfs	# Coll. streets	Coll. street R/W, ft.	# Res. Streets	Res. street R/W, ft.	Total R/W, ft.	Weir Q at TOC, cfs	Weir Q at at TC, cfs	Weir Q at TC+1.0, cfs	Weir Q at TC+1.5, cfs	INFLOW CAPACITY (DI): Total at TOC, cfs	Total at TC, cfs	Total TC+1.0, cfs	Total TC+1.5, cfs
S75I	a	1095.30	1078.40	5240	0.0032	0.02	0.64		12.9	21.6	35	43.2	580.1	989.1		1	60	4	200	260	0.0	39.5	917.8	1583.6	35	82.7	1497.9	2572.6
S75J	a	1078.40	1064.40	5330	0.0026	0.02	0.64	328.0	11.7	19.5	359	367.0	851.5	1220.6		1	60	3	150	210	0.0	31.9	741.3	1279.0	359	398.9	1592.8	2499.6
S75K	a	1064.40	1049.60	5310	0.0028	0.02	0.64	467.0	12.0	20.1	499	507.2	1006.3	1386.5		1	60	0	0	60	0.0	9.1	211.8	365.4	499	516.3	1218.1	1751.9
S83H	a	1075.50	1063.10	5330	0.0023	0.02	0.64		11.0	18.3	29	36.7	492.7	840.0		0	0	2	100	100	0.0	15.2	353.0	609.1	29	51.9	845.7	1449.1
S83I	a	1063.10	1051.20	5260	0.0023	0.02	0.64	243.0	10.8	18.1	272	279.2	728.8	1071.4		1	60	3	150	210	0.0	31.9	741.3	1279.0	272	311.1	1470.1	2350.4
S83J	a	1051.20	1036.10	5280	0.0029	0.02	0.64	243.0	12.2	20.3	276	283.7	789.3	1174.4		1	60	1	50	110	0.0	16.7	388.3	670.0	276	300.4	1177.5	1844.3
S91E	a	1088.10	1056.40	5240	0.0060	0.02	0.64		17.7	29.6	47	59.2	794.5	1354.6		1	60	2	100	160	0.0	24.3	564.8	974.5	47	83.5	1359.3	2329.1
S91F	a	1056.40	1047.20	5320	0.0017	0.02	0.64		9.5	15.8	25	31.6	424.8	724.2		0	0	3	150	150	0.0	22.8	529.5	913.6	25	54.4	954.3	1637.8
S91G	a	1047.20	1043.10	5280	0.0008	0.02	0.64	326.0	6.3	10.6	343	347.2	610.6	811.3		1	60	0	0	60	0.0	9.1	211.8	365.4	343	356.3	822.4	1176.8
S91H	a	1036.60	1025.00	5350	0.0022	0.02	0.64	380.0	10.6	17.7	408	415.4	855.6	1191.0		1	60	0	0	60	0.0	9.1	211.8	365.4	408	424.5	1067.4	1556.4
S99C	a	1041.80	1031.70	5340	0.0019	0.02	0.64		9.9	16.5	26	33.1	444.2	757.4		0	0	2	100	100	0.0	15.2	353.0	609.1	26	48.3	797.2	1366.5
S99D	a	1031.70	1026.70	5310	0.0009	0.02	0.64		7.0	11.7	19	23.3	313.4	534.4		0	0	1	50	50	0.0	7.6	176.5	304.5	19	30.9	489.9	839.0
S99E	a	1026.70	1021.70	5330	0.0009	0.02	0.64		7.0	11.6	19	23.3	312.9	533.4		0	0	1	50	50	0.0	7.6	176.5	304.5	19	30.9	489.3	838.0
S107A	a	1034.50	1020.30	5300	0.0027	0.02	0.64		11.8	19.7	31	39.4	528.7	901.5		1	60	1	50	110	0.0	16.7	388.3	670.0	31	56.1	917.0	1571.5
S107B	a	SPECIAL CASE ALL FLOW IS TO THE SOUTH																										
S115A	a	1008.40	998.90	5280	0.0018	0.02	0.64		9.7	16.1	26	32.3	433.3	738.7		1	60	0	0	60	0.0	9.1	211.8	365.4	26	41.4	645.1	1104.2
SOA1	a	1220.40	1208.80	5300	0.0022	0.02	0.64		10.7	17.8	28	35.6	477.9	814.8		1	60	2	100	160	0.0	24.3	564.8	974.5	28	59.9	1042.6	1789.3
SNA1	a	SPECIAL CASE ALL FLOW IS SOUTH EXCEPT FOR SD													61.0													
SNA2	a	1201.20	1190.00	5270	0.0021	0.02	0.64	18.0	10.5	17.5	46	53.1	488.9	820.9	133.0	1	60	3	150	210	133.0	164.9	874.3	1412.0	179	218.0	1363.2	2232.9
SGA1	a	SPECIAL CASE ALL FLOW IS TO THE SOUTH													132.0													
SCB1	a	1138.00	1133.30	4350	0.0011	0.02	0.64		7.5	12.5	20	25.0	335.8	572.5		2	120	0	0	120	0.0	18.2	423.6	730.9	20	43.2	759.3	1303.3
SCB2	a	1133.30	1121.40	5420	0.0022	0.02	0.64		10.7	17.8	28	35.6	478.6	816.1		0	0	5	250	250	0.0	38.0	882.5	1522.7	28	73.6	1361.1	2338.7
SCB5	a	1095.30	1075.50	5280	0.0037	0.02	0.64		14.0	23.3	37	46.6	625.5	1066.5		1	60	3	150	210	0.0	31.9	741.3	1279.0	37	78.5	1366.8	2345.5

CH2M HILL

Subject	Maryvale ADMS: City of Phoenix	By:	J. GEISBUSH
	Street Capacity Diversions	Checked:	D. DUST
	Case 1: Weir Flow Into Side Streets	Project No.	132586

City of Phoenix Street Widths (a = arterial (1 mi.), c = collector (½ mi.), r = residential):

	R/W, ft.	PW, ft.
a	80	64
c	60	40
r	50	36

Curb height = 0.5 ft.

Capacity, $Q = (1.49/n)*(A^{1.67}/P^{0.67})*S^{0.5}$

Q = discharge, cfs
n = Manning's roughness
A = flow area, sq. ft.
P = wetted perimeter, ft.
S = longitudinal slope, ft/ft

Weir Flow down side streets, $Q=CLh^{1.5}$

C = 2.9
L = weir length, ft.
h = flow depth, ft.

Streets
TB = Thunderbird Road
CR = Cactus Road
PA = Peoria Avenue
OA = Olive Avenue
NA = Northern Avenue
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BH = Bethany Home Road
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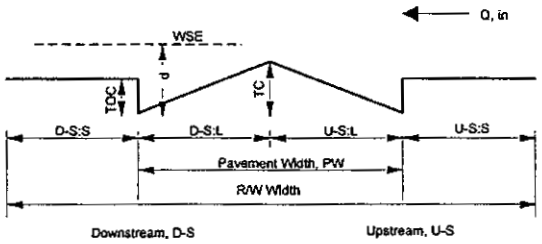

Node	Street Type (a, c, r)	Top of Slope Elev., ft	Bottom of Slope Elev., ft.	Slope Length, ft.	Ave. Long. Slope, ft/ft	Cross Slope, Sx, ft/ft	Top of Crown ft.	DOWN-STREET FLOW & STORM DRAIN FLOW: Storm Drain Capacity, cfs	Qcap before overtop curb: D-S cfs	U-S cfs	Total, cfs	Top of Crown, TC, cfs	1.0 ft over crown, cfs	1.5 ft over crown, cfs	WEIR FLOW & STORM DRAIN FLOW (flowing out of main street and into side streets) (DQ): Storm Drain Capacity, cfs	# Coll. streets	Coll. street R/W, ft.	# Res. Streets	Res. street R/W, ft.	Total R/W, ft.	Weir Q at TOC, cfs	Weir Q at at TC, cfs	Weir Q at TC+1.0, cfs	Weir Q at TC+1.5, cfs	INFLOW CAPACITY (DI): Total at TOC, cfs	Total at TC, cfs	Total TC+1.0, cfs	Total TC+1.5, cfs
SCB6	a	1075.50	1056.40	5300	0.0036	0.02	0.64		13.7	22.8	37	45.7	613.2	1045.5		1	60	1	50	110	0.0	16.7	388.3	670.0	37	62.4	1001.5	1715.5
SCB7	a	1056.40	1041.80	5370	0.0027	0.02	0.64		11.9	19.8	32	39.7	532.6	908.1		0	0	1	50	50	0.0	7.6	176.5	304.5	32	47.3	709.1	1212.6
SIS1	a	SPECIAL CASE 43% WEST 57% SOUTH*													332.0													
SIS2	a	1115.20	1113.70	2650	0.0006	0.02	0.64	45.0	5.4	9.0	59	63.1	288.0	459.4		1	60	3	150	210	0.0	31.9	741.3	1279.0	59	95.0	1029.3	1738.4
SIS3	CASE 2																											
SIS4		SPECIAL CASE ONLY 26 CFS WEST IN SD						26.0																				
SIS5	a	1091.40	1078.40	5300	0.0025	0.02	0.64		11.3	18.8	30	37.7	505.9	862.5		1	60	2	100	160	0.0	24.3	564.8	974.5	30	62.0	1070.7	1837.1
SIS6	a	1078.40	1063.10	5280	0.0029	0.02	0.64	37.0	12.3	20.5	70	77.9	586.9	974.5		1	60	7	350	410	0.0	62.3	1447.2	2497.2	70	140.2	2034.1	3471.7
SIS7	a	1063.10	1047.20	5310	0.0030	0.02	0.64	33.0	12.5	20.8	66	74.6	591.9	986.0		1	60	3	150	210	0.0	31.9	741.3	1279.0	66	106.5	1333.2	2265.1
SIS8	a	1047.20	1031.70	5290	0.0029	0.02	0.64		12.3	20.6	33	41.2	552.9	942.7		0	0	2	100	100	0.0	15.2	353.0	609.1	33	56.4	905.9	1551.8
SIS9	a	1031.70	1020.30	5480	0.0021	0.02	0.64		10.4	17.3	28	34.7	465.9	794.3		0	0	1	50	50	0.0	7.6	176.5	304.5	28	42.3	642.4	1098.9
SIS10	a													0.0														
STR1	a	1098.10	1095.30	5200	0.0005	0.02	0.64	8.0	5.3	8.8	22	25.6	245.0	412.1	237.0	1	60	3	150	210	237.0	268.9	978.3	1516.0	259	294.6	1223.3	1928.2
STR2	a	1095.30	1093.40	5300	0.0004	0.02	0.64		4.3	7.2	12	14.4	193.4	329.8	286.0	1	60	3	150	210	286.0	317.9	1027.3	1565.0	298	332.3	1220.7	1894.8
STR3	a	SPECIAL CASE 50% WEST 50% SOUTH*												0.0														
STR4	a	1093.40	1091.30	5300	0.0004	0.02	0.64		4.5	7.6	12	15.1	203.3	346.7		1	60	3	150	210	0.0	31.9	741.3	1279.0	12	47.0	944.6	1625.7
STR5	a	1091.30	1084.10	5320	0.0014	0.02	0.64	26.0	8.4	14.0	48	54.0	401.8	666.7		1	60	2	100	160	0.0	24.3	564.8	974.5	48	78.3	966.6	1641.2
STR6	a	1084.10	1076.80	5150	0.0014	0.02	0.64		8.6	14.3	23	28.6	384.6	655.7		1	60	3	150	210	0.0	31.9	741.3	1279.0	23	60.5	1125.8	1934.7
STR7	a	1076.80	1064.40	5300	0.0023	0.02	0.64	91.0	11.0	18.4	120	127.8	585.1	933.4		1	60	2	100	160	0.0	24.3	564.8	974.5	120	152.1	1149.9	1907.9
STR8	a	1064.40	1051.20	5220	0.0025	0.02	0.64		11.5	19.1	31	38.2	513.7	875.8		0	0	1	50	50	0.0	7.6	176.5	304.5	31	45.8	690.1	1180.3
STR9	a	1051.20	1036.60	5290	0.0028	0.02	0.64		12.0	20.0	32	40.0	536.6	915.0		1	60	3	150	210	0.0	31.9	741.3	1279.0	32	71.9	1277.9	2194.0
STR10	a	1036.60	1026.70	5290	0.0019	0.02	0.64		9.9	16.5	26	32.9	441.9	753.4		0	0	1	50	50	0.0	7.6	176.5	304.5	26	40.5	618.4	1058.0
STR11	a	1015.20	1008.42	5190	0.0013	0.02	0.64		8.2	13.7	22	27.5	369.2	629.5		0	0	3	150	150	0.0	22.8	529.5	913.6	22	50.3	898.7	1543.1
SMD1	a	1080.90	1076.20	5300	0.0009	0.02	0.64		6.8	11.3	18	22.6	304.2	518.6	182.0	1	60	4	200	260	182.0	221.5	1099.8	1765.6	200	244.1	1403.9	2284.2
SMD2	a	1076.20	1073.70	5290	0.0005	0.02	0.64		5.0	8.3	13	16.5	222.1	378.6	319.0	1	60	5	250	310	319.0	366.1	1413.3	2207.1	332	382.6	1635.3	2585.7
SMD3	a	SPECIAL CASE 50% WEST 50% SOUTH*																										
SMD4	a	1074.00	1073.10	3980	0.0002	0.02	0.64		3.4	5.7	9	11.4	153.6	261.9		1	60	2	100	160	0.0	24.3	564.8	974.5	9	35.7	718.4	1236.4
SMD5	a	1073.10	1065.50	5290	0.0014	0.02	0.64		8.6	14.4	23	28.8	387.2	660.1		0	0	2	100	100	0.0	15.2	353.0	609.1	23	44.0	740.2	1269.2
SMD6	a	1065.50	1057.60	5150	0.0015	0.02	0.64	48.0	8.9	14.9	72	77.8	448.1	730.1		1	60	0	0	60	0.0	9.1	211.8	365.4	72	86.9	659.9	1095.6

CH2M HILL

Subject	Maryvale ADMS: City of Phoenix	By:	J. GEISBUSH
	Street Capacity Diversions	Checked:	D. DUST
	Case 1: Weir Flow Into Side Streets	Project No.	132586

City of Phoenix Street Widths (a = arterial (1 mi.), c = collector (½ mi.), r = residential):

	R/W, ft.	PW, ft.
a	80	64
c	60	40
r	50	36

Curb height = 0.5 ft.

Capacity, $Q = (1.49/n)*(A^{1.67}/P^{0.67})*S^{0.5}$

Q = discharge, cfs
n = Manning's roughness
A = flow area, sq. ft.
P = wetted perimeter, ft.
S = longitudinal slope, ft/ft

Weir Flow down side streets, $Q=CLh^{1.5}$

C = 2.9
L = weir length, ft.
h = flow depth, ft.

Streets
TB = Thunderbird Road
CR = Cactus Road
PA = Peoria Avenue
OA = Olive Avenue
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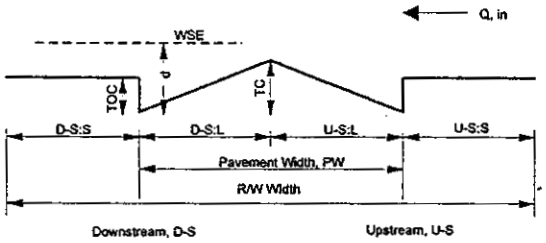

								DOWN-STREET FLOW & STORM DRAIN FLOW							WEIR FLOW & STORM DRAIN FLOW (flowing out of main street and into side streets) (DQ)									INFLOW CAPACITY (DI)			
								Storm Drain	Qcap before overtop curb			Top of Crown,	1.0 ft over	1.5 ft over	Storm Drain		Coll.		Res.										
Node	Street Type (a, c, r)	Top of Slope Elev., ft	Bottom of Slope Elev., ft.	Slope Length, ft.	Ave. Long. Slope, ft/ft	Cross Slope, Sx, ft/ft	Top of Crown ft.	Capacity, cfs	D-S cfs	U-S cfs	Total, cfs	TC, cfs	crown, cfs	crown, cfs	Capacity, cfs	# Coll. streets	street R/W, ft.	# Res. Streets	street R/W, ft.	Total R/W, ft.	Weir Q at TOC, cfs	Weir Q at at TC, cfs	Weir Q at TC+1.0, cfs	Weir Q at TC+1.5, cfs	Total at TOC, cfs	Total at TC, cfs	Total TC+1.0, cfs	Total TC+1.5, cfs
SMD7	a	1057.60	1049.60	5270	0.0015	0.02	0.64		8.9	14.8	24	29.6	398.0	678.6		0	0	1	50	50	0.0	7.6	176.5	304.5	24	37.2	574.5	983.1
SMD8	a	1049.60	1036.10	5310	0.0025	0.02	0.64		11.5	19.2	31	38.4	515.0	878.2		0	0	1	50	50	0.0	7.6	176.5	304.5	31	45.9	691.5	1182.7
SMD9	a	1036.10	1025.00	5270	0.0021	0.02	0.64		10.5	17.5	28	34.9	468.8	799.3		0	0	1	50	50	0.0	7.6	176.5	304.5	28	42.5	645.3	1103.8
SMD10	a	1025.00	1021.70	5300	0.0006	0.02	0.64		5.7	9.5	15	19.0	254.9	434.6		1	60	0	0	60	0.0	9.1	211.8	365.4	15	28.1	466.7	800.0
SMD11	a	1021.70	1010.90	5280	0.0020	0.02	0.64		10.3	17.2	28	34.4	462.0	787.7		0	0	1	50	50	0.0	7.6	176.5	304.5	28	42.0	638.5	1092.2
SMD12	a	1010.90	998.90	5100	0.0024	0.02	0.64		11.1	18.4	29	36.9	495.5	844.8		0	0	1	50	50	0.0	7.6	176.5	304.5	29	44.5	672.0	1149.3
SMD13	a	998.90	974.00	7490	0.0033	0.02	0.64		13.1	21.9	35	43.9	589.0	1004.2		0	0	2	100	100	0.0	15.2	353.0	609.1	35	59.0	941.9	1613.2

Note:
* Based on Location of Grade Break & Associated Sub-basins

CH2M HILL

Subject	Maryvale ADMS: City of Peoria	By:	J. GEISBUSH
	Street Capacity Diversions	Checked:	D. DUST
	Case 1: Weir Flow Into Side Streets	Project No.	132586

City of Peoria Street Widths (a = arterial (1 mi.), c = collector (½ mi.), r = residential):

	R/W, ft.	PW, ft.
a	130	64
c	60	40
r	50	32

Curb height = 0.5 ft.

Capacity, $Q = (1.49/n)*(A^{1.67}/P^{0.67})*S^{0.5}$

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A = flow area, sq. ft.
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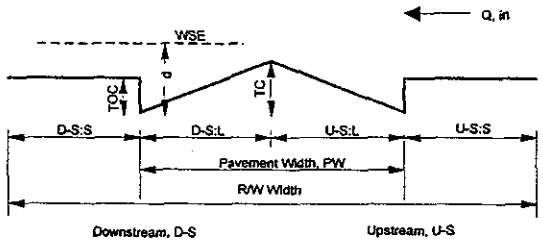


								DOWN-STREET FLOW & STORM DRAIN FLOW							WEIR FLOW & STORM DRAIN FLOW (flowing out of main street and into side streets) (DQ)									INFLOW CAPACITY (DI)			
Node	Street Type (a, c, r)	Top of Slope Elev., ft	Bottom of Slope Elev., ft.	Slope Length, ft.	Ave. Long. Slope, ft/ft	Cross Slope, Sx, ft/ft	Top of Crown ft.	Storm Drain Capacity, cfs	Qcap before overtop curb D-S cfs	Qcap before overtop curb U-S cfs	Qcap before overtop curb Total, cfs	Top of Crown, TC, cfs	1.0 ft over crown, cfs	1.5 ft over crown, cfs	Storm Drain Capacity, cfs	# Coll. streets	Coll. street R/W, ft.	# Res. Streets	Res. street R/W, ft.	Total R/W, ft.	Weir Q at TOC, cfs	Weir Q at at TC, cfs	Weir Q at TC+1.0, cfs	Weir Q at TC+1.5, cfs	Total at TOC, cfs	Total at TC, cfs	Total TC+1.0, cfs	Total TC+1.5, cfs
SCR2	a	1183.00	1167.30	5330	0.0029	0.02	0.64	367.0	12.4	30.8	410	428.7	1051.7	1541.3		1	60	3	150	210	0.0	31.9	741.3	1279.0	410	460.6	1793.0	2820.4
SCR3	a	1167.30	1152.20	5330	0.0028	0.02	0.64	777.0	12.1	30.2	819	837.5	1448.5	1928.7		1	60	5	250	310	0.0	47.1	1094.3	1888.1	819	884.6	2542.7	3816.8
SCR4	a	1151.90	1138.40	5050	0.0027	0.02	0.64	1000.0	11.8	29.4	1041	1058.7	1652.3	2118.7		0	0	2	100	100	0.0	15.2	353.0	609.1	1041	1073.9	2005.3	2727.8
SPA4	a	1170.30	1151.80	5300	0.0035	0.02	0.64		13.5	33.6	47	67.1	745.3	1278.4		1	60	3	150	210	0.0	31.9	741.3	1279.0	47	99.0	1486.6	2557.4
SPA5	a	1151.80	1139.90	5310	0.0022	0.02	0.64		10.8	26.9	38	53.8	597.2	1024.3		0	0	2	100	100	0.0	15.2	353.0	609.1	38	69.0	950.2	1633.4
SPA6	a	1140.70	1117.40	6260	0.0037	0.02	0.64	147.0	13.9	34.7	196	216.3	916.7	1467.1		1	60	2	100	160	0.0	24.3	564.8	974.5	196	240.6	1481.4	2441.6
S75A	a	1201.60	1185.90	5230	0.0030	0.02	0.64		12.5	31.1	44	62.2	691.2	1185.5		1	60	4	200	260	0.0	39.5	917.8	1583.6	44	101.7	1609.0	2769.1
S75B	a	1185.90	1167.30	5280	0.0035	0.02	0.64		13.5	33.7	47	67.4	748.8	1284.2		1	60	1	50	110	0.0	16.7	388.3	670.0	47	84.1	1137.1	1954.2
S75C	a	1167.30	1151.80	5230	0.0030	0.02	0.64		12.4	30.9	43	61.8	686.8	1177.9		1	60	2	100	160	0.0	24.3	564.8	974.5	43	86.1	1251.6	2152.4
S75D	a	1151.80	1137.80	5230	0.0027	0.02	0.64		11.8	29.4	41	58.8	652.7	1119.5		1	60	4	200	260	0.0	39.5	917.8	1583.6	41	98.3	1570.5	2703.1
S75E	a	1137.80	1127.80	5290	0.0019	0.02	0.64		9.9	24.7	35	49.4	548.5	940.8		0	0	1	50	50	0.0	7.6	176.5	304.5	35	57.0	725.0	S
STB1	a	1200.00	1186.00	5300	0.0026	0.02	0.64		11.7	29.2	41	58.4	648.4	1112.1		1	60	2	100	160	0.0	24.3	564.8	974.5	41	82.7	1213.2	2086.6
STB2	a	1186.00	1168.10	5330	0.0034	0.02	0.64		13.2	32.9	46	65.8	731.1	1253.9		1	60	1	50	110	0.0	16.7	388.3	670.0	46	82.5	1119.4	1923.9
S83A	a	1168.10	1152.20	5220	0.0030	0.02	0.64		12.6	31.3	44	62.7	696.3	1194.2		1	60	5	250	310	0.0	47.1	1094.3	1888.1	44	109.8	1790.5	3082.3
S83B	a	1167.30	1151.80	5230	0.0030	0.02	0.64		12.4	30.9	43	61.8	686.8	1177.9		1	60	2	100	160	0.0	24.3	564.8	974.5	43	86.1	1251.6	2152.4
S83C	a	1139.90	1123.60	5250	0.0031	0.02	0.64		12.7	31.6	44	63.3	703.0	1205.7		1	60	1	50	110	0.0	16.7	388.3	670.0	44	80.0	1091.2	1875.6
S83D	a	1123.60	1103.00	5230	0.0039	0.02	0.64		14.3	35.6	50	71.3	791.8	1358.0		1	60	2	100	160	0.0	24.3	564.8	974.5	50	95.6	1356.5	2332.5
S91A	a	1120.30	1110.10	5280	0.0019	0.02	0.64		10.0	25.0	35	49.9	554.5	951.0		0	0	1	50	50	0.0	7.6	176.5	304.5	35	57.5	731.0	1255.6
SOA5	a	1154.30	1137.60	5280	0.0032	0.02	0.64	262.0	12.8	31.9	307	325.9	971.5	1478.9		0	0	2	100	100	0.0	15.2	353.0	609.1	307	341.1	1324.5	2087.9
SOA6	a	1137.60	1123.60	5290	0.0026	0.02	0.64	427.0	11.7	29.2	468	485.4	1076.0	1540.1		1	60	1	50	110	0.0	16.7	388.3	670.0	468	502.1	1464.3	2210.1
SOA7	a	1123.60	1110.10	5310	0.0025	0.02	0.64	546.0	11.5	28.6	586	603.3	1182.1	1637.0		1	60	2	100	160	0.0	24.3	564.8	974.5	586	627.6	1746.9	2611.5

CH2M HILL

Subject: Maryvale ADMS: City of Glendale
Street Capacity Diversions: PART 1
Case 2: Weir & Normal Depth Flow Into Side Streets

By: J. GEISBUSH
Checked: D. DUST
Project No. 132586

Street Widths (a = arterial (1 mi.), c = collector (½ mi.), r = residential):

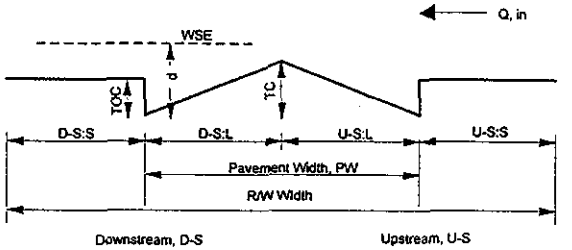
	R/W, ft.	PW, ft.
a	110	68
c	70	43
r	50	35

Curb height = 0.5 ft.

Capacity, $Q = (1.49/n)*(A^{1.67}/P^{0.67})*S^{0.5}$
Q = discharge, cfs
n = Manning's roughness
A = flow area, sq. ft.
P = wetted perimeter, ft.
S = longitudinal slope, ft/ft

Weir Flow down side streets, $Q=CLh^{1.5}$
C = 2.6
L = weir length, ft.
h = flow depth, ft.

Streets
TB = Thunderbird Road
CR = Cactus Road
PA = Peoria Avenue
OA = Olive Avenue
NA = Northern Avenue
GA = Glendale Avenue
BH = Bethany Home Road
CB = Camelback Road
IS = Indian School Road
TR = Thomas Road
MD = McDowell Road



Node	Street Type (a)	ARTERIAL STREET DATA: Top of Slope Elev., ft	Bottom of Slope Elev., ft.	Slope Length, ft.	Ave. Long. Slope, ft/ft	Cross Slope, Sx, ft/ft	TC ft.	DOWN-STREET FLOW: Storm Drain Capacity, cfs	Qcap before overtop curb: D-S cfs	U-S cfs	Total, cfs	Top of Crown, TC, cfs	1.0 ft over crown, cfs	1.5 ft over crown, cfs	WEIR FLOW FROM ARTERIAL TO SIDE STREETS (see attachments for Normal depth flow from the arterial street): # Coll. streets	Coll. street R/W, ft.	# Res. Streets	Res. street R/W, ft.	Total R/W, ft.	Weir Q at TOC, cfs	Weir Q at at TC, cfs	Weir Q at TC+1.0, cfs	Weir Q at TC+1.5, cfs	TOTAL[1] INFLOW CAPACITY (DI): Total at TOC, cfs	Total at TC, cfs	Total TC+1.0, cfs	Total TC+1.5, cfs
SNA4	a	1180.40	1159.10	5280	0.0040	0.02	0.68		14.5	36.1	51	72.2	801.3	1374.3		0		0	0	0.0	0.0	0.0	0.0	77	116.8	1268.5	2150.1
SGA2	a	1184.30	1171.80	5220	0.0024	0.02	0.68	27.0	11.1	27.8	66	82.6	644.3	1085.8		0	2	100	100	0.0	19.9	333.3	566.2	247	305.5	1682.8	2723.8
SGA3	a	1171.80	1165.70	5230	0.0012	0.02	0.68		7.8	19.4	27	38.8	430.8	739.0		0	2	100	100	0.0	19.9	333.3	566.2	57	109.0	1290.6	2179.4
SGA4	a	1165.70	1149.70	5340	0.0030	0.02	0.68		12.5	31.1	44	62.2	690.6	1184.4		0	7	350	350	0.0	69.5	1166.4	1981.6	71	178.8	2350.2	3984.9
SBH1		SPECIAL CASE: 50% EAST & 50% WEST DUE TO GRADE BREAK ON BH										N.A.															
SBH2	a	1157.30	1149.40	5200	0.0015	0.02	0.68		8.9	22.1	31	44.3	491.7	843.4	0	0	1	50	50	0.0	9.9	166.6	283.1	93	159.6	1761.2	2957.7
SIS3	a	1113.70	1105.50	5420	0.0015	0.02	0.68	61.0	8.9	22.1	92	105.2	551.7	902.6	1	70	3	150	220	0.0	43.7	733.2	1245.5	134	221.4	2043.7	3408.1

CH2M HILL

Subject: Maryvale ADMS: City of Glendale
Street Capacity Diversions: PART 2
Case 2: Weir & Normal Depth Flow Into Side Streets

By: J. GEISBUSH
Checked: D. DUST
Project No. 132586

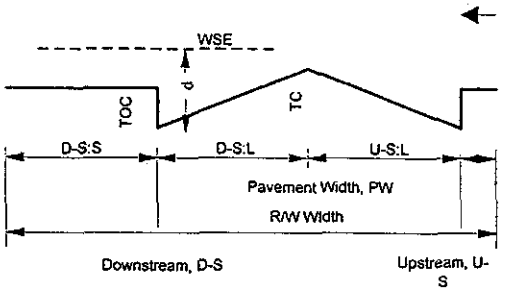
Street Widths (a = arterial (1 mi.), c = collector (½ mi.), r = residential):

	R/W, ft.	PW, ft.
a	110	68
c	70	43
r	50	35

Curb height = 0.5 ft.

Capacity, $Q = (1.49/n)*(A^{1.67}/P^{0.67})*S^{0.5}$
Q = discharge, cfs
n = Manning's roughness
A = flow area, sq. ft.
P = wetted perimeter, ft.
S = longitudinal slope, ft/ft

Streets
TB = Thunderbird Road
CR = Cactus Road
PA = Peoria Avenue
OA = Olive Avenue
NA = Northern Avenue
GA = Glendale Avenue
BH = Bethany Home Road
CB = Camelback Road
IS = Indian School Road
TR = Thomas Road
MD = McDowell Road



Node	Street Type (c)	COLLECTOR STREET DATA: Top of Slope Elev., ft	Bottom of Slope Elev., ft.	Slope Length, ft.	Ave. Long. Slope, ft/ft	Cross Slope, Sx, ft/ft	Top of Crown ft.	COLLECTOR STREET FLOW: Storm Drain Capacity (cfs)	Gutter Depth=0.5' cfs	Gutter Depth= 0.68' cfs	Gutter Depth= 1.68' cfs	Gutter Depth= 2.18' cfs	TOTAL FLOW ONTO SIDE STREETS (COLLECTOR & RESIDENTIAL STREETS) ~~(DI)~~ DQ: Gutter Depth=0.5' cfs	Gutter Depth= 0.68' cfs	Gutter Depth= 1.68' cfs	Gutter Depth= 2.18' cfs
SNA4	C	1168.70	1168.00	240	0.0029	0.02	0.43		26.1	44.7	467.2	775.8	26.1	44.7	467.2	775.8
SGA2	C	1178.70	1178.00	170	0.0041	0.02	0.43	150.0	181.1	203.1	705.2	1071.8	181.1	222.9	1038.4	1638.0
SGA3	C	1168.00	1166.00	540	0.0037	0.02	0.43		29.5	50.3	526.5	874.3	29.5	70.2	859.8	1440.4
SGA4	C	1159.30	1158.00	400	0.0032	0.02	0.43		27.6	47.2	493.2	819.0	27.6	116.6	1659.7	2800.5
SBH1		SPECIAL CASE: 50% EAST & 50% WEST DUE TO GRADE BREAK ON BH														
SBH2	C	1153.30	1152.00	80	0.0162	0.02	0.43		61.7	105.4	1102.9	1831.2	61.7	115.4	1269.5	2114.3
SIS3	C	1109.00	1108.00	130	0.0077	0.02	0.43		42.4	72.5	758.8	1259.9	42.4	116.2	1492.0	2505.5

Appendix G: Street Intersection Diversions

Street Intersection Diversions

Type A: Arterial Street Intersection

Type A - arterial street intersections characteristics:

- Continuous pavement crowns in both directions; that is, valley gutters are **not** used to direct stormwater through the intersection.
- Street slopes in the vicinity of the intersection are relatively mild(i.e., less than 1%).
- Intersection subject to low velocity inundation.

Computational Methodology

Premise: The distribution of flow leaving the intersection is primarily a function of the street capacities immediately downstream of the intersection. The underlying premise is that the flow split would be 50/50 or even, if the street slopes are equal, the effective flow areas/right-of-way widths are equal, and normal depth conditions are dominant downstream of the intersection. This underlying premise is consistent with assumptions used in the HEC-1 models for the ACDC/ADMS by Kaminski-Hubbard Engineering, Inc.(KHE), as documented in ***Volume 1.5: Hydrology Report***(March 1995). In the ACDC/ADMS it was assumed that all flow diversions at arterial street intersections are 50/50 or even.

Procedure: Compute flow diversion percentages based on ratios corresponding to the street capacity immediately downstream of the intersection. The ratios are functions of the street slopes to the 0.5 power and right-of-way/pavement widths. In other words, the ratios are essentially equivalent to ratios of the Normal Depth(i.e. Manning's Equation) capacity for the streets, assuming that the flow depth and hydraulic radius for each street immediately downstream of the intersection are approximately equal.

Input Parameters: Streets slopes immediately downstream of the intersection and right-of-way or pavement widths.

Main Assumptions:

- Normal depth conditions are dominant immediately downstream of the intersection.
- Pavement crowns are continuous in both directions.
- Intersection flooding can be characterized as being slow moving with relatively deep ponding.
- Street or right-of-way widths are nearly equal in both directions.

CH2M HILL

Subject: **MARYVALE ADMS**
Type A: Intersection Diversions

By: **J. GEISBUSH**
Checked: **D. DUST**
Project No.: **132586**

	Glendale			Peoria			Phoenix		
	a	c	r	a	c	r	a	c	r
R/W [ft]	110	70	50	130	60	50	80	60	50
PW [ft]	68	43	35	64	40	32	64	40	36

(a = arterial (1 mi.), c = collector (½ mi.), r = residential):

Note: County Arterial Streets' Assumed R/W is 110'

INTERSECTION PARAMETERS (enter)						CALCULATIONS:							
Location		Street Slope, S,		R/W Width		Slope Ratios,SR, (S^1/2)		R/W Ratios, R/WR,		Composite Ratios,CR,		Existing Storm Drain Capacity,	
E-W Street	N-S Street	West, ft/ft	South, ft/ft	West, ft.	South, ft.	West, (SR-W) $S_w^{1/2}/(S_w^{1/2}+S_s^{1/2})$	South, (SR-S) $S_s^{1/2}/(Sw^{1/2}+Ss^{1/2})$	West, (R/WR-W) $W_w/(W_w+W_s)$	South, (R/WR-S) $W_s/(W_w+W_s)$	West, (CR-W)	South, (CR-S)	West, cfs	South, cfs
TB	67	0.00308	0.00533	130	110	0.43	0.57	0.54	0.46	**0.47**	**0.53**		
TB	75	0.00640	0.00450	110	110	0.54	0.46	0.50	0.50	**0.54**	**0.46**		
TB	83	0.00330	0.00320	110	110	0.50	0.50	0.50	0.50	**0.50**	**0.50**		
CR	59	0.00274	0.00353	110	110	0.47	0.53	0.50	0.50	**0.47**	**0.53**		
CR	67	0.00323	0.00690	130	110	0.41	0.59	0.54	0.46	**0.45**	**0.55**	213	
CR	75	0.00300	0.00400	130	130	0.46	0.54	0.50	0.50	**0.46**	**0.54**	489	
CR	83	0.00286	0.00386	130	130	0.46	0.54	0.50	0.50	**0.46**	**0.54**	823	
PA	51	0.00438	0.00700	110	110	0.44	0.56	0.50	0.50	**0.44**	**0.56**		
PA	59	0.00167	0.00250	110	110	0.45	0.55	0.50	0.50	**0.45**	**0.55**		
PA	67	0.00740	0.00194	130	110	0.66	0.34	0.54	0.46	**0.70**	**0.30**		
PA	75	SPECIAL CASE -- TYPE B											
PA	83	-	-	-	-					**0.00**	**1.00**	96	
PA	91	0.00346	0.00900	130	130	0.38	0.62	0.50	0.50	**0.38**	**0.62**	147	
OA	35	0.00296	0.01511	80	80	0.31	0.69	0.50	0.50	**0.31**	**0.69**		54
OA	43	0.00500	0.00563	110	80	0.49	0.51	0.58	0.42	**0.56**	**0.44**		81
OA	51	0.00320	0.00314	110	110	0.50	0.50	0.50	0.50	**0.50**	**0.50**	350	
OA	59	0.01333	0.01286	110	110	0.50	0.50	0.50	0.50	**0.50**	**0.50**	380	
OA	67	0.00496	0.00863	110	110	0.43	0.57	0.50	0.50	**0.43**	**0.57**	750	
OA	75	-	-	-	-					**0.00**	**1.00**	392	
OA	83	0.00281	0.00246	130	130	0.52	0.48	0.50	0.50	**0.52**	**0.48**	397	
OA	91	0.00063	0.00053	130	130	0.52	0.48	0.50	0.50	**0.52**	**0.48**	546	
NA	27	0.00000	0.00464	80	80	0.00	1.00	0.50	0.50	**0.00**	**1.00**		104
NA	35	0.00044	0.00443	80	80	0.24	0.76	0.50	0.50	**0.24**	**0.76**		81
NA	43	-	0.00313	-	80					**0.00**	**1.00**		115

CH2M HILL

Subject: **MARYVALE ADMS**
Type A: Intersection Diversions

By: **J. GEISBUSH**
Checked: **D. DUST**
Project No.: **132586**

	Glendale			Peoria			Phoenix		
	a	c	r	a	c	r	a	c	r
R/W [ft]	110	70	50	130	60	50	80	60	50
PW [ft]	68	43	35	64	40	32	64	40	36

(a = arterial (1 mi.), c = collector (½ mi.), r = residential):

Note: County Arterial Streets' Assumed R/W is 110'

INTERSECTION PARAMETERS (enter)						CALCULATIONS:							
Location		Street Slope, S,		R/W Width		Slope Ratios,SR, (S^1/2)		R/W Ratios, R/WR,		Composite Ratios,CR,		Existing Storm Drain Capacity,	
E-W Street	N-S Street	West, ft/ft	South, ft/ft	West, ft.	South, ft.	West, (SR-W) $S_w^{1/2}/(S_w^{1/2}+S_s^{1/2})$	South, (SR-S) $S_s^{1/2}/(Sw^{1/2}+Ss^{1/2})$	West, (R/WR-W) $W_w/(W_w+W_s)$	South, (R/WR-S) $W_s/(W_w+W_s)$	West, (CR-W)	South, (CR-S)	West, cfs	South, cfs
NA	67	-	-	-	-					0.00	1.00		
NA	75	0.00947	0.00188	110	110	0.69	0.31	0.50	0.50	0.69	0.31		
NA	83	0.00714	0.02500	130	130	Note: All flow is to the West				1.00	0.00	214	
NA	91	0.00262	0.00611	110	110	0.40	0.60	0.50	0.50	0.40	0.60	33	
GA	27	0.00000	0.00733	80	80	0.00	1.00	0.50	0.50	0.00	1.00		120
GA	35	0.00256	0.05750	80	80	0.17	0.83	0.50	0.50	0.17	0.83		64
GA	43	0.00265	0.00305	110	80	0.48	0.52	0.58	0.42	0.56	0.44		100
GA	51	0.00283	0.00425	110	110	0.45	0.55	0.50	0.50	0.45	0.55		
GA	59	-	-	-	-	Note: All flow is to the North				0.00	1.00		
GA	67	0.00700	0.00130	110	110	0.70	0.30	0.50	0.50	0.70	0.30		
GA	75	0.00600	0.01500	110	110	0.39	0.61	0.50	0.50	0.39	0.61		
GA	83	0.00826	0.00373	110	110	0.60	0.40	0.50	0.50	0.60	0.40	455	
GA	91	0.00400	0.00125	110	110	0.64	0.36	0.50	0.50	0.64	0.36	455	
GA	99	-	0.00636	-	110	Note: All flow is to the South				0.00	1.00	487	
BH	27	0.00000	0.00667	80	80	0.00	1.00	0.50	0.50	0.00	1.00		145
BH	35	0.00000	0.00733	80	80	0.00	1.00	0.50	0.50	0.00	1.00		55
BH	43	0.00183	0.00325	110	80	0.43	0.57	0.58	0.42	0.51	0.49		100
BH	51	-	-	-	-	Note: All flow is to the South				0.00	1.00		
BH	59	0.00630	0.01000	110	110	0.44	0.56	0.50	0.50	0.44	0.56		
BH	67	0.00120	0.00430	110	110	0.35	0.65	0.50	0.50	0.35	0.65		
BH	75	0.01000	0.00200	110	110	0.69	0.31	0.50	0.50	0.69	0.31		
BH	83	SPECIAL CASE				70/30 Spilt Based on Road Slope & Grades				0.30	0.70		
BH	91	SPECIAL CASE		110	110	Storm Drain Only							
BH	99	SPECIAL CASE		110	110	Storm Drain Only							
CB	27	-	0.00667	80	80	Note: All flow is to the South				0.00	1.00		152
CB	35	0.00000	0.00688	80	80	0.00	1.00	0.50	0.50	0.00	1.00		86
CB	43	-	-	-	-	Note: All flow is to the South				0.00	1.00		100

CH2M HILL

Subject: **MARYVALE ADMS**
Type A: Intersection Diversions

By: **J. GEISBUSH**
Checked: **D. DUST**
Project No.: **132586**

	Glendale			Peoria			Phoenix		
	a	c	r	a	c	r	a	c	r
R/W [ft]	110	70	50	130	60	50	80	60	50
PW [ft]	68	43	35	64	40	32	64	40	36

(a = arterial (1 mi.), c = collector (½ mi.), r = residential):

Note: County Arterial Streets' Assumed R/W is 110'

INTERSECTION PARAMETERS (enter)						CALCULATIONS:							
Location		Street Slope, S,		R/W Width		Slope Ratios,SR, (S^1/2)		R/W Ratios, R/WR,		Composite Ratios,CR,		Existing Storm Drain Capacity,	
E-W Street	N-S Street	West, ft/ft	South, ft/ft	West, ft.	South, ft.	West, (SR-W) $S_w^{1/2}/(S_w^{1/2}+S_s^{1/2})$	South, (SR-S) $S_s^{1/2}/(Sw^{1/2}+Ss^{1/2})$	West, (R/WR-W) $W_w/(W_w+W_s)$	South, (R/WR-S) $W_s/(W_w+W_s)$	West, (CR-W)	South, (CR-S)	West, cfs	South, cfs
CB	51	0.00620	0.00570	80	80	0.51	0.49	0.50	0.50	**0.51**	**0.49**		
CB	59	0.00670	0.00800	80	80	0.48	0.52	0.50	0.50	**0.48**	**0.52**		14
CB	67	0.00360	0.00500	110	80	0.46	0.54	0.58	0.42	**0.54**	**0.46**		
CB	75	0.00765	0.02600	110	110	0.35	0.65	0.50	0.50	**0.35**	**0.65**		
CB	83	0.01875	0.00600	80	80	0.64	0.36	0.50	0.50	**0.64**	**0.36**		
CB	91	0.00211	0.00364	80	80	0.43	0.57	0.50	0.50	**0.43**	**0.57**		
CB	99	0.00429	0.00225	110	80	0.58	0.42	0.58	0.42	**0.66**	**0.34**		
CB	107	0.01250	0.00833	110	110	0.55	0.45	0.50	0.50	**0.55**	**0.45**		
IS	27	-	0.01800	-	80	Note: All flow is to the South				**0.00**	**1.00**		160
IS	35	Note: Flow is in 3 Directions - 1) South Along 35th Ave -2) West along "Frontage Rd" -3) S.E. Along Grand Ave											75
IS	43	0.00200	0.00590	80	80	0.37	0.63	0.50	0.50	**0.37**	**0.63**		89
IS	51	0.0008	0.01000	80	80	0.22	0.78	0.50	0.50	**0.22**	**0.78**		207
IS	59	0.0025	0.00600	80	80	0.39	0.61	0.50	0.50	**0.39**	**0.61**		359
IS	67	-	-	-	-	Note: All flow is to the South due to storm drain				**1.00**	**0.00**		174
IS	75	0.00571	0.04000	80	80	0.27	0.73	0.50	0.50	**0.27**	**0.73**	11	161
IS	83	0.00846	0.00229	80	80	0.66	0.34	0.50	0.50	**0.66**	**0.34**		199
IS	91	0.00800	0.00100	110	80	0.74	0.26	0.58	0.42	**0.80**	**0.20**		162
IS	99	0.00654	0.00100	110	80	0.72	0.28	0.58	0.42	**0.78**	**0.22**		
IS	107	0.00750	0.03000	80	80	0.33	0.67	0.50	0.50	**0.33**	**0.67**		
TR	27	SPECIAL CASE : ALL FLOW SOUTH EXCEPT FOR STORM DRAIN SYSTEMS										33	160
TR	35	0.00050	0.00619	80	80	0.22	0.78	0.50	0.50	**0.22**	**0.78**	20	63
TR	43	0.00036	0.00667	80	80	0.19	0.81	0.50	0.50	**0.19**	**0.81**		262
TR	51	0.00260	0.00650	80	80	0.39	0.61	0.50	0.50	**0.39**	**0.61**		281
TR	59	0.00091	0.00200	80	80	0.40	0.60	0.50	0.50	**0.40**	**0.60**		389
TR	67	0.00571	0.01333	80	80	0.40	0.60	0.50	0.50	**0.40**	**0.60**		240
TR	75	0.00343	0.01200	80	80	0.35	0.65	0.50	0.50	**0.35**	**0.65**		328
TR	83	0.00240	0.00800	80	80	0.35	0.65	0.50	0.50	**0.35**	**0.65**		243
TR	91	0.00300	0.00545	80	80	0.43	0.57	0.50	0.50	**0.43**	**0.57**		326

CH2M HILL

Subject: MARYVALE ADMS
Type A: Intersection Diversions

By: J. GEISBUSH
Checked: D. DUST
Project No.: 132586

	Glendale			Peoria			Phoenix		
	a	c	r	a	c	r	a	c	r
R/W [ft]	110	70	50	130	60	50	80	60	50
PW [ft]	68	43	35	64	40	32	64	40	36

(a = arterial (1 mi.), c = collector (½ mi.), r = residential):

Note: County Arterial Streets' Assumed R/W is 110'

INTERSECTION PARAMETERS (enter)						CALCULATIONS:							
Location		Street Slope, S,		R/W Width		Slope Ratios,SR, (S^1/2)		R/W Ratios, R/WR,		Composite Ratios,CR,		Existing Storm Drain Capacity,	
E-W Street	N-S Street	West, ft/ft	South, ft/ft	West, ft.	South, ft.	West, (SR-W) $S_w^{1/2}/(S_w^{1/2}+S_s^{1/2})$	South, (SR-S) $S_s^{1/2}/(Sw^{1/2}+Ss^{1/2})$	West, (R/WR-W) $W_w/(W_w+W_s)$	South, (R/WR-S) $W_s/(W_w+W_s)$	West, (CR-W)	South, (CR-S)	West, cfs	South, cfs
TR	99	0.00333	0.00037	80	80	0.75	0.25	0.50	0.50	**0.75**	**0.25**		
TR	107	0.00255	0.00076	80	80	0.65	0.35	0.50	0.50	**0.65**	**0.35**		
TR	115	0.00078	0.00045	80	80	0.57	0.43	0.50	0.50	**0.57**	**0.43**		
MD	27	0.00300	0.00818	80	80	0.38	0.62	0.50	0.50	**0.38**	**0.62**		131
MD	35	0.00013	0.00056	80	80	0.33	0.67	0.50	0.50	**0.33**	**0.67**		53
MD	43	-	0.00773	-	80	Note: All flow is to the South				**0.00**	**1.00**		207
MD	51	0.00061	0.02200	80	80	0.14	0.86	0.50	0.50	**0.14**	**0.86**		286
MD	59	0.00417	0.00682	80	80	0.44	0.56	0.50	0.50	**0.44**	**0.56**		448
MD	67	0.00229	0.00485	80	80	0.41	0.59	0.50	0.50	**0.41**	**0.59**		532
MD	75	0.00214	0.00714	80	80	0.35	0.65	0.50	0.50	**0.35**	**0.65**		467
MD	83	0.00955	0.00368	80	80	0.62	0.38	0.50	0.50	**0.62**	**0.38**		243
MD	91	0.00167	0.00330	80	80	0.42	0.58	0.50	0.50	**0.42**	**0.58**		380
MD	99	0.00436	0.02833	80	80	0.28	0.72	0.50	0.50	**0.28**	**0.72**		
MD	107	0.00141	-	80	-	Note: All flow is to the West				**1.00**	**0.00**		
MD	115	0.00450	0.00900	80	80	0.41	0.59	0.50	0.50	**0.41**	**0.59**		
I-10 A	(27TH AVE.)					SPECIAL CASE: FLOW CONVEYED SOUTH OF I-10 BY STORM DRAIN SYSTEM							131
I-10 C	(43RD AVE.)					SPECIAL CASE: FLOW CONVEYED SOUTH OF I-10 BY STORM DRAIN SYSTEM							207

Street Intersection Diversions

Type B: Arterial Street Intersection

Type B - arterial street intersections characteristics:

- Continuous pavement crowns in only one direction; that is, valley gutters are may be used to direct stormwater through the intersection.
- Street slopes in the vicinity of the intersection are relatively mild(i.e., less than 1%).
- Intersection subject to low velocity inundation.

Computational Methodology

Premise: Stormwater primarily flows down the street with the continuous crown and gutter slope; however, stormwater will weir flow into the street with the gradebreak.

Procedure: Compute flow diversion rating data based on normal depth and weir flow computations.

Input Parameters: Streets slopes immediately downstream of the intersection and right-of-way or pavement widths.

Main Assumptions:

- Normal depth conditions are appropriate for the street with the continuous crown and gutter slope.
- Weir flow conditions apply to flow entering the street with the grade break.
- Intersection flooding can be characterized as being slow moving with relatively deep ponding.

CH2M HILL

Subject: Maryvale ADMS:
Type B: Street Intersection Diversions

By: J. GEISBUSH
Checked: D. DUST
Project No. 132586

City of Peoria Street Widths (a = arterial (1 mi.), c = collector (½ mi.), r = residential):

	R/W, ft.	PW, ft.
a	110	68
c	70	43
r	50	35

Curb height = 0.5 ft.

Capacity, $Q = (1.49/n)*(A^{1.67}/P^{0.67})*S^{0.5}$
Q = discharge, cfs
n = Manning's roughness
A = flow area, sq. ft.
P = wetted perimeter, ft.
S = longitudinal slope, ft/ft

Weir Flow down side streets, $Q=CLh^{1.5}$
C = 2.9
L = weir length, ft.
h = flow depth, ft.

Streets
TB = Thunderbird Road
CR = Cactus Road
PA = Peoria Avenue
OA = Olive Avenue
NA = Northern Avenue
GA = Glendale Avenue
BH = Bethany Home Road
CB = Camelback Road
IS = Indian School Road
TR = Thomas Road
MD = McDowell Road

DQ

								DOWN-STREET FLOW							WEIR FLOW INTO AN ARTERIAL STREET						INFLOW CAPACITY (DI)			
									Qcap before overtop curb															
Node	Street Type (a)	Top of Slope Elev., ft	Bottom of Slope Elev., ft.	Slope Length, ft.	Ave. Long. Slope, ft/ft	Cross Slope, Sx, ft/ft	Top of Crown ft.	Storm Drain Capacity, cfs	D-S cfs	U-S cfs	Total cfs	Top of Crown, TC, cfs	1.0 ft over crown, cfs	1.5 ft over crown, cfs	Storm Drain Capacity cfs	Arterial Street R/W, ft.	Weir Q at Top of Curb cfs	Weir Q at at TC, cfs	Weir Q at TC+1.0, cfs	Weir Q at TC+1.5, cfs	Total at TOC, cfs	Total at TC, cfs	Total TC+1.0, cfs	Total TC+1.5, cfs
PA75(1)	a	1151.80	1150.00	700	0.0026	0.02	0.68		11.6	28.8	40	57.6	639.7	1097.2		130	0.0	28.8	483.2	820.9	40	86.4	1123.0	1918.2

NOTES:
(1) Flow diversion is to the south down 75th Avenue. Peoria Avenue has a grade break just to the west of the intersection; hence, weir flow is west.

Changing Intersection Diversions to Reflect Storm Drain Systems

Computational Methodology

Premise: Modify the inflow and outflow data to reflect an existing or future storm drain system.

Procedure: Modify the DI & DQ Cards as indicated in the example below.

Input Parameters: The storm drain system's design capacity.

Main Assumptions:

- There is a sufficient number of inlets to allow the storm drain system to capture flow up to its design capacity.
- Extra capacity, due to surcharge, is insignificant and not taken into account.

Example: Street Intersection Diversion at "00"th Ave. and Long Rd.

HEC-1 Input : No Storm Drain:

```
- KK DLR00
- KM STREET INTERSECTION DIVERSION
- KM 53% West & 47% South
- DT D00LR
- DI      0  1000.
- DQ      0   470.
```

HEC-1 Input: Storm Drain Along "Long Road"(LR) at "00"th Avenue: Capacity = 80 cfs:

```
- KK DLR00
- KM STREET INTERSECTION DIVERSION
- KM 53% West & 47% South
- KM FUTURE STORM DRAIN ALONG LONG ROAD
- KM CAPACITY = 80 CFS WEST
- DT D00LR
- DI      0     80.  10080.
```

(Note: The 2nd value is set equal to the storm drain capacity(80cfs). & the 3rd value is 10000 plus the storm drain capacity (80cfs)

```
- DQ      0    0.01   4700.
```

(Note: The values are 47% of the DI -Card values minus the storm drain capacity (80cfs).).

HEC-1 Input: Storm Drain Along "00"th Ave. at "Long Road"(LR) :Capacity = 75 cfs:

```
- KK DLR00
- KM STREET INTERSECTION DIVERSION
- KM 53% West & 47% South
- KM FUTURE STORM DRAIN ALONG 00th AVE.
- KM CAPACITY = 75 CFS SOUTH
- DT D00LR
- DI      0     75.  10075.
```

(Note: The 2nd value is set equal to the storm drain capacity(75cfs). & the 3rd value is 10000 plus the storm drain capacity (75cfs)

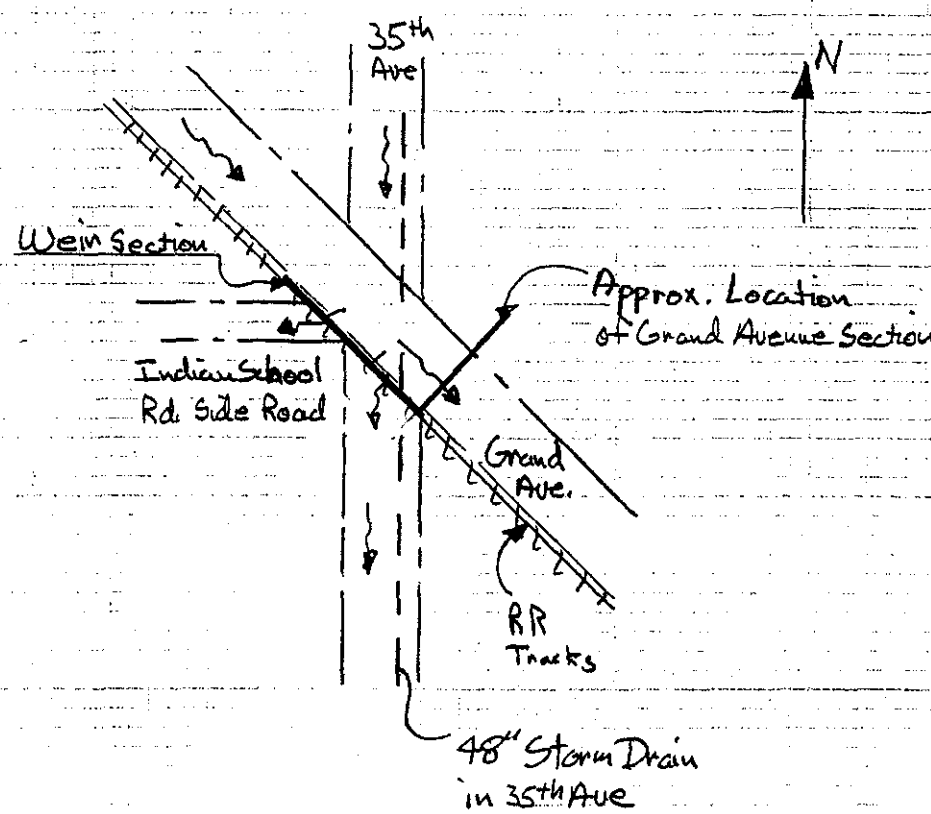
```
- DQ      0     75.   4775.
```

(Note: The values are 47% of the DI -Card values minus the storm drain capacity (80cfs)).

Special Case Flow Diversions

Flow Split @ 35th Avenue & Grand Avenue

Schematic Diagram



Project Maryvale
Project No. 132586
Sheet No. 2 of 4
Calculated by DWD Date 8/96

WEIR FLOW COMPUTATIONS

LOCATION/DESCRIPTION:

DIS35 Rating Curves

Flow Southwest over RR

CROSS SECTION PARAMETERS: FILENAME: dis35-rr.SEC

No. of Cross Section Points: 24 Bed Slope: 0.00190 Max Elev.: 1117.81
Bank Stations.....Left: 271.0 Right....: 880.0 Min Elev.: 1117.24
Encroachment Stations..Left: 271.0 Right....: 880.0 Weir Coef: 2.700

CROSS SECTION POINTS - Elevations & Stations in feet:

No.	Elev.	Sta.	No.	Elev.	Sta.	No.	Elev.	Sta.
1)	1116.31	0.00	2)	1115.78	13.00	3)	1115.62	13.10
4)	1116.79	58.00	5)	1116.81	58.10	6)	1117.33	61.00
7)	1117.39	61.10	8)	1116.82	61.20	9)	1116.08	101.00
10)	1116.57	101.10	11)	1116.78	104.00	12)	1117.40	109.00
13)	1117.08	160.00	14)	1116.95	167.00	15)	1116.98	169.00
16)	1117.01	172.00	17)	1117.18	204.00	18)	1117.81	263.00
19)	1117.81	271.00	20)	1117.66	398.00	21)	1117.68	500.00
22)	1117.52	609.00	23)	1117.63	716.00	24)	1117.24	880.00

COMPUTED PARAMETERS:

WSEL(ft)	Q(cfs)	H:max(ft)	H:ave(ft)	TW(ft)	A(sf)
1117.50	16.1	0.26	0.13	111.0	14.5
1118.00	448.9	0.76	0.41	609.0	250.3
1118.50	1440.4	1.26	0.91	609.0	554.8

NOTES: Composite Rating Curves

Elev	Weir Flow over RR to 35th Ave (cfs)	Flows South in S.D. in 35th Ave (cfs)	Flow in Gravel Ave (cfs)	Total (cfs)
1116	0	75	4	79
1117	0	75	216	291
1117.24	0	75	265	340
1117.50	16	75	389	480
1118.0	449	75	813	1337
1118.5	1440	75	1460	2975

Project Manyvale
Project No. 132586
Sheet No. 3 of 4
Calculated by DWD Date 8/96

UNIFORM FLOW COMPUTATIONS

LOCATION/DESCRIPTION:

DIS35

Flow Along Grand Ave.

CROSS SECTION PARAMETERS: FILENAME: DIS35-ST.SEC

No. of Cross Section Points: 24 Bed Slope:0.00190 Max Elev.:1117.81
Bank Stations.....Left: 0.0 Right....: 109.0 Min Elev.:1115.62
Encroachment Stations..Left: 0.0 Right....: 271.0
Manning-n Values.....LOB: 0.035 CHANNEL..: 0.016 ROB.....: 0.035

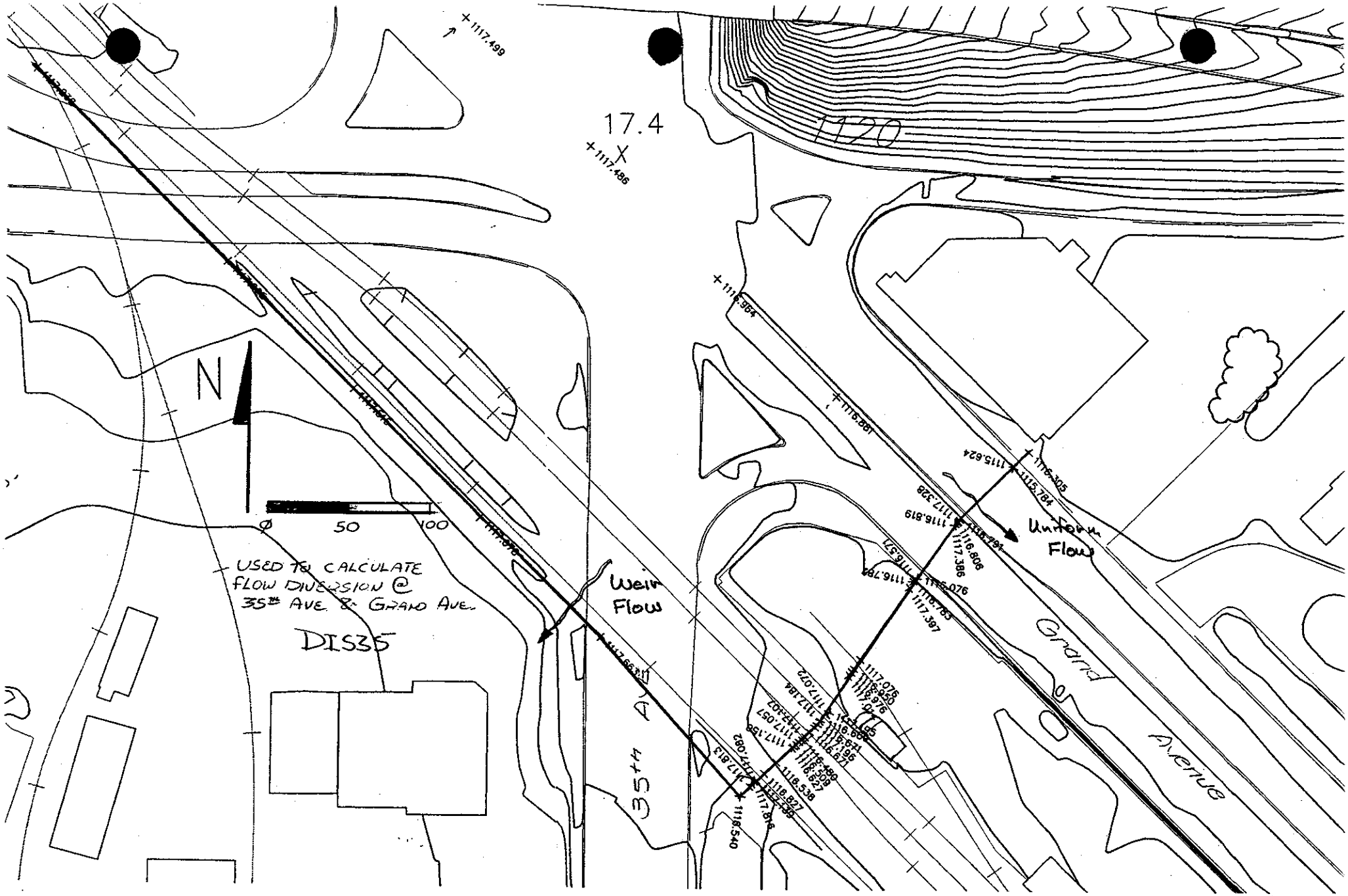
CROSS SECTION POINTS - Elevations & Stations in feet:

No.	Elev.	Sta.	No.	Elev.	Sta.	No.	Elev.	Sta.
1)	1116.31	0.00	2)	1115.78	13.00	3)	1115.62	13.10
4)	1116.79	58.00	5)	1116.81	58.10	6)	1117.33	61.00
7)	1117.39	61.10	8)	1116.82	61.20	9)	1116.08	101.00
10)	1116.57	101.10	11)	1116.78	104.00	12)	1117.40	109.00
13)	1117.08	160.00	14)	1116.95	167.00	15)	1116.98	169.00
16)	1117.01	172.00	17)	1117.18	204.00	18)	1117.81	263.00
19)	1117.81	271.00	20)	1117.66	398.00	21)	1117.68	500.00
22)	1117.52	609.00	23)	1117.63	716.00	24)	1117.24	880.00

COMPUTED PARAMETERS:

WSEL(ft)	Q(cfs)	V(fps)	Fr No.	ne	ALPHA	TW(ft)	A(sf)	WP(ft)	CRWS(ft)
1116.00	4.1	1.2	0.53	0.016	1.0	20.0	3.3	20.1	1115.92
1117.00	215.5	3.0	0.66	0.016	1.0	110.4	71.6	111.2	1116.81
1117.24	265.0	2.5	0.62	0.018	1.2	182.4	106.4	183.4	1116.89
1117.50	388.7	2.4	0.61	0.021	1.4	233.6	161.9	234.8	1117.07
1118.00	813.3	2.8	0.62	0.024	1.7	271.0	290.3	272.1	1117.58
1118.50	1460.2	3.4	0.63	0.025	1.7	271.0	425.8	272.1	1118.07

NOTES:


17.4
1120
N
0
50
100
USED TO CALCULATE
FLOW DIVERSION @
35th AVE. & GRAND AVE.
DIS35
Weir
Flow
Uniform
Flow
35th Ave
Grand
Avenue

Project MARYVALE ADMS
Project No. 132586
Sheet No. 1 of
Calculated by JG Date 8/6

WEIR FLOW COMPUTATIONS

LOCATION/DESCRIPTION:

DBH83 RATING CURVES

Flow west

CROSS SECTION PARAMETERS: FILENAME: dbh83-w.SEC

No. of Cross Section Points: 4 Bed Slope:0.00500 Max Elev.:1085.00
Bank Stations.....Left: 0.0 Right....: 510.0 Min Elev.:1084.00
Encroachment Stations..Left: 0.0 Right....: 390.0 Weir Coef: 2.700

CROSS SECTION POINTS - Elevations & Stations in feet:

No.	Elev.	Sta.	No.	Elev.	Sta.	No.	Elev.	Sta.
1)	1085.00	0.00	2)	1084.00	320.00	3)	1084.00	390.00
4)	1084.00	510.00						

COMPUTED PARAMETERS:

WSEL(ft)	Q(cfs)	H:max(ft)	H:ave(ft)	TW(ft)	A(sf)
1084.50	127.9	0.50	0.33	230.0	75.0
1085.00	534.6	1.00	0.59	390.0	230.0
1085.50	1238.5	1.50	1.09	390.0	425.0

NOTES:

SECTION IS TAKEN LEFT TO RIGHT
LOOKING UPSTREAM

Project MADYVALE ADMS
Project No. 132586
Sheet No. 2 of
Calculated by JG Date 8/6

WEIR FLOW COMPUTATIONS

LOCATION/DESCRIPTION:

DBH83 RATING CURVE SOUTH

CROSS SECTION PARAMETERS: FILENAME: dbh83-s.SEC

No. of Cross Section Points: 4 Bed Slope:0.00500 Max Elev.:1084.00
Bank Stations.....Left: 0.0 Right....: 510.0 Min Elev.:1084.00
Encroachment Stations..Left: 390.0 Right....: 510.0 Weir Coef: 2.700

CROSS SECTION POINTS - Elevations & Stations in feet:

No.	Elev.	Sta.	No.	Elev.	Sta.	No.	Elev.	Sta.
1)	1085.00	0.00	2)	1084.00	320.00	3)	1084.00	390.00
4)	1084.00	510.00						

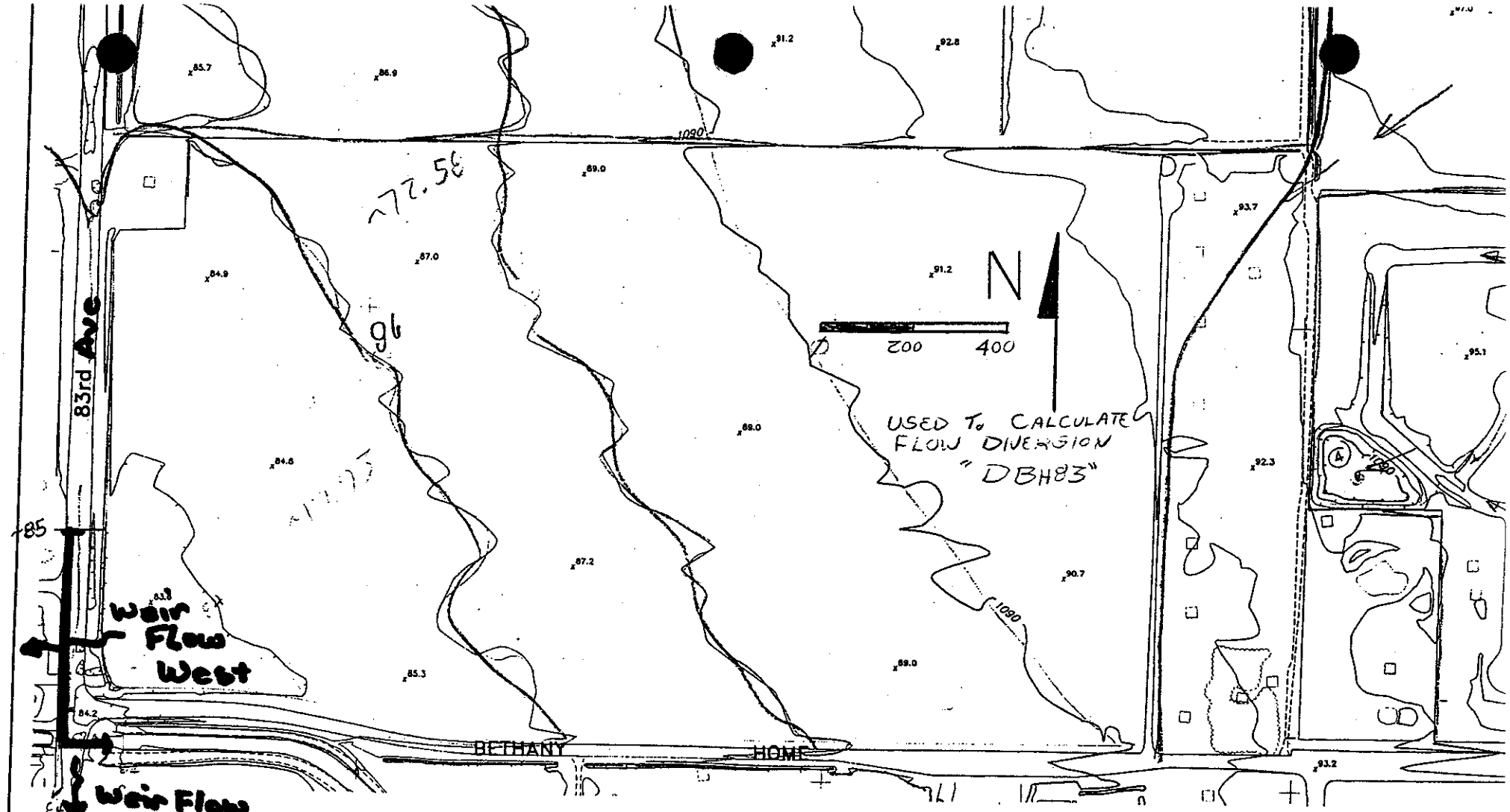
COMPUTED PARAMETERS:

WSEL(ft)	Q(cfs)	H:max(ft)	H:ave(ft)	TW(ft)	A(sf)
1084.50	114.6	0.50	0.50	120.0	60.0
1085.00	324.0	1.00	1.00	120.0	120.0
1085.50	595.2	1.50	1.50	120.0	180.0

NOTES: Composite Rating Curve

ELEV	Q_{WEST}	Q_{SOUTH}	Q_{TOTAL}
1084	Ø	Ø	Ø
1084.5	128	115	243
1085	535	324	859
1085.5	1,239	595	1,844

SECTION IS TAKEN LEFT TO RIGHT LOOKING UPSTREAM.


83rd Ave
BETHANY
HOME
N
200
400
USED To CALCULATE
FLOW DIVERSION
"DBH83"
Weir
Flow
West
Weir Flow
South
E 403000
E 404000
E 405000
1090
1080
85
~72.58
96

Project Maryvale ADMS
Project No. 132586.01
Sheet No. 1 of 3
Calculated by DWD Date 8/8

UNIFORM FLOW COMPUTATIONS

LOCATION/DESCRIPTION:

D1421E Flow Diversion Rating Curves
Flow along N. side of Grand Canal

CROSS SECTION PARAMETERS: FILENAME: d1421-n.SEC

No. of Cross Section Points: 9 Bed Slope:0.00240 Max Elev.:1093.00
Bank Stations.....Left: 1230.0 Right....: 1850.2 Min Elev.:1090.00
Encroachment Stations..Left: 1230.0 Right....: 1850.2
Manning-n Values.....LOB: 0.030 CHANNEL..: 0.030 ROB.....: 0.030

CROSS SECTION POINTS - Elevations & Stations in feet:

No.	Elev.	Sta.	No.	Elev.	Sta.	No.	Elev.	Sta.
1)	1093.00	0.00	2)	1092.00	370.00	3)	1091.00	950.00
4)	1090.20	1230.00	5)	1090.00	1250.00	6)	1090.00	1450.00
7)	1091.00	1850.00	8)	1092.00	1850.10	9)	1093.00	1850.20

COMPUTED PARAMETERS:

WSEL(ft)	Q(cfs)	V(fps)	Fr No.	ne	ALPHA	TW(ft)	A(sf)	WP(ft)	CRWS(ft)
[illegible]0.20	36.7	0.7	0.32	0.030	1.0	300.0	50.0	300.0	1090.09
1091.00	779.9	1.9	0.40	0.030	1.0	620.0	418.0	620.0	1090.61
1092.00	3547.9	3.4	0.47	0.030	1.0	620.1	1038.1	621.0	1091.33
1093.00	7736.3	4.7	0.50	0.030	1.0	620.2	1658.2	622.0	1092.01

NOTES:

Normal Depth flow along North side of Grand Canal

Project Manyvale
Project No. 132586
Sheet No. 2 of 3
Calculated by DWD Date 8/96

WEIR FLOW COMPUTATIONS

LOCATION/DESCRIPTION:

D 1421E

Weir Flow Over Grand Canal

CROSS SECTION PARAMETERS: FILENAME: d1421-wr.SEC

No. of Cross Section Points: 9 Bed Slope:0.00240 Max Elev.:1093.00
Bank Stations.....Left: 0.0 Right....: 1230.0 Min Elev.:1090.20
Encroachment Stations..Left: 0.0 Right....: 1230.0 Weir Coef: 2.700

CROSS SECTION POINTS - Elevations & Stations in feet:

No.	Elev.	Sta.	No.	Elev.	Sta.	No.	Elev.	Sta.
1)	1093.00	0.00	2)	1092.00	370.00	3)	1091.00	950.00
4)	1090.20	1230.00	5)	1090.00	1250.00	6)	1090.00	1450.00
7)	1091.00	1850.00	8)	1092.00	1850.10	9)	1093.00	1850.20

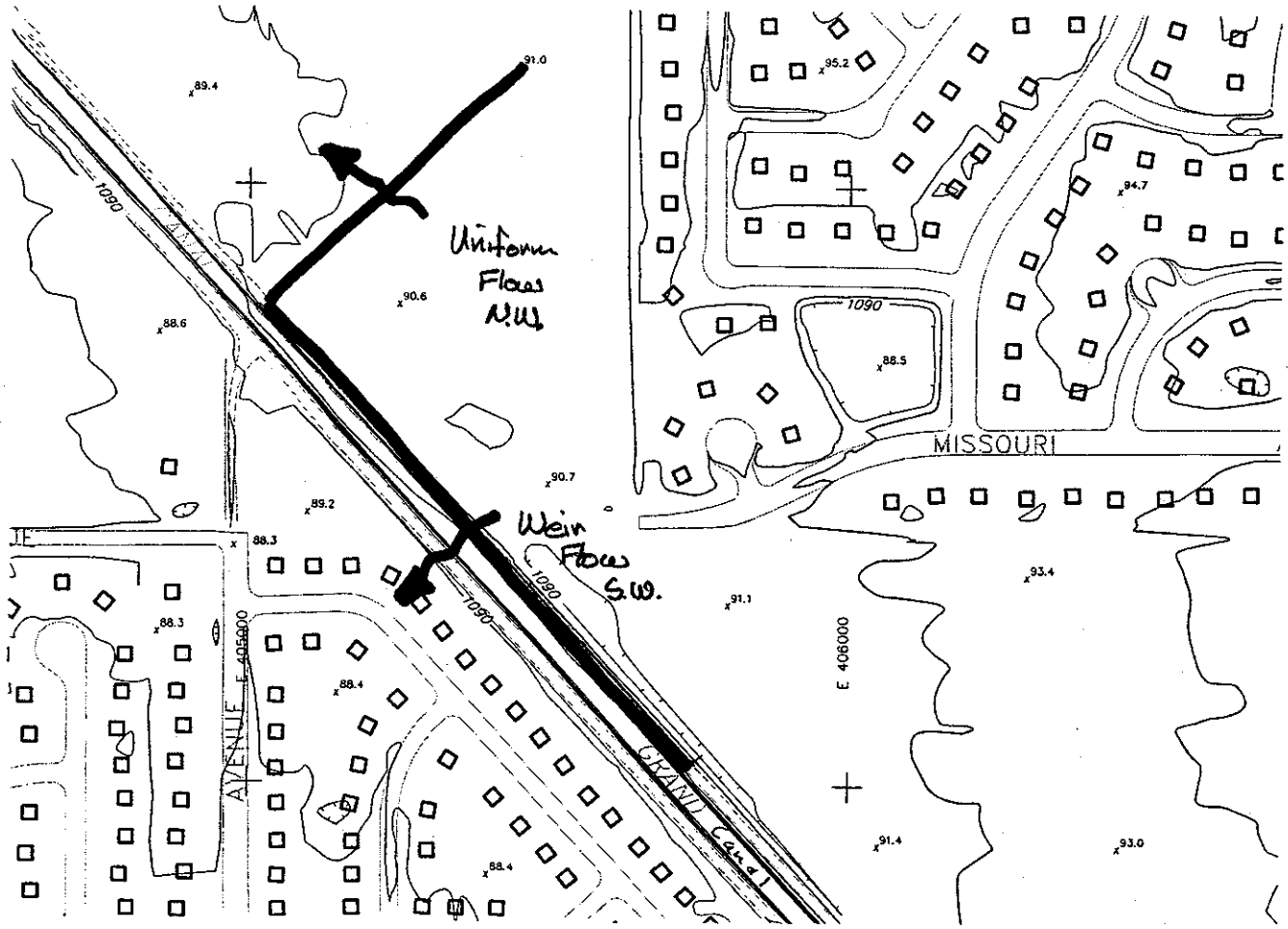
COMPUTED PARAMETERS:

WSEL(ft)	Q(cfs)	H:max(ft)	H:ave(ft)	TW(fc)	A(sf)
1091.00	216.4	0.80	0.40	280.0	112.0
1092.00	1891.6	1.80	0.79	860.0	682.0
1093.00	6137.3	2.80	1.40	1230.0	1727.0

NOTES:

Composite Rating Data

	Weir flow South (cfs)	flow along Canal (cfs)	Total (cfs)
1090	0	0	0
1090.2	0	37	37
1091	216	780	996
1092	1890	3550	5440
1093	6140	7740	



N

0 200 400

USED TO CALCULATE FLOW DIVERSION D14-21E

Appendix H: Storm Drain and Surge Basin Data

Changing Intersection Diversions to Reflect Storm Drain Systems

Computational Methodology

Premise: Modify the inflow and outflow data to reflect an existing or future storm drain system.

Procedure: Modify the DI & DQ Cards as indicated in the example below.

Input Parameters: The storm drain system's design capacity.

Main Assumptions:

- There is a sufficient number of inlets to allow the storm drain system to capture flow up to its design capacity.
- Extra capacity, due to surcharge, is insignificant and not taken into account.

Example: Street Intersection Diversion at "00"th Ave. and Long Rd.

HEC-1 Input : No Storm Drain:

```
- KK DLR00
- KM STREET INTERSECTION DIVERSION
- KM 53% West & 47% South
- DT D00LR
- DI      0  1000.
- DQ      0   470.
```

HEC-1 Input: Storm Drain Along "Long Road"(LR) at "00"th Avenue: Capacity = 80 cfs:

```
- KK DLR00
- KM STREET INTERSECTION DIVERSION
- KM 53% West & 47% South
- KM FUTURE STORM DRAIN ALONG LONG ROAD
- KM CAPACITY = 80 CFS WEST
- DT D00LR
- DI      0     80.  10080.
```

(Note: The 2nd value is set equal to the storm drain capacity(80cfs). & the 3rd value is 10000 plus the storm drain capacity (80cfs)

```
- DQ      0    0.01   4700.
```

(Note: The values are 47% of the DI -Card values minus the storm drain capacity (80cfs).).

HEC-1 Input: Storm Drain Along "00"th Ave. at "Long Road"(LR) :Capacity = 75 cfs:

```
- KK DLR00
- KM STREET INTERSECTION DIVERSION
- KM 53% West & 47% South
- KM FUTURE STORM DRAIN ALONG 00th AVE.
- KM CAPACITY = 75 CFS SOUTH
- DT D00LR
- DI      0     75.  10075.
```

(Note: The 2nd value is set equal to the storm drain capacity(75cfs). & the 3rd value is 10000 plus the storm drain capacity (75cfs)

```
- DQ      0     75.   4775.
```

(Note: The values are 47% of the DI -Card values minus the storm drain capacity (80cfs)).

Changing Street Capacity Diversions to Reflect Storm Drain Systems

Computational Methodology

Premise: Modify the inflow and outflow data to reflect an existing or future storm drain system.

Procedure: Enter the capacity of the future or existing storm drain system in the appropriate column in the Street Capacity Diversion spreadsheet. The spreadsheet generates the appropriate diversion data as indicated in the attached sample spreadsheet and the sample HEC-1 input data provided below.

Input Parameters: The storm drain system's design capacity.

Main Assumptions:

- There is a sufficient number of inlets to allow the storm drain system to capture flow up to its design capacity.
- Extra capacity, due to surcharge, is insignificant and not taken into account.

Example: Street Capacity Diversion for "Long Avenue" (LA).

HEC-1 Input : No Storm Drain:

```
- KK  SLA1W
- KM  STREET CAPACITY DIVERSION
- KM  LONG AVENUE(LA)
- KM  DIVERSION TO SOUTH
- DT  SLA1S
- DI      0     46.   115.  1185.  2018.
- DQ      0     0.1    49.   818.  1389.
```

HEC-1 Input: Storm Drain Along Long Avenue- Capacity = 80 cfs:

```
- KK  SLA1W
- KM  STREET CAPACITY DIVERSION
- KM  LONG AVENUE(LA)
- KM  DIVERSION TO SOUTH
- KM  FUTURE STORM DRAIN ALONG LONG AVENUE
- KM  CAPACITY = 80 CFS WEST
- DT  SLA1S
- DI      0    126.   195.  1265.  2098.
  (Note: These values have been increased by  80cfs.)
- DQ      0     0.1    49.   818.  1389.
```

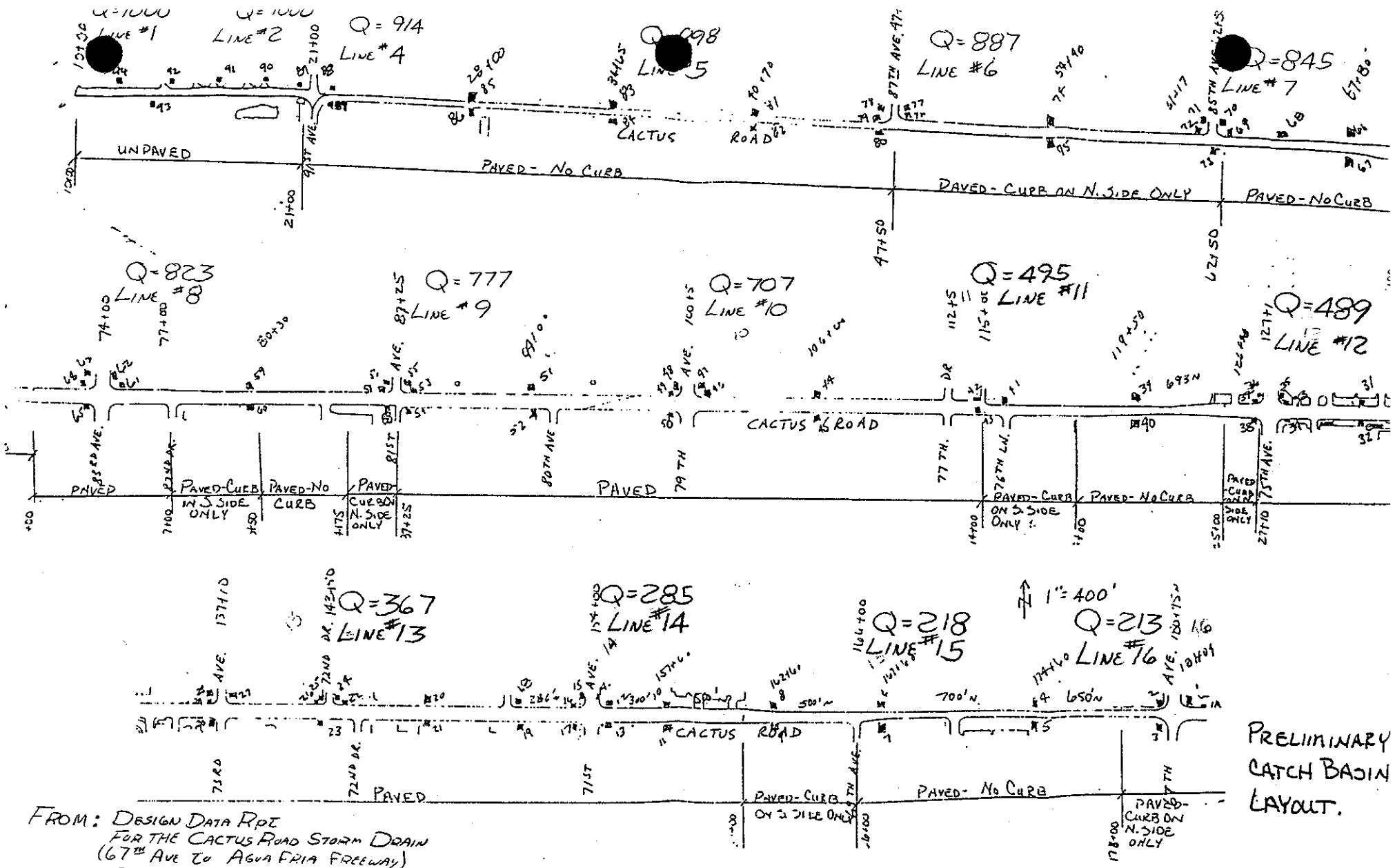
Cactus Road Storm Drain

FROM: DESIGN DATA RIPE
FOR THE CACTUS ROAD STORM DRAIN (67TH AVE TO AGUA FRIA FREEWAY)
STANLEY, FRANZOY, COREY ENGINEERING CO.
JUNE 1992

FINAL DESIGN CACTUS

INPUT DATA LISTING

CD	L2	MAX Q	ADJ Q	LENGTH	FL 1	FL 2	CTL/TW	D	W	S	KJ	KK	KM	LC	L1	L3	L4	A1	A3	A4	J	N
8	1						1130.68															
2	2	1000.0	1000.0	10+00 30.00	1120.29	1120.30	.00	96.	120.	3	.00	.00	.00	1	3	0	0	0.	0.	0.	9.99	.014
2	3	1000.0	1000.0	22+00 1200.00	1120.30	1121.80	.00	120.	0.	3	.00	.00	.00	0	4	17	0	0.	45.	0.	9.99	.012
2	4	914.0	914.0	10.00	1121.80	1121.81	.00	120.	0.	3	.00	.00	.00	0	5	0	0	0.	0.	0.	9.99	.012
2	5	898.0	898.0	35+30 1320.00	1121.81	1125.46	.00	120.	0.	3	.00	.00	.00	0	6	0	0	0.	0.	0.	9.99	.012
2	6	887.0	887.0	48+50 1320.00	1125.46	1129.10	.00	120.	0.	3	.00	.00	.00	0	7	0	0	0.	0.	0.	9.99	.012
2	7	845.0	845.0	61+70 1320.00	1129.10	1131.21	.00	120.	0.	3	.00	.00	.00	0	8	0	0	0.	0.	0.	9.99	.012
2	8	823.0	823.0	74+90 1320.00	1131.21	1133.32	.00	120.	0.	3	.00	.00	.00	0	9	0	0	0.	0.	0.	9.99	.012
2	9	777.0	777.0	88+10 1320.00	1133.82	1137.39	.00	114.	0.	3	.00	.00	.00	0	10	0	0	0.	0.	0.	9.99	.012
2	10	707.0	707.0	101+30 1320.00	1137.39	1140.95	.00	114.	0.	3	.00	.00	.00	0	11	18	0	0.	45.	0.	9.99	.012
2	11	495.0	495.0	114+50 1320.00	1141.45	1145.02	.00	108.	0.	3	.00	.00	.00	0	12	0	0	0.	0.	0.	8.00	.012
2	12	489.0	489.0	127+70 1320.00	1145.02	1148.58	.00	108.	0.	3	.00	.00	.00	0	13	21	0	0.	45.	0.	8.00	.012
2	13	367.0	367.0	140+90 1320.00	1150.58	1153.22	.00	84.	0.	3	.00	.00	.00	0	14	0	0	0.	0.	0.	7.00	.012
2	14	285.0	285.0	154+10 1320.00	1153.22	1155.86	.00	84.	0.	3	.00	.00	.00	0	15	24	0	0.	45.	0.	7.00	.012
2	15	218.0	218.0	167+30 1320.00	1156.36	1159.86	.00	78.	0.	3	.00	.00	.00	0	16	0	0	0.	0.	0.	7.00	.012
2	16	213.0	213.0	180+50 1320.00	1159.86	1163.36	.00	78.	0.	1	.00	.00	.00	0	0	0	0	0.	0.	0.	.00	.012
				17,080'																		
2	17	87.0	87.0	4000.00	1121.80	1126.81	.00	84.	0.	1	.00	.00	.00	4	0	0	0	0.	0.	0.	.00	.012
2	18	214.0	214.0	20.00	1144.95	1145.06	.00	66.	0.	3	.00	.00	.00	11	19	0	0	0.	0.	0.	.00	.012
2	19	185.0	185.0	1300.00	1145.06	1152.22	.00	66.	0.	3	.00	.00	.00	0	20	0	0	0.	0.	0.	.00	.012
2	20	104.0	104.0	1320.00	1153.22	1159.50	.00	54.	0.	1	.00	.00	.00	0	0	0	0	0.	0.	0.	.00	.012
2	21	113.0	113.0	20.00	1154.08	1154.19	.00	42.	0.	3	.00	.00	.00	13	22	0	0	0.	0.	0.	.00	.012
2	22	84.0	84.0	1300.00	1154.19	1161.79	.00	42.	0.	3	.00	.00	.00	0	23	0	0	0.	0.	0.	.00	.012
2	23	44.0	44.0	1320.00	1161.79	1165.50	.00	42.	0.	1	.00	.00	.00	0	0	0	0	0.	0.	0.	.00	.012
2	24	30.0	30.0	20.00	1160.36	1160.46	.00	30.	0.	3	.00	.00	.00	15	25	0	0	0.	0.	0.	.00	.012
2	25	25.0	25.0	1300.00	1160.46	1167.14	.00	30.	0.	3	.00	.00	.00	0	26	0	0	0.	0.	0.	.00	.012



PRELIMINARY CATCH BASIN LAYOUT.

FROM: DESIGN DATA RPT
FOR THE CACTUS ROAD STORM DRAIN
(67TH AVE TO AGUA FRIA FREEWAY)
STANLEY, FRANZOY, COREY ENGINEERING CO.
JUNE 1992

Olive Avenue Storm Drain

CH2M HILL

SUBJECT OLIVE AVE STORM DRAIN CAPACITY BY JRG PROJECT NO. 132586 DATE 16 SHT 1 OF 4

CAPACITY & STATIONING INFO FROM: "OLIVE AVENUE STORM DRAIN & PAVING PLANS 91st AVE TO 67th AVE"
(AS BUILTS ⇒ JULY 1990) PROJECT NO. FCO 89-16"

[FLOW IN CFS]

STA 62+76.11 (STA 65+25 91st AVE) — Q=546 — 10'x6' CBC + (11' TRANS STRCT & 9LF 96"Φ)

STA 66+29 — Q=425 — 96"Φ

STA 78+43 89th AVE — Q=425 — 90"Φ

STA 90+78.8 ~87th AVE — Q=397 — 90"Φ

STA 104+29 — Q=397 — 90"Φ

STA 118+12.9 83rd AVE — Q=293 — 84"Φ

STA 129+05.7 — Q=427 — 96"Φ

STA 142+75 ~79th AVE — Q=392 — 96"Φ

STA 156+40 — Q=392 — 90"Φ

STA 168+66 — 36"Φ (SOUTH) & 54"Φ (N.E.)

(STA 171+13 GRAND AVE & 75th AVE) — Q=262 — 78"Φ

STA 174+81 — Q=161 — 78"Φ

STA 179+05 — Q=161 — 78"Φ

STA 185+00 — Q=161 — 72"Φ

(STA 190+62 72nd AVE) — 48"Φ (NORTH)

STA 193+51 — Q=589 — 96"Φ (NORTH)

(STA 197+62.4 71st AVE) — Q=750 — 102"Φ

Q=-134 — 54"Φ (NORTH)

STA 208+55 — Q=750 — 102"Φ

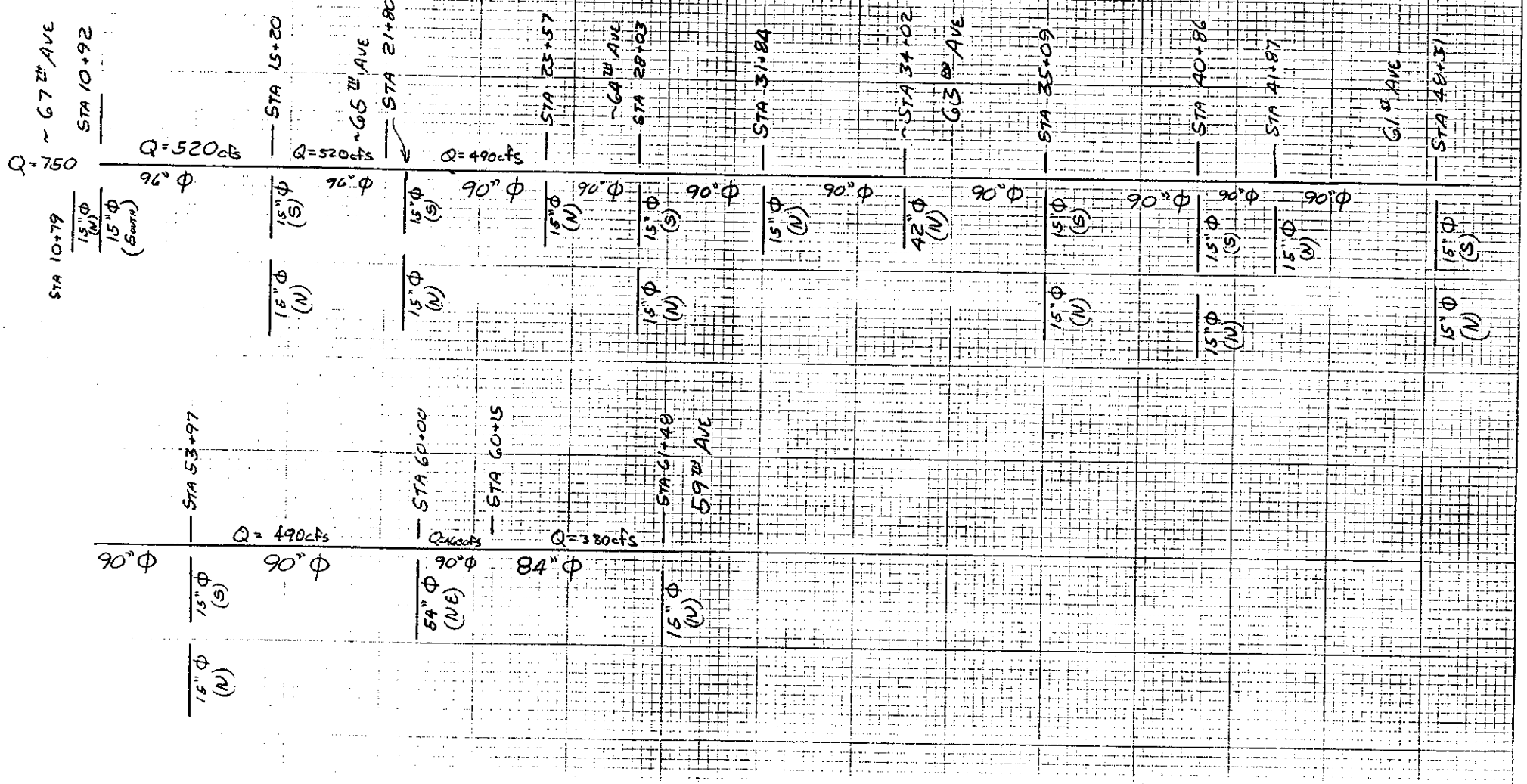
STA 223+36 ~67th AVE — Q=230 — 72"Φ (N.E.) & 24"Φ (SOUTH)

STA 225+10 — Q=520 — 96"Φ

CH2M HILL SUBJECT MARYVALE ADMS BY JRG PROJECT NO. 132586.01.HY DATE 17 APR SHT 2 OF 4

OLIVE AVE. STORM DRAIN CAPACITY

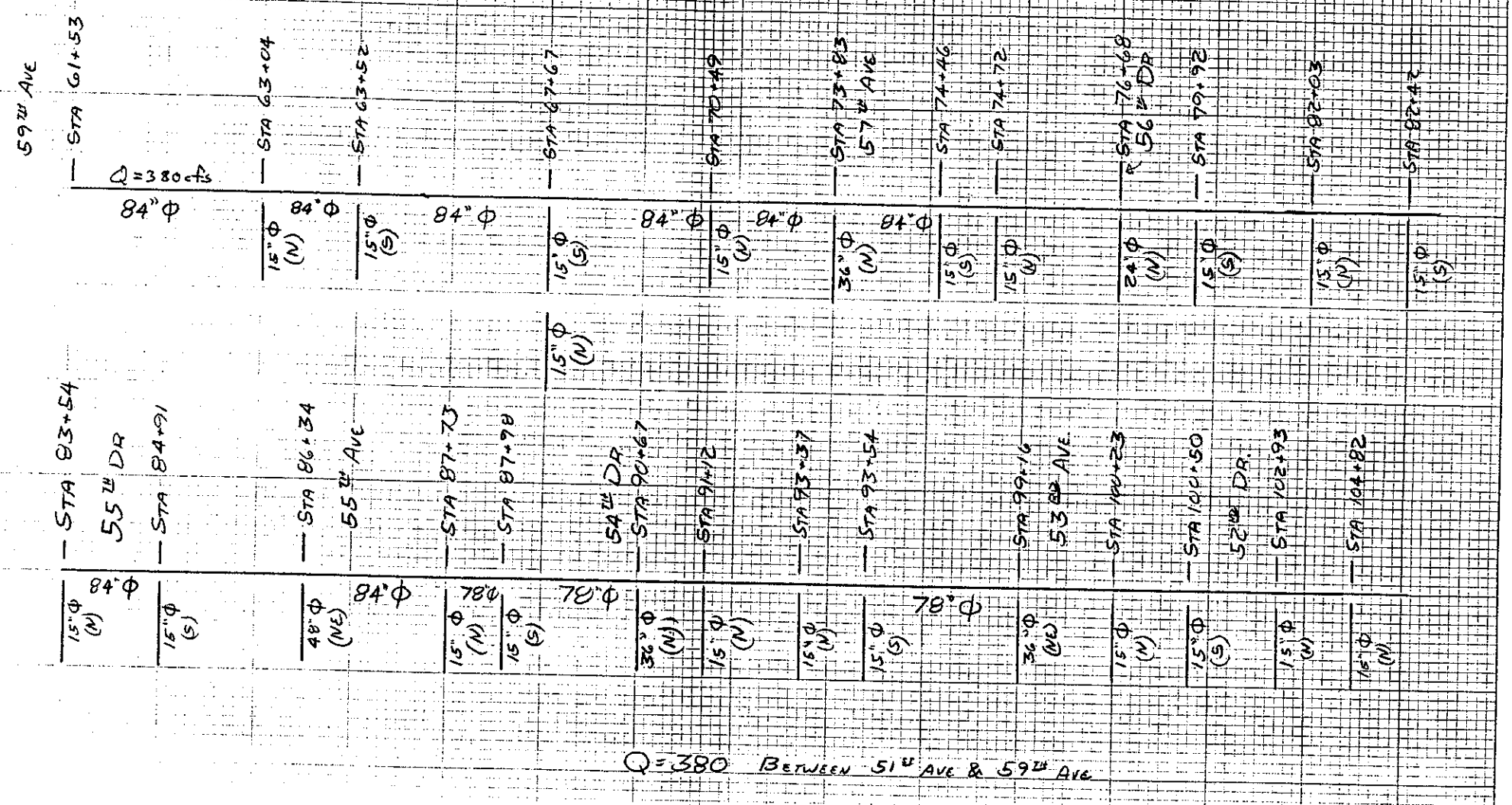
INFORMATION FROM: "P889005 OLIVE AVE. 67TH AVE TO 59TH AVE IMPROVEMENT PLANS" DTD APR '91 & CAPACITY CALCS RECEIVED FROM WOOD PATEL



CH2M HILL

SUBJECT _____ BY _____ PROJECT NO. _____ DATE 17 SHT 3 OF 4

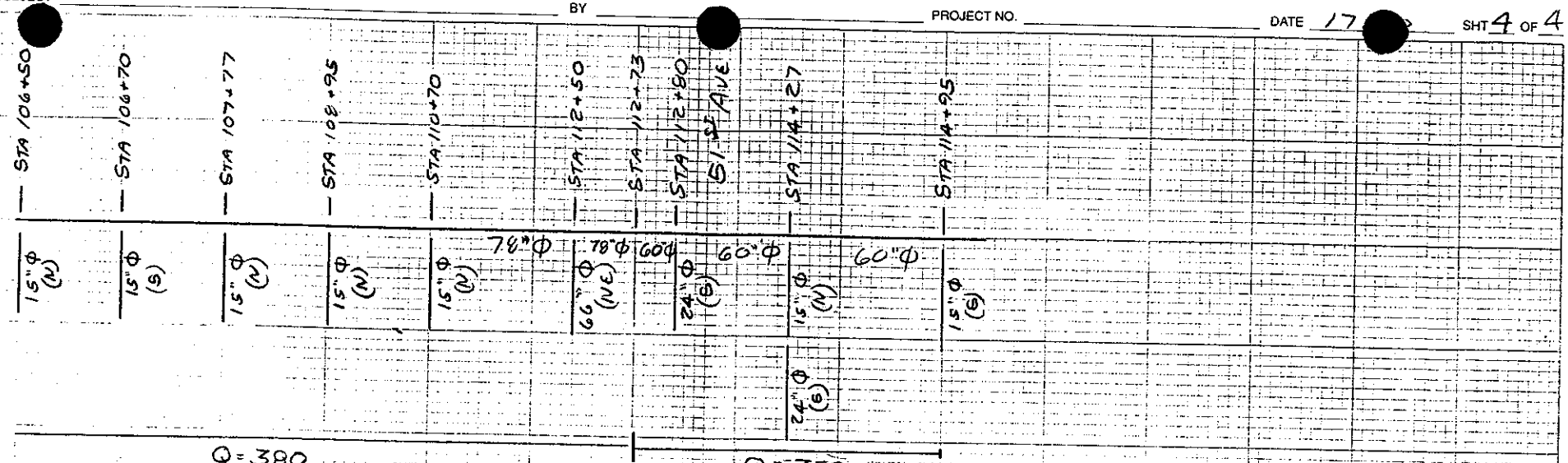
OLIVE A[illegible] STORM DRAIN CAPACITY
INFO FROM: # 889011 OLIVE AVE STORM DRAIN 69TH AVE TO 51ST AVE.
& CAPACITY CALCS RECEIVED FROM WOW PATEL.



Q=380 BETWEEN 51ST AVE & 59TH AVE

CH2M HILL

SUBJECT _____ BY _____ PROJECT NO. _____ DATE 17 _____ SHT 4 OF 4



CH2M HILL

SUBJECT: Maryvale ADMS

BY: DWD

SHEET NO. ____ of ____ DATE 8/96

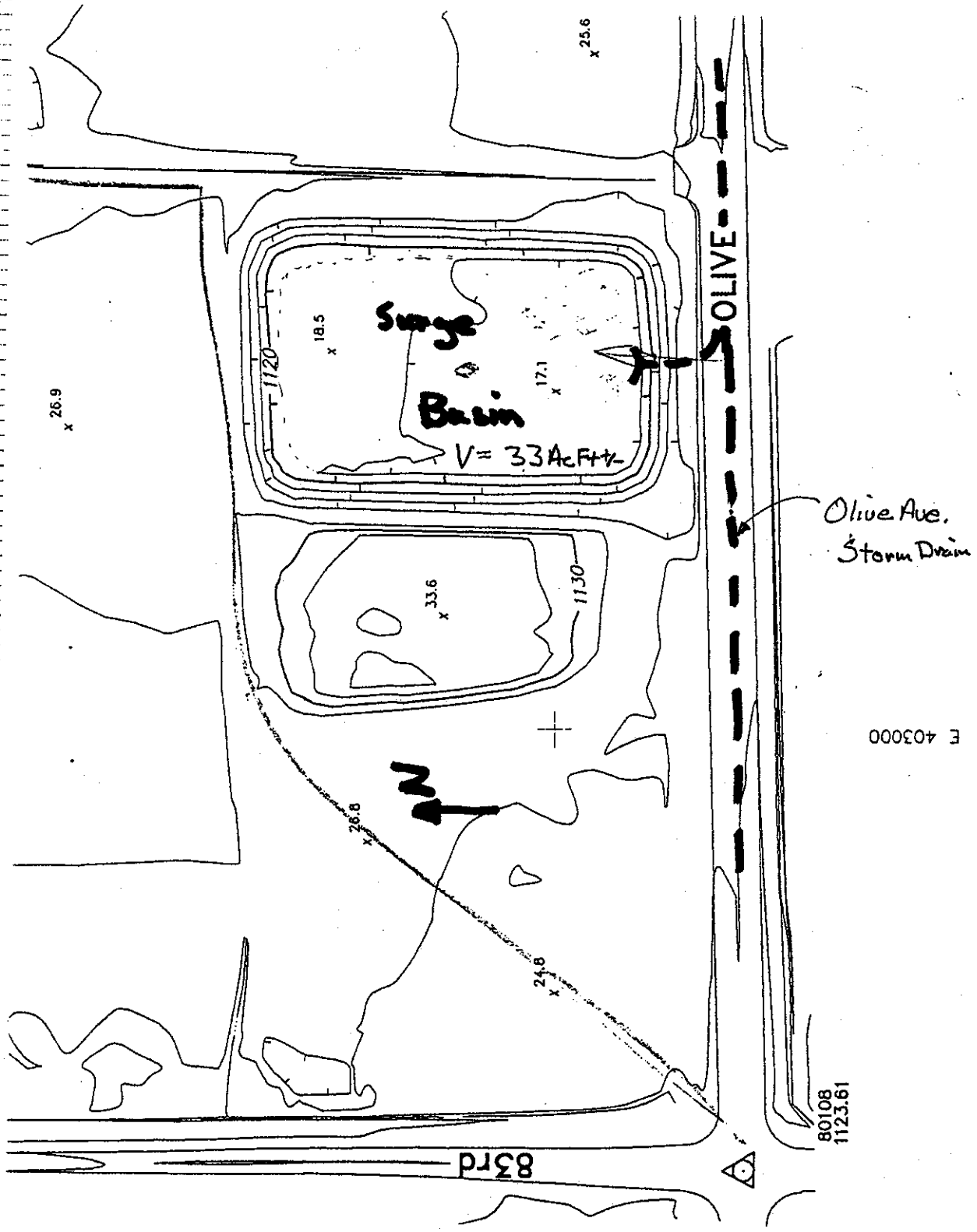
PROJECT NO. 132586

Olive Avenue Storm Drain: Surge Basin @ 83RD Ave

- Bottom Elev = 1118 +/- A = 3.1 Ac +/-

Top Elev = 1126 +/- A = 5.1 Ac +/-

Vol = 32.8 Ac Ft +/-



CH2M HILL

Maryvale ADMS

SHEET NO. ____ of ____ DATE 8/96

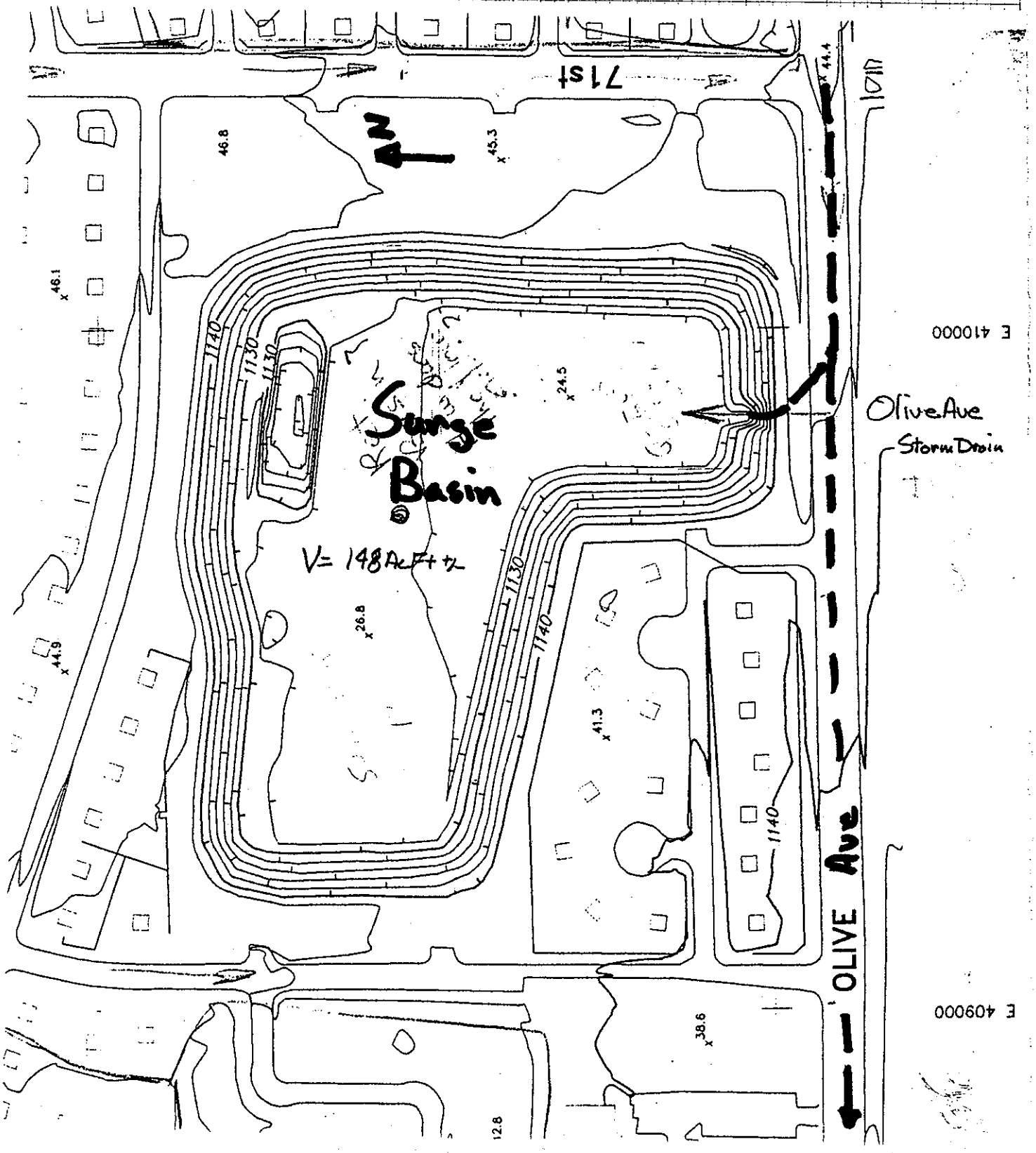
PROJECT NO. 132586

Olive Avenue Storm Drain: Surge Basin @ 75th Ave

Bot. Elev = 1126+/- A = 7.4 Ac

Top Elev = 1140+/- A = 13.7 Ac

Vol ≅ 148 Ac Ft



Ciy of Phoenix Storm Drain Systems

CAPACITIES: EXISTING STORM DRAINS

Maryvale ADMS

Wood, Patel & Associates, Inc.

Date: 08/22/96
By: JGT/AJR
Checked:
Project No. 94154

INTERSECTION PARAMETERS

Manning's 0.013

Location			Pipe Sizes		Pipe Slopes		Storm Drain Capacity	
Plan Log No.	E-W Street	N-S Street	West (inches)	South (inches)	West (ft/ft)	South (ft/ft)	West (cfs)	South (cfs)
116	Bethany Home	27th Ave.		57		0.0041	0	145
180	Bethany Home	31st Ave.		60		0.0032	0	147
112,121	Bethany Home	35th Ave.		42		0.0030	0	55
111	Bethany Home	39th Ave.	36		0.0021		31	0
182	Bethany Home	39th Ave.		72		0.0015	0	164
22,110	Bethany Home	43rd Ave.		54		0.0026	0	100
125M	Cactus Road	67th Ave	78		0.0026		268	
125M	Cactus Road	71st Ave	84		0.0020		286	
125M	Cactus Road	75th Ave	108		0.0027		650	
125M	Cactus Road	79th Ave	114		0.0027		751	
125M	Cactus Road	83rd Ave	120		0.0016		664	
125M	Cactus Road	87th Ave	120		0.0028		877	
125M	Cactus Road	91st Ave	120		0.0013		599	
29	Camelback	27th Ave.		57		0.0045	0	152
6	Camelback	31st Ave.		66		0.0020	0	150
10	Camelback	35th Ave.		36		0.0048	0	46
15	Camelback	39th Ave.		72		0.0040	0	268
	Camelback	51st Ave.	48	84	0.0020	0.0015	64	247
26	Camelback	59th Ave.		24		0.0040	0	14
19	Camelback	43rd Ave.		60		0.0040	0	165
	Campbell	51st Ave.		36		0.0032		38
135	Dunlap	31st Ave.	33		0.0019		23	0
134	Dunlap	35th Ave.		42		0.0029	0	54
140	Dunlap	43rd Ave.		48		0.0032	0	81
215	Glendale	31st Ave.		54		0.0045	0	132
126	Glendale	35th Ave.		42		0.0040	0	64
120	Glendale	39th Ave.	33		0.0027		27	0
209	Glendale	39th Ave.	33	72		0.0057		
119	Glendale	43rd Ave.		54		0.0034	0	115
2,34	Indian School	31st Ave.		72		0.0035	0	251
8	Indian School	35th Ave.	24	48		0.0027	0	75
38	Indian School	39th Ave.	36		0.0013		24	0
16,36	Indian School	43rd Ave.		63		0.0009	0	89
	Indian School	47th Ave.	42		0.0020		45	
126MB	Indian School	51st Ave.		72		0.0024	0	207
71,30	Indian School	55th Ave.	42		0.0037		61	0
31	Indian School	59th Ave.		78		0.0047	0	359
67	Indian School	63rd Ave.	24		0.0131		26	0
97,167,20	Indian School	67th Ave.		66		0.0027	0	174
	Indian School	71st Ave.	42		0.0024		49	0
52,55,106	Indian School	75th Ave.		60		0.0038	0	161
55	Indian School	75th Ave.	18		0.0105	(a)	11	0
193	Indian School	78th Ave.	36		0.0030		37	0
191	Indian School	79th Dr.	36		0.0036		40	0
57	Indian School	83rd Ave.		72		0.0022	0	199
196	Indian School	83rd Ave.		72		0.0022	0	199
59,200	Indian School	87th Ave.	36		0.0024		33	0
199	Indian School	91st Ave.		72		0.0015	0	162
13	Indian School	39th Ave.		78		0.0040	0	332

CAPACITIES: EXISTING STORM DRAINS

Maryvale ADMS

Wood, Patel & Associates, Inc.

Date: 08/22/96
By: JGT/AJR
Checked:
Project No. 94154

INTERSECTION PARAMETERS

Manning's 0.013

Location			Pipe Sizes		Pipe Slopes		Storm Drain Capacity	
Plan Log No.	E-W Street	N-S Street	West (inches)	South (inches)	West (ft/ft)	South (ft/ft)	West (cfs)	South (cfs)
184,176	McDowell	31st Ave.		84		0.0008	0	182
77,79	McDowell	35th Ave.		51		0.0010	0	53
173	McDowell	39th Ave.		84		0.0025	0	319
98,101	McDowell	43rd Ave.		69		0.0030	0	207
92	McDowell	51st Ave.		84		0.0020	0	286
190	McDowell	59th Ave.		90		0.0034	0	448
194	McDowell	63rd Ave.	42		0.0023		48	0
163	McDowell	67th Ave.		90		0.0048	0	532
159	McDowell	75th Ave.		90		0.0037	0	467
149	McDowell	83rd Ave.		90		0.0010	0	243
	McDowell	91st Ave.		90		0.0020		380
218	Northern	27th Ave.		54		0.0028	0	104
213	Northern	31st Ave.		42		0.0037	0	61
129	Northern	35th Ave.		48		0.0032	0	81
220	Northern	39th Ave.	27		0.0035		18	0
137	Northern	43rd Ave.		54		0.0034	0	115
131,132,2	Northern	27th Ave.		54		0.0028	0	104
217	Northern	31st Ave.	42		0.0050	(a)	71	0
211	Northern	39th Ave.		60		0.0026	0	133
129M	Peoria	91st Ave.	72		0.0012		147	0
130M	Peoria	83rd Ave.	48		0.0045		96	0
75	Thomas	27th Ave.		66		0.0023	0	160
105	Thomas	27th Ave.	36	59	0.0024	0.0036 (a)	33	149
104	Thomas	31st Ave.	18		0.0061		8	0
178	Thomas	31st Ave.		66		0.0050	0	237
81	Thomas	35th Ave.		48		0.0019	0	63
109	Thomas	35th Ave.	27	48	0.0040	(a)	20	0
175	Thomas	39th Ave.		84		0.0020	0	286
96	Thomas	43rd Ave.		69		0.0048	0	262
87	Thomas	51st Ave.	24		0.0049	(a)	16	0
94	Thomas	51st Ave.		72		0.0044	0	281
86	Thomas	55th Ave.		36		0.0015	0	26
88	Thomas	59th Ave.		84		0.0037	0	389
160,165	Thomas	67th Ave.		78		0.0021	0	240
162	Thomas	71st Ave.	54		0.0021		91	0
157,161	Thomas	75th Ave.		81		0.0032	0	328
151,153	Thomas	83rd Ave.		94		0.0030	0	472
148	Thomas	91st Ave.		84		0.0026	0	326

Notes: (a) Flow is from west to east.
(?) Pipe slope is not readily available. Assume pipe slope the same as street slope for estimated capaci

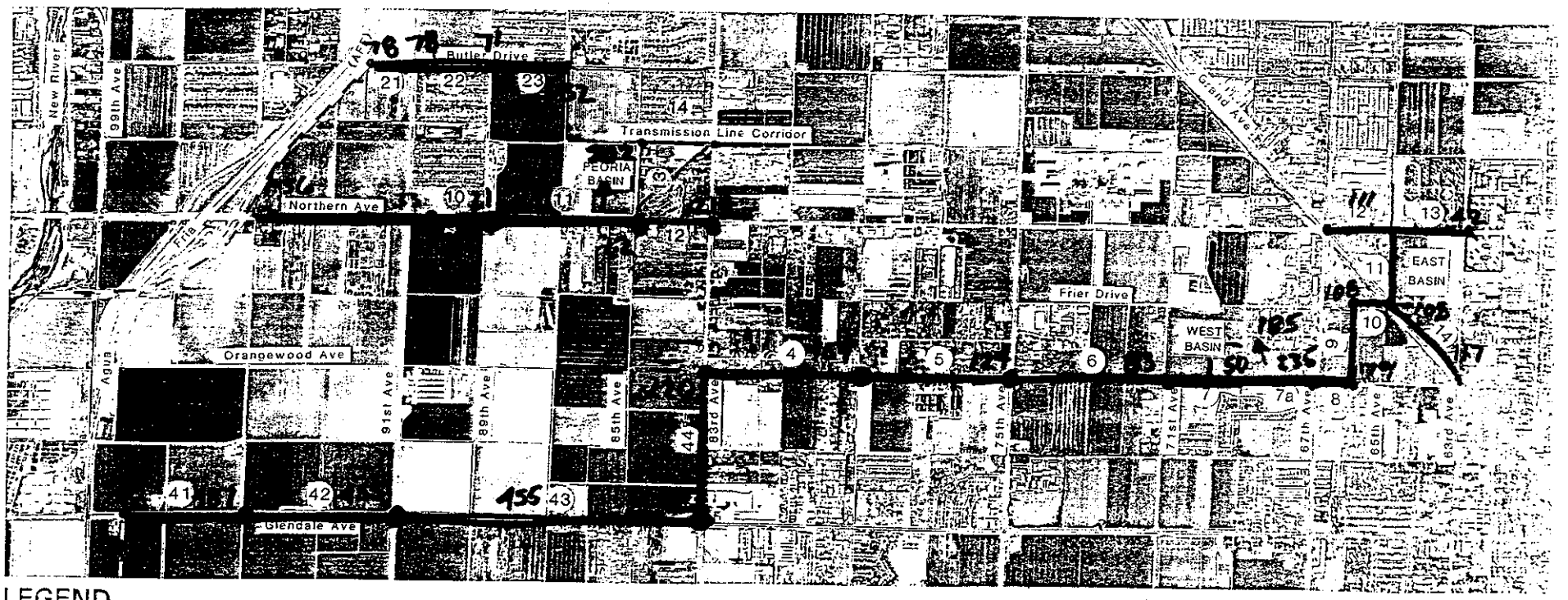
q:\mvladms\pipe.wq2

Northern/Orangewood Storm Drain System

NORTHERN/ORANGEWOOD STORM DRAIN PROJECT

CONCEPT/ROUTING STUDY

Contract FCD 94-12



LEGEND

Existing	Proposed
Storm Drain Pipe	Storm Drain Pipe
AFF Outlet Channel	Detention/Surge Basin
	Future Outfall Channel
	3 Butler Drive Storm Drain Pipe #
	10 Northern Avenue Storm Drain Pipe #
	44 Glendale Avenue Storm Drain Pipe #

455 Storm Drain capacity (cfs)

NOTE: See Pertinent Table II for Pipe #'s, Sizes and Flows.

½ Mile

SELECTED ALIGNMENTS

BUTLER AVENUE, NORTHERN AVENUE AND GLENDALE AVENUE ALIGNMENTS

Wood, Patel & Associates, Inc.

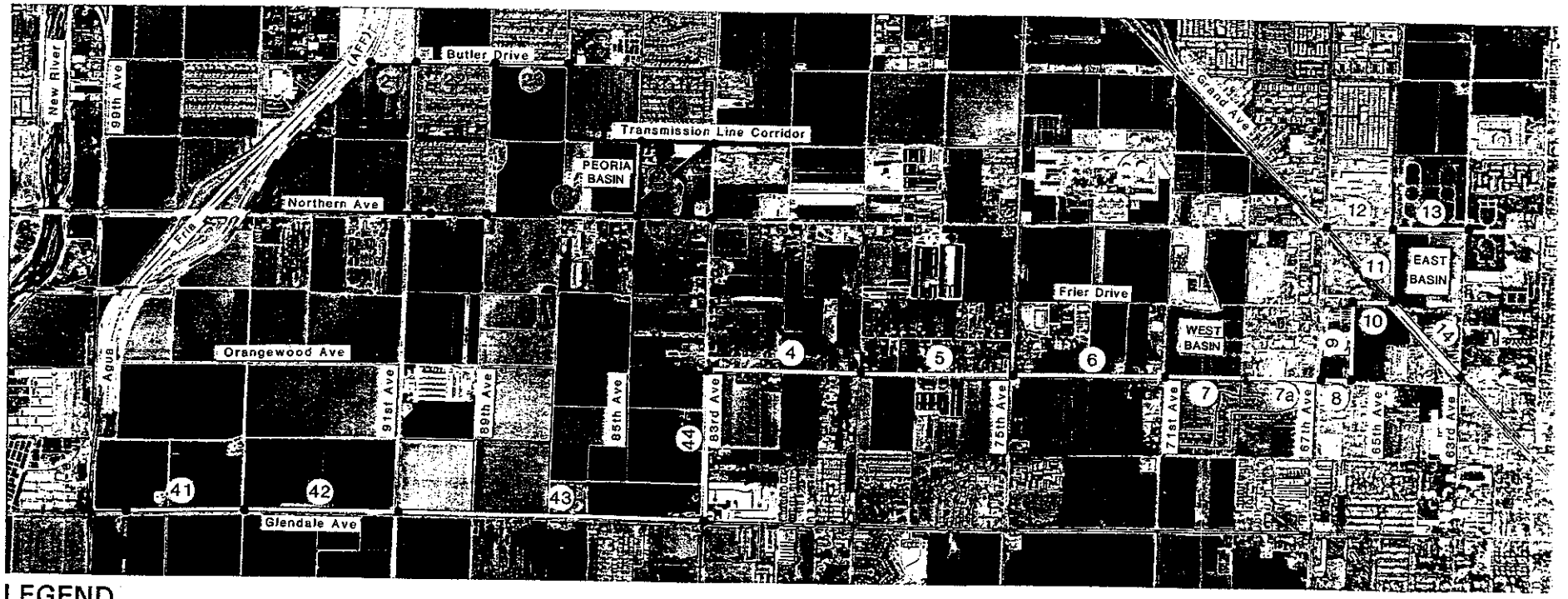
PLATE II-3A

Note Will be 11"x17" in Final

NORTHERN/ORANGEWOOD STORM DRAIN PROJECT

CONCEPT/ROUTING STUDY

Contract FCD 94-12



LEGEND

Existing	Proposed
Storm Drain Pipe	Storm Drain Pipe
AFF Outlet Channel	Detention/Surge Basin
	Future Outfall Channel
	3 Butler Drive Storm Drain Pipe #
	10 Northern Avenue Storm Drain Pipe #
	44 Glendale Avenue Storm Drain Pipe #

NOTE: See Pertinent Table II for Pipe #'s, Sizes and Flows.

N

½ Mile

SELECTED ALIGNMENTS

BUTLER AVENUE, NORTHERN AVENUE AND GLENDALE AVENUE ALIGNMENTS

Wood, Patel & Associates, Inc.

PLATE II-3A

TABLE 8B

Glendale Avenue Alignment with East Basin

Partial use (50 cfs bypass) of West Basin

ORANGEWOOD AVENUE STORM DRAIN ALIGNMENT
(SEE PLATE II-1)

11-Apr-96

02:18 PM

Manning's "n"= 0.013

	STORM SEWER LINE STATION LOCATION	PIPE #	STATION	PIPE DIA (in)		REACH LENGTH (ft)	SLOPE OF REACH (ft/ft)	INVERT ELEV (ft)	DESIGN Q (cfs)	PREL GRADE LINE ELEV ENERGY	PREL GRADE LINE ELEV HYDRAULIC	CHECK D+INV +.2vel hd	(a)	(b)	CONTROL HGL	CONTROL EGL	NATURAL GROUND ELEVATION	CHECK NAT GRND VS. EGL (c)	DEPTH TO INVERT	PIPE UNIT PRICE $	PIPE COST $
	Glendale Ave Alignment																				
1	AFF Cha Outlet @ 98th Ave.		0					1052.0		1060.00	1060.00				1060.00	*1060.00*	*1067*	ok	15.0		
		41		102	U	2100	0.0019													294	616963
2	95 th Ave		2100					1056.0	487	1065.46	1064.32	1064.73	-0.4	ok	1064.73	*1065.87*	*1068*	ok	12.0		
		42,43		96	U	8000	0.0034													276	2204007
3	83rd Ave @ Glendale		10100					1083.0	455	1085.69	1084.42	1091.25	-6.8	ocf	1091.25	*1092.53*	*1095*	ok	12.0		
		44		66	U	2640	0.0036													145	381784
4	83rd Ave @ Orangewood		12740					1092.5	220	1097.29	1095.96	1098.27	-2.3	ocf	1098.27	*1099.60*	*1106*	ok	13.5		
	Orangewood Alignment	4		60	R	2640	0.0019													110	290367
5	79th Ave		15380					1097.5	159	1106.98	1105.96	1102.70	3.3	ok	1105.96	*1106.98*	*1114*	ok	16.5		
		5		54	U	2640	0.0021													119	313720
6	75th Ave		18020					1103.0	124	1117.53	1116.59	1107.69	8.9	ok	1116.59	*1117.53*	*1121*	ok	18.0		
		6		54	U	2640	0.0019													119	313720
7	71st Ave		20660					1108.0	83	1121.77	1121.35	1112.58	8.8	ok	1121.35	*1121.77*	*1127*	ok	19.0		
		7		48	U	1320	0.0038													110	145842
	69th Ave		21980					1113.0	50	1123.24	1122.99	1117.05	5.9	ok	1122.99	*1123.24*	*1130*	ok	17.0		
		7a		72	U	1320	0.0038													157	207305
8	67th Ave		21980					1118.0	235	1128.32	1127.25	1124.21	3.0	ok	1127.25	*1128.32*	*1130*	ok	12.0		
		8		72	R	660	0.0015													132	87153
9	66th Ave		22640					1119.0	179	1129.17	1128.55	1125.12	3.4	ok	1128.55	*1129.17*	*1138*	ok	19.0		
	Alignment as Noted	9		60	R	1320	0.0038													110	145184
*	Along 66th to Frier		23960					1124.0	108	1131.37	1130.90	1129.09	1.8	ok	1130.90	*1131.37*	*1140*	ok	16.0		
		10		54	U	660	0.0030													119	78430
*	Along Frier to Grand		24620					1126.0	108	1133.74	1133.03	1130.64	2.4	ok	1133.03	*1133.74*	*1142*	ok	16.0		
																				TOTAL	$4,784,475
																				STORM DRAIN SYSTEM WITH CONTINGENCY 40 %	$6,698,265
	City of Glendale																				
		11		48	R	1320	0.0038													91	120175
	Along 65th to Northern		25940					1131.0	71	1136.83	1136.33	1135.10	1.2	ok	1136.33	*1136.83*	*1145*	ok	14.0		
		12		54	U	1320	0.0038													119	156860
	Northern 67th to 65th		27260					1136.0	111	1141.42	1140.67	1140.65	0.0	ok	1140.67	*1141.42*	*1143*	ok	7.0		
		13		36	R	1320	0.0008													83	109841
	Northern 63rd to 65th		1320					1132.0	42	1142.19	1141.64	1135.11	6.5	ok	1141.64	*1142.19*	*1147*	ok	15.0		
																				TOTAL	$386,876
																				STORM DRAIN SYSTEM WITH CONTINGENCY 40 %	$541,627
	ADOT (Grand Avenue)																				
		14		60	U	1880	0.0021													132	248554
	Grand Ave 63rd to 65th		1880					1130.0	117	1137.46	1136.91	1135.11	1.8	ok	1136.91	*1137.46*	*1145*	ok	15.0		
																				TOTAL	$248,554
																				STORM DRAIN SYSTEM WITH CONTINGENCY 40 %	$347,976

Note: R = Rural Section
U = Urban Section

REVISED COSTS OF EAST BASIN:

DESCRIPTION	ITEM	UNIT	UNIT COST	COST
39 AC(+/-) BASIN	LAND	39	$56,400	$2,199,600
BASIN EXCAVATION	CY	650,000	$3	$1,950,000

BASIN TOTAL ***$4,149,600***

COSTS OF STORM DRAIN RIGHT OF WAY PURCHASE:

DESCRIPTION	AREA SF	UNIT COST	COST
Frier Dr - 65th Ave to 66th Ave	9,900	$1.03	$10,227
66th Ave - Frier to Orangewoo	19,800	$1.03	$20,453
66th Ave - Northern to Frier Dr	26,400	$1.03	$27,271

RIGHT OF WAY TOTAL ***$57,951***

COST OF MODIFYING AFF OUTFALL CHANNEL

DESCRIPTION	ITEM	UNIT	UNIT COST	COST
Glendale Ave to	Lining SF	60,768	$3	$182,304
Bethany Home Road	Excav CY	24,906	$3	$74,718
AFF CHANNEL MODIFICATION TOTAL				***$257,022***

COST OF WEST BASIN PER PURCHASE PRICE:

DESCRIPTION	ITEM	UNIT	UNIT COST	COST
9.4 AC BASIN	LAND	9.4	$42,253	$397,180
BASIN EXCAVATION	CY	114,000	$3	$342,000

BASIN TOTAL ***$739,000***

STORM DRAIN W/CONTINGENCIES	***$7,588,000***
BASIN, R/W AND AFF CHANNEL TOTAL	***$5,204,000***
GRAND TOTAL	***$12,792,000***

Only major friction losses have been considered in the computation of the hydraulic grade line. Minor losses have been ignored.
(a) This column depicts the difference between the calculated hydraulic grade & the elevation of (top of pipe + 0.2 v^2/2g)
(b) If HGL is significantly lower than the top of pipe elevation, open channel flow may exist, "ocf" statement then appears here.
(c) If natural ground is lower than EGL, "pb" statement appears here.

TABLE II-2

Option B

Peoria Watershed Storm Drain System

Peoria Watershed Storm Drain Alignment (SEE PLATE II-3)

Northern Avenue; 83rd Avenue to the AFF Channel;Butler;Peoria Laterals

08-Apr-96
05:02 PM

Manning's "n"= 0.013

STORM SEWER LINE STATION LOCATION	PIPE #	STORM SEWER STATION	PIPE DIA (in)		REACH LENGTH (ft)	SLOPE OF REACH (ft/ft)	INVERT ELEV (ft)	DESIGN Q (cfs)	PREL GRADE LINE ELEV ENERGY	PREL GRADE LINE ELEV HYDRAULIC	CHECK D+INV +.2 v^2/2g	(a)	(b)	CONTROL HGL	CONTROL EGL	NATURAL GROUND ELEVATION	(c)	DEPTH TO INVERT	PIPE UNIT PRICE $	PIPE COST $
Northern Ave Alignment																				
@ AFF Pipe		-251					1079.2		1083.70	1083.70				1083.70	***1083.70***	***1088.0***	ok	8.8		
			60	U	1551	0.0007													EXISTING	0
93rd Ave (13+00)		1300					1080.2	36	1084.05	1083.99	1085.21	-1.2	ocf	1085.21	***1085.26***	***1094.0***	ok	13.8		
			60	U	1160	0.0006													EXISTING	0
91st Ave (24+60)		2460					1080.9	33	1084.22	1084.18	1085.91	-1.7	ocf	1085.91	***1085.95***	***1095.5***	ok	14.6		
			60	U	14	0.1643													EXISTING	0
@ Sta (24+74)		2474					1083.2	33	1084.23	1084.18	1088.21	-4.0	ocf	1088.21	***1088.25***	***1095.5***	ok	12.3		
			60	U	26	0.0077													EXISTING	0
@ Sta (25+00)		2500					1083.4	33	1084.23	1084.19	1088.41	-4.2	ocf	1088.41	***1088.45***	***1095.6***	ok	12.2		
			60	U	75	0.0080													EXISTING	0
@ Sta (25+75)		2575					1084.0	33	1084.24	1084.20	1089.01	-4.8	ocf	1089.01	***1089.05***	***1096.0***	ok	12.0		
			60	U	225	0.0007													EXISTING	0
@ Sta (28+00)		2800					1084.2	33	1084.28	1084.23	1089.17	-4.9	ocf	1089.17	***1089.21***	***1096.0***	ok	11.8		
	10		27	U	1020	0.0005													83	85056
91st Ave to 89th Ave		3820					1084.7	21	1089.32	1088.89	1087.01	1.9	ok	1088.89	***1089.32***	***1098.0***	ok	13.3		
	11		27	U	2640	0.0005													83	220145
89th Ave to 85th Ave		6460					1086.0	12	1092.96	1092.82	1088.27	4.6	ok	1092.82	***1092.96***	***1096.0***	ok	10.0		
	12		72	U	1320	0.0005													157	207305
85th Ave to 83rd Ave		7780					1086.7	214	1097.07	1096.18	1092.83	3.4	ok	1096.18	***1097.07***	***1102.0***	ok	15.3		
																			TOTAL	$512,507
															STORM DRAIN SYSTEM WITH CONTINGENCY				***40 %***	***$717,510***
Peoria Laterals																				
@ Northern & 85th Ave							1086.0	12.0	1093.0	1092.8	1088.3	4.6	ok	1092.8	1093.0	1096.0	ok	10.0		
	13		24	R	1320	0.0064													69	91739
85th, Northern to Elec. Corridor		1320					1094.5	19	1102.63	1102.06	1096.61	5.4	ok	1102.06	***1102.63***	***1106.0***	ok	11.5		
	14		66	R	1320	0.0010													121	159725
Elec.Corridor, 83rd to 85th		2640					1095.8	132	1104.57	1104.09	1101.40	2.7	ok	1104.09	***1104.57***	***1106.0***	ok	10.2		
															STORM DRAIN SYSTEM WITH CONTINGENCY				***TOTAL***	$251,465
																			40 %	***$352,050***
Butler Drive Alignment																				
@ AFF Channel		0					1089.0	78	1092.50	1092.50				1092.50	***1092.50***	***1102.0***	ok	13.0		
	21		48	R	840	0.0065													91	76475
AFF to 91st Ave		840					1094.5	78	1095.56	1094.96	1098.62	-3.7	ocf	1098.62	***1099.22***	***1102.8***	ok	8.3		
	22		42	U	1320	0.0020													105	138822
91st Ave to 89th Ave		2160					1097.1	71	1102.34	1101.50	1100.77	0.7	ok	1101.50	***1102.34***	***1105.8***	ok	8.7		
	23		36	U	1100	0.0020													100	109867
89th Ave to 87th Ave		3260					1099.3	32	1104.33	1104.01	1102.40	1.6	ok	1104.01	***1104.33***	***1107.0***	ok	7.7		
															STORM DRAIN SYSTEM WITH CONTINGENCY				***TOTAL***	$325,164
																			40 %	***$455,230***

Note: R = Rural Section
U = Urban Section

DETENTION BASIN

DESCRIPTION	*ITEM*	*UNIT*	*UNIT COST*	*COST*
18AC (+/-) PEORIA BASIN	LAND	23	$27,437	$630,502
EXCAVATION	CY	225,000	$3	$675,000
BASIN TOTAL				***$1,305,502***

COST OF RIGHT OF WAY PURCHASE

DESCRIPTION	*AREA SF*	*UNIT COST*	*COST*
Butler, 91st to AFF	41,265	$0.37	$15,326
Elec Corridor	52,800	$0.37	$19,536
RIGHT OF WAY TOTAL			***$35,000***

STORM DRAIN W/CONTINGENCIES	***$1,525,000***
BASIN AND RIGHT OF WAY TOTAL	***$1,340,502***
GRAND TOTAL	***$2,865,502***

Only major friction losses have been considered in the computation of the hydraulic grade line. Minor losses have been ignored.
(a) This column depicts the diffference between the calculated hydraulic grade & the elevation of (top of pipe + 0.2 v^2/2g)
(b) If HGL is significantly lower than the top of pipe elevation, open channel flow may exist. "ocf" statement is appears here.
(c) If natural ground is lower than EGL, "pb" statement appears here.

Appendix I: HEC-1 Output and Input Files on Diskette

Maryvale ADMS

HEC-1 Element Nomenclature

○ SUB-BASIN HYDROGRAPH GENERATION:

Format: (section no.) - (township no.) (range no.)(optional alphanumeric)

Example: **17-32N**

Generate hydrograph for the northern portion of Section 17, T3N, R2E.

◇ SUB-BASIN DIVERSION:

Format: D(section no.)(W, S, E, or N)

Example: **D17S**

Southerly component of flow diversion of Section 17.

□ SUB-BASIN ROUTE:

Format: R(section no.)(township no.) (range no.)(W, S, E, or N)

Example: **R1732S**

Southerly component of flow route through Section 17, T3N, R2E.

△ SUB-BASIN RESERVOIR ROUTE: **Regional Retention Basins & Ponding Areas**

Format: RES(section no.)

Example: **RES17**

Reservoir route in Section 17.

△ SUB-BASIN RETENTION BASIN DIVERSION: **Subdivision Retention Basins**

Format: RET(section no.)

Example: **RET19**

Retention basin diversion in Section 19.

STREET ROUTE:

Format: R(street ID, up to 3 characters per street code)(sequential alphanumeric)

Example: **RPA1**

First route for Peoria Avenue.

Example: **R67C**

Third route for 67th Avenue.

STREET CAPACITY DIVERSION:

Format: S(street ID, up to 3 characters) (sequential alphanumeric) (W, S, E, or N)

Example: **SPA1S**

First diversion from Peoria Avenue to the south.

Example: **S67CW**

Third diversion from 67th Avenue to the west.

STREET INTERSECTION DIVERSION:

Format: D(street ID, up to 3 characters) (street ID, up to 3 characters)

Example: **DPA67**

Flow component in Peoria Avenue from diversion at Peoria & 67th Avenues.

Example: **D67PA**

Flow component in 67th Avenue from diversion at Peoria & 67th Avenues.

STREET INTERSECTION COMBINE:

Format: C(street ID, up to 3 characters) (street ID, up to 3 characters)

Example: **CPA67**

Flow combine at the intersection of Peoria & 67th Avenues.

STREET COMBINE:

Format: C(street ID, up to 3 characters) (sequential alphanumeric character)

Example: **CPA2**

Second flow combine along Peoria Avenue.

SUB-BASIN COMBINE:

Format: C(section no.) - (township no.) (range no.)(optional alphanumeric)

Example: C17-32

Hydrograph combine in Section 17, T3N, R2E.

Alternate formats C1732N, C1732A, C1732B, & ETC ... ...

These formats are used when there are multiple combines within a sub-basin and/or when the section is sub-divided into multiple sub-basins.

STREET NAME CODES FOR NAMED STREETS

Street Name	Code
Thunderbird Road	TB
Cactus Road	CR
Peoria Avenue	PA
Olive Avenue	OA
Northern Avenue	NA
Glendale Avenue	GA
Bethany Home Road	BH
Camelback Road	CB
Indian School Road	IS
Thomas Road	TR
McDowell Road	MD

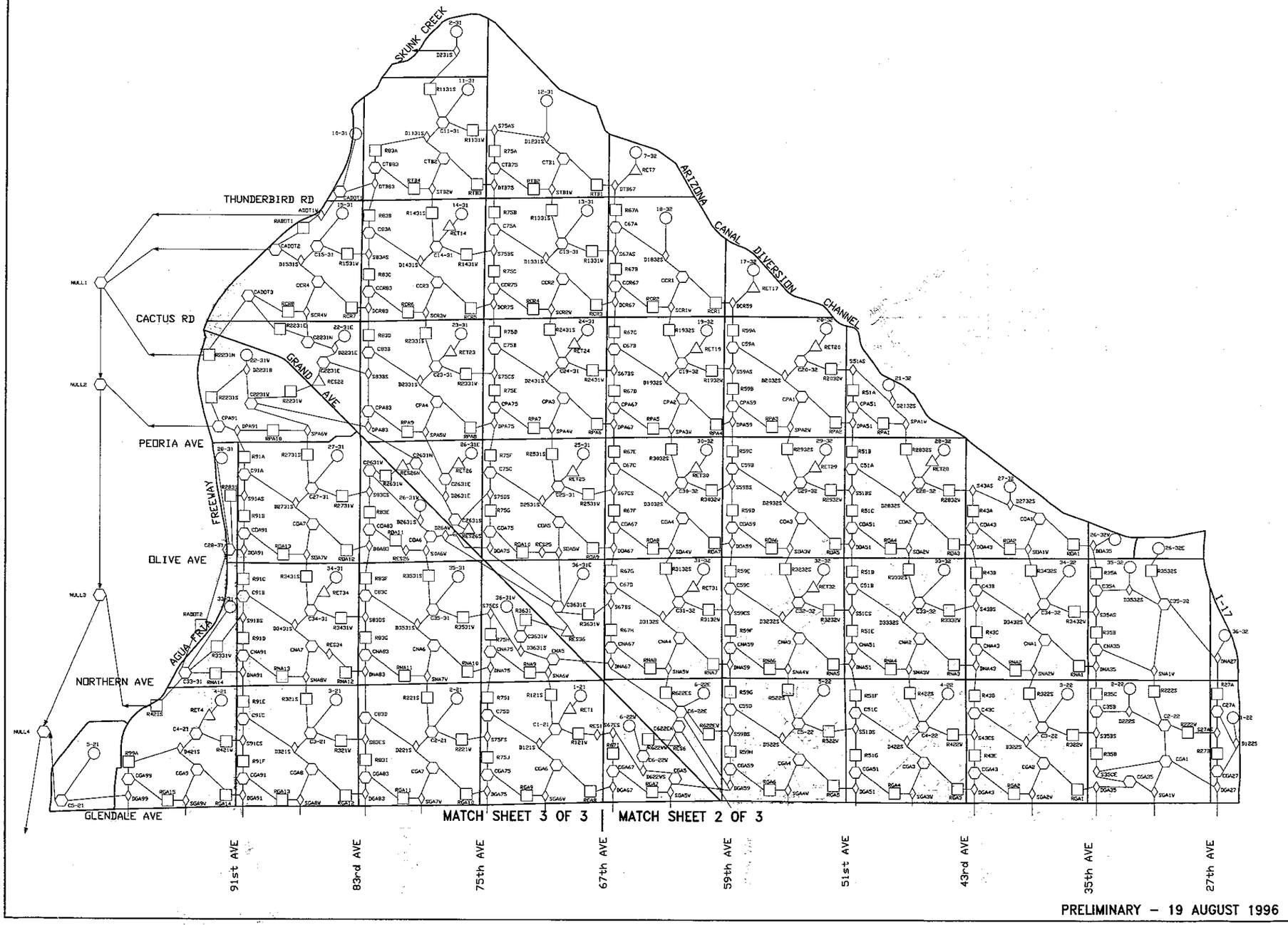
Note: The codes for numbered streets simply corresponds to the street number. For example the code for 51st Avenue is "51." The study area extends west from 27th Avenue to approximately 120th Avenue.

Appendix J: Exhibits 1 - 5

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

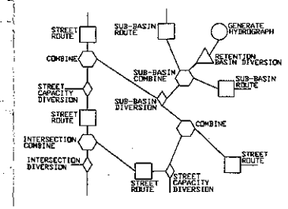
MARYVALE AREA DRAINAGE MASTER STUDY

FCD CONTRACT # 93-29



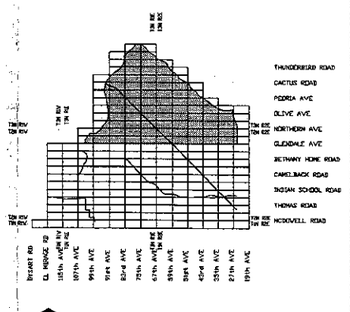
PRELIMINARY – 19 AUGUST 1996

LEGEND



DRAINAGE SUB-BASIN BOUNDARY

INDEX MAP



N

0 2000' 4000' 6000'

SCALE: 1" = 2000'

EXHIBIT 1

HEC-1 SCHEMATIC

	BY	DATE
DESIGN	–	–
DESIGN CHK.	–	–
PLANS	–	–
PLANS CHK.	–	–
SUBMITTED BY:		DATE:

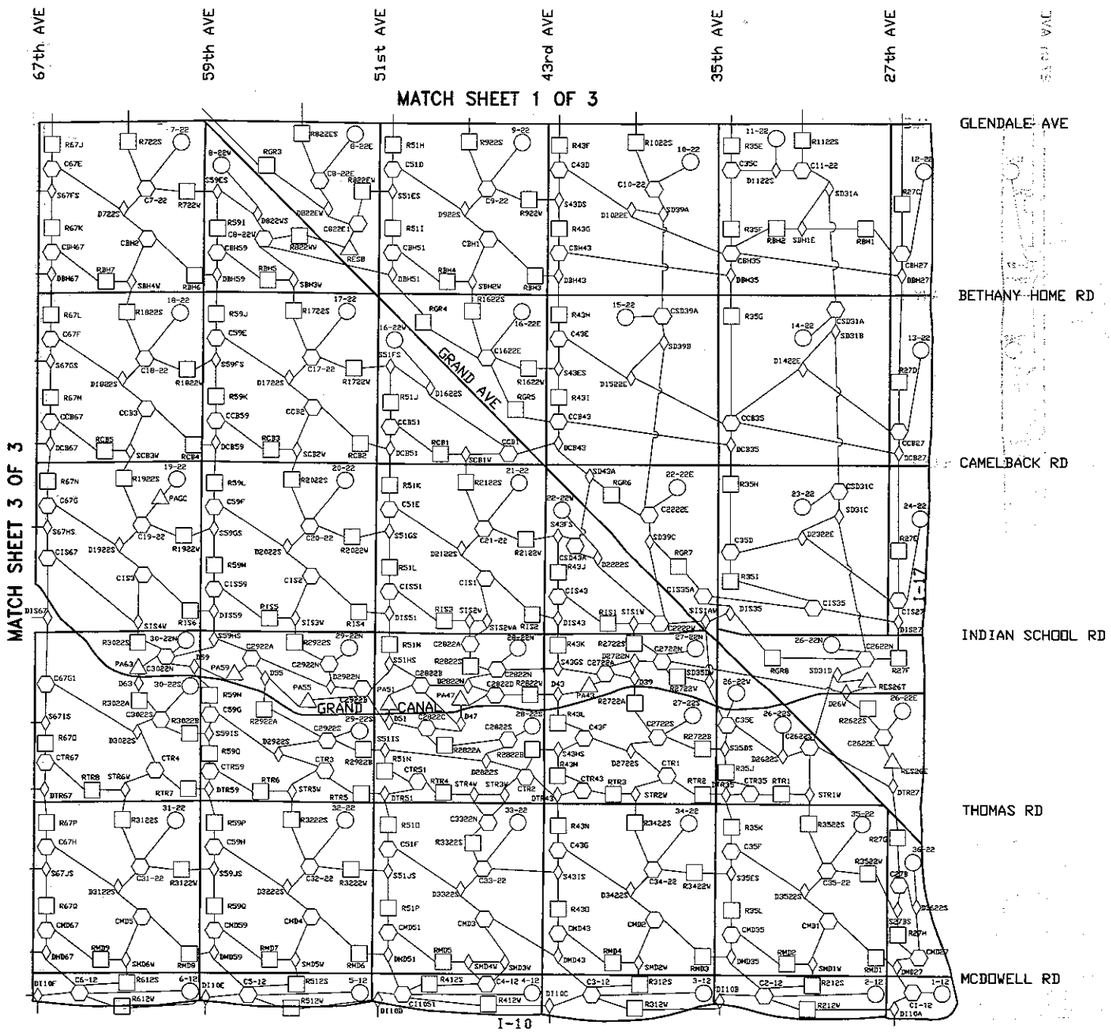
FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

RECOMMENDED BY: DATE

APPROVED BY: DATE

CHIEF ENGINEER AND GENERAL MANAGER

SHEET 1 OF 3



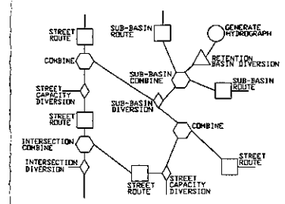
PRELIMINARY – 19 AUGUST 1996

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

MARYVALE AREA DRAINAGE MASTER STUDY

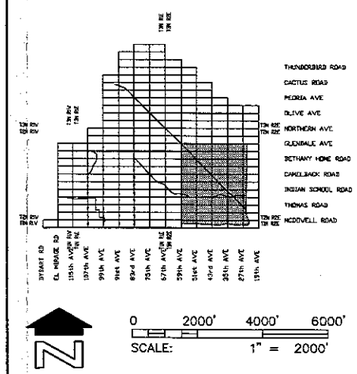
FCD CONTRACT # 93-29

LEGEND



DRAINAGE SUB-BASIN BOUNDARY

INDEX MAP



0 2000' 4000' 6000'

SCALE: 1" = 2000'

EXHIBIT 1

HEC-1 SCHEMATIC

	BY	DATE
DESIGN	–	–
DESIGN CHK.	–	–
PLANS	–	–
PLANS CHK.	–	–
SUBMITTED BY:		DATE:

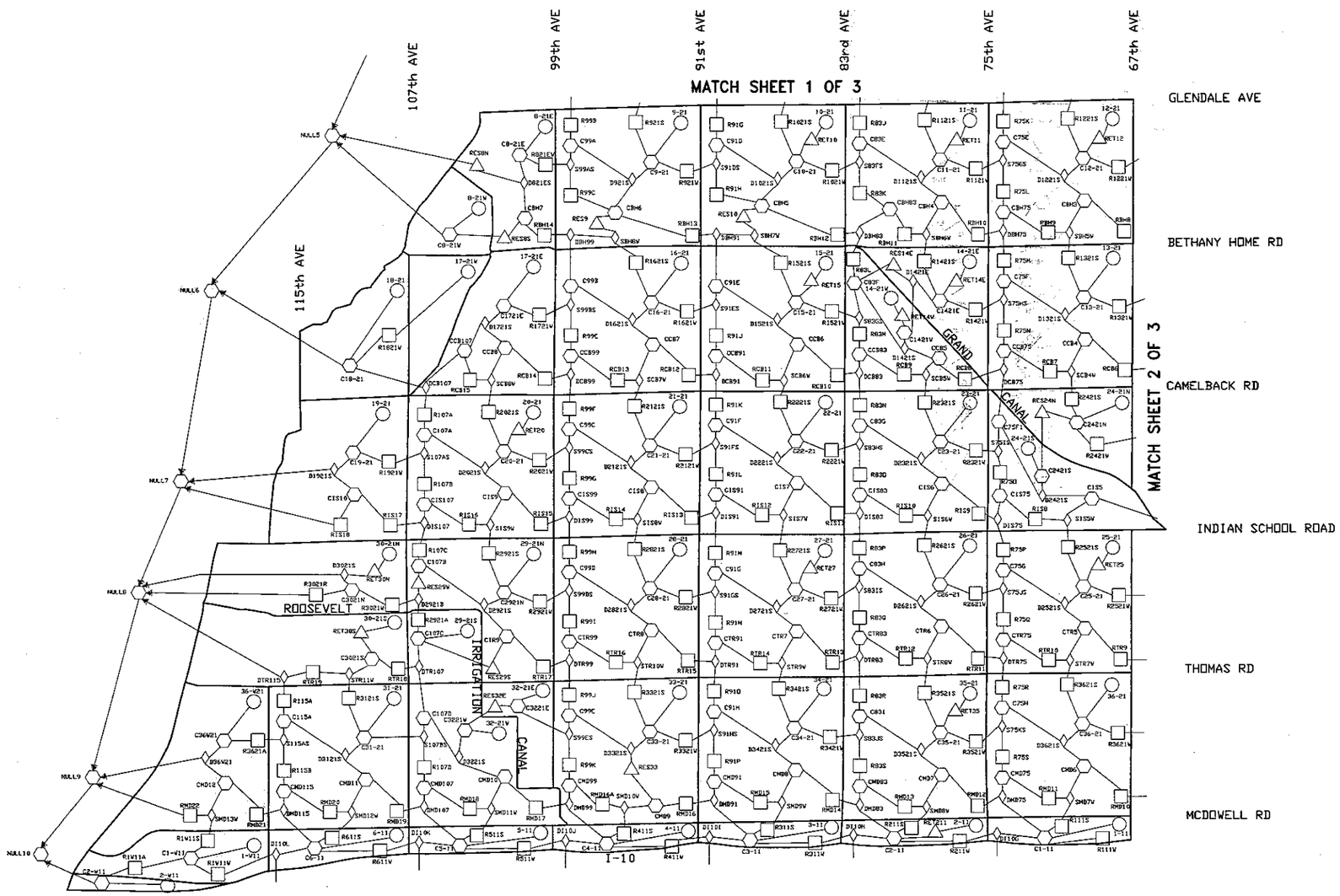
FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

RECOMMENDED BY: DATE

APPROVED BY: DATE

CHIEF ENGINEER AND GENERAL MANAGER

SHEET 2 OF 3



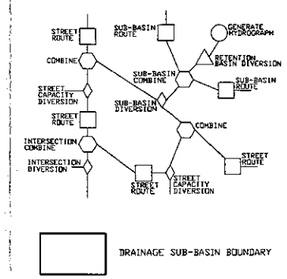
PRELIMINARY – 19 AUGUST 1996

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

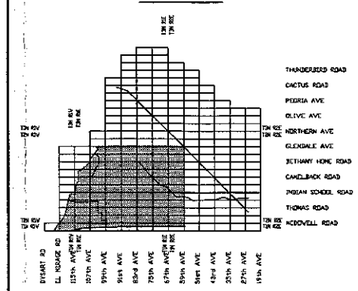
MARYVALE AREA DRAINAGE MASTER STUDY

FCD CONTRACT # 93-29

LEGEND



INDEX MAP



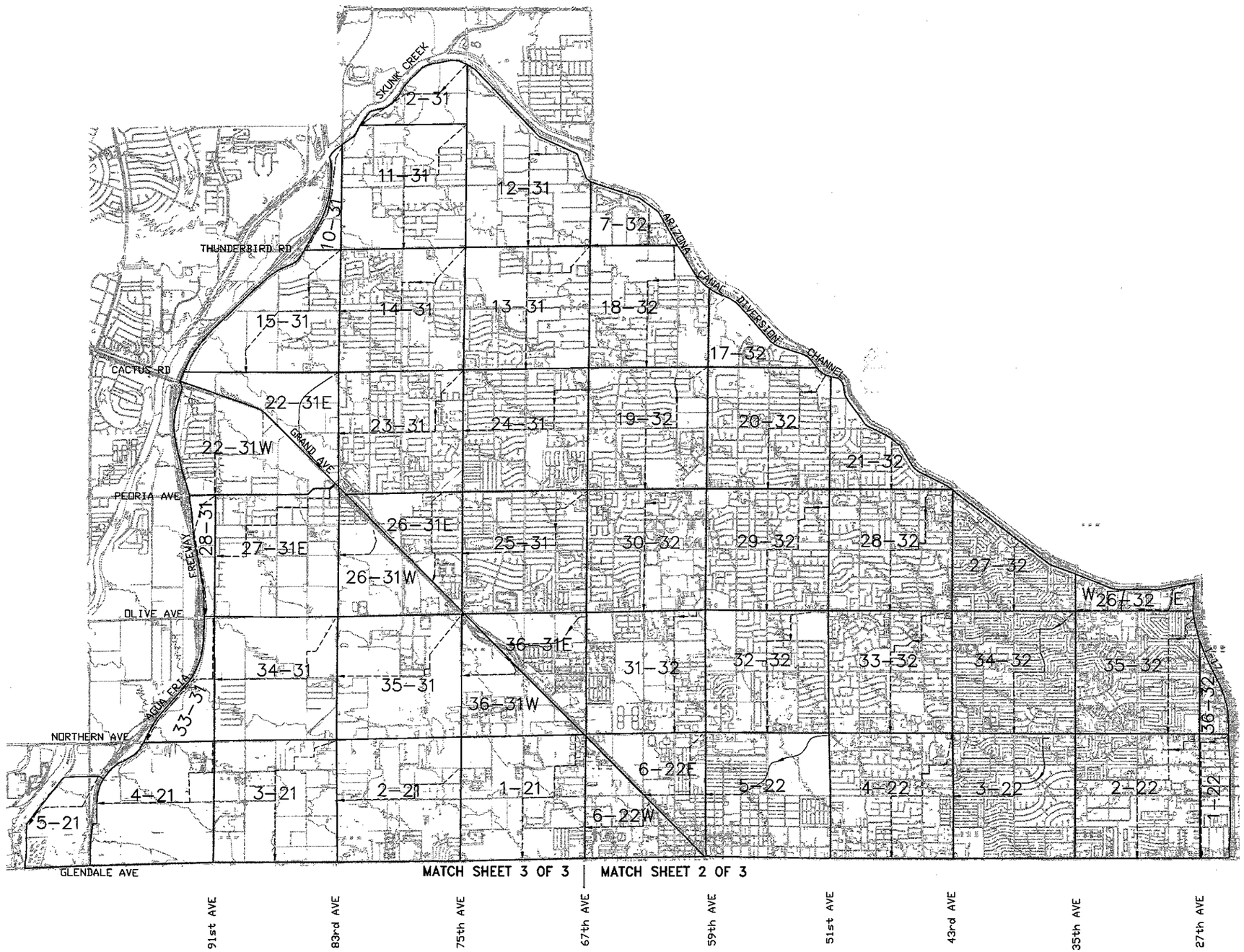
0 2000' 4000' 6000'

SCALE: 1" = 2000'

EXHIBIT 1

HEC-1 SCHEMATIC

	BY	DATE	
DESIGN	–	–	FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
DESIGN CHK.	–	–	RECOMMENDED BY: DATE
PLANS	–	–	APPROVED BY: DATE
PLANS CHK.	–	–	CHIEF ENGINEER AND GENERAL MANAGER
SUBMITTED BY: DATE:			SHEET 3 OF 3



FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

MARYVALE AREA DRAINAGE MASTER STUDY

"FCD CONTRACT # 93-29"

LEGEND

- ROAD/PAVEMENT
- RAILROAD
- INDEX CONTOUR
- 16-32 DRAINAGE SUB-BASIN BOUNDARY
- 16-32 SUB-BASIN I.D. NO.
- SUB-BASIN FLOW PATH

INDEX MAP

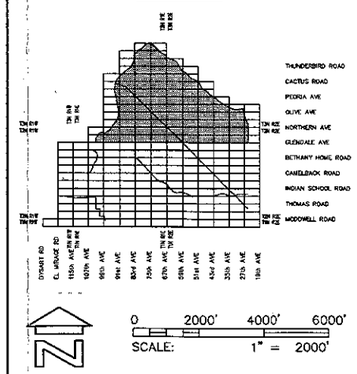


EXHIBIT 2

SUB-BASIN BOUNDARY & FLOW PATH MAP

	BY	DATE
DESIGN	–	–
DESIGN CHK.	–	–
PLANS	–	–
PLANS CHK.	–	–

SUBMITTED BY: DATE:

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

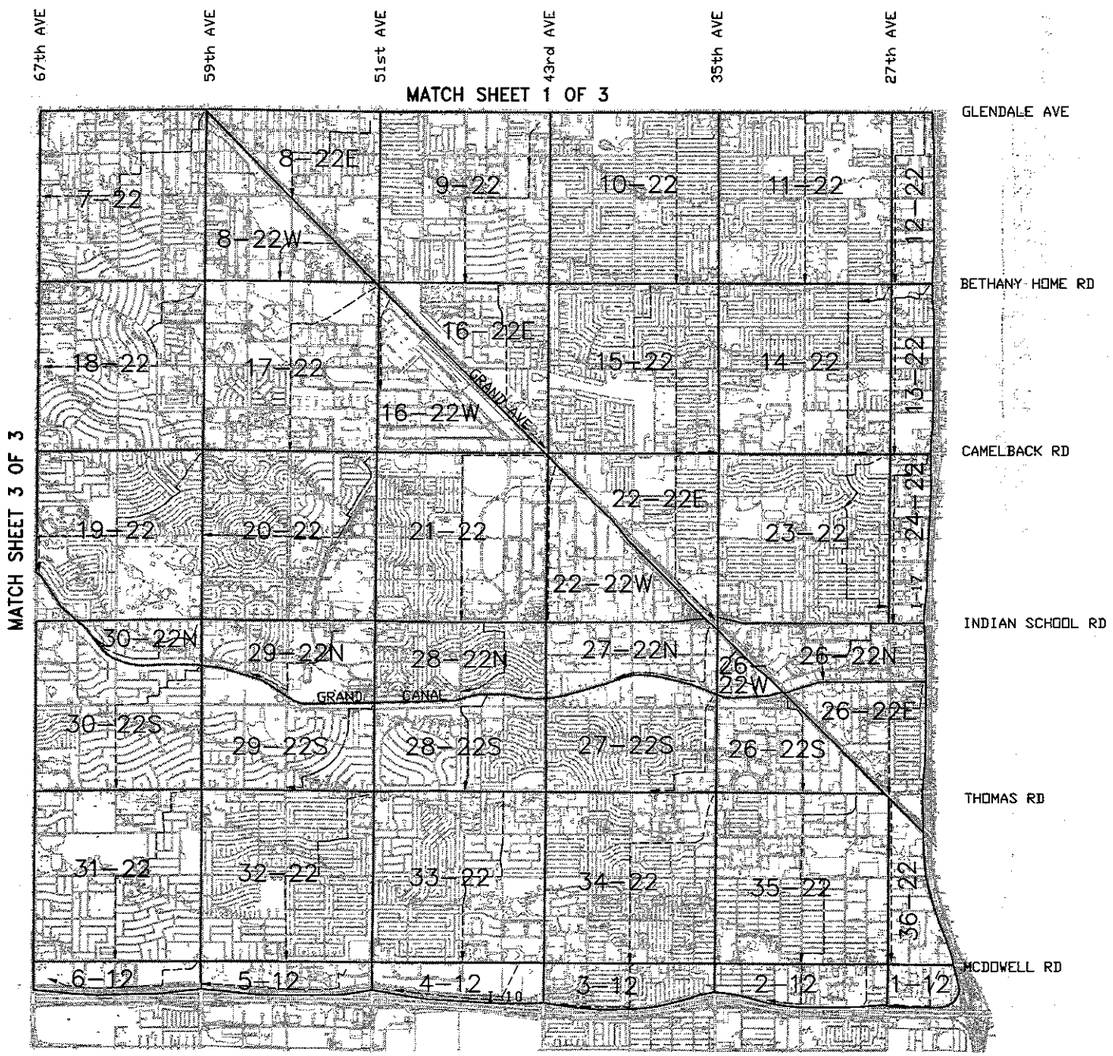
RECOMMENDED BY: DATE

APPROVED BY: DATE

CHIEF ENGINEER AND GENERAL MANAGER

SHEET 1 OF 3

PRELIMINARY – 19 AUGUST 1996



FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

MARYVALE AREA DRAINAGE MASTER STUDY

"FCD CONTRACT # 93-29"

LEGEND

- ROAD/PAVEMENT
- RAILROAD
- INDEX CONTOUR
- 16-32 DRAINAGE SUB-BASIN BOUNDARY
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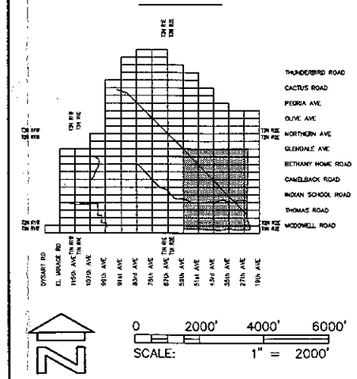
- SUB-BASIN FLOW PATH

INDEX MAP



0 2000' 4000' 6000'

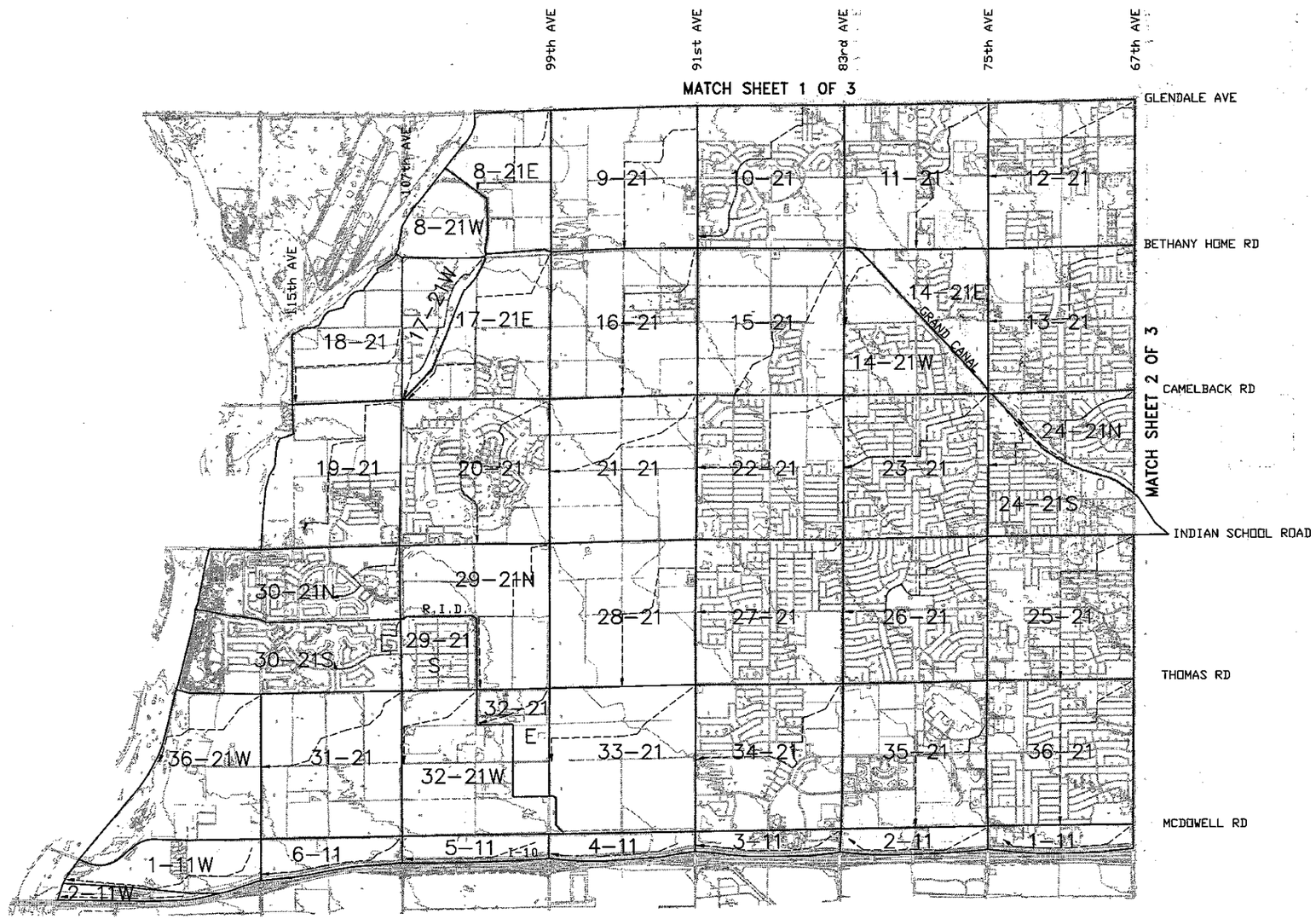
SCALE: 1" = 2000'

EXHIBIT 2

SUB-BASIN BOUNDARY & FLOW PATH MAP

	BY	DATE	
DESIGN	–	–	FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
DESIGN CHK.	–	–	RECOMMENDED BY: DATE
PLANS	–	–	APPROVED BY: DATE
PLANS CHK.	–	–	CHIEF ENGINEER AND GENERAL MANAGER
SUBMITTED BY: DATE:			SHEET 2 OF 3

PRELIMINARY – 19 AUGUST 1996



PRELIMINARY – 19 AUGUST 1996

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

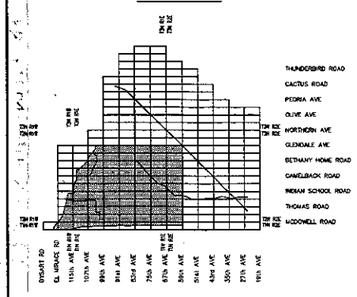
MARYVALE AREA DRAINAGE MASTER STUDY

"FCD CONTRACT # 93-29"

LEGEND

- ROAD/PAVEMENT
- RAILROAD
- INDEX CONTOUR
- 16-32 DRAINAGE SUB-BASIN BOUNDARY
- 16-32 SUB-BASIN I.D. NO.
- SUB-BASIN FLOW PATH

INDEX MAP



0 2000' 4000' 6000'

SCALE: 1" = 2000'

EXHIBIT 2

SUB-BASIN BOUNDARY & FLOW PATH MAP

	BY	DATE
DESIGN	–	–
DESIGN CHK.	–	–
PLANS	–	–
PLANS CHK.	–	–
SUBMITTED BY:		DATE:

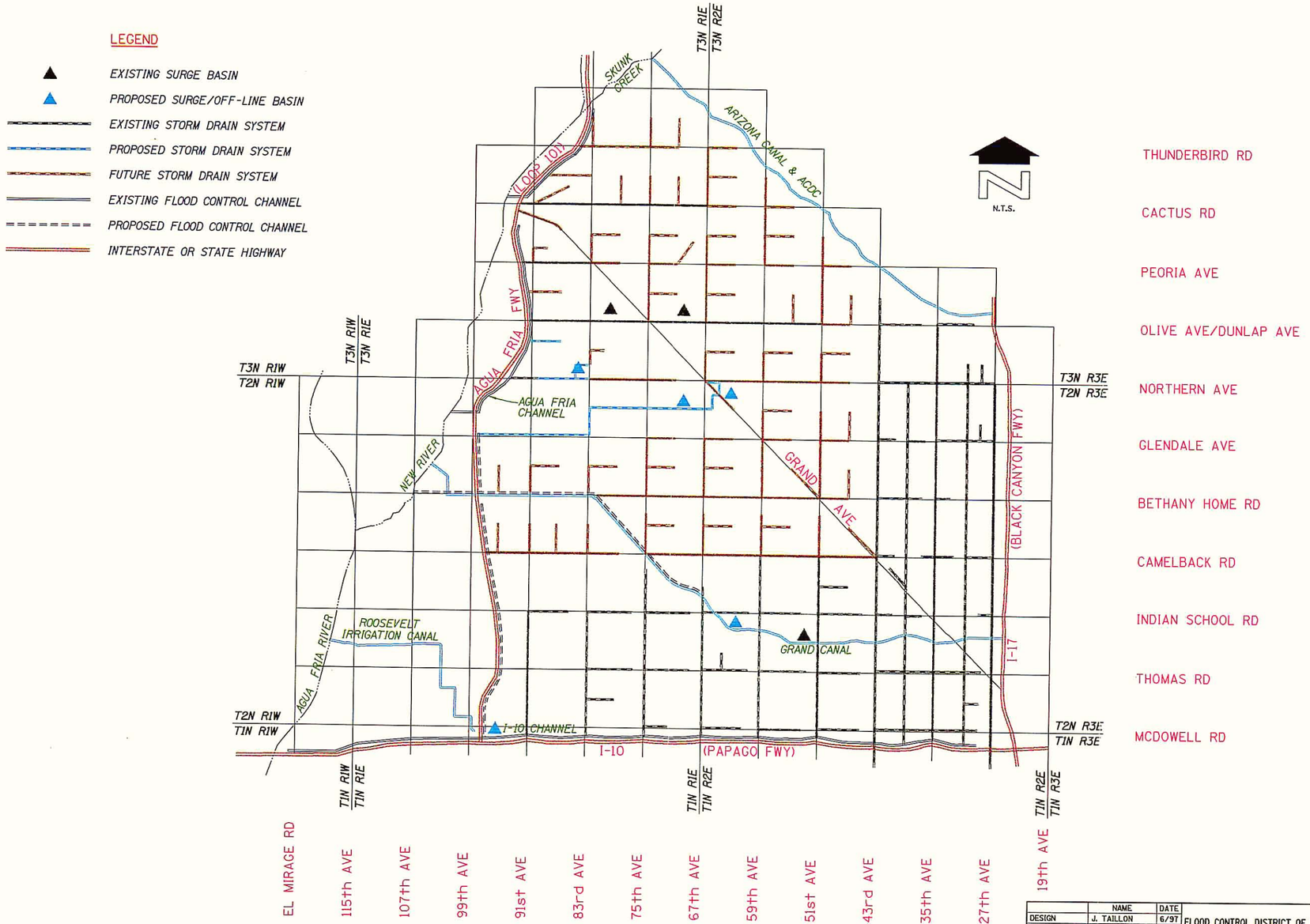
FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

RECOMMENDED BY: DATE

APPROVED BY: DATE

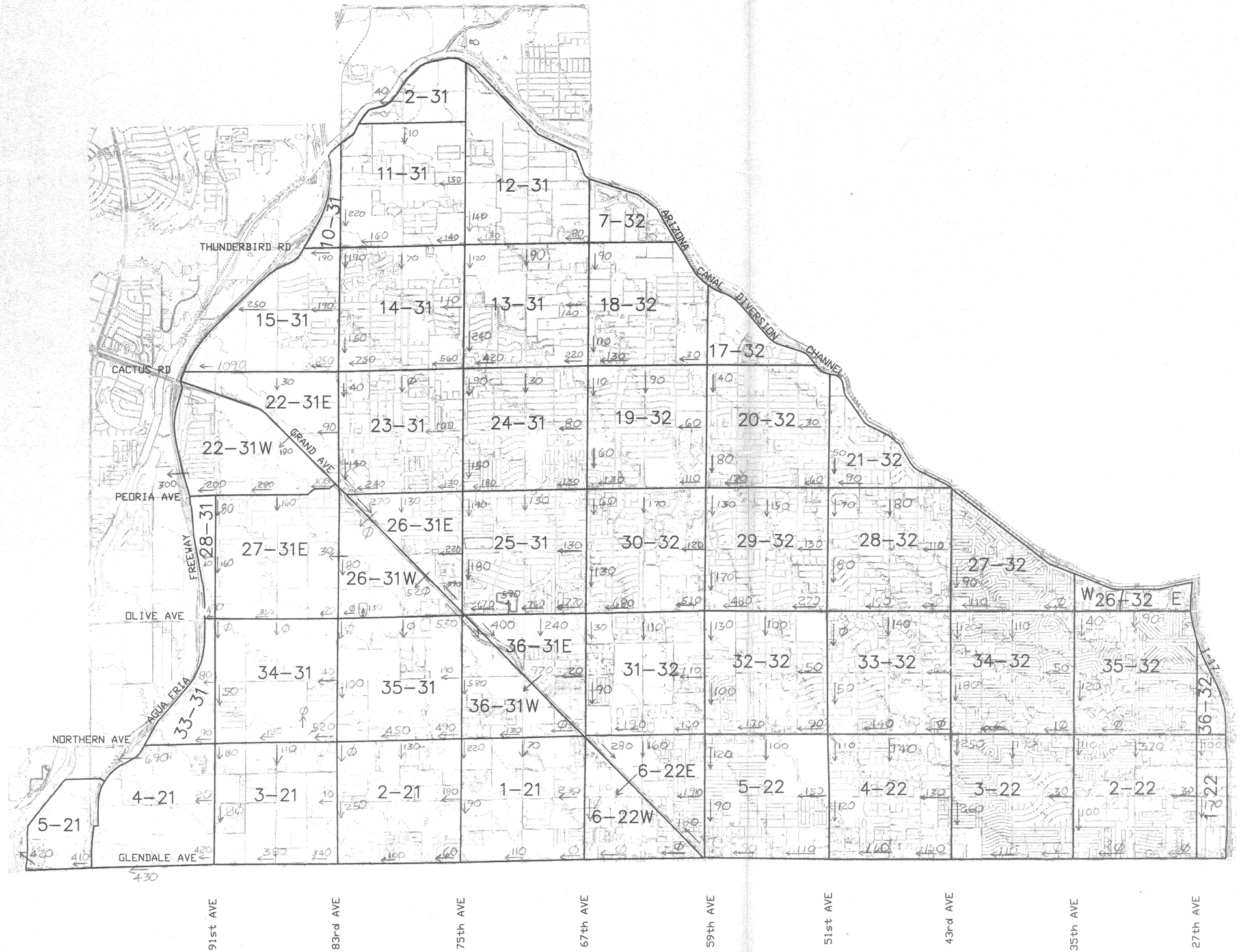
CHIEF ENGINEER AND GENERAL MANAGER

SHEET 3 OF 3



	NAME	DATE	
DESIGN	J. TAILLON	6/97	FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
DRAWN	A. LINN	6/97	
CHECKED	A. PATEL	6/97	
WOOD, PATEL & ASSOCIATES, INC. 1550 EAST MISSOURI, SUITE 203 PHOENIX, ARIZONA (602) 234-1344			EXISTING & PROPOSED STORM DRAIN FACILITIES
MARYVALE AREA DRAINAGE MASTER STUDY			FIGURE 2

P:/94154/SDRAIN1.DGN
06/26/97 13:57



FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

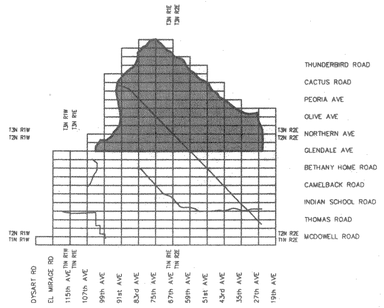
MARYVALE AREA DRAINAGE MASTER STUDY

"FCD CONTRACT # 93-29"

LEGEND

- ROAD/PAVEMENT
- RAILROAD
- INDEX CONTOUR
- 16-32 DRAINAGE SUB-BASIN BOUNDARY
- 16-32 SUB-BASIN I.D. NO.

INDEX MAP



0 2000' 4000' 6000'

SCALE: 1" = 2000'

Exhibit 5.

SUB-BASIN BOUNDARY MAP

	BY	DATE
DESIGN	–	–
DESIGN CHK.	–	–
PLANS	–	–
PLANS CHK.	–	–
SUBMITTED BY:		DATE:

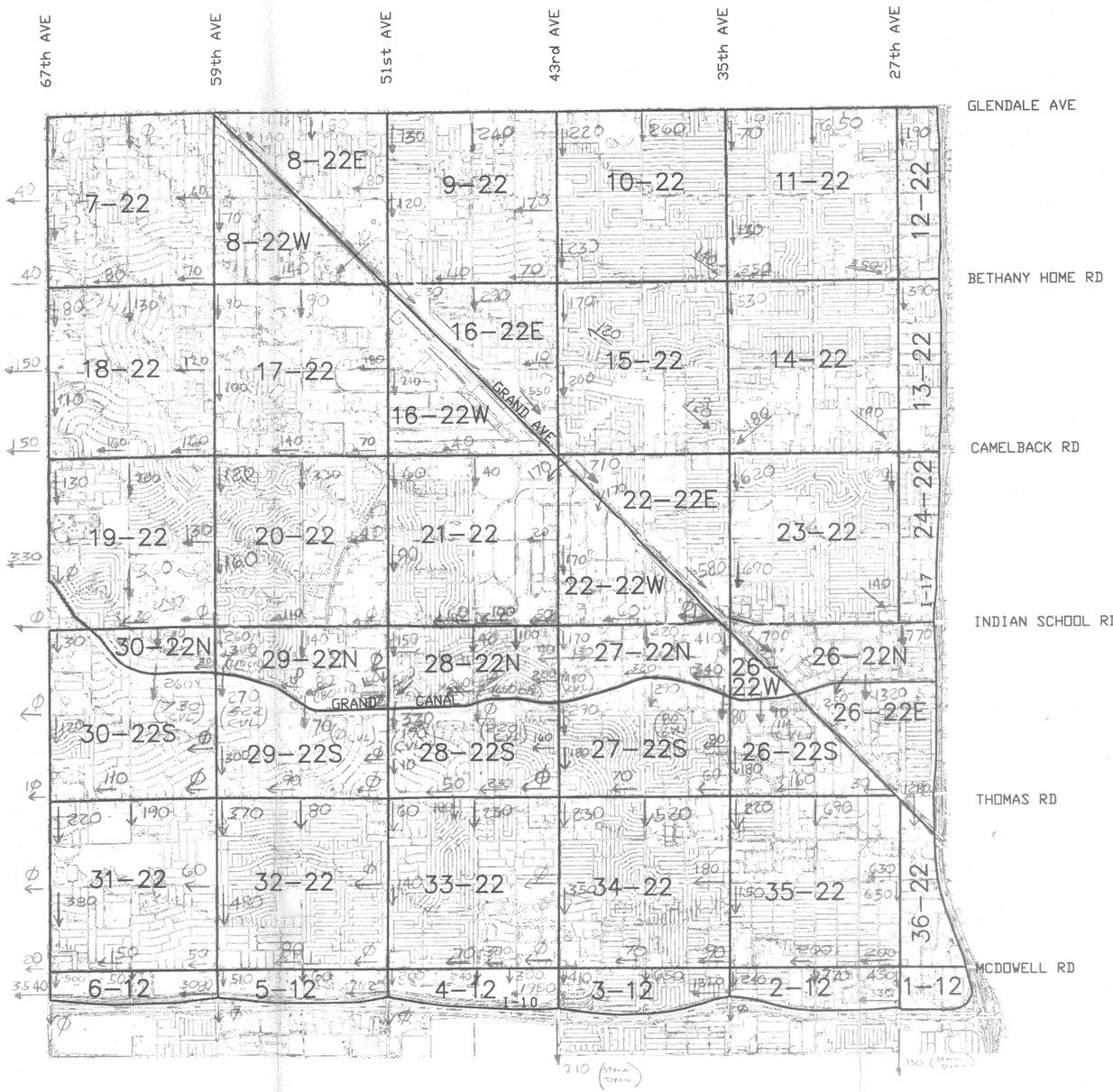
FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

RECOMMENDED BY: DATE

APPROVED BY: DATE

CHIEF ENGINEER AND GENERAL MANAGER

SHEET 1 OF 3



FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

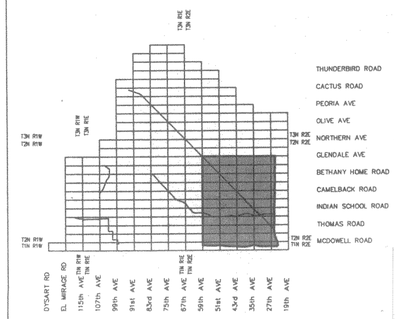
MARYVALE AREA DRAINAGE MASTER STUDY

"FCD CONTRACT # 93-29"

LEGEND

- ROAD/PAVEMENT
- RAILROAD
- INDEX CONTOUR
- 16-32 DRAINAGE SUB-BASIN BOUNDARY
- 16-32 SUB-BASIN I.D. NO.

INDEX MAP



0 2000' 4000' 6000'

SCALE: 1" = 2000'

Exhibit 5

SUB-BASIN BOUNDARY MAP

	BY	DATE
DESIGN	–	–
DESIGN CHK.	–	–
PLANS	–	–
PLANS CHK.	–	–

SUBMITTED BY: DATE:

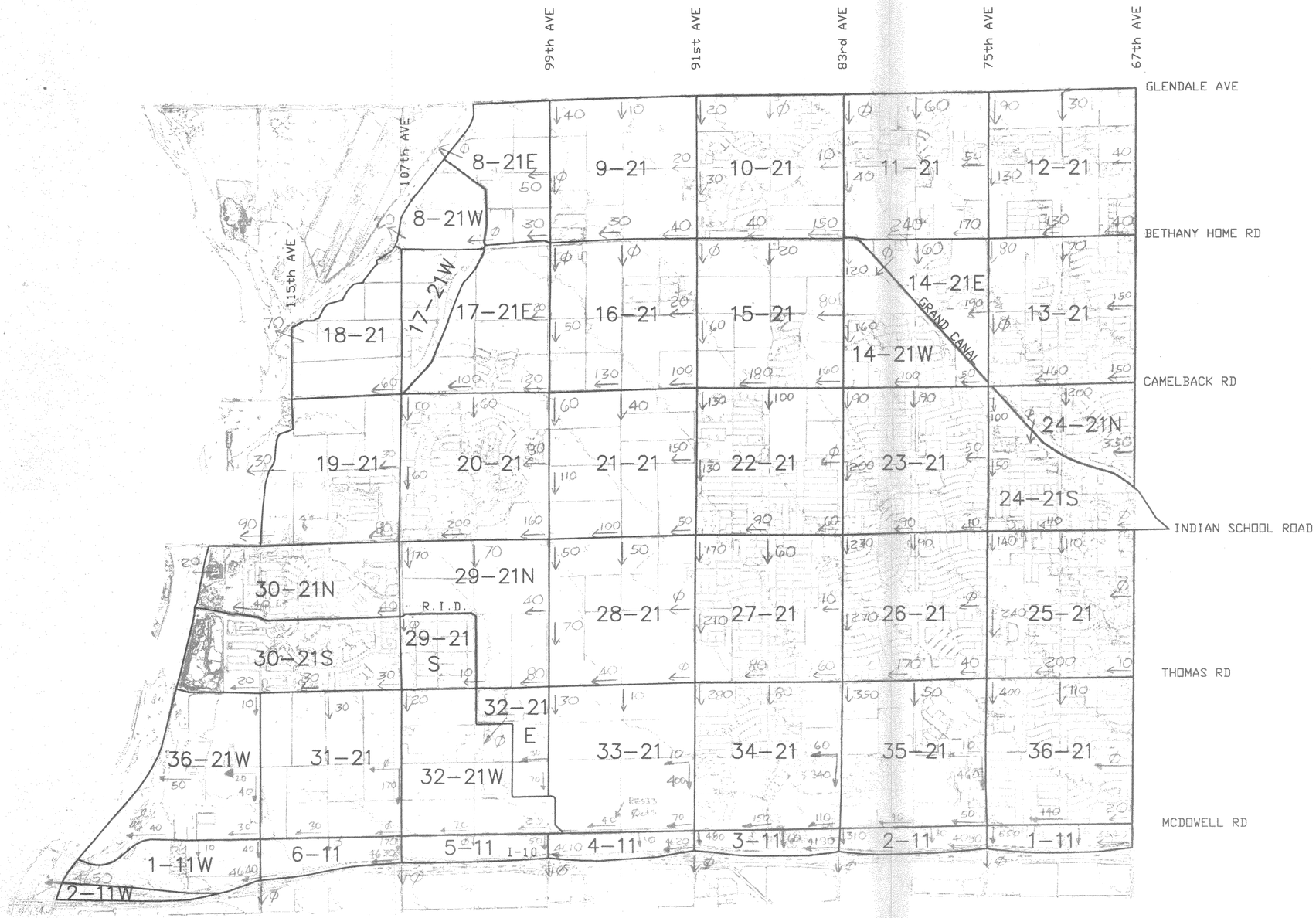
FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

RECOMMENDED BY: DATE

APPROVED BY: DATE

CHIEF ENGINEER AND GENERAL MANAGER

SHEET 2 OF 3



FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

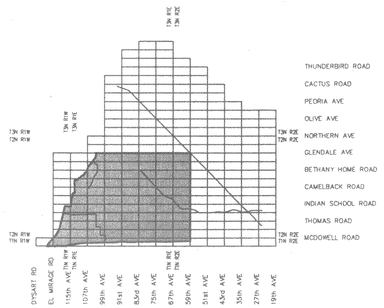
MARYVALE AREA DRAINAGE MASTER STUDY

"FCD CONTRACT # 93-29"

LEGEND

	ROAD/PAVEMENT
	RAILROAD
	INDEX CONTOUR
16-32	DRAINAGE SUB-BASIN BOUNDARY
16-32	SUB-BASIN I.D. NO.

INDEX MAP



0 2000' 4000' 6000'

SCALE: 1" = 2000'

Exhibit 5

SUB-BASIN BOUNDARY MAP

	BY	DATE
DESIGN	–	–
DESIGN CHK.	–	–
PLANS	–	–
PLANS CHK.	–	–
SUBMITTED BY:		DATE:

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

RECOMMENDED BY: DATE

APPROVED BY: DATE

CHIEF ENGINEER AND GENERAL MANAGER

SHEET 3 OF 3