VILLAGE LAKE TRIBUTARY STREAM STABILIZATION AS-BUILT ENGINEERING DESIGN REPORT

PROJECT SITE:

VILLAGE LAKE
STATE ROUTE 5 & N 100 W
NOBLE COUNTY, INDIANA

PREPARED FOR:

WAWASEE AREA CONSERVANCY FOUNDATION
P.O. BOX 548
SYRACUSE, INDIANA 46567

PREPARED BY:

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SEPTEMBER 14, 2009

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Village Lake Tributary Stream Stabilization
Draft As-Built Engineering Design Report

NOBLE COUNTY, INDIANA

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Village Lake Tributary Stream Stabilization
As-Built Engineering Design Report

NOBLE COUNTY, INDIANA

Executive Summary

Village Lake is approximately 11.3 acres and is located upstream of Lake Wawasee as the final lake along Turkey Creek within the Knapp Lake Chain. An unnamed tributary to the east of Village Lake, with an approximate 270-acre watershed, provides Village Lake with a major source for depositional sedimentation problems. This tributary suffers from scouring and erosion of its banks.

The proposed stabilization project will reduce the amount of sediment entering Village Lake by stabilizing the streambanks upstream of the lake providing a long term solution by eliminating sediment at the source. Based on the tributary drainage area, stream bed characteristics, stream cross-section geometry and existing vegetation characteristics, three stabilization measure cross-sections were developed. The streambank stabilization measures proposed include a combination of grading, placement of rock, live stake facines, live stake bundles, soils lifts, jute fabric, erosion control blanket, and native seeding.

Permits are not required from Army Corps of Engineers (ACOE) or the Indiana Department of Environmental Management (IDEM) as the scope of work does not include any fill placement in the wetland areas or in the unnamed tributary (Waters of the U.S.).

Project Purpose

The original project scope included construction of a sediment basin as well as design plans for stream stabilization measures. This approach was discussed and submitted to the Indiana Department of Environmental Management (IDEM) for permit approval. Through further conversations and submittals, the construction of an on-stream sediment basin was deemed non-permittable by IDEM. Therefore the project scope was revised to just an engineering design study. The purpose of the engineering design study was to prepare a complete physical design that is ready to move to the construction phase and to ensure project success through necessary communication with permitting agency staff and affected landowners.

Project Description

Existing Conditions

Village Lake is approximately 11.3 acres and is located upstream of Lake Wawasee as the final lake along Turkey Creek within the Knapp Lake Chain. An unnamed tributary to the east of Village Lake, with an approximate 270-acre watershed, provides Village Lake with a major source for depositional sedimentation problems. This tributary suffers from scouring and erosion of its banks.

As shown on the Aerial Exhibit in Section 1, Village Lake is currently and has been experiencing a significant sedimentation problem, while in-effect acting as a sediment

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basin in itself as the ultimate outlet for the unnamed tributary. The sedimentation has resulted in approximately one-half acre of the lake filling in along the southwest portion. It should be noted that the tributary is considered to be ephemeral as flow is only apparent during rainfall events.

Based on site specific info, USGS topography, soils information and current land use, the sedimentation issue is being caused by the combination of these characteristics. See Section 1 for site specific exhibits. The upstream portion of the watershed is farmed with efficient drain tile systems for low flow conditions and shallow sloped, wide bottomed drainage swales for high flow conditions. Once the stormwater runoff gets to the WACF property, the width of the channel bottom has decreased and the overall slope of the channel has increased significantly. The majority of the tributary is located within a well established wooded area that prohibits vegetation from establishing. The sparse vegetation in combination with the sandy soils and grazing cows in the this area ultimately result in an unstable condition as there are very little established root systems to prevent the soils from washing away during the rain events.

Proposed Conditions

The proposed stabilization project will reduce the amount of sediment entering Village Lake by stabilizing the streambanks upstream of the lake providing a long term solution by eliminating sediment at the source. The streambank stabilization measures proposed include a combination of grading, placement of rock, live stake facines, live stake bundles, soils lifts, jute fabric, erosion control blanket, and native seeding. Three representative cross sections have been designed based on the severity of the erosion at each location. See the Engineering Calculations Section of this report for a description of each cross section and the Final Engineering Plan Set, Drawing 2.0 for the locations and details for each cross section.

Project Tasks

Project Boundaries and Preliminary Design

The entire unnamed tributary and surrounding woodland areas are on property that is currently owned by WACF. The project improvements are proposed to be confined to the stream corridor (no more than 100 feet wide) and will not be impacting adjacent property owners. Access to the project site is through an adjacent property. This is further discussed under the Easement and Land Availability/Land User Coordination section of this report.

Engineering Calculations

The Village Lake Stream Stabilization project includes 13 areas of stabilization totaling 531 linear feet. These 13 areas were identified as the most moderately to severely eroded areas along the approximate 1,300 foot stream corridor located on the WACF property.

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A critical duration TR-20 hydrologic model was created to determine the flows that are being conveyed through the stream for 1, 2, 5, 10, 25, 50, and 100 year storms. A tributary drainage area of 270 acres was delineated for the unnamed tributary using the USGS map for this area. 162.17 acres is located north of County Road W100N and is predominately agricultural land. 107.58 acres is located south of County Road W100N and is also predominately agricultural land with some wooded areas. Curve numbers were determined using the NRCS Soil Map for this area as well as aerial photography for land cover descriptions. Time of concentration numbers were determined using the USGS topographic map for slopes and aerial photography for land cover surface descriptions. The peak flow for each storm was then inputted into a Flow Master model to compute the approximate velocity in the channel. Peak flows of 32.45 cfs to 305.92 cfs are experienced in the stream from the 1-year to 100-year storm with velocities ranging from 5.41 fps to 10.25 fps. See Section 2 for the back-up calculations and the TR-20 model input and output files.

It should be noted that there are absolutely no proposed improvements below the ordinary high water level in the tributary. The ordinary high water level was field verified to be approximately 1-foot above the channel bottom.

Based on the tributary drainage area, stream bed characteristics, stream cross-section geometry and existing vegetation characteristics, three stabilization measure cross-sections were developed.

Stream Bank Stabilization – Cross Section A is intended for the most severely eroded areas that are located in sections of the stream experiencing drastic grade changes or meanders. The existing eroded banks are proposed to be graded to a minimum of a 6:1 slope or maximum of 3:1 slope depending on the depth of the erosion and available land at that location. The excess material is proposed to be disposed of on-site in the same general location where the excavation is taking place. A rock toe is proposed at the ordinary high water level for additional protection during the more frequent storm events. Soil lifts including jute fabric, erosion control blanket, and live stakes are proposed above the rock toe. The remaining re-graded slope will be seeded and blanketed with a native prairie seed for shady areas.

Stream Bank Stabilization – Cross Section B is proposed for the moderately eroded areas. The existing eroded banks are proposed to be graded to a minimum of 6:1 slope or a maximum of 3:1 slope depending on the depth of the erosion and available land at that location. The excess material is proposed to be disposed of on-site in the same general location where the excavation is taking place. Two soil lifts are proposed to begin at the ordinary high water level with live fascine bundles for additional protection during the more frequent storm events. The remaining re-graded slope will be seeded and blanketed with a native prairie seed for shady areas.

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Stream Bank Stabilization – Cross Section C is proposed for the areas that are showing signs of minimal erosion. The existing eroded banks are proposed to be graded to a minimum of 6:1 slope or a maximum of 3:1 slope depending on the depth of the erosion and available land at that location. The excess material is proposed to be disposed of on-site in the same general location where the excavation is taking place. Two soil lifts are proposed to begin at the ordinary high water level. The remaining re-graded slope will be seeded and blanketed with a native prairie seed for shady areas.

Permit Coordination

Permits are not required from Army Corps of Engineers (ACOE) or the Indiana Department of Environmental Management (IDEM) as the scope of work does not include any fill placement in the wetland areas or in the unnamed tributary (Waters of the U.S.). Permits were originally submitted for when the sediment basin was a part of the proposed improvements, due to IDEM considering the sediment basin "out of scope" it was removed from the design and is not longer a part of the project.

See Section 3 for correspondence from the ACOE, IDEM, USFWS, and Indiana Natural Heritage Data Center.

Construction Cost Estimates and Timelines

Based on previously completed streambank/shoreline stabilization projects, it is estimated that construction will cost $350/linear foot. This cost takes into account access, potential constructability issues with the amount of trees in this area and materials needed to construct the proposed cross sections.

The construction schedule should take into account appropriate seeding windows for the native plantings proposed for each cross section. The Shady Prairie Mix has a spring installation period of March 1 to May 15 and a fall installation period of November 1 (or first frost) to December 31 (or frozen ground). The live stakes and live fascine bundles are recommended to be installed in the spring.

Easement and Land Availability/Land User Coordination

As stated in the Project Boundaries section of this report, the proposed improvements are located on property currently owned by WACF. However, access to the site is through an adjacent property. The property owner is aware of the proposed project and has agreed to allow access through his property for construction activities. It should be noted that the access is through a graveled private drive and that any disturbances to the gravel drive during construction shall be repaired prior to completion of the project. The property owner's contact information will be provided to the consultant chosen for the construction phase of this project. The property owner shall be notified at least 48 hours in advance of any construction activities taking place and given a construction schedule.

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Flood Stage Analysis

Based on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) for this area, there is no mapped floodplain associated with the unnamed tributary to Village Lake. Village Lake is mapped as Zone A1 with a corresponding elevation of 880. The proposed improvements do not include any fill being placed in the floodplain or any modifications to the stream corridor below the ordinary high water level. The tributary drainage area to Village Lake associated with the unnamed tributary is 270 acres, which is less than a square mile. Therefore, a flood stage analysis was not necessary.

Wetland Impact Assessment

A wetland impact assessment was completed in September of 2008. It was determined that there are wetland areas adjacent to Village Lake including the unnamed tributary east to the private drive. The established wetland areas outside of the stream corridor are not within the project limits and will not be disturbed during construction of the stream stabilization measures. The quality of the wetlands within the stream corridor is deprived due to the amount of erosion that has occurred in this area. This section of stream is the flattest sloped area and is where the sediment from upstream begins to drop out of the water column due to low velocities. These areas, similarly to the upstream sections, will be stabilized to a natural condition without any placement of fill in the wetland areas.

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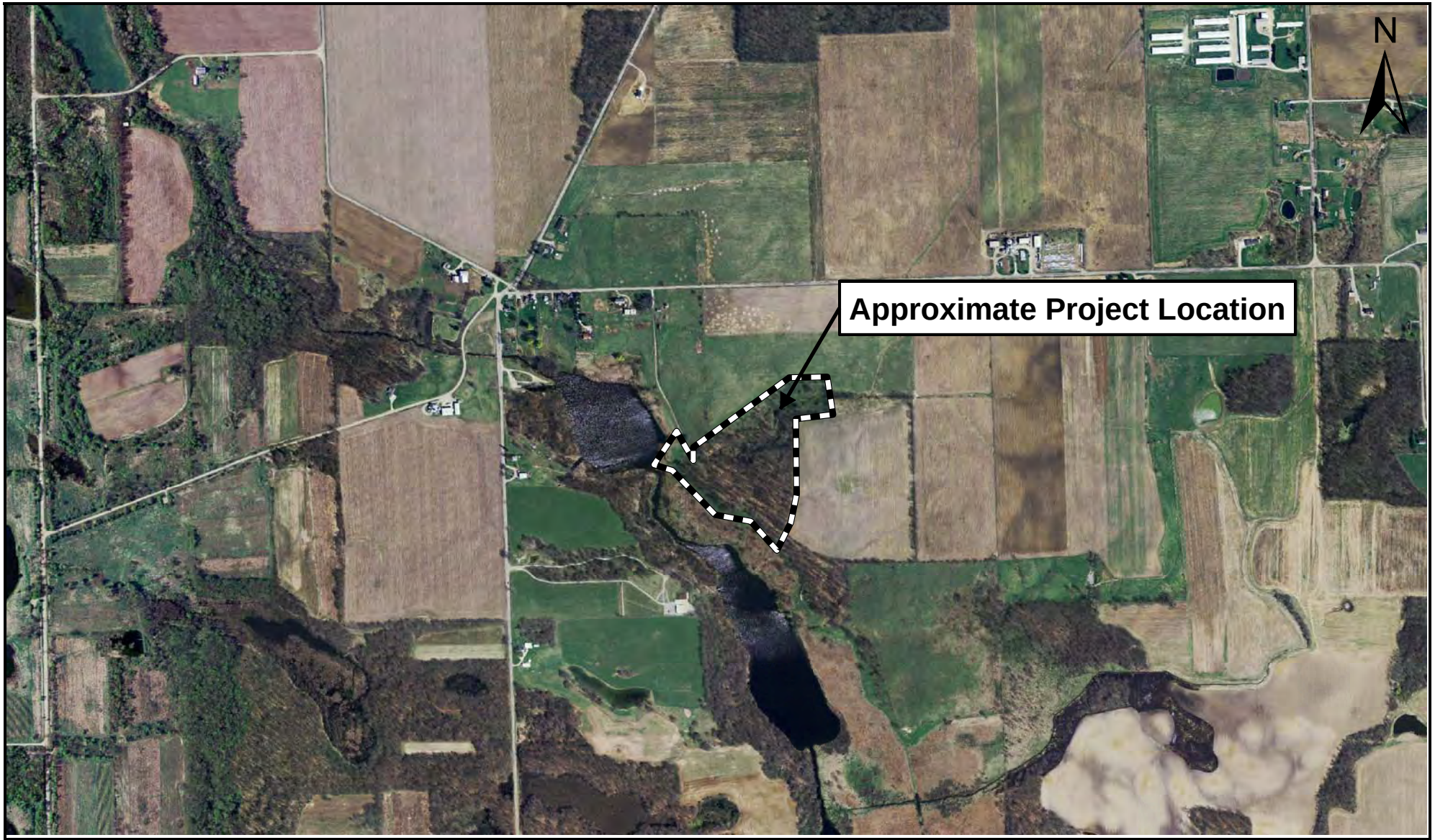
SECTION 1



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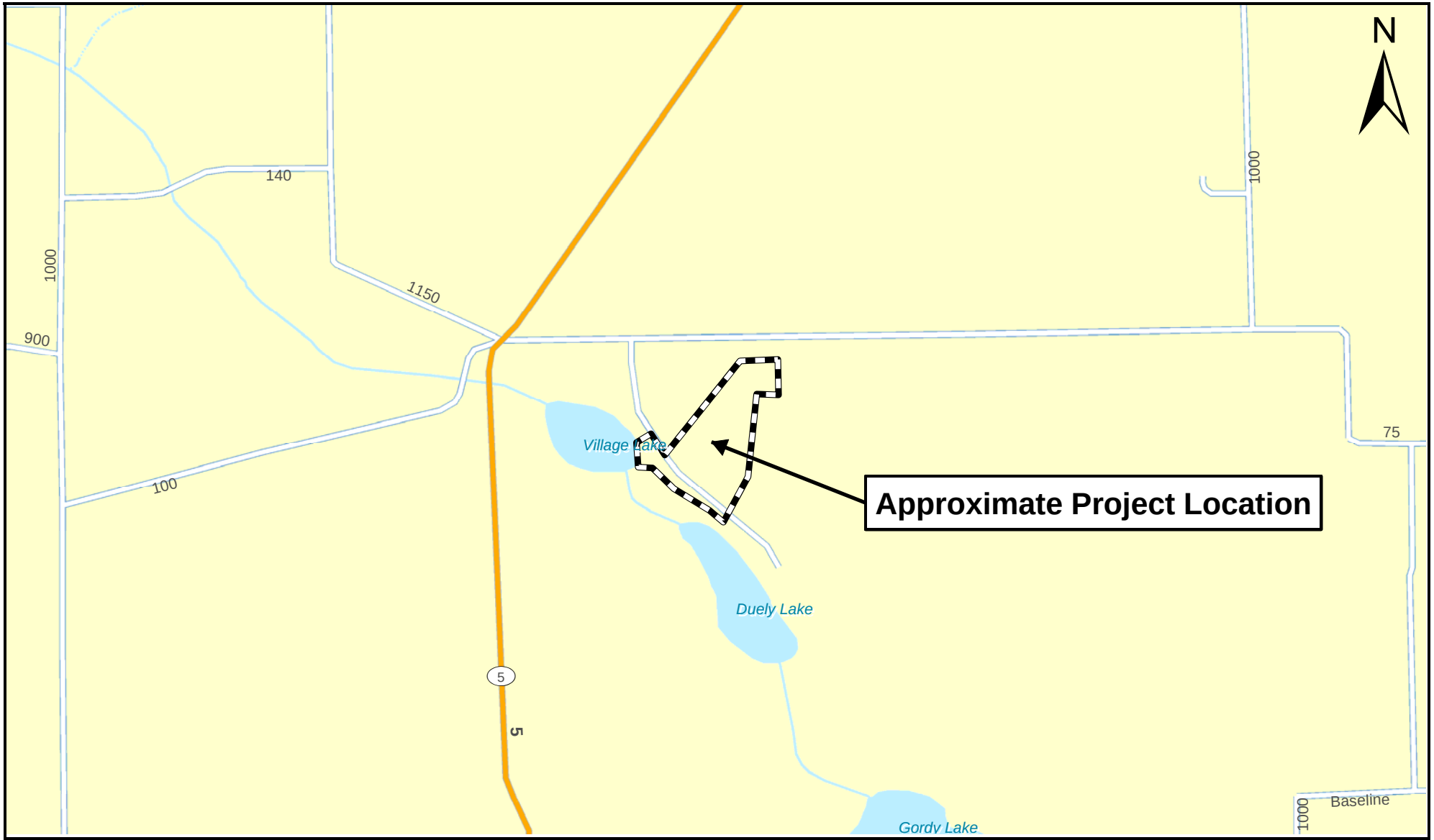
www.v3co.com

TITLE: **Village Tributary Aerial Exhibit**		PROJECT: **Village Lake Tributary - Stream Erosion Project**	
BASE LAYER: 2005 Aerial Photograph		PROJECT NO.: 06037.03	EXHIBIT: 1	SHEET: 1 OF: 1
CLIENT: Wawasee Area Conservancy Foundation, P.O. Box 548, Syracuse, Indiana 46567		QUADRANGLE: North Webster	DATE: 01/23/08	SCALE: NTS



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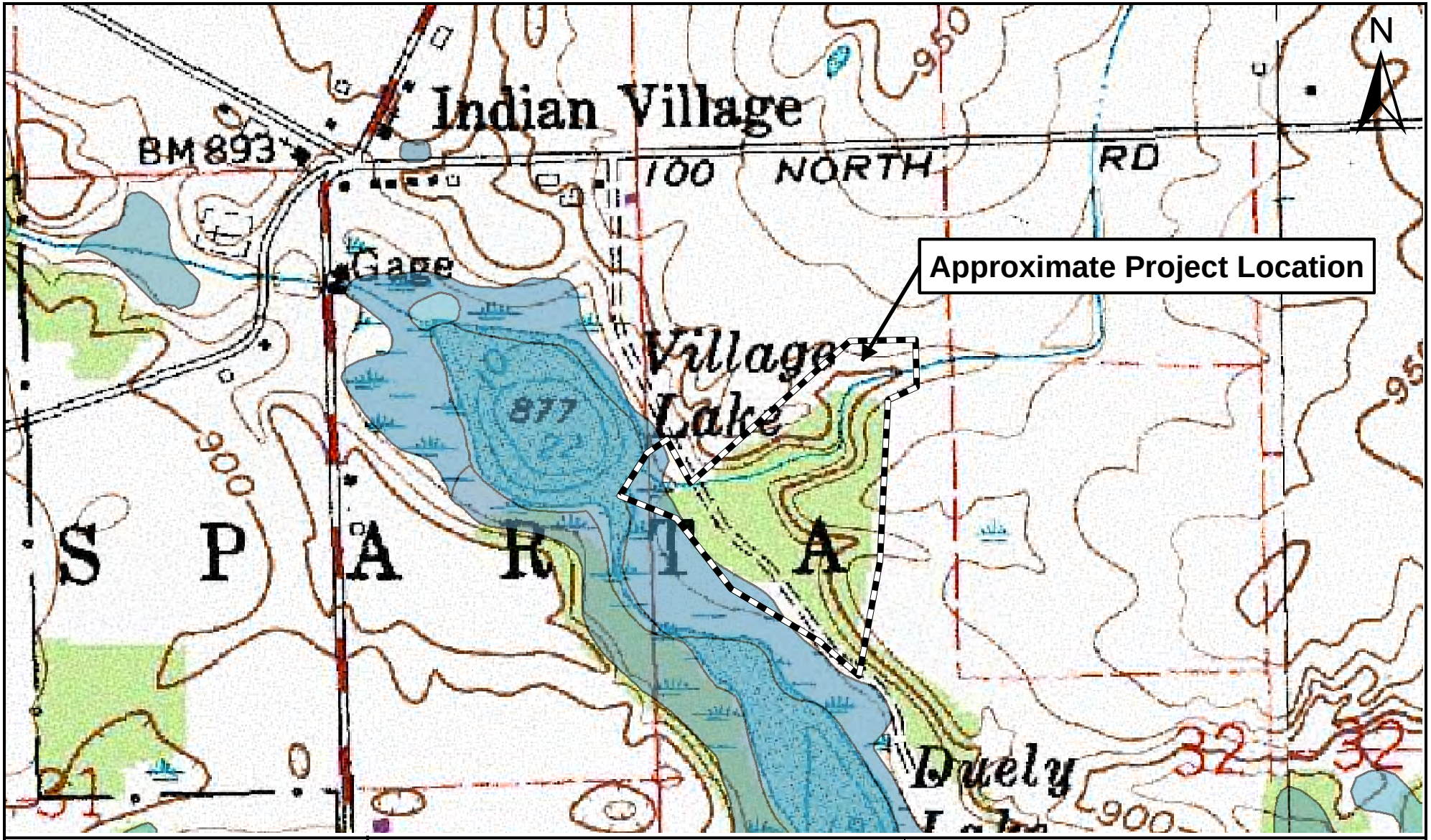
TITLE: **Project Location Map**		PROJECT: **Village Lake Tributary - Stream Erosion Project**	
BASE LAYER: StreetMap USA (2006)		PROJECT NO.: 06037.03	EXHIBIT: 2	SHEET: 1 OF: 1
CLIENT: Wawasee Area Conservancy Foundation P.O.Box 548 Syracuse, Indiana 46567		QUADRANGLE: North Webster	DATE: 01/23/2008	SCALE: NTS



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TITLE: National Wetland Inventory Map		PROJECT: Village Lake Tributary - Stream Erosion Project	
BASE LAYER: USGS Topographic Work Map		PROJECT NO.: 06037.03	EXHIBIT: 3	SHEET: 1 OF: 1
CLIENT: Wawasee Area Conservancy Foundation, P.O.Box 548, Syracuse, Indiana 46567		QUADRANGLE: North Webster	DATE: 01/23/2008	SCALE: NTS

E:\2006\06037\06037.03\Drawings\ARCVIEW\EXHIII_nwi06037_03.mxd

WETLANDS AND DEEPWATER HABITATS CLASSIFICATION

SYSTEM — **M - MARINE**

SUBSYSTEM — **1 - SUBTIDAL**

CLASS	Subclass
RB - ROCK BOTTOM	1 Bedrock 2 Rubble
UB - UNCONSOLIDATED BOTTOM	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic
AB - AQUATIC BED	1 Algal 3 Rooted Vascular 5 *Unknown Submergent*
RF - REEF	1 Coral 3 Worm
OW - *OPEN WATER/ Unknown Bottom*	

SUBSYSTEM — **2 - INTERTIDAL**

CLASS	Subclass
AB - AQUATIC BED	1 Algal 3 Rooted Vascular 5 *Unknown Submergent*
RF - REEF	1 Coral 3 Worm
RS - ROCKY SHORE	1 Bedrock 2 Rubble
US - UNCONSOLIDATED SHORE	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic

SYSTEM — **E - ESTUARINE**

SUBSYSTEM — **1 - SUBTIDAL**

CLASS	Subclass
RB - ROCK BOTTOM	1 Bedrock 2, Rubble
UB UNCONSOLIDATED BOTTOM	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic
AB AQUATIC BED	1 Algal 3 Rooted Vascular 4 Floating Vascular 5 *Unknown Submergent* 6 *Unknown Surface*
RF - REEF	1 Mollusc 2 Worm
OW - *OPEN WATER/ Unknown Bottom*	

SUBSYSTEM — **2 - INTERTIDAL**

CLASS	Subclass
AB - AQUATIC BED	1 Algal 3 Rooted Vascular 4 Floating Vascular 5 *Unknown Submergent* 6 *Unknown Surface*
RF- REEF	1 Mollusc 2 Worm
SB - STREAMBED	1 Cobble Gravel 2 Sand 3 Mud 4 Organic
RS - ROCKY SHORE	1 Bedrock 2 Rubble
US - UNCONSOLIDATED SHORE	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic
EM -EMERGENT	1 Persistent 2 Nonpersistent
SS - SCRUB-SHRUB	1 Broad-Leaved Deciduous 2 Needle-Leaved Deciduous 3 Broad-Leaved Evergreen 4 Needle-Leaved Evergreen 5 Dead 6 *Deciduous* 7 *Evergreen*
FO FORESTED	1 Broad-Leaved Deciduous 2 Needle-Leaved Deciduous 3 Broad-Leaved Evergreen 4 Needle-Leaved Evergreen 5 Dead 6 *Deciduous* 7 *Evergreen*

SYSTEM — **R - RIVERINE**

SUBSYSTEM — **1 – TIDAL**

CLASS	Subclass
RB - ROCK BOTTOM	1 Bedrock 2 Rubble
UB - UNCONSOLIDATED BOTTOM	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic
*SB - STREAMBED	1 Bedrock 2 Rubble 3 Cobble Gravel 4 Sand 5 Mud 6 Organic 7 Vegetated
AB - AQUATIC BED	1 Algal 2 Aquatic Moss 3 Rooted Vascular 4 Floating Vascular 5 *Unknown Submergent* 6 *Unknown Surface*
RS - ROCKY SHORE	1 Bedrock 2 Rubble
US UNCONSOLIDATED SHORE	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic 5 Vegetated
**EM - EMERGENT	2 Nonpersistent
OW - *OPEN WATER/ Unknown Bottom*	

SUBSYSTEM — **2 – LOWER PERENNIAL**

SUBSYSTEM — **3 – UPPER PERENNIAL**

SUBSYSTEM — **4 – INTERMITTENT**

SUBSYSTEM — **5 – *UNKNOWN PERENNIAL***

* STREAMBED is limited to TIDAL and INTERMITTENT SUBSYSTEMS, and comprises the only CLASS in the INTERMITTENT SUBSYSTEM.
** EMERGENT is limited to TIDAL and LOWER PERENNIAL SUBSYSTEMS.

Classification of Wetlands and Deepwater Habitats of the United States
Cowardin ET AL. 1979 as modified for National Wetland Inventory Mapping Convention

WETLANDS AND DEEPWATER HABITATS CLASSIFICATION

SYSTEM — **L- LACUSTRINE**

SUBSYSTEM — **1 - LIMNETIC**

CLASS	RB - ROCK BOTTOM	UB - UNCONSOLIDATED BOTTOM	AB - AQUATIC BED	OW - *OPEN WATER/ Unknown Bottom*
Subclass	1 Bedrock 2. Rubble	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic	1 Algal 2 Aquatic Moss 3 Rooted Vascular 4 Floating Vascular 5 *Unknown Submergent* 6 *Unknown Surface*	

SUBSYSTEM — **2 - LITTORAL**

CLASS	RB - ROCK BOTTOM	UB - UNCONSOLIDATED BOTTOM	AB - AQUATIC BED	RS - ROCKY SHORE	US - UNCONSOLIDATED SHORE	EM - EMERGENT	OW - *OPEN WATER/ Unknown Bottom*
Subclass	1 Bedrock 2. Rubble	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic	1 Algal 2 Aquatic Moss 3 Rooted Vascular 4 Floating Vascular 5 *Unknown Submergent* 6 *Unknown Surface*	1 Bedrock 2. Rubble	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic 5 Vegetated	2 Nonpersistent	

SYSTEM — **P - PALUSTRINE**

CLASS	RB - ROCK BOTTOM	UB - UNCONSOLIDATED BOTTOM	AB - AQUATIC BED	US - UNCONSOLIDATED SHORE	ML - MOSS-LICHEN	EM - EMERGENT	SS SCRUB-SHRUB	FO - FORESTED	OW - *OPEN WATER/ Unknown Bottom*
Subclass	1 Bedrock 2. Rubble	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic	1 Algal 2 Aquatic Moss 3 Rooted Vascular 4 Floating Vascular 5 *Unknown Submergent* 6 *Unknown Surface*	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic 5 Vegetated	1 Moss 2 Lichen	1 Persistent 2 Nonpersistent	1 Broad-Leaved Deciduous 2 Needle-Leaved Deciduous 3 Broad-Leaved Evergreen 4 Needle-Leaved Evergreen 5 Dead 6 *Deciduous* 7 *Evergreen*	1 Broad-Leaved Deciduous 2 Needle-Leaved Deciduous 3 Broad-Leaved Evergreen 4 Needle-Leaved Evergreen 5 Dead 6 *Deciduous* 7 *Evergreen*	

MODIFIERS

In order to more adequately describe the wetland and deepwater habitats one or more of the water regime, water chemistry, soil, or special modifiers may be applied at the class or lower level in the hierarchy. The farmed modifier may also be applied to the ecological system.

WATER REGIME

Non-Tidal		Tidal	
A Temporarily Flooded B Saturated C Seasonally Flooded D *Seasonally Flooded/ Well Drained* E *Seasonally Flooded/ Saturated* F Semipermanently Flooded G Intermittently Exposed	H Permanently Flooded J Intermittently Flooded K Artificially Flooded W Intermittently Flooded/Temporary Y Saturated/Semipermanent/ Seasonal Z Intermittently Exposed/Permanent U *Unknown*	K *Artificially Flooded* L Subtidal M Irregularly Exposed N Regularly Flooded P Irregularly Flooded	*S Temporary-Tidal *R Seasonal-Tidal *T Semipermanent-Tidal *V Permanent-Tidal U *Unknown*

*These water regimes are only used in tidally influenced, freshwater systems.

WATER CHEMISTRY

Coastal Halinity	Inland Salinity	pH Modifiers for all Fresh Water
1 Hyperhaline 2 Euthaline 3 Mixohaline *(Brackish)* 4 Polyhaline 5 Mesohaline 6 Oligohaline 0 Fresh	7 Hypersaline 8 Eusaline 9 Mixosaline 0 Fresh	a Acid t Circumneutral i Alkaline

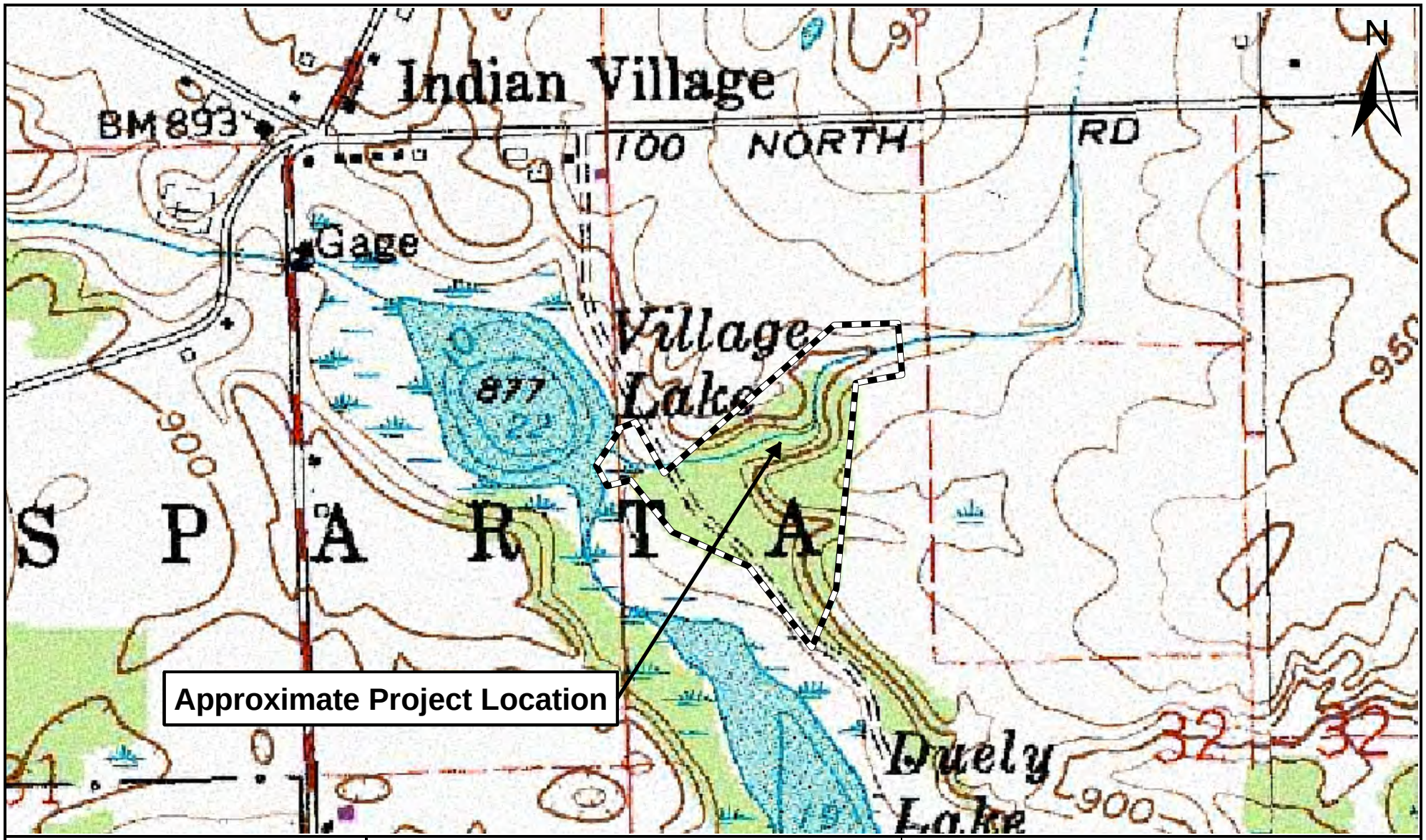
SOIL

g Organic
n Mineral

SPECIAL MODIFIERS

b *Beaver*
d *Partially Drained/Ditched*
f Farmed
h *Diked/Impounded*
r Artificial Substrate
s *Spoil*
x Excavated

NOTE: Italicized terms were added for mapping by the National Wetlands Inventory program.



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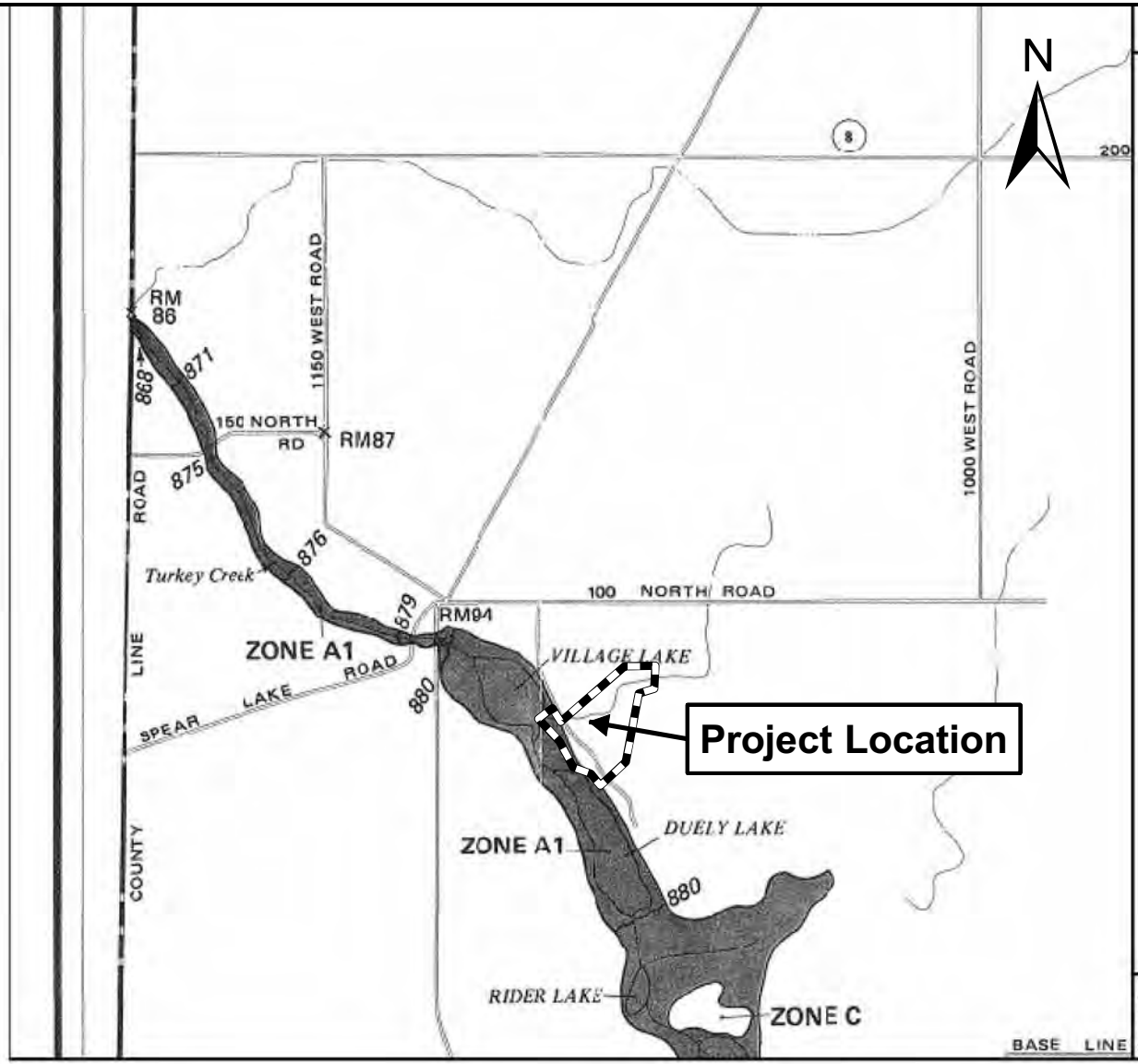
TITLE: USGS Topographic Work Map		PROJECT: Village Lake Tributary - Stream Erosion Project	
BASE LAYER: N/A		PROJECT NO.: 06037.03	EXHIBIT: 4	SHEET: 1 OF: 1
CLIENT: Wawasee Area Conservancy Foundation, P.O. Box 548, Syracuse, Indiana 46567		QUADRANGLE: North Webster	DATE: 01/23/2008	SCALE: NTS



NATIONAL FLOOD INSURANCE PROGRAM

FLOOD INSURANCE RATE MAP

NOBLE COUNTY, INDIANA
(UNINCORPORATED AREAS)

COMMUNITY-PANEL NUMBER
180183 0075 B

PAGE 75 OF 100
SEE MAP INDEX FOR PAGES NOT PRINTED)

EFFECTIVE
JANUARY 3, 1979

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
FEDERAL INSURANCE ADMINISTRATION

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

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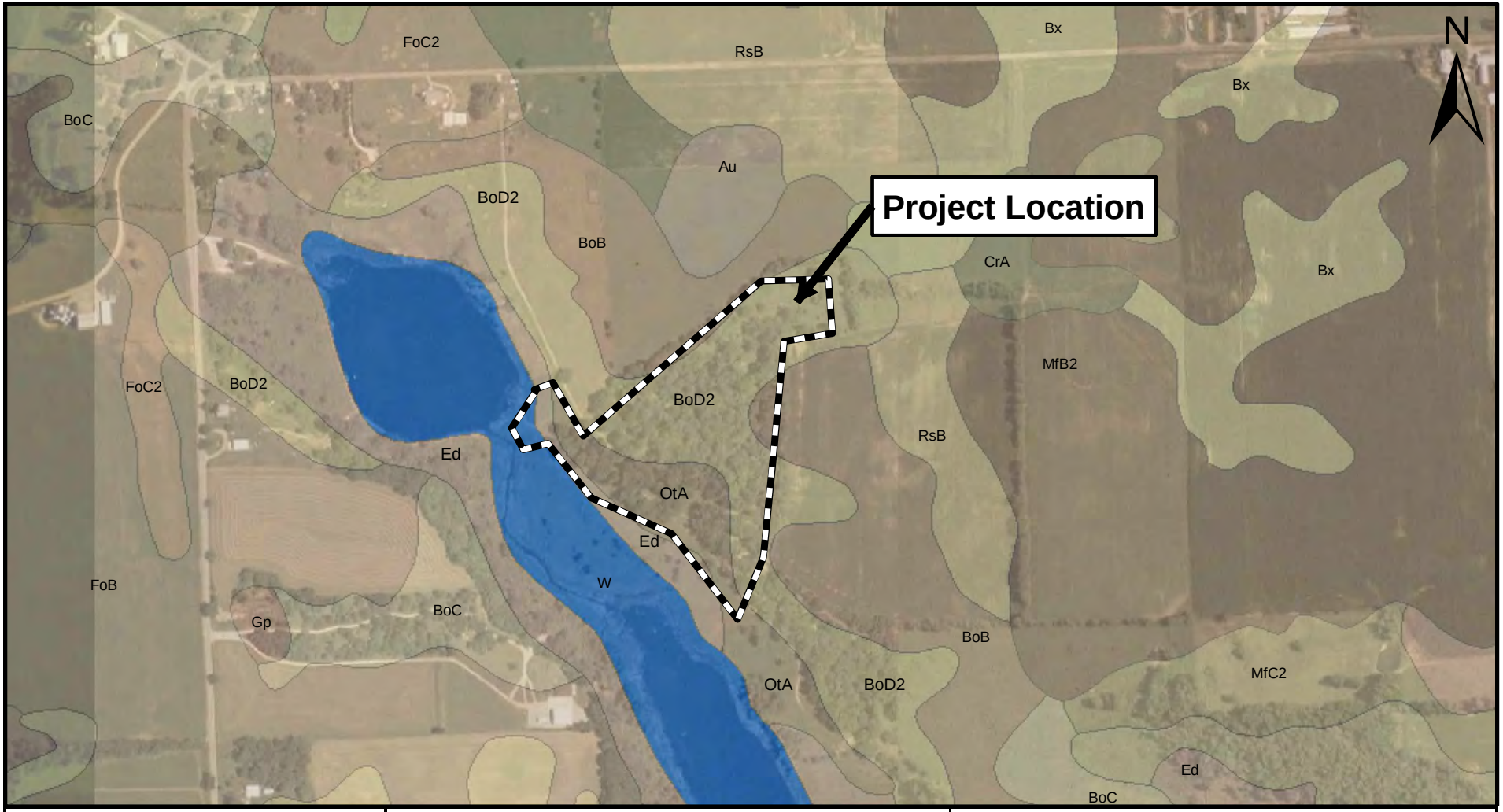
TITLE: Flood Insurance Rate Map		PROJECT: Village Lake Tributary - Stream Erosion Project	
BASE LAYER: N/A		PROJECT NO.: 06037.03	EXHIBIT: 5	SHEET: 1 OF: 1
CLIENT: Wawasee Area Conservancy Foundation, P.O. Box 548, Syracuse, Indiana 46567		QUADRANGLE: North Webster	DATE: 01/23/2008	SCALE: NTS



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TITLE: **NRCS Soil Survey Exhibit**	PROJECT AND SITE LOCATION: **Village Lake Tributary - Stream Erosion Project**		
BASE LAYER: 2005 Aerial Photograph	PROJECT NO.: 06037.03	FIGURE: 6	SHEET: 1 OF: 1
CLIENT: **Wawasee Area Conservancy Foundation P.O. Box 548 Syracuse, Indiana 46567**	QUADRANGLE: North Webster	DATE: 01/23/08	SCALE: NTS

Engineering Properties

Noble County, Indiana

Absence of an entry indicates that the data were not estimated. The asterisk '*' denotes the representative texture; other possible textures follow the dash.

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percent passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 Inches	3-10 Inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
BoD2:												
Boyer	0-8	Loamy sand	SM, SP-SM	A-2-4, A-3	0-1	0-5	80-100	75-98	55-80	10-25	0	NP
	8-11	Loamy sand	SM, SP-SM	A-2-4, A-3	0-1	0-5	80-100	75-98	55-80	10-25	0	NP
	11-32	Gravelly loamy sand, Gravelly sandy clay loam, Sandy loam	SC, SC-SM, SM	A-2, A-4, A-6	0-2	0-10	60-100	50-98	25-55	10-55	0-50	NP-20
	32-60	Stratified sand to gravelly coarse sand	SP-SM, SW, SW-SM	A-1	0-2	0-20	55-85	40-75	10-50	0-15	0	NP
OtA:												
Oshtemo	0-10	Sandy loam	SM	A-4	0-1	0-5	80-100	75-98	60-80	25-40	0-25	NP-10
	10-12	Sandy loam	SM	A-4	0-1	0-5	80-100	75-98	60-80	25-40	0-25	NP-10
	12-26	Gravelly sandy clay loam, Gravelly sandy loam, Loam	SM	A-4	0-2	0-5	80-100	75-95	45-80	20-50	10-50	NP-20
	26-46	Gravelly loamy sand, Gravelly sandy loam	SM	A-2-4	0-2	0-10	60-95	50-75	25-55	10-30	0-25	NP-10
	46-60	Stratified sand to gravelly coarse sand	SP-SM	A-1	0-2	0-20	55-85	40-75	10-50	0-15	0	NP

Physical Soil Properties

Noble County, Indiana

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors			Wind erodi-bility group	Wind erodi-bility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	micro m/sec	In/In	Pct	Pct					
BoD2:														
Boyer	0-8	---	---	5-15	1.40-1.70	14.11-42.34	0.10-0.21	0.0-2.9	1.0-3.0	.05	.05	4	2	134
	8-11	---	---	5-15	1.40-1.70	14.11-42.34	0.10-0.21	0.0-2.9	0.5-1.0	.05	.05			
	11-32	---	---	5-20	1.60-1.80	14.11-42.34	0.10-0.18	0.0-2.9	0.5-1.0	.05	.10			
	32-60	---	---	0-5	1.60-1.80	141.14	0.02-0.04	0.0-2.9	0.5-1.0	.02	.10			
OtA:														
Oshtemo	0-10	---	---	5-15	1.40-1.70	14.11-42.34	0.10-0.21	0.0-2.9	1.0-3.0	.17	.17	4	3	86
	10-12	---	---	5-15	1.40-1.70	14.11-42.34	0.10-0.21	0.0-2.9	0.5-1.0	.17	.17			
	12-26	---	---	10-20	1.60-1.80	14.11-42.34	0.10-0.18	0.0-2.9	0.5-1.0	.20	.20			
	26-46	---	---	5-15	1.60-1.80	14.11-42.34	0.08-0.16	0.0-2.9	0.5-1.0	.05	.10			
	46-60	---	---	0-5	1.60-1.80	141.14	0.02-0.04	0.0-2.9	0.5-1.0	.02	.10			

Water Features

Noble County, Indiana

Map symbol and soil name	Hydrologic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface depth	Duration	Frequency	Duration	Frequency
				Ft	Ft	Ft				
BoD2:										
Boyer	A	Low	Jan-Dec			---	---	None	---	None
OtA:										
Oshtemo	A	Very low	Jan-Dec			---	---	None	---	None

SECTION 2

Worksheet 2: Runoff Curve Number and runoff

Project: Village Lake - 06037.03 By: JAS Date: 4/29/2008
Location: Noble County, Indiana Checked: Date:

Circle One: Present Location
Subbasin 010

1. Runoff Curve Number (CN)

Soil Name and hydrologic group (appendix A)			Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN[1/] Table 2-2	CN[1/] Fig. 2-3	CN[1/] Fig. 2-4	Area [x] acres [ ] mi^2 [ ] %	Product of CN x area
			Impervious	98			1.60	156.7
		C	Woods - good condition	70			9.84	689.1
		C	Row Crops (SR+CR) good condition	82			137.89	11307.0
		C	Farmstead	82			10.07	825.7
		B	Row Crops (SR+CR) good condition	75			2.76	207.0
								0.0
								0.0
1/ Use only one CN source per line.						Totals =	162.16	13185.5

$$\text{CN (weighted)} = \frac{\text{total product}}{\text{total area}} = \frac{13186}{162.16} = 81.3;$$

Use CN = 81

AREA = 162.2 Acres
0.2534 Sq. Mi.

2. Runoff

		Storm #1	Storm #2	Storm #3
Frequency……	yr			
Rainfall, P (24-hour)……	in			
Runoff, Q…… (Use P and CN with table 2-1, fig. 2-1, or eqs. 2-3 and 2-4.)	in			

Worksheet 3: Time of Concentration (T_c) or Travel Time (T_t)

Project: Village Lake - 06037.03 By: JAS Date: 4/29/2008
Location: Noble County, Indiana Checked: Date:

Circle One: Present Location
Circle One: T_c T_t through subareas Subbasin 010

NOTES: Space for as many as two segments per flow type can be used for each worksheet
Include a map, schematic, or descpription of flow segments.

Sheet Flow (Applicable to T_c only)		Segment ID		
1. Surface description (table 3-1)……		woods		
2. Manning's roughness coeff., n (table 3-1)……		0.4		
3. Flow Length, L (total L < 300 ft)……	ft	104.8		
4. Two-yr 24-hr rainfall, P_2……	in	2.52		
5. Land slope, s……	ft / ft	0.048		
6. $Tt = \frac{0.007\,(nL)^{0.8}}{P_2^{0.5}\,s^{0.4}}$ Compute T_t……	hr	0.30	0.00	0.30

Shallow Concentrated Flow		Segment ID		
7. Surface Description (paved or unpaved)……		unpaved		
8. Flow Length, L……	ft	1047.9		
9. Watercourse slope, s……	ft / ft	0.014		
10. Average velocity, V (figure 3-1)……	ft / s	1.9		
11. $T_c = \frac{L}{3600\,V}$ Compute T_c……	hr	0.15	0.00	0.15

Channel Flow		Segment ID		
12. Cross sectional flow area, a……	ft^2			
13. Wetted perimeter, P_w……	ft			
14. Hydraulic radius, $r = a / P_w$ Compute r……	ft			
15. Channel slope, s……	ft / ft			
16. Manning's roughness coeff., n……				
17. $V = \frac{1.49\,r^{2/3}}{n}\,s^{1/2}$ Compute V……	ft / s	3		
18. Flow length, L……	ft	1940.2		
19. $T_t = \frac{L}{3600\,V}$ Compute T_t……	hr	0.18	0.00	0.18

20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, and 19)…… hr 0.63
37.7 minutes

(210-VI-TR-55, Second Ed., June 1986)

Worksheet 2: Runoff Curve Number and runoff

Project: Village Lake - 06037.03 By: JAS Date: 4/29/2008
Location: Noble County, Indiana Checked: Date:

Circle One: Present Location
Subbasin 011

1. Runoff Curve Number (CN)

Soil Name and hydrologic group (appendix A)			Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN 1/ Table 2-2	CN 1/ Fig. 2-3	CN 1/ Fig. 2-4	Area [x] acres [ ] mi² [ ] %	Product of CN x area
			Impervious	98			0.92	89.9
		A	Woods - good condition	30			9.60	287.9
		C	Row Crops (SR+CR) good condition	82			83.02	6807.9
		C	Farmstead	82			1.52	125.0
		B	Row Crops (SR+CR) good condition	75			12.52	939.1
								0.0
								0.0
						Totals =	107.58	8249.8

1/ Use only one CN source per line.

$$\text{CN (weighted)} = \frac{\text{total product}}{\text{total area}} = \frac{8249.8}{107.58} = 76.7;$$

Use CN = 77

AREA = 107.6 Acres
0.1681 Sq. Mi.

2. Runoff

		Storm #1	Storm #2	Storm #3
Frequency……	yr			
Rainfall, P (24-hour)……	in			
Runoff, Q…… (Use P and CN with table 2-1, fig. 2-1, or eqs. 2-3 and 2-4.)	in			

Worksheet 3: Time of Concentration (T_c) or Travel Time (T_t)

Project: Village Lake - 06037.03 By: JAS Date: 4/29/2008
Location: Noble County, Indiana Checked: Date:

Circle One: Present Location
Circle One: T_c T_t through subareas Subbasin 011

NOTES: Space for as many as two segments per flow type can be used for each worksheet
Include a map, schematic, or descpription of flow segments.

Sheet Flow (Applicable to T_c only)

		Segment ID			
1. Surface description (table 3-1)……		dense grass			
2. Manning's roughness coeff., n (table 3-1)……		0.24			
3. Flow Length, L (total L < 300 ft)……	ft	110.4			
4. Two-yr 24-hr rainfall, P_2……	in	2.52			
5. Land slope, s……	ft / ft	0.045			
6. $Tt = \frac{0.007\,(nL)^{0.8}}{P_2^{0.5}\,s^{0.4}}$ Compute T_t……	hr	0.21	0.00	0.21	

Shallow Concentrated Flow

		Segment ID		
7. Surface Description (paved or unpaved)……		unpaved		
8. Flow Length, L……	ft	951.6		
9. Watercourse slope, s……	ft / ft	0.032		
10. Average velocity, V (figure 3-1)……	ft / s	2.8		
11. $T_c = \frac{L}{3600\,V}$ Compute T_c……	hr	0.09	0.00	0.09

Channel Flow

		Segment ID		
12. Cross sectional flow area, a……	ft^2			
13. Wetted perimeter, P_w……	ft			
14. Hydraulic radius, $r = a / P_w$ Compute r……	ft			
15. Channel slope, s……	ft / ft			
16. Manning's roughness coeff., n……				
17. $V = \frac{1.49\,r^{2/3}\,s^{1/2}}{n}$ Compute V……	ft / s	3		
18. Flow length, L……	ft	3139.4		
19. $T_t = \frac{L}{3600\,V}$ Compute T_t……	hr	0.29	0.00	0.29

20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, and 19)…… hr 0.59
35.7 minutes

(210-VI-TR-55, Second Ed., June 1986)

```
JOB TR-20                                          SUMMARY   NOPLOTS
TITLE 001 VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS
TITLE     CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS
 5 RAINFL 6            0.05                                            Storm T
 8          0.00        0.16        0.33        0.43        0.52       Huff
 8          0.60        0.66        0.71        0.75        0.79       1st
 8          0.82        0.84        0.86        0.88        0.90       Quartile
 8          0.92        0.94        0.96        0.97        0.98       at a
 8          1.00        1.00        1.00        1.00        1.00       Point
 9 ENDTBL
 5 RAINFL 7            0.05                                            Storm T
 8          0.00        0.03        0.08        0.12        0.16       Huff
 8          0.22        0.29        0.39        0.51        0.62       2nd
 8          0.70        0.76        0.81        0.85        0.88       Quartile
 8          0.91        0.93        0.95        0.97        0.98       at a
 8          1.00        1.00        1.00        1.00        1.00       Point
 9 ENDTBL
 5 RAINFL 8            0.05                                            Storm T
 8          0.00        0.03        0.06        0.09        0.12       Huff
 8          0.15        0.19        0.23        0.27        0.32       3rd
 8          0.38        0.45        0.57        0.70        0.79       Quartile
 8          0.85        0.89        0.92        0.95        0.97       at a
 8          1.00        1.00        1.00        1.00        1.00       Point
 9 ENDTBL
 5 RAINFL 9            0.05                                            Storm T
 8          0.00        0.02        0.05        0.08        0.10       Huff
 8          0.13        0.16        0.19        0.22        0.25       4th
 8          0.28        0.32        0.35        0.39        0.45       Quartile
 8          0.51        0.59        0.72        0.84        0.92       at a
 8          1.00        1.00        1.00        1.00        1.00       Point
 9 ENDTBL
 6 RUNOFF 1 010       1 .2534       81.         0.63        1 1 1 1 1 1
 6 RUNOFF 1 011       2 .1681       77.         0.59        1 1 1 1 1 1
 6 ADDHYD 4 101   1 2 3                                      1 1 1 1 1 1
   ENDATA
 7 LIST
 7 INCREM 6            0.05                                              Output
Time Inc, Hrs.
 7 COMPUT 7 010   101              1.02        1.          6 2  01  01  1yr, 1hr,
Huff 1st per
   ENDCMP 1
 7 COMPUT 7 010   101              1.25        2.          6 2  02  01  1yr, 2 hr,
Huff 1st per
   ENDCMP 1
 7 COMPUT 7 010   101              1.38        3.          6 2  03  01  1yr, 3hr,
Huff 1st per
   ENDCMP 1
 7 COMPUT 7 010   101              1.62        6.          6 2  06  01  1yr, 6hr,
Huff 1st per
   ENDCMP 1
 7 INCREM 6            0.2
 7 COMPUT 7 010   101              1.88        12.         7 2  12  01  1yr, 12hr,
Huff 2nd per
   ENDCMP 1
 7 COMPUT 7 010   101              2.03        18.         8 2  18  01  1yr, 18 hr,
Huff 3rd per
   ENDCMP 1
 7 COMPUT 7 010   101              2.16        24.         8 2  24  01  1yr, 24hr,
Huff 3rd per
   ENDCMP 1
 7 INCREM 6            0.5
 7 COMPUT 7 010   101              2.39        48.         9 2  48  01  1yr, 48hr,
Huff 4th per
```

```
   ENDCMP 1
 7 COMPUT 7 010   101              2.60        72.         9 2  72  01  1yr, 72hr,
Huff 4th per
   ENDCMP 1
 7 COMPUT 7 010   101              2.98        120.        9 2  73  01  1yr, 120hr,
Huff 4th per
   ENDCMP 1
 7 COMPUT 7 010   101              3.70        240.        9 2  74  01  1yr, 240hr,
Huff 4th per
   ENDCMP 1
 7 INCREM 6             0.05                                             Output
Time Inc, Hrs.
 7 COMPUT 7 010   101              1.18        1.          6 2  01  02  2yr, 1hr,
Huff 1st per
   ENDCMP 1
 7 COMPUT 7 010   101              1.46        2.          6 2  02  02  2yr, 2 hr,
Huff 1st per
   ENDCMP 1
 7 COMPUT 7 010   101              1.61        3.          6 2  03  02  2yr, 3hr,
Huff 1st per
   ENDCMP 1
 7 COMPUT 7 010   101              1.89        6.          6 2  06  02  2yr, 6hr,
Huff 1st per
   ENDCMP 1
 7 INCREM 6             0.2
 7 COMPUT 7 010   101              2.19        12.         7 2  12  02  2yr, 12hr,
Huff 2nd per
   ENDCMP 1
 7 COMPUT 7 010   101              2.37        18.         8 2  18  02  2yr, 18 hr,
Huff 3rd per
   ENDCMP 1
 7 COMPUT 7 010   101              2.52        24.         8 2  24  02  2yr, 24hr,
Huff 3rd per
   ENDCMP 1
 7 INCREM 6             0.5
 7 COMPUT 7 010   101              2.77        48.         9 2  48  02  2yr, 48hr,
Huff 4th per
   ENDCMP 1
 7 COMPUT 7 010   101              3.01        72.         9 2  72  02  2yr, 72hr,
Huff 4th per
   ENDCMP 1
 7 COMPUT 7 010   101              3.46        120.        9 2  73  02  2yr, 120hr,
Huff 4th per
   ENDCMP 1
 7 COMPUT 7 010   101              4.25        240.        9 2  74  02  2yr, 240hr,
Huff 4th per
   ENDCMP 1
 7 INCREM 6             0.05                                             Output
Time Inc, Hrs.
 7 COMPUT 7 010   101              1.43        1.          6 2  01  05  5yr, 1hr,
Huff 1st per
   ENDCMP 1
 7 COMPUT 7 010   101              1.76        2.          6 2  02  05  5yr, 2 hr,
Huff 1st per
   ENDCMP 1
 7 COMPUT 7 010   101              1.95        3.          6 2  03  05  5yr, 3hr,
Huff 1st per
   ENDCMP 1
 7 COMPUT 7 010   101              2.28        6.          6 2  06  05  5yr, 6hr,
Huff 1st per
   ENDCMP 1
 7 INCREM 6             0.2
 7 COMPUT 7 010   101              2.64        12.         7 2  12  05  5yr, 12hr,
```

```
Huff 2nd per
   ENDCMP 1
 7 COMPUT 7 010   101              2.86        18.         8 2  18  05  5yr, 18 hr,
Huff 3rd per
   ENDCMP 1
 7 COMPUT 7 010   101              3.04        24.         8 2  24  05  5yr, 24hr,
Huff 3rd per
   ENDCMP 1
 7 INCREM 6             0.5
 7 COMPUT 7 010   101              3.38        48.         9 2  48  05  5yr, 48hr,
Huff 4th per
   ENDCMP 1
 7 COMPUT 7 010   101              3.68        72.         9 2  72  05  5yr, 72hr,
Huff 4th per
   ENDCMP 1
 7 COMPUT 7 010   101              4.18        120.        9 2  73  05  5yr, 120hr,
Huff 4th per
   ENDCMP 1
 7 COMPUT 7 010   101              5.12        240.        9 2  74  05  5yr, 240hr,
Huff 4th per
   ENDCMP 1
 7 INCREM 6             0.05                                            Output
Time Inc, Hrs.
 7 COMPUT 7 010   101              1.65        1.          6 2  01  10  10yr, 1hr,
Huff 1st per
   ENDCMP 1
 7 COMPUT 7 010   101              2.04        2.          6 2  02  10  10yr, 2 hr,
Huff 1st per
   ENDCMP 1
 7 COMPUT 7 010   101              2.25        3.          6 2  03  10  10yr, 3hr,
Huff 1st per
   ENDCMP 1
 7 COMPUT 7 010   101              2.64        6.          6 2  06  10  10yr, 6hr,
Huff 1st per
   ENDCMP 1
 7 INCREM 6             0.2
 7 COMPUT 7 010   101              3.06        12.         7 2  12  10  10yr, 12hr,
Huff 2nd per
   ENDCMP 1
 7 COMPUT 7 010   101              3.31        18.         8 2  18  10  10yr, 18
hr, Huff 3rd per
   ENDCMP 1
 7 COMPUT 7 010   101              3.52        24.         8 2  24  10  10yr, 24hr,
Huff 3rd per
   ENDCMP 1
 7 INCREM 6             0.5
 7 COMPUT 7 010   101              3.92        48.         9 2  48  10  10yr, 48hr,
Huff 4th per
   ENDCMP 1
 7 COMPUT 7 010   101              4.27        72.         9 2  72  10  10yr, 72hr,
Huff 4th per
   ENDCMP 1
 7 COMPUT 7 010   101              4.81        120.        9 2  73  10  10yr,
120hr, Huff 4th per
   ENDCMP 1
 7 COMPUT 7 010   101              5.84        240.        9 2  74  10  10yr,
240hr, Huff 4th per
   ENDCMP 1
 7 INCREM 6             0.05                                            Output
Time Inc, Hrs.
 7 COMPUT 7 010   101              2.02        1.          6 2  01  25  25yr, 1hr,
Huff 1st per
   ENDCMP 1
```

```
 7 COMPUT 7 010   101                2.49        2.          6 2  02  25  25yr, 2 hr,
Huff 1st per
   ENDCMP 1
 7 COMPUT 7 010   101                2.75        3.          6 2  03  25  25yr, 3hr,
Huff 1st per
   ENDCMP 1
 7 COMPUT 7 010   101                3.22        6.          6 2  06  25  25yr, 6hr,
Huff 1st per
   ENDCMP 1
 7 INCREM 6             0.2
 7 COMPUT 7 010   101                3.73        12.         7 2  12  25  25yr, 12hr,
Huff 2nd per
   ENDCMP 1
 7 COMPUT 7 010   101                4.03        18.         8 2  18  25  25yr, 18
hr, Huff 3rd per
   ENDCMP 1
 7 COMPUT 7 010   101                4.29        24.         8 2  24  25  25yr, 24hr,
Huff 3rd per
   ENDCMP 1
 7 INCREM 6             0.5
 7 COMPUT 7 010   101                4.78        48.         9 2  48  25  25yr, 48hr,
Huff 4th per
   ENDCMP 1
 7 COMPUT 7 010   101                5.21        72.         9 2  72  25  25yr, 72hr,
Huff 4th per
   ENDCMP 1
 7 COMPUT 7 010   101                5.83        120.        9 2  73  25  25yr,
120hr, Huff 4th per
   ENDCMP 1
 7 COMPUT 7 010   101                6.96        240.        9 2  74  25  25yr,
240hr, Huff 4th per
   ENDCMP 1
 7 INCREM 6             0.05                                                Output
Time Inc, Hrs.
 7 COMPUT 7 010   101                2.36        1.          6 2  01  50  50yr, 1hr,
Huff 1st per
   ENDCMP 1
 7 COMPUT 7 010   101                2.91        2.          6 2  02  50  50yr, 2 hr,
Huff 1st per
   ENDCMP 1
 7 COMPUT 7 010   101                3.21        3.          6 2  03  50  50yr, 3hr,
Huff 1st per
   ENDCMP 1
 7 COMPUT 7 010   101                3.76        6.          6 2  06  50  50yr, 6hr,
Huff 1st per
   ENDCMP 1
 7 INCREM 6             0.2
 7 COMPUT 7 010   101                4.37        12.         7 2  12  50  50yr, 12hr,
Huff 2nd per
   ENDCMP 1
 7 COMPUT 7 010   101                4.72        18.         8 2  18  50  50yr, 18
hr, Huff 3rd per
   ENDCMP 1
 7 COMPUT 7 010   101                5.02        24.         8 2  24  50  50yr, 24hr,
Huff 3rd per
   ENDCMP 1
 7 INCREM 6             0.5
 7 COMPUT 7 010   101                5.57        48.         9 2  48  50  50yr, 48hr,
Huff 4th per
   ENDCMP 1
 7 COMPUT 7 010   101                6.06        72.         9 2  72  50  50yr, 72hr,
Huff 4th per
   ENDCMP 1
```

```
 7 COMPUT 7 010   101                6.76        120.        9 2  73  50  50yr,
120hr, Huff 4th per
   ENDCMP 1
 7 COMPUT 7 010   101                8.01        240.        9 2  74  50  50yr,
240hr, Huff 4th per
   ENDCMP 1
 7 INCREM 6             0.05
 7 COMPUT 7 010   101                2.71        1.          6 2  01  99  100yr, 1hr,
Huff 1st per
   ENDCMP 1
 7 COMPUT 7 010   101                3.35        2.          6 2  02  99  100yr, 2
hr, Huff 1st per
   ENDCMP 1
 7 COMPUT 7 010   101                3.69        3.          6 2  03  99  100yr, 3hr,
Huff 1st per
   ENDCMP 1
 7 COMPUT 7 010   101                4.33        6.          6 2  06  99  100yr, 6hr,
Huff 1st per
   ENDCMP 1
 7 INCREM 6             0.2
 7 COMPUT 7 010   101                5.02        12.         7 2  12  99  100yr,
12hr, Huff 2nd per
   ENDCMP 1
 7 COMPUT 7 010   101                5.42        18.         8 2  18  99  100yr, 18
hr, Huff 3rd per
   ENDCMP 1
 7 COMPUT 7 010   101                5.77        24.         8 2  24  99  100yr,
24hr, Huff 3rd per
   ENDCMP 1
 7 INCREM 6             0.5
 7 COMPUT 7 010   101                6.45        48.         9 2  48  99  100yr,
48hr, Huff 4th per
   ENDCMP 1
 7 COMPUT 7 010   101                7.01        72.         9 2  72  99  100yr,
72hr, Huff 4th per
   ENDCMP 1
 7 COMPUT 7 010   101                7.80        120.        9 2  73  99  100yr,
120hr, Huff 4th per
   ENDCMP 1
 7 COMPUT 7 010   101                9.16        240.        9 2  74  99  100yr,
240hr, Huff 4th per
   ENDCMP 1
   ENDJOB 2
```

```
1


 ******************80-80 LIST OF INPUT DATA FOR TR-20 HYDROLOGY******************

 JOB TR-20                                          SUMMARY   NOPLOTS
 TITLE 001 VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS
 TITLE     CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS
  5 RAINFL 6            0.05                                            Storm T
  8          0.00       0.16       0.33       0.43       0.52       Huff
  8          0.60       0.66       0.71       0.75       0.79       1st
  8          0.82       0.84       0.86       0.88       0.90       Quartile
  8          0.92       0.94       0.96       0.97       0.98       at a
  8          1.00       1.00       1.00       1.00       1.00       Point
  9 ENDTBL
  5 RAINFL 7            0.05                                            Storm T
  8          0.00       0.03       0.08       0.12       0.16       Huff
  8          0.22       0.29       0.39       0.51       0.62       2nd
  8          0.70       0.76       0.81       0.85       0.88       Quartile
  8          0.91       0.93       0.95       0.97       0.98       at a
  8          1.00       1.00       1.00       1.00       1.00       Point
  9 ENDTBL
  5 RAINFL 8            0.05                                            Storm T
  8          0.00       0.03       0.06       0.09       0.12       Huff
  8          0.15       0.19       0.23       0.27       0.32       3rd
  8          0.38       0.45       0.57       0.70       0.79       Quartile
  8          0.85       0.89       0.92       0.95       0.97       at a
  8          1.00       1.00       1.00       1.00       1.00       Point
  9 ENDTBL
  5 RAINFL 9            0.05                                            Storm T
  8          0.00       0.02       0.05       0.08       0.10       Huff
  8          0.13       0.16       0.19       0.22       0.25       4th
  8          0.28       0.32       0.35       0.39       0.45       Quartile
  8          0.51       0.59       0.72       0.84       0.92       at a
  8          1.00       1.00       1.00       1.00       1.00       Point
  9 ENDTBL
  6 RUNOFF 1 010       1 .2534       81.        0.63       1 1 1 1 1 1
  6 RUNOFF 1 011       2 .1681       77.        0.59       1 1 1 1 1 1
  6 ADDHYD 4 101   1 2 3                                     1 1 1 1 1 1
    ENDATA
  7 LIST
  7 INCREM 6            0.05                                             Output
  7 COMPUT 7 010   101               1.02       1.         6 2  01  01  1yr, 1h
    ENDCMP 1
  7 COMPUT 7 010   101               1.25       2.         6 2  02  01  1yr, 2
    ENDCMP 1
  7 COMPUT 7 010   101               1.38       3.         6 2  03  01  1yr, 3h
    ENDCMP 1
  7 COMPUT 7 010   101               1.62       6.         6 2  06  01  1yr, 6h
    ENDCMP 1
  7 INCREM 6            0.2
1


 *********************80-80 LIST OF INPUT DATA (CONTINUED)*********************

  7 COMPUT 7 010   101               1.88       12.        7 2  12  01  1yr, 12
    ENDCMP 1
  7 COMPUT 7 010   101               2.03       18.        8 2  18  01  1yr, 18
    ENDCMP 1
  7 COMPUT 7 010   101               2.16       24.        8 2  24  01  1yr, 24
    ENDCMP 1
  7 INCREM 6            0.5
  7 COMPUT 7 010   101               2.39       48.        9 2  48  01  1yr, 48
    ENDCMP 1
  7 COMPUT 7 010   101               2.60       72.        9 2  72  01  1yr, 72
    ENDCMP 1
  7 COMPUT 7 010   101               2.98       120.       9 2  73  01  1yr, 12
    ENDCMP 1
  7 COMPUT 7 010   101               3.70       240.       9 2  74  01  1yr, 24
    ENDCMP 1
  7 INCREM 6            0.05                                             Output
  7 COMPUT 7 010   101               1.18       1.         6 2  01  02  2yr, 1h
    ENDCMP 1
  7 COMPUT 7 010   101               1.46       2.         6 2  02  02  2yr, 2
    ENDCMP 1
  7 COMPUT 7 010   101               1.61       3.         6 2  03  02  2yr, 3h
    ENDCMP 1
  7 COMPUT 7 010   101               1.89       6.         6 2  06  02  2yr, 6h
    ENDCMP 1
  7 INCREM 6            0.2
  7 COMPUT 7 010   101               2.19       12.        7 2  12  02  2yr, 12
    ENDCMP 1
  7 COMPUT 7 010   101               2.37       18.        8 2  18  02  2yr, 18
    ENDCMP 1
  7 COMPUT 7 010   101               2.52       24.        8 2  24  02  2yr, 24
    ENDCMP 1
  7 INCREM 6            0.5
  7 COMPUT 7 010   101               2.77       48.        9 2  48  02  2yr, 48
    ENDCMP 1
  7 COMPUT 7 010   101               3.01       72.        9 2  72  02  2yr, 72
    ENDCMP 1
  7 COMPUT 7 010   101               3.46       120.       9 2  73  02  2yr, 12
    ENDCMP 1
  7 COMPUT 7 010   101               4.25       240.       9 2  74  02  2yr, 24
    ENDCMP 1
  7 INCREM 6            0.05                                             Output
  7 COMPUT 7 010   101               1.43       1.         6 2  01  05  5yr, 1h
    ENDCMP 1
  7 COMPUT 7 010   101               1.76       2.         6 2  02  05  5yr, 2
    ENDCMP 1
  7 COMPUT 7 010   101               1.95       3.         6 2  03  05  5yr, 3h
1
```

```
**********************80-80 LIST OF INPUT DATA (CONTINUED)**********************

    ENDCMP 1
  7 COMPUT 7 010   101              2.28        6.          6 2  06  05  5yr, 6h
    ENDCMP 1
  7 INCREM 6             0.2
  7 COMPUT 7 010   101              2.64        12.         7 2  12  05  5yr, 12
    ENDCMP 1
  7 COMPUT 7 010   101              2.86        18.         8 2  18  05  5yr, 18
    ENDCMP 1
  7 COMPUT 7 010   101              3.04        24.         8 2  24  05  5yr, 24
    ENDCMP 1
  7 INCREM 6             0.5
  7 COMPUT 7 010   101              3.38        48.         9 2  48  05  5yr, 48
    ENDCMP 1
  7 COMPUT 7 010   101              3.68        72.         9 2  72  05  5yr, 72
    ENDCMP 1
  7 COMPUT 7 010   101              4.18        120.        9 2  73  05  5yr, 12
    ENDCMP 1
  7 COMPUT 7 010   101              5.12        240.        9 2  74  05  5yr, 24
    ENDCMP 1
  7 INCREM 6             0.05                                            Output
  7 COMPUT 7 010   101              1.65        1.          6 2  01  10  10yr, 1
    ENDCMP 1
  7 COMPUT 7 010   101              2.04        2.          6 2  02  10  10yr, 2
    ENDCMP 1
  7 COMPUT 7 010   101              2.25        3.          6 2  03  10  10yr, 3
    ENDCMP 1
  7 COMPUT 7 010   101              2.64        6.          6 2  06  10  10yr, 6
    ENDCMP 1
  7 INCREM 6             0.2
  7 COMPUT 7 010   101              3.06        12.         7 2  12  10  10yr, 1
    ENDCMP 1
  7 COMPUT 7 010   101              3.31        18.         8 2  18  10  10yr, 1
    ENDCMP 1
  7 COMPUT 7 010   101              3.52        24.         8 2  24  10  10yr, 2
    ENDCMP 1
  7 INCREM 6             0.5
  7 COMPUT 7 010   101              3.92        48.         9 2  48  10  10yr, 4
    ENDCMP 1
  7 COMPUT 7 010   101              4.27        72.         9 2  72  10  10yr, 7
    ENDCMP 1
  7 COMPUT 7 010   101              4.81        120.        9 2  73  10  10yr, 1
    ENDCMP 1
  7 COMPUT 7 010   101              5.84        240.        9 2  74  10  10yr, 2
    ENDCMP 1
  7 INCREM 6             0.05                                            Output
  7 COMPUT 7 010   101              2.02        1.          6 2  01  25  25yr, 1
1


**********************80-80 LIST OF INPUT DATA (CONTINUED)**********************

    ENDCMP 1
  7 COMPUT 7 010   101              2.49        2.          6 2  02  25  25yr, 2
    ENDCMP 1
  7 COMPUT 7 010   101              2.75        3.          6 2  03  25  25yr, 3
    ENDCMP 1
  7 COMPUT 7 010   101              3.22        6.          6 2  06  25  25yr, 6
    ENDCMP 1
  7 INCREM 6             0.2
  7 COMPUT 7 010   101              3.73        12.         7 2  12  25  25yr, 1
    ENDCMP 1
  7 COMPUT 7 010   101              4.03        18.         8 2  18  25  25yr, 1
    ENDCMP 1
  7 COMPUT 7 010   101              4.29        24.         8 2  24  25  25yr, 2
    ENDCMP 1
  7 INCREM 6             0.5
  7 COMPUT 7 010   101              4.78        48.         9 2  48  25  25yr, 4
    ENDCMP 1
  7 COMPUT 7 010   101              5.21        72.         9 2  72  25  25yr, 7
    ENDCMP 1
  7 COMPUT 7 010   101              5.83        120.        9 2  73  25  25yr, 1
    ENDCMP 1
  7 COMPUT 7 010   101              6.96        240.        9 2  74  25  25yr, 2
    ENDCMP 1
  7 INCREM 6             0.05                                            Output
  7 COMPUT 7 010   101              2.36        1.          6 2  01  50  50yr, 1
    ENDCMP 1
  7 COMPUT 7 010   101              2.91        2.          6 2  02  50  50yr, 2
    ENDCMP 1
  7 COMPUT 7 010   101              3.21        3.          6 2  03  50  50yr, 3
    ENDCMP 1
  7 COMPUT 7 010   101              3.76        6.          6 2  06  50  50yr, 6
    ENDCMP 1
  7 INCREM 6             0.2
  7 COMPUT 7 010   101              4.37        12.         7 2  12  50  50yr, 1
    ENDCMP 1
  7 COMPUT 7 010   101              4.72        18.         8 2  18  50  50yr, 1
    ENDCMP 1
  7 COMPUT 7 010   101              5.02        24.         8 2  24  50  50yr, 2
    ENDCMP 1
  7 INCREM 6             0.5
  7 COMPUT 7 010   101              5.57        48.         9 2  48  50  50yr, 4
    ENDCMP 1
  7 COMPUT 7 010   101              6.06        72.         9 2  72  50  50yr, 7
    ENDCMP 1
  7 COMPUT 7 010   101              6.76        120.        9 2  73  50  50yr, 1
    ENDCMP 1
1
```

```
*********************80-80 LIST OF INPUT DATA (CONTINUED)*********************

 7 COMPUT 7 010   101               8.01        240.        9 2  74  50  50yr, 2
   ENDCMP 1
 7 INCREM 6             0.05
 7 COMPUT 7 010   101               2.71        1.          6 2  01  99  100yr,
   ENDCMP 1
 7 COMPUT 7 010   101               3.35        2.          6 2  02  99  100yr,
   ENDCMP 1
 7 COMPUT 7 010   101               3.69        3.          6 2  03  99  100yr,
   ENDCMP 1
 7 COMPUT 7 010   101               4.33        6.          6 2  06  99  100yr,
   ENDCMP 1
 7 INCREM 6             0.2
 7 COMPUT 7 010   101               5.02        12.         7 2  12  99  100yr,
   ENDCMP 1
 7 COMPUT 7 010   101               5.42        18.         8 2  18  99  100yr,
   ENDCMP 1
 7 COMPUT 7 010   101               5.77        24.         8 2  24  99  100yr,
   ENDCMP 1
 7 INCREM 6             0.5
 7 COMPUT 7 010   101               6.45        48.         9 2  48  99  100yr,
   ENDCMP 1
 7 COMPUT 7 010   101               7.01        72.         9 2  72  99  100yr,
   ENDCMP 1
 7 COMPUT 7 010   101               7.80        120.        9 2  73  99  100yr,
   ENDCMP 1
 7 COMPUT 7 010   101               9.16        240.        9 2  74  99  100yr,
   ENDCMP 1
   ENDJOB 2
0******************************END OF 80-80 LIST*******************************
1
```



```
EXECUTIVE CONTROL OPERATION LIST                                                                    RECORD ID

LISTING OF CURRENT DATA


                     TIME INCREMENT
 4 DIMHYD                     .0200

 8                 .0000       .0300       .1000       .1900       .3100
 8                 .4700       .6600       .8200       .9300       .9900
 8                1.0000       .9900       .9300       .8600       .7800
 8                 .6800       .5600       .4600       .3900       .3300
 8                 .2800       .2410       .2070       .1740       .1470
 8                 .1260       .1070       .0910       .0770       .0660
 8                 .0550       .0470       .0400       .0340       .0290
 8                 .0250       .0210       .0180       .0150       .0130
 8                 .0110       .0090       .0080       .0070       .0060
 8                 .0050       .0040       .0030       .0020       .0010
 8                 .0000       .0000       .0000       .0000       .0000
 9 ENDTBL

   COMPUTED PEAK RATE FACTOR =  484.00


     TABLE NO.       TIME INCREMENT
 5 RAINFL 1                   .5000

 8                 .0000       .0080       .0170       .0260       .0350
 8                 .0450       .0550       .0650       .0760       .0870
 8                 .0990       .1120       .1260       .1400       .1560
 8                 .1740       .1940       .2190       .2540       .3030
 8                 .5150       .5830       .6240       .6550       .6820
 8                 .7060       .7280       .7480       .7660       .7830
 8                 .7990       .8150       .8300       .8440       .8570
 8                 .8700       .8820       .8930       .9050       .9160
 8                 .9260       .9360       .9460       .9560       .9650
 8                 .9740       .9830       .9920      1.0000      1.0000
 9 ENDTBL

     TABLE NO.       TIME INCREMENT
 5 RAINFL 2                   .2500

1
```



```
 8                 .0000       .0020       .0050       .0080       .0110
 8                 .0140       .0170       .0200       .0230       .0260
 8                 .0290       .0320       .0350       .0380       .0410
 8                 .0440       .0480       .0520       .0560       .0600
 8                 .0640       .0680       .0720       .0760       .0800
 8                 .0850       .0900       .0950       .1000       .1050
 8                 .1100       .1150       .1200       .1260       .1330
 8                 .1400       .1470       .1550       .1630       .1720
 8                 .1810       .1910       .2030       .2180       .2360
 8                 .2570       .2830       .3870       .6630       .7070
 8                 .7350       .7580       .7760       .7910       .8040
 8                 .8150       .8250       .8340       .8420       .8490
 8                 .8560       .8630       .8690       .8750       .8810
```

```
 8                .8870       .8930       .8980       .9030       .9080
 8                .9130       .9180       .9220       .9260       .9300
 8                .9340       .9380       .9420       .9460       .9500
 8                .9530       .9560       .9590       .9620       .9650
 8                .9680       .9710       .9740       .9770       .9800
 8                .9830       .9860       .9890       .9920       .9950
 8                .9980      1.0000      1.0000      1.0000      1.0000
 9 ENDTBL

     TABLE NO.       TIME INCREMENT
 5 RAINFL 3                   .5000

 8                .0000       .0100       .0220       .0360       .0510
 8                .0670       .0830       .0990       .1160       .1350
 8                .1560       .1790       .2040       .2330       .2680
 8                .3100       .4250       .4800       .5200       .5500
 8                .5770       .6010       .6230       .6440       .6640
 8                .6830       .7010       .7190       .7360       .7530
 8                .7690       .7850       .8000       .8150       .8300
 8                .8440       .8580       .8710       .8840       .8960
 8                .9080       .9200       .9320       .9440       .9560
 8                .9670       .9780       .9890      1.0000      1.0000
 9 ENDTBL

     TABLE NO.       TIME INCREMENT
 5 RAINFL 4                   .5000

 8                .0000       .0040       .0080       .0120       .0160
 8                .0200       .0250       .0300       .0350       .0400
 8                .0450       .0500       .0550       .0600       .0650
 8                .0700       .0750       .0810       .0870       .0930
 8                .0990       .1050       .1110       .1180       .1250
 8                .1320       .1400       .1480       .1560       .1650
 8                .1740       .1840       .1950       .2070       .2200
1
```



```
 8                .2360       .2550       .2770       .3030       .4090
 8                .5150       .5490       .5830       .6050       .6240
 8                .6400       .6550       .6690       .6820       .6940
 8                .7050       .7160       .7270       .7380       .7480
 8                .7580       .7670       .7760       .7840       .7920
 8                .8000       .8080       .8160       .8230       .8300
 8                .8370       .8440       .8510       .8580       .8640
 8                .8700       .8760       .8820       .8880       .8940
 8                .9000       .9060       .9110       .9160       .9210
 8                .9260       .9310       .9360       .9410       .9460
 8                .9510       .9560       .9610       .9660       .9710
 8                .9760       .9800       .9840       .9880       .9920
 8                .9960      1.0000      1.0000      1.0000      1.0000
 9 ENDTBL

     TABLE NO.       TIME INCREMENT
 5 RAINFL 5                   .5000

 8                .0000       .0020       .0050       .0080       .0110
 8                .0140       .0170       .0200       .0230       .0260
 8                .0290       .0320       .0350       .0380       .0410
 8                .0440       .0470       .0510       .0550       .0590
 8                .0630       .0670       .0710       .0750       .0790
 8                .0840       .0890       .0940       .0990       .1040
 8                .1090       .1140       .1200       .1260       .1330
 8                .1400       .1470       .1540       .1620       .1710
 8                .1810       .1920       .2040       .2170       .2330
 8                .2520       .2770       .3180       .6380       .6980
 8                .7290       .7520       .7700       .7850       .7980
 8                .8090       .8190       .8290       .8380       .8460
 8                .8540       .8610       .8680       .8740       .8800
 8                .8860       .8920       .8970       .9020       .9070
 8                .9120       .9170       .9210       .9250       .9290
 8                .9330       .9370       .9410       .9450       .9490
 8                .9530       .9570       .9600       .9630       .9660
 8                .9690       .9720       .9750       .9780       .9810
 8                .9840       .9870       .9900       .9930       .9960
 8                .9980      1.0000      1.0000      1.0000      1.0000
 9 ENDTBL

     TABLE NO.       TIME INCREMENT
 5 RAINFL 6                   .0500

 8                .0000       .1600       .3300       .4300       .5200
 8                .6000       .6600       .7100       .7500       .7900
 8                .8200       .8400       .8600       .8800       .9000
 8                .9200       .9400       .9600       .9700       .9800
1
```



```
 8               1.0000      1.0000      1.0000      1.0000      1.0000
 9 ENDTBL

     TABLE NO.       TIME INCREMENT
 5 RAINFL 7                   .0500

 8                .0000       .0300       .0800       .1200       .1600
 8                .2200       .2900       .3900       .5100       .6200
 8                .7000       .7600       .8100       .8500       .8800
```

```
 8                .9100       .9300       .9500       .9700       .9800
 8               1.0000      1.0000      1.0000      1.0000      1.0000
 9 ENDTBL

      TABLE NO.       TIME INCREMENT
 5 RAINFL 8                   .0500

 8                .0000       .0300       .0600       .0900       .1200
 8                .1500       .1900       .2300       .2700       .3200
 8                .3800       .4500       .5700       .7000       .7900
 8                .8500       .8900       .9200       .9500       .9700
 8               1.0000      1.0000      1.0000      1.0000      1.0000
 9 ENDTBL

      TABLE NO.       TIME INCREMENT
 5 RAINFL 9                   .0500

 8                .0000       .0200       .0500       .0800       .1000
 8                .1300       .1600       .1900       .2200       .2500
 8                .2800       .3200       .3500       .3900       .4500
 8                .5100       .5900       .7200       .8400       .9200
 8               1.0000      1.0000      1.0000      1.0000      1.0000
 9 ENDTBL
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS   1
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                     PAGE   5


0                    STANDARD CONTROL INSTRUCTIONS


 6 RUNOFF 1  10       1        .2534     81.0000       .63001 1 1 1 1 1
 6 RUNOFF 1  11       2        .1681     77.0000       .59001 1 1 1 1 1
 6 ADDHYD 4 101   1 2 3                                     1 1 1 1 1 1
   ENDATA


 END OF LISTING
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS   1
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                     PAGE   6


 EXECUTIVE CONTROL OPERATION INCREM                                                                                RECORD ID   Output
+                                   MAIN TIME INCREMENT =   .05 HOURS


 EXECUTIVE CONTROL OPERATION COMPUT                                                                                RECORD ID  1yr, 1h
+                                   FROM XSECTION  10
+                                                          TO XSECTION 101
         STARTING TIME =   .00    RAIN DEPTH =  1.02    RAIN DURATION=  1.00    RAIN TABLE NO.= 6    ANT. MOIST. COND= 2
         ALTERNATE NO.= 1         STORM NO.= 1    MAIN TIME INCREMENT =   .05 HOURS


 OPERATION RUNOFF   CROSS SECTION  10

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
                .99                          18.62                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .25 SQ.MI.
    .00    DISCHG         .00       .00       .00       .00       .03       .17       .52      1.18      2.26      3.81
    .50    DISCHG        5.78      7.99     10.25     12.40     14.29     15.82     16.99     17.81     18.30     18.54
   1.00    DISCHG       18.61     18.50     18.11     17.51     16.67     15.54     14.14     12.58     10.97      9.37
   1.50    DISCHG        7.90      6.58      5.41      4.42      3.63      2.99      2.46      2.03      1.68      1.38
   2.00    DISCHG        1.13       .93       .77       .63       .52       .43       .35       .28       .22       .18
   2.50    DISCHG         .14       .11       .09       .07       .05       .04       .03       .02       .01       .01
   3.00    DISCHG         .00

  RUNOFF VOLUME ABOVE BASEFLOW =   .10 WATERSHED INCHES,     17.13 CFS-HRS,     1.42 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION  10, ALTERNATE  1, STORM  1, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION RUNOFF   CROSS SECTION  11

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               1.08                          6.86                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .17 SQ.MI.
    .00    DISCHG         .00       .00       .00       .00       .00       .00       .02       .10       .26       .55
    .50    DISCHG        1.02      1.64      2.37      3.14      3.90      4.59      5.19      5.71      6.14      6.47
   1.00    DISCHG        6.71      6.84      6.84      6.71      6.44      6.00      5.43      4.79      4.11      3.46
   1.50    DISCHG        2.87      2.34      1.89      1.53      1.24      1.01       .82       .67       .54       .44
   2.00    DISCHG         .36       .29       .24       .19       .16       .12       .10       .08       .06       .05
   2.50    DISCHG         .04       .03       .02       .02       .01       .01       .00

  RUNOFF VOLUME ABOVE BASEFLOW =   .05 WATERSHED INCHES,      5.68 CFS-HRS,      .47 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION  11, ALTERNATE  1, STORM  1, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION ADDHYD   CROSS SECTION 101
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS   1
```

```
          PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
              1.03                          25.38                        (NULL)

TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .42 SQ.MI.
    .00    DISCHG         .00       .00       .00       .00       .03       .17       .54      1.28      2.52      4.37
    .50    DISCHG        6.79      9.63     12.62     15.55     18.19     20.41     22.18     23.52     24.44     25.01
   1.00    DISCHG       25.32     25.33     24.95     24.22     23.11     21.54     19.57     17.37     15.08     12.83
   1.50    DISCHG       10.77      8.92      7.30      5.95      4.87      4.00      3.29      2.70      2.22      1.82
   2.00    DISCHG        1.49      1.23      1.01       .83       .68       .55       .44       .36       .29       .23
   2.50    DISCHG         .18       .14       .11       .08       .06       .04       .03       .02       .01       .01
   3.00    DISCHG         .00

  RUNOFF VOLUME ABOVE BASEFLOW =   .08 WATERSHED INCHES,     22.81 CFS-HRS,     1.88 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION 101, ALTERNATE  1, STORM  1, ADDED TO OUTPUT HYDROGRAPH FILE ---

 EXECUTIVE CONTROL OPERATION ENDCMP                                                                                  RECORD ID
+                                     COMPUTATIONS COMPLETED FOR PASS   1


 EXECUTIVE CONTROL OPERATION COMPUT                                                                                  RECORD ID  1yr, 2
+                                     FROM XSECTION  10
+                                                          TO XSECTION 101
        STARTING TIME =   .00    RAIN DEPTH =  1.25    RAIN DURATION=  2.00    RAIN TABLE NO.= 6    ANT. MOIST. COND= 2
        ALTERNATE NO.= 2         STORM NO.= 1    MAIN TIME INCREMENT =   .05 HOURS


 OPERATION RUNOFF   CROSS SECTION  10

          PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
              1.15                          21.96                       (RUNOFF)

TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .25 SQ.MI.
    .00    DISCHG         .00       .00       .00       .00       .00       .00       .03       .15       .44       .99
    .50    DISCHG        1.91      3.26      5.02      7.12      9.43     11.79     14.07     16.15     17.96     19.44
   1.00    DISCHG       20.57     21.37     21.82     21.96     21.83     21.45     20.89     20.24     19.57     18.91
   1.50    DISCHG       18.31     17.80     17.39     17.09     16.88     16.72     16.54     16.31     15.99     15.58
   2.00    DISCHG       15.10     14.58     14.02     13.43     12.74     11.87     10.82      9.68      8.50      7.34
   2.50    DISCHG        6.23      5.20      4.26      3.47      2.84      2.33      1.92      1.58      1.29      1.06
   3.00    DISCHG         .87       .71       .58       .48       .39       .32       .26       .21       .17       .14
   3.50    DISCHG         .11       .09       .07       .05       .04       .03       .02       .02       .01       .01
   4.00    DISCHG         .00

  RUNOFF VOLUME ABOVE BASEFLOW =   .20 WATERSHED INCHES,     31.89 CFS-HRS,     2.64 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION  10, ALTERNATE  2, STORM  1, ADDED TO OUTPUT HYDROGRAPH FILE ---
1
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 OPERATION RUNOFF   CROSS SECTION  11

          PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
              1.75                           7.59                       (RUNOFF)
              1.20                           8.53                       (RUNOFF)

TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .17 SQ.MI.
    .00    DISCHG         .00       .00       .00       .00       .00       .00       .00       .00       .01       .06
    .50    DISCHG         .18       .41       .80      1.37      2.10      2.95      3.86      4.78      5.66      6.47
   1.00    DISCHG        7.16      7.73      8.15      8.41      8.53      8.52      8.42      8.27      8.09      7.92
   1.50    DISCHG        7.77      7.66      7.60      7.57      7.58      7.59      7.58      7.52      7.40      7.23
   2.00    DISCHG        7.02      6.78      6.54      6.27      5.94      5.50      4.97      4.40      3.81      3.23
   2.50    DISCHG        2.68      2.18      1.75      1.41      1.14       .93       .75       .61       .49       .40
   3.00    DISCHG         .32       .26       .21       .17       .14       .11       .09       .07       .05       .04
   3.50    DISCHG         .03       .02       .02       .01       .01       .01       .00

  RUNOFF VOLUME ABOVE BASEFLOW =   .12 WATERSHED INCHES,     12.68 CFS-HRS,     1.05 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION  11, ALTERNATE  2, STORM  1, ADDED TO OUTPUT HYDROGRAPH FILE ---

 OPERATION ADDHYD   CROSS SECTION 101

          PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
              1.17                          30.42                        (NULL)

TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .42 SQ.MI.
    .00    DISCHG         .00       .00       .00       .00       .00       .00       .03       .15       .45      1.05
    .50    DISCHG        2.09      3.67      5.82      8.49     11.53     14.74     17.93     20.93     23.62     25.91
   1.00    DISCHG       27.74     29.10     29.97     30.37     30.35     29.97     29.31     28.51     27.66     26.83
   1.50    DISCHG       26.08     25.46     24.99     24.66     24.46     24.30     24.12     23.83     23.39     22.80
   2.00    DISCHG       22.12     21.36     20.55     19.70     18.68     17.36     15.79     14.07     12.31     10.57
   2.50    DISCHG        8.91      7.38      6.01      4.88      3.98      3.26      2.67      2.19      1.79      1.46
   3.00    DISCHG        1.19       .97       .79       .64       .52       .43       .35       .28       .22       .18
   3.50    DISCHG         .14       .11       .09       .07       .05       .04       .02       .02       .01       .01
   4.00    DISCHG         .00

  RUNOFF VOLUME ABOVE BASEFLOW =   .16 WATERSHED INCHES,     44.58 CFS-HRS,     3.68 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION 101, ALTERNATE  2, STORM  1, ADDED TO OUTPUT HYDROGRAPH FILE ---

 EXECUTIVE CONTROL OPERATION ENDCMP                                                                                  RECORD ID
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+                                   COMPUTATIONS COMPLETED FOR PASS   2

1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS   3
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                     PAGE   9


 EXECUTIVE CONTROL OPERATION COMPUT                                                                                   RECORD ID  1yr, 3h
+                                   FROM XSECTION  10
+                                                          TO XSECTION 101
         STARTING TIME =   .00    RAIN DEPTH =  1.38    RAIN DURATION=  3.00    RAIN TABLE NO.= 6    ANT. MOIST. COND= 2
         ALTERNATE NO.= 3         STORM NO.= 1    MAIN TIME INCREMENT =   .05 HOURS


 OPERATION RUNOFF   CROSS SECTION  10

            PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
                1.42                          21.32                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .25 SQ.MI.
     .00    DISCHG         .00       .00       .00       .00       .00       .00       .00       .01       .06       .18
     .50    DISCHG         .45       .94      1.70      2.79      4.21      5.91      7.82      9.85     11.91     13.89
    1.00    DISCHG       15.69     17.24     18.52     19.51     20.25     20.76     21.08     21.25     21.31     21.30
    1.50    DISCHG       21.22     21.04     20.74     20.32     19.77     19.13     18.40     17.63     16.87     16.16
    2.00    DISCHG       15.52     14.98     14.53     14.18     13.92     13.72     13.58     13.48     13.41     13.37
    2.50    DISCHG       13.36     13.35     13.34     13.28     13.15     12.92     12.57     12.13     11.63     11.16
    3.00    DISCHG       10.76     10.45     10.20      9.97      9.66      9.18      8.52      7.73      6.86      5.95
    3.50    DISCHG        5.06      4.21      3.45      2.81      2.30      1.89      1.56      1.29      1.06       .87
    4.00    DISCHG         .71       .58       .48       .39       .32       .26       .21       .17       .14       .11
    4.50    DISCHG         .09       .07       .06       .04       .03       .03       .02       .01       .01       .00

   RUNOFF VOLUME ABOVE BASEFLOW =   .25 WATERSHED INCHES,     41.65 CFS-HRS,     3.44 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION  10, ALTERNATE  3, STORM  1, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION RUNOFF   CROSS SECTION  11

            PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
                1.56                           8.96                        (RUNOFF)
                2.61                           6.57                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .17 SQ.MI.
     .50    DISCHG         .01       .03       .11       .26       .53       .95      1.51      2.21      3.01      3.85
    1.00    DISCHG        4.70      5.50      6.23      6.86      7.39      7.81      8.14      8.41      8.62      8.78
    1.50    DISCHG        8.90      8.95      8.93      8.83      8.66      8.42      8.14      7.83      7.53      7.26
    2.00    DISCHG        7.03      6.84      6.69      6.59      6.52      6.48      6.46      6.46      6.46      6.48
    2.50    DISCHG        6.51      6.54      6.57      6.56      6.51      6.40      6.21      5.96      5.69      5.45
    3.00    DISCHG        5.26      5.13      5.05      4.96      4.82      4.56      4.18      3.74      3.25      2.76
    3.50    DISCHG        2.28      1.85      1.48      1.20       .97       .79       .64       .52       .42       .34
    4.00    DISCHG         .28       .22       .18       .14       .12       .09       .07       .06       .05       .04
    4.50    DISCHG         .03       .02       .02       .01       .01       .01       .00

   RUNOFF VOLUME ABOVE BASEFLOW =   .16 WATERSHED INCHES,     17.62 CFS-HRS,     1.46 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION  11, ALTERNATE  3, STORM  1, ADDED TO OUTPUT HYDROGRAPH FILE ---
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS   3
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                     PAGE  10


 OPERATION ADDHYD   CROSS SECTION 101

            PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
                1.48                          30.12                        (NULL)
                2.58                          19.91                        (NULL)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .42 SQ.MI.
     .00    DISCHG         .00       .00       .00       .00       .00       .00       .00       .01       .06       .18
     .50    DISCHG         .46       .97      1.81      3.05      4.73      6.85      9.34     12.07     14.92     17.75
    1.00    DISCHG       20.38     22.74     24.75     26.37     27.63     28.57     29.22     29.66     29.93     30.09
    1.50    DISCHG       30.12     29.99     29.68     29.15     28.44     27.55     26.53     25.46     24.40     23.42
    2.00    DISCHG       22.54     21.81     21.22     20.77     20.44     20.20     20.04     19.93     19.88     19.86
    2.50    DISCHG       19.87     19.90     19.90     19.84     19.66     19.32     18.78     18.08     17.32     16.61
    3.00    DISCHG       16.03     15.58     15.25     14.93     14.48     13.73     12.71     11.46     10.11      8.71
    3.50    DISCHG        7.34      6.06      4.94      4.01      3.28      2.69      2.21      1.81      1.48      1.21
    4.00    DISCHG         .99       .81       .66       .53       .43       .35       .28       .23       .18       .15
    4.50    DISCHG         .12       .09       .07       .06       .04       .03       .02       .01       .01       .00

   RUNOFF VOLUME ABOVE BASEFLOW =   .22 WATERSHED INCHES,     59.27 CFS-HRS,     4.90 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION 101, ALTERNATE  3, STORM  1, ADDED TO OUTPUT HYDROGRAPH FILE ---

 EXECUTIVE CONTROL OPERATION ENDCMP                                                                                   RECORD ID
+                                   COMPUTATIONS COMPLETED FOR PASS   3


 EXECUTIVE CONTROL OPERATION COMPUT                                                                                   RECORD ID  1yr, 6h
+                                   FROM XSECTION  10
+                                                          TO XSECTION 101
         STARTING TIME =   .00    RAIN DEPTH =  1.62    RAIN DURATION=  6.00    RAIN TABLE NO.= 6    ANT. MOIST. COND= 2
         ALTERNATE NO.= 6         STORM NO.= 1    MAIN TIME INCREMENT =   .05 HOURS
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OPERATION RUNOFF CROSS SECTION 10

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.94	18.43	(RUNOFF)
5.13	9.13	(RUNOFF)
6.17	6.90	(RUNOFF)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .05 HOURS DRAINAGE AREA = .25 SQ.MI.

.50	DISCHG	.00	.01	.03	.11	.25	.51	.91	1.46	2.18	3.04
1.00	DISCHG	4.02	5.10	6.25	7.43	8.61	9.76	10.89	11.97	13.00	13.96
1.50	DISCHG	14.85	15.67	16.40	17.03	17.54	17.92	18.18	18.34	18.41	18.43
2.00	DISCHG	18.38	18.29	18.15	18.00	17.84	17.66	17.45	17.20	16.92	16.64
2.50	DISCHG	16.38	16.13	15.93	15.75	15.62	15.51	15.42	15.31	15.17	14.97
3.00	DISCHG	14.72	14.43	14.09	13.71	13.28	12.81	12.30	11.80	11.32	10.87

1

TR20 XEQ 04-29-08 16:15 VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS JOB 1 PASS 4
REV PC 09/83(.2) CALCS: V3 W/HUFF-ISWS CIR.173/90 FILE: E06037.DAT DATE: 04/29/08 JAS PAGE 11

3.50	DISCHG	10.46	10.10	9.79	9.54	9.35	9.19	9.07	8.98	8.91	8.85
4.00	DISCHG	8.81	8.78	8.77	8.76	8.76	8.76	8.77	8.78	8.79	8.81
4.50	DISCHG	8.83	8.85	8.87	8.89	8.92	8.94	8.97	9.00	9.02	9.05
5.00	DISCHG	9.07	9.10	9.13	9.13	9.10	9.02	8.86	8.61	8.28	7.91
5.50	DISCHG	7.51	7.12	6.74	6.40	6.11	5.89	5.75	5.71	5.77	5.94
6.00	DISCHG	6.20	6.48	6.73	6.88	6.87	6.65	6.24	5.68	5.02	4.34
6.50	DISCHG	3.67	3.05	2.50	2.04	1.67	1.38	1.14	.93	.77	.63
7.00	DISCHG	.52	.42	.35	.28	.23	.19	.16	.13	.10	.08
7.50	DISCHG	.07	.06	.04	.04	.03	.02	.02	.01	.01	.00

RUNOFF VOLUME ABOVE BASEFLOW = .38 WATERSHED INCHES, 61.92 CFS-HRS, 5.12 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 10, ALTERNATE 6, STORM 1, ADDED TO OUTPUT HYDROGRAPH FILE ---

OPERATION RUNOFF CROSS SECTION 11

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
2.18	7.96	(RUNOFF)
5.14	4.82	(RUNOFF)
6.16	3.76	(RUNOFF)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .05 HOURS DRAINAGE AREA = .17 SQ.MI.

.50	DISCHG	.00	.00	.00	.00	.00	.00	.01	.04	.10	.20
1.00	DISCHG	.38	.62	.95	1.34	1.80	2.31	2.85	3.41	3.97	4.52
1.50	DISCHG	5.05	5.56	6.03	6.45	6.81	7.11	7.34	7.53	7.68	7.79
2.00	DISCHG	7.86	7.91	7.94	7.95	7.95	7.94	7.90	7.84	7.76	7.68
2.50	DISCHG	7.60	7.54	7.49	7.45	7.44	7.44	7.44	7.42	7.38	7.29
3.00	DISCHG	7.18	7.05	6.89	6.70	6.49	6.26	6.01	5.76	5.53	5.32
3.50	DISCHG	5.13	4.97	4.84	4.74	4.66	4.60	4.56	4.53	4.51	4.50
4.00	DISCHG	4.49	4.49	4.49	4.50	4.50	4.52	4.53	4.54	4.56	4.57
4.50	DISCHG	4.59	4.61	4.62	4.64	4.66	4.68	4.70	4.72	4.74	4.76
5.00	DISCHG	4.78	4.79	4.81	4.82	4.80	4.75	4.65	4.50	4.31	4.09
5.50	DISCHG	3.87	3.65	3.45	3.28	3.13	3.03	2.98	2.97	3.04	3.16
6.00	DISCHG	3.34	3.53	3.68	3.76	3.72	3.55	3.27	2.91	2.52	2.12
6.50	DISCHG	1.75	1.42	1.14	.92	.75	.61	.50	.40	.32	.26
7.00	DISCHG	.21	.17	.14	.11	.09	.07	.06	.05	.04	.03
7.50	DISCHG	.02	.02	.01	.01	.01	.00				

RUNOFF VOLUME ABOVE BASEFLOW = .26 WATERSHED INCHES, 28.28 CFS-HRS, 2.34 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 11, ALTERNATE 6, STORM 1, ADDED TO OUTPUT HYDROGRAPH FILE ---

OPERATION ADDHYD CROSS SECTION 101

1

TR20 XEQ 04-29-08 16:15 VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS JOB 1 PASS 4
REV PC 09/83(.2) CALCS: V3 W/HUFF-ISWS CIR.173/90 FILE: E06037.DAT DATE: 04/29/08 JAS PAGE 12

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.99	26.25	(NULL)
5.13	13.95	(NULL)
6.17	10.65	(NULL)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .05 HOURS DRAINAGE AREA = .42 SQ.MI.

.50	DISCHG	.00	.01	.03	.11	.25	.51	.92	1.50	2.28	3.24
1.00	DISCHG	4.40	5.73	7.20	8.77	10.41	12.07	13.74	15.38	16.97	18.48
1.50	DISCHG	19.91	21.23	22.43	23.48	24.35	25.03	25.52	25.87	26.09	26.21
2.00	DISCHG	26.25	26.19	26.09	25.95	25.79	25.60	25.35	25.04	24.68	24.32
2.50	DISCHG	23.98	23.67	23.41	23.21	23.06	22.95	22.85	22.73	22.54	22.27
3.00	DISCHG	21.91	21.47	20.97	20.41	19.78	19.07	18.31	17.56	16.85	16.19
3.50	DISCHG	15.59	15.07	14.63	14.28	14.01	13.80	13.63	13.51	13.42	13.35
4.00	DISCHG	13.30	13.27	13.26	13.25	13.26	13.27	13.30	13.32	13.35	13.38
4.50	DISCHG	13.42	13.46	13.50	13.54	13.58	13.62	13.67	13.71	13.76	13.80
5.00	DISCHG	13.85	13.90	13.94	13.95	13.90	13.77	13.51	13.11	12.59	12.00
5.50	DISCHG	11.38	10.77	10.20	9.68	9.24	8.92	8.73	8.69	8.81	9.11
6.00	DISCHG	9.54	10.02	10.41	10.64	10.59	10.21	9.52	8.59	7.54	6.46
6.50	DISCHG	5.42	4.47	3.64	2.96	2.42	1.99	1.63	1.34	1.09	.89
7.00	DISCHG	.73	.60	.49	.40	.32	.26	.22	.18	.14	.12
7.50	DISCHG	.09	.07	.06	.05	.04	.02	.02	.01	.01	.00

RUNOFF VOLUME ABOVE BASEFLOW = .33 WATERSHED INCHES, 90.20 CFS-HRS, 7.45 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 101, ALTERNATE 6, STORM 1, ADDED TO OUTPUT HYDROGRAPH FILE ---

EXECUTIVE CONTROL OPERATION ENDCMP RECORD ID

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+                                   COMPUTATIONS COMPLETED FOR PASS   4


 EXECUTIVE CONTROL OPERATION INCREM                                                                                  RECORD ID
+                                   MAIN TIME INCREMENT =   .20 HOURS


 EXECUTIVE CONTROL OPERATION COMPUT                                                                                  RECORD ID  1yr, 12
+                                   FROM XSECTION  10
+                                                          TO XSECTION 101
         STARTING TIME =   .00    RAIN DEPTH =  1.88    RAIN DURATION= 12.00    RAIN TABLE NO.= 7    ANT. MOIST. COND= 2
         ALTERNATE NO.=12         STORM NO.= 1    MAIN TIME INCREMENT =   .20 HOURS


 OPERATION RUNOFF   CROSS SECTION  10

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               5.63                          19.78                        (RUNOFF)
              10.71                           6.08                        (RUNOFF)
              12.07                           5.43                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .20 HOURS      DRAINAGE AREA =    .25 SQ.MI.
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS   5
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                     PAGE  13


    2.00    DISCHG         .00       .00       .00       .00       .00       .00       .00       .02       .24      1.01
    4.00    DISCHG        2.55      4.56      6.90      9.78     12.78     15.34     17.24     18.82     19.77     19.24
    6.00    DISCHG       18.48     17.93     16.75     15.69     15.06     14.26     13.63     13.15     12.32     11.60
    8.00    DISCHG       11.02     10.07      9.23      8.85      8.72      8.69      8.42      7.54      6.70      6.28
   10.00    DISCHG        6.11      6.04      6.03      6.04      6.05      5.77      4.84      3.95      3.78      4.54
   12.00    DISCHG        5.38      5.22      3.48      1.67       .77       .35       .16       .07       .03       .01
   14.00    DISCHG         .00

   RUNOFF VOLUME ABOVE BASEFLOW =   .53 WATERSHED INCHES,     86.59 CFS-HRS,     7.16 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION  10, ALTERNATE 12, STORM  1, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION RUNOFF   CROSS SECTION  11

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               5.68                           9.23                        (RUNOFF)
               8.91                           4.70                        (RUNOFF)
              10.71                           3.34                        (RUNOFF)
              12.05                           3.05                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .20 HOURS      DRAINAGE AREA =    .17 SQ.MI.
    4.00    DISCHG         .09       .56      1.53      2.98      4.61      6.12      7.35      8.44      9.17      9.07
    6.00    DISCHG        8.90      8.81      8.29      7.86      7.65      7.29      7.03      6.84      6.42      6.08
    8.00    DISCHG        5.81      5.29      4.88      4.72      4.68      4.69      4.54      4.03      3.58      3.39
   10.00    DISCHG        3.32      3.30      3.30      3.31      3.33      3.15      2.59      2.10      2.07      2.57
   12.00    DISCHG        3.03      2.87      1.79       .81       .35       .15       .07       .03       .01       .00

   RUNOFF VOLUME ABOVE BASEFLOW =   .39 WATERSHED INCHES,     41.77 CFS-HRS,     3.45 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION  11, ALTERNATE 12, STORM  1, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION ADDHYD   CROSS SECTION 101

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               5.65                          29.00                        (NULL)
              10.71                           9.42                        (NULL)
              12.06                           8.48                        (NULL)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .20 HOURS      DRAINAGE AREA =    .42 SQ.MI.
    2.00    DISCHG         .00       .00       .00       .00       .00       .00       .00       .02       .24      1.01
    4.00    DISCHG        2.63      5.12      8.43     12.76     17.39     21.46     24.59     27.26     28.94     28.31
    6.00    DISCHG       27.38     26.74     25.04     23.55     22.71     21.55     20.66     19.99     18.74     17.68
    8.00    DISCHG       16.82     15.36     14.11     13.57     13.40     13.37     12.95     11.57     10.28      9.67
   10.00    DISCHG        9.42      9.34      9.33      9.35      9.37      8.92      7.43      6.05      5.85      7.11
   12.00    DISCHG        8.41      8.09      5.27      2.48      1.12       .50       .22       .10       .04       .01
   14.00    DISCHG         .00
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS   5
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                     PAGE  14


   RUNOFF VOLUME ABOVE BASEFLOW =   .47 WATERSHED INCHES,    128.36 CFS-HRS,    10.61 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION 101, ALTERNATE 12, STORM  1, ADDED TO OUTPUT HYDROGRAPH FILE ---


 EXECUTIVE CONTROL OPERATION ENDCMP                                                                                  RECORD ID
+                                   COMPUTATIONS COMPLETED FOR PASS   5


 EXECUTIVE CONTROL OPERATION COMPUT                                                                                  RECORD ID  1yr, 18
+                                   FROM XSECTION  10
+                                                          TO XSECTION 101
         STARTING TIME =   .00    RAIN DEPTH =  2.03    RAIN DURATION= 18.00    RAIN TABLE NO.= 8    ANT. MOIST. COND= 2
         ALTERNATE NO.=18         STORM NO.= 1    MAIN TIME INCREMENT =   .20 HOURS
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 OPERATION RUNOFF   CROSS SECTION  10

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
              11.82                          21.51                        (RUNOFF)
              16.12                           6.80                        (RUNOFF)
              17.96                           6.80                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .20 HOURS      DRAINAGE AREA =    .25 SQ.MI.
    6.00    DISCHG         .00       .00       .00       .02       .10       .25       .44       .67       .97      1.31
    8.00    DISCHG        1.63      1.96      2.38      2.89      3.37      3.80      4.28      4.93      5.59      6.16
   10.00    DISCHG        6.79      8.51     11.08     13.25     14.82     16.23     17.83     19.35     20.62     21.50
   12.00    DISCHG       20.88     19.16     18.06     17.75     17.21     15.48     13.82     13.06     12.67     11.71
   14.00    DISCHG       10.30      9.37      8.98      8.61      7.89      7.24      6.91      6.78      6.74      6.74
   16.00    DISCHG        6.76      6.78      6.58      5.89      5.21      4.88      4.80      5.23      6.00      6.54
   18.00    DISCHG        6.78      6.20      4.08      2.00       .91       .42       .19       .08       .03       .01
   20.00    DISCHG         .00

   RUNOFF VOLUME ABOVE BASEFLOW =   .62 WATERSHED INCHES,    101.90 CFS-HRS,     8.42 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION  10, ALTERNATE 18, STORM  1, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION RUNOFF   CROSS SECTION  11

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
              11.83                          10.95                        (RUNOFF)
              16.13                           3.78                        (RUNOFF)
              17.95                           3.86                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .20 HOURS      DRAINAGE AREA =    .17 SQ.MI.
    8.00    DISCHG         .04       .15       .32       .55       .79      1.03      1.29      1.63      1.98      2.30
   10.00    DISCHG        2.66      3.56      4.85      5.95      6.82      7.66      8.62      9.54     10.33     10.94
   12.00    DISCHG       10.62      9.77      9.34      9.30      9.06      8.11      7.29      6.97      6.82      6.27
1
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   14.00    DISCHG        5.49      5.05      4.88      4.69      4.27      3.93      3.78      3.73      3.73      3.74
   16.00    DISCHG        3.75      3.77      3.65      3.22      2.86      2.70      2.67      2.97      3.43      3.71
   18.00    DISCHG        3.84      3.45      2.12       .96       .41       .18       .07       .03       .01       .00

   RUNOFF VOLUME ABOVE BASEFLOW =   .46 WATERSHED INCHES,     50.34 CFS-HRS,     4.16 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION  11, ALTERNATE 18, STORM  1, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION ADDHYD   CROSS SECTION 101

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
              11.82                          32.45                        (NULL)
              16.12                          10.58                        (NULL)
              17.95                          10.65                        (NULL)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .20 HOURS      DRAINAGE AREA =    .42 SQ.MI.
    6.00    DISCHG         .00       .00       .00       .02       .10       .25       .44       .67       .97      1.31
    8.00    DISCHG        1.68      2.11      2.70      3.44      4.16      4.82      5.57      6.56      7.58      8.46
   10.00    DISCHG        9.45     12.07     15.93     19.20     21.63     23.89     26.45     28.90     30.95     32.44
   12.00    DISCHG       31.50     28.93     27.40     27.05     26.26     23.59     21.11     20.03     19.49     17.98
   14.00    DISCHG       15.79     14.41     13.86     13.30     12.17     11.17     10.70     10.52     10.47     10.48
   16.00    DISCHG       10.51     10.55     10.23      9.12      8.08      7.58      7.47      8.20      9.43     10.25
   18.00    DISCHG       10.62      9.65      6.20      2.96      1.32       .59       .26       .11       .04       .01
   20.00    DISCHG         .00

   RUNOFF VOLUME ABOVE BASEFLOW =   .56 WATERSHED INCHES,    152.23 CFS-HRS,    12.58 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION 101, ALTERNATE 18, STORM  1, ADDED TO OUTPUT HYDROGRAPH FILE ---

 EXECUTIVE CONTROL OPERATION ENDCMP                                                                                  RECORD ID
+                                   COMPUTATIONS COMPLETED FOR PASS   6



 EXECUTIVE CONTROL OPERATION COMPUT                                                                                  RECORD ID  1yr, 24
+                                   FROM XSECTION  10
+                                                          TO XSECTION 101
         STARTING TIME =   .00    RAIN DEPTH =  2.16    RAIN DURATION= 24.00    RAIN TABLE NO.= 8    ANT. MOIST. COND= 2
         ALTERNATE NO.=24         STORM NO.= 1    MAIN TIME INCREMENT =   .20 HOURS


 OPERATION RUNOFF   CROSS SECTION  10

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
              15.69                          18.57                        (RUNOFF)
              16.72                          14.78                        (RUNOFF)
              21.52                           5.65                        (RUNOFF)
              23.92                           5.78                        (RUNOFF)
1
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 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .20 HOURS      DRAINAGE AREA =    .25 SQ.MI.
    8.00    DISCHG         .00       .00       .04       .11       .23       .35       .48       .61       .74       .90
   10.00    DISCHG        1.13      1.37      1.59      1.79      1.98      2.22      2.56      2.93      3.23      3.49
   12.00    DISCHG        3.74      4.04      4.50      4.98      5.36      5.68      5.97      6.74      8.58     10.52
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  14.00    DISCHG       11.85     12.81     13.58     14.38     15.41     16.41     17.23     17.91     18.50     18.47
  16.00    DISCHG       17.03     15.54     14.89     14.71     14.74     14.37     12.92     11.51     10.85     10.59
  18.00    DISCHG       10.51     10.16      9.11      8.09      7.57      7.36      7.28      7.08      6.52      5.99
  20.00    DISCHG        5.72      5.61      5.57      5.56      5.57      5.58      5.60      5.62      5.63      5.46
  22.00    DISCHG        4.88      4.33      4.04      3.91      3.87      4.04      4.63      5.21      5.52      5.67
  24.00    DISCHG        5.73      5.21      3.41      1.66       .76       .35       .15       .07       .03       .01
  26.00    DISCHG         .00

  RUNOFF VOLUME ABOVE BASEFLOW =   .71 WATERSHED INCHES,    115.74 CFS-HRS,     9.56 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION  10, ALTERNATE 24, STORM  1, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION RUNOFF   CROSS SECTION  11

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
              15.70                          9.70                        (RUNOFF)
              16.75                          7.92                        (RUNOFF)
              23.92                          3.31                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .20 HOURS      DRAINAGE AREA =    .17 SQ.MI.
  10.00    DISCHG         .01       .05       .13       .23       .33       .46       .62       .79       .94      1.10
  12.00    DISCHG        1.24      1.42      1.66      1.90      2.11      2.30      2.48      2.90      3.86      4.81
  14.00    DISCHG        5.50      6.04      6.50      7.00      7.64      8.25      8.75      9.19      9.59      9.60
  16.00    DISCHG        8.82      8.10      7.86      7.84      7.91      7.72      6.89      6.17      5.87      5.77
  18.00    DISCHG        5.76      5.56      4.93      4.39      4.15      4.06      4.03      3.92      3.58      3.30
  20.00    DISCHG        3.17      3.13      3.11      3.12      3.12      3.14      3.15      3.16      3.17      3.06
  22.00    DISCHG        2.71      2.40      2.26      2.20      2.18      2.30      2.67      3.00      3.17      3.24
  24.00    DISCHG        3.28      2.92      1.78       .80       .35       .15       .06       .03       .01       .00

  RUNOFF VOLUME ABOVE BASEFLOW =   .54 WATERSHED INCHES,     58.18 CFS-HRS,     4.81 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION  11, ALTERNATE 24, STORM  1, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION ADDHYD   CROSS SECTION 101

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
              15.70                         28.21                        (NULL)
              16.73                         22.69                        (NULL)
              21.52                          8.83                        (NULL)
              23.92                          9.09                        (NULL)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .20 HOURS      DRAINAGE AREA =    .42 SQ.MI.
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS   7
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                PAGE  17


   8.00    DISCHG         .00       .00       .04       .11       .23       .35       .48       .61       .74       .90
  10.00    DISCHG        1.14      1.42      1.72      2.02      2.32      2.67      3.18      3.71      4.17      4.59
  12.00    DISCHG        4.98      5.46      6.16      6.88      7.47      7.98      8.46      9.64     12.44     15.33
  14.00    DISCHG       17.35     18.84     20.08     21.38     23.05     24.66     25.98     27.10     28.10     28.07
  16.00    DISCHG       25.85     23.64     22.75     22.55     22.65     22.08     19.81     17.68     16.72     16.36
  18.00    DISCHG       16.27     15.73     14.04     12.48     11.72     11.42     11.31     11.01     10.11      9.29
  20.00    DISCHG        8.89      8.74      8.69      8.68      8.70      8.72      8.75      8.78      8.80      8.52
  22.00    DISCHG        7.59      6.72      6.30      6.11      6.05      6.34      7.30      8.21      8.69      8.91
  24.00    DISCHG        9.01      8.13      5.19      2.46      1.10       .49       .22       .09       .04       .01
  26.00    DISCHG         .00

  RUNOFF VOLUME ABOVE BASEFLOW =   .64 WATERSHED INCHES,    173.92 CFS-HRS,    14.37 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION 101, ALTERNATE 24, STORM  1, ADDED TO OUTPUT HYDROGRAPH FILE ---


 EXECUTIVE CONTROL OPERATION ENDCMP                                                                                  RECORD ID
+                                   COMPUTATIONS COMPLETED FOR PASS   7



 EXECUTIVE CONTROL OPERATION INCREM                                                                                  RECORD ID
+                                   MAIN TIME INCREMENT =   .50 HOURS


 EXECUTIVE CONTROL OPERATION COMPUT                                                                                  RECORD ID  1yr, 48
+                                   FROM XSECTION  10
+                                                          TO XSECTION 101
         STARTING TIME =   .00    RAIN DEPTH =  2.39    RAIN DURATION= 48.00    RAIN TABLE NO.= 9    ANT. MOIST. COND= 2
         ALTERNATE NO.=48         STORM NO.= 1    MAIN TIME INCREMENT =   .50 HOURS


 OPERATION RUNOFF   CROSS SECTION  10

 *** WARNING-MAIN TIME INCREMENT MAY BE TOO LARGE.
          COMPUTED PEAK(      9.60) AT          EXCEEDS MAX. ADJACENT HYDROGRAPH COORDINATE BY   7 %.
+                                  XSECTION  10

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
              42.87                         12.12                        (RUNOFF)
              47.75                          9.60                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .50 HOURS      DRAINAGE AREA =    .25 SQ.MI.
  15.00    DISCHG         .00       .00       .00       .00       .00       .00       .03       .09       .15       .20
  20.00    DISCHG         .26       .32       .37       .43       .48       .54       .59       .64       .69       .89
  25.00    DISCHG        1.05      1.15      1.23      1.30      1.13      1.10      1.13      1.17      1.25      1.60
  30.00    DISCHG        1.73      1.81      1.88      2.18      2.92      3.16      3.31      3.45      3.57      3.70
  35.00    DISCHG        3.82      3.93      4.05      4.97      5.65      5.90      6.09      6.36      9.36     10.71
  40.00    DISCHG       11.23     11.61     11.86     11.50     11.62     11.85     12.09     11.31      8.86      8.49
  45.00    DISCHG        8.52      8.60      8.69      8.77      8.85      8.93      8.97      3.82       .54       .07
  50.00    DISCHG         .00

  RUNOFF VOLUME ABOVE BASEFLOW =   .86 WATERSHED INCHES,    141.03 CFS-HRS,    11.65 ACRE-FEET;   BASEFLOW =    .00 CFS
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1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS   8
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                     PAGE  18


                        --- HYDROGRAPH FOR XSECTION  10, ALTERNATE 48, STORM  1, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION RUNOFF   CROSS SECTION  11

 *** WARNING-MAIN TIME INCREMENT MAY BE TOO LARGE.
          COMPUTED PEAK(      5.59) AT              EXCEEDS MAX. ADJACENT HYDROGRAPH COORDINATE BY   7 %.
+                                   XSECTION  11

            PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               42.88                           6.77                        (RUNOFF)
               47.76                           5.59                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .50 HOURS      DRAINAGE AREA =    .17 SQ.MI.
   20.00    DISCHG         .00       .00       .00       .00       .00       .03       .06       .09       .12       .19
   25.00    DISCHG         .25       .31       .36       .41       .37       .37       .40       .42       .47       .61
   30.00    DISCHG         .68       .73       .77       .93      1.26      1.39      1.48      1.57      1.65      1.73
   35.00    DISCHG        1.81      1.89      1.97      2.49      2.82      2.98      3.10      3.28      4.96      5.66
   40.00    DISCHG        5.99      6.25      6.43      6.28      6.40      6.58      6.75      6.28      4.94      4.80
   45.00    DISCHG        4.84      4.90      4.97      5.03      5.09      5.15      5.20      1.94       .24       .02

   RUNOFF VOLUME ABOVE BASEFLOW =   .67 WATERSHED INCHES,     72.66 CFS-HRS,     6.01 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION  11, ALTERNATE 48, STORM  1, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION ADDHYD   CROSS SECTION 101

 *** WARNING-MAIN TIME INCREMENT MAY BE TOO LARGE.
          COMPUTED PEAK(     15.19) AT              EXCEEDS MAX. ADJACENT HYDROGRAPH COORDINATE BY   7 %.
+                                   XSECTION 101

            PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               42.87                          18.89                        (NULL)
               47.76                          15.19                        (NULL)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .50 HOURS      DRAINAGE AREA =    .42 SQ.MI.
   15.00    DISCHG         .00       .00       .00       .00       .00       .00       .03       .09       .15       .20
   20.00    DISCHG         .26       .32       .37       .43       .48       .56       .65       .73       .81      1.08
   25.00    DISCHG        1.31      1.46      1.59      1.71      1.50      1.47      1.52      1.59      1.72      2.21
   30.00    DISCHG        2.41      2.53      2.65      3.11      4.18      4.55      4.79      5.01      5.23      5.43
   35.00    DISCHG        5.63      5.83      6.02      7.46      8.47      8.88      9.18      9.64     14.32     16.38
   40.00    DISCHG       17.22     17.86     18.30     17.79     18.02     18.43     18.84     17.59     13.80     13.29
   45.00    DISCHG       13.36     13.50     13.65     13.80     13.94     14.08     14.17      5.76       .77       .09
   50.00    DISCHG         .00

   RUNOFF VOLUME ABOVE BASEFLOW =   .79 WATERSHED INCHES,    213.68 CFS-HRS,    17.66 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION 101, ALTERNATE 48, STORM  1, ADDED TO OUTPUT HYDROGRAPH FILE ---
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS   9
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                     PAGE  19



 EXECUTIVE CONTROL OPERATION ENDCMP                                                                                  RECORD ID
+                                   COMPUTATIONS COMPLETED FOR PASS   8



 EXECUTIVE CONTROL OPERATION COMPUT                                                                                  RECORD ID  1yr, 72
+                                   FROM XSECTION  10
+                                                         TO XSECTION 101
         STARTING TIME =   .00    RAIN DEPTH =  2.60    RAIN DURATION= 72.00    RAIN TABLE NO.= 9    ANT. MOIST. COND= 2
         ALTERNATE NO.=72         STORM NO.= 1    MAIN TIME INCREMENT =   .50 HOURS


 OPERATION RUNOFF   CROSS SECTION  10

 *** WARNING-MAIN TIME INCREMENT MAY BE TOO LARGE.
          COMPUTED PEAK(      7.29) AT              EXCEEDS MAX. ADJACENT HYDROGRAPH COORDINATE BY   7 %.
+                                   XSECTION  10

            PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               64.41                           9.27                        (RUNOFF)
               71.75                           7.29                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .50 HOURS      DRAINAGE AREA =    .25 SQ.MI.
   20.00    DISCHG         .00       .00       .00       .00       .00       .00       .00       .00       .00       .01
   25.00    DISCHG         .03       .06       .09       .12       .15       .19       .22       .24       .27       .30
   30.00    DISCHG         .33       .36       .39       .41       .44       .47       .49       .52       .55       .57
   35.00    DISCHG         .60       .62       .65       .80       .92       .97      1.02      1.06      1.10      1.13
   40.00    DISCHG        1.05       .93       .93       .94       .96       .98      1.00      1.11      1.35      1.42
   45.00    DISCHG        1.46      1.50      1.53      1.56      1.68      2.29      2.49      2.58      2.65      2.71
   50.00    DISCHG        2.77      2.83      2.89      2.95      3.01      3.07      3.12      3.18      3.23      3.93
   55.00    DISCHG        4.40      4.55      4.64      4.72      4.80      4.88      6.26      7.97      8.39      8.61
   60.00    DISCHG        8.79      8.95      9.12      9.10      8.78      8.83      8.94      9.05      9.16      9.27
   65.00    DISCHG        9.05      6.91      6.44      6.40      6.44      6.48      6.52      6.56      6.60      6.64
   70.00    DISCHG        6.67      6.71      6.75      6.78      6.80      2.86       .40       .05       .00

   RUNOFF VOLUME ABOVE BASEFLOW =  1.01 WATERSHED INCHES,    165.53 CFS-HRS,    13.68 ACRE-FEET;   BASEFLOW =    .00 CFS
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                    --- HYDROGRAPH FOR XSECTION  10, ALTERNATE 72, STORM  1, ADDED TO OUTPUT HYDROGRAPH FILE ---

 OPERATION RUNOFF   CROSS SECTION  11

 *** WARNING-MAIN TIME INCREMENT MAY BE TOO LARGE.
          COMPUTED PEAK(      4.29) AT              EXCEEDS MAX. ADJACENT HYDROGRAPH COORDINATE BY   7 %.
+                                  XSECTION  11

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
              64.44                          5.27                          (RUNOFF)
              71.75                          4.29                          (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .50 HOURS      DRAINAGE AREA =    .17 SQ.MI.
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS   9
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                PAGE  20


   30.00    DISCHG         .00       .00       .02       .04       .05       .07       .08       .10       .12       .13
   35.00    DISCHG         .15       .16       .18       .24       .28       .31       .34       .36       .39       .41
   40.00    DISCHG         .38       .35       .36       .37       .38       .39       .41       .46       .57       .60
   45.00    DISCHG         .62       .65       .67       .69       .75      1.05      1.14      1.19      1.23      1.28
   50.00    DISCHG        1.32      1.36      1.40      1.44      1.48      1.52      1.55      1.59      1.63      2.02
   55.00    DISCHG        2.26      2.34      2.40      2.46      2.52      2.57      3.39      4.29      4.52      4.66
   60.00    DISCHG        4.79      4.91      5.03      5.03      4.88      4.94      5.02      5.10      5.19      5.27
   65.00    DISCHG        5.13      3.89      3.67      3.67      3.70      3.74      3.77      3.80      3.83      3.86
   70.00    DISCHG        3.88      3.91      3.94      3.97      3.98      1.49       .18       .02

   RUNOFF VOLUME ABOVE BASEFLOW =   .80 WATERSHED INCHES,     86.97 CFS-HRS,     7.19 ACRE-FEET;   BASEFLOW =    .00 CFS

                    --- HYDROGRAPH FOR XSECTION  11, ALTERNATE 72, STORM  1, ADDED TO OUTPUT HYDROGRAPH FILE ---

 OPERATION ADDHYD   CROSS SECTION 101

 *** WARNING-MAIN TIME INCREMENT MAY BE TOO LARGE.
          COMPUTED PEAK(     11.57) AT              EXCEEDS MAX. ADJACENT HYDROGRAPH COORDINATE BY   7 %.
+                                  XSECTION 101

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
              64.42                         14.54                          (NULL)
              71.75                         11.57                          (NULL)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .50 HOURS      DRAINAGE AREA =    .42 SQ.MI.
   20.00    DISCHG         .00       .00       .00       .00       .00       .00       .00       .00       .00       .01
   25.00    DISCHG         .03       .06       .09       .12       .15       .19       .22       .24       .27       .30
   30.00    DISCHG         .33       .36       .41       .45       .49       .54       .58       .62       .66       .70
   35.00    DISCHG         .74       .78       .82      1.04      1.20      1.28      1.35      1.42      1.48      1.55
   40.00    DISCHG        1.43      1.28      1.28      1.31      1.34      1.38      1.41      1.57      1.92      2.02
   45.00    DISCHG        2.09      2.14      2.20      2.25      2.43      3.34      3.63      3.77      3.88      3.99
   50.00    DISCHG        4.09      4.19      4.29      4.39      4.49      4.58      4.68      4.77      4.86      5.94
   55.00    DISCHG        6.66      6.88      7.04      7.18      7.32      7.45      9.65     12.26     12.91     13.27
   60.00    DISCHG       13.57     13.86     14.14     14.13     13.66     13.76     13.95     14.15     14.35     14.54
   65.00    DISCHG       14.18     10.80     10.11     10.08     10.14     10.21     10.29     10.36     10.42     10.49
   70.00    DISCHG       10.56     10.62     10.68     10.75     10.78      4.35       .58       .07       .00

   RUNOFF VOLUME ABOVE BASEFLOW =   .93 WATERSHED INCHES,    252.50 CFS-HRS,    20.87 ACRE-FEET;   BASEFLOW =    .00 CFS

                    --- HYDROGRAPH FOR XSECTION 101, ALTERNATE 72, STORM  1, ADDED TO OUTPUT HYDROGRAPH FILE ---

 EXECUTIVE CONTROL OPERATION ENDCMP                                                                                  RECORD ID
+                                  COMPUTATIONS COMPLETED FOR PASS   9


1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  10
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                PAGE  21


 EXECUTIVE CONTROL OPERATION COMPUT                                                                                  RECORD ID  1yr, 12
+                                  FROM XSECTION  10
+                                                     TO XSECTION 101
         STARTING TIME =   .00    RAIN DEPTH =  2.98    RAIN DURATION=120.00    RAIN TABLE NO.= 9    ANT. MOIST. COND= 2
         ALTERNATE NO.=73         STORM NO.= 1    MAIN TIME INCREMENT =   .50 HOURS


 OPERATION RUNOFF   CROSS SECTION  10

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
             107.76                          7.05                          (RUNOFF)
             119.60                          4.95                          (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .50 HOURS      DRAINAGE AREA =    .25 SQ.MI.
   35.00    DISCHG         .00       .00       .00       .02       .03       .05       .06       .08       .09       .11
   40.00    DISCHG         .12       .13       .15       .16       .18       .19       .20       .22       .23       .24
   45.00    DISCHG         .26       .27       .28       .30       .31       .32       .33       .35       .36       .37
   50.00    DISCHG         .38       .39       .41       .42       .43       .44       .45       .46       .47       .49
   55.00    DISCHG         .50       .51       .52       .53       .54       .55       .56       .57       .58       .59
   60.00    DISCHG         .60       .73       .82       .85       .87       .89       .90       .92       .94       .95
   65.00    DISCHG         .97       .98      1.00       .87       .79       .78       .79       .80       .81       .81
   70.00    DISCHG         .82       .83       .84       .85       .86      1.03      1.15      1.18      1.19      1.21
   75.00    DISCHG        1.22      1.23      1.25      1.26      1.27      1.29      1.30      1.69      1.96      2.02
   80.00    DISCHG        2.05      2.08      2.10      2.13      2.16      2.18      2.21      2.23      2.26      2.28
   85.00    DISCHG        2.31      2.33      2.35      2.37      2.40      2.42      2.44      2.46      2.48      2.51
   90.00    DISCHG        2.53      3.04      3.38      3.46      3.50      3.54      3.57      3.60      3.63      3.67
   95.00    DISCHG        3.70      3.73      3.76      5.17      6.09      6.29      6.38      6.45      6.52      6.59
```

100.00	DISCHG	6.66	6.72	6.78	6.84	6.90	6.65	6.51	6.53	6.57	6.61
105.00	DISCHG	6.66	6.70	6.74	6.79	6.83	6.87	6.90	5.60	4.78	4.68
110.00	DISCHG	4.68	4.70	4.71	4.73	4.74	4.76	4.77	4.79	4.80	4.82
115.00	DISCHG	4.83	4.85	4.86	4.87	4.89	4.90	4.91	4.93	4.94	4.95
120.00	DISCHG	4.95	2.10	.30	.04	.00					

RUNOFF VOLUME ABOVE BASEFLOW = 1.30 WATERSHED INCHES, 212.01 CFS-HRS, 17.52 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 10, ALTERNATE 73, STORM 1, ADDED TO OUTPUT HYDROGRAPH FILE ---

OPERATION RUNOFF CROSS SECTION 11

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
107.77	4.12	(RUNOFF)
119.70	2.96	(RUNOFF)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .50 HOURS DRAINAGE AREA = .17 SQ.MI.

45.00	DISCHG	.01	.02	.02	.03	.04	.05	.05	.06	.07	.08
50.00	DISCHG	.08	.09	.10	.11	.11	.12	.13	.13	.14	.15
55.00	DISCHG	.16	.16	.17	.18	.18	.19	.20	.20	.21	.22
60.00	DISCHG	.22	.28	.31	.33	.34	.35	.36	.37	.38	.39

1

65.00	DISCHG	.40	.41	.42	.37	.34	.34	.34	.35	.35	.36
70.00	DISCHG	.37	.37	.38	.38	.39	.48	.53	.54	.55	.56
75.00	DISCHG	.57	.58	.59	.60	.61	.61	.62	.83	.95	.98
80.00	DISCHG	1.00	1.02	1.04	1.06	1.08	1.09	1.11	1.13	1.14	1.16
85.00	DISCHG	1.18	1.19	1.21	1.22	1.24	1.26	1.27	1.29	1.30	1.32
90.00	DISCHG	1.33	1.63	1.80	1.84	1.87	1.89	1.92	1.94	1.96	1.99
95.00	DISCHG	2.01	2.03	2.06	2.90	3.37	3.48	3.54	3.59	3.64	3.69
100.00	DISCHG	3.74	3.78	3.83	3.88	3.92	3.77	3.71	3.73	3.77	3.80
105.00	DISCHG	3.84	3.87	3.90	3.93	3.96	3.99	4.02	3.20	2.78	2.73
110.00	DISCHG	2.74	2.75	2.77	2.78	2.79	2.80	2.81	2.83	2.84	2.85
115.00	DISCHG	2.86	2.87	2.88	2.89	2.90	2.91	2.92	2.93	2.94	2.95
120.00	DISCHG	2.95	1.10	.13	.01						

RUNOFF VOLUME ABOVE BASEFLOW = 1.06 WATERSHED INCHES, 114.51 CFS-HRS, 9.46 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 11, ALTERNATE 73, STORM 1, ADDED TO OUTPUT HYDROGRAPH FILE ---

OPERATION ADDHYD CROSS SECTION 101

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
107.76	11.17	(NULL)
119.64	7.91	(NULL)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .50 HOURS DRAINAGE AREA = .42 SQ.MI.

35.00	DISCHG	.00	.00	.00	.02	.03	.05	.06	.08	.09	.11
40.00	DISCHG	.12	.13	.15	.16	.18	.19	.20	.22	.23	.24
45.00	DISCHG	.26	.28	.31	.33	.35	.37	.39	.41	.43	.45
50.00	DISCHG	.47	.49	.50	.52	.54	.56	.58	.60	.62	.63
55.00	DISCHG	.65	.67	.69	.71	.72	.74	.76	.77	.79	.81
60.00	DISCHG	.83	1.01	1.14	1.18	1.21	1.24	1.26	1.29	1.32	1.35
65.00	DISCHG	1.37	1.40	1.42	1.23	1.12	1.12	1.13	1.15	1.16	1.17
70.00	DISCHG	1.19	1.20	1.22	1.23	1.24	1.51	1.68	1.72	1.74	1.77
75.00	DISCHG	1.79	1.81	1.83	1.86	1.88	1.90	1.93	2.53	2.91	3.00
80.00	DISCHG	3.05	3.10	3.14	3.19	3.23	3.28	3.32	3.36	3.40	3.44
85.00	DISCHG	3.48	3.52	3.56	3.60	3.64	3.68	3.71	3.75	3.79	3.82
90.00	DISCHG	3.86	4.67	5.18	5.30	5.37	5.43	5.49	5.54	5.60	5.65
95.00	DISCHG	5.71	5.76	5.82	8.07	9.47	9.77	9.92	10.04	10.16	10.28
100.00	DISCHG	10.39	10.50	10.61	10.72	10.82	10.42	10.22	10.26	10.34	10.42
105.00	DISCHG	10.49	10.57	10.65	10.72	10.79	10.86	10.92	8.80	7.56	7.41
110.00	DISCHG	7.42	7.45	7.48	7.51	7.53	7.56	7.59	7.61	7.64	7.67
115.00	DISCHG	7.69	7.72	7.74	7.77	7.79	7.81	7.84	7.86	7.88	7.91
120.00	DISCHG	7.90	3.20	.43	.05	.00					

RUNOFF VOLUME ABOVE BASEFLOW = 1.20 WATERSHED INCHES, 326.51 CFS-HRS, 26.98 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 101, ALTERNATE 73, STORM 1, ADDED TO OUTPUT HYDROGRAPH FILE ---

1

EXECUTIVE CONTROL OPERATION ENDCMP RECORD ID
+ COMPUTATIONS COMPLETED FOR PASS 10

EXECUTIVE CONTROL OPERATION COMPUT RECORD ID 1yr, 24
+ FROM XSECTION 10
+ TO XSECTION 101
STARTING TIME = .00 RAIN DEPTH = 3.70 RAIN DURATION=240.00 RAIN TABLE NO.= 9 ANT. MOIST. COND= 2
ALTERNATE NO.=74 STORM NO.= 1 MAIN TIME INCREMENT = .50 HOURS

OPERATION RUNOFF CROSS SECTION 10

*** WARNING-NO PEAK FOUND, MAXIMUM DISCHARGE = .95 CFS.

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
149.50	.95	(RUNOFF)

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TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .50 HOURS      DRAINAGE AREA =    .25 SQ.MI.
  60.00    DISCHG         .01       .02       .02       .03       .03       .04       .04       .05       .06       .06
  65.00    DISCHG         .07       .07       .08       .08       .09       .09       .10       .10       .11       .12
  70.00    DISCHG         .12       .13       .13       .14       .14       .15       .15       .16       .16       .17
  75.00    DISCHG         .17       .18       .18       .19       .19       .20       .20       .21       .21       .22
  80.00    DISCHG         .22       .22       .23       .23       .24       .24       .25       .25       .26       .26
  85.00    DISCHG         .27       .27       .27       .28       .28       .29       .29       .30       .30       .31
  90.00    DISCHG         .31       .31       .32       .32       .33       .33       .33       .34       .34       .35
  95.00    DISCHG         .35       .35       .36       .36       .37       .37       .37       .38       .38       .39
 100.00    DISCHG         .39       .39       .40       .40       .40       .41       .41       .42       .42       .42
 105.00    DISCHG         .43       .43       .43       .44       .44       .44       .45       .45       .46       .46
 110.00    DISCHG         .46       .47       .47       .47       .48       .48       .48       .49       .49       .49
 115.00    DISCHG         .50       .50       .50       .51       .51       .51       .52       .52       .52       .52
 120.00    DISCHG         .53       .63       .70       .72       .72       .73       .74       .74       .75       .75
 125.00    DISCHG         .76       .76       .77       .77       .78       .78       .79       .79       .80       .80
 130.00    DISCHG         .81       .81       .82       .82       .83       .71       .64       .63       .63       .63
 135.00    DISCHG         .64       .64       .64       .64       .65       .65       .65       .65       .66       .66
 140.00    DISCHG         .66       .67       .67       .67       .67       .67       .68       .68       .68       .82
 145.00    DISCHG         .90       .92       .93       .93       .93       .94       .94       .95       .95       .95

  RUNOFF VOLUME ABOVE BASEFLOW =   .24 WATERSHED INCHES,     39.81 CFS-HRS,     3.29 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION  10, ALTERNATE 74, STORM  1, ADDED TO OUTPUT HYDROGRAPH FILE ---


OPERATION RUNOFF   CROSS SECTION  11

*** WARNING-NO PEAK FOUND, MAXIMUM DISCHARGE =         .49 CFS.
1
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          PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
            149.50                           .49                          (RUNOFF)

TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .50 HOURS      DRAINAGE AREA =    .17 SQ.MI.
  70.00    DISCHG         .00       .00       .00       .00       .00       .00       .00       .00       .01       .01
  75.00    DISCHG         .01       .02       .02       .02       .02       .03       .03       .03       .04       .04
  80.00    DISCHG         .04       .04       .05       .05       .05       .06       .06       .06       .06       .07
  85.00    DISCHG         .07       .07       .08       .08       .08       .08       .09       .09       .09       .09
  90.00    DISCHG         .10       .10       .10       .11       .11       .11       .11       .12       .12       .12
  95.00    DISCHG         .12       .13       .13       .13       .13       .14       .14       .14       .14       .15
 100.00    DISCHG         .15       .15       .15       .16       .16       .16       .16       .17       .17       .17
 105.00    DISCHG         .17       .17       .18       .18       .18       .18       .19       .19       .19       .19
 110.00    DISCHG         .20       .20       .20       .20       .20       .21       .21       .21       .21       .22
 115.00    DISCHG         .22       .22       .22       .22       .23       .23       .23       .23       .23       .24
 120.00    DISCHG         .24       .29       .32       .33       .33       .34       .34       .34       .35       .35
 125.00    DISCHG         .35       .36       .36       .36       .37       .37       .37       .38       .38       .38
 130.00    DISCHG         .39       .39       .39       .40       .40       .34       .31       .31       .31       .31
 135.00    DISCHG         .31       .31       .31       .32       .32       .32       .32       .32       .33       .33
 140.00    DISCHG         .33       .33       .33       .33       .34       .34       .34       .34       .34       .42
 145.00    DISCHG         .46       .46       .47       .47       .47       .48       .48       .48       .48       .49

  RUNOFF VOLUME ABOVE BASEFLOW =   .15 WATERSHED INCHES,     16.70 CFS-HRS,     1.38 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION  11, ALTERNATE 74, STORM  1, ADDED TO OUTPUT HYDROGRAPH FILE ---


OPERATION ADDHYD   CROSS SECTION 101

*** WARNING-NO PEAK FOUND, MAXIMUM DISCHARGE =        1.44 CFS.

          PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
            149.50                          1.44                          (NULL)

TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .50 HOURS      DRAINAGE AREA =    .42 SQ.MI.
  60.00    DISCHG         .01       .02       .02       .03       .03       .04       .04       .05       .06       .06
  65.00    DISCHG         .07       .07       .08       .08       .09       .09       .10       .10       .11       .12
  70.00    DISCHG         .12       .13       .13       .14       .14       .15       .15       .16       .17       .18
  75.00    DISCHG         .18       .19       .20       .21       .22       .22       .23       .24       .25       .25
  80.00    DISCHG         .26       .27       .28       .28       .29       .30       .31       .31       .32       .33
  85.00    DISCHG         .34       .34       .35       .36       .37       .37       .38       .39       .39       .40
  90.00    DISCHG         .41       .41       .42       .43       .43       .44       .45       .45       .46       .47
  95.00    DISCHG         .47       .48       .49       .49       .50       .51       .51       .52       .53       .53
 100.00    DISCHG         .54       .54       .55       .56       .56       .57       .58       .58       .59       .59
 105.00    DISCHG         .60       .61       .61       .62       .62       .63       .63       .64       .65       .65
 110.00    DISCHG         .66       .66       .67       .67       .68       .69       .69       .70       .70       .71
 115.00    DISCHG         .71       .72       .72       .73       .73       .74       .75       .75       .76       .76
 120.00    DISCHG         .77       .93      1.02      1.05      1.06      1.07      1.07      1.08      1.09      1.10
 125.00    DISCHG        1.11      1.12      1.13      1.14      1.14      1.15      1.16      1.17      1.18      1.19
1
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 130.00    DISCHG        1.19      1.20      1.21      1.22      1.23      1.05       .95       .94       .94       .94
 135.00    DISCHG         .95       .95       .96       .96       .97       .97       .97       .98       .98       .99
 140.00    DISCHG         .99      1.00      1.00      1.00      1.01      1.01      1.02      1.02      1.03      1.23
 145.00    DISCHG        1.36      1.38      1.39      1.40      1.41      1.41      1.42      1.43      1.43      1.44

  RUNOFF VOLUME ABOVE BASEFLOW =   .21 WATERSHED INCHES,     56.51 CFS-HRS,     4.67 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION 101, ALTERNATE 74, STORM  1, ADDED TO OUTPUT HYDROGRAPH FILE ---

EXECUTIVE CONTROL OPERATION ENDCMP                                                                                RECORD ID
+                                   COMPUTATIONS COMPLETED FOR PASS  11
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 EXECUTIVE CONTROL OPERATION INCREM                                                                                    RECORD ID   Output
+                                     MAIN TIME INCREMENT =   .05 HOURS


 EXECUTIVE CONTROL OPERATION COMPUT                                                                                    RECORD ID  2yr, 1h
+                                     FROM XSECTION  10
+                                                                  TO XSECTION 101
         STARTING TIME =   .00    RAIN DEPTH =  1.18    RAIN DURATION=  1.00    RAIN TABLE NO.= 6    ANT. MOIST. COND= 2
         ALTERNATE NO.= 1         STORM NO.= 2    MAIN TIME INCREMENT =   .05 HOURS


 OPERATION RUNOFF   CROSS SECTION  10

            PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
                 .91                          28.82                         (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .25 SQ.MI.
     .00    DISCHG         .00       .00       .00       .01       .15       .58      1.46      2.96      5.22      8.22
     .50    DISCHG       11.72     15.40     18.96     22.13     24.73     26.66     27.94     28.62     28.82     28.70
    1.00    DISCHG       28.38     27.85     26.99     25.87     24.46     22.66     20.54     18.21     15.84     13.52
    1.50    DISCHG       11.38      9.48      7.79      6.37      5.23      4.31      3.55      2.93      2.41      1.98
    2.00    DISCHG        1.64      1.35      1.11       .91       .75       .61       .49       .39       .32       .25
    2.50    DISCHG         .20       .16       .12       .10       .07       .05       .04       .02       .02       .01
    3.00    DISCHG         .00

   RUNOFF VOLUME ABOVE BASEFLOW =   .17 WATERSHED INCHES,     27.03 CFS-HRS,     2.23 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION  10, ALTERNATE  1, STORM  2, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION RUNOFF   CROSS SECTION  11

            PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
                1.01                          11.69                         (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .17 SQ.MI.
     .00    DISCHG         .00       .00       .00       .00       .00       .05       .19       .52      1.10      1.99
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  12
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                     PAGE  26


     .50    DISCHG        3.19      4.58      6.04      7.43      8.66      9.66     10.43     10.98     11.35     11.58
    1.00    DISCHG       11.68     11.65     11.44     11.07     10.49      9.70      8.72      7.64      6.54      5.50
    1.50    DISCHG        4.55      3.71      3.00      2.42      1.97      1.60      1.31      1.06       .86       .70
    2.00    DISCHG         .57       .46       .38       .30       .24       .19       .15       .12       .10       .07
    2.50    DISCHG         .06       .04       .03       .02       .02       .01       .01       .00

   RUNOFF VOLUME ABOVE BASEFLOW =   .10 WATERSHED INCHES,     10.31 CFS-HRS,      .85 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION  11, ALTERNATE  1, STORM  2, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION ADDHYD   CROSS SECTION 101

            PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
                 .94                          40.28                         (NULL)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .42 SQ.MI.
     .00    DISCHG         .00       .00       .00       .01       .15       .62      1.65      3.48      6.32     10.21
     .50    DISCHG       14.91     19.99     25.00     29.57     33.39     36.32     38.37     39.60     40.17     40.27
    1.00    DISCHG       40.06     39.50     38.44     36.93     34.95     32.36     29.25     25.85     22.38     19.01
    1.50    DISCHG       15.93     13.19     10.79      8.80      7.20      5.91      4.86      3.99      3.28      2.69
    2.00    DISCHG        2.21      1.81      1.48      1.21       .99       .80       .64       .52       .41       .33
    2.50    DISCHG         .26       .20       .16       .12       .09       .06       .04       .02       .02       .01
    3.00    DISCHG         .00

   RUNOFF VOLUME ABOVE BASEFLOW =   .14 WATERSHED INCHES,     37.34 CFS-HRS,     3.09 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION 101, ALTERNATE  1, STORM  2, ADDED TO OUTPUT HYDROGRAPH FILE ---

 EXECUTIVE CONTROL OPERATION ENDCMP                                                                                    RECORD ID
+                                     COMPUTATIONS COMPLETED FOR PASS  12



 EXECUTIVE CONTROL OPERATION COMPUT                                                                                    RECORD ID  2yr, 2
+                                     FROM XSECTION  10
+                                                                  TO XSECTION 101
         STARTING TIME =   .00    RAIN DEPTH =  1.46    RAIN DURATION=  2.00    RAIN TABLE NO.= 6    ANT. MOIST. COND= 2
         ALTERNATE NO.= 2         STORM NO.= 2    MAIN TIME INCREMENT =   .05 HOURS


 OPERATION RUNOFF   CROSS SECTION  10

            PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
                1.10                          33.77                         (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .25 SQ.MI.
     .00    DISCHG         .00       .00       .00       .00       .00       .05       .24       .69      1.54      2.95
     .50    DISCHG        5.03      7.75     11.01     14.60     18.31     21.88     25.12     27.91     30.14     31.81
    1.00    DISCHG       32.93     33.58     33.77     33.54     32.96     32.08     30.98     29.79     28.60     27.45
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  13
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1.50	DISCHG	26.42	25.53	24.81	24.25	23.84	23.50	23.16	22.76	22.24	21.60
2.00	DISCHG	20.89	20.12	19.30	18.45	17.48	16.25	14.80	13.23	11.61	10.02
2.50	DISCHG	8.51	7.09	5.81	4.73	3.87	3.18	2.61	2.15	1.76	1.44
3.00	DISCHG	1.18	.97	.79	.65	.53	.43	.35	.29	.23	.19
3.50	DISCHG	.15	.12	.09	.07	.05	.04	.03	.02	.01	.01
4.00	DISCHG	.00									

RUNOFF VOLUME ABOVE BASEFLOW = .29 WATERSHED INCHES, 48.12 CFS-HRS, 3.98 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 10, ALTERNATE 2, STORM 2, ADDED TO OUTPUT HYDROGRAPH FILE ---

OPERATION RUNOFF CROSS SECTION 11

PEAK TIME(HRS) 1.15 PEAK DISCHARGE(CFS) 14.53 PEAK ELEVATION(FEET) (RUNOFF)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .05 HOURS DRAINAGE AREA = .17 SQ.MI.

.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.04	.16	.43
.50	DISCHG	.94	1.75	2.86	4.25	5.81	7.42	8.98	10.42	11.68	12.71
1.00	DISCHG	13.51	14.07	14.41	14.53	14.45	14.20	13.82	13.40	12.96	12.54
1.50	DISCHG	12.19	11.90	11.70	11.56	11.49	11.42	11.34	11.20	10.97	10.67
2.00	DISCHG	10.32	9.94	9.55	9.13	8.62	7.97	7.19	6.35	5.49	4.66
2.50	DISCHG	3.86	3.14	2.52	2.03	1.65	1.34	1.09	.88	.71	.58
3.00	DISCHG	.47	.38	.30	.24	.20	.16	.13	.10	.08	.06
3.50	DISCHG	.05	.04	.03	.02	.01	.01	.01	.00		

RUNOFF VOLUME ABOVE BASEFLOW = .19 WATERSHED INCHES, 20.95 CFS-HRS, 1.73 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 11, ALTERNATE 2, STORM 2, ADDED TO OUTPUT HYDROGRAPH FILE ---

OPERATION ADDHYD CROSS SECTION 101

PEAK TIME(HRS) 1.12 PEAK DISCHARGE(CFS) 48.21 PEAK ELEVATION(FEET) (NULL)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .05 HOURS DRAINAGE AREA = .42 SQ.MI.

.00	DISCHG	.00	.00	.00	.00	.00	.05	.24	.73	1.70	3.38
.50	DISCHG	5.97	9.50	13.87	18.85	24.12	29.30	34.11	38.33	41.83	44.52
1.00	DISCHG	46.44	47.65	48.18	48.07	47.41	46.27	44.81	43.19	41.56	40.00
1.50	DISCHG	38.60	37.43	36.50	35.82	35.33	34.93	34.50	33.96	33.21	32.27
2.00	DISCHG	31.21	30.06	28.85	27.58	26.10	24.22	22.00	19.58	17.11	14.67
2.50	DISCHG	12.37	10.23	8.33	6.76	5.52	4.52	3.70	3.03	2.47	2.02
3.00	DISCHG	1.65	1.35	1.10	.89	.72	.59	.48	.38	.31	.25
3.50	DISCHG	.19	.15	.12	.09	.07	.05	.04	.02	.01	.01
4.00	DISCHG	.00									

RUNOFF VOLUME ABOVE BASEFLOW = .25 WATERSHED INCHES, 69.07 CFS-HRS, 5.71 ACRE-FEET; BASEFLOW = .00 CFS
1

--- HYDROGRAPH FOR XSECTION 101, ALTERNATE 2, STORM 2, ADDED TO OUTPUT HYDROGRAPH FILE ---

EXECUTIVE CONTROL OPERATION ENDCMP RECORD ID
+ COMPUTATIONS COMPLETED FOR PASS 13

EXECUTIVE CONTROL OPERATION COMPUT RECORD ID 2yr, 3h
+ FROM XSECTION 10
+ TO XSECTION 101
STARTING TIME = .00 RAIN DEPTH = 1.61 RAIN DURATION= 3.00 RAIN TABLE NO.= 6 ANT. MOIST. COND= 2
ALTERNATE NO.= 3 STORM NO.= 2 MAIN TIME INCREMENT = .05 HOURS

OPERATION RUNOFF CROSS SECTION 10

PEAK TIME(HRS) 1.30 PEAK DISCHARGE(CFS) 31.95 PEAK ELEVATION(FEET) (RUNOFF)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .05 HOURS DRAINAGE AREA = .25 SQ.MI.

.00	DISCHG	.00	.00	.00	.00	.00	.00	.03	.13	.38	.88
.50	DISCHG	1.73	3.03	4.81	7.05	9.67	12.58	15.65	18.71	21.65	24.32
1.00	DISCHG	26.59	28.45	29.87	30.87	31.52	31.86	31.95	31.85	31.63	31.33
1.50	DISCHG	30.95	30.47	29.85	29.07	28.14	27.10	25.96	24.78	23.63	22.56
2.00	DISCHG	21.59	20.78	20.10	19.56	19.15	18.83	18.59	18.41	18.28	18.19
2.50	DISCHG	18.13	18.10	18.04	17.94	17.74	17.41	16.92	16.30	15.62	14.98
3.00	DISCHG	14.43	13.99	13.64	13.32	12.90	12.25	11.37	10.31	9.14	7.93
3.50	DISCHG	6.74	5.61	4.60	3.75	3.07	2.53	2.08	1.71	1.41	1.15
4.00	DISCHG	.95	.78	.63	.52	.42	.34	.28	.23	.18	.15
4.50	DISCHG	.12	.09	.07	.06	.05	.04	.03	.02	.01	.01
5.00	DISCHG	.00									

RUNOFF VOLUME ABOVE BASEFLOW = .37 WATERSHED INCHES, 61.03 CFS-HRS, 5.04 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 10, ALTERNATE 3, STORM 2, ADDED TO OUTPUT HYDROGRAPH FILE ---

OPERATION RUNOFF CROSS SECTION 11

PEAK TIME(HRS) 1.46 PEAK DISCHARGE(CFS) 14.27 PEAK ELEVATION(FEET) (RUNOFF)
2.59 9.35 (RUNOFF)

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 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .17 SQ.MI.
    .00    DISCHG         .00       .00       .00       .00       .00       .00       .00       .00       .01       .04
    .50    DISCHG         .15       .37       .77      1.39      2.25      3.34      4.62      6.00      7.43      8.81
   1.00    DISCHG       10.06     11.16     12.07     12.79     13.33     13.71     13.97     14.13     14.23     14.27
   1.50    DISCHG       14.26     14.17     13.98     13.70     13.32     12.86     12.35     11.81     11.30     10.83
   2.00    DISCHG       10.43     10.10      9.85      9.66      9.52      9.42      9.36      9.32      9.30      9.30
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  14
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                     PAGE  29


   2.50    DISCHG        9.32      9.34      9.35      9.32      9.23      9.05      8.77      8.41      8.02      7.67
   3.00    DISCHG        7.39      7.21      7.08      6.95      6.74      6.37      5.84      5.21      4.54      3.85
   3.50    DISCHG        3.19      2.58      2.07      1.67      1.36      1.11       .90       .73       .59       .48
   4.00    DISCHG         .39       .31       .25       .20       .16       .13       .10       .08       .06       .05
   4.50    DISCHG         .04       .03       .02       .02       .01       .01       .00

  RUNOFF VOLUME ABOVE BASEFLOW =   .26 WATERSHED INCHES,     27.80 CFS-HRS,     2.30 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION  11, ALTERNATE  3, STORM  2, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION ADDHYD   CROSS SECTION 101

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               1.34                          45.98                        (NULL)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .42 SQ.MI.
    .00    DISCHG         .00       .00       .00       .00       .00       .00       .03       .13       .39       .92
    .50    DISCHG        1.88      3.40      5.58      8.43     11.92     15.93     20.27     24.72     29.08     33.12
   1.00    DISCHG       36.66     39.61     41.94     43.66     44.85     45.58     45.92     45.97     45.85     45.60
   1.50    DISCHG       45.20     44.64     43.83     42.77     41.47     39.96     38.31     36.60     34.93     33.39
   2.00    DISCHG       32.03     30.88     29.94     29.22     28.67     28.25     27.95     27.73     27.58     27.49
   2.50    DISCHG       27.45     27.44     27.39     27.26     26.97     26.46     25.69     24.71     23.64     22.64
   3.00    DISCHG       21.82     21.20     20.72     20.27     19.64     18.61     17.21     15.52     13.68     11.78
   3.50    DISCHG        9.93      8.19      6.67      5.42      4.43      3.63      2.98      2.44      2.00      1.63
   4.00    DISCHG        1.33      1.09       .88       .72       .58       .47       .38       .31       .25       .20
   4.50    DISCHG         .16       .12       .10       .08       .06       .05       .03       .02       .01       .01
   5.00    DISCHG         .00

  RUNOFF VOLUME ABOVE BASEFLOW =   .33 WATERSHED INCHES,     88.83 CFS-HRS,     7.34 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION 101, ALTERNATE  3, STORM  2, ADDED TO OUTPUT HYDROGRAPH FILE ---


 EXECUTIVE CONTROL OPERATION ENDCMP                                                                                  RECORD ID
+                                   COMPUTATIONS COMPLETED FOR PASS  14



 EXECUTIVE CONTROL OPERATION COMPUT                                                                                  RECORD ID  2yr, 6h
+                                   FROM XSECTION  10
+                                                 TO XSECTION 101
        STARTING TIME =   .00    RAIN DEPTH =  1.89    RAIN DURATION=  6.00    RAIN TABLE NO.= 6    ANT. MOIST. COND= 2
        ALTERNATE NO.= 6         STORM NO.= 2    MAIN TIME INCREMENT =   .05 HOURS


 OPERATION RUNOFF   CROSS SECTION  10
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  15
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                     PAGE  30


           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               1.84                          26.96                        (RUNOFF)
               5.13                          11.98                        (RUNOFF)
               6.17                           8.98                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .25 SQ.MI.
    .50    DISCHG         .02       .10       .29       .66      1.25      2.12      3.26      4.62      6.14      7.77
   1.00    DISCHG        9.46     11.18     12.88     14.51     16.06     17.53     18.92     20.24     21.47     22.59
   1.50    DISCHG       23.61     24.52     25.32     25.97     26.46     26.78     26.93     26.96     26.88     26.73
   2.00    DISCHG       26.50     26.22     25.90     25.56     25.22     24.86     24.47     24.04     23.57     23.11
   2.50    DISCHG       22.68     22.28     21.94     21.64     21.40     21.21     21.03     20.85     20.61     20.31
   3.00    DISCHG       19.95     19.52     19.03     18.49     17.89     17.23     16.54     15.84     15.18     14.56
   3.50    DISCHG       14.00     13.51     13.09     12.74     12.47     12.25     12.08     11.95     11.84     11.76
   4.00    DISCHG       11.70     11.66     11.62     11.61     11.60     11.59     11.60     11.61     11.62     11.63
   4.50    DISCHG       11.65     11.67     11.70     11.72     11.75     11.77     11.80     11.83     11.86     11.88
   5.00    DISCHG       11.91     11.94     11.97     11.97     11.93     11.81     11.60     11.27     10.84     10.34
   5.50    DISCHG        9.82      9.30      8.81      8.37      7.98      7.69      7.51      7.45      7.53      7.75
   6.00    DISCHG        8.08      8.45      8.77      8.96      8.94      8.66      8.12      7.39      6.53      5.64
   6.50    DISCHG        4.77      3.97      3.25      2.66      2.18      1.79      1.48      1.22      1.00       .82
   7.00    DISCHG         .67       .55       .45       .37       .30       .25       .20       .17       .14       .11
   7.50    DISCHG         .09       .07       .06       .05       .04       .03       .02       .01       .01       .00

  RUNOFF VOLUME ABOVE BASEFLOW =   .54 WATERSHED INCHES,     87.62 CFS-HRS,     7.24 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION  10, ALTERNATE  6, STORM  2, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION RUNOFF   CROSS SECTION  11

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               1.96                          12.43                        (RUNOFF)
               5.13                           6.56                        (RUNOFF)
               6.16                           5.07                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .17 SQ.MI.
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     .50    DISCHG         .00       .00       .00       .02       .06       .15       .31       .57       .94      1.44
    1.00    DISCHG        2.04      2.73      3.48      4.29      5.11      5.94      6.76      7.55      8.31      9.02
    1.50    DISCHG        9.69     10.30     10.85     11.33     11.71     11.99     12.19     12.32     12.39     12.42
    2.00    DISCHG       12.41     12.37     12.30     12.23     12.14     12.04     11.90     11.74     11.57     11.39
    2.50    DISCHG       11.22     11.08     10.96     10.86     10.80     10.77     10.73     10.67     10.58     10.43
    3.00    DISCHG       10.25     10.03      9.78      9.50      9.19      8.84      8.48      8.12      7.78      7.47
    3.50    DISCHG        7.20      6.96      6.77      6.62      6.51      6.42      6.35      6.30      6.27      6.24
    4.00    DISCHG        6.23      6.22      6.21      6.22      6.22      6.23      6.24      6.26      6.27      6.29
    4.50    DISCHG        6.31      6.33      6.35      6.37      6.39      6.41      6.43      6.45      6.47      6.49
    5.00    DISCHG        6.52      6.54      6.56      6.56      6.53      6.46      6.32      6.11      5.85      5.55
    5.50    DISCHG        5.25      4.95      4.68      4.44      4.24      4.10      4.03      4.02      4.10      4.28
    6.00    DISCHG        4.52      4.77      4.97      5.07      5.02      4.79      4.41      3.93      3.39      2.86
    6.50    DISCHG        2.36      1.91      1.54      1.24      1.01       .82       .67       .54       .44       .35
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  15
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                PAGE  31


    7.00    DISCHG         .29       .23       .19       .15       .12       .10       .08       .06       .05       .04
    7.50    DISCHG         .03       .03       .02       .01       .01       .01       .00

   RUNOFF VOLUME ABOVE BASEFLOW =   .39 WATERSHED INCHES,     42.33 CFS-HRS,     3.50 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION  11, ALTERNATE  6, STORM  2, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION ADDHYD   CROSS SECTION 101

            PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
                1.88                          39.29                          (NULL)
                5.13                          18.54                          (NULL)
                6.17                          14.04                          (NULL)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .42 SQ.MI.
     .50    DISCHG         .02       .10       .29       .67      1.31      2.26      3.57      5.19      7.08      9.20
    1.00    DISCHG       11.50     13.91     16.37     18.80     21.17     23.47     25.68     27.79     29.78     31.61
    1.50    DISCHG       33.30     34.83     36.17     37.30     38.17     38.77     39.12     39.28     39.28     39.15
    2.00    DISCHG       38.92     38.59     38.20     37.78     37.36     36.90     36.38     35.78     35.14     34.50
    2.50    DISCHG       33.90     33.36     32.89     32.51     32.21     31.97     31.76     31.52     31.19     30.75
    3.00    DISCHG       30.20     29.55     28.81     27.99     27.09     26.08     25.01     23.96     22.96     22.03
    3.50    DISCHG       21.20     20.47     19.85     19.36     18.97     18.67     18.44     18.25     18.11     18.00
    4.00    DISCHG       17.93     17.87     17.84     17.82     17.82     17.83     17.84     17.86     17.89     17.93
    4.50    DISCHG       17.96     18.00     18.04     18.09     18.13     18.18     18.23     18.28     18.33     18.38
    5.00    DISCHG       18.43     18.48     18.53     18.53     18.46     18.27     17.92     17.38     16.68     15.90
    5.50    DISCHG       15.07     14.26     13.49     12.81     12.22     11.79     11.53     11.47     11.63     12.02
    6.00    DISCHG       12.59     13.21     13.73     14.03     13.96     13.45     12.54     11.31      9.93      8.50
    6.50    DISCHG        7.13      5.88      4.79      3.90      3.19      2.61      2.14      1.76      1.44      1.17
    7.00    DISCHG         .96       .78       .64       .52       .43       .35       .28       .23       .19       .15
    7.50    DISCHG         .12       .10       .08       .06       .05       .03       .02       .01       .01       .00

   RUNOFF VOLUME ABOVE BASEFLOW =   .48 WATERSHED INCHES,    129.96 CFS-HRS,    10.74 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION 101, ALTERNATE  6, STORM  2, ADDED TO OUTPUT HYDROGRAPH FILE ---


 EXECUTIVE CONTROL OPERATION ENDCMP                                                                                  RECORD ID
+                                   COMPUTATIONS COMPLETED FOR PASS  15



 EXECUTIVE CONTROL OPERATION INCREM                                                                                  RECORD ID
+                                   MAIN TIME INCREMENT =   .20 HOURS


 EXECUTIVE CONTROL OPERATION COMPUT                                                                                  RECORD ID  2yr, 12
+                                   FROM XSECTION  10
+                                                 TO XSECTION 101
         STARTING TIME =   .00    RAIN DEPTH =  2.19    RAIN DURATION= 12.00    RAIN TABLE NO.= 7    ANT. MOIST. COND= 2
         ALTERNATE NO.=12         STORM NO.= 2    MAIN TIME INCREMENT =   .20 HOURS
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  16
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                PAGE  32


 OPERATION RUNOFF   CROSS SECTION  10

            PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
                5.59                          27.50                         (RUNOFF)
               10.70                           7.79                         (RUNOFF)
               12.07                           6.93                         (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .20 HOURS      DRAINAGE AREA =    .25 SQ.MI.
    2.00    DISCHG         .00       .00       .00       .00       .00       .00       .12       .70      1.79      3.44
    4.00    DISCHG        5.95      8.87     11.99     15.78     19.62     22.73     24.88     26.61     27.50     26.45
    6.00    DISCHG       25.14     24.19     22.46     20.91     19.97     18.84     17.93     17.25     16.12     15.13
    8.00    DISCHG       14.35     13.09     11.97     11.47     11.27     11.22     10.85      9.72      8.63      8.08
   10.00    DISCHG        7.84      7.76      7.73      7.74      7.74      7.39      6.19      5.04      4.82      5.79
   12.00    DISCHG        6.86      6.65      4.43      2.14       .98       .45       .20       .09       .04       .01
   14.00    DISCHG         .00

   RUNOFF VOLUME ABOVE BASEFLOW =   .73 WATERSHED INCHES,    119.00 CFS-HRS,     9.83 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION  10, ALTERNATE 12, STORM  2, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION RUNOFF   CROSS SECTION  11
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            PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
                5.63                          13.68                        (RUNOFF)
               10.71                           4.41                        (RUNOFF)
               12.05                           4.01                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .20 HOURS      DRAINAGE AREA =    .17 SQ.MI.
    2.00    DISCHG         .00       .00       .00       .00       .00       .00       .00       .00       .02       .27
    4.00    DISCHG        1.11      2.45      4.11      6.21      8.41     10.29     11.71     12.93     13.67     13.26
    6.00    DISCHG       12.81     12.51     11.65     10.97     10.60     10.03      9.63      9.33      8.72      8.23
    8.00    DISCHG        7.83      7.12      6.56      6.33      6.26      6.25      6.05      5.36      4.76      4.50
   10.00    DISCHG        4.39      4.36      4.36      4.38      4.39      4.15      3.41      2.76      2.73      3.38
   12.00    DISCHG        3.98      3.77      2.35      1.06       .46       .20       .09       .03       .01       .00

   RUNOFF VOLUME ABOVE BASEFLOW =   .55 WATERSHED INCHES,     60.04 CFS-HRS,     4.96 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION  11, ALTERNATE 12, STORM  2, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION ADDHYD   CROSS SECTION 101

            PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
                5.61                          41.17                        (NULL)
               10.71                          12.20                        (NULL)
               12.06                          10.94                        (NULL)
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  16
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                     PAGE  33


 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .20 HOURS      DRAINAGE AREA =    .42 SQ.MI.
    2.00    DISCHG         .00       .00       .00       .00       .00       .00       .12       .70      1.81      3.71
    4.00    DISCHG        7.06     11.32     16.10     21.99     28.03     33.02     36.59     39.54     41.17     39.71
    6.00    DISCHG       37.95     36.70     34.11     31.88     30.56     28.87     27.56     26.58     24.84     23.36
    8.00    DISCHG       22.18     20.21     18.53     17.79     17.53     17.47     16.90     15.08     13.38     12.57
   10.00    DISCHG       12.24     12.12     12.10     12.11     12.13     11.54      9.60      7.81      7.55      9.17
   12.00    DISCHG       10.84     10.42      6.78      3.19      1.45       .65       .29       .13       .05       .01
   14.00    DISCHG         .00

   RUNOFF VOLUME ABOVE BASEFLOW =   .66 WATERSHED INCHES,    179.04 CFS-HRS,    14.80 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION 101, ALTERNATE 12, STORM  2, ADDED TO OUTPUT HYDROGRAPH FILE ---


 EXECUTIVE CONTROL OPERATION ENDCMP                                                                                  RECORD ID
+                                       COMPUTATIONS COMPLETED FOR PASS  16



 EXECUTIVE CONTROL OPERATION COMPUT                                                                                  RECORD ID  2yr, 18
+                                       FROM XSECTION  10
+                                                          TO XSECTION 101
         STARTING TIME =   .00    RAIN DEPTH =  2.37    RAIN DURATION= 18.00    RAIN TABLE NO.= 8    ANT. MOIST. COND= 2
         ALTERNATE NO.=18         STORM NO.= 2    MAIN TIME INCREMENT =   .20 HOURS


 OPERATION RUNOFF   CROSS SECTION  10

            PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               11.80                          28.83                        (RUNOFF)
               16.11                           8.68                        (RUNOFF)
               17.96                           8.64                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .20 HOURS      DRAINAGE AREA =    .25 SQ.MI.
    4.00    DISCHG         .00       .00       .00       .00       .00       .00       .00       .00       .00       .01
    6.00    DISCHG         .10       .28       .52       .79      1.06      1.34      1.61      1.93      2.40      2.89
    8.00    DISCHG        3.33      3.75      4.33      5.04      5.69      6.23      6.84      7.71      8.59      9.30
   10.00    DISCHG       10.10     12.45     15.98     18.85     20.82     22.56     24.52     26.36     27.86     28.83
   12.00    DISCHG       27.83     25.41     23.83     23.32     22.53     20.20     17.99     16.96     16.42     15.15
   14.00    DISCHG       13.31     12.08     11.56     11.08     10.14      9.29      8.86      8.69      8.63      8.62
   16.00    DISCHG        8.64      8.66      8.40      7.51      6.65      6.22      6.12      6.66      7.63      8.32
   18.00    DISCHG        8.61      7.87      5.18      2.54      1.15       .53       .24       .10       .04       .01
   20.00    DISCHG         .00

   RUNOFF VOLUME ABOVE BASEFLOW =   .85 WATERSHED INCHES,    139.02 CFS-HRS,    11.49 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION  10, ALTERNATE 18, STORM  2, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION RUNOFF   CROSS SECTION  11
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  17
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                     PAGE  34


            PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               11.81                          15.37                        (RUNOFF)
               16.12                           4.97                        (RUNOFF)
               17.95                           5.03                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .20 HOURS      DRAINAGE AREA =    .17 SQ.MI.
    6.00    DISCHG         .00       .00       .00       .00       .00       .01       .05       .16       .35       .56
    8.00    DISCHG         .79      1.02      1.33      1.69      2.02      2.34      2.69      3.17      3.65      4.06
   10.00    DISCHG        4.53      5.84      7.72      9.22     10.34     11.39     12.60     13.74     14.68     15.37
   12.00    DISCHG       14.79     13.50     12.83     12.70     12.30     10.97      9.82      9.36      9.13      8.37
   14.00    DISCHG        7.32      6.72      6.48      6.22      5.66      5.20      5.00      4.93      4.91      4.92
   16.00    DISCHG        4.94      4.96      4.79      4.23      3.75      3.53      3.50      3.88      4.48      4.85
   18.00    DISCHG        5.01      4.50      2.76      1.25       .54       .23       .10       .04       .01       .00
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  RUNOFF VOLUME ABOVE BASEFLOW =   .66 WATERSHED INCHES,     71.56 CFS-HRS,     5.91 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION  11, ALTERNATE 18, STORM  2, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION ADDHYD   CROSS SECTION 101

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
              11.80                          44.20                        (NULL)
              16.12                          13.66                        (NULL)
              17.95                          13.67                        (NULL)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .20 HOURS      DRAINAGE AREA =    .42 SQ.MI.
    4.00    DISCHG         .00       .00       .00       .00       .00       .00       .00       .00       .00       .01
    6.00    DISCHG         .10       .28       .52       .79      1.06      1.34      1.66      2.09      2.74      3.46
    8.00    DISCHG        4.12      4.78      5.65      6.73      7.71      8.56      9.53     10.88     12.24     13.36
   10.00    DISCHG       14.63     18.29     23.70     28.07     31.16     33.95     37.11     40.10     42.54     44.20
   12.00    DISCHG       42.62     38.90     36.66     36.02     34.83     31.17     27.81     26.32     25.55     23.52
   14.00    DISCHG       20.62     18.80     18.04     17.30     15.80     14.49     13.86     13.62     13.55     13.55
   16.00    DISCHG       13.58     13.62     13.19     11.75     10.40      9.76      9.62     10.55     12.11     13.17
   18.00    DISCHG       13.62     12.37      7.95      3.79      1.69       .76       .34       .14       .06       .01
   20.00    DISCHG         .00

  RUNOFF VOLUME ABOVE BASEFLOW =   .77 WATERSHED INCHES,    210.58 CFS-HRS,    17.40 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION 101, ALTERNATE 18, STORM  2, ADDED TO OUTPUT HYDROGRAPH FILE ---


 EXECUTIVE CONTROL OPERATION ENDCMP                                                                                  RECORD ID
+                                   COMPUTATIONS COMPLETED FOR PASS  17


1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                        JOB  1   PASS  18
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                PAGE  35



 EXECUTIVE CONTROL OPERATION COMPUT                                                                                  RECORD ID  2yr, 24
+                                   FROM XSECTION  10
+                                                                   TO XSECTION 101
         STARTING TIME =   .00    RAIN DEPTH =  2.52    RAIN DURATION= 24.00    RAIN TABLE NO.= 8    ANT. MOIST. COND= 2
         ALTERNATE NO.=24         STORM NO.= 2    MAIN TIME INCREMENT =   .20 HOURS


 OPERATION RUNOFF   CROSS SECTION  10

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
              15.66                          24.56                       (RUNOFF)
              21.51                           7.16                       (RUNOFF)
              23.92                           7.29                       (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .20 HOURS      DRAINAGE AREA =    .25 SQ.MI.
    6.00    DISCHG         .00       .00       .00       .00       .00       .00       .00       .03       .11       .25
    8.00    DISCHG         .42       .59       .77       .94      1.12      1.29      1.46      1.62      1.78      2.00
   10.00    DISCHG        2.34      2.71      3.00      3.26      3.50      3.80      4.29      4.79      5.19      5.52
   12.00    DISCHG        5.81      6.20      6.82      7.45      7.93      8.32      8.68      9.69     12.22     14.84
   14.00    DISCHG       16.57     17.76     18.68     19.63     20.89     22.11     23.07     23.85     24.52     24.36
   16.00    DISCHG       22.38     20.36     19.44     19.15     19.14     18.61     16.71     14.86     13.98     13.62
   18.00    DISCHG       13.50     13.04     11.67     10.36      9.69      9.41      9.29      9.04      8.32      7.63
   20.00    DISCHG        7.28      7.14      7.09      7.07      7.08      7.09      7.10      7.12      7.14      6.91
   22.00    DISCHG        6.18      5.48      5.11      4.95      4.89      5.11      5.85      6.58      6.97      7.16
   24.00    DISCHG        7.23      6.57      4.30      2.09       .95       .44       .19       .09       .03       .01
   26.00    DISCHG         .00

  RUNOFF VOLUME ABOVE BASEFLOW =   .96 WATERSHED INCHES,    156.33 CFS-HRS,    12.92 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION  10, ALTERNATE 24, STORM  2, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION RUNOFF   CROSS SECTION  11

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
              15.67                          13.29                       (RUNOFF)
              16.73                          10.65                       (RUNOFF)
              21.51                           4.14                       (RUNOFF)
              23.92                           4.28                       (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .20 HOURS      DRAINAGE AREA =    .17 SQ.MI.
    8.00    DISCHG         .00       .00       .00       .00       .00       .03       .09       .17       .26       .37
   10.00    DISCHG         .53       .69       .84       .98      1.12      1.30      1.54      1.79      2.01      2.20
   12.00    DISCHG        2.38      2.61      2.95      3.29      3.56      3.79      4.02      4.61      6.00      7.36
   14.00    DISCHG        8.28      8.95      9.52     10.13     10.92     11.68     12.28     12.80     13.25     13.19
   16.00    DISCHG       12.05     11.01     10.64     10.57     10.63     10.33      9.20      8.22      7.80      7.66
   18.00    DISCHG        7.63      7.36      6.51      5.78      5.46      5.34      5.30      5.15      4.70      4.32
   20.00    DISCHG        4.15      4.09      4.07      4.07      4.08      4.09      4.10      4.12      4.13      3.98
   22.00    DISCHG        3.52      3.12      2.93      2.86      2.83      2.98      3.47      3.89      4.10      4.19
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                        JOB  1   PASS  18
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                PAGE  36


   24.00    DISCHG        4.24      3.77      2.31      1.04       .45       .19       .08       .03       .01       .00

  RUNOFF VOLUME ABOVE BASEFLOW =   .75 WATERSHED INCHES,     81.62 CFS-HRS,     6.74 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION  11, ALTERNATE 24, STORM  2, ADDED TO OUTPUT HYDROGRAPH FILE ---
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```
 OPERATION ADDHYD   CROSS SECTION 101

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
              15.67                          37.85                        (NULL)
              16.71                          29.85                        (NULL)
              21.51                          11.30                        (NULL)
              23.92                          11.58                        (NULL)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .20 HOURS      DRAINAGE AREA =    .42 SQ.MI.
    6.00    DISCHG         .00       .00       .00       .00       .00       .00       .00       .03       .11       .25
    8.00    DISCHG         .42       .59       .77       .94      1.12      1.32      1.55      1.79      2.05      2.37
   10.00    DISCHG        2.87      3.39      3.84      4.24      4.62      5.10      5.83      6.58      7.19      7.71
   12.00    DISCHG        8.19      8.81      9.77     10.74     11.49     12.11     12.69     14.30     18.23     22.20
   14.00    DISCHG       24.84     26.71     28.20     29.76     31.82     33.79     35.35     36.65     37.77     37.55
   16.00    DISCHG       34.43     31.37     30.08     29.72     29.76     28.94     25.91     23.08     21.78     21.28
   18.00    DISCHG       21.13     20.39     18.18     16.14     15.15     14.75     14.59     14.18     13.02     11.95
   20.00    DISCHG       11.44     11.23     11.16     11.14     11.15     11.18     11.21     11.24     11.26     10.90
   22.00    DISCHG        9.70      8.59      8.05      7.81      7.72      8.09      9.32     10.47     11.07     11.35
   24.00    DISCHG       11.47     10.34      6.61      3.12      1.40       .63       .27       .12       .05       .01
   26.00    DISCHG         .00

   RUNOFF VOLUME ABOVE BASEFLOW =   .87 WATERSHED INCHES,    237.95 CFS-HRS,    19.66 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION 101, ALTERNATE 24, STORM  2, ADDED TO OUTPUT HYDROGRAPH FILE ---


 EXECUTIVE CONTROL OPERATION ENDCMP                                                                                    RECORD ID
+                                     COMPUTATIONS COMPLETED FOR PASS  18



 EXECUTIVE CONTROL OPERATION INCREM                                                                                    RECORD ID
+                                     MAIN TIME INCREMENT =   .50 HOURS


 EXECUTIVE CONTROL OPERATION COMPUT                                                                                    RECORD ID  2yr, 48
+                                     FROM XSECTION  10
+                                                          TO XSECTION 101
         STARTING TIME =   .00    RAIN DEPTH =  2.77    RAIN DURATION= 48.00    RAIN TABLE NO.= 9    ANT. MOIST. COND= 2
         ALTERNATE NO.=48         STORM NO.= 2    MAIN TIME INCREMENT =   .50 HOURS


 OPERATION RUNOFF   CROSS SECTION  10
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  19
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                PAGE  37


 *** WARNING-MAIN TIME INCREMENT MAY BE TOO LARGE.
          COMPUTED PEAK(     11.91) AT              EXCEEDS MAX. ADJACENT HYDROGRAPH COORDINATE BY   7 %.
+                                   XSECTION  10

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
              42.85                          15.30                        (RUNOFF)
              47.75                          11.91                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .50 HOURS      DRAINAGE AREA =    .25 SQ.MI.
   15.00    DISCHG         .00       .01       .06       .14       .22       .30       .37       .45       .52       .59
   20.00    DISCHG         .66       .73       .80       .86       .93       .99      1.05      1.11      1.17      1.48
   25.00    DISCHG        1.72      1.84      1.94      2.02      1.74      1.66      1.69      1.74      1.85      2.34
   30.00    DISCHG        2.52      2.61      2.69      3.11      4.12      4.43      4.61      4.76      4.90      5.04
   35.00    DISCHG        5.18      5.31      5.44      6.65      7.52      7.81      8.02      8.35     12.21     13.91
   40.00    DISCHG       14.51     14.92     15.18     14.66     14.75     14.99     15.24     14.23     11.12     10.64
   45.00    DISCHG       10.65     10.74     10.83     10.92     11.00     11.08     11.12      4.73       .67       .08
   50.00    DISCHG         .00

   RUNOFF VOLUME ABOVE BASEFLOW =  1.14 WATERSHED INCHES,    185.82 CFS-HRS,    15.36 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION  10, ALTERNATE 48, STORM  2, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION RUNOFF   CROSS SECTION  11

 *** WARNING-MAIN TIME INCREMENT MAY BE TOO LARGE.
          COMPUTED PEAK(      7.08) AT              EXCEEDS MAX. ADJACENT HYDROGRAPH COORDINATE BY   7 %.
+                                   XSECTION  11

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
              42.86                           8.78                        (RUNOFF)
              47.76                           7.08                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .50 HOURS      DRAINAGE AREA =    .17 SQ.MI.
   15.00    DISCHG         .00       .00       .00       .00       .00       .00       .00       .00       .00       .02
   20.00    DISCHG         .06       .10       .14       .18       .22       .26       .30       .34       .38       .51
   25.00    DISCHG         .61       .68       .74       .79       .69       .68       .71       .74       .80      1.03
   30.00    DISCHG        1.12      1.18      1.23      1.46      1.95      2.12      2.23      2.33      2.43      2.52
   35.00    DISCHG        2.62      2.71      2.80      3.50      3.95      4.12      4.27      4.48      6.73      7.63
   40.00    DISCHG        8.00      8.30      8.49      8.25      8.37      8.55      8.75      8.10      6.36      6.16
   45.00    DISCHG        6.20      6.27      6.34      6.40      6.47      6.53      6.58      2.46       .30       .03

   RUNOFF VOLUME ABOVE BASEFLOW =   .91 WATERSHED INCHES,     98.90 CFS-HRS,     8.17 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION  11, ALTERNATE 48, STORM  2, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION ADDHYD   CROSS SECTION 101
1
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 *** WARNING-MAIN TIME INCREMENT MAY BE TOO LARGE.
          COMPUTED PEAK(     18.99) AT              EXCEEDS MAX. ADJACENT HYDROGRAPH COORDINATE BY   7 %.
+                                   XSECTION 101

            PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               42.86                          24.08                        (NULL)
               47.75                          18.99                        (NULL)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .50 HOURS      DRAINAGE AREA =    .42 SQ.MI.
   15.00    DISCHG         .00       .01       .06       .14       .22       .30       .37       .45       .52       .61
   20.00    DISCHG         .72       .83       .94      1.05      1.15      1.25      1.35      1.45      1.55      1.98
   25.00    DISCHG        2.33      2.52      2.68      2.81      2.43      2.34      2.40      2.48      2.65      3.37
   30.00    DISCHG        3.64      3.79      3.92      4.57      6.07      6.54      6.83      7.09      7.33      7.57
   35.00    DISCHG        7.79      8.02      8.24     10.15     11.46     11.94     12.29     12.83     18.94     21.53
   40.00    DISCHG       22.51     23.22     23.67     22.90     23.12     23.55     23.99     22.33     17.47     16.80
   45.00    DISCHG       16.85     17.01     17.17     17.32     17.47     17.62     17.70      7.19       .96       .11
   50.00    DISCHG         .00

   RUNOFF VOLUME ABOVE BASEFLOW =  1.05 WATERSHED INCHES,    284.70 CFS-HRS,    23.53 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION 101, ALTERNATE 48, STORM  2, ADDED TO OUTPUT HYDROGRAPH FILE ---


 EXECUTIVE CONTROL OPERATION ENDCMP                                                                                  RECORD ID
+                                   COMPUTATIONS COMPLETED FOR PASS  19



 EXECUTIVE CONTROL OPERATION COMPUT                                                                                  RECORD ID  2yr, 72
+                                   FROM XSECTION  10
+                                                                  TO XSECTION 101
         STARTING TIME =   .00    RAIN DEPTH =  3.01    RAIN DURATION= 72.00    RAIN TABLE NO.= 9    ANT. MOIST. COND= 2
         ALTERNATE NO.=72         STORM NO.= 2    MAIN TIME INCREMENT =   .50 HOURS


 OPERATION RUNOFF   CROSS SECTION  10

 *** WARNING-MAIN TIME INCREMENT MAY BE TOO LARGE.
          COMPUTED PEAK(      8.96) AT              EXCEEDS MAX. ADJACENT HYDROGRAPH COORDINATE BY   7 %.
+                                   XSECTION  10

            PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               64.39                          11.58                       (RUNOFF)
               71.75                           8.96                       (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .50 HOURS      DRAINAGE AREA =    .25 SQ.MI.
   20.00    DISCHG         .00       .00       .00       .00       .04       .08       .12       .16       .20       .24
   25.00    DISCHG         .28       .32       .36       .40       .43       .47       .51       .54       .58       .61
   30.00    DISCHG         .65       .68       .71       .75       .78       .81       .84       .87       .90       .93
   35.00    DISCHG         .96       .99      1.02      1.26      1.43      1.49      1.54      1.59      1.64      1.68
   40.00    DISCHG        1.55      1.36      1.35      1.37      1.39      1.42      1.44      1.58      1.92      2.02
   45.00    DISCHG        2.06      2.10      2.14      2.18      2.33      3.17      3.43      3.53      3.61      3.68
1
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   50.00    DISCHG        3.75      3.82      3.89      3.96      4.02      4.08      4.15      4.21      4.27      5.17
   55.00    DISCHG        5.78      5.95      6.05      6.14      6.23      6.32      8.08     10.26     10.76     11.01
   60.00    DISCHG       11.20     11.38     11.55     11.50     11.07     11.11     11.22     11.34     11.46     11.57
   65.00    DISCHG       11.28      8.60      8.00      7.95      7.98      8.03      8.07      8.11      8.15      8.19
   70.00    DISCHG        8.23      8.27      8.30      8.34      8.36      3.52       .49       .06       .00

   RUNOFF VOLUME ABOVE BASEFLOW =  1.32 WATERSHED INCHES,    215.63 CFS-HRS,    17.82 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION  10, ALTERNATE 72, STORM  2, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION RUNOFF   CROSS SECTION  11

 *** WARNING-MAIN TIME INCREMENT MAY BE TOO LARGE.
          COMPUTED PEAK(      5.38) AT              EXCEEDS MAX. ADJACENT HYDROGRAPH COORDINATE BY   7 %.
+                                   XSECTION  11

            PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               64.41                           6.74                       (RUNOFF)
               71.75                           5.38                       (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .50 HOURS      DRAINAGE AREA =    .17 SQ.MI.
   25.00    DISCHG         .00       .00       .00       .00       .02       .04       .06       .08       .10       .12
   30.00    DISCHG         .15       .17       .19       .21       .23       .25       .27       .29       .31       .32
   35.00    DISCHG         .34       .36       .38       .49       .56       .59       .63       .66       .69       .71
   40.00    DISCHG         .66       .59       .59       .61       .62       .64       .65       .73       .89       .94
   45.00    DISCHG         .97       .99      1.02      1.04      1.13      1.56      1.68      1.75      1.80      1.85
   50.00    DISCHG        1.89      1.94      1.99      2.03      2.08      2.12      2.17      2.21      2.25      2.78
   55.00    DISCHG        3.09      3.19      3.26      3.33      3.39      3.45      4.54      5.71      5.99      6.15
   60.00    DISCHG        6.29      6.42      6.55      6.53      6.32      6.37      6.46      6.56      6.65      6.73
   65.00    DISCHG        6.55      4.95      4.67      4.67      4.70      4.73      4.76      4.80      4.83      4.86
   70.00    DISCHG        4.89      4.92      4.95      4.98      4.99      1.86       .22       .02

   RUNOFF VOLUME ABOVE BASEFLOW =  1.08 WATERSHED INCHES,    116.67 CFS-HRS,     9.64 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION  11, ALTERNATE 72, STORM  2, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION ADDHYD   CROSS SECTION 101
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 *** WARNING-MAIN TIME INCREMENT MAY BE TOO LARGE.
         COMPUTED PEAK(     14.33) AT              EXCEEDS MAX. ADJACENT HYDROGRAPH COORDINATE BY   7 %.
+                                   XSECTION 101

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
              64.40                          18.32                        (NULL)
              71.75                          14.33                        (NULL)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .50 HOURS      DRAINAGE AREA =    .42 SQ.MI.
   20.00    DISCHG         .00       .00       .00       .00       .04       .08       .12       .16       .20       .24
   25.00    DISCHG         .28       .32       .36       .40       .45       .51       .57       .62       .68       .74
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  20
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                PAGE  40


   30.00    DISCHG         .79       .85       .90       .95      1.01      1.06      1.11      1.16      1.21      1.26
   35.00    DISCHG        1.31      1.35      1.40      1.74      1.99      2.09      2.17      2.25      2.32      2.40
   40.00    DISCHG        2.20      1.95      1.94      1.98      2.02      2.05      2.09      2.31      2.81      2.95
   45.00    DISCHG        3.03      3.09      3.16      3.22      3.46      4.73      5.11      5.28      5.41      5.53
   50.00    DISCHG        5.65      5.76      5.88      5.99      6.10      6.21      6.31      6.41      6.52      7.94
   55.00    DISCHG        8.87      9.14      9.31      9.47      9.62      9.77     12.62     15.96     16.75     17.16
   60.00    DISCHG       17.49     17.80     18.10     18.03     17.40     17.48     17.68     17.90     18.10     18.30
   65.00    DISCHG       17.82     13.55     12.67     12.62     12.68     12.76     12.83     12.91     12.98     13.05
   70.00    DISCHG       13.12     13.19     13.25     13.32     13.35      5.38       .72       .09       .00

   RUNOFF VOLUME ABOVE BASEFLOW =  1.22 WATERSHED INCHES,    332.29 CFS-HRS,    27.46 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION 101, ALTERNATE 72, STORM  2, ADDED TO OUTPUT HYDROGRAPH FILE ---


 EXECUTIVE CONTROL OPERATION ENDCMP                                                                                  RECORD ID
+                                   COMPUTATIONS COMPLETED FOR PASS  20



 EXECUTIVE CONTROL OPERATION COMPUT                                                                                  RECORD ID  2yr, 12
+                                   FROM XSECTION  10
+                                                         TO XSECTION 101
         STARTING TIME =   .00    RAIN DEPTH =  3.46    RAIN DURATION=120.00    RAIN TABLE NO.= 9    ANT. MOIST. COND= 2
         ALTERNATE NO.=73         STORM NO.= 2    MAIN TIME INCREMENT =   .50 HOURS


 OPERATION RUNOFF   CROSS SECTION  10

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
             107.76                          8.73                       (RUNOFF)
             119.54                          6.06                       (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .50 HOURS      DRAINAGE AREA =    .25 SQ.MI.
   30.00    DISCHG         .00       .00       .00       .00       .02       .04       .06       .08       .10       .12
   35.00    DISCHG         .14       .16       .17       .19       .21       .23       .25       .27       .28       .30
   40.00    DISCHG         .32       .34       .35       .37       .39       .40       .42       .44       .45       .47
   45.00    DISCHG         .49       .50       .52       .53       .55       .56       .58       .59       .61       .62
   50.00    DISCHG         .63       .65       .66       .68       .69       .70       .72       .73       .74       .76
   55.00    DISCHG         .77       .78       .80       .81       .82       .83       .85       .86       .87       .88
   60.00    DISCHG         .89      1.08      1.21      1.25      1.27      1.29      1.31      1.33      1.35      1.37
   65.00    DISCHG        1.38      1.40      1.42      1.23      1.11      1.10      1.11      1.12      1.13      1.14
   70.00    DISCHG        1.15      1.16      1.17      1.18      1.19      1.43      1.59      1.62      1.64      1.66
   75.00    DISCHG        1.67      1.69      1.70      1.72      1.73      1.75      1.77      2.29      2.64      2.72
   80.00    DISCHG        2.76      2.79      2.82      2.85      2.88      2.91      2.93      2.96      2.99      3.01
   85.00    DISCHG        3.04      3.07      3.09      3.12      3.14      3.17      3.19      3.22      3.24      3.26
   90.00    DISCHG        3.29      3.95      4.38      4.48      4.52      4.56      4.60      4.63      4.67      4.70
   95.00    DISCHG        4.74      4.77      4.81      6.60      7.76      8.00      8.10      8.18      8.25      8.32
  100.00    DISCHG        8.39      8.46      8.53      8.59      8.65      8.33      8.14      8.15      8.20      8.24
  105.00    DISCHG        8.29      8.33      8.38      8.42      8.47      8.51      8.54      6.93      5.91      5.78
  110.00    DISCHG        5.78      5.79      5.81      5.83      5.84      5.86      5.87      5.89      5.90      5.92
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  21
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                PAGE  41


  115.00    DISCHG        5.93      5.95      5.96      5.98      5.99      6.00      6.02      6.03      6.04      6.06
  120.00    DISCHG        6.05      2.57       .36       .05       .00

   RUNOFF VOLUME ABOVE BASEFLOW =  1.67 WATERSHED INCHES,    273.77 CFS-HRS,    22.62 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION  10, ALTERNATE 73, STORM  2, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION RUNOFF   CROSS SECTION  11

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
             107.76                          5.20                       (RUNOFF)
             119.63                          3.68                       (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .50 HOURS      DRAINAGE AREA =    .17 SQ.MI.
   35.00    DISCHG         .00       .00       .00       .00       .00       .00       .00       .00       .00       .01
   40.00    DISCHG         .02       .03       .04       .05       .06       .07       .08       .09       .10       .11
   45.00    DISCHG         .12       .13       .14       .15       .16       .17       .18       .19       .20       .21
   50.00    DISCHG         .22       .23       .24       .24       .25       .26       .27       .28       .29       .30
   55.00    DISCHG         .30       .31       .32       .33       .34       .35       .35       .36       .37       .38
   60.00    DISCHG         .38       .48       .53       .55       .56       .58       .59       .60       .61       .63
   65.00    DISCHG         .64       .65       .66       .57       .52       .52       .53       .53       .54       .55
   70.00    DISCHG         .55       .56       .57       .57       .58       .71       .78       .80       .81       .82
   75.00    DISCHG         .83       .84       .85       .87       .88       .89       .90      1.19      1.36      1.40
   80.00    DISCHG        1.42      1.44      1.47      1.49      1.51      1.53      1.55      1.57      1.58      1.60
   85.00    DISCHG        1.62      1.64      1.66      1.68      1.69      1.71      1.73      1.75      1.76      1.78
   90.00    DISCHG        1.80      2.20      2.42      2.47      2.50      2.53      2.55      2.58      2.61      2.63
```

95.00	DISCHG	2.66	2.68	2.71	3.81	4.42	4.55	4.62	4.67	4.73	4.78
100.00	DISCHG	4.84	4.89	4.94	4.99	5.04	4.84	4.75	4.77	4.81	4.85
105.00	DISCHG	4.88	4.92	4.95	4.99	5.02	5.05	5.08	4.04	3.50	3.45
110.00	DISCHG	3.45	3.46	3.48	3.49	3.50	3.52	3.53	3.54	3.55	3.56
115.00	DISCHG	3.58	3.59	3.60	3.61	3.62	3.63	3.64	3.66	3.67	3.68
120.00	DISCHG	3.67	1.37	.17	.02						

RUNOFF VOLUME ABOVE BASEFLOW = 1.40 WATERSHED INCHES, 151.74 CFS-HRS, 12.54 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 11, ALTERNATE 73, STORM 2, ADDED TO OUTPUT HYDROGRAPH FILE ---

OPERATION ADDHYD CROSS SECTION 101

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
107.76	13.93	(NULL)
119.58	9.73	(NULL)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .50 HOURS DRAINAGE AREA = .42 SQ.MI.

30.00	DISCHG	.00	.00	.00	.00	.02	.04	.06	.08	.10	.12
35.00	DISCHG	.14	.16	.17	.19	.21	.23	.25	.27	.28	.31
40.00	DISCHG	.34	.37	.40	.42	.45	.48	.50	.53	.56	.58

1

45.00	DISCHG	.61	.63	.66	.68	.71	.73	.76	.78	.81	.83
50.00	DISCHG	.85	.88	.90	.92	.94	.97	.99	1.01	1.03	1.05
55.00	DISCHG	1.07	1.10	1.12	1.14	1.16	1.18	1.20	1.22	1.24	1.26
60.00	DISCHG	1.28	1.56	1.74	1.80	1.83	1.86	1.90	1.93	1.96	1.99
65.00	DISCHG	2.02	2.06	2.08	1.80	1.63	1.62	1.64	1.65	1.67	1.69
70.00	DISCHG	1.70	1.72	1.73	1.75	1.77	2.14	2.37	2.42	2.45	2.48
75.00	DISCHG	2.51	2.53	2.56	2.58	2.61	2.63	2.66	3.49	4.00	4.12
80.00	DISCHG	4.18	4.23	4.28	4.33	4.38	4.43	4.48	4.53	4.57	4.62
85.00	DISCHG	4.66	4.71	4.75	4.79	4.84	4.88	4.92	4.96	5.00	5.04
90.00	DISCHG	5.09	6.14	6.80	6.95	7.03	7.09	7.15	7.22	7.28	7.34
95.00	DISCHG	7.39	7.45	7.52	10.41	12.19	12.55	12.72	12.85	12.98	13.11
100.00	DISCHG	13.23	13.35	13.47	13.58	13.69	13.16	12.89	12.93	13.00	13.09
105.00	DISCHG	13.17	13.25	13.33	13.41	13.49	13.56	13.62	10.96	9.41	9.23
110.00	DISCHG	9.23	9.26	9.29	9.32	9.34	9.37	9.40	9.43	9.46	9.48
115.00	DISCHG	9.51	9.54	9.56	9.59	9.61	9.64	9.66	9.69	9.71	9.73
120.00	DISCHG	9.72	3.94	.53	.06	.00					

RUNOFF VOLUME ABOVE BASEFLOW = 1.56 WATERSHED INCHES, 425.50 CFS-HRS, 35.16 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 101, ALTERNATE 73, STORM 2, ADDED TO OUTPUT HYDROGRAPH FILE ---

EXECUTIVE CONTROL OPERATION ENDCMP RECORD ID
+ COMPUTATIONS COMPLETED FOR PASS 21

EXECUTIVE CONTROL OPERATION COMPUT RECORD ID 2yr, 24
+ FROM XSECTION 10
+ TO XSECTION 101
STARTING TIME = .00 RAIN DEPTH = 4.25 RAIN DURATION=240.00 RAIN TABLE NO.= 9 ANT. MOIST. COND= 2
ALTERNATE NO.=74 STORM NO.= 2 MAIN TIME INCREMENT = .50 HOURS

OPERATION RUNOFF CROSS SECTION 10

*** WARNING-NO PEAK FOUND, MAXIMUM DISCHARGE = 1.24 CFS.

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
149.50	1.24	(RUNOFF)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .50 HOURS DRAINAGE AREA = .25 SQ.MI.

50.00	DISCHG	.00	.00	.00	.00	.00	.00	.01	.01	.02	.03
55.00	DISCHG	.04	.04	.05	.06	.07	.07	.08	.09	.10	.10
60.00	DISCHG	.11	.12	.12	.13	.14	.15	.15	.16	.17	.17
65.00	DISCHG	.18	.19	.19	.20	.21	.21	.22	.22	.23	.24
70.00	DISCHG	.24	.25	.26	.26	.27	.27	.28	.29	.29	.30
75.00	DISCHG	.30	.31	.32	.32	.33	.33	.34	.34	.35	.36
80.00	DISCHG	.36	.37	.37	.38	.38	.39	.39	.40	.40	.41
85.00	DISCHG	.42	.42	.43	.43	.44	.44	.45	.45	.46	.46
90.00	DISCHG	.47	.47	.48	.48	.49	.49	.50	.50	.50	.51

1

95.00	DISCHG	.51	.52	.52	.53	.53	.54	.54	.55	.55	.55
100.00	DISCHG	.56	.56	.57	.57	.58	.58	.58	.59	.59	.60
105.00	DISCHG	.60	.61	.61	.61	.62	.62	.63	.63	.63	.64
110.00	DISCHG	.64	.65	.65	.65	.66	.66	.67	.67	.67	.68
115.00	DISCHG	.68	.68	.69	.69	.70	.70	.70	.71	.71	.71
120.00	DISCHG	.72	.86	.95	.97	.98	.99	.99	1.00	1.00	1.01
125.00	DISCHG	1.01	1.02	1.03	1.03	1.04	1.04	1.05	1.06	1.06	1.07
130.00	DISCHG	1.07	1.08	1.08	1.09	1.09	.94	.84	.83	.83	.84
135.00	DISCHG	.84	.84	.84	.85	.85	.85	.86	.86	.86	.86
140.00	DISCHG	.87	.87	.87	.88	.88	.88	.88	.89	.89	1.06
145.00	DISCHG	1.18	1.20	1.20	1.21	1.21	1.22	1.22	1.23	1.23	1.24

RUNOFF VOLUME ABOVE BASEFLOW = .35 WATERSHED INCHES, 56.44 CFS-HRS, 4.66 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 10, ALTERNATE 74, STORM 2, ADDED TO OUTPUT HYDROGRAPH FILE ---

```
 OPERATION RUNOFF   CROSS SECTION  11

 *** WARNING-NO PEAK FOUND, MAXIMUM DISCHARGE =         .66 CFS.

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
             149.50                            .66                          (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .50 HOURS      DRAINAGE AREA =    .17 SQ.MI.
   65.00    DISCHG         .00       .01       .01       .01       .02       .02       .03       .03       .03       .04
   70.00    DISCHG         .04       .05       .05       .05       .06       .06       .07       .07       .07       .08
   75.00    DISCHG         .08       .08       .09       .09       .09       .10       .10       .11       .11       .11
   80.00    DISCHG         .12       .12       .12       .13       .13       .13       .14       .14       .14       .15
   85.00    DISCHG         .15       .15       .16       .16       .16       .17       .17       .17       .18       .18
   90.00    DISCHG         .18       .19       .19       .19       .19       .20       .20       .20       .21       .21
   95.00    DISCHG         .21       .22       .22       .22       .23       .23       .23       .23       .24       .24
  100.00    DISCHG         .24       .25       .25       .25       .25       .26       .26       .26       .27       .27
  105.00    DISCHG         .27       .27       .28       .28       .28       .28       .29       .29       .29       .29
  110.00    DISCHG         .30       .30       .30       .31       .31       .31       .31       .32       .32       .32
  115.00    DISCHG         .32       .33       .33       .33       .33       .34       .34       .34       .34       .35
  120.00    DISCHG         .35       .42       .47       .47       .48       .48       .49       .49       .50       .50
  125.00    DISCHG         .50       .51       .51       .52       .52       .52       .53       .53       .53       .54
  130.00    DISCHG         .54       .55       .55       .55       .56       .47       .43       .43       .43       .43
  135.00    DISCHG         .43       .43       .44       .44       .44       .44       .44       .45       .45       .45
  140.00    DISCHG         .45       .45       .45       .46       .46       .46       .46       .46       .47       .57
  145.00    DISCHG         .62       .63       .63       .64       .64       .64       .65       .65       .65       .66

   RUNOFF VOLUME ABOVE BASEFLOW =   .23 WATERSHED INCHES,     25.38 CFS-HRS,     2.10 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION  11, ALTERNATE 74, STORM  2, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION ADDHYD   CROSS SECTION 101
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  22
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                     PAGE  44


 *** WARNING-NO PEAK FOUND, MAXIMUM DISCHARGE =        1.89 CFS.

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
             149.50                           1.89                          (NULL)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .50 HOURS      DRAINAGE AREA =    .42 SQ.MI.
   50.00    DISCHG         .00       .00       .00       .00       .00       .00       .01       .01       .02       .03
   55.00    DISCHG         .04       .04       .05       .06       .07       .07       .08       .09       .10       .10
   60.00    DISCHG         .11       .12       .12       .13       .14       .15       .15       .16       .17       .17
   65.00    DISCHG         .18       .19       .20       .21       .22       .23       .24       .26       .27       .28
   70.00    DISCHG         .29       .30       .31       .32       .33       .34       .35       .36       .37       .37
   75.00    DISCHG         .38       .39       .40       .41       .42       .43       .44       .45       .46       .47
   80.00    DISCHG         .48       .49       .50       .50       .51       .52       .53       .54       .55       .56
   85.00    DISCHG         .57       .57       .58       .59       .60       .61       .62       .62       .63       .64
   90.00    DISCHG         .65       .66       .66       .67       .68       .69       .70       .70       .71       .72
   95.00    DISCHG         .73       .73       .74       .75       .76       .76       .77       .78       .79       .79
  100.00    DISCHG         .80       .81       .82       .82       .83       .84       .84       .85       .86       .87
  105.00    DISCHG         .87       .88       .89       .89       .90       .91       .91       .92       .93       .93
  110.00    DISCHG         .94       .95       .95       .96       .97       .97       .98       .98       .99      1.00
  115.00    DISCHG        1.00      1.01      1.02      1.02      1.03      1.03      1.04      1.05      1.05      1.06
  120.00    DISCHG        1.07      1.28      1.42      1.45      1.46      1.47      1.48      1.49      1.50      1.51
  125.00    DISCHG        1.52      1.53      1.54      1.55      1.56      1.57      1.58      1.59      1.60      1.61
  130.00    DISCHG        1.61      1.62      1.63      1.64      1.65      1.41      1.27      1.26      1.26      1.27
  135.00    DISCHG        1.27      1.28      1.28      1.28      1.29      1.29      1.30      1.30      1.31      1.31
  140.00    DISCHG        1.32      1.32      1.33      1.33      1.34      1.34      1.35      1.35      1.36      1.63
  145.00    DISCHG        1.80      1.83      1.84      1.85      1.85      1.86      1.87      1.88      1.88      1.89

   RUNOFF VOLUME ABOVE BASEFLOW =   .30 WATERSHED INCHES,     81.82 CFS-HRS,     6.76 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION 101, ALTERNATE 74, STORM  2, ADDED TO OUTPUT HYDROGRAPH FILE ---

 EXECUTIVE CONTROL OPERATION ENDCMP                                                                                  RECORD ID
+                                   COMPUTATIONS COMPLETED FOR PASS  22



 EXECUTIVE CONTROL OPERATION INCREM                                                                                  RECORD ID   Output
+                                   MAIN TIME INCREMENT =   .05 HOURS


 EXECUTIVE CONTROL OPERATION COMPUT                                                                                  RECORD ID  5yr, 1h
+                                   FROM XSECTION  10
+                                                          TO XSECTION 101
         STARTING TIME =   .00    RAIN DEPTH =  1.43    RAIN DURATION=  1.00    RAIN TABLE NO.= 6    ANT. MOIST. COND= 2
         ALTERNATE NO.= 1         STORM NO.= 5    MAIN TIME INCREMENT =   .05 HOURS


 OPERATION RUNOFF   CROSS SECTION  10
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  23
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                     PAGE  45


           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
                .83                         48.61                          (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .25 SQ.MI.
     .00    DISCHG         .00       .00       .00       .13       .66      1.89      4.11      7.61     12.43     18.31
```

.50	DISCHG	24.70	31.01	36.72	41.48	45.06	47.36	48.45	48.57	48.02	47.05
1.00	DISCHG	45.90	44.51	42.70	40.57	38.09	35.09	31.67	28.00	24.29	20.70
1.50	DISCHG	17.41	14.49	11.92	9.75	8.01	6.59	5.43	4.49	3.69	3.04
2.00	DISCHG	2.50	2.06	1.69	1.39	1.13	.92	.74	.59	.47	.38
2.50	DISCHG	.30	.23	.18	.14	.11	.08	.06	.04	.02	.01
3.00	DISCHG	.00									

RUNOFF VOLUME ABOVE BASEFLOW = .28 WATERSHED INCHES, 45.65 CFS-HRS, 3.77 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 10, ALTERNATE 1, STORM 5, ADDED TO OUTPUT HYDROGRAPH FILE ---

OPERATION RUNOFF CROSS SECTION 11

PEAK TIME(HRS) .89 PEAK DISCHARGE(CFS) 21.46 PEAK ELEVATION(FEET) (RUNOFF)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .05 HOURS DRAINAGE AREA = .17 SQ.MI.

.00	DISCHG	.00	.00	.00	.00	.08	.36	1.01	2.16	3.94	6.33
.50	DISCHG	9.11	12.01	14.74	17.12	18.99	20.29	21.05	21.40	21.45	21.32
1.00	DISCHG	21.05	20.60	19.93	19.03	17.86	16.38	14.64	12.78	10.91	9.15
1.50	DISCHG	7.56	6.17	4.99	4.03	3.28	2.67	2.17	1.77	1.44	1.17
2.00	DISCHG	.95	.77	.62	.50	.40	.31	.25	.20	.15	.12
2.50	DISCHG	.09	.07	.05	.04	.03	.02	.01	.00		

RUNOFF VOLUME ABOVE BASEFLOW = .18 WATERSHED INCHES, 19.67 CFS-HRS, 1.63 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 11, ALTERNATE 1, STORM 5, ADDED TO OUTPUT HYDROGRAPH FILE ---

OPERATION ADDHYD CROSS SECTION 101

PEAK TIME(HRS) .85 PEAK DISCHARGE(CFS) 69.97 PEAK ELEVATION(FEET) (NULL)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .05 HOURS DRAINAGE AREA = .42 SQ.MI.

.00	DISCHG	.00	.00	.00	.13	.74	2.25	5.12	9.77	16.37	24.64
.50	DISCHG	33.82	43.01	51.46	58.60	64.05	67.64	69.50	69.97	69.47	68.37
1.00	DISCHG	66.95	65.11	62.64	59.61	55.95	51.47	46.31	40.78	35.20	29.85
1.50	DISCHG	24.98	20.66	16.91	13.78	11.28	9.26	7.61	6.25	5.13	4.20
2.00	DISCHG	3.45	2.83	2.31	1.89	1.53	1.23	.99	.79	.63	.49
2.50	DISCHG	.39	.30	.24	.18	.13	.09	.06	.04	.02	.01
3.00	DISCHG	.00									

1

TR20 XEQ 04-29-08 16:15 VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS JOB 1 PASS 23
REV PC 09/83(.2) CALCS: V3 W/HUFF-ISWS CIR.173/90 FILE: E06037.DAT DATE: 04/29/08 JAS PAGE 46

RUNOFF VOLUME ABOVE BASEFLOW = .24 WATERSHED INCHES, 65.32 CFS-HRS, 5.40 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 101, ALTERNATE 1, STORM 5, ADDED TO OUTPUT HYDROGRAPH FILE ---

EXECUTIVE CONTROL OPERATION ENDCMP RECORD ID
+ COMPUTATIONS COMPLETED FOR PASS 23

EXECUTIVE CONTROL OPERATION COMPUT RECORD ID 5yr, 2
+ FROM XSECTION 10
+ TO XSECTION 101
STARTING TIME = .00 RAIN DEPTH = 1.76 RAIN DURATION= 2.00 RAIN TABLE NO.= 6 ANT. MOIST. COND= 2
ALTERNATE NO.= 2 STORM NO.= 5 MAIN TIME INCREMENT = .05 HOURS

OPERATION RUNOFF CROSS SECTION 10

PEAK TIME(HRS) 1.04 PEAK DISCHARGE(CFS) 53.59 PEAK ELEVATION(FEET) (RUNOFF)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .05 HOURS DRAINAGE AREA = .25 SQ.MI.

.00	DISCHG	.00	.00	.00	.00	.08	.37	1.07	2.41	4.64	7.91
.50	DISCHG	12.23	17.40	23.14	29.09	34.88	40.15	44.64	48.20	50.79	52.47
1.00	DISCHG	53.36	53.58	53.17	52.23	50.83	49.04	47.01	44.89	42.82	40.86
1.50	DISCHG	39.10	37.58	36.33	35.35	34.60	33.97	33.35	32.65	31.82	30.82
2.00	DISCHG	29.73	28.57	27.35	26.10	24.68	22.91	20.84	18.61	16.33	14.08
2.50	DISCHG	11.94	9.95	8.16	6.64	5.43	4.46	3.67	3.02	2.47	2.02
3.00	DISCHG	1.66	1.36	1.11	.91	.74	.60	.49	.40	.32	.26
3.50	DISCHG	.21	.16	.13	.10	.07	.06	.04	.03	.02	.01
4.00	DISCHG	.00									

RUNOFF VOLUME ABOVE BASEFLOW = .46 WATERSHED INCHES, 74.92 CFS-HRS, 6.19 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 10, ALTERNATE 2, STORM 5, ADDED TO OUTPUT HYDROGRAPH FILE ---

OPERATION RUNOFF CROSS SECTION 11

PEAK TIME(HRS) 1.09 PEAK DISCHARGE(CFS) 25.08 PEAK ELEVATION(FEET) (RUNOFF)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .05 HOURS DRAINAGE AREA = .17 SQ.MI.

.00	DISCHG	.00	.00	.00	.00	.00	.02	.12	.41	.99	2.02
.50	DISCHG	3.60	5.71	8.26	11.07	13.94	16.66	19.09	21.13	22.71	23.85
1.00	DISCHG	24.60	25.00	25.07	24.84	24.33	23.60	22.72	21.79	20.88	20.04
1.50	DISCHG	19.31	18.71	18.25	17.93	17.70	17.50	17.28	16.99	16.58	16.07
2.00	DISCHG	15.49	14.88	14.25	13.59	12.81	11.81	10.65	9.39	8.12	6.87
2.50	DISCHG	5.70	4.63	3.72	3.00	2.43	1.97	1.60	1.29	1.05	.85

1

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TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  24
     REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                     PAGE  47

   3.00    DISCHG         .69       .55       .45       .36       .29       .23       .18       .15       .11       .09
   3.50    DISCHG         .07       .05       .04       .03       .02       .01       .01       .00

  RUNOFF VOLUME ABOVE BASEFLOW =   .33 WATERSHED INCHES,     35.31 CFS-HRS,     2.92 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION  11, ALTERNATE  2, STORM  5, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION ADDHYD   CROSS SECTION 101

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               1.06                          78.59                          (NULL)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .42 SQ.MI.
     .00    DISCHG         .00       .00       .00       .00       .08       .39      1.19      2.81      5.63      9.93
     .50    DISCHG       15.83     23.11     31.40     40.16     48.82     56.82     63.74     69.32     73.50     76.33
    1.00    DISCHG       77.97     78.58     78.25     77.07     75.16     72.64     69.73     66.69     63.70     60.90
    1.50    DISCHG       58.40     56.29     54.59     53.28     52.30     51.47     50.63     49.65     48.40     46.89
    2.00    DISCHG       45.22     43.45     41.61     39.69     37.48     34.73     31.49     28.00     24.44     20.95
    2.50    DISCHG       17.65     14.59     11.87      9.64      7.86      6.43      5.27      4.31      3.52      2.87
    3.00    DISCHG        2.34      1.91      1.56      1.27      1.03       .84       .68       .55       .44       .35
    3.50    DISCHG         .27       .21       .17       .13       .10       .07       .05       .03       .02       .01
    4.00    DISCHG         .00

  RUNOFF VOLUME ABOVE BASEFLOW =   .41 WATERSHED INCHES,    110.23 CFS-HRS,     9.11 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION 101, ALTERNATE  2, STORM  5, ADDED TO OUTPUT HYDROGRAPH FILE ---


 EXECUTIVE CONTROL OPERATION ENDCMP                                                                                  RECORD ID
+                                     COMPUTATIONS COMPLETED FOR PASS  24



 EXECUTIVE CONTROL OPERATION COMPUT                                                                                  RECORD ID  5yr, 3h
+                                     FROM XSECTION  10
+                                                          TO XSECTION 101
         STARTING TIME =   .00    RAIN DEPTH =  1.95    RAIN DURATION=  3.00    RAIN TABLE NO.= 6    ANT. MOIST. COND= 2
         ALTERNATE NO.= 3         STORM NO.= 5    MAIN TIME INCREMENT =   .05 HOURS


 OPERATION RUNOFF   CROSS SECTION  10

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               1.21                          50.54                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .25 SQ.MI.
     .00    DISCHG         .00       .00       .00       .00       .00       .04       .23       .71      1.64      3.20
     .50    DISCHG        5.53      8.64     12.41     16.71     21.36     26.18     30.95     35.47     39.54     43.00
    1.00    DISCHG       45.78     47.90     49.34     50.19     50.52     50.44     50.02     49.37     48.59     47.74
    1.50    DISCHG       46.81     45.77     44.57     43.17     41.61     39.89     38.06     36.21     34.41     32.74
1


TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  25
     REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                     PAGE  48

   2.00    DISCHG       31.25     29.98     28.92     28.07     27.40     26.88     26.48     26.16     25.92     25.74
   2.50    DISCHG       25.61     25.51     25.40     25.21     24.90     24.40     23.70     22.81     21.84     20.91
   3.00    DISCHG       20.13     19.50     19.00     18.53     17.93     17.02     15.79     14.31     12.68     11.01
   3.50    DISCHG        9.35      7.79      6.38      5.20      4.26      3.50      2.89      2.38      1.95      1.60
   4.00    DISCHG        1.31      1.08       .88       .72       .58       .48       .39       .31       .25       .20
   4.50    DISCHG         .16       .13       .10       .08       .06       .05       .04       .03       .02       .01
   5.00    DISCHG         .00

  RUNOFF VOLUME ABOVE BASEFLOW =   .57 WATERSHED INCHES,     93.69 CFS-HRS,     7.74 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION  10, ALTERNATE  3, STORM  5, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION RUNOFF   CROSS SECTION  11

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               1.28                          24.06                        (RUNOFF)
               2.53                          13.83                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .17 SQ.MI.
     .00    DISCHG         .00       .00       .00       .00       .00       .00       .01       .06       .21       .54
     .50    DISCHG        1.14      2.10      3.46      5.20      7.26      9.56     11.97     14.36     16.63     18.64
    1.00    DISCHG       20.33     21.68     22.70     23.41     23.84     24.04     24.06     23.95     23.78     23.56
    1.50    DISCHG       23.28     22.91     22.41     21.79     21.05     20.20     19.28     18.35     17.47     16.67
    2.00    DISCHG       15.99     15.42     14.97     14.63     14.37     14.18     14.04     13.94     13.87     13.84
    2.50    DISCHG       13.82     13.83     13.81     13.74     13.58     13.30     12.87     12.32     11.73     11.20
    3.00    DISCHG       10.79     10.50     10.30     10.10      9.79      9.24      8.47      7.56      6.58      5.58
    3.50    DISCHG        4.62      3.74      3.00      2.42      1.97      1.60      1.30      1.06       .85       .69
    4.00    DISCHG         .56       .45       .36       .29       .23       .19       .15       .12       .09       .07
    4.50    DISCHG         .06       .04       .04       .03       .02       .01       .01       .00

  RUNOFF VOLUME ABOVE BASEFLOW =   .42 WATERSHED INCHES,     45.71 CFS-HRS,     3.78 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION  11, ALTERNATE  3, STORM  5, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION ADDHYD   CROSS SECTION 101

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               1.24                          74.49                          (NULL)
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```
 TIME(HRS)          FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .42 SQ.MI.
     .00    DISCHG         .00       .00       .00       .00       .00       .04       .24       .77      1.85      3.74
     .50    DISCHG        6.67     10.73     15.87     21.91     28.62     35.74     42.92     49.84     56.17     61.64
    1.00    DISCHG       66.12     69.58     72.04     73.60     74.36     74.47     74.07     73.32     72.37     71.30
    1.50    DISCHG       70.08     68.68     66.98     64.96     62.65     60.08     57.34     54.56     51.88     49.41
    2.00    DISCHG       47.24     45.40     43.89     42.69     41.77     41.06     40.51     40.10     39.79     39.57
    2.50    DISCHG       39.44     39.34     39.21     38.95     38.48     37.70     36.56     35.12     33.57     32.12
    3.00    DISCHG       30.92     30.00     29.29     28.63     27.72     26.25     24.26     21.86     19.26     16.58
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  25
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                     PAGE  49


    3.50    DISCHG       13.97     11.53      9.38      7.62      6.23      5.10      4.19      3.43      2.81      2.29
    4.00    DISCHG        1.87      1.53      1.24      1.01       .82       .66       .54       .43       .35       .28
    4.50    DISCHG         .22       .17       .14       .11       .08       .06       .04       .03       .02       .01
    5.00    DISCHG         .00

   RUNOFF VOLUME ABOVE BASEFLOW =   .51 WATERSHED INCHES,    139.40 CFS-HRS,    11.52 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION 101, ALTERNATE  3, STORM  5, ADDED TO OUTPUT HYDROGRAPH FILE ---


 EXECUTIVE CONTROL OPERATION ENDCMP                                                                                  RECORD ID
+                                     COMPUTATIONS COMPLETED FOR PASS  25



 EXECUTIVE CONTROL OPERATION COMPUT                                                                                  RECORD ID  5yr, 6h
+                                     FROM XSECTION  10
+                                                          TO XSECTION 101
         STARTING TIME =   .00    RAIN DEPTH =  2.28    RAIN DURATION=  6.00    RAIN TABLE NO.= 6    ANT. MOIST. COND= 2
         ALTERNATE NO.= 6         STORM NO.= 5    MAIN TIME INCREMENT =   .05 HOURS


 OPERATION RUNOFF   CROSS SECTION  10

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               1.76                          40.98                        (RUNOFF)
               5.12                          16.24                        (RUNOFF)
               6.17                          12.08                        (RUNOFF)

 TIME(HRS)          FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .25 SQ.MI.
     .00    DISCHG         .00       .00       .00       .00       .00       .00       .00       .00       .01       .07
     .50    DISCHG         .26       .69      1.49      2.76      4.54      6.80      9.40     12.18     14.99     17.76
    1.00    DISCHG       20.43     22.95     25.26     27.35     29.26     31.03     32.70     34.25     35.66     36.93
    1.50    DISCHG       38.04     39.01     39.81     40.43     40.82     40.97     40.90     40.66     40.30     39.84
    2.00    DISCHG       39.30     38.69     38.03     37.38     36.73     36.08     35.40     34.66     33.89     33.13
    2.50    DISCHG       32.42     31.77     31.19     30.70     30.29     29.95     29.65     29.33     28.95     28.48
    3.00    DISCHG       27.92     27.28     26.56     25.78     24.91     23.97     22.97     21.99     21.05     20.17
    3.50    DISCHG       19.38     18.68     18.08     17.59     17.20     16.89     16.64     16.44     16.28     16.16
    4.00    DISCHG       16.07     15.99     15.94     15.90     15.88     15.87     15.86     15.87     15.88     15.89
    4.50    DISCHG       15.90     15.92     15.95     15.97     16.00     16.02     16.05     16.08     16.11     16.15
    5.00    DISCHG       16.18     16.21     16.24     16.23     16.16     16.00     15.71     15.25     14.66     13.99
    5.50    DISCHG       13.28     12.58     11.91     11.30     10.78     10.38     10.13     10.05     10.15     10.44
    6.00    DISCHG       10.89     11.38     11.81     12.06     12.04     11.65     10.93      9.94      8.79      7.59
    6.50    DISCHG        6.42      5.34      4.37      3.57      2.93      2.41      1.99      1.64      1.34      1.10
    7.00    DISCHG         .90       .74       .61       .50       .41       .33       .27       .22       .18       .15
    7.50    DISCHG         .12       .10       .08       .06       .05       .04       .03       .02       .01       .01
    8.00    DISCHG         .00

   RUNOFF VOLUME ABOVE BASEFLOW =   .79 WATERSHED INCHES,    128.97 CFS-HRS,    10.66 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION  10, ALTERNATE  6, STORM  5, ADDED TO OUTPUT HYDROGRAPH FILE ---
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  26
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                     PAGE  50


 OPERATION RUNOFF   CROSS SECTION  11

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               1.82                          20.20                        (RUNOFF)
               5.12                           9.23                        (RUNOFF)
               6.16                           7.07                        (RUNOFF)

 TIME(HRS)          FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .17 SQ.MI.
     .50    DISCHG         .00       .04       .14       .37       .76      1.36      2.16      3.15      4.27      5.49
    1.00    DISCHG        6.77      8.08      9.38     10.63     11.82     12.97     14.07     15.09     16.05     16.92
    1.50    DISCHG       17.71     18.42     19.03     19.53     19.89     20.10     20.19     20.19     20.11     19.98
    2.00    DISCHG       19.80     19.58     19.34     19.11     18.86     18.60     18.30     17.97     17.62     17.28
    2.50    DISCHG       16.96     16.68     16.44     16.25     16.11     16.00     15.90     15.78     15.60     15.35
    3.00    DISCHG       15.05     14.70     14.31     13.88     13.40     12.87     12.32     11.79     11.28     10.82
    3.50    DISCHG       10.41     10.05      9.76      9.54      9.36      9.23      9.12      9.04      8.98      8.94
    4.00    DISCHG        8.91      8.89      8.88      8.87      8.87      8.88      8.89      8.90      8.92      8.93
    4.50    DISCHG        8.95      8.97      9.00      9.02      9.04      9.06      9.09      9.11      9.14      9.16
    5.00    DISCHG        9.18      9.21      9.23      9.23      9.18      9.07      8.87      8.58      8.21      7.79
    5.50    DISCHG        7.36      6.94      6.56      6.22      5.94      5.74      5.63      5.62      5.73      5.97
    6.00    DISCHG        6.30      6.65      6.93      7.07      7.00      6.68      6.14      5.47      4.73      3.98
    6.50    DISCHG        3.28      2.66      2.14      1.73      1.41      1.14       .93       .75       .61       .49
    7.00    DISCHG         .40       .32       .26       .21       .17       .14       .11       .09       .07       .06
    7.50    DISCHG         .05       .04       .03       .02       .01       .01       .00

   RUNOFF VOLUME ABOVE BASEFLOW =   .61 WATERSHED INCHES,     65.74 CFS-HRS,     5.43 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION  11, ALTERNATE  6, STORM  5, ADDED TO OUTPUT HYDROGRAPH FILE ---
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 OPERATION ADDHYD   CROSS SECTION 101

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               1.78                          61.11                        (NULL)
               5.12                          25.47                        (NULL)
               6.17                          19.15                        (NULL)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .42 SQ.MI.
     .00    DISCHG         .00       .00       .00       .00       .00       .00       .00       .00       .01       .07
     .50    DISCHG         .26       .73      1.64      3.13      5.30      8.15     11.56     15.32     19.26     23.25
    1.00    DISCHG       27.20     31.03     34.64     37.98     41.08     44.00     46.76     49.34     51.71     53.84
    1.50    DISCHG       55.75     57.43     58.84     59.95     60.70     61.07     61.09     60.85     60.41     59.83
    2.00    DISCHG       59.10     58.27     57.38     56.48     55.59     54.68     53.70     52.63     51.51     50.41
    2.50    DISCHG       49.38     48.45     47.63     46.95     46.40     45.95     45.55     45.10     44.55     43.83
    3.00    DISCHG       42.97     41.98     40.87     39.65     38.32     36.84     35.30     33.77     32.33     30.99
    3.50    DISCHG       29.79     28.74     27.84     27.13     26.56     26.11     25.76     25.48     25.27     25.10
    4.00    DISCHG       24.97     24.88     24.82     24.78     24.75     24.75     24.75     24.77     24.79     24.82
    4.50    DISCHG       24.86     24.90     24.94     24.99     25.04     25.09     25.14     25.19     25.25     25.31
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  26
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                PAGE  51


    5.00    DISCHG       25.36     25.42     25.47     25.46     25.35     25.08     24.58     23.83     22.87     21.78
    5.50    DISCHG       20.64     19.52     18.47     17.52     16.72     16.12     15.76     15.68     15.89     16.42
    6.00    DISCHG       17.19     18.03     18.73     19.13     19.03     18.33     17.08     15.41     13.52     11.57
    6.50    DISCHG        9.71      8.00      6.51      5.30      4.33      3.55      2.92      2.39      1.95      1.60
    7.00    DISCHG        1.30      1.06       .87       .71       .58       .47       .38       .31       .25       .21
    7.50    DISCHG         .17       .13       .11       .08       .06       .05       .03       .02       .01       .01
    8.00    DISCHG         .00

   RUNOFF VOLUME ABOVE BASEFLOW =   .72 WATERSHED INCHES,    194.72 CFS-HRS,    16.09 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION 101, ALTERNATE  6, STORM  5, ADDED TO OUTPUT HYDROGRAPH FILE ---


 EXECUTIVE CONTROL OPERATION ENDCMP                                                                                  RECORD ID
+                                     COMPUTATIONS COMPLETED FOR PASS  26



 EXECUTIVE CONTROL OPERATION INCREM                                                                                  RECORD ID
+                                     MAIN TIME INCREMENT =   .20 HOURS


 EXECUTIVE CONTROL OPERATION COMPUT                                                                                  RECORD ID  5yr, 12
+                                     FROM XSECTION  10
+                                                                TO XSECTION 101
         STARTING TIME =   .00    RAIN DEPTH =  2.64    RAIN DURATION= 12.00    RAIN TABLE NO.= 7    ANT. MOIST. COND= 2
         ALTERNATE NO.=12         STORM NO.= 5    MAIN TIME INCREMENT =   .20 HOURS


 OPERATION RUNOFF   CROSS SECTION  10

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               5.55                          39.62                        (RUNOFF)
              12.07                           9.16                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .20 HOURS      DRAINAGE AREA =    .25 SQ.MI.
    2.00    DISCHG         .00       .00       .00       .00       .09       .63      1.81      3.59      5.63      8.18
    4.00    DISCHG       12.01     16.22     20.46     25.60     30.67     34.53     36.97     38.82     39.55     37.61
    6.00    DISCHG       35.41     33.81     31.17     28.87     27.43     25.78     24.45     23.44     21.85     20.46
    8.00    DISCHG       19.35     17.62     16.09     15.38     15.10     15.00     14.50     12.97     11.50     10.76
   10.00    DISCHG       10.44     10.31     10.27     10.27     10.27      9.79      8.20      6.68      6.38      7.66
   12.00    DISCHG        9.07      8.78      5.85      2.82      1.30       .59       .27       .12       .05       .01
   14.00    DISCHG         .00

   RUNOFF VOLUME ABOVE BASEFLOW =  1.04 WATERSHED INCHES,    170.50 CFS-HRS,    14.09 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION  10, ALTERNATE 12, STORM  5, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION RUNOFF   CROSS SECTION  11
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  27
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                PAGE  52


           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               5.58                          20.87                        (RUNOFF)
              10.71                           6.04                        (RUNOFF)
              12.05                           5.45                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .20 HOURS      DRAINAGE AREA =    .17 SQ.MI.
    2.00    DISCHG         .00       .00       .00       .00       .00       .00       .02       .28       .99      2.21
    4.00    DISCHG        4.14      6.38      8.81     11.80     14.79     17.17     18.81     20.18     20.87     19.91
    6.00    DISCHG       18.97     18.32     16.92     15.80     15.17     14.29     13.65     13.16     12.26     11.53
    8.00    DISCHG       10.95      9.93      9.12      8.78      8.67      8.64      8.35      7.38      6.55      6.18
   10.00    DISCHG        6.03      5.98      5.98      5.99      6.00      5.67      4.66      3.77      3.72      4.60
   12.00    DISCHG        5.42      5.13      3.19      1.44       .63       .27       .12       .05       .02       .00

   RUNOFF VOLUME ABOVE BASEFLOW =   .83 WATERSHED INCHES,     89.93 CFS-HRS,     7.43 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION  11, ALTERNATE 12, STORM  5, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION ADDHYD   CROSS SECTION 101
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          PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
              5.57                          60.48                        (NULL)
             10.70                          16.36                        (NULL)
             12.06                          14.61                        (NULL)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .20 HOURS      DRAINAGE AREA =    .42 SQ.MI.
    2.00    DISCHG         .00       .00       .00       .00       .09       .63      1.83      3.87      6.62     10.39
    4.00    DISCHG       16.15     22.60     29.27     37.39     45.45     51.70     55.78     59.00     60.41     57.52
    6.00    DISCHG       54.38     52.12     48.09     44.67     42.60     40.06     38.09     36.60     34.11     31.99
    8.00    DISCHG       30.30     27.55     25.21     24.16     23.77     23.65     22.85     20.35     18.05     16.94
   10.00    DISCHG       16.47     16.30     16.25     16.26     16.27     15.47     12.86     10.45     10.10     12.26
   12.00    DISCHG       14.49     13.91      9.05      4.26      1.93       .86       .38       .17       .06       .02
   14.00    DISCHG         .00

   RUNOFF VOLUME ABOVE BASEFLOW =   .96 WATERSHED INCHES,    260.42 CFS-HRS,    21.52 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION 101, ALTERNATE 12, STORM  5, ADDED TO OUTPUT HYDROGRAPH FILE ---


 EXECUTIVE CONTROL OPERATION ENDCMP                                                                                    RECORD ID
+                                     COMPUTATIONS COMPLETED FOR PASS  27



 EXECUTIVE CONTROL OPERATION COMPUT                                                                                    RECORD ID  5yr, 18
+                                     FROM XSECTION  10
+                                                          TO XSECTION 101
         STARTING TIME =   .00    RAIN DEPTH =  2.86    RAIN DURATION= 18.00    RAIN TABLE NO.= 8    ANT. MOIST. COND= 2
         ALTERNATE NO.=18         STORM NO.= 5    MAIN TIME INCREMENT =   .20 HOURS
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  28
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                     PAGE  53


 OPERATION RUNOFF   CROSS SECTION  10

          PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
             11.78                          39.95                        (RUNOFF)
             16.11                          11.47                        (RUNOFF)
             17.96                          11.34                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .20 HOURS      DRAINAGE AREA =    .25 SQ.MI.
    4.00    DISCHG         .00       .00       .00       .00       .00       .01       .11       .35       .69      1.07
    6.00    DISCHG        1.46      1.85      2.23      2.60      2.97      3.32      3.66      4.11      4.82      5.57
    8.00    DISCHG        6.18      6.75      7.56      8.58      9.47     10.18     10.99     12.19     13.39     14.31
   10.00    DISCHG       15.35     18.66     23.65     27.58     30.13     32.31     34.78     37.08     38.87     39.94
   12.00    DISCHG       38.33     34.81     32.49     31.66     30.48     27.25     24.20     22.76     21.99     20.24
   14.00    DISCHG       17.76     16.10     15.39     14.72     13.47     12.33     11.75     11.51     11.42     11.40
   16.00    DISCHG       11.41     11.43     11.08      9.91      8.76      8.19      8.05      8.76     10.03     10.93
   18.00    DISCHG       11.31     10.33      6.80      3.34      1.51       .69       .31       .14       .05       .02
   20.00    DISCHG         .00

   RUNOFF VOLUME ABOVE BASEFLOW =  1.21 WATERSHED INCHES,    197.18 CFS-HRS,    16.30 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION  10, ALTERNATE 18, STORM  5, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION RUNOFF   CROSS SECTION  11

          PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
             11.79                          22.24                        (RUNOFF)
             16.12                           6.76                        (RUNOFF)
             17.95                           6.79                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .20 HOURS      DRAINAGE AREA =    .17 SQ.MI.
    6.00    DISCHG         .01       .06       .20       .38       .58       .79      1.00      1.25      1.61      1.99
    8.00    DISCHG        2.32      2.64      3.10      3.65      4.14      4.55      5.03      5.73      6.41      6.95
   10.00    DISCHG        7.59      9.55     12.35     14.48     15.95     17.29     18.86     20.30     21.46     22.24
   12.00    DISCHG       21.23     19.24     18.17     17.88     17.24     15.32     13.67     12.99     12.63     11.56
   14.00    DISCHG       10.08      9.23      8.89      8.53      7.75      7.11      6.83      6.72      6.69      6.70
   16.00    DISCHG        6.71      6.73      6.50      5.74      5.08      4.79      4.74      5.25      6.05      6.55
   18.00    DISCHG        6.76      6.06      3.72      1.68       .72       .31       .13       .05       .02       .00

   RUNOFF VOLUME ABOVE BASEFLOW =   .97 WATERSHED INCHES,    105.71 CFS-HRS,     8.74 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION  11, ALTERNATE 18, STORM  5, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION ADDHYD   CROSS SECTION 101
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  28
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                     PAGE  54


          PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
             11.78                          62.19                        (NULL)
             16.11                          18.22                        (NULL)
             17.95                          18.13                        (NULL)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .20 HOURS      DRAINAGE AREA =    .42 SQ.MI.
    4.00    DISCHG         .00       .00       .00       .00       .00       .01       .11       .35       .69      1.07
    6.00    DISCHG        1.47      1.91      2.43      2.98      3.55      4.11      4.67      5.36      6.44      7.56
    8.00    DISCHG        8.50      9.39     10.66     12.24     13.61     14.73     16.02     17.92     19.79     21.26
   10.00    DISCHG       22.94     28.21     36.00     42.06     46.08     49.61     53.64     57.38     60.32     62.17
   12.00    DISCHG       59.56     54.05     50.66     49.55     47.72     42.57     37.88     35.75     34.62     31.80
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  14.00    DISCHG       27.83     25.33     24.28     23.25     21.22     19.44     18.57     18.23     18.11     18.10
  16.00    DISCHG       18.12     18.16     17.57     15.64     13.84     12.98     12.78     14.01     16.08     17.47
  18.00    DISCHG       18.07     16.39     10.52      5.02      2.24      1.01       .44       .19       .07       .02
  20.00    DISCHG         .00

  RUNOFF VOLUME ABOVE BASEFLOW =  1.11 WATERSHED INCHES,    302.89 CFS-HRS,    25.03 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION 101, ALTERNATE 18, STORM  5, ADDED TO OUTPUT HYDROGRAPH FILE ---


 EXECUTIVE CONTROL OPERATION ENDCMP                                                                                RECORD ID
+                                    COMPUTATIONS COMPLETED FOR PASS  28



 EXECUTIVE CONTROL OPERATION COMPUT                                                                                RECORD ID  5yr, 24
+                                    FROM XSECTION  10
+                                                          TO XSECTION 101
         STARTING TIME =   .00    RAIN DEPTH =  3.04    RAIN DURATION= 24.00    RAIN TABLE NO.= 8    ANT. MOIST. COND= 2
         ALTERNATE NO.=24         STORM NO.= 5    MAIN TIME INCREMENT =   .20 HOURS


 OPERATION RUNOFF   CROSS SECTION  10

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
              15.64                          33.62                        (RUNOFF)
              21.51                           9.39                        (RUNOFF)
              23.92                           9.51                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .20 HOURS      DRAINAGE AREA =    .25 SQ.MI.
    6.00    DISCHG         .00       .00       .02       .13       .31       .55       .80      1.05      1.30      1.55
    8.00    DISCHG        1.79      2.03      2.26      2.49      2.71      2.93      3.14      3.35      3.55      3.85
   10.00    DISCHG        4.38      4.93      5.35      5.69      6.00      6.41      7.11      7.83      8.36      8.79
   12.00    DISCHG        9.15      9.66     10.52     11.39     12.01     12.50     12.93     14.33     17.91     21.56
   14.00    DISCHG       23.88     25.40     26.53     27.69     29.27     30.79     31.95     32.85     33.60     33.24
   16.00    DISCHG       30.42     27.58     26.25     25.78     25.70     24.93     22.34     19.83     18.63     18.12
   18.00    DISCHG       17.93     17.30     15.47     13.71     12.81     12.43     12.27     11.92     10.96     10.05
   20.00    DISCHG        9.59      9.40      9.32      9.29      9.29      9.30      9.32      9.34      9.35      9.06
   22.00    DISCHG        8.10      7.17      6.69      6.48      6.40      6.67      7.64      8.59      9.10      9.34
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  29
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                PAGE  55


  24.00    DISCHG        9.43      8.56      5.60      2.72      1.24       .57       .25       .11       .04       .01
  26.00    DISCHG         .00

  RUNOFF VOLUME ABOVE BASEFLOW =  1.34 WATERSHED INCHES,    219.67 CFS-HRS,    18.15 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION  10, ALTERNATE 24, STORM  5, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION RUNOFF   CROSS SECTION  11

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
              15.64                          18.92                        (RUNOFF)
              16.71                          14.80                        (RUNOFF)
              21.51                           5.58                        (RUNOFF)
              23.92                           5.73                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .20 HOURS      DRAINAGE AREA =    .17 SQ.MI.
    6.00    DISCHG         .00       .00       .00       .00       .00       .00       .00       .00       .01       .05
    8.00    DISCHG         .14       .26       .39       .53       .66       .80       .93      1.06      1.19      1.36
   10.00    DISCHG        1.62      1.89      2.12      2.31      2.49      2.74      3.12      3.50      3.80      4.05
   12.00    DISCHG        4.28      4.59      5.09      5.57      5.93      6.23      6.51      7.36      9.45     11.44
   14.00    DISCHG       12.71     13.58     14.28     15.04     16.07     17.03     17.76     18.38     18.90     18.70
   16.00    DISCHG       17.00     15.47     14.88     14.73     14.76     14.31     12.71     11.32     10.72     10.50
   18.00    DISCHG       10.44     10.06      8.89      7.89      7.44      7.26      7.20      6.98      6.37      5.85
   20.00    DISCHG        5.62      5.53      5.50      5.50      5.50      5.52      5.53      5.55      5.56      5.36
   22.00    DISCHG        4.73      4.19      3.94      3.83      3.80      4.00      4.65      5.21      5.49      5.61
   24.00    DISCHG        5.67      5.04      3.08      1.38       .60       .26       .11       .04       .02       .00

  RUNOFF VOLUME ABOVE BASEFLOW =  1.10 WATERSHED INCHES,    119.12 CFS-HRS,     9.84 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION  11, ALTERNATE 24, STORM  5, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION ADDHYD   CROSS SECTION 101

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
              15.64                          52.54                        (NULL)
              21.51                          14.96                        (NULL)
              23.92                          15.24                        (NULL)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .20 HOURS      DRAINAGE AREA =    .42 SQ.MI.
    6.00    DISCHG         .00       .00       .02       .13       .31       .55       .80      1.05      1.31      1.60
    8.00    DISCHG        1.93      2.29      2.66      3.02      3.38      3.73      4.07      4.40      4.74      5.21
   10.00    DISCHG        6.01      6.83      7.47      8.01      8.49      9.15     10.24     11.33     12.16     12.83
   12.00    DISCHG       13.44     14.25     15.61     16.96     17.94     18.73     19.45     21.69     27.37     33.01
   14.00    DISCHG       36.59     38.98     40.81     42.74     45.34     47.82     49.71     51.23     52.50     51.94
   16.00    DISCHG       47.42     43.05     41.13     40.51     40.45     39.24     35.05     31.15     29.35     28.63
   18.00    DISCHG       28.38     27.35     24.35     21.60     20.25     19.69     19.47     18.90     17.33     15.90
   20.00    DISCHG       15.21     14.93     14.82     14.79     14.80     14.82     14.85     14.89     14.91     14.41
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  29
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                PAGE  56


  22.00    DISCHG       12.83     11.36     10.63     10.31     10.19     10.67     12.29     13.80     14.59     14.95
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  24.00    DISCHG       15.10     13.60      8.69      4.11      1.84       .83       .36       .15       .06       .02
  26.00    DISCHG         .00

  RUNOFF VOLUME ABOVE BASEFLOW =  1.25 WATERSHED INCHES,    338.79 CFS-HRS,    28.00 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION 101, ALTERNATE 24, STORM  5, ADDED TO OUTPUT HYDROGRAPH FILE ---


 EXECUTIVE CONTROL OPERATION ENDCMP                                                                                  RECORD ID
+                                   COMPUTATIONS COMPLETED FOR PASS  29



 EXECUTIVE CONTROL OPERATION INCREM                                                                                  RECORD ID
+                                   MAIN TIME INCREMENT =   .50 HOURS


 EXECUTIVE CONTROL OPERATION COMPUT                                                                                  RECORD ID  5yr, 48
+                                   FROM XSECTION  10
+                                                        TO XSECTION 101
         STARTING TIME =   .00    RAIN DEPTH =  3.38    RAIN DURATION= 48.00    RAIN TABLE NO.= 9    ANT. MOIST. COND= 2
         ALTERNATE NO.=48         STORM NO.= 5    MAIN TIME INCREMENT =   .50 HOURS


 OPERATION RUNOFF   CROSS SECTION  10

 *** WARNING-MAIN TIME INCREMENT MAY BE TOO LARGE.
         COMPUTED PEAK(     15.65) AT              EXCEEDS MAX. ADJACENT HYDROGRAPH COORDINATE BY   7 %.
+                                  XSECTION  10

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
              42.83                          20.52                        (RUNOFF)
              47.75                          15.65                        (RUNOFF)
              41.00                          20.66                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .50 HOURS      DRAINAGE AREA =    .25 SQ.MI.
  10.00    DISCHG         .00       .00       .00       .00       .00       .00       .01       .08       .19       .31
  15.00    DISCHG         .43       .54       .65       .75       .85       .96      1.05      1.15      1.24      1.33
  20.00    DISCHG        1.42      1.51      1.60      1.68      1.76      1.84      1.92      1.99      2.07      2.56
  25.00    DISCHG        2.93      3.09      3.21      3.30      2.81      2.67      2.70      2.75      2.91      3.66
  30.00    DISCHG        3.91      4.02      4.12      4.72      6.21      6.63      6.85      7.02      7.19      7.35
  35.00    DISCHG        7.51      7.66      7.82      9.50     10.68     11.04     11.28     11.68     17.00     19.24
  40.00    DISCHG       19.95     20.42     20.66     19.86     19.91     20.16     20.42     19.00     14.81     14.14
  45.00    DISCHG       14.13     14.22     14.32     14.41     14.50     14.58     14.61      6.21       .87       .11
  50.00    DISCHG         .00

  RUNOFF VOLUME ABOVE BASEFLOW =  1.61 WATERSHED INCHES,    262.93 CFS-HRS,    21.73 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION  10, ALTERNATE 48, STORM  5, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION RUNOFF   CROSS SECTION  11
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  30
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                PAGE  57


 *** WARNING-MAIN TIME INCREMENT MAY BE TOO LARGE.
         COMPUTED PEAK(      9.53) AT              EXCEEDS MAX. ADJACENT HYDROGRAPH COORDINATE BY   7 %.
+                                  XSECTION  11

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
              42.84                          12.13                        (RUNOFF)
              47.75                           9.53                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .50 HOURS      DRAINAGE AREA =    .17 SQ.MI.
  15.00    DISCHG         .00       .00       .00       .04       .10       .16       .22       .28       .34       .40
  20.00    DISCHG         .45       .51       .56       .62       .67       .72       .77       .82       .86      1.11
  25.00    DISCHG        1.28      1.38      1.45      1.52      1.29      1.25      1.28      1.32      1.41      1.80
  30.00    DISCHG        1.93      2.00      2.06      2.42      3.19      3.42      3.56      3.68      3.80      3.91
  35.00    DISCHG        4.02      4.13      4.24      5.26      5.89      6.11      6.28      6.56      9.77     10.98
  40.00    DISCHG       11.43     11.77     11.96     11.55     11.65     11.86     12.07     11.14      8.71      8.41
  45.00    DISCHG        8.45      8.52      8.60      8.67      8.74      8.81      8.86      3.30       .40       .04

  RUNOFF VOLUME ABOVE BASEFLOW =  1.34 WATERSHED INCHES,    145.11 CFS-HRS,    11.99 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION  11, ALTERNATE 48, STORM  5, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION ADDHYD   CROSS SECTION 101

 *** WARNING-MAIN TIME INCREMENT MAY BE TOO LARGE.
         COMPUTED PEAK(     25.18) AT              EXCEEDS MAX. ADJACENT HYDROGRAPH COORDINATE BY   7 %.
+                                  XSECTION 101

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
              40.88                          32.66                        (NULL)
              42.83                          32.65                        (NULL)
              47.75                          25.18                        (NULL)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .50 HOURS      DRAINAGE AREA =    .42 SQ.MI.
  10.00    DISCHG         .00       .00       .00       .00       .00       .00       .01       .08       .19       .31
  15.00    DISCHG         .43       .54       .65       .79       .96      1.12      1.28      1.43      1.58      1.73
  20.00    DISCHG        1.88      2.02      2.16      2.29      2.43      2.56      2.68      2.81      2.93      3.67
  25.00    DISCHG        4.22      4.47      4.67      4.82      4.11      3.92      3.98      4.07      4.32      5.46
  30.00    DISCHG        5.83      6.02      6.18      7.14      9.41     10.05     10.40     10.70     10.99     11.27
  35.00    DISCHG       11.53     11.79     12.05     14.76     16.57     17.15     17.56     18.24     26.76     30.22
  40.00    DISCHG       31.38     32.18     32.62     31.41     31.56     32.02     32.49     30.14     23.52     22.56
  45.00    DISCHG       22.58     22.74     22.91     23.08     23.24     23.39     23.47      9.51      1.28       .15
  50.00    DISCHG         .00
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RUNOFF VOLUME ABOVE BASEFLOW = 1.50 WATERSHED INCHES, 408.02 CFS-HRS, 33.72 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 101, ALTERNATE 48, STORM 5, ADDED TO OUTPUT HYDROGRAPH FILE ---

EXECUTIVE CONTROL OPERATION ENDCMP RECORD ID
+ COMPUTATIONS COMPLETED FOR PASS 30

1

TR20 XEQ 04-29-08 16:15 VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS JOB 1 PASS 31
REV PC 09/83(.2) CALCS: V3 W/HUFF-ISWS CIR.173/90 FILE: E06037.DAT DATE: 04/29/08 JAS PAGE 58

EXECUTIVE CONTROL OPERATION COMPUT RECORD ID 5yr, 72
+ FROM XSECTION 10
+ TO XSECTION 101
STARTING TIME = .00 RAIN DEPTH = 3.68 RAIN DURATION= 72.00 RAIN TABLE NO.= 9 ANT. MOIST. COND= 2
ALTERNATE NO.=72 STORM NO.= 5 MAIN TIME INCREMENT = .50 HOURS

OPERATION RUNOFF CROSS SECTION 10

*** WARNING-MAIN TIME INCREMENT MAY BE TOO LARGE.
COMPUTED PEAK(11.71) AT EXCEEDS MAX. ADJACENT HYDROGRAPH COORDINATE BY 7 %.
+ XSECTION 10

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
64.36	15.41	(RUNOFF)
71.75	11.71	(RUNOFF)
61.00	15.63	(RUNOFF)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .50 HOURS DRAINAGE AREA = .25 SQ.MI.

15.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.04	.10	.17
20.00	DISCHG	.23	.29	.35	.41	.46	.52	.57	.63	.68	.73
25.00	DISCHG	.78	.84	.88	.93	.98	1.03	1.07	1.12	1.16	1.21
30.00	DISCHG	1.25	1.29	1.33	1.37	1.41	1.45	1.49	1.53	1.57	1.61
35.00	DISCHG	1.64	1.68	1.72	2.09	2.36	2.45	2.51	2.57	2.62	2.68
40.00	DISCHG	2.44	2.14	2.12	2.14	2.16	2.19	2.22	2.43	2.94	3.07
45.00	DISCHG	3.13	3.18	3.22	3.26	3.48	4.72	5.08	5.21	5.30	5.38
50.00	DISCHG	5.46	5.54	5.62	5.69	5.77	5.84	5.91	5.98	6.05	7.30
55.00	DISCHG	8.14	8.35	8.47	8.57	8.67	8.76	11.16	14.12	14.77	15.04
60.00	DISCHG	15.25	15.45	15.63	15.52	14.90	14.91	15.02	15.15	15.27	15.39
65.00	DISCHG	14.97	11.40	10.59	10.51	10.54	10.59	10.63	10.67	10.72	10.76
70.00	DISCHG	10.80	10.83	10.87	10.91	10.92	4.60	.64	.08	.00	

RUNOFF VOLUME ABOVE BASEFLOW = 1.85 WATERSHED INCHES, 302.86 CFS-HRS, 25.03 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 10, ALTERNATE 72, STORM 5, ADDED TO OUTPUT HYDROGRAPH FILE ---

OPERATION RUNOFF CROSS SECTION 11

*** WARNING-MAIN TIME INCREMENT MAY BE TOO LARGE.
COMPUTED PEAK(7.19) AT EXCEEDS MAX. ADJACENT HYDROGRAPH COORDINATE BY 7 %.
+ XSECTION 11

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
64.38	9.22	(RUNOFF)
71.75	7.19	(RUNOFF)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .50 HOURS DRAINAGE AREA = .17 SQ.MI.

20.00	DISCHG	.00	.00	.00	.00	.00	.01	.04	.08	.11	.14

1

TR20 XEQ 04-29-08 16:15 VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS JOB 1 PASS 31
REV PC 09/83(.2) CALCS: V3 W/HUFF-ISWS CIR.173/90 FILE: E06037.DAT DATE: 04/29/08 JAS PAGE 59

25.00	DISCHG	.17	.21	.24	.27	.30	.33	.35	.38	.41	.44
30.00	DISCHG	.47	.49	.52	.55	.57	.60	.62	.65	.67	.70
35.00	DISCHG	.72	.74	.77	.96	1.08	1.13	1.17	1.21	1.25	1.28
40.00	DISCHG	1.17	1.03	1.03	1.05	1.07	1.09	1.11	1.23	1.49	1.56
45.00	DISCHG	1.59	1.62	1.65	1.68	1.81	2.49	2.67	2.75	2.81	2.87
50.00	DISCHG	2.93	2.98	3.04	3.09	3.14	3.20	3.25	3.30	3.35	4.11
55.00	DISCHG	4.56	4.68	4.76	4.84	4.91	4.98	6.52	8.16	8.52	8.71
60.00	DISCHG	8.87	9.02	9.16	9.10	8.77	8.82	8.91	9.01	9.11	9.21
65.00	DISCHG	8.93	6.74	6.35	6.33	6.36	6.40	6.43	6.47	6.50	6.53
70.00	DISCHG	6.57	6.60	6.63	6.66	6.67	2.49	.30	.03		

RUNOFF VOLUME ABOVE BASEFLOW = 1.56 WATERSHED INCHES, 169.47 CFS-HRS, 14.01 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 11, ALTERNATE 72, STORM 5, ADDED TO OUTPUT HYDROGRAPH FILE ---

OPERATION ADDHYD CROSS SECTION 101

*** WARNING-MAIN TIME INCREMENT MAY BE TOO LARGE.
COMPUTED PEAK(18.90) AT EXCEEDS MAX. ADJACENT HYDROGRAPH COORDINATE BY 7 %.
+ XSECTION 101

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
61.08	24.80	(NULL)
64.37	24.63	(NULL)
71.75	18.90	(NULL)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .50 HOURS DRAINAGE AREA = .42 SQ.MI.

15.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.04	.10	.17
20.00	DISCHG	.23	.29	.35	.41	.46	.53	.62	.71	.79	.88

25.00	DISCHG	.96	1.04	1.12	1.20	1.28	1.35	1.43	1.50	1.57	1.65
30.00	DISCHG	1.72	1.79	1.85	1.92	1.99	2.05	2.12	2.18	2.24	2.30
35.00	DISCHG	2.36	2.42	2.48	3.05	3.44	3.58	3.68	3.77	3.87	3.96
40.00	DISCHG	3.61	3.17	3.15	3.19	3.23	3.28	3.33	3.66	4.43	4.63
45.00	DISCHG	4.72	4.80	4.87	4.95	5.29	7.20	7.75	7.95	8.11	8.25
50.00	DISCHG	8.39	8.52	8.66	8.79	8.91	9.03	9.16	9.27	9.39	11.41
55.00	DISCHG	12.69	13.03	13.23	13.41	13.58	13.75	17.68	22.29	23.29	23.75
60.00	DISCHG	24.12	24.46	24.79	24.61	23.67	23.72	23.93	24.16	24.38	24.60
65.00	DISCHG	23.90	18.14	16.93	16.84	16.91	16.99	17.06	17.14	17.22	17.29
70.00	DISCHG	17.36	17.43	17.50	17.57	17.59	7.09	.94	.11	.00	

RUNOFF VOLUME ABOVE BASEFLOW = 1.74 WATERSHED INCHES, 472.33 CFS-HRS, 39.03 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 101, ALTERNATE 72, STORM 5, ADDED TO OUTPUT HYDROGRAPH FILE ---

EXECUTIVE CONTROL OPERATION ENDCMP RECORD ID
+ COMPUTATIONS COMPLETED FOR PASS 31

1

TR20 XEQ 04-29-08 16:15 VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS JOB 1 PASS 32
REV PC 09/83(.2) CALCS: V3 W/HUFF-ISWS CIR.173/90 FILE: E06037.DAT DATE: 04/29/08 JAS PAGE 60

EXECUTIVE CONTROL OPERATION COMPUT RECORD ID 5yr, 12
+ FROM XSECTION 10
+ TO XSECTION 101
STARTING TIME = .00 RAIN DEPTH = 4.18 RAIN DURATION=120.00 RAIN TABLE NO.= 9 ANT. MOIST. COND= 2
ALTERNATE NO.=73 STORM NO.= 5 MAIN TIME INCREMENT = .50 HOURS

OPERATION RUNOFF CROSS SECTION 10

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
107.76	11.27	(RUNOFF)
119.48	7.72	(RUNOFF)
102.00	11.32	(RUNOFF)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .50 HOURS DRAINAGE AREA = .25 SQ.MI.

25.00	DISCHG	.00	.00	.00	.00	.01	.03	.06	.09	.12	.15
30.00	DISCHG	.18	.21	.23	.26	.29	.31	.34	.37	.39	.42
35.00	DISCHG	.44	.47	.49	.51	.54	.56	.58	.61	.63	.65
40.00	DISCHG	.67	.70	.72	.74	.76	.78	.80	.82	.84	.86
45.00	DISCHG	.88	.90	.92	.94	.96	.98	.99	1.01	1.03	1.05
50.00	DISCHG	1.06	1.08	1.10	1.12	1.13	1.15	1.17	1.18	1.20	1.21
55.00	DISCHG	1.23	1.24	1.26	1.28	1.29	1.31	1.32	1.33	1.35	1.36
60.00	DISCHG	1.38	1.66	1.85	1.90	1.93	1.95	1.97	2.00	2.02	2.04
65.00	DISCHG	2.06	2.09	2.11	1.82	1.64	1.62	1.63	1.64	1.65	1.67
70.00	DISCHG	1.68	1.69	1.70	1.71	1.72	2.07	2.29	2.34	2.36	2.38
75.00	DISCHG	2.40	2.42	2.43	2.45	2.47	2.48	2.50	3.25	3.74	3.84
80.00	DISCHG	3.88	3.91	3.95	3.98	4.01	4.05	4.08	4.11	4.14	4.17
85.00	DISCHG	4.20	4.23	4.25	4.28	4.31	4.34	4.36	4.39	4.42	4.44
90.00	DISCHG	4.47	5.36	5.94	6.06	6.11	6.15	6.19	6.23	6.27	6.31
95.00	DISCHG	6.34	6.38	6.42	8.80	10.33	10.63	10.74	10.82	10.90	10.97
100.00	DISCHG	11.05	11.12	11.19	11.26	11.32	10.88	10.62	10.62	10.67	10.72
105.00	DISCHG	10.76	10.81	10.86	10.90	10.95	10.99	11.02	8.93	7.62	7.44
110.00	DISCHG	7.43	7.45	7.47	7.48	7.50	7.51	7.53	7.55	7.56	7.58
115.00	DISCHG	7.59	7.61	7.62	7.63	7.65	7.66	7.68	7.69	7.70	7.72
120.00	DISCHG	7.70	3.27	.46	.06	.00					

RUNOFF VOLUME ABOVE BASEFLOW = 2.27 WATERSHED INCHES, 371.37 CFS-HRS, 30.69 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 10, ALTERNATE 73, STORM 5, ADDED TO OUTPUT HYDROGRAPH FILE ---

OPERATION RUNOFF CROSS SECTION 11

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
107.76	6.87	(RUNOFF)
119.55	4.77	(RUNOFF)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .50 HOURS DRAINAGE AREA = .17 SQ.MI.

30.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.01	.03	.05

1

TR20 XEQ 04-29-08 16:15 VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS JOB 1 PASS 32
REV PC 09/83(.2) CALCS: V3 W/HUFF-ISWS CIR.173/90 FILE: E06037.DAT DATE: 04/29/08 JAS PAGE 61

35.00	DISCHG	.06	.08	.09	.11	.12	.13	.15	.16	.18	.19
40.00	DISCHG	.21	.22	.23	.25	.26	.27	.29	.30	.31	.32
45.00	DISCHG	.34	.35	.36	.37	.38	.40	.41	.42	.43	.44
50.00	DISCHG	.45	.47	.48	.49	.50	.51	.52	.53	.54	.55
55.00	DISCHG	.56	.57	.58	.59	.60	.61	.62	.63	.64	.65
60.00	DISCHG	.66	.81	.90	.93	.94	.96	.98	.99	1.01	1.02
65.00	DISCHG	1.04	1.05	1.07	.91	.83	.83	.84	.84	.85	.86
70.00	DISCHG	.87	.87	.88	.89	.90	1.09	1.21	1.23	1.24	1.26
75.00	DISCHG	1.27	1.28	1.29	1.31	1.32	1.33	1.34	1.78	2.03	2.08
80.00	DISCHG	2.11	2.13	2.16	2.18	2.20	2.23	2.25	2.27	2.29	2.32
85.00	DISCHG	2.34	2.36	2.38	2.40	2.42	2.44	2.46	2.48	2.50	2.52
90.00	DISCHG	2.54	3.09	3.40	3.47	3.50	3.53	3.56	3.59	3.62	3.65
95.00	DISCHG	3.68	3.70	3.74	5.24	6.07	6.23	6.31	6.37	6.43	6.49
100.00	DISCHG	6.55	6.60	6.66	6.71	6.76	6.48	6.36	6.38	6.42	6.45
105.00	DISCHG	6.49	6.53	6.57	6.60	6.64	6.67	6.71	5.32	4.61	4.53
110.00	DISCHG	4.54	4.55	4.56	4.58	4.59	4.60	4.62	4.63	4.64	4.66
115.00	DISCHG	4.67	4.68	4.69	4.70	4.72	4.73	4.74	4.75	4.76	4.77
120.00	DISCHG	4.76	1.78	.22	.02						

RUNOFF VOLUME ABOVE BASEFLOW = 1.95 WATERSHED INCHES, 211.65 CFS-HRS, 17.49 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 11, ALTERNATE 73, STORM 5, ADDED TO OUTPUT HYDROGRAPH FILE ---

OPERATION ADDHYD CROSS SECTION 101

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
101.82	18.14	(NULL)
107.76	18.14	(NULL)
119.51	12.49	(NULL)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .50 HOURS DRAINAGE AREA = .42 SQ.MI.

25.00	DISCHG	.00	.00	.00	.00	.01	.03	.06	.09	.12	.15
30.00	DISCHG	.18	.21	.23	.26	.29	.31	.34	.38	.42	.46
35.00	DISCHG	.50	.54	.58	.62	.66	.70	.73	.77	.81	.84
40.00	DISCHG	.88	.92	.95	.98	1.02	1.05	1.09	1.12	1.15	1.18
45.00	DISCHG	1.22	1.25	1.28	1.31	1.34	1.37	1.40	1.43	1.46	1.49
50.00	DISCHG	1.52	1.55	1.58	1.60	1.63	1.66	1.69	1.71	1.74	1.77
55.00	DISCHG	1.79	1.82	1.84	1.87	1.89	1.92	1.94	1.97	1.99	2.02
60.00	DISCHG	2.04	2.48	2.75	2.83	2.87	2.91	2.95	2.99	3.03	3.06
65.00	DISCHG	3.10	3.14	3.17	2.73	2.47	2.45	2.47	2.49	2.50	2.52
70.00	DISCHG	2.54	2.56	2.58	2.60	2.62	3.16	3.50	3.57	3.61	3.64
75.00	DISCHG	3.67	3.70	3.73	3.76	3.78	3.81	3.85	5.03	5.76	5.91
80.00	DISCHG	5.99	6.05	6.10	6.16	6.22	6.27	6.33	6.38	6.43	6.48
85.00	DISCHG	6.53	6.58	6.63	6.68	6.73	6.78	6.82	6.87	6.91	6.96
90.00	DISCHG	7.01	8.45	9.34	9.53	9.62	9.69	9.76	9.82	9.89	9.96
95.00	DISCHG	10.02	10.08	10.16	14.04	16.40	16.86	17.04	17.19	17.33	17.46
100.00	DISCHG	17.59	17.72	17.85	17.97	18.08	17.36	16.97	17.00	17.08	17.17
105.00	DISCHG	17.26	17.34	17.43	17.51	17.59	17.66	17.72	14.25	12.23	11.98

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TR20 XEQ 04-29-08 16:15 VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS JOB 1 PASS 32
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110.00	DISCHG	11.97	12.00	12.03	12.06	12.09	12.12	12.15	12.18	12.20	12.23
115.00	DISCHG	12.26	12.29	12.31	12.34	12.36	12.39	12.41	12.44	12.46	12.49
120.00	DISCHG	12.46	5.04	.68	.08	.00					

RUNOFF VOLUME ABOVE BASEFLOW = 2.14 WATERSHED INCHES, 583.01 CFS-HRS, 48.18 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 101, ALTERNATE 73, STORM 5, ADDED TO OUTPUT HYDROGRAPH FILE ---

EXECUTIVE CONTROL OPERATION ENDCMP RECORD ID
+ COMPUTATIONS COMPLETED FOR PASS 32

EXECUTIVE CONTROL OPERATION COMPUT RECORD ID 5yr, 24
+ FROM XSECTION 10
+ TO XSECTION 101
STARTING TIME = .00 RAIN DEPTH = 5.12 RAIN DURATION=240.00 RAIN TABLE NO.= 9 ANT. MOIST. COND= 2
ALTERNATE NO.=74 STORM NO.= 5 MAIN TIME INCREMENT = .50 HOURS

OPERATION RUNOFF CROSS SECTION 10

*** WARNING-NO PEAK FOUND, MAXIMUM DISCHARGE = 1.70 CFS.

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
149.50	1.70	(RUNOFF)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .50 HOURS DRAINAGE AREA = .25 SQ.MI.

40.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
45.00	DISCHG	.02	.02	.03	.03	.04	.04	.04	.07	.08	.10
50.00	DISCHG	.11	.12	.13	.14	.15	.16	.17	.18	.19	.20
55.00	DISCHG	.21	.22	.23	.24	.25	.26	.27	.27	.28	.29
60.00	DISCHG	.30	.31	.32	.33	.34	.35	.35	.36	.37	.38
65.00	DISCHG	.39	.40	.41	.41	.42	.43	.44	.45	.45	.46
70.00	DISCHG	.47	.48	.49	.49	.50	.51	.52	.52	.53	.54
75.00	DISCHG	.54	.55	.56	.57	.57	.58	.59	.59	.60	.61
80.00	DISCHG	.61	.62	.63	.64	.64	.65	.65	.66	.67	.67
85.00	DISCHG	.68	.69	.69	.70	.71	.71	.72	.72	.73	.74
90.00	DISCHG	.74	.75	.75	.76	.76	.77	.78	.78	.79	.79
95.00	DISCHG	.80	.80	.81	.82	.82	.83	.83	.84	.84	.85
100.00	DISCHG	.85	.86	.86	.87	.87	.88	.88	.89	.89	.90
105.00	DISCHG	.90	.91	.91	.92	.92	.93	.93	.94	.94	.95
110.00	DISCHG	.95	.96	.96	.96	.97	.97	.98	.98	.99	.99
115.00	DISCHG	1.00	1.00	1.01	1.01	1.02	1.02	1.02	1.02	1.03	1.03
120.00	DISCHG	1.04	1.24	1.37	1.40	1.41	1.42	1.42	1.43	1.44	1.44
125.00	DISCHG	1.45	1.46	1.46	1.47	1.48	1.48	1.49	1.50	1.50	1.51
130.00	DISCHG	1.52	1.52	1.53	1.53	1.54	1.32	1.19	1.17	1.17	1.17
135.00	DISCHG	1.18	1.18	1.18	1.19	1.19	1.19	1.20	1.20	1.20	1.21
140.00	DISCHG	1.21	1.21	1.22	1.22	1.22	1.22	1.23	1.23	1.23	1.48
145.00	DISCHG	1.63	1.66	1.66	1.67	1.67	1.68	1.68	1.69	1.69	1.70

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TR20 XEQ 04-29-08 16:15 VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS JOB 1 PASS 33
REV PC 09/83(.2) CALCS: V3 W/HUFF-ISWS CIR.173/90 FILE: E06037.DAT DATE: 04/29/08 JAS PAGE 63

RUNOFF VOLUME ABOVE BASEFLOW = .53 WATERSHED INCHES, 86.33 CFS-HRS, 7.13 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 10, ALTERNATE 74, STORM 5, ADDED TO OUTPUT HYDROGRAPH FILE ---

OPERATION RUNOFF CROSS SECTION 11

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*** WARNING-NO PEAK FOUND, MAXIMUM DISCHARGE =         .94 CFS.

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
             149.50                            .94                        (RUNOFF)

TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .50 HOURS      DRAINAGE AREA =    .17 SQ.MI.
  55.00    DISCHG         .00       .00       .01       .02       .02       .03       .03       .04       .04       .05
  60.00    DISCHG         .06       .06       .07       .07       .08       .08       .09       .09       .10       .10
  65.00    DISCHG         .11       .12       .12       .13       .13       .14       .14       .15       .15       .16
  70.00    DISCHG         .16       .17       .17       .18       .18       .19       .19       .20       .20       .20
  75.00    DISCHG         .21       .21       .22       .22       .23       .23       .24       .24       .25       .25
  80.00    DISCHG         .25       .26       .26       .27       .27       .28       .28       .28       .29       .29
  85.00    DISCHG         .30       .30       .31       .31       .31       .32       .32       .33       .33       .33
  90.00    DISCHG         .34       .34       .34       .35       .35       .36       .36       .36       .37       .37
  95.00    DISCHG         .38       .38       .38       .39       .39       .39       .40       .40       .40       .41
 100.00    DISCHG         .41       .41       .42       .42       .43       .43       .43       .44       .44       .44
 105.00    DISCHG         .45       .45       .45       .46       .46       .46       .47       .47       .47       .47
 110.00    DISCHG         .48       .48       .48       .49       .49       .49       .50       .50       .50       .51
 115.00    DISCHG         .51       .51       .51       .52       .52       .52       .53       .53       .53       .54
 120.00    DISCHG         .54       .65       .72       .73       .74       .74       .75       .75       .76       .76
 125.00    DISCHG         .77       .77       .77       .78       .78       .79       .79       .80       .80       .81
 130.00    DISCHG         .81       .82       .82       .82       .83       .70       .64       .63       .63       .63
 135.00    DISCHG         .64       .64       .64       .64       .65       .65       .65       .65       .66       .66
 140.00    DISCHG         .66       .66       .66       .67       .67       .67       .67       .68       .68       .82
 145.00    DISCHG         .90       .91       .92       .92       .93       .93       .93       .94       .94       .94

  RUNOFF VOLUME ABOVE BASEFLOW =   .38 WATERSHED INCHES,     41.65 CFS-HRS,     3.44 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION  11, ALTERNATE 74, STORM  5, ADDED TO OUTPUT HYDROGRAPH FILE ---


OPERATION ADDHYD   CROSS SECTION 101

*** WARNING-NO PEAK FOUND, MAXIMUM DISCHARGE =        2.64 CFS.

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
             149.50                           2.64                        (NULL)

TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .50 HOURS      DRAINAGE AREA =    .42 SQ.MI.
  40.00    DISCHG         .00       .00       .00       .00       .00       .00       .00       .00       .01       .01
  45.00    DISCHG         .02       .02       .03       .03       .04       .04       .04       .07       .08       .10
1


TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  33
     REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                PAGE  64


  50.00    DISCHG         .11       .12       .13       .14       .15       .16       .17       .18       .19       .20
  55.00    DISCHG         .21       .22       .24       .25       .27       .28       .30       .31       .33       .34
  60.00    DISCHG         .36       .37       .39       .40       .42       .43       .44       .46       .47       .49
  65.00    DISCHG         .50       .51       .53       .54       .55       .57       .58       .59       .61       .62
  70.00    DISCHG         .63       .64       .66       .67       .68       .69       .71       .72       .73       .74
  75.00    DISCHG         .75       .77       .78       .79       .80       .81       .82       .84       .85       .86
  80.00    DISCHG         .87       .88       .89       .90       .91       .92       .93       .95       .96       .97
  85.00    DISCHG         .98       .99      1.00      1.01      1.02      1.03      1.04      1.05      1.06      1.07
  90.00    DISCHG        1.08      1.09      1.10      1.11      1.12      1.13      1.14      1.15      1.16      1.16
  95.00    DISCHG        1.17      1.18      1.19      1.20      1.21      1.22      1.23      1.24      1.25      1.26
 100.00    DISCHG        1.26      1.27      1.28      1.29      1.30      1.31      1.32      1.32      1.33      1.34
 105.00    DISCHG        1.35      1.36      1.36      1.37      1.38      1.39      1.40      1.40      1.41      1.42
 110.00    DISCHG        1.43      1.44      1.44      1.45      1.46      1.47      1.47      1.48      1.49      1.50
 115.00    DISCHG        1.50      1.51      1.52      1.53      1.53      1.54      1.55      1.55      1.56      1.57
 120.00    DISCHG        1.58      1.90      2.09      2.13      2.15      2.16      2.17      2.18      2.19      2.20
 125.00    DISCHG        2.22      2.23      2.24      2.25      2.26      2.27      2.28      2.29      2.31      2.32
 130.00    DISCHG        2.33      2.34      2.35      2.36      2.37      2.02      1.82      1.80      1.80      1.81
 135.00    DISCHG        1.81      1.82      1.82      1.83      1.84      1.84      1.85      1.85      1.86      1.86
 140.00    DISCHG        1.87      1.87      1.88      1.88      1.89      1.90      1.90      1.91      1.91      2.30
 145.00    DISCHG        2.53      2.57      2.58      2.59      2.60      2.61      2.62      2.63      2.63      2.64

  RUNOFF VOLUME ABOVE BASEFLOW =   .47 WATERSHED INCHES,    127.98 CFS-HRS,    10.58 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION 101, ALTERNATE 74, STORM  5, ADDED TO OUTPUT HYDROGRAPH FILE ---

EXECUTIVE CONTROL OPERATION ENDCMP                                                                                RECORD ID
+                                   COMPUTATIONS COMPLETED FOR PASS  33



EXECUTIVE CONTROL OPERATION INCREM                                                                                RECORD ID   Output
+                                   MAIN TIME INCREMENT =   .05 HOURS

EXECUTIVE CONTROL OPERATION COMPUT                                                                                RECORD ID  10yr, 1
+                                   FROM XSECTION  10
+                                                          TO XSECTION 101
        STARTING TIME =   .00    RAIN DEPTH =  1.65    RAIN DURATION=  1.00    RAIN TABLE NO.= 6    ANT. MOIST. COND= 2
        ALTERNATE NO.= 1         STORM NO.=10    MAIN TIME INCREMENT =   .05 HOURS


OPERATION RUNOFF   CROSS SECTION  10

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
                .80                         69.21                        (RUNOFF)

TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .25 SQ.MI.
    .00    DISCHG         .00       .00       .04       .41      1.51      3.80      7.70     13.53     21.17     30.06
    .50    DISCHG       39.33     48.14     55.82     61.91     66.19     68.57     69.21     68.57     67.10     65.17
   1.00    DISCHG       63.08     60.74     57.94     54.78     51.21     47.03     42.33     37.36     32.37     27.56
   1.50    DISCHG       23.17     19.28     15.86     12.97     10.65      8.77      7.23      5.97      4.92      4.04
1
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   2.00    DISCHG        3.33      2.74      2.25      1.84      1.49      1.21       .97       .78       .62       .49
   2.50    DISCHG         .39       .31       .24       .18       .14       .10       .07       .05       .03       .02
   3.00    DISCHG         .01       .00

  RUNOFF VOLUME ABOVE BASEFLOW =   .40 WATERSHED INCHES,     64.64 CFS-HRS,     5.34 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION  10, ALTERNATE  1, STORM 10, ADDED TO OUTPUT HYDROGRAPH FILE ---


OPERATION RUNOFF   CROSS SECTION  11

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
                .82                          32.39                        (RUNOFF)

TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .17 SQ.MI.
    .00    DISCHG         .00       .00       .00       .05       .31      1.02      2.43      4.73      8.04     12.14
    .50    DISCHG       16.62     21.00     24.93     28.13     30.43     31.80     32.33     32.29     31.89     31.29
   1.00    DISCHG       30.55     29.62     28.43     26.96     25.16     22.97     20.47     17.82     15.19     12.73
   1.50    DISCHG       10.52      8.58      6.93      5.61      4.56      3.71      3.02      2.46      2.00      1.62
   2.00    DISCHG        1.32      1.07       .86       .68       .54       .43       .34       .27       .21       .16
   2.50    DISCHG         .13       .10       .07       .05       .03       .02       .01       .01       .00

  RUNOFF VOLUME ABOVE BASEFLOW =   .27 WATERSHED INCHES,     29.73 CFS-HRS,     2.46 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION  11, ALTERNATE  1, STORM 10, ADDED TO OUTPUT HYDROGRAPH FILE ---


OPERATION ADDHYD   CROSS SECTION 101

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
                .81                         101.56                        (NULL)

TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .42 SQ.MI.
    .00    DISCHG         .00       .00       .04       .45      1.81      4.82     10.13     18.27     29.21     42.19
    .50    DISCHG       55.95     69.15     80.74     90.04     96.63    100.37    101.54    100.86     99.00     96.46
   1.00    DISCHG       93.63     90.37     86.37     81.74     76.37     70.01     62.81     55.18     47.56     40.28
   1.50    DISCHG       33.69     27.86     22.79     18.58     15.21     12.48     10.25      8.43      6.91      5.67
   2.00    DISCHG        4.65      3.81      3.11      2.53      2.04      1.64      1.31      1.04       .83       .65
   2.50    DISCHG         .51       .40       .31       .23       .17       .12       .08       .05       .03       .02
   3.00    DISCHG         .01       .00

  RUNOFF VOLUME ABOVE BASEFLOW =   .35 WATERSHED INCHES,     94.37 CFS-HRS,     7.80 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION 101, ALTERNATE  1, STORM 10, ADDED TO OUTPUT HYDROGRAPH FILE ---


EXECUTIVE CONTROL OPERATION ENDCMP                                                                                  RECORD ID
+                                   COMPUTATIONS COMPLETED FOR PASS  34


1
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EXECUTIVE CONTROL OPERATION COMPUT                                                                                  RECORD ID  10yr, 2
+                                   FROM XSECTION  10
+                                                                   TO XSECTION 101
        STARTING TIME =   .00    RAIN DEPTH =  2.04    RAIN DURATION=  2.00    RAIN TABLE NO.= 6    ANT. MOIST. COND= 2
        ALTERNATE NO.= 2         STORM NO.=10    MAIN TIME INCREMENT =   .05 HOURS


OPERATION RUNOFF   CROSS SECTION  10

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               1.00                          74.73                        (RUNOFF)

TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .25 SQ.MI.
    .00    DISCHG         .00       .00       .00       .02       .25       .97      2.45      5.05      9.11     14.68
    .50    DISCHG       21.57     29.40     37.71     46.00     53.75     60.55     66.04     70.08     72.78     74.26
   1.00    DISCHG       74.72     74.35     73.20     71.40     69.07     66.29     63.25     60.14     57.13     54.32
   1.50    DISCHG       51.79     49.61     47.81     46.38     45.26     44.31     43.39     42.40     41.23     39.87
   2.00    DISCHG       38.41     36.85     35.23     33.57     31.71     29.41     26.73     23.85     20.92     18.03
   2.50    DISCHG       15.29     12.74     10.44      8.50      6.95      5.71      4.69      3.86      3.16      2.59
   3.00    DISCHG        2.12      1.74      1.42      1.16       .94       .77       .63       .51       .41       .33
   3.50    DISCHG         .26       .21       .16       .12       .09       .07       .05       .04       .02       .01
   4.00    DISCHG         .00

  RUNOFF VOLUME ABOVE BASEFLOW =   .63 WATERSHED INCHES,    103.02 CFS-HRS,     8.51 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION  10, ALTERNATE  2, STORM 10, ADDED TO OUTPUT HYDROGRAPH FILE ---


OPERATION RUNOFF   CROSS SECTION  11

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               1.04                          36.75                        (RUNOFF)

TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .17 SQ.MI.
    .00    DISCHG         .00       .00       .00       .00       .02       .14       .51      1.29      2.68      4.86
    .50    DISCHG        7.84     11.50     15.60     19.87     24.01     27.73     30.85     33.26     34.98     36.07
   1.00    DISCHG       36.63     36.73     36.42     35.74     34.72     33.43     31.98     30.49     29.06     27.74
   1.50    DISCHG       26.60     25.66     24.93     24.39     23.99     23.64     23.28     22.82     22.22     21.48
   2.00    DISCHG       20.67     19.82     18.95     18.04     16.98     15.64     14.08     12.42     10.73      9.08
   2.50    DISCHG        7.53      6.11      4.91      3.96      3.20      2.60      2.11      1.71      1.38      1.12
   3.00    DISCHG         .91       .73       .59       .47       .38       .30       .24       .19       .15       .12
   3.50    DISCHG         .09       .07       .05       .04       .03       .02       .01       .01       .00
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RUNOFF VOLUME ABOVE BASEFLOW = .47 WATERSHED INCHES, 50.93 CFS-HRS, 4.21 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 11, ALTERNATE 2, STORM 10, ADDED TO OUTPUT HYDROGRAPH FILE ---

OPERATION ADDHYD CROSS SECTION 101
1

TR20 XEQ 04-29-08 16:15 VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS JOB 1 PASS 35
REV PC 09/83(.2) CALCS: V3 W/HUFF-ISWS CIR.173/90 FILE: E06037.DAT DATE: 04/29/08 JAS PAGE 67

PEAK TIME(HRS) 1.01 PEAK DISCHARGE(CFS) 111.41 PEAK ELEVATION(FEET) (NULL)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .05 HOURS DRAINAGE AREA = .42 SQ.MI.

.00	DISCHG	.00	.00	.00	.02	.27	1.12	2.96	6.34	11.79	19.53
.50	DISCHG	29.41	40.90	53.32	65.87	77.75	88.27	96.88	103.34	107.76	110.34
1.00	DISCHG	111.36	111.08	109.63	107.14	103.79	99.72	95.23	90.64	86.19	82.06
1.50	DISCHG	78.39	75.28	72.74	70.77	69.24	67.95	66.67	65.22	63.45	61.35
2.00	DISCHG	59.08	56.67	54.18	51.62	48.68	45.05	40.82	36.27	31.64	27.11
2.50	DISCHG	22.82	18.86	15.35	12.46	10.16	8.31	6.81	5.57	4.54	3.71
3.00	DISCHG	3.03	2.47	2.01	1.63	1.33	1.08	.87	.70	.56	.45
3.50	DISCHG	.35	.27	.21	.16	.12	.09	.07	.04	.02	.01
4.00	DISCHG	.00									

RUNOFF VOLUME ABOVE BASEFLOW = .57 WATERSHED INCHES, 153.95 CFS-HRS, 12.72 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 101, ALTERNATE 2, STORM 10, ADDED TO OUTPUT HYDROGRAPH FILE ---

EXECUTIVE CONTROL OPERATION ENDCMP RECORD ID
+ COMPUTATIONS COMPLETED FOR PASS 35

EXECUTIVE CONTROL OPERATION COMPUT RECORD ID 10yr, 3
+ FROM XSECTION 10
+ TO XSECTION 101
STARTING TIME = .00 RAIN DEPTH = 2.25 RAIN DURATION= 3.00 RAIN TABLE NO.= 6 ANT. MOIST. COND= 2
ALTERNATE NO.= 3 STORM NO.=10 MAIN TIME INCREMENT = .05 HOURS

OPERATION RUNOFF CROSS SECTION 10

PEAK TIME(HRS) 1.17 PEAK DISCHARGE(CFS) 69.19 PEAK ELEVATION(FEET) (RUNOFF)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .05 HOURS DRAINAGE AREA = .25 SQ.MI.

.00	DISCHG	.00	.00	.00	.00	.01	.15	.66	1.75	3.64	6.62
.50	DISCHG	10.76	15.89	21.76	28.11	34.68	41.22	47.47	53.15	58.04	62.02
1.00	DISCHG	65.09	67.28	68.59	69.15	69.05	68.45	67.46	66.20	64.82	63.38
1.50	DISCHG	61.87	60.26	58.47	56.46	54.26	51.88	49.39	46.89	44.47	42.22
2.00	DISCHG	40.23	38.53	37.10	35.95	35.04	34.32	33.75	33.30	32.95	32.69
2.50	DISCHG	32.49	32.33	32.15	31.88	31.46	30.82	29.90	28.76	27.52	26.34
3.00	DISCHG	25.34	24.53	23.88	23.29	22.52	21.37	19.82	17.95	15.92	13.81
3.50	DISCHG	11.73	9.77	8.00	6.52	5.34	4.39	3.62	2.98	2.45	2.01
4.00	DISCHG	1.65	1.35	1.10	.90	.73	.60	.49	.39	.32	.25
4.50	DISCHG	.20	.16	.13	.10	.08	.06	.05	.03	.02	.01
5.00	DISCHG	.00									

RUNOFF VOLUME ABOVE BASEFLOW = .77 WATERSHED INCHES, 125.65 CFS-HRS, 10.38 ACRE-FEET; BASEFLOW = .00 CFS
1

TR20 XEQ 04-29-08 16:15 VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS JOB 1 PASS 36
REV PC 09/83(.2) CALCS: V3 W/HUFF-ISWS CIR.173/90 FILE: E06037.DAT DATE: 04/29/08 JAS PAGE 68

--- HYDROGRAPH FOR XSECTION 10, ALTERNATE 3, STORM 10, ADDED TO OUTPUT HYDROGRAPH FILE ---

OPERATION RUNOFF CROSS SECTION 11

PEAK TIME(HRS) 1.21 PEAK DISCHARGE(CFS) 34.43 PEAK ELEVATION(FEET) (RUNOFF)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .05 HOURS DRAINAGE AREA = .17 SQ.MI.

.00	DISCHG	.00	.00	.00	.00	.00	.00	.08	.30	.79	1.69
.50	DISCHG	3.12	5.12	7.64	10.60	13.85	17.25	20.65	23.86	26.74	29.19
1.00	DISCHG	31.14	32.60	33.61	34.19	34.42	34.36	34.07	33.66	33.18	32.65
1.50	DISCHG	32.06	31.38	30.56	29.59	28.47	27.23	25.92	24.61	23.36	22.24
2.00	DISCHG	21.28	20.47	19.83	19.33	18.95	18.66	18.44	18.28	18.17	18.09
2.50	DISCHG	18.05	18.03	17.99	17.88	17.65	17.27	16.69	15.97	15.20	14.50
3.00	DISCHG	13.96	13.57	13.30	13.04	12.62	11.91	10.92	9.74	8.47	7.18
3.50	DISCHG	5.94	4.82	3.86	3.12	2.53	2.06	1.68	1.36	1.10	.89
4.00	DISCHG	.72	.58	.47	.38	.30	.24	.19	.15	.12	.09
4.50	DISCHG	.07	.06	.05	.03	.02	.02	.01	.00		

RUNOFF VOLUME ABOVE BASEFLOW = .59 WATERSHED INCHES, 63.82 CFS-HRS, 5.27 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 11, ALTERNATE 3, STORM 10, ADDED TO OUTPUT HYDROGRAPH FILE ---

OPERATION ADDHYD CROSS SECTION 101

PEAK TIME(HRS) 1.18 PEAK DISCHARGE(CFS) 103.51 PEAK ELEVATION(FEET) (NULL)

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 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .42 SQ.MI.
    .00    DISCHG         .00       .00       .00       .00       .01       .15       .74      2.05      4.44      8.31
    .50    DISCHG       13.88     21.01     29.40     38.71     48.53     58.48     68.12     77.01     84.78     91.21
   1.00    DISCHG       96.23     99.88    102.20    103.34    103.47    103.81    101.53     99.86     98.00     96.03
   1.50    DISCHG       93.94     91.65     89.03     86.05     82.73     79.12     75.31     71.49     67.83     64.46
   2.00    DISCHG       61.50     59.00     56.92     55.28     53.99     52.98     52.19     51.58     51.12     50.78
   2.50    DISCHG       50.54     50.36     50.14     49.76     49.11     48.08     46.60     44.73     42.72     40.85
   3.00    DISCHG       39.30     38.10     37.18     36.32     35.14     33.27     30.74     27.69     24.39     20.99
   3.50    DISCHG       17.68     14.58     11.86      9.64      7.88      6.46      5.30      4.34      3.55      2.90
   4.00    DISCHG        2.37      1.93      1.57      1.27      1.03       .84       .68       .55       .44       .35
   4.50    DISCHG         .28       .22       .17       .14       .11       .08       .06       .03       .02       .01
   5.00    DISCHG         .00

  RUNOFF VOLUME ABOVE BASEFLOW =   .70 WATERSHED INCHES,    189.47 CFS-HRS,    15.66 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION 101, ALTERNATE  3, STORM 10, ADDED TO OUTPUT HYDROGRAPH FILE ---
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  37
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                      PAGE  69



 EXECUTIVE CONTROL OPERATION ENDCMP                                                                                   RECORD ID
+                                      COMPUTATIONS COMPLETED FOR PASS  36



 EXECUTIVE CONTROL OPERATION COMPUT                                                                                   RECORD ID  10yr, 6
+                                      FROM XSECTION  10
+                                                          TO XSECTION 101
         STARTING TIME =   .00    RAIN DEPTH =  2.64    RAIN DURATION=  6.00    RAIN TABLE NO.= 6    ANT. MOIST. COND= 2
         ALTERNATE NO.= 6         STORM NO.=10    MAIN TIME INCREMENT =   .05 HOURS


 OPERATION RUNOFF   CROSS SECTION  10

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               1.71                          55.23                        (RUNOFF)
               5.11                          20.28                        (RUNOFF)
               6.17                          15.02                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .25 SQ.MI.
    .00    DISCHG         .00       .00       .00       .00       .00       .00       .00       .01       .09       .34
    .50    DISCHG         .91      1.99      3.77      6.32      9.60     13.45     17.63     21.84     25.89     29.67
   1.00    DISCHG       33.13     36.22     38.92     41.30     43.41     45.35     47.17     48.84     50.34     51.65
   1.50    DISCHG       52.78     53.72     54.47     54.98     55.22     55.16     54.82     54.28     53.60     52.81
   2.00    DISCHG       51.92     50.96     49.96     48.97     48.01     47.05     46.05     45.00     43.92     42.85
   2.50    DISCHG       41.86     40.95     40.15     39.46     38.88     38.39     37.95     37.49     36.97     36.33
   3.00    DISCHG       35.59     34.73     33.79     32.76     31.64     30.42     29.14     27.87     26.66     25.54
   3.50    DISCHG       24.52     23.63     22.85     22.22     21.71     21.31     20.98     20.72     20.52     20.35
   4.00    DISCHG       20.22     20.12     20.05     19.99     19.96     19.93     19.92     19.92     19.92     19.93
   4.50    DISCHG       19.94     19.96     19.98     20.00     20.03     20.06     20.09     20.12     20.15     20.18
   5.00    DISCHG       20.22     20.25     20.28     20.27     20.17     19.97     19.59     19.02     18.28     17.44
   5.50    DISCHG       16.56     15.67     14.84     14.08     13.42     12.92     12.61     12.51     12.63     12.99
   6.00    DISCHG       13.54     14.15     14.67     14.99     14.95     14.48     13.58     12.35     10.92      9.43
   6.50    DISCHG        7.97      6.63      5.43      4.44      3.64      2.99      2.47      2.03      1.67      1.37
   7.00    DISCHG        1.12       .92       .75       .62       .50       .41       .34       .28       .23       .18
   7.50    DISCHG         .15       .12       .10       .08       .06       .05       .03       .02       .01       .01
   8.00    DISCHG         .00

  RUNOFF VOLUME ABOVE BASEFLOW =  1.04 WATERSHED INCHES,    170.58 CFS-HRS,    14.10 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION  10, ALTERNATE  6, STORM 10, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION RUNOFF   CROSS SECTION  11

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               1.76                          28.42                        (RUNOFF)
               5.11                          11.81                        (RUNOFF)
               6.16                           8.98                        (RUNOFF)
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  37
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                      PAGE  70


 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .17 SQ.MI.
    .00    DISCHG         .00       .00       .00       .00       .00       .00       .00       .00       .00       .01
    .50    DISCHG         .07       .27       .68      1.40      2.47      3.89      5.58      7.42      9.32     11.22
   1.00    DISCHG       13.09     14.87     16.53     18.07     19.49     20.85     22.12     23.30     24.37     25.33
   1.50    DISCHG       26.18     26.93     27.55     28.03     28.32     28.42     28.37     28.21     27.96     27.65
   2.00    DISCHG       27.27     26.86     26.43     26.01     25.59     25.15     24.68     24.17     23.64     23.13
   2.50    DISCHG       22.65     22.23     21.86     21.56     21.34     21.16     20.99     20.80     20.53     20.18
   3.00    DISCHG       19.76     19.28     18.74     18.16     17.52     16.81     16.08     15.37     14.69     14.08
   3.50    DISCHG       13.53     13.06     12.67     12.37     12.14     11.96     11.82     11.70     11.62     11.55
   4.00    DISCHG       11.51     11.48     11.46     11.44     11.44     11.44     11.45     11.46     11.48     11.49
   4.50    DISCHG       11.51     11.53     11.55     11.58     11.60     11.63     11.65     11.68     11.70     11.73
   5.00    DISCHG       11.76     11.78     11.81     11.80     11.74     11.59     11.33     10.95     10.47      9.94
   5.50    DISCHG        9.39      8.85      8.36      7.93      7.57      7.31      7.17      7.16      7.30      7.60
   6.00    DISCHG        8.02      8.46      8.80      8.98      8.89      8.48      7.81      6.94      6.00      5.06
   6.50    DISCHG        4.17      3.38      2.72      2.20      1.78      1.45      1.18       .96       .77       .63
   7.00    DISCHG         .51       .41       .33       .27       .22       .18       .14       .11       .09       .07
   7.50    DISCHG         .06       .05       .03       .03       .02       .01       .01       .00

  RUNOFF VOLUME ABOVE BASEFLOW =   .83 WATERSHED INCHES,     89.95 CFS-HRS,     7.43 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION  11, ALTERNATE  6, STORM 10, ADDED TO OUTPUT HYDROGRAPH FILE ---
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 OPERATION ADDHYD   CROSS SECTION 101

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               1.73                          83.61                        (NULL)
               5.11                          32.09                        (NULL)
               6.16                          23.99                        (NULL)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .42 SQ.MI.
     .00    DISCHG         .00       .00       .00       .00       .00       .00       .00       .01       .09       .35
     .50    DISCHG         .98      2.26      4.45      7.71     12.07     17.35     23.21     29.26     35.20     40.89
    1.00    DISCHG       46.21     51.09     55.46     59.36     62.90     66.20     69.29     72.14     74.71     76.98
    1.50    DISCHG       78.96     80.65     82.02     83.01     83.54     83.58     83.19     82.49     81.56     80.45
    2.00    DISCHG       79.19     77.82     76.39     74.98     73.60     72.20     70.74     69.17     67.56     65.98
    2.50    DISCHG       64.51     63.18     62.01     61.02     60.22     59.55     58.94     58.29     57.50     56.52
    3.00    DISCHG       55.34     54.01     52.53     50.92     49.16     47.23     45.22     43.23     41.36     39.62
    3.50    DISCHG       38.06     36.69     35.53     34.59     33.85     33.27     32.80     32.43     32.13     31.91
    4.00    DISCHG       31.73     31.60     31.51     31.44     31.40     31.38     31.37     31.38     31.40     31.42
    4.50    DISCHG       31.45     31.49     31.53     31.58     31.63     31.68     31.74     31.80     31.85     31.91
    5.00    DISCHG       31.97     32.03     32.08     32.07     31.91     31.56     30.93     29.97     28.76     27.38
    5.50    DISCHG       25.94     24.52     23.20     22.01     20.99     20.23     19.79     19.67     19.93     20.59
    6.00    DISCHG       21.56     22.60     23.48     23.97     23.84     22.96     21.39     19.29     16.92     14.48
    6.50    DISCHG       12.15     10.01      8.15      6.64      5.42      4.44      3.65      2.99      2.44      2.00
    7.00    DISCHG        1.63      1.33      1.08       .88       .72       .59       .48       .39       .32       .26
    7.50    DISCHG         .21       .17       .13       .10       .08       .06       .04       .02       .01       .01
    8.00    DISCHG         .00
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  37
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                     PAGE  71


   RUNOFF VOLUME ABOVE BASEFLOW =   .96 WATERSHED INCHES,    260.53 CFS-HRS,    21.53 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION 101, ALTERNATE  6, STORM 10, ADDED TO OUTPUT HYDROGRAPH FILE ---


 EXECUTIVE CONTROL OPERATION ENDCMP                                                                                  RECORD ID
+                                   COMPUTATIONS COMPLETED FOR PASS  37



 EXECUTIVE CONTROL OPERATION INCREM                                                                                  RECORD ID
+                                   MAIN TIME INCREMENT =   .20 HOURS


 EXECUTIVE CONTROL OPERATION COMPUT                                                                                  RECORD ID  10yr, 1
+                                   FROM XSECTION  10
+                                                         TO XSECTION 101
         STARTING TIME =   .00    RAIN DEPTH =  3.06    RAIN DURATION= 12.00    RAIN TABLE NO.= 7    ANT. MOIST. COND= 2
         ALTERNATE NO.=12         STORM NO.=10    MAIN TIME INCREMENT =   .20 HOURS


 OPERATION RUNOFF   CROSS SECTION  10

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               5.53                          51.61                       (RUNOFF)
              12.07                          11.27                       (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .20 HOURS      DRAINAGE AREA =    .25 SQ.MI.
    2.00    DISCHG         .00       .00       .01       .21      1.10      2.70      4.78      7.36     10.09     13.42
    4.00    DISCHG       18.50     23.96     29.26     35.66     41.87     46.38     49.01     50.90     51.40     48.54
    6.00    DISCHG       45.42     43.14     39.62     36.56     34.63     32.45     30.70     29.38     27.34     25.55
    8.00    DISCHG       24.13     21.95     20.02     19.12     18.74     18.61     17.97     16.06     14.23     13.30
   10.00    DISCHG       12.90     12.74     12.68     12.67     12.66     12.07     10.10      8.23      7.86      9.43
   12.00    DISCHG       11.15     10.80      7.20      3.47      1.60       .73       .33       .15       .06       .02
   14.00    DISCHG         .00

   RUNOFF VOLUME ABOVE BASEFLOW =  1.36 WATERSHED INCHES,    222.19 CFS-HRS,    18.36 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION  10, ALTERNATE 12, STORM 10, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION RUNOFF   CROSS SECTION  11

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               5.55                          28.16                       (RUNOFF)
              10.70                           7.60                       (RUNOFF)
              12.05                           6.84                       (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .20 HOURS      DRAINAGE AREA =    .17 SQ.MI.
    2.00    DISCHG         .00       .00       .00       .00       .00       .10       .63      1.72      3.12      4.96
    4.00    DISCHG        7.74     10.77     13.88     17.71     21.45     24.28     26.07     27.53     28.11     26.56
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  38
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                     PAGE  72


    6.00    DISCHG       25.10     24.08     22.12     20.56     19.66     18.45     17.57     16.90     15.70     14.75
    8.00    DISCHG       13.97     12.65     11.60     11.15     11.00     10.95     10.56      9.34      8.27      7.80
   10.00    DISCHG        7.61      7.55      7.53      7.54      7.55      7.13      5.85      4.73      4.67      5.77
   12.00    DISCHG        6.80      6.43      4.00      1.80       .79       .34       .15       .06       .02       .00

   RUNOFF VOLUME ABOVE BASEFLOW =  1.11 WATERSHED INCHES,    120.63 CFS-HRS,     9.97 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION  11, ALTERNATE 12, STORM 10, ADDED TO OUTPUT HYDROGRAPH FILE ---
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 OPERATION ADDHYD   CROSS SECTION 101

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               5.54                          79.76                        (NULL)
              10.58                          20.21                        (NULL)
              12.06                          18.10                        (NULL)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .20 HOURS      DRAINAGE AREA =    .42 SQ.MI.
    2.00    DISCHG         .00       .00       .01       .21      1.10      2.80      5.41      9.08     13.22     18.39
    4.00    DISCHG       26.24     34.72     43.15     53.37     63.31     70.66     75.08     78.43     79.51     75.10
    6.00    DISCHG       70.52     67.22     61.74     57.12     54.29     50.91     48.28     46.28     43.04     40.29
    8.00    DISCHG       38.10     34.60     31.62     30.27     29.74     29.56     28.53     25.40     22.50     21.11
   10.00    DISCHG       20.51     20.28     20.21     20.21     20.21     19.20     15.96     12.96     12.53     15.20
   12.00    DISCHG       17.95     17.23     11.20      5.27      2.38      1.07       .48       .21       .08       .02
   14.00    DISCHG         .00

   RUNOFF VOLUME ABOVE BASEFLOW =  1.26 WATERSHED INCHES,    342.82 CFS-HRS,    28.33 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION 101, ALTERNATE 12, STORM 10, ADDED TO OUTPUT HYDROGRAPH FILE ---


 EXECUTIVE CONTROL OPERATION ENDCMP                                                                                    RECORD ID
+                                     COMPUTATIONS COMPLETED FOR PASS  38



 EXECUTIVE CONTROL OPERATION COMPUT                                                                                    RECORD ID  10yr, 1
+                                     FROM XSECTION  10
+                                                          TO XSECTION 101
         STARTING TIME =   .00    RAIN DEPTH =  3.31    RAIN DURATION= 18.00    RAIN TABLE NO.= 8    ANT. MOIST. COND= 2
         ALTERNATE NO.=18         STORM NO.=10    MAIN TIME INCREMENT =   .20 HOURS


 OPERATION RUNOFF   CROSS SECTION  10

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
              11.77                          50.55                        (RUNOFF)
              16.11                          14.05                        (RUNOFF)
              17.96                          13.85                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .20 HOURS      DRAINAGE AREA =    .25 SQ.MI.
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  39
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                PAGE  73


    4.00    DISCHG         .00       .00       .01       .07       .29       .68      1.17      1.68      2.20      2.70
    6.00    DISCHG        3.20      3.67      4.14      4.58      5.02      5.43      5.84      6.41      7.37      8.36
    8.00    DISCHG        9.13      9.82     10.86     12.19     13.31     14.17     15.16     16.67     18.16     19.27
   10.00    DISCHG       20.53     24.76     31.15     36.09     39.17     41.73     44.65     47.34     49.37     50.50
   12.00    DISCHG       48.29     43.71     40.67     39.52     37.95     33.88     30.03     28.20     27.20     25.01
   14.00    DISCHG       21.92     19.85     18.96     18.12     16.57     15.16     14.43     14.13     14.02     13.98
   16.00    DISCHG       13.99     14.00     13.57     12.13     10.72     10.03      9.84     10.71     12.26     13.35
   18.00    DISCHG       13.81     12.61      8.30      4.07      1.85       .84       .38       .16       .07       .02
   20.00    DISCHG         .00

   RUNOFF VOLUME ABOVE BASEFLOW =  1.55 WATERSHED INCHES,    254.24 CFS-HRS,    21.01 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION  10, ALTERNATE 18, STORM 10, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION RUNOFF   CROSS SECTION  11

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
              11.77                          28.91                        (RUNOFF)
              16.11                           8.44                        (RUNOFF)
              17.95                           8.44                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .20 HOURS      DRAINAGE AREA =    .17 SQ.MI.
    4.00    DISCHG         .00       .00       .00       .00       .00       .00       .00       .02       .11       .31
    6.00    DISCHG         .56       .83      1.11      1.38      1.65      1.91      2.17      2.50      3.02      3.54
    8.00    DISCHG        3.97      4.37      4.98      5.73      6.35      6.86      7.46      8.37      9.23      9.90
   10.00    DISCHG       10.69     13.29     16.99     19.72     21.52     23.12     25.01     26.73     28.05     28.89
   12.00    DISCHG       27.45     24.77     23.30     22.85     21.97     19.48     17.34     16.44     15.96     14.58
   14.00    DISCHG       12.70     11.62     11.18     10.71      9.72      8.91      8.55      8.41      8.37      8.37
   16.00    DISCHG        8.39      8.41      8.11      7.16      6.34      5.96      5.90      6.53      7.53      8.14
   18.00    DISCHG        8.40      7.53      4.63      2.09       .90       .39       .16       .07       .02       .00

   RUNOFF VOLUME ABOVE BASEFLOW =  1.29 WATERSHED INCHES,    139.94 CFS-HRS,    11.56 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION  11, ALTERNATE 18, STORM 10, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION ADDHYD   CROSS SECTION 101

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
              11.77                          79.46                        (NULL)
              16.11                          22.49                        (NULL)
              17.95                          22.29                        (NULL)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .20 HOURS      DRAINAGE AREA =    .42 SQ.MI.
    4.00    DISCHG         .00       .00       .01       .07       .29       .68      1.17      1.70      2.31      3.01
    6.00    DISCHG        3.75      4.51      5.24      5.97      6.67      7.35      8.01      8.91     10.38     11.90
    8.00    DISCHG       13.09     14.19     15.84     17.92     19.66     21.03     22.62     25.03     27.40     29.17
   10.00    DISCHG       31.22     38.05     48.14     55.80     60.68     64.86     69.66     74.06     77.42     79.40
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  39
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                PAGE  74
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  12.00    DISCHG       75.73     68.48     63.98     62.38     59.92     53.35     47.38     44.63     43.16     39.59
  14.00    DISCHG       34.61     31.47     30.13     28.83     26.29     24.07     22.99     22.55     22.39     22.36
  16.00    DISCHG       22.38     22.41     21.68     19.28     17.06     15.99     15.74     17.25     19.79     21.49
  18.00    DISCHG       22.21     20.14     12.92      6.16      2.75      1.23       .55       .23       .09       .02
  20.00    DISCHG         .00

  RUNOFF VOLUME ABOVE BASEFLOW =  1.45 WATERSHED INCHES,    394.18 CFS-HRS,    32.58 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION 101, ALTERNATE 18, STORM 10, ADDED TO OUTPUT HYDROGRAPH FILE ---


 EXECUTIVE CONTROL OPERATION ENDCMP                                                                                  RECORD ID
+                                     COMPUTATIONS COMPLETED FOR PASS  39



 EXECUTIVE CONTROL OPERATION COMPUT                                                                                  RECORD ID  10yr, 2
+                                     FROM XSECTION  10
+                                                          TO XSECTION 101
         STARTING TIME =   .00    RAIN DEPTH =  3.52    RAIN DURATION= 24.00    RAIN TABLE NO.= 8    ANT. MOIST. COND= 2
         ALTERNATE NO.=24         STORM NO.=10    MAIN TIME INCREMENT =   .20 HOURS


 OPERATION RUNOFF   CROSS SECTION  10

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
              15.62                          42.24                        (RUNOFF)
              21.51                          11.46                        (RUNOFF)
              23.92                          11.58                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .20 HOURS      DRAINAGE AREA =    .25 SQ.MI.
   4.00    DISCHG         .00       .00       .00       .00       .00       .00       .00       .00       .02       .09
   6.00    DISCHG         .24       .44       .74      1.09      1.44      1.77      2.10      2.42      2.73      3.03
   8.00    DISCHG        3.32      3.61      3.88      4.15      4.42      4.67      4.92      5.16      5.41      5.79
  10.00    DISCHG        6.51      7.24      7.78      8.20      8.56      9.07      9.99     10.91     11.58     12.08
  12.00    DISCHG       12.51     13.12     14.21     15.30     16.06     16.63     17.13     18.89     23.48     28.13
  14.00    DISCHG       31.01     32.82     34.12     35.46     37.33     39.11     40.43     41.43     42.24     41.67
  16.00    DISCHG       38.04     34.41     32.68     32.04     31.88     30.88     27.64     24.51     22.99     22.34
  18.00    DISCHG       22.09     21.29     19.02     16.85     15.73     15.26     15.05     14.62     13.43     12.31
  20.00    DISCHG       11.74     11.50     11.40     11.37     11.36     11.37     11.39     11.41     11.42     11.05
  22.00    DISCHG        9.88      8.74      8.16      7.90      7.80      8.13      9.31     10.46     11.08     11.37
  24.00    DISCHG       11.48     10.42      6.82      3.31      1.51       .69       .31       .14       .05       .02
  26.00    DISCHG         .00

  RUNOFF VOLUME ABOVE BASEFLOW =  1.72 WATERSHED INCHES,    281.84 CFS-HRS,    23.29 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION  10, ALTERNATE 24, STORM 10, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION RUNOFF   CROSS SECTION  11
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  40
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                PAGE  75


           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
              15.62                          24.39                        (RUNOFF)
              21.51                           6.93                        (RUNOFF)
              23.92                           7.09                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .20 HOURS      DRAINAGE AREA =    .17 SQ.MI.
   6.00    DISCHG         .00       .00       .00       .00       .01       .07       .19       .35       .53       .71
   8.00    DISCHG         .89      1.06      1.24      1.41      1.57      1.73      1.89      2.05      2.20      2.43
  10.00    DISCHG        2.81      3.19      3.48      3.73      3.95      4.26      4.79      5.29      5.66      5.97
  12.00    DISCHG        6.25      6.63      7.29      7.91      8.35      8.71      9.04     10.14     12.92     15.53
  14.00    DISCHG       17.12     18.17     18.99     19.88     21.12     22.26     23.11     23.80     24.38     24.02
  16.00    DISCHG       21.77     19.76     18.95     18.71     18.71     18.10     16.06     14.28     13.51     13.22
  18.00    DISCHG       13.12     12.62     11.15      9.88      9.31      9.09      9.00      8.72      7.96      7.30
  20.00    DISCHG        7.01      6.89      6.85      6.85      6.85      6.86      6.88      6.90      6.90      6.66
  22.00    DISCHG        5.88      5.20      4.89      4.76      4.71      4.96      5.76      6.46      6.80      6.95
  24.00    DISCHG        7.01      6.23      3.81      1.71       .74       .32       .13       .05       .02       .00

  RUNOFF VOLUME ABOVE BASEFLOW =  1.44 WATERSHED INCHES,    156.68 CFS-HRS,    12.95 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION  11, ALTERNATE 24, STORM 10, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION ADDHYD   CROSS SECTION 101

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
              15.62                          66.63                        (NULL)
              21.51                          18.39                        (NULL)
              23.92                          18.67                        (NULL)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .20 HOURS      DRAINAGE AREA =    .42 SQ.MI.
   4.00    DISCHG         .00       .00       .00       .00       .00       .00       .00       .00       .02       .09
   6.00    DISCHG         .24       .44       .74      1.09      1.45      1.84      2.29      2.77      3.26      3.74
   8.00    DISCHG        4.21      4.67      5.12      5.56      5.99      6.41      6.81      7.21      7.61      8.22
  10.00    DISCHG        9.32     10.44     11.27     11.93     12.51     13.33     14.77     16.20     17.24     18.05
  12.00    DISCHG       18.76     19.75     21.50     23.21     24.41     25.34     26.17     29.03     36.41     43.66
  14.00    DISCHG       48.13     51.00     53.11     55.35     58.45     61.38     63.54     65.23     66.62     65.69
  16.00    DISCHG       59.81     54.17     51.64     50.75     50.59     48.99     43.70     38.79     36.50     35.56
  18.00    DISCHG       35.21     33.91     30.17     26.73     25.04     24.34     24.05     23.34     21.39     19.62
  20.00    DISCHG       18.75     18.40     18.25     18.21     18.21     18.23     18.26     18.30     18.32     17.71
  22.00    DISCHG       15.75     13.94     13.05     12.65     12.50     13.09     15.07     16.92     17.88     18.32
  24.00    DISCHG       18.49     16.65     10.63      5.02      2.26      1.01       .44       .19       .07       .02
  26.00    DISCHG         .00

  RUNOFF VOLUME ABOVE BASEFLOW =  1.61 WATERSHED INCHES,    438.53 CFS-HRS,    36.24 ACRE-FEET;   BASEFLOW =    .00 CFS
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                    --- HYDROGRAPH FOR XSECTION 101, ALTERNATE 24, STORM 10, ADDED TO OUTPUT HYDROGRAPH FILE ---
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  41
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                     PAGE  76



 EXECUTIVE CONTROL OPERATION ENDCMP                                                                                   RECORD ID
+                                     COMPUTATIONS COMPLETED FOR PASS  40



 EXECUTIVE CONTROL OPERATION INCREM                                                                                   RECORD ID
+                                     MAIN TIME INCREMENT =   .50 HOURS


 EXECUTIVE CONTROL OPERATION COMPUT                                                                                   RECORD ID  10yr, 4
+                                     FROM XSECTION  10
+                                                 TO XSECTION 101
         STARTING TIME =   .00    RAIN DEPTH =  3.92    RAIN DURATION= 48.00    RAIN TABLE NO.= 9    ANT. MOIST. COND= 2
         ALTERNATE NO.=48         STORM NO.=10    MAIN TIME INCREMENT =   .50 HOURS


 OPERATION RUNOFF   CROSS SECTION  10

 *** WARNING-MAIN TIME INCREMENT MAY BE TOO LARGE.
          COMPUTED PEAK(     18.97) AT              EXCEEDS MAX. ADJACENT HYDROGRAPH COORDINATE BY   7 %.
+                                   XSECTION  10

            PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               40.84                          25.67                        (RUNOFF)
               42.82                          25.20                        (RUNOFF)
               47.75                          18.97                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .50 HOURS      DRAINAGE AREA =    .25 SQ.MI.
   10.00    DISCHG         .00       .00       .00       .01       .12       .27       .42       .58       .72       .87
   15.00    DISCHG        1.01      1.14      1.27      1.40      1.52      1.64      1.76      1.87      1.98      2.09
   20.00    DISCHG        2.20      2.30      2.40      2.49      2.59      2.68      2.77      2.86      2.95      3.62
   25.00    DISCHG        4.12      4.31      4.45      4.55      3.85      3.64      3.67      3.73      3.92      4.91
   30.00    DISCHG        5.23      5.36      5.47      6.25      8.19      8.70      8.95      9.14      9.33      9.50
   35.00    DISCHG        9.67      9.84     10.01     12.12     13.59     14.00     14.26     14.73     21.36     24.09
   40.00    DISCHG       24.89     25.38     25.60     24.55     24.54     24.79     25.06     23.27     18.11     17.28
   45.00    DISCHG       17.24     17.33     17.42     17.52     17.60     17.69     17.71      7.52      1.06       .13
   50.00    DISCHG         .00

   RUNOFF VOLUME ABOVE BASEFLOW =  2.05 WATERSHED INCHES,    335.13 CFS-HRS,    27.69 ACRE-FEET;   BASEFLOW =    .00 CFS

                    --- HYDROGRAPH FOR XSECTION  10, ALTERNATE 48, STORM 10, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION RUNOFF   CROSS SECTION  11

 *** WARNING-MAIN TIME INCREMENT MAY BE TOO LARGE.
          COMPUTED PEAK(     11.74) AT              EXCEEDS MAX. ADJACENT HYDROGRAPH COORDINATE BY   7 %.
+                                   XSECTION  11

            PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               42.83                          15.18                        (RUNOFF)
               47.75                          11.74                        (RUNOFF)
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  41
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                     PAGE  77


 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .50 HOURS      DRAINAGE AREA =    .17 SQ.MI.
   10.00    DISCHG         .00       .00       .00       .00       .00       .00       .00       .00       .00       .05
   15.00    DISCHG         .13       .21       .29       .37       .45       .52       .60       .67       .74       .81
   20.00    DISCHG         .87       .94      1.00      1.07      1.13      1.19      1.25      1.31      1.36      1.72
   25.00    DISCHG        1.97      2.08      2.17      2.24      1.89      1.82      1.85      1.89      2.02      2.55
   30.00    DISCHG        2.72      2.80      2.87      3.36      4.40      4.68      4.84      4.98      5.11      5.24
   35.00    DISCHG        5.36      5.48      5.60      6.93      7.72      7.98      8.16      8.49     12.59     14.08
   40.00    DISCHG       14.59     14.96     15.14     14.57     14.66     14.87     15.09     13.89     10.84     10.46
   45.00    DISCHG       10.48     10.56     10.64     10.71     10.79     10.86     10.90      4.06       .49       .05

   RUNOFF VOLUME ABOVE BASEFLOW =  1.74 WATERSHED INCHES,    189.21 CFS-HRS,    15.64 ACRE-FEET;   BASEFLOW =    .00 CFS

                    --- HYDROGRAPH FOR XSECTION  11, ALTERNATE 48, STORM 10, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION ADDHYD   CROSS SECTION 101

 *** WARNING-MAIN TIME INCREMENT MAY BE TOO LARGE.
          COMPUTED PEAK(     30.71) AT              EXCEEDS MAX. ADJACENT HYDROGRAPH COORDINATE BY   7 %.
+                                   XSECTION 101

            PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               26.32                           6.87                        (NULL)
               40.85                          40.84                        (NULL)
               42.82                          40.38                        (NULL)
               47.75                          30.71                        (NULL)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .50 HOURS      DRAINAGE AREA =    .42 SQ.MI.
   10.00    DISCHG         .00       .00       .00       .01       .12       .27       .42       .58       .72       .91
   15.00    DISCHG        1.13      1.35      1.56      1.77      1.97      2.16      2.36      2.54      2.72      2.90
   20.00    DISCHG        3.07      3.24      3.40      3.56      3.72      3.87      4.02      4.16      4.31      5.35
   25.00    DISCHG        6.09      6.39      6.62      6.79      5.75      5.46      5.52      5.62      5.94      7.47
   30.00    DISCHG        7.94      8.16      8.34      9.61     12.59     13.38     13.79     14.12     14.44     14.74
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   35.00    DISCHG       15.04     15.32     15.61     19.05     21.31     21.98     22.42     23.22     33.94     38.17
   40.00    DISCHG       39.48     40.34     40.75     39.12     39.20     39.66     40.16     37.17     28.96     27.73
   45.00    DISCHG       27.72     27.89     28.06     28.23     28.39     28.55     28.61     11.59      1.55       .18
   50.00    DISCHG         .00

   RUNOFF VOLUME ABOVE BASEFLOW =  1.93 WATERSHED INCHES,    524.32 CFS-HRS,    43.33 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION 101, ALTERNATE 48, STORM 10, ADDED TO OUTPUT HYDROGRAPH FILE ---


 EXECUTIVE CONTROL OPERATION ENDCMP                                                                                  RECORD ID
+                                    COMPUTATIONS COMPLETED FOR PASS  41


1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  42
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                PAGE  78



 EXECUTIVE CONTROL OPERATION COMPUT                                                                                  RECORD ID  10yr, 7
+                                    FROM XSECTION  10
+                                                          TO XSECTION 101
         STARTING TIME =   .00    RAIN DEPTH =  4.27    RAIN DURATION= 72.00    RAIN TABLE NO.= 9    ANT. MOIST. COND= 2
         ALTERNATE NO.=72         STORM NO.=10    MAIN TIME INCREMENT =   .50 HOURS


 OPERATION RUNOFF   CROSS SECTION  10

 *** WARNING-MAIN TIME INCREMENT MAY BE TOO LARGE.
          COMPUTED PEAK(     14.14) AT              EXCEEDS MAX. ADJACENT HYDROGRAPH COORDINATE BY   7 %.
+                                   XSECTION  10

            PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               64.34                          18.82                        (RUNOFF)
               71.75                          14.14                        (RUNOFF)
               61.00                          19.28                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .50 HOURS      DRAINAGE AREA =    .25 SQ.MI.
   15.00    DISCHG         .00       .00       .01       .08       .16       .24       .32       .40       .48       .56
   20.00    DISCHG         .63       .71       .78       .85       .92       .99      1.05      1.12      1.18      1.24
   25.00    DISCHG        1.30      1.36      1.42      1.48      1.53      1.59      1.64      1.70      1.75      1.80
   30.00    DISCHG        1.85      1.90      1.95      1.99      2.04      2.09      2.13      2.18      2.22      2.26
   35.00    DISCHG        2.30      2.34      2.39      2.90      3.25      3.36      3.43      3.50      3.56      3.62
   40.00    DISCHG        3.30      2.88      2.84      2.86      2.90      2.93      2.96      3.23      3.90      4.06
   45.00    DISCHG        4.13      4.18      4.23      4.28      4.55      6.16      6.61      6.76      6.86      6.95
   50.00    DISCHG        7.04      7.13      7.21      7.29      7.37      7.45      7.52      7.60      7.67      9.24
   55.00    DISCHG       10.28     10.53     10.66     10.77     10.87     10.97     13.95     17.61     18.37     18.67
   60.00    DISCHG       18.89     19.09     19.28     19.10     18.32     18.29     18.41     18.54     18.66     18.78
   65.00    DISCHG       18.25     13.88     12.88     12.78     12.81     12.85     12.90     12.94     12.98     13.02
   70.00    DISCHG       13.06     13.10     13.14     13.17     13.18      5.55       .78       .10       .00

   RUNOFF VOLUME ABOVE BASEFLOW =  2.35 WATERSHED INCHES,    383.69 CFS-HRS,    31.71 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION  10, ALTERNATE 72, STORM 10, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION RUNOFF   CROSS SECTION  11

 *** WARNING-MAIN TIME INCREMENT MAY BE TOO LARGE.
          COMPUTED PEAK(      8.80) AT              EXCEEDS MAX. ADJACENT HYDROGRAPH COORDINATE BY   7 %.
+                                   XSECTION  11

            PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               64.36                          11.45                        (RUNOFF)
               71.75                           8.80                        (RUNOFF)
               61.00                          11.52                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .50 HOURS      DRAINAGE AREA =    .17 SQ.MI.
   20.00    DISCHG         .03       .08       .12       .16       .21       .25       .29       .33       .37       .41
   25.00    DISCHG         .45       .49       .52       .56       .60       .63       .67       .70       .73       .77
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  42
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                PAGE  79


   30.00    DISCHG         .80       .83       .86       .89       .93       .96       .99      1.01      1.04      1.07
   35.00    DISCHG        1.10      1.13      1.16      1.43      1.61      1.67      1.71      1.76      1.80      1.84
   40.00    DISCHG        1.66      1.47      1.46      1.48      1.50      1.53      1.55      1.71      2.07      2.16
   45.00    DISCHG        2.20      2.23      2.27      2.30      2.47      3.38      3.61      3.70      3.77      3.84
   50.00    DISCHG        3.90      3.96      4.03      4.09      4.14      4.20      4.26      4.31      4.37      5.35
   55.00    DISCHG        5.92      6.06      6.15      6.23      6.31      6.39      8.34     10.41     10.84     11.04
   60.00    DISCHG       11.21     11.37     11.52     11.42     10.99     11.02     11.12     11.23     11.33     11.43
   65.00    DISCHG       11.07      8.35      7.85      7.82      7.85      7.89      7.93      7.96      8.00      8.03
   70.00    DISCHG        8.06      8.09      8.13      8.16      8.16      3.05       .37       .04

   RUNOFF VOLUME ABOVE BASEFLOW =  2.02 WATERSHED INCHES,    219.27 CFS-HRS,    18.12 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION  11, ALTERNATE 72, STORM 10, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION ADDHYD   CROSS SECTION 101

 *** WARNING-MAIN TIME INCREMENT MAY BE TOO LARGE.
          COMPUTED PEAK(     22.94) AT              EXCEEDS MAX. ADJACENT HYDROGRAPH COORDINATE BY   7 %.
+                                   XSECTION 101

            PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               39.34                           5.50                        (NULL)
```

61.03	30.81	(NULL)
64.35	30.26	(NULL)
71.75	22.94	(NULL)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .50 HOURS DRAINAGE AREA = .42 SQ.MI.

15.00	DISCHG	.00	.00	.01	.08	.16	.24	.32	.40	.48	.56
20.00	DISCHG	.67	.78	.90	1.01	1.12	1.23	1.34	1.45	1.55	1.65
25.00	DISCHG	1.75	1.85	1.94	2.04	2.13	2.22	2.31	2.40	2.48	2.57
30.00	DISCHG	2.65	2.73	2.81	2.89	2.97	3.04	3.12	3.19	3.26	3.33
35.00	DISCHG	3.40	3.47	3.54	4.33	4.86	5.03	5.15	5.26	5.36	5.47
40.00	DISCHG	4.96	4.35	4.31	4.35	4.40	4.45	4.50	4.94	5.97	6.22
45.00	DISCHG	6.33	6.41	6.50	6.58	7.02	9.53	10.22	10.46	10.63	10.79
50.00	DISCHG	10.94	11.09	11.24	11.38	11.51	11.65	11.78	11.91	12.04	14.60
55.00	DISCHG	16.20	16.59	16.81	17.00	17.19	17.36	22.29	28.02	29.21	29.72
60.00	DISCHG	30.10	30.46	30.81	30.53	29.31	29.31	29.53	29.76	29.99	30.21
65.00	DISCHG	29.31	22.23	20.73	20.60	20.66	20.74	20.82	20.90	20.98	21.05
70.00	DISCHG	21.12	21.20	21.26	21.33	21.35	8.59	1.14	.14	.00	

RUNOFF VOLUME ABOVE BASEFLOW = 2.22 WATERSHED INCHES, 602.94 CFS-HRS, 49.83 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 101, ALTERNATE 72, STORM 10, ADDED TO OUTPUT HYDROGRAPH FILE ---

EXECUTIVE CONTROL OPERATION ENDCMP RECORD ID
+ COMPUTATIONS COMPLETED FOR PASS 42

1

TR20 XEQ 04-29-08 16:15 VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS JOB 1 PASS 43
REV PC 09/83(.2) CALCS: V3 W/HUFF-ISWS CIR.173/90 FILE: E06037.DAT DATE: 04/29/08 JAS PAGE 80

EXECUTIVE CONTROL OPERATION COMPUT RECORD ID 10yr, 1
+ FROM XSECTION 10
+ TO XSECTION 101
STARTING TIME = .00 RAIN DEPTH = 4.81 RAIN DURATION=120.00 RAIN TABLE NO.= 9 ANT. MOIST. COND= 2
ALTERNATE NO.=73 STORM NO.=10 MAIN TIME INCREMENT = .50 HOURS

OPERATION RUNOFF CROSS SECTION 10

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
107.76	13.50	(RUNOFF)
119.44	9.16	(RUNOFF)
102.00	13.67	(RUNOFF)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .50 HOURS DRAINAGE AREA = .25 SQ.MI.

20.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.00	.01	.04
25.00	DISCHG	.08	.12	.16	.19	.23	.27	.30	.34	.37	.41
30.00	DISCHG	.44	.48	.51	.54	.57	.60	.64	.67	.70	.73
35.00	DISCHG	.76	.78	.81	.84	.87	.90	.92	.95	.98	1.00
40.00	DISCHG	1.03	1.05	1.08	1.10	1.13	1.15	1.18	1.20	1.22	1.25
45.00	DISCHG	1.27	1.29	1.31	1.33	1.36	1.38	1.40	1.42	1.44	1.46
50.00	DISCHG	1.48	1.50	1.52	1.54	1.56	1.58	1.59	1.61	1.63	1.65
55.00	DISCHG	1.67	1.68	1.70	1.72	1.74	1.75	1.77	1.79	1.80	1.82
60.00	DISCHG	1.83	2.21	2.46	2.51	2.55	2.57	2.60	2.62	2.65	2.67
65.00	DISCHG	2.70	2.72	2.74	2.37	2.13	2.11	2.12	2.13	2.14	2.15
70.00	DISCHG	2.16	2.18	2.19	2.20	2.21	2.66	2.94	3.00	3.03	3.04
75.00	DISCHG	3.06	3.08	3.10	3.12	3.14	3.16	3.18	4.12	4.73	4.85
80.00	DISCHG	4.90	4.94	4.98	5.01	5.05	5.08	5.11	5.15	5.18	5.21
85.00	DISCHG	5.24	5.27	5.30	5.33	5.36	5.39	5.42	5.45	5.47	5.50
90.00	DISCHG	5.53	6.63	7.34	7.48	7.54	7.58	7.62	7.66	7.70	7.74
95.00	DISCHG	7.78	7.81	7.86	10.76	12.62	12.96	13.08	13.16	13.24	13.32
100.00	DISCHG	13.40	13.47	13.54	13.61	13.67	13.13	12.80	12.80	12.84	12.89
105.00	DISCHG	12.94	12.99	13.03	13.08	13.12	13.17	13.19	10.69	9.11	8.90
110.00	DISCHG	8.88	8.90	8.92	8.93	8.95	8.97	8.98	9.00	9.01	9.03
115.00	DISCHG	9.04	9.06	9.07	9.08	9.10	9.11	9.13	9.14	9.15	9.16
120.00	DISCHG	9.14	3.88	.55	.07	.00					

RUNOFF VOLUME ABOVE BASEFLOW = 2.81 WATERSHED INCHES, 460.31 CFS-HRS, 38.04 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 10, ALTERNATE 73, STORM 10, ADDED TO OUTPUT HYDROGRAPH FILE ---

OPERATION RUNOFF CROSS SECTION 11

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
107.76	8.34	(RUNOFF)
119.51	5.73	(RUNOFF)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .50 HOURS DRAINAGE AREA = .17 SQ.MI.
1

TR20 XEQ 04-29-08 16:15 VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS JOB 1 PASS 43
REV PC 09/83(.2) CALCS: V3 W/HUFF-ISWS CIR.173/90 FILE: E06037.DAT DATE: 04/29/08 JAS PAGE 81

25.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01
30.00	DISCHG	.03	.05	.07	.09	.11	.13	.15	.17	.19	.20
35.00	DISCHG	.22	.24	.26	.28	.30	.31	.33	.35	.36	.38
40.00	DISCHG	.40	.41	.43	.45	.46	.48	.49	.51	.52	.54
45.00	DISCHG	.55	.57	.58	.60	.61	.62	.64	.65	.66	.68
50.00	DISCHG	.69	.70	.72	.73	.74	.76	.77	.78	.79	.80
55.00	DISCHG	.82	.83	.84	.85	.86	.88	.89	.90	.91	.92
60.00	DISCHG	.93	1.14	1.26	1.29	1.31	1.33	1.35	1.37	1.38	1.40
65.00	DISCHG	1.42	1.43	1.45	1.23	1.13	1.12	1.13	1.14	1.15	1.15
70.00	DISCHG	1.16	1.17	1.18	1.19	1.20	1.46	1.60	1.63	1.65	1.66
75.00	DISCHG	1.68	1.69	1.71	1.72	1.73	1.75	1.76	2.33	2.65	2.71
80.00	DISCHG	2.74	2.77	2.80	2.82	2.85	2.87	2.90	2.92	2.95	2.97

85.00	DISCHG	3.00	3.02	3.04	3.06	3.09	3.11	3.13	3.15	3.17	3.19
90.00	DISCHG	3.21	3.91	4.30	4.37	4.41	4.44	4.48	4.51	4.54	4.57
95.00	DISCHG	4.60	4.63	4.67	6.53	7.55	7.74	7.82	7.89	7.95	8.02
100.00	DISCHG	8.08	8.14	8.19	8.25	8.30	7.95	7.79	7.80	7.84	7.88
105.00	DISCHG	7.92	7.96	8.00	8.04	8.07	8.11	8.14	6.46	5.59	5.49
110.00	DISCHG	5.50	5.51	5.52	5.54	5.55	5.57	5.58	5.59	5.60	5.62
115.00	DISCHG	5.63	5.64	5.65	5.67	5.68	5.69	5.70	5.71	5.72	5.73
120.00	DISCHG	5.72	2.13	.26	.03						

RUNOFF VOLUME ABOVE BASEFLOW = 2.46 WATERSHED INCHES, 267.04 CFS-HRS, 22.07 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 11, ALTERNATE 73, STORM 10, ADDED TO OUTPUT HYDROGRAPH FILE ---

OPERATION ADDHYD CROSS SECTION 101

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
101.81	22.05	(NULL)
107.76	21.84	(NULL)
119.47	14.90	(NULL)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .50 HOURS DRAINAGE AREA = .42 SQ.MI.

20.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.00	.01	.04
25.00	DISCHG	.08	.12	.16	.19	.23	.27	.30	.34	.37	.42
30.00	DISCHG	.47	.52	.58	.63	.68	.73	.78	.83	.88	.93
35.00	DISCHG	.98	1.03	1.07	1.12	1.16	1.21	1.25	1.30	1.34	1.38
40.00	DISCHG	1.43	1.47	1.51	1.55	1.59	1.63	1.67	1.71	1.75	1.78
45.00	DISCHG	1.82	1.86	1.89	1.93	1.97	2.00	2.04	2.07	2.10	2.14
50.00	DISCHG	2.17	2.20	2.24	2.27	2.30	2.33	2.36	2.39	2.42	2.45
55.00	DISCHG	2.48	2.51	2.54	2.57	2.60	2.63	2.66	2.68	2.71	2.74
60.00	DISCHG	2.77	3.35	3.72	3.81	3.86	3.90	3.95	3.99	4.03	4.07
65.00	DISCHG	4.12	4.16	4.19	3.60	3.26	3.23	3.24	3.26	3.29	3.31
70.00	DISCHG	3.33	3.35	3.37	3.39	3.41	4.12	4.55	4.63	4.68	4.71
75.00	DISCHG	4.74	4.78	4.81	4.84	4.87	4.90	4.94	6.45	7.38	7.56
80.00	DISCHG	7.65	7.71	7.77	7.83	7.90	7.95	8.01	8.07	8.13	8.18
85.00	DISCHG	8.24	8.29	8.34	8.40	8.45	8.50	8.55	8.60	8.64	8.69
90.00	DISCHG	8.75	10.54	11.63	11.85	11.95	12.02	12.09	12.17	12.24	12.31

1

95.00	DISCHG	12.37	12.44	12.52	17.29	20.17	20.70	20.90	21.05	21.20	21.34
100.00	DISCHG	21.47	21.61	21.73	21.86	21.98	21.08	20.59	20.60	20.69	20.78
105.00	DISCHG	20.87	20.95	21.04	21.12	21.20	21.28	21.34	17.15	14.70	14.39
110.00	DISCHG	14.38	14.41	14.44	14.47	14.50	14.53	14.56	14.59	14.62	14.64
115.00	DISCHG	14.67	14.70	14.72	14.75	14.78	14.80	14.83	14.85	14.87	14.90
120.00	DISCHG	14.87	6.01	.81	.10	.00					

RUNOFF VOLUME ABOVE BASEFLOW = 2.67 WATERSHED INCHES, 727.33 CFS-HRS, 60.11 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 101, ALTERNATE 73, STORM 10, ADDED TO OUTPUT HYDROGRAPH FILE ---

EXECUTIVE CONTROL OPERATION ENDCMP RECORD ID
+ COMPUTATIONS COMPLETED FOR PASS 43

EXECUTIVE CONTROL OPERATION COMPUT RECORD ID 10yr, 2
+ FROM XSECTION 10
+ TO XSECTION 101
STARTING TIME = .00 RAIN DEPTH = 5.84 RAIN DURATION=240.00 RAIN TABLE NO.= 9 ANT. MOIST. COND= 2
ALTERNATE NO.=74 STORM NO.=10 MAIN TIME INCREMENT = .50 HOURS

OPERATION RUNOFF CROSS SECTION 10

*** WARNING-NO PEAK FOUND, MAXIMUM DISCHARGE = 2.10 CFS.

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
149.50	2.10	(RUNOFF)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .50 HOURS DRAINAGE AREA = .25 SQ.MI.

35.00	DISCHG	.00	.00	.00	.00	.00	.01	.02	.02	.03	.04
40.00	DISCHG	.04	.05	.06	.06	.07	.07	.08	.09	.09	.10
45.00	DISCHG	.10	.11	.12	.12	.13	.13	.14	.19	.23	.24
50.00	DISCHG	.26	.27	.28	.29	.30	.32	.33	.34	.35	.36
55.00	DISCHG	.38	.39	.40	.41	.42	.43	.44	.45	.46	.48
60.00	DISCHG	.49	.50	.51	.52	.53	.54	.55	.56	.57	.58
65.00	DISCHG	.59	.60	.61	.62	.63	.63	.64	.65	.66	.67
70.00	DISCHG	.68	.69	.70	.71	.72	.72	.73	.74	.75	.76
75.00	DISCHG	.77	.77	.78	.79	.80	.81	.82	.82	.83	.84
80.00	DISCHG	.85	.85	.86	.87	.88	.88	.89	.90	.91	.91
85.00	DISCHG	.92	.93	.93	.94	.95	.96	.96	.97	.98	.98
90.00	DISCHG	.99	1.00	1.00	1.01	1.02	1.02	1.03	1.04	1.04	1.05
95.00	DISCHG	1.05	1.06	1.07	1.07	1.08	1.08	1.09	1.10	1.10	1.11
100.00	DISCHG	1.11	1.12	1.13	1.13	1.14	1.14	1.15	1.15	1.16	1.16
105.00	DISCHG	1.17	1.17	1.18	1.19	1.19	1.20	1.20	1.21	1.21	1.22
110.00	DISCHG	1.22	1.23	1.23	1.24	1.24	1.25	1.25	1.26	1.26	1.27
115.00	DISCHG	1.27	1.28	1.28	1.28	1.29	1.29	1.30	1.30	1.31	1.31
120.00	DISCHG	1.32	1.58	1.74	1.77	1.78	1.79	1.80	1.81	1.82	1.82
125.00	DISCHG	1.83	1.84	1.84	1.85	1.86	1.87	1.87	1.88	1.89	1.89

1

130.00	DISCHG	1.90	1.91	1.91	1.92	1.92	1.65	1.48	1.46	1.46	1.46

135.00	DISCHG	1.47	1.47	1.47	1.48	1.48	1.49	1.49	1.49	1.50	1.50
140.00	DISCHG	1.50	1.51	1.51	1.51	1.52	1.52	1.52	1.53	1.53	1.83
145.00	DISCHG	2.02	2.05	2.06	2.06	2.07	2.08	2.08	2.09	2.09	2.10

RUNOFF VOLUME ABOVE BASEFLOW = .70 WATERSHED INCHES, 113.73 CFS-HRS, 9.40 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 10, ALTERNATE 74, STORM 10, ADDED TO OUTPUT HYDROGRAPH FILE ---

OPERATION RUNOFF CROSS SECTION 11

*** WARNING-NO PEAK FOUND, MAXIMUM DISCHARGE = 1.19 CFS.

PEAK TIME(HRS) 149.50 PEAK DISCHARGE(CFS) 1.19 PEAK ELEVATION(FEET) (RUNOFF)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .50 HOURS DRAINAGE AREA = .17 SQ.MI.

50.00	DISCHG	.01	.02	.02	.03	.04	.05	.05	.06	.07	.08
55.00	DISCHG	.08	.09	.10	.10	.11	.12	.13	.13	.14	.15
60.00	DISCHG	.15	.16	.17	.17	.18	.18	.19	.20	.20	.21
65.00	DISCHG	.22	.22	.23	.23	.24	.25	.25	.26	.26	.27
70.00	DISCHG	.28	.28	.29	.29	.30	.30	.31	.32	.32	.33
75.00	DISCHG	.33	.34	.34	.35	.35	.36	.36	.37	.37	.38
80.00	DISCHG	.39	.39	.40	.40	.41	.41	.42	.42	.42	.43
85.00	DISCHG	.43	.44	.44	.45	.45	.46	.46	.47	.47	.48
90.00	DISCHG	.48	.49	.49	.49	.50	.50	.51	.51	.52	.52
95.00	DISCHG	.52	.53	.53	.54	.54	.55	.55	.55	.56	.56
100.00	DISCHG	.57	.57	.57	.58	.58	.59	.59	.59	.60	.60
105.00	DISCHG	.60	.61	.61	.62	.62	.62	.63	.63	.63	.64
110.00	DISCHG	.64	.64	.65	.65	.65	.66	.66	.67	.67	.67
115.00	DISCHG	.68	.68	.68	.69	.69	.69	.70	.70	.70	.70
120.00	DISCHG	.71	.86	.94	.96	.96	.97	.98	.98	.99	.99
125.00	DISCHG	1.00	1.00	1.01	1.01	1.02	1.02	1.03	1.03	1.04	1.04
130.00	DISCHG	1.05	1.05	1.06	1.06	1.07	.90	.82	.81	.81	.81
135.00	DISCHG	.82	.82	.82	.82	.83	.83	.83	.84	.84	.84
140.00	DISCHG	.84	.84	.85	.85	.85	.85	.86	.86	.86	1.05
145.00	DISCHG	1.14	1.16	1.16	1.17	1.17	1.18	1.18	1.19	1.19	1.19

RUNOFF VOLUME ABOVE BASEFLOW = .53 WATERSHED INCHES, 57.07 CFS-HRS, 4.72 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 11, ALTERNATE 74, STORM 10, ADDED TO OUTPUT HYDROGRAPH FILE ---

OPERATION ADDHYD CROSS SECTION 101

*** WARNING-NO PEAK FOUND, MAXIMUM DISCHARGE = 3.29 CFS.
1

TR20 XEQ 04-29-08 16:15 VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS JOB 1 PASS 44
REV PC 09/83(.2) CALCS: V3 W/HUFF-ISWS CIR.173/90 FILE: E06037.DAT DATE: 04/29/08 JAS PAGE 84

PEAK TIME(HRS) 149.50 PEAK DISCHARGE(CFS) 3.29 PEAK ELEVATION(FEET) (NULL)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .50 HOURS DRAINAGE AREA = .42 SQ.MI.

35.00	DISCHG	.00	.00	.00	.00	.00	.01	.02	.02	.03	.04
40.00	DISCHG	.04	.05	.06	.06	.07	.07	.08	.09	.09	.10
45.00	DISCHG	.10	.11	.12	.12	.13	.13	.14	.19	.23	.24
50.00	DISCHG	.27	.29	.31	.32	.34	.36	.38	.40	.42	.44
55.00	DISCHG	.46	.48	.50	.51	.53	.55	.57	.59	.60	.62
60.00	DISCHG	.64	.66	.67	.69	.71	.72	.74	.76	.77	.79
65.00	DISCHG	.80	.82	.84	.85	.87	.88	.90	.91	.93	.94
70.00	DISCHG	.96	.97	.99	1.00	1.02	1.03	1.04	1.06	1.07	1.09
75.00	DISCHG	1.10	1.11	1.13	1.14	1.15	1.17	1.18	1.19	1.21	1.22
80.00	DISCHG	1.23	1.24	1.26	1.27	1.28	1.29	1.31	1.32	1.33	1.34
85.00	DISCHG	1.36	1.37	1.38	1.39	1.40	1.41	1.43	1.44	1.45	1.46
90.00	DISCHG	1.47	1.48	1.49	1.50	1.51	1.53	1.54	1.55	1.56	1.57
95.00	DISCHG	1.58	1.59	1.60	1.61	1.62	1.63	1.64	1.65	1.66	1.67
100.00	DISCHG	1.68	1.69	1.70	1.71	1.72	1.73	1.74	1.75	1.76	1.76
105.00	DISCHG	1.77	1.78	1.79	1.80	1.81	1.82	1.83	1.84	1.85	1.85
110.00	DISCHG	1.86	1.87	1.88	1.89	1.90	1.90	1.91	1.92	1.93	1.94
115.00	DISCHG	1.95	1.95	1.96	1.97	1.98	1.99	1.99	2.00	2.01	2.02
120.00	DISCHG	2.03	2.44	2.69	2.73	2.75	2.76	2.78	2.79	2.80	2.81
125.00	DISCHG	2.83	2.84	2.85	2.86	2.88	2.89	2.90	2.91	2.92	2.94
130.00	DISCHG	2.95	2.96	2.97	2.98	2.99	2.56	2.30	2.27	2.27	2.28
135.00	DISCHG	2.28	2.29	2.30	2.30	2.31	2.32	2.32	2.33	2.33	2.34
140.00	DISCHG	2.34	2.35	2.36	2.36	2.37	2.37	2.38	2.38	2.39	2.87
145.00	DISCHG	3.16	3.21	3.22	3.23	3.24	3.25	3.26	3.27	3.28	3.29

RUNOFF VOLUME ABOVE BASEFLOW = .63 WATERSHED INCHES, 170.80 CFS-HRS, 14.11 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 101, ALTERNATE 74, STORM 10, ADDED TO OUTPUT HYDROGRAPH FILE ---

EXECUTIVE CONTROL OPERATION ENDCMP RECORD ID
+ COMPUTATIONS COMPLETED FOR PASS 44

EXECUTIVE CONTROL OPERATION INCREM RECORD ID Output
+ MAIN TIME INCREMENT = .05 HOURS

EXECUTIVE CONTROL OPERATION COMPUT RECORD ID 25yr, 1
+ FROM XSECTION 10
+ TO XSECTION 101
STARTING TIME = .00 RAIN DEPTH = 2.02 RAIN DURATION= 1.00 RAIN TABLE NO.= 6 ANT. MOIST. COND= 2
ALTERNATE NO.= 1 STORM NO.=25 MAIN TIME INCREMENT = .05 HOURS

OPERATION RUNOFF CROSS SECTION 10

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1

 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  45
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                PAGE  85


            PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
                 .76                         109.18                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .25 SQ.MI.
     .00    DISCHG         .00       .00       .23      1.27      3.80      8.57     16.23     26.96     40.24     54.89
     .50    DISCHG       69.51     82.78     93.78    101.96    107.07    109.08    108.48    106.09    102.65     98.71
    1.00    DISCHG       94.71     90.48     85.73     80.59     74.98     68.59     61.56     54.20     46.88     39.88
    1.50    DISCHG       33.50     27.87     22.93     18.76     15.41     12.68     10.45      8.63      7.11      5.85
    2.00    DISCHG        4.82      3.96      3.25      2.65      2.14      1.73      1.38      1.10       .88       .70
    2.50    DISCHG         .55       .43       .34       .26       .20       .14       .10       .07       .04       .02
    3.00    DISCHG         .01       .00

   RUNOFF VOLUME ABOVE BASEFLOW =   .62 WATERSHED INCHES,    100.89 CFS-HRS,     8.34 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION  10, ALTERNATE  1, STORM 25, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION RUNOFF   CROSS SECTION  11

            PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
                 .77                          54.76                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .17 SQ.MI.
     .00    DISCHG         .00       .00       .02       .27      1.13      3.02      6.36     11.42     18.04     25.62
     .50    DISCHG       33.35     40.45     46.38     50.83     53.60     54.68     54.46     53.44     51.97     50.31
    1.00    DISCHG       48.55     46.59     44.32     41.73     38.72     35.18     31.24     27.13     23.09     19.32
    1.50    DISCHG       15.96     13.01     10.52      8.52      6.92      5.63      4.59      3.73      3.03      2.46
    2.00    DISCHG        1.99      1.61      1.29      1.02       .81       .64       .51       .40       .31       .24
    2.50    DISCHG         .19       .14       .10       .07       .05       .03       .02       .01       .00

   RUNOFF VOLUME ABOVE BASEFLOW =   .46 WATERSHED INCHES,     49.75 CFS-HRS,     4.11 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION  11, ALTERNATE  1, STORM 25, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION ADDHYD   CROSS SECTION 101

            PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
                 .76                         163.93                        (NULL)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .42 SQ.MI.
     .00    DISCHG         .00       .00       .25      1.53      4.93     11.59     22.58     38.39     58.28     80.52
     .50    DISCHG      102.86    123.24    140.16    152.80    160.67    163.76    162.94    159.52    154.62    149.02
    1.00    DISCHG      143.26    137.08    130.06    122.32    113.69    103.77     92.79     81.32     69.97     59.19
    1.50    DISCHG       49.46     40.88     33.45     27.28     22.32     18.31     15.04     12.36     10.14      8.31
    2.00    DISCHG        6.81      5.57      4.53      3.67      2.95      2.37      1.89      1.50      1.19       .94
    2.50    DISCHG         .73       .57       .44       .33       .25       .18       .12       .08       .04       .02
    3.00    DISCHG         .01       .00
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  45
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                PAGE  86


   RUNOFF VOLUME ABOVE BASEFLOW =   .55 WATERSHED INCHES,    150.64 CFS-HRS,    12.45 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION 101, ALTERNATE  1, STORM 25, ADDED TO OUTPUT HYDROGRAPH FILE ---


 EXECUTIVE CONTROL OPERATION ENDCMP                                                                                  RECORD ID
+                                   COMPUTATIONS COMPLETED FOR PASS  45



 EXECUTIVE CONTROL OPERATION COMPUT                                                                                  RECORD ID  25yr, 2
+                                   FROM XSECTION  10
+                                                          TO XSECTION 101
         STARTING TIME =   .00    RAIN DEPTH =  2.49    RAIN DURATION=  2.00    RAIN TABLE NO.= 6    ANT. MOIST. COND= 2
         ALTERNATE NO.= 2         STORM NO.=25    MAIN TIME INCREMENT =   .05 HOURS


 OPERATION RUNOFF   CROSS SECTION  10

            PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
                 .95                         113.04                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .25 SQ.MI.
     .00    DISCHG         .00       .00       .00       .14       .89      2.70      6.03     11.48     19.37     29.44
     .50    DISCHG       41.13     53.73     66.47     78.62     89.49     98.52    105.27    109.73    112.23    113.04
    1.00    DISCHG      112.47    110.82    108.18    104.73    100.65     96.04     91.16     86.27     81.59     77.24
    1.50    DISCHG       73.35     70.00     67.22     64.98     63.20     61.69     60.25     58.73     56.98     54.99
    2.00    DISCHG       52.88     50.65     48.35     46.00     43.39     40.20     36.51     32.55     28.53     24.58
    2.50    DISCHG       20.84     17.36     14.22     11.58      9.47      7.77      6.39      5.26      4.30      3.52
    3.00    DISCHG        2.89      2.36      1.93      1.58      1.29      1.05       .85       .69       .56       .45
    3.50    DISCHG         .36       .28       .22       .17       .13       .10       .07       .05       .03       .02
    4.00    DISCHG         .01       .00

   RUNOFF VOLUME ABOVE BASEFLOW =   .94 WATERSHED INCHES,    152.91 CFS-HRS,    12.64 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION  10, ALTERNATE  2, STORM 25, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION RUNOFF   CROSS SECTION  11
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           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
                .98                          58.59                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .17 SQ.MI.
     .00    DISCHG         .00       .00       .00       .01       .17       .71      1.88      4.02      7.43     12.12
     .50    DISCHG       17.92     24.47     31.34     38.05     44.18     49.34     53.30     56.06     57.75     58.50
    1.00    DISCHG       58.52     57.92     56.78     55.17     53.14     50.78     48.26     45.74     43.35     41.16
    1.50    DISCHG       39.27     37.70     36.46     35.52     34.79     34.17     33.53     32.78     31.83     30.70
    2.00    DISCHG       29.48     28.21     26.92     25.58     24.03     22.11     19.90     17.53     15.13     12.80
    2.50    DISCHG       10.62      8.62      6.92      5.58      4.52      3.67      2.98      2.41      1.95      1.58
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  46
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                PAGE  87


    3.00    DISCHG        1.28      1.03       .83       .67       .54       .43       .34       .27       .21       .16
    3.50    DISCHG         .13       .10       .07       .05       .04       .03       .02       .01       .00

   RUNOFF VOLUME ABOVE BASEFLOW =   .73 WATERSHED INCHES,     79.58 CFS-HRS,     6.58 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION  11, ALTERNATE  2, STORM 25, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION ADDHYD   CROSS SECTION 101

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
                .96                         171.60                        (NULL)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .42 SQ.MI.
     .00    DISCHG         .00       .00       .00       .15      1.06      3.40      7.92     15.51     26.80     41.57
     .50    DISCHG       59.06     78.20     97.81    116.67    133.67    147.86    158.57    165.79    169.98    171.54
    1.00    DISCHG      170.99    168.74    164.96    159.90    153.79    146.83    139.43    132.01    124.93    118.40
    1.50    DISCHG      112.62    107.71    103.68    100.50     97.99     95.86     93.78     91.51     88.81     85.70
    2.00    DISCHG       82.35     78.86     75.26     71.59     67.42     62.32     56.40     50.08     43.66     37.38
    2.50    DISCHG       31.46     25.98     21.14     17.16     13.99     11.44      9.37      7.66      6.25      5.10
    3.00    DISCHG        4.16      3.39      2.76      2.24      1.82      1.48      1.20       .96       .77       .61
    3.50    DISCHG         .48       .38       .29       .22       .17       .12       .09       .06       .03       .02
    4.00    DISCHG         .01       .00

   RUNOFF VOLUME ABOVE BASEFLOW =   .85 WATERSHED INCHES,    232.49 CFS-HRS,    19.21 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION 101, ALTERNATE  2, STORM 25, ADDED TO OUTPUT HYDROGRAPH FILE ---


 EXECUTIVE CONTROL OPERATION ENDCMP                                                                                  RECORD ID
+                                     COMPUTATIONS COMPLETED FOR PASS  46



 EXECUTIVE CONTROL OPERATION COMPUT                                                                                  RECORD ID  25yr, 3
+                                     FROM XSECTION  10
+                                                          TO XSECTION 101
         STARTING TIME =    .00    RAIN DEPTH =  2.75    RAIN DURATION=  3.00    RAIN TABLE NO.= 6    ANT. MOIST. COND= 2
         ALTERNATE NO.= 3         STORM NO.=25    MAIN TIME INCREMENT =   .05 HOURS


 OPERATION RUNOFF   CROSS SECTION  10

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               1.12                         103.88                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .25 SQ.MI.
     .00    DISCHG         .00       .00       .00       .00       .11       .66      2.07      4.71      8.98     15.14
     .50    DISCHG       23.05     32.18     42.00     52.05     61.93     71.31     79.85     87.20     93.15     97.72
    1.00    DISCHG      100.98    103.00    103.83    103.64    102.59    100.90     98.73     96.27     93.70     91.12
    1.50    DISCHG       88.51     85.82     82.93     79.79     76.41     72.85     69.17     65.49     61.97     58.70
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  47
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                PAGE  88


    2.00    DISCHG       55.81     53.34     51.25     49.57     48.23     47.15     46.28     45.59     45.05     44.62
    2.50    DISCHG       44.29     44.02     43.72     43.31     42.70     41.79     40.52     38.94     37.24     35.62
    3.00    DISCHG       34.24     33.12     32.23     31.40     30.35     28.78     26.68     24.17     21.42     18.58
    3.50    DISCHG       15.79     13.14     10.77      8.78      7.19      5.91      4.87      4.01      3.29      2.70
    4.00    DISCHG        2.22      1.82      1.48      1.21       .98       .80       .65       .53       .43       .34
    4.50    DISCHG         .27       .22       .17       .14       .11       .08       .06       .04       .03       .01
    5.00    DISCHG         .01       .00

   RUNOFF VOLUME ABOVE BASEFLOW =  1.12 WATERSHED INCHES,    183.83 CFS-HRS,    15.19 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION  10, ALTERNATE  3, STORM 25, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION RUNOFF   CROSS SECTION  11

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               1.15                          54.38                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .17 SQ.MI.
     .00    DISCHG         .00       .00       .00       .00       .00       .09       .47      1.32      2.87      5.35
     .50    DISCHG        8.82     13.08     17.94     23.16     28.51     33.76     38.71     43.08     46.76     49.73
    1.00    DISCHG       51.91     53.38     54.18     54.38     54.09     53.43     52.50     51.41     50.29     49.13
    1.50    DISCHG       47.94     46.66     45.20     43.56     41.75     39.79     37.74     35.72     33.81     32.09
    2.00    DISCHG       30.62     29.39     28.39     27.61     27.00     26.53     26.17     25.89     25.68     25.54
    2.50    DISCHG       25.44     25.37     25.28     25.09     24.75     24.18     23.35     22.32     21.23     20.24
    3.00    DISCHG       19.46     18.91     18.51     18.13     17.54     16.54     15.16     13.52     11.75      9.96
    3.50    DISCHG        8.25      6.68      5.36      4.33      3.52      2.86      2.33      1.89      1.53      1.24
```

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   4.00    DISCHG        1.00       .81       .65       .52       .42       .33       .27       .21       .17       .13
   4.50    DISCHG         .10       .08       .06       .05       .03       .02       .01       .01       .00

  RUNOFF VOLUME ABOVE BASEFLOW =   .90 WATERSHED INCHES,     97.75 CFS-HRS,     8.08 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION  11, ALTERNATE  3, STORM 25, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION ADDHYD   CROSS SECTION 101

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               1.13                          158.18                        (NULL)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .42 SQ.MI.
    .00    DISCHG         .00       .00       .00       .00       .11       .75      2.53      6.03     11.84     20.49
    .50    DISCHG       31.87     45.27     59.94     75.21     90.44    105.08    118.55    130.28    139.91    147.44
   1.00    DISCHG      152.89    156.37    158.01    158.02    156.68    154.33    151.23    147.68    143.99    140.26
   1.50    DISCHG      136.46    132.48    128.14    123.35    118.17    112.64    106.91    101.20     95.77     90.80
   2.00    DISCHG       86.43     82.73     79.65     77.18     75.23     73.68     72.45     71.48     70.73     70.15
   2.50    DISCHG       69.73     69.39     69.00     68.40     67.45     65.97     63.87     61.26     58.47     55.86
   3.00    DISCHG       53.70     52.03     50.74     49.53     47.89     45.32     41.85     37.69     33.18     28.55
   3.50    DISCHG       24.04     19.82     16.13     13.10     10.70      8.77      7.20      5.90      4.82      3.94
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  47
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                      PAGE  89


   4.00    DISCHG        3.22      2.62      2.13      1.73      1.40      1.14       .92       .74       .59       .47
   4.50    DISCHG         .37       .30       .23       .18       .14       .11       .08       .05       .03       .01
   5.00    DISCHG         .01       .00

  RUNOFF VOLUME ABOVE BASEFLOW =  1.04 WATERSHED INCHES,    281.58 CFS-HRS,    23.27 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION 101, ALTERNATE  3, STORM 25, ADDED TO OUTPUT HYDROGRAPH FILE ---

 EXECUTIVE CONTROL OPERATION ENDCMP                                                                                  RECORD ID
+                                   COMPUTATIONS COMPLETED FOR PASS  47



 EXECUTIVE CONTROL OPERATION COMPUT                                                                                  RECORD ID  25yr, 6
+                                   FROM XSECTION  10
+                                                          TO XSECTION 101
         STARTING TIME =   .00    RAIN DEPTH =  3.22    RAIN DURATION=  6.00    RAIN TABLE NO.= 6    ANT. MOIST. COND= 2
         ALTERNATE NO.= 6         STORM NO.=25    MAIN TIME INCREMENT =   .05 HOURS


 OPERATION RUNOFF   CROSS SECTION  10

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               1.66                           80.15                       (RUNOFF)
               5.10                           26.89                       (RUNOFF)
               6.17                           19.80                       (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .25 SQ.MI.
    .00    DISCHG         .00       .00       .00       .00       .00       .00       .02       .16       .57      1.48
    .50    DISCHG        3.17      5.95      9.99     15.24     21.44     28.24     35.17     41.76     47.74     52.98
   1.00    DISCHG       57.46     61.22     64.34     66.95     69.19     71.22     73.10     74.81     76.30     77.55
   1.50    DISCHG       78.57     79.36     79.90     80.14     80.03     79.53     78.67     77.55     76.27     74.86
   2.00    DISCHG       73.34     71.75     70.12     68.54     67.01     65.50     63.97     62.36     60.73     59.14
   2.50    DISCHG       57.65     56.30     55.10     54.06     53.18     52.43     51.75     51.07     50.29     49.37
   3.00    DISCHG       48.29     47.09     45.77     44.33     42.78     41.09     39.33     37.59     35.94     34.40
   3.50    DISCHG       33.01     31.78     30.72     29.85     29.15     28.59     28.14     27.78     27.48     27.25
   4.00    DISCHG       27.06     26.92     26.80     26.72     26.66     26.61     26.59     26.57     26.56     26.56
   4.50    DISCHG       26.57     26.58     26.60     26.62     26.64     26.67     26.70     26.73     26.76     26.80
   5.00    DISCHG       26.83     26.86     26.89     26.87     26.74     26.45     25.95     25.18     24.20     23.08
   5.50    DISCHG       21.91     20.73     19.63     18.62     17.74     17.08     16.67     16.53     16.68     17.15
   6.00    DISCHG       17.87     18.67     19.36     19.76     19.72     19.09     17.90     16.27     14.39     12.42
   6.50    DISCHG       10.51      8.73      7.16      5.85      4.80      3.94      3.25      2.68      2.20      1.80
   7.00    DISCHG        1.48      1.21       .99       .81       .66       .54       .45       .37       .30       .24
   7.50    DISCHG         .20       .16       .13       .10       .08       .06       .04       .03       .02       .01
   8.00    DISCHG         .00

  RUNOFF VOLUME ABOVE BASEFLOW =  1.48 WATERSHED INCHES,    242.74 CFS-HRS,    20.06 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION  10, ALTERNATE  6, STORM 25, ADDED TO OUTPUT HYDROGRAPH FILE ---
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  48
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                      PAGE  90


 OPERATION RUNOFF   CROSS SECTION  11

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               1.70                           43.21                       (RUNOFF)
               5.10                           16.08                       (RUNOFF)
               6.16                           12.15                       (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .17 SQ.MI.
    .00    DISCHG         .00       .00       .00       .00       .00       .00       .00       .00       .04       .20
    .50    DISCHG         .61      1.43      2.86      4.95      7.65     10.81     14.18     17.51     20.67     23.59
   1.00    DISCHG       26.22     28.56     30.61     32.43     34.08     35.64     37.08     38.40     39.56     40.57
   1.50    DISCHG       41.44     42.17     42.74     43.10     43.21     43.07     42.73     42.24     41.64     40.97
   2.00    DISCHG       40.24     39.45     38.67     37.92     37.17     36.42     35.63     34.79     33.93     33.11
   2.50    DISCHG       32.36     31.68     31.09     30.60     30.21     29.91     29.62     29.29     28.88     28.34
   3.00    DISCHG       27.71     27.00     26.22     25.37     24.45     23.44     22.39     21.38     20.43     19.56
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3.50	DISCHG	18.79	18.12	17.56	17.14	16.80	16.54	16.33	16.16	16.03	15.93
4.00	DISCHG	15.86	15.81	15.77	15.74	15.73	15.72	15.73	15.73	15.74	15.76
4.50	DISCHG	15.77	15.79	15.82	15.84	15.87	15.89	15.92	15.95	15.98	16.00
5.00	DISCHG	16.03	16.06	16.08	16.07	15.98	15.77	15.42	14.89	14.24	13.50
5.50	DISCHG	12.75	12.02	11.35	10.76	10.27	9.92	9.73	9.71	9.89	10.29
6.00	DISCHG	10.86	11.45	11.91	12.15	12.02	11.47	10.56	9.39	8.12	6.84
6.50	DISCHG	5.64	4.57	3.67	2.97	2.41	1.96	1.60	1.29	1.05	.85
7.00	DISCHG	.69	.55	.45	.36	.29	.24	.19	.15	.12	.10
7.50	DISCHG	.08	.06	.05	.03	.02	.01	.01	.00		

RUNOFF VOLUME ABOVE BASEFLOW = 1.23 WATERSHED INCHES, 132.95 CFS-HRS, 10.99 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 11, ALTERNATE 6, STORM 25, ADDED TO OUTPUT HYDROGRAPH FILE ---

OPERATION ADDHYD CROSS SECTION 101

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.68	123.32	(NULL)
5.10	42.98	(NULL)
6.16	31.95	(NULL)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .05 HOURS DRAINAGE AREA = .42 SQ.MI.

.00	DISCHG	.00	.00	.00	.00	.00	.00	.02	.16	.61	1.68
.50	DISCHG	3.78	7.38	12.85	20.19	29.09	39.05	49.35	59.28	68.41	76.57
1.00	DISCHG	83.68	89.78	94.95	99.38	103.27	106.85	110.18	113.20	115.86	118.12
1.50	DISCHG	120.01	121.53	122.64	123.24	123.24	122.60	121.40	119.79	117.91	115.83
2.00	DISCHG	113.58	111.20	108.79	106.45	104.18	101.92	99.60	97.15	94.66	92.25
2.50	DISCHG	90.01	87.98	86.19	84.66	83.40	82.34	81.37	80.36	79.17	77.71
3.00	DISCHG	76.00	74.09	71.98	69.70	67.23	64.53	61.73	58.97	56.37	53.96
3.50	DISCHG	51.80	49.90	48.29	46.98	45.95	45.13	44.47	43.94	43.51	43.18
4.00	DISCHG	42.92	42.72	42.57	42.46	42.39	42.34	42.31	42.30	42.30	42.32

1

TR20 XEQ 04-29-08 16:15 VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS JOB 1 PASS 48
REV PC 09/83(.2) CALCS: V3 W/HUFF-ISWS CIR.173/90 FILE: E06037.DAT DATE: 04/29/08 JAS PAGE 91

4.50	DISCHG	42.34	42.38	42.42	42.46	42.51	42.56	42.62	42.68	42.74	42.80
5.00	DISCHG	42.86	42.93	42.98	42.94	42.71	42.23	41.37	40.08	38.44	36.59
5.50	DISCHG	34.66	32.75	30.98	29.38	28.01	27.00	26.39	26.23	26.57	27.44
6.00	DISCHG	28.73	30.11	31.27	31.92	31.74	30.56	28.46	25.66	22.51	19.26
6.50	DISCHG	16.15	13.31	10.83	8.82	7.21	5.91	4.85	3.97	3.25	2.65
7.00	DISCHG	2.16	1.77	1.44	1.17	.96	.78	.64	.52	.42	.34
7.50	DISCHG	.27	.22	.18	.14	.10	.08	.05	.03	.02	.01
8.00	DISCHG	.00									

RUNOFF VOLUME ABOVE BASEFLOW = 1.38 WATERSHED INCHES, 375.69 CFS-HRS, 31.05 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 101, ALTERNATE 6, STORM 25, ADDED TO OUTPUT HYDROGRAPH FILE ---

EXECUTIVE CONTROL OPERATION ENDCMP RECORD ID
+ COMPUTATIONS COMPLETED FOR PASS 48

EXECUTIVE CONTROL OPERATION INCREM RECORD ID
+ MAIN TIME INCREMENT = .20 HOURS

EXECUTIVE CONTROL OPERATION COMPUT RECORD ID 25yr, 1
+ FROM XSECTION 10
+ TO XSECTION 101
STARTING TIME = .00 RAIN DEPTH = 3.73 RAIN DURATION= 12.00 RAIN TABLE NO.= 7 ANT. MOIST. COND= 2
ALTERNATE NO.=12 STORM NO.=25 MAIN TIME INCREMENT = .20 HOURS

OPERATION RUNOFF CROSS SECTION 10

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
5.50	71.63	(RUNOFF)
12.07	14.65	(RUNOFF)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .20 HOURS DRAINAGE AREA = .25 SQ.MI.

2.00	DISCHG	.01	.23	.95	2.36	4.76	7.70	10.88	14.61	18.39	22.96
4.00	DISCHG	30.10	37.61	44.59	53.00	60.98	66.44	69.25	71.07	71.08	66.61
6.00	DISCHG	61.91	58.47	53.45	49.12	46.36	43.32	40.87	39.01	36.23	33.79
8.00	DISCHG	31.87	28.94	26.37	25.14	24.63	24.42	23.56	21.04	18.63	17.40
10.00	DISCHG	16.86	16.64	16.55	16.53	16.51	15.73	13.16	10.71	10.23	12.27
12.00	DISCHG	14.50	14.04	9.35	4.50	2.08	.95	.43	.19	.08	.02
14.00	DISCHG	.00									

RUNOFF VOLUME ABOVE BASEFLOW = 1.89 WATERSHED INCHES, 309.90 CFS-HRS, 25.61 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 10, ALTERNATE 12, STORM 25, ADDED TO OUTPUT HYDROGRAPH FILE ---

OPERATION RUNOFF CROSS SECTION 11
1

TR20 XEQ 04-29-08 16:15 VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS JOB 1 PASS 49
REV PC 09/83(.2) CALCS: V3 W/HUFF-ISWS CIR.173/90 FILE: E06037.DAT DATE: 04/29/08 JAS PAGE 92

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
5.52	40.60	(RUNOFF)
10.70	10.13	(RUNOFF)
12.05	9.09	(RUNOFF)

```
TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .20 HOURS      DRAINAGE AREA =    .17 SQ.MI.
   2.00    DISCHG         .00       .00       .00       .07       .62      1.78      3.41      5.46      7.62     10.32
   4.00    DISCHG       14.46     18.78     23.01     28.20     33.11     36.59     38.55     40.06     40.38     37.78
   6.00    DISCHG       35.39     33.70     30.79     28.47     27.10     25.34     24.05     23.06     21.38     20.02
   8.00    DISCHG       18.93     17.12     15.66     15.04     14.81     14.73     14.19     12.53     11.09     10.45
  10.00    DISCHG       10.18     10.09     10.06     10.06     10.07      9.51      7.80      6.30      6.21      7.67
  12.00    DISCHG        9.03      8.54      5.32      2.39      1.04       .45       .19       .08       .03       .00

  RUNOFF VOLUME ABOVE BASEFLOW =  1.60 WATERSHED INCHES,    173.83 CFS-HRS,    14.37 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION  11, ALTERNATE 12, STORM 25, ADDED TO OUTPUT HYDROGRAPH FILE ---


OPERATION ADDHYD   CROSS SECTION 101

          PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
              5.51                          112.22                        (NULL)
             12.06                           23.73                        (NULL)

TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .20 HOURS      DRAINAGE AREA =    .42 SQ.MI.
   2.00    DISCHG         .01       .23       .95      2.43      5.38      9.49     14.30     20.06     26.01     33.27
   4.00    DISCHG       44.57     56.39     67.60     81.19     94.09    103.03    107.79    111.13    111.46    104.39
   6.00    DISCHG       97.31     92.17     84.23     77.59     73.46     68.66     64.92     62.08     57.61     53.82
   8.00    DISCHG       50.80     46.06     42.03     40.18     39.43     39.15     37.75     33.57     29.71     27.85
  10.00    DISCHG       27.04     26.72     26.61     26.59     26.57     25.24     20.96     17.02     16.44     19.94
  12.00    DISCHG       23.54     22.58     14.67      6.90      3.12      1.40       .62       .27       .10       .03
  14.00    DISCHG         .00

  RUNOFF VOLUME ABOVE BASEFLOW =  1.78 WATERSHED INCHES,    483.73 CFS-HRS,    39.98 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION 101, ALTERNATE 12, STORM 25, ADDED TO OUTPUT HYDROGRAPH FILE ---


 EXECUTIVE CONTROL OPERATION ENDCMP                                                                                  RECORD ID
+                                     COMPUTATIONS COMPLETED FOR PASS  49



 EXECUTIVE CONTROL OPERATION COMPUT                                                                                  RECORD ID  25yr, 1
+                                     FROM XSECTION  10
+                                                          TO XSECTION 101
        STARTING TIME =   .00    RAIN DEPTH =  4.03    RAIN DURATION= 18.00    RAIN TABLE NO.= 8    ANT. MOIST. COND= 2
        ALTERNATE NO.=18         STORM NO.=25    MAIN TIME INCREMENT =   .20 HOURS
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  50
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                     PAGE  93


 OPERATION RUNOFF   CROSS SECTION  10

          PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
             11.75                           67.94                       (RUNOFF)
             16.10                           18.22                       (RUNOFF)
             17.95                           17.88                       (RUNOFF)

TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .20 HOURS      DRAINAGE AREA =    .25 SQ.MI.
   2.00    DISCHG         .00       .00       .00       .00       .00       .00       .00       .00       .00       .06
   4.00    DISCHG         .27       .62      1.03      1.48      2.12      2.94      3.75      4.49      5.19      5.85
   6.00    DISCHG        6.48      7.09      7.66      8.22      8.76      9.27      9.77     10.53     11.90     13.31
   8.00    DISCHG       14.34     15.24     16.65     18.48     19.98     21.06     22.33     24.34     26.31     27.72
  10.00    DISCHG       29.32     35.07     43.76     50.32     54.22     57.38     60.99     64.26     66.65     67.82
  12.00    DISCHG       64.57     58.23     54.00     52.31     50.10     44.62     39.48     37.00     35.63     32.72
  14.00    DISCHG       28.64     25.91     24.72     23.61     21.57     19.72     18.76     18.36     18.20     18.14
  16.00    DISCHG       18.14     18.15     17.57     15.70     13.87     12.97     12.73     13.85     15.84     17.24
  18.00    DISCHG       17.82     16.27     10.71      5.25      2.38      1.09       .49       .21       .09       .03
  20.00    DISCHG         .00

  RUNOFF VOLUME ABOVE BASEFLOW =  2.14 WATERSHED INCHES,    350.75 CFS-HRS,    28.99 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION  10, ALTERNATE 18, STORM 25, ADDED TO OUTPUT HYDROGRAPH FILE ---


OPERATION RUNOFF   CROSS SECTION  11

          PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
             11.76                           40.06                       (RUNOFF)
             16.11                           11.17                       (RUNOFF)
             17.95                           11.12                       (RUNOFF)

TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .20 HOURS      DRAINAGE AREA =    .17 SQ.MI.
   4.00    DISCHG         .00       .00       .00       .01       .09       .33       .68      1.07      1.47      1.87
   6.00    DISCHG        2.26      2.64      3.01      3.37      3.71      4.04      4.37      4.83      5.62      6.39
   8.00    DISCHG        6.98      7.51      8.38      9.45     10.31     10.97     11.76     13.01     14.19     15.04
  10.00    DISCHG       16.08     19.75     24.98     28.69     31.00     33.01     35.39     37.51     39.09     39.99
  12.00    DISCHG       37.79     33.95     31.79     31.06     29.76     26.31     23.37     22.10     21.41     19.53
  14.00    DISCHG       16.98     15.52     14.91     14.27     12.94     11.85     11.36     11.17     11.11     11.10
  16.00    DISCHG       11.11     11.13     10.73      9.46      8.37      7.87      7.79      8.62      9.93     10.73
  18.00    DISCHG       11.06      9.92      6.09      2.75      1.18       .51       .21       .09       .03       .00

  RUNOFF VOLUME ABOVE BASEFLOW =  1.83 WATERSHED INCHES,    198.96 CFS-HRS,    16.44 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION  11, ALTERNATE 18, STORM 25, ADDED TO OUTPUT HYDROGRAPH FILE ---


OPERATION ADDHYD   CROSS SECTION 101
1


TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  50
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```
          PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
             11.76                          108.00                        (NULL)
             16.10                           29.39                        (NULL)
             17.95                           28.99                        (NULL)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .20 HOURS      DRAINAGE AREA =    .42 SQ.MI.
    2.00    DISCHG         .00       .00       .00       .00       .00       .00       .00       .00       .00       .06
    4.00    DISCHG         .27       .62      1.03      1.49      2.21      3.27      4.43      5.56      6.66      7.72
    6.00    DISCHG        8.74      9.73     10.67     11.59     12.47     13.31     14.15     15.36     17.52     19.70
    8.00    DISCHG       21.32     22.76     25.03     27.94     30.29     32.03     34.09     37.36     40.51     42.76
   10.00    DISCHG       45.40     54.82     68.75     79.01     85.23     90.39     96.37    101.78    105.73    107.82
   12.00    DISCHG      102.36     92.17     85.79     83.36     79.85     70.93     62.85     59.09     57.04     52.25
   14.00    DISCHG       45.62     41.43     39.63     37.88     34.51     31.57     30.12     29.53     29.30     29.24
   16.00    DISCHG       29.25     29.28     28.30     25.16     22.25     20.84     20.51     22.47     25.77     27.96
   18.00    DISCHG       28.88     26.19     16.79      8.00      3.56      1.60       .71       .30       .12       .03
   20.00    DISCHG         .00

   RUNOFF VOLUME ABOVE BASEFLOW =  2.02 WATERSHED INCHES,    549.70 CFS-HRS,    45.43 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION 101, ALTERNATE 18, STORM 25, ADDED TO OUTPUT HYDROGRAPH FILE ---


 EXECUTIVE CONTROL OPERATION ENDCMP                                                                                  RECORD ID
+                                     COMPUTATIONS COMPLETED FOR PASS  50



 EXECUTIVE CONTROL OPERATION COMPUT                                                                                  RECORD ID  25yr, 2
+                                     FROM XSECTION  10
+                                                          TO XSECTION 101
         STARTING TIME =   .00    RAIN DEPTH =  4.29    RAIN DURATION= 24.00    RAIN TABLE NO.= 8    ANT. MOIST. COND= 2
         ALTERNATE NO.=24         STORM NO.=25    MAIN TIME INCREMENT =   .20 HOURS


 OPERATION RUNOFF   CROSS SECTION  10

          PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
             15.60                           56.38                        (RUNOFF)
             21.50                           14.80                        (RUNOFF)
             23.92                           14.89                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .20 HOURS      DRAINAGE AREA =    .25 SQ.MI.
    4.00    DISCHG         .00       .00       .00       .02       .11       .30       .55       .83      1.11      1.39
    6.00    DISCHG        1.67      2.03      2.58      3.18      3.71      4.18      4.61      5.02      5.41      5.79
    8.00    DISCHG        6.16      6.52      6.86      7.19      7.52      7.83      8.13      8.43      8.72      9.25
   10.00    DISCHG       10.28     11.33     12.06     12.60     13.05     13.72     14.99     16.25     17.13     17.76
   12.00    DISCHG       18.28     19.06     20.52     21.97     22.94     23.63     24.23     26.57     32.85     39.13
   14.00    DISCHG       42.90     45.18     46.73     48.33     50.64     52.82     54.38     55.50     56.38     55.44
   16.00    DISCHG       50.48     45.55     43.15     42.21     41.92     40.54     36.23     32.08     30.05     29.17
   18.00    DISCHG       28.81     27.73     24.76     21.92     20.45     19.82     19.53     18.96     17.42     15.96
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  51
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                      PAGE  95


   20.00    DISCHG       15.21     14.89     14.76     14.70     14.69     14.70     14.71     14.73     14.74     14.26
   22.00    DISCHG       12.74     11.28     10.52     10.18     10.05     10.48     11.99     13.47     14.27     14.63
   24.00    DISCHG       14.77     13.40      8.76      4.26      1.95       .89       .39       .17       .07       .02
   26.00    DISCHG         .00

   RUNOFF VOLUME ABOVE BASEFLOW =  2.37 WATERSHED INCHES,    386.86 CFS-HRS,    31.97 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION  10, ALTERNATE 24, STORM 25, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION RUNOFF   CROSS SECTION  11

          PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
             15.60                           33.48                        (RUNOFF)
             21.50                            9.13                        (RUNOFF)
             23.92                            9.30                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .20 HOURS      DRAINAGE AREA =    .17 SQ.MI.
    4.00    DISCHG         .00       .00       .00       .00       .00       .00       .00       .00       .00       .01
    6.00    DISCHG         .07       .19       .40       .66       .93      1.19      1.45      1.70      1.95      2.19
    8.00    DISCHG        2.42      2.65      2.87      3.08      3.29      3.50      3.70      3.89      4.08      4.40
   10.00    DISCHG        5.00      5.57      5.98      6.30      6.58      7.00      7.77      8.49      8.99      9.38
   12.00    DISCHG        9.72     10.22     11.13     11.99     12.57     13.01     13.41     14.94     18.88     22.51
   14.00    DISCHG       24.64     25.98     26.97     28.05     29.62     31.04     32.05     32.84     33.48     32.86
   16.00    DISCHG       29.68     26.84     25.68     25.28     25.21     24.34     21.56     19.14     18.07     17.65
   18.00    DISCHG       17.51     16.82     14.84     13.14     12.37     12.06     11.94     11.56     10.54      9.66
   20.00    DISCHG        9.27      9.11      9.06      9.04      9.04      9.05      9.07      9.09      9.09      8.76
   22.00    DISCHG        7.73      6.84      6.43      6.25      6.19      6.51      7.56      8.48      8.92      9.11
   24.00    DISCHG        9.20      8.17      5.00      2.24       .97       .42       .18       .07       .02       .00

   RUNOFF VOLUME ABOVE BASEFLOW =  2.04 WATERSHED INCHES,    221.28 CFS-HRS,    18.29 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION  11, ALTERNATE 24, STORM 25, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION ADDHYD   CROSS SECTION 101

          PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
             15.60                           89.86                        (NULL)
             21.50                           23.93                        (NULL)
             23.92                           24.19                        (NULL)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .20 HOURS      DRAINAGE AREA =    .42 SQ.MI.
```

4.00	DISCHG	.00	.00	.00	.02	.11	.30	.55	.83	1.11	1.40
6.00	DISCHG	1.74	2.22	2.99	3.85	4.64	5.37	6.06	6.72	7.36	7.98
8.00	DISCHG	8.58	9.16	9.73	10.28	10.81	11.33	11.83	12.32	12.81	13.65
10.00	DISCHG	15.28	16.90	18.04	18.90	19.63	20.72	22.76	24.74	26.12	27.14
12.00	DISCHG	28.00	29.28	31.65	33.95	35.50	36.64	37.63	41.51	51.73	61.65
14.00	DISCHG	67.55	71.16	73.70	76.38	80.25	83.86	86.42	88.34	89.86	88.30

1

TR20 XEQ 04-29-08 16:15 VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS JOB 1 PASS 51
REV PC 09/83(.2) CALCS: V3 W/HUFF-ISWS CIR.173/90 FILE: E06037.DAT DATE: 04/29/08 JAS PAGE 96

16.00	DISCHG	80.16	72.39	68.83	67.50	67.13	64.88	57.78	51.22	48.12	46.83
18.00	DISCHG	46.31	44.55	39.60	35.06	32.82	31.88	31.47	30.52	27.96	25.62
20.00	DISCHG	24.48	24.01	23.81	23.74	23.74	23.75	23.78	23.82	23.84	23.03
22.00	DISCHG	20.48	18.12	16.95	16.43	16.23	16.99	19.55	21.95	23.18	23.74
24.00	DISCHG	23.96	21.57	13.76	6.50	2.92	1.31	.57	.24	.09	.02
26.00	DISCHG	.00									

RUNOFF VOLUME ABOVE BASEFLOW = 2.24 WATERSHED INCHES, 608.14 CFS-HRS, 50.26 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 101, ALTERNATE 24, STORM 25, ADDED TO OUTPUT HYDROGRAPH FILE ---

EXECUTIVE CONTROL OPERATION ENDCMP RECORD ID
+ COMPUTATIONS COMPLETED FOR PASS 51

EXECUTIVE CONTROL OPERATION INCREM RECORD ID
+ MAIN TIME INCREMENT = .50 HOURS

EXECUTIVE CONTROL OPERATION COMPUT RECORD ID 25yr, 4
+ FROM XSECTION 10
+ TO XSECTION 101
STARTING TIME = .00 RAIN DEPTH = 4.78 RAIN DURATION= 48.00 RAIN TABLE NO.= 9 ANT. MOIST. COND= 2
ALTERNATE NO.=48 STORM NO.=25 MAIN TIME INCREMENT = .50 HOURS

OPERATION RUNOFF CROSS SECTION 10

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
26.29	6.77	(RUNOFF)
40.80	33.69	(RUNOFF)
42.80	32.70	(RUNOFF)
47.74	22.65	(RUNOFF)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .50 HOURS DRAINAGE AREA = .25 SQ.MI.

10.00	DISCHG	.07	.27	.50	.73	.94	1.15	1.36	1.55	1.74	1.92
15.00	DISCHG	2.10	2.27	2.43	2.59	2.74	2.89	3.04	3.18	3.31	3.45
20.00	DISCHG	3.57	3.70	3.82	3.93	4.05	4.16	4.26	4.37	4.47	5.46
25.00	DISCHG	6.17	6.41	6.57	6.68	5.63	5.30	5.31	5.38	5.64	7.04
30.00	DISCHG	7.46	7.62	7.74	8.81	11.49	12.16	12.44	12.66	12.86	13.06
35.00	DISCHG	13.24	13.42	13.61	16.43	18.34	18.84	19.12	19.69	28.43	31.93
40.00	DISCHG	32.86	33.39	33.56	32.08	31.98	32.22	32.49	30.10	23.39	22.27
45.00	DISCHG	22.20	22.28	22.38	22.47	22.56	22.64	22.64	9.61	1.35	.17
50.00	DISCHG	.00									

RUNOFF VOLUME ABOVE BASEFLOW = 2.79 WATERSHED INCHES, 455.46 CFS-HRS, 37.64 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 10, ALTERNATE 48, STORM 25, ADDED TO OUTPUT HYDROGRAPH FILE ---

1

TR20 XEQ 04-29-08 16:15 VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS JOB 1 PASS 52
REV PC 09/83(.2) CALCS: V3 W/HUFF-ISWS CIR.173/90 FILE: E06037.DAT DATE: 04/29/08 JAS PAGE 97

OPERATION RUNOFF CROSS SECTION 11

*** WARNING-MAIN TIME INCREMENT MAY BE TOO LARGE.
COMPUTED PEAK(15.27) AT EXCEEDS MAX. ADJACENT HYDROGRAPH COORDINATE BY 7 %.
+ XSECTION 11

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
42.81	20.11	(RUNOFF)
47.75	15.27	(RUNOFF)
41.00	20.33	(RUNOFF)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .50 HOURS DRAINAGE AREA = .17 SQ.MI.

10.00	DISCHG	.00	.00	.00	.00	.02	.11	.24	.36	.47	.59
15.00	DISCHG	.70	.81	.91	1.01	1.11	1.21	1.30	1.39	1.48	1.57
20.00	DISCHG	1.65	1.73	1.81	1.89	1.97	2.04	2.12	2.19	2.26	2.82
25.00	DISCHG	3.18	3.32	3.44	3.52	2.94	2.81	2.84	2.89	3.06	3.86
30.00	DISCHG	4.08	4.18	4.27	4.96	6.46	6.83	7.02	7.17	7.33	7.47
35.00	DISCHG	7.61	7.75	7.88	9.70	10.76	11.07	11.28	11.68	17.23	19.18
40.00	DISCHG	19.77	20.17	20.33	19.48	19.53	19.75	19.98	18.34	14.28	13.75
45.00	DISCHG	13.75	13.83	13.91	13.99	14.07	14.14	14.18	5.28	.64	.07

RUNOFF VOLUME ABOVE BASEFLOW = 2.43 WATERSHED INCHES, 263.92 CFS-HRS, 21.81 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 11, ALTERNATE 48, STORM 25, ADDED TO OUTPUT HYDROGRAPH FILE ---

OPERATION ADDHYD CROSS SECTION 101

*** WARNING-MAIN TIME INCREMENT MAY BE TOO LARGE.
COMPUTED PEAK(39.54) AT EXCEEDS MAX. ADJACENT HYDROGRAPH COORDINATE BY 7 %.
+ XSECTION 101

```
           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
              26.30                          10.34                        (NULL)
              40.81                          54.08                        (NULL)
              42.81                          52.81                        (NULL)
              47.75                          39.54                        (NULL)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .50 HOURS      DRAINAGE AREA =    .42 SQ.MI.
   10.00    DISCHG         .07       .27       .50       .73       .96      1.27      1.59      1.91      2.21      2.51
   15.00    DISCHG        2.79      3.07      3.34      3.60      3.86      4.10      4.34      4.57      4.80      5.01
   20.00    DISCHG        5.23      5.43      5.63      5.83      6.02      6.20      6.38      6.55      6.73      8.28
   25.00    DISCHG        9.35      9.73     10.01     10.19      8.58      8.11      8.16      8.28      8.70     10.89
   30.00    DISCHG       11.54     11.80     12.01     13.77     17.94     18.98     19.46     19.83     20.19     20.53
   35.00    DISCHG       20.85     21.17     21.49     26.13     29.11     29.91     30.40     31.37     45.66     51.11
   40.00    DISCHG       52.64     53.56     53.89     51.56     51.50     51.96     52.47     48.44     37.67     36.02
   45.00    DISCHG       35.95     36.11     36.29     36.46     36.62     36.78     36.81     14.90      1.99       .24
   50.00    DISCHG         .00
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  52
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                     PAGE  98


   RUNOFF VOLUME ABOVE BASEFLOW =  2.64 WATERSHED INCHES,    719.35 CFS-HRS,    59.45 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION 101, ALTERNATE 48, STORM 25, ADDED TO OUTPUT HYDROGRAPH FILE ---


 EXECUTIVE CONTROL OPERATION ENDCMP                                                                                  RECORD ID
+                                     COMPUTATIONS COMPLETED FOR PASS  52



 EXECUTIVE CONTROL OPERATION COMPUT                                                                                  RECORD ID  25yr, 7
+                                     FROM XSECTION  10
+                                                          TO XSECTION 101
         STARTING TIME =   .00    RAIN DEPTH =  5.21    RAIN DURATION= 72.00    RAIN TABLE NO.= 9    ANT. MOIST. COND= 2
         ALTERNATE NO.=72         STORM NO.=25    MAIN TIME INCREMENT =   .50 HOURS


 OPERATION RUNOFF   CROSS SECTION  10

 *** WARNING-MAIN TIME INCREMENT MAY BE TOO LARGE.
          COMPUTED PEAK(     17.99) AT                EXCEEDS MAX. ADJACENT HYDROGRAPH COORDINATE BY   7 %.
+                                   XSECTION  10

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
              39.31                           5.27                        (RUNOFF)
              60.95                          25.14                        (RUNOFF)
              64.32                          24.25                        (RUNOFF)
              71.75                          17.99                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .50 HOURS      DRAINAGE AREA =    .25 SQ.MI.
   10.00    DISCHG         .00       .00       .00       .00       .00       .00       .01       .05       .10       .16
   15.00    DISCHG         .31       .45       .57       .68       .79       .90      1.01      1.11      1.21      1.31
   20.00    DISCHG        1.40      1.50      1.59      1.68      1.76      1.85      1.93      2.01      2.09      2.17
   25.00    DISCHG        2.24      2.31      2.39      2.46      2.52      2.59      2.66      2.72      2.78      2.85
   30.00    DISCHG        2.91      2.97      3.02      3.08      3.13      3.19      3.24      3.29      3.35      3.40
   35.00    DISCHG        3.44      3.49      3.54      4.28      4.79      4.93      5.01      5.09      5.16      5.23
   40.00    DISCHG        4.75      4.13      4.07      4.09      4.13      4.16      4.20      4.57      5.51      5.73
   45.00    DISCHG        5.81      5.86      5.92      5.97      6.33      8.55      9.15      9.33      9.44      9.54
   50.00    DISCHG        9.64      9.73      9.82      9.91     10.00     10.08     10.16     10.24     10.32     12.41
   55.00    DISCHG       13.78     14.08     14.22     14.33     14.44     14.55     18.45     23.24     24.18     24.51
   60.00    DISCHG       24.74     24.94     25.14     24.86     23.79     23.71     23.82     23.95     24.08     24.20
   65.00    DISCHG       23.47     17.84     16.54     16.39     16.42     16.46     16.50     16.54     16.59     16.63
   70.00    DISCHG       16.66     16.70     16.74     16.78     16.78      7.06       .99       .12       .00

   RUNOFF VOLUME ABOVE BASEFLOW =  3.17 WATERSHED INCHES,    517.79 CFS-HRS,    42.79 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION  10, ALTERNATE 72, STORM 25, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION RUNOFF   CROSS SECTION  11
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  53
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                     PAGE  99


           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
              64.34                          15.04                        (RUNOFF)
              71.72                          10.56                        (RUNOFF)
              61.00                          15.36                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .50 HOURS      DRAINAGE AREA =    .17 SQ.MI.
   15.00    DISCHG         .00       .00       .00       .01       .05       .12       .18       .25       .31       .37
   20.00    DISCHG         .43       .49       .55       .60       .66       .71       .76       .82       .87       .92
   25.00    DISCHG         .97      1.01      1.06      1.11      1.15      1.20      1.24      1.28      1.33      1.37
   30.00    DISCHG        1.41      1.45      1.49      1.52      1.56      1.60      1.64      1.67      1.71      1.74
   35.00    DISCHG        1.77      1.81      1.84      2.27      2.53      2.61      2.66      2.72      2.77      2.82
   40.00    DISCHG        2.53      2.23      2.21      2.23      2.26      2.28      2.31      2.55      3.07      3.18
   45.00    DISCHG        3.23      3.27      3.31      3.35      3.59      4.89      5.20      5.31      5.39      5.47
   50.00    DISCHG        5.54      5.61      5.68      5.75      5.82      5.88      5.94      6.00      6.07      7.41
   55.00    DISCHG        8.17      8.34      8.45      8.54      8.62      8.71     11.33     14.10     14.63     14.85
   60.00    DISCHG       15.03     15.20     15.36     15.19     14.57     14.59     14.69     14.80     14.90     15.01
   65.00    DISCHG       14.51     10.93     10.26     10.21     10.24     10.28     10.32     10.35     10.39     10.42
   70.00    DISCHG       10.46     10.49     10.52     10.55     10.55      3.94       .47       .05

   RUNOFF VOLUME ABOVE BASEFLOW =  2.79 WATERSHED INCHES,    303.13 CFS-HRS,    25.05 ACRE-FEET;   BASEFLOW =    .00 CFS
```

--- HYDROGRAPH FOR XSECTION 11, ALTERNATE 72, STORM 25, ADDED TO OUTPUT HYDROGRAPH FILE ---

OPERATION ADDHYD CROSS SECTION 101

*** WARNING-MAIN TIME INCREMENT MAY BE TOO LARGE.
COMPUTED PEAK(29.37) AT EXCEEDS MAX. ADJACENT HYDROGRAPH COORDINATE BY 7 %.
+ XSECTION 101

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
39.32	8.11	(NULL)
60.97	40.50	(NULL)
64.33	39.29	(NULL)
71.75	29.37	(NULL)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .50 HOURS DRAINAGE AREA = .42 SQ.MI.

10.00	DISCHG	.00	.00	.00	.00	.00	.00	.01	.05	.10	.16
15.00	DISCHG	.31	.45	.57	.69	.84	1.02	1.19	1.35	1.52	1.68
20.00	DISCHG	1.83	1.98	2.13	2.28	2.42	2.56	2.69	2.83	2.96	3.08
25.00	DISCHG	3.21	3.33	3.45	3.56	3.68	3.79	3.90	4.00	4.11	4.21
30.00	DISCHG	4.31	4.41	4.51	4.60	4.70	4.79	4.88	4.97	5.05	5.14
35.00	DISCHG	5.22	5.30	5.39	6.56	7.32	7.54	7.68	7.80	7.93	8.05
40.00	DISCHG	7.28	6.36	6.28	6.32	6.38	6.44	6.50	7.12	8.58	8.91
45.00	DISCHG	9.04	9.14	9.23	9.32	9.92	13.44	14.36	14.65	14.84	15.01
50.00	DISCHG	15.18	15.35	15.51	15.66	15.81	15.96	16.10	16.24	16.39	19.82
55.00	DISCHG	21.94	22.42	22.67	22.87	23.06	23.25	29.79	37.34	38.81	39.37
60.00	DISCHG	39.77	40.14	40.50	40.04	38.36	38.30	38.51	38.75	38.98	39.20
65.00	DISCHG	37.98	28.76	26.80	26.60	26.66	26.74	26.82	26.90	26.97	27.05

1

TR20 XEQ 04-29-08 16:15 VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS JOB 1 PASS 53
REV PC 09/83(.2) CALCS: V3 W/HUFF-ISWS CIR.173/90 FILE: E06037.DAT DATE: 04/29/08 JAS PAGE 100

70.00	DISCHG	27.12	27.19	27.26	27.33	27.33	10.99	1.46	.17	.00	

RUNOFF VOLUME ABOVE BASEFLOW = 3.02 WATERSHED INCHES, 820.90 CFS-HRS, 67.84 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 101, ALTERNATE 72, STORM 25, ADDED TO OUTPUT HYDROGRAPH FILE ---

EXECUTIVE CONTROL OPERATION ENDCMP RECORD ID
+ COMPUTATIONS COMPLETED FOR PASS 53

EXECUTIVE CONTROL OPERATION COMPUT RECORD ID 25yr, 1
+ FROM XSECTION 10
+ TO XSECTION 101
STARTING TIME = .00 RAIN DEPTH = 5.83 RAIN DURATION=120.00 RAIN TABLE NO.= 9 ANT. MOIST. COND= 2
ALTERNATE NO.=73 STORM NO.=25 MAIN TIME INCREMENT = .50 HOURS

OPERATION RUNOFF CROSS SECTION 10

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
101.79	17.56	(RUNOFF)
107.75	17.10	(RUNOFF)
119.40	11.50	(RUNOFF)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .50 HOURS DRAINAGE AREA = .25 SQ.MI.

15.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.00	.02	.04
20.00	DISCHG	.07	.10	.12	.15	.17	.19	.22	.24	.26	.38
25.00	DISCHG	.47	.53	.58	.63	.68	.72	.77	.81	.86	.90
30.00	DISCHG	.94	.99	1.03	1.07	1.11	1.15	1.19	1.23	1.26	1.30
35.00	DISCHG	1.34	1.37	1.41	1.44	1.48	1.51	1.54	1.58	1.61	1.64
40.00	DISCHG	1.67	1.70	1.73	1.76	1.79	1.82	1.85	1.88	1.90	1.93
45.00	DISCHG	1.96	1.99	2.01	2.04	2.06	2.09	2.11	2.14	2.16	2.18
50.00	DISCHG	2.21	2.23	2.25	2.28	2.30	2.32	2.34	2.36	2.38	2.41
55.00	DISCHG	2.43	2.45	2.47	2.49	2.51	2.52	2.54	2.56	2.58	2.60
60.00	DISCHG	2.62	3.15	3.49	3.57	3.60	3.63	3.66	3.69	3.72	3.75
65.00	DISCHG	3.78	3.80	3.83	3.30	2.96	2.93	2.93	2.95	2.96	2.98
70.00	DISCHG	2.99	3.00	3.02	3.03	3.04	3.65	4.04	4.11	4.14	4.16
75.00	DISCHG	4.18	4.20	4.22	4.24	4.26	4.28	4.31	5.58	6.40	6.55
80.00	DISCHG	6.61	6.65	6.69	6.72	6.76	6.80	6.83	6.87	6.90	6.94
85.00	DISCHG	6.97	7.00	7.04	7.07	7.10	7.13	7.16	7.19	7.21	7.24
90.00	DISCHG	7.28	8.71	9.63	9.80	9.87	9.91	9.95	10.00	10.04	10.08
95.00	DISCHG	10.12	10.15	10.20	13.95	16.34	16.76	16.89	16.98	17.06	17.14
100.00	DISCHG	17.21	17.29	17.36	17.43	17.49	16.78	16.34	16.33	16.37	16.42
105.00	DISCHG	16.46	16.51	16.56	16.60	16.64	16.69	16.71	13.53	11.53	11.25
110.00	DISCHG	11.23	11.25	11.26	11.28	11.29	11.31	11.32	11.34	11.35	11.37
115.00	DISCHG	11.38	11.40	11.41	11.42	11.44	11.45	11.46	11.48	11.49	11.50
120.00	DISCHG	11.47	4.86	.69	.09	.00					

RUNOFF VOLUME ABOVE BASEFLOW = 3.72 WATERSHED INCHES, 609.15 CFS-HRS, 50.34 ACRE-FEET; BASEFLOW = .00 CFS

1

TR20 XEQ 04-29-08 16:15 VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS JOB 1 PASS 54
REV PC 09/83(.2) CALCS: V3 W/HUFF-ISWS CIR.173/90 FILE: E06037.DAT DATE: 04/29/08 JAS PAGE 101

--- HYDROGRAPH FOR XSECTION 10, ALTERNATE 73, STORM 25, ADDED TO OUTPUT HYDROGRAPH FILE ---

OPERATION RUNOFF CROSS SECTION 11

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
107.76	10.74	(RUNOFF)
119.45	7.29	(RUNOFF)

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            102.00                          10.82                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .50 HOURS      DRAINAGE AREA =    .17 SQ.MI.
   25.00    DISCHG         .01       .03       .06       .09       .12       .15       .18       .21       .23       .26
   30.00    DISCHG         .29       .32       .34       .37       .39       .42       .44       .47       .49       .52
   35.00    DISCHG         .54       .56       .58       .61       .63       .65       .67       .69       .72       .74
   40.00    DISCHG         .76       .78       .80       .82       .84       .86       .88       .89       .91       .93
   45.00    DISCHG         .95       .97       .98      1.00      1.02      1.04      1.05      1.07      1.09      1.10
   50.00    DISCHG        1.12      1.13      1.15      1.17      1.18      1.20      1.21      1.23      1.24      1.26
   55.00    DISCHG        1.27      1.28      1.30      1.31      1.33      1.34      1.35      1.37      1.38      1.39
   60.00    DISCHG        1.41      1.72      1.89      1.93      1.96      1.98      2.00      2.02      2.04      2.06
   65.00    DISCHG        2.08      2.10      2.12      1.80      1.64      1.63      1.63      1.65      1.66      1.67
   70.00    DISCHG        1.68      1.69      1.70      1.70      1.72      2.09      2.29      2.33      2.35      2.36
   75.00    DISCHG        2.38      2.40      2.41      2.43      2.44      2.46      2.48      3.27      3.70      3.79
   80.00    DISCHG        3.82      3.85      3.88      3.91      3.94      3.97      4.00      4.02      4.05      4.08
   85.00    DISCHG        4.10      4.13      4.15      4.18      4.20      4.23      4.25      4.27      4.29      4.32
   90.00    DISCHG        4.34      5.28      5.79      5.88      5.92      5.96      5.99      6.03      6.06      6.09
   95.00    DISCHG        6.12      6.16      6.20      8.67     10.00     10.23     10.32     10.39     10.46     10.53
  100.00    DISCHG       10.59     10.65     10.71     10.77     10.82     10.35     10.13     10.14     10.18     10.22
  105.00    DISCHG       10.26     10.30     10.34     10.37     10.41     10.45     10.48      8.30      7.18      7.06
  110.00    DISCHG        7.06      7.07      7.08      7.10      7.11      7.12      7.14      7.15      7.16      7.18
  115.00    DISCHG        7.19      7.20      7.21      7.22      7.24      7.25      7.26      7.27      7.28      7.29
  120.00    DISCHG        7.28      2.71       .33       .03

   RUNOFF VOLUME ABOVE BASEFLOW =  3.33 WATERSHED INCHES,    360.91 CFS-HRS,    29.83 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION  11, ALTERNATE 73, STORM 25, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION ADDHYD   CROSS SECTION 101

            PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               65.77                           6.04                        (NULL)
              101.79                          28.42                        (NULL)
              107.76                          27.84                        (NULL)
              119.42                          18.79                        (NULL)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .50 HOURS      DRAINAGE AREA =    .42 SQ.MI.
   15.00    DISCHG         .00       .00       .00       .00       .00       .00       .00       .00       .02       .04
   20.00    DISCHG         .07       .10       .12       .15       .17       .19       .22       .24       .26       .38
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  54
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                PAGE 102


   25.00    DISCHG         .48       .56       .64       .72       .80       .87       .95      1.02      1.09      1.16
   30.00    DISCHG        1.23      1.30      1.37      1.44      1.50      1.57      1.63      1.69      1.75      1.82
   35.00    DISCHG        1.88      1.93      1.99      2.05      2.11      2.16      2.22      2.27      2.32      2.38
   40.00    DISCHG        2.43      2.48      2.53      2.58      2.63      2.68      2.72      2.77      2.82      2.86
   45.00    DISCHG        2.91      2.95      3.00      3.04      3.08      3.12      3.17      3.21      3.25      3.29
   50.00    DISCHG        3.33      3.37      3.40      3.44      3.48      3.52      3.55      3.59      3.63      3.66
   55.00    DISCHG        3.70      3.73      3.76      3.80      3.83      3.86      3.90      3.93      3.96      3.99
   60.00    DISCHG        4.03      4.86      5.38      5.50      5.56      5.61      5.66      5.71      5.76      5.81
   65.00    DISCHG        5.86      5.90      5.95      5.09      4.60      4.55      4.57      4.59      4.62      4.64
   70.00    DISCHG        4.66      4.69      4.71      4.73      4.76      5.73      6.33      6.44      6.49      6.53
   75.00    DISCHG        6.56      6.60      6.63      6.67      6.71      6.74      6.79      8.85     10.10     10.34
   80.00    DISCHG       10.43     10.50     10.57     10.64     10.70     10.77     10.83     10.89     10.95     11.02
   85.00    DISCHG       11.07     11.13     11.19     11.24     11.30     11.35     11.41     11.46     11.51     11.56
   90.00    DISCHG       11.62     13.99     15.42     15.69     15.79     15.87     15.95     16.02     16.10     16.17
   95.00    DISCHG       16.24     16.31     16.40     22.62     26.34     26.99     27.22     27.37     27.52     27.66
  100.00    DISCHG       27.80     27.94     28.07     28.20     28.31     27.13     26.47     26.46     26.54     26.63
  105.00    DISCHG       26.72     26.81     26.89     26.98     27.06     27.13     27.19     21.83     18.71     18.31
  110.00    DISCHG       18.28     18.32     18.35     18.38     18.40     18.43     18.46     18.49     18.52     18.54
  115.00    DISCHG       18.57     18.60     18.62     18.65     18.67     18.70     18.72     18.75     18.77     18.79
  120.00    DISCHG       18.75      7.58      1.02       .12       .00

   RUNOFF VOLUME ABOVE BASEFLOW =  3.57 WATERSHED INCHES,    970.05 CFS-HRS,    80.16 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION 101, ALTERNATE 73, STORM 25, ADDED TO OUTPUT HYDROGRAPH FILE ---


 EXECUTIVE CONTROL OPERATION ENDCMP                                                                                  RECORD ID
+                                   COMPUTATIONS COMPLETED FOR PASS  54



 EXECUTIVE CONTROL OPERATION COMPUT                                                                                  RECORD ID  25yr, 2
+                                   FROM XSECTION  10
+                                                          TO XSECTION 101
         STARTING TIME =    .00    RAIN DEPTH =  6.96    RAIN DURATION=240.00    RAIN TABLE NO.= 9    ANT. MOIST. COND= 2
         ALTERNATE NO.=74          STORM NO.=25    MAIN TIME INCREMENT =   .50 HOURS


 OPERATION RUNOFF   CROSS SECTION  10

 *** WARNING-NO PEAK FOUND, MAXIMUM DISCHARGE =        2.73 CFS.

            PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
              149.50                           2.73                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .50 HOURS      DRAINAGE AREA =    .25 SQ.MI.
   30.00    DISCHG         .00       .00       .00       .01       .02       .04       .06       .08       .10       .12
   35.00    DISCHG         .14       .16       .18       .16       .15       .15       .16       .17       .18       .18
   40.00    DISCHG         .19       .20       .21       .22       .22       .23       .24       .25       .25       .26
   45.00    DISCHG         .27       .28       .28       .29       .30       .31       .31       .41       .49       .51
   50.00    DISCHG         .53       .54       .56       .57       .59       .60       .62       .63       .65       .66
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  55
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                PAGE 103
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55.00	DISCHG	.67	.69	.70	.72	.73	.74	.76	.77	.78	.80
60.00	DISCHG	.81	.82	.83	.85	.86	.87	.88	.89	.91	.92
65.00	DISCHG	.93	.94	.95	.96	.98	.99	1.00	1.01	1.02	1.03
70.00	DISCHG	1.04	1.05	1.06	1.07	1.08	1.09	1.10	1.11	1.12	1.13
75.00	DISCHG	1.14	1.15	1.16	1.17	1.18	1.19	1.20	1.21	1.22	1.23
80.00	DISCHG	1.24	1.25	1.25	1.26	1.27	1.28	1.29	1.30	1.31	1.31
85.00	DISCHG	1.32	1.33	1.34	1.35	1.36	1.36	1.37	1.38	1.39	1.39
90.00	DISCHG	1.40	1.41	1.42	1.42	1.43	1.44	1.45	1.45	1.46	1.47
95.00	DISCHG	1.48	1.48	1.49	1.50	1.50	1.51	1.52	1.52	1.53	1.54
100.00	DISCHG	1.54	1.55	1.56	1.56	1.57	1.57	1.58	1.59	1.59	1.60
105.00	DISCHG	1.61	1.61	1.62	1.62	1.63	1.64	1.64	1.65	1.65	1.66
110.00	DISCHG	1.66	1.67	1.68	1.68	1.69	1.69	1.70	1.70	1.71	1.71
115.00	DISCHG	1.72	1.72	1.73	1.73	1.74	1.74	1.75	1.75	1.76	1.76
120.00	DISCHG	1.77	2.12	2.34	2.38	2.39	2.40	2.41	2.42	2.42	2.43
125.00	DISCHG	2.44	2.45	2.46	2.46	2.47	2.48	2.49	2.49	2.50	2.51
130.00	DISCHG	2.52	2.52	2.53	2.54	2.54	2.18	1.96	1.93	1.93	1.93
135.00	DISCHG	1.93	1.94	1.94	1.94	1.95	1.95	1.96	1.96	1.96	1.97
140.00	DISCHG	1.97	1.97	1.98	1.98	1.98	1.99	1.99	2.00	2.00	2.39
145.00	DISCHG	2.64	2.68	2.69	2.69	2.70	2.70	2.71	2.72	2.72	2.73

RUNOFF VOLUME ABOVE BASEFLOW = .98 WATERSHED INCHES, 160.09 CFS-HRS, 13.23 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 10, ALTERNATE 74, STORM 25, ADDED TO OUTPUT HYDROGRAPH FILE ---

OPERATION RUNOFF CROSS SECTION 11

*** WARNING-NO PEAK FOUND, MAXIMUM DISCHARGE = 1.60 CFS.

PEAK TIME(HRS) 149.50 PEAK DISCHARGE(CFS) 1.60 PEAK ELEVATION(FEET) (RUNOFF)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .50 HOURS DRAINAGE AREA = .17 SQ.MI.

40.00	DISCHG	.00	.01	.01	.01	.02	.02	.03	.03	.04	.04
45.00	DISCHG	.05	.05	.06	.06	.07	.07	.07	.11	.13	.14
50.00	DISCHG	.15	.16	.17	.18	.19	.20	.21	.21	.22	.23
55.00	DISCHG	.24	.25	.26	.27	.28	.29	.29	.30	.31	.32
60.00	DISCHG	.33	.34	.34	.35	.36	.37	.38	.38	.39	.40
65.00	DISCHG	.41	.41	.42	.43	.44	.44	.45	.46	.47	.47
70.00	DISCHG	.48	.49	.49	.50	.51	.52	.52	.53	.54	.54
75.00	DISCHG	.55	.56	.56	.57	.57	.58	.59	.59	.60	.61
80.00	DISCHG	.61	.62	.62	.63	.64	.64	.65	.65	.66	.67
85.00	DISCHG	.67	.68	.68	.69	.69	.70	.70	.71	.72	.72
90.00	DISCHG	.73	.73	.74	.74	.75	.75	.76	.76	.77	.77
95.00	DISCHG	.78	.78	.79	.79	.80	.80	.81	.81	.82	.82
100.00	DISCHG	.82	.83	.83	.84	.84	.85	.85	.86	.86	.87
105.00	DISCHG	.87	.87	.88	.88	.89	.89	.90	.90	.90	.91
110.00	DISCHG	.91	.92	.92	.92	.93	.93	.94	.94	.94	.95
115.00	DISCHG	.95	.96	.96	.96	.97	.97	.97	.98	.98	.98

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TR20 XEQ 04-29-08 16:15 VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS JOB 1 PASS 55
REV PC 09/83(.2) CALCS: V3 W/HUFF-ISWS CIR.173/90 FILE: E06037.DAT DATE: 04/29/08 JAS PAGE 104

120.00	DISCHG	.99	1.20	1.31	1.33	1.34	1.35	1.35	1.36	1.37	1.37
125.00	DISCHG	1.38	1.38	1.39	1.40	1.40	1.41	1.41	1.42	1.42	1.43
130.00	DISCHG	1.44	1.44	1.45	1.45	1.46	1.23	1.12	1.10	1.11	1.11
135.00	DISCHG	1.11	1.11	1.12	1.12	1.12	1.13	1.13	1.13	1.13	1.14
140.00	DISCHG	1.14	1.14	1.14	1.15	1.15	1.15	1.16	1.16	1.16	1.41
145.00	DISCHG	1.54	1.56	1.57	1.57	1.57	1.58	1.58	1.59	1.59	1.60

RUNOFF VOLUME ABOVE BASEFLOW = .77 WATERSHED INCHES, 83.86 CFS-HRS, 6.93 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 11, ALTERNATE 74, STORM 25, ADDED TO OUTPUT HYDROGRAPH FILE ---

OPERATION ADDHYD CROSS SECTION 101

*** WARNING-NO PEAK FOUND, MAXIMUM DISCHARGE = 4.32 CFS.

PEAK TIME(HRS) 149.50 PEAK DISCHARGE(CFS) 4.32 PEAK ELEVATION(FEET) (NULL)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .50 HOURS DRAINAGE AREA = .42 SQ.MI.

30.00	DISCHG	.00	.00	.00	.01	.02	.04	.06	.08	.10	.12
35.00	DISCHG	.14	.16	.18	.16	.15	.15	.16	.17	.18	.18
40.00	DISCHG	.19	.20	.22	.23	.24	.26	.27	.28	.29	.30
45.00	DISCHG	.32	.33	.34	.35	.36	.38	.39	.52	.61	.65
50.00	DISCHG	.68	.70	.73	.75	.77	.80	.82	.85	.87	.89
55.00	DISCHG	.92	.94	.96	.98	1.01	1.03	1.05	1.07	1.09	1.11
60.00	DISCHG	1.14	1.16	1.18	1.20	1.22	1.24	1.26	1.28	1.30	1.32
65.00	DISCHG	1.34	1.36	1.38	1.39	1.41	1.43	1.45	1.47	1.49	1.50
70.00	DISCHG	1.52	1.54	1.56	1.57	1.59	1.61	1.63	1.64	1.66	1.68
75.00	DISCHG	1.69	1.71	1.72	1.74	1.76	1.77	1.79	1.80	1.82	1.83
80.00	DISCHG	1.85	1.86	1.88	1.89	1.91	1.92	1.94	1.95	1.97	1.98
85.00	DISCHG	1.99	2.01	2.02	2.03	2.05	2.06	2.08	2.09	2.10	2.11
90.00	DISCHG	2.13	2.14	2.15	2.17	2.18	2.19	2.20	2.22	2.23	2.24
95.00	DISCHG	2.25	2.26	2.28	2.29	2.30	2.31	2.32	2.33	2.35	2.36
100.00	DISCHG	2.37	2.38	2.39	2.40	2.41	2.42	2.43	2.44	2.45	2.47
105.00	DISCHG	2.48	2.49	2.50	2.51	2.52	2.53	2.54	2.55	2.56	2.57
110.00	DISCHG	2.58	2.59	2.60	2.60	2.61	2.62	2.63	2.64	2.65	2.66
115.00	DISCHG	2.67	2.68	2.69	2.70	2.71	2.71	2.72	2.73	2.74	2.75
120.00	DISCHG	2.76	3.32	3.65	3.71	3.73	3.75	3.76	3.78	3.79	3.80
125.00	DISCHG	3.82	3.83	3.85	3.86	3.87	3.89	3.90	3.91	3.93	3.94
130.00	DISCHG	3.95	3.96	3.98	3.99	4.00	3.41	3.07	3.03	3.03	3.04
135.00	DISCHG	3.04	3.05	3.06	3.06	3.07	3.08	3.08	3.09	3.10	3.10
140.00	DISCHG	3.11	3.12	3.12	3.13	3.14	3.14	3.15	3.15	3.16	3.80
145.00	DISCHG	4.17	4.24	4.25	4.26	4.27	4.28	4.29	4.30	4.31	4.32

RUNOFF VOLUME ABOVE BASEFLOW = .90 WATERSHED INCHES, 243.95 CFS-HRS, 20.16 ACRE-FEET; BASEFLOW = .00 CFS

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                    --- HYDROGRAPH FOR XSECTION 101, ALTERNATE 74, STORM 25, ADDED TO OUTPUT HYDROGRAPH FILE ---
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  56
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                     PAGE 105



 EXECUTIVE CONTROL OPERATION ENDCMP                                                                                   RECORD ID
+                                       COMPUTATIONS COMPLETED FOR PASS  55



 EXECUTIVE CONTROL OPERATION INCREM                                                                                   RECORD ID   Output
+                                       MAIN TIME INCREMENT =   .05 HOURS


 EXECUTIVE CONTROL OPERATION COMPUT                                                                                   RECORD ID  50yr, 1
+                                       FROM XSECTION  10
+                                                          TO XSECTION 101
         STARTING TIME =   .00    RAIN DEPTH =  2.36    RAIN DURATION=  1.00    RAIN TABLE NO.= 6    ANT. MOIST. COND= 2
         ALTERNATE NO.= 1         STORM NO.=50    MAIN TIME INCREMENT =   .05 HOURS


 OPERATION RUNOFF   CROSS SECTION  10

            PEAK TIME(HRS)               PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
                 .74                          150.50                       (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .25 SQ.MI.
     .00    DISCHG         .00       .00       .52      2.45      6.74     14.43     26.39     42.54     61.80     82.37
     .50    DISCHG      102.30    119.84    133.85    143.76    149.26    150.46    148.25    143.81    138.17    132.06
    1.00    DISCHG      125.99    119.77    113.00    105.82     98.14     89.56     80.22     70.52     60.94     51.80
    1.50    DISCHG       43.50     36.18     29.77     24.36     20.01     16.47     13.58     11.21      9.23      7.60
    2.00    DISCHG        6.26      5.14      4.21      3.42      2.76      2.22      1.78      1.42      1.13       .89
    2.50    DISCHG         .70       .55       .43       .33       .25       .18       .13       .08       .05       .03
    3.00    DISCHG         .01       .00

   RUNOFF VOLUME ABOVE BASEFLOW =   .84 WATERSHED INCHES,    137.93 CFS-HRS,    11.40 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION  10, ALTERNATE  1, STORM 50, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION RUNOFF   CROSS SECTION  11

            PEAK TIME(HRS)               PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
                 .74                           78.76                       (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .17 SQ.MI.
     .00    DISCHG         .00       .00       .11       .74      2.48      5.95     11.73     20.01     30.28     41.51
     .50    DISCHG       52.50     62.21     69.94     75.35     78.22     78.72     77.48     75.24     72.54     69.67
    1.00    DISCHG       66.77     63.67     60.25     56.47     52.20     47.29     41.90     36.33     30.88     25.82
    1.50    DISCHG       21.33     17.39     14.06     11.38      9.24      7.52      6.13      4.99      4.05      3.29
    2.00    DISCHG        2.66      2.14      1.71      1.36      1.07       .85       .67       .52       .41       .32
    2.50    DISCHG         .24       .18       .14       .10       .07       .04       .02       .01       .00

   RUNOFF VOLUME ABOVE BASEFLOW =   .65 WATERSHED INCHES,     70.91 CFS-HRS,     5.86 ACRE-FEET;   BASEFLOW =    .00 CFS
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  56
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                     PAGE 106


                        --- HYDROGRAPH FOR XSECTION  11, ALTERNATE  1, STORM 50, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION ADDHYD   CROSS SECTION 101

            PEAK TIME(HRS)               PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
                 .74                          229.26                       (NULL)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .42 SQ.MI.
     .00    DISCHG         .00       .00       .63      3.19      9.21     20.38     38.12     62.56     92.08    123.88
     .50    DISCHG      154.80    182.05    203.79    219.10    227.48    229.18    225.73    219.05    210.70    201.73
    1.00    DISCHG      192.76    183.44    173.25    162.29    150.34    136.86    122.12    106.85     91.82     77.62
    1.50    DISCHG       64.83     53.57     43.83     35.74     29.25     24.00     19.71     16.20     13.29     10.88
    2.00    DISCHG        8.91      7.28      5.91      4.78      3.84      3.07      2.44      1.94      1.53      1.21
    2.50    DISCHG         .95       .74       .57       .43       .32       .23       .15       .10       .05       .03
    3.00    DISCHG         .01       .00

   RUNOFF VOLUME ABOVE BASEFLOW =   .77 WATERSHED INCHES,    208.84 CFS-HRS,    17.26 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION 101, ALTERNATE  1, STORM 50, ADDED TO OUTPUT HYDROGRAPH FILE ---


 EXECUTIVE CONTROL OPERATION ENDCMP                                                                                   RECORD ID
+                                       COMPUTATIONS COMPLETED FOR PASS  56



 EXECUTIVE CONTROL OPERATION COMPUT                                                                                   RECORD ID  50yr, 2
+                                       FROM XSECTION  10
+                                                          TO XSECTION 101
         STARTING TIME =   .00    RAIN DEPTH =  2.91    RAIN DURATION=  2.00    RAIN TABLE NO.= 6    ANT. MOIST. COND= 2
         ALTERNATE NO.= 2         STORM NO.=50    MAIN TIME INCREMENT =   .05 HOURS


 OPERATION RUNOFF   CROSS SECTION  10
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           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
                .92                          152.69                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .25 SQ.MI.
     .00    DISCHG         .00       .00       .00       .36      1.84      5.06     10.71     19.59     31.88     46.90
     .50    DISCHG       63.65     81.09     98.19    113.98    127.65    138.51    146.08    150.54    152.50    152.34
    1.00    DISCHG      150.50    147.37    143.07    137.84    131.90    125.39    118.61    111.89    105.50     99.61
    1.50    DISCHG       94.35     89.81     86.03     82.98     80.53     78.45     76.47     74.42     72.10     69.50
    2.00    DISCHG       66.74     63.86     60.88     57.88     54.53     50.49     45.82     40.84     35.78     30.82
    2.50    DISCHG       26.13     21.76     17.83     14.52     11.87      9.74      8.01      6.58      5.39      4.41
    3.00    DISCHG        3.62      2.96      2.42      1.97      1.61      1.31      1.07       .87       .70       .56
    3.50    DISCHG         .45       .35       .27       .21       .16       .12       .09       .06       .04       .02
    4.00    DISCHG         .01       .00
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  57
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                      PAGE 107


   RUNOFF VOLUME ABOVE BASEFLOW =  1.24 WATERSHED INCHES,    203.50 CFS-HRS,    16.82 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION  10, ALTERNATE  2, STORM 50, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION RUNOFF   CROSS SECTION  11

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
                .94                           81.85                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .17 SQ.MI.
     .00    DISCHG         .00       .00       .00       .05       .50      1.70      4.05      8.03     13.96     21.58
     .50    DISCHG       30.47     40.02     49.63     58.65     66.58     72.88     77.37     80.20     81.60     81.81
    1.00    DISCHG       81.10     79.64     77.54     74.88     71.75     68.25     64.59     60.98     57.58     54.50
    1.50    DISCHG       51.83     49.61     47.84     46.47     45.41     44.48     43.56     42.51     41.21     39.69
    2.00    DISCHG       38.05     36.36     34.66     32.90     30.87     28.39     25.52     22.48     19.40     16.41
    2.50    DISCHG       13.60     11.04      8.86      7.14      5.78      4.69      3.81      3.08      2.49      2.02
    3.00    DISCHG        1.63      1.32      1.06       .85       .68       .55       .44       .35       .27       .21
    3.50    DISCHG         .16       .12       .09       .07       .05       .03       .02       .01       .00

   RUNOFF VOLUME ABOVE BASEFLOW =  1.01 WATERSHED INCHES,    109.40 CFS-HRS,     9.04 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION  11, ALTERNATE  2, STORM 50, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION ADDHYD   CROSS SECTION 101

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
                .93                          234.45                        (NULL)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .42 SQ.MI.
     .00    DISCHG         .00       .00       .00       .42      2.33      6.75     14.76     27.63     45.84     68.48
     .50    DISCHG       94.11    121.11    147.82    172.63    194.22    211.40    223.45    230.74    234.11    234.15
    1.00    DISCHG      231.60    227.01    220.60    212.72    203.64    193.64    183.20    172.87    163.09    154.11
    1.50    DISCHG      146.17    139.42    133.87    129.45    125.94    122.93    120.04    116.92    113.31    109.18
    2.00    DISCHG      104.79    100.22     95.54     90.77     85.41     78.88     71.35     63.31     55.18     47.22
    2.50    DISCHG       39.73     32.81     26.69     21.66     17.65     14.44     11.82      9.67      7.88      6.43
    3.00    DISCHG        5.25      4.28      3.48      2.83      2.29      1.86      1.51      1.21       .97       .77
    3.50    DISCHG         .61       .47       .37       .28       .21       .16       .11       .07       .04       .02
    4.00    DISCHG         .01       .00

   RUNOFF VOLUME ABOVE BASEFLOW =  1.15 WATERSHED INCHES,    312.89 CFS-HRS,    25.86 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION 101, ALTERNATE  2, STORM 50, ADDED TO OUTPUT HYDROGRAPH FILE ---


 EXECUTIVE CONTROL OPERATION ENDCMP                                                                                  RECORD ID
+                                   COMPUTATIONS COMPLETED FOR PASS  57


1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  58
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                      PAGE 108


 EXECUTIVE CONTROL OPERATION COMPUT                                                                                  RECORD ID  50yr, 3
+                                   FROM XSECTION  10
+                                                          TO XSECTION 101
         STARTING TIME =   .00    RAIN DEPTH =  3.21    RAIN DURATION=  3.00    RAIN TABLE NO.= 6    ANT. MOIST. COND= 2
         ALTERNATE NO.= 3         STORM NO.=50    MAIN TIME INCREMENT =   .05 HOURS


 OPERATION RUNOFF   CROSS SECTION  10

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               1.08                          138.90                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .25 SQ.MI.
     .00    DISCHG         .00       .00       .00       .03       .35      1.52      4.14      8.78     15.94     25.76
     .50    DISCHG       37.79     51.11     64.90     78.53     91.50    103.40    113.83    122.43    129.06    133.88
    1.00    DISCHG      137.05    138.66    138.81    137.70    135.55    132.66    129.22    125.48    121.67    117.91
    1.50    DISCHG      114.16    110.36    106.37    102.09     97.56     92.84     87.98     83.17     78.57     74.33
    2.00    DISCHG       70.56     67.35     64.63     62.42     60.66     59.22     58.07     57.14     56.40     55.82
    2.50    DISCHG       55.36     54.97     54.57     54.02     53.22     52.05     50.45     48.46     46.33     44.29
    3.00    DISCHG       42.55     41.14     40.02     38.97     37.66     35.70     33.09     29.97     26.56     23.04
    3.50    DISCHG       19.57     16.29     13.35     10.88      8.91      7.33      6.04      4.97      4.08      3.35
    4.00    DISCHG        2.75      2.25      1.84      1.50      1.22      1.00       .81       .66       .53       .42
    4.50    DISCHG         .34       .27       .21       .17       .13       .10       .08       .06       .03       .02
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   5.00    DISCHG         .01       .00

  RUNOFF VOLUME ABOVE BASEFLOW =  1.48 WATERSHED INCHES,    241.45 CFS-HRS,    19.95 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION  10, ALTERNATE  3, STORM 50, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION RUNOFF   CROSS SECTION  11

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               1.10                          75.10                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .17 SQ.MI.
    .00    DISCHG         .00       .00       .00       .00       .04       .33      1.23      3.04      6.08     10.62
    .50    DISCHG       16.50     23.27     30.57     38.03     45.33     52.23     58.45     63.68     67.90     71.15
   1.00    DISCHG       73.38     74.66     75.10     74.78     73.86     72.51     70.83     69.02     67.19     65.36
   1.50    DISCHG       63.53     61.61     59.49     57.17     54.66     51.96     49.18     46.46     43.89     41.60
   2.00    DISCHG       39.62     37.97     36.62     35.55     34.71     34.06     33.55     33.16     32.85     32.63
   2.50    DISCHG       32.47     32.36     32.21     31.94     31.49     30.75     29.67     28.34     26.95     25.67
   3.00    DISCHG       24.68     23.96     23.44     22.95     22.20     20.92     19.17     17.09     14.86     12.60
   3.50    DISCHG       10.42      8.44      6.77      5.47      4.44      3.62      2.94      2.38      1.93      1.56
   4.00    DISCHG        1.26      1.02       .82       .66       .53       .42       .34       .27       .21       .16
   4.50    DISCHG         .13       .10       .08       .06       .04       .03       .02       .01       .00
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  58
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                      PAGE 109


  RUNOFF VOLUME ABOVE BASEFLOW =  1.22 WATERSHED INCHES,    132.16 CFS-HRS,    10.92 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION  11, ALTERNATE  3, STORM 50, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION ADDHYD   CROSS SECTION 101

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               1.09                         213.95                        (NULL)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .42 SQ.MI.
    .00    DISCHG         .00       .00       .00       .03       .39      1.84      5.38     11.82     22.01     36.38
    .50    DISCHG       54.29     74.39     95.47    116.56    136.83    155.64    172.28    186.10    196.97    205.03
   1.00    DISCHG      210.42    213.32    213.90    212.47    209.41    205.16    200.06    194.50    188.86    183.27
   1.50    DISCHG      177.69    171.97    165.86    159.26    152.22    144.80    137.17    129.62    122.47    115.92
   2.00    DISCHG      110.18    105.31    101.24     97.97     95.37     93.28     91.62     90.30     89.26     88.45
   2.50    DISCHG       87.83     87.33     86.78     85.96     84.70     82.80     80.12     76.81     73.27     69.96
   3.00    DISCHG       67.23     65.10     63.46     61.92     59.85     56.62     52.26     47.06     41.42     35.63
   3.50    DISCHG       29.99     24.74     20.12     16.35     13.35     10.94      8.98      7.36      6.01      4.91
   4.00    DISCHG        4.01      3.27      2.66      2.16      1.75      1.42      1.15       .92       .74       .59
   4.50    DISCHG         .47       .37       .29       .23       .18       .13       .09       .06       .03       .02
   5.00    DISCHG         .01       .00

  RUNOFF VOLUME ABOVE BASEFLOW =  1.37 WATERSHED INCHES,    373.61 CFS-HRS,    30.87 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION 101, ALTERNATE  3, STORM 50, ADDED TO OUTPUT HYDROGRAPH FILE ---

 EXECUTIVE CONTROL OPERATION ENDCMP                                                                                  RECORD ID
+                                   COMPUTATIONS COMPLETED FOR PASS  58


 EXECUTIVE CONTROL OPERATION COMPUT                                                                                  RECORD ID  50yr, 6
+                                   FROM XSECTION  10
+                                                          TO XSECTION 101
        STARTING TIME =   .00    RAIN DEPTH =  3.76    RAIN DURATION=  6.00    RAIN TABLE NO.= 6    ANT. MOIST. COND= 2
        ALTERNATE NO.= 6         STORM NO.=50    MAIN TIME INCREMENT =   .05 HOURS


 OPERATION RUNOFF   CROSS SECTION  10

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               1.61                         104.99                        (RUNOFF)
               5.10                          33.10                        (RUNOFF)
               6.17                          24.28                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .25 SQ.MI.
    .00    DISCHG         .00       .00       .00       .00       .00       .01       .14       .57      1.59      3.54
    .50    DISCHG        6.82     11.78     18.48     26.70     35.97     45.75     55.35     64.15     71.81     78.20
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  59
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                      PAGE 110


   1.00    DISCHG       83.41     87.58     90.87     93.50     95.67     97.59     99.38    100.97    102.33    103.40
   1.50    DISCHG      104.20    104.74    104.99    104.88    104.36    103.36    101.93    100.21     98.29     96.24
   2.00    DISCHG       94.08     91.83     89.57     87.38     85.29     83.23     81.15     79.00     76.82     74.71
   2.50    DISCHG       72.74     70.95     69.36     67.98     66.80     65.79     64.88     63.96     62.94     61.73
   3.00    DISCHG       60.35     58.80     57.11     55.29     53.33     51.20     48.98     46.79     44.71     42.78
   3.50    DISCHG       41.03     39.49     38.15     37.05     36.17     35.46     34.89     34.43     34.05     33.75
   4.00    DISCHG       33.51     33.32     33.17     33.05     32.97     32.90     32.86     32.83     32.81     32.80
   4.50    DISCHG       32.80     32.81     32.82     32.84     32.86     32.88     32.91     32.94     32.97     33.01
   5.00    DISCHG       33.04     33.08     33.10     33.07     32.90     32.54     31.92     30.97     29.76     28.38
   5.50    DISCHG       26.92     25.48     24.12     22.87     21.80     20.97     20.46     20.29     20.48     21.05
   6.00    DISCHG       21.93     22.90     23.74     24.24     24.18     23.40     21.95     19.95     17.64     15.23
   6.50    DISCHG       12.88     10.71      8.78      7.17      5.88      4.84      3.98      3.28      2.70      2.21
   7.00    DISCHG        1.81      1.49      1.22      1.00       .81       .67       .55       .45       .37       .30
   7.50    DISCHG         .24       .20       .16       .13       .10       .08       .05       .04       .02       .01
   8.00    DISCHG         .00
```

RUNOFF VOLUME ABOVE BASEFLOW = 1.92 WATERSHED INCHES, 314.11 CFS-HRS, 25.96 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 10, ALTERNATE 6, STORM 50, ADDED TO OUTPUT HYDROGRAPH FILE ---

OPERATION RUNOFF CROSS SECTION 11

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.66	58.24	(RUNOFF)
5.10	20.15	(RUNOFF)
6.16	15.16	(RUNOFF)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .05 HOURS DRAINAGE AREA = .17 SQ.MI.

.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.05	.25	.77
.50	DISCHG	1.84	3.71	6.57	10.40	14.97	19.99	25.06	29.80	34.06	37.77
1.00	DISCHG	40.94	43.61	45.88	47.81	49.55	51.17	52.67	54.02	55.18	56.15
1.50	DISCHG	56.96	57.61	58.05	58.24	58.13	57.70	57.02	56.17	55.20	54.14
2.00	DISCHG	53.02	51.85	50.70	49.59	48.52	47.44	46.31	45.14	43.95	42.83
2.50	DISCHG	41.78	40.84	40.03	39.35	38.80	38.36	37.95	37.49	36.92	36.20
3.00	DISCHG	35.36	34.43	33.41	32.30	31.11	29.80	28.46	27.16	25.93	24.81
3.50	DISCHG	23.82	22.96	22.25	21.69	21.26	20.91	20.64	20.42	20.25	20.12
4.00	DISCHG	20.01	19.94	19.88	19.85	19.82	19.81	19.80	19.80	19.81	19.82
4.50	DISCHG	19.84	19.86	19.88	19.90	19.93	19.95	19.98	20.01	20.04	20.07
5.00	DISCHG	20.10	20.13	20.15	20.12	20.00	19.74	19.29	18.64	17.81	16.89
5.50	DISCHG	15.94	15.03	14.19	13.45	12.83	12.39	12.15	12.12	12.35	12.84
6.00	DISCHG	13.55	14.28	14.86	15.15	14.99	14.30	13.16	11.71	10.12	8.52
6.50	DISCHG	7.03	5.70	4.58	3.70	3.01	2.45	1.99	1.61	1.30	1.06
7.00	DISCHG	.85	.69	.56	.45	.37	.30	.24	.19	.15	.12
7.50	DISCHG	.10	.08	.06	.04	.03	.02	.01	.00		

RUNOFF VOLUME ABOVE BASEFLOW = 1.63 WATERSHED INCHES, 176.35 CFS-HRS, 14.57 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 11, ALTERNATE 6, STORM 50, ADDED TO OUTPUT HYDROGRAPH FILE ---
1

TR20 XEQ 04-29-08 16:15 VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS JOB 1 PASS 59
REV PC 09/83(.2) CALCS: V3 W/HUFF-ISWS CIR.173/90 FILE: E06037.DAT DATE: 04/29/08 JAS PAGE 111

OPERATION ADDHYD CROSS SECTION 101

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.63	163.18	(NULL)
5.10	53.25	(NULL)
6.16	39.43	(NULL)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .05 HOURS DRAINAGE AREA = .42 SQ.MI.

.00	DISCHG	.00	.00	.00	.00	.00	.01	.14	.62	1.83	4.31
.50	DISCHG	8.66	15.48	25.05	37.09	50.95	65.74	80.40	93.95	105.87	115.98
1.00	DISCHG	124.35	131.19	136.75	141.32	145.21	148.77	152.05	154.99	157.51	159.55
1.50	DISCHG	161.16	162.34	163.03	163.12	162.49	161.06	158.95	156.37	153.49	150.38
2.00	DISCHG	147.10	143.69	140.27	136.98	133.80	130.66	127.47	124.14	120.77	117.53
2.50	DISCHG	114.52	111.79	109.39	107.33	105.60	104.15	102.83	101.45	99.86	97.93
3.00	DISCHG	95.71	93.23	90.52	87.60	84.43	81.00	77.44	73.94	70.64	67.59
3.50	DISCHG	64.85	62.44	60.40	58.75	57.43	56.38	55.53	54.85	54.30	53.87
4.00	DISCHG	53.52	53.26	53.05	52.90	52.79	52.71	52.66	52.63	52.62	52.62
4.50	DISCHG	52.64	52.66	52.70	52.74	52.79	52.84	52.89	52.95	53.01	53.08
5.00	DISCHG	53.14	53.21	53.25	53.19	52.90	52.29	51.21	49.60	47.57	45.26
5.50	DISCHG	42.87	40.51	38.30	36.32	34.62	33.36	32.61	32.41	32.82	33.89
6.00	DISCHG	35.47	37.18	38.60	39.39	39.17	37.70	35.11	31.66	27.76	23.75
6.50	DISCHG	19.92	16.41	13.36	10.87	8.89	7.28	5.97	4.89	4.00	3.27
7.00	DISCHG	2.67	2.18	1.78	1.45	1.18	.96	.79	.64	.52	.42
7.50	DISCHG	.34	.27	.22	.17	.13	.09	.06	.04	.02	.01
8.00	DISCHG	.00									

RUNOFF VOLUME ABOVE BASEFLOW = 1.80 WATERSHED INCHES, 490.47 CFS-HRS, 40.53 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 101, ALTERNATE 6, STORM 50, ADDED TO OUTPUT HYDROGRAPH FILE ---

EXECUTIVE CONTROL OPERATION ENDCMP RECORD ID
+ COMPUTATIONS COMPLETED FOR PASS 59

EXECUTIVE CONTROL OPERATION INCREM RECORD ID
+ MAIN TIME INCREMENT = .20 HOURS

EXECUTIVE CONTROL OPERATION COMPUT RECORD ID 50yr, 1
+ FROM XSECTION 10
+ TO XSECTION 101
STARTING TIME = .00 RAIN DEPTH = 4.37 RAIN DURATION= 12.00 RAIN TABLE NO.= 7 ANT. MOIST. COND= 2
ALTERNATE NO.=12 STORM NO.=50 MAIN TIME INCREMENT = .20 HOURS

OPERATION RUNOFF CROSS SECTION 10
1

TR20 XEQ 04-29-08 16:15 VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS JOB 1 PASS 60
REV PC 09/83(.2) CALCS: V3 W/HUFF-ISWS CIR.173/90 FILE: E06037.DAT DATE: 04/29/08 JAS PAGE 112

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
5.45	91.05	(RUNOFF)
12.07	17.88	(RUNOFF)

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TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .20 HOURS      DRAINAGE AREA =    .25 SQ.MI.
    .00    DISCHG         .00       .00       .00       .00       .00       .00       .00       .00       .00       .07
   2.00    DISCHG         .59      1.83      3.53      5.82      9.43     13.55     17.73     22.55     27.33     33.07
   4.00    DISCHG       42.26     51.74     60.30     70.59     80.21     86.48     89.33     90.98     90.41     84.29
   6.00    DISCHG       78.01     73.38     66.87     61.29     57.71     53.81     50.68     48.30     44.79     41.73
   8.00    DISCHG       39.31     35.67     32.46     30.93     30.27     30.00     28.92     25.82     22.84     21.33
  10.00    DISCHG       20.65     20.37     20.26     20.23     20.19     19.23     16.09     13.09     12.50     14.98
  12.00    DISCHG       17.71     17.14     11.42      5.50      2.53      1.16       .52       .24       .09       .03
  14.00    DISCHG         .00

  RUNOFF VOLUME ABOVE BASEFLOW =  2.43 WATERSHED INCHES,    398.04 CFS-HRS,    32.89 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION  10, ALTERNATE 12, STORM 50, ADDED TO OUTPUT HYDROGRAPH FILE ---


OPERATION RUNOFF   CROSS SECTION  11

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               5.50                          52.84                        (RUNOFF)
              12.05                          11.25                        (RUNOFF)

TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .20 HOURS      DRAINAGE AREA =    .17 SQ.MI.
   2.00    DISCHG         .00       .02       .27      1.06      2.70      4.78      7.12      9.90     12.73     16.23
   4.00    DISCHG       21.74     27.32     32.61     39.10     45.12     49.16     51.18     52.66     52.65     48.95
   6.00    DISCHG       45.60     43.22     39.33     36.24     34.40     32.09     30.39     29.08     26.91     25.17
   8.00    DISCHG       23.76     21.46     19.61     18.81     18.50     18.39     17.70     15.62     13.81     13.01
  10.00    DISCHG       12.67     12.54     12.50     12.50     12.50     11.80      9.67      7.82      7.70      9.51
  12.00    DISCHG       11.19     10.58      6.58      2.96      1.29       .56       .24       .10       .03       .01

  RUNOFF VOLUME ABOVE BASEFLOW =  2.10 WATERSHED INCHES,    228.24 CFS-HRS,    18.86 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION  11, ALTERNATE 12, STORM 50, ADDED TO OUTPUT HYDROGRAPH FILE ---


OPERATION ADDHYD   CROSS SECTION 101

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               5.47                         143.86                        (NULL)
              12.06                          29.13                        (NULL)

TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .20 HOURS      DRAINAGE AREA =    .42 SQ.MI.
    .00    DISCHG         .00       .00       .00       .00       .00       .00       .00       .00       .00       .07
   2.00    DISCHG         .59      1.85      3.80      6.88     12.12     18.33     24.85     32.45     40.05     49.30
   4.00    DISCHG       64.00     79.06     92.91    109.69    125.33    135.64    140.51    143.64    143.06    133.25
1


TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  60
     REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                PAGE 113


   6.00    DISCHG      123.60    116.60    106.20     97.53     92.11     85.90     81.07     77.39     71.70     66.90
   8.00    DISCHG       63.07     57.12     52.07     49.74     48.77     48.39     46.62     41.43     36.65     34.34
  10.00    DISCHG       33.32     32.92     32.76     32.73     32.69     31.03     25.76     20.91     20.20     24.49
  12.00    DISCHG       28.90     27.72     18.00      8.46      3.83      1.71       .76       .33       .13       .03
  14.00    DISCHG         .00

  RUNOFF VOLUME ABOVE BASEFLOW =  2.30 WATERSHED INCHES,    626.28 CFS-HRS,    51.76 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION 101, ALTERNATE 12, STORM 50, ADDED TO OUTPUT HYDROGRAPH FILE ---


EXECUTIVE CONTROL OPERATION ENDCMP                                                                                  RECORD ID
+                                     COMPUTATIONS COMPLETED FOR PASS  60



EXECUTIVE CONTROL OPERATION COMPUT                                                                                  RECORD ID  50yr, 1
+                                     FROM XSECTION  10
+                                                                  TO XSECTION 101
        STARTING TIME =   .00    RAIN DEPTH =  4.72    RAIN DURATION= 18.00    RAIN TABLE NO.= 8    ANT. MOIST. COND= 2
        ALTERNATE NO.=18         STORM NO.=50    MAIN TIME INCREMENT =   .20 HOURS


OPERATION RUNOFF   CROSS SECTION  10

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
              11.74                          84.89                        (RUNOFF)
              17.95                          21.73                        (RUNOFF)

TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .20 HOURS      DRAINAGE AREA =    .25 SQ.MI.
   2.00    DISCHG         .00       .00       .00       .00       .00       .00       .03       .22       .62      1.14
   4.00    DISCHG        1.72      2.30      2.88      3.49      4.40      5.59      6.71      7.66      8.52      9.33
   6.00    DISCHG       10.08     10.80     11.48     12.13     12.76     13.35     13.94     14.87     16.66     18.47
   8.00    DISCHG       19.76     20.85     22.62     24.94     26.79     28.09     29.61     32.10     34.53     36.21
  10.00    DISCHG       38.12     45.35     56.30     64.42     69.08     72.77     77.00     80.81     83.49     84.67
  12.00    DISCHG       80.38     72.30     66.90     64.67     61.82     54.98     48.58     45.47     43.75     40.14
  14.00    DISCHG       35.10     31.73     30.25     28.87     26.36     24.09     22.91     22.41     22.21     22.13
  16.00    DISCHG       22.12     22.12     21.41     19.13     16.89     15.79     15.49     16.85     19.27     20.96
  18.00    DISCHG       21.66     19.77     13.01      6.38      2.90      1.32       .60       .26       .11       .03
  20.00    DISCHG         .00

  RUNOFF VOLUME ABOVE BASEFLOW =  2.74 WATERSHED INCHES,    447.57 CFS-HRS,    36.99 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION  10, ALTERNATE 18, STORM 50, ADDED TO OUTPUT HYDROGRAPH FILE ---


OPERATION RUNOFF   CROSS SECTION  11
1


TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  61
     REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                PAGE 114
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          PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
             11.75                          51.08                        (RUNOFF)
             16.11                          13.82                        (RUNOFF)
             17.94                          13.70                        (RUNOFF)

TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .20 HOURS      DRAINAGE AREA =    .17 SQ.MI.
   4.00    DISCHG         .01       .12       .33       .63      1.07      1.64      2.21      2.75      3.27      3.77
   6.00    DISCHG        4.25      4.71      5.15      5.58      5.99      6.39      6.78      7.37      8.43      9.46
   8.00    DISCHG       10.20     10.87     11.99     13.39     14.47     15.26     16.24     17.83     19.31     20.33
  10.00    DISCHG       21.59     26.34     33.08     37.75     40.54     42.90     45.73     48.23     50.01     50.95
  12.00    DISCHG       47.97     42.95     40.11     39.08     37.36     32.97     29.24     27.61     26.71     24.33
  14.00    DISCHG       21.14     19.31     18.53     17.72     16.06     14.70     14.08     13.84     13.75     13.73
  16.00    DISCHG       13.74     13.76     13.26     11.69     10.34      9.72      9.61     10.63     12.24     13.22
  18.00    DISCHG       13.63     12.21      7.50      3.39      1.45       .63       .26       .11       .04       .01

  RUNOFF VOLUME ABOVE BASEFLOW =  2.39 WATERSHED INCHES,    259.13 CFS-HRS,    21.41 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION  11, ALTERNATE 18, STORM 50, ADDED TO OUTPUT HYDROGRAPH FILE ---


OPERATION ADDHYD   CROSS SECTION 101

          PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
             11.75                         135.97                        (NULL)
             16.10                          36.02                        (NULL)
             17.95                          35.43                        (NULL)

TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .20 HOURS      DRAINAGE AREA =    .42 SQ.MI.
   2.00    DISCHG         .00       .00       .00       .00       .00       .00       .03       .22       .62      1.14
   4.00    DISCHG        1.73      2.42      3.21      4.12      5.47      7.23      8.92     10.42     11.80     13.10
   6.00    DISCHG       14.33     15.51     16.63     17.71     18.75     19.74     20.71     22.24     25.09     27.93
   8.00    DISCHG       29.96     31.72     34.61     38.33     41.26     43.35     45.85     49.93     53.84     56.54
  10.00    DISCHG       59.71     71.69     89.38    102.17    109.62    115.67    122.74    129.04    133.50    135.62
  12.00    DISCHG      128.35    115.26    107.01    103.74     99.18     87.95     77.82     73.08     70.46     64.47
  14.00    DISCHG       56.24     51.04     48.78     46.59     42.43     38.79     37.00     36.25     35.96     35.87
  16.00    DISCHG       35.86     35.88     34.67     30.82     27.24     25.51     25.10     27.48     31.51     34.18
  18.00    DISCHG       35.29     31.99     20.51      9.77      4.35      1.96       .86       .37       .14       .04
  20.00    DISCHG         .00

  RUNOFF VOLUME ABOVE BASEFLOW =  2.60 WATERSHED INCHES,    706.69 CFS-HRS,    58.40 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION 101, ALTERNATE 18, STORM 50, ADDED TO OUTPUT HYDROGRAPH FILE ---

 EXECUTIVE CONTROL OPERATION ENDCMP                                                                                    RECORD ID
+                                     COMPUTATIONS COMPLETED FOR PASS  61


1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  62
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                     PAGE 115


 EXECUTIVE CONTROL OPERATION COMPUT                                                                                    RECORD ID  50yr, 2
+                                     FROM XSECTION  10
+                                                 TO XSECTION 101
         STARTING TIME =   .00    RAIN DEPTH =  5.02    RAIN DURATION= 24.00    RAIN TABLE NO.= 8    ANT. MOIST. COND= 2
         ALTERNATE NO.=24         STORM NO.=50    MAIN TIME INCREMENT =   .20 HOURS


 OPERATION RUNOFF   CROSS SECTION  10

          PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
             15.58                          69.95                        (RUNOFF)
             21.50                          17.96                        (RUNOFF)
             23.92                          18.03                        (RUNOFF)

TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .20 HOURS      DRAINAGE AREA =    .25 SQ.MI.
   4.00    DISCHG         .03       .18       .46       .81      1.19      1.57      1.95      2.32      2.68      3.03
   6.00    DISCHG        3.38      3.85      4.67      5.53      6.23      6.82      7.35      7.85      8.32      8.76
   8.00    DISCHG        9.20      9.61     10.01     10.40     10.77     11.13     11.49     11.82     12.16     12.81
  10.00    DISCHG       14.16     15.52     16.44     17.09     17.62     18.43     20.04     21.64     22.71     23.45
  12.00    DISCHG       24.05     24.98     26.79     28.58     29.74     30.55     31.22     34.12     42.02     49.89
  14.00    DISCHG       54.51     57.20     58.96     60.79     63.49     66.04     67.80     69.02     69.94     68.62
  16.00    DISCHG       62.37     56.19     53.15     51.92     51.49     49.73     44.40     39.28     36.77     35.67
  18.00    DISCHG       35.19     33.86     30.21     26.73     24.93     24.15     23.79     23.08     21.20     19.42
  20.00    DISCHG       18.50     18.11     17.93     17.87     17.85     17.85     17.86     17.88     17.89     17.31
  22.00    DISCHG       15.46     13.67     12.76     12.34     12.18     12.70     14.53     16.32     17.28     17.72
  24.00    DISCHG       17.87     16.22     10.61      5.15      2.35      1.08       .48       .21       .08       .03
  26.00    DISCHG         .00

  RUNOFF VOLUME ABOVE BASEFLOW =  3.00 WATERSHED INCHES,    490.71 CFS-HRS,    40.55 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION  10, ALTERNATE 24, STORM 50, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION RUNOFF   CROSS SECTION  11

          PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
             15.59                          42.34                        (RUNOFF)
             21.50                          11.23                        (RUNOFF)
             23.91                          11.40                        (RUNOFF)

TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .20 HOURS      DRAINAGE AREA =    .17 SQ.MI.
   4.00    DISCHG         .00       .00       .00       .00       .00       .02       .09       .25       .43       .64
   6.00    DISCHG         .84      1.10      1.49      1.91      2.28      2.62      2.94      3.25      3.55      3.84
   8.00    DISCHG        4.12      4.39      4.66      4.92      5.16      5.41      5.64      5.87      6.10      6.51
  10.00    DISCHG        7.32      8.09      8.60      8.99      9.33      9.86     10.86     11.79     12.41     12.88
```

12.00	DISCHG	13.27	13.89	15.05	16.12	16.83	17.34	17.80	19.75	24.83	29.48
14.00	DISCHG	32.12	33.71	34.84	36.09	37.95	39.63	40.77	41.64	42.33	41.43
16.00	DISCHG	37.33	33.70	32.17	31.62	31.48	30.35	26.84	23.80	22.45	21.91
18.00	DISCHG	21.71	20.84	18.37	16.26	15.29	14.91	14.75	14.28	13.00	11.92

1

TR20 XEQ 04-29-08 16:15 VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS JOB 1 PASS 62
REV PC 09/83(.2) CALCS: V3 W/HUFF-ISWS CIR.173/90 FILE: E06037.DAT DATE: 04/29/08 JAS PAGE 116

20.00	DISCHG	11.44	11.24	11.16	11.14	11.14	11.14	11.16	11.18	11.18	10.77
22.00	DISCHG	9.50	8.40	7.90	7.68	7.60	8.00	9.28	10.40	10.93	11.17
24.00	DISCHG	11.27	10.01	6.12	2.75	1.19	.51	.22	.09	.03	.00

RUNOFF VOLUME ABOVE BASEFLOW = 2.64 WATERSHED INCHES, 286.15 CFS-HRS, 23.65 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 11, ALTERNATE 24, STORM 50, ADDED TO OUTPUT HYDROGRAPH FILE ---

OPERATION ADDHYD CROSS SECTION 101

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
15.58	112.29	(NULL)
21.50	29.19	(NULL)
23.92	29.42	(NULL)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .20 HOURS DRAINAGE AREA = .42 SQ.MI.

4.00	DISCHG	.03	.18	.46	.81	1.19	1.59	2.04	2.56	3.11	3.67
6.00	DISCHG	4.22	4.95	6.16	7.44	8.51	9.44	10.30	11.10	11.87	12.61
8.00	DISCHG	13.32	14.00	14.67	15.31	15.94	16.54	17.13	17.70	18.26	19.32
10.00	DISCHG	21.48	23.61	25.05	26.08	26.95	28.29	30.90	33.43	35.12	36.33
12.00	DISCHG	37.32	38.87	41.84	44.71	46.57	47.89	49.02	53.87	66.86	79.37
14.00	DISCHG	86.62	90.90	93.80	96.88	101.45	105.67	108.57	110.67	112.28	110.06
16.00	DISCHG	99.71	89.89	85.32	83.54	82.97	80.08	71.24	63.08	59.22	57.58
18.00	DISCHG	56.90	54.70	48.59	42.99	40.22	39.05	38.54	37.36	34.20	31.34
20.00	DISCHG	29.93	29.34	29.09	29.00	28.98	28.99	29.02	29.06	29.07	28.08
22.00	DISCHG	24.96	22.08	20.65	20.02	19.77	20.69	23.81	26.72	28.21	28.89
24.00	DISCHG	29.15	26.23	16.73	7.90	3.55	1.59	.69	.30	.11	.03
26.00	DISCHG	.00									

RUNOFF VOLUME ABOVE BASEFLOW = 2.86 WATERSHED INCHES, 776.86 CFS-HRS, 64.20 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 101, ALTERNATE 24, STORM 50, ADDED TO OUTPUT HYDROGRAPH FILE ---

EXECUTIVE CONTROL OPERATION ENDCMP RECORD ID
+ COMPUTATIONS COMPLETED FOR PASS 62

EXECUTIVE CONTROL OPERATION INCREM RECORD ID
+ MAIN TIME INCREMENT = .50 HOURS

EXECUTIVE CONTROL OPERATION COMPUT RECORD ID 50yr, 4
+ FROM XSECTION 10
+ TO XSECTION 101
STARTING TIME = .00 RAIN DEPTH = 5.57 RAIN DURATION= 48.00 RAIN TABLE NO.= 9 ANT. MOIST. COND= 2
ALTERNATE NO.=48 STORM NO.=50 MAIN TIME INCREMENT = .50 HOURS

OPERATION RUNOFF CROSS SECTION 10
1

TR20 XEQ 04-29-08 16:15 VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS JOB 1 PASS 63
REV PC 09/83(.2) CALCS: V3 W/HUFF-ISWS CIR.173/90 FILE: E06037.DAT DATE: 04/29/08 JAS PAGE 117

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
26.28	8.88	(RUNOFF)
40.78	41.09	(RUNOFF)
42.79	39.59	(RUNOFF)
47.65	27.17	(RUNOFF)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .50 HOURS DRAINAGE AREA = .25 SQ.MI.

5.00	DISCHG	.00	.00	.00	.00	.00	.00	.01	.10	.23	.37
10.00	DISCHG	.64	1.03	1.33	1.60	1.87	2.12	2.36	2.60	2.82	3.04
15.00	DISCHG	3.24	3.45	3.64	3.82	4.00	4.18	4.34	4.50	4.66	4.81
20.00	DISCHG	4.96	5.10	5.23	5.37	5.49	5.62	5.74	5.85	5.97	7.26
25.00	DISCHG	8.17	8.45	8.64	8.74	7.35	6.89	6.90	6.97	7.29	9.08
30.00	DISCHG	9.59	9.78	9.91	11.25	14.63	15.43	15.75	15.98	16.19	16.40
35.00	DISCHG	16.59	16.78	16.98	20.45	22.78	23.35	23.65	24.30	34.99	39.20
40.00	DISCHG	40.24	40.78	40.90	39.01	38.82	39.04	39.31	36.37	28.23	26.86
45.00	DISCHG	26.74	26.82	26.91	27.00	27.09	27.17	27.15	11.52	1.62	.20
50.00	DISCHG	.00									

RUNOFF VOLUME ABOVE BASEFLOW = 3.49 WATERSHED INCHES, 570.08 CFS-HRS, 47.11 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 10, ALTERNATE 48, STORM 50, ADDED TO OUTPUT HYDROGRAPH FILE ---

OPERATION RUNOFF CROSS SECTION 11

*** WARNING-MAIN TIME INCREMENT MAY BE TOO LARGE.
COMPUTED PEAK(18.52) AT EXCEEDS MAX. ADJACENT HYDROGRAPH COORDINATE BY 7 %.
+ XSECTION 11

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
40.80	25.25	(RUNOFF)
42.80	24.68	(RUNOFF)

```
            47.75                          18.52                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .50 HOURS      DRAINAGE AREA =    .17 SQ.MI.
   10.00    DISCHG         .00       .01       .13       .29       .45       .61       .76       .91      1.05      1.19
   15.00    DISCHG        1.33      1.45      1.58      1.70      1.82      1.93      2.05      2.15      2.26      2.36
   20.00    DISCHG        2.46      2.56      2.65      2.74      2.83      2.91      3.00      3.08      3.16      3.93
   25.00    DISCHG        4.40      4.57      4.70      4.78      3.99      3.79      3.82      3.88      4.10      5.14
   30.00    DISCHG        5.41      5.53      5.63      6.52      8.45      8.90      9.12      9.29      9.45      9.61
   35.00    DISCHG        9.76      9.91     10.06     12.34     13.65     14.00     14.22     14.69     21.60     23.96
   40.00    DISCHG       24.62     25.03     25.16     24.05     24.05     24.26     24.50     22.45     17.46     16.78
   45.00    DISCHG       16.77     16.85     16.93     17.01     17.09     17.16     17.19      6.40       .78       .08

   RUNOFF VOLUME ABOVE BASEFLOW =  3.10 WATERSHED INCHES,    336.04 CFS-HRS,    27.77 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION  11, ALTERNATE 48, STORM 50, ADDED TO OUTPUT HYDROGRAPH FILE ---
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  63
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                      PAGE 118



 OPERATION ADDHYD   CROSS SECTION 101

 *** WARNING-MAIN TIME INCREMENT MAY BE TOO LARGE.
          COMPUTED PEAK(     47.63) AT              EXCEEDS MAX. ADJACENT HYDROGRAPH COORDINATE BY   7 %.
+                                   XSECTION 101

            PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               26.29                          13.73                        (NULL)
               40.79                          66.35                        (NULL)
               42.80                          64.27                        (NULL)
               47.75                          47.63                        (NULL)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .50 HOURS      DRAINAGE AREA =    .42 SQ.MI.
    5.00    DISCHG         .00       .00       .00       .00       .00       .00       .01       .10       .23       .37
   10.00    DISCHG         .64      1.04      1.46      1.89      2.32      2.73      3.13      3.51      3.87      4.23
   15.00    DISCHG        4.57      4.90      5.22      5.53      5.82      6.11      6.39      6.66      6.92      7.17
   20.00    DISCHG        7.42      7.65      7.88      8.10      8.32      8.53      8.73      8.93      9.13     11.19
   25.00    DISCHG       12.57     13.02     13.34     13.52     11.34     10.69     10.72     10.85     11.39     14.21
   30.00    DISCHG       15.01     15.31     15.54     17.76     23.08     24.33     24.86     25.27     25.65     26.01
   35.00    DISCHG       26.35     26.68     27.03     32.79     36.43     37.35     37.86     38.99     56.59     63.16
   40.00    DISCHG       64.85     65.81     66.06     63.06     62.86     63.31     63.81     58.82     45.69     43.64
   45.00    DISCHG       43.51     43.67     43.85     44.01     44.17     44.33     44.34     17.93      2.40       .28
   50.00    DISCHG         .00

   RUNOFF VOLUME ABOVE BASEFLOW =  3.33 WATERSHED INCHES,    906.08 CFS-HRS,    74.88 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION 101, ALTERNATE 48, STORM 50, ADDED TO OUTPUT HYDROGRAPH FILE ---


 EXECUTIVE CONTROL OPERATION ENDCMP                                                                                  RECORD ID
+                                   COMPUTATIONS COMPLETED FOR PASS  63



 EXECUTIVE CONTROL OPERATION COMPUT                                                                                  RECORD ID  50yr, 7
+                                   FROM XSECTION  10
+                                                         TO XSECTION 101
         STARTING TIME =   .00    RAIN DEPTH =  6.06    RAIN DURATION= 72.00    RAIN TABLE NO.= 9    ANT. MOIST. COND= 2
         ALTERNATE NO.=72         STORM NO.=50    MAIN TIME INCREMENT =   .50 HOURS


 OPERATION RUNOFF   CROSS SECTION  10

            PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               39.30                           6.81                        (RUNOFF)
               60.92                          30.45                        (RUNOFF)
               64.31                          29.16                        (RUNOFF)
               71.68                          20.02                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .50 HOURS      DRAINAGE AREA =    .25 SQ.MI.
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  64
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                      PAGE 119


   10.00    DISCHG         .00       .00       .03       .11       .18       .25       .33       .40       .47       .54
   15.00    DISCHG         .84      1.05      1.20      1.34      1.48      1.61      1.73      1.86      1.97      2.09
   20.00    DISCHG        2.20      2.31      2.42      2.52      2.63      2.72      2.82      2.91      3.01      3.09
   25.00    DISCHG        3.18      3.27      3.35      3.43      3.51      3.58      3.66      3.73      3.80      3.87
   30.00    DISCHG        3.94      4.01      4.07      4.13      4.20      4.26      4.32      4.37      4.43      4.49
   35.00    DISCHG        4.54      4.59      4.65      5.61      6.26      6.42      6.52      6.60      6.68      6.75
   40.00    DISCHG        6.12      5.31      5.23      5.25      5.28      5.32      5.36      5.83      7.02      7.28
   45.00    DISCHG        7.37      7.43      7.49      7.55      8.00     10.77     11.52     11.72     11.84     11.94
   50.00    DISCHG       12.04     12.14     12.24     12.33     12.42     12.50     12.59     12.67     12.75     15.31
   55.00    DISCHG       16.98     17.32     17.47     17.59     17.70     17.81     22.55     28.36     29.46     29.81
   60.00    DISCHG       30.04     30.25     30.44     30.06     28.73     28.61     28.71     28.84     28.96     29.08
   65.00    DISCHG       28.19     21.40     19.84     19.65     19.67     19.71     19.75     19.79     19.83     19.87
   70.00    DISCHG       19.91     19.94     19.98     20.01     20.01      8.41      1.18       .15       .00

   RUNOFF VOLUME ABOVE BASEFLOW =  3.93 WATERSHED INCHES,    643.01 CFS-HRS,    53.14 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION  10, ALTERNATE 72, STORM 50, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION RUNOFF   CROSS SECTION  11

            PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
```

60.95	18.87	(RUNOFF)
64.32	18.30	(RUNOFF)
71.64	12.72	(RUNOFF)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .50 HOURS DRAINAGE AREA = .17 SQ.MI.

15.00	DISCHG	.06	.15	.23	.32	.40	.48	.56	.64	.72	.79
20.00	DISCHG	.86	.93	1.00	1.07	1.14	1.20	1.26	1.33	1.39	1.45
25.00	DISCHG	1.50	1.56	1.62	1.67	1.72	1.77	1.83	1.88	1.92	1.97
30.00	DISCHG	2.02	2.06	2.11	2.15	2.20	2.24	2.28	2.32	2.36	2.40
35.00	DISCHG	2.44	2.48	2.52	3.09	3.43	3.52	3.59	3.65	3.70	3.76
40.00	DISCHG	3.37	2.96	2.93	2.95	2.98	3.01	3.04	3.35	4.02	4.16
45.00	DISCHG	4.22	4.27	4.31	4.35	4.65	6.32	6.71	6.84	6.92	7.01
50.00	DISCHG	7.08	7.16	7.24	7.31	7.38	7.45	7.51	7.58	7.65	9.32
55.00	DISCHG	10.26	10.46	10.57	10.66	10.75	10.84	14.09	17.48	18.11	18.35
60.00	DISCHG	18.53	18.70	18.87	18.62	17.85	17.83	17.93	18.04	18.15	18.25
65.00	DISCHG	17.63	13.27	12.44	12.38	12.41	12.45	12.48	12.52	12.55	12.59
70.00	DISCHG	12.62	12.65	12.68	12.72	12.71	4.74	.57	.06		

RUNOFF VOLUME ABOVE BASEFLOW = 3.52 WATERSHED INCHES, 382.40 CFS-HRS, 31.60 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 11, ALTERNATE 72, STORM 50, ADDED TO OUTPUT HYDROGRAPH FILE ---

OPERATION ADDHYD CROSS SECTION 101
1

TR20 XEQ 04-29-08 16:15 VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS JOB 1 PASS 64
REV PC 09/83(.2) CALCS: V3 W/HUFF-ISWS CIR.173/90 FILE: E06037.DAT DATE: 04/29/08 JAS PAGE 120

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
39.31	10.60	(NULL)
60.93	49.32	(NULL)
64.31	47.46	(NULL)
71.66	32.73	(NULL)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .50 HOURS DRAINAGE AREA = .42 SQ.MI.

10.00	DISCHG	.00	.00	.03	.11	.18	.25	.33	.40	.47	.54
15.00	DISCHG	.90	1.20	1.43	1.66	1.88	2.09	2.30	2.50	2.69	2.88
20.00	DISCHG	3.07	3.25	3.42	3.60	3.76	3.93	4.09	4.24	4.39	4.54
25.00	DISCHG	4.68	4.83	4.96	5.10	5.23	5.36	5.48	5.61	5.73	5.84
30.00	DISCHG	5.96	6.07	6.18	6.29	6.39	6.50	6.60	6.70	6.79	6.89
35.00	DISCHG	6.98	7.07	7.17	8.70	9.68	9.95	10.11	10.25	10.38	10.52
40.00	DISCHG	9.49	8.27	8.16	8.20	8.27	8.33	8.40	9.18	11.04	11.45
45.00	DISCHG	11.59	11.70	11.80	11.90	12.65	17.09	18.23	18.56	18.76	18.95
50.00	DISCHG	19.13	19.30	19.47	19.64	19.79	19.95	20.10	20.24	20.40	24.64
55.00	DISCHG	27.23	27.78	28.04	28.25	28.45	28.65	36.64	45.85	47.56	48.16
60.00	DISCHG	48.57	48.95	49.31	48.68	46.58	46.45	46.65	46.88	47.12	47.34
65.00	DISCHG	45.82	34.67	32.28	32.03	32.07	32.15	32.23	32.31	32.38	32.46
70.00	DISCHG	32.53	32.60	32.66	32.73	32.72	13.15	1.75	.21	.00	

RUNOFF VOLUME ABOVE BASEFLOW = 3.77 WATERSHED INCHES, 1025.38 CFS-HRS, 84.74 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 101, ALTERNATE 72, STORM 50, ADDED TO OUTPUT HYDROGRAPH FILE ---

EXECUTIVE CONTROL OPERATION ENDCMP RECORD ID
+ COMPUTATIONS COMPLETED FOR PASS 64

EXECUTIVE CONTROL OPERATION COMPUT RECORD ID 50yr, 1
+ FROM XSECTION 10
+ TO XSECTION 101
STARTING TIME = .00 RAIN DEPTH = 6.76 RAIN DURATION=120.00 RAIN TABLE NO.= 9 ANT. MOIST. COND= 2
ALTERNATE NO.=73 STORM NO.=50 MAIN TIME INCREMENT = .50 HOURS

OPERATION RUNOFF CROSS SECTION 10

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
65.77	4.93	(RUNOFF)
101.78	21.06	(RUNOFF)
107.75	20.37	(RUNOFF)
119.37	13.62	(RUNOFF)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .50 HOURS DRAINAGE AREA = .25 SQ.MI.

15.00	DISCHG	.00	.00	.00	.03	.10	.17	.25	.25	.25	.28
20.00	DISCHG	.31	.34	.37	.40	.43	.46	.49	.52	.55	.75
25.00	DISCHG	.90	.98	1.04	1.10	1.15	1.21	1.26	1.32	1.37	1.42

1

TR20 XEQ 04-29-08 16:15 VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS JOB 1 PASS 65
REV PC 09/83(.2) CALCS: V3 W/HUFF-ISWS CIR.173/90 FILE: E06037.DAT DATE: 04/29/08 JAS PAGE 121

30.00	DISCHG	1.47	1.52	1.57	1.62	1.66	1.71	1.75	1.80	1.84	1.89
35.00	DISCHG	1.93	1.97	2.01	2.05	2.09	2.13	2.17	2.20	2.24	2.28
40.00	DISCHG	2.31	2.35	2.38	2.42	2.45	2.48	2.51	2.55	2.58	2.61
45.00	DISCHG	2.64	2.67	2.70	2.73	2.75	2.78	2.81	2.84	2.86	2.89
50.00	DISCHG	2.92	2.94	2.97	2.99	3.02	3.04	3.06	3.09	3.11	3.13
55.00	DISCHG	3.16	3.18	3.20	3.22	3.24	3.26	3.28	3.31	3.33	3.35
60.00	DISCHG	3.37	4.04	4.48	4.57	4.61	4.64	4.68	4.71	4.74	4.77
65.00	DISCHG	4.80	4.82	4.85	4.17	3.75	3.70	3.71	3.72	3.74	3.75
70.00	DISCHG	3.77	3.78	3.79	3.81	3.82	4.58	5.06	5.15	5.18	5.21
75.00	DISCHG	5.23	5.25	5.27	5.29	5.31	5.33	5.36	6.93	7.95	8.13
80.00	DISCHG	8.19	8.23	8.27	8.31	8.35	8.39	8.43	8.46	8.50	8.53
85.00	DISCHG	8.57	8.60	8.63	8.67	8.70	8.73	8.76	8.79	8.82	8.85
90.00	DISCHG	8.88	10.62	11.74	11.94	12.01	12.05	12.10	12.14	12.18	12.22
95.00	DISCHG	12.26	12.30	12.35	16.87	19.74	20.23	20.37	20.46	20.54	20.62

100.00	DISCHG	20.69	20.77	20.84	20.91	20.97	20.10	19.57	19.53	19.57	19.62
105.00	DISCHG	19.67	19.71	19.76	19.80	19.84	19.88	19.90	16.11	13.72	13.39
110.00	DISCHG	13.36	13.37	13.39	13.40	13.42	13.43	13.45	13.46	13.48	13.49
115.00	DISCHG	13.50	13.52	13.53	13.54	13.56	13.57	13.58	13.59	13.61	13.62
120.00	DISCHG	13.58	5.76	.81	.10	.00					

RUNOFF VOLUME ABOVE BASEFLOW = 4.58 WATERSHED INCHES, 748.53 CFS-HRS, 61.86 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 10, ALTERNATE 73, STORM 50, ADDED TO OUTPUT HYDROGRAPH FILE ---

OPERATION RUNOFF CROSS SECTION 11

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
107.76	12.93	(RUNOFF)
119.41	8.71	(RUNOFF)
102.00	13.13	(RUNOFF)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .50 HOURS DRAINAGE AREA = .17 SQ.MI.

20.00	DISCHG	.00	.00	.00	.02	.04	.06	.07	.09	.11	.17
25.00	DISCHG	.22	.26	.30	.34	.37	.41	.44	.48	.51	.54
30.00	DISCHG	.57	.61	.64	.67	.70	.73	.76	.79	.82	.84
35.00	DISCHG	.87	.90	.93	.95	.98	1.00	1.03	1.05	1.08	1.10
40.00	DISCHG	1.13	1.15	1.18	1.20	1.22	1.24	1.27	1.29	1.31	1.33
45.00	DISCHG	1.35	1.37	1.39	1.41	1.43	1.45	1.47	1.49	1.51	1.53
50.00	DISCHG	1.55	1.56	1.58	1.60	1.62	1.63	1.65	1.67	1.68	1.70
55.00	DISCHG	1.72	1.73	1.75	1.76	1.78	1.79	1.81	1.82	1.84	1.85
60.00	DISCHG	1.87	2.28	2.51	2.56	2.58	2.61	2.63	2.65	2.68	2.70
65.00	DISCHG	2.72	2.74	2.76	2.34	2.13	2.11	2.12	2.13	2.14	2.16
70.00	DISCHG	2.17	2.18	2.19	2.20	2.21	2.69	2.94	2.99	3.01	3.03
75.00	DISCHG	3.05	3.06	3.08	3.10	3.11	3.13	3.15	4.16	4.70	4.80
80.00	DISCHG	4.84	4.88	4.91	4.94	4.97	5.00	5.03	5.06	5.09	5.11
85.00	DISCHG	5.14	5.17	5.19	5.22	5.24	5.27	5.29	5.32	5.34	5.36
90.00	DISCHG	5.39	6.55	7.17	7.28	7.33	7.36	7.40	7.44	7.47	7.50
95.00	DISCHG	7.54	7.57	7.61	10.64	12.26	12.53	12.63	12.70	12.77	12.83

1

TR20 XEQ 04-29-08 16:15 VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS JOB 1 PASS 65
REV PC 09/83(.2) CALCS: V3 W/HUFF-ISWS CIR.173/90 FILE: E06037.DAT DATE: 04/29/08 JAS PAGE 122

100.00	DISCHG	12.90	12.96	13.02	13.08	13.13	12.55	12.27	12.27	12.31	12.35
105.00	DISCHG	12.39	12.43	12.47	12.51	12.54	12.58	12.61	9.99	8.64	8.48
110.00	DISCHG	8.48	8.49	8.50	8.52	8.53	8.54	8.56	8.57	8.58	8.59
115.00	DISCHG	8.61	8.62	8.63	8.64	8.65	8.66	8.68	8.69	8.70	8.71
120.00	DISCHG	8.69	3.24	.39	.04						

RUNOFF VOLUME ABOVE BASEFLOW = 4.15 WATERSHED INCHES, 449.73 CFS-HRS, 37.17 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 11, ALTERNATE 73, STORM 50, ADDED TO OUTPUT HYDROGRAPH FILE ---

OPERATION ADDHYD CROSS SECTION 101

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
65.77	7.73	(NULL)
101.79	34.24	(NULL)
107.75	33.30	(NULL)
119.39	22.33	(NULL)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .50 HOURS DRAINAGE AREA = .42 SQ.MI.

15.00	DISCHG	.00	.00	.00	.03	.10	.17	.25	.25	.25	.28
20.00	DISCHG	.31	.34	.37	.42	.47	.51	.56	.61	.65	.91
25.00	DISCHG	1.13	1.24	1.34	1.43	1.52	1.61	1.70	1.79	1.88	1.96
30.00	DISCHG	2.04	2.13	2.21	2.28	2.36	2.44	2.51	2.59	2.66	2.73
35.00	DISCHG	2.80	2.87	2.94	3.00	3.07	3.13	3.20	3.26	3.32	3.38
40.00	DISCHG	3.44	3.50	3.56	3.61	3.67	3.72	3.78	3.83	3.89	3.94
45.00	DISCHG	3.99	4.04	4.09	4.14	4.19	4.23	4.28	4.33	4.37	4.42
50.00	DISCHG	4.46	4.51	4.55	4.59	4.63	4.67	4.72	4.76	4.80	4.83
55.00	DISCHG	4.87	4.91	4.95	4.99	5.02	5.06	5.09	5.13	5.16	5.20
60.00	DISCHG	5.24	6.32	6.99	7.13	7.19	7.25	7.30	7.36	7.41	7.46
65.00	DISCHG	7.52	7.57	7.61	6.52	5.88	5.81	5.83	5.85	5.88	5.91
70.00	DISCHG	5.93	5.96	5.98	6.01	6.03	7.26	8.01	8.14	8.20	8.24
75.00	DISCHG	8.27	8.31	8.35	8.39	8.43	8.46	8.51	11.09	12.65	12.93
80.00	DISCHG	13.03	13.11	13.18	13.25	13.32	13.39	13.45	13.52	13.58	13.65
85.00	DISCHG	13.71	13.77	13.83	13.89	13.94	14.00	14.05	14.11	14.16	14.21
90.00	DISCHG	14.27	17.17	18.91	19.22	19.34	19.42	19.50	19.57	19.65	19.72
95.00	DISCHG	19.79	19.86	19.96	27.51	32.01	32.76	33.00	33.16	33.31	33.45
100.00	DISCHG	33.59	33.73	33.86	33.98	34.10	32.65	31.83	31.80	31.88	31.97
105.00	DISCHG	32.06	32.14	32.23	32.31	32.39	32.46	32.51	26.10	22.35	21.87
110.00	DISCHG	21.83	21.86	21.89	21.92	21.95	21.98	22.01	22.03	22.06	22.09
115.00	DISCHG	22.11	22.14	22.16	22.19	22.21	22.23	22.26	22.28	22.30	22.33
120.00	DISCHG	22.27	9.00	1.21	.14	.00					

RUNOFF VOLUME ABOVE BASEFLOW = 4.40 WATERSHED INCHES, 1198.25 CFS-HRS, 99.02 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 101, ALTERNATE 73, STORM 50, ADDED TO OUTPUT HYDROGRAPH FILE ---

EXECUTIVE CONTROL OPERATION ENDCMP RECORD ID
+ COMPUTATIONS COMPLETED FOR PASS 65

1

TR20 XEQ 04-29-08 16:15 VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS JOB 1 PASS 66
REV PC 09/83(.2) CALCS: V3 W/HUFF-ISWS CIR.173/90 FILE: E06037.DAT DATE: 04/29/08 JAS PAGE 123

EXECUTIVE CONTROL OPERATION COMPUT RECORD ID 50yr, 2

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+                                   FROM XSECTION  10
+                                                          TO XSECTION 101
        STARTING TIME =   .00    RAIN DEPTH =  8.01    RAIN DURATION=240.00    RAIN TABLE NO.= 9    ANT. MOIST. COND= 2
        ALTERNATE NO.=74         STORM NO.=50    MAIN TIME INCREMENT =   .50 HOURS


 OPERATION RUNOFF   CROSS SECTION  10

 *** WARNING-NO PEAK FOUND, MAXIMUM DISCHARGE =        3.33 CFS.

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
             149.50                            3.33                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .50 HOURS      DRAINAGE AREA =    .25 SQ.MI.
   25.00    DISCHG         .00       .00       .00       .00       .00       .00       .01       .03       .06       .09
   30.00    DISCHG         .11       .14       .17       .19       .22       .24       .27       .29       .31       .34
   35.00    DISCHG         .36       .39       .41       .35       .31       .31       .32       .33       .34       .35
   40.00    DISCHG         .36       .37       .37       .38       .39       .40       .41       .42       .43       .44
   45.00    DISCHG         .45       .46       .46       .47       .48       .49       .50       .66       .76       .80
   50.00    DISCHG         .82       .83       .85       .87       .89       .90       .92       .94       .96       .97
   55.00    DISCHG         .99      1.00      1.02      1.04      1.05      1.07      1.08      1.10      1.11      1.13
   60.00    DISCHG        1.14      1.16      1.17      1.19      1.20      1.21      1.23      1.24      1.26      1.27
   65.00    DISCHG        1.28      1.30      1.31      1.32      1.33      1.35      1.36      1.37      1.38      1.40
   70.00    DISCHG        1.41      1.42      1.43      1.44      1.46      1.47      1.48      1.49      1.50      1.51
   75.00    DISCHG        1.52      1.53      1.54      1.56      1.57      1.58      1.59      1.60      1.61      1.62
   80.00    DISCHG        1.63      1.64      1.65      1.66      1.67      1.68      1.69      1.69      1.70      1.71
   85.00    DISCHG        1.72      1.73      1.74      1.75      1.76      1.77      1.78      1.78      1.79      1.80
   90.00    DISCHG        1.81      1.82      1.83      1.83      1.84      1.85      1.86      1.87      1.87      1.88
   95.00    DISCHG        1.89      1.90      1.90      1.91      1.92      1.93      1.93      1.94      1.95      1.96
  100.00    DISCHG        1.96      1.97      1.98      1.98      1.99      2.00      2.00      2.01      2.02      2.02
  105.00    DISCHG        2.03      2.04      2.04      2.05      2.06      2.06      2.07      2.08      2.08      2.09
  110.00    DISCHG        2.09      2.10      2.11      2.11      2.12      2.12      2.13      2.13      2.14      2.15
  115.00    DISCHG        2.15      2.16      2.16      2.17      2.17      2.18      2.18      2.19      2.20      2.20
  120.00    DISCHG        2.21      2.64      2.91      2.96      2.98      2.98      2.99      3.00      3.01      3.02
  125.00    DISCHG        3.03      3.04      3.04      3.05      3.06      3.07      3.08      3.08      3.09      3.10
  130.00    DISCHG        3.11      3.12      3.12      3.13      3.13      2.69      2.41      2.37      2.37      2.37
  135.00    DISCHG        2.38      2.38      2.39      2.39      2.39      2.40      2.40      2.41      2.41      2.41
  140.00    DISCHG        2.42      2.42      2.42      2.43      2.43      2.44      2.44      2.44      2.45      2.92
  145.00    DISCHG        3.22      3.27      3.29      3.29      3.30      3.30      3.31      3.32      3.32      3.33

   RUNOFF VOLUME ABOVE BASEFLOW =  1.26 WATERSHED INCHES,    206.76 CFS-HRS,    17.09 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION  10, ALTERNATE 74, STORM 50, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION RUNOFF   CROSS SECTION  11
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  66
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                     PAGE 124


 *** WARNING-NO PEAK FOUND, MAXIMUM DISCHARGE =        1.98 CFS.

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
             149.50                            1.98                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .50 HOURS      DRAINAGE AREA =    .17 SQ.MI.
   30.00    DISCHG         .00       .00       .00       .00       .00       .00       .00       .00       .00       .01
   35.00    DISCHG         .02       .03       .05       .05       .05       .05       .06       .07       .07       .08
   40.00    DISCHG         .08       .09       .10       .10       .11       .11       .12       .12       .13       .14
   45.00    DISCHG         .14       .15       .15       .16       .16       .17       .17       .24       .28       .29
   50.00    DISCHG         .30       .32       .33       .34       .35       .36       .37       .38       .39       .40
   55.00    DISCHG         .42       .43       .44       .45       .46       .47       .48       .49       .50       .51
   60.00    DISCHG         .52       .53       .54       .54       .55       .56       .57       .58       .59       .60
   65.00    DISCHG         .61       .62       .63       .64       .64       .65       .66       .67       .68       .69
   70.00    DISCHG         .69       .70       .71       .72       .73       .73       .74       .75       .76       .76
   75.00    DISCHG         .77       .78       .79       .79       .80       .81       .82       .82       .83       .84
   80.00    DISCHG         .84       .85       .86       .87       .87       .88       .89       .89       .90       .91
   85.00    DISCHG         .91       .92       .92       .93       .94       .94       .95       .96       .96       .97
   90.00    DISCHG         .97       .98       .99       .99      1.00      1.00      1.01      1.01      1.02      1.03
   95.00    DISCHG        1.03      1.04      1.04      1.05      1.05      1.06      1.06      1.07      1.07      1.08
  100.00    DISCHG        1.08      1.09      1.09      1.10      1.10      1.11      1.11      1.12      1.12      1.13
  105.00    DISCHG        1.13      1.14      1.14      1.15      1.15      1.16      1.16      1.17      1.17      1.18
  110.00    DISCHG        1.18      1.19      1.19      1.19      1.20      1.20      1.21      1.21      1.22      1.22
  115.00    DISCHG        1.22      1.23      1.23      1.24      1.24      1.24      1.25      1.25      1.26      1.26
  120.00    DISCHG        1.27      1.53      1.68      1.70      1.71      1.72      1.73      1.73      1.74      1.74
  125.00    DISCHG        1.75      1.76      1.76      1.77      1.78      1.78      1.79      1.79      1.80      1.81
  130.00    DISCHG        1.81      1.82      1.82      1.83      1.84      1.55      1.40      1.39      1.39      1.39
  135.00    DISCHG        1.40      1.40      1.40      1.41      1.41      1.41      1.42      1.42      1.42      1.42
  140.00    DISCHG        1.43      1.43      1.43      1.44      1.44      1.44      1.44      1.45      1.45      1.76
  145.00    DISCHG        1.92      1.94      1.95      1.96      1.96      1.97      1.97      1.97      1.98      1.98

   RUNOFF VOLUME ABOVE BASEFLOW =  1.03 WATERSHED INCHES,    111.47 CFS-HRS,     9.21 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION  11, ALTERNATE 74, STORM 50, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION ADDHYD   CROSS SECTION 101

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
             131.76                            5.06                        (NULL)
             149.50                            5.31                        (NULL)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .50 HOURS      DRAINAGE AREA =    .42 SQ.MI.
   25.00    DISCHG         .00       .00       .00       .00       .00       .00       .01       .03       .06       .09
   30.00    DISCHG         .11       .14       .17       .19       .22       .24       .27       .29       .31       .35
   35.00    DISCHG         .38       .42       .46       .39       .35       .36       .38       .39       .41       .42
   40.00    DISCHG         .44       .45       .47       .49       .50       .52       .53       .54       .56       .57
   45.00    DISCHG         .59       .60       .62       .63       .64       .66       .67       .89      1.04      1.09
1
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TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  66
     REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                     PAGE 125

  50.00    DISCHG        1.12      1.15      1.18      1.21      1.24      1.27      1.29      1.32      1.35      1.38
  55.00    DISCHG        1.40      1.43      1.46      1.48      1.51      1.53      1.56      1.58      1.61      1.63
  60.00    DISCHG        1.66      1.68      1.71      1.73      1.75      1.78      1.80      1.82      1.85      1.87
  65.00    DISCHG        1.89      1.91      1.94      1.96      1.98      2.00      2.02      2.04      2.06      2.08
  70.00    DISCHG        2.10      2.12      2.14      2.16      2.18      2.20      2.22      2.24      2.26      2.28
  75.00    DISCHG        2.30      2.31      2.33      2.35      2.37      2.39      2.40      2.42      2.44      2.45
  80.00    DISCHG        2.47      2.49      2.51      2.52      2.54      2.55      2.57      2.59      2.60      2.62
  85.00    DISCHG        2.63      2.65      2.66      2.68      2.70      2.71      2.72      2.74      2.75      2.77
  90.00    DISCHG        2.78      2.80      2.81      2.83      2.84      2.85      2.87      2.88      2.89      2.91
  95.00    DISCHG        2.92      2.93      2.95      2.96      2.97      2.99      3.00      3.01      3.02      3.04
 100.00    DISCHG        3.05      3.06      3.07      3.08      3.10      3.11      3.12      3.13      3.14      3.15
 105.00    DISCHG        3.17      3.18      3.19      3.20      3.21      3.22      3.23      3.24      3.25      3.26
 110.00    DISCHG        3.27      3.28      3.30      3.31      3.32      3.33      3.34      3.35      3.36      3.37
 115.00    DISCHG        3.38      3.39      3.40      3.40      3.41      3.42      3.43      3.44      3.45      3.46
 120.00    DISCHG        3.47      4.17      4.59      4.66      4.69      4.70      4.72      4.73      4.75      4.76
 125.00    DISCHG        4.78      4.79      4.81      4.82      4.84      4.85      4.87      4.88      4.89      4.91
 130.00    DISCHG        4.92      4.93      4.95      4.96      4.97      4.24      3.81      3.76      3.76      3.77
 135.00    DISCHG        3.78      3.78      3.79      3.80      3.80      3.81      3.82      3.82      3.83      3.84
 140.00    DISCHG        3.84      3.85      3.86      3.86      3.87      3.88      3.88      3.89      3.90      4.68
 145.00    DISCHG        5.14      5.22      5.24      5.25      5.26      5.27      5.28      5.29      5.30      5.31

  RUNOFF VOLUME ABOVE BASEFLOW =  1.17 WATERSHED INCHES,    318.23 CFS-HRS,    26.30 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION 101, ALTERNATE 74, STORM 50, ADDED TO OUTPUT HYDROGRAPH FILE ---


 EXECUTIVE CONTROL OPERATION ENDCMP                                                                                  RECORD ID
+                                     COMPUTATIONS COMPLETED FOR PASS  66



 EXECUTIVE CONTROL OPERATION INCREM                                                                                  RECORD ID
+                                     MAIN TIME INCREMENT =   .05 HOURS


 EXECUTIVE CONTROL OPERATION COMPUT                                                                                  RECORD ID  100yr,
+                                     FROM XSECTION  10
+                                                          TO XSECTION 101
         STARTING TIME =   .00    RAIN DEPTH =  2.71    RAIN DURATION=  1.00    RAIN TABLE NO.= 6    ANT. MOIST. COND= 2
         ALTERNATE NO.= 1         STORM NO.=99    MAIN TIME INCREMENT =   .05 HOURS


 OPERATION RUNOFF   CROSS SECTION  10

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
                .72                          196.95                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .25 SQ.MI.
    .00    DISCHG         .00       .00       .92      4.00     10.46     21.71     38.82     61.29     87.33    114.46
    .50    DISCHG      140.14    162.17    179.21    190.68    196.26    196.23    191.96    185.07    176.84    168.22
   1.00    DISCHG      159.81    151.31    142.28    132.85    122.91    111.94    100.10     87.90     75.90     64.48
   1.50    DISCHG       54.14     45.02     37.04     30.31     24.90     20.50     16.89     13.95     11.49      9.45
1


TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  67
     REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                     PAGE 126

   2.00    DISCHG        7.78      6.39      5.22      4.24      3.41      2.74      2.19      1.75      1.39      1.10
   2.50    DISCHG         .86       .68       .53       .41       .31       .23       .16       .10       .06       .03
   3.00    DISCHG         .01       .00

  RUNOFF VOLUME ABOVE BASEFLOW =  1.09 WATERSHED INCHES,    178.93 CFS-HRS,    14.79 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION  10, ALTERNATE  1, STORM 99, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION RUNOFF   CROSS SECTION  11

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
                .72                          106.41                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .17 SQ.MI.
    .00    DISCHG         .00       .00       .28      1.48      4.42      9.96     18.81     30.98     45.47     60.81
    .50    DISCHG       75.35     87.78     97.27    103.48    106.20    105.80    103.23     99.50     95.30     91.00
   1.00    DISCHG       86.75     82.34     77.60     72.49     66.81     60.40     53.42     46.26     39.29     32.84
   1.50    DISCHG       27.11     22.11     17.88     14.47     11.75      9.57      7.80      6.34      5.15      4.18
   2.00    DISCHG        3.37      2.71      2.16      1.71      1.35      1.07       .84       .66       .51       .40
   2.50    DISCHG         .31       .23       .17       .12       .08       .05       .03       .01       .00

  RUNOFF VOLUME ABOVE BASEFLOW =   .87 WATERSHED INCHES,     94.87 CFS-HRS,     7.84 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION  11, ALTERNATE  1, STORM 99, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION ADDHYD   CROSS SECTION 101

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
                .72                          303.34                        (NULL)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .42 SQ.MI.
    .00    DISCHG         .00       .00      1.19      5.48     14.88     31.67     57.64     92.26    132.81    175.27
    .50    DISCHG      215.49    249.94    276.48    294.17    302.46    302.02    295.19    284.57    272.14    259.23
   1.00    DISCHG      246.55    233.65    219.88    205.34    189.72    172.34    153.52    134.16    115.19     97.32
   1.50    DISCHG       81.25     67.12     54.91     44.79     36.65     30.07     24.69     20.29     16.64     13.63
   2.00    DISCHG       11.16      9.10      7.38      5.95      4.77      3.81      3.03      2.40      1.90      1.49
   2.50    DISCHG        1.17       .91       .70       .53       .39       .28       .19       .12       .06       .03
   3.00    DISCHG         .01       .00
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   RUNOFF VOLUME ABOVE BASEFLOW =  1.01 WATERSHED INCHES,    273.80 CFS-HRS,    22.63 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION 101, ALTERNATE  1, STORM 99, ADDED TO OUTPUT HYDROGRAPH FILE ---

 EXECUTIVE CONTROL OPERATION ENDCMP                                                                                  RECORD ID
+                                   COMPUTATIONS COMPLETED FOR PASS  67


1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  68
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                     PAGE 127


 EXECUTIVE CONTROL OPERATION COMPUT                                                                                  RECORD ID  100yr,
+                                   FROM XSECTION  10
+                                                                TO XSECTION 101
         STARTING TIME =   .00    RAIN DEPTH =  3.35    RAIN DURATION=  2.00    RAIN TABLE NO.= 6    ANT. MOIST. COND= 2
         ALTERNATE NO.= 2         STORM NO.=99    MAIN TIME INCREMENT =   .05 HOURS


 OPERATION RUNOFF   CROSS SECTION  10

            PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
                 .90                          197.30                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .25 SQ.MI.
     .00    DISCHG         .00       .00       .05       .77      3.26      8.36     17.00     30.12     47.66     68.41
     .50    DISCHG       90.87    113.64    135.40    154.98    171.43    183.95    192.05    196.20    197.29    195.83
    1.00    DISCHG      192.40    187.49    181.22    173.93    165.88    157.22    148.32    139.57    131.30    123.69
    1.50    DISCHG      116.91    111.07    106.19    102.23     99.04     96.32     93.77     91.12     88.18     84.91
    2.00    DISCHG       81.46     77.87     74.18     70.46     66.34     61.39     55.69     49.61     43.45     37.42
    2.50    DISCHG       31.72     26.42     21.64     17.62     14.40     11.82      9.72      7.99      6.54      5.35
    3.00    DISCHG        4.39      3.59      2.94      2.40      1.95      1.59      1.30      1.05       .85       .68
    3.50    DISCHG         .54       .43       .33       .25       .19       .15       .11       .08       .05       .03
    4.00    DISCHG         .01       .00

   RUNOFF VOLUME ABOVE BASEFLOW =  1.59 WATERSHED INCHES,    259.60 CFS-HRS,    21.45 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION  10, ALTERNATE  2, STORM 99, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION RUNOFF   CROSS SECTION  11

            PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
                 .91                          108.64                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .17 SQ.MI.
     .00    DISCHG         .00       .00       .00       .18      1.09      3.26      7.25     13.69     22.79     33.92
     .50    DISCHG       46.36     59.27     71.84     83.26     92.94    100.24    105.05    107.73    108.63    108.07
    1.00    DISCHG      106.40    103.86    100.59     96.70     92.28     87.47     82.51     77.67     73.14     69.04
    1.50    DISCHG       65.50     62.55     60.18     58.33     56.88     55.62     54.38     52.98     51.30     49.34
    2.00    DISCHG       47.25     45.11     42.95     40.73     38.20     35.10     31.54     27.77     23.96     20.26
    2.50    DISCHG       16.80     13.63     10.94      8.82      7.14      5.79      4.70      3.80      3.07      2.49
    3.00    DISCHG        2.01      1.63      1.31      1.05       .84       .68       .54       .43       .33       .26
    3.50    DISCHG         .20       .15       .11       .09       .06       .04       .02       .01       .00

   RUNOFF VOLUME ABOVE BASEFLOW =  1.32 WATERSHED INCHES,    143.10 CFS-HRS,    11.83 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION  11, ALTERNATE  2, STORM 99, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION ADDHYD   CROSS SECTION 101
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  68
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                     PAGE 128


            PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
                 .90                          305.92                        (NULL)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .42 SQ.MI.
     .00    DISCHG         .00       .00       .05       .95      4.35     11.62     24.24     43.82     70.45    102.33
     .50    DISCHG      137.23    172.91    207.24    238.24    264.36    284.19    297.10    303.92    305.92    303.89
    1.00    DISCHG      298.81    291.35    281.81    270.63    258.16    244.69    230.83    217.24    204.43    192.73
    1.50    DISCHG      182.40    173.62    166.37    160.56    155.92    151.95    148.15    144.11    139.48    134.25
    2.00    DISCHG      128.72    122.98    117.13    111.19    104.54     96.48     87.23     77.38     67.41     57.68
    2.50    DISCHG       48.52     40.05     32.58     26.44     21.54     17.62     14.42     11.79      9.62      7.84
    3.00    DISCHG        6.40      5.22      4.24      3.45      2.80      2.27      1.84      1.48      1.18       .94
    3.50    DISCHG         .74       .58       .44       .34       .26       .19       .14       .09       .05       .03
    4.00    DISCHG         .01       .00

   RUNOFF VOLUME ABOVE BASEFLOW =  1.48 WATERSHED INCHES,    402.71 CFS-HRS,    33.28 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION 101, ALTERNATE  2, STORM 99, ADDED TO OUTPUT HYDROGRAPH FILE ---

 EXECUTIVE CONTROL OPERATION ENDCMP                                                                                  RECORD ID
+                                   COMPUTATIONS COMPLETED FOR PASS  68


 EXECUTIVE CONTROL OPERATION COMPUT                                                                                  RECORD ID  100yr,
+                                   FROM XSECTION  10
+                                                                TO XSECTION 101
```

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        STARTING TIME =   .00    RAIN DEPTH =  3.69    RAIN DURATION=  3.00    RAIN TABLE NO.= 6    ANT. MOIST. COND= 2
        ALTERNATE NO.= 3         STORM NO.=99    MAIN TIME INCREMENT =   .05 HOURS


 OPERATION RUNOFF   CROSS SECTION  10

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               1.05                          177.94                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .25 SQ.MI.
     .00    DISCHG        .00       .00       .00       .11       .81      2.87      7.16     14.42     25.17     39.38
     .50    DISCHG      56.18     74.22     92.37    109.81    125.96    140.36    152.54    162.18    169.28    174.11
    1.00    DISCHG     176.95    177.93    177.15    174.89    171.42    167.11    162.22    157.01    151.79    146.69
    1.50    DISCHG     141.67    136.64    131.42    125.90    120.11    114.12    108.00    101.95     96.20     90.90
    2.00    DISCHG      86.20     82.18     78.78     76.01     73.78     71.97     70.51     69.32     68.37     67.61
    2.50    DISCHG      67.01     66.51     65.98     65.28     64.28     62.84     60.88     58.47     55.87     53.39
    3.00    DISCHG      51.28     49.56     48.19     46.92     45.32     42.96     39.81     36.05     31.94     27.70
    3.50    DISCHG      23.54     19.59     16.05     13.08     10.71      8.81      7.26      5.98      4.91      4.03
    4.00    DISCHG       3.30      2.71      2.21      1.80      1.47      1.20       .97       .79       .64       .51
    4.50    DISCHG        .41       .32       .26       .20       .16       .13       .09       .07       .04       .02
    5.00    DISCHG        .01       .00

   RUNOFF VOLUME ABOVE BASEFLOW =  1.86 WATERSHED INCHES,    304.66 CFS-HRS,    25.18 ACRE-FEET;   BASEFLOW =    .00 CFS
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  69
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                      PAGE 129


                        --- HYDROGRAPH FOR XSECTION  10, ALTERNATE  3, STORM 99, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION RUNOFF   CROSS SECTION  11

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               1.07                           98.60                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .17 SQ.MI.
     .00    DISCHG        .00       .00       .00       .01       .15       .81      2.52      5.70     10.77     17.93
     .50    DISCHG      26.73     36.41     46.43     56.29     65.64     74.15     81.52     87.47     92.09     95.47
    1.00    DISCHG      97.57     98.51     98.43     97.43     95.72     93.52     90.97     88.30     85.64     83.04
    1.50    DISCHG      80.47     77.82     74.97     71.88     68.58     65.08     61.51     58.01     54.73     51.79
    2.00    DISCHG      49.27     47.15     45.41     44.03     42.95     42.10     41.42     40.90     40.49     40.19
    2.50    DISCHG      39.96     39.79     39.58     39.23     38.64     37.72     36.38     34.74     33.01     31.44
    3.00    DISCHG      30.20     29.31     28.67     28.05     27.13     25.56     23.42     20.87     18.15     15.38
    3.50    DISCHG      12.73     10.31      8.27      6.68      5.42      4.41      3.59      2.91      2.35      1.91
    4.00    DISCHG       1.54      1.24      1.00       .80       .65       .52       .41       .32       .26       .20
    4.50    DISCHG        .16       .12       .10       .07       .05       .04       .02       .01       .00

   RUNOFF VOLUME ABOVE BASEFLOW =  1.57 WATERSHED INCHES,    170.56 CFS-HRS,    14.10 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION  11, ALTERNATE  3, STORM 99, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION ADDHYD   CROSS SECTION 101

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               1.06                          276.50                        (NULL)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .05 HOURS      DRAINAGE AREA =    .42 SQ.MI.
     .00    DISCHG        .00       .00       .00       .12       .96      3.68      9.68     20.11     35.94     57.31
     .50    DISCHG      82.91    110.63    138.79    166.11    191.59    214.51    234.06    249.65    261.36    269.58
    1.00    DISCHG     274.52    276.45    275.58    272.32    267.14    260.64    253.19    245.31    237.43    229.73
    1.50    DISCHG     222.14    214.46    206.39    197.78    188.69    179.20    169.50    159.96    150.93    142.69
    2.00    DISCHG     135.47    129.33    124.19    120.04    116.73    114.07    111.93    110.22    108.87    107.80
    2.50    DISCHG     106.97    106.29    105.55    104.50    102.92    100.56     97.26     93.20     88.88     84.83
    3.00    DISCHG      81.48     78.88     76.86     74.97     72.45     68.52     63.23     56.92     50.09     43.08
    3.50    DISCHG      36.26     29.90     24.32     19.76     16.14     13.23     10.85      8.89      7.27      5.93
    4.00    DISCHG       4.84      3.95      3.21      2.61      2.11      1.71      1.39      1.11       .89       .71
    4.50    DISCHG        .56       .45       .35       .28       .21       .16       .11       .07       .04       .02
    5.00    DISCHG        .01       .00

   RUNOFF VOLUME ABOVE BASEFLOW =  1.75 WATERSHED INCHES,    475.23 CFS-HRS,    39.27 ACRE-FEET;   BASEFLOW =    .00 CFS

                        --- HYDROGRAPH FOR XSECTION 101, ALTERNATE  3, STORM 99, ADDED TO OUTPUT HYDROGRAPH FILE ---
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  70
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                      PAGE 130


 EXECUTIVE CONTROL OPERATION ENDCMP                                                                                  RECORD ID
+                                  COMPUTATIONS COMPLETED FOR PASS  69


 EXECUTIVE CONTROL OPERATION COMPUT                                                                                  RECORD ID  100yr,
+                                  FROM XSECTION  10
+                                                          TO XSECTION 101
        STARTING TIME =   .00    RAIN DEPTH =  4.33    RAIN DURATION=  6.00    RAIN TABLE NO.= 6    ANT. MOIST. COND= 2
        ALTERNATE NO.= 6         STORM NO.=99    MAIN TIME INCREMENT =   .05 HOURS


 OPERATION RUNOFF   CROSS SECTION  10

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               1.55                          132.59                        (RUNOFF)
               5.09                           39.67                        (RUNOFF)
```

6.17	29.02	(RUNOFF)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .05 HOURS DRAINAGE AREA = .25 SQ.MI.

.00	DISCHG	.00	.00	.00	.00	.00	.08	.45	1.40	3.37	6.85
.50	DISCHG	12.31	20.02	29.93	41.61	54.37	67.40	79.86	90.94	100.21	107.64
1.00	DISCHG	113.43	117.84	121.12	123.59	125.51	127.18	128.72	130.07	131.16	131.94
1.50	DISCHG	132.41	132.59	132.45	131.91	130.87	129.28	127.20	124.77	122.13	119.35
2.00	DISCHG	116.46	113.50	110.53	107.67	104.94	102.27	99.59	96.83	94.05	91.38
2.50	DISCHG	88.88	86.61	84.59	82.84	81.34	80.04	78.88	77.71	76.41	74.91
3.00	DISCHG	73.18	71.27	69.19	66.95	64.54	61.94	59.23	56.56	54.02	51.67
3.50	DISCHG	49.55	47.67	46.04	44.70	43.62	42.76	42.05	41.48	41.02	40.64
4.00	DISCHG	40.34	40.10	39.91	39.76	39.65	39.57	39.50	39.46	39.43	39.41
4.50	DISCHG	39.40	39.40	39.41	39.42	39.44	39.46	39.49	39.52	39.55	39.58
5.00	DISCHG	39.61	39.65	39.67	39.62	39.41	38.98	38.22	37.08	35.63	33.97
5.50	DISCHG	32.23	30.50	28.86	27.37	26.08	25.09	24.48	24.27	24.49	25.17
6.00	DISCHG	26.21	27.37	28.38	28.97	28.89	27.96	26.22	23.83	21.08	18.19
6.50	DISCHG	15.39	12.79	10.49	8.57	7.02	5.78	4.76	3.92	3.22	2.64
7.00	DISCHG	2.16	1.77	1.45	1.19	.97	.80	.65	.53	.44	.36
7.50	DISCHG	.29	.23	.19	.15	.12	.09	.06	.04	.03	.01
8.00	DISCHG	.01	.00								

RUNOFF VOLUME ABOVE BASEFLOW = 2.40 WATERSHED INCHES, 392.64 CFS-HRS, 32.45 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 10, ALTERNATE 6, STORM 99, ADDED TO OUTPUT HYDROGRAPH FILE ---

OPERATION RUNOFF CROSS SECTION 11

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.62	75.10	(RUNOFF)
5.09	24.48	(RUNOFF)
6.16	18.35	(RUNOFF)

1

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .05 HOURS DRAINAGE AREA = .17 SQ.MI.

.00	DISCHG	.00	.00	.00	.00	.00	.00	.04	.23	.78	1.95
.50	DISCHG	4.07	7.46	12.23	18.18	24.95	32.07	38.97	45.17	50.48	54.89
1.00	DISCHG	58.47	61.37	63.72	65.66	67.36	68.96	70.43	71.72	72.80	73.66
1.50	DISCHG	74.34	74.83	75.08	75.04	74.64	73.85	72.77	71.49	70.08	68.58
2.00	DISCHG	67.02	65.41	63.83	62.32	60.87	59.41	57.92	56.37	54.82	53.35
2.50	DISCHG	51.98	50.76	49.70	48.80	48.08	47.48	46.93	46.32	45.59	44.66
3.00	DISCHG	43.60	42.42	41.13	39.75	38.26	36.64	34.97	33.35	31.84	30.45
3.50	DISCHG	29.22	28.15	27.27	26.58	26.03	25.60	25.26	24.98	24.76	24.59
4.00	DISCHG	24.46	24.36	24.29	24.23	24.19	24.17	24.16	24.15	24.15	24.16
4.50	DISCHG	24.17	24.19	24.21	24.23	24.26	24.29	24.31	24.34	24.37	24.40
5.00	DISCHG	24.43	24.46	24.48	24.45	24.29	23.97	23.42	22.62	21.61	20.49
5.50	DISCHG	19.34	18.23	17.21	16.31	15.55	15.02	14.73	14.69	14.96	15.56
6.00	DISCHG	16.41	17.29	17.99	18.34	18.15	17.31	15.93	14.17	12.24	10.31
6.50	DISCHG	8.51	6.90	5.54	4.48	3.64	2.96	2.41	1.95	1.58	1.28
7.00	DISCHG	1.03	.84	.68	.55	.44	.36	.29	.23	.19	.15
7.50	DISCHG	.12	.09	.07	.05	.04	.02	.01	.01	.00	

RUNOFF VOLUME ABOVE BASEFLOW = 2.07 WATERSHED INCHES, 224.81 CFS-HRS, 18.58 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 11, ALTERNATE 6, STORM 99, ADDED TO OUTPUT HYDROGRAPH FILE ---

OPERATION ADDHYD CROSS SECTION 101

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.58	207.57	(NULL)
5.09	64.16	(NULL)
6.16	47.36	(NULL)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .05 HOURS DRAINAGE AREA = .42 SQ.MI.

.00	DISCHG	.00	.00	.00	.00	.00	.08	.48	1.63	4.14	8.80
.50	DISCHG	16.38	27.48	42.16	59.79	79.32	99.47	118.83	136.11	150.69	162.53
1.00	DISCHG	171.90	179.20	184.85	189.25	192.87	196.14	199.14	201.79	203.96	205.60
1.50	DISCHG	206.75	207.42	207.53	206.95	205.51	203.13	199.97	196.26	192.21	187.93
2.00	DISCHG	183.48	178.90	174.36	169.99	165.80	161.68	157.51	153.20	148.87	144.72
2.50	DISCHG	140.87	137.37	134.29	131.64	129.41	127.53	125.81	124.03	122.00	119.57
3.00	DISCHG	116.78	113.69	110.32	106.70	102.80	98.57	94.20	89.91	85.86	82.12
3.50	DISCHG	78.76	75.81	73.31	71.28	69.66	68.36	67.31	66.46	65.78	65.23
4.00	DISCHG	64.80	64.46	64.20	64.00	63.84	63.74	63.66	63.61	63.58	63.57
4.50	DISCHG	63.58	63.59	63.62	63.65	63.70	63.75	63.80	63.86	63.92	63.98
5.00	DISCHG	64.04	64.11	64.16	64.07	63.70	62.95	61.65	59.70	57.24	54.46
5.50	DISCHG	51.57	48.73	46.07	43.67	41.63	40.11	39.21	38.96	39.45	40.73
6.00	DISCHG	42.62	44.67	46.37	47.31	47.04	45.27	42.15	38.00	33.32	28.51
6.50	DISCHG	23.90	19.69	16.03	13.05	10.66	8.74	7.17	5.87	4.80	3.92
7.00	DISCHG	3.20	2.61	2.13	1.74	1.42	1.16	.94	.77	.62	.50
7.50	DISCHG	.41	.33	.26	.20	.15	.11	.08	.05	.03	.01
8.00	DISCHG	.01	.00								

1

RUNOFF VOLUME ABOVE BASEFLOW = 2.27 WATERSHED INCHES, 617.46 CFS-HRS, 51.03 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 101, ALTERNATE 6, STORM 99, ADDED TO OUTPUT HYDROGRAPH FILE ---

EXECUTIVE CONTROL OPERATION ENDCMP RECORD ID
+ COMPUTATIONS COMPLETED FOR PASS 70

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 EXECUTIVE CONTROL OPERATION INCREM                                                                                    RECORD ID
+                                    MAIN TIME INCREMENT =   .20 HOURS


 EXECUTIVE CONTROL OPERATION COMPUT                                                                                    RECORD ID  100yr,
+                                    FROM XSECTION  10
+                                                          TO XSECTION 101
         STARTING TIME =   .00    RAIN DEPTH =  5.02    RAIN DURATION= 12.00    RAIN TABLE NO.= 7    ANT. MOIST. COND= 2
         ALTERNATE NO.=12         STORM NO.=99    MAIN TIME INCREMENT =   .20 HOURS


 OPERATION RUNOFF   CROSS SECTION  10

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               5.41                          111.58                        (RUNOFF)
              12.07                           21.16                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .20 HOURS      DRAINAGE AREA =    .25 SQ.MI.
    .00    DISCHG         .00       .00       .00       .00       .00       .00       .00       .00       .10       .84
   2.00    DISCHG        2.48      4.69      7.07     10.09     14.91     20.25     25.45     31.38     37.16     44.09
   4.00    DISCHG       55.37     66.87     76.99     89.16    100.37    107.38    110.19    111.58    110.34    102.48
   6.00    DISCHG       94.52     88.66     80.61     73.72     69.29     64.52     60.68     57.76     53.51     49.81
   8.00    DISCHG       46.87     42.50     38.66     36.81     36.00     35.66     34.36     30.66     27.12     25.31
  10.00    DISCHG       24.50     24.16     24.02     23.97     23.92     22.78     19.05     15.50     14.79     17.73
  12.00    DISCHG       20.95     20.28     13.51      6.50      3.00      1.37       .62       .28       .11       .03
  14.00    DISCHG         .00

  RUNOFF VOLUME ABOVE BASEFLOW =  3.00 WATERSHED INCHES,    490.69 CFS-HRS,    40.55 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION  10, ALTERNATE 12, STORM 99, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION RUNOFF   CROSS SECTION  11

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               5.45                           65.93                        (RUNOFF)
              12.05                           13.46                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .20 HOURS      DRAINAGE AREA =    .17 SQ.MI.
   2.00    DISCHG         .08       .55      1.55      3.10      5.61      8.49     11.49     15.02     18.51     22.83
   4.00    DISCHG       29.77     36.66     43.01     50.81     57.93     62.47     64.49     65.87     65.46     60.58
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  71
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                PAGE 133


   6.00    DISCHG       56.19     53.06     48.15     44.26     41.92     39.02     36.89     35.26     32.58     30.43
   8.00    DISCHG       28.71     25.90     23.65     22.67     22.28     22.13     21.29     18.77     16.59     15.63
  10.00    DISCHG       15.21     15.05     15.00     14.99     14.98     14.14     11.59      9.36      9.22     11.38
  12.00    DISCHG       13.39     12.65      7.87      3.55      1.55       .67       .29       .12       .04       .01

  RUNOFF VOLUME ABOVE BASEFLOW =  2.64 WATERSHED INCHES,    286.15 CFS-HRS,    23.65 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION  11, ALTERNATE 12, STORM 99, ADDED TO OUTPUT HYDROGRAPH FILE ---


 OPERATION ADDHYD   CROSS SECTION 101

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               5.43                          177.48                        (NULL)
              12.06                           34.61                        (NULL)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .20 HOURS      DRAINAGE AREA =    .42 SQ.MI.
    .00    DISCHG         .00       .00       .00       .00       .00       .00       .00       .00       .10       .84
   2.00    DISCHG        2.56      5.24      8.61     13.19     20.52     28.73     36.95     46.40     55.67     66.92
   4.00    DISCHG       85.14    103.53    120.00    139.97    158.30    169.85    174.68    177.44    175.81    163.06
   6.00    DISCHG      150.70    141.72    128.75    117.98    111.21    103.54     97.58     93.02     86.09     80.24
   8.00    DISCHG       75.58     68.40     62.31     59.48     58.28     57.79     55.65     49.43     43.71     40.94
  10.00    DISCHG       39.71     39.21     39.01     38.96     38.90     36.92     30.64     24.86     24.01     29.11
  12.00    DISCHG       34.34     32.93     21.38     10.05      4.54      2.03       .91       .39       .15       .04
  14.00    DISCHG         .00

  RUNOFF VOLUME ABOVE BASEFLOW =  2.86 WATERSHED INCHES,    776.83 CFS-HRS,    64.20 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION 101, ALTERNATE 12, STORM 99, ADDED TO OUTPUT HYDROGRAPH FILE ---


 EXECUTIVE CONTROL OPERATION ENDCMP                                                                                    RECORD ID
+                                    COMPUTATIONS COMPLETED FOR PASS  71


 EXECUTIVE CONTROL OPERATION COMPUT                                                                                    RECORD ID  100yr,
+                                    FROM XSECTION  10
+                                                          TO XSECTION 101
         STARTING TIME =   .00    RAIN DEPTH =  5.42    RAIN DURATION= 18.00    RAIN TABLE NO.= 8    ANT. MOIST. COND= 2
         ALTERNATE NO.=18         STORM NO.=99    MAIN TIME INCREMENT =   .20 HOURS


 OPERATION RUNOFF   CROSS SECTION  10

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
              11.74                          102.21                        (RUNOFF)
              17.95                           25.63                        (RUNOFF)

 TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .20 HOURS      DRAINAGE AREA =    .25 SQ.MI.
   2.00    DISCHG         .00       .00       .00       .00       .03       .26       .76      1.44      2.19      2.95
1
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TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  72
     REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                     PAGE 134

   4.00    DISCHG        3.69      4.42      5.11      5.85      7.04      8.64     10.08     11.25     12.28     13.21
   6.00    DISCHG       14.08     14.90     15.68     16.42     17.12     17.80     18.45     19.56     21.78     24.02
   8.00    DISCHG       25.56     26.83     28.97     31.79     34.00     35.49     37.27     40.24     43.13     45.06
  10.00    DISCHG       47.28     56.02     69.28     78.99     84.40     88.60     93.44     97.75    100.71    101.87
  12.00    DISCHG       96.50     86.64     80.03     77.23     73.73     65.50     57.82     54.07     51.98     47.65
  14.00    DISCHG       41.65     37.63     35.86     34.21     31.22     28.52     27.12     26.52     26.26     26.17
  16.00    DISCHG       26.15     26.14     25.30     22.59     19.95     18.64     18.28     19.88     22.73     24.72
  18.00    DISCHG       25.55     23.31     15.34      7.52      3.42      1.56       .71       .30       .12       .04
  20.00    DISCHG         .00

  RUNOFF VOLUME ABOVE BASEFLOW =  3.36 WATERSHED INCHES,    548.86 CFS-HRS,    45.36 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION  10, ALTERNATE 18, STORM 99, ADDED TO OUTPUT HYDROGRAPH FILE ---


OPERATION RUNOFF   CROSS SECTION  11

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
              11.74                          62.45                        (RUNOFF)
              16.10                          16.51                        (RUNOFF)
              17.94                          16.32                        (RUNOFF)

TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .20 HOURS      DRAINAGE AREA =    .17 SQ.MI.
   2.00    DISCHG         .00       .00       .00       .00       .00       .00       .00       .00       .06       .27
   4.00    DISCHG         .60       .99      1.40      1.84      2.48      3.30      4.07      4.74      5.37      5.96
   6.00    DISCHG        6.53      7.06      7.58      8.07      8.55      9.00      9.45     10.18     11.54     12.83
   8.00    DISCHG       13.73     14.52     15.90     17.64     18.95     19.88     21.03     22.97     24.75     25.94
  10.00    DISCHG       27.42     33.28     41.60     47.23     50.49     53.20     56.47     59.33     61.29     62.24
  12.00    DISCHG       58.44     52.21     48.64     47.30     45.14     39.79     35.24     33.23     32.12     29.24
  14.00    DISCHG       25.38     23.16     22.22     21.23     19.24     17.60     16.86     16.55     16.45     16.42
  16.00    DISCHG       16.42     16.43     15.83     13.95     12.34     11.60     11.46     12.68     14.59     15.76
  18.00    DISCHG       16.24     14.55      8.93      4.03      1.73       .75       .32       .13       .04       .01

  RUNOFF VOLUME ABOVE BASEFLOW =  2.98 WATERSHED INCHES,    322.81 CFS-HRS,    26.68 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION  11, ALTERNATE 18, STORM 99, ADDED TO OUTPUT HYDROGRAPH FILE ---


OPERATION ADDHYD   CROSS SECTION 101

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
              11.74                         164.66                        (NULL)
              16.10                          42.75                        (NULL)
              17.95                          41.95                        (NULL)

TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .20 HOURS      DRAINAGE AREA =    .42 SQ.MI.
   2.00    DISCHG         .00       .00       .00       .00       .03       .26       .76      1.44      2.25      3.21
   4.00    DISCHG        4.29      5.41      6.51      7.69      9.52     11.94     14.15     15.99     17.65     19.18
   6.00    DISCHG       20.61     21.97     23.26     24.49     25.67     26.80     27.90     29.74     33.32     36.85
1


TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   PASS  72
     REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                     PAGE 135

   8.00    DISCHG       39.29     41.35     44.87     49.43     52.94     55.37     58.30     63.21     67.88     71.00
  10.00    DISCHG       74.70     89.30    110.87    126.22    134.90    141.80    149.91    157.08    162.00    164.11
  12.00    DISCHG      154.94    138.85    128.67    124.53    118.87    105.29     93.06     87.30     84.09     76.89
  14.00    DISCHG       67.03     60.79     58.07     55.44     50.46     46.12     43.97     43.07     42.71     42.59
  16.00    DISCHG       42.57     42.57     41.13     36.55     32.29     30.24     29.75     32.56     37.33     40.48
  18.00    DISCHG       41.79     37.86     24.27     11.56      5.15      2.31      1.02       .43       .17       .04
  20.00    DISCHG         .00

  RUNOFF VOLUME ABOVE BASEFLOW =  3.20 WATERSHED INCHES,    871.68 CFS-HRS,    72.04 ACRE-FEET;   BASEFLOW =    .00 CFS

                      --- HYDROGRAPH FOR XSECTION 101, ALTERNATE 18, STORM 99, ADDED TO OUTPUT HYDROGRAPH FILE ---


EXECUTIVE CONTROL OPERATION ENDCMP                                                                                   RECORD ID
+                                  COMPUTATIONS COMPLETED FOR PASS  72



EXECUTIVE CONTROL OPERATION COMPUT                                                                                   RECORD ID  100yr,
+                                  FROM XSECTION  10
+                                                 TO XSECTION 101
         STARTING TIME =   .00    RAIN DEPTH =  5.77    RAIN DURATION= 24.00    RAIN TABLE NO.= 8    ANT. MOIST. COND= 2
         ALTERNATE NO.=24         STORM NO.=99    MAIN TIME INCREMENT =   .20 HOURS


OPERATION RUNOFF   CROSS SECTION  10

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
              15.57                          83.96                        (RUNOFF)
              21.50                          21.20                        (RUNOFF)
              23.92                          21.24                        (RUNOFF)

TIME(HRS)         FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .20 HOURS      DRAINAGE AREA =    .25 SQ.MI.
   2.00    DISCHG         .00       .00       .00       .00       .00       .00       .00       .01       .11       .38
   4.00    DISCHG         .80      1.28      1.77      2.27      2.75      3.22      3.68      4.12      4.55      4.96
   6.00    DISCHG        5.37      5.98      7.07      8.22      9.12      9.83     10.46     11.04     11.58     12.09
   8.00    DISCHG       12.58     13.05     13.50     13.94     14.36     14.76     15.16     15.53     15.91     16.69
  10.00    DISCHG       18.37     20.06     21.17     21.92     22.52     23.48     25.45     27.39     28.66     29.50
  12.00    DISCHG       30.17     31.24     33.42     35.57     36.91     37.82     38.56     42.04     51.63     61.13
  14.00    DISCHG       66.61     69.71     71.68     73.73     76.82     79.72     81.67     82.99     83.93     82.22
  16.00    DISCHG       74.63     67.14     63.43     61.89     61.32     59.18     52.79     46.67     43.66     42.33
  18.00    DISCHG       41.74     40.14     35.80     31.67     29.52     28.58     28.15     27.31     25.07     22.96
```

20.00	DISCHG	21.87	21.40	21.19	21.11	21.08	21.08	21.09	21.11	21.11	20.42
22.00	DISCHG	18.24	16.13	15.04	14.55	14.36	14.97	17.12	19.23	20.36	20.87
24.00	DISCHG	21.06	19.10	12.49	6.07	2.77	1.27	.56	.25	.10	.03
26.00	DISCHG	.00									

RUNOFF VOLUME ABOVE BASEFLOW = 3.67 WATERSHED INCHES, 600.48 CFS-HRS, 49.62 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 10, ALTERNATE 24, STORM 99, ADDED TO OUTPUT HYDROGRAPH FILE ---

1

TR20 XEQ 04-29-08 16:15 VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS JOB 1 PASS 73
REV PC 09/83(.2) CALCS: V3 W/HUFF-ISWS CIR.173/90 FILE: E06037.DAT DATE: 04/29/08 JAS PAGE 136

OPERATION RUNOFF CROSS SECTION 11

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
15.57	51.55	(RUNOFF)
21.50	13.39	(RUNOFF)
23.91	13.55	(RUNOFF)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .20 HOURS DRAINAGE AREA = .17 SQ.MI.

4.00	DISCHG	.00	.00	.02	.14	.34	.59	.86	1.13	1.39	1.65
6.00	DISCHG	1.90	2.25	2.82	3.40	3.88	4.31	4.69	5.06	5.41	5.75
8.00	DISCHG	6.08	6.39	6.70	6.99	7.28	7.56	7.83	8.09	8.34	8.85
10.00	DISCHG	9.89	10.86	11.50	11.96	12.34	12.99	14.23	15.39	16.13	16.67
12.00	DISCHG	17.11	17.85	19.26	20.57	21.39	21.98	22.49	24.86	31.15	36.85
14.00	DISCHG	40.02	41.85	43.12	44.53	46.69	48.61	49.88	50.82	51.54	50.34
16.00	DISCHG	45.28	40.81	38.90	38.18	37.96	36.56	32.30	28.62	26.98	26.31
18.00	DISCHG	26.05	24.98	22.02	19.48	18.31	17.84	17.64	17.07	15.54	14.24
20.00	DISCHG	13.66	13.42	13.32	13.29	13.29	13.29	13.31	13.33	13.33	12.84
22.00	DISCHG	11.32	10.01	9.40	9.14	9.04	9.52	11.04	12.37	13.01	13.29
24.00	DISCHG	13.40	11.90	7.28	3.27	1.42	.61	.26	.10	.04	.01

RUNOFF VOLUME ABOVE BASEFLOW = 3.28 WATERSHED INCHES, 355.45 CFS-HRS, 29.37 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 11, ALTERNATE 24, STORM 99, ADDED TO OUTPUT HYDROGRAPH FILE ---

OPERATION ADDHYD CROSS SECTION 101

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
15.57	135.52	(NULL)
21.50	34.59	(NULL)
23.92	34.79	(NULL)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .20 HOURS DRAINAGE AREA = .42 SQ.MI.

2.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.01	.11	.38
4.00	DISCHG	.80	1.28	1.80	2.41	3.10	3.82	4.54	5.25	5.94	6.61
6.00	DISCHG	7.27	8.23	9.89	11.63	13.00	14.14	15.15	16.10	16.99	17.84
8.00	DISCHG	18.66	19.44	20.20	20.93	21.64	22.32	22.98	23.62	24.25	25.54
10.00	DISCHG	28.27	30.92	32.67	33.88	34.87	36.47	39.68	42.77	44.78	46.17
12.00	DISCHG	47.28	49.09	52.68	56.13	58.30	59.80	61.05	66.91	82.78	97.98
14.00	DISCHG	106.62	111.56	114.80	118.25	123.50	128.34	131.55	133.81	135.47	132.55
16.00	DISCHG	119.91	107.94	102.33	100.07	99.28	95.74	85.10	75.30	70.64	68.63
18.00	DISCHG	67.78	65.12	57.82	51.14	47.83	46.42	45.79	44.38	40.61	37.20
20.00	DISCHG	35.53	34.82	34.51	34.40	34.37	34.37	34.40	34.43	34.44	33.26
22.00	DISCHG	29.56	26.14	24.45	23.69	23.40	24.48	28.17	31.61	33.37	34.16
24.00	DISCHG	34.46	31.00	19.77	9.34	4.19	1.87	.82	.35	.13	.04
26.00	DISCHG	.00									

1

TR20 XEQ 04-29-08 16:15 VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS JOB 1 PASS 73
REV PC 09/83(.2) CALCS: V3 W/HUFF-ISWS CIR.173/90 FILE: E06037.DAT DATE: 04/29/08 JAS PAGE 137

RUNOFF VOLUME ABOVE BASEFLOW = 3.51 WATERSHED INCHES, 955.92 CFS-HRS, 79.00 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 101, ALTERNATE 24, STORM 99, ADDED TO OUTPUT HYDROGRAPH FILE ---

EXECUTIVE CONTROL OPERATION ENDCMP RECORD ID
+ COMPUTATIONS COMPLETED FOR PASS 73

EXECUTIVE CONTROL OPERATION INCREM RECORD ID
+ MAIN TIME INCREMENT = .50 HOURS

EXECUTIVE CONTROL OPERATION COMPUT RECORD ID 100yr,
+ FROM XSECTION 10
+ TO XSECTION 101
STARTING TIME = .00 RAIN DEPTH = 6.45 RAIN DURATION= 48.00 RAIN TABLE NO.= 9 ANT. MOIST. COND= 2
ALTERNATE NO.=48 STORM NO.=99 MAIN TIME INCREMENT = .50 HOURS

OPERATION RUNOFF CROSS SECTION 10

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
26.28	11.31	(RUNOFF)
40.76	49.34	(RUNOFF)
42.78	47.24	(RUNOFF)
47.57	32.19	(RUNOFF)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .50 HOURS DRAINAGE AREA = .25 SQ.MI.

5.00	DISCHG	.00	.00	.00	.00	.04	.30	.46	.64	.81	.98
10.00	DISCHG	1.42	2.01	2.39	2.73	3.04	3.34	3.62	3.90	4.16	4.41

15.00	DISCHG	4.65	4.88	5.10	5.32	5.52	5.72	5.91	6.09	6.26	6.43
20.00	DISCHG	6.60	6.75	6.90	7.05	7.19	7.33	7.46	7.59	7.72	9.36
25.00	DISCHG	10.49	10.82	11.02	11.12	9.33	8.73	8.72	8.80	9.18	11.41
30.00	DISCHG	12.03	12.24	12.38	14.02	18.19	19.14	19.49	19.73	19.96	20.17
35.00	DISCHG	20.37	20.56	20.77	24.97	27.77	28.40	28.71	29.45	42.33	47.32
40.00	DISCHG	48.46	49.02	49.07	46.73	46.42	46.63	46.89	43.33	33.60	31.94
45.00	DISCHG	31.78	31.85	31.94	32.03	32.11	32.19	32.15	13.64	1.92	.24
50.00	DISCHG	.00									

RUNOFF VOLUME ABOVE BASEFLOW = 4.29 WATERSHED INCHES, 700.96 CFS-HRS, 57.93 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 10, ALTERNATE 48, STORM 99, ADDED TO OUTPUT HYDROGRAPH FILE ---

OPERATION RUNOFF CROSS SECTION 11

*** WARNING-MAIN TIME INCREMENT MAY BE TOO LARGE.
COMPUTED PEAK(22.14) AT EXCEEDS MAX. ADJACENT HYDROGRAPH COORDINATE BY 7 %.
+ XSECTION 11
1

TR20 XEQ 04-29-08 16:15 VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS JOB 1 PASS 74
REV PC 09/83(.2) CALCS: V3 W/HUFF-ISWS CIR.173/90 FILE: E06037.DAT DATE: 04/29/08 JAS PAGE 138

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
26.29	6.37	(RUNOFF)
40.78	30.71	(RUNOFF)
42.79	29.78	(RUNOFF)
47.75	22.14	(RUNOFF)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .50 HOURS DRAINAGE AREA = .17 SQ.MI.

5.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.00	.00	.07
10.00	DISCHG	.23	.46	.67	.88	1.08	1.27	1.45	1.63	1.80	1.96
15.00	DISCHG	2.12	2.27	2.42	2.56	2.70	2.83	2.96	3.09	3.21	3.32
20.00	DISCHG	3.44	3.55	3.65	3.76	3.86	3.95	4.05	4.14	4.23	5.23
25.00	DISCHG	5.84	6.04	6.18	6.27	5.21	4.94	4.97	5.03	5.30	6.62
30.00	DISCHG	6.96	7.10	7.20	8.32	10.75	11.29	11.53	11.71	11.89	12.05
35.00	DISCHG	12.21	12.36	12.53	15.33	16.92	17.31	17.54	18.08	26.52	29.33
40.00	DISCHG	30.06	30.48	30.57	29.16	29.10	29.31	29.54	27.03	20.99	20.16
45.00	DISCHG	20.13	20.21	20.29	20.37	20.44	20.51	20.53	7.65	.93	.10

RUNOFF VOLUME ABOVE BASEFLOW = 3.86 WATERSHED INCHES, 419.20 CFS-HRS, 34.64 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 11, ALTERNATE 48, STORM 99, ADDED TO OUTPUT HYDROGRAPH FILE ---

OPERATION ADDHYD CROSS SECTION 101

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
26.28	17.68	(NULL)
40.77	80.05	(NULL)
42.79	77.02	(NULL)
47.69	52.72	(NULL)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .50 HOURS DRAINAGE AREA = .42 SQ.MI.

5.00	DISCHG	.00	.00	.00	.00	.04	.30	.46	.64	.81	1.05
10.00	DISCHG	1.64	2.47	3.07	3.61	4.12	4.61	5.07	5.52	5.96	6.37
15.00	DISCHG	6.77	7.15	7.52	7.88	8.22	8.55	8.87	9.18	9.47	9.76
20.00	DISCHG	10.03	10.30	10.56	10.81	11.05	11.28	11.51	11.73	11.95	14.59
25.00	DISCHG	16.33	16.86	17.20	17.39	14.54	13.67	13.69	13.83	14.48	18.03
30.00	DISCHG	19.00	19.34	19.58	22.33	28.94	30.43	31.02	31.44	31.84	32.22
35.00	DISCHG	32.58	32.92	33.29	40.30	44.68	45.71	46.25	47.53	68.84	76.65
40.00	DISCHG	78.52	79.50	79.63	75.89	75.52	75.93	76.43	70.37	54.60	52.10
45.00	DISCHG	51.92	52.07	52.23	52.40	52.55	52.70	52.68	21.29	2.85	.34
50.00	DISCHG	.00									

RUNOFF VOLUME ABOVE BASEFLOW = 4.12 WATERSHED INCHES, 1120.13 CFS-HRS, 92.57 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 101, ALTERNATE 48, STORM 99, ADDED TO OUTPUT HYDROGRAPH FILE ---

EXECUTIVE CONTROL OPERATION ENDCMP RECORD ID
+ COMPUTATIONS COMPLETED FOR PASS 74

1

TR20 XEQ 04-29-08 16:15 VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS JOB 1 PASS 75
REV PC 09/83(.2) CALCS: V3 W/HUFF-ISWS CIR.173/90 FILE: E06037.DAT DATE: 04/29/08 JAS PAGE 139

EXECUTIVE CONTROL OPERATION COMPUT RECORD ID 100yr,
+ FROM XSECTION 10
+ TO XSECTION 101
STARTING TIME = .00 RAIN DEPTH = 7.01 RAIN DURATION= 72.00 RAIN TABLE NO.= 9 ANT. MOIST. COND= 2
ALTERNATE NO.=72 STORM NO.=99 MAIN TIME INCREMENT = .50 HOURS

OPERATION RUNOFF CROSS SECTION 10

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
39.30	8.58	(RUNOFF)
60.89	36.38	(RUNOFF)
64.30	34.62	(RUNOFF)
71.60	23.62	(RUNOFF)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .50 HOURS DRAINAGE AREA = .25 SQ.MI.

5.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01

10.00	DISCHG	.14	.36	.55	.54	.60	.69	.78	.86	.95	1.04
15.00	DISCHG	1.53	1.83	2.02	2.18	2.34	2.49	2.64	2.79	2.93	3.06
20.00	DISCHG	3.19	3.32	3.44	3.56	3.68	3.79	3.90	4.01	4.11	4.21
25.00	DISCHG	4.31	4.41	4.50	4.59	4.68	4.76	4.84	4.93	5.00	5.08
30.00	DISCHG	5.16	5.23	5.30	5.37	5.44	5.51	5.57	5.63	5.69	5.75
35.00	DISCHG	5.81	5.87	5.93	7.14	7.95	8.15	8.25	8.34	8.42	8.51
40.00	DISCHG	7.69	6.67	6.55	6.57	6.61	6.65	6.69	7.27	8.74	9.06
45.00	DISCHG	9.16	9.22	9.28	9.34	9.89	13.30	14.19	14.42	14.55	14.66
50.00	DISCHG	14.76	14.86	14.96	15.05	15.14	15.23	15.32	15.40	15.49	18.58
55.00	DISCHG	20.57	20.96	21.12	21.24	21.35	21.46	27.14	34.09	35.36	35.74
60.00	DISCHG	35.96	36.17	36.36	35.86	34.25	34.07	34.16	34.28	34.41	34.52
65.00	DISCHG	33.44	25.37	23.50	23.27	23.28	23.32	23.36	23.40	23.44	23.48
70.00	DISCHG	23.51	23.55	23.58	23.62	23.60	9.92	1.39	.17	.00	

RUNOFF VOLUME ABOVE BASEFLOW = 4.81 WATERSHED INCHES, 786.02 CFS-HRS, 64.96 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 10, ALTERNATE 72, STORM 99, ADDED TO OUTPUT HYDROGRAPH FILE ---

OPERATION RUNOFF CROSS SECTION 11

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
39.30	4.91	(RUNOFF)
60.92	22.81	(RUNOFF)
64.31	21.95	(RUNOFF)
71.57	15.12	(RUNOFF)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .50 HOURS DRAINAGE AREA = .17 SQ.MI.

10.00	DISCHG	.00	.00	.00	.00	.00	.03	.09	.14	.19	.25
15.00	DISCHG	.42	.55	.66	.77	.87	.96	1.06	1.15	1.24	1.33

1

20.00	DISCHG	1.42	1.50	1.58	1.66	1.74	1.81	1.89	1.96	2.03	2.10
25.00	DISCHG	2.17	2.23	2.29	2.36	2.42	2.48	2.54	2.59	2.65	2.70
30.00	DISCHG	2.76	2.81	2.86	2.91	2.96	3.00	3.05	3.10	3.14	3.19
35.00	DISCHG	3.23	3.27	3.32	4.06	4.49	4.60	4.68	4.74	4.80	4.86
40.00	DISCHG	4.35	3.81	3.77	3.79	3.82	3.85	3.88	4.27	5.13	5.30
45.00	DISCHG	5.36	5.41	5.46	5.50	5.87	7.97	8.45	8.59	8.68	8.77
50.00	DISCHG	8.85	8.93	9.01	9.08	9.16	9.23	9.30	9.36	9.44	11.49
55.00	DISCHG	12.62	12.85	12.97	13.07	13.16	13.25	17.19	21.30	22.02	22.28
60.00	DISCHG	22.46	22.64	22.80	22.47	21.51	21.47	21.56	21.67	21.78	21.88
65.00	DISCHG	21.11	15.88	14.88	14.79	14.82	14.86	14.90	14.93	14.97	15.00
70.00	DISCHG	15.03	15.06	15.09	15.12	15.11	5.63	.68	.07		

RUNOFF VOLUME ABOVE BASEFLOW = 4.37 WATERSHED INCHES, 473.74 CFS-HRS, 39.15 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 11, ALTERNATE 72, STORM 99, ADDED TO OUTPUT HYDROGRAPH FILE ---

OPERATION ADDHYD CROSS SECTION 101

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
39.30	13.49	(NULL)
60.90	59.18	(NULL)
64.30	56.56	(NULL)
71.59	38.74	(NULL)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .50 HOURS DRAINAGE AREA = .42 SQ.MI.

5.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01
10.00	DISCHG	.14	.36	.55	.54	.60	.72	.86	1.00	1.14	1.29
15.00	DISCHG	1.95	2.38	2.68	2.95	3.21	3.46	3.70	3.94	4.17	4.39
20.00	DISCHG	4.61	4.82	5.02	5.22	5.42	5.61	5.79	5.97	6.14	6.31
25.00	DISCHG	6.48	6.64	6.79	6.95	7.09	7.24	7.38	7.52	7.65	7.78
30.00	DISCHG	7.91	8.04	8.16	8.28	8.40	8.51	8.62	8.73	8.84	8.94
35.00	DISCHG	9.04	9.14	9.25	11.21	12.44	12.75	12.93	13.08	13.23	13.37
40.00	DISCHG	12.05	10.49	10.32	10.36	10.43	10.50	10.57	11.55	13.87	14.36
45.00	DISCHG	14.52	14.63	14.74	14.85	15.76	21.26	22.64	23.01	23.23	23.42
50.00	DISCHG	23.61	23.79	23.97	24.14	24.30	24.46	24.61	24.76	24.93	30.07
55.00	DISCHG	33.19	33.81	34.09	34.30	34.51	34.70	44.33	55.39	57.38	58.01
60.00	DISCHG	58.42	58.80	59.16	58.34	55.76	55.54	55.72	55.96	56.18	56.40
65.00	DISCHG	54.55	41.25	38.39	38.06	38.10	38.18	38.26	38.33	38.41	38.48
70.00	DISCHG	38.55	38.61	38.68	38.74	38.71	15.56	2.07	.24	.00	

RUNOFF VOLUME ABOVE BASEFLOW = 4.63 WATERSHED INCHES, 1259.74 CFS-HRS, 104.10 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 101, ALTERNATE 72, STORM 99, ADDED TO OUTPUT HYDROGRAPH FILE ---

EXECUTIVE CONTROL OPERATION ENDCMP RECORD ID
+ COMPUTATIONS COMPLETED FOR PASS 75

1

EXECUTIVE CONTROL OPERATION COMPUT RECORD ID 100yr,
+ FROM XSECTION 10
+ TO XSECTION 101
STARTING TIME = .00 RAIN DEPTH = 7.80 RAIN DURATION=120.00 RAIN TABLE NO.= 9 ANT. MOIST. COND= 2
ALTERNATE NO.=73 STORM NO.=99 MAIN TIME INCREMENT = .50 HOURS

OPERATION RUNOFF CROSS SECTION 10

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
65.76	6.11	(RUNOFF)
101.78	24.95	(RUNOFF)
107.75	24.01	(RUNOFF)
119.35	15.98	(RUNOFF)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .50 HOURS DRAINAGE AREA = .25 SQ.MI.

10.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.00	.00	.02
15.00	DISCHG	.10	.20	.30	.40	.49	.59	.68	.61	.56	.59
20.00	DISCHG	.62	.66	.70	.73	.77	.80	.84	.87	.90	1.22
25.00	DISCHG	1.45	1.54	1.62	1.68	1.75	1.81	1.88	1.94	2.00	2.06
30.00	DISCHG	2.12	2.18	2.23	2.29	2.34	2.39	2.45	2.50	2.55	2.59
35.00	DISCHG	2.64	2.69	2.74	2.78	2.83	2.87	2.91	2.95	2.99	3.04
40.00	DISCHG	3.08	3.11	3.15	3.19	3.23	3.26	3.30	3.33	3.37	3.40
45.00	DISCHG	3.44	3.47	3.50	3.53	3.56	3.60	3.63	3.66	3.68	3.71
50.00	DISCHG	3.74	3.77	3.80	3.82	3.85	3.88	3.90	3.93	3.95	3.98
55.00	DISCHG	4.00	4.03	4.05	4.07	4.10	4.12	4.14	4.16	4.18	4.20
60.00	DISCHG	4.23	5.07	5.61	5.72	5.77	5.80	5.83	5.87	5.90	5.93
65.00	DISCHG	5.96	5.99	6.02	5.17	4.64	4.58	4.59	4.60	4.62	4.63
70.00	DISCHG	4.65	4.66	4.68	4.69	4.71	5.64	6.23	6.33	6.37	6.39
75.00	DISCHG	6.41	6.44	6.46	6.48	6.50	6.52	6.56	8.47	9.70	9.91
80.00	DISCHG	9.98	10.02	10.06	10.10	10.14	10.18	10.22	10.26	10.29	10.33
85.00	DISCHG	10.36	10.40	10.43	10.46	10.49	10.52	10.56	10.59	10.61	10.64
90.00	DISCHG	10.68	12.76	14.10	14.33	14.40	14.45	14.49	14.53	14.58	14.62
95.00	DISCHG	14.65	14.69	14.74	20.13	23.54	24.11	24.26	24.34	24.42	24.50
100.00	DISCHG	24.57	24.65	24.71	24.78	24.84	23.80	23.16	23.11	23.14	23.19
105.00	DISCHG	23.23	23.28	23.32	23.36	23.40	23.44	23.46	18.98	16.16	15.77
110.00	DISCHG	15.73	15.74	15.75	15.77	15.78	15.80	15.81	15.83	15.84	15.85
115.00	DISCHG	15.87	15.88	15.89	15.90	15.92	15.93	15.94	15.95	15.96	15.97
120.00	DISCHG	15.93	6.75	.95	.12	.00					

RUNOFF VOLUME ABOVE BASEFLOW = 5.55 WATERSHED INCHES, 907.25 CFS-HRS, 74.98 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 10, ALTERNATE 73, STORM 99, ADDED TO OUTPUT HYDROGRAPH FILE ---

OPERATION RUNOFF CROSS SECTION 11
1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
101.78	15.78	(RUNOFF)
107.75	15.36	(RUNOFF)
119.38	10.29	(RUNOFF)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .50 HOURS DRAINAGE AREA = .17 SQ.MI.

15.00	DISCHG	.00	.00	.00	.00	.00	.00	.03	.06	.08	.10
20.00	DISCHG	.12	.14	.17	.19	.21	.23	.25	.28	.30	.42
25.00	DISCHG	.51	.57	.61	.65	.70	.74	.78	.82	.86	.90
30.00	DISCHG	.94	.97	1.01	1.05	1.08	1.12	1.15	1.19	1.22	1.25
35.00	DISCHG	1.28	1.32	1.35	1.38	1.41	1.44	1.47	1.50	1.53	1.55
40.00	DISCHG	1.58	1.61	1.63	1.66	1.69	1.71	1.74	1.76	1.79	1.81
45.00	DISCHG	1.83	1.86	1.88	1.90	1.93	1.95	1.97	1.99	2.01	2.03
50.00	DISCHG	2.05	2.07	2.09	2.11	2.13	2.15	2.17	2.19	2.21	2.23
55.00	DISCHG	2.24	2.26	2.28	2.30	2.31	2.33	2.35	2.36	2.38	2.39
60.00	DISCHG	2.41	2.94	3.22	3.28	3.31	3.34	3.36	3.39	3.41	3.44
65.00	DISCHG	3.46	3.49	3.51	2.97	2.70	2.68	2.69	2.70	2.71	2.72
70.00	DISCHG	2.73	2.74	2.76	2.77	2.78	3.38	3.70	3.75	3.78	3.79
75.00	DISCHG	3.81	3.83	3.85	3.87	3.88	3.90	3.92	5.18	5.85	5.96
80.00	DISCHG	6.01	6.04	6.07	6.11	6.14	6.17	6.20	6.23	6.26	6.29
85.00	DISCHG	6.32	6.35	6.37	6.40	6.43	6.45	6.48	6.50	6.53	6.55
90.00	DISCHG	6.58	7.98	8.74	8.86	8.91	8.95	8.99	9.02	9.06	9.09
95.00	DISCHG	9.12	9.15	9.21	12.85	14.80	15.11	15.21	15.28	15.35	15.42
100.00	DISCHG	15.48	15.54	15.60	15.66	15.71	15.00	14.66	14.65	14.69	14.73
105.00	DISCHG	14.77	14.81	14.85	14.89	14.92	14.96	14.98	11.86	10.26	10.07
110.00	DISCHG	10.06	10.07	10.09	10.10	10.11	10.13	10.14	10.15	10.16	10.17
115.00	DISCHG	10.19	10.20	10.21	10.22	10.23	10.24	10.25	10.26	10.27	10.28
120.00	DISCHG	10.26	3.82	.47	.05						

RUNOFF VOLUME ABOVE BASEFLOW = 5.09 WATERSHED INCHES, 551.66 CFS-HRS, 45.59 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 11, ALTERNATE 73, STORM 99, ADDED TO OUTPUT HYDROGRAPH FILE ---

OPERATION ADDHYD CROSS SECTION 101

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
65.77	9.68	(NULL)
101.78	40.73	(NULL)
107.75	39.37	(NULL)
119.36	26.26	(NULL)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .50 HOURS DRAINAGE AREA = .42 SQ.MI.

10.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.00	.00	.02
15.00	DISCHG	.10	.20	.30	.40	.49	.59	.70	.66	.64	.69
20.00	DISCHG	.74	.80	.86	.92	.98	1.03	1.09	1.15	1.20	1.64
25.00	DISCHG	1.96	2.11	2.23	2.34	2.45	2.55	2.66	2.76	2.86	2.96
30.00	DISCHG	3.05	3.15	3.24	3.33	3.42	3.51	3.60	3.68	3.77	3.85

1

35.00	DISCHG	3.93	4.01	4.08	4.16	4.23	4.31	4.38	4.45	4.52	4.59
40.00	DISCHG	4.66	4.72	4.79	4.85	4.91	4.98	5.04	5.10	5.16	5.21
45.00	DISCHG	5.27	5.33	5.38	5.44	5.49	5.54	5.60	5.65	5.70	5.75

50.00	DISCHG	5.80	5.84	5.89	5.94	5.98	6.03	6.07	6.12	6.16	6.20
55.00	DISCHG	6.25	6.29	6.33	6.37	6.41	6.45	6.49	6.52	6.56	6.60
60.00	DISCHG	6.64	8.01	8.84	9.01	9.08	9.14	9.20	9.26	9.31	9.37
65.00	DISCHG	9.42	9.48	9.53	8.15	7.34	7.26	7.27	7.30	7.33	7.35
70.00	DISCHG	7.38	7.41	7.43	7.46	7.49	9.01	9.92	10.08	10.14	10.18
75.00	DISCHG	10.23	10.27	10.31	10.35	10.38	10.42	10.48	13.64	15.54	15.87
80.00	DISCHG	15.99	16.06	16.14	16.21	16.28	16.35	16.42	16.49	16.55	16.62
85.00	DISCHG	16.68	16.74	16.80	16.86	16.92	16.98	17.03	17.09	17.14	17.19
90.00	DISCHG	17.26	20.75	22.84	23.20	23.32	23.40	23.48	23.55	23.63	23.70
95.00	DISCHG	23.78	23.85	23.95	32.98	38.34	39.22	39.47	39.62	39.77	39.92
100.00	DISCHG	40.05	40.19	40.32	40.44	40.55	38.80	37.81	37.76	37.83	37.92
105.00	DISCHG	38.00	38.09	38.17	38.25	38.32	38.40	38.44	30.84	26.41	25.83
110.00	DISCHG	25.78	25.81	25.84	25.87	25.90	25.92	25.95	25.98	26.00	26.03
115.00	DISCHG	26.05	26.08	26.10	26.12	26.15	26.17	26.19	26.21	26.24	26.26
120.00	DISCHG	26.18	10.57	1.42	.17	.00					

RUNOFF VOLUME ABOVE BASEFLOW = 5.36 WATERSHED INCHES, 1458.89 CFS-HRS, 120.56 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 101, ALTERNATE 73, STORM 99, ADDED TO OUTPUT HYDROGRAPH FILE ---

EXECUTIVE CONTROL OPERATION ENDCMP RECORD ID
+ COMPUTATIONS COMPLETED FOR PASS 76

EXECUTIVE CONTROL OPERATION COMPUT RECORD ID 100yr,
+ FROM XSECTION 10
+ TO XSECTION 101
STARTING TIME = .00 RAIN DEPTH = 9.16 RAIN DURATION=240.00 RAIN TABLE NO.= 9 ANT. MOIST. COND= 2
ALTERNATE NO.=74 STORM NO.=99 MAIN TIME INCREMENT = .50 HOURS

OPERATION RUNOFF CROSS SECTION 10

*** WARNING-NO PEAK FOUND, MAXIMUM DISCHARGE = 3.99 CFS.

PEAK TIME(HRS) 149.50 PEAK DISCHARGE(CFS) 3.99 PEAK ELEVATION(FEET) (RUNOFF)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .50 HOURS DRAINAGE AREA = .25 SQ.MI.

25.00	DISCHG	.01	.04	.07	.11	.14	.18	.21	.24	.28	.31
30.00	DISCHG	.34	.37	.40	.43	.46	.49	.52	.55	.58	.61
35.00	DISCHG	.64	.66	.69	.58	.50	.50	.51	.52	.54	.55
40.00	DISCHG	.56	.57	.58	.59	.60	.61	.62	.63	.64	.65
45.00	DISCHG	.67	.68	.69	.70	.71	.72	.73	.95	1.10	1.14
50.00	DISCHG	1.17	1.19	1.21	1.23	1.25	1.27	1.29	1.31	1.32	1.34
55.00	DISCHG	1.36	1.38	1.40	1.42	1.43	1.45	1.47	1.49	1.50	1.52

1

TR20 XEQ 04-29-08 16:15 VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS JOB 1 PASS 77
REV PC 09/83(.2) CALCS: V3 W/HUFF-ISWS CIR.173/90 FILE: E06037.DAT DATE: 04/29/08 JAS PAGE 144

60.00	DISCHG	1.54	1.55	1.57	1.59	1.60	1.62	1.63	1.65	1.66	1.68
65.00	DISCHG	1.69	1.71	1.72	1.74	1.75	1.77	1.78	1.79	1.81	1.82
70.00	DISCHG	1.83	1.85	1.86	1.87	1.89	1.90	1.91	1.92	1.94	1.95
75.00	DISCHG	1.96	1.97	1.98	2.00	2.01	2.02	2.03	2.04	2.05	2.06
80.00	DISCHG	2.07	2.09	2.10	2.11	2.12	2.13	2.14	2.15	2.16	2.17
85.00	DISCHG	2.18	2.19	2.20	2.21	2.22	2.23	2.24	2.24	2.25	2.26
90.00	DISCHG	2.27	2.28	2.29	2.30	2.31	2.32	2.32	2.33	2.34	2.35
95.00	DISCHG	2.36	2.37	2.37	2.38	2.39	2.40	2.41	2.41	2.42	2.43
100.00	DISCHG	2.44	2.44	2.45	2.46	2.47	2.47	2.48	2.49	2.49	2.50
105.00	DISCHG	2.51	2.52	2.52	2.53	2.54	2.54	2.55	2.56	2.56	2.57
110.00	DISCHG	2.58	2.58	2.59	2.59	2.60	2.61	2.61	2.62	2.62	2.63
115.00	DISCHG	2.64	2.64	2.65	2.65	2.66	2.66	2.67	2.68	2.68	2.69
120.00	DISCHG	2.70	3.22	3.55	3.61	3.63	3.63	3.64	3.65	3.66	3.67
125.00	DISCHG	3.68	3.69	3.70	3.71	3.71	3.72	3.73	3.74	3.75	3.75
130.00	DISCHG	3.76	3.77	3.78	3.79	3.79	3.25	2.91	2.87	2.86	2.87
135.00	DISCHG	2.87	2.88	2.88	2.88	2.89	2.89	2.90	2.90	2.90	2.91
140.00	DISCHG	2.91	2.92	2.92	2.92	2.93	2.93	2.93	2.94	2.94	3.51
145.00	DISCHG	3.87	3.93	3.95	3.95	3.96	3.96	3.97	3.98	3.98	3.99

RUNOFF VOLUME ABOVE BASEFLOW = 1.59 WATERSHED INCHES, 260.62 CFS-HRS, 21.54 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 10, ALTERNATE 74, STORM 99, ADDED TO OUTPUT HYDROGRAPH FILE ---

OPERATION RUNOFF CROSS SECTION 11

*** WARNING-NO PEAK FOUND, MAXIMUM DISCHARGE = 2.42 CFS.

PEAK TIME(HRS) 149.50 PEAK DISCHARGE(CFS) 2.42 PEAK ELEVATION(FEET) (RUNOFF)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .50 HOURS DRAINAGE AREA = .17 SQ.MI.

30.00	DISCHG	.00	.00	.02	.04	.05	.07	.09	.11	.13	.14
35.00	DISCHG	.16	.18	.19	.17	.15	.16	.16	.17	.18	.18
40.00	DISCHG	.19	.20	.21	.21	.22	.23	.23	.24	.25	.25
45.00	DISCHG	.26	.27	.27	.28	.29	.29	.30	.40	.46	.48
50.00	DISCHG	.50	.51	.52	.54	.55	.56	.58	.59	.60	.61
55.00	DISCHG	.63	.64	.65	.66	.68	.69	.70	.71	.72	.73
60.00	DISCHG	.74	.76	.77	.78	.79	.80	.81	.82	.83	.84
65.00	DISCHG	.85	.86	.87	.88	.89	.90	.91	.92	.93	.94
70.00	DISCHG	.95	.96	.97	.97	.98	.99	1.00	1.01	1.02	1.03
75.00	DISCHG	1.04	1.04	1.05	1.06	1.07	1.08	1.09	1.09	1.10	1.11
80.00	DISCHG	1.12	1.12	1.13	1.14	1.15	1.15	1.16	1.17	1.18	1.18
85.00	DISCHG	1.19	1.20	1.21	1.21	1.22	1.23	1.23	1.24	1.25	1.25
90.00	DISCHG	1.26	1.27	1.27	1.28	1.29	1.29	1.30	1.30	1.31	1.32
95.00	DISCHG	1.32	1.33	1.34	1.34	1.35	1.35	1.36	1.36	1.37	1.38
100.00	DISCHG	1.38	1.39	1.39	1.40	1.40	1.41	1.41	1.42	1.43	1.43
105.00	DISCHG	1.44	1.44	1.45	1.45	1.46	1.46	1.47	1.47	1.48	1.48
110.00	DISCHG	1.49	1.49	1.50	1.50	1.50	1.51	1.51	1.52	1.52	1.53

1

TR20 XEQ 04-29-08 16:15 VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS JOB 1 PASS 77
REV PC 09/83(.2) CALCS: V3 W/HUFF-ISWS CIR.173/90 FILE: E06037.DAT DATE: 04/29/08 JAS PAGE 145

115.00	DISCHG	1.53	1.54	1.54	1.55	1.55	1.55	1.56	1.56	1.57	1.57
120.00	DISCHG	1.58	1.91	2.09	2.12	2.13	2.14	2.14	2.15	2.16	2.16
125.00	DISCHG	2.17	2.18	2.18	2.19	2.20	2.20	2.21	2.22	2.22	2.23
130.00	DISCHG	2.24	2.24	2.25	2.25	2.26	1.91	1.73	1.71	1.71	1.71
135.00	DISCHG	1.72	1.72	1.72	1.73	1.73	1.73	1.74	1.74	1.74	1.75
140.00	DISCHG	1.75	1.75	1.75	1.76	1.76	1.76	1.77	1.77	1.77	2.15
145.00	DISCHG	2.34	2.37	2.38	2.39	2.39	2.40	2.40	2.41	2.41	2.42

RUNOFF VOLUME ABOVE BASEFLOW = 1.33 WATERSHED INCHES, 143.87 CFS-HRS, 11.89 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 11, ALTERNATE 74, STORM 99, ADDED TO OUTPUT HYDROGRAPH FILE ---

OPERATION ADDHYD CROSS SECTION 101

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
131.76	6.16	(NULL)
149.50	6.40	(NULL)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .50 HOURS DRAINAGE AREA = .42 SQ.MI.

25.00	DISCHG	.01	.04	.07	.11	.14	.18	.21	.24	.28	.31
30.00	DISCHG	.34	.37	.42	.47	.52	.57	.61	.66	.71	.75
35.00	DISCHG	.80	.84	.88	.74	.66	.66	.68	.70	.71	.73
40.00	DISCHG	.75	.77	.79	.80	.82	.84	.86	.87	.89	.91
45.00	DISCHG	.92	.94	.96	.97	.99	1.01	1.02	1.35	1.57	1.63
50.00	DISCHG	1.66	1.70	1.73	1.76	1.80	1.83	1.86	1.90	1.93	1.96
55.00	DISCHG	1.99	2.02	2.05	2.08	2.11	2.14	2.17	2.20	2.23	2.25
60.00	DISCHG	2.28	2.31	2.34	2.36	2.39	2.42	2.44	2.47	2.49	2.52
65.00	DISCHG	2.54	2.57	2.59	2.62	2.64	2.67	2.69	2.71	2.74	2.76
70.00	DISCHG	2.78	2.80	2.83	2.85	2.87	2.89	2.91	2.93	2.95	2.98
75.00	DISCHG	3.00	3.02	3.04	3.06	3.08	3.10	3.12	3.13	3.15	3.17
80.00	DISCHG	3.19	3.21	3.23	3.25	3.26	3.28	3.30	3.32	3.34	3.35
85.00	DISCHG	3.37	3.39	3.40	3.42	3.44	3.45	3.47	3.48	3.50	3.52
90.00	DISCHG	3.53	3.55	3.56	3.58	3.59	3.61	3.62	3.64	3.65	3.67
95.00	DISCHG	3.68	3.70	3.71	3.72	3.74	3.75	3.76	3.78	3.79	3.81
100.00	DISCHG	3.82	3.83	3.84	3.86	3.87	3.88	3.90	3.91	3.92	3.93
105.00	DISCHG	3.94	3.96	3.97	3.98	3.99	4.00	4.02	4.03	4.04	4.05
110.00	DISCHG	4.06	4.07	4.08	4.09	4.11	4.12	4.13	4.14	4.15	4.16
115.00	DISCHG	4.17	4.18	4.19	4.20	4.21	4.22	4.23	4.24	4.25	4.26
120.00	DISCHG	4.27	5.13	5.64	5.73	5.75	5.77	5.79	5.80	5.82	5.84
125.00	DISCHG	5.85	5.87	5.88	5.90	5.91	5.93	5.94	5.96	5.97	5.98
130.00	DISCHG	6.00	6.01	6.03	6.04	6.05	5.16	4.64	4.58	4.57	4.58
135.00	DISCHG	4.59	4.60	4.60	4.61	4.62	4.62	4.63	4.64	4.65	4.65
140.00	DISCHG	4.66	4.67	4.67	4.68	4.69	4.69	4.70	4.71	4.72	5.66
145.00	DISCHG	6.22	6.31	6.33	6.34	6.35	6.36	6.37	6.38	6.39	6.40

RUNOFF VOLUME ABOVE BASEFLOW = 1.49 WATERSHED INCHES, 404.49 CFS-HRS, 33.43 ACRE-FEET; BASEFLOW = .00 CFS

--- HYDROGRAPH FOR XSECTION 101, ALTERNATE 74, STORM 99, ADDED TO OUTPUT HYDROGRAPH FILE ---

1

TR20 XEQ 04-29-08 16:15 VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS JOB 1 PASS 78
REV PC 09/83(.2) CALCS: V3 W/HUFF-ISWS CIR.173/90 FILE: E06037.DAT DATE: 04/29/08 JAS PAGE 146

EXECUTIVE CONTROL OPERATION ENDCMP RECORD ID
+ COMPUTATIONS COMPLETED FOR PASS 77

EXECUTIVE CONTROL OPERATION ENDJOB RECORD ID
1

TR20 XEQ 04-29-08 16:15 VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS JOB 1 SUMMARY
REV PC 09/83(.2) CALCS: V3 W/HUFF-ISWS CIR.173/90 FILE: E06037.DAT DATE: 04/29/08 JAS PAGE 147

SUMMARY TABLE 1 - SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL INSTRUCTIONS IN THE ORDER PERFORMED
(A STAR(*) AFTER THE PEAK DISCHARGE TIME AND RATE (CFS) VALUES INDICATES A FLAT TOP HYDROGRAPH
A QUESTION MARK(?) INDICATES A HYDROGRAPH WITH PEAK AS LAST POINT.)

SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM (HR)	PRECIPITATION BEGIN (HR)	PRECIPITATION AMOUNT (IN)	PRECIPITATION DURATION (HR)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	PEAK DISCHARGE TIME (HR)	PEAK DISCHARGE RATE (CFS)	PEAK DISCHARGE RATE (CSM)
ALTERNATE 1 STORM 1													
+													
XSECTION 10	RUNOFF	.25	6	2	.05	.0	1.02	1.00	.10	---	.99	18.62	73.5
XSECTION 11	RUNOFF	.17	6	2	.05	.0	1.02	1.00	.05	---	1.08	6.86	40.8
XSECTION 101	ADDHYD	.42	6	2	.05	.0	1.02	1.00	.08	---	1.03	25.38	60.2
ALTERNATE 2 STORM 1													
+													
XSECTION 10	RUNOFF	.25	6	2	.05	.0	1.25	2.00	.20	---	1.15	21.96	86.7
XSECTION 11	RUNOFF	.17	6	2	.05	.0	1.25	2.00	.12	---	1.20	8.53	50.7
XSECTION 101	ADDHYD	.42	6	2	.05	.0	1.25	2.00	.16	---	1.17	30.42	72.2
ALTERNATE 3 STORM 1													

```
+
 XSECTION  10  RUNOFF      .25      6      2     .05      .0     1.38     3.00      .25       ---       1.42      21.32       84.1
 XSECTION  11  RUNOFF      .17      6      2     .05      .0     1.38     3.00      .16       ---       1.56       8.96       53.3
 XSECTION 101  ADDHYD      .42      6      2     .05      .0     1.38     3.00      .22       ---       1.48      30.12       71.5

    ALTERNATE    6   STORM    1
+
 XSECTION  10  RUNOFF      .25      6      2     .05      .0     1.62     6.00      .38       ---       1.94      18.43       72.7
 XSECTION  11  RUNOFF      .17      6      2     .05      .0     1.62     6.00      .26       ---       2.18       7.96       47.3
 XSECTION 101  ADDHYD      .42      6      2     .05      .0     1.62     6.00      .33       ---       1.99      26.25       62.3

    ALTERNATE   12   STORM    1
+
 XSECTION  10  RUNOFF      .25      7      2     .20      .0     1.88    12.00      .53       ---       5.63      19.78       78.1
 XSECTION  11  RUNOFF      .17      7      2     .20      .0     1.88    12.00      .39       ---       5.68       9.23       54.9
 XSECTION 101  ADDHYD      .42      7      2     .20      .0     1.88    12.00      .47       ---       5.65      29.00       68.8

    ALTERNATE   18   STORM    1
+
 XSECTION  10  RUNOFF      .25      8      2     .20      .0     2.03    18.00      .62       ---      11.82      21.51       84.9
 XSECTION  11  RUNOFF      .17      8      2     .20      .0     2.03    18.00      .46       ---      11.83      10.95       65.1
 XSECTION 101  ADDHYD      .42      8      2     .20      .0     2.03    18.00      .56       ---      11.82      32.45       77.0

    ALTERNATE   24   STORM    1
+
 XSECTION  10  RUNOFF      .25      8      2     .20      .0     2.16    24.00      .71       ---      15.69      18.57       73.3
 XSECTION  11  RUNOFF      .17      8      2     .20      .0     2.16    24.00      .54       ---      15.70       9.70       57.7
 XSECTION 101  ADDHYD      .42      8      2     .20      .0     2.16    24.00      .64       ---      15.70      28.21       66.9

    ALTERNATE   48   STORM    1
+
 XSECTION  10  RUNOFF      .25      9      2     .50      .0     2.39    48.00      .86       ---      42.87      12.12       47.8
 XSECTION  11  RUNOFF      .17      9      2     .50      .0     2.39    48.00      .67       ---      42.88       6.77       40.3
 XSECTION 101  ADDHYD      .42      9      2     .50      .0     2.39    48.00      .79       ---      42.87      18.89       44.8
1
```


SUMMARY TABLE 1 - SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL INSTRUCTIONS IN THE ORDER PERFORMED
(A STAR(*) AFTER THE PEAK DISCHARGE TIME AND RATE (CFS) VALUES INDICATES A FLAT TOP HYDROGRAPH
A QUESTION MARK(?) INDICATES A HYDROGRAPH WITH PEAK AS LAST POINT.)

```
 SECTION/    STANDARD              RAIN  ANTEC  MAIN        PRECIPITATION                          PEAK DISCHARGE
 STRUCTURE    CONTROL   DRAINAGE  TABLE  MOIST  TIME   ------------------------  RUNOFF   ------------------------------------
    ID       OPERATION    AREA      #     COND  INCREM  BEGIN    AMOUNT  DURATION  AMOUNT   ELEVATION   TIME       RATE       RATE
                        (SQ MI)                (HR)    (HR)     (IN)     (HR)     (IN)       (FT)      (HR)      (CFS)      (CSM)

    ALTERNATE   72   STORM    1
+
 XSECTION  10  RUNOFF      .25      9      2     .50      .0     2.60    72.00     1.01       ---      64.41       9.27       36.6
 XSECTION  11  RUNOFF      .17      9      2     .50      .0     2.60    72.00      .80       ---      64.44       5.27       31.3
 XSECTION 101  ADDHYD      .42      9      2     .50      .0     2.60    72.00      .93       ---      64.42      14.54       34.5

    ALTERNATE   73   STORM    1
+
 XSECTION  10  RUNOFF      .25      9      2     .50      .0     2.98   120.00     1.30       ---     107.76       7.05       27.8
 XSECTION  11  RUNOFF      .17      9      2     .50      .0     2.98   120.00     1.06       ---     107.77       4.12       24.5
 XSECTION 101  ADDHYD      .42      9      2     .50      .0     2.98   120.00     1.20       ---     107.76      11.17       26.5

    ALTERNATE   74   STORM    1
+
 XSECTION  10  RUNOFF      .25      9      2     .50      .0     3.70   240.00      .24       ---     149.50?        .95?       3.8
 XSECTION  11  RUNOFF      .17      9      2     .50      .0     3.70   240.00      .15       ---     149.50?        .49?       2.9
 XSECTION 101  ADDHYD      .42      9      2     .50      .0     3.70   240.00      .21       ---     149.50?       1.44?       3.4

    ALTERNATE    1   STORM    2
+
 XSECTION  10  RUNOFF      .25      6      2     .05      .0     1.18     1.00      .17       ---        .91      28.82      113.7
 XSECTION  11  RUNOFF      .17      6      2     .05      .0     1.18     1.00      .10       ---       1.01      11.69       69.5
 XSECTION 101  ADDHYD      .42      6      2     .05      .0     1.18     1.00      .14       ---        .94      40.28       95.6

    ALTERNATE    2   STORM    2
+
 XSECTION  10  RUNOFF      .25      6      2     .05      .0     1.46     2.00      .29       ---       1.10      33.77      133.3
 XSECTION  11  RUNOFF      .17      6      2     .05      .0     1.46     2.00      .19       ---       1.15      14.53       86.4
 XSECTION 101  ADDHYD      .42      6      2     .05      .0     1.46     2.00      .25       ---       1.12      48.21      114.4

    ALTERNATE    3   STORM    2
+
 XSECTION  10  RUNOFF      .25      6      2     .05      .0     1.61     3.00      .37       ---       1.30      31.95      126.1
 XSECTION  11  RUNOFF      .17      6      2     .05      .0     1.61     3.00      .26       ---       1.46      14.27       84.9
 XSECTION 101  ADDHYD      .42      6      2     .05      .0     1.61     3.00      .33       ---       1.34      45.98      109.1

    ALTERNATE    6   STORM    2
+
 XSECTION  10  RUNOFF      .25      6      2     .05      .0     1.89     6.00      .54       ---       1.84      26.96      106.4
 XSECTION  11  RUNOFF      .17      6      2     .05      .0     1.89     6.00      .39       ---       1.96      12.43       73.9
 XSECTION 101  ADDHYD      .42      6      2     .05      .0     1.89     6.00      .48       ---       1.88      39.29       93.2

    ALTERNATE   12   STORM    2
+
 XSECTION  10  RUNOFF      .25      7      2     .20      .0     2.19    12.00      .73       ---       5.59      27.50      108.5
 XSECTION  11  RUNOFF      .17      7      2     .20      .0     2.19    12.00      .55       ---       5.63      13.68       81.4
 XSECTION 101  ADDHYD      .42      7      2     .20      .0     2.19    12.00      .66       ---       5.61      41.17       97.7
1
```

SUMMARY TABLE 1 - SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL INSTRUCTIONS IN THE ORDER PERFORMED
(A STAR(*) AFTER THE PEAK DISCHARGE TIME AND RATE (CFS) VALUES INDICATES A FLAT TOP HYDROGRAPH
A QUESTION MARK(?) INDICATES A HYDROGRAPH WITH PEAK AS LAST POINT.)

SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM (HR)	PRECIPITATION BEGIN (HR)	PRECIPITATION AMOUNT (IN)	PRECIPITATION DURATION (HR)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	PEAK DISCHARGE TIME (HR)	PEAK DISCHARGE RATE (CFS)	PEAK DISCHARGE RATE (CSM)
ALTERNATE 18 STORM 2													
+													
XSECTION 10	RUNOFF	.25	8	2	.20	.0	2.37	18.00	.85	---	11.80	28.83	113.8
XSECTION 11	RUNOFF	.17	8	2	.20	.0	2.37	18.00	.66	---	11.81	15.37	91.4
XSECTION 101	ADDHYD	.42	8	2	.20	.0	2.37	18.00	.77	---	11.80	44.20	104.9
ALTERNATE 24 STORM 2													
+													
XSECTION 10	RUNOFF	.25	8	2	.20	.0	2.52	24.00	.96	---	15.66	24.56	96.9
XSECTION 11	RUNOFF	.17	8	2	.20	.0	2.52	24.00	.75	---	15.67	13.29	79.1
XSECTION 101	ADDHYD	.42	8	2	.20	.0	2.52	24.00	.87	---	15.67	37.85	89.8
ALTERNATE 48 STORM 2													
+													
XSECTION 10	RUNOFF	.25	9	2	.50	.0	2.77	48.00	1.14	---	42.85	15.30	60.4
XSECTION 11	RUNOFF	.17	9	2	.50	.0	2.77	48.00	.91	---	42.86	8.78	52.2
XSECTION 101	ADDHYD	.42	9	2	.50	.0	2.77	48.00	1.05	---	42.86	24.08	57.1
ALTERNATE 72 STORM 2													
+													
XSECTION 10	RUNOFF	.25	9	2	.50	.0	3.01	72.00	1.32	---	64.39	11.58	45.7
XSECTION 11	RUNOFF	.17	9	2	.50	.0	3.01	72.00	1.08	---	64.41	6.74	40.1
XSECTION 101	ADDHYD	.42	9	2	.50	.0	3.01	72.00	1.22	---	64.40	18.32	43.5
ALTERNATE 73 STORM 2													
+													
XSECTION 10	RUNOFF	.25	9	2	.50	.0	3.46	120.00	1.67	---	107.76	8.73	34.4
XSECTION 11	RUNOFF	.17	9	2	.50	.0	3.46	120.00	1.40	---	107.76	5.20	31.0
XSECTION 101	ADDHYD	.42	9	2	.50	.0	3.46	120.00	1.56	---	107.76	13.93	33.1
ALTERNATE 74 STORM 2													
+													
XSECTION 10	RUNOFF	.25	9	2	.50	.0	4.25	240.00	.35	---	149.50?	1.24?	4.9
XSECTION 11	RUNOFF	.17	9	2	.50	.0	4.25	240.00	.23	---	149.50?	.66?	3.9
XSECTION 101	ADDHYD	.42	9	2	.50	.0	4.25	240.00	.30	---	149.50?	1.89?	4.5
ALTERNATE 1 STORM 5													
+													
XSECTION 10	RUNOFF	.25	6	2	.05	.0	1.43	1.00	.28	---	.83	48.61	191.8
XSECTION 11	RUNOFF	.17	6	2	.05	.0	1.43	1.00	.18	---	.89	21.46	127.6
XSECTION 101	ADDHYD	.42	6	2	.05	.0	1.43	1.00	.24	---	.85	69.97	166.0
ALTERNATE 2 STORM 5													
+													
XSECTION 10	RUNOFF	.25	6	2	.05	.0	1.76	2.00	.46	---	1.04	53.59	211.5
XSECTION 11	RUNOFF	.17	6	2	.05	.0	1.76	2.00	.33	---	1.09	25.08	149.2
XSECTION 101	ADDHYD	.42	6	2	.05	.0	1.76	2.00	.41	---	1.06	78.59	186.5

1

SUMMARY TABLE 1 - SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL INSTRUCTIONS IN THE ORDER PERFORMED
(A STAR(*) AFTER THE PEAK DISCHARGE TIME AND RATE (CFS) VALUES INDICATES A FLAT TOP HYDROGRAPH
A QUESTION MARK(?) INDICATES A HYDROGRAPH WITH PEAK AS LAST POINT.)

SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM (HR)	PRECIPITATION BEGIN (HR)	PRECIPITATION AMOUNT (IN)	PRECIPITATION DURATION (HR)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	PEAK DISCHARGE TIME (HR)	PEAK DISCHARGE RATE (CFS)	PEAK DISCHARGE RATE (CSM)
ALTERNATE 3 STORM 5													
+													
XSECTION 10	RUNOFF	.25	6	2	.05	.0	1.95	3.00	.57	---	1.21	50.54	199.4
XSECTION 11	RUNOFF	.17	6	2	.05	.0	1.95	3.00	.42	---	1.28	24.06	143.1
XSECTION 101	ADDHYD	.42	6	2	.05	.0	1.95	3.00	.51	---	1.24	74.49	176.7
ALTERNATE 6 STORM 5													
+													
XSECTION 10	RUNOFF	.25	6	2	.05	.0	2.28	6.00	.79	---	1.76	40.98	161.7
XSECTION 11	RUNOFF	.17	6	2	.05	.0	2.28	6.00	.61	---	1.82	20.20	120.2
XSECTION 101	ADDHYD	.42	6	2	.05	.0	2.28	6.00	.72	---	1.78	61.11	145.0
ALTERNATE 12 STORM 5													
+													
XSECTION 10	RUNOFF	.25	7	2	.20	.0	2.64	12.00	1.04	---	5.55	39.62	156.3
XSECTION 11	RUNOFF	.17	7	2	.20	.0	2.64	12.00	.83	---	5.58	20.87	124.2
XSECTION 101	ADDHYD	.42	7	2	.20	.0	2.64	12.00	.96	---	5.57	60.48	143.5
ALTERNATE 18 STORM 5													
+													
XSECTION 10	RUNOFF	.25	8	2	.20	.0	2.86	18.00	1.21	---	11.78	39.95	157.7
XSECTION 11	RUNOFF	.17	8	2	.20	.0	2.86	18.00	.97	---	11.79	22.24	132.3
XSECTION 101	ADDHYD	.42	8	2	.20	.0	2.86	18.00	1.11	---	11.78	62.19	147.5
ALTERNATE 24 STORM 5													
+													
XSECTION 10	RUNOFF	.25	8	2	.20	.0	3.04	24.00	1.34	---	15.64	33.62	132.7

```
 XSECTION  11  RUNOFF      .17      8      2     .20      .0     3.04    24.00     1.10       ---      15.64       18.92      112.6
 XSECTION 101  ADDHYD      .42      8      2     .20      .0     3.04    24.00     1.25       ---      15.64       52.54      124.6

    ALTERNATE   48   STORM    5
+
 XSECTION  10  RUNOFF      .25      9      2     .50      .0     3.38    48.00     1.61       ---      41.00       20.66       81.5
 XSECTION  11  RUNOFF      .17      9      2     .50      .0     3.38    48.00     1.34       ---      42.84       12.13       72.2
 XSECTION 101  ADDHYD      .42      9      2     .50      .0     3.38    48.00     1.50       ---      40.88       32.66       77.5

    ALTERNATE   72   STORM    5
+
 XSECTION  10  RUNOFF      .25      9      2     .50      .0     3.68    72.00     1.85       ---      61.00       15.63       61.7
 XSECTION  11  RUNOFF      .17      9      2     .50      .0     3.68    72.00     1.56       ---      64.38        9.22       54.8
 XSECTION 101  ADDHYD      .42      9      2     .50      .0     3.68    72.00     1.74       ---      61.08       24.80       58.8

    ALTERNATE   73   STORM    5
+
 XSECTION  10  RUNOFF      .25      9      2     .50      .0     4.18   120.00     2.27       ---     102.00       11.32       44.7
 XSECTION  11  RUNOFF      .17      9      2     .50      .0     4.18   120.00     1.95       ---     107.76        6.87       40.9
 XSECTION 101  ADDHYD      .42      9      2     .50      .0     4.18   120.00     2.14       ---     101.82       18.14       43.0
1
```


SUMMARY TABLE 1 - SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL INSTRUCTIONS IN THE ORDER PERFORMED
(A STAR(*) AFTER THE PEAK DISCHARGE TIME AND RATE (CFS) VALUES INDICATES A FLAT TOP HYDROGRAPH
A QUESTION MARK(?) INDICATES A HYDROGRAPH WITH PEAK AS LAST POINT.)

```
 SECTION/    STANDARD              RAIN  ANTEC  MAIN         PRECIPITATION                                  PEAK DISCHARGE
 STRUCTURE    CONTROL   DRAINAGE  TABLE  MOIST  TIME   ------------------------  RUNOFF    ------------------------------------
    ID       OPERATION    AREA     #     COND  INCREM  BEGIN    AMOUNT  DURATION  AMOUNT    ELEVATION   TIME       RATE       RATE
                        (SQ MI)                (HR)   (HR)     (IN)     (HR)     (IN)       (FT)      (HR)       (CFS)      (CSM)

    ALTERNATE   74   STORM    5
+
 XSECTION  10  RUNOFF      .25      9      2     .50      .0     5.12   240.00      .53       ---    149.50?       1.70?       6.7
 XSECTION  11  RUNOFF      .17      9      2     .50      .0     5.12   240.00      .38       ---    149.50?        .94?       5.6
 XSECTION 101  ADDHYD      .42      9      2     .50      .0     5.12   240.00      .47       ---    149.50?       2.64?       6.3

    ALTERNATE    1   STORM   10
+
 XSECTION  10  RUNOFF      .25      6      2     .05      .0     1.65     1.00      .40       ---        .80       69.21      273.1
 XSECTION  11  RUNOFF      .17      6      2     .05      .0     1.65     1.00      .27       ---        .82       32.39      192.7
 XSECTION 101  ADDHYD      .42      6      2     .05      .0     1.65     1.00      .35       ---        .81      101.56      241.0

    ALTERNATE    2   STORM   10
+
 XSECTION  10  RUNOFF      .25      6      2     .05      .0     2.04     2.00      .63       ---       1.00       74.73      294.9
 XSECTION  11  RUNOFF      .17      6      2     .05      .0     2.04     2.00      .47       ---       1.04       36.75      218.6
 XSECTION 101  ADDHYD      .42      6      2     .05      .0     2.04     2.00      .57       ---       1.01      111.41      264.3

    ALTERNATE    3   STORM   10
+
 XSECTION  10  RUNOFF      .25      6      2     .05      .0     2.25     3.00      .77       ---       1.17       69.19      273.0
 XSECTION  11  RUNOFF      .17      6      2     .05      .0     2.25     3.00      .59       ---       1.21       34.43      204.8
 XSECTION 101  ADDHYD      .42      6      2     .05      .0     2.25     3.00      .70       ---       1.18      103.51      245.6

    ALTERNATE    6   STORM   10
+
 XSECTION  10  RUNOFF      .25      6      2     .05      .0     2.64     6.00     1.04       ---       1.71       55.23      218.0
 XSECTION  11  RUNOFF      .17      6      2     .05      .0     2.64     6.00      .83       ---       1.76       28.42      169.1
 XSECTION 101  ADDHYD      .42      6      2     .05      .0     2.64     6.00      .96       ---       1.73       83.61      198.4

    ALTERNATE   12   STORM   10
+
 XSECTION  10  RUNOFF      .25      7      2     .20      .0     3.06    12.00     1.36       ---       5.53       51.61      203.7
 XSECTION  11  RUNOFF      .17      7      2     .20      .0     3.06    12.00     1.11       ---       5.55       28.16      167.5
 XSECTION 101  ADDHYD      .42      7      2     .20      .0     3.06    12.00     1.26       ---       5.54       79.76      189.2

    ALTERNATE   18   STORM   10
+
 XSECTION  10  RUNOFF      .25      8      2     .20      .0     3.31    18.00     1.55       ---      11.77       50.55      199.5
 XSECTION  11  RUNOFF      .17      8      2     .20      .0     3.31    18.00     1.29       ---      11.77       28.91      172.0
 XSECTION 101  ADDHYD      .42      8      2     .20      .0     3.31    18.00     1.45       ---      11.77       79.46      188.5

    ALTERNATE   24   STORM   10
+
 XSECTION  10  RUNOFF      .25      8      2     .20      .0     3.52    24.00     1.72       ---      15.62       42.24      166.7
 XSECTION  11  RUNOFF      .17      8      2     .20      .0     3.52    24.00     1.44       ---      15.62       24.39      145.1
 XSECTION 101  ADDHYD      .42      8      2     .20      .0     3.52    24.00     1.61       ---      15.62       66.63      158.1
1
```


SUMMARY TABLE 1 - SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL INSTRUCTIONS IN THE ORDER PERFORMED
(A STAR(*) AFTER THE PEAK DISCHARGE TIME AND RATE (CFS) VALUES INDICATES A FLAT TOP HYDROGRAPH
A QUESTION MARK(?) INDICATES A HYDROGRAPH WITH PEAK AS LAST POINT.)

```
 SECTION/    STANDARD              RAIN  ANTEC  MAIN         PRECIPITATION                                  PEAK DISCHARGE
 STRUCTURE    CONTROL   DRAINAGE  TABLE  MOIST  TIME   ------------------------  RUNOFF    ------------------------------------
    ID       OPERATION    AREA     #     COND  INCREM  BEGIN    AMOUNT  DURATION  AMOUNT    ELEVATION   TIME       RATE       RATE
                        (SQ MI)                (HR)   (HR)     (IN)     (HR)     (IN)       (FT)      (HR)       (CFS)      (CSM)

    ALTERNATE   48   STORM   10
```

```
+
 XSECTION  10  RUNOFF      .25      9      2     .50      .0     3.92    48.00     2.05       ---      40.84       25.67      101.3
 XSECTION  11  RUNOFF      .17      9      2     .50      .0     3.92    48.00     1.74       ---      42.83       15.18       90.3
 XSECTION 101  ADDHYD      .42      9      2     .50      .0     3.92    48.00     1.93       ---      40.85       40.84       96.9

    ALTERNATE   72   STORM   10
+
 XSECTION  10  RUNOFF      .25      9      2     .50      .0     4.27    72.00     2.35       ---      61.00       19.28       76.1
 XSECTION  11  RUNOFF      .17      9      2     .50      .0     4.27    72.00     2.02       ---      61.00       11.52       68.6
 XSECTION 101  ADDHYD      .42      9      2     .50      .0     4.27    72.00     2.22       ---      61.03       30.81       73.1

    ALTERNATE   73   STORM   10
+
 XSECTION  10  RUNOFF      .25      9      2     .50      .0     4.81   120.00     2.81       ---     102.00       13.67       54.0
 XSECTION  11  RUNOFF      .17      9      2     .50      .0     4.81   120.00     2.46       ---     107.76        8.34       49.6
 XSECTION 101  ADDHYD      .42      9      2     .50      .0     4.81   120.00     2.67       ---     101.81       22.05       52.3

    ALTERNATE   74   STORM   10
+
 XSECTION  10  RUNOFF      .25      9      2     .50      .0     5.84   240.00      .70       ---     149.50?       2.10?        8.3
 XSECTION  11  RUNOFF      .17      9      2     .50      .0     5.84   240.00      .53       ---     149.50?       1.19?        7.1
 XSECTION 101  ADDHYD      .42      9      2     .50      .0     5.84   240.00      .63       ---     149.50?       3.29?        7.8

    ALTERNATE    1   STORM   25
+
 XSECTION  10  RUNOFF      .25      6      2     .05      .0     2.02     1.00      .62       ---         .76      109.18      430.8
 XSECTION  11  RUNOFF      .17      6      2     .05      .0     2.02     1.00      .46       ---         .77       54.76      325.7
 XSECTION 101  ADDHYD      .42      6      2     .05      .0     2.02     1.00      .55       ---         .76      163.93      388.9

    ALTERNATE    2   STORM   25
+
 XSECTION  10  RUNOFF      .25      6      2     .05      .0     2.49     2.00      .94       ---         .95      113.04      446.1
 XSECTION  11  RUNOFF      .17      6      2     .05      .0     2.49     2.00      .73       ---         .98       58.59      348.5
 XSECTION 101  ADDHYD      .42      6      2     .05      .0     2.49     2.00      .85       ---         .96      171.60      407.1

    ALTERNATE    3   STORM   25
+
 XSECTION  10  RUNOFF      .25      6      2     .05      .0     2.75     3.00     1.12       ---        1.12      103.88      409.9
 XSECTION  11  RUNOFF      .17      6      2     .05      .0     2.75     3.00      .90       ---        1.15       54.38      323.5
 XSECTION 101  ADDHYD      .42      6      2     .05      .0     2.75     3.00     1.04       ---        1.13      158.18      375.3

    ALTERNATE    6   STORM   25
+
 XSECTION  10  RUNOFF      .25      6      2     .05      .0     3.22     6.00     1.48       ---        1.66       80.15      316.3
 XSECTION  11  RUNOFF      .17      6      2     .05      .0     3.22     6.00     1.23       ---        1.70       43.21      257.1
 XSECTION 101  ADDHYD      .42      6      2     .05      .0     3.22     6.00     1.38       ---        1.68      123.32      292.6
1


 TR20 XEQ 04-29-08  16:15       VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS                          JOB  1   SUMMARY
      REV PC 09/83(.2)          CALCS: V3 W/HUFF-ISWS CIR.173/90  FILE: E06037.DAT  DATE: 04/29/08 JAS                     PAGE 153


 SUMMARY TABLE 1 - SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL INSTRUCTIONS IN THE ORDER PERFORMED
                   (A STAR(*) AFTER THE PEAK DISCHARGE TIME AND RATE (CFS) VALUES INDICATES A FLAT TOP HYDROGRAPH
                    A QUESTION MARK(?) INDICATES A HYDROGRAPH WITH PEAK AS LAST POINT.)

 SECTION/    STANDARD              RAIN  ANTEC  MAIN         PRECIPITATION                                  PEAK DISCHARGE
 STRUCTURE    CONTROL   DRAINAGE  TABLE  MOIST  TIME   ------------------------  RUNOFF   ------------------------------------
    ID       OPERATION    AREA      #     COND  INCREM  BEGIN    AMOUNT  DURATION  AMOUNT   ELEVATION   TIME       RATE       RATE
                        (SQ MI)                (HR)    (HR)     (IN)     (HR)     (IN)      (FT)      (HR)      (CFS)      (CSM)


    ALTERNATE   12   STORM   25
+
 XSECTION  10  RUNOFF      .25      7      2     .20      .0     3.73    12.00     1.89       ---        5.50       71.63      282.7
 XSECTION  11  RUNOFF      .17      7      2     .20      .0     3.73    12.00     1.60       ---        5.52       40.60      241.5
 XSECTION 101  ADDHYD      .42      7      2     .20      .0     3.73    12.00     1.78       ---        5.51      112.22      266.2

    ALTERNATE   18   STORM   25
+
 XSECTION  10  RUNOFF      .25      8      2     .20      .0     4.03    18.00     2.14       ---       11.75       67.94      268.1
 XSECTION  11  RUNOFF      .17      8      2     .20      .0     4.03    18.00     1.83       ---       11.76       40.06      238.3
 XSECTION 101  ADDHYD      .42      8      2     .20      .0     4.03    18.00     2.02       ---       11.76      108.00      256.2

    ALTERNATE   24   STORM   25
+
 XSECTION  10  RUNOFF      .25      8      2     .20      .0     4.29    24.00     2.37       ---       15.60       56.38      222.5
 XSECTION  11  RUNOFF      .17      8      2     .20      .0     4.29    24.00     2.04       ---       15.60       33.48      199.2
 XSECTION 101  ADDHYD      .42      8      2     .20      .0     4.29    24.00     2.24       ---       15.60       89.86      213.2

    ALTERNATE   48   STORM   25
+
 XSECTION  10  RUNOFF      .25      9      2     .50      .0     4.78    48.00     2.79       ---       40.80       33.69      133.0
 XSECTION  11  RUNOFF      .17      9      2     .50      .0     4.78    48.00     2.43       ---       41.00       20.33      120.9
 XSECTION 101  ADDHYD      .42      9      2     .50      .0     4.78    48.00     2.64       ---       40.81       54.08      128.3

    ALTERNATE   72   STORM   25
+
 XSECTION  10  RUNOFF      .25      9      2     .50      .0     5.21    72.00     3.17       ---       60.95       25.14       99.2
 XSECTION  11  RUNOFF      .17      9      2     .50      .0     5.21    72.00     2.79       ---       61.00       15.36       91.4
 XSECTION 101  ADDHYD      .42      9      2     .50      .0     5.21    72.00     3.02       ---       60.97       40.50       96.1

    ALTERNATE   73   STORM   25
+
 XSECTION  10  RUNOFF      .25      9      2     .50      .0     5.83   120.00     3.72       ---      101.79       17.56       69.3
 XSECTION  11  RUNOFF      .17      9      2     .50      .0     5.83   120.00     3.33       ---      102.00       10.82       64.4
 XSECTION 101  ADDHYD      .42      9      2     .50      .0     5.83   120.00     3.57       ---      101.79       28.42       67.4

    ALTERNATE   74   STORM   25
+
 XSECTION  10  RUNOFF      .25      9      2     .50      .0     6.96   240.00      .98       ---     149.50?       2.73?       10.8
 XSECTION  11  RUNOFF      .17      9      2     .50      .0     6.96   240.00      .77       ---     149.50?       1.60?        9.5
 XSECTION 101  ADDHYD      .42      9      2     .50      .0     6.96   240.00      .90       ---     149.50?       4.32?       10.3
```

```
   ALTERNATE    1   STORM   50
+
 XSECTION  10  RUNOFF      .25      6      2     .05      .0     2.36     1.00      .84       ---        .74      150.50      593.9
 XSECTION  11  RUNOFF      .17      6      2     .05      .0     2.36     1.00      .65       ---        .74       78.76      468.5
 XSECTION 101  ADDHYD      .42      6      2     .05      .0     2.36     1.00      .77       ---        .74      229.26      543.9
1
```


SUMMARY TABLE 1 - SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL INSTRUCTIONS IN THE ORDER PERFORMED
(A STAR(*) AFTER THE PEAK DISCHARGE TIME AND RATE (CFS) VALUES INDICATES A FLAT TOP HYDROGRAPH
A QUESTION MARK(?) INDICATES A HYDROGRAPH WITH PEAK AS LAST POINT.)

```
 SECTION/    STANDARD              RAIN  ANTEC  MAIN         PRECIPITATION                          PEAK DISCHARGE
 STRUCTURE    CONTROL   DRAINAGE  TABLE  MOIST  TIME   ------------------------  RUNOFF   ------------------------------------
    ID       OPERATION    AREA     #     COND  INCREM  BEGIN    AMOUNT  DURATION  AMOUNT   ELEVATION   TIME       RATE       RATE
                        (SQ MI)                (HR)   (HR)     (IN)     (HR)     (IN)       (FT)      (HR)      (CFS)      (CSM)

   ALTERNATE    2   STORM   50
+
 XSECTION  10  RUNOFF      .25      6      2     .05      .0     2.91     2.00     1.24       ---        .92      152.69      602.6
 XSECTION  11  RUNOFF      .17      6      2     .05      .0     2.91     2.00     1.01       ---        .94       81.85      486.9
 XSECTION 101  ADDHYD      .42      6      2     .05      .0     2.91     2.00     1.15       ---        .93      234.45      556.2

   ALTERNATE    3   STORM   50
+
 XSECTION  10  RUNOFF      .25      6      2     .05      .0     3.21     3.00     1.48       ---       1.08      138.90      548.1
 XSECTION  11  RUNOFF      .17      6      2     .05      .0     3.21     3.00     1.22       ---       1.10       75.10      446.8
 XSECTION 101  ADDHYD      .42      6      2     .05      .0     3.21     3.00     1.37       ---       1.09      213.95      507.6

   ALTERNATE    6   STORM   50
+
 XSECTION  10  RUNOFF      .25      6      2     .05      .0     3.76     6.00     1.92       ---       1.61      104.99      414.3
 XSECTION  11  RUNOFF      .17      6      2     .05      .0     3.76     6.00     1.63       ---       1.66       58.24      346.5
 XSECTION 101  ADDHYD      .42      6      2     .05      .0     3.76     6.00     1.80       ---       1.63      163.18      387.1

   ALTERNATE   12   STORM   50
+
 XSECTION  10  RUNOFF      .25      7      2     .20      .0     4.37    12.00     2.43       ---       5.45       91.05      359.3
 XSECTION  11  RUNOFF      .17      7      2     .20      .0     4.37    12.00     2.10       ---       5.50       52.84      314.3
 XSECTION 101  ADDHYD      .42      7      2     .20      .0     4.37    12.00     2.30       ---       5.47      143.86      341.3

   ALTERNATE   18   STORM   50
+
 XSECTION  10  RUNOFF      .25      8      2     .20      .0     4.72    18.00     2.74       ---      11.74       84.89      335.0
 XSECTION  11  RUNOFF      .17      8      2     .20      .0     4.72    18.00     2.39       ---      11.75       51.08      303.9
 XSECTION 101  ADDHYD      .42      8      2     .20      .0     4.72    18.00     2.60       ---      11.75      135.97      322.6

   ALTERNATE   24   STORM   50
+
 XSECTION  10  RUNOFF      .25      8      2     .20      .0     5.02    24.00     3.00       ---      15.58       69.95      276.1
 XSECTION  11  RUNOFF      .17      8      2     .20      .0     5.02    24.00     2.64       ---      15.59       42.34      251.8
 XSECTION 101  ADDHYD      .42      8      2     .20      .0     5.02    24.00     2.86       ---      15.58      112.29      266.4

   ALTERNATE   48   STORM   50
+
 XSECTION  10  RUNOFF      .25      9      2     .50      .0     5.57    48.00     3.49       ---      40.78       41.09      162.2
 XSECTION  11  RUNOFF      .17      9      2     .50      .0     5.57    48.00     3.10       ---      40.80       25.25      150.2
 XSECTION 101  ADDHYD      .42      9      2     .50      .0     5.57    48.00     3.33       ---      40.79       66.35      157.4

   ALTERNATE   72   STORM   50
+
 XSECTION  10  RUNOFF      .25      9      2     .50      .0     6.06    72.00     3.93       ---      60.92       30.45      120.2
 XSECTION  11  RUNOFF      .17      9      2     .50      .0     6.06    72.00     3.52       ---      60.95       18.87      112.3
 XSECTION 101  ADDHYD      .42      9      2     .50      .0     6.06    72.00     3.77       ---      60.93       49.32      117.0
1
```


SUMMARY TABLE 1 - SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL INSTRUCTIONS IN THE ORDER PERFORMED
(A STAR(*) AFTER THE PEAK DISCHARGE TIME AND RATE (CFS) VALUES INDICATES A FLAT TOP HYDROGRAPH
A QUESTION MARK(?) INDICATES A HYDROGRAPH WITH PEAK AS LAST POINT.)

```
 SECTION/    STANDARD              RAIN  ANTEC  MAIN         PRECIPITATION                          PEAK DISCHARGE
 STRUCTURE    CONTROL   DRAINAGE  TABLE  MOIST  TIME   ------------------------  RUNOFF   ------------------------------------
    ID       OPERATION    AREA     #     COND  INCREM  BEGIN    AMOUNT  DURATION  AMOUNT   ELEVATION   TIME       RATE       RATE
                        (SQ MI)                (HR)   (HR)     (IN)     (HR)     (IN)       (FT)      (HR)      (CFS)      (CSM)

   ALTERNATE   73   STORM   50
+
 XSECTION  10  RUNOFF      .25      9      2     .50      .0     6.76   120.00     4.58       ---     101.78       21.06       83.1
 XSECTION  11  RUNOFF      .17      9      2     .50      .0     6.76   120.00     4.15       ---     102.00       13.13       78.1
 XSECTION 101  ADDHYD      .42      9      2     .50      .0     6.76   120.00     4.40       ---     101.79       34.24       81.2

   ALTERNATE   74   STORM   50
+
 XSECTION  10  RUNOFF      .25      9      2     .50      .0     8.01   240.00     1.26       ---     149.50?       3.33?      13.1
 XSECTION  11  RUNOFF      .17      9      2     .50      .0     8.01   240.00     1.03       ---     149.50?       1.98?      11.8
 XSECTION 101  ADDHYD      .42      9      2     .50      .0     8.01   240.00     1.17       ---     149.50        5.31       12.6

   ALTERNATE    1   STORM   99
+
 XSECTION  10  RUNOFF      .25      6      2     .05      .0     2.71     1.00     1.09       ---        .72      196.95      777.2
```

XSECTION 11	RUNOFF	.17	6	2	.05	.0	2.71	1.00	.87	---	.72	106.41	633.0
XSECTION 101	ADDHYD	.42	6	2	.05	.0	2.71	1.00	1.01	---	.72	303.34	719.7

ALTERNATE 2 STORM 99
+

XSECTION 10	RUNOFF	.25	6	2	.05	.0	3.35	2.00	1.59	---	.90	197.30	778.6
XSECTION 11	RUNOFF	.17	6	2	.05	.0	3.35	2.00	1.32	---	.91	108.64	646.3
XSECTION 101	ADDHYD	.42	6	2	.05	.0	3.35	2.00	1.48	---	.90	305.92	725.8

ALTERNATE 3 STORM 99
+

XSECTION 10	RUNOFF	.25	6	2	.05	.0	3.69	3.00	1.86	---	1.05	177.94	702.2
XSECTION 11	RUNOFF	.17	6	2	.05	.0	3.69	3.00	1.57	---	1.07	98.60	586.6
XSECTION 101	ADDHYD	.42	6	2	.05	.0	3.69	3.00	1.75	---	1.06	276.50	656.0

ALTERNATE 6 STORM 99
+

XSECTION 10	RUNOFF	.25	6	2	.05	.0	4.33	6.00	2.40	---	1.55	132.59	523.3
XSECTION 11	RUNOFF	.17	6	2	.05	.0	4.33	6.00	2.07	---	1.62	75.10	446.7
XSECTION 101	ADDHYD	.42	6	2	.05	.0	4.33	6.00	2.27	---	1.58	207.57	492.5

ALTERNATE 12 STORM 99
+

XSECTION 10	RUNOFF	.25	7	2	.20	.0	5.02	12.00	3.00	---	5.41	111.58	440.3
XSECTION 11	RUNOFF	.17	7	2	.20	.0	5.02	12.00	2.64	---	5.45	65.93	392.2
XSECTION 101	ADDHYD	.42	7	2	.20	.0	5.02	12.00	2.86	---	5.43	177.48	421.1

ALTERNATE 18 STORM 99
+

XSECTION 10	RUNOFF	.25	8	2	.20	.0	5.42	18.00	3.36	---	11.74	102.21	403.4
XSECTION 11	RUNOFF	.17	8	2	.20	.0	5.42	18.00	2.98	---	11.74	62.45	371.5
XSECTION 101	ADDHYD	.42	8	2	.20	.0	5.42	18.00	3.20	---	11.74	164.66	390.7

1

SUMMARY TABLE 1 - SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL INSTRUCTIONS IN THE ORDER PERFORMED
(A STAR(*) AFTER THE PEAK DISCHARGE TIME AND RATE (CFS) VALUES INDICATES A FLAT TOP HYDROGRAPH
A QUESTION MARK(?) INDICATES A HYDROGRAPH WITH PEAK AS LAST POINT.)

SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM (HR)	PRECIPITATION BEGIN (HR)	PRECIPITATION AMOUNT (IN)	PRECIPITATION DURATION (HR)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	PEAK DISCHARGE TIME (HR)	PEAK DISCHARGE RATE (CFS)	PEAK DISCHARGE RATE (CSM)
ALTERNATE 24 STORM 99													
+													
XSECTION 10	RUNOFF	.25	8	2	.20	.0	5.77	24.00	3.67	---	15.57	83.96	331.3
XSECTION 11	RUNOFF	.17	8	2	.20	.0	5.77	24.00	3.28	---	15.57	51.55	306.7
XSECTION 101	ADDHYD	.42	8	2	.20	.0	5.77	24.00	3.51	---	15.57	135.52	321.5
ALTERNATE 48 STORM 99													
+													
XSECTION 10	RUNOFF	.25	9	2	.50	.0	6.45	48.00	4.29	---	40.76	49.34	194.7
XSECTION 11	RUNOFF	.17	9	2	.50	.0	6.45	48.00	3.86	---	40.78	30.71	182.7
XSECTION 101	ADDHYD	.42	9	2	.50	.0	6.45	48.00	4.12	---	40.77	80.05	189.9
ALTERNATE 72 STORM 99													
+													
XSECTION 10	RUNOFF	.25	9	2	.50	.0	7.01	72.00	4.81	---	60.89	36.38	143.6
XSECTION 11	RUNOFF	.17	9	2	.50	.0	7.01	72.00	4.37	---	60.92	22.81	135.7
XSECTION 101	ADDHYD	.42	9	2	.50	.0	7.01	72.00	4.63	---	60.90	59.18	140.4
ALTERNATE 73 STORM 99													
+													
XSECTION 10	RUNOFF	.25	9	2	.50	.0	7.80	120.00	5.55	---	101.78	24.95	98.5
XSECTION 11	RUNOFF	.17	9	2	.50	.0	7.80	120.00	5.09	---	101.78	15.78	93.9
XSECTION 101	ADDHYD	.42	9	2	.50	.0	7.80	120.00	5.36	---	101.78	40.73	96.6
ALTERNATE 74 STORM 99													
+													
XSECTION 10	RUNOFF	.25	9	2	.50	.0	9.16	240.00	1.59	---	149.50?	3.99?	15.7
XSECTION 11	RUNOFF	.17	9	2	.50	.0	9.16	240.00	1.33	---	149.50?	2.42?	14.4
XSECTION 101	ADDHYD	.42	9	2	.50	.0	9.16	240.00	1.49	---	149.50	6.40	15.2

1

SUMMARY TABLE 3 - DISCHARGE (CFS) AT XSECTIONS AND STRUCTURES FOR ALL STORMS AND ALTERNATES

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS..... 1	2	5	10	25	50	99
0 XSECTION 10	.25							
+								
ALTERNATE 1		18.62	28.82	48.61	69.21	109.18	150.50	196.95
ALTERNATE 2		21.96	33.77	53.59	74.73	113.04	152.69	197.30
ALTERNATE 3		21.32	31.95	50.54	69.19	103.88	138.90	177.94
ALTERNATE 6		18.43	26.96	40.98	55.23	80.15	104.99	132.59
ALTERNATE 12		19.78	27.50	39.62	51.61	71.63	91.05	111.58
ALTERNATE 18		21.51	28.83	39.95	50.55	67.94	84.89	102.21
ALTERNATE 24		18.57	24.56	33.62	42.24	56.38	69.95	83.96
ALTERNATE 48		12.12	15.30	20.66	25.67	33.69	41.09	49.34

ALTERNATE	72	9.27	11.58	15.63	19.28	25.14	30.45	36.38
ALTERNATE	73	7.05	8.73	11.32	13.67	17.56	21.06	24.95
ALTERNATE	74	.95	1.24	1.70	2.10	2.73	3.33	3.99

0 XSECTION 11 .17
+

ALTERNATE	1	6.86	11.69	21.46	32.39	54.76	78.76	106.41
ALTERNATE	2	8.53	14.53	25.08	36.75	58.59	81.85	108.64
ALTERNATE	3	8.96	14.27	24.06	34.43	54.38	75.10	98.60
ALTERNATE	6	7.96	12.43	20.20	28.42	43.21	58.24	75.10
ALTERNATE	12	9.23	13.68	20.87	28.16	40.60	52.84	65.93
ALTERNATE	18	10.95	15.37	22.24	28.91	40.06	51.08	62.45
ALTERNATE	24	9.70	13.29	18.92	24.39	33.48	42.34	51.55
ALTERNATE	48	6.77	8.78	12.13	15.18	20.33	25.25	30.71
ALTERNATE	72	5.27	6.74	9.22	11.52	15.36	18.87	22.81
ALTERNATE	73	4.12	5.20	6.87	8.34	10.82	13.13	15.78
ALTERNATE	74	.49	.66	.94	1.19	1.60	1.98	2.42

0 XSECTION 101 .42
+

ALTERNATE	1	25.38	40.28	69.97	101.56	163.93	229.26	303.34
ALTERNATE	2	30.42	48.21	78.59	111.41	171.60	234.45	305.92
ALTERNATE	3	30.12	45.98	74.49	103.51	158.18	213.95	276.50
ALTERNATE	6	26.25	39.29	61.11	83.61	123.32	163.18	207.57
ALTERNATE	12	29.00	41.17	60.48	79.76	112.22	143.86	177.48
ALTERNATE	18	32.45	44.20	62.19	79.46	108.00	135.97	164.66
ALTERNATE	24	28.21	37.85	52.54	66.63	89.86	112.29	135.52
ALTERNATE	48	18.89	24.08	32.66	40.84	54.08	66.35	80.05
ALTERNATE	72	14.54	18.32	24.80	30.81	40.50	49.32	59.18

1

TR20 XEQ 04-29-08 16:15 VILLAGE LAKE, NOBLE COUNTY, INDIANA: EXISTING CONDITIONS JOB 1 SUMMARY
REV PC 09/83(.2) CALCS: V3 W/HUFF-ISWS CIR.173/90 FILE: E06037.DAT DATE: 04/29/08 JAS PAGE 158

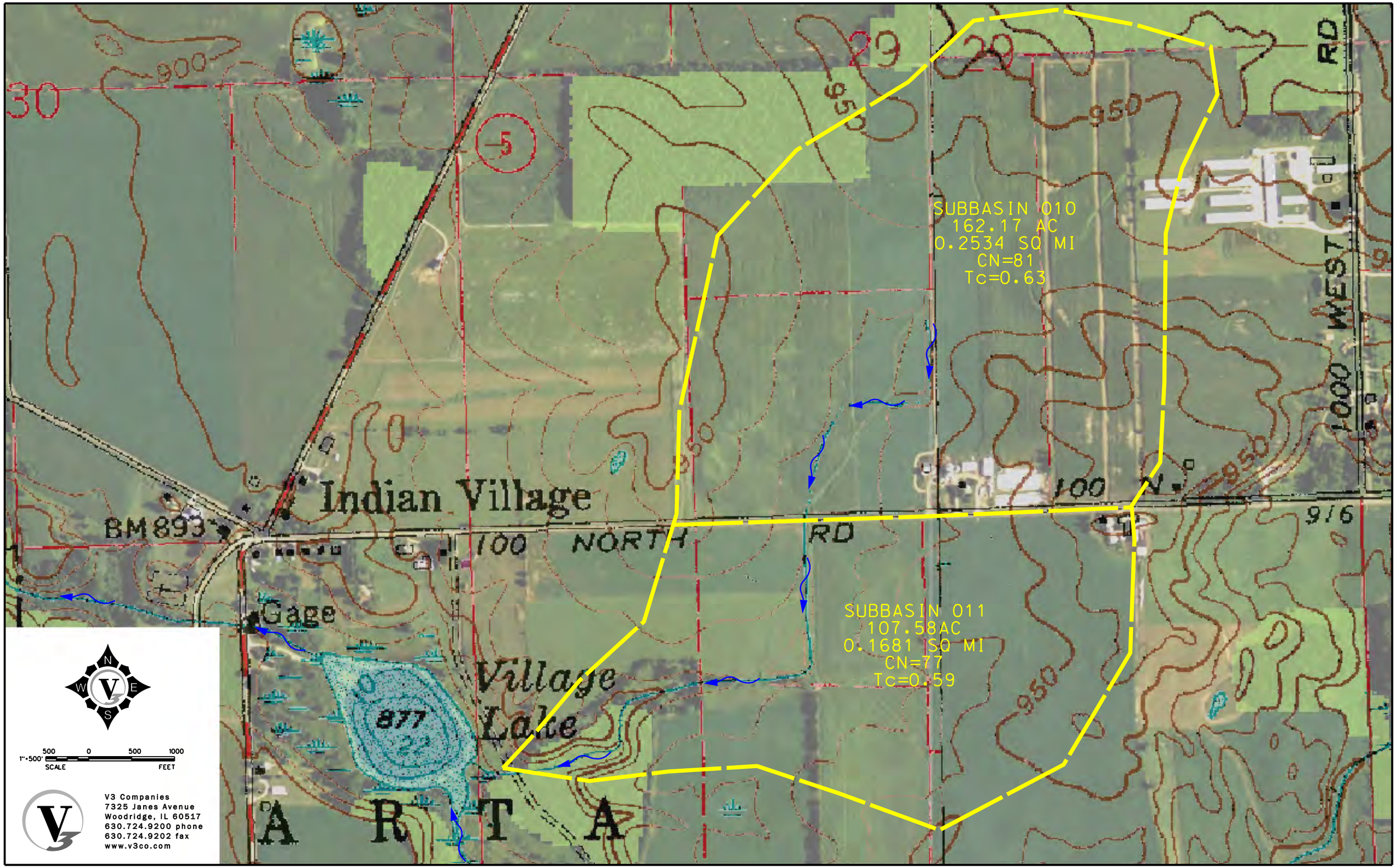
SUMMARY TABLE 3 - DISCHARGE (CFS) AT XSECTIONS AND STRUCTURES FOR ALL STORMS AND ALTERNATES

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS..... 1	2	5	10	25	50	99

0 XSECTION 101 .42
+

ALTERNATE	73	11.17	13.93	18.14	22.05	28.42	34.24	40.73
ALTERNATE	74	1.44	1.89	2.64	3.29	4.32	5.31	6.40

1END OF 1 JOBS IN THIS RUN



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SECTION 3

DEPARTMENT OF THE ARMY
DETROIT DISTRICT, CORPS OF ENGINEERS

November 7, 2008

REPLY TO
ATTENTION OF:

Engineering & Technical Services
Regulatory Office
File No. LRE-2008-00547-157

Wawasee Area Conservancy Foundation
Diana Castell
Ecology Committee Chairperson
P.O. Box 548
Syracuse, Indiana 46567

Dear Ms. Castell:

This is in response to your request regarding a Department of the Army jurisdictional determination submitted on your behalf by V3 Companies of Illinois for property located east of State Road 5 and Village Lake and south of County Road 100 North, in Indian Village, Indiana (Section 32, Township 34N, Range 8E, Noble County).

In the St. Joseph River, its tributaries (including an unnamed tributary, Village Lake, Turkey Creek, Lake Wawasee, Syracuse Lake and the Elkhart River), as in all navigable waters of the United States, including their adjacent wetlands, any discharge of dredged and/or fill material must be authorized by the Department of the Army. The authority of the Corps of Engineers to regulate the discharge of dredged and/or fill material is contained in Section 404 of the Clean Water Act and regulations promulgated pursuant to that Act. Filling and grading work, mechanized landclearing, the sidecasting of excavated material, and the installation of certain pile-supported structures constitute or otherwise involve discharges of dredged and/or fill material under the Corps' regulatory authority.

Please be advised that the property in question does contain an unnamed tributary within the jurisdiction of the Corps of Engineers (see attached graphic). Any discharges of dredged and/or fill material into the wetlands on this property will require a Corps permit. This jurisdiction determination is valid for a period of five years from the date of this letter unless new information warrants revision of the delineation before the expiration date.

Should you anticipate work in this waterway, the necessary permit application can be found on our website at *www.lre.usace.army.mil/regulatory*. Plan view and cross-sectional view drawings, in 8 1/2" x 11" format, should accompany the application. Drawings and the application should include a description of all quantities, dimensions, and nature of material to be placed and soil to be moved within wetland areas. We also advise you to contact the Indiana Department of Environmental Management (IDEM) at 317-233-8488 to determine the applicability of state law to your project. A copy of this letter is being forwarded to the IDEM for its files.

Our assertion of jurisdiction is based on the following criteria: our documentation that the waterbody in question (unnamed tributary) flows to the St. Joseph River, a traditional navigable

water of the United States.

This letter contains an approved jurisdictional determination for the property in question. If you object to this determination, you may request an administrative appeal under Corps regulations at 33 Code of Federal Regulations (CFR) Part 331. We have enclosed a Notification of Appeal Process (NAP) fact sheet and a Request For Appeal (RFA) form. If you request to appeal this determination you must submit a completed RFA form to the Corps' Great Lakes and Ohio River Division office at following address:

Michael Montone
Appeals Review Officer
U.S. Army Corps of Engineers
Great Lakes and Ohio River Division
550 Main Street
Room 10032
Cincinnati, Ohio 45202-3222

In order for an RFA to be accepted by the Corps, the Corps must determine that the RFA is complete, that it meets the criteria for appeal under 33 CFR Part 331.5, and that it has been received by the Division office within 60 days of the date of the NAP sheet. If you decide to submit an RFA form, it must be received at the above address by January 7, 2009. It is not necessary to submit an RFA form to the Division office if you do not object to the determination in this letter. You may contact Mr. Montone at (513) 684-6212 and send him a facsimile at (513) 684-2460.

Thank you for giving us the opportunity to review this proposal. Should you have any questions, please contact me at the above address or telephone (574) 232-1952. Please refer to File No. LRE-2008-00547-157 in all future communications with this office.

Sincerely,

ORIGINAL SIGNED BY

Barbara H. Anderson
Project Manager
South Bend Field Office

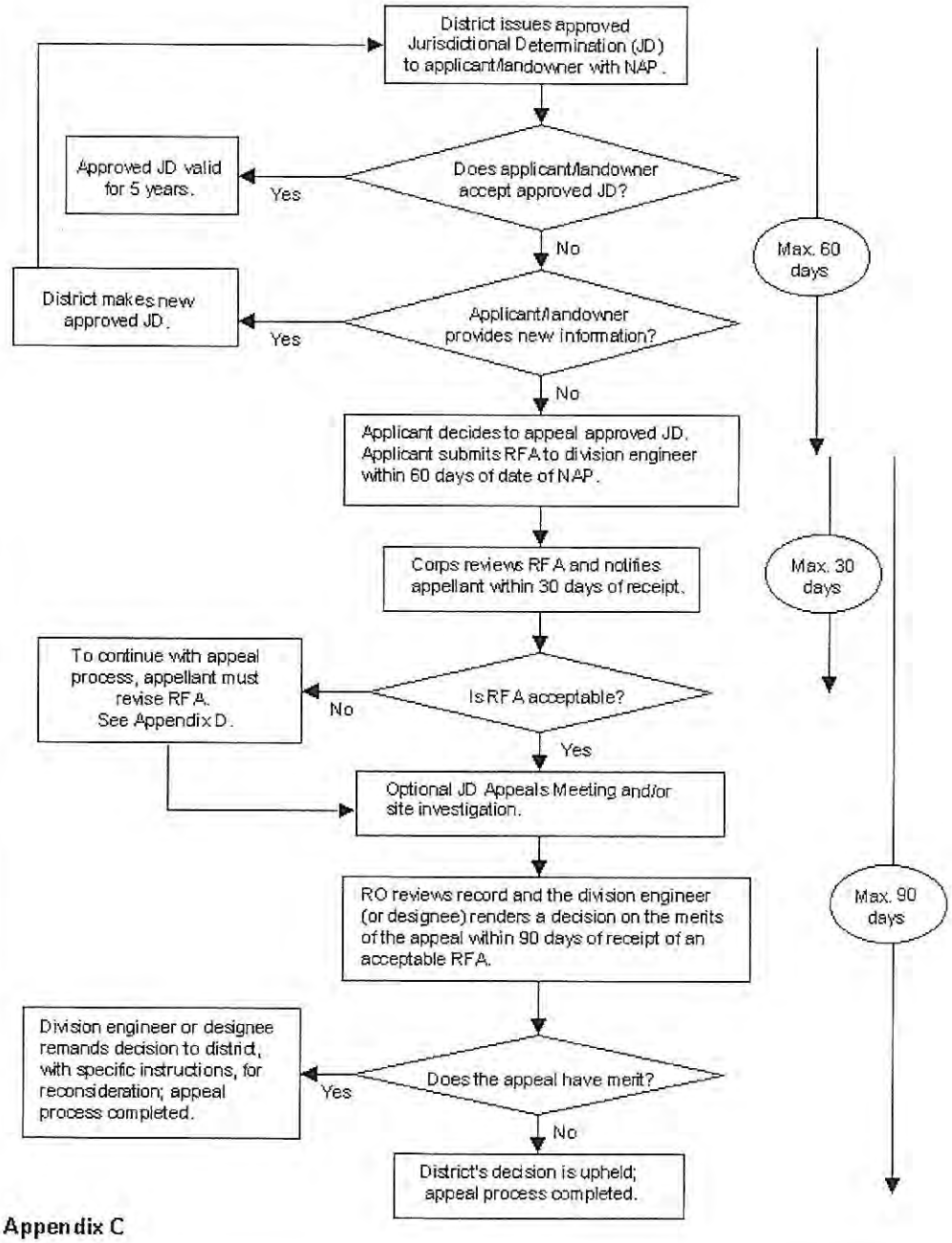
Enclosures

Site Map
Flowchart
NAP Document

Copies Furnished

IDEM (Brad Baldwin)
IDNR (Doug Nusbaum/LARE Program Specialist)
V3 Companies of Illinois (Carrie Pintar)

Administrative Appeal Process for Approved Jurisdictional Determinations



Appendix C

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant:		File Number: LRE-2008-00547-157	Date: 07 November, 2008
Attached is:			See Section below
	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)		A
	PROFFERED PERMIT (Standard Permit or Letter of permission)		B
	PERMIT DENIAL		C
X	APPROVED JURISDICTIONAL DETERMINATION		D
	PRELIMINARY JURISDICTIONAL DETERMINATION		E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at http://www.usace.army.mil/inet/functions/cw/cecwo/reg or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- OBJECT: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit.

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

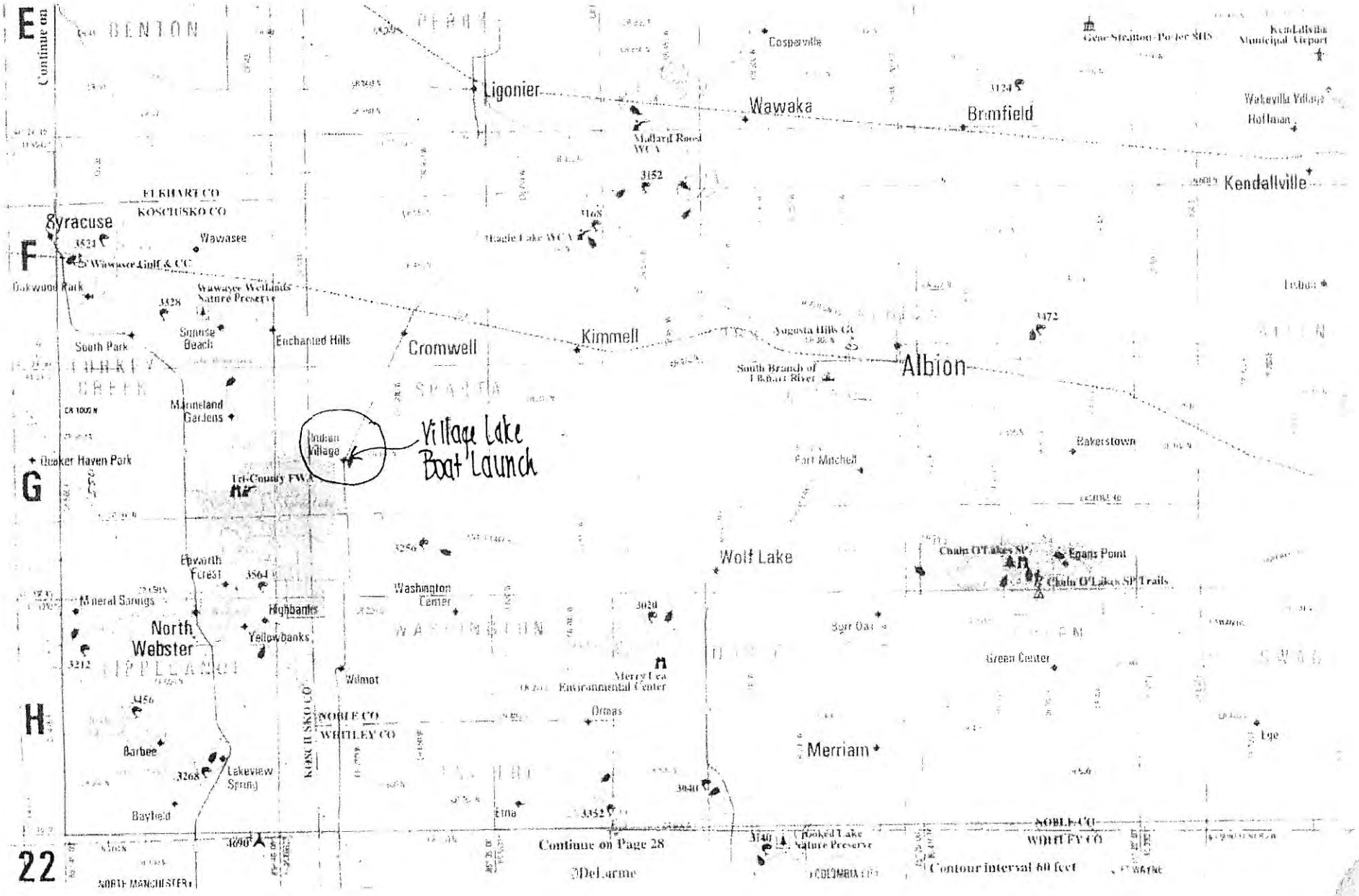
ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:	If you only have questions regarding the appeal process you may also contact:
Barbara Anderson Project Manager South Bend Field Office (5742) 232-1952	Mike Montone, Appeal Review Officer Great Lakes and Ohio River Division 550 Main Street, Room 10032 Cincinnati, Ohio 45202-3222 Tel. (513) 684-6212 Fax. (513) 684-2460

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

	Date:	Telephone number:
_____ Signature of appellant or agent.		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PERU
Ligonier
Cosperville
Wawaka
Bramfield
Kendallville
Hoffman
Syracuse
ELKHART CO
KOSCIUSKO CO
Wawasee
Wawasee Golf & CC
Oakwood Park
Wawasee Wetlands Nature Preserve
South Park
Sunrise Beach
Enchanted Hills
Cromwell
Kimmell
Albion
South Branch of Elkhart River
Maineland Gardens
Indian Village
Village Lake Boat Launch
Quaker Haven Park
Tri-County FWA
Fort Mitchell
Bakerstown
Wolf Lake
Chain O'Lakes SP
Egans Point
Chain O'Lakes SP Trails
Epworth Forest
Mineral Springs
Highbanks
Yellowbanks
North Webster
Washington Center
Merry Lea Environmental Center
Orinas
Burr Oak
Green Center
Wilmot
NOBLE CO
WHITLEY CO
KOSCIUSKO CO
Barbee
Lakeview Spring
Bayfield
Merriam
Ege
Etna
Hooked Lake Nature Preserve
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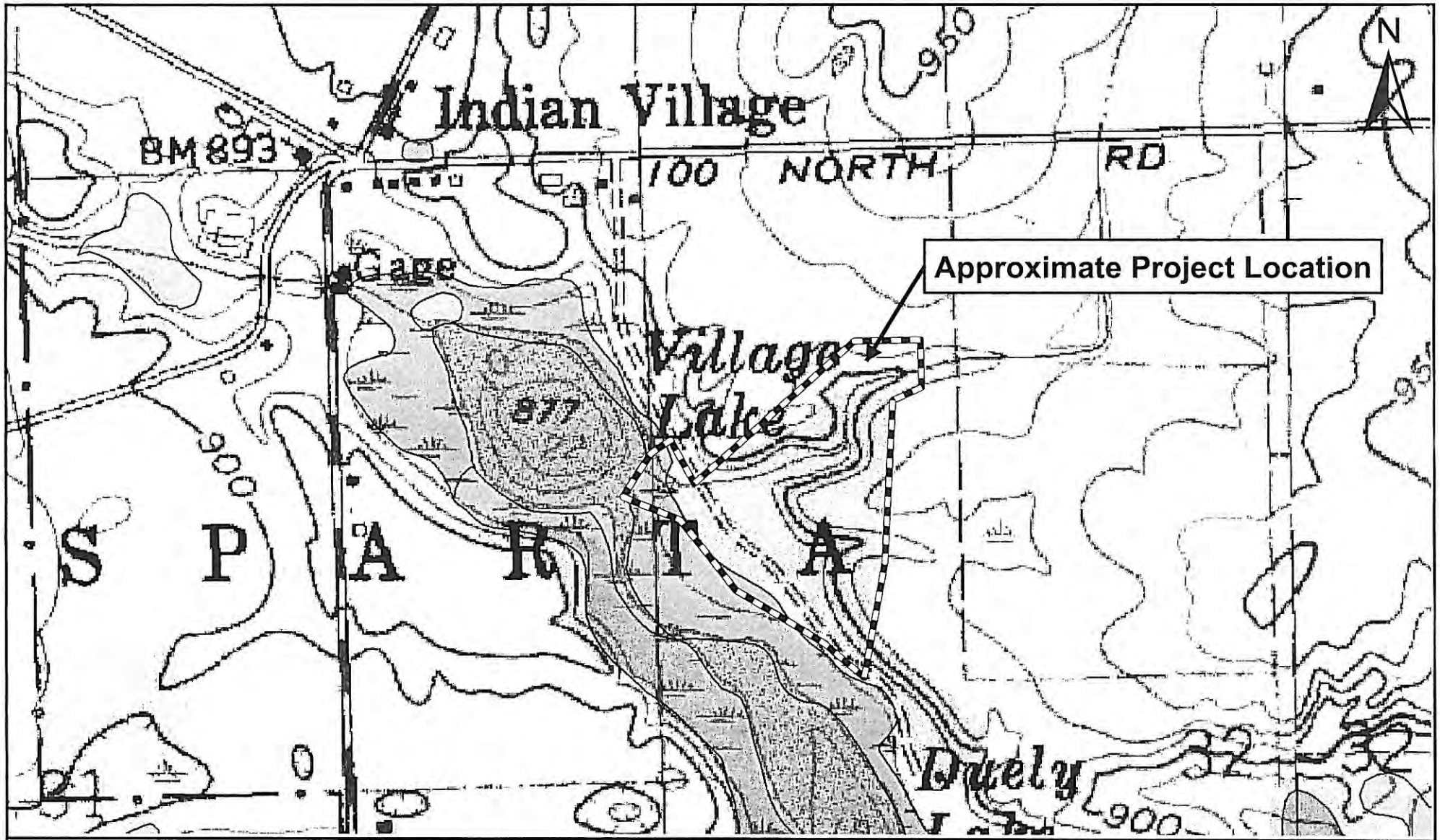
NORTH MANCHESTER



V3 Companies
7325 Janes Avenue
Woodridge, IL 60517
630.724.9200 phone
630.724.9202 fax
www.v3co.com

TITLE: National Wetland Inventory Map		PROJECT: Village Lake Tributary - Stream Erosion Project	
BASE LAYER: USGS Topographic Work Map		PROJECT NO.: 06037.03	EXHIBIT: 3	SHEET: 1 OF: 1
CLIENT: Wawasee Area Conservancy Foundation, P.O.Box 548, Syracuse, Indiana 46567		QUADRANGLE: North Webster	DATE: 01/23/2008	SCALE: NTS

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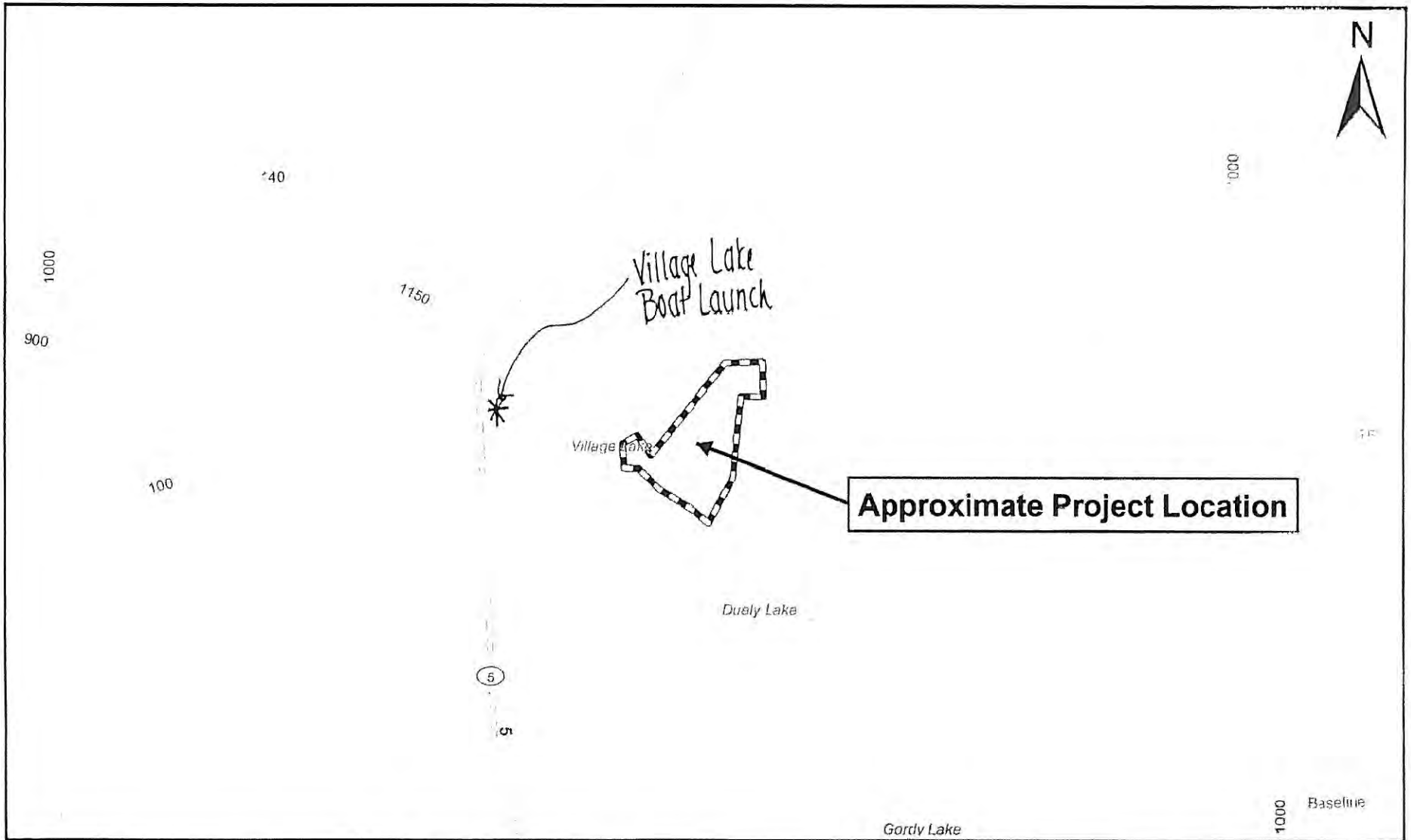


V3 Companies
7325 Janes Avenue
Woodridge, IL 60517
630.724.9200 phone
630.724.9202 fax
www.v3co.com

TITLE: Project Location Map		PROJECT: Village Lake Tributary - Stream Erosion Project	
BASE LAYER: StreetMap USA (2006)		PROJECT NO.: 06037.03	EXHIBIT: 2	SHEET: 1 OF: 1
CLIENT: Wawasee Area Conservancy Foundation, P.O.Box 548, Syracuse, Indiana 46567		QUADRANGLE: North Webster	DATE: 01/23/2008	SCALE: NTS

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
Toll Free (800) 451-6027
www.idem.IN.gov

February 25, 2009

VIA CERTIFIED MAIL 7002 0510 0002 7965 2367

Ms. Heather Harwood
Wawasee Area Conservancy Foundation
P.O. Box 548
Syracuse, IN 46567

Dear Ms. Harwood:

Re: IDEM Regional General Permit Notification Form
Out-of-Scope Determination
Project: Village Lake Sediment Basin
IDEM No.: 2009-066-57-BCB-X
County: Noble

The Office of Water Quality has reviewed your IDEM Regional General Permit (RGP) Notification Form dated January 31, 2009, and received February 3, 2009. According to the notification form, you propose to discharge course aggregate into Unnamed Tributary to Village Lake in order to construct a check dam that would retain water in a proposed 125' by 45' wide in-stream sediment basin for the purposes of downstream sedimentation control. The project is located in Section 32, Township 34 North, Range 8 East near Syracuse in Noble County.

It is the judgment of this office that the aforementioned project falls outside the scope of the terms and conditions of the IDEM Regional General Permit (RGP) Notification Form. You may wish to:

(1) revise the scope of the project so that it will meet the terms and conditions of the IDEM RGP Notification Form; or

(2) revise and/or correct your application to demonstrate that the project meets the terms and conditions of the RGP Notification Form

Should you choose either option, you are required to submit a new Regional General Permit Notification Form, with all required enclosures, for the aforementioned project. Please reference the IDEM ID number located at the top of this letter with any future submittals for this project. If you cannot make your project meet the terms and conditions of the IDEM Regional General Permit Notification Form, you must apply for a site-specific Individual Section 401 Water Quality Certification.

Based on submitted information, the Indiana Department of Environmental Management has determined that the application is incomplete and does not meet the scope of the IDEM Regional General Permit Notification Form. Specifically:

- Regional General Permit #1 Specific Condition 3 states that the activity will not permanently change the sinuosity, flow path, velocity, cross-sectional area under the bankfull elevation or the slope of the stream. Though you propose to discharge the material on a temporary basis, you have not defined what the proposed timeframe. Carrie Pintar, Project Manager with V3, stated that the structure could be in place a year or longer.
- Furthermore, you propose to use a water of the state for sediment treatment (pollution control), which would violate state water quality standards. Specifically, 327 IAC 2-1 Section 1.5 (Water Quality Goals) states the goal of the state is to restore and maintain the chemical, physical, and biological integrity of the waters of the state. 327 IAC 2-1 Section 2 (Maintenance of surface water quality standards) states the following policies of non-degradation are applicable to all surface waters of the state: (1) For all waters of the state, existing beneficial uses shall be maintained and protected. No degradation of water quality shall be permitted which would interfere with or become injurious to existing and potential uses. 327 IAC 2-1 Section 6 (Minimum surface water quality standards) states (a) The following are minimum surface water quality conditions: (1) All surface waters at all times and at all places, including waters within the mixing zone, shall meet the minimum conditions of being free from substances, materials, floating debris, oil, or scum attributable to municipal, industrial, agricultural, and other land use practices, or other discharges that do any of the following:
  (A) Will settle to form putrescent or otherwise objectionable deposits.
  (B) Are in amounts sufficient to be unsightly or deleterious.
  (C) Produce:
  (i) color;
  (ii) visible oil sheen;
  (iii) odor; or
  (iv) other conditions; in such degree as to create a nuisance.

Though IDEM understand the need to prevent downstream sedimentation into Village Lake, an existing water of the State can not be used to control the sediment. It would be possible to obtain an Individual 401 Water Quality Certification if you where to construct a sediment basin off-line of the stream in order to prevent sedimentation until the time that the upstream stabilization measures can be constructed.

The 345' of proposed bank shaping and stabilization appears to be above the Ordinary High Water Mark, and therefore would be outside of Section 401 jurisdiction upon concurrence with the Corps that a Section 404 permit would not be required.

Any unauthorized discharge of dredged or fill material into Waters of the State will be treated as a knowing and willful violation of Section 401 of the Clean Water Act and the Indiana Water Quality Standards (33 USC Sec. 1341, IC 13-18-4-5, and 327 IAC 2). Failure to comply with the terms and conditions of the aforementioned rules and regulations may result in enforcement action. **This letter does <u>NOT</u> authorize any discharges of dredged or fill material to Waters of the State.**

If you have any questions about this letter, contact me at 317-234-5647 or you may contact the Office of Water Quality through the Indiana Department of Environmental Management Helpline (1-800-451-6027).

Sincerely,

Brad Baldwin
Project Manager
Office of Water Quality

cc: Barb Anderson, USACE, Detroit District South Bend Field Office
Carrie Pintar, V3 Companies

United States Department of the Interior
Fish and Wildlife Service

Bloomington Field Office (ES)
620 South Walker Street
Bloomington, IN 47403-2121
Phone: (812) 334-4261 Fax: (812) 334-4273

July 3, 2008

Ms. Amy L. Halsall
V3 Companies LTD.
7325 Janes Avenue
Woodridge, Illinois 60517

Project: Village Lake Tributary Stream Erosion Control Project - 06037.03
Location: Village Lake, Indian village, Noble County

Dear Ms. Halsall:

This responds to your letter dated June 3, 2008, requesting our comments on the aforementioned project.

These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (16 U.S.C. 661 et. seq.) and are consistent with the intent of the National Environmental Policy Act of 1969, the Endangered Species Act of 1973, and the U. S. Fish and Wildlife Service's Mitigation Policy.

The proposed project involves some type of erosion control work along a small tributary on the east side of Village Lake in order to improve the lake's water quality. We hope this will involve bioengineering rather than riprap or other hard surfaces. However, since the project purpose is to improve the lake's water quality, we also recommend that the cattle from a adjacent farm not continue to be allowed unfettered access to the lake (Photograph No. 1).

The intermittent stream in question flows through a wooded area that may include some wetlands along the lake; otherwise, it is upland with some steep drops to the stream channel. Care must be taken to lessen tree clearing and ground disturbance of the highly erodible soils, which would only increase the sedimentation problems with the lake.

ENDANGERED SPECIES

The proposed project is within the range of the Federally endangered Indiana bat (Myotis sodalis) and the candidate eastern massasauga rattlesnake (Sistrurus catenatus catenatus). Although the eastern massasauga is known nearby at Tri-County Fish and Wildlife Area, we are not aware of its presence in the general project area. The woodland in the project area may provide suitable summer nursery habitat for the Indiana bat; therefore, any tree clearing needed for the project must take place when the bat would not be present, which is the time period between October 1 and April 1. With this stipulation adhered to, we agree that the proposed project is not likely to adversely affect this endangered species.

This precludes the need for further consultation on this project as required under Section 7 of the Endangered Species Act of 1973, as amended. However, should new information arise pertaining to project plans or a revised species list be published, it will be necessary for the Federal agency to reinitiate consultation.

We appreciate the opportunity to comment at this early stage of project planning. If you have any questions, please contact Elizabeth McCloskey at (219) 983-9753 or elizabeth_mccloskey@fws.gov.

Sincerely yours,

Elizabeth S. McCloskey

for Scott E. Pruitt
Supervisor

cc: Christie Stanifer, Environmental Coordinator, Division of Water, Indianapolis
Wawasee Area Conservancy Foundation, Syracuse, IN

Photograph No. 1. Village Lake on June 16, 2008, looking east across the lake from the public access site along SR 5 - the cattle are directly within the lake not far from the outlet of the stream where the erosion control work is proposed.

DNR

Indiana Department of Natural Resources

June 12, 2008

Ms. Amy L. Halsall
V3 Companies, Ltd.
7325 Janes Avenue
Woodridge, IL 60517

Dear Ms. Halsall:

I am responding to your request for information on the endangered, threatened, or rare (ETR) species, high quality natural communities, and natural areas documented from a project area, Village Lake Tributary, Stream Erosion Project 06037.03, Syracuse, Noble County, Indiana. The Indiana Natural Heritage Data Center has been checked and following you will find information on the ETR species documented from the project area.

1. There is a historical record from 1955 of the state species of special concern fish *Coregonus artedi*, cisco, documented in Village Lake. This population is reported as extirpated.

For more information on the animal species mentioned, please contact Christie Stanifer, Environmental Coordinator, Division of Water, 402 W. Washington Room W264, Indianapolis, Indiana 46204, (317)232-4160.

The information I am providing does not preclude the requirement for further consultation with the U.S. Fish and Wildlife Service as required under Section 7 of the Endangered Species Act of 1973. You should contact the Service at their Bloomington, Indiana office.

U.S. Fish and Wildlife Service
620 South Walker St.
Bloomington, Indiana 47403-2121
(812)334-4261

At some point, you may need to contact the Department of Natural Resources' Environmental Review Coordinator so that other divisions within the department have the opportunity to review your proposal. For more information, please contact:

Robert Carter Jr., Director
Department of Natural Resources
attn: Christie Stanifer
Environmental Coordinator
Division of Water
402 W. Washington Street, Room W264
Indianapolis, IN 46204
(317)232-4160

Please note that the Indiana Natural Heritage Data Center relies on the observations of many individuals for our data. In most cases, the information is not the result of comprehensive field surveys conducted at particular sites. Therefore, our statement that there are no documented significant natural features at a site should not be interpreted to mean that the site does not support special plants or animals.

Due to the dynamic nature and sensitivity of the data, this information should not be used for any project other than that for which it was originally intended. It may be necessary for you to request updated material from us in order to base your planning decisions on the most current information.

Thank you for contacting the Indiana Natural Heritage Data Center. You may reach me at (317)232-8059 if you have any questions or need additional information.

Sincerely,

Ronald P. Hellmich

Ronald P. Hellmich
Indiana Natural Heritage Data Center

enclosure: invoice

DNR

Indiana Department of Natural Resources

06037.03 W32A

INVOICE

CLIENT: Ms. Amy L. Halsall
V3 Companies, Ltd.
7325 Janes Avenue
Woodridge, IL 60517

DATE OF SERVICES RENDERED: June 12, 2008

INVOICE NUMBER: 08-278

SERVICES RENDERED: Provided Indiana Natural Heritage Data Center data on endangered, threatened, or rare species, and high quality natural communities of Indiana documented from a project area, Village Lake Tributary, Stream Erosion Project 06037.03, Syracuse, Noble County, Indiana.

INVOICE AMOUNT: $42.00

BY: Ronald P. Hellmich
FOR: Division of Nature Preserves
Indiana Department of Natural Resources
402 W. Washington St., Room W267
Indianapolis, IN 46204
(317)232-4052

Please make checks payable to Indiana Division of Nature Preserves.

Invoice payable upon receipt.

Send check to the attention of

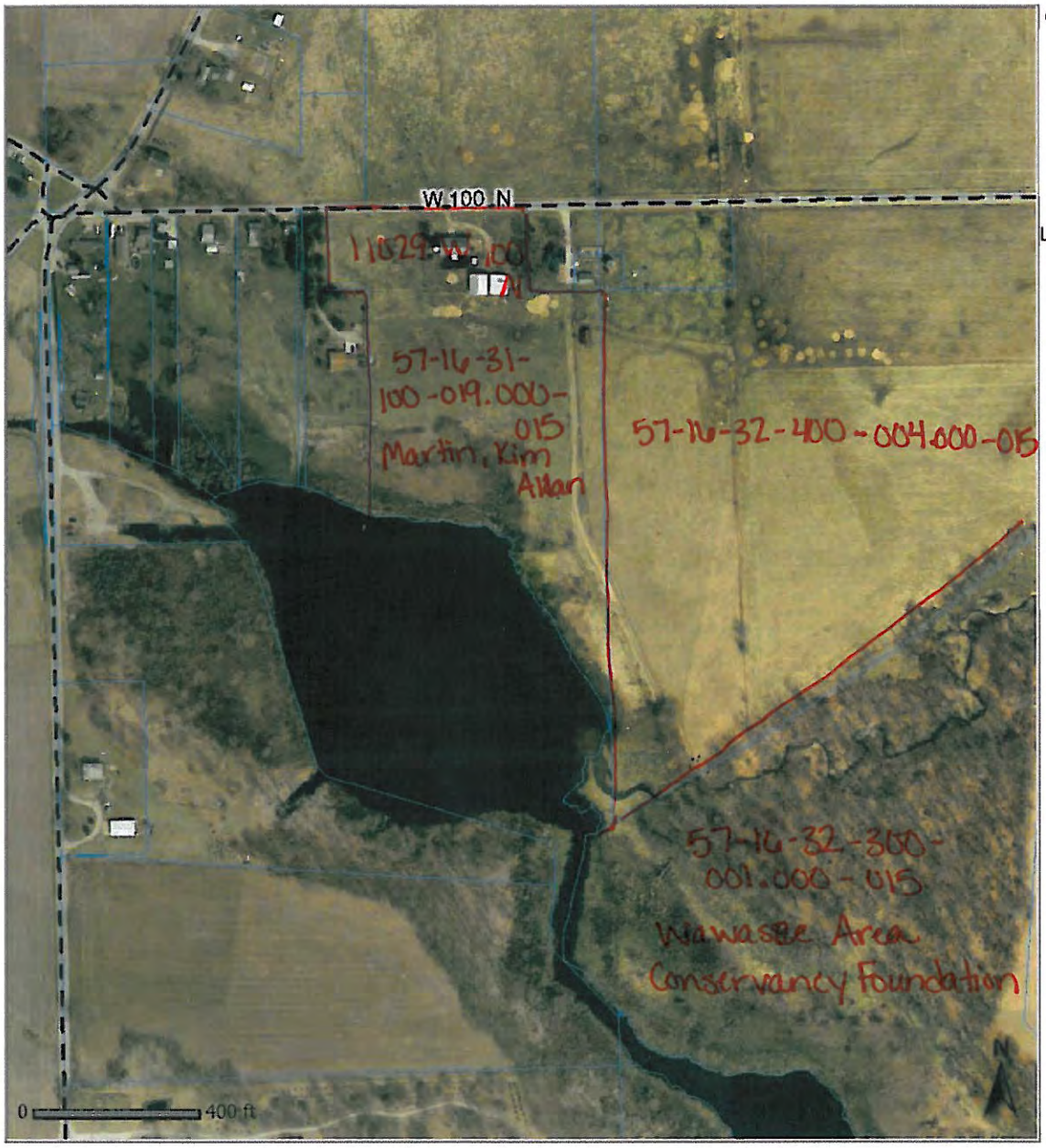
Ronald P. Hellmich
Division of Nature Preserves

SECTION 4

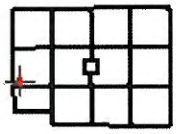
Noble County, IN

beacon™

Date Created: 1/15/2009
Map Scale: 1 in = 400 ft



Overview



Legend

- Township Boundaries
- Corporate Limits
- Railroads
- Parcels (Surveyor)
- Parcels
- Street Centerlines

Last Data Upload: 1/9/2009 2:35:16 PM

Schneider
developed by
The Schneider Corporation
www.schneidercorp.com

SECTION 5

Site: Village Lake
Locale: Creek below the road
By: AK, WL
File: e:\2006\06037\06037.03\Calculations & Data\Natural Resources\Natural Resources\Mangement and Monitoring\FQA\Area 1 - Creek DS of Road.inv

FLORISTIC QUALITY DATA	Native	43	84.3%	Adventive	8	15.7%
43 NATIVE SPECIES	Tree	2	3.9%	Tree	0	0.0%
51 Total Species	Shrub	2	3.9%	Shrub	0	0.0%
2.5 NATIVE MEAN C	W-Vine	0	0.0%	W-Vine	0	0.0%
2.1 W/Adventives	H-Vine	0	0.0%	H-Vine	0	0.0%
16.2 NATIVE FQI	P-Forb	21	41.2%	P-Forb	4	7.8%
14.8 W/Adventives	B-Forb	0	0.0%	B-Forb	1	2.0%
-3.0 NATIVE MEAN W	A-Forb	11	21.6%	A-Forb	1	2.0%
-2.9 W/Adventives	P-Grass	1	2.0%	P-Grass	1	2.0%
AVG: Fac. Wetland	A-Grass	1	2.0%	A-Grass	1	2.0%
	P-Sedge	5	9.8%	P-Sedge	0	0.0%
	A-Sedge	0	0.0%	A-Sedge	0	0.0%
	Fern	0	0.0%	Fern	0	0.0%

ACRONYM	C	SCIENTIFIC NAME	W	WETNESS	PHYSIOGNOMY	COMMON NAME
ACARHO	0	Acalypha rhomboidea	3	FACU	Nt A-Forb	THREE-SEEDED MERCURY
ACOCAL	0	ACORUS CALAMUS	-5	OBL	Ad P-Forb	EUROPEAN SWEET FLAG
AMBARE	0	Ambrosia artemisiifolia v. elatior	3	FACU	Nt A-Forb	COMMON RAGWEED
ASCINC	4	Asclepias incarnata	-5	OBL	Nt P-Forb	SWAMP MILKWEED
BIDCER	2	Bidens cernua	-5	OBL	Nt A-Forb	NODDING BUR MARIGOLD
BIDCOM	2	Bidens comosa	-5	OBL	Nt A-Forb	SWAMP TICKSEED
BIDFRO	1	Bidens frondosa	-3	FACW	Nt A-Forb	COMMON BEGGAR'S TICKS
CERDEM	1	Ceratophyllum demersum	-5	OBL	Nt P-Forb	COONTAIL
CICBUL	8	Cicuta bulbifera	-5	OBL	Nt P-Forb	BULBLET-BEARING WATER HEMLOCK
CIRARV	0	CIRSIUM ARVENSE	3	FACU	Ad P-Forb	FIELD THISTLE
CONCAN	0	Conyza canadensis	1	FAC-	Nt A-Forb	HORSEWEED
CORRAC	2	Cornus racemosa	-2	FACW-	Nt Shrub	GRAY DOGWOOD
CYPESL	0	Cyperus esculentus v. l.	-3	FACW	Nt P-Sedge	FIELD NUT SEDGE
CYPSTR	0	Cyperus strigosus	-3	FACW	Nt P-Sedge	LONG-SCALED NUT SEDGE
DAUCAR	0	DAUCUS CAROTA	4	FACU-	Ad B-Forb	QUEEN ANNE'S LACE
ECHCRU	0	ECHINOCHLOA CRUS-GALLI	-3	FACW	Ad A-Grass	BARNYARD GRASS
ELEACI	2	Eleocharis acicularis	-5	OBL	Nt P-Sedge	NEEDLE SPIKE RUSH
ELEERY	2	Eleocharis erythropoda	-5	OBL	Nt P-Sedge	RED-ROOTED SPIKE RUSH
ELOCAN	3	Elodea canadensis	-5	OBL	Nt P-Forb	COMMON WATERWEED
ERISTR	2	Erigeron strigosus	1	FAC-	Nt P-Forb	DAISY FLEABANE
EUPFIS	4	Eupatoriadelphus fistulosus	-5	OBL	Nt P-Forb	HOLLOW JOE PYE WEED
EUPPER	4	Eupatorium perfoliatum	-4	FACW+	Nt P-Forb	COMMON BONESET
EUTGRA	3	Euthamia graminifolia	-2	FACW-	Nt P-Forb	GRASS-LEAVED GOLDENROD
IMPPAL	4	Impatiens pallida	-3	FACW	Nt A-Forb	PALE TOUCH-ME-NOT
LEEORY	2	Leersia oryzoides	-5	OBL	Nt P-Grass	RICE CUT GRASS
LUDPOL	4	Ludwigia polycarpa	-5	OBL	Nt P-Forb	FALSE LOOSESTRIFE
LYCAME	3	Lycopus americanus	-5	OBL	Nt P-Forb	COMMON WATER HOREHOUND
MENARV	4	Mentha arvensis v. villosa	-3	FACW	Nt P-Forb	WILD MINT
MENPIP	0	MENTHA × PIPERITA	-5	OBL	Ad P-Forb	PEPPERMINT
NYMODT	6	Nymphaea odorata s. tuberosa	-5	OBL	Nt P-Forb	FRAGRANT WATER LILY
PANDIC	0	Panicum dichotomiflorum	-2	FACW-	Nt A-Grass	FALL PANICUM
PERHYR	0	PERSICARIA HYDROPIPER	-5	OBL	Ad A-Forb	WATER PEPPER
PERPEN	0	Persicaria pensylvanica	-4	FACW+	Nt A-Forb	PINKWEED
PERPUN	3	Persicaria punctata	-5	OBL	Nt A-Forb	SMARTWEED
PHAARU	0	PHALARIS ARUNDINACEA	-4	FACW+	Ad P-Grass	REED CANARY GRASS
PHYAME	0	Phytolacca americana	1	FAC-	Nt P-Forb	POKEWEED
PLARUG	0	Plantago rugelii	0	FAC	Nt A-Forb	RED-STALKED PLANTAIN
POPDEL	1	Populus deltoides	-1	FAC+	Nt Tree	EASTERN COTTONWOOD
POTCRI	0	POTAMOGETON CRISPUS	-5	OBL	Ad P-Forb	BEGINNER'S PONDWEED
POTNOD	4	Potamogeton nodosus	-5	OBL	Nt P-Forb	AMERICAN PONDWEED
PYCVIR	5	Pycnanthemum virginianum	-4	FACW+	Nt P-Forb	COMMON MOUNTAIN MINT
RANSCE	3	Ranunculus sceleratus	-5	OBL	Nt A-Forb	CURSED CROWFOOT
RUDLAC	3	Rudbeckia laciniata	-4	FACW+	Nt P-Forb	WILD GOLDEN GLOW
SAGLAT	3	Sagittaria latifolia	-5	OBL	Nt P-Forb	COMMON ARROWHEAD
SALAMY	4	Salix amygdaloides	-3	FACW	Nt Tree	PEACH-LEAVED WILLOW
SALHUM	5	Salix humilis	3	FACU	Nt Shrub	PRAIRIE WILLOW
SCIPEN	2	Scirpus pendulus	-5	OBL	Nt P-Sedge	RED BULRUSH
SENHEB	4	Senna hebecarpa	-3	FACW	Nt P-Forb	WILD SENNA
SOLALT	0	Solidago altissima	3	FACU	Nt P-Forb	TALL GOLDENROD
SYMLAN	3	Symphyotrichum lanceolatum	-5	OBL	Nt P-Forb	PANICLED ASTER
VERHAS	3	Verbena hastata	-4	FACW+	Nt P-Forb	BLUE VERVAIN

Site: Village Lake
Locale: Area 1 - Farthest Downstream Wetland
By: AK, WL
File: e:\2006\06037\06037.03\Calculations & Data\Natural Resources\Natural Resources\Mangement and Monitoring\FQA\Area 1 - Downstream Wetland.inv

FLORISTIC QUALITY DATA	Native	52	86.7%	Adventive	8	13.3%
52 NATIVE SPECIES	Tree	1	1.7%	Tree	0	0.0%
60 Total Species	Shrub	4	6.7%	Shrub	0	0.0%
3.8 NATIVE MEAN C	W-Vine	0	0.0%	W-Vine	0	0.0%
3.3 W/Adventives	H-Vine	0	0.0%	H-Vine	0	0.0%
27.5 NATIVE FQI	P-Forb	26	43.3%	P-Forb	2	3.3%
25.6 W/Adventives	B-Forb	0	0.0%	B-Forb	2	3.3%
-3.7 NATIVE MEAN W	A-Forb	8	13.3%	A-Forb	1	1.7%
-3.5 W/Adventives	P-Grass	2	3.3%	P-Grass	2	3.3%
AVG: Fac. Wetland (+)	A-Grass	0	0.0%	A-Grass	1	1.7%
	P-Sedge	7	11.7%	P-Sedge	0	0.0%
	A-Sedge	2	3.3%	A-Sedge	0	0.0%
	Fern	2	3.3%	Fern	0	0.0%

ACRONYM	C	SCIENTIFIC NAME	W	WETNESS	PHYSIOGNOMY	COMMON NAME
ACARHO	0	Acalypha rhomboidea	3	FACU	Nt A-Forb	THREE-SEEDED MERCURY
ACOCAL	0	ACORUS CALAMUS	-5	OBL	Ad P-Forb	EUROPEAN SWEET FLAG
AGRALA	0	AGROSTIS GIGANTEA	-3	FACW	Ad P-Grass	RED TOP
ALISUB	2	Alisma subcordatum	-5	OBL	Nt P-Forb	COMMON WATER PLANTAIN
AMBARE	0	Ambrosia artemisiifolia v. elatior	3	FACU	Nt A-Forb	COMMON RAGWEED
ASCINC	4	Asclepias incarnata	-5	OBL	Nt P-Forb	SWAMP MILKWEED
BIDCER	2	Bidens cernua	-5	OBL	Nt A-Forb	NODDING BUR MARIGOLD
BIDCOR	5	Bidens coronata	-5	OBL	Nt A-Forb	TALL SWAMP MARIGOLD
BOECYC	3	Boehmeria cylindrica	-5	OBL	Nt P-Forb	FALSE NETTLE
CALCAN	5	Calamagrostis canadensis	-5	OBL	Nt P-Grass	BLUE JOINT GRASS
CALSEP	1	Calystegia sepium	0	FAC	Nt P-Forb	AMERICAN BINDWEED
CAMAPA	8	Campanula aparinoides	-5	OBL	Nt P-Forb	MARSH BELLFLOWER
CXHYST	5	Carex hystericina	-5	OBL	Nt P-Sedge	PORCUPINE SEDGE
CXLACU	7	Carex lacustris	-5	OBL	Nt P-Sedge	COMMON LAKE SEDGE
CXSTRC	5	Carex stricta	-5	OBL	Nt P-Sedge	COMMON TUSSOCK SEDGE
CXTRBT	5	Carex tribuloides v. tribuloides	-4	FACW+	Nt P-Sedge	BROAD-LEAVED OVAL SEDGE
CHEGLB	7	Chelone glabra	-5	OBL	Nt P-Forb	WHITE TURTLEHEAD
CORRAC	2	Cornus racemosa	-2	FACW-	Nt Shrub	GRAY DOGWOOD
CYPBIP	3	Cyperus bipartitus	-5	OBL	Nt A-Sedge	SHINING FLAT SEDGE
DAUCAR	0	DAUCUS CAROTA	4	FACU-	Ad B-Forb	QUEEN ANNE'S LACE
DIPFUL	0	DIPSACUS FULLONUM	5	UPL	Ad B-Forb	COMMON TEASEL
ECHCRU	0	ECHINOCHLOA CRUS-GALLI	-3	FACW	Ad A-Grass	BARNYARD GRASS
ELEACI	2	Eleocharis acicularis	-5	OBL	Nt P-Sedge	NEEDLE SPIKE RUSH
EPICOL	3	Epilobium coloratum	-5	OBL	Nt P-Forb	CINNAMON WILLOW HERB
EUPFIS	4	Eupatoriadelphus fistulosus	-5	OBL	Nt P-Forb	HOLLOW JOE PYE WEED
EUPMAC	5	Eupatoriadelphus maculatus	-5	OBL	Nt P-Forb	SPOTTED JOE PYE WEED
EUPPER	4	Eupatorium perfoliatum	-4	FACW+	Nt P-Forb	COMMON BONESET
FRAPEP	3	Fraxinus pennsylvanica v. p.	-3	FACW	Nt Tree	RED ASH
GALOBT	5	Galium obtusum	-4	FACW+	Nt P-Forb	WILD MADDER
IMPCAP	2	Impatiens capensis	-3	FACW	Nt A-Forb	SPOTTED TOUCH-ME-NOT
IRIVIR	5	Iris virginica	-5	OBL	Nt P-Forb	SOUTHERN BLUE FLAG
LEEORY	2	Leersia oryzoides	-5	OBL	Nt P-Grass	RICE CUT GRASS
LYCAME	3	Lycopus americanus	-5	OBL	Nt P-Forb	COMMON WATER HOREHOUND
MENARV	4	Mentha arvensis v. villosa	-3	FACW	Nt P-Forb	WILD MINT
MIMRIN	4	Mimulus ringens	-5	OBL	Nt P-Forb	MONKEY FLOWER
ONOSEN	4	Onoclea sensibilis	-3	FACW	Nt Fern	SENSITIVE FERN
OSMCIN	9	Osmunda cinnamomea	-3	FACW	Nt Fern	CINNAMON FERN
PENSED	2	Penthorum sedoides	-5	OBL	Nt P-Forb	DITCH STONECROP
PERAMS	4	Persicaria amphibia v. stipulacea	-5	OBL	Nt P-Forb	WATER KNOTWEED
PERHYR	0	PERSICARIA HYDROPIPER	-5	OBL	Ad A-Forb	WATER PEPPER
PERPEN	0	Persicaria pensylvanica	-4	FACW+	Nt A-Forb	PINKWEED
PERPUN	3	Persicaria punctata	-5	OBL	Nt A-Forb	SMARTWEED
PHAARU	0	PHALARIS ARUNDINACEA	-4	FACW+	Ad P-Grass	REED CANARY GRASS
ROSBLA	4	Rosa blanda	3	FACU	Nt Shrub	EARLY WILD ROSE
RUMORB	7	Rumex orbiculatus v. borealis	-5	OBL	Nt P-Forb	GREAT WATER DOCK
SAGLAT	3	Sagittaria latifolia	-5	OBL	Nt P-Forb	COMMON ARROWHEAD
SALPET	6	Salix petiolaris	-5	OBL	Nt Shrub	MEADOW WILLOW
SCHACU	5	Schoenoplectus acutus	-5	OBL	Nt P-Sedge	HEARD-STEMMED BULRUSH

SCHPUN	3	Schoenoplectus pungens	-5	OBL	Nt	A-Sedge	THREE-SQUARE CLUB BULRUSH
SCICYP	4	Scirpus cyperinus	-5	OBL	Nt	P-Sedge	WOOL GRASS
SENHEB	4	Senna hebecarpa	-3	FACW	Nt	P-Forb	WILD SENNA
SOLGIG	4	Solidago gigantea	-3	FACW	Nt	P-Forb	LATE GOLDENROD
SPAEUR	5	Sparganium eurycarpum	-5	OBL	Nt	P-Forb	COMMON BUR REED
SPIALB	4	Spiraea alba	-4	FACW+	Nt	Shrub	MEADOWSWEET
SYMLAN	3	Symphyotrichum lanceolatum	-5	OBL	Nt	P-Forb	PANICLED ASTER
TYPANG	0	TYPHA ANGUSTIFOLIA	-5	OBL	Ad	P-Forb	NARROW-LEAVED CATTAIL
VERHAS	3	Verbena hastata	-4	FACW+	Nt	P-Forb	BLUE VERVAIN
VERFAS	5	Vernonia fasciculata	-3	FACW	Nt	P-Forb	COMMON IRONWEED
VICAME	6	Vicia americana	5	UPL	Nt	P-Forb	AMERICAN VETCH
XANSTR	0	Xanthium strumarium	0	FAC	Nt	A-Forb	COCKLEBUR

Site: Village Lake
Locale: Area 2 - Stream Channel
By: AK, WL
File: e:\2006\06037\06037.03\Calculations & Data\Natural Resources\Natural Resources\Mangement and Monitoring\FQA\Area 2 - Creek.inv

FLORISTIC QUALITY DATA		Native	17	70.8%	Adventive	7	29.2%
17	NATIVE SPECIES	Tree	2	8.3%	Tree	2	8.3%
24	Total Species	Shrub	3	12.5%	Shrub	0	0.0%
3.0	NATIVE MEAN C	W-Vine	0	0.0%	W-Vine	1	4.2%
2.1	W/Adventives	H-Vine	0	0.0%	H-Vine	0	0.0%
12.4	NATIVE FQI	P-Forb	5	20.8%	P-Forb	0	0.0%
10.4	W/Adventives	B-Forb	0	0.0%	B-Forb	1	4.2%
-1.3	NATIVE MEAN W	A-Forb	6	25.0%	A-Forb	0	0.0%
-1.2	W/Adventives	P-Grass	1	4.2%	P-Grass	1	4.2%
AVG: Faculative (+)		A-Grass	0	0.0%	A-Grass	2	8.3%
		P-Sedge	0	0.0%	P-Sedge	0	0.0%
		A-Sedge	0	0.0%	A-Sedge	0	0.0%
		Fern	0	0.0%	Fern	0	0.0%

ACRONYM	C	SCIENTIFIC NAME	W	WETNESS	PHYSIOGNOMY	COMMON NAME
ALLPET	0	ALLIARIA PETIOLATA	0	FAC	Ad B-Forb	GARLIC MUSTARD
AMBARE	0	Ambrosia artemisiifolia v. elatior	3	FACU	Nt A-Forb	COMMON RAGWEED
AMBTRI	0	Ambrosia trifida	-1	FAC+	Nt A-Forb	GIANT RAGWEED
BIDFRO	1	Bidens frondosa	-3	FACW	Nt A-Forb	COMMON BEGGAR'S TICKS
CORRAC	2	Cornus racemosa	-2	FACW-	Nt Shrub	GRAY DOGWOOD
ECHCRU	0	ECHINOCHLOA CRUS-GALLI	-3	FACW	Ad A-Grass	BARNYARD GRASS
EUTGRA	3	Euthamia graminifolia	-2	FACW-	Nt P-Forb	GRASS-LEAVED GOLDENROD
GYMDIO	4	Gymnocladus dioica	5	UPL	Nt Tree	KENTUCKY COFFEE TREE
IMPCAP	2	Impatiens capensis	-3	FACW	Nt A-Forb	SPOTTED TOUCH-ME-NOT
LEEORY	2	Leersia oryzoides	-5	OBL	Nt P-Grass	RICE CUT GRASS
MORALB	0	MORUS ALBA	0	FAC	Ad Tree	WHITE MULBERRY
OSTVIR	5	Ostrya virginiana	4	FACU-	Nt Tree	HOP HORNBEAM
PHAARU	0	PHALARIS ARUNDINACEA	-4	FACW+	Ad P-Grass	REED CANARY GRASS
PILPUM	2	Pilea pumila	-3	FACW	Nt A-Forb	CANADA CLEARWEED
RHAALN	10	Rhamnus alnifolia	-5	OBL	Nt Shrub	ALDER BUCKTHORN
SALFRA	0	SALIX FRAGILIS	-1	FAC+	Ad Tree	CRACK WILLOW
SCRLAN	5	Scrophularia lanceolata	2	FACU+	Nt P-Forb	EARLY FIGWORT
SENHEB	4	Senna hebecarpa	-3	FACW	Nt P-Forb	WILD SENNA
SETFAB	0	SETARIA FABERI	2	FACU+	Ad A-Grass	GIANT FOXTAIL GRASS
SOLDUL	0	SOLANUM DULCAMARA	0	FAC	Ad W-Vine	BITTERSWEET NIGHTSHADE
SYMLAN	3	Symphyotrichum lanceolatum	-5	OBL	Nt P-Forb	PANICLED ASTER
VERALT	3	Verbesina alternifolia	-3	FACW	Nt P-Forb	WINGSTEM
VIBLEN	5	Viburnum lentago	-1	FAC+	Nt Shrub	NANNYBERRY
XANSTR	0	Xanthium strumarium	0	FAC	Nt A-Forb	COCKLEBUR

Site: Village Lake
Locale: Area 3 - creek bottom outside of property
By: AK, WL
File: e:\2006\06037\06037.03\Calculations & Data\Natural Resources\Natural Resources\Mangement and Monitoring\FQA\Area 3- Creek bottom outside of property.inv

FLORISTIC QUALITY DATA	Native	16	84.2%	Adventive	3	15.8%
16 NATIVE SPECIES	Tree	0	0.0%	Tree	0	0.0%
19 Total Species	Shrub	2	10.5%	Shrub	0	0.0%
2.5 NATIVE MEAN C	W-Vine	0	0.0%	W-Vine	0	0.0%
2.1 W/Adventives	H-Vine	0	0.0%	H-Vine	0	0.0%
10.0 NATIVE FQI	P-Forb	7	36.8%	P-Forb	1	5.3%
9.2 W/Adventives	B-Forb	1	5.3%	B-Forb	0	0.0%
-2.2 NATIVE MEAN W	A-Forb	3	15.8%	A-Forb	0	0.0%
-2.3 W/Adventives	P-Grass	1	5.3%	P-Grass	1	5.3%
AVG: Fac. Wetland (-)	A-Grass	1	5.3%	A-Grass	1	5.3%
	P-Sedge	1	5.3%	P-Sedge	0	0.0%
	A-Sedge	0	0.0%	A-Sedge	0	0.0%
	Fern	0	0.0%	Fern	0	0.0%

ACRONYM	C	SCIENTIFIC NAME	W	WETNESS	PHYSIOGNOMY	COMMON NAME
AMBTRI	0	Ambrosia trifida	-1	FAC+	Nt A-Forb	GIANT RAGWEED
BIDVUL	0	Bidens vulgata	-3	FACW	Nt A-Forb	TALL BEGGAR'S TICKS
BOECYC	3	Boehmeria cylindrica	-5	OBL	Nt P-Forb	FALSE NETTLE
CICMAC	6	Cicuta maculata	-5	OBL	Nt B-Forb	WATER HEMLOCK
CORRAC	2	Cornus racemosa	-2	FACW-	Nt Shrub	GRAY DOGWOOD
ECHCRU	0	ECHINOCHLOA CRUS-GALLI	-3	FACW	Ad A-Grass	BARNYARD GRASS
EUTGRA	3	Euthamia graminifolia	-2	FACW-	Nt P-Forb	GRASS-LEAVED GOLDENROD
KRIDAN	8	Krigia dandelion	3	FACU	Nt P-Forb	POTATO DWARF DANDELION
LEEORY	2	Leersia oryzoides	-5	OBL	Nt P-Grass	RICE CUT GRASS
PANDIC	0	Panicum dichotomiflorum	-2	FACW-	Nt A-Grass	FALL PANICUM
PERLAP	0	Persicaria lapathifolia	-4	FACW+	Nt A-Forb	CURYTOP LADY'S THUMB
PHAARU	0	PHALARIS ARUNDINACEA	-4	FACW+	Ad P-Grass	REED CANARY GRASS
RUDLAC	3	Rudbeckia laciniata	-4	FACW+	Nt P-Forb	WILD GOLDEN GLOW
SAMNIC	2	Sambucus nigra s. canadensis	4	FACU-	Nt Shrub	COMMON ELDERBERRY
SCHACU	5	Schoenoplectus acutus	-5	OBL	Nt P-Sedge	HEARD-STEMMED BULRUSH
SOLALT	0	Solidago altissima	3	FACU	Nt P-Forb	TALL GOLDENROD
SYMLAN	3	Symphyotrichum lanceolatum	-5	OBL	Nt P-Forb	PANICLED ASTER
URTDID	0	URTICA DIOICA s. DIOICA	-1	FAC+	Ad P-Forb	TALL NETTLE
VERALT	3	Verbesina alternifolia	-3	FACW	Nt P-Forb	WINGSTEM

Site: Village Lake
Locale: Area 4 - small trib to left looking US
By: AK, WL
File: e:\2006\06037\06037.03\Calculations & Data\Natural Resources\Natural Resources\Mangement and Monitoring\FQA\Area 4 - Trib to the left looking US.inv

FLORISTIC QUALITY DATA	Native	7	100.0%	Adventive	0	0.0%
7 NATIVE SPECIES	Tree	0	0.0%	Tree	0	0.0%
7 Total Species	Shrub	1	14.3%	Shrub	0	0.0%
1.6 NATIVE MEAN C	W-Vine	0	0.0%	W-Vine	0	0.0%
1.6 W/Adventives	H-Vine	0	0.0%	H-Vine	0	0.0%
4.2 NATIVE FQI	P-Forb	3	42.9%	P-Forb	0	0.0%
4.2 W/Adventives	B-Forb	0	0.0%	B-Forb	0	0.0%
-1.6 NATIVE MEAN W	A-Forb	2	28.6%	A-Forb	0	0.0%
-1.6 W/Adventives	P-Grass	1	14.3%	P-Grass	0	0.0%
AVG: Fac. Wetland (-)	A-Grass	0	0.0%	A-Grass	0	0.0%
	P-Sedge	0	0.0%	P-Sedge	0	0.0%
	A-Sedge	0	0.0%	A-Sedge	0	0.0%
	Fern	0	0.0%	Fern	0	0.0%

ACRONYM	C	SCIENTIFIC NAME	W	WETNESS	PHYSIOGNOMY	COMMON NAME
AGEALT	2	Ageratina altissima	3	FACU	Nt P-Forb	WHITE SNAKEROOT
AMBTRI	0	Ambrosia trifida	-1	FAC+	Nt A-Forb	GIANT RAGWEED
BIDVUL	0	Bidens vulgata	-3	FACW	Nt A-Forb	TALL BEGGAR'S TICKS
BOECYC	3	Boehmeria cylindrica	-5	OBL	Nt P-Forb	FALSE NETTLE
LEEORY	2	Leersia oryzoides	-5	OBL	Nt P-Grass	RICE CUT GRASS
RUBOCC	1	Rubus occidentalis	3	FACU	Nt Shrub	BLACK RASPBERRY
VERALT	3	Verbesina alternifolia	-3	FACW	Nt P-Forb	WINGSTEM

SECTION 6

FINAL ENGINEERING PLANS
FOR
VILLAGE LAKE STREAM STABILIZATION
SYRACUSE, INDIANA

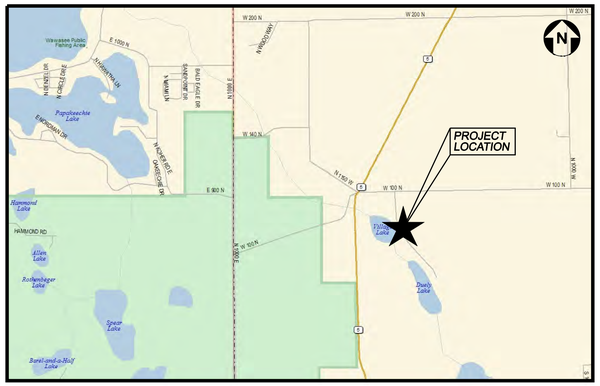
PROJECT TEAM

OWNER

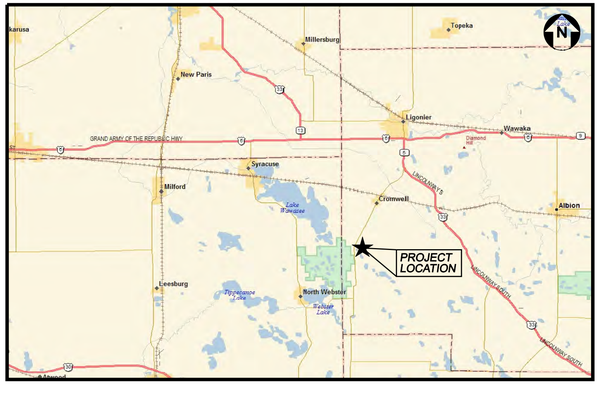
Wawasee Area Conservancy Foundation
P.O. Box 548
Syracuse, Indiana 46567
574 457 4549 voice
Contact: Heather Harwood

ENGINEER

V3 Companies of Illinois
7325 Janes Avenue
Woodridge, Illinois 60517
630 724 9200 voice
630 724 9202 fax
Project Manager: Carrie Pintar, P.E., CFM, CPESC
Design Engineer: Jessica Spurlock, P.E., CFM, CPESC



LOCATION MAP
NO SCALE



VICINITY MAP
NO SCALE

INDEX OF DRAWINGS

	TITLE SHEET
1.0	GENERAL NOTES AND SPECIFICATIONS
2.0	TRIBUTARY STABILIZATION PLAN
3.0	CONSTRUCTION DETAILS

V3 Companies
7325 Janes Avenue
Woodridge, IL 60517
630.724.9200 phone
630.724.9202 fax
www.v3co.com

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PER INDIANA STATE LAW IC8-1-26, IT IS AGAINST THE LAW TO EXCAVATE WITHOUT NOTIFYING THE UNDERGROUND LOCATION SERVICE TWO (2) WORKING DAYS BEFORE COMMENCING WORK.

REVISIONS

NO.	DATE	DESCRIPTION	SHEETS REVISED	REV. BY
1	01/07/09	REVISED FOR PERMIT SUBMITTALS	ALL	CAP / JAS
2	05/04/09	REVISED TO EXCLUDE SEDIMENT BASIN	2.0,3.0	CAP / JAS
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ORIGINAL ISSUE DATE: October 1, 2008

PROFESSIONAL ENGINEER'S CERTIFICATION

I, CARRIE A. PINTAR, A LICENSED PROFESSIONAL ENGINEER OF INDIANA, HEREBY CERTIFY THAT THIS SUBMISSION WAS PREPARED ON BEHALF OF THE WAWASEE AREA CONSERVANCY FOUNDATION BY V3 COMPANIES UNDER MY PERSONAL DIRECTION. THIS TECHNICAL SUBMISSION IS INTENDED TO BE USED AS AN INTEGRAL PART OF AND IN CONJUNCTION WITH THE PROJECT SPECIFICATIONS AND CONTRACT DOCUMENTS.

DATED THIS _____ DAY OF _____ , A.D., 2009.

_____
INDIANA LICENSED PROFESSIONAL ENGINEER

06037.03 - VILLAGE LAKE STREAM STABILIZATION

** THIS DOCUMENT IS THE PROPERTY OF V3 COMPANIES AND NO PART HEREIN SHALL BE USED EXCEPT FOR THIS SPECIFIC PROJECT WITHOUT THE WRITTEN CONSENT OF V3 COMPANIES. **

E:\2006\06037\06037.03\Drawings\Main\Tlsht06037.03.dgn 5/4/2009 9:26:41 AM

GENERAL NOTES

1. THESE CONSTRUCTION PLANS AND GENERAL CONDITIONS ARE ALL TO BE CONSIDERED AS PART OF THE CONTRACT DOCUMENTS. INCIDENTAL ITEMS OR ACCESSORIES NECESSARY TO COMPLETE THIS WORK MAY NOT BE SPECIFICALLY NOTED BUT ARE TO BE CONSIDERED A PART OF THE CONTRACT.

2. THE WORK TO BE PERFORMED UNDER THIS CONTRACT SHALL INCLUDE ALL THE NECESSARY LABOR. EQUIPMENT. AND MATERIALS REQUIRED TO INSTALL THE PROPOSED LANDSCAPING AND ALL APPURTENANCES AS SHOWN ON THE PLANS AND AS DESCRIBED IN THESE SPECIFICATIONS.

3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SAFE AND HEALTHFUL WORKING CONDITIONS THROUGHOUT THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS. THE CONTRACTOR MUST. THEREFORE. BE FAMILIAR WITH AND ADHERE TO THE MINIMUM SAFETY STANDARDS AS SET FORTH IN PUBLIC LAW 91-596 ADMINISTERED BY THE DEPARTMENT OF LABOR OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION AND AS FURTHER DEFINED IN PART 1926 OF TITLE 29 CODE OF THE FEDERAL REGULATIONS ENTITLED "SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION".

4. PRIOR TO COMMENCEMENT OF ANY OFF-SITE CONSTRUCTION. THE CONTRACTOR SHALL SECURE WRITTEN AUTHORIZATION THAT ALL OFF-SITE EASEMENTS HAVE BEEN SECURED. AND THAT PERMISSION HAS BEEN GRANTED TO ENTER ONTO PRIVATE PROPERTY OR PUBLIC RIGHT-OF-WAY.

5. WHERE SECTION OR SUB-SECTION MONUMENTS AND PROPERTY OF REFERENCE MARKERS ARE ENCOUNTERED THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS OR MARKERS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL MONUMENTS OR MARKERS UNTIL AN AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION. THE CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING A REGISTERED LAND SURVEYOR TO RE-ESTABLISH ANY MONUMENTS OR MARKERS DESTROYED BY HIS OPERATIONS.

6. CONSTRUCTION SHALL NOT BLOCK OFF-SITE DRAINAGE.

7. ELECTRIC. TELEPHONE. NATURAL GAS. AND OTHER UTILITY COMPANIES MAY HAVE UNDERGROUND AND/OR OVERHEAD SERVICE FACILITIES IN THE VICINITY OF THE PROPOSED WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING THE UTILITY COMPANIES LOCATE THEIR FACILITIES IN THE FIELD PRIOR TO CONSTRUCTION AND SHALL ALSO BE RESPONSIBLE FOR THE MAINTENANCE AND PRESERVATION OF THESE FACILITIES.

8. THE CONTRACTOR SHALL CALL TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE ANY ERRORS OR DISCREPANCIES WHICH MAY BE SUSPECTED IN LINES AND GRADES WHICH ARE ESTABLISHED BY THE OWNER. AND SHALL NOT PROCEED WITH THE WORK UNTIL ANY LINES AND GRADES WHICH ARE BELIEVED TO BE IN ERROR HAVE BEEN VERIFIED OR CORRECTED BY THE OWNER'S REPRESENTATIVE.

9. ALL EXISTING SITE TOPOGRAPHY SHOWN ON THE DRAWINGS WAS OBTAINED FROM GPS FIELD MEASUREMENTS PROVIDED BY:

   V3 COMPANIES
   7325 JANES AVENUE
   WOODRIDGE. ILLINOIS 60517
   TEL: 630.724.9200

10. ALL EXISTING TOPOGRAPHY. UNDERGROUND UTILITIES. STRUCTURES. AND ASSOCIATED FACILITIES SHOWN ON THESE DRAWINGS HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORDS. THEREFORE. THEIR LOCATIONS AND ELEVATIONS MUST BE CONSIDERED APPROXIMATE ONLY. THERE MAY BE OTHER FACILITIES. THE EXISTENCE OF WHICH ARE NOT PRESENTLY KNOWN. CONTRACTOR IS TO VERIFY ALL EXISTING STRUCTURES AND FACILITIES AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO STARTING HIS WORK.

11. PRIOR TO COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AFFECTING THEIR WORK WITH THE ACTUAL CONDITIONS AT THE JOB SITE. IF THERE ARE ANY DISCREPANCIES FROM WHAT IS SHOWN ON THE CONSTRUCTION PLANS. HE MUST IMMEDIATELY REPORT SAME TO THE ENGINEER BEFORE DOING ANY WORK. OTHERWISE THE CONTRACTOR ASSUMES FULL RESPONSIBILITY. IN THE EVENT OF DISAGREEMENT BETWEEN THE CONSTRUCTION PLANS. STANDARD SPECIFICATIONS AND/OR SPECIAL DETAILS. THE CONTRACTOR SHALL SECURE WRITTEN INSTRUCTIONS FROM THE ENGINEER PRIOR TO PROCEEDING WITH ANY PART OF THE WORK AFFECTED BY OMISSIONS OR DISCREPANCIES. FAILING TO SECURE SUCH INSTRUCTION. THE CONTRACTOR WILL BE CONSIDERED TO HAVE PROCEEDED AT HIS OWN RISK AND EXPENSE. IN THE EVENT OF ANY DOUBT OR QUESTION ARISING WITH RESPECT TO THE TRUE MEANING OF THE CONSTRUCTION PLANS OR SPECIFICATIONS. THE DECISION OF THE ENGINEER SHALL BE FINAL AND CONCLUSIVE.

12. ALL WORK PERFORMED UNDER THIS CONTRACT SHALL BE GUARANTEED AGAINST ALL DEFECTS IN MATERIALS AND WORKMANSHIP OF WHATEVER NATURE BY THE CONTRACTOR AND HIS SURETY FOR A PERIOD OF 12 MONTHS FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK BY THE WAWASEE AREA CONSERVANCY FOUNDATION (WACF) AND APPLICABLE GOVERNMENTAL AGENCIES.

13. THE CONTRACTOR SHALL INFORM THE ENGINEER AND THE WACF BEFORE WORK COMMENCES ON EACH CATEGORY OF CONSTRUCTION. (I.E.. SEDIMENT BASIN. TRIBUTARY STABILIZATION)

14. BEFORE ACCEPTANCE BY THE WACF AND FINAL PAYMENT. ALL WORK SHALL BE INSPECTED AND APPROVED BY THE OWNER OR HIS REPRESENTATIVE. FINAL PAYMENT WILL BE MADE AFTER ALL OF THE CONTRACTOR'S WORK HAS BEEN APPROVED AND ACCEPTED. AND IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

15. UPON AWARD OF THE CONTRACT AND WHEN REQUIRED BY THE OWNER. THE CONTRACTOR SHALL FURNISH A LABOR. MATERIAL. AND PERFORMANCE BOND IN THE PENAL SUM OF 100 PERCENT OF THE CONTRACT GUARANTEEING COMPLETION OF THE WORK. THE UNDERWRITER SHALL BE ACCEPTABLE TO THE OWNER.

16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS FOR CONSTRUCTION ALONG OR ACROSS EXISTING STREETS OR HIGHWAYS. HE SHALL MAKE ARRANGEMENTS FOR THE PROPER BRACING. SHORING. AND OTHER REQUIRED PROTECTION OF ALL ROADWAYS BEFORE CONSTRUCTION BEGINS. HE SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THE STREETS OR ROADWAYS. AND ASSOCIATED STRUCTURES. AND SHALL MAKE REPAIRS AS NECESSARY TO THE SATISFACTION OF THE ENGINEER.

17. EASEMENTS FOR THE EXISTING UTILITIES. BOTH PUBLIC AND PRIVATE. AND UTILITIES WITHIN PUBLIC RIGHTS-OF-WAY ARE SHOWN ON THE PLANS ACCORDING TO AVAILABLE RECORDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION IN THE FIELD OF THESE UTILITY LINES AND THEIR PROTECTION FROM DAMAGE DUE TO CONSTRUCTION OPERATIONS. IF EXISTING UTILITY LINES OF ANY NATURE ARE ENCOUNTERED WHICH CONFLICT IN LOCATION WITH NEW CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY SO THAT THE CONFLICT MAY BE RESOLVED.

18. WHENEVER THE PERFORMANCE OF WORK IS INDICATED ON THE PLANS. AND NO ITEM IS INCLUDED IN THE CONTRACT FOR PAYMENT. THE WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED UNLESS APPROVED BY THE OWNER.

19. WHENEVER. DURING CONSTRUCTION OPERATIONS. ANY LOOSE MATERIAL IS DEPOSITED IN THE FLOW LINE OF GUTTERS. DRAINAGE STRUCTURES. DITCHES. ETC. SUCH THAT THE NATURAL FLOW LINE OF WATER IS OBSTRUCTED. THIS LOOSE MATERIAL SHALL BE REMOVED AT THE CLOSE OF EACH WORKING DAY BY THE RESPONSIBLE PARTY. AT THE CONCLUSION OF CONSTRUCTION OPERATIONS. ALL DRAINAGE STRUCTURES AND FLOW LINES SHALL BE FREE FROM DIRT AND DEBRIS. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

20. WHERE OVERHANGING BRANCHES INTERFERE WITH OPERATIONS OF CONSTRUCTION. SAID BRANCHES SHALL BE TRIMMED AND SEALED AND THE COST OF SAME SHALL BE INCIDENTAL TO THE CONTRACT. TREES SHALL BE REMOVED ONLY AFTER RECEIVING APPROVAL OF THE OWNER OR THEIR REPRESENTATIVE. THE OWNER OR THEIR REPRESENTATIVE SHALL DESIGNATE THOSE TREES WHICH ARE TO BE REMOVED. A CONTRACTOR REMOVING TREES WITHOUT OWNER OR THEIR REPRESENTATIVE APPROVAL WILL BE RESPONSIBLE FOR REPLACEMENT OF SAID TREE(S) AS DIRECTED BY OWNER OR THEIR REPRESENTATIVE AT CONTRACTOR'S EXPENSE. IF TREES OR SHRUBS MUST BE REMOVED. THEY WILL BE PAID FOR IN ACCORDANCE WITH SPECIFICATIONS.

21. IT SHALL BE THE RESPONSIBILITY OF EACH RESPECTIVE CONTRACTOR TO REMOVE FROM THE SITE ANY AND ALL MATERIALS AND DEBRIS WHICH RESULT FROM HIS CONSTRUCTION OPERATIONS AT NO ADDITIONAL EXPENSE TO THE OWNER.

22. THE ENGINEER AND OWNER ARE NOT RESPONSIBLE FOR THE CONSTRUCTION MEANS. METHODS. TECHNIQUES. SEQUENCES OR PROCEDURES. TIME OF PERFORMANCE. PROGRAMS OR FOR ANY SAFETY PRECAUTIONS USED BY THE CONTRACTOR. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR EXECUTION OF HIS WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND SPECIFICATIONS.

23. THE CONTRACTOR IS REQUIRED TO HAVE A COMPETENT SUPERINTENDENT ON THE PROJECT SITE AT ALL TIMES IRRESPECTIVE OF THE AMOUNT OF WORK SUBLET. THE SUPERINTENDENT SHALL BE CAPABLE OF READING AND UNDERSTANDING THE PLANS AND SPECIFICATIONS. SHALL HAVE FULL AUTHORITY TO EXECUTE ORDERS TO EXPEDITE THE PROJECT AND SHALL BE RESPONSIBLE FOR SCHEDULING AND HAVE CONTROL OF ALL WORK AS THE AGENT OF THE CONTRACTOR. FAILURE TO COMPLY WITH THIS PROVISION WILL RESULT IN A SUSPENSION OF WORK.

24. THE CONTRACTOR SHALL KEEP A SET OF "APPROVED" CONSTRUCTION PLANS ON THE JOB SITE. AND SHALL MAINTAIN (AS INDICATED HEREIN AND ELSEWHERE WITHIN THESE CONSTRUCTION NOTES. SPECIFICATIONS. AND PLANS) A LEGIBLE RECORD ON SAID PLANS OF ANY FIELD TILE ENCOUNTERED. ANY MODIFICATIONS/ALTERATIONS TO ALIGNMENT AND/OR TO PLANS AND SPECIFICATIONS OF PROPOSED IMPROVEMENTS. ETC. UPON COMPLETION OF THE CONTRACTORS' WORK. SAID PLANS AND INFORMATION SHALL BE PROVIDED TO THE OWNER. FINAL CONTRACT PAYMENT SHALL NOT COME DUE UNTIL THIS INFORMATION IS RECEIVED BY THE OWNER.

25. ACCESS TO ALL PRIVATE PROPERTIES SHALL BE MAINTAINED AT ALL TIMES BY THE CONTRACTOR.

26. THE CONTRACTOR SHALL SUBSCRIBE TO ALL GOVERNING REGULATIONS AND SHALL OBTAIN ALL NECESSARY PUBLIC AGENCY PERMITS. THE CONTRACTOR. BY USING THESE DRAWINGS FOR THEIR WORK. AGREE TO HOLD HARMLESS V3 COMPANIES OF ILLINOIS. LTD. AND THE WAWASEE AREA CONSERVANCY FOUNDATION AND THEIR EMPLOYEES WHILE ACTING WITHIN THE SCOPE OF THEIR DUTIES FROM AND AGAINST ANY AND ALL LIABILITY. CLAIMS. DAMAGES. AND THE COST OF DEFENSE ARISING OUT OF CONTRACTOR(S) PERFORMANCE OF THE WORK DESCRIBED HEREIN. BUT NOT INCLUDING THE SOLE NEGLIGENCE OF THE OWNER. HIS AGENTS. THE ENGINEER. HIS EMPLOYEES AND AGENTS.

27. CONSTRUCTION OPERATIONS SHALL BE CONDUCTED IN SUCH A WAY AS TO PREVENT TRACKING OF MUD OR SOIL ONTO PUBLIC THOROUGHFARES. AT A MINIMUM. THE CONTRACTOR SHALL CLEAN UP ALL MUD OR SOIL WHICH HAS BEEN TRACKED ONTO PUBLIC STREETS AT THE END OF EACH DAY. THE CONTRACTOR MAY BE REQUIRED TO PERFORM MORE FREQUENT CLEANING OF PUBLIC STREETS AFFECTED BY CONSTRUCTION OPERATIONS IF DEEMED NECESSARY BY THE WACF.

28. BEFORE EXCAVATING OVER OR ADJACENT TO ANY EXISTING UTILITIES. NOTIFY THE OWNER OF SUCH UTILITIES TO ENSURE THAT PROTECTIVE WORK WILL BE COORDINATED AND PERFORMED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE OWNER OF THE UTILITY INVOLVED. IF ANY EXISTING SERVICE LINES. UTILITIES AND UTILITY STRUCTURES WHICH ARE TO REMAIN IN SERVICE ARE UNCOVERED OR ENCOUNTERED DURING THIS OPERATION. THEY SHALL BE SAFEGUARDED. PROTECTED FROM DAMAGE AND SUPPORTED IF NECESSARY.

29. ANY AREA OUTSIDE THE R.O.W. LINE OR CONSTRUCTION LIMIT LINE USED BY THE CONTRACTOR SHALL BE RETURNED TO THE STATE IT WAS FOUND PRIOR TO NEW CONSTRUCTION. EXCEPT WHERE NEW WORK IS SHOWN.

30. ALL TREES SHALL BE PROTECTED FROM DAMAGE TO TRUNKS. BRANCHES. AND ROOTS. NO EXCAVATING. FILLING OR GRADING IS TO BE DONE INSIDE THE DRIP LINE OF TREES UNLESS OTHERWISE INDICATED.

31. PROPOSED ELEVATIONS INDICATE FINISHED CONDITIONS. FOR ROUGH GRADING ELEVATIONS ALLOW FOR THICKNESS OF PROPOSED PAVING (ROADS. WALKS. DRIVES. ETC.) OR TOPSOIL AS SHOWN.

32. ALL FIELD TILE ENCOUNTERED DURING CONSTRUCTION OPERATIONS SHALL BE REPAIRED. UNLESS OTHERWISE NOTED. A RECORD OF THE LOCATION OF ALL FIELD TILE FOR ON-SITE DRAIN PIPE ENCOUNTERED SHALL BE KEPT BY THE CONTRACTOR AND SUBMITTED TO THE ENGINEER UPON COMPLETION OF THE PROJECT. THE COST OF THIS WORK SHALL BE CONSIDERED AS INCIDENTAL TO THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

33. REMOVED PIPE AND/OR TREES SHALL BE DISPOSED OF BY THE CONTRACTOR AT HIS OWN EXPENSE AT AN OFF-SITE DUMP LOCATION.

34. DURING CONSTRUCTION OPERATIONS THE CONTRACTOR SHALL ENSURE POSITIVE SITE DRAINAGE AT THE CONCLUSION OF EACH DAY. SITE DRAINAGE MAY BE ACHIEVED BY DITCHING. PUMPING OR ANY OTHER ACCEPTABLE METHOD. THE CONTRACTOR'S FAILURE TO PROVIDE THE ABOVE WILL PRECLUDE ANY POSSIBLE ADDED COMPENSATION REQUESTED DUE TO DELAYS OR UNSUITABLE MATERIAL CREATED AS A RESULT THEREOF.

35. CONTRACTOR SHALL PROVIDE CERTIFICATES OF INSURANCE AS REQUIRED. LISTING AS ADDITIONAL INSURED: THE WAWASEE AREA CONSERVANCY FOUNDATION AND V3 COMPANIES OF ILLINOIS. LTD.

36. IT SHALL BE THE RESPONSIBILITY OF EACH RESPECTIVE CONTRACTOR TO REMOVE FROM THE SITE ANY AND ALL MATERIALS AND DEBRIS WHICH RESULT FROM HIS CONSTRUCTION OPERATIONS AT NO ADDITIONAL EXPENSE TO THE OWNER.

EROSION CONTROL

EROSION CONTROL BLANKET SPECIFICATIONS

1. EROSION CONTROL BLANKET SHALL BE PLACED ON ALL DISTURBED SLOPES. THE EROSION CONTROL BLANKET SHALL BE INSTALLED IMMEDIATELY AFTER PERMANENT SEEDING AND RAKING OF THE DISTURBED SLOPES.

2. EROSION CONTROL BLANKET SHALL BE INSTALLED WITH STAPLE PATTERN AS RECOMMENDED BY THE SUPPLIER.

EARTHWORK & GRADING

1. WORK UNDER THIS SECTION SHALL INCLUDE. BUT NOT BE LIMITED TO THE FOLLOWING:
   A. CLEARING AND REMOVAL OF ALL UNDESIRABLE TREES AND OTHER VEGETATIVE GROWTH WITHIN THE CONSTRUCTION AREA. TREE REMOVAL SHALL BE DESIGNATED BY THE WAWASEE AREA CONSERVANCY FOUNDATION (WACF) AND SHALL BE KEPT TO A MINIMUM.
   B. STRIPPING OF TOPSOIL FROM ALL EXCAVATION AREAS.
   C. STOCKPILING OF TOPSOIL AT LOCATIONS AS DIRECTED BY THE OWNER AND/OR ENGINEER. TOPSOIL STOCKPILED FOR FUTURE USE SHALL BE RELATIVELY FREE FROM LARGE ROOTS. STICKS. WEEDS. BRUSH. STONES LARGER THAN ONE (1) INCH DIAMETER. OR OTHER LITTER AND WASTE PRODUCTS INCLUDING EXTRANEOUS MATERIALS NOT CONDUCIVE TO PLANT GROWTH. TOPSOIL SHALL BE STOCKPILED IN SEQUENCE TO ELIMINATE ANY REHANDLING OR DOUBLE MOVEMENTS BY THE CONTRACTOR. FAILURE TO PROPERLY SEQUENCE THE STOCKPILING OPERATIONS SHALL NOT CONSTITUTE A CLAIM FOR ADDITIONAL COMPENSATION. NO MATERIAL SHALL BE STOCKPILED IN OVERLAND DRAINAGE SWALES (FLOOD ROUTING AREAS). OR IN THE RIGHT OF WAY.
   D. SUBGRADE CUT AND SUBGRADE FILL WITH COMPACTION WITHIN STABILIZED STREAMBANK AREAS AND OTHER DESIGNATED AREAS.
   E. EXCAVATION AND GRADING OF THE STREAMBANK STABILIZATION AREAS PER PLAN INCLUDING EMBANKMENT PREPARATION. ETC.
   F. PLACEMENT OF NON-STRUCTURAL FILLS.
   G. IF REQUIRED. REMOVAL FROM SITE AND DISPOSAL OF ANY EXCESS OR UNSUITABLE MATERIAL UPON COMPLETION OF GRADING.
   H. FINAL SHAPING AND TRIMMING TO THE LINES. GRADES. AND CROSS- SECTIONS SHOWN IN THESE PLANS: AND TOPSOIL PLACEMENT TO DESIGN FINISHED GRADE ELEVATIONS.
   I. SOIL EROSION CONTROL MEASURES IN ACCORDANCE WITH THE APPLICABLE SPECIFICATIONS.

2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ALL MATERIAL QUANTITIES AND APPRAISE HIMSELF OF ALL SITE CONDITIONS. NO CLAIMS FOR EXTRA WORK WILL BE RECOGNIZED UNLESS ORDERED IN WRITING BY THE OWNER.

3. PRIOR TO ONSET OF GRADING OPERATIONS THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE CONSTRUCTION STAGING.

4. IT SHALL BE THE RESPONSIBILITY OF THE EXCAVATION CONTRACTOR TO REMOVE FROM THE SITE ANY AND ALL MATERIALS AND DEBRIS WHICH RESULT FROM HIS CONSTRUCTION OPERATIONS AT NO ADDITIONAL EXPENSE TO THE OWNER.

5. IMPORTED TOPDRESS MATERIAL SHALL CONTAIN AN ORGANIC MATTER CONTENT OF 3% OR MORE AND A CLAY CONTENT OF 27% OR LESS. THE CLAY CONTENT IS CONSISTENT WITH THE SOIL TEXTURAL CLASSES OF LOAM. SILT LOAM. SANDY LOAM. OR LIGHT SANDY CLAY LOAM. TOPDRESS MATERIAL MEETING THESE SPECIFICATIONS WILL PRODUCE A SUITABLE SEEDBED FOR VEGETATION ESTABLISHMENT. USE OF TOPDRESS MATERIAL ORIGINATING OFF-SITE WILL NEED TO BE APPROVED BY A QUALIFIED WETLAND SPECIALIST OR SOIL SCIENTIST PRIOR TO PLACEMENT.

6. PRIOR TO TOPDRESS PLACEMENT. THE SURFACE AT SUBGRADE ELEVATION SHALL BE THOROUGHLY DISKED TO REDUCE COMPACTION: WHERE POSSIBLE.

7. WHEEL BASED VEHICLES (SCRAPERS. ENDLOADERS. ETC.) SHALL NOT BE USED FOR TOPDRESSING WORK. ONLY LOW GROUND PRESSURE WIDE TRACK EQUIPMENT (QUADTRACK TRACTOR AND PULL TYPE SCRAPER ASSEMBLY. WIDE TRACK DOZER. BACKHOE. OR APPROVED BY ENGINEER) SHALL HAUL. MOVE AND SPREAD TOPDRESS MATERIAL.

8. NO WHEELED TRAFFIC SHALL OCCUR IN THE NATURALIZED PLANTING AREAS AFTER THE FINAL DISKING IS COMPLETE. WITH THE EXCEPTION OF A SMALL FARM TYPE TRACTOR IF USED FOR SEEDING.

9. ALL CONSTRUCTION ACTIVITIES MUST BE DONE UNDER DRY CONDITIONS.

10. TOPSOIL REMOVED FROM ANY AREA DOMINATED BY REED CANARY GRASS (PHALARIS ARUNDINACEA) AND/OR ANY OTHER INVASIVE SPECIES MUST BE HANDLED SENSITIVELY AND MAY ONLY BE PLACED IN ONSITE DISPOSAL AREAS. UNLESS APPROVED BY WETLAND SPECIALIST OR SOIL SCIENTIST.

NATIVE SEEDING SPECIFICATIONS

1. ALL AREAS EXPOSED BY CONSTRUCTION WILL BE STABILIZED WITH A COVER CROP IMMEDIATELY AFTER COMPLETION OF FINAL GRADING. AND IN CONJUNCTION WITH AN EROSION BLANKET ON SLOPES TO PREVENT SOIL EROSION AS APPROPRIATE. PERMANENT NATIVE VEGETATION WILL BE PLANTED AND SEEDED PER THE PLAN.

2. CONTRACTOR SHALL FURNISH. TRANSPORT. INOCULATE. AND INSTALL THE SPECIFIED SEED MIXES IN THE AREAS INDICATED ON THE PLAN.

3. ALL SEED SOURCES SHALL BE WITHIN A 200-MILE EAST-WEST RADIUS AND A 100-MILE NORTH-SOUTH RADIUS OF THE PROJECT SITE.

4. SEEDS SHALL BE TRUE TO NAME AND VARIETY AND HAVE THE PROPER STRATIFICATION AND/OR SCARIFICATION TO BREAK DORMANCY FOR THE APPROPRIATE PLANTING SEASON.

5. SEED INSTALLATION SHALL BE CONDUCTED BETWEEN FEBRUARY 15 AND MAY 31. 2009 OR NOVEMBER 15 AND DECEMBER 31. 2009

6. SEED SHALL NOT BE SOWN DURING HIGH WINDS OR WHEN THE SEEDBED IS NOT IN THE PROPER CONDITION FOR SEEDING. PRIOR TO STARTING WORK. CALIBRATE ALL SEEDING EQUIPMENT AND ADJUST TO SOW SEED AT THE PROPER SEEDING RATE. OPERATE EQUIPMENT TO ENSURE COMPLETE COVERAGE OF THE ENTIRE AREA TO BE SEEDED.

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REVISIONS

NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
1	01/07/09	REVISED FOR PERMIT SUBMITTALS			

SEAL:

PROJECT NO.: 06037.03	DESIGNED BY: JAS
FILE NAME: Gal0603703	DRAWN BY: JAS
ORIGINAL ISSUE DATE: 10/01/08	CHECKED BY: CAP
SCALE: NTS	PROJECT MANAGER: CAP

VILLAGE LAKE
STREAM STABILIZATION

SYRACUSE INDIANA

GENERAL NOTES AND SPECIFICATIONS

DRAWING NO. 1.0

06037.03 - GENERAL NOTES AND SPECIFICATIONS

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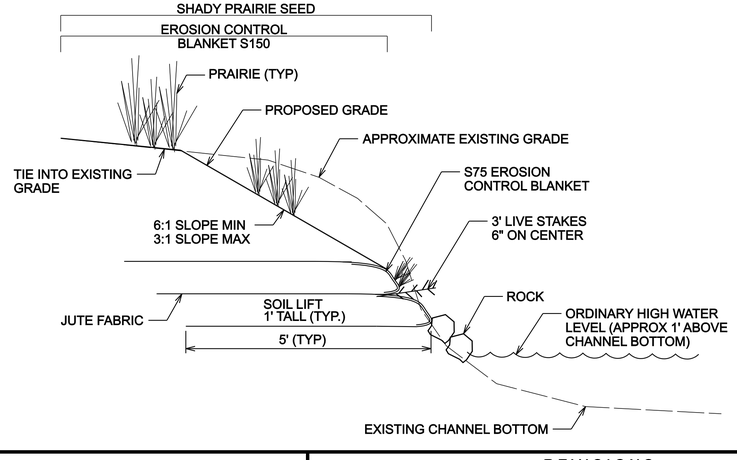
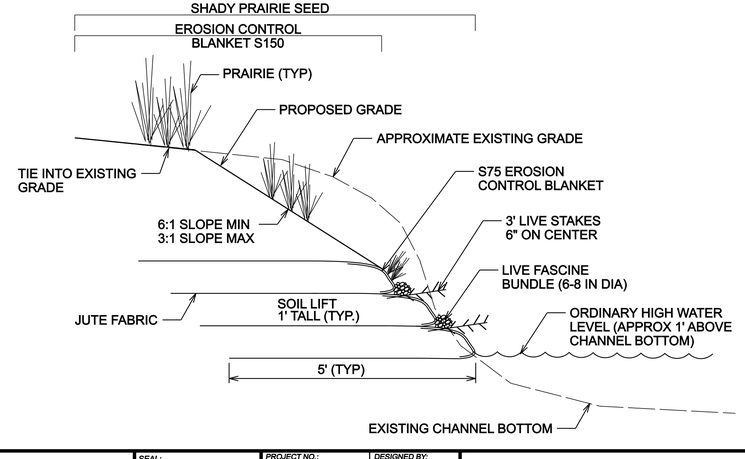
STREAM BANK STABILIZATION - CROSS SECTON A

(AREAS 5, 6, 9, 10, 11)
NTS



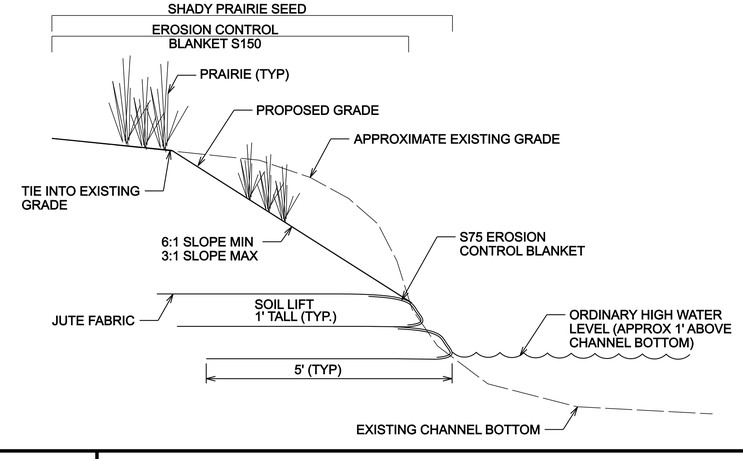
STREAM BANK STABILIZATION - CROSS SECTON B

(AREAS 4, 7, 8, 12, 13)
NTS



STREAM BANK STABILIZATION - CROSS SECTON C

(AREAS 1, 2, 3)
NTS



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1	01/07/09	REVISED FOR PERMIT SUBMITTALS			
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FILE NAME: EXHstabil	DRAWN BY: JAS
ORIGINAL ISSUE DATE: 10/02/08	CHECKED BY: CAP
SCALE: 1"=40'	PROJECT MANAGER: CAP

VILLAGE LAKE
STREAM STABILIZATION

SYRACUSE INDIANA

STREAM STABILIZATION PLAN

DRAWING NO. 2.0

06037.03 - STREAM STABILIZATION PLAN

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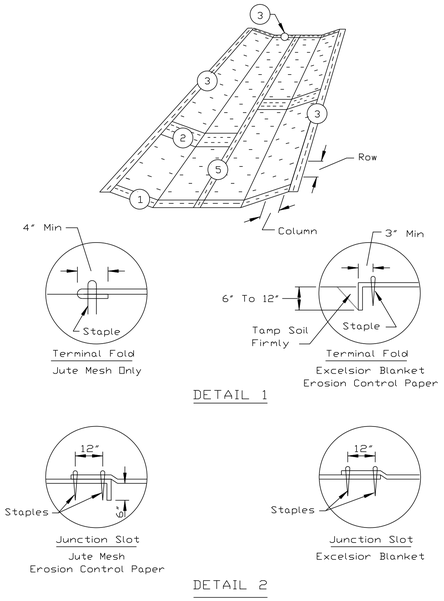
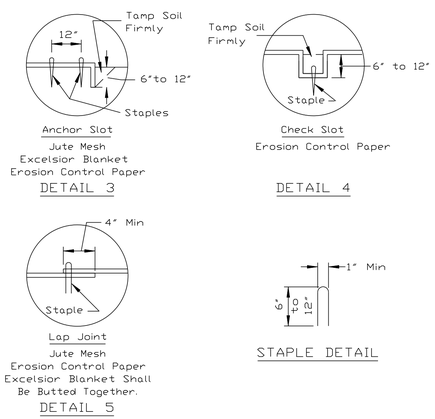
EROSION CONTROL BLANKET DETAIL





NOTES:

1. On erosion control paper, check slots, in ditch channel shall be spaced so that one occurs within each 50' on slopes of more than 4% and less than 6%. On slopes of 6% or more, they shall be spaced so that one occurs within each 25'.
2. Staples are to be placed alternately, in columns approximately 2' apart and in rows approximately 3' apart. Approximately 175 staples are required per 4'x 225' roll of material and 125 staples are required per 4'x 150' roll of material.
3. Erosion control material shall be placed loosely over ground surface. Do not stretch.
4. All terminal ends and transverse laps shall be stapled at approximately 12" intervals.

INDOT COARSE AGGREGATE SIZE SPECIFICATIONS

Sieve Sizes	Coarse Aggregate Sizes (Percent Passing)									
	Coarse Graded								Dense Graded	
	2	5	8	9	11	12	43[1]	91	53[1]	73[1]
4 in. (100 mm)										
3½ in. (90 mm)										
2½ in. (63 mm)	100									
2 in. (50 mm)	80-100									
1½ in. (37.5 mm)		100					100		100	
1 in. (25 mm)	0-25	85-98	100				70-90	100	80-100	100
¾ in. (19 mm)	0-10	60-85	75-95	100			50-70		70-90	90-100
½ in. (12.5 mm)	0-7	30-60	40-70	60-85	100	100	35-50		55-80	60-90
⅜ in. (9.5 mm)		15-45	20-50	30-60	75-95	95-100				
No. 4 (4.75 mm)		0-15	0-15	0-15	10-30	50-80	20-40		35-60	35-60
No. 8 (2.36 mm)		0-10	0-10	0-10	0-10	0-35	15-35		25-50	
No. 30 (600 µm)						0-4	5-20		12-30	12-30
No. 200 (75 µm)[2]							0-6		5-10	5-12

Notes:

[1] The liquid limit shall not exceed 25 (35 if slag) and the plasticity index shall not exceed 5. The liquid limit shall be determined in accordance with AASHTO T 89 and the plasticity index in accordance with AASHTO T 90.

[2] Includes the total amount passing the No. 200 (75 micrometers) sieve as determined by AASHTO T 11 and T 27.

Riprap Gradation Requirements (Percent Smaller)					
Size, in. (mm)	Revetment	Class 1	Class 2	Uniform A	Uniform B
30 (750)			100		
24 (600)		100	85-100		
18 (450)	100	85-100	60-80		
12 (300)	90-100	35-50	20-40		
8 (200)				100	
6 (150)	20-40	10-30	0-20	35-80	95-100
3 (75)	0-10	0-10	0-10		35-80
1 (25)				0-20	0-20
Depth of Riprap, minimum	18 in. (450 mm)	24 in. (600 mm)	30 in. (750 mm)		

SEED MIX LISTS

Seed Mixes		Prairie Seed Mix	Shady Prairie Seed Mix
Scientific Name	Common Name	Lbs. Seed/Acre	
*Avena sativa	oats	40.000	40.000
*Lolium multiflorum	annual rye	10.000	10.000
Actinomeris alternifolia	wingstem	-	0.063
Andropogon gerardii	big bluestem	4.500	4.500
Andropogon scoparius	little bluestem	5.000	5.000
Anemone virginiana	tall anemone	-	0.031
Aster laevis	smooth blue aster	0.125	0.125
Aster novae-angliae	New England aster	0.250	0.250
Aster sagititfolius	arrow-leaved aster	-	0.063
Aster shortii	short's aster	-	0.063
Baptisia leucantha	white wild indigo	0.125	0.125
Bouteloua curtipendula	side oats gramma	4.000	4.000
Bromus pubescens	woodland brome	-	0.500
Carex vulpinoidea	brown fox sedge	0.250	-
Echinacea purpurea	purple coneflower	0.250	0.250
Eleocharis erythropoda	red-rooted spike rush	0.063	0.063
Elymus canadensis	Canada wild rye	4.000	4.000
Elymus virginicus	Virginia wild rye	3.000	3.000
Impatiens capensis	orange jewelweed	-	0.125
Juncus dudleyi	Dudley's rush	0.063	-
Leersia oryzoides	rice cut grass	0.250	0.250
Monarda fistulosa	wild bergamot	0.250	0.250
Panicum virgatum	switch grass	2.000	2.000
Ratibida pinnata	grey coneflower	0.250	0.250
Rudbeckia hirta	brown-eyed susan	0.250	0.250
Rudbeckia subtomentosa	sweet black-eyed susan	0.250	0.500
Silphium integrifolium	rosin weed	0.125	0.125
Silphium laciniatum	compass plant	0.250	-
Solidago nemoralis	old-field goldenrod	-	0.031
Solidago rigida	stiff goldenrod	0.125	0.125
Sorghastrum nutans	Indian grass	4.000	4.000
Spartina pectinata	prairie cord grass	0.500	0.500
Zizua aurea	golden Alexander's	0.125	0.125
	Total Lbs. Seed Per Ac.:	30.001	30.564
	Total Lbs. Seed Per Ac. with *Cover Crop:	79.376	80.564

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ORIGINAL ISSUE DATE: 10/01/08	CHECKED BY: CAP
SCALE: NTS	PROJECT MANAGER: CAP

VILLAGE LAKE
STREAM STABILIZATION

SYRACUSE INDIANA

CONSTRUCTION DETAILS

DRAWING NO. 3.0

06037.03 - CONSTRUCTION DETAILS

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