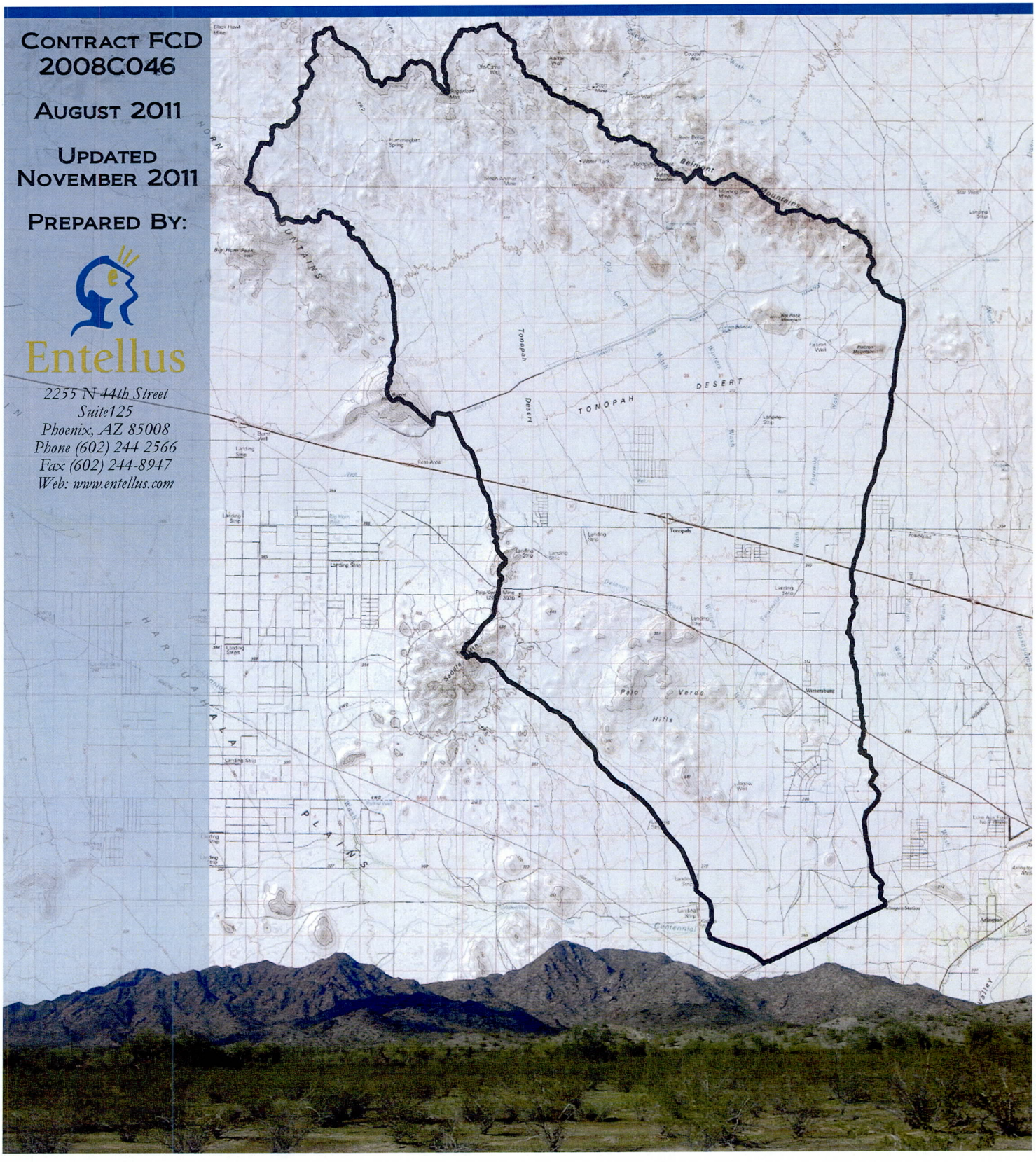
PALO VERDE WATERSHED DETAILED FLOODPLAIN DELINEATION STUDY

HYDRAULICS TECHNICAL DATA NOTEBOOK VOLUME 2 OF 3



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APPENDIX E: HYDRAULIC ANALYSIS SUPPORTING DOCUMENTATION

E.1 Roughness Coefficient Estimation

E.2 Cross Section Plots

E.3 Expansion and Contraction Coefficients

E.4 Analysis of Structures

E.5 Hydraulic Calculations

E.6 HEC-RAS Output

E.7 CHECK-RAS Output

E.8 Summary of Errors and Warnings

E.9 Effective FIS Models

E.1 Roughness Coefficient Estimation

E.1.1 Roughness Coefficient Reference Materials

Table E1-1

BY JGA DATE 2/8/2010
CHECK FEB DATE 5/4/2010

Project: Palo Verde Watershed Detailed Floodplain Delineation Study
Location: East Region
Description: Eastern side of study area
Streams: T2N-R6W-S02, T2N-R6W-S22, Fourmile Wash, T1S-R6W-S27, T1S-R6W-S08, T1N-R6W-S18, T2N-R6W-S28N

Channel Conditions		Manning's n Adjustment		Area 1 (view maps)	Area 2 (view maps)	Area 3 (view maps)
Channel Material	Concrete	n_b	.012-.018			
	Firm Earth		.025-.032	0.025	0.025	
	Coarse Sand		.026-.035			0.030
	Gravel		.024-.035			
	Cobble		.030-.050			
	Boulder		.040-.070			
Degree of Irregularity	Smooth	n_1	0.000			
	Minor		.001-.005		0.001	0.005
	Moderate		.006-.010			
	Severe		.011-.020			
Effect of Obstruction	Negligible	n_2	.000-.004		0.001	
	Minor		.005-.015			0.015
	Appreciable		.020-.030			
	Severe		.040-.060			
Vegetation	Negligible	n_3	.000-.002			
	Small		.002-.010	0.010		0.006
	Medium		.010-.025		0.015	
	Large		.025-.050			
	Very Large		.050-.100			
	Extremely Large		.100-.200			
Variation in Channel Cross Section	Gradual	n_4	0.000	0.000	0.000	
	Occ. Alt.		.001-.005			0.004
	Freq. Alt.		.010-.015			
				0.035	0.042	0.060
Degree of Meandering	Minor	m	1	1	1	1
	Appreciable		1.15			
	Severe		1.3			
	$n=(n_b+n_1+n_2+n_3+n_4)m$			**0.035**	**0.042**	**0.060**

East - Photo 1: Overview from Area 2 looking upstream.

East - Photo 2: Looking downstream at Area 2.

East - Photo 3: Area 3 looking downstream.

East - Photo 4: Looking upstream at Area 1.

Table E1-2

BY JGA DATE 2/8/2010
CHECK FEB DATE 5/4/2010

Project: Palo Verde Watershed Detailed Floodplain Delineation Study
Location: Northeast Region
Description: South of Jones Tank, north end is about 0.5 miles downstream of Jones Tank
Streams: Fourmile Wash, T3N-R6W-S35, T2N-R6W-S02

Channel Conditions		Manning's n Adjustment		Area 1 (view maps)	Area 2 (view maps)	Area 3 (view maps)
Channel Material	Concrete	n_b	.012-.018			
	Firm Earth		.025-.032	0.025	0.032	0.025
	Coarse Sand		.026-.035			
	Gravel		.024-.035			
	Cobble		.030-.050			
	Boulder		.040-.070			
Degree of Irregularity	Smooth	n_1	0.000			
	Minor		.001-.005	0.001	0.001	0.001
	Moderate		.006-.010			
	Severe		.011-.020			
Effect of Obstruction	Negligible	n_2	.000-.004	0.001	0.001	
	Minor		.005-.015			0.010
	Appreciable		.020-.030			
	Severe		.040-.060			
Vegetation	Negligible	n_3	.000-.002			
	Small		.002-.010	0.008		
	Medium		.010-.025		0.015	
	Large		.025-.050			0.030
	Very Large		.050-.100			
	Extremely Large		.100-.200			
Variation in Channel Cross Section	Gradual	n_4	0.000			0.000
	Occ. Alt.		.001-.005	0.002	0.002	
	Freq. Alt.		.010-.015			
				0.037	0.051	0.066
Degree of Meandering	Minor	m	1	1	1	1
	Appreciable		1.15			
	Severe		1.3			
$n=(n_b+n_1+n_2+n_3+n_4)m$				**0.037**	**0.051**	**0.066**

Northeast - Photo 1: Looking downstream at the Area 2.

Northeast - Photo 2: Looking downstream at the Area 1.

Northeast - Photo 3: Looking downstream at Area 3.

Northeast - Photo 4: Looking upstream at the Area 1 & 2.

Table E1-3

BY JGA DATE 2/8/2010
CHECK FEB DATE 5/4/2010

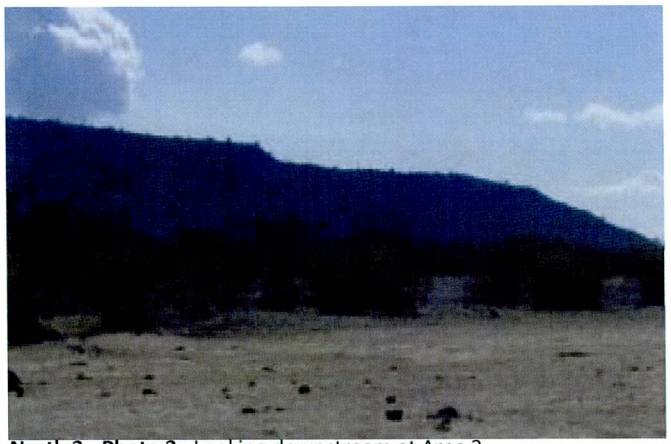
Project: Palo Verde Watershed Detailed Floodplain Delineation Study
Location: North-3 Region
Description: South of Jones Tank, from Jones Tank to 0.5 miles downstream of Jones Tank
Streams: Fourmile Wash

Channel Conditions		Manning's n Adjustment		Area 1 (view maps)	Area 2 (view maps)	Area 3 * (view maps)
Channel Material	Concrete	n_b	.012-.018			
	Firm Earth		.025-.032	0.032	0.030	
	Coarse Sand		.026-.035			
	Gravel		.024-.035			
	Cobble		.030-.050			
	Boulder		.040-.070			
Degree of Irregularity	Smooth	n_1	0.000			
	Minor		.001-.005	0.001	0.001	
	Moderate		.006-.010			
	Severe		.011-.020			
Effect of Obstruction	Negligible	n_2	.000-.004	0.000		
	Minor		.005-.015		0.005	
	Appreciable		.020-.030			
	Severe		.040-.060			
Vegetation	Negligible	n_3	.000-.002			
	Small		.002-.010	0.002	0.004	
	Medium		.010-.025			
	Large		.025-.050			
	Very Large		.050-.100			
	Extremely Large		.100-.200			
Variation in Channel Cross Section	Gradual	n_4	0.000	0.000	0.000	
	Occ. Alt.		.001-.005			
	Freq. Alt.		.010-.015			
				0.035	0.040	
Degree of Meandering	Minor	m	1	1	1	
	Appreciable		1.15			
	Severe		1.3			
$n=(n_b+n_1+n_2+n_3+n_4)m$				**0.035**	**0.040**	**N/A**

* Uniform area, no "**Area 3**" delineated.

North 3 - Photo 1: Area 1 looking upstream at stock tank.

North 3 - Photo 2: Looking downstream at Area 1.



North 3 - Photo 3: Looking downstream at Area 2.

North 3 - Photo 4: Overview.

Table E1-4

BY JGA DATE 2/8/2010
CHECK FEB DATE 5/4/2010

Project: Palo Verde Watershed Detailed Floodplain Delineation Study
Location: North-1 Region
Description: Between CAP 14 flume and Jones Tank
Stream: Fourmile Wash, T2N-R6W-S05E

Channel Conditions		Manning's n Adjustment		Area 1 (view maps)	Area 2 (view maps)	Area 3 (view maps)
Channel Material	Concrete	n_b	.012-.018			
	Firm Earth		.025-.032		0.032	
	Coarse Sand		.026-.035			
	Gravel		.024-.035	0.025		0.035
	Cobble		.030-.050			
	Boulder		.040-.070			
Degree of Irregularity	Smooth	n_1	0.000	0.000	0.000	
	Minor		.001-.005			
	Moderate		.006-.010			0.010
	Severe		.011-.020			
Effect of Obstruction	Negligible	n_2	.000-.004	0.001	0.001	
	Minor		.005-.015			
	Appreciable		.020-.030			0.020
	Severe		.040-.060			
Vegetation	Negligible	n_3	.000-.002			
	Small		.002-.010			0.005
	Medium		.010-.025	0.014	0.015	
	Large		.025-.050			
	Very Large		.050-.100			
	Extremely Large		.100-.200			
Variation in Channel Cross Section	Gradual	n_4	0.000	0.000	0.000	
	Occ. Alt.		.001-.005			0.005
	Freq. Alt.		.010-.015			
				0.040	0.048	0.075
Degree of Meandering	Minor	m	1	1	1	1
	Appreciable		1.15			
	Severe		1.3			
$n=(n_b+n_1+n_2+n_3+n_4)m$				**0.040**	**0.048**	**0.075**

North 1 - Photo 1: Looking upstream at Area 2.

North 1 - Photo 2: Looking upstream at west Area 3 split.

North 1 - Photo 3: Looking upstream at Area 2 & 3 before spli

North 1 - Photo 4: Looking downstream at Area 3 split.

North 1 - Photo 5: Looking upstream at Area 1.

Table E1-5

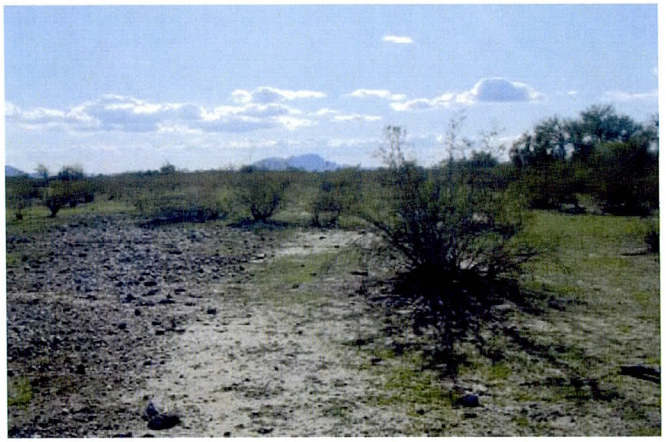
BY JGA DATE 2/8/2010
CHECK FEB DATE 5/4/2010

Project: Palo Verde Watershed Detailed Floodplain Delineation Study
Location: North-2 Region
Description: Begins at main outflow from Jones Tank
Streams: T2N-R6W-S05E, T3N-R6W-S27W

Channel Conditions		Manning's n Adjustment		Area 1 (view maps)	Area 2 (view maps)	Area 3 (view maps)
Channel Material	Concrete	n_b	.012-.018			
	Firm Earth		.025-.032	0.030	0.030	0.030
	Coarse Sand		.026-.035			
	Gravel		.024-.035			
	Cobble		.030-.050			
	Boulder		.040-.070			
Degree of Irregularity	Smooth	n_1	0.000			
	Minor		.001-.005	0.001	0.001	0.005
	Moderate		.006-.010			
	Severe		.011-.020			
Effect of Obstruction	Negligible	n_2	.000-.004	0.000		
	Minor		.005-.015		0.005	0.005
	Appreciable		.020-.030			
	Severe		.040-.060			
Vegetation	Negligible	n_3	.000-.002			
	Small		.002-.010	0.009	0.010	
	Medium		.010-.025			0.015
	Large		.025-.050			
	Very Large		.050-.100			
	Extremely Large		.100-.200			
Variation in Channel Cross Section	Gradual	n_4	0.000	0.000	0.000	0.000
	Occ. Alt.		.001-.005			
	Freq. Alt.		.010-.015			
				0.040	0.046	0.055
Degree of Meandering	Minor	m	1	1	1	1
	Appreciable		1.15			
	Severe		1.3			
$n=(n_b+n_1+n_2+n_3+n_4)m$				**0.040**	**0.046**	**0.055**

North 2 - Photo 1: Looking upstream at Area 2.

North 2 - Photo 2: Looking downstream at Area 3.



North 2 - Photo 3: Looking downstream at Area 2.

North 2 - Photo 4: Looking downstream at Area 1.

Table E1-6

BY JGA DATE 2/9/2010
CHECK FEB DATE 5/5/2010

Project: Palo Verde Watershed Detailed Floodplain Delineation Study
Location: Central-2 Region
Description: East of 411 Ave and north and south of I-10
Streams: T2N-R7W-S25E, T2N-R7W-S25W

Channel Conditions		Manning's n Adjustment		Area 1 (view maps)	Area 2 (view maps)	Area 3 (view maps)
Channel Material	Concrete	n_b	.012-.018			
	Firm Earth		.025-.032			
	Coarse Sand		.026-.035			
	Gravel		.024-.035	0.025	0.025	0.027
	Cobble		.030-.050			
	Boulder		.040-.070			
Degree of Irregularity	Smooth	n_1	0.000			
	Minor		.001-.005	0.001	0.001	
	Moderate		.006-.010			0.006
	Severe		.011-.020			
Effect of Obstruction	Negligible	n_2	.000-.004	0.000	0.000	
	Minor		.005-.015			0.015
	Appreciable		.020-.030			
	Severe		.040-.060			
Vegetation	Negligible	n_3	.000-.002			
	Small		.002-.010	0.010		0.003
	Medium		.010-.025		0.016	
	Large		.025-.050			
	Very Large		.050-.100			
	Extremely Large		.100-.200			
Variation in Channel Cross Section	Gradual	n_4	0.000	0.000	0.000	
	Occ. Alt.		.001-.005			0.003
	Freq. Alt.		.010-.015			
				0.036	0.042	0.054
Degree of Meandering	Minor	m	1	1	1	1
	Appreciable		1.15			
	Severe		1.3			
$n=(n_b+n_1+n_2+n_3+n_4)m$				**0.036**	**0.042**	**0.054**

Central 2 - Photo 1: Looking downstream at Area 3 toward box culvert.

Central 2 - Photo 2: Looking upstream at Area 1.

Central 2 - Photo 3: Looking upstream at Area 3.

Central 2 - Photo 4: Looking upstream at Area 2.

Table E1-7

BY JGA DATE 2/9/2010
CHECK FEB DATE 5/5/2010

Project: Palo Verde Watershed Detailed Floodplain Delineation Study
Location: West-1 Region & North Central Region
Description: North of I-10, from western study limits to Hot Rock Mountain near 387th Avenue
Streams: Winters Wash, Old Camp Wash, T2N-R6W-S19, T2N-R7W-S10, -S15E, T2N-R7W-S15W, T3N-R6W-S32 T3N-R6W-S27W, T2N-R6W-S05N, T3N-R6W-S21, T3N-R6W-S33, T2N-R6W-S05W, T2N-R6W-S05E, T2N-R6W-S05S

Channel Conditions		Manning's n Adjustment		Area 1 (view maps)	Area 2 (view maps)	Area 3 (view maps)
Channel Material	Concrete	n_b	.012-.018			
	Firm Earth		.025-.032	0.025	0.025	
	Coarse Sand		.026-.035			0.028
	Gravel		.024-.035			
	Cobble		.030-.050			
	Boulder		.040-.070			
Degree of Irregularity	Smooth	n_1	0.000			
	Minor		.001-.005	0.001	0.003	
	Moderate		.006-.010			0.010
	Severe		.011-.020			
Effect of Obstruction	Negligible	n_2	.000-.004	0.000	0.002	0.001
	Minor		.005-.015			
	Appreciable		.020-.030			
	Severe		.040-.060			
Vegetation	Negligible	n_3	.000-.002			
	Small		.002-.010			
	Medium		.010-.025	0.015		
	Large		.025-.050		0.025	0.030
	Very Large		.050-.100			
	Extremely Large		.100-.200			
Variation in Channel Cross Section	Gradual	n_4	0.000			
	Occ. Alt.		.001-.005	0.003	0.003	0.003
	Freq. Alt.		.010-.015			
				0.044	0.058	0.072
Degree of Meandering	Minor	m	1	1	1	1
	Appreciable		1.15			
	Severe		1.3			
$n=(n_b+n_1+n_2+n_3+n_4)m$				**0.044**	**0.058**	**0.072**

North Central - Photo 1: Looking upstream at Area 1 & 3.

North Central - Photo 2: Looking downstream at Area 3 .

North Central - Photo 3: Looking upstream at Area 2.

Table E1-8

BY JGA DATE 2/9/2010
CHECK FEB DATE 5/5/2010

Project: Palo Verde Watershed Detailed Floodplain Delineation Study
Location: Central-1
Description: West of 411th Ave. And between Bethany Home Road and Camelback Road
Streams: T2N-R7W-S25E

Channel Conditions		Manning's n Adjustment		Area 1 (view maps)	Area 2 (view maps)	Area 3 (view maps)
Channel Material	Concrete	n_b	.012-.018			
	Firm Earth		.025-.032		0.030	0.025
	Coarse Sand		.026-.035	0.035		
	Gravel		.024-.035			
	Cobble		.030-.050			
	Boulder		.040-.070			
Degree of Irregularity	Smooth	n_1	0.000	0.000	0.000	
	Minor		.001-.005			0.005
	Moderate		.006-.010			
	Severe		.011-.020			
Effect of Obstruction	Negligible	n_2	.000-.004			
	Minor		.005-.015	0.005	0.005	0.010
	Appreciable		.020-.030			
	Severe		.040-.060			
Vegetation	Negligible	n_3	.000-.002	0.002		
	Small		.002-.010			
	Medium		.010-.025		0.025	
	Large		.025-.050			0.030
	Very Large		.050-.100			
	Extremely Large		.100-.200			
Variation in Channel Cross Section	Gradual	n_4	0.000	0.000	0.000	
	Occ. Alt.		.001-.005			0.003
	Freq. Alt.		.010-.015			
				0.042	0.060	0.073
Degree of Meandering	Minor	m	1	1	1	1
	Appreciable		1.15			
	Severe		1.3			
$n=(n_b+n_1+n_2+n_3+n_4)m$				**0.042**	**0.060**	**0.073**

Central 1 - Photo 1: Looking upstream at Area 2.

Central 1 - Photo 2: Looking upstream at the Area 3.

Central 1 - Photo 4: Looking downstream at Area 1.

Table E1-9

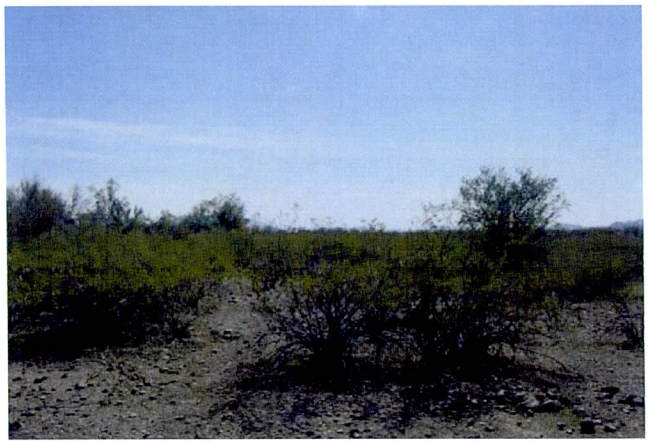
BY JGA DATE 2/9/2010
CHECK FEB DATE 5/5/2010

Project: Palo Verde Watershed Detailed Floodplain Delineation Study
Location: West-2 Region
Description: Along both sides of 443rd Ave. from CAP to 0.75 miles south of Glendale Avenue
Streams: T2N-R7W-S20E

Channel Conditions		Manning's n Adjustment		Area 1 (view maps)	Area 2 (view maps)	Area 3 (view maps)
Channel Material	Concrete	n_b	.012-.018			
	Firm Earth		.025-.032	0.030		
	Coarse Sand		.026-.035		0.027	0.035
	Gravel		.024-.035			
	Cobble		.030-.050			
	Boulder		.040-.070			
Degree of Irregularity	Smooth	n_1	0.000			
	Minor		.001-.005	0.001	0.001	0.003
	Moderate		.006-.010			
	Severe		.011-.020			
Effect of Obstruction	Negligible	n_2	.000-.004	0.001	0.002	0.004
	Minor		.005-.015			
	Appreciable		.020-.030			
	Severe		.040-.060			
Vegetation	Negligible	n_3	.000-.002			
	Small		.002-.010			
	Medium		.010-.025	0.012	0.020	0.015
	Large		.025-.050			
	Very Large		.050-.100			
	Extremely Large		.100-.200			
Variation in Channel Cross Section	Gradual	n_4	0.000	0.000		
	Occ. Alt.		.001-.005		0.002	0.001
	Freq. Alt.		.010-.015			
				0.044	0.052	0.058
Degree of Meandering	Minor	m	1	1	1	1
	Appreciable		1.15			
	Severe		1.3			
$n=(n_b+n_1+n_2+n_3+n_4)m$				**0.044**	**0.052**	**0.058**

West 2 - Photo 1: Looking downstream at lower Area 1.

West 2 - Photo 2: Looking upstream at Area 3.



West 2 - Photo 3: Looking downstream at Area 3.

West 2 - Photo 4: Looking upstream at high Area 2.

Table E1-10

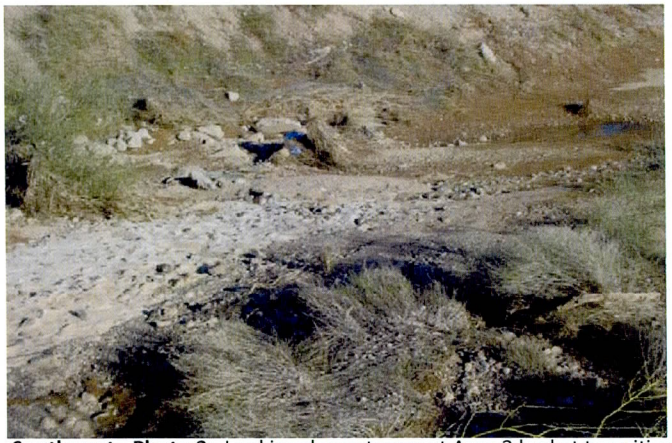
BY JGA DATE 2/9/2010
CHECK FEB DATE 4/22/2010

Project: Palo Verde Watershed Detailed Floodplain Delineation Study
Location: Southwest Region
Description: South of I-10, from western study limits to 387th Avenue.
Streams: Winters Wash, Delaney Wash, T1S-R6W-S08, T2N-R7W-S20W, -S20E, -S32E, -S26W, -S25W, -S26E, -S36E, -S35 T1S-R6W-S05S, T1N-R6W-S17, T2N-R7W-S35W

Channel Conditions		Manning's n Adjustment		Area 1 (view maps)	Area 2 (view maps)	Area 3 (view maps)
Channel Material	Concrete	n_b	.012-.018			
	Firm Earth		.025-.032	0.030		0.030
	Coarse Sand		.026-.035		0.030	
	Gravel		.024-.035			
	Cobble		.030-.050			
	Boulder		.040-.070			
Degree of Irregularity	Smooth	n_1	0.000	0.000		0.000
	Minor		.001-.005		0.001	
	Moderate		.006-.010			
	Severe		.011-.020			
Effect of Obstruction	Negligible	n_2	.000-.004	0.000	0.000	0.000
	Minor		.005-.015			
	Appreciable		.020-.030			
	Severe		.040-.060			
Vegetation	Negligible	n_3	.000-.002			
	Small		.002-.010			
	Medium		.010-.025	0.012	0.015	
	Large		.025-.050			0.035
	Very Large		.050-.100			
	Extremely Large		.100-.200			
Variation in Channel Cross Section	Gradual	n_4	0.000	0.000	0.000	0.000
	Occ. Alt.		.001-.005			
	Freq. Alt.		.010-.015			
				0.042	0.046	0.065
Degree of Meandering	Minor	m	1	1	1	1
	Appreciable		1.15			
	Severe		1.3			
$n=(n_b+n_1+n_2+n_3+n_4)m$				**0.042**	**0.046**	**0.065**

Southwest - Photo 1: Looking downstream at Area 2.

Southwest - Photo 2: Looking downstream at Area 3.



Southwest - Photo 3: Looking downstream at Area 2 bed at transition from grouted rip-rap near road crossing to natural earth.

Southwest - Photo 4: Looking downstream at Area 2.

Southwest - Photo 5: Looking upstream at Area 1.

Southwest - Photo 6: Looking upstream at Area 3-note scour on the right bank.

Table E1-11

BY JGA DATE 2/9/2010
CHECK FEB DATE 4/22/2010

Project: Palo Verde Watershed Detailed Floodplain Delineation Study
Location:
Description: Calculations for Agriculture, Mountain, & Recharge areas
Streams:

Channel Conditions		Manning's n Adjustment		Agricultural	Mountain	Recharge
Channel Material	Concrete	n_b	.012-.018			
	Firm Earth		.025-.032			0.030
	Coarse Sand		.026-.035	0.030		
	Gravel		.024-.035			
	Cobble		.030-.050		0.035	
	Boulder		.040-.070			
Degree of Irregularity	Smooth	n_1	0.000	0.000		0.000
	Minor		.001-.005			
	Moderate		.006-.010		0.008	
	Severe		.011-.020			
Effect of Obstruction	Negligible	n_2	.000-.004	0.000	0.000	
	Minor		.005-.015			0.010
	Appreciable		.020-.030			
	Severe		.040-.060			
Vegetation	Negligible	n_3	.000-.002			0.002
	Small		.002-.010		0.009	
	Medium		.010-.025			
	Large		.025-.050	0.035		
	Very Large		.050-.100			
	Extremely Large		.100-.200			
Variation in Channel Cross Section	Gradual	n_4	0.000	0.000		0.000
	Occ. Alt.		.001-.005			
	Freq. Alt.		.010-.015		0.010	
				0.065	0.062	0.042
Degree of Meandering	Minor	m	1	1	1	1
	Appreciable		1.15			
	Severe		1.3			
$n=(n_b+n_1+n_2+n_3+n_4)m$				**0.065**	**0.062**	**0.042**

E.2 Cross-Section Plots

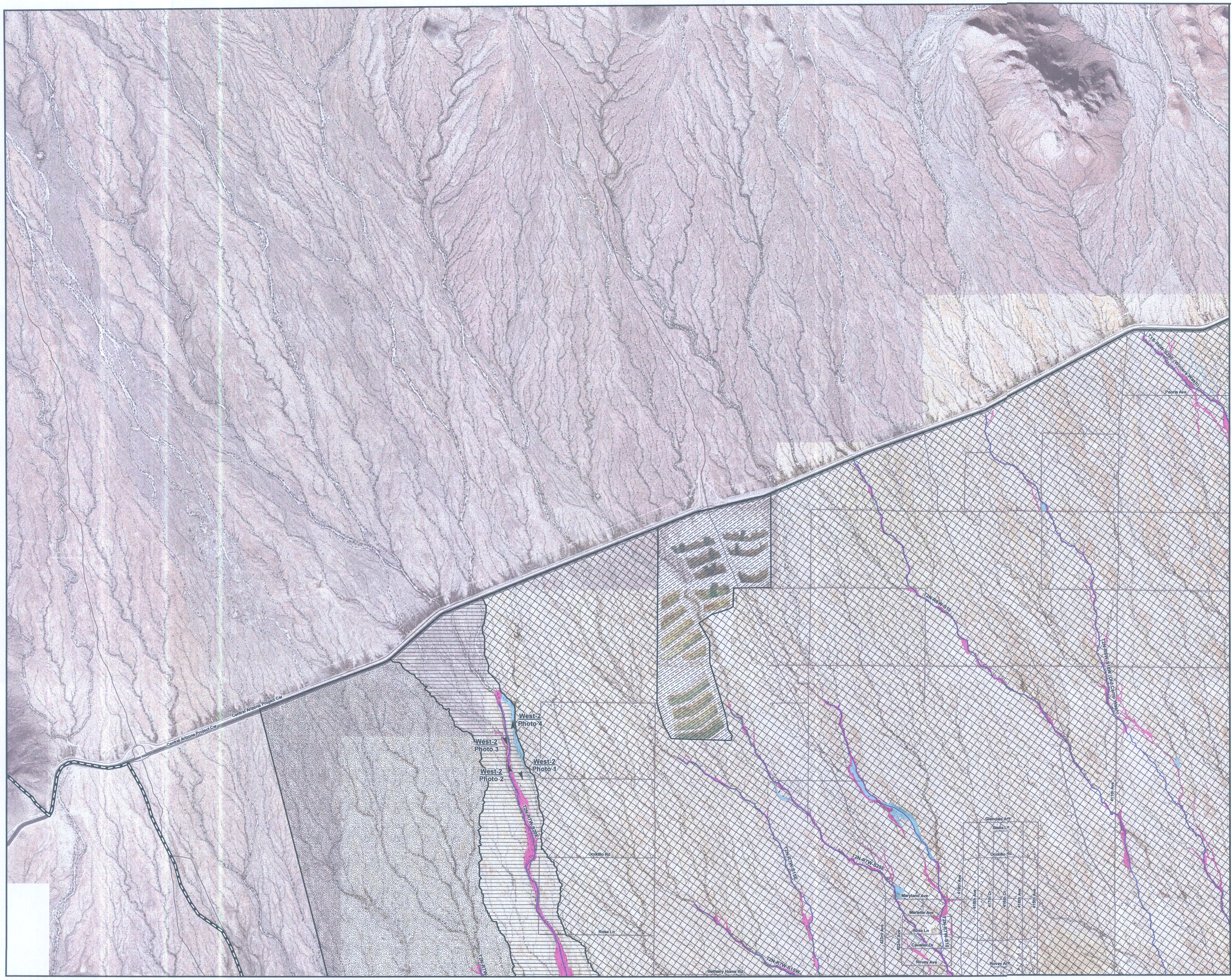
All cross section plots are included electronically in **Appendix F**. Only the Zone A cross sections are included in this appendix. See **Appendix F** for other cross sectional information.

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

PALO VERDE WATERSHED
DETAILED FLOODPLAIN DELINEATION STUDY

F.C.D. CONTRACT NO. 2008C046

Manning's n-Value Map



LEGEND

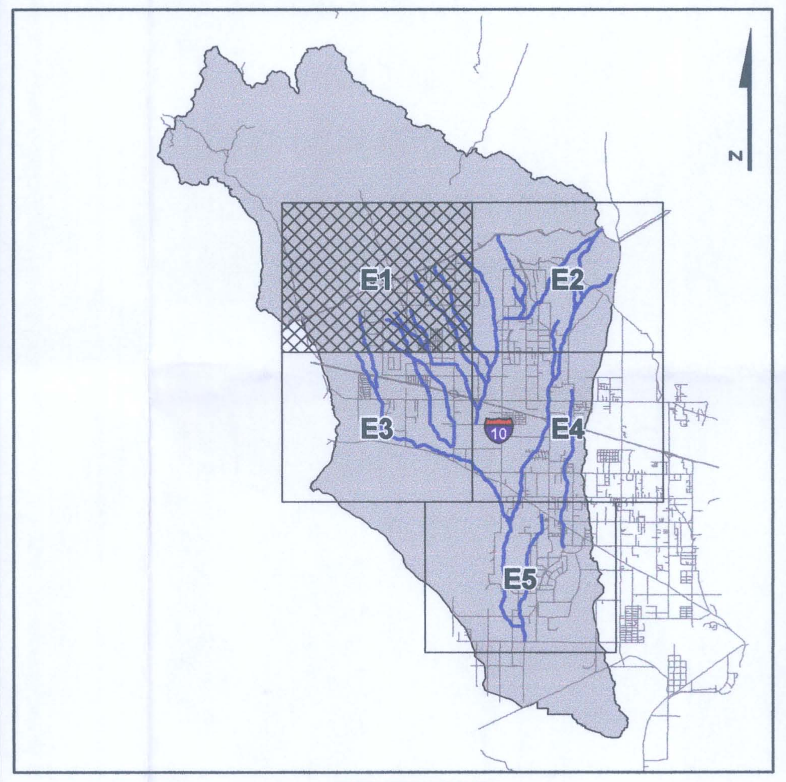
- Study Wash
- Streets
- Railroad
- PaloVerde Watershed
- Geographical Region / Photo #

Typical n-Values

Region	Area 1	Area 2	Area 3
West-1	0.044	0.058	0.072
West-2	0.044	0.052	0.058
Central-1	0.042	0.060	0.073
Central-2	0.036	0.042	0.054
North-Central	0.044	0.058	0.072
North-1	0.040	0.048	0.075
North-2	0.040	0.046	0.055
North-3	0.035	0.040	N/A
Northeast	0.037	0.051	0.066
East	0.035	0.042	0.060
Southwest	0.042	0.046	0.065
Mountain	0.062	0.062	0.062
Agricultural	0.065	0.065	0.065
Recharge	0.062	0.062	0.062
Roadway	0.020	0.020	0.020

NOTES

REFER TO TDN REPORT AND APPENDIX E FOR ADDITIONAL INFORMATION.



INDEX MAP

1,500 750 0 1,500 3,000 Feet

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	BY	DATE
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DESIGN CHK.	HAA	06/2010
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PLANS CHK.	HAA	06/2010

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FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

RECOMMENDED BY: DATE:

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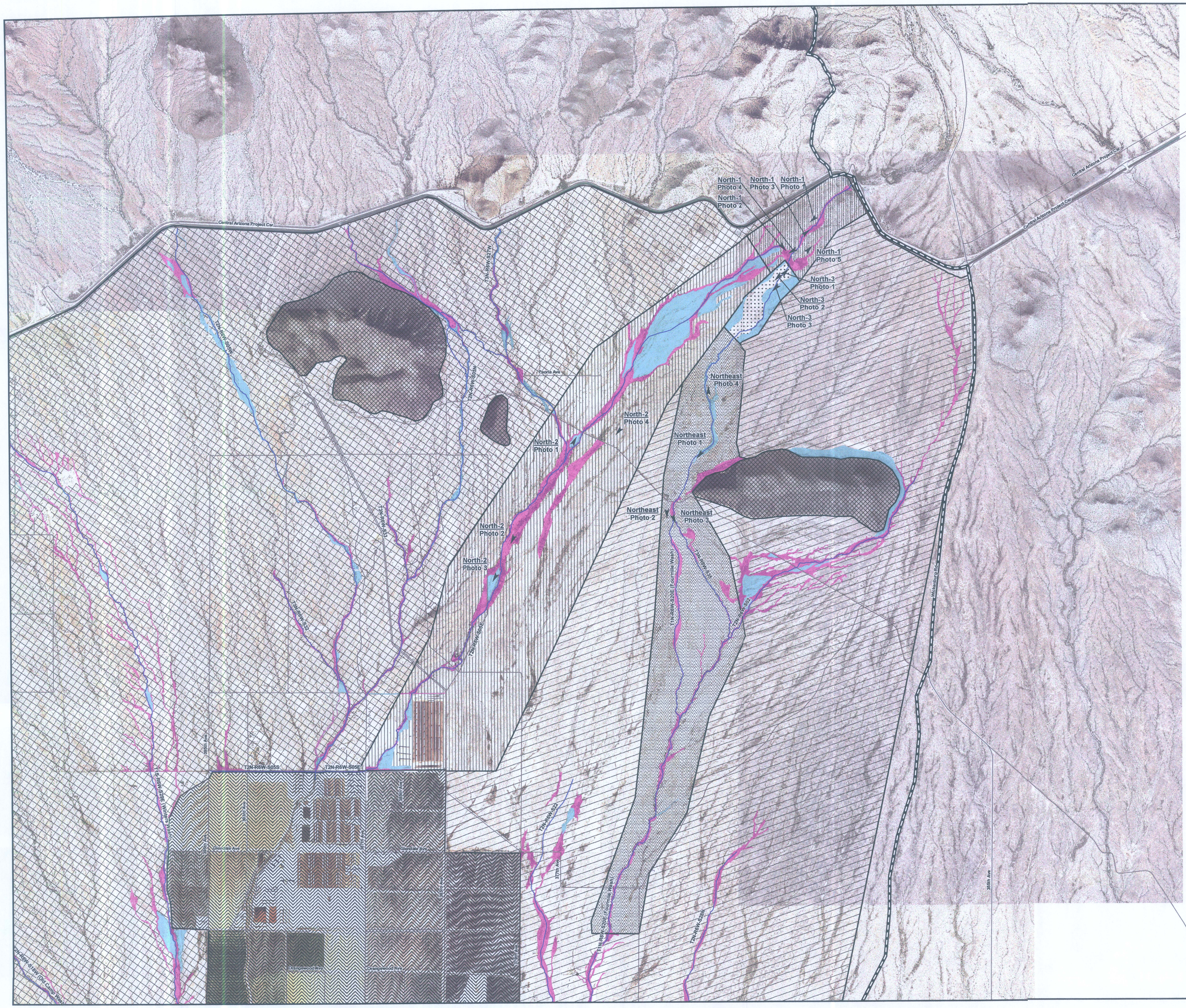
CHIEF ENGINEER AND GENERAL MANAGER

SHEET E1 OF E5



FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

PALO VERDE WATERSHED
DETAILED FLOODPLAIN DELINEATION STUDY

F.C.D. CONTRACT NO. 2008C046

Manning's n-Value Map

LEGEND

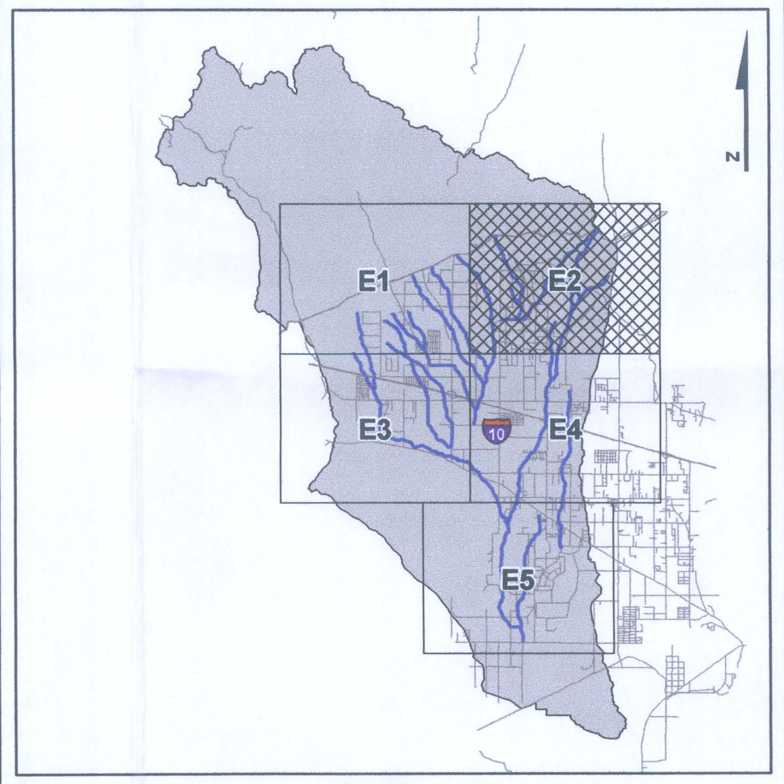
- Study Wash
- Streets
- Railroad
- PaloVerde Watershed
- Geographical Region / Photo #

Typical n-Values

Region	Area 1	Area 2	Area 3
West-1	0.044	0.058	0.072
West-2	0.044	0.052	0.058
Central-1	0.042	0.060	0.073
Central-2	0.036	0.042	0.054
North-Central	0.044	0.058	0.072
North-1	0.040	0.048	0.075
North-2	0.040	0.046	0.055
North-3	0.035	0.040	N/A
Northeast	0.037	0.051	0.066
East	0.035	0.042	0.060
Southwest	0.042	0.046	0.065
Mountain	0.062	0.062	0.062
Agricultural	0.065	0.065	0.065
Recharge	0.062	0.062	0.062
Roadway	0.020	0.020	0.020

NOTES

REFER TO TDN REPORT AND APPENDIX E FOR ADDITIONAL INFORMATION.



INDEX MAP

1,500 750 0 1,500 3,000 Feet

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SHEET E2 OF E5

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

PALO VERDE WATERSHED DETAILED FLOODPLAIN DELINEATION STUDY

F.C.D. CONTRACT NO. 2008C046

Manning's n-Value Map

LEGEND

- Study Wash
- Streets
- Railroad
- PaloVerde Watershed
- Geographical Region / Photo #

Typical n-Values

Region	Area 1	Area 2	Area 3
West-1	0.044	0.058	0.072
West-2	0.044	0.052	0.058
Central-1	0.042	0.060	0.073
Central-2	0.036	0.042	0.054
North-Central	0.044	0.058	0.072
North-1	0.040	0.048	0.075
North-2	0.040	0.046	0.055
North-3	0.035	0.040	N/A
Northeast	0.037	0.051	0.066
East	0.035	0.042	0.060
Southwest	0.042	0.046	0.065
Mountain	0.062	0.062	0.062
Agricultural	0.065	0.065	0.065
Recharge	0.062	0.062	0.062
Roadway	0.020	0.020	0.020

NOTES

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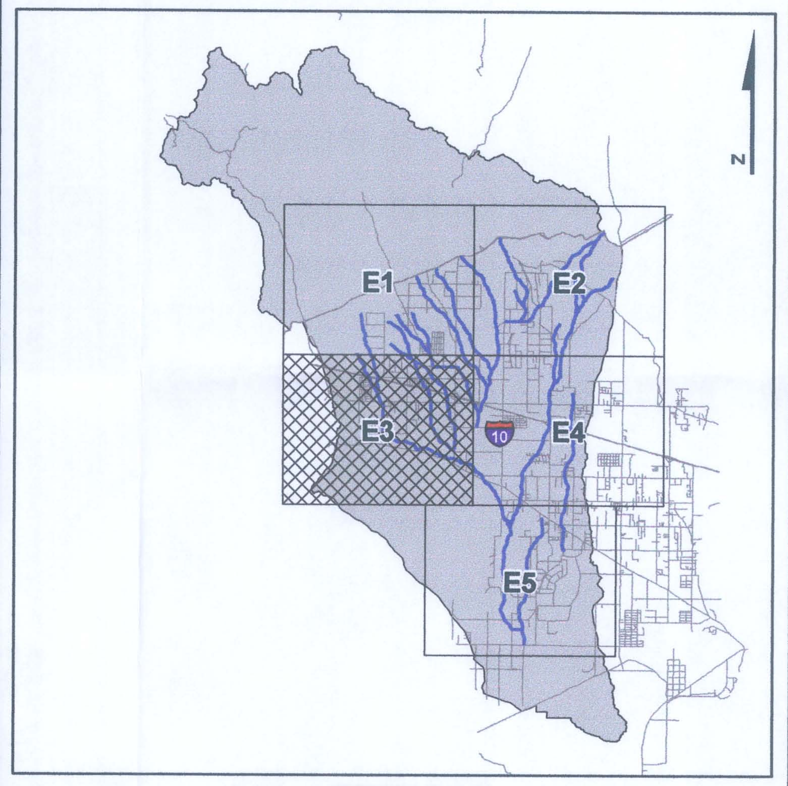

INDEX MAP

N — 1,500 750 0 1,500 3,000 Feet

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FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

RECOMMENDED BY: ____ DATE: ____

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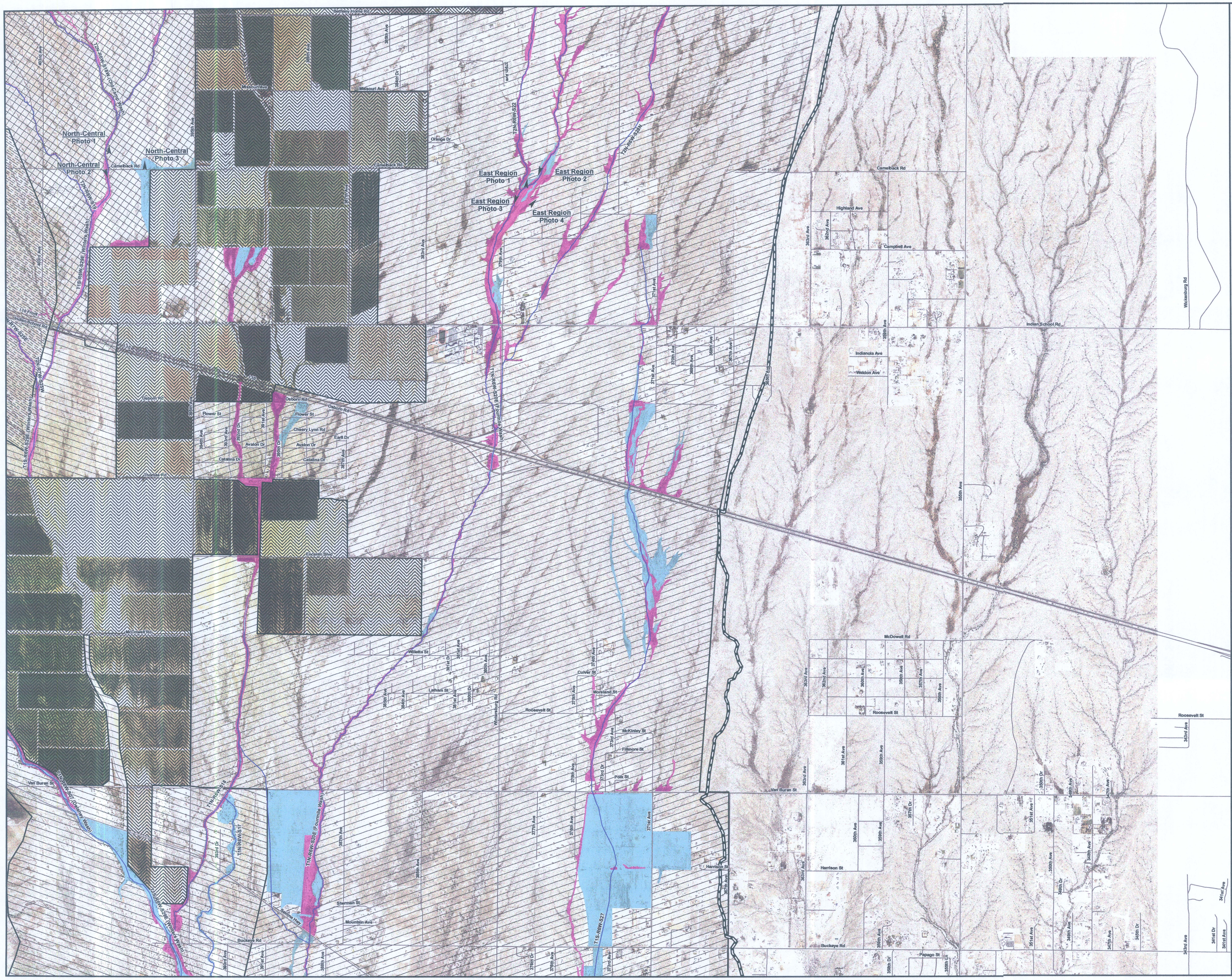
CHIEF ENGINEER AND GENERAL MANAGER

SHEET E3 OF E5



FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

PALO VERDE WATERSHED
DETAILED FLOODPLAIN DELINEATION STUDY

F.C.D. CONTRACT NO. 2008C046

Manning's n-Value Map

LEGEND

- Study Wash
- Streets
- Railroad
- PaloVerde Watershed
- Geographical Region / Photo #

Typical n-Values

Region	Area 1	Area 2	Area 3
West-1	0.044	0.058	0.072
West-2	0.044	0.052	0.058
Central-1	0.042	0.060	0.073
Central-2	0.036	0.042	0.054
North-Central	0.044	0.058	0.072
North-1	0.040	0.048	0.075
North-2	0.040	0.046	0.055
North-3	0.035	0.040	N/A
Northeast	0.037	0.051	0.066
East	0.035	0.042	0.060
Southwest	0.042	0.046	0.065
Mountain	0.062	0.062	0.062
Agricultural	0.065	0.065	0.065
Recharge	0.062	0.062	0.062
Roadway	0.020	0.020	0.020

NOTES

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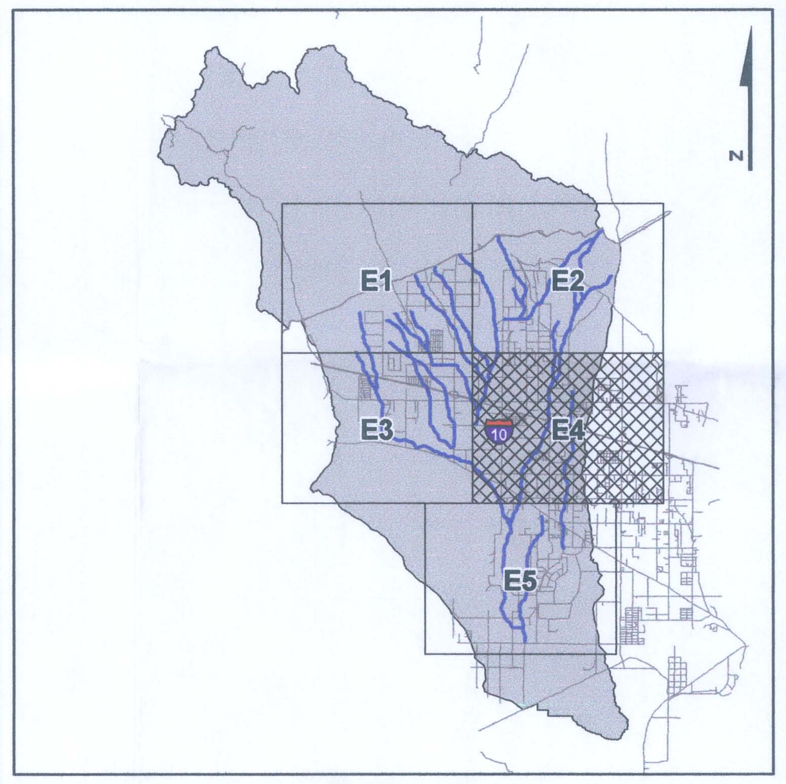

INDEX MAP

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CHIEF ENGINEER AND GENERAL MANAGER

SHEET E4 OF E5

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

PALO VERDE WATERSHED
DETAILED FLOODPLAIN DELINEATION STUDY

F.C.D. CONTRACT NO. 2008C046

Manning's n-Value Map

LEGEND

- Study Wash
- Streets
- Railroad
- PaloVerde Watershed
- Geographical Region / Photo #

Typical n-Values

Region	Area 1	Area 2	Area 3
West-1	0.044	0.058	0.072
West-2	0.044	0.052	0.058
Central-1	0.042	0.060	0.073
Central-2	0.036	0.042	0.054
North-Central	0.044	0.058	0.072
North-1	0.040	0.048	0.075
North-2	0.040	0.046	0.055
North-3	0.035	0.040	N/A
Northeast	0.037	0.051	0.066
East	0.035	0.042	0.060
Southwest	0.042	0.046	0.065
Mountain	0.062	0.062	0.062
Agricultural	0.065	0.065	0.065
Recharge	0.062	0.062	0.062
Roadway	0.020	0.020	0.020

NOTES

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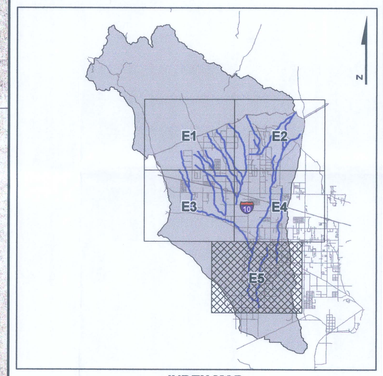

INDEX MAP

N

1,500 750 0 1,500 3,000 Feet

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FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

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CHIEF ENGINEER AND GENERAL MANAGER

SHEET E5 OF E5

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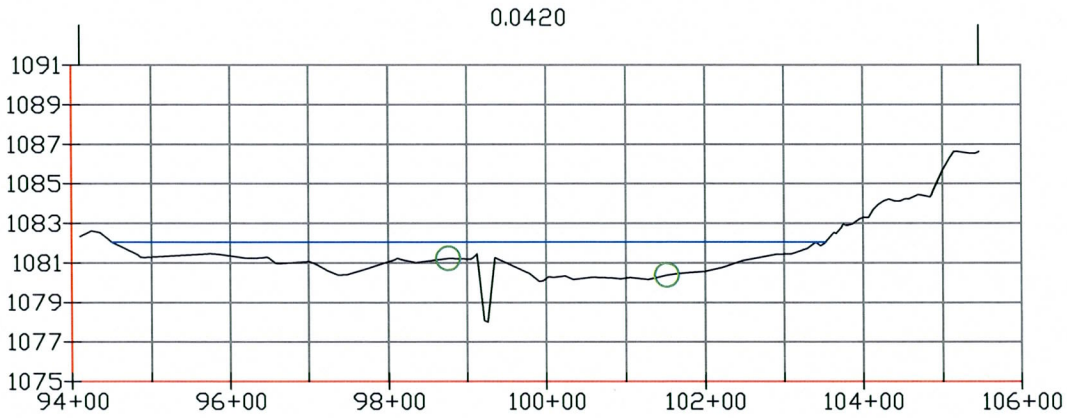
E.2 Cross-Section Plots

All cross section plots are included electronically in **Appendix F**. Only the Zone A cross sections are included in this appendix. See **Appendix F** for other cross sectional information.

Delaney Wash – Stock Pond Split

Wash Name: Stock Pond Split



10

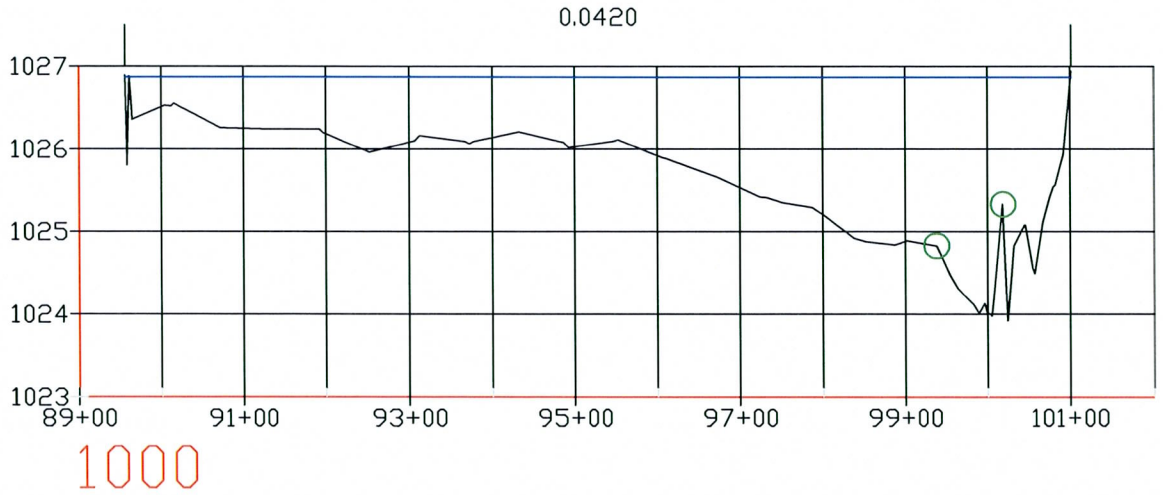
Zone A
Approx. location is within subbasin S135K (Hydrology ID)
Approx. 1 mile west of 411th Avenue
Q=2380 cfs (Incidental Split)
Flow Split estimated by using
Normal Depth

Normal Depth Results

Cross Section:	10	
Elevation:	1082.05	ft MSL
Depth:	4.06	ft
Discharge:	2380.00	cfs
Energy Gradient:	0.0033	ft/ft
Froude Number:	0.1993	
Flow Regime:	Subcritical	
Flow Area:	1044.03	sq ft
Average Velocity:	2.27	ft/s
Maximum Velocity:	2.27	ft/s
Composite n:	0.042	
Hydraulic Radius:	1.15	ft
Wetted Perimeter:	904.36	ft
Wetted Top Width:	903.15	ft
Critical Slope:	0.0857	ft/ft

T1N-R6W-S17&S18 E-1

T1N-R6W-S17&S18 - E1

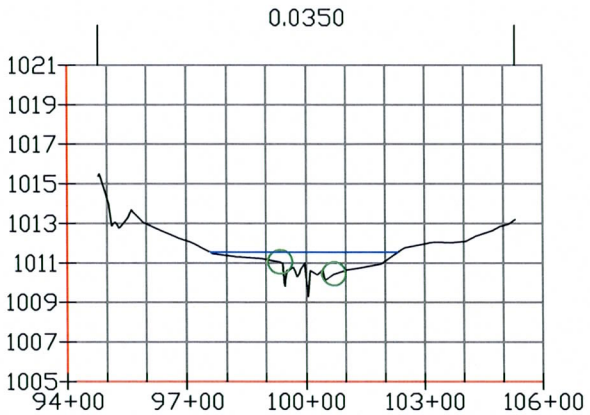


Normal Depth Results

Cross Section:	1000	
Elevation:	1026.87	ft MSL
Depth:	2.95	ft
Discharge:	3260.00	cfs
Energy Gradient:	0.004	ft/ft
Froude Number:	0.2534	
Flow Regime:	Subcritical	
Flow Area:	1320.13	sq ft
Average Velocity:	2.47	ft/s
Maximum Velocity:	2.47	ft/s
Composite n:	0.042	
Hydraulic Radius:	1.15	ft
Wetted Perimeter:	1145.33	ft
Wetted Top Width:	1144.46	ft
Critical Slope:	0.0624	ft/ft

T1N-R6W-S22E

Wash Name: T1N-R6W-S22E



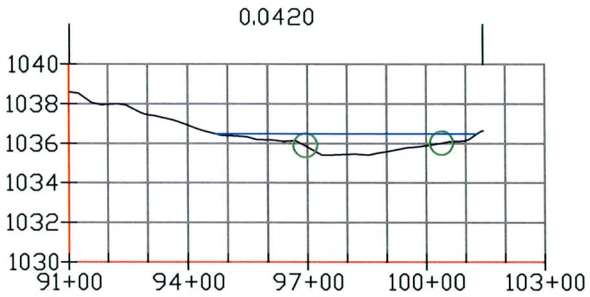
10

Zone A
T1N-R6W-S22E
Q=640 cfs (C910L)

Normal Depth Results

Cross Section:	10	
Elevation:	1011.54	ft MSL
Depth:	2.25	ft
Discharge:	640.00	cfs
Energy Gradient:	0.0046	ft/ft
Froude Number:	0.2509	
Flow Regime:	Subcritical	
Flow Area:	299.76	sq ft
Average Velocity:	2.14	ft/s
Maximum Velocity:	2.14	ft/s
Composite n:	0.035	
Hydraulic Radius:	0.63	ft
Wetted Perimeter:	474.98	ft
Wetted Top Width:	474.39	ft
Critical Slope:	0.0737	ft/ft

Wash Name: T1N-R6W-S22E



20

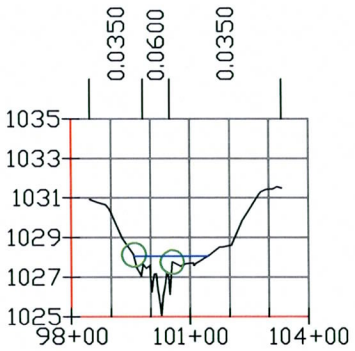
Zone A
T1N-R6W-S22E
Q=640 cfs (C910L)

Normal Depth Results

Cross Section:	20	
Elevation:	1036.48	ft MSL
Depth:	1.07	ft
Discharge:	640.00	cfs
Energy Gradient:	0.0046	ft/ft
Froude Number:	0.2847	
Flow Regime:	Subcritical	
Flow Area:	382.78	sq ft
Average Velocity:	1.69	ft/s
Maximum Velocity:	1.69	ft/s
Composite n:	0.042	
Hydraulic Radius:	0.58	ft
Wetted Perimeter:	659.08	ft
Wetted Top Width:	659.07	ft
Critical Slope:	0.0565	ft/ft

T1S-R6W-S27 – North Split

Wash Name: S27 North Split



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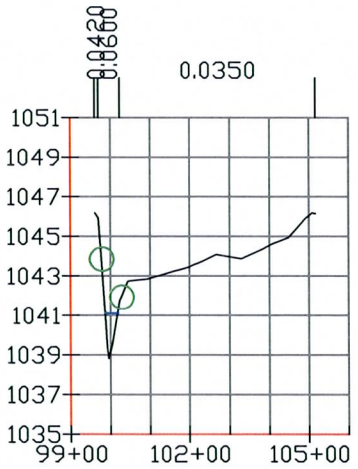
Normal Depth Results

Cross Section:	10	
Elevation:	1028.05	ft MSL
Depth:	3.00	ft
Discharge:	250.00	cfs
Energy Gradient:	0.0044	ft/ft
Froude Number:	0.1859	
Flow Regime:	Subcritical	
Flow Area:	136.84	sq ft
Average Velocity:	1.82	ft/s
Maximum Velocity:	2.07	ft/s
Composite n:	0.0448	
Hydraulic Radius:	0.73	ft
Wetted Perimeter:	188.25	ft
Wetted Top Width:	187.22	ft
Critical Slope:	0.1339	ft/ft

Zone A
Irrigation Canal south of Van Buren (alignment)
Q=250 cfs (Incidental Split from main wash at Van Buren Road; See TDN for more information)

Wash Name: S27 North Split



20

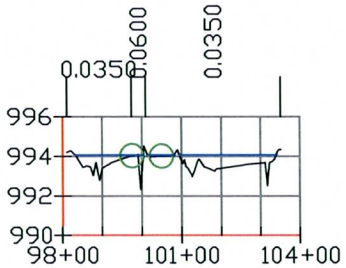
Normal Depth Results

Cross Section:	20	
Elevation:	1041.11	ft MSL
Depth:	2.30	ft
Discharge:	250.00	cfs
Energy Gradient:	0.044	ft/ft
Froude Number:	0.7116	
Flow Regime:	Subcritical	
Flow Area:	40.86	sq ft
Average Velocity:	6.08	ft/s
Maximum Velocity:	6.08	ft/s
Composite n:	0.06	
Hydraulic Radius:	1.26	ft
Wetted Perimeter:	32.43	ft
Wetted Top Width:	32.00	ft
Critical Slope:	0.088	ft/ft

Zone A
Irrigation Canal south of Van Buren (alignment)
Q=250 cfs (Incidental Split from main wash at Van Buren Road; See TDN for more information)

T1S-R6W-S27 – SW Salome

Wash Name: S27 SW Salome



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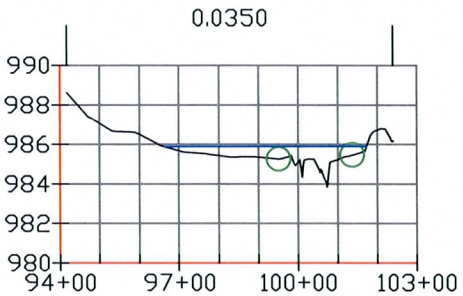
Zone A
Southwest Salome HWY
Q=360 cfs (Incidental Split from right overbank of cross section 8.016; see TDN for more information)

Normal Depth Results

Cross Section:	10	
Elevation:	994.07	ft MSL
Depth:	1.75	ft
Discharge:	360.00	cfs
Energy Gradient:	0.0042	ft/ft
Froude Number:	0.2176	
Flow Regime:	Subcritical	
Flow Area:	220.48	sq ft
Average Velocity:	1.61	ft/s
Maximum Velocity:	1.66	ft/s
Composite n:	0.0366	
Hydraulic Radius:	0.46	ft
Wetted Perimeter:	483.24	ft
Wetted Top Width:	482.33	ft
Critical Slope:	0.0968	ft/ft

T1S-R6W-S27 – South Split

Wash Name: S27 South Split



10

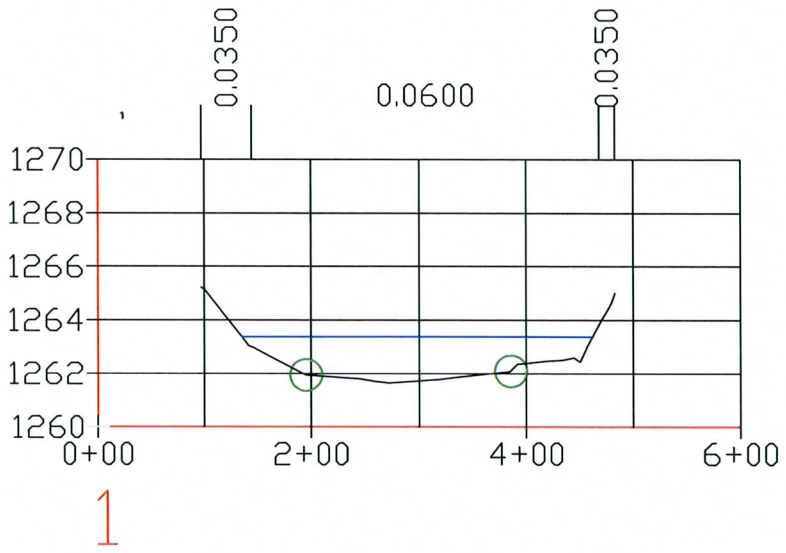
Zone A
Approx. 1700 feet South of Salome HWY
Q=520 cfs (Incidental Split)
Flow Split estimated by using HEC-RAS
Split Optimization

Normal Depth Results

Cross Section:	10	
Elevation:	985.87	ft MSL
Depth:	2.04	ft
Discharge:	520.00	cfs
Energy Gradient:	0.0043	ft/ft
Froude Number:	0.2298	
Flow Regime:	Subcritical	
Flow Area:	278.91	sq ft
Average Velocity:	1.88	ft/s
Maximum Velocity:	1.88	ft/s
Composite n:	0.035	
Hydraulic Radius:	0.55	ft
Wetted Perimeter:	511.53	ft
Wetted Top Width:	511.19	ft
Critical Slope:	0.0814	ft/ft

T2N-R6W-S02 – Split W1

T2N-R6W-S02 - Split W1

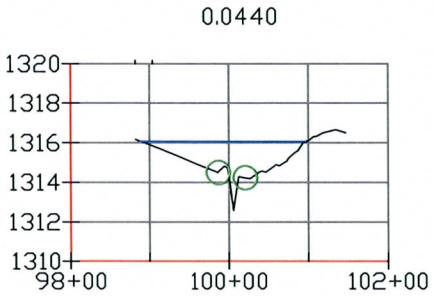


Normal Depth Results

Cross Section:	1	
Elevation:	1263.37	ft MSL
Depth:	1.73	ft
Discharge:	790.00	cfs
Energy Gradient:	0.0044	ft/ft
Froude Number:	0.2603	
Flow Regime:	Subcritical	
Flow Area:	406.95	sq ft
Average Velocity:	1.93	ft/s
Maximum Velocity:	1.94	ft/s
Composite n:	0.0593	
Hydraulic Radius:	1.25	ft
Wetted Perimeter:	326.82	ft
Wetted Top Width:	326.75	ft
Critical Slope:	0.0659	ft/ft

T2N-R6W-S05N – Split 1

Wash Name: S05N Split 1



10

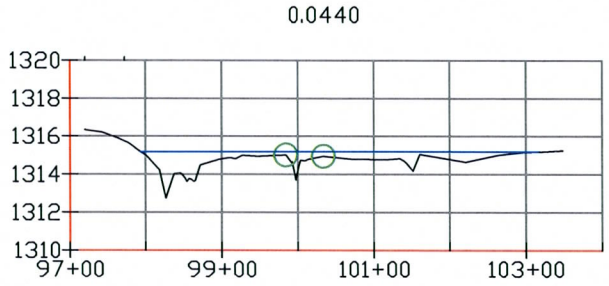
Zone A
Approx. location is at C340A (Hydrology ID)
Q=790 cfs (Incidental Split)
Flow Split estimated by using
Normal Depth

Normal Depth Results

Cross Section:	10	
Elevation:	1316.06	ft MSL
Depth:	3.49	ft
Discharge:	790.00	cfs
Energy Gradient:	0.009	ft/ft
Froude Number:	0.3239	
Flow Regime:	Subcritical	
Flow Area:	230.19	sq ft
Average Velocity:	3.43	ft/s
Maximum Velocity:	3.43	ft/s
Composite n:	0.044	
Hydraulic Radius:	1.1	ft
Wetted Perimeter:	209.15	ft
Wetted Top Width:	208.55	ft
Critical Slope:	0.0861	ft/ft

T2N-R6W-S05N – East Split

Wash Name: S05N East Split



10

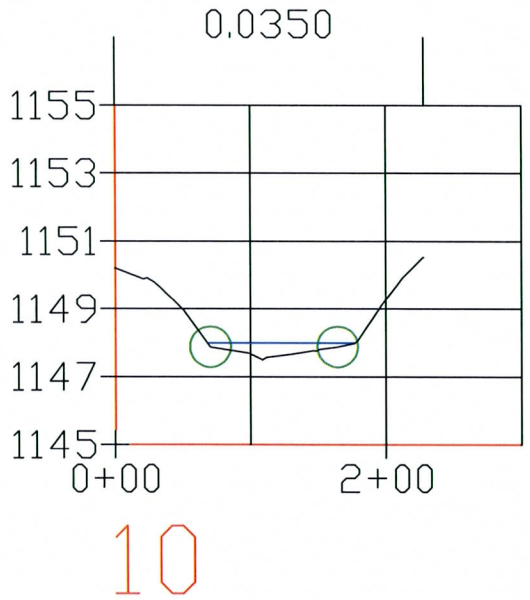
Zone A
Diverison from C340A (Hydrology ID)
Q=460 cfs (D340AL)

Normal Depth Results

Cross Section:	10	
Elevation:	1315.17	ft MSL
Depth:	2.43	ft
Discharge:	460.00	cfs
Energy Gradient:	0.0091	ft/ft
Froude Number:	0.2183	
Flow Regime:	Subcritical	
Flow Area:	238.43	sq ft
Average Velocity:	1.92	ft/s
Maximum Velocity:	1.92	ft/s
Composite n:	0.044	
Hydraulic Radius:	0.46	ft
Wetted Perimeter:	523.47	ft
Wetted Top Width:	522.93	ft
Critical Slope:	0.1943	ft/ft

T2N-R6W-S22 – W1

T2N-R6W-S22 - W1

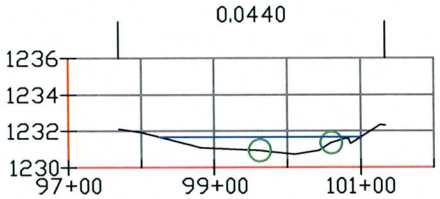


Normal Depth Results

Cross Section:	10	
Elevation:	1147.99	ft MSL
Depth:	0.50	ft
Discharge:	100.00	cfs
Energy Gradient:	0.053	ft/ft
Froude Number:	0.9495	
Flow Regime:	Subcritical	
Flow Area:	26.28	sq ft
Average Velocity:	3.81	ft/s
Maximum Velocity:	3.81	ft/s
Composite n:	0.035	
Hydraulic Radius:	0.24	ft
Wetted Perimeter:	108.44	ft
Wetted Top Width:	108.43	ft
Critical Slope:	0.0586	ft/ft

T3N-R6W-S32 – Split 2

Wash Name: S32 East Split



10

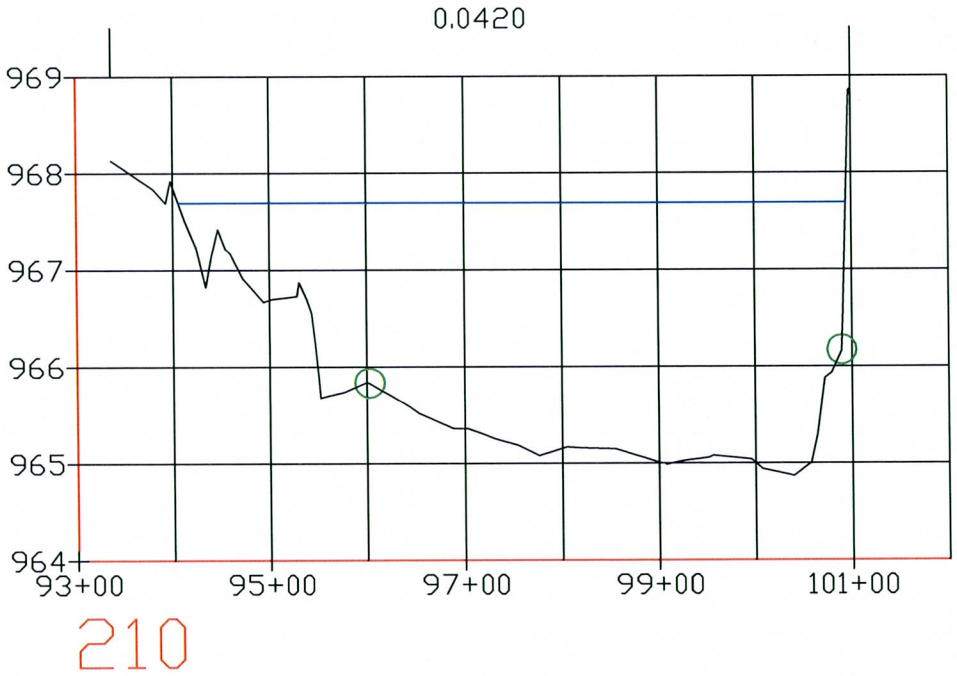
Zone A
Approx. location is within subbasin S330C
Q=310 cfs (Incidental Split)
Flow Split estimated by using
Normal Depth

Normal Depth Results

Cross Section:	10	
Elevation:	1231.67	ft MSL
Depth:	0.94	ft
Discharge:	310.00	cfs
Energy Gradient:	0.0075	ft/ft
Froude Number:	0.3636	
Flow Regime:	Subcritical	
Flow Area:	155.35	sq ft
Average Velocity:	2.00	ft/s
Maximum Velocity:	2.00	ft/s
Composite n:	0.044	
Hydraulic Radius:	0.56	ft
Wetted Perimeter:	276.83	ft
Wetted Top Width:	276.81	ft
Critical Slope:	0.0567	ft/ft

Winters Wash – E4

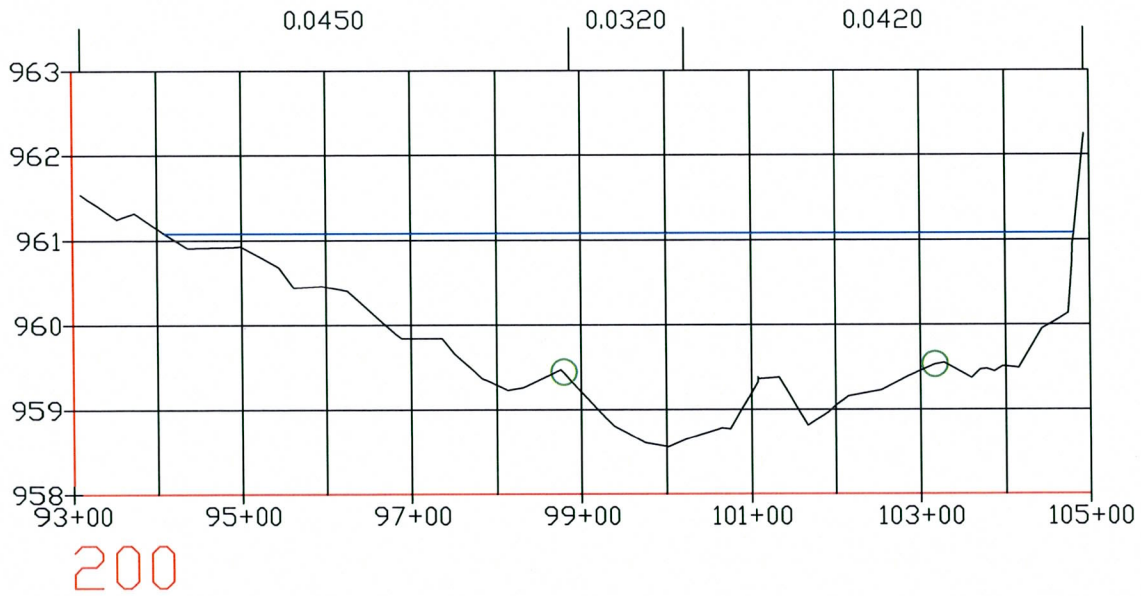
WINTERS WASH - E4



Normal Depth Results

Cross Section:	210	
Elevation:	967.69	ft MSL
Depth:	2.82	ft
Discharge:	4970.00	cfs
Energy Gradient:	0.0038	ft/ft
Froude Number:	0.3688	
Flow Regime:	Subcritical	
Flow Area:	1414.76	sq ft
Average Velocity:	3.53	ft/s
Maximum Velocity:	3.53	ft/s
Composite n:	0.042	
Hydraulic Radius:	2.05	ft
Wetted Perimeter:	688.93	ft
Wetted Top Width:	688.58	ft
Critical Slope:	0.0276	ft/ft

WINTERS WASH - E4

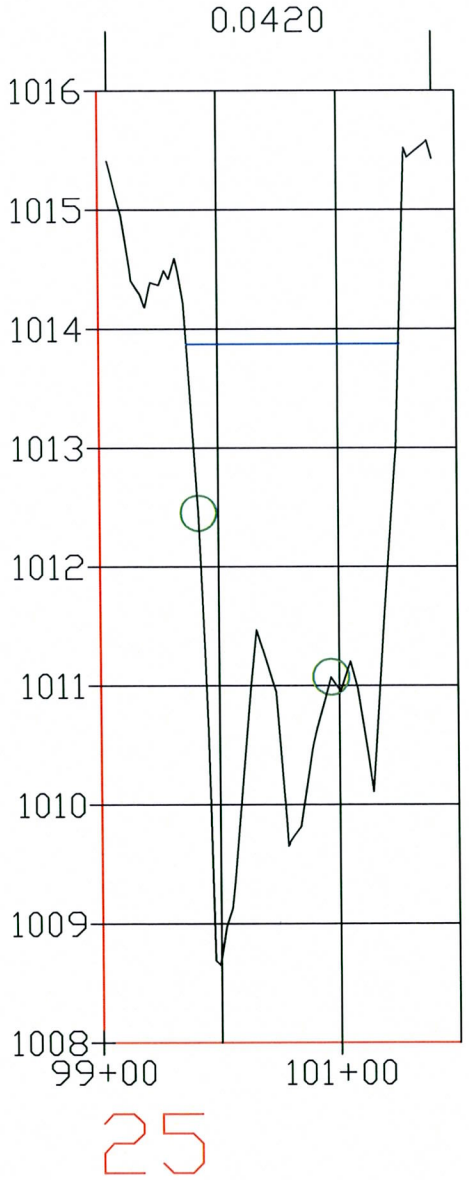


Normal Depth Results

Cross Section:	200	
Elevation:	961.08	ft MSL
Depth:	2.52	ft
Discharge:	4970.00	cfs
Energy Gradient:	0.0038	ft/ft
Froude Number:	0.352	
Flow Regime:	Subcritical	
Flow Area:	1567.92	sq ft
Average Velocity:	3.19	ft/s
Maximum Velocity:	4.97	ft/s
Composite n:	0.0421	
Hydraulic Radius:	1.46	ft
Wetted Perimeter:	1072.71	ft
Wetted Top Width:	1072.60	ft
Critical Slope:	0.0391	ft/ft

Winters Wash – W1

WINTERS WASH - W1

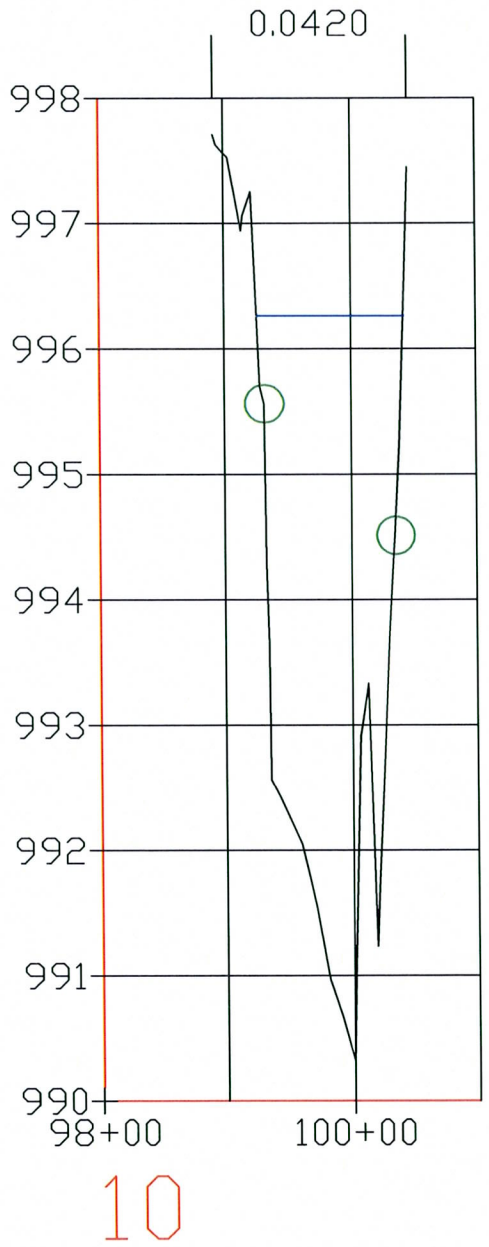


Normal Depth Results

Cross Section:	25	
Elevation:	1013.87	ft MSL
Depth:	5.22	ft
Discharge:	1850.00	cfs
Energy Gradient:	0.002	ft/ft
Froude Number:	0.2589	
Flow Regime:	Subcritical	
Flow Area:	551.20	sq ft
Average Velocity:	3.35	ft/s
Maximum Velocity:	3.35	ft/s
Composite n:	0.042	
Hydraulic Radius:	3.07	ft
Wetted Perimeter:	179.27	ft
Wetted Top Width:	177.91	ft
Critical Slope:	0.0298	ft/ft

Winters Wash – W2

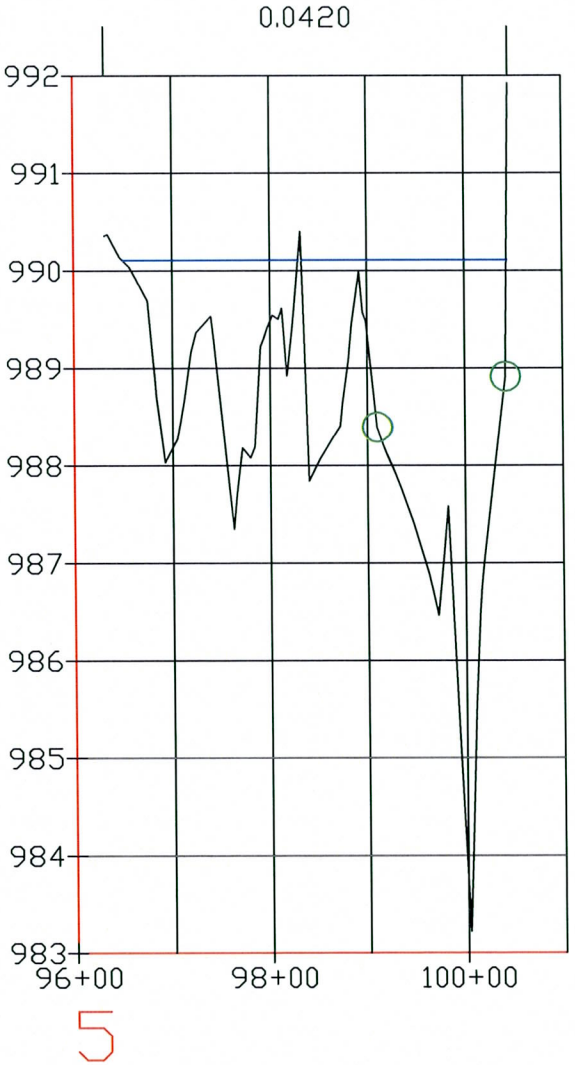
WINTERS WASH - W2



Normal Depth Results

Cross Section:	10	
Elevation:	996.26	ft MSL
Depth:	5.94	ft
Discharge:	2110.00	cfs
Energy Gradient:	0.003	ft/ft
Froude Number:	0.34	
Flow Regime:	Subcritical	
Flow Area:	448.77	sq ft
Average Velocity:	4.71	ft/s
Maximum Velocity:	4.71	ft/s
Composite n:	0.042	
Hydraulic Radius:	3.77	ft
Wetted Perimeter:	118.91	ft
Wetted Top Width:	116.15	ft
Critical Slope:	0.0258	ft/ft

WINTERS WASH - W2

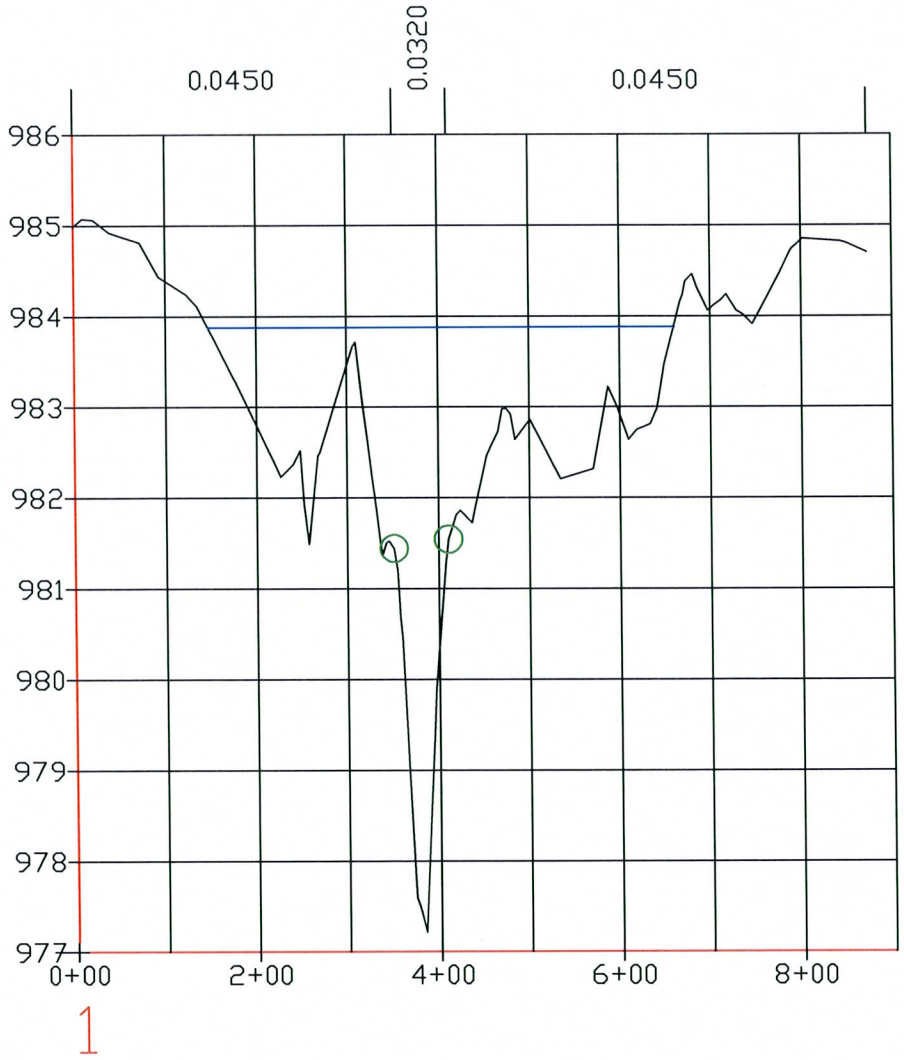


Normal Depth Results

Cross Section:	5	
Elevation:	990.11	ft MSL
Depth:	6.89	ft
Discharge:	2110.00	cfs
Energy Gradient:	0.003	ft/ft
Froude Number:	0.1961	
Flow Regime:	Subcritical	
Flow Area:	722.73	sq ft
Average Velocity:	2.92	ft/s
Maximum Velocity:	2.92	ft/s
Composite n:	0.042	
Hydraulic Radius:	1.85	ft
Wetted Perimeter:	391.66	ft
Wetted Top Width:	389.18	ft
Critical Slope:	0.0777	ft/ft

Winters Wash – W3

WINTERS WASH - W3

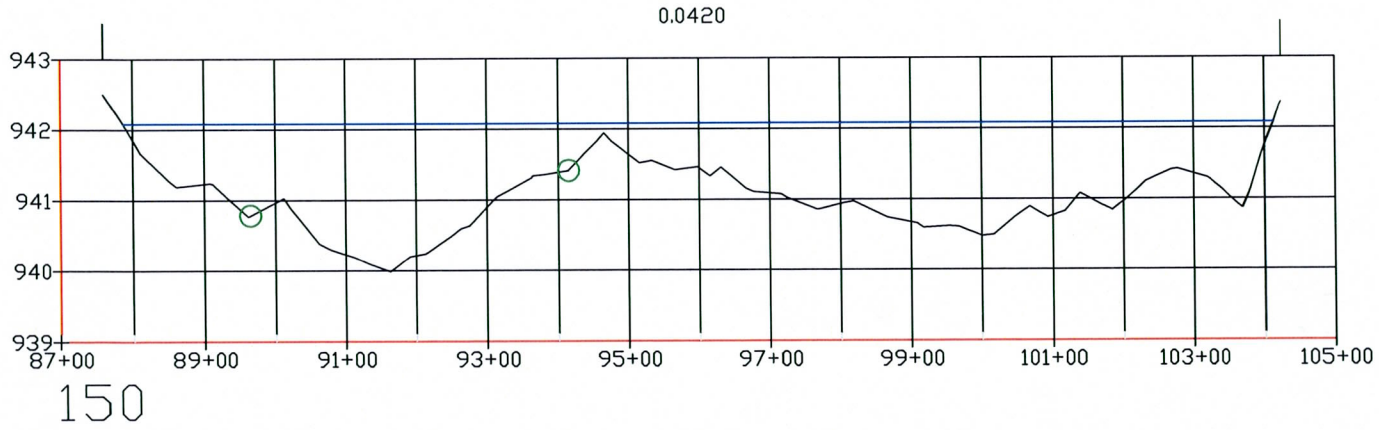


Normal Depth Results

Cross Section:	2.1	
Elevation:	983.88	ft MSL
Depth:	6.66	ft
Discharge:	2120.00	cfs
Energy Gradient:	0.0027	ft/ft
Froude Number:	0.1738	
Flow Regime:	Subcritical	
Flow Area:	833.44	sq ft
Average Velocity:	2.54	ft/s
Maximum Velocity:	2.54	ft/s
Composite n:	0.042	
Hydraulic Radius:	1.62	ft
Wetted Perimeter:	513.88	ft
Wetted Top Width:	512.79	ft
Critical Slope:	0.0893	ft/ft

Winters Wash – W5

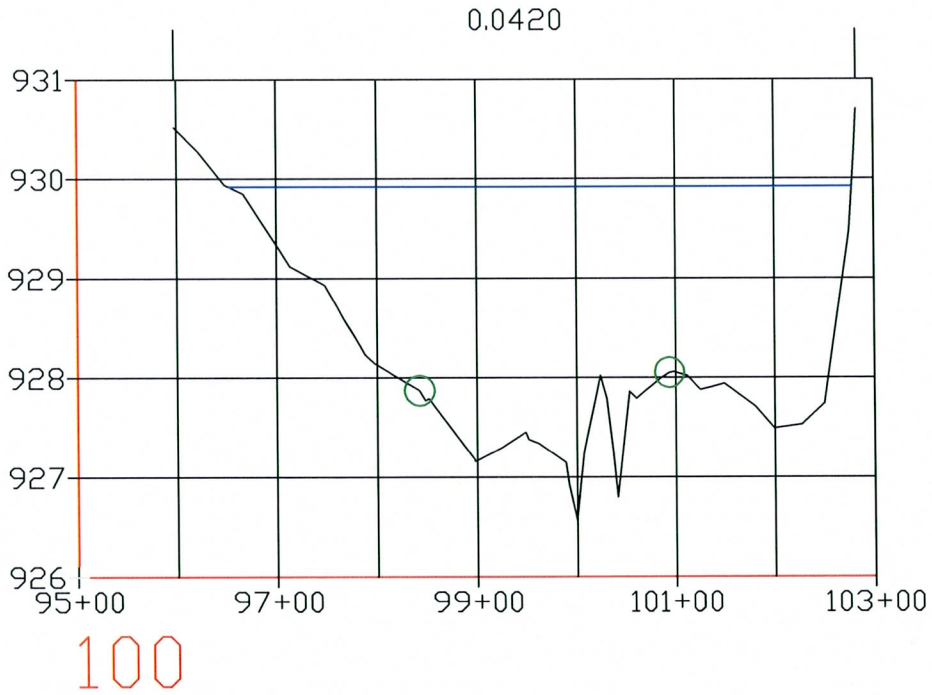
WINTERS WASH - W5



Normal Depth Results

Cross Section:	150	
Elevation:	942.07	ft MSL
Depth:	2.08	ft
Discharge:	3850.00	cfs
Energy Gradient:	0.0035	ft/ft
Froude Number:	0.2676	
Flow Regime:	Subcritical	
Flow Area:	1756.19	sq ft
Average Velocity:	2.21	ft/s
Maximum Velocity:	2.21	ft/s
Composite n:	0.042	
Hydraulic Radius:	1.08	ft
Wetted Perimeter:	1623.70	ft
Wetted Top Width:	1623.65	ft
Critical Slope:	0.048	ft/ft

WINTERS WASH - W5



Normal Depth Results

Cross Section:	100	
Elevation:	929.92	ft MSL
Depth:	3.35	ft
Discharge:	3850.00	cfs
Energy Gradient:	0.0035	ft/ft
Froude Number:	0.3102	
Flow Regime:	Subcritical	
Flow Area:	1195.66	sq ft
Average Velocity:	3.23	ft/s
Maximum Velocity:	3.23	ft/s
Composite n:	0.042	
Hydraulic Radius:	1.91	ft
Wetted Perimeter:	625.67	ft
Wetted Top Width:	625.39	ft
Critical Slope:	0.036	ft/ft

E.3 Expansion and Contraction Coefficients

The expansion and contraction coefficients used in the HEC-RAS model were determined using the HEC-RAS User's Manual (**Reference 2**). More discussion regarding the expansion and contraction coefficients is included in **Section 5.3.2**.

E.4 Analysis of Structures

Very few culverts were modeled as part of this study. These structures were modeled using the HEC-RAS bridge routine. The majority of the structures modeled were located along Interstate-10. Approximately 3 locations were included in the modeling along Interstate-10. The structures were modeled using the data included in Palo Verde Watershed Zone A Floodplain Delineation Study – Box Culverts I-10, Survey Report (**Reference 14**). General discussions regarding the analyses of various structures are included throughout **Section 5**.

E.5 Hydraulic Calculations

The hydraulic calculations were made using the US Army Corps of Engineer's HEC-RAS V.4.0.0 program (**Reference 1**), in accordance, with BOSS RiverCAD Version 8.4.0 (**Reference 3**). The details of the hydraulic methodology are discussed in **Section 5**. The HEC-RAS output is included in **Appendix E.6.**

E.5.1 - Split Flow Supporting Documentation

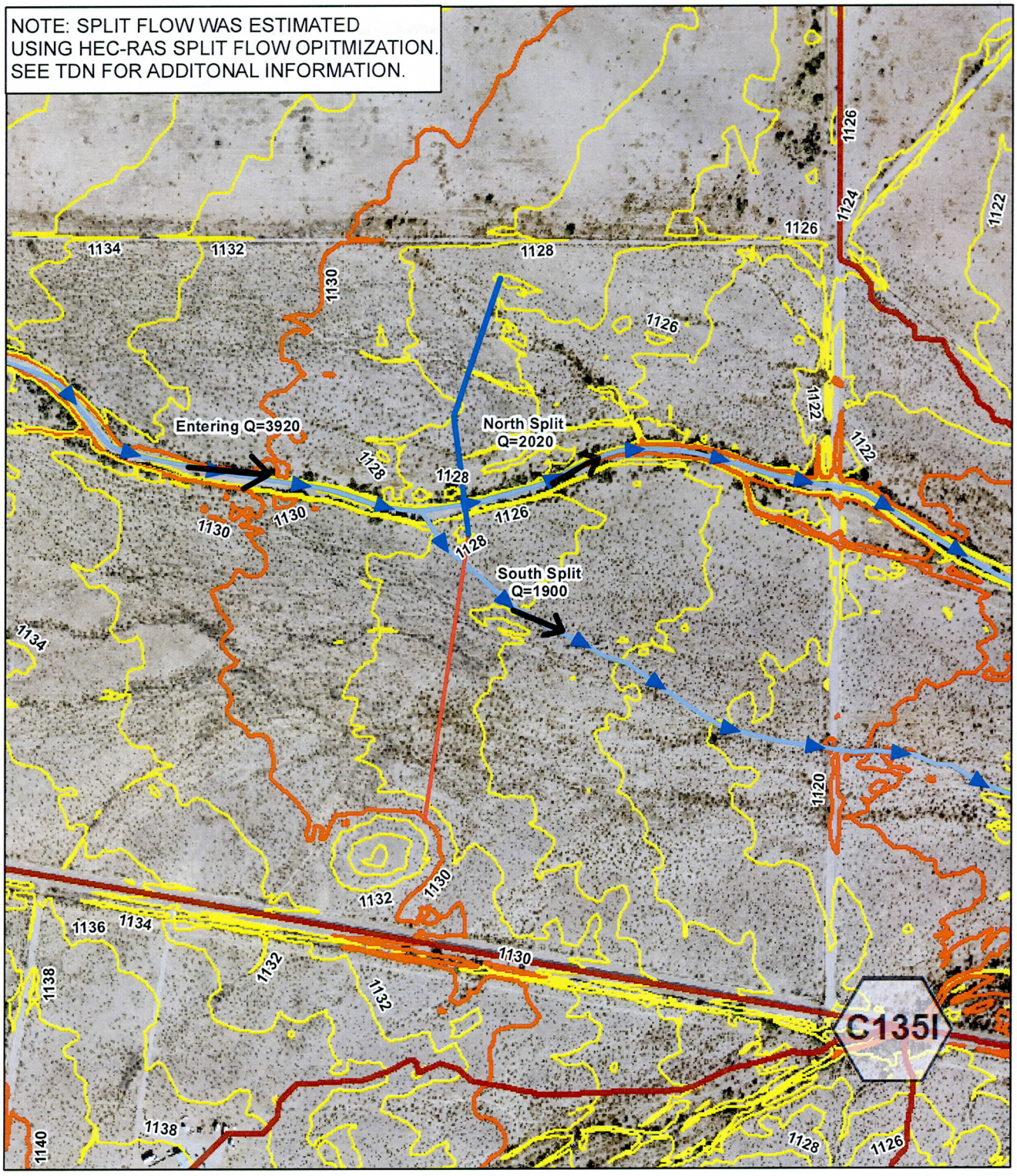
E.5.2 - Agreement Tables

E.5.1 Split Flow Supporting Documentation

The documentation included under this appendix shows the incidental splits that were incorporated into the hydraulic modeling, but the hydrology HEC-1 models were note modified to include the splits identified.

1. Delaney Wash Split Flow
2. Four Mile Wash Split Flow
3. T1N-R6W-S17 & S18 Split Flow
4. T1S-R6W-S27 Split Flow
5. T2N-R6W-S02 Split Flow
6. T2N-R6W-S05N Split Flow
7. T2N-R6W-S05S Split Flow
8. T2N-R6W-S22 Split and Zone A Flow
9. T3N-R6W-S32 Split Flow
10. Winters Wash Split Flow
11. T2N-R6W-S05E Split Flow

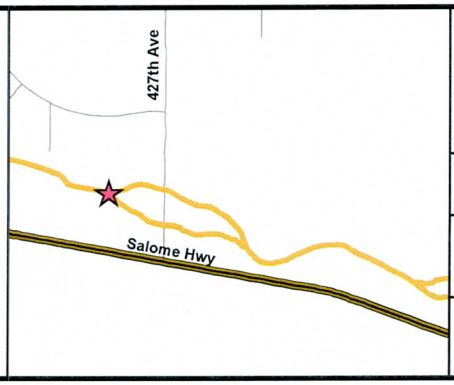
Delaney Wash Split Flow
Supporting Documentation



LEGEND

- Delaney Wash
- Split Flow Cross Section
- Wash Flow Cross Section
- Hydrology Subbasins
- S750E — Hydrology Subbasin ID
- C750C L — Concentration Point ID

VICINITY MAP



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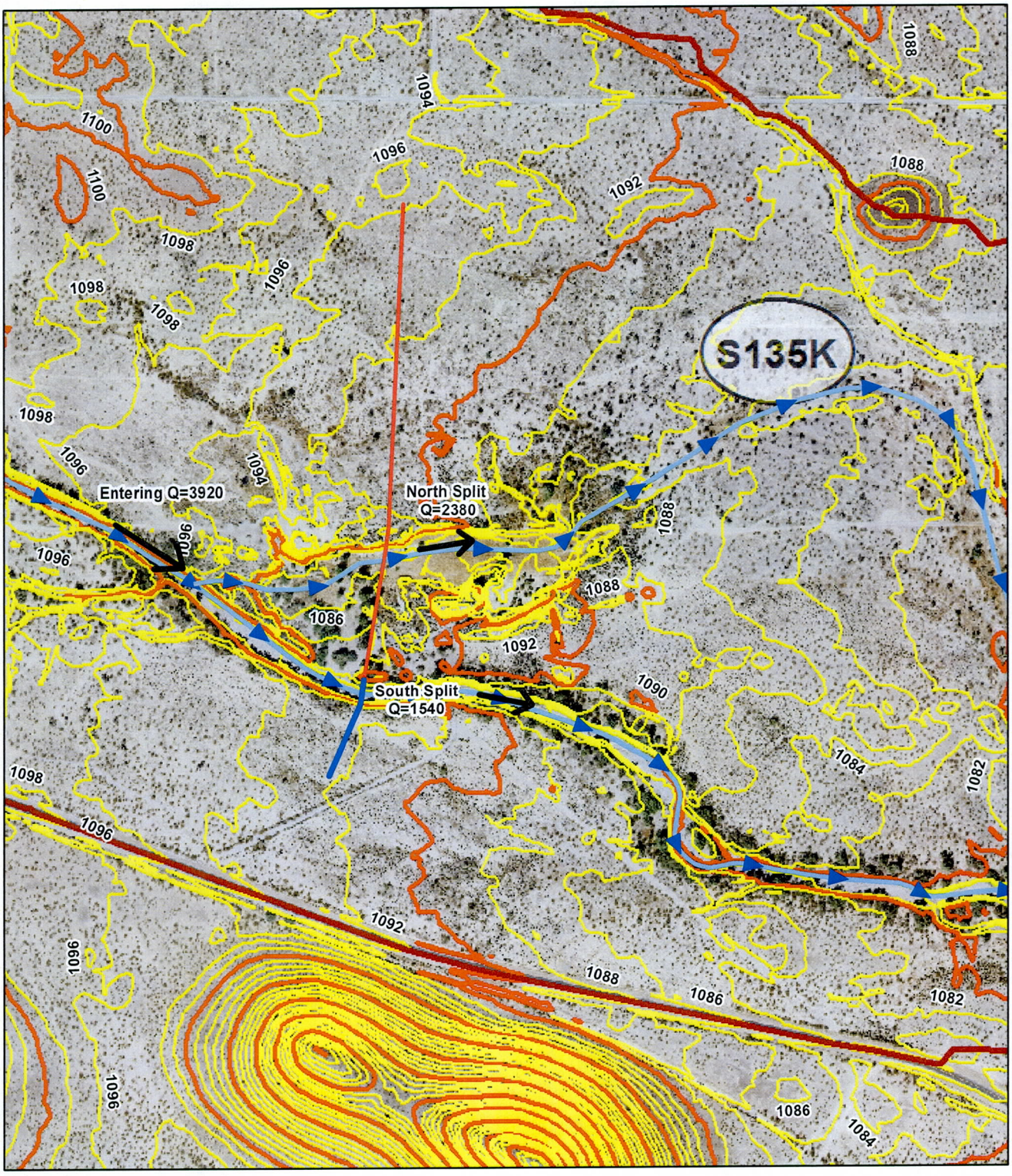
DELANEY WASH SPLIT 1
NEAR CROSS SECTION 4.777

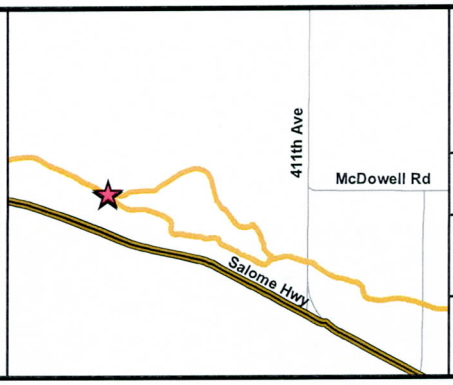
P:\300\310\310047_Palo_Verde\Global_Data\Hydraulics\RiverCAD\T1N_R6W_S07_Delaney_Wash\Splits\Split1_Map.mxd



LEGEND

- Delaney Wash
- Split Flow Cross Section
- Wash Flow Cross Section
- Hydrology Subbasins
- S750E — Hydrology Subbasin ID
- C750C L — Concentration Point ID

VICINITY MAP



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DELANEY WASH SPLIT 2
NEAR CROSS SECTION 3.033

P:\30013\10\310047_Palo_Verde\Global_Data\Hydraulics\RiverCAD\T1N_R6W_S07_Delaney_Wash\Splits\Split1_Map.mxd

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SHEET 1 OF 2

BY AMB DATE 7/5/2011

CLIENT: FCDMC CHECK RLJ DATE 7/6/2011

JOB: Palo Verde Watershed Detailed Floodplain Delineation Study JOB NO. 310.047

Split Flow Analysis for: Delaney Wash - Split 2 (near cross section 3.033)

Split Flow Location: Approximately 1 mile west of 411th Ave Alignment

Analysis Method: **HEC-RAS Flow Distribution in Cross Section**

Split Results	
Entering Flow	3920
North Split	***2380***
South Split	***1540***

	HEC-RAS Output							
Position	**Left Station [ft]**	**Right Station [ft]**	**Q [ft^3/s]**	**Area [ft^2]**	**Wetted Perimeter [ft]**	**Percent Conveyance [%]**	**Hydraulic Depth [ft]**	**Velocity [ft/s]**
Left of Bank		9910.13	2383.86	1620.31	1014.10	60.81	1.60	1.47
Channel	9910.13	10004.66	1488.43	524.97	96.77	37.97	5.55	2.84
Right of Bank	10004.66		47.71	76.98	222.69	1.22	0.35	0.62

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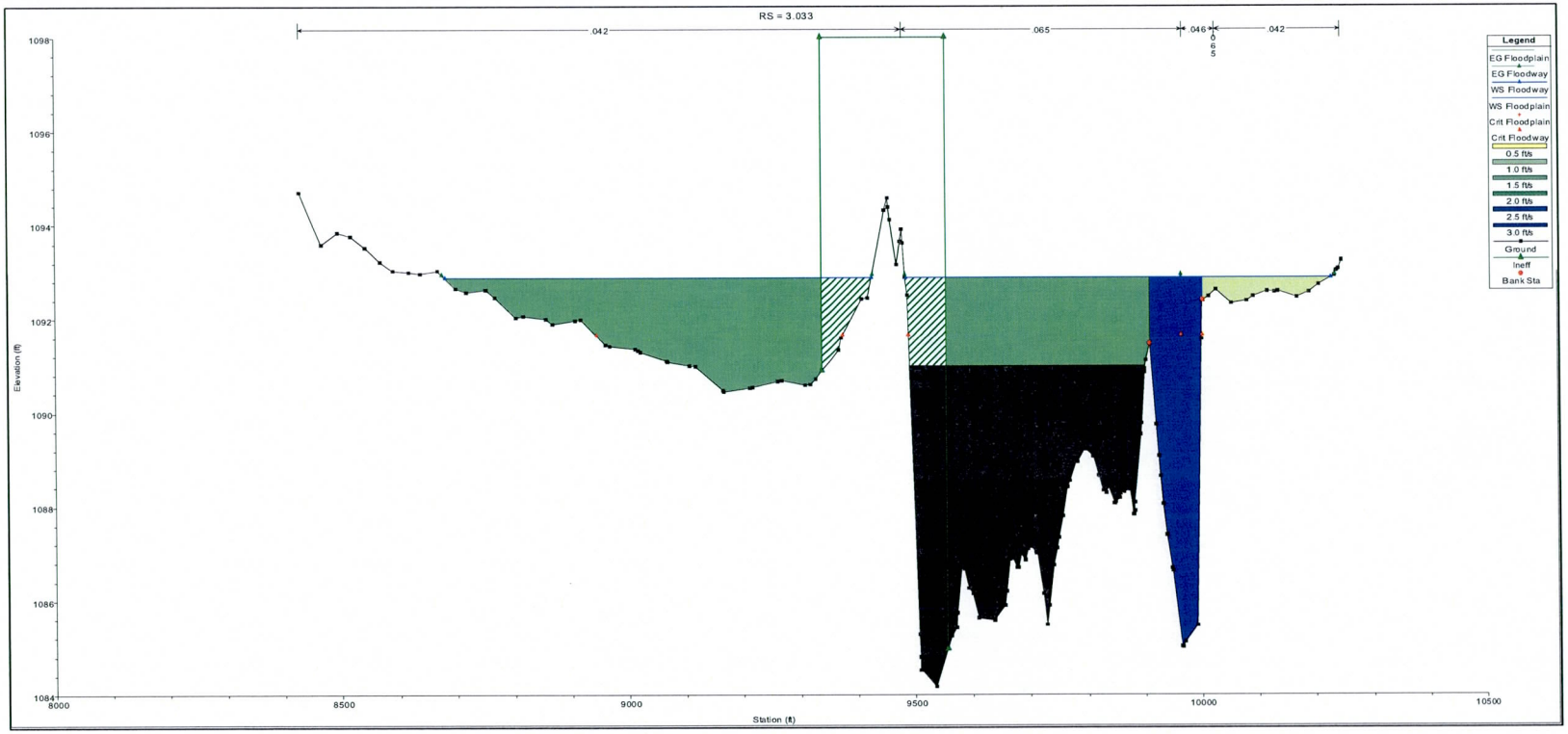
SHEET	2	**OF**	2
BY	AMB	**DATE**	7/5/2011
CHECK	RLJ	**DATE**	7/6/2011
JOB NO.	310.047		

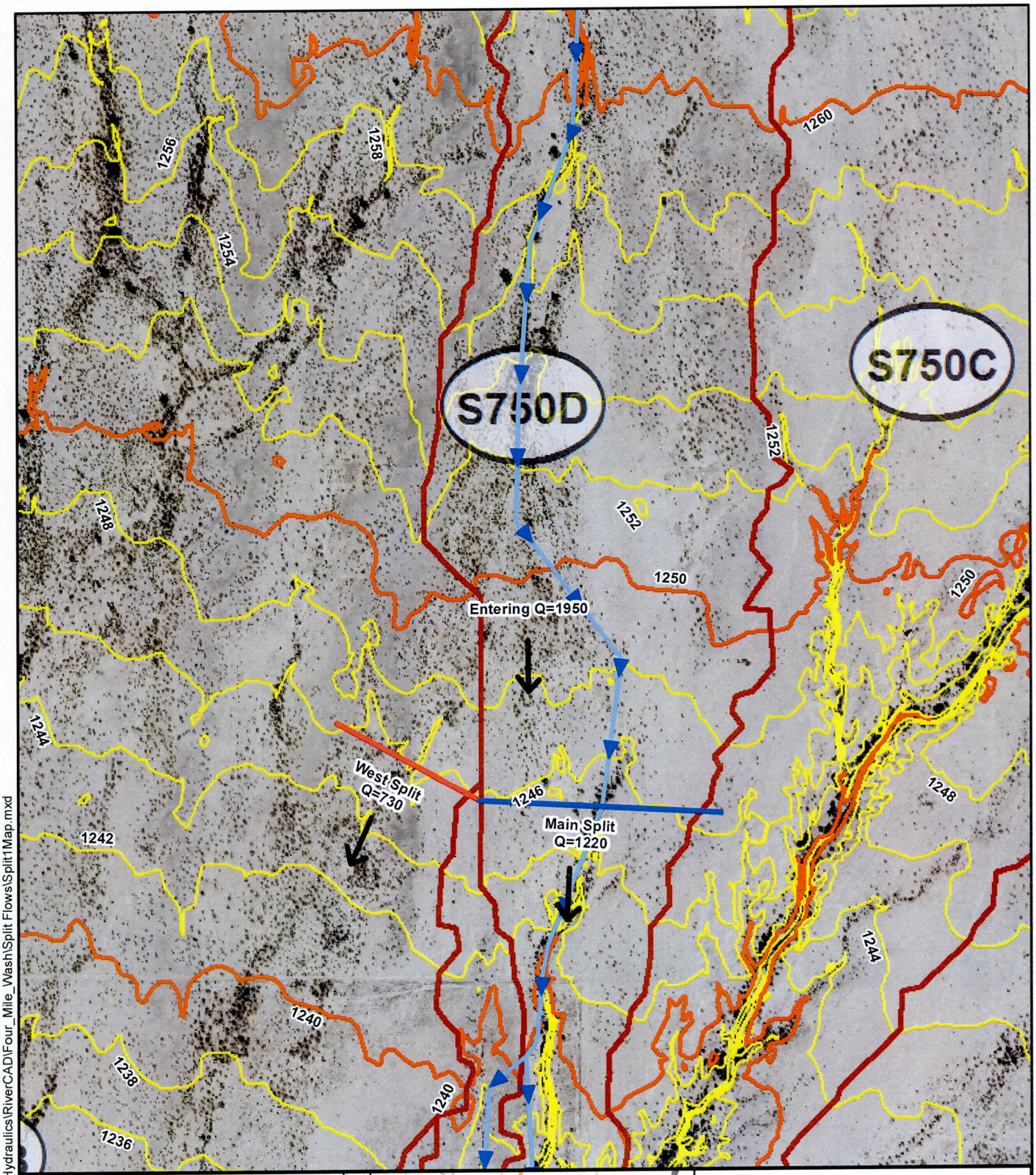
CLIENT: FCDMC

JOB: Palo Verde Watershed Detailed Floodplain Delineation Study
Split Flow Analysis for: Delaney Wash - Split 2 (near cross section 3.033)
Split Flow Location: Approximately 1 mile west of 411th Ave Alignment

Analysis Method: **HEC-RAS Flow Distribution in Cross Section**



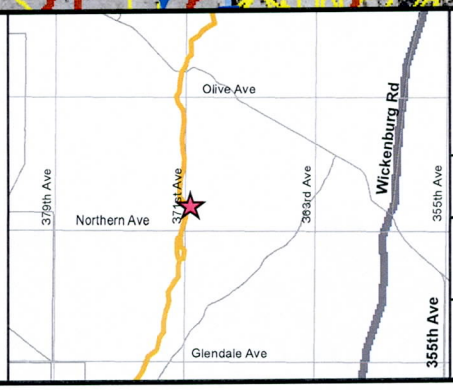
Four Mile Wash Split Flow
Supporting Documentation



LEGEND

- Four Mile Wash
- Wash Flow Cross Section
- Split Flow Cross Section
- Hydrology Subbasins
- S750E — Hydrology Subbasin ID
- C750C L — Concentration Point ID

VICINITY MAP



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FOUR MILE WASH SPLIT 1
NEAR CROSS SECTION 10.346

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SHEET 1 OF 2

BY AL DATE 1/12/2011

CHECK HAA DATE 1/12/2011

CLIENT: FCDMC

JOB: Palo Verde Watershed Detailed Floodplain Delineation Study JOB NO. 310.047

Split Flow Analysis for: Four Mile Wash - Split 1 (Near Cross Section 10.346)

Split Flow Location: Just north of Northern Ave. alignment

Analysis Method: HEC-RAS Flow Distribution in Cross Section

Split Results	
Entering Flow	1950
West Split	730
Main Split	***1220***

	HEC-RAS Output							
Position	**Left Station [ft]**	**Right Station [ft]**	**Q [ft^3/s]**	**Area [ft^2]**	**Wetted Perimeter [ft]**	**Percent Conveyance [%]**	**Hydraulic Depth [ft]**	**Velocity [ft/s]**
Left of Bank		9989.60	292.02	141.05	311.48	14.98	0.45	2.07
Channel	9989.60	10379.19	927.74	334.23	389.89	47.58	0.86	2.78
Right of Bank	10379.19		730.24	292.40	440.75	37.45	0.66	2.50

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SHEET	2	OF	2
BY	AL	DATE	1/12/2011
CHECK	HAA	DATE	1/12/2011
JOB NO.	310.047		

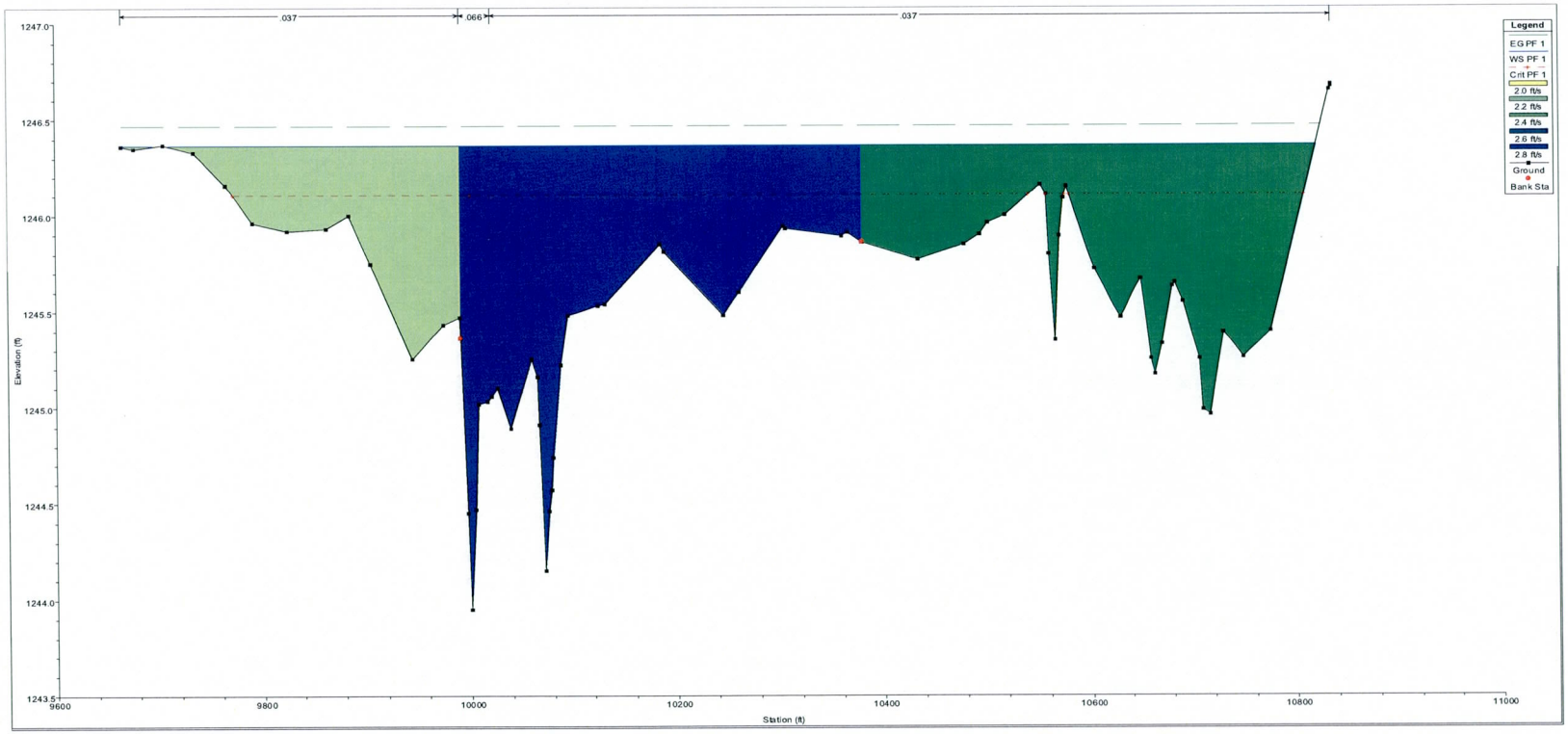
CLIENT: FCDMC

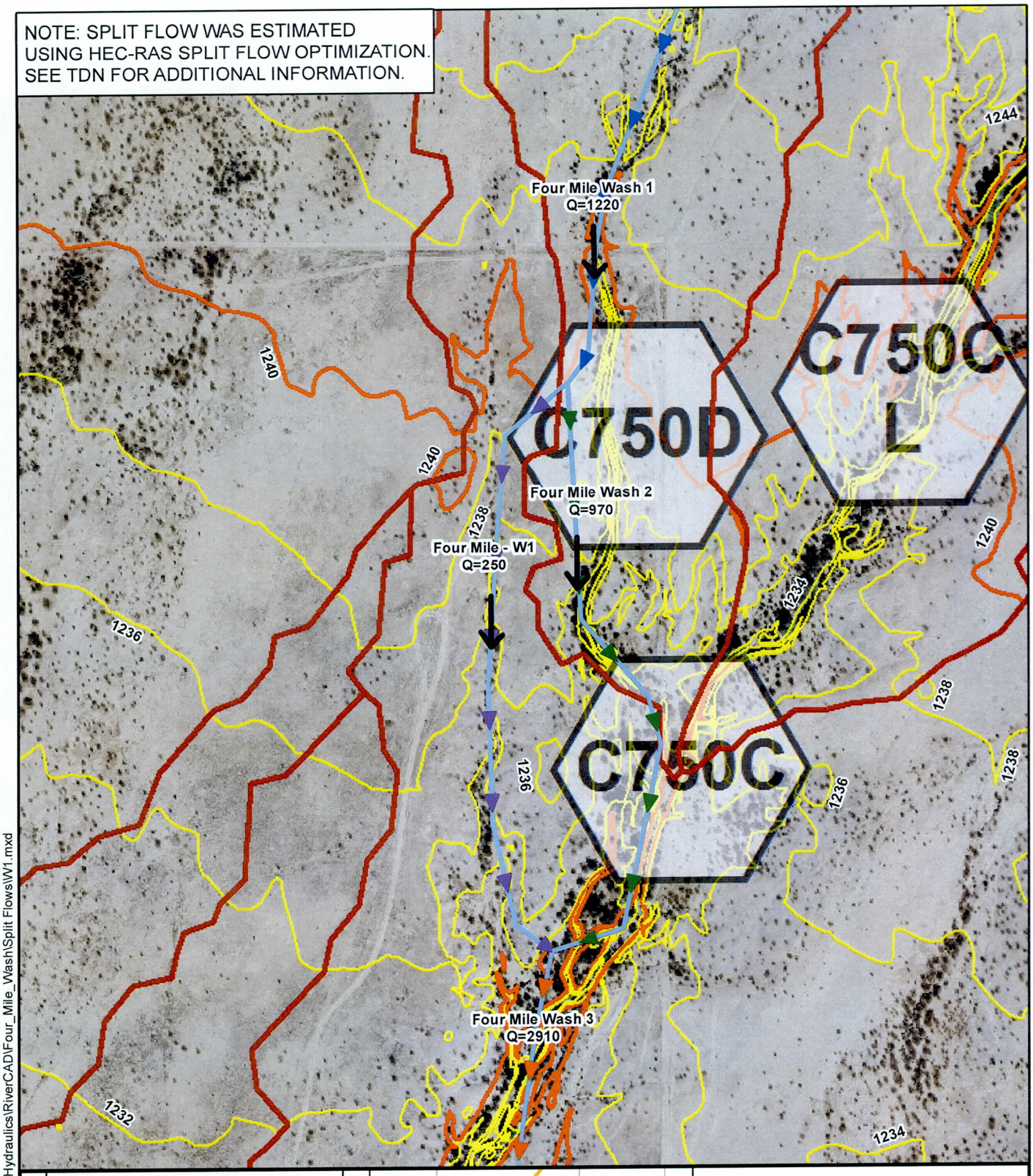
JOB: Palo Verde Watershed Detailed Floodplain Delineation Study

Split Flow Analysis for: Four Mile Wash - Split 1 (Near Cross Section 10.346)

Split Flow Location: Just north of Northern Ave. alignment

Analysis Method: HEC-RAS Flow Distribution in Cross Section

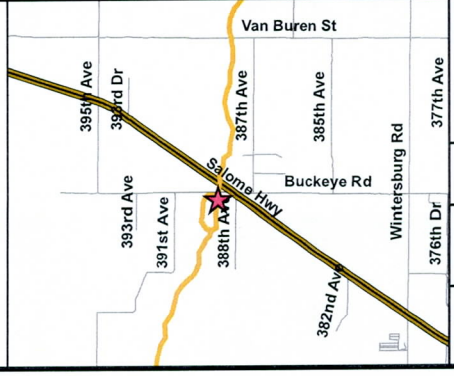




LEGEND

- Four Mile Wash 1
- Four Mile Wash - W1
- Four Mile Wash 2
- Four Mile Wash 3
- S750E — Hydrology Subbasin ID
- C750C L — Concentration Point ID

VICINITY MAP



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FOUR MILE WASH - W1
NEAR CROSS SECTION 10.216

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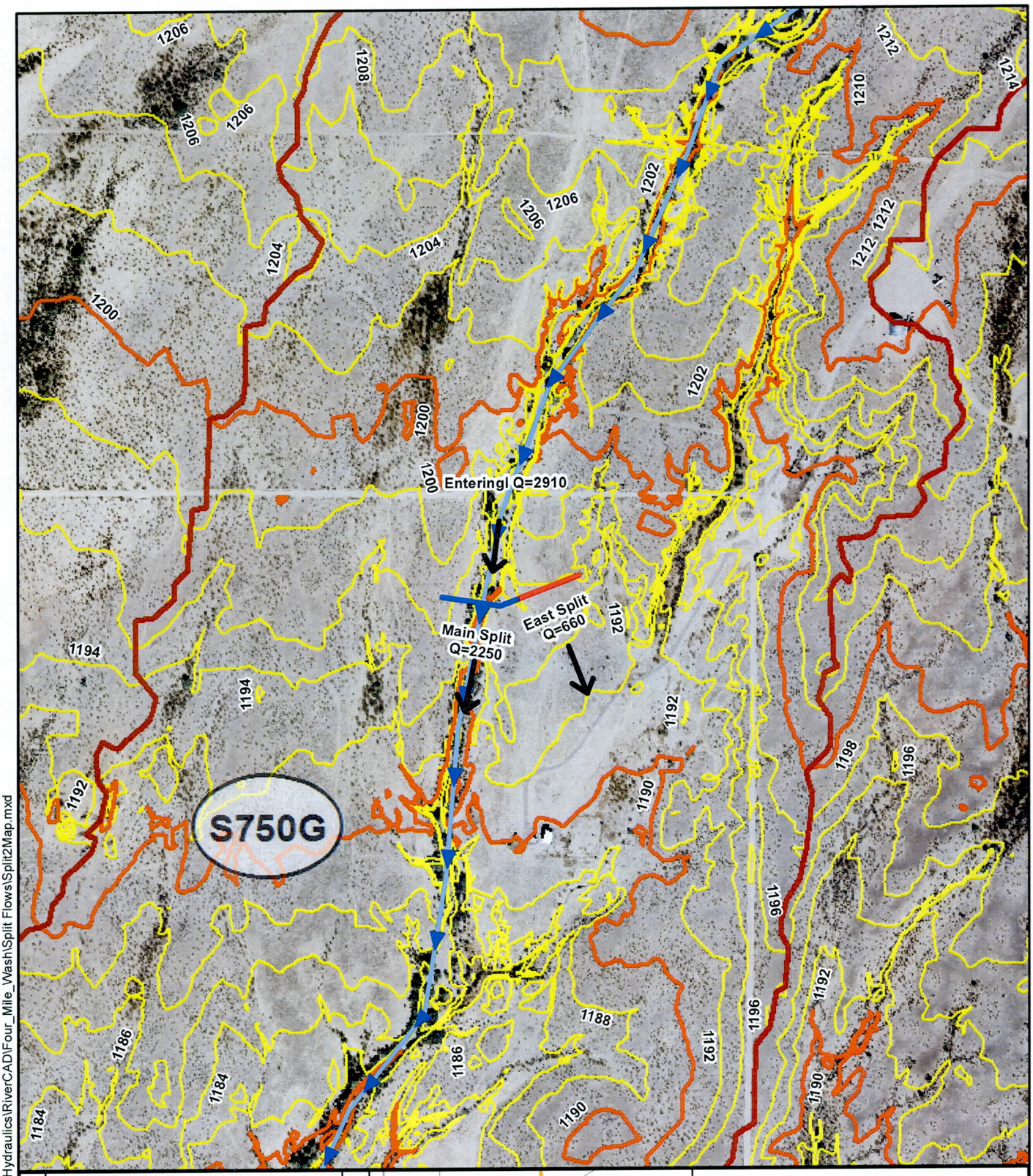

LEGEND

- Four Mile Wash
- Wash Flow Cross Section
- Split Flow Cross Section
- Hydrology Subbasins
- S750E — Hydrology Subbasin ID
- C750C L — Concentration Point ID

VICINITY MAP

PALO VERDE WATERSHED DETAILED FLOODPLAIN DELINEATION STUDY
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FOUR MILE WASH SPLIT 2 NEAR CROSS SECTION 8.815

P:\300\310\310047_Palo_Verde\Global_Data\Hydraulics\RiverCAD\Four_Mile_Wash\Split Flows\Split2Map.mxd

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SHEET 1 OF 2

BY AL DATE 7/11/2011

CHECK RAS DATE 7/11/2011

CLIENT: FCDMC

JOB: Palo Verde Watershed Detailed Floodplain Delineation Study **JOB NO.** 310.047

Split Flow Analysis for: Four Mile Wash - Split 2 (Near cross section 8.815)

Split Flow Location: Approximately 0.25 miles south of Glendale Ave. alignment

Analysis Method: HEC-RAS Flow Distribution in Cross Section

Split Results	
Entering Flow	2910
East Split	660
Main Split	***2250***

	HEC-RAS Output							
Position	**Left Station [ft]**	**Right Station [ft]**	**Q [ft^3/s]**	**Area [ft^2]**	**Wetted Perimeter [ft]**	**Percent Conveyance [%]**	**Hydraulic Depth [ft]**	**Velocity [ft/s]**
Left of Bank		9875.46	660.85	198.00	204.13	22.71	0.97	3.34
Channel	9875.46	10047.24	2006.48	428.27	173.42	68.95	2.49	4.69
Right of Bank	10047.24		242.67	69.98	68.12	8.34	1.03	3.47

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SHEET	2	OF	2
BY	AL	DATE	7/11/2011
CHECK	RAS	DATE	7/11/2011
JOB NO.	310.047		

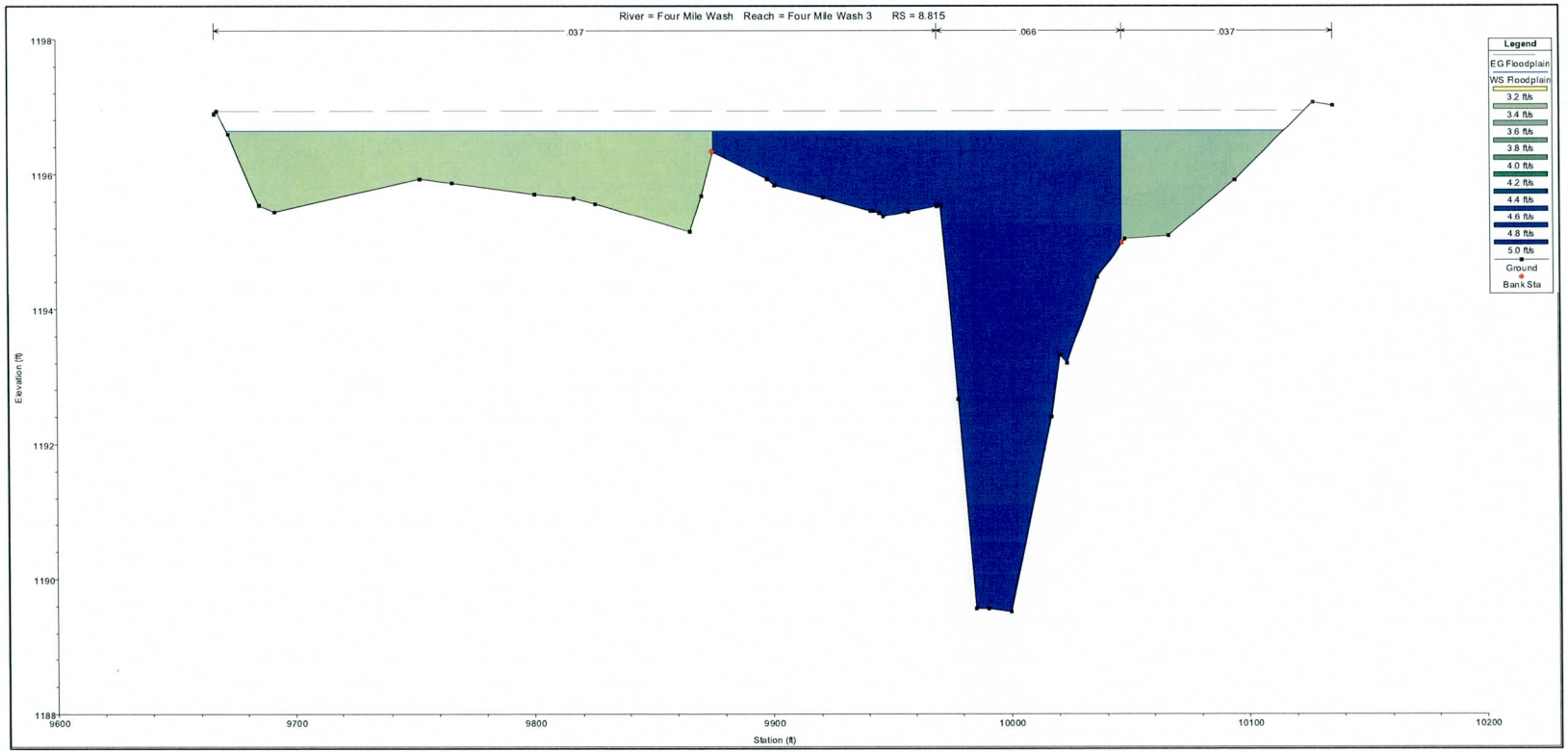
CLIENT: FCDMC

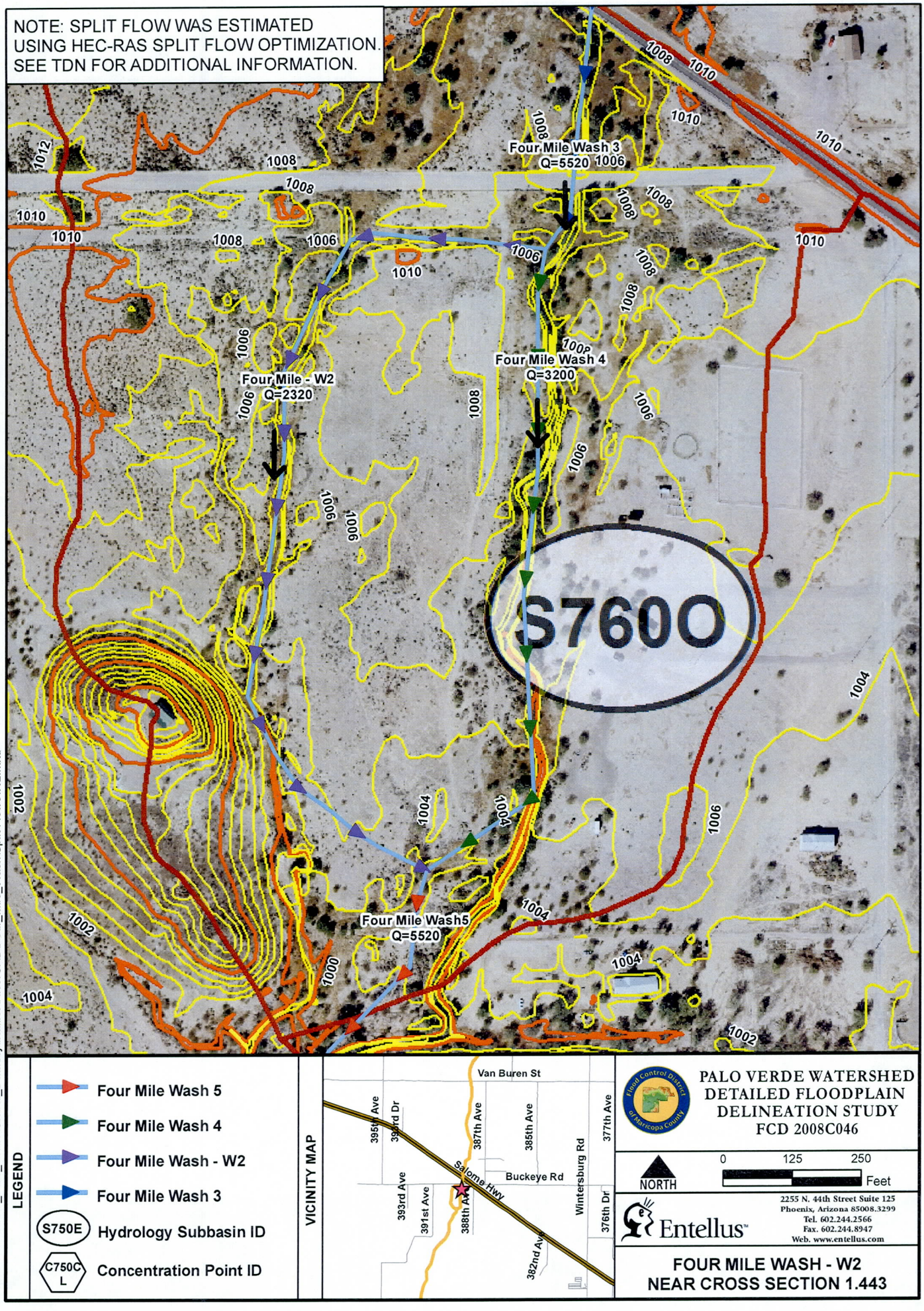
JOB: Palo Verde Watershed Detailed Floodplain Delineation Study

Split Flow Analysis for: Four Mile Wash - Split 2 (Near cross section 8.815)

Split Flow Location: Approximately 0.25 miles south of Glendale Ave. alignment

Analysis Method: HEC-RAS Flow Distribution in Cross Section




NOTE: SPLIT FLOW WAS ESTIMATED USING HEC-RAS SPLIT FLOW OPTIMIZATION. SEE TDN FOR ADDITIONAL INFORMATION.
Four Mile Wash 3
Q=5520
Four Mile Wash 4
Q=3200
Four Mile - W2
Q=2320
Four Mile Wash5
Q=5520
S760O
LEGEND
Four Mile Wash 5
Four Mile Wash 4
Four Mile Wash - W2
Four Mile Wash 3
S750E
Hydrology Subbasin ID
C750C L
Concentration Point ID
VICINITY MAP
Van Buren St
Buckeye Rd
Salome Hwy
395th Ave
393rd Dr
387th Ave
385th Ave
377th Ave
393rd Ave
391st Ave
388th Ave
Wintersburg Rd
376th Dr
382nd Ave
PALO VERDE WATERSHED
DETAILED FLOODPLAIN
DELINEATION STUDY
FCD 2008C046
NORTH
0
125
250
Feet
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FOUR MILE WASH - W2
NEAR CROSS SECTION 1.443
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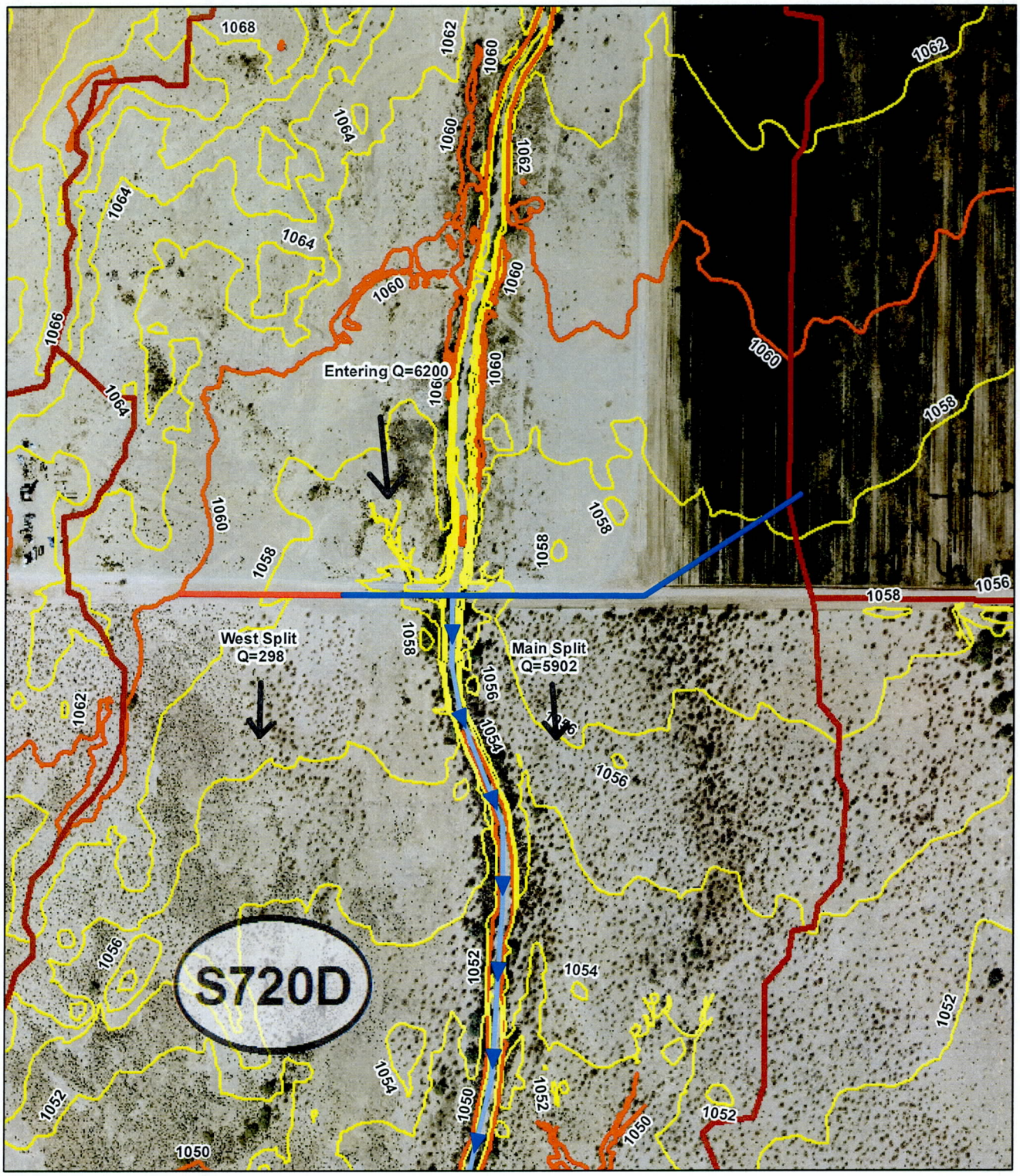
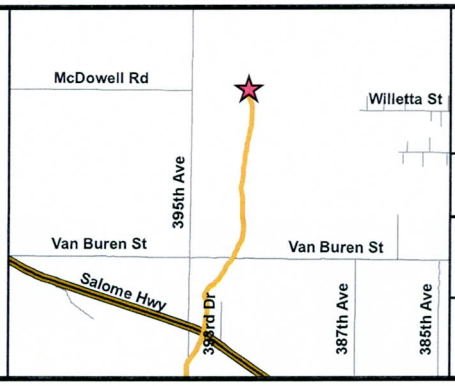
T1N-R6W-S17 & S18 Split Flow
Supporting Documentation



LEGEND

- T1N-R6W-S18
- Split Flow Cross Section
- Wash Flow Cross Section
- Hydrology Subbasins
- S750E — Hydrology Subbasin ID
- C750CL — Concentration Point ID

VICINITY MAP



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T1N-R6W-S18 NORTH SPLIT 1 NEAR CROSS SECTION 2.237

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SHEET 1 OF 2

BY AL DATE 4/6/2011

CHECK HAA DATE 4/6/2011

CLIENT: FCDMC

JOB: Palo Verde Watershed Detailed Floodplain Delineation Study JOB NO. 310.047

Split Flow Analysis for: T1N-R6W-S18 North - Split 1 (Near cross seciton 2.237)

Split Flow Location: McDowell Rd alignment

Analysis Method: HEC-RAS Flow Distribution in Cross Section

Split Results	
Entering Flow	6200
West Split	298
Main Split	***5902***

	HEC-RAS Output							
Position	Left Station [ft]	Right Station [ft]	Q [ft^3/s]	Area [ft^2]	Wetted Perimeter [ft]	Percent Conveyance [%]	Hydraulic Depth [ft]	Velocity [ft/s]
Left of Bank		9974.74	2470.42	1034.06	843.07	39.85	1.23	2.39
Channel	9974.74	10231.04	3431.94	807.26	257.41	55.35	3.15	4.25
Right of Bank	10231.04		297.64	178.70	265.21	4.80	0.67	1.67

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SHEET	2	**OF**	2		
BY	AL	**DATE**	4/6/2011		
CHECK	HAA	**DATE**	4/6/2011		
JOB NO.	310.047				

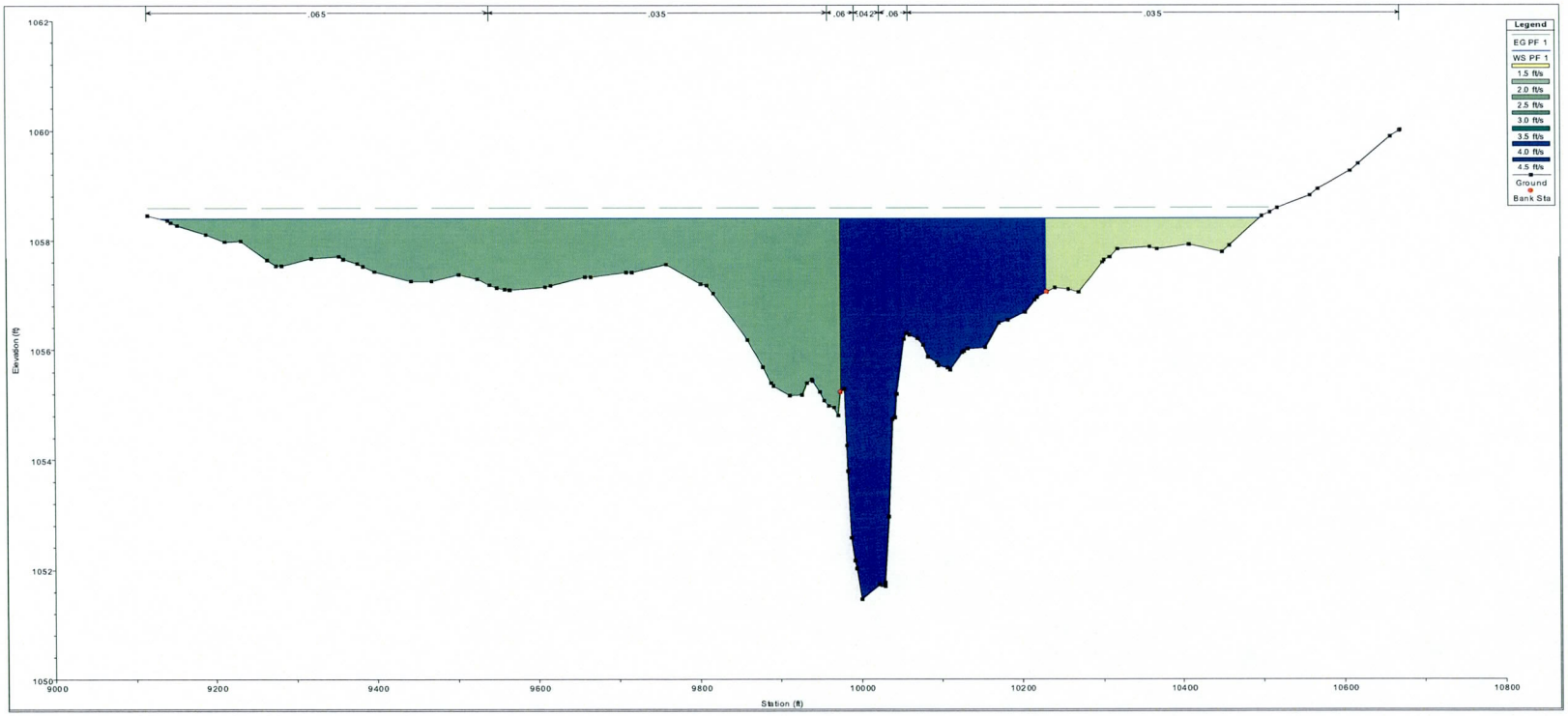
CLIENT: FCDMC

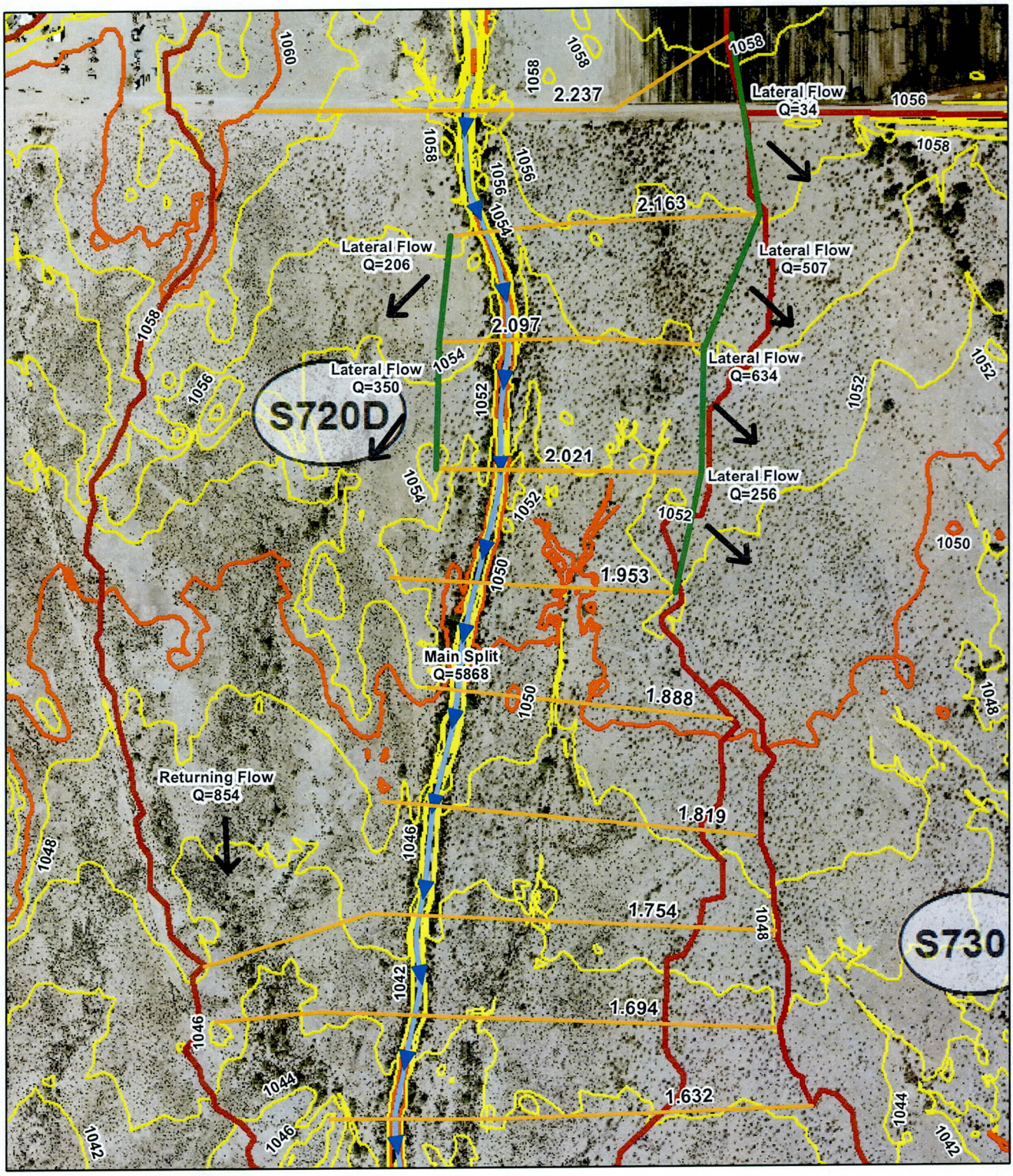
JOB: Palo Verde Watershed Detailed Floodplain Delineation Study

Split Flow Analysis for: T1N-R6W-S18 North - Split 1 (Near cross seciton 2.237)

Split Flow Location: McDowell Rd alignment

Analysis Method: **HEC-RAS Flow Distribution in Cross Section**

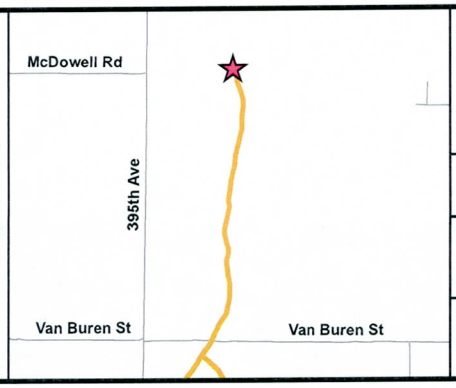




LEGEND

- T1N-R6W-S18 NORTH
- Lateral Weir
- CrossSections
- Hydrology Subbasins
- S750E — Hydrology Subbasin ID
- C750C L — Concentration Point ID

VICINITY MAP



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T1N-R6W-S18 NORTH
LATERAL FLOWS

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SHEET 1 OF 1

BY AL DATE 7/10/2011

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CLIENT: FCDMC

JOB: Palo Verde Watershed Detailed Floodplain Delineation Study

Split Flow Analysis for: T1N-R6W-S18 North (Near Cross Section 2.237)

Split Flow Location: Just east of upstream wash limits.

Analysis Method: HEC-RAS Wier Flow

		HEC-RAS Output												
Reach	River Sta	Q US [cfs]	Q Leaving Total [cfs]	Q DS [cfs]	Q Weir [cfs]	Q Gates [cfs]	Weir Top Width [ft]	Weir Max Depth [ft]	Weir Avg Depth [ft]	Min El Weir Flow [ft]	E.G. US. [ft]	W.S. US. [ft]	E.G. DS [ft]	W.S. DS [ft]
Reach1	2.236	5902.00	34.44	5232.48	34.44		218.87	0.50	0.15	1056.09	1058.60	1058.39	1056..24	1055.87

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BY AL DATE 7/10/2011

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Split Flow Analysis for: T1N-R6W-S18 North (Near Cross Section 2.163)

Split Flow Location: Just east of upstream wash limits.

Analysis Method: HEC-RAS Wier Flow

		HEC-RAS Output												
Reach	River Sta	Q US [cfs]	Q Leaving Total [cfs]	Q DS [cfs]	Q Weir [cfs]	Q Gates [cfs]	Weir Top Width [ft]	Weir Max Depth [ft]	Weir Avg Depth [ft]	Min El Weir Flow [ft]	E.G. US. [ft]	W.S. US. [ft]	E.G. DS [ft]	W.S. DS [ft]
Reach1	2.162	5868.07	507.38	4173.20	507.38		437.43	0.84	0.69	1054.12	1057.30	1056.92	1055.15	1054.82

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JOB NO. 310.047

CLIENT: FCDMC

JOB: Palo Verde Watershed Detailed Floodplain Delineation Study

Split Flow Analysis for: T1N-R6W-S18 North (Near Cross Section 2.163)

Split Flow Location: Just east of upstream wash limits.

Analysis Method: HEC-RAS Wier Flow

		HEC-RAS Output												
Reach	River Sta	Q US [cfs]	Q Leaving Total [cfs]	Q DS [cfs]	Q Weir [cfs]	Q Gates [cfs]	Weir Top Width [ft]	Weir Max Depth [ft]	Weir Avg Depth [ft]	Min El Weir Flow [ft]	E.G. US. [ft]	W.S. US. [ft]	E.G. DS [ft]	W.S. DS [ft]
Reach1	2.161	5868.07	205.84	5232.48	205.84		335.53	0.60	0.45	1054.69	1057.30	1056.92	1055.46	1055.10

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JOB NO. 310.047

CLIENT: FCDMC

JOB: Palo Verde Watershed Detailed Floodplain Delineation Study

Split Flow Analysis for: T1N-R6W-S18 North (Near Cross Section 2.097)

Split Flow Location: Just east of upstream wash limits.

Analysis Method: HEC-RAS Wier Flow

		HEC-RAS Output												
Reach	River Sta	Q US [cfs]	Q Leaving Total [cfs]	Q DS [cfs]	Q Weir [cfs]	Q Gates [cfs]	Weir Top Width [ft]	Weir Max Depth [ft]	Weir Avg Depth [ft]	Min El Weir Flow [ft]	E.G. US. [ft]	W.S. US. [ft]	E.G. DS [ft]	W.S. DS [ft]
Reach1	2.096	5232.48	633.72	4173.20	633.72		392.46	1.21	0.85	1052.95	1055.46	1055.10	1053.61	1053.41

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BY AL DATE 7/10/2011

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JOB NO. 310.047

CLIENT: FCDMC

JOB: Palo Verde Watershed Detailed Floodplain Delineation Study

Split Flow Analysis for: T1N-R6W-S18 North (Near Cross Section 2.097)

Split Flow Location: Just east of upstream wash limits.

Analysis Method: HEC-RAS Wier Flow

		HEC-RAS Output												
Reach	River Sta	Q US [cfs]	Q Leaving Total [cfs]	Q DS [cfs]	Q Weir [cfs]	Q Gates [cfs]	Weir Top Width [ft]	Weir Max Depth [ft]	Weir Avg Depth [ft]	Min El Weir Flow [ft]	E.G. US. [ft]	W.S. US. [ft]	E.G. DS [ft]	W.S. DS [ft]
Reach1	2.095	5232.48	350.37	4173.20	350.37		312.14	0.98	0.67	1052.97	1055.46	1055.10	1053.49	1053.31

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BY AL DATE 7/10/2011

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JOB NO. 310.047

CLIENT: FCDMC

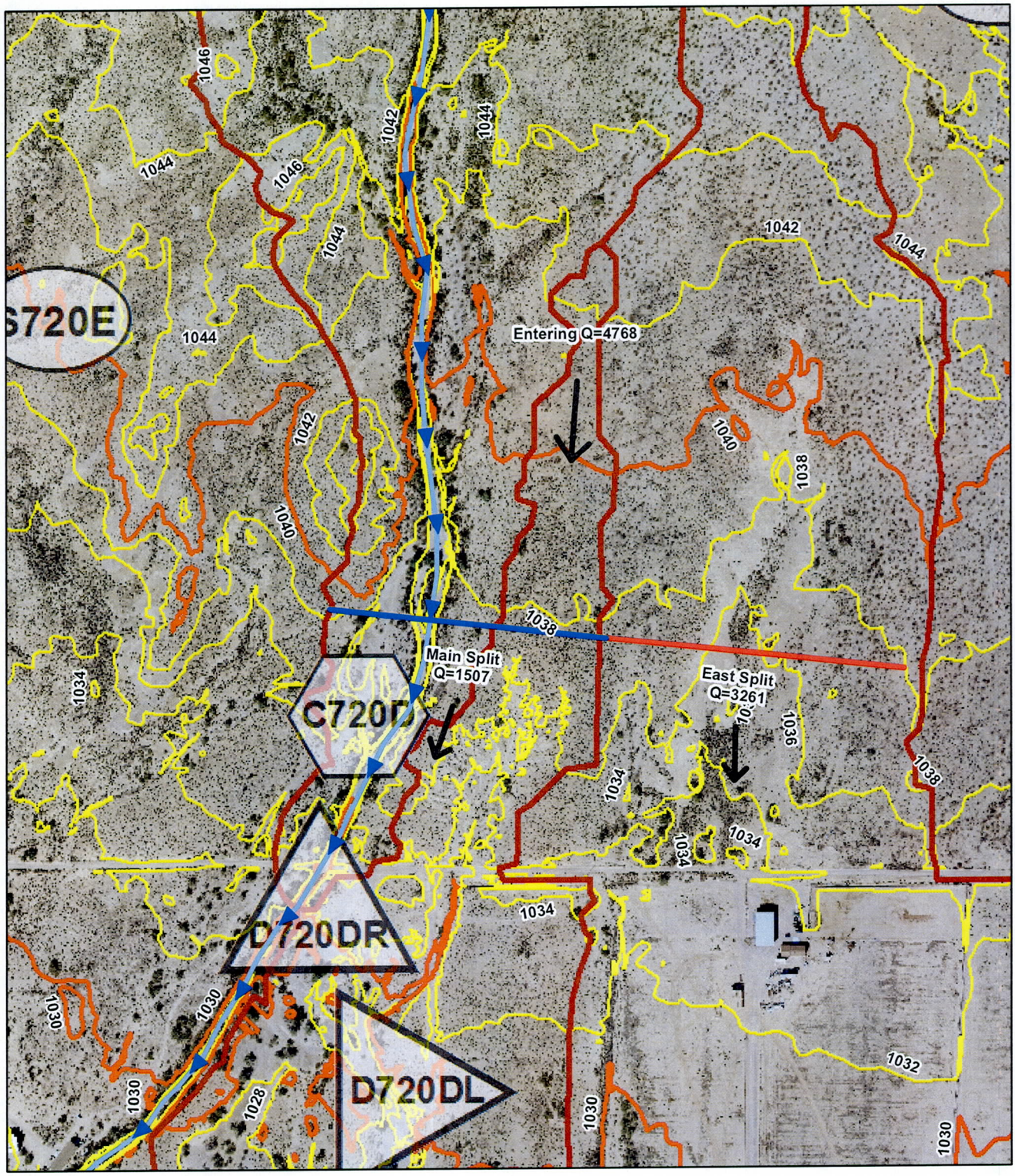
JOB: Palo Verde Watershed Detailed Floodplain Delineation Study

Split Flow Analysis for: T1N-R6W-S18 North (Near Cross Section 2.021)

Split Flow Location: Just east of upstream wash limits.

Analysis Method: HEC-RAS Wier Flow

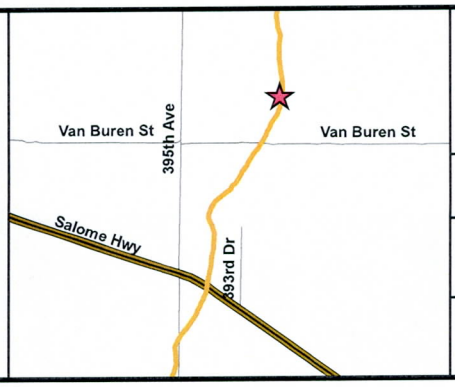
		HEC-RAS Output												
Reach	River Sta	Q US [cfs]	Q Leaving Total [cfs]	Q DS [cfs]	Q Weir [cfs]	Q Gates [cfs]	Weir Top Width [ft]	Weir Max Depth [ft]	Weir Avg Depth [ft]	Min El Weir Flow [ft]	E.G. US. [ft]	W.S. US. [ft]	E.G. DS [ft]	W.S. DS [ft]
Reach1	2.020	4173.20	256.21	3913.80	256.21		379.80	0.71	0.47	1051.93	1053.49	1053.31	1052.36	1052.21



LEGEND

- T1N-R6W-S18
- Split Flow Cross Section
- Wash Flow Cross Section
- Hydrology Subbasins
- S750E — Hydrology Subbasin ID
- C750C L — Concentration Point ID

VICINITY MAP



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T1N-R6W-S18 NORTH SPLIT 2 NEAR CROSS SECTION 1.360

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BY AL DATE 4/6/2011

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JOB: Palo Verde Watershed Detailed Floodplain Delineation Study JOB NO. 310.047

Split Flow Analysis for: T1N-R6W-S18 North - Split 2 (Near cross section 1.360)

Split Flow Location: Approximately 750 north of Van Buren St

Analysis Method: HEC-RAS Flow Distribution in Cross Section

Split Results	
Entering Flow	4768
East Split	3262
Main Split	***1506***

	HEC-RAS Output							
Position	Left Station [ft]	Right Station [ft]	Q [ft^3/s]	Area [ft^2]	Wetted Perimeter [ft]	Percent Conveyance [%]	Hydraulic Depth [ft]	Velocity [ft/s]
Left of Bank		9787.21	3261.67	1279.18	1079.84	68.41	1.18	2.55
Channel	9787.21	10051.97	1186.06	401.66	267.33	24.88	1.52	2.95
Right of Bank	10051.97		320.27	162.42	214.32	6.72	0.76	1.97

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SHEET	2	**OF**	2		
BY	AL	**DATE**	4/6/2011		
CHECK	HAA	**DATE**	4/6/2011		
JOB NO.	310.047				

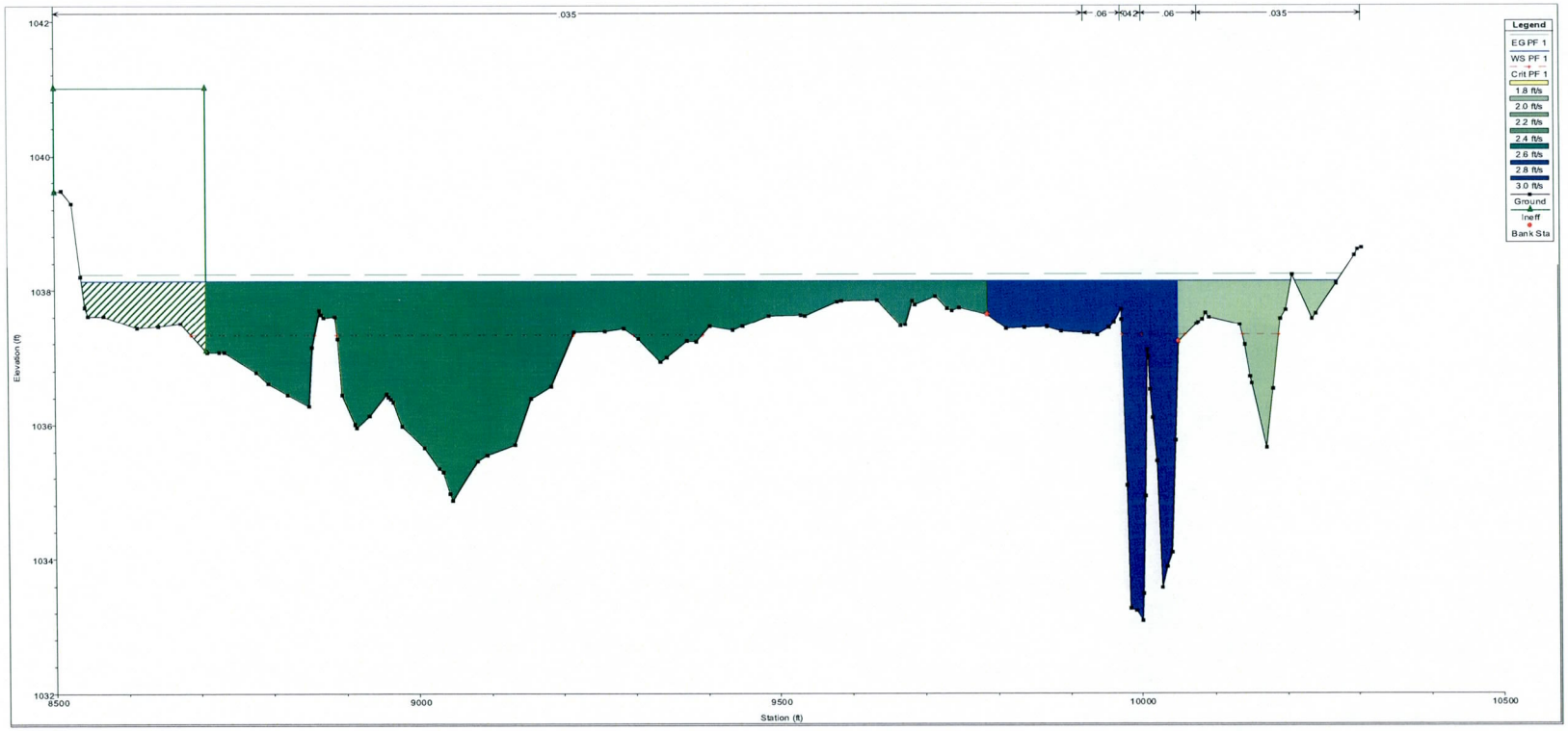
CLIENT: FCDMC

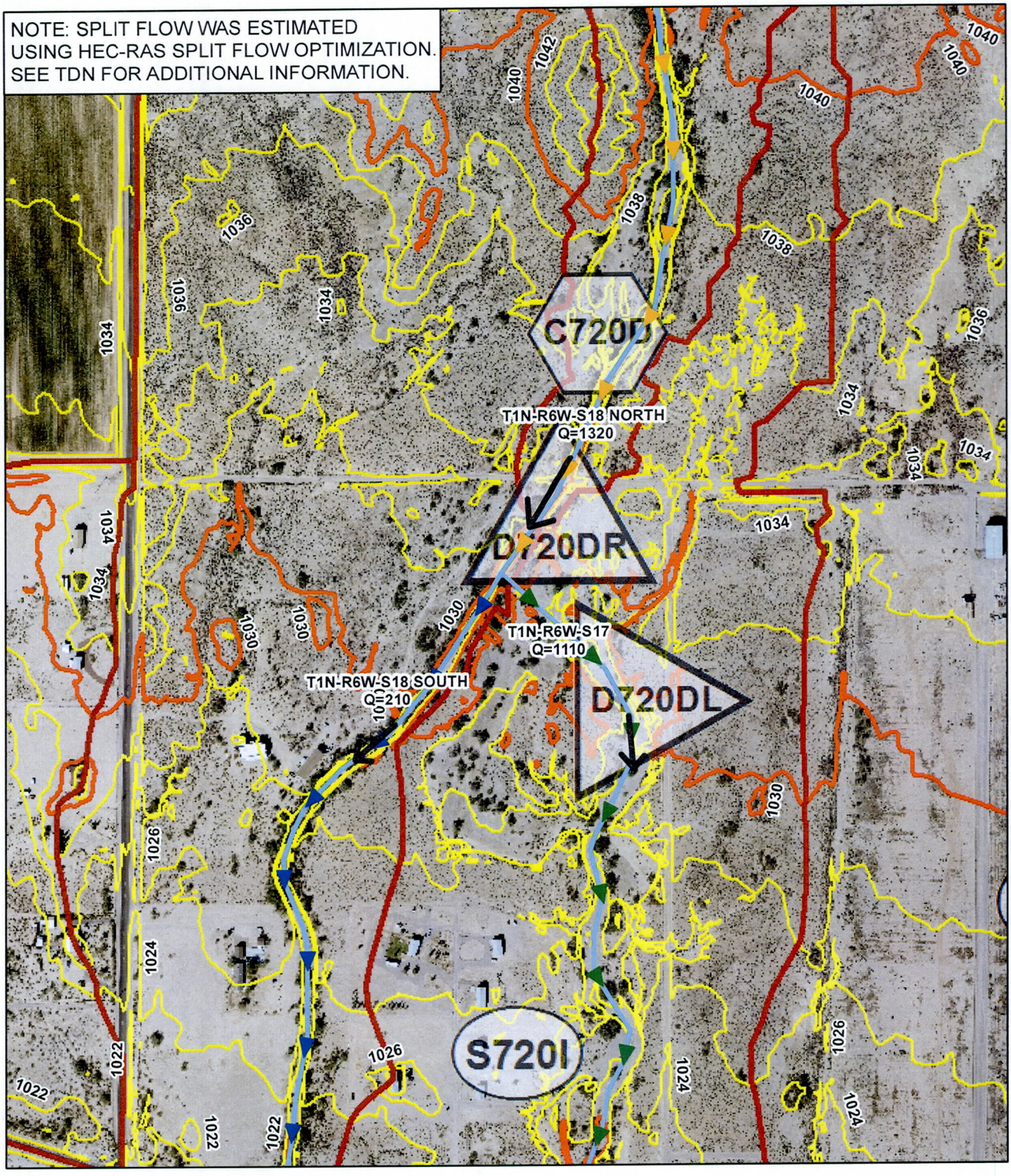
JOB: Palo Verde Watershed Detailed Floodplain Delineation Study

Split Flow Analysis for: T1N-R6W-S18 North - Split 2 (Near cross section 1.360)

Split Flow Location: Approximately 750 north of Van Buren St

Analysis Method: HEC-RAS Flow Distribution in Cross Section

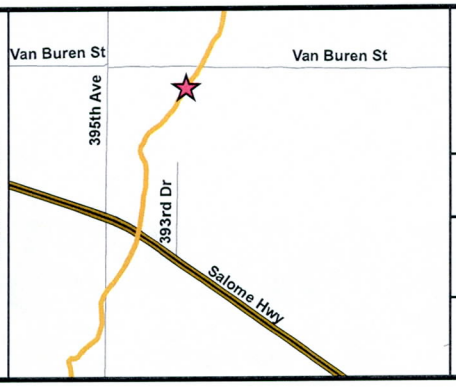




LEGEND

- T1N-R6W-S18 NORTH
- T1N-R6W-S18 SOUTH
- T1N-R6W-S17
- Hydrology Subbasins
- S750E — Hydrology Subbasin ID
- C750CL — Concentration Point ID

VICINITY MAP



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T1N-R6W-S18&17 FLOW OPTIMIZATION
NEAR CROSS SECTION 1.152

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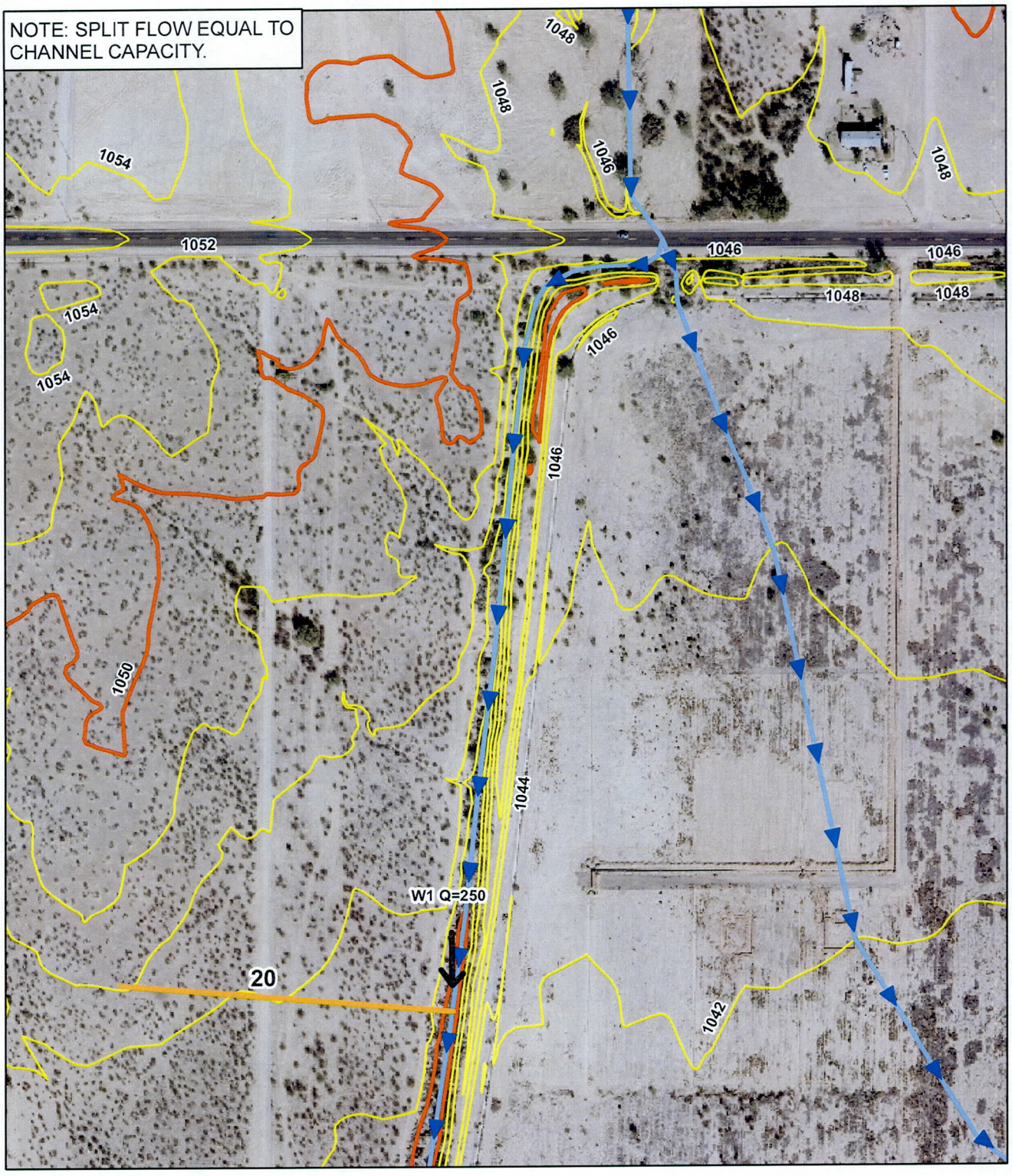
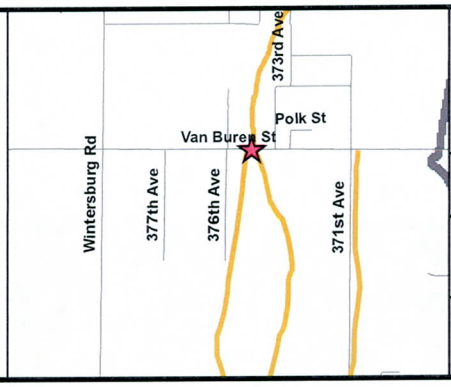
T1S-R6W-S27 Split Flow
Supporting Documentation



LEGEND

- T1S-R6W-S27
- Hydrology Subbasins
- CrossSections
- S750E — Hydrology Subbasin ID
- C750C L — Concentration Point ID

VICINITY MAP



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T1S-R6W-S27 - NORTH SPLIT
NEAR CROSS SECTION 10.258

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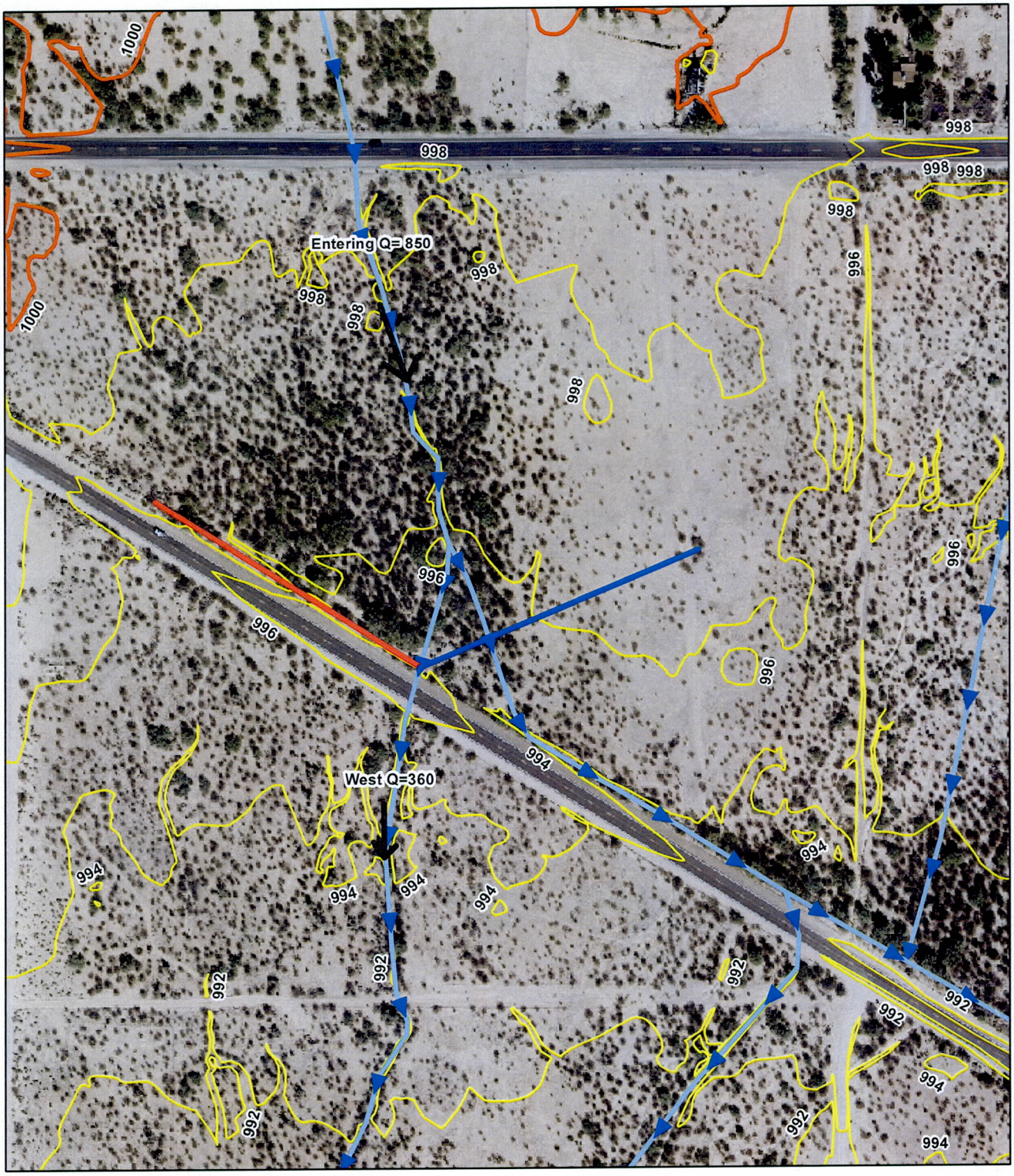
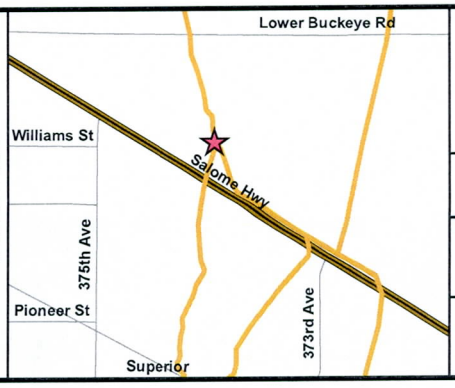


LEGEND

- T1S-R6W-S27
- Split Flow Cross Section
- Wash Flow Cross Section
- Hydrology Subbasins
- S750E — Hydrology Subbasin ID
- C750C L — Concentration Point ID

VICINITY MAP



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T1S-R6W-S27 - SW SALOME NEAR CROSS SECTION 8.016

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SHEET 1 OF 2

BY AMB DATE 7/7/2011

CLIENT: FCDMC CHECK RLJ DATE 7/7/2011

JOB: Palo Verde Watershed Detailed Floodplain Delineation Study JOB NO. 310.047

Split Flow Analysis for: T1S-R6W-S27 - SW Salome (Near cross section 8.016)

Split Flow Location: At Salmoe Highway

Analysis Method: HEC-RAS Flow Distribution in Cross Section

Zone A Flow	
Entering Flow	850
West Flow	***360***

	HEC-RAS Output							
Position	**Left Station [ft]**	**Right Station [ft]**	**Q [ft^3/s]**	**Area [ft^2]**	**Wetted Perimeter [ft]**	**Percent Conveyance [%]**	**Hydraulic Depth [ft]**	**Velocity [ft/s]**
Left of Bank	9647.50	9736.15	0.72	2.22	22.62	0.08	0.10	0.32
Left of Bank	9736.15	9824.81	19.25	27.57	88.65	2.26	0.31	0.70
Left of Bank	9824.81	9913.46	61.13	55.15	88.65	7.19	0.62	1.11
Channel	9913.46	9980.82	121.99	80.36	67.36	14.35	1.19	1.52
Channel	9980.82	10048.17	134.06	102.83	67.36	15.77	1.53	1.30
Channel	10048.17	10115.53	155.84	112.87	67.83	18.33	1.68	1.38
Right of Bank	*10115.53*	*10278.40*	*189.53*	*183.51*	*162.87*	*22.30*	*1.13*	*1.03*
Right of Bank	*10278.40*	*10441.26*	*114.12*	*135.35*	*162.87*	*13.43*	*0.83*	*0.84*
Right of Bank	*10441.26*	*10604.13*	*53.36*	*78.76*	*131.56*	*6.28*	*0.60*	*0.68*

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SHEET	2	**OF**	2		
BY	AMB	**DATE**	7/7/2011		
CHECK	RLJ	**DATE**	7/7/2011		
JOB NO.	310.047				

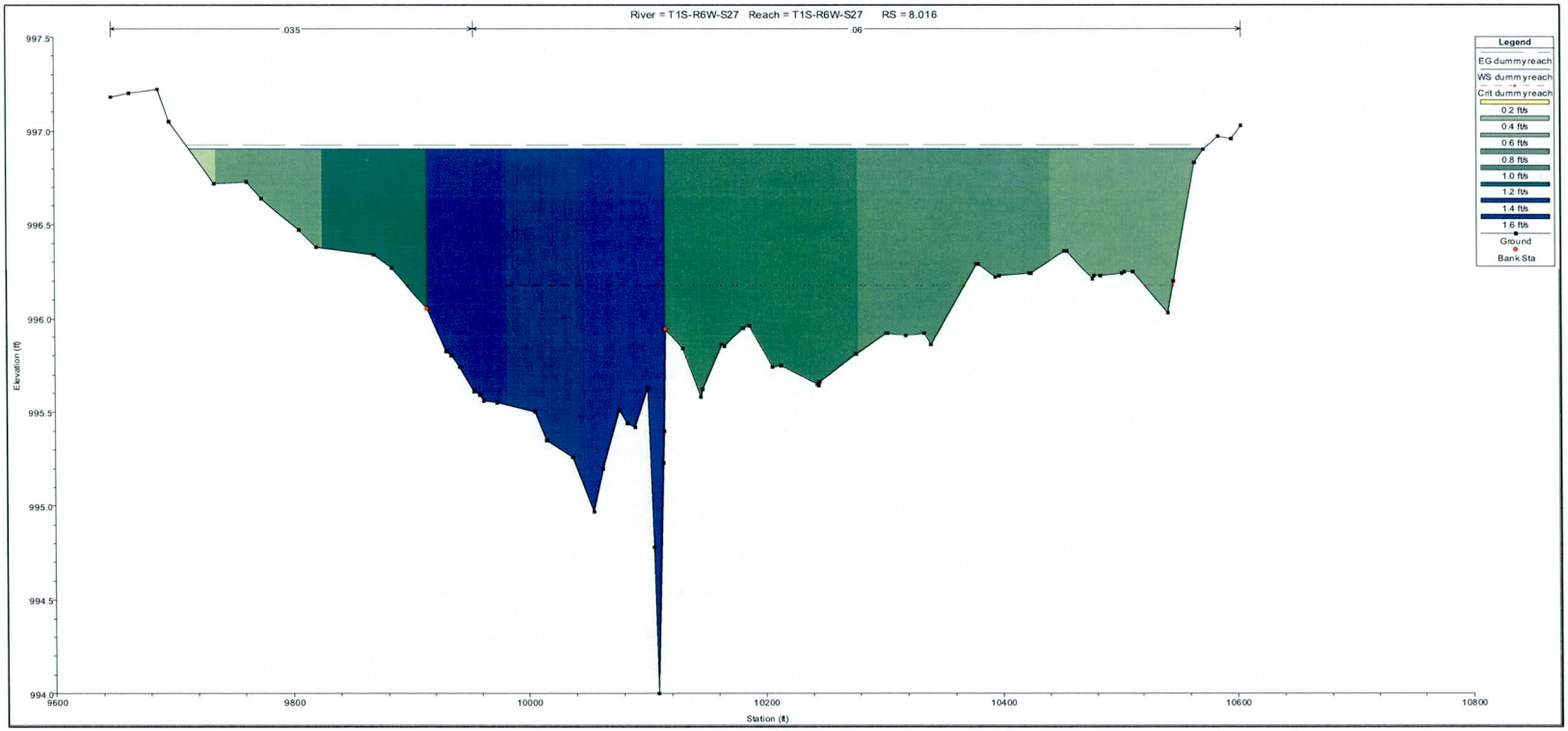
CLIENT: FCDMC

JOB: Palo Verde Watershed Detailed Floodplain Delineation Study

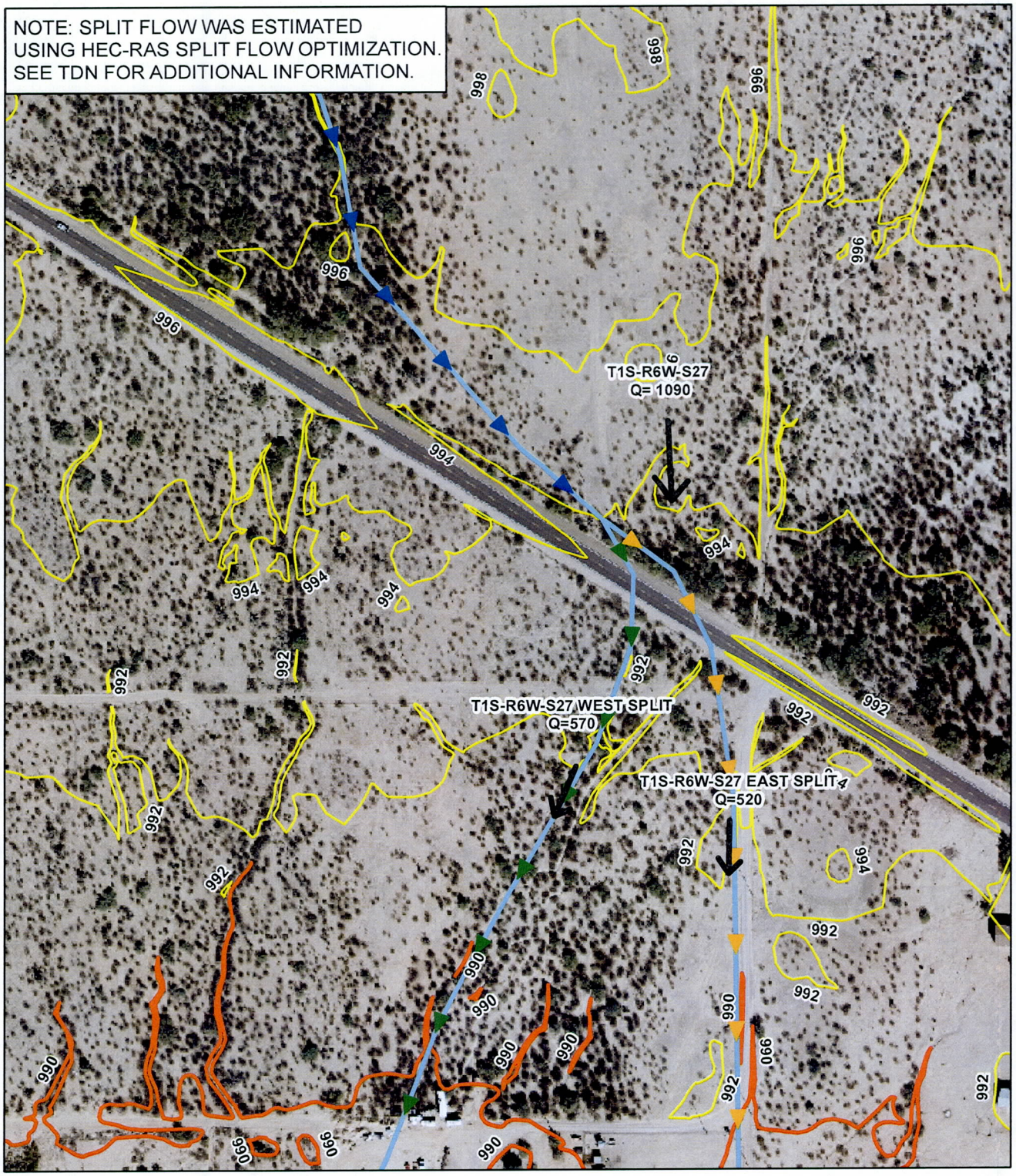
Split Flow Analysis for: T1S-R6W-S27 - SW Salome (Near cross section 8.016)

Split Flow Location: At Salmoe Highway

Analysis Method: **HEC-RAS Flow Distribution in Cross Section**



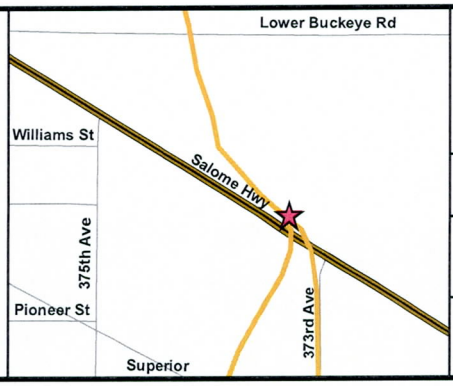
NOTE: SPLIT FLOW WAS ESTIMATED USING HEC-RAS SPLIT FLOW OPTIMIZATION. SEE TDN FOR ADDITIONAL INFORMATION.



LEGEND

- T1S-R6W-S27
- S27-EastSplit
- S27-WestSplit
- Hydrology Subbasins
- S750E — Hydrology Subbasin ID
- C750C L — Concentration Point ID

VICINITY MAP



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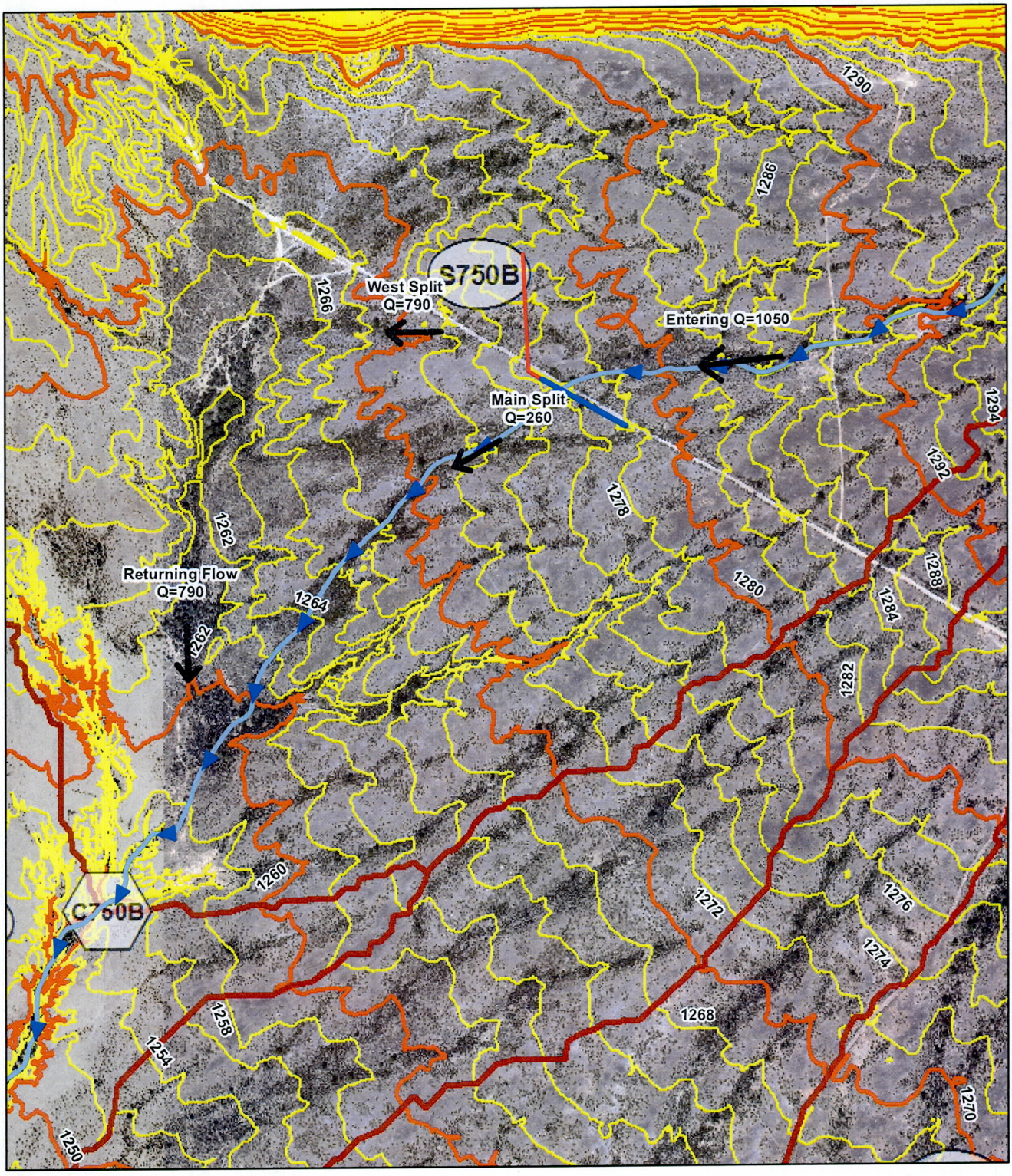
T1S-R6W-S27 - SOUTH SPLIT NEAR CROSS SECTION 7.886

P:\300\310\310047_Palo_Verde\Global_Data\Hydraulics\RiverCAD\T1S_R6W_S27\Split Flows\Flow Optimization.mxd

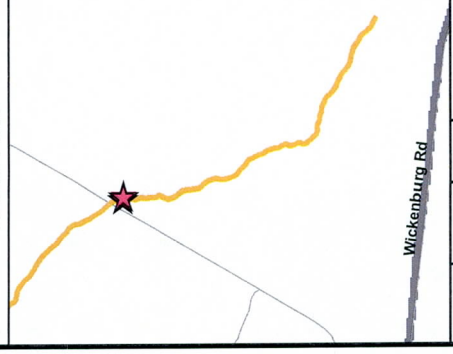
T2N-R6W-S02 Split Flow Supporting Documentation



LEGEND

- T2N-R6W-S02
- Split Flow Cross Section
- Wash Flow Cross Section
- Hydrology Subbasins
- S750E — Hydrology Subbasin ID
- C750C L — Concentration Point ID

VICINITY MAP



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T2N-R6W-S02 - SPLIT W1
NEAR CROSS SECTION 1.351

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SHEET 1 OF 2

BY RLJ DATE 7/14/2011

CHECK AMB DATE 7/14/2011

CLIENT: FCDMC

JOB: Palo Verde Watershed Detailed Floodplain Delineation Study JOB NO. 310.047

Split Flow Analysis for: T2N-R6W-S02 - Split W1 (Near cross section 1.351)

Split Flow Location: App. 100 feet south of Olive Ave alignment

Analysis Method: HEC-RAS Flow Distribution in Cross Section

Split Results	
Entering Flow	1050
West Split	790
Main Split	***260***

	HEC-RAS Output							
Position	Left Station [ft]	Right Station [ft]	Q [ft^3/s]	Area [ft^2]	Wetted Perimeter [ft]	Percent Conveyance [%]	Hydraulic Depth [ft]	Velocity [ft/s]
Left of Bank	9716.74	9788.2	0.12	0.3	5.01	0.01	0.05	0.48
Left of Bank	9788.21	9859.7	14.22	14.8	71.49	1.35	0.21	0.96
Left of Bank	9859.68	9931.2	16.26	18.9	71.52	1.55	0.26	0.86
Channel	9931.15	9958.9	46.19	24.34	27.74	4.40	0.88	1.90
Channel	9958.85	9986.6	25.98	17.22	27.71	2.47	0.62	1.51
Channel	9986.55	10014.3	75.77	32.74	27.71	7.22	1.18	2.31
Channel	10014.25	10042.0	77.97	32.92	27.79	7.43	1.19	2.37
Right of Bank	10041.95	10216.7	86.57	49.80	156.94	8.24	0.32	1.74
Right of Bank	10216.66	10391.4	261.82	125.53	174.72	24.94	0.72	2.09
Right of Bank	10391.37	10566.08	445.1	170.36	162.39	42.39	1.05	2.61

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SHEET	2	**OF**	2
BY	RLJ	**DATE**	7/14/2011
CHECK	AMB	**DATE**	7/14/2011
JOB NO.	310.047		

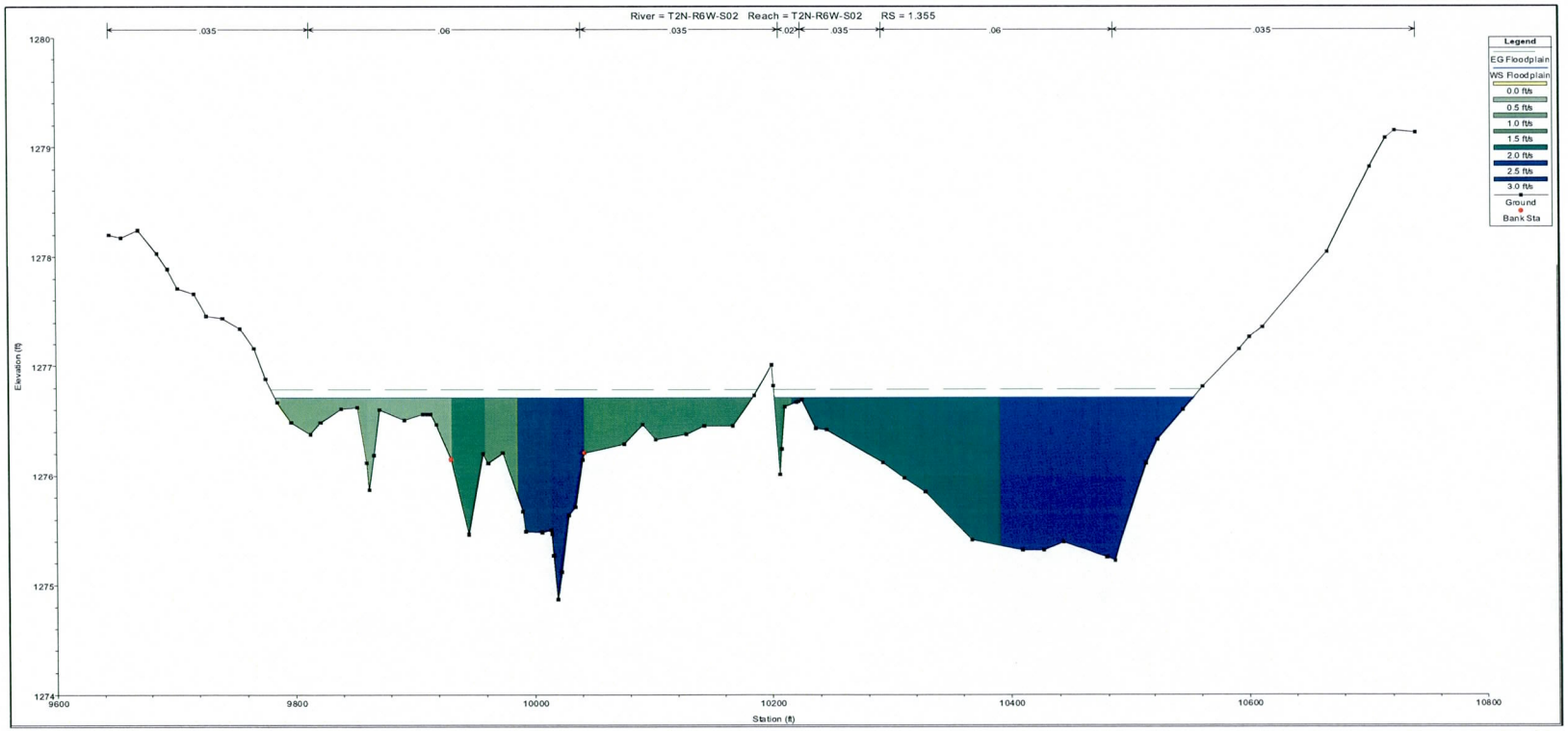
CLIENT: FCDMC

JOB: Palo Verde Watershed Detailed Floodplain Delineation Study

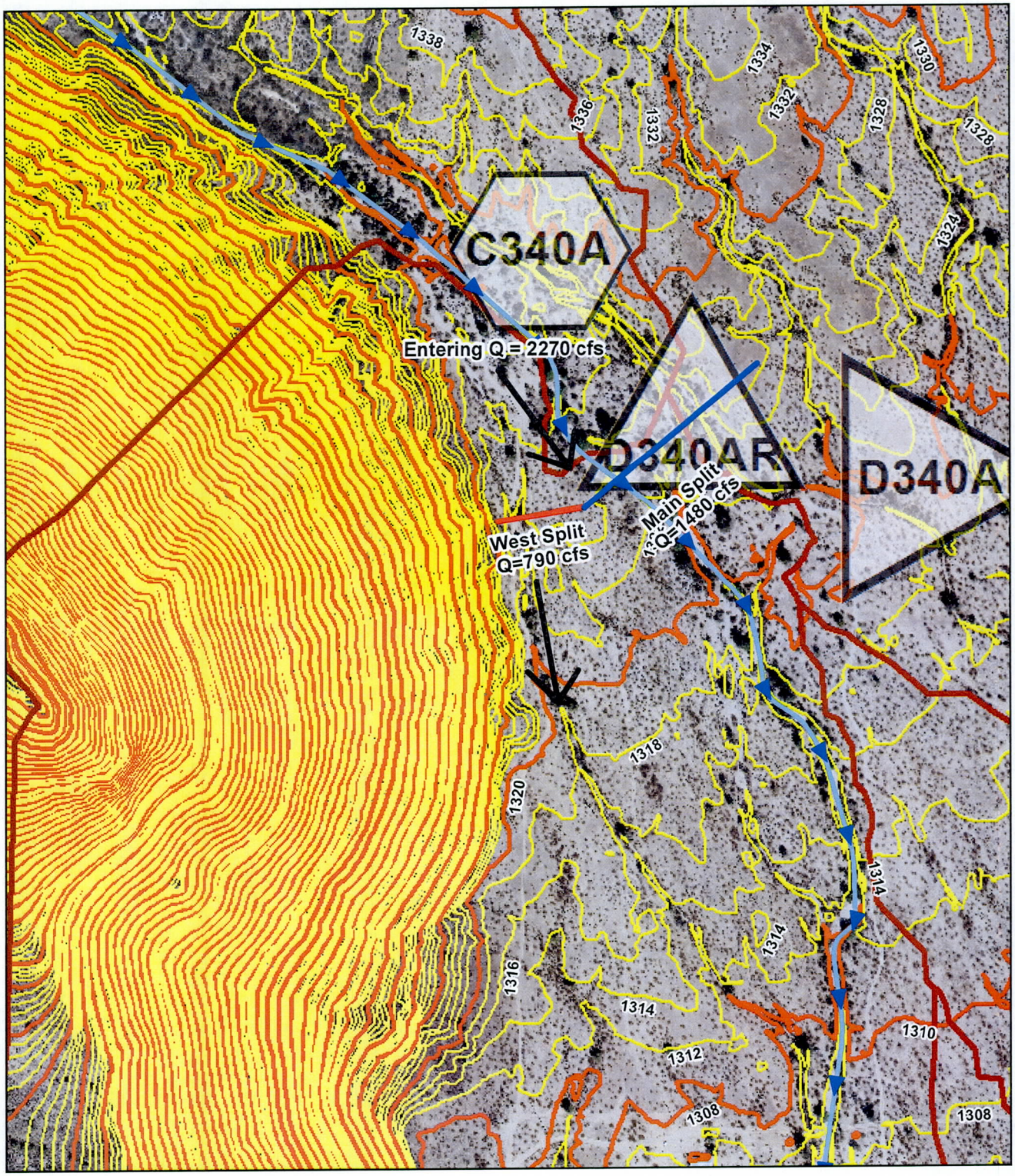
Split Flow Analysis for: T2N-R6W-S02 - Split W1 (Near cross section 1.351)

Split Flow Location: App. 100 feet south of Olive Ave alignment

Analysis Method: **HEC-RAS Flow Distribution in Cross Section**



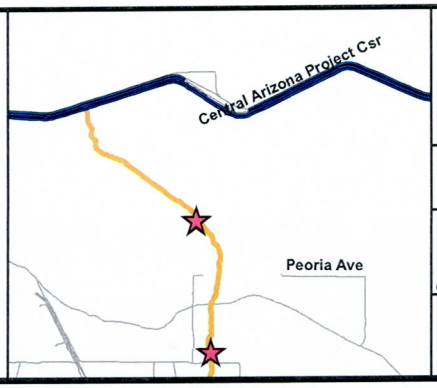
T2N-R6W-S05N Split Flow Supporting Documentation



LEGEND

- T2N-R6W-S05N
- Split Flow Cross Section
- Wash Flow Cross Section
- Hydrology Subbasin
- S750E — Hydrology Subbasin ID
- C750C L — Concentration Point ID

VICINITY MAP



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T2N-R6W-S05N SPLIT 1
NEAR CROSS SECTION 2.808

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SHEET 1 OF 4

BY AMB DATE 2/4/2011

CHECK HAA DATE 2/11/2011

CLIENT: FCDMC

JOB: Palo Verde Watershed Detailed Floodplain Delineation Study JOB NO. 310.047

Split Flow Analysis for: T2N-R6W-S05N - Split 1 (near cross section 2.808)

Split Flow Location: Just south of HEC-1 Concentration Point C340A & After D340AR to Main Wash

Analysis Method: **Wash Normal Depth Analysis Using Manning's Equation**

	Slope (ft/ft)
Main Split	0.008
West Split	0.011

Total Flow		Main Split	West Split	Main Split	West Split
Stage [ft]	Q [cfs]	Q [cfs]	Q [cfs]	%	%
1322.00	0.5	0.5	0.0	100%	0%
1322.25	2.9	2.9	0.0	100%	0%
1322.50	12.9	11.4	1.5	88%	12%
1322.75	35.9	28.6	7.3	80%	20%
1323.00	81.0	62.1	18.9	77%	23%
1323.25	163.8	123.7	40.1	76%	24%
1323.50	264.9	197.4	67.5	75%	25%
1323.75	394.3	285.0	109.3	72%	28%
1324.00	591.4	447.5	143.9	76%	24%
1324.25	887.0	648.3	238.7	73%	27%
1324.50	1306.3	921.0	385.3	71%	29%
1324.75	1839.8	1243.9	595.9	68%	32%
1325.00	2455.2	1605.9	849.3	65%	35%
1325.25	3100.1	1955.5	1144.6	63%	37%
1325.50	3929.8	2399.9	1529.9	61%	39%
1325.75	4847.6	2888.8	1958.8	60%	40%
1326.00	5843.7	3414.1	2429.6	58%	42%
1326.25	6837.9	3899.1	2938.8	57%	43%
1326.50	7671.5	4185.1	3486.4	55%	45%
1326.75	8682.5	4610.9	4071.6	53%	47%
1327.00	10069.0	5375.6	4693.4	53%	47%

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SHEET 2 OF 4

BY AMB DATE 2/4/2011

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CLIENT: FCDMC

JOB: Palo Verde Watershed Detailed Floodplain Delineation Study JOB NO. 310.047

Split Flow Analysis for: T2N-R6W-S05N - Split 1 (near cross section 2.808)

Split Flow Location: Just south of HEC-1 Concentration Point C340A & After D340AR to Main Wash

Analysis Method: Wash Normal Depth Analysis Using Manning's Equation

Main Split Data

Slope (ft/ft)
0.008

Raw Cross-Section Data			Raw Cross-Section Data		
Station [ft]	Elevation [ft]	N	Station [ft]	Elevation [ft]	N
0.00	1326.17		356.57	1322.58	
0.10	1326.17		384.25	1323.36	
1.43	1326.18		385.41	1323.36	
28.54	1326.48		385.89	1323.36	
52.17	1326.67		386.29	1323.38	
86.36	1326.45		386.63	1323.38	
97.37	1326.51		392.39	1323.44	
118.40	1326.19		414.60	1323.74	
120.22	1326.17		417.30	1323.63	
121.98	1326.02		425.61	1323.52	
144.34	1324.29		428.15	1323.62	
165.86	1324.18		432.43	1323.78	
168.33	1324.16		456.53	1323.54	
169.07	1324.01		459.03	1323.50	
179.66	1321.78		459.44	1323.49	
185.33	1322.71		459.68	1323.50	
189.93	1323.53		464.26	1323.46	
197.47	1323.84		488.87	1323.56	
228.72	1324.08		496.84	1324.13	
232.34	1324.12		504.09	1325.09	
237.50	1323.42		518.14	1325.26	
244.88	1322.35		523.07	1325.22	
251.54	1322.22		523.17	1325.22	0.072
254.56	1322.10				
256.66	1322.31				
261.47	1322.91				
268.39	1322.95				
279.76	1322.79				
292.38	1322.49				
294.89	1322.15				
297.05	1321.72				
301.05	1322.00				
309.73	1322.31				
311.72	1322.34				
316.00	1322.48				
341.51	1323.28				
348.59	1322.53				
349.17	1322.47				
349.64	1322.52				
354.96	1322.56				

	Flow Master Output					
Stage [ft]	WSE [ft]	Q [ft³/s]	Vel [ft/s]	Area [ft²]	Wetted Perimeter [ft]	Top Width [ft]
0.00	1322.0	0.5	0.5	1.0	7.9	7.8
0.25	1322.3	2.9	0.6	4.8	25.2	25.1
0.50	1322.5	11.4	0.8	14.1	47.7	47.4
0.75	1322.8	28.6	0.9	31.3	88.2	87.8
1.00	1323.0	62.1	1.1	58.8	133.1	132.6
1.25	1323.3	123.7	1.3	94.9	156.7	156.1
1.50	1323.5	197.4	1.4	136.8	193.9	193.3
1.75	1323.8	285.0	1.5	197.0	278.3	277.6
2.00	1324.0	447.5	1.7	270.2	311.7	311.0
2.25	1324.3	648.3	1.8	352.1	346.4	345.6
2.50	1324.5	921.0	2.1	440.8	358.8	358.0
2.75	1324.8	1243.9	2.3	530.9	364.0	363.1
3.00	1325.0	1605.9	2.6	622.4	369.1	368.3
3.25	1325.3	1955.5	2.7	716.1	390.1	389.2
3.50	1325.5	2399.9	3.0	814.3	395.6	394.5
3.75	1325.8	2888.8	3.2	913.3	399.1	397.7
4.00	1326.0	3414.1	3.4	1013.1	402.6	400.9
4.25	1326.3	3899.1	3.5	1114.3	418.5	416.5
4.50	1326.5	4185.1	3.4	1223.7	475.6	473.1
4.75	1326.8	4610.9	3.4	1350.4	526.2	523.2
5.00	1327.0	5375.6	3.6	1481.2	526.7	523.2

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SHEET 3 OF 4

BY AMB DATE 2/4/2011

CHECK HAA DATE 2/11/2011

CLIENT: FCDMC

JOB: Palo Verde Watershed Detailed Floodplain Delineation Study JOB NO. 310.047

Split Flow Analysis for: T2N-R6W-S05N - Split 1 (near cross section 2.808)

Split Flow Location: Just south of HEC-1 Concentration Point C340A & After D340AR to Main Wash

Analysis Method: Wash Normal Depth Analysis Using Manning's Equation

West Split Data

Slope (ft/ft)
0.011

Raw Cross-Section Data			Raw Cross-Section Data		
Station [ft]	Elevation [ft]	N	Station [ft]	Elevation [ft]	N
0.00	1325.11				
0.10	1325.11				
2.56	1325.18				
4.37	1325.16				
4.93	1325.17				
21.06	1324.85				
46.41	1324.34				
51.89	1324.29				
62.61	1324.39				
66.66	1324.15				
71.59	1323.86				
90.39	1323.93				
123.39	1324.17				
141.82	1323.59				
151.53	1323.34				
158.73	1322.60				
161.41	1322.28				
167.63	1322.35				
170.50	1322.57				
177.67	1322.92				
178.70	1322.89				
187.52	1323.34				
209.01	1324.33				
213.14	1325.26				
218.00	1326.03				
232.33	1327.99				
238.09	1329.16				
258.53	1333.81				
258.63	1333.83	0.044			

	Flow Master Output					
Stage [ft]	WSE [ft]	Q [ft³/s]	Vel [ft/s]	Area [ft²]	Wetted Perimeter [ft]	Top Width [ft]
0.00	1322.0					
0.25	1322.3					
0.50	1322.5	1.5	1.0	1.5	10.0	10.0
0.75	1322.8	7.3	1.5	4.8	17.0	16.9
1.00	1323.0	18.9	1.9	10.1	26.1	26.0
1.25	1323.3	40.1	2.3	17.6	33.4	33.4
1.50	1323.5	67.5	2.5	27.2	45.8	45.7
1.75	1323.8	109.3	2.7	40.4	59.8	59.7
2.00	1324.0	143.9	2.4	59.5	104.0	103.9
2.25	1324.3	238.7	2.6	91.4	142.4	142.3
2.50	1324.5	385.3	2.9	131.2	171.5	171.3
2.75	1324.8	595.9	3.4	175.7	185.0	184.8
3.00	1325.0	849.3	3.8	223.7	198.7	198.5
3.25	1325.3	1144.6	4.2	275.3	213.5	213.1
3.50	1325.5	1529.9	4.7	328.8	215.3	214.7
3.75	1325.8	1958.8	5.1	382.6	217.2	216.2
4.00	1326.0	2429.6	5.6	436.9	219.0	217.8
4.25	1326.3	2938.8	6.0	491.5	221.1	219.6
4.50	1326.5	3486.4	6.4	546.7	223.2	221.4
4.75	1326.8	4071.6	6.8	602.3	225.3	223.3
5.00	1327.0	4693.4	7.1	658.3	227.4	225.1

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SHEET 4 OF 4

BY AMB DATE 2/4/2011

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CLIENT: FCDMC

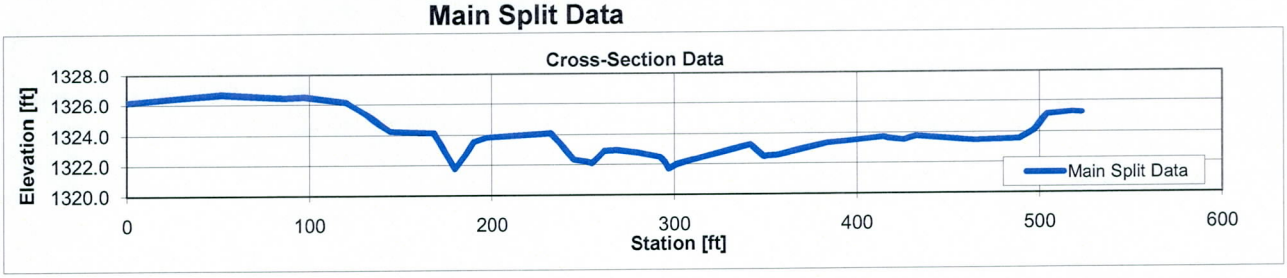
JOB: Palo Verde Watershed Detailed Floodplain Delineation Study JOB NO. 310.047

Split Flow Analysis for: T2N-R6W-S05N - Split 1 (near cross section 2.808)

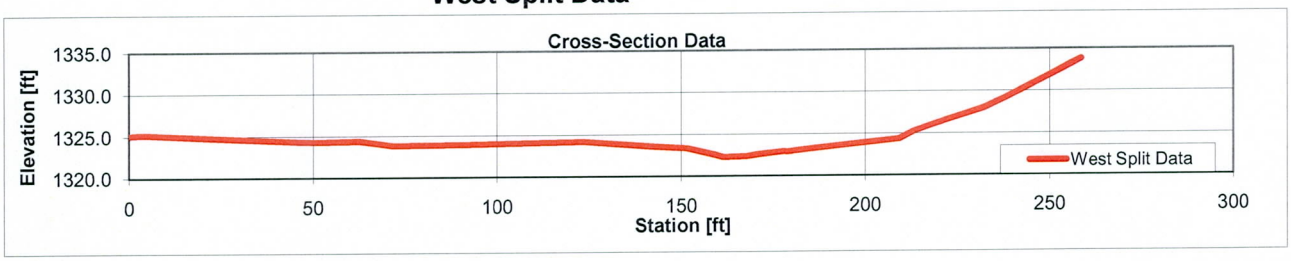
Split Flow Location: Just south of HEC-1 Concentration Point C340A & After D340AR to Main Wash

Analysis Method: **Wash Normal Depth Analysis Using Manning's Equation**

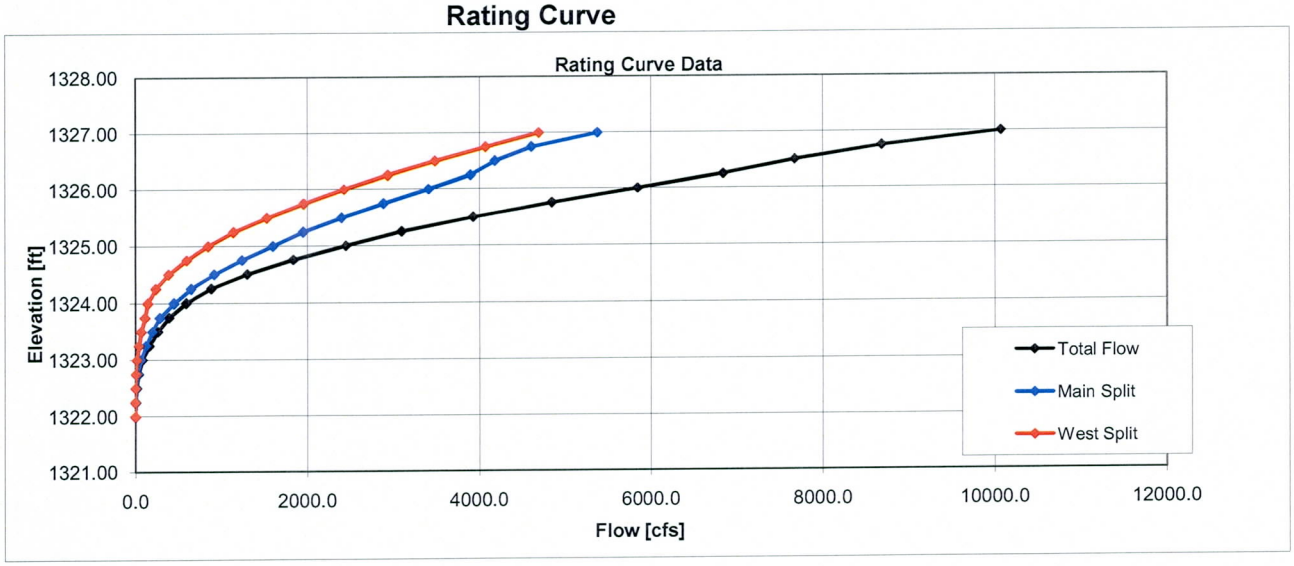
Main Split Data

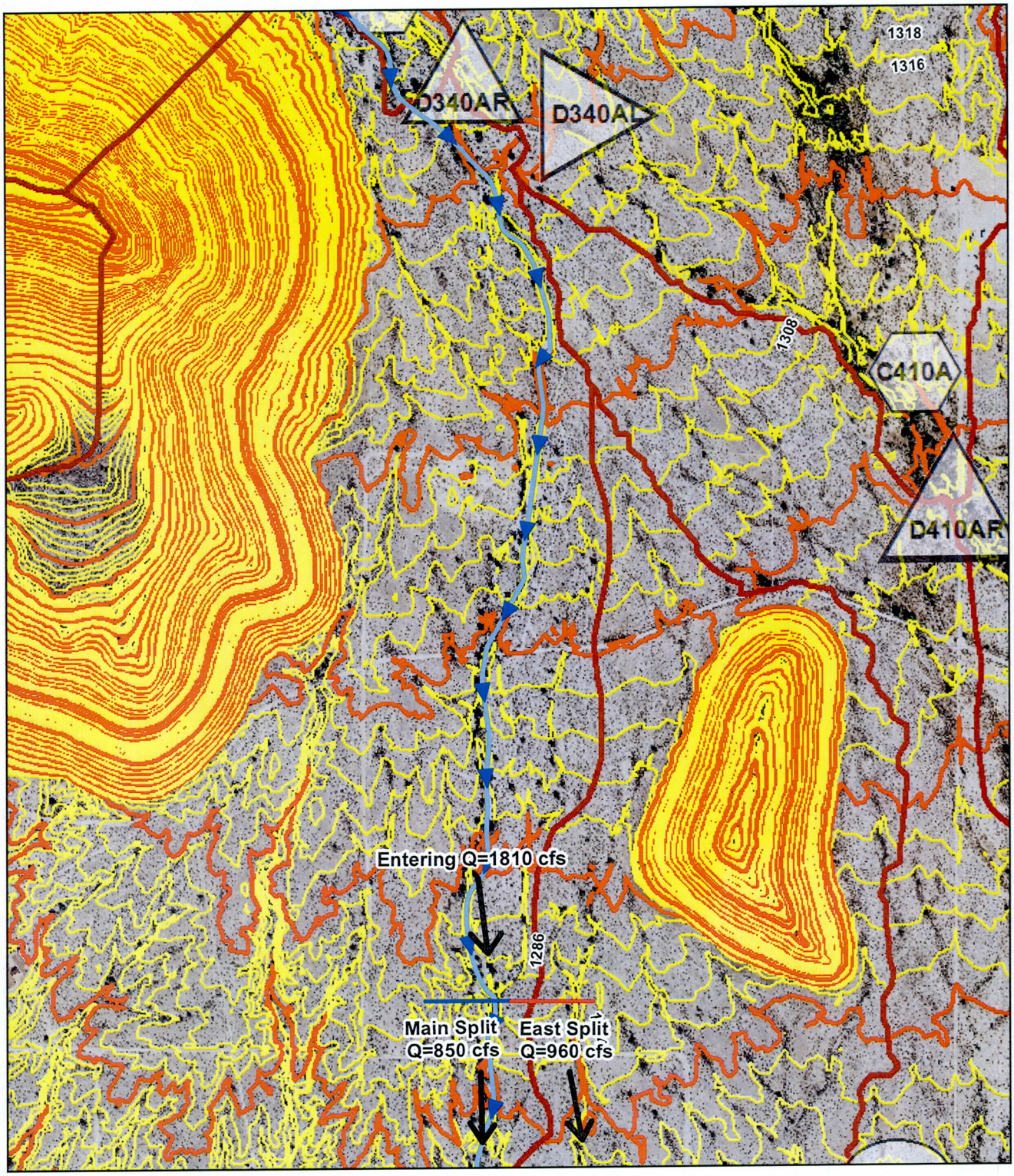


West Split Data



Rating Curve





LEGEND

- T2N-R6W-S05N
- Split Flow Cross Section
- Wash Flow Cross Section
- Hydrology Subbasin
- S750E — Hydrology Subbasin ID
- C750C L — Concentration Point ID

VICINITY MAP

PALO VERDE WATERSHED DETAILED FLOODPLAIN DELINEATION STUDY
FCD 2008C046

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T2N-R6W-S05N SPLIT 2
NEAR CROSS SECTION 2.012

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SHEET 1 OF 4

BY AMB DATE 2/4/2011

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CLIENT: FCDMC

JOB: Palo Verde Watershed Detailed Floodplain Delineation Study JOB NO. 310.047

Split Flow Analysis for: T2N-R6W-S05N - Split 2 (near cross section 2.012)

Split Flow Location: Approximately 0.5 miles south of Peoria Ave allignment

Analysis Method: Wash Normal Depth Analysis Using Manning's Equation

	Slope (ft/ft)
East Split	0.010
Main Split	0.009

Total Flow		East Split	Main Split	East Split	Main Split
Stage [ft]	Q [cfs]	Q [cfs]	Q [cfs]	%	%
1281.00	1.0	1.0	0.0	100%	0%
1281.25	3.0	3.0	0.0	100%	0%
1281.50	6.4	6.4	0.0	100%	0%
1281.75	11.7	11.7	0.0	100%	0%
1282.00	19.1	19.1	0.0	100%	0%
1282.25	29.0	29.0	0.0	100%	0%
1282.50	42.9	41.5	1.4	97%	3%
1282.75	66.1	57.0	9.1	86%	14%
1283.00	98.4	75.7	22.7	77%	23%
1283.25	131.9	97.8	34.1	74%	26%
1283.50	139.0	77.3	61.7	56%	44%
1283.75	222.0	113.4	108.6	51%	49%
1284.00	362.4	183.6	178.8	51%	49%
1284.25	575.4	301.9	273.5	52%	48%
1284.50	831.9	453.7	378.2	55%	45%
1284.75	1096.9	551.9	545.0	50%	50%
1285.00	1678.2	874.4	803.8	52%	48%
1285.25	2432.0	1286.6	1145.4	53%	47%
1285.50	3308.2	1763.7	1544.5	53%	47%
1285.75	4297.0	2303.3	1993.7	54%	46%
1286.00	5398.2	2903.7	2494.5	54%	46%
1286.25	6621.0	3580.4	3040.6	54%	46%
1286.50	7985.1	4353.5	3631.6	55%	45%
1286.75	9453.1	5184.8	4268.3	55%	45%
1287.00	11019.2	6072.3	4946.9	55%	45%
1287.25	12680.2	7013.7	5666.5	55%	45%
1287.50	14413.2	8007.5	6405.7	56%	44%
1287.75	16183.8	9052.1	7131.7	56%	44%
1288.00	17996.9	10145.9	7851.0	56%	44%

Entellus

SHEET 2 OF 4

BY AMB DATE 2/4/2011

CHECK HAA DATE 2/11/2011

CLIENT: FCDMC

JOB: Palo Verde Watershed Detailed Floodplain Delineation Study JOB NO. 310.047

Split Flow Analysis for: T2N-R6W-S05N - Split 2 (near cross section 2.012)

Split Flow Location: Approximately 0.5 miles south of Peoria Ave allignment

Analysis Method: Wash Normal Depth Analysis Using Manning's Equation

East Split Data

Slope (ft/ft)
0.010

Raw Cross-Section Data			Raw Cross-Section Data		
Station [ft]	Elevation [ft]	N	Station [ft]	Elevation [ft]	N
0.00	1286.10				
0.10	1286.10				
1.38	1286.13				
55.58	1284.49				
61.38	1284.41				
75.95	1283.94				
104.24	1283.30				
112.81	1280.87				
114.05	1280.51				
117.57	1281.71				
121.96	1283.15				
122.85	1283.43				
134.54	1283.39				
146.08	1283.51				
159.07	1283.67				
165.07	1283.52				
165.25	1283.52				
165.65	1283.54				
172.42	1283.85				
178.20	1283.80				
184.06	1283.85				
186.77	1283.84				
214.77	1284.26				
241.39	1284.67				
293.97	1284.68				
301.36	1284.71				
308.87	1284.72				
336.07	1284.79				
336.17	1284.79	0.044			

	Flow Master Output					
Stage [ft]	WSE [ft]	Q [ft³/s]	Vel [ft/s]	Area [ft²]	Wetted Perimeter [ft]	Top Width [ft]
0.00	1281.0	1.0	1.3	0.8	3.3	3.1
0.25	1281.3	3.0	1.7	1.8	5.0	4.8
0.50	1281.5	6.4	2.0	3.1	6.7	6.4
0.75	1281.8	11.7	2.4	4.9	8.4	8.0
1.00	1282.0	19.1	2.7	7.1	10.1	9.6
1.25	1282.3	29.0	3.0	9.8	11.8	11.3
1.50	1282.5	41.5	3.3	12.8	13.5	12.9
1.75	1282.8	57.0	3.5	16.2	15.2	14.6
2.00	1283.0	75.7	3.8	20.1	17.0	16.2
2.25	1283.3	97.8	4.0	24.3	18.7	17.9
2.50	1283.5	77.3	2.5	31.4	50.6	49.7
2.75	1283.8	113.4	2.3	49.1	86.8	85.9
3.00	1284.0	183.6	2.4	75.7	124.2	123.4
3.25	1284.3	301.9	2.8	109.6	148.7	147.8
3.50	1284.5	453.7	3.0	149.7	176.0	175.1
3.75	1284.8	551.9	2.7	201.1	274.4	273.5
4.00	1285.0	874.4	3.2	274.1	298.6	297.4
4.25	1285.3	1286.6	3.7	349.5	307.1	305.7
4.50	1285.5	1763.7	4.1	427.0	315.6	314.0
4.75	1285.8	2303.3	4.6	506.5	324.1	322.2
5.00	1286.0	2903.7	4.9	588.1	332.6	330.5
5.25	1286.3	3580.4	5.3	671.7	338.7	336.2
5.50	1286.5	4353.5	5.8	755.7	339.2	336.2
5.75	1286.8	5184.8	6.2	839.8	339.7	336.2
6.00	1287.0	6072.3	6.6	923.8	340.2	336.2
6.25	1287.3	7013.7	7.0	1007.8	340.7	336.2
6.50	1287.5	8007.5	7.3	1091.9	341.2	336.2
6.75	1287.8	9052.1	7.7	1175.9	341.7	336.2
7.00	1288.0	10145.9	8.1	1260.0	342.2	336.2

Entellus

SHEET 3 OF 4

BY AMB DATE 2/4/2011

CHECK HAA DATE 2/11/2011

CLIENT: FCDMC

JOB: Palo Verde Watershed Detailed Floodplain Delineation Study JOB NO. 310.047

Split Flow Analysis for: T2N-R6W-S05N - Split 2 (near cross section 2.012)

Split Flow Location: Approximately 0.5 miles south of Peoria Ave allignment

Analysis Method: Wash Normal Depth Analysis Using Manning's Equation

Main Split Data

Slope (ft/ft)
0.009

Raw Cross-Section Data			Raw Cross-Section Data		
Station [ft]	Elevation [ft]	N	Station [ft]	Elevation [ft]	N
0.00	1284.81		341.26	1285.29	
0.10	1284.81		350.90	1285.73	
7.35	1284.83		362.39	1286.44	
17.13	1284.79		376.10	1287.43	
67.37	1284.44		394.10	1287.87	
71.89	1284.42		405.78	1288.11	
79.07	1284.49		410.50	1287.87	
84.43	1284.43		410.60	1287.87	0.058
86.76	1284.03				
93.95	1282.55				
112.65	1282.27				
114.01	1282.26				
114.92	1282.37				
124.52	1283.52				
139.32	1284.61				
141.36	1284.72				
143.59	1284.47				
153.35	1283.22				
158.96	1283.18				
169.23	1283.29				
177.60	1283.30				
183.02	1284.62				
183.95	1284.76				
187.45	1284.68				
199.17	1284.45				
201.10	1284.39				
218.86	1284.31				
237.64	1284.07				
240.05	1284.00				
246.79	1283.83				
252.92	1283.74				
263.45	1283.41				
263.64	1283.39				
275.16	1283.88				
276.97	1284.10				
285.16	1284.04				
299.46	1283.23				
303.23	1282.98				
306.48	1283.33				
319.45	1284.70				

	Flow Master Output					
Stage [ft]	WSE [ft]	Q [ft³/s]	Vel [ft/s]	Area [ft²]	Wetted Perimeter [ft]	Top Width [ft]
0.00	1281.0					
0.25	1281.3					
0.50	1281.5					
0.75	1281.8					
1.00	1282.0					
1.25	1282.3					
1.50	1282.5	1.4	0.6	2.3	18.7	18.7
1.75	1282.8	9.1	1.1	8.1	25.2	25.1
2.00	1283.0	22.7	1.5	14.8	29.0	28.9
2.25	1283.3	34.1	1.4	23.7	50.9	50.7
2.50	1283.5	61.7	1.5	40.9	81.6	81.3
2.75	1283.8	108.6	1.7	64.7	110.2	109.8
3.00	1284.0	178.8	1.9	96.3	140.9	140.4
3.25	1284.3	273.5	2.0	136.2	177.4	176.8
3.50	1284.5	378.2	2.0	186.7	239.9	239.2
3.75	1284.8	545.0	2.2	253.8	298.7	297.9
4.00	1285.0	803.8	2.4	334.1	331.5	330.5
4.25	1285.3	1145.4	2.7	417.9	341.0	339.8
4.50	1285.5	1544.5	3.1	503.6	347.3	345.9
4.75	1285.8	1993.7	3.4	590.8	352.9	351.2
5.00	1286.0	2494.5	3.7	679.1	357.2	355.3
5.25	1286.3	3040.6	4.0	768.4	361.5	359.3
5.50	1286.5	3631.6	4.2	858.7	365.7	363.2
5.75	1286.8	4268.3	4.5	950.0	369.4	366.7
6.00	1287.0	4946.9	4.8	1042.1	373.1	370.2
6.25	1287.3	5666.5	5.0	1135.0	376.9	373.6
6.50	1287.5	6405.7	5.2	1228.9	382.5	379.0
6.75	1287.8	7131.7	5.4	1325.0	392.9	389.2
7.00	1288.0	7851.0	5.5	1423.8	407.2	403.1

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SHEET 4 OF 4

BY AMB DATE 2/4/2011

CHECK HAA DATE 2/11/2011

CLIENT: FCDMC

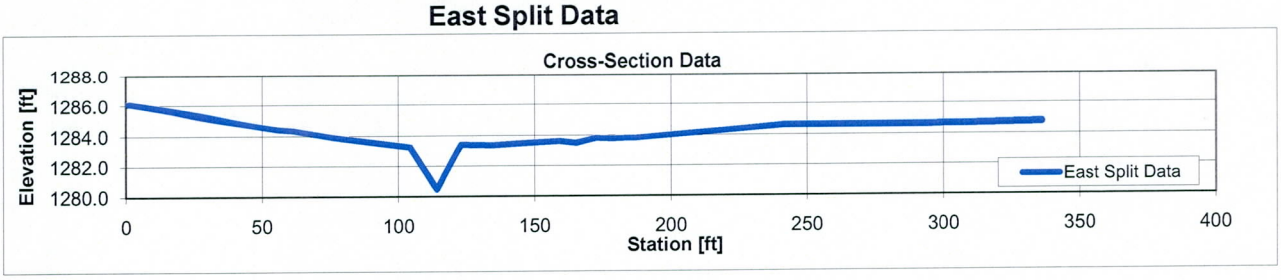
JOB: Palo Verde Watershed Detailed Floodplain Delineation Study JOB NO. 310.047

Split Flow Analysis for: T2N-R6W-S05N - Split 2 (near cross section 2.012)

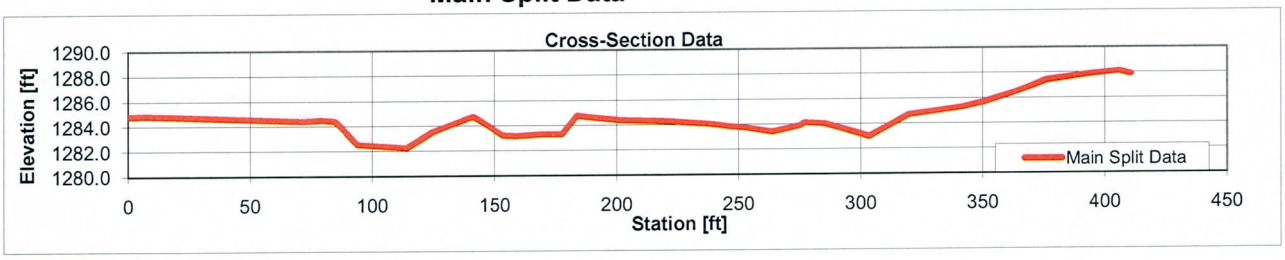
Split Flow Location: Approximately 0.5 miles south of Peoria Ave allignment

Analysis Method: Wash Normal Depth Analysis Using Manning's Equation

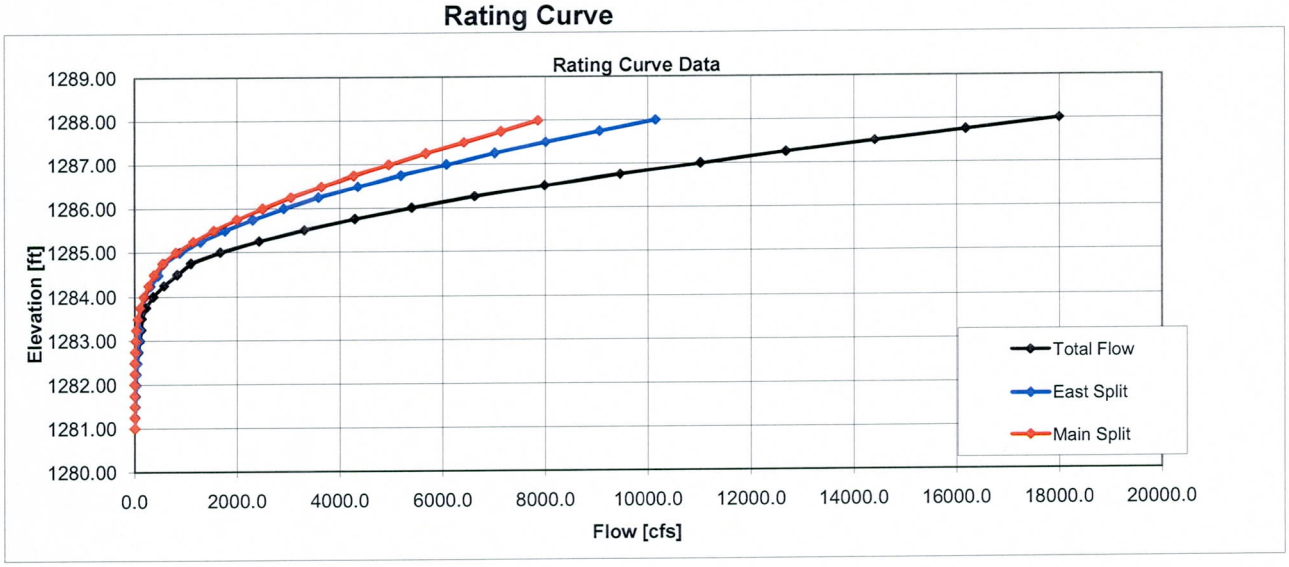
East Split Data



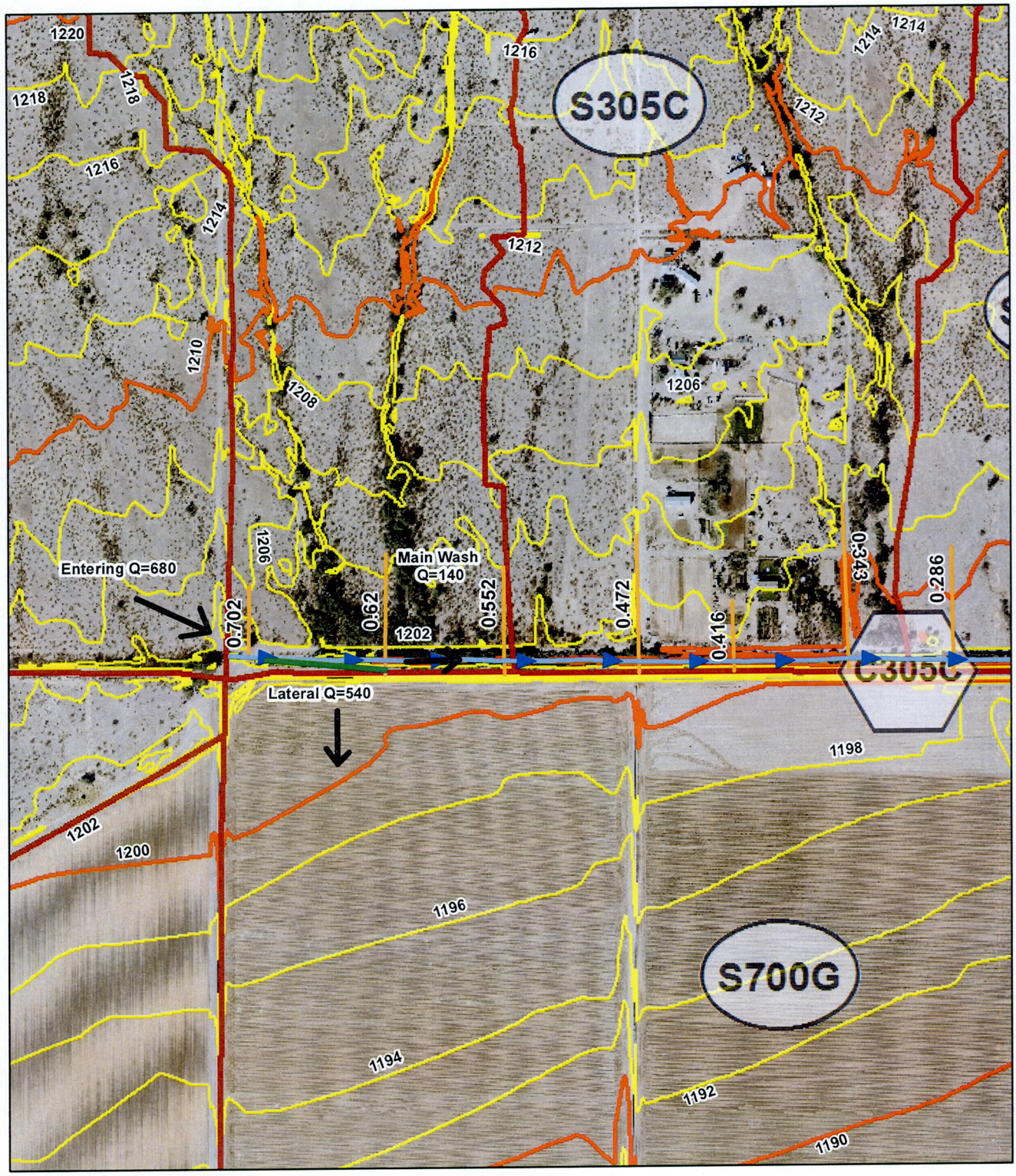
Main Split Data



Rating Curve



T2N-R6W-S05S Split Flow
Supporting Documentation

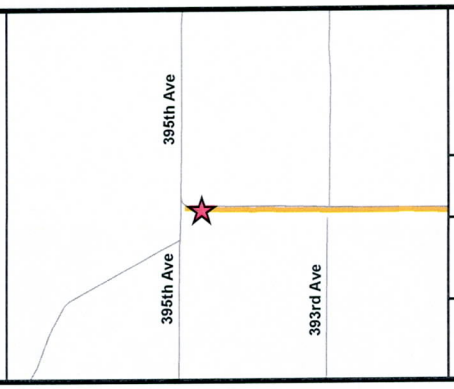


P:\30013\10\310047_Palo_Verde\Global_Data\Hydraulics\RiverCAD\T2N_R6W_S05S\WeirAnalysisS05\WeirAnalysisS05S_Map.mxd

LEGEND

- T2N-R6W-S05S
- Lateral Weir
- CrossSections
- Hydrology Subbasins
- S750E — Hydrology Subbasin ID
- C750C L — Concentration Point ID

VICINITY MAP



PALO VERDE WATERSHED
DETAILED FLOODPLAIN
DELINEATION STUDY
FCD 2008C046

NORTH

0 250 500 Feet

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Phoenix, Arizona 85008.3299
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T2N-R6W-S05S SPLIT 1
NEAR CROSS SECTION 0.702

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SHEET 1 OF 2

BY AL DATE 11/23/2010

CHECK HAA DATE 11/24/2010

JOB NO. 310.047

CLIENT: FCDMC

JOB: Palo Verde Watershed Detailed Floodplain Delineation Study

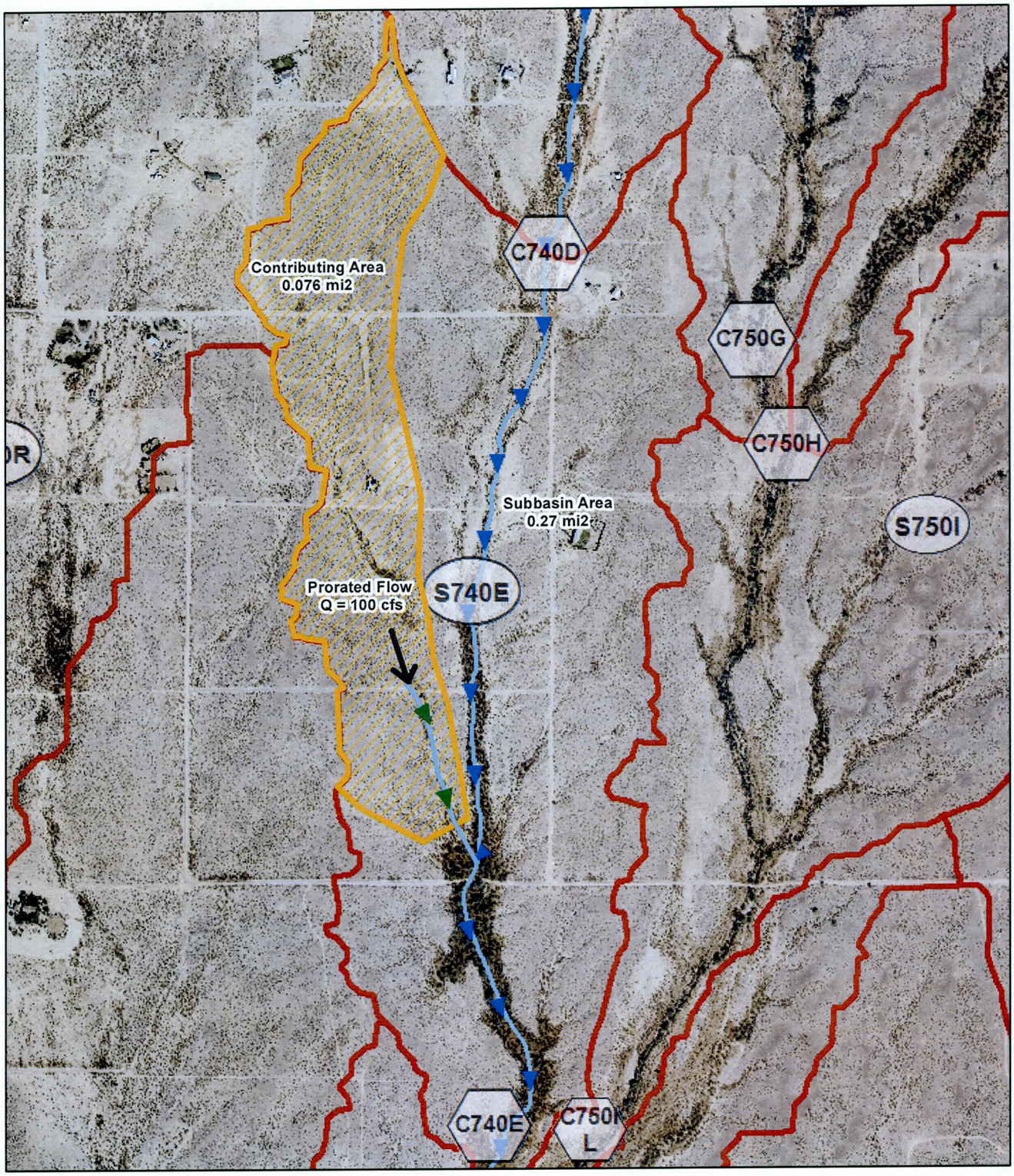
Split Flow Analysis for: T2N-R6W-S05S (Near cross section 0.702)

Split Flow Location: Just east of upstram wash limits.

Analysis Method: HEC-RAS Wier Flow

		HEC-RAS Output												
Reach	River Sta	Q US [cfs]	Q Leaving Total [cfs]	Q DS [cfs]	Q Weir [cfs]	Q Gates [cfs]	Weir Top Width [ft]	Weir Max Depth [ft]	Weir Avg Depth [ft]	Min El Weir Flow [ft]	E.G. US. [ft]	W.S. US. [ft]	E.G. DS [ft]	W.S. DS [ft]
Reach1	0.650	680.00	536.95	140.72	536.95		307.07	1.20	0.65	1203.27	1204.96	1204.78	1203.09	1203.07

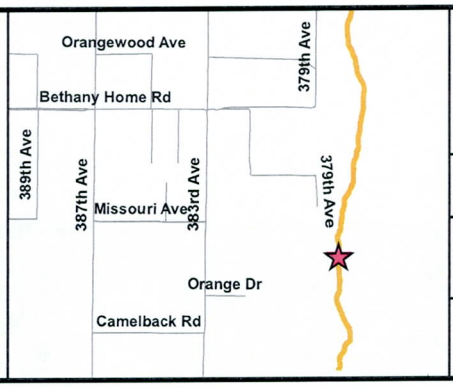
T2N-R6W-S22 Split and Zone A Flow Supporting Documentation



LEGEND

- T2N-R6W-S22
- T2N-R6W-S22-W1
- Contributing Area
- Hydrology Subbasins
- S750E — Hydrology Subbasin ID
- C750C L — Concentration Point ID

VICINITY MAP



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T2N-R6W-S22 - W1
NEAR CROSS SECTION 0.546

P:\30013\10\310047_Palo_Verde\Global_Data\Hydraulics\RiverCAD\T2N_R6W_S22\Zone A\W1 Map.mxd

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SHEET 1 OF 2

BY RLJ DATE 7/13/2011

CHECK HAA DATE 7/13/2011

CLIENT: FCDMC

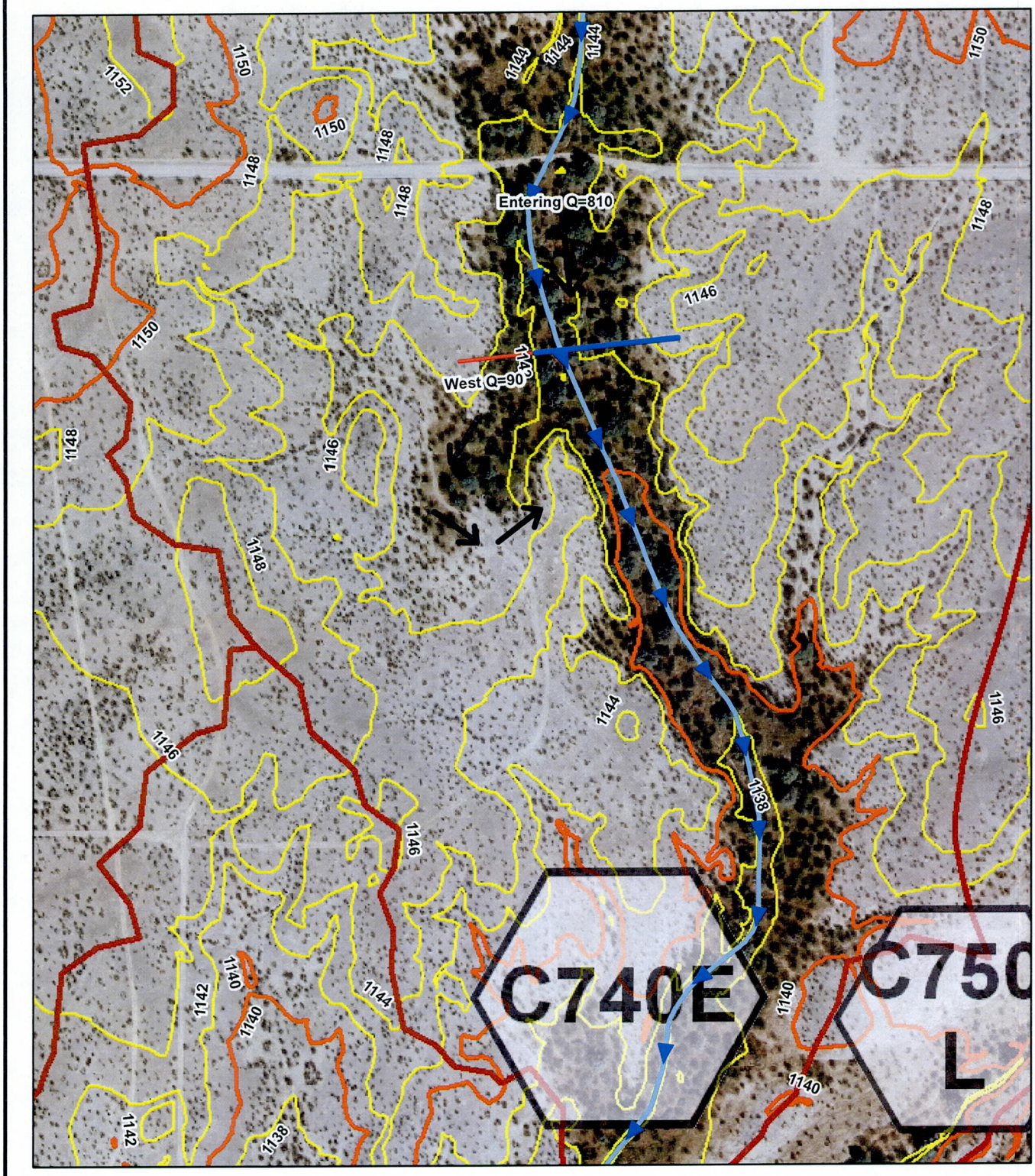
JOB: Palo Verde Watershed Detailed Floodplain Delineation Study JOB NO. 310.047

Split Flow Analysis for: T2N-R6W-S22 - W1

Split Flow Location: Begins app. 0.5 miles north of Camelback Road alignment (Near cross seciton 0.546).
Ends at confluence with T2N-R6W-S22 (Near cross section 0.365)

Analysis Method: Prorated Subbasin Flow

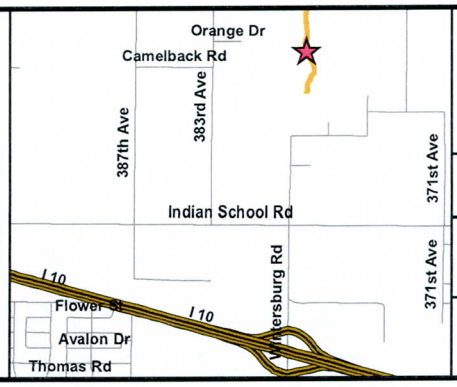
Analysis	
Subbasin Flow (cfs)	364
Subbasin Area (mi^2)	0.270
Zone A Contributing Area (mi^2)	0.076
% Contributing Area	28%
Contributing Zone A Flow (cfs)	***100***



LEGEND

- T2N-R6W-S22
- Split Flow Cross Section
- Wash Flow Cross Section
- Hydrology Subbasins
- S750E — Hydrology Subbasin ID
- C750C / L — Concentration Point ID

VICINITY MAP



PALO VERDE WATERSHED DETAILED FLOODPLAIN DELINEATION STUDY FCD 2008C046

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T2N-R6W-S22 - W2
NEAR CROSS SECTION 0.314

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SHEET 1 OF 2

BY RLJ DATE 7/13/2011

CHECK HAA DATE 7/13/2011

CLIENT: FCDMC

JOB: Palo Verde Watershed Detailed Floodplain Delineation Study JOB NO. 310.047

Split Flow Analysis for: T2N-R6W-S22 - W2 (Near cross section 0.314)

Split Flow Location: Approximately 700 ft north of Camelback Road alignment.

Analysis Method: HEC-RAS Flow Distribution in Cross Section

Zone A Flow	
Entering Flow	810
West Flow	*90*

	HEC-RAS Output							
Position	Left Station [ft]	Right Station [ft]	Q [ft^3/s]	Area [ft^2]	Wetted Perimeter [ft]	Percent Conveyance [%]	Hydraulic Depth [ft]	Velocity [ft/s]
Left of Bank		9865.72	23.86	17.57	19.98	2.95	0.88	1.36
Channel	9865.72	10033.46	699.29	316.05	167.77	86.33	1.88	2.21
Right of Bank	*10033.46*		*86.85*	*51.45*	*44.14*	*10.72*	*1.17*	*1.69*

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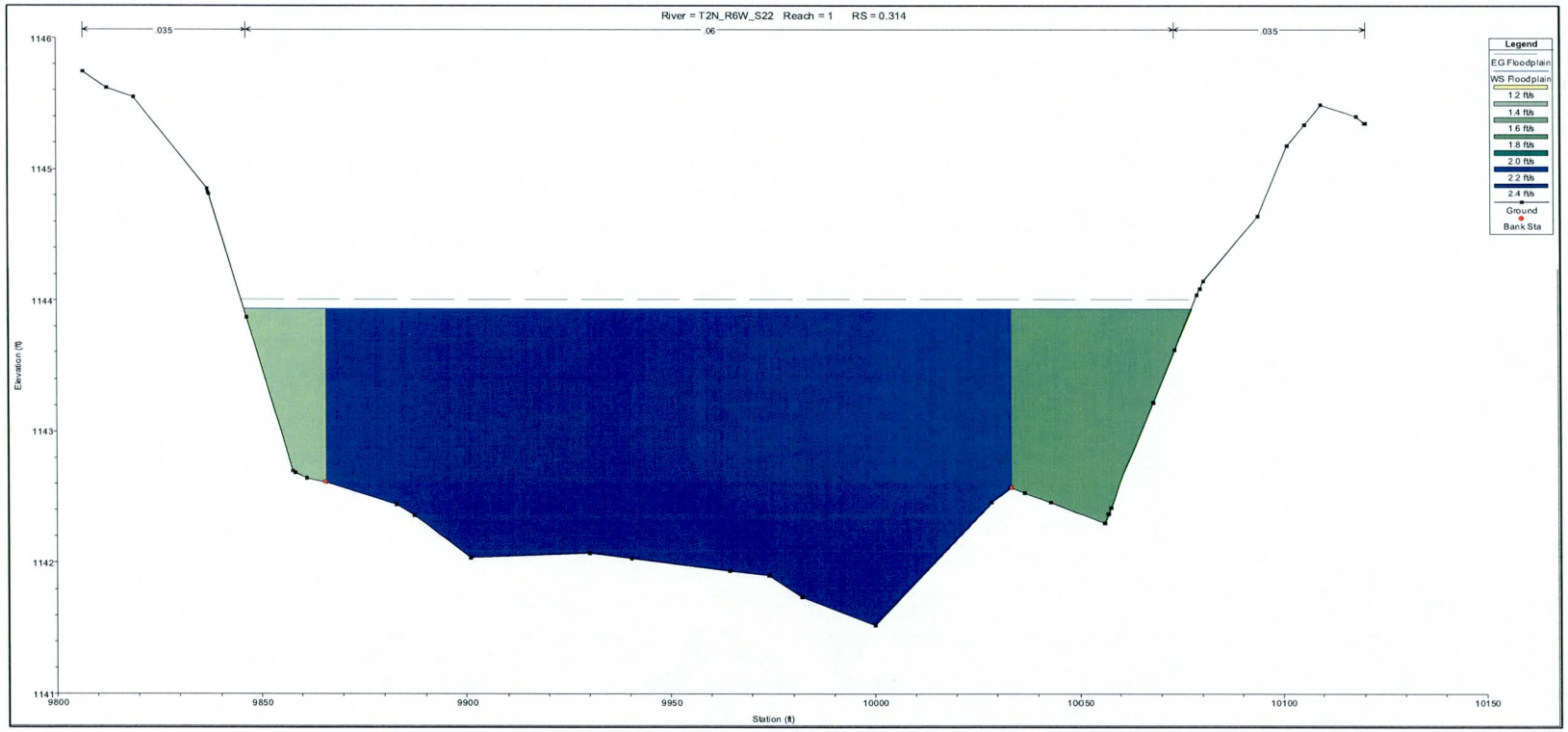
SHEET	2	**OF**	2
BY	RLJ	**DATE**	7/13/2011
CHECK	HAA	**DATE**	7/13/2011
JOB NO.	310.047		

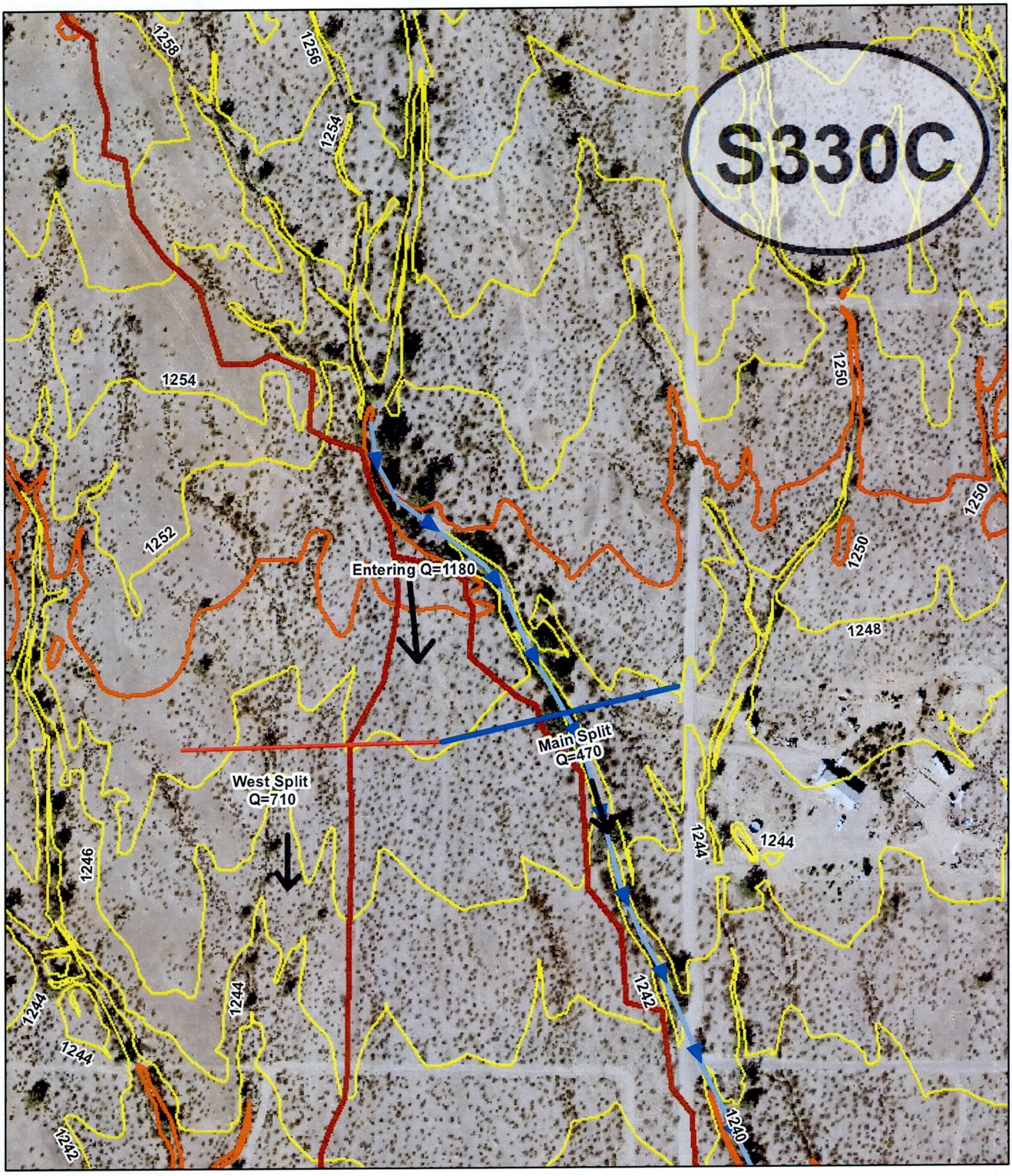
CLIENT: FCDMC

JOB: Palo Verde Watershed Detailed Floodplain Delineation Study
Split Flow Analysis for: T2N-R6W-S22 - W2 (Near cross section 0.314)
Split Flow Location: Approximately 700 ft north of Camelback Road alignment.

Analysis Method: **HEC-RAS Flow Distribution in Cross Section**



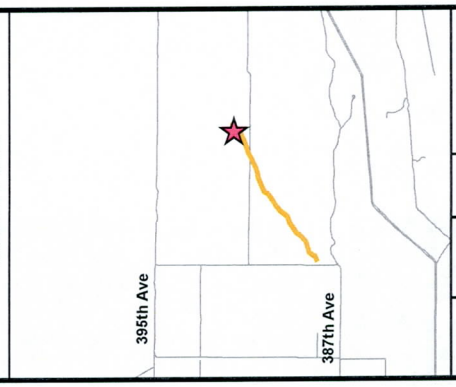
T3N-R6W-S32 Split Flow
Supporting Documentation



LEGEND

- T3N-R6W-S32
- Split Flow Cross Section
- Wash Flow Cross Section
- Hydrology Subbasins
- S750E — Hydrology Subbasin ID
- C750C L — Concentration Point ID

VICINITY MAP



PALO VERDE WATERSHED
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FCD 2008C046

NORTH

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T3N-R6W-S32 SPLIT 1
NEAR CROSS SECTION 0.886

P:\300\310\310047_Palo_Verde\Global_Data\Hydraulics\RiverCAD\T3N_R6W_S32\Split Flow Analysis\Split1_Map.mxd

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SHEET 1 OF 4

BY AL DATE 11/17/2010

CHECK AMB DATE 4/12/2011

CLIENT: FCDMC

JOB: Palo Verde Watershed Detailed Floodplain Delineation Study JOB NO. 310.047

Split Flow Analysis for: T3N-R6W-S32 - Split 1 (near cross section 0.886)

Split Flow Location: At beginning of wash study limits

Analysis Method: Wash Normal Depth Analysis Using Manning's Equation

	Slope (ft/ft)
West Split	0.0093
Main Split	0.0103

Total Flow		West Split	Main Split	West Split	Main Split
Stage [ft]	Q [cfs]	Q [cfs]	Q [cfs]	%	%
1247.00	203.2	121.7	81.5	60%	40%
1247.10	234.2	152.2	82.0	65%	35%
1247.20	283.3	192.8	90.5	68%	32%
1247.30	342.8	239.0	103.8	70%	30%
1247.40	405.2	290.9	114.3	72%	28%
1247.50	475.7	347.3	128.4	73%	27%
1247.60	561.2	409.0	152.2	73%	27%
1247.70	614.3	447.9	166.4	73%	27%
1247.80	723.8	493.5	230.3	68%	32%
1247.90	853.9	539.7	314.2	63%	37%
1248.00	1045.4	647.6	397.8	62%	38%
1248.10	1285.4	769.3	516.1	60%	40%

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SHEET 2 OF 4

BY AL DATE 11/17/2010

CHECK AMB DATE 4/12/2011

CLIENT: FCDMC

JOB: Palo Verde Watershed Detailed Floodplain Delineation Study JOB NO. 310.047

Split Flow Analysis for: T3N-R6W-S32 - Split 1 (near cross section 0.886)

Split Flow Location: At beginning of wash study limits

Analysis Method: Wash Normal Depth Analysis Using Manning's Equation

West Split Data

Slope (ft/ft)
0.0093

Raw Cross-Section Data			Raw Cross-Section Data		
Station [ft]	Elevation [ft]	N	Station [ft]	Elevation [ft]	N
0.00	1248.04				
30.91	1247.90				
60.34	1247.63				
96.75	1247.82				
120.68	1247.89				
136.97	1247.43				
147.58	1246.97				
154.58	1246.60				
158.02	1246.49				
162.02	1246.64				
177.47	1247.10				
181.80	1246.89				
217.51	1245.99				
240.59	1245.98				
241.49	1246.03				
242.53	1246.12				
250.45	1246.84				
294.77	1247.47				
324.61	1247.85				
332.55	1247.83				
362.59	1248.14				
362.69	1248.14	0.044			

	Flow Master Output					
Stage [ft]	WSE [ft]	Q [ft³/s]	Vel [ft/s]	Area [ft²]	Wetted Perimeter [ft]	Top Width [ft]
	1247.0	121.7	2.1	57.4	109.5	109.4
0.10	1247.1	152.2	2.2	69.1	124.2	124.2
0.20	1247.2	192.8	2.4	82.0	133.6	133.5
0.30	1247.3	239.0	2.5	95.8	142.9	142.8
0.40	1247.4	290.9	2.6	110.6	152.3	152.2
0.50	1247.5	347.3	2.8	126.3	162.7	162.6
0.60	1247.6	409.0	2.9	143.1	174.1	174.0
0.70	1247.7	447.9	2.8	161.8	206.6	206.5
0.80	1247.8	493.5	2.7	184.5	248.0	247.9
0.90	1247.9	539.7	2.5	212.5	308.5	308.4
1.00	1248.0	647.6	2.7	244.6	333.7	333.6
1.10	1248.1	769.3	2.8	279.2	358.8	358.7

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SHEET 3 OF 4

BY AL DATE 11/17/2010

CHECK AMB DATE 4/12/2011

CLIENT: FCDMC

JOB: Palo Verde Watershed Detailed Floodplain Delineation Study JOB NO. 310.047

Split Flow Analysis for: T3N-R6W-S32 - Split 1 (near cross section 0.886)

Split Flow Location: At beginning of wash study limits

Analysis Method: Wash Normal Depth Analysis Using Manning's Equation

Main Split Data

Slope (ft/ft)
0.0103

Raw Cross-Section Data			Raw Cross-Section Data		
Station [ft]	Elevation [ft]	N	Station [ft]	Elevation [ft]	N
0.00	1248.16				
0.10	1248.16				
38.01	1247.50				
57.42	1247.37				
93.50	1247.03				
97.18	1247.08				
99.70	1246.93				
111.87	1247.51				
124.28	1247.69				
126.65	1247.72				
130.51	1247.49				
130.97	1247.50	0.044			
145.30	1247.66				
155.75	1247.63				
157.90	1247.23				
167.02	1245.43				
170.65	1244.91				
173.39	1244.68				
175.99	1245.17				
190.44	1247.36				
202.86	1247.44	0.072			
210.92	1247.49				
223.89	1247.64				
278.28	1247.64				
285.16	1247.65				
304.74	1247.74				
338.71	1247.84				
347.78	1247.95				
363.11	1247.96				
406.46	1248.03				
409.65	1248.04	0.044			

	Flow Master Output					
Stage [ft]	WSE [ft]	Q [ft³/s]	Vel [ft/s]	Area [ft²]	Wetted Perimeter [ft]	Top Width [ft]
	1247.0	81.5	2.3	35.5	32.0	31.6
0.10	1247.1	82.0	2.1	39.3	47.8	47.4
0.20	1247.2	90.5	2.0	44.7	61.7	61.2
0.30	1247.3	103.8	2.0	51.6	75.6	75.1
0.40	1247.4	114.3	1.9	59.9	96.8	96.3
0.50	1247.5	128.4	1.8	71.2	130.1	129.6
0.60	1247.6	152.2	1.8	85.7	162.1	161.6
0.70	1247.7	166.4	1.5	107.8	268.1	267.6
0.80	1247.8	230.3	1.7	136.3	304.9	304.3
0.90	1247.9	314.2	1.9	168.2	329.1	328.6
1.00	1248.0	397.8	2.0	202.9	379.1	378.6
1.10	1248.1	516.1	2.1	242.7	406.6	406.1

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SHEET 4 OF 4

BY AL DATE 11/17/2010

CHECK AMB DATE 4/12/2011

CLIENT: FCDMC

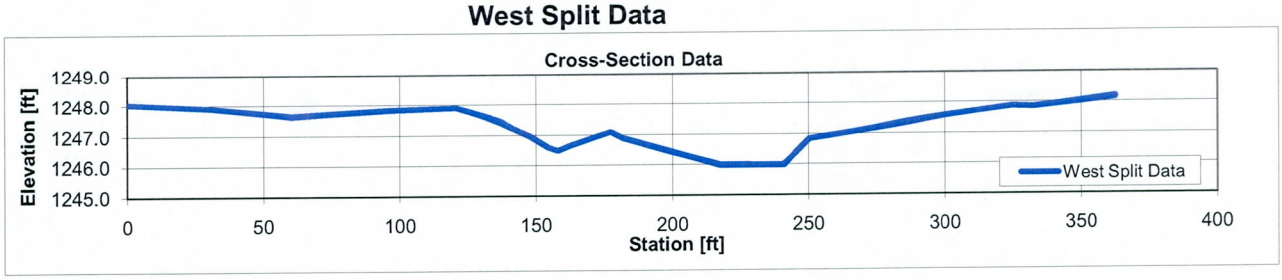
JOB: Palo Verde Watershed Detailed Floodplain Delineation Study JOB NO. 310.047

Split Flow Analysis for: T3N-R6W-S32 - Split 1 (near cross section 0.886)

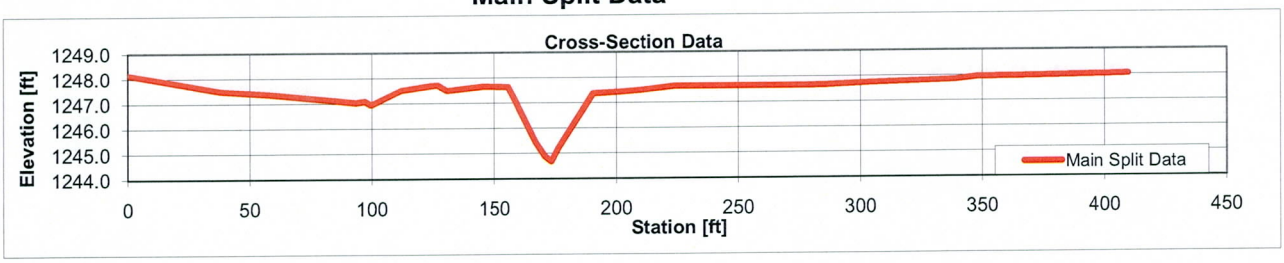
Split Flow Location: At beginning of wash study limits

Analysis Method: **Wash Normal Depth Analysis Using Manning's Equation**

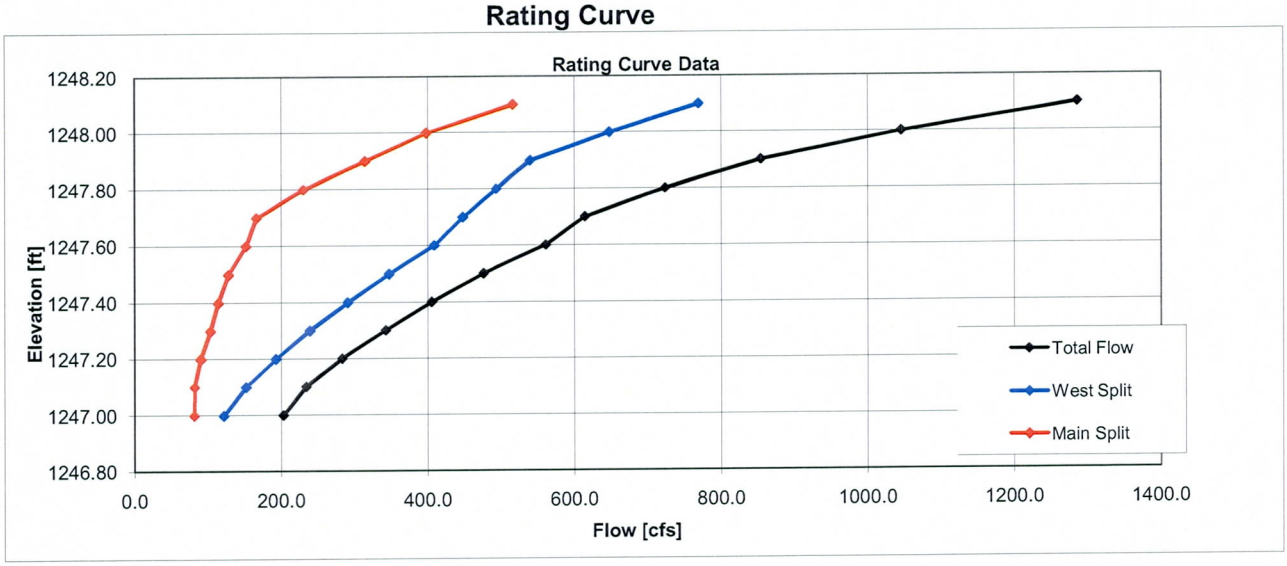
West Split Data



Main Split Data



Rating Curve



LEGEND

- T3N-R6W-S32
- Split Flow Cross Section
- Wash Flow Cross Section
- Hydrology Subbasins
- S750E — Hydrology Subbasin ID
- C750C L — Concentration Point ID

VICINITY MAP

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T3N-R6W-S32 SPLIT 2
NEAR CROSS SECTION 0.565

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SHEET 1 OF 4

BY AL DATE 11/17/2010

CHECK AMB DATE 4/12/2011

CLIENT: FCDMC

JOB: Palo Verde Watershed Detailed Floodplain Delineation Study JOB NO. 310.047

Split Flow Analysis for: T3N-R6W-S32 - Split 2 (near cross section 0.565)

Split Flow Location: Approximately 1500 feet upstream of HEC-1 Concentration Point C330C

Analysis Method: Wash Normal Depth Analysis Using Manning's Equation

	Slope (ft/ft)
Main Split	0.0071
East Split	0.0087

Total Flow		Main Split	East Split	Main Split	East Split
Stage [ft]	Q [cfs]	Q [cfs]	Q [cfs]	%	%
1231.00	92.5	81.4	11.1	0.9	0.1
1231.10	122.3	92.0	30.3	75%	25%
1231.20	167.0	104.8	62.2	63%	37%
1231.30	222.5	119.3	103.2	54%	46%
1231.40	286.5	135.4	151.1	47%	53%
1231.50	360.4	151.2	209.2	42%	58%
1231.60	443.0	163.0	280.0	37%	63%
1231.70	522.0	156.1	365.9	30%	70%
1231.80	642.2	179.4	462.8	28%	72%
1231.90	791.9	221.2	570.7	28%	72%
1232.00	952.1	263.1	689.0	28%	72%

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SHEET 2 OF 4

BY AL DATE 11/17/2010

CHECK AMB DATE 4/12/2011

CLIENT: FCDMC

JOB: Palo Verde Watershed Detailed Floodplain Delineation Study JOB NO. 310.047

Split Flow Analysis for: T3N-R6W-S32 - Split 2 (near cross section 0.565)

Split Flow Location: Approximately 1500 feet upstream of HEC-1 Concentration Point C330C

Analysis Method: Wash Normal Depth Analysis Using Manning's Equation

Main Split Data

Slope (ft/ft)
0.0071

Raw Cross-Section Data			Raw Cross-Section Data		
Station [ft]	Elevation [ft]	N	Station [ft]	Elevation [ft]	N
0.00	1232.50				
26.40	1231.79				
30.41	1231.71				
30.87	1231.59	0.044			
32.65	1231.12				
40.04	1229.41				
40.81	1229.14				
44.90	1228.91				
45.85	1228.91				
51.94	1228.96				
54.22	1229.35				
60.92	1230.71				
63.36	1230.73				
68.35	1231.07	0.072			
74.27	1231.48				
105.21	1231.73				
124.49	1231.63				
135.01	1231.69				
156.86	1231.96				
178.22	1231.93				
187.01	1232.08				
198.84	1231.12				
205.76	1230.52				
209.26	1230.87				
218.17	1231.83				
234.54	1231.61				
248.86	1231.73				
288.18	1232.07				
289.29	1232.07				
289.39	1232.07	0.044			

	Flow Master Output					
Stage [ft]	WSE [ft]	Q [ft³/s]	Vel [ft/s]	Area [ft²]	Wetted Perimeter [ft]	Top Width [ft]
	1231.0	81.4	1.9	43.8	44.9	44.4
0.10	1231.1	92.0	1.9	48.5	48.9	48.4
0.20	1231.2	104.8	2.0	53.5	52.9	52.4
0.30	1231.3	119.3	2.0	58.9	56.9	56.3
0.40	1231.4	135.4	2.1	64.8	60.9	60.3
0.50	1231.5	151.2	2.1	71.0	67.1	66.5
0.60	1231.6	163.0	2.1	78.4	82.0	81.4
0.70	1231.7	156.1	1.8	89.0	139.2	138.6
0.80	1231.8	179.4	1.7	105.3	182.5	181.9
0.90	1231.9	221.2	1.8	125.0	209.6	209.0
1.00	1232.0	263.1	1.8	148.3	256.5	255.8

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SHEET 3 OF 4

BY AL DATE 11/17/2010

CHECK AMB DATE 4/12/2011

CLIENT: FCDMC

JOB: Palo Verde Watershed Detailed Floodplain Delineation Study JOB NO. 310.047

Split Flow Analysis for: T3N-R6W-S32 - Split 2 (near cross section 0.565)

Split Flow Location: Approximately 1500 feet upstream of HEC-1 Concentration Point C330C

Analysis Method: Wash Normal Depth Analysis Using Manning's Equation

East Split Data

Slope (ft/ft)
0.0087

Raw Cross-Section Data			Raw Cross-Section Data		
Station [ft]	Elevation [ft]	N	Station [ft]	Elevation [ft]	N
0.00	1232.03				
0.10	1232.03				
0.14	1232.03				
7.18	1231.95				
10.96	1231.92				
91.85	1231.06				
92.10	1231.06				
92.34	1231.06				
97.56	1231.05				
173.61	1230.92				
180.83	1230.88				
219.11	1230.75				
254.61	1230.96				
266.76	1231.28				
287.20	1231.53				
291.25	1231.53				
294.06	1231.29				
337.16	1232.37				
339.78	1232.36				
352.99	1232.50	0.044			

	Flow Master Output					
Stage [ft]	WSE [ft]	Q [ft³/s]	Vel [ft/s]	Area [ft²]	Wetted Perimeter [ft]	Top Width [ft]
	1231.0	11.1	0.7	14.9	129.3	129.3
0.10	1231.1	30.3	1.0	30.5	171.8	171.8
0.20	1231.2	62.2	1.3	48.3	185.1	185.0
0.30	1231.3	103.2	1.5	67.5	199.6	199.6
0.40	1231.4	151.1	1.7	88.6	222.4	222.4
0.50	1231.5	209.2	1.9	112.0	245.1	245.1
0.60	1231.6	280.0	2.0	137.7	265.4	265.4
0.70	1231.7	365.9	2.2	164.9	278.8	278.8
0.80	1231.8	462.8	2.4	193.5	292.2	292.2
0.90	1231.9	570.7	2.6	223.3	305.6	305.6
1.00	1232.0	689.0	2.7	254.6	319.7	319.6

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SHEET 4 OF 4

BY AL DATE 11/17/2010

CHECK AMB DATE 4/12/2011

CLIENT: FCDMC

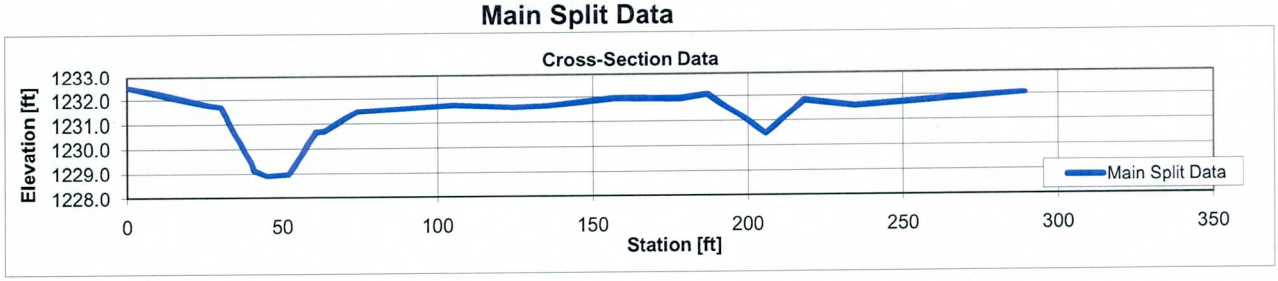
JOB: Palo Verde Watershed Detailed Floodplain Delineation Study JOB NO. 310.047

Split Flow Analysis for: T3N-R6W-S32 - Split 2 (near cross section 0.565)

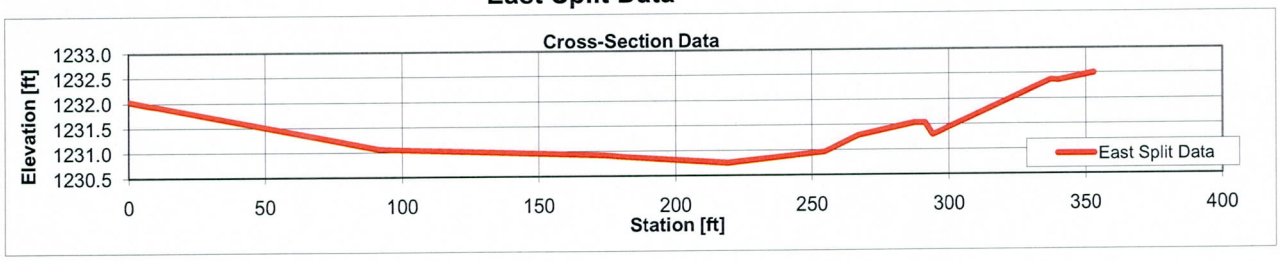
Split Flow Location: Approximately 1500 feet upstream of HEC-1 Concentration Point C330C

Analysis Method: Wash Normal Depth Analysis Using Manning's Equation

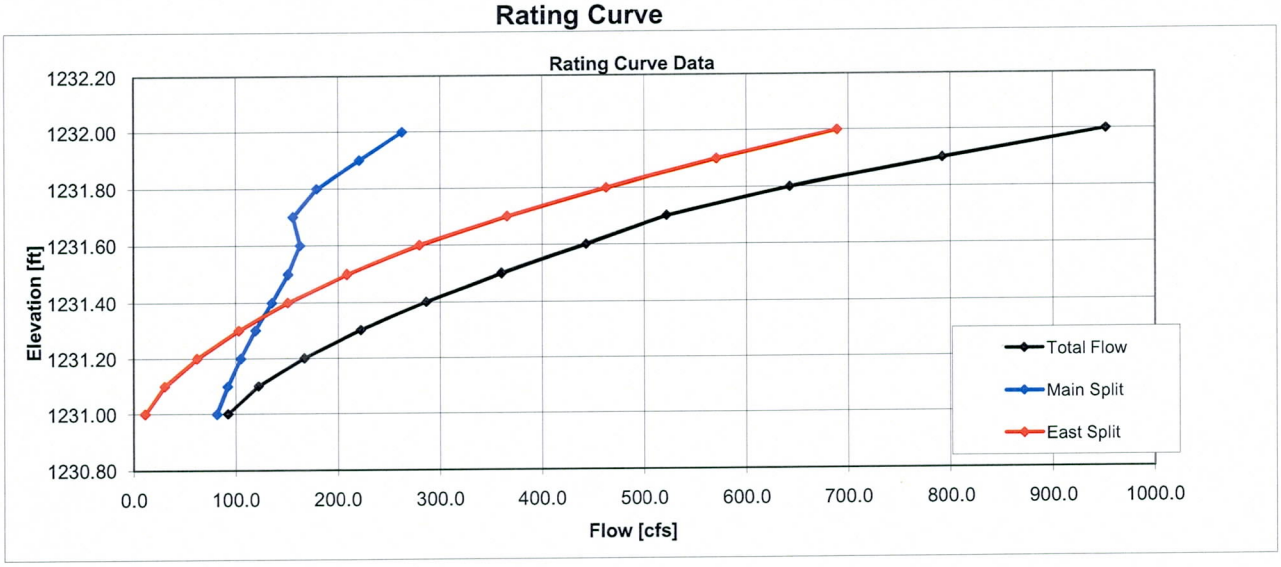
Main Split Data



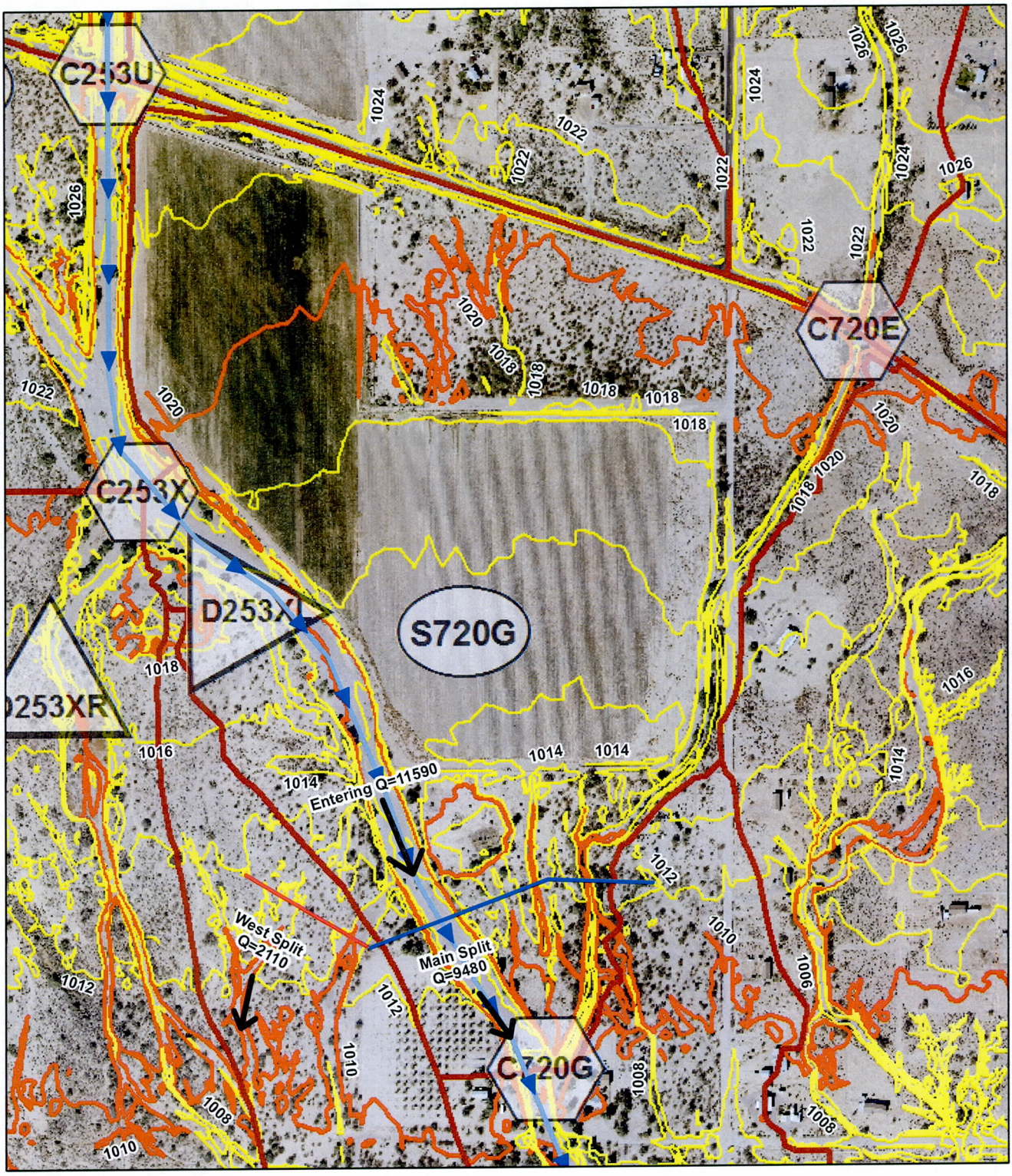
East Split Data



Rating Curve



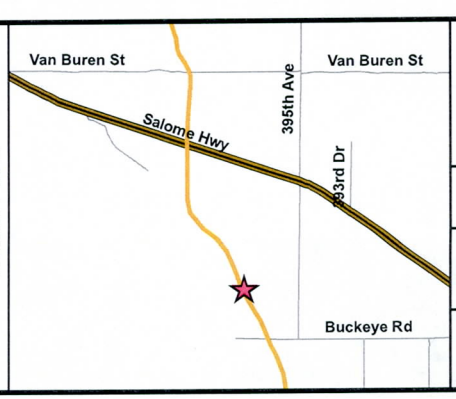
Winters Wash Split Flow
Supporting Documentation



LEGEND

- WINTERS WASH
- Split Flow Cross Section
- Wash Flow Cross Section
- Hydrology Subbasins
- S750E — Hydrology Subbasin ID
- C750C L — Concentration Point ID

VICINITY MAP



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WINTERS WASH - W2
NEAR CROSS SECTION 9.800

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SHEET 1 OF 2

BY AL DATE 7/10/2011

CHECK RLJ DATE 7/10/2011

CLIENT: FCDMC

JOB: Palo Verde Watershed Detailed Floodplain Delineation Study JOB NO. 310.047

Split Flow Analysis for: **Winters Wash - W2 (Near cross section 9.800)**

Split Flow Location: **App. 750 feet north of Buckeye Rd**

Analysis Method: **Wash Normal Depth Analysis Using Manning's Equation**

Split Results	
Entering Flow	11590
West Split	2110
Main Split	***9480***

	HEC-RAS Output							
Position	**Left Station [ft]**	**Right Station [ft]**	**Q [ft^3/s]**	**Area [ft^2]**	**Wetted Perimeter [ft]**	**Percent Conveyance [%]**	**Hydraulic Depth [ft]**	**Velocity [ft/s]**
Left of Bank		9976.67	2858.39	1184.98	578.08	24.66	2.06	2.41
Channel	9976.67	10310.01	6619.07	1265.78	335.43	57.11	3.80	5.23
Right of Bank	10310.01		2112.54	887.51	531.80	18.23	1.68	2.38

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SHEET	2	**OF**	2
BY	AL	**DATE**	7/10/2011
CHECK	RLJ	**DATE**	7/10/2011
JOB NO.	310.047		

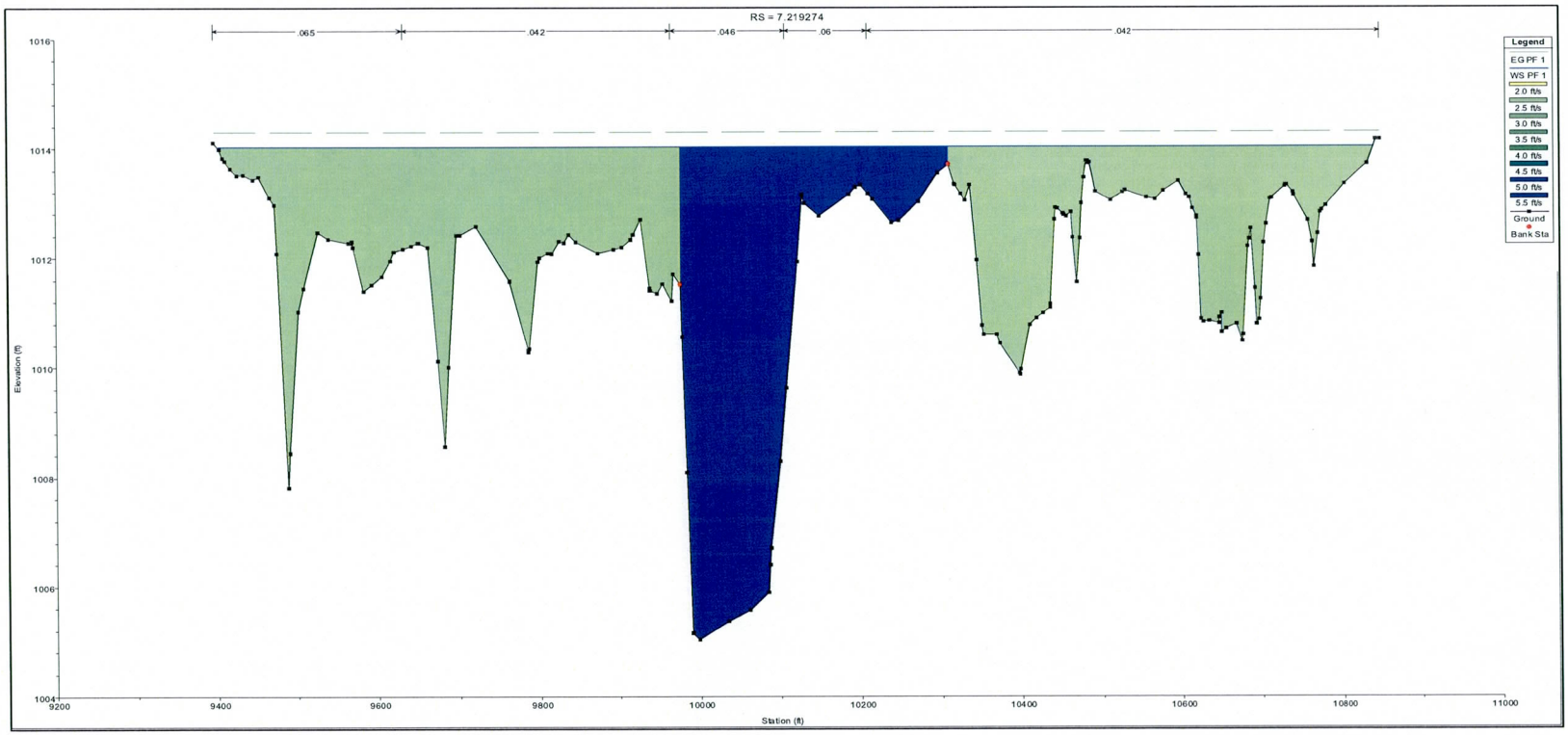
CLIENT: FCDMC

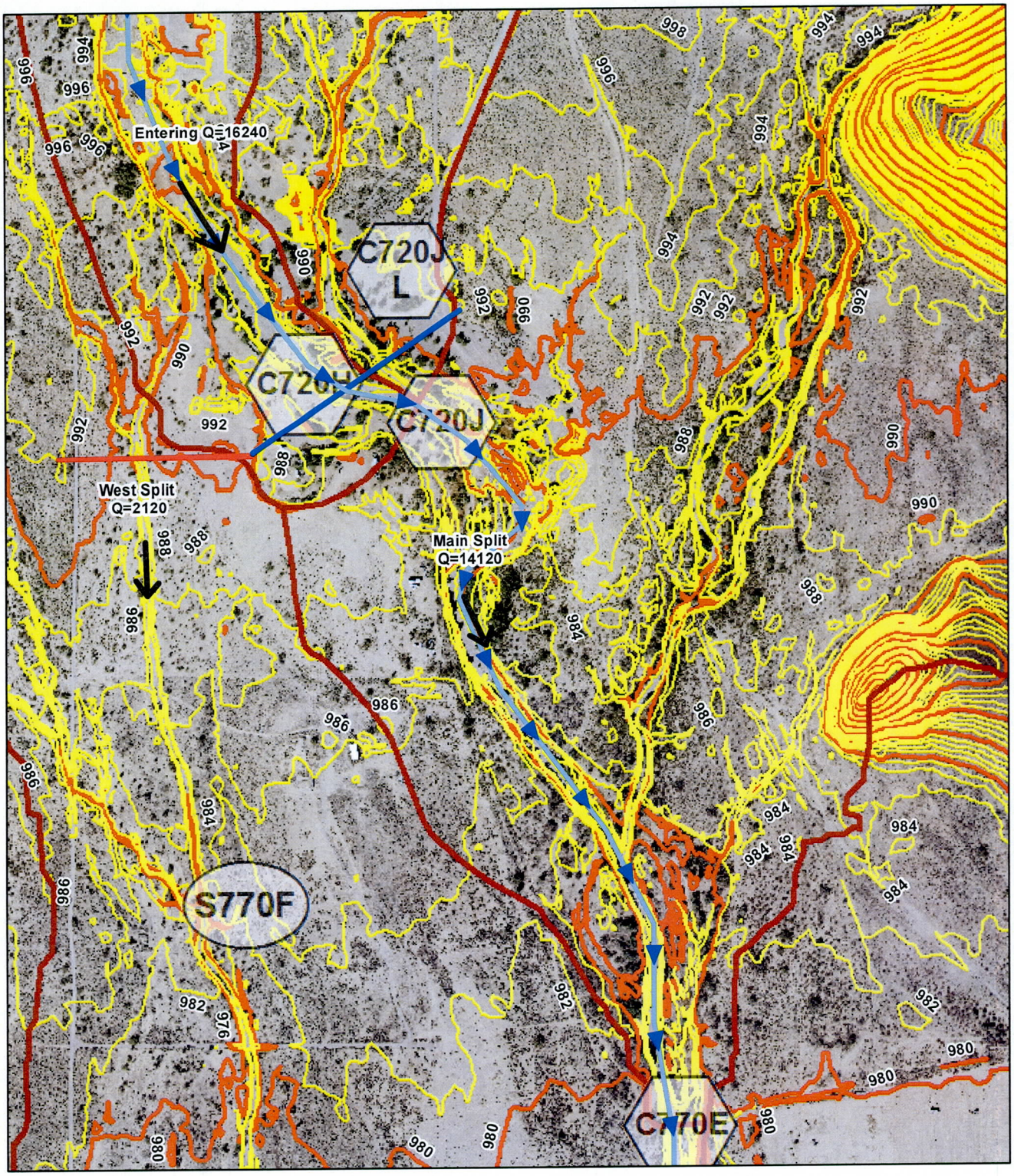
JOB: Palo Verde Watershed Detailed Floodplain Delineation Study

Split Flow Analysis for: **Winters Wash - W2 (Near cross section 9.800)**

Split Flow Location: **App. 750 feet north of Buckeye Rd**

Analysis Method: **Wash Normal Depth Analysis Using Manning's Equation**

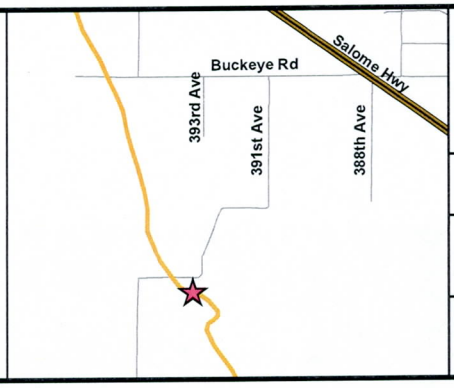




LEGEND

- WINTERS WASH
- Split Flow Cross Section
- Wash Flow Cross Section
- Hydrology Subbasins
- S750E — Hydrology Subbasin ID
- C750C L — Concentration Point ID

VICINITY MAP



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WINTERS WASH - W3
NEAR CROSS SECTION 8.754

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SHEET 1 OF 2

BY AL DATE 7/10/2011

CHECK RLJ DATE 7/10/2011

CLIENT: FCDMC

JOB: Palo Verde Watershed Detailed Floodplain Delineation Study JOB NO. 310.047

Split Flow Analysis for: **Winters Wash - W3 (Near cross section 8.754)**

Split Flow Location: **Just south or HEC-1 Concentration Point C720J**

Analysis Method: **Wash Normal Depth Analysis Using Manning's Equation**

Split Results	
Entering Flow	16240
West Split	2120
Main Split	***14120***

	HEC-RAS Output							
Position	**Left Station [ft]**	**Right Station [ft]**	**Q [ft^3/s]**	**Area [ft^2]**	**Wetted Perimeter [ft]**	**Percent Conveyance [%]**	**Hydraulic Depth [ft]**	**Velocity [ft/s]**
Left of Bank		9863.23	3576.11	1060.14	368.36	22.02	2.89	3.37
Channel	9863.23	10348.20	10545.35	2584.37	486.53	64.93	5.33	4.08
Right of Bank	10348.20		2118.55	1117.27	687.24	13.05	1.63	1.90

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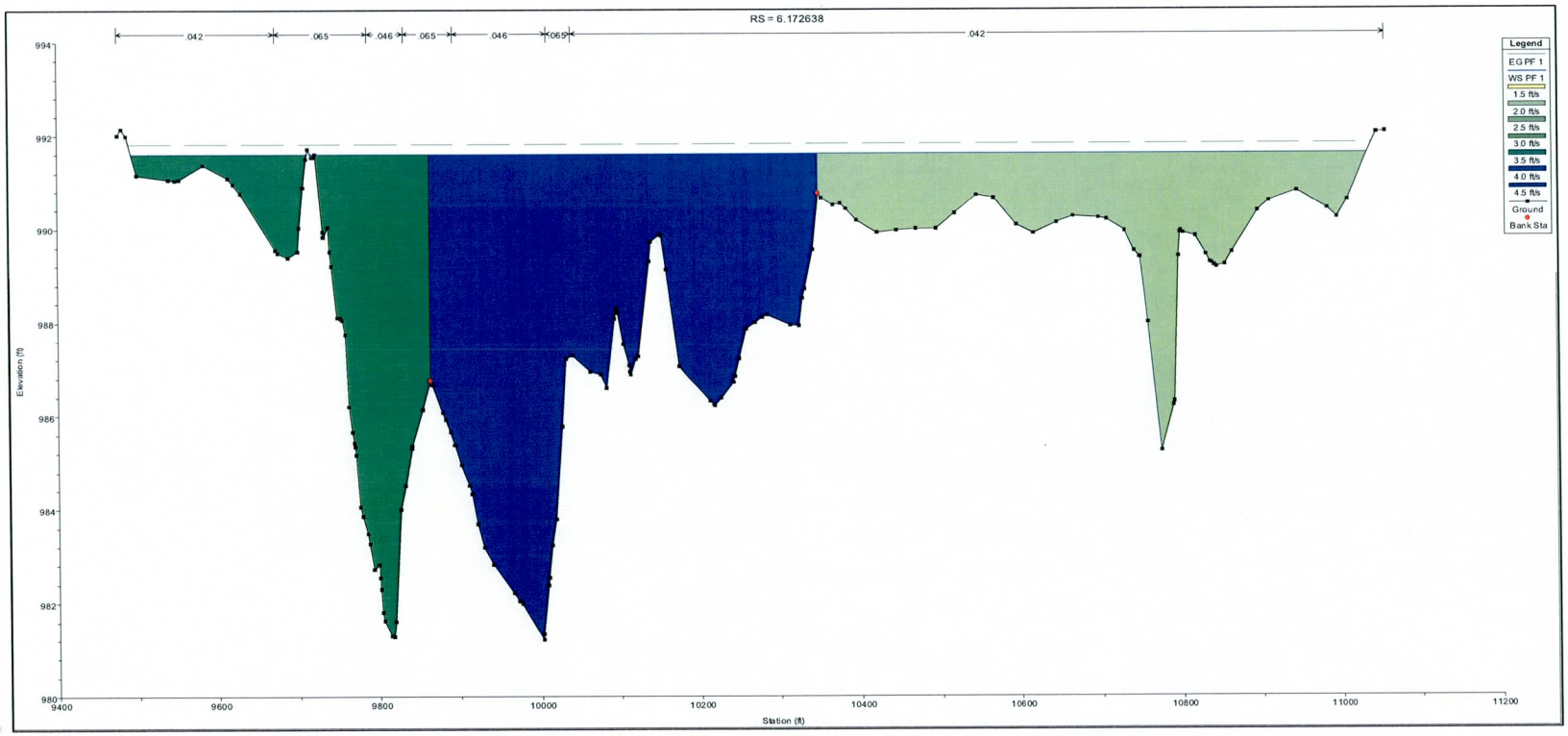
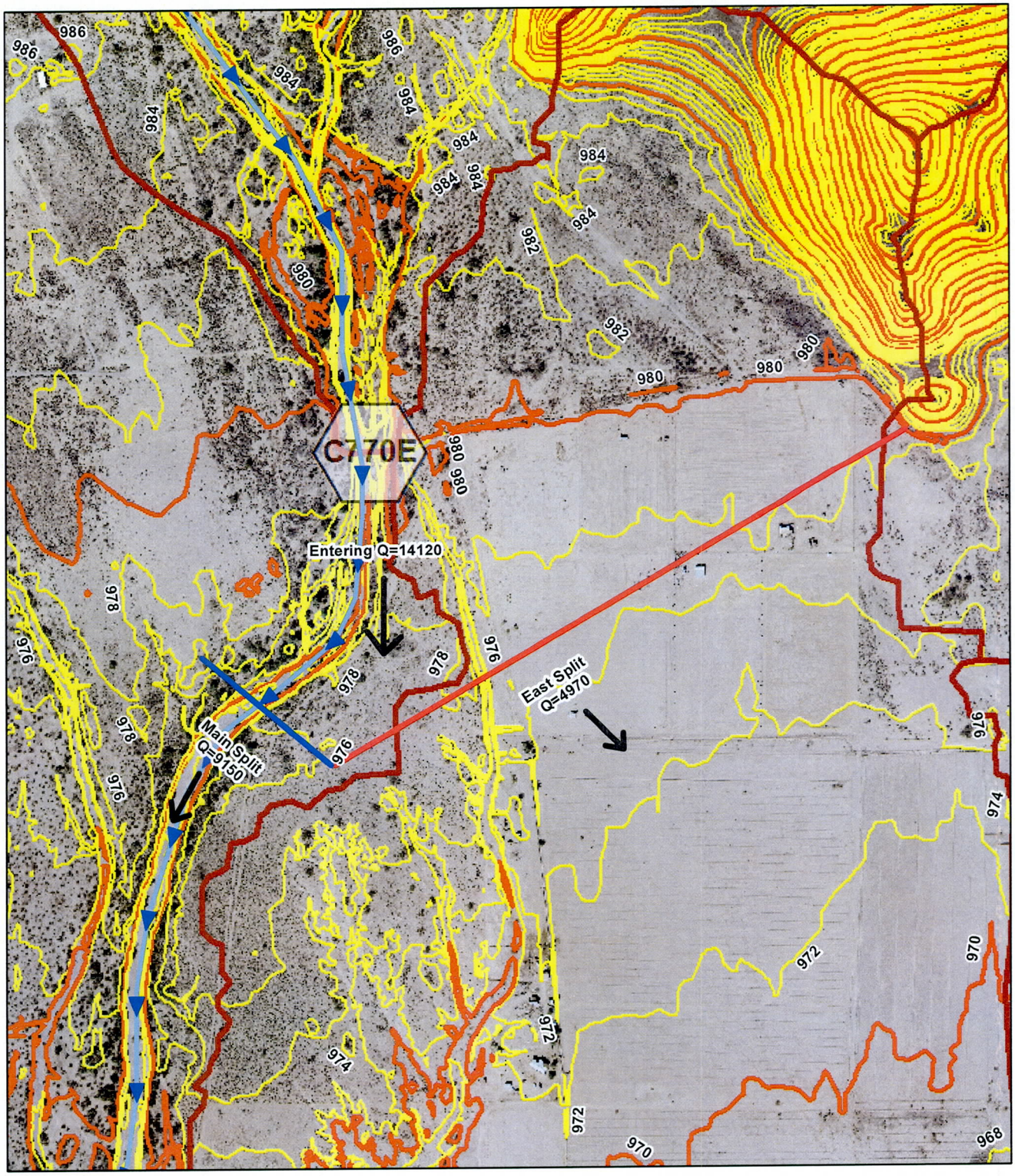
SHEET	2	OF	2
BY	AL	DATE	7/10/2011
CHECK	RLJ	DATE	7/10/2011
JOB NO.	310.047		

CLIENT: FCDMC

JOB: Palo Verde Watershed Detailed Floodplain Delineation Study
Split Flow Analysis for: Winters Wash - W3 (Near cross section 8.754)
Split Flow Location: Just south or HEC-1 Concentration Point C720J

Analysis Method: Wash Normal Depth Analysis Using Manning's Equation

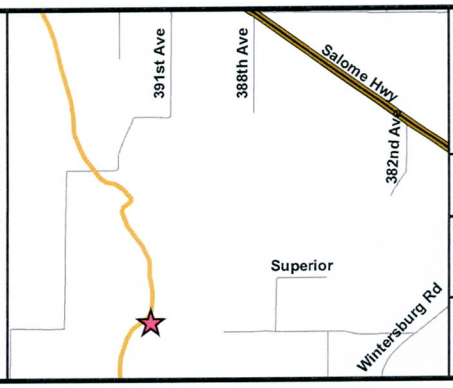




LEGEND

- WINTERS WASH
- Split Flow Cross Section
- Wash Flow Cross Section
- Hydrology Subbasins
- S750E — Hydrology Subbasin ID
- C750C L — Concentration Point ID

VICINITY MAP



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WINTERS WASH - E4
NEAR CROSS SECTION 7.924

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SHEET 1 OF 2

BY AL DATE 7/10/2011

CHECK HAA DATE 7/10/2011

CLIENT: FCDMC

JOB: Palo Verde Watershed Detailed Floodplain Delineation Study JOB NO. 310.047

Split Flow Analysis for: Winters Wash - E4 (Near cross section 7.924)

Split Flow Location: Just south of HEC-1 Concentration Point C770E

Analysis Method: Wash Normal Depth Analysis Using Manning's Equation

Split Results	
Entering Flow	14120
East Split	4970
Main Split	***9150***

	HEC-RAS Output							
Position	**Left Station [ft]**	**Right Station [ft]**	**Q [ft^3/s]**	**Area [ft^2]**	**Wetted Perimeter [ft]**	**Percent Conveyance [%]**	**Hydraulic Depth [ft]**	**Velocity [ft/s]**
Left of Bank		2370.01	4971.96	2468.00	2105.81	35.21	1.17	2.01
Channel	2370.01	2942.55	9025.91	2193.68	575.00	63.92	3.83	4.11
Right of Bank	2942.55		122.13	62.82	38.95	0.86	1.62	1.94

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SHEET	2	OF	2
BY	AL	DATE	7/10/2011
CHECK	HAA	DATE	7/10/2011
JOB NO.	310.047		

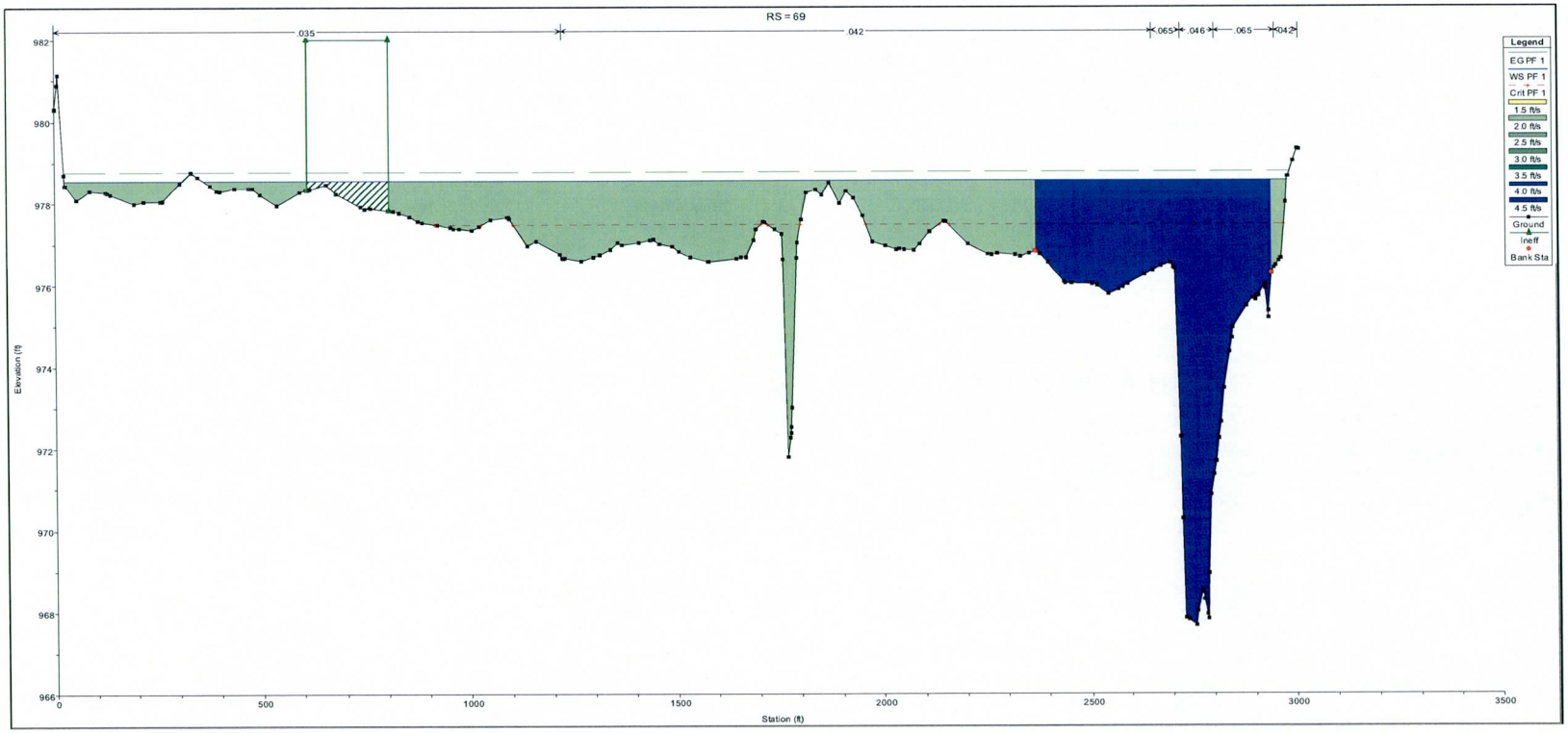
CLIENT: FCDMC

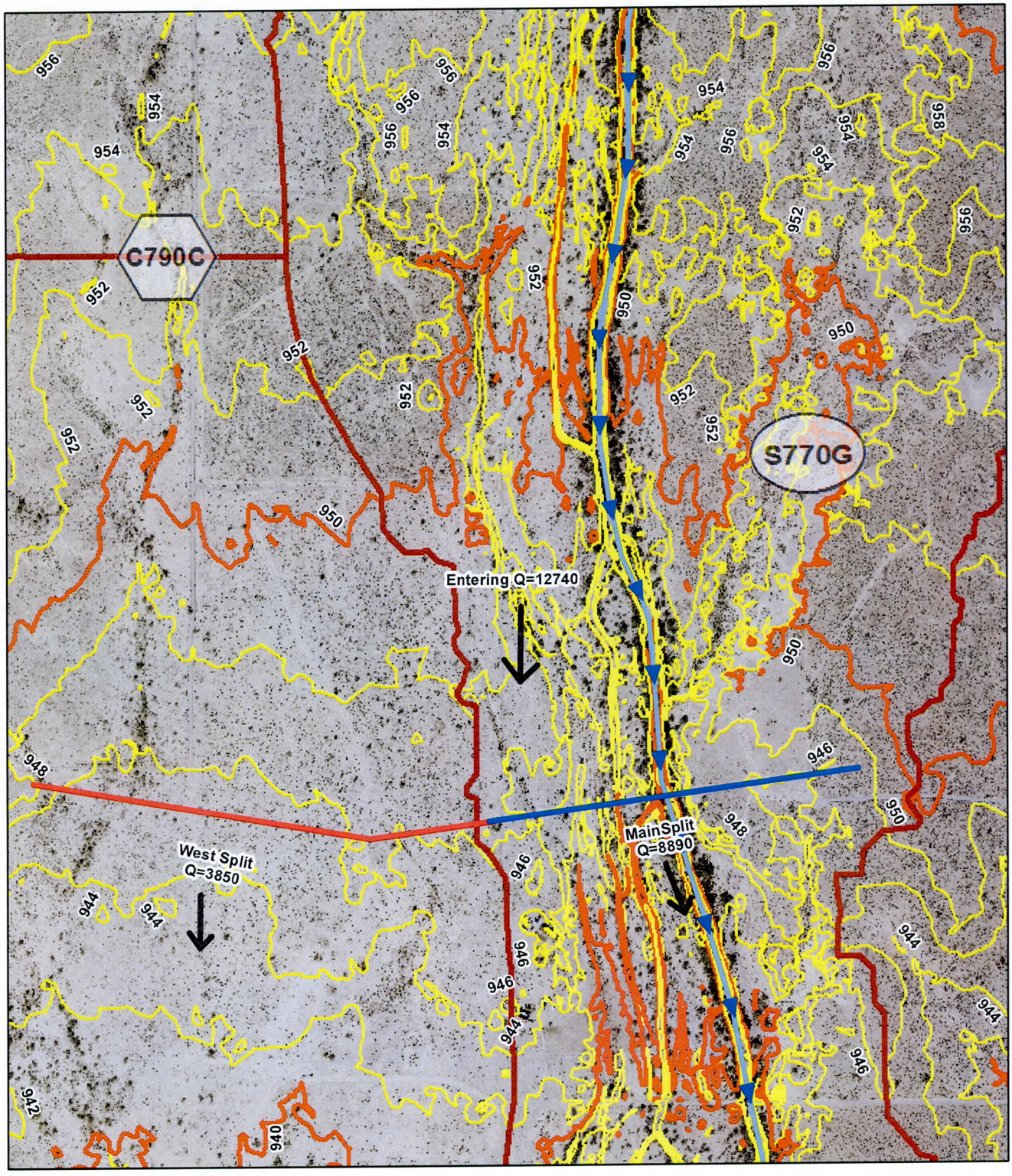
JOB: Palo Verde Watershed Detailed Floodplain Delineation Study

Split Flow Analysis for: Winters Wash - E4 (Near cross section 7.924)

Split Flow Location: Just south of HEC-1 Concentration Point C770E

Analysis Method: Wash Normal Depth Analysis Using Manning's Equation

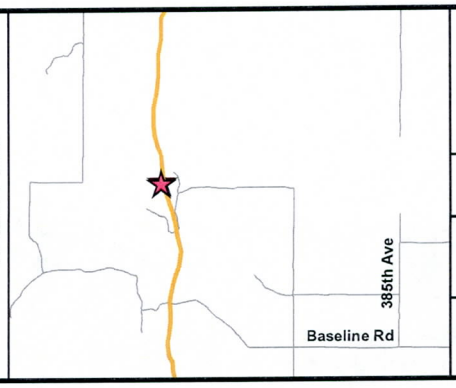




LEGEND

- WINTERS WASH
- Split Flow Cross Section
- Wash Flow Cross Section
- Hydrology Subbasins
- S750E — Hydrology Subbasin ID
- C750C L — Concentration Point ID

VICINITY MAP



PALO VERDE WATERSHED
DETAILED FLOODPLAIN
DELINEATION STUDY
FCD 2008C046

NORTH

0 300 600 Feet

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WINTERS WASH - W5
NEAR CROSS SECTION 6.162

P:\30013\10\310047_Palo_Verde\Global_Data\Hydraulics\RiverCAD\Winters_Wash\Split Flow Analysis\Split5.mxd

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SHEET 1 OF 2

BY AL DATE 7/10/2011

CHECK HAA DATE 7/10/2011

CLIENT: FCDMC

JOB: Palo Verde Watershed Detailed Floodplain Delineation Study JOB NO. 310.047

Split Flow Analysis for: **Winters Wash - W5 (Near cross section 6.162)**

Split Flow Location: **Approximately 0.75 miles north of Basline Rd alignment.**

Analysis Method: **Wash Normal Depth Analysis Using Manning's Equation**

Split Results	
Entering Flow	12740
West Split	3850
Main Split	***8890***

	HEC-RAS Output							
Position	**Left Station [ft]**	**Right Station [ft]**	**Q [ft^3/s]**	**Area [ft^2]**	**Wetted Perimeter [ft]**	**Percent Conveyance [%]**	**Hydraulic Depth [ft]**	**Velocity [ft/s]**
Left of Bank		9970.63	1900.74	680.63	275.53	14.92	2.48	2.79
Channel	9970.63	10794.88	6992.15	2272.54	828.33	54.88	2.76	3.08
Right of Bank	10794.88		3847.11	2149.51	1912.30	30.20	1.12	1.79

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SHEET	2	OF	2
BY	AL	DATE	7/10/2011
CHECK	HAA	DATE	7/10/2011
JOB NO.	310.047		

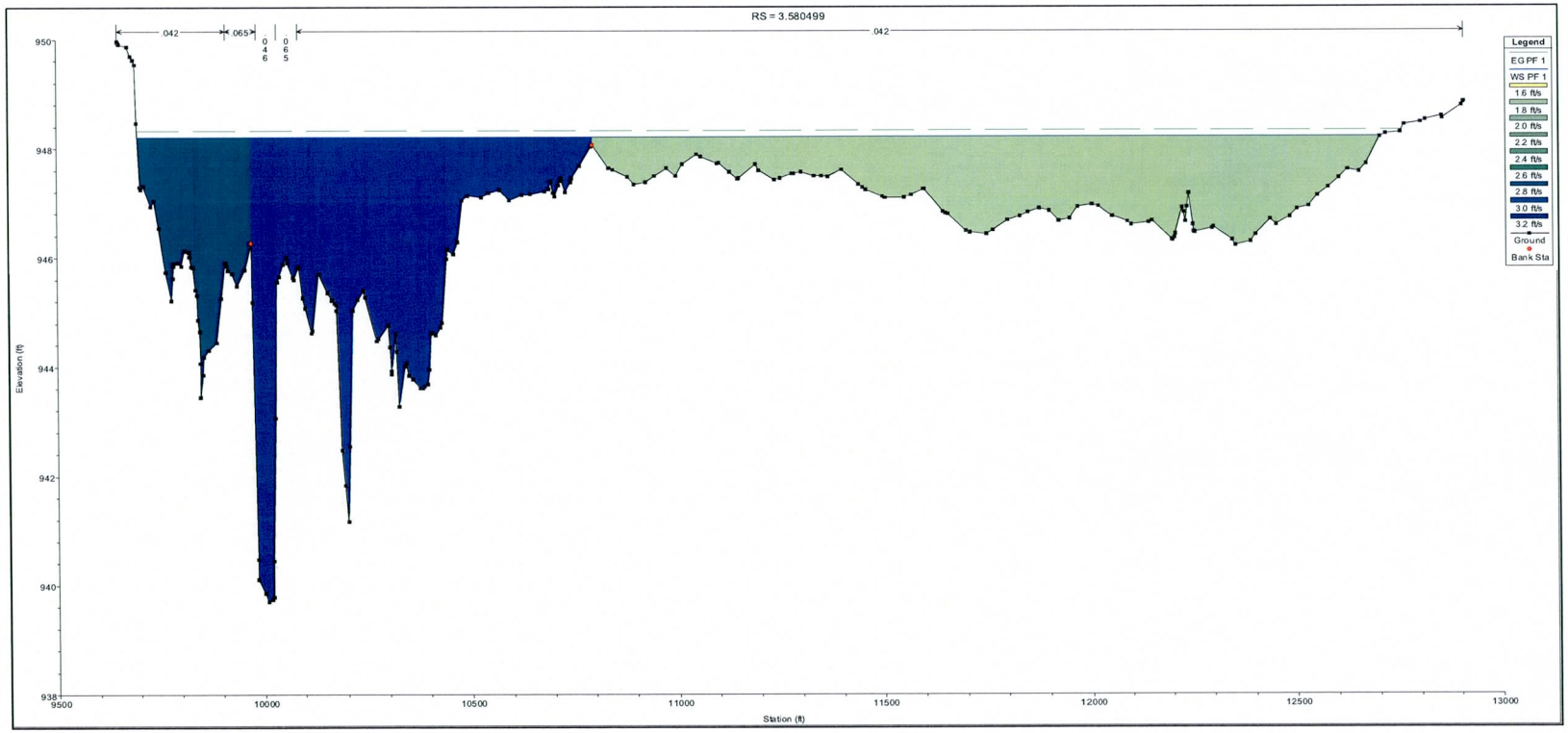
CLIENT: FCDMC

JOB: Palo Verde Watershed Detailed Floodplain Delineation Study

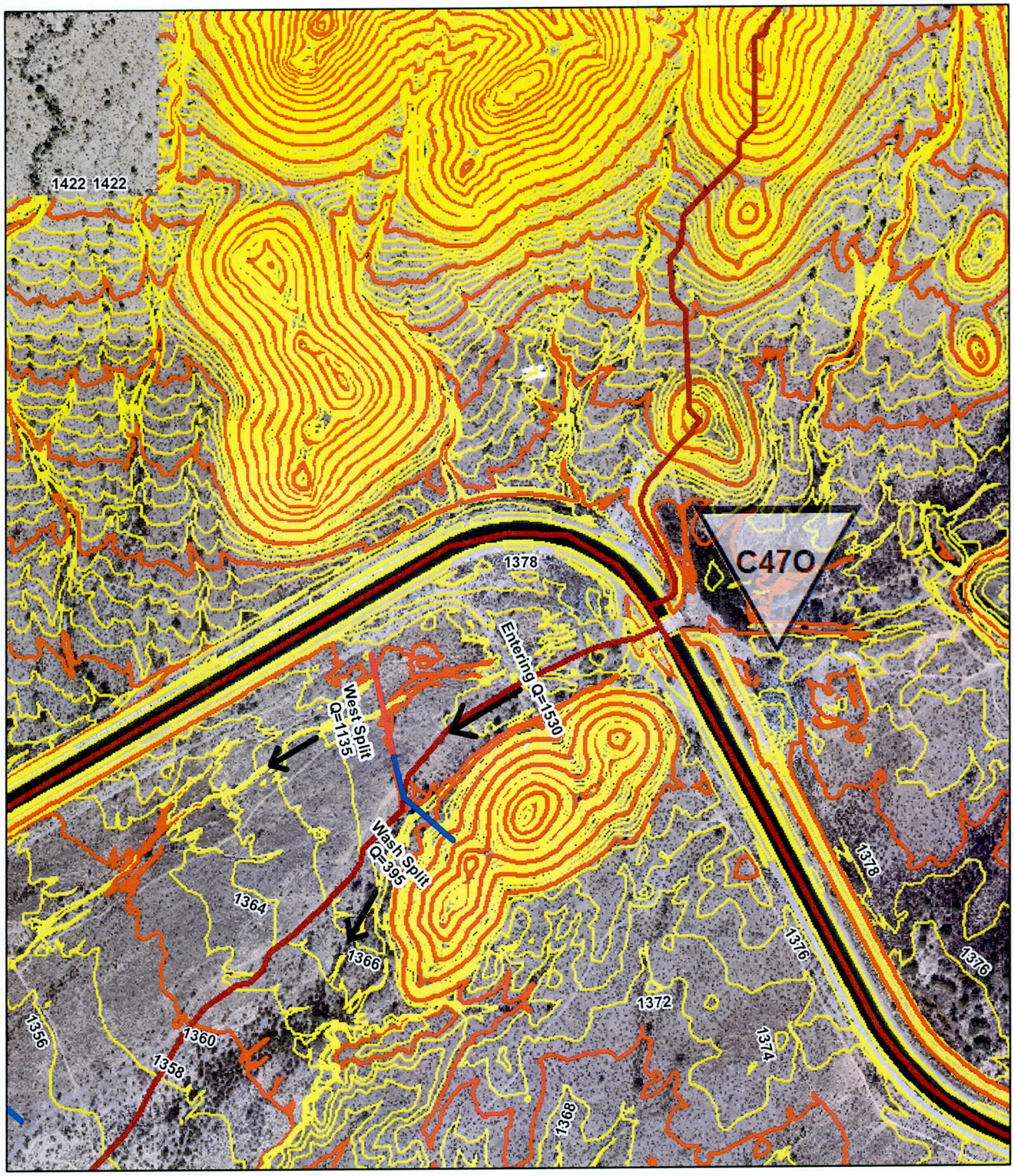
Split Flow Analysis for: Winters Wash - W5 (Near cross section 6.162)

Split Flow Location: Approximately 0.75 miles north of Basline Rd alignment.

Analysis Method: Wash Normal Depth Analysis Using Manning's Equation



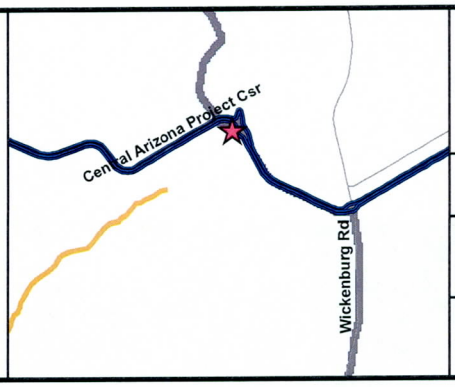
T2N-R6W-S05E Split Flow Supporting Documentation



LEGEND

- T2N-R6W-S05E
- Split Flow Cross Section
- Wash Flow Cross Section
- Hydrology Subbasins
- S750E — Hydrology Subbasin ID
- C750C L — Concentration Point ID

VICINITY MAP



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0 250 500 Feet

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T2N-R6W-S05E SPLIT 1
2000 FT UPSTREAM OF CROSS SECTION 4.806

P:\30013101310047_Palo_Verde\Global_Data\Hydraulics\RiverCAD\T2N_R6W_S05E\Split Flow Analysis\Split1.mxd

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SHEET 1 OF 4

BY RLJ DATE 10/14/2010

CHECK HAA DATE 10/18/2010

CLIENT: FCDMC

JOB: Palo Verde Watershed Detailed Floodplain Delineation Study JOB NO. 310.047

Split Flow Analysis for: T2N-R6W-S05E - Split 1 (2000 ft upstream of cross section 4.806)

Split Flow Location: Approximately 0.25 miles southwest of HEC-1 Concentration Point C47O

Analysis Method: Wash Normal Depth Analysis Using Manning's Equation

	Slope (ft/ft)
West Split	0.0105
Wash Split	0.0080

Total Flow		West Split	Wash Split	West Split	Wash Split
Stage [ft]	Q [cfs]	Q [cfs]	Q [cfs]	%	%
1370.00	660.2	481.0	179.2	73%	27%
1370.25	903.6	651.0	252.6	72%	28%
1370.50	1488.7	1104.5	384.2	74%	26%
1370.75	2258.9	1684.5	574.4	75%	25%
1371.00	3089.7	2294.5	795.2	74%	26%
1371.25	4117.7	3072.7	1045.0	75%	25%
1371.50	5304.7	3982.1	1322.6	75%	25%
1371.75	6587.0	4959.7	1627.3	75%	25%
1372.00	8035.5	6077.2	1958.3	76%	24%

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SHEET 2 OF 4

BY RLJ DATE 10/14/2010

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CLIENT: FCDMC

JOB: Palo Verde Watershed Detailed Floodplain Delineation Study JOB NO. 310.047

Split Flow Analysis for: T2N-R6W-S05E - Split 1 (2000 ft upstream of cross section 4.806)

Split Flow Location: Approximately 0.25 miles southwest of HEC-1 Concentration Point C47O

Analysis Method: Wash Normal Depth Analysis Using Manning's Equation

West Split Data

Slope (ft/ft)
0.0105

Raw Cross-Section Data			Raw Cross-Section Data		
Station [ft]	Elevation [ft]	N	Station [ft]	Elevation [ft]	N
0.00	1370.53		350.49	1368.79	
26.45	1370.16		351.86	1368.91	
62.72	1370.06		353.08	1368.90	
94.99	1370.19		364.49	1368.82	
122.83	1370.19		365.91	1368.69	
165.29	1369.88		367.11	1368.56	
178.15	1369.82		373.36	1369.63	
179.05	1369.89		382.30	1370.10	
180.49	1369.93		388.61	1370.59	
195.28	1369.68		398.13	1370.89	
198.07	1369.72		401.02	1371.08	
204.20	1369.84		403.14	1371.15	
211.11	1370.03		409.69	1370.94	
214.40	1370.20		421.73	1370.95	
218.94	1369.97		429.00	1370.96	
225.24	1369.53		441.26	1371.78	
226.69	1369.02		445.39	1371.51	
235.41	1366.92		445.48	1371.50	0.040
235.42	1366.92				
239.15	1368.19				
245.72	1369.65				
246.77	1369.93				
258.66	1369.77				
286.22	1369.38				
286.45	1369.35				
287.80	1369.25				
290.62	1369.00				
291.91	1369.09				
297.33	1369.36				
302.64	1369.15				
303.54	1369.12				
303.89	1369.10				
307.97	1368.80				
311.34	1368.90				
312.43	1368.98				
323.92	1368.81				
332.32	1368.70				
336.81	1368.66				
341.93	1368.46				
346.93	1368.17				

	Flow Master Output					
Stage [ft]	WSE [ft]	Q [ft³/s]	Vel [ft/s]	Area [ft²]	Wetted Perimeter [ft]	Top Width [ft]
0.00	1370.0	481.0	3.0	159.0	224.2	223.2
0.25	1370.3	651.0	2.8	231.7	365.2	364.2
0.50	1370.5	1104.5	3.4	325.4	386.4	385.3
0.75	1370.8	1684.5	4.0	422.8	395.0	393.7
1.00	1371.0	2294.5	4.4	523.2	423.1	421.6
1.25	1371.3	3072.7	4.9	630.4	435.1	433.3
1.50	1371.5	3982.1	5.4	739.2	439.1	437.1
1.75	1371.8	4959.7	5.8	849.4	447.1	444.6
2.00	1372.0	6077.2	6.3	960.8	448.6	445.5

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BY RLJ DATE 10/14/2010

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CLIENT: FCDMC

JOB: Palo Verde Watershed Detailed Floodplain Delineation Study JOB NO. 310.047

Split Flow Analysis for: T2N-R6W-S05E - Split 1 (2000 ft upstream of cross section 4.806)

Split Flow Location: Approximately 0.25 miles southwest of HEC-1 Concentration Point C47O

Analysis Method: Wash Normal Depth Analysis Using Manning's Equation

Wash Split Data

Slope (ft/ft)
0.0080

Raw Cross-Section Data			Raw Cross-Section Data		
Station [ft]	Elevation [ft]	N	Station [ft]	Elevation [ft]	N
0.00	1385.79		251.40	1370.22	
0.10	1385.77		258.60	1370.23	
8.18	1384.19		262.95	1370.22	
14.33	1382.95		271.43	1370.28	
29.01	1380.50		288.51	1370.47	0.040
47.67	1377.22				
52.76	1376.27				
73.99	1372.84				
75.68	1372.55				
77.18	1372.33				
80.01	1372.05				
95.67	1370.06				
96.76	1370.01				
97.57	1369.99				
117.74	1369.32				
120.72	1369.55	0.040			
122.19	1369.67				
124.26	1369.83				
129.15	1369.75				
145.47	1369.38				
148.37	1367.53				
151.06	1366.13				
155.95	1365.82				
158.50	1365.63				
161.06	1366.76				
166.26	1369.36				
170.84	1369.40				
171.39	1369.39				
172.48	1369.50				
179.37	1369.96				
187.80	1369.64				
191.98	1369.56				
193.76	1369.53				
196.91	1369.47	0.075			
204.49	1369.31				
217.91	1370.33				
218.36	1370.37				
218.63	1370.37				
235.79	1370.16				
241.60	1370.13				

	Flow Master Output					
Stage [ft]	WSE [ft]	Q [ft³/s]	Vel [ft/s]	Area [ft²]	Wetted Perimeter [ft]	Top Width [ft]
0.00	1370.0	179.2	1.8	100.4	118.3	116.4
0.25	1370.3	252.6	1.9	132.4	163.3	161.4
0.50	1370.5	384.2	2.2	178.4	198.2	196.3
0.75	1370.8	574.4	2.5	227.7	200.5	198.3
1.00	1371.0	795.2	2.9	277.5	202.7	200.2
1.25	1371.3	1045.0	3.2	327.8	204.9	202.2
1.50	1371.5	1322.6	3.5	378.6	207.2	204.2
1.75	1371.8	1627.3	3.8	429.9	209.4	206.1
2.00	1372.0	1958.3	4.1	481.7	211.6	208.1

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SHEET 4 OF 4

BY RLJ DATE 10/14/2010

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CLIENT: FCDMC

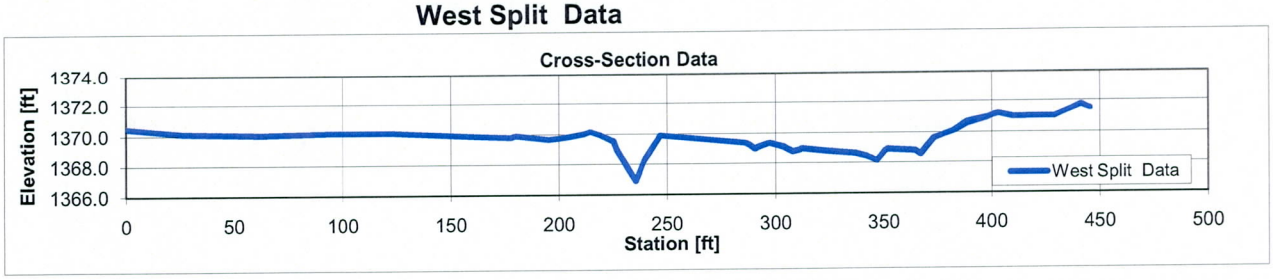
JOB: Palo Verde Watershed Detailed Floodplain Delineation Study JOB NO. 310.047

Split Flow Analysis for: T2N-R6W-S05E - Split 1 (2000 ft upstream of cross section 4.806)

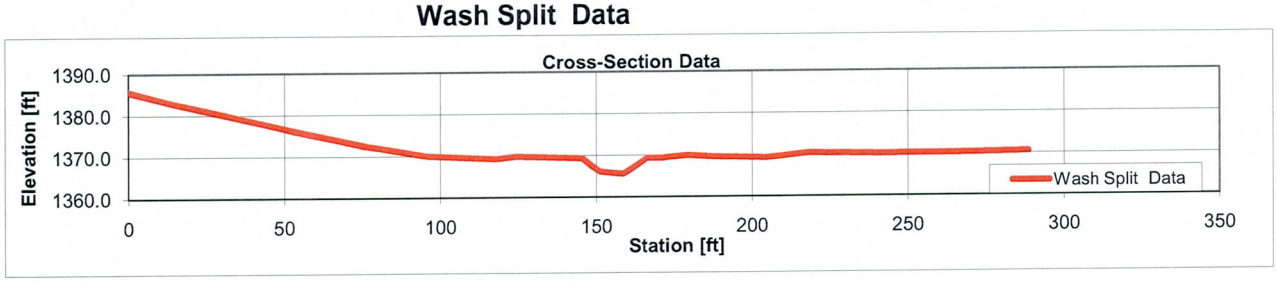
Split Flow Location: Approximately 0.25 miles southwest of HEC-1 Concentration Point C47O

Analysis Method: Wash Normal Depth Analysis Using Manning's Equation

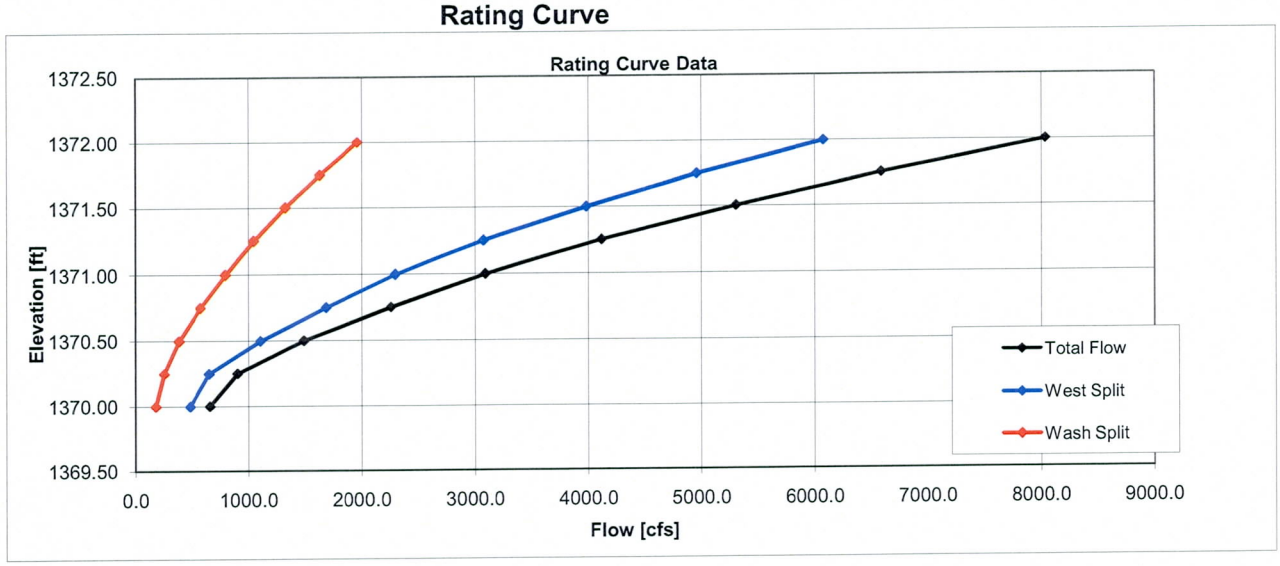
West Split Data

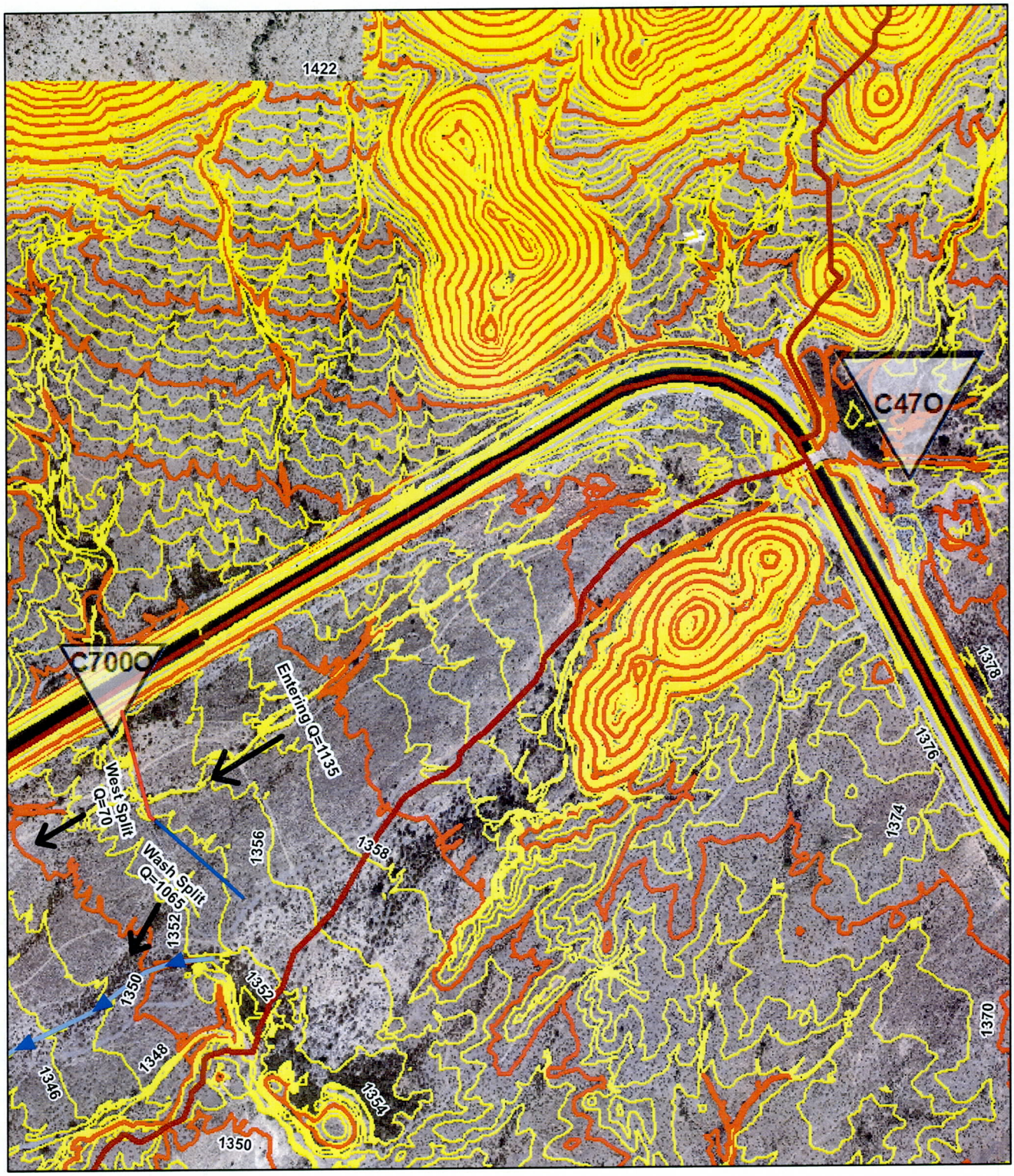


Wash Split Data



Rating Curve

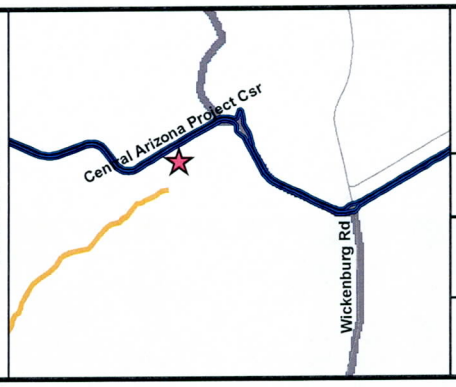




LEGEND

- T2N-R6W-S05E
- Split Flow Cross Section
- Wash Flow Cross Section
- Hydrology Subbasins
- S750E — Hydrology Subbasin ID
- C750C L — Concentration Point ID

VICINITY MAP



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T2N-R6W-S05E SPLIT 2 NEAR CROSS SECTION 4.806

P:\300\310\310047_Palo_Verde\Global_Data\Hydraulics\RiverCAD\T2N_R6W_S05E\Split Flow Analysis\Split2.mxd

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SHEET 1 OF 4

BY RLJ DATE 10/18/2010

CHECK HAA DATE 10/18/2010

CLIENT: FCDMC

JOB: Palo Verde Watershed Detailed Floodplain Delineation Study JOB NO. 310.047

Split Flow Analysis for: T2N-R6W-S05E - Split 2 (near cross section 4.806)

Split Flow Location: Approximately 0.5 miles southwest of HEC-1 Concentration Point C47O

Analysis Method: Wash Normal Depth Analysis Using Manning's Equation

	Slope (ft/ft)
West Split	0.0040
Wash Split	0.0082

Total Flow		West Split	Wash Split	West Split	Wash Split
Stage [ft]	Q [cfs]	Q [cfs]	Q [cfs]	%	%
1352.78	0.0	0.0	0.0		
1352.93	0.1	0.0	0.1	0%	100%
1353.08	0.9	0.2	0.7	22%	78%
1353.23	3.5	0.7	2.8	20%	80%
1353.38	12.0	1.3	10.7	11%	89%
1353.53	34.5	2.8	31.7	8%	92%
1353.68	78.8	5.8	73.0	7%	93%
1353.83	158.9	9.9	149.0	6%	94%
1353.98	278.8	15.3	263.5	5%	95%
1354.13	450.1	20.1	430.0	4%	96%
1354.28	661.1	28.9	632.2	4%	96%
1354.43	901.5	41.4	860.1	5%	95%
1354.58	1196.8	74.9	1121.9	6%	94%
1354.73	1572.3	154.8	1417.5	10%	90%
1354.88	2011.5	256.1	1755.4	13%	87%

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SHEET 2 OF 4

BY RLJ DATE 10/18/2010

CHECK HAA DATE 10/18/2010

CLIENT: FCDMC

JOB: Palo Verde Watershed Detailed Floodplain Delineation Study JOB NO. 310.047

Split Flow Analysis for: T2N-R6W-S05E - Split 2 (near cross section 4.806)

Split Flow Location: Approximately 0.5 miles southwest of HEC-1 Concentration Point C47O

Analysis Method: Wash Normal Depth Analysis Using Manning's Equation

West Split Data

Slope (ft/ft)
0.0040

Raw Cross-Section Data			Raw Cross-Section Data		
Station [ft]	Elevation [ft]	N	Station [ft]	Elevation [ft]	N
0.00	1354.17		404.29	1353.53	
11.16	1354.20		411.53	1353.31	
25.20	1354.40		417.18	1354.79	
37.23	1354.45		422.40	1357.22	
48.26	1354.44	0.040	432.55	1358.32	
54.31	1354.43		438.95	1360.46	
58.27	1353.68		439.05	1360.50	0.044
62.45	1352.78				
65.84	1353.30				
68.46	1354.00				
70.53	1354.42				
78.57	1354.33				
87.95	1354.39	0.060			
92.46	1354.42				
98.62	1354.51				
133.52	1354.50				
138.83	1354.51				
152.51	1354.53				
177.07	1354.49				
183.45	1354.54				
201.37	1354.45				
236.03	1354.24				
251.46	1353.98				
257.89	1354.02				
260.68	1354.28				
263.26	1354.39				
265.58	1354.50				
272.12	1354.51				
276.27	1354.72				
284.38	1354.88				
295.60	1354.94	0.040			
307.59	1355.01				
322.49	1355.08				
336.11	1355.30				
351.99	1355.04				
357.09	1354.91				
365.69	1355.17				
373.13	1355.09				
381.60	1354.65				
400.16	1354.00				

	Flow Master Output					
Stage [ft]	WSE [ft]	Q [ft³/s]	Vel [ft/s]	Area [ft²]	Wetted Perimeter [ft]	Top Width [ft]
0.00	1352.8					
0.15	1352.9	0.0	0.3	0.1	1.7	1.7
0.30	1353.1	0.2	0.4	0.5	3.4	3.4
0.45	1353.2	0.7	0.6	1.1	5.1	5.0
0.60	1353.4	1.3	0.6	2.1	9.2	9.1
0.75	1353.5	2.8	0.7	4.0	16.0	15.8
0.90	1353.7	5.8	0.9	6.6	19.2	19.0
1.05	1353.8	9.9	1.0	9.7	22.5	22.2
1.20	1354.0	15.3	1.2	13.2	25.8	25.5
1.35	1354.1	20.1	1.1	19.0	48.4	47.9
1.50	1354.3	28.9	1.0	28.9	86.4	85.8
1.65	1354.4	41.4	0.9	46.4	159.4	158.6
1.80	1354.6	74.9	0.9	82.9	307.3	306.3
1.95	1354.7	154.8	1.2	129.4	314.8	313.7
2.10	1354.9	256.1	1.4	177.3	325.9	324.6

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SHEET 3 OF 4

BY RLJ DATE 10/18/2010

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CLIENT: FCDMC

JOB: Palo Verde Watershed Detailed Floodplain Delineation Study JOB NO. 310.047

Split Flow Analysis for: T2N-R6W-S05E - Split 2 (near cross section 4.806)

Split Flow Location: Approximately 0.5 miles southwest of HEC-1 Concentration Point C47O

Analysis Method: Wash Normal Depth Analysis Using Manning's Equation

Wash Split Data

Slope (ft/ft)
0.0082

Raw Cross-Section Data			Raw Cross-Section Data		
Station [ft]	Elevation [ft]	N	Station [ft]	Elevation [ft]	N
0.00	1354.85		430.33	1353.49	
0.10	1354.85		437.33	1353.05	
70.76	1354.33		437.71	1353.03	
74.32	1354.32		438.32	1353.07	
79.27	1354.26		445.30	1353.49	
116.86	1353.78		455.57	1353.58	
146.97	1353.33		477.28	1354.01	0.040
160.36	1353.21				
165.97	1353.25	0.040			
193.05	1353.46				
193.64	1353.46				
194.09	1353.42				
201.10	1352.84				
204.31	1353.08				
205.43	1353.18				
215.63	1353.34				
218.39	1353.02				
220.01	1352.82				
226.55	1353.34				
230.29	1353.73				
237.28	1352.95				
237.35	1352.94				
237.36	1352.94				
237.38	1352.94				
240.09	1353.29	0.075			
241.43	1353.47				
247.08	1353.54				
261.67	1353.70				
271.86	1353.63				
273.44	1353.57				
276.08	1353.32				
279.77	1353.47				
282.40	1353.21				
285.49	1353.43				
289.45	1353.83				
300.83	1353.65				
319.51	1353.42				
348.87	1353.73				
372.90	1353.99				
425.67	1353.62				

	Flow Master Output					
Stage [ft]	WSE [ft]	Q [ft³/s]	Vel [ft/s]	Area [ft²]	Wetted Perimeter [ft]	Top Width [ft]
0.00	1352.8					
0.15	1352.9	0.1	0.2	0.2	4.6	4.6
0.30	1353.1	0.7	0.4	1.6	15.6	15.5
0.45	1353.2	2.8	0.5	5.1	37.8	37.7
0.60	1353.4	10.7	0.7	15.4	96.6	96.4
0.75	1353.5	31.7	0.9	34.4	162.2	161.9
0.90	1353.7	73.0	1.1	64.7	247.7	247.5
1.05	1353.8	149.0	1.4	107.4	317.9	317.6
1.20	1354.0	263.5	1.7	159.1	372.5	372.2
1.35	1354.1	430.0	2.0	216.4	388.3	387.8
1.50	1354.3	632.2	2.3	275.5	400.2	399.7
1.65	1354.4	860.1	2.6	336.9	420.8	420.1
1.80	1354.6	1121.9	2.8	401.4	441.4	440.5
1.95	1354.7	1417.5	3.0	469.0	461.9	460.9
2.10	1354.9	1755.4	3.3	539.6	478.5	477.3

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SHEET 4 OF 4

BY RLJ DATE 10/18/2010

CHECK HAA DATE 10/18/2010

CLIENT: FCDMC

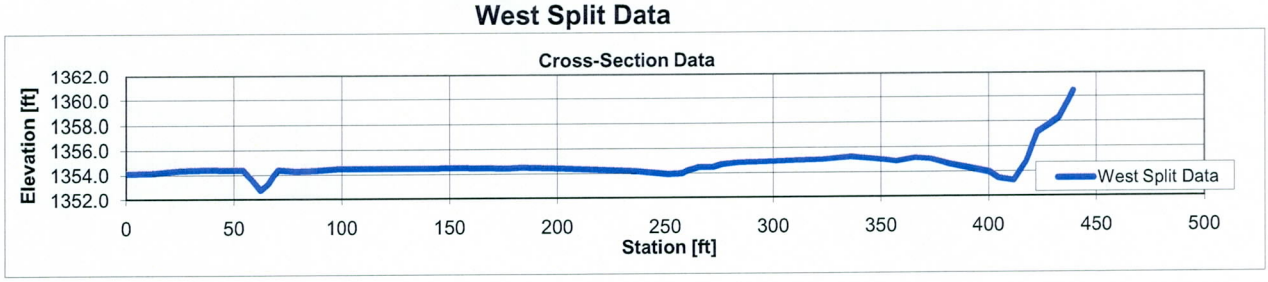
JOB: Palo Verde Watershed Detailed Floodplain Delineation Study JOB NO. 310.047

Split Flow Analysis for: T2N-R6W-S05E - Split 2 (near cross section 4.806)

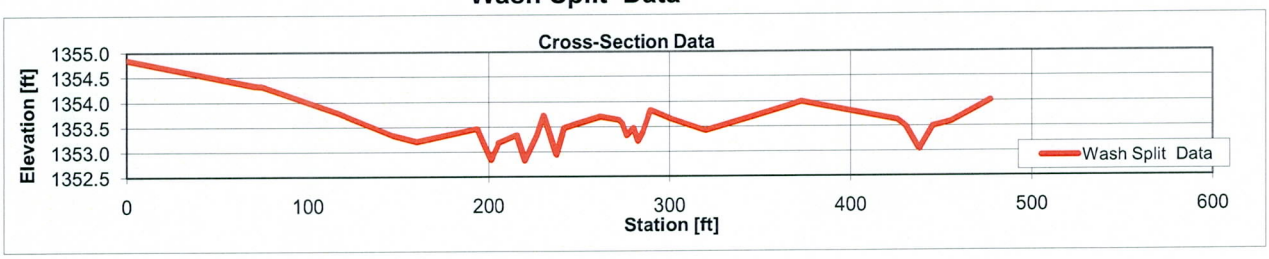
Split Flow Location: Approximately 0.5 miles southwest of HEC-1 Concentration Point C47O

Analysis Method: **Wash Normal Depth Analysis Using Manning's Equation**

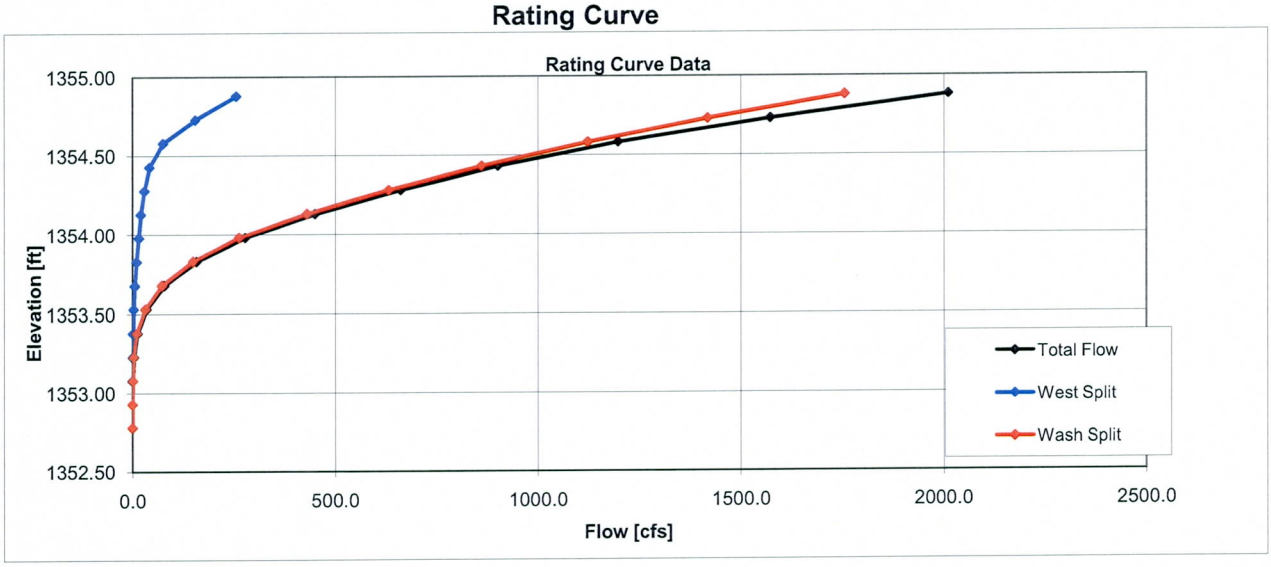
West Split Data

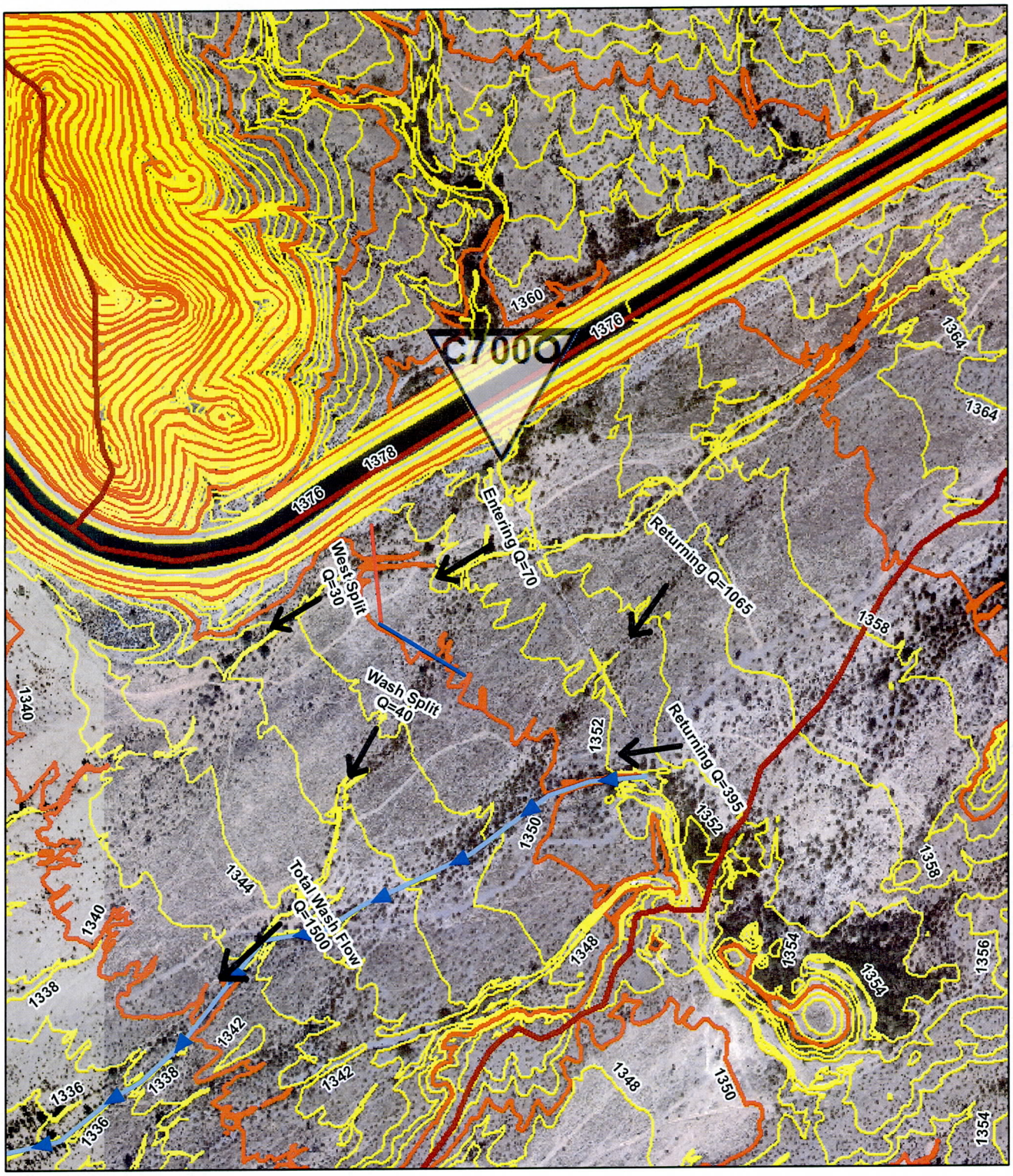


Wash Split Data



Rating Curve

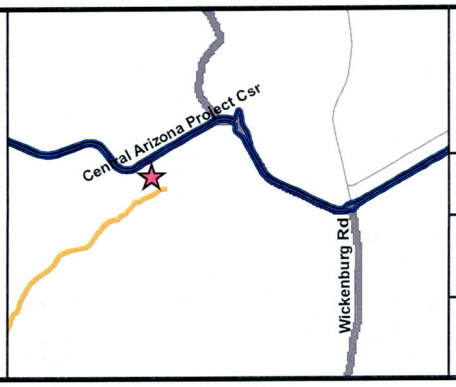




LEGEND

- T2N-R6W-S05E
- Split Flow Cross Section
- Wash Flow Cross Section
- Hydrology Subbasins
- S750E — Hydrology Subbasin ID
- C750C L — Concentration Point ID

VICINITY MAP



PALO VERDE WATERSHED
DETAILED FLOODPLAIN
DELINEATION STUDY
FCD 2008C046

NORTH

0 250 500 Feet

Entellus™
2255 N. 44th Street Suite 125
Phoenix, Arizona 85008.3299
Tel. 602.244.2566
Fax. 602.244.8947
Web. www.entellus.com

T2N-R6W-S05E SPLIT 3
NEAR CROSS SECTION 4.769

P:\300\310\310047_Palo_Verde\Global_Data\Hydraulics\RiverCAD\T2N_R6W_S05E\Split Flow Analysis\Split3.mxd

Entellus

SHEET 1 OF 4

BY RLJ DATE 10/18/2010

CHECK HAA DATE 10/18/2010

CLIENT: FCDMC

JOB: Palo Verde Watershed Detailed Floodplain Delineation Study JOB NO. 310.047

Split Flow Analysis for: T2N-R6W-S05E - Split 3 (near cross section 4.769)

Split Flow Location: Approximately 0.75 miles southwest of HEC-1 Concentration Point C47O

Analysis Method: Wash Normal Depth Analysis Using Manning's Equation

	Slope (ft/ft)
West Split	0.0089
Wash Split	0.0093

Total Flow		West Split	Wash Split	West Split	Wash Split
Stage [ft]	Q [cfs]	Q [cfs]	Q [cfs]	%	%
1348.94	1.2	1.2	0.0	100%	0%
1349.09	2.0	1.9	0.1	95%	5%
1349.24	3.5	3.1	0.4	89%	11%
1349.39	6.3	5.1	1.2	81%	19%
1349.54	10.5	8.0	2.5	76%	24%
1349.69	16.5	11.9	4.6	72%	28%
1349.84	27.2	17.0	10.2	63%	38%
1349.99	44.9	23.4	21.5	52%	48%
1350.14	55.6	22.1	33.5	40%	60%
1350.29	121.3	56.0	65.3	46%	54%

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SHEET	2	OF	4
BY	RLJ	DATE	10/18/2010
CHECK	HAA	DATE	10/18/2010

CLIENT: FCDMC

JOB: Palo Verde Watershed Detailed Floodplain Delineation Study   JOB NO. 310.047

Split Flow Analysis for: T2N-R6W-S05E - Split 3 (near cross section 4.769)

Split Flow Location: Approximately 0.75 miles southwest of HEC-1 Concentration Point C47O

Analysis Method: **Wash Normal Depth Analysis Using Manning's Equation**

West Split Data

Slope (ft/ft)
0.0089

Raw Cross-Section Data			Raw Cross-Section Data		
Station [ft]	Elevation [ft]	N	Station [ft]	Elevation [ft]	N
0.00	1350.15				
21.02	1350.02				
69.40	1350.06				
89.42	1350.08				
105.20	1350.21				
129.37	1350.39				
132.39	1350.41				
177.87	1350.67				
178.81	1350.67				
179.51	1350.67				
180.08	1350.67				
182.62	1350.65				
206.47	1350.48				
211.76	1350.29				
214.29	1350.22				
221.35	1350.75				
221.58	1350.76				
221.91	1350.75	0.040			
225.41	1350.67				
244.98	1350.23				
245.73	1349.81				
249.02	1348.29				
252.32	1350.01				
253.04	1350.52				
254.18	1350.49				
262.93	1350.25				
266.57	1349.01				
266.60	1349.00				
266.81	1349.04				
273.86	1350.25				
276.73	1350.30				
293.52	1350.44				
309.84	1350.60				
326.44	1350.60				
351.85	1350.57				
361.34	1350.76				
361.44	1350.77	0.044			

	Flow Master Output					
Stage [ft]	WSE [ft]	Q [ft³/s]	Vel [ft/s]	Area [ft²]	Wetted Perimeter [ft]	Top Width [ft]
0.00	1348.9	1.2	1.4	0.9	3.0	2.7
0.15	1349.1	1.9	1.4	1.3	4.4	4.0
0.30	1349.2	3.1	1.5	2.1	6.5	6.0
0.45	1349.4	5.1	1.6	3.1	8.5	7.9
0.60	1349.5	8.0	1.8	4.5	10.5	9.8
0.75	1349.7	11.9	2.0	6.1	12.6	11.7
0.90	1349.8	17.0	2.1	8.0	14.6	13.7
1.05	1350.0	23.4	2.3	10.2	16.6	15.5
1.20	1350.1	22.1	1.1	20.3	113.6	112.4
1.35	1350.3	56.0	1.4	39.2	145.9	144.5

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SHEET 3 OF 4

BY RLJ DATE 10/18/2010

CHECK HAA DATE 10/18/2010

CLIENT: FCDMC

JOB: Palo Verde Watershed Detailed Floodplain Delineation Study JOB NO. 310.047

Split Flow Analysis for: T2N-R6W-S05E - Split 3 (near cross section 4.769)

Split Flow Location: Approximately 0.75 miles southwest of HEC-1 Concentration Point C47O

Analysis Method: Wash Normal Depth Analysis Using Manning's Equation

Wash Split Data

Slope (ft/ft)
0.0093

Raw Cross-Section Data			Raw Cross-Section Data		
Station [ft]	Elevation [ft]	N	Station [ft]	Elevation [ft]	N
0.00	1350.35				
0.10	1350.35				
20.51	1350.12				
34.07	1349.78				
37.50	1349.94				
38.59	1350.02				
46.05	1350.01				
46.60	1350.01				
50.95	1349.81				
55.42	1349.76				
58.24	1349.80				
59.87	1349.78	0.040			
77.89	1349.58				
79.16	1349.56				
79.55	1349.51				
85.43	1348.94				
88.77	1349.48				
92.45	1349.95				
101.32	1350.05				
105.19	1350.06	0.075			
124.17	1350.09				
136.94	1350.27				
140.19	1350.29				
143.62	1350.29				
166.73	1350.44	0.040			

	Flow Master Output					
Stage [ft]	WSE [ft]	Q [ft³/s]	Vel [ft/s]	Area [ft²]	Wetted Perimeter [ft]	Top Width [ft]
0.00	1348.9					
0.15	1349.1	0.1	0.3	0.2	2.5	2.5
0.30	1349.2	0.4	0.5	0.7	5.0	5.0
0.45	1349.4	1.2	0.7	1.7	7.5	7.4
0.60	1349.5	2.5	0.9	3.0	10.0	9.9
0.75	1349.7	4.6	0.9	5.3	22.5	22.4
0.90	1349.8	10.2	1.0	10.2	45.1	45.0
1.05	1350.0	21.5	1.2	18.0	61.6	61.5
1.20	1350.1	33.5	1.1	31.1	109.1	109.0
1.35	1350.3	65.3	1.3	49.3	138.3	138.2

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SHEET 4 OF 4

BY RLJ DATE 10/18/2010

CHECK HAA DATE 10/18/2010

CLIENT: FCDMC

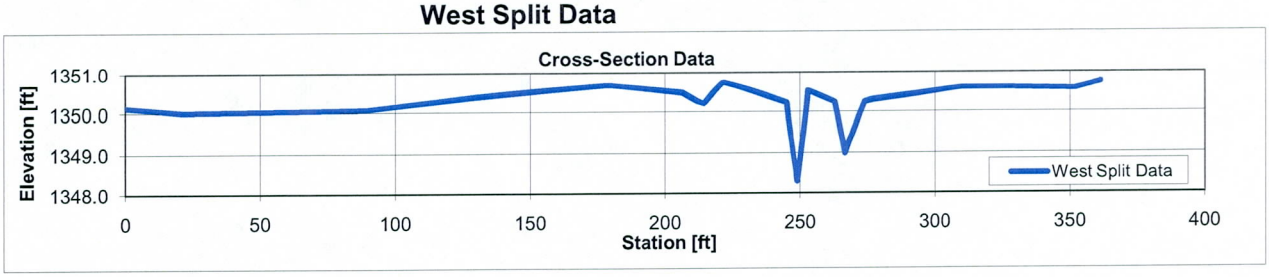
JOB: Palo Verde Watershed Detailed Floodplain Delineation Study JOB NO. 310.047

Split Flow Analysis for: T2N-R6W-S05E - Split 3 (near cross section 4.769)

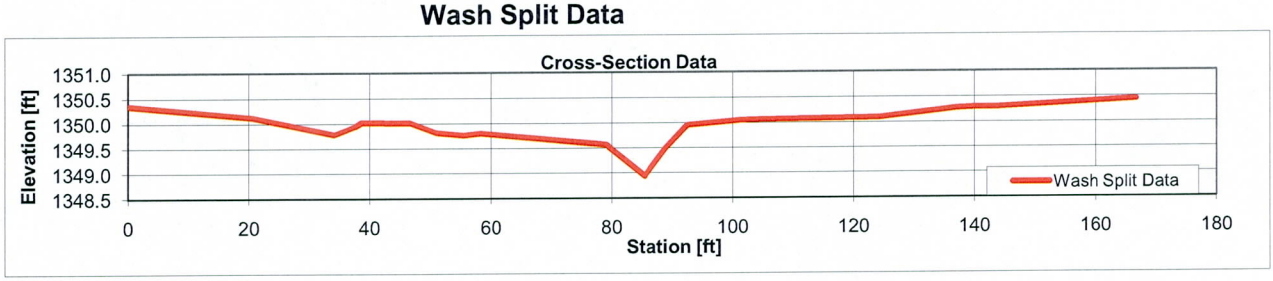
Split Flow Location: Approximately 0.75 miles southwest of HEC-1 Concentration Point C47O

Analysis Method: Wash Normal Depth Analysis Using Manning's Equation

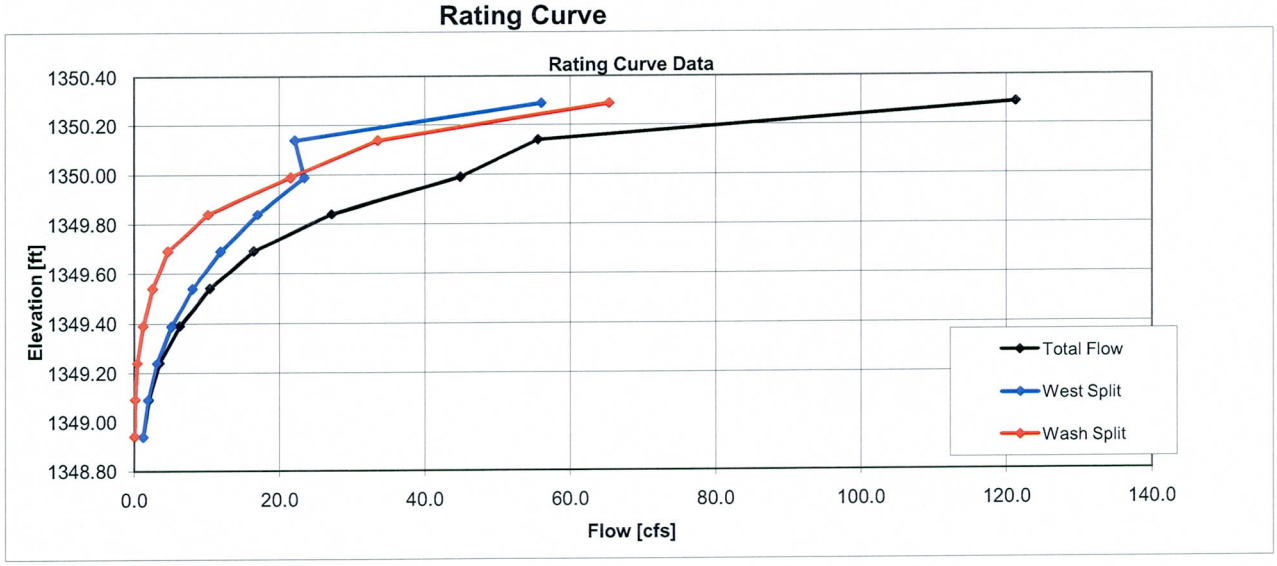
West Split Data

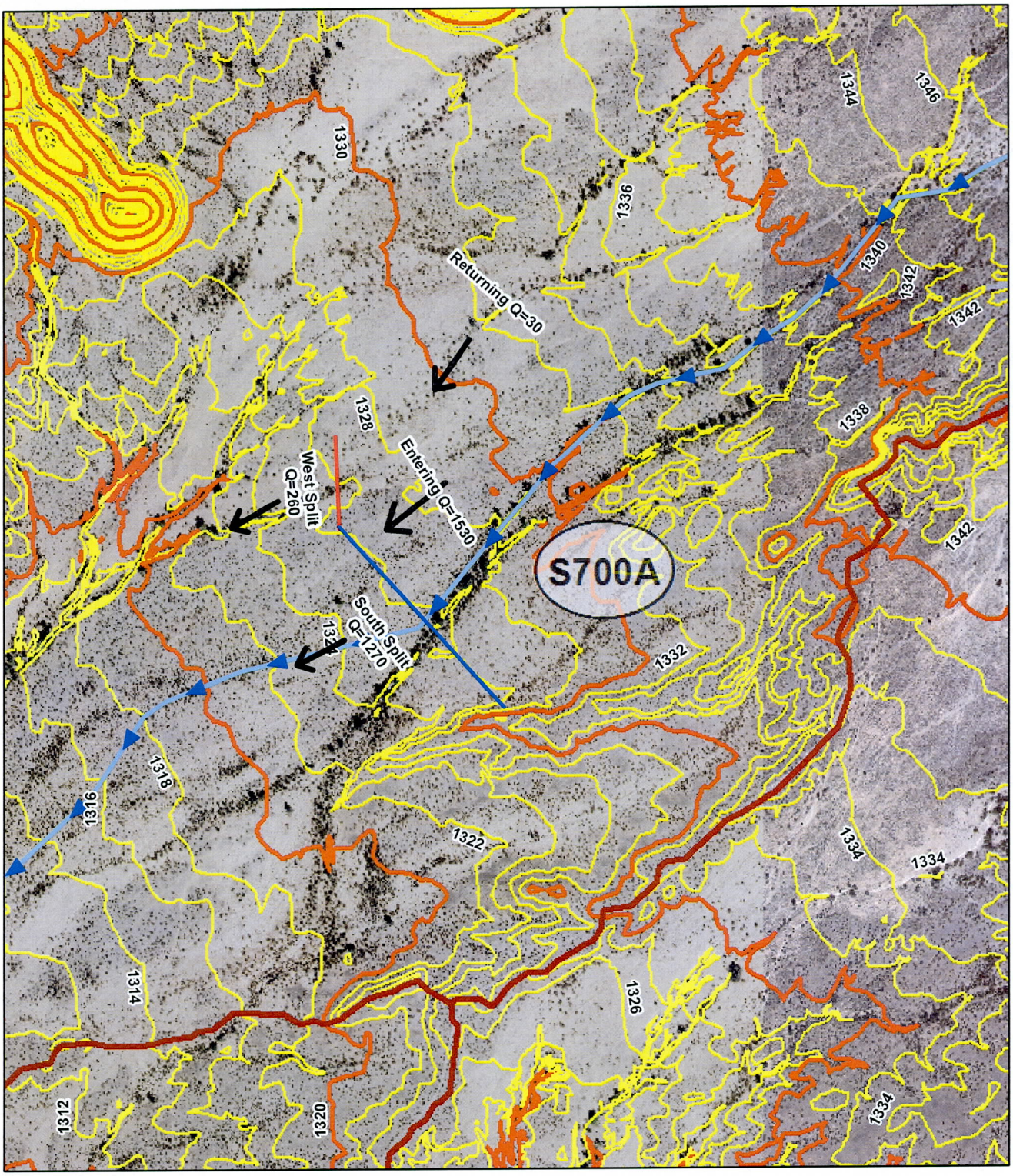


Wash Split Data



Rating Curve





LEGEND

- T2N-R6W-S05E
- Split Flow Cross Section
- Wash Flow Cross Section
- Hydrology Subbasins
- S750E — Hydrology Subbasin ID
- C750C L — Concentration Point ID

VICINITY MAP

Flood Control District of Maricopa County

PALO VERDE WATERSHED DETAILED FLOODPLAIN DELINEATION STUDY
FCD 2008C046

NORTH

0 250 500 Feet

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Phoenix, Arizona 85008.3299
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Fax. 602.244.8947
Web. www.entellus.com

T2N-R6W-S05E SPLIT 4
NEAR CROSS SECTION 4.173

P:\30013\10\310047_Palo_Verde\Global_Data\Hydraulics\RiverCAD\T2N_R6W_S05E\Split Flow Analysis\Split4.mxd

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SHEET 1 OF 4

BY RLJ DATE 10/18/2010

CHECK HAA DATE 10/21/2011

CLIENT: FCDMC

JOB: Palo Verde Watershed Detailed Floodplain Delineation Study JOB NO. 310.047

Split Flow Analysis for: T2N-R6W-S05E - Split 4 (near cross section 4.173)

Split Flow Location: Just east of 371st Ave alignment.

Analysis Method: Wash Normal Depth Analysis Using Manning's Equation

	Slope (ft/ft)
West Split	0.0103
Wash Split	0.0061

Total Flow		West Split	Wash Split	West Split	Wash Split
Stage [ft]	Q [cfs]	Q [cfs]	Q [cfs]	%	%
1323.98	0.0	0.0	0.0		
1324.18	0.2	0.0	0.2	0%	100%
1324.38	1.5	0.0	1.5	0%	100%
1324.58	5.0	0.0	5.0	0%	100%
1324.78	11.5	0.0	11.5	0%	100%
1324.98	22.4	0.1	22.3	0%	100%
1325.18	40.4	1.6	38.8	4%	96%
1325.38	46.2	6.0	40.2	13%	87%
1325.58	128.9	22.5	106.4	17%	83%
1325.78	270.8	54.2	216.6	20%	80%
1325.98	479.0	97.8	381.2	20%	80%
1326.18	748.2	127.6	620.6	17%	83%
1326.38	1176.9	200.4	976.5	17%	83%
1326.58	1772.5	300.6	1471.9	17%	83%

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SHEET 2 OF 4

BY RLJ DATE 10/18/2010

CHECK HAA DATE 10/21/2011

CLIENT: FCDMC

JOB: Palo Verde Watershed Detailed Floodplain Delineation Study JOB NO. 310.047

Split Flow Analysis for: T2N-R6W-S05E - Split 4 (near cross section 4.173)

Split Flow Location: Just east of 371st Ave alignment.

Analysis Method: Wash Normal Depth Analysis Using Manning's Equation

West Split Data

Slope (ft/ft)
0.0103

Raw Cross-Section Data			Raw Cross-Section Data		
Station [ft]	Elevation [ft]	N	Station [ft]	Elevation [ft]	N
0.00	1326.51				
25.85	1325.51				
46.02	1325.24				
62.08	1325.50				
65.71	1325.42	0.046			
69.79	1325.25				
76.45	1324.98				
81.10	1324.89				
92.82	1325.89				
94.81	1326.05				
101.03	1326.11				
119.55	1326.14	0.060			
124.51	1326.19				
174.94	1326.70				
180.37	1326.75				
232.81	1326.63				
240.49	1326.68				
250.63	1326.68				
300.62	1326.69				
314.85	1326.62				
337.27	1326.68				
337.37	1326.68	0.040			

	Flow Master Output					
Stage [ft]	WSE [ft]	Q [ft³/s]	Vel [ft/s]	Area [ft²]	Wetted Perimeter [ft]	Top Width [ft]
0.00	1324.0					
0.20	1324.2					
0.40	1324.4					
0.60	1324.6					
0.80	1324.8					
1.00	1325.0	0.1	0.3	0.3	5.7	5.7
1.20	1325.2	1.6	0.8	2.1	13.0	13.0
1.40	1325.4	6.0	0.9	6.8	39.3	39.3
1.60	1325.6	22.5	1.3	17.9	65.2	65.2
1.80	1325.8	54.2	1.7	31.7	72.7	72.7
2.00	1326.0	97.8	2.1	47.0	80.3	80.2
2.20	1326.2	127.6	2.0	65.4	115.1	115.0
2.40	1326.4	200.4	2.2	90.9	140.0	139.9
2.60	1326.6	300.6	2.5	121.3	163.2	163.1

Entellus

SHEET 3 OF 4

BY RLJ DATE 10/18/2010

CHECK HAA DATE 10/21/2011

CLIENT: FCDMC

JOB: Palo Verde Watershed Detailed Floodplain Delineation Study JOB NO. 310.047

Split Flow Analysis for: T2N-R6W-S05E - Split 4 (near cross section 4.173)

Split Flow Location: Just east of 371st Ave alignment.

Analysis Method: Wash Normal Depth Analysis Using Manning's Equation

Wash Split Data

Slope (ft/ft)
0.0061

Raw Cross-Section Data			Raw Cross-Section Data		
Station [ft]	Elevation [ft]	N	Station [ft]	Elevation [ft]	N
0.00	1329.40		546.94	1326.39	
0.10	1329.39		550.90	1326.37	
9.75	1328.57	0.040	589.68	1325.84	
14.27	1328.19		624.11	1325.72	
16.87	1328.01		643.91	1325.79	
29.92	1326.65		697.32	1325.95	
39.30	1325.74		717.51	1326.03	
40.92	1325.49		745.91	1326.01	
42.17	1325.32		760.31	1326.08	
42.56	1325.32		770.53	1326.17	
49.90	1325.35		798.30	1326.32	
81.95	1325.34		804.21	1326.37	
111.65	1325.34		835.63	1326.51	0.046
131.85	1325.39				
162.99	1325.38				
184.86	1325.45				
234.27	1325.84				
261.35	1326.20				
275.59	1326.04	0.046			
277.50	1326.02				
284.10	1324.77				
285.94	1324.24				
289.04	1324.42				
299.15	1325.17				
306.94	1324.25				
309.89	1323.98				
312.29	1324.15				
320.42	1324.64				
328.77	1324.97				
332.49	1325.19				
332.93	1325.23				
336.70	1325.21				
356.17	1325.30	0.055			
404.49	1325.51				
418.93	1325.60				
439.13	1325.73				
461.45	1326.00				
477.70	1326.05				
504.11	1326.23				
541.31	1326.40				

	Flow Master Output					
Stage [ft]	WSE [ft]	Q [ft³/s]	Vel [ft/s]	Area [ft²]	Wetted Perimeter [ft]	Top Width [ft]
0.00	1324.0					
0.20	1324.2	0.2	0.5	0.5	5.1	5.1
0.40	1324.4	1.5	0.7	2.3	13.2	13.2
0.60	1324.6	5.0	0.9	5.8	21.8	21.7
0.80	1324.8	11.5	1.1	11.0	31.5	31.4
1.00	1325.0	22.3	1.2	18.3	42.0	41.8
1.20	1325.2	38.8	1.4	27.6	50.6	50.4
1.40	1325.4	40.2	0.9	44.6	180.1	179.8
1.60	1325.6	106.4	1.1	96.8	297.2	296.9
1.80	1325.8	216.6	1.3	163.0	386.8	386.5
2.00	1326.0	381.2	1.5	254.5	515.9	515.5
2.20	1326.2	620.6	1.7	375.3	666.7	666.3
2.40	1326.4	976.5	1.9	518.2	762.2	761.8
2.60	1326.6	1471.9	2.2	677.0	805.5	805.0

Entellus

SHEET 4 OF 4

BY RLJ DATE 10/18/2010

CHECK HAA DATE 10/21/2011

CLIENT: FCDMC

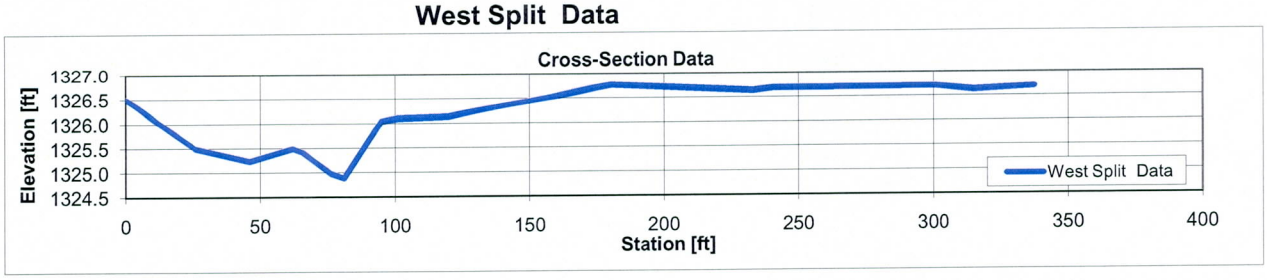
JOB: Palo Verde Watershed Detailed Floodplain Delineation Study JOB NO. 310.047

Split Flow Analysis for: T2N-R6W-S05E - Split 4 (near cross section 4.173)

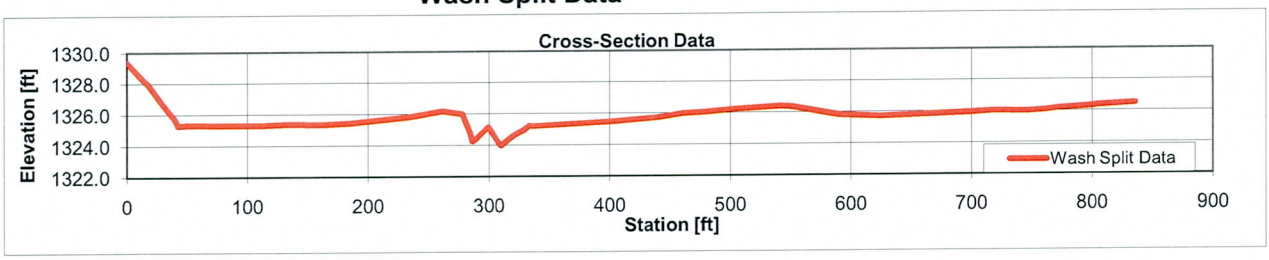
Split Flow Location: Just east of 371st Ave alignment.

Analysis Method: Wash Normal Depth Analysis Using Manning's Equation

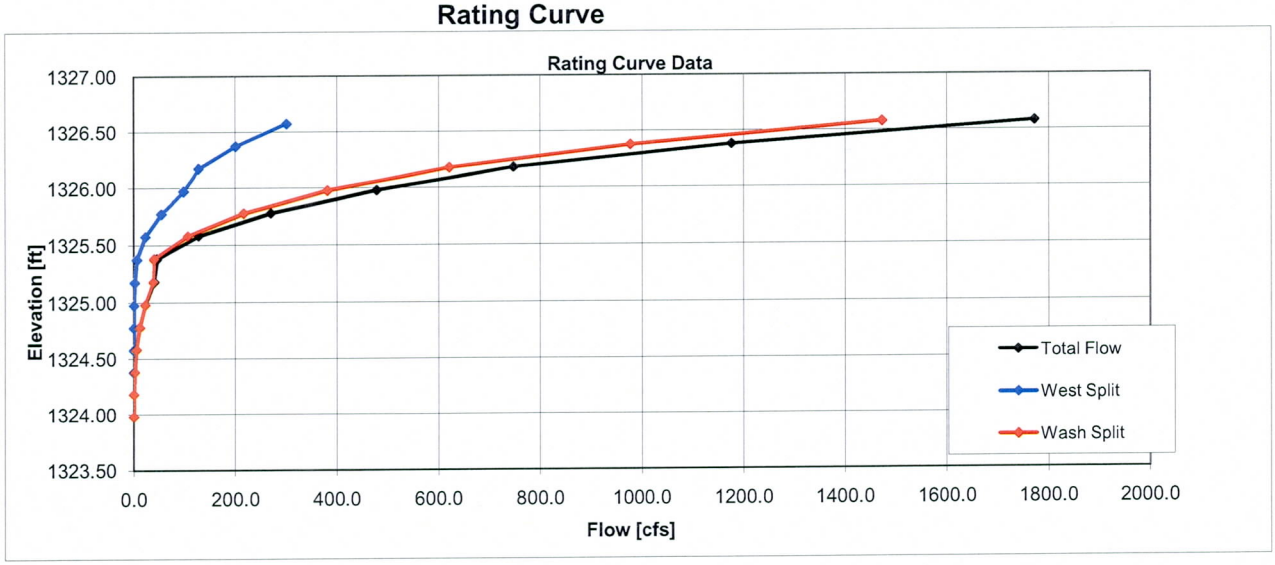
West Split Data

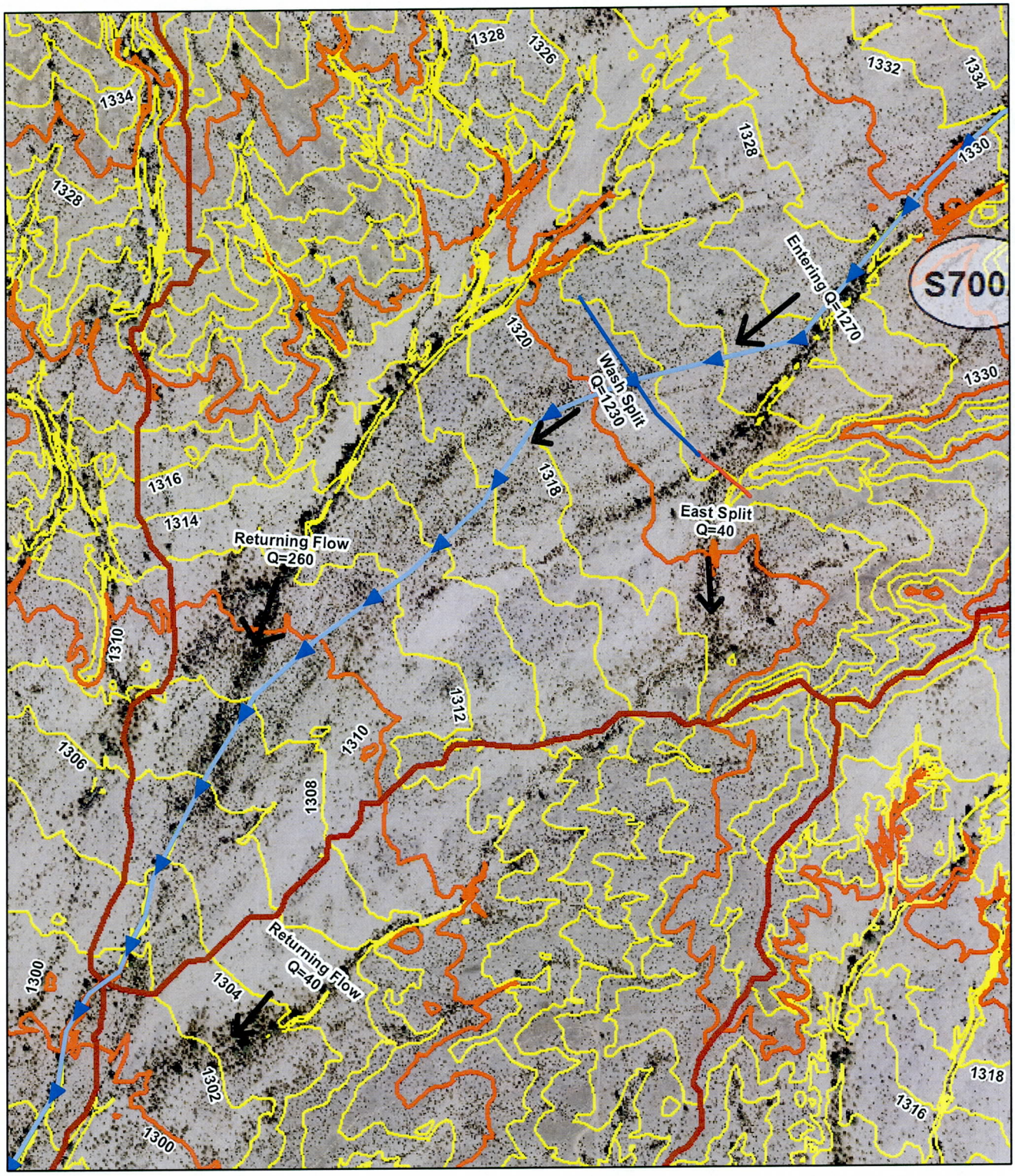


Wash Split Data



Rating Curve

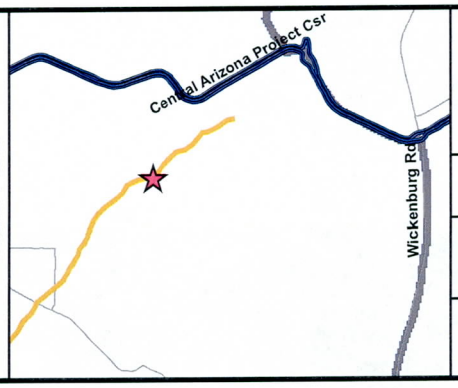




LEGEND

- T2N-R6W-S05E
- Split Flow Cross Section
- Wash Flow Cross Section
- Hydrology Subbasins
- S750E — Hydrology Subbasin ID
- C750C L — Concentration Point ID

VICINITY MAP



PALO VERDE WATERSHED DETAILED FLOODPLAIN DELINEATION STUDY FCD 2008C046

NORTH

0 250 500 Feet

Entellus™
2255 N. 44th Street Suite 125
Phoenix, Arizona 85008.3299
Tel. 602.244.2566
Fax. 602.244.8947
Web. www.entellus.com

T2N-R6W-S05E SPLIT 5 NEAR CROSS SECTION 4.049

P:\30013\10\310047_Palo_Verde\Global_Data\Hydraulics\RiverCAD\T2N_R6W_S05E\Split Flow Analysis\Split5.mxd

Entellus

SHEET 1 OF 4

BY RLJ DATE 10/19/2010

CHECK HAA DATE 10/21/2011

CLIENT: FCDMC

JOB: Palo Verde Watershed Detailed Floodplain Delineation Study JOB NO. 310.047

Split Flow Analysis for: T2N-R6W-S05E - Split 5 (near cross section 4.049)

Split Flow Location: App. 500 feet south of Split 4

Analysis Method: Wash Normal Depth Analysis Using Manning's Equation

	Slope (ft/ft)
Wash Split	0.0089
East Split	0.0047

Total Flow		Wash Split	East Split	Wash Split	East Split
Stage [ft]	Q [cfs]	Q [cfs]	Q [cfs]	%	%
1321.13	51.2	51.2	0.0		
1321.28	151.0	150.1	0.9	99%	1%
1321.43	317.7	314.0	3.7	99%	1%
1321.58	544.1	534.5	9.6	98%	2%
1321.73	833.4	811.8	21.6	97%	3%
1321.88	1170.3	1131.3	39.0	97%	3%
1322.03	1543.2	1482.0	61.2	96%	4%
1322.18	1920.1	1831.2	88.9	95%	5%

Entellus

SHEET 2 OF 4

BY RLJ DATE 10/19/2010

CHECK HAA DATE 10/21/2011

CLIENT: FCDMC

JOB: Palo Verde Watershed Detailed Floodplain Delineation Study JOB NO. 310.047

Split Flow Analysis for: T2N-R6W-S05E - Split 5 (near cross section 4.049)

Split Flow Location: App. 500 feet south of Split 4

Analysis Method: Wash Normal Depth Analysis Using Manning's Equation

Wash Split Data

Slope (ft/ft)
0.0089

Raw Cross-Section Data			Raw Cross-Section Data		
Station [ft]	Elevation [ft]	N	Station [ft]	Elevation [ft]	N
0.00	1322.26				
15.06	1322.21				
24.13	1322.20	0.055			
70.16	1322.16				
84.34	1322.11				
98.06	1321.93				
155.40	1321.21				
181.05	1321.01				
210.59	1320.94				
237.84	1320.95				
242.19	1320.97				
259.74	1321.10				
285.60	1321.13				
329.07	1321.31				
358.58	1321.14				
398.39	1321.10				
457.03	1320.76				
467.72	1320.72				
474.97	1320.74				
537.04	1321.02				
591.35	1320.99				
606.37	1320.99				
628.81	1321.24				
675.69	1321.55				
687.42	1321.76				
707.33	1321.95				
731.09	1322.05				
745.01	1322.21				
759.32	1322.27				
759.42	1322.27	0.046			

	Flow Master Output					
Stage [ft]	WSE [ft]	Q [ft³/s]	Vel [ft/s]	Area [ft²]	Wetted Perimeter [ft]	Top Width [ft]
0.00	1321.1	51.2	0.9	57.9	370.4	370.3
0.15	1321.3	150.1	1.2	121.7	472.6	472.6
0.30	1321.4	314.0	1.6	196.8	519.7	519.7
0.45	1321.6	534.5	1.9	277.3	551.4	551.4
0.60	1321.7	811.8	2.3	361.6	571.8	571.8
0.75	1321.9	1131.3	2.5	449.2	598.0	598.0
0.90	1322.0	1482.0	2.7	541.4	635.9	635.9
1.05	1322.2	1831.2	2.9	639.7	695.3	695.3

Entellus

SHEET 3 OF 4

BY RLJ DATE 10/19/2010

CHECK HAA DATE 10/21/2011

CLIENT: FCDMC

JOB: Palo Verde Watershed Detailed Floodplain Delineation Study JOB NO. 310.047

Split Flow Analysis for: T2N-R6W-S05E - Split 5 (near cross section 4.049)

Split Flow Location: App. 500 feet south of Split 4

Analysis Method: Wash Normal Depth Analysis Using Manning's Equation

East Split Data

Slope (ft/ft)
0.0047

Raw Cross-Section Data			Raw Cross-Section Data		
Station [ft]	Elevation [ft]	N	Station [ft]	Elevation [ft]	N
0.00	1323.22				
0.10	1323.22				
6.28	1323.57				
21.31	1324.46				
25.23	1323.68				
36.36	1322.14				
36.37	1322.14				
39.13	1321.63				
46.83	1321.17				
54.43	1321.13	0.040			
57.03	1321.11				
72.10	1321.36				
106.01	1321.59				
131.07	1321.92				
157.69	1322.19				
173.53	1322.26	0.055			

	Flow Master Output					
Stage [ft]	WSE [ft]	Q [ft³/s]	Vel [ft/s]	Area [ft²]	Wetted Perimeter [ft]	Top Width [ft]
0.00	1321.3	0.9	0.5	2.0	20.8	20.8
0.15	1321.4	3.7	0.6	6.0	36.7	36.7
0.30	1321.6	9.6	0.7	13.4	61.3	61.3
0.45	1321.7	21.6	0.9	23.9	76.5	76.4
0.60	1321.9	39.0	1.1	36.3	88.7	88.6
0.75	1322.0	61.2	1.2	50.6	102.9	102.9
0.90	1322.2	88.9	1.3	67.2	118.6	118.5

Entellus

SHEET 4 OF 4

BY RLJ DATE 10/19/2010

CHECK HAA DATE 10/21/2011

CLIENT: FCDMC

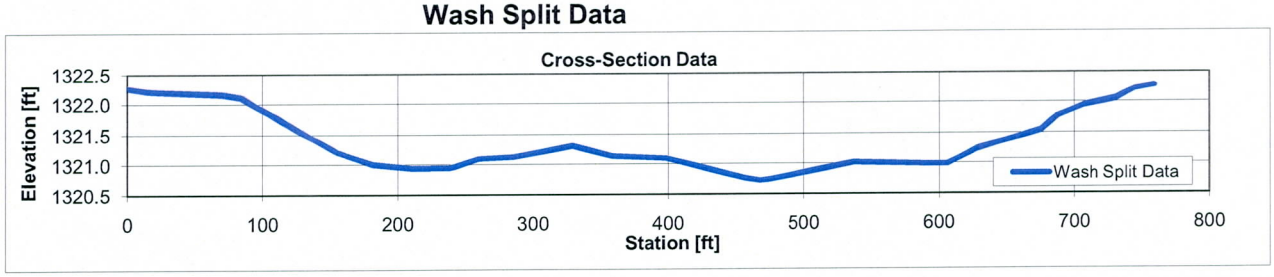
JOB: Palo Verde Watershed Detailed Floodplain Delineation Study JOB NO. 310.047

Split Flow Analysis for: T2N-R6W-S05E - Split 5 (near cross section 4.049)

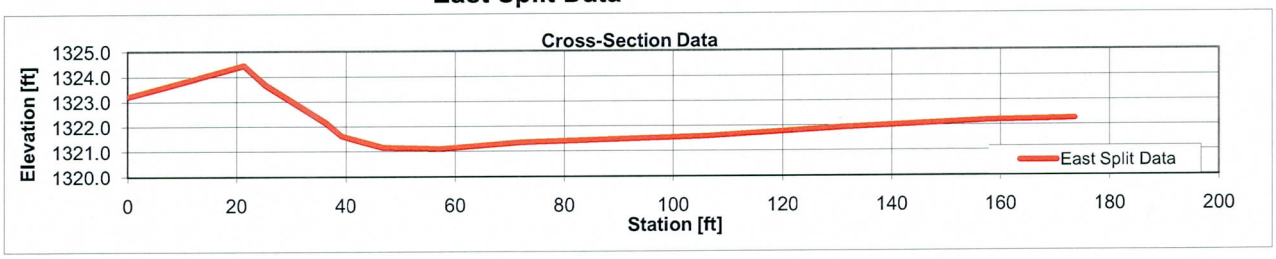
Split Flow Location: App. 500 feet south of Split 4

Analysis Method: **Wash Normal Depth Analysis Using Manning's Equation**

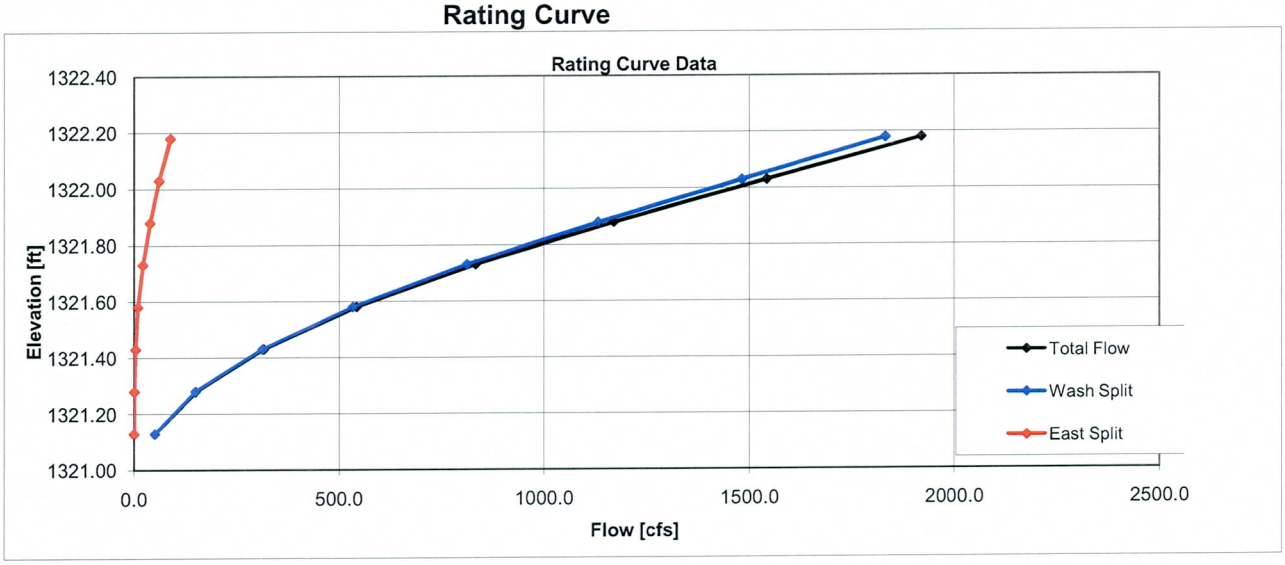
Wash Split Data



East Split Data



Rating Curve

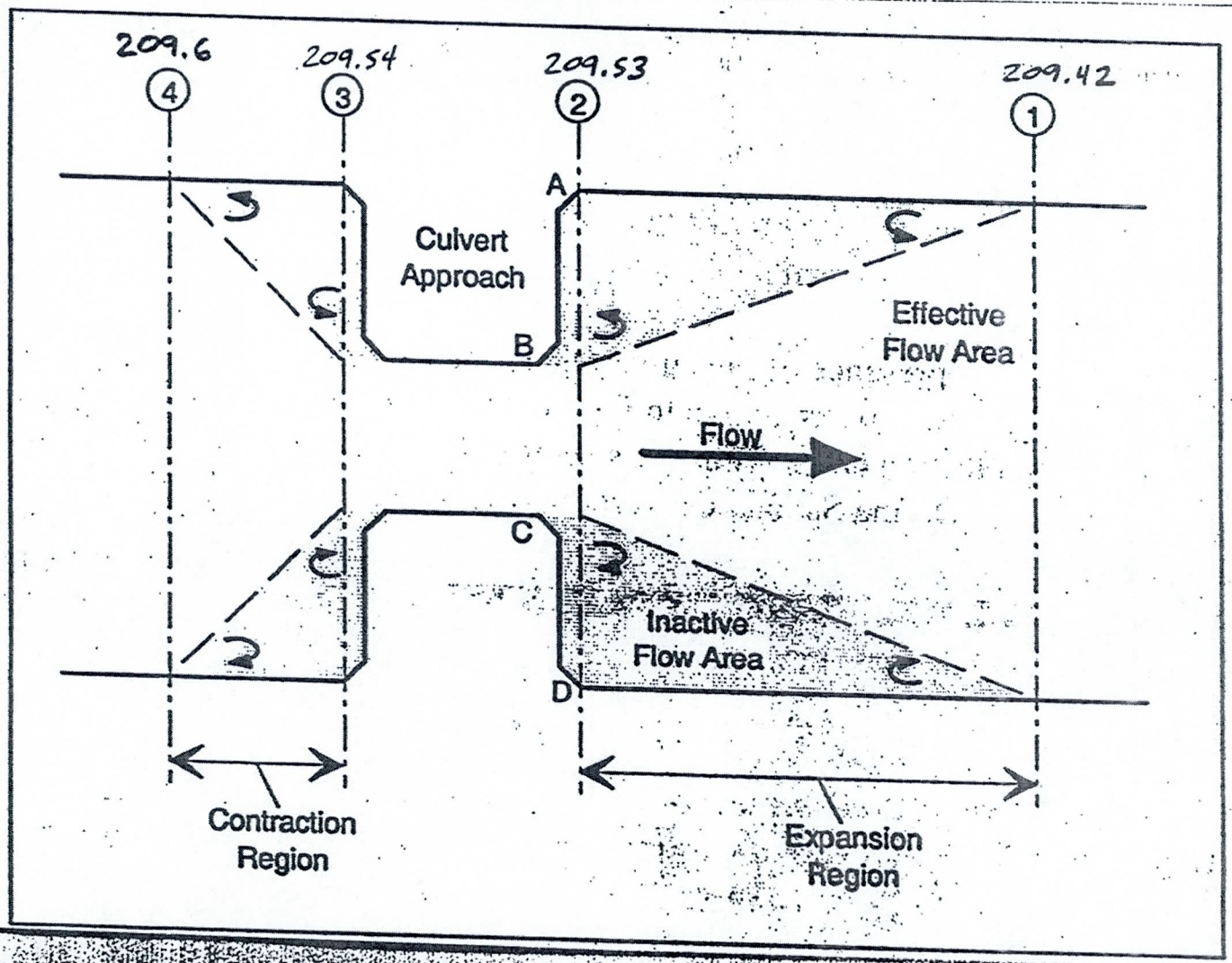


E.5.2 Agreement Tables

The agreement tables under this appendix is part of the check and verification of channel lengths and top widths as measured in HEC-RAS and the workmaps. Comments are provided where special considerations were found.

Special Bridge Cross Sections

Determination of ineffective flow areas using Corps of Engineers method



Delaney Wash
Agreement Table

AGREEMENT TABLE

Map Tolerance (1/20th map scale)= 20 Feet

Study Name: *Palo Verde Watershed Detailed Floodplain Delineation Study*
Stream Name : T1N-R6W-S07 (Delaney Wash)

XS NUMBER	XLCH		TOPWIDTH										REMARKS
			FLOODPLAIN					FLOODWAY					
	HEC-RAS	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	
5.579	363	364	671	61	732	0	732	NA	NA	NA	NA	NA	**Reach Name: DelaneyUpstream** Floodplain: See "NOTE" below. Floodway not appropriate.
5.510	370	370	590	0	590	0	590	NA	NA	NA	NA	NA	**Reach Name: DelaneyUpstream** Floodway not appropriate.
5.440	438	437	922	95	1010	7	1017	NA	NA	NA	NA	NA	**Reach Name: DelaneyUpstream** Floodplain: See "NOTE" below. Floodway not appropriate.
5.357	220	220	942	-1	942	-1	941	NA	NA	NA	NA	NA	**Reach Name: DelaneyUpstream** Floodway not appropriate.
5.316	227	227	700	326	1025	1	1026	NA	NA	NA	NA	NA	**Reach Name: DelaneyUpstream** Floodplain: Blocked Obstruction included in floodpalin. Floodway not appropriate.
5.273	496	498	637	76	714	-1	713	NA	NA	NA	NA	NA	**Reach Name: DelaneyUpstream** Floodplain: Blocked Obstruction included in floodpalin. Floodway not appropriate.
5.179	433	433	951	68	1016	3	1019	NA	NA	NA	NA	NA	**Reach Name: DelaneyUpstream** Floodplain: Blocked Obstruction included in floodpalin. Floodway not appropriate.
5.097	401	400	988	157	1145	0	1145	NA	NA	NA	NA	NA	**Reach Name: DelaneyUpstream** Floodplain: Blocked Obstruction included in floodpalin. Floodway not appropriate.
5.021	335	337	1893	7	1900	0	1900	NA	NA	NA	NA	NA	**Reach Name: DelaneyUpstream** Floodway not appropriate.
4.957	336	337	1860	84	1944	0	1944	NA	NA	NA	NA	NA	**Reach Name: DelaneyUpstream** Floodplain: See "NOTE" below. Floodway not appropriate.
4.893	349	350	2000	156	2156	0	2156	NA	NA	NA	NA	NA	**Reach Name: DelaneyUpstream** Floodplain: See "NOTE" below. Floodway not appropriate.
4.827	266	268	1787	10	1797	0	1797	NA	NA	NA	NA	NA	**Reach Name: DelaneyUpstream** Floodway not appropriate.
4.777			1841	18	1859	0	1859	NA	NA	NA	NA	NA	**Reach Name: DelaneyUpstream** Floodway not appropriate.
4.693	465	460	661	101	762	0	762	NA	NA	NA	NA	NA	**Reach Name: NorthSplit** Floodplain: See "NOTE" below. Floodway not appropriate.
4.605	453	466	410	26	436	0	436	NA	NA	NA	NA	NA	**Reach Name: NorthSplit** Floodplain: See "NOTE" below. Floodway not appropriate.
4.519	468	471	670	0	670	0	670	NA	NA	NA	NA	NA	**Reach Name: NorthSplit** Floodway not appropriate.
4.430	542	545	491	2	491	2	493	NA	NA	NA	NA	NA	**Reach Name: NorthSplit** Floodway not appropriate.

AGREEMENT TABLE

Map Tolerance (1/20th map scale)= 20 Feet

Study Name: *Palo Verde Watershed Detailed Floodplain Delineation Study*
Stream Name :T1N-R6W-S07 (Delaney Wash)

XS NUMBER	XLCH		TOPWIDTH										REMARKS
			FLOODPLAIN					FLOODWAY					
	HEC-RAS	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	
4.327	476	480	306	1	306	1	307	NA	NA	NA	NA	NA	**Reach Name: NorthSplit** Floodway not appropriate.
4.237	371	369	307	25	332	1	332	NA	NA	NA	NA	NA	**Reach Name: NorthSplit** Floodplain: See "NOTE" below. Floodway not appropriate.
4.167	633	644	201	4	205	0	205	NA	NA	NA	NA	NA	**Reach Name: NorthSplit** Floodway not appropriate.
4.047	331	334	88	0	88	0	88	NA	NA	NA	NA	NA	**Reach Name: NorthSplit** Floodway not appropriate.
3.946	399	400	674	45	720	-1	719	NA	NA	NA	NA	NA	**Reach Name: DelaneyDownstm** Floodplain: See "NOTE" below. Floodway not appropriate.
3.871	294	294	637	7	644	0	644	NA	NA	NA	NA	NA	**Reach Name: DelaneyDownstm** Floodway not appropriate.
3.815	306	306	626	59	685	0	685	NA	NA	NA	NA	NA	**Reach Name: DelaneyDownstm** Floodplain: See "NOTE" below. Floodway not appropriate.
3.757	256	257	690	0	690	0	690	NA	NA	NA	NA	NA	**Reach Name: DelaneyDownstm** Floodway not appropriate.
3.709	363	364	1004	0	1004	0	1004	NA	NA	NA	NA	NA	**Reach Name: DelaneyDownstm** Floodway not appropriate.
3.64	423	424	796	126	922	0	922	NA	NA	NA	NA	NA	**Reach Name: DelaneyDownstm** Floodplain: See "NOTE" below. Floodway not appropriate.
3.56	322	322	916	20	936	0	936	NA	NA	NA	NA	NA	**Reach Name: DelaneyDownstm** Floodplain: See "NOTE" below. Floodway not appropriate.
3.499	276	280	889	32	920	1	921	NA	NA	NA	NA	NA	**Reach Name: DelaneyDownstm** Floodplain: See "NOTE" below. Floodway not appropriate.
3.446	400	402	997	5	1002	0	1002	NA	NA	NA	NA	NA	**Reach Name: DelaneyDownstm** Floodway not appropriate.
3.371	431	433	779	22	801	0	801	NA	NA	NA	NA	NA	**Reach Name: DelaneyDownstm** Floodplain: See "NOTE" below. Floodway not appropriate.
3.289	415	415	685	26	711	0	711	NA	NA	NA	NA	NA	**Reach Name: DelaneyDownstm** Floodplain: See "NOTE" below. Floodway not appropriate.
3.210	379	314	981	19	1000	0	1000	NA	NA	NA	NA	NA	**Reach Name: DelaneyDownstm** Floodplain: See "NOTE" below. Floodway not appropriate.

AGREEMENT TABLE

Map Tolerance (1/20th map scale)= 20 Feet

Study Name: *Palo Verde Watershed Detailed Floodplain Delineation Study*
Stream Name : T1N-R6W-S07 (Delaney Wash)

XS NUMBER	XLCH		TOPWIDTH										REMARKS
			FLOODPLAIN					FLOODWAY					
	HEC-RAS	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	
3.139	146	148	413	558	970	1	971	NA	NA	NA	NA	NA	**Reach Name: DelaneyDownstm** Floodplain: See "NOTE" below. Floodway not appropriate.
3.111	201	201	357	673	1028	2	1030	NA	NA	NA	NA	NA	**Reach Name: DelaneyDownstm** Floodplain: See "NOTE" below. Floodway not appropriate.
3.073	212	218	1199	27	1226	0	1226	NA	NA	NA	NA	NA	**Reach Name: DelaneyDownstm** Floodplain: See "NOTE" below. Floodway not appropriate.
3.033	431	430	969	106	1075	0	1075	NA	NA	NA	NA	NA	**Reach Name: DelaneyDownstm** Floodplain: See "NOTE" below. Floodway not appropriate.
2.951	489	491	98	0	98	0	98	NA	NA	NA	NA	NA	**Reach Name: DelaneyDownstm** Floodway not appropriate.
2.858	352	354	106	0	106	0	106	NA	NA	NA	NA	NA	**Reach Name: DelaneyDownstm** Floodway not appropriate.
2.792	342	343	178	0	178	0	178	NA	NA	NA	NA	NA	**Reach Name: DelaneyDownstm** Floodway not appropriate.
2.727	267	269	118	0	118	0	118	NA	NA	NA	NA	NA	**Reach Name: DelaneyDownstm** Floodway not appropriate.
2.676	485	487	97	0	97	0	97	NA	NA	NA	NA	NA	**Reach Name: DelaneyDownstm** Floodway not appropriate.
2.584	342	342	349	8	357	0	357	NA	NA	NA	NA	NA	**Reach Name: DelaneyDownstm** Floodway not appropriate.
2.519	324	325	371	0	371	0	371	NA	NA	NA	NA	NA	**Reach Name: DelaneyDownstm** Floodway not appropriate.
2.458	376	377	1570	6	1576	0	1576	NA	NA	NA	NA	NA	**Reach Name: DelaneyDownstm** Floodway not appropriate.
2.387	434	435	1334	13	1347	0	1347	NA	NA	NA	NA	NA	**Reach Name: DelaneyDownstm** Floodway not appropriate.
2.305	363	363	892	326	1216	2	1218	NA	NA	NA	NA	NA	**Reach Name: DelaneyDownstm** Floodplain: See "NOTE" below. Floodway not appropriate.
2.236	432	433	1302	134	1436	0	1436	NA	NA	NA	NA	NA	**Reach Name: DelaneyDownstm** Floodplain: See "NOTE" below. Floodway not appropriate.

AGREEMENT TABLE

Map Tolerance (1/20th map scale)= 20 Feet

Study Name: *Palo Verde Watershed Detailed Floodplain Delineation Study*
Stream Name :T1N-R6W-S07 (Delaney Wash)

XS NUMBER	XLCH		TOPWIDTH										REMARKS
			FLOODPLAIN					FLOODWAY					
	HEC-RAS	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	
2.154	65	65	1224	88	1312	0	1312	NA	NA	NA	NA	NA	**Reach Name: DelaneyDownstm** Floodplain: See "NOTE" below. Floodway not appropriate.
2.142	72	73	645	0	645	0	645	NA	NA	NA	NA	NA	**Reach Name: DelaneyDownstm** Floodway not appropriate.
2.128	386	388	411	-3	411	-3	408	232	3	232	3	235	**Reach Name: DelaneyDownstm**
2.055	256	256	559	80	669	-30	639	127	4	131	0	131	**Reach Name: DelaneyDownstm** Floodplain: See "NOTE" below.
2.007	314	315	731	116	847	0	847	137	2	137	2	139	**Reach Name: DelaneyDownstm** Floodplain: See "NOTE" below.
1.947	249	249	908	20	928	0	928	125	0	125	0	125	**Reach Name: DelaneyDownstm** Floodplain: See "NOTE" below.
1.900	274	276	849	208	1057	0	1057	277	2	277	2	279	**Reach Name: DelaneyDownstm** Floodplain: See "NOTE" below.
1.848	268	270	1148	13	1161	0	1161	463	3	463	3	466	**Reach Name: DelaneyDownstm** Floodplain: See "NOTE" below.
1.797	308	309	1099	197	1296	0	1296	320	183	504	-1	503	**Reach Name: DelaneyDownstm** Floodplain: See "NOTE" below. Also, blocked obstruction is included in floodplain.
1.739	383	383	1240	33	1273	0	1273	410	28	428	10	438	**Reach Name: DelaneyDownstm** Floodplain: See "NOTE" below.
1.666	392	395	1678	29	1691	16	1707	262	5	267	0	267	**Reach Name: DelaneyDownstm** Floodplain: See "NOTE" below.
1.592	406	407	659	222	881	0	881	121	-1	121	-1	120	**Reach Name: DelaneyDownstm** Floodplain: See "NOTE" below. Also, blocked obstruction is included in floodplain.
1.515	410	410	845	26	871	0	871	147	6	147	6	153	**Reach Name: DelaneyDownstm** Floodplain: See "NOTE" below.
1.438	523	528	912	100	1014	-2	1012	202	22	221	3	224	**Reach Name: DelaneyDownstm** Floodplain: See "NOTE" below. Also, blocked obstruction is included in floodplain. Floodway: See "NOTE" below.
1.339	441	439	901	62	963	0	963	285	6	285	6	291	**Reach Name: DelaneyDownstm** Floodplain: See "NOTE" below.
1.255	547	543	737	7	744	0	744	317	5	317	5	321	**Reach Name: DelaneyDownstm**
1.151	522	528	961	-275	958	-272	686	320	3	320	3	323	**Reach Name: DelaneyDownstm** Floodplain: The cross section isn't contained vertically on the right overbank (north side), which is the area included as ineffective limits. Since the ineffective area is in the agriculture area, the floodplain limits were not included in new floodplain limits.
1.053	622	642	727	0	727	0	727	234	0	234	0	234	**Reach Name: DelaneyDownstm**
0.935	375	375	943	8	951	0	951	403	-1	403	-1	402	**Reach Name: DelaneyDownstm**
0.864	487	488	810	160	970	0	970	545	30	571	4	575	**Reach Name: DelaneyDownstm** Floodplain: See "NOTE" below. Floodway: See "NOTE" below.
0.772	429	428	882	0	882	0	882	408	1	408	1	409	**Reach Name: DelaneyDownstm**
0.69	446	446	1095	68	1163	0	1163	405	4	405	4	409	**Reach Name: DelaneyDownstm** Floodplain: See "NOTE" below.

AGREEMENT TABLE

Map Tolerance (1/20th map scale)= 20 Feet

Study Name: *Palo Verde Watershed Detailed Floodplain Delineation Study*
Stream Name : T1N-R6W-S07 (Delaney Wash)

XS NUMBER	XLCH		TOPWIDTH										REMARKS
			FLOODPLAIN					FLOODWAY					
	HEC-RAS	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	
0.606	356	355	678	1	679	0	679	250	-1	250	-1	249	**Reach Name: DelaneyDownstm**
0.539	309	305	165	0	165	0	165	118	-1	118	-1	117	**Reach Name: DelaneyDownstm**
0.48	228	227	238	0	238	0	238	205	-3	205	-3	202	**Reach Name: DelaneyDownstm**
0.437	485	486	74	0	74	0	74	74	0	74	0	74	**Reach Name: DelaneyDownstm**
0.345	285	286	61	0	61	0	61	61	0	61	0	61	**Reach Name: DelaneyDownstm**
0.291	336	339	70	0	70	0	70	70	0	70	0	70	**Reach Name: DelaneyDownstm**
0.228	365	373	84	0	84	0	84	62	22	62	22	84	**Reach Name: DelaneyDownstm**
0.158	381	391	101	1	101	1	102	84	0	84	0	84	**Reach Name: DelaneyDownstm**
0.086	397	462	271	-97	327	-153	174	NA	NA	NA	NA	NA	**Reach Name: DelaneyDownstm** Floodplain: Winters Wash (confluence wash) floodplain limits control in this area, therefore, Winters Wash floodplain limits are shown on the map. Floodway not appropriate.
0.011			172	0	172	0	172	NA	NA	NA	NA	NA	**Reach Name: DelaneyDownstm** Floodplain: Winters Wash (confluence wash) floodplain limits control in this area, therefore, Winters Wash floodplain limits are shown on the map. Floodway not appropriate.
0.663	444	444	822	0	822	0	822	NA	NA	NA	NA	NA	**Reach Name: SouthSplit** Floodway not appropriate.
0.579	463	464	952	0	952	0	952	NA	NA	NA	NA	NA	**Reach Name: SouthSplit** Floodway not appropriate.
0.491	467	466	874	3	877	0	877	NA	NA	NA	NA	NA	**Reach Name: SouthSplit** Floodway not appropriate.
0.403	493	487	823	0	823	0	823	NA	NA	NA	NA	NA	**Reach Name: SouthSplit** Floodway not appropriate.
0.309	464	479	548	0	548	0	548	NA	NA	NA	NA	NA	**Reach Name: SouthSplit** Floodway not appropriate.
0.221	341	341	564	0	564	0	564	NA	NA	NA	NA	NA	**Reach Name: SouthSplit** Floodway not appropriate.
0.157	484	488	451	-1	451	-1	450	NA	NA	NA	NA	NA	**Reach Name: SouthSplit** Floodway not appropriate.
0.065	213	213	299	0	299	0	299	NA	NA	NA	NA	NA	**Reach Name: SouthSplit** Floodway not appropriate.

NOTE: "HEC-RAS"only reports widths of wetted portions. Small dry islands with elevations less than 1/2 contour interval (1 foot) above the water surface elevation were included in the floodplain (as shown on the workmaps).

Four Mile Wash
Agreement Table

AGREEMENT TABLE

Map Tolerance (1/20th map scale)= 20 Feet

Study Name: *Palo Verde Watershed Detailed Floodplain Delineation Study*
Stream Name : Four Mile Wash

XS NUMBER	XLCH		TOPWIDTH										REMARKS
			FLOODPLAIN					FLOODWAY					
	HEC-RAS	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	
13.960	477	477	162	-1	162	-1	161	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 1
13.869	365	365	574	0	574	0	574	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 1
13.800	343	343	632	24	653	3	656	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 1 Floodplain: See "NOTE" below.
13.735	455	455	853	14	862	5	867	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 1 Floodplain: See "NOTE" below.
13.649	431	431	1037	172	1208	1	1209	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 1 Floodplain: See "NOTE" below.
13.567	373	373	1350	60	1408	2	1410	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 1 Floodplain: See "NOTE" below.
13.497	472	472	1251	189	1440	0	1440	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 1 Floodplain: See "NOTE" below.
13.408	470	470	1735	-1	1735	-1	1734	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 1
13.318	71	71	1655	407	2061	1	2062	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 1 Floodplain: See "NOTE" below.
13.305	313	313	427	-3	427	-3	424	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 1
13.246	379	379	509	2	509	2	511	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 1
13.174	418	418	358	-3	358	-3	355	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 1
13.095	479	479	451	3	451	3	454	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 1
13.004	342	342	747	2	747	2	749	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 1
12.939	349	349	871	-1	871	-1	870	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 1
12.873	398	398	923	-3	923	-3	920	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 1
12.798	482	482	631	2	631	2	633	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 1
12.706	459	459	707	1	707	1	708	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 1
12.619	336	336	707	69	775	1	776	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 1 Floodplain: See "NOTE" below.
12.556	282	282	799	13	809	3	812	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 1 Floodplain: See "NOTE" below.
12.502	238	238	600	0	600	0	600	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 1
12.457	288	288	737	1	737	1	738	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 1
12.403	322	322	463	33	495	1	496	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 1 Floodplain: See "NOTE" below.
12.342	317	317	640	1	640	1	641	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 1
12.282	229	229	518	-4	518	-4	514	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 1
12.238	444	444	476	2	476	2	478	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 1
12.154	330	330	849	0	849	0	849	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 1
12.092	325	325	838	107	950	-5	945	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 1 Floodplain: See "NOTE" below.
12.03	219	219	1356	44	1399	1	1400	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 1 Floodplain: See "NOTE" below.
11.989	184	184	1056	190	1246	1	1246	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 1 Floodplain: See "NOTE" below.
11.954	366	366	1074	-1	1074	-1	1073	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 1
11.885	289	289	951	1	951	1	952	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 1
11.830	362	362	818	-1	818	-1	817	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 1
11.762	255	255	714	1	714	1	715	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 1
11.713	303	303	776	1	776	1	777	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 1
11.656	257	257	569	14	583	0	583	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 1 Floodplain: See "NOTE" below.

AGREEMENT TABLE

Map Tolerance (1/20th map scale)= 20 Feet

Study Name: *Palo Verde Watershed Detailed Floodplain Delineation Study*
Stream Name : Four Mile Wash

XS NUMBER	XLCH		TOPWIDTH										REMARKS
			FLOODPLAIN					FLOODWAY					
	HEC-RAS	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	
11.607	295	295	406	1	406	1	407	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 1
11.551	271	271	406	0	406	1	406	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 1
11.500	453	453	660	4	666	-2	664	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 1
11.414	308	308	354	14	369	-1	368	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 1
11.356	286	286	434	70	497	7	504	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 1 Floodplain: See "NOTE" below.
11.302	278	278	567	0	567	0	567	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 1
11.249	368	368	845	39	883	1	884	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 1 Floodplain: See "NOTE" below.
11.180	190	190	885	-2	885	-2	883	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 1
11.144	271	271	708	0	708	0	708	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 1
11.092	318	318	890	2	890	2	892	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 1
11.032	393	393	617	1	617	1	618	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 1
10.958	405	405	768	0	768	0	768	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 1
10.881	397	397	795	1	795	1	796	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 1
10.806	413	413	835	-2	835	-2	833	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 1
10.727	340	340	719	-2	719	-2	717	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 1
10.663	479	479	899	1	899	1	900	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 1
10.572	314	314	843	1	843	1	844	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 1
10.513	465	465	1031	-3	1031	-3	1028	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 1
10.425	416	416	810	1	810	1	811	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 1
10.346	427	427	1096	0	1096	0	1096	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 1
10.265	260	260	271	1	271	1	272	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 1
10.216			322	0	322	0	322	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 1
10.183	229	229	131	0	131	0	131	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 2
10.140	216	216	208	0	208	0	208	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 2
10.099	373	373	328	0	328	0	328	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 2
10.028	170		245	5	250	0	250	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 2
9.996	193	196	370	0	370	0	370	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
9.960	445	430	213	0	213	0	213	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
9.875	417	408	235	-2	235	-2	233	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
9.796	333	320	302	1	302	1	303	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
9.733	411	397	217	12	229	0	229	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3 Floodplain: See "NOTE" below.
9.655	444	442	401	0	401	0	401	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
9.571	388	387	412	-1	412	-1	411	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
9.498	418	404	210	0	210	0	210	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
9.418	313	304	164	1	164	1	165	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
9.359	493	486	182	0	182	0	182	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
9.266	435	398	134	0	134	0	134	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
9.184	318	319	118	0	118	0	118	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
9.123	407	406	227	-2	227	-2	225	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
9.046	469	462	224	32	255	1	256	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3 Floodplain: See "NOTE" below.
8.957	458	458	334	0	334	0	334	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
8.871	295	295	207	0	207	0	207	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
8.815	414	413	444	0	444	0	444	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
8.736	483	483	169	48	216	1	217	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3 Floodplain: See "NOTE" below.

AGREEMENT TABLE

Map Tolerance (1/20th map scale)= 20 Feet

Study Name: *Palo Verde Watershed Detailed Floodplain Delineation Study*
Stream Name : Four Mile Wash

XS NUMBER	XLCH		TOPWIDTH										REMARKS
			FLOODPLAIN					FLOODWAY					
	HEC-RAS	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	
8.645	464	455	285	0	285	0	285	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
8.557	393	386	451	-1	451	-1	450	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
8.483	469	468	707	21	728	0	728	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3 Floodplain: See "NOTE" below.
8.394	341	340	598	87	689	-4	685	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3 Floodplain: See "NOTE" below.
8.329	368	360	455	1	455	1	456	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
8.259	393	350	543	41	583	1	584	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3 Floodplain: See "NOTE" below.
8.185	403	392	372	4	372	4	376	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
8.109	329	318	596	4	596	4	600	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
8.046	346	338	554	1	554	1	555	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
7.981	411	411	527	-5	527	-5	522	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
7.903	336	332	223	-1	223	-1	222	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
7.84	428	404	309	1	309	1	310	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
7.758	272	275	403	-2	403	-2	401	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
7.707	446	431	261	-4	261	-4	257	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
7.622	461	464	416	0	416	0	416	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
7.535	343	345	468	5	468	5	473	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
7.47	428	417	425	-1	425	-1	424	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
7.389	266	262	659	14	676	-3	673	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
7.339	454	453	788	3	788	3	791	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
7.253	386	374	659	-2	659	-2	657	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
7.18	390	379	565	26	590	1	591	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3 Floodplain: See "NOTE" below.
7.106	341	340	673	13	686	0	686	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3 Floodplain: See "NOTE" below.
7.041	359	360	698	4	698	4	702	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
6.973	340	342	578	1	578	1	579	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
6.909	293	278	549	4	549	4	553	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
6.854	450	444	983	1	983	1	984	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
6.768	360	362	918	4	918	4	922	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
6.7	365	362	561	17	576	2	578	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3 Floodplain: See "NOTE" below.
6.631	449	450	477	-1	477	-1	476	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
6.546	386	381	488	-1	488	-1	487	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
6.473	452	451	560	0	560	0	560	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
6.387	346	347	606	3	606	3	609	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
6.322	311	308	673	4	673	4	677	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
6.263	482	482	974	17	992	-1	991	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3 Floodplain: See "NOTE" below.
6.171	478	475	896	2	896	2	898	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
6.081	320	317	1366	24	1389	1	1390	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3 Floodplain: See "NOTE" below.
6.02	405	403	1225	87	1307	5	1312	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3 Floodplain: Blocked obstruction included in floodplain.
5.944	344	338	1334	248	1579	3	1582	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3 Floodplain: See "NOTE" below. Also, blocked obstructions included in floodplain.

AGREEMENT TABLE

Map Tolerance (1/20th map scale)= 20 Feet

Study Name: *Palo Verde Watershed Detailed Floodplain Delineation Study*
Stream Name : Four Mile Wash

XS NUMBER	XLCH		TOPWIDTH										REMARKS
			FLOODPLAIN					FLOODWAY					
	HEC-RAS	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	
5.879	74	47	1565	0	1565	0	1565	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
5.864	66	58	1412	19	1431	0	1431	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3 Floodplain: See "NOTE" below.
5.852	267	268	1393	50	1443	0	1443	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3 Floodplain: See "NOTE" below.
5.801	449	448	1218	3	1218	3	1221	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
5.716	394	378	1163	349	1507	5	1512	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3 Floodplain: See "NOTE" below.
5.642	356	362	929	34	978	-15	963	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3 Floodplain: See "NOTE" below.
5.574	330	331	1086	0	1086	0	1086	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
5.512	258	259	916	33	945	4	949	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3 Floodplain: See "NOTE" below.
5.463	461	463	1087	77	1165	-1	1164	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3 Floodplain: See "NOTE" below.
5.376	363	364	711	176	890	-3	887	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3 Floodplain: See "NOTE" below.
5.307	312	313	731	30	869	-108	761	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
5.248	434	434	919	4	921	2	923	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
5.165	105	105	1981	-1	1981	-1	1980	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
5.154	Culvert	Culvert	Culvert	Culvert	Culvert	Culvert	Culvert	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3 I-10
5.146	210	210	922	4	922	4	926	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
5.106	210	210	988	5	1003	-10	993	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
5.066	229	229	919	2	919	2	921	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
5.045	Culvert	Culvert	Culvert	Culvert	Culvert	Culvert	Culvert	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3 I-10
5.023	258	258	644	0	644	0	644	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
4.974	328	328	998	-6	998	-6	992	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
4.912	72	72	1022	7	1022	7	1029	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
4.904	Culvert	Culvert	Culvert	Culvert	Culvert	Culvert	Culvert	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3 I-10
4.898	332	332	507	0	507	0	507	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
4.835	302	302	1049	5	1049	5	1054	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
4.778	313	313	785	-1	785	-1	784	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
4.719	358	358	694	57	748	3	751	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3 Floodplain: See "NOTE" below.
4.651	431	431	732	5	732	5	737	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
4.569	325	325	598	0	598	0	598	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
4.508	421	421	760	4	760	4	764	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
4.428	394	394	883	2	883	2	885	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
4.354	311	311	928	1	928	1	929	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
4.295	117	117	498	0	498	0	498	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
4.273	123	123	1121	-2	1117	2	1119	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
4.249	354	354	1142	18	1159	1	1160	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3 Floodplain: See "NOTE" below.
4.182	412	412	1348	7	1354	1	1355	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
4.104	453	453	665	0	665	0	665	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
4.018	466	466	534	-1	534	-1	533	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3

AGREEMENT TABLE

Map Tolerance (1/20th map scale)= 20 Feet

Study Name: *Palo Verde Watershed Detailed Floodplain Delineation Study*
Stream Name : Four Mile Wash

XS NUMBER	XLCH		TOPWIDTH										REMARKS
			FLOODPLAIN					FLOODWAY					
	HEC-RAS	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	
3.93	437	437	450	0	450	0	450	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
3.848	448	448	489	3	489	3	492	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
3.763	382	382	443	1	443	1	444	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
3.69	457	457	409	1	409	1	410	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
3.604	417	417	456	0	456	0	456	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
3.525	330	330	363	2	363	2	365	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
3.462	397	397	325	-2	325	-2	323	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
3.387	464	464	445	0	445	0	445	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
3.299	349	349	277	0	277	0	277	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
3.233	217	217	529	1	529	1	530	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
3.192	236	236	414	1	414	1	415	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
3.147	388	388	432	1	432	1	433	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
3.074	404	404	339	-1	339	-1	338	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
2.997	411	411	529	24	553	0	553	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3 Floodplain: See "NOTE" below.
2.919	366	366	487	2	487	2	489	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
2.85	465	465	527	2	527	2	529	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
2.762	417	417	704	0	704	0	704	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
2.683	343	343	565	1	565	1	566	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
2.618	312	312	586	1	586	1	587	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
2.559	238	238	417	-2	417	-2	415	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
2.514	157	157	630	1	630	1	631	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
2.484	161	161	439	47	487	-1	486	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3 Floodplain: See "NOTE" below.
2.454	178	178	932	10	944	-2	942	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3 Floodplain: See "NOTE" below.
2.42	407	407	755	0	755	0	755	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
2.343	394	394	928	2	928	2	930	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
2.268	385	385	893	31	921	4	924	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3 Floodplain: See "NOTE" below.
2.195	58	58	172	440	298	314	612	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3 Floodplain: The map width is shown on the workmaps to tie into the upstream and downstream floodplain limits smoothly and the HEC-RAS width was ignored due to this reason.
2.184	279	279	639	0	639	0	639	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
2.132	375	375	631	-1	631	-1	630	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
2.06	477	477	515	7	521	1	522	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
1.97	464	464	606	0	606	0	606	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3
1.882	475	475	899	89	987	1	988	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3 Floodplain: See "NOTE" below.
1.792	366	366	861	49	909	1	910	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3 Floodplain: See "NOTE" below.
1.723	218	218	714	10	723	1	724	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3 Floodplain: See "NOTE" below.
1.682	247	247	1054	53	1106	1	1107	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3 Floodplain: See "NOTE" below.
1.635	58	58	486	490	977	-1	976	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3 Floodplain: See "NOTE" below.
1.624	263	266	1298	0	1298	0	1298	NA	NA	NA	NA	NA	Reach Name: Four Mile Wash 3

AGREEMENT TABLE

Map Tolerance (1/20th map scale)= 20 Feet

Study Name: *Palo Verde Watershed Detailed Floodplain Delineation Study*
Stream Name : Four Mile Wash

XS NUMBER	XLCH		TOPWIDTH										REMARKS
			FLOODPLAIN					FLOODWAY					
	HEC-RAS	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	
1.574	225	226	1494	0	1615	-121	1494	NA	NA	NA	NA	NA	**Reach Name: Four Mile Wash 3**
1.531	87	89	1418	2	1418	2	1420	NA	NA	NA	NA	NA	**Reach Name: Four Mile Wash 3**
1.515	128	128	789	4	789	4	793	NA	NA	NA	NA	NA	**Reach Name: Four Mile Wash 3**
1.491	253	253	758	1	758	1	759	NA	NA	NA	NA	NA	**Reach Name: Four Mile Wash 3**
1.443			952	0	952	0	952	NA	NA	NA	NA	NA	**Reach Name: Four Mile Wash 3**
1.412	312	312	741	1	741	1	742	NA	NA	NA	NA	NA	**Reach Name: Four Mile Wash 4**
1.353	227	227	480	0	480	0	480	NA	NA	NA	NA	NA	**Reach Name: Four Mile Wash 4**
1.31	355	355	568	9	578	-1	577	NA	NA	NA	NA	NA	**Reach Name: Four Mile Wash 4**
1.243	299	301	557	0	557	0	557	NA	NA	NA	NA	NA	**Reach Name: Four Mile Wash 4**
1.187	174	174	794	-1	794	-1	793	NA	NA	NA	NA	NA	**Reach Name: Four Mile Wash 5**
1.154	181	181	527	0	527	0	527	NA	NA	NA	NA	NA	**Reach Name: Four Mile Wash 5**
1.12	439	439	230	1	230	1	231	NA	NA	NA	NA	NA	**Reach Name: Four Mile Wash 5**
1.036	389	389	623	1	623	1	624	NA	NA	NA	NA	NA	**Reach Name: Four Mile Wash 5**
0.963	409	409	677	1	677	1	678	NA	NA	NA	NA	NA	**Reach Name: Four Mile Wash 5**
0.885	460	460	686	5	699	-8	691	NA	NA	NA	NA	NA	**Reach Name: Four Mile Wash 5**
0.798	402	402	780	0	780	0	780	NA	NA	NA	NA	NA	**Reach Name: Four Mile Wash 5**
0.722	404	404	498	0	498	0	498	NA	NA	NA	NA	NA	**Reach Name: Four Mile Wash 5**
0.645	350	350	797	0	797	0	797	NA	NA	NA	NA	NA	**Reach Name: Four Mile Wash 5**
0.579	394	394	1086	2	1088	0	1088	339	0	339	0	339	**Reach Name: Four Mile Wash 5**
0.505	407	407	658	1	658	1	659	400	0	400	0	400	**Reach Name: Four Mile Wash 5**
0.428	297	297	1803	42	1989	-144	1845	461	20	481	0	481	**Reach Name: Four Mile Wash 5** Floodplain: Winters Wash floodplain limits control this area; therefore, Winters Wash floodplain is shown on the map. Floodway: See "NOTE" below.
0.371	245	245	1577	27	1610	-6	1604	545	0	545	0	545	**Reach Name: Four Mile Wash 5** Floodplain: Winters Wash floodplain limits control this area; therefore, Winters Wash floodplain is shown on the map. Floodway: Winters Wash controls the west side of the floodway; therefore, topwidth does not match what is shown on the map.
0.325	379	379	1932	13	1949	-4	1945	495	0	495	0	495	**Reach Name: Four Mile Wash 5** Floodplain: Winters Wash floodplain limits control this area; therefore, Winters Wash floodplain is shown on the map. Floodway: Winters Wash controls the west side of the floodway; therefore, topwidth does not match what is shown on the map.
0.253	474	474	1032	287	1319	0	1319	389	121	510	0	510	**Reach Name: Four Mile Wash 5** Floodplain: Winters Wash floodplain limits control this area; therefore, Winters Wash floodplain is shown on the map. Floodway: See "NOTE" below. Also, Winters Wash controls the west side of the floodway; therefore, topwidth does not match what is shown on the map.
0.163	445	445	1104	168	1272	0	1272	413	0	413	0	413	**Reach Name: Four Mile Wash 5** Floodplain: Winters Wash floodplain limits control this area; therefore, Winters Wash floodplain is shown on the map. Floodway: Winters Wash floodway limits control this area; therefore, Winters Wash floodway is shown on the map.

AGREEMENT TABLE

Map Tolerance (1/20th map scale)= 20 Feet

Study Name: *Palo Verde Watershed Detailed Floodplain Delineation Study*
Stream Name : Four Mile Wash

XS NUMBER	XLCH		TOPWIDTH										REMARKS
			FLOODPLAIN					FLOODWAY					
	HEC-RAS	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	
0.079			901	284	1184	1	1185	151	0	151	0	151	**Reach Name: Four Mile Wash 5** Floodplain: Winters Wash floodplain limits control this area; therefore, Winters Wash floodplain is shown on the map. Floodway: Winters Wash floodway limits control this area; therefore, Winters Wash floodway is shown on the map.
0.259	414	414	177	2	177	2	179	NA	NA	NA	NA	NA	**Reach Name: Four Mile - W2**
0.181	226	226	463	21	485	-1	484	NA	NA	NA	NA	NA	**Reach Name: Four Mile - W2** Floodplain: See "NOTE" below.
0.138	285	285	524	1	524	1	525	NA	NA	NA	NA	NA	**Reach Name: Four Mile - W2**
0.084	446	455	166	0	166	0	166	NA	NA	NA	NA	NA	**Reach Name: Four Mile - W2**
0.175	330	330	96	1	97	0	97	NA	NA	NA	NA	NA	**Reach Name: Four Mile - W1**
0.112	183	183	105	0	105	0	105	NA	NA	NA	NA	NA	**Reach Name: Four Mile - W1**
0.077	250	250	86	0	86	0	86	NA	NA	NA	NA	NA	**Reach Name: Four Mile - W1**
0.03	161	162	160	-1	160	-1	159	NA	NA	NA	NA	NA	**Reach Name: Four Mile - W1**

NOTE: "HEC-RAS"only reports widths of wetted portions. Small dry islands with elevations less than 1/2 contour interval (1 foot) above the water surface elevation were included in the floodplain (as shown on the workmaps).

T1S-R6W-S05S
Agreement Table

AGREEMENT TABLE

Map Tolerance (1/20th map scale)= 20 Feet

Study Name: *Palo Verde Watershed Detailed Floodplain Delineation Study*
Stream Name : T1S-R6W-S05S

XS NUMBER	XLCH		TOPWIDTH										REMARKS
			FLOODPLAIN					FLOODWAY					
	HEC-RAS	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	
1.726	416	419	1019	-4	1019	-4	1015	314	0	314	0	314	
1.647	438	439	1023	-10	1023	-10	1013	301	0	301	0	301	
1.564	389	388	986	8	986	8	994	311	0	311	0	311	
1.490	483	482	946	26	970	2	972	422	0	422	0	422	See "NOTE" below.
1.399	455	456	935	-5	935	-5	930	440	0	440	0	440	
1.313	360	359	959	16	977	-2	975	346	0	346	0	346	See "NOTE" below.
1.244	562	568	1296	13	1296	13	1309	391	0	391	0	391	
1.138	444	444	1134	5	1279	-140	1139	304	2	304	2	306	
1.054	314	314	1271	-4	1271	-4	1267	361	0	361	0	361	
0.994	585	593	1445	46	1495	-4	1491	357	0	357	0	357	See "NOTE" below.
0.884	415	414	1313	2	1313	2	1315	365	0	365	0	365	
0.805	477	478	842	1	834	9	843	294	0	294	0	294	
0.715	467	467	684	7	684	7	691	341	1	341	1	342	
0.626	384	384	625	-3	625	-3	622	343	0	343	0	343	
0.554	466	467	814	-2	814	-2	812	344	0	344	0	344	
0.465	413	416	410	0	410	0	410	218	0	218	0	218	
0.387	353	353	1049	23	1079	-7	1072	308	0	308	0	308	See "NOTE" below.
0.320	329	329	3918	16	4104	-170	3934	371	0	371	0	371	Winters wash floodplain controls this area; therefore, Winters Wash floodplain limits are shown on the map.
0.258	322	322	4129	150	4242	37	4279	416	0	416	0	416	Winters wash floodplain controls this area; therefore, Winters Wash floodplain limits are shown on the map.
0.197	347	347	4022	51	4072	1	4073	412	0	412	0	412	Winters wash floodplain controls this area; therefore, Winters Wash floodplain limits are shown on the map.
0.132	346	346	3559	97	3653	3	3656	385	0	385	0	385	Winters wash floodplain controls this area; therefore, Winters Wash floodplain limits are shown on the map.
0.066			3595	8	3595	8	3603	481	-2	481	-2	479	Winters wash floodplain controls this area; therefore, Winters Wash floodplain limits are shown on the map.

NOTE: "HEC-RAS"only reports widths of wetted portions. Small dry islands with elevations less than 1/2 contour interval (1 foot) above the water surface elevation were included in the floodplain (as shown on the workmaps).

T1N-R6W-S17 & S18
Agreement Table

AGREEMENT TABLE

Map Tolerance (1/20th map scale)= 20 Feet

Study Name: *Palo Verde Watershed Detailed Floodplain Delineation Study*
Stream Name : T1N-R6W-S18&S17

XS NUMBER	XLCH		TOPWIDTH										REMARKS
			FLOODPLAIN					FLOODWAY					
	HEC-RAS	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	
2.237	390	392	1362	-20	1362	-20	1342	NA	NA	NA	NA	NA	Reach Name: S18-NORTH
2.236			Lat Struct	Lat Struct	Lat Struct	Lat Struct	Lat Struct	NA	NA	NA	NA	NA	Reach Name: S18-NORTH
2.163	348	346	966	-14	966	-14	952	NA	NA	NA	NA	NA	Reach Name: S18-NORTH
2.162			Lat Struct	Lat Struct	Lat Struct	Lat Struct	Lat Struct	NA	NA	NA	NA	NA	Reach Name: S18-NORTH
2.161			Lat Struct	Lat Struct	Lat Struct	Lat Struct	Lat Struct	NA	NA	NA	NA	NA	Reach Name: S18-NORTH
2.097	406	407	833	-12	833	-12	821	NA	NA	NA	NA	NA	Reach Name: S18-NORTH
2.096			Lat Struct	Lat Struct	Lat Struct	Lat Struct	Lat Struct	NA	NA	NA	NA	NA	Reach Name: S18-NORTH
2.095			Lat Struct	Lat Struct	Lat Struct	Lat Struct	Lat Struct	NA	NA	NA	NA	NA	Reach Name: S18-NORTH
2.021	356	357	799	-10	799	-10	789	NA	NA	NA	NA	NA	Reach Name: S18-NORTH
2.020			Lat Struct	Lat Struct	Lat Struct	Lat Struct	Lat Struct	NA	NA	NA	NA	NA	Reach Name: S18-NORTH
1.953	343	344	871	-5	871	-5	866	NA	NA	NA	NA	NA	Reach Name: S18-NORTH
1.888	366	365	427	28	457	-2	455	NA	NA	NA	NA	NA	Reach Name: S18-NORTH Floodplain: See "NOTE" below.
1.819	345	345	1104	1	1104	1	1105	NA	NA	NA	NA	NA	Reach Name: S18-NORTH
1.754	313	316	1771	-12	1771	-12	1759	NA	NA	NA	NA	NA	Reach Name: S18-NORTH
1.694	329	328	1733	-6	1733	-6	1727	NA	NA	NA	NA	NA	Reach Name: S18-NORTH
1.632	425	423	1407	1	1407	1	1408	NA	NA	NA	NA	NA	Reach Name: S18-NORTH
1.552	425	429	1766	-3	1766	-3	1763	NA	NA	NA	NA	NA	Reach Name: S18-NORTH
1.471	317	317	1512	0	1512	0	1512	NA	NA	NA	NA	NA	Reach Name: S18-NORTH
1.411	270	270	1444	95	1540	-1	1539	NA	NA	NA	NA	NA	Reach Name: S18-NORTH Floodplain: See "NOTE" below.
1.360	454	454	1728	6	1734	0	1734	NA	NA	NA	NA	NA	Reach Name: S18-NORTH
1.274	350	350	119	-5	119	-5	114	NA	NA	NA	NA	NA	Reach Name: S18-NORTH
1.208	159	159	284	-2	284	-2	282	NA	NA	NA	NA	NA	Reach Name: S18-NORTH
1.177	134	134	73	24	96	1	97	NA	NA	NA	NA	NA	Reach Name: S18-NORTH Floodplain: See "NOTE" below.
1.152			230	40	271	-1	270	NA	NA	NA	NA	NA	Reach Name: S18-NORTH Floodplain: See "NOTE" below.
1.097	323	323	37	0	37	0	37	NA	NA	NA	NA	NA	Reach Name: S18-SOUTH
1.036	220	220	39	-1	39	-1	38	NA	NA	NA	NA	NA	Reach Name: S18-SOUTH
0.994	244	244	39	-2	39	-2	37	NA	NA	NA	NA	NA	Reach Name: S18-SOUTH
0.948	166	166	39	2	39	2	41	NA	NA	NA	NA	NA	Reach Name: S18-SOUTH
0.916	209	209	45	2	45	2	47	NA	NA	NA	NA	NA	Reach Name: S18-SOUTH
0.877	235	235	48	3	48	3	51	NA	NA	NA	NA	NA	Reach Name: S18-SOUTH
0.832	480	480	46	0	46	0	46	NA	NA	NA	NA	NA	Reach Name: S18-SOUTH
0.741	265	265	33	1	33	1	34	NA	NA	NA	NA	NA	Reach Name: S18-SOUTH
0.691	62	62	334	0	334	0	334	NA	NA	NA	NA	NA	Reach Name: S18-SOUTH
0.679	390	390	42	4	42	4	46	NA	NA	NA	NA	NA	Reach Name: S18-SOUTH
0.606	443	443	42	-2	42	-2	40	NA	NA	NA	NA	NA	Reach Name: S18-SOUTH
0.522	152	152	46	-1	46	-1	45	NA	NA	NA	NA	NA	Reach Name: S18-SOUTH
0.493	377	377	84	-10	84	-10	74	NA	NA	NA	NA	NA	Reach Name: S18-SOUTH
0.421	433	433	93	3	99	-3	96	NA	NA	NA	NA	NA	Reach Name: S18-SOUTH
0.339	441	441	1494	92	1593	-7	1586	NA	NA	NA	NA	NA	Reach Name: S18-SOUTH Floodplain: Winters Wash floodplain controls this area; therefore, Winters Wash floodplain limits are shown on the map.

AGREEMENT TABLE

Map Tolerance (1/20th map scale)= 20 Feet

Study Name: *Palo Verde Watershed Detailed Floodplain Delineation Study*
Stream Name : T1N-R6W-S18&S17

XS NUMBER	XLCH		TOPWIDTH										REMARKS
			FLOODPLAIN					FLOODWAY					
	HEC-RAS	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	
0.256	478	478	923	-683	1301	-1061	240	NA	NA	NA	NA	NA	**Reach Name: S18-SOUTH** Floodplain: Winters Wash floodplain controls this area; therefore, Winters Wash floodplain limits are shown on the map.
0.165	512	512	126	576	332	370	702	NA	NA	NA	NA	NA	**Reach Name: S18-SOUTH** Floodplain: Winters Wash floodplain controls this area; therefore, Winters Wash floodplain limits are shown on the map.
0.068	304	304	94	34	94	34	128	NA	NA	NA	NA	NA	**Reach Name: S18-SOUTH** Floodplain: Winters Wash floodplain controls this area; therefore, Winters Wash floodplain limits are shown on the map.
0.011			79	15	79	15	94	NA	NA	NA	NA	NA	**Reach Name: S18-SOUTH** Floodplain: Winters Wash floodplain controls this area; therefore, Winters Wash floodplain limits are shown on the map.
2.156	342	342	138	-18	138	-18	120	98	-1	98	-1	97	**Reach Name: T1N-R6W-S17**
2.091	399	399	164	9	189	-16	173	114	-5	114	-5	109	**Reach Name: T1N-R6W-S17**
2.016	286	286	207	-1	207	-1	206	54	0	54	0	54	**Reach Name: T1N-R6W-S17**
1.962	374	374	168	2	168	2	170	82	0	82	0	82	**Reach Name: T1N-R6W-S17**
1.891	353	353	233	0	233	0	233	84	0	84	0	84	**Reach Name: T1N-R6W-S17**
1.824	474	474	193	-2	193	-2	191	78	0	78	0	78	**Reach Name: T1N-R6W-S17**
1.734	339	339	486	6	487	5	492	131	0	131	0	131	**Reach Name: T1N-R6W-S17**
1.670	52	52	168	-9	168	-9	159	136	0	136	0	136	**Reach Name: T1N-R6W-S17**
1.660	75	75	428	8	428	8	436	130	0	130	0	130	**Reach Name: T1N-R6W-S17**
1.646	441	441	151	-3	151	-3	148	97	0	97	0	97	**Reach Name: T1N-R6W-S17**
1.563	417	417	148	71	212	7	219	56	0	56	0	56	**Reach Name: T1N-R6W-S17** Floodplain: See "NOTE" below.
1.483	249	249	52	5	52	5	57	36	0	36	0	36	**Reach Name: T1N-R6W-S17**
1.436	283	283	64	4	64	4	68	61	0	61	0	61	**Reach Name: T1N-R6W-S17**
1.383	432	432	246	-3	246	-3	243	122	0	122	0	122	**Reach Name: T1N-R6W-S17**
1.301	242	242	323	24	344	3	347	98	0	98	0	98	**Reach Name: T1N-R6W-S17** Floodplain: Includes blocked obstruction.
1.255	267	267	303	39	336	6	342	43	0	43	0	43	**Reach Name: T1N-R6W-S17** Floodplain: Includes blocked obstruction.
1.205	359	359	833	51	879	5	884	42	0	42	0	42	**Reach Name: T1N-R6W-S17** Floodplain: Includes blocked obstruction.
1.137	209	209	292	64	336	20	356	36	0	36	0	36	**Reach Name: T1N-R6W-S17** Floodplain: See "NOTE" below.
1.097	250	250	416	14	416	14	430	147	0	147	0	147	**Reach Name: T1N-R6W-S17**
1.050	67	67	160	1	160	1	161	100	0	100	0	100	**Reach Name: T1N-R6W-S17**
1.037	89	89	433	-1	433	-1	432	63	0	63	0	63	**Reach Name: T1N-R6W-S17**
1.020	324	324	84	24	111	-3	108	50	-1	50	-1	49	**Reach Name: T1N-R6W-S17** Floodplain: See "NOTE" below.
0.959	351	351	338	4	338	4	342	105	-1	105	-1	104	**Reach Name: T1N-R6W-S17**

AGREEMENT TABLE

Map Tolerance (1/20th map scale)= 20 Feet

Study Name: *Palo Verde Watershed Detailed Floodplain Delineation Study*
Stream Name : T1N-R6W-S18&S17

XS NUMBER	XLCH		TOPWIDTH										REMARKS
			FLOODPLAIN					FLOODWAY					
	HEC-RAS	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	
0.892	426	426	233	46	281	-2	279	52	0	52	0	52	**Reach Name: T1N-R6W-S17** Floodplain: See "NOTE" below.
0.812	445	445	163	-3	163	-3	160	76	0	76	0	76	**Reach Name: T1N-R6W-S17**
0.727	360	360	135	2	135	2	137	76	0	76	0	76	**Reach Name: T1N-R6W-S17**
0.659	414	414	226	-3	229	-6	223	138	0	138	0	138	**Reach Name: T1N-R6W-S17**
0.581	289	289	124	1	124	1	125	84	0	84	0	84	**Reach Name: T1N-R6W-S17**
0.526	472	472	68	-1	78	-11	67	59	-4	59	-4	55	**Reach Name: T1N-R6W-S17**
0.437	234	234	130	-1	130	-1	129	66	0	66	0	66	**Reach Name: T1N-R6W-S17**
0.392	434	434	249	9	260	-2	258	89	0	89	0	89	**Reach Name: T1N-R6W-S17** Floodplain: See "NOTE" below.
0.31	357	357	108	5	108	5	113	59	0	59	0	59	**Reach Name: T1N-R6W-S17**
0.243	433	433	188	53	236	5	241	53	0	53	0	53	**Reach Name: T1N-R6W-S17** Floodplain: See "NOTE" below.
0.161	259	259	448	16	1003	-539	464	56	0	56	0	56	**Reach Name: T1N-R6W-S17** Floodplain: Winters Wash floodplain controls this area; therefore, Winters Wash floodplain limits are shown on the map.
0.112	153	153	332	5	955	-618	337	63	0	63	0	63	**Reach Name: T1N-R6W-S17** Floodplain: Winters Wash floodplain controls this area; therefore, Winters Wash floodplain limits are shown on the map. Floodway: Winters Wash floodway controls this area; therefore, Winters Wash floodway limits are shown on the map.
0.083	310	310	212	18	256	-26	230	53	0	53	0	53	**Reach Name: T1N-R6W-S17** Floodplain: Winters Wash floodplain controls this area; therefore, Winters Wash floodplain limits are shown on the map. Floodway: Winters Wash floodway controls this area; therefore, Winters Wash floodway limits are shown on the map.
0.024			205	18	224	-1	223	83	0	83	0	83	**Reach Name: T1N-R6W-S17** Floodplain: Winters Wash floodplain controls this area; therefore, Winters Wash floodplain limits are shown on the map. Floodway: Winters Wash floodway controls this area; therefore, Winters Wash floodway limits are shown on the map.

NOTE: "HEC-RAS"only reports widths of wetted portions. Small dry islands with elevations less than 1/2 contour interval (1 foot) above the water surface elevation were included in the floodplain (as shown on the workmaps).

T1N-R6W-S08
Agreement Table

AGREEMENT TABLE

Map Tolerance (1/20th map scale)= 20 Feet

Study Name: *Palo Verde Watershed Detailed Floodplain Delineation Study*
Stream Name : T1S-R6W-S08

XS NUMBER	XLCH		TOPWIDTH										REMARKS
			FLOODPLAIN					FLOODWAY					
	HEC-RAS	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	
5.334	327	327	1056	21	1081	-4	1077	NA	NA	NA	NA	NA	See "NOTE" below.
5.273	367	367	714	143	855	2	857	NA	NA	NA	NA	NA	See "NOTE" below.
5.203	434	434	202	6	210	-2	208	NA	NA	NA	NA	NA	
5.121	389	389	768	18	792	-6	786	NA	NA	NA	NA	NA	See "NOTE" below.
5.047	454	454	694	105	800	-1	799	NA	NA	NA	NA	NA	See "NOTE" below.
4.961	338	338	716	1	716	1	717	NA	NA	NA	NA	NA	
4.897	359	359	767	5	767	5	772	NA	NA	NA	NA	NA	
4.829	352	352	1003	21	1024	0	1024	NA	NA	NA	NA	NA	See "NOTE" below.
4.763	352	352	776	-6	776	-6	770	NA	NA	NA	NA	NA	
4.696	395	395	690	0	690	0	690	NA	NA	NA	NA	NA	
4.621	396	396	388	3	386	5	391	NA	NA	NA	NA	NA	
4.546	327	327	310	0	310	0	310	NA	NA	NA	NA	NA	
4.484	422	422	388	1	388	1	389	NA	NA	NA	NA	NA	
4.404	436	436	271	2	271	2	273	NA	NA	NA	NA	NA	
4.321	436	436	247	-1	247	-1	246	NA	NA	NA	NA	NA	
4.239	406	406	469	0	469	0	469	NA	NA	NA	NA	NA	
4.162	483	483	359	2	359	2	361	NA	NA	NA	NA	NA	
4.070	477	477	471	1	471	1	472	NA	NA	NA	NA	NA	
3.980	484	484	597	13	597	13	610	NA	NA	NA	NA	NA	
3.888	477	477	455	2	455	2	457	NA	NA	NA	NA	NA	
3.798	467	467	530	1	530	1	531	NA	NA	NA	NA	NA	
3.710	415	415	436	0	436	0	436	NA	NA	NA	NA	NA	
3.631	387	387	535	-1	535	-1	534	NA	NA	NA	NA	NA	
3.558	456	456	1010	6	1015	1	1016	NA	NA	NA	NA	NA	
3.471	407	407	813	-2	813	-2	811	NA	NA	NA	NA	NA	
3.394	496	496	928	-2	928	-2	926	NA	NA	NA	NA	NA	
3.3	447	447	834	-1	834	-1	833	NA	NA	NA	NA	NA	
3.216	350	350	994	96	1095	-5	1090	NA	NA	NA	NA	NA	
3.149	380	380	1044	-5	1044	-5	1039	NA	NA	NA	NA	NA	
3.077	405	405	1095	-1	1095	-1	1094	NA	NA	NA	NA	NA	
3.001	445	445	793	1	793	1	794	NA	NA	NA	NA	NA	
2.916	424	424	1890	-2	1890	-2	1888	NA	NA	NA	NA	NA	
2.836	279	279	2059	3	2060	2	2062	NA	NA	NA	NA	NA	
2.783	305	305	1679	-7	1679	-7	1672	NA	NA	NA	NA	NA	
2.725	384	384	1729	0	1729	0	1729	NA	NA	NA	NA	NA	Blocked obstruction included in floodplain.
2.653	445	445	1576	59	1635	0	1635	NA	NA	NA	NA	NA	See "NOTE" below. Also, blocked obstruction included in floodplain
2.568	282	282	1469	40	1514	-5	1509	NA	NA	NA	NA	NA	See "NOTE" below.
2.515	378	376	1783	18	1800	1	1801	NA	NA	NA	NA	NA	See "NOTE" below.
2.443	329	303	1439	2	1440	1	1441	NA	NA	NA	NA	NA	
2.381	329	329	1321	-4	1321	-4	1317	NA	NA	NA	NA	NA	
2.319	359	359	1358	2	1358	2	1360	NA	NA	NA	NA	NA	
2.251	295	295	1273	13	1288	-2	1286	NA	NA	NA	NA	NA	See "NOTE" below.
2.195	281	281	1564	174	1739	-1	1738	NA	NA	NA	NA	NA	See "NOTE" below. Also, blocked obstruction included in floodplain
2.142	307	307	1572	335	1907	0	1907	NA	NA	NA	NA	NA	See "NOTE" below. Also, blocked obstruction included in floodplain
2.083	358	358	1690	74	1764	0	1764	NA	NA	NA	NA	NA	See "NOTE" below.
2.016	422	422	1762	8	1770	0	1770	NA	NA	NA	NA	NA	

AGREEMENT TABLE

Map Tolerance (1/20th map scale)= 20 Feet

Study Name: ***Palo Verde Watershed Detailed Floodplain Delineation Study***
Stream Name **:T1S-R6W-S08**

XS NUMBER	XLCH		TOPWIDTH										REMARKS
			FLOODPLAIN					FLOODWAY					
	HEC-RAS	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	
1.936	399	399	1424	372	1797	-1	1796	NA	NA	NA	NA	NA	See "NOTE" below. Also, blocked obstruction included in floodplain
1.860	254	254	1697	415	2120	-8	2112	NA	NA	NA	NA	NA	See "NOTE" below. Also, blocked obstruction included in floodplain
1.812	222	222	1761	137	1893	5	1898	NA	NA	NA	NA	NA	See "NOTE" below.
1.770	391	391	1689	5	1689	5	1694	NA	NA	NA	NA	NA	
1.696	307	307	1543	-2	1543	-2	1541	NA	NA	NA	NA	NA	
1.638	404	404	1272	-3	1272	-3	1269	NA	NA	NA	NA	NA	
1.562	366	366	1281	2	1281	2	1283	NA	NA	NA	NA	NA	
1.492	238	238	1077	174	1261	-10	1251	NA	NA	NA	NA	NA	See "NOTE" below. Also blocked obstructino is included in floodplain.
1.447	444	444	1161	110	1296	-25	1271	NA	NA	NA	NA	NA	Blocked obstruction is included in floodplain.
1.363	283	283	822	211	1301	-268	1033	NA	NA	NA	NA	NA	Blocked obstruction is partially included in floodplain.
1.310	209	209	927	146	1071	2	1073	NA	NA	NA	NA	NA	Blocked obstruction is included in floodplain.
1.270	382	382	823	2	823	2	825	NA	NA	NA	NA	NA	
1.198	457	457	724	86	810	0	810	NA	NA	NA	NA	NA	Blocked obstruction is included in floodplain
1.111	360	360	850	1	850	1	851	NA	NA	NA	NA	NA	
1.043	350	349	1162	2	1162	2	1164	NA	NA	NA	NA	NA	
0.977	440	440	1223	-1	1223	-1	1222	NA	NA	NA	NA	NA	
0.893	382	381	1377	1	1377	1	1378	NA	NA	NA	NA	NA	
0.821	384	384	1202	1	1202	1	1203	NA	NA	NA	NA	NA	
0.748	296	296	1150	3	1150	3	1153	NA	NA	NA	NA	NA	
0.692	383	383	1473	19	1473	19	1492	NA	NA	NA	NA	NA	
0.620	328	328	1305	-3	1305	-3	1302	NA	NA	NA	NA	NA	
0.558	476	476	1251	-2	1253	-4	1249	NA	NA	NA	NA	NA	
0.468	248	248	1154	0	1154	0	1154	NA	NA	NA	NA	NA	
0.421	365	365	1042	1	1042	1	1043	NA	NA	NA	NA	NA	
0.352	267	267	3250	142	3385	7	3392	NA	NA	NA	NA	NA	Winters Wash floodplain controls this area; therefore, Winters Wash floodplain limits are shown on the map.
0.301	356	356	2852	1	2852	1	2853	NA	NA	NA	NA	NA	Winters Wash floodplain controls this area; therefore, Winters Wash floodplain limits are shown on the map.
0.234	285	285	2614	-7	2606	1	2607	NA	NA	NA	NA	NA	Winters Wash floodplain controls this area; therefore, Winters Wash floodplain limits are shown on the map.
0.18	197	197	2193	-77	2193	-77	2116	NA	NA	NA	NA	NA	Winters Wash floodplain controls this area; therefore, Winters Wash floodplain limits are shown on the map.
0.142	192	192	2091	-45	2091	-45	2046	NA	NA	NA	NA	NA	Winters Wash floodplain controls this area; therefore, Winters Wash floodplain limits are shown on the map.
0.106	281	281	1938	18	1938	18	1956	NA	NA	NA	NA	NA	Winters Wash floodplain controls this area; therefore, Winters Wash floodplain limits are shown on the map.
0.053			579	-160	860	-441	419	NA	NA	NA	NA	NA	Winters Wash floodplain controls this area; therefore, Winters Wash floodplain limits are shown on the map.

NOTE: "HEC-RAS"only reports widths of wetted portions. Small dry islands with elevations less than 1/2 contour interval (1 foot) above the water surface elevation were included in the floodplain (as shown on the workmaps).

T1S-R6W-S27
Agreement Table

AGREEMENT TABLE

Map Tolerance (1/20th map scale)= 20 Feet

Study Name: *Palo Verde Watershed Detailed Floodplain Delineation Study*
Stream Name : T1S-R6W-S27 and T2N-R6W-S22S

XS NUMBER	XLCH		TOPWIDTH										REMARKS
			FLOODPLAIN					FLOODWAY					
	HEC-RAS	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	
													Reach Name: T2N-R6W-S22S
0.353	382	381	532	23	554	1	555	NA	NA	NA	NA	NA	See "NOTE" below.
0.281	423	427	745	4	749	0	749	NA	NA	NA	NA	NA	**Reach Name: T2N-R6W-S22S**
0.201	501	508	718	0	718	0	718	NA	NA	NA	NA	NA	**Reach Name: T2N-R6W-S22S**
0.106	568	586	639	0	639	0	639	NA	NA	NA	NA	NA	**Reach Name: T2N-R6W-S22S**
													Reach Name: T1S-R6W-S27
13.620	429	431	941	165	1106	0	1106	NA	NA	NA	NA	NA	See "NOTE" below.
													Reach Name: T1S-R6W-S27
13.539	340	336	756	218	974	0	974	NA	NA	NA	NA	NA	See "NOTE" below.
13.474	32	32	1011	0	1011	0	1011	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
13.468	36	36	928	0	928	0	928	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
													Reach Name: T1S-R6W-S27
13.461	44	45	723	85	808	0	808	NA	NA	NA	NA	NA	See "NOTE" below.
													Reach Name: T1S-R6W-S27
13.453	443	446	579	24	604	-1	603	NA	NA	NA	NA	NA	See "NOTE" below.
													Reach Name: T1S-R6W-S27
13.369	478	478	696	30	726	0	726	NA	NA	NA	NA	NA	See "NOTE" below.
13.279	473	473	435	4	435	4	439	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
13.189	442	442	574	2	574	2	576	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
13.105	463	463	464	-2	464	-2	462	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
13.018	347	347	754	12	764	2	766	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
12.952	41	41	852	-1	853	-2	851	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
12.944	460	460	584	-1	584	-1	583	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
12.857	464	464	727	0	727	0	727	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
12.769	434	434	704	4	708	0	708	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
12.687	474	474	655	4	655	4	659	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
													Reach Name: T1S-R6W-S27
12.597	470	470	526	58	585	-1	584	NA	NA	NA	NA	NA	See "NOTE" below.
12.508	433	433	756	8	738	26	764	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
12.426	94	94	258	-13	100	145	245	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
													Reach Name: T1S-R6W-S27
12.422			Culvert	Culvert	Culvert	Culvert	Culvert	NA	NA	NA	NA	NA	I-10 North
12.408	17	17	55	-3	258	-206	52	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
12.405	13	13	81	-3	81	-3	78	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
12.403	86	86	60	3	60	3	63	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
													Reach Name: T1S-R6W-S27
12.398			Culvert	Culvert	Culvert	Culvert	Culvert	NA	NA	NA	NA	NA	I-10 North
12.386	193	193	53	5	53	5	58	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
12.350	437	437	450	3	450	3	453	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
12.267	343	343	456	2	456	2	458	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
													Reach Name: T1S-R6W-S27
12.202	439	439	620	25	647	-2	645	NA	NA	NA	NA	NA	See "NOTE" below.
													Reach Name: T1S-R6W-S27
12.119	399	399	596	29	626	-1	625	NA	NA	NA	NA	NA	See "NOTE" below.
12.043	455	455	523	4	523	4	527	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
11.957	411	414	1079	5	1079	5	1084	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**

AGREEMENT TABLE

Map Tolerance (1/20th map scale)= 20 Feet

Study Name: *Palo Verde Watershed Detailed Floodplain Delineation Study*
Stream Name : T1S-R6W-S27 and T2N-R6W-S22S

XS NUMBER	XLCH		TOPWIDTH										REMARKS
			FLOODPLAIN					FLOODWAY					
	HEC-RAS	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	
11.879	488	488	804	99	900	3	903	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27** See "NOTE" below.
11.787	466	466	865	64	924	5	929	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27** See "NOTE" below.
11.699	473	473	656	38	691	3	694	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27** See "NOTE" below.
11.609	447	447	474	0	474	0	474	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
11.525	503	503	414	40	452	2	454	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27** See "NOTE" below.
11.429	423	423	518	10	518	10	528	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
11.349	459	459	522	0	522	0	522	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
11.262	488	489	308	-6	308	-6	302	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
11.170	371	375	278	3	278	3	281	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
11.099	431	431	319	2	319	2	321	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
11.018	272	272	426	1	426	1	427	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
10.966	261	261	233	-1	233	-1	232	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
10.917	489	489	252	2	252	2	254	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
10.824	434	434	500	0	500	0	500	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
10.742	408	408	634	73	701	6	707	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27** See "NOTE" below.
10.665	284	282	487	3	487	3	490	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
10.611	381	381	477	1	477	1	478	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
10.539	220	220	385	-5	385	-5	380	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
10.497	397	397	253	0	253	0	253	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
10.422	442	442	333	9	333	9	342	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
10.338	307	313	444	0	444	0	444	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
10.280	55	59	749	76	826	-1	825	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27** See "NOTE" below.
10.270	62	65	822	1	822	1	823	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27** See "NOTE" below.
10.258	231	231	99	296	395	0	395	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27** See "NOTE" below.
10.214	269	270	1882	359	2242	-1	2241	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27** See "NOTE" below.
10.163	369	370	1583	687	2275	-5	2270	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27** See "NOTE" below.
10.093	503	503	2290	11	2301	0	2301	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27** See "NOTE" below.
9.998	300	306	1888	438	2326	0	2326	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27** See "NOTE" below.
9.941	295	295	1183	352	1537	-2	1535	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27** See "NOTE" below.
9.886	315	315	1243	485	1728	0	1728	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27** See "NOTE" below.
9.826	228	228	1571	247	1816	2	1818	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27** See "NOTE" below.

AGREEMENT TABLE

Map Tolerance (1/20th map scale)= 20 Feet

Study Name: *Palo Verde Watershed Detailed Floodplain Delineation Study*
Stream Name : T1S-R6W-S27 and T2N-R6W-S22S

XS NUMBER	XLCH		TOPWIDTH										REMARKS
			FLOODPLAIN					FLOODWAY					
	HEC-RAS	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	
9.783	215	215	1847	128	1999	-24	1975	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27** See "NOTE" below.
9.742	31	31	1731	-88	1947	-304	1643	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
9.736	72	72	981	211	1733	-541	1192	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
9.722	310	310	1856	8	1856	8	1864	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
9.664	435	435	1264	578	1841	1	1842	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27** See "NOTE" below.
9.581	494	494	1104	515	1619	0	1619	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27** See "NOTE" below.
9.488	476	476	1847	190	2035	1	2036	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27** See "NOTE" below.
9.397	419	419	1988	79	2067	0	2067	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27** See "NOTE" below.
9.318	445	445	1889	73	1960	2	1962	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27** See "NOTE" below.
9.234	26	26	1474	417	1892	-1	1891	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27** See "NOTE" below.
9.229	58	58	848	48	895	1	896	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27** See "NOTE" below.
9.218	360	362	1042	82	1125	-1	1124	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27** See "NOTE" below.
9.15	417	419	1057	45	1103	-1	1102	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27** See "NOTE" below.
9.071	314	314	923	27	949	1	950	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27** See "NOTE" below.
9.011	419	419	980	-2	980	-2	978	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
8.932	278	278	1097	221	1315	3	1318	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27** See "NOTE" below.
8.879	265	265	1133	2	1133	3	1135	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
8.829	293	293	928	-4	928	-4	924	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
8.774	260	260	717	0	719	-2	717	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
8.725	306	306	502	0	502	0	502	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
8.667	321	326	486	1	486	1	487	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
8.606	422	426	488	0	488	0	488	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
8.526	313	313	515	1	555	-39	516	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
8.467	238	238	446	75	507	14	521	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27** See "NOTE" below.
8.421	503	503	835	-1	835	-1	834	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
8.326	342	342	689	119	811	-3	808	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27** See "NOTE" below.
8.261	480	485	801	103	904	0	904	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27** See "NOTE" below.
8.171	185	185	727	72	799	0	799	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27** See "NOTE" below.
8.135	323	323	701	98	798	0	798	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27** See "NOTE" below.

AGREEMENT TABLE

Map Tolerance (1/20th map scale)= 20 Feet

Study Name: *Palo Verde Watershed Detailed Floodplain Delineation Study*
Stream Name : T1S-R6W-S27 and T2N-R6W-S22S

XS NUMBER	XLCH		TOPWIDTH										REMARKS
			FLOODPLAIN					FLOODWAY					
	HEC-RAS	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	
8.074	306	305	796	0	796	0	796	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
8.016	511	516	859	0	859	0	859	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
7.92	179	178	676	0	676	0	676	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
7.886	60	60	843	0	843	0	843	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
7.874	158	158	485	13	500	-2	498	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
7.844	371	371	608	7	699	-84	615	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
7.774	374	374	678	0	678	0	678	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
7.703	385	385	573	4	576	1	577	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
7.63	466	466	911	-5	911	-5	906	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
7.542	446	446	906	2	908	0	908	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
7.458	443	443	920	-4	920	-4	916	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
7.374	428	428	912	15	926	1	927	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
7.293	337	329	771	0	771	0	771	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
7.229	391	394	821	37	860	-2	858	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27** See "NOTE" below.
7.155	238	239	988	97	1085	0	1085	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27** See "NOTE" below.
7.11	150	152	846	150	993	3	996	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27** See "NOTE" below.
7.081	223	227	1104	7	1107	4	1111	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27**
7.039	448	448	903	93	912	84	996	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27** See "NOTE" below.
6.954	362	362	518	593	595	516	1111	NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27** See "NOTE" below.
6.886	388	360	682	-682	729	-729		NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27** This cross section was included in the HEC-RAS model to improve the hydraulic analysis. The effective Zone A was kept in the area of this cross section.
6.812	461	464	563	-563	563	-563		NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27** This cross section was included in the HEC-RAS model to improve the hydraulic analysis. The effective Zone A was kept in the area of this cross section.
6.725	306	306	375	-375	375	-375		NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27** This cross section was included in the HEC-RAS model to improve the hydraulic analysis. The effective Zone A was kept in the area of this cross section.
6.667	285	285	54	-54	54	-54		NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27** This cross section was included in the HEC-RAS model to improve the hydraulic analysis. The effective Zone A was kept in the area of this cross section.
6.613			41	-41	41	-41		NA	NA	NA	NA	NA	**Reach Name: T1S-R6W-S27** This cross section was included in the HEC-RAS model to improve the hydraulic analysis. The effective Zone A was kept in the area of this cross section.

NOTE: "HEC-RAS"only reports widths of wetted portions. Small dry islands with elevations less than 1/2 contour interval (1 foot) above the water surface elevation were included in the floodplain (as shown on the workmaps).

T2N-R6W-S02
Agreement Table

AGREEMENT TABLE

Map Tolerance (1/20th map scale)= 20 Feet

Study Name: *Palo Verde Watershed Detailed Floodplain Delineation Study*
Stream Name : T2N-R6W-S02

XS NUMBER	XLCH		TOPWIDTH										REMARKS
			FLOODPLAIN					FLOODWAY					
	HEC-RAS	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	
2.437	505	509	145	2	145	2	147	NA	NA	NA	NA	NA	
2.342	449	449	208	-1	208	-1	207	NA	NA	NA	NA	NA	
2.257	435	436	172	0	172	0	172	NA	NA	NA	NA	NA	
2.174	518	521	214	1	214	1	215	NA	NA	NA	NA	NA	
2.076	385	385	124	0	124	0	124	NA	NA	NA	NA	NA	
2.003	505	515	156	0	156	0	156	NA	NA	NA	NA	NA	
1.907	511	511	160	0	160	0	160	NA	NA	NA	NA	NA	
1.811	490	490	182	1	182	1	182	NA	NA	NA	NA	NA	
1.718	443	443	256	0	256	0	256	NA	NA	NA	NA	NA	
1.634	442	442	183	0	183	0	183	NA	NA	NA	NA	NA	
1.550	400	405	408	0	408	0	408	NA	NA	NA	NA	NA	
1.475	244	244	545	13	558	0	558	NA	NA	NA	NA	NA	See "NOTE" below.
1.428	360	360	698	0	698	0	698	NA	NA	NA	NA	NA	
1.360	25	33	702	0	702	0	702	NA	NA	NA	NA	NA	
1.356	26	29	895	0	895	0	895	NA	NA	NA	NA	NA	
1.351	353	354	813	0	813	0	813	NA	NA	NA	NA	NA	
1.284	472	481	324	47	371	0	371	NA	NA	NA	NA	NA	See "NOTE" below.
1.194	270	270	482	13	495	0	495	NA	NA	NA	NA	NA	See "NOTE" below.
1.143	276	276	593	-1	593	-1	592	NA	NA	NA	NA	NA	
1.091	264	264	814	0	814	0	814	NA	NA	NA	NA	NA	
1.041	338	338	146	0	146	0	146	NA	NA	NA	NA	NA	
0.977	290	296	270	11	281	0	281	NA	NA	NA	NA	NA	
0.922	233	233	522	0	522	0	522	NA	NA	NA	NA	NA	
0.878	300	294	573	1	573	1	574	NA	NA	NA	NA	NA	
0.821	246	250	413	54	463	4	467	NA	NA	NA	NA	NA	See "NOTE" below.
0.774	366	370	317	23	340	0	340	NA	NA	NA	NA	NA	See "NOTE" below.
0.705	233	252	48	0	48	0	48	NA	NA	NA	NA	NA	
0.661	260	257	143	4	147	0	147	NA	NA	NA	NA	NA	
0.612	422	422	112	2	112	2	114	NA	NA	NA	NA	NA	
0.532	471	471	114	5	117	2	119	NA	NA	NA	NA	NA	
0.442	336	336	80	0	80	0	80	NA	NA	NA	NA	NA	
0.379	528	528	183	2	183	2	185	NA	NA	NA	NA	NA	
0.279	418	421	107	0	107	0	107	NA	NA	NA	NA	NA	
0.200	272	277	223	-5	249	-31	218	NA	NA	NA	NA	NA	
0.148	246	245	274	-1	274	-1	273	NA	NA	NA	NA	NA	
0.101	372	378	265	39	299	5	304	NA	NA	NA	NA	NA	Four Mile Wash floodplain limits control this area; therefore, Four Mile wash floodplain is shown in the map.
0.031			168	-18	169	-19	150	NA	NA	NA	NA	NA	Four Mile Wash floodplain limits control this area; therefore, Four Mile wash floodplain is shown in the map.

NOTE: "HEC-RAS"only reports widths of wetted portions. Small dry islands with elevations less than 1/2 contour interval (1 foot) above the water surface elevation were included in the floodplain (as shown on the workmaps).

T2N-R6W-S05E
Agreement Table

AGREEMENT TABLE

Map Tolerance (1/20th map scale)= 20 Feet

Study Name: *Palo Verde Watershed Detailed Floodplain Delineation Study*
Stream Name : T2N-R6W-S05E

XS NUMBER	XLCH		TOPWIDTH										REMARKS
			FLOODPLAIN					FLOODWAY					
	HEC-RAS	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	
4.806	198	201	810	142	945	7	952	NA	NA	NA	NA	NA	See "NOTE" Below.
4.769	286	286	950	106	1046	10	1056	NA	NA	NA	NA	NA	See "NOTE" Below.
4.715	236	236	1189	40	1219	10	1229	NA	NA	NA	NA	NA	See "NOTE" Below.
4.670	239	239	804	7	805	7	811	NA	NA	NA	NA	NA	
4.625	403	403	789	6	789	6	795	NA	NA	NA	NA	NA	
4.548	244	247	725	55	775	5	780	NA	NA	NA	NA	NA	See "NOTE" Below.
4.502	358	358	620	5	620	5	625	NA	NA	NA	NA	NA	
4.434	359	359	705	27	727	5	732	NA	NA	NA	NA	NA	See "NOTE" Below.
4.366	349	349	398	3	398	3	401	NA	NA	NA	NA	NA	
4.300	362	362	627	4	627	4	631	NA	NA	NA	NA	NA	
4.232	311	311	717	5	717	5	722	NA	NA	NA	NA	NA	
4.173	326	333	1036	8	1036	8	1044	NA	NA	NA	NA	NA	
4.111	324	324	611	5	611	5	616	NA	NA	NA	NA	NA	
4.049	261	261	594	4	594	4	598	NA	NA	NA	NA	NA	
4.000	425	425	843	6	843	6	849	NA	NA	NA	NA	NA	
3.920	310	310	960	7	960	7	967	NA	NA	NA	NA	NA	
3.861	323	323	1017	7	1017	7	1024	NA	NA	NA	NA	NA	
3.800	403	403	589	5	589	5	594	NA	NA	NA	NA	NA	
3.724	294	294	772	6	772	6	778	NA	NA	NA	NA	NA	
3.668	217	217	825	5	825	5	830	NA	NA	NA	NA	NA	
3.627	347	347	1075	9	1075	9	1084	NA	NA	NA	NA	NA	
3.561	333	333	969	7	969	7	976	NA	NA	NA	NA	NA	
3.498	399	399	1293	8	1293	8	1301	NA	NA	NA	NA	NA	
3.422	299	299	917	7	917	7	924	NA	NA	NA	NA	NA	
3.366	353	353	662	11	669	4	673	NA	NA	NA	NA	NA	
3.299	299	299	885	6	885	6	891	NA	NA	NA	NA	NA	
3.242	348	348	1008	63	1062	9	1071	NA	NA	NA	NA	NA	See "NOTE" Below.
3.176	388	388	985	38	1015	8	1023	NA	NA	NA	NA	NA	See "NOTE" Below.
3.103	331	335	903	47	943	7	950	NA	NA	NA	NA	NA	See "NOTE" Below.
3.040	494	500	1012	26	1031	7	1038	NA	NA	NA	NA	NA	See "NOTE" Below.
2.947	430	430	799	8	799	8	807	NA	NA	NA	NA	NA	
2.865	362	362	1874	6	1874	6	1880	NA	NA	NA	NA	NA	
2.797	367	367	1663	45	1696	12	1708	NA	NA	NA	NA	NA	See "NOTE" Below; The ineffective area on the right overbank was included in the floodzone to better tie into the upstream floodzone.
2.727	438	438	1324	91	1405	10	1415	NA	NA	NA	NA	NA	See "NOTE" Below; The ineffective area on the right overbank was included in the floodzone to better tie into the upstream floodzone.
2.644	358	358	1171	7	1171	7	1178	NA	NA	NA	NA	NA	
2.576	407	407	1310	12	1314	8	1322	NA	NA	NA	NA	NA	
2.499	377	377	825	15	834	6	840	NA	NA	NA	NA	NA	
2.428	443	443	888	8	888	8	896	NA	NA	NA	NA	NA	
2.344	438	438	750	6	750	6	756	NA	NA	NA	NA	NA	
2.261	425	425	646	5	646	5	651	NA	NA	NA	NA	NA	
2.181	474	474	847	6	847	6	853	NA	NA	NA	NA	NA	
2.091	401	401	806	5	806	5	811	NA	NA	NA	NA	NA	
2.015	442	442	764	5	764	5	769	NA	NA	NA	NA	NA	
1.931	414	414	869	5	869	5	874	NA	NA	NA	NA	NA	
1.853	436	436	761	6	761	6	767	NA	NA	NA	NA	NA	

AGREEMENT TABLE

Map Tolerance (1/20th map scale)= 20 Feet

Study Name: ***Palo Verde Watershed Detailed Floodplain Delineation Study***
Stream Name : **T2N-R6W-S05E**

XS NUMBER	XLCH		TOPWIDTH										REMARKS
			FLOODPLAIN					FLOODWAY					
	HEC-RAS	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	
1.770	395	395	883	8	883	8	891	NA	NA	NA	NA	NA	
1.696	426	426	654	6	654	6	660	NA	NA	NA	NA	NA	
1.615	312	312	438	11	446	3	449	NA	NA	NA	NA	NA	
1.556	398	398	311	3	311	3	314	NA	NA	NA	NA	NA	
1.480	332	332	462	32	491	3	494	NA	NA	NA	NA	NA	See "NOTE" Below.
1.418	266	266	519	20	535	4	539	NA	NA	NA	NA	NA	See "NOTE" Below.
1.367	279	279	483	23	502	4	506	NA	NA	NA	NA	NA	See "NOTE" Below.
1.314	226	226	301	3	387	-83	304	NA	NA	NA	NA	NA	The blocked out area was included in the floodzone; the ineffective area was included in the floodzone on the right overbank; also, the dry area was not included in the floodzone.
1.272	424	424	165	34	198	1	199	NA	NA	NA	NA	NA	See "NOTE" Below; The ineffective area on the right overbank was included in the floodzone to better tie into the upstream floodzone.
1.191	416	421	499	4	499	4	503	NA	NA	NA	NA	NA	
1.112	147	147	284	2	284	2	286	NA	NA	NA	NA	NA	
1.085	159	159	382	3	382	3	385	NA	NA	NA	NA	NA	
1.054	245	245	509	4	509	4	513	NA	NA	NA	NA	NA	
1.008	477	477	779	6	779	6	785	NA	NA	NA	NA	NA	
0.918	81	81	791	22	807	6	813	NA	NA	NA	NA	NA	See "NOTE" Below.
0.902	380	380	261	8	266	3	269	NA	NA	NA	NA	NA	
0.830	385	385	282	2	282	2	284	NA	NA	NA	NA	NA	
0.757	315	315	168	1	168	1	169	NA	NA	NA	NA	NA	
0.698	421	421	143	1	143	1	144	NA	NA	NA	NA	NA	
0.618	359	359	135	1	135	1	136	NA	NA	NA	NA	NA	
0.550	432	432	238	0	238	0	238	NA	NA	NA	NA	NA	
0.468	256	256	314	2	314	2	316	NA	NA	NA	NA	NA	
0.420	376	376	551	4	551	4	555	NA	NA	NA	NA	NA	
0.349	321	321	302	2	302	2	304	NA	NA	NA	NA	NA	The blocked out area was included in the floodzone
0.288	328	328	586	4	586	4	590	NA	NA	NA	NA	NA	
0.226	281	281	628	4	628	4	632	NA	NA	NA	NA	NA	
0.172	349	349	349	1	349	1	350	NA	NA	NA	NA	NA	
0.106	160	160	211	3	208	6	214	NA	NA	NA	NA	NA	
0.076	75	75	258	2	258	2	260	NA	NA	NA	NA	NA	
0.062	164	163	267	26	291	2	293	NA	NA	NA	NA	NA	Wash T2N-R6W-S05W floodplain limits control in this area, therefore, S05W floodplain limits are shown on the map.
0.031			355	-75	355	-75	280	NA	NA	NA	NA	NA	Wash T2N-R6W-S05W floodplain limits control in this area, therefore, S05W floodplain limits are shown on the map.

NOTE: "HEC-RAS"only reports widths of wetted portions. Small dry islands with elevations less than 1/2 contour interval (1 foot) above the water surface elevation were included in the floodplain (as shown on the workmaps).

T2N-R6W-S05N
Agreement Table

AGREEMENT TABLE

Map Tolerance (1/20th map scale)= 20 Feet

Study Name: *Palo Verde Watershed Detailed Floodplain Delineation Study*
Stream Name : T2N-R6W-S05N

XS NUMBER	XLCH		TOPWIDTH										REMARKS
			FLOODPLAIN					FLOODWAY					
	HEC-RAS	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	
3.831	358	350	49	4	53	c	53	N/A	N/A	N/A	N/A	N/A	Floodway not appropriate for this area.
3.763	223	228	71	0	71	0	71	N/A	N/A	N/A	N/A	N/A	Floodway not appropriate for this area.
3.721	241	225	81	0	81	0	81	N/A	N/A	N/A	N/A	N/A	Floodway not appropriate for this area.
3.675	216	212	86	0	86	0	86	N/A	N/A	N/A	N/A	N/A	Floodway not appropriate for this area.
3.635	224	226	68	0	68	0	68	N/A	N/A	N/A	N/A	N/A	Floodway not appropriate for this area.
3.592	243	239	61	1	61	1	62	N/A	N/A	N/A	N/A	N/A	Floodway not appropriate for this area.
3.546	310	306	113	0	113	0	113	N/A	N/A	N/A	N/A	N/A	Floodway not appropriate for this area.
3.487	449	436	110	0	110	0	110	N/A	N/A	N/A	N/A	N/A	Floodway not appropriate for this area.
3.402	276	277	107	0	107	0	107	N/A	N/A	N/A	N/A	N/A	Floodway not appropriate for this area.
3.350	312	312	85	0	85	0	85	N/A	N/A	N/A	N/A	N/A	Floodway not appropriate for this area.
3.291	348	349	143	0	143	0	143	N/A	N/A	N/A	N/A	N/A	Floodway not appropriate for this area.
3.225	217	217	148	0	148	0	148	N/A	N/A	N/A	N/A	N/A	Floodway not appropriate for this area.
3.184	410	409	176	0	176	0	176	N/A	N/A	N/A	N/A	N/A	Floodway not appropriate for this area.
3.106	322	320	212	-1	212	-1	211	N/A	N/A	N/A	N/A	N/A	Floodway not appropriate for this area.
3.045	219	222	216	0	216	0	216	N/A	N/A	N/A	N/A	N/A	Floodway not appropriate for this area.
3.004	280	280	299	-1	299	-1	298	N/A	N/A	N/A	N/A	N/A	Floodway not appropriate for this area.
2.951	383	386	245	0	245	0	245	N/A	N/A	N/A	N/A	N/A	Floodway not appropriate for this area.
2.878	373	373	478	1	478	1	479	N/A	N/A	N/A	N/A	N/A	Floodway not appropriate for this area.
2.808	430	434	375	1	375	1	376	N/A	N/A	N/A	N/A	N/A	Floodway not appropriate for this area.
2.726	397	400	410	1	410	1	411	N/A	N/A	N/A	N/A	N/A	Floodway not appropriate for this area.
2.651	372	405	333	33	366	-1	365	N/A	N/A	N/A	N/A	N/A	Floodplain: See "NOTE" below. Floodway not appropriate for this area.
2.581	504	508	569	-2	569	-2	567	N/A	N/A	N/A	N/A	N/A	Floodway not appropriate for this area.
2.485	451	456	745	17	809	-47	762	N/A	N/A	N/A	N/A	N/A	Floodway not appropriate for this area.

AGREEMENT TABLE

Map Tolerance (1/20th map scale)= 20 Feet

Study Name: *Palo Verde Watershed Detailed Floodplain Delineation Study*
Stream Name : T2N-R6W-S05N

XS NUMBER	XLCH		TOPWIDTH										REMARKS
			FLOODPLAIN					FLOODWAY					
	HEC-RAS	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	
2.4	441	445	970	0	974	-4	970	N/A	N/A	N/A	N/A	N/A	Floodway not appropriate for this area.
2.316	107	109	966	196	1163	-1	1162	104	0	104	0	104	See "NOTE" below.
2.296	303	303	928	84	1013	-1	1012	255	0	255	0	255	See "NOTE" below.
2.239	415	419	877	0	877	0	877	259	5	259	5	264	
2.16	456	463	793	0	793	0	793	220	0	220	0	220	
2.074	324	331	766	0	766	0	766	228	0	228	0	228	
2.012	221	229	648	-3	648	-3	645	181	0	181	0	181	
1.970	30	33	286	-1	286	-1	285	85	1	85	1	86	
1.965	469	469	255	2	260	-3	257	117	0	117	0	117	
1.876	402	385	310	1	310	1	311	147	0	147	0	147	
1.800	460	466	398	-4	398	-4	394	89	2	89	2	91	
1.713	547	559	495	0	495	0	495	174	0	174	0	174	
1.609	348	356	283	1	283	1	284	103	0	103	0	103	
1.543	369	358	340	-3	340	-3	337	95	0	95	0	95	
1.473	333	340	280	-3	280	-3	277	87	0	87	0	87	
1.410	215	220	451	0	451	0	451	116	0	116	0	116	
1.369	431	431	340	-3	340	-3	337	119	0	119	0	119	
1.288	348	352	338	0	338	0	338	92	0	92	0	92	
1.222	411	413	458	1	462	-3	459	192	0	192	0	192	
1.144	585	626	386	3	386	3	389	103	0	103	0	103	Floodplain: See "NOTE" below. Also, the blocked out area was included in the floodzone.
1.033	379	388	248	0	248	0	248	145	1	145	1	146	Floodplain: See "NOTE" below. Also, the blocked out area was included in the floodzone.
0.962	352	380	301	0	301	0	301	109	0	109	0	109	
0.895	462	456	323	33	356	0	356	133	0	133	0	133	See "NOTE" below.
0.807	296	296	306	0	306	0	306	110	0	110	0	110	
0.751	453	457	380	-1	380	-1	379	141	0	141	0	141	

AGREEMENT TABLE

Map Tolerance (1/20th map scale)= 20 Feet

Study Name: *Palo Verde Watershed Detailed Floodplain Delineation Study*
Stream Name : T2N-R6W-S05N

XS NUMBER	XLCH		TOPWIDTH										REMARKS
			FLOODPLAIN					FLOODWAY					
	HEC-RAS	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	
0.665	181	184	514	2	514	2	516	157	-1	157	-1	156	
0.631	210	211	545	3	544	4	548	149	0	149	0	149	
0.591	53	53	438	-1	438	-1	437	158	0	158	0	158	
0.581	71	71	211	0	211	0	211	169	0	169	0	169	
0.568	365	372	449	0	449	0	449	161	0	161	0	161	
0.499	463	468	303	0	303	0	303	143	-19	143	-19	124	
0.411	371	378	500	0	500	0	500	145	0	145	0	145	
0.341	428	430	409	0	409	0	409	143	0	143	0	143	
0.260	448	450	NA	NA	NA	NA	NA	220	0	220	0	220	Floodplain: Wash T2N-R6W-S05W floodplain limits control here, therefore, S05W limits are shown in the map.
0.175	421	422	NA	NA	NA	NA	NA	216	0	216	0	216	Floodplain: Wash T2N-R6W-S05W floodplain limits control here, therefore, S05W limits are shown in the map.
0.095	476	477	NA	NA	NA	NA	NA	N/A	N/A	N/A	NA	N/A	Floodplain: Wash T2N-R6W-S05W floodplain limits control here, therefore, S05W limits are shown in the map.
0.005			NA	NA	NA	NA	NA	N/A	N/A	N/A	NA	N/A	Floodplain: Wash T2N-R6W-S05W floodplain limits control here, therefore, S05W limits are shown in the map.

NOTE: "HEC-RAS"only reports widths of wetted portions. Small dry islands with elevations less than 1/2 contour interval (1 foot) above the water surface elevation were included in the floodplain (as shown on the workmaps).

T2N-R6W-S05S
Agreement Table

AGREEMENT TABLE

Map Tolerance (1/20th map scale)= 20 Feet

Study Name: ***Palo Verde Watershed Detailed Floodplain Delineation Study***
Stream Name : **T2N-R6W-S05S**

XS NUMBER	XLCH		TOPWIDTH										REMARKS
			FLOODPLAIN					FLOODWAY					
	HEC-RAS	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	
0.702	437	437	160	0	160	0	160	NA	NA	NA	NA	NA	
0.620	360	360	292	1	292	1	293	NA	NA	NA	NA	NA	
0.552	420	420	251	0	251	0	251	NA	NA	NA	NA	NA	
0.472	296	300	373	0	373	0	373	NA	NA	NA	NA	NA	
0.416	384	385	127	0	127	0	127	NA	NA	NA	NA	NA	
0.343	300	296	415	0	415	0	415	NA	NA	NA	NA	NA	
0.286	344	344	335	-1	335	-1	334	NA	NA	NA	NA	NA	
0.221	418	418	296	-1	296	-1	295	NA	NA	NA	NA	NA	
0.142	262	262	245	0	245	0	245	NA	NA	NA	NA	NA	
0.093	88	88	111	-111	111	-111		NA	NA	NA	NA	NA	Floodplain limits for T2N-R6W-S05W control this area; therefore, S05W floodplain limits are shown on the map.
0.076			162	-162	162	-162		NA	NA	NA	NA	NA	Floodplain limits for T2N-R6W-S05W control this area; therefore, S05W floodplain limits are shown on the map.

NOTE: "HEC-RAS"only reports widths of wetted portions. Small dry islands with elevations less than 1/2 contour interval (1 foot) above the water surface elevation were included in the floodplain (as shown on the workmaps).

T2N-R6W-S05W
Agreement Table

AGREEMENT TABLE

Map Tolerance (1/20th map scale)= 20 Feet

Study Name: *Palo Verde Watershed Detailed Floodplain Delineation Study*
Stream Name : T2N-R6W-S05W

XS NUMBER	XLCH		TOPWIDTH										REMARKS
			FLOODPLAIN					FLOODWAY					
	HEC-RAS	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	
0.919	389	389	787	0	787	0	787	NA	NA	NA	NA	NA	
0.845	160	161	1082	75	1157	0	1157	NA	NA	NA	NA	NA	See "NOTE" below.
0.815	247	247	1008	0	1008	0	1008	NA	NA	NA	NA	NA	
0.768	340	342	1658	0	1658	0	1658	NA	NA	NA	NA	NA	
0.704	280	280	1341	79	1420	0	1420	NA	NA	NA	NA	NA	See "NOTE" below.
0.651	350	351	1520	23	1543	0	1543	NA	NA	NA	NA	NA	See "NOTE" below.
0.584	322	324	1108	47	1155	0	1155	NA	NA	NA	NA	NA	See "NOTE" below.
0.523	463	467	1002	49	1050	1	1051	NA	NA	NA	NA	NA	Floodplain includes block obstruction.
0.436	375	374	950	0	950	0	950	NA	NA	NA	NA	NA	
0.365	294	294	979	1	979	1	980	NA	NA	NA	NA	NA	
0.309	380	383	821	11	829	3	832	NA	NA	NA	NA	NA	
0.237	164	165	624	196	820	0	820	NA	NA	NA	NA	NA	See "NOTE" below.
0.206	338	338	780	14	794	0	794	NA	NA	NA	NA	NA	See "NOTE" below.
0.142	354	357	534	43	578	-1	577	NA	NA	NA	NA	NA	See "NOTE" below.
0.075	174	170	557	0	557	0	557	NA	NA	NA	NA	NA	
0.042	142	142	638	0	638	0	638	NA	NA	NA	NA	NA	
0.015			953	-953	1147	-1147			0		0		This cross section is not shown on the maps, see TDN for further explanation. Floodplain includes blocked obstructions.

NOTE: "HEC-RAS"only reports widths of wetted portions. Small dry islands with elevations less than 1/2 contour interval (1 foot) above the water surface elevation were included in the floodplain (as shown on the workmaps).

T2N-R6W-S22
Agreement Table

AGREEMENT TABLE

Map Tolerance (1/20th map scale)= 20 Feet

Study Name: ***Palo Verde Watershed Detailed Floodplain Delineation Study***
Stream Name : **T2N-R6W-S22**

XS NUMBER	XLCH		TOPWIDTH										REMARKS
			FLOODPLAIN					FLOODWAY					
	HEC-RAS	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	
2.274	412	403	511	3	511	3	514	NA	NA	NA	NA	NA	
2.196	365	365	932	0	932	0	932	NA	NA	NA	NA	NA	
2.126	502	505	874	2	874	2	876	NA	NA	NA	NA	NA	
2.031	476	476	441	7	447	1	448	NA	NA	NA	NA	NA	
1.941	294	294	294	0	294	0	294	NA	NA	NA	NA	NA	
1.886	298	297	392	2	392	2	394	NA	NA	NA	NA	NA	
1.829	424	424	375	-1	375	-1	374	NA	NA	NA	NA	NA	
1.749	486	486	577	0	577	0	577	NA	NA	NA	NA	NA	
1.657	211	211	547	3	550	0	550	NA	NA	NA	NA	NA	
1.617	416	416	566	-1	566	-1	565	NA	NA	NA	NA	NA	
1.538	297	297	226	0	226	0	226	NA	NA	NA	NA	NA	
1.482	376	376	207	2	207	2	209	NA	NA	NA	NA	NA	
1.411	590	598	211	2	211	2	213	NA	NA	NA	NA	NA	
1.299	424	424	452	0	452	0	452	NA	NA	NA	NA	NA	
1.219	472	472	471	2	471	2	473	NA	NA	NA	NA	NA	
1.129	421	421	256	0	256	0	256	NA	NA	NA	NA	NA	
1.049	516	523	551	4	555	0	555	NA	NA	NA	NA	NA	
0.952	326	326	354	1	354	1	355	NA	NA	NA	NA	NA	
0.890	363	363	354	34	388	0	388	NA	NA	NA	NA	NA	See "NOTE" below.
0.821	319	319	353	23	376	0	376	NA	NA	NA	NA	NA	See "NOTE" below.
0.761	274	274	281	0	281	0	281	NA	NA	NA	NA	NA	
0.709	291	291	318	65	382	1	383	NA	NA	NA	NA	NA	See "NOTE" below.
0.654	369	369	287	1	287	1	288	NA	NA	NA	NA	NA	
0.584	192	192	288	-2	288	-2	286	NA	NA	NA	NA	NA	
0.548	485	485	160	-1	160	-1	159	NA	NA	NA	NA	NA	
0.456	468	468	184	0	184	0	184	NA	NA	NA	NA	NA	
0.367	268	268	279	0	279	0	279	NA	NA	NA	NA	NA	
0.316	222	222	232	-1	232	-1	231	NA	NA	NA	NA	NA	
0.274	286	288	89	1	89	1	90	NA	NA	NA	NA	NA	
0.220	314	318	112	1	112	1	113	NA	NA	NA	NA	NA	
0.161	406	406	234	0	234	0	234	NA	NA	NA	NA	NA	
0.084	443	428	633	141	774	0	774	NA	NA	NA	NA	NA	Four Mile Wash floodplain limits control this area; therefore, Four Mile Wash floodplain is shown in map
0.000			672	0	672	0	672	NA	NA	NA	NA	NA	Four Mile Wash floodplain limits control this area; therefore, Four Mile Wash floodplain is shown in map

NOTE: "HEC-RAS"only reports widths of wetted portions. Small dry islands with elevations less than 1/2 contour interval (1 foot) above the water surface elevation were included in the floodplain (as shown on the workmaps).

T2N-R6W-S28N
Agreement Table

AGREEMENT TABLE

Map Tolerance (1/20th map scale)= 20 Feet

Study Name: Palo Verde Watershed Detailed Floodplain Delineation Study
Stream Name : T2N-R6W-S28N

XS NUMBER	XLCH		TOPWIDTH										REMARKS
			FLOODPLAIN					FLOODWAY					
	HEC-RAS	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	
4.118	392	395	245	6	254	-3	251	NA	NA	NA	NA	NA	
4.043	424	426	269	1	269	1	270	NA	NA	NA	NA	NA	
3.963	374	379	282	2	282	2	284	NA	NA	NA	NA	NA	
3.892	353	352	291	3	291	3	294	NA	NA	NA	NA	NA	
3.825	371	368	382	-2	382	-2	380	NA	NA	NA	NA	NA	
3.755	293	293	285	5	285	5	290	NA	NA	NA	NA	NA	
3.700	461	463	225	3	225	3	228	NA	NA	NA	NA	NA	
3.612	458	459	203	-6	203	-6	197	NA	NA	NA	NA	NA	
3.525	443	446	192	-9	197	-14	183	NA	NA	NA	NA	NA	
3.441	373	376	179	0	179	0	179	NA	NA	NA	NA	NA	
3.371	431	437	124	1	124	1	125	NA	NA	NA	NA	NA	
3.289	420	421	168	7	168	7	175	NA	NA	NA	NA	NA	
3.209	397	400	153	-1	153	-1	152	NA	NA	NA	NA	NA	
3.134	371	374	162	1	162	1	163	NA	NA	NA	NA	NA	
3.064	315	318	236	-2	236	-2	234	NA	NA	NA	NA	NA	
3.004	335	339	128	1	128	1	129	NA	NA	NA	NA	NA	
2.941	373	373	195	3	195	3	198	NA	NA	NA	NA	NA	
2.870	361	364	143	-1	143	-1	142	NA	NA	NA	NA	NA	
2.802	367	367	104	3	104	3	107	NA	NA	NA	NA	NA	
2.732	392	398	271	-5	271	-5	266	NA	NA	NA	NA	NA	
2.658	435	435	200	-2	200	-2	198	NA	NA	NA	NA	NA	
2.576	379	384	312	8	312	8	320	NA	NA	NA	NA	NA	
2.504	386	391	198	-4	198	-4	194	NA	NA	NA	NA	NA	
2.431	427	428	210	2	210	2	212	NA	NA	NA	NA	NA	
2.35	331	331	281	0	281	0	281	NA	NA	NA	NA	NA	
2.287	448	448	288	4	288	4	292	NA	NA	NA	NA	NA	
2.203	389	390	219	-1	219	-1	218	NA	NA	NA	NA	NA	
2.129	344	347	270	2	270	2	272	NA	NA	NA	NA	NA	
2.064	410	412	228	-1	228	-1	227	NA	NA	NA	NA	NA	
1.986	339	340	314	15	314	15	329	NA	NA	NA	NA	NA	
1.922	426	429	385	-2	385	-2	383	NA	NA	NA	NA	NA	
1.841	473	474	242	10	242	10	252	NA	NA	NA	NA	NA	
1.752	403	405	186	-5	186	-5	181	NA	NA	NA	NA	NA	
1.675	454	458	197	-1	197	-1	196	NA	NA	NA	NA	NA	
1.589	447	451	342	4	342	4	346	NA	NA	NA	NA	NA	
1.505	372	375	238	1	238	1	239	NA	NA	NA	NA	NA	
1.434	461	461	221	1	221	1	222	NA	NA	NA	NA	NA	
1.347	438	437	436	14	438	12	450	NA	NA	NA	NA	NA	
1.264	385	389	304	4	304	4	308	NA	NA	NA	NA	NA	
1.191	235	236	299	-3	299	-3	296	NA	NA	NA	NA	NA	
1.146	322	321	359	37	390	6	396	NA	NA	NA	NA	NA	See " NOTE" below.
1.085	382	385	307	3	307	3	310	NA	NA	NA	NA	NA	
1.013	367	367	279	-8	279	-8	271	NA	NA	NA	NA	NA	
0.944	348	351	257	6	257	6	263	NA	NA	NA	NA	NA	
0.878	380	380	384	0	384	0	384	NA	NA	NA	NA	NA	
0.806	253	253	435	-2	435	-2	433	NA	NA	NA	NA	NA	
0.758	34	35	600	17	600	17	617	NA	NA	NA	NA	NA	
0.751	52	51	560	12	615	-43	572	NA	NA	NA	NA	NA	

AGREEMENT TABLE

Map Tolerance (1/20th map scale)= 20 Feet

Study Name: *Palo Verde Watershed Detailed Floodplain Delineation Study*
Stream Name : *T2N-R6W-S28N*

XS NUMBER	XLCH		TOPWIDTH										REMARKS
			FLOODPLAIN					FLOODWAY					
	HEC-RAS	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	
0.741	389	391	336	189	512	13	525	NA	NA	NA	NA	NA	See "NOTE" below.
0.668	239	239	435	5	435	5	440	NA	NA	NA	NA	NA	
0.623	129	131	562	-9	562	-9	553	NA	NA	NA	NA	NA	
0.598	236	238	173	313	206	280	486	NA	NA	NA	NA	NA	See "NOTE" below. Also, blocked are is included in the floodplain.
0.554	390	395	710	1	711	0	711	NA	NA	NA	NA	NA	
0.480	104	107	263	-1	263	-1	262	NA	NA	NA	NA	NA	
0.460	256	256	103	59	162	0	162	NA	NA	NA	NA	NA	See "NOTE" below.
0.412	320	320	113	29	142	0	142	NA	NA	NA	NA	NA	See "NOTE" below.
0.351	265	264	91	7	98	0	98	NA	NA	NA	NA	NA	
0.301	432	431	81	38	119	0	119	NA	NA	NA	NA	NA	See "NOTE" below.
0.219	350	350	103	0	103	0	103	NA	NA	NA	NA	NA	
0.153	305	305	199	0	199	0	199	NA	NA	NA	NA	NA	
0.095	486	486	366	-203	700	-537	163	NA	NA	NA	NA	NA	Four Mile Wash floodplain limits control this area; therefore, Four Mile Wash floodplain limits are shown in the map.
0.003			121	0	121	0	121	NA	NA	NA	NA	NA	Four Mile Wash floodplain limits control this area; therefore, Four Mile Wash floodplain limits are shown in the map.

NOTE: "HEC-RAS"only reports widths of wetted portions. Small dry islands with elevations less than 1/2 contour interval (1 foot) above the water surface elevation were included in the floodplain (as shown on the workmaps).

T2N-R7W-S20W
Agreement Table

AGREEMENT TABLE

Map Tolerance (1/20th map scale)= 20 Feet

Study Name: Palo Verde Watershed Detailed Floodplain Delineation Study
Stream Name : T2N-R7W-S20W

XS NUMBER	XLCH		TOPWIDTH										REMARKS
			FLOODPLAIN					FLOODWAY					
	HEC-RAS	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	
2.035	383	383	182	0	182	0	182	116	-2	116	-2	114	
1.962	416	416	259	3	259	3	262	71	0	71	0	71	
1.883	498	505	205	1	205	1	206	102	1	102	1	103	
1.789	448	448	137	2	137	2	139	67	1	67	1	68	
1.704	453	453	208	2	208	2	210	66	1	66	1	67	
1.618	377	387	296	3	296	3	299	133	1	133	1	134	
1.547	207	215	241	3	241	3	244	86	1	86	1	87	
1.508	347	353	141	2	141	2	143	84	1	84	1	85	
1.442	401	411	124	1	124	1	125	50	1	50	1	51	
1.366	330	339	241	0	241	0	241	117	1	117	1	118	
1.303	422	432	212	4	211	4	215	64	1	64	1	65	
1.223	460	478	49	4	49	4	53	47	2	47	2	49	
1.136	234	239	213	3	213	3	216	87	1	87	1	88	
1.092	242	242	173	3	173	3	175	149	5	149	5	154	
1.046	297	297	222	2	222	2	224	145	2	145	2	147	
0.990	343	343	286	-3	286	-3	283	254	4	254	4	258	
0.925	120	120	66	9	63	12	75	66	5	63	8	71	
0.913	Culvert	Culvert	Culvert	Culvert		Culvert	Culvert	Culvert	Culvert		Culvert	Culvert	I-10 North
0.902	77	77	49	10	49	10	59	49	9	49	9	58	
0.888	45	45	476	-2	475	-1	474	475	-1	475	-1	474	
0.879	129	129	58	8	58	8	66	58	8	58	8	66	
0.868	Culvert	Culvert	Culvert	Culvert		Culvert	Culvert	Culvert	Culvert		Culvert	Culvert	I-10 South
0.855	352	352	67	12	67	12	79	68	4	68	4	72	
0.788	413	422	161	2	161	2	163	74	1	74	1	75	
0.71	288	300	166	2	166	2	168	73	0	73	0	73	
0.655	248	251	197	2	197	2	199	87	7	87	7	94	
0.608	363	369	193	-1	193	-1	192	54	0	52	2	54	
0.54	498	508	211	0	236	-25	211	82	1	81	2	83	
0.445	282	285	132	123	166	89	255	NA	NA	NA	NA	NA	Floodplain limits for T2N-R7W-S20E control this area; therefore, floodplain limits for S20E are shown in the map. Floodway not appropriate here.
0.392	425	432	261	1095	984	372	1356	NA	NA	NA	NA	NA	Floodplain limits for T2N-R7W-S20E control this area; therefore, floodplain limits for S20E are shown in the map. Floodway not appropriate here.
0.312	388	394	251	1101	782	570	1352	NA	NA	NA	NA	NA	Floodplain limits for T2N-R7W-S20E control this area; therefore, floodplain limits for S20E are shown in the map. Floodway not appropriate here.
0.238	261	266	286	945	1049	182	1231	NA	NA	NA	NA	NA	Floodplain limits for T2N-R7W-S20E control this area; therefore, floodplain limits for S20E are shown in the map. Floodway not appropriate here.

AGREEMENT TABLE

Map Tolerance (1/20th map scale)= 20 Feet

Study Name: ***Palo Verde Watershed Detailed Floodplain Delineation Study***
Stream Name : ***T2N-R7W-S20W***

XS NUMBER	XLCH		TOPWIDTH										REMARKS
			FLOODPLAIN					FLOODWAY					
	HEC-RAS	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	
0.189	281	287	512	666	782	396	1178	NA	NA	NA	NA	NA	Floodplain limits for T2N-R7W-S20E control this area; therefore, floodplain limits for S20E are shown in the map. Floodway not appropriate here.
0.135	330	336	316	795	415	696	1111	NA	NA	NA	NA	NA	Floodplain limits for T2N-R7W-S20E control this area; therefore, floodplain limits for S20E are shown in the map. Floodway not appropriate here.
0.073	343	348	296	733	514	515	1029	NA	NA	NA	NA	NA	Floodplain limits for T2N-R7W-S20E control this area; therefore, floodplain limits for S20E are shown in the map. Floodway not appropriate here.
0.008	0		320	272	522	70	592	NA	NA	NA	NA	NA	Floodplain limits for T2N-R7W-S20E control this area; therefore, floodplain limits for S20E are shown in the map. Floodway not appropriate here.

NOTE: "HEC-RAS"only reports widths of wetted portions. Small dry islands with elevations less than 1/2 contour interval (1 foot) above the water surface elevation were included in the floodplain (as shown on the workmaps).

T2N-R7W-S32E
Agreement Table

AGREEMENT TABLE

Map Tolerance (1/20th map scale)= 20 Feet

Study Name: *Palo Verde Watershed Detailed Floodplain Delineation Study*
Stream Name : T2N-R6W-S32E

XS NUMBER	XLCH		TOPWIDTH										REMARKS
			FLOODPLAIN					FLOODWAY					
	HEC-RAS	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	
2.386	61	69	990	0	990	0	990	NA	NA	NA	NA	NA	
2.374	461	464	1036	0	1036	0	1036	NA	NA	NA	NA	NA	
2.287	346	350	1211	0	1211	0	1211	NA	NA	NA	NA	NA	
2.221	375	376	1618	0	1618	0	1618	NA	NA	NA	NA	NA	
2.150	290	292	1343	0	1343	0	1343	NA	NA	NA	NA	NA	
2.095	399	404	1604	0	1604	0	1604	NA	NA	NA	NA	NA	
2.020	340	345	940	282	1219	3	1222	NA	NA	NA	NA	NA	See "NOTE" below.
1.955	495	498	1168	40	1208	0	1208	NA	NA	NA	NA	NA	See "NOTE" below.
1.862	338	344	1111	0	1111	0	1111	NA	NA	NA	NA	NA	
1.798	357	357	1022	7	1029	0	1029	NA	NA	NA	NA	NA	
1.730	352	354	592	0	592	0	592	NA	NA	NA	NA	NA	
1.663	444	446	752	0	752	0	752	NA	NA	NA	NA	NA	
1.579	266	269	1121	0	1121	0	1121	NA	NA	NA	NA	NA	
1.529	308	311	1269	16	1285	0	1285	NA	NA	NA	NA	NA	See "NOTE" below.
1.471	346	346	1650	0	1650	0	1650	NA	NA	NA	NA	NA	
1.405	64	64	1151	205	1356	0	1356	NA	NA	NA	NA	NA	See "NOTE" below.
1.393	62	62	1473	25	1498	0	1498	NA	NA	NA	NA	NA	See "NOTE" below.
1.381	292	291	1055	202	1535	-278	1257	NA	NA	NA	NA	NA	See "NOTE" below; however, east dry width not included in floodplain. Also, blocked obstruction included in floodplain.
1.326	469	472	953	45	998	0	998	NA	NA	NA	NA	NA	See "NOTE" below. Also, blocked obstruction included in floodplain.
1.237	348	349	734	0	734	0	734	NA	NA	NA	NA	NA	
1.171	442	442	543	0	543	0	543	NA	NA	NA	NA	NA	
1.088	453	459	445	84	528	1	529	NA	NA	NA	NA	NA	See "NOTE" below.
1.002	352	353	444	0	444	0	444	NA	NA	NA	NA	NA	
0.935	387	389	646	0	646	0	646	NA	NA	NA	NA	NA	
0.862	405	406	681	0	681	0	681	NA	NA	NA	NA	NA	
0.785	380	380	904	0	904	0	904	NA	NA	NA	NA	NA	
0.713	459	460	681	0	681	0	681	NA	NA	NA	NA	NA	
0.626	590	590	594	-6	594	-6	588	NA	NA	NA	NA	NA	
0.515	402	406	531	1	531	1	532	NA	NA	NA	NA	NA	
0.438	485	489	636	2	636	2	637	NA	NA	NA	NA	NA	
0.347	245	245	411	-1	411	-1	410	NA	NA	NA	NA	NA	
0.300	240	240	358	48	406	0	406	NA	NA	NA	NA	NA	See "NOTE" below.
0.255	307	307	311	0	311	0	311	NA	NA	NA	NA	NA	
0.197	279	280	358	28	387	-1	386	NA	NA	NA	NA	NA	See "NOTE" below.
0.144	332	332	405	0	405	0	405	NA	NA	NA	NA	NA	
0.081	428	431	571	41	612	0	612	NA	NA	NA	NA	NA	See "NOTE" below.
0.000			566	165	715	16	731	NA	NA	NA	NA	NA	See "NOTE" below.

NOTE: "HEC-RAS"only reports widths of wetted portions. Small dry islands with elevations less than 1/2 contour interval (1 foot) above the water surface elevation were included in the floodplain (as shown on the workmaps).

T2N-R7W-S35W
Agreement Table

AGREEMENT TABLE

Map Tolerance (1/20th map scale)= 20 Feet

Study Name: *Palo Verde Watershed Detailed Floodplain Delineation Study*
Stream Name : *T2N-R7W-S35W*

XS NUMBER	XLCH		TOPWIDTH										REMARKS
			FLOODPLAIN					FLOODWAY					
	HEC-RAS	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	
3.752	470	471	1378	49	1427	0	1427	NA	NA	NA	NA	NA	See "NOTE" below.
3.663	290	291	1999	177	2176	0	2176	NA	NA	NA	NA	NA	See "NOTE" below.
3.608	236	234	1851	180	2031	0	2031	NA	NA	NA	NA	NA	See "NOTE" below.
3.563	338	333	2287	363	2650	0	2650	NA	NA	NA	NA	NA	See "NOTE" below.
3.499	281	283	2792	23	2815	0	2815	NA	NA	NA	NA	NA	See "NOTE" below.
3.446	322	322	2847	0	2847	0	2847	NA	NA	NA	NA	NA	
3.385	258	260	3012	69	3081	0	3081	NA	NA	NA	NA	NA	See "NOTE" below.
3.336	493	498	3289	74	3381	-17	3363	NA	NA	NA	NA	NA	Floodplain includes blocked obstructions.
3.243	337	336	3368	309	3677	0	3677	NA	NA	NA	NA	NA	See "NOTE" below.
3.179	275	276	1601	922	2523	0	2523	NA	NA	NA	NA	NA	See "NOTE" below.
3.127	477	481	2205	282	2487	0	2487	NA	NA	NA	NA	NA	See "NOTE" below. Also, floodplain includes blocked obstruciton.
3.037	597	605	2147	260	2407	0	2407	NA	NA	NA	NA	NA	See "NOTE" below.
2.924	429	431	2229	43	2272	0	2272	NA	NA	NA	NA	NA	See "NOTE" below.
2.842	395	395	1805	131	2129	-193	1936	NA	NA	NA	NA	NA	See "NOTE" below.
2.768	388	385	1500	91	1591	0	1591	NA	NA	NA	NA	NA	See "NOTE" below.
2.694	289	292	1230	209	1439	0	1439	NA	NA	NA	NA	NA	See "NOTE" below.
2.639	411	427	1369	3	1373	0	1373	NA	NA	NA	NA	NA	
2.562	398	412	1218	0	1218	0	1218	NA	NA	NA	NA	NA	
2.486	397	399	1294	71	1365	0	1365	NA	NA	NA	NA	NA	Floodplain includes blocked obstruction.
2.411	410	414	1198	12	1210	0	1210	NA	NA	NA	NA	NA	
2.333	399	401	1056	165	1221	0	1221	NA	NA	NA	NA	NA	See "NOTE" below.
2.258	556	557	1900	242	2143	0	2143	NA	NA	NA	NA	NA	See "NOTE" below.
2.152	361	366	1963	160	2123	0	2123	NA	NA	NA	NA	NA	See "NOTE" below.
2.084	504	503	2151	196	2348	0	2348	NA	NA	NA	NA	NA	See "NOTE" below.
1.989	492	493	2310	53	2363	0	2363	NA	NA	NA	NA	NA	Floodplain includes blocked obstruction.
1.895	616	620	2341	24	2365	0	2365	NA	NA	NA	NA	NA	See "NOTE" below.
1.779	347	340	2314	5	2319	0	2319	NA	NA	NA	NA	NA	
1.713	364	369	1874	382	2256	0	2256	NA	NA	NA	NA	NA	See "NOTE" below. Dry island with more than 1 ft evelvation above water surface elevation was includedn in the floodplain due to small surface area.
1.644	316	317	2272	189	2462	0	2462	NA	NA	NA	NA	NA	See "NOTE" below.
1.584	387	385	2285	241	2527	0	2526	NA	NA	NA	NA	NA	See "NOTE" below.
1.511	411	416	2099	15	2114	1	2115	NA	NA	NA	NA	NA	See "NOTE" below.
1.433	397	398	1725	141	1868	-1	1866	NA	NA	NA	NA	NA	See "NOTE" below.
1.358	461	463	1062	187	1249	0	1249	NA	NA	NA	NA	NA	See "NOTE" below.
1.271	411	414	1195	164	1359	0	1359	NA	NA	NA	NA	NA	See "NOTE" below.
1.193	398	401	1533	99	1632	0	1632	NA	NA	NA	NA	NA	See "NOTE" below.
1.117	370	372	1586	55	1641	0	1641	NA	NA	NA	NA	NA	See "NOTE" below.
1.047	434	431	1434	69	1503	0	1503	NA	NA	NA	NA	NA	See "NOTE" below.
0.965	506	511	996	0	996	0	996	NA	NA	NA	NA	NA	
0.869	393	396	771	0	771	0	771	NA	NA	NA	NA	NA	
0.795	336	338	811	20	831	0	831	NA	NA	NA	NA	NA	See "NOTE" below.
0.731	311	308	869	2	869	2	872	NA	NA	NA	NA	NA	
0.672	409	407	970	-3	970	-3	967	NA	NA	NA	NA	NA	
0.595	348	350	1024	122	1146	0	1146	NA	NA	NA	NA	NA	See "NOTE" below.
0.529	529	530	787	0	787	0	787	NA	NA	NA	NA	NA	
0.429	486	487	1055	0	1055	0	1055	NA	NA	NA	NA	NA	
0.337	559	559	1009	17	1027	-1	1026	NA	NA	NA	NA	NA	See "NOTE" below.

AGREEMENT TABLE

Map Tolerance (1/20th map scale)= 20 Feet

Study Name: *Palo Verde Watershed Detailed Floodplain Delineation Study*
Stream Name : *T2N-R7W-S35W*

XS NUMBER	XLCH		TOPWIDTH										REMARKS
			FLOODPLAIN					FLOODWAY					
	HEC-RAS	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	
0.231	383	387	730	0	730	0	730	NA	NA	NA	NA	NA	
0.158	384	403	892	-8	892	-8	884	NA	NA	NA	NA	NA	
0.086	400	391.26	1036	79	1112	3	1115	NA	NA	NA	NA	NA	See "NOTE" below. Also, blocked area due to structure in the middle is included in the floodplain.
0.010	52	47.539	1503	33	1535	0	1535	NA	NA	NA	NA	NA	See "NOTE" below.
0.000			1664	-4	1664	-4	1660	NA	NA	NA	NA	NA	

NOTE: "HEC-RAS"only reports widths of wetted portions. Small dry islands with elevations less than 1/2 contour interval (1 foot) above the water surface elevation were included in the floodplain (as shown on the workmaps).

T3N-R6W-S27W
Agreement Table

AGREEMENT TABLE

Map Tolerance (1/20th map scale)= 20 Feet

Study Name: ***Palo Verde Watershed Detailed Floodplain Delineation Study***
Stream Name : **T3N-R6W-S27W**

XS NUMBER	XLCH		TOPWIDTH										REMARKS
			FLOODPLAIN					FLOODWAY					
	HEC-RAS	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	
1.675	333	335	99	0	99	0	99	NA	NA	NA	NA	NA	
1.612	138	138	61	0	61	0	61	NA	NA	NA	NA	NA	
1.586	367	367	109	0	109	0	109	NA	NA	NA	NA	NA	
1.516	355	355	75	0	75	0	75	NA	NA	NA	NA	NA	
1.449	498	498	105	0	105	0	105	NA	NA	NA	NA	NA	
1.354	299	299	129	0	129	0	129	NA	NA	NA	NA	NA	
1.298	414	414	178	0	178	0	178	NA	NA	NA	NA	NA	
1.219	370	370	206	0	206	0	206	NA	NA	NA	NA	NA	
1.149	208	208	283	0	283	0	283	NA	NA	NA	NA	NA	
1.110	370	373	292	0	292	0	292	NA	NA	NA	NA	NA	
1.040	421	423	865	0	865	0	865	NA	NA	NA	NA	NA	
0.960	332	335	726	0	726	0	726	NA	NA	NA	NA	NA	
0.897	267	266	756	57	813	0	813	NA	NA	NA	NA	NA	See "NOTE" below.
0.847	367	365	688	0	688	0	688	NA	NA	NA	NA	NA	
0.777	327	331	763	0	763	0	763	NA	NA	NA	NA	NA	
0.715	310	310	796	-2	804	-10	794	NA	NA	NA	NA	NA	Dry width is not included in the floodzone
0.656	467	467	946	73	1019	0	1019	NA	NA	NA	NA	NA	See "NOTE" below.
0.568	268	268	992	0	992	0	992	NA	NA	NA	NA	NA	
0.517	301	301	1021	0	1021	0	1021	NA	NA	NA	NA	NA	
0.460	269	269	1044	0	1044	0	1044	NA	NA	NA	NA	NA	
0.409	277	277	1129	0	1129	0	1129	NA	NA	NA	NA	NA	
0.357	412	412	1332	8	1340	0	1340	NA	NA	NA	NA	NA	
0.279	398	398	1720	0	1720	0	1720	NA	NA	NA	NA	NA	
0.203	470	470	1369	22	1391	0	1391	NA	NA	NA	NA	NA	See "NOTE" below.
0.114	219	221	1137	5	1142	0	1142	NA	NA	NA	NA	NA	
0.073			1734	44	1778	0	1778	NA	NA	NA	NA	NA	Wash T2N-R6W-S05E floodplain limits control in this area, therefore, S05E floodplain limits are shown on the map.

NOTE: "HEC-RAS"only reports widths of wetted portions. Small dry islands with elevations less than 1/2 contour interval (1 foot) above the water surface elevation were included in the floodplain (as shown on the workmaps).

T3N-R6W-S32
Agreement Table

AGREEMENT TABLE

Map Tolerance (1/20th map scale)= 20 Feet

Study Name: *Palo Verde Watershed Detailed Floodplain Delineation Study*
Stream Name : T3N-R6W-S32

XS NUMBER	XLCH		TOPWIDTH										REMARKS
			FLOODPLAIN					FLOODWAY					
	HEC-RAS	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	
0.886	273	273	329	0	329	0	329	NA	NA	NA	NA	NA	
0.834	378	378	113	0	113	0	113	NA	NA	NA	NA	NA	
0.762	459	459	229	-1	229	-1	228	NA	NA	NA	NA	NA	
0.675	351	351	283	1	283	1	284	NA	NA	NA	NA	NA	
0.609	233	233	254	0	254	0	254	NA	NA	NA	NA	NA	
0.565	467	467	473	1	473	1	474	NA	NA	NA	NA	NA	
0.476	258	258	251	14	269	-4	265	NA	NA	NA	NA	NA	See "NOTE" below.
0.427	327	327	96	14	110	0	110	NA	NA	NA	NA	NA	See "NOTE" below.
0.366	475	479	90	0	90	0	90	NA	NA	NA	NA	NA	
0.275	256	257	610	20	630	0	630	NA	NA	NA	NA	NA	See "NOTE" below.
0.227	204	204	985	-386	1078	-479	599	NA	NA	NA	NA	NA	Wash T2N-R6W-S05 floodplain limits control this area, therefore, S05 limits are shown on the map.
0.188	215	215	851	-239	977	-365	612	NA	NA	NA	NA	NA	Wash T2N-R6W-S05 floodplain limits control this area, therefore, S05 limits are shown on the map.
0.148	362	366	994	-448	1505	-959	546	NA	NA	NA	NA	NA	Wash T2N-R6W-S05 floodplain limits control this area, therefore, S05 limits are shown on the map.
0.079			388	NA	1327	NA	NA	NA	NA	NA	NA	NA	Wash T2N-R6W-S05 floodplain limits control this area, therefore, S05 limits are shown on the map.

NOTE: "HEC-RAS"only reports widths of wetted portions. Small dry islands with elevations less than 1/2 contour interval (1 foot) above the water surface elevation were included in the floodplain (as shown on the workmaps).

T3N-R6W-S33
Agreement Table

AGREEMENT TABLE

Map Tolerance (1/20th map scale)= 20 Feet

Study Name: *Palo Verde Watershed Detailed Floodplain Delineation Study*
Stream Name : *T3N-R6W-S33*

XS NUMBER	XLCH		TOPWIDTH										REMARKS
			FLOODPLAIN					FLOODWAY					
	HEC-RAS	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	
0.575	174	175.9	285	0	285	0	285	NA	NA	NA	NA	NA	
0.542	376	375.83	240	0	240	0	240	NA	NA	NA	NA	NA	
0.471	358	358.12	231	0	231	0	231	NA	NA	NA	NA	NA	
0.403	343	343.43	201	0	201	0	201	NA	NA	NA	NA	NA	
0.338	352	351.7	217	0	217	0	217	NA	NA	NA	NA	NA	
0.271	342	341.54	295	3	297	1	298	NA	NA	NA	NA	NA	
0.207	346	346.46	214	-1	214	-1	213	NA	NA	NA	NA	NA	
0.141	281	281.65	303	1	303	1	304	NA	NA	NA	NA	NA	
0.088	459	460.08	290	46	336	0	336	NA	NA	NA	NA	NA	See "NOTE" below.
0.001	0	0.8361	236	-236	236	-236		NA	NA	NA	NA	NA	Floodplain limits for T2N-R6W-S05N control this area; therefore, S05N limits are shown in the map.

NOTE: "HEC-RAS"only reports widths of wetted portions. Small dry islands with elevations less than 1/2 contour interval (1 foot) above the water surface elevation were included in the floodplain (as shown on the workmaps).

T3N-R6W-S35
Agreement Table

AGREEMENT TABLE

Map Tolerance (1/20th map scale)= 20 Feet

Study Name: ***Palo Verde Watershed Detailed Floodplain Delineation Study***
Stream Name :**T3N-R6W-S35**

XS NUMBER	XLCH		TOPWIDTH										REMARKS
			FLOODPLAIN					FLOODWAY					
	HEC-RAS	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	
0.676	451	453	740	-143	823	-226	597	151	0	151	0	151	Floodplain: Four Mile Wash floodplain limits control this area; therefore, Four Mile Wash floodplain is shown in the map.
0.590	315	318	671	2	671	2	673	126	1	126	1	127	
0.531	298	298	642	0	642	0	642	140	0	140	0	140	
0.474	255	256	520	4	609	-85	524	96	2	96	2	98	
0.426	387	387	90	9	99	0	99	46	0	46	0	46	
0.353	318	318	82	1	82	1	83	50	0	50	0	50	
0.293	173	173	147	4	151	0	151	66	0	66	0	66	
0.260	193	193	188	7	195	0	195	87	2	89	0	89	
0.223	275	275	131	22	153	0	153	56	0	56	0	56	Floodplain: See "NOTE" below.
0.171	235	235	68	0	68	0	68	41	0	41	0	41	
0.127	149	151	159	0	159	0	159	84	0	84	0	84	
0.098	231	172	103	0	103	0	103	44	0	44	0	44	
0.055	236	237	51	0	51	0	51	NA	NA	NA	NA	NA	
0.010			138	6	143	1	144	NA	NA	NA	NA	NA	

NOTE: "HEC-RAS"only reports widths of wetted portions. Small dry islands with elevations less than 1/2 contour interval (1 foot) above the water surface elevation were included in the floodplain (as shown on the workmaps).

Winters Wash
Agreement Table

AGREEMENT TABLE

Map Tolerance (1/20th map scale)= 20 Feet

Study Name: ***Palo Verde Watershed Detailed Floodplain Delineation Study***
Stream Name **:Winters Wash - With Embankment**

XS NUMBER	XLCH		TOPWIDTH										REMARKS
			FLOODPLAIN					FLOODWAY					
	HEC-RAS	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	
10.295	464	464	313	0	339	-26	313	103	0	103	0	103	
10.207	459	459	523	2	523	2	525	175	0	175	0	175	
10.120	384	384	258	-4	257	-3	254	214	-1	214	-1	213	
10.047	447	447	311	2	311	2	313	211	-1	211	-1	210	
9.962	490	490	1593	133	1731	-5	1726	885	126	1009	2	1011	Floodplain: See "NOTE" below. Floodway: See "NOTE" below.
9.870	365	365	1558	40	1606	-8	1598	985	15	998	2	1000	Floodplain: See "NOTE" below. Floodway: See "NOTE" below.
9.800	437	437	1393	12	1410	-5	1405	865	7	865	7	872	
9.718	434	434	956	-14	947	-5	942	368	3	368	3	371	Floodplain: See "NOTE" below.
9.635	305	305	940	26	966	0	966	277	1	277	1	278	
9.577	447	447	711	40	747	4	751	204	0	204	0	204	Floodplain: See "NOTE" below.
9.493	304	304	255	1	255	1	256	246	0	246	0	246	
9.435	429	429	240	-3	355	-118	237	143	-1	143	-1	142	
9.354	403	403	483	2	483	2	485	373	0	373	0	373	
9.278	464	464	315	-1	322	-8	314	205	0	205	0	205	
9.190	407	407	322	18	340	0	340	176	2	176	2	178	Floodplain: See "NOTE" below.
9.113	461	461	271	0	271	0	271	271	0	271	0	271	
9.026	473	473	396	8	404	0	404	165	0	165	0	165	
8.936	490	490	259	32	290	1	291	158	1	158	1	159	Floodplain: See "NOTE" below.
8.843	295	295	1210	-1	1210	-1	1209	639	-1	639	-1	638	
8.788	177	177	1077	259	1336	0	1336	494	-1	494	-1	493	Floodplain: See "NOTE" below.
8.754	365	365	1424	100	1526	-2	1524	496	1	496	1	497	Floodplain: See "NOTE" below. Also, floodplain includes blocked obstruction.
8.685	444	444	416	3	747	-328	419	258	1	258	1	259	
8.601	367	367	1987	164	2106	45	2151	604	-3	604	-3	601	Floodplain: See "NOTE" below.
8.531	379	379	1551	82	1631	2	1633	942	67	1009	0	1009	Floodplain: See "NOTE" below. Also, floodplain includes blocked obstruction.
8.46	483	483	1977	4	1977	4	1981	1035	1	1035	1	1036	
8.368	477	477	1959	62	2015	6	2021	433	-1	433	-1	432	Floodplain: See "NOTE" below. Also, floodplain includes blocked obstruction.
8.278	444	444	2091	37	2126	2	2128	740	0	740	0	740	Floodplain: See "NOTE" below.
8.193	480	480	2245	34	2279	0	2279	635	-3	635	-3	632	Floodplain: See "NOTE" below.
8.103	485	485	2555	-2	2555	-2	2553	422	2	422	2	424	
8.011	458	458	2411	1	2426	-14	2412	344	2	344	2	346	
7.924	399	399	2971	-1	2971	-1	2970	300	0	300	0	300	
7.848	480	480	397	0	397	0	397	359	-1	359	-1	358	
7.758	475	475	1104	95	1200	-1	1199	255	51	307	-1	306	Floodplain: See "NOTE" below.
7.668	407	407	1232	1	1232	1	1233	465	0	465	0	465	
7.590	443	443	1039	-3	1039	-3	1036	505	-1	505	-1	504	
7.507	315	315	1623	63	1689	-3	1686	465	0	465	0	465	Floodplain: See "NOTE" below.
7.447	185	185	1445	9	1457	-3	1454	684	-1	684	-1	683	
7.412	242	242	1107	100	1210	-3	1207	525	0	525	0	525	Island higher than 1 ft above floodplain, but relatively small in area; therefore, the island was included in the floodplain.

AGREEMENT TABLE

Map Tolerance (1/20th map scale)= 20 Feet

Study Name: *Palo Verde Watershed Detailed Floodplain Delineation Study*
Stream Name :Winters Wash - With Embankment

XS NUMBER	XLCH		TOPWIDTH										REMARKS
			FLOODPLAIN					FLOODWAY					
	HEC-RAS	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	
7.366	417	417	1127	21	1149	-1	1148	567	-3	567	-3	564	Floodplain: See "NOTE" below.
7.287	396	396	1282	17	1300	-1	1299	548	1	548	1	549	Floodplain: See "NOTE" below.
7.212	438	438	1038	-1	1038	-1	1037	619	0	619	0	619	
7.129	442	442	2585	83	2670	-2	2668	844	-1	844	-1	843	Floodplain: See "NOTE" below.
7.045	458	458	2527	48	2574	1	2575	745	0	745	0	745	Floodplain: See "NOTE" below.
6.959	456	456	2724	-3	2724	-3	2721	837	0	837	0	837	
6.872	438	438	2136	142	2275	3	2278	674	0	674	0	674	Floodplain: See "NOTE" below.
6.789	434	434	2739	178	2908	9	2917	652	0	652	0	652	Floodplain: See "NOTE" below.
6.707	433	433	2519	167	2688	-2	2686	614	0	614	0	614	Floodplain: See "NOTE" below.
6.625	432	432	3020	95	3105	10	3115	666	0	666	0	666	Floodplain: See "NOTE" below.
6.543	422	422	2755	47	2802	0	2802	595	0	595	0	595	Floodplain: See "NOTE" below.
6.463	480	480	2810	27	2835	2	2837	581	0	581	0	581	Floodplain: See "NOTE" below.
6.372	441	441	2847	-3	2847	-3	2844	620	0	620	0	620	
6.289	360	360	2485	57	2543	-1	2542	547	0	547	0	547	Floodplain: See "NOTE" below.
6.220	309	309	3070	80	3153	-3	3150	711	0	711	0	711	Floodplain: See "NOTE" below.
6.162	458	458	2885	93	2979	-1	2978	669	0	669	0	669	Floodplain: See "NOTE" below.
6.075	312	312	706	1	706	1	707	563	0	563	0	563	
6.016	464	464	770	3	770	3	773	427	0	427	0	427	
5.928	388	388	844	-2	844	-2	842	488	0	488	0	488	
5.855	465	465	786	13	799	0	799	495	0	495	0	495	
5.767	431	431	987	0	987	0	987	498	0	498	0	498	
5.685	376	376	986	-1	986	-1	985	648	0	648	0	648	
5.614	99	99	525	371	895	1	896	396	54	450	0	450	Floodplain: See "NOTE" below. Floodway: See "NOTE" below.
5.595	431	431	894	57	950	1	951	473	6	479	0	479	Floodplain: See "NOTE" below.
5.513	468	468	964	25	994	-5	989	519	0	519	0	519	Floodplain: See "NOTE" below.
5.425	471	471	1318	64	1386	-4	1382	545	-1	545	-1	544	Floodplain: See "NOTE" below.
5.336	387	387	857	96	953	0	953	563	-3	563	-3	560	
5.262	328	328	861	1	861	1	862	NA	NA	NA	NA	NA	Floodway not appropriate here.
5.200	438	438	953	2	953	2	955	NA	NA	NA	NA	NA	Floodway not appropriate here.
5.117	488	488	1161	51	1213	-1	1212	NA	NA	NA	NA	NA	Floodplain: See "NOTE" below. Floodway not appropriate here.
5.025	381	381	1210	0	1210	0	1210	NA	NA	NA	NA	NA	Floodway not appropriate here.
4.953	382	382	3376	503	4069	-190	3879	NA	NA	NA	NA	NA	Floodplain: See "NOTE" below. Floodway not appropriate here.
4.88	429	429	3617	573	4188	2	4190	NA	NA	NA	NA	NA	Floodplain: See "NOTE" below. Floodway not appropriate here.
4.799	494	494	3990	54	4044	0	4044	NA	NA	NA	NA	NA	Floodplain: See "NOTE" below. Floodway not appropriate here.
4.705	410	410	3587	68	3656	-1	3655	NA	NA	NA	NA	NA	Floodplain: See "NOTE" below. Floodway not appropriate here.
4.628	432	432	3515	-1	3515	-1	3514	NA	NA	NA	NA	NA	Floodway not appropriate here.
4.546	479	479	3319	142	3460	1	3461	NA	NA	NA	NA	NA	Floodplain: See "NOTE" below. Floodway not appropriate here.
4.455	499	499	3127	173	3300	0	3300	NA	NA	NA	NA	NA	Floodplain: See "NOTE" below. Floodway not appropriate here.

AGREEMENT TABLE

Map Tolerance (1/20th map scale)= 20 Feet

Study Name: *Palo Verde Watershed Detailed Floodplain Delineation Study*
Stream Name : Winters Wash - With Embankment

XS NUMBER	XLCH		TOPWIDTH										REMARKS
			FLOODPLAIN					FLOODWAY					
	HEC-RAS	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	
4.36	451	451	3062	372	3435	-1	3434	NA	NA	NA	NA	NA	Floodplain: See "NOTE" below. Floodway not appropriate here.
4.275	478	478	3439	103	3544	-2	3542	NA	NA	NA	NA	NA	Floodplain: See "NOTE" below. Floodway not appropriate here.
4.185	462	462	3501	90	3590	1	3591	NA	NA	NA	NA	NA	Floodplain: See "NOTE" below. Floodway not appropriate here.
4.097	483	483	3387	54	3450	-9	3441	NA	NA	NA	NA	NA	Floodplain: See "NOTE" below. Floodway not appropriate here.
4.005	461	461	2857	21	2865	13	2878	NA	NA	NA	NA	NA	Floodplain: See "NOTE" below. Floodway not appropriate here.
3.918	497	497	2401	71	2471	1	2472	NA	NA	NA	NA	NA	Floodplain: See "NOTE" below. Floodway not appropriate here.
3.824	420	420	3596	0	3600	-4	3596	NA	NA	NA	NA	NA	Floodway not appropriate here.
3.744	321	321	2938	-5	2938	-5	2933	NA	NA	NA	NA	NA	Floodway not appropriate here.
3.684	466	466	2960	-192	2960	-192	2768	NA	NA	NA	NA	NA	Floodplain: Without embankment model controls west side of floodplain; therefore, top widths do not match. Floodway not appropriate here.
3.595	446	446	2725	-181	2725	-181	2544	NA	NA	NA	NA	NA	Floodplain: Without embankment model controls west side of floodplain; therefore, top widths do not match. Floodway not appropriate here.
3.511	444	444	2666	396	2666	396	3062	NA	NA	NA	NA	NA	Floodplain: Without embankment model controls west side of floodplain; therefore, top widths do not match. Floodway not appropriate here.
3.427	499	499	2740	-129	2744	-133	2611	NA	NA	NA	NA	NA	Floodplain: Without embankment model controls west side of floodplain; therefore, top widths do not match. Floodway not appropriate here.
3.332	461	461	2100	172	2100	172	2272	NA	NA	NA	NA	NA	Floodplain: Without embankment model controls west side of floodplain; therefore, top widths do not match. Floodway not appropriate here.
3.245	484	484	1114	27	1114	27	1141	NA	NA	NA	NA	NA	Floodplain: Without embankment model controls west side of floodplain; therefore, top widths do not match. Floodway not appropriate here.
3.153	472	472	864	184	864	184	1048	NA	NA	NA	NA	NA	Floodplain: Without embankment model controls west side of floodplain; therefore, top widths do not match. Floodway not appropriate here.
3.064	467	467	1854	79	1854	79	1933	NA	NA	NA	NA	NA	Floodplain: Without embankment model controls west side of floodplain; therefore, top widths do not match. Floodway not appropriate here.
2.975	423	423	1969	35	1969	35	2004	NA	NA	NA	NA	NA	Floodplain: Without embankment model controls west side of floodplain; therefore, top widths do not match. Floodway not appropriate here.
2.895	370	370	1000	258	1000	258	1258	NA	NA	NA	NA	NA	Floodplain: Without embankment model controls west side of floodplain; therefore, top widths do not match. Floodway not appropriate here.

AGREEMENT TABLE

Map Tolerance (1/20th map scale)= 20 Feet

Study Name: ***Palo Verde Watershed Detailed Floodplain Delineation Study***
Stream Name : **Winters Wash - With Embankment**

XS NUMBER	XLCH		TOPWIDTH										REMARKS
			FLOODPLAIN					FLOODWAY					
	HEC-RAS	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	
2.825	392	392	1256	-46	1256	-46	1210	NA	NA	NA	NA	NA	Floodplain: Without embankment model controls west side of floodplain; therefore, top widths do not match. Floodway not appropriate here.
2.751	383	383	1200	-202	1200	-202	998	NA	NA	NA	NA	NA	Floodplain: Without embankment model controls west side of floodplain; therefore, top widths do not match. Floodway not appropriate here.
2.678	141	141	2253	-1218	2253	-1218	1035	NA	NA	NA	NA	NA	Floodplain: Without embankment model controls west side of floodplain; therefore, top widths do not match. Floodway not appropriate here.
2.652	263	263	1458	NA	1458	NA	NA	NA	NA	NA	NA	NA	Floodplain: Limits of study end at Elliot Road. Cross section is south of Elliot Road, therefore no floodplain is shown in the map.
2.602			1130	NA	1130	NA	NA	NA	NA	NA	NA	NA	Floodplain: Limits of study end at Elliot Road. Cross section is south of Elliot Road, therefore no floodplain is shown in the map.

NOTE: "HEC-RAS"only reports widths of wetted portions. Small dry islands with elevations less than 1/2 contour interval (1 foot) above the water surface elevation were included in the floodplain (as shown on the workmaps).

AGREEMENT TABLE

Map Tolerance (1/20th map scale)= 20 Feet

Study Name: ***Palo Verde Watershed Detailed Floodplain Delineation Study***
Stream Name : **Winters Wash**

XS NUMBER	XLCH		TOPWIDTH										REMARKS
			FLOODPLAIN					FLOODWAY					
	HEC-RAS	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	HEC-RAS w/out Dry Areas	Diff. (Map vs. w/out)	HEC-RAS with Dry Areas	Diff. (Map vs. with)	MAP	
3.520	215	214	2882	109	2882	109	2991	NA	NA	NA	NA	NA	With embankment model controls east side of floodplain; therefore, top widths do not match.
3.479	205	205	2520	121	2602	39	2641	NA	NA	NA	NA	NA	See "NOTE" below. Also, with embankment model controls east side of floodplain; therefore, top widths do not match.
3.440	204	204	2606	90	2667	29	2696	NA	NA	NA	NA	NA	See "NOTE" below. Also, with embankment model controls east side of floodplain; therefore, top widths do not match.
3.401	320	320	2584	262	2660	186	2846	NA	NA	NA	NA	NA	See "NOTE" below. Also, with embankment model controls east side of floodplain; therefore, top widths do not match.
3.341	373	372	2632	55	2632	55	2687	NA	NA	NA	NA	NA	With embankment model controls east side of floodplain; therefore, top widths do not match.
3.270	482	482	2670	-1	2670	-1	2669	NA	NA	NA	NA	NA	
3.179	421	422	2831	18	2835	14	2849	NA	NA	NA	NA	NA	
3.099	466	465	3033	49	3048	34	3082	NA	NA	NA	NA	NA	With embankment model controls east side of floodplain; therefore, top widths do not match.
3.011	428	430	3649	74	3673	50	3723	NA	NA	NA	NA	NA	With embankment model controls east side of floodplain; therefore, top widths do not match.
2.930	456	455	3623	47	3650	20	3670	NA	NA	NA	NA	NA	See "NOTE" below. Also, with embankment model controls east side of floodplain; therefore, top widths do not match.
2.844	475	475	2560	69	2581	48	2629	NA	NA	NA	NA	NA	See "NOTE" below. Also, with embankment model controls east side of floodplain; therefore, top widths do not match.
2.754	398	398	2526	42	2561	7	2568	NA	NA	NA	NA	NA	See "NOTE" below.
2.678	141	140	2028	8	2028	8	2036	NA	NA	NA	NA	NA	
2.652	263	263	2135	-2135	2165	-2165		NA	NA	NA	NA	NA	Floodplain: Limits of study end at Elliot Road. Cross section is south of Elliot Road, therefore no floodplain is shown in the map.
2.602			1424	-1424	1450	-1450		NA	NA	NA	NA	NA	Floodplain: Limits of study end at Elliot Road. Cross section is south of Elliot Road, therefore no floodplain is shown in the map.

NOTE: "HEC-RAS"only reports widths of wetted portions. Small dry islands with elevations less than 1/2 contour interval (1 foot) above the water surface elevation were included in the floodplain (as shown on the workmaps).