APPENDIX E
FLOOD CONTAINMENT CAPACITY ANALYSIS

Following completion of the Reformulation of Alternatives Report (Parsons 2003), the HEC-RAS hydraulic model was modified to recalculate flood containment capacity of the RGCP. The updated model simulated a floodway vegetation growth that, while greater that current conditions, represents a significant reduction to those conditions simulated during preparation of the Alternatives Formulation Report (Parsons 2001a). Relative to previously simulated conditions, the extent that vegetation would be allowed to grow was minimized in the southern reach of the RGCP.

Table E-1 lists modified roughness coefficients relative to values originally used in the 1996 USACE model. Individual cross-sections used in model are identified by River mile, the distance from American Dam in El Paso. For the banks, coefficient changes were made to simulate development of native grasslands (n=0.04) and cottonwoods (n=0.15) along the riparian corridor at selected RGCP locations. No changes were made in the river channel coefficients (n=0.02) relative to the 1996 simulations. Results of the flood containment analysis are discussed in Section 4.2 of the DEIS.

Table E-2 compares results of the current conditions, as simulated by USACE in 1996), and as modified conditions simulating vegetation growth. A solid bar indicates sections of the RGCO where levees are present. The center column indicates the potential increase in water elevation as a result the increase in vegetation growth (roughness coefficient). Sections of the RGCP where the simulated freeboard is less that 3 feet (the design value above the maximum water elevation for the 100-year flood) are highlighted.

Table E-1 Changes in Floodway Roughness Coefficients

Site	Miles from Am. Dam	Roughness Coefficient (Manning's "n")							
		Original Coefficient (USACE 1996)			Modified Coefficient (Parsons 2003)				
		Left Bank	Channel	Right Bank	Left Bank	Channel	Right Bank		
UPPER RINCON RIVER MANAGEMENT UNIT									
Oxbow	104.7	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.04
Restoration	104.6	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.04
	104.5	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.04
Tripton	103.8	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	
Arroyo	103.7	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	
	103.6	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.15
Trujillo	103.3	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.15
Arroyo	103.2	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.15
	103.1	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.15
	103.0	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.15
	102.9	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.15
	102.7	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.15
	102.7	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.15
	102.6	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.15
	102.5	0.035	**0.02**	0.035	0.15	0.15	**0.02**	0.15	0.15
	102.3	0.035	**0.02**	0.035	0.15	0.15	**0.02**	0.15	0.15
	102.2	0.035	**0.02**	0.035	0.15	0.15	**0.02**	0.15	0.15
	102.1	0.035	**0.02**	0.035	0.15	0.15	**0.02**	0.15	0.15
	102.0	0.035	**0.02**	0.035	0.15	0.15	**0.02**	0.15	0.15
	101.9	0.035	**0.02**	0.035	0.15	0.15	**0.02**	0.15	0.15
	101.8	0.035	**0.02**	0.035	0.15	0.15	**0.02**	0.15	0.15
	101.7	0.035	**0.02**	0.035	0.15	0.15	**0.02**	0.15	0.15

Site	Miles from Am. Dam	Roughness Coefficient (Manning's "n")							
		Original Coefficient (USACE 1996)			Modified Coefficient (Parsons 2003)				
		Left Bank	Channel	Right Bank	Left Bank		Channel	Right Bank	
Montoya	101.6	0.035	**0.02**	0.035	0.15	0.15	**0.02**	0.15	0.15
Arroyo	101.4	0.03	**0.02**	0.03	0.15	0.15	**0.02**	0.15	0.15
	101.3	0.03	**0.02**	0.03	0.15	0.15	**0.02**	0.15	0.15
	101.2	0.03	**0.02**	0.03	0.15	0.15	**0.02**	0.15	0.15
	101.1	0.03	**0.02**	0.03	0.15	0.15	**0.02**	0.15	0.15
Holguin	100.9	0.03	**0.02**	0.03	0.15	0.15	**0.02**	0.15	
Arroyo	100.9	0.03	**0.02**	0.03	0.15	0.15	**0.02**	0.15	0.04
	100.8	0.03	**0.02**	0.03	0.15	0.15	**0.02**	0.15	0.04
	100.7	0.03	**0.02**	0.03	0.15	0.15	**0.02**	0.15	0.04
	100.6	0.03	**0.02**	0.03	0.15	0.15	**0.02**	0.15	0.04
Green/	99.9	0.03	**0.02**	0.03	0.15	0.15	**0.02**	0.15	0.15
Tierra	99.8	0.03	**0.02**	0.03	0.15	0.15	**0.02**	0.15	0.15
Blanca	99.6	0.03	**0.02**	0.03	0.15	0.15	**0.02**	0.15	0.15
Arroyos	99.5	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.15
	99.4	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.15
	99.4	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.15
	99.2	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.15
	99.1	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.15
	98.9	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.04
	98.8	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.04
	98.7	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.04
	98.6	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.04
	98.5	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.04
Sibley	98.4	0.03	**0.02**	0.03	0.04	0.04	**0.02**	0.03	0.03
Arroyo	98.3	0.03	**0.02**	0.03	0.04	0.04	**0.02**	0.03	0.03
	98.2	0.03	**0.02**	0.03	0.04	0.04	**0.02**	0.03	0.03
	98.1	0.03	**0.02**	0.03	0.04	0.04	**0.02**	0.03	0.03
	98.0	0.03	**0.02**	0.03	0.04	0.04	**0.02**	0.03	0.03
	97.9	0.03	**0.02**	0.03	0.04	0.04	**0.02**	0.03	0.03
	97.8	0.03	**0.02**	0.03	0.04	0.04	**0.02**	0.03	0.03
	97.7	0.03	**0.02**	0.03	0.04	0.04	**0.02**	0.03	0.03
	97.6	0.03	**0.02**	0.03	0.04	0.04	**0.02**	0.03	0.03
Jaralosa	97.5	0.03	**0.02**	0.03	0.04	0.04	**0.02**	0.15	
Arroyo	97.4	0.03	**0.02**	0.03	0.04	0.04	**0.02**	0.15	
	97.3	0.03	**0.02**	0.03	0.04	0.04	**0.02**	0.15	
	97.3	0.03	**0.02**	0.03	0.04	0.04	**0.02**	0.15	
	97.2	0.03	**0.02**	0.03	0.04	0.04	**0.02**	0.15	
	97.1	0.03	**0.02**	0.03	0.04	0.04	**0.02**	0.15	
	97.0	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	
	96.9	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	
	96.8	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	
	96.6	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	
	96.5	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	
	96.3	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	
	96.2	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	
	96.0	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	
	95.8	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	
	95.7	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	
	95.6	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	
	95.5	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	

Site	Miles from Am. Dam	Roughness Coefficient (Manning's "n")							
		Original Coefficient (USACE 1996)			Modified Coefficient (Parsons 2003)				
		Left Bank	Channel	Right Bank	Left Bank		Channel	Right Bank	
	95.5	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	
	95.4	0.03	**0.02**	0.03	0.15	0.15	**0.02**	0.15	
	95.3	0.03	**0.02**	0.03	0.15	0.15	**0.02**	0.15	
	95.2	0.03	**0.02**	0.03	0.15	0.15	**0.02**	0.15	
	95.1	0.03	**0.02**	0.03	0.15	0.15	**0.02**	0.15	0.15
	95.0	0.03	**0.02**	0.03	0.15	0.15	**0.02**	0.15	
	94.9	0.03	**0.02**	0.03	0.15	0.15	**0.02**	0.15	0.15
	94.8	0.03	**0.02**	0.03	0.15	0.15	**0.02**	0.15	0.15
	94.7	0.03	**0.02**	0.03	0.15	0.15	**0.02**	0.15	0.15
	94.6	0.03	**0.02**	0.03	0.15	0.15	**0.02**	0.15	0.15
Yeso	94.2	0.03	**0.02**	0.03	0.15	0.15	**0.02**	0.15	0.15
Arroyo	94.1	0.03	**0.02**	0.03	0.15	0.15	**0.02**	0.15	0.15
	94.0	0.03	**0.02**	0.03	0.15	0.15	**0.02**	0.15	0.15
	93.8	0.03	**0.02**	0.03	0.15	0.15	**0.02**	0.15	0.04
	93.8	0.03	**0.02**	0.03	0.15	0.15	**0.02**	0.15	0.04
	93.7	0.03	**0.02**	0.03	0.15	0.15	**0.02**	0.15	0.04
	93.6	0.03	**0.02**	0.03	0.15	0.15	**0.02**	0.15	0.04
	93.5	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.04
	93.4	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.04
	93.3	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.04
	93.2	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.04
Crow	92.6	0.03	**0.02**	0.03	0.15	0.15	**0.02**	0.15	
Canyon	92.4	0.03	**0.02**	0.03	0.15	0.15	**0.02**	0.15	
	92.3	0.03	**0.02**	0.03	0.15	0.15	**0.02**	0.15	
	92.2	0.03	**0.02**	0.03	0.15	0.15	**0.02**	0.15	
	92.1	0.03	**0.02**	0.03	0.15	0.15	**0.02**	0.15	
	92.0	0.03	**0.02**	0.03	0.15	0.15	**0.02**	0.15	
	91.9	0.03	**0.02**	0.03	0.15	0.15	**0.02**	0.15	
	91.8	0.03	**0.02**	0.03	0.15	0.15	**0.02**	0.15	
	91.7	0.03	**0.02**	0.03	0.15	0.15	**0.02**	0.15	
	91.6	0.03	**0.02**	0.03	0.15	0.15	**0.02**	0.15	
	91.5	0.03	**0.02**	0.03	0.15	0.15	**0.02**	0.15	
	91.3	0.03	**0.02**	0.03	0.15	0.15	**0.02**	0.15	
	91.2	0.03	**0.02**	0.03	0.15	0.15	**0.02**	0.15	
	91.1	0.03	**0.02**	0.03	0.15	0.15	**0.02**	0.15	
	91.0	0.03	**0.02**	0.03	0.15	0.15	**0.02**	0.15	
	90.9	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	
	90.7	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	
	90.6	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	
	90.5	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	
	90.4	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	
LOWER RINCON RIVER MANAGEMENT UNIT									
Hatch	90.3	0.03	**0.02**	0.03	0.03	0.03	**0.02**	0.04	
Siphon	90.2	0.03	**0.02**	0.03	0.03	0.03	**0.02**	0.04	
	90.2	0.03	**0.02**	0.03	0.03	0.03	**0.02**	0.04	
	90.2	0.03	**0.02**	0.03	0.03	0.03	**0.02**	0.04	
	90.2	0.03	**0.02**	0.03	0.03	0.03	**0.02**	0.04	
	90.2	0.03	**0.02**	0.03	0.03	0.03	**0.02**	0.04	0.04
	90.1	0.03	**0.02**	0.03	0.03	0.03	**0.02**	0.04	0.04
	90.1	0.03	**0.02**	0.03	0.03	0.03	**0.02**	0.04	0.04

Site	Miles from Am. Dam	Roughness Coefficient (Manning's "n")							
		Original Coefficient (USACE 1996)			Modified Coefficient (Parsons 2003)				
		Left Bank	Channel	Right Bank	Left Bank		Channel	Right Bank	
	90.1	0.03	**0.02**	0.03	0.03	0.03	**0.02**	0.04	0.04
	89.9	0.03	**0.02**	0.03	0.03	0.03	**0.02**	0.04	0.04
	89.9	0.03	**0.02**	0.03	0.03	0.03	**0.02**	0.04	0.04
Wetlands	88.7	0.03	**0.02**	0.03	0.03	0.03	**0.02**	0.04	0.04
Unit A	88.6	0.03	**0.02**	0.03	0.03	0.03	**0.02**	0.04	0.04
	88.5	0.03	**0.02**	0.03	0.03	0.03	**0.02**	0.04	0.04
	88.4	0.03	**0.02**	0.03	0.03	0.03	**0.02**	0.04	0.04
	88.4	0.03	**0.02**	0.03	0.03	0.03	**0.02**	0.04	0.04
Wetlands	87.5	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.04
Unit B	87.4	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.04
	87.3	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.04
	87.2	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.04
	87.1	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.04
Garfield	86.3	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.04
Drain	86.2	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.04
	86.1	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.04
	85.9	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.04
Placitas	85.4	0.03	**0.02**	0.03	0.03	0.03	**0.02**	0.03	0.03
Arroyo	85.3	0.03	**0.02**	0.03	0.03	0.03	**0.02**	0.03	0.03
	85.2	0.03	**0.02**	0.03	0.03	0.03	**0.02**	0.03	0.03
	85.1	0.03	**0.02**	0.03	0.03	0.03	**0.02**	0.03	0.03
	85.0	0.03	**0.02**	0.03	0.03	0.03	**0.02**	0.04	0.04
	84.9	0.03	**0.02**	0.03	0.03	0.03	**0.02**	0.04	0.04
	84.8	0.03	**0.02**	0.03	0.04	0.04	**0.02**	0.04	0.04
	84.8	0.03	**0.02**	0.03	0.04	0.04	**0.02**	0.04	0.04
	84.7	0.03	**0.02**	0.03	0.04	0.04	**0.02**	0.04	0.04
	84.6	0.03	**0.02**	0.03	0.04	0.04	**0.02**	0.04	0.04
	84.5	0.03	**0.02**	0.03	0.04	0.04	**0.02**	0.04	0.04
	84.4	0.03	**0.02**	0.03	0.04	0.04	**0.02**	0.04	0.04
Remnant	83.2	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.15
Bosque/	83.1	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.15
Rincon	83.0	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.15
	83.0	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.15
	82.9	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.15
	82.8	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.15
	82.7	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.15
	82.6	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.03	0.03
	82.5	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.03	0.03
	82.4	0.03	**0.02**	0.03	0.04	0.04	**0.02**	0.03	0.03
	82.3	0.03	**0.02**	0.03	0.04	0.04	**0.02**	0.03	0.03
	82.2	0.03	**0.02**	0.03	0.04	0.04	**0.02**	0.03	0.03
	82.1	0.03	**0.02**	0.03	0.04	0.04	**0.02**	0.03	0.03
Angostura	80.9	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.04
Arroyo	80.8	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.04
	80.7	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.04
	80.6	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.04
	80.5	0.03	**0.02**	0.03	0.04	0.03	**0.02**	0.04	0.04
	80.4	0.03	**0.02**	0.03	0.04	0.03	**0.02**	0.04	0.04
	80.3	0.03	**0.02**	0.03	0.04	0.03	**0.02**	0.04	0.04
	80.2	0.03	**0.02**	0.03	0.04	0.03	**0.02**	0.04	

Site	Miles from Am. Dam	Roughness Coefficient (Manning's "n")							
		Original Coefficient (USACE 1996)			Modified Coefficient (Parsons 2003)				
		Left Bank	Channel	Right Bank	Left Bank		Channel	Right Bank	
	80.0	0.03	**0.02**	0.03	0.04	0.03	**0.02**	0.04	0.04
	79.9	0.03	**0.02**	0.03	0.04	0.03	**0.02**	0.04	0.04
	79.8	0.03	**0.02**	0.03	0.04	0.03	**0.02**	0.04	0.04
Rincon/	78.7	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.04
Reed	78.5	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.04
Arroyos	78.4	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.04
	78.3	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.04
	78.2	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.04
	78.1	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.04
	78.0	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.04
	77.9	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.04
	77.8	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.04
Bignell	76.7	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.04
Arroyo	76.6	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.04
	76.1	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.04
	76.0	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.04
	75.9	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.04
	75.9	0.03	**0.02**	0.08	0.04	0.15	**0.02**	0.15	
	75.3	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.04
	75.2	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.04
SELDON CANYON RIVER MANAGEMENT UNIT									
Dead Man's	69.3	0.05	**0.02**	0.03	0.05	0.05	**0.02**	0.04	0.15
Curve	69.2	0.05	**0.02**	0.03	0.05	0.05	**0.02**	0.04	0.15
	69.1	0.05	**0.02**	0.03	0.05	0.05	**0.02**	0.04	0.15
	69.0	0.08	**0.02**	0.03	0.08	0.08	**0.02**	0.04	0.15
	68.9	0.08	**0.02**	0.03	0.08	0.08	**0.02**	0.04	0.15
	68.8	0.08	**0.02**	0.03	0.08	0.08	**0.02**	0.04	0.15
	68.8	0.08	**0.02**	0.03	0.08	0.08	**0.02**	0.04	0.15
	68.7	0.08	**0.02**	0.03	0.08	0.08	**0.02**	0.04	0.15
	68.6	0.08	**0.02**	0.03	0.08	0.08	**0.02**	0.04	0.15
		0.08	**0.02**	0.03	0.08	0.08	**0.02**	0.04	0.15
Broad	68.1	0.08	**0.02**	0.08	0.08	0.08	**0.02**	0.04	0.15
Canyon	67.9	0.08	**0.02**	0.08	0.08	0.08	**0.02**	0.15	
UPPER MESILLA RIVER MANAGEMENT UNIT									
West Side	58.0	0.03	**0.02**	0.035	0.03	0.03	**0.02**	0.065	0.065
	57.9	0.03	**0.02**	0.035	0.03	0.03	**0.02**	0.065	0.065
Levee	57.4	0.03	**0.02**	0.035	0.04	0.15	**0.02**	0.065	0.065
Setback	57.3	0.03	**0.02**	0.065	0.15	0.15	**0.02**	0.065	0.065
	57.2	0.03	**0.02**	0.065	0.15	0.15	**0.02**	0.065	0.065
	57.1	0.03	**0.02**	0.065	0.15	0.15	**0.02**	0.065	
	56.9	0.03	**0.02**	0.065	0.15	0.15	**0.02**	0.065	
	56.8	0.03	**0.02**	0.065	0.15	0.15	**0.02**	0.065	
	56.7	0.03	**0.02**	0.065	0.15	0.15	**0.02**	0.065	0.065
	56.6	0.03	**0.02**	0.065	0.15	0.15	**0.02**	0.065	0.065
	56.5	0.03	**0.02**	0.065	0.04	0.15	**0.02**	0.065	0.065
Channel	54.8	0.03	**0.02**	0.03	0.04	0.04	**0.02**	0.15	0.15
Cut	54.7	0.03	**0.02**	0.03	0.04	0.04	**0.02**	0.15	0.15
	54.6	0.03	**0.02**	0.03	0.04	0.04	**0.02**	0.15	0.15
	54.5	0.03	**0.02**	0.03	0.04	0.04	**0.02**	0.15	0.15
	54.5	0.03	**0.02**	0.03	0.04	0.04	**0.02**	0.15	0.15

Site	Miles from Am. Dam	Roughness Coefficient (Manning's "n")							
		Original Coefficient (USACE 1996)			Modified Coefficient (Parsons 2003)				
		Left Bank	Channel	Right Bank	Left Bank		Channel	Right Bank	
	54.4	0.03	**0.02**	0.03	0.04	0.04	**0.02**	0.15	0.15
	54.2	0.03	**0.02**	0.03	0.04	0.04	**0.02**	0.15	0.15
	54.1	0.03	**0.02**	0.03	0.04	0.04	**0.02**	0.15	0.15
	54.0	0.03	**0.02**	0.03	0.04	0.04	**0.02**	0.15	0.15
	53.9	0.03	**0.02**	0.03	0.04	0.04	**0.02**	0.15	0.15
Spillway	53.0	0.03	**0.02**	0.08	0.04	0.04	**0.02**	0.08	0.08
No. 2A	52.9	0.03	**0.02**	0.08	0.04	0.04	**0.02**	0.08	0.08
	52.8	0.03	**0.02**	0.08	0.04	0.04	**0.02**	0.08	0.08
	52.7	0.03	**0.02**	0.08	0.04	0.04	**0.02**	0.08	0.08
	52.7	0.03	**0.02**	0.08	0.04	0.04	**0.02**	0.08	0.08
	52.6	0.03	**0.02**	0.08	0.04	0.04	**0.02**	0.08	0.08
	52.5	0.03	**0.02**	0.08	0.04	0.04	**0.02**	0.08	0.08
	52.4	0.03	**0.02**	0.035	0.04	0.04	**0.02**	0.08	0.08
	52.3	0.03	**0.02**	0.035	0.04	0.04	**0.02**	0.08	0.08
LAS CRUCES RIVER MANAGEMENT UNIT									
	50.7	0.03	**0.02**	0.03	0.03	0.03	**0.02**	0.04	0.04
	50.6	0.03	**0.02**	0.03	0.03	0.03	**0.02**	0.04	0.04
	50.5	0.03	**0.02**	0.03	0.03	0.03	**0.02**	0.04	0.04
Spillway	50.2	0.03	**0.02**	0.03	0.03	0.03	**0.02**	0.04	0.04
No. 5	50.1	0.03	**0.02**	0.03	0.03	0.03	**0.02**	0.04	0.04
	50.0	0.03	**0.02**	0.03	0.03	0.03	**0.02**	0.04	0.04
	49.9	0.03	**0.02**	0.03	0.03	0.03	**0.02**	0.04	0.04
Spillway	48.9	0.03	**0.02**	0.03	0.03	0.03	**0.02**	0.04	0.04
No. 39	48.8	0.03	**0.02**	0.03	0.03	0.03	**0.02**	0.04	0.04
	48.7	0.03	**0.02**	0.03	0.03	0.03	**0.02**	0.15	0.04
	48.6	0.03	**0.02**	0.03	0.03	0.03	**0.02**	0.15	0.04
	48.4	0.03	**0.02**	0.03	0.03	0.03	**0.02**	0.15	0.04
	48.3	0.03	**0.02**	0.03	0.03	0.03	**0.02**	0.15	0.04
Spillway	47.7	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.04	0.04
No. 8	47.6	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.04	0.04
	47.5	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.04	0.04
	47.4	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.04	0.04
Spillway	47.3	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.04	0.04
No. 39A	47.2	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.04	0.04
	47.1	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.04	0.04
NMGF	42.1	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.04
	42.0	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.15
	42.0	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.05
	41.9	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.05
	41.8	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.05
	41.7	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.05
	41.6	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.05
	41.5	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.05
	41.4	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.05
	41.3	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.05
	41.2	0.03	**0.02**	0.03	0.04	0.15	**0.02**	0.15	0.15
	40.7	0.03	**0.02**	0.035	0.04	0.15	**0.02**	0.03	0.03
	40.6	0.03	**0.02**	0.035	0.04	0.04	**0.02**	0.03	0.03

Table E-2 Hydraulic Simulation Results

River Mile	LEFT Freeboard (feet) 1996	LEFT Freeboard (feet) 2003	LEVEE	Water Surface Elevation Change (ft)	LEVEE	RIGHT Freeboard (feet) 1996	RIGHT Freeboard (feet) 2003
105.34	13.99	13.99		0.00		10.85	10.85
105.30	11.33	11.33		0.00		11.86	11.86
105.20	12.37	12.35		0.02		13.33	13.31
105.11	12.48	12.44		0.04		15.08	15.04
105.01	12.21	12.16		0.05		12.37	12.32
104.92	11.91	11.84		0.07		11.85	11.78
104.82	13.62	13.53		0.09		11.49	11.40
104.73	14.62	14.49		0.13		10.60	10.47
104.64	10.08	9.91		0.17		7.53	7.36
104.54	9.00	8.78		0.22		12.52	12.30
104.45	6.01	5.78		0.23		11.75	11.52
104.35	12.60	12.35		0.25		12.53	12.28
104.26	13.98	13.71		0.27		12.51	12.24
104.20	11.45	11.16		0.29		12.45	12.16
104.20	11.48	11.18		0.30		12.48	12.18
104.20	11.49	11.19		0.30		12.49	12.19
104.20	11.49	11.19		0.30		12.49	12.19
104.07	12.60	12.29		0.31		9.70	9.39
103.98	11.85	11.53		0.32		9.97	9.65
103.69	6.87	6.52		0.35		10.46	10.11
103.60	6.04	5.74		0.30		9.83	9.53
103.50	3.74	3.33		0.41		8.92	8.51
103.41	4.54	4.08		0.46		9.11	8.65
103.31	8.01	7.52		0.49		9.54	9.05
103.22	1.29	0.78		0.51		3.44	2.93
103.12	2.15	1.65		0.50		2.68	2.18
103.03	9.36	8.76		0.60		1.11	0.51
102.93	8.25	7.72		0.53		0.27	0.26
102.84	9.07	8.55		0.52		3.91	3.39
102.65	3.15	2.60		0.55		8.35	7.80
102.56	4.08	3.94		0.14		8.28	8.14
102.46	4.07	3.59		0.48		7.88	7.40
102.27	7.07	6.65		0.42		2.74	2.32
102.18	0.55	0.20		0.35		3.45	3.10
102.08	7.09	6.62		0.47		3.56	3.09
101.99	5.40	4.98		0.42		3.55	3.13
101.89	4.65	4.27		0.38		2.32	1.94
101.80	5.43	5.12		0.31		1.87	1.56
101.70	3.03	2.62		0.41		1.86	1.45
101.61	3.75	3.38		0.37		1.49	1.12
101.51	3.06	2.66		0.40		0.24	0.16
101.32	3.37	1.87		1.50		3.67	2.17
101.23	0.57	0.61		1.18		2.17	0.99
101.14	3.56	2.80		0.76		5.56	4.80
101.04	2.07	1.42		0.65		2.40	1.75
100.85	0.64	0.15		0.49		2.44	1.95
100.76	8.18	7.94		0.24		1.68	1.44
100.66	27.27	27.20		0.07		2.27	2.20
100.56	0.21	0.17		0.38		2.93	2.55
100.47	24.13	23.80		0.33		1.31	0.98
100.38	87.77	87.50		0.27		2.41	2.14
100.28	63.96	63.61		0.35		2.43	2.08
100.19	32.68	32.40		0.28		1.45	1.17
100.09	5.85	5.68		0.17		7.15	6.98
100.00	3.72	3.58		0.14		3.62	3.48
100.00	3.73	3.66		0.07		3.63	3.56
100.00	3.74	3.69		0.05		3.64	3.59
100.00	3.74	3.67		0.07		3.64	3.57
99.81	1.24	1.17		0.07		3.60	3.53
99.72	2.60	2.68		0.08		3.84	3.92
99.53	3.93	2.83		1.10		4.33	3.23
99.44	2.18	1.20		0.98		4.38	3.40
99.34	0.80	0.36		0.44		3.35	2.91
99.29	0.53	0.06		0.59		3.93	3.34
99.15	2.90	2.59		0.31		1.90	1.59
98.96	1.06	0.51		0.55		0.89	0.34
98.77	2.06	1.82		0.24		2.26	2.02
98.68	3.95	3.88		0.07		1.15	1.08
98.58	2.99	2.64		0.35		0.99	0.64
98.49	3.31	2.97		0.34		4.48	4.14
98.39	2.09	1.77		0.32		5.29	4.97
98.30	1.49	1.21		0.28		12.09	11.81
98.20	1.07	1.14		0.07		10.32	10.39
98.11	1.15	1.69		0.54		8.31	8.85

River Mile	LEFT Freeboard (feet) 1996	LEFT Freeboard (feet) 2003	LEVEE	Water Surface Elevation Change (ft)	LEVEE	RIGHT Freeboard (feet) 1996	RIGHT Freeboard (feet) 2003
98.01	3.81	3.30		0.51		7.71	7.20
97.92	3.79	3.02		0.77		8.18	7.41
97.83	2.47	2.69		0.22		15.38	15.60
97.73	0.91	0.89		0.02		27.95	27.93
97.64	3.39	3.39		0.00		47.91	47.91
97.54	4.01	3.93		0.08		22.18	22.10
97.45	6.45	6.32		0.13		13.92	13.79
97.35	6.66	6.50		0.16		2.81	2.65
97.26	7.03	6.87		0.16		2.16	2.00
97.16	7.33	7.12		0.21		1.73	1.52
97.07	7.42	7.25		0.17		2.22	2.05
96.97	6.26	6.08		0.18		1.86	1.68
96.88	7.46	7.32		0.14		0.66	0.52
96.78	7.25	7.06		0.19		2.05	1.86
96.69	7.70	7.93		0.23		8.27	8.50
96.50	8.75	8.62		0.13		3.29	3.16
96.41	9.14	8.99		0.15		3.26	3.11
96.22	8.68	8.47		0.21		1.68	1.47
96.12	8.44	8.19		0.25		4.03	3.78
95.93	8.71	8.32		0.39		3.29	2.90
95.74	7.74	7.52		0.22		6.32	6.10
95.65	7.14	7.08		0.06		6.44	6.38
95.55	8.02	7.52		0.50		9.08	8.58
95.46	7.27	6.72		0.55		17.33	16.78
95.36	7.54	7.18		0.36		12.89	12.53
95.27	7.20	6.74		0.46		25.18	24.72
95.17	7.85	7.41		0.44		29.03	28.59
95.08	7.90	7.45		0.45		24.15	23.70
94.98	8.26	7.89		0.37		16.89	16.52
94.89	7.92	7.37		0.55		8.58	8.03
94.80	8.53	8.37		0.16		6.44	6.28
94.70	8.16	7.77		0.39		5.28	4.89
94.65	8.19	7.76		0.43		4.94	4.51
94.51	8.51	8.13		0.38		7.73	7.35
94.42	7.78	7.57		0.21		9.81	9.60
94.32	7.41	7.19		0.22		9.02	8.80
94.23	7.22	7.08		0.14		8.03	7.89
94.13	6.99	7.02		0.03		17.16	17.19
94.04	7.25	7.37		0.12		17.44	17.56
93.94	8.26	8.08		0.18		13.56	13.38
93.75	9.49	8.95		0.54		15.18	14.64
93.66	8.85	8.72		0.13		17.75	17.62
93.56	8.83	8.74		0.09		6.54	6.45
93.47	7.23	7.29		0.06		5.84	5.90
93.37	6.21	6.45		0.24		5.79	6.03
93.28	5.94	6.13		0.19		5.58	5.77
93.19	7.52	7.18		0.34		7.16	6.82
93.09	8.57	8.29		0.28		8.29	8.01
93.00	7.74	7.79		0.05		7.46	7.51
92.90	6.34	6.38		0.04		17.43	17.47
92.80	6.83	6.97		0.14		29.38	29.52
92.71	7.74	7.59		0.15		44.66	44.51
92.62	7.41	7.43		0.02		22.01	22.03
92.52	6.92	7.00		0.08		7.42	7.50
92.33	7.16	7.09		0.07		2.36	2.29
92.24	7.17	7.10		0.07		2.07	2.00
92.14	7.37	7.30		0.07		8.47	8.40
92.05	7.21	7.13		0.08		8.67	8.59
91.95	7.35	7.25		0.10		7.15	7.05
91.76	7.52	7.41		0.11		0.92	0.81
91.67	7.12	6.92		0.20		2.52	2.32
91.58	7.90	7.35		0.55		2.81	2.26
91.48	7.26	6.46		0.80		5.26	4.46
91.39	8.43	7.06		1.37		6.95	5.58
91.20	6.69	5.53		1.16		7.69	6.53
91.10	6.05	4.91		1.14		6.85	5.71
91.01	6.96	5.18		1.78		5.76	3.98
90.91	7.35	5.00		2.35		7.91	5.56
90.82	6.58	4.51		2.07		5.78	3.71
90.63	6.80	7.36		0.56		23.17	23.73
90.53	6.52	6.08		0.44		18.77	18.33
90.44	7.43	7.00		0.43		36.83	36.40
90.34	8.60	8.53		0.07		2.68	2.61
90.25	8.21	8.11		0.10		4.17	4.07

Table E-2 Hydraulic Simulation Results

River Mile	LEFT Freeboard (feet) 1996	LEFT Freeboard (feet) 2003	LEVEE	Water Surface Elevation Change (ft)	LEVEE	RIGHT Freeboard (feet) 1996	RIGHT Freeboard (feet) 2003
90.16	8.38	8.28		0.10		5.61	5.51
90.14	9.23	9.07		0.16		5.83	5.67
90.12	9.42	9.08		0.34		6.71	6.37
90.10	9.28	9.11		0.17		7.16	6.99
90.06	10.08	9.98		0.10		7.02	6.92
90.04	10.05	9.95		0.10		6.90	6.80
90.01	10.34	10.31		0.03		6.34	6.31
89.96	10.13	10.22		0.09		6.53	6.62
89.82	10.18	10.14		0.04		6.78	6.74
89.78	10.73	10.73		0.00		6.17	6.17
89.68	10.24	10.18		0.06		9.24	9.18
89.59	11.01	11.10		0.09		10.37	10.46
89.49	11.45	11.47		0.02		6.97	6.99
89.40	10.76	10.76		0.00		10.16	10.16
89.30	9.78	9.78		0.00		9.58	9.58
89.21	9.98	9.98		0.00		8.78	8.78
89.11	10.53	10.53		0.00		9.73	9.73
89.02	9.33	9.33		0.00		9.28	9.28
88.92	9.53	9.52		0.01		8.93	8.92
88.83	9.52	9.51		0.01		8.07	8.06
88.73	9.28	9.28		0.00		8.08	8.08
88.64	9.94	9.94		0.00		9.47	9.47
88.55	9.90	9.89		0.01		8.91	8.90
88.45	10.25	10.25		0.00		8.85	8.85
88.36	11.28	11.27		0.01		8.88	8.87
88.26	8.93	8.92		0.01		8.33	8.32
88.17	8.83	8.81		0.02		8.27	8.25
88.07	9.26	9.24		0.02		8.33	8.31
88.00	11.91	11.88		0.03		12.60	12.57
87.99	11.29	11.26		0.03		11.93	11.90
87.99	11.36	11.33		0.03		12.00	11.97
87.99	12.12	12.09		0.03		12.81	12.78
87.89	9.85	9.82		0.03		9.25	9.22
87.79	10.13	10.08		0.05		9.73	9.68
87.70	10.34	10.27		0.07		9.34	9.27
87.60	9.77	9.70		0.07		9.17	9.10
87.51	9.99	9.90		0.09		8.99	8.90
87.41	9.91	9.81		0.10		9.48	9.38
87.32	8.64	8.52		0.12		9.37	9.25
87.22	8.64	8.51		0.13		9.24	9.11
87.13	8.61	8.47		0.14		9.21	9.07
87.03	8.21	8.05		0.16		9.27	9.11
86.94	7.34	7.17		0.17		8.54	8.37
86.85	7.36	7.18		0.18		8.36	8.18
86.75	6.98	6.79		0.19		8.28	8.09
86.66	6.81	6.61		0.20		7.41	7.21
86.56	6.86	6.68		0.18		7.06	6.88
86.47	7.23	7.00		0.23		7.46	7.23
86.37	6.57	6.32		0.25		7.17	6.92
86.29	5.60	5.34		0.26		5.78	5.52
86.29	5.66	5.40		0.26		5.79	5.53
86.29	5.69	5.42		0.27		5.82	5.55
86.29	5.67	5.41		0.26		5.85	5.59
86.19	0.29	0.54		0.25		5.40	5.15
86.09	2.16	2.33		0.17		5.04	4.87
86.00	1.31	1.22		0.09		4.47	4.38
85.81	0.27	0.30		0.03		5.33	5.30
85.71	3.50	3.50		0.00		4.82	4.82
85.62	4.95	4.76		0.19		5.55	5.36
85.43	20.93	20.71		0.22		5.13	4.91
85.34	5.53	5.22		0.31		5.77	5.46
85.24	2.28	1.97		0.31		5.29	4.98
85.15	0.73	0.68		0.05		5.30	5.25
85.05	1.06	1.03		0.03		5.93	5.90
84.96	0.64	0.87		0.23		5.41	5.64
84.86	4.53	4.59		0.06		5.21	5.27
84.77	0.21	0.21		0.00		4.43	4.43
84.67	0.80	0.80		0.00		5.71	5.71
84.58	0.74	0.73		0.01		4.94	4.93
84.48	0.92	0.92		0.00		4.49	4.49
84.39	4.41	4.41		0.00		5.28	5.28
84.29	5.23	5.23		0.00		4.49	4.49
84.20	14.05	14.04		0.01		13.20	13.19
84.19	14.05	14.05		0.00		13.20	13.20

River Mile	LEFT Freeboard (feet) 1996	LEFT Freeboard (feet) 2003	LEVEE	Water Surface Elevation Change (ft)	LEVEE	RIGHT Freeboard (feet) 1996	RIGHT Freeboard (feet) 2003
84.19	14.16	14.15		0.01		13.31	13.30
84.19	14.17	14.16		0.01		13.32	13.31
84.02	32.40	32.12		0.28		6.20	5.92
83.92	10.66	10.39		0.27		5.86	5.59
83.83	19.08	18.82		0.26		4.37	4.11
83.73	21.74	21.48		0.26		3.94	3.68
83.64	19.91	19.66		0.25		4.31	4.06
83.54	29.38	29.13		0.25		3.38	3.13
83.45	16.37	16.05		0.32		3.87	3.55
83.35	24.73	24.42		0.31		4.93	4.62
83.26	22.02	21.67		0.35		4.30	3.95
83.16	31.65	31.32		0.33		4.65	4.32
83.07	20.05	19.66		0.39		3.99	3.60
82.97	15.16	14.76		0.40		3.94	3.54
82.88	12.21	11.78		0.43		4.23	3.80
82.78	16.14	15.68		0.46		3.71	3.25
82.69	16.54	16.05		0.49		3.14	2.65
82.60	17.67	17.17		0.50		2.79	2.29
82.50	6.23	5.72		0.51		1.66	1.15
82.41	9.61	9.10		0.51		1.11	0.60
82.31	2.69	2.17		0.52		0.88	0.36
82.22	1.76	1.48		0.28		1.26	0.98
82.12	1.68	1.52		0.16		1.10	0.94
82.03	3.33	3.56		0.23		1.07	1.30
81.87	6.04	5.61		0.43		6.02	5.59
81.87	6.33	5.80		0.53		6.33	5.80
81.87	6.42	6.12		0.30		6.42	6.12
81.87	6.37	6.07		0.30		6.35	6.05
81.86	1.68	1.39		0.29		0.79	0.50
81.86	1.68	1.39		0.29		0.79	0.50
81.86	3.59	3.41		0.18		3.88	3.70
81.86	3.85	3.71		0.14		3.84	3.70
81.86	4.11	3.92		0.19		4.10	3.91
81.86	4.07	3.87		0.20		4.36	4.16
81.83	4.38	4.28		0.10		4.41	4.31
81.82	5.11	5.04		0.07		5.10	5.03
81.81	5.04	5.00		0.04		4.84	4.80
81.80	5.94	5.96		0.02		5.04	5.06
81.80	6.72	6.72		0.00		6.58	6.58
81.79	7.37	7.35		0.02		7.77	7.75
81.79	6.91	6.90		0.01		7.51	7.50
81.78	6.99	6.98		0.01		7.59	7.58
81.75	6.50	6.48		0.02		7.50	7.48
81.66	6.84	6.82		0.02		7.14	7.12
81.56	6.33	6.31		0.02		7.13	7.11
81.47	6.55	6.53		0.02		6.75	6.73
81.37	6.77	6.74		0.03		7.17	7.14
81.28	6.40	6.36		0.04		7.07	7.03
81.18	6.31	6.25		0.06		6.96	6.90
81.09	5.19	5.11		0.08		6.73	6.65
80.99	5.56	5.47		0.09		6.76	6.67
80.90	5.91	5.81		0.10		6.81	6.71
80.80	5.77	5.68		0.09		6.97	6.88
80.71	4.95	4.87		0.08		5.65	5.57
80.61	5.33	5.27		0.06		6.13	6.07
80.52	5.24	5.17		0.07		5.72	5.65
80.42	4.94	4.87		0.07		4.74	4.67
80.33	5.15	5.06		0.09		19.97	19.88
80.24	4.43	4.33		0.10		19.88	19.78
80.14	4.40	4.31		0.09		13.23	13.14
79.95	5.29	5.12		0.17		12.49	12.32
79.86	3.15	3.01		0.14		10.40	10.26
79.76	4.06	3.90		0.16		4.75	4.59
79.67	5.31	5.03		0.28		5.15	4.87
79.57	4.09	3.77		0.32		6.13	5.81
79.48	3.86	3.52		0.34		4.20	3.86
79.38	3.98	3.61		0.37		4.97	4.60
79.29	4.20	3.79		0.41		4.88	4.47
79.19	3.06	2.63		0.43		4.30	3.87
79.10	3.39	2.93		0.46		4.55	4.09
79.00	4.26	3.72		0.54		4.56	4.02
78.91	2.49	1.92		0.57		4.09	3.52
78.82	7.37	6.77		0.60		6.97	6.37
78.82	7.40	6.80		0.60		7.60	7.00

Table E-2 Hydraulic Simulation Results

River Mile	LEFT Freeboard (feet) 1996	LEFT Freeboard (feet) 2003	LEVEE	Water Surface Elevation Change (ft)	LEVEE	RIGHT Freeboard (feet) 1996	RIGHT Freeboard (feet) 2003
78.82	7.42	6.82		0.60		7.62	7.02
78.82	7.42	6.81		0.61		7.02	6.41
78.63	2.60	2.00		0.60		2.60	2.00
78.44	5.19	5.43		0.24		3.99	4.23
78.35	3.45	3.07		0.38		3.76	3.38
78.25	3.12	2.28		0.84		6.32	5.48
78.16	3.07	2.24		0.83		4.07	3.24
78.06	3.60	2.82		0.78		3.60	2.82
77.92	3.69	2.91		0.78		3.69	2.91
77.78	3.06	3.23		0.17		3.94	4.11
77.68	3.42	3.64		0.22		4.42	4.64
77.59	4.56	4.76		0.20		4.73	4.93
77.50	4.69	4.61		0.08		5.31	5.23
77.40	4.99	4.81		0.18		4.86	4.68
77.31	3.99	3.80		0.19		4.18	3.99
77.21	4.36	4.12		0.24		4.53	4.29
77.12	3.43	3.15		0.28		4.76	4.48
77.02	3.85	3.49		0.36		4.84	4.48
76.93	4.28	3.69		0.59		4.69	4.10
76.83	4.23	3.58		0.65		4.23	3.58
76.74	3.99	3.29		0.70		3.86	3.16
76.64	2.99	2.75		0.24		3.15	2.91
76.55	3.70	3.60		0.10		2.71	2.61
76.45	3.85	3.40		0.45		2.88	2.43
76.36	3.51	2.98		0.53		3.33	2.80
76.26	3.07	2.52		0.55		2.15	1.60
76.17	2.27	1.70		0.57		3.30	2.73
76.07	2.26	2.10		0.16		3.39	3.23
75.98	1.83	1.60		0.23		2.83	2.60
75.89	2.11	1.91		0.20		2.91	2.71
75.79	3.20	3.39		0.19		1.58	1.77
75.70	3.37	3.23		0.14		11.26	11.12
75.60	4.70	4.22		0.48		2.70	2.22
75.22	1.49	1.53		0.04		0.07	0.11
75.13	1.01	1.06		0.05		15.71	15.76
75.03	0.38	0.38		0.00		34.45	34.45
74.94	0.71	0.71		0.00		16.94	16.94
74.84	0.86	0.86		0.00		8.86	8.86
74.75	0.42	0.42		0.00		1.00	1.00
74.65	0.64	0.64		0.00		17.25	17.25
74.56	0.38	0.38		0.00		11.46	11.46
74.47	0.40	0.40		0.00		12.23	12.23
74.37	0.49	0.49		0.00		10.48	10.48
74.28	2.12	2.12		0.00		5.48	5.48
74.18	0.46	0.46		0.00		6.47	6.47
74.09	0.77	0.77		0.00		5.15	5.15
73.99	2.05	2.05		0.00		6.35	6.35
73.90	2.28	2.28		0.00		7.22	7.22
73.80	3.19	3.19		0.00		6.91	6.91
73.76	1.43	1.43		0.00		0.87	0.87
73.76	2.13	2.13		0.00		2.69	2.69
73.71	3.54	3.54		0.00		8.00	8.00
73.61	2.79	2.79		0.00		17.79	17.79
73.52	2.40	2.40		0.00		18.98	18.98
73.43	2.62	2.62		0.00		19.34	19.34
73.33	2.29	2.29		0.00		15.09	15.09
73.24	2.25	2.25		0.00		15.10	15.10
73.14	3.02	3.02		0.00		15.41	15.41
73.07	2.87	2.87		0.00		9.43	9.43
72.95	2.29	2.29		0.00		5.83	5.83
72.86	1.77	1.77		0.00		6.17	6.17
72.76	2.34	2.34		0.00		4.34	4.34
72.67	2.05	2.05		0.00		9.65	9.65
72.57	1.46	1.46		0.00		12.29	12.29
72.48	1.07	1.07		0.00		11.30	11.30
72.38	0.70	0.70		0.00		10.54	10.54
72.29	1.21	1.21		0.00		10.77	10.77
72.19	0.76	0.76		0.00		11.23	11.23
72.10	0.84	0.84		0.00		11.56	11.56
72.01	1.55	1.55		0.00		13.88	13.88
71.91	3.56	3.56		0.00		21.36	21.36
71.82	5.25	5.25		0.00		13.65	13.65
71.72	4.43	4.43		0.00		6.97	6.97
71.63	4.22	4.22		0.00		4.08	4.08

River Mile	LEFT Freeboard (feet) 1996	LEFT Freeboard (feet) 2003	LEVEE	Water Surface Elevation Change (ft)	LEVEE	RIGHT Freeboard (feet) 1996	RIGHT Freeboard (feet) 2003
71.53	1.89	1.89		0.00		14.61	14.61
71.44	4.38	4.38		0.00		5.82	5.82
71.34	3.60	3.60		0.00		17.76	17.76
71.25	3.77	3.77		0.00		25.33	25.33
71.15	4.45	4.45		0.00		21.35	21.35
71.06	0.99	0.99		0.00		15.23	15.23
70.96	2.78	2.78		0.00		0.58	0.58
70.87	2.89	2.89		0.00		0.79	0.79
70.77	2.58	2.58		0.00		0.58	0.58
70.68	2.62	2.62		0.00		0.94	0.94
70.58	1.44	1.44		0.00		0.54	0.54
70.49	43.10	43.11		0.01		16.34	16.35
70.40	14.90	14.91		0.01		0.70	0.69
70.30	15.24	15.25		0.01		5.84	5.85
70.21	11.42	11.43		0.01		2.42	2.43
70.11	9.94	9.95		0.01		0.72	0.73
70.02	12.05	12.06		0.01		1.15	1.14
69.92	11.17	11.18		0.01		1.75	1.74
69.83	11.43	11.44		0.01		1.77	1.76
69.73	10.70	10.71		0.01		1.40	1.39
69.64	5.35	5.36		0.01		1.40	1.39
69.54	9.80	9.82		0.02		1.10	1.08
69.45	12.83	12.84		0.01		0.81	0.80
69.35	10.13	10.15		0.02		11.99	12.01
69.26	2.45	2.48		0.03		11.45	11.48
69.16	4.82	4.86		0.04		9.82	9.86
69.07	10.37	10.43		0.06		10.37	10.43
68.97	9.65	9.62		0.03		10.55	10.52
68.88	10.55	10.64		0.09		5.23	5.32
68.79	8.55	8.63		0.08		7.59	7.67
68.69	8.58	8.67		0.09		8.58	8.67
68.66	8.59	8.68		0.09		3.49	3.58
68.55	8.64	8.74		0.10		1.74	1.84
68.52	8.66	8.76		0.10		8.66	8.76
68.39	7.15	7.24		0.09		7.15	7.24
68.31	7.75	7.84		0.09		6.92	7.01
68.19	7.21	7.34		0.13		4.99	5.12
68.12	14.75	14.87		0.12		2.81	2.93
68.04	1.97	1.95		0.02		25.87	25.85
67.84	2.85	2.43		0.42		4.12	3.70
67.74	15.80	15.80		0.00		12.10	12.10
67.55	7.03	7.03		0.00		13.29	13.29
67.46	25.01	25.01		0.00		11.75	11.75
67.36	20.40	20.40		0.00		7.50	7.50
67.27	4.14	4.14		0.00		8.61	8.61
67.18	13.83	13.83		0.00		10.36	10.36
67.08	22.14	22.14		0.00		20.82	20.82
66.99	15.61	15.61		0.00		9.90	9.90
66.89	20.14	20.14		0.00		19.06	19.06
66.80	18.95	18.95		0.00		8.74	8.74
66.70	20.30	20.30		0.00		10.26	10.26
66.61	17.94	17.94		0.00		2.76	2.76
66.51	26.82	26.82		0.00		22.03	22.03
66.09	18.33	18.33		0.00		13.96	13.96
66.04	43.68	43.68		0.00		11.57	11.57
65.99	34.00	34.00		0.00		7.23	7.23
65.94	7.28	7.28		0.00		1.41	1.41
65.76	8.04	8.04		0.00		24.69	24.69
65.66	2.96	2.96		0.00		18.02	18.02
65.57	1.84	1.84		0.00		31.91	31.91
65.47	5.06	5.06		0.00		2.43	2.43
65.38	8.32	8.32		0.00		8.43	8.43
65.28	12.82	12.82		0.00		14.93	14.93
65.19	22.68	22.68		0.00		5.34	5.34
65.09	12.18	12.18		0.00		4.96	4.96
65.00	42.76	42.76		0.00		26.16	26.16
64.90	8.14	8.14		0.00		15.15	15.15
64.81	6.70	6.70		0.00		6.92	6.92
64.71	64.31	64.31		0.00		3.12	3.12
64.62	14.20	14.20		0.00		16.86	16.86
64.52	19.67	19.67		0.00		16.67	16.67
64.43	39.68	39.68		0.00		25.26	25.26
64.33	5.30	5.30		0.00		7.97	7.97
64.24	47.75	47.75		0.00		60.65	60.65

Table E-2 Hydraulic Simulation Results

River Mile	LEFT Freeboard (feet) 1996	LEFT Freeboard (feet) 2003	LEVEE	Water Surface Elevation Change (ft)	LEVEE	RIGHT Freeboard (feet) 1996	RIGHT Freeboard (feet) 2003
64.15	46.57	46.57		0.00		19.11	19.11
64.03	28.23	28.23		0.00		6.03	6.03
63.96	25.55	25.55		0.00		21.13	21.13
63.91	4.74	4.74		0.00		25.31	25.31
63.67	41.55	41.55		0.00		30.55	30.55
63.58	9.61	9.61		0.00		19.61	19.61
63.48	11.92	11.92		0.00		8.87	8.87
63.29	41.11	41.11		0.00		10.40	10.40
63.20	43.40	43.40		0.00		10.67	10.67
62.91	15.04	15.04		0.00		18.34	18.34
62.82	8.82	8.82		0.00		25.07	25.07
62.63	7.43	7.43		0.00		35.25	35.25
62.54	10.43	10.43		0.00		30.94	30.94
62.44	35.52	35.52		0.00		12.65	12.65
62.35	15.24	15.24		0.00		3.54	3.54
62.25	2.78	2.78		0.00		2.17	2.17
62.16	9.55	9.55		0.00		4.15	4.15
62.06	10.37	10.37		0.00		5.77	5.77
61.99	1.80	1.80		0.00		5.74	5.74
61.89	8.37	8.37		0.00		9.47	9.47
61.78	47.78	47.78		0.00		0.90	0.90
61.69	41.83	41.83		0.00		1.13	1.13
61.55	40.62	40.62		0.00		5.17	5.17
61.50	30.13	30.13		0.00		2.23	2.23
61.40	5.38	5.38		0.00		4.17	4.17
61.31	6.53	6.53		0.00		3.11	3.11
61.11	2.99	2.99		0.00		3.09	3.09
61.11	3.06	3.06		0.00		3.16	3.16
61.11	3.08	3.08		0.00		3.18	3.18
61.11	3.06	3.06		0.00		3.16	3.16
60.94	0.70	0.70		0.00		0.21	0.21
60.84	0.66	0.66		0.00		0.37	0.37
60.65	2.74	2.74		0.00		10.94	10.94
60.56	4.95	4.95		0.00		14.19	14.19
60.46	6.53	6.53		0.00		11.97	11.97
60.37	6.30	6.30		0.00		8.90	8.90
60.27	6.40	6.40		0.00		9.42	9.42
60.08	6.71	6.71		0.00		11.64	11.64
59.99	7.38	7.38		0.00		10.18	10.18
59.89	7.46	7.46		0.00		11.06	11.06
59.80	5.96	5.96		0.00		10.85	10.85
59.71	3.17	3.17		0.00		11.17	11.17
59.61	6.60	6.60		0.00		10.80	10.80
59.52	6.05	6.05		0.00		5.17	5.17
59.42	5.68	5.68		0.00		6.38	6.38
59.33	5.64	5.64		0.00		10.84	10.84
59.23	6.10	6.10		0.00		10.90	10.90
59.14	7.10	7.10		0.00		9.92	9.92
59.04	6.71	6.71		0.00		10.64	10.64
58.99	5.35	5.35		0.00		10.60	10.60
58.76	2.20	2.20		0.00		11.19	11.19
58.66	2.45	2.45		0.00		12.18	12.18
58.57	1.51	1.51		0.00		12.11	12.11
58.47	2.79	2.79		0.00		9.99	9.99
58.38	2.41	2.41		0.00		10.02	10.02
58.28	2.25	2.25		0.00		10.16	10.16
58.19	2.07	2.07		0.00		10.87	10.87
58.10	2.94	2.94		0.00		12.69	12.69
58.00	4.51	4.51		0.00		15.31	15.31
57.91	4.26	4.26		0.00		14.66	14.66
57.81	4.60	4.60		0.00		7.80	7.80
57.72	4.38	4.38		0.00		3.98	3.98
57.62	4.21	4.21		0.00		11.22	11.22
57.53	3.60	3.60		0.00		11.18	11.18
57.43	3.09	3.09		0.00		11.89	11.89
57.34	4.34	4.34		0.00		12.35	12.35
57.24	4.17	4.17		0.00		3.06	3.06
57.15	3.50	3.50		0.00		2.30	2.30
57.05	4.11	4.11		0.00		1.49	1.49
56.96	5.42	5.42		0.00		14.82	14.82
56.77	5.04	5.04		0.00		13.64	13.64
56.67	5.40	5.40		0.00		14.37	14.37
56.58	5.13	5.13		0.00		14.53	14.53
56.49	5.09	5.09		0.00		13.54	13.54

River Mile	LEFT Freeboard (feet) 1996	LEFT Freeboard (feet) 2003	LEVEE	Water Surface Elevation Change (ft)	LEVEE	RIGHT Freeboard (feet) 1996	RIGHT Freeboard (feet) 2003
56.39	4.91	4.91		0.00		13.91	13.91
56.30	5.06	5.06		0.00		14.06	14.06
56.20	5.17	5.17		0.00		14.57	14.57
56.11	5.19	5.19		0.00		12.99	12.99
56.01	4.65	4.65		0.00		13.25	13.25
55.92	5.27	5.27		0.00		13.77	13.77
55.82	4.97	4.97		0.00		12.97	12.97
55.73	5.09	5.09		0.00		13.29	13.29
55.59	4.52	4.52		0.00		8.56	8.56
55.54	4.70	4.70		0.00		5.00	5.00
55.44	4.49	4.49		0.00		13.77	13.77
55.35	4.29	4.29		0.00		12.49	12.49
55.25	4.74	4.74		0.00		11.74	11.74
55.16	4.47	4.47		0.00		12.07	12.07
55.06	3.81	3.81		0.00		11.61	11.61
54.97	5.58	5.58		0.00		13.38	13.38
54.88	5.00	5.00		0.00		13.80	13.80
54.78	4.81	4.81		0.00		10.81	10.81
54.69	4.67	4.67		0.00		3.81	3.81
54.59	4.23	4.23		0.00		1.38	1.38
54.50	3.96	3.96		0.00		0.82	0.82
54.40	3.78	3.78		0.00		1.21	1.21
54.31	4.19	4.19		0.00		10.14	10.14
54.21	4.35	4.35		0.00		0.22	0.22
54.07	2.63	2.63		0.00		3.33	3.33
54.02	2.26	2.26		0.00		3.23	3.23
53.93	2.67	2.67		0.00		3.60	3.60
53.83	3.04	3.04		0.00		0.44	0.44
53.74	2.91	2.91		0.00		0.20	0.20
53.64	3.56	3.56		0.00		11.56	11.56
53.55	3.03	3.03		0.00		11.63	11.63
53.46	4.28	4.28		0.00		11.88	11.88
53.36	3.79	3.79		0.00		12.19	12.19
53.27	3.62	3.62		0.00		8.82	8.82
53.17	3.59	3.59		0.00		7.31	7.31
53.08	3.38	3.38		0.00		10.09	10.09
52.98	3.48	3.48		0.00		10.29	10.29
52.89	2.72	2.72		0.00		3.79	3.79
52.79	2.08	2.08		0.00		1.28	1.28
52.70	2.42	2.42		0.00		1.98	1.98
52.60	1.77	1.77		0.00		1.83	1.83
52.51	1.54	1.54		0.00		2.26	2.26
52.41	2.33	2.33		0.00		1.07	1.07
52.32	2.91	2.91		0.00		1.09	1.09
52.22	2.83	2.83		0.00		1.07	1.07
52.13	2.12	2.12		0.00		1.88	1.88
51.94	1.78	1.78		0.00		19.78	19.78
51.85	1.08	1.08		0.00		19.48	19.48
51.75	0.76	0.76		0.00		17.96	17.96
51.66	1.34	1.34		0.00		13.64	13.64
51.56	1.28	1.28		0.00		14.88	14.88
51.47	3.47	3.47		0.00		10.77	10.77
51.28	7.47	7.47		0.00		5.37	5.37
51.16	5.08	5.08		0.00		4.70	4.70
51.16	5.33	5.33		0.00		4.95	4.95
51.16	5.47	5.47		0.00		5.09	5.09
51.16	5.43	5.43		0.00		5.05	5.05
51.00	4.99	4.99		0.00		5.79	5.79
50.90	4.60	4.60		0.00		5.54	5.54
50.81	5.07	5.07		0.00		5.67	5.67
50.71	4.86	4.86		0.00		5.37	5.37
50.62	3.57	3.57		0.00		4.12	4.12
50.52	3.97	3.97		0.00		4.27	4.27
50.43	3.29	3.29		0.00		4.03	4.03
50.33	3.37	3.37		0.00		5.57	5.57
50.24	3.68	3.68		0.00		5.68	5.68
50.15	4.25	4.25		0.00		5.85	5.85
50.05	4.46	4.46		0.00		5.90	5.90
49.96	4.90	4.90		0.00		5.30	5.30
49.86	3.06	3.06		0.00		3.44	3.44
49.77	4.00	4.00		0.00		3.75	3.75
49.67	3.49	3.49		0.00		4.29	4.29
49.58	3.38	3.38		0.00		4.68	4.68
49.48	3.55	3.55		0.00		3.79	3.79

Table E-2 Hydraulic Simulation Results

River Mile	LEFT Freeboard (feet) 1996	LEFT Freeboard (feet) 2003	LEVEE	Water Surface Elevation Change (ft)	LEVEE	RIGHT Freeboard (feet) 1996	RIGHT Freeboard (feet) 2003
49.39	3.28	3.28		0.00		2.87	2.87
49.29	2.93	2.93		0.00		3.64	3.64
49.20	3.63	3.63		0.00		4.61	4.61
49.10	4.22	4.22		0.00		5.09	5.09
49.01	3.06	3.05		0.01		4.70	4.69
48.91	4.08	4.08		0.00		4.63	4.63
48.82	5.37	5.37		0.00		5.74	5.74
48.72	4.97	4.96		0.01		5.37	5.36
48.63	4.48	4.47		0.01		5.28	5.27
48.54	4.39	4.37		0.02		5.49	5.47
48.44	4.46	4.43		0.03		5.86	5.83
48.35	4.04	3.97		0.07		5.24	5.17
48.25	4.00	3.92		0.08		4.68	4.60
48.16	3.87	3.78		0.09		4.92	4.83
48.06	4.49	4.39		0.10		4.28	4.18
47.97	3.35	3.24		0.11		3.94	3.83
47.87	3.61	3.45		0.16		4.42	4.26
47.78	3.94	3.72		0.22		4.54	4.32
47.68	3.32	3.04		0.28		4.32	4.04
47.59	3.12	2.80		0.32		3.59	3.27
47.49	3.31	2.97		0.34		3.15	2.81
47.40	3.34	2.91		0.43		3.74	3.31
47.30	2.78	2.26		0.52		2.68	2.16
47.21	2.18	1.61		0.57		2.29	1.72
47.12	2.34	1.65		0.69		2.45	1.76
47.02	2.39	1.87		0.52		2.62	2.10
46.93	2.03	1.51		0.52		2.83	2.31
46.83	2.11	1.65		0.46		3.27	2.81
46.74	2.73	2.24		0.49		3.45	2.96
46.64	2.46	2.30		0.16		3.48	3.32
46.55	2.31	2.19		0.12		3.25	3.13
46.45	2.57	2.46		0.11		3.74	3.63
46.36	2.62	2.32		0.30		3.39	3.09
46.26	3.29	3.33		0.04		4.17	4.21
46.17	2.20	2.37		0.17		3.60	3.77
46.07	2.70	2.70		0.00		3.65	3.65
45.98	3.70	3.70		0.00		4.15	4.15
45.88	3.83	3.83		0.00		4.82	4.82
45.79	4.43	4.43		0.00		4.93	4.93
45.69	3.63	3.63		0.00		4.12	4.12
45.59	8.26	8.26		0.00		8.10	8.10
45.59	8.28	8.28		0.00		8.12	8.12
45.59	8.50	8.50		0.00		8.34	8.34
45.58	8.50	8.50		0.00		8.34	8.34
45.43	3.97	3.97		0.00		2.87	2.87
45.33	2.97	2.97		0.00		3.27	3.27
45.24	3.01	3.01		0.00		3.41	3.41
45.14	2.95	2.95		0.00		3.55	3.55
45.05	2.74	2.74		0.00		3.34	3.34
44.95	2.74	2.74		0.00		3.14	3.14
44.86	3.06	3.06		0.00		2.66	2.66
44.77	2.52	2.52		0.00		2.82	2.82
44.67	2.46	2.46		0.00		2.16	2.16
44.58	2.03	2.03		0.00		2.23	2.23
44.48	2.42	2.42		0.00		1.92	1.92
44.39	1.82	1.82		0.00		1.62	1.62
44.29	1.40	1.40		0.00		1.60	1.60
44.18	27.22	27.22		0.00		27.00	27.00
44.18	27.22	27.22		0.00		27.00	27.00
44.18	27.32	27.32		0.00		27.10	27.10
44.18	27.35	27.35		0.00		27.13	27.13
44.12	1.71	1.71		0.00		2.41	2.41
44.03	1.35	1.35		0.00		1.35	1.35
43.93	1.72	1.72		0.00		1.82	1.82
43.84	2.00	2.00		0.00		1.80	1.80
43.75	1.81	1.80		0.01		2.21	2.20
43.65	2.09	2.09		0.00		2.59	2.59
43.56	2.55	2.54		0.01		2.95	2.94
43.46	2.02	2.02		0.00		3.32	3.32
43.37	2.97	2.97		0.00		3.57	3.57
43.27	2.52	2.51		0.01		3.52	3.51
43.18	2.38	2.38		0.00		3.38	3.38
43.06	2.29	2.28		0.01		3.39	3.38
42.99	2.45	2.44		0.01		3.35	3.34

River Mile	LEFT Freeboard (feet) 1996	LEFT Freeboard (feet) 2003	LEVEE	Water Surface Elevation Change (ft)	LEVEE	RIGHT Freeboard (feet) 1996	RIGHT Freeboard (feet) 2003
42.89	3.01	3.00		0.01		3.01	3.00
42.80	2.68	2.66		0.02		2.98	2.96
42.70	2.26	2.24		0.02		2.76	2.74
42.61	1.47	1.44		0.03		1.77	1.74
42.51	1.56	1.54		0.02		1.86	1.84
42.42	2.29	2.26		0.03		1.79	1.76
42.26	4.49	4.42		0.07		3.94	3.87
42.26	4.63	4.54		0.09		4.08	3.99
42.26	4.82	4.70		0.12		4.27	4.15
42.26	4.81	4.69		0.12		4.26	4.14
42.05	2.92	2.71		0.21		3.42	3.21
41.95	2.47	2.22		0.25		2.97	2.72
41.86	2.97	2.64		0.33		3.37	3.04
41.76	2.66	2.22		0.44		3.16	2.72
41.67	1.95	1.88		0.07		2.55	2.48
41.57	1.75	1.69		0.06		2.05	1.99
41.48	2.53	2.44		0.09		2.13	2.04
41.38	2.39	2.32		0.07		2.39	2.32
41.29	2.69	2.65		0.04		2.09	2.05
41.19	1.86	1.84		0.02		2.69	2.67
41.10	2.08	2.03		0.05		2.22	2.27
40.91	0.82	0.78		0.04		9.13	9.09
40.82	1.10	1.04		0.06		9.60	9.54
40.72	1.41	1.35		0.06		9.59	9.53
40.63	0.72	0.80		0.08		2.89	2.81
40.53	0.33	0.26		0.07		5.11	5.04
40.44	0.62	0.62		0.00		15.31	15.31
40.34	0.52	0.52		0.00		12.78	12.78
40.25	1.11	1.11		0.00		23.77	23.77
40.15	1.26	1.26		0.00		32.31	32.31
40.06	0.38	0.38		0.00		27.46	27.46
39.90	0.54	0.54		0.00		2.26	2.26
39.77	0.20	0.20		0.00		34.10	34.10
39.68	0.67	0.67		0.00		12.83	12.83
39.58	0.50	0.50		0.00		20.10	20.10
39.49	2.00	2.00		0.00		18.30	18.30
39.40	1.75	1.75		0.00		20.95	20.95
39.30	1.19	1.19		0.00		15.11	15.11
39.25	2.76	2.76		0.00		2.22	2.22
39.21	6.20	6.20		0.00		6.20	6.20
39.21	6.70	6.70		0.00		6.70	6.70
39.21	6.81	6.81		0.00		6.81	6.81
39.21	6.69	6.69		0.00		6.69	6.69
39.12	5.69	5.69		0.00		5.19	5.19
39.02	5.58	5.58		0.00		6.38	6.38
38.93	5.67	5.67		0.00		6.57	6.57
38.83	5.16	5.16		0.00		5.76	5.76
38.74	5.29	5.29		0.00		4.99	4.99
38.64	5.06	5.06		0.00		4.96	4.96
38.55	4.78	4.78		0.00		5.68	5.68
38.45	5.31	5.31		0.00		4.71	4.71
38.36	5.44	5.44		0.00		4.74	4.74
38.26	5.03	5.03		0.00		5.03	5.03
38.17	4.57	4.57		0.00		4.97	4.97
38.07	4.23	4.23		0.00		5.13	5.13
37.98	4.50	4.50		0.00		4.90	4.90
37.88	3.90	3.90		0.00		4.50	4.50
37.79	3.68	3.68		0.00		4.68	4.68
37.69	3.38	3.38		0.00		5.08	5.08
37.51	3.62	3.62		0.00		4.62	4.62
37.41	3.86	3.86		0.00		5.16	5.16
37.32	3.43	3.43		0.00		4.93	4.93
37.22	3.27	3.27		0.00		4.12	4.12
37.13	4.14	4.14		0.00		5.21	5.21
37.03	5.32	5.32		0.00		6.01	6.01
36.94	5.18	5.18		0.00		5.97	5.97
36.84	4.38	4.38		0.00		4.88	4.88
36.75	4.76	4.76		0.00		5.71	5.71
36.65	4.70	4.70		0.00		4.91	4.91
36.56	4.26	4.26		0.00		4.27	4.27
36.51	4.21	4.21		0.00		5.26	5.26
36.48	9.76	9.76		0.00		9.72	9.72
36.48	9.78	9.78		0.00		9.72	9.72
36.48	9.81	9.81		0.00		9.75	9.75

Table E-2 Hydraulic Simulation Results

River Mile	LEFT Freeboard (feet) 1996	LEFT Freeboard (feet) 2003	LEVEE	Water Surface Elevation Change (ft)	LEVEE	RIGHT Freeboard (feet) 1996	RIGHT Freeboard (feet) 2003
36.48	9.80	9.80		0.00		9.76	9.76
36.38	5.18	5.18		0.00		6.40	6.40
36.28	4.19	4.19		0.00		5.49	5.49
36.19	3.81	3.81		0.00		6.17	6.17
36.09	3.58	3.58		0.00		5.03	5.03
36.00	3.46	3.46		0.00		4.66	4.66
35.90	3.61	3.61		0.00		5.11	5.11
35.81	3.48	3.48		0.00		5.24	5.24
35.62	5.30	5.30		0.00		6.20	6.20
35.52	4.63	4.63		0.00		5.33	5.33
35.43	5.19	5.19		0.00		5.89	5.89
35.33	5.25	5.25		0.00		5.35	5.35
35.24	4.50	4.50		0.00		5.00	5.00
35.15	4.04	4.04		0.00		4.14	4.14
35.05	5.41	5.41		0.00		5.41	5.41
34.96	5.62	5.62		0.00		5.52	5.52
34.86	6.04	6.04		0.00		5.44	5.44
34.77	6.60	6.60		0.00		6.00	6.00
34.67	5.02	5.02		0.00		5.12	5.12
34.58	5.36	5.36		0.00		5.06	5.06
34.48	5.32	5.32		0.00		5.12	5.12
34.39	5.90	5.90		0.00		5.90	5.90
34.29	5.35	5.35		0.00		5.45	5.45
34.20	5.22	5.22		0.00		5.82	5.82
34.10	4.85	4.85		0.00		4.95	4.95
34.01	5.41	5.41		0.00		5.01	5.01
33.91	4.78	4.78		0.00		4.28	4.28
33.82	4.75	4.75		0.00		5.35	5.35
33.72	6.20	6.20		0.00		5.80	5.80
33.63	6.06	6.06		0.00		5.66	5.66
33.54	5.32	5.32		0.00		5.82	5.82
33.43	5.67	5.67		0.00		5.17	5.17
33.35	5.51	5.51		0.00		4.71	4.71
33.25	5.88	5.88		0.00		5.88	5.88
33.16	6.36	6.36		0.00		6.36	6.36
33.06	5.76	5.76		0.00		6.26	6.26
32.97	5.59	5.59		0.00		5.89	5.89
32.87	5.77	5.77		0.00		5.87	5.87
32.78	5.60	5.60		0.00		6.20	6.20
32.68	5.64	5.64		0.00		6.34	6.34
32.59	5.56	5.56		0.00		5.96	5.96
32.49	6.18	6.18		0.00		5.78	5.78
32.40	5.83	5.83		0.00		5.93	5.93
32.35	10.87	10.87		0.00		10.93	10.93
32.35	10.90	10.90		0.00		10.96	10.96
32.35	10.94	10.94		0.00		11.00	11.00
32.35	10.93	10.93		0.00		10.99	10.99
32.22	4.93	4.93		0.00		5.73	5.73
32.12	4.51	4.51		0.00		5.51	5.51
32.03	5.20	5.20		0.00		5.50	5.50
31.93	4.96	4.96		0.00		5.56	5.56
31.84	5.92	5.92		0.00		6.52	6.52
31.75	5.16	5.16		0.00		5.86	5.86
31.65	5.20	5.20		0.00		4.90	4.90
31.56	5.27	5.27		0.00		5.27	5.27
31.46	5.67	5.67		0.00		5.67	5.67
31.27	4.13	4.13		0.00		5.13	5.13
31.18	4.67	4.67		0.00		4.97	4.97
31.08	5.44	5.44		0.00		5.44	5.44
30.99	5.24	5.24		0.00		6.04	6.04
30.89	5.27	5.27		0.00		6.07	6.07
30.80	5.53	5.53		0.00		5.93	5.93
30.70	5.58	5.58		0.00		6.28	6.28
30.61	5.55	5.55		0.00		5.75	5.75
30.51	5.19	5.19		0.00		5.89	5.89
30.42	4.94	4.94		0.00		5.64	5.64
30.32	5.78	5.78		0.00		5.58	5.58
30.23	5.56	5.56		0.00		6.46	6.46
30.14	5.44	5.44		0.00		5.94	5.94
30.04	4.98	4.98		0.00		4.38	4.38
29.95	4.86	4.86		0.00		4.06	4.06
29.85	5.34	5.34		0.00		4.34	4.34
29.76	5.05	5.05		0.00		3.95	3.95
29.66	4.25	4.25		0.00		3.35	3.35

River Mile	LEFT Freeboard (feet) 1996	LEFT Freeboard (feet) 2003	LEVEE	Water Surface Elevation Change (ft)	LEVEE	RIGHT Freeboard (feet) 1996	RIGHT Freeboard (feet) 2003
29.57	4.16	4.16		0.00		3.76	3.76
29.47	4.47	4.47		0.00		3.87	3.87
29.40	4.57	4.57		0.00		4.27	4.27
29.28	4.69	4.69		0.00		4.69	4.69
29.19	5.19	5.19		0.00		4.89	4.89
29.09	4.19	4.19		0.00		4.29	4.29
29.00	4.60	4.60		0.00		4.20	4.20
28.90	4.98	4.98		0.00		4.78	4.78
28.81	4.43	4.43		0.00		4.53	4.53
28.72	4.76	4.76		0.00		4.36	4.36
28.62	4.62	4.62		0.00		4.32	4.32
28.53	4.23	4.23		0.00		4.23	4.23
28.43	3.95	3.95		0.00		4.15	4.15
28.34	3.87	3.87		0.00		3.27	3.27
28.24	4.12	4.12		0.00		3.52	3.52
28.15	3.77	3.77		0.00		3.57	3.57
28.05	4.30	4.30		0.00		4.10	4.10
27.96	4.58	4.58		0.00		4.08	4.08
27.86	3.76	3.76		0.00		4.06	4.06
27.82	3.41	3.41		0.00		3.76	3.76
27.75	4.25	4.25		0.00		4.25	4.25
27.75	4.25	4.25		0.00		4.24	4.24
27.75	4.30	4.30		0.00		4.29	4.29
27.75	4.29	4.29		0.00		4.28	4.28
27.58	2.96	2.96		0.00		2.86	2.86
27.49	3.01	3.01		0.00		2.51	2.51
27.39	2.07	2.07		0.00		2.47	2.47
27.30	2.64	2.64		0.00		2.04	2.04
27.20	2.09	2.09		0.00		2.09	2.09
27.11	2.32	2.32		0.00		1.32	1.32
26.99	1.59	1.59		0.00		1.39	1.39
26.83	0.01	0.01		0.00		2.39	2.39
26.73	4.32	4.32		0.00		2.32	2.32
26.64	4.11	4.11		0.00		3.11	3.11
26.54	3.74	3.74		0.00		3.34	3.34
26.45	1.65	1.65		0.00		3.85	3.85
26.35	3.17	3.17		0.00		4.57	4.57
26.26	4.26	4.26		0.00		3.86	3.86
26.16	4.48	4.48		0.00		4.18	4.18
26.07	4.25	4.25		0.00		4.25	4.25
25.97	3.50	3.50		0.00		4.30	4.30
25.88	3.21	3.21		0.00		4.51	4.51
25.78	3.03	3.03		0.00		4.43	4.43
25.69	2.02	2.02		0.00		4.02	4.02
25.59	2.83	2.83		0.00		3.83	3.83
25.50	4.33	4.33		0.00		4.03	4.03
25.41	2.81	2.81		0.00		3.71	3.71
25.31	2.64	2.64		0.00		3.84	3.84
25.22	2.66	2.66		0.00		3.56	3.56
25.12	2.22	2.22		0.00		3.22	3.22
25.03	2.80	2.80		0.00		2.90	2.90
24.93	2.52	2.52		0.00		3.22	3.22
24.84	2.12	2.12		0.00		2.72	2.72
24.74	1.33	1.33		0.00		6.63	6.63
24.65	1.97	1.97		0.00		6.77	6.77
24.55	2.43	2.43		0.00		6.33	6.33
24.46	2.27	2.27		0.00		6.37	6.37
24.36	2.21	2.21		0.00		6.01	6.01
24.27	2.45	2.45		0.00		6.35	6.35
24.17	2.36	2.36		0.00		5.36	5.36
24.08	1.51	1.51		0.00		4.81	4.81
24.02	3.96	3.96		0.00		3.98	3.98
24.02	3.92	3.92		0.00		3.91	3.91
24.02	4.05	4.05		0.00		4.04	4.04
24.02	4.95	4.95		0.00		4.97	4.97
23.89	4.01	4.01		0.00		4.71	4.71
23.80	3.47	3.47		0.00		3.27	3.27
23.71	3.00	3.00		0.00		3.30	3.30
23.61	2.50	2.50		0.00		3.10	3.10
23.52	3.57	3.57		0.00		3.37	3.37
23.42	3.25	3.25		0.00		3.05	3.05
23.33	3.76	3.76		0.00		3.76	3.76
23.23	4.40	4.40		0.00		3.20	3.20
23.14	3.36	3.36		0.00		3.56	3.56

Table E-2 Hydraulic Simulation Results

River Mile	LEFT Freeboard (feet) 1996	LEFT Freeboard (feet) 2003	LEVEE	Water Surface Elevation Change (ft)	LEVEE	RIGHT Freeboard (feet) 1996	RIGHT Freeboard (feet) 2003
23.04	2.42	2.42		0.00		2.32	2.32
22.95	2.46	2.46		0.00		2.26	2.26
22.85	2.03	2.03		0.00		2.23	2.23
22.76	2.43	2.43		0.00		1.63	1.63
22.66	2.75	2.75		0.00		1.75	1.75
22.57	2.46	2.46		0.00		1.66	1.66
22.47	1.85	1.85		0.00		2.45	2.45
22.38	2.98	2.98		0.00		3.18	3.18
22.28	2.81	2.81		0.00		3.21	3.21
22.19	2.38	2.38		0.00		2.88	2.88
22.10	3.23	3.23		0.00		3.23	3.23
22.00	3.09	3.09		0.00		3.69	3.69
21.91	2.20	2.20		0.00		2.50	2.50
21.81	2.40	2.40		0.00		4.10	4.10
21.72	2.30	2.30		0.00		4.20	4.20
21.62	1.48	1.48		0.00		1.38	1.38
21.53	1.26	1.26		0.00		1.86	1.86
21.43	2.19	2.19		0.00		1.69	1.69
21.34	4.20	4.20		0.00		1.60	1.60
21.24	5.03	5.03		0.00		1.13	1.13
21.15	5.84	5.84		0.00		0.94	0.94
21.05	4.22	4.22		0.00		0.82	0.82
20.94	6.46	6.46		0.00		7.23	7.23
20.94	6.49	6.49		0.00		7.22	7.22
20.94	6.53	6.53		0.00		7.26	7.26
20.94	6.53	6.53		0.00		7.30	7.30
20.77	4.88	4.88		0.00		3.58	3.58
20.68	3.50	3.50		0.00		2.20	2.20
20.59	2.30	2.30		0.00		2.50	2.50
20.49	2.18	2.18		0.00		2.18	2.18
20.40	2.60	2.60		0.00		2.30	2.30
20.30	1.89	1.89		0.00		2.09	2.09
20.21	1.75	1.75		0.00		2.05	2.05
20.11	4.47	4.47		0.00		3.17	3.17
20.02	2.47	2.47		0.00		3.37	3.37
19.92	1.66	1.66		0.00		2.86	2.86
19.83	1.29	1.29		0.00		3.29	3.29
19.73	2.01	2.01		0.00		4.21	4.21
19.64	1.16	1.16		0.00		3.66	3.66
19.54	1.09	1.09		0.00		1.99	1.99
19.45	1.93	1.93		0.00		1.83	1.83
19.35	5.32	5.32		0.00		1.92	1.92
19.26	5.35	5.35		0.00		1.55	1.55
19.16	4.54	4.54		0.00		2.34	2.34
19.15	3.87	3.87		0.00		2.34	2.34
19.10	5.49	5.49		0.00		5.12	5.12
19.10	5.94	5.94		0.00		5.57	5.57
19.10	6.42	6.42		0.00		6.05	6.05
19.10	6.31	6.31		0.00		5.94	5.94
19.01	2.79	2.79		0.00		3.10	3.10
18.98	2.56	2.56		0.00		3.26	3.26
18.89	2.56	2.56		0.00		3.36	3.36
18.76	2.05	2.05		0.00		2.85	2.85
18.70	2.30	2.30		0.00		3.10	3.10
18.61	2.48	2.48		0.00		2.28	2.28
18.51	2.23	2.23		0.00		2.43	2.43
18.42	2.42	2.42		0.00		3.02	3.02
18.32	2.44	2.44		0.00		2.14	2.14
18.23	2.58	2.58		0.00		2.58	2.58
18.13	2.31	2.31		0.00		1.51	1.51
18.04	3.39	3.39		0.00		2.69	2.69
17.94	2.71	2.71		0.00		2.61	2.61
17.85	2.31	2.31		0.00		1.71	1.71
17.75	3.06	3.06		0.00		2.06	2.06
17.66	3.15	3.15		0.00		2.55	2.55
17.56	4.33	4.33		0.00		2.73	2.73
17.47	4.00	4.00		0.00		3.10	3.10
17.37	4.51	4.51		0.00		3.21	3.21
17.28	3.79	3.79		0.00		3.29	3.29
17.18	3.52	3.52		0.00		2.62	2.62
17.09	3.26	3.26		0.00		2.46	2.46
17.00	4.04	4.04		0.00		1.94	1.94
16.90	3.74	3.74		0.00		2.44	2.44
16.81	3.82	3.82		0.00		2.82	2.82

River Mile	LEFT Freeboard (feet) 1996	LEFT Freeboard (feet) 2003	LEVEE	Water Surface Elevation Change (ft)	LEVEE	RIGHT Freeboard (feet) 1996	RIGHT Freeboard (feet) 2003
16.71	4.04	4.04		0.00		2.24	2.24
16.62	4.17	4.17		0.00		2.87	2.87
16.52	3.45	3.45		0.00		2.45	2.45
16.43	3.32	3.32		0.00		2.42	2.42
16.33	1.33	1.33		0.00		1.97	1.97
16.26	3.53	3.53		0.00		1.53	1.53
16.14	2.58	2.58		0.00		1.58	1.58
16.05	5.86	5.86		0.00		1.76	1.76
15.95	2.40	2.40		0.00		2.40	2.40
15.86	1.81	1.81		0.00		2.51	2.51
15.76	0.91	0.91		0.00		2.11	2.11
15.71	2.58	2.58		0.00		2.57	2.57
15.71	2.56	2.56		0.00		2.25	2.25
15.71	2.59	2.59		0.00		2.28	2.28
15.71	2.65	2.65		0.00		2.64	2.64
15.58	9.53	9.53		0.00		1.73	1.73
15.48	8.08	8.08		0.00		2.28	2.28
15.39	7.48	7.48		0.00		2.68	2.68
15.30	7.76	7.76		0.00		2.16	2.16
15.20	10.06	10.06		0.00		2.16	2.16
15.11	10.11	10.11		0.00		1.11	1.11
15.01	11.21	11.21		0.00		1.21	1.21
14.92	10.75	10.75		0.00		0.75	0.75
14.82	10.55	10.55		0.00		2.45	2.45
14.73	10.40	10.40		0.00		1.00	1.00
14.63	6.96	6.96		0.00		1.16	1.16
14.54	7.05	7.05		0.00		1.25	1.25
14.44	0.72	0.72		0.00		1.72	1.72
14.35	10.77	10.77		0.00		1.67	1.67
14.25	8.65	8.65		0.00		1.55	1.55
14.16	7.38	7.38		0.00		2.08	2.08
14.06	8.55	8.55		0.00		2.55	2.55
13.97	8.28	8.28		0.00		2.08	2.08
13.88	7.49	7.49		0.00		1.79	1.79
13.78	2.48	2.48		0.00		2.32	2.32
13.69	11.40	11.40		0.00		1.70	1.70
13.59	12.72	12.72		0.00		1.32	1.32
13.50	13.64	13.64		0.00		1.74	1.74
13.40	16.24	16.24		0.00		1.54	1.54
13.31	13.79	13.79		0.00		1.49	1.49
13.21	7.40	7.40		0.00		0.90	0.90
13.12	0.71	0.71		0.00		0.89	0.89
13.02	5.61	5.61		0.00		0.21	0.21
12.93	1.04	1.04		0.00		0.06	0.06
12.83	0.22	0.22		0.00		0.28	0.28
12.74	10.73	10.73		0.00		0.03	0.03
12.68	1.45	1.45		0.00		0.02	0.02
12.66	2.64	2.64		0.00		2.73	2.73
12.66	1.10	1.10		0.00		1.19	1.19
12.63	2.53	2.53		0.00		1.47	1.47
12.56	11.81	11.81		0.00		1.51	1.51
12.46	4.98	4.98		0.00		1.48	1.48
12.37	7.98	7.98		0.00		1.68	1.68
12.27	5.21	5.21		0.00		1.21	1.21
12.18	2.58	2.58		0.00		1.38	1.38
12.08	0.52	0.52		0.00		0.88	0.88
11.99	1.29	1.29		0.00		0.71	0.71
11.89	1.56	1.56		0.00		0.94	0.94
11.80	1.42	1.42		0.00		1.08	1.08
11.70	1.35	1.35		0.00		0.65	0.65
11.61	2.30	2.30		0.00		0.30	0.30
11.51	2.63	2.63		0.00		0.17	0.17
11.42	2.49	2.49		0.00		0.29	0.29
11.33	2.61	2.61		0.00		0.81	0.81
11.23	3.33	3.33		0.00		0.33	0.33
11.14	2.18	2.18		0.00		0.18	0.18
11.04	1.99	1.99		0.00		1.39	1.39
10.95	2.71	2.71		0.00		1.31	1.31
10.85	2.51	2.51		0.00		1.71	1.71
10.76	3.28	3.28		0.00		0.78	0.78
10.66	3.07	3.07		0.00		1.47	1.47
10.66	3.15	3.15		0.00		1.27	1.27
10.64	0.89	0.89		0.00		1.15	1.15
10.64	1.86	1.86		0.00		1.60	1.60

Table E-2 Hydraulic Simulation Results

River Mile	LEFT Freeboard (feet) 1996	LEFT Freeboard (feet) 2003	LEVEE	Water Surface Elevation Change (ft)	LEVEE	RIGHT Freeboard (feet) 1996	RIGHT Freeboard (feet) 2003
10.62	1.82	1.82		0.00		1.80	1.80
10.56	2.68	2.68		0.00		2.88	2.88
10.48	2.26	2.26		0.00		2.86	2.86
10.38	2.12	2.12		0.00		3.02	3.02
10.29	2.29	2.29		0.00		2.29	2.29
10.19	2.32	2.32		0.00		2.72	2.72
10.10	2.54	2.54		0.00		2.94	2.94
10.00	1.72	1.72		0.00		2.32	2.32
9.91	2.04	2.04		0.00		2.04	2.04
9.81	2.11	2.11		0.00		2.21	2.21
9.72	2.09	2.09		0.00		1.59	1.59
9.63	1.45	1.45		0.00		1.35	1.35
9.53	1.90	1.90		0.00		1.70	1.70
9.44	2.08	2.08		0.00		2.08	2.08
9.34	2.27	2.27		0.00		2.17	2.17
9.25	1.51	1.51		0.00		1.51	1.51
9.15	1.99	1.99		0.00		1.79	1.79
9.06	1.59	1.59		0.00		1.79	1.79
8.96	1.51	1.51		0.00		1.71	1.71
8.87	1.64	1.64		0.00		1.84	1.84
8.77	1.78	1.78		0.00		1.88	1.88
8.68	1.62	1.62		0.00		1.62	1.62
8.59	1.35	1.35		0.00		1.75	1.75
8.49	1.75	1.75		0.00		1.75	1.75
8.39	2.05	2.05		0.00		1.75	1.75
8.30	2.17	2.17		0.00		2.07	2.07
8.21	1.79	1.79		0.00		1.69	1.69
8.11	1.86	1.86		0.00		1.86	1.86
8.02	2.14	2.14		0.00		2.04	2.04
7.92	2.17	2.17		0.00		1.67	1.67
7.86	1.58	1.58		0.00		1.71	1.71
7.83	2.23	2.23		0.00		2.12	2.12
7.83	2.24	2.24		0.00		2.13	2.13
7.83	2.42	2.42		0.00		2.31	2.31
7.83	2.42	2.42		0.00		2.31	2.31
7.79	1.62	1.62		0.00		1.96	1.96
7.74	2.09	2.09		0.00		1.39	1.39
7.65	1.95	1.95		0.00		1.65	1.65
7.55	2.35	2.35		0.00		2.05	2.05
7.46	1.17	1.17		0.00		1.77	1.77
7.36	1.76	1.76		0.00		2.06	2.06
7.27	1.22	1.22		0.00		2.12	2.12
7.17	2.65	2.65		0.00		2.15	2.15
7.08	1.18	1.18		0.00		1.28	1.28
6.98	1.38	1.38		0.00		1.38	1.38
6.89	1.33	1.33		0.00		8.53	8.53
6.79	1.36	1.36		0.00		12.06	12.06
6.70	1.05	1.05		0.00		13.75	13.75
6.66	1.12	1.12		0.00		18.72	18.72
6.61	1.32	1.32		0.00		13.92	13.92
6.51	1.90	1.90		0.00		14.30	14.30
6.42	2.20	2.20		0.00		14.40	14.40
6.32	1.37	1.37		0.00		14.57	14.57
6.23	1.33	1.33		0.00		12.23	12.23
6.13	1.59	1.59		0.00		11.89	11.89
6.04	1.66	1.66		0.00		12.16	12.16
5.94	0.54	0.54		0.00		13.24	13.24
5.85	1.61	1.61		0.00		15.21	15.21
5.75	2.69	2.69		0.00		17.59	17.59
5.66	1.90	1.90		0.00		20.90	20.90
5.56	2.92	2.92		0.00		12.12	12.12
5.47	3.25	3.25		0.00		12.05	12.05
5.28	2.55	2.55		0.00		12.35	12.35
5.18	1.91	1.91		0.00		10.21	10.21
5.09	2.35	2.35		0.00		4.55	4.55
5.00	1.95	1.95		0.00		8.35	8.35
4.90	2.13	2.13		0.00		14.93	14.93
4.81	2.49	2.49		0.00		13.29	13.29
4.71	2.49	2.49		0.00		8.39	8.39
4.62	1.57	1.57		0.00		14.07	14.07
4.52	1.59	1.59		0.00		4.29	4.29
4.43	1.51	1.51		0.00		8.71	8.71
4.33	1.08	1.08		0.00		15.08	15.08

River Mile	LEFT Freeboard (feet) 1996	LEFT Freeboard (feet) 2003	LEVEE	Water Surface Elevation Change (ft)	LEVEE	RIGHT Freeboard (feet) 1996	RIGHT Freeboard (feet) 2003
4.24	1.50	1.50		0.00		7.80	7.80
4.09	1.46	1.46		0.00		12.36	12.36
3.95	1.17	1.17		0.00		3.27	3.27
3.86	0.89	0.89		0.00		3.89	3.89
3.76	2.07	2.07		0.00		0.17	0.17
3.67	2.15	2.15		0.00		13.45	13.45
3.58	2.06	2.06		0.00		13.76	13.76
3.48	1.84	1.84		0.00		13.14	13.14
3.39	2.06	2.06		0.00		13.16	13.16
3.29	2.47	2.47		0.00		14.17	14.17
3.20	2.11	2.11		0.00		14.21	14.21
3.10	1.28	1.28		0.00		14.28	14.28
3.01	1.50	1.50		0.00		10.50	10.50
2.91	1.34	1.34		0.00		2.74	2.74
2.82	1.00	1.00		0.00		5.50	5.50
2.72	1.07	1.07		0.00		8.97	8.97
2.66	7.99	7.99		0.00		8.27	8.27
2.66	7.99	7.99		0.00		8.23	8.23
2.66	8.01	8.01		0.00		8.25	8.25
2.66	8.02	8.02		0.00		8.30	8.30
2.45	2.16	2.16		0.00		12.36	12.36
2.35	1.75	1.75		0.00		14.65	14.65
2.26	1.92	1.92		0.00		22.32	22.32
2.16	1.67	1.67		0.00		22.37	22.37
2.10	1.48	1.48		0.00		0.98	0.98
1.97	1.32	1.32		0.00		0.62	0.62
1.88	1.36	1.36		0.00		0.76	0.76
1.78	19.75	19.75		0.00		0.95	0.95
1.69	21.75	21.75		0.00		1.55	1.55
1.66	13.56	13.56		0.00		18.76	18.76
1.66	13.56	13.56		0.00		18.76	18.76
1.66	13.71	13.71		0.00		18.91	18.91
1.66	13.71	13.71		0.00		18.91	18.91
1.51	27.92	27.92		0.00		11.62	11.62
1.42	12.71	12.71		0.00		10.61	10.61
1.32	10.98	10.98		0.00		10.68	10.68
1.23	2.04	2.04		0.00		10.84	10.84
1.13	28.04	28.04		0.00		11.04	11.04
1.04	25.30	25.30		0.00		0.40	0.40
0.94	17.55	17.55		0.00		0.05	0.05
0.85	3.05	3.05		0.00		11.15	11.15
0.75	1.44	1.44		0.00		10.14	10.14
0.66	11.84	11.84		0.00		10.84	10.84
0.56	16.81	16.81		0.00		10.91	10.91
0.47	11.18	11.18		0.00		11.18	11.18
0.38	3.21	3.21		0.00		11.41	11.41
0.28	4.04	4.04		0.00		8.54	8.54
0.20	1.48	1.48		0.00		1.28	1.28
0.19	0.49	0.49		0.00		0.43	0.43
0.19	0.17	0.17		0.00		0.04	0.04
0.09	0.80	0.80		0.00		10.90	10.90
0.00	0.23	0.23		0.00		9.17	9.17